



Standard Practices

Part No. N2710STD01
Issue 1-0. August 1991
Printed in U.S.A. (183)

This manual has been developed by Nitsuko America. It is intended for the use of its customers and service personnel, and should be read in its entirety before attempting to install or program the system. Any comments or suggestions for improving this manual would be appreciated. Forward your remarks to:

Nitsuko America, Telecom Division
4 Forest Parkway
Shelton, CT 06484

Attention: Manager, Technical Publications

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Standard Practices

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SITE REQUIREMENTS

Site Environmental Guidelines

Install the common equipment in a clean, dry and secure location. Make sure the location is accessible only to authorized personnel. Control the environment within the following limits:

- Relative humidity between 5-95% (non-condensing)
- Temperature range between 40-100 degrees F (4-38 degrees C)

Your phone system is a computer system. Maintain the same environmental conditions as for any sophisticated computer system. This maximizes the system's life.

Site Location Guidelines

When choosing an installation site, make sure the site provides:

- Ample room to mount and maintain the common equipment
- At least 3 feet (915 cm) between the ceiling and the top of the common equipment cabinet
- Adequate ventilation and air circulation¹
- An area free from static electricity, such as produced by dry copiers
- An area free from environmental interference, such as electromagnetic interference (EMI) caused by arc welders or other heavy machinery
- An area not subject to excessive vibration
- An area away from caustic (corrosive) chemicals
- A mounting location that will not flood

Site Electrical Guidelines

Each power supply requires a dedicated three-wire 120 V ac, 60Hz, 15 A circuit terminated in a NEMA 5-15R receptacle. Make sure the receptacle is close enough to the power supply. Do not stretch the cord when plugging it in.

If any other receptacles are on the same branch as a power supply, disable or clearly label them (to prohibit use). To prevent accidental shutdown, use a lock clip on the service panel.

Never use a three-prong to two-prong adaptor.

¹ Take care not to block any air vents.

SITE REQUIREMENTS

Power Line Surge Protector

Each power supply requires a power line surge protector. Nitsuko America Technical Service has approved the following surge protectors for use with Nitsuko America products:

Manufacturer	Model Number
E.F.I.	DPI 453D ¹
LEA Dynatec	SS-120-H
Lynex Corporation	Surge One
MCG	P210B
T.I.I. Industries	439 ¹
T.I.I. Industries	428 mk II

Cable Routing Guidelines

Route station cable away from electrical interference sources. Typical sources are electric motors and fluorescent lights. Route the station cable at least 2 inches (5.1 cm) from:

- Electric light conductors
- Power circuit conductors
- Class 1 circuits²

CAUTION:

Equipment modifications not expressly shown in the system installation manual void applicable warranties.

Installing Optional Equipment

If installing optional equipment that requires 120 V AC, connect it to an AC circuit other than the power supply's dedicated AC line. This prevents transients from the optional equipment from coupling through the AC line into the system.

¹ Also provides AC line RFI protection.

² Refer to the National Electrical Code, Article 800, Communications Circuits

SITE REQUIREMENTS

Grounding

Most systems require ground wires. These grounds are in addition to the AC circuit third-wire ground. Connect the grounds according to the instructions in the system's installation manual. Use only approved earth grounds. Make sure these grounds meet the requirements of local and national codes. For the best ground, make the ground wires as short as possible. Use the largest gauge ground wire that will fit in the provided ground lug.

Connecting Test Equipment

Use an accurate, high input impedance digital voltmeter to measure system voltages. Do not connect other test equipment to any internal system part. This may damage the system, the test equipment or both.

CAUTION:

Installing and operating the system outside of the site requirements stated above will decrease the system's reliability and void applicable warranties.

Static Precautions

Printed Circuit Boards (PCBs) are sensitive to static electricity. Use the following precautions to guard against static damage when installing or handling PCBs:

- During shipping, anti-static bags protect static sensitive PCBs. Keep the PCBs in these bags unless you use the proper anti-static precautions (see below).
- Do not use the bag as a holder for the PCB when it is outside the bag.
- When working with PCBs, keep the work area free of any objects that may contain a static charge. This includes plastic and metal objects.
- Discharge any accumulated body static before handling a PCB that is not in its anti-static bag. To discharge body static, touch a grounded object. Following discharge, *attach a wrist strap grounded to a suitable ground.*
- Never slide a PCB across a work surface.
- Minimize foot movement to prevent a charge buildup.

FEDERAL COMMUNICATIONS COMMISSION (FCC) REQUIREMENTS

Type of Service

Your system is designed for use on standard device telephone lines. The system connects to the telephone line by means of a standard jack (e.g., USOC RJ11C). Refer to the Specifications table in each system's installation manual for the jack types. Connection to telephone company-provided coin service (central office implemented systems) is prohibited. Connection to party line service is subject to state tariffs.

The FCC has rules and regulations for operating and installing privately owned telephone systems. The FCC publishes these regulations in:

FCC Rules, Part 68, Connection of Terminal Equipment to the Telephone Network (and its amendments)

Part 68 requires several actions during system installation. The following paragraphs outline these actions.

Notification to Telco

The operating telephone company (telco) may request the following information about the system:

- The lines used (telephone numbers xxx-xxxx through xxx-xxxx)
- The registration information listed in the system installation manual Specifications table. This includes:
 - Manufacturer
 - FCC Registration Number
 - Ringer Equivalence Number
 - Registered Jack

Installation Training

The installer should be a well qualified, experienced telecommunications technician. Nitsuko America offers instruction for certified installation.

Telephone Company Procedures

The goal of the telephone company is to provide you with the best service it can. In order to do this, it may occasionally be necessary for them to make changes in their equipment, operations or procedures. If these changes might affect your service or the operation of your equipment, the telephone company will give you notice, in writing, to allow you to make any changes necessary to maintain uninterrupted service.

If you have any questions about your telephone line, such as how many pieces of equipment you can connect to it, the telephone company will provide this information upon request.

FEDERAL COMMUNICATIONS COMMISSION (FCC) REQUIREMENTS

Telephone Company Procedures (Cont'd)

In certain circumstances, it may be necessary for the telephone company to request information from you concerning the equipment which you have connected to your telephone line. Upon request of the telephone company, provide the FCC registration number and the ringer equivalence number (REN) of the equipment which is connected to your line. Both of these items are listed on the equipment label. The sum of all of the RENs on your telephone lines should be less than five in order to assure proper service from the telephone company. In some cases, a sum of five may not be usable on a given line.

If Problems Arise

If any of your telephone equipment is not operating properly, you should immediately remove it from your telephone line, as it may cause harm to the telephone network. If the telephone company notes a problem, they may temporarily discontinue service. When practical, they will notify you in advance of this disconnection. If advance notice is not feasible, you will be notified as soon as possible. When you are notified, you will be given the opportunity to correct the problem and informed of your right to file a complaint with the FCC.

In the event repairs are ever needed on your system, they should be performed by Nitsuko America or an authorized repair facility of Nitsuko America. For information, contact:

Nitsuko America, Telecom Division
4 Forest Parkway
Shelton, CT 06484

Private Line Operations

In order to connect this system to the private line network, you must provide the telephone company with the following:

- The quantities and USOC numbers of the required jacks
- The sequence in which you want to connect the trunks
- The Facility Interface Codes (by position)
- The ringer equivalence number or service code, as applicable (by position)

This information is in the Specifications table in each system's installation manual. The chart below shows you a sample of this information.

Type of Interface	USOC Jack Connector	REN/Service Code	Facility Interface Code
2-Wire Loop	RJ11C	0.5B	02LS2

FEDERAL COMMUNICATIONS COMMISSION (FCC) REQUIREMENTS

Radio Frequency Interference (RFI)

This system generates, uses, and radiates radio frequency energy. Installing and operating the system in accordance with the system manuals minimizes this radio frequency energy. If not properly installed and operated, this equipment may cause RFI.

Class A Systems

The following pertains to Class A systems. Refer to the Specifications table in the system installation manual for registration class.

This system meets the requirements for a Class A computing device according to Part 15 of the FCC Rules (Subpart J). Class A computing devices provide RFI protection when operated in a commercial area. System operation in a residential area is likely to cause RFI. If this occurs, the FCC requires that the user (at his own expense) correct the interference.

Class B Systems

The following pertains to Class B systems. Refer to the Specifications table in the system installation manual for registration class.

This system meets the requirements for a Class B computing device according to Part 15 of the FCC Rules (Subpart J). Class B computing devices provide protection against interfering with radio and television reception when operated in a residential area. However, there is no guarantee that the system will not cause interference in a particular installation. If this occurs, the FCC encourages the user to correct the interference.

FEDERAL COMMUNICATIONS COMMISSION (FCC) REQUIREMENTS

Radio Frequency Interference (Continued)

To determine if the system is the cause of interference, turn the system off. If the system is the cause of the RFI, try the following to solve the problem:

- (a) Re-orient the receiving antenna.
- (b) Move the receiver away from the equipment.

If necessary, consult the system dealer or an experienced radio/television technician for additional suggestions. The following booklet, prepared by the FCC, may be helpful:

How to Identify and Resolve Radio-TV Interference Problems

Order this booklet from:

U.S. Government Printing Office
Washington, D.C. 20402
(Stock No. 004-000-00345-4)

Radio Frequency (RF) Susceptibility

A strong radio frequency field may affect system operation. Following the installation and grounding procedures in the system manual minimizes RF susceptibility.

Hearing Aid Compatibility

The FCC Rules require hearing aid-compatible telephones for certain applications. These applications are:

- Public or semi-public coin or credit card operated telephones
- Telephones in elevators, highways, and tunnels (automobile, subway, railroad, or pedestrian)
- Telephones which alert emergency authorities
- Telephones for signaling life threatening or emergency situations
- Telephones at workstations for hearing-impaired personnel
- Telephones that store patrons use to order merchandise
- Telephones in public transportation terminals used to call taxis, to reserve lodging or to rent automobiles
- Telephones in hotel, motel and apartment lobbies
- Telephones in hotel and motel rooms

FEDERAL COMMUNICATIONS COMMISSION (FCC) REQUIREMENTS

Hearing Aid Compatibility (Continued)

Note: At least 10% of the rooms must contain hearing aid telephones or jacks for plug-in hearing aid-compatible telephones. The hotel or motel must provide these telephones to hearing-impaired customers upon request.

Your system's telephones may or may not be hearing aid-compatible. Read the label attached to each telephone's shipping carton.

Responsibility of Grantee

Do not modify this equipment unless specifically shown to do so in the installation manual. If the installer suspects equipment malfunction, he should disconnect the system from the telco lines. To do this, the installer unplugs the telco connector(s).

Systems with LCR or ARS

Your system may have Least Cost Routing (LCR) or Automatic Route Selection (ARS). These features are based on a defined set of telco network area and exchange codes. The telco may establish new area and exchange codes that your LCR or ARS options don't recognize. This may restrict user access to the telephone network and to the new codes.

You should keep in contact with your telco to find out if there are any new network area codes. Additionally, Bell Communications Research (Bellcore) publishes North American Numbering Plan (NANP) information. You can also obtain a brief summary of the newly established area and exchange codes. Contact Bellcore at (201) 829 2592 for more information.

DEPARTMENT OF COMMUNICATIONS (DOC) REQUIREMENTS

Notice

The Canadian Department of Communications label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

CAUTION:

Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

Load Numbers

The Load Number (LN) assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop which is used by the device, to prevent overloading. The termination on a loop may consist of any combination of devices subject only to the requirement that the total of the Load Numbers of all the devices does not exceed 100. Refer to the Specifications table in each system's installation manual for the Load Number.

TELCO REQUIREMENTS

The National Electrical Code (NEC) requires the telco to provide primary protection devices on a customer's telephone lines. Check the entry point to be sure the installation has primary protection devices. If no such devices are present, notify the telco before proceeding with the installation.

WARNING:

This electronic telephone system requires a primary protection device on the telco side of the demarcation point.



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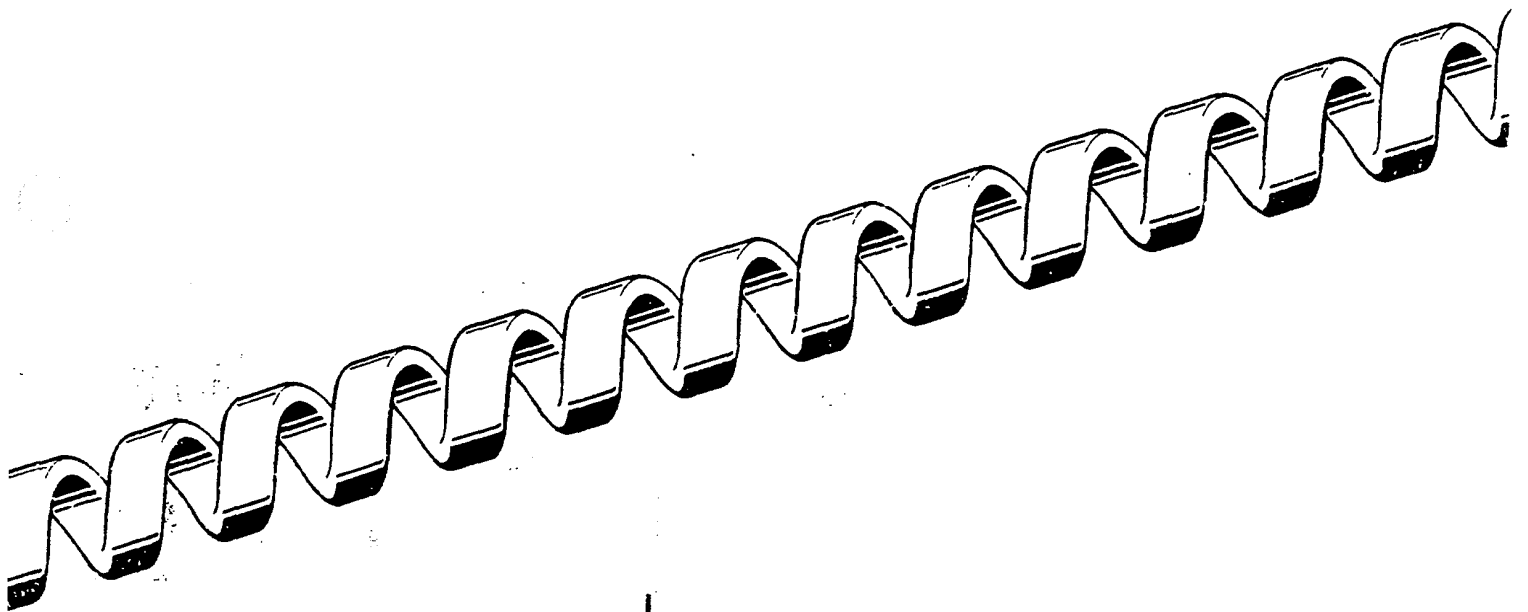
Other Important Telephone Numbers

Sales:.....203-926-5450
Customer Service:203-926-5444
Customer Service FAX:203-926-5454
Technical Service:203-925-8801
Discontinued Product Service:.....900-990-2541
Technical Training:.....203-926-5430
Emergency Technical Service (After Hours).....203-929-7920

(Excludes discontinued products)



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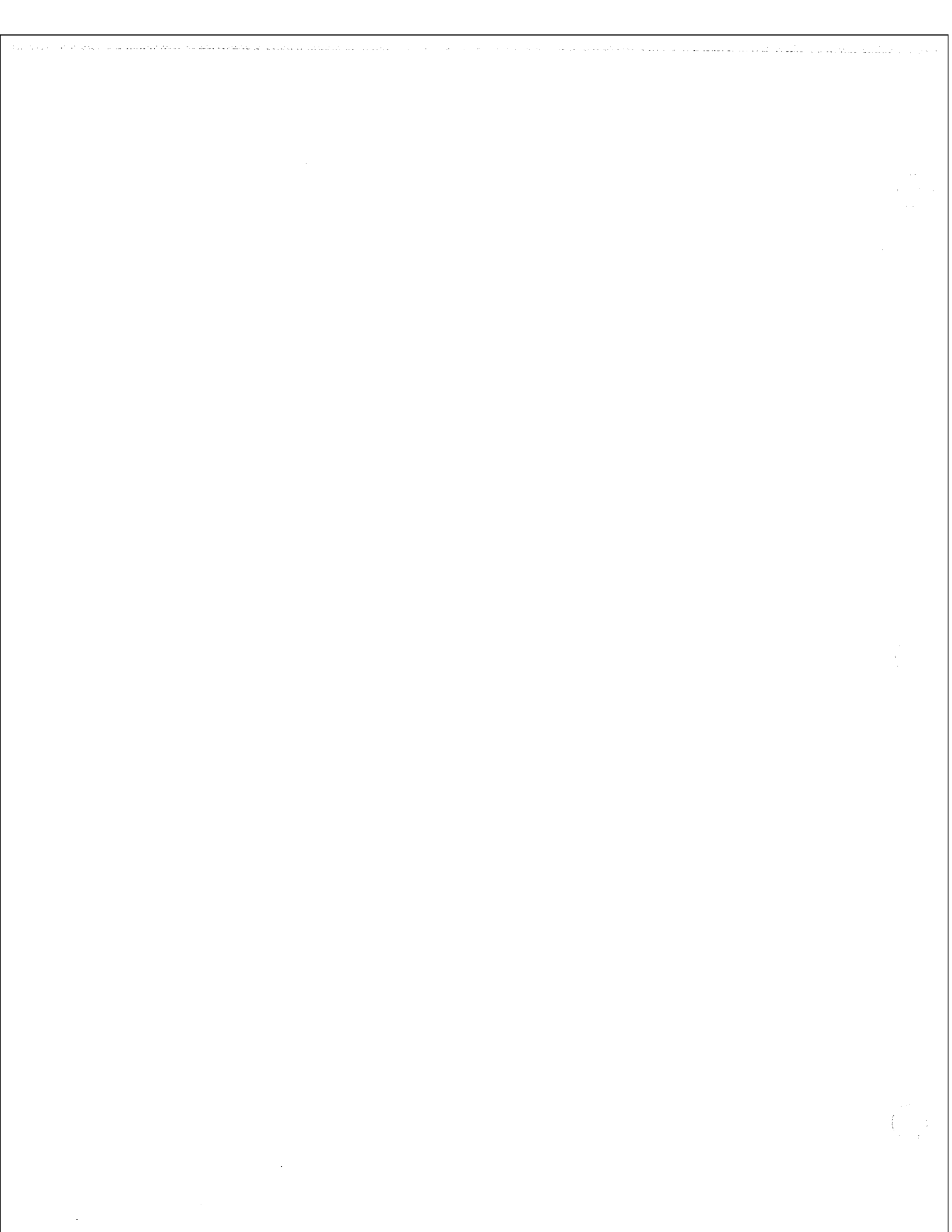


**ONYX VS
and
ULTRACOM DCS**

Hardware Manual

Part No. N1853INS01
Issue 1-1, March 1992
Printed in U.S.A.

VP/183





Use this manual to learn about and install your system's hardware.

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HOW TO USE THIS MANUAL

To learn about your system's hardware...

Read Section 1, System Description. You'll find out about each of the components required for a successful installation. Section 1 also contains a complete Parts List and Specifications table.

To connect your system's hardware...

Go to Section 2, Installation. This section guides you step-by-step through a complete installation.

To find out more about your system...

Read the following related manuals and user guides:

- VS Administrator's Guide N1853ADG02
- DCS Administrator's Guide N1863ADG01
Helps the system administrator understand and customize the system. Also describes the system programming entered at the administrator's telephone.
- Software Manual N1850SWG03
Provides a complete reference for all the system's features and terminal programming options.
- VS Multibutton Telephone Feature Handbook . N1850MFH03
- DCS Multibutton Telephone Feature Handbook N1860MFH02
Gives detailed instructions for using every feature available at multibutton keysets.
- VS Multibutton Quick Reference Guide N1850MBG02
- DCS Multibutton Quick Reference Guide N1860MBG01
Contains abbreviated instructions for the most commonly used keyset features.
- VS Single Line Quick Reference Guide N1852SLO01
- DCS SL/Four Button Quick Reference Guide . . N1862FBU01
Provides abbreviated instructions for the most commonly used features.
- VS Program Record Form N1853PRF02
- DCS Program Record Form N1863PRF01
Lets the system administrator keep a written record of the system's programming.
- Standard Practices Manual N2710STD01
Contains general installation guidelines.

Section 1

System Description

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ONYX VS ULTRACOM DCS

Small Capacity Digital Communications Systems Unique User Programmability Simple, Powerful and Expandable

The ONYX VS and ULTRACOM DCS are the smallest members of the ONYX and ULTRACOM family of digital telephone systems. Modular design allows these systems to respond immediately to a business's changing requirements and growth. They are expandable from 12 extensions and four lines to 48 extensions and 16 lines. Like the rest of the ONYX and ULTRACOM family, the VS and DCS are unique in their adaptability, cost effectiveness and ease of use.

With ONYX VS and ULTRACOM DCS, the installer can quickly program new requirements or system configurations. Installation is simplified by:

- Two pair extension wiring
- Replaceable modules
- A single, modular, wall-mounted Common Equipment Unit (CEU).
- Program entry from a terminal or the attendant's telephone

For maximum reliability and cost-effectiveness, ONYX VS and ULTRACOM DCS use advanced digital architecture. This design ensures non-obsolescence. The ONYX VS and ULTRACOM DCS fully integrate voice and data, without a new and expensive wiring network.

Each telephone is user-programmable. User programmability makes each phone a self-tailored communications tool. Employees can personalize their telephones simply by pressing a few keys. Additionally, employees can easily access a vast array of communications features.

COMMON EQUIPMENT

Common Equipment Unit (VS P/N 88500, DCS P/N 89500)

The Common Equipment Unit (CEU) is the control center for the system. The CO Modules, Station Modules, AUX Module and power supply all plug into the CEU. An eight line by 24 extension system requires one CEU. If you want more than eight lines or 24 extensions, install a second CEU. In a two-CEU system, one CEU is the main and the other is the expansion. The standard CEU kit (VS P/N 88501, DCS P/N 89501) supports four lines and 12 extensions.

Power Supply (P/N 60001)

The Power Supply provides the direct current (DC) voltages necessary to operate the system. Each CEU requires a separate Power Supply (2 maximum). The standard CEU kit (VS P/N 88501, DCS P/N 89501) includes one power supply.

CO (Outside Line) Module (P/N 88511)

The CO Module lets you connect up to four CO (outside) lines to the system. You can install two CO Modules on each CEU. The CO Module is compatible with loop start, DTMF or Dial Pulse lines. The maximum number of outside lines is 16 (i.e., two CO Modules per CEU). The standard CEU kit includes one CO Module.

External Page, Music on Hold (for internal extensions) and Background Music use the fourth line circuit on the first CO Module. Music on Hold for outside calls only doesn't require a line circuit.

Station Module (P/N 88521)

The Station Module (P/N 88521) connects up to 12 system telephones to the CEU. The maximum number of extensions is 48 (i.e., two Station Modules per CEU). The standard CEU kit includes one Station Module.

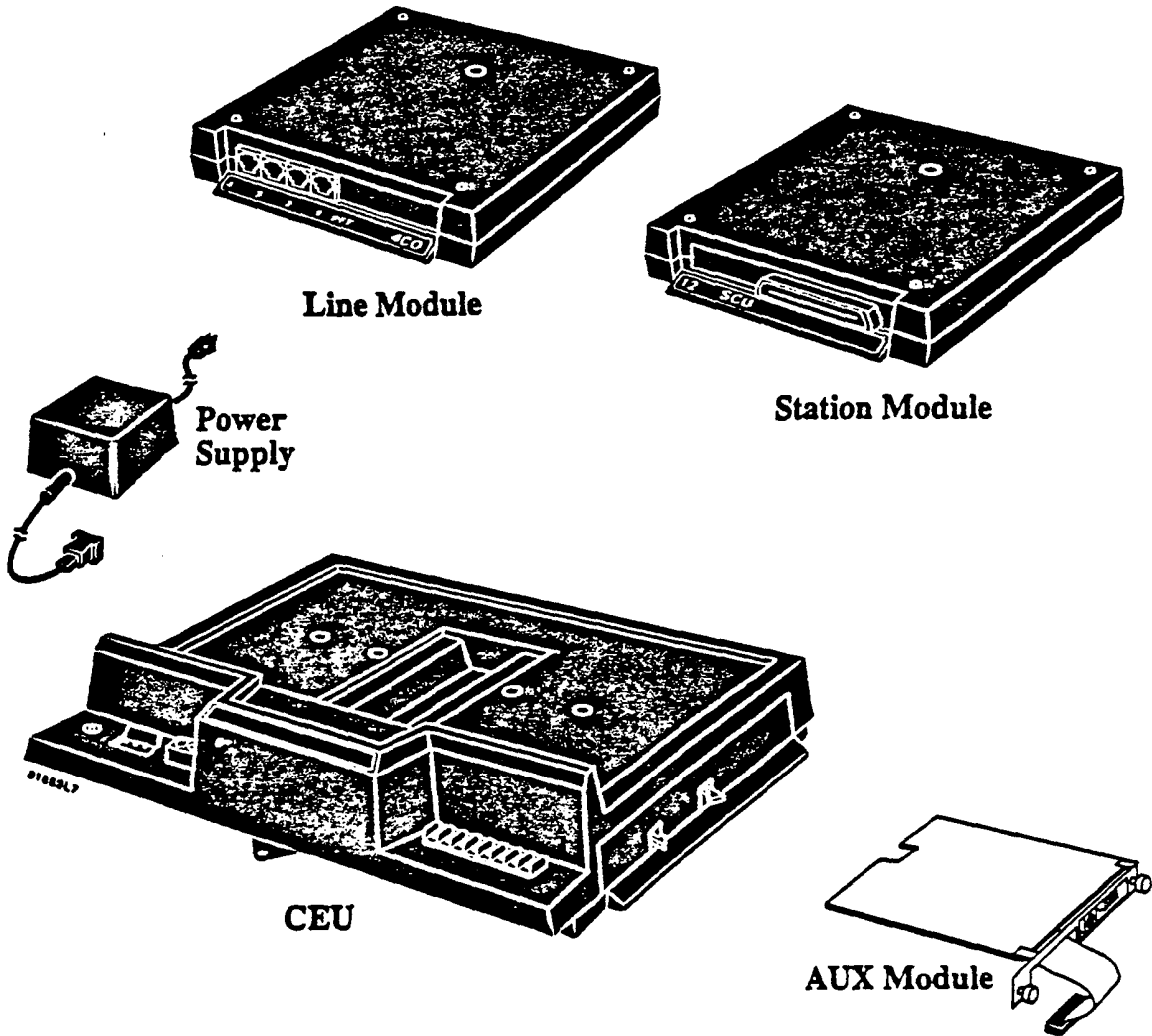


Figure 1-1 COMMON EQUIPMENT

COMMON EQUIPMENT

AUX Module

The AUX Module gives the system:

- Automatic Route Selection
- Automatic Call Distribution Supervisor Displays
- Centrex Feature Keys
- Full Directory Dialing
- Modular jacks for connecting two CEUs
- Names for Speed Dial blocks 1-50
- Real Time Clock (battery backed-up)
- Speed Dial blocks 29-57
- Station Message Detail Recording (SMDR)
- Support for the Mini Data Unit
- Terminal Programming
- Verifiable Account Codes

You can also use the AUX Module to upgrade the CEU software. In a two-CEU system, one AUX Module is the main module and the other is the expansion. See the chart below for module part numbers.

System	Main	Expansion
VS	88525	88529
DCS	89525	88529

The ONYX VS system accommodates up to 48 telephones. The available types are (Figure 1-2):

- 30-Button Modular and Non-Modular Telephone
- 10-Button Modular Telephone
- Digital Single Line Telephone
- DSS Console (80 Button)

30-Button Telephones

The 30-Button Telephone is the system's most fully-featured telephone. With one-button access to a wide range of features, it is also the easiest to use. Three types of 30-Button Telephones are available:

30-Button Modular Telephone (P/N 88160A), featuring:

- Six fixed feature keys for the most commonly used features
- Up to 24 programmable keys for Hotline, Speed Dial, Direct Station Selection or selected features
- Dual mode (red/green) line keys that identify a user's own calls
- Easy-to-use dial pad with feature buttons
- Dial access to additional features
- Off-hook signaling with Voice Over

30-Button Modular Telephone with Handsfree (P/N 88161A), featuring

- All the capabilities of the 30-Button Modular Telephone
- Full Speakerphone (Handsfree) operation

30-Button Modular Telephone with Display and Handsfree (P/N 88163A), featuring

- All the capabilities of the 30-Button Modular Telephone
- Alphanumeric Display that provides feature status messages¹
- Full Speakerphone (Handsfree) operation

30-Button Non-Modular Telephone (P/N 88260B), featuring:

- All the features of the 30-button Modular telephone
- Red LEDs in all keys

30-Button Non-Modular Telephone with Handsfree (P/N 88261B), featuring

- All the capabilities of the 30-Button Non-Modular Telephone
- Full Speakerphone (Handsfree) operation

¹ Each CEU can support six modular display telephones (including Attendant Telephone P/N 88254), or any number of non-modular display telephones (48 max.).

ONYX VS TELEPHONES

30-Button Telephones (Cont'd)

30-Button Non-Modular Telephone with Display and Handsfree (P/N 88263B), featuring

- All the capabilities of the 30-Button Non-Modular Telephone
- Alphanumeric Display that provides feature status messages¹
- Full Speakerphone (Handsfree) operation

All extension instruments use a single station position (port).

Attendant Telephone (P/N 88254)

Attendants can use the Attendant Telephone (P/N 88254) as an alternative to a 30-button display telephone. The Attendant Telephone provides.

- All the capabilities of the 30-Button Modular Telephone, with 18 programmable keys
- Alphanumeric Display that provides feature status messages¹

10-Button Modular Telephones

The 10-Button Modular Telephone gives users many convenient features. Two types of 10-Button Modular Telephones are available:

10-Button Modular Telephone (P/N 88155), featuring

- Six fixed feature keys for the most commonly used features
- Up to four programmable keys for Hotline, Speed Dial, Direct Station Selection or selected features.
- All other features of the 30-Button Modular Telephone (P/N 88160A).

10-Button Modular Telephone with Handsfree (P/N 88154), featuring

- All the capabilities of the 10-Button Modular Telephone
- Full Speakerphone (Handsfree) operation

¹ Each CEU can support six modular display telephones (including Attendant Telephone P/N 88254), or any number of non-modular display telephones (48 max.).

Telephone Modules

With the modular telephones, there is no need to replace a phone to upgrade its performance. With the addition of a plug-in module, the 10-button telephone expands to a 30-button phone. Additional modules add the speakerphone and display features.

You can add the following modules to any modular telephone:

- **Handsfree (Speakerphone) Module (P/N 88170)**, to add Handsfree to any non-handsfree modular phone
- **20-Button Module (P/N 88171)**, to convert a 10-button modular telephone to a 30-button modular telephone
- **20-Button Module with display (P/N 88176)**, to convert a 10-button modular telephone to a 30-button modular telephone with display

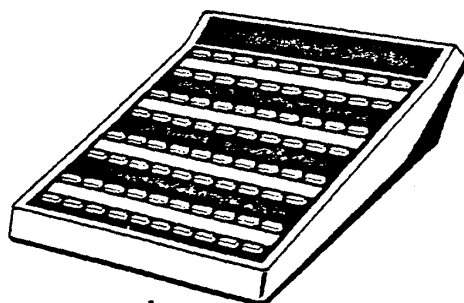
ONYX VS TELEPHONES



30-Button Keypad



10-Button Keypad



DSS Console



**Digital Single
Line Telephone**

Figure 1-2 ONYX VS TELEPHONES

The ULTRACOM DCS accommodates up to 48 telephones. The available types are (Figure 1-3):

- Multibutton Keypad
- Executive Display Multibutton Keypad
- Four Button Telephone
- Digital Single Line Telephone
- DSS Console (80 Button)

Multibutton Keypads

The multibutton keypad is the system's most fully-featured telephone. With one-button access to a wide range of features, it is also the easiest to use. There are two types of multibutton keypads:

Multibutton Keypad (P/N 89758A), featuring:

- Seven fixed feature keys for the most commonly used features
- Up to 21 programmable keys for Hotline, Speed Dial, Direct Station Selection or selected features
- Easy-to-use dial pad with feature buttons
- Dial access to additional features
- Off-hook signaling with Voice Over
- Full Speakerphone (Handsfree) operation

Executive Display Multibutton Keypad (P/N 89759A), featuring:

- All the capabilities of the Multibutton Telephone
- Alphanumeric Display that provides feature status messages¹

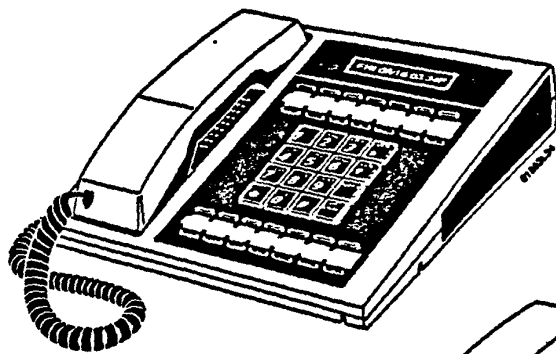
Four Button Telephone (P/N 89765A)

The Four Button Telephone gives users many convenient features. The Four Button Telephone provides:

- Four feature keys for the most commonly used features
- Easy-to-use dial pad with feature buttons
- Dial access to additional features
- Handsfree Answerback (Handsfree reply) for Intercom calls

¹ Each CEU can support a maximum of six display telephones.

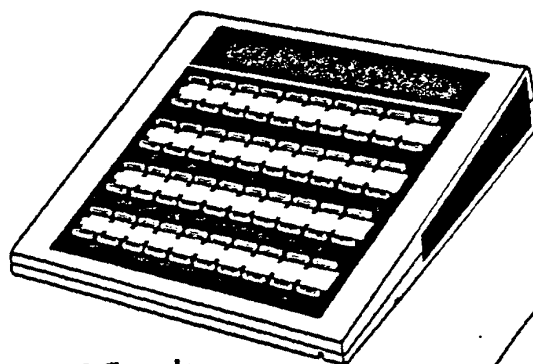
ULTRACOM DCS TELEPHONES



Multibutton Keypad



Four-Button Telephone



DSS Console



Digital Single Line Telephone

Figure 1-3 ULTRACOM DCS TELEPHONES

OTHER STATION EQUIPMENT

DSS Console, 80 Button (VS P/N 88555, DCS P/N 89764A)

The 80-Button DSS/BLF Console provides one-button access to:

- Extensions (Hotline)
- Park Orbits
- Outside Lines
- Page zones
- DSS Console Speed Dial
- Release (key 80)

The DSS Console is a dual port device, using adjacent even and odd numbered ports. You can have as many DSS Consoles as there are available dual ports. The system allows, however, only 16 unique DSS Console key configurations. Always install the DSS Console in the even numbered port. *Do not install a DSS Console in the expansion cabinet.*

Digital Single Line Telephone (VS P/N 88250, DCS P/N 89762A)

The Digital Single Line Telephone gives basic telephone service to users that don't need the convenience of keysets. The Digital Single Line Telephone provides dial access to many system features.

Analog Station Interface (P/N 89749)

The Analog Station Interface (ASI) provides standard 2500 type DTMF service at any extension port. Use the ASI when the system requires a limited number of analog interfaces -- without reducing the number of outside lines. The ASI lets you easily connect auxiliary equipment such as Integrated Voice Messaging.

ASIs require DTMF detection (i.e., receivers) for outgoing calls. ASI P/N 89749 has its own DTMF receiver.

OTHER STATION EQUIPMENT

2500/500 Sets

You can connect a 2500 type telephone to any ASI device for single line telephone service. You can also connect a 500 or 2500 set as a power failure telephone. Each CO Module allows for one power failure telephone.

Wall/Desk Mounting Kit

The wall-mounting kit allows wall mounting of system telephones. Each kit contains the hardware necessary to mount one telephone. You can also use the wall-mounting kit as a telephone tilted desk stand. The following wall-mounting kits are available:

- VS wall-mounting kit (P/N 88179)
- DCS Multibutton Keypad wall-mounting kit (P/N 89769)
- DCS Single Line/Four Button wall-mounting kit (P/N 89768)

Tractor Feed Label Inserts (VS P/N 88257, DCS P/N 89257)

Use the Tractor Feed Label Inserts to print your own customized telephone labels. To print the label inserts, you must have:

- An Epson FX compatible printer
- An AUX Module

OPTIONAL EQUIPMENT

Music Source

Background Music and Music on Hold require a customer-provided music source (i.e., tape deck, receiver, etc.). If you have a two-CEU system, you can use the same music source for both CEUs. Or, you can use a separate music source for each CEU. The music source must meet the following specifications:

Input Impedance: 100 K Ohms
Maximum Input: -10 dBm

Headset

Any extension can have a headset (refer to the Headset Compatibility feature). The recommended headset is the Plantronics Supra Star Mate (Model MH0530-1).

External Paging Equipment

Each CEU provides one port for external Paging. You can connect these ports to customer-provided external Paging equipment. In the main CEU, the external Paging output is for All Call Paging. In the expansion CEU, the external Paging output is for Paging zone 1.

The Paging equipment must be compatible with the following system specifications:

Output Impedance: 600 Ohms
Maximum Output: +3 dBm

External Alerting Device

Each CEU has an external relay that you can connect to a customer-provided alerting device. These devices are typically loud ringers or bells that provide ringing in large or noisy areas.

In the main CEU, the external relay corresponds to software Relay 01. In the expansion CEU, the external relay corresponds to software Relay 02.

The equipment you connect to the external relays must be compatible with the following system specifications:

Maximum Load: 60 mA @ 30 V DC
10 mA @ 90 V AC

OPTIONAL EQUIPMENT

SMDR Printer/ Programming Terminal

The AUX Module provides an RS-232-C serial port for connecting a Station Message Detail Recording (SMDR) printer or optional programming terminal. The customer-provided printer/terminal selected should be a standard ASCII RS-232-C device. The printer or terminal connects to the AUX Module with customer-provided RS-232-C cable (see page 2-24).

Modem

If you want the system to have Remote Maintenance and Programming capability, you'll need two 103 or 212A Hayes compatible modems. Install a modem at the off-site service center and near the system CEU. The on-site modem plugs into the RS-232-C serial port on the AUX Module. You'll also need a DCE-DCE Adaptor (P/N 89079) for the modem connected to the AUX Module.

Backup and Online Software Disk (P/N 88216)

With the Backup and Online Software Disk, you can:

- Backup (save) the system programming to disk
- Upload (send) previously saved programming back to the system
- Program the system directly from the PC

The Backup and Online Software Disk requires an IBM compatible PC. The PC must have:

- An RS-232-C serial port
- At least 256K RAM
- DOS version 2.1 (or higher)

The Backup and Online option requires an AUX Module. Consult your sales representative for additional details.

Battery Backup

The CEU provides connection for a customer-provided battery backup unit. The recommended battery backup unit is the Valcom VB260. The VB260 provides short term (approximately two hours) battery backup if AC power fails.

INSTALLATION EQUIPMENT

Installation Backboard

The common equipment mounts on an installation backboard. This backboard should be 3/4" exterior grade plywood. The minimum recommended size for a two-CEU system is 4' x 5'.

RFI Suppressor Beads

The power supply cable and the optional equipment terminal strip require RFI suppressor ferrite bead assemblies. Each assembly consists of two split beads and a plastic housing. Two RFI bead assemblies are included with each CEU

RJ11C Telco Interface

The line ports in each CO Module connect to Telco RJ11C interface jacks. The site must have one RJ11C for each CO Module port used for outside lines. Make a record of the phone numbers associated with each RJ11C.

66M1-50 Connecting Blocks

Each Station Module should have two 66M1-50 connecting blocks. One block, the extension block, connects to each Station Module. The second block, the cross-connect block, connects the extensions. During installation, you cross-connect between the two blocks.

Bridging Clips

Each extension and cross-connect block requires 50 bridging clips. Bridging clips simplify troubleshooting.

Modular Jacks

Each extension and power failure telephone requires a 625A or 625F modular jack. The power failure telephones require two additional 6-pin jacks. All jacks **must** use screw type terminals. Do not use modular jacks with push-on type terminals.

INSTALLATION EQUIPMENT

Cables

The system requires the cables listed below.

- **25-Pair cable** connects each Station Module to its extension block. The cable end that plugs into the Station Module must be a Type 57 female connector. The other cable end depends on the type of extension block you use.
- **Station cable** connects each extension modular jack to the cross-connect blocks. Station cable is two-pair twisted, insulated, jacketed, solid copper wire. Station cable can be 22-26 AWG, depending on the length of the cable run. See Specifications on page 1-21.
- **Cross-connect cable** connects the extension blocks to the cross-connect blocks. Cross-connect cable is single-pair, twisted, insulated, non-jacketed solid copper wire. Cross-connect cable is normally 22-26 AWG.
- **Modular line cords** (four-conductor) connect each extension to its modular jack. A Modular line cord comes in the box with each phone. Modular line cords also connect each Telco RJ11C to each CO Module line port. Each power failure telephone uses a four-conductor line cord and an additional six-conductor line cord for the CO Module.
- **Ground Wire** connects each CEU to verified earth ground. Ground wire is normally 12-14 AWG insulated copper wire.

Surge Protector

Each power supply must use a power line surge protector. Refer to the Standard Installation Practices Manual (P/N N2710STD01) for recommended types.

The Data Products allow your system to link (network) computers, printers, terminals and other data devices. Refer to the system Data Products Manual for complete installation and programming details.

Data Module (P/N 88400)

With the Data Module, any extension position can connect to an RS-232-C compatible device. When bridged to a telephone, Data Module users can:

- Place voice calls (using just the telephone)
- Place data calls (using just the Data Module)
- Place simultaneous voice and data calls (using the module and the telephone).

DATAPORT PCB (P/N 89460)

The DATAPORT PCB is similar in function to the Data Module. Anything you can do from a terminal connected to a Data Module you can do from a terminal connected to a DATAPORT. The DATAPORT has DIP configuration switches to customize its RS-232-C parameters. Each DATAPORT PCB supports two connected devices. The DATAPORT PCB plugs into a Mini Data Unit (see below). *You can connect a Mini Data Unit only if your system has an AUX Module.*

Modem Pooling PCB (P/N 89465)

The Modem Pooling PCB allows users to call data devices outside of the system (such as bulletin boards or off-site computers). The system automatically assigns a modem from this PCB to the outside data call. The system modem communicates with the modem connected to the off-site (remote) device. Each Modem Pooling PCB has two modem circuits. The Modem Pooling PCB plugs into a Mini Data Unit (see below). *You can connect a Mini Data Unit only if your system has an AUX Module.*

Mini Data Unit (P/N 89408)

The Mini Data Unit holds up to two DATAPORT PCBs, two Modem Pooling PCBs, or one of each. It can network up to four devices or provide four modem circuits. Like the Data Module, the Mini Data Unit plugs into extension jacks, not the CEU. Because of its small size, you can place the unit on a desk top. You can also mount it on the wall.

With each Mini Data Unit you'll also need a Mini Data Unit Power Supply (P/N 89409). *You can connect a Mini Data Unit only if your system has an AUX Module.*

PARTS LIST (Page 1 of 3)

Description	Part No.
The Common Equipment	
ONYX VS Common Equipment Unit (CEU)	88500
ONYX VS CEU 4 x 12 kit (4 lines and 12 extensions)	88501
Consisting of...	
(1) CEU Base, P/N 88500	
(1) CO Module, P/N 88511	
(1) Station Module, P/N 88521	
(1) Power Supply, P/N 60001	
ULTRACOM DCS Common Equipment Unit (CEU)	89500
ULTRACOM DCS CEU 4 x 12 kit (4 lines and 12 extensions)	89501
Consisting of...	
(1) CEU Base, P/N 89500	
(1) CO Module, P/N 88511	
(1) Station Module, P/N 88521	
(1) Power Supply, P/N 60001	
Power Supply	60001
CO Module	88511
Station Module	88521
ONYX VS Aux Module (main)	88525
ULTRACOM DCS Aux Module (main)	89525
Aux Module (expansion)	88529
ONYX VS Telephones	
Modular Telephones (red and green LEDs)	
30-Button Keypad without Handsfree	88160A
30-Button Keypad with Handsfree	88161A
30-Button Keypad with display and Handsfree	88163A
10-Button Keypad with Handsfree	88154
10-Button Keypad without Handsfree	88155
Modules for Modular Phones	
Handsfree Module	88170
20-Button Module	88171
20-Button Module with display	88176
Attendant Telephone	88254
Non-Modular Telephones (red LEDs only)	
30-Button Keypad without Handsfree	88260B
30-Button Keypad with Handsfree	88261B
30-Button Keypad with display and Handsfree	88263B
ULTRACOM DCS Telephones	
Multibutton Keypad	89758A
Executive Display Multibutton Keypad	89759A
Four Button Telephone	89765A

Other Station Equipment

ONYX VS DSS Console (80 button)	88555
ONYX VS Digital Single Line Telephone	88250
ULTRACOM DCS DSS Console	89764A
ULTRACOM DCS Digital Single Line Telephone	89762A
Analog Station Interface (ASI), with DTMF receiver	89749
2500/500 Sets ¹	
VS Wall/Desk Mounting Kit	88179A
DCS Multibutton Keypad Wall/Desk Mounting Kit	89769
DCS Four Button/Single Line Wall/Desk Mounting Kit	89768
VS Tractor Feed Label Inserts	88257
DCS Tractor Feed Label Inserts	89257

Optional Equipment

Music Source ¹	
Headset ¹	
External Paging Equipment ¹	
External Alerting Device ¹	
SMDR Printer/Programming Terminal ¹	
Modem (103 or 212A Compatible) ¹	
DCE-DCE Adapter	89079
Backup and Online Software Disk	88216
Battery Backup ¹	

Installation Equipment

Installation Backboard ¹	
RFI Suppressor Kits (Provided with CEU)	
RJ11C Telco Interface ¹	
66M1-50 Connecting Blocks ¹	
Bridging Clips ¹	
Modular Jacks ¹	
25-Pair Cable ¹	
Station Cable ¹	
Cross-connect Cable ¹	
Modular Line Cords, four conductor ¹	
Modular Line Cords, six conductor ¹	
Modular Line Cords, eight conductor ¹	
Ground Wire ¹	
Surge Protectors (One for each CEU) ¹	

Data Products

Data Module	88400
DATAPORT PCB	89460
Modem Pooling PCB	89465
Mini Data Unit	89408
Mini Data Unit Power Supply	89409

¹ Item not available from Nitsuko America.

PARTS LIST (Page 3 of 3)

VS Spare Parts

CEU Base	88500
Handset and Cord Assembly (K2)	88185H
Handset and Cord Assembly (K1)	89085H
Handset Coil Cord (6')	12442
Handset Coil Cord (9')	12443
Handset Coil Cord (13')	12444
Telephone Label Insert	88157
Keypad Directory Tray (without card)	88158
Keypad Directory Tray Card	88159
Four-Conductor Line Cord (7')	89086
Four-Conductor Line Cord (14')	89087
Four-Conductor Line Cord (25')	89088
DTS Paper Tray Module	88172

DCS Spare Parts

CEU Base	89500
Handset and Cord Assembly (K2)	89780H
Handset Coil Cord (6')	85326
Handset Coil Cord (9')	85323
Handset Coil Cord (13')	85324
Telephone Label Insert (Multibutton)	89157
Telephone Label Insert (Four Button)	89158
Keypad Directory Tray (without card)	89788
Keypad Directory Tray Card	89787
Four-Conductor Line Cord (7')	89086
Four-Conductor Line Cord (14')	89087
Four-Conductor Line Cord (25')	89088

SPECIFICATIONS (Page 1 of 2)

CEU Specifications:

	Lines	Stations
Main CEU	8	24
Expansion CEU	8	24
Total	16	48

System Capacity:

Power Failure Cut-Through Circuit	1 per CO Module
Talk Timeslots (Intercom/lines)	Non-blocking
DTMF Tone Duration (manual dial)	256 ms on/128 ms off
DTMF Tone Duration (speed dial)	128 ms on/128 ms off
Internal Page Zones	7 (and all-call)
External Page Zones	1 output per CEU
External Control Relay Circuits	1 set of contacts per CEU
Special Trunk Interface Units:	1
- OPX/DID Circuits	8
- Tie Lines	7

Electrical Specifications:

AC Input:

115 V AC +/- 10% @ 57-63 Hz, Dedicated 15 A circuit.

Grounding Requirements:

Copper wire, continuous, No. 14 AWG, or larger

Power Requirements:

75 VA maximum (per CEU)

Heat Dissipation:

TBD

External Control Relay Contact Rating:

Max. Load: 60 mA @ 30 V DC

10 mA @ 90 V AC

Maximum Initial Contact Resistance:

50 m OHMS

Background Music/Music on Hold:

Input Impedance: 100 K OHMS

Maximum Input: -10 dBm

External Zone Paging:

Output Impedance: 600 OHMS

Max. Output: +3 dBm

Cable Requirements:

From CEU to Keysets or ASI:

Four-conductor (two-pair twisted station cable)

1,500 feet w/No. 26 AWG

2,000 feet w/No. 24 AWG

2,500 feet w/No. 22 AWG

From ASI to connected OPX device:

100 feet using 22 AWG four-conductor

Use 25-pair cables with Type 57 female connectors to connect to Station Modules.

Use four conductor modular line cords to connect to CO Modules.

Use multiconductor "riser cables" to an Intermediate Distribution Frame (IDF) when required.

SPECIFICATIONS (Page 2 of 2)

Mechanical Specifications:

	Width	Height	Depth	Weight
CEU	14 5/16" 39.2 cm	9 1/4" 23.7 cm	3" 7.6 cm	3 lb, 11 oz 1.7 kg
CO Module	6 3/4" 17.1 cm	6 3/4" 17.2 cm	1 1/2" 3.8 cm	1 lb .5 kg
Station Module	6 3/4" 17.1 cm	6 3/4" 17.1 cm	1 1/2" 3.8 cm	1 lb .7 kg
Power Supply	2 13/16" 7.2 cm	5" 12.7 cm	2 3/4" 7.0 cm	3 lbs 1.4 kg
Keysets	3 1/2" 8.9 cm	7 1/2" 19.1 cm	10 1/8" 25.8 cm	2.7 lb 1.3 kg

NOTE: Weight of CEU is with modules not installed.

Environmental Specifications:

Refer to the Standard Practices Manual (P/N N2710STD01).

FCC Registration Information:

Model:	ONYX VS, ULTRACOM DCS
Manufacturer:	Nitsuko America
Load number (DOC)	20
FCC Part 15 Registration:	Class A
Sample FCC Registration Number:	1ZDTHA-65325-MF-E

(Refer to the label on the CEU for FCC Registration number.)

Type of Interface	USOC Jack Connector	REN/Service Code	Facility Interface Code
2-Wire Loop	RJ11C	2.5B	02LS2

Section 2

Installation

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INSTALLING THE COMMON EQUIPMENT

Before Installing

Step 1 > **Unpack the equipment.**

Unpack the equipment and check it against your equipment lists. Inspect for physical damage. If you have any questions about the quantity or function of the equipment received, review Section 1 of this manual.

Step 2 > **Check your tools.**

In addition to your equipment, make sure you have the appropriate tools for the job. These tools should include:

- Lineman's test set
- Punch down (impact) tool
- Digital voltmeter (Fluke 8012A or equivalent)

Step 3 > **Make sure you have a building plan showing the location of the common equipment and the extensions.**

INSTALLING THE COMMON EQUIPMENT

Mounting the CEUs

To mount the CEUs:

- Step 1 > Install the backboard using suitable fasteners.
- Step 2 > Have the telco install the RJ11C interface connectors to the left of the CEU locations (Figure 2-1).
- Step 3 > Using Figure 2-1 as a guide, mark the mounting holes for the CEUs.

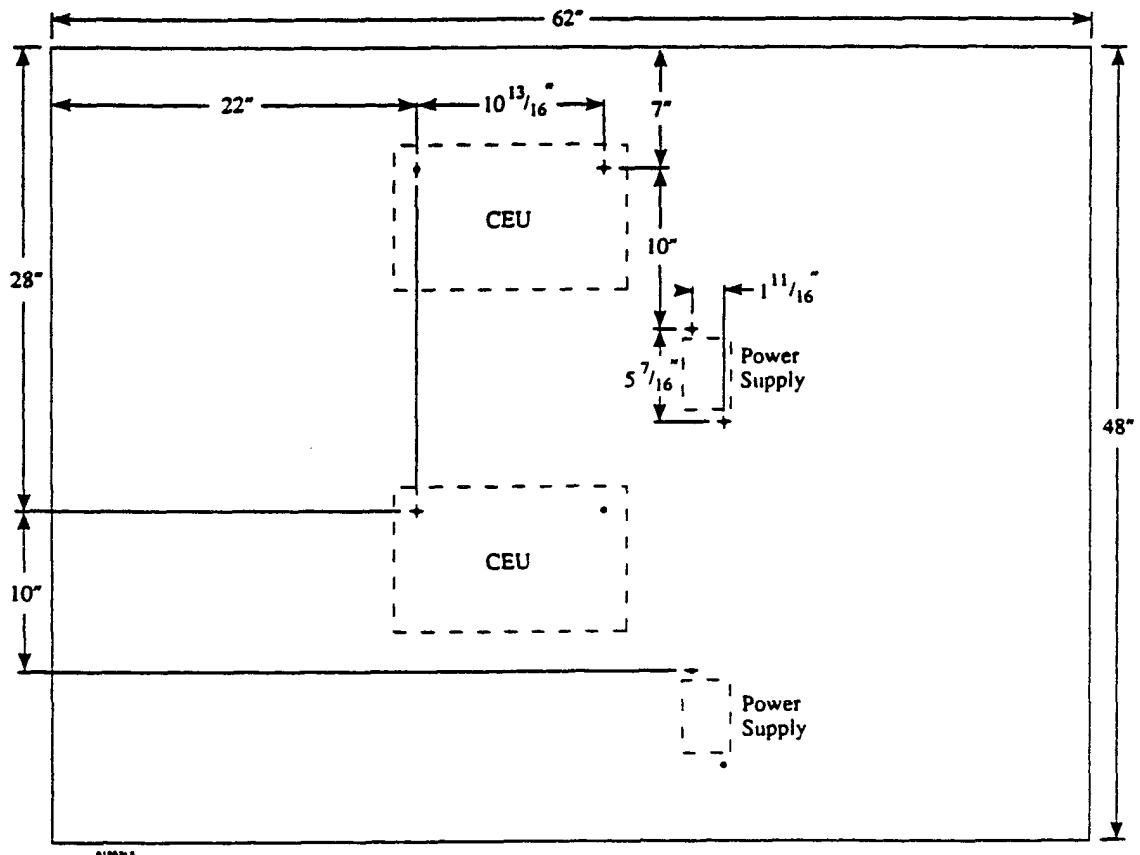


Figure 2-1 COMMON EQUIPMENT LOCATION

INSTALLING THE COMMON EQUIPMENT

Mounting the CEUs (Cont'd)

Step 4 > Start pilot holes (Figure 2-2) and insert suitable fasteners.

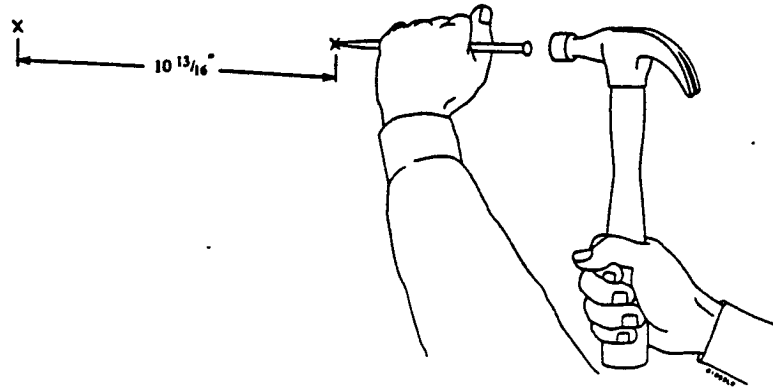


Figure 2-2 LOCATING THE CEU MOUNTING HOLES

Step 5 > Using the plastic screw gauge provided with your CEUs (Figure 2-3), tighten the CEU mounting screws until they just touch the screw gauge.

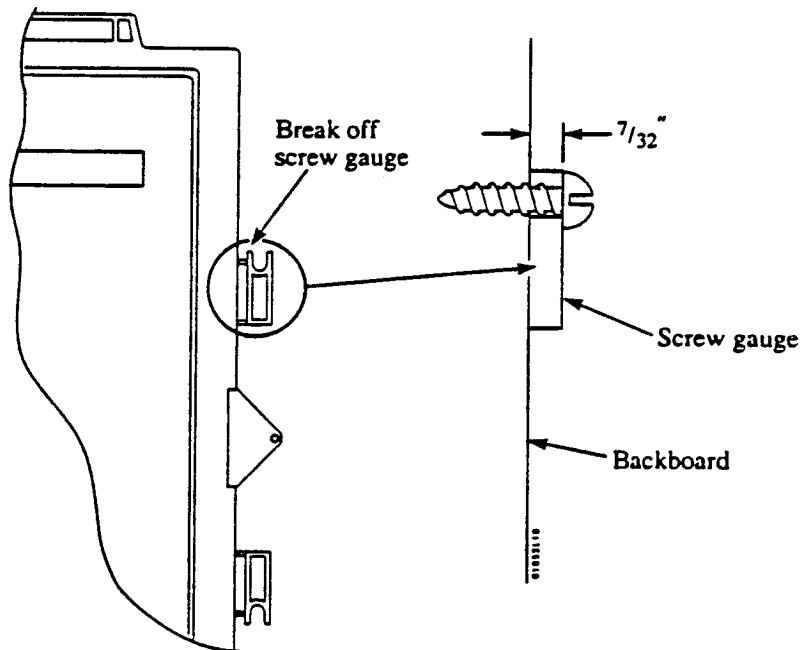


Figure 2-3 USING THE SCREW GAUGE

INSTALLING THE COMMON EQUIPMENT

Mounting the CEUs (Cont'd)

- Step 6 > Remove the screw gauge.
- Step 7 > Hang the CEUs on their mounting screws (Figure 2-4).

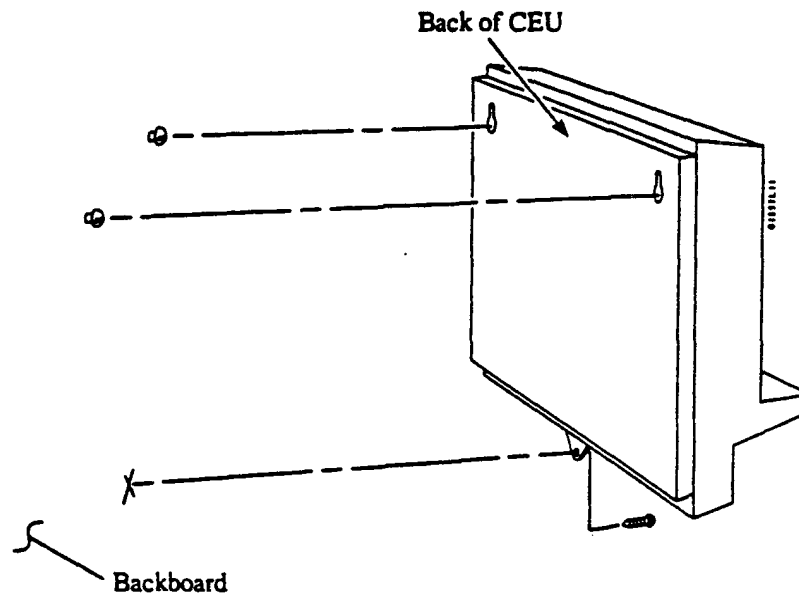


Figure 2-4 HANGING THE CEUs

- Step 8 > Install the third mounting screw in each CEU (Figure 2-4). This screw keeps the CEU from inadvertently sliding off the wall.

Mounting the Power Supplies

To mount the Power Supplies:

- Step 1 > Using Figure 2-1 as a guide, mark the mounting holes for the power supplies.
- Step 3 > Start pilot holes for the power supplies.
- Step 4 > While holding a power supply against the wall, insert and tighten its fasteners. Repeat for the second power supply.

INSTALLING THE COMMON EQUIPMENT

Installing the RFI Suppressor Beads on the Power Supply Cable

You must install two RFI Suppressor ferrite beads (one assembly) on the power supply cable before plugging it into the CEU.

To install the RFI Suppressor beads (Figure 2-5):

- Step 1 > Form three loops in the power supply cable within 3" of the connector that plugs into the CEU.
- Step 2 >
 - Insert the beads in the plastic cover.
 - Snap on the plastic cover around the loops.
- Step 3 > Plug the power supply connector into the CEU. *Do not plug the power supply into the AC receptacle.*

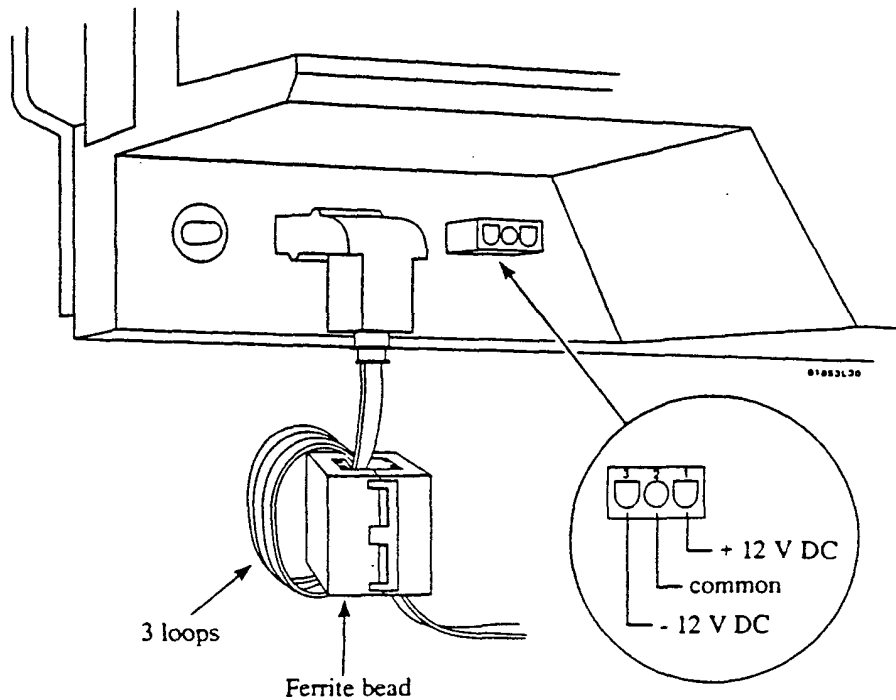


Figure 2-5 POWER SUPPLY RFI SUPPRESSOR BEADS

INSTALLING THE COMMON EQUIPMENT

Installing the Modules

The CO Modules always install on the left side of the CEU. The Station Modules always install on the right side of the CEU. Remember, the first (inside) station module in the main CEU should be a 12 Station Module. Also, External Page, Music on Hold (for internal extensions) and Background Music use the fourth line circuit on the first CO Module.

CAUTION: Never install the modules with the power supply plugged in.

To install the CO and Station Modules (Figure 2-6):

- Step 1 >** Place the two CO or Station Modules together. Make sure the ground plug on the outside module plugs into the ground receptacle in the inside module.
- Step 2 >** Line up the modules you placed together in step 1 with the CEU pilot holes.
- Step 3 >** Pass the long screw provided through each pair of modules and tighten the modules against the CEU. This holds the modules in place while you plug in the ribbon cables.
If you have two modules on the same side of the CEU, use the long screw provided. If you have only one module on a side, use the short screw.
- Step 4 >** Grasp the stiffeners and plug the module ribbon cables firmly into the CEU connectors. The inside modules plug into the outside connectors. The outside modules plug into the inside connectors. *Do not twist or crush the module ribbon cables.*
- Step 5 >** For each pair of modules:
- Remove the screw that holds the modules in the pilot holes.
 - Line up the modules in their final mounting position. The inside module ground plugs must fit into their receptacles in the CEU.
 - Tighten the screws in the final mounting holes.

INSTALLING THE COMMON EQUIPMENT

Installing the Modules (Cont'd)

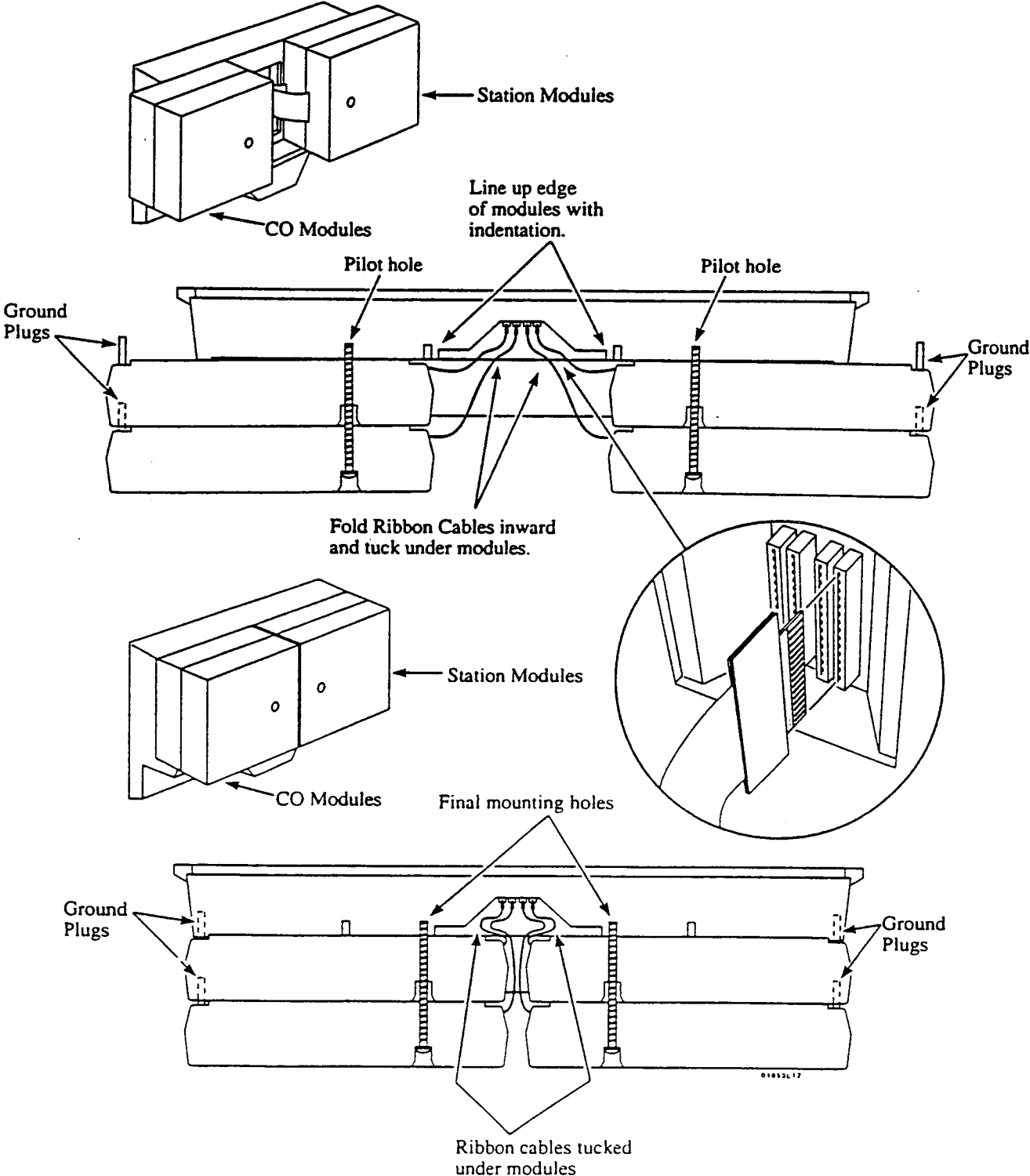


Figure 2-6 INSTALLING THE CO AND STATION MODULES

INSTALLING THE COMMON EQUIPMENT

Installing the Modules (Cont'd)

To install the AUX Module (Figure 2-7):

- Step 1 >** Make sure the CEU power supply is unplugged. You'll need at least 7" of clearance between the CEU and any object to the right of the CEU.
- Step 2 >** With the CEU ejector tabs closed, slide the AUX Module on the guides part way into the CEU.
- Step 3 >**
- Plug the AUX Module in until the ejector tabs clear the AUX Module front panel.
 - Open the CEU ejector tabs by pushing them outward.
 - Firmly seat the AUX Module ribbon cable before pushing the module all the way in. Push on the ribbon cable connector until the ejector tabs close.
- Step 4 >** Push the AUX Module all the way in and tighten the two thumbscrews.

If you plug an AUX Module into an existing system without reinitializing, the level 2 terminal programming password is DCH. If you reinitialize, the default programming is reinstated. Consult your software manual for the terminal programming passwords.

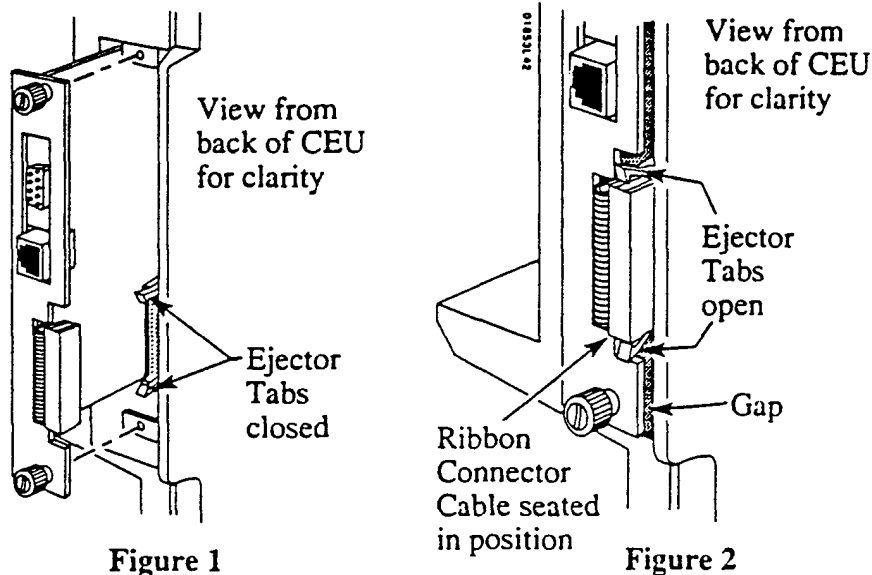
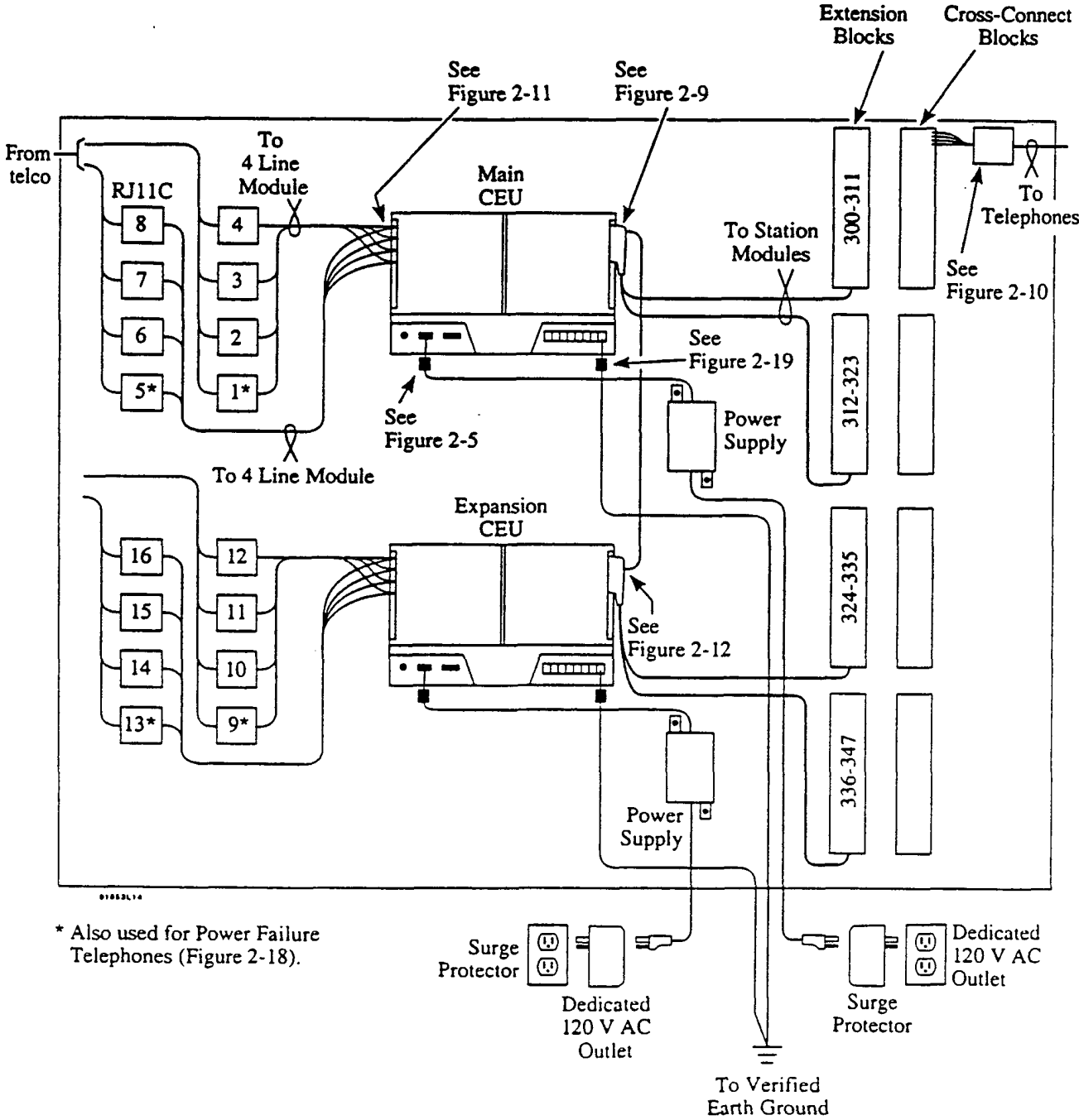


Figure 2-7 INSTALLING THE AUX MODULE

Mounting the Connecting Blocks

Figure 2-8 shows a typical layout for the system and the 66M1-50 connecting blocks. Each Station Module has two blocks: an extension block and a cross-connect block. Modify this layout to suit the site requirements and your preference.



* Also used for Power Failure Telephones (Figure 2-18).

Figure 2-8 TYPICAL SYSTEM LAYOUT

CABLING

Grounding

You *must* ground each CEU to a verified earth ground (Figure 2-8). Run a separate ground wire for each CEU. The ground wire connects from the right lug on the CEU terminal strip to earth ground. Keep the ground wire as short as possible, generally not exceeding 25'.

Station Module Cabling

To cable the Station Modules (Figure 2-9):

- Step 1 ► Use 25-pair cable to connect each Station Module to its extension block. The female end of the 25-pair cable plugs into the Station Module.
- Step 2 ► Punch down the other end of the cable on the extension block (see Table 2-1). The chart below shows the extension numbers for each Station Module.

CEU	Position	Extensions
Main	1 (inside)	300-311
Main	2 (outside)	312-323
Expansion	1 (inside)	324-335
Expansion	2 (outside)	336-347

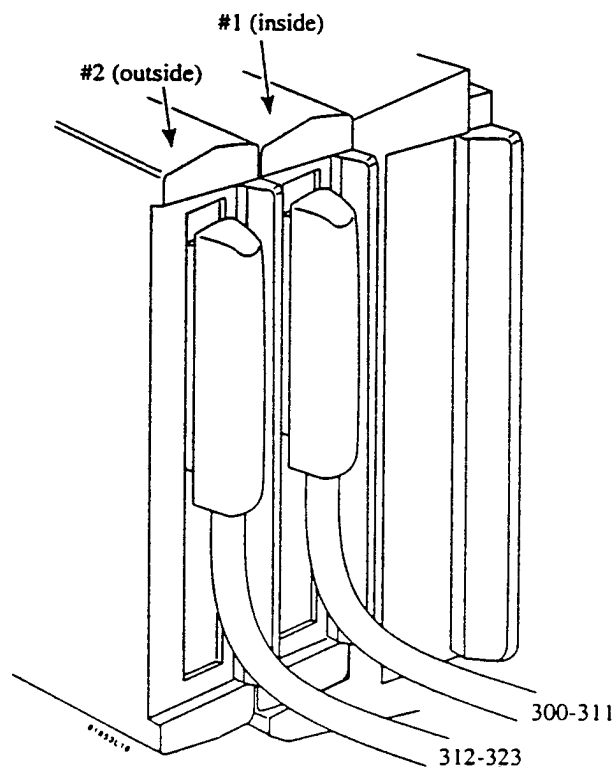


Figure 2-9 STATION MODULE CABLING

Table 2-1 EXTENSION ASSIGNMENTS

25-PAIR CABLE							
CONN PIN	BLOCK TERM.	COLOR CODE	MAIN CEU (INSIDE)	MAIN CEU (OUTSIDE)	EXP. CEU (INSIDE)	EXP. CEU (OUTSIDE)	FUNCTION
26	1	WHT-BLU	300 (00)	312 (12)	324 (24)	336 (36)	TT
1	2	BLU-WHT					TR
27	3	WHT-ORN					RT
2	4	ORN-WHT					RR
28	5	WHT-GRN	301 (01)	313 (13)	325 (25)	337 (37)	TT
3	6	GRN-WHT					TR
29	7	WHT-BRN					RT
4	8	BRN-WHT					RR
30	9	WHT-SLT	302 (02)	314 (14)	326 (26)	338 (38)	TT
5	10	SLT-WHT					TR
31	11	RED-BLU					RT
6	12	BLU-RED					RR
32	13	RED-ORN	303 (03)	315 (15)	327 (27)	339 (39)	TT
7	14	ORN-RED					TR
33	15	RED-GRN					RT
8	16	GRN-RED					RR
34	17	RED-BRN	304 (04)	316 (16)	328 (28)	340 (40)	TT
9	18	BRN-RED					TR
35	19	RED-SLT					RT
10	20	SLT-RED					RR
36	21	BLK-BLU	305 (05)	317 (17)	329 (29)	341 (41)	TT
11	22	BLU-BLK					TR
37	23	BLK-ORN					RT
12	24	ORN-BLK					RR
38	25	BLK-GRN	306 (06)	318 (18)	330 (30)	342 (42)	TT
13	26	GRN-BLK					TR
39	27	BLK-BRN					RT
14	28	BRN-BLK					RR
40	29	BLK-SLT	307 (07)	319 (19)	331 (31)	343 (43)	TT
15	30	SLT-BLK					TR
41	31	YEL-BLU					RT
16	32	BLU-YEL					RR
42	33	YEL-ORN	308 (08)	320 (20)	332 (32)	344 (44)	TT
17	34	ORN-YEL					TR
43	35	YEL-GRN					RT
18	36	GRN-YEL					RR
44	37	YEL-BRN	309 (09)	321 (21)	333 (33)	345 (45)	TT
19	38	BRN-YEL					TR
45	39	YEL-SLT					RT
20	40	SLT-YEL					RR
46	41	VIO-BLU	310 (10)	322 (22)	334 (34)	346 (46)	TT
21	42	BLU-VIO					TR
47	43	VIO-ORN					RT
22	44	ORN-VIO					RR
48	45	VIO-GRN	311 (11)	323 (23)	335 (35)	347 (47)	TT
23	46	GRN-VIO					TR
49	47	VIO-BRN					RT
24	48	BRN-VIO					RR
50	49	VIO-SLT					N/C
25	50	SLT-VIO					N/C

CABLING

Station Module Cross-Connect Cabling

Use cross-connect cable to connect the clips on the extension blocks to their corresponding clips on the cross-connect blocks. Bridging clips simplify troubleshooting later on.

Installing the Telephones

To install the telephones:

- Step 1 > Install a modular jack at each extension location. The modular jack should be within six feet of the phone location.
- Step 2 > For each extension, run two-pair twisted station cable from the modular jack to the cross-connect block.
- Step 3 > Connect the station cable to each modular jack (Figure 2-10).
- Step 4 > Punch down the station cable on the cross-connect block. *DSS Consoles always use the even numbered port of a dual port.*

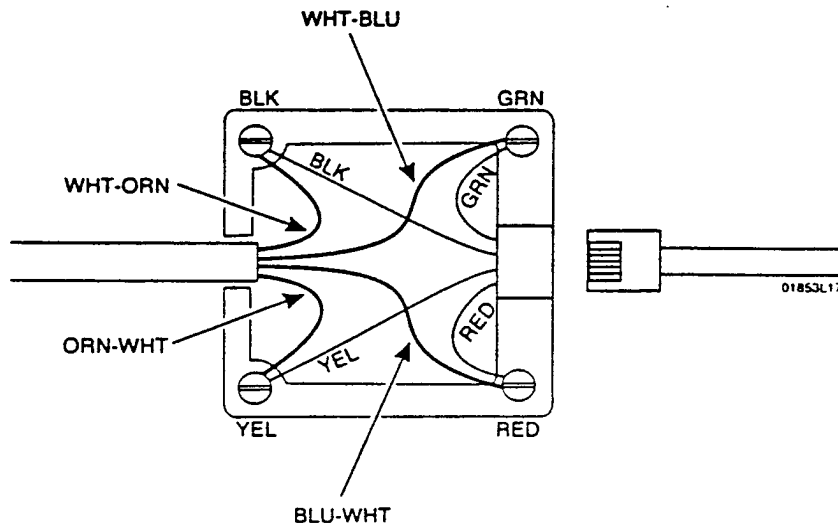


Figure 2-10 MODULAR JACK CONNECTIONS

CO Module Cabling

To connect the outside lines (Figure 2-11):

- Step 1 > Plug one end of a modular line cord into the first telco RJ11C.
- Step 2 > Plug the other end of the modular line cord into the "1" connector on the inside CO Module.
- Step 3 > Repeat steps 1 and 2 for each RJ11C. External Page and internal MOH use the fourth line circuit on the inside CO Module in each CEU. You may not want to connect an RJ11C to these ports.

The chart below shows the line numbers for each CO Module.

CEU	Position	Lines
Main	1 (inside)	1-4
Main	2 (outside)	5-8
Expansion	1 (inside)	9-12
Expansion	2 (outside)	13-16

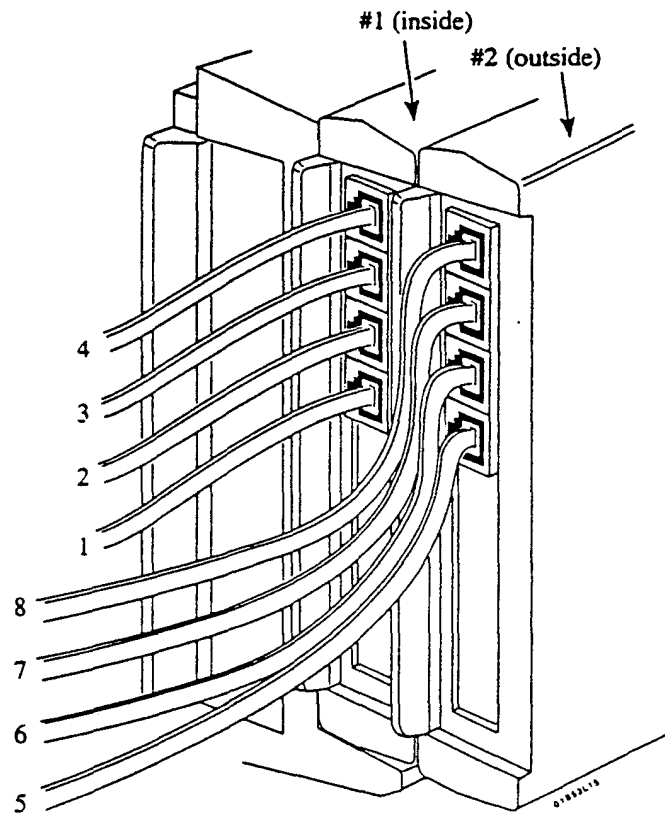


Figure 2-11 CO MODULE CABLING

CABLING

Connecting the CEUs

If you have a two-CEU system, you must connect the main CEU to the expansion CEU. Both CEUs must have AUX Modules. In addition, you'll need an eight-pin modular line cord.

To connect two CEUs (Figure 2-12):

- Step 1 ► Plug one end of an eight-pin line cord into the jack on the main CEU AUX Module.
- Step 2 ► Plug the other end of the same line cord into the jack on the expansion CEU AUX Module.

Connecting the
CEUs (Cont'd)

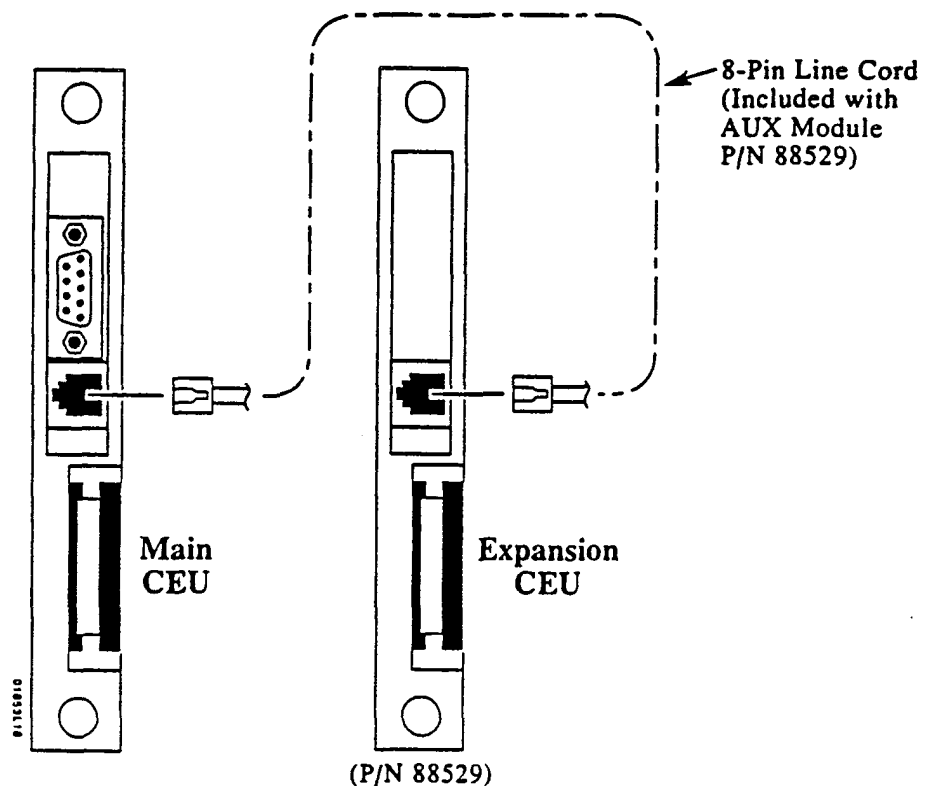


Figure 2-12 CONNECTING TWO CEUs

POWERING UP AND TESTING THE SYSTEM

You can now power up the system and briefly check its operation. Before proceeding, be sure that:

- The common equipment is installed
- All extensions are wired and cross-connected
- All telco RJ11C jacks are connected to the CO Modules
- The RFI Suppressor beads are installed

Initial Power-up

To power up the system:

Step 1 >

Plug in each CEU power supply.

The system automatically starts up after a few seconds. If your system has any display sets, their displays will show, "WELCOME."

On initial power up:

- Attendant is extension 300
- DSS Console is extension 302
- 30-button VS keyset and DCS keyset programmable keys 1-16 are for lines 1-16. Remaining keys are undefined.
- 10-button VS keyset programmable keys are undefined
- Line keys on attendant's phone flash and ring for all incoming calls
- Line keys on other phones flash but do not ring for incoming calls
- All lines are loop start DTMF signaling
- The system performs a side tone test on all lines

Making Test Calls

To test the Intercom:

Step 1 >

Go to any keyset and lift the handset.

Step 2 >

Press INTERCOM.

The key lights and you hear Intercom dial tone.

Step 3 >

Dial the number of another installed extension.

You hear two beeps and are connected.

To test outside calls:

Step 1 >

Go to any keyset and lift the handset.

Step 2 >

Press line key 1.

The key lights and you hear telco dial tone.

Step 3 >

Dial the telephone number that rings line two.

Line two flashes at all keysets.

Step 4 >

Have an assistant go to any keyset, lift the handset and press line key 2.

You are connected to your assistant.

POWERING UP AND TESTING THE SYSTEM

Basic Troubleshooting

To troubleshoot extension problems:

- Step 1 > Check and verify programming.
- Step 2 > Check and verify extension. The voltages at the extension's modular jack should be:
- | Meter Lead | Jack Terminal | Voltages ¹ |
|-------------------------|---------------|-----------------------|
| Black lead to | GRN | +27 V DC |
| Red lead to | BLK | |
| Black lead to | RED | +27 V DC |
| Red lead to | YEL | |
| Black lead to | GRN | 0 V DC |
| Red lead to | RED | |
| Black lead to | BLK | 0 V DC |
| Red lead to | YEL | |
- Step 3 > Check and verify extension, cross-connect and Station Module wiring.
- Step 4 > Check and verify Station Module.
- Step 5 > Check and verify CEU and power supply.

To troubleshoot line problems:

- Step 1 > Check and verify programming.
- Step 2 > Check and verify RJ11C with a test set.
- Step 3 > Check and verify line and CO Module wiring.
- Step 4 > Check and verify CO Module.
- Step 5 > Check and verify CEU and power supply.

¹ All voltages are +/- 5%.

POWERING UP AND TESTING THE SYSTEM

- For your notes -

INSTALLING THE OPTIONAL EQUIPMENT

Installing the Music Source

To install the music source (Figure 2-13):

- Step 1 >**
- Using station cable (or suitable audio cable), connect the CEU MOH terminals to the music source audio output.
 - If your system has two CEUs, connect the expansion cabinet MOH terminals to the main cabinet MOH terminals. Use station cable or suitable audio cable.
You can optionally install a second music source for the expansion CEU.

CAUTION: Make sure the music source output meets the stated specifications. Do not connect to speaker terminals.

- Step 2 >** Connect the music source according to the manufacturer's instructions.
- Step 3 >** Plug the music source power cord into the 120 V AC outlet.
- Step 4 >** Activate BGM and/or MOH and adjust for a distortion-free signal. Refer to the system Software Manual or Administrator's Guide for programming considerations.
After making all your connections to the optional equipment terminal strip, you must install the RFI suppressor beads (page 2-30).

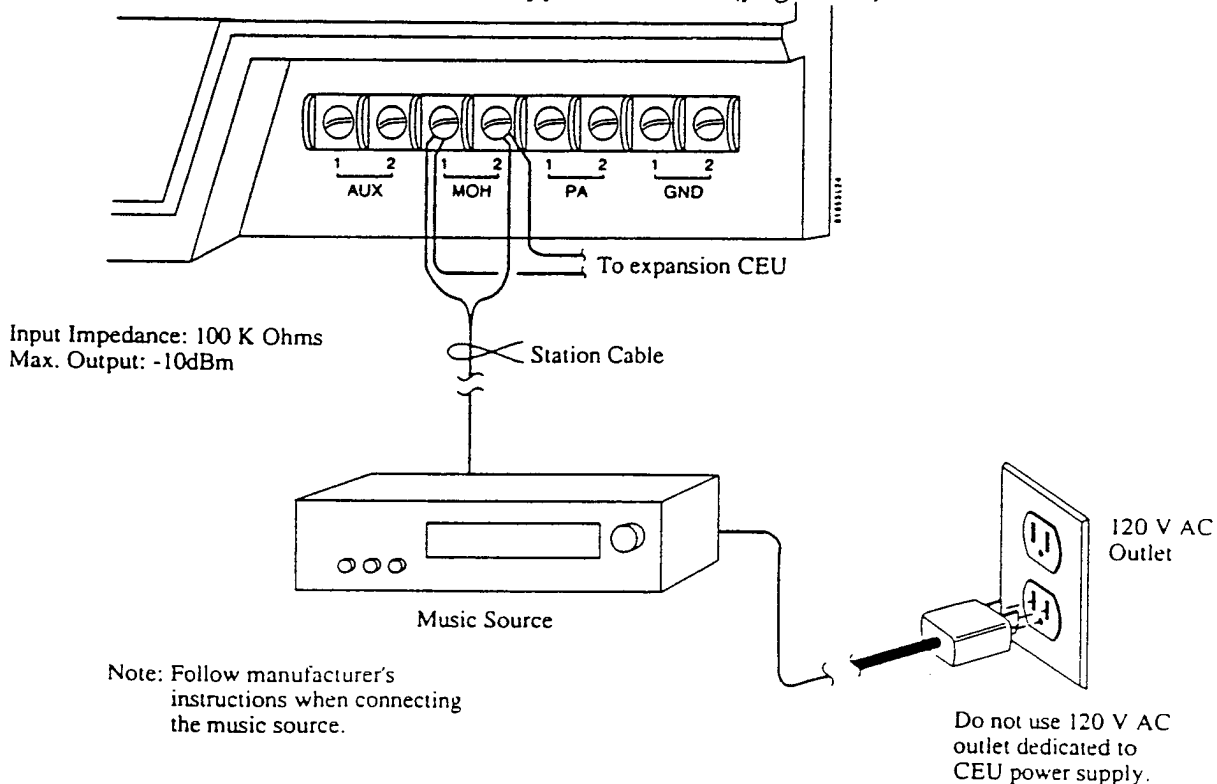


Figure 2-13 INSTALLING THE MUSIC SOURCE

INSTALLING THE OPTIONAL EQUIPMENT

Installing External Paging Equipment

To install External Paging equipment (Figure 2-14):

- Step 1 >** Using station cable (or suitable audio cable), connect the CEU PA terminals to the paging equipment audio input.
In the main CEU, the external Paging output is for All Call Paging. In the expansion CEU, the Paging output is for Paging zone 1.

CAUTION: Make sure the Paging equipment is compatible with the stated system output specifications.

- Step 2 >** Connect the Paging equipment according to the manufacturer's instructions.
- Step 3 >** Plug the Paging equipment power cord into the 120 V AC outlet.
- Step 4 >** Activate External Paging or night ringing and adjust for a distortion-free signal. Refer to the system Software Manual or Administrator's Guide for programming considerations.
After making all your connections to the optional equipment terminal strip, you must install the RFI suppressor beads (page 2-30).

INSTALLING THE OPTIONAL EQUIPMENT

Installing External Paging Equipment (Cont'd)

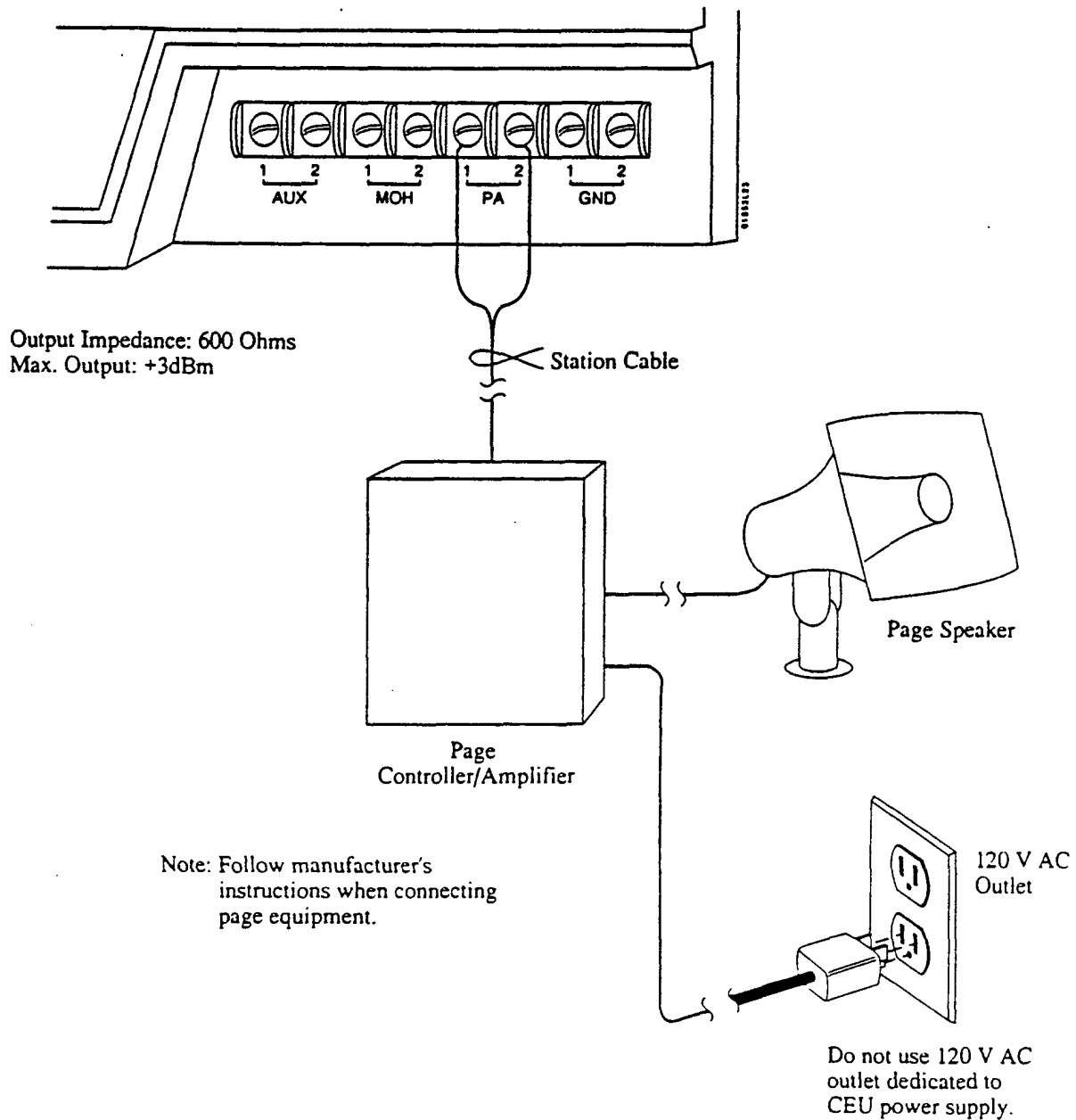


Figure 2-14 INSTALLING EXTERNAL PAGING EQUIPMENT

INSTALLING THE OPTIONAL EQUIPMENT

Installing an External Alerting Device

To connect an external alerting device (Figure 2-15):

- Step 1 >** Using station cable, connect the CEU AUX terminals to the appropriate terminals in the external alerting device.
In the main CEU, the AUX contacts correspond to software Relay 01. In the expansion CEU, the AUX contacts correspond to software Relay 02.

CAUTION: Make sure the external alerting device is compatible with the stated system output specifications.

- Step 2 >** Connect the external alerting device according to the manufacturer's instructions.
- Step 3 >** If required, plug the external alerting device power cord into the 120 V AC outlet.
- Step 4 >** Activate the external alerting device and check for proper operation. Refer to the system Software Manual or Administrator's Guide for programming considerations.
After making all your connections to the optional equipment terminal strip, you must install the RFI suppressor beads (page 2-30).

INSTALLING THE OPTIONAL EQUIPMENT

Installing an External Alerting Device (Cont'd)

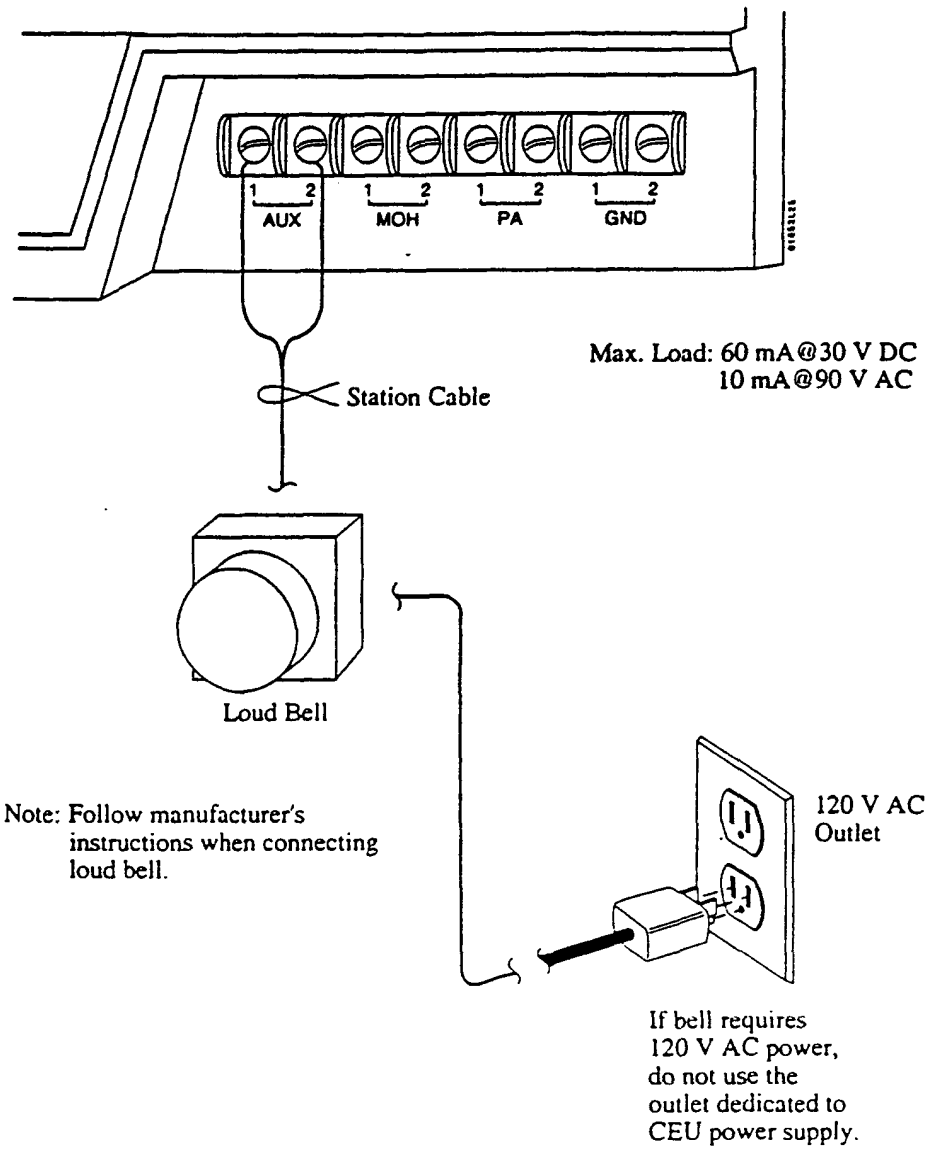


Figure 2-15 INSTALLING AN EXTERNAL ALERTING DEVICE

INSTALLING THE OPTIONAL EQUIPMENT

Installing a Programming Terminal, SMDR Printer or Modem

The AUX Module provides an RS-232-C serial port for connecting a programming terminal, SMDR printer or modem. The AUX Module serial port is configured as Data Communications Equipment (DCE). Most printers are Data Terminal Equipment (DTE). This means that in most cases you can plug a printer or terminal directly into the AUX Module, without special cables.

To connect a programming terminal or SMDR printer to the AUX Module (Figure 2-16):

- Step 1 > Plug a 9-pin to 25-pin adapter cable into the AUX Module serial port. The 9-pin cable end must have a female connector.
- Step 2 > Use a standard 25-pin RS-232-C cable to connect the adapter cable to the back of the modem.
The cable ends required depends on the requirements of the terminal/printer and the adapter cable.
- Step 3 > Plug the terminal/printer power cord into the 120 V AC outlet.

To connect a Modem to the AUX Module (Figure 2-16):

- Step 1 > Plug a 9-pin to 25-pin adapter cable into the AUX Module serial port. The 9-pin cable end must have a female connector.
- Step 2 > Plug a DCE/DCE Adapter into the back of the modem.
- Step 3 > Use a standard 25-pin RS-232-C cable to connect the adapter cable to the back of the modem.
The cable end that plugs into the modem must have a 25-pin male connector. The other cable end depends on the requirements of the adapter cable.
- Step 3 > Plug the modem power cord into the 120 V AC outlet.

To set the AUX serial port speed (from port 00/ext. 300):

- Step 1 > Lift handset and press ICM.
- Step 2 > Press # and dial 0.
- Step 3 > Dial digit to select baud rate (0=300, 1=1200, 2=2400, 3=4800, 4=9600, 5=19.2K).
- Step 4 > Hang up.

INSTALLING THE OPTIONAL EQUIPMENT

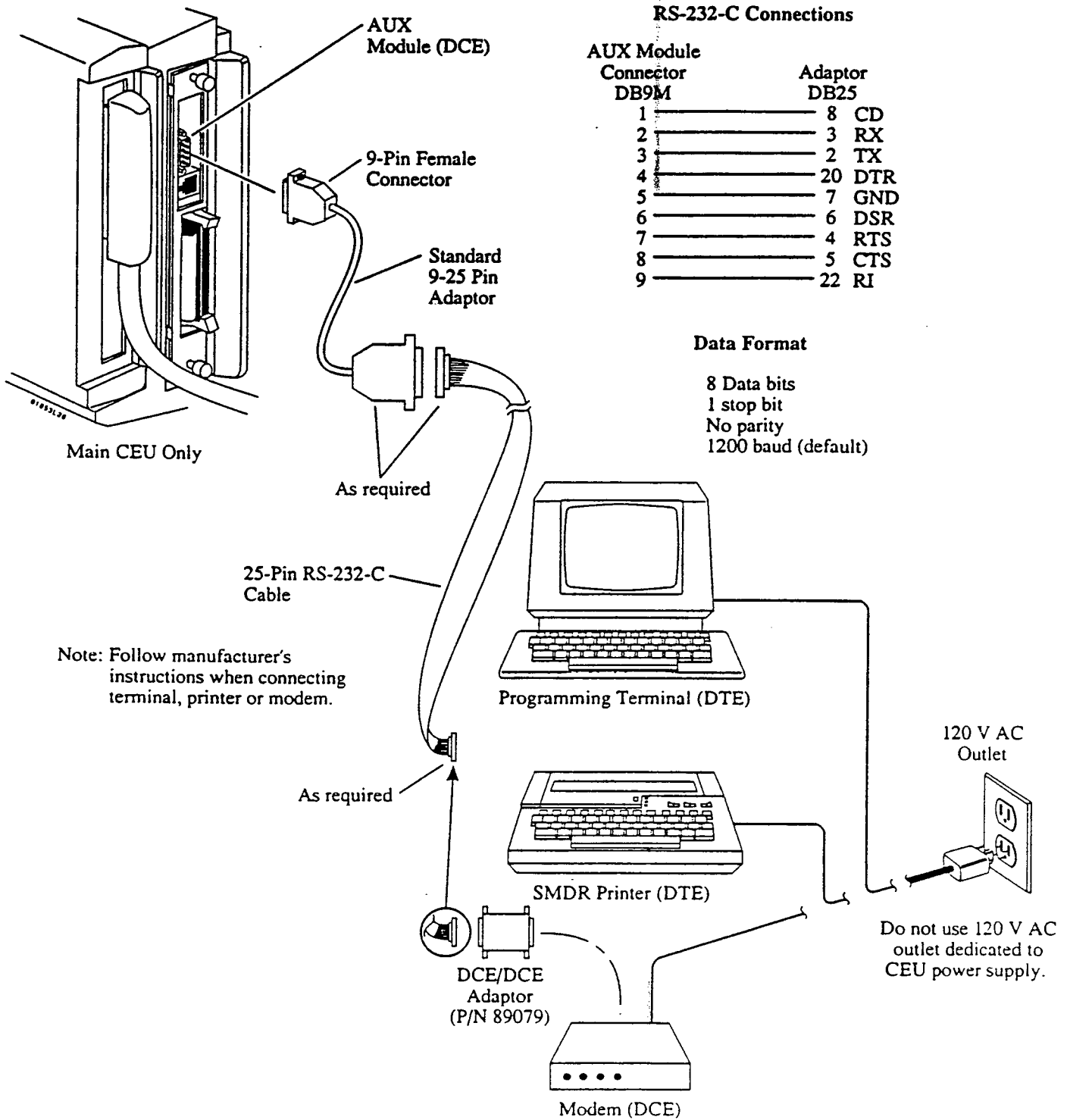


Figure 2-16 INSTALLING A PROGRAMMING TERMINAL, SMDR PRINTER OR MODEM

INSTALLING THE OPTIONAL EQUIPMENT

Installing Battery Backup

The battery backup unit provides short term battery backup if AC power fails. The recommended unit is the Valcom VB260.

To connect the battery backup unit (Figure 2-17):

- Step 1 >** Mount the unit on the installation backboard, within 3' of the CEU.
- Step 2 >** Plug the battery backup unit 3-pin plug into the CEU connector. The plug and connector are keyed so they fit together only one way.
- Step 3 >** Plug the battery backup unit into the 120 V AC outlet.

INSTALLING THE OPTIONAL EQUIPMENT

Installing Battery Backup (Cont'd)

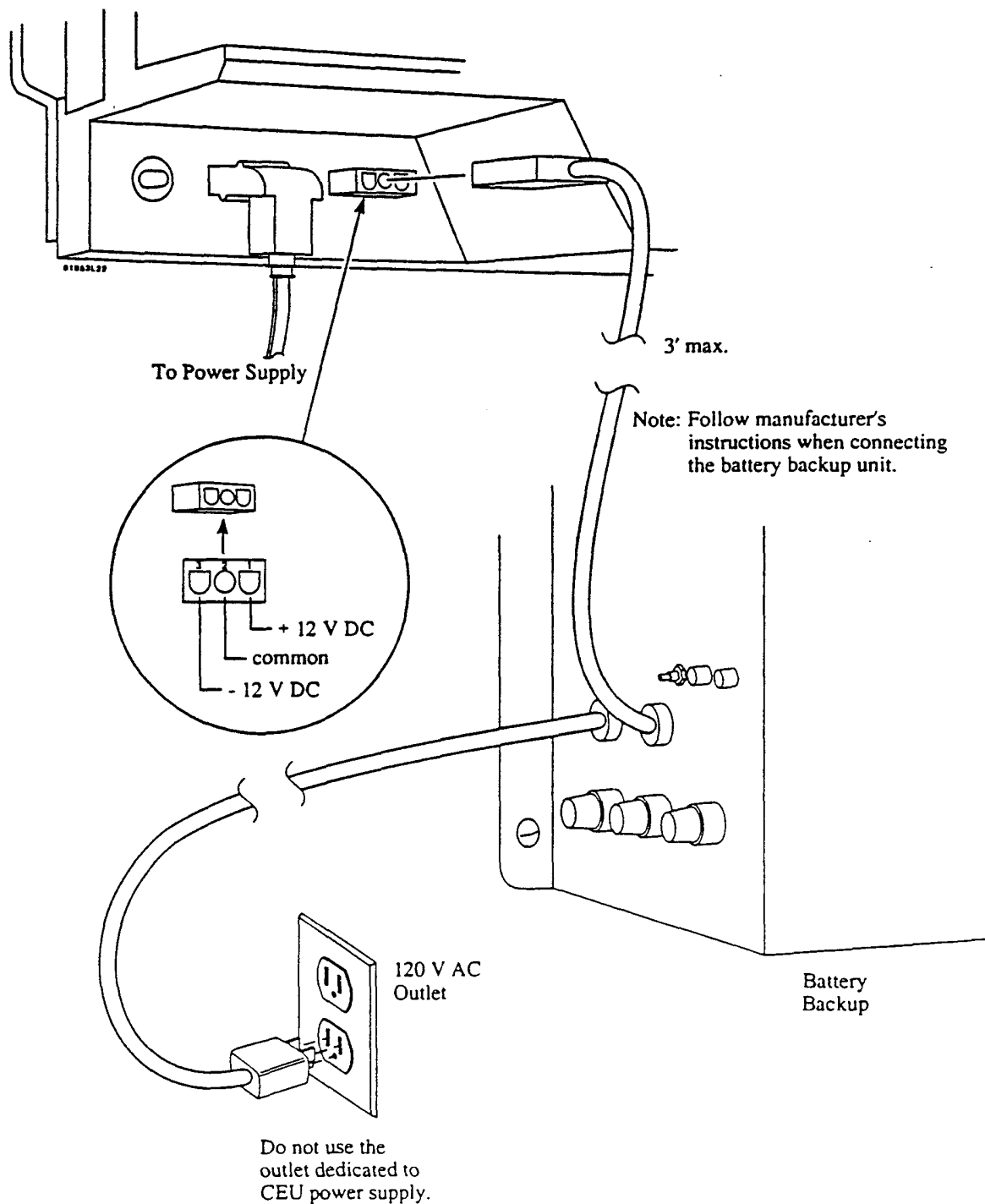


Figure 2-17 INSTALLING BATTERY BACKUP

INSTALLING THE OPTIONAL EQUIPMENT

Installing Power Failure Telephones

The first line port in each CO Module provides power failure cut-through. When power fails, a relay closes in the CEU to cut line 1 through to the third pair in the modular jack. The system can have up to four single line sets wired for power failure cut-through. Make sure the phone you select is compatible with your telco service (DTMF or Dial Pulse).

To install a power failure telephone (Figure 2-18):

- Step 1 >** Install three modular jacks close to the CEU. One of the jacks must be 6-pin. The other two jacks can be 6-pin or 4-pin.
- Step 2 >** Using station cable, connect the green/red pair of the first 6-pin jack to the green/red pair of the second 6-pin jack.
- Step 3 >** Using station cable, connect the blue/white pair of the second 6-pin jack to the green/red pair of the third jack.
- Step 4 >** Using a four-conductor line cord, connect the telco RJ11C to the first 6-pin jack.
- Step 5 >** Using a six-conductor line cord, connect the second 6-pin jack to CO Module line 1.
- Step 6 >** Using a four-conductor line cord, connect the power failure telephone to the third jack.

To test power-failure cut-through:

- Step 1 >** Unplug the CEU.
- Step 2 >** Lift the handset on the power failure telephone.
You should hear dial tone and be able to place and answer calls.

INSTALLING THE OPTIONAL EQUIPMENT

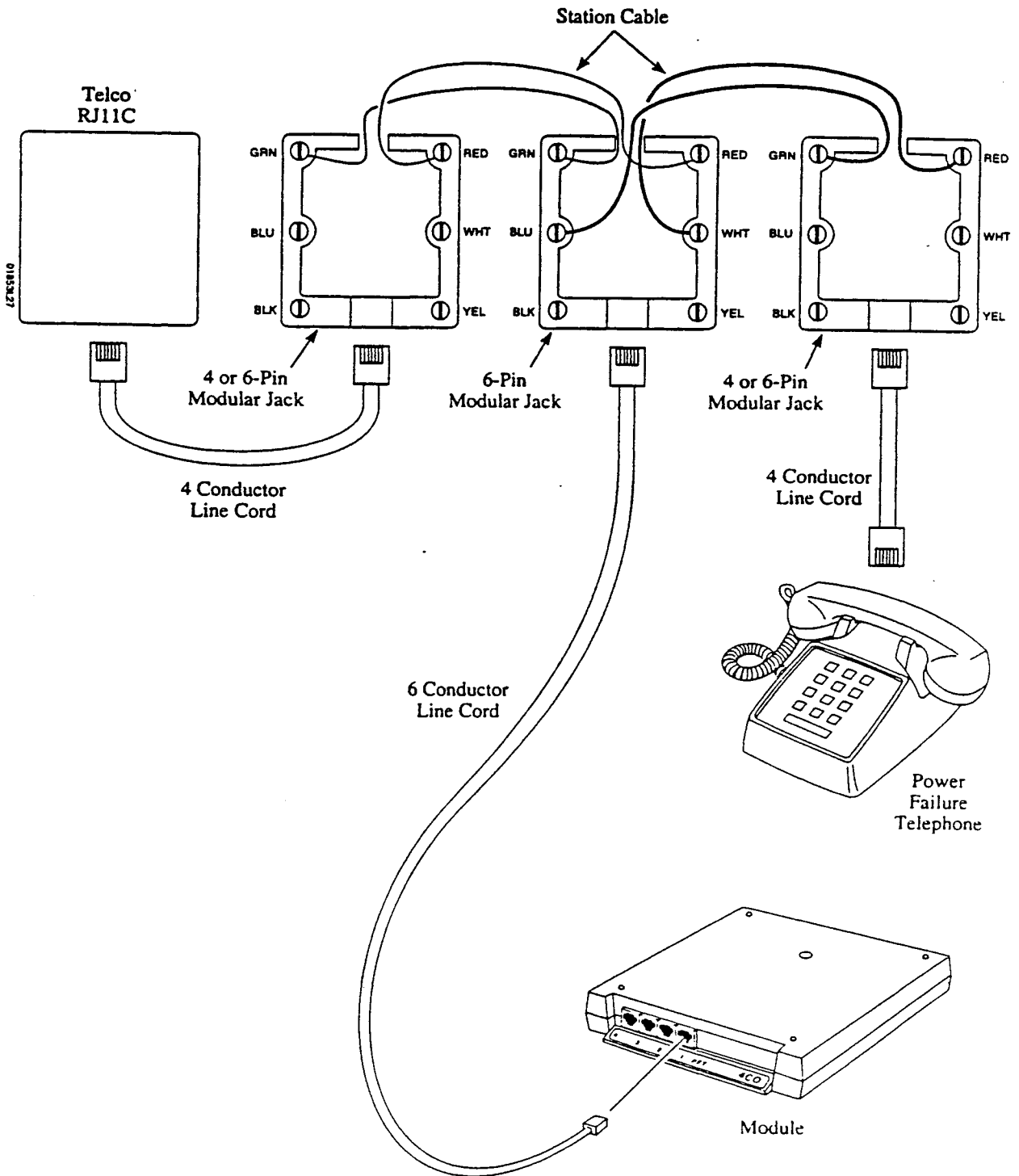


Figure 2-18 INSTALLING POWER FAILURE TELEPHONES

INSTALLING THE OPTIONAL EQUIPMENT

Installing the RFI Suppressor on the Optional Equipment Terminal Strip

You must install two RFI Suppressor ferrite beads (one assembly) on the wires connected to the optional equipment terminal strip.

To install the RFI Suppressor Bead Assembly for the optional equipment terminal strip (Figure 2-19):

- Step 1 > Assemble the RF beads around all the wires connected to the terminal strip.
- Step 2 > Position the bead assembly as close to the optional equipment terminal strip as possible.
- Step 3 > Snap the bead assembly plastic cover around the wires.
- Step 4 > Secure the wires with a tie wrap.

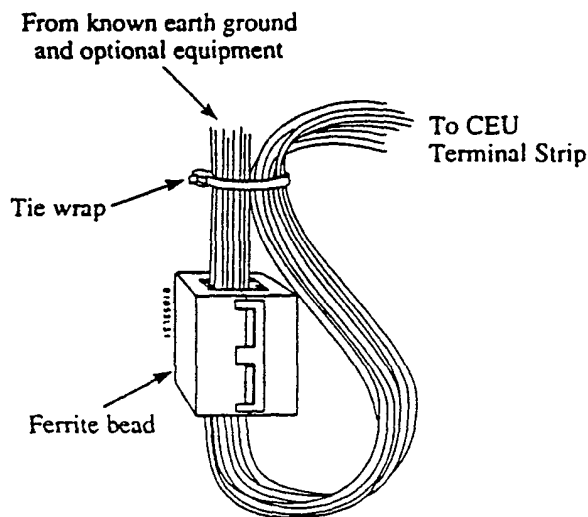


Figure 2-19 TERMINAL STRIP RFI SUPPRESSOR BEADS



This manual describes your system's features and programming. It is intended for system administrators (system programmers) and service technicians using a programming terminal. If you are programming an ONYX VS from the telephone, refer to your Administrator's Guide.

References to 56x120 and 72x180 systems pertain to ONYX II, III and IV unless otherwise noted.

ONYX™

Feature and Terminal Programming Manual

Includes ONYX VS, II, III and IV

Part No. N1850SWG03

Issue 1-2, March 1992

Printed in U.S.A.

VP/183

This manual has been developed by Nitsuko America. It is intended for the use of its customers and service personnel, and should be read in its entirety before attempting to install or program the system. Any comments or suggestions for improving this manual would be appreciated. Forward your remarks to:

Nitsuko America, Telecom Division
4 Forest Parkway
Shelton, CT 06484

Attention: Manager, Technical Publications

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HOW TO USE THIS MANUAL

To find out about
the ONYX
features...

Refer to Section 1, Features. You'll learn about each feature, how it benefits you and how you can customize it through programming. This section also contains complete operating instructions for each feature.

Before changing
the system
programming...

Review Section 2, Software Configuration. Section 2 explains each of the system's programming options. It also tells you how to record your programming data on the Program Record Form and enter it into system memory.

Using the Charts
in the Back of the
Manual...

Software Troubleshooting Chart

Use this chart to troubleshoot programming problems. Just look up the feature, cross-reference to where the problem occurs and check the listed programming.

1) Find the feature.

2) Look up where
the problem occurs.

PROGRAMMING CHART

Feature	Keypad		100 00	200 00	300 00	400 00	500 00	600 00	700 00	800 00	900 00
000 000 000 00	000 000	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00
000 000 000 00	000 000	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00
000 000 000 00	000 000	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00
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000 000 000 00	000 000	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00
Group Call Pickup	000 000	EC. KS	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00
000 000 000 00	000 000	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00
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000 000 000 00	000 000	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00
000 000 000 00	000 000	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00	000 00

3) Check the programming.

HOW TO USE THIS MANUAL

Using the Charts in the Back of the Manual (Cont'd)...

System Programmable Options

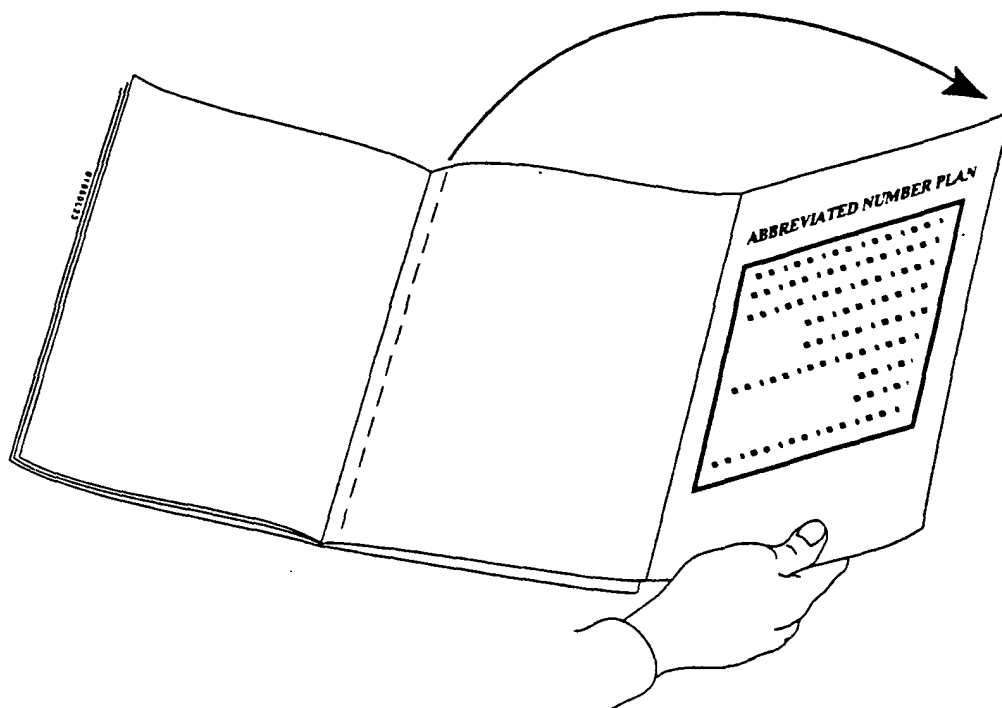
This chart lists all the system's software options. It also provides page number references to Section 2, Software Configuration.

The Abbreviated Number Plan Foldout

The Abbreviated Number Plan chart shows the numbers for:

- Extensions
- Trunks
- Ports
- Ring Groups
- Selectable Display Messages
- Speed Dial Blocks for:

Unfold this chart (see the illustration below) when reading Sections 1 and 2.



Other Charts

This section also contains charts that are part of Section 1, Features. They are repeated here for quick reference.



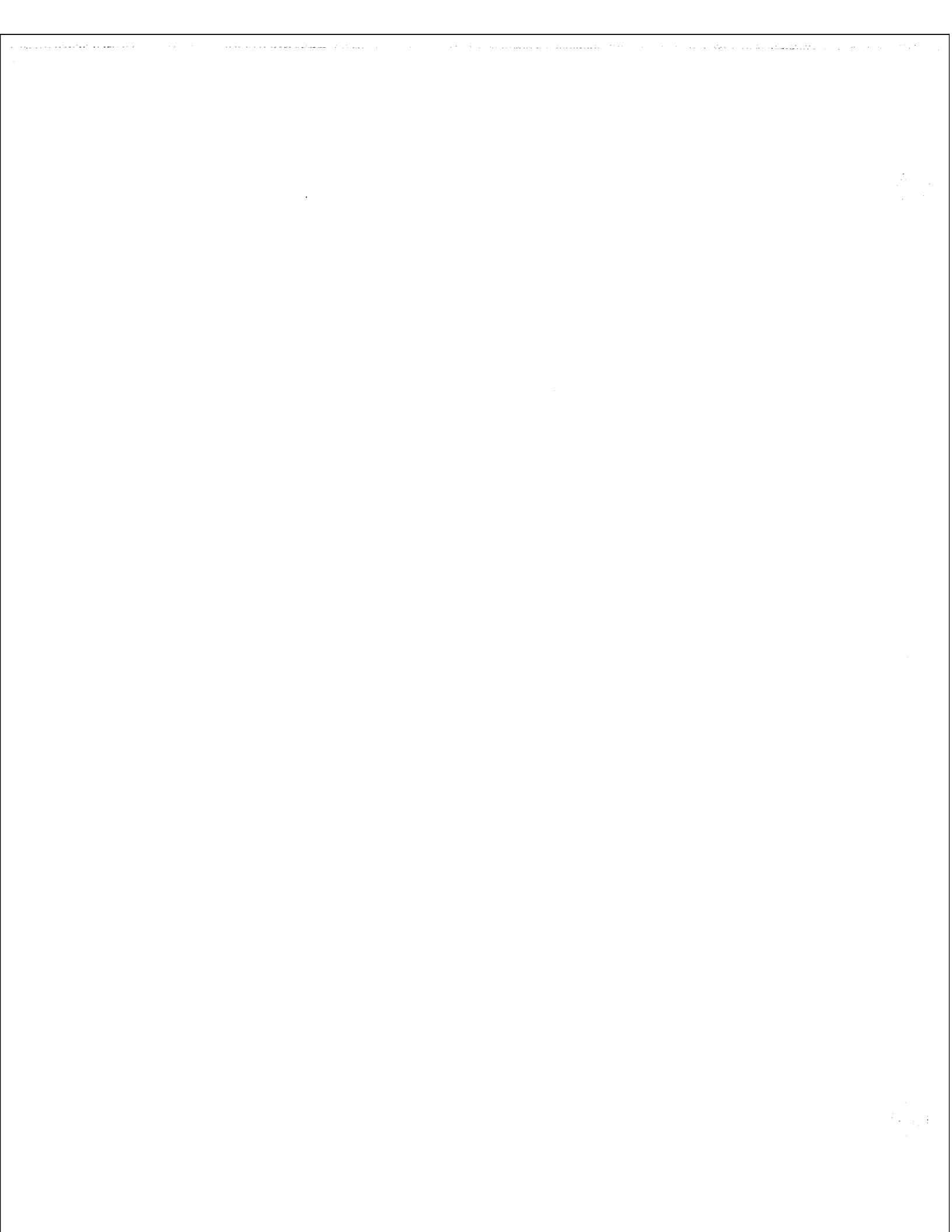
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Sales:	203-926-5450
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Customer Service FAX:	203-926-5454
Technical Service:	203-925-8801
Discontinued Product Service:	900-990-2541
Technical Training:	203-926-5430
Emergency Technical Service (After Hours)	203-929-7920

(Excludes discontinued products)





Update Notice

This Update Notice describes the new features in ONYX VS software version AUX Module 2.0/Base 5.0, ONYX II/III software version 3.5 and ONYX IV software version 1.2. Use this notice to update your ONYX Feature and Terminal Programming Manual (P/N N1850SWG03). With this new software:

- In ONYX IV, the Automatic Ringdown destination can be a trunk or an extension (page 1-36A).
- The system can apply the user-set volume for trunk calls, rather than a preset level (pages 1- 57 through 1-59 and 1-246).
- The Digital Door Box (P/N 88545) is now available in VS (page 1-72A).
- Direct Inward Dialing intercepts follow the extension's operator, not the trunks termination (page 1-75).
- In VS, trunks can have Distinctive Ringing (page 1-89).
- Equal Access Compatibility complies with new FCC requirements (page 1-92).
- The leading digit for reaching extensions through Operator Assistance (ONYX II/III/IV) is programmable (page 1-163).
- In VS, External Paging broadcasts All Call, zone 1 and zone 2 (rather than zone 1 and All Call). See page 1-167.
- ONYX II/III/IV Speed Dial bins can contain Flash and Delay commands (page 1-199).
- The system accommodates telcos that use NNX numbering for NPAs (page 1-231).
- Personal Answering Machine Emulation (ONYX IV) can answer all calls or just trunk calls (page 1-239).

To use this update notice, replace the pages in your manual with the corresponding pages in this notice. When you're done, save this notice for your records. *On each page, the text adjacent to the black bar contains the new information.*

Make sure you have the following user guides and handbooks on site:

- Multibutton Telephone Feature Handbook P/N N1850MFH03
- Multibutton Telephone Quick Reference Guide P/N N1850MBG02
- Electronic Single Line Telephone User Guide P/N N1852SLO01





Section 1 Features

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	VS	12x36	32x60	56x120 72x180	IV	Comments
Account Code Capability	✓	✓	✓	✓	✓	400 codes in VS, 601 in others IV has additional option
Alphanumeric Display	✓	✓	✓	✓	✓	VS has phone prog. displays
Alternate Attendant	✓	✓	✓	✓	✓	Not for IV att. console
Alternate Attendant, Attendant Console (ONYX IV)					✓	Console only
Analog Station Interface	✓	✓	✓	✓	✓	Only 89749 in VS
Attendant Console (ONYX IV)					✓	
Attendant Positions	✓	✓	✓	✓	✓	IV has keysets and/or consoles
Automatic Answer (ONYX IV)					✓	
Automatic Call Distribution	✓	✓	✓	✓		VS sup. display needs AUX
Automatic Call Distribution (ONYX IV)					✓	IV has many additional options
Automatic Fault Reporting (With Remote Maintenance/Programming)	✓	✓	✓	✓	✓	No off-site reporting in VS No separate modem port in VS
Automatic Handsfree	✓	✓	✓	✓	✓	
Automatic Ringdown (ONYX IV)					✓	
Automatic Route Selection	✓	✓	✓	✓	✓	Not in key systems 64 codes in VS, 184 in others Requires AUX in VS
Background Music	✓	✓	✓	✓	✓	Different connections in VS
Battery Backup	✓	✓	✓	✓	✓	Different unit for VS
Call Coverage Keys	✓	✓	✓	✓	✓	Interacts with DSS prog in VS ACD/UCD cck needs VS AUX VS user-programmable
Call Forwarding	✓	✓	✓	✓	✓	No voice reminder in VS OPX CFWD needs disc. super.
Call Forwarding Cancel	✓	✓	✓	✓	✓	
Call Parking	✓	✓	✓	✓	✓	
Call Timer	✓	✓	✓	✓	✓	Different options in VS

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	VS	12x36	32x60	56x120 72x180	IV	Comments
Call Waiting (Camp-On)	✓	✓	✓	✓	✓	
Callback	✓	✓	✓	✓	✓	
Central Office Calls, Answering	✓	✓	✓	✓	✓	Different capacities VS user-programmable
Central Office Calls, Placing	✓	✓	✓	✓	✓	Different capacities
Centralized Attendant Service	✓	✓	✓	✓	✓	Future module in VS
Centrex Compatible Feature Keys	✓	✓	✓	✓	✓	41 total in VS, 565 in others
Class of Service	✓	✓	✓	✓	✓	Additional option in IV
Conference	✓	✓	✓	✓	✓	
Data	✓	✓	✓	✓	✓	Requires AUX in VS
DP and DTMF Compatibility	✓	✓	✓	✓	✓	
Dialing Number Preview	✓	✓	✓	✓	✓	
Direct Inward Dialing (DID)	✓	✓	✓	✓	✓	Future module required in VS Different Camp-On in IV
Direct Inward Line (DIL)	✓	✓	✓	✓	✓	
Direct Inward System Access (DISA)	✓	✓	✓	✓	✓	Future module required in VS VS supervised loop only
Direct Station Selection, DSS Console	✓	✓	✓	✓	✓	4 blocks in VS, 20 in others
Direct Station Selection, Extension	✓	✓	✓	✓	✓	
Direct Trunk Access	✓	✓	✓	✓	✓	
Directed Call Pickup	✓	✓	✓	✓	✓	
Directory Dialing	✓	✓	✓	✓	✓	Full Dir. Dial. needs VS AUX
Directory Dialing (ONYX IV)					✓	Uses special keyset key
Distinctive Ringing, Tones and Flash Patterns	✓	✓	✓	✓	✓	
Do Not Disturb	✓	✓	✓	✓	✓	No voice reminder in VS
Dual Line Appearance (ONYX IV)					✓	
Equal Access Compatibility	✓	✓	✓	✓	✓	

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	VS	12x36	32x60	56x120 72x180	IV	Comments
Extended Ringing	✓	✓	✓	✓	✓	
Extension Hunting	✓	✓	✓	✓	✓	No UCD announcement in VS
External Alerting Devices	✓	✓	✓	✓	✓	Two relays in VS, 4 in others Not for paging in VS
Flash	✓	✓	✓	✓	✓	
Flexible Numbering Plan	✓	✓	✓	✓	✓	Requires AUX in VS
Forced Trunk Disconnect	✓	✓	✓	✓	✓	
Group Call Pickup	✓	✓	✓	✓	✓	VS user-programmable
Group Listen	✓	✓	✓	✓	✓	
Group Ring (Ring Groups)	✓	✓	✓	✓	✓	Different group numbers
Handsfree (Speakerphone) and Monitor	✓	✓	✓	✓	✓	
Headset Compatibility	✓	✓	✓	✓	✓	VS user-programmable
Hold	✓	✓	✓	✓	✓	
Hotline	✓	✓	✓	✓	✓	VS user-programmable
Intercept of Calls	✓	✓	✓	✓	✓	
Intercom	✓	✓	✓	✓	✓	Different capacities VS user-programmable
Intrusion (Barge-In)	✓	✓	✓	✓	✓	
Last Number Redial	✓	✓	✓	✓	✓	
Least Cost Routing (Hybrid)		✓	✓	✓	✓	Not in VS or key systems
Line (Trunk) Queuing	✓	✓	✓	✓	✓	
Line (Trunk) Rotaries (Hybrid)	✓	✓	✓	✓	✓	Not in key systems
Loop Keys	✓	✓	✓	✓	✓	Key systems incoming only
Meet-Me Conference	✓	✓	✓	✓	✓	
Message Waiting	✓	✓	✓	✓	✓	No voice reminder in VS
Microphone Mute	✓	✓	✓	✓	✓	12x36/32x60 mutes handset
Multiple Directory Numbers (ONYX IV)					✓	

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	VS	12x36	32x60	56x120 72x180	IV	Comments
Music On Hold	✓	✓	✓	✓	✓	Different connections in VS
Night Answer (Off-Hours Ringing)	✓	✓	✓	✓	✓	Different UNA prog. in VS IV has additional option VS user-programmable
Non-Blocking Architecture	✓	✓	✓	✓	✓	
Off-Hook Signaling	✓	✓	✓	✓	✓	Voice over VS user-prog.
Off-Premise Extension	✓	✓	✓	✓	✓	Requires future module in VS
Operator Assistance (OPA)		✓	✓	✓	✓	Not in VS
Paging	✓	✓	✓	✓	✓	2 ext zones in VS, 4 in others Different prog in VS No page relays in VS Auto Page only in IV VS user-programmable
PBX/Centrex Compatibility	✓	✓	✓	✓	✓	
Personal Greeting		✓	✓	✓	✓	Not in VS
Prime Line Selection	✓	✓	✓	✓	✓	VS user-programmable
Privacy	✓	✓	✓	✓	✓	
Privacy Groups	✓	✓	✓	✓	✓	
Private Line	✓	✓	✓	✓	✓	Different capacities
Programmable Keys	✓	✓	✓	✓	✓	Different options VS and IV
Release Key	✓	✓	✓	✓	✓	DSS Console only
Removing Trunks and Extensions From Service	✓	✓	✓	✓	✓	
Reverse Voice Over (ONYX IV)					✓	
Ringling Line Preference	✓	✓	✓	✓	✓	VS user-programmable
Save	✓	✓	✓	✓	✓	
Selectable Display Messages	✓	✓	✓	✓	✓	16 in VS, 64 in others 16 preset in VS without AUX
Silent Monitor	✓	✓	✓	✓	✓	
Special Services and OCC Compatibility	✓	✓	✓	✓	✓	

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	VS	12x36	32x60	56x120 72x180	IV	Comments
Special Trunk Interface		✓	✓	✓	✓	Not in VS
Speed Dial	✓	✓	✓	✓	✓	Different number of blocks Names in VS needs AUX VS user-programmable
Split	✓	✓	✓	✓	✓	Split key in IV
Station Message Detail Recording	✓	✓	✓	✓	✓	No separate modem port in VS Requires AUX in VS
System Identification	✓	✓	✓	✓	✓	VS uses first line only
System Programming Password Protection	✓	✓	✓	✓	✓	Different passwords
System Reports, Diagnostics and Maintenance Utilities	✓	✓	✓	✓	✓	
System Timers	✓	✓	✓	✓	✓	Additional timer in IV
Tandem Calls (Tandem Trunking)	✓	✓	✓	✓	✓	Needs disconnect supervision
Tenant Service	✓	✓	✓	✓	✓	Different prog in VS
Tie Lines	✓	✓	✓	✓	✓	VS requires future module
Time and Date Setting	✓	✓	✓	✓	✓	No voice time in VS VS user-programmable
Toll Restriction	✓	✓	✓	✓	✓	No voice prompt in VS
Traffic Management Reporting	✓	✓	✓	✓	✓	No modem in VS Requires AUX in VS
Traffic Management Reporting (ONYX IV)					✓	Different options in IV
Transfer	✓	✓	✓	✓	✓	
Voice Mail Compatibility	✓	✓	✓	✓	✓	Additional option in IV
Voice Prompting Messages		✓	✓	✓	✓	Not in VS
Volume Controls	✓	✓	✓	✓	✓	
Walking Class of Service	✓	✓	✓	✓	✓	

Before Reading This Section

This section provides detailed information on the system's features. If you don't know what the various features are, review the feature summary provided as part of this section's Table of Contents. After reviewing the feature summary, turn back to this section for the specifics.

Using This Section

The features in this section are in alphabetical order, like a dictionary. This section subdivides each feature definition into headings as follows:

Description tells what the feature is and describes its benefits. Along with the Description are the *Conditions* and *Default Configuration*. Conditions provides the feature's operational limits (if any). Default Configuration outlines how the feature works with the default programming. When initially installed, the system uses the default configuration.

Programming explains the system programming that lets you customize the feature. Some features require programming; others don't. You *must* customize the *Required Programming* to make the feature work. *Other Programming* lists additional programs you should consider when setting up the feature. If you decide to customize a feature, use Section 2 to:

- Enter the change in the system
 - Record the change on the Program Record Form (PRF)
- Refer to the System Programmable Options chart at the end of this manual for a handy Feature-to-Program troubleshooting reference.

Related Features presents the feature interaction.

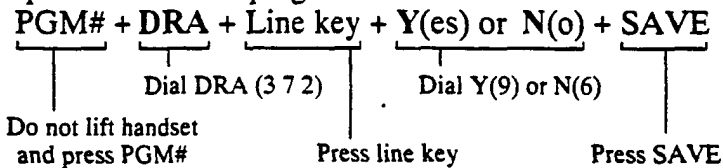
Feature Operation consists of instructions on how to use each feature. The instructions also show the various flash and ring rates and system tones (Tables 1-1 through 1-3). This tells the user what to expect before *and* after each instruction step. For example:

Look for: Line key On (red/green)
Listen for: Dial tone

indicates that both red and green LEDs in the line key are on and the user listens to dial tone. If a user has an Electronic Single Line (ESL) set, the *Look for* instructions do not apply.

VS User-Programmable Features

With the correct access level, a user can customize selected features from the telephone. The user-programmable features are abbreviated in this manual:



01070L20

User-programmable features include (refer to the system Administrator's Guide for the specifics):

Call Coverage Keys	Off-Hook Signaling
Central Office Calls, Answering	Paging
Intercom	Prime Line Selection
Group Call Pickup	Ringing Line Preference
Headset Compatibility	Speed Dial
Hotline	Time and Date Setting
Night Answer	

Modular and Non-Modular Keysets

Your system may have modular and/or non-modular keysets. Modular keysets have red and green LEDs; non-modular keysets have only red LEDs. Some feature operations have different LED flash rates for modular and non-modular keysets. For other features, the rate applies to both keysets. Note that the color green only applies to modular keysets.

For example, if you see:

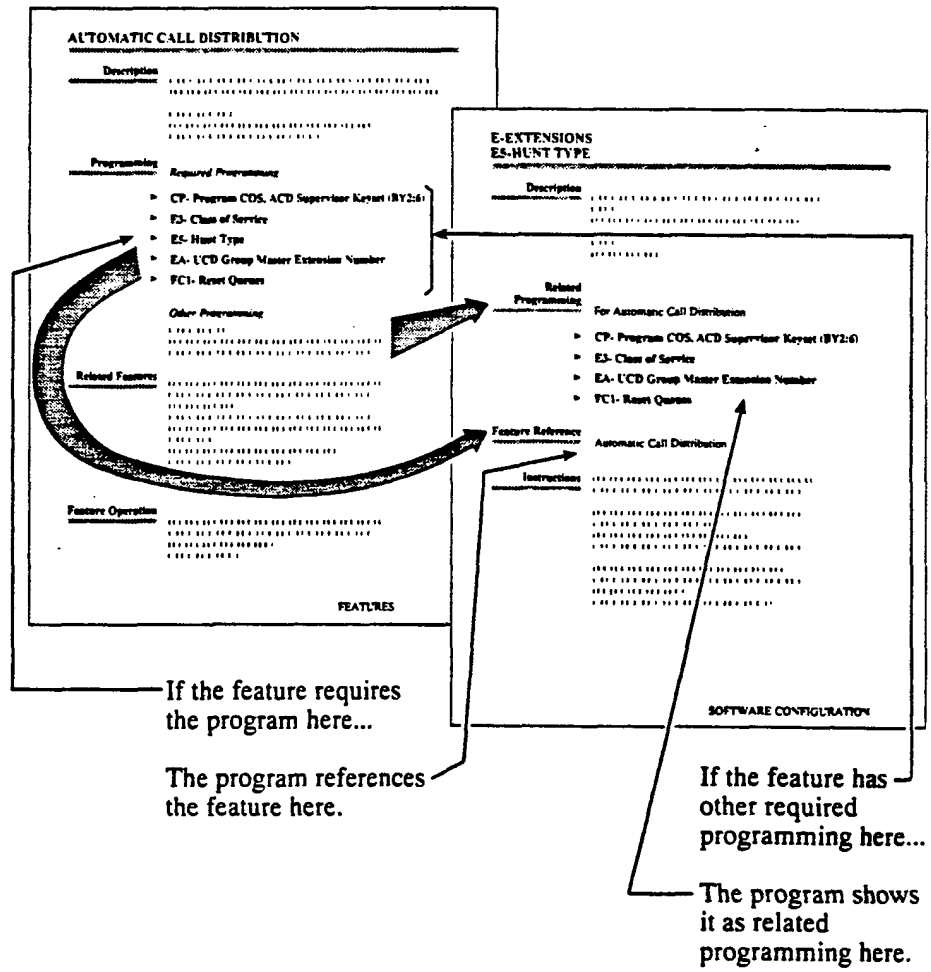
Look for: DND/MIC On (green)

you know that the DND/MIC LED on a non-modular keyset is On (red).

How to Use This Section With Section 2

Section 1, Features, works closely with Section 2, Software Configuration (see the Illustration below).

- If a feature has a required program, go to Section 2 for the details on the program.
- The *Feature Reference* heading in Section 2 lists all the features for which that program is required.
- If a feature has more than one required program, the *Related Programming* heading in Section 2 lists these options. While learning about one program, this shows you the other programs you have to consider to get the feature to work.



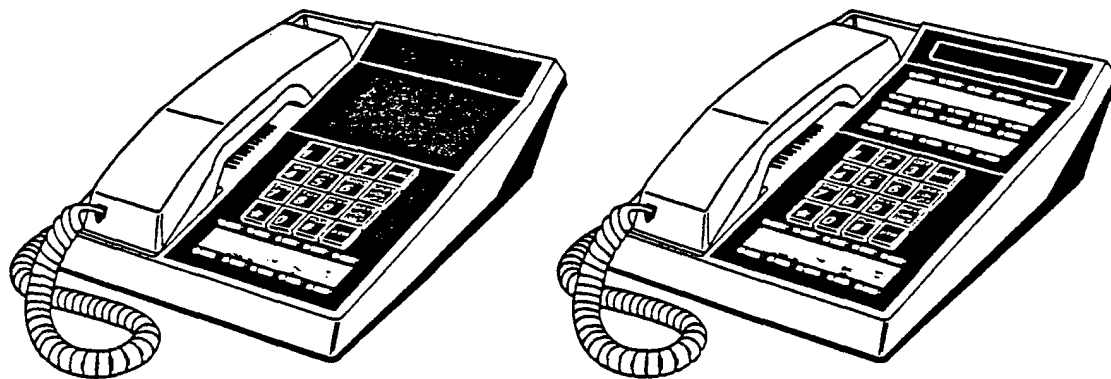
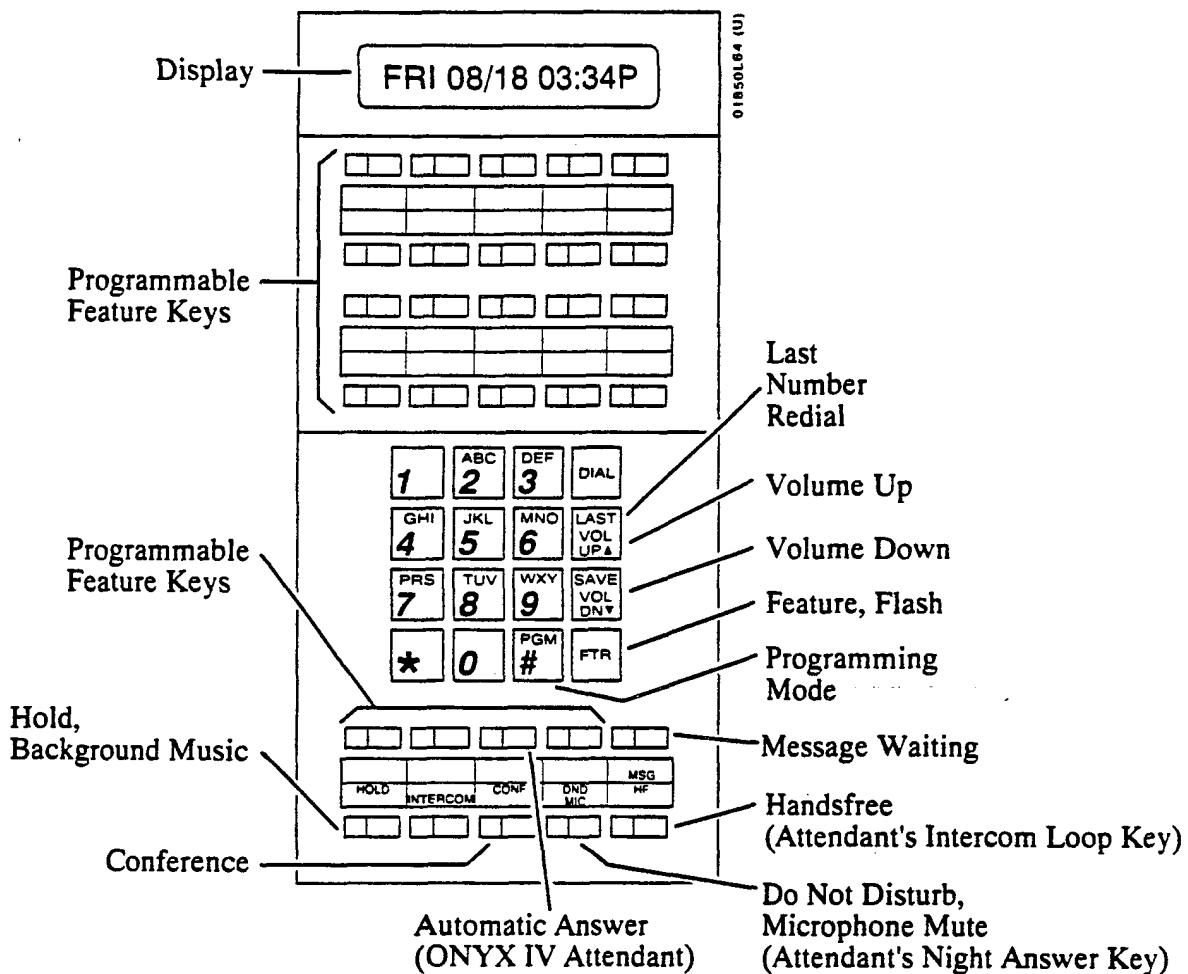


Figure 1-1 MULTIBUTTON TELEPHONES

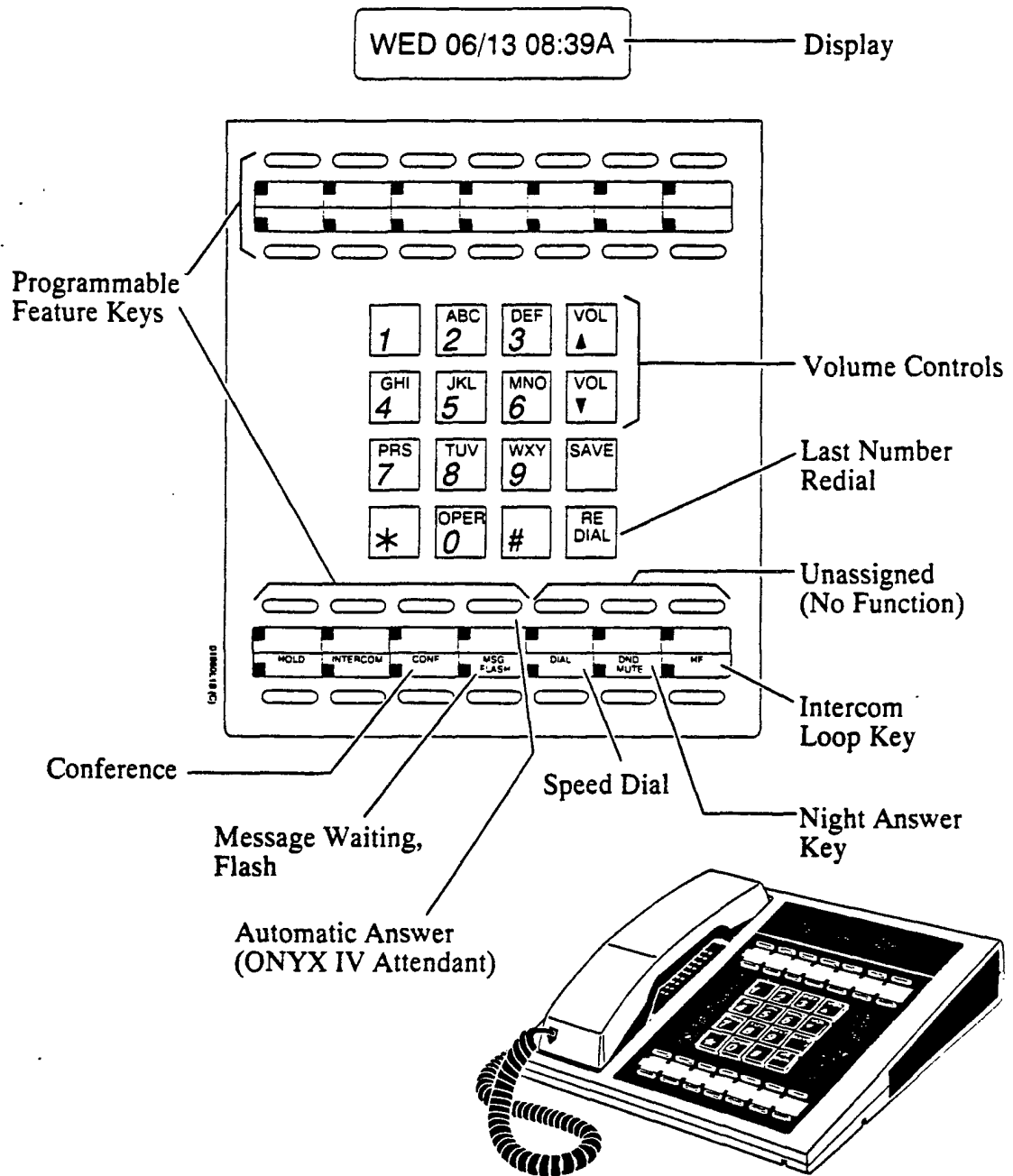
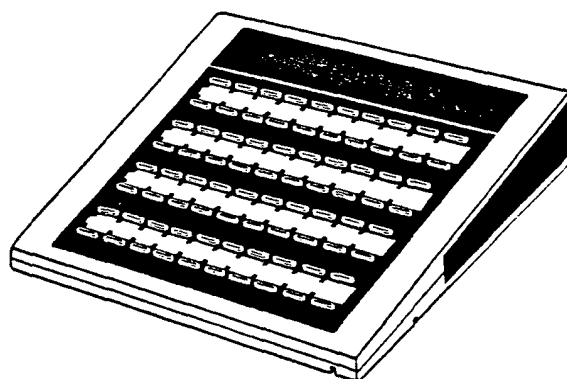
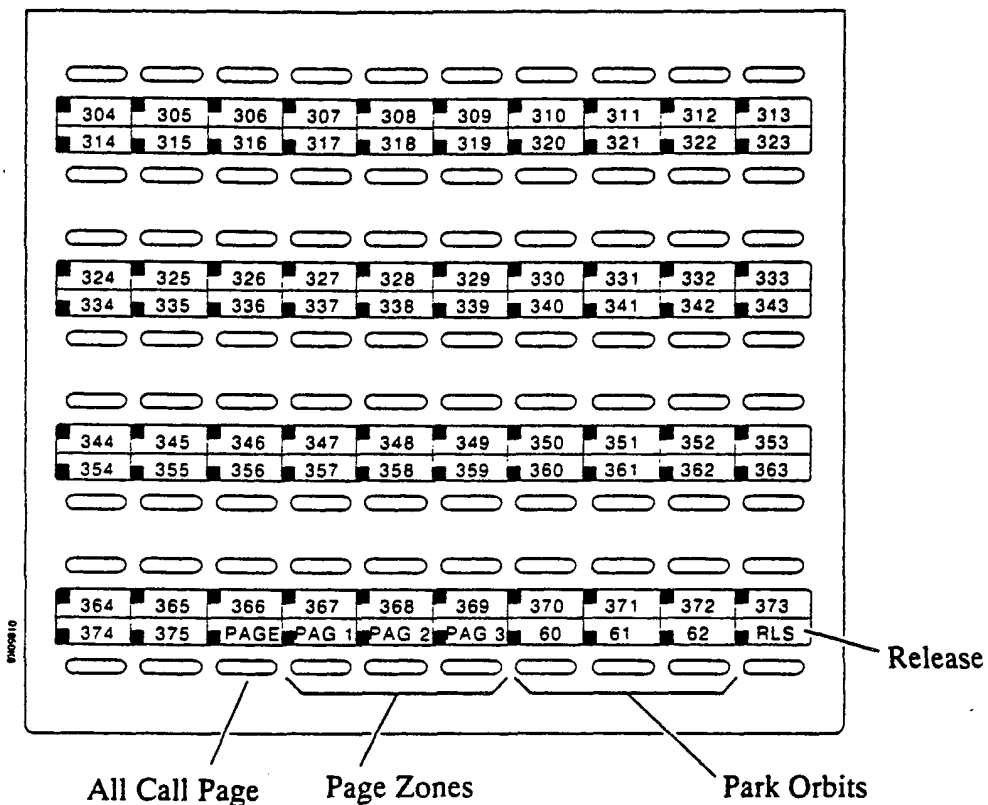
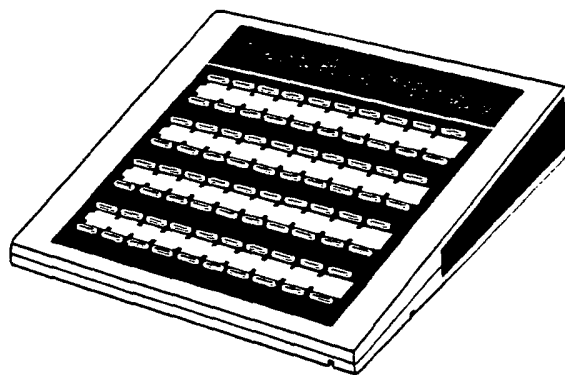
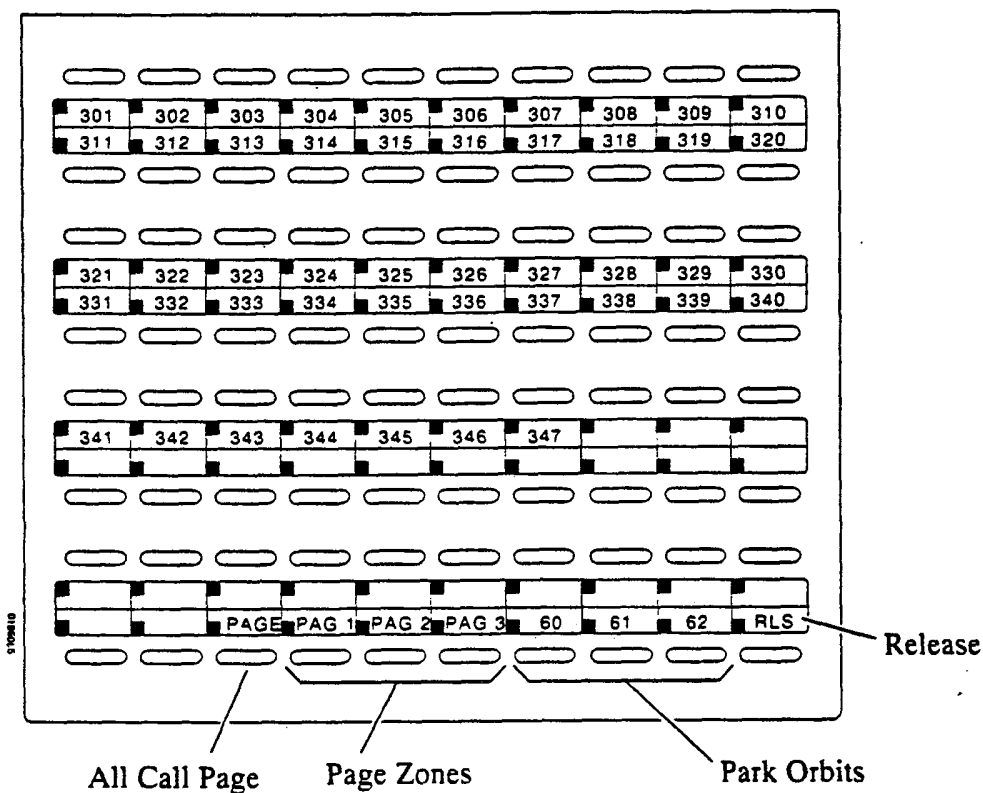


Figure 1-2 ATTENDANT TELEPHONE (P/N 88254)



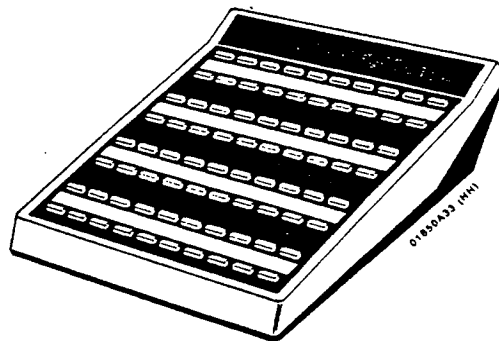
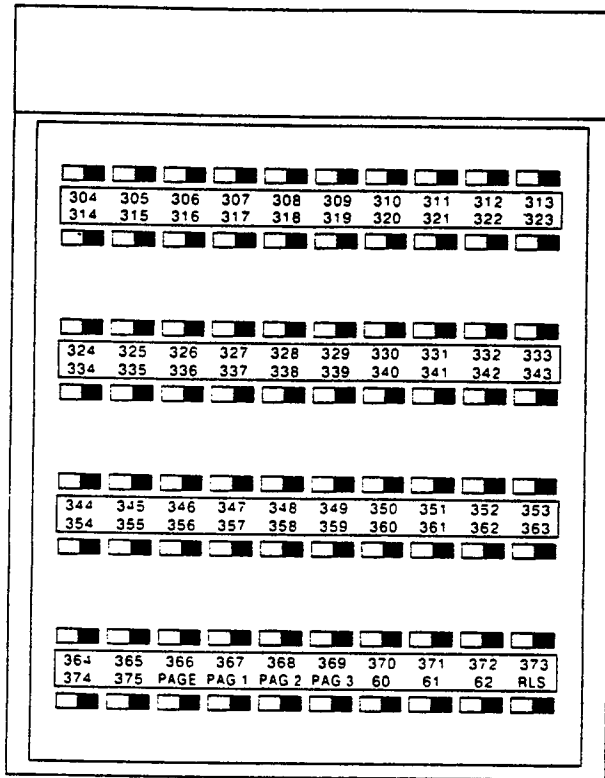
(P/N 88255)
Figure 1-3 DSS CONSOLE
WITH ONYX II/III/IV KEY CALLOUTS (Page 1 of 4)

INTRODUCTION



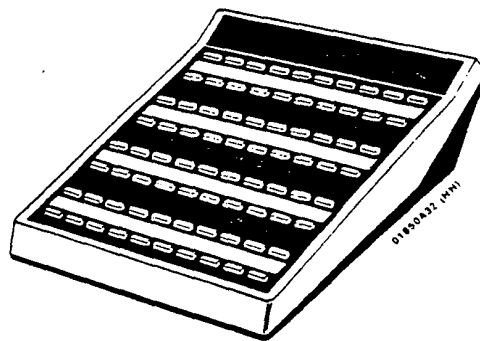
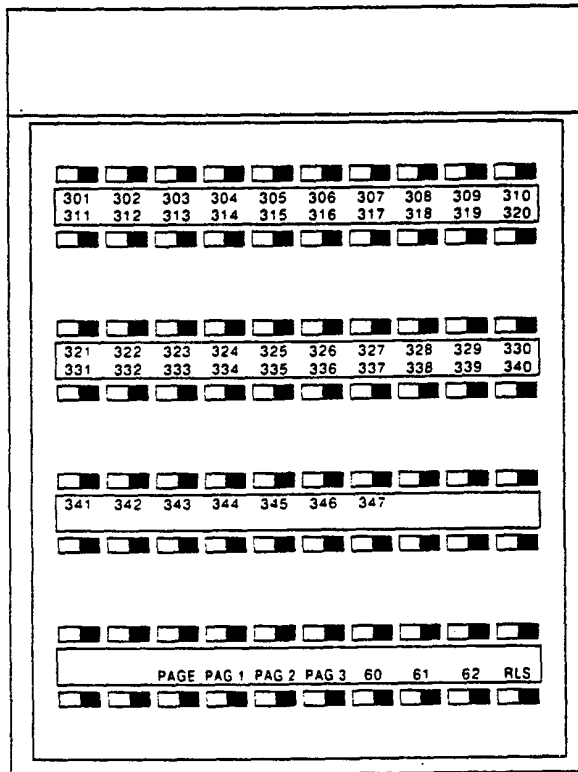
(P/N 88255)
Figure 1-3 DSS CONSOLE
WITH ONYX VS KEY CALLOUTS (Page 2 of 4)

INTRODUCTION

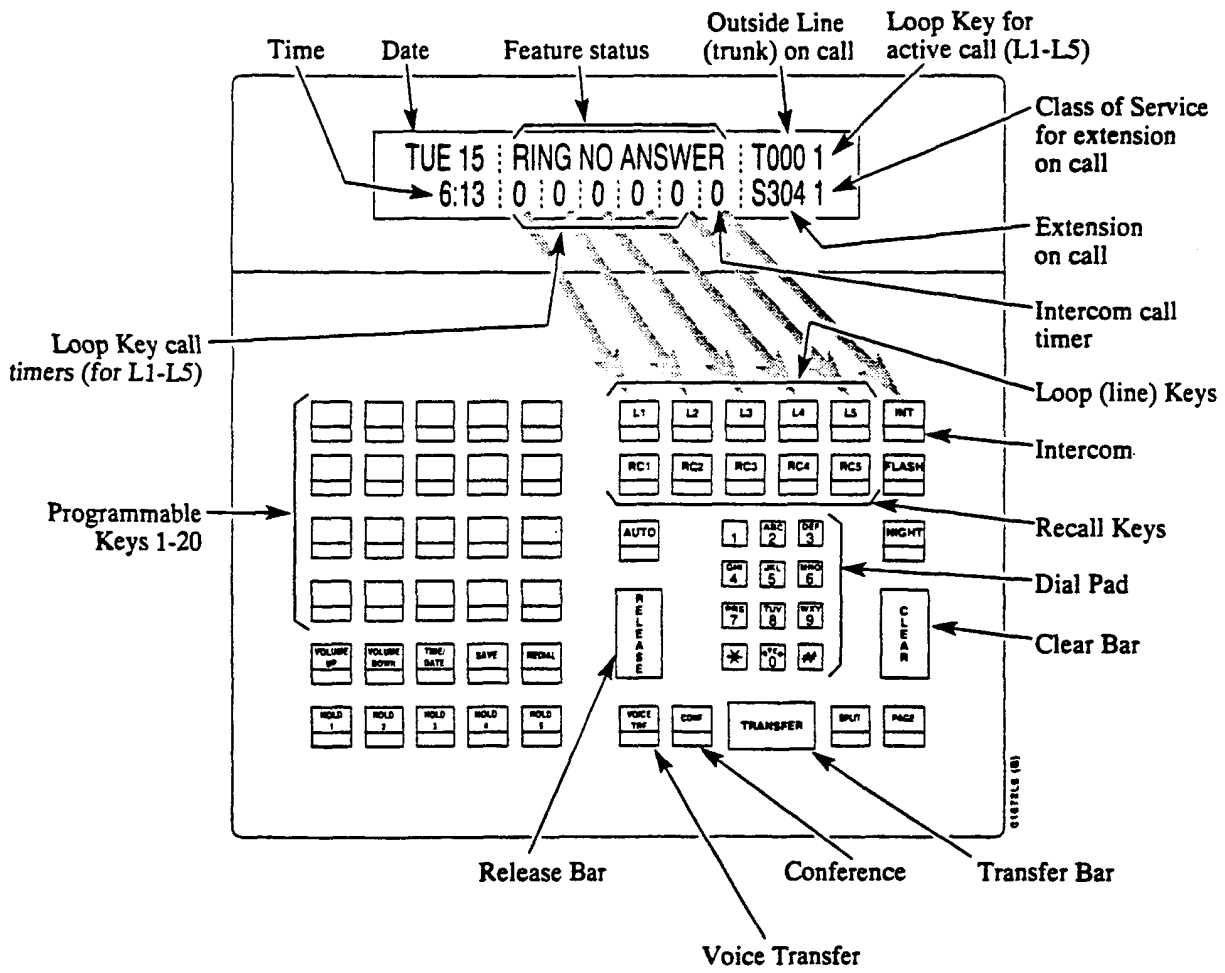
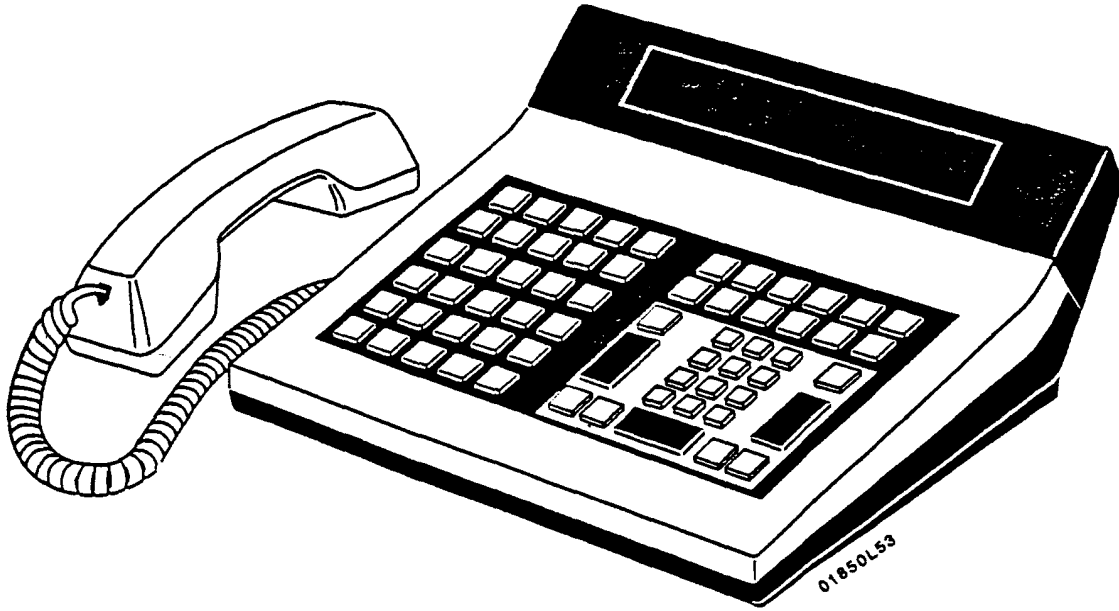


(P/N 88555)
Figure 1-3 DSS CONSOLE
WITH ONYX II/III/IV KEY CALLOUTS (Page 3 of 4)

INTRODUCTION



(P/N 88555)
Figure 1-3 DSS CONSOLE
WITH ONYX VS KEY CALLOUTS (Page 4 of 4)



Note: For additional information on the Attendant Console's keys, refer to the Attendant Console (ONYX IV) feature.

Figure 1-4 ATTENDANT CONSOLE (ONYX IV Only)

INTRODUCTION

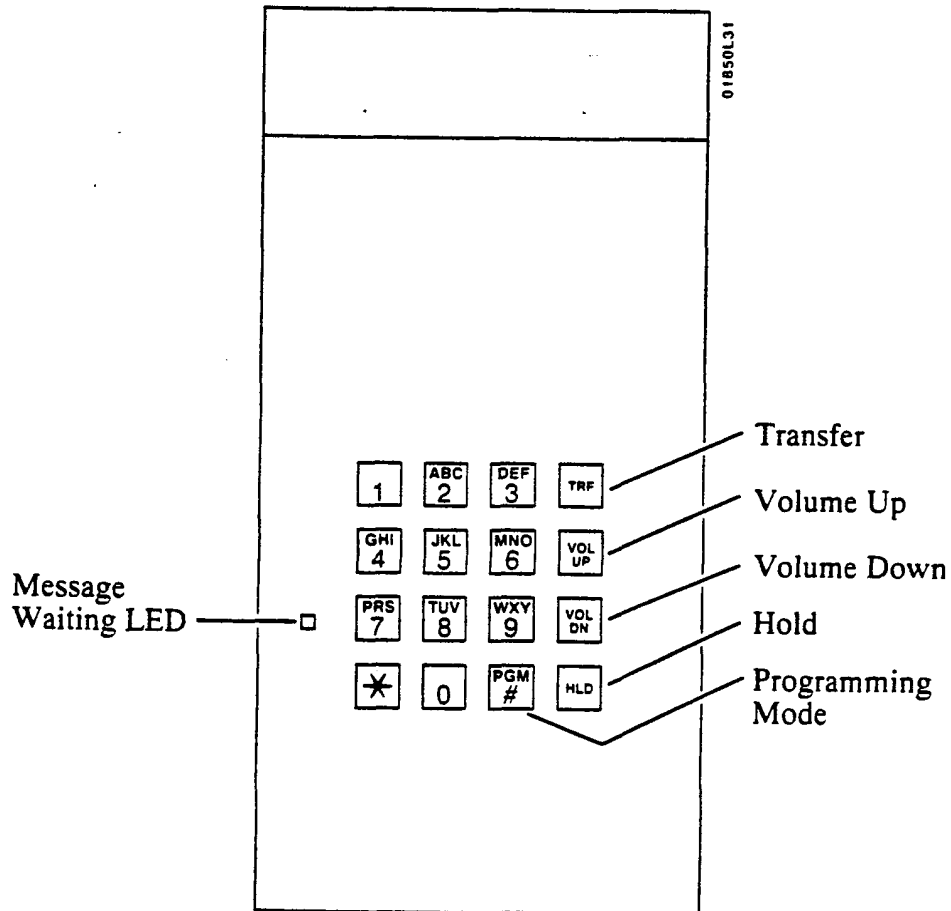


Figure 1-5 ELECTRONIC SINGLE LINE (ESL) TELEPHONE

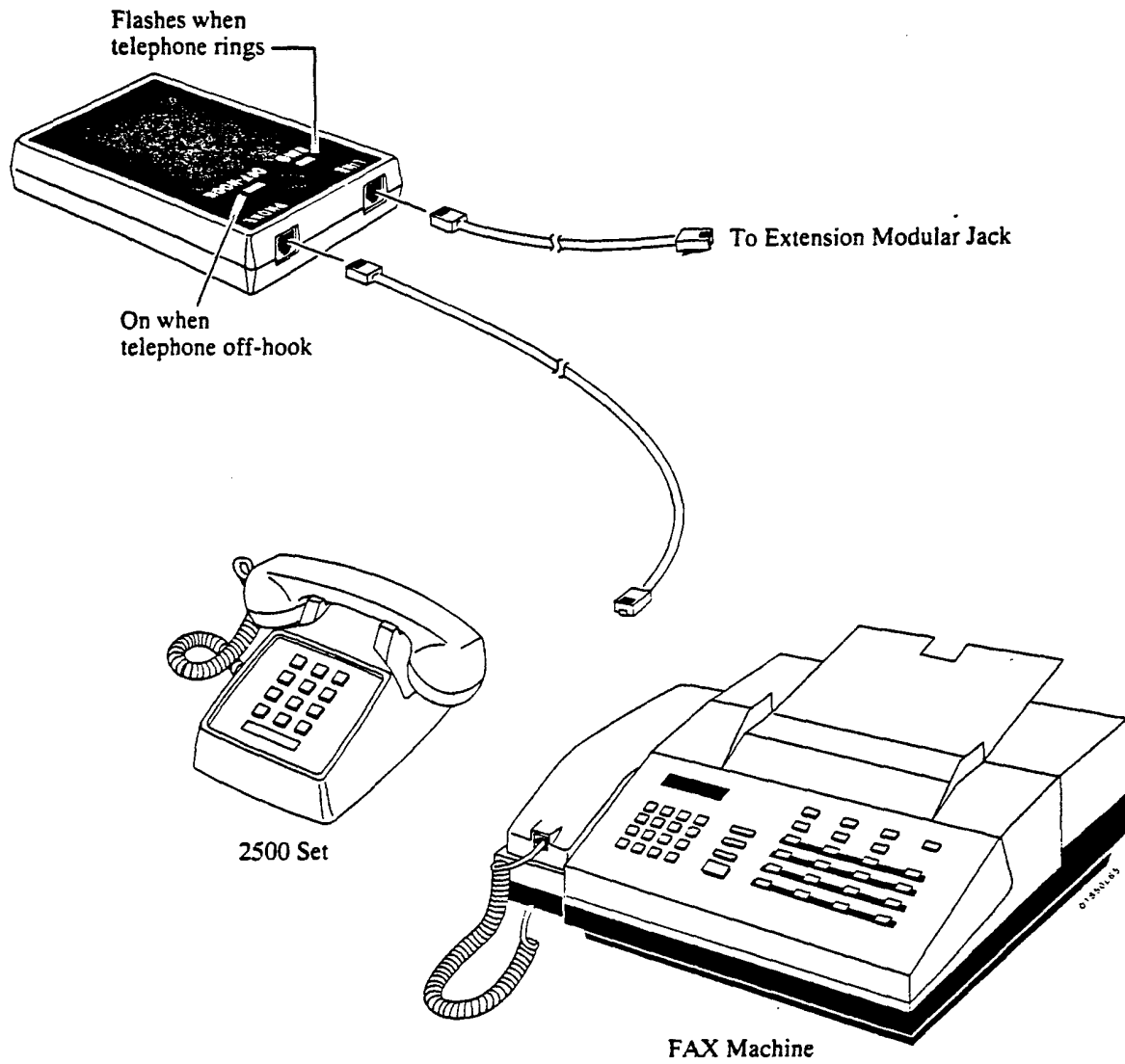


Figure 1-6 ANALOG STATION INTERFACE

INTRODUCTION

Table 1-1 SYSTEM FLASH RATES (Page 1 of 2)

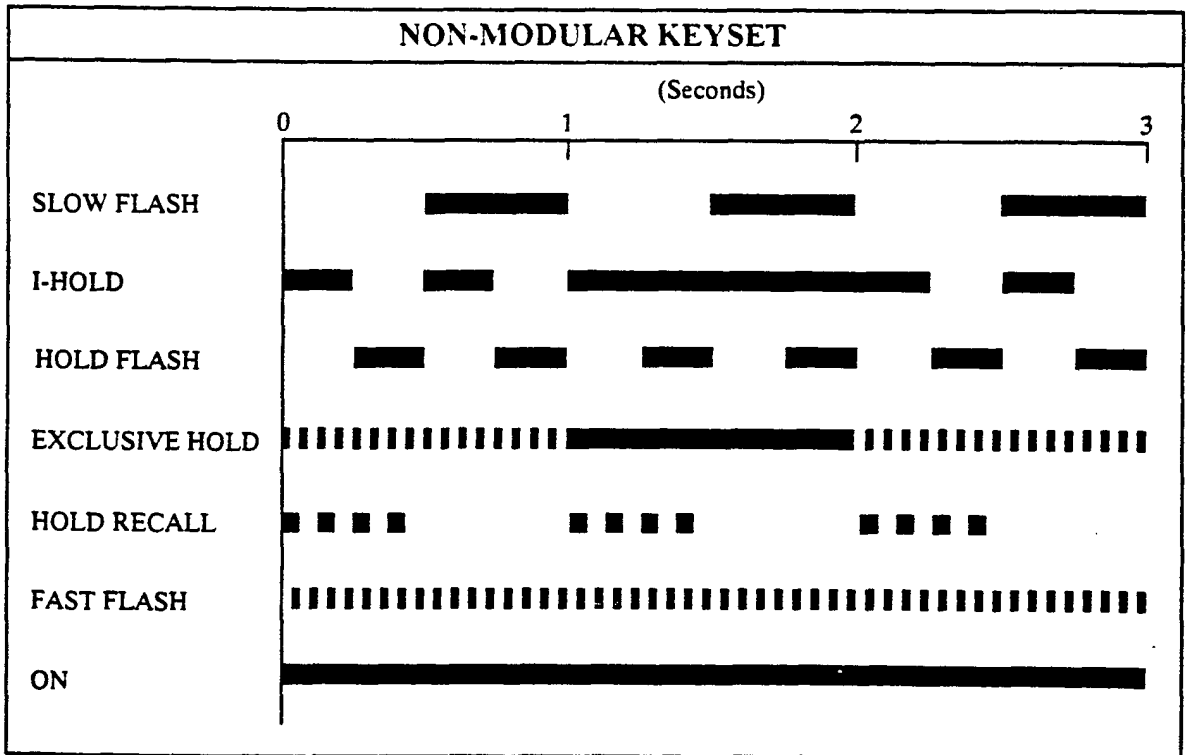
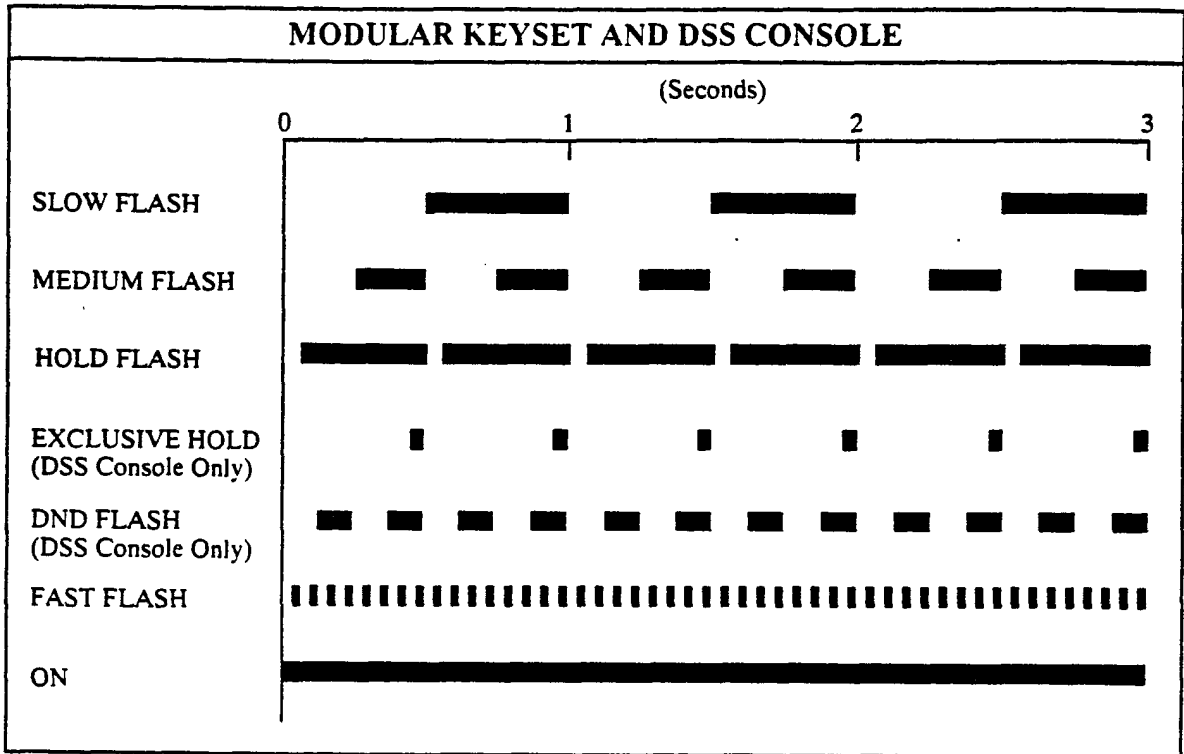


Table 1-1 SYSTEM FLASH RATES (Page 2 of 2)

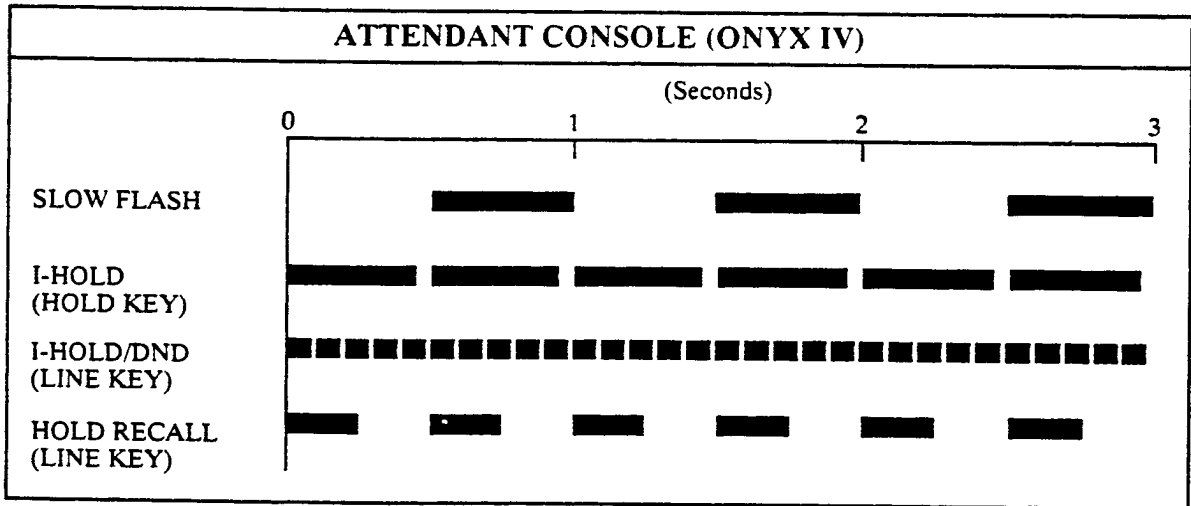
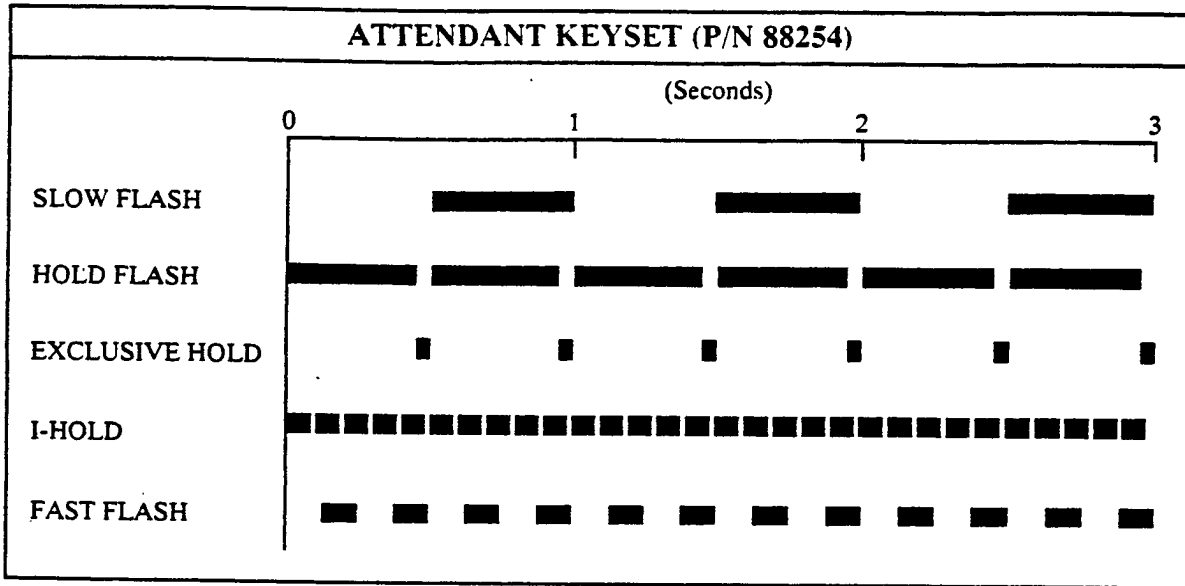
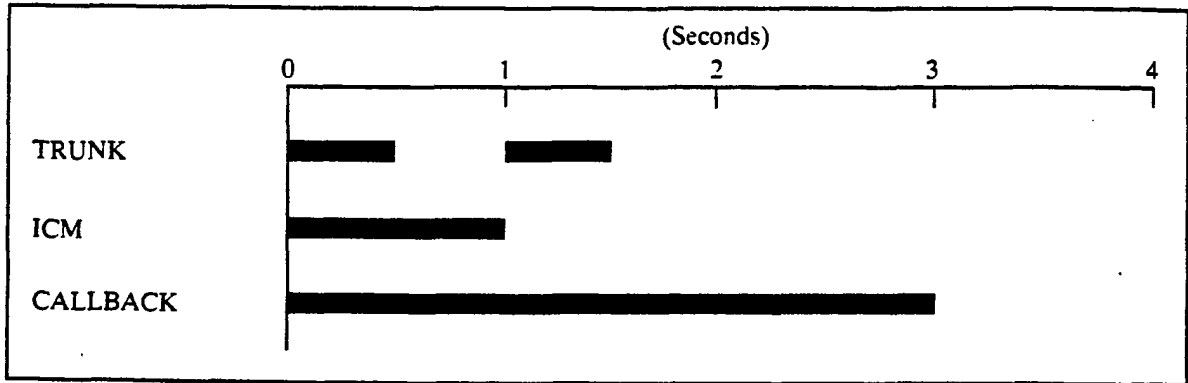


Table 1-2 SYSTEM RING RATES



Note: Each group of four extensions rings with different tones. This is called Distinctive Ringing. For example, extension 300 rings differently than extension 301. Extension 301 rings differently than extension 302.

Every fourth extension, the Distinctive Ringing pattern repeats. For example, extension 300 rings the same as extension 304. Extension 301 rings the same as extension 305, and so on.

Table 1-3 SYSTEM TONES

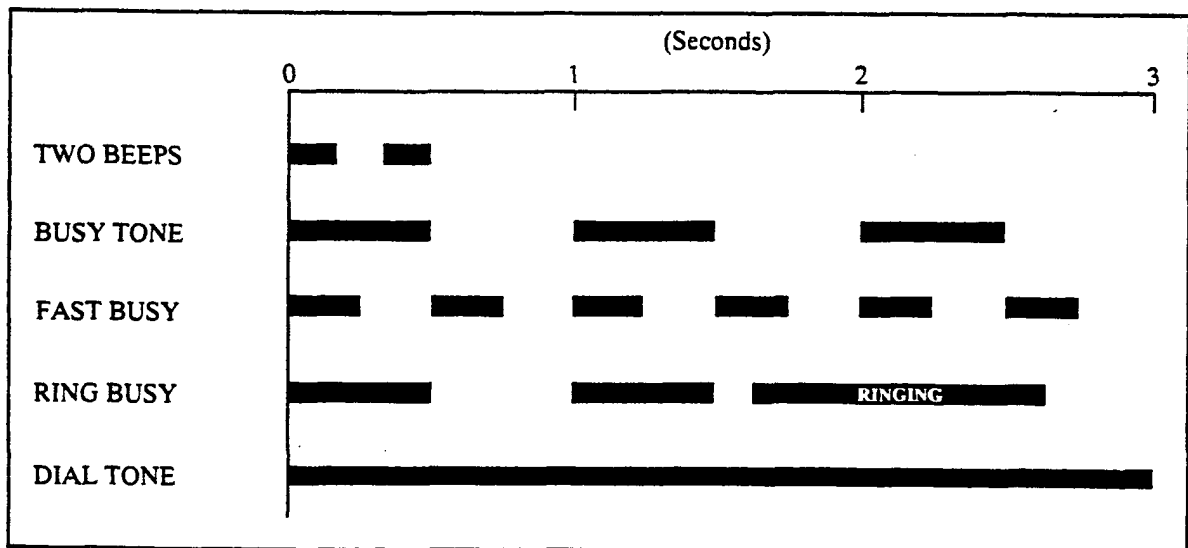


Table 1-4 SYSTEM NUMBER PLAN (Page 1 of 3)

Note: All the functions below are from Intercom dial tone (except where noted).

Code	Function
<p>#+10 dig.</p>	<p>Account Codes Account Code number</p>
<p>4# 6# #6+8+6+9 or 6 ##DSS Con.+4 ##DSS Con.+7</p>	<p>Automatic Call Distribution ACD agent puts self back in service ACD agent removes self from service Erase OPA\ACD messages (dial 9) or abort procedure (dial 6) ACD supervisor puts agent back in service ACD supervisor removes agent from service</p>
<p># #+0 ##ext+1 ##ext+2 ##ext+3</p>	<p>Call Forwarding Cancel Call Forwarding Forward calls to main attendant Call Forwarding option 1 (ring no answer) Call Forwarding option 2 (ring no answer and busy) Call Forwarding option 3 (all calls)</p>
<p>60-69 *560-*569</p>	<p>Call Parking Park Orbits At ASI/OPX, transfer call to Park Orbits 60-69</p>
<p>#8</p>	<p>Call Timer Call Timer On/Off</p>
<p>*2</p>	<p>Call Waiting Call Waiting (answering a waiting call from an ESL set)</p>
<p>2 *FTR **</p>	<p>Callback When hearing busy/ring busy, dial 2 and hang up to leave Callback Cancel Callback left at own extension Cancel all Callbacks at own extension</p>
<p>348-363 396-408 396-427 480-551 801-816 801-812 801-832 801-872 9 90-98</p>	<p>Central Office Calls (Trunk Numbers and Access Codes) VS trunk numbers 12x36 trunk numbers 32x60 trunk numbers 56x120/72x180 trunk numbers VS trunk access codes 12x36 trunk access codes 32x60 trunk access codes 56x120/72x180 trunk access codes Single digit access to group 1 (90) Trunk group access (groups 1-9)</p>
<p>11,12 *#</p>	<p>Conference Meet-Me Conference Retrieve Conference from Hold at ASI/OPX/ESL</p>
<p>* or FTR</p>	<p>Dialing Number Preview While idle, dial * or FTR to activate Dialing Number Preview</p>
<p>*300-*347 *300-*395 *300-*479</p>	<p>Directed Call Pickup VS Directed Call Pickup codes 12x36/32x60 Directed Call Pickup codes 56x120/72x180 Directed Call Pickup codes</p>

INTRODUCTION

Table 1-4 SYSTEM NUMBER PLAN (Page 2 of 3)

Note: All the functions below are from Intercom dial tone (except where noted).

Code	Function
	Directory Dialing
3	While idle, dial 3 to activate Directory Dialing
32	While idle, dial 32 to access the Company-Wide Directory
34	While idle, dial 34 to access the Directory
37	While idle, dial 37 to access the Personal Speed Dial directory
	Forced Line Disconnect
#	While hearing busy, dial # to disconnect trunk
	Flash
FTR	Flash the trunk
	Group Call Pickup
*1	Group Call Pickup
##key+3	From idle, assign delayed ringing to pickup key
##key+5	From idle, assign lamp-only (no ringing) to pickup key
##key+7	From idle, assign immediate ringing to pickup key
	Group Ring
364-371	VS Ring Groups
428-435	12x36/32x60 Ring Groups
548-555	56x120/72x180 Ring Groups (when programming DILs)
556-563	56x120/72x180 Ring Groups (for transfer and calling)
	Hold
*801-*816	VS retrieve trunk call from Hold
*801-*812	12x36 retrieve trunk call from Hold
*801-*832	32x60 retrieve trunk call from Hold
*801-*873	56x120/72x180 retrieve trunk call from Hold
	Intercom
1 + ext	Intercom call, forced ringing
300-347	VS extension numbers
300-395	12x36/32x60 extension numbers
300-479	56x120/72x180 extension numbers
0	Your attendant
01-04	Attendants 1-4
#0	While idle, incoming Voice Announce off
#1	While idle, incoming Voice Announce on
	Intrusion
4	When hearing busy/ring busy, dial 4 to intrude
	Last Number Redial
**	Last Number Redial
DIAL+LAST	From idle, redial last number dialed
	Message Waiting
6	While hearing busy tone at ASI/OPX/ESL set, dial 6 to send message
*6	Retrieve Message Waiting
**	Cancel all Messages Waiting left at own extension
	Night Answer
*0	Pick up night mode call ringing External Paging
*01-*04	Pick up night mode call ringing operator (ONYX IV only)
	Operator Assistance
#6+8+02-07	Record OPA message 02-07
#6+8+5+02-07	Listen to previously recorded message 02-07
#6+8+#+9 or 6	Erase OPA/ACD messages (dial 9) or abort procedure (dial 6)

Table 1-4 SYSTEM NUMBER PLAN (Page 3 of 3)

Note: All the functions below are from Intercom dial tone (except where noted).

Code	Function
	Paging
1*	All Call Paging
2*	Page Zone 1
3*	Page Zone 2
4*	Page Zone 3
5*	Page Zone 4
6*	Page Zone 5
7*	Page Zone 6
8*	Page Zone 7
#+ext+0	Removing Lines and Extensions from Service Remove extension from service
DIAL SAVE	Save Steps for saving the last number dialed or dialing a saved number
#600-#615 #600-#663	Selectable Display Messages VS select messages 600-615 Select messages 600-663
#+ext+6 6	Silent Monitor Activate Silent Monitor for extension dialed When busy/ring busy, dial 6 to activate Silent Monitor
20-29 50-59 70-7999 #20-#29 #50-#59 #70-7999 #+key DIAL+key	Speed Dial Personal Speed Dial bins (second 10 bins) Personal Speed Dial bins (first 10 bins) System Speed Dial bins Program Personal Speed Dial (second 10 bins) Program Personal Speed Dial (first 10 bins - not available on 56x120 and 72x180 systems)) Program System Speed dial bins From idle, program One-Touch Speed Dial key From idle, dial Speed Dial number stored under key
*7	Split Retrieve second call
#8 #9 6 8	Time and Date Set Time Set Date While idle, dial 6 to hear the extension number While idle, dial 8 to hear the time
##	Walking Class of Service Digits dialed before Walking Class of Service code
#+0 1,2 0-5	Miscellaneous From attendant, set baud rate of COM ports (see page 2-2) After attendant dials #0, dial 1 to program modem baud rate or 2 to set local baud rate (see page 2-2) After attendant dials #+0+1 or 2, 0-5 sets baud rate (see page 2-2)

ACCOUNT CODE CAPABILITY

Description

Account Codes are user-dialed codes associated with trunk calls. An extension user may enter an Account Code while placing a call or any time while on a call. The system administrator uses Account Codes to restrict and classify trunk calls. The Account Codes print along with the other call data on the SMDR record after the call completes. Account Codes can be up to 10 digits long, using the digits 0-9.

There are two modes of Account Code Operation:

- Mandatory
- Verifiable

With Mandatory Account Codes, a user must enter an Account Code when placing a trunk call. If the user fails to enter the code, the system cuts off the call.

With Verifiable Account Codes, a user must enter an Account Code from the Verifiable Account Code list when placing a trunk call. If the user fails to enter the code (or enters a code not on the list), the system cuts off the call. The system administrator can enter up to 601 Verifiable Account Codes into system memory. A Verifiable Account Code must be at least two digits long.

In VS, you must have an AUX Module to have Verifiable Account Codes. Also, the VS Account Code list holds 400 codes. (The larger systems have 601 codes).

Conditions

- a. Users can enter Account Codes for incoming calls. However, the system cannot make these codes Mandatory or Verifiable.
- b. The system never requires a user to enter an Account Code for a 911 call.

Default Configuration

Mandatory and Verifiable Account Codes disabled. Users can optionally enter unverified Account Codes.

Programming

Required Programming

- **QI- Verifiable Account Code List** - Enter up to 601 codes into the Verifiable Account Code List. The codes must be at least two digits long.
- **QL- LCR/ARS/Account Codes, Mandatory Account Codes** - Enable/disable Mandatory Account Codes.
- **QL- LCR/ARS/Account Codes, Verifiable Account Codes** - Enable/disable Verifiable Account Codes.
- **QL- LCR/ARS/Account Codes, Account Codes for Toll Calls Only** - Enable/disable Mandatory Account Codes for all outside calls or just for toll (1+) calls.
- **QL- LCR/ARS/Account Codes, Minimum COS for Mandatory Account Codes** - Set the minimum COS number that requires Mandatory Account Codes. For example, if you enter 00, COSs 00-27 must enter Account Codes.

Other Programming

- **E- Extensions, E3- Class of Service** - Assign a Class of Service to each extension. See QL-LCR/ARS/Account Codes, Minimum COS for Mandatory Account Codes.
- **QX- Suppress "#" When Speed Dialing** - For ONYX IV, enter Y(es) to allow users to enter Account Codes without interrupting their call (see Feature Operation below).

ACCOUNT CODE CAPABILITY

Related Features

Automatic Route Selection

The system can require Account Codes and ARS Authorization Codes for the same call. If you want to use Account Codes with ARS, make sure you enable Mandatory Account Codes in the QL option.

Speed Dial

A extension user can have One-Touch Speed Dial keys for simplified Account Code entry. However, the user cannot then implement Last Number Redial or Save to redial the call.

Feature Operation

To enter an Account Code when placing an outside call:

If you use a One-Touch Speed Dial key instead of the procedure below, the system will reverify your account code (if verification is applicable).

- Step 1 > Place call.
If you have the Account Code in a One-Touch Speed Dial key, you can press the key instead of using steps 2-4.
- Step 2 > Press PGM# immediately after dialing the number.
- Step 3 > Enter Account Code.
- Step 4 > Press PGM# again.
Entering # again, additional digits and another # may change your Account Code.

To enter an Account Code for the call you are on:

If you use a One-Touch Speed Dial key instead of the procedure below, the system will reverify your account code (if verification is applicable).

- Step 1 > Do not hang up.
- Step 2 > Press INTERCOM.
If you have ESL Set, press HLD instead.
Look for: INTERCOM On
(Modular) -- HOLD Fast Flash (green), Slow Flash (red)
(Non-Modular) -- HOLD Exclusive Hold
Listen for: Dial tone
- Step 3 > Press PGM#.
Listen for: Dial tone stops
- Step 4 > Enter Account Code.
- Step 5 > Press PGM# again.
- Step 6 > Press HOLD (HLD).
Look for: INTERCOM and HOLD go out
Line key On (red/green)
Listen for: You return to the call

To enter an Account Code without interrupting the call you are on (ONYX IV only):

- Step 1 > Place call.
Look for: Line key On
Listen for: Conversation with caller
You must wait at least six seconds (from the last digit dialed) for the call to go through.
- Step 2 > Dial PGM#.
You can continue to converse while entering the code.
- Step 3 > Enter the Account Code.
- Step 4 > Dial PGM#.

Description

Each Multibutton Display Telephone has a 16-character alphanumeric display that provides various feature status messages. These messages (Tables 1-5 through 1-7) help the display telephone user process calls, identify callers and customize features. Note that Time and Date always display when the extension is idle.

There are four categories of Alphanumeric Displays:

- Attendant Displays (Table 1-5), which can occur only at attendant extensions
- ACD Supervisor Displays (Table 1-6), which can occur only at the ACD supervisor extensions
- Other Telephone Displays (Table 1-7), which can occur at any display telephone
- Telephone programming displays (VS only). Refer to the Administrator's Guide for the specifics.

Non-Modular display keyset users can adjust the brightness of their telephone's display (see Feature Operation).

Conditions

None

Default Configuration

None

ALPHANUMERIC DISPLAY

Table 1-5 ATTENDANT DISPLAYS

This display...	Appears when using...	And shows...
0-5=300-19200	Terminal Programming	Attendant has dialed INTERCOM, #, 0, selected port to program (1 or 2), and system is asking for port speed entry
1=MODEM,2=LOCAL	Terminal Programming	Attendant has dialed INTERCOM, #, 0 and system is asking for port selection (1 or 2)
300	Terminal Programming	Port speed of 300 baud selected
1200	Terminal Programming	Port speed of 1200 baud selected
2400	Terminal Programming	Port speed of 2400 baud selected
4800	Terminal Programming	Port speed of 4800 baud selected
9600	Terminal Programming	Port speed of 9600 baud selected
19200	Terminal Programming	Port speed of 19,200 baud selected
ABORTED	Selectable Display Messages	Attendant has dialed N to abort the procedure which cancels all Selectable Display Message selections
ALT OPR ASSIGNED	Alternate Operator	Attendant just enabled Alternate Operator
CANCEL ALT OPR	Alternate Operator	Attendant pressed DND/MIC to cancel Alternate Operator
COMPLETED	Selectable Display Messages	Attendant has dialed Y to cancel all Selectable Display Message selections
DELETE ALL MSG ?	ACD/Personal Greeting/OPA	Attendant/supervisor dialed INTERCOM #68# to cancel all messages
EXPD KSU FAILED	Automatic Fault Reporting	In VS, shows attendant that expansion KSU has failed
LINE nnn FAILED	Automatic Fault Reporting	Trunk circuit nnn failed
LINECRD nn FAILED	Automatic Fault Reporting	Trunk/Line PCB nn failed
MAJOR ALARM	Automatic Fault Reporting	Major alarm(s) has occurred in system
MAJOR/MINOR ALRM	Automatic Fault Reporting	Both major and minor alarms have occurred in system
MINOR ALARM	Automatic Fault Reporting	Minor alarm(s) has occurred in system
NIGHT MODE OFF	Night Answer	Attendant pressed DND/MIC to disable Night Mode operation
NIGHT MODE ON	Night Answer	Attendant pressed DND/MIC to enable Night Mode operation
PARKED IN nn	Park	Attendant parked call in orbit nn
STA nnn FAILED	Automatic Fault Reporting	Extension nnn failed

Table 1-6 ACD SUPERVISOR DISPLAYS

This display...	Appears when using...	And shows...
02 X-304 1:23	Automatic Call Distribution	Two calls are waiting and extension 304 has the longest waiting call (1 minute, 23 seconds)
01 L-01 3:21 4=INST,7=REMOVE	Automatic Call Distribution Automatic Call Distribution	Line 01 has one call waiting for 3:21 ACD Supervisor dialed INTERCOM # and pressed DSS Console key for member extension
ABORTED	Selectable Display Messages	ACD supervisor has dialed N to abort the procedure which cancels all Selectable Display Message selections
COMPLETED	Selectable Display Messages	ACD supervisor has dialed Y to cancel all Selectable Display Message selections
DELETE ALL MSG ?	Selectable Display Messages	ACD supervisor dials INTERCOM #68# to cancel all Selectable Display Messages selected by extension users

Table 1-7 TELEPHONE DISPLAYS (Page 1 of 3)

This display...	Appears when using...	And shows...
0,1,PK,SPD KEY	Intercom, Speed Dial	Options when programming Intercom Voice Announce, Group Call Pickup ringing and One-Touch Speed Dial keys
A-Y,0=SPACE,Q,Z	Speed Dial	In the Speed Dial programming mode, user has dialed Y to program Speed Dial names
A-Y,0=QZ,#=ALL	Directory Dialing	After dialing I, P or C for Directory Dialing, user dials * for options
ACCESS DENIED	Directory Dialing	User tries to use company-wide directory (System Speed Dial) from a restricted phone
AUTHORIZATION NO	ARS	User places an outside call and ARS requests an Authorization Code
AUTO TIMER ON	Call Timer	User activates Call Timer
AUTO TIMER OFF	Call Timer	User deactivates Call Timer
B Assigned name	Transfer	User answered Trunk recalling from busy extension (with indicated name) after an incomplete Transfer
BUSY RECALL nnn	Transfer	User answered Trunk recalling from busy extension nnn after an incomplete Transfer
CALL FROM nnn	Call Waiting, Intercom, Hotline, Station Call Coverage	Intercom call from extension nnn
CALL FROM Lnn	Central Office Calls, Answ.	User presses a line key to answer a trunk without an assigned name
CALL FROM ORBIT	Park	Call retrieved from Orbit
CALL WAITING	Call Waiting	Caller (with programmed name) waiting
Callers name	Call Waiting, Intercom, Hotline, Station Call Coverage, Central Office Calls	Call from extension or trunk with indicated name
CFWD FROM nnn	Call Forwarding	Call forwarded from extension nnn
COMPANY WIDE DIR	Directory Dialing	User dialed C for company-wide directory
CONFERENCE CALL	Conference, Privacy	User established Conference or joined a call using Privacy Release
COST \$ nn/nn	Least Cost Routing	Cost of current outside call
Date and Time	Time and Date Setting	The current date and time (while the extension is idle)
DELAYR,RING,LAMP	Station Call Coverage	User is programming ringing options for a Call Coverage key
DIAL PREVIEW	Dialing Number Preview	User dialed * to activate Dialing Number Preview
Digits	Central Office Calls, Last Number Redial, Save, Speed Dial	Digits as trunk call dials out
DIRECTORY I,P,C	Directory Dialing	User dials D when extension is on hook to view Directory Dialing options
DND OFF	Do Not Disturb	User disabled DND
DND ON	Do Not Disturb	User enabled DND
DO NOT DISTURB	Intercom, Station Call Coverage	User called extension in DND
DSS LAMP FIELD	Intercom, Direct Station Selection	User pressed INTERCOM and enabled DSS keys
DSS,EXT,6,9,8 ?	Call Forwarding, DSS, Selectable Display Messages	User dialed INTERCOM # and system shows selection options

Table 1-7 TELEPHONE DISPLAYS (Page 2 of 3)

This display...	Appears when using...	And shows...
ENTER A/C CODE	LCR	User places an outside call and LCR requests an Account Code
ENTER BIN #	Speed Dial	User is programming Speed Dial bins
ENTER FEAT. CODE	Speed Dial	User is programming Intercom Feature in a Speed Dial bin (or under a One-Touch Speed Dial key)
EXT	Call Forwarding Selectable Display Messages	User (with DSS suppressed) dials INTERCOM # and system shows selection options
F Assigned name FWD TO nnn	Call Forwarding, Intercom	User placed Intercom call to extension forwarded to extension nnn
GROUP-R PICK-UP	Group Ring	User answered an outside call ringing a Ring Group (of which the user's extension is not a member)
HF CIRCUIT BUSY	Intercom	User places an Intercom call to a dual channel Data Set that has both channels busy. Also occurs if user tries to use Handsfree and no system Speakerphone circuits are available
HOLD RECALL Lnn	Hold	Tie line has a trunk on Hold
HOLD RECALL nnn	Hold	User picks up a call abandoned on Hold by extension nnn
HOLD/WAIT xx/yy	Transfer	User is Transferring a call to a busy extension that has xx calls on Hold and yy calls camped-on (waiting)
ICM ANNOUNCE ON	Intercom	User dialed #1 to allow incoming Intercom voice announcements
ICM ANNOUNCE OFF	Intercom	User dialed #0 to block incoming Intercom Voice announcements
ICM DIRECTORY	Directory Dialing	User dialed I (or pressed D key in ONYX IV) for Intercom directory
LINE [01-31,9X]	Speed Dial	User is programming a Speed Dial bin or One-Touch Speed dial key, and system is asking for a trunk number
LINE nn	Central Office Calls	User placing an outside call has seized trunk nn
MIKE MUTED	Microphone Mute	User pressed DND/MIC to mute the phone's mic
MSG. FRM. nnn	Message Waiting	User is viewing messages, and has Message Waiting from extension nnn
Name	Central Office Calls, Intercom, Hotline, Message Waiting, Station Call Coverage	User is placing a call, answering a call, or viewing a message for an extension with a programmed name
NO RAM INSTALLED	Directory Dialing	User trying to use Directory Dialing in a system with a MEM-A PCB or a VS without an Aux Module
NO SPEED DIAL	Speed Dial	User is trying to enter the users Personal Directory with no Speed Dial blocks assigned in programming
NO. OF MSG=nn	Voice Mail Compatibility	User pressed MSG to check the number of Voice Mail messages waiting
NUMBER SAVED	SAVE	Number accepted as Saved number (ONYX IV only)

Table 1-7 TELEPHONE DISPLAYS (Page 3 of 3)

This display...	Appears when using...	And shows...
ORBIT RECALL nnn	Park	Call user parked is recalling user extension (nnn)
P Assigned name	Directed Call Pickup, Group Pickup	User has picked up a call from extension with assigned name
PARKED IN nn	Park	User Parks call in orbit
PERSONAL DIR.	Directory Dialing	User dialed P for personal directory
PICKUP FROM nnn	Group Call Pickup	User picked up a call ringing extension nnn
PRIVACY	Privacy Groups	User presses line key to have privacy
PRIVATE CALL	Privacy Groups	User pressed line key for trunk that has Privacy enabled by Hotline partner. Trunk normally must have Privacy released.
PROGM NAME Y/N	Speed Dial	User is programming Speed Dial and system is asking for a name entry
PROG MESSAGE	Personal Greeting	User is programming a Personal Greeting
R Assigned name	Hold, Park, Transfer	User answered recalling trunk call from extension with assigned name
	DID	User answered call routed from extension with Assigned name via DID RNA Intercept
RELEASE PRIVACY	Privacy	User pressed a line key to release privacy on a call where privacy was previously established
RING NO ANS nnn	Hold, Park, Transfer	User answered trunk call recalling from extension nnn
	DID	User answered call routed from extension nnn via DID RNA Intercept
SELECTED IDLE LINE	Dialing Number Preview	After entering number, user pressed DIAL to place call
SET DATE MMDDYY	Time and Date Setting	User is setting system date
SET TIME HHMMSS	Time and Date Setting	User is setting system time
SPEED DIAL BINS	Speed dial	User presses DIAL to program or use Speed dial
Speed Dial name	Speed Dial	User dialing out a Speed Dial with a stored name
TEL NUMBER?	Speed Dial	User is programming Speed Dial and the system is requesting a number
UNLISTED NAME	Directory Dialing	User tries to access Directory Dialing, and the system has no names programmed
V Assigned name	DID	User answered call routed from extension with assigned name via DID Vacant Number Intercept
VACANT NO nnn	DID	User answered call routed from extension nnn via DID Vacant Number Intercept
VACANT NUMBER	Direct Station Selection	User has pressed an undefined DSS Console key
WELCOME		Initial message after system start-up or reset

ALPHANUMERIC DISPLAY

Programming

Required Programming

- **E- Extensions, E2- Circuit Type** - Assign circuit type 02 to each Multibutton Display Telephone.

Other Programming

None

Related Features

Refer to the features indicated in Tables 1-5 through 1-7.

Feature Operation

Refer to the features indicated in Tables 1-5 through 1-7.

To adjust the brightness of your telephone's display (if you have a non-modular keyset):

- Step 1 ➤ Press VOL UP ▲ or VOL DN ▼ while telephone is idle.
Your phone must be idle (not ringing), with Background Music off.

Description

Alternate Attendant lets the attendant forward calls to another keyset extension. This is useful when the attendant must temporarily leave the phone but does not want calls to go unanswered. After activating Alternate Attendant, outside calls that ring the attendant also ring the alternate. Intercom calls to the attendant normally ring only at the Alternate Attendant. If the alternate is busy, however, Intercom calls ring the attendant. After activating Alternate Attendant, the attendant may still place calls and use other attendant features.

Conditions

For maximum performance, the Alternate Attendant should be a 30-button telephone with display.

Default Configuration

Alternate Attendant allowed.

Programming

Required Programming

- **CP- Inhibit Call Forwarding (BY0:6)** - Enable or disable Call Forwarding capability. To allow Alternate Attendant, this bit should always be 0 in COS 00.

Other Programming

- **E- Extensions, E2- Circuit Type** - The Alternate Attendant must be a keyset (type 01-04).

Related Features

Attendant Positions

The Alternate Attendant cannot be another attendant.

Automatic Fault Reporting

Attendant alarm indications do not display at the Alternate Attendant.

Call Forwarding

The system cancels Call Forwarding at the extension the attendant designates as the alternate. In addition, the alternate cannot forward calls once designated as the alternate.

Do Not Disturb

The system cancels Do Not Disturb at the extension the attendant designates as the alternate. If an Alternate Attendant enables Do Not Disturb, the system cancels the Alternate Attendant assignment.

Removing Trunks and Extension From Service

The Alternate Attendant cannot remove trunks and extensions from service.

Speed Dial

The attendant can have a One-Touch Speed Dial key or Personal Speed Dial bin for the Alternate Attendant code.

ALTERNATE ATTENDANT

Feature Operation

To reroute calls to the Alternate Attendant:

- Step 1 >** Lift handset.
You can press a One-Touch Speed Dial key instead of using Steps 2-5.
- Step 2 >** Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
- Step 3 >** Dial PGM#.
Listen for: Dial tone stops
- Step 4 >** Dial the alternate's extension number.
- Step 5 >** Dial 3.
Look for: MSG Slow Flash (green)
DND/MIC Slow Flash (red)
- Step 6 >** Hang up.
Look for: INTERCOM Off

To cancel the Alternate Attendant routing (and return your calls to you):

- Step 1 >** Do not lift handset.
- Step 2 >** Press DND/MIC
MSG and DND/MIC go out.

ALTERNATE ATTENDANT, ATTENDANT CONSOLE (ONYX IV)

Description

An attendant with an Attendant Console can forward calls to an Alternate Attendant group. This is helpful when the attendant must temporarily leave the console but does not want calls to go unanswered. The attendant presses a specially programmed Alternate Attendant group key to activate and deactivate Alternate Attendant. After activating Alternate Attendant, calls that ring the Attendant Console also ring the Alternate Attendant group. The calls ring the group like Group Ring calls: an Alternate Attendant group member just lifts the handset to answer. Alternate Attendant Group members can be any telephone type.

This feature is only available in ONYX IV and requires an Attendant Console (P/N 89055A).

Conditions

None

Default Configuration

No Alternate Attendant groups programmed.
Attendant Console key 20 is undefined.

Programming

Required Programming

- E- Extensions, EE- Ring Group - For each Alternate Attendant keyset, enter the Alternate Attendant group number (A1-A4).
- QC- Operator Programming, DSS Key #20 - Enter the console's own extension number to enable Alternate Attendant at the Attendant Console.

Other Programming

- E- Extensions, E2- Circuit Type - Assign the Attendant Console circuit type 06. Refer to the Attendant Console feature for additional programming.

Related Features

Attendant Console/Attendant Position

The Alternate Attendant cannot be another attendant.

Automatic Fault Reporting

Attendant alarm indications do not display at the Alternate Attendant.

Group Ring (Ring Groups)

A phone in an Alternate Attendant group cannot also be in a Ring Group.

Removing Trunks and Extension From Service

The Alternate Attendant cannot remove trunks and extensions from service.

ALTERNATE ATTENDANT, ATTENDANT CONSOLE (ONYX IV)

Feature Operation

- To enable Alternate Attendant at an Attendant Console:**
- Step 1 > Press Alternate Attendant key.
Look for: Alternate Attendant key On
You cannot use the keyset Alternate Attendant procedure (i.e., ICM + PGM# + ext. + 3) instead.
- To disable Alternate Attendant at an Attendant Console:**
- Step 1 > Press Alternate Attendant key.
Look for: Alternate Attendant key Off
- To answer an Alternate Attendant group call:**
- Step 1 > Lift handset.
Look for: INTERCOM Fast Flash (if an Intercom call)
Line key On (red/green) if an outside call
Listen for: Conversation with caller
If you have a loop key for the call, the key lights only after you answer the call.

ANALOG STATION INTERFACE (ASI)

Description

ASI Modules

The Analog Station Interface (ASI) module provides standard 2500 set DTMF service at any extension port. Install the ASI when the site requires a limited number of analog interfaces -- without reducing the number of Line/Trunk ports. This lets the installer easily connect auxiliary equipment such as Integrated Voice Messaging without using Special Trunk Interface ports. The ASI module can also support on-premise 2500 type telephones. The system requires an ASI module for each 2500 type port.

There are two types of ASI modules: P/N 89748 (without a DTMF receiver) and P/N 89749 (with an integral DTMF receiver). ASI P/N 89748 requires DTMF detection (i.e., a system DTMF receiver) for outgoing calls. When the number of ASIs exceeds the number of DTMF receivers available in the system, the ASIs may "contend" for a receiver. When a receiver is available, the system passes dial tone to the ASI on a first come-first served basis. To limit contention, use the following table to determine the maximum number of ASIs allowable. Note that other features (e.g., DISA and OPX) may also require DTMF receivers, which reduces the total available to the ASIs.

Dialing Traffic	DTMF Receivers	ASIs
Light	2	10
	4	24
Medium	2	8
	4	20
Heavy	2	6
	4	14

To have DTMF receivers, the large systems must have either a MLU, VAU or OPA/VAU PCB. Each of these PCBs provides two receivers, and replaces four trunk circuits. Heavy traffic may require the installation of the MLU and VAU or OPA/VAU PCBs. The VS must have a PCU Module (not currently available).

ASI P/N 89749 does not require a system DTMF receiver for outgoing calls.

8SLU PCB

The 8SLU PCB (P/N 88122) provides eight 500/2500 ports. It plugs into a Station (SCU) PCB slot in the large system CEU and replaces 12 extensions. The 8SLU PCB provides all the capabilities of ASI P/N 89748, plus:

- Multiple ports (up to eight connected devices)
- 500 (Dial Pulse) service
- Two integral DTMF receivers (shared by the eight ports)

If the SLU ports have heavy outgoing DTMF traffic, the SLU may require the use of a system DTMF receiver. Keep this in mind when allocating DTMF receivers. Also, the 8SLU PCB requires an external power supply/ring generator. Refer to the system hardware manual for the specifics.

Description (Cont'd)

Conditions

- a. ASI modules do not support Dial Pulse (500 type) telephones.
- b. The device connected to the ASI *must* meet the FCC Part 68 requirements for Type B ringers (with a REN of 1.0 or less). For outdialing, the device connected must provide standard DTMF signals. Do not connect a telephone with an electro-mechanical ringer.
- c. Do not install a telephone connected to an ASI off-premise. Wiring from the system to the ASI's modular jack should not exceed 2500 feet using 22 AWG two-pair twisted wire. Wiring from the modular jack to the analog device should not exceed 100 feet using 22 AWG two-pair twisted wire.
- d. Analog devices which use automated dialing should incorporate dial tone detection, particularly in applications with heavy dialing traffic.
- e. The system dedicates a DTMF receiver to a P/N 89748 ASI for six seconds after the user dials a digit (or until dial tone times out). After that interval, the receiver becomes available to other users.

Default Configuration

None

Programming

Required Programming

(ASI extensions use E- Extension programming for features, not E- Trunk programming.)

- **E- Extensions, E2- Circuit Type** - Assign type 05 for ASI P/N 89748 and the 8SLU ports. Assign type 51 for ASI P/N 89749.

Other Programming

- **IT- Activate/Deactivate Decoders** - Activate or deactivate the system DTMF decoders (receivers). A service technician may have to do this during troubleshooting to isolate a faulty receiver.

Related Features

Off-Premise Extension (OPX)

A 2500 set connected to an ASI offers the same features as an Off-Premise Extension. Refer to the Off-Premise Extension feature for more details.

Voice Mail Compatibility

ASIs can provide the DTMF interface for Voice Messaging.

Feature Operation

Refer to the Off-Premise Extension feature.

ANALOG STATION INTERFACE (ASI)

- For Your Notes -

Description

The ONYX IV system allows up to four Attendant Consoles. The Attendant Console offers unique features that streamline call processing for operators. These features include:

- Special function keys that simplify placing and answering calls, transferring calls and putting calls on Hold.
- Feature keys for speeding up other common attendant functions
- 20 programmable keys for one button access to extensions and selected features
- A 40-character, two-row alphanumeric display for comprehensive call status messages



The following paragraphs summarize the features and related benefits available with the Attendant Console. For complete details on all the Attendant Console features, refer to the Attendant Console Feature Handbook (P/N N1850ACH01).

Note: You can mix any combination of Attendant Consoles and attendant keysets in the same system.

Attendant Console Special Function Keys

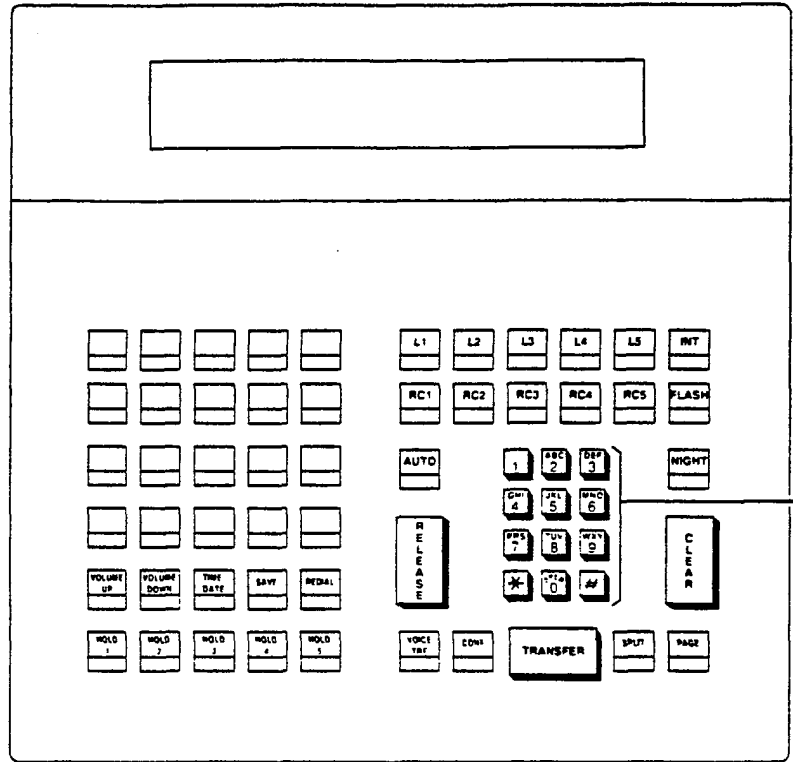
The Attendant Console has oversized, easy-to-use keys for the most frequently-used functions.

This key...	Lets the attendant...
RELEASE	Disconnect a call, clear alarms or get Intercom dial tone (to place Intercom calls). Press this key also to clear the display (while not on a call).
CLEAR	Display alarms (remember to write them down before pressing Release to clear them). Press this key also to clear the display without releasing active call.
TRANSFER	Initiate a screened Transfer (TRANSFER + ext.) or Handsfree Transfer (TRANSFER + ext. + VOICE TRF). For an unscreened Transfer of an incoming call, just dial the destination extension number while on a call.

ATTENDANT CONSOLE (ONYX IV)

Description (Cont'd)

Attendant Console Special Function Keys



Dial Pad

0183087

ATTENDANT CONSOLE (ONYX IV)

Description (Cont'd)

Attendant Console Loop, Recall and Hold Keys

The five loop keys are for placing and answering outside (trunk) calls. In programming, you assign a loop key to incoming trunks and outgoing trunk groups. This gives each loop key a dual function: Press it while idle to place a trunk group call or press it while flashing to answer a trunk call. Since each trunk rings an assigned key, that attendant can tell the type of trunk by the key it rings. Refer to Programming Loop Keys below.

The Attendant Console has Recall keys for calls that have been Parked, Transferred or placed on Hold and then not picked up. These calls eventually recall to their assigned incoming loop key. This lets the attendant identify the type of recalling trunk call recalling before answering it.

When the attendant places a call on Hold, it waits on one of the five Hold keys. The calls remain on the Hold keys until picked up or until they recall the appropriate RC (recall) key.¹ By having separate keys for each call on Hold, the attendant can visually keep track of the held calls.

This key...	Lets the attendant...
HOLD (1-5)	Put a call on Hold (five maximum). <i>The console does not have Automatic Hold.</i> Intercom calls left on Hold too long recall to the INT key. Trunk calls left on Hold too long recall to their respective RC (recall) keys.
L1-L5 (Loop Keys 1-5)	Place and answer trunk calls. For answering calls, you assign each trunk to a specific loop key. For placing calls, you assign each loop key to a trunk group.
RC1-RC5 (Recall Keys)	Retrieve unanswered trunk calls previously placed on Hold, Transferred or Parked. Trunks ring the recall key that corresponds to their incoming loop key. For example, if a trunk would normally ring L1, it recalls RC1.

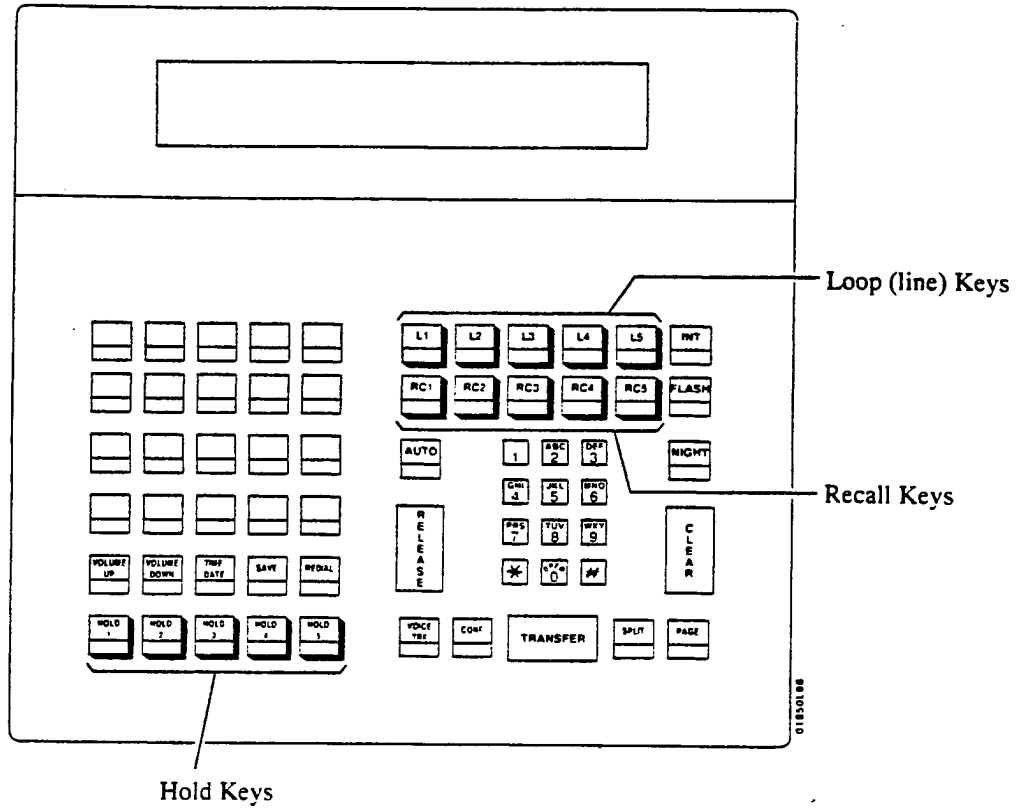
If a loop key is busy, additional incoming calls queue (stack up) on the busy loop key. The system processes the calls on a first-come, first-served basis when the key becomes idle.

¹ Recalls occur after the QT- Hold Recall Time interval.

ATTENDANT CONSOLE (ONYX IV)

Description (Cont'd)

Attendant Console Loop, Recall and Hold Keys



ATTENDANT CONSOLE (ONYX IV)

Description (Cont'd)

Attendant Console Feature Keys

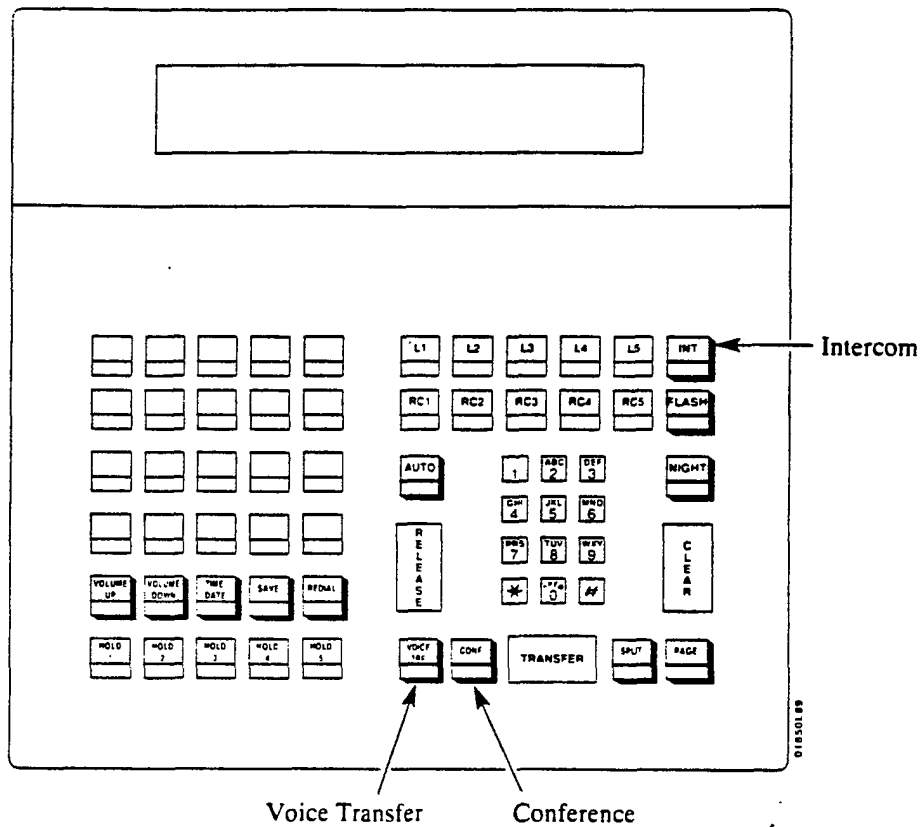
The Attendant Console has dedicated feature keys. Some of these feature keys, like SAVE and CONF, and are the same as those on the keyset. Others, like AUTO and INT, have functions unique to the console.

This key...	Lets the attendant...
VOLUME UP	Set the handset and incoming ringing volume. Also use these keys to set the display contrast and select from the Intercom Directory Dialing list.
VOLUME DOWN	
TIME/DATE	Change the system time (TIME/DATE + HHMMSS + RELEASE) or date (TIME/DATE twice + MMDDYY + RELEASE)
SAVE	Save an outside number (press SAVE after placing call) or redial a Saved Number (press SAVE while idle). The display shows, "NUMBER SAVED."
REDIAL	Redial an outside number (press REDIAL while idle)
AUTO	Enable or disable Automatic Answer.
VOICE TRF	Make a Handsfree Transfer (TRANSFER + ext. + VOICE TRF)
CONF	Set up a Conference (first call + CONF + second call + CONF)
SPLIT	Alternate between two calls (first call + SPLIT to get newest waiting call)
PAGE	Make an All Call Page
INT	Answer incoming Intercom calls or Intercom recalls
FLASH	Flash a trunk (place or answer call + FLASH) or respond to a Voice Messaging System Message Waiting
NIGHT	Enable or disable the Night Mode

ATTENDANT CONSOLE (ONYX IV)

Description (Cont'd)

Attendant Console Feature Keys



ATTENDANT CONSOLE (ONYX IV)

Description (Cont'd)

Attendant Console Programmable Keys

The 20 programmable keys on the Attendant Console give the operator one-button access to extensions and selected features. The programmable keys are similar to those on the DSS Console, except that they are right on the attendant's phone. You can program the keys with the following options:

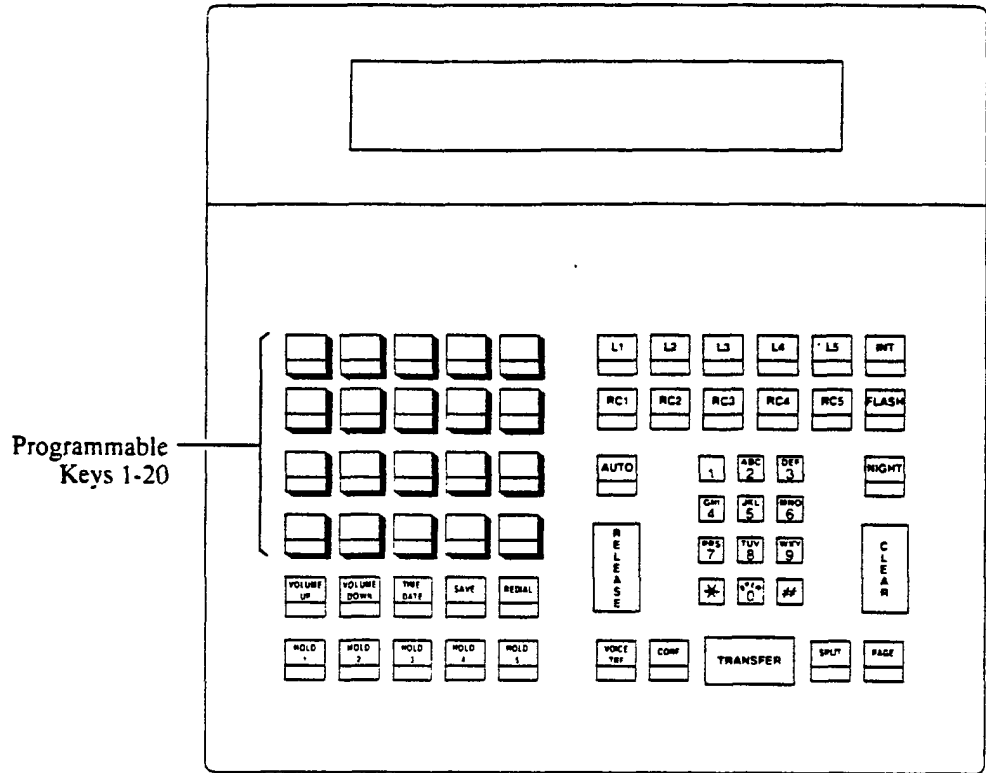
- Alternate Attendant Group (key 20 only). See Alternate Attendant in this supplement.
- Call Parking orbits
- Central Office Calls, line keys
- Directory Dialing (ICM Directory). See Directory Dialing in this supplement.
- Hotline
- Paging
- Speed Dial, Personal and System

Many of the options are the same as those available to DSS Consoles. However, the Alternate Attendant Group key is unique to the Attendant Console programmable keys.

ATTENDANT CONSOLE (ONYX IV)

Description
(Cont'd)

Attendant Console Programmable Keys



Each Attendant Console can have up to three 80-Button DSS Consoles for additional programmable keys. You use and program these consoles the same way as in the ONYX II/III/VS systems. For more information, refer to Direct Station Selection, DSS Console.

ATTENDANT CONSOLE (ONYX IV)

Description (Cont'd)

Alphanumeric Display

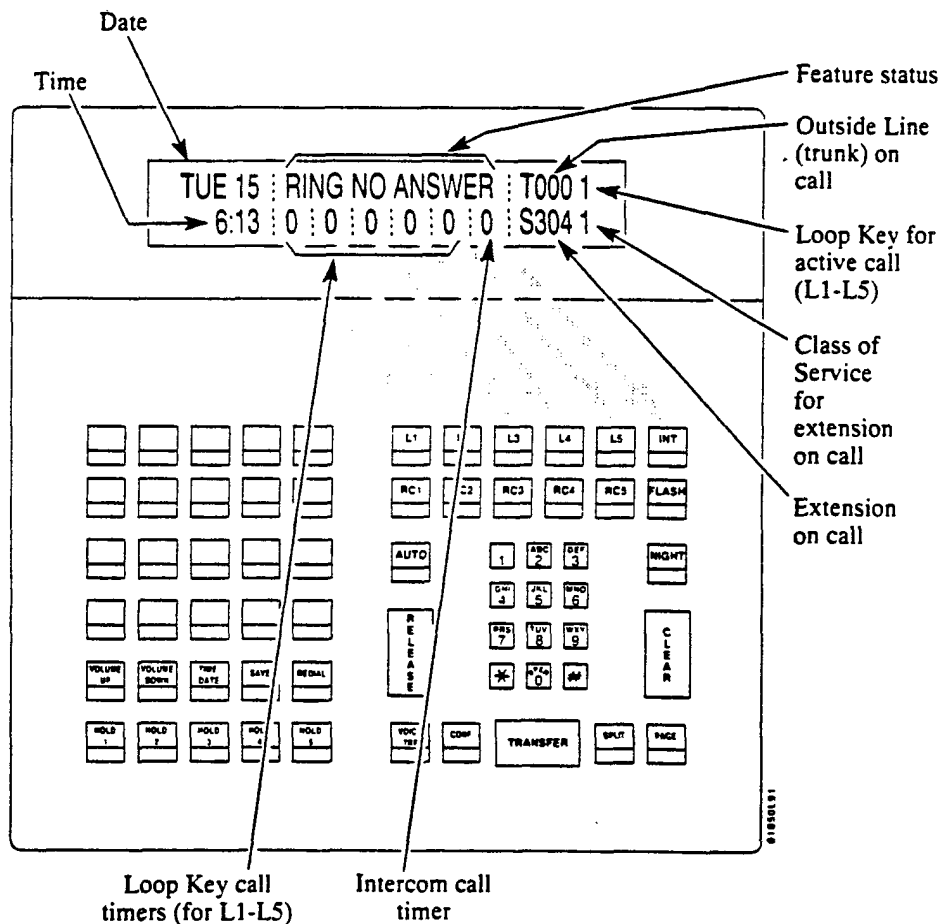
The 40-character two-row alphanumeric display shows at a glance important information about the Attendant Console's active call:

This display...

Shows the attendant...

Date	The current date (date and day of week only)
Time	The current time (24 hour clock)
Feature Status	The status of the current (active) call. For a complete list of the messages, refer to the Feature and Programming Manual.
Loop Key	
Call Timers	How many seconds the call has been ringing the loop key. The timer clears when the call is answered. There is one timer for each loop key. If a second call is ringing a busy loop key, this timer shows how long the second call has been ringing. The maximum time is 99 seconds.
Intercom	
Call Timer	How many seconds a call has been ringing the INT key. The call can be an Intercom call or an unassigned trunk call (no loop number and no 0 loop key). The maximum time is 99 seconds.
Outside Call	The trunk number for an active outside call (e.g., 001 for trunk 801)
Loop Key	The loop key used for the current (active) call
Extension	The extension number for an active Intercom call
Class of Service	
Service	The Class of Service of the extension on an active Intercom call

Alphanumeric Display



Description (Cont'd)

Parallel and Independent Operation

In a system with more than one Attendant Console, you can program the consoles for Parallel Operation or Independent Operation. With Parallel Operation, the programming and operation of the consoles is the same. For example, if trunk 801 rings L1 on console 1, it rings L1 on console 2 as well. This is helpful if both attendants should cover the same calls.

With Independent Operation, the programming and operation is unique to each console. For example, trunks 801-804 ring L1 on console 1, while trunks 805-810 ring L1 on console 2. Independent operation is appropriate when the attendant coverage should not overlap.

Conditions

When installing an Attendant Console with a separate power supply (P/N 89055A):

- Plug the power supply into the console
- Plug the console into a dedicated 120 V AC receptacle
- Assign the console circuit type 06 in **E2- Circuit Type** (see programming below)
- Designate the console extension as an operator in **QC- Operator Programming** (see programming below)
- Plug the console line cord into the console and the console's modular jack

Default Configuration

No Attendant Consoles programmed.

All incoming loop keys are loop 0 (in **QC- Loop Keys**).

All outgoing loop keys have no rotaries assigned (in **QC- Outloop Keys**).

The console's 20 DSS keys are undefined (in **QC- DSS Key #**).

All trunks have no loop number (in **EL- Loop Number**).

Programming

Required Programming

To program loop keys...

- **E- Trunks, EL- Loop Number** - Assign trunks to one of four loop numbers. Trunks ring the Attendant Console according to the trunk loop number and the loop key loop number (see **QC- LOOP KEYS**) below.
- **QC- Operator Programming, Loop Keys** - Assign each console loop key a loop number (1-4). Trunks ring their associated loop key. For example, if you enter 1 for **QC- LOOP KEY #1** and **EL- LOOP NUMBER** for trunk 1, trunk 1 rings loop key 1. All trunks without a loop number ring the 0 loop key, if there is one. If there is no 0 loop key, the trunks without a loop number ring the INT key.
- **QC- Operator Programming, Outloop Keys** - For outgoing calls, correlate each loop key to a trunk group. This option assigns a trunk group (90-98) to each of the five loop keys. Refer to the Line (Trunk) Rotaries feature when programming trunk groups.

ATTENDANT CONSOLE (ONYX IV)

Programming

Required Programming (Cont'd)

To program the Attendant Console Programmable Keys...

- QC- Operator Programming, DSS KEY # - Program the DSS Console programmable keys with any of the functions listed below.

For this function... . Enter this code...

Alternate Attendant

Group 300 (for key 20 only)

Hotline Extension number

ICM Directory D

Orbit 60-69

Page P0-P7

Personal Speed Dial . 50-59, 20-29

System Speed Dial . . 7 + Bin (usually 00-99)

Trunks Trunk number (801-872)

To set additional Attendant Console programming...

- E- Extensions, E2- Circuit Type - Assign the Attendant Console circuit type 06. You must do this for each console -- the console doesn't auto-ID.
- QC- Operator Programming, Operator Extensions - Designate the console extension as an attendant.

Other Programming

- E- Extensions, ED- Trunk Control - Calls ring the console according to the console's ED programming.

Related Features

Direct Station Selection, DSS Console

An Attendant Console can have a DSS Console.

Headset Compatibility

An Attendant Console can use a customer-provided headset.

The following features *do not* apply to the Attendant Console:

- Call Coverage (Station Call Coverage keys)
- Call Forwarding
- Call Timer
- Do Not Disturb
- Monitor
- Paging (receiving Pages and placing an Auto-Page)
- Personal Greeting
- Prime Line Selection

Feature Operation

Refer to the Attendant Console Feature Handbook (P/N N1850ACH01).

Description

The attendant is the focal point for call processing within the system. The system can have up to four attendants. To maximize call handling efficiency, the attendant should have a 30-button display telephone and a DSS Console. (Refer also to the Direct Station Selection, Console feature.)

In addition to the features of a standard keyset, the attendant also has several unique features (see below). Go to the feature descriptions for the specifics.

- Automatic Answer (ONYX IV)
- Automatic Fault Reporting (i.e., viewing and clearing alarms)
- Automatic Hold (refer to the Hold feature)
- Alternate Attendant
- Forced Trunk Disconnect
- Removing Trunks and Extensions from Service

The following features are not available to attendants:

- Automatic Call Distribution (member)
- Call Forwarding
- Callback
- Do Not Disturb
- Group Listen
- Handsfree and Monitor
- Line (Trunk) Queuing
- Message Waiting
- Off-Hook Signaling
- Paging (Receive and Auto-Page)
- Personal Greeting

Conditions

The system's main attendant should be port 00 (usually extension 300).

Default Configuration

The system has one attendant, located at port 00 (extension 300).

Programming

Required Programming

- **QC- Operator Programming** - Designate additional attendant extensions (other than port 00/extension 300).

Other Programming

- **E- Extensions, E2- Circuit Type** - Assign circuit type 04 to Attendant Telephone P/N 88254.
- **E- Extensions, E8- Line Access Options, Off-Hook Ringing** - Allow Off-Hook Ringing for each attendant.
- **E- Extensions, E9- Attendant (Operator) Assignment** - Assign the attendant reached when the extension user dials 0.

ATTENDANT POSITIONS

Related Features

Central Office Calls

The attendant has the same flexibility for placing and answering calls as does a non-attendant keyset.

Class of Service

Attendant's extensions always use COS 30. This COS follows the programming options of COS 0. If you remove an attendant (in QC), use the E3- Class of Service option to change the extension to a non-attendant COS (00-27).

Flexible Numbering Plan

Flexible numbering allows the System Administrator to change the operator access digit (normally 0) to any other digit (1-9).

Handsfree and Monitor

Attendants do not have Handsfree or Monitor.

Night Answer

Two attendants can be in a Circular Hunt Group (consisting only of themselves) for special night mode operation. Both attendants must activate Night Answer to put their trunks in the night mode. Following is an example for attendants 300 and 304:

<u>Ext</u>	<u>E4</u>	<u>E5</u>
300	304	02
304	300	02

Off-Hook Signaling

An attendant should have off-hook ringing. This allows the attendant extension to ring while it displays alarms.

Ringin Line Preference

Intercom calls to an attendant follow Ringin Line Preference programming.

Tenant Service

Tenants can share the same Attendant Position.

Toll Restriction

An extension in a tenant group can have night mode restriction (e.g., CP- Allow Only Intercom Calls at Night [BY0:2] is 1). The restriction takes effect when the extension's operator activates Night Answer.

Feature Operation

To call an attendant:

- Step 1 >** Lift handset.
If you have an ESL set, skip to step 3.
- Step 2 >** Press INTERCOM
Look for: INTERCOM On
Listen for: Dial tone
- Step 3 >** Dial attendant code.
You can dial:
0 (for your operator) or 01 for main attendant
02-04 for attendants 2, 3 and 4
Attendant's extension number
Listen for: Ringing
In a multiple attendant system, the system waits four seconds for a second digit. Your call then goes through to the main operator.

Description

A keyset attendant position can have Automatic Answer. With Automatic Answer, the attendant never has to press a line/loop key to answer a call -- or decide which call to answer. The system automatically selects the oldest call for them. Automatic Answer is particularly helpful to an attendant with a headset and DSS Console. The attendant just presses the Release key on the DSS Console to automatically answer each new call.

All attendant keysets have key 23 permanently assigned as the Auto Answer key. There is no programming required. To enable and disable Automatic Answer, the keyset attendant just presses the Auto Answer key (key 23).

Although Automatic Answer works like Ringing Line Preference, it has two advantages:

- The attendant can enable or disable Automatic Answer by pressing a key
- The attendant hears two alert tones just before the system answers the call

Automatic Answer is only available in the PBX.

Conditions

With Attendant keyset P/N 88254, key 18 is the Automatic Answer key.

Default Configuration

All attendant keysets have key 23 permanently assigned as the Auto Answer key.

Programming

Required Programming

None

Other Programming

- QC- Operator Programming, Operator Extensions - Assign a keyset as an attendant.

Related Features

Attendant Console

An attendant with an Attendant Console can press AUTO to activate Automatic Answer at the console. Refer to the Attendant Console Handbook (P/N N1850ACH01) for the specifics.

Data

Since Auto Answer uses key 23, the attendant keyset cannot also be a Data Set.

Feature Operation

Step 1 ➤

To enable or disable Automatic Answer:

Press Auto Answer key (key 23).

Look for: Auto Answer key Off when Automatic Answer disabled
Auto Answer key On when Automatic Answer enabled

To answer a call with Automatic Answer (If you have a headset and a DSS Console):

Step 1 ➤

Press RLS on DSS Console.

Look for: Line key On, or
INTERCOM key Fast Flash

Listen for: Two beeps, then conversation with caller

AUTOMATIC ANSWER (ONYX IV)

Feature Operation (Cont'd)

To answer a call with Automatic Answer (If you have a headset and don't have a DSS Console):

- Step 1 > Remove handset from cradle.
Your phone automatically answers your first incoming call.
- Step 2 > Press and release the hook switch to get your next call.

To answer a call with Automatic Answer (If you don't have a headset or a DSS Console):

- Step 1 > Lift handset.
Your phone automatically answers your first incoming call.
- Step 2 > Press and release the hook switch to get your next call.

Description

Automatic Call Distribution (ACD) uniformly distributes incoming calls among members of a programmed ACD group. Each ACD group consists of member extensions, called agents, and a master number. When a call rings the master number, the system automatically routes the call to the agent that has been idle (on hook) the longest. The call can be a transferred call or Intercom call to the master number. ACD obsoletes the need to have a receptionist or attendant screen and route calls to group members.

Supervisor Functions

Each ACD group can have a supervisor extension. The supervisor must have a 30-button display telephone with a DSS Console. This lets the supervisor monitor the status of the ACD group and each agent extension. When all ACD agents are busy, the supervisor's display shows:¹

- The number of calls waiting
- The trunk or extension that has been waiting the longest (this is the next extension/trunk in the ACD queue)
- How long the trunk or extension has been waiting

The supervisor can also take agent extensions in and out of service as traffic into the ACD group changes. ACD agents can also remove and reinstall their own extensions. However, the supervisor can always reinstall an extension if it was removed by an agent.

The supervisor's DSS Console should have a Hotline key for each ACD agent. This shows at a glance the status of each agent.

When DSS key is...	Agent is...
Off	Idle
On	Busy
Flashing	Removed from service
DND Flash	In Do Not Disturb

Optionally, the supervisor's DSS Console can have a Hotline key for the ACD master number. This shows the status of the entire ACD group. When all ACD agents are busy, the key for the ACD master number lights. As soon as an agent becomes free, the DSS key for the ACD master number goes out.

In VS, ACD supervisor displays require an AUX Module. If the VS doesn't have an AUX module, the supervisor's display does not show how long a call has been waiting for an available agent.

All Agents Busy Announcement

Callers into the ACD group can optionally hear an All Agents Busy announcement. This announcement occurs when all ACD agents are busy and the system automatically queues the call for a free agent. The system processes the queued calls on a first-in, first-out basis. The supervisors and attendant can customize the All Agents Busy announcement, if desired. The announcement cannot exceed 12 seconds. The system provides one All Agents Busy announcement, shared by all ACD groups.

The system can have any number of ACD groups, with any number of agents within each group. An agent can only be a member of one ACD group.

The ACD busy announcement requires a VAU or OPA/VAU PCB (not available in VS). The VAU or OPA/VAU PCB replaces four trunk circuits.

¹ Also see the Alphanumeric Display feature.

AUTOMATIC CALL DISTRIBUTION

Description (Cont'd)

For information on the ACD enhancements available in the PBX (ONYX IV), refer to page 1-32A.

Conditions

The maximum call waiting time that displays on the supervisor's extension is 4:15 (four minutes, 15 seconds).

Default Configuration

No ACD Groups programmed.

Programming

Required Programming

- **CP- ACD Supervisor Keyset (BY2:6)** - Set the Supervisor Keyset bit for the supervisor's extension.
- **E- Extensions, E2- Circuit Type** - Program the master extension number with type X (uninstalled). The master extension must be a port that has no phone connected to it.
- **E- Extensions, E3- Class of Service** - Assign a unique COS with BY2:6 set for the supervisor's extension.
- **E- Extensions, E5- Hunt Type** - Assign hunt type 06 to:
 - Each member agent in the ACD group.
 - The ACD group master extension.

Make sure the supervisor extension has hunt type 00. The supervisor should never be an ACD group member.
- **E- Extensions, EA- UCD Group Master Extension Number** - Assign the master extension number to:
 - Each member agent
 - The supervisor extension
 - The ACD group master extension
- **FC1- Reset Queues** - Reset system queues after initial ACD programming.

Other Programming

- **E- Extensions, E4- Next Extension in Hunt Group** - For the master ACD number, designate an extension or another ACD group as the overflow destination. The overflow cannot be an ACD supervisor. With no overflow, Camp-On is indefinite. Also, enter 300 for this option for all group members.
- **QT- System Timers, Camp On Time** - Enter the interval a call to a busy ACD group should Camp-On before routing to the overflow extension.
- **QT- System Timers, Number of Rings Before Recall** - Set how long a call rings an extension in an ACD group before ringing the next group member.
- **KD- Programming Keys for DSS Consoles** - Program the supervisor's DSS Console to have a Hotline key for each agent and the ACD master number. This automatically makes the console's E9 assignment the supervisor.

Related Features

Call Coverage Keys/Hotline

A Call Coverage or Hotline key for the ACD master extension provides an ACD group BLF and simplified Transfer. Call Coverage activates when all group members are busy. In VS, this option requires an AUX Module.

Call Forwarding

If an extension is in an ACD Group, forwarding calls at that extension disrupts normal ACD operation. An extension user can, however, forward calls to an ACD master number.

Direct Inward Line

Trunks terminated to the ACD group master number ring the group directly.

AUTOMATIC CALL DISTRIBUTION

Related Features

Direct Inward System Access

To allow the DISA caller to record the ACD message, enable the following in the DISA trunk's COS:

- Call Forwarding (BY0:6=0)
- ACD Supervisor (BY2:6=1)

Do Not Disturb

Putting an extension in Do Not Disturb temporarily removes it from its ACD group.

Extension Hunting

A terminal hunt can route to an ACD master number.

System Reports and Diagnostics

The system reports provide data on ACD group agent and incoming call activity. The reports also show details on calls received while all agents were busy.

Traffic Management Reporting

If an ACD caller hangs up while listening to the ACD all agents busy announcement, the call is not logged in the TMS report as Aborted.

Transfer

Any user can Transfer a call to the ACD master number.

Feature Operation

To remove or install a member agent (from the supervisor's extension):

- Step 1 > Lift handset.
- Step 2 > Press INTERCOM
 - Look for: INTERCOM On
 - Listen for: Dial tone
- Step 3 > Press PGM#.
 - Listen for: Dial tone stops
- Step 4 > Press DSS Console key for agent you want to change.
- Step 5 > Dial 7 to remove an agent; 4 to install.
- Step 6 > Hang up.

To remove or install yourself as an agent (from your agent extension):

- Step 1 > Lift handset.
- Step 2 > Press INTERCOM
 - Look for: INTERCOM On
 - Listen for: Dial tone
- Step 3 > Dial 6 to remove yourself as an agent; 4 to install.
 - Listen for: Dial tone stops
- Step 4 > Press PGM# and hang up.
 - Look for: At supervisor's DSS Console, key for your extension flashes
Medium Flash

To record the ACD All Agents Busy announcement (from a supervisor or attendant extension):

- Step 1 > Lift handset.
- Step 2 > Press INTERCOM
 - Look for: INTERCOM On
 - Listen for: Dial tone
- Step 3 > Press PGM#.
 - Listen for: Dial tone stops
- Step 4 > Dial 686.
 - Listen for: Voice message, "Please start recording."
- Step 5 > Record message when you hear the tone.
- Step 6 > Hang up when you are done.

AUTOMATIC CALL DISTRIBUTION

Feature Operation (Cont'd)

To erase the ACD All Agents Busy announcement (from your attendant or ACD Supervisor extension):

This also erases all the system's Operator Assistance messages and Personal Greetings.

- Step 1 > Lift handset.
- Step 2 > Press INTERCOM.
 - Look for: INTERCOM On
 - Listen for: Dial tone
- Step 3 > Press PGM#.
 - Listen for: Dial tone stops
- Step 4 > Dial 68.
- Step 5 > Press PGM#.
 - Listen for: Dial tone
- Step 6 >
 - Press 9 to delete the announcement.
 - OR
 - Press 4 to abort the procedure and leave the announcement unchanged.

AUTOMATIC CALL DISTRIBUTION (ONYX IV)

Description

Automatic Call Distribution (ACD) in the PBX provides the following enhancements:

- Enhanced Supervisor Functions
- Simplified ACD Supervisor Programming
- Overflow to Voice Mail
- Priority Answering
- Announcement Message Options
- Programmable Agent Work Time
- Programmable On/Off Duty Key
- Extended Supervisor's Timer

For more information on the basics of ACD, refer to Automatic Call Distribution on page 1-29.

Enhanced Supervisor Functions

The supervisor has programmable alert for waiting calls. With programmable alert, the supervisor's phone can alert (ring) for calls that wait while all agents are busy. The alert can occur after a set number of calls are waiting, after a call has been waiting a programmed interval, or both. This option permits the supervisor to easily cover ACD calls when the agents have more work than they can handle.

The supervisor can also put the ACD group in the night mode. This lets the supervisor redirect trunks when all the ACD agents are off-duty. Once in the night mode, trunks terminated to the ACD group ring their night destinations. For example, a trunk's E9- Direct Trunk Termination assignment can be the ACD master number. The trunk rings the ACD group directly during the day. When the supervisor activates night mode for the ACD group, trunk routes to the EI- Night Call Routing Destination.

When programming supervisor alert and night mode options, refer to the chart *Setting Supervisor Functions* in Programming.

An extension can be a supervisor for more than one ACD group. The supervisor extension must have a DSS Console with a Hotline key for each of their ACD group master numbers. When assigning a supervisor to an ACD group, refer to the chart *Setting Other ACD Functions* in Programming.

Simplified ACD Supervisor Programming

When assigning an ACD supervisor, assign an extension a Class of Service with the Supervisor option enabled (BY2:6=1). Then, assign the supervisor in EU- ACD Group Setup. There is no need to program the E4, E5 and EA options for the supervisor. Remember, the supervisor must have a DSS Console (refer to the KD option).

When programming supervisors, refer to the chart *Setting Supervisor Functions* in Programming.

Description (Cont'd)

Overflow to Voice Mail

When all agents in the ACD group are busy, waiting calls can overflow (divert) to the Voice Mail, an extension or another ACD/UCD group. Overflow can occur immediately or after a programmed interval. Setting the overflow is helpful for ACD groups that have an alternate answerer. Calls don't just wait in queue -- they go to the alternate answerer.

When programming overflow options, refer to the chart *Setting the Overflow Options* in Programming.

Priority Answering

ACD can route calls according to the priority of agents and trunks. With agent priority, ACD can route calls to the highest priority available agent, bypassing lower priority agents. The lower priority agents receive calls only when all the higher priority agents are busy. Using agent priority, ACD can automatically route the most calls to the more experienced agents.

When all agents are busy, trunk priority will send the highest priority trunk to the first free agent. Trunk priority routes calls based on the trunk's priority number, instead of how long the trunk has been waiting. This lets ACD differentiate between trunks in queue. For example, if important sales calls are queued with routine service calls, ACD can handle the sales calls first.

When programming priority answering, refer to the chart *Setting Priorities for Agents and Trunks* in Programming.

Announcement Message Options

The PBX provides two types of ACD announcements, the initial announcement and the repetitive announcement. Callers to an ACD group can hear an initial announcement instead of ringing. The initial announcement can occur as soon as the call comes in or after a programmed interval. Additionally, the announcement can play automatically for all callers, or just when all agents are busy. The initial announcement can be from the Voice Messaging System, the OPA or the standard Voice Prompting Messages.

If all ACD agents are busy, the ACD caller can hear a different (repetitive) announcement while waiting for an agent. This repetitive announcement can be from the Voice Messaging System or the OPA. Additionally, the system administrator can program the announcement to repeat at specific intervals. The repetitive announcement assures waiting callers that they have not been forgotten. Note that enabling overflow disables the repetitive announcement message. When programming announcements, refer to *Setting the Announcement Messages* in programming.

Programmable Agent Work Time

After an agent completes an ACD call, the programmable agent work time allows them time complete desk work before accepting a new call. After the agent's work time expires, ACD routes the next waiting call to the agent.

When setting the agent's work time option, refer to the chart *Setting Other ACD Functions* in Programming.

AUTOMATIC CALL DISTRIBUTION (ONYX IV)

Description (Cont'd)

Programmable On/Off Duty Key

Each ACD member can have a programmable key assigned as an On/Off Duty key. When the member presses the key, they remove themselves from service (i.e., become Off Duty). They can no longer receive ACD group calls. To return themselves to service (i.e., become On Duty), the member just presses the key again. While Off Duty, the agent can still receive non-ACD calls.¹

Supervisor's Timer

The maximum call waiting time that displays on the supervisor's extension is 99 minutes. In the ONYX II/III/VS systems, the maximum time is 4 minutes and 15 seconds.

Conditions

None

Default Configuration

ACD not programmed.
No On/Off Duty keys defined.

Programming

Required Programming

- **KS- Programming Keys for Keysets** - To give an extension an On/Off Duty key, enter I for an available key.

For additional programming information, see the following charts.

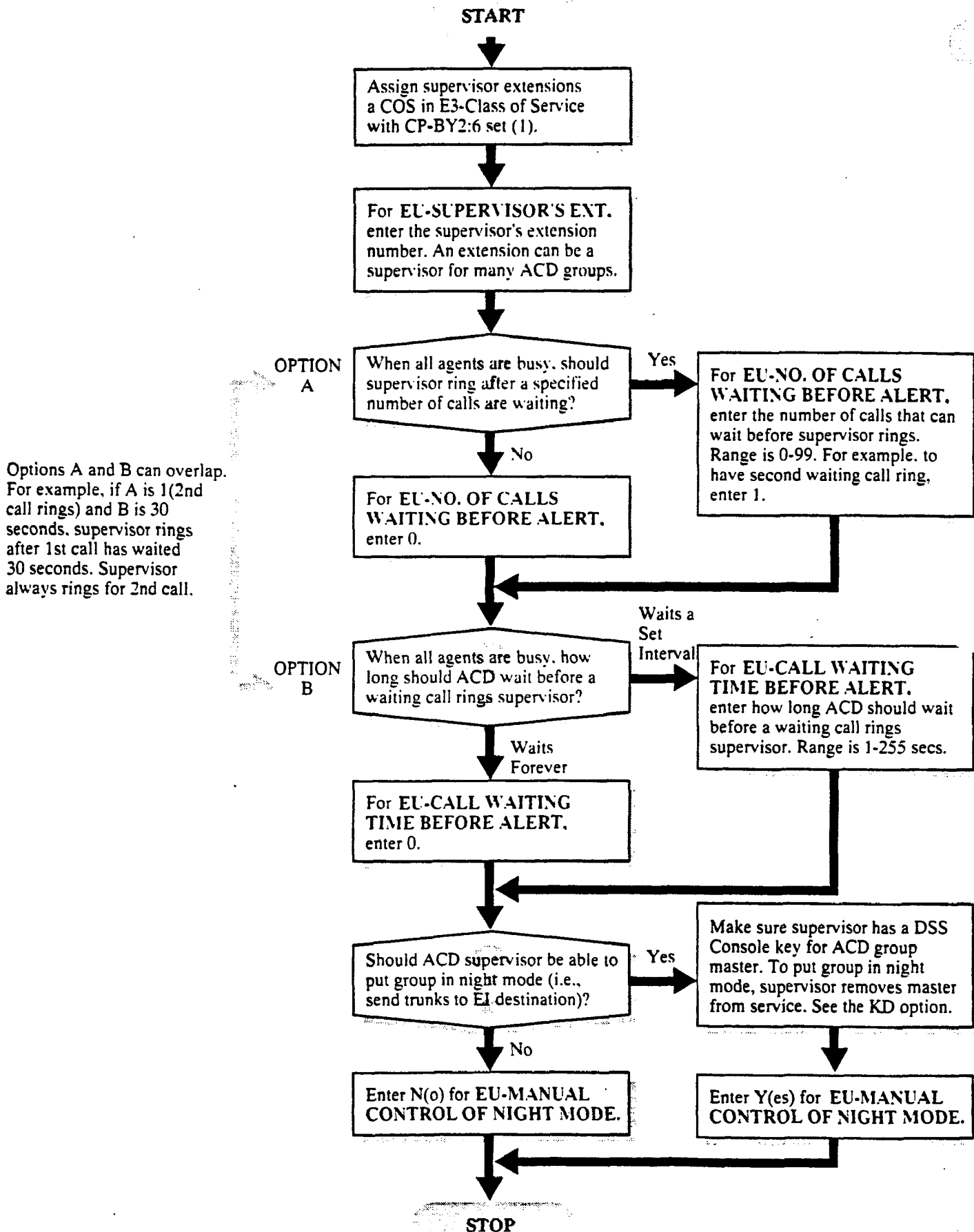
Other Programming

None

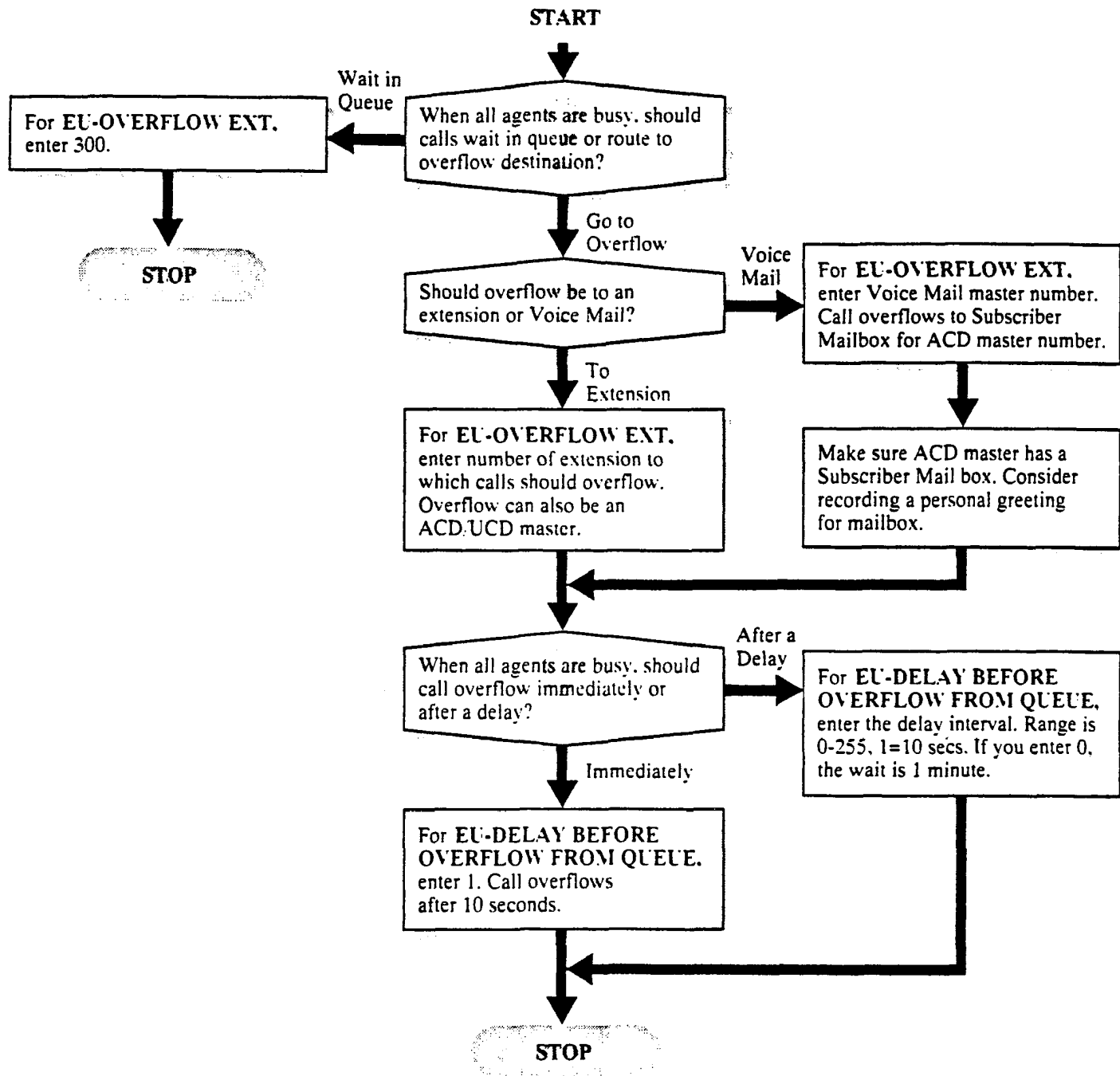
¹ An agent remains Off-Duty until returned to On-Duty.

AUTOMATIC CALL DISTRIBUTION (ONYX IV)

SETTING SUPERVISOR FUNCTIONS



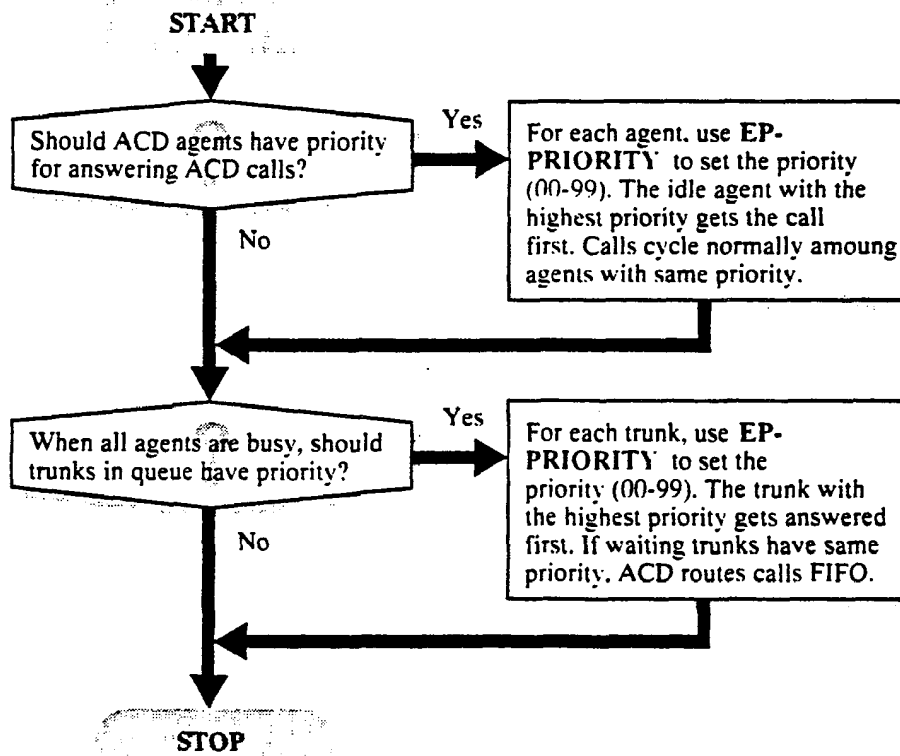
SETTING THE OVERFLOW OPTIONS



012531A.10

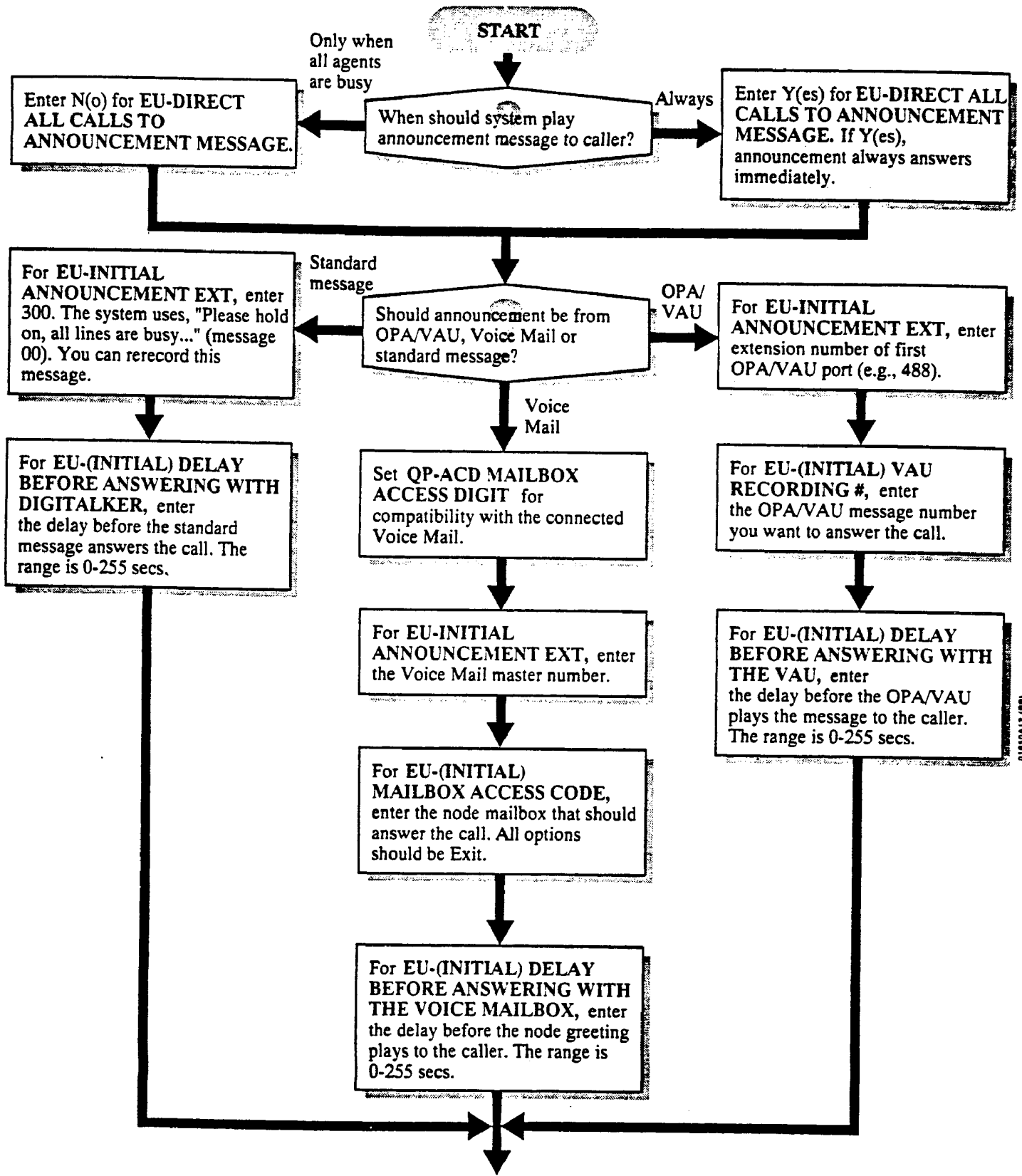
AUTOMATIC CALL DISTRIBUTION (ONYX IV)

SETTING PRIORITIES FOR AGENTS AND TRUNKS



01830414

SETTING THE ANNOUNCEMENT MESSAGES

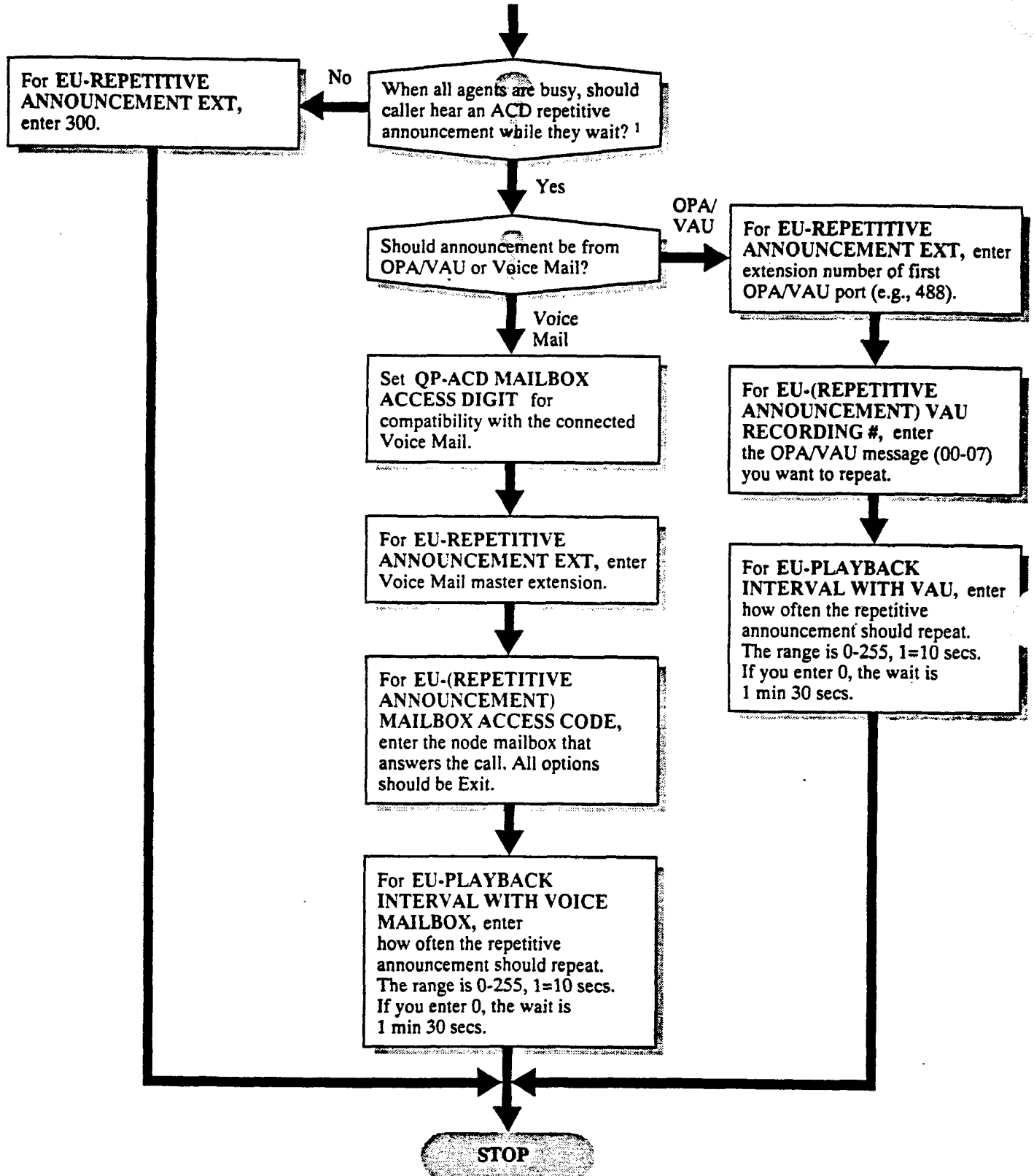


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AUTOMATIC CALL DISTRIBUTION (ONYX IV)

SETTING THE ANNOUNCEMENT MESSAGES

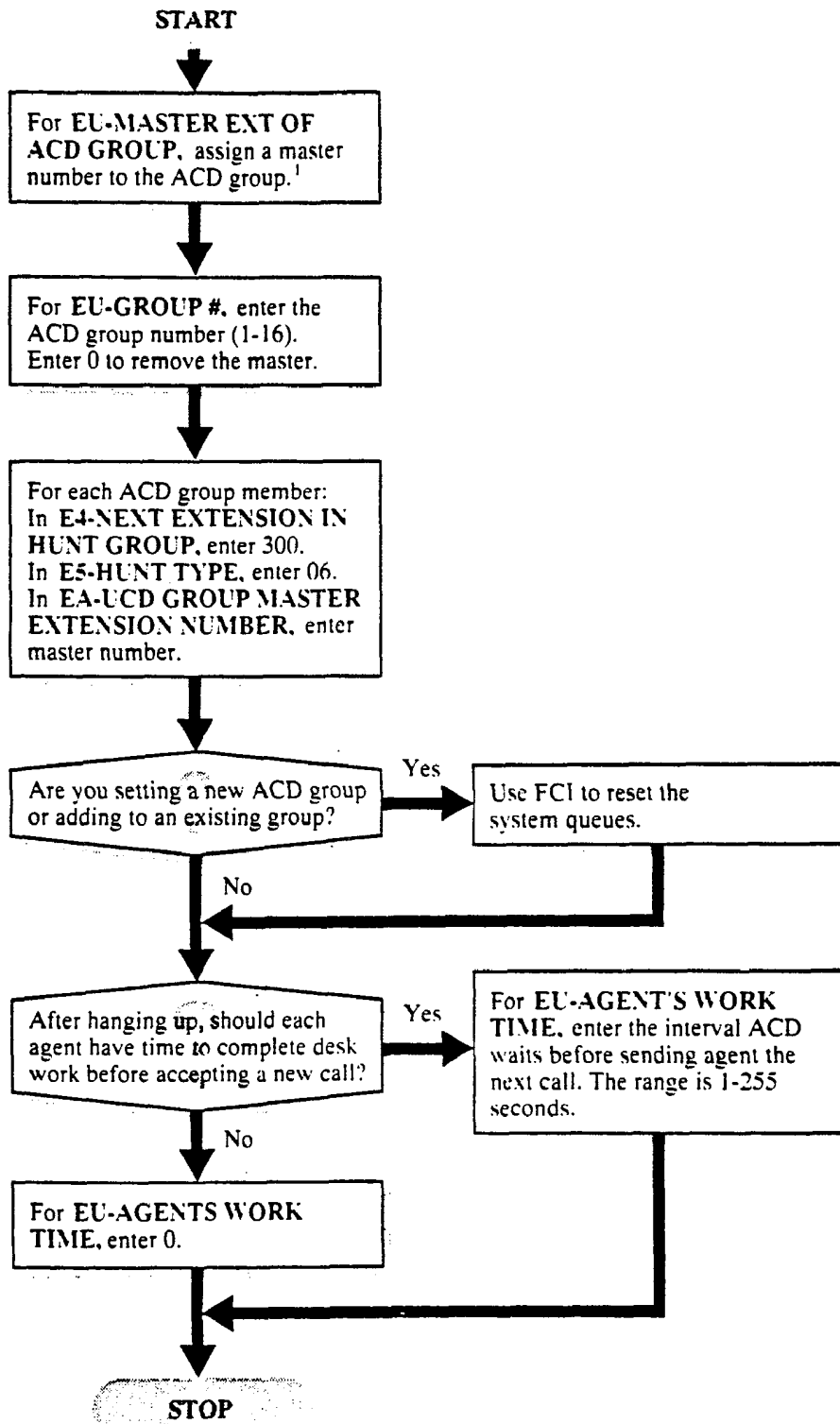
(Continued from previous page)



¹ EU-OVERFLOW EXT must be 300.

AUTOMATIC CALL DISTRIBUTION (ONYX IV)

SETTING OTHER ACD FUNCTIONS



¹ Enter ? to see a list of the available ACD master numbers. Make sure the master number is uninstalled (i.e. E-EXTENSIONS, EZ-CIRCUIT TYPE=X).

AUTOMATIC CALL DISTRIBUTION (ONYX IV)

Related Features

See Related Features for ACD on page 1-29.

Feature Operation

To activate/deactivate night mode for an ACD Group (Supervisor only):

- Step 1 ► Lift handset.
- Step 2 ► Press INTERCOM.
 - Look for: INTERCOM On
 - Listen for: Dial tone
- Step 3 ► Dial PGM#.
 - Listen for: Dial tone stops
- Step 4 ► Press DSS Console key for ACD master number.
- Step 5 ► Dial 4 to return the ACD group to the day mode.
OR
Dial 7 to activate night mode for the ACD group.

To remove yourself from service:

- Step 1 ► Press On/Off Duty Key.
 - Look for: On/Off Duty key On

To put yourself back into service:

- Step 1 ► Press On/Off Duty Key.
 - Look for: On/Off Duty key Off

To override the agents work time (for your next waiting call):

You must repeat this procedure for each waiting call.

- Step 1 ► Lift handset
- Step 2 ► Press INTERCOM.
 - Look for: INTERCOM On
 - Listen for: Dial tone
- Step 3 ► Dial PGM#.
 - Listen for: Dial tone stops
- Step 4 ► Dial 5 and hang up.
 - Listen for: Next waiting call ringing in.

AUTOMATIC FAULT REPORTING (With Remote Maintenance/Programming)

Description

The system constantly monitors the status of extensions and trunks, and automatically reports faults if they occur. There are two types of Automatic Fault Reporting:

- Alarm indications at the attendant's extension
- Automatic Fault Reporting to an off-site service center (except in VS)

The VS constantly monitors the status of extensions, trunks and the expansion CEU. Unlike the large systems, it does not monitor or report on the status of individual modules.

Attendant's Alarm Indications

There are three categories of alarms displayed on the attendant's extension: major alarms, minor alarms and major/minor alarms.¹ The system reports a minor alarm if an extension or trunk fails. The system reports a major alarm if an extension or trunk PCB fails. Major/minor alarms include both major and minor alarms.

After viewing the alarms, the attendant can selectively remove extensions or trunks from service. (See the Removing Lines and Extensions from Service feature.) This allows the system to operate normally, bypassing the affected port. In a multiple-attendant system, each attendant must independently clear their alarms. Once viewed, the same alarm will not display again.

Automatic Fault Reporting to the Remote Service Center

After displaying a major alarm at the attendant's extension, the system also reports the fault to an off-site service center (if installed). The fault identifies the reporting telephone system and indicates the fault. A technician at the service center can then call the system, view the various system reports and work around the problem.

Automatic Fault Reporting can occur if:

The off-site service center has...

- An ASCII terminal connected to a 103/212A Hayes-compatible modem, or An IBM-compatible PC with the Backup and On-Line Program (P/N 88216) installed -- connected to a 103/212A compatible modem

The remote system has...

- A 103/212A Hayes-compatible modem connected to the COM PCB modem port²
- A DTMF CO line connected to the modem

Remote Programming

If the off-site service center has the Backup and On-Line Program (P/N 88216) installed on an IBM compatible PC, the off-site technician can:

- Use modem commands to call a remote system
- Program the remote system's database³
- Backup the system's database on the service center's PC
- Upload a database from the service center's PC to the remote system⁴

¹ Also see the Alphanumeric Display feature.

² Refer to the system Hardware Manual for details on connecting a modem to the COM PCB.

³ After accessing the remote system, the installer should press ENTER on the PC three times. This locks out the remote system local port, and enables the modem port.

⁴ The systems you back up from and restore to must use the same type MEM PCBs (A or B). You cannot mix MEM PCB types. Also, P/N 88216 is not currently compatible with VS.

AUTOMATIC FAULT REPORTING (With Remote Maintenance/Programming)

Description (Cont'd)

The installer can also use the Backup and On-Line Program on-site, in lieu of a programming terminal. Refer to the system hardware manual for more details.

The VS also allows Remote Programming through the main CEU AUX Module serial port. The VS does not provide Automatic Fault Reporting to an off-site service center. Also, the VS does not have a modem port.

Conditions

None

Default Configuration

Attendant's Alarm Indications always occur.

System will not report faults to a remote service center.

Programming

Required Programming

- **J- Communications Port Parameters, Port Speed** - Set the baud rate for Port A (modem) and Port B (local) to match the connected device. (The attendant can set these options from the telephone. See page 2-2.)
- **J- Communications Port Parameters, Modem Ring Count** - Set the Automated Answer ring count to match the setting of the connected modem.
- **QC- Operator Programming, Suppress Operator Alarms** - Suppress/allow alarm indications at attendant extensions.
- **QK- CEU Identification** - Enter the text that identifies the system to the off-site service center.
- **QV- Trouble Report Telephone Number** - This is the number the system dials to report a major alarm to the off-site service center.

Other Programming

- **QS- Install Printed Circuit Boards** - The system reports a Line/Trunk PCB failure only if you program the PCB as installed.
- **QZ- SMDR Printout All The Time** - If you connect the Backup and On-Line Program PC to the upper (local) COM PCB port, you must disable this option to use the LOAD and BACKUP options.

Related Features

Off-Hook Signaling

When an alarm displays, the attendant's phone does not ring normally for incoming calls. If the extension has Off-Hook Ringing, it rings with a single beep (repeated). If the attendant's extension does not have Off-Hook Ringing, calls do not ring while the alarm displays.

System Reports, Diagnostics and Maintenance Utilities

After calling the remote system, the remote service center technician can use the various reports and diagnostics to troubleshoot the system.

Traffic Management Reporting

The Backup and On-Line Program also backs up and restores the TMS report data. During restore, the system overwrites the existing TMS data.

Feature Operation

To view alarms (at your attendant keyset):

Look for: Display showing type of alarm

Step 1 > Do not lift handset.

Step 2 > Press MSG.

Look for: Display showing alarm

Press MSG again to view additional alarms.

Lift and replace handset to return to normal time and date display.

To clear alarms (at your attendant keyset):

Look for: Display showing type of alarm

Step 1 > Do Not lift handset.

Step 2 > ● Press RLS on DSS Console.

OR

● Lift and replace handset.

AUTOMATIC HANDSFREE

Description

Automatic Handsfree allows a keyset user to place or answer a call Handsfree by just pressing a key. There is no need to press HF first. The system always provides Automatic Handsfree for:

- Dialing Number Preview
- Directory Dialing
- Intercom (when user presses INTERCOM)
- Last Number Redial
- One-Touch Speed Dial
- Save
- Speed Dial (when user presses DIAL)

Automatic Handsfree is programmable system-wide for:

- Central Office Calls (for all types of line keys)
- Group Call Pickup (with a pickup key)
- Paging (with a Page key)
- Park (with an orbit key)
- Station Call Coverage (with a call coverage key)

Conditions

- a. If an extension does not have a handsfree module (P/N 88170), the user can implement Automatic Handsfree but must lift the handset to speak.
- b. The system allows 12 simultaneous Handsfree conversations per cabinet.

Default Configuration

Automatic Handsfree enabled.

Programming

Required Programming

- QE- Automatic Handsfree - Enable/disable Automatic Handsfree system-wide.

Other Programming

- KS- Programming Keys for Keysets - Define a keyset's programmable keys.

Related Features

Attendant Positions

Attendant extensions cannot have Automatic Handsfree.

Headset Compatibility

An extension with Headset Compatibility cannot also have Automatic Handsfree.

Feature Operation

To use Automatic Handsfree:

- Step 1 ➤ Do not lift handset.
- Step 2 ➤ Press key for desired feature.
Look for: HF On

AUTOMATIC RINGDOWN (ONYX IV)

Description

With Automatic Ringdown, an ESL or ASI/OPX extension automatically calls a programmed destination when the user lifts the handset. This would be helpful, for example, in a hotel lobby with dedicated reservation phones. As soon as the caller lifts the handset, the phone rings the reservation desk. The ringdown phone cannot access any system features. The phone can, however, receive calls.

Automatic Ringdown is only available in ONYX IV, and only with ESL and ASI/OPX extensions.

Conditions

None

Default Configuration

No Automatic Ringdown destination programmed.
Automatic Ringdown disabled.

Programming

Required Programming

- E- Extensions, E9- Attendant (Operator) Assignment - Enter the Automatic Ringdown destination. The destination can be an extension or a trunk. Enter 300 for no Ringdown destination.
- E- Extensions, E9- Ring Down - Enable/disable Automatic Ringdown.

Other Programming

None

Related Features

Intercom

Automatic Ringdown follows Intercom Voice-Announce programming.

Feature Operation

To use Automatic Ringdown:

Step 1 ➤

Lift handset.

Listen for: Two beeps or ringing
If you hear ringing, wait for called party to answer.
If you hear two beeps, you may begin speaking.

1. The following are the names of the students who have been selected for the competition.

100

100

100

AUTOMATIC ROUTE SELECTION (HYBRID ONLY)

Description

Automatic Route Selection (ARS) provides call routing and call restriction based on the digits a user dials. ARS lets the system administrator obtain the most cost-effective use of the system's connected long distance carriers.

ARS is an on-line call routing program that the system administrator can customize from the programming terminal. The program accommodates over 8,000 call routing choices -- without a custom-ordered rate structure database. ARS allows the system administrator to make modifications to the routing choices quickly and easily. This is often necessary as the cost structure of the connected services change.

ARS provides:

Call Routing

ARS can apply 3-digit (Area Code) and 6-digit (Area Code and Exchange) analysis to every number

Dialing Translation (Special Dialing Instructions)

ARS can automatically execute stored dialing instructions when it chooses a route for a call

Time of Day Selection

The system administrator can program route selection according to the time of day/day of week.

Hierarchical Class of Service Control

ARS allows or denies call route choices based on an extension's Class of Service.¹

Forced Authorization Code

Designated routes may require the user to enter an Authorization Code before ARS allows routing. This code is verifiable and is enforced by an extension's Class of Service.

Separate Routing for Operator Assisted, International and Equal Access Calls

To provide unique control, the system administrator may program separate routing instructions for Operator Assisted, International and Equal Access calls.

Independently Programmed Restriction for Exchanges 976 and 555

Restriction for these exchanges is hierarchical according to an extension's Class of Service.

In VS, Automatic Route Selection requires an AUX Module. If desired, you can program up to 64 ARS Authorization codes. (The large systems have 184 codes.)

For complete details on ARS, including instructions for using the ARS editor (GA command), refer to Appendix A.

Conditions

- a. Do not use ARS behind a Centrex/PBX. In addition, ARS is intended for areas that use the North American Number Plan (NANP).
- b. ARS requires a MEM-B PCB (large systems) or an AUX Module (VS).

Default Configuration

ARS not programmed.

¹ Class of Service options may interact with ARS. For example, if CP- Allow Only Intercom Calls at Night (BY0:2) is enabled (1), the extension cannot use ARS at night.

AUTOMATIC ROUTE SELECTION (HYBRID ONLY)

Programming

Required Programming

- **E- Trunks, E4- Next Trunk in Outbound Rotary** - ARS requires outbound trunk rotaries. This prompt determines the selection sequence for trunks within each rotary.
- **E- Trunks, E7- Trunk Service Number** - Assign a Service Number to each trunk used for ARS. ARS routes calls to Service Numbers, not individual trunks.
- **E- Trunks, EA- Trunk Group Assignment (First Trunk in Group)** - Group trunks in rotaries by assigning each one the same First Trunk in Group number.
- **GA- ARS Editor** - Program the ARS options. Refer to Appendix A for complete details.
- **QL- LCR/ARS/Account Codes, LCR or ARS Enable** - Enter 2 to enable ARS.
- **QL- LCR/ARS/Account Codes, Number of Services** - Designate how many services (trunk rotaries) ARS will use.
- **QL- LCR/ARS/Account Codes, Service Line Numbers** - Indicate the trunk rotary master number for each of the rotaries used by ARS. This should correspond to the **EA- First Trunk in Group** entry.

Other Programming

- **E- Extensions, E3- Class of Service** - ARS routing is based on an extension's Class of Service number.
- **E- Extensions, E8- Line Access Options, Allow Line Code Dial-Up** - If enabled, users may be able to dial trunk access codes (e.g., 801) to bypass ARS.
- **E- Extensions, E8- Line Access Options, Access to Groups 90-95** - Allow access to group 90 (the ARS access code). If you allow access to 91-95, users may be able to dial these codes to bypass ARS. Users can always dial groups 96-98.
- **E- Extensions, E8- Line Access Options, Key Access to Outbound Lines** - If enabled, user may be able to press a line key to bypass ARS.
- **E- Extensions, ED- Trunk Control, Access Control** - An extension must have access to the trunks selected by ARS.
- **E- Extensions, ED- Trunk Control, Call-Out Control** - An extension must have Call-Out to the trunks selected by ARS.
- **E- Trunks, E2- Circuit Type** - Trunks within each ARS Service Group should have the same circuit type.
- **KS- Programming Keys for Keysets** - An extension can have a loop key for ARS access.
- **QC- Operator Programming, Operator Extension** - Make sure the main operator is port 00 (normally extension 300).
- **QF- Line Group Access (First Trunk in Group)** - Correlate the first trunk in a trunk rotary (e.g., 801) to one of nine trunk rotary numbers (90-98). The system requires this correlation when setting up trunk rotaries. Use the trunk access code (e.g., 801 or L01) that corresponds to the **EA- First Trunk in Group** entry.
- **QQ- "1" Prefix Required for NPA Calls** - If the system is in a conflict area, enter Y. Enter N if the system is not in a conflict area. See Appendix A for more details.
- **QT- System Timers, Dialtone Detection Count** - Set the length of the dial tone detection interval. ARS Dial Treatments (option P) use this interval. See Appendix A for more details.

AUTOMATIC ROUTE SELECTION (HYBRID ONLY)

Programming (Cont'd)

- **QW- ARS Authorization Codes** - If required, enter ARS Dial Treatment Authorization codes. See Appendix A for more details.
- **QX- Suppress "#" When Speed Dialing** - If ARS Dial Treatments outdial the # digit, enter N. To suppress outdialing the #, enter Y. See Appendix A for more details.
- **QY- Single Digit Line Access** - If enabled, users can dial 9 (instead of 90) for ARS.

Related Features

Account Code Capability

ARS can optionally utilize the system's Account Codes.

Least Cost Routing

Least Cost Routing also routes trunk calls, and can be an alternative to ARS. The system can have ARS or LCR. not both.

Speed Dial

Speed Dial can route calls through ARS or optionally bypass ARS routing.

Tenant Service

Each system can have only one ARS package. shared by all tenants.

Toll Restriction

When a user dials 9 or 90 for ARS. ARS overrides Toll Restriction.

Feature Operation

To place a call using ARS:

For more information on placing calls using ARS. refer to Appendix A.

- Step 1 ➤** Lift handset.
If you have an ARS loop key. press it and skip to step 4.
- Step 2 ➤** Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
- Step 3 ➤** Dial ARS access code (9 or 90).
Listen for: Another (higher pitched) dial tone
- Step 4 ➤** Dial number.

BACKGROUND MUSIC

Description

Background Music (BGM) sends music from a customer-provided music source to the speakers in keysets and ESL telephones. If an extension user activates it, BGM plays whenever the user's extension is idle. Incoming calls and Page announcements override BGM. Optionally, BGM can also play over the external paging zones.

Background Music requires a customer-provided music source and an unused trunk circuit.

Conditions

- a. In the large systems, the customer-provided music source connects to an unused trunk port (on an installed PCB). The music source (tape deck, receiver, etc.) must be compatible with the following system specifications:
 - Input Impedance . . . 600 Ohms
 - Maximum Input . . . -10 dBm (244 mV AC)Refer to the system Hardware Manual for additional installation details.
- b. In VS, Background Music uses the fourth trunk circuit on the first CO Module in the main CEU. Although you connect to the CEU MOH terminals, you cannot use the fourth trunk circuit for trunks. The music source (tape deck, receiver, etc.) must be compatible with the following system specifications:
 - Input Impedance . . . 100K Ohms
 - Maximum Input . . . -10 dBm (244 mV AC)Refer to the system Hardware Manual for additional installation details.
- c. A system reset turns off BGM at all extensions.

Default Configuration

BGM trunk not assigned.

Programming

Required Programming

- **E- Trunks, E2- Circuit Type** - The trunk used for BGM must be circuit type X. If you want to use the BGM trunk later on for another function, remember to:
 - Remove the assignment in QM- BGM Line Number
 - Reset the associated line/trunk PCB (using IR- Reset Line/Trunk Card - large systems only)
 - Change the trunk to the desired circuit type (using the E2 option)
 - Perform a side tone test on the trunk (using the IS- Side Tone Test option)
- **QM- Music and Relay Control, BGM Line Number** - In the large systems, enter the number of the trunk connected to the BGM source. In VS, enter Y(es).

Other Programming

- **QM- Music and Relay Control, BGM to All External Page Zones** - Allow/disallow BGM to play over the external paging zones. For proper operation, access the Paging zone once after enabling this option.

Related Features

Attendant Positions

BGM does not play at attendant extensions.

Do Not Disturb

When a user activates DND, BGM turns off. Once the user deactivates DND, BGM remains off.

Music on Hold

BGM and Music on Hold can share the same music source, if desired.

Feature Operation

To turn Background Music on or off:

- Step 1 > Do not lift handset.
- Step 2 > Press HOLD.

To adjust the volume of Background Music:

- Step 1 > Press VOL UP ▲ or VOL DN ▼ while feature is active or telephone is idle.
This also affects your incoming ringing and Paging announcements.

BATTERY BACKUP

Description

Battery Backup allows the system to operate normally during AC power failures and brownouts. For each large system CEU, Battery Backup requires the installation of an optional Battery Backup Kit (P/N 88107) and two customer-provided batteries. For each VS CEU, the Valcom VB260 Battery Backup Unit is recommended. Battery Backup will power a fully loaded system for about two hours.

The batteries listed below are compatible with the P/N 88107 Battery Backup Kit. Both batteries must be from the same manufacturer.

- Eagle Picher CFMP12V33
- Powersonic PS12400
- Yuasa NP38-12

In the large systems, the system Memory PCB provides short-term backup of system memory and the system time and date (Real Time Clock). The Memory PCB cannot, however, run the system. The chart below shows how long each MEM PCB backs up system memory. In a newly installed system, allow 12 hours for the MEM PCB to reach full charge.

	MEM-A	MEM-B
System Memory	At least 2 weeks	At least 2 weeks
Time and Date	At least 2 weeks	At least 12 hours

In VS, the Real Time Clock is only available in systems with an AUX Module. The Real Time Clock maintains the correct date and time for at least one week without AC power. If the VS doesn't have an AUX Module, it stores the time of the power failure in memory. The system starts from that stored time when power is restored.

Conditions

The MEM-B PCB and AUX Module use a permanently installed "supercap" capacitor. The MEM-A PCB uses a battery that must be installed on site.

Default Configuration

None

Programming

None

Related Features

None

Feature Operation

If installed, Battery Backup is automatic during AC power failures and brownouts.

Description

A Call Coverage key gives an extension user one-touch call pickup, Transfer and Intercom for the assigned extension. This simplifies phone operation for co-workers that frequently cover each other's calls. Additionally, each extension user can program the ringing options for their Call Coverage keys.

A Call Coverage key also shows the status of the covered extension:

When the key is...	The covered extension is...
Off	Idle
On	Busy
Flashing slowly	Ringing
Flashing fast	DND

Conditions

None

Default Configuration

No Call Coverage Keys programmed.

Programming

Required Programming

- **KS- Programmable Keys for Keysets** - Designate programmable keys as Call Coverage keys. Also, program the ringing option for Call Coverage Keys (no ring, delayed ring or immediate ring).

Other Programming

- **E- Extensions, ED- Trunk Control, Access Control** - To intercept outside calls, the extension must have access to the covered extension's trunks.
- **QT- System Timers, Delayed Ring Interval** - Set the Delayed Ring Interval for Call Coverage Keys with delayed ringing.

Related Features

Attendant Positions

An Attendant cannot program Call Coverage Key ringing options from their telephone.

Automatic Call Distribution/Extension Hunting

An extension can have a Call Coverage key for an ACD/UCD hunt group. The key activates only when all group members are busy. In VS, this can only occur if the system has an AUX Module.

Automatic Handsfree

If the system has Automatic Handsfree, the extension user can just press the Call Coverage key.

Off-Hook Signaling

Call Coverage keys always activate Off-Hook Signaling (if allowed at the destination). In addition, an extension with Off-Hook Signaling receives off-hook signals for calls to its covered extensions.

Feature Operation

To place a call to your covered extension:

- Step 1 ➤ Lift handset.
- Step 2 ➤ Press Call Coverage key.
Look for: INTERCOM Fast Flash
Call Coverage Key On (green)
- Step 3 ➤
 - If you hear two beeps, go ahead and speak.
 - OR
 - If you hear ringing, wait for the called part to answer.

CALL COVERAGE KEYS

Feature Operation (Cont'd)

To Transfer a call to a covered extension:

- Step 1 > Press Call Coverage key.
Look for: (Modular) -- Line key Hold Flash (red) - Fast Flash (green)
(Non-Modular) -- Line key Exclusive Hold
Call Coverage key On (green)
- Step 2 > ● If you hear two beeps, announce call.
OR
● If you hear ringing, wait for called party to answer.
OR
● If you hear busy or fast busy, hang up to have the call wait at the covered extension.
You can also press the line key to return to the call.
OR
● Hang up to Transfer the call unannounced.
Your phone may start ringing again, depending on your Call Coverage key ring options.

To pick up a call ringing a covered extension:

- Look for: Call Coverage key Slow Flash
Listen for: (Optional) Trunk or ICM Ring
- Step 1 > Press flashing Call Coverage key.
Look for: Line key On (red/green)
Listen for: Conversation with calling party

To program ringing for your Call Coverage keys:

This procedure is not available in VS. Use the User-Programmable Features instead.

- Step 1 > Press PGM#.
Look for: HF On
- Step 2 > Press Call Coverage key.
- Step 3 > ● Dial 3 for delayed ringing. OR
● Dial 7 for immediate ringing. OR
● Dial 5 for no ringing (lamp only).
Listen for: Dial tone
- Step 4 > Press HF to hang up.
Look for: HF goes out
Listen for: Dial tone stops

User-Programmable Feature...

In VS, use this procedure to change the ringing for your keyset's Call Coverage keys.

Ring Assignment

PGM# + RA + Line key + Y(es) or N(o) + SAVE

Delayed Ring Assignment

PGM# + DRA + Line key + Y(es) or N(o) + SAVE

You can change the assignment for your Call Coverage keys.

PGM# + DSS + DSS key + ext. + SAVE

Description

Call Forwarding permits an extension user to redirect their calls to another extension. Optionally, the user can also redirect calls to an outside telephone number (Off-Premise Call Forwarding). Call Forwarding ensures that the user's calls are covered when they are away from their work area. Note that only the extension receiving the forwarded calls can place an Intercom call to the forwarding extension.

Conditions

- a. Off-Premise Call Forwarding requires either ground start trunks or loop start trunks with disconnect supervision. Up to eight extensions can forward their calls off-premise at the same time.
- b. A power failure cancels Call Forwarding. In VS, a system reset also cancels Call Forwarding.
- c. Extension users can chain their Call Forwarding (e.g., 304 forwards to 306, who then forwards to 310). The system prevents the chain from looping back to the first extension (e.g., 304).

Default Configuration

Call Forwarding allowed at all extensions.

Programming

Required Programming

- **CP- Inhibit Call Forwarding (BY0:6)** - For each COS, allow or deny Call Forwarding.
- **CP- Allow Off-Premise Call Forwarding (BY0:3)** - For each COS, allow or deny Off-Premise Call Forwarding.
- **E- Extensions, E3- Class of Service** - Assign a COS to each extension.

Other Programming

- **E- Extensions, ED- Trunk Control, Access Control** - The extension activating Off-Premise Call Forwarding must have access for the trunk selected. The caller to the forwarded extension must also have access (unless Transferred).
- **E- Extensions, ED- Trunk Control, Call-Out Control** - The extension calling an Off-Premise Extension must have call-out for the selected trunk (unless transferred). If not, the call won't go through. The extension activating the forwarding does not need call-out for the selected trunk.
- **QJ- Intercom Call Control, Alerts** - Allow or deny the Call Forwarding reminder message.
- **QT- System Timers, Number of Rings Before Recall** - Set how many times a call should ring an extension with type 1 or 2 Call Forwarding before rerouting.
- **E- Trunks, EI- Tandem Trunk** - Enable Tandem Trunking for trunks used for Off-Premise Call Forwarding. (See Transfer in Related Features).

Related Features

Alternate Attendant

An extension cannot use Call Forwarding if activated as an Alternate Attendant.

Automatic Call Distribution

An extension user can forward calls to an ACD master number.

Call Coverage Keys

Call Forwarding does not reroute calls ringing a Call Coverage Key.

Central Office Calls, Answering

Call Forwarding does not reroute calls ringing line or loop keys (except DILs).

CALL FORWARDING

Related Features

Central Office Calls. Placing

An extension user can forward calls off-premise only over lines to which the user normally has access and call-out.

Direct Inward Line

Call Forwarding reroutes DILs.

Do Not Disturb

Activating Do Not Disturb cancels Call Forwarding.

Extension Hunting

If an extension is in a Hunt Group, forwarding calls at that extension disrupts normal hunting. An extension user can, however, forward calls to a UCD master number.

Group Ring

Call Forwarding does not reroute Ring Group Calls.

Line (Trunk) Rotaries

An extension user should not forward calls off-premise using a trunk group (codes 9 or 90-98).

Multiple Directory Numbers (ONYX IV)

You cannot Call Forward a Multiple Directory Number. You can, however, Call Forward a phone to a Multiple Directory Number.

Paging/Personal Greeting/Selectable Display Messages

Call Forwarding cancels an Auto-Page, Personal Greeting or Selectable Display Message in effect at an extension. Any programming or user action that affects Call Forwarding also affects Selectable Display Messages.

Speed Dial

An extension user can have Call Forwarding codes stored with a One-Touch Speed Dial key.

Transfer

An extension user can Transfer a call to an extension with Off-Premise Call Forwarding activated. To abort the procedure, the user can return to the initial call. If an attendant does this, the system places the trunk used for dialing the off-premise destination on Hold.

When making a screened Transfer of a trunk call to an extension with Off-Premise Call Forwarding, implement Tandem Trunking when the off-premise user answers.

Voice Prompting Messages (except in VS)

A voice message can periodically announce when an extension's calls are forwarded. For Off-Premise Call Forwarding, a voice prompt plays when the system reroutes the call.

Voice Mail Compatibility

An extension can forward calls to the Voice Messaging System.

Feature Operation

To forward your calls to another extension:

- Step 1 >** Lift handset.
If you have a One-Touch Speed Dial key, you can press the key instead of using steps 2-5.
- Step 2 >** Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
If you have an ESL set, skip this step.
- Step 3 >** Press PGM#.
Listen for: Dial tone stops
- Step 4 >** ● Dial extension number to receive your calls.
You can optionally press a DSS Console Hotline key or dial an operator (0 or 01-04). If you dial an operator, the system automatically inserts code 3 in the next step.
- OR
- Press MSG to forward your calls to your mailbox.
Skip to step 6.
- Step 5 >** ● Dial 1 to forward ringing calls you do not answer.
- OR
- Dial 2 to forward ringing calls you do not answer *and* calls to your phone when it is busy.
- Dial 3 to forward all your calls. OR
- Step 6 >** Hang up.
Look for: MSG Slow Flash (green)

To forward your calls off-premise:

- Step 1 >** Lift handset.
If you have a One-Touch Speed Dial key, you can press the key instead of using steps 2-6.
- Step 2 >** Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
If you have an ESL set, skip this step.
- Step 3 >** Press PGM#.
Listen for: Dial tone stops
- Step 4 >** Dial 1.
- Step 5 >** Select the trunk your forward will use.
You can dial the trunk number (e.g., 01) or trunk extension number (e.g., 480).
- Step 6 >** Dial telephone number that will receive your calls.
- Step 7 >** Hang up.
Look for: MSG Slow Flash (green)

To cancel your Call Forwarding:

- Look for: MSG Slow Flash (green)
- Step 1 >** Lift handset.
- Step 2 >** Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
If you have an ESL set, skip this step.
- Step 3 >** Press PGM#.
Listen for: Dial tone stops
- Step 4 >** Hang up.
Look for: MSG off

CALL FORWARDING CANCEL

Description

The attendant may simultaneously cancel all Call Forwards in the system. The attendant may want to do this at the end of the business day or business week. This ensures that the system directs calls normally at the start of the next business day.

Conditions

None

Default Configuration

None

Programming

➤ **Required Programming**
QC- Operator Programming, Operator Extensions - Designate extensions as operators.

Other Programming

None

Related Features

Do Not Disturb/Paging (Auto-Page)/Personal Greeting/Selectable Display Messages

Canceling Call Forwarding also cancels DNDs, Auto-Pages, Personal Greetings and Selectable Display Messages system-wide.

Feature Operation

To cancel Call Forwarding system-wide from your attendant's extension:

- Step 1 ➤ Lift handset.
- Step 2 ➤ Press INTERCOM.
 - Look for: INTERCOM On
 - Listen for: Dial Tone
- Step 3 ➤ Press PGM#.
 - Listen for: Dial Tone stops
- Step 4 ➤ Dial *.
 - Listen for: Dial tone
- Step 5 ➤ Hang up.
 - Look for: INTERCOM Off

Description

Call Parking places an outside call in a waiting state (called a Park orbit) so that any extension user may pick it up. There are two types of Park orbits: System Park and Personal Park. With System Park, a user may Park a call in one of ten system orbits (numbered 60-69). With Personal Park, a user may park a call at an extension. After parking the call, the user can Page the person receiving the call and hang up. The paged party just dials the orbit code from any extension to pick up the call. With Park, it is not necessary to locate a person to handle their calls.

If a call remains parked longer than the Park Orbit Recall interval, it recalls the extension that initially parked it. If still unanswered, the call recalls all extensions that normally ring for the trunk.

The system allows only one call at a time to be parked in the same System Park orbit. However, any number of users can park a call in the same Personal Park orbit. The user retrieves the Personal Parked calls on a first in - first out (FIFO) basis. A call in Personal Park goes on Exclusive Hold at the destination and at the extension that parked it. The call does not ring the destination.

Conditions

- a. Park Orbits 68 and 69 have a five-minute fixed recall interval.
- b. The code to retrieve a Personal Park is the same as Directed Call Pickup and remote Hold Retrieve. When a user dials the code, the system picks up calls at the dialed extension in the following order:
 1. Ringing Intercom calls (see Directed Call Pickup)
 2. Personal Park calls (see Call Park)
 3. Ringing outside calls and DILs (see Directed Call Pickup)
 4. Calls on Hold (see Hold)

Default Configuration

Park enabled.

Programming

Required Programming

- **E- Extensions, ED- Trunk Control, Access Control** - An extension can only pick up a parked call on trunks to which it has access. Program access for each desired trunk.
- **QT- System Timers, Park Orbit Recall Time** - For Park Orbits 60-67, set the Park Orbit Recall Time.

Other Programming

- **QA- Number Plan, Park Orbit Access Digit** - If desired, change the first digit of the Park Orbit codes (factory set at 6).

Related Features

Analog Station Interface/Off-Premise Extension

A 2500 set connected to an ASI or OPX has Call Parking capability.

Direct Station Selection, DSS Console

An extension user with a DSS Console can have a Park Orbit number stored with a DSS key.

Speed Dial

An extension user can have the Park functions stored with a One-Touch Speed Dial Key.

CALL PARKING

Feature Operation

To Park your call in a system Park Orbit:

If you have a One-Touch Speed Dial Key or a DSS key with a stored Park Orbit, you can press the key instead of using steps 1-3.

- Step 1 >**
- At a keyset, press INTERCOM.
Look for: INTERCOM On
(Modular) -- HOLD Hold Flash (red), Fast Flash (green)
(Non-modular) -- HOLD Exclusive Hold
Listen for: Dial Tone
 - At ESL set, press TRF.
Listen for: Dial tone
- Step 2 >** Dial Park Orbit code (60-69).
Look for: Line Key On (red)
If you hear busy tone, press INTERCOM and try another orbit.
Optionally, you can press a DSS Console key.
- Step 3 >** Page party to receive call and announce the Park Orbit code.
- Step 4 >** Hang up.

To Park your call at an extension (Personal Park):

If you have a One-Touch Speed Dial Key or a DSS key, you can press the key instead of using steps 1-3.

- Step 1 >**
- At a keyset, press INTERCOM.
Look for: INTERCOM On
(Modular) -- HOLD Hold Flash (red), Fast Flash (green)
(Non-modular) -- HOLD Exclusive Hold
Listen for: Dial Tone
 - At ESL set, press TRF.
Listen for: Dial tone
- Step 2 >** Dial *.
Listen for: Dial tone stops
- Step 3 >** Dial extension number where you want call parked.
Look for: Line Key On (red)
If you hear busy tone, press INTERCOM and try another extension.
Optionally, you can press a DSS Console key.
- Step 4 >** Page party to receive call and announce the extension number.
- Step 5 >** Hang up.
At your extension and at the extension where you parked the call:
Look for: (Modular) -- Line key Hold Flash (red), Fast Flash (green)
(Non-Modular) -- Line key Exclusive Hold
At all other extensions (with a key for the trunk):
Look for: Line key On (red)

To pick up a parked call:

Listen for announced Park code.

- Step 1 >** Lift handset.
If you have a One-Touch Speed Dial key or a DSS Console key, you can press the key instead of using steps 2 and 3.
- Step 2 >** Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
If you have an ESL set, skip this step.
- Step 3 >** (Personal Park only) Dial *.
Listen for: Dial tone stops
- Step 4 >** Dial announced Park code (60-69 or extension number).

Description

Call Timer lets a multibutton display keyset user time their outside calls on the telephone display. This helps users that must keep track of their time on the phone.

In the large systems, the user can activate the timer in two ways: by dialing the Timer code or by pressing a special Timer key. If the user dials the Timer code before placing or answering an outside call, the timer starts automatically after the call connects. The Timer key offers more flexibility. The user can press it any time before placing or answering a call, or while on a call. The Timer key also allows the user to time Intercom calls, or use the idle telephone as a stopwatch.

In VS, Call Timer is only available to extensions with Call Timer keys. There are two types of Call Timer keys, Auto Timer and Manual Timer. A keyset can have one type of timer key or the other, not both.

If a VS extension has an Auto Timer key, the Auto Timer key lights and the timer starts when the user places or answers a call. The timer runs until the user hangs up or presses the Auto Timer key, whichever comes first. The user can also press the Auto Timer key while idle to use it as a Manual Timer key.

The VS Manual Timer key works the same as the large system timer key (see Feature Operation below).

Conditions

Attendant telephone P/N 88254 cannot have a Timer key.

Default Configuration

Call Timer always available through the dial pad (large systems only).
No Timer keys programmed.

Programming

Required Programming

- **KS- Programming Keys for Keysets** - Assign a programmable key as a Timer key. The option for the large systems is T. For VS, the options are TA (Auto Timer) and TM (Manual Timer). *Each keyset should have a Timer key.*

Other Programming

None

Related Features

Station Message Detail Recording (SMDR)

The SMDR report also helps users keep track of their time on the phone.

CALL TIMER

Feature Operation

To start the Call Timer from your dial pad (except in VS):

Your phone must be idle.

- Step 1 > Do not lift handset.
- Step 2 > Press PGM#. Look for: HF On
- Step 3 > Dial 8. Listen for: Dial tone
- Step 4 > Press HF. Listen for: Dial tone stops
- Step 5 > Place or answer your call. After a few seconds, your display starts timing your call.

To stop the Call Timer from your dial pad (except in VS):

- Step 1 > Do not lift handset.
- Step 2 > Press PGM#. Look for: HF On
- Step 3 > Dial 8. Listen for: Dial tone
- Step 4 > Press HF. Listen for: Dial tone stops
If your Call Timer continues to run, press the Timer key.

To start the Call Timer (if you have a T/TM timer key):

You can start the Call Timer before you place or answer your call -- or while your phone is idle.

- Step 1 > Press Timer key. Look for: Timer key On (red)

To stop the Call Timer (if you have a T/TM timer key):

You can stop the timer before or after you hang up.

- Step 1 > Press Timer key. Look for: Timer key Off
To restart the timer from 00:00, press the Timer key again.

Description

With Call Waiting, an extension user may call a busy extension and wait in line (Camp-On) without hanging up. When the user camps-on, the system signals the busy extension with two beeps indicating the waiting call. The call goes through when the busy extension becomes free. Call Waiting helps busy extension users know when they have additional waiting calls. It also lets callers wait in line for a busy extension without being forgotten.

Outside calls may also automatically send Call Waiting tones to a busy extension. The tones occur if:

- Another user transfers the outside call to the busy extension (see Transfer)
- The outside call is directly terminated to the busy extension (see Direct Inward Lines)
- The outside call normally rings a key at the busy extension (See Central Office Calls)

An extension with Direct Trunk Access capability can Camp-On to a busy trunk. When the trunk becomes free, the user gets a new dial tone and can place a call. Trunk Camp-On does not send Call Waiting tones to the trunk.

Conditions

- a. For ASI extensions, ESL sets and keysets with calls stacked up behind a trunk loop key, the system services camped-on calls on a first in-first out basis.
- b. A busy extension only receives Call Waiting tones from the first camped-on call.

Default Configuration

All extensions can send Call Waiting tones.

Extensions cannot Camp-On to trunks.

Transferred calls Camp-On to ESL sets and ASIs for 30 seconds before recalling.

Transferred calls Camp-On to keysets for 3 rings before recalling.

Programming

Required Programming

- **CP- Inhibit Camp-On (BY0:5)** - Allow or deny an extension's capability to send Call Waiting (Camp-On) tones when the user dials 2.
- **CP- Direct Trunk Access and Trunk Camp-On (BY2:0)** - An extension user with Direct Trunk Access can camp-on to a busy trunk.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **QJ- Intercom Call Control, Alerts** - Allow or deny audible Call Waiting indications system wide.

Other Programming

- **E- Extensions, E8- Line Access Options, Off-Hook Ringing** - If enabled, the system automatically converts Camp-On requests to Off-Hook Signaling rings.
- **QT- System Timers, Single Line Set Camp-On Time** - Set how long a transferred call should Camp-On to a busy ESL Set or ASI before recalling the transferring party.
- **QT- System Timers, Number of Rings Before Recall** - Set how long a transferred call should Camp-On to a busy keyset before recalling the transferring party.

CALL WAITING (CAMP-ON)

Related Features

Callback/Line (Trunk) Queuing

If an extension user Camps-On and then hangs up, the system converts the Camp-On to a Callback Line Queue.

Do Not Disturb

An extension user cannot dial 2 to send Camp-On tones to a busy extension in Do Not Disturb.

Off-Hook Signaling

If an extension has off-hook ringing enabled (in E8), it automatically converts incoming Call Waiting beeps to off-hook ringing.

Privacy

Privacy blocks Call Waiting (Camp-On) tones.

Ringing Line Preference

A keyset with Ringing Line Preference answers camped-on calls on a first in-first out basis.

Toll Restriction

Trunk Camp-On bypasses Toll Restriction.

Transfer

When transferring a call to a busy extension, the transferring extension user can Camp-On and wait to make an announcement. Or, the user can hang up and have the transferred call wait at the busy extension.

Feature Operation

To send a Call Waiting tone to a busy extension:

Listen for: Busy tone

Step 1 >

Dial 2.

Listen for: ICM Ring

If you hear Ring/Busy, the called extension converts your Camp-On to off-hook ringing.

Step 2 >

Wait off hook for called party to answer.

If you hang up, you leave a Callback at the busy extension.

To Camp-On to a busy trunk:

Listen for: Busy tone

Step 1 >

Dial 2.

Listen for: Busy tone stops

Step 2 >

Wait off-hook for the trunk to become free.

When you hear dial tone, place your new call.

If you hang up, the Camp-On converts to a Trunk Queue.

To answer a Call Waiting tone at a keyset:

Look for: Flashing INTERCOM or line key

Listen for: Two beeps

If an Intercom call is waiting, your display shows the first waiting call.

Step 1 >

Press flashing key.

To save your initial call, place it on Hold first. If your INTERCOM key continues flashing, you have additional calls waiting. You will not hear two beeps again.

To switch (alternate between the calls), refer to the Split feature.

To answer a Call Waiting tone at an ESL set:

Listen for: Two beeps

Step 1 >

● Press HOLD.

● Dial * 2.

To switch (alternate between the calls), refer to the Split feature.

If you hear two beeps again, you have an additional call waiting.

OR

● Hang up and lift handset when phone rings.

Description

When an extension user calls a busy extension, the user may leave a Callback request for a return call. The user does not have to repeatedly call the busy extension back, hoping to find it idle.

The system processes Callbacks as follows:

1. Caller at extension A leaves a Callback at busy extension B.
Caller A can place or answer additional calls in the meantime.
2. When caller B becomes idle (for at least four seconds), the system rings caller A. This is called the Callback ring.
Caller B can place or answer additional calls before four seconds and not affect the Callback.
3. Once caller A answers the Callback ring, the system rings (formerly busy) caller B.
If caller A does not answer the Callback ring (within five rings), the system cancels the Callback.
4. As soon as caller B answers, the system sets up an Intercom call between A and B.
If caller A places another call (and caller B hears busy), the system reinstates the callback when caller B hangs up.

An extension user can only leave one Callback request at a busy extension. The user can, however, leave Callbacks at any number of extensions at the same time. Additionally, more than one extension can leave a Callback at a single busy extension. The system queues these Callbacks and processes them on a first-in-first-out basis.

Conditions

- a. A power failure or system reset cancels all Callback requests.

Default Configuration

Callback allowed.

Programming

Required Programming

None

Other Programming

- CP- Allow Callback Priority (BY1:7) - Allow/deny trunk Callback priority for extensions with this COS.
- E- Extensions, E3- Class of Service - Assign Class of Service to extensions.

Related Features

Attendant Positions

An attendant cannot leave a Callback request. Since attendants are never busy, a user cannot leave a Callback request for an attendant.

Call Waiting

Call Waiting lets a user wait off-hook for a busy extension to become free.

Do Not Disturb

An extension user cannot leave a Callback at an extension in Do Not Disturb.

Line Queuing

Line Queuing lets an extension user leave a Callback request for a trunk.

Off-Hook Signaling

An extension user cannot leave a Callback after initiating a Voice Over.

CALLBACK

Feature Operation

To request a Callback (after calling a busy extension):

- Look for: INTERCOM On
Listen for: Busy Tone or Ring Busy tone
- Step 1 > Do not hang up.
- Step 2 > Dial 2.
Listen for: Ringing
- Step 3 > Hang up.
Look for: Intercom Off

To answer when Callback rings you back:

- Listen for: Callback Ring
- Step 1 > Lift handset.
Look for: INTERCOM Fast Flash
Listen for: Two beeps or Ringing
- Step 2 > ● If you hear ringing, wait for called party to answer.
OR
● If you hear two beeps, you can begin speaking.

To cancel a Callback request at a specific extension:

- Step 1 > Call busy extension again.
Look for: INTERCOM On
Listen for: Busy tone
- Step 2 > Press *.
Listen for: Dial tone
- Step 3 > Hang up.

To cancel all your Callbacks simultaneously:

- This also cancels all your Line Queuing requests.
- Step 1 > Lift handset.
- Step 2 > Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
If you have an ESL set, skip this step. At an ESL set, this also cancels your trunk Callbacks and Messages Waiting.
- Step 3 > ● At a keyset, press * FTR.
OR
● At an ESL set, press # *.
- Step 4 > Hang up.

Description

The system administrator can customize the routing of incoming CO (trunk) calls to meet the exact site requirements. This lets trunk calls ring and be answered at any combination of system extensions. In the large systems, CO trunks can be loop start or ground start, in any combination (depending on the hardware installed). In VS, CO trunks can only be loop start.

Conditions

To connect trunks in the large systems, the systems require Trunk Protect (TRPT) PCBs and Line (4LNU) and/or Trunk (4TRK) PCBs.

Default Configuration

The attendant has ringing and access for trunks 1-24 (1-16 in VS) on programmable keys 1-24 (1-16 in VS). Trunks 25 and above (large systems only) are not on keys and ring the phone directly.

All 30-button keyset users have lamp only and access for trunks 1-24 (1-16 in VS) on programmable keys 1-24 (1-16 in VS). Trunks 24 and above (large systems only) are not on keys. The user has access to these trunks as well.

In the large systems, all 10-button keysets have lamp only and access for trunks 20-24 on keys 20-24. All other trunks are not on keys. The user has access to all these other trunks. In VS, keys 20-24 are undefined.

Programming

Required Programming

- **E- Extensions, ED- Trunk Control, Ring Control** - For each keyset, designate the ringing options for each trunk (immediate, delayed, no ring or night ring). If you enter D, see QT- System Timers, Delayed Ring Interval in Other Programming below. You normally program the attendant with ringing for each trunk. This gives unanswered calls and recalls at least one destination in the system.
- **E- Extensions, ED- Trunk Control, Access Control** - For each extension, assign access for the lines the extension should be able to answer. You normally program the attendant with access for each trunk.
- **E- Trunks, E2- Circuit Type** - Program circuit type for each trunk.
- **E- Trunks, E9- Direct Trunk Termination** - Enter 300 to have extensions ring according to their ED programming assignments.
- **KS- Programming Keys for Keysets** - Program the types of keys that will ring the extension. Additionally, make sure that every keyset has at least one fixed or switched loop key. This ensures that an incoming call will ring a key somewhere on the keyset. On key systems, loop keys are for incoming calls only. Only switched loop keys are available.

Other Programming

- **E- Extensions, EK- Retain Trunk Volume Setting** - Enter Y if the system should apply the user-set volume for trunk calls. Enter N if the system should apply a median volume level for each new trunk call. This option only pertains to VS ≥ Aux Module 2.0, ONYX II/III ≥ 3.5 and ONYX IV (≥ 1.2).
- **IT- Activate/Deactivate Decoders (ONYX IV)** - Activate or deactivate system DTMF receivers.
- **NP- Programming Names and Messages** - Assign names to incoming trunks. The name displays after a display set user answers a call on the trunk.
- **QE- Line Gain Table** - Set the gains for each trunk.

Programming (Cont'd)

- **QE- Manual Sidetone** - You can adjust the sidetone manually for each trunk. This lets you fine tune each trunk's sidetone level, if necessary.
- **QT- System Timers, Delayed Ring Interval** - Set the delayed ring interval for trunks with delayed ringing. This is the D option in E, Extensions, ED-Trunk Control, Ring Control.
- **QT- System Timers, Loop Disconnect Time (ONYX IV and VS)** - Set the disconnect interval for trunks. This only applies to VS ≥ Aux Module 2.0/Base 5.0, ONYX II/III ≥3.5 and ONYX IV.

Related Features

Attendant Console (ONYX IV)

The Attendant Console can answer calls on loop keys and line keys. This requires unique programming. Refer to the Attendant Console (ONYX IV) feature.

Automatic Call Distribution

DILs to an ACD group ring extensions in the group directly.

Automatic Handsfree

If the system has Automatic Handsfree, an extension user can answer a trunk call just by pressing the line key.

Direct Inward Line

A Direct Inward Line rings its programmed destination extension directly.

Distinctive Ringing

In VS ≥ Aux Module 2.0/Base 5.0 and later, selected trunks can have Distinctive Ringing.

Direct Station Selection, Console

DSS Consoles can have line keys for answering calls.

Extension Hunting

DILs to a UCD hunt group ring extensions in the group directly.

Group Ring

DILs to a Ring Group ring all extensions in the ring group directly.

Night Answer

Night Answer lets specified trunks ring an extension at night (off hours).

Ring Line Preference

A keyset user can answer a ringing call by just lifting the handset.

Feature Operation

To answer a trunk call:

- Look for: (Optional) Programmable key Slow Flash
- Listen for: (Optional) Trunk Ring
- Step 1 ➤ Lift handset.
If you have an ASI/OPX/ESL set, you automatically answer the call.
- Step 2 ➤ If not connected to the call, press flashing programmable key.

Description

The system administrator can customize the way each extension user places outgoing trunk calls. A user can place a call by:

- Pressing a line key (keyset only)
- Dialing a trunk access code (e.g., 801)
- Dialing a trunk group code (9 or 90-98)
- Dialing a trunk extension number (e.g., 480)

System programming lets the administrator customize the call placing options to meet site requirements and each individual's needs. In the large systems, CO trunks can be loop start or ground start, in any combination (depending on the hardware installed). In VS, CO trunks can only be loop start.

Conditions

- a. To connect trunks in the large systems, the systems require Trunk Protect (TRPT) PCBs and Line (4LNU) and/or Trunk (4TRK) PCBs.
- b. On power up, the system automatically does a side tone test on each trunk. Refer to IS- Side Tone Test for more information.

Default Configuration

All 30-button keyset users can place calls on trunks 1-24 (1-16 in VS) via programmable keys 1-24 (1-16 in VS).

In the large systems, all 10-button keyset users can place calls on trunks 20-24 via programmable keys 20-24. In VS, 10-button users cannot place calls via programmable keys.

All users can place calls by dialing trunk access codes (e.g., 801).

Placing calls via trunk groups is not available.

Programming

Required Programming

- **E- Extensions, E8- Line Access Options, Key Access to Outbound Lines** - If enabled, keyset user can press a line key to place a call (if also allowed by ED programming).
- **E- Extensions, E8- Line Access Options, Allow Line Code Dial-Up** - If enabled, user can dial trunk access code (e.g., 801) to access trunks (if also allowed by ED programming).
- **E- Extensions, E8- Line Access Options, Access to Groups 90-95 (not on key systems)** - If enabled, user can dial 90-95 to access trunk groups 1-6.
- **E- Extensions, ED- Trunk Control, Access Control** - Assign access for each trunk on which the user should be able to place calls.
- **E- Extensions, ED- Trunk Control, Call-Out Control** - Enable call-out for each trunk on which the user should be able to place calls.
- **E- Trunks, E2- Circuit Type** - Program the correct circuit type for each trunk.
- **KS- Programming Keys for Keysets** - Program the types of keys that allow the extension user to place trunk calls.

Other Programming

- **E- Extensions, EK- Retain Trunk Volume Setting** - Enter Y if the system should apply the user-set volume for trunk calls. Enter N if the system should apply a median volume level for each new trunk call. This option only applies to VS ≥ Aux Module 2.0, ONYX II/III ≥3.5 and ONYX IV ≥1.2.
- **IT- Activate/Deactivate Decoders (ONYX IV only)** - Activate or deactivate system DTMF receivers.
- **QA- Trunk Access Digit** - Specify the first digit a user dials to place a call on a specific trunk.

Programming (Cont'd)

- **QE- Line Gain Table** - Set the gain for trunks.
- **QE- Manual Sidetone** - You can adjust the sidetone manually for each trunk. This lets you fine tune each trunk's sidetone level, if necessary.
- **QT- System Timers, Loop Disconnect Time (ONYX IV and VS)** - Set the disconnect interval for trunks. This option only applies to VS ≥ Aux Module 2.0/Base 5.0, ONYX II/III ≥3.5 and ONYX IV.

Related Features

Account Code Capability

Users can dial Account Codes while placing calls. The system may require Account Code Entry.

Attendant Console (ONYX IV)

The Attendant Console can place calls on loop keys and line keys. This requires unique programming. Refer to the Attendant Console (ONYX IV) feature.

Automatic Handsfree

If the system has Automatic Handsfree, an extension user can place a call by just pressing a line key before dialing.

Automatic Route Selection/Least Cost Routing

ARS and LCR may restrict the numbers a user may dial.

Dialing Number Preview

Dialing Number Preview lets a user dial, review and correct a number before the system dials it out.

Direct Station Selection, Console

DSS Consoles can have line keys for placing calls.

Direct Trunk Access

Direct Trunk Access lets an extension user place a call by dialing the trunk number.

Last Number Redial/Save/Speed Dial

These features give extension users convenient options to dialing manually.

Line (Trunk) Queuing

A user can queue for an available trunk if all trunks are busy.

Line (Trunk) Rotaries

The system administrator can group trunks into rotaries for placing outside calls.

Toll Restriction

Toll Restriction may restrict the numbers a user may dial.

Feature Operation

Step 1 ➤

To place an outside call using a line key:

Lift handset.

Step 2 ➤

Press line key

Look for: Line key On (red/green)

Listen for: Dial tone

Step 3 ➤

Dial number.

Listen for: Digits dialing out

To place a call using dial-up codes:

Step 1 ➤

Lift handset.

Step 2 ➤

Press INTERCOM.

Look for: INTERCOM On

Listen for: Dial Tone

Step 3 ➤

Dial code.

You can dial:

A trunk extension number (See Direct Trunk Access)

A trunk access code (e.g., 801)

Trunk group access code - 9 or 90-98 (See Line Rotaries)

CENTRALIZED ATTENDANT SERVICE

Description

Centralized Attendant Service (CAS) allows an attendant in a hub system to answer calls for a number of satellite systems. Each of the satellite systems does not have to have their own operator. The Centralized Attendant does the call screening for them.

With Centralized Attendant Service:

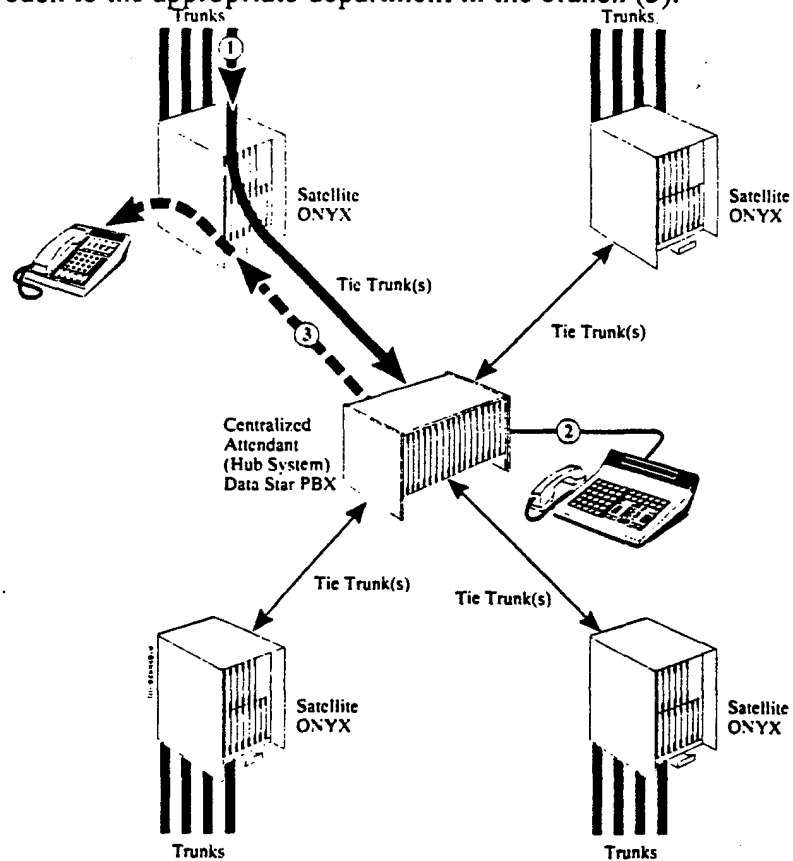
- An outside caller places a call to a satellite system
- The satellite routes the call to a tie trunk (or tie trunk rotary) which rings the Centralized Attendant in the hub system
- The Centralized Attendant answers the call and determines to which department (extension) in the satellite the caller wishes to speak
- The Centralized Attendant flashes the tie trunk and dials the satellite extension number
- The call then rings the desired extension in the satellite system
- If the call is answered, the system drops the tie trunk

OR

If the call is unanswered, the satellite

- Reseizes the tie trunk (or tie trunk rotary)
- Recalls the Centralized Attendant
- Sends the unanswered extension's ID to the Centralized Attendant

In the example below, CAS connects four ONYX satellite branch offices to a Data Star PBX hub. When a caller dials one of the branches (1), the call rings the hub console. The Centralized Attendant answers the call (2), and then sends it back to the appropriate department in the branch (3).



- ① Call rings Centralized Attendant
- ② Centralized Attendant screens call
- ③ Centralized Attendant sends call back to correct extension in Satellite

CENTRALIZED ATTENDANT SERVICE

Description (Cont'd)

The ONYX can be a Centralized Attendant Service satellite system. The CAS hub should be a Data Star PBX.

Conditions

If a call transferred to a satellite extension is unanswered, the Centralized Attendant can display the name of the called satellite extension on no-answer recall. To achieve this:

- The hub system must be a Datastar PBX
- The extension names (NP) database in the hub must be the same as the extension names (NP) database in the satellite
- The Class of Service of the satellite tie trunk must have Bell Standard CAS disabled (see programming below)
- Each satellite system must have a Special Trunk Interface (large systems) or Tie Line Module (VS).¹

Default Configuration

Centralized Attendant Service not programmed.

Programming

Required Programming

- **CP- Allow Bell Standard for CAS (BY0:0)** - Enable this option if hub system is using Bell Standard Centralized Attendant Service. Disable this option if hub is a Datastar PBX.
- **E- Trunks, E2- Circuit Type** - Assign each tie trunk used for CAS one of the following circuit types:
 - 16 DTMF Wink Start tie line
 - 17 Dial Pulse Wink Start tie line
 - 18 DTMF Immediate Dial tie line
 - 19 Dial Pulse Immediate Dial tie line
- **E- Trunks, E2- STI Circuit Number** - Enter the STI circuit number for the tie trunk. Refer to the STI Installation and Programming Manual for charts and drawings that explain this correlation.
- **E- Trunks, E3- Class of Service** - Assign a Class of Service to the tie trunk.
- **E- Trunks, E4- Next Trunk in Outbound Rotary** - If the CAS tie trunk is part of a trunk rotary for outgoing calls, enter the number of the next trunk in the rotary
- **E- Trunks, E9- Direct Trunk Termination** - Terminate each incoming trunk (or rotary) in the satellite to a tie trunk (or tie trunk rotary) that connects to the hub.
- **E- Trunks, EA- UCD Group Master Extension Number (First Trunk in Group)** - If a CAS tie trunk is in a rotary, specify the first trunk in the rotary. All trunks in the rotary should have the same entry for this option.

¹ Not currently available.

CENTRALIZED ATTENDANT SERVICE

Programming

Other Programming

- **KS- Programming Keys for Keysets** - Each extension in the satellite should have a key for the tie line, or a loop key. Calls transferred over the tie line from the hub ring this key.
- **QF- Line Group Access (First Trunk in Group)** - For outgoing calls on the tie trunk, correlate the first trunk in a trunk rotary (e.g., 801) to one of nine trunk rotary numbers (90-98). The system requires this correlation when setting up trunk rotaries. Use the trunk access code (e.g., 801 or L01) that corresponds to the EA- First Trunk in Group entry.
- **QT- System Timers, Tie Line Outgoing Flash Timer** - Set the duration of the Flash loop current interruption for outgoing tie line calls (e.g., recalls back to the hub).
- **QT- System Timers, Number of Rings Before Recall** - Set how long a tie trunk rings the satellite destination after being transferred by the Centralized Attendant. After this interval, the trunk recalls the Centralized Attendant.

Related Features

Attendant Console (ONYX IV)

Attendant Consoles can have loop keys for access to tie lines.

Tie Lines

Centralized Attendant Service requires tie trunks in both the satellite and the hub system.

Feature Operation

None

CENTREX COMPATIBLE FEATURE KEYS

Description

Centrex Feature Keys are programmable keys customized with Centrex/PBX functions. If the system is installed behind a Centrex/PBX, these keys give extension users one-touch access to complex Centrex/PBX functions. A Centrex feature key can contain any combination of:

- Digits 0-9, * or #
- Delay (D)
- Flash (F)
- Pause (P)

The Centrex code can be up to 12 entries long (10 in VS). The system allows a total of 565 Centrex Feature Keys (41 in VS). In VS, only systems with AUX Modules can have Centrex Feature Keys.

Conditions

The system ignores the Flash option if F is the first key entry and the user is not on an established trunk call.

Default Configuration

No Centrex feature keys programmed.

Programming

Required Programming

- **FC4- Reset All Keyset Feature Keys** - Before programming Centrex Feature Keys for the first time, reset the system memory used for Centrex feature keys.
- **KS- Programming Keys for Keysets** - Assign keys as Centrex keys. For Centrex keys, the system requests a trunk number before you enter the Centrex code.

Other Programming

- **QT- System Timers, Flash Response Time** - Set the flash (open circuit) interval.
- **QT- System Timers, Dialtone Detection Count** - Set how long the system waits for dialtone. The system waits three times this interval to detect second dialtone.
- **QT- System Timers, Centrex Type Feature Key Delay** - Set the Centrex delay interval. This is the interval that corresponds to a D entry when programming Centrex keys.
- **QX- Suppress "#" When Speed Dialing** - Allow or prevent the system from outdialing a # if stored with a Centrex feature key.

Related Features

PBX/Centrex Compatibility

The system administrator must program trunks for operation behind a Centrex/PBX.

Station Message Detail Recording

If applicable, the SMDR report will list the codes D (delay), F (Flash) and P (pause) in the "Number Dialed" field.

Feature Operation

To use a Centrex feature key:

- Step 1** ➤ (Optional) Lift handset.
If you are already on a call, skip this step.
- Step 2** ➤ Press Centrex feature key.
The stored function automatically executes. If the function contains a trunk code and you are already on a trunk, the system strips out the trunk code.

Description

Class of Service (COS) sets various features and dialing options for extensions (and certain types of trunks). An extension can have only one COS; however, any number of extensions may share the same COS. Class of Service lets the system administrator tailor the dialing options for each user.

The system organizes Class of Service options into bytes. There are three COS bytes: 0, 1, and 2. Each byte has eight individual options called bits (0-7). To change a COS option, you change the bit of a specific byte. This manual abbreviates the COS nomenclature. For example, byte 0 bit 7 is BY0:7.

The system supports 28 Classes of Service. Extensions normally use Classes of Service 01-27. The system permanently assigns attendants Class of Service 30, which cannot be changed. However, COS 30 follows the programming for COS 00. The system administrator can change the options for COS 30 by changing COS 00.

The chart below correlates each Class of Service option to the feature it affects. It also shows the default setting for COS 01, which is the standard COS for all extensions. Refer to the individual feature description for more information. COS 30 (for attendants) has the same default as COS 1, except:

- COS 30 allows Break In (BY0:4)
- COS 30 allows Direct Trunk Access (BY2:0)

Feature	COS Option	Byte/Bit	COS 1 Default
Automatic Call Distribution Call Forwarding	ACD Supervisor Keypad	BY2:6	0-No
	Inhibit Call Forwarding	BY0:6	0-No
	Allow Off-Premise Call Forwarding	BY0:3	0-No
Call Waiting Callback	Inhibit Camp-On	BY0:5	0-No
	Allow Callback Priority	BY1:7	0-No
Centralized Attendant Service	Allow Bell Standard for CAS	BY0:0	0-No
Direct Inward Dialing	Allow Automatic Op. Intercept for DID	BY0:0	0-No
Direct Inward Dialing/Tie Lines	Absorb 1st Digit for DID/Tie Trunks	BY0:1	0-No
Direct Trunk Access	Direct Trunk Access/Trunk Camp-On	BY2:0	0-No
Distinctive Ringing	Single Ring OPX	BY2:7	0-No
Flash	Inhibit Flash for Single Line Sets	BY2:6	0-No
Intrusion	Allow Break-In (Intrusion)	BY0:4	0-No
OPA	Inhibit OPA Transfers to Extension	BY0:1	0-No
Paging	Inhibit Access to Page Zone 3	BY2:4	0-No
	Inhibit Access to Page Zone 2	BY2:3	0-No
	Inhibit Access to Page Zone 1	BY2:2	0-No
	Inhibit Access to All Call Paging	BY2:1	0-No
Privacy	Allow Privacy	BY1:6	0-No
Silent Monitor	Allow Silent Monitor	BY2:5	0-No
Speed Dial	Inhibit System Speed Dial	BY0:7	0-No
Toll Restriction	Allow Only Intercom Calls at Night	BY0:2	0-No
	Allow Only Local Calls at Night	BY1:4	0-No
	Allow Only Local Calls (Day or Night)	BY1:3	0-No
	Extension Toll Restriction Level	BY1:1	0
Transfer	Allow Extended Ring	BY1:5	0-No
Universal Night Answer	Operator Call Pickup (ONYX IV)	BY3:7	0-Yes

CLASS OF SERVICE

Description (Cont'd)

Conditions
None

Default Configuration

All extensions have COS 01.

All trunks have COS 00.

The attendant has COS 30.

See chart above for details.

The port pairs assigned to the Special Trunk Interface have COS 31.

Data Ports with permanent Receive/Transmit Connection have COS 29.

Refer to the Data Products Manual.

Programming

Required Programming

- CP- Program COS - Set the Class of Service options.
- E- Extensions/Trunks, E3- Class of Service - Assign a Class of Service to trunks (where applicable) and extensions.

Other Programming

None

Related Features

Direct Inward System Access (DISA)/Tie Lines

Since DISA and tie trunk callers can use many extension features, these trunks should have a COS.

Feature Operation

Refer to the features referenced above.

Time and Date

Only extensions with COS 00 can set the Time and Date.

Description

Conference lets an extension user add an additional party to their conversation. With Conference, a user may join in a three-way telephone meeting without leaving the office. The added call may be an Intercom or outside call.

In addition to Conference, the following features also allow three-party calls:

- Intrusion
- Meet-Me-Conference
- Privacy Groups
- Tandem Calls

Conditions

- a. Conferencing trunk calls requires either loop start trunks with disconnect supervision or ground start trunks.
- b. The system supports eight simultaneous three-party Conferences.

Default Configuration

Conference allowed at all extensions.

Programming

Required Programming

None

Other Programming

- **E- Extensions, ED- Trunk Control, Access Control** - When Conferencing with a trunk, only the extension initiating the Conference needs access to the trunk.

Related Features

Tandem Calls

Tandem Calls lets a user Conference with two trunk calls and then leave the Conference. The two trunk calls remain connected.

Feature Operation

To set up a Conference at a keyset:

- Step 1 ➤** Place or answer first call.
Listen for: Conversation with caller
- Step 2 ➤** Press CONF.
Look for: (Modular) -- HOLD Hold Flash (red), Fast Flash (green)
(Non-modular) -- HOLD Exclusive Hold
Listen for: Dial tone
If you were on an outside call, a line key flashes also. If all Conference circuits are busy, you hear fast busy tone.
- Step 3 ➤** Place or answer second call.
Listen for: Conversation with caller
- Step 4 ➤** Press CONF.
Look for: CONF On (red/green)
Listen for: Conversation with both parties
If the Conference includes at least one Intercom caller, the other parties remain connected if you hang up.

CONFERENCE

Feature Operation (Cont'd)

- To set up a Conference at an ESL set:**
- Step 1 >** Place or answer first call.
Listen for: Conversation with caller
 - Step 2 >** Press HLD.
Listen for: Dial tone
 - Step 3 >** Place or answer second call.
Listen for: Conversation with caller
 - Step 4 >** Press HLD. *, #.
Listen for: Conversation with both parties
If the Conference includes at least one Intercom caller, the other parties remain connected if you hang up.

Description

The system provides internal and external RS-232-C data communications. Using the optional Data Products (listed below), the system can link (network) computers, printers, terminals and other RS-232-C devices. The Data Products have unique installation and programming requirements. Refer to the Data Products Manual (P/N N1850DMG01) for the specifics.

Data Products	Part Number
Data Module	88400
Companion module for keyset that lets user connect an RS-232-C data device	
Data Set	89054
Special multibutton keyset that also connects to an RS-232-C data device	
Data Set Power Supply	89057
Replacement power supply for Data Set	
Mini Data Unit	89408
Small "desk-top" version of the Data Rack that accepts two Dataport PCBs, two Modem Pooling PCBs or one of each. Requires AUX Module in VS.	
Mini Data Unit Power Supply	89409
Separate power supply for Mini Data Unit	
Dataport PCB	89460
Plugs into the Mini Data Unit and connects up to two RS-232-C data devices	
Modem Pooling PCB	89465
Plugs into the Mini Data Unit and allows system users to place data calls outside of the system. Each PCB contains two 103/212A modems.	
DCE/DCE Adaptor	89079
Adaptor required when connecting a modem type (DCE) device to a Data Set, Data Module or Dataport PCB.	

Conditions
None

Default Configuration
Data communications is always available if the additional data equipment is installed and programmed.

Programming

Required Programming
Refer to the Data Products Manual (P/N N1850DMG01).

Other Programming
Refer to the Data Products Manual (P/N N1850DMG01).

DATA

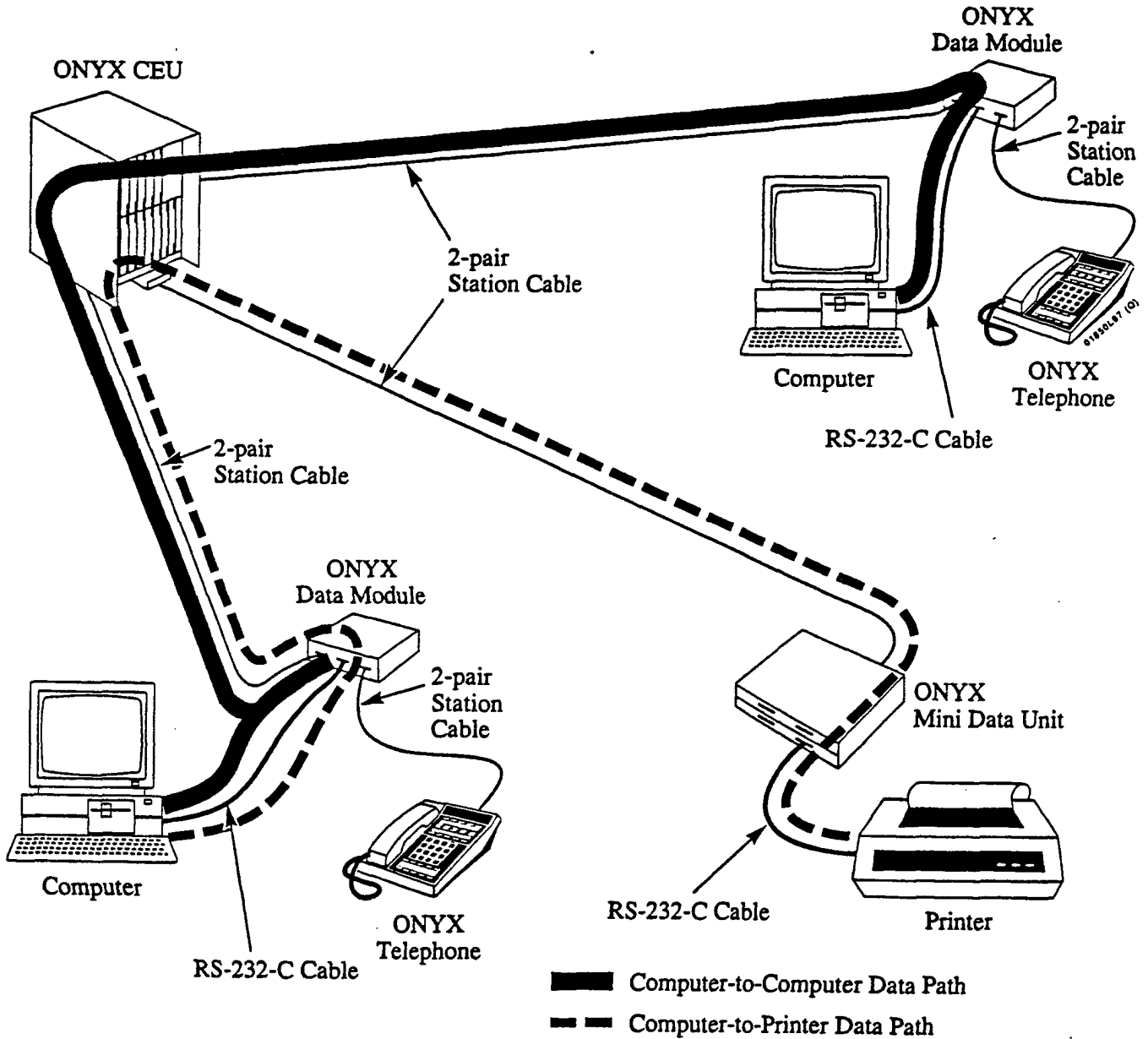
Related Features

Refer to the Data Products Manual (P/N N1850DMG01).

Feature Operation

Refer to the Data Products Manual (P/N N1850DMG01) and the Data Products Feature Handbook (P/N N1850DFH01).

Sample Data Installation



Description

The system administrator can program each trunk for Dual Tone Multifrequency (DTMF) or Dial Pulse (DP) dialing. This allows the system to connect to any combination of DTMF or DP trunks.

DP/DTMF Compatibility also provides Pulse to Tone Conversion. Pulse to Tone Conversion lets a user change their extension's dialing mode while placing a call. For systems in a DP area, this permits users to access dial-up OCCs (e.g., MCI or GTE Sprint) from a DP area. The user can, for example:

- Place a call to an OCC over DP trunks.
- Wait six seconds after dialing the OCC's local number.
- Dial the OCC security code and desired number. The system dials the digits after the six-second wait as DTMF.

Conditions

DP trunks require a Trunk (4TRK) PCB. DTMF trunks can use either a Trunk (4TRK) PCB or a Line (4LNU) PCB.

Default Configuration

All trunks have loop start DTMF signaling.

Since all COSs have Toll Restriction Level 0, all COSs allow Pulse to Tone Conversion. Continued dialing is always allowed by COS 0. Continued Dialing is switchable (by Toll Level) for all other COSs.

Programming

Required Programming

- **E- Trunks, E2- Circuit Type** - Assign a circuit type that matches the signaling for each connected trunk. If a trunk has both DP and DTMF signaling, program it for DTMF.

Other Programming

- **AP- Active Dial Pad** - Enable for each Toll Restriction level that should allow Pulse to Tone Conversion.
- **CP- Extension Toll Restriction Level** - Assign a Toll restriction level to each COS.
- **E- Extensions, E3- Class of Service** - Assign a COS to each extension.

Related Features

Speed Dial

If a Speed Dial number uses a DP trunk and contains a pause, Pulse to Tone Conversion can be automatic. The digits before the pause dial out DP. The digits after the pause dial out DTMF.

Feature Operation

To convert your dialing from pulse to tone:

Your outside call must initially use pulse signaling.

- Step 1 ➤ Place initial call.
- Step 2 ➤ Wait six seconds.
- Step 3 ➤ Dial additional digits.
These digits dial as DTMF.

DIALING NUMBER PREVIEW

Description

Dialing Number Preview allows display keyset users to dial, review and correct a number before the system dials it out. DNP helps the display keyset user avoid dialing errors.

Conditions

None

Default Configuration

Dialing Number Preview functions at all display keysets.

Programming

Required Programming

None

Other Programming

- **E- Extensions, E2- Circuit Type** - Make sure that display keysets have circuit type 02.
- **E- Extensions, ED- Trunk Control, Access Control/Callout Control** - After using Dialing Number Preview, the extension must have access/call-out for the selected trunk to complete the call.

Related Features

Automatic Route Selection/Toll Restriction

The system places normal routing and restriction on calls placed using Dialing Number Preview.

Prime Line Selection

If an extension has Prime Line Selection, the system selects the Prime Line when the user presses DIAL (step 5 below).

Feature Operation

To use Dialing Number Preview:

If you are an attendant, lift handset before going to step 1.

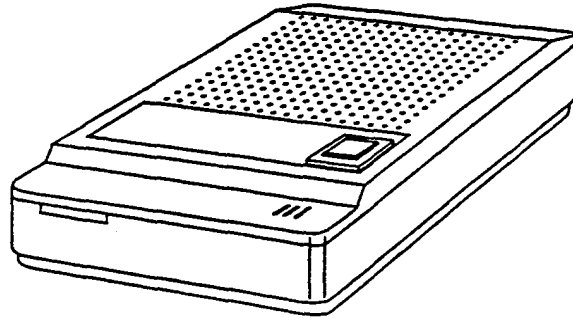
- Step 1 ➤ Press *.
Look for: HF On
- Step 2 ➤ Dial number.
Look for: Display shows the digits you dial
- Step 3 ➤ (Optional) Edit the number you dial.
Press DN ▼ to move the cursor left to the incorrect digit. If you go too far, press UP ▲ to move the cursor to the right.
Dial correct digit(s). The cursor moves one digit to the right with each digit you enter.
- Step 4 ➤ Press FTR.
This moves the cursor all the way to the right. Dialing Number Preview only dials the digits up to the cursor.
- Step 5 ➤ Press DIAL.
Look for: Your display asks you to select an idle line key
If you have Prime Line Selection, the system selects the trunk for you.
- Step 6 ➤ Press line key.
Look for: Line key On (red/green)
Listen for: Digits dialing out

To exit Dialing Number Preview without dialing:

- Step 1 ➤ Press HF.
Look for: HF Off

Description

The Digital Door Box (P/N 88545) is a self-contained Intercom unit typically used to monitor an entrance door. A visitor at the door can press the Door Box call button (like a door bell). The Door Box then sends chime tones to all extensions programmed to receive chimes. To answer the chime, the called extension user just lifts the handset. This lets the extension user talk to the visitor at the Door Box. The Door Box is convenient to have at a delivery entrance, for example. It is not necessary to have company personal monitor the delivery entrance; they just answer the Door Box chimes instead.



The system can have up to four Door Boxes, installed at extensions 310, 311, 322 and 323. Each Door Box has a distinctive chime pattern as follows:

<u>Extension</u>	<u>Chime Pattern</u>			
310	High	Low		
311	High	High		
322	High	Low	High	Low ¹
323	High	High	High	High ¹

The Digital Door Box is only available in VS \geq Aux Module 2.0/Base 5.0.

Conditions

- The Door Box is a weather-tight unit, with an operating temperature range of -20°C to 60°C (-4°F to 140°F). It is not intended for outdoor installation.
- Ring and Paging affect the way a Door Box alerts an extension:
 - Incoming ringing stops the chimes (if sounding) or prevents the chimes (if ringing occurs before the chimes sound).
 - Paging turns off an active chime. Conversely, an incoming chime turns off a Page announcement in progress.

Default Configuration

No Door Boxes installed.

Programming

Required Programming

- E- Extensions, E3- Class of Service - Assign each Door Box COS 28.
- QV- Peripheral Ports, Alert Programming - For each extension, entering Y lets the phone receive chime tones from the door boxes. Entering N prevents chime tones from alerting the phone.

Other Programming

- QT- System Timers, Door Box Alert Time - Set how long an extension user has to answer Door Box chimes. The user can answer the Door Box only if they respond within this interval.

¹The chimes for extensions 322 and 323 are twice as fast as the chimes for 310 and 311.

Related Features

Call Waiting/Off Hook Signaling

An extension cannot receive off-hook signals from a Door Box.

Call Coverage Keys/Hotline (recommended option)

An extension can have a Call Coverage or Hotline key for a Door Box. This gives the extension a BLF, one button calling and one button answering for the Door Box.

When the key is...

The Door Box is...

Off	Idle
On	Busy
Slow Flash	Calling (ringing) in

Directed Call Pickup

Directed Call Pickup cannot pick up a Door Box call at another extension.

Volume Control

An extension user cannot adjust the volume of the Door Box chimes.

Feature Operation

Step 1 >

To use the Door Box:

Press and release the Door Box button.

This sends distinctive chimes to the phones programmed to receive chimes.

To answer the Door Box chimes (from your phone):

Look for:	Call Coverage/Hotline key	Slow Flash
Listen for:	Distinctive Door Box chimes	

Step 1 >

Lift handset.

If you have a keyset, you may also be able to press HF instead.

If busy on another call, you can press your Door Box Call Coverage/Hotline key to answer the Door Box.

To call the Door Box:

Step 1 >

Lift handset.

Step 2 >

Press INTERCOM.

Look for: INTERCOM on

Listen for: Dial tone

If you have a Call Coverage or Hotline key for the Door Box, press it instead. Skip the next step.

Step 3 >

Dial Door Box extension number.

Listen for: You call goes through

Description

Direct Inward Dialing lets outside callers directly dial system extensions, ACD/UCD groups and ring groups. DID saves time for callers who know the extension or group number they wish to reach. With DID, the caller does not have to rely on attendant or secretary call screening to complete the call.

In addition to direct dialing, the system also provides the following DID features:

- Three- or Four-Digit DID Service Compatibility
- Vacant Number Intercept
- Busy Intercept
- Ring-No-Answer Intercept
- All Call Intercept
- DID Camp-On to a busy keyset

In the large systems, DID trunks require the installation of a Special Trunk Interface (STI), P/N 88146.¹ Each STI provides connection for up to eight DID trunks. The chart below shows the maximum number of STIs and DID trunks allowed per system:

System	Max STIs	Max DIDs
12x36	1	8
32x60	2	16
56x120/72x180	4	32

The Special Trunk Interface requires trunk ports, an external power supply/ring generator and two unused extension ports. In addition, the STI has two DTMF receivers. The STI uses receivers in a VAU, OPA/VAU or MLU PCB only when its integral receivers are busy. For complete installation details, refer to the STI Installation and Programming Manual (P/N N1850STI01).

In VS, DID trunks require the installation of a DID/OPX Module (not currently available).

Three- or Four-Digit DID Service Compatibility

The System Administrator can program the system to accept either three- or four-digit telco DID service. This lets the system readily match the service offered by the local telco. With three- digit DID service, the system uses the three digits sent by the telco as the destination extension number. With four-digit service, the system absorbs the first digit sent by the local telco. The system then uses the last three digits sent as the extension number.

Vacant Number Intercept

Vacant Number Intercept routes improperly or partially dialed calls and calls to uninstalled extensions to the attendant. This helps callers who misdial. The system does not reject the call -- it sends it to the attendant instead. For example, if a DID caller dials an extension that does not exist, the call rings the attendant. Without Vacant Number Intercept, the caller hears system error tone (fast busy) and the call does not reroute.

Busy Intercept

When a DID caller dials a busy or DND extension, Busy Intercept routes the call to the attendant. The DID caller does not have to call back later. The call goes to the attendant instead. Without Busy Intercept, the DID caller hears busy tone and the call does not reroute.

¹ Refer to the Special Trunk Interface feature for more details.

DIRECT INWARD DIALING (DID)

Description (Cont'd)

Ring-No-Answer Intercept

With Ring-No-Answer Intercept, unanswered DID calls ring the attendant. As with Busy Intercept, the DID caller does not have to hang up and call later. After an interval of ringing, the call goes to the attendant. Without Ring-No-Answer Intercept, unanswered DID calls ring the destination extension until the DID caller hangs up. Additionally, a DID call a user places on Hold and abandons will recall their extension indefinitely. The call will not reroute.

All Call Intercept

If an extension has All Call Intercept, the system reroutes all the extension's DID calls to the attendant. Class of Service enables or disables All Call Intercept. All Call Intercept helps users that do not want to be interrupted by DID calls.

DID Camp-On

A DID caller can optionally Camp-On to a busy keyset. This lets the DID caller wait in line for a busy extension to become free. A call can only Camp-On if the keyset has an idle line key for the DID trunk or a loop key. If the system doesn't have DID Camp-On, a DID call to a busy extension follows normal Busy Intercept routing.

The Camped-On call waits in line for the QT- Number of Rings Before Recall interval. After this interval expires, the call goes to the programmed Ring-No-Answer Intercept destination. If the system doesn't have Ring-No-Answer Intercept, the call Camps-On indefinitely.

In ONYX IV, Direct Inward Dialing works with Dual Line Appearance to allow multiple DID calls to a keyset. Refer to the Dual Line Appearance feature. With Dual Line Appearance, the first DID call to a keyset rings the first appearance (E1) key. The second DID call rings the second appearance (E2) key. Additional DID callers hear busy tone or go to the Busy Intercept destination (if programmed). If the keyset has Dual Line Appearance, DID calls never ring a loop key.

If a keyset in ONYX IV doesn't have Dual Line Appearance keys, the first DID call rings the loop key. Additional DID callers hear busy tone or go to the Busy Intercept destination (if programmed). Note that the DID Camp-On option QO- DID Camp On to Busy Keyset is not available in the PBX.

Conditions

The system supports wink start, incoming only Dial Pulse (DP) DID trunks.

Default Configuration

No DID trunks assigned.

Programming

Required Programming

- **CP- Absorb 1st Digit for DID and Tie Trunks (BY0:1)** If QO- DID Intercepts (Absorb 1st Digit) is off (N), use this option to apply 1st digit absorption on a trunk-by-trunk basis. When you enable this option, the trunk is compatible with four-digit DID service. *This is a COS option for DID trunks.*
- **CP- Allow Automatic Operator Intercept for DID (BY0:0)** - Enable/disable All Call Intercept in an extension's COS. *This is a COS option for extensions.*
- **E- Extensions, ED- Trunk Control, Ring Control** - The attendant assigned to each DID trunk should have ringing for the trunk. This allows the intercepts to work properly. However, intercepts to keysets work fine without having ring programmed.
- **E- Extensions, ED- Trunk Control, Access Control** - An extension must have access to a DID trunk in order to answer a DID call on that trunk.
- **E- Extensions/Trunks, E3- Class of Service** - Assign Class of Service to DID trunks and extensions.
- **E- Trunks, E2- Circuit Type** - Assign DID trunks with circuit type 07.
- **E- Trunks, E2- STI Circuit Number** - Enter the STI circuit number for the DID trunk. Refer to the STI Installation and Programming Manual for charts and drawings that explain this correlation.
- **KS- Programming Keys for Keysets** - Each extension should have a line key for DID trunks or a loop key.

Other Programming

- **E- Extensions, E9- Attendant (Operator) Assignment** - Designate the intercept destination for DID calls to an extension. This option only applies to ONYX II/III ≥3.5 and ONYX IV ≥1.2.
- **E- Trunks, E9- Direct Trunk Termination** - Designate the intercept destination (if other than the operator). See Night Answer in related features. This option does not apply to ONYX II/III ≥3.5 and ONYX IV ≥1.2.
- **NP- Programming Names and Messages** - Assign names to DID trunks. The name displays after a display telephone user answers a DID call.
- **QO- DID Intercepts, Absorb 1st Digit** - Set 1st digit absorption for all DID trunks. If enabled, system is compatible with four-digit DID service.
- **QO- DID Intercepts, Vacant Number Intercept** - Enable/Disable Vacant Number Intercept for all DID trunks.
- **QO- DID Intercepts, Busy Intercept** - Enable/disable Busy Intercept for all DID trunks.
- **QO- DID Intercepts, Ring-No-Answer Intercept** - Enable/disable Ring-No-Answer Intercept for all DID trunks.
- **QO- Camp-On to Busy Keyset** - Enable/disable DID Camp-On to a busy keyset. This option is not available in ONYX IV.

Related Features

Call Forwarding/Extension Hunting

If the system has Busy and Ring-No-Answer intercept, a DID call will follow Call Forwarding and hunting at the extension dialed.

Central Office Calls, Answering

Make sure at least one extension (preferably the attendant) has ringing and access for each DID trunk. This ensures that each DID will recall somewhere in the system if it is abandoned on Hold or after a Transfer.

Central Office Calls, Placing

Users cannot place outgoing calls on DID trunks.

Night Answer

For Vacant, Busy and Ring-No-Answer Intercept...

If the E9 assignment for the DID trunk is an attendant, DID calls at night follow the attendant's night routing (i.e., Universal Night Answer.)

If the E9 assignment for the DID trunk is a keyset, DID calls at night ring the keyset (i.e., Assigned Night Answer).

For All Call Intercept...

A DID call follows E9 routing for the extension dialed during the day. The DID call rings the extension dialed at night. Additionally, the system does not intercept calls at night.

Off-Premise Extension

Each OPX installed reduces by one the number of DIDs you can connect to the STI.

Feature Operation

To answer a DID call:

Look for: Line key Slow Flash (keyset only)

Listen for: Trunk Ring

Step 1 >

Lift handset.

If you have an ESL set, this step answers the call.

Step 2 >

Press flashing line key.

Look for: Line key On (red/green)

Listen for: Conversation with caller

DIRECT INWARD DIALING (DID)

- For Your Notes -

DIRECT INWARD LINE (DIL)

Description

A Direct Inward Line (DIL) is a trunk that directly rings an extension, ACD group, UCD group or Ring Group. DILs give the system administrator additional routing options for incoming calls.

For example, a Sales Manager can have a DIL for a new sales campaign's calls. When a caller dials the sales campaign number, the call rings the Sales Manager's phone. If the Sales Manager does not answer, the call then rings all the other phones with programmed ringing for that trunk.

Conditions
None

Default Configuration
No DILs programmed.

Programming

Required Programming

- **E- Trunks, E9- Direct Trunk Termination** - Assign the DIL destination: extension, ACD/UCD group master number or Ring Group.
- **KS- Programming Keys for Keysets** - A DIL to a keyset should ring a key. If the trunk doesn't have a line key, it will ring a loop key.

Other Programming

- **E- Extensions, ED- Trunk Control, Ring Control** - An unanswered DIL diverts to all extensions with ringing for the trunk. Initially, the DIL ignores the ED programming.
- **E- Extensions, ED- Trunk Control, Access Control** - A user must have access to the trunk to pick up a diverted DIL. For Private Line type operation, deny access to all but the DIL destination.
- **E- Trunks, EI- Night Call Routing** - A DIL to an extension in DND routes to the programmed EI night mode destination.
- **NP- Programming Names and Messages** - Assign names to DILs. The name displays after a display telephone user answers the DIL.
- **QT- System Timers, Camp-On Time** - Set how long a DIL Camps-On to a busy ESL set.
- **QT- System Timers, Number of Rings Before Recall** - Set how long a DIL Camps-On to a busy keyset.

Related Features

Automatic Call Distribution

A DIL terminated to an ACD group master number rings the agent that has been idle longest.

Call Forwarding

A DIL activates Call Forwarding.

Central Office Calls, Answering

After a programmed interval, an unanswered DIL diverts to all extensions with Ringing for the trunk.

A user can answer a DIL flashing their line key. The trunk will never ring (unless diverted from the DIL destination).

Central Office Calls, Placing

Extension users can place calls on DIL trunks.

Do Not Disturb

A DIL to an extension in DND routes to the programmed EI night mode destination.

Related Features (Cont'd)

Extension Hunting

A DIL terminated to a UCD master number rings the member that has been idle longest.

A DIL terminated to an extension in a Circular or Terminal Hunt group initiates hunting.

Group Call Pickup

A DIL ringing a Pickup Group member activates Pickup Group coverage for the member extensions.

Group Ring

A DIL terminated to a Ring Group rings all members in the group during the day. The trunk never diverts to all extensions with programmed ring and access. The trunk rings the programmed EI destination at night.

Line (Trunk) Rotaries

A DIL can be a member of a trunk rotary (for placing calls). While busy on an outgoing call, the DIL is unavailable for incoming calls.

Night Answer

A DIL ignores ANA (E-Trunks, EI) programming (unless the destination extension is in DND).

Feature Operation

None

DIRECT INWARD SYSTEM ACCESS (DISA)

Description

DISA permits outside callers to dial a special telephone number and directly access system extensions, trunks and features. For example, DISA helps salespeople who are away from the office but want to use the company's trunks for long distance calls.

To use DISA, the outside caller:

- Dials the telephone number that rings a DISA trunk
- Waits for the DISA trunk to automatically answer
- Dials the DISA password (access code)
- Hears system Intercom dial tone
- Can implement many of the system features that use dial pad keys (digits 0-9, # and *)

DISA calls ring system extensions like any other outside call (i.e., on a line or loop key).

The system supports four types of DISA connections:

- **DISA Day or Night, DTMF**
The trunk receives inbound DISA calls in the day or night mode, and is DTMF when used for outgoing calls.
- **DISA Day or Night, Dial Pulse (DP)**
The trunk receives inbound DISA calls in the day or night mode, and is DP when used for outgoing calls.
- **DISA Night Only, DTMF**
The trunk receives inbound DISA calls only at night, and is DTMF when used for outgoing calls. The trunk is a normal DTMF trunk when the system is in the day mode.
- **DISA Night Only, Dial Pulse (DP)**
The trunk receives inbound DISA calls only when the system is in the night mode, and is DP when used for outgoing calls. The trunk is a normal DP trunk when the system is in the day mode.

In the large systems, DISA trunks can be ground start or *supervised* loop start. In VS, DISA trunks must be supervised loop start.¹ Do not connect ground start DISA trunks to VS.

Conditions

- a. The DISA caller must use a 2500 type (DTMF) telephone. DISA is compatible with calling devices that meet the DTMF signaling requirements of EIA Specification RS-464. Additionally, DISA requires system DTMF receivers. The large systems must have an MLU, VAU or OPA/VAU PCB. The VS must have a PCU Module (not currently available).
- b. In the large systems, ground start DISA trunks require a Trunk (TRK) PCB.

Default Configuration

No DISA trunks programmed.

¹ Loop supervision is not currently available in VS.

DIRECT INWARD SYSTEM ACCESS (DISA)

Programming

Required Programming

- **E- Trunks, E2- Circuit Type** - Program each DISA trunk with one of the following circuit types:
 - 12 DISA, DTMF, Day or Night
 - 13 DISA, DP, Day or Night
 - 14 DISA, DTMF, Night Only
 - 15 DISA, DP, Night Only
- **QG- DISA Code** - Program the DISA access code (up to eight digits).
- **QG- Ground Start DISA Trunk** - Set DISA trunks for ground start or loop start operation.

Other Programming

DISA trunks use the following extension programming:

- **CP- Programming Class of Service** - The following Class of Service options apply to DISA trunks.

Feature	COS Option	Byte/Bit	Default
Call Waiting	Inhibit Camp-On	BY0:5	0-No
Direct Inward Dialing/Tie Lines	Absorb 1st Digit for DID/Tie Trunks	BY0:1	0-No
Direct Trunk Access	Direct Trunk Access/Trunk Camp-On	BY2:0	0-No
Intrusion	Allow Break-In (Intrusion)	BY0:4	0-No
Paging	Inhibit Access to Page Zone 3	BY2:4	0-No
	Inhibit Access to Page Zone 2	BY2:3	0-No
	Inhibit Access to Page Zone 1	BY2:2	0-No
	Inhibit Access to All Call Paging	BY2:1	0-No
Speed Dial	Inhibit System Speed Dial	BY0:7	0-No
Toll Restriction	Allow Only Intercom Calls at Night	BY0:2	0-No
	Allow Only Local Calls at Night	BY1:4	0-No
	Allow Only Local Calls (Day or Night)	BY1:3	0-No
	Extension Toll Restriction Level	BY1:1	0-No

- **E- Extensions, E8- Line Access Options, Allow Line Code Dial-Up** - If enabled, DISA caller can dial a trunk access code (e.g., 801 for trunk 1).
- **E- Extensions, E8- Line Access Options, Access to Groups 90-95 (Hybrid Only)** - If enabled, DISA caller can dial 90-95 to access trunk groups 1-6.
- **E- Extensions, EB- Personal Speed Dial Block** - Assign a Speed Dial block to a DISA trunk so the DISA caller can access personal Speed Dial numbers.
- **E- Extensions, EC- Group Call Pickup Group** - Assign the DISA trunk to a Pickup Group. (See the Group Call Pickup feature.) This activates Group Call Pickup for Night Only DISA trunks if a call rings in on the trunk during the day.
- **E- Extensions, ED- Trunk Control, Ring Control** - Make sure the attendant has ringing enabled (in the ED option) for the DISA trunk. This ensures that the attendant's phone will ring if the DISA caller dials 0.
- **E- Extensions, ED- Trunk Control, Access Control** - Assign access for each trunk on which the DISA caller should be able to place calls.
- **E- Extensions, ED- Trunk Control, Call-Out Control** - Enable call-out for each trunk on which the DISA caller should be able to place calls.
- **E- Trunks, E3- Class of Service** - Assign Class of Service to DISA trunks.

DIRECT INWARD SYSTEM ACCESS (DISA)

Programming (Cont'd)

- **E- Trunks, E4- Next Extension in Hunt** - Program the next trunk in the rotary. (See the Line Rotaries feature.) This options pertains to DISA trunks when accessed by extension users for outgoing calls.
- **E- Trunks, E7- Service Number** - Assign the DISA trunk to a service group. ARS and LCR require the service number for routing when the system uses the DISA trunk for normal outgoing calls. Refer to Appendix A for ARS details.
- **E- Trunks, E9- Direct Trunk Termination** - Enter 300. The main operator controls the night mode on the DISA trunk. DISA callers reach the main operator or UNA (night bell) when they dial 0.
- **E- Trunks, EA- UCD Group Master Extension Number** - Use this option to assign the First Trunk in Group number to the DISA trunk. This is required so system users can access the DISA trunk as part of a trunk group. (See the Line Rotaries feature.)
- **E- Trunks, EI- Night Call Routing** - Assign the termination for the DISA trunk if the called extension is in Do Not Disturb.
- **NP- Programming Names and Messages** - Assign names to DISA trunks. The name displays after a display telephone user answers a DISA call.
- **QF- Line Group Access (First Trunk in Group)** - For outgoing calls, correlate the first trunk in a trunk rotary (e.g., 801) to one of nine trunk rotary numbers (90-98). The system requires this correlation when setting up trunk rotaries. (See the Line Rotaries feature.) Use the trunk access code (e.g., 801 or L01) that corresponds to the EA- First Trunk in Group entry.

Related Features

Automatic Call Distribution/Operator Assistance (except in VS)

To allow the DISA caller to record ACD/OPA messages, enable the following in the DISA trunk's COS:

- Call Forwarding (BY0:6=0)
- ACD Supervisor (BY2:6=1)

Central Office Calls, Placing

If a DISA caller places an outgoing call over a Dial Pulse trunk, the system outdials both DTMF and Dial Pulse digits. Some COs may not be compatible with this type of signaling.

Toll Restriction

If a DISA caller places an outgoing call, the system restricts and/or routes the call according to the Class of Service of the DISA trunk.

Walking Class of Service

The system uses the DISA code for Walking Class of Service.

Feature Operation

To place a DISA call (from a telephone outside the system):

- Step 1** ➤ **Dial telephone number for DISA trunk.**
Listen for: Ringing, then dial tone from the system
- Step 2** ➤ **Dial DISA access code.**
Listen for: A second system dial tone
- Step 3** ➤ **Dial code for system feature.**
For example, you can dial an extension number or a code for a trunk.
If you hear busy tone after dialing an extension, you can dial another extension
If you hear busy tone after dialing a trunk code or feature, hang up and try again.

DIRECT STATION SELECTION, DSS CONSOLE

Description

A Direct Station Selection (DSS) Console gives a keyset user 80 keys for one-button access to extensions and selected features. This saves time for users that do a lot of call processing. A keyset user can have DSS Console keys for:

- Hotline (to extensions)
- Park orbits
- Outside lines
- Page zones
- DSS Console Speed Dial (refer to Speed Dial)
- Release (always on key 80)

When programmed as a Hotline key, a DSS key shows at a glance the status of the associated extension:

When the key is...	The extension is...
Off	Idle
On	Busy
Medium Flash	An ACD agent out of service
DND Flash	DND

If a line key, a DSS key shows at a glance the status of the associated trunk:

When the key is...	The trunk is...
Off	Idle
On	Busy
DND Flash	On Hold (at DSS Console)
Slow Flash	Ringling
Hold Flash	On Hold (at another extension)
Medium Flash	Held line recalling (Hold Recall)

If an orbit key, a DSS key shows the status of the associated Park orbit:

When the key is...	The Park orbit is...
Off	Idle
Hold	In use

Page zone and Speed Dial keys are on when the feature is active; off when feature is idle.

CAUTION: In VS, do not put a DSS Console in the expansion CEU.

Conditions

The DSS Console is a dual port device, using adjacent even and odd numbered ports. The system accepts as many DSS Consoles as there are available dual ports. The large systems allow only 20 unique DSS Console key configurations. VS allows only four unique configurations. See Required Programming below.

DIRECT STATION SELECTION, DSS CONSOLE

Description (Cont'd)

Default Configuration

Large systems

DSS Console at extension 302

The following default key assignments are for:

- The first four (unnumbered) blocks in 12x36 and 32x60 systems, used for operators 01-04 in QC programming
- Block 01 in the 56x120 and 72x180 systems:

Key	Assignment
1-72	Extensions 304-375
73-76	Page zones 0-3
77-79	Park orbits 60-62
80	Release

The default key assignments for all other blocks are:

Key	Assignment
1-79	Undefined
80	Release

VS Systems

DSS Console automatically enabled (circuit type 06) when you plug it in
Each DSS Console assigned to extension 300

Each DSS Console uses block (configuration) 01, with key assignments as follows:

Key	Assignment
1-47	Extensions 301-347
48-72	Undefined
73-76	Page zones 0-3
77-79	Park orbits 60-62
80	Release

Programming

Required Programming

- **E- Extensions, E2- Circuit Type** - Program each DSS Console with circuit type 06 (even numbered ports only). DSS Consoles are dual port devices. In VS, the DSS Console is automatically enabled when you plug it in.
- **KD- Programming Keys for DSS Consoles** - Designate the function for each DSS Console key.

The large systems allow 20 unique blocks (key configurations). In 12x36 and 32x60 systems, the system permanently assigns the first four blocks to operators 1-4. The system numbers the remaining blocks 1-16. You can change the assignment for blocks 1-16. In 56x120 and 72x180 systems, you can change the assignment for all 20 blocks. If the system has more than 20 consoles, the additional consoles must use one of the initial 20 configurations. VS allows four unique configurations. Each DSS Console initially uses block 01.

Other Programming

- **E- Extensions, EB- Personal Speed Dial Block** - Assign a Speed Dial block to each DSS Console that should have DSS Speed Dial bins. This actually selects four consecutive (higher numbered) Speed Dial blocks. If these blocks were assigned to extensions, the extensions and the DSS Console share the blocks. Reassign the extensions' blocks to prevent this.

DIRECT STATION SELECTION, DSS CONSOLE

Related Features

Attendant Positions

To maximize call processing efficiency, each attendant should have a DSS Console.

Automatic Call Distribution/Extension Hunting

A DSS Console can have a Hotline key to an ACD/UCD master number. The key lights when the entire ACD/UCD group is busy. This also simplifies Transfer into the group. Additionally, the ACD supervisor should have a DSS Console.

Hold

For attendants, pressing a DSS Console key always activates Automatic Hold. For non-attendant keysets, pressing a DSS key never activates Automatic Hold. The keyset user must press HOLD, INTERCOM or CONF first.

Feature Operation

To use your DSS Console keys:

- Step 1 > Lift handset.
- Step 2 > Press DSS Console key for desired function.
The function executes.

To use your DSS Console Hotline keys to Transfer your outside call:

You cannot Transfer an Intercom call.

- Step 1 > Press INTERCOM.
 - Look for: INTERCOM On
(Modular) -- HOLD Hold Flash (red), Fast Flash (green)
(Non-Modular) -- HOLD Exclusive Hold
 - Listen for: Dial tone
 - If you are an attendant, skip this step unless you want to Transfer unscreened.
- Step 2 > Press DSS Console Hotline key.
 - Look for: DSS Key Medium Flash (red)
 - Listen for: Two beeps, ringing or busy
 - If you hear two beeps, you can announce the call.
 - If you hear ringing, you can wait for called party to answer or hang up to send the call unannounced.
 - If you hear busy tone, you can return to the call or hang up to have the call wait at the busy extension.

100

100

DIRECT STATION SELECTION, EXTENSION

Description

Direct Station Selection (DSS) gives a 30-button keyset user simplified access and call Transfer to the extensions assigned to their DSS keys. DSS also provides a Busy Lamp Field for the assigned extensions. With DSS, the user can call or Transfer just by pressing INTERCOM and a DSS key. All 30-button keyset users have DSS capability on keys 1-15. Each extension user assigns their own DSS keys from their phone.

Once the user presses the INTERCOM key, the DSS keys show at a glance (for about six seconds) the status of the associated extension:

When the key is...	The extension is...
OFF	Idle
On	Busy
Fast Flash	DND

Conditions

None

Default Configuration

DSS capability allowed at each extension.
All extension DSS keys access extension 300.

Programming

Required Programming

- **E- Extensions, EH- Suppress DSS Lamps** - Allow/deny DSS capability at each extension.

Other Programming

None

Related Features

Alphanumeric Display

If an extension has DSS denied in EH programming, the user does not see the display. "DSS LAMP FIELD" after pressing INTERCOM.

Call Waiting

After hearing busy tone, a DSS caller can camp-on to a busy extension.

Off-Hook Signaling

An extension's DSS keys always activate Off-Hook Signaling (if allowed at the destination).

DIRECT STATION SELECTION, EXTENSION

Feature Operation

To program your DSS keys:

- Step 1 >** Lift handset.
- Step 2 >** Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
If your extension has DSS denied in EH programming, INTERCOM does not light.
- Step 3 >** Press PGM/#.
Listen for: Dial tone stops
- Step 4 >** Press DSS key you want to program.
Look for: (Modular) -- DSS key On (red), Fast Flash (green)
(Non-Modular) -- DSS key Fast Flash
- Step 5 >** Dial extension number you want DSS key to call.
Look for: DSS key Off
Listen for: Dial tone stops
To clear a DSS key, press * instead of dialing the extension number.

User-Programmable Feature...

In VS, you can also use the procedure below to assign your keyset's DSS keys.

PGM# + DSS + DSS key + ext. + SAVE

To call another extension using your DSS keys:

- Step 1 >** Lift handset.
- Step 2 >** Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
Your DSS keys now function as a Busy Lamp Field for the assigned extensions.
If your extension has DSS denied in EH programming, INTERCOM does not light.
- Step 3 >** Press DSS key.
Look for: DSS key On (briefly)
Listen for: Two beeps
If you hear ringing, wait for the called party to answer before speaking.
If you hear busy, you can dial 2 to Camp-On (i.e., send a Call Waiting signal).

Description

Direct Trunk Access lets an extension user access (seize) an individual trunk. After seizing the trunk, the user can dial any outside telephone number without restriction. An extension's Class of Service allows or denies Direct Trunk Access. The system administrator typically permits Direct Trunk Access for attendants and selected extensions. In addition to providing unrestricted dialing, Direct Trunk Access lets maintenance personnel test individual trunks.

Conditions

None

Default Configuration

Direct Trunk Access disabled for COS 01-27

Direct Trunk Access allowed for COS 00 and 30 (attendants).

Programming

Required Programming

- CP- Direct Trunk Access and Trunk Camp ON (BY2:0) - Enable/disable Direct Trunk Access in Class of Service.
- E- Extensions, E3- Class of Service - Assign Class of Service to extensions.
- E- Extensions, ED- Trunk Control, Access Control - Assign access for each trunk that the user should be able seize using Direct Trunk Access.
- E- Extensions, ED- Trunk Control, Call-Out Control - Enable call-out for each trunk that the user should be able to seize using Direct Trunk Access.

Other Programming

None

Related Features

Automatic Route Selection/Least Cost Routing

Direct Trunk Access bypasses ARS and LCR.

Call Waiting (Camp-On)

An extension user with Direct Trunk Access can dial 2 to camp-on to a busy trunk.

Forced Trunk Disconnect

An extension user with Direct Trunk Access can use Forced Trunk Disconnect.

Removing Trunks and Extensions From Service

If Direct Trunk Access uncovers a defective trunk, the attendant can remove it from service.

Speed Dial

An extension with Direct Trunk Access can program System Speed Dial numbers.

Toll Restriction

The system will not restrict calls placed using Direct Trunk Access.

Feature Operation

To directly access a trunk for an outside call:

- Step 1 ➤ Lift handset.
- Step 2 ➤ Press INTERCOM
 - Look for: INTERCOM On
 - Listen for: Dial tone
 - If you have an ESL set, skip this step.
- Step 3 ➤ Dial trunk extension number (e.g., 480).
 - Look for: INTERCOM Off
 - Line key On (if available)
 - Listen for: Dial tone

DIRECTED CALL PICKUP

Description

Directed Call Pickup permits an extension user to intercept a call ringing another extension. This allows a user to conveniently answer a co-worker's call from their own telephone.

Conditions

The code to retrieve a Personal Park is the same as Directed Call Pickup and remote Hold Retrieve. When a user dials the code, the system picks up calls at the dialed extension in the following order:

1. Ringing Intercom calls
2. Personal Park calls (see Call Park)
3. Ringing outside calls and DILs
4. Calls on Hold (see Hold)

Default Configuration

Directed Call Pickup allowed.

Programming

Required Programming

None

Other Programming

- **E- Extensions, ED- Trunk Control, Access Control** - An extension can only intercept calls to which it has access.

Related Features

Attendant Positions

Directed Call Pickup will pick up a call ringing an attendant only if the user dials the attendant's extension number (e.g., 300).

Call Coverage Keys

Directed Call Pickup will not pick up a call ringing a Call Coverage Key.

Off-Premise Extension

In 56x120 and 72x180 systems, an OPX cannot use Directed Call Pickup to intercept a call ringing an extension in the 500s group (e.g., a Ring Group).

Feature Operation

To intercept a call using Directed Call Pickup:

- Step 1 ➤** Lift handset.
- Step 2 ➤** Press INTERCOM.
 - Look for: INTERCOM On
 - Listen for: Dial tone
 - If you have an ESL set, skip this step.
- Step 3 ➤** Dial *.
- Step 4 ➤** Dial number of ringing extension.
 - Look for: Line key on (red/green) or INTERCOM Fast Flash
 - Listen for: Conversation with caller

Description

Directory Dialing lets a display keyset user call a Speed Dial or Intercom number by selecting the name associated with the number. The user does not have to dial the number -- the user selects the displayed name instead. There are three types of directories:

- Intercom (I), which dials Intercom numbers
- Personal (P), which dials the user's Personal Speed Dial numbers
- Company-wide (C), which dials the first 250 System Speed Dial numbers (56x120 and 72x180)

OR

The first 100 System Speed Dial numbers (VS, 12x36 and 32x60)

The directories consist of the names assigned to Speed Dial numbers and to the system extensions. The system administrator using a programming terminal can assign names for Intercom, Personal and Company-wide directories. Selected users (normally attendants) can also assign names for the Company-wide directory. Any user can assign names for their own Personal directory.

Note: Directory Dialing follows all the programmed options and conditions for Speed Dial and Intercom. Refer to these features for the specifics.

Conditions

- a. In the large systems, full Directory Dialing requires a MEM-B Memory PCB. Systems with a MEM-A PCB have only Intercom Directory Dialing.
- b. In VS, full Directory Dialing is only available if the system has an AUX Module. If the system doesn't have an AUX Module, it only has Intercom Directory Dialing.

Default Configuration

Directory dialing allowed.
No names programmed.

Programming

Required Programming

None

Other Programming

- **E- Extensions, E2- Circuit Type** - Assign each display keyset with circuit type 02. Attendant Telephone P/N 88254 should have circuit type 04.
- **NP- Programming Names and Messages** - Assign names to extensions.
- **SP- Programming Extension and System Speed Dial** - Program Speed Dial numbers and assign Speed Dial names.

Related Features

Attendant Console (ONYX IV)

To use Personal or Company Directory Dialing with an Attendant Console, the console must have outloop keys programmed. Refer to the Attendant Console Feature Handbook (P/N N1850ACH01) for more on using Directory Dialing.

Directory Dialing (ONYX IV)

An Attendant Console or keyset can have a specially programmed key for Intercom Directory Dialing.

DIRECTORY DIALING

Feature Operation

To use Directory Dialing:

- Step 1 > Lift handset.
- Step 2 > Dial letter for directory.
 - I (digit 4) for Intercom
 - P (digit 7) for Personal
 - C (digit 2) for Company-wideIf you want to scroll through the directory you select, skip to step 5.
- Step 3 > Dial first letter of directory name.
 - For example, to call Tim dial T.
 - The display shows you the first name that begins with the letter you select. If the name you want displays, skip to step 6.
- Step 4 > Dial 1, 2 or 3 to specify the exact letter you want.
 - For example, when you dial T you see, "1=T, 2=U, 3=V."
- Step 5 > Press DN ▼ or UP ▲ to scroll through the directory.
- Step 6 > When your phone's display shows the name you want, press DIAL.

To exit Directory Dialing at any time:

- Step 1 > Hang up.

Description

In ONYX IV, an Attendant Console or keyset can have a specially programmed key for Intercom Directory Dialing. The user just presses the Directory Dialing key to access the Intercom directory. This allows the user to place an Intercom call or Transfer a call from a list of names, rather than extension numbers.

For additional Directory Dialing functions, refer to the Directory Dialing feature on page 1-87.

Conditions

None

Default Configuration

No Intercom Directory Dialing keys programmed.

Programming

Required Programming

- **KS- Programming Keys For Keysets** - For keysets, designate a programmable key as type D.
 - **NP- Programming Names and Messages** - Assign names to extensions.
 - **QC- Operator Programming, DSS Keys** - For Attendant Consoles, designate a programmable key as type D. You should only have one "D" key per console.
- To program an Intercom Directory Dialing key for an Attendant Console:

Other Programming

None

Related Features

None

Feature Operation

To use a Directory Dialing key (Attendant Console only):

If you are on a trunk call, the following steps Transfer the call to the extension you select.

- Step 1 ➤ Press Directory Dialing key.
Look for: Directory Dialing key On
If you want to scroll through the directory, skip to step 4.
- Step 2 ➤ Dial first letter of directory name.
For example, to call Tim dial T.
The display shows you the first name that begins with the letter you select. If the name you want displays, skip to step 5.
- Step 3 ➤ Dial 1, 2 or 3 to specify the exact letter you want.
For example, when you dial T you see, "1=T, 2=U, 3=V."
- Step 4 ➤ Press VOL UP ▲ or VOL DN ▼ to scroll through the directory.
- Step 5 ➤ When your phone's display shows the name you want:
 - Press INT to place an Intercom call or make a screened Transfer
 - OR
 - Press RELEASE to send a trunk call unscreened.
 - OR
 - Press INT then VOICE TRF to send a trunk call to the destination's speakerphone.

DIRECTORY DIALING (ONYX IV)

Feature Operation (Cont'd)

To use a Directory Dialing key (keyset only):

If you are on a trunk call, the following steps Transfer the call to the extension you select.

- Step 1 >** Press Directory Dialing key.
Look for: Directory Dialing key On
If you want to scroll through the directory, skip to step 4.
- Step 2 >** Dial first letter of directory name.
For example, to call Tim dial T.
The display shows you the first name that begins with the letter you select. If the name you want displays, skip to step 5.
- Step 3 >** Dial 1, 2 or 3 to specify the exact letter you want.
For example, when you dial T you see, "1=T, 2=U, 3=V."
- Step 4 >** Press VOL UP ▲ or VOL DN ▼ to scroll through the directory.
- Step 5 >** When your phone's display shows the name you want:
- Press DIAL to make a screened Transfer or place an Intercom call
 - OR
 - Hang up to send a Transferred call unscreened.

The Attendant Console can also use the Directory Dialing procedures that apply to keysets. However, the console must be idle (i.e., no dial tone in the handset).

Description

Distinctive Ringing, Tones and Flash Patterns provide extension users with audible and visual call status signals. This lets users tell the types of calls by listening to the ring/tones and watching the keys. It also helps the users monitor the progress of their calls. The following tables (at the beginning of this section) illustrate the various ringing, tones and flash patterns.

Table 1-1	System Flash Rates
Table 1-2	System Ring Rates
Table 1-3	System Tones

Distinctive Ringing for OPX Type Circuits

Extensions and trunks with circuit types 05 and 51 can have Distinctive Ringing enabled or disabled in their Class of Service. Auxiliary devices connected to type 05/51 ports may not be compatible with Distinctive Ringing. If you disable Distinctive Ringing, Intercom and outside calls have a single one-second ring followed by a pause. If you enable Distinctive Ringing, trunk calls have two short rings (repeated) followed by a pause. Intercom calls have a single-one second ring followed by a pause.

Distinctive Ringing for Trunks (VS Only)

Trunk calls can ring an extension with two high-pitched tones, rather than normal ringing. The extension user can differentiate between ringing trunks just by listening to the ring pitch. This is helpful, for example, if the system has a customer-provided Door Box connected to a trunk circuit. The Distinctive Ring tells users when a visitor is at the door. The Distinctive Ring always has precedence over normal ringing trunks.

CAUTION: Do not enable Distinctive Ringing for trunks if any extensions have headsets.

Ringback Tone

The ringback tone the system plays to outside callers is one second on and five seconds off. The system plays ringback for transferred calls, DID calls and OPA/Voice Messaging System transfers

Conditions

ESL set P/N 88250 has a Message-Waiting LED; ESL P/N 89060 does not.

Default Configuration

Distinctive Ringing, Tones and Flash Patterns always enabled.

Programming

Required Programming

- CP- Single Ring OPX (BY2:7)- Enable (0) or disable (1) Distinctive Ringing for type 05/51 circuits.
- E- Extensions, E3- Class of Service - Assign COS to circuit types 05/51.
- E- Trunks, E3- Class of Service (VS Only) - Assign COS 20 to each trunk that should have Distinctive Ringing (VS ≥ Aux Module 2.0/Base 5.0).

Other Programming

None

Related Features

Voice Mail Compatibility

ASI ports programmed as VX ports (in EK) do not have Distinctive Ringing. All calls ring with the ICM cadence.

Feature Operation

Refer to each feature.

DO NOT DISTURB

Description

At a keyset, Do Not Disturb (DND) blocks Page announcements, ringing and incoming voice announcements. DND permits an extension user to work by the phone undisturbed by these system audibles. When the user activates DND, incoming trunk calls still flash the line keys. The user may use the phone in the normal manner for placing and processing calls.

A user calling an extension in DND hears reorder tone or the voice message, "Please do not disturb." The attendant or Hotline partner (with or without a DSS Console) can override an extension's DND. Voice Prompting Messages do not occur in VS.

Conditions

None

Default Configuration

DND allowed at each keyset.

Programming

Required Programming

- E- Extensions, EK- Do Not Disturb (DND) - Allow/disallow DND at each extension.

Other Programming

- KS- Programming Keys for Keysets - To override DND, use this option to assign Hotline partners.

Related Features

Alternate Attendant

When the attendant assigns an Alternate Attendant, the system cancels DND for the Alternate. Attendants cannot place their phones in DND.

Automatic Call Distribution

An ACD supervisor can cancel an agent extension's DND by returning it to service.

Background Music

When a user activates DND, BGM turns off. Once the user deactivates DND, BGM remains off.

Call Forwarding

Activating Call Forwarding cancels DND.

Call Forwarding Cancel

When the attendant cancels all Call Forwarding, the system also cancels all DNDs.

Extension Hunting

The system treats as busy a hunt group member extension that has DND activated.

Intrusion (Barge In)

Intrusion lets an extension user override another extension's DND.

Microphone Mute

If a keyset is in DND, turning Microphone Mute on cancels DND.

Night Answer

An attendant must have DND capability in order to put the system in the night mode. If a trunk has a DIL (E9) termination and an ANA (EI) termination, the trunk follows the ANA termination only when the extension user activates DND.

Voice Prompting Messages (except in VS)

Voice Prompting Messages provide the message, "Please do not disturb." Voice Prompting Messages require a VAU or OPA/VAU PCB. The VAU or OPA/VAU PCB replaces four trunk circuits.

Feature Operation

To put your extension in DND:

- Step 1 >** Do not lift handset.
- Step 2 >** Press DND until it flashes.
Look for: DND MIC Fast Flash

To cancel DND at your extension:

- Look for: DND MIC Fast Flash
- Step 1 >** Do not lift handset.
- Step 2 >** Press DND until it goes out.
Look for: DND MIC Off

To override an extension's DND using a Hotline key:

- You have a Hotline key or DSS Console Hotline key.
- Look for: Keypad Hotline key Fast Flash, or
DSS Console Hotline key DND Flash
- Step 1 >** Lift handset (Optional with a keypad Hotline key).
- Step 2 >** Press Hotline key twice.
Look for: Keypad Hotline key On, or
DSS Console Hotline key Slow Flash
Listen for: Ringing

To override an extensions DND by dialing codes:

- Step 1 >** Place Intercom call to extension in DND.
- Step 2 >** Dial 4.
Listen for: Ringing

DUAL LINE APPEARANCE (ONYX IV)

Description

An ONYX IV keyset can have two line appearance keys for placing and answering calls. These line appearances are programmable keys assigned to an extension's own number. Dual Line Appearance keys simplify operations for busy users. For example, the user can easily process a new call on one appearance with a call in progress on the other.

When an Intercom call rings the keyset, it rings the first appearance key (instead of the INTERCOM key). A second Intercom call flashes the second appearance key. Additional callers hear busy tone and may Camp-On for an idle appearance. The Camped-On call goes through when an appearance becomes free.

This option is only available in ONYX IV.

Conditions

None

Default Configuration

No Dual Line Appearance keys assigned.

Programming

- **Required Programming**
KS- Programming Keys for Keysets - Assign multiple extension appearances. The first key appearance is E1 plus the extension number (e.g., E1304). The second key appearance is E2 plus the extension number (e.g., E2304). The keys you select can have immediate, delayed or no ringing for incoming calls.

Other Programming

None

Related Features

Extension Hunting

If an extension is busy on its first line appearance, Extension Hunting can route to the idle second appearance.

Direct Inward Dialing

In ONYX IV, only Dual Line Appearance allows multiple DID calls to a keyset. DID Camp-On is not available.

Loop Keys

Since a keyset with Dual Line Appearance has two appearances for incoming calls, it may not be necessary for the keyset to have a loop key.

Feature Operation

- Step 1 >** **To place a call if you have Dual Line Appearance:**
Lift handset.
Look for: First line appearance key On
Listen for: Dial tone
To use your line keys, press line key before or after lifting handset. Dual Line Appearance follows Ringing Line Preference.

- To answer a call if you have Dual Line Appearance:**
Look for: Line appearance key Slow Flash
Listen for: ICM for an Intercom Call
TRUNK for an outside call
- Step 1 >** **Lift handset.**
If you have Ringing Line Preference, this answers the call.
- Step 2 >** **Press ringing line appearance key.**
Look for: Line appearance key On
Listen for: Conversation with caller

Description

The system's Toll Restriction package provides Equal Access dialing compatibility. With Equal Access, the system administrator selects the primary toll carrier at installation. This allows the administrator to obtain the most cost-effective service for leading 1 toll calls.

In addition, Equal Access permits users to access other carriers by dialing specific 10XXX codes.¹ Toll Restriction screens the 10XXX codes dialed and compares the dialed code against a programmed Equal Access list. The list can either selectively allow or deny the dialed code. Assume, for example, that the Equal Access list is programmed as an allow list. If the user dials a code that is in the list, the system allows the call. If the code is not included in the programmed list, the system denies the call.

Note: Equal Access is a facility of the local telco. To have this capability, the system must be installed in an Equal Access area.

New Requirements (VS ≥ Aux Module 2.0/Base 5.0, ONYX II/III ≥3.5 and ONYX IV ≥1.2)

The system complies with the new FCC requirements for Equal Access (effective 4/17/92). The system does not prevent use of Equal Access. It can, however, Toll Restrict the telephone number a user dials after the Equal Access digits. The separate Equal Access List is eliminated.

Conditions

None

Default Configuration

Equal Access dialing allowed -- no equal access codes programmed.

Programming

Required Programming

- **AP- Allow Equal Access** - For each Toll Restriction Level, allow Equal Access system-wide and program the Equal Access Code list. This does not apply to VS ≥ Aux Module 2.0/Base 5.0, ONYX II/III ≥3.5 and ONYX IV ≥1.2.
- **CP- Extension Toll Restriction Level (BY1:0-2)** - Assign a Toll Restriction Level to each Class of Service.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to each extension.
- **QQ- No. of Digits in Equal Access Code** - Specify the number of digits in the Equal Access Codes (5-9). For example, 10XXX is a 5-digit code. This option only applies to VS ≥ Aux Module 2.0/Base 5.0, ONYX II/III ≥3.5 and ONYX IV ≥1.2.

Other Programming

- **CP- Allow Only Intercom Calls at Night (BY0:2)**
- CP- Allow Only Local Calls at Night (BY1:4)**
- CP- Allow Only Local Calls (BY 1:3)** - If enabled (1), any one of these options can prevent calls allowed by the Equal Access Code list.

¹ The local telephone company assigns these special dialing codes at installation. X may be any digit, 0-9.

Related Features

Automatic Route Selection/Least Cost Routing

ARS and LCR have unique ways of handling Equal Access calls. Refer to these features for the specifics.

Central Office Calls, Placing

Users access trunks for Equal Access calls in the normal way. All trunk programming applies to Equal Access Calls.

Class of Service

Equal Access calls follow all Class of Service dialing restrictions.

Speed Dial

Toll Restriction does not restrict Equal Access calls placed using Speed Dial. However, the system administrator must enter the normally restricted Speed Dial numbers at the programming terminal.

Toll Restriction

Toll Restriction does not restrict Equal Access calls (except according to the Equal Access list). Note that in VS \geq Aux Module 2.0/Base 5.0, ONYX II/III \geq 3.5 and ONYX IV (\geq 1.2) the Equal Access list is eliminated.

If an extension's Toll Restriction level doesn't have Active Dial Pad enabled, the system turns off the dial pad six seconds after dialing the last digit. For example, if a user dials an Equal Access code and waits more than six seconds, dialing cannot continue.

Walking Class of Service

Toll Restriction does not restrict Equal Access calls placed using Walking Class of Service.

Feature Operation

None

EXTENDED RINGING

Description

Extended Ringing forces an unanswered call to ring 15 times at an extension before being rerouted. This helps users that cannot readily get to their phones to pick up calls (for example, a warehouse worker). An extension's Class of Service enables/disables Extended Ringing. If an extension has Extended Ringing:

- An Extension Hunting call or Transfer rings 15 times before the system reroutes it
- A call the extension user has placed on Hold and forgotten recalls for 15 rings before the system reroutes it
- An unanswered forwarded call (Call Forwarding type 1 or 2) rings 15 times before the system reroutes it
- A DIL rings its terminated extension 15 times before the system reroutes it
- A DID call rings an idle extension (with Ring-No-Answer Intercept) 15 times before the system reroutes it.

Conditions

Extended Ringing overrides QT- System Timers, Number of Rings Before Recall.

Default Configuration

Extended Ringing disabled in all Classes of Service.

Programming

Required Programming

- CP- Program Class of Service, Allow Extended Ringing (BY1:5) - Enable/disable Extended Ringing for each Class of Service.
- E- Extensions, E3- Class of Service - Assign a Class of Service to each extension.

Other Programming

None

Related Features

None

Feature Operation

None

Description

Extension Hunting routes calls to a predefined group of hunt group member extensions. A call rings in sequence through the hunt group until answered at a member extension. Extension Hunting is helpful, for example, for a group of co-workers that share responsibility for answering calls. Each call cycles through the group until an available member picks it up.

There are three types of Extension Hunting:

- Circular Hunting
- Terminal Hunting
- Uniform Call Distribution (UCD) Hunting

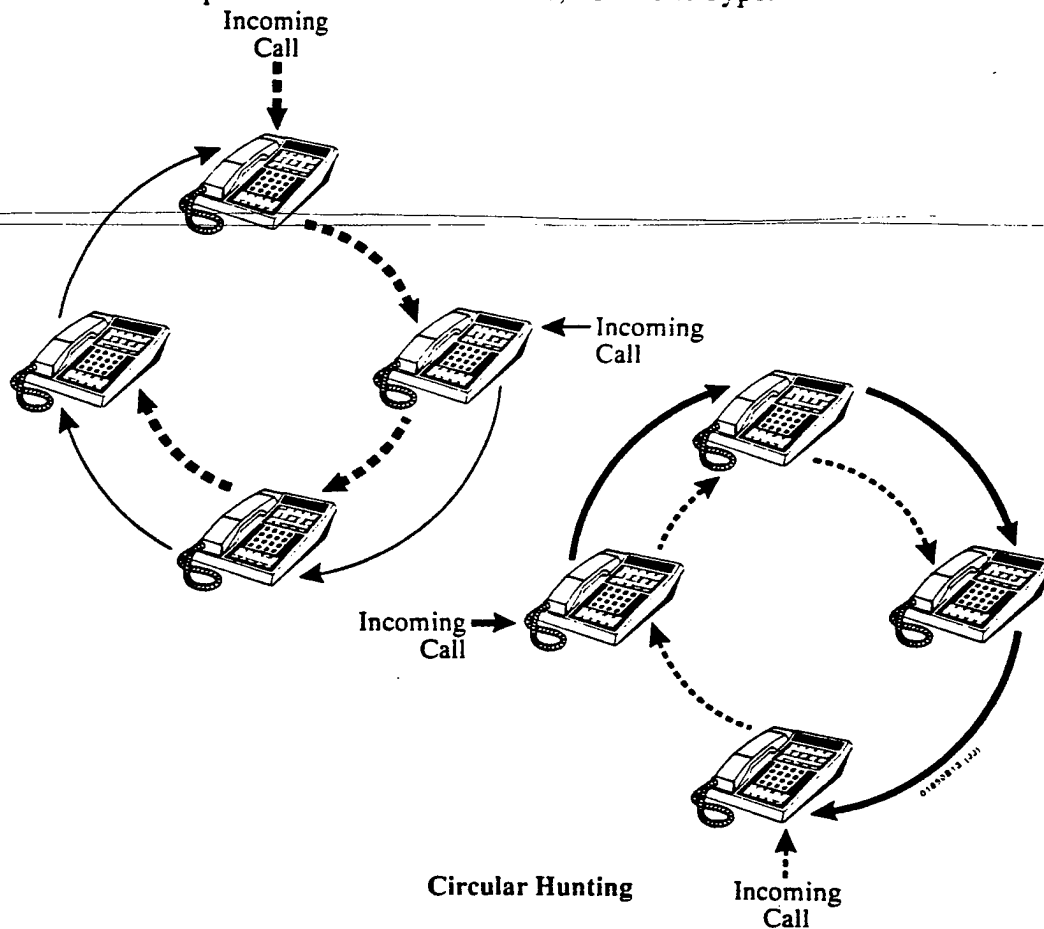
The system administrator uses the programming terminal to designate hunt groups and the conditions that cause hunting. There is no limit to the number of extensions that can be in a hunt group, or the total number of hunt groups in the system. However, an extension can be in only one hunt group.

Circular Hunting

A Circular Hunt group consists of a group of extensions programmed into a Circular Hunting list. A call unanswered at a member extension rings the next extension in the programmed list. If still unanswered, the call rings all the remaining list members. If not picked up after ringing all group members:

- An Intercom call continues to ring the last extension in the group
- A trunk call rings the attendant

Note: Refer to the Extension Hunting Operational Matrix in Section 2 for hunting specifics. See E- Extensions, E5- Hunt Type.



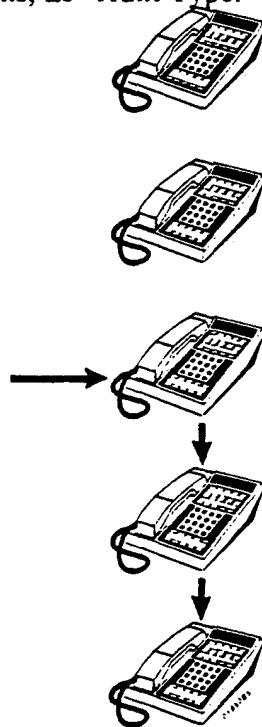
EXTENSION HUNTING

Description (Cont'd)

Terminal Hunting

As in Circular Hunting, a Terminal Hunt group also consists of a group of extensions programmed into a hunt list. A call unanswered at a member extension rings the next extension in the programmed list. If still unanswered, the call rings the remaining extensions until it reaches the bottom of the list. The system will not cycle the call back to the top of list. The call then continues to ring the last extension or rings the attendant (depending on programming).

Note: Refer to the Extension Hunting Operational Matrix in Section 2 for hunting specifics. See E- Extensions, E5- Hunt Type.



Terminal Hunting

Description (Cont'd)

Uniform Call Distribution (UCD) Hunting

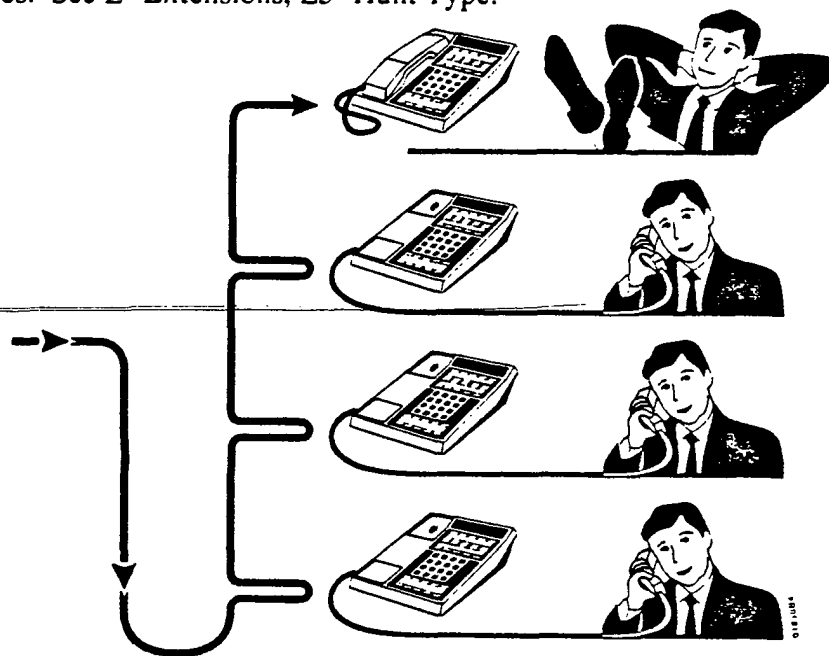
Like Circular and Terminal Hunting, a UCD Hunt group also consists of a group of extensions programmed into a hunt list. Each member of the group is additionally associated with a UCD Master Extension Number. To activate UCD, an incoming call must route to the UCD master number. Typically, the incoming call is a Direct Inward Line (DIL) to the master number.

The system routes calls into a UCD group according to the frequency of use of the member extensions. The first extension rung is the member that has been idle the longest. The last extension rung is the member that has been idle the shortest. If all UCD members are busy, the system may (depending on programming):

- Have the call wait in queue for an available member. The caller may hear (if enabled), "Please hold on, all lines are busy. Your call will be answered when a line becomes free."
- Route the call to a special Overflow Destination extension.

The UCD busy announcement requires a VAU or OPA/VAU PCB. The VAU or OPA/VAU PCB replaces four trunk circuits. The busy announcement is not available in VS.

Note: Refer to the Extension Hunting Operational Matrix in Section 2 for hunting specifics. See E- Extensions, E5- Hunt Type.



UCD Hunting

EXTENSION HUNTING

Description (Cont'd)

Conditions

The system administrator can link hunt groups together. For example, the UCD master extension can be the last member of a Terminal Hunting group. Also, the master extension can be the overflow destination of another UCD Hunting group.

Default Configuration

No hunt groups configured.

Programming

Required Programming

For Circular and Terminal Hunting

- **E- Extensions, E4- Next Extension in Hunt Group** - Use this option to link extensions into a hunting list. For Circular Hunting, make sure your last member loops back to the first. For Terminal Hunting, enter 300 for the last member.
- **E- Extensions, E5- Hunt Type** - Designate a hunt type for each member of the hunting group. The choices are:
 - 00 Extension not in a hunt group. If the last member in a Terminal Hunt group is type 00, the hunt stays at the last member in the hunt list. If the last member is type 01-03, the call rings the attendant.
 - 01 Unanswered outside calls and calls to busy member cause hunting
 - 02 Unanswered outside/Intercom calls and outside/Intercom calls to a busy member cause hunting
 - 03 Only unanswered outside calls cause hunting

For UCD Hunting

- **E- Extensions, E2- Circuit Type** - Program the master extension number with type X (uninstalled). The master extension must be a port that has no phone connected to it.
- **E- Extensions, E4- Next Extension in Hunt Group** - For the master extension number only, use this option to designate the Overflow Destination. Enter 300 for all other UCD members.
- **E- Extensions, E5- Hunt Type** - Enter a hunt type for each member of the hunting group and the master extension number. The hunt type should be the same for each member. The choices are:
 - 00 Extension not in a hunt group
 - 04 UCD hunting with no overflow and no group busy voice message
 - 05 UCD hunting with overflow and no group busy voice message
 - 06 UCD hunting with overflow and group busy voice message
- **E- Extensions, EA- UCD Group Master Extension Number** - Assign the master extension number to each group member and the master extension number.
- **FC1- Reset Queues** - Reset the system queues after initial UCD programming.

Other Programming

- **EF- Incoming Voice Call Through Telephone Speaker** - For type 2 Circular/Terminal Hunting, enter N. This allows an Intercom call to an idle extension to hunt.
- **QT- System Timers, Camp-On Time** - Enter the interval a call to a busy UCD group should Camp-On before routing to the overflow extension.
- **QT- System Timers, Number of Rings Before Recall** - Set how long a call rings an extension in a Circular or Terminal hunt group before ringing the next group member.

Related Features

Automatic Call Distribution

ACD also uniformly distributes incoming calls among members of a programmed group.

Call Coverage Keys/Hotline

A Call Coverage or Hotline key for the UCD master extension provides a UCD group BLF and simplified Transfer.

Call Forwarding

If an extension is in a Hunt Group, forwarding calls at that extension disrupts normal hunting. An extension user can, however, forward calls to a UCD master number.

Data

Do not include Modem Pooling ports or Data Modules in a "voice" hunt group.

Direct Inward Line

Trunks terminated to the UCD group master number ring the group directly.

Direct Station Selection, DSS Console

Do not include DSS Consoles in a hunt group.

Do Not Disturb

Putting an extension in Do Not Disturb temporarily removes it from its hunt group. If a Circular Hunt group extension is in DND, a trunk call continually cycles through the group. The call never rings the attendant.

Intercom

Voice-announced Intercom calls do not initiate hunting.

Night Answer

Two attendants can be in a Circular Hunt Group (consisting only of themselves) for special night mode operation. Both attendants must activate Night Answer to put their trunks in the night mode. Following is an example for attendants 300 and 304:

<u>Ext</u>	<u>E4</u>	<u>E5</u>
300	304	02
304	300	02

Off-Hook Signaling

Circular or Terminal Hunting members cannot have Voice Over capability.

System Reports, Diagnostics and Maintenance Utilities

The system reports provide data on UCD group call activity. The reports also show details on calls received while all members were busy.

Transfer

Any user can Transfer a call to the UCD master number.

Feature Operation

None

EXTERNAL ALERTING DEVICES

Description

The system has external relays which the installer can connect to customer-provided alerting devices. The devices are typically bells or ringers that provide loud ringing in large or noisy areas. Depending on programming, the relays can activate for:

- A call ringing the system at night
- A call ringing a specific extension, trunk, OPX, ACD/UCD Group or Ring Group
- A Paging announcement (except in VS)

In the large systems, the system administrator can program up to four relays -- two on each Trunk Protect (TRPT) PCB. The relays can provide a steady or interrupted closure. In a multi-cabinet system, only the relays on the first (main) cabinet are available. The relays are normally open.

In VS, the system administrator can program two relays - one in each CEU. Relay 0 is AUX on the main CEU. Relay 1 is AUX on the expansion CEU. The relays can provide a steady or interrupted closure, and are normally open. The relays never close for Paging.

Conditions

The devices connected to the relays must be compatible with the following relay specifications:

Maximum Load: 60 mA @ 30 V dc
 10 mA @ 90 V ac

Maximum Initial
Contact Resistance: 50 m Ohms

Default Configuration

Relays activate for night ringing and paging.

Programming

Required Programming

- **QM- Music and Relay Control, Interrupted Ring Relays** - Enable/disable interrupted relay closure. If enabled, relay pulses one second closed/three seconds open when activated. If disabled, relay has continuous closure when activated.

For each of the four relays (0-3):

- **QM- Music and Relay Control, Relay Control-Ringer On (except in VS)** If enabled and Pageowner is main attendant (port 00/extension 300), relay activates for UNA calls. If Pageowner is an extension other than the main attendant, relay activates when extension rings. If disabled, relay never closes for ringing.
- **QM- Music and Relay Control, Relay Control-Page On (except in VS)** - If enabled and Pageowner is main attendant (port 00/extension 300), relay closes each time a user makes an All Call Paging announcement. If disabled or Pageowner is other than the attendant, relay never closes for Paging.
- **QM- Music and Relay Control, Relay Control-Pageowner** - Assign the Pageowner for ringer and page control.

Other Programming

- **E- Extensions, ED- Trunk Control, Access Control** - An extension can only pick up a call ringing an External Alerting Device if it has access to the trunk.

Related Features

Group Ring

The Pageowner can be a ring group number. The relay activates for calls to the ring group.

Paging

The system administrator can use the external relays to activate external paging amplifiers. Refer also to the system hardware manual.

Feature Operation

To answer a call you hear ringing over the External Alerting Device:

Step 1 >

Lift handset.

Step 2 >

Press flashing line key.

Look for: Line key On

Listen for: Conversation with caller

OR

Step 2 >

● Press INTERCOM.

Look for: INTERCOM On

Listen for: Dial tone

● Dial *.

Listen for: Dial tone stops

● Dial 0 or 01-04.

Look for: Line key On

Listen for: Conversation with caller

If you hear Reorder tone, you cannot pick up the call from your extension.

If the owner is not the attendant, dial the owner's extension or group number.

Description

Flash allows an extension user to access certain CO or PBX features by interrupting trunk loop current. Flash lets an extension user take full advantage of whatever features the connected telco or PBX offers. The system administrator must set the Flash parameters for compatibility with the connected telco.

Conditions

The system provides a loop current interruption when flashing a ground start trunk. The system does not provide ground Flash.

Default Configuration

The default flash for a keyset is 7 tenths of a second (700 mS).

Programming

Required Programming

- **CP- Inhibit Flash for Single Line Telephones (BY2:6)** - Enable/disable Flash for ESL sets.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **QT- System Timers, Flash Response Time** - Set the length of the loop current interruption the system provides to a trunk (1-25 tenth seconds). Enter 0 to deny Flash system-side. This option applies to flash from a keyset only.

Other Programming

- **E- Extensions, ED- Trunk Control, Call-Out Control** - An extension must have callout enabled in order to Flash incoming calls.

Related Features

Analog Station Interface

Single line set users connected to an ASI cannot flash a trunk. When the user hookflashes a trunk, the system places the trunk on Hold. This operation does not flash the trunk.

Off-Premise Extension

OPX users cannot flash a trunk. The system provides a Flash timer that applies only to OPX extensions. OPX flash is the loop current interruption that occurs when the OPX user hookflashes. This operation places a trunk on Hold, it does not flash the trunk.

PBX Compatibility

If the system is behind a PBX, Flash normally gives the extension user access to many PBX features.

Tie Lines

The system provides a Flash timer setting that applies only to tie lines.

Toll Restriction

The system applies Toll Restriction (if applicable) to the number a user dials after flashing a trunk.

Feature Operation

- To flash the trunk you are on (from your keyset):**
- Step 1 ➤ Press FTR or MSG.

- To flash the trunk you are on (from your ESL set):**
- Step 1 ➤ Press and release hookswitch (approximately 1/2 second).

Description

Flexible Numbering Plan lets the system administrator change the digits users dial to access features. This helps the administrator customize the standard number plan (shown in Table 1-4, page 1-11) for each customer. Assume, for example, that extension users are accustomed to an older system with extension numbers in the 500s and 600s. The system administrator can change the first digit used to access extensions so users can still dial familiar numbers.

CAUTION: Do not change the standard numbering plan unless absolutely necessary. Changing the standard plan affects many features (including program entry).

The following chart shows some of the features affected when the administrator changes the System Numbering Plan. Refer to Table 1-4 (page 1-11) for additional number plan information.

Changing this digit...	Affects the operation of this feature...
1	Group Call Pickup Intercom (Forced Ringing) Meet-Me Conference (Conference codes)
2	Paging (All Call) Paging (Zone 1) Call Waiting (answering waiting call at ESL set) Speed Dial (Personal Speed Dial bins) Central Office Calls (Trunk access codes)
3	Intercom (first 100 extensions) Paging (Zone 2)
4	Automatic Call Distribution (putting agents in service) Group Ring (12x36/32x60 group numbers) Intercom (Second 100 extensions) Paging (Zone 3)
5	Call Parking (from ASI/OPX) Central Office Calls, Placing (56x120 and 72x180 trunk numbers 500-551) Paging (Zone 4) Speed Dial (Personal Speed Dial bins)
6	Automatic Call Distribution (agents putting themselves out of service) Call Parking (first access digit) Message Waiting (access digit) Paging (Zone 5) Selectable Display Messages (first access digit)
7	Automatic Call Distribution (supervisor putting agents out of service) Paging (Zone 6) Speed Dial (System Speed Dial first access digit) Split (retrieve second call at ESL set)
8	Central Office Calls (trunk access codes) Paging (Zone 7) Time and Date (setting the time)
9	Central Office Calls (trunk group numbers and single-digit access) Time and Date (setting the date)
0	Attendant Positions (attendant access digit) Night Answer (pick up call ringing External Paging)

Conditions

- a. The system prohibits the administrator from changing the digits * and #.
- b. In VS, Flexible Numbering Plan requires an AUX Module.

Default Configuration

Refer to the Table 1-4, System Number Plan (page 1-11).

FLEXIBLE NUMBERING PLAN

Programming

➤ *Required Programming*
QA- Number Plan - Customize the function of digits 0-9.

Other Programming
None

Related Features

Refer to Table 1-4, System Number Plan (page 1-11).

Feature Operation

Refer to Table 1-4, System Number Plan (page 1-11).

Description

An extension user can implement Forced Trunk Disconnect to disconnect (release) another extension's active outside call. The user can then place a call on the released trunk. Forced Trunk Disconnect lets a user access a busy trunk in an emergency, when no other trunks are available. Maintenance technicians can also use Forced Trunk Disconnect to release a trunk on which there is no conversation. This can happen if a trunk does not properly disconnect when the outside party hangs up.

The system administrator normally permits Forced Trunk Disconnect only at attendants and selected extensions.

Conditions
None

Default Configuration
Forced Trunk Disconnect allowed for attendants and extensions with COS 00.

Programming

Required Programming

- **CP- Direct Trunk Access and Trunk Camp-On (BY2:0)** - Assign Direct Trunk Access to each extension that should have Forced Trunk Disconnect capability.
- **E- Extensions, E3- COS, Class of Service** - Assign Class of Service to extensions.

Other Programming

- **E- Extensions, E8- Line Access Options, Key Access to Outbound Lines** - If enabled, user can press a line key to place a call (if also allowed by ED programming).
- **E- Extensions, E8- Line Access Options, Allow Line Code Dial-Up** - If enabled, user can dial 801-873 to access trunks 1-72.
- **E- Extensions, ED- Trunk Control, Access Control** - Assign access for each trunk on which the user should be able to place calls.
- **E- Extensions, ED- Trunk Control, Call-Out Control** - Enable call-out for each trunk on which the user should be able to place calls.
- **KS- Programming Keys for Keysets** - Program the types of keys that allow the extension user to place trunk calls.

Related Features

ARS/LCR/Toll Restriction

The system subjects the call on the released trunk to normal ARS/LCR routing or Toll Restriction.

Direct Trunk Access

Forced Trunk Disconnect requires that the extension have Direct Trunk Access capability.

Speed Dial

An extension with Forced Trunk Disconnect/Direct Trunk Access can also program System Speed Dial numbers.

FORCED TRUNK DISCONNECT

Feature Operation

- To disconnect a busy trunk (by dialing a code):**
- Step 1 > Lift handset.
 - Step 2 > Press Intercom.
 - Look for: INTERCOM On
 - Listen for: Dial tone
 - If you have an ESL set, skip this step.
 - Step 3 > Dial trunk number (e.g., 480) or trunk access code (e.g., 801), or press line key.
 - Look for: Line key On (unless you dial trunk number)
 - Listen for: Busy tone
 - If you dial the trunk access code, wait for voice prompt to complete.
 - Step 4 > Dial PGM#.
 - Listen for: Dial tone
 - To place a call on the trunk you just disconnected, repeat step 3.

- To disconnect a busy trunk (by pressing a line key):**
- Look for: Line key On
 - Step 1 > Lift handset.
 - Step 2 > Press illuminated line key.
 - Listen for: Busy tone
 - Step 3 > Dial PGM#.
 - Look for: Line key Off
 - Listen for: Dial tone
 - To place a call on the trunk you just disconnected, press line key again.

Description

Group Call Pickup lets an extension user answer a call ringing an extension in their assigned pickup group. This permits co-workers in the same pickup group to easily answer each other's ringing calls. System programming allows a maximum of 23 pickup groups, with an unlimited number of extensions in each group. However, an extension can be a member of only one pickup group.

To answer a pickup group call, the user just dials a pickup code. Optionally, a keyset user can press a special programmable pickup key. The keyset user can also assign ringing options for their pickup keys:

- Immediate ringing for calls to pickup group members
- Delayed ringing for calls to pickup group members
- No ringing for calls to pickup group members

A trunk can also be a member of a pickup group. A call ringing the trunk activates Group Call Pickup coverage for the programmed group.

Conditions

An extension with a programmable pickup key does not have to be a member of a pickup group.

Default Configuration

No pickup groups assigned.

Programming

Required Programming

- **E- Extensions/Trunks, EC- Group Call Pickup Group** - For extensions and trunks, assign the Group Call Pickup number (01-23).

Other Programming

- **E- Extensions, ED- Trunk Control, Access Control** - An extension can only pick up trunks to which it has access.
- **KS- Programming Keys for Keysets** - Assign a pickup group to a programmable key (G + group number). An extension can have more than one pickup key. Also, program ringing option for pickup group calls (no ring, immediate ring or delayed ring).
- **QT- System Timers, Delayed Ring Interval** - Set the Delayed Ring Interval for Group Call Pickup calls with delayed ringing.

Related Features

Attendant Positions

Attendants cannot change ringing for their Pickup Group calls (see Feature Operation).

Directed Call Pickup

An extension user can implement Directed Call Pickup to answer a call ringing another extension. The user must know the ringing phone's extension number.

Group Ring

Group Call Pickup cannot pick up a Ring Group call.

Silent Monitor

An extension can only monitor other extensions in their Pickup Group. An extension not assigned to a group (00) can monitor any system extension.

Speed Dial

An extension user can have Group Call Pickup codes stored with a One-Touch Speed Dial key.

GROUP CALL PICKUP

Feature Operation

To answer a call you hear ringing another extension in your pickup group (if you don't have a pickup key):

- Step 1 > Lift handset.
Step 2 > Press INTERCOM
Look for: INTERCOM On
Listen for: Dial tone
If you have an ESL set, skip this step.

- Step 3 > Press *.
Listen for: Dial tone stops

- Step 4 > Dial 1.
Look for: INTERCOM Fast Flash (if an Intercom call)
Line key On (red/green) if an outside call
Listen for: Conversation with caller

To answer a call you hear ringing your pickup key (keyset only):

- Look for: Pickup key Slow Flash
Step 1 > Lift handset.
Step 2 > Press pickup group key.
Look for: INTERCOM Fast Flash (if an Intercom call)
Line key On (red/green) if an outside call
Listen for: Conversation with caller

To assign ringing for your pickup group calls (if you have a pickup key):
This procedure is not available in VS. Use the User-Programmable Features instead.

- Step 1 > Do not lift handset.
Step 2 > Press PGM#.
Look for: HF On
Step 3 > Press pickup key.
Step 4 > Dial ringing code.
Dial 3 for delayed ringing
Dial 5 for no ringing (lamp only)
Dial 7 for immediate ringing
Listen for: Dial tone
Step 5 > Press HF to hang up.

User-Programmable Feature...

In VS, you can assign ringing to your keyset's pickup group keys.

Ring Assignment

PGM# + RA + Line key + Y(es) or N(o) + SAVE

Delayed Ring Assignment

PGM# + DRA + Line key + Y(es) or N(o) + SAVE

Description

With Group Listen, a keyset user can talk on the handset and have the caller's voice broadcast over the telephone speaker. Group Listen lets others in the user's work area listen to the conversation.

Conditions
None

Default Configuration
Group Listen allowed at all keysets.

Programming

Required Programming
> E- Extensions, EF- Headset Mode - Disable headset mode for all extensions that should have Group Listen.

Other Programming
None

Related Features

Attendant Positions
Attendants cannot use Group Listen.

Headset Compatibility
An extension with Headset Compatibility cannot use Group Listen.

Feature Operation

- To initiate Group Listen:**
- Step 1 > Place or answer call using handset.
Look for: INTERCOM Fast Flash (if an Intercom call)
Line key On (red/green) if an outside call
Listen for: Conversation with caller
- Step 2 > Press HF, but do not hang up.
Look for: HF Slow Flash
Your caller's voice comes through your handset and your telephone speaker.

- To cancel Group Listen (without hanging up on your call):**
- Step 1 > Do not hang up.
- Step 2 > Press HF.
Look for: HF goes out
Listen for: Your caller's voice in your handset only

GROUP RING (RING GROUPS)

Description

Group Ring permits the system administrator to arrange extensions into groups for answering calls. When a call comes into the Ring Group, all extensions in the group ring simultaneously. Any user in the Ring Group can answer the call by just lifting the handset. The ringing call can be:

- A Direct Inward Line to the Ring Group
- An outside call transferred to the Ring Group
- An Intercom call to the Ring Group

During programming, the system administrator assigns extensions to Ring Groups. The system automatically assigns each group a DIL number (for programming purposes) and an Intercom number.

System	Group Number	DIL Number	Intercom Number
VS	01-08	364-371	364-371
12x36/32x60	01-08	428-435	428-435
56x120/72x180	01-08	548-555	556-563

Conditions

None

Default Configuration

No Ring Groups programmed.

Programming

Required Programming

- E- Extensions, EE- Ring Group - Assign a Ring Group number (01-08) for each extension. Do not assign more than 30 extensions in a CEU to the same Ring Group. If the ring group must have more than 30 members, use extensions in an expansion cabinet (if available).

Other Programming

None

Related Features

Attendant Positions

Attendants cannot be in Ring Groups.

Automatic Call Distribution/Extension Hunting

Ring Group calls do not activate ACD or hunting.

Automatic Handsfree

An extension user cannot use Automatic Handsfree to answer a Ring Group call.

Call Coverage Keys

A Station Call Coverage key can pick up a Ring Group call.

Call Forwarding

Call Forwarding does not reroute Ring Group calls.

Call Waiting

An Intercom caller or trunk cannot send Call Waiting tones to a Ring Group. The call just waits for an extension in the group to become free.

Direct Inward Line

DILs can terminate at a Ring Group during the day. A call ringing the DIL causes all phones in the group to ring. The trunk rings the programmed EI destination at night.

Related Features (Cont'd)

Directed Call Pickup

An extension user can use Directed Call Pickup to pick up a call ringing another extension's ring group. However, the extension must have access to the trunk (in ED).

External Alerting Devices

A Ring Group can be an external relay Pageowner. Calls to the Ring Group activate the associated relay.

Group Call Pickup

Group Call Pickup cannot pick up a call ringing a Ring Group.

Speed Dial

An extension can have a Ring Group number in a One-Touch Speed Dial key.

Transfer

A call transferred to a Ring Group will not recall the transferring extension. The call continues to ring the group until answered or until the calling party hangs up.

Feature Operation

To place a call to a Ring Group:

- Step 1 > Lift handset.
- Step 2 > Press INTERCOM.
 - Look for: INTERCOM On
 - Listen for: Dial tone
 - If you have an ESL set, skip this step.
- Step 3 > Dial Ring Group number.
 - Listen for: Ringing

To answer a call ringing your Ring Group:

- Listen for: Trunk or ICM ring
- Step 1 > Lift handset.
 - Look for: INTERCOM Fast Flash (if an Intercom call)
Line key On (red/green) if an outside call
 - Listen for: Conversation with caller
 - If you have a loop key for the call, the key lights only after you answer the call.

To answer a call ringing someone else's Ring Group:

- Step 1 > Lift handset.
- Step 2 > Press INTERCOM.
 - Look for: INTERCOM On
 - Listen for: Dial tone
 - If you have an ESL set, skip this step.
- Step 3 > Press *.
 - Listen for: Dial tone stops
- Step 4 > Dial the Ring Group number.
 - Look for: INTERCOM Fast Flash (if an Intercom call)
Line key On (red/green) if an outside call
 - Listen for: Conversation with caller

Description

With Handsfree (Speakerphone), keyset users may process calls using the speaker and microphone in the telephone (instead of the handset). Handsfree is a convenience for workers who don't have a free hand to pick up the handset. For example, a terminal operator could continue to enter data with both hands while talking on the phone. The system allows 12 simultaneous Handsfree conversations per cabinet. In addition, Handsfree requires a keyset with Handsfree (Speakerphone) capability.

Monitor, like Handsfree, also allows on-hook monitoring of calls. However, with Monitor the keyset user must lift the handset to speak. Monitor occurs on keysets that do not have Handsfree capability. The system allows any number of extension to Monitor calls simultaneously.

Conditions

None

Default Configuration

All keysets with Handsfree capability have Handsfree.
All keysets without Handsfree capability have Monitor.

Programming

Required Programming

- E- Extensions, EF- Headset Mode - Disable Headset Compatibility for each extension that should have Handsfree or Monitor.

Other Programming

None

Related Features

Attendant Positions

Attendants do not have Handsfree.

Automatic Handsfree

Automatic Handsfree allows a keyset user to place or answer a call Handsfree by just pressing a key -- without pressing HF first. Users with Monitor must lift the handset to speak.

Headset Compatibility

A keyset with Headset Compatibility does not have Handsfree or Monitor.

Intercom

Depending on system programming, any keyset user can answer an Intercom voice announcement Handsfree. This function does not require Handsfree capability. However, an extension must have a speakerphone to initiate a voice-announced Intercom call Handsfree.

Microphone Mute

An extension user can turn off the phone's microphone at any time.

Off-Hook Signaling

While on a Handsfree call, an extension user may hear an off-hook signal (single beep, repeated).

Feature Operation

Where the instructions in this manual tell you to lift handset, you can press HF instead.

To find out if your phone has Handsfree:

Step 1 > Do not lift handset.

Step 2 > Press HF.

Look for: HF On

If DND/MIC lights, your phone doesn't have Handsfree or all system Handsfree circuits are busy. The HF key doesn't light for incoming voice-announced Intercom calls.

If DND/MIC doesn't light, your phone has Handsfree. The HF key also lights for incoming voice-announced Intercom calls.

To talk Handsfree:

Step 1 > Speak toward phone.

To hang up a Handsfree call:

Look for: HF On

Step 1 > Press HF.

Look for: HF Off

To change a handset call into a Handsfree call:

Step 1 > Press HF.

Look for: HF On

Step 2 > Hang up.

To change a Handsfree call into a handset call:

Look for: HF On

Step 1 > Lift handset.

Look for: HF Off

HEADSET COMPATIBILITY

Description

A keyset user can utilize a customer-provided headset in place of the handset. Like using Handsfree, using the headset frees up the user's hands for other work. However, headset operation also provides privacy not available from Handsfree.

While in the headset mode, the keyset user can hear the following system signals muted in the headset:

- Ringing
- Paging
- Background Music (BGM)

The recommended headset is the Plantronic Supra Star Mate (Model MH0530-1).

CAUTION: Use of a headset on an extension that is not properly programmed may be harmful to the user. Ringing signals produced by the headset may be painfully loud.

Conditions

An attendant keyset with a headset should also have a DSS Console (see Feature Operation).

Default Configuration

Headset operation disabled.

Programming

Required Programming

- **E- Extensions, EF- Headset Mode - Enable Headset Compatibility for each keyset that has a headset.**

Other Programming

None

Related Features

Attendant Console (ONYX IV)

An Attendant Console can also use a headset.

Group Listen

Headset mode disables Group Listen.

Handsfree (Speakerphone) and Monitor

Enabling the headset at an extension always disables Handsfree.

Intercom

Headset mode disables incoming Intercom voice announcements.

Microphone Mute

Headset mode disables Microphone Mute.

Prime Line Selection

Prime Line Selection does not apply to an attendant in the headset mode.

Ringling Line Preference

An attendant with a headset should not also have Ringling Line Preference.

Feature Operation

- Step 1 ➤ **Make sure your phone is idle and programmed for headset operation.**
- Step 2 ➤ **Unplug the handset.**
Leave the handset in the handset cradle.
- Step 3 ➤ **Plug in the headset.**

Feature Operation (Cont'd)

To operate the headset (except for attendants):

- Step 1 >
- Press HF whenever you see the instruction, "Lift handset."
Look for: HF Slow Flash
- OR
- Press HF whenever you see the instruction, "Hang up."
Look for: HF Off
The HF key functions as a Release key.

To answer a call using the headset (attendants only):

- Step 1 > Press RLS on DSS Console.
If you have Ringing Line Preference, this answers the call.
- Step 2 > Press the flashing line or Intercom loop key.
Look for: Key On
Listen for: Conversation with caller

To place a call using the headset (attendants only):

- Step 1 > Press RLS on DSS Console.
- Step 2 > Press the flashing line or Intercom loop key.
If you have Ringing Line Preference, press the line or Intercom loop key before pressing RLS.
Look for: Key On
Listen for: Dial tone

User-Programmable Feature...

In VS, you can allow or deny Headset operation for your keyset.
PGM# + HS + Y(es) or N(o) + SAVE

HOLD

Description

Hold lets an extension user put a call in a temporary waiting state. The caller on Hold hears silence or Music on Hold, not conversation in the extension user's work area. While the call waits on Hold, the extension user may process other calls or use a system feature.

There are three types of Hold:

- Hold (also called System Hold)
- Exclusive Hold
- Automatic Hold

Regular Hold

With regular Hold, an outside call a user places on Hold flashes the line key (if programmed) at all other keysets. Any keyset user with the flashing line key can pick up the call. An extension user can also place an Intercom call on Hold. However, Intercom calls on Hold do not indicate at any other extensions.

Exclusive Hold

When a user places a call on Exclusive Hold, only that user can pick up the call from Hold. The trunk appears busy to all other keysets that have a key for the trunk. For keysets, Exclusive Hold always occurs for outside calls unless the keyset has a line key, loop key or DSS Console line key. Note that ESL sets can only place outside calls on Exclusive Hold.

Automatic Hold

Automatic Hold occurs when a user initiates another feature while already on a call. The system places a call on Hold automatically when the user presses:

- INTERCOM
- CONF
- A line, Call Coverage, Hotline or Page key

Calls left on Hold recall the extension which placed them on Hold after the Hold Recall interval. If still unretrieved, abandoned outside calls ring all extensions that normally receive ringing for the trunk.

Conditions

The code to retrieve a Personal Park is the same as Directed Call Pickup and remote Hold Retrieve. When a user dials the code, the system picks up calls at the dialed extension in the following order:

1. Ringing Intercom calls (see Directed Call Pickup)
2. Personal Park calls (see Call Park)
3. Ringing outside calls and DILs (see Directed Call Pickup)
4. Calls on Hold (see Hold)

Default Configuration

Hold allowed at all extensions. The Hold Recall interval is 30 seconds.

Programming

Required Programming

- **QT- System Timers, Hold Recall Time** - Set the Hold Recall interval.

Other Programming

- **E- Extensions, ED- Trunk Control, Ring Control** - An extension must have access to a trunk to pick it up from Hold.
- **KS- Keyset Programmable Keys** - Assign a loop key to every keyset. Otherwise, calls without an appearance go on Hold under the HOLD key.

Related Features

Attendant Console (ONYX IV)

The Attendant Console does not have Automatic Hold.

Attendant Positions

The attendant has Automatic Hold for all calls.

Direct Station Selection, DSS Console

For attendants, pressing a DSS Console key always activates Automatic Hold. For non-attendant keysets, pressing a DSS key never activates Automatic Hold. The keyset user must press HOLD, INTERCOM or CONF first.

Intercom

An extension user should not hang up after placing a Handsfree or Voice-Announced Intercom call on Hold. If the user hangs up, the system cuts off the call.

Music on Hold

If installed, MOH provides music to callers on Hold.

Feature Operation

To place an Intercom or outside call on Hold:

If you have an ESL set, this procedure places outside calls on Exclusive Hold.

Step 1 ➤

Press HOLD.

Look for:

If an Intercom call...

(Modular) -- HOLD Hold Flash (red), Fast Flash (green)

(Non-modular) -- HOLD Exclusive Hold

If an Outside call...

(Modular) -- Line key Hold Flash (red), On (green)

(Non-modular) -- Line key I-Hold

At all other extensions with a line key for the call -- Line key Hold Flash (red)

Step 2 ➤

Hang up.

If the called party answers without using the handset, the system disconnects the call if you hang up.

To place an outside call on Exclusive Hold:

This procedure does not apply to Intercom calls or ESL sets.

Step 1 ➤

Press HOLD twice.

Look for:

(Modular) -- Line key Hold Flash (red), Fast Flash (green)

(Non-Modular) -- Line key Exclusive Hold

At all other extensions with a line key for the call -- Line key On (red)

Step 2 ➤

Hang up.

HOLD

Feature Operation (Cont'd)

To retrieve an outside call on Hold:

If the call has been left on Hold too long (past the Hold Recall time):

Look for: (Modular) -- Line key Slow Flash (red), On (green)
(Non-Modular) -- Line key Hold Recall

- Step 1 ► Lift handset.
- Step 2 ► ● At a keyset, press flashing line key.
OR
● At an ESL set, press HOLD.

To retrieve an outside call on Hold at another extension:

This is useful for a call that is not on one of your line keys.

- Step 1 ► Lift handset.
- Step 2 ► Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
If you have an ESL set, skip this step.
- Step 3 ► Dial *.
- Step 4 ► Dial trunk access code (e.g., 801) or extension number.
Look for: Line (loop) key On
Listen for: Conversation with previously held party.

To retrieve an Intercom call from Hold:

Look for: (Modular) -- HOLD Hold Flash (red), Fast Flash (green)
(Non-Modular) -- HOLD Exclusive Hold

- Step 1 ► Lift handset.
- Step 2 ► Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
If you have an ESL step, skip this step.
- Step 3 ► Press HOLD.
Look for: INTERCOM Fast Flash
Listen for: Conversation with party previously on Hold

Description

Hotline gives a keyset user one-button calling and Transfer to another extension (the Hotline partner). Hotline helps co-worker's that work closely together. The Hotline partners can call or Transfer calls to each other just by pressing a single key.

In addition, the Hotline key shows the status of the partner's extension:

When the key is...	The extension is...
OFF	Idle
On	Busy or ringing
Fast Flash	DND

Conditions

None

Default Configuration

No Hotline keys assigned.

Programming

- **Required Programming**
KS- Programming Keys for Keysets - Assign an extension's Hotline keys. An extension can have more than one Hotline partner.

Other Programming

None

Related Features

Do Not Disturb

An extension user can use Hotline to override their partner's Do Not Disturb.

Off-Hook Signaling

An extension's Hotline keys always activate Off-Hook Signaling (if allowed at the destination).

Feature Operation

- To place a call to your Hotline partner:**
- Step 1 ➤ **Lift handset.**
 To make the call handsfree, skip this step.
- Step 2 ➤ **Press Hotline key.**
 Look for: Hotline key On (green)
 INTERCOM Fast Flash
 Listen for: Two beeps
 If the Hotline key is lit, this automatically activates Off-Hook Signaling.
 If the Hotline is flashing fast (in DND), press Hotline again to make your partner's phone ring (i.e., override DND).

HOTLINE

Feature Operation (Cont'd)

- To Transfer your outside call to your Hotline partner:**
- Step 1 >** Press Hotline key.
Look for: (Non-Modular) -- Line key Exclusive Hold
(Modular) -- Line key Hold Flash (red), Fast Flash (green)
Listen for: Two beeps
If the Hotline key is lit, this automatically activates Off-Hook Signaling.
If the Hotline is flashing fast (in DND), press Hotline again to make your partner's phone ring (i.e., override DND).
- Step 2 >**
- Announce call and hang up.
- OR
- Hang up to have the call wait at your Hotline partner unannounced.
If unanswered, the call recalls like a normal transferred call.

To answer a call from your Hotline partner:

- Look for: INTERCOM Fast Flash
Listen for: Two beeps
- Step 1 >**
- Speak toward phone.
- OR
- Lift handset for privacy.

User-Programmable Feature...

If you have a Hotline key in VS, you can change your keyset's Hotline assignment.

PGM# + HL + Hotline Key + ext. + SAVE

Description

The system may intercept (prevent) certain calls a user places. Intercept can occur when:

- The user dials an invalid code
- The user places a call to an unassigned (uninstalled) extension
- The user places an outside call not allowed by Automatic Route Selection, Least Cost Routing or Toll Restriction

After intercepting the call, the system sends fast busy tone to the user (refer to Table 1-3, page 1-10). If the system has Voice Prompting Messages, a voice message also plays. Additionally, the display on a 30-button display telephone may show explanatory messages.

Conditions

None

Default Configuration

Intercept always occurs when appropriate.

Programming

Required Programming

None

Other Programming

None

Related Features

Alphanumeric Display

The display on a 30-button display telephone may show explanatory messages when the system intercepts a call.

Voice Prompting Messages (except in VS)

Voice Prompting Messages requires the installation of a VAU or OPA/VAU PCB. The VAU or OPA/VAU PCB installs in a trunk slot, replacing four trunk circuits.

Feature Operation

None

Description

Intercom gives every extension user dial access to every other extension. This provides the system with complete internal calling capability. The system universally allows Intercom calling.

Intercom calls can ring or voice-announce at the called extension. Depending on system programming and extension user options, any keyset or ESL set can receive a voice-announced Intercom call. The system administrator can:

- Enable/disable voice-announced Intercom calls system-wide
- Enable/disable handsfree reply system-wide
- If allowed system-wide, enable/disable incoming voice-announced Intercom calls for each extension

Each extension user can:

- Force Intercom calls they place to ring the called extension, regardless of other programming
- If allowed system-wide, enable/disable voice-announce for their incoming Intercom calls

Conditions

None

Default Configuration

Intercom calls always allowed. All Intercom calls voice-announce at the called extension.

Programming

Required Programming

None

Other Programming

- **E- Extensions, E9- Attendant (Operator) Assignment** - Assign the attendant reached when the user dials 0.
- **E- Extensions, EF- Incoming Voice Call Through Telephone Speaker** - For each extension, enable/disable voice-announced Intercom calls.
- **NP- Programming Names and Messages** - Program a name for each extension.
- **QA- Number Plan, Ringdown Digit** - If desired, change the digit used to activate Forced Intercom Ringing.
- **QA- Number Plan, Block of First 100 Extensions Digit and Block of Second 100 Extensions Digit and Block of Third 100 Extensions Digit** - If desired, change the digits that define the first digit of extension numbers.
- **QC- Operator Programming** - Assign extensions as attendants (01-04).
- **QJ- Intercom Call Control, Second Channel Access** - Restrict or allow access to a Data Set's idle second channel.
- **QJ- Intercom Call Control, Voice Call** - Enable/disable voice-announced Intercom calls system-wide.
- **QJ- Intercom Call Control, Handsfree Reply** - Enable/Disable handsfree reply to voice-announced Intercom calls system-wide.

Related Features

Alphanumeric Display

The display on the 30-button display telephone shows the caller's Intercom number or name (if programmed).

Attendant Positions

Attendants cannot receive voice-announced Intercom calls.

Call Coverage Keys/Direct Station Selection, Extension/Hotline

Extension users can use these features as an alternative to dialing Intercom calls.

Call Waiting/Callback/Off-Hook Signaling

After placing an Intercom call to a busy extension, the user can:

- Leave a Callback request
- Camp-on (wait in line off hook)
- Send an off-hook signal

Directory Dialing

Extension users can use Directory Dialing as an alternative to dialing Intercom calls.

Handsfree and Monitor

An extension must have a speakerphone to initiate a voice-announced Intercom call Handsfree.

Headset Compatibility

Extensions in the headset mode cannot receive voice-announced Intercom calls.

Message Waiting

An extension user can leave a Message Waiting request at a busy or unanswered extension.

Microphone Mute

If an extension has Microphone Mute enabled, the incoming voice-announce beeps are farther apart than when Microphone Mute is disabled.

Speed Dial

A user can have an Intercom number stored at a One-Touch Speed Dial key. If the user stores the digit 1 before the extension number, the key forces Intercom ringing at the called extension.

Toll Restriction

An extension in a tenant group can have night mode restriction (e.g., CP- Allow Only Intercom Calls at Night [BY0:2] is 1). The restriction takes effect when the extension's operator activates Night Answer.

Feature Operation

To place an Intercom call:

- Step 1 > Lift handset.
- Step 2 > Press INTERCOM.
 Look for: INTERCOM On
 Listen for: Dial tone
- Step 3 > Dial extension number, 0 for main attendant or 01-04 for other attendants.
 Look for: INTERCOM Fast Flash
 Listen for: Two beeps or ringing
 To force your Intercom call to ring the called extension, dial 1 before the extension number. If you don't lift the handset in step 1, and your phone doesn't have Handsfree, your call always rings the destination.
- Step 4 > ● If you hear two beeps, you can begin speaking.
 OR
 ● If you hear ringing, wait for called party to answer.

To answer an Intercom call if you hear two beeps:

Look for: INTERCOM Fast Flash
 Listen for: Two beeps
 If the two beeps are spaced far apart, your phone has Microphone Mute enabled or the system has handsfree reply disabled.

- Step 1 > Speak toward phone.

INTERCOM

Feature Operation (Cont'd)

To answer an Intercom call that rings your phone:

At keysets and ESL sets...

Look for: INTERCOM Slow Flash

Listen for: ICM ring

At attendants...

Look for: HF Slow Flash

Listen for: Trunk ring

Step 1 >

Lift handset.

Look for: INTERCOM Fast Flash

Listen for: Conversation with caller

If you are an attendant and you don't have Ringing Line Preference, you must also press HF.

To have all Intercom calls ring your extension:

This procedure is not available in VS. Use the User-Programmable Features instead.

Step 1 >

Do not lift handset.

Step 2 >

Press PGM#.

Look for: HF On

Step 3 >

Dial 0.

Listen for: Dial tone

Step 4 >

Press HF.

Look for: HF Off

Listen for: Dial tone stops

To have Intercom calls voice-announce at your extension (if allowed in system programming):

Step 1 >

Do not lift handset.

Step 2 >

Press PGM#.

Look for: HF On

Step 3 >

Dial 1.

Listen for: Dial tone

Step 4 >

Press HF.

Look for: HF Off

Listen for: Dial tone stops

User-Programmable Feature...

In VS, you can enable or disable voice-announced Intercom calls to your keyset.

PGM# + VA + Y(es) or N(o) + SAVE

Description

Intrusion permits an extension user to break into another extension user's established call. This sets up a three-way conversation between the intruding extension and the two parties on the initial call. With Intrusion, an extension user can get a message through to a busy co-worker right away.

In addition to Intrusion, the following features also allow three-party calls:

- Conference
- Meet-Me-Conference
- Privacy Groups
- Tandem Calls

CAUTION: Unauthorized intrusion on calls using this feature may be interpreted as an invasion of privacy.

Conditions

The system supports eight simultaneous Conferences (three-party conversations). Under certain conditions, this may prevent an Intrusion.

Default Configuration

Intrusion disabled in all Classes of Service.

Programming

Required Programming

- **CP- Allow Break-In (Intrusion) (BY0:4)** - Enable/disable Intrusion for each Class of Service.
- **CP- Allow Privacy (BY1:6)** - Enable/disable Privacy for each Class of Service. If an extension has Privacy, another extension cannot Intrude on its calls.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.

Other Programming

None

Related Features

Attendant Positions

Since an attendant is never busy, an extension user cannot intrude on an Attendant.

Central Office Calls

An extension user cannot Intrude on a busy trunk.

Class of Service

An extension's COS sets its Intrusion options.

Conference

An extension user cannot Intrude on a Conference call.

Do Not Disturb

An extension user can implement Intrusion to override another extension's Do Not Disturb.

Privacy

An extension user cannot Intrude on an extension with Privacy.

INTRUSION (BARGE-IN)

Feature Operation

To intrude on a busy extension:

Look for: INTERCOM On
Listen for: Busy or Ring Busy

Step 1 ► Dial 4.

At your extension:

Look for: CONF On (red/green)
Listen for: After four seconds. interrupt call in progress

At the called extension:

Look for: CONF On (red/green)
Listen for: Two bursts of Busy tone -- After four seconds, hear interruption from intruding party

Description

Last Number Redial allows an extension user to quickly redial the last number dialed. For example, a keyset user may recall a busy or unanswered number without manually dialing the digits.

Last Number Redial saves in system memory the last 24 digits a user dials. The number can be any combination of digits 0-9, # or *. The system remembers the digits regardless of whether the call was answered, unanswered or busy. Normally, the system uses the same trunk (or rotary) for Last Number Redial as the user selected for the initial call. The keyset user can, however, select a different trunk before implementing Last Number Redial.

Conditions

- a. In VS, 12x36 and 32x60 systems, a power failure erases all stored Last Number Redial numbers. In VS, a system reset also erases the stored numbers.
- b. If a user waits more than six seconds between digits while dialing, Last Number Redial remembers only the digits after the pause.

Default Configuration

Last Number Redial always enabled.

Programming

Required Programming

None

Other Programming

- **E- Extensions, ED- Trunk Control, Access Control/Call-Out Control -** You must have access and call-out for a trunk to use it for Last Number Redial.
- **QX- Suppress "#" When Speed Dialing -** Allow or prevent the system from outdialing a # if dialed as part of the initial call.

Related Features

Automatic Route Selection/Least Cost Routing

Unless the user preselects a trunk, the system enforces ARS/LCR for Last Number Redial calls.

Speed Dial

Last Number Redial can redial Speed Dial numbers.

Toll Restriction

The system applies Toll Restriction to all Last Number Redial calls. If you don't dial enough digits (as determined by your Toll Restriction programming), Last Number Redial will not retain your last call.

LAST NUMBER REDIAL

Feature Operation

To use Last Number Redial (at a keyset):

- Step 1 >** Lift handset.
To preselect a trunk, press a line key before lifting the handset.
To activate Handsfree, skip this step.
- Step 2 >** Press DIAL.
Listen for: Dial tone
On Attendant telephone P/N 88254, just press REDIAL and skip the next step.
- Step 3 >** Press LAST.
Look for: Line key On (green/red)
Listen for: Digits dialing out
If you hear busy tone, press an idle line key. Your call dials out automatically.¹

To use Last Number Redial (at an ESL set):

- Step 1 >** Lift handset.
Listen for: Dial tone
- Step 2 >** Press * *.
Listen for: Digits dialing out

¹ To do this, you must have:

- Line/loop keys programmed (see KS- Programming Keys for Keysets)
- Key access to outbound trunks (see E8- Key Access to Outbound Lines)
- (Optional) Access to Trunk Groups (see E8- Access to Groups 90-95)

Description

Least Cost Routing (LCR) provides call routing and call restriction based on the digits a user dials. LCR analyzes the digits dialed and sends the call to the least costly route. LCR also establishes a cost for each long distance call. This cost prints on the Station Message Detail Recording (SMDR) report and displays on telephone displays. LCR lets the system administrator obtain the most cost-effective use of the system's connected long distance carriers.

LCR must be separately ordered. Before ordering LCR, a customer representative must complete the Rate Service Questionnaire. LCR is then provided on a site-specific separate software diskette. The installer must upload this diskette into system memory. Consult with a sales representative for additional details on ordering and installing LCR.

LCR Highlights

- 3-digit (area code) and 6-digit (area code and exchange) analysis for each number dialed.
- Dialing translation with special dialing instructions. LCR can automatically execute stored dialing instructions when it chooses a route for a call.
- Hierarchical Class of Service Control. LCR allows or denies call route choices based on an extension's Class of Service.¹
- Routes calls on up to 10 service (trunk) groups.
- Allows up to 4 FXs with a choice of:
 - Local calls only
 - Local Intra-Lata calls only
 - All exchange codes in the FXs Area Code
 - All exchange codes in the FXs state
 - All exchange codes in all contiguous states
- Allows up to 9 OCCs (dial-up and/or dedicated).
- Allows up to 9 Resellers (dial-up and/or dedicated).²
- Supports WATS bands 1-6, 8, 9 and 0. LCR allows other services (e.g., MCI) to use the same WATS band.
- Makes route decision based on a programmed time between 1-5 minutes, variable in 0.1 minute increments.
- Costs directory assistance calls. Charge is variable from no charge to \$9.99 per minute.
- Costs operator assisted calls. Charge is variable from no charge to \$9.99 per minute.
- Provides a time of day discount variable from 0% to 200% markup. Discount based on the following time periods: day, evening or night.

Least Cost Routing is not available in VS.

Conditions

LCR requires a MEM-B PCB.

Default Configuration

LCR not installed.

¹ Class of Service options may interact with LCR. For example, if CP- Allow Only Intercom Calls at Night (BY0:2) is enabled (1), the extension cannot use LCR at night.

² LCR may block calls to a Reseller for areas not served by it.

LEAST COST ROUTING (HYBRID ONLY)

Programming

Required Programming

Note: Be sure to install the LCR software before using the following system options.

- **E- Trunks, E7- Trunk Service Number** - Assign a Service Number to each trunk used for LCR. LCR routes calls to Service Numbers, not individual trunks.
- **GL- LCR Testing** - Use this option to display your current LCR configuration and make changes to your LCR database.
- **QL- LCR/ARS/Account Codes, LCR or ARS Enable** - Enter 1 to enable LCR.
- **QL- LCR/ARS/Account Codes, Number of Services** - Designate how many services (trunk rotaries) LCR will use.
- **QL- LCR/ARS/Account Codes, Service Line Numbers** - Indicate the trunk rotary master number for each of the rotaries used by LCR. This should correspond to the **EA- First Trunk in Group** entry.
- **QL- LCR/ARS/Account Codes, COS Needed to Access ALT Route** - Enter the minimum COS that the system requires before routing a call to the alternate route (if primary route is busy).
- **QL- LCR/ARS/Account Codes, Type of Service** - Enter the type of service number (0-5). For example, for DDD or WATS, enter 0.
- **QL- LCR/ARS/Account Codes, Access Code** - For dial-up services, enter the access code (telephone number) for the service.
- **QL- LCR/ARS/Account Codes, Security Code** - For dial-up services, enter the security code the service requires.

Other Programming

- **E- Extensions, E3- Class of Service** - LCR routing is based on an extension's Class of Service number.
- **E- Extensions, E8- Line Access Options, Allow Line Code Dial-Up** - If enabled, users may be able to dial trunk access codes (e.g., 801) to bypass LCR.
- **E- Extensions, E8- Line Access Options, Access to Groups 90-95** - Allow access to group 90 (the LCR access code). If you allow access to 91-95, users may be able to dial these codes to bypass LCR. Users can always dial groups 96-98.
- **E- Extensions, E8- Line Access Options, Key Access to Outbound Lines** - If enabled, user may be able to press a line key to bypass LCR.
- **E- Extensions, ED- Trunk Control, Access Control** - An extension must have access to the trunks selected by LCR.
- **E- Extensions, ED- Trunk Control, Callout Control** - An extension must have callout to the trunks selected by LCR.
- **E- Trunks, E2- Circuit Type** - Trunks within each LCR Service Group should have the same circuit type.
- **E- Trunks, E4- Next Trunk in Outbound Rotary** - LCR requires outbound trunk rotaries. This prompt determines the selection sequence for trunks within each rotary.
- **E- Trunks, EA- Trunk Group Assignment (First Trunk in Group)** - Group trunks in rotaries by assigning each one the same First Trunk in Group number.
- **KS- Programming Keys for Keysets** - An extension can have a loop key for LCR access.
- **QQ- "1" Prefix Required for NPA Calls** - If the system is in a conflict area, enter Y. Enter N if the system is not in a conflict area.

LEAST COST ROUTING (HYBRID ONLY)

Programming (Cont'd)

- **QT- System Timers, Dialtone Detection Count** - Set the length of the dial tone detection interval. LCR with dial-up OCCs uses this interval.
- **QX- Suppress "#" When Speed Dialing** - If LCR should outdial the # digit, enter N. To suppress outdialing the #, enter Y.
- **QY- Single Digit Line Access** - If enabled, users can dial 9 (instead of 90) for LCR.

Related Features

Account Code Capability

LCR can optionally utilize the system's Account Codes.

Automatic Route Selection

ARS also routes trunk calls, and can be an alternative to ARS. The system can have either ARS or LCR, not both.

Speed Dial

Speed Dial can route calls through ARS, or bypass ARS routing.

Tenant Service

Each system can have only one LCR package, shared by all tenants.

Toll Restriction

When a user dials 9 or 90 for LCR, LCR overrides Toll Restriction.

Feature Operation

To place a call using LCR:

- Step 1 ➤ Lift handset.
- Step 2 ➤ Press INTERCOM.
 - Look for: INTERCOM On
 - Listen for: Dial toneIf you have an LCR loop key, press it and skip to step 4.
- Step 3 ➤ Dial LCR access code (9 or 90).
 - Listen for: Another (higher pitched) dial tone
- Step 4 ➤ Dial number. *

LINE (TRUNK) QUEUING

Description

Trunk Queuing permits an extension user to queue (wait in line) for a busy trunk or trunk group to become free. The system recalls the queued extension as soon as a trunk is available. The user does not have to manually retry their call later. Trunk Queuing lets the caller know when the call can go through.

Any number of extensions may simultaneously queue for the same trunk or trunk group. When a trunk becomes free, the system recalls the extensions in the order that the queues were left. If the extension does not answer the Callback ring, the system:

- Rings the next extension in queue
- Removes an unanswered extension from the queue and cancels its Callback

OR

Skips a busy extension and retries it later on

Selected extensions can have Callback priority, set in the extension's Class of Service. When multiple extensions queue for a trunk, those with priority receive Callback first.

Conditions

A power failure or system reset cancels all Trunk Queuing requests.

Default Configuration

Callback enabled.

Programming

Required Programming

None

Other Programming

- CP- Allow Callback Priority (BY1:7) - Enable/disable Callback Priority for extensions with this COS.
- E- Extensions, E3- Class of Service - Assign Class of Service to extensions.
- E- Extensions, ED- Trunk Control, Access Control - Assign access for each trunk on which the user should be able to queue.
- E- Extensions, ED- Trunk Control, Call-Out Control - Enable call-out for each trunk on which the user should be able to queue.

Related Features

Attendant Positions

An attendant cannot queue for a trunk.

Automatic Route Selection/Least Cost Routing

If the system has ARS or LCR, Line Queuing queues for the least costly route.

Direct Trunk Access

An extension user with Direct Trunk Access can dial 2 to camp-on to a busy trunk.

Last Number Redial/Save/Speed Dial

If an extension user implements these features and hears busy tone, they can queue for a trunk. The call dials automatically when the user answers the Callback ring.

Voice Prompting Messages (except in VS)

A user queuing for a busy trunk group hears, "All lines are busy. For automatic Callback, please press the Callback key." This requires the installation of a VAU or OPA/VAU PCB. The VAU or OPA/VAU PCB installs in a trunk slot, replacing four trunk circuits.

Feature Operation

To queue for a busy trunk:

Look for: Line key On (if trunk appears on your phone)

Listen for: Busy tone

If you queued for a trunk group, you may hear a voice message before you hear busy tone.

Step 1 > Dial 2.

Step 2 > Hang up.

To answer the Callback ring:

Look for: Line key On (red)

Listen for: Callback ring

Step 1 > Lift handset.

Look for: Line key On (red/green)

Listen for: Dial tone

Step 2 > Dial number.

To cancel a Line Queuing request you placed (before the system calls you back):

Step 1 > Try to access busy trunk again.

Use the same procedure you used when trying your initial call.

Step 2 > Dial *

Listen for: Dial tone

To simultaneously cancel all your Line Queuing requests (and also cancel your Callbacks):

Step 1 > Lift handset.

Step 2 > Press INTERCOM.

Look for: INTERCOM On

Listen for: Dial tone

If you have an ESL set, skip this step.

Step 3 > ● At a keyset, press * FTR.

OR

● At an ESL set, press # *.

Step 4 > Hang up.

LINE (TRUNK) ROTARIES (HYBRID ONLY)

Description

A trunk rotary is a programmed group of trunks used for outgoing calls. The system allows up to nine trunk rotaries, numbered 90-98. The rotaries should consist of trunks of the same type (e.g., WATS band 5 or WATS band 3). Users can select trunk rotaries when placing outside calls. To select a rotary, the user dials the trunk (rotary) group code. The system then selects the first available trunk from the group.

The system administrator can use rotaries to help control the cost of outside calls. By restricting access to certain rotaries, the administrator can force users to select lower cost lines when placing calls.

If your system has trunk rotaries, the FCC classifies it as a hybrid. You must use FCC registration number BJ286G-10094-MF-E. If your system doesn't use trunk rotaries, the FCC classifies it as a key system. Use FCC registration number BJ286G-16856-KF-E.

Conditions

None

Default Configuration

No trunk rotaries configured.

Programming

Required Programming

- **E- Extensions, E8- Line Access Options, Access To Groups 90-95** - Allow/deny access to each of the first 6 trunk groups (90-95). You cannot program this option for trunk groups 96-98.
- **E- Trunks, E4- Next Trunk in Outbound Rotary** - This determines the selection sequence for trunks within the rotary. Make sure the last trunk in the rotary is terminated to that trunk's operator (e.g., 300).
- **E- Trunks, EA- Trunk Group Assignment (First Trunk in Group)** - Group trunks together by assigning each one the same First Trunk in Group number.
- **QF- Line Group Access (First Trunk in Group)** - Correlate the first trunk in a trunk rotary (e.g., 801) to one of nine trunk rotary numbers (90-98). The system requires this correlation when setting up trunk rotaries. Use the trunk access code (e.g., 801 or L01) that corresponds to the EA- First Trunk in Group entry.

Other Programming

- **E- Extensions, ED- Trunk Control, Access/Call-Out Control** - To use a rotary, an extension must have access and call-out for the trunks in the rotary.
- **E- Trunks, E2- Circuit Type** - Trunks within the rotary should have the same circuit type.
- **KS- Programming Keys for Keysets** - Loop keys simplify access to rotaries.
- **QA- Number Plan, Trunk Group Access Digit** - Designate the trunk group (rotary) access digit (normally 9).
- **QY- Single Digit Line Access** - Allow/deny users the capability to access trunk group 1 (code 90) by dialing 9. If you allow dial 9 capability, users cannot dial access groups 91-98.

LINE (TRUNK) ROTARIES (HYBRID ONLY)

Related Features

Attendant Console (ONYX IV)

Your can assign Trunk Rotaries to Attendant Console outloop keys.

Central Office Calls

The system does not search a rotary for an idle trunk when the user dials a trunk access code (e.g., 801).

Direct Inward Line

A DIL can be a member of a trunk rotary (for placing calls). While busy on an outgoing call, the DIL is unavailable for incoming calls.

Line (Trunk) Queuing

The user can queue for an available trunk if all trunks in the group are busy.

System Reports, Diagnostics and Maintenance Utilities

The HC- System Queues report displays the trunk rotary queues. The HE/HF-Traffic Management Summary option summarizes the trunk group call activity.

Feature Operation

To place a call using trunk group dial-up codes:

- Step 1 ► Lift handset.
- Step 2 ► Press INTERCOM.
 - Look for: INTERCOM On
 - Listen for: Dial Tone
- Step 3 ► Dial code (9 or 90-98).

LOOP KEYS

Description

Loop keys are programmable keys that simplify the way extension users place and answer outside calls. There are two types of loop keys: fixed loop keys and switched loop keys. For outgoing calls, Fixed loop keys give the user single key access to a specific trunk group. Switched loop keys give the user simplified access to any trunk group.

Loop keys are also important for answering calls. An incoming call not assigned to a key rings the first available loop key. This ensures a key appearance for any call ringing an extension. For this reason, *each extension should have at least one loop key*. On key systems, loop keys are for incoming calls only. Only switched loop keys are available.

Conditions

An incoming call without an assigned key rings the first available loop key. The system searches the keys in the following order looking for a loop key: 1-15, 21-24 then 16-20.

Default Configuration

No loop keys programmed.

Programming

Required Programming

- **KS- Programming Keys for Keysets** - Designate programmable keys as Fixed or Switched loop keys.

Other Programming

- **E- Extensions, E8- Line Access Options, Access To Groups 90-95** - Allow/deny access to each of the first 6 trunk groups (90-95).
- **E- Extensions, ED- Trunk Control, Ring Control** - Assign ringing for each trunk that should ring a switched loop key.
- **E- Extensions, ED- Trunk Control, Access Control** - An extension user must have access to a trunk before using it to place or answer a call.
- **E- Extensions, ED- Trunk Control, Call-Out Control** - An extension user must have call-out enabled for a trunk before using it to place a call.
- **E- Trunks, E4- Next Trunk in Outbound Rotary** - This determines the selection sequence for trunks within the rotary. Make sure the last trunk in the rotary does not loop back to the first.
- **E- Trunks, EA- Trunk Group Assignment (First Trunk in Group)** - Group trunks together by assigning each one the same First Trunk in Group number.
- **QF- Line Group Access (First Trunk in Group)** - Correlate the first trunk in a trunk rotary (e.g., 801) to one of nine trunk rotary numbers (90-98). The system requires this correlation when setting up trunk rotaries. Use the trunk access code (e.g., 801 or L01) that corresponds to the EA- First Trunk in Group entry.

Related Features

Class of Service/Night Answer/Toll Restriction

If an extension's COS has CP- Allow Only Intercom Calls at Night (BY0:2=1), the extension cannot use loop keys at night.

Dual Line Appearance (ONYX IV)

A keyset with Dual Line Appearance may not need a Loop Key for incoming calls.

Line (Trunk) Rotaries

Loop keys use the programmed trunk rotaries.

Feature Operation

To place a call using a switched loop key (Hybrid only):

- Step 1 > Lift handset.
- Step 2 > Press fixed loop key.
 - Look for: Loop key on (red/green)
 - Listen for: Dial Tone
- Step 3 > Dial second digit of trunk group code (0 for 90, 1 for 91).
- Step 4 > Dial number.

To place a call using a fixed loop key (Hybrid only):

- Step 1 > Lift handset.
- Step 2 > Press fixed loop key.
 - Look for: Loop key On
 - Listen for: Dial Tone
- Step 3 > Dial number.

To answer a call ringing a loop key:

- Look for: Loop key Slow Flash (red)
- Listen for: CO Ring
- Step 1 > Lift handset.
- Step 2 > Press flashing loop key.
 - Look for: Loop key On
 - Listen for: Conversation with caller

MEET-ME CONFERENCE

Description

With Meet-Me Conference, an extension user can set up a Conference with up to two other inside parties. Each party joins the Conference by dialing a Meet-Me Conference access code (within one minute). Meet-Me Conference lets three extension users have a telephone meeting -- without leaving the office.

In addition to Meet-Me Conference, the following features also allow three-party calls:

- Conference
- Intrusion
- Privacy Groups
- Tandem Calls

Conditions

The system supports two Meet-Me Conferences (at codes 11 and 12). The system supports eight simultaneous three-party conversations.

Default Configuration

Meet-Me Conference always allowed.

Programming

Required Programming

None

Other Programming

None

Related Features

Conference

Conference lets an extension user add an additional party to their conversation. Conference has an initiator (controller): Meet-Me Conference does not.

Feature Operation

To set up a Meet-Me Conference:

- Step 1 > Page desired parties and announce Meet-Me Conference code (11 or 12).
- Step 2 > Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
- Step 3 > Dial Meet-Me Conference access code (11-12).
Look for: When two parties are in Conference - INTERCOM Fast Flash
When three parties are in Conference - CONF On (red/green)
Listen for: Conversation with Conference members

To join a Meet-Me Conference:

- Step 1 > Lift handset.
- Step 2 > Press INTERCOM
Look for: INTERCOM On
Listen for: Dial tone
- Step 3 > Dial Meet-Me Conference access code (11 or 12).
Look for: When two parties are in Conference - INTERCOM Fast Flash
When three parties are in Conference - CONF On (red/green)
Listen for: Conversation with Conference members

Description

With Message Waiting, an extension user can leave an indication at a busy or unanswered extension requesting a return call. The indication is a flashing MSG key and an optional voice reminder message. Answering the Message Waiting automatically calls the extension which left the indication. Message Waiting ensures that a user will not have to recall an unanswered extension. It also ensures that a user will not miss calls when their extension is busy or unattended.

Additionally, Message Waiting lets extension users:

- Cancel all the messages they left at other extensions
- Cancel all messages left at their extensions
- View and selectively answer messages left at their extensions (display keyset only)

An extension user can leave Messages Waiting at any number of extensions. Also, any number of extension users can leave a Message Waiting at the same extension.

Conditions

A power failure or system reset cancels all active Messages Waiting. Answering the message also cancels the Message Waiting. This is true if the called extension doesn't answer, is busy or is in Do Not Disturb.

Default Configuration

Message Waiting and reminder message allowed.

Programming

Required Programming

None

Other Programming

- **QJ- Intercom Call Control, Alerts** - Enable/disable the periodic Message Waiting reminder.

Related Features

Attendant Positions

An extension user cannot leave a Message Waiting at an attendant.

Off-Hook Signaling

An extension user cannot leave a Message Waiting while using Voice Over.

Voice Mail Compatibility

Message Waiting will not function if the system has a voice messaging system installed. The Message Waiting procedures access extension's Subscriber Mailbox.

Voice Prompting Messages (except in VS)

The Message Waiting reminder voice message requires a VAU or OPA/VAU PCB. The VAU or OPA/VAU PCB installs in a trunk slot, replacing four trunk circuits.

MESSAGE WAITING

Feature Operation

To leave a Message Waiting (an extension that is busy or does not answer):

Look for: INTERCOM On or Fast Flash
Listen for: Busy, Ring Busy, Ringing or two beeps

Step 1 > ● At a keyset, press MSG.

OR

● At an ESL set, dial 6.

Listen for: Dial tone

Step 2 > Hang up.

The MSG key flashes fast (green) at the called extension (if it is a keyset).

To cancel a Message Waiting you left:

Step 1 > Lift handset.

Step 2 > Press INTERCOM.

Look for: INTERCOM On

Listen for: Dial tone

If you have an ESL set, skip this step.

Step 3 > Dial number of extension where you left the message and hang up.

To cancel all messages left at your phone simultaneously:

This also cancels your Callback and Line Queuing requests.

Step 1 > Lift handset.

Step 2 > Press INTERCOM.

Look for: INTERCOM On

Listen for: Dial tone

If you have an ESL set, skip this step.

Step 3 > Press # *.

Step 4 > Hang up.

To answer a Message Waiting:

Look for: MSG Fast Flash (green)

Listen for: Periodic reminder message

Step 1 > Lift handset.

Step 2 > ● At a keyset, press MSG.

● At an ESL set, press * and dial 6.

Listen for: Two beeps or ringing

If you have a keyset and your MSG key continues to flash fast, you have additional messages waiting.

To view and then selectively answer your messages (display telephone only):

Look for: MSG Fast Flash (green)

Listen for: Periodic reminder message

Step 1 > Do not lift handset.

Step 2 > Press MSG.

Your phone's display shows the first extension that left you a message. Press MSG repeatedly to see all your messages.

Step 3 > When you see the extension you want to call back:

● Lift handset

● Press MSG.

Listen for: Two beeps or ringing

If you have a keyset and your MSG key continues to flash fast, you have additional messages waiting.

Description

Microphone Mute lets a keyset user turn off their phone's handsfree microphone at any time. When activated, Microphone Mute prevents the caller from hearing conversations in the user's work area. The user may turn off the microphone while his telephone is idle, busy on a call or ringing. The microphone stays off until the user turns it back on.

Conditions

On 12x36 and 32x60 systems, Microphone Mute can also turn off the handset microphone.

Default Configuration

Microphone Mute allowed at all keysets.

Programming

Required Programming

None

Other Programming

None

Related Features

Attendant Positions

Microphone Mute is not available to attendants.

Call Forwarding/Paging (Auto)/Personal Greeting/Selectable Display Messages

Turning off Microphone Mute (if enabled) automatically cancels these features.

Handsfree (Speakerphone) and Monitor

If an extension has Microphone Mute enabled, the user can listen Handsfree but cannot respond.

Headset Compatibility

Microphone Mute is not available to keysets in the headset mode.

Intercom

If an extension has Microphone Mute enabled, it broadcasts two long beeps for an incoming voice-announced Intercom call. The receiving extension has Handsfree reply disabled.

Feature Operation

Step 1 ►

To activate Microphone Mute:

Press DND/MIC until it lights (green).

You can do this while on a call or when your phone is idle.

Step 1 ►

To deactivate Microphone Mute:

Press DND/MIC until it goes out.

If DND/MIC flashes fast, your phone is in Do Not Disturb.

MULTIPLE DIRECTORY NUMBERS (ONYX IV)

Description

Multiple Directory Numbers let a keyset have more than one extension number. Calls can route to the keyset's installed number or to the keyset's "phantom" Multiple Directory Number key. This helps users identify incoming calls. For example, an extension installed at 304 (Sales) could have a "phantom" directory number for extension 350 (Service). Calls to 304 ring the extension normally. Calls to 350 ring the Multiple Directory Number key. This lets the user at extension 304 differentiate Sales calls from Service calls.

Trunks can ring Multiple Directory Numbers directly. This can be done using the following features:

- Direct Inward Dialing (DID) - DID callers dial the phantom number
- Direct Inward Lines (DIL) - Trunks terminate to the phantom number
- Direct Inward System Access (DISA) - After getting Intercom dial tone, DISA callers dial the phantom number
- Transfer - Users extend a trunk call to the phantom number

Multiple Directory Numbers are only available in the PBX.

Conditions

- a. More than one keyset can share appearances for the same phantom extension. In addition, a keyset can have more than one phantom extension. The keyset is limited only by the number of available programmable keys.
- b. An extension can have both Multiple Directory Numbers and Dual Line Appearance.

Default Configuration

No Multiple Directory Number keys assigned.

Programming

Required Programming

- **E- Extensions, E2- Circuit Type** - Create a phantom extension (e.g., 350) by assigning it circuit type Y. This is an extension position with no installed telephone. The phantom does not require a port on a station PCB.
- **KS- Programming Keys For Keysets** -
At the extension that should have Multiple Directory Numbers...
Assign key appearances for the phantom. The first key appearance is E1 plus the phantom number (e.g., E1350). The second key appearance is E2 plus the phantom number (e.g., E2350). By default, there are no Multiple Directory Number keys assigned. The keys you select can have immediate, delayed or no ringing for incoming calls.

At the Phantom extension...

Assign appearances for itself. Key 1 should be E1 plus the phantom number (e.g., E1350). Key 2 should be E2 plus the phantom number.(e.g., E2350). All other keys at the phantom must be unassigned.

Other Programming

None

MULTIPLE DIRECTORY NUMBERS (ONYX IV)

Related Features

Call Forwarding

You cannot Call Forward a Multiple Directory Number. You can, however, Call Forward a phone to a Multiple Directory Number.

Call Waiting (Camp-On)/Callback

If you call a Multiple Directory Number and hear busy, you cannot Camp-On or leave a Callback.

Extension Hunting

Extension Hunting can route to a phantom number.

Intercom

A user places a call to a phantom number just like any other Intercom call.

Feature Operation

None

MUSIC ON HOLD

Description

Music On Hold (MOH) sends music to calls on Hold, parked calls and calls transferred to a busy extension. The music lets the caller know that his call is waiting, not forgotten. Without Music On Hold, the system provides silence to these types of calls. Music on Hold requires a customer-provided music source (i.e., tape deck, receiver, etc.) and an unused trunk circuit.

Note: In accordance with U.S. copyright law, a license may be required from the American Society of Composers, Authors and Publishers (ASCAP) or other similar organizations, if radio, television broadcasts or music and other material not in the public domain are transmitted through the Music-On-Hold feature of telecommunications systems. Nitsuko America hereby disclaims any liability arising out of the failure to obtain such a license.

Conditions

- a. In the large systems, the music source connects to an unused trunk port (on an uninstalled PCB). For MOH, the system provides:

Input Impedance 600 Ohms
Maximum Input -10 dBm (244 mV AC)

Refer to the system Hardware Manual for additional installation details.

- b. In VS, Music On Hold (for internal extensions) uses the fourth trunk circuit on the first CO Module in the main CEU. You cannot use the fourth trunk circuit for trunks. (Music on Hold for outside calls does not use the trunk circuit.) If you want MOH for trunks 9-16, connect the MOH terminals on the main CEU to the MOH terminals on the expansion CEU. For MOH, the system provides:

Input Impedance 100K Ohms
Maximum Input -10 dBm (244 mV AC)

Refer to the system Hardware Manual for additional installation details.

Default Configuration

Music on Hold not available.

Programming

Required Programming

- E- Trunks, E2- Circuit Type - The MOH trunk port must be (circuit type X).
- QM- Music/Relay Control, MOH Line Number - In large systems, enter the number of the trunk connected to the MOH source. In VS, enter Y(es).

Other Programming

- QM- MOH on Transfer - If enabled (Y), transferred callers can hear Music on Hold. If disabled (N), transferred callers hear ringback tone.

To use the MOH trunk for another function, remember to:

- Remove the assignment in QM- MOH Line Number
- Reset the associated line/trunk PCB (using IR- Reset Line/Trunk Card)
- Change the trunk to the desired circuit type (using the E2 option)
- Perform a side tone test on the trunk (using the IS- Side Tone Test option)

Related Features

Background Music

Background Music and Music on Hold can share the same music source.

Conference

While an extension user sets up a Conference, MOH plays to their initial caller.

Feature Operation

None

Description

Night Answer lets the attendant put the system in the night mode. Night Answer redirects calls to their night mode destination, as determined by Universal and Assigned Night Answer. The attendant typically activates Night Answer after normal working hours, when most employees are unavailable to answer calls. Large systems automatically come up in the night mode after initial start-up or after a power failure. VS systems come up in the day mode.

Assigned Night Answer

With Assigned Night Answer (ANA), night mode calls directly ring extensions, Ring Groups and ACD/UCD hunt groups. Assigned Night Answer provides an answering point for night mode calls. For certain applications, this may be more appropriate than Universal Night Answer. For example, the system administrator could program trunks to ring at the security station's telephones during off hours.

Universal Night Answer

Universal Night Answer (UNA) allows an extension user to answer incoming night mode calls ringing over the external Paging speakers. With UNA, an employee can:

- Go to any telephone
- Dial the UNA code
- Answer the incoming call

UNA requires external amplifiers and an unused trunk circuit. In large systems, you connect to a trunk circuit on an installed PCB. In VS, UNA always uses the fourth trunk circuit on the first CO Module in the main CEU. You connect to the main CEU PA terminals. Refer to the system Hardware Manual for External Paging installation details.

In ONYX IV, an extension's Class of Service can allow or deny UNA pickup. See Programming below. If denied, the user cannot dial *0, *01-*04 or * and the operator's extension number to pickup UNA calls. This also prohibits extensions from using Directed Call Pickup to intercept day mode operator calls. If allowed, UNA call pickup works normally.

Conditions

The External Paging equipment connected to the UNA trunk port must be compatible with the following system specifications:

- Output Impedance . . . 600 Ohms
- Maximum Input . . . 3 dBm (1.09 V AC)

Default Configuration

Attendants can activate Night Answer. ANA and UNA not programmed. UNA call pickup allowed (ONYX IV).

Programming

Required Programming

Night Answer

- **E- Extensions, EK- Do Not Disturb (DND)** - Allow DND at each attendant that should be able to activate Night Answer.
- **E- Trunks, E9- Direct Trunk Termination** - Assign an operator to each trunk. For each trunk, Night Answer activates when that trunk's operator goes into the night mode. (You also use this option to assign DILs. Refer to the Direct Inward Line feature.)

NIGHT ANSWER (OFF-HOURS RINGING)

Programming (Cont'd)

- Night Answer, Assigned Night Answer**
- **E- Extensions, ED- Trunk Control, Ring Control** - For each keyset, designate the ringing options for each trunk. Use the N option to have the trunk only ring the keyset at night.
 - **E- Extensions, ED- Trunk Control, Access Control** - For each extension, assign access for lines the extension should be able to answer (day or night).
 - **E- Trunks, EI- Night Call Routing** - Define the night call route (extension or Ring Group) for each trunk. EI programming overrides ED programming at night. The EI option also lets night mode calls ring non-keyset extensions.
- Night Answer, Universal Night Answer**
- **E- Extensions, ED- Trunk Control, Access Control** - An extension has UNA pickup only for trunks to which it has access. (ED- Ring Control programming has no effect on UNA answering.)
 - **E- Trunks, E2- Circuit Type** - The unused trunk circuit assigned in QM below must have circuit type X.
 - **E- Trunks, E9- Direct Trunk Termination/EI- Night Call Routing** - Terminate each trunk to the main attendant (extension 300/port 00).
 - **QM- Music and Relay Control, Ext Page/Night Audible Line Number** - In the large systems, indicate the unused trunk circuit that will broadcast night audible. In VS, enter Y. An incoming call will activate ringing on the night audible port if:
 - The ringing trunk is terminated (in E9) to the main attendant (300)
 - The main attendant is in the night mode
 - **QM- Music and Relay Control, Inhibit Audible Ring** - Enable audible ring on the night audible port.
- Other Programming**
- For Assigned Night Answer**
- **QT- System Timers, Number of Rings Before Recall** - When the system is in the night mode, an incoming call rings the EI termination for this interval. The call then diverts to all extensions that normally ring for the call (programmed in ED- Ring Control).
- For Universal Night Answer**
- **CP- Program Class of Service, Operator Call Pickup (BY3:7 - ONYX IV)** - Enable/disable UNA pickup for each Class of Service.

Related Features

Attendant Positions

If an attendant is in the night mode, another extension user cannot place an Intercom call to that attendant.

Automatic Call Distribution (ONYX IV)

The ACD supervisor can have control of the ACD group night mode.

Direct Inward Line

DILs ring the extension day or night, overriding ANA programming. To activate Night Answer for the DIL, put the DIL's extension in DND.

Extension Hunting

If a trunk is a DIL to an ACD/UCD master number, the trunk goes into night mode when the master's operator activates Night Answer.

Two attendants can be in a Circular Hunt Group (consisting only of themselves) for special night mode operation. Both attendants must activate Night Answer to put their trunks in the night mode. Following is an example for attendants 300 and 304:

<u>Ext</u>	<u>E4</u>	<u>E5</u>
300	304	02
304	300	02

NIGHT ANSWER (OFF-HOURS RINGING)

Related Features (Cont'd)

External Alerting Devices

Under certain conditions, night mode ringing can also activate the external relays. Refer to External Alerting Devices for the specifics.

Group Ring

An ANA call to a ring group rings all members of the group. The trunk never diverts to all extensions with programmed ring and access.

Ringing Line Preference

Ringing Line Preference lets a keyset user answer a night mode call just by lifting the handset.

Toll Restriction

An extension in a tenant group can have night mode restriction (e.g., CP- Allow Only Intercom Calls at Night [BY0:2] is 1). The restriction takes effect when the extension's operator activates Night Answer.

Feature Operation

To activate Night Answer (attendant only):

- Step 1 > Do not lift handset.
- Step 2 > Press DND/MIC.
Look for: DND/MIC Fast Flash

To deactivate Night Answer (attendant only):

- Look for: DND/MIC Fast Flash
- Step 1 > Do not lift handset.
- Step 2 > Press DND/MIC.
Look for: DND/MIC Off.

To answer an ANA call ringing your extension:

- Look for: Line key Slow Flash (red)
(optional) Fast Flash (green)
- Listen for: Trunk ring
- Step 1 > Lift handset.
If you have an ESL set, this answers the call. Skip step 2.
- Step 2 > Press flashing line key.
Look for: Line key On (red/green)
Listen for: Conversation with caller

To answer a UNA call ringing the External Paging equipment:

- Listen for: Trunk ring over the External Paging equipment
- Step 1 > Lift handset.
- Step 2 > Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
If you have an ESL set, skip this step.
- Step 3 > Press *.
Look for: Dial tone stops
- Step 4 > Dial 0.
Look for: Line key On (red/green)
Listen for: Conversation with caller

User-Programmable Feature...

In VS, you can change the lines that ring your keyset at night.
PGM# + NR + Line key + Y(es) or N(o) + SAVE

NON-BLOCKING ARCHITECTURE

Description

The system has a non-blocking architecture. This means that the number of transmission paths is greater than the number of extension and trunk ports. In other words, all extensions and trunks can be on calls simultaneously, without blocking or interfering with each other.

Conditions

None

Default Configuration

The system always has non-blocking architecture.

Programming

Required Programming

None

Other Programming

None

Related Features

Analog Station Interface

There are two types of ASI modules: P/N 89748 (without a DTMF receiver) and P/N 89749 (with an integral DTMF receiver). ASI P/N 89748 requires DTMF detection (i.e., a system DTMF receiver) for outgoing calls. When the number of ASIs exceeds the number of DTMF receivers available in the system, the ASIs may "contend" for a receiver. When a receiver is available, the system passes dial tone to the ASI on a first come-first served basis. To limit contention, use the following table to determine the maximum number of ASIs allowable. Note that other features (e.g., DISA and OPX) may also require DTMF receivers, which reduces the total available to the ASIs.

Dialing Traffic	DTMF Rcvrs	ASIs
Light	2	10
	4	24
Medium	2	8
	4	20
Heavy	2	6
	4	14

To have DTMF receivers, the large systems must have either a MLU, VAU or OPA/VAU PCB. Each of these PCBs provides two receivers, and replaces four trunk circuits. Heavy traffic may require the installation of the MLU and VAU or OPA/VAU PCBs. To have DTMF receivers in VS, the system must have a PCU Module (not currently available).

ASI P/N 89749 does not require a system DTMF receiver for outgoing calls.

Central Office Calls, Placing/Intercom

The system has 56 dialing buffers. An extension uses a dialing buffer when dialing digits for Intercom or trunk calls. This means that a total of 56 extensions can dial digits simultaneously.

Handsfree and Monitor

The system allows 12 simultaneous Handsfree (speakerphone) calls per cabinet.

Feature Operation

None

Description

With Off-Hook Signaling, a user can send an off-hook indication to a busy keyset. This tells the busy keyset user that they have another call waiting. Off-Hook signaling helps important callers get through -- without waiting in line for the called extension to become free.

There are two types of Off-Hook Signaling: Off-Hook Ringing and Voice Over. With Off-Hook Ringing, you hear ringing through your speaker when a new call comes in. You can answer the waiting call. With Voice Over, you hear the caller's voice in your handset. Only you can hear the incoming voice. Also, you can respond without your original caller listening.

Off-Hook Signaling also lets you signal a busy extension (after you hear ring/busy tone), indicating you want to get through. If the busy party is on a handset call, they receive Off-Hook Ringing or Voice Over. The party can answer the Off-Hook Signal, then talk to their initial caller.

Conditions

The system takes six seconds to set up an outgoing call. After dialing a call, an extension user cannot receive a Voice Over until six seconds have elapsed.

Default Configuration

No off-hook ringing -- Voice Over allowed

Programming

Required Programming

- E- Extensions, E8- Line Access Options, Off-Hook Ringing - Enable or disable incoming off-hook ring for each extension.
- E- Extensions, EF- Incoming Voice Over Off-Hook Signals - Enable or disable incoming Voice Over signaling for each extension. If enabled, this option overrides E8- Off Hook Ringing.

The following chart shows the interaction between E8 and EF programming for the destination extension.

Caller	Dest.	E8	EF	Result after dialing 1
Handset	Handset	N	N	Voice Over to destination
Handset	Handsfree	N	N	No Off-Hook Signaling
Handsfree	Handset	N	N	No Off-Hook Signaling
Handsfree	Handsfree	N	N	No Off-Hook Signaling
Handset	Handset	N	Y	No Off-Hook Signaling
Handset	Handsfree	N	Y	No Off-Hook Signaling
Handsfree	Handset	N	Y	No Off-Hook Signaling
Handsfree	Handsfree	N	Y	No Off-Hook Signaling
Handset	Handset	Y	N	Voice Over to destination
Handset	Handsfree	Y	N	Off-hook ringing
Handsfree	Handset	Y	N	No Off-Hook Signaling
Handsfree	Handsfree	Y	N	Off-hook ring if dest. has HF - otherwise no Off-Hook Signals
Handset	Handset	Y	Y	Off-hook ringing
Handset	Handsfree	Y	Y	Off-hook ringing
Handsfree	Handset	Y	Y	Off-hook ringing
Handsfree	Handsfree	Y	Y	Off-hook ringing

Other Programming

None

OFF-HOOK SIGNALING

Related Features

Analog Station Interface/Off-Premise Extension

ASI and OPX extensions cannot receive Voice Over or off-hook ringing.

Attendant Positions

An attendant should have off-hook ringing. This allows the attendant extension to ring while the phone displays alarms. An attendant cannot receive Voice Over.

Call Coverage Keys

Call Coverage Keys always activate Off-Hook Signaling (if allowed at the destination). In addition, an extension with Off-Hook Signaling receives off-hook signals for calls to its covered extension.

Call Waiting (Camp On)

If an extension has off-hook ringing enabled (in E8), the system automatically converts Call Waiting beeps to off-hook ringing.

Direct Station Selection, Extension

An extension's DSS keys always activate Off-Hook Signaling (if allowed at the destination).

Do Not Disturb

DND blocks Off-Hook Signaling.

Extension Hunting

Always disable Voice Over for extensions in Terminal and Circular Hunt Groups (type 02).

Handsfree and Monitor

While on a Handsfree call, an extension user may hear an off-hook signal (single beep, repeated).

Hotline

Hotline always activates Off-Hook Signaling (if allowed at the destination).

Intercom

Intercom callers to a busy extension with off-hook signaling capability hear ring/busy instead of busy.

Reverse Voice Over (ONYX IV)

A busy keyset user can place a private Intercom call to an idle co-worker.

Feature Operation

To signal an off-hook extension by dialing the extension number:

- Step 1 ► Lift handset.
- Step 2 ► Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial Tone
If you have an ESL set, skip this step.
- Step 3 ► Dial extension number.
Listen for: Ring/Busy
If you don't hear Ring/Busy, you can't send an off-hook signal.
If you press a DSS key instead, skip to step 4 (without dialing 1).
- Step 4 ► Dial 1.
Listen for: Two beeps (for Voice Over) or
Ringing (for off-hook ringing)
- Step 5 ►
 - If you hear two beeps, you can begin speaking.
 - OR
 - If you hear ringing, wait for called party to answer before speaking.

**Feature Operation
(Cont'd)**

To signal an off-hook extension by pressing a Hotline key:

- Look for: Hotline key On (green)
- Step 1 > Lift handset.
- Step 2 > Press Hotline key.
Listen for: Two beeps (for Voice Over) or Ringing (for off-hook ringing)
- Step 3 > ● If you hear two beeps, you can begin speaking.
OR
● If you hear ringing, wait for called party to answer before speaking.

To signal an off-hook extension by pressing a Call Coverage key:

- Look for: Call Coverage key On
- Step 1 > Lift handset.
- Step 2 > Press Call Coverage key.
Listen for: Ring/Busy
If you don't hear Ring/Busy, you can't send an off-hook signal.
- Step 3 > Dial 1.
Listen for: Two beeps (for Voice Over) or Ringing (for off-hook ringing)
- Step 4 > ● If you hear two beeps, you can begin speaking.
OR
● If you hear ringing, wait for called party to answer before speaking.

To respond to a Voice Over signal you hear in your handset:

- Look for: INTERCOM Fast Flash
Listen for: Two beeps in your handset.
- Step 1 > Press and hold DND/MIC.
While you hold down DND/MIC, you can talk to the party sending you the Voice Over. Your other caller cannot hear your voice.
- Step 2 > Release DND/MIC to return to your initial caller.

To respond to off-hook ringing you hear over your speaker:

- If you are on an outside call -
Look for: INTERCOM Slow Flash
Listen for: One beep (repeated)
- If you are on an Intercom call -
Look for: INTERCOM Fast Flash
Listen for: One beep (repeated)
- Step 1 > (Optional) Press HOLD.
If you are on an Intercom call, this saves your first call. If you are on an outside call, hold is automatic when you go to step 2.
- Step 2 > Press flashing INTERCOM.
Look for: INTERCOM Fast Flash
(Modular) -- HOLD Fast Flash (green), Hold (red), (Optional) Line key Fast Flash (green), Hold (red)
(Non-modular) -- HOLD Exclusive Hold, (Optional) Line key Exclusive Hold
Listen for: Conversation with second caller
To switch (alternate) between the calls, use the Split feature.

User-Programmable Feature...

In VS, you can allow or deny incoming Voice Over for your keyset.
PGM# + VO + Y(es) or N(o) + SAVE

OFF-PREMISE EXTENSION (OPX)

Description

The system provides connections for Off-Premise Extensions (OPXs). With OPX support, the system can use equipment that requires a standard Dial Pulse (500 type) or DTMF (2500 type) interface. This equipment includes:

- Telco OPX circuits
- On-premise single line telephones
- Equipment that requires a single line telephone connection (such as a voice messaging system).

To operate an OPX single line set, refer to **Feature Operations** below. For more about each feature, refer to the feature descriptions in this manual.

In the large systems, OPX extensions require the installation of a Special Trunk Interface (STI), P/N 88146.¹ Each STI provides connection for up to eight OPX trunks. The chart below shows the maximum number of STIs and OPX extensions allowed per system:

System	Max STIs	Max OPXs
12x36	1	8
32x60	2	16
56x120/72x180	4	32

The Special Trunk Interface requires trunk ports, an external power supply/ring generator and two unused extension ports. In addition, the STI has two DTMF receivers. The STI uses receivers in a VAU, OPA/VAU or MLU PCB only when its integral receivers are busy. For complete installation details, refer to the STI Installation and Programming Manual (P/N N1850STI01).

In VS, OPX trunks require the installation of a DID/OPX Module (not currently available).

Conditions

Dial Pulse OPXs cannot use any features accessed using dial pad keys * or #.

Default Configuration

No OPXs programmed.

Programming

Required Programming

(Except for E2- Circuit Type, OPX extensions use E- Extension programming for features, not E- Trunk programming.)

- **E- Trunks, E2- Circuit Type** - OPX extensions use circuit type 05. Remember that OPX extensions use trunk numbers.
- **E- Trunks, E2- STI Circuit Number** - Enter the STI circuit number for the OPX extension. Refer to the STI Installation and Programming Manual for charts and drawings that explain this correlation.

Other Programming

- **QT- System Timers, OPX Incoming Flash Timer** - Enter the duration of the OPX loop current interruption that occurs when an OPX device hookflashes. Make sure that the entry you select coincides with the loop current interruption provided by the device connected to the OPX circuit. Note that OPX hookflash always puts an outside call on Hold.

¹ Refer to the Special Trunk Interface feature for more details.

Related Features

Analog Station Interface

The Analog Station Interface (ASI) module (P/Ns 89748 and 89749) provides standard 2500 set DTMF service at any extension port. The feature operations for Off-Premises Extensions also apply to a 2500 set connected to an ASI.

Callback/Line (Trunk) Queuing

There is no Callback ring for OPX extensions connected to STIs. These extensions use Trunk ring instead.

Direct Inward Dialing

Each OPX installed reduces by one the number of DIDs you can connect to the STI.

Directed Call Pickup/Group Ring

A 2500 set connected to an ASI or OPX port cannot do a Directed Call Pickup to any port in the 500s group (e.g., Ring Group 556 in a 56x120 or 72x180 system).

Feature Operation

Note: When these instructions tell you to Hookflash, press the hookswitch for about 1/2 second and release it.

ACCOUNT CODE CAPABILITY

To enter an Account Code when placing an outside call:

- Step 1 > Place call.
- Step 2 > Press # immediately after dialing the number.
- Step 3 > Enter Account Code.
- Step 4 > Press # again.

To enter an Account Code for the call you are on:

- Step 1 > Do not hang up.
- Step 2 > Hookflash.
Listen for: Dial tone.
- Step 3 > Press #.
Listen for: Dial tone stops
- Step 4 > Enter Account Code.
- Step 5 > Press # again.
Listen for: Dial tone
- Step 6 > Dial * 7.
Listen for: You return to the call

CALL FORWARDING

To forward your calls to another extension:

- Step 1 > Lift handset.
Listen for: Dial tone
- Step 2 > Press #.
Listen for: Dial tone stops
- Step 3 > Dial extension number to receive your calls.
If you dial 0, the system automatically inserts code 3 in the next step.
- Step 4 >
 - Dial 1 to forward ringing calls you do not answer.
 - OR
 - Dial 2 to forward ringing calls you do not answer *and* calls to your phone when it is busy.
 - Dial 3 to forward all your calls. OR
- Step 5 > Hang up.

OFF-PREMISE EXTENSION (OPX)

Feature Operation (Cont'd)

CALL FORWARDING (Cont'd)

To forward your calls off-premise:

- Step 1 > Lift handset.
Listen for: Dial tone
- Step 2 > Press #.
Listen for: Dial tone stops
- Step 3 > Dial 1.
- Step 4 > Select the trunk your forward will use.
You can dial the trunk number (e.g., 01) or trunk extension number (e.g., 480).
- Step 5 > Dial telephone number that will receive your calls.
- Step 6 > Hang up.

To cancel your Call Forwarding:

- Step 1 > Lift handset.
Listen for: Dial tone
- Step 2 > Press #.
Listen for: Dial tone stops
- Step 3 > Hang up.

CALL PARKING

To Park your call:

- Step 1 > Hookflash.
- Step 2 > Dial *.
Listen for: Dial Tone
- Step 3 > Dial Park Orbit code (extension number or 5 + 60-69).
Listen for: Dial tone
If you hear busy tone, hookflash and try another orbit.
- Step 4 > Page party to receive call and announce the Park Orbit code.
- Step 5 > Hang up.

To pick up a parked call:

Listen for announced Park Orbit code.

- Step 1 > Lift handset.
Listen for: Dial tone
- Step 2 > Dial announced Park Orbit code (60-69 or * + extension number).

CALL WAITING (CAMP-ON)

To send a Call Waiting tone to a busy extension:

Listen for: Busy tone

- Step 1 > Dial 2.
Listen for: ICM Ring
If you hear Ring/Busy, the called extension converts your Camp-On to off-hook ringing.
- Step 2 > Wait off hook for called party to answer.

To answer a Call Waiting tone:

Listen for: Two beeps

- Step 1 > ● Hookflash.
● Dial * 2.
To switch (alternate between the calls), refer to the Split feature.

OR

- Hang up and lift handset when phone rings.

Feature Operation (Cont'd)

CALLBACK

To request a Callback (after calling a busy extension):

- Listen for: Busy Tone
- Step 1 > Do not hang up.
- Step 2 > Dial 2.
Listen for: Ringing
- Step 3 > Hang up.

To answer when Callback rings you back:

- Listen for: Callback Ring (ASI)
Trunk ring (OPX)
- Step 1 > Lift handset.
Listen for: Ringing
- Step 2 > Wait for called party to answer, then begin speaking.

To cancel a Callback request at a specific extension:

- Step 1 > Call busy extension again.
Listen for: Busy tone
- Step 2 > Press *.
Listen for: Dial tone
- Step 3 > Hang up.

To cancel all your Callbacks simultaneously:

- This also cancels all your Line Queuing requests.
- Step 1 > Lift handset.
- Step 2 > Dial # *.
- Step 3 > Hang up.

CENTRAL OFFICE CALLS, ANSWERING

Listen for: Trunk ring

To answer an outside call:

- Step 1 > Lift handset.
Listen for: Conversation with calling party

CENTRAL OFFICE CALLS, PLACING

To place an outside call:

- Step 1 > Lift handset.
Listen for: Dial Tone
- Step 2 > Dial code.
You can dial:
A trunk extension number (e.g., 480 - See Direct Trunk Access)
A trunk access code (e.g., 801)
Trunk group access code - 9 or 90-98 (See Line Rotaries)

OFF-PREMISE EXTENSION (OPX)

Feature Operation (Cont'd)

CONFERENCE

To set up a Conference:

- Step 1 > Place or answer first call.
Listen for: Conversation with caller
- Step 2 > Hookflash.
Listen for: Dial tone
- Step 3 > Place or answer second call.
Listen for: Conversation with caller.
- Step 4 > Hookflash.
Listen for: Dial tone
- Step 5 > Dial * #.
Listen for: Conversation with both parties
If the Conference includes at least one Intercom caller, the other parties remain connected if you hang up.

DIRECT TRUNK ACCESS

To directly access a trunk for an outside call:

- Step 1 > Lift handset
Listen for: Dial tone
- Step 2 > Dial trunk extension number (e.g., 480).
Listen for: Dial tone

DIRECTED CALL PICKUP

To intercept a call using Directed Call Pickup:

- Step 1 > Lift handset.
Listen for: Dial tone
- Step 2 > Dial *.
Listen for: Dial tone stops
- Step 3 > Dial number of ringing extension.
Listen for: Conversation with caller

FORCED TRUNK DISCONNECT

To disconnect a busy trunk:

- Step 1 > Lift handset.
- Step 2 > Dial trunk number (e.g., 480) or trunk access code (e.g., 801).
Listen for: Busy tone
If you dial the trunk access code, wait for voice prompt to complete.
- Step 3 > Dial #.
Listen for: Dial tone
To place a call on the trunk you just disconnected, repeat step 2.

GROUP CALL PICKUP

To answer a call you hear ringing another extension in your pickup group:

- Step 1 > Lift handset.
Listen for: Dial tone
- Step 2 > Press *.
Listen for: Dial tone stops
- Step 3 > Dial 1.
Listen for: Conversation with caller

Feature Operation (Cont'd)

GROUP RING (RING GROUPS)

To place a call to a Ring Group:

- Step 1 > Lift handset.
Listen for: Dial tone
- Step 2 > Dial Ring Group number.
Listen for: Ringing

To answer a call ringing your Ring Group:

- Listen for: ICM ring
- Step 1 > Lift handset.
Listen for: Conversation with caller

HOLD

To place an Intercom or outside call on Hold:

This procedure places outside calls on Exclusive Hold.

- Step 1 > Hookflash.
Listen for: Dial tone
- Step 2 > Hang up.
If your caller is a keyset user utilizing Handsfree, the system disconnects the call if you hang up.

To retrieve a call on Hold:

- Step 1 > Lift handset.
- Step 2 > Dial * 7.

To retrieve an outside call on Hold at another extension:

- Step 1 > Lift handset.
Listen for: Dial tone
- Step 2 > Dial *.
Listen for: Dial tone stops
- Step 3 > Dial trunk access code (e.g., 801) or extension number.
Listen for: Conversation with previously held party

INTERCOM

To place an Intercom call:

- Step 1 > Lift handset.
Listen for: Dial tone
- Step 2 > Dial extension number, 0 for your attendant or 01-04 for other attendants.
Listen for: Ringing
Intercom calls always ring the called extension.
- Step 3 > Wait for called party to answer.

To answer an Intercom call that rings your phone:

- Listen for: ICM ring
- Step 1 > Lift handset.
Listen for: Conversation with caller

Feature Operation (Cont'd)

INTRUSION (BARGE-IN)

To intrude on a busy extension:

Listen for: Busy or Ring Busy

- Step 1 > Dial 4.
After four seconds, you can begin speaking.

LAST NUMBER REDIAL

To use Last Number Redial:

- Step 1 > Lift handset.
Listen for: Dial tone
- Step 2 > Dial * *.
Listen for: Digits dialing out

LINE (TRUNK) QUEUING

To queue for a busy trunk:

Listen for: Busy tone

If you queued for a trunk group, you may hear a voice message before you hear busy tone.

- Step 1 > Dial 2.
Listen for: Dial tone stops
- Step 2 > Hang up.

To answer the Line Queuing ring:

Listen for: Callback Ring (ASI)
Trunk ring (OPX)

- Step 1 > Lift handset.
Listen for: Dial tone
- Step 2 > Dial number.

To cancel a Line Queuing request you placed (before the system calls you back):

- Step 1 > Try to access busy trunk again.
Use the same procedure you used when trying your initial call.
- Step 2 > Dial *
Listen for: Dial tone

To simultaneously cancel all your Line Queuing requests (and also cancel your Callbacks):

- Step 1 > Lift handset.
Listen for: Dial tone
- Step 2 > Dial # *.
Listen for: Dial tone
- Step 3 > Hang up.

Feature Operation (Cont'd)

MEET-ME CONFERENCE

To set up a Meet-Me Conference:

- Step 1 > Page desired parties and announce Meet-Me Conference code (11 or 12).
- Step 2 > Hookflash.
Listen for: Dial tone
- Step 3 > Dial Meet-Me Conference access code (11-12).
Listen for: Conversation with Conference members

To join a Meet-Me Conference:

- Step 1 > Lift handset.
Listen for: Dial tone
- Step 2 > Dial Meet-Me Conference access code (11 or 12).
Listen for: Conversation with Conference members

NIGHT ANSWER (OFF-HOURS RINGING)

To answer an ANA call ringing your extension:

- Step 1 > Lift handset.
Listen for: Trunk ring
Listen for: Conversation with caller

To answer a UNA call ringing the External Paging equipment:

- Step 1 > Lift handset.
Listen for: Trunk ring over the External Paging equipment
Listen for: Dial tone
- Step 2 > Dial * 0.
Listen for: Conversation with caller

OFF-HOOK SIGNALING

To signal an off-hook extension by dialing the extension number:

- Step 1 > Lift handset.
Listen for: Dial tone
- Step 2 > Dial extension number.
Listen for: Ring/Busy
If you don't hear Ring/Busy, you can't send an off-hook signal.
- Step 3 > Dial 1.
Listen for: Two beeps (for Voice Over) or
Ringing (for off-hook ringing)
- Step 4 >
 - If you hear two beeps, you can begin speaking.
 - OR
 - If you hear ringing, wait for called party to answer before speaking.

OFF-PREMISE EXTENSION (OPX)

Feature Operation (Cont'd)

PAGING

To make an All Call Page or a Zone Page:

- Step 1 >** Lift handset.
Listen for: Dial tone
- Step 2 >** Dial Page Zone access code, as follows:
- | Page Zone | Access Code |
|--------------------|-------------|
| All Call | .1* |
| 1 | .2* |
| 2 | .3* |
| 3 | .4* |
| 4 | .5* |
| 5 | .6* |
| 6 | .7* |
| 7 | .8* |
- Listen for: Two beeps
- Step 3 >** Make announcement.
If the zone you request is busy. Try again later. An All Call Page overrides a Zone Page already in progress.
- Step 4 >** Hang up.

To record an Auto-Page announcement (56x120 and 72x180 only):

- Step 1 >** Lift handset.
Listen for: Dial tone
- Step 2 >** Press #.
Listen for: Dial tone stops
- Step 3 >** Dial 687.
Listen for: Voice message that asks you to start recording.
- Step 4 >** Record your Auto-Page announcement when you hear the beep.
- Step 5 >** Dial the Page Zone code (1-8) when you are done.

Page Zone	Access Code
All Call . . . . .	.1
1 . . . . .	.2
2 . . . . .	.3
3 . . . . .	.4
4 . . . . .	.5
5 . . . . .	.6
6 . . . . .	.7
7 . . . . .	.8

Listen for: Dial tone

- Step 6 >** Hang up.
- #### To cancel your Auto-Page announcement (56x120 and 72x180 only):

- Step 1 >** Lift handset.
Listen for: Dial tone
- Step 2 >** Dial #.
Listen for: Dial tone stops
- Step 3 >** Hang up.

Feature Operation (Cont'd)

PERSONAL GREETING

To record a Personal Greeting:

If you already have a Personal Greeting recorded, the new greeting replaces the old one.

- Step 1 > Lift handset.
Listen for: Dial tone
- Step 2 > Dial #.
Listen for: Dial tone stops
- Step 3 > Dial 68.
- Step 4 > Dial Personal Greeting option:
The options are:
2 All Calls
4 Intercom Calls
A voice message asks you to start recording.
- Step 5 > Start recording when you hear the beep.
Your Personal Greeting cannot be longer than 16 seconds.
- Step 6 > Hang up.

To cancel your Personal Greeting:

- Step 1 > Lift handset.
Listen for: Dial tone
- Step 2 > Dial #.
Listen for: Dial tone stops
- Step 3 > Hang up.
If you want to use Personal Greeting again, you'll have to record a new greeting.

SELECTABLE DISPLAY MESSAGES

To select a Display Message:

- Step 1 > Lift handset.
Listen for: Dial tone
- Step 2 > Dial #.
Listen for: Dial tone stops
- Step 3 > Dial 6.
- Step 4 > Dial the number of the Selectable Display Message (00-63).
If you select a message from 00-06, you can add digits to the message. The total message (including the digits you add) cannot exceed 16 digits.
- Step 5 > Hang up.

To cancel a Selectable Display Message you enabled for your extension:

- Step 1 > Lift handset.
Listen for: Dial tone
- Step 2 > Dial #.
Listen for: Dial tone stops
- Step 3 > Hang up.

OFF-PREMISE EXTENSION (OPX)

Feature Operation (Cont'd)

SILENT MONITOR

To use Silent Monitor to listen to the conversation received by another extension:

- Step 1 > Lift handset.
Listen for: Dial tone
- Step 2 > Dial number of extension you want to monitor.
Listen for: Busy tone
- Step 3 > Dial 6.

To cancel Silent Monitor:

- Step 1 > Hang up.

SPEED DIAL

To store a Speed Dial Number:

- Step 1 > Lift handset.
Listen for: Dial tone
- Step 2 > Dial #.
Listen for: Dial tone stops
- Step 3 > Dial the Speed Dial bin number.
Personal Speed Dial bins are 50-59 and 20-29. System Speed Dial bins are normally 700-799. You must have Direct Trunk Access capability to store System Speed Dial numbers.
If you have a 56x120 or 72x180 system, you cannot use bins 50-59.
- Step 4 > Dial the trunk code (e.g., 01).
From a hybrid system, you can optionally enter a trunk group code (9, 90-98).
- Step 5 > Dial the telephone number.
- Step 6 > Hang up.
Look for: INTERCOM Off

To call a Personal Speed Dial number:

- Step 1 > Lift handset.
- Step 2 > Dial Personal Speed Dial bin number (20-29, 50-59).
If Speed Dial number contains a pause, you may have to press * to continue dialing.

To call a System Speed Dial number:

- Step 1 > Lift handset.
Listen for: Dial tone
- Step 2 > Dial System Speed Dial bin number (normally 700-799).
Listen for: Stored number dialing out
If Speed Dial number contains a pause, you may have to press * to continue dialing.

Feature Operation (Cont'd)

SPLIT

To Split between your active call and a call on Hold:

- Step 1 > Hookflash to put current call on Hold.
Listen for: Dial tone
- Step 2 > Dial * 2 to answer waiting call.
Listen for: Conversation with new caller
- Step 3 > Hookflash.
Listen for: Dial tone
- Step 4 > Press *.
Listen for: Dial tone stops
- Step 5 > Dial 7.
You answer the call on Hold. Your previous call now goes on Hold instead.
Repeat steps 3 - 5 to continue alternating between the calls.

TANDEM CALLS

To set up a Tandem Call:

- Step 1 > Place or answer first call.
Listen for: Conversation with caller
- Step 2 > Hookflash.
Listen for: Dial tone
- Step 3 > Place or answer second call.
Listen for: Conversation with caller
- Step 4 > Hookflash and dial *, #.
Listen for: Conversation with both parties
- Step 5 > Hang up.

TRANSFER

To Transfer your call:

- Step 1 > Do not hang up.
- Step 2 > Hookflash.
Listen for: Dial tone
- Step 3 > Dial extension number.
Listen for: Ringing
- Step 4 > Wait for called party to answer, then announce call.
To transfer the call unannounced, skip this step.
If the extension you called doesn't pick up the call, it recalls to you. If you in turn don't pick it up, it rings all extensions that normally ring for the trunk.
- Step 5 > Hang up.
Your Transfer goes through.

To return to your outside call (if the called party doesn't want your Transfer):

- Step 1 > Hookflash.
- Step 2 > Dial * 7.

To receive a Transfer (if you get an Intercom call announcing it):

- Step 1 > Stay on the line.
The Transfer goes through when calling party hangs up.

OFF-PREMISE EXTENSION (OPX)

Feature Operation (Cont'd)

To answer a transferred call ringing your phone:

- Listen for: Trunk ring
- Step 1 > Lift handset.
Listen for: Conversation with caller

WALKING CLASS OF SERVICE

To use Walking Class of Service to place an outside call:

- Step 1 > Lift handset.
Listen for: Dial Tone
- Step 2 > Press # twice.
Listen for: Dial tone stops
- Step 3 > Dial Walking Class of Service code.
Listen for: Second dial tone
- Step 4 > Dial code for outside call.
You may be able to dial:
A trunk extension number (See Direct Trunk Access)
A trunk access code (e.g., 801)
Trunk group access code - 9 or 90-98 (See Line Rotaries)

Description

Operator Assistance (OPA) automatically answers calls on designated trunks and provides dialing options to callers. With OPA, callers can dial extensions and hunt groups directly, without human intervention. OPA saves system users call processing time and provides immediate call answering to outside callers. Operator Assistance provides:

- **Caller Dialing Options**
 - Direct dialing to any extension, ring group or ACD/UCD hunt group
 - Single-digit access to selected extensions, ring groups or ACD/UCD hunt groups
- Simultaneous call answering
- Programmable OPA messages
- Automatic attendant overflow

Caller Dialing Options

When a call rings a trunk, OPA answers the call (if programmed) and plays a prerecorded message to the caller. The message normally provides a company greeting and describes the options the caller may dial. For example, a caller may hear, "Hello. You have reached XYZ Corporation. Dial 4 for Technical Service or 5 for Sales." The outside caller listens to the message (up to 16 seconds long) and dials accordingly. The caller may then dial:¹

- 3 plus any three-digit extension, ring group or ACD/UCD hunt group number
- A single digit for an extension, ring group or ACD\UCD hunt group. Allowed single-digit options are 1, 2, and 4-9

Simultaneous Call Answering

OPA can answer up to three calls simultaneously, using three separate OPA ports. If all OPA ports are busy, the call queues for an idle port and the outside caller hears ringing. If the internal extension dialed is busy, the outside caller hears a special message describing additional dialing options.

Programmable OPA Messages

The system allows the attendant to record six Operator Assistance messages, numbered 02-07. In programming, the system administrator can assign an incoming call to any one of these messages. This allows OPA to answer an incoming call and play the appropriate message to the caller.

Automatic Attendant Overflow

Operator Assistance also provides call overflow for attendants. With call overflow, an unanswered call to an attendant routes to an OPA message after a programmed interval. The caller can then use the announced options.

Hardware Requirements

Operator Assistance requires the installation of an Operator Assistance (OPA/VAU) PCB in the main CEU. The OPA/VAU PCB takes the place of the Voice Announce Unit (VAU) PCB (if installed), and replaces four trunk circuits. The OPA/VAU PCB supports all the functions of the Voice Announce Unit (VAU) PCB. The OPA/VAU PCB provides on-board battery backup for the recorded OPA messages.

¹ If the caller does not dial a digit, the call rings all extensions with programmed ringing for the trunk. This is the only option available to Dial Pulse (DP) telephone callers.

OPERATOR ASSISTANCE (OPA)

Description (Cont'd)

In addition, OPA requires DTMF detection (i.e., DTMF receivers) for incoming calls. Under certain conditions, Operator Assistance may "contend" for a receiver with other devices (such as ASIs). The system assigns receivers on a first come-first served basis. There are two DTMF receivers on the OPA/VAU PCB. There are two additional receivers on the Main Link Unit (MLU) PCB, if installed. To minimize contention, the system may require the installation of both of these PCBs.

Conditions

- a. Operator Assistance is compatible with calling devices that meet the DTMF signaling requirements of EIA specification RS-464.
- b. Operator Assistance requires loop start trunks with disconnect supervision or ground start trunks.

Default Configuration

Operator Assistance not installed.

Programming

Required Programming

Note: After programming OPA for the first time, you must clear (erase) the OPA messages. Refer to, "To erase all OPA messages" in Feature Operation.

To have OPA answer the trunk...

- **E- Trunks, E9- Direct Trunk Termination** - To have OPA intercept incoming calls on a trunk day and night, enter the number of the first port on the OPA/VAU PCB. Intercept occurs after the first ring.
- **E- Trunks, EI- Night Call Route** - To have OPA intercept incoming calls on a trunk at night only, enter the first port on the OPA/VAU PCB. Intercept occurs after the first ring.

To configure the OPA dialing and message options...

- **CP- Inhibit OPA Transfers to Extension (BY0:1)** - Allow/deny OPA Transfers to extensions with this Class of Service.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **QE- Line Gain Table** - Program the last two trunk ports of the OPA/VAU PCB for -6 dB gain.
- **QH- OPA Configuration, OPA Group Routing** - Assign the termination (destination) for each OPA access digit (1, 2, and 4-9). Callers reach the termination when they dial the digit. The termination can be an extension, ring group or an ACD/UCD master number. The recorded messages (see Feature Operation below) should describe the terminations reached by these single digits. Don't assign an OPA access code to an extension with BY0:1 set (1).
- **QH- OPA Configuration, Line n Day and Night Message** - For each trunk, indicate the message (2-7) that the caller hears after the OPA answers the trunk in the day and night modes.

To set Automatic Attendant Overflow...

- **QH- OPA Configuration, Overflow Message for Operator (1-4)** - For each operator, designate the OPA message (2-7) for overflow calls. To disable call overflow to the OPA, enter 0.
- **QT- System Timers, OPA Overflow Ring Control** - Indicate the number of rings (3-15) before operator overflow to the OPA occurs. This pertains only to operator overflow calls.

Programming (Cont'd)

- **QH- OPA Configuration, Line n Day and Night Message** - For each trunk, indicate the message (2-7) that the caller hears after the OPA answers the trunk in the day and night modes.
To set Automatic Attendant Overflow...
 - **QH- OPA Configuration, Overflow Message for Operator (1-4)** - For each operator, designate the OPA message (2-7) for overflow calls. To disable call overflow to the OPA, enter 0.
 - **QT- System Timers, OPA Overflow Ring Control** - Indicate the number of rings (3-15) before operator overflow to the OPA occurs. This pertains only to operator overflow calls.
- Other Programming*
- **E- Extensions, ED- Trunk Control, Ring Control** - For operator overflow, designate the ringing options for each trunk. Also, designate ring for timed-out calls.
 - **E- Extensions, ED- Trunk Control, Access Control** - For operator overflow, assign access for the lines the attendant should be able to answer. Also, designate access for timed-out calls.
 - **E- Trunks, E3- Class of Service** - Assign COS 09 to trunks that should provide the 900 Service Alert to incoming callers.
 - **KS- Programming Keys for Keysets** - For operator overflow, program the types of keys that will ring the attendant.
 - **QT- System Timers, Number of Rings Before Recall** - An OPA call to an extension ring for this interval. After this interval expires, the call rings all extensions with ring and access for the trunk.

Related Features

Automatic Call Distribution

An ACD supervisor can also record the OPA messages.

Central Office Calls, Answering

An OPA call rings the destination extension on the line key that corresponds to the trunk that the OPA answered. If the extension has no line key for the trunk, the call rings the extension's loop key.

Direct Inward System Access

To allow the DISA caller to record, erase or listen to OPA messages, enable the following in the DISA trunk's COS:

- Call Forwarding (BY0:6=0)
- ACD Supervisor (BY2:6=1)

Voice Mail Compatibility

A Voice Messaging system may contend for the DTMF receivers required by Operator Assistance. Keep this in mind when installing both OPA and Voice Messaging in the same system. To minimize contention, use ASI P/N 89749 for Voice Messaging.

Voice Prompting Messages (except in VS)

The Operator Assistance (OPA) PCB allows Voice Prompting Messages. The OPA/VAU PCB supports all the functions of the Voice Announce Unit (VAU) PCB.

OPERATOR ASSISTANCE (OPA)

Feature Operation

To erase all OPA messages (if you are an attendant or ACD Supervisor):

This also erases the ACD All Agents Busy message and Personal Greetings.

- Step 1 > Lift handset.
- Step 2 > Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
- Step 3 > Press PGM#.
Listen for: Dial tone stops
- Step 4 > Dial 68.
- Step 5 > Press PGM#.
- Step 6 > Dial 9.
Listen for: Dial tone
If you change your mind, dial 6 to cancel this procedure.

To record an OPA message (if you are an attendant or ACD Supervisor):

- Step 1 > Lift handset.
- Step 2 > Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
- Step 3 > Press PGM#.
Listen for: Dial tone stops
- Step 4 > Dial 68.
- Step 5 > Dial OPA message number (01-07).
Message 02 is the error message. A caller dialing an incorrect code hears message 02. Make sure you program this message.
Message 00 is the ACD/UCD overflow message. Refer to Automatic Call Distribution. Message 01 is the 900 Service Alert message (if applicable).
- Step 6 > Wait for voice instructions, then begin recording.
You can record a message up to 16 seconds long. The system indicates if your message is too long.

To listen to a previously recorded OPA message (from your attendant or ACD Supervisor extension):

- Step 1 > Lift handset.
- Step 2 > Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
- Step 3 > Press PGM#.
Listen for: Dial tone stops
- Step 4 > Dial 685.
- Step 5 > Dial OPA message number (00-07).

To call into the system using Operator Assistance:

- Step 1 > Dial system telephone number.
 - Step 2 > After OPA answers your call, dial announced option:
 - Dial single-digit option.
- OR
- Dial 3 plus the extension number you wish to reach.
The incoming call rings the destination extension on a line or loop key (at the Trunk ring rate). If unanswered, an OPA call to an extension rings all extensions with ring and access for the trunk.

Description

With Paging, extension users may broadcast announcements to other keyset/ESL extensions and external Paging amplifiers. Page allows a user to locate another employee or make an announcement without calling each extension individually.

There are three types of Paging:

- Internal Page
- External Page
- Auto-Page (56x120 and 72x180 systems only)

Internal Page

Internal Page allows extension users to broadcast announcements into seven internal Page Zones and All Call (all zone) Page. When a user makes a Page announcement, the announcement broadcasts to all idle extensions in the zone specified. When a user makes an All Call Page, the announcement broadcasts to all keyset/ESL extensions. An All Call Page always overrides an internal Zone Page. An extension can be a member of only one Internal Page zone. The Page announcement cannot be longer than 90 seconds.

Keysets can have programmable keys assigned to Page zones. When the zone is available, the key is dark. When the zone is in use, the key is lit.

External Page

With External Page, a user can broadcast an announcement over paging equipment connected to external Paging ports. When a user pages one of the internal zones, the system sends the announcement to the corresponding external zone as well. All Call broadcasts over all external zones. Large systems have four external ports; VS has two. In the large systems, the external ports correspond to All Call Page and the first three internal Page zones. In VS \geq Aux Module 2.0/Base 5.0, the external ports are for zone 1 (main) and zone 2 (expansion). In VS versions prior to AUX Module 2.0/Base 5.0, the external ports are for All Call (main) and zone 1 (expansion).

External Page requires external amplifiers and unused trunk circuits. In large systems, you connect to trunk circuits on an installed PCB. In VS, External Paging disables the fourth trunk circuit on the first CO Module in each CEU. However, you connect to the PA terminals in each CEU (not the trunk). Refer to the system Hardware Manual for External Paging installation details.

Auto-Page (56x120 and 72x180 only)

Auto-Page lets a user record an announcement that broadcasts over a specific zone when an outside call rings the extension. For example, a user (e.g., Fred Jones) can record an Auto-Page announcement that states, "Fred Jones, pick up a call ringing your extension." The user then specifies over which zone the announcement should broadcast. Each time an outside call rings Fred's extension, the Auto-Page announcement broadcasts.

As with Internal Page, an Auto-Page announcement over All Call overrides an Auto-Page announcement over an individual zone. If a call comes into an extension and the designated Auto-Page zone is busy, the system waits for the zone to become free. Once the zone is available, the Auto-Page announcement goes through.

Auto-Page requires a VAU or OPA/VAU PCB. The VAU or OPA/VAU PCB installs in a trunk slot, replacing four trunk circuits.

Description (Cont'd)

Conditions

- a. The External Paging equipment connected to the unused trunk port must be compatible with the following system specifications:
Output Impedance: 600 Ohms Maximum Input: 3 dBm (1.09 V AC)
- b. A power failure cancels an active Auto-Page announcement.

Default Configuration

All extensions broadcast and receive All Call and can Page into any zone.

Programming

Required Programming

For Internal and All Call Paging

- **CP- Inhibit Access to Page Zone 3 (BY2:4)** - Allow/inhibit Paging to zone 3 for extensions with this COS.¹
- **CP- Inhibit Access to Page Zone 2 (BY2:3)** - Allow/inhibit Paging to zone 2 for extensions with this COS.¹
- **CP- Inhibit Access to Page Zone 1 (BY2:2)** - Allow/inhibit Paging to zone 1 for extensions with this COS.¹
- **CP- Inhibit Access to All Call Paging (BY2:1)** - Allow/inhibit All Call Paging for extensions with this COS.¹
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Extensions, E7- Page Zone** - Assign each extension to an internal Paging zone (01-07, or 00 for All Call only). The extension broadcasts page announcements only for the assigned zone. Each cabinet cannot have more than 36 phones in any one zone.
- **E- Extensions, EF- Paging Through Telephone Speaker** - For each extension, allow/block Paging announcements through the telephone speaker.

For External Paging

- **E- Trunks, E2- Circuit Type** - Program the ports used for External Paging as uninstalled (circuit type X).
- **QM- Music and Relay Control, Ext Page/Night Audible Line Number** - In large systems, assign the trunk number the system uses for All Call Paging and Night Audible. In VS ≥ Aux Module 2.0/Base 5.0, enter Y to have All Call and zone 1 broadcast over the main CEU PA terminals. In VS versions earlier than AUX Module 2.0/Base 5.0, enter Y to have only All Call broadcast over the main CEU PA terminals.
- **QM- Music and Relay Control, Page Zone n Line Number (except in VS)** - Assign a trunk port for External Paging zones 1-3. All Call Paging also broadcasts over these ports.
- **QM- Music and Relay Control, External Page (VS only)** - In VS ≥ Aux Module 2.0/Base 5.0, enter Y to have zone 2 and All Call broadcast over the expansion CEU PA terminals. In versions earlier than AUX Module 2.0/Base 5.0, enter Y to have zone 1 and All Call broadcast over the expansion CEU PA terminals.
- **QM- Music and Relay Control, External Page Music Gain** - Adjust the gain for the music that plays over the External Paging ports. (Program the next two options for each of the four relays.)
- **QM- Music and Relay Control, Relay Control-Page On (except in VS)** - If enabled and Pageowner is main attendant (port 00/extension 300), relay closes each time a user makes an All Call Paging announcement. If disabled or Pageowner is other than the attendant, relay never closes for Paging.
- **QM- Music and Relay Control, Relay Control-Pageowner** - Assign the Pageowner for ringer and page control.

¹ This option does not apply to Auto-Page.

Programming

Other Programming

- **KD- Programming Keys for DSS Consoles** - Assign a key as a Paging key.
- **KS- Programming Keys for Keysets** - Assign a key as a Paging key.
- **QM- Music and Relay Control, BGM on External Page Zones** - Enable/disable Background music on the External Paging zones.

Related Features

Analog Station Interface/Off-Premise Extension

Single line (2500 type) telephones can make Page announcements. Single line telephones cannot, however, receive Page announcements.

Attendant Console (ONYX IV)

The Attendant Console can have programmable keys assigned as Page keys.

Attendant Positions

An attendant cannot use Auto-Page or receive a Page announcement.

Background Music

The External Paging zones can also broadcast Background Music.

Call Forwarding/Personal Greeting/Selectable Display Messages

Auto-Page cancels a Call Forwarding, Personal Greeting or Selectable Display Message in effect at an extension. These features also cancel Auto-Page.

Do Not Disturb

DND blocks Paging announcements.

Extension Hunting

When an OPA call rings into a Terminal Hunt group, it can ring an extension but force an Auto Page from another. For example, create a Terminal Hunt group with extensions 304 and 305 (type 02). When an OPA caller dials 304, the call hunts immediately to 305. However, extension 304's Auto Page broadcasts. This can occur if the Class of Service for extension 304 has Camp-On inhibited (CP-Inhibit Camp-On [BY0:5]=1).

External Alerting Devices

Under certain conditions, External Paging may also activate the external relays.

Headset Compatibility

Headset users hear Paging announcements in the headset.

Night Answer

Night ringing can broadcast over the All Call External Page port.

Speed Dial

An extension can have Paging functions on a One-Touch Speed Dial key.

Feature Operation

To make an All Call Page or a Zone Page:

- Step 1 ➤ Lift handset.
If you have a Page key, you can press the key and skip steps 2 and 3 below.
- Step 2 ➤ Press INTERCOM (skip at ESL set).
Look for: INTERCOM On
Listen for: Dial tone
- Step 3 ➤ Dial Page Zone access code, as follows:

Page Zone	Access Code
All Call	1*
1	2*
2	3*
3	4*
4	5*
5	6*
6	7*
7	8*

Listen for: Two beeps

Feature Operation (Cont'd)

Step 4 > Make announcement.
If the zone is busy, try later. All Call Page overrides a Zone Page in progress.

Step 5 > Hang up.

User-Programmable Feature...

In VS, you can allow or deny Pages to your keyset.

PGM# + VP + Y(es) or N(o) + SAVE

To record an Auto-Page announcement (56x120 and 72x180 systems only):

Step 1 > Lift handset.

Step 2 > Press INTERCOM.

Look for: INTERCOM On

Listen for: Dial tone

If you have an ESL set, skip this step.

Step 3 > Press PGM#.

Listen for: Dial tone stops

Step 4 > Dial 687.

Listen for: Voice message that asks you to start recording.

Step 5 > Record your Auto-Page announcement when you hear the beep.

Step 6 > Dial the Page Zone code (1-8) when you are done.

Page Zone	Access Code
All Call	1
1	2
2	3
3	4
4	5
5	6
6	7
7	8
Look for:	MSG Slow Flash (green)
Listen for:	Dial tone

Step 7 > Hang up.

To cancel your Auto-Page announcement:

Step 1 > Lift handset.

Step 2 > Press INTERCOM.

Look for: INTERCOM On

Listen for: Dial tone

If you have an ESL set, skip this step.

Step 3 > Dial #.

Listen for: Dial tone stops

Step 4 > Hang up.

Look for: MSG goes out

Description

The system trunks can connect to Centrex/PBX lines, rather than to telco trunk circuits. If installed behind a PBX, the trunk inputs into the system are 500/2500 compatible Centrex/PBX extensions. PBX/Centrex Compatibility lets the system be a node in a larger private telephone network. To make the system compatible with a Centrex/PBX, the system administrator:

- Enters the PBX/Centrex trunk access codes into the system
- Designates trunks as PBX/Centrex lines

When behind a Centrex/PBX, the system begins Toll Restriction after the user dials the PBX/Centrex trunk access code. The Centrex/PBX may further restrict the call.

Conditions

None

Default Configuration

No PBX Access Codes programmed.

Programming

Required Programming

- **E- Trunks, E7- Trunk Service Number** - Enter 11 for each PBX trunk.
- **QB- PBX Access Codes** - Designate up to 11 PBX access codes.

Other Programming

- **E- Trunks, E2- Circuit Type** - Assign the correct circuit type to each trunk connected to the PBX.
- **KS- Programmable Keys for Keysets** - Program "Feature" keys for complex PBX/Centrex functions.
- **QT- System Timers, Flash Response Time** - Program the Flash time for Compatibility with the connected PBX/Centrex.

Related Features

Automatic Route Selection/Least Cost Routing

Do not use ARS behind a Centrex/PBX.

A PBX trunk should not normally be in an ARS or LCR service group. For ARS/LCR to route calls to PBX lines:

- Place the PBX lines in unique service groups
- Have digit insertion (Dial Treatments) insert the PBX access codes for each number dialed

Centrex Compatible Feature Keys

Keyset users can have programmable keys assigned to complex PBX/Centrex functions. To implement the function, the user just presses the programmable key.

Line (Trunk) Rotaries

Place PBX lines in their own trunk rotaries.

Speed Dial

If a Speed Dial number uses a DP trunk and contains a pause, Pulse to Tone Conversion is automatic. The digits before the pause dial out DP. The digits after the pause dial out DTMF. This may affect PBX/Centrex operation.

Toll Restriction

If a trunk is a PBX trunk, Toll Restriction begins after the user dials the PBX access code.

If only the PBX/Centrex should apply restriction, make no QB entries but use Type 11 for E7. The system does not apply Toll Restriction to trunks with this programming.

PBX/CENTREX COMPATIBILITY

Feature Operation

- To place an outside call if the system is behind a PBX/Centrex:**
- Step 1 >** Access outside trunk.
 - Step 2 >** Dial PBX trunk access code before the number you want to reach.
After you hang up, you must wait about one second before placing your next call on the PBX trunk.

Description

An extension user can record a Personal Greeting (i.e., brief message) for their extension. Once recorded, callers to the extension hear the Personal Greeting. Additionally, Personal Greeting can automatically forward calls to a specified extension after the recorded greeting plays. The user can have the recorded greeting optionally play for all calls or just Intercom calls.

Personal Greeting lets extension users handle their unanswered calls with a personal touch. For example, a user (e.g., Fred Jones) could record, "Hello, this is Fred Jones. I'm on vacation this week and John Smith will be handling my calls. Thank you." Fred could then redirect his calls to John Smith's extension. Callers to Fred's phone would first hear his recorded message. The system would then send them to John's phone.

Personal Greetings require a VAU or OPA/VAU PCB. The VAU or OPA/VAU PCB installs in a trunk slot, replacing four trunk circuits. There are three broadcast channels and two record channels on the VAU and OPA/VAU PCBs. This means that the system can play three greetings and record two greetings at the same time. The system queues users for an available record channel by consecutive extension number. The queued users hear ringing while waiting.

Personal Greeting is not available in VS.

Conditions

- a. Personal Greetings cannot be longer than 16 seconds. The total of all Personal Greetings cannot exceed 256 seconds.
- b. Personal Greetings are lost when power fails.

Default Configuration

No Personal Greetings recorded.

Programming

Required Programming

None

Other Programming

- CP- Inhibit Call Forwarding (BY0:6) - Enable this option (0) if extensions with this COS should be able to use Personal Greeting.
- E- Extensions, E3- Class of Service - Assign Class of Service to extensions.

Related Features

Attendant Positions

The attendant cannot record a Personal Greeting. Also, an extension user should not have Personal Greeting automatically Call Forward to an attendant.

Call Forwarding/Paging/Selectable Display Messages

Personal Greeting cancels a Call Forwarding, Auto-Page or Selectable Display Message in effect at an extension.

Central Office Calls, Answering/Direct Inward Lines/Transfer

Outside calls ringing an extension directly (either DILs or via Transfer) hear the Personal Greeting, if enabled. The outside call then rings the specified extension. If there is no specified extension, the call rings all extensions with ringing for the trunk. Outside calls ringing a line key don't activate Personal Greeting.

Feature Operation

To record a Personal Greeting:

If you already have a Personal Greeting recorded, the new greeting replaces the old.

- Step 1 > Lift handset.
- Step 2 > Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
If you have an ESL set, skip this step.
- Step 3 > Press PGM#.
Listen for: Dial tone stops

Step 4 > Dial 68.

Step 5 > Dial Personal Greeting option:

The options are:

2 All Calls forwarded, greeting plays for all callers (and Transfer screens)

4 All Calls forwarded, greeting for Intercom calls only

A voice message asks you to start recording.

If you hear, "Audio file is full," you cannot record a Personal Greeting. The system greeting total exceeds 256 seconds. Go to "To cancel your Personal Greeting" and cancel your greeting.

Step 6 > Start recording when you hear the beep.
Your Personal Greeting cannot be longer than 16 seconds.

Step 7 > (Optional) Dial the number of the extension that should receive your calls.
If you skip this step, callers just hear your message.
The forwarding assignment remains until you cancel it, even if the VAU fails or is removed.
Do not forward to an attendant.

Step 8 > Hang up.
Look for: MSG Slow Flash

To cancel your Personal Greeting:

- Step 1 > Lift handset.
- Step 2 > Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
If you have an ESL set, skip this step.
- Step 3 > Press PGM#.
Listen for: Dial tone stops

Step 4 > Hang up.
If you want to use Personal Greeting again, you'll have to record a new greeting.

To erase all Personal Greetings system-wide (from your attendant or ACD Supervisor extension):

This also erases all the system's Operator Assistance messages and the ACD All Agents Busy announcement.

- Step 1 > Lift handset.
- Step 2 > Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
- Step 3 > Press PGM#.
Listen for: Dial tone stops
- Step 4 > Dial 68.
- Step 5 > Press PGM#, 9.
Listen for: Dial tone
To cancel this procedure, dial 6.

Description

Prime Line Selection lets a keyset user answer or place an outside call by just lifting the handset. The user does not have to first press a line key. This simplifies handling calls on a frequently used trunk. There are two types of Prime Line Selection: Ringing Prime Line and Idle Prime Line.

Ringing Prime Line

With Ringing Prime Line, the user just lifts the handset to answer a call ringing or flashing the Prime Line key. To place a call on an idle Prime Line key, the user must lift the handset and press the key.

Idle Prime Line

Idle Prime Line lets the user place or answer a Prime Line key call by just lifting the handset.

Conditions

More than one extension can have a Prime Line key for the same trunk. The trunk should not, however, also be a DIL to one of the extensions.

Default Configuration

No Prime Lines defined.

Programming

Required Programming

- **E- Extensions, E8- Line Access Options, Key Access to Outbound Lines** - The extension must have outbound line key access to use the Prime Line key for placing calls.
- **E- Extensions, ED- Trunk Control, Access Control** - The extension must have access for the trunk appearing on the Prime Line key.
- **E- Extensions, ED- Trunk Control, Call-Out Control** - For outgoing calls, the extension must have call-out enabled for the trunk appearing on the Prime Line key.
- **E- Extensions, EL- Prime Line Key** - Enter the Prime Line key number (1-24), followed by the option. The options are:
 - R Ringing Prime Line
 - I Idle Prime Line
- **KS- Programming Keys for Keysets** - Program the Prime Line key as a line key.

Other Programming

None

Related Features

Attendant Positions

Prime Line Selection does not apply to an attendant in the headset mode.

Class of Service/Night Answer/Toll Restriction

If an extension's COS has CP- Allow Only Intercom Calls at Night (BY0:2=1), the extension cannot use Prime Line Selection at night.

Ringing Line Preference

Ringing Line Preference overrides Prime Line Selection.

PRIME LINE SELECTION

Feature Operation

- To answer a Prime Line key call:**
- Step 1 > Lift handset.
Look for: Prime Line key On (red/green)
Listen for: Conversation with caller
- To place a Prime Line key call (if your extension has Ringing Prime Line):**
- Step 1 > Lift handset.
Step 2 > Press Prime Line key.
Look for: Prime Line key On (red/green)
Listen for: Dial tone
- To place a Prime Line key call (if your extension has Idle Prime Line):**
- Step 1 > Lift handset.
Look for: Prime Line key On (red/green)
Listen for: Dial tone
- To place a call other than on your Prime Line key (if your extension has Idle Prime Line):**
- Step 1 > Preselect line key or press INTERCOM.
Look for: Line key On (red/green)
INTERCOM On
Listen for: Dial tone
- User-Programmable Feature...**
In VS, you may be able to assign Prime Lines for your keyset.
PGM# + PLA + Line key + Y(es) or N(o) + SAVE

Description

An extension with Privacy blocks incoming Intrusion (Barge-In) attempts, Silent Monitor and Call Waiting (Camp-On) signals. Privacy helps extension users that don't want their conversations interrupted.

Conditions

While on an Intercom call, a user with Privacy will hear Barge-In and Call Waiting directed to the other extension. However, this will not occur if the other extension also has Privacy enabled.

Default Configuration

Extensions do not have Privacy.

Programming

Required Programming

- > CP- Allow Privacy (BY1:6) - Enable/disable Privacy for extensions with this Class of Service.
- > E- Extensions, E3- Class of Service - Assign Class of Service to extensions.

Other Programming

None

Related Features

Attendant Positions

Since the attendant is never busy for Intercom calls, the attendant always has Privacy.

Off-Hook Signaling

Privacy does not block Off-Hook Signaling.

Feature Operation

None

PRIVACY GROUPS

Description

The system administrator can program keysets into Privacy Groups. When an extension is in a Privacy Group, the user can enter another group member's outside call unannounced and uninvited. To join the call, the user just presses the line key. Privacy Groups provide simplified Conferencing on outside calls for co-workers that often must share calls.

If desired, a Privacy Group member can prevent Privacy Group interruptions for their active call. This ensures that group members will not interrupt confidential calls.

In addition to Privacy Groups, the following features also allow three-party calls:

- Conference
- Intrusion
- Meet-Me-Conference
- Tandem Calls

Conditions

When a Privacy Group member joins an outside call, it creates a three-party call. The system allows eight simultaneous three-party calls.

Default Configuration

No Privacy Groups defined.

Programming

Required Programming

- E- Extensions, EC- Privacy Group - Assign an extension to a Privacy Group (01-99).
- KS- Programming Keys for Keysets - Privacy Group members must have line keys.

Other Programming

- E- Extensions, E8- Line Access Options, Key Access to Outbound Lines - Privacy Group members must have key access to outbound trunks.
- E- Extensions, ED- Trunk Control, Access Control - A Privacy Group member must have access to join a conversation on a trunk.

Related Features

Conference

A Privacy Group member cannot join a Conference call.

Feature Operation

To join a conversation with a member of your Privacy Group:

Look for: Line key On (red)
If the group member just placed the call, you must wait six seconds before joining it.

Step 1 > Lift handset.

Step 2 > Press line key.

Look for: Line key On (red green)
CONF On (red green)
Listen for: Join conversation in progress

To prevent a member of your Privacy Group from interrupting your call:

This prevents members of your group from joining your call.

Step 1 > Establish call on line key.

Look for: Line key On (red) - Fast Flash (green)
Listen for: Conversation with caller

Step 2 > Press line key for call you are on.

Look for: Line key On (red green)

PRIVATE LINE

Description

A Private Line is a trunk reserved for a single or group of keysets for placing and answering calls. A user with a Private Line knows when important calls are for them. Additionally, the user has their own trunk for placing calls that is not available to others in the system.

There are three types of Private Lines:

- **Incoming only** - The keyset has a Private Line only for incoming calls. The user cannot place a call on the Private Line.
- **Outgoing only** - The keyset has a Private Line only for outgoing calls. The Private Line does not ring for incoming calls.
- **Both ways** - The keyset has a Private Line for both incoming and outgoing calls.

Conditions

None

Default Configuration

No Private Lines assigned.

Programming

Required Programming

- **E- Extensions, E8- Line Access Options, Key Access to Outbound Lines** - Enable outbound access to allow the keyset user to place calls on the Private Line (if also allowed by ED programming).
- **E- Extensions, ED- Trunk Control, Ring Control** - Enable/disable ringing for the Private Line. Assign ringing only for those extensions that have the Private Line.
- **E- Extensions, ED- Trunk Control, Access Control** - Assign access for each Private Line. Assign access only for those extensions that have the Private Line.
- **E- Extensions, ED- Trunk Control, Call-Out Control** - Enable call-out if the extension user should be able to place calls on the Private Line. Enable callout only for those extensions that have the Private Line.
- **E- Trunks, E2- Circuit Type** - Program correct circuit type for Private Lines.
- **KS- Programming Keys for Keysets** - Assign the Private Line to a programmable key. Assign the key only on those extensions that should have the Private Line.

Other Programming

- **NP- Programming Names and Messages** - Assign names to incoming Private Lines. The name displays after a display telephone user answers a call on the Private Line.

Related Features

Attendant Console (ONYX IV)/Direct Station Selection, Console

The Attendant and DSS Consoles can have keys assigned as Private Line keys.

Automatic Handsfree

If the system has Automatic Handsfree, an extension user can answer the Private Line by pressing the line key.

Automatic Route Selection/Least Cost Routing/Toll Restriction

The system applies the same ARS, LCR and Toll Restriction to Private Lines as it applies to other trunks.

Call Forwarding

An extension user cannot forward a Private Line. If you need to forward private calls, consider using a Direct Inward Line with restricted access.

**Related Features
(Cont'd)**

Call Parking

An extension must have access to a Private Line to be able to pick it up from a Park Orbit.

Extension Hunting

Private Lines do not initiate hunting unless transferred.

Group Ring

Private Lines can activate Group Ring, if programmed.

Hold

A Private Line placed on Hold and forgotten recalls the extension that placed it on Hold. If still not picked up, it also recalls those extensions that share it (if any).

Last Number Redial/Save/Speed Dial

An extension user can have these features dial out on a Private Line.

Line (Trunk) Rotaries

Avoid including Private Lines in trunk rotaries. This maximizes their availability to those extensions that have the Private Line.

Night Answer

Night Answer can redirect Private Lines at night (off hours).

Prime Line Selection

A keyset user can have Prime Line Selection simplify placing and answering calls on their Private Line.

Privacy Groups

To ensure privacy on Private Lines, avoid putting them in Privacy Groups.

Toll Restriction

Toll Restriction works normally on Private Lines.

Transfer

A keyset user can Transfer a Private Line to any extension. The destination extension does not need access to the Private Line. If unanswered, the Private Line only recalls to the Transferring extension and the extensions that share it.

Feature Operation

To answer a call on your Private Line:

Look for: Private Line key Slow Flash (red)
Listen for: Trunk ring

Step 1 ► Lift handset.

Step 2 ► Press Private Line key.

Look for: Private Line key On (red/green)
Listen for: Conversation with caller

To place a call on your Private Line:

Step 1 ► Lift handset.

Step 2 ► Press Private Line key.

Look for: Private Line key On (red/green)
Listen for: Dial tone

Step 3 ► Dial number.

PROGRAMMABLE KEYS

Description

Each keyset has programmable keys. Programmable keys simplify placing calls, answering calls and using certain features. The 30-button keyset has 24 programmable keys. The 10-button keyset has four programmable keys.

The system administrator can customize the function of the programmable keys from the programming terminal. The chart below shows the programmable key functions and their corresponding features.

Key	Feature
Extension Speed Dial	Speed Dial
Feature	Centrex Feature Keys
Fixed Loop	Central Office Calls
Group Pickup	Group Call Pickup
Hotline	Hotline
ICM Directory Dialing	Directory Dialing (ONYX IV)
On/Off Duty	Automatic Call Distribution (ONYX IV)
Line	Central Office Calls
Orbit	Call Parking
Page	Paging
Record	Voice Mail Compatibility
Split	Split (ONYX IV)
Station Pickup	Call Coverage
Station Appearance	Dual Line Appearance (ONYX IV)
Switched Loop	Central Office Calls
System Speed Dial	Speed Dial
Timer	Call Timer
Voice Over	Reverse Voice Over (ONYX IV)

On 30-button keysets, some programmable keys may have two additional functions. Keys 1-20 become Speed Dial keys when the user presses DIAL. Keys 1-15 become DSS keys when the user presses INTERCOM. Refer to the Speed Dial and Direct Station Selection, Extension features for the specifics.

Conditions

If you replace a 30-button keyset with a 10-button keyset, the system erases the programming for keys 1-20.

Default Configuration

The 30-button keyset has keys 1-24 (1-16 in VS) assigned as line keys for trunks 1-24 (1-16 in VS).

The 10-button keyset has keys 21-24 assigned as line keys for trunks 21-24.

Programming



Required Programming

KS- Programming Keys for Keysets - Assign a keyset's programmable keys.

Other Programming

Refer to the individual features.

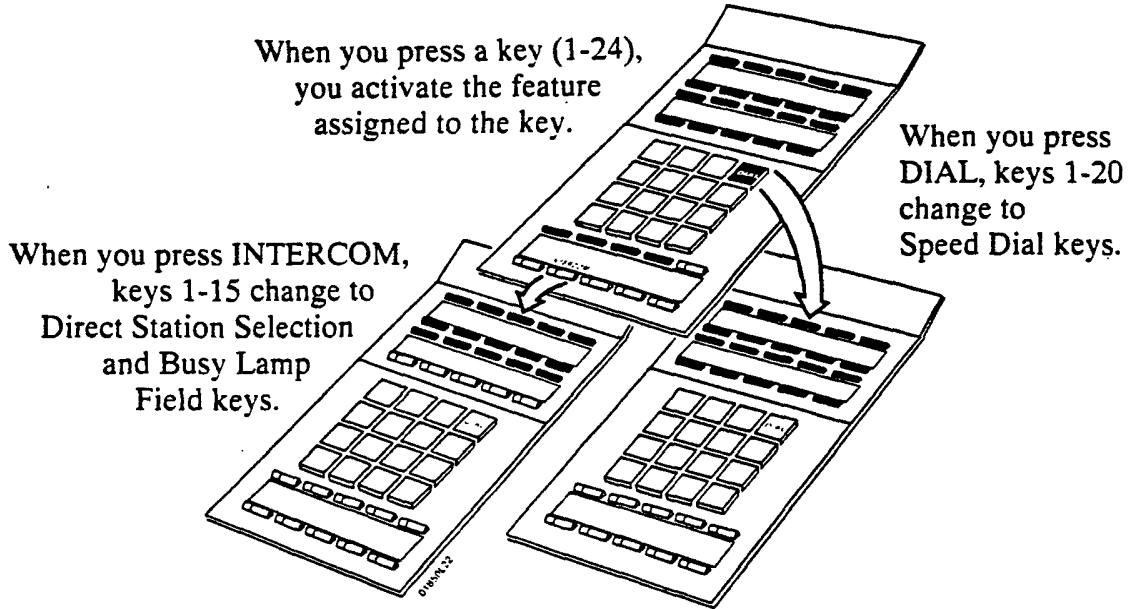
Related Features

Attendant Console (ONYX IV)

The Attendant Console has 20 programmable keys. See the Attendant Console feature for more on these keys.

Feature Operation

Using Your Programmable Keys



Refer to the individual features for the specifics.

RELEASE KEY

Description

The last button on the DSS Console is the RLS (Release) key. The keyset user or attendant can press this key to disconnect a call, instead of hanging up the handset. The Release Key is a convenience if the user is in the handset mode and wants to immediately place another call.

If the keyset is in the headset mode (and is not an attendant), the HF key functions as the Release key. While in the headset mode, attendants must use the RLS key to hang up calls.

Conditions

None

Default Configuration

Key 80 on the DSS Console is always the RLS (Release) key.

Programming

Required Programming

- **E- Extensions, EF- Headset Mode** - Enable headset mode for each keyset that has a headset. On non-attendant keysets, the HF key becomes the Release key.

Other Programming

- **KD Programming Keys for DSS Consoles** - Assign consoles to extensions and program DSS Console keys.

Related Features

Attendant Console (ONYX IV)

The Attendant Console also has a Release key. For more details, refer to the Attendant Console feature.

Automatic Fault Reporting

The attendant can use the RLS key on the DSS Console to clear the alarm display.

Headset Compatibility

If a non-attendant keyset is in the headset mode, the HF key functions as the Release key. Attendants must use the RLS key to hang up calls.

Feature Operation

To disconnect the call you are on:

- Step 1 ➤ Press RLS on your DSS Console.

REMOVING TRUNKS AND EXTENSIONS FROM SERVICE

Description

The attendant can remove problem trunks and extensions from service. The trunk or extension must be idle. This helps the attendant ensure maximum system performance. For example, the attendant can busy-out a noisy trunk or problem extension until service personnel can repair the problem. The trunk or extension then appears busy to all callers. Following repair, the system administrator (from the programming terminal) or attendant can return the extension or trunk to service.

The extension or trunk removed from service shows as busy on the appropriate telephone keys (e.g., line, Hotline, or DSS key). When the attendant removes a trunk from service, the corresponding LED on the trunk card goes on.

Conditions

- a. On power up, the system automatically does a side tone test on each trunk. Refer to **IS- Side Tone Test** for more information.

Default Configuration

All attendants can remove trunks and extensions from service.

Programming

Required Programming

- **CP- Inhibit Call Forwarding (BY0:6)** - The attendant must have Call Forwarding capability (in COS 0) to remove trunks and extensions from service. The system automatically assigns COS 30 to attendants. COS 30 uses COS 0 programming.

Other Programming

- **IP - Port Release** - This utility lets the system administrator return a trunk or extension to service from the programming terminal.
- **QC- Operator Programming** - Designate attendant extensions.

Related Features

Automatic Fault Reporting

The attendant's alarm display can indicate faulty extensions or trunks.

Call Forwarding/Paging/Personal Greeting/Selectable Display Messages

Removing an extension from service, and then returning it to service cancels these features (if activated).

Feature Operation

To remove a problem trunk or extension from service (from your attendant's extension):

- Step 1 ➤ Lift handset.
- Step 2 ➤ Press INTERCOM.
 - Look for: INTERCOM On
 - Listen for: Dial tone
- Step 3 ➤ Press PGM#.
 - Listen for: Dial tone stops
- Step 4 ➤ Dial trunk or extension number.
 - Use the trunk extension numbers (e.g., 480), not the trunk number (e.g., 801).
- Step 5 ➤ Dial 0.
 - Look for: Line key On (red), if appearing on your phone
OR
DSS Console key On (red), if appearing on your console
 - Listen for: Dial tone

REMOVING TRUNKS AND EXTENSIONS FROM SERVICE

Feature Operation (Cont'd)

- To return a trunk or extension to service (from your attendant's extension):**
- Step 1 >** Lift handset.
- Step 2 >** Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
- Step 3 >** Press PGM#.
Listen for: Dial tone stops
- Step 4 >** Dial trunk or extension number.
Use the trunk extension numbers (e.g., 480), not the trunk number (e.g., 801).
- Step 5 >** Hang up.
Look for: Line key Off, if appearing on your phone
OR
DSS Console key Off, if appearing on your console

Description

While on a handset call, Reverse Voice Over lets a busy keyset user make a private Intercom call to an idle co-worker. The busy user just presses a specially programmed Reverse Voice Over key to make a private call to a specified co-worker. The initial caller cannot hear the Reverse Voice Over conversation. The private Intercom call continues as long as the user holds down the Reverse Voice Over key. The initial call can be an outside call or an Intercom call.

Reverse Voice Over could help a salesman, for example, when placing a call to an important client. The salesman can talk with the client *and* give special instructions to a secretary -- without interrupting the initial call.

A keyset's Reverse Voice Over key shows at a glance the status of the associated extension:

When the key is...	The extension is...
Off	Idle
On	Busy or call ringing
Fast Flash	In Do Not Disturb

Reverse Voice Over is only available in ONYX IV.

Conditions

None

Default Configuration

No Reverse Voice Over Keys programmed.

Programming

Required Programming

- ▶ **KS- Programming Keys for Keysets** - For each Reverse Over Key, enter V followed by the destination extension number. For example, V305 is a Reverse Voice Over key to extension 305.

Other Programming

None

Related Features

Automatic Call Distribution/Extension Hunting

An extension cannot have a Reverse Voice Over key for an ACD/UCD master or ring group.

Conference

An extension user cannot join a Reverse Voice Over Call in a Conference.

Direct Station Selection

When the extension is idle, the Reverse Voice Over key works like a DSS key. However, the user doesn't have to press INTERCOM to activate it.

Do Not Disturb

DND does not block incoming Reverse Voice Over calls.

Hold

An extension cannot put an incoming Reverse Voice Over call on Hold.

Transfer

The user cannot press a Reverse Voice Over key to transfer a call.

REVERSE VOICE OVER (ONYX IV)

Feature Operation

To place a Reverse Over call:

You must be on a handset call.

Step 1 >

Press and hold your Reverse Voice Over key.

Look for: (Modular) -- Reverse Voice Over key On (red), Fast Flash (green)
(Non-modular) -- Reverse Voice Over key On (red)

Listen for: Two beeps, then begin speaking

If the extension you call doesn't have Handsfree, they must lift the handset to respond.

Description

Ringling Line Preference lets a keyset user answer a ringing call by just lifting the handset. For a user that primarily answers calls, Ringling Line Preference ensures that ringing calls have priority.

Conditions

If an extension has more than one call ringing its programmable keys, the system answers the call on the lowest numbered key first.

Default Configuration

Ringling Line Preference disabled.

Programming

Required Programming

- **E- Extensions, E8- Ringling Line Preference** - Enable/disable Ringling Line Preference for each extension. This option applies to all calls ringing the extension.
- **KS- Programming Keys for Keysets** - Program the line and loop keys that will ring the extension.

Other Programming

- **E- Extensions, ED- Trunk Control, Ring Control** - Designate which trunks should ring the keyset.
- **E- Extensions, ED- Trunk Control, Access Control** - Assign access for the trunks the extension should be able to answer.
- **E- Trunks, E9- Direct Trunk Termination** - Direct Inward Lines can also ring an extension directly. Use this option to assign the DIL destination.

Related Features

Attendant Positions

Intercom calls to an attendant follow E8- Ringling Line Preference programming. Normally, attendants should not have Ringling Line Preference.

Automatic Handsfree

With Ringling Line Preference, an extension user can press HF to answer a ringing call if their extension has Automatic Handsfree.

Call Coverage Keys

A ringing Call Coverage Key will not activate Ringling Line Preference.

Group Call Pickup

A ringing group Call Pickup key will not activate Ringling Line Preference.

Group Ring

If an extension with Ringling Line Preference has a Group Ring call and an outside call ringing, the extension answers the Group Ring call first.

Intercom

If an extension has an Intercom and an outside call ringing, Ringling Line Preference answers the Intercom call.

Prime Line Selection

Ringling Line Preference overrides Prime Line Selection.

RINGING LINE PREFERENCE

Feature Operation

To answer a call using Ringing Line Preference (from your keyset):

- Look for: Line key Slow Flash (red)
OR
INTERCOM Slow Flash
Trunk or ICM
- Listen for:
- Step 1 ► Lift handset.**
- Look for: Line key On (red:green)
OR
INTERCOM On
- Listen for: Conversation with caller

To place a call if you have Ringing Line Preference (and a call is already ringing):

- Step 1 ► Press line key or INTERCOM before lifting the handset.**

User-Programmable Feature...

In VS, you can allow or deny Ringing Line Preference for your keyset.

PGM# + RLP + Y(es) or N(o) + SAVE

Description

Save permits a keyset user to save their last outside number and easily redial it later on. For example, an extension user can recall a busy or unanswered number without manually dialing the digits. The system retains the saved number until the user stores a new one in its place.

Save can retain a number up to 24 digits long. The number can be any combination of digits 0-9, # or *. Normally, the system uses the same trunk (or rotary) for Save as the user selected for the initial call. The user can, however, select a different trunk before implementing Save.

Conditions

In VS, 12x36 and 32x60 systems, a Saved number is lost when the system resets or AC power fails. In VS, a system reset also erases the stored numbers.

Default Configuration

Save always allowed.

Programming

Required Programming

None

Other Programming

- **QX- Suppress "#" When Speed Dialing** - Allow or prevent the system from outdialing a # if dialed as part of the initial call.

Related Features

Automatic Route Selection/Least Cost Routing/Toll Restriction

The system subjects a saved number to the same routing and restriction as if the user manually dialed. The system always routes a saved number through ARS/LCR, unless the user manually selects a trunk.

Last Number Redial

Last Number Redial also simplifies recalling a busy or unanswered call.

Line (Trunk) Queuing

If a user hears busy tone after trying to dial a saved number, the user may queue for an available trunk.

Toll Restriction

If you don't dial enough digits (as determined by your Toll Restriction programming), Save will not retain the digits you dial.

Feature Operation

To Save an outside number any time after placing a call:

- Step 1 ➤** Do not hang up.
Look for: Line key On (red/green)
- Step 2 ➤** Press DIAL.
Look for: Line key Off
On Attendant telephone P/N 88254, just press SAVE and skip the next step.
- Step 3 ➤** Press SAVE.
Look for: Line key On (red/green)

SAVE

Feature Operation (Cont'd)

To dial a Saved outside number:

To use a different trunk than the initial call, select a different trunk or rotary before going to step 1.

Step 1 > Lift handset.

Step 2 > Press DIAL.

Listen for: Dial tone

On Attendant telephone P N 88254, just press SAVE and skip the next step.

Step 3 > Press SAVE.

Look for: Line key On (red/green)

Listen for: Stored number dialing out

If you hear busy tone, press an idle line key. Your call dials out automatically.¹

¹ To do this, you must have:

- Line loop keys programmed (see KS- Programming Keys for Keysets)
- Key access to outbound trunks (see E8- Key Access to Outbound Lines)
- (Optional) Access to Trunk Groups (see E8- Access to Groups 90-95)

SELECTABLE DISPLAY MESSAGES

Description

An extension user can select one of 64 (16 in VS) preprogrammed Selectable Display Messages for their extension. Display keyset callers see the selected message when they call the user's extension. Selectable Display Messages provide personalized messaging. For example, Fred Jones could select the message, "On vacation." Any display keyset user calling Fred would see the message and know why he doesn't answer. Other than displaying the message, the system puts the call through normally.

The system administrator can program up to 64 (16 in VS) messages from the programming terminal. Each message can be up to 16 digits long.

An extension user can add digits to (append) the first eight Selectable Display Messages (00-07). For example, the administrator could program message 00 with, "Call." An extension user could select this message and add the numbers where they can be reached (e.g., 888-8000). Callers to the extension would see, "Call 888-8000." The original message plus the appended digits cannot exceed 16 digits.

Conditions

- a. Any number of extensions can choose the same message. However, a single extension can choose only one message. The appended part of messages 00-07 can be different for each extension.
- b. A power failure cancels Selectable Display Messages. In VS, a reset also cancels Selectable Display Messages.

Default Configuration

No Selectable Display Messages programmed.

VS systems without AUX Modules have 16 preset messages. They are:

00=CALL	08=BACK BY 10AM
01=BACK BY	09=BACK BY 11AM
02=MEETING IN RM	10=BACK BY NOON
03=OUT TO LUNCH	11=BACK BY 2PM
04=GONE FOR THE DAY	12=BACK BY 4PM
05=ON VACATION	13=BACK TOMORROW
06=ON BUSINESS TRIP	14=BACK NEXT WEEK
07=IN THE MEETING	15=HAVE A GOOD DAY

Installing an AUX Module and initializing erases the preset messages.

Programming

Required Programming

- **NP- Programming Names and Messages** - Program up to 64 Selectable Display Messages. From the terminal, messages 00-63 are numbered 600-663. Users can append messages 600-607 (00-07) by dialing additional digits.

Other Programming

- **CP- Inhibit Call Forwarding (BY0:6)** - Disable this option (0) for each COS with Selectable Display Messaging capability.
- **E- Extensions, E#- Class of Service** - Assign Class of Service to extensions.

Related Features

Call Forwarding/Paging/Personal Greeting

Enabling Selectable Display Messages cancels a Call Forwarding, Auto-Page or Personal Greeting in effect at an extension.

Speed Dial

An extension user can have a One-Touch Speed Dial key for Selectable Display Messaging.

SELECTABLE DISPLAY MESSAGES

Related Features (Cont'd)

Voice Prompting Messages (except in VS)

If an extension user activates Selectable Display Message, a voice prompt periodically announces, "Your calls have been forwarded." Voice Prompting Messages requires a VAU or OPA VAU PCB. The VAU or OPA VAU PCB installs in a trunk slot, replacing four trunk circuits.

Feature Operation

To select a Display Message (by dialing the message number):

- Step 1 > Lift handset.
- Step 2 > Press INTERCOM.
 - Look for: INTERCOM On
 - Listen for: Dial tone
 - If you have an ESL set, skip this step.
- Step 3 > Press PGM#.
 - Listen for: Dial tone stops
- Step 4 > Dial 6.
- Step 5 > Dial the number of the Selectable Display Message (00-63).
 - If you select a message from 00-07, you can add digits to the message. The total message (including the digits you add) cannot exceed 16 digits.
- Step 6 > Hang up.
 - Look for: MSG Slow Flash (green)

To select a Display Message (by scrolling through the messages at a keyset):

- Step 1 > Lift handset.
- Step 2 > Press INTERCOM.
 - Look for: INTERCOM On
 - Listen for: Dial tone
- Step 3 > Press PGM#.
 - Listen for: Dial tone stops
- Step 4 > Dial 6.
- Step 5 > Scroll through the messages using VOL UP ▲ or VOL DN ▼.
 - If you select a message from 00-07, you can add digits to the message. The total message (including the digits you add) cannot exceed 16 digits.
- Step 6 > Press DIAL, SAVE.
 - If you append a message from 00-07, skip this step.
- Step 7 > Hang up.
 - Look for: MSG Slow Flash (green)

To cancel a Selectable Display Message you enabled for your extension:

- Step 1 > Lift handset.
- Step 2 > Press INTERCOM.
 - Look for: INTERCOM On
 - Listen for: Dial tone
 - If you have an ESL set, skip this step.
- Step 3 > Press PGM#.
 - Listen for: Dial tone stops
- Step 4 > Hang up.
 - Look for: MSG Off

Description

Silent Monitor lets an extension user listen to the conversation at a busy extension. To implement Silent Monitor, an extension user just calls a busy extension and dials the Silent Monitor code. The busy extension and their caller have no indication of the intrusion. There are no tones heard and there is no visual indication that monitoring is occurring. For example, Silent Monitor could help the supervisor of a service department. The department supervisor could listen to the questions that callers ask without disturbing the service call.

An extension in a Pickup Group can only monitor other extensions in their Pickup Group (see Group Call Pickup). However, an extension not assigned to a Pickup Group (00) can monitor any system extension.

CAUTION: Silent Monitor provides no warning tones prior to Intrusion. Silent Monitor may be interpreted as an invasion of privacy.

Conditions

ESL set users cannot initiate Silent Monitor.

Default Configuration

Silent Monitor not allowed.

Programming

Required Programming

- **CP- Allow Silent Monitor (BY2:5)** - Enable/Disable the ability to initiate Silent Monitor in an extension's Class of Service.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Extensions, EC- Group Call Pickup Group** - Assign the Group Call Pickup number to extensions (01-23, 00 for no group).

Other Programming

None

Related Features

Intercom

When monitoring Intercom calls, the monitoring user hears only the conversation into the busy extension. The monitoring user does not hear the busy extension user's voice.

Privacy

Privacy blocks Silent Monitor. An extension with Privacy cannot have its conversation's monitored.

SILENT MONITOR

Feature Operation

To use Silent Monitor to listen to the conversation received by another extension:

Step 1 ▶ Lift handset.

Step 2 ▶ Press INTERCOM.

Look for: INTERCOM On
Listen for: Dial tone
If you have an ESL set, skip this step.

Step 3 ▶ Dial number of extension you want to monitor.

Listen for: Busy tone

Step 4 ▶ Dial 6.

You can listen to the conversation coming into the extension you called. You cannot hear that extension user talk.

To cancel Silent Monitor:

Step 1 ▶ Hang up.

Description

The system is compatible with special long distance services such as MCI or GTE Sprint. The system administrator can use special services to save money on long distance calls. An extension user can access these services in two ways:

- Manually dial the special service access and security codes (refer to the Central Office Calls. Placing feature)
- Store the access and security codes in a Speed Dial bin

When using Extension Speed Dial, the user typically stores a pause between the special service access and security codes. The system will dial the access code and automatically wait for the second dial tone from the special service. When the system detects the second dial tone, it dials out the rest of the Speed Dial number. Refer to the Speed Dial feature for more details.

Optionally, the system administrator can store the OCC access and security codes in a System Speed Dial bin. This allows every user quick access to the Special Service.

To ensure that a user can dial additional digits after the special service answers, each extension should have Continued Dialing. With Continued Dialing, the telephone outputs a digit over a trunk each time the user presses a dial pad key. The system never turns off the dial pad. The system administrator enables Continued Dialing by:

- Giving the extension's Class of Service Toll Restriction Level 0
OR
- Giving the extension's Class of Service Toll Restriction Level 1-7 an active dial pad

Conditions

None

Default Configuration

System is always compatible with special services.

Programming

Required Programming

- **AP- Allow Active Dial Pad** - For Toll Restriction Levels other than 0, enable Active Dial Pad. This lets extension users dial additional digits into the special service.
- **CP- Extension Toll Restriction Level (BY1:0-2)** -
 - Toll Restriction Level 0 (dial pad always active)
 - Toll Restriction Level with an Active Dial Pad (AP) enabled.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Trunks, E2- Circuit Type** - Program Special Service trunks with the correct circuit type.
- **QT- System Timers, Dialtone Detection Counter** - Set how long the system waits for second (OCC) dial tone. This only occurs when the system encounters a pause in a Speed Dial bin.

Other Programming

None

SPECIAL SERVICES AND OCC COMPATIBILITY

Related Features

Analog Station Interface/DISA/Off-Premise Extension

The system always allows Continued Dialing for ASI and OPX extensions and DIS callers.

Automatic Route Selection/Least Cost Routing

ARS and LCR can have digit insertion/dialing translation capabilities. This makes selecting special services for outgoing calls transparent to extension users.

DP and DTMF Compatibility

After a special service answers, it requires DTMF signaling. Pulse to Tone Conversion lets a user dial a special service from a DP area.

Line (Trunk) Rotaries

Special Services trunks should be in the same trunk rotary. The system allows up to nine rotaries.

Speed Dial

The system does not restrict special service access and security codes stored in System Speed Dial bins. The system always allows Continued Dialing via chaining Speed Dial bins.

Toll Restriction

Toll Restriction may restrict the use of special services.

Feature Operation

None

Description

The Special Trunk Interface (P/N 88146) is optional equipment that provides 15 circuits for connecting the following special trunk circuits:

- Tie lines (7 max.)
- 500/2500 type Off-Premise Extensions or Direct Inward Dialing trunks (8 max.)

By allowing connection of these special circuits, the Special Trunk Interface (STI) improves the flexibility of the system. The following chart shows how many STIs the installer can connect to each system type:

System	Max STIs
12x36	1
32x60	2
56x120/72x180	4

The Special Trunk Interface requires trunk ports, an external power supply/ring generator and two unused extension ports. In addition, the STI has two DTMF receivers. The STI uses receivers in a VAU, OPA/VAU or MLU PCB only when its integral receivers are busy. For complete installation details, refer to the STI Installation and Programming Manual (P/N N1850STI01).

VS does not support the Special Trunk Interface.

Conditions

None

Default Configuration

STI not installed.

Programming

Required Programming

Refer to the STI Installation and Programming Manual (P/N N1850STI01) for complete STI programming details. Also refer to:

- Direct Inward Dialing
- Off-Premise Extension
- Tie Lines

Other Programming

None

Related Features

Analog Station Interface

The ASI allows connection of a 2500 set to a system extension port.

Feature Operation

Refer to the appropriate feature.

SPEED DIAL

Description

Speed Dial gives an extension user quick access to frequently called numbers. There are two types of Speed Dial: Personal Speed Dial and System Speed Dial. Personal Speed Dial numbers are available to individual extensions or shared by groups of extensions. System Speed Dial numbers are available to every system user.

The 12x36 and 32x60 systems allow a maximum of 2,040 Speed Dial bins (i.e., numbers), allocated in blocks of 20 bins each. In these systems, there are a total of 102 blocks. The 56x120 and 72x180 systems allow a maximum of 4,080 Speed Dial bins. These systems have a total of 204 Speed Dial blocks. The VS system (with an AUX Module) allows a maximum of 1140 bins in 57 Speed Dial blocks. A VS without an AUX Module has only 28 blocks (1-28).

The system distributes the bins between System and Personal Speed Dial. If the system administrator chooses two-digit System Speed Dial numbering (bins 70-79), almost all the Speed Dial numbers are for extensions. Conversely, the system administrator can choose four-digit System Speed Dial numbering (7000-7999). In a 32x60 system, for example, this allocates System and Personal Speed Dial about evenly. Refer to the following chart for the specifics.

Personal		System		Bin Numbers	
Blocks	Bins	Blocks	Bins	Personal	System
VS¹					
56	1120	1	10	50-59, 20-29	70-79
52	1040	5	100	50-59, 20-29	700-799
12x36 and 32x60 Systems					
101	2020	1	10	50-59, 20-29	70-79
97	1940	5	100	50-59, 20-29	700-799
52	1040	50	1000	50,59, 20-29	7000-7999
56x120 and 72x180 Systems					
203	4060	1	10	50-59, 20-29	70-79
199	3980	5	100	50-59, 20-29	700-799
154	3080	50	1000	50-59, 20-29	7000-7999

Each Speed Dial number/bin can accommodate up to 16 digits, using any combination of digits 0-9 and *.² If a number is longer than 16 digits, it automatically uses part of the next consecutive bin (up to a maximum of 32 digits). For longer numbers, an extension user can also chain (link) two Speed Dial numbers together when placing a call.

System Speed Dial

System Speed Dial numbers are accessible from any extension. The extension user need only dial the Speed Dial code or press a key, instead of dialing manually. The system administrator can program System Speed Dial numbers from the programming terminal. In addition, any extension user with Direct Trunk Access capability can also store or change these numbers.

¹ In VS, you can assign names to Speed Dial blocks 1-50.

² If using VS User Programmable Features to store a * or #, press DIAL before each * or # character you want to store.

**Description
(Cont'd)****Personal Speed Dial**

Each extension user has up to 20 Personal Speed Dial numbers reserved for their own use. By pressing DIAL, the first 20 programmable keys on a 30-button keyset become Personal Speed Dial keys. The first ten keys are for bins 50-59; the second ten for bins 20-29. All 10-button keyset and ESL users have dial access to the 20 Personal Speed Dial bins. An extension user or the system administrator (from the programming terminal) can store Personal Speed Dial numbers.

One-Touch Speed Dial

Optionally, a keyset can have any programmable key assigned for One-Touch Speed Dial. The user just presses the One-Touch Speed Dial key to get Intercom dial tone and dial the stored number. (DSS Consoles can also have One-Touch Speed Dial keys.) One-Touch Speed Dial keys allow the keyset user to store certain Intercom features. This simplifies often-used Intercom features -- the user just presses the key to use the feature. The user can store any Intercom feature that uses the digits 0-9, # and *. Normal Personal and System Speed Dial bins can also contain stored Intercom numbers.

Storing a Pause in a Speed Dial Bin

The system allows Pause commands in Speed Dial bins. Each Pause command counts as a digit. To store a Pause from an extension, the user presses HOLD while programming bins. While entering numbers from the programming terminal, the system administrator enters P. When the system sees a Pause, it waits a programmable interval for a second dial tone. If the system detects the second dial tone, it dials out the rest of the number. If the system does not detect dial tone, the user must dial * to continue with the rest of the number. Otherwise, the system disconnects the call. In a Dial Pulse area, the digits before the Pause are DP -- the digits after the Pause are DTMF. This is helpful for Special Services. Refer to the DP to DTMF Compatibility and Special Services Compatibility features.

Storing a Flash in a Speed Dial Bin

To let users access certain CO/PBX features, the system allows Flash commands in Speed Dial bins. When the system sees the Flash, it Flashes the line for a programmed Interval. To store a Flash from a keyset, the user presses MSG while programming bins. While entering numbers from the programming terminal, the system administrator types F. This option is only available in ONYX II/III ≥ 3.5 and ONYX IV (versions 1.2 and higher).

Storing a Delay in a Speed Dial Bin

The system also permits Delay commands in Speed Dial bins. A Delay causes the system to wait for a programmed interval. After the interval, the system dials the rest of the bin. You can use a Delay in lieu of a Pause, for example, if the connected telco/PBX cannot provide second dial tone. To store a Delay from a keyset, the user presses DIAL while programming bins. While entering numbers from the programming terminal, the system administrator types D. This option is only available in ONYX II/III ≥ 3.5 and ONYX IV (versions 1.2 and higher).

Storing a # in a Speed Dial Bin

You can also store # characters in a Speed Dial bin. The # digits dial out as part of the stored number, unless prevented by system programming.

Description (Cont'd)

Storing Names

Display 30-button keyset extension users and the system administrator (from the programming terminal) can assign names to Speed Dial numbers. The names can be up to 16 characters long. When a display keyset user dials a Speed Dial number, their display shows the assigned name. Additionally, Personal and Company-wide Directory Dialing use the programmed names. Storing names in VS requires an AUX Module. Also, only numbers in the first 50 VS blocks can have names.

Conditions

- a. A large system should have a MEM-B Memory PCB for full Speed Dial capability. With a MEM-A PCB, the system has only 81 Speed Dial Blocks and will not accept Speed Dial (Directory Dialing) names.
- b. The 56x120 and 72x180 systems do not let users dial-access Personal Speed Dial bins 50-59.

Default Configuration

System Speed Dial numbers are three digits long.
All Classes of Service can use System Speed Dial.
No Speed Dial numbers are programmed.

Programming

Required Programming

- CP- Inhibit System Speed Dial (BY0:7) - Allow/deny extensions with this COS the ability to use System Speed Dial numbers.
- E- Extensions, E3- Class of Service - Assign Class of Service to extensions.
- E- Extensions, EB- Speed Dial Blocks - Assign a Speed Dial block to an extension. Extensions can share a block, thereby sharing the Extension Speed Dial numbers.
- QD- Number of System Speed Dial Digits - Assign the number of System Speed Dial digits (2, 3 or 4). This allows either 10, 100 or 1000 System Speed Dial numbers. You can select only 2 or 3 for this option in VS.

Other Programming

- CP- Direct Trunk Access and Trunk Camp-On - Only extensions with Direct Trunk Access capability can store System Speed Dial numbers.
- E- Extensions, E8- Line Access Options, Line Code Dial-Up - An extension must have dial access to trunks to store trunk codes with outside Speed Dial numbers.
- E- Extensions, ED- Trunk Control, Access Control - Speed Dial can only use trunks to which an extension has access.
- E- Extensions, ED- Trunk Control, Call-Out Control - Speed Dial can only use trunks to which the extension has callout enabled.
- KS- Programming Keys for Keysets - Assign programmable keys for Personal or System Speed Dial.
- QA- Number Plan, 2nd Ten Speed Dial Bin Digit - If the standard number plan is not adequate, define a new digit for the second 10 Extension Speed Dial bins.
- QA- Number Plan, 1st Ten Speed Dial Bin Digit/Block of Third 100 Extensions Digit - If the standard number plan is not adequate, define a new digit for the first 10 Extension Speed Dial bins.
- QA- Number Plan, System Speed Dial Access Digit - If the standard number plan is not adequate, define a new System Speed Dial access digit.

Programming (Cont'd)

- **QT- System Timers, Delayed Ring Interval** - Enter the length of the Delay interval (for the Delay option in Speed Dial bins). This only pertains to ONYX II/III ≥3.5 and ONYX IV ≥1.2.
- **QT- System Timers, Flash Response Time** - Enter the length of the Flash interval (for the Flash option in Speed Dial bins). This only pertains to ONYX II/III ≥3.5 and ONYX IV ≥1.2.
- **QT- System Timers, Dialtone Detection Counter** - Enter the interval the system should wait for second dial tone after a Speed Dial Pause.
- **QX- Suppress "#" When Speed Dialing** - Allow/prevent the system from outdialing the # digit when stored in a Speed Dial bin.
- **SL- List Extension and System Speed Dial Numbers** - List the programmed Speed Dial numbers and names.
- **SP- Programming Extension and System Speed Dial Numbers** - Program Speed Dial numbers and names.
- **SR- Rotary Conversion (Converting Speed Dial Trunks)** - Globally change the Speed Dial trunk assignments.

Related Features

Account Code Capability

If the system requires Account Codes, the user must enter a code after the Speed Dial number dials out. Optionally, an extension user can store an Account Code in a Personal Speed Dial bin.

Attendant Console (ONYX IV)

The Attendant Console can have programmable keys assigned as Speed Dial keys. Refer to the Attendant Console feature.

Automatic Route Selection/Least Cost Routing

Speed Dial may bypass ARS and LCR routing. Do not use the Delay option in a bin if Speed Dial calls route through ARS.

Direct Station Selection, Console

If the DSS Console is predominantly for Speed Dial, it should have four consecutive Speed Dial blocks (programmed in EB). This prevents other extension users from sharing the console's Speed Dial numbers. If these blocks were assigned to extensions, the extensions and the DSS Console share the blocks. Reassign the extensions' blocks to prevent this.

Directory Dialing

An extension user can implement Directory Dialing instead of dialing System and Personal Speed Dial numbers.

Last Number Redial

After using Speed Dial, the user can implement Last Number Redial to redial the number. When chaining Speed Dial numbers, Last Number Redial redials the last bin selected.

Line (Trunk) Rotaries

Speed Dial bins can use trunk groups instead of specific trunks.

Programmable Keys

An extension can have a programmable key for Extension and/or System Speed Dial. However, if the system has four-digit extension Speed Dial numbers, you cannot assign numbers above 7255 to keys.

Toll Restriction

The Extension Speed Dial numbers an extension user stores are Toll Restricted. The Extension Speed Dial numbers entered at the programming terminal are not. System Speed Dial numbers are not Toll Restricted.

Feature Operation

System Speed Dial

To store a System Speed Dial Number (if your phone has Direct Trunk Access Capability):

- Step 1 > Lift handset.
- Step 2 > Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
If you have an ASI/OPX/ESL set, skip this step.
- Step 3 > Press PGM#.
Listen for: Dial tone stops
- Step 4 > Dial the System Speed Dial bin number (normally 700-799).
- Step 5 > For display keysets only:
● Dial 9 to begin storing a name.
Refer to Storing a Speed Dial Name below. Go to step 6 below when you are done.
- OR
- Dial 6 to go to the next step without storing a name.
- Step 6 > Dial the trunk code (e.g., 01) or press line key.
From a hybrid system, you can optionally enter a trunk group code (9, 90-98).
- Step 7 > Dial the telephone number.
To enter a Pause, press HOLD.
To enter a Flash, press MSG (ONYX II/III ≥ 3.5 and ONYX IV ≥ 1.2).
To enter a Delay, press DIAL (ONYX II/III ≥ 3.5 and ONYX IV ≥ 1.2).
- Step 8 > Hang up.
Look for: INTERCOM Off

To call a System Speed Dial number (by dialing a code):

- Step 1 > Lift handset.
You can preselect a trunk by pressing a line key. If you preselect, you must press INTERCOM instead of DIAL before dialing a bin number
- Step 2 > Press DIAL.
Listen for: Dial tone
If you have an ASI/OPX/ESL set, skip this step.
- Step 3 > Dial System Speed Dial bin number (normally 700-799).
Look for: Line key On (red/green) if appearing on your phone
Listen for: Stored number dialing out
If Speed Dial number contains a Pause, you may have to press * to continue dialing.
If you hear busy tone, press an idle line key. Your call dials out automatically.¹

To call a System Speed Dial number (by using a keyset Speed Dial key):

- Step 1 > Lift handset.
You can preselect a trunk by pressing a line key.
- Step 2 > Press Speed Dial key.
Look for: Line key On (red/green) if appearing on your phone
Listen for: Stored number dialing out
If Speed Dial number contains a Pause, you may have to press * to continue dialing.
If you hear busy tone, press an idle line key. Your call dials out automatically.¹

¹ To do this, you must have:

- Line/loop keys programmed (see KS- Programming Keys for Keysets)
- Key access to outbound trunks (see E8- Key Access to Outbound Lines)
- (Optional) Access to Trunk Groups (see E8- Access to Groups 90-95)

Feature Operation (Cont'd)

Personal Speed Dial

To store a Personal Speed Dial number:

- Step 1 >** Press DIAL.
Look for: HF On
Listen for: Dial tone On
If you are programming a One-Touch Speed Dial key or an ASI/OPX/ESL extension, skip this step. To store a number on a One-Touch Speed Dial key in VS, go to User-Programmable features below.
- Step 2 >** Press PGM#.
Listen for: Dial tone stops
- Step 3 >**
- Dial the Personal Speed Dial bin number (50-59, 20-29).
OR
 - Press the Personal Speed Dial bin key (1-20).
Your first bin key is 50; your last is bin 29.
OR
 - Press One-Touch Speed Dial key.
To program a One-Touch Speed Dial key in VS, see User-Programmable features.
- Step 4 >** For display keysets only:
- Dial 9 to begin storing a name.
Refer to Storing a Speed Dial Name below. Go to step 6 below when you are done.
OR
 - Dial 6 to go to the next step without storing a name.
- Step 5 >** Dial the trunk code (e.g., 01) or press line key.
From a hybrid system, you can optionally enter a trunk group code (9, 90-98).
- Step 6 >** Dial the telephone number.
To enter a Pause, press HOLD.
To enter a Flash, press MSG (ONYX II/III ≥ 3.5 and ONYX IV ≥ 1.2).
To enter a Delay, press DIAL (ONYX II/III ≥ 3.5 and ONYX IV ≥ 1.2).
- Step 7 >** Hang up.

To store an Intercom Feature (at your keyset):

- Step 1 >** Press DIAL.
Look for: HF On
Listen for: Dial tone
If you are programming a One-Touch Speed Dial key, skip this step.
- Step 2 >** Press PGM#.
Listen for: Dial tone stops
- Step 3 >**
- Dial the Speed Dial bin number (50-59, 20-29, 700-799).
OR
 - Press the Personal Speed Dial bin key (1-20).
Your first bin key is 50; your last is bin 29.
OR
 - Press One-Touch Speed Dial key.
To program a One-Touch Speed Dial key in VS, see User-Programmable features.
- Step 4 >** For display keysets only:
- Dial 9 to begin storing a name.
Refer to Storing a Speed Dial Name below. Go to step 6 below when you are done.
OR
 - Dial 6 to go to the next step without storing a name.
- Step 5 >** Press INTERCOM.
- Step 6 >** Enter Intercom code.
The code you enter can be any combination of digits 0-9, # and *.
- Step 7 >** Hang up.

Feature Operation (Cont'd)

Personal Speed Dial (Cont'd)

To call a Personal Speed Dial number (using a bin key or code):

- Step 1 >** Lift handset.
You can preselect a trunk by pressing a line key. If you preselect, you must press INTERCOM instead of DIAL before dialing a bin number.
- Step 2 >** Press DIAL.
Listen for: Dial tone
If you have an ASI/OPX/ESL set, skip this step.
- Step 3 >** Dial Personal Speed Dial bin number (20-29, 50-59) or press bin key.
Look for: Line key On (red/green) if appearing on your phone, or INTERCOM Fast Flash (for stored Intercom feature)
Listen for: Stored number dialing out
If Speed Dial number contains a Pause, you may have to press * to continue dialing.
If you have an ASI/OPX/ESL set, you can only dial the bin code (20-29, 50-59).
If you hear busy tone, press an idle line key. Your call dials out automatically.¹

To call a Personal Speed Dial number (using a One-Touch Speed Dial key):

- Step 1 >** Lift handset.
You can preselect a trunk by pressing a line key.
- Step 2 >** Press One-Touch Speed Dial key.
Look for: Line key On (red/green) if appearing on your phone, or INTERCOM Fast Flash (for stored Intercom feature)
Listen for: Stored number dialing out
If Speed Dial number contains a Pause, you may have to press * to continue dialing.
If you hear busy tone, press an idle line key. Your call dials out automatically.¹

Programming Speed Dial Names (Display Keypad Only)

To program a Speed Dial name (when your display requests it):

- Step 1 >** ● Dial 9 to begin the name storing procedure.
If you dial 9, the display shows the current name (if any).
- OR
- Dial 6 to continue Speed Dial programming with storing a name.
If you don't store a name, the previous name remains assigned (if any).
- Step 2 >** Dial the first letter of the desired name.
For example, if the name begins with T, dial 8.
To enter a blank (space), a Q or a Z, dial 0. To erase a name, dial *.
- Step 3 >** Dial the digit (1,2 or 3) that identifies the desired letter.
For example, if you dialed 8 in the previous step to select T, dial 1 now.
Press VOL DN ▼ to backspace (erase) over a character, then enter the correct letters.
- Step 4 >** Repeat steps 2 and 3 until you have entered the name.
- Step 5 >** Press PGM# (or press bin key).
You can now continue with your Speed Dial programming.

¹ To do this, you must have:

- Line/loop keys programmed (see KS- Programming Keys for Keysets)
- Key access to outbound trunks (see E8- Key Access to Outbound Lines)
- (Optional) Access to Trunk Groups (see E8- Access to Groups 90-95)

Feature Operation (Cont'd)

User-Programmable Feature

In VS, you can also use the following procedure to store Personal Speed Dial numbers at your keyset. This is the only way you can store numbers on One-Touch Speed Dial keys.

PGM# + SD + Speed key (or bin number + PGM#) + PGM# + line key (or line code + PGM#) or ICM + number (32 digits max.) + SAVE

Chaining Speed Dial Numbers (Keysets Only)

To chain Speed Dial numbers:

- Step 1 ► Place first call using Speed Dial.
Wait for number to dial out.
- Step 2 ► Press DIAL.
- Step 3 ► Press Speed Dial bin key of second number.
You can chain as many bins as you want.
Do not dial a bin number.
- OR
- Step 1 ► Place first call using Speed Dial.
Wait for number to dial out.
- Step 2 ► Press One-Touch Speed Dial key of second number.
- OR
- Step 1 ► Place first call using Speed Dial.
Wait for number to dial out.
- Step 2 ► Press INTERCOM.
- Step 3 ► Dial Speed Dial bin number (50-59, 20-29).
Dial access to bins 50-59 is prevented in 56x120 and 72x180 systems.

SPLIT

Description

With Split, an extension user can split (alternate) between a current call and a new call. Split lets the extension user easily alternate between the calls without joining (Conferencing) the parties together. In ONYX IV, every keyset can have a programmable key assigned as a Split key for one-button Split operation. Pressing the Split key automatically alternates between the call you are on and your newest incoming call.

Conditions

None

Default Configuration

Split always allowed - no Split keys defined (ONYX IV).

Programming

Required Programming

None

Other Programming

- **KS- Programming Keys for Keysets (ONYX IV)** - Enter S to assign a programmable key as a Split key.

Related Features

Call Waiting/Off-Hook Signaling

These features let an extension user know when they have a call waiting.

Central Office Calls/Answering and Placing

Extension users can Split on any trunk they can use for placing and answering calls.

Feature Operation

Using Split at a Keyset

To Split between a new call and your current call (when both your current call and new call are Intercom calls):

- Step 1 ➤ Press HOLD to put current call on Hold.
 - Look for: (Modular) -- HOLD Slow Flash (red), Fast Flash (green)
 - (Non-modular) -- HOLD Exclusive Hold
- Step 2 ➤ Press INTERCOM to answer waiting call.
 - Look for: INTERCOM Fast Flash
 - Listen for: Conversation with new caller
 - You can also Split after placing a call.
- Step 3 ➤ Press INTERCOM to begin Split.
 - Look for: INTERCOM On
 - Listen for: Dial tone
- Step 4 ➤ Press * and dial 7.
 - You answer the call on Hold. Your previous call now goes on Hold instead.
 - Repeat steps 3-5 to continue alternating between the calls.

To Split between a new call and your current call (when your current call is an Intercom call and your new call is an outside call):

- Step 1 ➤ Press HOLD to put current call on Hold.
 - Look for: (Modular) -- HOLD Hold Flash (red), Fast Flash (green)
 - (Non-Modular) -- HOLD Exclusive Hold
- Step 2 ➤ Press line key to answer waiting call.
 - Look for: Line key On (red/green)
 - Listen for: Conversation with new caller
 - You can also Split after placing a call.

**Feature Operation
(Cont'd)**

- Step 3 >** Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
- Step 4 >** Press * and dial 7.
You answer the call on Hold. Your previous call now goes on Hold instead.
Repeat steps 3 and 4 to continue alternating between the calls.

To Split between a new call and your current call (when your current call is an outside call and your new call is an Intercom call):

- Step 1 >** Press INTERCOM.
Look for: (Modular) --HOLD/line key Hold Flash (red), Fast Flash (green)
(Non-modular) -- HOLD and line key Exclusive Hold
INTERCOM Fast Flash
Listen for: Conversation with new caller
- Step 2 >** Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
- Step 3 >** Press *.
Listen for: Dial tone stops
- Step 4 >** Dial 7.
You answer the call on Hold. Your previous call now goes on Hold instead.
Repeat steps 2-4 to continue alternating between the calls.

To Split between a new call and your current call (when both your current call and new call are outside calls):

- Step 1 >** Press HOLD.
Look for: (Modular) -- Line key Hold Flash (red), On (green)
(Non-modular) -- Line key I-Hold
- Step 2 >** Press Line key for new call.
Look for: New call line key On (red/green)
Repeat steps 1 and 2 to continue alternating between the calls.

To Split using a Split key (ONYX IV):

- Step 1 >** Press Split key.
Listen for: Conversation with second caller.

Using Split at an ESL Set

To Split between a new call and your current call:

- Step 1 >** Press HLD to put current call on Hold.
Listen for: Dial tone
- Step 2 >** Dial * 2 to answer waiting call.
Listen for: Conversation with new caller
Optionally, you can place a new call rather than answer your waiting call.
- Step 3 >** Press HLD.
Listen for: Dial tone
- Step 4 >** Press *.
Listen for: Dial tone stops
- Step 5 >** Dial 7.
You answer the call on Hold. Your previous call now goes on Hold instead. Repeat steps 3-5 to continue alternating between the calls.

STATION MESSAGE DETAIL RECORDING

Description

Station Message Detail Recording (SMDR) provides a record of the system's calls. Typically, the record outputs to a customer-provided printer, terminal or SMDR data collection device. SMDR allows the system administrator account for usage at each extension and trunk. This makes charge-back and traffic management easier.

SMDR requires the installation of a customer-provided ASCII record collection device (e.g., printer). In large systems, the device connects to the upper (local) port on the Communications (COM) PCB. In VS, the device connects to the main CEU AUX Module serial port. You can only have SMDR in VS if you have an AUX Module. Refer to the system hardware manual when connecting the SMDR device.

Following is typical SMDR report.

STATION MESSAGE DETAIL RECORDING
11/06/89 09:59:39

STA	LIN	NUMBER DIALED	ACCT	START	ELAPSE	COST	S#
304	01	202		15:23:52	00:00:01	\$00.00	01
304	01	12036672145	1212	15:44:12	00:00:08	\$00.00	01
304	02	12035551254	3112	15:45:38	00:00:12	\$00.00	01
304	01	12032223456	1123	15:49:29	00:00:05	\$00.00	01
304	01	12038888123	1212	15:50:32	00:00:17	\$00.00	01
304	01	-		17:10:00	00:00:48	\$00.00	01
304	01	-		17:19:33	00:00:21	\$00.00	
304	02	-		10:02:24	00:01:36	\$00.00	01
304	02	-		10:57:44	00:00:19	\$00.00	01
304	01	-		10:57:32	00:00:45	\$00.00	01
304	01	-		11:02:01	00:01:00	\$00.00	01
304	01	-		11:03:17	00:00:55	\$00.00	01

SMDR Headings

This heading... Shows the ...
Header Date for calls and time report was run
STA Extension charged with the call
LIN Trunk used for the call
NUMBER DIALED Number user dialed (outgoing only)¹
ACCT Account Code (if entered)
START Start time for call
ELAPSE Call duration
COST Cost of call (with LCR only)
S# Call's Service Number (ARS and LCR only)

Connecting SMDR Record Collection Devices

The following chart shows the format for the SMDR report. This information is useful when implementing a custom application using an SMDR record collection device. If the system prints SMDR all the time (see programming below), the report consists of:

- Report Start Header line 2, followed by an additional line feed
- Call record, followed by an additional line feed

¹ The number dialed can contain alpha codes, such as Centrex Compatible Feature Key codes D, F and P.

STATION MESSAGE DETAIL RECORDING

Description (Cont'd)

SMDR Format (Page 1 of 2)

Report Start Header		
Line	Char.	Field
Line 1	1-32	STATION-MESSAGE-DETAIL-RECORDING
	33,34	Carriage return. line feed
Line 2	1-8	Date (mm/dd/yy)
	9	Space
	10-17	Time (hh:mm:ss)
	18,19	Carriage return. line feed
Line 3	1,2	Carriage return. line feed
Line 4	1,2	Carriage return. line feed
Call Record Header		
Lines 1 and 3	1,2	Blank
	3-6	- characters
	7	+ character
	8-10	- characters
	11	+ character
	12-41	- characters
	42	+ character
	43-52	- characters
	53	+ character
	54-61	- characters
	62	+ character
	63-70	- characters
	71	+ character
	72-77	- characters
	78	+ character
	79,80	- characters
Line 2	1,2	Blank
	3-6	STA(space)
	7	| character
	8-10	LIN
	11	| character
	12-19	Spaces
	20-32	NUMBER(space)DIALED
	33-41	Spaces
	42	| character
	43-45	Spaces
	46-49	ACCT
	50-52	Spaces
	53	| character
	54,55	Spaces
	56-61	START(space)
	62	| character
	63-70	(space)ELAPSE(space)
	71	| character
	72-77	(space)COST(space)
	78	| character
	79,80	S#

STATION MESSAGE DETAIL RECORDING

Description (Cont'd)

SMDR Format (Page 2 of 2)

Call Record

1.2	Blank
3-6	Extension number, space
7	| character
8-10	Space, trunk number
11	| character
12-41	Number dialed (right justified, preceded by spaces)
42	| character
43-52	Account Code (right justified, preceded by spaces)
53	| character
54-61	Start time (hh:mm:ss)
62	| character
63-70	Elapsed time of call (hh:mm:ss)
71	| character
72-77	Cost of call (\$nn.nn)
78	| character
79.80	Service number (01-10)

Keep the following in mind when connecting the SMDR collection device:

- SMDR *only* prints out of the local (upper) COM PCB port. On initial power up, this port takes precedence over the modem (lower) port.
- The system supports XON/XOFF protocol.
- On power-up, the SMDR port prints out a power-up header. The SMDR port also prints major alarm information, if one occurs. (Refer to Automatic Fault Reporting.)
- When the upper (local) COM PCB port is on line, the following RS-232-C signals are active (connected):

Pin	Signal
5	Data Terminal Ready (DTR)
6	Request to Send (RTS)
8	Carrier Detect (CD)

These signals become inactive (not connected) when the lower (modem) COM PCB port is on line. Additionally, these signals toggle as the system prints the COM PCB power-up header.

- If QZ- SMDR Printout All the Time is Y(es), the system buffers SMDR data when the modem port is busy. The system prints out all buffered SMDR data when the local port becomes active.

Conditions

- a. To allow for servicing, the system buffers (stores) calls as follows:

Memory PCB	Stored Call Records
VS	154
MEM-B	510
MEM-A	128

If the buffer fills, each new call pushes one old call out of the buffer.

- b. In VS. terminal programming may interfere with the SMDR report. If you are programming a sub-menu (e.g., QE), the system buffers the SMDR report. The report displays as soon as you return to the main menu.

Default Configuration

SMDR port is 1200 baud, 8 bits, 1 stop bit with no parity.

The SMDR report prints at 12:00 A.M., and includes incoming, local and toll calls.

STATION MESSAGE DETAIL RECORDING

Programming

Required Programming

- **P- Print SMDR Report** - Print the SMDR report. The system can clear or retain records from the SMDR buffer after the report prints.
- **QZ- SMDR Setup. SMDR Only for Toll Calls** - Have the SMDR report include all outside calls, or just toll calls.
- **QZ- SMDR Setup. Inbound SMDR** - Have the SMDR report print incoming and outgoing calls, or just outgoing calls.
- **QZ- SMDR Setup. SMDR Printout All the Time** - Have the SMDR report print after each call completes, or at a preset time.
- **QZ- SMDR Setup. SMDR Report Start Hour** - Designate the time when the SMDR report should print. This option does not apply if SMDR prints all the time.
- **Z- Clear All SMDR Records** - Clear the SMDR records from the system buffer without printing the SMDR report. Clear the records when you change the SMDR print options.

Other Programming

None

Related Features

Account Code Capability

After a user enters an Account Code, dialing #, additional digits and another # may change the SMDR Account Code entry.

Attendant Positions

The attendant may change the baud rates for the COM PCB ports. See page 2-2.

PBX Compatibility

The SMDR report also includes PBX access codes, if dialed.

Special Services and OCC Compatibility

In the following applications, the highlighted portions of the numbers print on the SMDR report:

(OCC Local Number) + Pause + (1+NPA+NNX+nnnn) + Pause + (Security Code)
(OCC Local Number) + Pause + (Security Code) + Pause + (1+NPA+NNX+nnnn)
(0+NPA+NNX+nnnn) + Pause + (Credit Card Number)

Traffic Management Reporting

If you request TMS and SMDR reports to print at the same time, the SMDR report prints first.

Transfer

SMDR charges the last party on a call for the entire call. For example:

- Extension 304 user places a call.
- Extension 304 user transfers the call to extension 306.
- When 306 user hangs up, SMDR charges the entire call to 306.

Feature Operation

None

SYSTEM IDENTIFICATION

Description

The System Identification is a four-line text field that contains site identification information. The system transmits the System Identification (along with fault information) to the off-site service center during Automatic Fault Reporting. This helps the off-site technician identify the system reporting the fault. The system administrator enters the System Identification information from the programming terminal. The information normally consists of the company name, address and telephone number.

When the system has a fault to report, it:

- Dials the off-site service center and waits for it to answer
- Transmits the System Identification
- Transmits the fault information

The system includes the first line of the System Identification with the various System Reports and Diagnostics.

In VS, the system uses the first line of the System Identification for Reports, Diagnostics and Maintenance Utilities. Since there is no off-site Automatic Fault Reporting, the remaining three lines are unused.

Conditions

None

Default Configuration

No System Identification programmed.

Programming

Required Programming

- **QK- CEU Identification** - Enter the System Identification. The System Identification is four lines long, with 17 characters in each line.

Other Programming

- **J- Communications Port Parameters, Port Speed** - Set the baud rate for Port A (modem) and Port B (local) to match the connected device. (The attendant can set these options from the telephone. See page 2-2.)
- **J- Communications Port Parameters, Modem Ring Count** - Set the Automated Answer ring count to match the setting of the connected modem.
- **QV- Trouble Report Telephone Number** - Enter the number the system dials during Automatic Fault Reporting.

Related Features

Attendant Positions

The attendant may change the baud rate of the COM PCB ports. See page 2-2.

Automatic Fault Reporting

The system sends the System Identification before transmitting fault information to the off-site service center.

System Reports, Diagnostics and Maintenance Utilities

The technician can use the various reports and diagnostics to troubleshoot the system.

Feature Operation

None

SYSTEM PROGRAMMING PASSWORD PROTECTION

Description

System Programming Password Protection requires the system administrator to enter an access code (password) before using a programming option. System Programming Password Protection prevents unauthorized personnel from modifying the system programming.

The system has three password levels: 0-2. Level 0 programming options don't require the administrator to enter a password. To use Level 1 options, the administrator must first enter the level 1 or 2 password. To use level 2 options, the administrator must first enter the level 2 password. The following chart shows the programming options and their password level.

Password (Access) Levels	
AI- Initialize Toll Restriction	1
AL- List Toll Restriction	0
AP- Program Toll Restriction	1
CL- List Class of Service	0
CP- Program Class of Service	1
D- Display Memory	0
E- Extensions	1
E- Trunks	2
F- EPROM Checksums	0
FC- Parameter Resets	1
FL- LCR Configuration	0
GA- ARS Editor	2
GL- LCR Testing	2
H- System Status Reports	0
I- System Utilities	1
J- Communications Port Parameters	0
KD- Programming Keys for DSS Consoles	1
KL- Listing Programmable Key Data	0
KS- Programming Keys for Keysets	1
L- Listing System and Extension Data	0
M- Cancel Access Level	0
ND- Programming the Directory	1
NL- Listing Names and Messages	0
NP- Programming Names and Messages	1
OL- Label Maker	0
OS- Selective History	0
P- Print SMDR Report	1
Q- System-Wide Programming	2
R- Error Log Report	0
SL- List Extension and System Speed Dial	1
SP- Programming Extension and System Speed Dial Numbers	1
SR- Rotary Conversion	1
T- Set System Date and Time	0
V- Clear Error Log	2
X- Exchange Extension Data	1
Y- Change System Passwords	1
Z- Clear All SMDR Records	2

The system administrator can change the level 1 and level 2 passwords. Note that the passwords (and all programming options) must be upper case (all capital letters).

SYSTEM PROGRAMMING PASSWORD PROTECTION

Description (Cont'd)

Conditions

Entering a new password erases the old one. The system administrator should keep a written record of the modified passwords.

Default Configuration

The default level 1 password is carriage return.

The default level 2 password for ONYX II is ONYX2.

The default level 2 password for ONYX III/IV is ONYX3.

The default level 2 password for VS key is ONYXVSK.

The default level 2 password for VS hybrid is ONYXVSH.

If you install an AUX Module in VS and don't initialize, the level 2 password is DCH.

Programming

Required Programming

- **M- Cancel Access Level** - For data security, reinstate level 0 after making a level 1 or 2 entry.
- **Y- Change System Passwords** - Change the level 1 or level 2 password. You must know the level 1 or level 2 password to change the level 1 password. You must know the level 2 password to change the level 2 password. If both passwords are the same, you can only program level 1 options. Change the level 1 password to give you access to both levels.

Other Programming

None

Related Features

None

Feature Operation

None

Description

The system provides reports, diagnostics and maintenance utilities which help the technician troubleshoot the system from the programming terminal. The chart below summarizes these reports, diagnostics and utilities. Refer to the appropriate option in Section 2 for more information.

Reports and Diagnostics (Page 1 of 2)

- AL- List Toll Restriction** - lists the Toll Restriction options for each Toll Restriction level.
- CL- List Class of Service** - lists the Class of Service options for each COS.
- D- Display Memory** - displays the contents of system memory locations (factory use only).
- EZ- Extension-Port Swap** - changes the extension/trunk assignment for each port.
- F- Miscellaneous System Data**
 - F- EPROM Checksums** - displays the checksums for the memory circuits on the software cartridge.
 - FC1- Reset System Queues** - resets the system queues after ACD/UCD programming.
 - FC2- Reset Trunk Circuits and Line/Trunk PCBs** - resets Line/Trunk PCBs.
 - FC3- Reset VX Flag (Telephone Message Waiting Lamps)** - resets the telephone message waiting (MSG) lamps.
 - FC4- Reset All Keypad Feature Keys** - clears all keypad programmable keys assigned as Centrex feature keys.
- H- System Status Reports**
 - HA- Extension-to-Port Conversion** - lists the number of the extension or trunk assigned to each port (in extension/trunk number order).
 - HB- Port-to-Extension Conversion** - lists the number of the extension or trunk assigned to each port (in port number order).
 - HC- System Queues** - displays the status of the system queue elements.
 - HD- System Status** - displays the status of every Line/Trunk PCB, trunk and extension in the system.
 - HE- Traffic Management Summary** - summarizes the extension, trunk and ACD/UCD group call activity. Running HE does not clear the summary data.
 - HF- Traffic Management Summary (with data cleared)** - summarizes the extension, trunk and ACD/UCD group call activity. Running HF clears the summary data.
 - HG- Display Key History** - displays the key history code definitions. The system administrator can enable the key history by pressing SHIFT 1 at the programming terminal.
 - HH- Port/Extension Checker** - checks for port/extension number conflicts.
 - HI- Buffered History Printer** - with buffered history enabled (SHIFT 4 + SHIFT 1), translates the key history into English definitions.
- I- System Utilities**
 - IE- Reset Expansion Cabinets (56x120 and 72x180 Only)**- lets you reset the expansion cabinets from the programming terminal.
 - IP- Port Release** - releases (disconnects) an extension or trunk that is active on a call.
 - IR- Reset Line/Trunk Card** - resets an individual Line/Trunk PCB.
 - IS- Side Tone Test** - adjusts the side tone for an individual trunk circuit.
 - IT- Activate/Deactivate Decoders** - activates and deactivates system DTMF decoders.
 - KL- Listing Programmable Key Data** - lists the programmable keys for each extension and DSS Console.

SYSTEM REPORTS, DIAGNOSTICS AND MAINTENANCE UTILITIES

Description (Cont'd)

Reports and Diagnostics (Page 2 of 2)

- L- Listing System and Extension Data** - provides a complete listing of extension and trunk data.
- NL- Listing Names and Messages** - lists the programmed extension/trunk names and Selectable Display Messages.
- OS- Selective History** - enables key history for selected extensions and trunks.
- QZ- TMS Report Print Modes**- sets the Traffic Management Report (TMS) Report print modes.
- QZ- TMS Print Times Setup**- sets the Traffic Management Report (TMS) Report automatic print times.
- R- Error Log Report** - displays the system error log.
- SL- List Extension and System Speed Dial** - lists Extension and System Speed Dial numbers.
- V- Clear Error Log** - clears the old data from the R- Error Log Report.
- X- Exchange Extension Data** - exchanges (swaps) extensions.
- Z- Clear All SMDR Records**

Note: To view the programmed Q data, access the individual Q options.

Conditions
None

Default Configuration
Not applicable

Programming

Required Programming
Refer to the chart above.

Other Programming
None

Related Features

Automatic Fault Reporting
After receiving a trouble report, the technician can use the System Reports, Diagnostics and Maintenance Utilities to isolate the problem.

Feature Operation

None

Description

The system administrator can use the programming terminal to change values for various System Timers. These timers affect extension, trunk and system performance. System Timers lets the administrator customize certain extension, trunk or system parameters for the site application. The chart below briefly describes these timers (programmed in QT- System Timers). Refer to QT in Section 2 for more information.

Park Orbit Recall Time - sets how long a Parked call remains in orbit before recalling the extension that initially parked it. Refer to Call Parking.

Hold Recall Time - sets how long a call will remain on Hold before recalling the extension that placed it on Hold.

Camp-On Time - sets how long a transferred call camps on to a busy single line extension or ACD/UCD group before recalling the transferring extension.

Trunk Response Time - specifies the allowed interval between trunk seizure and the receipt of telco loop current.

Modem Reserve Time - sets how long the system reserves a modem from the modem pool for the extension requesting it.

Number of Rings Before Recall - sets how many times a trunk call rings an idle extension before recalling the transferring extension.

OPA Overflow Ring Control - sets the number of rings before operator overflow to the OPA occurs.

Delayed Ring Interval - sets the Delayed Ring Interval for Call Coverage and Group Call Pickup keys with delayed ringing.

Flash Response Time - sets the length of the loop current interruption the system provides to a trunk.

Dialtone Detection Counter - sets how long the system waits for trunk dial tone for Speed Dial calls.

Centrex Type Feature Key Delay - sets the Centrex delay interval. This is the interval that corresponds to a D entry when programming Centrex keys.

Traffic Management Report Wait Time - sets how long a call rings the system before the TMS report logs it as a Long Wait.

Loop Disconnect Time (ONYX IV) - lets you tailor the system trunks to the disconnect characteristics of the connected telco.

Default Modem Speed - sets the default modem speed for outgoing outside data calls.

OPX Incoming Flash Timer - sets the length of the OPX loop current interruption that occurs when an OPX user flashes.

Tie Line Outgoing Flash Timer - sets the length of the loop current interruption when a user flashes a tie line.

Conditions

None

SYSTEM TIMERS

Description (Cont'd)

Default Configuration

Timer	Default Value
Park Orbit Recall Time	60 seconds
Hold Recall Time	60 seconds
Camp-On Time	60 seconds
Trunk Response Time . . . . .	.15 seconds
Modem Reserve Time	30 seconds
Number of Rings Before Recall	5 rings
OPA Overflow Ring Control	3 rings
Delayed Ring Interval	3 rings
Flash Response Time	700 mS
Dialtone Detection Counter	No entry
Centrex Type Feature Key Delay	No entry
Traffic Management Report Wait Time	No entry
Loop Disconnect Time (ONYX IV)	00 (.5 seconds)
Default Modem Speed	Low
OPX Incoming Flash Timer	7 (.7-1.5 seconds)
Tie Line Outgoing Flash Timer	4 (.4 seconds)

Programming

Required Programming

Refer to QT- System Timers for the specifics.

Other Programming

None

Related Features

Refer to QT- System Timers for the specifics.

Feature Operation

None

TANDEM CALLS (TANDEM TRUNKING)

Description

Tandem Trunking allows an extension user to join two outside calls in a trunk-to-trunk Conference. The extension user can then drop out of the call, leaving the trunks in an "unsupervised" Conference. The extension user that established the Conference is not part of the conversation. The Conference continues until either outside caller hangs up.

Tandem Trunking helps a dispatcher, for example, put two repairmen in touch. The dispatcher could:

- Answer a call from one repairman
- Place a call to the other
- Set up a trunk-to-trunk Conference
- Hang up

The Conference becomes unsupervised when the dispatcher hangs up.

In addition to Tandem Calls, the following features also allow three-party calls:

- Conference
- Intrusion
- Meet-Me-Conference
- Privacy Groups

Conditions

- a. Tandem Trunking requires either loop start trunks with disconnect supervision or ground start trunks.
- b. The system supports eight simultaneous three-party Conferences.

Default Configuration

Tandem Trunking not allowed.

Programming

Required Programming

- **E- Trunks, E1- Tandem Trunk** - Enable/disable a trunk for Tandem Trunking capability. Only one of the trunks on a Tandem Call must have this option enabled.

Other Programming

None

Related Features

Conference

Conference lets an extension user establish a three-way conversation.

Intrusion (Barge In)

An extension user cannot Barge-In on a Tandem Call.

Transfer

When making a screened Transfer of a trunk call to an extension with Off-Premise Call Forwarding, implement Tandem Trunking when the off-premise user answers.

TANDEM CALLS (TANDEM TRUNKING)

Feature Operation

To set up a Tandem Call at a keyset:

- Step 1 >** Place or answer first trunk call.
Listen for: Conversation with caller
- Step 2 >** Press CONF.
Look for: (Modular) -- HOLD line key Hold Flash (red), Fast Flash (green)
(Non-modular) -- HOLD and line key Exclusive Hold
Listen for: Dial tone
- Step 3 >** Place or answer second call.
Listen for: Conversation with caller.
- Step 4 >** Press CONF.
Look for: CONF On (red green)
Listen for: Conversation with both parties
- Step 5 >** Hang up.
Look for: Line keys On (red)

To set up a Tandem Call at an ESL set:

- Step 1 >** Place or answer first call.
Listen for: Conversation with caller
- Step 2 >** Press HLD.
Listen for: Dial tone
- Step 3 >** Place or answer second call.
Listen for: Conversation with caller.
- Step 4 >** Press HLD, *, #.
- Step 5 >** Hang up.

Description

The system administrator can divide the system into individual tenant groups. Typically, each tenant group has their own attendant, outside lines and paging zones. Tenant Service lets the system administrator use the same system for several different businesses. If an extension user dials 0, they reach their own operator. In addition, outside calls to and from one tenant don't interfere with the other. Finally, members of one tenant group hear only their own Zone Paging, not Paging into another group.

If each tenant should have their own attendant, the system provides four tenant groups. If each tenant only needs outside lines, the system provides as many groups as there are available trunks. Keep in mind, however, that there are only seven Internal Paging zones. (Class of Service can deny access to the first three and All Call.)

Conditions

None

Default Configuration

All extensions are in the same tenant group (assigned to the operator at extension 300).

Programming
Required Programming**Assigning Attendants to Tenants**

- E- Extensions, E9- Attendant (Operator) Assignment - Assign the same operator extension to each extension in the tenant group.

Assigning Trunks to Tenants for Answering Calls

- E- Extensions, ED- Trunk Control, Ring Control - For each keyset in the tenant group, designate the ringing options for each trunk. Each tenant group should ring for a different set of trunks.
- E- Extensions, ED- Trunk Control, Access Control - For each extension, assign access for the lines the tenant group extension should be able to answer. Each tenant group should have access to a different set of trunks.
- KS- Programming Keys for Keysets - Program the types of keys that will ring the extension. Additionally, make sure that every keyset has at least one fixed or switched loop key. This ensures that an incoming call will ring a key somewhere on the keyset.

Assigning Trunks to Tenants for Placing Calls

- E- Extensions, E8- Line Access Options, Key Access to Outbound Lines - If enabled, each user in the tenant group can press a line key to place a call (if also allowed by ED programming).
- E- Extensions, E8- Line Access Options, Allow Line Code Dial-Up - If enabled, each user in the tenant group can dial a trunk access code (e.g., 801) to access trunks (if also allowed by ED programming).
- E- Extensions, E8- Line Access Options, Access to Groups 90-95 (not on key systems) - Restrict each extension in the tenant group to the trunk groups (90-95) that the tenant should be able to dial.
- E- Extensions, ED- Trunk Control, Access Control - Assign access only for those trunks on which the tenant group user should be able to place calls. Each tenant group should have access to a different set of trunks.
- E- Extensions, ED- Trunk Control, Call-Out Control - Enable call-out for each trunk on which the tenant group user should be able to place calls. Each tenant group should have callout for a different set of trunks.

Programming (Cont'd)

Required Programming (Cont'd)

Assigning Trunks to Tenants for Placing Calls (Cont'd)

- **KS- Programming Keys for Keysets** - Program the types of keys that allow the extension user to place trunk calls.

Assigning Internal Paging Zones to Tenants

- **CP- Inhibit Access to Page Zone 3 (BY2:4)** - Allow/inhibit Paging to zone 3 for extensions with this COS. You can allow this option for one tenant group's members and deny it for all others.
- **CP- Inhibit Access to Page Zone 2 (BY2:3)** - Allow/inhibit Paging to zone 2 for extensions with this COS. You can allow this option for one tenant group's members and deny it for all others.
- **CP- Inhibit Access to Page Zone 1 (BY2:2)** - Allow/inhibit Paging to zone 1 for extensions with this COS. You can allow this option for one tenant group's members and deny it for all others.
- **CP- Inhibit Access to All Call Paging (BY2:1)** - Since all tenants hear All Call Paging, consider using this option to prevent All Call Paging system-wide.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Extensions, E7- Page Zone** - Assign each extension to an internal Paging zone (01-07, or 00 for All Call only). Each tenant group's extensions should be in a different internal Paging zone.
- **E- Extensions, EF- Paging Through Telephone Speaker** - Enable this option to allow Paging announcements through the telephone speaker.

Assigning External Paging Zones to Tenants

- **E- Trunks, E2- Circuit Type** - Program the ports used for External Paging, uninstalled (circuit type X). There are a total of four ports available for External Paging.
- **QM- Music and Relay Control, Ext Page/Night Audible Line Number** - In the large systems, assign the trunk number the system will use to broadcast All Call Paging and Night Audible. In VS, enter Y to broadcast over the main CEU PA terminals. You can have Paging amplifiers for all tenants or just those you select.
- **QM- Music and Relay Control, Page Zone n Line Number (except in VS)** - Assign a trunk port for External Paging zones 1-3. All Call Paging also broadcasts over these ports. You have three external zones available for tenants.
- **QM- Music and Relay Control, External Page (VS only)** - Enter Y to have All Call Paging and Night Audible broadcast over the expansion CEU PA terminals.
- **QM- Music and Relay Control, External Page Music Gain** - Adjust the gain for the music that plays over the External Paging ports (if any).
- **QM- Music and Relay Control, Relay Control-Page On (except in VS)** - If enabled and Pageowner is main attendant (port 00/extension 300), relay closes each time a user makes an All Call Paging announcement. If disabled or Pageowner is other than the attendant, relay never closes for Paging.
- **QM- Music and Relay Control, Relay Control-Pageowner** - Assign the Pageowner for ringer and page control. This assignment should be the attendant in each tenant group.

Other Programming

None

Related Features

Attendant Console (ONYX IV)

The Attendant Console can be in a tenant group or can cross tenant assignments. Refer to the Attendant Console feature for programming details.

Automatic Route Selection/Least Cost Routing

All extensions share the same ARS/ LCR programming, regardless of tenant assignment.

Direct Inward Dialing

DID callers can dial an extension in any tenant group.

Direct Inward Line

You can have unanswered DILs recall to all tenant groups or only to the DIL's extension tenant group.

Direct Inward System Access

All tenants share the same DISA code.

Intercom

Members of one tenant group can place Intercom calls to members of another tenant group.

Night Answer

An attendant can place only its own trunks in night answer (according to E9- Direct Trunk Termination programming).

Paging

The system sends All Call Paging to all page zones, regardless of tenant assignment.

Toll Restriction

An extension in a tenant group can have night mode restriction (e.g., CP- Allow Only Intercom Calls at Night [BY0:2] is 1). The restriction takes effect when the extension's operator activates Night Answer.

Feature Operation

Refer to:

Central Office Calls, Answering

Central Office Calls, Placing

Paging

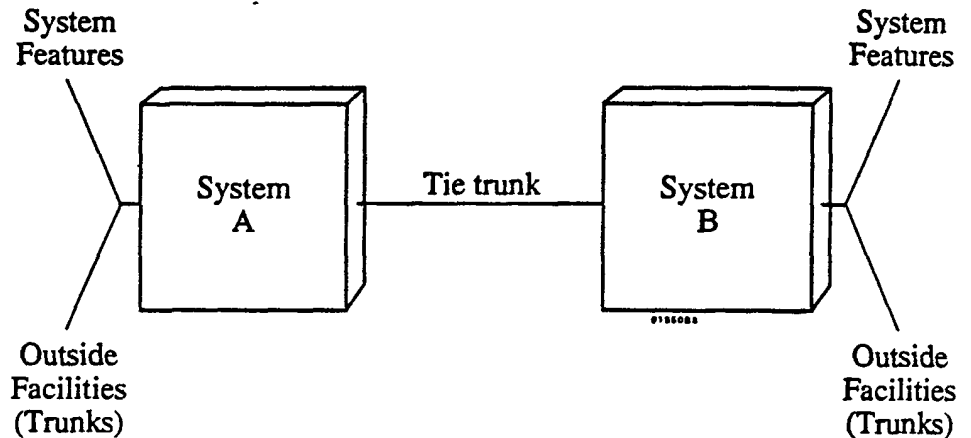
TIE LINES

Description

The system provides connection for two-wire Type I Signaling (TL11M) tie trunks. Tie trunks directly link two systems independent of the telco switch network. Tie trunks let callers from the connected systems:

- Use each other's trunks for outgoing calls
- Call each other's extensions
- Use each other's Speed Dial bins

In the example below, a tie trunk connects System A and System B. Unless restricted in programming, System A users can access the trunks, extensions and Speed Dial bins in System B. Conversely, System B users can access the trunks, extensions and Speed Dial bins in System A.



In the large systems, tie lines require the installation of a Special Trunk Interface (STI), P/N 88146.¹ Each STI provides connection for up to seven tie trunks. The chart below shows the maximum number of STIs and tie trunks allowed per system:

System	Max. STIs	Max. Tie Trunks
12x36	1	7
32x60	2	14
56x120/72x180	4	28

The Special Trunk Interface requires trunk ports, an external power supply/ring generator and two unused extension ports. In addition, the STI has two DTMF receivers. The STI uses receivers in a VAU, OPA/VAU or MLU PCB only when its integral receivers are busy. For complete installation details, refer to the STI Installation and Programming Manual (P/N N1850STI01).

In VS, tie lines require the installation of a DID/OPX Module (not currently available).

Conditions
None

Default Configuration
No tie trunks installed.

¹ Refer to the Special Trunk Interface feature for more details.

Programming

Required Programming

- **CP- Absorb 1st Digit for DID and Tie Trunks (BY0:1)** - For incoming wink start tie trunk calls, enable/disable 1st digit absorption. If enabled, system ignores first incoming digit on tie trunk call.
- **E- Trunks, E2- Circuit Type** - Assign each tie line one of the following circuit types:
 - 16 DTMF Wink Start tie line
 - 17 Dial Pulse Wink Start tie line
 - 18 DTMF Immediate Dial tie line
 - 19 Dial Pulse Immediate Dial tie line
- **E- Trunks, E2- STI Circuit Number** - Enter the STI circuit number for the tie trunk. Refer to the STI Installation and Programming Manual for charts and drawings that explain this correlation.
- **E- Trunks, E3- Class of Service** - Assign COS to tie trunk for incoming calls. COS does not pertain to outgoing calls.

Other Programming

- **CP- Inhibit System Speed Dial (BY0:7)** - For incoming tie trunk calls, allow/inhibit the caller to use System Speed Dial.
- **CP- Allow Only Intercom Calls at Night (BY0:2)** - For incoming tie trunk calls, optionally restrict the caller to only Intercom calls at night.
- **CP- Allow Only Local Calls at Night (BY1:4)** - For incoming tie trunk calls, optionally restrict the caller to only local calls at night.
- **CP- Allow Only Local Calls (Day or Night)(BY1:3)** - For incoming tie trunk callers, optionally restrict the caller to local calls only.
- **CP- Extension Toll Restriction Level (BY1:1)** - For incoming tie trunk callers, set the Toll Restriction level.
- **CP- Inhibit Access to Page Zones (BY2:1-4)** - Consider preventing Paging over the tie trunks.
- **E- Trunks, E7- Trunk Service Number** - Assign the trunk to a Service Number for ARS or LCR routing.
- **E- Extensions, E8- Line Access Options, Allow Line Code Dial-Up** - For incoming tie trunk calls, allow/deny incoming caller the ability to dial a trunk group for an outgoing call.
- **E- Extensions, E8- Line Access Options, Access to Groups 90-95 (ONYX III Only)** - For incoming tie trunk calls, allow/deny incoming caller the ability to dial specific trunk groups.
- **E- Extensions, E9- Attendant (Operator) Assignment** - For incoming tie trunk call, set the extension the incoming caller rings when they dial 0 (for operator).
- **E- Extensions, EB- Personal Speed Dial Block** - Designate the Speed Dial block associated with each incoming tie trunk. Incoming tie trunk callers can dial these Speed Dial bins.
- **E- Extensions, ED- Trunk Control, Ring Control** - Make sure the attendant has ringing enabled (in the ED option) for the tie trunk. This ensures that the attendant's phone will ring if the tie trunk caller dials 0.
- **E- Extensions, ED- Trunk Control, Access Control** - For incoming tie trunks, indicate which trunks the incoming caller should have access to for outgoing calls.
- **E- Extensions, ED- Trunk Control, Call-Out Control** - For incoming tie trunks, indicate which trunks the incoming caller should have call-out enabled for outgoing calls.

TIE LINES

Programming

Other Programming (Cont'd)

- **E- Trunks, E4- Next Trunk in Outbound Rotary** - If the tie trunk is part of a trunk rotary for outgoing calls, enter the number of the next trunk in the rotary.
- **E- Trunks, EA- UCD Group Master Extension Number (First Trunk in Group)** - If tie trunk is in a rotary for outgoing calls, specify the first trunk in the rotary. All trunks in the rotary should have the same entry for this option.
- **E- Trunks, EC- Group Call Pickup Group** - For incoming tie trunks, indicate the Call Pickup Group. Incoming calls on the tie trunk can activate Group Call Pickup.
- **NP- Programming Names and Messages** - Assign names to tie trunks. The name displays after a display telephone user answers a tie trunk call.
- **QT- System Timers, Tie Line Outgoing Flash Timer** - Set the length of the loop current interruption that occurs when a user flashes a tie line.

Related Features

Automatic Route Selection/Least Cost Routing

ARS and LCR can route a call over a tie trunk. Automatic dialing translation can strip out the unwanted digits.

Centralized Attendant Service

Centralized Attendant Service requires tie trunks.

Class of Service/Toll Restriction

The system restricts calls on incoming tie trunks only. The system never restricts outgoing tie trunks.

Group Call Pickup

An incoming call on a tie line can activate Group Call Pickup.

Intercom

If a tie trunk user places a tie trunk call to an extension in the distant system, the call rings in on a line or loop key. The call does not appear as an Intercom call.

Speed Dial

Incoming tie trunk callers can dial Extension Speed Dial bins assigned to the incoming tie trunk. The 56x120 and 72x180 users can only dial extension bins 20-29. Incoming tie trunk callers can also dial System Speed Dial bins.

Feature Operation

To place a call over a tie line:

- Step 1 ➤ Lift handset.
- Step 2 ➤ ● At a keyset, press tie line key or dial code to seize outgoing tie line.
OR
● At an ESL set, dial code to seize outgoing tie line.
You can dial:
 - A trunk extension number (e.g., 480 - see Direct Trunk Access)
 - A trunk access code (e.g., 801)
 - Trunk group access code - 9 or 90-98 (See Line Rotaries)Listen for: Dial tone from distant system
- Step 3 ➤ Dial distant system extension, trunk or Speed Dial code.
The number you dial applies to extensions, trunks or Speed Dial bins in the distant system. You can dial:
 - A trunk extension number (e.g., 480 - see Direct Trunk Access)
 - A trunk access code (e.g., 801)
 - Trunk group access code - 9 or 90-98 (See Line Rotaries)
 - An extension number, 0 for main attendant or 01-04 for other attendants

**Feature Operation
(Cont'd)**

- To Flash a tie line:**
- Step 1 > ● At a keyset, press FTR.
- OR
- At an ESL set, press and release hookswitch.

- To use a Speed Dial number in the distant system:**
- Step 1 > Place call over tie line.
Listen for: Dial tone
- Step 2 > Dial the Speed Dial bin number.
System Speed Dial bins are normally 700-799. Extension Speed Dial bins are 20-29 and 50-59.
Listen for: Stored number dialing out
If Speed Dial number contains a pause, you may have to press * to continue dialing.

TIME AND DATE SETTING

Description

The system Time and Date appears on:

- Display Telephones
- Station Message Detail Recording reports
- System Reports, Diagnostics and Maintenance Utilities
- Traffic Management Report

A display keyset with Class of Service 00 and the system administrator can change the Time and Date. Although entered in 24-hour format, the system time always displays in 12-hour format (AM/PM).

Conditions

None

Default Configuration

Date=00/00/00

Time=00:00:00

Programming

Required Programming

- **E- Extensions, E3- Class of Service** - Assign COS 00 to each display keyset that should be able to enter the system date and time.
- **T- Set System Date and Time** - The system administrator can set the system date and time from the programming terminal.

Other Programming

None

Related Features

Automatic Route Selection/Least Cost Routing

ARS and LCR use time and date when routing calls.

Battery Backup

The Memory (MEM) PCB temporarily backs up the system Time and Date when power fails.

Station Message Detail Recording

Time and Date appear on the SMDR report. Also, the system administrator can have SMDR print at a preset time.

System Reports, Diagnostics and Maintenance Utilities

Time and Date appear on System Reports, Diagnostics and Maintenance Utilities.

Traffic Management Reporting

Time and Date appear on the TMS report. Also, the system administrator can have the TMS Report print at a preset time.

Voice Prompting Messages

Any keyset or ESL user can dial 8 to hear the voice prompt announcing the time. Voice Prompting Messages requires a VAU or OPA/VAU PCB. The VAU or OPA/VAU PCB installs in a trunk slot, replacing four trunk circuits.

Feature Operation

To set the system time (if your keyset has COS 00):

- Step 1 > Lift handset.
- Step 2 > Press INTERCOM.
 - Look for: INTERCOM On
 - Listen for: Dial tone
- Step 3 > Press PGM#.
 - Listen for: Dial tone stops
- Step 4 > Dial 8.
- Step 5 >
 - Enter the hour (00-23).
Use a 24-hour clock (i.e., 1:00 PM = 13)
 - Enter the minutes (00-59).
 - Enter the seconds (00-59).
 - Listen for: Dial tone
- Step 6 > Hang up.
 - Look for: INTERCOM goes out

To set the system date (if your keyset has COS 00):

- Step 1 > Lift handset.
- Step 2 > Press INTERCOM.
 - Look for: INTERCOM On
 - Listen for: Dial tone
- Step 3 > Press PGM#.
 - Listen for: Dial tone stops
- Step 4 > Dial 9.
- Step 5 >
 - Enter the month (01-12).
January=01, December=12
 - Enter the day of the month (01-31).
 - Enter the last two digits of the year (00-99).
 - Listen for: Dial tone
- Step 6 > Hang up.
 - Look for: INTERCOM goes out

To check the time from any keyset or ESL set:

- Step 1 > Do not lift handset.
- Step 2 > Dial 8.
 - A voice prompt announces the system time.

TOLL RESTRICTION

Description

Toll Restriction limits the numbers an extension user may dial. By allowing extensions to place only certain types of calls, the system administrator can control long distance costs. The system applies Toll Restriction according to an extension's Class of Service Toll Restriction Level. For each Toll Restriction Level, the administrator can enable or disable:

- Continuous dialing (see Special Services and OCC Compatibility)
- Special access (N11) dialing (such as 411 Directory Assistance)
- Outside operator (0+) dialing
- Direct international dialing
- Equal Access dialing (See Equal Access Compatibility)
- 1+NNX (long distance exchange) dialing
- NNX (local exchange) dialing
- NPA (area code long distance) dialing
- Six-digit (NPA and NNX) dialing analysis

The system sends reorder to an extension when it Toll Restricts a call. If the system has a VAU or OPA/VAU PCB, it sends the voice message, "Your call cannot go through. Please call the operator."

Conditions

Toll Restriction does not restrict 1-800 or 911 calls.

Default Configuration

All Classes of Service have Toll Restriction Level 0 (Toll Restriction disabled).

Programming

Required Programming

- **AI- Initialize Toll Restriction** - Initialize Toll Restriction before programming.
- **AP- Toll Level** - Enter the Toll Level you want to program.
- **AP- Allow Active Dial Pad** - Enable/disable continued dialing for this Toll Level (see Special Services and OCC Compatibility).
- **AP- Allow Special Access (N11) Dialing** - Enable/disable N11 and 1+N11 dialing for this Toll Level.
- **AP- Allow Outside Operator (0+) Dialing** - Enable/disable outside operator dialing for this Toll Level.
- **AP- Allow International Dialing** - Enable/disable direct international dialing for this Toll Level.
- **AP- Allow Equal Access** - Enable/disable Equal Access Dialing for this Toll Level (see Equal Access Compatibility). Also, program the Equal Access Codes table.
- **AP- Allow 1 + NNX Dialing** - Enable/disable long distance exchange calls for this Toll Level. Also, program the 1 + NNX codes table.
- **AP- Allow NNX Dialing** - Enable/disable local exchange (NNX) dialing for this Toll Level. Also, program the NNX codes table.
- **AP- Allow NPA Dialing** - Enable/disable area code (NPA) dialing for this Toll Level. Also, program the NPA codes table.

Programming (Cont'd)

Required Programming (Cont'd)

- **AP- Six Digit Analysis** - Enable/disable six-digit analysis for this Toll Level. Also, program a six-digit analysis table.
- **CP- Allow Only Intercom Calls at Night (BY0:2)** - At night, extensions with this option enabled can only place Intercom calls. This assignment overrides AP programming.
- **CP- Allow Only Local Calls at Night (BY1:4)** - At night, extensions with this option enabled can place Intercom calls and local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).
- **CP- Allow Only Local Calls (Day or Night) (BY1:3)** - Extensions with this option enabled can only place Intercom calls or local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).
- **CP- Extension Toll Restriction Level (BY1:1)** - Assign a toll restriction level (0-7) to a Class of Service.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Trunks, EJ- Toll Restriction** - Enable/disable Toll Restriction for each trunk. For example, WATS lines may not require Toll Restriction.

Other Programming

- **AL- List Toll Restriction** - List the programmed Toll Restriction data.
- **E- Extensions, ED- Trunk Control, Access Control** - An extension can only place a call on a trunk for which it has access assigned.
- **E- Extensions, ED- Trunk Control, Call-Out Control** - An extension can only place a call on a trunk for which it has callout assigned.
- **QQ- "1" Prefix Required for NPA Calls** - Indicate if the system is in a conflict area. A conflict area has conflict codes. Conflict codes are area codes (e.g., 212) that can also be local exchange codes. Enter Y if the system is in a conflict area. Enter N if the system is not in a conflict area.

TOLL RESTRICTION

Related Features

Automatic Route Selection/Least Cost Routing

A system can have ARS/LCR and Toll Restriction. When a user dials 9 or 90 for ARS/LCR, ARS/LCR overrides Toll Restriction.

Direct Trunk Access

The system does not apply Toll Restriction to calls placed using Direct Trunk Access.

Last Number Redial/Save

If you don't dial enough digits (as determined by your Toll Restriction), Last Number Redial and Save will not retain the digits you dial.

Night Answer

An extension in a tenant group can have night mode restriction (e.g., CP- Allow Only Intercom Calls at Night [BY0:2] is 1). The restriction takes effect when the extension's operator activates Night Answer.

Speed Dial

The Extension Speed Dial numbers an extension user stores are Toll Restricted. The Extension Speed Dial numbers entered at the programming terminal are not. System Speed Dial numbers are not Toll Restricted.

Tenant Service

An extension in a tenant group can have night mode restriction (e.g., CP- Allow Only Intercom Calls at Night [BY0:2] is 1). The restriction takes effect when the extension's operator activates Night Answer.

Walking Class of Service

An extension user can implement Walking Class of Service to temporarily override Toll Restriction/COS programming.

Voice Prompting Messages

The voice prompt, "Your call cannot go through. Please call the operator" requires a VAU or OPA/VAU PCB. The VAU or OPA/VAU PCB installs in a trunk slot, replacing four trunk circuits.

Feature Operation

None

TRAFFIC MANAGEMENT REPORTING

Description

The Traffic Management (TMS) Report provides the system administrator with a record of the system's call activity. The TMS Report consists of call activity details for each installed extension, trunk, trunk group and ACD/UCD hunting group. The system administrator can use the TMS Report to analyze the system traffic. This, in turn, lets the administrator maximize the system's resources. The TMS report only outputs from the upper (local) COM PCB port.

The administrator can display the report on the programming terminal, or record it on an SMDR printer. Additionally, the administrator can have the report print on demand or at a preset time. When printing at a preset time, the TMS Report can consist of all data or just selected categories of data. Following are samples of the TMS Report.

Traffic Management Report For Extensions

TRAFFIC MANAGEMENT REPORT
COLLECTED SINCE: 00/00/00 00:00:00

PAGE 1

STA	NUMBER OF CALLS			TIME IN USE	OFF-DUTY	
	INCOMING	ANSWERED	OUTGOING		DURATION	NO. OF TIMES
300	1	0	0	00:00:00	00:00:00	0
304	0	0	15	00:01:30	00:00:00	0

The TMS report for extensions shows:

- Extension number
- Number of incoming, answered and outgoing calls.
Incoming calls are all calls that ring an extension (including recalls). The system does not log voice announced calls as incoming calls.
Answered calls are all calls the extension answers (without exception).
Outgoing calls are all calls the extension places. Feature activation (such as DND) is not considered an outgoing call
- Total time each extension was in use (not idle). This includes time a feature is active (such as DND).
- If ACD agent, number of times and duration off duty (out of service). See ACD/UCD report below. If an agent is removed from service, the Duration counter increments only when the agent returns to service.

Traffic Management Report For ACD/UCD Groups

MASTER EXT: 308
MEMBERS
309

CALLS WHEN ALL MEMBERS BUSY - 0
DURATION OF ALL BUSY - 00:00:00
CALL ABORTED WHILE WAITING - 0

The TMS report for ACD/UCD groups shows:

- Master extension and members of each ACD/UCD group
- Total number of calls to group when all members were busy
- Duration of the all-busy condition
- Number of outside callers who hung up (calls aborted) while waiting for a group member to become free

TRAFFIC MANAGEMENT REPORTING

Description (Cont'd)

Traffic Management Report For Trunks

LINE	NO. RCVD	INCOMING CALLS			CALLS ABANDONED	CALLS OUTGOING	TIME IN USE
		ANSRD	LONG WAIT	TRMNATD			
801	0	0	0	0	0	11	00:01:15
802	0	0	0	0	0	2	00:00:16

The TMS report for trunks shows:

- Trunk number
- For incoming calls, total calls received, answered and terminated
Received is the total of all incoming calls detected at each trunk.
Answered is the total of all incoming calls actually answered by system users for each trunk.
Terminated is the total calls terminated (completed) by system users for each trunk. Note that currently active calls are Answered but not terminated.
- Total calls the TMS report flags as Long Wait calls (see QT in programming below)
- Total of abandoned calls (where the outside caller hangs up while the call is on Hold, parked or being transferred)
- Total of all outgoing calls
- Total time trunk was in use

Traffic Management Report For Trunk Groups

LINE GROUP: 801
MEMBERS
802

CALLS WHEN ALL MEMBERS BUSY - 1
DURATION OF ALL BUSY - 00:05:16

The TMS report for trunk groups shows (refer to the Line Rotaries feature):

- Master and members of each trunk group
- Total number of calls to group when all members were busy
- Duration of the all-busy condition

Conditions

The TMS Report only includes installed extensions and trunks. In addition, the report only includes extensions or trunks that had call activity since the data was last cleared.

Default Configuration

TMS Report prints manually from the HE or HF options.

TRAFFIC MANAGEMENT REPORTING

Programming

Required Programming

- **HE- System Status Reports, Traffic Management Summary** - Print the TMS Report. The system does not clear the TMS data after the report runs.
 - **HF- System Status Reports, Traffic Management Summary (With Data Cleared)** - Print the TMS Report. The system clears the TMS data after the report runs.
 - **QT- System Timers, Traffic Management Report Wait Time** - Set the TMS Wait Time interval. If a call rings longer than this interval, the TMS report flags it as Long Wait.
 - **QZ- SMDR Setup, TMS Report Print Modes** - Set the TMS Report print mode:
 - 0 Manual (from HE or HF) for all data.
 - 1 Automatic (at preset time) for trunk data only. The data clears after the report runs.
 - 2 Automatic (at preset time) for trunk and operator data only. The data clears after the report runs.
 - 3 Automatic (at preset time) for all data. The data clears after the report runs.
 - **QZ- SMDR Setup, TMS Print Times Setup** - Set the time that the TMS report should print (using modes 1-3).
- Other Programming*
- **T- Set System Date and Time** - Set the system Date and Time.

Related Features

Attendant Positions

The attendant can set the baud rate for the COM PCB ports. Refer to page 2-2.

Station Message Detail Recording

If you request TMS and SMDR reports to print at the same time, the SMDR report prints first.

Feature Operation

None

TRANSFER

Description

Transfer permits an extension user to send (i.e., extend) an active outside call to any other extension in the system. With Transfer, any extension user can quickly send a call to the desired co-worker.

A call a user transfers automatically recalls if not picked up at the destination extension. If the call is still not picked up, it rings all extensions with programmed ringing for the trunk. This assures that users do not lose or inadvertently abandon their transfers.

A user may Transfer a call screened or unscreened. With Screened Transfer, the transferring user announces the call to the destination user before hanging up. With Unscreened Transfer, the transferring party extends the call without an announcement.

Conditions

If an extension receiving a screened Transfer:

- Answers the screen
- Immediately hangs up (before the transferring extension hangs up)

the call goes on Exclusive Hold at the transferring extension.

Default Configuration

Transfer always allowed.

Programming

Required Programming

None

Other Programming

- **E- Extensions, ED- Trunk Control, Ring Control** - An unanswered transferred call rings all extensions with ringing for the trunk. Transferred calls always ring the destination extension, regardless of Ring Control programming.
- **E- Extensions, ED- Trunk Control, Access Control** - For each extension, assign access for the lines the extension should be able to answer. An extension can receive a Transfer on a trunk to which it doesn't have access.
- **KS- Programming Keys for Keysets** - Assign line keys to keysets.
- **QT- System Timers, Camp-On Time** - Set how long a transferred call waits at a busy ESL, ASI or OPX extension before recalling the extension that transferred it.
- **QT- System Timers, Number of Rings Before Recall** - Set the number of times a transferred call rings:
 - An idle or busy keyset
 - An idle ESL, ASI or OPX extension

After this interval, the call recalls the extension that initially transferred it. This interval also determines how many times an unanswered transfer rings the transferring extension before diverting to extensions with ringing for the trunk.

Related Features

Attendant Positions

Calls transferred to an attendant do not recall the extension that initially transferred the call. The call also never diverts to extensions with ring and access for the trunk.

Call Coverage Keys

Call Coverage provides one-button call Transfer.

Call Parking

Instead of transferring a call to an extension, a user can place it in a Park Orbit instead.

Call Waiting (Camp-On)

If an extension user tries to Transfer a call and hears busy tone, the user can dial 2 to Camp On.

Extended Ringing

With Extended Ringing, a transferred call rings an extension 15 times before recalling the extension that initially transferred it.

Group Ring

Unscreened Transfers to ring groups do not recall the transferring extension if unanswered.

Hotline

Hotline provides one-button call Transfer.

Off-Hook Signaling

If an extension tries to Transfer a call and hears ring/busy, the user can dial 1 to initiate Off-Hook Signaling.

Privacy

An extension with Privacy does not hear camp-on tones when a Transferred call is waiting.

Speed Dial

An extension can have Transfer codes stored under a One-Touch Speed Dial key.

Tandem Calls

When making a screened Transfer of a trunk call to an extension with Off-Premise Call Forwarding, implement Tandem Trunking when the off-premise user answers.

Feature Operation

To Transfer your call:

You can also use Hotline and Call Coverage Keys to Transfer calls. Refer to these features.

Step 1 ▶ Do not hang up.

Step 2 ▶ ● (At a keyset) Press INTERCOM.

Look for: INTERCOM On
(Modular) -- HOLD Hold Flash (red), Fast Flash (green)
(Non-modular) -- HOLD Exclusive Hold

Listen for: Dial tone

OR

● (At an ESL set) Press TRF.

Listen for: Dial tone

Step 3 ▶ Dial extension number or press DSS key.

Look for: INTERCOM Fast Flash

Listen for: Two beeps or ringing

Step 4 ▶ Announce the call.

If you hear ringing, wait for party to answer before announcing the call. To Transfer the call unannounced, skip this step.

If the extension you called doesn't pick up the call, it recalls to you. If you in turn don't pick it up, it rings all extensions that normally ring for the trunk.

Step 5 ▶ Hang up.

Your Transfer goes through.

TRANSFER

Feature Operation (Cont'd)

To return to your outside call (if the called party doesn't want your Transfer):

- Step 1 ► ● (At a keyset) Press flashing line key.
OR
● (At an ESL Set) Press HLD and dial * 7.

To receive a Transfer (if you get an Intercom call announcing it):

- Step 1 ► Stay on the line.
The Transfer goes through when calling party hangs up.

To answer a transferred call ringing your phone:

Look for: (Modular) -- Line key Slow Flash (red), Fast Flash (green)
(Non-modular) -- Line key Hold Recall
Listen for: Trunk ring

- Step 1 ► Lift handset.
If you have an ESL set, this answers the call. Skip the next step.
- Step 2 ► Press flashing line key.

Description

The system is fully compatible with the TIE System 1001/1002 and VCPU Voice Messaging Systems. These systems provide telephone users with comprehensive Voice Messaging and Automated Attendant¹ features. Voice Messaging ends the frustration and cost of missed calls, inaccurate written messages and telephone tag. Voice Messaging frees a company's busy receptionists and secretaries for more productive work.

Automated Attendant automatically answers the system's incoming calls. After listening to a customized message, an outside caller can dial a system extension or use Voice Messaging.

Voice Messaging and Automated Attendant enhance the telephone system with the following features.

Call Forward to Voice Messaging System (Mailbox Call Forward)

Extension users can forward calls to the Voice Messaging System. Once forwarded, called extension's incoming calls connect to the called extension's mailbox. The caller can then leave a message instead of calling back later.

Mailbox Message Waiting (Leaving a Voice Message)

Mailbox Message Waiting helps a user who calls another extension that is busy, not answered or in Do Not Disturb. As with Call Forwarding, the caller can leave a message in the called extension's mailbox instead of calling back later. (This occurs only if an extension is in a Terminal Hunt Group that terminates at the Voice Messaging system master number. Refer to Extension Hunting for programming details.)

Message View

Display keyset users can press the MSG key to see how many messages they have waiting. The system removes the Voice Message count from the display after the user calls their mailbox.

Transfer to Voice Messaging System (Mailbox Transfer)

An extension user can Transfer a call to the user's own or a co-worker's mailbox. After the Transfer goes through, the caller can leave a message in the mailbox.

Conversation Record

While on a call, a keyset user can have the Voice Messaging System record the conversation. The keyset user just presses a specially programmed Record key. Once recorded, the Voice Messaging System stores the conversation as a new message in the user's mailbox. After calling their mailbox, a user can save, edit or delete the recorded conversation. A voice announcement always precedes the recording.

¹ Automated Attendant is available on TIE System 1002 only.

VOICE MAIL COMPATIBILITY (INTEGRATED VOICE MESSAGING)

Description (Cont'd)

Alternate Night Mode Answering Enhancement (Direct Trunk Routing to a Personal Greeting)

The system offers alternate night mode answering. For systems with Automated Attendant, this allows simplified answering during off hours. Instead of routing to the night mode Automated Attendant, outside callers hear a brief recording and are asked to leave a message. To enable alternate answering:

- Program a terminal hunt group consisting of an uninstalled extension and the Voice Messaging system.
- Make the uninstalled extension the first member of the group.
- Assign an Assigned Night Answer (ANA) trunk (using the EI option) to the uninstalled extension. Refer to Night Answer for the specifics.

When a call rings in on the ANA trunk, Voice Messaging plays the personal greeting for the uninstalled extension. The caller can then leave a message in the uninstalled extension's mailbox. The caller does not hear the Automated Attendant night mode instructions.

Note: Refer to the Voice Messaging System documentation for more information on the many Voice Messaging and Automated Attendant features.

Hardware Requirements

The Voice Messaging System connects to OPX or ASI ports. OPX ports require a Special Trunk Interface (STI).¹ Refer to the Analog Station Interface and Off-Premise Extension features for additional information about these ports.

Conditions

None

Default Configuration

Voice Mail not installed.

Programming

Required Programming

- **E- Extensions, E2- Circuit Type** - When connected to OPX or ASI P/N 89748, each Voice Messaging System port should have circuit type 05. When connected to ASI P/N 89749, each Voice Messaging System port should have circuit type 51.
- **E- Extensions, E5- Hunt Type** - Program each Voice Messaging System port with hunt type 06.
- **E- Extensions, EA- UCD Group Master Extension Number** - Program each Voice Messaging System port with the master number assigned in QP programming below.
- **E- Extensions, EK- Voice Mail (VX) Port** - Enable this option for each Voice Messaging System port.
- **E- Trunks, E9- Direct Trunk Termination** - For each trunk the Tie System 1002 Automated Attendant should answer, terminate the trunk to the Voice Messaging System master number. (See EA above.)

¹ The Special Trunk Interface requires trunk ports, an external power supply/ring generator and two unused extension ports.

VOICE MAIL COMPATIBILITY (INTEGRATED VOICE MESSAGING)

Programming (Cont'd)

- **E- Trunks, EI- Night Call Routing** - For each trunk the Tie System 1002 Automated Attendant should answer at night, terminate the trunk to the master number (see EA above). For this application, make sure the E9 entry is 300.
- **FC1- Reset System Queues** - Reset the system queues after installing the Voice Messaging System.
- **FC3- Reset VX Flag (Telephone Message Waiting Lamps)** - For a first time installation, always use this option to reset the telephone Message Waiting lamps.
- **KS- Programming Keys for Keysets** - Designate a programmable key as a Record key (type R).
- **QP- Voice Mailbox Installation, Mailbox Installed** - Enable this option if the system has a Voice Messaging System connected.
- **QP- Voice Mail Installation, Voice Messaging Master Extension** - Select one of the Voice Messaging System ports programmed in the options above as the master extension number.

Other Programming

- **E- Extensions, E4- Next Extension in Hunt Group** - Enter 300 for all VX ports.
- **E- Extensions, ED- Trunk Control, Access Control** - For Message Notification and/or Message Reminder callout, Voice Messaging System ports must have access to the trunks used for callouts.
- **E- Extensions, ED- Trunk Control, Call-Out Control** - For Message Notification and/or Message Reminder callout, Voice Messaging System ports must have callout enabled for the trunks used for callouts.
- **QJ- Intercom Call Control, Alerts** - Enable/disable the periodic Message Waiting reminder.

Related Features

Flexible Numbering Plan

Flexible numbering may conflict with the Voice Messaging System database.

Message Waiting

Normal Message Waiting does not function if the system has a Voice Messaging System installed.

Voice Prompting Messages

An extension with Messages Waiting can periodically hear a reminder message. This reminder message requires a VAU or OPA/VAU PCB. The VAU or OPA/VAU PCB installs in a trunk slot, replacing four trunk circuits.

Special Trunk Interface

Do not assign a mailbox to the ports used by the STI for power and signaling.

VOICE MAIL COMPATIBILITY (INTEGRATED VOICE MESSAGING)

Feature Operation

For more complete Voice Messaging system operating instructions, refer to the TIE System 1001/1002 or VCPU documentation.

To call your Voice Messaging System mailbox:

If you have messages waiting:

Look for: MSG Fast Flash (green)
Listen for: Periodic reminder message

Step 1 > Lift handset.

Step 2 > ● At a keyset, press MSG.
Look for: MSG Off
Listen for: Ringing

OR

● At an ESL set, press * and dial 6.
Listen for: Ringing

Step 3 > Wait for Voice Messaging System to answer.
Look for: INTERCOM Fast Flash
Refer to your Voice Messaging System documentation for the specifics.

To forward calls to your Voice Messaging System mailbox:

Step 1 > Lift handset.
If you have a One-Touch Speed Dial key, you can press the key instead of using steps 2-5.

Step 2 > Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
If you have an ESL set, skip this step.

Step 3 > Press PGM#.
Listen for: Dial tone stops

Step 4 > Dial Voice Messaging master extension number.
You can optionally press a DSS Console Hotline key.

Step 5 > ● Dial 1 to forward ringing calls you do not answer.

OR

● Dial 2 to forward ringing calls you do not answer *and* calls to your phone when it is busy.

● Dial 3 to forward all your calls. OR

Step 6 > Hang up.
Look for: MSG Slow Flash (green)

To cancel your Call Forwarding:

Look for: MSG Slow Flash (green)

Step 1 > Lift handset.

Step 2 > Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial tone
If you have an ESL set, skip this step.

Step 3 > Press PGM#.
Listen for: Dial tone stops

Step 4 > Hang up.
Look for: MSG off

VOICE MAIL COMPATIBILITY (INTEGRATED VOICE MESSAGING)

Feature Operation (Cont'd)

To Transfer a call to the Voice Messaging System (keyset only):

- Look for: Line key On (red/green)
- Step 1 ► Press INTERCOM.
Look for: (Modular) -- HOLD Hold Flash (red), Fast Flash (green)
(Non-modular) -- HOLD Exclusive Hold
Listen for: Dial tone
If you have an ESL set, press HLD instead.
- Step 2 ► Press MSG.
Listen for: Dial tone stops
- Step 3 ► ● Dial extension number.
To send the call to the Automated Attendant, dial the VX master number instead.
OR
● Press Hotline key.
OR
● Press DSS or DSS Console key.
Listen for: Dial tone
- Step 4 ► Hang up.

To record your conversation (if your keyset has a Record key):

- Look for: Line key On (red/green) if an outside call
INTERCOM On if an Intercom call
- Step 1 ► Press Record key.
After a few seconds:
Look for: CONF On (red/green)
(Modular) -- Record key On (red), Fast Flash (green)
(Non-modular) -- Record key Fast Flash
Listen for: Two beeps and an announcement when the Voice Messaging System starts recording your call
A single beep periodically repeats to indicate that the Voice Messaging System is still recording

To see how many Voice Messaging System messages you have in your voice mailbox:

- Look for: MSG Fast Flash (green)
Listen for: Periodic voice reminder message
- Step 1 ► Do not lift handset.
- Step 2 ► Press MSG.
Look for: Display shows the number of messages left in your mailbox

VOICE PROMPTING MESSAGES

Description

The system plays Voice Prompting Messages to inform a user of the status of their call. Voice Prompting Messages help a user as the call progresses. In addition, Voice Prompting Messages remind users when they have activated certain features (such as Call Forwarding). The chart below shows the Voice Prompting Messages.

Voice Prompting Messages

This message...	Occurs when user...
<i>All lines are busy. For automatic Callback, please press the Callback key.</i>	Tries to place a call when all trunks in the rotary are busy.
<i>Audio file is full.</i>	Tries to record a Personal Greeting and no OPA or OPA/VAU memory is available.
<i>Please do not disturb.</i>	User calls an extension in DND.
<i>Please hold on. All lines are busy. Your call will be answered when a line becomes free.</i>	Calls a busy UCD or ACD group.
<i>Please hold on. Your call is being rerouted.</i>	Calls an extension that is Call Forwarded off-premise.
<i>Please start recording <beep>.</i>	Starts to record a Personal Greeting, OPA announcement, etc.
<i><beep> Recording finished.</i>	Exceeds time allotted for recording a Personal Greeting, OPA announcement, etc. Also occurs if user pauses too long while recording.
<i>The lowest cost line is busy. Please wait for the next one.</i>	Places a call using ARS or LCR when all trunks in the preferred service are busy.
<i>The number you have dialed is not in service.</i>	Calls a valid, but inoperative extension.
<i>The time is...</i>	Dials 8 on an idle extension.
<i>This is station...</i>	Dials 6 on an idle extension.
<i>You have a message.</i>	Has a Message Waiting (voice or Voice Messaging System).
<i>Your call cannot go through. Please call the operator.</i>	Tries to place a Toll Restricted call.
<i>Your calls have been forwarded.</i>	Has forwarded calls. Message periodically reminds user that calls are forwarded.
<i>Vacant number.</i>	Calls an invalid (not installed) extension.

Voice Prompting Messages requires the installation of a VAU or OPA/VAU PCB. The VAU or OPA/VAU PCB installs in a trunk slot, replacing four trunk circuits.

VOICE PROMPTING MESSAGES

Description (Cont'd)

Conditions

None

Default Configuration

Voice Prompting Messages occur as indicated in the chart above when the VAU or OPA/VAU PCB is installed. Do not install the VAU or OPA/VAU PCB in the first trunk slot.

Programming

Required Programming

None

Other Programming

- **QJ- Intercom Call Control, Alerts (Call Forwarding)** - Enable/disable the Voice Prompting Message, "Your calls have been forwarded."
- **QJ- Intercom Call Control, Alerts (Message)** - Enable/disable the Voice Prompting Message, "You have a message."

Related Features

Personal Greeting

An extension user can record a personalized voice message for their callers.

Voice Mail Compatibility

Voice Messaging and Automated Attendant give callers additional Voice Prompting Messages.

Feature Operation

None

VOLUME CONTROLS

Description

Each keyset and ESL telephone has three separate volume adjustments: Background Music, handset and Handsfree. The Background Music adjustment also sets the volume of incoming ringing and paged announcements. With Volume Controls, each keyset or ESL user can individually set volumes to their most comfortable level.

When the user sets the volume for Background Music and Intercom calls (handset or Handsfree), the level remains until the user changes it. When the user sets the level for outside calls (handset or Handsfree), the level remains only for that call. The system reestablishes a mid-range (nominal) level for the next outside call.

Pressing the VOL UP or VOL DN key changes the volume by 3 dB. This doubles or halves the volume level. For example, to reduce the volume by 9 dB, the user presses VOL DN three times. To increase the volume by 9 dB, the user presses VOL UP three times.

The following table shows, for each type of call:

- The nominal (default) volume level
- The minimum and maximum levels (in dB)
- The number of presses required for each minimum or maximum

Type of Call	Low (steps)	Nominal	High (steps)
Ring, page and BGM	-21 dB (-5)	-6 dB	+9 dB (+5)
Intercom	-15 dB (-3)	-6 dB	+9 dB (+5)
Line	-9 dB (-3)	0 dB	+9 dB (+3)

Conditions

None

Default Configuration

See above.

Programming

Required Programming

None

Other Programming

QE- Line Gain Table - Set the gain for each trunk.

Related Features

Analog Station Interface/Off-Premise Extension

Single line sets connected to ASIs or OPX ports do not have volume controls. The system sets their Intercom volumes at a nominal level.

Headset Compatibility

The user can also adjust the volume of the signals in a customer-provided headset.

Feature Operation

To adjust the volume of Background Music, incoming ringing and paged announcements:

Step 1 ► Press VOL UP ▲ or VOL DN ▼ while feature is active or telephone is idle.

To adjust the handset volume:

Step 1 ► Press VOL UP ▲ or VOL DN ▼ while on a handset call.

When you hang up, the volume level for outside calls reverts to a mid-range value. The volume level for Intercom calls, however, stays at the set value until you change it.

To adjust the Handsfree (speaker) volume:

Step 1 ► Press VOL UP ▲ or VOL DN ▼ while on a Handsfree call.

When you hang up, the volume level for outside calls reverts to a mid-range value. The volume level for Intercom calls, however, stays at a set value until you change it.

The volume level setting for the previous Handsfree Intercom call determines the volume of your incoming voice announcements.

WALKING CLASS OF SERVICE

Description

Walking Class of Service lets an extension user temporarily override Class of Service dialing restrictions. This helps a user that must place an important call while at a co-worker's phone. Walking Class of Service lets the user:

- Go to a co-worker's phone
- Implement Walking Class of Service
- Place an outside call that the extension normally restricts

Walking Class of Service overrides the following CP- Program COS restrictions (refer to the Class of Service feature):

Allow Only Intercom Calls at Night (BY0:2)
Allow Only Local Calls at Night (BY1:4)
Allow Only Local Calls (Day or Night)(BY1:3)
Extension Toll Restriction Level (BY1:1)¹

Walking Class of Service does not override the following E- Extensions programming:

E8- Line Access Options, Allow Line Code Dial-Up
E8- Line Access Options, Access to Groups 90-95 (not on ONYX II)
ED- Trunk Control, Access Control
ED- Trunk Control, Call-Out Control

Conditions

None

Default Configuration

Walking Class of Service disabled (no code programmed).

Programming

Required Programming

- **QG- DISA Code** - Program the Walking Class of Service code. This is also the DISA code.

Other Programming

None

Related Features

Last Number Redial/Save

If an extension user implements Walking Class of Service to place a call, Last Number Redial and Save can redial it.

¹ When implemented at an extension, Walking Class of Service temporarily assigns that extension toll level 0.

WALKING CLASS OF SERVICE

Feature Operation

- To use Walking Class of Service to place an outside call:**
- Step 1 ▶** Lift handset.
- Step 2 ▶** Press INTERCOM.
Look for: INTERCOM On
Listen for: Dial Tone
If you have an ESL set, skip this step.
- Step 3 ▶** Press # twice.
Listen for: Dial tone stops
- Step 4 ▶** Dial Walking Class of Service code.
Look for: INTERCOM off
Listen for: Second dial tone
- Step 5 ▶** Dial code for outside call.
You may be able to dial:
A trunk extension number (See Direct Trunk Access)
A trunk access code (e.g., 801)
Trunk group access code - 9 or 90-98 (See Line Rotaries)

100

100

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INTRODUCTION

Before Reading This Section

This section provides detailed information on each of the system's programmable options. Use these options to customize your system's features. For example, after reading a feature description in Section 1, review the feature's programming requirements. Then, turn to this section for the specifics.

To change the system's programmable options, you must connect a programming terminal to the system. (Refer to *Connecting a Programming Terminal* below.) The terminal uses menus to show you the different options. This section is organized just like the menus you see on your terminal.

How to Use This Section

This section subdivides the description for each programming option into the following headings:

Description tells what the programming option is. Along with the Description are the *Conditions* and *Default Value*. Conditions describes any limits or special considerations that may apply to the option. Default Value lists the default (factory-installed) setting for the option. When initially installed, the system uses the Default Value.

Related Programming shows other programmable options that closely relate to the option you are reading about. If an option is *required* to make a feature work, the feature may have other required programming as well. Related Programming lists these other programming options. You *must* consider these other programs when customizing the feature. If an option is a required program for several features, there will be separate lists of related programs for each feature.

Feature Reference lists all the features that require this option. If a feature is listed here, you must program the option to get the feature to work.

Instructions tells you how to enter data for this option on the Program Record Form (PRF) and the programming terminal. Use the PRF to keep a record of your programming.

INTRODUCTION

Connecting a Programming Terminal

Your programming terminal must be a standard ASCII device with an RS-232-C interface. The programming terminal is typically a keyboard with attached CRT or printer.

To connect a programming terminal to the system (Figure 2-1):

- Step 1 ► Using a standard RS-232-C cable (with ends as shown), connect the programming terminal to the upper port on the COM PCB.
- Step 2 ► Plug the programming terminal into an AC receptacle. *Do not use the AC receptacle dedicated to the system power supply.*
- Step 3 ► Set the programming terminal parameters to match the COM PCB parameters. For a newly installed system, set the terminal as follows:
 - 8 data bits
 - 1 stop bit
 - No parity
 - 1200 baud

Use the J- Communications Port Parameters option or the attendant's phone to change the COM PCB port speed.

To set the COM PCB port speed from the attendant's phone (usually extension 300):

- Step 1 ► Lift handset.
- Step 2 ► Press INTERCOM.
 - Look for: INTERCOM On
 - Listen for: Dial tone
- Step 3 ► Press PGM# and dial 0.
 - Listen for: Dial tone stops
- Step 4 ►
 - To set the modem (lower) port speed, dial 1 and select the baud rate option.
 - OR
 - To set the local (upper) port speed, dial 2 and select the baud rate option. In either case, the choices are:
 - 0=300 baud
 - 1=1200 baud
 - 2=2400 baud
 - 3=4800 baud
 - 4=9600 baud
 - 5=19.2K baud
- Step 5 ► Hang up.
 - Look for: Intercom goes out
- Step 6 ► Press ESC on the programming terminal. You should see the Main Menu.

INTRODUCTION

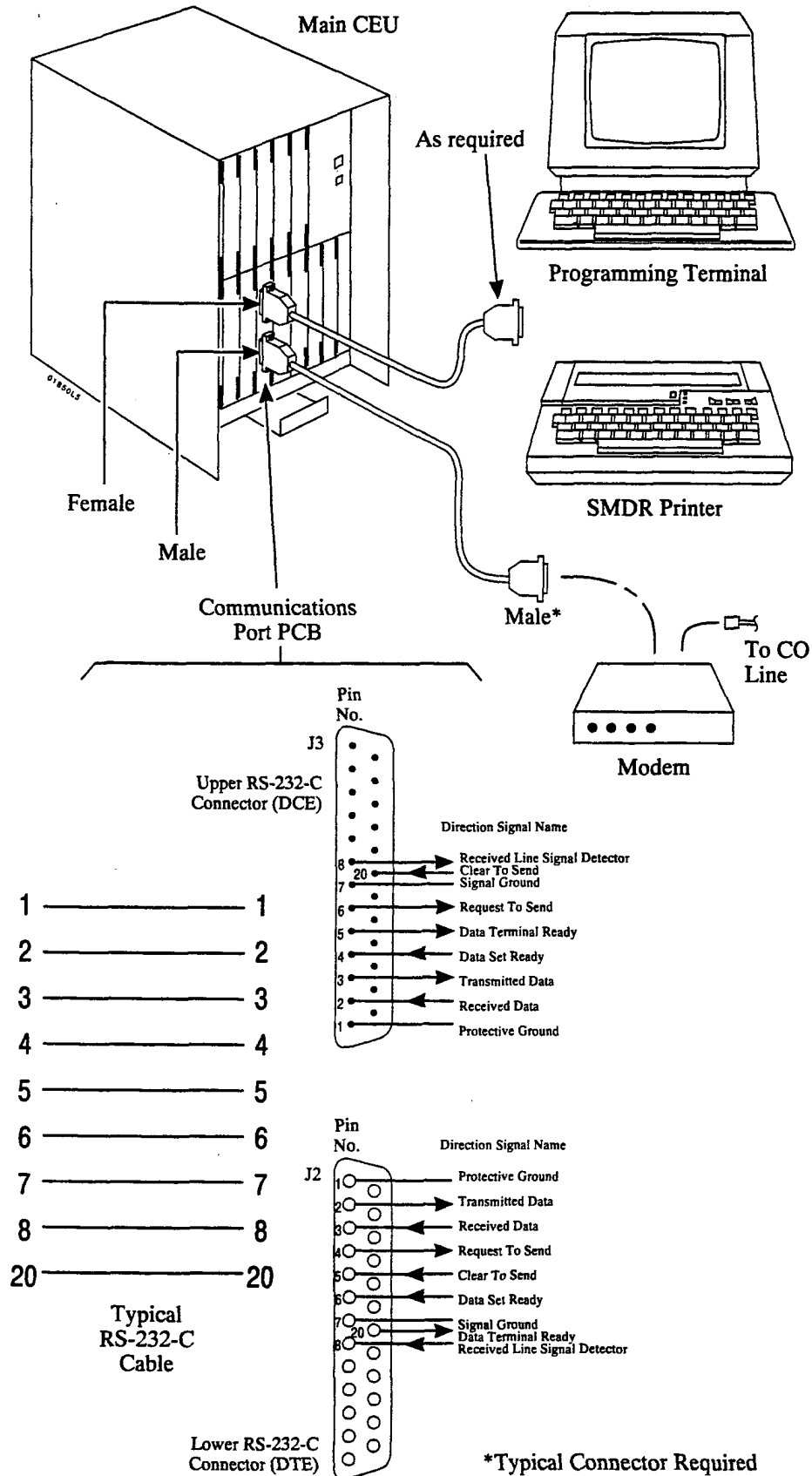


Figure 2-1 CONNECTING THE PROGRAMMING TERMINAL

INTRODUCTION

The Main Menu

The Main Menu (below) shows your basic programming options.

CMD	DESCRIPTION	ACCESS LEVEL	CMD	DESCRIPTION	ACCESS LEVEL
A	TOLL RESTRICTION		K	KEY DATA	
	- LIST	[L] 0		- LIST DATA	[L] 0
	- PROGRAM	[P] 1		- DSS,KEYSET	[D,S] 1
	- INITIALIZE	[I] 1	L	LIST	
C	CLASS OF SERVICE TABLE			- SYSTEM DATA	[S] 0
	- LIST	[L] 0		- EXTENSION DATA	[E] 0
	- PROGRAM	[P] 1	M	CANCEL ACCESS LEVEL	0
D	DISPLAY MEMORY	0	N	EXTENSION NAMES/MESSAGES	
E	EXTENSION SETUP [0-9,A-L,Y,Z]			- LIST	[L] 0
	- STATIONS	1		- PROGRAM/DIRECTORY	[P/D] 1
	- LINES	2	OL	LABEL MAKER	0
F	MISC. SYSTEM DATA		OS	SELECTIVE HISTORY	[D,F,N] 0
	- EPROM CHECKSUMS [<CR>]	0	P	PRINT SMDR REPORT	1
	- LCR CONFIGURATION	[L] 0	Q	SYSTEM PARAMETERS	[A-Z] 2
	- PARAMETER RESET	[C] 1	R	ERROR LOG REPORT	0
GA	ARS EDITOR	2	S	SPEED DIAL	
GL	LCR TESTING [A,E,F,L-R,/]	2		- LIST	[L] 0
H	SYSTEM STATUS REPORTS [A-I]	0		- PROGRAM/ROTARY CONV.	[P/R] 1
I	SYSTEM UTILITIES	1	T	SET SYSTEM DATE/TIME	0
	- PORT RELEASE	[P] 1	V	CLEAR ERROR LOG	2
	- SIDE TONE TEST	[S] 1	X	EXCHANGE EXTENSION DATA	1
	- RESET LINE CARD	[R] 1	Y	ACCESS-LEVEL PASSWORDS	1
	- RESET EXP CABINET	[E] 1	Z	CLEAR SMDR RECORDS	2
J	COMM PORT PARAMETERS	0			

FOR MENU OF COMMANDS ENTER <CR>¹

To select an option from the Main Menu:

Step 1 ►

Press the indicated key.

For example, to set the system date and time, press T. All your entries must be upper case.

Entering an Access Code

When you enter data at the programming terminal, the system may ask you to enter an access code (password). As you can see from the ACCESS LEVEL column on the Main Menu, the system has three access (password) levels: 0-2. Level 0 programming options don't require you to enter a password. To use Level 1 options (such as AP), you must first enter the level 1 or 2 password. To use level 2 options (such as GA), you must first enter the level 2 password. Refer to the System Programming Password Protection feature for more information.

To enter an access code (if you press a key and see, "ENTER ACCESS CODE"):

Step 1 ►

Enter the level 1 or 2 Access Code, as required.

The default level 1 password is carriage return (ENTER).

The default level 2 password for ONYX II is ONYX2.

The default level 2 password for ONYX III is ONYX3.

You must make your entry within ten minutes. If you don't, you'll have to enter the password again.

Step 2 ►

Press ENTER.

¹ When you enter Y for QZ- SMDR Printout All the Time, you no longer see the Main Menu prompt: FOR MENU OF COMMANDS ENTER <CR>

The Sub-Menus

Certain Main Menu options have sub-menus. When you type a letter for a Main Menu option, you see a prompt (-CMD>) indicating that the option has a sub-menu. If you press ENTER, you see the sub-menu. The sub-menu shows additional options. For example, when you type S, you see: S-CMD>. If you press ENTER, you see the Speed Dial sub-menu:

```
SYSTEM/STATION SPEED DIAL
L- LIST MODE
P- PROGRAM MODE
R- ROTARY CONVERSION
```

The following Main Menu items have sub-menus:

```
A- TOLL RESTRICTION
C- CLASS OF SERVICE
E- EXTENSION SETUP
FC- RESETS
GA- ARS
GL- LCR TESTING
H- SYSTEM STATUS REPORTS
I- SYSTEM UTILITIES
K- KEY DATA
L- LIST
N- EXTENSION NAMES/MESSAGES
O- LABEL MAKER/SELECTIVE HISTORY
Q- SYSTEM PARAMETERS
S- SPEED DIAL
```

Entering Data, The Basics

To enter data for an option, just access the option and type in the appropriate response. For some options you have to press ENTER after your response, for others you don't.

When you access an option, you see the option's prompt followed by the current programmed value. For most options, pressing ENTER leaves the current programmed value unchanged.

Note: When programming the E options for trunks, you can enter the trunk extension number (e.g., 480) or the trunk number (L01). Trunk numbers always run sequentially, starting with L01.

The chart below describes the special-function keys:

Press this key...	For this function...
ENTER	Accept the value you type in or leave the current programmed value unchanged.
SPACE BAR	Temporarily halt a listing.
ESC	Cancel an action and return to the Main Menu. Since the COM PCB has a buffer, the cancellation may not be immediate.
BACKSPACE	For many options, erases the character to the left of the cursor

To erase an entry, different options require different responses. Refer to the appropriate option in this section if you need to erase an entry.

- When entering extension data for circuit types 00-04, 06, Z and M, use Table 3.
- When entering trunk data for circuit types 07-11, use Table 5.
- When entering extension/trunk data for circuit types 05, 12-19 and 51, use Table 4.

INTRODUCTION

Programming Class of Service

When programming Class of Service (CP), you usually enter a value for each bit of each byte. You do, however, have some additional options. If you press ENTER after programming a byte, the system accepts your entry and skips to the next COS number. Or, you can press ESC in the middle of a byte to cancel your entries. To leave a COS unchanged, press ENTER before typing any data.

Programming a Newly Installed System

When programming a new system, you may find the following helpful:

- Verify your trunk circuit types. All connected trunks default to type 10. You may have to reprogram E2- Circuit Type for all trunks. (Be sure to enter X for all uninstalled trunks.)
- Set the system time (using the attendant's phone or the T- Set System Date and Time option).
- Run the HF- Traffic Management Summary (with Data Cleared) report. This clears out any unnecessary TMS reports that may have occurred during installation.
- Use the V- Clear Error Log option to clear the System Error Report. This clears out any unnecessary error log reports that may have occurred during installation.
- Use the QE- Line Gain Table option to set the relative gain for each trunk. Refer to this option to find out how to test the trunk signal levels before you adjust the gains.
- Use FC1 to reset the system queue elements.
- Use FC2 to reset the trunk circuit and line/trunk PCB fail counters
- Set the trunk side tone levels. To do this -
 - To set side tone automatically...**
Use the IS option
Power the system off then on
 - To set side tone manually...**
Use the QE- Sidetone Network option

A- TOLL RESTRICTION

AI- INITIALIZE TOLL RESTRICTION

Description

Use the AI option to initialize Toll Restriction. Initialization loads the standard (default) Toll Restriction programming. *Always initialize when programming Toll Restriction for the first time.*

CAUTION: Initialization erases all previous Toll Restriction programming.

Conditions

None

Default Value

Toll Restriction not initialized.

Related Programming

Toll Restriction

- **AP- Toll Level** - Enter the Toll Level you want to program.
- **AP- Allow Active Dial Pad** - Enable/disable continued dialing for this Toll Level (see Special Services and OCC Compatibility).
- **AP- Allow Special Access (N11) Dialing** - Enable/disable N11 and 1+N11 dialing for this Toll Level.
- **AP- Allow Outside Operator (0+) Dialing** - Enable/disable outside operator dialing for this Toll Level.
- **AP- Allow International Dialing** - Enable/disable direct international dialing for this Toll Level.
- **AP- Allow Equal Access** - Enable/disable Equal Access Dialing for this Toll Level (see Equal Access Compatibility). Also, program the Equal Access Codes table.
- **AP- Allow 1 + NNX Dialing** - Enable/disable long distance exchange calls for this Toll Level. Also, program the 1 + NNX codes table.
- **AP- Allow NNX Dialing** - Enable/disable local exchange (NNX) dialing for this Toll Level. Also, program the NNX codes table.
- **AP- Allow NPA Dialing** - Enable/disable area code (NPA) dialing for this Toll Level. Also, program the NPA codes table.
- **AP- Six Digit Analysis** - Enable/disable six-digit analysis for this Toll Level. Also, program a six-digit analysis table.
- **CP- Allow Only Intercom Calls at Night (BY0:2)** - At night, extensions with this option enabled can only place Intercom calls. This assignment overrides AP programming.
- **CP- Allow Only Local Calls at Night (BY1:4)** - At night, extensions with this option enabled can place Intercom calls and local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).
- **CP- Allow Only Local Calls (Day or Night) (BY1:3)** - Extensions with this option enabled can only place Intercom calls or local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).
- **CP- Extension Toll Restriction Level (BY1:1)** - Assign a toll restriction level (0-7) to a Class of Service.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Trunks, EJ- Toll Restriction** - Enable/disable Toll Restriction for each trunk.

A- TOLL RESTRICTION

AI- INITIALIZE TOLL RESTRICTION

Feature Reference

Toll Restriction

Instructions

To enter data on the PRF:
No entries required.

To initialize the Toll Restriction data:

- Step 1 > Type AI. You see: **INITIALIZE DATABASE?**
- Step 2 > Type Y. You see: **DONE!**
- Step 3 >
 - Enter another option from the Toll Restriction menu.
 - OR
 - Press **ESC** to return to the Main Menu.

A- TOLL RESTRICTION AL- LIST TOLL RESTRICTION

Description

Use the AL option to list (display) the programmed AP- Program Toll Restriction options for each toll level.

Conditions

None

Default Value

ACTIVE DIAL PAD -Yes
ALLOW SPECIAL ACCESS (N11) DIALING -Yes
ALLOW 0+ DIALING -Yes
ALLOW DIRECT INT'L DIALING -Yes
ALLOW EQUAL ACCESS -Yes
EQUAL ACCESS ALLOW TABLE
TABLE EMPTY
ALLOW 1+NNX DIALING -Yes
1+NNX ALLOW TABLE
TABLE EMPTY
ALLOW NNX DIALING -Yes
NNX ALLOW TABLE
TABLE EMPTY
ALLOW NPA DIALING -Yes
NPA ALLOW TABLE
TABLE EMPTY
SIX DIGIT ANALYSIS -Yes

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities

Instructions

To enter data on the PRF:
No entries required.

To list the Toll Restriction data:

- Step 1 > Type **AL**. You see: **ENTER TOLL LEVEL**
- Step 2 > Enter the toll level you want to list (1-7). The programmed Toll Restriction data displays. You then see: **DISPLAY NEXT LEVEL?**
- Step 3 > ● Press **ENTER** to return to the Toll Restriction menu.
OR
● Press **Y** to display the data for the next toll level.
OR
● Press **ESC** to return to the Main Menu.

A- TOLL RESTRICTION

AP- TOLL LEVEL

Description

When entering Toll Restriction data, use this option to specify the toll level you want to program. Valid toll levels are 1-7. An extension's Class of Service determines its toll level. When programming, the AP prompts that follow pertain to the toll level you specify here.

Conditions

None

Default Value

All Classes of Service have Toll Level 0 (no restriction).

Related Programming

Toll Restriction

- **AI- Initialize Toll Restriction** - Initialize Toll Restriction before programming.
- **AP- Allow Active Dial Pad** - Enable/disable continued dialing for this Toll Level (see Special Services and OCC Compatibility).
- **AP- Allow Special Access (N11) Dialing** - Enable/disable N11 and 1+N11 dialing for this Toll Level.
- **AP- Allow Outside Operator (0+) Dialing** - Enable/disable outside operator dialing for this Toll Level.
- **AP- Allow International Dialing** - Enable/disable direct international dialing for this Toll Level.
- **AP- Allow Equal Access** - Enable/disable Equal Access Dialing for this Toll Level (see Equal Access Compatibility). Also, program the Equal Access Codes table.
- **AP- Allow 1 + NNX Dialing** - Enable/disable long distance exchange calls for this Toll Level. Also, program the 1 + NNX codes table.
- **AP- Allow NNX Dialing** - Enable/disable local exchange (NNX) dialing for this Toll Level. Also, program the NNX codes table.
- **AP- Allow NPA Dialing** - Enable/disable area code (NPA) dialing for this Toll Level. Also, program the NPA codes table.
- **AP- Six Digit Analysis** - Enable/disable six-digit analysis for this Toll Level. Also, program a six-digit analysis table.
- **CP- Allow Only Intercom Calls at Night (BY0:2)** - At night, extensions with this option enabled can only place Intercom calls. This assignment overrides AP programming.
- **CP- Allow Only Local Calls at Night (BY1:4)** - At night, extensions with this option enabled can place Intercom calls and local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).
- **CP- Allow Only Local Calls (Day or Night) (BY1:3)** - Extensions with this option enabled can only place Intercom calls or local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).
- **CP- Extension Toll Restriction Level (BY1:1)** - Assign a toll restriction level (0-7) to a Class of Service.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Trunks, EJ- Toll Restriction** - Enable/disable Toll Restriction for each trunk.

A- TOLL RESTRICTION AP- TOLL LEVEL

Feature Reference

Toll Restriction

Instructions

To enter data on the PRF:

Step 1 ► Enter the toll level you want to program on Table 1.

To enter data at the programming terminal:

Step 1 ► Type **AP**. You see: **ENTER TOLL LEVEL**

Step 2 ► Enter the toll level you want to program (1-7). Go to Allow Active Dial Pad on the next page.

A- TOLL RESTRICTION AP- ALLOW ACTIVE DIAL PAD

Description

Use this option to enable/disable continued dialing for extensions. With continued dialing, the telephone outputs a digit over a trunk each time the user presses a dial pad key. The system never turns off the dial pad. Without continued dialing, the system turns off the extension's dial pad six seconds after the user dials their last digit.

Conditions

Toll level 0 always has Continued Dialing.

Default Value

Continued dialing enabled.

Related Programming

Special Services and OCC Compatibility

- **CP- Extension Toll Restriction Level (BY1:1)** - Toll level 0 always has an active dial pad. Other levels must have active dial pad enabled in AP- Allow Active Dial Pad.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Trunks, E2- Circuit Type** - Program Special Service Trunks with the correct circuit type.
- **QT- System Timers, Dialtone Detection Counter** - Set how long the system waits for second (OCC) dialtone.

Feature Reference

Special Services and OCC Compatibility

Instructions

To enter data on the PRF:

- Step 1 ➤ Enter Y(es) or N(o) for this option on Table 1.

To enter data at the programming terminal:

- Step 1 ➤ After programming the previous AP option, you see: **ACTIVE DIAL PAD?**
- Step 2 ➤ Enter Y(es) or N(o) for this option. Go to Allow Special Access (N11) Dialing on the next page.

A- TOLL RESTRICTION

AP- ALLOW SPECIAL ACCESS (N11) DIALING

Description

Use this option to allow/prevent an extension user from directly dialing N11 and 1+N11 calls. (N is any digit 2 to 8.) If restricted, the system terminates the call on the third digit of an N11 call and the fourth digit of a 1+N11 call.

Conditions

- a. To restrict international (011) calls, refer to Allow Outside Operator (0+) Dialing below.
- b. The system never restricts 911 and 1+911 calls.

Default Value

Special Access Dialing allowed.

Related Programming

Toll Restriction

- **AI- Initialize Toll Restriction** - Initialize Toll Restriction before programming.
- **AP- Toll Level** - Enter the Toll Level you want to program.
- **AP- Allow Active Dial Pad** - Enable/disable continued dialing for this Toll Level (see Special Services and OCC Compatibility).
- **AP- Allow Outside Operator (0+) Dialing** - Enable/disable outside operator dialing for this Toll Level.
- **AP- Allow International Dialing** - Enable/disable direct international dialing for this Toll Level.
- **AP- Allow Equal Access** - Enable/disable Equal Access Dialing for this Toll Level (see Equal Access Compatibility). Also, program the Equal Access Codes table.
- **AP- Allow 1 + NNX Dialing** - Enable/disable long distance exchange calls for this Toll Level. Also, program the 1 + NNX codes table.
- **AP- Allow NNX Dialing** - Enable/disable local exchange (NNX) dialing for this Toll Level. Also, program the NNX codes table.
- **AP- Allow NPA Dialing** - Enable/disable area code (NPA) dialing for this Toll Level. Also, program the NPA codes table.
- **AP- Six Digit Analysis** - Enable/disable six-digit analysis for this Toll Level. Also, program a six-digit analysis table.
- **CP- Allow Only Intercom Calls at Night (BY0:2)** - At night, extensions with this option enabled can only place Intercom calls. This assignment overrides AP programming.
- **CP- Allow Only Local Calls at Night (BY1:4)** - At night, extensions with this option enabled can place Intercom calls and local outside calls. In addition, extensions with this option enabled cannot place N11 or 1+N11 calls.
- **CP- Allow Only Local Calls (Day or Night) (BY1:3)** - Extensions with this option enabled can only place Intercom calls or local outside calls. In addition, extensions with this option enabled cannot place N11 or 1+N11 calls.
- **CP- Extension Toll Restriction Level (BY1:1)** - Assign a toll restriction level (0-7) to a Class of Service.

A- TOLL RESTRICTION

AP- ALLOW SPECIAL ACCESS (N11) DIALING

Related Programming (Cont'd)

- E- Extensions, E3- Class of Service - Assign Class of Service to extensions.
- E- Trunks, EJ- Toll Restriction - Enable/disable Toll Restriction for each trunk.

Feature Reference

Toll Restriction

Instructions

- To enter data on the PRF:**
- Step 1 ➤ Enter Y(es) or N(o) for this option on Table 1.
- To enter data at the programming terminal:**
- Step 1 ➤ After programming the previous AP option, you see: **ALLOW SPECIAL ACCESS (N11) DIALING?**
 - Step 2 ➤ Enter Y(es) or N(o) for this option. Go to Allow Outside Operator (0+) Dialing on the next page.

A- TOLL RESTRICTION

AP- ALLOW OUTSIDE OPERATOR (0+) DIALING

Description

Use this option to allow/prevent an extension user from directly dialing 0 to get an outside (telco) operator. These calls can include:

- Operator assisted calls
- Credit card calls
- 011 international calls

If this option restricts 0+ dialing, the system terminates the call as soon as the user dials 0.

Conditions

Even if allowed by this option, International Dialing below may still prevent 011 international calls.

Default Value

0+ dialing allowed.

Related Programming

Toll Restriction

- **AI- Initialize Toll Restriction** - Initialize Toll Restriction before programming.
- **AP- Toll Level** - Enter the Toll Level you want to program.
- **AP- Allow Active Dial Pad** - Enable/disable continued dialing for this Toll Level (see Special Services and OCC Compatibility).
- **AP- Allow Special Access (N11) Dialing** - Enable/disable N11 and 1+N11 dialing for this Toll Level.
- **AP- Allow International Dialing** - Enable/disable direct international dialing for this Toll Level. This option applies only if you first enable Allow Outside Operator (0+).
- **AP- Allow Equal Access** - Enable/disable Equal Access Dialing for this Toll Level (see Equal Access Compatibility). Also, program the Equal Access Codes table.
- **AP- Allow 1 + NNX Dialing** - Enable/disable long distance exchange calls for this Toll Level. Also, program the 1 + NNX codes table.
- **AP- Allow NNX Dialing** - Enable/disable local exchange (NNX) dialing for this Toll Level. Also, program the NNX codes table.
- **AP- Allow NPA Dialing** - Enable/disable area code (NPA) dialing for this Toll Level. Also, program the NPA codes table.
- **AP- Six Digit Analysis** - Enable/disable six-digit analysis for this Toll Level. Also, program a six-digit analysis table.
- **CP- Allow Only Intercom Calls at Night (BY0:2)** - At night, extensions with this option enabled can only place Intercom calls. This assignment overrides AP programming.

A- TOLL RESTRICTION

AP- ALLOW OUTSIDE OPERATOR (0+) DIALING

Related Programming (Cont'd)

- **CP- Allow Only Local Calls at Night (BY1:4)** - At night, extensions with this option enabled can place Intercom calls and local outside calls. In addition, extensions with this option enabled cannot place 0+ calls.
- **CP- Allow Only Local Calls (Day or Night) (BY1:3)** - Extensions with this option enabled can only place Intercom calls or local outside calls. In addition, extensions with this option enabled cannot place 0+ calls.
- **CP- Extension Toll Restriction Level (BY1:1)** - Assign a toll restriction level (0-7) to a Class of Service.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Trunks, EJ- Toll Restriction** - Enable/disable Toll Restriction for each trunk.

Feature Reference

Toll Restriction

Instructions

To enter data on the PRF:
Step 1 ➤ Enter Y(es) or N(o) for this option on Table 1.

To enter data at the programming terminal:
Step 1 ➤ After programming the previous AP option, you see: **ALLOW 0+ DIALING?**
Step 2 ➤ Enter Y(es) or N(o) for this option. Go to Allow International Dialing on the next page.

A- TOLL RESTRICTION

AP- ALLOW INTERNATIONAL DIALING

Description

Use this option to allow/prevent an extension user from directly dialing a 011 international call. If this option restricts 011 dialing, the system terminates the call as soon as the user dials 01.

Conditions

- a. To allow 011 dialing, you must first allow 0+ dialing in Allow Outside Operator (0+) Dialing.
- b. Some or all portions of Mexico and Canada are included in the same numbering plan as the United States. This is termed the North American Numbering Plan (NANP). Mexico and Canada are served by area codes within the NANP. To restrict these calls, use the Allow NPA Dialing option.

Default Value

011 dialing allowed.

Related Programming

Toll Restriction

- **AI- Initialize Toll Restriction** - Initialize Toll Restriction before programming.
- **AP- Toll Level** - Enter the Toll Level you want to program.
- **AP- Allow Active Dial Pad** - Enable/disable continued dialing for this Toll Level (see Special Services and OCC Compatibility).
- **AP- Allow Special Access (N11) Dialing** - Enable/disable N11 and 1+N11 dialing for this Toll Level.
- **AP- Allow Outside Operator (0+) Dialing** - Enable/disable outside operator dialing for this Toll Level.
- **AP- Allow Equal Access** - Enable/disable Equal Access Dialing for this Toll Level (see Equal Access Compatibility). Also, program the Equal Access Codes table.
- **AP- Allow 1 + NNX Dialing** - Enable/disable long distance exchange calls for this Toll Level. Also, program the 1 + NNX codes table.
- **AP- Allow NNX Dialing** - Enable/disable local exchange (NNX) dialing for this Toll Level. Also, program the NNX codes table.
- **AP- Allow NPA Dialing** - Enable/disable area code (NPA) dialing for this Toll Level. Also, program the NPA codes table.
- **AP- Six Digit Analysis** - Enable/disable six-digit analysis for this Toll Level. Also, program a six-digit analysis table.
- **CP- Allow Only Intercom Calls at Night (BY0:2)** - At night, extensions with this option enabled can only place Intercom calls. This assignment overrides AP programming.

A- TOLL RESTRICTION

AP- ALLOW INTERNATIONAL DIALING

Related Programming (Cont'd)

- **CP- Allow Only Local Calls at Night (BY1:4)** - At night, extensions with this option enabled can place Intercom calls and local outside calls. In addition, extensions with this option enabled cannot place 011 international calls.
- **CP- Allow Only Local Calls (Day or Night) (BY1:3)** - Extensions with this option enabled can only place Intercom calls or local outside calls. In addition, extensions with this option enabled cannot place 011 international calls.
- **CP- Extension Toll Restriction Level (BY1:1)** - Assign a toll restriction level (0-7) to a Class of Service.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Trunks, EJ- Toll Restriction** - Enable/disable Toll Restriction for each trunk.

Feature Reference

Toll Restriction

Instructions

- To enter data on the PRF:**
- Step 1 ➤ Enter Y(es) or N(o) for this option on Table 1.

- To enter data at the programming terminal:**
- Step 1 ➤ After programming the previous AP option, you see: **ALLOW DIRECT INTERNATIONAL DIALING?**
 - Step 2 ➤ Enter Y(es) or N(o) for this option. Go to Allow Equal Access on the next page.

A- TOLL RESTRICTION AP- ALLOW EQUAL ACCESS

Description

Use this option to allow/prevent an extension user from directly dialing Equal Access (10XXX) calls. If allowed, the system compares the 10XXX code the user dials to the programmed Equal Access List. The list can be either an allow or deny list. This means the list can either selectively allow or deny the dialed code. The system does not further Toll Restrict the call.

If this option restricts 10XXX dialing, the system terminates the call as soon as the user dials 10 and any digit. If the user dials a code that is not allowed by the Equal Access List, the system terminates the call after the code.

Note: This option does not apply to VS \geq Aux Module 2.0/Base 5.0, ONYX II/III \geq 3.5 and ONYX IV \geq 1.2. In these versions, the Equal Access list is eliminated. The system does not prevent use of Equal Access. It can, however, Toll Restrict the telephone number a user dials. Refer to the Equal Access Compatibility feature.

Conditions
None

Default Value
Equal Access Dialing allowed. The Equal Access List is an allow list with no entries. An empty list allows all codes.

Related Programming

Equal Access Compatibility

- CP- Extension Toll Restriction Level (BY1:1) - Assign a Toll Restriction Level to each Class of Service.
- E- Extensions, E3- Class of Service - Assign Class of Service to each extension.

Toll Restriction

- AI- Initialize Toll Restriction - Initialize Toll Restriction before programming.
- AP- Toll Level - Enter the Toll Level you want to program.
- AP- Allow Active Dial Pad - Enable/disable continued dialing for this Toll Level (see Special Services and OCC Compatibility).
- AP- Allow Special Access (N11) Dialing - Enable/disable N11 and 1+N11 dialing for this Toll Level.
- AP- Allow Outside Operator (0+) Dialing - Enable/disable outside operator dialing for this Toll Level.
- AP- Allow International Dialing - Enable/disable direct international dialing for this Toll Level.
- AP- Allow 1 + NNX Dialing - Enable/disable long distance exchange calls for this Toll Level. Also, program the 1 + NNX codes table.
- AP- Allow NNX Dialing - Enable/disable local exchange (NNX) dialing for this Toll Level. Also, program the NNX codes table.
- AP- Allow NPA Dialing - Enable/disable area code (NPA) dialing for this Toll Level. Also, program the NPA codes table.
- AP- Six Digit Analysis - Enable/disable six-digit analysis for this Toll Level. Also, program a six-digit analysis table.
- CP- Allow Only Intercom Calls at Night (BY0:2) - At night, extensions with this option enabled can only place Intercom calls. This assignment overrides AP programming.

A- TOLL RESTRICTION

AP- ALLOW EQUAL ACCESS

Related Programming (Cont'd)

- **CP- Allow Only Local Calls at Night (BY1:4)** - At night, extensions with this option enabled can place Intercom calls and local outside calls. In addition, extensions with this option enabled cannot place Equal Access calls.
- **CP- Allow Only Local Calls (Day or Night) (BY1:3)** - Extensions with this option enabled can only place Intercom calls or local outside calls. In addition, extensions with this option enabled cannot place Equal Access calls.
- **CP- Extension Toll Restriction Level (BY1:1)** - Assign a toll restriction level (0-7) to a Class of Service.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Trunks, EJ- Toll Restriction** - Enable/disable Toll Restriction for each trunk.

Feature Reference

Equal Access Compatibility
Toll Restriction

Instructions

- To enter data on the PRF:**
- Step 1 ➤ Enter Y(es) or N(o) for this option on Table 1.
If you enter N, do not go to steps 2 and 3.
 - Step 2 ➤ If you enter Y, indicate if the Equal Access List is a deny list or an allow list.
For example, to have Equal Access only for a few specific codes, make the list an allow list.
 - Step 3 ➤ Enter the codes in the Equal Access List.
For example, if the list is an allow list only for 10288, enter only 288 in the list.

A- TOLL RESTRICTION AP- ALLOW EQUAL ACCESS

Instructions (Cont'd)

To enter data at the programming terminal:

- Step 1 >** After programming the previous AP option, you see: **ALLOW EQUAL ACCESS?**
- Step 2 >** Enter Y(es) or N(o) for this option.
If you enter N, go to Allow 1+NNX Dialing.
- Step 3 >** Use the chart below to enter data into the list. Go to Allow 1+NNX when you complete the list.

From this menu	Type this	Function	To use these options
AP-CMD>	Enter ↵	Display list of options.	
	A	Add a code to the list.	<p>DATA Enter code (3-digits) from Table 1. The system then asks for your next entry.</p> <p>Enter ↵ After making all your entries, press ENTER to go back to AP-CMD> options for this list.</p>
	D	Delete a code from the list.	<p>DATA Enter code (3-digits) from Table 1. The system then asks for your next entry.</p> <p>Enter ↵ After making all your entries, press ENTER to go back to AP-CMD> options for this list.</p>
	L	Display the codes in the list.	
	Q	Exit this list and go to the next Toll Restriction option.	

A- TOLL RESTRICTION

AP- ALLOW 1+NNX DIALING

Description

Use this option to allow/prevent an extension user from directly dialing 1+NNX (1 + exchange) calls. If allowed, the system compares the 1+NNX code the user dials to the programmed 1+NNX List. The list can be either an allow or deny list. This means the list can either selectively allow or deny the dialed code.

If this option restricts 1+NNX dialing (or a specific 1+NNX code), the system terminates the call after the user dials the code.

Conditions

None

Default Value

1+NNX dialing allowed. The 1+NNX list is an allow list with no entries. An empty list allows all codes.

Related Programming

Toll Restriction

- **AI- Initialize Toll Restriction** - Initialize Toll Restriction before programming.
- **AP- Toll Level** - Enter the Toll Level you want to program.
- **AP- Allow Active Dial Pad** - Enable/disable continued dialing for this Toll Level (see Special Services and OCC Compatibility).
- **AP- Allow Special Access (N11) Dialing** - Enable/disable N11 and 1+N11 dialing for this Toll Level.
- **AP- Allow Outside Operator (0+) Dialing** - Enable/disable outside operator dialing for this Toll Level.
- **AP- Allow International Dialing** - Enable/disable direct international dialing for this Toll Level.
- **AP- Allow Equal Access** - Enable/disable Equal Access Dialing for this Toll Level (see Equal Access Compatibility). Also, program the Equal Access Codes table.
- **AP- Allow NNX Dialing** - Enable/disable local exchange (NNX) dialing for this Toll Level. Also, program the NNX codes table.
- **AP- Allow NPA Dialing** - Enable/disable area code (NPA) dialing for this Toll Level. Also, program the NPA codes table.
- **AP- Six Digit Analysis** - Enable/disable six-digit analysis for this Toll Level. Also, program a six-digit analysis table.
- **CP- Allow Only Intercom Calls at Night (BY0:2)** - At night, extensions with this option enabled can only place Intercom calls. This assignment overrides AP programming.
- **CP- Allow Only Local Calls at Night (BY1:4)** - At night, extensions with this option enabled can place Intercom calls and local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).
- **CP- Allow Only Local Calls (Day or Night) (BY1:3)** - Extensions with this option enabled can only place Intercom calls or local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).

A- TOLL RESTRICTION AP- ALLOW 1+NNX DIALING

Related Programming (Cont'd)

- CP- Extension Toll Restriction Level (BY1:1) - Assign a toll restriction level (0-7) to a Class of Service.
- E- Extensions, E3- Class of Service - Assign Class of Service to extensions.
- E- Trunks, EJ- Toll Restriction - Enable/disable Toll Restriction for each trunk.

Feature Reference

Toll Restriction

Instructions

To enter data on the PRF:

- Step 1 ➤ Enter Y(es) or N(o) for this option on Table 1.
If you enter N, do not go to steps 2 and 3.
- Step 2 ➤ If you enter Y, indicate if the 1+NNX list is a deny list or an allow list.
For example, to have 1+NNX dialing only for a few specific codes, make the list an allow list.
- Step 3 ➤ Enter the codes in the 1+NNX List.
For example, if the list is an allow list only for 888, enter only 888 in the list.

To enter data at the programming terminal:

- Step 1 ➤ After programming the previous AP option, you see: **ALLOW 1+NNX DIALING?**
- Step 2 ➤ Enter Y(es) or N(o) for this option.
If you enter N, go to Allow NNX dialing.
- Step 3 ➤ Use the chart below to enter data into the list. Go to Allow NNX Dialing when you complete the list.

From this menu	Type this	Function	To use these options
AP-CMD>	Enter ↵	Display list of options.	
	A	Add a code to the list.	DATA Enter code (3-digits) from Table 1. The system then asks for your next entry. Enter ↵ After making all your entries, press ENTER to go back to AP-CMD> options for this list.
	D	Delete a code from the list.	DATA Enter code (3-digits) from Table 1. The system then asks for your next entry. Enter ↵ After making all your entries, press ENTER to go back to AP-CMD> options for this list.
	L	Display the codes in the list.	
	Q	Exit this list and go to the next Toll Restriction option.	

A- TOLL RESTRICTION

AP- ALLOW NNX DIALING

Description

Use this option to allow/prevent an extension user from directly dialing NNX (local exchange) calls. If allowed, the system compares the NNX code the user dials to the programmed NNX list. The list can be either an allow or deny list. This means the list can either selectively allow or deny the dialed code.

If this option restricts NNX dialing (or a specific NNX code), the system terminates the call after the user dials the code.

Conditions

If the system is in a Conflict Area, the system uses the NNX List when:

- The user dials an area code (NPA) without a leading 1
- The user dials an exchange (NNX) without a leading 1

When in a Conflict Area, make sure that QQ- "1" Prefix Required For NPA Calls is Yes. Also be sure to account for the Conflict Codes in the NNX List.

Default Value

NNX dialing allowed. The NNX list is an allow list with no entries. An empty list allows all codes.

Related Programming

Toll Restriction

- **AI- Initialize Toll Restriction** - Initialize Toll Restriction before programming.
- **AP- Toll Level** - Enter the Toll Level you want to program.
- **AP- Allow Active Dial Pad** - Enable/disable continued dialing for this Toll Level (see Special Services and OCC Compatibility).
- **AP- Allow Special Access (N11) Dialing** - Enable/disable N11 and 1+N11 dialing for this Toll Level.
- **AP- Allow Outside Operator (0+) Dialing** - Enable/disable outside operator dialing for this Toll Level.
- **AP- Allow International Dialing** - Enable/disable direct international dialing for this Toll Level.
- **AP- Allow Equal Access** - Enable/disable Equal Access Dialing for this Toll Level (see Equal Access Compatibility). Also, program the Equal Access Codes table.
- **AP- Allow 1 + NNX Dialing** - Enable/disable long distance exchange calls for this Toll Level. Also, program the 1 + NNX codes table.
- **AP- Allow NPA Dialing** - Enable/disable area code (NPA) dialing for this Toll Level. Also, program the NPA codes table.
- **AP- Six Digit Analysis** - Enable/disable six-digit analysis for this Toll Level. Also, program a six-digit analysis table.
- **CP- Allow Only Intercom Calls at Night (BY0:2)** - At night, extensions with this option enabled can only place Intercom calls. This assignment overrides AP programming.
- **CP- Allow Only Local Calls at Night (BY1:4)** - At night, extensions with this option enabled can place Intercom calls and local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).

A- TOLL RESTRICTION AP- ALLOW NNX DIALING

Related Programming (Cont'd)

- **CP- Allow Only Local Calls (Day or Night) (BY1:3)** - Extensions with this option enabled can only place Intercom calls or local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).
- **CP- Extension Toll Restriction Level (BY1:1)** - Assign a toll restriction level (0-7) to a Class of Service.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Trunks, EJ- Toll Restriction** - Enable/disable Toll Restriction for each trunk.

Feature Reference

Toll Restriction

Instructions

To enter data on the PRF:

- Step 1 ➤ Enter Y(es) or N(o) for this option on Table 1.
If you enter N, do not go to steps 2 and 3.
- Step 2 ➤ If you enter Y, indicate if the NNX list is a deny list or an allow list.
For example, to have NNX dialing only for a few specific codes, make the list an allow list.
- Step 3 ➤ Enter the codes in the NNX List.
For example, if the list is an allow list only for 888, enter only 888 in the list.

To enter data at the programming terminal:

- Step 1 ➤ After programming the previous AP option, you see: **ALLOW NNX DIALING?**
- Step 2 ➤ Enter Y(es) or N(o) for this option.
If you enter N, go to Allow NPA dialing.
- Step 3 ➤ Use the chart below to enter data into the list. Go to Allow NPA Dialing when you complete the list.

From this menu	Type this	Function	To use these options
AP-CMD>	Enter ↵	Display list of options.	
	A	Add a code to the list.	DATA Enter code (3-digits) from Table 1. The system then asks for your next entry. Enter ↵ After making all your entries, press ENTER to go back to AP-CMD> options for this list.
	D	Delete a code from the list.	DATA Enter code (3-digits) from Table 1. The system then asks for your next entry. Enter ↵ After making all your entries, press ENTER to go back to AP-CMD> options for this list.
	L	Display the codes in the list.	
	Q	Exit this list and go to the next Toll Restriction option.	

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A- TOLL RESTRICTION AP- ALLOW NPA DIALING

Description

Use this option to allow/prevent an extension user from directly dialing NPA (Area Code) calls. If allowed, the system compares the NPA code the user dials to the programmed NPA List. The list can be either an allow or deny list. This means the list can either selectively allow or deny the dialed code. If the system is not in a Conflict Area, the NPA list applies to both 1+NPA and NPA calls. If an NPA requires six-digit analysis, the NPA must be on this list.

If this option restricts NPA dialing (or a specific NNX code), the system terminates the call after the user dials the code.

Conditions

If the system is in a Conflict Area, the system uses the NPA List only when the user dials 1+NPA. If the user dials just NPA, the system uses the NNX List. When in a Conflict Area, be sure that QQ- "1" Prefix Required For NPA Calls is Yes. Be sure to account for the Conflict Codes in the NNX List.

Default Value

NPA and 1+NPA dialing allowed. The NPA list is an allow list with no entries. An empty list allows all entries.

Related Programming

Toll Restriction

- **AI- Initialize Toll Restriction** - Initialize Toll Restriction before programming.
- **AP- Toll Level** - Enter the Toll Level you want to program.
- **AP- Allow Active Dial Pad** - Enable/disable continued dialing for this Toll Level (see Special Services and OCC Compatibility).
- **AP- Allow Special Access (N11) Dialing** - Enable/disable N11 and 1+N11 dialing for this Toll Level.
- **AP- Allow Outside Operator (0+) Dialing** - Enable/disable outside operator dialing for this Toll Level.
- **AP- Allow International Dialing** - Enable/disable direct international dialing for this Toll Level.
- **AP- Allow Equal Access** - Enable/disable Equal Access Dialing for this Toll Level (see Equal Access Compatibility). Also, program the Equal Access Codes table.
- **AP- Allow 1 + NNX Dialing** - Enable/disable long distance exchange calls for this Toll Level. Also, program the 1 + NNX codes table.
- **AP- Allow NNX Dialing** - Enable/disable local exchange (NNX) dialing for this Toll Level. Also, program the NNX codes table.
- **AP- Six Digit Analysis** - Enable/disable six-digit analysis for this Toll Level. Also, program a six-digit analysis table.
- **CP- Allow Only Intercom Calls at Night (BY0:2)** - At night, extensions with this option enabled can only place Intercom calls. This assignment overrides AP programming.
- **CP- Allow Only Local Calls at Night (BY1:4)** - At night, extensions with this option enabled can place Intercom calls and local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).

A- TOLL RESTRICTION AP- ALLOW NPA DIALING

Related Programming (Cont'd)

- **CP- Allow Only Local Calls (Day or Night) (BY1:3)** - Extensions with this option enabled can only place Intercom calls or local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).
- **CP- Extension Toll Restriction Level (BY1:1)** - Assign a toll restriction level (0-7) to a Class of Service.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Trunks, EJ- Toll Restriction** - Enable/disable Toll Restriction for each trunk.

Feature Reference

Toll Restriction

Instructions

To enter data on the PRF:

- Step 1 ➤** Enter Y(es) or N(o) for this option on Table 1.
If you enter N, do not go to steps 2 and 3.
- Step 2 ➤** If you enter Y, indicate if the NPA list is a deny list or an allow list.
For example, to have NPA dialing only for a few specific codes, make the list an allow list.
- Step 3 ➤** Enter the codes in the NPA List.
For example, if the list is an allow list only for 203, enter only 203 in the list.

To enter data at the programming terminal:

- Step 1 ➤** After programming the previous AP option, you see: **ALLOW NPA DIALING?**
- Step 2 ➤** Enter Y(es) or N(o) for this option.
If you enter N, go to Six Digit Analysis.
- Step 3 ➤** Use the chart below to enter data into the list. Go to Six Digit Analysis when you complete the list.

From this menu	Type this	Function	To use these options
AP-CMD>	Enter ↵	Display list of options.	
	A	Add a code to the list.	DATA Enter code (3-digits) from Table 1. The system then asks for your next entry. Enter ↵ After making all your entries, press ENTER to go back to AP-CMD> options for this list.
	D	Delete a code from the list.	DATA Enter code (3-digits) from Table 1. The system then asks for your next entry. Enter ↵ After making all your entries, press ENTER to go back to AP-CMD> options for this list.
	L	Display the codes in the list.	
	Q	Exit this list and go to the next Toll Restriction option.	

A- TOLL RESTRICTION AP- SIX DIGIT ANALYSIS

Description

Use this option to enable/disable six-digit translation. With six-digit translation, the system restricts a call according to the NPA *and* the NNX user dials. If six-digit translation is allowed, the system compares the NPA and NNX code the user dials to the programmed six-digit list. For each area code, the list can be either an allow or deny list. This means the list can either selectively allow or deny the dialed codes. For each toll level, the system allows a six-digit list for ten NPAs. Each NPA can have up to 48 associated NNXs. Six-digit translation can only occur if the Toll Level also allows NPA dialing.

If this option restricts a number, the system terminates the call after the user dials the NNX code.

Conditions

If the system is in a Conflict Area, the system uses the six-digit list only when the user dials 1+NPA. If the user dials just NPA, the system uses the NNX List. When in a Conflict Area, be sure that QQ- "1" Prefix Required For NPA Calls is Yes. Be sure to account for the Conflict Codes in the NNX List.

Default Value

Six-digit translation allowed. All six-digit lists are allowed lists with no entries.

Related Programming

Toll Restriction

- **AI- Initialize Toll Restriction** - Initialize Toll Restriction before programming.
- **AP- Toll Level** - Enter the Toll Level you want to program.
- **AP- Allow Active Dial Pad** - Enable/disable continued dialing for this Toll Level (see Special Services and OCC Compatibility).
- **AP- Allow Special Access (N11) Dialing** - Enable/disable N11 and 1+N11 dialing for this Toll Level.
- **AP- Allow Outside Operator (0+) Dialing** - Enable/disable outside operator dialing for this Toll Level.
- **AP- Allow International Dialing** - Enable/disable direct international dialing for this Toll Level.
- **AP- Allow Equal Access** - Enable/disable Equal Access Dialing for this Toll Level (see Equal Access Compatibility). Also, program the Equal Access Codes table.
- **AP- Allow 1 + NNX Dialing** - Enable/disable long distance exchange calls for this Toll Level. Also, program the 1 + NNX codes table.
- **AP- Allow NNX Dialing** - Enable/disable local exchange (NNX) dialing for this Toll Level. Also, program the NNX codes table.
- **AP- Allow NPA Dialing** - Enable/disable area code (NPA) dialing for this Toll Level. Also, program the NPA codes table. For six-digit analysis to occur, this option must first allow the user to dial the NPA. If not, the system cuts off the call after the restricted NPA code.

**Related
Programming
(Cont'd)**

- **CP- Allow Only Intercom Calls at Night (BY0:2)** - At night, extensions with this option enabled can only place Intercom calls. This assignment overrides AP programming.
- **CP- Allow Only Local Calls at Night (BY1:4)** - At night, extensions with this option enabled can place Intercom calls and local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).
- **CP- Allow Only Local Calls (Day or Night) (BY1:3)** - Extensions with this option enabled can only place Intercom calls or local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).
- **CP- Extension Toll Restriction Level (BY1:1)** - Assign a toll restriction level (0-7) to a Class of Service.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Trunks, EJ- Toll Restriction** - Enable/disable Toll Restriction for each trunk.

Feature Reference

Toll Restriction

Instructions

To enter data on the PRF:

- Step 1 ➤ Enter Y(es) or N(o) for this option on Table 1.
If you enter N, do not go to steps 2 - 4.
- Step 2 ➤ If you enter Y, indicate the first NPA for six-digit translation.
The letter X is a wild card letter. It represents any number 0-9. For example, if you want the NNX list to apply to all NPAs, enter XXX. You can use this technique to restrict all 976 exchange calls from all area codes.
- Step 3 ➤ Indicate if the six-digit list for this NPA is a deny list or an allow list.
For example, to have NPA dialing only for a few specific codes, make the list an allow list.
- Step 4 ➤ Record the NNXs (48 max.) for the NPA you selected in step 2.
For example, if the list is an allow list only for 203, enter only 203 in the list. The letter X is a wild card letter. It represents any number 0-9. If you want to allow deny all NNXs for this area code, enter XXX.
- Step 5 ➤ Repeat steps 2-4 for each NPA you want to program.

To enter data at the programming terminal:

- Step 1 ➤ After programming the previous AP option, you see: **SIX DIGIT ANALYSIS?**
- Step 2 ➤ Enter Y(es) or N(o) for this option.
If you enter N, you can program another toll level or press ESC to go to the Main Menu.
- Step 3 ➤ Use the chart below to enter data into the list. When you complete the list, you can program another toll level. Or, you can press ESC to go to the Main Menu.

A- TOLL RESTRICTION AP- SIX DIGIT ANALYSIS

Instructions (Cont'd)

From this menu	Type this	Function	To use these options
AP-CMD>	Enter ↵	Display list of options.	
	A	Add a code to the list.	<p>AREA CODE Enter NPA for this list.</p> <p>ALLOW OR DENY TABLE Indicate if list is an allow or deny list.</p> <p>DATA Enter NXX code (3-digits) from Table 1. The system then asks for your next entry.</p> <p>Enter ↵ After making all your entries, press ENTER to go back to AP-CMD> options for this list.</p>
	D	Delete a code from the list.	<p>AREA CODE Enter NPA for list entries you want to delete.</p> <p>DATA Enter NXX code (3-digits) from Table 1. The system then asks for your next entry.</p> <p>Enter ↵ After making all your entries, press ENTER to go back to AP-CMD> options for this list.</p>
	L	Display the codes in the list.	<p>AREA CODE Enter NPA for list you want to display.</p>
	Q	Exit this list and go to the next Toll Restriction option.	

A- TOLL RESTRICTION AP- TOLL RESTRICTION EXAMPLE

The following is a Toll Restriction example for a sample corporation located in NPA (area code) 203. This example illustrates one solution to sample corporation's Toll Restriction requirements. For simplicity, the example is limited to toll level 2. A completed Program Record Form for sample corporation is shown on the following two pages.

For this requirement...	Use this programming
<p>Toll level 2 No continued dialing Restrict N11 calls Restrict 0+ calls Restrict international calls</p> <p>Restrict Equal Access calls Allow only 1+NNX calls to exchanges 733 and 861 Allow all NNX calls</p> <p>Restrict all NPA calls except to 212, 717 and 718 For NPA 718, allow all calls</p> <p>For NPA 212, allow only NNXs 547, 560-569 and 700-799 For NPA 718, deny only NNXs 688 and 700-799 Restrict all 555 calls in all NPAs</p>	<p>For Toll Level, enter 2. For Allow Active Dial Pad, enter N(o). For Allow Special Access (N11) Dialing, enter N(o). For Allow Outside Operator (0+) Dialing, enter N(o). Since 0+ calls are restricted, 011 calls are also automatically restricted.</p> <p>For Allow Equal Access, enter N(o). For Allow 1+NNX Dialing, enter Y. Make an allow list that includes only exchanges 733 and 861 For Allow NNX Dialing, enter Y(es). Make an allow list that contains no entries. This allows all NNXs.</p> <p>For Allow NPA Dialing, enter Y(es). Make an allow list that contains only NPAs 212, 717 and 718. No additional entries are required. Allow NPA Dialing allows all NNXs unless you use six-digit translation.</p> <p>For Six Digit Analysis, enter Y(es). For NPA 212, make an allow Six-digit List with NNXs 547, 56X and 7XX. For NPA 718, make a deny six-digit list with NNXs 688 and 7XX. For NPA XXX, make a deny six-digit list with NNX 555.</p>

A- TOLL RESTRICTION

AP- TOLL RESTRICTION EXAMPLE

Table 1 PROGRAM RECORD FORM, TOLL RESTRICTION (Page 1 of 3)

ENTER TOLL LEVEL	<u>2</u>	[1-7]
ACTIVE DIAL PAD?	<u>N</u>	[Y/N]
ALLOW SPECIAL ACCESS (N11) DIALING?	<u>N</u>	[Y/N]
ALLOW 0+ DIALING?	<u>N</u>	[Y/N]
ALLOW DIRECT INT'L DIALING?	<u>N</u>	[Y/N]
ALLOW EQUAL ACCESS?	<u>N</u>	[Y/N]
ALLOW OR DENY TABLE?	<u>-</u>	[A/D]
DATA		[000-999. XXX]
NO ENTRIES REQUIRED		
---	---	---
---	---	---
---	---	---
---	---	---
---	---	---
ALLOW 1+NNX DIALING?	<u>Y</u>	[Y/N]
ALLOW OR DENY TABLE?	<u>A</u>	[A/D]
DATA		[200-999. XXX]
<u>7 3 3</u>	---	---
<u>8 6 1</u>	---	---
---	---	---
---	---	---
---	---	---
---	---	---
ALLOW NNX DIALING?	<u>Y</u>	[Y/N]
ALLOW OR DENY TABLE?	<u>A</u>	[A/D]
DATA		[200-999. XXX]
NO ENTRIES REQUIRED		
---	---	---
---	---	---
---	---	---
---	---	---
---	---	---
---	---	---
ALLOW NPA DIALING?	<u>Y</u>	[Y/N]
ALLOW OR DENY TABLE?	<u>A</u>	[A/D]
DATA		[200-919. XXX]
<u>2 1 2</u>	---	---
<u>7 1 7</u>	---	---
<u>7 1 8</u>	---	---
---	---	---
---	---	---

A- TOLL RESTRICTION AP- TOLL RESTRICTION EXAMPLE

Table 1 PROGRAM RECORD FORM, TOLL RESTRICTION (Page 2 of 3)

SIX DIGIT ANALYSIS?	<u>Y</u>	
AREA CODE	<u>2</u> <u>1</u> <u>2</u>	[Y/N]
ALLOW OR DENY TABLE?	<u>A</u>	[200-919. XXX]
DATA		[A/D]
		[200-999. XXX]
<u>5</u> <u>4</u> <u>7</u>	---	---
<u>5</u> <u>6</u> <u>X</u>	---	---
<u>7</u> <u>X</u> <u>X</u>	---	---
---	---	---
---	---	---
AREA CODE	<u>7</u> <u>1</u> <u>8</u>	[200-919. XXX]
ALLOW OR DENY TABLE?	<u>D</u>	[A/D]
DATA		[200-999. XXX]
<u>6</u> <u>8</u> <u>8</u>	---	---
<u>7</u> <u>X</u> <u>X</u>	---	---
---	---	---
---	---	---
AREA CODE	<u>X</u> <u>X</u> <u>X</u>	[200-919. XXX]
ALLOW OR DENY TABLE?	<u>D</u>	[A/D]
DATA		[200-999. XXX]
<u>5</u> <u>5</u> <u>5</u>	---	---
---	---	---
---	---	---
---	---	---
AREA CODE	---	[200-919. XXX]
ALLOW OR DENY TABLE?	---	[A/D]
DATA		[200-999. XXX]
---	---	---
---	---	---
---	---	---
---	---	---

A- TOLL RESTRICTION

AP- TOLL RESTRICTION EXAMPLE

- For Your Notes -

C- CLASS OF SERVICE CL- LIST COS

Description

Use this option to list the programmed Class of Service.

Conditions

None

Default Value

All extensions have COS 01.

The attendant has COS 30.

See chart below for details.

Data Ports with Permanent Receive/Transmit Connection have COS 29.

Refer to the Data Products Manual.

The port pairs assigned to the STI have COS 31.

Feature	COS Option	Byte/Bit	COS 1 Default
Automatic Call Distribution	ACD Supervisor Keyset	BY2:6	0-No
Call Forwarding	Inhibit Call Forwarding	BY0:6	0-No
	Allow Off-Premise Call Forwarding	BY0:3	0-No
Call Waiting	Inhibit Camp-On	BY0:5	0-No
Callback	Allow Callback Priority	BY1:7	0-No
Centralized Attendant Service	Allow Bell Standard for CAS	BY0:0	0-No
Direct Inward Dialing	Allow Automatic Op. Intercept for DID	BY0:0	0-No
Direct Inward Dialing/Tie Lines	Absorb 1st Digit for DID/Tie Trunks	BY0:1	0-No
Direct Trunk Access	Direct Trunk Access/Trunk Camp-On	BY2:0	0-No ¹
Distinctive Ringing	Single Ring OPX	BY2:7	0-No
	Inhibit Flash for Single Line Sets	BY2:6	0-No
Flash	Inhibit Flash for Single Line Sets	BY2:6	0-No
Intrusion	Allow Break-In (Intrusion)	BY0:4	0-No ¹
OPA	Inhibit OPA Transfers to Extension	BY0:1	0-No
	Inhibit Access to Page Zone 3	BY2:4	0-No
Paging	Inhibit Access to Page Zone 2	BY2:3	0-No
	Inhibit Access to Page Zone 1	BY2:2	0-No
	Inhibit Access to All Call Paging	BY2:1	0-No
	Allow Privacy	BY1:6	0-No
Privacy	Allow Privacy	BY1:6	0-No
Silent Monitor	Allow Silent Monitor	BY2:5	0-No
Speed Dial	Inhibit System Speed Dial	BY0:7	0-No
Toll Restriction	Allow Only Intercom Calls at Night	BY0:2	0-No
	Allow Only Local Calls at Night	BY1:4	0-No
	Allow Only Local Calls (Day or Night)	BY1:3	0-No
	Extension Toll Restriction Level	BY1:1	0-No
	Allow Extended Ring	BY1:5	0-No
Transfer	Operator Call Pickup (ONYX IV)	BY3:7	0-Yes

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities

¹ These options are enabled (1) in COS 00/30 (for attendants).

C- CLASS OF SERVICE CL- LIST COS

Instructions

To enter data on the PRF:
No entry required.

To enter data at the programming terminal:
Step 1 ► Press CL. The Class of Service listing displays. See below for a partial display.

```
COS CONFIGURATION
****      ****      ****      ****

BYn: BIT7   BIT6   BIT5   BIT4
      BIT3   BIT2   BIT1   BIT0

BY0: INH SYS SPEED DIAL   INH CALL FWD   INH CAMP ON   BREAK-IN
      OFF-P CFWD          ICM NITE ONLY   ABSORB/INH OPA BELL CAS/DID INTERCEPT

BY1: CBACK PRIORITY   PRIVACY   EXTENDED RING   LOCAL CALL AT NIGHT
      LOCAL ONLY      TOLL RESTRICT [B2-B0]

BY2: SINGLE RG OPX   NO SLS FLASH/SPRVR   MONITOR          INH PG ZN 3
      INH PG ZN 2   INH PG ZN 1   INH ALLCALL PG   DIR LINE ACC/CAMP ON

COS # 00: 00010000 00000-0 00000000
COS # 01: 00000000 00000-0 00000000
           through
COS # 27: 00000000 00000-0 00000000
```


C- CLASS OF SERVICE CP- INHIBIT SYSTEM SPEED DIAL (BY0:7)

Description

Use this option to allow (0) or deny (1) extensions with this COS the ability to use System Speed Dial. This option also restricts System Speed Dial for DISA trunks and incoming tie trunks.

Conditions

This option does not apply to CO trunks.

Default Value

System Speed Dial enabled (0).

Related Programming

Speed Dial

- E- Extensions, E3- Class of Service - Assign Class of Service to extensions.
- E- Extensions, EB- Personal Speed Dial Blocks - Assign a Speed Dial block to an extension. Extensions can share a block, thereby sharing the Extension Speed Dial numbers.
- QD- Number of System Speed Dial Digits - Assign the number of System Speed Dial digits (2, 3 or 4). This allows either 10, 100 or 1000 System Speed Dial numbers.

Feature Reference

Speed Dial

Instructions

To enter data on the PRF:

- Step 1 ➤ On Table 2 for BY0:7, enter 0 to enable System Speed Dial for each COS. Enter 1 to disable System Speed Dial.

To enter data at the programming terminal:

- Step 1 ➤ Type CP. You see: **COS # 00: 00010000 00000-0 00000001**
- Step 2 ➤ Enter data for each COS you want to program.

C- CLASS OF SERVICE CP- INHIBIT CALL FORWARDING (BY0:6)

Description

Use this option to allow (0) or deny (1) on-premise Call Forwarding for extensions with this COS. For system attendants (in COS 00), use this option to allow/deny the Alternate Attendant and Removing Trunks and Extensions From Service features.

Conditions
None

Default Value
Call Forwarding and Alternate Attendant enabled (0).

Related Programming

Call Forwarding
➤ CP- Allow Off-Premise Call Forwarding (BY0:3) - For each COS, allow or deny Off-Premise Call Forwarding.
➤ E- Extensions, E3- Class of Service - Assign a COS to each extension.

Feature Reference

Alternate Attendant
Call Forwarding
Removing Trunks and Extensions From Service

Instructions

To enter data on the PRF:

Step 1 ➤ On Table 2 for BY0:6, enter 0 to enable Call Forwarding for each COS. Enter 1 to disable Call Forwarding.

To enter data at the programming terminal:

Step 1 ➤ Type CP. You see: COS # 00: 00010000 00000-0 00000001
Step 2 ➤ Enter data for each COS you want to program.

C- CLASS OF SERVICE CP- INHIBIT CAMP-ON (BY0:5)

Description

Use this option to allow (0) or deny (1) a user's ability to send Call Waiting (Camp-On) tones to a busy extension by dialing 2. (To allow/deny a user's ability to Camp-On to a busy trunk, refer to BY2:0).

Conditions

None

Default Value

Camp-On to extensions allowed (0).

Related Programming

- **Call Waiting (Camp-On)**
- **CP- Direct Trunk Access and Trunk Camp-On (BY2:0)** - An extension user with Direct Trunk Access can camp-on to a busy trunk.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **QJ- Intercom Call Control, Alerts** - Allow or deny Call Waiting indications system wide.

Feature Reference

Call Waiting (Camp-On)

Instructions

To enter data on the PRF:

- Step 1 ➤ On Table 2 for BY0:5, enter 0 to enable Camp-On for each COS. Enter 1 to disable Camp-On.

To enter data at the programming terminal:

- Step 1 ➤ Type CP. You see: **COS # 00: 00010000 00000-0 00000001**
- Step 2 ➤ Enter data for each COS you want to program.

C- CLASS OF SERVICE

CP- ALLOW BREAK-IN (INTRUSION) (BY0:4)

Description

Use this option to enable (1) or disable (0) Intrusion for extensions with this COS.

Conditions

None

Default Value

Intrusion allowed (1) at COS 0.

Intrusion not allowed (0) at all other COSs.

Related Programming

Intrusion

- **CP- Allow Privacy (BY1:6)** - Enable/disable Privacy for each Class of Service. If an extension has Privacy, another extension cannot Intrude on its calls.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.

Feature Reference

Intrusion

Instructions

To enter data on the PRF:

- Step 1 ➤ On Table 2 for BY0:4, enter 0 to disable Intrusion for each COS. Enter 1 to enable Intrusion.

To enter data at the programming terminal:

- Step 1 ➤ Type CP. You see: **COS # 00: 00010000 00000-0 00000001**
- Step 2 ➤ Enter data for each COS you want to program.

C- CLASS OF SERVICE

CP- ALLOW OFF-PREMISE CALL FORWARDING (BY0:3)

Description

Use this option to allow (1) or deny (0) Off-Premise Call Forwarding for extensions with this COS.

Conditions

Off-Premise Call Forwarding requires either ground start trunks or loop start trunks with disconnect supervision.

Default Value

Off-Premise Call Forwarding not allowed (0).

Related Programming

- **Call Forwarding**
- **CP- Inhibit Call Forwarding (BY0:6)** - For each COS, allow or deny Call Forwarding.
- **E- Extensions, E3- Class of Service** - Assign a COS to each extension.

Feature Reference

Call Forwarding

Instructions

To enter data on the PRF:

- Step 1 ➤ On Table 2 for BY0:3, enter 0 to disable Off-Premise Call Forwarding. Enter 1 to enable Off-Premise Call Forwarding.

To enter data at the programming terminal:

- Step 1 ➤ Type CP. You see: **COS # 00: 00010000 00000-0 00000001**
- Step 2 ➤ Enter data for each COS you want to program.

C- CLASS OF SERVICE

CP- ALLOW ONLY INTERCOM CALLS AT NIGHT (BY0:2)

Description

Use this option to restrict extensions with this COS to only Intercom calls at night. If enabled in an extension's COS, the user can only place Intercom calls when the system is in the night mode. The user cannot place any outside calls (including 911 calls). When enabled (1), this option overrides AP- Toll Restriction programming. This option also pertains to incoming tie trunk callers.

Conditions

None

Default Value

Extensions not restricted to Intercom calls at night (0).

Related Programming

Toll Restriction

- **AI- Initialize Toll Restriction** - Initialize Toll Restriction before programming.
- **AP- Toll Level** - Enter the Toll Level you want to program.
- **AP- Allow Active Dial Pad** - Enable/disable continued dialing for this Toll Level (see Special Services and OCC Compatibility).
- **AP- Allow Special Access (N11) Dialing** - Enable/disable N11 and 1+N11 dialing for this Toll Level.
- **AP- Allow Outside Operator (0+) Dialing** - Enable/disable outside operator dialing for this Toll Level.
- **AP- Allow International Dialing** - Enable/disable direct international dialing for this Toll Level.
- **AP- Allow Equal Access** - Enable/disable Equal Access Dialing for this Toll Level (see Equal Access Compatibility). Also, program the Equal Access Codes table.
- **AP- Allow 1 + NNX Dialing** - Enable/disable long distance exchange calls for this Toll Level. Also, program the 1 + NNX codes table.
- **AP- Allow NNX Dialing** - Enable/disable local exchange (NNX) dialing for this Toll Level. Also, program the NNX codes table.
- **AP- Allow NPA Dialing** - Enable/disable area code (NPA) dialing for this Toll Level. Also, program the NPA codes table.
- **AP- Six Digit Analysis** - Enable/disable six-digit analysis for this Toll Level. Also, program a six-digit analysis table.
- **CP- Allow Only Local Calls at Night (BY1:4)** - At night, extensions with this option enabled can place Intercom calls and local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).
- **CP- Allow Only Local Calls (Day or Night) (BY1:3)** - Extensions with this option enabled can only place Intercom calls or local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).
- **CP- Extension Toll Restriction Level (BY1:1)** - Assign a toll restriction level (0-7) to a Class of Service.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Trunks, EJ- Toll Restriction** - Enable/disable Toll Restriction for each trunk.

C- CLASS OF SERVICE

CP- ALLOW ONLY INTERCOM CALLS AT NIGHT (BY0:2)

Feature Reference

Toll Restriction

Instructions

To enter data on the PRF:

Step 1 ▶ On Table 2 for BY0:2, enter 0 not to restrict extensions to Intercom calls at night. Enter 1 to restrict extensions to Intercom calls at night.

To enter data at the programming terminal:

Step 1 ▶ Type CP. You see: **COS # 00: 00010000 00000-0 00000001**

Step 2 ▶ Enter data for each COS you want to program.

C- CLASS OF SERVICE

CP- ABSORB 1ST DIGIT FOR DID AND TIE TRUNKS (BY0:1)

Description

Use this option to enable (1) or disable (0) first digit absorption for DID and wink start tie trunks. If you enable this option, the system ignores the first incoming digit on a DID or tie trunk call. If you disable this option, the system attempts to process the first digit. This option only applies to DID and wink start tie trunks. Immediate start tie trunks can't have digit absorption. When programming this option for DID trunks, make sure QO- DID Intercepts (Absorb 1st Digit) is off (N).

Note: When programming extensions, refer to CP- Inhibit OPA Transfers to Extension (BY0:1) below.

Conditions

None

Default Value

First digit not absorbed (0).

Related Programming

Direct Inward Dialing

- **CP- Allow Automatic Operator Intercept for DID (BY0:0)** - Enable/disable All Call Intercept in an extension's COS. *This is a COS option for extensions.*
- **E- Extensions, ED- Trunk Control, Ring Control** - The attendant assigned to each DID trunk should have ringing for the trunk. This allows the intercepts to work properly. However, intercepts to keysets work fine with ring programmed.
- **E- Extensions, ED- Trunk Control, Access Control** - An extension must have access to a DID trunk in order to answer a DID call on that trunk.
- **E- Extensions, Trunks, E3- Class of Service** - Assign Class of Service to DID trunks and extensions.
- **E- Trunks, E2- Circuit Type** - Assign DID trunks with circuit type 07.
- **E- Trunks, E2- STI Circuit Number** - Enter the STI circuit number for the DID trunk. Refer to the STI Installation and Programming Manual for charts and drawings that explain this correlation.
- **KS- Programming Keys for Keysets** - Each extension should have a line key for DID trunks or a loop key.

Tie Lines

- **E- Trunks, E2- Circuit Type** - Assign each tie line one of the following circuit types:
 - 16 DTMF Wink Start tie line
 - 17 Dial Pulse Wink Start tie line
 - 18 DTMF Immediate Dial tie line
 - 19 Dial Pulse Immediate Dial tie line
- **E- Trunks, E2- STI Circuit Number** - Enter the STI circuit number for the tie trunk. Refer to the STI Installation and Programming Manual for charts and drawings that explain this correlation.
- **E- Trunks, E3- Class of Service** - Assign COS to tie trunk for incoming calls. COS does not pertain to outgoing calls.

C- CLASS OF SERVICE

CP- ABSORB 1ST DIGIT FOR DID AND TIE TRUNKS (BY0:1)

Feature Reference

Direct Inward Dialing
Tie Lines

Instructions

To enter data on the PRF:
Step 1 > On Table 2 for BY0:1, enter 0 to disable first digit absorption. Enter 1 to enable first digit absorption.

To enter data at the programming terminal:
Step 1 > Type CP. You see: COS # 00: 00010000 00000-0 00000001
Step 2 > Enter data for each COS you want to program.

C- CLASS OF SERVICE

CP- INHIBIT OPA TRANSFERS TO EXTENSION (BY0:1)

Description

Use this option to allow/deny Operator Assistance (OPA) transfers for extensions with this COS. If denied (1), the OPA will not transfer calls to extensions with this Class of Service. If allowed (0), the transfer can go through if the extension is free. This option is not available in VS.

Note: When programming DID and tie trunks, refer to CP- Absorb 1st Digit for DID and Tie Trunks (BY0:1) above.

Conditions

None

Default Value

OPA transfers not inhibited (0).

Related Programming

Operator Assistance

To have OPA answer the trunk...

- **E- Trunks, E9- Direct Trunk Termination** - To have OPA intercept incoming calls on a trunk day and night, enter the number of the first port on the OPA/VAU PCB. Intercept occurs after the first ring.
- **E- Trunks, EI- Night Call Route** - To have OPA intercept incoming calls on a trunk at night only, enter the first port on the OPA/VAU PCB. Intercept occurs after the first ring.

To configure the OPA dialing and message options...

- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **QE- Line Gain Table** - Program the last two trunk ports of the OPA/VAU PCB for -6 dB gain.
- **QH- OPA Configuration, OPA Group Routing** - Assign the termination (destination) for each OPA access digit (1, 2, and 4-9). Callers reach the termination when they dial the digit. The termination can be an extension, ring group or an ACD/UCD master number. The recorded messages should describe the terminations reached by these single digits. Don't assign an OPA access code to an extension with BY0:1 set (1).
- **QH- OPA Configuration, Line n Day and Night Message** - For each trunk, indicate the message (2-7) that the caller hears after the OPA answers the trunk in the day and night modes.

To set Automatic Attendant Overflow...

- **QH- OPA Configuration, Overflow Message for Operator (1-4)** - For each operator, designate the OPA message (2-7) for overflow calls. To disable call overflow to the OPA, enter 0.
- **QT- System Timers, OPA Overflow Ring Control** - Indicate the number of rings (3-15) before operator overflow to the OPA occurs. This pertains only to operator overflow calls.

Feature Reference

Operator Assistance (OPA)

C- CLASS OF SERVICE
CP- INHIBIT OPA TRANSFERS TO EXTENSION (BY0:1)

Instructions

To enter data on the PRF:

- Step 1 ▶** On Table 2 for BY0:1, enter 0 to allow OPA transfers. Enter 1 to disable OPA transfers.

To enter data at the programming terminal:

- Step 1 ▶** Type CP. You see: **COS # 00: 00010000 00000-0 00000001**
Step 2 ▶ Enter data for each COS you want to program.

C- CLASS OF SERVICE

CP- ALLOW BELL STANDARD FOR CAS (BY0:0)

Description

Use this option to enable (1) disable (0) Bell Standard signaling for Centralized Attendant Service (CAS). If the CAS hub system is not a Datastar PBX, enable this option. When the hub system is a Datastar PBX, disable this option (0). This causes incomplete transfers to an ONYX branch system to ring back to the CAS operator. To get the most performance out of the CAS feature, the hub system should always be a Datastar PBX.

Conditions

None

Default Value

Bell CAS standard disabled (0).

Related Programming

Centralized Attendant Service

- **E- Trunks, E2- Circuit Type** - Assign each tie trunk used for CAS one of the following circuit types:
 - 16 DTMF Wink Start tie line
 - 17 Dial Pulse Wink Start tie line
 - 18 DTMF Immediate Dial tie line
 - 19 Dial Pulse Immediate Dial tie line
- **E- Trunks, E2- STI Circuit Number** - Enter the STI circuit number for the tie trunk. Refer to the STI Installation and Programming Manual for charts and drawings that explain this correlation.
- **E- Trunks, E3- Class of Service** - Assign a Class of Service to the tie trunk
- **E- Trunks, E4- Next Trunk in Outbound Rotary** - If the CAS tie trunk is part of a trunk rotary for outgoing calls, enter the number of the next trunk in the rotary
- **E- Trunks, E9- Direct Trunk Termination** - Terminate each incoming trunk (or rotary) in the satellite to a tie trunk (or tie trunk rotary) that connects to the hub.
- **E- Trunks, EA- UCD Group Master Extension Number (First Trunk in Group)** - If a CAS tie trunk is in a rotary, specify the first trunk in the rotary. All trunks in the rotary should have the same entry for this option.

Feature Reference

Centralized Attendant Service

Instructions

To enter data on the PRF:

- Step 1 ➤ On Table 2 for BY0:0, enter 0 to disable Bell CAS standard. Enter 1 to enable the Bell CAS standard.

To enter data at the programming terminal:

- Step 1 ➤ Type CP. You see: COS # 00: 00010000 00000-0 00000001
- Step 2 ➤ Enter data for each COS you want to program.

C- CLASS OF SERVICE

-CP- ALLOW AUTOMATIC OP. INTERCEPT FOR DID (BY0:0)

Description

Use this option to allow (1) or deny (0) All Call Intercept for DID calls to extensions with this COS. If an extension has All Call Intercept, the system reroutes all the extension's DID calls to the attendant.

Conditions

None

Default Value

All Call Intercept for DID calls disabled (0).

Related Programming

Direct Inward Dialing (DID)

- **CP- Absorb 1st Digit for DID and Tie Trunks (BY0:1)** If QO- DID Intercepts (Absorb 1st Digit) is off (N), use this option to apply 1st digit absorption on a trunk-by-trunk basis. When you enable this option, the trunk is compatible with four digit DID service. *This is a COS option for DID trunks.*
- **E- Extensions, ED- Trunk Control, Ring Control** - The attendant assigned to each DID trunk should have ringing for the trunk. This allows the intercepts to work properly. However, intercepts to keysets work fine without having ring programmed.
- **E- Extensions, ED- Trunk Control, Access Control** - An extension must have access to a DID trunk in order to answer a DID call on that trunk.
- **E- Extensions/Trunks, E3- Class of Service** - Assign Class of Service to DID trunks and extensions.
- **E- Trunks, E2- Circuit Type** - Assign DID trunks with circuit type 07.
- **E- Trunks, E2- STI Circuit Number** - Enter the STI circuit number for the DID trunk. Refer to the STI Installation and Programming Manual for charts and drawings that explain this correlation.
- **KS- Programming Keys for Keysets** - Each extension should have a line key for DID trunks or a loop key.

Feature Reference

Direct Inward Dialing (DID)

Instructions

To enter data on the PRF:

- Step 1 ➤ On Table 2 for BY0:0, enter 0 to disable All Call Intercept for DID calls. Enter 1 to enable All Call Intercept for DID calls.

To enter data at the programming terminal:

- Step 1 ➤ Type CP. You see: COS # 00: 00010000 00000-0 00000001
Step 2 ➤ Enter data for each COS you want to program.

C- CLASS OF SERVICE CP- ALLOW CALLBACK PRIORITY (BY1:7)

Description

Use this option to allow (1) or deny (0) extensions with this COS trunk Callback priority. An extension with priority receives Callback from a trunk before other extensions that also have Callbacks waiting. Without priority, the system processes the trunk Callbacks on a first in, first out basis. This option has no effect on Callbacks left at an extension.

Conditions

More than one extension with Priority can leave a Callback for the same trunk. If this occurs, the system processes the requests on a first in, first out basis.

Default Value

Priority disabled (0).

Related Programming

- E- Extensions, E3- Class of Service - Assign Class of Service to extensions.

Feature Reference

None

Instructions

To enter data on the PRF:

- Step 1 ➤ On Table 2 for BY1:7, enter 0 to disable Callback priority. Enter 1 to enable Callback priority.

To enter data at the programming terminal:

- Step 1 ➤ Type CP. You see: COS # 00: 00010000 00000-0 00000001
- Step 2 ➤ Enter data for each COS you want to program.

C- CLASS OF SERVICE CP- ALLOW PRIVACY (BY1:6)

Description

Use this option to enable (1) or disable (0) Privacy for extensions with this COS. If an extension has Privacy, another extension cannot Intrude on its calls. Privacy also blocks Call Waiting (Camp-On) tones and Silent Monitor.

Conditions

None

Default Value

Privacy not allowed (0).

Related Programming

- **Intrusion**
 - CP- Allow Break-In (Intrusion) (BY0:4) - Enable/disable Intrusion for each Class of Service.
 - E- Extensions, E3- Class of Service - Assign Class of Service to extensions.
- **Privacy**
 - E- Extensions, E3- Class of Service - Assign Class of Service to extensions.

Feature Reference

Intrusion
Privacy

Instructions

To enter data on the PRF:

- Step 1 ➤ On Table 2 for BY1:6, enter 0 to disable Privacy for each COS. Enter 1 to enable Privacy.

To enter data at the programming terminal:

- Step 1 ➤ Type CP. You see: COS # 00: 00010000 00000-0 00000001
- Step 2 ➤ Enter data for each COS you want to program.

C- CLASS OF SERVICE

CP- ALLOW EXTENDED RINGING (BY1:5)

Description
Use this option to enable (1) or disable (0) Extended Ringing for extensions with this COS.

Conditions
None

Default Value
Extended Ringing disabled (0).

Related Programming
➤ **Extended Ringing**
E- Extensions, E3- Class of Service - Assign a Class of Service to each extension.

Feature Reference
Extended Ringing

Instructions

To enter data on the PRF:

Step 1 ➤ On Table 2 for BY0:5, enter 0 to enable Camp-On for each COS. Enter 1 to disable Camp-On.

To enter data at the programming terminal:

Step 1 ➤ Type CP. You see: COS # 00: 00010000 00000-0 00000001

Step 2 ➤ Enter data for each COS you want to program.

C- CLASS OF SERVICE

CP- ALLOW ONLY LOCAL CALLS AT NIGHT (BY1:4)

Description

Use this option to restrict extensions with this COS to Intercom and local calls in the night mode. This option also applies to DISA trunks and incoming tie trunks. This assignment overrides AP programming (except AP- Allow Active Dial Pad).

If you enable this option (1), extension users can only place the following types of trunk calls:

- 7-digit (NNX+nnnn) calls, where N=any digit 2-9
- 1+911 and 911 calls
- 1+800+NNX+nnnn calls

If disabled (0), this option does not restrict calls.

Conditions

This option does not apply to CO trunks.

Default Value

Calls not restricted (0).

Related Programming

Toll Restriction

- **AI- Initialize Toll Restriction** - Initialize Toll Restriction before programming.
- **AP- Toll Level** - Enter the Toll Level you want to program.
- **AP- Allow Active Dial Pad** - Enable/disable continued dialing for this Toll Level (see Special Services and OCC Compatibility).
- **AP- Allow Special Access (N11) Dialing** - Enable/disable N11 and 1+N11 dialing for this Toll Level.
- **AP- Allow Outside Operator (0+) Dialing** - Enable/disable outside operator dialing for this Toll Level.
- **AP- Allow International Dialing** - Enable/disable direct international dialing for this Toll Level.
- **AP- Allow Equal Access** - Enable/disable Equal Access Dialing for this Toll Level (see Equal Access Compatibility). Also, program the Equal Access Codes table.
- **AP- Allow 1 + NNX Dialing** - Enable/disable long distance exchange calls for this Toll Level. Also, program the 1 + NNX codes table.
- **AP- Allow NNX Dialing** - Enable/disable local exchange (NNX) dialing for this Toll Level. Also, program the NNX codes table.
- **AP- Allow NPA Dialing** - Enable/disable area code (NPA) dialing for this Toll Level. Also, program the NPA codes table.
- **AP- Six Digit Analysis** - Enable/disable six-digit analysis for this Toll Level. Also, program a six-digit analysis table.
- **CP- Allow Only Intercom Calls at Night (BY0:2)** - At night, extensions with this option enabled can only place Intercom calls. This assignment overrides AP programming.
- **CP- Allow Only Local Calls (Day or Night) (BY1:3)** - Extensions with this option enabled can only place Intercom calls or local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).
- **CP- Extension Toll Restriction Level (BY1:1)** - Assign a toll restriction level (0-7) to a Class of Service.

C- CLASS OF SERVICE CP- ALLOW ONLY LOCAL CALLS AT NIGHT (BY1:4)

Related Programming (Cont'd)

- E- Extensions, E3- Class of Service - Assign Class of Service to extensions.
- E- Trunks, EJ- Toll Restriction - Enable/disable Toll Restriction for each trunk.

Feature Reference

Toll Restriction

Instructions

To enter data on the PRF:

- Step 1 ➤ On Table 2 for BY1:4, enter 0 not to limit extensions to local calls at night. Enter 1 to restrict extensions to local calls at night.

To enter data at the programming terminal:

- Step 1 ➤ Type CP. You see: COS # 00: 00010000 00000-0 00000001
- Step 2 ➤ Enter data for each COS you want to program.

C- CLASS OF SERVICE

CP- ALLOW ONLY LOCAL CALLS (DAY OR NIGHT) (BY1:3)

Description

Use this option to restrict extensions with this COS to Intercom and local calls. This option also applies to DISA trunks and incoming tie trunks. This assignment overrides AP programming (except AP- Allow Active Dial Pad).

If you enable this option (1), extension users can only place the following types of trunk calls:

- 7-digit (NNX+nnnn) calls, where N=any digit 2-9
- 1+911 and 911 calls
- 1+800+NNX+nnnn calls

If disabled (0), this option does not restrict calls.

Conditions

This option does not apply to CO trunks.

Default Value

Calls not restricted (0).

Related Programming

Toll Restriction

- **AI- Initialize Toll Restriction** - Initialize Toll Restriction before programming.
- **AP- Toll Level** - Enter the Toll Level you want to program.
- **AP- Allow Active Dial Pad** - Enable/disable continued dialing for this Toll Level (see Special Services and OCC Compatibility).
- **AP- Allow Special Access (N11) Dialing** - Enable/disable N11 and 1+N11 dialing for this Toll Level.
- **AP- Allow Outside Operator (0+) Dialing** - Enable/disable outside operator dialing for this Toll Level.
- **AP- Allow International Dialing** - Enable/disable direct international dialing for this Toll Level.
- **AP- Allow Equal Access** - Enable/disable Equal Access Dialing for this Toll Level (see Equal Access Compatibility). Also, program the Equal Access Codes table.
- **AP- Allow 1 + NNX Dialing** - Enable/disable long distance exchange calls for this Toll Level. Also, program the 1 + NNX codes table.
- **AP- Allow NNX Dialing** - Enable/disable local exchange (NNX) dialing for this Toll Level. Also, program the NNX codes table.
- **AP- Allow NPA Dialing** - Enable/disable area code (NPA) dialing for this Toll Level. Also, program the NPA codes table.
- **AP- Six Digit Analysis** - Enable/disable six-digit analysis for this Toll Level. Also, program a six-digit analysis table.
- **CP- Allow Only Intercom Calls at Night (BY0:2)** - At night, extensions with this option enabled can only place Intercom calls. This assignment overrides AP programming.
- **CP- Allow Only Local Calls at Night (BY1:4)** - At night, extensions with this option enabled can place Intercom calls and local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).
- **CP- Extension Toll Restriction Level (BY1:1)** - Assign a toll restriction level (0-7) to a Class of Service.

C- CLASS OF SERVICE

CP- ALLOW ONLY LOCAL CALLS (DAY OR NIGHT) (BY1:3)

Related Programming (Cont'd)

- E- Extensions, E3- Class of Service - Assign Class of Service to extensions.
- E- Trunks, EJ- Toll Restriction - Enable/disable Toll Restriction for each trunk.

Feature Reference

Toll Restriction

Instructions

To enter data on the PRF:

- Step 1 ➤ On Table 2 for BY1:3, enter 0 not to limit extensions to local calls. Enter 1 to restrict extensions to local calls at night.

To enter data at the programming terminal:

- Step 1 ➤ Type CP. You see: **COS # 00: 00010000 00000-0 00000001**
- Step 2 ➤ Enter data for each COS you want to program.

C- CLASS OF SERVICE

CP- EXTENSION TOLL RESTRICTION LEVEL (BY1:0-2)

Description

Use this option to assign a Toll Restriction level (1-7) to extensions with this COS. This option also applies to DISA trunks and incoming tie trunks. You normally assign toll level 0 to COS 0 (for attendants).

Conditions

This option does not apply to CO lines.

Default Value

No restriction (toll level 0).

Related Programming

Equal Access Compatibility

- **AP- Allow Equal Access** - For each Toll Restriction Level, allow Equal Access system-wide and program the Equal Access Code list.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to each extension.

Special Services and OCC Compatibility

- **AP- Allow Active Dial Pad** - Toll Restriction Level 0 always has active dial pad. For Toll Restriction Levels other than 0, enable Active Dial Pad. This lets extension users dial additional digits into the special service.
- **E- Trunks, E2- Circuit Type** - Program Special Service trunks with the correct circuit type.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **QT- System Timers, Dialtone Detection Counter** - Set how long the system waits for second (OCC) dialtone. This only occurs when the system encounters a pause in a Speed Dial bin.

Toll Restriction

- **AI- Initialize Toll Restriction** - Initialize Toll Restriction before programming.
- **AP- Toll Level** - Enter the Toll Level you want to program.
- **AP- Allow Active Dial Pad** - Enable/disable continued dialing for this Toll Level (see Special Services and OCC Compatibility).
- **AP- Allow Special Access (N11) Dialing** - Enable/disable N11 and 1+N11 dialing for this Toll Level.
- **AP- Allow Outside Operator (0+) Dialing** - Enable/disable outside operator dialing for this Toll Level.
- **AP- Allow International Dialing** - Enable/disable direct international dialing for this Toll Level.
- **AP- Allow Equal Access** - Enable/disable Equal Access Dialing for this Toll Level (see Equal Access Compatibility). Also, program the Equal Access Codes table.
- **AP- Allow 1 + NNX Dialing** - Enable/disable long distance exchange calls for this Toll Level. Also, program the 1 + NNX codes table.
- **AP- Allow NNX Dialing** - Enable/disable local exchange (NNX) dialing for this Toll Level. Also, program the NNX codes table.

C- CLASS OF SERVICE

CP- EXTENSION TOLL RESTRICTION LEVEL (BY1:0-2)

Related Programming (Cont'd)

Toll Restriction (Cont'd)

- **AP- Allow NPA Dialing** - Enable/disable area code (NPA) dialing for this Toll Level. Also, program the NPA codes table.
- **AP- Six Digit Analysis** - Enable/disable six-digit analysis for this Toll Level. Also, program a six-digit analysis table.
- **CP- Allow Only Intercom Calls at Night (BY0:2)** - At night, extensions with this option enabled can only place Intercom calls. This assignment overrides AP programming.
- **CP- Allow Only Local Calls at Night (BY1:4)** - At night, extensions with this option enabled can place Intercom calls and local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).
- **CP- Allow Only Local Calls (Day or Night) (BY1:3)** - Extensions with this option enabled can only place Intercom calls or local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Trunks, EJ- Toll Restriction** - Enable/disable Toll Restriction for each trunk.

Feature Reference

Equal Access Compatibility
Special Services and OCC Compatibility
Toll Restriction

Instructions

To enter data on the PRF:

- Step 1 ➤ On Table 2 for BY1:0-2, enter the Toll Restriction level (0-1). Enter 0 for no restrictions.

To enter data at the programming terminal:

- Step 1 ➤ Type CP. You see: **COS # 00: 00010000 00000-0 00000001**
- Step 2 ➤ Enter data for each COS you want to program.

C- CLASS OF SERVICE CP- SINGLE RING OPX (BY2:7)

Description

Use this option to enable (0) or disable (1) Distinctive Ringing for ports with circuit types 05 and 51 (OPX and ASI extensions). If enabled (0), trunk calls have two short rings (repeated) followed by a pause. Intercom calls have a single one second ring followed by a pause. If disabled (1), Intercom and trunk calls have a single one second ring followed by a pause.

In VS \geq AUX 2.0/Base 5.0, ONYX II/III \geq 3.5, use this option to control the types of calls Voice Mail Personal Answering Machine Emulation answers. If enabled (1), Personal Answering Machine Emulation answers only trunk calls. Intercom calls to the extension go through normally. If disabled (0), Personal Answering Machine Emulation answers all calls (Intercom and trunk). For more information, refer to the Voice Mail Compatibility feature.

In ONYX IV, this option is CP- Long Ring OPX (BY2:7).

Conditions

None

Default Value

Distinctive Ringing enabled (0).

Related Programming

>

Distinctive Ringing
E- Extensions, E3- Class of Service - Assign Class of Service to circuit type 05/51 extensions.

Feature Reference

Distinctive Ringing

Instructions

To enter data on the PRF:

Step 1 > On Table 2 for BY2:7, enter 0 allow Distinctive Ringing at circuit type 05/51 ports. Enter 1 to prevent Distinctive Ringing.

OR

On Table 2 for BY3:6, enter 0 to have Personal Answering Machine Emulation answer all calls to an extension. Enter 1 to have Personal Answering Machine Emulation answer only trunk calls.

To enter data at the programming terminal:

Step 1 > Type CP. You see: COS # 00: 00010000 00000-0 00000001

Step 2 > Enter data for each COS you want to program.

CP- INHIBIT FLASH FOR SINGLE LINE TELEPHONES (BY2:6)

Description

Use this option to enable (0) or disable (1) Flash for ESL sets with this COS. If enabled, ESL users can press and release the hookswitch to Flash a trunk.

Note: If you are using BY2:6 to assign an ACD supervisor keyset, go to CP- ACD Supervisor Keyset (BY2:6) on the next page.

Conditions

None

Default Value

Flash allowed at ESL sets (0).

Related Programming

Flash

- E- Extensions, E3- Class of Service - Assign Class of Service to extensions.
- QT- System Timers, Flash Response Time - Set the length of the loop current interruption the system provides to a trunk (1-25 tenth seconds). Enter 0 to deny Flash system-side.

Feature Reference

Flash

Instructions

To enter data on the PRF:

- Step 1 ➤ On Table 2 for BY2:6, enter 0 allow Flash at ESL sets. Enter 1 to prevent Flash at ESL sets.

To enter data at the programming terminal:

- Step 1 ➤ Type CP. You see: COS # 00: 00010000 00000-0 00000001
- Step 2 ➤ Enter data for each COS you want to program.

C- CLASS OF SERVICE CP- ACD SUPERVISOR KEYSER (BY2:6)

Description

Use this option to assign extensions with this COS as ACD supervisor keysets. This option only identifies the extension as a supervisor. It does not assign the keyset to an ACD group (see Related Programming below). If enabled (1), extension is an ACD supervisor. If disabled (0), extension is not a supervisor.

Conditions
None

Default Value
ACD supervisor not assigned (0).

Related Programming

Automatic Call Distribution

- **E- Extensions, E2- Circuit Type** - Program the master extension number with type X (uninstalled). The master extension must be a port that has no phone connected to it.
- **E- Extensions, E3- Class of Service** - Assign a unique COS with BY2:6 set for the supervisor's extension.
- **E- Extensions, E5- Hunt Type** - Assign hunt type 06 to:
 - Each member agent in the ACD group.
 - The ACD group master extension.*Make sure the supervisor extension has hunt type 00. The supervisor should never be an ACD group member.*
- **E- Extensions, EA- UCD Group Master Extension Number** - Assign the master extension number to:
 - Each member agent
 - The supervisor extension
 - The ACD group master extension
- **FC1- Reset Queues** - Reset the system queues after initial ACD programming.

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution
Automatic Call Distribution (ONYX IV)

Instructions

To enter data on the PRF:

- Step 1 ➤ On Table 2 for BY2:6, enter 0 if the keyset is not an ACD group supervisor. Enter 1 if the keyset is an ACD supervisor.

To enter data at the programming terminal:

- Step 1 ➤ Type CP. You see: **COS # 00: 00010000 00000-0 00000001**
- Step 2 ➤ Enter data for each COS you want to program.

C- CLASS OF SERVICE CP- ALLOW SILENT MONITOR (BY2:5)

Description

Use this option to allow (1) or prevent (0) Silent with this COS from initiating Silent Monitor.

Conditions
None

Default Value
Silent Monitor not allowed (0).

Related Programming

Silent Monitor

- E- Extensions, E3- Class of Service - Assign Class of Service to extensions.
- E- Extensions, EC- Group Call Pickup Group - Assign the Group Call Pickup number to extensions (01-23. 00 for no group).

Feature Reference

Silent Monitor

Instructions

To enter data on the PRF:

- Step 1 ➤ On Table 2 for BY2:5, enter 0 to prevent extensions from initiating Silent Monitor. Enter 1 to allow extensions to initiate Silent Monitor.

To enter data at the programming terminal:

- Step 1 ➤ Type CP. You see: COS # 00: 00010000 00000-0 00000001
- Step 2 ➤ Enter data for each COS you want to program.

C- CLASS OF SERVICE CP- INHIBIT ACCESS TO PAGE ZONE 3 (BY2:4)

Description

Use this option to allow (1) or prevent (0) extensions with this COS from broadcasting announcements into Paging zone 3. This option also applies to DISA trunks and incoming tie lines. Consider preventing incoming tie trunk callers from using the system's Paging zones. This option does not affect Auto Page (refer to the Paging feature).

Conditions

None

Default Value

Access to Page Zone 3 allowed (0).

Related Programming

Paging, Internal and All Call

- **CP- Inhibit Access to Page Zone 2 (BY2:3)** - Allow/inhibit Paging to zone 2 for extensions with this COS.
- **CP- Inhibit Access to Page Zone 1 (BY2:2)** - Allow/inhibit Paging to zone 1 for extensions with this COS.
- **CP- Inhibit Access to All Call Paging (BY2:1)** - Allow/inhibit All Call Paging for extensions with this COS.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Extensions, E7- Page Zone** - Assign each extension to an internal Paging zone (01-07, or 00 for All Call only). The extension broadcasts page announcements to the assigned zone.
- **E- Extensions, EF- Paging Through Telephone Speaker** - For each extension, allow or block Paging announcements through the telephone speaker.

Tenant Service, Assigning Internal Paging Zones to Tenants

- **CP- Inhibit Access to Page Zone 2 (BY2:3)** - Allow/inhibit Paging to zone 2 for extensions with this COS. You can allow this option for one tenant group's members and deny it for all others.
- **CP- Inhibit Access to Page Zone 1 (BY2:2)** - Allow/inhibit Paging to zone 1 for extensions with this COS. You can allow this option for one tenant group's members and deny it for all others.
- **CP- Inhibit Access to All Call Paging (BY2:1)** - Since all tenants hear All Call Paging, consider using this options to prevent All Call Paging system-wide.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Extensions, E7- Page Zone** - Assign each extension to an internal Paging zone (01-07, or 00 for All Call only). Each tenant group's extensions should be in a different internal Paging zone.
- **E- Extensions, EF- Paging Through Telephone Speaker** - Enable this option to allow Paging announcements through the telephone speaker.

Feature Reference

Paging
Tenant Service

C- CLASS OF SERVICE CP- INHIBIT ACCESS TO PAGE ZONE 3 (BY2:4)

Instructions

To enter data on the PRF:

- Step 1 > On Table 2 for BY2:4, enter 0 to allow extensions Paging into zone 3. Enter 1 to restrict extensions from Paging into zone 3.

To enter data at the programming terminal:

- Step 1 > Type CP. You see: COS # 00: 00010000 00000-0 00000001
Step 2 > Enter data for each COS you want to program.

C- CLASS OF SERVICE CP- INHIBIT ACCESS TO PAGE ZONE 2 (BY2:3)

Description

Use this option to allow (0) or prevent (1) extensions with this COS from broadcasting announcements into Paging zone 2. This option also applies to DISA trunks and incoming tie lines. Consider preventing incoming tie trunk callers from using the system's Paging zones. This option does not affect Auto Page (refer to the Paging feature).

Conditions
None

Default Value
Access to Paging zone 2 allowed.

Related Programming

Paging, Internal and All Call

- **CP- Inhibit Access to Page Zone 3 (BY2:4)** - Allow/inhibit Paging to zone 3 for extensions with this COS.
- **CP- Inhibit Access to Page Zone 1 (BY2:2)** - Allow/inhibit Paging to zone 1 for extensions with this COS.
- **CP- Inhibit Access to All Call Paging (BY2:1)** - Allow/inhibit All Call Paging for extensions with this COS.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Extensions, E7- Page Zone** - Assign each extension to an internal Paging zone (01-07, or 00 for All Call only). The extension broadcasts page announcements to the assigned zone.
- **E- Extensions, EF- Paging Through Telephone Speaker** - For each extension, allow or block Paging announcements through the telephone speaker.

Tenant Service, Assigning Internal Paging Zones to Tenants

- **CP- Inhibit Access to Page Zone 3 (BY2:4)** - Allow/inhibit Paging to zone 3 for extensions with this COS. You can allow this option for one tenant group's members and deny it for all others.
- **CP- Inhibit Access to Page Zone 1 (BY2:2)** - Allow/inhibit Paging to zone 1 for extensions with this COS. You can allow this option for one tenant group's members and deny it for all others.
- **CP- Inhibit Access to All Call Paging (BY2:1)** - Since all tenants hear All Call Paging, consider using this option to prevent All Call Paging system-wide.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Extensions, E7- Page Zone** - Assign each extension to an internal Paging zone (01-07, or 00 for All Call only). Each tenant group's extensions should be in a different internal Paging zone.
- **E- Extensions, EF- Paging Through Telephone Speaker** - Enable this option to allow Paging announcements through the telephone speaker.

Feature Reference

Paging
Tenant Service

C- CLASS OF SERVICE

CP- INHIBIT ACCESS TO PAGE ZONE 2 (BY2:3)

Instructions

To enter data on the PRF:

- Step 1 > On Table 2 for BY2:3, enter 0 to allow extensions Paging into zone 2. Enter 1 to restrict extensions from Paging into zone 2.

To enter data at the programming terminal:

- Step 1 > Type CP. You see: COS # 00: 00010000 00000-0 00000001
Step 2 > Enter data for each COS you want to program.

C- CLASS OF SERVICE CP- INHIBIT ACCESS TO PAGE ZONE 1 (BY2:2)

Description

Use this option to allow (0) or prevent (1) extensions with this COS from broadcasting announcements into Paging zone 1. This option also applies to DISA trunks and incoming tie lines. Consider preventing incoming tie trunk callers from using the system's Paging zones. This option does not affect Auto Page (refer to the Paging feature).

Conditions

None

Default Value

Access to Paging zone 1 allowed.

Related Programming

Paging, Internal and All Call

- **CP- Inhibit Access to Page Zone 3 (BY2:4)** - Allow/inhibit Paging to zone 3 for extensions with this COS.
- **CP- Inhibit Access to Page Zone 2 (BY2:3)** - Allow/inhibit Paging to zone 2 for extensions with this COS.
- **CP- Inhibit Access to All Call Paging (BY2:1)** - Allow/inhibit All Call Paging for extensions with this COS.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Extensions, E7- Page Zone** - Assign each extension to an internal Paging zone (01-07, or 00 for All Call only). The extension broadcasts page announcements to the assigned zone.
- **E- Extensions, EF- Paging Through Telephone Speaker** - For each extension, allow or block Paging announcements through the telephone speaker.

Tenant Service, Assigning Internal Paging Zones to Tenants

- **CP- Inhibit Access to Page Zone 3 (BY2:4)** - Allow/inhibit Paging to zone 3 for extensions with this COS. You can allow this option for one tenant group's members and deny it for all others.
- **CP- Inhibit Access to Page Zone 2 (BY2:3)** - Allow/inhibit Paging to zone 2 for extensions with this COS. You can allow this option for one tenant group's members and deny it for all others.
- **CP- Inhibit Access to All Call Paging (BY2:1)** - Since all tenants hear All Call Paging, consider using this option to prevent All Call Paging system-wide.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Extensions, E7- Page Zone** - Assign each extension to an internal Paging zone (01-07, or 00 for All Call only). Each tenant group's extensions should be in a different internal Paging zone.
- **E- Extensions, EF- Paging Through Telephone Speaker** - Enable this option to allow Paging announcements through the telephone speaker.

Feature Reference

Paging
Tenant Service

C- CLASS OF SERVICE CP- INHIBIT ACCESS TO PAGE ZONE 1 (BY2:2)

Instructions

To enter data on the PRF:

- Step 1 >** On Table 2 for BY2:2, enter 0 to allow extensions Paging into zone 1. Enter 1 to restrict extensions from Paging into zone 1.

To enter data at the programming terminal:

- Step 1 >** Type CP. You see: **COS # 00: 00010000 00000-0 00000001**
Step 2 > Enter data for each COS you want to program.

C- CLASS OF SERVICE

CP- INHIBIT ACCESS TO ALL CALL PAGING (BY2:1)

Description

Use this option to allow (0) or prevent (1) extensions with this COS from broadcasting All Call Paging announcements. This option also applies to DISA trunks and incoming tie lines. Consider preventing incoming tie trunk callers from using the system's Paging zones. This option does not affect Auto Page (refer to the Paging feature).

Conditions

None

Default Value

Access to All Call Paging allowed.

Related Programming

Paging, Internal and All Call

- **CP- Inhibit Access to Page Zone 3 (BY2:4)** - Allow/inhibit Paging to zone 3 for extensions with this COS.
- **CP- Inhibit Access to Page Zone 2 (BY2:3)** - Allow/inhibit Paging to zone 2 for extensions with this COS.
- **CP- Inhibit Access to Page Zone 1 (BY2:2)** - Allow/inhibit Paging to zone 1 for extensions with this COS.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Extensions, E7- Page Zone** - Assign each extension to an internal Paging zone (01-07, or 00 for All Call only). The extension broadcasts page announcements to the assigned zone.
- **E- Extensions, EF- Paging Through Telephone Speaker** - For each extension, allow or block Paging announcements through the telephone speaker.

Tenant Service, Assigning Internal Paging Zones to Tenants

- **CP- Inhibit Access to Page Zone 3 (BY2:4)** - Allow/inhibit Paging to zone 3 for extensions with this COS. You can allow this option for one tenant group's members and deny it for all others.
- **CP- Inhibit Access to Page Zone 2 (BY2:3)** - Allow/inhibit Paging to zone 2 for extensions with this COS. You can allow this option for one tenant group's members and deny it for all others.
- **CP- Inhibit Access to Page Zone 1 (BY2:2)** - Allow/inhibit Paging to zone 1 for extensions with this COS. You can allow this option for one tenant group's members and deny it for all others.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Extensions, E7- Page Zone** - Assign each extension to an internal Paging zone (01-07, or 00 for All Call only). Each tenant group's extensions should be in a different internal Paging zone.
- **E- Extensions, EF- Paging Through Telephone Speaker** - Enable this option to allow Paging announcements through the telephone speaker.

Feature Reference

Paging
Tenant Service

C- CLASS OF SERVICE

CP- INHIBIT ACCESS TO ALL CALL PAGING (BY2:1)

Instructions

To enter data on the PRF:

Step 1 > On Table 2 for BY2:1, enter 0 to allow extensions All Call Paging. Enter 1 to restrict extensions from All Call Paging.

To enter data at the programming terminal:

Step 1 > Type CP. You see: COS # 00: 00010000 00000-0 00000001

Step 2 > Enter data for each COS you want to program.

C- CLASS OF SERVICE

CP- DIRECT TRUNK ACCESS AND TRUNK CAMP-ON (BY2:0)

Description

Use this option to enable (1) or disable (0) Direct Trunk Access for extensions with this COS. If allowed, extensions can also use Forced Trunk Disconnect. Additionally, extensions with Direct Trunk Access capability can dial 2 to Camp-On to a busy trunk. This option also allows extensions to program System Speed Dial numbers.

Conditions

None

Default Value

Direct Trunk Access allowed (1) for COS 0.

Direct Trunk Access not allowed (0) for all other COSs.

Related Programming

Call Waiting (Camp-On)

- CP- Inhibit Camp-On (BY0:5) - Allow or deny an extension's capability to send Call Waiting (Camp-On) tones when the user dials 2.
- E- Extensions, E3- Class of Service - Assign Class of Service to extensions.
- QJ- Intercom Call Control, Alerts - Allow or deny audible Call Waiting indications system wide.

Direct Trunk Access and Forced Trunk Disconnect

- E- Extensions, E3- Class of Service - Assign Class of Service to extensions.
- E- Extensions, ED- Trunk Control, Access Control - Assign access for each trunk that the user should be able seize using Direct Trunk Access.
- E- Extensions, ED- Trunk Control, Call-Out Control - Enable call-out for each trunk that the user should be able to seize using Direct Trunk Access.

Feature Reference

Call Waiting (Camp-On)
Direct Trunk Access
Forced Trunk Disconnect

Instructions

To enter data on the PRF:

- Step 1 ➤ On Table 2 for BY2:0, enter 0 to prevent extensions with this COS from using Direct Trunk Access. Enter 1 to allow extensions with this COS to use Direct Trunk Access.

To enter data at the programming terminal:

- Step 1 ➤ Type CP. You see: COS # 00: 00010000 00000-0 00000001
- Step 2 ➤ Enter data for each COS you want to program.

C- CLASS OF SERVICE CP- OPERATOR CALL PICKUP (BY3:7 - ONYX IV)

Description

Use this option to enable (0) or disable (1) Universal Night Answer pickup denied (1), the user cannot dial *0, *01-*04 or * and the operator's extension number to pick up UNA calls. If allowed (0), UNA pickup works normally. Note that disabling UNA pickup also prohibits extensions from using Directed Call Pickup to intercept day mode operator calls. Refer to the Night Answer feature for more information.

This option is only available in ONYX IV.

Conditions

None

Default Value

UNA pickup allowed (0).

Related Programming

None

Feature Reference

None

Instructions

To enter data on the PRF:

Step 1 ► On Table 2 for BY3:7, enter 0 to allow UNA pickup; 1 to deny.

To enter data at the programming terminal:

Step 1 ► Type CP. You see: COS # 00: 00010000 00000-0 00000001 00000000

Step 2 ► Enter data for each COS you want to program.

C- CLASS OF SERVICE CP- ONLY CO CALL FORWARD TO VOICE MAIL (BY3:6 ONYX IV)

Description

Use this option to control the types of calls Voice Mail Personal Answering Machine Emulation answers. If enabled (1), Personal Answering Machine Emulation answers only trunk calls. Intercom calls to the extension go through normally. If disabled (0), Personal Answering Machine Emulation answers all calls (Intercom and trunk). For more information, refer to the Voice Mail Compatibility feature.

This option is only available in ONYX IV ≥ 1.2 .

Conditions

None

Default Value

Personal Answering Machine Emulation answers all calls (0).

Related Programming

None

Feature Reference

None

Instructions

To enter data on the PRF:

- Step 1 ► On Table 2 for BY3:6, enter 0 to have Personal Answering Machine Emulation answer all calls to an extension. Enter 1 to have Personal Answering Machine Emulation answer only trunk calls.

To enter data at the programming terminal:

- Step 1 ► Type CP. You see: COS # 00: 00010000 00000-0 00000001 00000000
Step 2 ► Enter data for each COS you want to program.



D- DISPLAY MEMORY

Description

This program displays the contents of system memory locations. It is a factory diagnostic tool, not intended for field use. Consult your Field Service representative for more information.

Conditions

None

Default Value

None

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities

Instructions

None

D- DISPLAY MEMORY

- For Your Notes -

Description

Use E0 to enter data for all options sequentially for an extension. The charts below show the E options that correspond to each E0 entry. Refer to these options for more information. Also, the charts below show the default value for each option (where applicable).

E0 Prompts for Keysets

For this option...	Look here...
EXT	E1
PORT	E2
CIRCUIT TYPE-	E3
COS (30 for Attendant, 01 for phones)-	E4
NEXT EXT IN HUNT-	E5
HUNT TYPE 00-	E6
DATA SET OR DATA MODULE? N [Y/N] -	E7
PAGE ZONE 00-	E8
RING-LINE PREFERENCE? N [Y/N] -	E8
OFF-HOOK RINGING? Y [Y/N] -	E8
KEY ACCESS TO OUTBOUND LINES Y [Y/N] -	E8
ALLOW LINE DIAL-UP Y [Y/N] -	E8
ACCESS TO GROUP 90? Y [Y/N] -	E8
through	
ACCESS TO GROUP 95? Y [Y/N] -	E8
DIR TERM OR OPR EXT 300-	E9
UCD MASTER EXT (OP1 for 300, blank for others)	EA
SPD DIAL BLOCK-	EB
CALL PICKUP GROUP 00-	EC
PRVCY RLS GROUP 00-	EC
RING CONTROL	ED
COPY? [SKIP=<SP>] [Y/N] -	
LINES 1 TO 8 L L L L L L L L -	
through	
65 TO 72 L L L L L L L L -	
(All trunks ring (R) the Attendant)	
ACCESS CONTROL	ED
COPY? [SKIP=<SP>] [Y/N] -	
LINES 1 TO 8 Y Y Y Y Y Y Y Y -	
through	
65 TO 72 Y Y Y Y Y Y Y Y -	
CALL-OUT CONTROL	
COPY? [SKIP=<SP>] [Y/N] -	ED
LINES 1 TO 8 Y Y Y Y Y Y Y Y -	
through	
65 TO 72 Y Y Y Y Y Y Y Y -	
RING GROUP # 00-	EE
PAGING THRU SPKR Y [Y/N] -	EF
INCOMING VOICE CALL Y [Y/N] -	EF
HEADSET N [Y/N] -	EF
INHIBIT VOICE OVER N [Y/N] -	EF
PROGRAMMABLE KEYS [24/18] 24-	EG
SUPPRESS DSS LAMPS N [Y/N] -	EH
ALLOW DND Y [Y/N] -	EK
PRIME LINE KEY -	EL
PRIORITY 00 (ONYX IV)	EP

**E- EXTENSIONS
E0- ALL DATA**

**Description
(Cont'd)**

E0 Prompts for ESL Sets

For this option...

Look here...

EXT	E1
PORT	E2
CIRCUIT TYPE 00-	E3
COS 00 -	E4
NEXT EXT IN HUNT -	E5
HUNT TYPE 00-	E7
PAGE ZONE 00-	E8
ALLOW LINE DIAL-UP Y [Y/N] -	E8
ACCESS TO GROUP 90? Y [Y/N] -	E8
through	
ACCESS TO GROUP 95? Y [Y/N] -	E8
DIR TERM OR OPR EXT 300-	E9
RING DOWN (ONYX IV)	E9
UCD MASTER EXT -	EA
SPD DIAL BLOCK	EB
CALL PICKUP GROUP 00-	EC
ACCESS CONTROL	ED
COPY? [SKIP=<SP>] [Y/N] -	
LINES 1 TO 8 Y Y Y Y Y Y Y Y -	
through	
65 TO 72 Y Y Y Y Y Y Y Y -	
CALL-OUT CONTROL	ED
COPY? [SKIP=<SP>] [Y/N] -	
LINES 1 TO 8 Y Y Y Y Y Y Y Y -	
through	
65 TO 72 Y Y Y Y Y Y Y Y -	
RING GROUP # 00-	EE
PAGING THRU SPKR Y [Y/N] -	EF
INCOMING VOICE CALL Y [Y/N] -	EF
HEADSET N [Y/N] -	EF
PRIORITY 00 (ONYX IV)	EP

Description
(Cont'd)

E0 Prompts for ASI/OPX Sets

For this option...	Look here...
EXT	
PORT	E1
CIRCUIT TYPE	E2
STI CIRCUIT # (OPX ports only)	E2
COS 00 -	E3
NEXT EXT IN HUNT -	E4
HUNT TYPE 00-	E5
ALLOW LINE DIAL-UP Y [Y/N] -	E8
ACCESS TO GROUP 90? Y [Y/N] -	E8
through	
ACCESS TO GROUP 95? Y [Y/N] -	E8
DIR TERM OR OPR EXT 300-	E9
RING DOWN (ONYX IV)	E9
UCD MASTER EXT -	EA
SPD DIAL BLOCK	EB
CALL PICKUP GROUP 00-	EC
ACCESS CONTROL	ED
COPY? [SKIP=<SP>] [Y/N] -	
LINES 1 TO 8 Y Y Y Y Y Y Y Y -	
through	
65 TO 72 Y Y Y Y Y Y Y Y -	
CALL-OUT CONTROL	ED
COPY? [SKIP=<SP>] [Y/N] -	
LINES 1 TO 8 Y Y Y Y Y Y Y Y -	
65 TO 72 Y Y Y Y Y Y Y Y -	
RING GROUP # 00-	EE
VX N [Y/N] -	EK
PRIORITY 00 (ONYX IV)	EP

E- EXTENSIONS

E0- ALL DATA

Description
(Cont'd)

E0 Prompts for Data Sets, Data Ports and Data Modules

For this option...	Look here...
EXT	
PORT	
CIRCUIT TYPE (01=Data Module, 03=Data Set, Z=Data Port)	E1
DATA MODULE [Y]/DATA PORT [N] Y-(Data Port Only)	E2
COS 01 -	E2
NEXT EXT IN HUNT -	E3
HUNT TYPE 00-	E4
DATA SET OR DATA MODULE? [Y/N] (Y=Data Set and Data Module, N=Data Port)	E5
PAGE ZONE 00-	E6
RING-LINE PREFERENCE? N [Y/N] -	E7
OFF-HOOK RINGING? N [Y/N] -	E8
KEY ACCESS TO OUTBOUND LINES Y [Y/N] -	E8
ALLOW LINE DIAL-UP Y [Y/N] -	E8
ACCESS TO GROUP 90? Y [Y/N] - through	E8
ACCESS TO GROUP 95? Y [Y/N] -	E8
DIR TERM OR OPR EXT 300-	E9
UCD MASTER EXT -	EA
SPD DIAL BLOCK	EB
CALL PICKUP GROUP 00-	EC
PRVCY RLS GROUP 00-	EC
RING CONTROL	ED
COPY? [SKIP=<SP>] [Y/N] -	
LINES 1 TO 8 L L L L L L L L - through	
65 TO 72 L L L L L L L L -	
ACCESS CONTROL	ED
COPY? [SKIP=<SP>] [Y/N] -	
LINES 1 TO 8 Y Y Y Y Y Y Y Y - through	
65 TO 72 Y Y Y Y Y Y Y Y -	
CALL-OUT CONTROL	ED
COPY? [SKIP=<SP>] [Y/N] -	
LINES 1 TO 8 Y Y Y Y Y Y Y Y - through	
65 TO 72 Y Y Y Y Y Y Y Y -	
RING GROUP # 00-	EE
PAGING THRU SPKR Y [Y/N] -	EF
INCOMING VOICE CALL Y [Y/N] -	EF
HEADSET N [Y/N] -	EF
INHIBIT VOICE OVER N [Y/N] -	EF
PROGRAMMABLE KEYS [24/18] 24	EG
SUPPRESS DSS LAMPS N [Y/N] -	EH
ALLOW DND Y [Y/N] -	EK
PRIME LINE KEY -	EL
PRIORITY 00 (ONYX IV)	EP

**Description
(Cont'd)**

E0 Prompts for Data Sets, Data Ports and Data Modules (Cont'd)

For this option...	Look here...
(Data Module and Data Port only)	
DATA MODULE BAUD RATES	EM
0-SLAVE,1-300,2-1200,3-1800	
4-2400,5-4800,6-9600,7-19200	
0 -	
DATA MODULE PARITY OPTIONS	EM
0-NO PARITY 8 BITS,1-EVEN 7 BITS,2-ODD 7 BITS	
0 -	
INTERACTIVE MODE? N -	EM
RS232 CONTROLS ACTIVE? N -	EM
ALLOW DTR DISCONNECT? N -	EM
ALLOW BREAK DISCONNECT? N -	EM
AUTO BAUD? N -	EM
BUSY ON DTR LOW? N -	EM

E0 Prompts for Modem Pooling Circuits

For this option...	Look here...
EXT	
PORT	E1
CIRCUIT TYPE M	E2
HUNT TYPE 00-	E5
UCD MASTER EXT	EA

**E0 Prompts for DSS Consoles
(Extension 302 Shown)**

For this option...	Look here...
EXT	
PORT	E1
CIRCUIT TYPE 06	E2
DIR TERM OR OPR EXT 300	E9
SPD DIAL BLOCK	EB

Conditions

None

Default Value

Refer to the charts above.

E- EXTENSIONS E0- ALL DATA

Related Programming

Refer to the charts above.

Feature Reference

Refer to the individual E options.

Instructions

- To enter data on the PRF:**
- Step 1 ► Refer to the individual E options.
- To enter data at the programming terminal:**
- Step 1 ► Type **E0**.
- Step 2 ► Press **RETURN** to program extension 300.
OR
Enter another extension number and press **RETURN**. In either case, you see:
PORT
- Step 3 ► Enter data for the E options from Table 4.
After you enter data for one option, you automatically advance to the next option.
You cannot use E0 to enter data for the EY and EZ options.

Description

Use this option to change the port assignment for an extension. The port is the hardware location of the extension. When you change an extension's port number, all programming for the extension goes to the new port assignment (location).

All extensions use a single port, except for Data Sets, DSS Consoles and STIs. These are dual-port devices that use a port pair. A port pair consists of two consecutive ports, beginning with an even numbered port (e.g., 00 and 01). When changing a dual-port device's port assignment, be sure to change both ports (even-to-even, odd-to-odd).

Keep the following in mind when programming ports:

- Do not swap an extension port with a trunk port.
- Be sure to install the main attendant at port 00 (usually extension 300).
- Use HH- Port/Extension Checker to make sure each port has only one assigned extension.
- You can optionally Use EZ- Extension-Port Swap (instead of E1) to change the extension assignment for a port
- You can use X- Exchange Extension Data to swap two extensions (without physically moving their ports). With this option, the programming follows the extension number.
- Use QN- Restore Standard Port Numbers to reinstate the standard trunk/extension-to-port assignments.
- Use LP- Listing Data by Port to list the programmed options for extensions in port number order.

Conditions

None

Default Value

Each extension is offset from its port by 300 (e.g., extension 320 is at port 20).

Related Programming

None

Feature Reference

None

Instructions

To enter data on the PRF:
Step 1 ► Enter the port number for each extension on Table 3.

To enter data at the programming terminal:

Step 1 ► Type **E1**. You see: **EXT 300**

Step 2 ► Press **RETURN** to program extension 300.

OR

Enter another extension number and press **RETURN**. In either case, you see:
PORT

Step 3 ► Enter data for this option from Table 3 and press **RETURN**. You see: **ARE YOU SURE?**

Step 4 ► Type **Y** if confirm you entry or **N** to cancel.
You advance to the next consecutive extension.

E- EXTENSIONS E2- CIRCUIT TYPE

Description

Use this option to identify the type of telephone connected to each extension port. The extension circuit type choices are:

00 ESL set

01 Keypad (10-button or 30-button without display) and Data Module (refer to the Data Products Manual)

02 30-button display keypad

03 Data Set (dual channel only - refer to the Data Products Manual)

04 Dual channel keypad (e.g., attendant phone P/N 88254)

05 OPX extension, ASI without DTMF receiver (P/N 89748) and 8SLU ports

06 DSS Console and ONYX IV Attendant Console

51 ASI with DTMF receiver (P/N 89749)

52 Digital Voice Mail Port Card

M Modem Pooling port (refer to the Data Products Manual)

Y Phantom extension (Multiple Directory Numbers in ONYX IV only)

Z Data Port and data-only Data Module (refer to the Data Products Manual)

X Uninstalled, STI port or ACD/UCD master number

Keep the following in mind when programming circuit type:

- Enter type X for all ports not terminated to a telephone.
- You should install a display keypad or Attendant Console (ONYX IV) for the main attendant.
- Data Sets, DSS Consoles, Attendant Consoles and keysets with a bridge Data Module require a port pair (see the E1 option).
- OPX extensions use trunk numbers. ASI extensions use extension numbers.

Conditions

When installing an Attendant Console with a separate power supply (P/N 89055A):

- Plug the power supply into the console
- Plug the console into a dedicated 120 V AC receptacle
- Assign the console circuit type 06 in **E2- Circuit Type** (see programming below)
- Designate the console extension as an operator in **QC- Operator Programming** (see programming below)
- Plug the console line cord into the console and the console's modular jack

Default Value

On power up, the system identifies (auto-IDs) the type of telephone connected to each extension port. It then assigns the correct circuit type to each port. If a port does not have a connected extension, the system assigns circuit type X. On subsequent power-ups, the system reports minor alarms on unconnected (but programmed) extensions. The system *does not* auto-ID circuit types Z, M, 05, 51, data modules and Attendant Consoles.

Related Programming

Refer to Programming in the features listed below.

Feature Reference

Refer to Programming in the following features:

Alphanumeric Display
Analog Station Interface
Attendant Console
Automatic Call Distribution
Automatic Call Distribution (ONYX IV)
Background Music
Call Timer
Dialing Number Preview
Direct Station Selection, DSS Console
Extension Hunting
Multiple Directory Numbers (ONYX IV)
Music on Hold
Night Answer, Universal Night Answer
Off Premise Extension
Private Line
Voice Mail Compatibility

Instructions

To enter data on the PRF:

Step 1 ▶ Enter the circuit type for each extension on Table 3.

To enter data at the programming terminal:

Step 1 ▶ Type **E2**. You see: **EXT 300**

Step 2 ▶ Press **RETURN** to program extension 300.

OR

Enter another extension number and press **RETURN**. In either case, you see:
CIRCUIT TYPE

Step 3 ▶ Enter data for this option from Table 3 and press **RETURN**.
You advance to the next consecutive extension.

E- EXTENSIONS

E2- DATA MODULE/DATA PORT

Description

For circuit type Z extensions, use this option to identify the connected device as a Data Module (Y) or Data Port PCB circuit (N). This option only applies to circuit type Z extensions. Always disable (N) this option for Modem Pooling (type M) extensions.

Conditions

None

Default Value

All type Z entries are Data Modules (Y).

Related Programming

Refer to the Data Products Manual.

Feature Reference

Refer to the Data Products Manual.

Instructions

To enter data on the PRF:

Step 1 > For type Z extensions, enter Y for Data Modules and N for Dataports on Table 3.

To enter data at the programming terminal:

Step 1 > After entering Z for the E2 option, you see: DATA MODULE [Y]/DATA PORT [N]?

Step 2 > Enter Y for a Data Module or N for a Dataport.
You advance to the next consecutive extension.

E- EXTENSIONS E3- CLASS OF SERVICE

Description

Use this option to assign a Class of Service (COS) to each extension. Keep the following in mind when assigning a COS to an extension:

- DSS Consoles and Modem Pooling extensions do not require a Class of Service
- Attendants (assigned in QC) must have COS 30. Do not assign any other COS to an attendant. Remember that COS 30 follows COS 00 programming. Changing COS 00 affects COS 30.
- DISA and incoming tie trunks also require a Class of Service assignment. Refer to E- Trunks (E3).
- The port pairs assigned to the STI have COS 31.
- Data ports with Permanent Receive/Transmit Connection have COS 29. Refer to the Data Products Manual.

Conditions

None

Default Value

Extension 300 has COS 30. All other extensions have COS 01.

Related Programming

Refer to Programming in the features listed below.

Feature Reference

Refer to Programming in the following features:

Automatic Call Distribution
Automatic Call Distribution (ONYX IV)
Call Forwarding
Call Waiting (Camp-On)
Centralized Attendant Service
Class of Service
Direct Inward Dialing
Direct Inward System Access (DISA)
Direct Trunk Access
Distinctive Ringing
Equal Access Compatibility
Extended Ringing
Flash
Forced Trunk Disconnect
Intrusion (Barge-In)
Line (Trunk) Queuing
Operator Assistance (OPA)
Paging
Privacy
Removing Trunks and Extensions from Service
Silent Monitor
Special Services and OCC Compatibility
Speed Dial
System Reports, Diagnostics and Maintenance Utilities
Tenant Service
Tie Lines
Time and Date Setting
Toll Restriction

E- EXTENSIONS

E3- CLASS OF SERVICE

Instructions

To enter data on the PRF:

- Step 1 ► Enter the Class of Service (00-27, 30 for attendants) for each extension on Table 3.

To enter data at the programming terminal:

- Step 1 ► Type **E3**. You see: **EXT 300**

- Step 2 ► Press **RETURN** to program extension 300.

OR

Enter another extension number and press **RETURN**. In either case, you see:
COS

- Step 3 ► Enter data for this option from Table 3 and press **RETURN**.
You advance to the next consecutive extension.

E- EXTENSIONS

E4- NEXT EXTENSION IN HUNT GROUP

Description

Use this option to create the extension hunting sequence for Circular and Terminal Extension Hunting. Hunting follows the order of the list you create using this option. You can also use this option to assign an Overflow destination for UCD hunting.

For Extension Hunting, Circular and Terminal, use this option to link extensions into a hunting list. For Circular Hunting, make sure your last member loops back to the first. For Terminal Hunting, enter 300 for the last member.

To program a Circular Extension Hunting Group with extensions 304, 305 and 306:

For this extension...	Enter this E4 data...
304	305
305	306
306	304

To program a Terminal Hunting Group with extensions 304, 305 and 306:

For this extension...	Enter this E4 data...
304	305
305	306
306	300

For UCD Extension hunting (master extension number only), use this option to designate the Overflow Destination. For all other UCD group members, enter 300 for this option (i.e., no overflow).

Note: This option appears for DISA and tie trunks. It lets you put the trunks in a rotary for outgoing calls. Refer to E- Trunks (E4- Next Trunk in Outbound Rotary) and the Line Rotaries feature for more information.

Conditions

None

Default Value

No extensions are in a hunt list (no entry).

Related Programming

Extension Hunting, Circular and Terminal

E- Extensions, E5- Hunt Type - Designate a hunt type for each member of the hunting group. The choices are:

00 Extension not in a hunt group. If the last member in a Terminal Hunt group is type 00, the hunt stays at the last member in the hunt list. If the last member is type 01-03, the call rings the attendant.

01 Unanswered outside calls and calls to busy member cause hunting

02 Unanswered outside/Intercom calls and outside/Intercom calls to a busy member cause hunting

03 Only unanswered outside calls will hunt

E- EXTENSIONS

E4- NEXT EXTENSION IN HUNT GROUP

Related Programming (Cont'd)

- Extension Hunting, UCD**
- **E- Extensions, E2- Circuit Type** - Program the master extension number with type X (uninstalled). The master extension must be a port that has no phone connected to it.
 - **E- Extensions, E5- Hunt Type** - Enter a hunt type for each member of the hunting group and the master extension number. The hunt type should be the same for each member. The choices are:
 - 00 Extension not in a hunt group
 - 04 UCD hunting with no overflow and no group busy voice message
 - 05 UCD hunting with overflow and no group busy voice message
 - 06 UCD hunting with overflow and group busy voice message
 - **E- Extensions, EA- UCD Group Master Extension Number** - Assign the master extension number to each group member and the master extension number.
 - **FC1- Reset Queues** - Reset the system queues after initial UCD programming.

Feature Reference

Extension Hunting

Instructions

To enter data on the PRF:

- Step 1 ➤ Enter the next extension in the hunt group for each extension on Table 3. Enter 300 if:
- The extension is the last extension in a Terminal Hunt group
 - The extension is not in a hunt group
 - The extension is a member of a UCD hunt group

To enter data at the programming terminal:

- Step 1 ➤ Type **E4**. You see: **EXT 300**
- Step 2 ➤ Press **RETURN** to program extension 300.
- OR
- Enter another extension number and press **RETURN**. In either case, you see: **NEXT EXT IN HUNT**
- Step 3 ➤ Enter data for this option from Table 3 and press **RETURN**. You advance to the next consecutive extension.

Description

Use this option to assign an Extension Hunting type (01-06) to each extension.

For Automatic Call Distribution, assign hunt type 06 to:

- Each member agent in the ACD group.
- The ACD group master extension.

Make sure the supervisor extension has hunt type 00. The supervisor should never be an ACD group member.

For Circular and Terminal Hunting, designate a hunt type for each member of the hunting group. The choices are:

- 00 Extension not in a hunt group. If the last member in a Terminal Hunt group is type 00, the hunt stays at the last member in the hunt list. If the last member is type 01-03, the call rings the attendant.
- 01 Unanswered outside calls and calls to busy member cause hunting
- 02 Unanswered outside/Intercom calls and outside/Intercom calls to a busy member cause hunting
- 03 Only unanswered outside calls cause hunting

For hunting specifics, refer to the Extension Hunting Operational Matrix on the next page.

For UCD Hunting, enter a hunt type for each member of the hunting group. The master extension number should also have the same hunt type. The choices are:

- 00 Extension not in a hunt group
- 04 UCD hunting with no overflow and no group busy voice message
- 05 UCD hunting with overflow and no group busy voice message
- 06 UCD hunting with overflow and group busy voice message

For hunting specifics, refer to the Extension Hunting Operational Matrix on the next page.

Conditions

None

Default Value

No hunt type defined (00).

E- EXTENSIONS E5- HUNT TYPE

EXTENSION HUNTING OPERATIONAL MATRIX (Page 1 of 6)

TYPE OF CALL	CONDITION	CIRCULAR 01	CIRCULAR 02	CIRCULAR 03
Transferred trunk	Busy	Skip member. If all busy, cycles through group, then recall, then Key Ring.	Skip member. If all busy, cycles through group, then Key Ring.	Hear Ring/Busy for recall duration, cycles through group then recall, then Key Ring.
	Ring - No answer	Ring, once through group, recall transferer, then Key Ring.	Ring, once through group, recall transferer, then Key Ring.	Ring, once through group, recall transferer, then Key Ring.
	Voice call - No answer	N/A	N/A	N/A
	D.N.D.	Skip member. If all DND, cycles through group, then Key Ring.	Skip member. If all DND, cycles through group, then Key Ring.	Flashes member, then skips to group. If all DND, cycles through group, then Key Ring.
	Call Forwarded	Follows Call Forward.	Follows Call Forward.	Follows Call Forward.
Direct term. trunk	Busy	Skip member. If all busy, cycles through group, then Key Ring.	Skip member. If all busy, cycles through group, then Key Ring.	Camp-On for Rings Before Recall duration, cycles through group, then Key Ring.
	Ring - No answer	Ring once through group, then Key Ring.	Ring once through group, then Key Ring.	Ring once through group, then Key Ring.
	Voice call - No answer	N/A	N/A	N/A
	D.N.D.	If 1st member, trunk follows nite route. Others, skip member.	If 1st member, trunk follows nite route. Others, skip member.	If 1st member, trunk follows nite route. Others, flasher at each member.
	Call Forwarded	Follows Call Forward.	Follows Call Forward.	Follows Call Forward.
Intercom	Busy	No hunt, hear Ring/Busy.	Skip member. If all busy, caller hears busy tone.	No hunt, hear Ring/Busy.
	Ring - No answer	No hunt	Ring, cycles through group to last idle member. Stay at last member.	No hunt
	Voice call - No answer	No hunt, voice-announce.	No hunt, voice-announce.	No hunt, voice-announce.
	D.N.D.	No hunt	Skip member. If all DND "Pls DND" msg.	No hunt
	Call Forwarded	Follows Call Forward.	Follows Call Forward.	Follows Call Forward.

E- EXTENSIONS E5- HUNT TYPE

EXTENSION HUNTING OPERATIONAL MATRIX (Page 2 of 6)

TYPE OF CALL	CONDITION	CIRCULAR 01	CIRCULAR 02	CIRCULAR 03
DID	Busy	Skip member. If all busy. intercept or busy tone.	Skip member. If all busy. intercept or busy tone.	Skip member. If all busy. intercept or busy tone.
	Ring - No answer	Ring once through group. then Key Ring.	Ring once through group. then Key Ring.	Ring once through group. then Key Ring.
	Voice call - No answer	N/A	N/A	N/A
	D.N.D.	Skip member. if all DND. intercept.	Skip member. if all DND. intercept.	Skip member. if all DND. intercept.
	Call Forwarded	Follows Call Forward.	Follows Call Forward.	Follows Call Forward.
DISA	Busy	Skip member. If all busy. then Key Ring.	Skip member. If all busy. then Key Ring.	Camp-On then Key Ring.
	Ring - No answer	Ring once through group. then Key Ring.	Ring once through group. then Key Ring.	Ring once through group. then Key Ring.
	Voice call - No answer	N/A	N/A	N/A
	D.N.D.	"Pls DND" msg.	Skip member. If all DND. then Key Ring.	"Pls DND" msg.
	Call Forwarded	Follows Call Forward.	Follows Call Forward.	Follows Call Forward.
Tie line	Busy	Skip member. If all busy. then Key Ring.	Skip member. If all busy. then Key Ring.	Skip member. If all busy. then Key Ring.
	Ring - No answer	Ring once through group. then Key Ring.	Ring once through group. then Key Ring.	Ring once through group. then Key Ring.
	Voice call - No answer	N/A	N/A	N/A
	D.N.D.	"Pls DND" msg.	Skip member. If all DND. then Key Ring.	"Pls DND" msg.
	Call Forwarded	Follows Call Forward.	Follows Call Forward.	Follows Call Forward.

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CIRCULAR NOTES:

- Key Ring indicates ring at extensions programmed for Ring and Access.
- Abbreviated voice synthesized messages are shown in quotes; e.g. "Pls hold" is actually "Please hold on. All lines are busy. Your call will be answered when a line becomes free."
- Camp-On to keyset - Will wait for programmed number of rings before recall.
Camp-On to 4B or SL - Will wait for Camp-On timer to mature before recall (no msg.).
- Trunks are not considered transferred until the transferring extension releases. Note that with hunting types 01 and 03 no hunting occurs until transfer is made. (See "Intercom" calls.)

E- EXTENSIONS E5- HUNT TYPE

EXTENSION HUNTING OPERATIONAL MATRIX (Page 3 of 6)

TYPE OF CALL	CONDITION	TERMINAL 01	TERMINAL 02	TERMINAL 03
Transferred trunk	Busy	Skip member. Key Ring if all busy.	Skip member. Key Ring if all busy.	Camp-On for recall duration, cycle thru group, then recall, then Key Ring.
	Ring - No answer	Ring, cycles to end of group.	Ring.	Ring, cycles to end of group.
	Voice call - No answer	N/A	N/A	N/A
	D.N.D.	Skip member. If all DND, flashes last member.	Skip member. If all DND, flashes last member.	Skip member. If all DND, flashes last member.
	Call Forwarded	Follows Call Forward.	Follows Call Forward.	Follows Call Forward.
Direct term. trunk	Busy	Skip member. If all busy, waits Recall duration, then Key Ring.	Skip member. If all busy, waits Recall duration, then Key Ring.	Camp-On for recall duration, cycle thru group, then Key Ring.
	Ring - No answer	Ring, cycle to end of group, then Key Ring.	Ring, cycle to end of group, then Key Ring.	Ring, cycle to end of group, then Key Ring.
	Voice call - No answer	N/A	N/A	N/A
	D.N.D.	If 1st member, trunk follows nite route. Others, skip member, then Key Ring.	If 1st member, trunk follows nite route. Others, skip member, then Key Ring.	If 1st member, trunk follows nite route. Others, flashes all members, then Key Ring.
	Call Forwarded	Follows Call Forward.	Follows Call Forward.	Follows Call Forward.
Intercom	Busy	No hunt, hear Ring/Busy.	Skip member. If all busy, caller hears Ring Busy at last member.	No hunt, hear Ring/Busy.
	Ring - No answer	No hunt	Ring, cycles through group to end.	No hunt
	Voice call - No answer	No hunt, voice-announce.	Ring, voice-announce.	No hunt, voice-announce.
	D.N.D.	No hunt, hear "Pls DND" msg.	Skip member. If all DND "Pls DND" msg.	No hunt, hear "Pls DND" msg.
	Call Forwarded	Follows Call Forward.	Follows Call Forward.	Follows Call Forward.

EXTENSION HUNTING OPERATIONAL MATRIX (Page 4 of 6)

TYPE OF CALL	CONDITION	TERMINAL 01	TERMINAL 02	TERMINAL 03
DID	Busy	Skip member. If all busy, intercept or busy tone.	Skip member. If all busy, intercept or busy tone.	Skip member. If all busy, intercept or busy tone.
	Ring - No answer	Ring, cycle to end of group, then Key Ring.	Ring, cycle to end of group, then Key Ring.	Ring, cycle to end of group, then Key Ring.
	Voice call - No answer	N/A	N/A	N/A
	D.N.D.	Skip member, if all DND intercept.	Skip member, if all DND intercept.	Skip member, if all DND intercept.
	Call Forwarded	Follows Call Forward.	Follows Call Forward.	Follows Call Forward.
DISA	Busy	Skip member. If all busy, then Key Ring.	Skip member. If all busy, then Key Ring.	Camp-On then Key Ring.
	Ring - No answer	Ring once through group, then Key Ring.	Ring once through group, then Key Ring.	Ring once through group, then Key Ring.
	Voice call - No answer	N/A	N/A	N/A
	D.N.D.	"Pls DND" msg.	Skip member. If all busy, then Key Ring.	"Pls DND" msg.
	Call Forwarded	Follows Call Forward.	Follows Call Forward.	Follows Call Forward.
Tie line	Busy	Skip member. If all busy, then busy tone.	Skip member. If all busy, then busy tone.	Camp-On for recall duration, cycle through group, then Key Ring.
	Ring - No answer	Ring once through group, then Key Ring.	Ring once through group, then Key Ring.	Ring once through group, then Key Ring.
	Voice call - No answer	N/A	N/A	N/A
	D.N.D.	"Pls DND" msg.	Skip member. If all in DND, then "DND" msg.	"Pls DND" msg.
	Call Forwarded	Follows Call Forward.	Follows Call Forward.	Follows Call Forward.

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TERMINAL NOTES:

- Key Ring indicates ring at extensions programmed for Ring and Access.
- Abbreviated voice synthesized messages are shown in quotes: e.g. "Pls hold" is actually "Please hold on. All lines are busy. Your call will be answered when a line becomes free."
- Camp-On to keyset - Will wait for programmed number of rings before recall.
Camp-On to 4B or SL - Will wait for Camp-On timer to mature before recall (no msg.).
- Trunks are not considered transferred until the transferring extension releases. Note that with hunting types 01 and 03 no hunting occurs until transfer is made. (See "Intercom" calls.)
- If the operator is the last extension in the hunt list, unanswered transferred calls ring the operator only. If an extension is last, unanswered transferred calls recall the transferring extension. The call then goes to Key Ring.

E- EXTENSIONS

E5- HUNT TYPE

EXTENSION HUNTING OPERATIONAL MATRIX (Page 5 of 6)

TYPE OF CALL	CONDITION	UDC 04	UDC 05	UDC 06
Transferred trunk	Busy	Skip member. If all busy, Camp-On for 1st free member, then overflow, then Key Ring.	Skip member. If all busy, "Pls hold" msg, Camp-On for 1st free member, then overflow, then Key Ring.	Skip member. If all busy, "Pls hold" msg, Camp-On for 1st free member, then overflow, then Key Ring.
	Ring - No answer	Cycles UCD group queue.	Cycles UCD group queue.	Cycles UCD group queue.
	Voice call - No answer	N/A	N/A	N/A
	D.N.D.	Treat as busy.	Treat as busy.	Treat as busy.
	Call Forwarded	Follows Call Forward.	Follows Call Forward.	Follows Call Forward.
Direct term. trunk	Busy	Skip member. If all busy, Camp-On for 1st free member, then overflow, then Key Ring.	Skip member. If all busy, "Pls hold" msg, Camp-On for 1st free member, then overflow, then Key Ring.	Skip member. If all busy, "Pls hold" msg, Camp-On for 1st free member, then overflow, then Key Ring.
	Ring - No answer	Cycles UCD group.	Cycles UCD group.	Cycles UCD group.
	Voice call - No answer	N/A	N/A	N/A
	D.N.D.	Treat as busy.	Treat as busy.	Treat as busy.
	Call Forwarded	Follows Call Forward.	Follows Call Forward.	Follows Call Forward.
Intercom	Busy	Skip member. If all busy, caller hears busy tone.	Skip member. If all busy, "Pls hold" msg, Camp-On for 1st free member, then overflow.	Skip member. If all bus "Pls hold" msg, Camp-on for 1st free member, then overflow.
	Ring - No answer	Cycles UCD group queue.	Cycles UCD group queue.	Cycles UCD group queue.
	Voice call - No answer	N/A	N/A	N/A
	D.N.D.	Treat as busy.	Treat as busy.	Treat as busy.
	Call Forwarded	Follows Call Forward.	Follows Call Forward.	Follows Call Forward.

EXTENSION HUNTING OPERATIONAL MATRIX (Page 6 of 6)

TYPE OF CALL	CONDITION	UDC 04	UDC 05	UDC 06
DID	Busy	Skip member. If all busy, busy tone.	Skip member. If all busy, "Pls hold" msg. then overflow.	Skip member. If all busy, "Pls hold" msg. then overflow.
	Ring - No answer	Cycle UCD group.	Cycle UCD group.	Cycle UCD group queue.
	Voice call - No answer	N/A	N/A	N/A
	D.N.D.	Treated as busy.	Treated as busy.	Treated as busy.
	Call Forwarded	Follows Call Forward.	Follows Call Forward.	Follows Call Forward.
DISA	Busy	Skip member. If all busy, busy tone.	Skip member. If all busy, "Pls hold" msg. then overflow.	Skip member. If all busy, "Pls hold" msg. then overflow.
	Ring - No answer	Cycle UCD group.	Cycle UCD group.	Cycle UCD group queue.
	Voice call - No answer	N/A	N/A	N/A
	D.N.D.	Treated as busy.	Treated as busy.	Treated as busy.
	Call Forwarded	Follows Call Forward.	Follows Call Forward.	Follows Call Forward.
Tie line	Busy	Skip member. If all busy, busy tone.	Skip member. If all busy, "Pls hold" msg. then overflow.	Skip member. If all busy, "Pls hold" msg. then overflow.
	Ring - No answer	Cycle UCD group.	Cycle UCD group.	Cycle UCD group queue.
	Voice call - No answer	N/A	N/A	N/A
	D.N.D.	Treated as busy.	Treated as busy.	Treated as busy.
	Call Forwarded	Follows Call Forward.	Follows Call Forward.	Follows Call Forward.

UCD NOTES:

- Overflow and Key Ring - If no overflow extensions are programmed, call will stay Camped-On. If overflow is programmed, call will ring or Camp-On to the overflow extensions before ringing at extensions with Ring and Access for the trunk involved.
- Abbreviated voice synthesized messages are shown in quotes; e.g. "Pls hold" is actually "Please hold on. All lines are busy. Your call will be answered when a line becomes free."
- Camp-On - Will ring the first member to become idle before the Camp-On timer matures.

E- EXTENSIONS E5- HUNT TYPE

Related Programming

Automatic Call Distribution

- **CP- ACD Supervisor Keypad (BY2:6)** - Set the Supervisor Keypad bit for the supervisor's extension.
- **E- Extensions, E2- Circuit Type** - Program the master extension number with type X (uninstalled). The master extension must be a port that has no phone connected to it.
- **E- Extensions, E3- Class of Service** - Assign a unique COS with BY2:6 set for the supervisor's extension.
- **E- Extensions, EA- UCD Group Master Extension Number** - Assign the master extension number to:
 - Each member agent
 - The supervisor extension
 - The ACD group master extension
- **FC1- Reset Queues** - Reset the system queues after initial ACD programming.

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with ACD (ONYX IV) on page 1-32A.

Extension Hunting, Circular and Terminal

- **E- Extensions, E4- Next Extension in Hunt Group** - Use this option to link extensions into a hunting list. For Circular Hunting, make sure your last member loops back to the first. For Terminal Hunting, enter 300 for the last member.

Extension Hunting, UCD

- **E- Extensions, E2- Circuit Type** - Program the master extension number with type X (uninstalled). The master extension must be a port that has no phone connected to it.
- **E- Extensions, E4- Next Extension in Hunt Group** - For the master extension number only, use this option to designate the Overflow Destination.
- **E- Extensions, EA- UCD Group Master Extension Number** - Assign the master extension number to each group member and the master extension number.
- **FC1- Reset Queues** - Reset the system queues after initial UCD programming.

Voice Mail Compatibility

- **E- Extensions, E2- Circuit Type** - Each OPX and ASI P/N 89748 Voice Messaging System port should have circuit type 05. Each ASI P/N 89749 Voice Messaging System port should have circuit type 51.
- **E- Extensions, EA- UCD Group Master Extension Number** - Program each Voice Messaging System port with the master number assigned in QP programming below.
- **E- Extensions, EK- Voice Mail (VX) Port** - Enable this option for each Voice Messaging System port.
- **E- Trunks, E9- Direct Trunk Termination** - For each trunk the VX Automated Attendant should answer, terminate the trunk to the Voice Messaging System master number. (See EA below.)
- **E- Trunks, EI- Night Call Routing** - For each trunk the VX Automated Attendant should answer at night, terminate the trunk to the master number (see EA above). For this application, make sure the E9 entry is 300.

**Related
Programming
(Cont'd)**

- **FC1- Reset System Queues** - Reset the system queues after installing the Voice Messaging System.
- **FC3- Reset VX Flag (Telephone Message Waiting Lamps)** - For a first time installation, always use this option to reset the telephone Message Waiting lamps.
- **KS- Programming Keys for Keysets** - Designate a programmable key as a Record key (type R).
- **QP- Voice Mailbox Installation, Mailbox Installed** - Enable this option if the system has a Voice Messaging System connected.
- **QP- Voice Mail Installation, Voice Messaging Master Extension** - Select one of the Voice Messaging System ports programmed in the options above as the master extension number.

Feature Reference

Automatic Call Distribution
Automatic Call Distribution (ONYX IV)
Extension Hunting
Voice Mail Compatibility

Instructions

To enter data on the PRF:

- Step 1 ➤** Enter the hunt type 01-06 for each extension on Table 3. Enter 00 if the extension is not in a hunt group.

To enter data at the programming terminal:

- Step 1 ➤** Type **E3**. You see: **EXT 300**

- Step 2 ➤** Press **RETURN** to program extension 300.

OR

Enter another extension number and press **RETURN**. In either case, you see:
HUNT TYPE

- Step 3 ➤** Enter data for this option from Table 3 and press **RETURN**.
You advance to the next consecutive extension.

E- EXTENSIONS

E6- DATA SET

Description

Use this option to assign a Data Set or a Data Module with a bridged keyset. For extensions that are not Data Sets or bridged to Data Modules, always disable this option. When programming Data Sets or Data Modules, refer to the Data Products Manual. This option applies to keysets and Data Sets only.

Conditions
None

Default Value
Extension is not a Data Set (N).

Related Programming

Refer to the Data Products Manual.

Feature Reference

Refer to the Data Products Manual

Instructions

To enter data on the PRF:

Step 1 ► On Table 3, enter Y for each extension that is a Data Set or a keyset bridged to a Data Module. Enter N if the extension is not a Data Set or a keyset bridged to a Data Module.

To enter data at the programming terminal:

Step 1 ► Type **E6**. You see: **EXT 300**

Step 2 ► Press **RETURN** to program extension 300.

OR

Enter another extension number and press **RETURN**. In either case (if the extension is a keyset), you see: **DATA SET OR DATA MODULE**

Step 3 ► Enter data for this option from Table 3 and press **RETURN**.
You advance to the next consecutive extension.

Description

Use this option to assign a keyset, ESL set or Data Set to an Internal Paging zone. The internal zones are:

- 00 All Call Paging only
- 01 Internal zone 1
- 02 Internal zone 2
- 03 Internal zone 3
- 04 Internal zone 4
- 05 Internal zone 5
- 06 Internal zone 6
- 07 Internal zone 7

For example, you can assign extension 304 to internal zone 5 (05). The speaker in extension 304 only broadcasts zone 5 and All Call Paging announcements.

Conditions
None

Default Value
Extension broadcast All Call Paging only (00).

**Related
Programming**

Paging, Internal and All Call

- CP- Inhibit Access to Page Zone 3 (BY2:4) - Allow/inhibit Paging to zone 3 for extensions with this COS.
- CP- Inhibit Access to Page Zone 2 (BY2:3) - Allow/inhibit Paging to zone 2 for extensions with this COS.
- CP- Inhibit Access to Page Zone 1 (BY2:2) - Allow/inhibit Paging to zone 1 for extensions with this COS.
- CP- Inhibit Access to All Call Paging (BY2:1) - Allow/inhibit All Call Paging for extensions with this COS.
- E- Extensions, E3- Class of Service - Assign Class of Service to extensions.
- E- Extensions, E7- Page Zone - Assign each extension to an internal Paging zone (01-07, or 00 for All Call only). The extension broadcasts page announcements to the assigned zone.
- E- Extensions, EF- Paging Through Telephone Speaker - For each extension, allow or block Paging announcements through the telephone speaker.

E- EXTENSIONS E7- PAGE ZONE

Related Programming (Cont'd)

- **Tenant Service, Assigning Internal Paging Zones to Tenants**
- **CP- Inhibit Access to Page Zone 3 (BY2:4)** - Allow/inhibit Paging to zone 3 for extensions with this COS. You can allow this option for one tenant group's members and deny it for all others.
- **CP- Inhibit Access to Page Zone 2 (BY2:3)** - Allow/inhibit Paging to zone 2 for extensions with this COS. You can allow this option for one tenant group's members and deny it for all others.
- **CP- Inhibit Access to Page Zone 1 (BY2:2)** - Allow/inhibit Paging to zone 1 for extensions with this COS. You can allow this option for one tenant group's members and deny it for all others.
- **CP- Inhibit Access to All Call Paging (BY2:1)** - Since all tenants hear All Call Paging, consider using this option to prevent All Call Paging system-wide.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Extensions, EF- Paging Through Telephone Speaker** - Enable this option to allow Paging announcements through the telephone speaker.

Feature Reference

Paging
Tenant Service

Instructions

To enter data on the PRF:

- Step 1 ➤ Enter the Paging zone number (00-07) for each extension on Table 3.

To enter data at the programming terminal:

- Step 1 ➤ Type **E3**. You see: **EXT 300**
- Step 2 ➤ Press **RETURN** to program extension 300.

OR

Enter another extension number and press **RETURN**. In either case, you see:
PAGE ZONE

- Step 3 ➤ Enter data for this option from Table 3 and press **RETURN**.
You advance to the next consecutive extension.

E- EXTENSIONS

E8- LINE ACCESS OPTIONS, RINGING LINE PREFERENCE

Description

Use this option to allow or deny Ringing Line Preference at each keyset. This option applies to all trunk calls ringing the extension (not Intercom calls).

Conditions

Intercom calls to an attendant follow E8- Ringing Line Preference programming.

Default Value

Ringing Line Preference disabled (N).

Related Programming

- **Ringing Line Preference**
KS- Programming Keys for Keysets - Program the line and loop keys that will ring the extension.

Feature Reference

Ringing Line Preference

Instructions

To enter data on the PRF:

- Step 1 ➤ Enter Y for each extension on Table 3 that should have Ringing Line Preference. Enter N if the extension should not have Ringing Line Preference.

To enter data at the programming terminal:

- Step 1 ➤ Type E8. You see: EXT 300

- Step 2 ➤ Press RETURN to program extension 300.

OR

Enter another extension number and press RETURN. In either case, you see:
RING-LINE PREFERENCE

- Step 3 ➤ Enter data for this option from Table 3 and press RETURN.
You advance to the next E8 option.

E- EXTENSIONS E8- LINE ACCESS OPTIONS, OFF-HOOK RINGING

Description

Use this option to enable/disable incoming off-hook ring for a keyset. Keep in mind that this option interacts with EF- Incoming Voice Over Off-Hook Signals. The chart below shows this interaction for the destination extension.

Caller	Dest.	E8	EF	Result after dialing 1
Handset	Handset	N	N	Voice Over to destination
Handset	Handsfree	N	N	No Off-Hook Signaling
Handsfree and Monitor	Handset	N	N	No Off-Hook Signaling
Handsfree and Monitor	Handsfree	N	N	No Off-Hook Signaling
Handset	Handset	N	Y	No Off-Hook Signaling
Handset	Handsfree	N	Y	No Off-Hook Signaling
Handsfree	Handset	N	Y	No Off-Hook Signaling
Handsfree	Handsfree	N	Y	No Off-Hook Signaling
Handset	Handset	Y	N	Voice Over to destination
Handset	Handsfree	Y	N	Off-hook ringing
Handsfree	Handset	Y	N	No Off-Hook Signaling
Handsfree	Handsfree	Y	N	Off-hook ring if dest. has HF - otherwise no Off-Hook Signals
Handset	Handset	Y	Y	Off-hook ringing
Handset	Handsfree	Y	Y	Off-hook ringing
Handsfree	Handset	Y	Y	Off-hook ringing
Handsfree	Handsfree	Y	Y	Off-hook ringing

Conditions

None

Default Value

Off-hook ringing not allowed (N).

Related Programming

➤

Off-Hook Signaling

E- Extensions, EF- Incoming Voice Over Off-Hook Signals - Enable or disable incoming Voice Over signaling for each extension. If enabled, this option overrides E8- Off Hook Ringing.

Feature Reference

Off-Hook Signaling

Instructions

To enter data on the PRF:

- Step 1 ➤ Enter Y for each extension on Table 3 that should have off-hook ringing. Enter N if the extension should not have off-hook ringing.

To enter data at the programming terminal:

- Step 1 ➤ After entering data for the previous E8 option, you see: **OFF-HOOK RINGING**
Step 2 ➤ Enter data for this option from Table 3 and press **RETURN**.
You advance to the next E8 option.

E- EXTENSIONS

E8- LINE ACCESS OPTIONS, KEY ACCESS TO OUTBOUND LINES

Description

Use this option to allow/deny a keyset user programmable line key access to outside trunks. If enabled, a keyset user can press a line key to place a call (if also allowed by the Related Programming below). If disabled, user cannot use line keys for placing outside calls. This option applies to all line keys on the keyset. Additionally, it does not affect dial access to trunks and trunk groups.

This option also lets:

- A user with Prime Line Selection place an outgoing call on the Prime Line key
- A Private Line user place an outbound call on the Private Line (if allowed by other programming)

Conditions

None

Default Value

Key access to outbound lines allowed (Y).

Related Programming

Central Office Calls, Placing

- **E- Extensions, E8- Line Access Options, Allow Line Code Dial-Up** - If enabled, user can dial a trunk access code (e.g., 801) to access trunks (if also allowed by ED programming).
- **E- Extensions, E8- Line Access Options, Access to Groups 90-95 (not on key systems)** - If enabled, user can dial 90-95 to access trunk groups 1-6.
- **E- Extensions, ED- Trunk Control, Access Control** - Assign access for each trunk on which the user should be able to place calls.
- **E- Extensions, ED- Trunk Control, Call-Out Control** - Enable call-out for each trunk on which the user should be able to place calls.
- **E- Trunks, E2- Circuit Type** - Program the correct circuit type for each trunk.
- **KS- Programming Keys for Keysets** - Program the types of keys that allow the extension user to place trunk calls.

Prime Line Selection

- **E- Extensions, ED- Trunk Control, Access Control** - The extension must have access for the trunk appearing on the Prime Line key.
- **E- Extensions, ED- Trunk Control, Call-Out Control** - For outgoing calls, the extension must have call-out enabled for the trunk appearing on the Prime Line key.
- **E- Extensions, EL- Prime Line Key** - Enter the Prime Line key number (1-24), followed by the option. The options are:
 - R Ringing Prime Line
 - I Idle Prime Line
- **KS- Programming Keys for Keysets** - Program the Prime Line key as a line key.

E- EXTENSIONS

E8- LINE ACCESS OPTIONS, KEY ACCESS TO OUTBOUND LINES

Related Programming (Cont'd)

- Private Line**
- **E- Extensions, ED- Trunk Control, Ring Control** - Enable/disable ringing for the Private Line. Assign ringing only for those extensions that have the Private Line.
 - **E- Extensions, ED- Trunk Control, Access Control** - Assign access for each Private Line. Assign access only for those extensions that have the Private Line.
 - **E- Extensions, ED- Trunk Control, Call-Out Control** - Enable call-out if the extension user should be able to place calls on the Private Line. Enable callout only for those extensions that have the Private Line.
 - **E- Trunks, E2- Circuit Type** - Program the correct circuit type for Private Line.
 - **KS- Programming Keys for Keysets** - Assign the Private Line to a programmable key. Assign the key only on those extensions that should have the Private Line.
- Tenant Service, Assigning Trunks to Tenants for Placing Calls**
- **E- Extensions, E8- Line Access Options, Allow Line Code Dial-Up** - If enabled, each user in the tenant group can dial 801-873 to access trunks 1-72 (if also allowed by ED programming).
 - **E- Extensions, E8- Line Access Options, Access to Groups 90-95 (not on key systems)** - Restrict each extension in the tenant group to the trunk groups (90-95) that tenant should be able to dial.
 - **E- Extensions, ED- Trunk Control, Access Control** - Assign access only those trunks on which the tenant group user should be able to place calls. Each tenant group should have access to a different set of trunks.
 - **E- Extensions, ED- Trunk Control, Call-Out Control** - Enable call-out for each trunk on which the tenant group user should be able to place calls. Each tenant group should have callout for a different set of trunks.
 - **KS- Programming Keys for Keysets** - Program the types of keys that allow the extension user to place trunk calls.

Feature Reference

Central Office Calls, Placing
Prime Line Selection
Private Line
Tenant Service

Instructions

- To enter data on the PRF:**
- Step 1 ➤ Enter Y for each extension on Table 3 that should have key access to outbound lines. Enter N if the extension should not have key access to outbound lines.
- To enter data at the programming terminal:**
- Step 1 ➤ After entering data for the previous E8 option, you see: **KEY ACCESS TO OUTBOUND LINES**
 - Step 2 ➤ Enter data for this option from Table 3 and press **RETURN**.
You advance to the next E8 option.

E- EXTENSIONS

E8- LINE ACCESS OPTIONS, ALLOW LINE CODE DIAL-UP

Description

Use this option to allow/deny an extension user from dialing a trunk code (e.g., 801) for an outside call. This option affects all trunk codes. It does not affect and extension user's capability to:

- Dial a trunk extension number (e.g. 500)
- Dial a trunk group code (e.g., 90)
- Press a line key for an outgoing call

This option also applies to DISA trunks and incoming tie trunks.

Conditions

This option does not apply to DSS Consoles and Modem Pooling ports.

Default Value

Line code dial-up allowed (Y).

Related Programming

Central Office Calls, Placing

- **E- Extensions, E8- Line Access Options, Key Access to Outbound Lines** - If enabled, user can press a line key to place a call (if also allowed by ED programming).
- **E- Extensions, E8- Line Access Options, Access to Groups 90-95 (not on key systems)** - If enabled, user can dial 90-95 to access trunk groups 1-6.
- **E- Extensions, ED- Trunk Control, Access Control** - Assign access for each trunk on which the user should be able to place calls.
- **E- Extensions, ED- Trunk Control, Call-Out Control** - Enable call-out for each trunk on which the user should be able to place calls.
- **E- Trunks, E2- Circuit Type** - Program the correct circuit type for each trunk.
- **KS- Programming Keys for Keysets** - Program the types of keys that allow the extension user to place trunk calls.

Line (Trunk) Rotaries

- **E- Trunks, E4- Next Trunk in Outbound Rotary** - This determines the selection sequence for trunks within the rotary. Make sure the last trunk in the rotary is terminated to that trunk's operator (e.g., 300).
- **E- Trunks, EA- Trunk Group Assignment (First Trunk in Group)** - Group trunks together by assigning each one the same First Trunk in Group number.
- **QF- Line Group Access (First Trunk in Group)** - Correlate the first trunk in a trunk rotary (e.g., 801) to one of nine trunk rotary numbers (90-98). The system requires this correlation when setting up trunk rotaries. Use the trunk access code (e.g., 801 or L01) that corresponds to the EA- First Trunk in Group entry.

E- EXTENSIONS E8- LINE ACCESS OPTIONS, ALLOW LINE CODE DIAL-UP

Related Programming

- Tenant Service, Assigning Trunks to Tenants for Placing Calls**
- **E- Extensions, E8- Line Access Options, Key Access to Outbound Lines** - If enabled, each user in the tenant group can press a line key to place a call (if also allowed by ED programming).
 - **E- Extensions, E8- Line Access Options, Access to Groups 90-95 (not on key systems)** - Restrict each extension in the tenant group to the trunk groups (90-95) that tenant should be able to dial.
 - **E- Extensions, ED- Trunk Control, Access Control** - Assign access only for those trunks on which the tenant group user should be able to place calls. Each tenant group should have access to a different set of trunks.
 - **E- Extensions, ED- Trunk Control, Call-Out Control** - Enable call-out for each trunk on which the tenant group user should be able to place calls. Each tenant group should have callout for a different set of trunks.
 - **KS- Programming Keys for Keysets** - Program the types of keys that allow the extension user to place trunk calls.

Feature Reference

Central Office Calls, Placing
Line (Trunk) Rotaries
Tenant Service

Instructions

To enter data on the PRF:

- Step 1** ➤ Enter **Y** for each extension on Table 3 that should be able to access a trunk by dialing a trunk code (e.g., 801). Enter **N** if the extension should not be able to access a trunk by dialing a trunk code.

To enter data at the programming terminal:

- Step 1** ➤ After entering data for the previous E8 option, you see: **ALLOW LINE DIAL-UP**
- Step 2** ➤ Enter data for this option from Table 3 and press **RETURN**.
You advance to the next E8 option.

E- EXTENSIONS (HYBRID ONLY) E8- LINE ACCESS OPTIONS, ACCESS TO GROUPS 90-95

Description

Use this option to allow/deny an extension dial access to the first six trunk groups (90-95). If enabled, an extension user can dial a trunk group code (90-95) to place an outside call on one of the first six groups. If disabled, the user cannot dial the trunk group code for groups 90-95. This option does not affect:

- Dial access to groups 96-98
- Dial access using trunk codes (e.g., 801)
- Dial access using trunk extension numbers (see Direct Trunk access)
- Line key access to outbound trunks

This option also applies to DISA trunks and incoming tie trunks.

Conditions

This option does not apply to DSS Consoles and Modem Pooling ports.

Default Value

Access to groups 90-95 allowed.

Related Programming

Central Office Calls, Placing

- **E- Extensions, E8- Line Access Options, Key Access to Outbound Lines -** If enabled, user can press a line key to place a call (if also allowed by ED programming).
- **E- Extensions, E8- Line Access Options, Allow Line Code Dial-Up -** If enabled, user can dial a trunk access code (e.g., 801) to access trunks (if also allowed by ED programming).
- **E- Extensions, ED- Trunk Control, Access Control -** Assign access for each trunk on which the user should be able to place calls.
- **E- Extensions, ED- Trunk Control, Call-Out Control -** Enable call-out for each trunk on which the user should be able to place calls.
- **E- Trunks, E2- Circuit Type -** Program the correct circuit type for each trunk.
- **KS- Programming Keys for Keysets -** Program the types of keys that allow the extension user to place trunk calls.

Line (Trunk) Rotaries (Hybrid Only)

- **E- Trunks, E4- Next Trunk in Outbound Rotary -** This determines the selection sequence for trunks within the rotary. Make sure the last trunk in the rotary is terminated to that trunk's operator (e.g., 300).
- **E- Trunks, EA- Trunk Group Assignment (First Trunk in Group) -** Group trunks together by assigning each one the same First Trunk in Group number.
- **QF- Line Group Access (First Trunk in Group) -** Correlate the first trunk in a trunk rotary (e.g., 801) to one of nine trunk rotary numbers (90-98). The system requires this correlation when setting up trunk rotaries. Use the trunk access code (e.g., 801 or L01) that corresponds to the EA- First Trunk in Group entry.

E- EXTENSIONS (HYBRID ONLY)

E8- LINE ACCESS OPTIONS, ACCESS TO GROUPS 90-95

Related Programming (Cont'd)

- **Tenant Service, Assigning Trunks to Tenants for Placing Calls**
 - **E- Extensions, E8- Line Access Options, Key Access to Outbound Lines** - If enabled, each user in the tenant group can press a line key to place a call (if also allowed by ED programming).
 - **E- Extensions, E8- Line Access Options, Allow Line Code Dial-Up** - If enabled, each user in the tenant group can dial a trunk access code (e.g., 801) to access trunks (if also allowed by ED programming).
 - **E- Extensions, ED- Trunk Control, Access Control** - Assign access only for those trunks on which the tenant group user should be able to place calls. Each tenant group should have access to a different set of trunks.
 - **E- Extensions, ED- Trunk Control, Call-Out Control** - Enable call-out for each trunk on which the tenant group user should be able to place calls. Each tenant group should have callout for a different set of trunks.
 - **KS- Programming Keys for Keysets** - Program the types of keys that allow the extension user to place trunk calls.

Feature Reference

Central Office Calls, Placing Line (Trunk Rotaries)
Tenant Service

Instructions

To enter data on the PRF:

- Step 1 ➤ For trunk groups 90-95 on Table 3, enter Y for each extension that should be able to access the respective trunk group. Enter N if the extension should not be able to access a trunk group.

To enter data at the programming terminal:

- Step 1 ➤ After entering data for the previous E8 option, you see: **ACCESS TO GROUP 90**
- Step 2 ➤ Enter data for this option from Table 3 and press **RETURN**.
Enter data in the same way for trunk groups 91-95. After you program trunk group 95, you advance to the next consecutive extension.

E- EXTENSIONS (HYBRID ONLY)

E8- LINE ACCESS OPTIONS, ACCESS TO GROUPS 90-95

Description

Use this option to allow/deny an extension dial access to the first six trunk groups (90-95). If enabled, an extension user can dial a trunk group code (90-95) to place an outside call on one of the first six groups. If disabled, the user cannot dial the trunk group code for groups 90-95. This option does not affect:

- Dial access to groups 96-98
- Dial access using trunk codes (e.g., 801)
- Dial access using trunk extension numbers (see Direct Trunk access)
- Line key access to outbound trunks

This option also applies to DISA trunks and incoming tie trunks.

Conditions

This option does not apply to DSS Consoles and Modem Pooling ports.

Default Value

Access to groups 90-95 allowed.

Related Programming

Central Office Calls, Placing

- **E- Extensions, E8- Line Access Options, Key Access to Outbound Lines** - If enabled, user can press a line key to place a call (if also allowed by ED programming).
- **E- Extensions, E8- Line Access Options, Allow Line Code Dial-Up** - If enabled, user can dial a trunk access code (e.g., 801) to access trunks (if also allowed by ED programming).
- **E- Extensions, ED- Trunk Control, Access Control** - Assign access for each trunk on which the user should be able to place calls.
- **E- Extensions, ED- Trunk Control, Call-Out Control** - Enable call-out for each trunk on which the user should be able to place calls.
- **E- Trunks, E2- Circuit Type** - Program the correct circuit type for each trunk.
- **KS- Programming Keys for Keysets** - Program the types of keys that allow the extension user to place trunk calls.

Line (Trunk) Rotaries (Hybrid Only)

- **E- Trunks, E4- Next Trunk in Outbound Rotary** - This determines the selection sequence for trunks within the rotary. Make sure the last trunk in the rotary is terminated to that trunk's operator (e.g., 300).
- **E- Trunks, EA- Trunk Group Assignment (First Trunk in Group)** - Group trunks together by assigning each one the same First Trunk in Group number.
- **QF- Line Group Access (First Trunk in Group)** - Correlate the first trunk in a trunk rotary (e.g., 801) to one of nine trunk rotary numbers (90-98). The system requires this correlation when setting up trunk rotaries. Use the trunk access code (e.g., 801 or L01) that corresponds to the EA- First Trunk in Group entry.

E- EXTENSIONS (HYBRID ONLY) E8- LINE ACCESS OPTIONS, ACCESS TO GROUPS 90-95

Related Programming (Cont'd)

- **Tenant Service, Assigning Trunks to Tenants for Placing Calls**
E- Extensions, E8- Line Access Options, Key Access to Outbound Lines
If enabled, each user in the tenant group can press a line key to place a call (also allowed by ED programming).
- **E- Extensions, E8- Line Access Options, Allow Line Code Dial-Up** - If enabled, each user in the tenant group can dial a trunk access code (e.g., 801) to access trunks (if also allowed by ED programming).
- **E- Extensions, ED- Trunk Control, Access Control** - Assign access only for those trunks on which the tenant group user should be able to place calls. Each tenant group should have access to a different set of trunks.
- **E- Extensions, ED- Trunk Control, Call-Out Control** - Enable call-out for each trunk on which the tenant group user should be able to place calls. Each tenant group should have callout for a different set of trunks.
- **KS- Programming Keys for Keysets** - Program the types of keys that allow the extension user to place trunk calls.

Feature Reference

Central Office Calls, Placing
Line (Trunk Rotaries)
Tenant Service

Instructions

To enter data on the PRF:

- Step 1 ➤ For trunk groups 90-95 on Table 3, enter Y for each extension that should be able to access the respective trunk group. Enter N if the extension should not be able to access a trunk group.

To enter data at the programming terminal:

- Step 1 ➤ After entering data for the previous E8 option, you see: **ACCESS TO GROUP 90**
- Step 2 ➤ Enter data for this option from Table 3 and press **RETURN**.
Enter data in the same way for trunk groups 91-95. After you program trunk group 95, you advance to the next consecutive extension.

Description

Use this option to assign an attendant to an extension. This assignment is:

- The extension reached when the Intercom user dials 0 (refer to the Intercom feature)
- The attendant that can activate night mode Toll Restriction for the extension (if applicable)¹
- The DSS Console owner (for DSS Consoles only)

When programming Tenant Service, assign the same operator to each extension in the tenant group.

For Automatic Ringdown (ONYX IV only), enter the ringdown destination. This only applies to ASI/OPX and ESL extensions. The destination can be a keyset, ASI/OPX, Ring Group number or ACD/UCD master extension number. The ringdown destination cannot be a trunk number.

You can also use this option to assign a Private Modem (refer to the Data Products Manual). This option also applies to incoming tie and DISA trunks.

Conditions

This option does not apply to Modem Pooling ports.

Default Value

All extensions assigned to main attendant (300).

Related Programming

- **Automatic Ringdown (ONYX IV)**
E- Extensions, E9- Ring Down - Enable/disable Automatic Ringdown.

Feature Reference

Automatic Ringdown
Tenant Service

Instructions

To enter data on the PRF:

- Step 1 ➤ Enter the operator assignment for each extension on Table 3.

To enter data at the programming terminal:

- Step 1 ➤ Type **E9**. You see: **EXT 300**
- Step 2 ➤ Press **RETURN** to program extension 300.

OR

Enter another extension number and press **RETURN**. In either case, you see:
DIR TERM OR OPR EXT

- Step 3 ➤ Enter data for this option from Table 3 and press **RETURN**.
You advance to the next consecutive extension.
For ASI/OPX and ESL extensions in ONYX IV, you advance to E- Ring Down.

¹ An extension in a tenant group can have night mode restriction (e.g., CP- Allow Only Intercom Calls at Night [BY0:2] is 1). The restriction takes effect when the extension's operator activates Night Answer.

E- EXTENSIONS E9- RING DOWN (ONYX IV)

Description

Use this option to enable (Y) or disable (N) Automatic Ringdown for ASI/OPX and ESL extensions. You should only do this if you have entered an Automatic Ringdown destination in E9- Attendant (Operator) Assignment.

This option only applies to ONYX IV, and only to ASI/OPX and ESL extensions.

Conditions
None

Default Value
Automatic Ringdown disabled (N).

Related Programming

- **Automatic Ringdown (ONYX IV)**
E- Extensions, E9- Attendant (Operator) Assignment - Enter the Automatic Ringdown destination. The destination cannot be a trunk number. Enter 300 for no Ringdown destination.

Feature Reference

Automatic Ringdown (ONYX IV)

Instructions

To enter data on the PRF:

- Step 1 ➤ For each OPX/ASI and ESL extension on Table 3, enter N (to disable) or (to enable) Automatic Ringdown.

To enter data at the programming terminal:

- Step 1 ➤ After programming E9- Attendant (Operator) Assignment, you see: **RING DOWN**
- Step 2 ➤ Enter Y or N for this extension from Table 3.
You advance to the next consecutive extension.

**E- EXTENSIONS
E9- RING DOWN (ONYX IV)**

- For Your Notes -

E- EXTENSIONS EA- UCD GROUP MASTER EXTENSION NUMBER

Description

Use this option to assign an ACD or UCD master extension number.

When programming an ACD group, assign the master extension number to:

- Each member agent
- The supervisor extension
- The ACD group master extension

When programming a UCD group (for Extension Hunting or Voice Mail applications), assign the master extension number to:

- Each group member
- The master extension number

This option appears for DISA and tie trunks. For DISA and outgoing tie trunks, use this option to assign the trunk to a rotary for outgoing calls. Refer to EA (Trunks)- Trunk Group Assignment and the Line Rotaries feature for more information.

For attendants, this option shows the operator number (OP1-OP4).

Conditions

This option does not apply to DSS Consoles and Modem Pooling ports.

Default Value

Master extension number not assigned (no entry).

Related Programming

Automatic Call Distribution

- CP- ACD Supervisor Keyset (BY2:6) - Set the Supervisor Keyset bit for the supervisor's extension.
- E- Extensions, E2- Circuit Type - Program the master extension number with type X (uninstalled). The master extension must be a port that has no phone connected to it.
- E- Extensions, E3- Class of Service - Assign a unique COS with BY2:6 set for the supervisor's extension.
- E- Extensions, E5- Hunt Type - Assign hunt type 06 to:
 - Each member agent in the ACD group.
 - The ACD group master extension.

Make sure the supervisor extension has hunt type 00. The supervisor should never be an ACD group member.
- FC1- Reset Queues - Reset the system queues after initial ACD programming.

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Extension Hunting, UCD

- E- Extensions, E2- Circuit Type - Program the master extension number with type X (uninstalled). The master extension must be a port that has no phone connected to it.
- E- Extensions, E4- Next Extension in Hunt Group - For the master extension number only, use this option to designate the Overflow Destination.

E- EXTENSIONS

EA- UCD GROUP MASTER EXTENSION NUMBER

Related Programming (Cont'd)

- **E- Extensions, E5- Hunt Type** - Enter a hunt type for each member of the hunting group and the master extension number. The choices are:
 - 00 Extension not in a hunt group
 - 04 UCD hunting with no overflow and no group busy voice message
 - 05 UCD hunting with overflow and no group busy voice message
 - 06 UCD hunting with overflow and group busy voice message
 - **FC1- Reset Queues** - Reset the system queues after initial UCD programming.
- Voice Mail Compatibility**
- **E- Extensions, E2- Circuit Type** - Each OPX and ASI P/N 89748 Voice Messaging System port should have circuit type 05. Each ASI P/N 89749 Voice Messaging System port should have circuit type 51.
 - **E- Extensions, E5- Hunt Type** - Program each Voice Messaging System port with hunt type 06.
 - **E- Extensions, EK- Voice Mail (VX) Port** - Enable this option for each Voice Messaging System port.
 - **E- Trunks, E9- Direct Trunk Termination** - For each trunk the VX Automated Attendant should answer, terminate the trunk to the Voice Messaging System master number. (See EA below.)
 - **E- Trunks, EI- Night Call Routing** - For each trunk the VX Automated Attendant should answer at night, terminate the trunk to the master number (see EA above). For this application, make sure the E9 entry is 300.
 - **FC1- Reset System Queues** - Reset the system queues after installing the Voice Messaging System.
 - **FC3- Reset VX Flag (Telephone Message Waiting Lamps)** - For a first time installation, always use this option to reset the telephone Message Waiting lamps.
 - **KS- Programming Keys for Keysets** - Designate a programmable key as a Record key (type R).
 - **QP- Voice Mailbox Installation, Mailbox Installed** - Enable this option if the system has a Voice Messaging System connected.
 - **QP- Voice Mail Installation, Voice Messaging Master Extension** - Select one of the Voice Messaging System ports programmed in the options above as the master extension number.

Feature Reference

Automatic Call Distribution
Automatic Call Distribution (ONYX IV)
Extension Hunting
Voice Mail Compatibility

E- EXTENSIONS

EA- UCD GROUP MASTER EXTENSION NUMBER

Instructions

To enter data on the PRF:

- Step 1 ► Enter the master extension number for each extension on Table 3. To have no master, enter 300.
For attendants, enter OP1-OP4. This is for reference only.

To enter data at the programming terminal:

- Step 1 ► Type EA. You see: EXT 300
- Step 2 ► Press RETURN to program extension 300.
OR
Enter another extension number and press RETURN. In either case, you see:
UCD MASTER EXT
- Step 3 ► Enter data for this option from Table 3 and press RETURN.
You advance to the next consecutive extension.

E- EXTENSIONS EB- PERSONAL SPEED DIAL BLOCK

Description

Use this option to assign a Speed Dial block to an extension for Extension Speed Dial. You can assign only one block to an extension, but more than one extension can share the same block. This lets the users share Extension Speed Dial numbers. Do not, however, assign an extension one of the System Speed Dial blocks.

When assigning blocks, you normally assign the highest available block to the lowest extension number. For example, extension 300 would have Speed Dial block 204 (in a 72x180 system). Continue assigning blocks in decreasing order. Review the Speed Dial feature before assigning blocks.

Note: You can also assign a Speed Dial block to DISA and tie trunks. Incoming callers can use these blocks.

Conditions

- a. This option does not apply to Modem Pooling ports.
- b. If an extension's last bin (29) has more than 16 digits, it overflows to the first bin (50) of the next consecutive block.
- c. The MEM-A PCB allows only 81 Speed Dial Blocks (1-81). Extensions with blocks from 82 and above don't have Personal Speed Dial.
- d. The VS has only 57 Speed Dial blocks (1-57). Extensions with blocks from 58 and above don't have Personal Speed Dial.

Default Value

Default assignments for 12x36 and 32x60 systems (with 3-digit System Speed Dial):

32x60 Cabinet		12x36 Cabinet	
Extension	Block	Extension	Block ¹
300	102	300	102
302 (DSS) . . .	98-101	302	98-101
304	97	304	97
305	96	through	
through . . .		311	90
359	42	312	77
		through	
		315	74

Blocks 01-05 are for System Speed Dial

Default Assignments for 56x120 and 72x180 systems (with 3-digit System Speed Dial):

Extension	Block
300	204
301	203
302 (DSS) . . .	199-202
303	
304	198
305	197
through	
479	23

Blocks 01-05 are for System Speed Dial

¹ You can assign the unused Speed Dial blocks.

E- EXTENSIONS

EB- PERSONAL SPEED DIAL BLOCK

Description (Cont'd)

Default Assignments for VS (with 3-digit System Speed Dial):

Extension	Block
300 . . . . .	.6
301 . . . . .	.7
302 . . . . .	.8
303	Not assigned
304 . . . . .	.9
through	
347 . . . . .	.52

Blocks 01-05 are for System Speed Dial. Blocks 53-57 are unassigned.

Related Programming

Speed Dial

- CP- Inhibit System Speed Dial (BY0:7) - Allow/deny extensions with this COS the ability to use System Speed Dial numbers.
- E- Extensions, E3- Class of Service - Assign Class of Service to extensions.
- QD- Number of System Speed Dial Digits - Assign the number of System Speed Dial digits (2, 3 or 4). This allows either 10, 100 or 1000 System Speed Dial numbers.

Feature Reference

Speed Dial

Instructions

To enter data on the PRF:

- Step 1 ➤ Enter the Speed Dial block for each extension on Table 3. To assign no Speed Dial block, enter 00.
- When assigning blocks to Consoles (except the default console at 302), the system allocates the three next higher blocks for the DSS Console. For example, if you install a console at 310, the system allocates blocks 192-195. You must reallocate the extension blocks so there is no duplication. Also, an extension can use the block assigned to the second port of the console without duplication.

To enter data at the programming terminal:

- Step 1 ➤ Type **EB**. You see: **EXT 300**
- Step 2 ➤ Press **RETURN** to program extension 300.
- OR
- Enter another extension number and press **RETURN**. In either case, you see:
SPD DIAL BLOCK
- Step 3 ➤ Enter data for this option from Table 3 and press **RETURN**.
You advance to the next consecutive extension.

E- EXTENSIONS EC- GROUP CALL PICKUP GROUP

Description

Use this option to assign an extension to a Call Pickup Group (01-23). To assign a trunk to a Call Pickup Group, refer to EC (Trunks)- Call Pickup Group.

For DISA and tie trunks, refer to E- Trunks, EC- Group Call Pickup.

Conditions

This option does not apply to DSS Consoles or Modem Pooling ports.

Default Value

Extensions not assigned to Call Pickup Groups (00).

Related Programming

- **Silent Monitor**
CP- Allow Silent Monitor (BY2:5) - Enable/Disable the ability to initiate Silent Monitor in an extension's Class of Service.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.

Feature Reference

Group Call Pickup
Silent Monitor

Instructions

To enter data on the PRF:

- Step 1 ➤ Enter the Call Pickup Group number for each extension on Table 3. To assign no group number, enter 00.

To enter data at the programming terminal:

- Step 1 ➤ Type **EC**. You see: **EXT 300**
- Step 2 ➤ Press **RETURN** to program extension 300.
OR
Enter another extension number and press **RETURN**. In either case, you see:
CALL PICKUP GROUP
- Step 3 ➤ Enter data for this option from Table 3 and press **RETURN**.
You advance to the Privacy Release Group prompts for this extension.

E- EXTENSIONS EC- PRIVACY GROUP

Description

Use this option to assign a keyset to a Privacy Group (01-99).

Conditions
None

Default Value
Keyset not assigned to a Privacy Group (00).

Related Programming

- ▶ **Privacy Groups**
- ▶ **KS- Programming Keys for Keysets - Privacy Group members must have line keys.**
- None

Feature Reference

Privacy Groups

Instructions

To enter data on the PRF:

- Step 1 ▶ Enter the Privacy Release Group number for each extension on Table 3. To assign no group number, enter 00.

To enter data at the programming terminal:

- Step 1 ▶ After programming Call Pickup Group, you see: **PRVCY RLS GROUP**
- Step 2 ▶ Enter data for this option from Table 3 and press **RETURN**.
You advance to EC- Call Pickup Group option for the next consecutive extension.

E- EXTENSIONS

ED- TRUNK CONTROL, RING CONTROL

Description

Use ED- Ring Control to set ringing options for each trunk at each keyset.

The options are:

- R Immediate Ringing - Phone starts ringing as soon as line key begins to flash
- D Delayed Ringing - Phone starts ringing after the delayed ring interval (the line key flashes immediately). Refer to QT- System Timers, Delayed Ring Interval when setting the delayed ring interval.
- L Lamp Only (no ringing) - Phone never rings (line key only flashes)
- N Night Ring - Phone rings immediately at night. Phone does not ring during the day. (Refer to Night Answer, Assigned Night Answer.)

Normally, program the attendant with ringing for each trunk. This gives unanswered calls and recalls at least one destination in the system.

When programming Private Lines, assign ringing only for those extensions that have the Private Line. When programming Tenant Service, assign ringing only for those extensions that are in the tenant group.

Conditions

To copy Ring Control data from one extension to another, use the EY option.

Default Value

All trunks ring (R) extension 300.

All trunks are lamp only (L) at all other keysets.

Related Programming

Central Office Calls, Answering

- **E- Extensions, ED- Trunk Control, Access Control** - For each extension, assign access for the lines the extension should be able to answer. You normally program the attendant with access for each trunk.
- **E- Trunks, E2- Circuit Type** - Program the correct circuit type for each trunk.
- **E- Trunks, E9- Direct Trunk Termination** - Enter 300 to have extensions ring according to their ED programming assignments.
- **KS- Programming Keys for Keysets** - Program the types of keys that will ring the extension. Additionally, make sure that every keyset has at least one fixed or switched loop key. This ensures that an incoming call will ring a key somewhere on the keyset. On key systems, loop keys are for incoming calls only. Only switched loop keys are available.

Direct Inward Dialing

- **CP- Absorb 1st Digit for DID and Tie Trunks (BY0:1)** If QO- DID Intercepts (Absorb 1st Digit) is off (N), use this option to apply 1st digit absorption on a trunk-by-trunk basis. When you enable this option, the trunk is compatible with four digit DID service. *This is a COS option for DID trunks.*
- **CP- Allow Automatic Operator Intercept for DID (BY0:0)** - Enable/disable All Call Intercept in an extension's COS. *This is a COS option for extensions.*

E- EXTENSIONS ED- TRUNK CONTROL, RING CONTROL

Related Programming (Cont'd)

- **E- Extensions, ED- Trunk Control, Access Control** - An extension must have access to a DID trunk in order to answer a DID call on that trunk.
- **E- Extensions/Trunks, E3- Class of Service** - Assign Class of Service to DID trunks and extensions.
- **E- Trunks, E2- Circuit Type** - Assign DID trunks with circuit type 07.
- **E- Trunks, E2- STI Circuit Number** - Enter the STI circuit number for the DID trunk. Refer to the STI Installation and Programming Manual for charts and drawings that explain this correlation.
- **KS- Programming Keys for Keysets** - Each extension should have a line key for DID trunks or a loop key.

Night Answer, Assigned Night Answer

- **E- Extensions, ED- Trunk Control, Access Control** - For each extension, assign access for the lines the extension should be able to answer (day or night).
- **E- Trunks, EI- Night Call Routing** - Define the night call route for each trunk. This option overrides ED- Ring Control assignments at night. It also lets night mode calls ring non-keyset extensions.

Private Line

- **E- Extensions, E8- Line Access Options, Key Access to Outbound Lines** - Enable outbound access to allow the keyset user to place calls on the Private Line (if also allowed by ED programming).
- **E- Extensions, ED- Trunk Control, Access Control** - Assign access for each Private Line. Assign access only for those extensions that have the Private Line.
- **E- Extensions, ED- Trunk Control, Call-Out Control** - Enable call-out if the extension user should be able to place calls on the Private Line. Enable callout only for those extensions that have the Private Line.
- **E- Trunks, E2- Circuit Type** - Program the correct circuit type for the Private Lines.
- **KS- Programming Keys for Keysets** - Assign the Private Line to a programmable key. Assign the key only on those extensions that should have the Private Line.

Tenant Service, Assigning Trunks to Tenants for Answering Calls

- **E- Extensions, ED- Trunk Control, Access Control** - For each extension, assign access for the lines the tenant group extension should be able to answer. Each tenant group should have access to a different set of trunks.
- **KS- Programming Keys for Keysets** - Program the types of keys that will ring the extension. Additionally, make sure that every keyset has at least one fixed or switched loop key. This ensures that an incoming call will ring a key somewhere on the keyset.

E- EXTENSIONS ED- TRUNK CONTROL, RING CONTROL

Feature Reference

Central Office Calls, Answering
Direct Inward Dialing
Night Answer, Assigned Night Answer
Private Line
Tenant Service

Instructions

To enter data on the PRF:

Step 1 > For each extension, enter each trunk's Ring Control option on Table 6.

To enter data at the programming terminal:

Step 1 > Type **ED**. You see: **EXT 300**

Step 2 > Press **RETURN** to program extension 300.

OR

Enter another extension number and press **RETURN**. In either case, you see:
RING CONTROL - COPY?

The Copy option lets you copy the key programming from another extension.

- Step 3 >
- To copy another extension's keys, enter **Y** and the extension number. After you enter the extension number, you skip to ED- Access Control programming for this extension.
 - To skip to Access Control programming without making an entry, press the space bar.
 - To program the ED- Ring Control options, type **N**. You see: **LINES 1 TO 8
LLLL LLLL**

Step 4 > Enter an option for each trunk.

Press **RETURN** to:

- Skip to the next trunk without making an entry. Your current entries don't change.
- Go to the next trunk after making a partial entry. The rest of the entries on the line don't change.

Press **ESC** to return to the Main Menu.

After you enter data for the last trunk, you go to ED- Access Control programming for this extension.

E- EXTENSIONS

ED- TRUNK CONTROL, ACCESS CONTROL

Description

Use ED- Access Control to set the access options for each trunk at each extension. If allowed in other programming, an extension can place and answer calls on trunks to which it has access.

Keep the following features in mind when programming Access Control:

- **Call Parking**
An extension can only pick up parked calls on trunks to which it has access.
- **Central Office Calls, Answering and Placing**
Assign access for the trunks the extension should be able to answer or use for outgoing calls.
- **Night Answer, Assigned and Universal**
Assign access for the trunks the extension should be able to answer.
- **Prime Line Selection**
The extension must have access for the trunk appearing on the Prime Line key.
- **Private Line**
For each Private Line, assign access only for those extensions that have the Private Line.
- **Tenant Service**
An extension should only have access to the trunks within its own tenant group.

Note: When programming Access Control for DISA and tie trunk callers, refer to ED (Trunks)- Access Control.

Conditions

- a. This option does not apply to DSS Consoles and Modem Pooling ports.
- b. To copy Access Control data from one extension to another, use the EY option.

Default Value

All extensions have access to all trunks (Y).

Related Programming

Call Parking

- **QT- System Timers, Park Orbit Recall Time** - For Park Orbits 60-67, set the Park Orbit Recall Time.

Central Office Calls, Answering

- **E- Extensions, ED- Trunk Control, Ring Control** - For each keyset, designate the ringing options for each trunk (immediate, delayed, no ring or night ring). If you enter D, see QT- System Timers, Delayed Ring Interval in Other Programming below. You normally program the attendant with ringing for each trunk. This gives unanswered calls and recalls at least one destination in the system.
- **E- Trunks, E2- Circuit Type** - Program the correct circuit type for each trunk.
- **E- Trunks, E9- Direct Trunk Termination** - Enter 300 to have extensions ring according to their ED programming assignments.
- **KS- Programming Keys for Keysets** - Program the types of keys that will ring the extension. Additionally, make sure that every keyset has at least one fixed or switched loop key. This ensures that an incoming call will ring a key somewhere on the keyset. On key systems, loop keys are for incoming calls only. Only switched loop keys are available.

E- EXTENSIONS ED- TRUNK CONTROL, ACCESS CONTROL

Related Programming (Cont'd)

Central Office Calls, Placing

- **E- Extensions, E8- Line Access Options, Key Access to Outbound Lines** - If enabled, user can press a line key to place a call (if also allowed by ED programming).
- **E- Extensions, E8- Line Access Options, Allow Line Code Dial-Up** - If enabled, user can dial a trunk access code (e.g., 801) to access trunks (if also allowed by ED programming).
- **E- Extensions, E8- Line Access Options, Access to Groups 90-95 (not on key systems)** - If enabled, user can dial 90-95 to access trunk groups 1-6.
- **E- Extensions, ED- Trunk Control, Call-Out Control** - Enable call-out for each trunk on which the user should be able to place calls.
- **E- Trunks, E2- Circuit Type** - Program the correct circuit type for each trunk.
- **KS- Programming Keys for Keysets** - Program the types of keys that allow the extension user to place trunk calls.

Direct Inward Dialing

- **CP- Absorb 1st Digit for DID and Tie Trunks (BY0:1)** If QO- DID Intercepts (Absorb 1st Digit) is off (N), use this option to apply 1st digit absorption on a trunk-by-trunk basis. When you enable this option, the trunk is compatible with four digit DID service. *This is a COS option for DID trunks.*
- **CP- Allow Automatic Operator Intercept for DID (BY0:0)** - Enable/disable All Call Intercept in an extension's COS. *This is a COS option for extensions.*
- **E- Extensions, ED- Trunk Control, Ring Control** - The attendant assigned to each DID trunk should have ringing for the trunk. This allows the intercepts to work properly. However, intercepts to keysets work fine without ring programmed.
- **E- Extensions/Trunks, E3- Class of Service** - Assign Class of Service to DID trunks and extensions.
- **E- Trunks, E2- Circuit Type** - Assign DID trunks with circuit type 07.
- **E- Trunks, E2- STI Circuit Number** - Enter the STI circuit number for the DID trunk. Refer to the STI Installation and Programming Manual for charts and drawings that explain this correlation.
- **KS- Programming Keys for Keysets** - Each extension should have a line key for DID trunks or a loop key.

Direct Trunk Access

- **CP- Direct Trunk Access and Trunk Camp ON (BY2:0)** - Enable/disable Direct Trunk Access in Class of Service
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Extensions, ED- Trunk Control, Call-Out Control** - Enable call-out for each trunk that the user should be able to seize using Direct Trunk Access.

Night Answer, Assigned Night Answer

- **E- Extensions, ED- Trunk Control, Ring Control** - For each keyset, designate the ringing options for each trunk. Use the N option to have the trunk only ring the keyset at night.
- **E- Trunks, EI- Night Call Routing** - Define the night call route for each trunk. This option overrides ED- Ring Control assignments at night. It also lets night mode calls ring non-keyset extensions.

E- EXTENSIONS

ED- TRUNK CONTROL, ACCESS CONTROL

Related Programming (Cont'd)

Night Answer, Universal Night Answer

- **E- Trunks, E2- Circuit Type** - The unused trunk circuit assigned in QM below must have circuit type X.
- **QM- Music and Relay Control, Ext Page/Night Audible Line Number** - In the large systems, indicate the unused trunk circuit that will broadcast night audible. In VS, enter Y. An incoming call will activate ringing on the night audible port if:
 - The ringing trunk is terminated (in E9) to the main attendant (extension 300)
 - The main attendant is in the night mode
- **QM- Music and Relay Control, Inhibit Audible Ring** - Enable audible ring on the night audible port.

Prime Line Selection

- **E- Extensions, E8- Line Access Options, Key Access to Outbound Lines** - The extension must have outbound line key access to use the Prime Line key for placing calls.
- **E- Extensions, ED- Trunk Control, Call-Out Control** - For outgoing calls, the extension must have call-out enabled for the trunk appearing on the Prime Line key.
- **E- Extensions, EL- Prime Line Key** - Enter the Prime Line key number (1-24), followed by the option. The options are:
 - R Ringing Prime Line
 - I Idle Prime Line
- **KS- Programming Keys for Keysets** - Program the Prime Line key as a line key.

Private Line

- **E- Extensions, E8- Line Access Options, Key Access to Outbound Lines** - Enable outbound access to allow the keyset user to place calls on the Private Line (if also allowed by ED programming).
- **E- Extensions, ED- Trunk Control, Ring Control** - Enable/disable ringing for the Private Line. Assign ringing only for those extensions that have the Private Line.
- **E- Extensions, ED- Trunk Control, Call-Out Control** - Enable call-out if the extension user should be able to place calls on the Private Line. Enable callout only for those extensions that have the Private Line.
- **E- Trunks, E2- Circuit Type** - Program the correct circuit type for the Private Lines.
- **KS- Programming Keys for Keysets** - Assign the Private Line to a programmable key. Assign the key only on those extensions that should have the Private Line.

Tenant Service, Assigning Trunks to Tenants for Answering Calls

- **E- Extensions, ED- Trunk Control, Ring Control** - For each keyset in the tenant group, designate the ringing options for each trunk. Each tenant group should ring for a different set of trunks.
- **KS- Programming Keys for Keysets** - Program the types of keys that will ring the extension. Additionally, make sure that every keyset has at least one fixed or switched loop key. This ensures that an incoming call will ring somewhere on the keyset.

E- EXTENSIONS ED- TRUNK CONTROL, ACCESS CONTROL

Related Programming (Cont'd)

- **Tenant Service, Assigning Trunks to Tenants for Placing Calls**
E- Extensions, E8- Line Access Options, Key Access to Outbound Lines - If enabled, each user in the tenant group can press a line key to place a call (if also allowed by ED programming).
- **E- Extensions, E8- Line Access Options, Allow Line Code Dial-Up** - If enabled, each user in the tenant group can dial a trunk access code (e.g., 801) to access trunks (if also allowed by ED programming).
- **E- Extensions, E8- Line Access Options, Access to Groups 90-95 (not on key systems)** - Restrict each extension in the tenant group to the trunk groups (90-95) that tenant should be able to dial.
- **E- Extensions, ED- Trunk Control, Call-Out Control** - Enable call-out for each trunk on which the tenant group user should be able to place calls. Each tenant group should have callout for a different set of trunks.
- **KS- Programming Keys for Keysets** - Program the types of keys that allow the extension user to place trunk calls.

Feature Reference

Call Parking
Central Office Calls, Answering
Central Office Calls, Placing
Direct Inward Dialing
Direct Trunk Access
Night Answer, Assigned Night Answer
Night Answer, Universal Night Answer
Prime Line Selection
Private Line
Tenant Service

E- EXTENSIONS

ED- TRUNK CONTROL, ACCESS CONTROL

Instructions

To enter data on the PRF:

- Step 1 > For each extension, enter Y on Table 6 for each trunk that should have access enabled. Enter N for each trunk that should not have access.

To enter data at the programming terminal:

- Step 1 > After programming ED- Ring Control for a trunk, you see: **ACCESS CONTROL - COPY?**

The Copy option lets you copy the key programming from another extension.

- Step 2 >
- To copy another extension's keys, enter Y and the extension number. After you enter the extension number, you skip to ED- Callout Control programming for this extension.
 - To skip to Callout Control programming without making an entry, press the space bar.
 - To program the ED- Access Control options, type N. You see: **LINES 1 TO 8 YYYYYYYY**

- Step 3 > Enter an option for each trunk.

Press return to:

- Skip to the next trunk without making an entry
- Go to the next trunk after making a partial entry

Press ESC to return to the Main Menu. Your changes go into effect only if you enter data for a complete line (eight trunks).

After you enter data for the last trunk, you go to ED- Call-Out Control programming for this extension.

E- EXTENSIONS

ED- TRUNK CONTROL, CALL-OUT CONTROL

Description

Use this option to enable/disable callout capability at each extension for each trunk. If allowed in other programming, an extension user can place calls on trunks to which their extension has access.

Keep the following features in mind when programming Call-Out Control:

- **Central Office Calls, Placing**
User can place calls only on trunks with callout enabled.
- **Prime Line Selection**
For outgoing calls, the extension must have call-out enabled for the trunk appearing on the Prime Line key.
- **Private Line**
Enable call-out if the extension user should be able to place calls on the Private Line. Enable callout only for those extensions that have the Private Line.
- **Tenant Service**
Extensions should have call-out enabled only for trunks in their own tenant group.

Note: When programming Call-Out Control for DISA and tie trunk callers, refer to ED (Trunks)- Call-Out Control.

Conditions

- a. This command does not apply to a DSS Console or a Modem Pooling port.
- b. To copy Callout Control data from one extension to another, use the EY option.

Default Value

Every extension has callout enabled for each trunk (Y).

Related Programming

Central Office Calls, Placing

- **E- Extensions, E8- Line Access Options, Key Access to Outbound Lines** - If enabled, user can press a line key to place a call (if also allowed by ED programming).
- **E- Extensions, E8- Line Access Options, Allow Line Code Dial-Up** - If enabled, user can dial a trunk code (e.g., 801) to access trunks (if also allowed by ED programming).
- **E- Extensions, E8- Line Access Options, Access to Groups 90-95 (not on key systems)** - If enabled, user can dial 90-95 to access trunk groups 1-6.
- **E- Extensions, ED- Trunk Control, Access Control** - Assign access for each trunk on which the user should be able to place calls.
- **E- Trunks, E2- Circuit Type** - Program the correct circuit type for each trunk.
- **KS- Programming Keys for Keysets** - Program the types of keys that allow the extension user to place trunk calls.

E- EXTENSIONS

ED- TRUNK CONTROL, CALL-OUT CONTROL

Related Programming (Cont'd)

- **CP- Direct Trunk Access and Trunk Camp ON (BY2:0)** - Enable/disable Direct Trunk Access in Class of Service
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Extensions, ED- Trunk Control, Access Control** - Assign access for each trunk that the user should be able seize using Direct Trunk Access.

Prime Line Selection

- **E- Extensions, E8- Line Access Options, Key Access to Outbound Lines** - The extension must have outbound line key access to use the Prime Line key for placing calls.
- **E- Extensions, ED- Trunk Control, Access Control** - The extension must have access for the trunk appearing on the Prime Line key.
- **E- Extensions, EL- Prime Line Key** - Enter the Prime Line key number (1-24), followed by the option. The options are:
 - R Ringing Prime Line
 - I Idle Prime Line
- **KS- Programming Keys for Keysets** - Program the Prime Line key as a line key.

Private Line

- **E- Extensions, E8- Line Access Options, Key Access to Outbound Lines** - Enable outbound access to allow the keyset user to place calls on the Private Line (if also allowed by ED programming).
- **E- Extensions, ED- Trunk Control, Ring Control** - Enable/disable ringing for the Private Line. Assign ringing only for those extensions that have the Private Line.
- **E- Extensions, ED- Trunk Control, Access Control** - Assign access for each Private Line. Assign access only for those extensions that have the Private Line.
- **E- Trunks, E2- Circuit Type** - Program the correct circuit type for the Private Lines.
- **KS- Programming Keys for Keysets** - Assign the Private Line to a programmable key. Assign the key only on those extensions that should have the Private Line.

Tenant Service, Assigning Trunks to Tenants for Placing Calls

- **E- Extensions, E8- Line Access Options, Key Access to Outbound Lines** - If enabled, each user in the tenant group can press a line key to place a call (if also allowed by ED programming).
- **E- Extensions, E8- Line Access Options, Allow Line Code Dial-Up** - If enabled, each user in the tenant group can dial trunk access codes (e.g., 801) to access trunks (if also allowed by ED programming).
- **E- Extensions, E8- Line Access Options, Access to Groups 90-95 (not on key systems)** - Restrict each extension in the tenant group to the trunk groups (90-95) that the tenant should be able to dial.
- **E- Extensions, ED- Trunk Control, Access Control** - Assign access only for those trunks on which the tenant group user should be able to place calls. Each tenant group should have access to a different set of trunks.
- **KS- Programming Keys for Keysets** - Program the types of keys that allow the extension user to place trunk calls.

E- EXTENSIONS

ED- TRUNK CONTROL, CALL-OUT CONTROL

Feature Reference

Central Office Calls, Placing
Direct Trunk Access
Prime Line Selection
Private Line
Tenant Service

Instructions

To enter data on the PRF:

- Step 1 ► For each extension, enter Y on Table 6 for each trunk that should have call-out enabled. Enter N for each trunk that should not have call-out.

To enter data at the programming terminal:

- Step 1 ► After programming ED- Access Control for a trunk, you see: **CALL-OUT CONTROL - COPY?[SKIP=<SP>]**
The Copy option lets you copy the key programming from another extension.
Press the space bar to skip to ED- Ring Control programming for the next extension.
- Step 2 ►
- To copy another extension's keys, enter Y and the extension number.
After you enter the extension number, you skip to ED- Ring Control programming for the next consecutive extension.
 - To skip to ED- Ring Control programming for the next extension without making an entry, press the space bar.
 - To program the ED- Callout Control options, type N. You see: **LINES 1 TO 8 YYYYYYYY**
- Step 3 ► Enter an option for each trunk.
Press return to:
- Skip to the next trunk without making an entry
 - Go to the next trunk after making a partial entry
- Press ESC to return to the Main Menu. Your changes go into effect only if you enter data for a complete line (eight trunks).
After you enter data for the last trunk, you go to ED- Ring Control programming for the next consecutive extension.

E- EXTENSIONS EE- RING GROUP

Description

For each member of a Ring Group, use this option to assign a Ring Group number (01-08). For each member of an ONYX IV Alternate Attendant (Attendant Console) group, enter the Alternate Attendant Group number. The choices are:

- A1 Alternate Attendant Group for Attendant Console 1
- A2 Alternate Attendant Group for Attendant Console 2
- A3 Alternate Attendant Group for Attendant Console 3
- A4 Alternate Attendant Group for Attendant Console 4

Do not assign more than 30 extensions in a CEU to the same group. If the group must have more than 30 members, use extensions in an expansion cabinet (if available).

Conditions

This option does not apply to DSS Consoles and Modem Pooling ports.

Default Value

Ring Group or Alternate Attendant group not assigned (0)

Related Programming



Alternate Attendant, Attendant Console (ONYX IV)
QC- Operator Programming, DSS Key #20 - Enter the console's own extension number to enable Alternate Attendant at the Attendant Console.

Feature Reference

Alternate Attendant, Attendant Console
Group Ring

Instructions

To enter data on the PRF:

- Step 1 ➤ For Group Ring, enter the Ring Group number for each extension on Table 3. For Alternate Attendant, Console (ONYX IV), enter the Alternate Attendant group (A1-A4). To assign no group, enter 0.

To enter data at the programming terminal:

- Step 1 ➤ Type **EE**. You see: **EXT 300**
Step 2 ➤ Press **RETURN** to program extension 300.

OR

Enter another extension number and press **RETURN**. In either case, you see:
RING GROUP

- Step 3 ➤ Enter data for this option from Table 3 and press **RETURN**.
You advance to the next consecutive extension.

E- EXTENSIONS EF- PAGING THROUGH TELEPHONE SPEAKER

Description

Use this option to allow/deny Paging announcements through the telephone speaker. When programming Tenant Service, enable this option only if tenant members can make pages.

Conditions

This option only applies to keysets and ESL sets.

Default Value

Paging through the speaker enabled (Y).

Related Programming

Paging, Internal and All Call

- **CP- Inhibit Access to Page Zone 3 (BY2:4)** - Allow/inhibit Paging to zone 3 for extensions with this COS.
- **CP- Inhibit Access to Page Zone 2 (BY2:3)** - Allow/inhibit Paging to zone 2 for extensions with this COS.
- **CP- Inhibit Access to Page Zone 1 (BY2:2)** - Allow/inhibit Paging to zone 1 for extensions with this COS.
- **CP- Inhibit Access to All Call Paging (BY2:1)** - Allow/inhibit All Call Paging for extensions with this COS.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Extensions, E7- Page Zone** - Assign each extension to an internal Paging zone (01-07, or 00 for All Call only). The extension broadcasts page announcements to the assigned zone.

Tenant Service, Assigning Internal Paging Zones to Tenants

- **CP- Inhibit Access to Page Zone 3 (BY2:4)** - Allow/inhibit Paging to zone 3 for extensions with this COS. You can allow this option for one tenant group's members and deny it for all others.
- **CP- Inhibit Access to Page Zone 2 (BY2:3)** - Allow/inhibit Paging to zone 2 for extensions with this COS. You can allow this option for one tenant group's members and deny it for all others.
- **CP- Inhibit Access to Page Zone 1 (BY2:2)** - Allow/inhibit Paging to zone 1 for extensions with this COS. You can allow this option for one tenant group's members and deny it for all others.
- **CP- Inhibit Access to All Call Paging (BY2:1)** - Since all tenants hear All Call Paging, consider using this option to prevent All Call Paging system-wide.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Extensions, E7- Page Zone** - Assign each extension to an internal Paging zone (01-07, or 00 for All Call only). Each tenant group's extensions should be in a different internal Paging zone.

Feature Reference

Paging
Tenant Service

E- EXTENSIONS EF- PAGING THROUGH TELEPHONE SPEAKER

Instructions

To enter data on the PRF:

- Step 1 >** For this option on Table 3, enter Y for each extension that should have Paging through the speaker. Enter N if extension should not have Paging through the speaker.

To enter data at the programming terminal:

- Step 1 >** Type **EF**. You see: **EXT 300**
- Step 2 >** Press **RETURN** to program extension 300.
OR
Enter another extension number and press **RETURN**. In either case, you see:
PAGING THROUGH SPKR
- Step 3 >** Enter data for this option from Table 3.
You advance to EF- Incoming Voice Call for this extension.

E- EXTENSIONS

EF- INCOMING VOICE CALL THROUGH TELEPHONE SPEAKER

Description

Use this option to allow/deny incoming voice-announced Intercom calls to a keyset or ESL set. If denied, Incoming calls always ring the extension.

Conditions

- a. This option only applies to keysets and ESL sets.
- b. In the large systems, dialing #0 and #1 from a keyset can change this entry. For example, if this entry is N, dialing #1 from a keyset changes this entry to Y. In VS, changing Voice-Announce (VA) in User-Programmable Features has the same effect. Refer to the Intercom feature.

Default Value

Incoming voice calls enabled (Y).

Related Programming

None

Feature Reference

None

Instructions

To enter data on the PRF:

- Step 1 ► For this option on Table 3, enter Y for each extension that should receive incoming voice-announced Intercom calls. Enter N if extension should not receive voice-announced Intercom calls.

To enter data at the programming terminal:

- Step 1 ► After programming EF- Paging Through Telephone Speaker, you see:
INCOMING VOICE CALL
- Step 2 ► Enter data for this option from Table 3 and press **RETURN**.
You advance to EF- Headset Mode for this extension.

E- EXTENSIONS

EF- HEADSET MODE

Description

Use this option to enable/disable the headset mode for keysets and ESL set. Keep the following in mind when programming this option:

- Enable Headset mode for each extension that has a headset. For non-attendant keysets, this makes the HF key the Release key.
- Disable headset mode for all extensions that should have Group Listen
- Disable headset mode for all extensions that should have Handsfree
- Enabling headset mode causes all calls to ring the extension

CAUTION: Use of a headset on an extension not programmed for headset operation may be harmful to the user. Ringing signals produced by the headset may be painfully loud, depending on the volume level setting.

Conditions

This option only applies to keysets and ESL sets.

Default Value

Headset mode disabled (N).

Related Programming

None

Feature Reference

Group Listen
Handsfree (Speakerphone) and Monitor
Headset Compatibility
Release Key

Instructions

To enter data on the PRF:

- Step 1 >** For this option on Table 3, enter Y to enable headset mode for each extension. Enter N to disable headset mode.

To enter data at the programming terminal:

- Step 1 >** After programming EF- Incoming Voice Call, you see: **HEADSET**
- Step 2 >** Enter data for this option from Table 3 and press **RETURN**.
You advance to EF- Incoming Voice-Over Off Hook Signals for this extension.

E- EXTENSIONS

EF- INCOMING VOICE-OVER OFF-HOOK SIGNALS

Description

Use this option to enable/disable incoming Voice Over signaling for each keyset. This option interacts with E8- Off Hook Ringing. The chart below shows this interaction at the destination extension.

Caller	Dest.	E8	EF	Result after dialing 1
Handset	Handset	N	N	Voice Over to destination
Handset	Handsfree	N	N	No Off-Hook Signaling
Handsfree	Handset	N	N	No Off-Hook Signaling
Handsfree	Handsfree	N	N	No Off-Hook Signaling
Handset	Handset	N	Y	No Off-Hook Signaling
Handset	Handsfree	N	Y	No Off-Hook Signaling
Handsfree	Handset	N	Y	No Off-Hook Signaling
Handsfree	Handsfree	N	Y	No Off-Hook Signaling
Handset	Handset	Y	N	Voice Over to destination
Handset	Handsfree	Y	N	Off-hook ringing
Handsfree	Handset	Y	N	No Off-Hook Signaling
Handsfree	Handsfree	Y	N	Off-hook ring if dest. has HF - otherwise no Off-Hook Signals
Handset	Handset	Y	Y	Off-hook ringing
Handset	Handsfree	Y	Y	Off-hook ringing
Handsfree	Handset	Y	Y	Off-hook ringing
Handsfree	Handsfree	Y	Y	Off-hook ringing

Conditions

This option only applies to keysets.

Default Value

Incoming Voice-Over allowed (N).

Related Programming



Off-Hook Signaling

E- Extensions, E8- Line Access Options, Off-Hook Ringing - Enable or disable incoming off-hook ring for each extension.

Feature Reference

Off-Hook Signaling

E- EXTENSIONS

EF- INCOMING VOICE-OVER OFF-HOOK SIGNALS

Instructions

To enter data on the PRF:

- Step 1 >** For this option on Table 3, enter N to enable Voice-Over Off-Hook Signaling. Enter Y to disable Voice-Over Off-Hook Signaling.

To enter data at the programming terminal:

- Step 1 >** After programming EF- Headset Mode, you see: **INHIBIT VOICE OVER**
- Step 2 >** Enter data for this option from Table 3 and press **RETURN**.
You advance to EF- Paging Through Telephone Speaker programming for the next consecutive extension.

E- EXTENSIONS

EG- NUMBER OF PROGRAMMABLE KEYS

Description

Use this option to designate the number of programmable keys on a keyset or Data Set. Keysets have 24 programmable keys; Data Sets and Attendant Telephone P/N 88254 have 18 programmable keys. When programming 10-button keysets, always enter 24 for this option (keys 1-20 are not used). Refer to the Data Products Manual when programming Data Sets.

Conditions

This option only applies to keysets and Data Sets.

Default Value

On power up, the system automatically sets this entry for each keyset.

Related Programming

None

Feature Reference

None

Instructions

To enter data on the PRF:

Step 1 ► For each keyset or Data Set on Table 3, enter the number of programmable keys (18 or 24).

To enter data at the programming terminal:

Step 1 ► Type **EG**. You see: **EXT 300**

Step 2 ► Press **RETURN** to program extension 300.

OR

Enter another extension number and press **RETURN**. In either case, you see:
PROGRAMMABLE KEYS

Step 3 ► Enter data for this option from Table 3 and press **RETURN**.
You advance to the next consecutive extension.

E- EXTENSIONS EH- SUPPRESS DSS LAMPS

Description

Use this option to allow/deny DSS capability at each keyset. If allowed, keyset user can program and use DSS keys. If denied, user has no DSS functions.

Conditions

This option only applies to keysets.

Default Value

Direct Station Selection allowed (N).

Related Programming

None

Feature Reference

Direct Station Selection, Extension

Instructions

To enter data on the PRF:

- Step 1 ► Enter Y to disable Direct Station Selection for each keyset on Table 3. Enter N to enable Direct Station Selection.

To enter data at the programming terminal:

- Step 1 ► Type EH. You see: **EXT 300**

- Step 2 ► Press **RETURN** to program extension 300.

OR

Enter another extension number and press **RETURN**. In either case, you see:
SUPPRESS DSS LAMPS

- Step 3 ► Enter data for this option from Table 3 and press **RETURN**.
You advance to the next consecutive extension.

E- EXTENSIONS

EK- RETAIN TRUNK VOLUME SETTING

Description

Use this option to determine if the system should apply the user-set volume level for trunk calls at an extension. Enter Y(es) if the system should initially apply the user setting for trunk calls. Enter N if the system should apply a median volume level for each new trunk call. For more information, refer to the Volume Control feature.

This option only applies to VS \geq Aux Module 2.0/Base 5.0, ONYX II/III \geq 3.5 and ONYX IV \geq 1.2.

Conditions

None

Default Value

User-set level not applied (N).

Related Programming

None

Feature Reference

None

Instructions

To enter data on the PRF:

Step 1 \blacktriangleright Enter Y to enable the user-set volume for each keyset on Table 3. Enter N to prevent the system from applying the user-set level.

To enter data at the programming terminal:

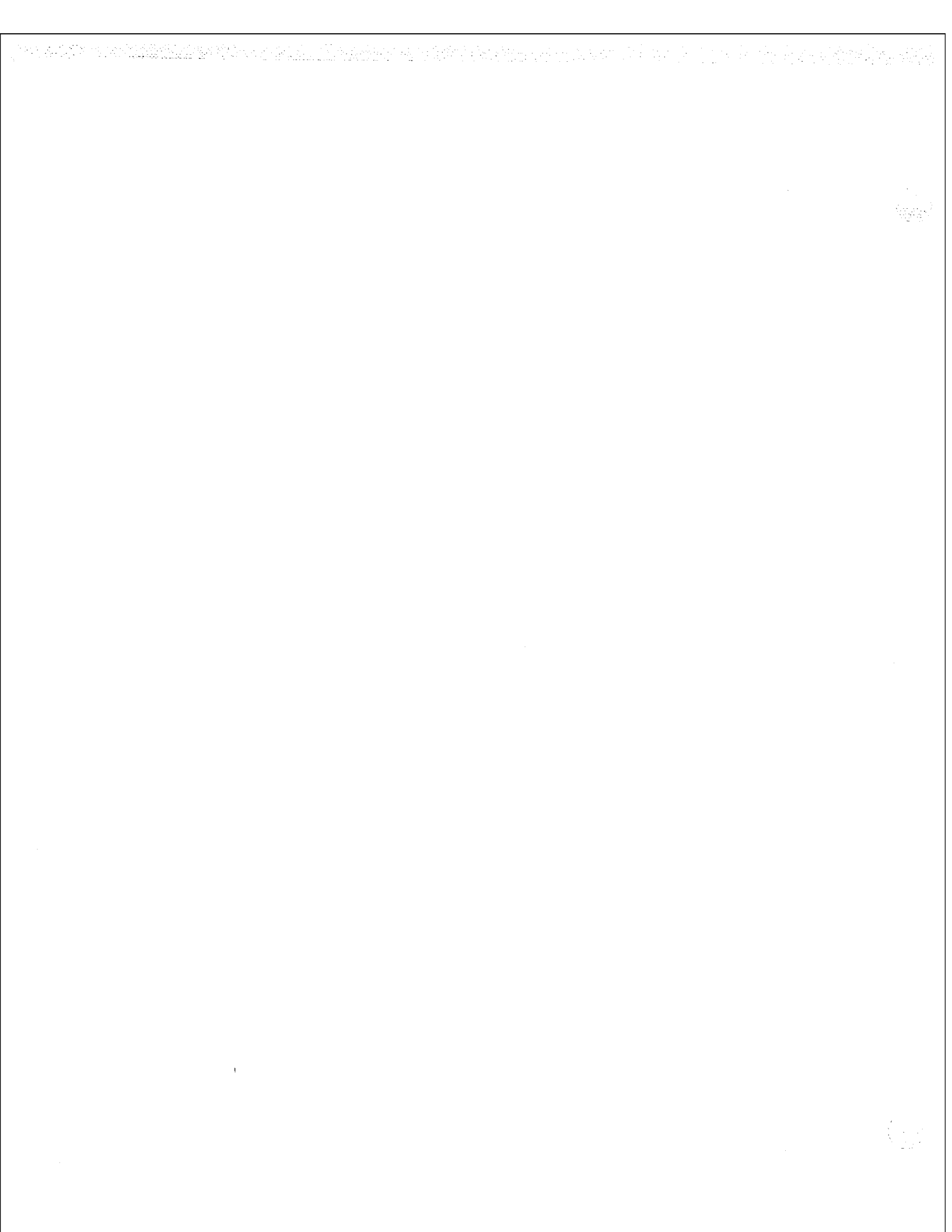
Step 1 \blacktriangleright Type EK. You see: EXT 300

Step 2 \blacktriangleright Press RETURN to program extension 300.

OR

Enter another extension number and press RETURN. In either case, you see:
RETAIN TRK VOLUME SETTING

Step 3 \blacktriangleright Enter data for this option from Table 3 and press RETURN.
You advance to the next consecutive extension.



E- EXTENSIONS EK- DO NOT DISTURB (DND)

Description

Use this option to allow/disallow Do Not Disturb (DND) at each keyset. For attendants, you must allow DND at each attendant that should be able to activate Night Answer.

Conditions

This option applies only to keysets.

Default Value

DND allowed (Y).

Related Programming

- Night Answer**
➤ **E- Trunks, E9- Direct Trunk Termination** - Assign an operator to each trunk. For each trunk, Night Answer activates when that trunk's operator goes into the night mode. (You also use this option to assign DILs. Refer to the Direct Inward Line feature.)

Feature Reference

Do Not Disturb
Night Answer

Instructions

To enter data on the PRF:

- Step 1 ➤ Enter Y to enable DND for each keyset on Table 3. Enter N to disable DND.

To enter data at the programming terminal:

- Step 1 ➤ Type **EK**. You see: **EXT 300**

- Step 2 ➤ Press **RETURN** to program extension 300.

OR

Enter another extension number and press **RETURN**. In either case, you see:
ALLOW DND

- Step 3 ➤ Enter data for this option from Table 3 and press **RETURN**.
You advance to the next consecutive extension.

E- EXTENSIONS EK- VOICE MAIL (VX) PORT

Description

Use this option to assign an OPX or ASI extension as a Voice Mail (VX) port. When connecting a Voice Messaging System, each ASI/OPX port must be a VX port.

Conditions

This option only applies to OPX or ASI extensions.

Default Value

OPX/ASI port is not a Voice Mail port.

Related Programming

Voice Mail Compatibility

- E- Extensions, E2- Circuit Type - Each OPX and ASI P/N 89748 Voice Messaging System port should have circuit type 05. Each ASI P/N 89749 Voice Messaging System port should have circuit type 51.
- E- Extensions, E5- Hunt Type - Program each Voice Messaging System port with hunt type 06.
- E- Extensions, EA- UCD Group Master Extension Number - Program each Voice Messaging System port with the master assigned in QP below.
- E- Trunks, E9- Direct Trunk Termination - For each trunk the VX Automated Attendant should answer, terminate the trunk to the Voice Messaging System master number. (See EA above.)
- E- Trunks, EI- Night Call Routing - For each trunk the VX Automated Attendant should answer at night, terminate the trunk to the master number (see EA above). For this application, make sure the E9 entry is 300.
- FC1- Reset System Queues - Reset system queues after installing VX.
- FC3- Reset VX Flag (Telephone Message Waiting Lamps) - For a first time installation, always use this option to reset phone MSG lamps.
- KS- Programming Keys for Keysets - Designate a programmable key as a Record key (type R).
- QP- Voice Mailbox Installation, Mailbox Installed - Enable this option if the system has a Voice Messaging System connected.
- QP- Voice Mail Installation, Voice Messaging Master Extension - Select one of the Voice Messaging System ports programmed in the options above as the master extension number.

Feature Reference

Voice Mail Compatibility

Instructions

To enter data on the PRF:

- Step 1 ➤ For each ASI/OPX port on Table 3, enter Y to designate the port as a VX port. Enter N if the port is not a VX port.

To enter data at the programming terminal:

- Step 1 ➤ Type EK. You see: EXT 300

- Step 2 ➤ Press RETURN to program extension 300.

OR

Enter another extension and press RETURN. In either case, you see: VX

- Step 3 ➤ Enter data for this option from Table 3 and press RETURN.
You advance to the next consecutive extension.

E- EXTENSIONS EL- PRIME LINE KEY

Description

Use this option to designate a keyset's Prime Line Selection key number and option. The Prime Line key can be any line key (1-24). The Prime Line options are:

- R Ringing Prime Line
- I Idle Prime Line

Conditions

This option only applies to keysets.

Default Value

No Prime Line keys defined (no entry).

Related Programming

Prime Line Selection

- E- Extensions, E8- Line Access Options, Key Access to Outbound Lines - The extension must have outbound line key access to use the Prime Line key for placing calls.
- E- Extensions, ED- Trunk Control, Access Control - The extension must have access for the trunk appearing on the Prime Line key.
- E- Extensions, ED- Trunk Control, Call-Out Control - For outgoing calls, the extension must have call-out enabled for the trunk appearing on the Prime Line key.
- KS- Programming Keys for Keysets - Program the Prime Line key as a line key.

Feature Reference

Prime Line Selection

Instructions

To enter data on the PRF:

- Step 1 ➤ For each keyset on Table 3, indicate the Prime Line key number and that key's Prime Line option. Enter Z for no Prime Line key.

To enter data at the programming terminal:

- Step 1 ➤ Type **EL**. You see: **EXT 300**
- Step 2 ➤ Press **RETURN** to program extension 300.
OR
Enter another extension number and press **RETURN**. In either case, you see:
PRIME LINE KEY
- Step 3 ➤ Enter data for this option from Table 3 and press **RETURN**. Enter Z to remove a Prime Line key.
You advance to the next consecutive extension.
If you don't enter a Prime Line type (R or I), the system enters R automatically.

E- EXTENSIONS

EM- CONFIGURE DATA MODULE

Description

Use this option to set various parameters for Data Modules. Refer to the Data Products Manual for the specifics. The EM options are:

- Baud Rates** - Sets the baud rate for the Data Module serial port
- Parity Options** - Sets the parity options for the Data Module serial port
- Interactive Mode** - Enable Interactive Mode dialing or Non-Interactive mode dialing for the device connected to the Data Module
- Interactive Echo** - Enable Interactive Mode Echo for the device connected to the Data Module.
- RS-232-C Controls Active** - Enable/disable RS-232-C Controls (RTS, CTS, CD and DTR) for the Data Module serial port.
- Allow DTR Disconnect** - Enable/disable DTR low disconnect for the Data Module serial port
- Allow Break Disconnect** - Enable/disable Break disconnect for the Data Module serial port
- Auto Baud** - Enable/disable Auto Baud for the Data Module serial port
- Busy on DTR Low** - Enable/disable automatic busy-out port when the Data Module serial port DTR lead goes low (e.g., RS-232-C cable disconnected)

Conditions

When upgrading from a 56x120 or 72x180 system to ONYX IV, the EM-Configure Data Module settings return to default.

Default Value

Refer to the Data Products Manual

Related Programming

Refer to the Data Products Manual

Feature Reference

Refer to the Data Products Manual

Instructions

To enter data on the PRF:

Step 1 ► Review the Data Products Manual.

Step 2 ► Enter EM data for each Data Module on Table 3.

To enter data at the programming terminal:

Step 1 ► Type **EM**. You see: **EXT 300**

Step 2 ► Enter the Data Module extension number and press **RETURN**. You see: **DATA MODULE BAUD RATES**

Step 3 ► Enter data for each EM option from Table 3. After entering data for one option, you automatically advance to the next.

After programming the last EM option, you advance to the next consecutive extension.

Description

Use this option to set the priority for Automatic Call Distribution agent extensions. The range is 00 (lowest priority) to 99 (highest priority). Lower priority agents receive calls only when all higher priority agents are busy.

This option only applies to ONYX IV.

Conditions

None

Default Value

00 (lowest priority)

**Related
Programming**

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ONYX IV)

Instructions

To enter data on the PRF:
Step 1 > For EP- Priority (ACD) on Table 3, enter the priority for each ACD agent extension (00-99).

To enter data at the programming terminal:
Step 1 > Type **EP**. You see: **EXT 300**
Step 2 > Press **RETURN** to program extension 300.

OR

Enter another extension number and press **RETURN**. In either case, you see:
PRIORITY
Step 3 > Enter EP- Priority (ACD) data from Table 3 and press **RETURN**.
You advance to the next consecutive extension.

E- EXTENSIONS

EU- MASTER EXTENSION OF ACD GROUP (ONYX IV)

Description

Use this option to designate the Automatic Call Distribution group master extension number. Make sure the number you assign is an uninstalled extension port (i.e., E2- Circuit Type=X). When programming ACD group members, refer to the **Setting Other ACD Functions** programming chart with the Automatic Call Distribution (ONYX IV) feature.

This option only applies to ONYX IV.

Conditions

None

Default Value

No master number assigned.

Related Programming

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ONYX IV)

Instructions

- To enter data on the PRF:**
- Step 1 ► For EU- Master Ext of ACD Group on Table 3, enter the ACD group master number.
- To enter data at the programming terminal:**
- Step 1 ► Type **EU**. You see: **MASTER EXT OF ACD GROUP:**
- Step 2 ► Enter the EU- Master Ext data from Table 3 for the ACD group you want to program.
Press **?** to see a list of the available master extensions.
- Step 3 ► Press **RETURN**. You see: **GROUP #**
Go to EU- ACD Group Number on the next page.

E- EXTENSIONS EU- ACD GROUP NUMBER (ONYX IV)

Description

Use this option to assign a number (from 1-16) to each ACD group. When entering data, this associates the EU options that follow with the group you want to program. The system allows a total of 16 ACD groups.

This option only applies to ONYX IV.

Conditions
None

Default Value
No ACD groups defined.

Related Programming

Automatic Call Distribution (ONYX IV)
Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ONYX IV)

Instructions

To enter data on the PRF:
Step 1 ► For EU- Group # on Table 3, enter the number (1-16) of the ACD group you want to configure.

To enter data at the programming terminal:
Step 1 ► After programming EU- Master Extension of ACD Group, you see: **GROUP #**
Step 2 ► From Table 3, enter the number of the ACD group you want to program and press **RETURN**. You see: **SUPERVISOR'S EXT**
Enter 0 to remove the master from the group.
Go to EU- Supervisor's Extension on the next page.

E- EXTENSIONS

EU- SUPERVISOR'S EXTENSION (ONYX IV)

Description

Use this option to assign the ACD Group supervisor extension. An extension can be a supervisor for any number of ACD groups (up to a maximum of 1). For maximum performance, a supervisor extension should be a display set with a DSS Console.

This option only applies to ONYX IV.

Conditions

None

Default Value

No supervisor assigned (300).

Related Programming

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ACD)

Instructions

Step 1 ►

To enter data on the PRF:

For EU- Supervisor's Ext on Table 3, enter the ACD group supervisor's extension number.

Step 1 ►

To enter data at the programming terminal:

Step 2 ►

After programming EU- ACD Group Number , you see: **SUPERVISOR'S EXT**
From Table 3, enter the number of the supervisor's extension for the ACD group you want to program and press **RETURN**. You see: **NO. OF CALLS WAITING BEFORE ALERT**

Enter 300 to remove the supervisor.

Go to EU- No. of Calls Waiting Before Alert on the next page.

E- EXTENSIONS

EU- NO. OF CALLS WAITING BEFORE ALERT (ONYX IV)

Description

Use this option to determine the number of calls that can queue for a busy ACD group before the supervisor's extension rings. The range is 1-99. If your entry is 1, for example, the supervisor's phone rings for the second queued call. If your entry is 2, for example, the supervisor's phone rings only when there are three calls queued.

This option only applies to ONYX IV. It works independently of EU- Call Waiting Time Before Alert. See the chart **Setting Supervisor Functions** with the Automatic Call Distribution (ONYX IV) feature.

Conditions

None

Default Value

Supervisor doesn't ring for waiting calls (0).

Related Programming

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ONYX IV)

Instructions

- To enter data on the PRF:**
- Step 1 ► For EU- No. of Calls Waiting Before Alert on Table 3, enter the number of calls that can wait before the supervisor rings (1-99). To have the supervisor never ring for waiting calls, enter 0.
- To enter data at the programming terminal:**
- Step 1 ► After programming EU- Supervisor's Extension, you see: **NO. OF CALLS WAITING BEFORE ALERT [0-99]:**
- Step 2 ► From Table 3, enter the EU- No. of Calls Waiting Before Alert data and press **RETURN**. You see: **CALL WAITING TIME BEFORE ALERT**
Go to EU- Call Waiting Time Before Alert on the next page.

E- EXTENSIONS EU- CALL WAITING TIME BEFORE ALERT (ONYX IV)

Description

This option sets how long a waiting call remains queued for an ACD group before the supervisor's extension rings. The range is 1-255 seconds. If your entry is 10, for example, a call will wait in queue for 10 seconds before it rings at the supervisor.

This option only applies to ONYX IV. It works independently of EU- No. of Calls Waiting Before Alert. See the chart **Setting Supervisor Functions with the Automatic Call Distribution (ONYX IV) feature.**

Conditions

None

Default Value

Supervisor's phone never rings for waiting calls (0).

Related Programming

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ONYX IV)

Instructions

- To enter data on the PRF:**
- Step 1 ► For EU- Call Waiting Time Before Alert on Table 3, enter how long a waiting call remains queued before the supervisor rings (1-255 seconds). To have supervisor's phone never ring for waiting calls, enter 0.
- To enter data at the programming terminal:**
- Step 1 ► After programming EU- No. of Calls Waiting Before Alert, you see: **CALL WAITING TIME BEFORE ALERT**
- Step 2 ► From Table 3, enter the EU- Call Waiting Time Before Alert data and press **RETURN**. You see: **MANUAL CONTROL OF NIGHT MODE?**
Go to EU- Manual Control of Night Mode on the next page.

E- EXTENSIONS

EU- MANUAL CONTROL OF NIGHT MODE (ONYX IV)

Description

Use this option to allow or deny the ACD group supervisor the ability to put the ACD group in the night mode. While in the night mode, trunks terminated to the ACD master (in E9- Direct Trunk Termination) will ring the night destination (set in E1- Night Call Routing).

This option only applies to ONYX IV.

Conditions
None

Default Value
Supervisor cannot put ACD group in the night mode (N).

Related Programming

Automatic Call Distribution (ONYX IV)
Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution

Instructions

- To enter data on the PRF:**
- Step 1 ► For EU- Manual Control of Night Mode on Table 3, enter Y(es) if supervisor should be able to put the ACD group in the night mode; N(o) if not.
- To enter data at the programming terminal:**
- Step 1 ► After programming EU- Call Waiting Time Before Alert, you see: **MANUAL CONTROL OF NIGHT MODE?**
- Step 2 ► Enter Y or N for this option from Table 3. You see: **OVERFLOW EXT:**
Go to EU- Overflow Extension on the next page.

E- EXTENSIONS

EU- OVERFLOW EXTENSION (ONYX IV)

Description

Use this option to designate the Automatic Call Distribution group overflow destination, if any. The overflow destination can be an extension, an ACD/UCD group or the Voice Mail system.

For this overflow destination...

	Enter...
Extension	Extension number
ACD/UCD Group	ACD/UCD master number
Voice Mail	VX master number
No overflow	300

This option only applies to ONYX IV.

Conditions

None

Default Value

No overflow programmed (300).

Related Programming

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ONYX IV)

Instructions

- To enter data on the PRF:**
- Step 1 ► For EU- Overflow Ext on Table 3, enter the overflow extension number, Voice Mail master number or 300 (for no overflow).
- To enter data at the programming terminal:**
- Step 1 ► After programming EU- Manual Control of Night Mode, you see:
OVERFLOW EXT:
 - Step 2 ► Enter EU- Overflow Ext data from Table 3 and press **RETURN**. You see:
AGENT'S WORK TIME.
Go to EU- Agent's Work time on the next page.

E- EXTENSIONS EU- AGENT'S WORK TIME (ONYX IV)

Description

This option sets the interval Automatic Call Distribution waits before sending an agent their next call. When an agent hangs up, ACD waits this time before ringing the agent's phone with a new ACD call. The range is 1-255 seconds.

This option only applies to ONYX IV.

Conditions

None

Default Value

No agent work time (0).

Related Programming

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ONYX IV)

Instructions

Step 1 ►

To enter data on the PRF:

For EU- Agents Work Time on Table 3, enter the ACD agent work time interval (1-255 seconds). For no work time, enter 0.

Step 1 ►

To enter data at the programming terminal:

Step 2 ►

After programming EU- Overflow Extension, you see: **AGENT'S WORK TIME**
Enter EU- Agent's Work Time data from Table 3 and press RETURN. You see: **DELAY BEFORE OVERFLOW FROM QUEUE**

Go to EU- Delay Before Overflow From Queue Agent's on the next page.

E- EXTENSIONS

EU- DELAY BEFORE OVERFLOW FROM QUEUE (ONYX IV)

Description

When all agents in an Automatic Call Distribution Group are busy, this option sets the delay before call overflow occurs. This option applies only if you designate an extension or VX master number for EU- Overflow Extension. This option does not apply if you enter 300 for EU- Overflow Extension. The range is 1-255, where 1=10 seconds, 2=20 seconds, etc. An entry of 0 is one minute.

This option only applies to ONYX IV.

Conditions

None

Default Value

One minute delay (0).

Related Programming

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ONYX IV)

Instructions

Step 1 ►

To enter data on the PRF:

For EU- Delay Before Overflow from Queue on Table 3, enter the overflow delay interval (1-255, where 1=10 seconds).

An entry of 0 corresponds to 1 minute.

Step 1 ►

To enter data at the programming terminal:

After programming EU- Agent's Work Time, you see: **DELAY BEFORE OVERFLOW FROM QUEUE**

Step 2 ►

Enter the EU- Delay Before Overflow from Queue interval from Table 3 and press **RETURN**. You see: **DIRECT ALL CALLS TO ANNOUNCEMENT MESSAGE**

Go to EU- Direct All Calls to Announcement Message on the next page.

E- EXTENSIONS

EU- DIRECT ALL CALLS TO ANN. MESSAGE (ONYX IV)

Description

Use this option to determine when the Initial Announcement Message (if any) should play to Automatic Call Distribution group callers. Enter N(o) to have the Initial Announcement Message play only when all agents are busy. Enter Y(es) to have the Initial Announcement Message play immediately to each ACD group caller. The Initial Announcement Message can be from the OPA, Voice Mail system or the standard system message.

This option only applies to ONYX IV.

Conditions

None

Default Value

Initial Announcement Message occurs only when all agents are busy (N).

Related Programming

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ONYX IV)

Instructions

- To enter data on the PRF:**
- Step 1 ► For EU- Direct All Calls to Announcement Message on Table 3, enter Y(es) or N(o).
- To enter data at the programming terminal:**
- Step 1 ► After programming EU- Delay Before Overflow From Queue, you see:
DIRECT ALL CALLS TO ANNOUNCEMENT MESSAGE
- Step 2 ► Enter EU- Direct All Calls to Announcement Message data from Table 3.
You see: **INITIAL ANNOUNCEMENT EXT**
Go to EU- Initial Announcement Extension on the next page.

E- EXTENSIONS

EU- INITIAL ANNOUNCEMENT EXTENSION (ONYX IV)

Description

Use this option to set the type of Automatic Call Distribution Initial Announcement Message. The message can be the standard Voice Prompting Message or a recorded message from Voice Mail or OPA.

For this Initial

Announcement Message...	Enter...
Standard	300
OPA	Extension number of first OPA/VAU port
Voice Mail	VX master number

This option is only available on ONYX IV.

Conditions

None

Default Value

Standard message answers (300).

Related Programming

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ACD)

Instructions

To enter data on the PRF:

Step 1 ► For EU- Initial Announcement Extension on Table 3, enter 300, the VX master number or the first port of the OPA/VAU PCB.

To enter data at the programming terminal:

Step 1 ► After programming EU- Direct All Calls to Announcement Mailbox , you see: **INITIAL ANNOUNCEMENT EXT**

Step 2 ► Enter EU- Initial Announcement Ext data from Table 3 and press **RETURN**.
If you enter 300, go to EU- Delay Before Answering With Digitalter.
If you enter the VX master number, go to EU- Mailbox Access Code, Initial.
If you enter the first port on the OPA/VAU PCB, go to EU- VAU Recording Number. Initial.

E- EXTENSIONS

EU- DELAY BEFORE ANSWERING WITH DIGITALKER (ONYX IV)

Description

If you enter 300 for EU- Initial Announcement Extension, use this option to set the Initial Announcement Message delay interval. This is the delay before the standard Voice Prompting Message answers an incoming ACD call. The range is 0 (no delay) to 255 seconds. *You can only use this option if you enter 300 for EU- Initial Announcement Extension.*

This option only applies to ONYX IV.

Conditions

None

Default Value

No delay before answering (0).

Related Programming

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ONYX IV)

Instructions

To enter data on the PRF:
Step 1 ► For EU- Delay Before Answering With Dgtr on Table 3, enter the delay interval (0-255 seconds).

To enter data at the programming terminal:
Step 1 ► If you enter 300 for EU- Initial Announcement Extension, you see: **DELAY BEFORE ANSWERING WITH THE DIGITALKER**
Step 2 ► Enter EU- Delay Before Answering With Dgtr data from Table 3 and press **RETURN**. You see: **REPETITIVE ANNOUNCEMENT**
Go to EU- Repetitive Announcement Extension.

E- EXTENSIONS

EU- VAU RECORDING NUMBER, INITIAL (ONYX IV)

Description

If you enter the first OPA/VAU port extension number for EU- Initial Announcement Extension, this option selects the OPA/VAU message that answers the ACD call. You can choose from eight OPA/VAU messages (00-07). *You can only use this option if you enter the first OPA/VAU port extension number for EU- Initial Announcement Extension.*

This option only applies to ONYX IV.

Conditions

None

Default Value

Standard ACD overflow message (00).

Related Programming

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ONYX IV)

Instructions

- To enter data on the PRF:**
- Step 1 ► For EU- VAU Recording # on Table 3, enter the OPA/VAU message number (00-07).
- To enter data at the programming terminal:**
- Step 1 ► If you enter the extension number of the first OPA/VAU port for EU- Initial Announcement Extension, you see: **VAU RECORDING #**
- Step 2 ► Enter EU- VAU Recording # data from Table 3 and press **RETURN**. You see: **DELAY BEFORE ANSWERING WITH THE VAU**
Go to EU- Delay Before Answering With VAU on the next page.

E- EXTENSIONS

EU- DELAY BEFORE ANSWERING WITH VAU (ONYX IV)

Description

If you enter the first OPA/VAU port extension number for EU- Initial Announcement Extension, use this option to set the Initial Announcement Message delay interval. This is the delay before the OPA/VAU message you select in EU- VAU Recording Number answers an incoming ACD call. The range is 0 (no delay) to 255 seconds. *You can only use this option if you enter the first OPA/VAU extension number for EU- Initial Announcement Extension.*

This option only applies to ONYX IV.

Conditions

None

Default Value

No delay before answering (0).

Related Programming

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ONYX IV)

Instructions

- To enter data on the PRF:**
- Step 1 ► For EU- Delay Before Answering With VAU on Table 3, enter the delay interval (0-255 seconds).
- To enter data at the programming terminal:**
- Step 1 ► After entering data for EU- VAU Recording Number, you see: **DELAY BEFORE ANSWERING WITH THE VAU**
- Step 2 ► Enter EU- Delay VAU Recording # data from Table 3 and press RETURN. You see: **REPETITIVE ANNOUNCEMENT EXT**
Go to EU- Repetitive Announcement Extension.

E- EXTENSIONS EU- MAILBOX ACCESS CODE, INITIAL (ONYX IV)

Description

If you enter the Voice Mail master number for EU- Initial Announcement Extension, this option allows you to specify the mailbox that answers incoming ACD calls. For 1002, this is a Node Mailbox. When programming the Node Mailbox, make sure you set all options to Exit. Refer to the Voice Mail documentation for the specifics on programming Node Mailboxes. *You can only use this option if you enter the Voice Mail master number for EU- Initial Announcement Extension.* Make sure Voice Mail is correctly programmed (refer to Voice Mail Compatibility).

This option only applies to ONYX IV.

Conditions

None

Default Value

Standard ACD overflow message (00).

Related Programming

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ONYX IV)

Instructions

To enter data on the PRF:

Step 1 > For EU- Mailbox Access Code on Table 3, enter the Voice Mail Node Mailbox that should answer incoming ACD calls.

To enter data at the programming terminal:

Step 1 > If you enter the Voice Mail master extension number for EU- Initial Announcement Extension, you see: **MAILBOX ACCESS CODE**

Step 2 > Enter EU- Mailbox Access Code data from Table 3 and press RETURN. You see: **DELAY BEFORE ANSWERING WITH VOICE MAILBOX**
Go to EU- Delay Before Answering With VX on the next page.

E- EXTENSIONS

EU- DELAY BEFORE ANSWERING WITH VX (ONYX IV)

Description

If you enter the Voice Mail master extension number for EU- Initial Announcement Extension, use this option to set the Initial Announcement Message delay interval. This is the delay before the Node Mailbox you select in EU- Mailbox Access Code, Initial answers an incoming ACD call. The range is 0 (no delay) to 255 seconds. *You can only use this option if you enter the Voice Mail master extension number for EU- Initial Announcement Extension.*

This option only applies to ONYX IV.

Conditions

None

Default Value

No delay before answering (0).

Related Programming

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ONYX IV)

Instructions

- To enter data on the PRF:**
- Step 1 ► For EU- Delay Before Answering With VX on Table 3, enter the delay interval (0-255 seconds).
- To enter data at the programming terminal:**
- Step 1 ► After entering data for EU- Mailbox Access Code, you: **DELAY BEFORE ANSWERING WITH THE VOICE MAILBOX**
- Step 2 ► Enter EU- Delay Before Answering With VX data from Table 3 and press **RETURN**. You see: **REPETITIVE ANNOUNCEMENT EXT**
Go to EU- Repetitive Announcement Extension.

E- EXTENSIONS

EU- REPETITIVE ANNOUNCEMENT EXTENSION (ONYX IV)

Description

Use this option to enable or disable the Automatic Call Distribution Repetitive Announcement Message. The Repetitive Announcement Message can be a recorded message from Voice Mail or OPA. To disable the Repetitive Announcement Message, enter 300.

For this Repetitive

Announcement Message...	Enter...
OPA	Extension number of first OPA/VAU port
Voice Mail	VX master number
No announcement	300

This option only applies to ONYX IV.

Conditions

None

Default Value

No repetitive announcement (300).

Related Programming

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ONYX IV)

Instructions

To enter data on the PRF:
Step 1 > For EU- Repetitive Announcement Ext on Table 3, enter 300, the VX master number or the first port of the OPA/VAU PCB.

To enter data at the programming terminal:
Step 1 > After programming the options for the Initial Announcement Message, you see: **REPETITIVE ANNOUNCEMENT EXT**

Step 2 > Enter data from Table 3 for EU- Repetitive Announcement Ext. and press **RETURN**.

If you enter 300, go to EU- Master Extension of ACD Group.

If you enter the VX master number, go to EU- Mailbox Access Code. Repetitive.

If you enter the first port on the OPA/VAU PCB, go to EU- VAU Recording Number. Repetitive on the next page.

E- EXTENSIONS

EU- VAU RECORDING NUMBER, REPETITIVE (ONYX IV)

Description

If you enter the first OPA/VAU port extension number for EU- Repetitive Announcement Extension, this option selects the OPA/VAU message that ACD callers hear while waiting. You can choose from eight OPA/VAU messages (00-07). *You can only use this option if you enter the first OPA/VAU port extension number for EU- Repetitive Announcement Extension.*

This option only applies to ONYX IV.

Conditions

None

Default Value

No Repetitive Announcement Message (00).

Related Programming

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ONYX IV)

Instructions

Step 1 >

To enter data on the PRF:

For EU- VAU Recording # on Table 3, enter the OPA/VAU message number (00-07).

Step 1 >

To enter data at the programming terminal:

If you enter the extension number of the first OPA/VAU port for EU- Repetitive Announcement Extension, you see: **VAU RECORDING #**

Step 2 >

Enter EU- VAU Recording # data from Table 3 and press **RETURN**. You see: **PLAYBACK INTERVAL WITH VAU**

Go to EU- Playback Interval With VAU on the next page.

E- EXTENSIONS

EU- PLAYBACK INTERVAL WITH VAU (ONYX IV)

Description

If you enter the first OPA/VAU port extension number for EU- Repetitive Announcement Extension, use this option to set how often the OPA/VAU should repeat the Repetitive Announcement Message. The range is 0-255 (where 1=10 seconds). If you enter 0, the wait is 1 minute and 30 seconds. *You can only use this option if you enter the first OPA/VAU port extension number for EU- Repetitive Announcement Extension.*

This option only applies to ONYX IV.

Conditions

None

Default Value

1 minute, 30 second wait (0) between Repetitive Announcements.

Related Programming

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ONYX IV)

Instructions

Step 1 ►

To enter data on the PRF:

For EU- Playback Interval With VAU on Table 3, enter how often the OPA/VAU should repeat the Repetitive Announcement Message (0-255).

Step 1 ►

To enter data at the programming terminal:

After entering data for EU- VAU Recording Number, you see: **PLAY BACK INTERVAL WITH VAU**

Step 2 ►

Enter EU- Playback Interval With VAU data from Table 3 and press **RETURN**. You see: **MASTER EXT OF ACD GROUP**
Go to EU- Master Extension of ACD Group.

E- EXTENSIONS

EU- MAILBOX ACCESS CODE, REPETITIVE (ONYX IV)

Description

If you enter the Voice Mail master number for EU- Repetitive Announcement Extension, this option lets you set the mailbox that plays the announcement while ACD callers wait. (In 1002, this is a Node Mailbox. Make sure you set all Node Mailbox options to Exit. Refer to the Voice Mail documentation for the specifics on programming Node Mailboxes.) *You can only use this option if you enter the Voice Mail master number for EU- Repetitive Announcement Extension.*

This option only applies to ONYX IV.

Conditions

None

Default Value

No Repetitive Announcement Message (00).

Related Programming

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ONYX IV)

Instructions

Step 1 >

To enter data on the PRF:

For EU- Mailbox Access Code on Table 3, enter the mailbox that should play the Repetitive Announcement Message.

Step 1 >

To enter data at the programming terminal:

If you enter the Voice Mail master extension number for EU- Repetitive Announcement Extension, you see: **MAILBOX ACCESS CODE**

Step 2 >

Enter EU- Mailbox Access Code data from Table 3 and press **RETURN**. You see: **PLAYBACK INTERVAL WITH VX**

Go to EU- Playback Interval With VX.

E- EXTENSIONS

EU- PLAYBACK INTERVAL WITH VX (ONYX IV)

Description

If you enter the Voice Mail master number for EU- Repetitive Announce Extension, use this option to set how often VX should repeat the Repetitive Announcement Message. The range is 0-255 (where 1=10 seconds). If you enter 0, the wait is 1 minute and 30 seconds. *You can only use this option if you enter the Voice Mail master number for EU- Repetitive Announcement Extension.*

This option only applies to ONYX IV.

Conditions

None

Default Value

1 minute, 30 second wait (0) between Repetitive Announcements.

Related Programming

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ONYX IV)

Instructions

- To enter data on the PRF:**
- Step 1 ► For EU- Playback Interval With VX on Table 3, enter how often the VX should repeat the Repetitive Announcement Message (0-255).
- To enter data at the programming terminal:**
- Step 1 ► After entering data for EU- Mailbox Access Code, Repetitive, you see: **PLAYBACK INTERVAL WITH VOICE MAILBOX**
- Step 2 ► Enter EU- Playback Interval With VX data from Table 3 and press **RETURN**. You see: **MASTER EXT OF ACD GROUP**
Go to EU- Master Extension of ACD Group.

E- EXTENSIONS

EY- COPY RING, ACCESS AND CALLOUT CONTROL

Description

Use this option to copy the ED- Ring, Access and Callout Control programming from one extension to another. Use this option only to copy data. You cannot enter ED data with this option.

Conditions

None

Default Value

None

Related Programming

None

Feature Reference

None

Instructions

To enter data on the PRF:

Step 1 > Refer to the data you entered for the ED option.

To enter data at the programming terminal:

Step 1 > Type EY. You see: **COPY RING CONTROL?**

Step 2 > To copy Ring Control data, type Y. You see: **COPY FROM EXT**
To skip to the Copy Access Control option, type N.

Step 3 > Enter the number of the extension from which you want to copy Ring Control data and press RETURN. You see: **COPY TO EXT**

Step 4 > Enter the number of the extension to which you want to copy data and press RETURN. You see: **COPY COMPLETE, COPY TO EXT**

Step 5 > ● Repeat the above steps to copy data to another extension.
OR

● Press RETURN to go to the Access Control options

Step 6 > Repeat steps 2-5 above for the **COPY ACCESS CONTROL** and **COPY CALLOUT CONTROL** options.

After completing the Copy Callout Control option, you return to the Main Menu.

E- EXTENSIONS EZ- EXTENSION-PORT SWAP

Description

Use this option to change the extension/trunk assignment for a port. The port is the hardware location of the extension/trunk. When you change a port number, all programming for the extension/trunk goes to the new port assignment (location).

All extensions/trunks use a single port, except for Data Sets, STIs and DSS Consoles. These are dual-port devices that use a port pair. A port pair consists of two consecutive ports, beginning with an even numbered port (e.g., 00 and 01). When changing a dual-port device's port assignment, be sure to change both ports (even-to-even, odd-to-odd).

Keep the following in mind when programming ports:

- Be sure to install the main attendant at port 00 (usually extension 300).
- Use HH- Port/Extension Checker to make sure each port has only one assigned extension.
- Use QN- Restore Standard Port Numbers to reinstate the standard extension/trunk-to-port assignments.
- You can optionally Use E1- Port Number (instead of EZ) to change the port assignment for an extension
- You can use X- Exchange Extension Data to swap two extensions/trunks (without physically moving their ports). With this option, the programming follows the extension/trunk number.
- Use LP- Listing Data by Port to list the programmed options for extensions and trunks in port number order.

CAUTION: Do not use the EZ option to change the trunk/port assignment for installed trunks. Also, do not swap an extension port with a trunk port.

Conditions

None

Default Value

Each extension is offset from its port by 300 (e.g., extension 320 is at port 20).

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities

E- EXTENSIONS EZ- EXTENSION-PORT SWAP

Instructions

To enter data on the PRF:

- Step 1 ► Enter the port number for each extension on Table 3.

To enter data at the programming terminal:

- Step 1 ► Type **EZ**. You see: **PORT 00**

- Step 2 ► Press **RETURN** to program port 00.

OR

Enter another port number (00-79) and press **RETURN**. In either case, you see:
EXT

- Step 3 ► Enter data for this option from Table 3 and press **RETURN**.
You advance to the next consecutive port.

**E- EXTENSIONS
EZ- EXTENSION-PORT SWAP**

- For Your Notes -

E- TRUNKS

E0- ALL DATA

Description

Use E0 to enter data for all options sequentially for a trunk. The charts below show the E options that correspond to each E0 entry. Refer to these options for more information. Also, the charts below show the default value for each option (where applicable).

E0 Prompts for CO Trunks

For this option...	Look here...
EXT	E1
PORT	E2
CIRCUIT TYPE (08-11)-	E3
COS 01 -	E4
NEXT LINE IN ROTARY -	E7
SERVICE # 00-	E9
DIR TERM OR OPR EXT -	EA
FIRST LINE IN GROUP -	EC
CALL PICKUP GROUP 00-	EI
NIGHT CALL TO EXT -	EI
TANDEM OK N [Y/N] -	EJ
TOLL RESTRICT Y [Y/N] -	EL
LOOP NUMBER (ONYX IV)	EP
PRIORITY (ONYX IV)	

E0 Prompts for DID Trunks

For this option...	Look here...
EXT	E1
PORT	E2
CIRCUIT TYPE 07	E2
STI CIRCUIT# 00 -	E3
COS 01 -	E4 ¹
NEXT LINE IN ROTARY -	E7 ¹
SERVICE # 00-	E9
DIR TERM OR OPR EXT -	EA ¹
FIRST LINE IN GROUP -	EC ¹
CALL PICKUP GROUP 00-	EI ¹
NIGHT CALL TO EXT -	EI ¹
TANDEM OK N [Y/N] -	EJ ¹
TOLL RESTRICT Y [Y/N] -	EL
LOOP NUMBER (ONYX IV)	EP
PRIORITY (ONYX IV)	

¹ Although these options appear for DID trunks, they are not used.

**E- TRUNKS
E0- ALL DATA**

**Description
(Cont'd)**

E0 Prompts for DISA Trunks

For this option...	Look here...
EXT	
PORT	
CIRCUIT TYPE (12-15)	E1
COS 01 -	E2
NEXT EXT IN HUNT -	E3
SERVICE # 00-	E4
ALLOW LINE DIAL-UP Y [Y/N] -	E7
ACCESS TO GROUP 90? Y [Y/N] -	E8
through	E8
ACCESS TO GROUP 95? Y [Y/N] -	E8
DIR TERM OR OPR EXT 300-	E9
UCD MASTER EXT -	EA
SPD DIAL BLOCK	EB
CALL PICKUP GROUP 00-	EC
ACCESS CONTROL	ED
COPY? [SKIP=<SP>] [Y/N] -	
LINES 1 TO 8 Y Y Y Y Y Y Y Y -	
through	
65 TO 72 Y Y Y Y Y Y Y Y -	
CALL-OUT CONTROL	ED
COPY? [SKIP=<SP>] [Y/N] -	
LINES 1 TO 8 Y Y Y Y Y Y Y Y -	
through	
65 TO 72 Y Y Y Y Y Y Y Y -	
LOOP NUMBER (ONYX IV)	EL
PRIORITY (ONYX IV)	EP

Description
(Cont'd)

E0 Prompts for Tie Trunks

For this option...	Look here...
EXT	
PORT	
CIRCUIT TYPE (16-19)	E1
STI CIRCUIT# 00 -	E2
COS 01 -	E2
NEXT EXT IN HUNT -	E3
SERVICE # 00-	E4
ALLOW LINE DIAL-UP Y [Y/N] -	E7
ACCESS TO GROUP 90? Y [Y/N] -	E8
through	
ACCESS TO GROUP 95? Y [Y/N] -	E8
DIR TERM OR OPR EXT 300-	E9
UCD MASTER EXT -	EA
SPD DIAL BLOCK	EB
CALL PICKUP GROUP 00-	EC
ACCESS CONTROL	ED
COPY? [SKIP=<SP>] [Y/N] -	
LINES 1 TO 8 Y Y Y Y Y Y Y Y -	
through	
65 TO 72 Y Y Y Y Y Y Y Y -	
CALL-OUT CONTROL	ED
COPY? [SKIP=<SP>] [Y/N] -	
LINES 1 TO 8 Y Y Y Y Y Y Y Y -	
through	
65 TO 72 Y Y Y Y Y Y Y Y -	
LOOP NUMBER (ONYX IV)	EL
PRIORITY (ONYX IV)	EP

Conditions

None

Default Value

Refer to the charts above.

E- TRUNKS E0- ALL DATA

Related Programming

Refer to the charts above.

Feature Reference

Refer to the individual E options.

Instructions

To enter data on the PRF:
Step 1 > Refer to the individual E options.

To enter data at the programming terminal:
Step 1 > Type **E0**.

Step 2 > Enter the number of the trunk you want to program and press **RETURN**. You see: **PORT**

Step 3 > Enter data for this option from Table 5.
After you enter data for one option, you automatically advance to the next option.

Description

Use this option to change the port assignment for a trunk. The port is the hardware location of the trunk. When you change a trunk's port number, all programming for the trunk goes to the new port assignment (location). All trunks use a single port.

Keep the following in mind when programming ports:

- Use HH- Port/Extension Checker to make sure each port has only one assigned trunk
- Do not swap an extension port with a trunk port.
- You can optionally Use EZ- Extension-Port Swap (instead of E1) to change the trunk assignment for a port
- You can use X- Exchange Extension Data to swap two trunk (without physically moving their ports). With this option, the programming follows the trunk number.
- Use QN- Restore Standard Port Numbers to reinstate the standard trunk/extension-to-port assignments
- Use LP- Listing Data by Port to list the programmed options for trunks in port number order.

CAUTION: Do not use the E1 option on installed trunks.

Conditions
None

Default Value
Each trunk is offset from its port by 300 (e.g., trunk 480 is at port 180).

**Related
Programming**

None

Feature Reference

None

Instructions

To enter data on the PRF:

Step 1 ► Enter the port number for each trunk on Table 5.

To enter data at the programming terminal:

Step 1 ► Type **E1**.

Step 2 ► Enter the number of the trunk you want to program and press **RETURN**. You see: **PORT**

Step 3 ► Enter data for this option from Table 5.
You automatically advance to the next consecutive trunk.

E- TRUNKS E2- CIRCUIT TYPE

Description

Use this option to identify the type of trunk connected to each trunk port. trunk circuit type choices are:

- 05 OPX, ASI P/N 89748 and 8SLU ports (see E- Extension programming)
- 07 DID trunk
- 08 CO trunk, ground start, DTMF¹
- 09 CO trunk, ground start, DP (Dial Pulse)¹
- 10 CO trunk, loop start, DTMF
- 11 CO trunk, loop start, DP
- 12 DISA trunk, DTMF, day or night¹
- 13 DISA trunk, DP, day or night¹
- 14 DISA trunk, DTMF, night only¹
- 15 DISA trunk, DP, night only¹
- 16 Tie trunk, DTMF, wink start¹
- 17 Tie trunk, DP, wink start¹
- 18 Tie trunk, DTMF, immediate dial¹
- 19 Tie trunk, DP, immediate dial¹
- 51 ASI P/N 89749 (See E- Extension programming)
- X Uninstalled

Keep the following in mind when programming circuit type:

- Enter type X for all ports not terminated to a trunk
- OPX extensions use trunk numbers. ASI extension use extension numbers. (Refer to E- Extension programming.)
- Program the ports used for External Paging, Background Music and Music on Hold as uninstalled (circuit type X)

Conditions

- a. When programming trunks, make sure the Trunk PCB associated with the port you are programming is installed. Refer to QS- Install Printed Circuit Boards.
- b. If you want to use a trunk you programmed for BGM/MOH for another function, you must:
 - Remove the assignment in QM- BGM Line Number
 - Reset the associated line/trunk PCB (using IR- Reset Line/Trunk Card)
 - Change the trunk to the desired circuit type (using the E2 option)
 - Perform a side tone test on the trunk (using the IS- Side Tone Test option)

Default Value

On initial power up in the large systems, the system identifies all line/trunk PCBs. It marks the PCBs as installed and sets each trunk circuit type at DTMF CO (type 10). The remaining line/trunk PCBs are marked as not installed. On subsequent power-ups, the system reports major alarms on trunks and PCBs that are no longer installed.

On initial power up in VS, the system assigns circuit type 10 to all trunks.

Related Programming

Refer to Programming in the features listed below.

¹ For proper operation, you should start (seize) each trunk once following the initial installation. Ground start trunks are not available in VS.

Feature Reference

Refer to Programming in the following features:

Background Music
Centralized Attendant Service
Central Office Calls, Answering
Central Office Calls, Placing
DP and DTMF Compatibility
Direct Inward Dialing
Direct Inward System Access
Music On Hold
Off-Premise Extension
Paging
Private Line
Special Services and OCC Compatibility
Tenant Service
Tie Lines
Voice Mail Compatibility

Instructions

To enter data on the PRF:

Step 1 > Enter the circuit type for each trunk on Table 5.

To enter data at the programming terminal:

Step 1 > Type **E2**. You see: **EXT 300**

Step 2 > Enter the number of the trunk you want to program and press **RETURN**. You see: **CIRCUIT TYPE**

Step 3 > Enter data for this option from Table 5 and press **RETURN**.

For CO and DISA trunks, you advance to the next consecutive trunk. For DID, OPX and tie trunks, you advance to E2 (Trunks)- STI Circuit Number.

E- TRUNKS

E2- STI CIRCUIT NUMBER

Description

Use this option to assign the associated STI circuit number for each OPX, DID and tie trunk. Refer to the STI Installation and Programming Manual for charts and drawings that explain this association. This option does not apply to VS.

Conditions

This option only applies to OPX, DID and tie trunks.

Default Value

No STI circuit number assigned (00).

Related Programming

Centralized Attendant Service

- CP- Allow Bell Standard for CAS (BY0:0) - Enable this option if hub system is using Bell Standard Centralized Attendant Service. Disable this option if hub is a Datastar PBX.
- E- Trunks, E2- Circuit Type - Assign each tie trunk used for CAS one of the following circuit types:
 - 16 DTMF Wink Start tie line
 - 17 Dial Pulse Wink Start tie line
 - 18 DTMF Immediate Dial tie line
 - 19 Dial Pulse Immediate Dial tie line
- E- Trunks, E3- Class of Service - Assign a Class of Service to the tie trunk.
- E- Trunks, E4- Next Trunk in Outbound Rotary - If the CAS tie trunk is part of a trunk rotary for outgoing calls, enter the number of the next trunk in the rotary
- E- Trunks, E9- Direct Trunk Termination - Terminate each incoming trunk (or rotary) in the satellite to a tie trunk (or tie trunk rotary) that connects to the hub.
- E- Trunks, EA- UCD Group Master Extension Number (First Trunk in Group) - If a CAS tie trunk is in a rotary, specify the first trunk in the rotary. All trunks in the rotary should have the same entry for this option.

Direct Inward Dialing

- CP- Absorb 1st Digit for DID and Tie Trunks (BY0:1) If QO- DID Intercepts (Absorb 1st Digit) is off (N), use this option to apply 1st digit absorption on a trunk-by-trunk basis. When you enable this option, the trunk is compatible with four digit DID service. *This is a COS option for DID trunks.*
- CP- Allow Automatic Operator Intercept for DID (BY0:0) - Enable/disable All Call Intercept in an extension's COS. *This is a COS option for extensions.*
- E- Extensions, ED- Trunk Control, Ring Control - The attendant assigned to each DID trunk should have ringing for the trunk. This allows the intercepts to work properly. However, intercepts to keysets work fine without ring programmed.
- E- Extensions, ED- Trunk Control, Access Control - An extension must have access to a DID trunk in order to answer a DID call on that trunk.
- E- Extensions/Trunks, E3- Class of Service - Assign Class of Service to DID trunks and extensions.
- E- Trunks, E2- Circuit Type - Assign DID trunks with circuit type 07.

**Related
Programming
(Cont'd)**

- **KS- Programming Keys for Keysets** - Each extension should have a line key for DID trunks or a loop key.

- Off-Premise Extension**
- **E- Trunks, E2- Circuit Type** - OPX extensions use circuit type 05. Remember that OPX extensions use trunk numbers.

- Tie Lines**
- **CP- Absorb 1st Digit for DID and Tie Trunks (BY0:1)** - For incoming wink start tie trunk calls, enable/disable 1st digit absorption. If enabled, system ignores first incoming digit on tie trunk call.
- **E- Trunks, E2- Circuit Type** - Assign each tie line one of the following circuit types:
 - 16 DTMF Wink Start tie line
 - 17 Dial Pulse Wink Start tie line
 - 18 DTMF Immediate Dial tie line
 - 19 Dial Pulse Immediate Dial tie line
- **E- Trunks, E3- Class of Service** - Assign COS to tie trunk for incoming calls. COS does not pertain to outgoing calls.

Feature Reference

Centralized Attendant Service
Direct Inward Dialing
Off-Premise Extension
Tie Lines

Instructions

To enter data on the PRF:

- Step 1 ➤ Review the STI Installation and Programming Manual. Enter the associated STI circuit on Table 5 for each DID, OPX and tie trunk.

To enter data at the programming terminal:

- Step 1 ➤ After entering data for **E2- CIRCUIT TYPE**, you see: **STI CIRCUIT#**
- Step 2 ➤ Enter data for this option from Table 5 and press **RETURN**.
You advance to E2- Circuit Type for the next consecutive trunk.

E- TRUNKS

E3- CLASS OF SERVICE

Description

Use this option to assign a Class of Service (COS) to each DID, DISA and tie trunk. You can use COS to put dialing restrictions on incoming DISA and tie trunk callers.

Conditions

This option only applies to DID, DISA and tie trunks.

Default Value

All trunks have COS 00.

Related Programming

Refer to Programming in the features listed below.

Feature Reference

Refer to Programming in the following features:
Centralized Attendant Service
Direct Inward Dialing
Direct Inward System Access (DISA)
Tie Lines

Instructions

To enter data on the PRF:

Step 1 > Enter the COS number for each DID, DISA and tie trunk on Table 5. Enter 00 for all other trunks.

To enter data at the programming terminal:

Step 1 > Type **E3**. You see: **EXT 300**

Step 2 > Enter the number of the DISA or tie trunk you want to program and press **RETURN**. You see: **COS**

Step 3 > Enter data for this option from Table 5 and press **RETURN**.
You advance to the next consecutive trunk.

E- TRUNKS

E4- NEXT TRUNK IN OUTBOUND ROTARY (HYBRID ONLY)

Description

Use this option to determine the selection sequence for trunks within a trunk rotary. The trunk rotary follows the order of the list you create using this option. When entering data, make sure the last trunk in the rotary does not loop back to the first. You can program CO, DISA and tie trunks into an outbound rotary. Normally, only trunks of the same type are in the same rotary.

For example, to program a trunk rotary using trunks 480, 481 and 482:

For this trunk...	Enter this E4 data...
480	481
481	482
482	300 (no entry)

Your outbound rotary may correspond to a telco inbound rotary. Telco normally picks the lowest trunk first. If this is the case, program your outbound trunk rotary to select the highest numbered trunks first.

This prompt does not appear for key systems.

Conditions

Although this option appears for DID trunks, it is not used.

Default Value

Trunks are not in a rotary (no entry).

Related Programming

Automatic Route Selection

- **E- Trunks, E7- Trunk Service Number** - Assign a Service Number to each trunk used for ARS. ARS routes calls to Service Numbers, not individual trunks.
- **E- Trunks, EA- Trunk Group Assignment (First Trunk in Group)** - Group trunks in rotaries by assigning each one the same First Trunk in Group number.
- **GA- ARS Editor** - Program the ARS options. Refer to Appendix A for complete details.
- **QL- LCR/ARS/Account Codes, LCR or ARS Enable** - Enter 2 to enable ARS.
- **QL- LCR/ARS/Account Codes, Number of Services** - Designate how many services (trunk rotaries) ARS will use.
- **QL- LCR/ARS/Account Codes, Service Line Numbers** - Indicate the trunk rotary master number for each of the rotaries used by ARS. This should correspond to the **EA- First Trunk in Group** entry.

E- TRUNKS

E4- NEXT TRUNK IN OUTBOUND ROTARY (HYBRID ONLY)

Related Programming (Cont'd)

Centralized Attendant Service

- CP- Allow Bell Standard for CAS (BY0:0) - Enable this option if hub system is using Bell Standard Centralized Attendant Service. Disable this option if hub is a Datastar PBX.
- E- Trunks, E2- Circuit Type - Assign each tie trunk used for CAS one of the following circuit types:
 - 16 DTMF Wink Start tie line
 - 17 Dial Pulse Wink Start tie line
 - 18 DTMF Immediate Dial tie line
 - 19 Dial Pulse Immediate Dial tie line
- E- Trunks, E2- STI Circuit Number - Enter the STI circuit number for the tie trunk. Refer to the STI Installation and Programming Manual for charts and drawings that explain this correlation.
- E- Trunks, E3- Class of Service - Assign a Class of Service to the tie trunk.
- E- Trunks, E9- Direct Trunk Termination - Terminate each incoming trunk (or rotary) in the satellite to a tie trunk (or tie trunk rotary) that connects to the hub.
- E- Trunks, EA- UCD Group Master Extension Number (First Trunk in Group) - If a CAS tie trunk is in a rotary, specify the first trunk in the rotary. All trunks in the rotary should have the same entry for this option.

Line (Trunk) Rotaries

- E- Extensions, E8- Line Access Options, Access To Groups 90-95 - Allow/deny access to each of the first 6 trunk groups (90-95). You cannot program this option for trunk groups 96-98.
- E- Trunks, EA- Trunk Group Assignment (First Trunk in Group) - Group trunks together by assigning each one the same First Trunk in Group number.
- QF- Line Group Access (First Trunk in Group) - Correlate the first trunk in a trunk rotary (e.g., 801) to one of nine trunk rotary numbers (90-98). The system requires this correlation when setting up trunk rotaries. Use the trunk access code (e.g., 801 or L01) that corresponds to the EA- First Trunk in Group entry.

Feature Reference

Automatic Route Selection
Centralized Attendant Service
Line (Trunk) Rotaries

Instructions

To enter data on the PRF:

- Step 1 ➤ Enter the next trunk in the rotary for each trunk on Table 5. Enter 300 for the last trunk in the rotary. Enter 300 also for all other trunks that are not in rotaries.

To enter data at the programming terminal:

- Step 1 ➤ Type E4. You see: EXT 300
- Step 2 ➤ Enter the number of the trunk you want to program and press RETURN. You see: NEXT LINE IN ROTARY
- Step 3 ➤ Enter data for this option from Table 5 and press RETURN.
You advance to the next consecutive trunk.

Description

If the system has ARS or LCR, use this option to assign a Service Number to trunks. Trunks of the same type should have the same Service Number. You can assign a trunk one of 10 Service Numbers (1-10). When routing calls, ARS and LCR will:

- Analyze the digits a user dials
- Choose a Service Number for the call
- Route the call on the first available trunk with the selected Service Number.

You can also use this option to designate a trunk as a PBX trunk (i.e., behind a PBX). Enter 11 for each PBX trunk. If a user hangs up a call on a PBX trunk, they cannot reseat the trunk before 1.2 seconds. This ensures that the connected PBX has adequate time to drop the old call.

Conditions

Although this option appears for DID trunks, it is not used.

Default Value

Trunks are not assigned a Service Number (00).

Related Programming

Automatic Route Selection (ARS)

- **E- Trunks, E4- Next Trunk in Outbound Rotary** - ARS requires outbound trunk rotaries. This prompt determines the selection sequence for trunks within each rotary.
- **E- Trunks, EA- Trunk Group Assignment (First Trunk in Group)** - Group trunks in rotaries by assigning each one the same First Trunk in Group number.
- **GA- ARS Editor** - Program the ARS options. Refer to Appendix A for complete details.
- **QL- LCR/ARS/Account Codes, LCR or ARS Enable** - Enter 2 to enable ARS.
- **QL- LCR/ARS/Account Codes, Number of Services** - Designate how many services (trunk rotaries) ARS will use.
- **QL- LCR/ARS/Account Codes, Service Line Numbers** - Indicate the trunk rotary master number for each of the rotaries used by ARS. This should correspond to the **EA- First Trunk in Group** entry.

Least Cost Routing (LCR)

- **GL- LCR Testing** - Use this option to display your current LCR configuration and make changes to your LCR database.
- **QL- LCR/ARS/Account Codes, LCR or ARS Enable** - Enter 1 to enable LCR.
- **QL- LCR/ARS/Account Codes, Number of Services** - Designate how many services (trunk rotaries) LCR will use.
- **QL- LCR/ARS/Account Codes, Service Line Numbers** - Indicate the trunk rotary master number for each of the rotaries used by LCR. This should correspond to the **EA- First Trunk in Group** entry.
- **QL- LCR/ARS/Account Codes, COS Needed to Access ALT Route** - Enter the minimum COS that the system requires before routing a call to the alternate route (if primary route is busy).

E- TRUNKS

E7- TRUNK SERVICE NUMBER

Related Programming (Cont'd)

- **QL- LCR/ARS/Account Codes, Type of Service** - Enter the type of service number (0-5). For example, for DDD or WATS, enter 0.
- **QL- LCR/ARS/Account Codes, Access Code** - For dial-up services, enter the access code (telephone number) for the service.
- **QL- LCR/ARS/Account Codes, Security Code** - For dial-up services, enter the security code the service requires.

PBX/Centrex Compatibility

- **QB- PBX Access Codes** - Designate up to 11 PBX access codes.

Feature Reference

Automatic Route Selection
Least Cost Routing
PBX/Centrex Compatibility

Instructions

To enter data on the PRF:

- Step 1 ➤ If the system requires Service Numbers, enter the Service Number for each trunk on Table 5. Enter 00 if the trunk should not have a Service Number.

To enter data at the programming terminal:

- Step 1 ➤ Type **E7**. You see: **EXT 300**
- Step 2 ➤ Enter the number of the trunk you want to program and press **RETURN**. You see: **SERVICE #**
- Step 3 ➤ Enter data for this option from Table 5 and press **RETURN**.
You advance to the next consecutive trunk.

Description

Use this option to set the termination for a trunk. If the termination is an attendant:

- For a CO trunk, this option sets the attendant that controls Night Answer for the trunk
- For a tie trunk, this option sets the attendant the incoming tie trunk caller reaches when they dial 0

The termination can also be:

- An extension or Ring Group (see the Direct Inward Lines feature)
- An ACD or UCD Group master number (see the Automatic Call Distribution and Extension Hunting features)
- The first port on the OPA PCB. This lets the OPA intercept incoming calls on the trunk. (See the Operator Assistance feature.)
- A tie line (see the Centralized Attendant Service feature)
- An extension or attendant for DID Intercept (see the Direct Inward Dialing feature)

For DISA trunks, always enter the main operator (usually 300). The main operator controls the night mode on the DISA trunk. Additionally, DISA calls go to the main operator or UNA when the DISA caller dials 0. When programming E9 for OPX trunks, refer to E- Extensions, E9- Attendant (Operator) Assignment.

Conditions

None

Default Value

All trunks terminated to extension 300.

Related Programming

Central Office Calls, Answering

- **E- Extensions, ED- Trunk Control, Ring Control** - For each keyset, designate the ringing options for each trunk (immediate, delayed, no ring or night ring). If you enter D, see QT- System Timers, Delayed Ring Interval in Other Programming below. You normally program the attendant with ringing for each trunk. This gives unanswered calls and recalls at least one destination in the system.
- **E- Extensions, ED- Trunk Control, Access Control** - For each extension, assign access for the lines the extension should be able to answer. You normally program the attendant with access for each trunk.
- **E- Trunks, E2- Circuit Type** - Program the correct circuit type for each trunk.
- **KS- Programming Keys for Keysets** - Program the types of keys that will ring the extension. Additionally, make sure that every keyset has at least one fixed or switched loop key. This ensures that an incoming call will ring a key somewhere on the keyset. On key systems, loop keys are for incoming calls only. Only switched loop keys are available.

E- TRUNKS

E9- DIRECT TRUNK TERMINATION

Related Programming (Cont'd)

- Centralized Attendant Service**
- **CP- Allow Bell Standard for CAS (BY0:0)** - Enable this option if hub system is using Bell Standard Centralized Attendant Service. Disable this option if hub is a Datastar PBX.
 - **E- Trunks, E2- Circuit Type** - Assign each tie trunk used for CAS one of the following circuit types:
 - 16 DTMF Wink Start tie line
 - 17 Dial Pulse Wink Start tie line
 - 18 DTMF Immediate Dial tie line
 - 19 Dial Pulse Immediate Dial tie line
 - **E- Trunks, E2- STI Circuit Number** - Enter the STI circuit number for the tie trunk. Refer to the STI Installation and Programming Manual for charts and drawings that explain this correlation.
 - **E- Trunks, E3- Class of Service** - Assign a Class of Service to the tie trunk.
 - **E- Trunks, E4- Next Trunk in Outbound Rotary** - If the CAS tie trunk is part of a trunk rotary for outgoing calls, enter the number of the next trunk in the rotary
 - **E- Trunks, EA- UCD Group Master Extension Number (First Trunk in Group)** - If a CAS tie trunk is in a rotary, specify the first trunk in the rotary. All trunks in the rotary should have the same entry for this option.

**Related
Programming
(Cont'd)**

- **QT- System Timers, OPA Overflow Ring Control** - Indicate the number of rings (3-15) before operator overflow to the OPA occurs. This pertains only to operator overflow calls.
- Voice Mail Compatibility**
- **E- Extensions, E2- Circuit Type** - Each OPX and ASI P/N 89748 Voice Messaging System port should have circuit type 05. Each ASI P/N 89749 Voice Messaging System port should have circuit type 51.
- **E- Extensions, E5- Hunt Type** - Program each Voice Messaging System port with hunt type 06.
- **E- Extensions, EA- UCD Group Master Extension Number** - Program each Voice Messaging System port with the master number assigned in QP programming below.
- **E- Extensions, EK- Voice Mail (VX) Port** - Enable this option for each Voice Messaging System port.
- **E- Trunks, EI- Night Call Routing** - For each trunk the VX Automated Attendant should answer at night, terminate the trunk to the master number (see EA above). For this application, make sure the E9 entry is 300.
- **FC1- Reset System Queues** - Reset system queues after installing the VX.
- **FC3- Reset VX Flag (Telephone Message Waiting Lamps)** - For a first time installation, always use this option to reset the telephone Message Waiting lamps.
- **KS- Programming Keys for Keysets** - Designate a programmable key as a Record key (type R).
- **QP- Voice Mailbox Installation, Mailbox Installed** - Enable this option if the system has a Voice Messaging System connected.
- **QP- Voice Mail Installation, Voice Messaging Master Extension** - Select one of the Voice Messaging System ports programmed in the options above as the master extension number.

Feature Reference

Central Office Calls, Answering
Centralized Attendant Service
Direct Inward Line (DIL)
Night Answer
Operator Assistance (OPA)
Voice Mail Compatibility

Instructions

To enter data on the PRF:

- Step 1 ➤ Enter the termination for each trunk on Table 5. To have the termination be the main operator, enter 300.

To enter data at the programming terminal:

- Step 1 ➤ Type **E9**. You see: **EXT 300**
- Step 2 ➤ Enter the number of the trunk you want to program and press **RETURN**. You see: **DIR TERM OR OPR EXT**
- Step 3 ➤ Enter data for this option from Table 5 and press **RETURN**.
You advance to the next consecutive trunk.

E- TRUNKS EA- TRUNK GROUP ASSIGN. (FIRST TRUNK IN GROUP), HYBRID

Description

Use this option to group trunks by assigning them the same First Trunk in Group number. Remember, you normally put only trunks of the same type in the same group.

Note: When programming DISA and tie trunks, use this option instead of EA (Extensions)- UCD Group Master Extension Number.

This prompt appears in the key systems, but has no significance.

Conditions

Although this option appears for DID trunks, it is not used.

Default Value

Trunks are not assigned to a First Trunk in Group (no entry).

Related Programming

Automatic Route Selection

- **E- Trunks, E4- Next Trunk in Outbound Rotary** - ARS requires outbound trunk rotaries. This prompt determines the selection sequence for trunks within each rotary.
- **E- Trunks, E7- Trunk Service Number** - Assign a Service Number to each trunk used for ARS. ARS routes calls to Service Numbers, not individual trunks.
- **GA- ARS Editor** - Program the ARS options. Refer to Appendix A for complete details.
- **QL- LCR/ARS/Account Codes, LCR or ARS Enable** - Enter 2 to enable ARS.
- **QL- LCR/ARS/Account Codes, Number of Services** - Designate how many services (trunk rotaries) ARS will use.
- **QL- LCR/ARS/Account Codes, Service Line Numbers** - Indicate the trunk rotary master number for each of the rotaries used by ARS. This should correspond to the EA- First Trunk in Group entry.

Centralized Attendant Service

- **CP- Allow Bell Standard for CAS (BY0:0)** - Enable this option if hub system is using Bell Standard Centralized Attendant Service. Disable this option if hub is a Datastar PBX.
- **E- Trunks, E2- Circuit Type** - Assign each tie trunk used for CAS one of the following circuit types:
 - 16 DTMF Wink Start tie line
 - 17 Dial Pulse Wink Start tie line
 - 18 DTMF Immediate Dial tie line
 - 19 Dial Pulse Immediate Dial tie line
- **E- Trunks, E2- STI Circuit Number** - Enter the STI circuit number for the tie trunk. Refer to the STI Installation and Programming Manual for charts and drawings that explain this correlation.
- **E- Trunks, E3- Class of Service** - Assign a Class of Service to the tie trunk.
- **E- Trunks, E4- Next Trunk in Outbound Rotary** - If the CAS tie trunk is part of a trunk rotary for outgoing calls, enter the number of the next trunk in the rotary
- **E- Trunks, E9- Direct Trunk Termination** - Terminate each incoming trunk (or rotary) in the satellite to a tie trunk (or tie trunk rotary) that connects to the hub.

EA- TRUNK GROUP ASSIGN. (FIRST TRUNK IN GROUP), HYBRID**Related Programming**

- Line (Trunk) Rotaries**
- **E- Extensions, E8- Line Access Options, Access To Groups 90-95 -** Allow/deny access to each of the first 6 trunk groups (90-95). You cannot program this option for trunk groups 96-98.
 - **E- Trunks, E4- Next Trunk in Outbound Rotary -** This determines the selection sequence for trunks within the rotary. Make sure the last trunk in the rotary does not loop back to the first.
 - **QF- Line Group Access (First Trunk in Group) -** Correlate the first trunk in a trunk rotary (e.g., 801) to one of nine trunk rotary numbers (90-98). The system requires this correlation when setting up trunk rotaries. Use the trunk access code (e.g., 801 or L01) that corresponds to the EA- First Trunk in Group entry.

Feature Reference

Automatic Route Selection
 Centralized Attendant Service
 Line (Trunk) Rotaries

Instructions**To enter data on the PRF:**

- Step 1 ➤** For each trunk in a rotary, enter the first trunk in the rotary on Table 5. To cancel an entry (i.e., no first trunk), enter 300.

To enter data at the programming terminal:

- Step 1 ➤** Type **EA**. You see: **EXT 300**
- Step 2 ➤** Enter the number of the trunk you want to program and press **RETURN**. You see: **FIRST LINE IN GROUP**
- Step 3 ➤** Enter data for this option from Table 5 and press **RETURN**.
 You advance to the next consecutive trunk.

E- TRUNKS

EC- CALL PICKUP GROUP

Description

Use this option to assign a trunk to a Call Pickup Group (01-23). To assign an extension to a Call Pickup Group, refer to EC (Extensions)- Call Pickup Group.

Conditions

Although this prompt appears for DID trunks, it is not used.

Default Value

Trunks not assigned to Call Pickup Groups (00).

Related Programming

None

Feature Reference

Group Call Pickup

Instructions

To enter data on the PRF:

Step 1 > Enter the Call Pickup Group number for each trunk on Table 5. To assign no group number, enter 00.

To enter data at the programming terminal:

Step 1 > Type **EC**. You see: **EXT 300**

Step 2 > Enter the trunk number you want to program and press **RETURN**. You see: **CALL PICKUP GROUP**

Step 3 > Enter data for this option from Table 5 and press **RETURN**.
You advance to the next consecutive trunk.

Description

Use this option to define the night call route for each trunk. The night route can be an extension or a ring group. The trunk uses this route when the trunk's attendant activates Night Answer. This option overrides ED- Ring Control assignments at night. It also lets night mode calls ring non-keyset extensions.

Conditions

This option does not apply to tie trunks. This option only applies to DISA trunks or a DIL when the called extension is in Do Not Disturb. Although this option appears for DID trunks, it is not used.

Default Value

Trunks do not have a Night Answer destination (i.e., destination is main attendant at 300).

**Related
Programming**

Night Answer, Assigned Night Answer

- **E- Extensions, ED- Trunk Control, Ring Control** - For each keyset, designate the ringing options for each trunk. Use the N option to have the trunk only ring the keyset at night.
- **E- Extensions, ED- Trunk Control, Access Control** - For each extension, assign access for the lines the extension should be able to answer (day or night).

Night Answer, Universal Night Answer

- **E- Extensions, ED- Trunk Control, Access Control** - An extension has UNA pickup only for trunks to which it has access. (ED- Ring Control programming has no effect on UNA answering.)
- **E- Trunks, E2- Circuit Type** - The unused trunk circuit assigned in QM below must have circuit type X.
- **E- Trunks, E9- Direct Trunk Termination** - Terminate each trunk to the main attendant (extension 300/port 00).
- **QM- Music and Relay Control, Ext Page/Night Audible Line Number** - In the large systems, indicate the unused trunk circuit that will broadcast night audible. In VS, enter Y. An incoming call will activate ringing on the night audible port if:
 - The ringing trunk is terminated (in E9) to the main attendant (extension 300)
 - The main attendant is in the night mode
- **QM- Music and Relay Control, Inhibit Audible Ring** - Enable audible ring on the night audible port.

E- TRUNKS

EI- NIGHT CALL ROUTING

Related Programming (Cont'd)

Operator Assistance

To have OPA answer the trunk...

- **E- Trunks, E9- Direct Trunk Termination** - To have OPA intercept incoming calls on a trunk day and night, enter the number of the first port on the OPA/VAU PCB. Intercept occurs after the first ring.

To configure the OPA dialing and message options...

- **CP- Inhibit OPA Transfers to Extension (BY0:1)** - Allow/deny OPA Transfers to extensions with this Class of Service.
 - **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
 - **QE- Line Gain Table** - Program the last two trunk ports of the OPA/VAU PCB for -6 dB gain.
 - **QH- OPA Configuration, OPA Group Routing** - Assign the termination (destination) for each OPA access digit (1, 2, and 4-9). Callers reach the termination when they dial the digit. The termination can be an extension, ring group or an ACD/UCD master number. The recorded messages should describe the terminations reached by these single digits. Don't assign an OPA access code to an extension with BY0:1 set (1).
 - **QH- OPA Configuration, Line n Day and Night Message** - For each trunk, indicate the message (2-7) that the caller hears after the OPA answers the trunk in the day and night modes.
- ##### To set Automatic Attendant Overflow...
- **QH- OPA Configuration, Overflow Message for Operator (1-4)** - For each operator, designate the OPA message (2-7) for overflow calls. To disable call overflow to the OPA, enter 0.
 - **QT- System Timers, OPA Overflow Ring Control** - Indicate the number of rings (3-15) before operator overflow to the OPA occurs. This pertains only to operator overflow calls.

**Related
Programming
(Cont'd)**

Voice Mail Compatibility

- **E- Extensions, E2- Circuit Type** - When connected to OPX or ASI P/N 89748, each Voice Messaging System port should have circuit type 05. When connected to ASI P/N 89749, each Voice Messaging System port should have circuit type 51.
- **E- Extensions, E5- Hunt Type** - Program each Voice Messaging System port with hunt type 06.
- **E- Extensions, EA- UCD Group Master Extension Number** - Program each Voice Messaging System port with the master number assigned in QP programming below.
- **E- Extensions, EK- Voice Mail (VX) Port** - Enable this option for each Voice Messaging System port.
- **E- Trunks, E9- Direct Trunk Termination** - For each trunk the VX Automated Attendant should answer, terminate the trunk to the Voice Messaging System master number. (See EA above.)
- **FC1- Reset System Queues** - Reset the system queues after installing the Voice Messaging System.
- **FC3- Reset VX Flag (Telephone Message Waiting Lamps)** - For a first time installation, always use this option to reset the telephone Message Waiting lamps.
- **KS- Programming Keys for Keysets** - Designate a programmable key as a Record key (type R).
- **QP- Voice Mailbox Installation, Mailbox Installed** - Enable this option if the system has a Voice Messaging System connected.
- **QP- Voice Mail Installation, Voice Messaging Master Extension** - Select one of the Voice Messaging System ports programmed in the options above as the master extension number.

Feature Reference

Night Answer
Operator Assistance

Instructions

To enter data on the PRF:

- Step 1 ➤ For Assigned Night Answer, enter the night call route for each trunk on Table 5. To use the ED (Extensions)- Ring Control programming instead, enter 300.

To enter data at the programming terminal:

- Step 1 ➤ Type EI. You see: **EXT 300**
- Step 2 ➤ Enter the trunk number you want to program and press RETURN. You see: **NIGHT CALL TO EXT**
- Step 3 ➤ Enter data for this option from Table 5 and press RETURN.
You advance to the EI- Tandem Trunk option for this trunk.

E- TRUNKS EI- TANDEM TRUNK

Description

Use this option to enable Tandem Trunking capability for a trunk. Remember, only one of the trunks on a Tandem Call must have this option enabled.

Conditions

- a. This option only applies to CO trunks.
- b. Tandem Trunking requires either loop start trunks with disconnect supervision or ground start trunks.

Default Value

Tandem trunking disabled (N).

Related Programming

None

Feature Reference

Tandem Trunk

Instructions

To enter data on the PRF:

- Step 1 > Enable (Y) or disable (N) Tandem Trunking for each trunk on Table 5.

To enter data at the programming terminal:

- Step 1 > After programming EI- Night Call Routing, you see: **TANDEM OK**
Step 2 > Enter data for this option from Table 5 and press **RETURN**.
You advance to the EI- Night Call Routing for the next trunk.

E- TRUNKS EJ- TOLL RESTRICTION

Description

Use this option to enable/disable Toll Restriction for each trunk. This only applies to Toll Restriction programmed using the AP- Toll Restriction and CP- Class of Service options. It does not apply to LCR and ARS.

Conditions

This option only applies to CO trunks. Although this option appears for DID trunks, it is not used.

Default Value

Toll Restriction enabled (Y).

Related Programming

Toll Restriction

- **AI- Initialize Toll Restriction** - Initialize Toll Restriction before programming.
- **AP- Toll Level** - Enter the Toll Level you want to program.
- **AP- Allow Active Dial Pad** - Enable/disable continued dialing for this Toll Level (see Special Services and OCC Compatibility).
- **AP- Allow Special Access (N11) Dialing** - Enable/disable N11 and 1+N11 dialing for this Toll Level.
- **AP- Allow Outside Operator (0+) Dialing** - Enable/disable outside operator dialing for this Toll Level.
- **AP- Allow International Dialing** - Enable/disable direct international dialing for this Toll Level.
- **AP- Allow Equal Access** - Enable/disable Equal Access Dialing for this Toll Level (see Equal Access Compatibility). Also, program the Equal Access Codes table.
- **AP- Allow 1 + NNX Dialing** - Enable/disable long distance exchange calls for this Toll Level. Also, program the 1 + NNX codes table.
- **AP- Allow NNX Dialing** - Enable/disable local exchange (NNX) dialing for this Toll Level. Also, program the NNX codes list.
- **AP- Allow NPA Dialing** - Enable/disable area code (NPA) dialing for this Toll Level. Also, program the NPA codes list.
- **AP- Six Digit Analysis** - Enable/disable six-digit analysis for this Toll Level. Also, program a six-digit analysis table.
- **CP- Allow Only Intercom Calls at Night (BY0:2)** - At night, extensions with this option enabled can only place Intercom calls. This assignment overrides AP programming.
- **CP- Allow Only Local Calls at Night (BY1:4)** - At night, extensions with this option enabled can place Intercom calls and local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).
- **CP- Allow Only Local Calls (Day or Night) (BY1:3)** - Extensions with this option enabled can only place Intercom calls or local outside calls. This assignment overrides AP programming (except AP- Allow Active Dial Pad).
- **CP- Extension Toll Restriction Level (BY1:1)** - Assign a toll restriction level (0-7) to a Class of Service.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.

E- TRUNKS EJ- TOLL RESTRICTION

Feature Reference

Toll Restriction

Instructions

To enter data on the PRF:

- Step 1 ► Enable (Y) or disable (N) Toll Restriction for each trunk on Table 5.

To enter data at the programming terminal:

- Step 1 ► Type EJ. You see: **EXT 300**
- Step 2 ► Enter the trunk number you want to program and press **RETURN**. You see:
TOLL RESTRICT
- Step 3 ► Enter data for this option from Table 5 and press **RETURN**.
You advance to the next consecutive trunk.

E- TRUNKS EL- LOOP NUMBER (ONYX IV)

Description

Use this option to assign trunks to one of four loop numbers (1-4). Trunks ring the Attendant Console loop keys according to the trunk loop number and the loop key loop number. See Related Programming below. This option only applies to ONYX IV.

Conditions
None

Default Value
No loop number assigned (0). Trunks ring the 0 loop keys (if any).

Related Programming

Attendant Console

To program Loop Keys...

- **QC- Operator Programming, Loop Keys** - Assign each console loop key a loop number (1-4). Trunks ring their associated loop key. For example, if you enter 1 for **QC- LOOP KEY #1** and **EL- LOOP NUMBER** for trunk 1, trunk 1 rings loop key 1. All trunks without a loop number ring the 0 loop key, if there is one. If there is no 0 loop key, the trunks without a loop number ring the INT key.
- **QC- Operator Programming, Outloop Keys** - For outgoing calls, correlate each loop key to a trunk group. This option assigns a trunk group (90-98) to each of the five loop keys. Refer to the Line (Trunk) Rotaries feature when programming trunk groups.

To program the Attendant Console Programmable Keys...

- **QC- Operator Programming, DSS Keys** - Program the DSS Console programmable keys.
- **To set additional Attendant Console programming...**
- **E- Extensions, E2- Circuit Type** - Assign the Attendant Console circuit type 06. You must do this for each console -- the console doesn't auto-ID.
- **QC- Operator Programming, Operator Extensions** - Designate the console extension as an attendant.

Feature Reference

Attendant Console

Instructions

To enter data on the PRF:

- Step 1 ➤ For each trunk on Table 5 that should ring an Attendant Console loop key, enter a loop number (1-4). Enter 0 for no loop number.

To enter data at the programming terminal:

- Step 1 ➤ Type **EL**. You see: **EXT 300**
- Step 2 ➤ Enter the trunk number you want to program and press **RETURN**. You see:
LOOP #
- Step 3 ➤ Enter data for this option from Table 5 and press **RETURN**.
You advance to the next consecutive trunk.

Description

Use this option to set the priority for trunks queued for busy Automatic Call Distribution groups. The range is 00 (lowest priority) to 99 (highest priority). When an agent becomes free, the higher priority trunks are answered first. If waiting trunks have the same priority, ACD accepts calls FIFO (first in queue - first out of queue).

This option only applies to ONYX IV.

Conditions

None

Default Value

00 (lowest priority)

**Related
Programming**

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ONYX IV)

Instructions

To enter data on the PRF:
Step 1 ► For EP- Priority (ACD) on Table 5, enter a priority (00-99).

To enter data at the programming terminal:
Step 1 ► Type EP. You see: **EXT 300**
Step 2 ► Enter the trunk number you want to program and press **RETURN**. You see:
PRIORITY
Step 3 ► Enter data for this option from Table 5 and press **RETURN**.
You advance to the next consecutive trunk.

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F- MISCELLANEOUS SYSTEM DATA

F- EPROM CHECKSUMS

Description

Use this option to display the software EPROM (memory circuit) checksums. The checksums provide a quick check of the software version of each memory circuit. Your service technician may ask for this information. Note that HD-System Status Display shows the software level of the Line/Trunk PCBs, SIM PCBs and STIs.

In the large systems, this option displays the checksums of the EPROMS in the software cartridge.
In a 56x120 or 72x180 system, this option displays the checksums in the main cabinet cartridge only. In VS, this option displays the checksums for the EPROMS in the main CEU software cartridge.

Conditions

None

Default Value

The checksums depend on the software version installed in your system.

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities

Instructions

Step 1 >

To enter data on the PRF:

No entry required.

Step 1 >

To enter data at the programming terminal:

Type **F** and press **RETURN**. The following shows a sample EPROM checksum printout. Your system may be different than the example below.

EPROM	CHECKSUM
U1	DCAA
U2	F2E2
U3	E093
U4	N/A (ONYX IV only)
U5	BDA6

You return to the main menu after the checksums print.

F- MISCELLANEOUS SYSTEM DATA

FC1- RESET SYSTEM QUEUES

Description

Use this option to initialize (reset) the system queue elements. (HC- System. Queues lists these elements.) This option's primary use is to initialize the queue elements of each ACD/UCD group, based on the order defined in programming.

You should reset the system queues after you:

- Complete system installation programming
- Add an extension to an ACD or UCD group
- Install or change your Voice Messaging System programming

Conditions

None

Default Value

None

Related Programming

Automatic Call Distribution

- **CP- ACD Supervisor Keyset (BY2:6)** - Set the Supervisor Keyset bit for the supervisor's extension.
- **E- Extensions, E2- Circuit Type** - Program the master extension number with type X (uninstalled). The master extension must be a port that has no phone connected to it.
- **E- Extensions, E3- Class of Service** - Assign a unique COS with BY2:6 set for the supervisor's extension.
- **E- Extensions, E5- Hunt Type** - Assign hunt type 06 to:
 - Each member agent in the ACD group.
 - The ACD group master extension.*Make sure the supervisor extension has hunt type 00. The supervisor should never be an ACD group member.*
- **E- Extensions, EA- UCD Group Master Extension Number** - Assign the master extension number to:
 - Each member agent
 - The supervisor extension
 - The ACD group master extension

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Extension Hunting, UCD

- **E- Extensions, E2- Circuit Type** - Program the master extension number with type X (uninstalled). The master extension must be a port that has no phone connected to it.
- **E- Extensions, E4- Next Extension in Hunt Group** - For the master extension number only, use this option to designate the Overflow Destination.
- **E- Extensions, E5- Hunt Type** - Enter a hunt type for each member of the hunting group and the master extension number. The choices are:
 - 00 Extension not in a hunt group
 - 04 UCD hunting with no overflow and no group busy voice message
 - 05 UCD hunting with overflow and no group busy voice message
 - 06 UCD hunting with overflow and group busy voice message

F- MISCELLANEOUS SYSTEM DATA FC1- RESET SYSTEM QUEUES

Related Programming

- **E- Extensions, EA- UCD Group Master Extension Number** - Assign the master extension number to each group member and the master extension number.
- Voice Mail Compatibility**
- **E- Extensions, E2- Circuit Type** - Each OPX and ASI P/N 89748 Voice Messaging System port should have circuit type 05. Each ASI P/N 89749 Voice Messaging System port should have circuit type 51.
- **E- Extensions, E5- Hunt Type** - Program each Voice Messaging System port with hunt type 06.
- **E- Extensions, EA- UCD Group Master Extension Number** - Program each Voice Messaging System port with the master number assigned in QP programming below.
- **E- Extensions, EK- Voice Mail (VX) Port** - Enable this option for each Voice Messaging System port.
- **E- Trunks, E9- Direct Trunk Termination** - For each trunk the VX Automated Attendant should answer, terminate the trunk to the Voice Messaging System master number. (See EA above.)
- **E- Trunks, EI- Night Call Routing** - For each trunk the VX Automated Attendant should answer at night, terminate the trunk to the master number (see EA above). For this application, make sure the E9 entry is 300.
- **FC3- Reset VX Flag (Telephone Message Waiting Lamps)** - For a first time installation, always use this option to reset the telephone Message Waiting lamps.
- **KS- Programming Keys for Keysets** - Designate a programmable key as a Record key (type R).
- **QP- Voice Mailbox Installation, Mailbox Installed** - Enable this option if the system has a Voice Messaging System connected.
- **QP- Voice Mail Installation, Voice Messaging Master Extension** - Select one of the Voice Messaging System ports programmed in the options above as the master extension number.

Feature Reference

Automatic Call Distribution
Automatic Call Distribution (ONYX IV)
Extension Hunting
System Reports, Diagnostics and Maintenance Utilities (HC Report)
Voice Mail Compatibility

Instructions

- To enter data on the PRF:**
- Step 1 ➤ No entry required.

- To enter data at the programming terminal:**
- Step 1 ➤ Type FC. You see: **FC-CMD**
 - Step 2 ➤ Type 1. You see: **** DONE ****
You return to the Main Menu.

F- MISCELLANEOUS SYSTEM DATA

FC2- RESET TRUNK CIRCUITS AND LINE/TRUNK PCBs

FC2- RESET REMOTE KSU FAIL COUNTERS (VS ONLY);

Description

In the large systems, this option is **FC2- RESET TRUNK CIRCUITS AND LINE TRUNK PCBs**. Use this command to reset the fail counters for trunks and Line/Trunk PCBs. The system shows the fail count as part of HD- System Status Display. Resetting the fail counters establishes a reference point to which you can compare future events.

Use this command after you:

- Complete the initial system programming
- Reset or replace any PCB
- Correct any problems detected and reported by the system for any trunk

In VS, the option is **FC2- RESET REMOTE KSU FAIL COUNTERS**. Use this command to reset the **HD- SYSTEM STATUS DISPLAY** fail counters for the expansion CEU. You would use this command after you complete the VS initial system programming.

Conditions

None

Default Value

None

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities (HD Report)

Instructions

To enter data on the PRF:
Step 1 > No entry required.

To enter data at the programming terminal:
Step 1 > Type FC. You see: **FC-CMD**
Step 2 > Type 2. You see: **** DONE ****
You return to the Main Menu.

F- MISCELLANEOUS SYSTEM DATA

FC3- RESET VX FLAG (TELEPHONE MESSAGE WAITING LAMPS)

Description

Use this option to update the status of each extension's Message Waiting LED. This option only applies if the system is connected to an integrated Voice Messaging System. Use this command once you complete installation and programming of the Voice Messaging System.

Conditions

This option only applies to systems with an integrated Voice Messaging System.

Default Value

None

Related Programming

Voice Mail Compatibility

- **E- Extensions, E2- Circuit Type** - Each OPX and ASI P/N 89748 Voice Messaging System port should have circuit type 05. Each ASI P/N 89749 Voice Messaging System port should have circuit type 51.
- **E- Extensions, E5- Hunt Type** - Program each Voice Messaging System port with hunt type 06.
- **E- Extensions, EA- UCD Group Master Extension Number** - Program each Voice Messaging System port with the master number assigned in QP programming below.
- **E- Extensions, EK- Voice Mail (VX) Port** - Enable this option for each Voice Messaging System port.
- **E- Trunks, E9- Direct Trunk Termination** - For each trunk the VX Automated Attendant should answer, terminate the trunk to the Voice Messaging System master number. (See EA above.)
- **FC1- Reset System Queues** - Reset the system queues after installing the Voice Messaging System.
- **KS- Programming Keys for Keysets** - Designate a programmable key as a Record key (type R).
- **QP- Voice Mailbox Installation, Mailbox Installed** - Enable this option if the system has a Voice Messaging System connected.
- **QP- Voice Mail Installation, Voice Messaging Master Extension** - Select one of the Voice Messaging System ports programmed in the options above as the master extension number.

Feature Reference

System Reports, Diagnostics and Maintenance Utilities
Voice Mail Compatibility

Instructions

- To enter data on the PRF:**
- Step 1 ➤ No entry required.

- To enter data at the programming terminal:**
- Step 1 ➤ Type FC. You see: **FC-CMD**
- Step 2 ➤ Type 3. You see: **** DONE ****
You return to the Main Menu.

F- MISCELLANEOUS SYSTEM DATA

FC4- RESET ALL KEYSSET FEATURE KEYS

Description

Use this command to reset the system memory used for Centrex feature key (programmed in KS- Programmable Keys for Keysets). You would normally do this before programming Centrex feature keys. You could also do this before redefining Centrex feature keys system-wide. FC4 changes the key definition to UNDEFINED for each Centrex feature key on each keyset.

Conditions

This option only applies to Centrex feature keys on keysets.

Default Value

None

Related Programming



Centrex Compatible Feature Keys

KS- Programming Keys for Keysets - Assign keys as Centrex keys. For Centrex keys, the system requests a trunk number before you enter the Centrex code.

Feature Reference

Centrex Compatible Feature Keys

System Reports, Diagnostics and Maintenance Utilities

Instructions

Step 1 ➤

To enter data on the PRF:

No entry required.

To enter data at the programming terminal:

This option uses password level 2.

Step 1 ➤

Type FC. You see: **FC-CMD**

Step 2 ➤

Type 4. You see: **** DONE ****

You return to the Main Menu.

F- MISCELLANEOUS SYSTEM DATA

FL- LCR CONFIGURATION

Description

If your system has LCR, use this option to show a description of the configuration. Following is an example of an LCR Description. Your description will be different than that shown below.

```
NITSUKO AMERICA
SALES ORDER NO. 87071

COMPILED      CONFIGURED
16-MAR-89     16-MAR-89

HOME NPA/COC: 508/528
ATTDDD: 508/528
ATTFX1: 617/364
ATTFX2: 401/728
ATTWO : 508/528
```

Conditions
None

Default Value
None

Related Programming

Refer to the Least Cost Routing Feature

Feature Reference

Refer to the Least Cost Routing Feature

Instructions

To enter data on the PRF:

Step 1 > No entry required.

To enter data at the programming terminal:

Step 1 > Type FL. Your LCR Configuration example displays.

**F- MISCELLANEOUS SYSTEM DATA
FL- LCR CONFIGURATION**

- For Your Notes -

Description

Use the GA option to program the Automatic Route Selection routing options. The GA option is explained in Appendix A, Automatic Route Selection.

Conditions

This option only applies to systems with Automatic Route Selection.

Default Value

Refer to Appendix A.

Related Programming

Automatic Route Selection

- **E- Trunks, E4- Next Trunk in Outbound Rotary** - ARS requires outbound trunk rotaries. This prompt determines the selection sequence for trunks within each rotary.
- **E- Trunks, E7- Trunk Service Number** - Assign a Service Number to each trunk used for ARS. ARS routes calls to Service Numbers, not individual trunks.
- **E- Trunks, EA- Trunk Group Assignment (First Trunk in Group)** - Group trunks in rotaries by assigning each one the same First Trunk in Group number.
- **QL- LCR/ARS/Account Codes, LCR or ARS Enable** - Enter 2 to enable ARS.
- **QL- LCR/ARS/Account Codes, Number of Services** - Designate how many services (trunk rotaries) ARS will use.
- **QL- LCR/ARS/Account Codes, Service Line Numbers** - Indicate the trunk rotary master number for each of the rotaries used by ARS. This should correspond to the **EA- First Trunk in Group** entry.

Feature Reference

Automatic Route Selection

Instructions

To enter data on the PRF:
Step 1 ➤ Refer to Appendix A.

To enter data at the programming terminal:
Step 1 ➤ Type GA. You see:

```
D= DISPLAY
M= CONFIGURE
I= INITIALIZE
S= SHORT
V= VERBOSE
E= EXIT
```

```
ARS>
```

Refer to Appendix A for the specifics.

GL- LCR TESTING

Description

Use this option to run the Least Cost Routing test program. The GL option lets you display your current LCR configuration and make changes to your LCR database. You can also use this option to test your LCR routing. Consult with your service technician before running this program.

Conditions

This option only applies to systems with Least Cost Routing.

Default Value

None

Related Programming

Least Cost Routing

- **E- Trunks, E7- Trunk Service Number** - Assign a Service Number to all trunks used for LCR. LCR routes calls to Service Numbers, not individual trunks.
- **QL- LCR/ARS/Account Codes, LCR or ARS Enable** - Enter 1 to enable LCR.
- **QL- LCR/ARS/Account Codes, Number of Services** - Designate how many services (trunk rotaries) LCR will use.
- **QL- LCR/ARS/Account Codes, Service Line Numbers** - Indicate the trunk rotary master number for each of the rotaries used by LCR. This should correspond to the **EA- First Trunk in Group** entry.
- **QL- LCR/ARS/Account Codes, COS Needed to Access ALT Route** - Enter the minimum COS that the system requires before routing a call to the alternate route (if primary route is busy).
- **QL- LCR/ARS/Account Codes, Type of Service** - Enter the type of service number (0-5). For example, for DDD or WATS, enter 0.
- **QL- LCR/ARS/Account Codes, Access Code** - For dial-up services, enter the access code (telephone number) for the service.
- **QL- LCR/ARS/Account Codes, Security Code** - For dial-up services, enter the security code the service requires.

Feature Reference

Least Cost Routing

Instructions

Step 1 > To enter data on the PRF:
No entry required

Step 1 > To enter data at the programming terminal:
Type GL. You see:

```
LCR TEST PROGRAM
A=MENU
E=MODIFY NEAREST NPA DETAIL TABLES (ROUTE #)
F=MODIFY 161 NPA TABLES (ROUTE #)
L=DATABASE ASCII DESCRIPTOR
M=CONFLICT, LEADING 1, SEARCH DATA
N=DISPLAY 161 NPA TABLES
O=DISPLAY NEAREST NPA DETAIL TABLES
P=DDD COST RATING TABLES
Q=ROUTE SELECTION TABLES
R=TEST LCR SELECTIONS
/=RETURN TO LCR-> PROMPT
```

LCR->

Consult with your service technician for the specifics.

GL- LCR TESTING

- For Your Notes -

H- SYSTEM STATUS REPORTS

HA- EXTENSION-TO-PORT CONVERSION

Description

Use this option to list the number of the extension or trunk assigned to each port. The HA option displays in extension/trunk number order.

Note: To display the assignment in port number order, use the HB option. Use the HH option to display extension/trunk-to-port conflicts.

Conditions

None

Default Value

Each extension/trunk is offset from its port number by 300. For example, extension 310 has port number 10.

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities

Instructions

To enter data on the PRF:

Step 1 ► No entry required.

To enter data at the programming terminal:

Step 1 ► Type H. You see: H-CMD>

Step 2 ► Type A. Following is a partial HA display, showing the default assignments. Your system may have different extension/port assignments.

12/15/89 16:41:43

```
EXTENSION #-PORT #
300- 00 301- 01 302- 02 303- 03 304- 04 305- 05 306- 06 307- 07 308- 08 309- 09
310- 10 311- 11 312- 12 313- 13 314- 14 315- 15 316- 16 317- 17 318- 18 319- 19
320- 20 321- 21 322- 22 323- 23 324- 24 325- 25 326- 26 327- 27 328- 28 329- 29
330- 30 331- 31 332- 32 333- 33 334- 34 335- 35 336- 36 337- 37 338- 38 339- 39
340- 40 341- 41 342- 42 343- 43 344- 44 345- 45 346- 46 347- 47 348- 48 349- 49
350- 50 351- 51 352- 52 353- 53 354- 54 355- 55 356- 56 357- 57 358- 58 359- 59
```

You return to the Main Menu.

H- SYSTEM STATUS REPORTS

HB- PORT-TO-EXTENSION CONVERSION

Description

Use this option to list the number of the extension or trunk assigned to each port. The HB option displays in port number order.

Note: To display the assignment in extension/trunk number order, use the HA option. Use the HH option to display extension/trunk-to-port conflicts.

Conditions
None

Default Value
Each extension/trunk is offset from its port number by 300. For example, extension 310 has port number 10.

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities

Instructions

To enter data on the PRF:

Step 1 ► No entry required.

To enter data at the programming terminal:

Step 1 ► Type H. You see: H-CMD>

Step 2 ► Type B. Following is a partial HB display, showing the default assignments. Your system may have different extension/port assignments.

12/21/89 09:07:57

PORT #-EXTENSION #									
00-300	01-301	02-302	03-303	04-304	05-305	06-306	07-307	08-308	09-309
10-310	11-311	12-312	13-313	14-314	15-315	16-316	17-317	18-318	19-319
20-320	21-321	22-322	23-323	24-324	25-325	26-326	27-327	28-328	29-329
30-330	31-331	32-332	33-333	34-334	35-335	36-336	37-337	38-338	39-339
40-340	41-341	42-342	43-343	44-344	45-345	46-346	47-347	48-348	49-349

H- SYSTEM STATUS REPORTS

HC- SYSTEM QUEUES

Description

Use this option to display the status of the system queue elements. A queue element associates an extension or trunk with call states (e.g., Callback and Camp-On). The HC option displays the status of the queues at the moment you request the report.

When you request the HC report, the system:

- Lists the total number of available queue elements
- Shows the type of queue
- Identifies those extensions or trunks currently in queue

System	Total queue elements
VS	63
12x36 & 32x60	127
56x120/72x180	252

Note: Use the FC1 option to initialize the queue elements. Refer to F-Miscellaneous System Data, FC1- Reset System Queues for more information.

The following table shows some common HC reports.

This report...

Means ...

FREE Q:127

There are 127 free queues (none currently in use).

CAMP ON Q
EXT # 350
07: 308
ELEMENTS USED: 01

Extension 350 has extension 308 Camped onto it. The system is using one queue element (07) for this queue.

UCD Q
EXT # 340
03: 304
02: 323
01: 302
ELEMENTS USED: 03

Extension 340 is the master extension number for this UCD hunt group. Extension 304, 323 and 302 are members of the group. The system assigns queue elements 01-03 to these extensions. The extension listed first (304) will receive the next call to the UCD group. The system then places it at the bottom of the list. This extension may or may not retain its current queue element number (03).

EXT # 396
06: 398
05: 397
04: 396
ELEMENTS USED: 03

Trunk 396 is the first trunk in a trunk rotary. Trunks 398, 397 and 396 are trunks in this rotary. The system assigns these trunks to queue elements 06, 05 and 04, respectively. The queue provides immediate recognition by the system when no trunks in the group are available. There is no significance to the order of the trunks in the list.

CALL BACK Q
EXT # 396
09: 315
ELEMENTS USED: 01

Extension 315 has placed a Callback request for trunk 396. The extension Callback report looks the same.

CALL Q
LIST # 01
08: 316
ELEMENTS USED: 01

Extension 316 is calling an operator. The system associates queue element 08 with this extension.

H- SYSTEM STATUS REPORTS

HC- SYSTEM QUEUES

<u>Description (Cont'd)</u>	<u>This report...</u>	<u>Means ...</u>
	CAMP ON Q EXT # 350 07: 308 ELEMENTS USED: 01	Extension 350 has extension 308 camped-on to it.
	HOLD Q EXT # 315 10: 397 ELEMENTS USED: 01	Trunk 397 is on Transfer Hold (not key Hold) at extension 315.
	MESSAGE Q EXT # 322 11: 320 ELEMENTS USED: 01	Extension 320 has left a Message Waiting at extension 322.
	OUT Q LIST # 01 12: 396 ELEMENTS USED: 01	Trunk 396 is in use on an outside call.
	RING Q LIST # 01 13: 310 ELEMENTS USED: 01	Extension 310 is ringing another extension.
	<i>Conditions</i> None	
	<i>Default Value</i> An idle VS system has 63 queue elements - all of which are available. An idle 12x36 or 32x60 system has 127 queue elements - all of which are available. An idle 56x120 or 72x180 system has 252 queue elements - all of which are available.	
<u>Related Programming</u>	None	
<u>Feature Reference</u>	System Reports, Diagnostics and Maintenance Utilities	

H- SYSTEM STATUS REPORTS HC- SYSTEM QUEUES

Instructions

To enter data on the PRF:

Step 1 > No entry required.

To enter data at the programming terminal:

Step 1 > Type H. You see: H-CMD>

Step 2 > Type C. Following is a sample HC display.

```
12/21/89 09:56:17
```

```
FREE Q: 250
```

```
OUT Q
```

```
LIST # 01
```

```
03: 480
```

```
ELEMENTS USED: 01
```

```
CAMP-ON Q
```

```
EXT # 304
```

```
02: 305
```

```
ELEMENTS USED: 01
```

```
TOTAL ELEMENTS: 252
```

H- SYSTEM STATUS REPORTS

HD- SYSTEM STATUS

Description

Use this option to display call activity at each trunk and extension and the status of every line/trunk PCB in the system. The HD option displays the system status at the moment you request the report. If there is no call activity or line/trunk PCB problem to report, the report is blank. Be sure to set the system time before using this report (refer to the Time and Data setting feature).

When you request the HD report, the system lists the:

- Call activity at each extension and trunk
- Status of each line/trunk PCB (large systems), or Status of the expansion CEU (VS)

Following is a sample 72x180 HD report, divided into two parts: Extension/trunk Activity and PCB Status:

Part 1: Extension/Trunk Activity

01/30/90 15:43:00

HYBRID SYSTEM STATUS

300 TALK	307
305 DATA CALL	311
306 TALK	480
307 TALK	300
311 DATA CALL	305
480 TALK	306

This part of the report shows that:

- Extension 300 is talking on the Intercom to 307
- Data Port 305 is on a data call with Data Port 311
- Extension 306 is on an outside call with trunk 480

Part 2: PCB Status

SYSTEM CARD STATUS:

	PREVIOUS	CURRENT	SW REV
MAIN CABINET			
SIM 0	OK	OK	01
LINE 1	OK	OK	04
LINE 2	OK	10	03
LINE 3	OK	OK	01
LINE 4	NOT INSTALLED		
LINE 5	NOT INSTALLED		
LINE 6	NOT INSTALLED		
LINE 7	NOT INSTALLED		
STI BOX 1	NOT INSTALLED		
STI BOX 2	NOT INSTALLED		
STI BOX 3	NOT INSTALLED		
STI BOX 4	NOT INSTALLED		

EXPANSION CABINET #1

SIM 0	NOT INSTALLED
LINE 1	NOT INSTALLED
LINE 2	NOT INSTALLED
LINE 3	NOT INSTALLED
LINE 4	NOT INSTALLED
LINE 5	NOT INSTALLED
LINE 6	NOT INSTALLED
LINE 7	NOT INSTALLED

H- SYSTEM STATUS REPORTS

HD- SYSTEM STATUS

Description (Cont'd)

EXPANSION CABINET #2		
SIM	0	NOT INSTALLED
LINE	1	NOT INSTALLED
LINE	2	NOT INSTALLED
LINE	3	NOT INSTALLED
LINE	4	NOT INSTALLED

This part of the report shows that:

- The SIM PCB reports no failures and has software version 01
- The first line/trunk PCB reports no previous or current failures and has software version 04
- The second line/trunk PCB reports no previous failures but has 10 current failures (see Note below). This PCB has software version 03.
- The fourth line/trunk PCB reports no failures and uses software version 01
- There are no additional line/trunk PCBs or STI units installed in any of the three cabinets

Note: Whenever a failure occurs, the failure counter increments. If a user then accesses the trunk successfully, the system clears the counter. (The system also clears the counter at midnight.) The report no longer shows the previously failed trunk. When the counter reaches five (05), the system issues a Minor Alarm. If the counter reaches 10, HD shows the PCB as failed and issues a major alarm.¹ Trunk failures can be the result of:

- A defective PCB
- Problems with the CO which prevent seizure (e.g., an open trunk)

After the service technician corrects the PCB or trunk problem, HD shows the PCB as OK in the **Current** column. The **Previous** column shows FAILED. To reset the **Previous** column to OK, use FC2- Reset Trunk Circuits and Line/Trunk PCBs.

The following chart shows the extension/trunk call states.

¹ The system resets the HD "Current" column to 0 every night at midnight.

H- SYSTEM STATUS REPORTS

HD- SYSTEM STATUS

Description (Cont'd)

Call States (Page 1 of 3)

ABANDONED	Being abandoned
ABORT CAL	Reorder
ACC CODE2	Get Account Code (Stage 2)
ALERT	Being alerted
ALERT CH2	Second channel is being alerted
ALRM DISP	Displaying alarm data
AQR OP DG	Acquiring Off-Premises CFWD telephone #
AQR SD DG	Acquire digit from Speed Dial bin
AQR SD LN	Acquire trunk from Speed Dial bin
B-IN ALRT	Break-in alert tone
BEING HLD	On Hold at another extension
BSY REACT	Reaction to busy
BUSY	Busy
BUSY LINE	Mandatory busy for trunk
CALL BACK	Callback reminder, calling back
CALL EXT1	Dialed 1st digit of extension number
CALL EXT2	Dialed 2nd digit of extension number
CALL OPER	Dialing Operator
CALL OUT	Calling out
CALL PKUP	Directed Call pickup
CAMPNG ON	Waiting for destination to become free
CAS TONE	Centralized Attendant service tone
CHAN 2 HF	Handsfree call on second channel
CHECK MSG	Checking Message Waiting queue
CHECK STA	Extension number voice message
DATA CALL	Data call
DEAD	Port out of sync
DG TALKER	Receiving announcement from digitalker (e.g., "Vacant Number")
DGT ABSRB	Absorb first digit dialed
DIAL PAUS	Pause during dialing
DIAL REPT	Dial repeating
DIALTONE	Receiving Intercom dial tone
DIGTALKER	Receiving announcement from digitalker (e.g., "This Is Station 316")
DISA	Direct System Access
DLY VXTLK	Delay talk state for voice mailbox port
DT DETECT	Detecting dial tone from CO
DUMP LINE	Dumping trunk
END CH2	End talk with second channel
END DATA	Abort data call
END TALKG	End talking
EXIT CONF	Secede from conference

H- SYSTEM STATUS REPORTS

HD- SYSTEM STATUS

Description (Cont'd)

Call States (Page 2 of 3)

FLASHED Flashed a trunk
FLASHING Flashing a trunk
FORWARD Test for Forwarding
FTRE MODE Feature mode (*' key struck)

GET A/C 1 Get Account Code (stage 1)
GET BUFF Waiting for dial buffer
GET ROUTE Route call based on cost data
GROUP CAL Group call
GRP RUNG Being rung by group call
HEAR CRER Listening (hear) to carrier
HF TO CH2 Handsfree call to second channel
HK DEBNCE Hook switch debounce
HOLD PAUS Hold pause [OPX]

IDLE Idle state
IN CONF Conference call
IN ORBIT Being parked in orbit

KEY HOLD Key type Hold
KEY RING Line key ringing at station

LCR CALL LCR call in progress
LEAD TONE Listen to handsfree leadtone
LINE ACC Special trunk access
LINE PKUP Line pickup
LN GP RNG Line assigned to group ring
LN WT DT Line waiting for dial tone

MONIT DAT Monitor data call

NITE RING Line key ringing at station (operator in night mode)
NXT RDOWN Get next ringdown extension digit

OFF-P FWD Being forwarded off-premises
OPER CALL Station calling operator
OPX HOLDC OPX attempt to Hold Conference
ORBIT ACC Orbit access
OTHER CH2 Talking with other extension's second channel
OUT DIGIT Output digit [trunk]
OUT SERV Out of service
OUT SYNC Waiting to sync

PAGING Paging
PG FWDOPR Programming FWD to operator
PG FWDSTA Programming Call Forward to destination station
PG FWDTYP Programming type of Call Forward
PG OP-FW1 Program Off-Premises CFWD (Part 1)
PG OP-FW2 Program Off-Premises CFWD (Part 2)
PG RING Programming pickup key ringer option

H- SYSTEM STATUS REPORTS

HD- SYSTEM STATUS

Description (Cont'd)

Call States (Page 3 of 3)

PG SQUARE	OPR programming key system (keysets)
PG STA SD	Programming station Speed Dial
PG SYS SD	Programming System Speed Dial
PREP DEST	Prepare destination
PROG DSS1	Programming a DSS key (Step 1)
PROG DSS2	Programming a DSS key (Step 2)
PROG MODE	Programming ('#' key struck)
REORDER	Reorder
RING EXT	Ringing other extension
RINGBACK	Station being rung because of Callback request
RINGING	Being rung
RSRVD MDM	Modem is reserved
RTRY SRCH	Search for free trunk
SET DATE	Set date
SET TIME	Set hour, minute, and second
SP LN ACC	Special trunk access
SRCH BUFF	Searching for dial buffer
STA SPEED	Dialing station Speed Dial number
START HF	Start Handsfree call
START HLD	Being exclusively held
START LN	Start trunk call
START RNG	Start ringdown
STRT GP R	Start group ring
SYS SPEED	System Speed Dial being accessed
TALK	In talking state
TERMINATE	Terminate call
TFR ORBIT	Transfer call to orbit
TIME CHCK	Time request (part 1) voice message
TIMED CMP	Timed Camp-on
TRANSFER	Being transferred
WAIT BUFF	Waiting for a free dial buffer
WAIT BUSY	Awaiting busy destination
WAIT CONF	Wait to join Conference
WAIT DCDR	Waiting for a free tone decoder
WAIT HUNT	Waiting to hunt [UCD]
WAIT LINE	Waiting for trunk selection
WAIT MODM	Waiting for answer from modem trunk
WAIT ONHK	Waiting for trunk to go on hook
WARN DND	Warning that destination is in Do Not Disturb mode
WT ANNCE	Waiting for digitalker announcement
WT DT DET	Search for a dial tone detection port
WT HANGUP	Waiting for telephone to be on hook
WT OTH DT	Detecting dial tone for other port
WT TO CAL	Waiting for trunk to respond

H- SYSTEM STATUS REPORTS HD- SYSTEM STATUS

Description (Cont'd)

Conditions

None

Default Value

None

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities

Instructions

To enter data on the PRF:

Step 1 > No entry required.

To enter data at the programming terminal:

Step 1 > Type H. You see: H-CMD>

Step 2 > Type D. You see the System Status Report.

H- SYSTEM STATUS REPORTS

HE- TRAFFIC MANAGEMENT SUMMARY

Description

Use this option to display the Traffic Management (TMS) report. This report summarizes extension and trunk call activity. It is cumulative -- it always adds new events to the existing report. The data does not clear when you run the report. The report only includes installed extensions and trunks. In addition, the report only includes an extension or trunk that has had call activity since you last cleared the report.

Note: Use HF- Traffic Management (Data Cleared) to clear the data from the TMS report.

Following is an ONYX VS/II/III sample TMS report.

TRAFFIC MANAGEMENT REPORT COLLECTED SINCE:

PAGE	NUMBER OF CALLS			TIME IN USE	OFF-DUTY	
	STA	INCOMING	ANSWERED		OUTGOING	DURATION	NO. OF TIMES
1						
	300	3	3	1	00:00:35	00:00:00
	304	0	0	7	00:02:26	00:00:00
	305	0	19	12	06:11:28	00:00:00
	306	1	3	7	00:05:23	00:00:01
	307	2	3	1	00:03:29	00:00:00
	308	1	2	14	00:02:41	00:00:00
	309	0	9	0	00:01:18	00:00:00
	310	0	0	5	00:00:21	00:00:00
	311	0	12	1	06:10:07	00:00:00

LINE	NO. RCVD	INCOMING CALLS			CALLS ABANDONED	CALLS OUTGOING	TIME IN
		ANSRD	LONG WAIT	TRMNATD			
801	1	1	0	0	0	4	00:04:19
804	1	1	0	0	0	0	00:02:40

MASTER EXT: 400
MEMBERS
306
307

CALLS WHEN ALL MEMBERS BUSY - 3
DURATION OF ALL BUSY - 00:03:21
CALL ABORTED WHILE WAITING - 0

The following chart explains the report headings:

This heading...

Means ...

(For extensions)

STA
INCOMING
ANSWERED
OUTGOING
TIME IN USE
DURATION

NO. OF TIMES

Extension number
Number of incoming calls to extension
Number of incoming calls answered at extension
Number of outgoing calls placed at extension
Total time extension was in use
For ACD agents, duration of time off duty. (Also see ACD report below.)
For ACD agents, number of times off duty. (Also see ACD/UCD report below.)

H- SYSTEM STATUS REPORTS HE- TRAFFIC MANAGEMENT SUMMARY

Description (Cont'd)	This heading...	Means ...
	(For trunks)	
	LINE	Trunk number
	NO. RCVD	Total of incoming calls received on trunk
	ANSRD	Total of incoming calls answered on trunk
	LONG WAIT	Total calls on trunk the TMS report flags as Long Wait calls (see QT programming below).
	TRMNATD	Total calls terminated on trunk
	CALLS ABANDONED	Total of abandoned calls (where the outside caller hangs up while the call is on Hold, parked or being transferred)
	CALLS OUTGOING	Total of all outgoing calls
	TIME IN USE	Total time trunk was in use
	(For trunk groups)	
	LINE GROUP	Master trunk number
	MEMBERS	List of group members
	CALLS WHEN ALL MEMBERS BUSY	Total number of calls to trunk group when all members were busy
	DURATION OF ALL BUSY	Duration of the all-busy condition
	(For ACD/UCD groups)	
	MASTER EXT	ACD/UCD group master extension number
	MEMBERS	List of group members
	CALLS WHEN ALL MEMBERS BUSY	Total number of calls to group when all members were busy
	DURATION OF ALL BUSY	Duration of the all-busy condition
	CALLS ABORTED WHILE WAITING	Number of outside callers who hung up (calls aborted) while waiting for a group member to become free
	<i>Conditions</i>	
	None	
	<i>Default Value</i>	
	None	

Related Programming

- **Traffic Management Reporting**
- **HF- System Status Reports, Traffic Management Summary (With Data Cleared)** - Print the TMS Report. The system clears the TMS data after the report runs.
- **QT- System Timers, Traffic Management Report Wait Time** - Set the TMS Wait Time interval. If a call rings longer than this interval, the TMS report flags it as Long Wait.

H- SYSTEM STATUS REPORTS

HE- TRAFFIC MANAGEMENT SUMMARY

Related Programming (Cont'd)

- **QZ- SMDR Setup, TMS Report Print Modes** - Set the TMS Report print mode:
 - 0 Manual (from HE or HF) for all data
 - 1 Automatic (at preset time) for trunk data only. The data clears after the report runs.
 - 2 Automatic (at preset time) for trunk and operator data only. The data clears after the report runs.
 - 3 Automatic (at preset time) for all data. The data clears after the report runs.
- **QZ- SMDR Setup, TMS Print Times Setup** - Set the time that the TMS report should print (using modes 1-3).

Feature Reference

System Reports, Diagnostics and Maintenance Utilities
Traffic Management Reporting
(See also Traffic Management Reporting, ONYX IV)

Instructions

- To enter data on the PRF:**
- Step 1 ➤ No entry required.
- To enter data at the programming terminal:**
- Step 1 ➤ Type H. You see: H-CMD>
 - Step 2 ➤ Type E. You see: FIRST EXT [<CR> FOR ALL]?
 - Step 3 ➤
 - Press RETURN to have the report include all extensions and trunks
 - OR
 - Enter the first extension/trunk you want to display and press RETURN. You see: LAST EXT?
 - Enter the last extension/trunk you want to display and press RETURN.
 - Step 4 ➤ When you see: LINES/PAGE [<CR>=60]?
 - Press RETURN to have each page of the report be 60 lines long.
 - OR
 - Enter the number of lines per page and press RETURN. In either case, the TMS report displays.

H- SYSTEM STATUS REPORTS

HF- TRAFFIC MANAGEMENT SUMMARY (WITH DATA CLEARED)

Description

This option is the same as HE, except that it clears (erases) the TMS records after the report displays. Use this option after initial system installation. This ensures the accuracy of future HE or HF reports. Be sure to set the system time before collecting TMS records (refer to the Time and Data setting feature).

Conditions

None

Default Value

None

Related Programming

Traffic Management Reporting

- **HE- System Status Reports, Traffic Management Summary** - Print the TMS Report. The system does not clear the TMS data after the report runs.
- **QT- System Timers, Traffic Management Report Wait Time** - Set the TMS Wait Time interval. If a call rings longer than this interval, the TMS report flags it as Long Wait.
- **QZ- SMDR Setup, TMS Report Print Modes** - Set the TMS Report print mode:
 - 0 Manual (from HE or HF) for all data
 - 1 Automatic (at preset time) for trunk data only. The data clears after the report runs.
 - 2 Automatic (at preset time) for trunk and operator data only. The data clears after the report runs.
 - 3 Automatic (at preset time) for all data. The data clears after the report runs.
- **QZ- SMDR Setup, TMS Print Times Setup** - Set the time that the TMS report should print (using modes 1-3).

Feature Reference

System Reports, Diagnostics and Maintenance Utilities
Traffic Management Reporting

H- SYSTEM STATUS REPORTS

HF- TRAFFIC MANAGEMENT SUMMARY (WITH DATA CLEARED)

Instructions

- To enter data on the PRF:**
- Step 1 > No entry required.
- To enter data at the programming terminal:**
- Step 1 > Type H. You see: H-CMD>
- Step 2 > Type F. You see: FIRST EXT [<CR> FOR ALL]?
- Step 3 > ● Press RETURN to have the report include all extensions and trunks
OR
● Enter the first extension/trunk you want to display and press RETURN. You see: LAST EXT?
● Enter the last extension/trunk you want to display and press RETURN.
- Step 4 > When you see: LINES/PAGE [<CR>=60]?
- Press RETURN to have each page of the report be 60 lines long.
OR
● Enter the number of lines per page and press RETURN. In either case, the TMS report displays.

H- SYSTEM STATUS REPORTS

HG- DISPLAY KEY HISTORY

Description

Use this option to display the key history code (call state) definitions. The key history shows you the sequence of events at each extension, trunk and PCB. You can activate key history by pressing SHIFT 1 on the programming terminal.¹ The following chart shows a sample of the key history definitions. Refer to the Call States chart under HD- System Status for an explanation of the definitions.

STATE NUMBER? - 00
IDLE

STATE NUMBER? - 01
DEAD

STATE NUMBER? - 02
TALK

STATE NUMBER? - 03
OUT SERV

STATE NUMBER? - 04
RINGING

STATE NUMBER? - 05
KEY HOLD

STATE NUMBER? - 06
NITE RING

STATE NUMBER? - 07
ALRM DISP

STATE NUMBER? - 08
IN CONF

STATE NUMBER? - 09
REORDER

STATE NUMBER? - 10
OTHER CH2

Conditions
None

Default Value
None

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities

¹ Press SHIFT 2 to have key history exclude PCB status. Press SHIFT 2 again to have history include PCB status. To display history for selected extensions and trunks, use the OS-Selective History option.

H- SYSTEM STATUS REPORTS

HG- DISPLAY KEY HISTORY

Instructions

- To enter data on the PRF:**
- Step 1 > No entry required.
- To enter data at the programming terminal:**
- Step 1 > Type H. You see: **H-CMD>**
- Step 2 > Type G. You see: **STATE NUMBER**
- Step 3 > Enter the hexadecimal number of the state you want to display (00-A2) and press **ENTER**. You see the call state description followed by: **STATE NUMBER**
- Step 4 > ● Enter another state.
- OR
- Press **ESC** to return to the Main Menu.

H- SYSTEM STATUS REPORTS

HH- PORT/EXTENSION CHECKER

Description

Use this option to check for port/extension or port/trunk number conflicts. Conflicts can occur if you incorrectly assign the E1, EZ or X options. Port/Extension Checker lets you see if you have inadvertently assigned the same port number to more than one extension or trunk. Use this report after using the E1, EZ or X options to change port assignments.

There are two parts to the report. The first part is in port number order. The second part is in extension number order. The following chart shows a sample HH display:

```
EXTENSION/PORT CHECKER
02-302, 303
```

```
PORT/EXTENSION CHECKER
303- 02, 03
```

The first part of the report shows port 02 assigned to extensions 302 and 303. The second part of the report shows extension 303 assigned to both ports 02 and 03. If your system had no conflicts, you would see:

```
PORT/EXTENSION CHECKER
NO ERRORS DETECTED
```

If required, use QN- Restore Standard Port Assignments to return all extensions and trunks to their default port assignments.

Note: To list all port assignments, use the HA and HB options.

Conditions
None

Default Value
Each extension or trunk is offset from its port by 300 (e.g., extension 320 is at port 20).

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities

Instructions

To enter data on the PRF:

Step 1 ► No entry required.

To enter data at the programming terminal:

Step 1 ► Type H. You see: H-CMD>

Step 2 ► Type H. You see: EXTENSION/PORT CHECKER
The report shows no errors or lists the conflicts.

H- SYSTEM STATUS REPORTS

HI- BUFFERED HISTORY PRINTER

Description

Use this option to display the buffered key history report. Buffered history like normal key history, except that the system stores it in memory. You can enable buffered history by pressing SHIFT 1 and SHIFT 4. Memory retains about two pages of buffered history reports. The history report is backed up like other system memory (see the Battery Backup feature).

The history buffer clears when you turn buffered history off and then back on again (i.e., pressing SHIFT 4 twice). Turning key history off (by pressing SHIFT 1) temporarily suspends buffered history. The buffer continues to fill when you turn key history back on. Running the HI report does not clear the report. For more on key history, refer to HG- Display Key History.

This option is not available in VS.

Conditions

None

Default Value

None

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities

Instructions

To enter data on the PRF:

Step 1 > No entry required.

To enter data at the programming terminal:

Step 1 > Enable history by pressing **SHIFT 1**. You see: **HISTORY ON**.
Pressing SHIFT 1 again turns history off.

Step 2 > Enable buffered history by pressing **SHIFT 4**. You see: **BUFFERED HISTORY ON**
Pressing SHIFT 4 again turns buffered history off.

Step 3 > Type **H**. You see: **H-CMD>**

Step 4 > Type **I**. You see: **CONVERT DATA?**

Step 5 > ● Type **N** to display the buffered key history in the standard format.
To review the call state definitions, refer to HD- System Status and HG- Display Key History.

OR

● Type **Y** to have the call states print in English.
To review the call state definitions, refer to HD- System Status.

I- SYSTEM UTILITIES

IE- RESET EXPANSION CABINETS (56x120 AND 72x180 ONLY)

Description

In a 56x120 or 72x180 system, use this option to reset the expansion cabinets. Using this option simulates pressing the reset button on the expansion cabinet Memory PCB. For maintenance purposes, it may be desirable to reset the expansion cabinets. (Refer to the HD- System Status option). Resetting drops all calls in progress in the cabinet you select. With the IE option, you can reset the cabinets remotely. There is no need to actually go to the expansion cabinet installation site.

Note: To reset the main cabinet, press the reset switch on the main cabinet MEM PCB.

Conditions

None

Default Value

None

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities

Instructions

To enter data on the PRF:

Step 1 > No entry required.

To enter data at the programming terminal:

Step 1 > Type I. You see: I-CMD>

Step 2 > Type E. You see: ENTER CABINET NUMBER [1-2] -

Step 3 > Enter the number of the expansion cabinet you want to reset. You see: SURE? [Y/N]

Step 4 >

- Type Y to reset the cabinet you selected in step 3.
OF
- Type N to return to step 2 without resetting a cabinet.

I- SYSTEM UTILITIES

IP- PORT RELEASE

Description

Use this option to release an extension or trunk that is active on a call. Releasing an extension or trunk terminates the active call. You may have to do this, for example, if a trunk locks up. Use this command as an alternative to resetting a PCB (the IR option). You can only use IP if the extension or trunk is active on a call.

Conditions

None

Default Value

None

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities

Instructions

To enter data on the PRF:

Step 1 > No entry required.

To enter data at the programming terminal:

Step 1 > Type I. You see: I-CMD>

Step 2 > Type P. You see: RELEASE UTILITY, EXT # -

Step 3 > Enter the number of the extension/trunk you want to release and press RETURN. You see: DONE, EXT # -

If you see, "NO CHANGE, TRY AGAIN," the extension/trunk you tried to release was not active.

Step 4 > ● Go back to step 3 and enter another extension/trunk number to release.

OR

● Press ESC to return to the Main Menu.

I- SYSTEM UTILITIES

IR- RESET LINE/TRUNK CARD

IR- RESET EXPANSION KSU

Description

In large systems, use this option to reset a line/trunk PCB. This may be desirable for maintenance purposes. Resetting a line/trunk PCB initializes the trunk interface circuits and drops all calls in progress on the PCB.

In VS, use this option to reset the expansion CEU. This may be desirable for maintenance purposes, or after adding an expansion CEU. Resetting the expansion CEU drops all calls in progress in the expansion CEU.

Conditions

None

Default Value

None

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities

Instructions

To enter data on the PRF:
Step 1 > No entry required.

To enter data at the programming terminal:

Step 1 > Type I. You see: I-CMD>

Step 2 > ● Type R.
For 12x36 and 32x60 systems, skip to step 3. For VS, skip to Step 4.
(56x120 and 72x180 systems only)

● You see: CABINET [M,1,2]

● Enter the designation for line/trunk PCB's cabinet. The choices are M (main cabinet), 1 (expansion cabinet 1) or 2 (expansion cabinet 2).

Step 3 > When you see: RESET CARD [1-7], enter the number of the line/trunk PCB you want to reset. You see: SURE? N [Y/N]

Step 4 > ● Type Y to reset the large system PCB you selected in step 3 or the VS expansion CEU.

OR

● Type N to return to step 2 without resetting.

Step 5 > ● Go back to step 2.

OR

● Press ESC to return to the Main Menu.

I- SYSTEM UTILITIES

IS- SIDE TONE TEST

Description

Use this option to adjust the side tone level for each trunk. When you initiate IS, the system:

- Seizes the trunk you specify for testing
- Outputs the side tone test digit onto the trunk
- Listens for the side tone level
- Automatically adjusts the side tone gain for optimum level

The system automatically does a side tone test on each trunk after power up. Use the IS option if the trunk characteristics change after the initial installation. The system does not perform a side tone test on DID, tie and OPX trunks.

The system will try and make the side tone test five times on a faulty trunk. If the test fails the fifth time, the system marks it as dead. If you correct the problem, the system starts the side tone tests again.

Conditions

- Use QR- Side Tone Test Digit to set the digit the system uses for side tone test.
- If you use IS- Side Tone Test to adjust side tone for a trunk, the system overrides the QE- Manual Sidetone entry.

Default Value

None

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities

Instructions

To enter data on the PRF:

Step 1 ► No entry required.

To enter data at the programming terminal:

Step 1 ► Type I. You see: I-CMD>

Step 2 ► Type S. You see LINE # -

Step 3 ► Enter the number of the line/trunk circuit you want to test and press ENTER. You see: DONE

Step 4 ► ● Go back to step 3.

OR

- Press ESC to return to the Main Menu.

I- SYSTEM UTILITIES

IT- ACTIVATE/DEACTIVATE DECODERS (ONYX IV)

Description

Use this option to activate or deactivate the system DTMF decoders (receivers). A service technician may have to do this during troubleshooting to isolate a faulty receiver. The IT option can activate or deactivate DTMF receivers in:

- OPA/VAU and VAU PCBs
- The MLU PCB
- SLU PCBs
- Special Trunk Interfaces (STIs)

The receivers in the OPA/VAU, VAU and MLU PCBs are a resource available to any port in the system. ASI P/N 89748 extensions and DISA trunks use these receivers when placing calls. The receivers in SLU PCBs and the STIs are available only to the circuits in those units. They are not a system resource. ASIs with integral DTMF receivers (P/N 89749) are not affected by this option.

The following chart shows the **IT- ACTIVATE/DEACTIVATE DECODERS** number for each DTMF receiver. The system resource decoders are unshaded:

Unit	Cabinet	IT Circuit #
MLU PCB	Main	00, 01 (Ports 29 & 30)
VAU or OPA/VAU PCB	Main	02, 03 (Last 2 PCB ports)
STI 1	Main	04, 05
STI 2	Main	06, 07
STI 3	Main	08, 09
STI 4	Main	10, 11
SLU 1	Main	12, 13
SLU 2	Main	14, 15
SLU 3	Main	16, 17
SLU 4	Main	18, 19
SLU 5	Main	20, 21
SLU 1	EXP 1	22, 23
SLU 2	EXP 1	24, 25
SLU 3	EXP 1	26, 27
SLU 4	EXP 1	28, 29
SLU 5	EXP 1	30, 31
SLU 1	EXP 2	32, 33
SLU 2	EXP 2	34, 35
SLU 3	EXP 2	36, 37
SLU 4	EXP 2	38, 39
SLU 5	EXP 2	40, 41

I- SYSTEM UTILITIES

IT- ACTIVATE/DEACTIVATE DECODERS (ONYX IV)

Description (Cont'd)	<i>Conditions</i> None
	<i>Default Value</i> Decoders activated.
Related Programming	None
Feature Reference	None
Instructions	To enter data on the PRF: Step 1 > No entry required.
	To enter data at the programming terminal:
Step 1 >	Type I. You see: I-CMD>
Step 2 >	Type T. You see: TONE DECODER # 00
Step 3 >	● Press RETURN to activate/deactivate decoder 00. OR ● Enter the number of the decoder you want to activate/deactivate and press RETURN .
Step 4 >	● Type Y to activate the decoder you select. OR ● The N to deactivate the decoder you select. In either case, you go to the next consecutive decoder.

J- COMMUNICATIONS PORT PARAMETERS

PORT SPEED

Description

Use this option to change the speed (baud rate) of the system serial ports. For the large systems, these are the COM PCB ports. You make a separate entry for each port. The COM PCB lower port should connect to a modem. The upper port should connect to a standard DTE RS-232-C terminal. For VS, this option sets the speed for the main CEU AUX Module serial port. This port is for a DTE terminal; the VS does not have a modem port. Refer to the system hardware manual for more information. Your entry should be compatible with the connected terminal or modem.

When you change the modem (lower) port speed (large system only), the system sends out AT <CR> to the modem. This preconditions the modem to "auto baud" to the new speed.

Conditions

The attendant can change the COM PCB port baud rates from the telephone. Refer to page 2-2.

Default Value

Both ports are set at 1200 baud.

Related Programming

Automatic Fault Reporting

- **J- Communications Port Parameters, Modem Ring Count** - Set the Automated Answer ring count to match the setting of the connected modem.
- **QC- Operator Programming, Suppress Operator Alarms** - Suppress/allow alarm indications at attendant extensions.
- **QK- CEU Identification** - Enter the text that identifies the system to the off-site service center.
- **QV- Trouble Report Telephone Number** - This is the number the system dials to report a major alarm to the off-site service center.

Feature Reference

Automatic Fault Reporting

Instructions

To enter data on the PRF:

- Step 1 ➤ No entry required.

To enter data at the programming terminal:

- Step 1 ➤ Type J. You see: (MODEM) -
For VS, skip to Step 3.
- Step 2 ➤ Enter the number for the desired modem baud rate. The choices are:
 - 0 300 baud
 - 1 1200 baud
 - 2 2400 baud
 - 3 4800 baud
 - 4 9600 baud
 - 5 19.2K baud
- Step 3 ➤ When you see: (LOCAL) -, enter the number for the desired local (terminal) port baud rate. You see: **MODEM RING COUNT (0-9)** -
- Step 4 ➤ ● Go to Modem Ring Count on the next page (large systems only) or Press **ESC**.

J- COMMUNICATIONS PORT PARAMETERS

MODEM RING COUNT

Description

Use this option to set the automatic answer ring count for the modem connected to the COM PCB lower port. When the COM PCB initializes, it sends the option you select to the modem. The automatic answer options are 1-9 rings. If you don't want the system to have automatic answer, enter 0. You must use a Hayes compatible 103 or 212A modem.

This option does not apply to VS.

Conditions

None

Default Value

Modem ring count is 1 (modem answers after one ring)

Related Programming

Automatic Fault Reporting

- **J- Communications Port Parameters, Port Speed** - Set the baud rate for Port A (modem) and Port B (local) to match the connected device. (The attendant can set these options from the telephone. See page 2-2.)
- **QC- Operator Programming, Suppress Operator Alarms** - Suppress/allow alarm indications at attendant extensions.
- **QK- CEU Identification** - Enter the text that identifies the system to the off-site service center.
- **QV- Trouble Report Telephone Number** - This is the number the system dials to report a major alarm to the off-site service center.

Feature Reference

Automatic Fault Reporting

Instructions

To enter data on the PRF:

- Step 1 ➤ No entry required.

To enter data at the programming terminal:

- Step 1 ➤ After programming the baud rate for port B, you see: **MODEM RING COUNT (0-9) -**
- Step 2 ➤ Enter the automatic answer modem ring count (0-9). You return to the Main Menu.

K- PROGRAMMABLE KEY DATA FOR KEYSETS AND DSS CONSOLES

KD- PROGRAMMING KEYS FOR DSS CONSOLES

Description

Use this option to assign consoles to keysets, assign blocks (key configurations) to consoles and program console key functions.

Assigning Consoles to Keysets

You can assign a DSS Console to any keyset. You can assign as many DSS Consoles as there are available dual ports. In the large systems, 20 of the consoles can have unique programming. In VS, four consoles can have unique programming. See Assigning Blocks below.

Assigning Blocks (Key Configurations) to DSS Consoles

The system provides for unique blocks (key configurations). The large systems have 20 blocks: VS has four. A block is a portion of memory for storing the functions of the 79 programmable console keys. In 12x36/32x60 systems, the system permanently assigns the first four blocks to operators 1-4. The system numbers the remaining blocks 1-16. You can change the assignment for blocks 1-16. In 56x120/72x180 systems, you can change the assignment for all 20 blocks. In VS, all DSS Consoles initially use block 1. If the number of consoles exceeds the number of blocks, consoles must share blocks. Consoles that share blocks have the same programming.

Programming Console Key Functions

You can program a console key for one of the functions in the chart below.

For this function...¹	Enter this code...
Hotline to extensions	Hotline partner extension number (refer also to Automatic Call Distribution)
Call Parking orbits	System Park orbit code (60-69)
Central Office Calls, Placing (DSS key as a line key)	Line access code (e.g., 801)
Paging zones	P and the zone number (0-7)
Speed Dial	S and the Speed Dial bin number (1-80)
Undefined	U

The Release key is permanently assigned to key 80.

Conditions

None

Default Value

Large Systems

The system has a DSS Console programmed at extension 302, assigned to extension 300.

The following default key assignments are for:

- The first four (unnumbered) blocks in 12x36 and 32x60 systems
- Block 01 in the 56x120 and 72x180 systems:

Key	Assignment
1-72	Extensions 304-375
73-76	Page zones 0-3
77-79	Park orbits 60-62
80	Release

The default key assignments for all other blocks are:

Key	Assignment
1-79	Undefined
80	Release

¹ Refer to the respective feature for more information.

K- PROGRAMMABLE KEY DATA FOR KEYSETS AND DSS CONSOLES

KD- PROGRAMMING KEYS FOR DSS CONSOLES

Description (Cont'd)

VS Systems

DSS Console automatically enabled (circuit type 06) when you plug it in
Each DSS Console assigned to extension 300

Each DSS Console uses block (configuration) 01, with key assignments as follows:

Key	Assignment
1-47	Extensions 304-347
48-72	Undefined
73-76	Page zones 0-3
77-79	Park orbits 60-62
80	Release

Related Programming

>

Direct Station Selection, DSS Console

E- Extensions, E2- Circuit Type - Program each DSS Console with circuit type 06 (even numbered ports only). DSS Consoles are dual port devices. In VS, the DSS Console is automatically enabled when you plug it in.

Feature Reference

Direct Station Selection, DSS Console

Instructions

Step 1 >

To enter data on the PRF:

For each DSS Console, on Table 8 indicate:

- The DSS Owner
- The DSS block (configuration) number
- The DSS key definitions

To enter data at the programming terminal:

Before programming DSS Consoles, make sure the console has circuit type 06.

Step 1 >

Type K. You see: **K-CMD>**

Step 2 >

Type D. You see: **DSS EXT?**

Step 3 >

Enter the extension number of the DSS Console you want to program. You see: **DSS OWNER?**

Step 4 >

Enter the extension number of the keyset assigned to the DSS Console. You see: **DSS BLOCK NO.**

Step 5 >

Enter the block (configuration) number for the DSS Console you are programming and press **RETURN**. You see: **KEY #01 -**

In the 56x120 and 72x180 systems, you can assign any of the 20 blocks. In the other systems, blocks 01-04 are automatically assigned to operators 01-04, respectively. If consoles share the same block, they have the same key programming.

Step 6 >

- Press **RETURN** to program key 01.

OR

- To program another key, enter the key number and press **RETURN**.

Step 7 >

Enter data for the key you want to program from Table 7 and press **RETURN**.

You can press + to move one key ahead: press - to move one key back.

To list the key programming for this extension (starting with the key you are on), press L instead of entering data.

To remove a key's programming, type U. To undefine all the keys for the console, starting with the key you are on, type Z.

K- PROGRAMMABLE KEY DATA FOR KEYSETS AND DSS CONSOLES

KD- PROGRAMMING KEYS FOR DSS CONSOLES

Instructions (Cont'd)

To see a list of the options before you make your entry:

- Type H Y. You see:

KEY TYPE	ENTRY (STD. NO. PLAN)
PAGE	"P" + ZONE # (0-7)
HOTLINE	EXT #
ORBIT	ORBIT # (60-69)
DSS SPEED DIAL	S + BIN # (01-80)
LINE	LINE #

OTHER COMMANDS:

U= UNDEFINE KEY
Z= UNDEFINE KEYS THRU END
L= LIST KEYS THRU END
C= COPY KEYS FROM ANOTHER DSS
"+ "= NEXT KEY "- "= PREVIOUS KEY

- Step 8 > ● Repeat steps 6 and 7 to program additional keys
OR
- Press ESC to return to the Main Menu.

To copy the KD programming from another console:

This helps if you have consoles with similar or identical KD programming.

- Step 1 > Using KD, go to the beginning of the configuration you want to copy.
- Step 2 > Type C. You see: **COPY FROM WHICH DSS EXT #**
- Step 3 > Enter the number of the console from which you want to copy. You see:
FROM KEY # (01-80)
- Step 4 > Enter the key number (on the other console) where you want to begin copying. This entry does not have to correspond to the key you are on. You see: **TO KEY # (01-80)**
- Step 5 > Enter the key number (on the other console) where you want to end copying. You see: **COPY COMPLETE**
You can now continue programming keys.

K- PROGRAMMABLE KEY DATA FOR KEYSETS AND DSS CONSOLES

KL- LISTING PROGRAMMABLE KEY DATA

Description

Use this option to list the keyset and DSS Console key programming. The system lists the keyset key programming before the DSS Console key programming.

Sample Keyset Listing

```
KEYSET EXT # 300  
  
KEY #01 - LINE 801  
KEY #02 - LINE 802  
KEY #03 - LINE 803  
KEY #04 - LINE 804  
           through  
KEY #24 - LINE 824
```

Sample DSS Console Listing

```
DSS EXT 302  
DSS OWNER: 304  
KEY #01 - HOTLINE TO EXT 304  
KEY #02 - HOTLINE TO EXT 305  
           through  
KEY #80 - RELEASE
```

Conditions
None

Default Value
30-button keysets have lines 1-24 (1-16 in VS) on keys 1-24 (1-16 in VS).
10-button keysets have lines 21-24 on keys 21-24 (unassigned in VS).

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities

Instructions

- To enter data on the PRF:**
- Step 1 ► No entry required.
- To enter data at the programming terminal:**
- Step 1 ► Type K. You see: K-CMD>
- Step 2 ► Type L. You see: LIST PROGRAMMABLE KEY DATA FROM EXT #
- Step 3 ► ● Press RETURN to list the data for all keysets and consoles. Skip the remaining steps.
- OR
- Enter the number of the keyset or console you want to begin the listing. Press RETURN. You see: TO EXT #
- Step 4 ► ● Press RETURN to have the listing include all remaining keysets and consoles. Skip the remaining steps.
- OR
- Enter the number of the keyset or console you want to end the listing. Press RETURN.

K- PROGRAMMABLE KEY DATA FOR KEYSETS AND DSS CONSOLES

KS- PROGRAMMING KEYS FOR KEYSETS

Description

Use this option to assign a function to each keyset programmable key. The chart below shows the options, the data you enter and the related feature. Remember, each keyset should have at least one switched or fixed loop key.

For this option...	Enter this data..	Refer to this feature
Group Pickup	"G" + Grp # (01-23)	Group Call Pickup
Page	"P" + Zone # (0-7)	Paging
Record	"R"	Voice Mail Compatibility
Station Pickup	"S" + Ext #	Call Coverage Keys
Feature	"F" + Line # + Definition - 0-9, *, #, P (Pause) - ,D (Delay), F (Flash)	Centrex Compatible Feature Keys
Hotline	Ext #	Hotline
Orbit	Orbit # (60-69)	Park
Sys Speed Dial	7+BIN #	Speed Dial
Ext Speed Dial	Bin # (50-59),(20-29)	Speed Dial
Line	Line #	Central Office Calls (Answering and Placing) Direct Inward Line Prime Line Selection Privacy Groups, Private Line Ringing Line Preference Tenant Service
On/Off Duty	I	ACD (ONYX IV)
Switch Loop	"9"	Loop Keys
Timer	"T" (ONYX II, III and IV) "TA" Auto Timer (VS only) "TM" Manual Timer (VS Only)	Call Timer
Loop Access	"9" a Line Grp # (0-8)	Loop Keys
ICM Directory Dialing	D	Directory Dialing (ONYX IV)
Station Appearance	E1 or E2 + extension	Dual Line App.(ONYX IV) Multiple Directory Numbers (ONYX IV)
Voice Over/Private ICM	V + extension	Reverse Voice Over (ONYX IV)
Split	S	Split (ONYX IV)
Auto Answer	AUTO KEY ¹	Automatic Answer (ONYX IV)

Note: When programming a Data key, refer to the Data Products Manual.

Conditions

If you replace a 30-button keyset with a 10-button keyset, the system erases the programming for keys 1-20.

Default Value

On a 30-button keyset, keys 1-24 are for lines 1-24 (801-824). In VS, keys 1-16 are for lines 1-16 (801-816).

On a 10-button keyset, keys 21-24 are for lines 21-24 (821-824). Keys 1-20 are unused.

¹ In ONYX IV, attendant keysets have key 23 permanently assigned as the Auto Answer key. Refer to Automatic Answer.

K- PROGRAMMABLE KEY DATA FOR KEYSETS AND DSS CONSOLES

KS- PROGRAMMING KEYS FOR KEYSETS

Related Programming

Refer to Programming in the features listed below.

Feature Reference

Refer to Programming in the following features:

Automatic Call Distribution (ONYX IV)

Call Coverage Keys

Call Parking¹

Call Timer

Central Office Calls, Answering and Placing

Centrex Compatible Feature Keys

Direct Inward Dialing

Direct Inward Dialing

Direct Inward Line

Directory Dialing (ONYX IV)

Dual Line Appearance (ONYX IV)

Group Call Pickup¹

Hotline

Loop Keys

Multiple Directory Numbers (ONYX IV)

Paging¹

Prime Line Selection

Privacy Groups

Private Line

Programmable Keys

Reverse Voice Over (ONYX IV)

Ringing Line Preference

Speed Dial¹

Split

Tenant Service

Voice Mail Compatibility

Instructions

To enter data on the PRF:

Step 1 ►

For each keyset, on Table 7 enter:

- F in the Entry Identifier Options column for each Centrex feature key. Leave this column blank if the key is not a Centrex feature key.
- The trunk (e.g., 801) or group (90-98) number in the Line Number Options columns if the key is a Centrex feature key. Leave this column blank if the key is not a Centrex feature key.
- The key definition in the Definition columns.
- The ring options (N=no ring, Y=immediate ring, D=delayed ring) in the Ring Options column. This only applies to Group Call Pickup, Call Coverage, Dual Line Appearance and Multiple Directory Number keys.

To enter data at the programming terminal:

Step 1 ►

Type **K**. You see: **K-CMD>**

Step 2 ►

Type **S**. You see: **KEYSET EXT # 300 -**

Step 3 ►

- Enter the number of the keyset you want to program and press **RETURN**.
OR
- Press **RETURN** to program the next consecutive extension 300 (starting with 300).

¹ KS programming is not required for this feature to operate.

K- PROGRAMMABLE KEY DATA FOR KEYSETS AND DSS CONSOLES

KS- PROGRAMMING KEYS FOR KEYSETS

Instructions (Cont'd)

- Step 4 >** You see: **KEY #01 -**
- Step 5 >** ● Type **K**, the key number you want to program (01-24) and press **RETURN**, or
- Press **RETURN** to program the next consecutive key (starting with key 01).
- Step 6 >** Enter the data for the key you select from Table 7 and press **RETURN**.
 You advance to the next consecutive key. After programming key 24, go back to step 3. Or, press **ESC** to return to the Main Menu.
 To list the key programming for this extension (starting with the key you are on), press **L** instead of entering data.
 You can press **+** to move one key ahead: press **-** to move one key back.
 To remove a key's programming, type **U**. To undefine all the keys for the extension, starting with the key you are on, type **Z**.
 To go to the next extension, type **N**. To go the previous extension, type **P**. You cannot type **P** if the key is undefined.
 To see a list of the options before you make your entry:
- Type **H Y**. You see (ONYX II/III sample):

KEY TYPE	ENTRY (STD. NO. PLAN)
GROUP PICKUP	"G" + GRP # (01-23)
PAGE	"P" + ZONE # (0-7)
RECORD	"R"
STATION PICKUP	"S" + EXT #
FEATURE	"F" + LINE # + DEFINITION - 0-9, *, # - P (PAUSE), D (DELAY), F (FLASH)
HOTLINE	EXT #
ORBIT	ORBIT # (60-69)
SYSTEM SPEED DIAL	7+BIN #
EXT SPEED DIAL	BIN # (50-59), (20-29)
LINE	LINE #
SWITCH LOOP	"9"
TIMER	"T"
LOOP ACCESS	"9" + LINE GRP # (0-8)
OTHER COMMANDS:	
C= COPY KEYS	W= WRITE FROM BUFFER
- 00= CLEAR BUFFER	K= GO TO KEY #
U= UNDEFINE KEY	Z= UNDEFINE KEYS THRU END
N= NEXT EXTENSION #	L= LIST KEYS THRU END
"+"= NEXT KEY	"-"= PREVIOUS KEY

To copy (mark) the KS programming from an extension:

This helps if you have extensions with similar or identical KS programming.

- Step 1 >** Using **KS**, go to the beginning of the key configuration you want to copy.
- Step 2 >** Type **C**. You see: **KEYS TO COPY?**
- Step 3 >** ● Type in the number of keys you want to copy (e.g., 04), starting with the key you are programming.
 To clear the copy buffer, type 00. The copy buffer also clears when you exit the **KS** command.
- Press **RETURN**. You see: **COPY UNDEFINED KEYS? [Y/N]**
- Step 4 >** ● Type **Y** to copy all the keys in the configuration you have blocked out. This *includes* the undefined keys.
- OR
- Type **N** to copy only the defined keys in the configuration you have blocked out. This *excludes* the undefined keys. In either case, you see: **KEYS COPIED**

K- PROGRAMMABLE KEY DATA FOR KEYSETS AND DSS CONSOLES

KS- PROGRAMMING KEYS FOR KEYSETS

Instructions (Cont'd)

- To write the configuration you copied to another keyset:**
- Step 1 ► Using KS, go to the beginning of the configuration where you want to insert the copied programming.
- Step 2 ► Type W. You see: **WRITE UNDEFINED KEYS? [Y/N]**
- Step 3 ► ● Type Y to write all the keys in the configuration you have blocked out. This *includes* the undefined keys.
- OR
- Type N to write only the defined keys in the configuration you have blocked out. This *excludes* the undefined keys. In either case, you return to KS programming.

L- LISTING SYSTEM AND EXTENSION DATA

LE- LISTING DATA BY EXTENSION/TRUNK

Description

Use LE- Listing Data by Extension/Trunk to list the programmed options for each extension and trunk. The report is in extension/trunk number order.

There are three parts to the report:

- Programmed options for extensions (without ED)
- Programmed options for trunks (without ED)
- ED programming for extensions, OPX, DISA and Tie trunks

Below are samples of each of the three reports.

Sample Extension/Trunk Listing (Without ED)

Extensions

EXT	PO	TY	COS	NXT EXT	HNT TYP	PG DS	OPR ZN	MAS EXT	SD BK	PK GP	RG GP	LIN DUP	RL PF	VC P	HD CL	ALW SET	P DND	L KEY	PR GP	#STI	OT KY	
300	00	01	30		00	N	00	300	OP1	204	00	00	Y	N	Y	Y	N	Y		00	24	Y
301	01	X	01		00	N	00	300		203	00	00	Y	N	Y	Y	N					
302	02	06						304	B01	199												
303	03	06																				
304	04	02	01		06	N	00	300		198	00	00	Y	N	Y	Y	N	Y		00	24	Y

Trunks

EXT	PO	LIN	TY	COS	NXT LIN	SV NO	DIR TRM	1ST LIN	PK GP	NIT EXT	TAN LIN	TOL RES	STI NUM
480	180	01	10	01		00			00		N	Y	
481	181	02	10	01		00			00		N	Y	
482	182	03	10	01		00			00		N	Y	
483	183	04	10	01		00	400		00		N	Y	

Sample Extension/Trunk Listing (ED Only)

Extensions, OPX, DISA and Tie Trunks

EXT 300

RING CONTROL

LINES	1 TO 24	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	25 TO 48	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
	49 TO 72	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R

ACCESS CONTROL

LINES	1 TO 24	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	25 TO 48	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	49 TO 72	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

CALL-OUT CONTROL

LINES	1 TO 24	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	25 TO 48	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	49 TO 72	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

ACCESS TO GROUP 90

ACCESS TO GROUP 91

ACCESS TO GROUP 92

ACCESS TO GROUP 93

ACCESS TO GROUP 94

ACCESS TO GROUP 95

L- LISTING SYSTEM AND EXTENSION DATA

LE- LISTING DATA BY EXTENSION/TRUNK

Description (Cont'd)

The following chart explains the abbreviations used in the LE report.

Abbreviations for Extensions

For this Abbr...		Refer to this option...
EXT		Extension Number
PO	E1	Port Number
TY	E2	Circuit Type
COS	E3	Class of Service number
NXT EXT	E4	Next Extension in Hunt Group
HNT TYP	E5	Hunt Type
DS	E6	Data Set
PG ZN	E7	Page Zone
OPR EXT	E9	Attendant (Operator) Assignment
MAS EXT	EA	UCD Group Master Extension Number
SD BK	EB	Personal Speed Dial Block
PK GP	EC	Group Call Pickup Group
RG GP	EE	Ring Group
LIN DUP	E8	Allow Line Code Dial-up
RL PF	E8	Ringing Line Preference
P	EF	Paging Through Telephone Speaker
VC CL	EF	Incoming Voice Call Through Telephone Speaker
HD SET	EF	Headset Mode
ALW DND	EK	Do Not Disturb (DND)
PL KEY	EL	Prime Line Key
PR GP	EC	Privacy Group
#KY STI	EG/E2	Number of Programmable Keys, STI Circuit #
OT KY	E8	Key Access to Outbound Lines

Abbreviations for Trunks

For this Abbr...		Refer to this option...
EXT		Trunk Number
PO	E1	Port Number
LIN		Line Number (e.g. 01)
TY	E2	Type of Circuit
COS	E3	Class of Service
NXT LIN	E4	Next Trunk in Outbound Rotary
SV NO	E7	Trunk Service Number
DIR TRM	E9	Direct Trunk Termination
1ST LIN	EA	First Trunk in Group
PK GP	EC	Call Pickup Group
NIT EXT	EI	Night Call Routing
TAN LIN	EI	Tandem Trunk
TOL RES	EJ	Toll Restriction
STI NUM	E2	STI Circuit Number (OPX, DID and Tie Trunks)

L- LISTING SYSTEM AND EXTENSION DATA

LE- LISTING DATA BY EXTENSION/TRUNK

Description (Cont'd)

Conditions
None

Default Value
None

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities

Instructions

To enter data on the PRF:
Step 1 > No entry required.

To enter data at the programming terminal:
Step 1 > Type L. You see: L-CMD>

Step 2 > Type E. You see: FROM EXT #

Step 3 > ● Press RETURN to have the report include all extensions and trunks.
OR

● Enter the number of the extension or trunk to begin the report and press RETURN. You see: TO EXT #

Step 4 > ● Press RETURN to have the report include all the remaining extensions and trunks.
OR

● Enter the number of the extension or trunk to end the report and press RETURN. In either case, you see: RING/ACCESS DATA? N [Y/N]

Step 5 > ● Type Y to have the report include only ED data.
OR

● Type N or press RETURN to have the report include all the data except ED.

L- LISTING SYSTEM AND EXTENSION DATA

LP- LISTING DATA BY PORT

Description

Use LP- Listing Data by Port to list the programmed options for extension and trunks in port number order. This report is the same as LE- Listing Data by Extension/Trunk - except that the data is correlated to ports. Refer to LE- Listing Data by Extension/Trunk for details on the report contents. Note that LP- Listing Data by Port report does not display ED programming.

Conditions

None

Default Value

None

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities

Instructions

To enter data on the PRF:
Step 1 > No entry required.

To enter data at the programming terminal:

Step 1 > Type L. You see: L-CMD>

Step 2 > Type P. You see: FROM PORT #

Step 3 > ● Press RETURN to have the report include all ports. Go to step 5.
OR

● Enter the number of the port to begin the report and press RETURN. You see: TO PORT #

Step 4 > ● Press RETURN to have the report include all the remaining ports.
OR

● Enter the number of the port to end the report and press RETURN.

L- LISTING SYSTEM AND EXTENSION DATA

LS- LISTING SYSTEM DATA

Description

Use this option to display the system data report. This report shows

- The installed SIM PCBs and their software level (56x120 and 72x180 systems only)
- The installed line/trunk PCBs and their software level (except in VS)
- The installed extensions, their names and their circuit types
- The installed trunks, their names and their circuit types

Following is a sample LS- Listing System Data report:

```
CARDS DEFINED      SW REV
MAIN CABINET
SIM 0              01
LINE 1             04
LINE 2             03
LINE 3             01
EXPANSION CABINET #1
NONE
EXPANSION CABINET #2
NONE

EXTENSIONS DEFINED
300 (OPERATOR)    1-CH KEYSSET
302               DSS CONSOLE (OWNED BY 304)
304 (EXTENSION 304) 1-CH DISPLAY SET
305 (EXTENSION 305) 1-CH KEYSSET
306 (EXTENSION 306) 1-CH KEYSSET
307               1-CH KEYSSET
462               1-CH KEYSSET
480 (TRUNK 480)    CO, LOOP, DTMF
481 (TRUNK 481)    CO, LOOP, DTMF
482 (TRUNK 482)    CO, LOOP, DTMF
```

Keep the following in mind when using the LS- Listing System Data option:

- If you enable a line/trunk PCB in QS without plugging it in, the LS report doesn't list it.
- If you remove a line/trunk PCB that was previously enabled in QS, the LS report still lists it.
- Use the HD- System Status option to display call activity at each trunk/extension and the status of every line/trunk PCB.
- Check E2- Circuit Type for each extension and trunk you want to include in the listing.
- Check NP- Programming Names and Messages for extension/trunk names.

Conditions

None

Default Value

None

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities

L- LISTING SYSTEM AND EXTENSION DATA

LS- LISTING SYSTEM DATA

Instructions

To enter data on the PRF:
Step 1 > No entry required

To enter data at the programming terminal:
Step 1 > Type **L**. You see: **L-CMD>**
Step 2 > Type **S**. The report displays.

Description

Use this option to immediately reinstate password (access code) level 0. For example, if you enter a level 1 or 2 access code, the system enables the access level for about 10 minutes. During this time, unauthorized modifications can be made to your system's programming. To protect your system's programmed options, use M- Cancel Access Level after making your entry. Refer to the System Programming Password Protection feature to find out the password (access) levels required for each option.

Note: Use the Y- Change System Passwords option to change the level 1 and 2 passwords.

Conditions

None

Default Value

None

Related Programming

None

Feature Reference

None

Instructions

- To enter data on the PRF:**
- Step 1 ► No entry required.
- To enter data at the programming terminal:**
- Step 1 ► Type M. You see: **PASSWORD LEVEL 0**

M- CANCEL ACCESS LEVEL

- For Your Notes -

N- PROGRAMMING NAMES AND MESSAGES

ND- PRINTING THE DIRECTORY

Description

Use this option to print an alphabetized directory of extension names. The directory only prints names for installed extensions. The directory prints in the following format:

- Line feeds
- Date and Time header
- Line feed
- Directory contents (54 lines of text per page)
- Page feed

The directory does not include trunk names or Selectable Display Messages.

Note: Use NP- Programming Names and Messages to program names.

Conditions

None

Default Value

None

Related Programming

None

Feature Reference

None

Instructions

To enter data on the PRF:
Step 1 > No entry required.

To enter data at the programming terminal:
Step 1 > Type **N**. You see: **N-CMD>**

Step 2 > Type **D**. You see: **TURN ON AUX PRINTER PORT, ENTER <CR> WHEN READY**

Step 3 > Connect a printer to your programming terminal, keeping the following in mind:

- The connected printer must be an Epson FX compatible printer
- Enable the programming terminal's Aux/Printer port. Refer to the terminal manufacturer's instructions.
- Check the programming terminal's baud rate for compatibility with the printer's baud rate.

Step 4 > Press **RETURN**.
The directory prints.

N- PROGRAMMING NAMES AND MESSAGES

NL- LISTING NAMES AND MESSAGES

Description

Use this option to list:

- Extension and trunk names
- Selectable Display Messages

Following is a sample names and messages listing:

Extensions

EXT # 300 OPERATOR
EXT # 301
EXT # 302
EXT # 303
EXT # 304 FRED
EXT # 305 SALLY

Trunks

EXT # 480 SALES
EXT # 481 SERVICE 01
EXT # 482 SERVICE 02

Messages

MSG # 600 OUT TO LUNCH
MSG # 601 ON VACATION
MSG # 602 MEET IN ROOM
MSG # 603 CALL

Conditions

None

Default Value

None

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities

Instructions

To enter data on the PRF:
Step 1 > No entry required.

To enter data at the programming terminal:

Step 1 > Type N. You see: N-CMD

Step 2 > Type L. You see: FROM -

Step 3 > ● Enter the number of the extension, trunk or message you want to begin the listing and press RETURN. You see: TO -. Go to step 4.

OR

● Press RETURN to have the listing include all extensions, trunks and messages.

Step 4 > ● Enter the number of the extension, trunk or message you want to end the listing and press RETURN.

OR

● Press RETURN to have the listing include all the remaining extensions, trunks and messages.

N- PROGRAMMING NAMES AND MESSAGES

NP- PROGRAMMING NAMES AND MESSAGES

Description

Use this option to assign names to extensions and trunks and to program Selectable Display Messages. Use this option with the following features:

- Central Office Calls, Answering
- Direct Inward Dialing
- Direct Inward Line
- Direct Inward System Access
- Directory Dialing
- Directory Dialing (ONYX IV)
- Intercom
- Private Lines
- Selectable Display Messages
- Tie lines

To print the names directory, refer to the ND- Printing the Directory.

Conditions

None

Default Value

No names or messages programmed.

Related Programming

- Directory Dialing (ONYX IV)
- **KS- Programming Keys For Keysets** - For keysets, designate a programmable key as type D.
- **QC- Operator Programming, DSS Keys** - For Attendant Consoles, designate a programmable key as type D. You should only have one "D" key per console.

Feature Reference

Directory Dialing (ONYX IV)
Selectable Display Messages

Instructions

- To enter data on the PRF:**
- Step 1 ➤ ● Record the extension and trunk names (up to 16 digits) on Tables 3-5.
OR
 - Record the Selectable Display Messages (up to 16 digits) on Table 9.
- To enter data at the programming terminal:**
- Step 1 ➤ Type **N**. You see: **N-CMD>**
 - Step 2 ➤ Type **P**. You see: **EXT # 300-**
 - Step 3 ➤ ● Enter the number of the extension, trunk or message you want to program and press **RETURN**. You see - or the previously programmed name.
OR
 - Press **RETURN** to begin programming extension 300.
 - Step 4 ➤ Type in the name or message (up to 16 digits) and press **RETURN**. You see **EXT #** for the next extension, trunk or message.
To erase an existing name or message, enter **Ø**.
When programming an appendable Selectable Display Message, for clarity you may want to press the space bar for the last character. Remember, if your appendable message is 14 characters long (13 + space bar), users can only append two additional characters.

N- PROGRAMMING NAMES AND MESSAGES
NP- PROGRAMMING NAMES AND MESSAGES

- For Your Notes -

Description

Use this command to print site-specific data on keyset and DSS Console labels (VS ≥ Aux Module 2.0/Base 5.0, ONYX II/III ≥3.5 and ONYX IV ≥1.2). The label maker prints out the KS/KD assignments and (optionally) Hotline names and keyset DSS assignments. For best results, use the tractor feed label inserts: P/N 88257 for keysets, P/N TBD for DSS Consoles. These inserts are conveniently set up to work with tractor feed printers.

Before using this option, check to be sure that you have:

- Connected an Epson FX compatible printer to the Aux/Printer port on the programming terminal
- Enabled the programming terminal's Aux/Printer port. Refer to the terminal manufacturer's instructions.
- Checked the programming terminal's baud rate for compatibility with the printer's baud rate
- Make sure the terminal uses XON/XOFF protocol
- For a serial printer, make sure it also uses XON/XOFF protocol
- For a parallel printer, make sure it uses the Busy Signal signal

Conditions

Default Value

None

Related Programming

None

Feature Reference

None

Instructions

To enter data on the PRF:

Step 1 > No entry required.

To enter data at the programming terminal:

Step 1 > Type 0. You see: **O-CMD>**

Step 2 > Type L. You see: **80 BUTTON DSS?**

This option is only available in VS ≥ Aux Module 2.0/Base 5.0, ONYX II/III ≥3.5 and ONYX IV ≥1.2.

Step 3 > ● If you enter N for step 2, you see: **AREA CODE?**

Go to step 4.

● If you enter Y for step 2, you see: **DSS EXT?**

Enter the DSS Console extension number, press ENTER and go to step 8.

Step 4 > Enter the Home Area Code for the system. You see: **PHONE NUMBER?**

Step 5 > Enter the system's telephone number (seven digits). You see: **FROM-**

Step 6 > ● Enter the number of the first extension for which you want to print labels and press RETURN. You see: **TO-**

OR

● Press RETURN if you want to print labels for all extensions. Skip to step 7.

Step 7 > Enter the number of the last extension for which you want to print labels and press RETURN.

O- LABEL MAKER AND SELECTIVE HISTORY

OL- LABEL MAKER

Instructions (Cont'd)

- Step 8 >** When you see **PRINT HOT LINE NAMES?:**
- Type **Y** to have the key labels include the programmed Hotline names.
For DSS Consoles, skip to step 11.
- OR
- Type **N** to have the key labels exclude the programmed Hotline names.
For DSS Consoles, skip to step 11.
- Step 9 >** When you see **PRINT DSS ON 2ND LINE?:**
- Type **Y** to have the key labels include the DSS extension number assignments.
- OR
- Type **N** to have the key labels exclude the DSS extension number assignments.
- Step 10 >** When you see **PRINT DSS NAMES?:**
- Type **Y** to have the key labels include the DSS names (if programmed) instead of DSS extension numbers.
- OR
- Type **N** to have the key labels print the DSS extension number assignments (not the names).
- Step 11 >** When you see **PRINT SPEED DIAL NAMES?:**
- Type **Y** to have the key labels include Speed Dial names (instead of the bin numbers).
- OR
- Type **N** to have the key labels include Speed Dial bin numbers (instead of the names).
- Step 12 >** When you see **PRINT LINE NAMES?:**
- Type **Y** to have the key labels include the trunk names (instead of trunk numbers).
- OR
- Type **N** to have the key labels include the trunk numbers (instead of the trunk names)
- Step 13 >** When you see **TURN ON AUX PRINTER PORT, ENTER <CR> WHEN READY:**
- Verify that the printer is properly connected and enabled.
 - Press **RETURN**
The labels print.

O- LABEL MAKER AND SELECTIVE HISTORY

OS- SELECTIVE HISTORY

Description

Use this option to enable key history for selected extensions and trunks. The key history shows the sequence of events at the extensions and/or trunks you select. Use OS- Selective History *in place of* pressing Shift 1 for normal key history. To understand the key history states:

- Use HG- Display Key History to display the history code (call state) definitions
- Refer to the Call States chart under HD- System Status for an explanation of the definitions

Conditions

Pressing SHIFT1 after enabling Selective History turns Selective History off.

Default Value

Selected history is off.

Related Programming

None

Feature Reference

System Reports, Diagnostics and Maintenance Utilities

Instructions

To enter data on the PRF:

Step 1 > No entry required.

To display the OS- Selective History options:

Step 1 > Type OS. You see: OS-CMD>

Step 2 > Press RETURN. You see:.

```
SELECTIVE HISTORY
D= DISPLAY
F= OFF
N= SELECT EXTENSIONS
```

D= DISPLAY lets you display the extensions and trunks you selected.

F= OFF allows you to turn Selective History off.

N= SELECT EXTENSIONS permits you to select specific extensions and trunks for Selective History.

To display the extensions/trunks you selected:

Step 1 > Type OS. You see: OS-CMD

Step 2 > Type D. You see: SELECTED EXTENSIONS followed by a list of the selected extensions and trunks.

To turn OS- Selective History off (if you previously selected extensions or trunks):

Step 1 > Type OS. You see: OS-CMD

Step 2 > Type F. You see: ** DONE **

O- LABEL MAKER AND SELECTIVE HISTORY

OS- SELECTIVE HISTORY

Instructions (Cont'd)

- To select extensions and/or trunks for the OS-Selective History report:
- Step 1 > Type **OS**. You see: **OS-CMD**
- Step 2 > Type **N**. You see: **SELECTED EXTENSIONS**
- Step 3 > Type in the number of the extension or trunk you want and press **RETURN**.
You see: **** DONE ** EXT-**
- Step 4 > ● Type in another extension or trunk.
OR
● Press **ESC** or **RETURN** to return to the Main Menu.

P- PRINT SMDR REPORT

Description

Use this option to print the SMDR report. You can have this option clear the SMDR buffer as the report prints, or retain the SMDR records. Clearing the SMDR buffer erases all the existing SMDR records. A sample SMDR report follows:

STATION MESSAGE DETAIL RECORDING
11/06/89 09:59:39

STA	LIN	NUMBER DIALED	ACCT	START	ELAPSE	COST	S#
304	01	202		15:23:52	00:00:01	\$00.00	01
304	01	12036672145	1212	15:44:12	00:00:08	\$00.00	01
304	02	12035551254	3112	15:45:38	00:00:12	\$00.00	01
304	01	12032223456	1123	15:49:29	00:00:05	\$00.00	01
304	01	12038888123	1212	15:50:32	00:00:17	\$00.00	01
304	01	-		17:10:00	00:00:48	\$00.00	01
304	01	-		17:19:33	00:00:21	\$00.00	01
304	02	-		10:02:24	00:01:36	\$00.00	01
304	02	-		10:57:44	00:00:19	\$00.00	01
304	01	-		10:57:32	00:00:45	\$00.00	01
304	01	-		11:02:01	00:01:00	\$00.00	01
304	01	-		11:03:17	00:00:55	\$00.00	01

Conditions
None

Default Value
None

Related Programming

Station Message Detail Recording

- QZ- SMDR Setup, SMDR Only for Toll Calls - Have the SMDR report include all outside calls, or just toll calls.
- QZ- SMDR Setup, Inbound SMDR - Have the SMDR report print incoming and outgoing calls, or just outgoing calls.
- QZ- SMDR Setup, SMDR Printout All the Time - Have the SMDR report print after each call completes, or at a preset time.
- QZ- SMDR Setup, SMDR Report Start Hour - Designate the time when the SMDR report should print. This option does not apply if SMDR prints all the time.
- Z- Clear All SMDR Records - Clear the SMDR records from the system buffer without printing the SMDR report. Clear the records when you change the SMDR print options.

Feature Reference

Station Message Detail Recording

P- PRINT SMDR REPORT

Instructions

Step 1 > **To enter data on the PRF:**
 No entry required.

Step 1 > **To enter data at the programming terminal:**
 Press P. You see: **CLEAR SMDR AFTER REPORT? [Y/N]**

Step 2 > ● Press Y to clear the SMDR buffer after the report runs.
 OR

Step 3 > ● Press N to run the SMDR report without clearing the SMDR buffer.
 The report prints.

Q- SYSTEM-WIDE PROGRAMMING

QA- NUMBER PLAN, RINGDOWN DIGIT

Description

Use this option to assign the digit used to force Intercom ringing. Refer to the Intercom Feature. Changing this digit also affects:

- Group Call Pickup (pickup code * 1)
- Meet-Me Conference (dial-up codes 11 and 12)
- Paging (All Call Paging code 1 *)

Note: Refer to Table 1-4 (page 1-11) before changing the system number plan.

Conditions

None

Default Value

1

Related Programming

None

Feature Reference

Flexible Numbering Plan

Instructions

Step 1 >

To enter data on the PRF:

Enter the number for QA- Ringdown Dgt (0-9) on Table 10.

You cannot use the number you enter for any other QA- Number Plan digit.

Step 1 >

To enter data at the programming terminal:

Type Q. You see: Q-CMD>

Step 2 >

Type A. You see: RINGDOWN DGT?

Step 3 >

Enter the QA- Ringdown Dgt entry (0-9) from Table 10.

Step 4 >

- If your entry deviates from the standard number plan, the system prompts you for the next option and displays:

WARNING! NON-STANDARD NUMBER PLAN
DIGIT? (<CR> FOR STANDARD PLAN)

- Enter the number for the next option.

OR

- Press RETURN to reinstall the standard number plan.

Q- SYSTEM-WIDE PROGRAMMING

QA- NUMBER PLAN, 2ND TEN SPEED DIAL BIN DIGIT

Description

Use this option to assign the first digit for the second ten Personal Speed Dial bins (normally 20-29). Refer to the Speed Dial feature. Changing this digit also affects:

- Call Waiting (dialing * 2 to answer a Call Waiting from an ESL set)
- Paging (zone 1 Paging code 2 *).

Note: Refer to Table 1-4 (page 1-11) before changing the system number plan.

Conditions

None

Default Value

2

Related Programming

None

Feature Reference

Flexible Numbering Plan

Instructions

To enter data on the PRF:
Step 1 ► Enter the number for QA- 2nd Ten Speed Dial Bin Digit (0-9) on Table 10.
You cannot use the number you enter for any other QA- Number Plan digit.

To enter data at the programming terminal:
Step 1 ► After typing QA and programming the QA- Ringdown Digit, you see: **SPEED DIAL ACCESS DGT**

Step 2 ► Enter the QA- 2nd Ten Speed Dial Bin Dgt entry (0-9) from Table 10.

Step 3 ► ● If your entry deviates from the standard number plan, the system prompts you for the next option and displays:

**WARNING! NON-STANDARD NUMBER PLAN
DIGIT? (<CR> FOR STANDARD PLAN)**

● Enter the number for the next option.

OR

● Press **RETURN** to reinstall the standard number plan.

Q- SYSTEM-WIDE PROGRAMMING

QA- NUMBER PLAN, BLOCK OF FIRST 100 EXTENSIONS DIGIT

Description

Use this option to assign the first digit for the first block of 100 extension/trunk numbers (e.g., 300). Refer to the Intercom feature. Changing this digit also affects:

- Central Office Calls, Placing (e.g., trunk access code 396 in 12x36 and 32x60 systems)
- Paging (zone 2 paging code 3 *)

Note: Refer to Table 1-4 (page 1-11) before changing the system number plan.

Conditions

None

Default Value

3

Related Programming

None

Feature Reference

Flexible Numbering Plan

Instructions

To enter data on the PRF:

Step 1 ► Enter the number for QA- 1st Hundred Block Ext Dgt (0-9) on Table 10.
You cannot use the number you enter for any other QA- Number Plan digit.

To enter data at the programming terminal:

- Step 1 ► After typing QA and programming the QA- 2ND Ten Speed Dial Bin Digit, you see: **1ST HUNDRED BLOCK EXT DGT**
- Step 2 ► Enter the QA- 1st Hundred Block Ext Dgt entry (0-9) from Table 10.
- Step 3 ► ● If your entry deviates from the standard number plan, the system prompts you for the next option and displays:
- WARNING! NON-STANDARD NUMBER PLAN
DIGIT? (<CR> FOR STANDARD PLAN)**
- Enter the number for the next option.
- OR**
- Press RETURN to reinstall the standard number plan.

Q- SYSTEM-WIDE PROGRAMMING

QA- NUMBER PLAN, BLOCK OF SECOND 100 EXTENSIONS DIGIT

Description	<p>Use this option to assign the first digit for the second block of 100 extension/trunk numbers (e.g., 400). Refer to the Intercom feature. Changing this digit also affects:</p> <ul style="list-style-type: none">● Automatic Call Distribution (putting agents in service by dialing 4)● Group Ring (12x36 and 32x60 group numbers 428-435)● Paging (zone 3 Paging code 4 *) <p>Note: Refer to Table 1-4 (page 1-11) before changing the system number plan.</p> <p><i>Conditions</i> None</p> <p><i>Default Value</i> 4</p>
Related Programming	None
Feature Reference	Flexible Numbering Plan
Instructions	<p>To enter data on the PRF:</p> <p>Step 1 ► Enter the number for QA- 2nd Hundred Block Ext Dgt (0-9) on Table 10. You cannot use the number you enter for any other QA- Number Plan digit.</p> <p>To enter data at the programming terminal:</p> <p>Step 1 ► After typing QA and programming the QA- Block of First 100 Extensions Digit, you see: 2ND HUNDRED BLOCK EXT DGT</p> <p>Step 2 ► Enter the QA- 2nd Hundred Block Ext Dgt entry from Table 10.</p> <p>Step 3 ►</p> <ul style="list-style-type: none">● If your entry deviates from the standard number plan, the system prompts you for the next option and displays: WARNING! NON-STANDARD NUMBER PLAN DIGIT? (<CR> FOR STANDARD PLAN)● Enter the number for the next option. OR● Press RETURN to reinstall the standard number plan.

Q- SYSTEM-WIDE PROGRAMMING

QA- NUMBER PLAN, BLOCK OF THIRD 100 EXTENSIONS DIGIT

Description

This option only applies to 56x120 and 72x180 systems.

Use this option to assign the first digit for the third block of 100 extension/trunk numbers (e.g., 500). Refer to the Central Office Calls, Placing feature. Changing this digit also affects:

- Call Parking from an ASI/OPX (e.g., dialing *560)
- Paging (zone 4 Paging code 5 *)
- Speed Dial (first 10 Personal Speed Dial bins 50-59)

The first digit for the first ten Personal Speed Dial bins is fixed at 5.

Note: Refer to Table 1-4 (page 1-11) before changing the system number plan.

Conditions

None

Default Value

5

Related Programming

None

Feature Reference

Flexible Numbering Plan

Instructions

To enter data on the PRF:
Step 1 ► Enter the number for QA- 3rd Hundred Block Ext Dgt (0-9) on Table 10.
You cannot use the number you enter for any other QA- Number Plan digit.

To enter data at the programming terminal:
Step 1 ► After typing QA and programming the QA- Block of Second 100 Extensions Digit, you see: **3RD HUNDRED BLOCK EXT DGT**

Step 2 ► Enter the QA- 3rd Hundred Block Ext Dgt entry (0-9) from Table 10.

- Step 3 ►**
- If your entry deviates from the standard number plan, the system prompts you for the next option and displays:
**WARNING! NON-STANDARD NUMBER PLAN
DIGIT? (<CR> FOR STANDARD PLAN)**
 - Enter the number for the next option.
OR
 - Press **RETURN** to reinstall the standard number plan.

Q- SYSTEM-WIDE PROGRAMMING

QA- NUMBER PLAN, 1ST TEN SPEED DIAL BIN DIGIT

Description

This option only applies to VS. 12x36 and 32x60 systems.

Use this option to assign the first digit for the first ten Personal Speed Dial bins (normally 50-59). Refer to the Speed Dial feature. Changing this digit also affects:

- Call Parking from an ASI/OPX (e.g., dialing *560)
- Paging (zone 4 Paging code 5 *)

Note: Refer to Table 1-4 (page 1-11) before changing the system number plan.

Conditions

None

Default Value

5

Related Programming

None

Feature Reference

Flexible Numbering Plan

Instructions

- To enter data on the PRF:**
- Step 1 ► Enter the number for QA- 1st Ten Speed Dial Dgt (0-9) on Table 10.
You cannot use the number you enter for any other QA- Number Plan digit.
- To enter data at the programming terminal:**
- Step 1 ► After typing QA and programming the QA- Block of Second 100 Extensions Digit, you see: 1ST TEN SPEED DIAL DGT
- Step 2 ► Enter the QA- 1st Ten Speed Dial Dgt entry (0-9) from Table 10.
- Step 3 ►
- If your entry deviates from the standard number plan, the system prompts you for the next option and displays:
WARNING! NON-STANDARD NUMBER PLAN
DIGIT? (<CR> FOR STANDARD PLAN)
 - Enter the number for the next option.
OR
 - Press RETURN to reinstall the standard number plan.

Q- SYSTEM-WIDE PROGRAMMING

QA- NUMBER PLAN, PARK ORBIT ACCESS DIGIT

Description

Use this option to assign the first digit of the ten System Park orbit codes (60-69). Refer to the Call Parking feature. Changing this digit also affects:

- Automatic Call Distribution (an agent dialing 6 to remove themselves from the group)
- Message Waiting (dialing 6 to leave or answer a Message Waiting)
- Paging (zone 5 Paging code 6 *)
- Selectable Display Messages (dialing # 6 to initiate display messaging)

Note: Refer to Table 1-4 (page 1-11) before changing the system number plan.

Conditions

None

Default Value

6

Related Programming

None

Feature Reference

Flexible Numbering Plan

Instructions

Step 1 >

To enter data on the PRF:

Enter the number for QA- Orbit Dgt (0-9) on Table 10.

You cannot use the number you enter for any other QA- Number Plan digit.

Step 1 >

To enter data at the programming terminal:

After typing QA and programming the previous QA option, you see: **ORBIT DGT**

Step 2 >

Enter the QA- Orbit Dgt entry (0-9) from Table 10.

Step 3 >

- If your entry deviates from the standard number plan, the system prompts you for the next option and displays:

**WARNING! NON-STANDARD NUMBER PLAN
DIGIT? (<CR> FOR STANDARD PLAN)**

- Enter the number for the next option.

OR

- Press **RETURN** to reinstall the standard number plan.

Q- SYSTEM-WIDE PROGRAMMING

QA- NUMBER PLAN, SYSTEM SPEED DIAL ACCESS DIGIT

Description

Use this option to define the first digit of the System Speed Dial numbers. Refer to the Speed Dial feature. Changing this digit also affects:

- Automatic Call Distribution (supervisor dialing 7 to put agents out of service)
- Paging (zone 6 Paging code 7 *)
- Split (*7 from an ESL set)

Note: Refer to Table 1-4 (page 1-11) before changing the system number plan.

Conditions

None

Default Value

7

Related Programming

None

Feature Reference

Flexible Numbering Plan

Instructions

- To enter data on the PRF:**
- Step 1 ► Enter the number for QA- System Spd Dial Dgt (0-9) on Table 10.
You cannot use the number you enter for any other QA- Number Plan digit.
- To enter data at the programming terminal:**
- Step 1 ► After typing QA and programming the QA- Park Orbit Access Digit: **SPEED DIAL ACCESS DGT**
- Step 2 ► Enter the QA- System Spd Dial Dgt entry (0-9) from Table 10.
- Step 3 ► ● If your entry deviates from the standard number plan, the system prompts you for the next option and displays:
**WARNING! NON-STANDARD NUMBER PLAN
DIGIT? (<CR> FOR STANDARD PLAN)**
- Enter the number for the next option.
- OR
- Press **RETURN** to reinstall the standard number plan.

Q- SYSTEM-WIDE PROGRAMMING

QA- NUMBER PLAN, TRUNK ACCESS DIGIT

Description

Use this option to assign the first digit of the trunk access codes (e.g., 801 for trunk 1). Refer to Central Office Calls, Placing. Changing this digit also affects:

- Paging (zone 7 Paging code 8 *)
- Time and Date (dialing # 8 to set the time)

Note: Refer to Table 1-4 (page 1-11) before changing the system number plan.

Conditions

None

Default Value

8

Related Programming

None

Feature Reference

Flexible Numbering Plan

Instructions

Step 1 ► To enter data on the PRF:
Enter the number for QA- Line Access Dgt (0-9) on Table 10.
You cannot use the number you enter for any other QA- Number Plan digit.

Step 1 ► To enter data at the programming terminal:
After typing QA and programming the QA- System Speed Dial Access Digit, you see: **LINE ACCESS DGT**

Step 2 ► Enter the QA- Line Access Dgt entry (0-9) from Table 10.

Step 3 ► ● If your entry deviates from the standard number plan, the system prompts you for the next option and displays:

**WARNING! NON-STANDARD NUMBER PLAN
DIGIT? (<CR> FOR STANDARD PLAN)**

● Enter the number for the next option.

OR

● Press **RETURN** to reinstall the standard number plan.

Q- SYSTEM-WIDE PROGRAMMING

QA- NUMBER PLAN, TRUNK GRP ACCESS DIGIT (HYBRID ONLY)

Description

Use this option to define the first digit used to access a trunk group (e.g. 90 for trunk group 01). This option also sets the single digit trunk access code (normally 9). Refer to Line (Trunk) Rotaries. Changing this digit also affects:

- Automatic Route Selection/Least Cost Routing (ARS/LCR access code 9 or 90)
- Time and Date (dialing # 9 to set the date).

This option appears but is not used for key systems.

Note: Refer to Table 1-4 (page 1-11) before changing the system number plan.

Conditions

None

Default Value

9

Related Programming

None

Feature Reference

Flexible Numbering Plan

Instructions

Step 1 >

To enter data on the PRF:

Enter the number for QA- Line Group Dgt (0-9) on Table 10.
You cannot use the number you enter for any other QA- Number Plan digit.

Step 1 >

To enter data at the programming terminal:

After typing **QA** and programming the QA- Trunk Access Digit, you see:
LINE GROUP DGT

Step 2 >

Enter the QA- Line Group Dgt entry (0-9) from Table 10.

Step 3 >

- If your entry deviates from the standard number plan, the system prompts you for the next option and displays:

**WARNING! NON-STANDARD NUMBER PLAN
DIGIT? (<CR> FOR STANDARD PLAN)**

- Enter the number for the next option.

OR

- Press **RETURN** to reinstall the standard number plan.

Q- SYSTEM-WIDE PROGRAMMING

QA- NUMBER PLAN, OPERATOR DIGIT

Description

Use this option to define the digit used to call an extension's attendant (normally 0). Refer to Attendant Positions. Changing this digit also affects Night Answer (dialing * 0 to pick up a call ringing the External Paging).

Note: Refer to Table 1-4 (page 1-11) before changing the system number plan.

Conditions
None

Default Value
0

Related Programming

None

Feature Reference

Flexible Numbering Plan

Instructions

To enter data on the PRF:

- Step 1 >** Enter the number for QA- Operator Dgt (0-9) on Table 10.
You cannot use the number you enter for any other QA- Number Plan digit.

To enter data at the programming terminal:

- Step 1 >** After typing **QA** and programming the QA- Trunk Group Access Digit, you see: **OPERATOR DGT**
- Step 2 >** Enter the QA- Operator Dgt entry (0-9) from Table 10.
- Step 3 >**
- If your entry deviates from the standard number plan, the system prompts you for the next option and displays:
**WARNING! NON-STANDARD NUMBER PLAN
DIGIT? (<CR> FOR STANDARD PLAN)**
 - Enter the number for the next option.
OR
 - Press **RETURN** to reinstall the standard number plan.

Q- SYSTEM-WIDE PROGRAMMING

QA- NUMBER PLAN, FEATURE AND PROGRAM ACCESS DIGITS

Description <hr/>	The system assigns the * and # digits as the feature and program access digits. For example, a user can implement Group Call Pickup by dialing * 1. To program the system time, an attendant can press INTERCOM and dial # 8. You cannot change the feature and program access digits.
Note:	Refer to Table 1-4 (page 1-11) before changing the system number plan.
	Conditions None
	Default Value The Feature Access Digit is *. The Program Access Digit is #.
Related Programming <hr/>	None
Feature Reference <hr/>	Flexible Numbering Plan
Instructions <hr/>	None

Q- SYSTEM WIDE PROGRAMMING

QB- PBX ACCESS CODES

Description

Use this option to designate up to 11 PBX access codes. The choices are:

- N (no entry)
- Any two-digit PBX access code from 00-99
- Any single-digit PBX access code from 0-9
- A range of codes using the wild card X (e.g., 9X allows PBX Access Codes 90-99). The system does not allow a single-digit X entry.

Conditions

None

Default Value

No PBX Access Codes defined.

Related Programming

>

PBX/Centrex Compatibility

E- Trunks, E7- Trunk Service Number - Enter 11 for each PBX trunk.

Feature Reference

PBX/Centrex Compatibility

Instructions

Step 1 >

To enter data on the PRF:

Enter the QB- PBX Access Codes on Table 10.

Step 1 >

To enter data at the programming terminal:

Type **Q**. You see: **Q-CMD>**

Step 2 >

Type **B**. You see: **PBX ACCESS CODE 01**

Step 3 >

- Enter QB- PBX Access Code 01 from Table 10.

If you enter a two-digit code, you automatically advance to the next consecutive code. If you enter a single digit, you must press RETURN after making your entry.

To remove a code, enter N. This removes all codes after your entry as well. For example, if you enter N for code 02, the system removes codes 02-11.

OR

- Press RETURN to go to the code you want to program.

Q- SYSTEM WIDE PROGRAMMING

QC- OPERATOR PROGRAMMING, SUPPRESS OPERATOR ALARMS

Description

Use this option to allow/deny alarm displays at the attendant's telephone. If allowed, the attendant's display shows all major, minor and major/minor alarms. If denied, the attendant's display never shows alarms.

Conditions

None

Default Value

Alarms not suppressed (N).

Related Programming

Automatic Fault Reporting

- **J- Communications Port Parameters, Port Speed** - Set the baud rate for Port A (modem) and Port B (local) to match the connected device. (The attendant can set these options from the telephone. See page 2-2.)
- **J- Communications Port Parameters, Modem Ring Count** - Set the Automated Answer ring count to match the setting of the connected modem.
- **QK- CEU Identification** - Enter the text that identifies the system to the off-site service center.
- **QV- Trouble Report Telephone Number** - This is the number the system dials to report a major alarm to the off-site service center.

Feature Reference

Automatic Fault Reporting

Instructions

- To enter data on the PRF:**
- Step 1 ➤ For QC- Suppress Alarms at Opr on Table 10, enter Y to prevent alarm displays or N to let alarm displays occur.

- To enter data at the programming terminal:**
- Step 1 ➤ Type **Q**. You see: **Q-CMD**
- Step 2 ➤ Type **C**. You see: **SUPPRESS ALARMS AT OPR**
- Step 3 ➤ Enter **Y** or **N** for QC- Suppress Alarms at OPR from Table 10.

Q- SYSTEM WIDE PROGRAMMING

QC- OP. PROGRAMMING, VX OVERFLOW RING COUNT

Description

Use this option to specify the number of rings after which Voice Mail overflow occurs (1-255 rings). After this number, unanswered trunk calls overflow to the Voice Messaging System Automated Attendant. Refer to the Voice Mail Compatibility feature and the Voice Mail system documentation for more information.

This option is only available in ONYX VS \geq Aux Module 2.0, ONYX II/III \geq 3.5 and ONYX IV.

Conditions

If you enter 00 for this option and the system has Operator Assistance (OPA) with Automatic Attendant Overflow, calls overflow to the OPA.

Default Value

No overflow to Voice Mail (00).

Related Programming

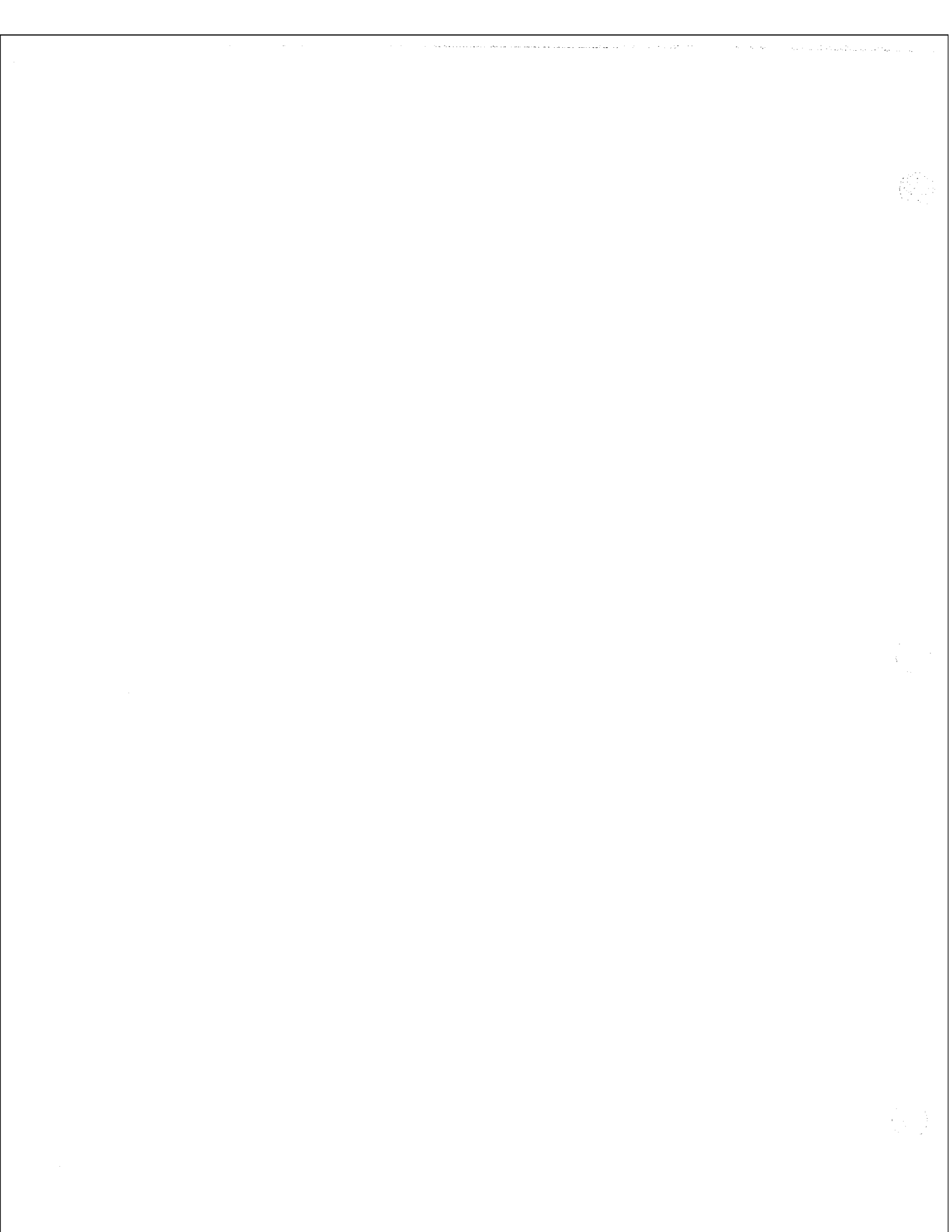
None

Feature Reference

None

Instructions

- To enter data on the PRF:**
- Step 1 ► For QC- Ring Count For Overflow to VX on Table 10, enter the number of rings after which overflow occurs (1-255). Enter 00 for no overflow.
- To enter data at the programming terminal:**
- Step 1 ► After programming QC- Suppress Operator Alarms, you see: **RING COUNT FOR OVERFLOW TO VOICE MAIL**
- Step 2 ► Enter the value of QC- Ring Count For Overflow to VX from Table 10.
Go to QC- Number of Operators.



Q- SYSTEM WIDE PROGRAMMING

QC- OPERATOR PROGRAMMING, NUMBER OF OPERATORS

Description

Use this option to specify the number of system operators (1-4). After programming this option, go to QC- Operator Extensions to specify the attendant extensions.

Conditions

When removing attendants:

- Change the QC- Number of Operators entry
- Go to E3- Class of Service and change the former attendant's COS to a valid extension's COS (1-27)

Default Value

One operator installed.

Related Programming



Attendant Positions/Call Forwarding Cancel
QC- Operator Programming, Operator Extensions - Designate the operator extensions.

Feature Reference

Attendant Positions
Call Forwarding Cancel

Instructions

Step 1 ➤

To enter data on the PRF:

For QC- Number of Oprs on Table 10, enter the number of system operators (1-4).

Step 1 ➤

To enter data at the programming terminal:

After programming QC- Suppress Operator Alarms (or QC- VX Overflow Ring Count in ONYX IV), you see: **NUMBER OF OPRS.**

Step 2 ➤

Enter the value of QC- Number of Oprs from Table 10 (1-4).

Q- SYSTEM WIDE PROGRAMMING

QC- OPERATOR PROGRAMMING, OPERATOR EXTENSIONS

Description

Use this option to designate the operator extensions. Always assign the system's main attendant to port 00 (usually extension 300). When you designate an attendant, the system automatically sets:

- E- Extensions, E3- Class of Service to 30
- E- Extensions, EA- UCD Group Master Extension Number to OP (1-4)

Conditions

When removing attendants:

- Change the QC- Number of Operators entry
- Go to E3- Class of Service and change the former attendant's COS to a valid extension's COS (1-27)

Default Value

Extension 300 is the attendant's extension.

Related Programming

Attendant Console

Refer to the Attendant Console feature for programming information.

Attendant Positions

- QC- Operator Programming, Number of Operators - Specify the number of system operators (1-4).

Feature Reference

Attendant Console
Attendant Positions

Instructions

To enter data on the PRF:

- Step 1 ➤ For the QC- Opr's Ext options on Table 10, indicate the attendant's extension numbers.

To enter data at the programming terminal:

You only see the prompts for the appropriate number of operators. If your QC- Number of Operators entry is 1, you only see prompts for Opr's Extension: 1 Ext.

- Step 1 ➤ After programming QC- Operator Extensions, you see: **OPR'S EXTENSION? 1 EXT**
- Step 2 ➤ Enter the value for QC- Opr's Extension 1 Ext from Table 10. You see: **OPR'S EXT? 2 EXT**
- Step 3 ➤ Enter the value for Opr's Extension 2 Ext from Table 10. You see: **OPR'S EXT? 3 EXT**. Repeat step 3 for Opr's Ext 3 Ext and Opr's Ext 4 Ext?
If you are programming an Attendant Console in ONYX IV, go to **QC- OPERATOR PROGRAMMING, LOOP KEYS** on the next page.
If you are not programming ONYX IV, you return to the Main Menu.

Q- SYSTEM WIDE PROGRAMMING

QC- OPERATOR PROGRAMMING, LOOP KEYS (ONYX IV)

Description

Use this option to assign a loop number (1-4) to each Attendant Console incoming loop key. When you enter a loop number for trunks (in EL), trunks ring their associated loop key. For example, if you enter 1 for **QC- LOOP KEY #1** and **EL- LOOP NUMBER** for trunk 1, trunk 1 rings loop key 1. All trunks without a loop number ring the 0 loop key, if there is one. If there is no 0 loop key, the trunks without a loop number ring the INT key. If all keys have the same loop number, trunks in that loop ring the keys from left to right.

Conditions

None

Default Value

All incoming loop keys unassigned (loop 0).

Related Programming

- **To program Loop Keys...**
 - **E- Trunks, EL- Loop Number** - Assign trunks to one of four loop numbers. Trunks ring the Attendant Console according to the trunk loop number and the loop key loop number.
 - **QC- Operator Programming, Outloop Keys** - For outgoing calls, correlate each loop key to a trunk group. This option assigns a trunk group (90-98) to each of the five loop keys. Refer to the Line (Trunk) Rotaries feature when programming trunk groups.
- **To program the Attendant Console programmable keys...**
 - **QC- Operator Programming, DSS KEYS** - Program the DSS Console programmable keys.
- **To set additional Attendant Console programming...**
 - **E- Extensions, E2- Circuit Type** - Assign the Attendant Console circuit type 06. You must do this for each console -- the console doesn't auto-ID.
 - **QC- Operator Programming, Operator Extensions** - Designate the console extension as an attendant.

Feature Reference

Attendant Console (ONYX IV)

Instructions

- **To enter data on the PRF:**
 - Step 1 ➤ For **QC- CONSOLE NUMBER** on Table 10, enter the number of the Attendant Console you want to program.
 - Step 2 ➤ For each Attendant Console loop key (1-5) on Table 10, enter the loop number (0-4).
- **To enter data at the programming terminal:**
 - You only see the prompts for the appropriate number of operators. If your QC- Number of Operators entry is 1, you only see prompts for Opr's Extension: 1 Ext.
 - Step 1 ➤ After programming QC- Operator Extensions, you see: **CONSOLE NUMBER ? (1,2,3,4)**
 - Step 2 ➤ Enter the number of the operator you are programming. You see: **LOOP KEY [0-4]**
 - Step 3 ➤ Enter the loop number for each incoming loop key from Table 10. After programming all five incoming loop keys, you see: **OUTLOOP KEY [GRP#]**
 - To erase an entry (1-4), enter 0.
 - Go to **QC- OPERATOR PROGRAMMING, OUTLOOP KEYS** on the next page.

Q- SYSTEM WIDE PROGRAMMING

QC- OPERATOR PROGRAMMING, OUTLOOP KEYS (ONYX IV)

Description

Use this option to assign each Attendant Console outgoing loop key (1-5) to a trunk group (90-98). Refer to the Line (Trunk) Rotaries feature when programming trunk groups.

Conditions

None

Default Value

No rotaries assigned.

Related Programming

Attendant Console (ONYX IV)

To program loop keys...

- **E- Trunks, EL- Loop Number** - Assign trunks to one of four loop numbers. Trunks ring the Attendant Console according to the trunk loop number and the loop key loop number (see **QC- LOOP KEYS**) below.
- **QC- Operator Programming, Loop Keys** - Assign each console loop key a loop number (1-4). Trunks ring their associated loop key. For example, if you enter 1 for **QC- LOOP KEY #1** and **EL- LOOP NUMBER** for trunk 1, trunk 1 rings loop key 1. All trunks without a loop number ring the 0 loop key, if there is one. If there is no 0 loop key, the trunks without a loop number ring the INT key.
- **To program the Attendant Console Programmable Keys...**
- **QC- Operator Programming, DSS KEYS** - Program the DSS Console programmable keys.
- **To set additional Attendant Console programming...**
- **E- Extensions, E2- Circuit Type** - Assign the Attendant Console circuit type 06. You must do this for each console -- the console doesn't auto-ID.
- **QC- Operator Programming, Operator Extensions** - Designate the console extension as an attendant.

Feature Reference

Attendant Console (ONYX IV)

Instructions

- To enter data on the PRF:**
- Step 1 ➤ For each Attendant Console outloop key (1-5) on Table 10, enter the trunk group number (90-98).
- To enter data at the programming terminal:**
- You only see the prompts for the appropriate number of operators. If your QC- Number of Operators entry is 1, you only see prompts for Opr's Extension: 1 Ext.
- Step 1 ➤ After programming QC- Loop Keys, you see: **OUTLOOP KEY [GRP#]**
 - Step 2 ➤ Enter the trunk group number for each outloop key from Table 10.
To erase an entry, enter 0.
After you program outloop key #5, go to **DSS KEYS** on the next page.

Q- SYSTEM WIDE PROGRAMMING

QC- OPERATOR PROGRAMMING, DSS KEYS (ONYX IV)

Description

Use this option to assign the functions of the 20 Attendant Console programmable keys. Each key can have one of the functions listed below. Refer to the appropriate feature and the Attendant Console Feature Handbook (P/N 01850ACH01) for more information.

For this function... Enter this code...

Alternate Attendant	
Group	The console's extension number (for key 20 only)
Hotline	Extension number
ICM Directory	D
Orbit	60-69
Page	P0-P7
Personal Speed Dial	50-59, 20-29
System Speed Dial	7 + Bin (usually 00-99)
Trunks	Trunk number (801-872)
Undefined	U

Conditions

None

Default Value

All keys are undefined (U).

Related Programming

- **Alternate Attendant, Attendant Console (ONYX IV)**
 - **E- Extensions, EE- Ring Group** - For each Alternate Attendant keyset, enter the Alternate Attendant group number (A1-A4).
- Attendant Console (ONYX IV)**
 - **To program loop keys...**
 - **E- Trunks, EL- Loop Number** - Assign trunks to one of four loop numbers. Trunks ring the Attendant Console according to the trunk loop number and the loop key loop number (see **QC- LOOP KEYS**) below.
 - **QC- Operator Programming, Loop Keys** - Assign each console loop key a loop number (1-4). Trunks ring their associated loop key. For example, if you enter 1 for **QC- LOOP KEY #1** and **EL- LOOP NUMBER** for trunk 1, trunk 1 rings loop key 1. All trunks without a loop number ring the 0 loop key, if there is one. If there is no 0 loop key, the trunks without a loop number ring the INT key.
 - **QC- Operator Programming, Outloop Keys** - For outgoing calls, correlate each loop key to a trunk group. This option assigns a trunk group (90-98) to each of the five loop keys. Refer to the Line (Trunk) Rotaries feature when programming trunk groups.
 - **To set additional Attendant Console programming...**
 - **E- Extensions, E2- Circuit Type** - Assign the Attendant Console circuit type 06. You must do this for each console -- the console doesn't auto-ID.
 - **QC- Operator Programming, Operator Extensions** - Designate the console extension as an attendant.
- Directory Dialing (ONYX IV)**
 - **KS- Programming Keys For Keysets** - For keysets, designate a programmable key as type D.
 - **NP- Programming Names and Messages** - Assign names to extensions.

Q- SYSTEM WIDE PROGRAMMING

QC- OPERATOR PROGRAMMING, DSS KEYS (ONYX IV)

Feature Reference

Alternate Attendant. Attendant Console (ONYX IV)
Attendant Console (ONYX IV)
Directory Dialing (ONYX IV)

Instructions

To enter data on the PRF:
Step 1 ► For each Attendant Console programmable key (1-20) on Table 10, enter the code for the appropriate function.

To enter data at the programming terminal:

You only see the prompts for the appropriate number of operators. If your QC- Number of Operators entry is 1, you only see prompts for Opr's Extension: 1 Ext.

Step 1 ► After programming QC- Outloop Keys, you see: **DSS KEY # 1**
Step 2 ► Enter the data for this key from Table 10. You see: **DSS KEY #** for the next consecutive key.

You can press + to move one key ahead; press - to move one key back.

To list the key programming for this extension (starting with the key you are on), press L instead of entering data.

To remove a key's programming, type U. To undefine all the keys for the console, starting with the key you are on, type Z.

To complete your programming without accessing the other keys, type F.

To see a list of the options before you make your entry:

● Type H Y. You see:

KEY TYPE	ENTRY (STD. NO. PLAN)
SPEED DIAL	BIN # (50-59), (20-29)
SYSTEM SPEED DIAL	"7" + BIN #
PAGE	"P" + ZONE # (0-7)
SELECT KEY	"K" + KEY #
HOTLINE	EXT # (300-552)
TRUNK	(801-872)
ORBIT	ORBIT # (60-69)
ICM DIRECTORY	"D"

OTHER COMMANDS:

U= UNDEFINE KEY
F= FINISHED
"+ "= NEXT KEY

Z= UNDEFINE KEYS THRU END
L= LIST KEYS THRU END
"- "= PREVIOUS KEY

Step 3 ► Repeat step 2 to program additional keys.
After you program DSS key 20, you see: **CONSOLE NUMBER? (1,2,3,4)**

OR

The Main Menu (if there are no more operators to program).

Q- SYSTEM WIDE PROGRAMMING

QD- NUMBER OF SYSTEM SPEED DIAL DIGITS

Description

Use this option to determine the number of System Speed Dial digits. The choices are:

- 2 10 numbers (70-79)
- 3 100 numbers (700-799)
- 4 1000 numbers (7000-7999)

In VS, this option can only be 2 (10 numbers) or 3 (100 numbers).

Conditions

None

Default Value

3 (Speed Dial Numbers 700-799)

Related Programming

- **Speed Dial**
- **CP- Inhibit System Speed Dial (BY0:7)** - Allow/deny extensions with this COS the ability to use System Speed Dial numbers.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Extensions, EB- Speed Dial Blocks** - Assign a Speed Dial block to an extension. Extensions can share a block, thereby sharing the Extension Speed Dial numbers.

Feature Reference

Speed Dial

Instructions

- To enter data on the PRF:**
- Step 1 ➤ For QD- No. of Sys Spd Dial Digits on Table 10, enter the number of System Speed Dial digits (2,3 or 4).
- To enter data at the programming terminal:**
- Step 1 ➤ Type **Q**. You see: **Q-CMD**
- Step 2 ➤ Press **D**. You see: **NO. OF SYS SPD DIAL DIGITS? (2,3,4)**
- Step 3 ➤ Enter the QD- No. of Sys Spd Dial Digits entry from Table 10.
You return to the Main Menu.

Q- SYSTEM WIDE PROGRAMMING

QE- AUTOMATIC HANDSFREE

Description

Use this option to allow/deny Automatic Handsfree for keysets. This option affects all keysets.

Conditions

None

Default Value

Automatic Handsfree enabled (Y).

Related Programming

None

Feature Reference

Automatic Handsfree

Instructions

- To enter data on the PRF:**
- Step 1 ► For QE- Auto-Handsfree on Table 10, enter Y to enable Automatic Handsfree; enter N to disable.
- To enter data at the programming terminal:**
- Step 1 ► Type Q. You see: Q-CMD>
- Step 2 ► Type E. You see: AUTO-HANDSFREE?
- Step 3 ► Enter Y or N for QE- Auto-Handsfree from Table 10.

Description

Use this option to enable/disable the Manual Side Tone option. If enabled (Y), you can specify the sidetone network for each trunk in QE- Line Gain Table. The system does not do an automatic sidetone test after power up. If disabled (N), you cannot manually adjust each trunk's sidetone. However, the system automatically does a side tone after power up. This option affects all trunks. If you use IS-Side Tone Test to adjust side tone for a trunk, the system overrides the QE- Manual Sidetone entry. Refer to IS- Side Tone Test and QE- Line Gain Table options for more information.

You must use the QE- Manual Sidetone option if you want to adjust the sidetone for tie, DID and OPX trunks. The system cannot automatically adjust sidetone for these trunk types.

Conditions

None

Default Value

Manual Sidetone disabled (N).

Related Programming

None

Feature Reference

None

Instructions

- To enter data on the PRF:**
- Step 1 >** For QE- Manual Sidetone on Table 10, enter Y to enable Manual Sidetone; enter N to disable.
- To enter data at the programming terminal:**
- Step 1 >** After entering data for QE- Automatic Handsfree, you see: **MANUAL SIDETONE? - [Y/N]**
- Step 2 >** Enter Y or N for QE- Manual Sidetone from Table 10.
Go to QE- Line Gain Table on the next page.

Q- SYSTEM WIDE PROGRAMMING

QE- LINE GAIN TABLE, GAIN

Description

Use this option to set the relative gain for each trunk. This may be necessary to compensate for transmission gains or losses from the Central Office. The QE entry choices are:

- + 6 dB gain
- + 3 dB gain
- 0 dB (no gain or loss)
- 3 dB loss
- 6 dB loss
- 9 dB loss
- 12 dB loss

Note: A 3 dB gain (+3 dB) doubles the volume on the trunk. A 3 dB loss (-3 dB) cuts the volume on the trunk in half.

Testing the Trunk Signal Levels

Before setting the gains for the trunks, check the trunk signal levels as follows:

- Step 1 >** Starting with the first trunk, connect a local loop tester (such as the Triplet Model 3) to tip and ring on the trunk block. Follow the tester manufacturer's instructions for the specifics.
Make sure the trunk you select is not terminated (in use) in the system.
- Step 2 >** Using a 2500 set connected to the local loop tester, call the telco test number that provides a 1 KHz 0 dBm (1 mW @ 600 Ohms) test tone.
- Step 3 >** Use the local loop tester to measure the strength of the trunk's signal. Keep the following in mind:
- For a business trunk, your tester should read the test signal at 0 to -5 dB (typically -3 to -5 dB).¹
 - If your signal is lower or higher than 0 to -5 dB, contact your telco. Your trunk may be out of "spec" or you may not have a business trunk.
 - Boosting the signal level on a trunk decreases the trunk's signal to noise ratio.
- Step 4 >** Use the QE command to compensate for gains or losses on the trunk. For example, if your trunk measures -9 dB, add +6 dB in QE. This brings the net loss to the system to -3 dB.
You can further refine the QE settings based on the desires of the system users.
- Step 5 >** Repeat steps 1-4 for your remaining trunks.

Setting Gains for VAU, MLU and OPA/VAU PCBs

You must also adjust the gains for selected ports on each VAU, MLU and OPA/VAU PCB. This ensures that the DTMF receivers on these PCBs will receive tones at the correct signal levels. The chart below shows the settings required.

For this

PCB...

Set as follows...

- | | |
|---------|--|
| VAU | Set the last two trunk ports on the PCB for -6 dB. ² |
| MLU | Set the first two trunk ports on the PCB for -6 dB. ² |
| OPA/VAU | Set the last two trunk ports on the PCB for -6 dB. ² |

¹ These values may be different in your area. Check with your local telco for levels applicable to your area.

² Do not adjust the gains if your system has Y2.4 software. Review this option if you upgrade your system.

Q- SYSTEM WIDE PROGRAMMING

QE- LINE GAIN TABLE, GAIN

Description (Cont'd)

After seizing a trunk, the user can adjust the gain on the trunk. However, the volume on the trunk returns to a preset setting for each new call. Refer to Volume Controls.

Conditions

QE- Line Gain Table settings do not apply to analog trunk-to-trunk connections. For example, if an OPX user accesses a trunk, the system does not apply the QE settings to the trunk. Trunk-to-trunk connections include Tie, DISA, OPX and DID trunks and ASI ports.

Default Value

No gain or loss (0 dB)

Related Programming

Operator Assistance

To have OPA answer the trunk...

- **E- Trunks, E9- Direct Trunk Termination** - To have OPA intercept incoming calls on a trunk day and night, enter the number of the first port on the OPA/VAU PCB. Intercept occurs after the first ring.
- **E- Trunks, EI- Night Call Route** - To have OPA intercept incoming calls on a trunk at night only, enter the first port on the OPA/VAU PCB. Intercept occurs after the first ring.

To configure the OPA dialing and message options...

- **CP- Inhibit OPA Transfers to Extension (BY0:1)** - Allow/deny OPA Transfers to extensions with this Class of Service.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **QH- OPA Configuration, OPA Group Routing** - Assign the termination (destination) for each OPA access digit (1, 2, and 4-9). Callers reach the termination when they dial the digit. The termination can be an extension, ring group or an ACD/UCD master number. The recorded messages should describe the terminations reached by these single digits. Don't assign an OPA access code to an extension with BY0:1 set (1).
- **QH- OPA Configuration, Line n Day and Night Message** - For each trunk, indicate the message (2-7) that the caller hears after the OPA answers the trunk in the day and night modes.

To set Automatic Attendant Overflow...

- **QH- OPA Configuration, Overflow Message for Operator (1-4)** - For each operator, designate the OPA message (2-7) for overflow calls. To disable call overflow to the OPA, enter 0.
- **QT- System Timers, OPA Overflow Ring Control** - Indicate the number of rings (3-15) before operator overflow to the OPA occurs. This pertains only to operator overflow calls.

Feature Reference

Operator Assistance (OPA)

Q- SYSTEM WIDE PROGRAMMING

QE- LINE GAIN TABLE, GAIN

Instructions

- To enter data on the PRF:**
- Step 1 ► Enter the required gain for each trunk on Table 10.

- To enter data at the programming terminal:**
- Step 1 ► After programming QE- Automatic Handsfree, you see:

LINE TABLE

LINE # 01
GAIN 0dB

- Step 2 ► Enter data for trunk 01.
- Step 3 ► ● If you entered N(o) for QE- Manual Sidetone, you can press **RETURN** repeatedly to access another trunk.
- OR
- If you entered Y(es) for QE- Manual Sidetone, you see **SIDETONE NETWORK? (54,56,58)** for trunk 01.
Go to QE- Line Gain Table. Sidetone Network on the next page.

Description

Use this option to manually adjust the sidetone for each trunk. This lets you fine tune each trunk's side tone level, if necessary. Use this option to match the impedance of each system trunk circuit to the impedance of the connected telco trunk. Enter the value that minimizes the sidetone (i.e., maximizes the return loss). The choices for this option are:

- 54 = short loop (600 Ohm), non-loaded
- 56 = long loop, non loaded
- 58 = loaded loop

This option only appears if you have entered Y(es) for QE- Manual Sidetone.

Conditions

None

Default Value

No sidetone network selected (00).

Related Programming

None

Feature Reference

None

Instructions

- To enter data on the PRF:**
- Step 1 ► For QE- Sidetone Network on Table 10, enter the sidetone network number (54, 56 or 58).
- To enter data at the programming terminal:**
- Step 1 ► After programming QE- Line Gain Table, Gain for a trunk, you see:
SIDETONE NETWORK? (54,56,58)
 - Step 2 ► For this trunk, enter the Sidetone Network number from Table 10.
You go to the QE- Line Gain Table, Gain option for the next trunk.

Q- SYSTEM WIDE PROGRAMMING

QF- LINE GRP ACCESS (FIRST TRUNK IN GROUP), HYBRID ONLY

Description

Use this option to correlate the first trunk in a trunk rotary (e.g., 801) to one of nine trunk rotary numbers (90-98). The system requires this correlation when setting up trunk rotaries.

This option does not appear for key systems.

Conditions

None

Default Value

No entries (no rotaries defined).

Related Programming

Line (Trunk) Rotaries

- **E- Extensions, E8- Line Access Options, Access To Groups 90-95 -** Allow/deny access to each of the first 6 trunk groups (90-95). You cannot program this option for trunk groups 96-98.
- **E- Trunks, E4- Next Trunk in Outbound Rotary -** This determines the selection sequence for trunks within the rotary. Make sure the last trunk in the rotary does not loop back to the first.
- **E- Trunks, EA- Trunk Group Assignment (First Trunk in Group) -** Group trunks together by assigning each one the same First Trunk in Group number.

Feature Reference

Line (Trunk) Rotaries

Instructions

To enter data on the PRF:

- Step 1 ➤ On Table 10, enter a trunk access code (e.g., 801) or trunk number (L01) for each rotary (90-98) you want to program. The entry should be the first trunk in the trunk rotary. Refer to EA- Trunk Group Assignment (First Trunk in Group).

To enter data at the programming terminal:

- Step 1 ➤ Type **Q**. You see: **Q-CMD>**
- Step 2 ➤ Type **F**. You see: **GROUP # 90 LINE NUMBER?**
- Step 3 ➤ ● Enter the trunk access code or number for this rotary from Table 10 and press **ENTER**. You see: **GROUP # 91 LINE NUMBER?**
OR
- Press **RETURN** repeatedly to skip to a higher numbered rotary, then enter data from Table 10.
- Step 4 ➤ ● Enter the trunk access code or number for the next rotary from Table 10 and press **RETURN**.
OR
- Press **RETURN** repeatedly to skip to a higher numbered rotary, then enter data from Table 10.
OR
- Press **ESC** to return to the Main Menu.

Description

Use this option to define the DISA access code (up to eight digits long). This code is also the Walking Class of Service code. You must also program QG-Ground Start DISA Trunk. This lets you have either ground or loop start DISA trunks.

Conditions

None

Default Value

No entry (no DISA code defined).

Related Programming

Direct Inward System Access (DISA)

- **E- Extensions, E2- Circuit Type** - Program each DISA trunk with one of the following circuit types:

- 12 DISA, DTMF, Day or Night

- 13 DISA, DP, Day or Night

- 14 DISA, DTMF, Night Only

- 15 DISA, DP, Night Only

- **QG- Ground Start DISA Trunk** - Set DISA trunks for ground start or loop start operation.

Feature Reference

Direct Inward System Access (DISA)

Walking Class of Service

Instructions

Step 1 ➤

To enter data on the PRF:

For QG- DISA CODE on Table 10, enter the DISA access code (up to eight digits long).

To enter data at the programming terminal:

Step 1 ➤

Type **Q**. You see: **Q-CMD>**

Step 2 ➤

Type **G**. You see: **DISA CODE (8 DGTS MAX)?**

Step 3 ➤

Enter the QG- DISA CODE data from Table 10 and press **RETURN**.

To erase a code, enter **N**.

You don't have to press **RETURN** if the code is eight digits long.

Go to QG- Ground Start DISA Trunk on the next page.

Q- SYSTEM WIDE PROGRAMMING

QG- GROUND START DISA TRUNK

Description

Use this option to program DISA trunks for ground start or loop start operation. If you enable this option (Y), all DISA trunks are ground start. If you disable this option (N), all DISA trunks are loop start.

This option does not apply to VS.

Conditions

If you upgrade your system from a version older than 3.2, all DISA trunks come up as ground start.

Default Value

All DISA trunks are ground start (Y).

Related Programming

➤

Direct Inward System Access (DISA)

E- Extensions, E2- Circuit Type - Program each DISA trunk with one of the following circuit types:

12 DISA, DTMF, Day or Night

13 DISA, DP, Day or Night

14 DISA, DTMF, Night Only

15 DISA, DP, Night Only

QG- DISA Code - Program the DISA Access Code (up to eight digits)

Feature Reference

Direct Inward System Access (DISA)

Instructions

Step 1 ➤

To enter data on the PRF:

For QG- GROUND START DISA TRUNK on Table 10, enter Y or N.

Step 1 ➤

To enter data at the programming terminal:

After programming QG- DISA CODE, you see: **GND START DISA LINE (Y=GND,N=LOOP)**

Step 2 ➤

Enter Y or N for QG- GROUND START DISA TRUNK from Table 10.

Q- SYSTEM WIDE PROGRAMMING

QH- OPA CONFIGURATION, OVERFLOW MSG FOR OPERATOR (1-4)

Description

Use this option to designate the OPA operator overflow message (2-7) for each system attendant. Assigning the message automatically enables OPA operator overflow for that attendant. To disable overflow for an attendant, enter 0.

This option does not apply to VS.

Conditions

None

Default Value

OPA operator overflow disabled (0).

Related Programming

Operator Assistance

To have OPA answer the trunk...

- **E- Trunks, E9- Direct Trunk Termination** - To have OPA intercept incoming calls on a trunk day and night, enter the number of the first port on the OPA/VAU PCB. Intercept occurs after the first ring.
- **E- Trunks, E1- Night Call Route** - To have OPA intercept incoming calls on a trunk at night only, enter the first port on the OPA/VAU PCB. Intercept occurs after the first ring.

To configure the OPA dialing and message options...

- **CP- Inhibit OPA Transfers to Extension (BY0:1)** - Allow/deny OPA Transfers to extensions with this Class of Service.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **QE- Line Gain Table** - Program the last two trunk ports of the OPA/VAU PCB for -6 dB gain.
- **QH- OPA Configuration, OPA Group Routing** - Assign the termination (destination) for each OPA access digit (1, 2, and 4-9). Callers reach the termination when they dial the digit. The termination can be an extension, ring group or an ACD/UCD master number. The recorded messages should describe the terminations reached by these single digits. Don't assign an OPA access code to an extension with BY0:1 set (1).
- **QH- OPA Configuration, Line n Day and Night Message** - For each trunk, indicate the message (2-7) that the caller hears after the OPA answers the trunk in the day and night modes.

To set Automatic Attendant Overflow...

- **QT- System Timers, OPA Overflow Ring Control** - Indicate the number of rings (3-15) before operator overflow to the OPA occurs. This pertains only to operator overflow calls.

Feature Reference

Operator Assistance

Q- SYSTEM WIDE PROGRAMMING

QH- OPA CONFIGURATION, OVERFLOW MSG FOR OPERATOR (1-4)

Instructions

- To enter data on the PRF:**
- Step 1 > For QH- Overflow Message on Table 10, enter the OPA overflow message number (2-7) for each system attendant.
- To enter data at the programming terminal:**
- Step 1 > Type **Q**. You see: **Q-CMD>**
- Step 2 > Type **H**. You see: **OVERFLOW MESSAGE OPR #1 -**
- Step 3 > ● Enter the QH- Overflow Message OPR #1 entry from Table 10 for this operator. You see: **OVERFLOW MESSAGE OPR #2**
OR
- Press **RETURN** repeatedly to skip to a higher numbered operator, then enter data from Table 10.
- Step 4 > Enter the QH- Overflow Message number from Table 10 for the next operator.
OR
- Press **RETURN** repeatedly to skip to a higher numbered operator, then enter data from Table 10.
OR
- Press **ESC** to return to the Main Menu.

Q- SYSTEM WIDE PROGRAMMING

QH- OPA CONFIGURATION, OPA GROUP ROUTING

Description

Use this option to assign the termination (destination) for the OPA access digits 1, 2, and 4-9. The destination is the extension, ring group (548-555 in ONYX IV) or ACD/UCD group OPA callers reach when they dial a digit. The OPA recorded messages should describe the terminations reached by these single digits. Refer to the Operator Assistance feature and the QH- Line n Day/Night Message options below for the specifics on recording messages.

In ONYX IV ≥ 1.2 , you can enter X for any OPA access digit (1-9). When you enter X, the digit becomes the leading digit for dialing Intercom calls. For example, if OPA GROUP #9=X, dialing 9304 will ring extension 304. With ONYX II/III ≥ 3.5 and ONYX IV ≥ 1.2 , you cannot have single digit access to Ring Group 555.

The OPA option does not apply to VS.

Conditions

None

Default Value

Dialing any digit (except 3) rings the primary attendant (normally extension 300).

Related Programming

Operator Assistance

To have OPA answer the trunk...

- **E- Trunks, E9- Direct Trunk Termination** - To have OPA intercept incoming calls on a trunk day and night, enter the number of the first port on the OPA/VAU PCB. Intercept occurs after the first ring.
- **E- Trunks, EI- Night Call Route** - To have OPA intercept incoming calls on a trunk at night only, enter the first port on the OPA/VAU PCB. Intercept occurs after the first ring.

To configure the OPA dialing and message options...

- **CP- Inhibit OPA Transfers to Extension (BY0:1)** - Allow/deny OPA Transfers to extensions with this Class of Service.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **QE- Line Gain Table** - Program the last two trunk ports of the OPA/VAU PCB for -6 dB gain.
- **QH- OPA Configuration, Line n Day and Night Message** - For each trunk, indicate the message (2-7) that the caller hears after the OPA answers the trunk in the day and night modes.

To set Automatic Attendant Overflow...

- **QH- OPA Configuration, Overflow Message for Operator (1-4)** - For each operator, designate the OPA message (2-7) for overflow calls. To disable call overflow to the OPA, enter 0.
- **QT- System Timers, OPA Overflow Ring Control** - Indicate the number of rings (3-15) before operator overflow to the OPA occurs. This pertains only to operator overflow calls.

Feature Reference

Operator Assistance

Q-SYSTEM WIDE PROGRAMMING

QH- OPA CONFIGURATION, OPA GROUP ROUTING

Instructions

To enter data on the PRF:

- Step 1 > For the QH- OPA Group # options on Table 10, enter the destination for each digit (OPA group). The choices are:
- Extensions
 - Ring Group (548-555 in ONYX IV)
 - ACD Groups
 - UCD Groups
 - X (Uses Group # as leading digit for Intercom calls). This option is only available in ONYX II/III ≥3.5 and ONYX IV ≥1.2.

To enter data at the programming terminal:

- Step 1 > After programming QH- Overflow Message for Operator (1-4), you see: OPA GROUP#1 -
- Step 2 > ● Enter the QH- OPA Group #1 entry from Table 10. You see: OPA GROUP#2
- OR
- Press RETURN repeatedly to skip to a higher numbered OPA group, then enter data from Table 10.
- Step 3 > ● Enter the QH- OPA Group # data for the next group from Table 10. You see: OPA GROUP#
- OR
- Press RETURN repeatedly to skip to a higher numbered OPA group, then enter data from Table 10.
- OR
- Press ESC to return to the Main Menu.

Q- SYSTEM WIDE PROGRAMMING

QH- OPA CONFIGURATION, LINE n DAY AND NIGHT MESSAGE

Description

This option sets the message (2-7) a caller hears after the OPA answers a trunk. You can assign a message for both day and night mode operation. Make an entry for each trunk the OPA should answer. Keep the following in mind when assigning messages:

- Message 0 is the ACD/UCD overflow message.
- Message 1 is the "All lines are busy" message. You cannot record message 01.
- Message 2 is the error message. A caller dialing an incorrect code hears message 02.

These options do not apply to VS.

Conditions

None

Default Value

All callers hear message 0 (the ACD/UCD overflow message).

Related Programming

Operator Assistance

To have OPA answer the trunk...

- **E- Trunks, E9- Direct Trunk Termination** - To have OPA intercept incoming calls on a trunk day and night, enter the number of the first port on the OPA/VAU PCB. Intercept occurs after the first ring.
- **E- Trunks, EI- Night Call Route** - To have OPA intercept incoming calls on a trunk at night only, enter the first port on the OPA/VAU PCB. Intercept occurs after the first ring.

To configure the OPA dialing and message options...

- **CP- Inhibit OPA Transfers to Extension (BY0:1)** - Allow/deny OPA Transfers to extensions with this Class of Service.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **QE- Line Gain Table** - Program the last two trunk ports of the OPA/VAU PCB for -6 dB gain.
- **QH- OPA Configuration, OPA Group Routing** - Assign the termination (destination) for each OPA access digit (1, 2, and 4-9). Callers reach the termination when they dial the digit. The termination can be an extension, ring group or an ACD/UCD master number. The recorded messages should describe the terminations reached by these single digits. Don't assign an OPA access code to an extension with BY0:1 set (1).

To set Automatic Attendant Overflow...

- **QH- OPA Configuration, Overflow Message for Operator (1-4)** - For each operator, designate the OPA message (2-7) for overflow calls. To disable call overflow to the OPA, enter 0.
- **QT- System Timers, OPA Overflow Ring Control** - Indicate the number of rings (3-15) before operator overflow to the OPA occurs. This pertains only to operator overflow calls.

Feature Reference

Operator Assistance

Q- SYSTEM WIDE PROGRAMMING

QH- OPA CONFIGURATION, LINE n DAY AND NIGHT MESSAGE

Instructions

To enter data on the PRF:

- Step 1 ► For QH- Day Message and QH- Night Message on Table 10, enter the OPA message (2-7) for each trunk. If desired, day and night operation can select the same message.

To enter data at the programming terminal:

- Step 1 ► After programming OPA Group Routing, you see: **LINE # 01**
- Step 2 ► ● Press **RETURN** to program trunk 1. You see: **DAY MESSAGE**
Press **RETURN** repeatedly to program a different trunk.
- Step 3 ► Enter the QH- Day Message entry for this trunk from Table 10. You see: **NIGHT MESSAGE**
- Step 4 ► Enter the QH- Night Message entry for this trunk from Table 10. You access the next consecutive trunk.
- Step 5 ► ● Repeat steps 2-4 to enter more data.
OR
● Press **ESC** to return to the Main Menu.

Q- SYSTEM WIDE PROGRAMMING

QI- VERIFIABLE ACCOUNT CODE LIST

Description

Use this option to enter codes into the Verifiable Account Code list. You can enter up to 601 codes (400 in VS). Each code can be from 2-10 digits long, using the digits 0-9. You can also use this option to delete and list the codes. When listing the codes, the system puts them in descending numerical order (0, 9-1), sorted by the first digit only.

Conditions

None

Default Value

No Verifiable Account Codes programmed.

Related Programming

Account Code Capability

- **QL- LCR/ARS/Account Codes, Mandatory Account Codes -** Enable/disable Mandatory Account Codes.
- **QL- LCR/ARS/Account Codes, Verifiable Account Codes -** Enable/disable Verifiable Account Codes.
- **QL- LCR/ARS/Account Codes, Account Codes for Toll Calls Only -** Enable/disable Mandatory Account Codes for all outside calls or just for toll (1+) calls.
- **QL- LCR/ARS/Account Codes, Minimum COS for Mandatory Account Codes -** Set the minimum COS number that requires Mandatory Account Codes.

Feature Reference

Account Code Capability

Q- SYSTEM WIDE PROGRAMMING

QI- VERIFIABLE ACCOUNT CODE LIST

Instructions

To enter data on the PRF:

Step 1 > Enter your system's QL- Verifiable Account Codes in Table 11.

To enter data at the programming terminal:

Step 1 > Press Q. You see: Q-CMD>

Step 2 > Press I. You see: VFY

Step 3 > Use the chart below to enter codes into the list.

From this menu	Type this	Function	To use these options
VFY>	Enter ←	Display list of options.	
	A	Add a code to the list.	DATA Enter code from Table 10 and press ENTER. Enter ← After making all your entries, press ENTER to go back to VFY> options.
	D	Delete a code from the list.	DATA Enter code from Table 10 and press ENTER. Enter ← After making all your entries, press ENTER to go back to VFY> options.
	L	Display the codes in the list.	
	ESC	Return to the Main Menu.	

0-8500-8

Q- SYSTEM WIDE PROGRAMMING

QJ- INTERCOM CALL CONTROL, SECOND CHANNEL ACCESS

Description

Use this option to control the types of calls that broadcast over a dual channel Data Set's idle second channel. This option only applies to Data Sets programmed for dual channel operation (circuit type 03 - P/N 89054). A call can broadcast over the idle second channel only when the user is busy on a handset call.

If enabled (Y), the following calls broadcast over the Data Set's second channel:

- Intercom calls from a keyset placed using the keyset's DSS key. Refer to the Intercom feature.
- Calls from the Data Set's Hotline partner placed using the telephone Hotline key. Refer to the Hotline feature.
- Any type of Intercom call from an attendant (DSS key, Hotline key, dial-up or DSS Console key). Refer to the Intercom feature.

If disabled (N), any call that would normally voice-announce broadcasts over the Data Set's second channel.

Conditions

None

Default Value

Second Channel access restricted (Y).

Related Programming

None

Feature Reference

None

Instructions

To enter data on the PRF:
Step 1 ► For QJ- Only Hotline Access to 2nd Chan on Table 10, enter Y or N.

To enter data at the programming terminal:
Step 1 ► Type **Q**. You see: **Q-CMD>**
Step 2 ► Type **J**. You see: **ONLY HOTLINE ACCESS TO 2ND CHAN?**
Step 3 ► Enter **Y** or **N** for QJ- Only Hotline Access to 2nd Chan from Table 10. In either case, you see: **INHIBIT VOICE CALL?**
Go to QJ- Intercom Call Control, Voice Call on the next page.

Q- SYSTEM WIDE PROGRAMMING

QJ- INTERCOM CALL CONTROL, VOICE CALL

Description

Use this option to enable/disable voice-announced Intercom calls system-wide. Refer to the Intercom feature. If disabled (N), the system allows voice-announced Intercom calls if also allowed at the destination extension. If enabled (Y), all Intercom calls ring the destination extension.

Conditions

Voice-announced calls cannot occur at ASI/OPX extensions.

Default Value

Voice-announced Intercom calls not inhibited (N).

Related Programming

None

Feature Reference

None

Instructions

- To enter data on the PRF:**
- Step 1 ► For QJ- Inhibit Voice Call on Table 10, enter Y or N.
- To enter data at the programming terminal:**
- Step 1 ► After making an entry for QJ- Second Channel Access, you see: **INHIBIT VOICE CALL?**
- Step 2 ► Enter Y or N for QJ- Inhibit Voice Call from Table 10. In either case, you see **INHIBIT HANDSFREE REPLY?**
Go to QJ- Intercom Call Control, Handsfree Reply on the next page.

Q- SYSTEM WIDE PROGRAMMING

QJ- INTERCOM CALL CONTROL, HANDSFREE REPLY

Description

Use this option to enable/disable handsfree reply to voice-announced Intercom calls system-wide. If disabled (Y), an extension user must lift the handset to respond to a voice-announced Intercom call. If enabled (N), an extension user can reply to a voice-announced Intercom call by just speaking toward the phone.

Conditions

Voice-announced calls cannot occur at ASI/OPX extensions.

Default Value

Handsfree reply permitted (N).

Related Programming

None

Feature Reference

None

Instructions

- To enter data on the PRF:**
Step 1 > For QJ- Inhibit Handsfree Reply on Table 10, enter Y or N.
- To enter data at the programming terminal:**
Step 1 > After programming QJ- Intercom Call Control, Voice Call, you see: **INHIBIT HANDSFREE REPLY?**
Step 2 > Enter Y or N for QJ- Inhibit Handsfree Reply from Table 10. In either case, you see: **INHIBIT ALERTS, CALL WAITING?**
Go to QJ- Intercom Call Control, Alerts (Call Waiting) on the next page.

Q- SYSTEM WIDE PROGRAMMING

QJ- INTERCOM CALL CONTROL, ALERTS (CALL WAITING)

Description

Use this option to allow or deny Call Waiting beeps. Refer to the Call Waiting feature. If allowed (N), extension users can hear Call Waiting beeps for camped-on calls. If denied (Y), extension users never hear Call Waiting beeps.

Conditions

This option has no affect on Off-Hook Signaling.

Default Value

Call Waiting alerts allowed.

Related Programming

Call Waiting (Camp-On)

- CP- Inhibit Camp-On (BY0:5) - Allow or deny an extension's capability to send Call Waiting tones when the user dials 2.
- CP- Direct Trunk Access and Trunk Camp-On (BY2:0) - An extension user with Direct Trunk Access can camp-on to a busy trunk.
- E- Extensions, E3- Class of Service - Assign Class of Service to extensions.

Feature Reference

Call Waiting (Camp-On)

Instructions

To enter data on the PRF:

- Step 1 ➤ For QJ- Call Waiting on Table 10, enter Y or N.

To enter data at the programming terminal:

- Step 1 ➤ After programming QJ- Intercom Call Control, Handsfree Reply, you see:
INHIBIT ALERTS, CALL WAITING?
- Step 2 ➤ Enter Y or N for QJ- Call Waiting from Table 10. In either case, you see:
CALL FORWARD?

Go to QJ- Intercom Call Control, Alerts (Call Forwarding) on the next page.

Q- SYSTEM WIDE PROGRAMMING

QJ- INTERCOM CALL CONTROL, ALERTS (CALL FORWARDING)

Description

Use this option to allow/deny the Call Forwarding reminder message. Refer to the Call Forwarding feature. If allowed (N), a voice message periodically plays to remind the user that their calls are forwarded. If denied (Y), the reminder message never plays. The reminder message is, "Your calls have been forwarded."

This option does not apply to VS.

Conditions

Voice Messages can play only if your system has a VAU or OPA/VAU PCB.

Default Value

Call Forwarding reminder message allowed (N).

Related Programming

None

Feature Reference

None

Instructions

To enter data on the PRF:

Step 1 ► For QJ- Call Forward on Table 10, enter Y or N.

To enter data at the programming terminal:

Step 1 ► After programming QJ- Intercom Call Control, Alerts (Call Waiting), you see:
CALL FORWARD?

Step 2 ► Enter Y or N for QJ- Call Forward from Table 10. In either case, you see:
MESSAGE?

Go to QJ- Intercom Call Control, Alerts (Message) on the next page.

Q- SYSTEM WIDE PROGRAMMING

QJ- INTERCOM CALL CONTROL, ALERTS (MESSAGE)

Description

Use this option to allow/deny the Message Waiting reminder message. Related to the Message Waiting feature. If allowed (N), a voice message periodically plays to remind the user that they have a Message Waiting. If denied (Y), the reminder message never plays. The reminder message is, "You have a message."

This option does not apply to VS.

Conditions

Voice messages can play only if your system has a VAU or OPA/VAU PCB.

Default Value

Message Waiting reminder message allowed (N).

Related Programming

None

Feature Reference

None

Instructions

- To enter data on the PRF:**
- Step 1 ► For QJ- Message on Table 10, enter Y or N.
- To enter data at the programming terminal:**
- Step 1 ► After programming QJ- Intercom Call Control, Alerts (Call Forwarding), you see: **MESSAGE?**
 - Step 2 ► Enter Y or N for QJ- Message from Table 10. After making your entry, you return to the Main Menu.

Description

Use this option to enter the System Identification. The System Identification is four lines long, with up to 17 characters in each line. It can consist of any combination of characters A-Z and the digits 0-9, # and *.

Conditions

None

Default Value

No System Identification programmed.

Related Programming

Automatic Fault Reporting

- **J- Communications Port Parameters, Port Speed** - Set the baud rate for Port A (modem) and Port B (local) to match the connected device. (The attendant can set these options from the telephone. See page 2-2)
- **J- Communications Port Parameters, Modem Ring Count** - Set the Automated Answer ring count to match the setting of the connected modem.
- **QC- Operator Programming, Suppress Operator Alarms** - Suppress/allow alarm indications at attendant extensions.
- **QV- Trouble Report Telephone Number** - This is the number the system dials to report a major alarm to the off-site service center.

Feature Reference

Automatic Fault Reporting
System Identification

Instructions

- To enter data on the PRF:**
- Step 1 ➤ For QK- KSU ID on Table 10, enter the System Identification.

To enter data at the programming terminal:

- Step 1 ➤ Type **Q**. You see: **Q-CMD>**
- Step 2 ➤ Type **K**. You see: **KSU ID:**
- Step 3 ➤ Enter the data for QK- KSU Ident (line 1) from Table 10 and press **RETURN**. You go to the second line.
 - If you enter 17 characters, you don't have to press **RETURN**.
 - To erase an entry for an entire line, press space bar and **RETURN**.
- Step 4 ➤ Repeat step 3 for lines 2-4.

Q- SYSTEM WIDE PROGRAMMING

QL- LCR/ARS/ACCOUNT CODES, MANDATORY ACCOUNT CODES

Description

Use this option to enable (Y) or disable (N) Mandatory Account Codes system-wide.

Conditions

None

Default Value

Mandatory Account Codes disabled (N).

Related Programming

Account Code Capability

- **QI- Verifiable Account Code List** - Enter up to 601 codes into the Verifiable Account Code List.
- **QL- LCR/ARS/Account Codes, Verifiable Account Codes** - Enable/disable Verifiable Account Codes.
- **QL- LCR/ARS/Account Codes, Account Codes for Toll Calls Only** - Enable/disable Mandatory Account Codes for all outside calls or just for toll (1+) calls.
- **QL- LCR/ARS/Account Codes, Minimum COS for Mandatory Account Codes** - Set the minimum COS number that requires Mandatory Account Codes.

Feature Reference

Account Code Capability

Instructions

- To enter data on the PRF:**
- Step 1 ➤ For QL- Acct Codes Mandatory on Table 10, enter Y or N.

- To enter data at the programming terminal:**
- Step 1 ➤ Type Q. You see: **Q-CMD>**
- Step 2 ➤ Type L. You see: **ACCT CODES MANDATORY?**
- Step 3 ➤ Enter Y or N for QL- Acct Codes Mandatory from Table 10.
- Step 4 ➤ ● If you enter Y for step 3, go to QL- Verifiable Account Codes on the next page.
- OR
- If you enter N for step 3, go to QL- LCR or ARS Enable

Q- SYSTEM WIDE PROGRAMMING

QL- LCR/ARS/ACCOUNT CODES, VERIFIABLE ACCOUNT CODES

Description

Use this option to enable (Y) or disable (N) Verifiable Account Codes system-wide.

Conditions

None

Default Value

Verifiable Account Codes disabled (N).

Related Programming

Account Code Capability

- **QI- Verifiable Account Code List** - Enter up to 601 codes into the Verifiable Account Code List.
- **QL- LCR/ARS/Account Codes, Mandatory Account Codes** - Enable/disable Mandatory Account Codes.
- **QL- LCR/ARS/Account Codes, Account Codes for Toll Calls Only** - Enable/disable Mandatory Account Codes for all outside calls or just for toll (1+) calls.
- **QL- LCR/ARS/Account Codes, Minimum COS for Mandatory Account Codes** - Set the minimum COS number that requires Mandatory Account Codes.

Feature Reference

Account Code Capability

Instructions

To enter data on the PRF:

- Step 1 ➤ For QL- Verify Codes on Table 10, enter Y or N.

To enter data at the programming terminal:

- Step 1 ➤ After entering Y for QL- Mandatory Account Codes, you see: **VERIFY CODES?**
- Step 2 ➤ Enter Y or N for QL- Verify Codes from Table 10. In either case, you see: **ACCT CODES FOR TOLL CALL ONLY?**
Go to QL- Account Codes for Toll Calls Only on the next page.

Q- SYSTEM WIDE PROGRAMMING

QL- LCR/ARS/ACCT CODES, ACCT CODES FOR TOLL CALLS ONLY

Description

Use this option to enforce Account Codes for all trunk calls (N) or for just trunk calls (1+) (Y).

Conditions
None

Default Value
Account codes enabled for all trunk calls (N).

Related Programming

Account Coded Capability

- **QL- Verifiable Account Code List** - Enter up to 601 codes into the Verifiable Account Code List.
- **QL- LCR/ARS/Account Codes, Mandatory Account Codes** - Enable/disable Mandatory Account Codes.
- **QL- LCR/ARS/Account Codes, Verifiable Account Codes** - Enable/disable Verifiable Account Codes.
- **QL- LCR/ARS/Account Codes, Minimum COS for Mandatory Account Codes** - Set the minimum COS number that requires Mandatory Account Codes.

Feature Reference

Account Code Capability

Instructions

To enter data on the PRF:

- Step 1 ➤ For QL- Acct Codes for Toll Call Only on Table 10, enter Y or N.

To enter data at the programming terminal:

- Step 1 ➤ After entering data for QL- Verifiable Account Codes, you see: **ACCT CODES FOR TOLL CALL ONLY?**
- Step 2 ➤ Enter Y or N for QL- Acct Codes for Toll Call Only from Table 10. You see: **MIN. COS REQUIRING ACCT CODE**
Go to QL- Minimum COS for Mandatory Account Codes on the next page.

Q- SYSTEM WIDE PROGRAMMING

QL- LCR/ARS/ACCOUNT CODES, MINIMUM COS FOR MANDATORY ACCOUNT CODES

Description

Use this option to set the minimum COS number that requires Mandatory Account Code entry. For example, entering 15 requires COSs 15-27 to enter Account Codes. COSs 00-14 do not have to enter Account Codes. To force all extension users to enter Account Codes (including attendants), enter 00.

Conditions

None

Default Value

Only COS 27 must enter an Account Code (27).

Related Programming

Account Code Capability

- **QI- Verifiable Account Code List** - Enter up to 601 codes into the Verifiable Account Code List.
- **QL- LCR/ARS/Account Codes, Mandatory Account Codes** - Enable/disable Mandatory Account Codes.
- **QL- LCR/ARS/Account Codes, Verifiable Account Codes** - Enable/disable Verifiable Account Codes.
- **QL- LCR/ARS/Account Codes, Account Codes for Toll Calls Only** - Enable/disable Mandatory Account Codes for all outside calls or just for toll (1+) calls.

Feature Reference

Account Code Capability

Instructions

- To enter data on the PRF:**
- Step 1 ➤ Enter a COS number (00-27) for QL- Min Cos Requiring Acct Code on Table 10.

- To enter data at the programming terminal:**
- Step 1 ➤ After entering data for QL- Account Codes for Toll Calls Only, you see: **MIN. COS REQUIRING ACCT CODE?**

- Step 2 ➤ Enter data for QL- Min. COS Requiring Acct Code from Table 10. You see: **LCR (0=NOT INST'D,1=LCR INST'D,2=ARS INST'D)**
Go to QL- LCR or ARS Enable on the next page.

Q- SYSTEM WIDE PROGRAMMING

QL- LCR/ARS/ACCOUNT CODES, LCR/ARS ENABLE (HYBRID ONLY)

Description

Use this option to enable LCR or ARS. The choices are:

- 0 ARS/LCR not enabled
- 1 LCR enabled
- 2 ARS enabled¹

This option is not available on key systems.

Conditions

None

Default Value

LCR and ARS disabled (0).

Related Programming

Automatic Route Selection

- **E- Trunks, E4- Next Trunk in Outbound Rotary** - ARS requires outbound trunk rotaries. This prompt determines the selection sequence for trunks within each rotary.
- **E- Trunks, E7- Trunk Service Number** - Assign a Service Number to each trunk used for ARS. ARS routes calls to Service Numbers, not trunks.
- **E- Trunks, EA- Trunk Group Assignment (First Trunk in Group)** - Group trunks in rotaries by assigning each one the same First Trunk in Group number.
- **GA- ARS Editor** - Program the ARS options. Refer to Appendix A for complete details.
- **QL- LCR/ARS/Account Codes, Number of Services** - Designate how many services (trunk rotaries) ARS will use.
- **QL- LCR/ARS/Account Codes, Service Line Numbers** - Indicate the trunk rotary master number for each of the rotaries used by ARS. This should correspond to the **EA- First Trunk in Group** entry.

Least Cost Routing

- **E- Trunks, E7- Trunk Service Number** - Assign a Service Number to each trunk used for LCR. LCR routes calls to Service Numbers, not individual trunks.
- **GL- LCR Testing** - Use this option to display your current LCR configuration and make changes to your LCR database.
- **QL- LCR/ARS/Account Codes, Number of Services** - Designate how many services (trunk rotaries) LCR will use.
- **QL- LCR/ARS/Account Codes, Service Line Numbers** - Indicate the trunk rotary master number for each of the rotaries used by LCR. This should correspond to the **EA- First Trunk in Group** entry.
- **QL- LCR/ARS/Account Codes, COS Needed to Access ALT Route** - Enter the minimum COS that the system requires before routing a call to the alternate route (if primary route is busy).
- **QL- LCR/ARS/Account Codes, Type of Service** - Enter the type of service number (0-5). For example, for DDD or WATS, enter 0.
- **QL- LCR/ARS/Account Codes, Access Code** - For dial-up services, enter the access code (telephone number) for the service.
- **QL- LCR/ARS/Account Codes, Security Code** - For dial-up services, enter the security code the service requires.

¹ Refer to Appendix A for details on programming ARS.

Q- SYSTEM WIDE PROGRAMMING

QL- LCR/ARS/ACCOUNT CODES, LCR/ARS ENABLE (HYBRID ONLY)

Feature Reference

Automatic Route Selection
Least Cost Routing

Instructions

Step 1 > **To enter data on the PRF:**
For QL- LCR on Table 10, enter 0, 1 or 2.

Step 1 > **To enter data at the programming terminal:**
After programming QL- Minimum COS for Mandatory Account Codes or entering **N** for QL- Mandatory Account Codes, you see: **LCR (0=NOT INST'D,1=LCR INST'D,2=ARS INST'D)**

Step 2 > Enter 0, 1 or 2 for QL- LCR (0=Not Inst'd,1=LCR inst'd,2=ARS Inst'd) from Table 10. If you enter 1 or 2, you see: **NO. OF CO SERVICES (01-10)**
If you enter 1 or 2, go to QL- Number of Services on the next page.
If you enter 0, you go to the Main Menu.

Q- SYSTEM WIDE PROGRAMMING
QL- LCR/ARS/ACCOUNT CODES, LCR OR ARS ENABLE

- For Your Notes -

Q- SYSTEM WIDE PROGRAMMING

QL- LCR/ARS/ACCOUNT CODES, NUMBER OF SERVICES

Description

Use this option to designate how many services (trunk rotaries) LCR or ARS will use.¹ The choices are 01-10. This prompt appears only if you enter 1 or 2 for the QL- LCR OR ARS ENABLE option.

This option does not apply to key systems.

Conditions

None

Default Value

No services designated (00).

Related Programming

Automatic Route Selection

- **E- Trunks, E4- Next Trunk in Outbound Rotary** - ARS requires outbound trunk rotaries. This prompt determines the selection sequence for trunks within each rotary.
- **E- Trunks, E7- Trunk Service Number** - Assign a Service Number to each trunk used for ARS. ARS routes calls to Service Numbers, not individual trunks.
- **E- Trunks, EA- Trunk Group Assignment (First Trunk in Group)** - Group trunks in rotaries by assigning each one the same First Trunk in Group number.
- **GA- ARS Editor** - Program the ARS options. Refer to Appendix A for complete details.
- **QL- LCR/ARS/Account Codes, LCR or ARS Enable** - Enter 2 to enable ARS.
- **QL- LCR/ARS/Account Codes, Service Line Numbers** - Indicate the trunk rotary master number for each of the rotaries used by ARS. This should correspond to the **EA- First Trunk in Group** entry.

Least Cost Routing

- **E- Trunks, E7- Trunk Service Number** - Assign a Service Number to each trunk used for LCR. LCR routes calls to Service Numbers, not individual trunks.
- **GL- LCR Testing** - Use this option to display your current LCR configuration and make changes to your LCR database.
- **QL- LCR/ARS/Account Codes, LCR or ARS Enable** - Enter 1 to enable LCR.
- **QL- LCR/ARS/Account Codes, Service Line Numbers** - Indicate the trunk rotary master number for each of the rotaries used by LCR. This should correspond to the **EA- First Trunk in Group** entry.
- **QL- LCR/ARS/Account Codes, COS Needed to Access ALT Route** - Enter the minimum COS that the system requires before routing a call to the alternate route (if primary route is busy).
- **QL- LCR/ARS/Account Codes, Type of Service** - Enter the type of service number (0-5). For example, for DDD or WATS, enter 0.
- **QL- LCR/ARS/Account Codes, Access Code** - For dial-up services, enter the access code (telephone number) for the service.
- **QL- LCR/ARS/Account Codes, Security Code** - For dial-up services, enter the security code the service requires.

¹ Refer to Appendix A for details on programming ARS.

Q- SYSTEM WIDE PROGRAMMING

QL- LCR/ARS/ACCOUNT CODES, NUMBER OF SERVICES

Feature Reference

Automatic Route Selection
Least Cost Routing

Instructions

- To enter data on the PRF:**
- Step 1 ► For QL- No. of Services (01-10), enter the number of services (trunk rotaries) ARS or LCR will use.
- To enter data at the programming terminal:**
- Step 1 ► After programming QL- LCR or ARS Enable, you see: **NO. OF CO SERVICES (01-10)**
- Step 2 ► Enter the number of services for QL- No. of Services from Table 10. You see: **SERVICE 01 LINE NUMBER**
Go to QL- Service Line Numbers on the next page.

Q- SYSTEM WIDE PROGRAMMING

QL- LCR/ARS/ACCOUNT CODES, SERVICE LINE NUMBERS

Description

Use this option to assign the trunk rotary master number for each of the rotaries used by ARS/LCR. Service number 01 should be the DDD trunk group. This entry should correspond to the EA- First Trunk in Group entry.

If you are programming ARS¹, this is the last QL option you have to program. If you are programming LCR, you must enter additional data for:

- QL- COS Needed to Access Alt Route
- QL- Type of Service
- QL- Access Code
- QL- Security Code

This option does not apply to key systems.

Conditions

None

Default Value

No rotaries assigned (00).

Related Programming

Automatic Route Selection

- **E- Trunks, E4- Next Trunk in Outbound Rotary** - ARS requires outbound trunk rotaries. This prompt determines the selection sequence for trunks within each rotary.
- **E- Trunks, E7- Trunk Service Number** - Assign a Service Number to each trunk used for ARS. ARS routes calls to Service Numbers, not trunks.
- **E- Trunks, EA- Trunk Group Assignment (First Trunk in Group)** - Group trunks in rotaries by assigning each one the same First Trunk in Group number.
- **GA- ARS Editor** - Program the ARS options. Refer to Appendix A for complete details.
- **QL- LCR/ARS/Account Codes, LCR or ARS Enable** - Enter 2 to enable ARS.
- **QL- LCR/ARS/Account Codes, Number of Services** - Designate how many services (trunk rotaries) ARS will use.

Least Cost Routing

- **E- Trunks, E7- Trunk Service Number** - Assign a Service Number to each trunk used for LCR. LCR routes calls to Service Numbers, not individual trunks.
- **GL- LCR Testing** - Use this option to display your current LCR configuration and make changes to your LCR database.
- **QL- LCR/ARS/Account Codes, LCR or ARS Enable** - Enter 1 to enable LCR.
- **QL- LCR/ARS/Account Codes, Number of Services** - Designate how many services (trunk rotaries) LCR will use.
- **QL- LCR/ARS/Account Codes, COS Needed to Access ALT Route** - Enter the minimum COS that the system requires before routing a call to the alternate route (if primary route is busy).
- **QL- LCR/ARS/Account Codes, Type of Service** - Enter the type of service number (0-5). For example, for DDD or WATS, enter 0.

¹ Refer to Appendix A for details on programming ARS.

Q- SYSTEM WIDE PROGRAMMING

QL- LCR/ARS/ACCOUNT CODES, SERVICE LINE NUMBERS

Related Programming (Cont'd)

- **QL- LCR/ARS/Account Codes, Access Code** - For dial-up services, enter the access code (telephone number) for the service.
- **QL- LCR/ARS/Account Codes, Security Code** - For dial-up services, enter the security code the service requires.

Feature Reference

Automatic Route Selection
Least Cost Routing

Instructions

- To enter data on the PRF:**
- Step 1 ➤ For QL- Service nn Line Number? on Table 10, enter the master number for each of the ARS/LCR trunk rotaries.

To enter data at the programming terminal:

- Step 1 ➤ After entering data for QL- Number of Services, you see: **SERVICE 01 LINE NUMBER?**
- Step 2 ➤ Enter data from Table 10 for service (rotary) 01 and press **ENTER**.
- Step 3 ➤ ● If you are programming LCR, you see: **COS NEEDED TO ACCESS ALT ROUTE?**
Go to QL- COS Needed to Access Alt Route on the next page.
- OR**
- If you are programming ARS, you see: **SERVICE 02 LINE NUMBER.**
Program additional service numbers (02-10) as required.

Q- SYSTEM WIDE PROGRAMMING

QL- LCR/ARS/ACCT CODES, COS NEEDED TO ACCESS ALT ROUTE

Description

Use this option to set the minimum COS (00-27) LCR requires before routing a call to the alternate route. This can occur only if the primary route is busy. If you enter 10, for example, extensions with a COS of 00-10 can use the alternate route. Extensions with a COS of 11-27 cannot use the alternate route. If you enter 27, all classes of service can use the alternate route.

This option only applies to systems with LCR installed. This option does not apply to systems with ARS. This option does not apply to VS.

Conditions

None

Default Value

All classes of service can access the alternate route (00).

Related Programming

Least Cost Routing

- **E- Trunks, E7- Trunk Service Number** - Assign a Service Number to each trunk used for LCR. LCR routes calls to Service Numbers, not individual trunks.
- **GL- LCR Testing** - Use this option to display your current LCR configuration and make changes to your LCR database.
- **QL- LCR/ARS/Account Codes, LCR or ARS Enable** - Enter 1 to enable LCR.
- **QL- LCR/ARS/Account Codes, Number of Services** - Designate how many services (trunk rotaries) LCR will use.
- **QL- LCR/ARS/Account Codes, Service Line Numbers** - Indicate the trunk rotary master number for each of the rotaries used by LCR. This should correspond to the **EA- First Trunk in Group** entry.
- **QL- LCR/ARS/Account Codes, Type of Service** - Enter the type of service number (0-5). For example, for DDD or WATS, enter 0.
- **QL- LCR/ARS/Account Codes, Access Code** - For dial-up services, enter the access code (telephone number) for the service.
- **QL- LCR/ARS/Account Codes, Security Code** - For dial-up services, enter the security code the service requires.

Feature Reference

Least Cost Routing

Instructions

- To enter data on the PRF:**
- Step 1 ➤ For QL- COS Needed to Access Alt Route on Table 10, enter the COS number (00-27).

To enter data at the programming terminal:

- Step 1 ➤ After programming QL- Service Line Numbers, you see: **COS NEEDED TO ACCESS ALT ROUTE?**
- Step 2 ➤ Enter the COS number from Table 10. You see: **TYPE OF SERVICE**
Go to QL- Type of Service on the next page.

Q- SYSTEM WIDE PROGRAMMING

QL- LCR/ARS/ACCOUNT CODES, TYPE OF SERVICE

Description

Use this option to enter the type of service (0-5) for each LCR service number (trunk rotary). The choices are:

- 0 DDD, WATS
- 1 FX Line
- 2 MCI, Tie line
- 3 Western Union
- 4 Same as 2 (but does not strip the leading 1)
- 5 Same as 3 (but does not strip the leading 1)

This option only applies to systems with LCR installed. This option does not apply to systems with ARS. This option does not apply to VS.

Conditions

None

Default Value

DDD, WATS (type 0)

Related Programming

Least Cost Routing

- **E- Trunks, E7- Trunk Service Number** - Assign a Service Number to each trunk used for LCR. LCR routes calls to Service Numbers, not individual trunks.
- **GL- LCR Testing** - Use this option to display your current LCR configuration and make changes to your LCR database.
- **QL- LCR/ARS/Account Codes, LCR or ARS Enable** - Enter 1 to enable LCR.
- **QL- LCR/ARS/Account Codes, Number of Services** - Designate how many services (trunk rotaries) LCR will use.
- **QL- LCR/ARS/Account Codes, Service Line Numbers** - Indicate the trunk rotary master number for each of the rotaries used by LCR. This should correspond to the **EA- First Trunk in Group** entry.
- **QL- LCR/ARS/Account Codes, COS Needed to Access ALT Route** - Enter the minimum COS that the system requires before routing a call to the alternate route (if primary route is busy).
- **QL- LCR/ARS/Account Codes, Access Code** - For dial-up services, enter the access code (telephone number) for the service.
- **QL- LCR/ARS/Account Codes, Security Code** - For dial-up services, enter the security code the service requires.

Feature Reference

Least Cost Routing

Q- SYSTEM WIDE PROGRAMMING

QL- LCR/ARS/ACCOUNT CODES, TYPE OF SERVICE

Instructions

- To enter data on the PRF:**
- Step 1 > For QL- Type of Service? on Table 10, enter the Service type for each LCR service number (trunk rotary).
- To enter data at the programming terminal:**
- Step 1 > After programming QL- COS Needed to Access Alt Route, you see: **TYPE OF SERVICE**
- Step 2 > Enter the type of service for service number 01 from Table 10.
- Step 3 > ● If you enter service type 0 or 1, you see: **SERVICE 02 LINE NUMBER.**
Go back to QL- Service Line Numbers and enter data for your remaining service numbers.
- OR
- If you enter service type 2, 3, 4 or 5, you see: **ACCESS CODE**
Go to QL- Access Code on the next page.

Q- SYSTEM WIDE PROGRAMMING

QL- LCR/ARS/ACCOUNT CODES, ACCESS CODE

Description

For service types 02-05, use this option to enter the service's access code. With dial-up MCI, for example, this would be the MCI local number. The access code can be up to 11 digits long, consisting of the digits 0-9, # and *.

This option only applies to systems with LCR installed. This option does not apply to systems with ARS. This option does not apply to VS.

Conditions

None

Default Value

No code entered.

Related Programming

Least Cost Routing

- **E- Trunks, E7- Trunk Service Number** - Assign a Service Number to each trunk used for LCR. LCR routes calls to Service Numbers, not individual trunks.
- **GL- LCR Testing** - Use this option to display your current LCR configuration and make changes to your LCR database.
- **QL- LCR/ARS/Account Codes, LCR or ARS Enable** - Enter 1 to enable LCR.
- **QL- LCR/ARS/Account Codes, Number of Services** - Designate how many services (trunk rotaries) LCR will use.
- **QL- LCR/ARS/Account Codes, Service Line Numbers** - Indicate the trunk rotary master number for each of the rotaries used by LCR. This should correspond to the **EA- First Trunk in Group** entry.
- **QL- LCR/ARS/Account Codes, COS Needed to Access ALT Route** - Enter the minimum COS that the system requires before routing a call to the alternate route (if primary route is busy).
- **QL- LCR/ARS/Account Codes, Type of Service** - Enter the type of service number (0-5). For example, for DDD or WATS, enter 0.
- **QL- LCR/ARS/Account Codes, Security Code** - For dial-up services, enter the security code the service requires.

Feature Reference

Least Cost Routing

Instructions

- To enter data on the PRF:**
- Step 1 ➤ For QL- Access Code on Table 10, enter the access code for each LCR service number (trunk rotary).
- To enter data at the programming terminal:**
- Step 1 ➤ After programming QL- Type of Service (and entering type 2-5), you see:
ACCESS CODE
- Step 2 ➤ Enter data for QL- Access Code from Table 10 and press **ENTER**. You see:
SECURITY CODE?
- To erase an access code, type N.
If your access code is 11 digits long, you don't have to press RETURN.
Go to QL- Security Code on the next page.

Q- SYSTEM WIDE PROGRAMMING

QL- LCR/ARS/ACCOUNT CODES, SECURITY CODE

Description

For service types 02-05, use this option to enter the service's security code. After dialing the access code, the caller must dial the security code before the service will accept the call. The security code can be up to 9 digits long, consisting of the digits 0-9, # and *.

This option only applies to systems with LCR installed. This option does not apply to systems with ARS. This option does not apply to VS.

Conditions

None

Default Value

No code entered.

Related Programming

Least Cost Routing

- **E- Trunks, E7- Trunk Service Number** - Assign a Service Number to each trunk used for LCR. LCR routes calls to Service Numbers, not individual trunks.
- **GL- LCR Testing** - Use this option to display your current LCR configuration and make changes to your LCR database.
- **QL- LCR/ARS/Account Codes, LCR or ARS Enable** - Enter 1 to enable LCR.
- **QL- LCR/ARS/Account Codes, Number of Services** - Designate how many services (trunk rotaries) LCR will use.
- **QL- LCR/ARS/Account Codes, Service Line Numbers** - Indicate the trunk rotary master number for each of the rotaries used by LCR. This should correspond to the **EA- First Trunk in Group** entry.
- **QL- LCR/ARS/Account Codes, COS Needed to Access ALT Route** - Enter the minimum COS that the system requires before routing a call to the alternate route (if primary route is busy).
- **QL- LCR/ARS/Account Codes, Type of Service** - Enter the type of service number (0-5). For example, for DDD or WATS, enter 0.
- **QL- LCR/ARS/Account Codes, Access Code** - For dial-up services, enter the access code (telephone number) for the service.

Feature Reference

Least Cost Routing

Instructions

- To enter data on the PRF:**
- Step 1 ➤ For QL- Security Code on Table 10, enter the security code for each LCR service number (trunk rotary).
- To enter data at the programming terminal:**
- Step 1 ➤ After programming QL- Access Code, you see: **SECURITY CODE**
- Step 2 ➤ Enter data for QL- Security Code from Table 10 and press **ENTER**. You see: **SERVICE 02 LINE NUMBER**
- To erase a security code, type N.
- If your security code is 9 digits long, you don't have to press RETURN.
- Go back to QL- Service Line Numbers and enter data for your remaining service numbers.

Q- SYSTEM WIDE PROGRAMMING

QM- MUSIC/RELAY CONTROL, BGM LINE NUMBER

Description

In the large systems, use this option to designate the trunk circuit connected to the Background Music music source (e.g., 05). You cannot use the trunk circuit you designate here for any other purpose. In VS, enter Y to enable Background Music; N to disable. Refer to the system Hardware Manual for additional installation details.

Conditions

In VS, Background Music uses the fourth trunk circuit on the first CO Module in the main CEU. Although you connect to the CEU MOH terminals, you cannot use the fourth trunk circuit for trunks. Refer to the system Hardware Manual for additional installation details.

Default Value

No trunk assigned (00).

Related Programming

Background Music

➤ **E- Trunks, E2- Circuit Type** - The trunk used for BGM must be circuit type X. If you want to use the BGM trunk later on for another function, remember to:

- Remove the assignment in QM- BGM Line Number
- Reset the associated line/trunk PCB (using IR- Reset Line/Trunk Card)
- Change the trunk to the desired circuit type (using the E2 option)
- Perform a side tone test on the trunk (using the IS- Side Tone Test option)

Feature Reference

Background Music

Instructions

To enter data on the PRF:
Step 1 ➤ For QM- BGM Line Number on Table 10, enter the BGM trunk circuit number for the large systems. For VS, enter Y(es) or N(o).

To enter data at the programming terminal:

Step 1 ➤ Type **Q**. You see: **Q-CMD>**

Step 2 ➤ (Large systems) Type **M**. You see: **BGM LINE NUMBER?**
OR

(VS) Type **M**. You see: **BGM**

Step 3 ➤ (Large systems) Enter the trunk circuit number for QM- BGM Line Number from Table 10 and press **ENTER**. You see: **MOH LINE NUMBER?**
To erase an entry, enter 00.

OR

(VS) enter Y(es) or N(o) from Table 10.
Go to MOH Line Number on the next page.

Q- SYSTEM WIDE PROGRAMMING

QM- MUSIC/RELAY CONTROL, MOH LINE NUMBER

Description

In the large systems, use this option to designate the trunk circuit connected to the Music on Hold music source (e.g., 02). You cannot use the trunk circuit you designate here for any other purpose. You can make the same entry for QM- MOH Line Number and QM- BGM Line Number, if desired. In VS, enter Y to enable Music on Hold; N to disable. Refer to the system Hardware Manual for additional installation details.

Conditions

In VS, Music On Hold (for internal extensions) uses the fourth trunk circuit on the first CO Module in the main CEU. You cannot use the fourth trunk circuit for trunks. (Music on Hold for outside calls does not use the trunk circuit.) If you want MOH for trunks 9-16, connect the MOH terminals on the main CEU to the MOH terminals on the expansion CEU. Refer to the system Hardware Manual for additional installation details.

Default Value

No trunk assigned (00).

Related Programming



Music On Hold

E- Trunks, E2- Circuit Type - The MOH trunk port must be uninstalled (circuit type X). If you want to use the MOH trunk later on for another function, remember to:

- Remove the assignment in QM- MOH Line Number
- Reset the associated line/trunk PCB (using IR- Reset Line/Trunk Card)
- Change the trunk to the desired circuit type (using the E2 option)
- Perform a side tone test on the trunk (using the IS- Side Tone Test option)

Feature Reference

Music On Hold

Instructions

Step 1 ➤

To enter data on the PRF:

For QM- MOH Line Number on Table 10, enter the MOH trunk circuit number for the large systems. For VS, enter Y(es) or N(o).

Step 1 ➤

To enter data at the programming terminal:

After programming QM- BGM Line Number, you see: **MOH LINE NUMBER (MOH IN VS)?**

Step 2 ➤

(Large systems) Enter the trunk circuit number for QM- MOH Line Number from Table 10 and press **RETURN**. You see: **EXT ALL PAGE/NIGHT AUDIBLE LINE NUMBER**

To erase an entry, enter 00.

If you enter a trunk for QM- MOH Line Number, go to QM- MOH On Transfer on the next page.

If you don't make an entry (or enter 00), go to QM- Ext Page/Night Audible Line Number.

OR

(VS) Enter Y(es) or N(o) from Table 10

If you enter Y(es) for QM- MOH Line Number, go to QM- MOH On Transfer on the next page.

If you enter N(o), go to QM- Ext Page/Night Audible Line Number.

Q- SYSTEM WIDE PROGRAMMING

QM- MUSIC/RELAY CONTROL, MOH ON TRANSFER

Description

Use this option to determine if transferred callers should hear Music on Hold or ringback tone. If enabled (Y), transferred callers hear Music on Hold while they wait for their call to go through. If disabled (N), transferred callers hear ringback tone.

For this option to function, you must have:

- Music on Hold installed (refer to the Music on Hold feature)
- Designated a trunk in QM- MOH Line Number

Conditions

None

Default Value

MOH for transferred calls enabled (Y).

Related Programming

None

Feature Reference

None

Instructions

- To enter data on the PRF:**
- Step 1 ► For QM- MOH On Transfer on Table 10, enter Y(es) to enable MOH for transferred callers. Enter N(o) to have transferred callers hear ringback tone
- To enter data at the programming terminal:**
- Step 1 ► After programming QM- MOH Line Number, you see: **MOH ON TRANSFER [Y/N]**
- Step 2 ► Enter data for QM- MOH On Transfer from Table 10. You see: **EXT ALL PAGE/NIGHT AUDIBLE LINE NUMBER**
Go to QM- Ext Page, Night Audible Line Number on the next page.

Q- SYSTEM WIDE PROGRAMMING

QM- MUSIC/RELAY CONTROL, EXT PAGE/NIGHT AUDIBLE LINE

Description

In the large systems, use this option to assign the trunk number the system will use to broadcast All Call Paging and Night Audible. You cannot use the trunk circuit you designate for any other purpose. Refer to the system Hardware Manual for additional installation details. This option is independent of the QM- Relay Control options.

In VS, this option is **EXTERNAL PAGE/NIGHT AUDIBLE**. Enter Y(es) to enable All Call Paging and Night Audible on the main CEU PA terminals. Enter N(o) to disable Paging and audible.

Conditions

None

Default Value

No trunk assigned (00).

Related Programming

Night Answer, Universal Night Answer

- **E- Extensions, ED- Trunk Control, Access Control** - An extension allows UNA pickup only for trunks to which it has access.
- **E- Trunks, E2- Circuit Type** - The unused trunk circuit assigned in QM below must have circuit type X.
- **E- Trunks, E9- Direct Trunk Termination/EI- Night Call Routing** - Terminate each trunk to the main attendant (extension 300/port 00).
- **QM- Music and Relay Control, Inhibit Audible Ring** - Enable audible ring on the night audible port.

Paging, External

- **E- Trunks, E2- Circuit Type** - Program the ports used for External Paging as uninstalled (circuit type X).
- **QM- Music and Relay Control, Page Zone n Line Number (except in VS)** - Assign a trunk port for External Paging zones 1-3. All Call Paging also broadcasts over these ports.
- **QM- Music and Relay Control, External Page (VS only)** - Enter Y to have External Paging zone 1 and All Call broadcast over the expansion CEU PA terminals.
- **QM- Music and Relay Control, External Page Music Gain** - Adjust the gain for the music that plays over the External Paging ports. (Program the next two options for each of the four relays.)
- **QM- Music and Relay Control, Relay Control-Page On (except in VS)** - If enabled and Pageowner is main attendant (port 00/extension 300), relay closes each time a user makes an All Call Paging announcement. If disabled or Pageowner is other than the attendant, relay never closes for Paging.
- **QM- Music and Relay Control, Relay Control-Pageowner** - Assign the Pageowner for ringer and page control.

Q- SYSTEM WIDE PROGRAMMING

QM- MUSIC/RELAY CONTROL, EXT PAGE/NIGHT AUDIBLE LINE

Related Programming (Cont'd)

- **Tenant Service. Assigning External Paging Zones to Tenants E- Extensions, E2- Circuit Type** - Program the ports used for External Paging as uninstalled (circuit type X). There are a total of four ports available for External Paging.
- **QM- Music and Relay Control. Page Zone n Line Number (except in VS)** - Assign a trunk port for External Paging zones 1-3. All Call Paging also broadcasts over these ports. You have three external zones available for tenants.
- **QM- Music and Relay Control. External Page (VS only)** - Enter Y to have All Call Paging and Night Audible broadcast over the expansion CEU PA terminals.
- **QM- Music and Relay Control. External Page Music Gain** - Adjust the gain for the music that plays over the External Paging ports (if any).
- **QM- Music and Relay Control. Relay Control-Page On (except in VS)** - If enabled and Pageowner is main attendant (port 00/extension 300), relay close each time a user makes an All Call Paging announcement. If disabled or Pageowner is other than the attendant, relay never closes for Paging.
- **QM- Music and Relay Control. Relay Control-Pageowner** - Assign the Pageowner for ringer and page control. This assignment should be the attendant in each tenant group.

Feature Reference

Night Answer
Paging
Tenant Service

Instructions

- To enter data on the PRF:**
- Step 1 ➤ For QM- Ext All Page/Night Audible Line Number on Table 10, enter the External All Page/Night Audible trunk circuit number.
- To enter data at the programming terminal:**
- Step 1 ➤ After programming QM- MOH Line Number, you see: **EXT ALL PAGE/NIGHT AUDIBLE (LINE NUMBER)**
 - Step 2 ➤ Enter the QM- Ext All Page/Night Audible Line Number from Table 10 from Table 10 and press **RETURN**. You see: **INHIBIT AUDIBLE RING?**
 - To erase an entry, enter 00.
 - Go to QM- Inhibit Audible Ring on the next page.
 - In VS, you enter Y(cs) or N(o).

Q- SYSTEM WIDE PROGRAMMING

QM- MUSIC/RELAY CONTROL, INHIBIT AUDIBLE RING

Description

Use this option to enable/disable audible ring on the trunk port you designate in QM- Ext Page/Night Audible Line Number. If enabled (N), night audible can occur over the trunk port. If disabled (Y), night audible cannot occur.

Conditions

None

Default Value

Audible ring enabled (N).

Related Programming

Night Answer, Universal Night Answer

- **E- Extensions, ED- Trunk Control, Access Control** - An extension allows UNA pickup only for trunks to which it has access.
- **E- Trunks, E2- Circuit Type** - The unused trunk circuit assigned in QM below must have circuit type X.
- **E- Trunks, E9- Direct Trunk Termination/EI- Night Call Routing** - Terminate each trunk to the main attendant (extension 300/port 00).
- **QM- Music and Relay Control, Ext Page/Night Audible Line Number** - In the large systems, indicate the unused trunk circuit that will broadcast night audible. In VS, enter Y. An incoming call will activate ringing on the night audible port if:
 - The ringing trunk is terminated (in E9) to the main attendant (extension 300)
 - The main attendant is in the night mode

Feature Reference

Night Answer

Instructions

- To enter data on the PRF:**
- Step 1 ➤ For QM- Inhibit Audible Ring on Table 10, enter Y or N.

- To enter data at the programming terminal:**
- Step 1 ➤ After programming QM- Ext Page/Night Audible Line Number, you see:
INHIBIT AUDIBLE RING?

- Step 2 ➤ Enter Y or N for QM- Inhibit Audible Ring from Table 10. You see:
EXTERNAL PAGE PORTS, ZONE 1 LINE NUMBER?
Go to QM- Page Zone n Line Number on the next page.

Q- SYSTEM WIDE PROGRAMMING

QM- MUSIC/RELAY CONTROL, PAGE ZONE n LINE NUMBER

Description

Use this option to assign the trunk circuits the system will use for external Paging zones 1-3. You should assign a different trunk for each of the three zones. You cannot use the trunk circuits you designate here for any other purpose. (Note that All Call Paging also broadcasts over these trunks.) Refer to the system Hardware Manual for additional installation details. This option is independent of the QM- Relay Control options.

This option does not apply to VS.

Conditions

None

Default Value

No trunk circuits assigned (00).

Related Programming

Paging, External

- **E- Trunks, E2- Circuit Type** - Program the ports used for External Paging as uninstalled (circuit type X).
- **QM- Music and Relay Control, Ext Page/Night Audible Line Number** - In large systems, assign the trunk number the system will use to broadcast All Call Paging and Night Audible. In VS, enter Y to have All Call Page broadcast over the main CEU PA terminals.
- **QM- Music and Relay Control, External Page (VS only)** - Enter Y to have External Paging zone 1 and All Call broadcast over the expansion CEU PA terminals.
- **QM- Music and Relay Control, External Page Music Gain** - Adjust the gain for the music that plays over the External Paging ports. (Program the next two options for each of the four relays.)
- **QM- Music and Relay Control, Relay Control-Page On (except in VS)** - If enabled and Pageowner is main attendant (port 00/extension 300), relay closes each time a user makes an All Call Paging announcement. If disabled or Pageowner is other than the attendant, relay never closes for Paging.
- **QM- Music and Relay Control, Relay Control-Pageowner** - Assign the Pageowner for ringer and page control.

Tenant Service, Assigning External Paging Zones to Tenants

- **E- Trunks, E2- Circuit Type** - Program the ports used for External Paging as uninstalled (circuit type X). There are a total of four ports available for External Paging.
- **QM- Music and Relay Control, Ext Page/Night Audible Line Number** - In the large systems, assign the trunk number the system will use to broadcast All Call Paging and Night Audible. In VS, enter Y to broadcast over the main CEU PA terminals. You can have Paging amplifiers for all tenants or just those you select. You can have Paging amplifiers for all tenants or just those you select.
- **QM- Music and Relay Control, External Page (VS only)** - Enter Y to have All Call Paging and Night Audible broadcast over the expansion CEU PA terminals.
- **QM- Music and Relay Control, External Page Music Gain** - Adjust the gain for the music that plays over the External Paging ports (if any).

Q- SYSTEM WIDE PROGRAMMING

QM- MUSIC/RELAY CONTROL, PAGE ZONE n LINE NUMBER

Related Programming (Cont'd)

- **QM- Music and Relay Control, Relay Control-Page On (except on VS) -** If enabled and Pageowner is main attendant (port 00/extension 300), relay closes each time a user makes an All Call Paging announcement. If disabled or Pageowner is other than the attendant, relay never closes for Paging.
- **QM- Music and Relay Control, Relay Control-Pageowner (Owner in VS) -** Assign the Pageowner for ringer and page control. This assignment should be the attendant in each tenant group.

Feature Reference

Paging
Tenant Service

Instructions

- To enter data on the PRF:**
- Step 1 ➤ For QM- Zone 1 Line Number on Table 10, enter the trunk circuits used for External Page zones 1-3.
- To enter data at the programming terminal:**
- Step 1 ➤ After programming QM- Inhibit Audible Ring, you see: **EXTERNAL PAGE PORTS, ZONE 1 LINE NUMBER**
 - Step 2 ➤ Enter the QM- Zone 1 Line Number entry from Table 10 and press **RETURN**.
You see: **ZONE 2 LINE NUMBER**.
To erase an assignment, enter 00.
 - Step 3 ➤ Enter the QM- Zone 2 Line Number entry from Table 10 and press **RETURN**.
You see: **ZONE 3 LINE NUMBER**.
To erase an assignment, enter 00.
 - Step 4 ➤ Enter the QM- Zone 3 Line Number entry from Table 10 and press **RETURN**.
You see: **BGM TO ALL EXT PAGE ZONES**.
To erase an assignment, enter 00.
Go to QM- BGM on External Page Zones on the next page.

Q- SYSTEM WIDE PROGRAMMING

QM- MUSIC/RELAY CONTROL, EXTERNAL PAGE (VS ONLY)

Description

Use this option to enable/disable External Paging on the expansion CEU PA terminals. If enabled (Y), External Paging zone 1 and All Call broadcast over the expansion CEU PA terminals. If disabled (N), paging does not broadcast over the expansion CEU PA terminals. Refer to the system Hardware Manual for additional installation details.

This option only applies to VS.

Conditions

External Paging uses the fourth trunk circuit on the first CO Module in each CEU. You cannot use these circuits for trunks. Refer to the system Hardware Manual for External Paging installation details.

Default Value

Paging not allowed (N).

Related Programming

Paging, External

- **E- Trunks, E2- Circuit Type** - Program the ports used for External Paging as uninstalled (circuit type X).
- **QM- Music and Relay Control, Ext Page/Night Audible Line Number** - In large systems, assign the trunk number the system will use to broadcast All Call Paging and Night Audible. In VS, enter Y to have All Call Page broadcast over the main CEU PA terminals.
- **QM- Music and Relay Control, External Page Music Gain** - Adjust the gain for the music that plays over the External Paging ports. (Program the next two options for each of the four relays.)
- **QM- Music and Relay Control, Relay Control-Pageowner (Owner in VS)** - Assign the Pageowner for ringer and page control.

Tenant Service, Assigning External Paging Zones to Tenants

- **E- Trunks, E2- Circuit Type** - Program the ports used for External Paging as uninstalled (circuit type X). There are a total of four ports available for External Paging.
- **QM- Music and Relay Control, Ext Page/Night Audible Line Number** - In the large systems, assign the trunk number the system will use to broadcast All Call Paging and Night Audible. In VS, enter Y to broadcast over the main CEU PA terminals. You can have Paging amplifiers for all tenants or just those you select. You can have Paging amplifiers for all tenants or just those you select.
- **QM- Music and Relay Control, External Page Music Gain** - Adjust the gain for the music that plays over the External Paging ports (if any).

Q- SYSTEM WIDE PROGRAMMING

QM- MUSIC/RELAY CONTROL, EXTERNAL PAGE (VS ONLY)

Related Programming (Cont'd)

- **QM- Music and Relay Control, Relay Control-Pageowner (Owner in VS)**
- Assign the Pageowner for ringer and page control. This assignment should be the attendant in each tenant group.

Feature Reference

Paging
Tenant Service

Instructions

- To enter data on the PRF:**
Step 1 ➤ For QM- External Page on Table 10, Y(es) or N(o).
- To enter data at the programming terminal:**
Step 1 ➤ After programming QM- Inhibit Audible Ring, you see: **EXTERNAL PAGE PORTS, EXTERNAL PAGE**
- Step 2 ➤ Enter Y(es) or N(o) for QM- External Page from Table 10 and press **RETURN**.
You see: **BGM TO ALL EXT PAGE ZONES.**
Go to QM- BGM on External Page Zones on the next page.

Q- SYSTEM WIDE PROGRAMMING

QM- MUSIC/RELAY CONTROL, BGM ON EXTERNAL PAGE ZONES

Description

Use this option to allow/disallow Background Music to play over the External Paging zones. If allowed (Y), BGM will play over all the external zones (All Call and 1-3) when they are idle. If disallowed, BGM will not play. Refer to the system Hardware Manual and the Background Music feature for additional information on Background Music.

Conditions

Always make a "test" page after enabling this option.

Default Value

BGM will not play over External Page zones (N).

Related Programming

None

Feature Reference

None

Instructions

To enter data on the PRF:

Step 1 > For QM- BGM to All Ext Page Zones on Table 10, enter Y or N.

To enter data at the programming terminal:

Step 1 > After making an entry for QM- Zone 3 Line Number, you see: **BGM TO ALL EXT PAGE ZONES**

Step 2 > Enter Y or N for QM- BGM to All Ext Page Zones from Table 10. You see: **INTERRUPTED RING RELAYS?**

Go to QM- Interrupted Ring Relays on the next page.

Q- SYSTEM WIDE PROGRAMMING

QM- MUSIC/RELAY CONTROL, INTERRUPTED RING RELAYS

Description

Use this option to enable/disable interrupted closure for the external relays when used for ringing. If enabled (Y), relays pulse one second closed/three seconds open when activated. If disabled (N), relays have continuous closure when activated. This option affects all the external relays. All external relays are normally open.

Conditions

None

Default Value

Relays provide continuous closure (N) when activated.

Related Programming

- For each of the four relays (0-3):
- **QM- Music and Relay Control, Relay Control-Ringer On (except in VS)**
If enabled and Pageowner is main attendant (port 00/extension 300), relay activates for UNA calls. If Pageowner is an extension other than the main attendant, relay activates when extension rings. If disabled, relay never closes for ringing.
 - **QM- Music and Relay Control, Relay Control-Page On (except in VS) -** If enabled and Pageowner is main attendant (port 00/extension 300), relay closes each time a user makes an All Call Paging announcement. If disabled or Pageowner is other than the attendant, relay never closes for Paging.
 - **QM- Music and Relay Control, Relay Control-Pageowner -** Assign the Pageowner for ringer and page control.

Feature Reference

External Alerting Devices

Instructions

- To enter data on the PRF:**
- Step 1 ➤ For QM- Interrupted Ring Relays on Table 10, enter Y or N.
- To enter data at the programming terminal:**
- Step 1 ➤ After programming QM- BGM to All Ext Page Zones, you see:
INTERRUPTED RING RELAYS
 - Step 2 ➤ Enter Y or N for QM- Interrupted Ring Relays on Table 10.
 - If you entered Y for QM- BGM on External Page Zones, go to QM- External Page Music Gain on the next page.
 - If you entered N for QM- BGM on External Page Zones, go to QM- Relay Control-Ringer On.

Q- SYSTEM WIDE PROGRAMMING

QM- MUSIC/RELAY CONTROL, EXTERNAL PAGE MUSIC GAIN

Description

Use this option to adjust the gain for the Background Music that plays over the External Paging ports. The adjustment you make with this option does not affect the volume of internal Background Music. You can make fine adjustments to internal and external BGM volumes separately. The choices are:

- 12 dB loss
- 6 dB loss
- 3 dB loss
- 0 dB
- +3 dB gain
- +6 dB gain

This option only appears if you enter Y for QM- BGM on External Page Zones.

Note: A 3 dB gain (+3 dB) doubles the BGM volume on the external port. A 3 dB loss (-3 dB) cuts the volume in half.

Conditions

None

Default Value

- 6 dB loss

Related Programming

Paging, External

- **E- Trunks, E2- Circuit Type** - Program the ports used for External Paging as uninstalled (circuit type X).
- **QM- Music and Relay Control, Ext Page/Night Audible Line Number** - In large systems, assign the trunk number the system will use to broadcast All Call Paging and Night Audible. In VS, enter Y to have All Call Page broadcast over the main CEU PA terminals.
- **QM- Music and Relay Control, Page Zone n Line Number (except in VS)** - Assign a trunk port for External Paging zones 1-3. All Call Paging also broadcasts over these ports.
- **QM- Music and Relay Control, External Page (VS only)** - Enter Y to have External Paging zone 1 and All Call broadcast over the expansion CEU PA terminals.
- **QM- Music and Relay Control, Relay Control-Page On (except in VS)** - If enabled and Pageowner is main attendant (port 00/extension 300), relay closes each time a user makes an All Call Paging announcement. If disabled or Pageowner is other than the attendant, relay never closes for Paging.
- **QM- Music and Relay Control, Relay Control-Pageowner (Owner in VS)** - Assign the Pageowner for ringer and page control.

Q- SYSTEM WIDE PROGRAMMING

QM- MUSIC/RELAY CONTROL, EXTERNAL PAGE MUSIC GAIN

Related Programming (Cont'd)

- **Tenant Service, Assigning External Paging Zones to Tenants**
- **E- Trunks, E2- Circuit Type** - Program the ports used for External Paging as uninstalled (circuit type X). There are a total of four ports available for External Paging.
- **QM- Music and Relay Control, Ext Page/Night Audible Line Number** - In the large systems, assign the trunk number the system will use to broadcast All Call Paging and Night Audible. In VS, enter Y to broadcast over the main CEU PA terminals. You can have Paging amplifiers for all tenants or just those you select. You can have Paging amplifiers for all tenants or just those you select.
- **QM- Music and Relay Control, Page Zone n Line Number (except in VS)** - Assign a trunk port for External Paging zones 1-3. All Call Paging also broadcasts over these ports. You have three external zones available for tenants.
- **QM- Music and Relay Control, Relay Control-Page On (except on VS)** - If enabled and Pageowner is main attendant (port 00/extension 300), relay closes each time a user makes an All Call Paging announcement. If disabled or Pageowner is other than the attendant, relay never closes for Paging.
- **QM- Music and Relay Control, Relay Control-Pageowner** - Assign the Pageowner for ringer and page control. This assignment should be the attendant in each tenant group.

Feature Reference

Paging
Tenant Service

Instructions

- To enter data on the PRF:**
- Step 1 ➤ For QM- External Page Music Gain on Table 10, enter the gain setting (e.g. -3).
- To enter data at the programming terminal:**
- Step 1 ➤ After programming QM- Interrupted Ring Relays, you see: **EXTERNAL PAGE MUSIC GAIN**
- Step 2 ➤ Enter the gain setting (e.g.. -3) for QM- Interrupted Ring Relays from Table 10. You see: **RELAY 0: RINGER ON**
Go to Relay Control-Ringer On on the next page.

Q- SYSTEM WIDE PROGRAMMING

QM- MUSIC/RELAY CONTROL, RELAY CONTROL-RINGER ON

Description

Use this option to control when extension/Night Mode ringing activates external relays 0-3. You program this option separately for each relay. Refer to the system Hardware Manual for instructions on connecting devices to the relays. This option does not apply to VS.

The relay activates for Night Mode calls if:

- QM- Ringer On is enabled (Y)
- QM- Page Owner entry is the main attendant (usually 300)

The relay activates when an extension rings if the QM- Page Owner entry is the extension (not main attendant), OPX, ACD/UCD master or Ring Group number.

If you disable this option (N), the relay never closes for ringing.

Conditions

None

Default Value

Ringer is on (Y).

Related Programming

External Alerting Devices

- **QM- Music and Relay Control, Interrupted Ring Relays** - Enable/disable interrupted relay closure. If enabled, relay pulses one second closed/three seconds open when activated. If disabled, relay has continuous closure when activated.

For each of the four relays (0-3):

- **QM- Music and Relay Control, Relay Control-Page On (except in VS)** - If enabled and Pageowner is main attendant (port 00/extension 300), relay closes each time a user makes an All Call Paging announcement. If disabled or Pageowner is other than the attendant, relay never closes for Paging.
- **QM- Music and Relay Control, Relay Control-Pageowner** - Assign the Pageowner for ringer and page control.

Feature Reference

External Alerting Devices

Instructions

To enter data on the PRF:

- Step 1 ➤ For QM- Relay 0, Ringer On on Table 10, enter Y or N. Make similar entries for Relays 1-3.

To enter data at the programming terminal:

- Step 1 ➤ After programming QM- Interrupted Ring Relays or QM- External Page Music Gain, you see: **RELAY 0, RINGER ON**
- Step 2 ➤ Enter Y or N for QM- Relay 0, Ringer On from Table 10. You see: **PAGE ON**
Go to QM- Relay Control Page On on the next page.

Q- SYSTEM WIDE PROGRAMMING

QM- MUSIC/RELAY CONTROL, RELAY CONTROL-PAGE ON

Description

Use this option to control when Paging activates external relays (0-3). You program this option separately for each relay. Refer to the system Hardware Manual for instructions on connecting devices to the relays. The system assigns relays 0-3 to Paging zones as follows:

This relay...	Activates for...
0	All Call Paging
1	All Call and Zone 1 Paging
2	All Call and Zone 2 Paging
3	All Call and Zone 3 Paging

The relay activates each time a user makes a Paging announcement if:

- QM- Relay Control-Page On is enabled (Y)
AND
- QM- Pageowner is main attendant (usually 300)

The relay never activates for Paging if:

- QM- Relay Control-Page On is disabled (N)
OR
- QM- Pageowner is not the main attendant

This option does not apply to VS.

Conditions

None

Default Value

Page On enabled (Y).

Related Programming

External Alerting Devices

- **QM- Music and Relay Control. Interrupted Ring Relays - Enable/disable interrupted relay closure.** If enabled, relay pulses one second closed/three seconds open when activated. If disabled, relay has continuous closure when activated.

For each of the four relays (0-3):
- **QM- Music and Relay Control. Relay Control-Ringer On (except in VS)** If enabled and Pageowner is main attendant (port 00/extension 300), relay activates for UNA calls. If Pageowner is an extension other than the main attendant, relay activates when extension rings. If disabled, relay never closes for ringing.
- **QM- Music and Relay Control. Relay Control-Pageowner - Assign the Pageowner for ringer and page control.**

Q- SYSTEM WIDE PROGRAMMING

QM- MUSIC/RELAY CONTROL, RELAY CONTROL-PAGE ON

Related Programming (Cont'd)

Paging, External

- **E- Trunks, E2- Circuit Type** - Program the ports used for External Paging as uninstalled (circuit type X).
- **QM- Music and Relay Control, Ext Page/Night Audible Line Number** - In large systems, assign the trunk number the system will use to broadcast All Call Paging and Night Audible. In VS, enter Y to have All Call Page broadcast over the main CEU PA terminals.
- **QM- Music and Relay Control, Page Zone n Line Number (except in VS)** - Assign a trunk port for External Paging zones 1-3. All Call Paging also broadcasts over these ports.
- **QM- Music and Relay Control, External Page (VS only)** - Enter Y to have External Paging zone 1 and All Call broadcast over the expansion CEU PA terminals.
- **QM- Music and Relay Control, External Page Music Gain** - Adjust the gain for the music that plays over the External Paging ports. (Program the next two options for each of the four relays.)
- **QM- Music and Relay Control, Relay Control-Pageowner** - Assign the Pageowner for ringer and page control.

Tenant Service, Assigning External Paging Zones to Tenants

- **E- Trunks, E2- Circuit Type** - Program the ports used for External Paging as uninstalled (circuit type X). There are a total of four ports available for External Paging.
- **QM- Music and Relay Control, Ext Page/Night Audible Line Number** - Assign the trunk number the system will use to broadcast All Call Paging and Night Audible. You can have Paging amplifiers for all tenants or just those you select.
- **QM- Music and Relay Control, Page Zone n Line Number** - Assign a trunk port for External Paging zones 1-3. All Call Paging also broadcasts over these ports. You have three external zones available for tenants.
- **QM- Music and Relay Control, External Page Music Gain** - Adjust the gain for the music that plays over the External Paging ports (if any).
- **QM- Music and Relay Control, Relay Control-Pageowner** - Assign the Pageowner for ringer and page control. This assignment should be the attendant in each tenant group.

Feature Reference

External Alerting Devices
Paging
Tenant Service

Instructions

- To enter data on the PRF:**
- Step 1 ➤ For QM- Relay 0, Page On on Table 10, enter Y or N. Make similar entries for relays 1-3.

To enter data at the programming terminal:

- Step 1 ➤ After programming QM- Ringer On for relay 0, you see: **PAGE ON**
- Step 2 ➤ Enter Y or N for QM- Relay 0, Page On from Table 10. You see: **PAGE-OWNER.**

Go to QM- Relay Control- Pageowner on the next page.

Q- SYSTEM WIDE PROGRAMMING

QM- MUSIC/RELAY CONTROL, RELAY CONTROL-PAGEOWNER

Description

Use this option to assign the Pageowner for ringer and Paging relay control, as shown below. You program this option separately for each of the four relays. This option is **OWNER** in VS.

For ringing...

The relay activates for Night Mode calls if:

- QM- Ringer On is enabled (Y)¹
- QM- Page Owner entry is the main attendant (usually 300)

The relay activates when an extension rings if:

- QM- Ringer On is enabled (Y)¹
- QM- Page Owner entry is the extension (not main attendant), trunk, OPX, ACD/UCD master or Ring Group number.

If you disable **QM- RELAY CONTROL-RINGER ON (N)**,¹ the relay never closes for ringing.

For Paging...¹

The relay activates each time a user makes a Paging announcement if:

- QM- Relay Control-Page On is enabled (Y)
- QM- Pageowner is main attendant (usually 300)

The relay never activates for Paging if:

- QM- Relay Control-Page On is disabled (N)
OR
- QM- Pageowner is not the main attendant

Conditions

None

Default Value

Pageowner is main attendant (extension 300).

Related Programming

External Alerting Devices

- **QM- Music and Relay Control, Interrupted Ring Relays** - Enable/disable interrupted relay closure. If enabled, relay pulses one second closed/three seconds open when activated. If disabled, relay has continuous closure when activated.

For each of the four relays (0-3):

- **QM- Music and Relay Control, Relay Control-Ringer On (except in VS)**
If enabled and Pageowner is main attendant (port 00/extension 300), relay activates for UNA calls. If Pageowner is an extension other than the main attendant, relay activates when extension rings. If disabled, relay never closes for ringing.
- **QM- Music and Relay Control, Relay Control-Page On (except in VS)** - If enabled and Pageowner is main attendant (port 00/extension 300), relay closes each time a user makes an All Call Paging announcement. If disabled or Pageowner is other than the attendant, relay never closes for Paging.

¹ Not applicable to VS.

Q- SYSTEM WIDE PROGRAMMING

QM- MUSIC/RELAY CONTROL, RELAY CONTROL-PAGEOWNER

Related Programming (Cont'd)

- Paging, External**
- **E- Trunks, E2- Circuit Type** - Program the ports used for External Paging as uninstalled (circuit type X).
 - **QM- Music and Relay Control, Ext Page/Night Audible Line Number** - In large systems, assign the trunk number the system will use to broadcast All Call Paging and Night Audible. In VS, enter Y to have All Call Page broadcast over the main CEU PA terminals.
 - **QM- Music and Relay Control, Page Zone n Line Number (except in VS)** - Assign a trunk port for External Paging zones 1-3. All Call Paging also broadcasts over these ports.
 - **QM- Music and Relay Control, External Page (VS only)** - Enter Y to have External Paging zone 1 and All Call broadcast over the expansion CEU PA terminals.
 - **QM- Music and Relay Control, External Page Music Gain** - Adjust the gain for the music that plays over the External Paging ports.
(Program the next two options for each of the four relays.)
 - **QM- Music and Relay Control, Relay Control-Page On (except in VS)** - If enabled and Pageowner is main attendant (port 00/extension 300), relay closes each time a user makes an All Call Paging announcement. If disabled or Pageowner is other than the attendant, relay never closes for Paging.

Tenant Service, Assigning External Paging Zones to Tenants

- **E- Trunks, E2- Circuit Type** - Program the ports used for External Paging as uninstalled (circuit type X). There are a total of four ports available for External Paging.
- **QM- Music and Relay Control, Ext Page/Night Audible Line Number** - In the large systems, assign the trunk number the system will use to broadcast All Call Paging and Night Audible. In VS, enter Y to broadcast over the main CEU PA terminals. You can have Paging amplifiers for all tenants or just those you select. You can have Paging amplifiers for all tenants or just those you select.
- **QM- Music and Relay Control, Page Zone n Line Number (except in VS)** - Assign a trunk port for External Paging zones 1-3. All Call Paging also broadcasts over these ports. You have three external zones available for tenants.
- **QM- Music and Relay Control, External Page (VS only)** - Enter Y to have All Call Paging and Night Audible broadcast over the expansion CEU PA terminals.
- **QM- Music and Relay Control, External Page Music Gain** - Adjust the gain for the music that plays over the External Paging ports (if any).
- **QM- Music and Relay Control, Relay Control-Page On (except in VS)** - If enabled and Pageowner is main attendant (port 00/extension 300), relay closes each time a user makes an All Call Paging announcement. If disabled or Pageowner is other than the attendant, relay never closes for Paging.

Feature Reference

External Alerting Devices
Paging
Tenant Service

Q- SYSTEM WIDE PROGRAMMING

QM- MUSIC/RELAY CONTROL, RELAY CONTROL-PAGEOWNER

Instructions

- To enter data on the PRF:**
- Step 1 ▶** For QM- Relay 0, Page Owner on Table 10, enter the pageowner's extension number.
The entry can also be an OPX, ACD,UCD master or Ring Group number.
- To enter data at the programming terminal:**
- Step 1 ▶** After programming QM- Relay Control-Page On for relay 0, you see: **PAGE OWNER**
- Step 2 ▶** Enter the pageowner for QM- Relay 0, Page Owner from Table 10 and press **RETURN**. You see: **RELAY 1, RINGER ON**
Go to QM- Relay Control-Ringer On for relay 1.

Q- SYSTEM WIDE PROGRAMMING

QN- RESTORE STANDARD PORT ASSIGNMENTS

Description

Use this option to restore (reinstate) the standard extension/trunk-to-port assignments. This may come in handy if you want to restore the original assignments in a heavily modified system. This option restores the trunk-to-port assignments only. It does not restore other programming.

Keep the following in mind when programming ports:

- Use E1- Port Number to change the extension/trunk assignment for a port.
- Use HH- Port/Extension Checker to make sure each port has only one assigned extension/trunk.
- You can optionally Use EZ- Extension-Port Swap (instead of E1) to change the extension/trunk assignment for a port
- You can use X- Exchange Extension Data to swap two extensions (without physically moving their ports). With this option, the programming follows the extension number.
- Use LP- Listing Data by Port to list the programmed options for extensions/trunks in port number order.

Conditions

None

Default Value

Each extension/trunk is offset from its port by 300 (e.g., trunk 480 is at port 180).

Related Programming

None

Feature Reference

None

Instructions

To enter data on the PRF:
Step 1 > No entry required.

To enter data at the programming terminal:

Step 1 > Type Q. You see: Q-CMD>

Step 2 > Type N. You see: RESTORE STD PORT NUMBERS?

- Step 3 > ● Type Y to restore the standard extension/trunk port assignments.
OR
● Type N to leave the extension/trunk port assignments unchanged.

Q- SYSTEM WIDE PROGRAMMING

QO- DID INTERCEPTS, ABSORB 1ST DIGIT

Description

Use this option to enable/disable 1st digit absorption system-wide for DID trunks. If you enable this option (Y), the system is compatible with four-digit DID service. If you disable QO- Absorb 1st Digit (N), the system is compatible with three-digit DID service. However, you can still use CP- Absorb 1st Digit for DID and Tie Trunks (BY0:1) to enable digit absorption in a DID trunk's COS.

Refer to the Direct Inward Dialing feature (Three or Four Digit DID Service Compatibility) for more information.

Conditions

None

Default Value

Digit absorption disabled (N).

Related Programming

None

Feature Reference

None

Instructions

To enter data on the PRF:
Step 1 ► For QO- Absorb 1st Digit on Table 10, enter Y or N.

To enter data at the programming terminal:
Step 1 ► Type **Q**. You see: **Q-CMD>**

Step 2 ► Type **O**. You see: **ABSORB 1ST DIGIT?**

Step 3 ► Enter Y or N for QO- Absorb 1st Digit on Table 10. You see: **VACANT NUMBER?**

Go to QO- Vacant Number Intercept on the next page.

Q- SYSTEM WIDE PROGRAMMING

QO- DID INTERCEPTS, VACANT NUMBER INTERCEPT

Description

Use this option to enable/disable Vacant Number Intercept system-wide for DID trunks. If you enable this option (Y), the system routes improperly or partially dialed DID calls to the attendant. If you disable this option (N), a partially or improperly dialed call does not go through.

Refer to the Direct Inward Dialing feature (Vacant Number Intercept) for more information.

Conditions

None

Default Value

Vacant Number Intercept disabled (N).

Related Programming

None

Feature Reference

None

Instructions

To enter data on the PRF:
Step 1 > For QO- Vacant Number on Table 10, enter Y or N.

To enter data at the programming terminal:
Step 1 > After programming QO- Absorb 1st Digit, you see: **VACANT NUMBER**
Step 2 > Enter Y or N for QO- Vacant Number Intercept from Table 10. You see: **BUSY?**

Go to QO- Busy Intercept on the next page.

Q- SYSTEM WIDE PROGRAMMING

QO- DID INTERCEPTS, BUSY INTERCEPT

Description

Use this option to enable/disable Busy Intercept system-wide for DID trunks. If you enable this option (Y), the system routes a DID call for a busy or DND extension to the attendant. If you disable this option (N), the DID caller hears busy instead.

Refer to the Direct Inward Dialing feature (Busy Intercept) for more information.

Conditions

None

Default Value

Busy Intercept disabled (N).

Related Programming

None

Instructions

Step 1 ►

To enter data on the PRF:

For QO- Busy on Table 10, enter Y or N.

Step 1 ►

To enter data at the programming terminal:

After programming QO- Vacant Number Intercept, you see: **BUSY?**

Step 2 ►

Enter Y or N for QO- Busy Intercept from Table 10. You see: **RING-NO-ANSWER?**

Go to QO- Ring-No-Answer Intercept on the next page.

Q- SYSTEM WIDE PROGRAMMING

QO- DID INTERCEPTS, RING-NO-ANSWER INTERCEPT

Description

Use this option to enable/disable Ring-No-Answer Intercept system-wide for DID trunks. If you enable this option (Y), unanswered DID calls ring the attendant. If you disable this option (N), unanswered calls ring the destination extension until the DID caller hangs up.

Refer to the Direct Inward Dialing feature (Ring-No-Answer Intercept) for more information.

Conditions

None

Default Value

Ring-No-Answer intercept disabled (N).

Related Programming

None

Feature Reference

None

Instructions

To enter data on the PRF:
Step 1 > For QO- Ring-No-Answer on Table 10, enter Y or N.

To enter data at the programming terminal:
Step 1 > After programming QO- Busy Intercept, you see: **RING-NO-ANSWER?**
Step 2 > Enter Y or N for QO- Ring-No-Answer Intercept from Table 10.
Go to QO- DID Camp-On to Busy Keyset on the next page.

Q- SYSTEM WIDE PROGRAMMING

QO- DID CAMP-ON TO BUSY KEYSET

Description

Use this option to enable/disable Camp-On for DID calls to busy keysets. If you enable this option (Y), a DID call Camps-On to a busy keyset. If you disable this option (N), a DID call to a busy keyset follows the Busy Intercept routing.

Refer to the Direct Inward Dialing feature (DID Camp-On) for more information. This option is not available in ONYX IV.

Conditions

None

Default Value

DID Camp-On to busy keysets enabled (Y).

Related Programming

None

Feature Reference

None

Instructions

To enter data on the PRF:
Step 1 ► For QO- DID Camp-On to Busy Keyset on Table 10, enter Y or N.

To enter data at the programming terminal:
Step 1 ► After programming QO- Ring-No-Answer Intercept, you see: **DID CAMP ON TO BUSY KEYSET?**

Step 2 ► Enter Y or N for QO- DID Camp-On to Busy Keyset from Table 10.
You return to the Main Menu.

Q- SYSTEM WIDE PROGRAMMING

QP- VOICE MAIL, ACD MAILBOX ACCESS DIGIT (ONYX IV)

Description

Use this option to designate the leading digit required to access the mailbox that provides the ACD announcements. The system sends this digit to the Voice Mail before sending the mailbox number. Some Voice Mail systems require a # as the leading digit. Other Voice Mail systems don't require any leading digit. This option lets you tailor the system to the requirements of the connected Voice Mail.

This option only applies to ONYX IV.

Conditions

None

Default Value

#

Related Programming

Automatic Call Distribution (ONYX IV)

Refer to the charts provided with the ACD (ONYX IV) feature on page 1-32A.

Feature Reference

Automatic Call Distribution (ONYX IV)

Instructions

- To enter data on the PRF:**
- Step 1 ► For QP- ACD Mailbox Access Digit on Table 10, enter the mailbox access digit (0-9, # or *).
- To enter data at the programming terminal:**
- Step 1 ► Type **Q**. You see: **Q-CMD**.
- Step 2 ► Type **P**. You see: **ACD MAILBOX ACCESS DIGIT?**
- Step 3 ► Enter data for QP- ACD Mailbox Access Digit from Table 10. You see:
MAILBOX INSTALLED
 Go to QP- Mailbox Installed.

Q- SYSTEM WIDE PROGRAMMING
QP- VOICE MAIL, ACD MAILBOX ACCESS DIGIT (ONYX IV)

- For Your Notes -

Q- SYSTEM WIDE PROGRAMMING

QP- VOICE MAIL, MAILBOX INSTALLED

Description

Use this option to tell the system when a Voice Messaging System is connected. Enable this option (Y) if the system has a Voice Messaging System. Disable this option (N) if the system does not have a Voice Messaging System.

Conditions

As soon as you enable QP, the system rings the Voice Mail ports.

Default Value

Voice Messaging System not installed (N).

Related Programming

Voice Mail Compatibility

- E- Extensions, E2- Circuit Type - Each OPX and ASI P/N 89748 Voice Messaging System port should have circuit type 05. Each ASI P/N 89749 Voice Messaging System port should have circuit type 51.
- E- Extensions, E5- Hunt Type - Program each VX port with hunt type 06.
- E- Extensions, EA- UCD Group Master Extension Number - Program each VX port with the master number assigned in QP programming below.
- E- Extensions, EK- Voice Mail (VX) Port - Enable this option for each Voice Messaging System port.
- E- Trunks, E9- Direct Trunk Termination - For each trunk the VX Automated Attendant should answer, terminate the trunk to the Voice Messaging System master number. (See EA above.)
- E- Trunks, EI- Night Call Routing - For each trunk the VX Automated Attendant should answer at night, terminate the trunk to the master number (see EA above). For this application, make sure the E9 entry is 300.
- FC1- Reset System Queues - Reset system queues after installing the VX.
- FC3- Reset VX Flag (Telephone Message Waiting Lamps) - For a first time installation, always use this option to reset the telephone Message Waiting lamps.
- KS- Programming Keys for Keysets - Designate a programmable key as a Record key (type R).
- QP- Voice Mail Installation, Voice Messaging Master Extension - Select one of the Voice Messaging System ports programmed in the options above as the master extension number.

Feature Reference

Voice Mail Compatibility

Instructions

- To enter data on the PRF:**
- Step 1 ➤ For QP- Mailbox Installed on Table 10, enter Y or N.

To enter data at the programming terminal:

In ONYX IV, you see MAILBOX INSTALLED (step 2) after programming QP-ACD Mailbox Access Digit.

- Step 1 ➤ Type Q. You see: Q-CMD.
- Step 2 ➤ Type P. You see: MAILBOX INSTALLED?
- Step 3 ➤ Enter Y or N for QP- Mailbox Installed from Table 10. You see: VX MAST STATION

Go to QP- Voice Messaging Master Extension on the next page.

Q- SYSTEM WIDE PROGRAMMING

QP- VOICE MAIL, VOICE MESSAGING MASTER EXTENSION

Description

Use this option to designate the Voice Messaging System master extension number. The extension you select must be one of the Voice Messaging System ports. Program the master number and designate VX ports before assigning this option. See Related Programming below.

Conditions
None

Default Value
VX master number not programmed (300).

Related Programming

Voice Mail Compatibility

- **E- Extensions, E2- Circuit Type** - Each OPX and ASI P/N 89748 Voice Messaging System port should have circuit type 05. Each ASI P/N 89749 Voice Messaging System port should have circuit type 51.
- **E- Extensions, E5- Hunt Type** - Program each Voice Messaging System port with hunt type 06.
- **E- Extensions, EA- UCD Group Master Extension Number** - Program each Voice Messaging System port with the master number assigned in QP programming below.
- **E- Extensions, EK- Voice Mail (VX) Port** - Enable this option for each Voice Messaging System port.
- **E- Trunks, E9- Direct Trunk Termination** - For each trunk the VX Automated Attendant should answer, terminate the trunk to the Voice Messaging System master number. (See EA above.)
- **E- Trunks, EI- Night Call Routing** - For each trunk the VX Automated Attendant should answer at night, terminate the trunk to the master number (see EA above). For this application, make sure the E9 entry is 300.
- **FC1- Reset System Queues** - Reset the system queues after installing the Voice Messaging System.
- **FC3- Reset VX Flag (Telephone Message Waiting Lamps)** - For a first time installation, always use this option to reset the telephone Message Waiting lamps.
- **KS- Programming Keys for Keysets** - Designate a programmable key as a Record key (type R).
- **QP- Voice Mailbox Installation, Mailbox Installed** - Enable this option if the system has a Voice Messaging System connected.

Feature Reference

Voice Mail Compatibility

Instructions

- To enter data on the PRF:**
- Step 1 ➤ For QP- VX Master Station on Table 10, enter the Voice Messaging System master extension number.
- To enter data at the programming terminal:**
- Step 1 ➤ After programming QP- Mailbox Installed, you see: **VX MASTER STATION**
- Step 2 ➤ Enter the QP- VX Master Station from Table 10 and press **RETURN**.
You return to the Main Menu.

Q- SYSTEM WIDE PROGRAMMING

QQ- "1" PREFIX REQUIRED FOR NPA CALLS

Description	<p>Use this option to indicate if the system is in a conflict area. A conflict area has conflict codes. Conflict codes are area codes (e.g., 212) that can also be local exchange codes. You enable QQ if the system is in a conflict area. When you enable QQ (Y), users must dial 1 when dialing the conflict code as an area code. Users omit the 1 when dialing the conflict code as a local exchange. You disable QQ if the system is not in a conflict area. If you disable QQ, the system assumes all area codes (200-219 through 900-919) are never local exchanges.</p> <p>This option is important for the following features:</p> <ul style="list-style-type: none">● Automatic Route Selection (Appendix A)● Least Cost Routing● Toll Restriction <p><i>Conditions</i> None</p> <p><i>Default Value</i> System requires a '1' to precede each NPA (Y).</p>
Related Programming	None
Feature Reference	None
Instructions	<p>To enter data on the PRF: Step 1 ► For QQ- '1' Prefix Required for NPA Call on Table 10, enter Y or N.</p> <p>To enter data at the programming terminal: Step 1 ► Type Q. You see: Q-CMD> Step 2 ► Type Q. You see: '1' PREFIX REQUIRED FOR NPA CALL Step 3 ► Enter Y or N for QQ- '1' Prefix Required for NPA Calls from Table 10. You return to the Main Menu.</p>

Q- SYSTEM WIDE PROGRAMMING

QQ- NO. OF DIGITS IN EQUAL ACCESS CODE

Description

Use this option to indicate the number of digits in an Equal Access Code. The range is 5-9 (i.e., 10XXX is a 5-digit Equal Access code). The system does not prevent Equal Access, but can Toll Restrict the digits users dial after the Equal Access Code. The system assumes all Equal Access codes are in the 10X format. For example (with 5-digit codes), the system Toll Restricts 10XXX-NPA calls identically to 1-NPA calls. Set this option for compatibility with the local telco.

This option is only available in VS \geq Aux Module 2.0/Base 5.0, ONYX II/III \geq 3.5 and ONYX IV \geq 1.2. The option AP- Allow Equal Access does not apply to these systems.

Conditions

None

Default Value

The system has 5-digit Equal Access Codes.

Related Programming

- AP- Allow Equal Access - For each Toll Restriction Level, allow Equal Access system-wide and program the Equal Access Code list. This does not apply to VS \geq AUX Module 2.0/Base 5.0, ONYX II/III \geq 3.5 and ONYX IV \geq 1.2.
- CP- Extension Toll Restriction Level (BY1:0-2) - Assign a Toll Restriction Level to each Class of Service.
- E- Extensions, E3- Class of Service - Assign Class of Service to each extension.

Feature Reference

Equal Access Compatibility

Instructions

- To enter data on the PRF:
- Step 1 ➤ For QQ- No. of Digits in Equal Access Code on Table 10, enter the number of Equal Access Digits required.
- To enter data at the programming terminal:
- Step 1 ➤ After programming QQ- '1' Prefix Required for NPA Calls, you see: NO. OF DIGIT IN EQUAL ACCESS CODE
- Step 2 ➤ Enter the data for QQ- No. of Digits in Equal Access Code from Table 10. You see: 0 OR 1 REQUIRED IN SECOND DIGIT OF NPA CODE
Go to QQ- 0 or 1 in Second Digit of NPA.

Q- SYSTEM WIDE PROGRAMMING

QQ- 0 OR 1 IN SECOND DIGIT OF NPA

Description

Use this option to set the NPA numbering plan for compatibility with the local telco. When you enable this option (Y), all NPA codes must have 0 or 1 as the second digit. If you disable this option (N), the second NPA digit can be any number from 0-9. In this case, NPA codes can use numbering similar to NNX codes. For additional information, refer to the Toll Restriction feature.

This option is only available in VS \geq AUX Module 2.0/Base 5.0, ONYX II/III \geq 3.5 and ONYX IV \geq 1.2.

Conditions

None

Default Value

System requires a 0 or 1 as the second digit of each NPA (Y).

Related Programming

None

Feature Reference

None

Instructions

To enter data on the PRF:
Step 1 \blacktriangleright For QQ- 0 or 1 in Second Digit of NPA on Table 10, enter Y or N.

To enter data at the programming terminal:
Step 1 \blacktriangleright After programming No. of Digits in Equal Access Code, you see: 0 OR 1 REQUIRED IN SECOND DIGIT OF NPA CODE?

Step 2 \blacktriangleright Enter the data for QQ- 0 or 1 in Second Digit of NPA from Table 10.
You return to the Main Menu.

Q- SYSTEM WIDE PROGRAMMING

QR- SIDE TONE TEST DIGIT

Description

Use this option to designate the digit used for the side tone test. This test adjusts the side tone level for each trunk. When you initiate the test (by using the IS option), the system:

- Seizes the trunk you specify for testing
- Outputs the side tone test digit onto the trunk
- Listens for the side tone level
- Automatically adjusts the side tone gain for optimum level

The system automatically does a side tone test on each trunk after system power up.

Conditions

Make sure the digit you select doesn't activate a feature on the connected trunk (for example, dialing 9 behind a PBX).

Default Value

The side tone test digit is 2.

Related Programming

None

Feature Reference

None

Instructions

To enter data on the PRF:
Step 1 > Enter the side tone test digit for QR- Side Tone Test Digit on Table 10.

To enter data at the programming terminal:
Step 1 > Type **Q**. You see: **Q-CMD>**
Step 2 > Type **R**. You see: **SIDE TONE TEST DIGIT**
Step 3 > Enter data for QR- Side Tone Test Digit from Table 10.
You go to the Main Menu.

Q- SYSTEM WIDE PROGRAMMING

QS- INSTALL PRINTED CIRCUIT BOARDS

QS- INSTALL REMOTE KSU

Description

In the large systems, this option is **QS- INSTALL PRINTED CIRCUIT BOARDS**. Use this option to specify line and trunk PCBs as installed (Y) or not installed (N). A line or trunk PCB will function only if the system knows it is installed. If you remove a line or trunk PCB from service, the trunks associated with it no longer function. For 56x120 and 72x180 systems, use this option to also identify the installed SIM PCBs. This option also pertains to MLU, VAU and OPA/VAU PCBs.

Keep the following in mind when programming QS in large systems:

- If you plug in a line/trunk PCB without enabling it in QS, the system automatically enables the PCB for you. You cannot use QS to disable a functioning PCB.
- If you enable a line/trunk PCB in QS without plugging in the PCB, the system generates a major alarm.
- If you remove a line/trunk PCB that was previously enabled in QS, the system generates a major alarm.

In VS, this option is **INSTALL REMOTE KSU**. Use it to install (Y) or remove (N) the expansion CEU. You may need to remove the expansion CEU for servicing. Once removed, the expansion CEU will not generate alarms. This option can also display the expansion CEU software level.

Conditions

None

Default Value

On initial power up, the system identifies all line/trunk PCBs. It marks these PCBs as installed and sets each trunk circuit type at DTMF CO (type 10). The remaining line/trunk PCBs are marked as not installed. On subsequent power-ups, the system reports major alarms on trunks and PCBs that are no longer installed.

Related Programming

None

Feature Reference

None

Instructions

- To enter data on the PRF:**
- Step 1 > For QS- on Table 10, enter Y or N.
On 56x120 and 72x180 systems, the Line 0 entry is for the SIM PCB.

- To enter data at the programming terminal:**
- Step 1 > Type **Q**. You see: **Q-CMD>**
- Step 2 > (Large systems) Type **S**. You see: **LINE (SIM) 0 INSTALLED?** Go to step 3.
On 56x120 and 72x180 systems, Line 0 if for the SIM PCB.
(VS) Type **S**, then **Y** to install, **N** to remove or **RETURN** to see software level.
- Step 3 > For QS- Line (SIM) 0 Installed on Table 10, enter Y or N.
- Step 4 > Repeat step 3 for the remaining PCBs.

Q- SYSTEM WIDE PROGRAMMING

QT- SYSTEM TIMERS, PARK ORBIT RECALL TIME

Description

Use this option to specify the recall time for System Park orbits 60-67. The Park Orbit Recall Time sets how long a Parked call remains in orbit before recalling the extension that initially parked it. The range is 0-970 seconds (16 minutes, 10 seconds). Note that the recall time for orbits 68 and 69 is fixed at five minutes.

Conditions

None

Default Value

1 minute (060)

Related Programming

➤

Call Parking

E- Extensions, ED- Trunk Control, Access Control - An extension can only pick up a parked call on trunks to which it has access. Program access for each desired trunk.

Feature Reference

Call Parking
System Timers

Instructions

Step 1 ➤

To enter data on the PRF:

For QT- Orbit Time on Table 10, enter the Call Park orbit time.

Step 1 ➤

To enter data at the programming terminal:

Type **Q**. You see: **Q-CMD**

Step 2 ➤

Type **T**. You see: **ORBIT TIME? (0-970 SECONDS)**

Step 3 ➤

Enter the QT- Park Orbit Recall Time entry from Table 10 and press **RETURN**.

You see: **HOLD-RCL TIME FOR KEYSET? (0-970 SECS)**

Go to QT- Hold Recall Time on the next page.

Q- SYSTEM WIDE PROGRAMMING

QT- SYSTEM TIMERS, HOLD RECALL TIME

Description

Use this option to specify the Hold Recall Time. The Hold Recall Time sets how long a call will remain on Hold before recalling the extension that placed it on Hold. The range is 0-970 seconds (16 minutes, 10 seconds). This interval applies to all extensions, not just keysets.

Conditions

None

Default Value

1 minute (060 seconds)

Related Programming

None

Feature Reference

Hold
System Timers

Instructions

To enter data on the PRF:
Step 1 ► For QT- Hold-Rcl Time for Keyset on Table 10, enter the Hold Recall interval.

To enter data at the programming terminal:
Step 1 ► After programming QT- Park Orbit Recall Time, you see: **HOLD-RCL TIME FOR KEYSET? (0-970 SECS)**
Step 2 ► Enter the QT- Hold Recall Time from Table 10 and press **RETURN**. You see: **CAMP-ON TIME? (0-970 SECS)**.

Go to QT- Camp-On Time on the next page.

Q- SYSTEM WIDE PROGRAMMING

QT- SYSTEM TIMERS, CAMP-ON TIME

Description

Use this option to specify the Camp-On Time. This sets how long a transferred call camps on to a busy single line extension or ACD/UCD group before recalling the transferring extension. The range is 0-970 seconds (16 minutes, 10 seconds). Refer to the Automatic Call Distribution, Extension Hunting and Transfer features for more information.

Conditions

None

Default Value

1 minute (60 seconds)

Related Programming

None

Feature Reference

System Timers

Instructions

- To enter data on the PRF:**
- Step 1 > For QT- Camp-On Time on Table 10, enter the Camp-On Time.
- To enter data at the programming terminal:**
- Step 1 > After programming QT- Hold Recall Time, you see: **CAMP-ON TIME? (0-970 SECS)**
- Step 2 > Enter the QT- Camp-On Time from Table 10 and press **RETURN**. You see: **LINE RESP TIME? (5 TO 99 TENTH SECS)**
Go to QT- Trunk Response Time on the next page.

Q- SYSTEM WIDE PROGRAMMING

QT- SYSTEM TIMERS, TRUNK RESPONSE TIME

Description

Use this option to specify the Trunk Response Time. The Trunk Response Time is the allowed interval between trunk seizure and the receipt of sufficient telco loop current. The range is 5-99 tenths of seconds (e.g., 5=500 mS). This option pertains to CO and DISA trunks.

When a user seizes a trunk, the system waits this interval for telco loop current. If received, the system allows the call. If the system does not receive sufficient loop current:

- The system sends the call to the next trunk in the rotary (if available). Refer to the Line (Trunk) Rotaries feature.

OR

- The system denies the call (i.e., the user must select a different trunk)
- Marks the trunk as failed (refer to HD- System Status)

Conditions

None

Default Value

1.5 seconds (15).

Related Programming

None

Feature Reference

System Timers

Instructions

To enter data on the PRF:
Step 1 ► For QT- Line Resp Time on Table 10, enter the Trunk Response Time.

To enter data at the programming terminal:
Step 1 ► After programming QT- Camp-On Time, you see: **LINE RESP TIME? (5 TO 99 TENTH SECS)**

Step 2 ► Enter the QT- Trunk Response Time from Table 10 and press **RETURN**. You see: **MODEM RSRV TIME? (0-970 SECS)**
Go to QT- Modem Reserve Time on the next page.

Q- SYSTEM WIDE PROGRAMMING

QT- SYSTEM TIMERS, MODEM RESERVE TIME

Description

Use this option to set how long the system reserves a modem from the modem pool when a user requests a Private Modem. If this interval expires and the user has not yet accessed the modem, the system returns the modem to the pool. The range is 0- 970 seconds (16 minutes, 10 seconds). This option only pertains to outside data calls. Refer to the system Data Products Manual for the specifics on Private Modem operation and programming.

Conditions

None

Default Value

30 seconds (030)

Related Programming

None

Feature Reference

System Timers

Instructions

To enter data on the PRF:

Step 1 ► For QT- Modem Rsrv Time on Table 10, enter the Modem Reserve Time.

To enter data at the programming terminal:

Step 1 ► After programming QT- Trunk Response Time, you see: **MODEM RSRV TIME (0-970 SECS)**

Step 2 ► Enter the QT- Modem Reserve Time from Table 10 and press **RETURN**. You see: **RINGS BEFORE RCL? (3 TO 15 MAX)**

Go to QT- Number of Rings Before Recall on the next page.

Q- SYSTEM WIDE PROGRAMMING

QT- SYSTEM TIMERS, NUMBER OF RINGS BEFORE RECALL

Description

Use this option to set how many times:

- A transferred call rings an idle or busy keyset. (Refer to the Transfer feature.)
- A transferred call rings an idle ESL, ASI or OPX extension. (Refer to the Transfer feature.)
- An unanswered transferred call rings the transferring extension before diverting to extensions with ringing for the trunk. (Refer to the Transfer feature.)
- A night mode call rings its Assigned Night Answer destination before diverting to extensions with ringing for the trunk. (Refer to the Night Answer feature.)
- A call rings an extension with type 1 or 2 Call Forwarding before routing to the forwarded extension. (Refer to the Call Forwarding feature.)
- A call rings an extension in a hunt or ACD group before ringing the next group member. (Refer to the Extension Hunting feature.)

The range is 3 to 15 rings.

Conditions

Extended Ringing overrides this setting. Refer to the Extended Ringing option.

Default Value

5 rings (5)

Related Programming

None

Feature Reference

System Timers

Instructions

To enter data on the PRF:

- Step 1 ► For QT- Rings Before Rcl on Table 10, enter the number of rings before recall.

To enter data at the programming terminal:

- Step 1 ► After programming QT- Modem Reserve Time, you see: **RINGS BEFORE RCL (3 TO 15 MAX)**

- Step 2 ► Enter the QT- Number of Rings Before Recall from Table 10 and press **RETURN**. You see: **OPA OVFL RING CTR? (3 TO 15 MAX)**

Go to QT- OPA Overflow Ring Control on the next page.

Q- SYSTEM WIDE PROGRAMMING

QT- SYSTEM TIMERS, OPA OVERFLOW RING CONTROL

Description

Use this option to indicate the number of rings before OPA Operator Overflow occurs. The range is 3-15 rings. Refer to the Operator Assistance feature for more details on OPA Operator Overflow.

This option does not apply to VS.

Conditions

None

Default Value

00 (no overflow)

Related Programming

Operator Assistance (OPA)

To have OPA answer the trunk...

- **E- Trunks, E9- Direct Trunk Termination** - To have OPA intercept incoming calls on a trunk day and night, enter the number of the first port on the OPA/VAU PCB. Intercept occurs after the first ring.
- **E- Trunks, EI- Night Call Route** - To have OPA intercept incoming calls on a trunk at night only, enter the first port on the OPA/VAU PCB. Intercept occurs after the first ring.

To configure the OPA dialing and message options...

- **CP- Inhibit OPA Transfers to Extension (BY0:1)** - Allow/deny OPA Transfers to extensions with this Class of Service.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **QE- Line Gain Table** - Program the last two trunk ports of the OPA/VAU PCB for -6 dB gain.
- **QH- OPA Configuration, OPA Group Routing** - Assign the termination (destination) for each OPA access digit (1, 2, and 4-9). Callers reach the termination when they dial the digit. The termination can be an extension, ring group or an ACD/UCD master number. The recorded messages should describe the terminations reached by these single digits. Don't assign an OPA access code to an extension with BY0:1 set (1).
- **QH- OPA Configuration, Line n Day and Night Message** - For each trunk, indicate the message (2-7) that the caller hears after the OPA answers the trunk in the day and night modes.

To set Automatic Attendant Overflow...

- **QH- OPA Configuration, Overflow Message for Operator (1-4)** - For each operator, designate the OPA message (2-7) for overflow calls. To disable call overflow to the OPA, enter 0.

Feature Reference

Operator Assistance
System Timers

Q- SYSTEM WIDE PROGRAMMING

QT- SYSTEM TIMERS, OPA OVERFLOW RING CONTROL

Instructions

- To enter data on the PRF:**
- Step 1 > For QT- OPA Overflow Ring Counter on Table 10. enter the OPA operator overflow ring count.
- To enter data at the programming terminal:**
- Step 1 > After programming QT- Number of Rings Before Recall, you see: **OPA OVFL RING CTR? (3 TO 15 MAX)**
- Step 2 > Enter the QT- OPA Overflow Ring Control entry from Table 10 and press **RETURN**. You see: **DELAY RING? (1 TO 10 MAX)**
Go to QT- Delayed Ring Interval on the next page.

Q- SYSTEM WIDE PROGRAMMING

QT- SYSTEM TIMERS, DELAYED RING INTERVAL

Description

Use this option to set the delayed ring interval. If an extension has a key with delayed ringing, ringing occurs after the delayed ring interval expires. The range is 1-10 rings. For more information, refer to:

- The Central Office Calls. Answering feature
- The Call Coverage Keys feature
- The Group Call Pickup Feature
- The ED- Trunk Control, Ring Control option

Conditions

This option only pertains to trunks in the key ring state. Refer to HD- System Status.

Default Value

3 rings (03)

Related Programming

None

Feature Reference

System Timers

Instructions

To enter data on the PRF:
Step 1 > For QT- Delay Ring on Table 10, enter the delayed ring interval.

To enter data at the programming terminal:
Step 1 > After programming QT- OPA Overflow Ring Control, you see: **DELAY RING (1 TO 10 MAX)**

Step 2 > Enter the QT- Delayed Ring Interval entry from Table 10 and press RETURN. You see: **FLASH RESP TIME? (0 TO 245 TENTH SECS)**
Go to QT- Flash Response Time on the next page.

Q- SYSTEM WIDE PROGRAMMING

QT- SYSTEM TIMERS, FLASH RESPONSE TIME

Description

Use this option to set the Flash Response Time. This is the length of the local current interruption the system provides to a loop start trunk. The range is 1-25 tenths seconds (e.g., 25=2.5 seconds). Enter 0 to deny Flash system-side. This option applies to flash from a keyset or ESL set only.

Conditions
None

Default Value
700 mS (07)

Related Programming

- Flash**
- **CP- Inhibit Flash for Single Line Telephones (BY2:6)** - Enable/disable Flash for ESL sets.
 - **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.

Feature Reference

Flash
System Timers

Instructions

- To enter data on the PRF:**
- Step 1 ➤ For QT- Flash Resp Time on Table 10, enter the Flash response time.
- To enter data at the programming terminal:**
- Step 1 ➤ After programming QT- Delayed Ring Interval, you see: **FLASH RESP TIME? (0 TO 25 TENTH SECS)**
- Step 2 ➤ Enter the QT- Flash Response Time entry from Table 10 and press RETURN. You see: **DT DETECT CNT? (1 TO 6, 10 SECS/CNT)**

Q- SYSTEM WIDE PROGRAMMING

QT- SYSTEM TIMERS, DIALTONE DETECTION COUNTER

Description

Use this option to set the dialtone detection counter. This counter sets how long the system waits for second (OCC) dial tone after it finds a pause in a number. After the system detects a pause, it waits up to three times the Dialtone Detection Counter for dial tone. If dial tone occurs, the system outdials the numbers that follow the pause. If dial tone doesn't occur before this interval expires, the system denies the call on the trunk.¹ The range is 1 to 6, where each count equals ten seconds (e.g., 6=60 seconds).

Pauses can occur during:

- ARS outdialing
- Centrex Compatible Feature Key dialing
- Last Number Redial
- LCR outdialing
- Save
- Speed Dial

The system detects dial tone by monitoring for a constant power level on the trunk. For the initial dial tone detection, the power level must be present for at least 500mS. For second dial tone detection, the power level must be present for at least 2.5 seconds.

Note: Incorrect trunk gain settings (in QE) may cause improper dial tone detection. Refer to the QE option when setting trunk gains.

Conditions

None

Default Value

No entry (counter not set)

Related Programming

Special Services and OCC Compatibility

- **AP- Allow Active Dial Pad** - For Toll Restriction Levels other than 0, enable Active Dial Pad. This lets extension users dial additional digits into the special service.
- **CP- Extension Toll Restriction Level (BY1:1)** -
 - Toll Restriction Level 0 (dial pad always active)
 - Toll Restriction Level with an Active Dial Pad (AP) enabled.
- **E- Extensions, E3- Class of Service** - Assign Class of Service to extensions.
- **E- Trunks, E2- Circuit Type** - Program Special Service trunks with the correct circuit type.

Feature Reference

Special Services and OCC Compatibility
System Timers

¹ Users can manually override the Dialtone Detection Counter by dialing *.

Q- SYSTEM WIDE PROGRAMMING

QT- SYSTEM TIMERS, DIALTONE DETECTION COUNTER

Instructions

- To enter data on the PRF:**
- Step 1 >** For QT- DT Detect Cnt on Table 10. enter the Dialtone Detection Counter value.
- To enter data at the programming terminal:**
- Step 1 >** After programming QT- Flash Response Time, you see: **DT DETECT CNT? (1 TO 6,10 SECS/CNT)**
- Step 2 >** Enter the QT- Dialtone Detection Counter entry from Table 10 and press **RETURN**. You see: **FEATURE KEY DELAY? (5 TO 99 TENTH SECS)**
Go to QT- Centrex-Type Feature Key Delay on the next page.

Q- SYSTEM WIDE PROGRAMMING

QT- SYSTEM TIMERS, CENTREX-TYPE FEATURE KEY DELAY

Description

Use this option to set the interval that corresponds to a D entry when programming Centrex feature keys. Use this option when the connected Centrex/PBX requires a wait interval for certain functions. This may be appropriate if the pause option cannot detect a second dial tone. When the user presses a Centrex key with a D programmed in it, the system:

- Dials out the codes that precede the D
- Waits the QT- Centrex-Type Feature Key Delay interval
- Dials out the remaining codes

The range is 5-25 tenths seconds (e.g., 25=2.5 seconds). Refer to the Centrex Compatible Feature Keys feature and the KS- Programming Keys for Keysets option for more information.

Conditions

None

Default Value

No delay set

Related Programming

None

Feature Reference

System Timers

Instructions

- To enter data on the PRF:**
- Step 1 ► For QT- Feature Key Delay on Table 10, enter the Centrex-Type Feature Key delay.
- To enter data at the programming terminal:**
- Step 1 ► After programming QT- Dialtone Detection Counter, you see: **FEATURE KEY DELAY? (5 TO 99 TENTH SECS)**
- Step 2 ► Enter the QT- Centrex-Type Feature Key Delay entry from Table 10 and press **RETURN**. You see: **TMS WAIT TIME (5 TO 99 SECS)?**

Q- SYSTEM WIDE PROGRAMMING

QT- SYSTEM TIMERS, TRAFFIC MANAGEMENT REPORT WAIT TIME

Description

Use this option to set the Traffic Management Report (TMS) Wait Time interval. If a call rings the system longer than this interval, the TMS report flags it as a Long Wait call. The range is 5 to 99 seconds.

Conditions

None

Default Value

TMS Wait Time not set (the TMS report will never flag calls as Long Wait).

Related Programming

Traffic Management Reporting

- **HE- System Status Reports, Traffic Management Summary** - Print the TMS Report. The system does not clear the TMS data after the report runs.
- **HF- System Status Reports, Traffic Management Summary (With Data Cleared)** - Print the TMS Report. The system clears the TMS data after the report runs.
- **QZ- SMDR Setup, TMS Report Print Modes** - Set the TMS Report print mode:
 - 0 Manual (from HE or HF) for all data
 - 1 Automatic (at preset time) for trunk data only. The data clears after the report runs.
 - 2 Automatic (at preset time) for trunk and operator data only. The data clears after the report runs.
 - 3 Automatic (at preset time) for all data. The data clears after the report runs.
- **QZ- SMDR Setup, TMS Print Times Setup** - Set the time that the TMS report should print (using modes 1-3).

Feature Reference

System Timers
Traffic Management Reporting

Instructions

- To enter data on the PRF:**
- Step 1 ➤ For QT- TMS Wait Time on Table 10, enter the TMS Report Wait Time interval.
- To enter data at the programming terminal:**
- Step 1 ➤ After programming QT- Centrex-Type Feature Key Delay, you see: **TMS WAIT TIME (5 TO 99 SECS)**
 - Step 2 ➤ Enter the QT- Traffic Management Report Wait Time entry from Table 10 and press **RETURN**. You see: **DEFAULT MODEM SPEED [H/L]**
Go to QT- Default Modem Speed. In ONYX IV, go to Loop Disconnect Time on the next page.

Q- SYSTEM WIDE PROGRAMMING

QT- SYSTEM TIMERS, LOOP DISCONNECT TIME

Description

Use this option to set the loop disconnect interval for system trunks. This lets you tailor the system trunks to the disconnect characteristics of the connected telco. If the system detects an open loop on a trunk equal to or greater than the interval you set, it assumes the telco has disconnected. The system then drops the call. If the open loop interval is less than the interval you set, the system maintains the call.

When programming this option, the value you enter is in tenths of seconds (0-99). For example, if you enter 4, the system looks for an open loop of at least .4 seconds (i.e., 400 mS). The default value (00) is .5 seconds (500 mS). The accuracy of the timer is $\pm .1$ seconds (100 mS).

When you change the interval, your new value takes effect in about four minutes. To have your new value take effect immediately, reset the system after making the change.

This option is only available in ONYX VS \geq Aux Module 2.0, ONYX II/III \geq 3.5 and ONYX IV. In ONYX IV, this option requires Line/Trunk PCBs that are series 9 or higher.

Conditions

None

Default Value

00 (.5 seconds)

Related Programming

None

Feature Reference

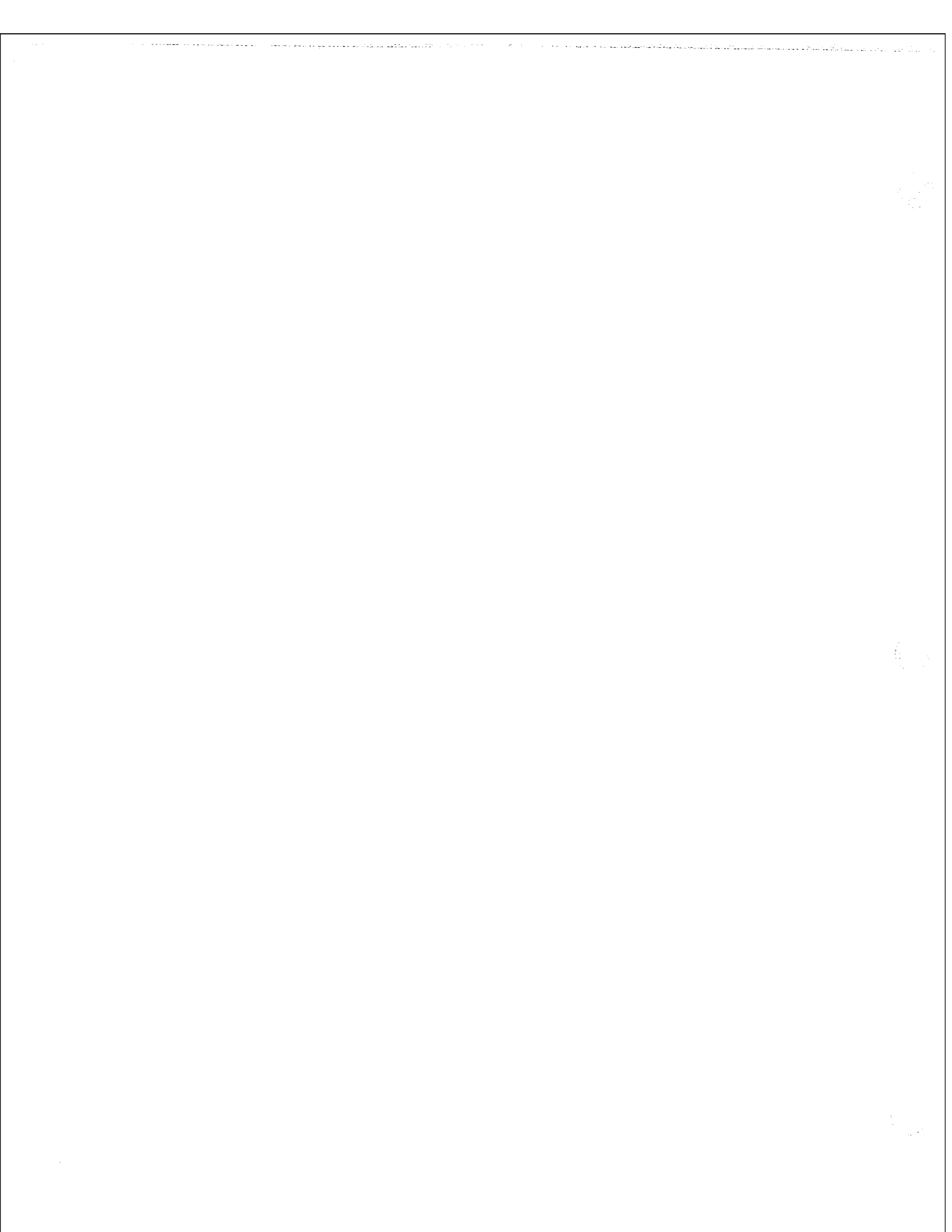
System Timers

Instructions

To enter data on the PRF:
Step 1 \blacktriangleright For QT- Loop Disconnect Time on Table 10, enter the Loop Disconnect Interval.

To enter data at the programming terminal:
Step 1 \blacktriangleright After programming QT- Traffic Management Report Wait Time, you see:
LOOP DISCNT TIME

Step 2 \blacktriangleright Enter the QT- Loop Disconnect Time entry from Table 10 and press RETURN.
You see: DEFAULT MODEM SPEED [H/L]
Go to QT- Default Modem Speed on the next page.



Q- SYSTEM WIDE PROGRAMMING

QT- SYSTEM TIMERS, DEFAULT MODEM SPEED

Description

Use this option to set the default modem speed for outgoing outside data calls. When the system assigns a modem to the call, it selects the speed you specify in this option. The user can, however, change the speed while placing the call. The choices are L (300 baud) and H (1200 baud). Refer to the system Data Products Manual for the specifics.

Conditions

None

Default Value

L (300 baud)

Related Programming

None

Feature Reference

System Timers

Instructions

To enter data on the PRF:
Step 1 > For QT- Default Modem Speed on Table 10, enter H or L.

To enter data at the programming terminal:
Step 1 > After programming QT- Traffic Management Report Wait Time, you see:
DEFAULT MODEM SPEED [H/L]

Step 2 > Enter the QT- Default Modem Speed entry from Table 10. You see:

```
OPX INCOMING FLASH TIMER (TENTH SEC)
  2=2-10, 3=3-11, 4=4-12
  5=5-13, 6=6-14, 7=7-15
02 -
```

Go to QT- OPX Incoming Flash Timer on the next page.

Q- SYSTEM WIDE PROGRAMMING

QT- SYSTEM TIMERS, DOOR BOX ALERT TIME (VS ONLY)

Description

Use this option to set how long an extension user has to answer Door Box chimes. The system sets up an Intercom call with the Door Box only if the called user answers within this interval. The range is 0 to 970 seconds (16 minutes, 10 seconds). For more information, refer to the Digital Door Box feature.

This option only applies to VS \geq Aux Module 2.0.

Conditions

None

Default Value

60 (60 seconds)

Related Programming

None

Feature Reference

None

Instructions

Step 1 \blacktriangleright

To enter data on the PRF:

For QT- Door Box Alert Time on Table 10, enter the Door Box Alert Time value.

Step 1 \blacktriangleright

To enter data at the programming terminal:

After programming QT- Default Modem Speed, you see: DOOR BOX ALERT TIME

Step 2 \blacktriangleright

Enter the QT- Door Box Alert Time value from Table 10 and press RETURN. You see:

OPX INCOMING FLASH TIMER (TENTH SEC)

2=2-10, 3=3-11, 4=4-12

5=5-13, 6=6-14, 7=7-15

02 -

Go to QT- OPX Incoming Flash Timer.

Q- SYSTEM WIDE PROGRAMMING
QT- SYSTEM TIMERS, DOOR BOX ALERT TIME (VS ONLY)

- For Your Notes -

Q- SYSTEM WIDE PROGRAMMING

QT- SYSTEM TIMERS, OPX INCOMING FLASH TIMER

Description

Use this option to match the system to the loop current interruption that occurs when an OPX hookflashes. This helps the system distinguish between a valid hookflash and a momentary loop interruption. Refer to the Off-Premise Extension (OPX) feature for more information. This option does not apply to ASI extensions.

The choices for this option are:

- 2 1-10 (100mS to 1 second)
- 3 3-11 (300 mS to 1.1 seconds)
- 4 4-12 (400 mS to 1.2 seconds)
- 5 5-13 (500 mS to 1.3 seconds)
- 6 6-14 (600 mS to 1.4 seconds)
- 7 7-15 (700 mS to 1.5 seconds)

For example, if the OPX device typically opens the loop for 750 mS to 1.4 seconds, enter 7.

Conditions

None

Default Value

2 (100 mS to 1 second)

Related Programming

None

Feature Reference

System Timers

Instructions

Step 1 >

To enter data on the PRF:

For QT- OPX Incoming Flash Timer of Table 10, enter the Flash timer value.

Step 1 >

To enter data at the programming terminal:

After programming QT- Default Modem Speed, you see:

```
OPX INCOMING FLASH TIMER (TENTH SEC)
  2=2-10, 3=3-11, 4=4-12
  5=5-13, 6=6-14, 7=7-15
02 -
```

Step 2 >

Enter the QT- OPX Incoming Flash Timer value from Table 10 and press RETURN. You see:

```
TIE LINE OUTGOING FLASH TIMER
  4, 6, 8, 10, 12, 14 (TENTH SEC)
04 -
```

Go top QT- Tie Line Outgoing Flash Timer on the next page.

Q- SYSTEM WIDE PROGRAMMING

QT- SYSTEM TIMERS, TIE LINE OUTGOING FLASH TIMER

Description

Use this option to set the length of the loop current interruption that occurs when a system (local) user flashes a Tie line. Set this option if the remote PBX supports Flash over the tie line. For example, some PBXs use Flash to initiate Hold or Transfer. Refer to the Tie Lines feature for more information. The choices are (in tenths of seconds):

- 4 400 mS
- 6 600 mS
- 7 700 mS
- 10 1 second
- 14 1.4 seconds

Conditions

None

Default Value

04 (400 mS)

Related Programming

None

Feature Reference

System Timers

Instructions

- To enter data on the PRF:**
- Step 1 ► For QT- Tie Line Outgoing Flash Timer on Table 10, enter the Tie line Flash value.
- To enter data at the programming terminal:**
- Step 1 ► After programming QT- OPX Incoming Flash Timer, you see:
- ```
TIE LINE OUTGOING FLASH TIMER
 4,6,8,10,12,14 (TENTH SEC)
04 -
```
- Step 2 ► Enter the QT- Tie Line Outgoing Flash Timer value from Table 10 and press RETURN. You return to the Main Menu.

# Q- SYSTEM WIDE PROGRAMMING

## QU- MODEM POOLING MASTER EXTENSION NUMBER

---

### Description

Use this option to designate the Modem Pooling master extension number. When setting up a pool of modem circuits, the system must know which circuit you want to use as the master. In addition, you must:

- Assign all modem circuits as type M (in E2- Circuit Type)
- Give all modem circuits hunt type 06 (in E5- Hunt Type)
- Program all modem circuits with the same master extension number (in EA- UCD Group Master Extension Number). This must be the same number you enter for QU- Modem Pooling Master Extension Number.
- Set the default modem speed in QT- Default Modem Speed.

Refer to the system Data Products Manual for the specifics.

### *Conditions*

None

### *Default Value*

Not assigned (300)

### Related Programming

None

### Feature Reference

None

### Instructions

Step 1 ►

#### **To enter data on the PRF:**

For QU- Pool Master Ext on Table 10, enter the Modem Pooling master extension number.

Step 1 ►

#### **To enter data at the programming terminal:**

Type **Q**. You see: **Q-CMD>**

Step 2 ►

Type **U**. You see: **POOL MASTER EXT**

Step 3 ►

Enter the QU- Modem Pooling Master Extension Number from Table 10. You return to the Main Menu.

To remove an assignment, enter 300.

# Q- SYSTEM WIDE PROGRAMMING

## QV- TROUBLE REPORT TELEPHONE NUMBER

---

### Description

---

Use this option to designate the off-site service center's telephone number (up to 24 digits). This is the number the system calls to report a major alarm (fault). Valid entries are 0-9, #, \* and P (pause)<sup>1</sup>.

If the service center is busy or unavailable, the system immediately redials it three more times. If the trouble report still cannot go through, the system repeats the procedure every five minutes until successful.

If the COM PCB modem port is busy when the system tries to report a fault, the system tries every 15 minutes until successful. If, however, another major alarm occurs before 15 minutes, the system tries again immediately.

On system power-up, the system sends the following modem initialization sequence to the modem attached to the lower (modem) COM PCB port:

```
ATZ. ATQ0. ATV0. ATE0. ATM1. ATF1, ATS0=xx, ATS2=34. ATS6=2,
ATS7=30, ATS8=2. ATS9=6. ATS10=6, ATS11=70, ATQ1.
```

For ATS0=xx, xx is the Modem Ring Count entered for the J command. This is the only command you can change.

This option does not apply to VS.

#### Conditions

- a. The COM PCB disables the local (upper) port while the modem (lower) port dials out.
- b. If you have a Hayes compatible 2400 baud modem, enter the following commands before connecting to the COM PCB:
  - AT&C0 Carrier Detect (CD) follows remote carrier
  - AT&D0 DTR always on
  - AT&J0 Jack type RJ11, RJ41, RJ45S
  - AT&Z0 Store configuration in user 0Consult the modem manufacturer's instructions for the specifics.

#### Default Value

Blank (no number entered).

### Related Programming

---

#### Automatic Fault Reporting

- **J- Communications Port Parameters, Port Speed** - Set the baud rate for Port A (modem) and Port B (local) to match the connected device. (The attendant can set these options from the telephone. See page 2-2.)
- **J- Communications Port Parameters, Modem Ring Count** - Set the Automated Answer ring count to match the setting of the connected modem.
- **QC- Operator Programming, Suppress Operator Alarms** - Suppress/allow alarm indications at attendant extensions.
- **QK- CEU Identification** - Enter the text that identifies the system to the off-site service center.

### Feature Reference

---

Automatic Fault Reporting

<sup>1</sup> The connected modem sets the duration of the pause. The modem must connect to a DTMF CO line.

# Q- SYSTEM WIDE PROGRAMMING

## QV- TROUBLE REPORT TELEPHONE NUMBER

---

### Instructions

---

**Step 1 >** **To enter data on the PRF:**  
For QV- Tel # (24 Dgts Max) on Table 10, enter the Trouble Report Telephone Number.

**Step 1 >** **To enter data at the programming terminal:**  
Type **Q**. You see: **Q-CMD>**  
**Step 2 >** Type **V**. You see: **TEL # (24 DGTS MAX)**  
**Step 3 >** Enter the QV- Trouble Report Telephone Number from Table 10 and press **RETURN**.

If the telephone number is 24 digits long, you don't have to press **RETURN**.  
To delete a number, enter **N**.

# Q- SYSTEM WIDE PROGRAMMING

## QV- PERIPHERAL PORTS, PCU CIRCUIT 01-04 TYPE (VS ONLY)

---

### Description

Use this option to set the circuit type for each PCU port. This option is currently not used.

This option only applies to VS ≥ Aux Module 2.0.

*Conditions*  
None

*Default Value*  
Each PCU circuit type is 0

### Related Programming

None

### Feature Reference

None

### Instructions

To enter data on the PRF:

Step 1 ► For QV- PCU Circuit 01-04 Type on Table 10, enter the correct circuit type.

To enter data at the programming terminal:

Step 1 ► Type Q. You see: Q-CMD>

Step 2 ► Type V. You see: PCU CIRCUIT 01 TYPE

Step 3 ► Type the QV- PCU Circuit Type entry for this port from Table 10. You see: SENSOR 01

Step 4 ►

- Press RETURN. You see: PCU CIRCUIT TYPE for the next consecutive PCU port.
- From Table 10, enter QV- PCU Circuit Type for this port.

Step 5 ► Repeat steps 3 and 4 for each port. After programming the fourth port, you see: SENSOR AND DOOR BOX STATION ALERT PROGRAMMING, EXT 300.

Step 6 ► Go to QV- Peripheral Ports, Alert Programming on the next page.

# Q- SYSTEM WIDE PROGRAMMING

## QV- PERIPHERAL PORTS, ALERT PROGRAMMING (VS ONLY)

### Description

Use this option to set which extensions should receive Door Box chime tones. You make an entry for each of the four door boxes - for each extension. To make an extension receive chime tones, enter Y(es). To prevent an extension from receiving chime tones, enter N(o). An extension can answer a Door Box only if you program it to receive chime tones in this option. This option only applies to VS ≥ Aux Module 2.0/Base 5.0.

#### Conditions

None

#### Default Value

Extensions don't receive Door Box chimes

### Related Programming

- E- Extensions, E3- Class of Service - Assign each Door Box COS 28.

### Feature Reference

Digital Door Box

### Instructions

- To enter data on the PRF:**
- Step 1 ➤ Go to QV- Alert Programming on Table 10. For each extension, enter the data for each Door Box.
- To enter data at the programming terminal:**
- Step 1 ➤ After programming QV- PCU Circuit Type for the fourth PCU port, you see: **SENSOR AND DOOR BOX STATION ALERT PROGRAMMING, EXT 300.**
  - Step 2 ➤ Press RETURN to program extension 300.  
OR  
Enter another extension number and press RETURN. In either case, you see: **SENSOR CONTROL, COPY?**
  - Step 3 ➤ Press RETURN twice. You see: **DOOR BOX ALERT CONTROL, COPY?**  
This lets you copy the Door Box Alert programming from another extension.
  - Step 4 ➤
    - To copy another extension's alert programming, enter Y, the extension number and RETURN.  
After you press RETURN, you go to SENSOR CONTROL programming for the next consecutive extension. Go back to step 2.
    - To skip to the next extension without making an entry, press the space bar.  
Go back to step 2.
    - To program an extension's QV- Station Alert options, press RETURN. You see: **DOOR BOX ALERTS 1 TO 4**  
Go to step 5.
  - Step 5 ➤ For the extension you are programming, enter Y or N for each Door Box port from Table 10.  
Press RETURN to:
    - Skip to the next extension without making an entry.
    - Skip to the extension after making a partial entry. The rest of the entries don't change.Press ESC to return to the Main Menu.

# Q- SYSTEM WIDE PROGRAMMING

## QW- ARS AUTHORIZATION CODES

### Description

---

Use this option to enter Automatic Route Selection (ARS) Authorization Codes into the system. If your system has ARS installed, it may require these codes. Each code can be from 1-10 digits long, using any combination of digits 0-9. Refer to the Automatic Route Selection feature and Appendix A for more information.

VS allows 64 ARS Authorization Codes. Large systems allow 184. This option does not apply to key systems.

#### *Conditions*

None

#### *Default Value*

No codes entered.

### Related Programming

---

None

### Feature Reference

---

None

### Instructions

---

**To enter data on the PRF:**  
Step 1 > Enter the QW- Authorization Codes on Table 12.

**To list QW- Authorization Code data:**  
Step 1 > Type **Q**. You see: **Q-CMD>**  
Step 2 > Type **W**. You see: **AUTHORIZATION CODES, LIST/PROGRAM (L/P)**  
Step 3 > Type **L**. You see a list of the programmed authorization codes. Following is a sample QW- ARS Authorization Codes listing.

```
001 - 8997
002 - 8998
003 - 8999
004 - 9000
```

**To program QW- ARS Authorization Code data:**  
Step 1 > Type **Q**. You see: **Q-CMD>**  
Step 2 > Type **W**. You see: **AUTHORIZATION CODES, LIST/PROGRAM (L/P)**  
Step 3 > Type **P**. You see: **001**  
Step 4 > ● To program code 001. press **RETURN**. You see the current entry.  
OR  
● To program another code, enter the code number (001-184). You see the current entry.  
Step 5 > Enter the QW- ARS Authorization Code entry from Table 12 and press **RETURN**.  
If your entry is 10 digits long. you don't have to press **RETURN**.  
Step 6 > Repeat steps 4 and 5 to program additional codes.

# Q- SYSTEM WIDE PROGRAMMING

## QX- SUPPRESS "#" WHEN SPEED DIALING

---

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description</b>         | <p>Use this option to prevent/allow the system from outdialing the # digit when stored in a Speed Dial bin. If prevented, the system stops dialing at the #. The system does not dial the # or any digits after the #. If allowed, the system outdials the contents of the Speed Dial bin normally. This option also affects numbers outdialed using:</p> <ul style="list-style-type: none"><li>● Automatic Route Selection</li><li>● Centrex Compatible Feature Keys</li><li>● Last Number Redial</li><li>● Least Cost Routing</li><li>● Save</li></ul> <p>For ONYX IV, allowing this option permits users to enter Account Codes without interrupting their call. See Account Code Capability feature operation.</p> <p><i>Conditions</i><br/>None</p> <p><i>Default Value</i><br/>Y (# not outdialed)</p> |
| <b>Related Programming</b> | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Feature Reference</b>   | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Instructions</b>        | <p><b>To enter data on the PRF:</b></p> <p>Step 1 ► For QX- Suppress '#' Key Tone on Table 10, enter Y or N.</p> <p><b>To enter data at the programming terminal:</b></p> <p>Step 1 ► Type Q. You see: Q-CMD&gt;</p> <p>Step 2 ► Type X. You see: SUPPRESS '#' KEY TONE?</p> <p>Step 3 ► Enter Y or N for QX- SUPPRESS "#" WHEN SPEED DIALING from Table 10. You see the Main Menu.</p>                                                                                                                                                                                                                                                                                                                                                                                                                      |



# Q- SYSTEM WIDE PROGRAMMING

## QY- SINGLE DIGIT LINE ACCESS

---

### Description

Use this option to allow/deny users the capability of accessing trunk group 1 (code 90) by dialing 9. If you enable this option (Y), users cannot dial-access trunk groups 91-98. If you disable this option, users can access any trunk group by dialing the two digit code (90-98). Refer to the Line (Trunk) Rotaries feature for more information on trunk groups. In systems with ARS, enabling this option changes the ARS access code from 90 to 9.

#### *Conditions*

None

#### *Default Value*

N (single digit access denied)

### Related Programming

None

### Feature Reference

None

### Instructions

#### **To enter data on the PRF:**

Step 1 ► For QY- Single Digit Line Access on Table 10, enter Y or N.

#### **To enter data at the programming terminal:**

Step 1 ► Type **Q**. You see: **Q-CMD>**

Step 2 ► Type **Y**. You see: **SINGLE DIGIT LINE ACCESS?**

Step 3 ► Enter **Y** or **N** for QY- Single Digit Line Access on Table 10.

# Q- SYSTEM WIDE PROGRAMMING

## QZ- SMDR SETUP, TMS REPORT PRINT MODES

---

### Description

---

Use this option to set the Traffic Management Report (TMS) print modes. You can have the TMS report print manually (using the HE or HF options) or at a preset time. If you request automatic printing, the report can include trunk data, trunk and operator data or all data. The options are:

- 0 Manual (using the HE or HF options)
- 1 Automatic (at a preset time) for trunk data only. The data clears after the report runs.
- 2 Automatic (at a preset time) for trunk and operator data only. The data clears after the report runs.
- 3 Automatic (at a preset time) for all data. The data clears after the report runs.

### Conditions

None

### Default Value

0 (Manual)

### Related Programming

---

#### Traffic Management Reporting

- HE- System Status Reports, Traffic Management Summary - Print the TMS Report. The system does not clear the TMS data after the report runs.
- HF- System Status Reports, Traffic Management Summary (With Data Cleared) - Print the TMS Report. The system clears the TMS data after the report runs.
- QT- System Timers, Traffic Management Report Wait Time - Set the TMS Wait Time interval. If a call rings longer than this interval, the TMS report flags it as Long Wait.
- QZ- SMDR Setup, TMS Print Times Setup - Set the time that the TMS report should print (using modes 1-3).

### Feature Reference

---

Traffic Management Reporting

### Instructions

---

- To enter data on the PRF:**
- Step 1 ➤ For QZ- Mode on Table 10, enter the TMS report print mode.

**To enter data at the programming terminal:**

- Step 1 ➤ Type Q. You see: **Q-CMD>**
  - Step 2 ➤ Type Z. You see: **MODE?**
  - Step 3 ➤ Enter the QZ- Mode data from Table 10.
  - Step 4 ➤ ● If you enter 0 for step 3, you see: **SMDR FOR TOLL CALLS ONLY?**  
Go to QZ- SMDR Only for Toll Calls.
- OR
- If you enter 1-3 for step 3, you see: **SET UP TMS PRINT TIMES?**  
Go to QZ- TMS Print Times Setup.

# Q- SYSTEM WIDE PROGRAMMING

## QZ- SMDR SETUP, TMS PRINT TIMES SETUP

---

### Description

---

Use this option to set the times that the TMS report should print. The data clears after each time the report runs. You can only set this option if you have entered:

- 1-3 for QZ- TMS Report Print Modes
- Y for QZ- TMS Print Times Setup

You can have the TMS report print every hour or every combination of hours.

#### Conditions

None

#### Default Value

N for each hour 00:00-23:00 (TMS report is not set to print)

### Related Programming

---

#### Traffic Management Reporting

- **HE- System Status Reports, Traffic Management Summary - Print the TMS Report.** The system does not clear the TMS data after the report runs.
- **HF- System Status Reports, Traffic Management Summary (With Data Cleared) - Print the TMS Report.** The system clears the TMS data after the report runs.
- **QT- System Timers, Traffic Management Report Wait Time - Set the TMS Wait Time interval.** If a call rings longer than this interval, the TMS report flags it as Long Wait.
- **QZ- SMDR Setup, TMS Report Print Modes - Set the TMS Report print mode:**
  - 0 Manual (from HE or HF) for all data
  - 1 Automatic (at preset time) for trunk data only. The data clears after the report runs.
  - 2 Automatic (at preset time) for trunk and operator data only. The data clears after the report runs.
  - 3 Automatic (at preset time) for all data. The data clears after the report runs.

### Feature Reference

---

Traffic Management Reporting

### Instructions

---

Step 1 ➤

**To enter data on the PRF:**

For each QZ- print TMS Data at nn:00 entry on Table 10, enter Y or N.

# Q- SYSTEM WIDE PROGRAMMING

## QZ- SMDR SETUP, TMS PRINT TIMES SETUP

---

### Instructions (Cont'd)

---

- To enter data at the programming terminal:**
- Step 1 >** After entering 1. 2. 3 for QZ- TMS Report Print Modes, you see: **SET UP TMS PRINT TIMES?**
- Step 2 >**
- To change the TMS Report print times, enter **Y**. You see: **PRINT TMS DATA AT 00:00?**  
Go to step 3.
- OR**
- To leave the TMS Report print times unchanged, enter **N**. You see: **SMDR FOR TOLL CALLS ONLY?**  
Go to QZ- SMDR Only for Toll Calls.
- Step 3 >**
- If you want the TMS report to print at 00:00 hours (12 midnight), enter **Y**. You see: **PRINT TMS DATA AT 01:00?**
- OR**
- If you don't want the TMS report to print at 00:00 hours, enter **N**. You see: **PRINT TMS DATA AT 01:00?**
- Step 4 >** Repeat step 3 for the remaining QZ- TMS Print Times Setup prompts. The options are 01:00 (1:00 AM) to 23:00 (11:00 PM).  
After programming QZ- Print TMS Data At 23:00, you go to QZ- SMDR Only for Toll Calls on the next page.

# Q- SYSTEM WIDE PROGRAMMING

## QZ- SMDR SETUP, SMDR ONLY FOR TOLL CALLS

---

### Description

---

Use this option to have the SMDR report include all outside calls or just toll calls. If you enter N, the SMDR report includes all outside calls. If you enter Y, the SMDR report includes just toll calls. The system defines toll calls as follows:

1 + NNX + nnnn  
NPA + NNX + nnnn  
1 + NPA + NNX + nnnn  
0 + NNX + nnnn  
0 + NPA + NNX + nnnn

#### Conditions

None

#### Default Value

N (SMDR for all calls)

### Related Programming

---

#### Station Message Detail Recording

- **P- Print SMDR Report** - Print the SMDR report. The system can clear or retain records from the SMDR buffer after the report prints.
- **QZ- SMDR Setup, Inbound SMDR** - Have the SMDR report print incoming and outgoing calls, or just outgoing calls.
- **QZ- SMDR Setup, SMDR Printout All the Time** - Have the SMDR report print after each call completes, or at a preset time.
- **QZ- SMDR Setup, SMDR Report Start Hour** - Designate the time when the SMDR report should print. This option does not apply if SMDR prints all the time.
- **Z- Clear All SMDR Records** - Clear the SMDR records from the system buffer without printing the SMDR report. Clear the records when you change the SMDR print options.

### Feature Reference

---

Station Message Detail Recording

### Instructions

---

#### To enter data on the PRF:

- Step 1 ➤ For QZ- SMDR for Toll Calls Only on Table 10, enter Y or N.

#### To enter data at the programming terminal:

- Step 1 ➤ After entering:  
0 for QZ- TMS Report Print Modes  
N for QZ- TMS Report Print Times Setup  
Y or N for QZ- Print TMS Data at 23:00  
You see: **SMDR FOR TOLL CALLS ONLY**
- Step 2 ➤ Enter Y or N for QZ- SMDR Only for Toll Calls from Table 10. You see:  
**INBOUND SMDR?**  
Go to QZ- Inbound SMDR on the next page.

# Q- SYSTEM WIDE PROGRAMMING

## QZ- SMDR SETUP, INBOUND SMDR

---

### Description

---

Use this option to have the SMDR report include or exclude incoming trunk calls. If you enter Y, the report includes incoming and outgoing trunk calls. If you enter N, the SMDR report prints only outgoing trunk calls.

#### *Conditions*

None

#### *Default Value*

Y (SMDR report includes both incoming and outgoing trunk calls)

### Related Programming

---

#### Station Message Detail Recording

- **P- Print SMDR Report** - Print the SMDR report. The system can clear or retain records from the SMDR buffer after the report prints.
- **QZ- SMDR Setup, SMDR Only for Toll Calls** - Have the SMDR report include all outside calls, or just toll calls.
- **QZ- SMDR Setup, SMDR Printout All the Time** - Have the SMDR report print after each call completes, or at a preset time.
- **QZ- SMDR Setup, SMDR Report Start Hour** - Designate the time when the SMDR report should print. This option does not apply if SMDR prints all the time.
- **Z- Clear All SMDR Records** - Clear the SMDR records from the system buffer without printing the SMDR report. Clear the records when you change the SMDR print options.

### Feature Reference

---

Station Message Detail Recording

### Instructions

---

**To enter data on the PRF:**  
Step 1 ➤ For QZ- Inbound SMDR on Table 10, enter Y or N.

**To enter data at the programming terminal:**  
Step 1 ➤ After programming QZ- SMDR Only for Toll Calls, you see: **INBOUND SMDR?**

Step 2 ➤ For QZ- Inbound SMDR on Table 10, enter Y or N. You see: **SMDR PRINTOUT ALL THE TIME?**

Go to QZ- SMDR Printout All the Time on the next page.

## Q- SYSTEM WIDE PROGRAMMING

### QZ- SMDR SETUP, SMDR PRINTOUT ALL THE TIME

---

#### Description

Use this option to determine when the SMDR report automatically prints. If you enable this option (Y), SMDR prints as soon as each call completes. The system provides a separate record for each call. Additionally, the system does not store the call record in the SMDR buffer. If you disable this option (N), the SMDR record prints:

- At a preset time (set in QZ- SMDR Report Start Hour). The SMDR report includes all calls currently in the SMDR buffer. The buffer clears after the report prints.<sup>1</sup>
- When the SMDR buffer fills
- When you manually request the SMDR report using the P- Print SMDR Report option.

**Note:** When you enter Y for QZ- SMDR Printout All the Time, you no longer see the Main Menu prompt: **FOR MENU OF COMMANDS ENTER <CR>**

#### *Conditions*

None

#### *Default Value*

N (SMDR prints at a preset time)

#### Related Programming

##### **Station Message Detail Recording**

- **P- Print SMDR Report** - Print the SMDR report. The system can clear or retain records from the SMDR buffer after the report prints.
- **QZ- SMDR Setup, SMDR Only for Toll Calls** - Have the SMDR report include all outside calls, or just toll calls.
- **QZ- SMDR Setup, Inbound SMDR** - Have the SMDR report print incoming and outgoing calls, or just outgoing calls.
- **QZ- SMDR Setup, SMDR Report Start Hour** - Designate the time when the SMDR report should print. This option does not apply if SMDR prints all the time.
- **Z- Clear All SMDR Records** - Clear the SMDR records from the system buffer without printing the SMDR report.

#### Feature Reference

Station Message Detail Recording

---

<sup>1</sup> If you don't have an SMDR device connected when the report prints, the SMDR records are lost.

## **Q- SYSTEM WIDE PROGRAMMING**

### **QZ- SMDR SETUP, SMDR PRINTOUT ALL THE TIME**

---

#### **Instructions**

---

- To enter data on the PRF:**
- Step 1 > For QZ- SMDR Printout All the Time on Table 10, enter Y or N.
- To enter data at the programming terminal:**
- Step 1 > After programming QZ- Inbound SMDR, you see: **SMDR PRINTOUT ALL THE TIME?**
- Step 2 > For QZ- SMDR Printout All the Time on Table 10, enter Y or N.  
To disable the SMDR Report, enter N for this option and 00 for QZ- SMDR Start Hour.
- Step 3 > ● If you enter Y, you return to the Main Menu.  
OR  
● If you enter N, you go to QZ- SMDR Report Start Hour on the next page.



# Q- SYSTEM WIDE PROGRAMMING

## QZ- SMDR SETUP, SMDR REPORT START HOUR

---

### Description

---

Use this option to specify when the SMDR report should print. The SMDR buffer clears after the report prints. You can use this option only if you answer N for QZ- SMDR Printout All the Time. The choices are 00-23, where 01=1:00 AM and 23=11:00 PM. To disable the SMDR printout, enter 00.

#### *Conditions*

None

#### *Default Value*

00 (SMDR report will not print)

### Related Programming

---

#### Station Message Detail Recording

- **P- Print SMDR Report** - Print the SMDR report. The system can clear or retain records from the SMDR buffer after the report prints.
- **QZ- SMDR Setup, SMDR Only for Toll Calls** - Have the SMDR report include all outside calls, or just toll calls.
- **QZ- SMDR Setup, Inbound SMDR** - Have the SMDR report print incoming and outgoing calls, or just outgoing calls.
- **QZ- SMDR Setup, SMDR Printout All the Time** - Have the SMDR report print after each call completes, or at a preset time.
- **Z- Clear All SMDR Records** - Clear the SMDR records from the system buffer without printing the SMDR report. Clear the records when you change the SMDR print options.

### Feature Reference

---

Station Message Detail Recording

### Instructions

---

- To enter data on the PRF:**
- Step 1 ➤ For QZ- SMDR Start Hour on Table 10, enter 00-23.
- To enter data at the programming terminal:**
- Step 1 ➤ After entering N for QZ- SMDR Printout All the Time, you see: **SMDR START HOUR? (00-23)**
- Step 2 ➤ Enter the QZ- SMDR Start Hour entry from Table 10.  
You return to the Main Menu.

**Q- SYSTEM WIDE PROGRAMMING**  
**QZ- SMDR SETUP, SMDR REPORT START HOUR**

---

- For Your Notes -

# R- ERROR LOG REPORT

## Description

Use this option to display the System Error Report. This report shows:

- The last time you cleared the System Error Report (using the V- Clear Error Log option)
- Total number of power resets (since you last cleared the report). Power resets occur when you turn the power off and on or if commercial AC power fails.
- Total number of error resets (since you last cleared the report). Error resets occur if the CPU initiates a non-stoppable system reset. This occurs if the CPU detects a serious error.
- The time and date of the error resets
- The time and date of the power (manual) resets

Following is a sample System Error Report. Consult with your Service Representative if you have questions about the report.

```
SYSTEM ERROR REPORT for XYZ CORP
03/23/90 01:16:07
```

-----  
Error-logging files initialized on 00/00/00 00:00:00

Total Power Resets to date = 05

Total Error Resets to date = 21

| DATE     | TIME     |
|----------|----------|
| 03/16/90 | 11:38:00 |
| 03/16/90 | 11:37:28 |
| 03/06/90 | 15:31:46 |
| 03/06/90 | 14:46:13 |
| 03/01/90 | 13:30:05 |
| 02/28/90 | 15:50:26 |
| 02/28/90 | 15:47:37 |
| 02/28/90 | 15:46:54 |
| 02/28/90 | 15:46:26 |
| 02/28/90 | 11:35:34 |
| 02/27/90 | 14:54:37 |
| 02/27/90 | 14:52:17 |
| 02/27/90 | 14:48:14 |
| 02/26/90 | 14:21:47 |
| 02/26/90 | 14:19:37 |

Total Manual Resets to date = 00

| DATE     | TIME     |
|----------|----------|
| 00/00/00 | 00:00:00 |
| 00/00/00 | 00:00:00 |
| 00/00/00 | 00:00:00 |
| 00/00/00 | 00:00:00 |
| 00/00/00 | 00:00:00 |
| 00/00/00 | 00:00:00 |
| 00/00/00 | 00:00:00 |
| 00/00/00 | 00:00:00 |
| 00/00/00 | 00:00:00 |
| 00/00/00 | 00:00:00 |
| 00/00/00 | 00:00:00 |
| 00/00/00 | 00:00:00 |
| 00/00/00 | 00:00:00 |
| 00/00/00 | 00:00:00 |
| 00/00/00 | 00:00:00 |
| 00/00/00 | 00:00:00 |

### Conditions

None

### Default Value

None

## R- ERROR LOG REPORT

---

### Related Programming

None

### Feature Reference

System Reports, Diagnostics and Maintenance Utilities

### Instructions

**To enter data on the PRF:**  
Step 1 ► No entry required.

**To enter data at the programming terminal:**  
Step 1 ► Type **R**. The error log displays.

# S- SPEED DIAL SL- LIST EXTENSION AND SYSTEM SPEED DIAL NUMBERS

## Description

Use this option to list the extension and system Speed Dial numbers. Refer to the Speed Dial feature for more information. Following are sample Extension Speed Dial and System Speed Dial listings.

### Typical Extension Speed Dial Listing

```
=====
EXT # 300 ANNA
=====
SPEED DIAL # 20 - BRUCE I:304

=====
EXT # 304 BRUCE
=====
SPEED DIAL # 50 - MARY I:302
SPEED DIAL # 51 - HOME 90:8882345
SPEED DIAL # 52 - PARTS PLUS 90:8883456
SPEED DIAL # 20 - 90:5552147
```

#### For example...

- I:nnn indicates Intercom function
- 90:8882345 indicates outside number 888-2345 will dial on trunk group 90

### Typical System Speed Dial Listing

```
SPEED DIAL # 700 - MAIN OFFICE 90:12038888000P204
SPEED DIAL # 701 - PRESIDENT 90:12038888001
SPEED DIAL # 702 - TECH SERVICE 90:12038888002
```

#### For example...

- 90:12038888000 indicates outside number 1-203-888-8000 will dial on trunk group 90
- P indicates a pause in the bin

#### Conditions

If you program a bin with a group (e.g., 90) and change the group master number, the system substitutes the new master number for the group.

#### Default Value

No numbers programmed

## Related Programming

None

## Feature Reference

System Reports, Diagnostics and Maintenance Utilities

# S- SPEED DIAL

## SL- LIST EXTENSION AND SYSTEM SPEED DIAL NUMBERS

---

### Instructions

---

#### To enter data on the PRF:

- Step 1 > Refer to Tables 12 and 13 for a listing of Extension and System Speed Dial numbers.

#### To list Extension (Personal) Speed Dial numbers

- Step 1 > Type **S**. You see: **S-CMD>**
- Step 2 > Type **L**. You see: **(S)YSTEM OR (E)XTENSION**
- Step 3 > Type **E**. You see: **FROM**
- Step 4 > ● Enter the extension number you want to begin the listing and press **RETURN**. You see: **TO** Go to step 5.  
OR
- Press **RETURN** to have the listing include all extensions. The listing displays.
- Step 5 > ● Enter the extension number you want to end the listing and press **RETURN**. The listing displays.  
OR
- Press **RETURN** to have the listing include all the remaining extensions. The listing displays.

#### To list System Speed Dial Numbers

- Step 1 > Type **S**. You see: **S-CMD>**
- Step 2 > Type **L**. You see: **(S)YSTEM OR (E)XTENSION**
- Step 3 > Type **S**. You see: **FROM**
- Step 4 > ● Enter the System Speed Dial number you want to begin the listing and press **RETURN**. You see: **TO** Go to step 5.  
OR
- Press **RETURN** to have the listing include all System Speed Dial numbers. The listing displays.
- Step 5 > ● Enter the System Speed Dial number you want to end the listing and press **RETURN**. The listing displays.  
OR
- Press **RETURN** to have the listing include all the remaining System Speed Dial numbers. The listing displays.

# SP- PROGRAMMING EXTENSION/SYSTEM SPEED DIAL NUMBERS

## Description

Use this option to enter System and Extension (Personal) Speed Dial numbers into the system. For each Speed Dial bin, you must enter:

- The trunk (e.g., 801) or trunk group (90-98) the stored number should dial out on. For an Intercom feature, enter I.
- The telephone number or feature code (up to 32 digits). Valid entries are the digits 0-9 and #.  
For a Pause, enter P.  
For a Flash, enter F (ONYX II/III  $\geq 3.5$  and ONYX IV  $\geq 1.2$ )  
For a Delay, enter D (ONYX II/III  $\geq 3.5$  and ONYX IV  $\geq 1.2$ )
- The name associated with the Speed Dial bin. The Speed Dial name can be up to 16 characters long, using any combination of letters (A-Z) and numbers (0-9). However, the first entry in the name must be a capital letter.

Refer to the Speed Dial feature for more information on storing and using Speed Dial numbers.

### Conditions

You can program a Speed Dial bin from a telephone, and then program the same bin from the terminal. The terminal programming replaces the telephone programming. You can also program a Speed Dial bin first from the terminal, and then program the same bin from the telephone. In this case, the telephone programming replaces the terminal programming.

### Default Value

No numbers entered.

## Related Programming

None

## Feature Reference

None

## Instructions

- To enter data on the PRF:
- Step 1 > ● Enter System Speed Dial numbers on Table 13.  
OR  
● Enter Extension (Personal) Speed Dial numbers on Table 14.
- To program Extension (Personal) Speed Dial numbers:
- Step 1 > Type S. You see: S-CMD>
- Step 2 > Type P. You see: (S)YSTEM OR (E)XTENSION
- Step 3 > Type E. You see: EXT # 300
- Step 4 > ● Press RETURN to program Speed Dial numbers for extension 300. You see: SPEED DIAL # 50  
OR  
● Enter the number of the extension you want to program Speed Dial numbers for and press RETURN. You see: SPEED DIAL # 50  
If you are programming a DSS Console, you see: DSS Speed Dial #01.

# SP- PROGRAMMING EXTENSION/SYSTEM SPEED DIAL NUMBERS

## Instructions (Cont'd)

- Step 5 >**
- Press **RETURN** to program Speed Dial bin 50 for the extension you select. The existing Speed Dial number displays (or **OPEN** if none programmed), followed by: **LINE**  
If you are programming a DSS Console, press **RETURN** for bin 01. Only program bins designated for Speed Dial in KD.
- OR**
- Enter another Speed Dial bin (51-59, 20-29) and press **RETURN**. The existing Speed Dial number displays (or **OPEN** if none programmed), followed by: **LINE**  
If you are programming a DSS Console, your bins are 01-79. Only program bins designated for Speed Dial in KD.
- Step 6 >** Enter the trunk or group number the bin should dial out on and press **RETURN**. You see: **TEL NO.**  
You can enter the trunk number (e.g., 801) or a two-digit trunk group code (e.g., 90).  
To remove an assignment and the associated number and name, enter **U**.  
To leave an assignment unchanged, just press **RETURN**.  
To store an Intercom feature, enter **I**.  
To skip to the next bin without making an entry, enter **N**.
- Step 7 >** Enter the telephone number or feature code and press **RETURN**. You see: **NAME**  
The number can be up to 32 digits long. If the number is longer than 16 digits, it uses the next consecutive bin as well. To edit an existing number, reenter the number.  
If the number is 32 digits long, you don't have to press **RETURN**.  
To leave a number unchanged, just press **ENTER**.
- Step 8 >** Enter the Speed Dial Number name (up to 16 characters) and press **RETURN**.  
To remove a name, enter **0**.  
If the name is 16 characters long, you don't have to press **RETURN**.  
To leave a name unchanged, just press **RETURN**.
- Step 9 >** Repeat steps 5-8 to program additional bins.
- To program System Speed Dial numbers:**
- Step 1 >** Type **S**. You see: **S-CMD>**
- Step 2 >** Type **P**. You see: **(S)YSTEM OR (E)XTENSION**
- Step 3 >** Type **S**. You see: **SPEED DIAL # 700**  
You may see 70 or 7000, depending on how you program the QE option. Refer to the Speed Dial feature.
- Step 4 >**
- Press **RETURN** to program System Speed Dial bin 700. The existing Speed Dial number displays (or **OPEN** if none programmed), followed by: **LINE**
- OR**
- Enter another System Speed Dial bin (700-799) and press **RETURN**. The existing Speed Dial number displays (or **OPEN** if none programmed), followed by: **LINE**
- Step 5 >** Enter the trunk or group number the bin should dial out on and press **RETURN**. You see: **TEL NO.**  
You can enter the trunk number (e.g., 801) or a two-digit trunk group code (e.g., 90).  
To remove an assignment and the associated number and name, enter **U**.  
To leave an assignment unchanged, just press **RETURN**.  
To store an Intercom feature, enter **I**.



# - SPEED DIAL

## SP- PROGRAMMING EXTENSION/SYSTEM SPEED DIAL NUMBERS

---

### Instructions (Cont'd)

---

- Step 6 >** Enter the telephone number or feature code and press **RETURN**. You see:  
**NAME**  
The number can be up to 32 digits long. If the number is longer than 16 digits, it uses the next consecutive bin as well. To edit an existing number, reenter the number.  
If the number is 32 digits long, you don't have to press **RETURN**.  
To leave a number unchanged, just press **RETURN**.
- Step 7 >** Enter the Speed Dial Number name (up to 16 characters) and press **RETURN**.  
To remove a name, enter 0.  
If the name is 16 characters long, you don't have to press **RETURN**.  
To leave a name unchanged, just press **RETURN**.
- Step 8 >** Repeat steps 4-7 to program additional bins.

# S- SPEED DIAL SR- ROTARY CONVERSION (CONVERTING SPEED DIAL TRUNKS)

---

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description</b>         | <p>Use this option to globally change the trunk assignments in Speed Dial bins. For example, you can convert all bins that currently use trunk group 90 to group 91. Or, you can convert all bins that used trunk 801 to trunk 805. The flexibility of rotary conversion helps if the relative cost of the connected services changes. You can easily reroute your Speed Dial calls over the most cost effective trunks. Refer to the Speed Dial feature for more information on storing and using Speed Dial numbers.</p> <p>Keep the following in mind when using the SR- Rotary Conversion option:</p> <ul style="list-style-type: none"><li>● You can convert from an old trunk to a new trunk if the new trunk is not the first trunk in a trunk rotary.</li><li>● If you convert from an old trunk to a new trunk, and the new trunk is the first trunk in a rotary, the system selects the rotary instead of the new trunk</li><li>● When converting from a trunk or rotary to a new rotary, enter the rotary's master number. For example, to convert to a trunk rotary consisting of trunks 801 (master), 802 and 803, enter 801.</li></ul> |
| <b>Conditions</b>          | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Default Value</b>       | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Related Programming</b> | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Feature Reference</b>   | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Instructions</b>        | <p><b>To enter data on the PRF:</b></p> <p>Step 1 ► No entry required.</p> <p><b>To enter data at the programming terminal:</b></p> <p>Step 1 ► Type <b>S</b>. You see: <b>S-CMD&gt;</b></p> <p>Step 2 ► Type <b>R</b>. You see: <b>FROM</b></p> <p>Step 3 ► Enter the number of the trunk or group you want to convert and press <b>RETURN</b>. You see: <b>TO</b></p> <p>Step 4 ► Enter the number of trunk or group that should replace the entry in step 3 and press <b>RETURN</b>. You see: <b>ALL LINES CONVERTED</b> and return to the Main Menu.</p> <p>If you see: <b>NO LINES CONVERTED</b>, check your entries and try again. The conversion was not successful.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## T- SET SYSTEM DATE AND TIME

---

### Description

---

Use this option to display and set the system date and time. If you set the date and time using this option, it overrides the date and time set earlier from a telephone. Conversely, setting the date and time from a display telephone overrides the date and time set earlier using this option.

#### *Conditions*

None

#### *Default Value*

Date=00/00/00

Time=00:00:00

### Related Programming

---



#### **Time and Date Setting**

E- Extensions, E3- Class of Service - Assign COS 00 to each display keyset that should be able to enter the system date and time.

### Feature Reference

---

Time and Date Setting

### Instructions

---

Step 1 ➤

#### **To enter data on the PRF:**

No entry required.

#### **To enter data at the programming terminal:**

Step 1 ➤

Type **T**. You see: **SET DATE ? (enter MM/DD/YY or return)**

Step 2 ➤

Enter the current date in the following format (with a slash between the entries):

MM=Month (01 to 12)

DD=Day (01 to 31)

YY=Year (00 to 99)

You can just press RETURN to leave the current date unchanged.

Step 3 ➤

After entering the year, you see: **SET TIME ? (enter HH:MM:SS or return)**

Enter the current time in the following format (with a colon between the entries):

HH=Hour (24-hour format, 00-23)

MM=Minutes (00-59)

SS=Seconds (00-59)

You can just press RETURN to leave the current time unchanged.

You return to the Main Menu.

# T- SET SYSTEM DATE AND TIME

---

- For Your Notes -

## Description

---

Use this option to clear the System Error Report (see the R- Error Log Report option). After clearing the System Error Report, the total number of power, error and manual resets goes to 0. Use this option after the initial installation to clear out any unnecessary reports that may have occurred. The following example shows a cleared System Error Report.

```
SYSTEM ERROR REPORT for XYZ CORP
03/24/90 02:33:30
```

```

Error-logging files initialized on 03/24/90 02:23:42
```

```
Total Power Resets to date = 00
```

```
Total Error Resets to date = 00
```

```
Total Manual Resets to date = 00
```

### *Conditions*

None

### *Default Value*

None

## Related Programming

---

None

## Feature Reference

---

System Reports, Diagnostics and Maintenance Utilities

## Instructions

---

**To enter data on the PRF:**  
Step 1 > No entry required.

**To enter data at the programming terminal:**  
Step 1 > Type V. You see: **CLEAR ALL ERROR LOG RECORDS?**  
Step 2 > ● Type Y to clear the System Error Report.  
OR  
● Type N to leave the System Error Report unchanged.

## V- CLEAR ERROR LOG

---

- For Your Notes -

## X- EXCHANGE EXTENSION DATA

---

### Description

---

Use this option to swap two extensions or trunks without physically moving their ports. This allows extensions to retain their programmed options if you move them around a facility. Assume, for example, you swap extensions 304 and 305. Port 05 now has extension 304. Port 04 has extension 305.

Keep the following in mind when programming ports:

- The main attendant should stay at extension 300/port 00
- Use HH- Port/Extension Checker to make sure each port has only one assigned extension.
- You can optionally use E1- Port Number or EZ- Extension-Port Swap to change the port assignment for an extension/trunk
- Use QN- Restore Standard Port Numbers to reinstate the standard trunk/extension-to-port assignments.
- Use LP- Listing Data by Port to list the programmed options for extensions/trunks in port number order.

**CAUTION:** Since this option also swaps E2- Circuit Type programming, make sure the extensions/trunks you swap are of the same type. When exchanging data for dual-channel telephones, exchange both channels (even-to-even, odd-to-odd).

#### *Conditions*

None

#### *Default Value*

Each extension/trunk is offset from its port by 300 (e.g., extension 320 is at port 20).

### Related Programming

---

None

### Feature Reference

---

System Reports, Diagnostics and Maintenance Utilities

### Instructions

---

**To enter data on the PRF:**  
Step 1 ► No entry required.

**To enter data at the programming terminal:**  
Step 1 ► Type X. You see: **EXCHANGE EXT #**  
Step 2 ► Enter the number of the first extension you want to swap and press **RETURN**. You see: **WITH EXT #**  
Step 3 ► Enter the number of the second extension you want to swap and press **RETURN**. You see: **COMPLETED**  
You return to the Main Menu.

## **X- EXCHANGE EXTENSION DATA**

---

**- For Your Notes -**



## Y- CHANGE SYSTEM PASSWORDS

---

### Description

---

Use this option to change the level 1 or level 2 password. You must know the level 1 or level 2 password to change the level 1 password. You must know the level 2 password to change the level 2 password. Remember that entering a new password erases the old one. Keep a written record of the modified passwords.

#### *Conditions*

If you change your passwords and forget them, call your technical service representative for assistance.

#### *Default Value*

The default level 1 password is carriage return.  
The default level 2 password for ONYX II is ONYX2.  
The default level 2 password for ONYX III/IV is ONYX3.  
The default level 2 password for VS key is ONYXVSK.  
The default level 2 password for VS hybrid is ONYXVSH.  
If you install an AUX Module in VS and don't initialize, the level 2 password is DCH.

### Related Programming

---

None

### Feature Reference

---

System Programming Password Protection

### Instructions

---

- To enter data on the PRF:**
- Step 1 > No entry required.
- To enter data at the programming terminal:**
- Step 1 > Type Y. You see: **ENTER LEVEL**
- Step 2 > Enter 1 or 2, depending on the level you want to change. You see: **ENTER ACCESS CODE**
- You must know the level 1 or level 2 password to change the level 1 password. You must know the level 2 password to change the level 2 password. If both passwords are the same, you can only program level 1. Change the level 1 password to give you access to both levels.
- If you recently entered the access code, the system will not ask you to enter it again.
- Step 3 > Enter the current level 1 or 2 access code. You see: **ENTER LEVEL n PASSWORD?**
- Step 4 > Enter the new password for the level you selected in step 2.  
You return to the Main Menu.

# **Y- CHANGE SYSTEM PASSWORDS**

---

**- For Your Notes -**

# Z- CLEAR ALL SMDR RECORDS

---

## Description

---

Use this option to clear (erase) the SMDR records from the SMDR buffer without printing the SMDR report. Clear the record when you change the SMDR print options. If you implement this option, all records stored in the buffer are lost.

**Conditions**  
None

**Default Value**  
N (Records will not be cleared)

## Related Programming

---

### Station Message Detail Recording

- **P- Print SMDR Report** - Print the SMDR report. The system can clear or retain records from the SMDR buffer after the report prints.
- **QZ- SMDR Setup, SMDR Only for Toll Calls** - Have the SMDR report include all outside calls, or just toll calls.
- **QZ- SMDR Setup, Inbound SMDR** - Have the SMDR report print incoming and outgoing calls, or just outgoing calls.
- **QZ- SMDR Setup, SMDR Printout All the Time** - Have the SMDR report print after each call completes, or at a preset time.
- **QZ- SMDR Setup, SMDR Report Start Hour** - Designate the time when the SMDR report should print. This option does not apply if SMDR prints all the time.

## Feature Reference

---

Station Message Detail Recording  
System Reports, Diagnostics and Maintenance Utilities

## Instructions

---

**Step 1 ➤ To enter data on the PRF:**  
No entry required.

**Step 1 ➤ To enter data at the programming terminal:**  
Type **Z**. You see: **CLEAR ALL SMDR RECORDS?**

**Step 2 ➤**

- Type **Y** to clear the records from the SMDR buffer.

OR

- Type **N** to leave the SMDR buffer unchanged.  
You return to the Main Menu.



**APPENDIX A**  
**AUTOMATIC ROUTE SELECTION**



## HOW TO USE THIS SUPPLEMENT

---

This supplement describes ARS in four sections as follows:

### **Section 1, DESCRIPTION**

Section 1 introduces Automatic Route Selection and defines the common terms and abbreviations used in this supplement. Section 1 also provides an ARS overview.

### **Section 2, SOFTWARE CONFIGURATION**

The SOFTWARE CONFIGURATION Section provides summarized and detailed instructions for compiling ARS data. The data is entered on the ARS Program Record Forms at the end of the section.

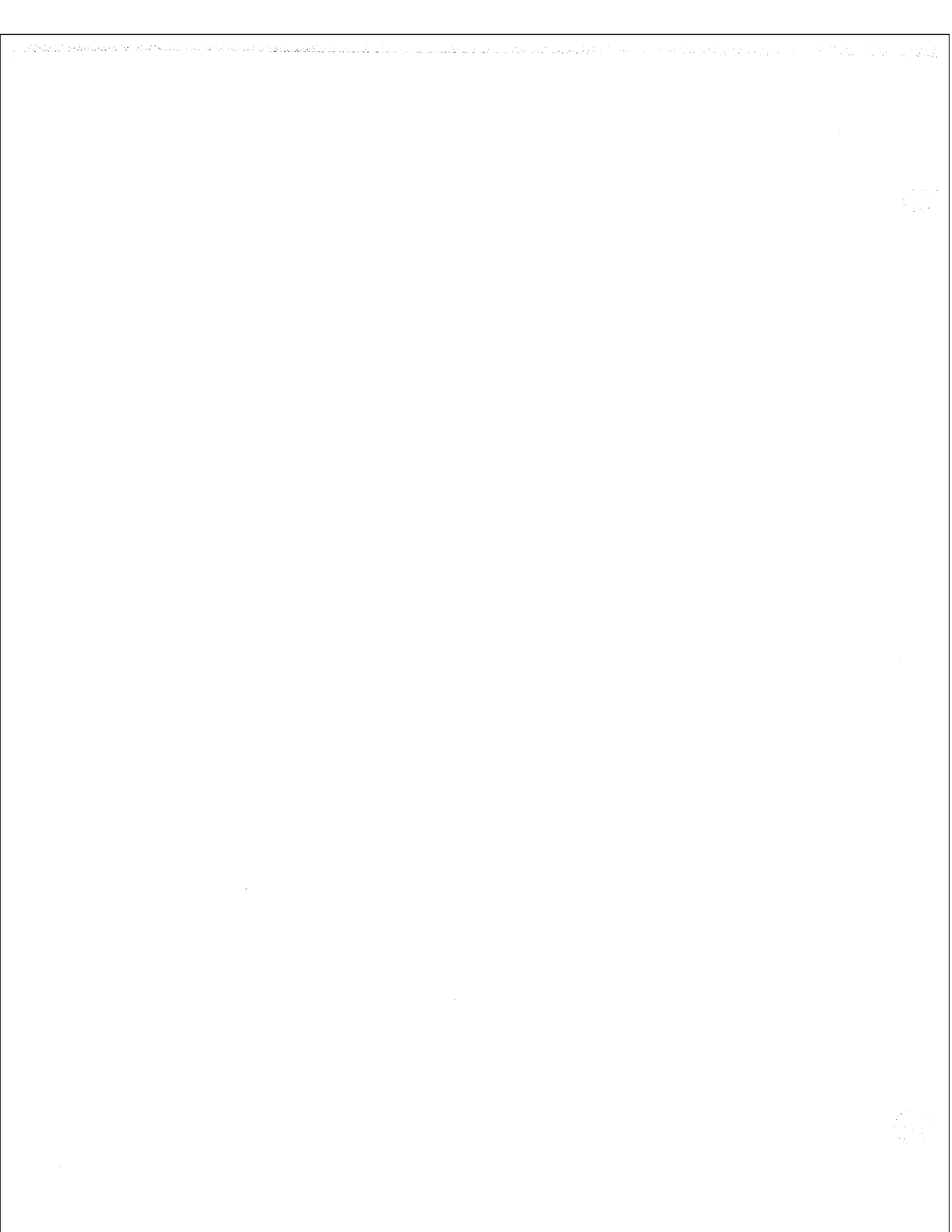
### **Section 3, PROGRAM ENTRY**

This section consists of the instructions for entering ARS data on the Program Record Forms into system memory. The instructions are presented as Program Entry Charts.

### **Section 4, OPERATION**

The OPERATION Section tells you how to place a call (from each type of telephone) if ARS is enabled for the system.

A Command Structure chart is included at the end of this appendix. Use this diagram as a quick reference for the ARS editor commands used during Program Entry.





---

# Section 1, Description

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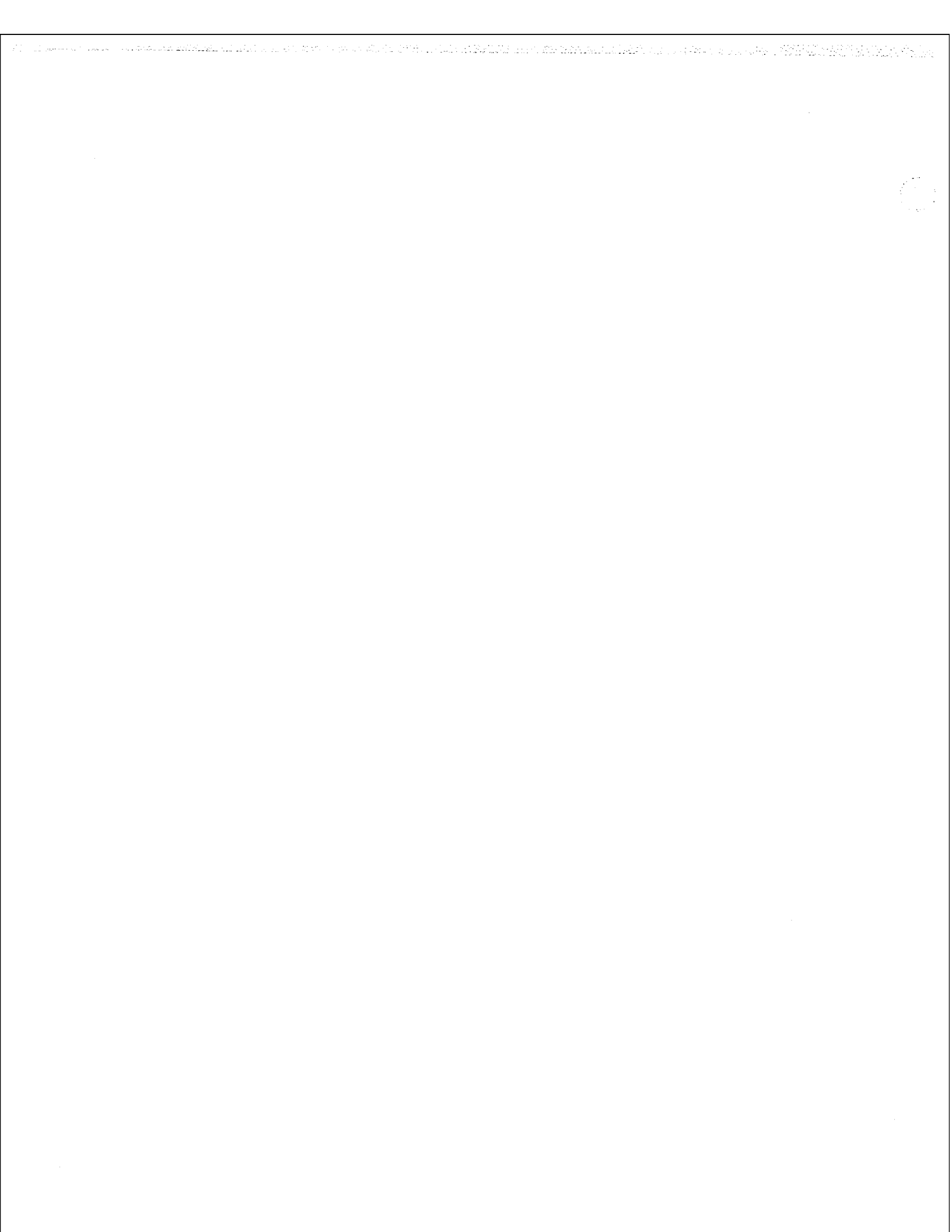
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## INTRODUCTION

---

Automatic Route Selection (ARS) is a comprehensive and flexible on-line call routing scheme that you can customize from the programming terminal. ARS accommodates over 8000 call routing choices -- without a custom-ordered rate structure data base. Automatic Route Selection allows modifications to the routing choices to be made quickly and easily as the cost structure of the connected services change.

ARS provides:

### **Call Routing**

3-digit (Area Code) and 6-digit (Area Code and Exchange) analysis can be applied to every number dialed.

### **Dialing Translation (Special Dialing Instructions)**

Stored dialing instructions can be automatically executed when a route is chosen.

### **Time of Day Selection**

Route selection can be independently programmed according to the time of day/day of week.

### **Hierarchical Class of Service Control**

Call route choices are allowed or denied based on an extension's Class of Service.

### **Forced Authorization Code**

Designated routes may require the user to enter an Authorization Code before routing is allowed. This code is verifiable and is enforced by station Class of Service.

### **Separate Routing For Operator Assisted, International and Equal Access Calls**

To provide unique control, separate routing instructions may be programmed for Operator Assisted, International and Equal Access calls.

### **Independently Programmed Restriction for Exchanges 976 and 555**

Restriction for these exchanges is hierarchical according to an extension's Class of Service.

# INTRODUCTION

---

For Your Notes

## DEFINITION OF TERMS

|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Call Route Option</b>                | The Call Route Option is a subset of the Selection Number and defines the routing of a call. The Call Route Option considers the maximum Class of Service permitted to access the route, assigns the route, and specifies the Dial Treatment that applies to the route selected. Each of the 64 Selection Numbers can have a total of 16 Call Route Options for each of the eight Rate Periods, for a system capacity of 8,192.  |
| <b>Carrier</b>                          | The Carrier is the company which provides a service to which a call may be routed. Some typical Carriers are ATT, MCI, GTE (US Sprint) and Western Union.                                                                                                                                                                                                                                                                        |
| <b>Conflict Code/<br/>Conflict Area</b> | A Conflict Code is a local exchange code that uses 0 or 1 as the second digit. A Conflict Area is a dialing area (NPA) in which Conflict Codes exist.                                                                                                                                                                                                                                                                            |
| <b>Dial Treatment</b>                   | A Dial Treatment contains any special dialing instructions that are to be automatically performed when a call is redialed on the selected route. The ARS system accommodates a total of 15 programmable Dial Treatments. Each Call Route Option can be assigned one of 16 Dial Treatments.                                                                                                                                       |
| <b>Equal Access</b>                     | Equal Access allows a primary carrier for long distance calls to be selected. When a user dials 1 + NPA + NNX + nnnn, the call will go out on the preselected primary carrier service. To manually dial toll calls on services other than the primary carrier, the user dials 10XXX + NPA + NNX + nnnn. Note that 10XXX is the equal access code to an alternate carrier. Equal Access capability is not provided by all telcos. |
| <b>Holiday</b>                          | For the purposes of Rate Period selection, Holidays are defined as New Year's Day (January 1), Independence Day (July 4), Labor Day (the first Monday in September), Thanksgiving Day (the fourth Thursday in November) and Christmas Day (December 25). Holidays nationally observed on days other than those listed above are not considered by ARS to be Holidays.                                                            |

## DEFINITION OF TERMS

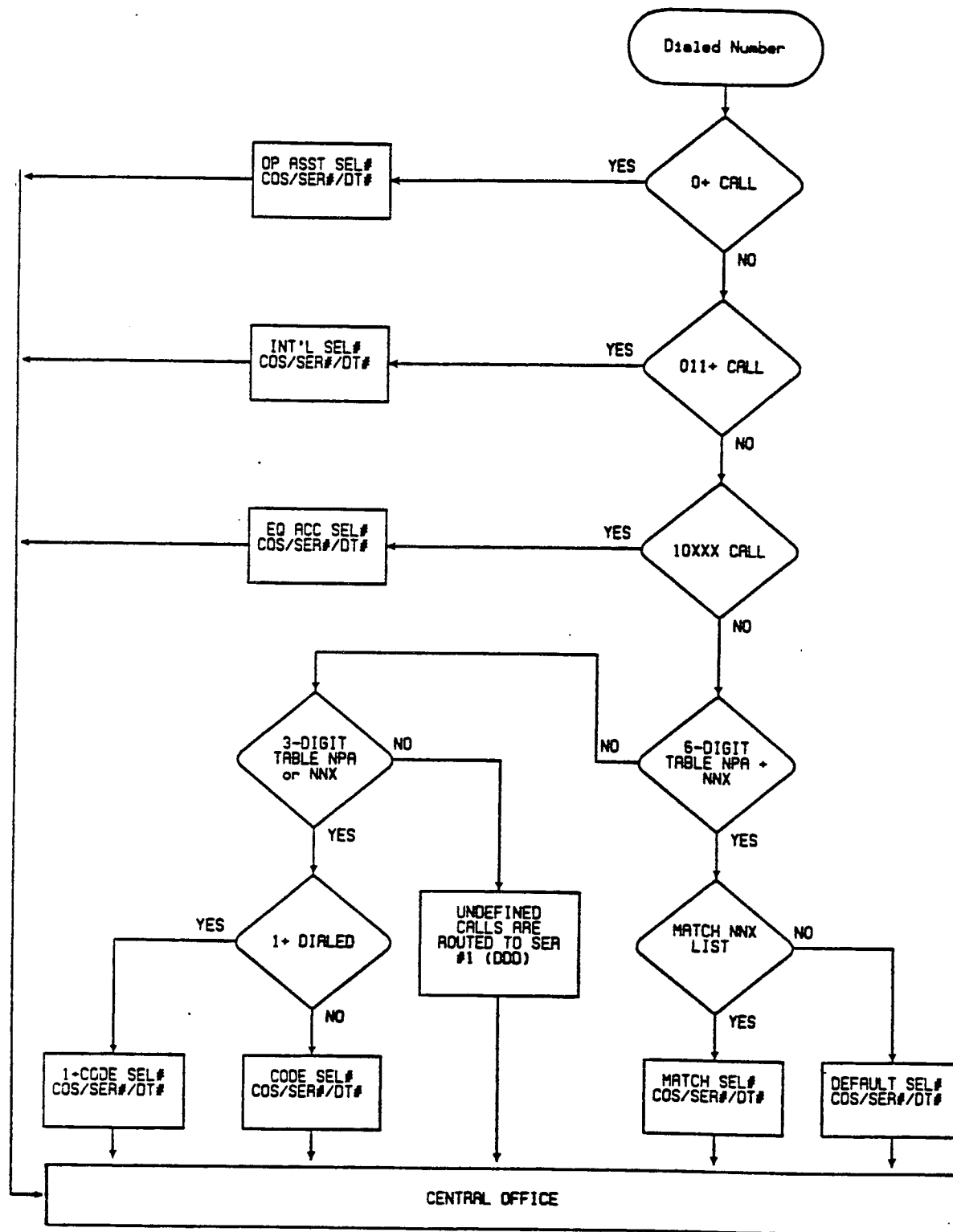
---

|                           |                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Local Address</b>      | The Local Address is that portion of a telephone number that follows the NNX (local exchange). In the dialing format NPA + NNX + nnnn, the nnnn entries represent the Local Address.                                                                                                                                                                                                           |
| <b>Non-Protected Code</b> | A Non-Protected Code is an exchange code in the home area code, which is also an exchange code in an adjacent area code, that can be dialed toll-free from some point in the home area.                                                                                                                                                                                                        |
| <b>Protected Code</b>     | A Protected Code is an exchange code, not used in the home area code, that is in an adjacent area code and can be dialed toll free from some point in the home area code.                                                                                                                                                                                                                      |
| <b>Rate Period</b>        | For call cost structure purposes, each day of the week is divided into Rate Periods. ARS recognizes eight periods. A Rate Period can be from 30 minutes to 24 hours in length and can be programmed to start and stop on the hour or half hour.                                                                                                                                                |
| <b>Selection Number</b>   | ARS is programmed to assign each call dialed to one of 64 Selection Numbers. For each call dialed, ARS analyzes the time of day based on the Rate Periods programmed. ARS then routes the call on the preferred available Call Route Option programmed for the accessed Selection Number.                                                                                                      |
| <b>Service Number</b>     | A Service Number is a group of lines used for ARS and LCR routing. The lines within a Service Number should be the same type (e.g., WATS5, DDD). The system can have up to 10 Service Numbers, programmed in QL- SERVICE nn LINE NUMBER. Service Numbers are in addition to the Line Groups programmed in GROUP #9n LINE NUMBER. Service Numbers may overlap line groups, however, if desired. |

## ABBREVIATIONS

---

- NNX** NNX is an abbreviation for a local exchange. Valid local exchanges are 220-299 through 920-999. In a Conflict Area, valid NNXs may be any code 200 through 999.
- NPA** NPA is an abbreviation for Area Code. Valid Area Codes are 200-219 through 900-919.



ARS-01

Figure 1-1 ARS OVERVIEW



---

## Section 2, Software Configuration

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## ARS OVERVIEW

### **The 6-Digit Table**

Automatic Route Selection (Figure 1-1) examines the digits a user dials and determines which of the 64 available Selection Numbers should be used for the call. If the user dials an NPA, ARS looks first at the 6-digit table for routing instructions. The six digit table is a series of NNX lists assigned to each NPA. If the NPA a user dials is programmed into the 6-digit table, and the NNX dialed is in one of the NNX lists for the NPA, ARS routes the call according to the 6-digit table Match Selection Number. If the NPA is in the 6-digit table and the NNX is not in one of the NNX lists, ARS routes the call to the Default Selection Number.

### **The 3-Digit Table**

If the NPA the user dials is not in the 6-digit table, or the user dials an NNX without an NPA, ARS looks at the 3-digit table. If the NNX or NPA is in the 3-digit table, ARS routes the call according to the 3-digit table Selection Number. If the NNX or NPA is not in the list, the call is placed on service # 1.

### **Rate Periods**

Once ARS chooses a Selection Number, Automatic Route Selection examines the time of day and day of week. ARS then selects the current rate period using the Rate Period table. You can program a maximum of eight Rate Periods.

### **Call Route Options**

ARS provides up to 16 Call Route Options for each Rate Period in a selection number. A Call Route Option defines:

- The maximum Class of Service permitted to use the option
- The service # accessed if ARS chooses the option
- The Dial Treatment instructions imposed on the initial number dialed

You program the Call Route Options into a list (from 1 - 16) for each Selection Number and Rate Period. Construct the list in order of routing preference. The option at the top of the list is the most-preferred. The option at the bottom of the list is the least-preferred. If the most-preferred Call Route Option is busy, ARS routes the call to the next-most-preferred option. If all the Call Route Options available to the extension are busy, the call cannot go through.

## ARS OVERVIEW

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### Dial Treatments

For each Call Route Option, a Dial Treatment is available to accommodate special dialing instructions. ARS has a total of 16 Dial Treatments, 15 of which you can program. These Dial Treatments can:

- Require that the user enter authorization code when placing a call
- Automatically insert or delete a leading 1
- Insert or delete an NPA
- Add digits (such as a dial-up OCC number), pauses and waits to the dialing sequence

Once ARS selects the route for the call, the system seizes an available trunk in the service. The system then redials the call according to the requirements of the applicable Dial Treatment.

In addition to its other capabilities, ARS provides separate routing for:

- Operator and operator-assisted calls
- International calls
- Equal Access calls

**Note:** Toll Restriction does not restrict a call dialed using ARS.

## INTRODUCTION

The SOFTWARE CONFIGURATION Section provides the instructions for completing the ARS Program Record Forms (included at the end of this section). Once completed, these Program Record Forms (PRFs) become the ARS data base which defines system call routing. You enter the data compiled on the PRFs into system memory during programming.

### How to Configure ARS

Before entering any data into the Program Record Forms, read this entire section. This gives you an overview of Automatic Route Selection and the type of data which must be entered.

#### To configure ARS:

- Step 1 ▶ Compile data from the customer concerning service carriers used and service types installed. Enter this data in the Carrier List (Table 2-1).
- Step 2 ▶ Ensure that similar trunks are correctly arranged into outbound groups. Refer to the E4 and EA Programs in the system Software Manual.
- Step 3 ▶ Install ARS and assign service numbers to groups you programmed in Step 2 above. Refer to the QL Program in the system Software Manual. Be sure to program DDD (local) trunks into Service #1.
- Step 4 ▶ Configure rate periods based on the cost structure for each service installed. Record these Rate Periods on the Rate Period PRF (Table 2-2).
- Step 5 ▶ For each type of call, assign route selections for each rate period. Also, determine which COS can access each route option. Use the ARS Worksheet (Table 2-3).
- Step 6 ▶ Configure any applicable dial treatments for each type of call. Make the entries on the Dial Treatment PRF (Table 2-4).

## INTRODUCTION

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### How to Configure ARS (Continued)

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- Step 7 ▶ Configure route selection options using the Carrier List, the Rate Periods PRF, the ARS Worksheet and the Dial Treatment PRF. Write your entries in the Call Route Options PRF (Table 2-5).
- Step 8 ▶ Build 3-digit & 6-digit translations as needed. Use the 3-Digit Table PRF (Table 2-6) and the 6-Digit Table PRF (Table 2-7) to record your entries.
- Step 9 ▶ Assign route selections to equal access, international, and operator assisted calls. Record the entries on the 6-Digit Table PRF (Table 2-7).
- Step 10 ▶ If required, program Authorization Codes. A user's Class of Service may require that the user enter an Authorization Code when placing a call. Refer to the QW Program in the System Software manual.

## COMPLETING THE PROGRAM RECORD FORMS

### Completing the Carrier List

Use the Carrier List (Table 2-1) to record the carriers and services connected to the system. Make as many copies of this table as are required to record all the information. The entries on this table are never entered directly into system memory, although the information is used when establishing the Call Route Options.

In the CARRIER column, list all the carriers connected to the system (i.e., AT&T, GTE, etc). Next, record the various services (WATS 5, DDD, Dial Up, 1+ etc) in the SERVICE TYPE column. Since ARS uses Service # assignment in the QL program to locate each service type, each service type should be assigned to a dedicated Service #. Indicate that assignment in the SERVICE # column.

In the USAGE INFORMATION column, record the cost of calls for each service type. This entry establishes the relative cost of each connected service. This determines the order in which ARS selects each route option for each dialed telephone number.

### Completing the Rate Period Table

The cost of calls usually changes at predetermined intervals throughout the day. These intervals are the Rate Periods. When ARS is first installed and initialized, three Rate Periods are defined according to the chart below. Note that all entries are in military time (e.g. 13:00 = 1:00 P.M.)

| <u>Day</u> | <u>Time Period</u> | <u>Rate Period Number</u> |
|------------|--------------------|---------------------------|
| MON-FRI    | 08:00-17:00.....   | 1                         |
|            | 17:00-23:00.....   | 2                         |
|            | 23:00-24:00.....   | 3                         |
|            | 00:00-08:00.....   | 3                         |
| SATURDAY   | 08:00-23:00.....   | 2                         |
|            | 23:00-24:00.....   | 3                         |
|            | 00:00-08:00.....   | 3                         |
| SUNDAY     | 08:00-23:00.....   | 2                         |
|            | 23:00-24:00.....   | 3                         |
|            | 00:00-08:00.....   | 3                         |
| HOLIDAY    | 08:00-23:00.....   | 2                         |
|            | 23:00-24:00.....   | 3                         |
|            | 00:00-08:00.....   | 3                         |

## COMPLETING THE PROGRAM RECORD FORMS

### Completing the Rate Period Table (Continued)

Many of the carriers use these predefined rate periods. If the system is connected to carriers that use these Rate Periods, the initialized values can be used; however, if carriers are used that have different (or additional) Rate Periods, the Rate Period Table must be redefined. The following is an example showing how to construct a Rate Period Table.

#### To construct a Rate Period Table:

- Step 1 ► Make extra copies of Table 2-2 as needed. For eight rate periods, you'll need the original plus three copies.
- Step 2 ► On Table 2-2, assign time periods to the services defined in the Usage Information column of the Carrier List PRF. There are eight rate period numbers and each is defined by the programmer. Any rate period number may define any time period. Rate period 1 usually defines normal working hours, Monday through Friday.

Refer to the sample below and indicate the time span covered by Rate Period 1. For example:

RATE PERIOD 1

| DAY OF WEEK | TIME SLOT |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|             | 0         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 |   |   |
|             | 0         | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 |
| MON-FRI     |           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

indicates that Rate Period 1 covers Monday-Friday, 7:00 A.M. to 5:00 P.M.



## COMPLETING THE PROGRAM RECORD FORMS

### Completing the Rate Period Table (Continued)

To indicate a half hour, begin on the line between two times. For example,

RATE PERIOD 1

| DAY OF WEEK | TIME SLOT |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|             | 0         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |   |
| MON-FRI     | 0         | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 |

indicates that Rate Period 1 covers Monday-Friday, 7:30 A.M. to 5:00 P.M.

**Step 3 ▶** Determine if Rate Period 1 is applicable for any other days (Saturday, Sunday or Holidays). If so, indicate this on the Rate Period 1 Table.

**Step 4 ▶** Using the same procedure as step 1 above, define the Rate Period 2 Table. Since a time of day cannot exist in two Rate Periods, it is not permissible for any Rate Periods to overlap. For example:

**This is an unacceptable configuration**

RATE PERIOD 1

| DAY OF WEEK | TIME SLOT |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|             | 0         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |   |
| MON-FRI     | 0         | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 |

RATE PERIOD 2

| DAY OF WEEK | TIME SLOT |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|             | 0         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |   |
| MON-FRI     | 0         | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 |

## COMPLETING THE PROGRAM RECORD FORMS

### Completing the Rate Period Table (Continued)

This is an acceptable configuration.

RATE PERIOD 1

| DAY OF WEEK | TIME SLOT |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|             | 0         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |   |
| MON-FRI     | 0         | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 |

RATE PERIOD 2

| DAY OF WEEK | TIME SLOT |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|             | 0         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |   |
| MON-FRI     | 0         | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 |

## COMPLETING THE PROGRAM RECORD FORMS

### Completing the Rate Period Table (Continued)

A new Rate Period can be introduced that divides an existing Rate Period. In the example below, Rate Period 3 divides Rate Period 2.

RATE PERIOD 2

| DAY OF WEEK | TIME SLOT |   |   |   |   |   |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------|-----------|---|---|---|---|---|---------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|             | 0         | 0 | 0 | 0 | 0 | 0 | 0       | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |
|             | 0         | 1 | 2 | 3 | 4 | 5 | 6       | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 |
| MON-FRI     | *-----*   |   |   |   |   |   | *-----* |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

RATE PERIOD 3

| DAY OF WEEK | TIME SLOT |   |   |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------|-----------|---|---|---------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|             | 0         | 0 | 0 | 0       | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |
|             | 0         | 1 | 2 | 3       | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 |
| MON-FRI     |           |   |   | *-----* |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

## COMPLETING THE PROGRAM RECORD FORMS

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### Completing the Rate Period Table (Continued)

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Step 5 ▶

Enter data for all applicable rate periods. After all the required Rate Period charts are completed, it is necessary to transpose the data from the graphic format of the chart to a numerical entry. You enter the numerical entry into the system during ARS programming. When transposing the data:

- The format is HH-HH/RP  
HH-HH = From Hour-To Hour  
RP = Rate Period #
- Always use a 24-hour clock.
- Use the slash (/) to identify the rate period.
- If a Rate Period extends from evening of one day to morning of the next, it must be recorded as two entries (e.g. 11:00 P.M. to 08:00 A.M. is recorded as 23-24/3 and 00-08/3).
- All half hour entries are in the format HH:30.

## COMPLETING THE PROGRAM RECORD FORMS

### Completing the ARS Worksheet

There are various types of calls that are switched by the DDD network. Among these calls are:

- NNX+nnnn (7-digit local call)
- 1+NNX+nnnn (1+7-digit home area toll call)
- NPX+NNX+nnnn or 1+NPX+NNX+nnnn (10-digit or 1+10-digit outside area code call)
- 0 or 0+Operator Assisted call
- 10xxx +Equal Access Other Common Carrier (OCC) call
- 011+International (IDDD) call
- 411, 1+411 555+nnnn Directory Assistance call
- 900 or 976 Special Service calls (e.g., Dial a Joke)

Each of the above types of calls must be directed to the desired service(s) for each rate period for economic call processing. Use the steps listed below to fill out the ARS Worksheet (Table 2-3).

- Step 1 ▶ Make additional copies of the ARS Worksheet, if required.
- Step 2 ▶ Under the TYPE OF CALL column, enter one of the above types.(e.g. 1+NNX).
- Step 3 ▶ Under the OPT # column, enter the option number of the route selection you are about to develop. The range is 1-16.
- Note: Arrange options by cost. The cheapest route should be Option 1.
- Step 4 ▶ Under the SERVICE TYPE/Rate Period column enter the desired service for each rate period. (e.g. DDD, WATS3, MCI) If a rate period is not used, enter a dash.
- Step 5 ▶ Determine the COS required to use each option and enter it in the column marked REQ COS. The range is 0-27.
- Step 6 ▶ After you define all options for all rate periods for a type of call, assign the group a Selection number in the column marked SEL #. The range is 1-64.

## COMPLETING THE PROGRAM RECORD FORMS

### Completing the ARS Worksheet (Continued)

In the example below, the worksheet entries are for:

- 1+NNX-nnnn type calls
- Using 5 rate periods, where MCI is the least expensive during rate periods 1,3, & 5. DDD is the least expensive during rate periods 2 & 4.
- The customer wishes to have both services available at all times to users with a COS of 3 or less, but all COS's can access the cheapest route during any rate period.

| TYPE OF CALL | OPT # | SERVICE TYPE<br>Rate Period |     |     |     |     |   |   |   | REQ COS | SEL # |
|--------------|-------|-----------------------------|-----|-----|-----|-----|---|---|---|---------|-------|
|              |       | 1                           | 2   | 3   | 4   | 5   | 6 | 7 | 8 |         |       |
| 1+<br>NNX    | 1     | MCI                         | DDD | MCI | DDD | MCI | - | - | - | 27      | 1     |
|              | 2     | DDD                         | MCI | DDD | MCI | DDD | - | - | - | 03      |       |
|              |       |                             |     |     |     |     |   |   |   |         |       |
|              |       |                             |     |     |     |     |   |   |   |         |       |

Compile all the necessary data and complete the ARS worksheet. The data on the worksheet can be transposed to the appropriate PRF's for data entry into the system.

## COMPLETING THE PROGRAM RECORD FORMS

### Completing the Dial Treatment Table

The Dial Treatment allows specific dialing instructions to be applied to each call, independent of the NNX and local address dialed. ARS accommodates a total of 15 programmable Dial Treatments. A Dial Treatment can be up to 32 characters and contains a combination of the option codes listed below. The options are listed in the order that they **MUST** be entered on the Dial Treatment Table PRF (Table 2-4). If an option is not required, omit it. (Note that n represents any digit 0-9.)

- Fnn** Fnn is the Forced Authorization Code entry. If the extension from which the call is placed has a Class of Service equal to or greater than the COS specified by nn, then an Authorization Code must be entered before the call will be processed. For example, F04 indicates that all extensions with a COS equal to or greater than 04 must enter an Authorization Code. Only one Fnn code per Dial Treatment is allowed.
- 3** Entering 3 causes the NPA to be deleted during ARS redial if it was dialed as part of the initial call. For example, a 1 + NPA + NNX+ nnnn call is routed to an FX. The NPA must be stripped before the call is redialed into the remote exchange. Only 1+NNX-nnnn would be dialed out by ARS if the 3 entry is used.
- 2** Entering 2 causes the leading 1 to be deleted during ARS redial if it was dialed as part of the initial call. Only one 2 code per Dial Treatment is allowed. The 2 option code may not be used with the 1 option code below in the same Dial Treatment.
- 1** Entering 1 causes a leading 1 to be added during ARS redial if it was not dialed as part of the initial call. This code can be used for all NNXs in the home NPA that are toll calls from the system. The leading 1 is automatically inserted in the redial if the user inadvertently omits it. Only one 1 code per Dial Treatment is allowed. The 1 option code may not be used with the 2 option code above in the same Dial Treatment.

## COMPLETING THE PROGRAM RECORD FORMS

### Completing the Dial Treatment Table (Continued)

**Inpa** Inpa is used to insert an NPA during ARS redial. This code can be used if a 1 + NNX + nnnn call is routed to a service which requires an NPA (e.g., WATS, or dial-up MCI). For example, I203 would automatically insert the NPA 203 whenever the Dial Treatment is selected. Only one Inpa code per Dial Treatment is allowed.

**Dnn** Dnn instructs the system to dial the nn digits or codes that follow. ARS uses the Dnn option code to insert digits, pauses, or timed waits into the number as it is redialed. When programming the Dnn option code, the following rules apply:

- The nn entry specifies the number of characters that follow that are included in the Dnn option. For example, D11 indicates that the next 11 characters immediately following D11 should be dialed.
- A Wnn entry indicates the number of seconds ARS should pause before outdialing or continuing to outdial. The Wnn is always counted as three characters. For example, D03W30 instructs ARS to wait 30 seconds before dialing. All nn entries must be 2 digits in length (e.g. 06 = six seconds).
- P indicates a programmed interval the system will wait for a second (OCC) dial tone. Each P is always counted as a character. To wait for more than one interval, enter more than one P. The interval of each P is equal to three times (3X) the Dialtone Detect Count programmed in system timers (QT). For example, D02PP instructs ARS to wait up to 2 intervals (6 Dialtone Detect Counts) for a second dial tone.

If the second dial tone is detected before the wait interval expires, the system immediately continues with the rest of the dial treatment. (Dialing a \* during this interval will also override this wait and continue with the rest of the dial treatment.) If second dial tone is not detected within the programmed time frame, the route is considered unavailable and the call will be denied (or routed to the next selection).

- Digits that are not part of a Wnn or P option are redialed just as they are entered in the Dial Treatment. For example, D079262000 instructs ARS to dial 9262000 whenever this Dial Treatment is chosen.



## COMPLETING THE PROGRAM RECORD FORMS

### Completing the Dial Treatment Table (Continued)

- R** R instructs ARS to redial the initially dialed number including any modifications, if any were made using the above entries in the dial treatment. Only one R code is permitted per Dial Treatment.

*If the R code is not inserted in a Dial Treatment, ARS will never redial the number initially dialed. In this case, ARS will redial only if a Dnn entry specifies that a different number be dialed.*

- E** E designates the end of a Dial Treatment. All Dial Treatments must end with the E code. The E code will only display as part of the dial treatment, when initially programming the dial treatment.

The following Dial Treatment code (F053D039PPRE) tells the system ARS that:

(F05) Extensions with Classes of Service equal to or greater than 05 must enter an authorization code.

(3) Strip the NPA from the digits dialed.

(D039PP) The system outdials the digit 9 and waits for up to six Dialtone Detection counts.

(R) The initial call will be redialed (less the NPA).

(E) This is the end of the Dial Treatment.

**Note:** Dial Treatment number 00 (no dial treatment) directs the system to outdial the initial number exactly as it was dialed.

#### **To enter a Dial Treatment:**

- Step 1 ▶** Enter the required Dial Treatment options.
- Step 2 ▶** Enter E to finish the Dial Treatment.

## COMPLETING THE PROGRAM RECORD FORMS

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### **Completing the Call Route Option PRF**

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Each Selection Number has up to 16 Call Route Options available for each of the 8 Rate Periods. It is the Call Route Option that determines the actual routing for a call after the Selection Number is chosen.

Call Route Option data consists of three entries:

- The required class of services which have access to the route
- The service which the call should be dialed out on
- The dial treatment to the initial number dialed to make it acceptable to the service selected

**To enter the required Call Route Option data:**

- Step 1 ▶ Make enough copies of the Call Route Option PRF (Table 2-5). Each sheet is for one Selection Number and one Rate Period.
- Step 2 ▶ Using the ARS Worksheet (Table 2-3) as a guide, enter data on Table 2-5 according to the routing preference. When a Selection Number is chosen, and the Call Route Option sheet for the correct Rate Period is configured, Option 1 should be the most preferred route. List the remaining options in decreasing order of preference.
- Step 3 ▶ In the COS column for each Call Route Option, enter the maximum Class of Service permitted to use the route. Extensions with a COS equal to or lower than this entry can use the route; those with a higher COS cannot.

When a route is busy, ARS selects the next route on the list. If that and all other routes available to the extension are busy, the call is denied.

ARS requires hierarchical CLASS OF SERVICE programming (i.e, the lower COS numbers are the least restricted; the higher numbers are the most restricted). The Class of Service numbers are 00-27.

**Note:** ARS overrides TOLL RESTRICTION programming.

## COMPLETING THE PROGRAM RECORD FORMS

### Completing the Call Route Option Table (Continued)

- Step 4 ▶ In the SER # column, enter the number of the service desired for the routing as entered in the QL program. The range is 01-10.
- Step 5 ▶ In the Dial Treatment column, enter the number of the dial treatment necessary for the initially dialed number to be transmitted over the desired route. The range is 00-15.

DT# 00 redials the original number with no modifications.

### Completing the 3-Digit Table PRF

ARS uses the 3-Digit Table PRF to direct the number dialed to a Selection Number. Data is entered in the 3-digit table for all NNXs (exchange codes), and for all NPAs that do not require 6-digit analysis (in the 6-digit table). If ARS does not find an entry for a code in the 3-digit table, the call will be placed automatically on Service #1. Before completing the 3-digit Table the following routing conditions must be considered:

If the system is installed in a Non-Conflict Area:

- ARS automatically recognizes NPA and NNX codes. If a leading 1 is dialed, the call is routed according to the 1+CODE SEL # entry. If the leading 1 is not dialed, the call is routed according to the CODE SEL # entry.
- If an NPA is dialed, ARS first determines if 6-digit analysis is required. (6-digit analysis can occur if the NPA is dialed with or without a leading 1.) If no data for the NPA exists in the 6-digit table, and the call is dialed with a leading 1, the call is routed on the 3-digit table 1+CODE SEL # entry. If no 6-digit table data for the NPA exists and the call is dialed without a leading 1, the call is routed according to the 3-digit table CODE SEL # entry.

## COMPLETING THE PROGRAM RECORD FORMS

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### Completing the 3-Digit Table PRF (Continued)

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#### To enter data in a Non-Conflict Area:

Step 1 ▶ For all NNXs that are dialed without a leading 1 (i.e., toll-free), enter a Selection Number in the CODE SEL # column.

Step 2 ▶ For all NNXs that are dialed with a leading 1 (i.e., NNXs that are toll calls), enter a Selection Number in the 1+CODE SEL # column. If the 1+CODE SEL # and the CODE SEL # routing is the same, enter the same Selection Number in both columns.

Note: Steps 3 and 4 below are only used for NPAs that will not be entered on the 6-digit table.

Step 3 ▶ For all NPAs that are not dialed with a leading 1, enter a Selection Number in the CODE SEL # column.

Step 4 ▶ For all NPAs that are dialed with a leading 1, enter a Selection Number in the 1+CODE SEL # column. If the 1+CODE SEL # and the CODE SEL # routing is the same, enter the same Selection Number in both columns.

## COMPLETING THE PROGRAM RECORD FORMS

### Completing the 3-Digit Table PRF (Continued)

If the system is installed in a Conflict Code Area:

- ARS automatically recognizes NPA and NNX codes. If a leading 1 is dialed, the call is routed according to the 1+CODE SEL # entry. If the leading 1 is not dialed, the call is routed according to the CODE SEL # entry.
- All NPAs dialed must be preceded by a leading 1. (6-digit analysis can only occur if the NPA is dialed with a leading 1.) If a leading 1 is not dialed, ARS assumes that the code is a Conflict Code, routes the call according to the CODE SEL # entry, and does not attempt 6-digit analysis.
- If the code is dialed with a leading 1, ARS determines if 6-digit analysis is required. If 6-digit analysis is required, the call is routed according to the 6-digit table entries. If 6-digit analysis is not required, the call is routed to the 1+CODE SEL # entry.

To enter data in a Conflict Code Area:

- Step 1 ▶ For all NNXs that are dialed without a leading 1 (i.e., non toll calls), enter a Selection Number in the CODE SEL # column.
- Step 2 ▶ For all NNXs that are dialed with a leading 1 (i.e., that are toll calls), enter a Selection Number in the 1+CODE SEL # column. If the 1+CODE SEL # and the CODE SEL # routing is the same, enter the same Selection Number in both columns.
- Step 3 ▶ For all Conflict Codes, enter a Selection Number in the 1+CODE SEL # column to determine the routing when the code is an NPA; enter a Selection Number in the CODE SEL # column to determine the routing when the code is an exchange.
- Step 4 ▶ For all NPAs, enter a 1+CODE SEL # entry. All NPAs must be dialed with a leading 1.

## COMPLETING THE PROGRAM RECORD FORMS

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### Completing the 3-Digit Table PRF (Continued)

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#### 3-Digit Initialization Programming

If the system is installed in an area where Conflict Codes exist, check the YES box for the heading: SYSTEM IN A CONFLICT AREA. If the system is not in a Conflict Code area, check the NO box. The entry for this prompt is made during 3-digit table initialization.

Calls to exchange 976, usually used for dial-up services for which there is a fixed charge per call (such as DIAL-A-JOKE), are normally restricted. In the box marked: MINIMUM COS TO DIAL 976 indicate the minimum Class of Service required to access the 976 services. Extensions with a COS greater than that programmed will be denied access the 976 exchange. The entry for this prompt is made during 3-digit table initialization. This restriction is enforced, whether or not the 976 is preceded by an NPA.

#### Programming Exchange 555

Selection Number assignments for exchange 555 must be made in the 3-digit table. The Selection Numbers programmed are used regardless of the NPA dialed. Because of this, exchange 555 does not have to be separately programmed into the 6-digit table for each NPA.

## COMPLETING THE PROGRAM RECORD FORMS

### Completing the 6-Digit Table PRF

ARS uses the 6-digit table to provide 6-digit analysis for programmed NPA codes. If an NPA is listed on the table, and the NPA is dialed (with or without a leading 1), ARS checks the NNX list for that NPA. If the NNX is found in the list, the match selection number (MATCH SEL #) is chosen. If the NNX is not found in the list, or the NPA does not have an NNX list, the default selection number (DEFAULT SEL #) is chosen. If the NPA is not listed in the 6-digit table, route selection is made according to the programmed entries in the 3-digit table.

#### To enter data for the 6-Digit Table:

Step 1 ▶ Enter each NPA for which 6-digit analysis is required.

Step 2 ▶ Under the NNX LIST heading, enter all NNXs that should cause the MATCH SEL # to be chosen. The entries must follow the guidelines below:

- Each NPA can have more than one NNX list. If more than one list is created, each list should have a different MATCH SEL #.
- Entries in an NNX list can be individual (e.g, 926, 929, 888, etc.) or in a range (e.g, 926-929, 950-959, etc.). If a range is used, the first number must always be the lowest number. In addition, the first two digits of a range must always be the same (e.g, 330-339, 453-458).

Step 3 ▶ Enter the DEFAULT SEL # for each NPA. If more than one NNX list is programmed for an NPA, the NNX list programmed at the "top" of the table determines the DEFAULT SEL # for the NNX lists "beneath" it. In other words, although many lists can be created for the same NPA, and each list can have its own MATCH SEL #, all NNX lists for a given NPA share the same DEFAULT SEL #.

## **COMPLETING THE PROGRAM RECORD FORMS**

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### **Completing the E.A. & OPR-ASSIST Assignments**

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#### **Operator-Assisted Calls**

A Selection Number for operator-assisted calls must be specified in the OPERATOR-ASSISTED CALLS column. It is recommended that the Selection Number and its associated Call Route Options be highly restrictive to prevent abuse of the operator-assist capability. Remember that call cost control is effectively bypassed when an outside operator is accessed.

#### **International Calls**

The INTERNATIONAL CALLS column is used to designate the Selection Number to be used when an international call is dialed. Due to the relatively high cost of international calls, this selection should be highly restrictive.

#### **Equal Access Calls**

The EQUAL ACCESS CALLS column designates the Selection Number used whenever a system user dials a 10XXX Equal Access code. Since this bypasses the 3-digit and 6-digit tables, the EQUAL ACCESS CALLS entry should be highly restrictive.



## RELATED PROGRAMS FROM THE SYSTEM MAIN MENU

### Required Programming

- E- Trunks, E4- Next Trunk in Outbound Rotary** - ARS requires trunk rotaries. This prompt determines the selection sequence for trunks within each rotary.
- E- Trunks, E7- Trunk Service Number** - Assign a Service Number to each trunk used for ARS. ARS routes calls to Service Numbers, not individual trunks.
- E- Trunks, EA- Trunk Group Assignment (First Trunk in Group)** - Group trunks in rotaries by assigning each one the same First Trunk in Group number.
- GA- ARS Editor** - Program the ARS options. Refer to Appendix A for details.
- QL- LCR/ARS/Account Codes, LCR or ARS Enable** - Enter 2 to enable ARS.
- QL- LCR/ARS/Account Codes, Number of Services** - Designate how many services (trunk rotaries) ARS will use.
- QL- LCR/ARS/Account Codes, Service Line Numbers** - Indicate the trunk rotary master number for each of the rotaries used by ARS. This should correspond to the EA- First Trunk in Group entry.

### Other Programming

- E- Extensions, E3- Class of Service** - ARS routing is based on an extension's COS number.
- E- Extensions, E8- Line Access Options, Allow Line Code Dial-Up** - If enable, users may be able to dial trunk access codes (e.g., 801) to bypass ARS.
- E- Extensions, E8- Line Access Options, Access to Groups 90-95** - Allow access to group 90 (the ARS access code). If you allow access to 91-95, users may be able to dial these codes to bypass ARS. Users can always dial groups 96-98.
- E- Extensions, E8- Line Access Options, Key Access to Outbound Lines** - If enabled, user may be able to press a line key to bypass ARS.
- E- Extensions, ED- Trunk Control, Access Control** - An extension must have access to the trunks selected by ARS.
- E- Extensions, ED- Trunk Control, Call-Out Control** - An extension must have Call-Out to the trunks selected by ARS.
- E- Trunks, E2- Circuit Type** - Trunks within each ARS Service Group should have the same circuit type.
- KS- Programming Keys for Keysets** - An extension can have a loop key for ARS access.
- QC- Operator Programming, Operator Extension** - Make sure the main operator is port 00 (normally extension 300).
- QF- Line Group Access (First Trunk in Group)** - Correlate the first trunk in a trunk rotary (e.g., 801) to one of nine trunk rotary numbers (90-98). The system requires this correlation when setting up trunk rotaries. Use the trunk access code (e.g., 801 or L01) that corresponds to the EA- First Trunk in Group entry.
- QQ- "1" Prefix Required for NPA Calls** - If the system is in a conflict area, enter Y. Enter N if the system is not in a conflict area. See Appendix A for more details.
- QT- System Timers, Dialtone Detection Count** - Set the length of the dial tone detection interval. ARS Dial Treatments (option P) use this interval. See Appendix A for more details.
- QW- ARS Authorization Codes** - If required, enter ARS Dial Treatment Authorization codes. See Appendix A for more details.
- QX- Suppress "#" When Speed Dialing** - If ARS Dial Treatments outdial the # digit, enter N. To suppress outdialing #, enter Y. See Appendix A for details.
- QY- Single Digit Line Access** - If enabled, users can dial 9 (instead of 90) for ARS.

## **EXAMPLE OF SAMPLE CORPORATION**

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This example develops ARS data for a fictitious company (Sample Corporation) located in Shelton, Connecticut. The paragraphs that follow show how the ARS Program Record Forms are completed for the Sample Corporation application. Sample Corporation has purchased four dialing services, as follows:

- AT&T WATS (Band 5)
- MCI (dial-up to network)
- AT&T FX (to Chicago - NPA 312, exchange 355)
- AT&T DDD

**Note:** Only calls within the continental United States are considered for this example.

**EXAMPLE OF SAMPLE CORPORATION**

**Setting Up a  
Sample Corporation**

**To set up a Sample Corporation:**

**Step 1 ▶ Complete the Carrier List PRF (Table 2-1). The Carrier List is completed below for Sample Corporation.**

**Carrier List for Sample Corporation**

| CARRIER | SERVICE TYPE | SERVICE # | USAGE INFORMATION                                                                                                                                                                                                                                                                                                                                  |
|---------|--------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AT&T    | WATS 5       | 5         | Preferred service for all toll calls outside of the home NPA, except for calls to NPA 312 - NNX 355. Second preferred service for calls to 312-355. Cannot be used for calls within the home NPA.                                                                                                                                                  |
|         |              |           |                                                                                                                                                                                                                                                                                                                                                    |
| MCI     | DIAL-UP      | 1         | Preferred service for all toll calls within the home NPA. Second preferred service for all toll calls outside of the home NPA. Third preferred service for calls to NPA 312 - NNX 355. MCI has a special Rate Period (M-F, 8-10 AM). MCI is the preferred service for toll calls outside of the home NPA (except 312-355) during Rate Period four. |
|         |              |           |                                                                                                                                                                                                                                                                                                                                                    |
| AT&T    | FX           | 3         | FX terminated at NPA 312 and NNX 355. Preferred service for all calls to 312-355 (Chicago). Not economical outside of the 312-355 local dialing area.                                                                                                                                                                                              |
|         |              |           |                                                                                                                                                                                                                                                                                                                                                    |
| AT&T    | DDD          | 1         | Preferred service for all local calls within the home NPA. Also used for N11 calls. COS5 & lower may call info, 0+ or 011 calls.                                                                                                                                                                                                                   |
|         |              |           |                                                                                                                                                                                                                                                                                                                                                    |

## EXAMPLE OF SAMPLE CORPORATION

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### Setting Up a Sample Corporation (Continued)

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Step 2 ▶ Assign a Service Number to lines and/or outbound rotaries.

- In line programming (E4-NEXT LINE IN ROTARY and EA-FIRST LINE IN ROTARY), assign the WATS trunks to a rotary, the FX lines to a rotary, and the DDD trunks to a rotary. Since MCI is a dial-up service, it is accessed over DDD trunks and is assigned Service #1.

Step 3 ▶

- In the QL program, assign the first line in each EA rotary a service number. DDD lines must be Service #1.
- In CP- CLASS OF SERVICE programming, verify that the Class of Service table is constructed so that the low COS numbers (toward 00) have the least dialing restrictions and the high COS numbers (toward 27) have the most dialing restrictions.

Note: If a dialed code is not entered into either the 3- or 6-digit table, the call will be routed by default to Service #1. If DDD trunks are assigned to Service #1, the call will be placed on a DDD trunk.

## EXAMPLE OF SAMPLE CORPORATION

### Setting Up a Sample Corporation (Continued)

**Step 4 ▶** Complete the Rate Periods PRF (Table 2-2).

The AT&T services use the standard three Rate Periods. These standard Rate Periods are configured when I=INITIALIZE is used to initialize Rate Periods data. MCI uses the standard Rate Periods plus a fourth rate period covering Monday through Friday, 8:00 AM to 10:00 AM. This fourth Rate Period must be created. The Rate Period Table is completed below to show this additional Rate Period.

**Rate Period 4 for Sample Corporation**

| DAY OF WEEK    | TIME SLOT |   |   |   |   |   |   |   |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------|-----------|---|---|---|---|---|---|---|---------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                | 0         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0       | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 |   |
|                | 0         | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8       | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 |
| <b>MON-FRI</b> |           |   |   |   |   |   |   |   | *-----* |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>SAT</b>     |           |   |   |   |   |   |   |   |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>SUN</b>     |           |   |   |   |   |   |   |   |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>HOL</b>     |           |   |   |   |   |   |   |   |         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

**MON-FRI 08-10/4      SAT  
SUN                                  HOL**

**Step 5 ▶** Complete the ARS Worksheet.

As discussed earlier, each type of call must be directed to the desired service(s) for each rate period for economic call processing. Enter the information compiled so far in this chapter into the proper columns on the ARS Worksheet (Table 2-3). This includes:

- TYPE OF CALL
- OPT #
- SERVICE TYPE for each Rate Period
- COS required for each option
- SELECTION NUMBER assignment

## EXAMPLE OF SAMPLE CORPORATION

### Setting Up a Sample Corporation (Continued)

The Sample Corporation worksheet entries follow.

| TYPE OF CALL | OPT # | SERVICE TYPE Rate Period |     |     |     |   |   |   |   | REQ COS | SEL #          |
|--------------|-------|--------------------------|-----|-----|-----|---|---|---|---|---------|----------------|
|              |       | 1                        | 2   | 3   | 4   | 5 | 6 | 7 | 8 |         |                |
| NNX          | 1     | DDD                      | DDD | DDD | DDD | - | - | - | - | 27      | 0 <sup>1</sup> |
|              |       |                          |     |     |     |   |   |   |   |         |                |

| TYPE OF CALL | OPT # | SERVICE TYPE Rate Period |     |     |     |   |   |   |   | REQ COS | SEL # |
|--------------|-------|--------------------------|-----|-----|-----|---|---|---|---|---------|-------|
|              |       | 1                        | 2   | 3   | 4   | 5 | 6 | 7 | 8 |         |       |
| 1+<br>NNX    | 1     | MCI                      | MCI | MCI | MCI | - | - | - | - | 27      | 1     |
|              |       |                          |     |     |     |   |   |   |   |         |       |

| TYPE OF CALL                               | OPT # | SERVICE TYPE Rate Period |       |       |       |   |   |   |   | REQ COS | SEL # |
|--------------------------------------------|-------|--------------------------|-------|-------|-------|---|---|---|---|---------|-------|
|                                            |       | 1                        | 2     | 3     | 4     | 5 | 6 | 7 | 8 |         |       |
| 1+<br>NPA-<br>NNX<br>(less<br>312-<br>355) | 1     | WATS5                    | WATS5 | WATS5 | MCI   | - | - | - | - | 27      | 2     |
|                                            | 2     | MCI                      | MCI   | MCI   | WATS5 | - | - | - | - | 05      |       |
|                                            |       |                          |       |       |       |   |   |   |   |         |       |

<sup>1</sup> Assigning Selection Number 0 automatically routes these types of calls to Service Number 1. Make sure you program Service Number 1 with the DDD lines.

## EXAMPLE OF SAMPLE CORPORATION

### Setting Up a Sample Corporation (Continued)

| TYPE OF CALL      | OPT # | SERVICE TYPE<br>Rate Period |       |       |       |   |   |   |   | REQ COS | SEL # |
|-------------------|-------|-----------------------------|-------|-------|-------|---|---|---|---|---------|-------|
|                   |       | 1                           | 2     | 3     | 4     | 5 | 6 | 7 | 8 |         |       |
| 1+<br>312-<br>355 | 1     | FX                          | FX    | FX    | FX    | - | - | - | - | 27      | 3     |
|                   | 2     | WATS5                       | WATS5 | WATS5 | MCI   | - | - | - | - | 05      |       |
|                   | 3     | MCI                         | MCI   | MCI   | WATS5 | - | - | - | - | 05      |       |

| TYPE OF CALL                                                | OPT # | SERVICE TYPE<br>Rate Period |     |     |     |     |   |   |   | REQ COS | SEL # |
|-------------------------------------------------------------|-------|-----------------------------|-----|-----|-----|-----|---|---|---|---------|-------|
|                                                             |       | 1                           | 2   | 3   | 4   | 5   | 6 | 7 | 8 |         |       |
| Direct.<br>assist.<br>call<br>(411, or<br>555 in<br>any NPA | 1     | DDD                         | DDD | DDD | DDD | DDD | - | - | - | 05      | 4     |
|                                                             |       |                             |     |     |     |     |   |   |   |         |       |
|                                                             | -     |                             |     |     |     |     |   |   |   |         |       |

After compiling all the necessary data and completing the ARS Worksheet, the data on the worksheet can be transposed to the appropriate PRF's for data entry into the system.

## EXAMPLE OF SAMPLE CORPORATION

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### Setting Up a Sample Corporation (Continued)

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Step 6 ▶ Complete the Dial Treatments Table PRF (Table 2-4).

The next step is constructing any dial treatments necessary to accommodate the services switching the outgoing calls. The first and only choice for routing NNX (local) calls is on the DDD circuits (Service #1). By not assigning a Selection Number to any NNX we can accomplish the correct routing.

**Note:** If a Selection Number is not assigned to a number, the call will automatically be routed on Service Number 1 (DDD) with no Dial Treatment.

The routing for toll calls within the home NPA directly dialed with or without the leading 1 is determined by Selection Number 01. The choice is the MCI dial-up service which uses Dial Treatment 01 when used for this Selection Number. This treatment:

- Strips the leading 1 (if dialed)
- Inserts the home NPA (required by MCI dial-up)
- Dials the local number for MCI access
- Pauses up to six Dial Tone Detection counts for MCI dial tone
- Dials the MCI access code
- Outdials the original number.

The MCI service is available to all Classes of Service for this Selection Number.



## EXAMPLE OF SAMPLE CORPORATION

### Setting Up a Sample Corporation (Continued)

| TREAT<br>MENT<br># | DIAL TREATMENT ENTRY |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 1                  | 2                    | I | 2 | 0 | 3 | D | 1 | 4 | 9 | 2 | 6 | 2 | 0 | 2 | 7 | P | P | 2 | 4 | 5 | 5 | 4 | R | E |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

The first choice for calls outside the home NPA, except to (312-355) calls is WATS5 (Service #5). Class of Service will not restrict access to WATS5 and no special dial treatment is required (just a redial of the initially dialed digits).

Second choice for the above calls outside of the home NPA is the MCI dial-up service. Only extensions with a COS of 05 or lower can use MCI, and Dial Treatment 02 must be used. Dial Treatment 02 will:

- Strip the leading 1 (if dialed)
- Dial the MCI local number
- Pause for up to six Dialtone Detection counts
- Dial the MCI access code
- Outdial the initial number dialed.

| TREAT<br>MENT<br># | DIAL TREATMENT ENTRY |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| 1                  | 2                    | I | 2 | 0 | 3 | D | 1 | 4 | 9 | 2 | 6 | 2 | 0 | 2 | 7 | P | P | 2 | 4 | 5 | 5 | 4 | R | E |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2                  | 2                    | D | 1 | 4 | 9 | 2 | 6 | 2 | 0 | 2 | 7 | P | P | 2 | 4 | 5 | 5 | 4 | R | E |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                    |                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



## EXAMPLE OF SAMPLE CORPORATION

### Setting Up a Sample Corporation (Continued)

Step 7 ▶ Complete the Call Route Options PRF (Table 2-5).

Using the information compiled thus far, fill in the Call Route options for the four rate periods of each selection number. The Sample Corporation has five Selection Numbers and four rate periods. Although 19 copies of the table are required to completely document the routing choices, much of the information is repetitive.

#### *Selection Number 01 - Rate Periods 1-4*

The routing for toll calls within the home NPA dialed with or without the leading 1 is determined by Selection Number 01. The choice is the MCI dial-up service. The service is available to all extensions.

SELECTION # 1  
RATE PERIOD 1-4

| OPT # | COS     | SER # | DT # |
|-------|---------|-------|------|
| 1     | 27      | 01    | 01   |
| 2     |         |       |      |
| 3     |         |       |      |
| 16    | through |       |      |

## EXAMPLE OF SAMPLE CORPORATION

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### Setting Up a Sample Corporation (Continued)

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#### *Selection Number 02 - Rate Periods 1, 2, and 3*

Selection Number 02 is used primarily for toll calls outside the home NPA. First choice for these calls is WATS5 (Service #5). Class of Service will not restrict access to WATS5. Second choice for calls outside of the home NPA is the MCI dial-up service. Only extensions with a COS of 05 or lower can use MCI.

SELECTION # 2  
RATE PERIOD 1-3

| OPT # | COS     | SER # | DT # |
|-------|---------|-------|------|
| 1     | 27      | 05    | 00   |
| 2     | 05      | 01    | 01   |
| 3     |         |       |      |
| 16    | through |       |      |

## EXAMPLE OF SAMPLE CORPORATION

### Setting Up a Sample Corporation (Continued)

#### *Selection Number 02 - Rate Period 4*

For Rate Period 4, the MCI dial-up service is more economical than the WATS service. For Selection Number 02, the route preference and Class of Service restrictions are reversed from what they are for Rate Periods 1, 2 and 3.

SELECTION # 2  
RATE PERIOD 4

| OPT # | COS     | SER # | DT # |
|-------|---------|-------|------|
| 1     | 27      | 01    | 01   |
| 2     | 05      | 05    | 00   |
| 3     |         |       |      |
| 16    | through |       |      |

#### *Selection Number 03, Rate Periods 1 - 3*

Selection Number 03 is used for routing calls to 312 - 355. The first routing choice is the FX terminated at 312 - 355. The second choice is the WATS 5 service; the third choice is MCI. The FX and WATS 5 services are available to all Classes of Service, while the MCI service is available only to extensions with a COS 05 or lower. The FX service uses Dial Treatment 03 to strip the NPA and leading 1 from the call. WATS 5 requires no special dialing, and Dial Treatment 02 is used for MCI. This treatment strips the leading 1, dials the MCI local number, waits for MCI dial tone, dials the MCI access code and the initial number dialed.

## EXAMPLE OF SAMPLE CORPORATION

### Setting Up a Sample Corporation (Continued)

SELECTION # 3  
RATE PERIOD 1-3

| OPT # | COS     | SER # | DT # |
|-------|---------|-------|------|
| 1     | 27      | 03    | 03   |
| 2     | 27      | 05    | 00   |
| 3     | 05      | 01    | 02   |
| 16    | through |       |      |

Selection Number 03 - Rate Period 4 uses the same routing as Rate Periods 1-3 except that the positions of the WATS5 and MCI services are reversed. In addition, the Class of Service restriction on MCI is removed and placed on WATS 5. Dial Treatments remain the same:

SELECTION # 3  
RATE PERIOD 4

| OPT # | COS     | SER # | DT # |
|-------|---------|-------|------|
| 1     | 27      | 03    | 03   |
| 2     | 27      | 01    | 02   |
| 3     | 05      | 05    | 00   |
| 16    | through |       |      |

## EXAMPLE OF SAMPLE CORPORATION

### Setting Up a Sample Corporation (Continued)

Selection number 04 is used to apply Class of Service restrictions on Directory Assistance calls. All 411 and 555 calls are routed to the AT&T DDD service; however, these calls can be placed only from extensions with Class of Service 05 or lower. Call routing is identical for all four Rate Periods. Dial Treatment 00 is specified.

*Selection Number 04, Rate Periods 1 - 4*

SELECTION # 4  
RATE PERIOD 1-4

| OPT # | COS     | SER # | DT # |
|-------|---------|-------|------|
| 1     | 05      | 01    | 00   |
| 2     |         |       |      |
| 3     |         |       |      |
| 16    | through |       |      |

## EXAMPLE OF SAMPLE CORPORATION

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### Setting Up a Sample Corporation (Continued)

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Step 8 ▶ Complete the 3-digit and 6-Digit Tables

#### *The 3-Digit Table*

The 3-digit Table PRF (Table 2-6) is used to assign Selection Numbers to NPA and NNX codes. Codes with similar routing requirements should have the same Selection Number. To enter data for Sample Corporation on the 3-digit table, refer to the sample table (on the page 2-38) and use the procedure that follows:

- Initially assign all NPA codes to Selection Number 02. This data will be block-loaded into the system during program entry (refer to Section 3). Since the system is in a leading 1 area, and all NPAs must be dialed with a leading 1, enter the same Selection Number into the 1+CODE SEL # and the CODE SEL # columns.

Note: If an NPA is dialed without a leading 1, the C.O. will intercept the call.

- Area code 312 requires 6-digit translation. Although this code is included on the 3-digit table as part of a block of NPAs, ARS will never look at the 3-digit table if the code is correctly entered on the 6-digit table.
- Assign all NNX codes Selection 01. This data will also be block loaded in system programming. Enter this Selection Number in both columns of the 3-digit table. Since all local NNX's are being routed to the DDD lines, we must now remove these codes and assign them no Selection Number (00), in both columns. For the Sample Corporation the local NNX's are 881-888; 926-929.
- A separate Selection Number (04) for exchange 555 is required because long distance directory assistance (1 + NPA + 555 + 1212) is a fixed rate toll charge. Although 555 calls will be routed over AT&T DDD lines, access to 555 will be restricted according to an extension's Class of Service (refer to Step 7). Local Directory Assistance is toll free.



**Setting Up a  
Sample Corporation  
(Continued)**

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*The 3-Digit Table (Continued)*

- Since Sample Corporation is not in a Conflict Area, check the NO box for the SYSTEM IN A CONFLICT AREA? prompt.
- For the MINIMUM COS TO DIAL 976? prompt, enter 00. Only extensions with Class of Service 00 can dial exchange 976.
- 800 is a Toll-Free NPA for DDD, and should be assigned no Selection #.

**Note:**

911 and in some cases 1+911 are EMERGENCY codes used on the DDD Network. These codes MUST be routed to the DDD Network and access MUST be granted to all instruments with access to outgoing lines.

## EXAMPLE OF SAMPLE CORPORATION

### Setting Up a Sample Corporation (Continued)

3-Digit Table for Sample Corporation

| 3-DIGIT<br>CODE | CODE<br>SEL # | 1+CODE<br>SEL # |
|-----------------|---------------|-----------------|
| 200-219         | 02            | 02              |
| 300-319         | 02            | 02              |
| 400-419         | 02            | 02              |
| 500-519         | 02            | 02              |
| 600-619         | 02            | 02              |
| 700-719         | 02            | 02              |
| 801-819         | 02            | 02              |
| 900-919         | 02            | 02              |
|                 |               |                 |
| 911             | 00            | 00              |
| 411             | 04            | 04              |
|                 |               |                 |

\*

\*\*

| 3-DIGIT<br>CODE     | CODE<br>SEL # | 1+CODE<br>SEL # |
|---------------------|---------------|-----------------|
| 220-299             | 01            | 01              |
| 320-399             | 01            | 01              |
| 420-499             | 01            | 01              |
| 520-554;<br>556-599 | 01            | 01              |
| 620-699             | 01            | 01              |
| 720-799             | 01            | 01              |
| 820-880;<br>889-899 | 01            | 01              |
| 881-888             | 00            | 00              |
| 926-929             | 00            | 00              |
| 920-925;<br>930-999 | 01            | 01              |
| 555                 | 04            | 04              |
| 800                 | 00            | 00              |

SYSTEM IN A CONFLICT AREA ?

YES

NO

MINIMUM COS TO DIAL 976 ?

\* 800 is a Toll-Free NPA for DDD, and should not be assigned a Selection #.

\*\* 911 (and in some cases 1+911) are Emergency Codes used on the DDD network. These codes must be routed to the DDD network and access must be granted to all telephones with access to outgoing lines.

## EXAMPLE OF SAMPLE CORPORATION

### Setting Up a Sample Corporation (Continued)

#### *The 6-Digit Table*

The 6-Digit Table PRF (Table 2-7) is used for NPA 312 to identify calls to the 312-355 FX exchange. If a MATCH occurs, Selection Number 03 is chosen. All other calls to NPA 312 are routed as long distance calls outside of the home NPA. Enter NPA 312 and an NNX list of 355 as shown below:

6-Digit Table for Sample Corporation

| AREA<br>CODE | MATCH<br>SEL # | DEFAULT<br>SEL # | NNX<br>LIST |
|--------------|----------------|------------------|-------------|
| 312          | 03             | 02               | 355         |
|              |                |                  |             |

## EXAMPLE OF SAMPLE CORPORATION

---

### Setting Up a Sample Corporation (Continued)

---

Step 9 ▶ Assign E.A. & OPER-ASSIST data to Table 2-7.

Enter the Selection Number required to route Operator assisted, Equal access, and International calls as described in the carrier list. Only COS5 and lower have access and route to these types of calls.

|                                   |    |
|-----------------------------------|----|
| OPERATOR ASSISTED<br>CALLS SEL #  | 04 |
| INTERNATIONAL<br>CALLS SEL #      | 04 |
| EQUAL ACCESS CALLS<br>SELECTION # | 04 |

Step 10 ▶ Program Authorization Codes.

Authorization codes (QW) are not required by this example.

**Table 2-1 CARRIER LIST PROGRAM RECORD FORM**

| Carrier | Service Type | Service # | Usage Information |
|---------|--------------|-----------|-------------------|
|         |              |           |                   |
|         |              |           |                   |
|         |              |           |                   |
|         |              |           |                   |
|         |              |           |                   |
|         |              |           |                   |
|         |              |           |                   |
|         |              |           |                   |
|         |              |           |                   |
|         |              |           |                   |
|         |              |           |                   |
|         |              |           |                   |
|         |              |           |                   |
|         |              |           |                   |
|         |              |           |                   |
|         |              |           |                   |
|         |              |           |                   |
|         |              |           |                   |
|         |              |           |                   |
|         |              |           |                   |

**Table 2-2 RATE PERIODS PROGRAM RECORD FORM**

| WEEKDAY | RATE PERIOD |    |    |    |    |    |    |    |    |    | TIME SLOTS |    |    |    |    |    |    |    |    |    |    |    |    |    |
|---------|-------------|----|----|----|----|----|----|----|----|----|------------|----|----|----|----|----|----|----|----|----|----|----|----|----|
|         | 00          | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10         | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|         |             |    |    |    |    |    |    |    |    |    |            |    |    |    |    |    |    |    |    |    |    |    |    |    |
|         |             |    |    |    |    |    |    |    |    |    |            |    |    |    |    |    |    |    |    |    |    |    |    |    |
|         |             |    |    |    |    |    |    |    |    |    |            |    |    |    |    |    |    |    |    |    |    |    |    |    |
|         |             |    |    |    |    |    |    |    |    |    |            |    |    |    |    |    |    |    |    |    |    |    |    |    |

MON-FRI \_\_\_\_\_

SAT \_\_\_\_\_

SUN \_\_\_\_\_

HOL \_\_\_\_\_

| WEEKDAY | RATE PERIOD |    |    |    |    |    |    |    |    |    | TIME SLOTS |    |    |    |    |    |    |    |    |    |    |    |    |    |
|---------|-------------|----|----|----|----|----|----|----|----|----|------------|----|----|----|----|----|----|----|----|----|----|----|----|----|
|         | 00          | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10         | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|         |             |    |    |    |    |    |    |    |    |    |            |    |    |    |    |    |    |    |    |    |    |    |    |    |
|         |             |    |    |    |    |    |    |    |    |    |            |    |    |    |    |    |    |    |    |    |    |    |    |    |
|         |             |    |    |    |    |    |    |    |    |    |            |    |    |    |    |    |    |    |    |    |    |    |    |    |
|         |             |    |    |    |    |    |    |    |    |    |            |    |    |    |    |    |    |    |    |    |    |    |    |    |

MON-FRI \_\_\_\_\_

SAT \_\_\_\_\_

SUN \_\_\_\_\_

HOL \_\_\_\_\_

**TABLE 2-3 ARS WORKSHEET**

| TYPE OF CALL | OPT # | SERVICE TYPE<br>Rate Period |   |   |   |   |   |   |   | REQ COS | SEL # |
|--------------|-------|-----------------------------|---|---|---|---|---|---|---|---------|-------|
|              |       | 1                           | 2 | 3 | 4 | 5 | 6 | 7 | 8 |         |       |
|              |       |                             |   |   |   |   |   |   |   |         |       |
|              |       |                             |   |   |   |   |   |   |   |         |       |
|              |       |                             |   |   |   |   |   |   |   |         |       |
|              |       |                             |   |   |   |   |   |   |   |         |       |
|              |       |                             |   |   |   |   |   |   |   |         |       |
|              |       |                             |   |   |   |   |   |   |   |         |       |
|              |       |                             |   |   |   |   |   |   |   |         |       |
|              |       |                             |   |   |   |   |   |   |   |         |       |
|              |       |                             |   |   |   |   |   |   |   |         |       |
|              |       |                             |   |   |   |   |   |   |   |         |       |
|              |       |                             |   |   |   |   |   |   |   |         |       |
|              |       |                             |   |   |   |   |   |   |   |         |       |
|              |       |                             |   |   |   |   |   |   |   |         |       |
|              |       |                             |   |   |   |   |   |   |   |         |       |
|              |       |                             |   |   |   |   |   |   |   |         |       |
|              |       |                             |   |   |   |   |   |   |   |         |       |
|              |       |                             |   |   |   |   |   |   |   |         |       |
|              |       |                             |   |   |   |   |   |   |   |         |       |

**Table 2-4 DIAL TREATMENT TABLE PROGRAM RECORD FORM**

| DT# | DIAL TREATMENT ENTRY |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-----|----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|     |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|     |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|     |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|     |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|     |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|     |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|     |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|     |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|     |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|     |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|     |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|     |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|     |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|     |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|     |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|     |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|     |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|     |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|     |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|     |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|     |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



**Table 2-5 CALL ROUTE OPTIONS PROGRAM RECORD FORM**

**SELECTION #** \_\_\_\_\_

**RATE PERIOD** \_\_\_\_\_

| <b>OPT #</b> | <b>COS</b> | <b>SER #</b> | <b>DT #</b> |
|--------------|------------|--------------|-------------|
| 1            |            |              |             |
| 2            |            |              |             |
| 3            |            |              |             |
| 4            |            |              |             |
| 5            |            |              |             |
| 6            |            |              |             |
| 7            |            |              |             |
| 8            |            |              |             |
| 9            |            |              |             |
| 10           |            |              |             |
| 11           |            |              |             |
| 12           |            |              |             |
| 13           |            |              |             |
| 14           |            |              |             |
| 15           |            |              |             |
| 16           |            |              |             |





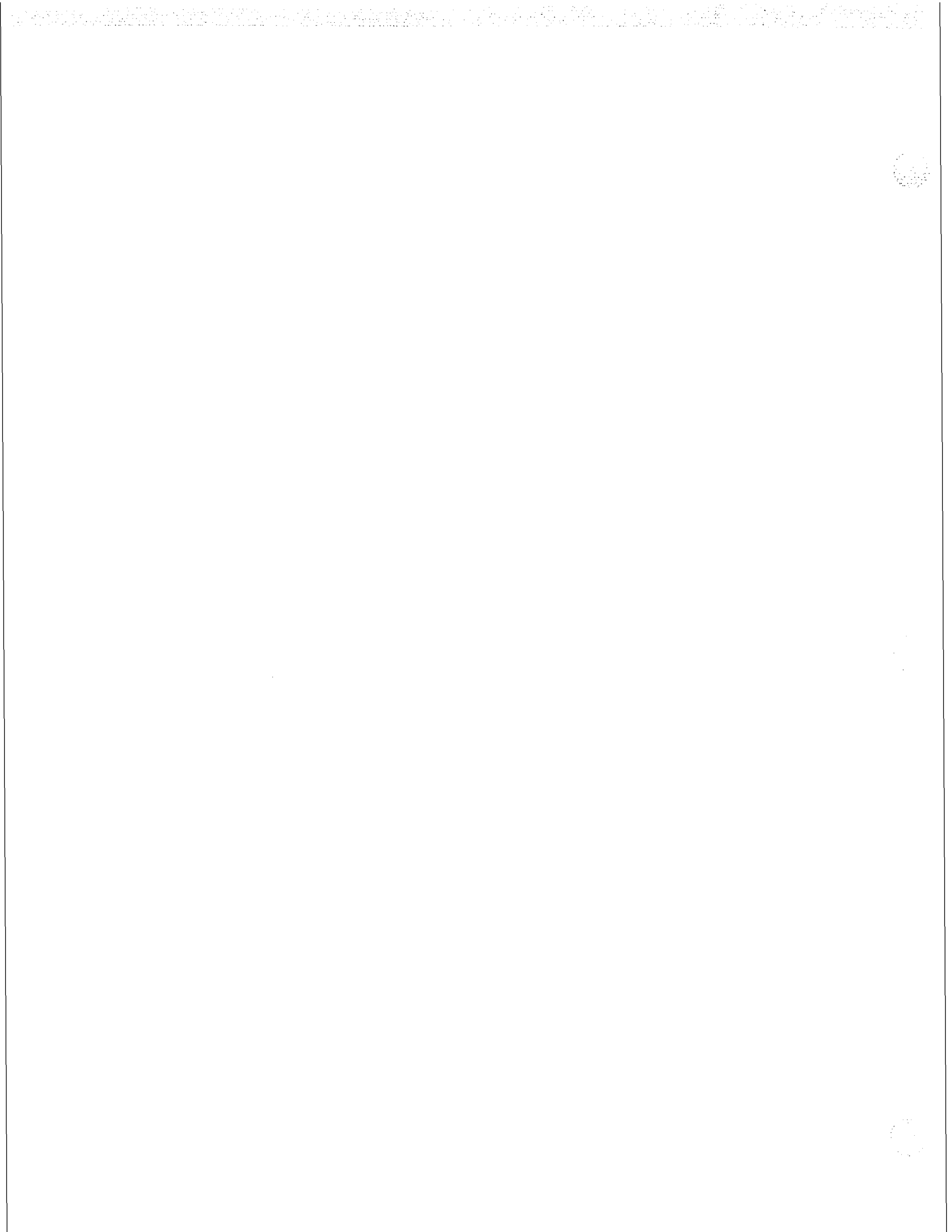


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## Section 3, Program Entry

### Table of Contents

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## INTRODUCTION

This section describes the procedures for entering data into system memory for each of the Automatic Route Selection (ARS) programmable fields (i.e, options). The entries are obtained from the ARS Program Record Forms (PRFs) located at the end of Section 2, SOFTWARE CONFIGURATION. This section is arranged according to the order of the ARS commands that appear on the programming terminal during program entry. These commands are outlined in the Command Structure chart at the end of this appendix. This chart shows the various levels of ARS commands. Program entry is much easier if you frequently refer to this chart.

### Using the Program Entry Charts

The program entry charts that follow provide you, as the programmer, with the instructions you need to enter ARS data into system memory. To make them easier for you to use, all the charts have the same basic elements, as shown on the next few pages.

- The Header:

```
ARS> CNF> CONFIGURE 6DIG> 6-DIGIT TABLE (1 OF 14)
```

At the top of every page is the header which correlates the instructions on the page to the appropriate ARS command level. For example, the header above tells you that you are programming at the 6-Digit Table Command Level, which is a subset of the Configure Command Level, which is in turn a subset of the ARS Command Level. The header also shows the identifying prompts for the command levels (i.e, ARS> for the ARS Command Level; CNF> for the Configure Command Level).

## INTRODUCTION

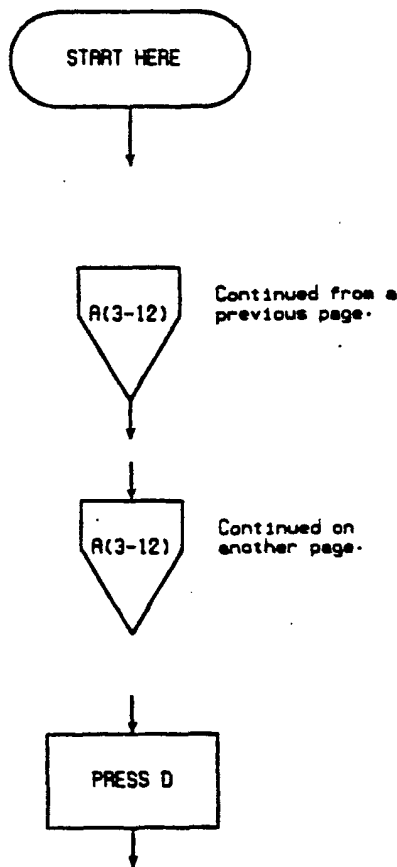
### Using the Program Entry Charts (Continued)

#### ● The Purpose

**PURPOSE:** This chart shows you how to access the S= 6-DIGIT TABLE commands after you have entered the M= CONFIGURE (CNF>) programming sub-field.

Directly beneath the HEADER is the PURPOSE statement, which briefly describes what the chart is used for. If the program entry sequence is more than one page (as most are), the PURPOSE statement is on only the first page.

#### ● The Symbols



Each program entry chart begins at the top of the page. If the chart you are looking at is a one page chart, or the first page of a multi-page chart, you always begin where the chart says, "START HERE." Just follow the arrow to get to the next step.

If you have to branch to another area of the chart, or another page of a multi-page chart, the symbol tells you either where you came from or where you should turn. The first symbol shown (top example) indicates that you arrived at that point (A) from a similar symbol on page 3-12. The symbol on the bottom shows you what the symbol in the example on page 3-12 might look like. The data inside the circle [A(3-12)] tells you to look on page 3-12 for the "A" branch.

At various points in the chart you will be asked to press certain keys. These commands are always in the same format as the example on the left, which tells you to press the D key. Unless otherwise instructed, never press any keys simultaneously.

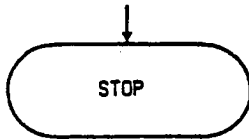
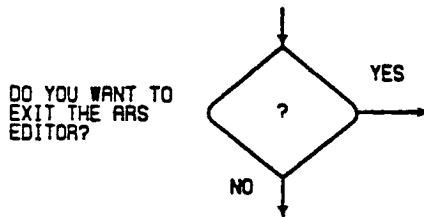
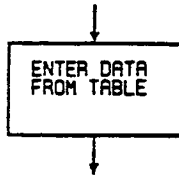
FRS-02b



## INTRODUCTION

### Using the Program Entry Charts (Continued)

#### ● The Symbols (Continued)



The instruction boxes are used whenever you are asked to do more than press a few keys. An instruction box might be used to tell you to enter data from a table, enter a certain extension or service number, or a perform a certain detailed operation.

In almost every program entry chart you are required to choose between several options. When you get to a decision symbol, read the choices inside the symbol and follow the desired path. In the example on the left, you are asked, "DO YOU WANT TO EXIT THE ARS EDITOR?" If you do, follow the yes path (exiting the symbol on the right side) to the next instruction block. If you don't want to exit the ARS editor, follow the NO path (exiting down) to its next instruction block.

The STOP symbol tells you that you have completed the chart.

#### ● The Prompts

Prompts will appear on your terminal screen when you complete certain programming steps. The prompt should agree exactly with how it is printed on the chart.

DEFAULT OPTION # -

#### ● The Comments

Comments are written in either the left or right margin of the chart. Comments provide clarification and additional instructions.

DO YOU WANT TO DISPLAY THE  
R- RATE PERIODS DATA?

Now that you have read these instructions, review the chart on the next page and proceed with program entry.

ARS-03

## INTRODUCTION

---

**Notes:** To display the options available to you at any time, just press <CR>.

If a prompt only appears under certain conditions, it is enclosed in square brackets (e.g., [TRANSFER COMPLETE]).

### Storing ARS Data

While you are programming ARS data, your entries (i.e., modified ARS data) are temporarily stored in a dedicated section of Random Access Memory (RAM) called the Workspace. When you use the Store (S) command, your entries (in the Workspace) are transferred to the system RAM where they are used as current data by ARS. When you use the Exit (E) command, any modified data will be stored in RAM. If you use Exit without Store, your entries are automatically stored in system RAM.

The Quit (Q or ESC) command allows the ARS data previously stored in system memory to be written into the working RAM, overriding whatever data you may have entered during your programming session. If you inadvertently enter a lot of inappropriate data, this capability can be used to return ARS to the state it was in before your programming session began.

### Abbreviated Programming

Once you are familiar with the ARS Editor, you may use Abbreviated Programming to reduce the number of steps required to enter data. To use Abbreviated Programming, enter the command letter, the data to be entered (in the proper entry syntax), and press <CR>. Following are several examples.

- If you are at the 6-DIGIT TABLE COMMAND LEVEL, the entry:

D3<CR>

displays both workspace and system RAM data for the 6-digit table.

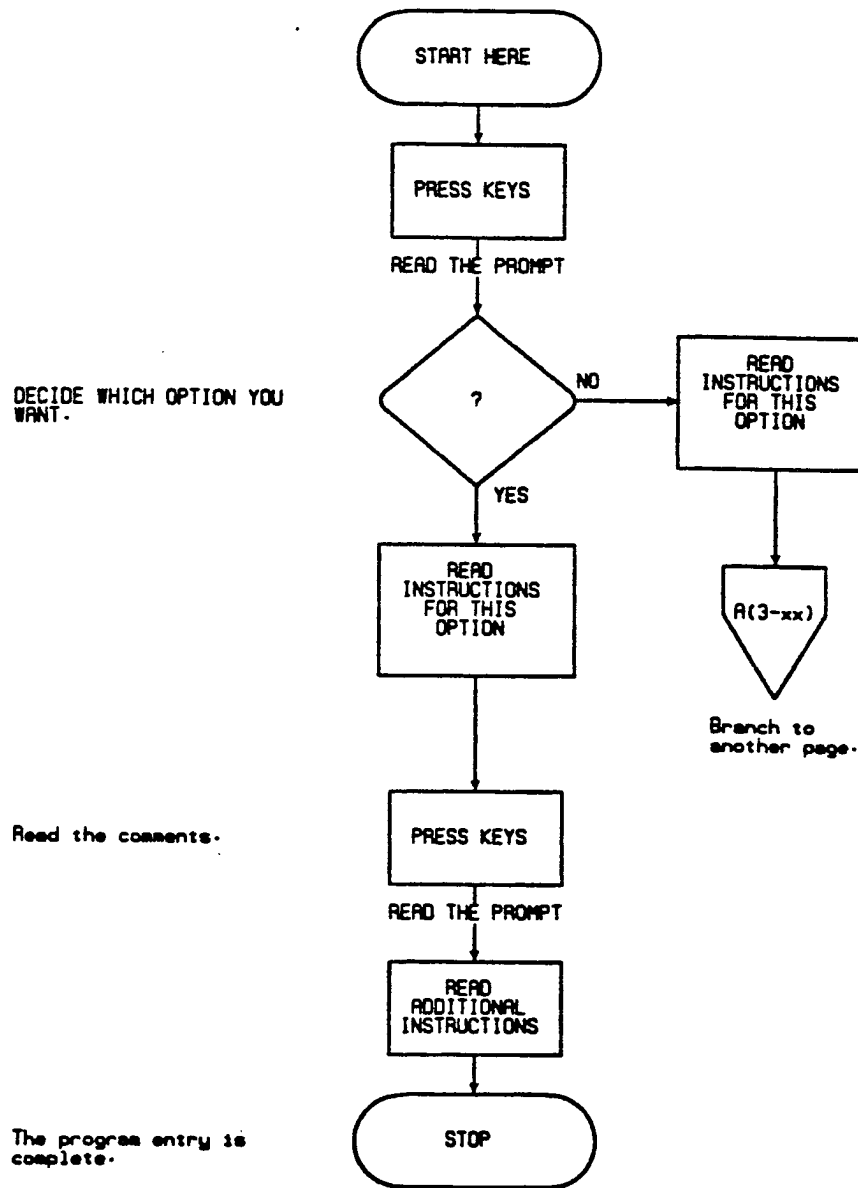
- If you are at the MODIFY DATA COMMAND LEVEL for D= DIAL TREATMENTS, the entry:

CF0613D01PRE<CR>

changes the current Dial Treatment entry from its previous entry to F0613D01PRE.

Sample Program  
Entry Chart

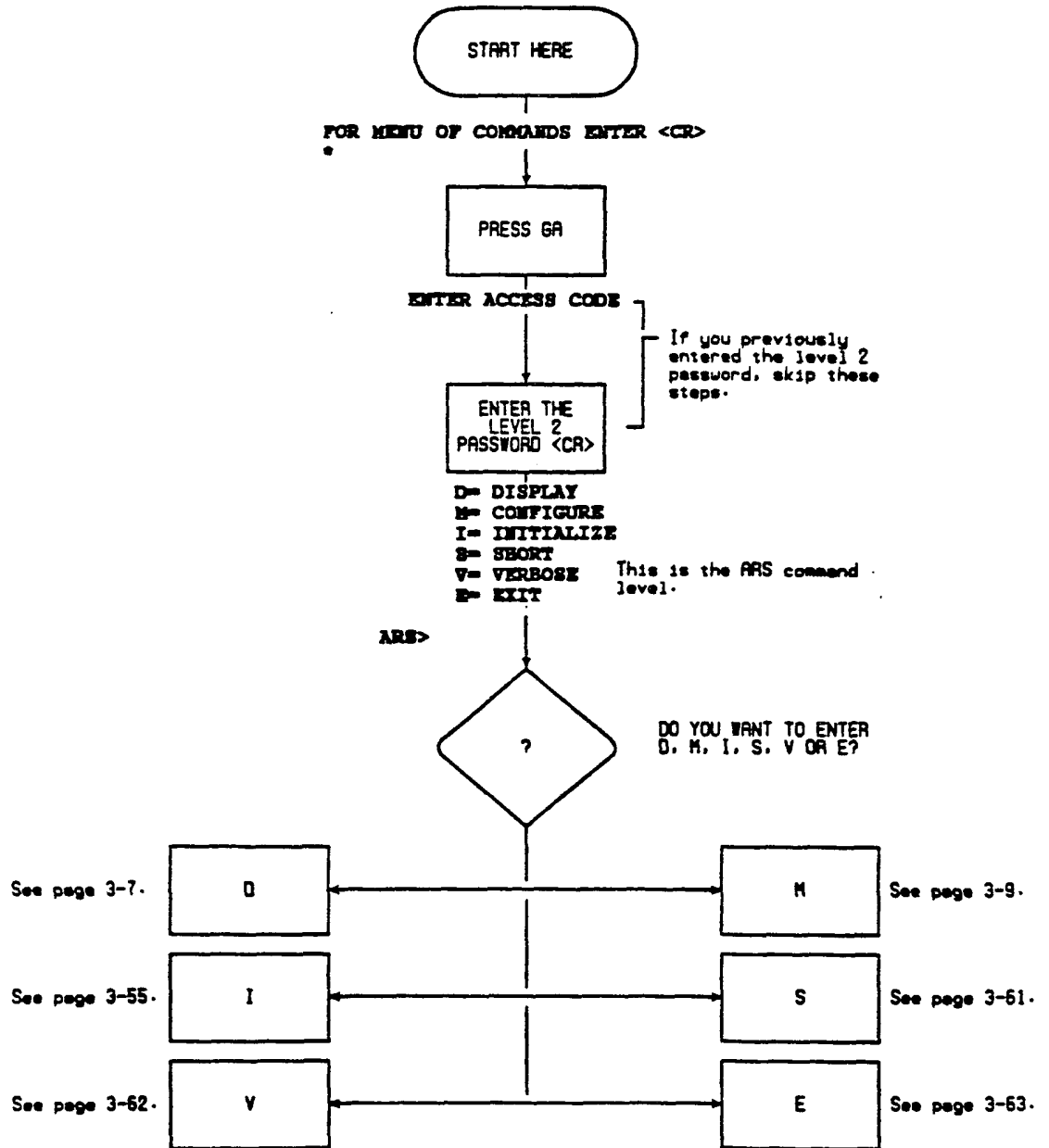
PURPOSE: This chart is an example to help you understand how the program entry charts in this section are used.



RRS-04

# GA- ARS EDITOR (MAIN MENU)

PURPOSE: This chart shows you how to access the GA- ARS EDITOR programming field.

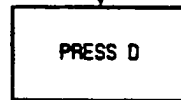


ARS-05

PURPOSE: This chart shows you how to access the D=DISPLAY report. This report displays the ARS data programmed into the system.



ARS>



The report runs in its entirety. Typical data is shown. Press the space bar to stop and start the report.

Dial Treatment Data

```

ARS> D
DT #01: F0613D01PR
DT #02: F041D03W60R
 through
DT #15: NOT DEFINED

```

Refer to page 2-11 for explanation.

Rate Period Table

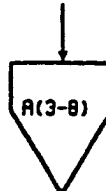
| DAY      | PERIOD        | RP# |
|----------|---------------|-----|
| MON-FRI  | 00:00 - 08:00 | 3   |
|          | 08:00 - 17:00 | 1   |
|          | 17:00 - 23:00 | 2   |
| SATURDAY | 23:00 - 24:00 | 3   |
|          | 00:00 - 08:00 | 3   |
| SUNDAY   | 08:00 - 23:00 | 2   |
|          | 23:00 - 24:00 | 3   |
| HOLIDAY  | 00:00 - 08:00 | 3   |
|          | 08:00 - 23:00 | 2   |

Refer to page 2-3 for explanation.

Selection Number Definitions

| S# | RATE PERIOD | MAX COS | TRUNK GROUP | DIAL TREATMENT |
|----|-------------|---------|-------------|----------------|
| 01 | 01          | NO DATA |             |                |
|    | 02          | 02      | 02          | 01             |
|    | 03          | NO DATA |             |                |
|    | 04          | NO DATA |             |                |
|    | 05          | NO DATA |             |                |
|    | 06          | NO DATA |             |                |
|    | 07          | NO DATA |             |                |
|    | 08          | NO DATA |             |                |

Refer to page 2-14 for explanation.



Continued on the following page.

**ARS> D=DISPLAY**

---



Continued from the previous page.

3-Digit Table Data

| DIAL<br>CODE | SELECTION NUMBERS |        |
|--------------|-------------------|--------|
|              | CODE ONLY         | 1+CODE |
| 200          | 01                | 64     |

Refer to page 2-15 for explanation.

6-Digit Table Data

| NPA | SELECTION NUMBER |         | NFX LIST        |
|-----|------------------|---------|-----------------|
|     | MATCH            | DEFAULT |                 |
| 203 | 01               | 00      | 554-558 321-329 |
|     | 45               | 00 |  | 222 |

Refer to page 2-19 for explanation.

Opp-Assist Sel. #  
Refer to page 2-20 for explanation.

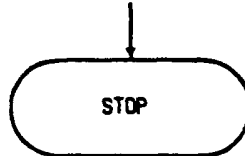
OPR-ASSISTED CALLS - S# 04

Int. Call Sel. #  
Refer to page 2-20 for explanation.

INTERNATIONAL CALLS - S# 04

Equal Access Sel. #  
Refer to page 2-20 for explanation.

EQUAL ACCESS - S# 06



ARS-07

# ARS> CNF> CONFIGURE (MAIN MENU)

PURPOSE: This chart shows you how to access the M= CONFIGURE programming sub-field, after you have entered the ARS editor.

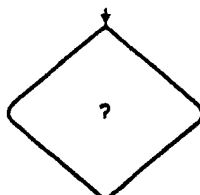
START HERE

ARS>

PRESS M

ARS> M  
 D= DIAL TREATMENTS  
 E= E.A. & OPR-ASSIST  
 R= RATE PERIODS  
 C= CALL ROUTE OPTIONS  
 S= 6-DIGIT TABLE  
 T= 3-DIGIT TABLE  
 Q= EXIT

CNF>



DO YOU WANT TO ENTER D, E, R, S, T, OR Q.

See page 3-10.

D

See page 3-15.

E

See page 3-18.

R

See page 3-23.

C

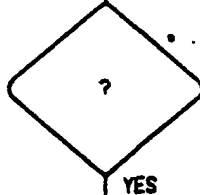
See page 3-33.

S

See page 3-47.

T

DO YOU WANT TO EXIT TO THE ARS COMMAND LEVEL?



NO

STOP

You have no more available options.

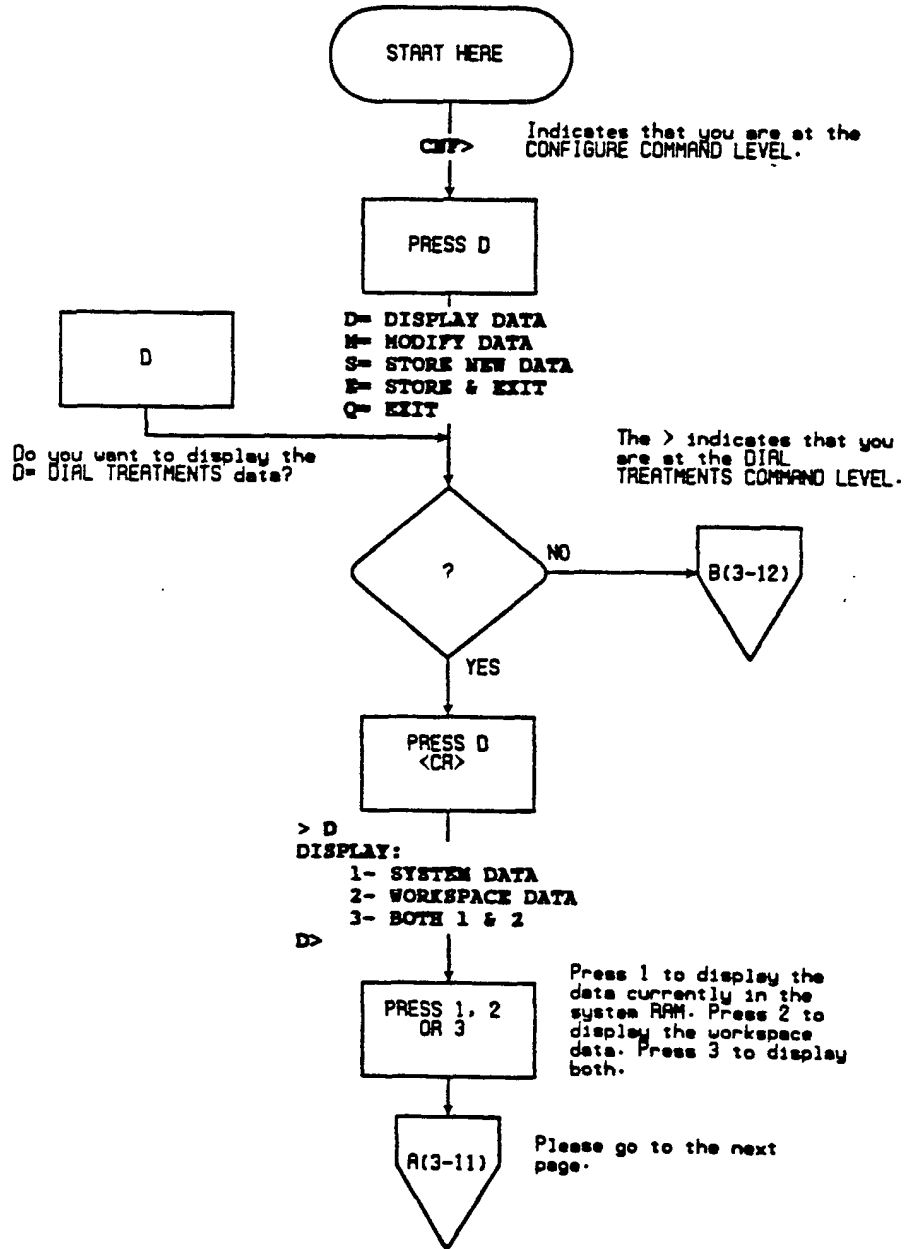
YES

PRESS Q

ARS> Refer to page 3-6 for available commands.

**ARS> CNF> CONFIGURE DT> DIAL TREATMENTS (Page 1 of 5)**

PURPOSE: This chart shows you how to access D= DIAL TREATMENTS after you have entered the M= CONFIGURE (CNF>) programming sub-field.



ARS-09





Continued from the  
previous page.

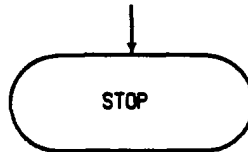
**SYSTEM DATA**

DT #01: F0613D01PRE  
DT #02: F041D03W60RE  
DT #03: NOT DEFINED  
DT #04: NOT DEFINED  
DT #05: NOT DEFINED  
DT #06: NOT DEFINED  
DT #07: NOT DEFINED  
DT #08: NOT DEFINED  
DT #09: NOT DEFINED  
DT #10: NOT DEFINED  
DT #11: NOT DEFINED  
DT #12: NOT DEFINED  
DT #13: NOT DEFINED  
DT #14: NOT DEFINED  
DT #15: NOT DEFINED

Typical system data  
displayed.

**WORKSPACE DATA**

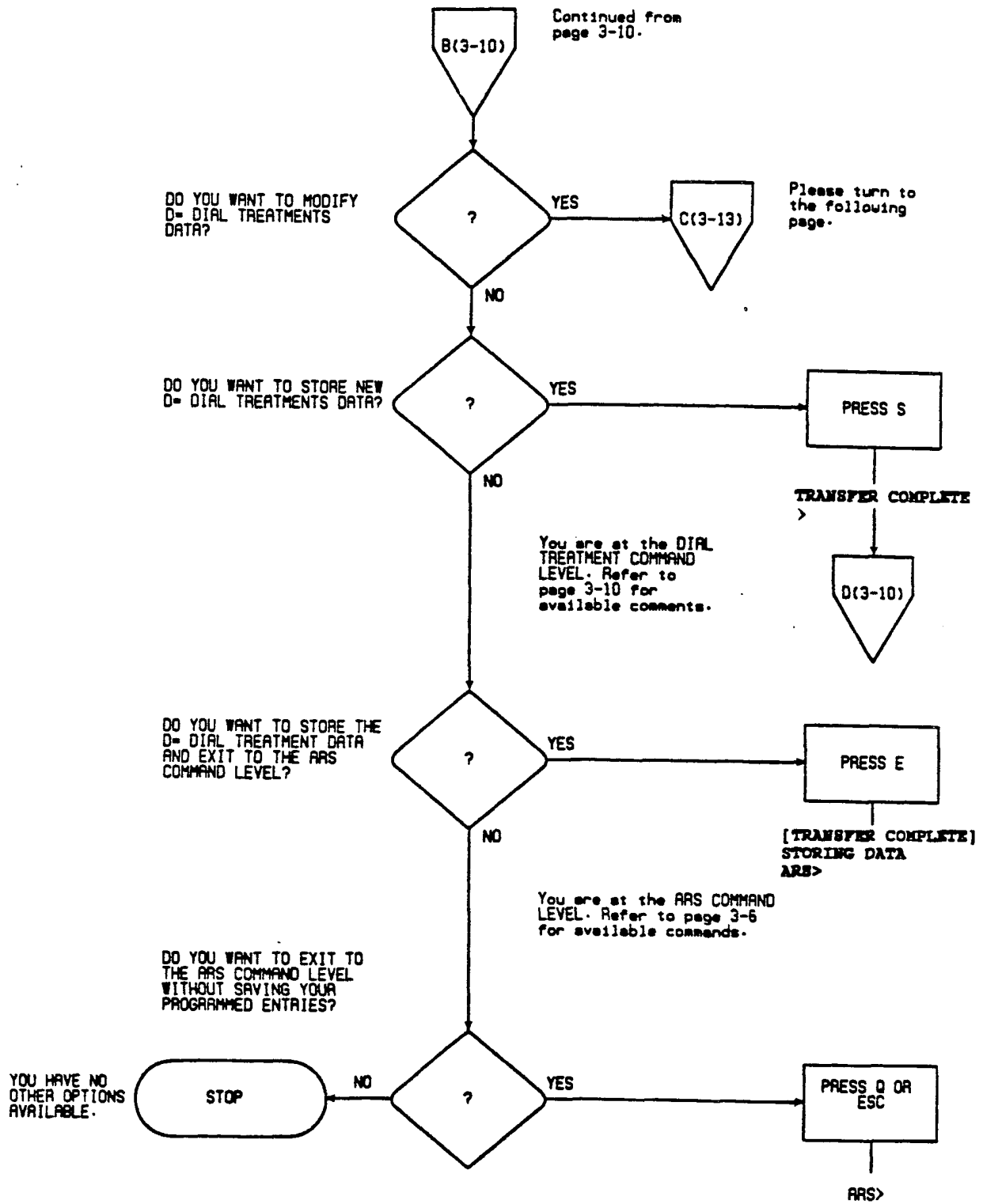
DT #01: F05D04W1201



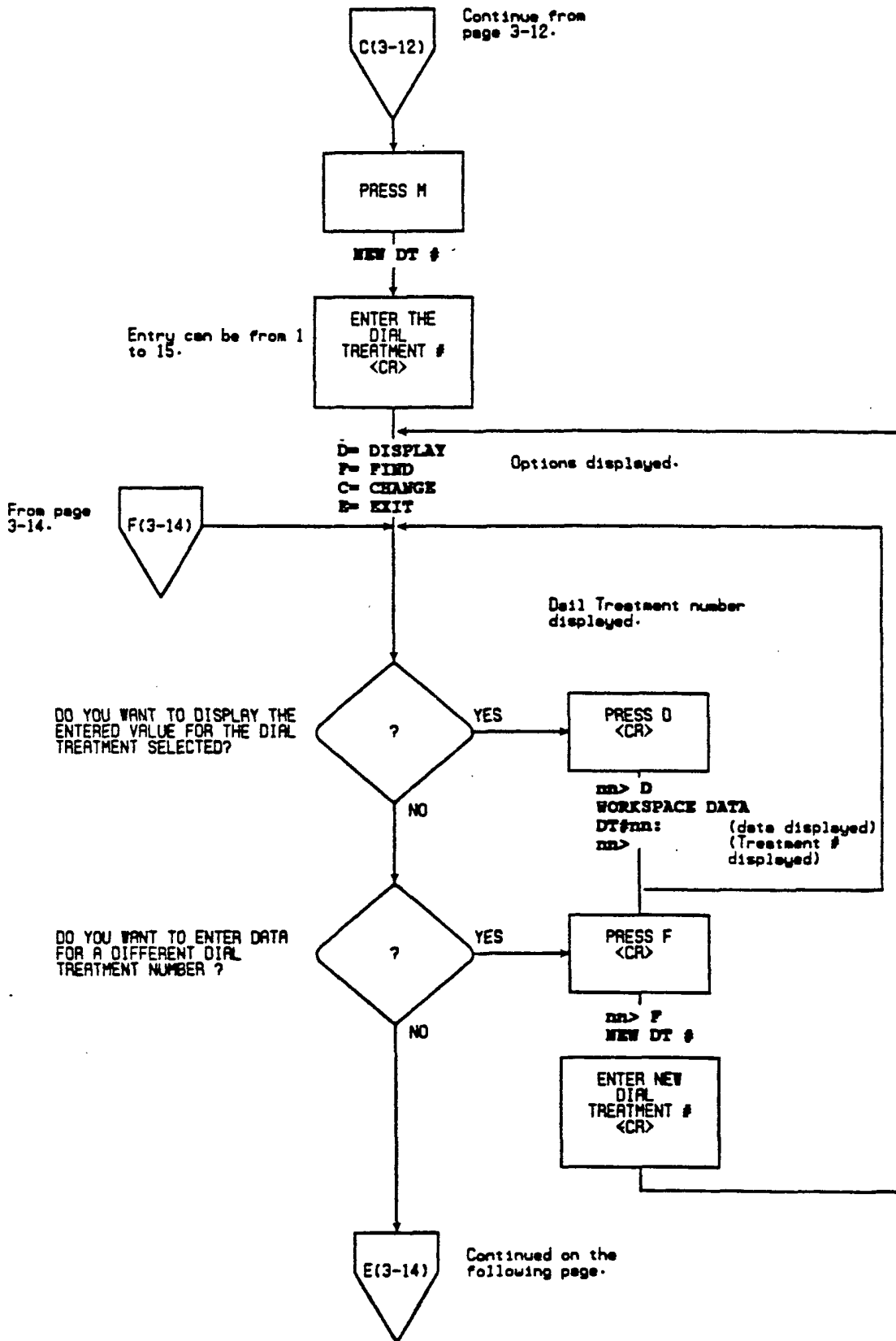
Typical workspace  
data displayed. The  
prompt: NO DATA  
indicates that no  
data has been  
modified during this  
session.

ARS-10

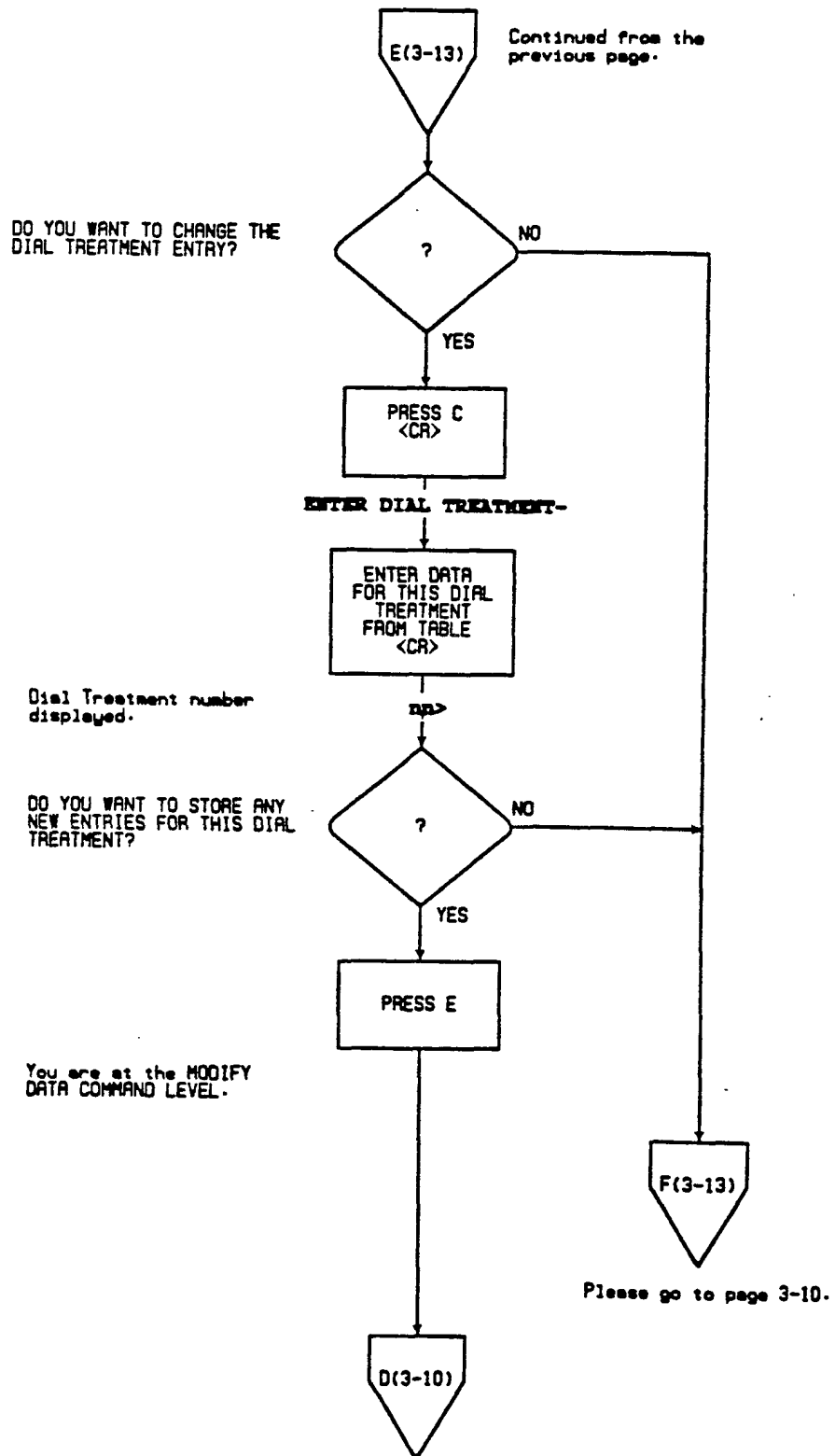
**ARS> CNF> CONFIGURE DT> DIAL TREATMENTS (Page 3 of 5)**



If you made changes, the prompt: WANT TO LOSE CHANGES? (Y/N) allows you to change your mind. Enter Y to initiate the command and go to the ARS COMMAND LEVEL (page 3-6); N to return to the DIAL TREATMENT COMMAND LEVEL.



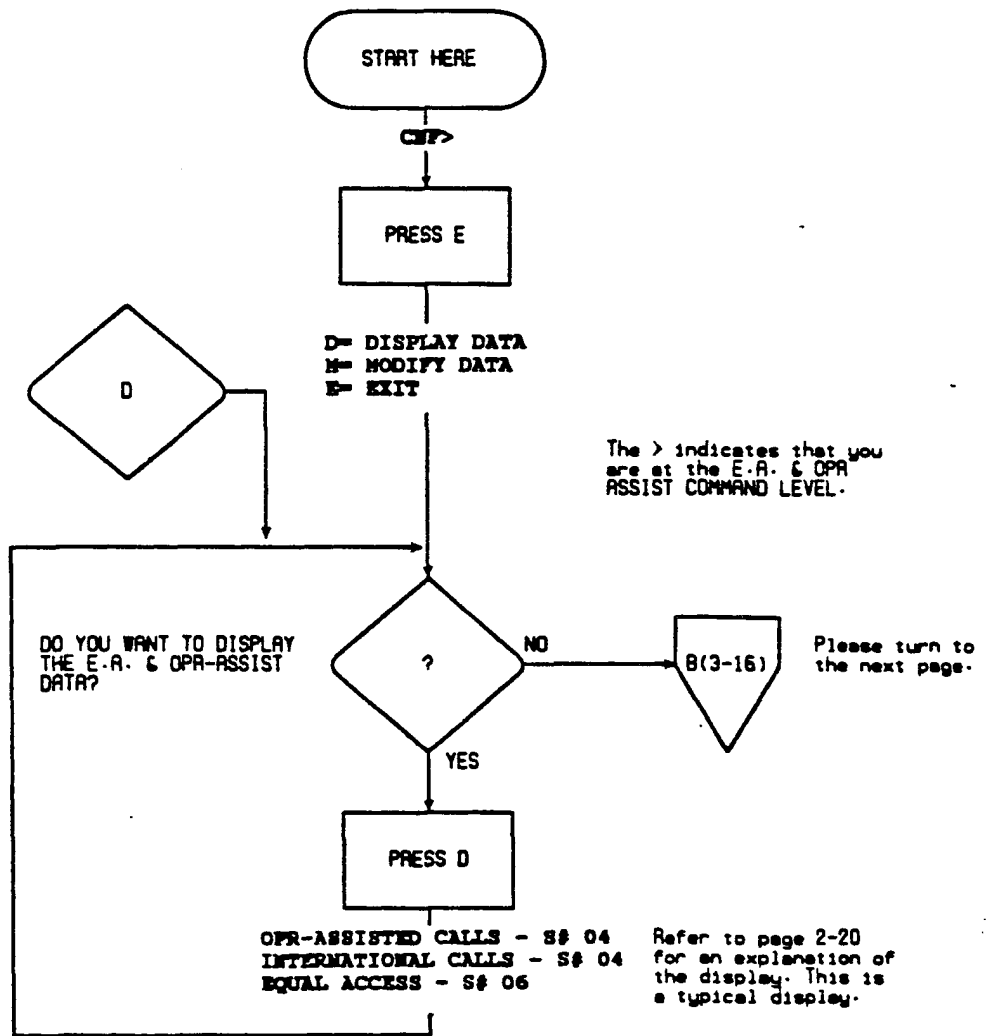
**ARS> CNF> CONFIGURE DT> DIAL TREATMENTS (Page 5 of 5)**



ARS-13

**ARS> CNF> CONFIGURE EA&OP> E.A. & OPR-ASSIST (Page 1 of 3)**

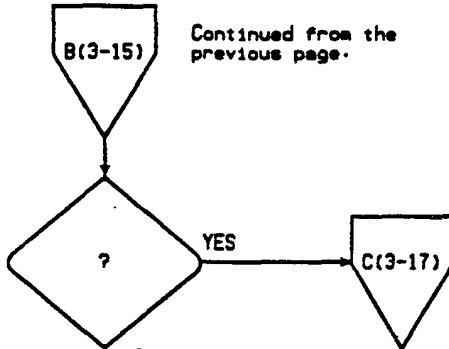
PURPOSE: This chart shows you how to access E= E.A. & OPR-ASSIST after you have entered the M= CONFIGURE (CNF>) programming sub-field.



ARS-14

**ARS> CNF> CONFIGURE EA&OP> EA. & OPR-ASSIST (Page 2 of 3)**

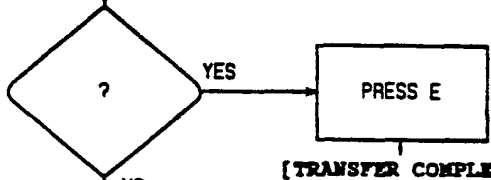
DO YOU WANT TO MODIFY  
E= E.A. & OPR-ASSIST  
DATA?



Continued from the  
previous page.

Please turn to  
the following  
page.

DO YOU WANT TO STORE  
THE E.A. & OPR-ASSIST  
DATA AND EXIT THE ARS  
COMMAND LEVEL?



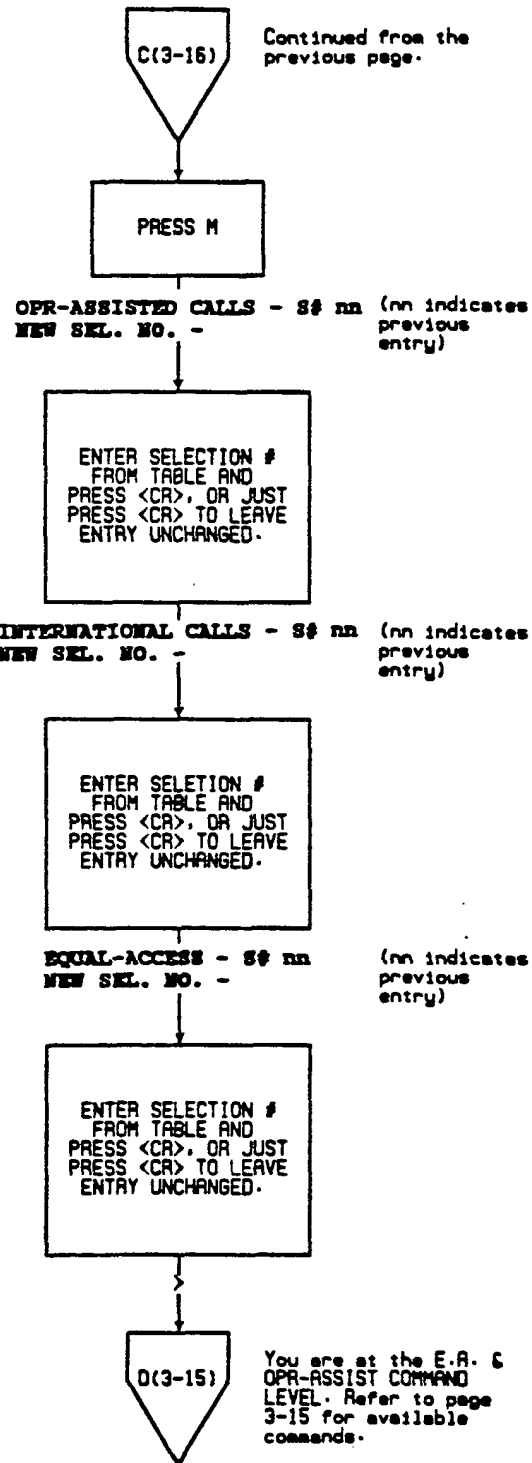
[TRANSFER COMPLETE]  
STORING DATA  
ARS>

You are at the ARS COMMAND  
LEVEL. Refer to page 3-6  
for available commands.

You have no other  
options available.

ARS-15

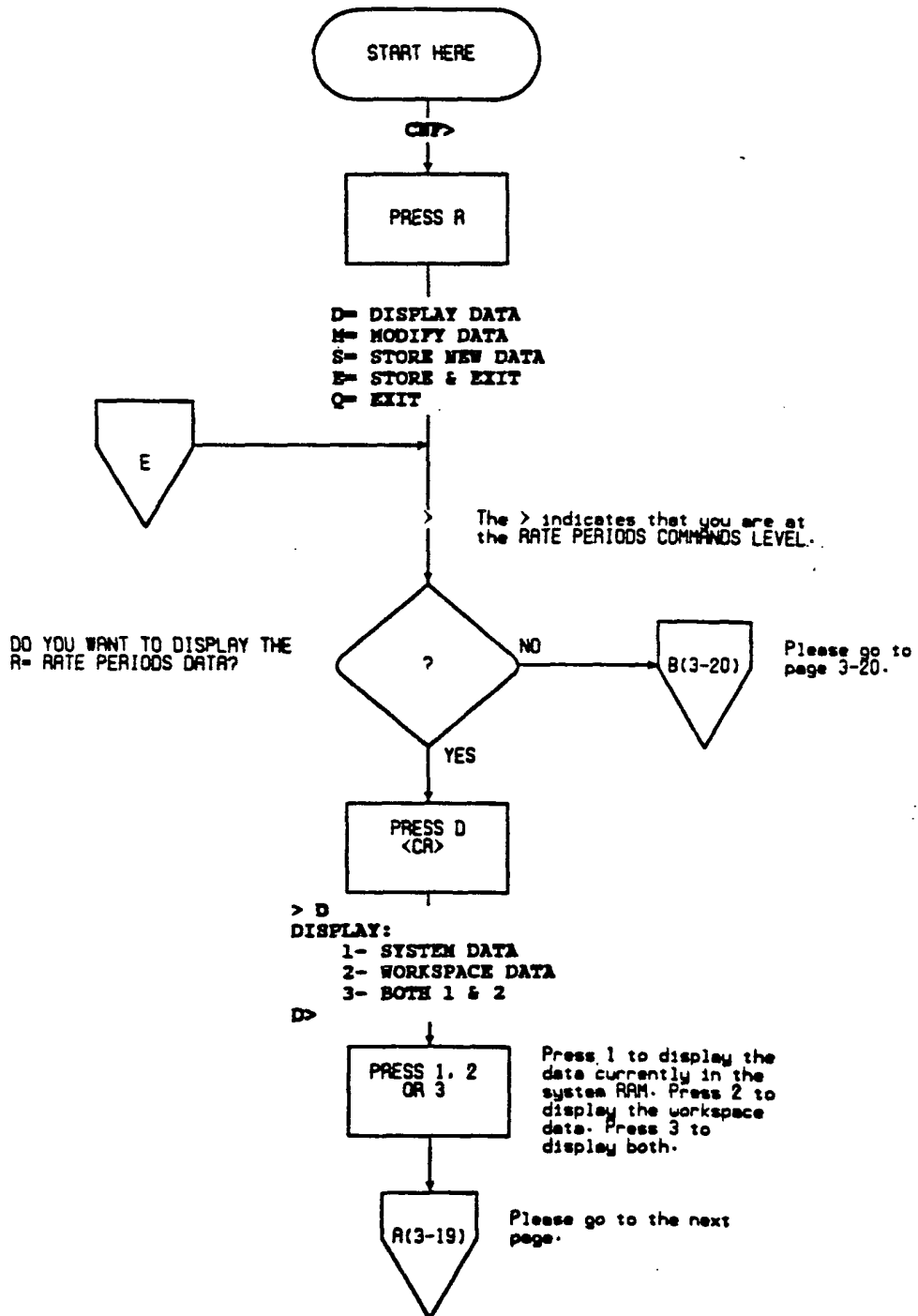
**ARS> CNF> CONFIGURE EA&OP> E.A. & OPR-ASSIST (Page 3 of 3)**



ARS-16

**ARS> CNF> CONFIGURE RP> RATE PERIODS (Page 1 of 5)**

PURPOSE: This chart shows you how to access R= RATE PERIODS after you have entered the M= CONFIGURE (CNF) programming sub-field.



ARS-17



ARS> CNF> CONFIGURE RP> RATE PERIODS (Page 2 of 5)



Continued from the previous page.

SYSTEM DATA

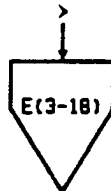
Refer to page 2-3 for explanation.

| DAY      | PERIOD        | RP# |
|----------|---------------|-----|
| MON-FRI  | 00:00 - 08:00 | 3   |
|          | 08:00 - 17:00 | 1   |
|          | 17:00 - 23:00 | 2   |
|          | 23:00 - 24:00 | 3   |
| SATURDAY | 00:00 - 08:00 | 3   |
|          | 08:00 - 23:00 | 2   |
|          | 23:00 - 24:00 | 3   |
| SUNDAY   | 00:00 - 08:00 | 3   |
|          | 08:00 - 23:00 | 2   |
|          | 23:00 - 24:00 | 3   |
| HOLIDAY  | 00:00 - 08:00 | 3   |
|          | 08:00 - 23:00 | 2   |

WORKSPACE DATA

Refer to page 2-3 for explanation.

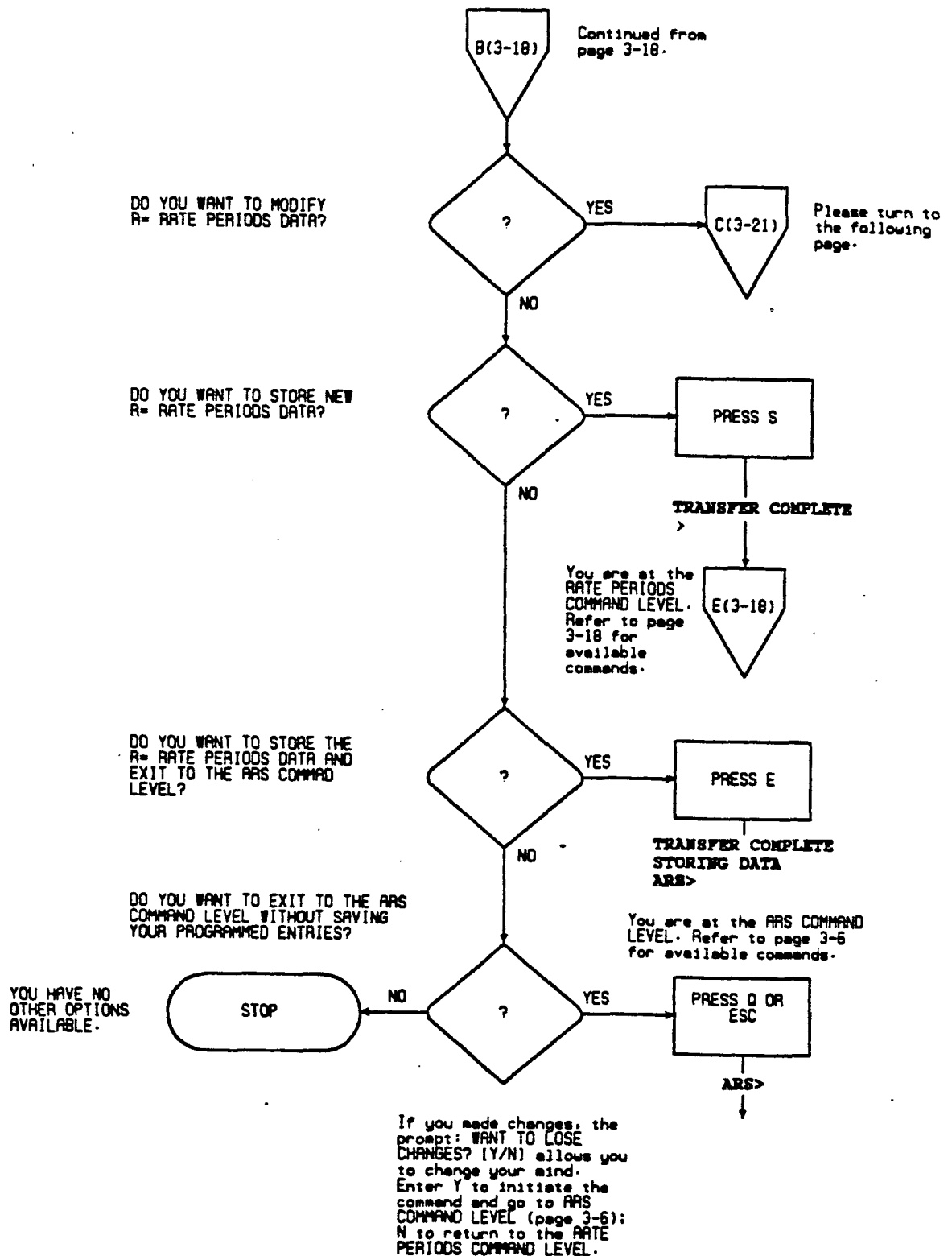
| DAY      | PERIOD        | RP# |
|----------|---------------|-----|
| MON-FRI  | 00:00 - 08:00 | 3   |
|          | 08:00 - 17:00 | 1   |
|          | 17:00 - 23:00 | 2   |
|          | 23:00 - 24:00 | 3   |
| SATURDAY | 00:00 - 08:00 | 3   |
|          | 08:00 - 23:00 | 2   |
|          | 23:00 - 24:00 | 3   |
| SUNDAY   | 00:00 - 08:00 | 3   |
|          | 08:00 - 23:00 | 2   |
|          | 23:00 - 24:00 | 3   |
| HOLIDAY  | 00:00 - 08:00 | 3   |
|          | 08:00 - 23:00 | 2   |



You are at the RATE PERIODS COMMAND LEVEL. Turn to page 3-18 for available commands.

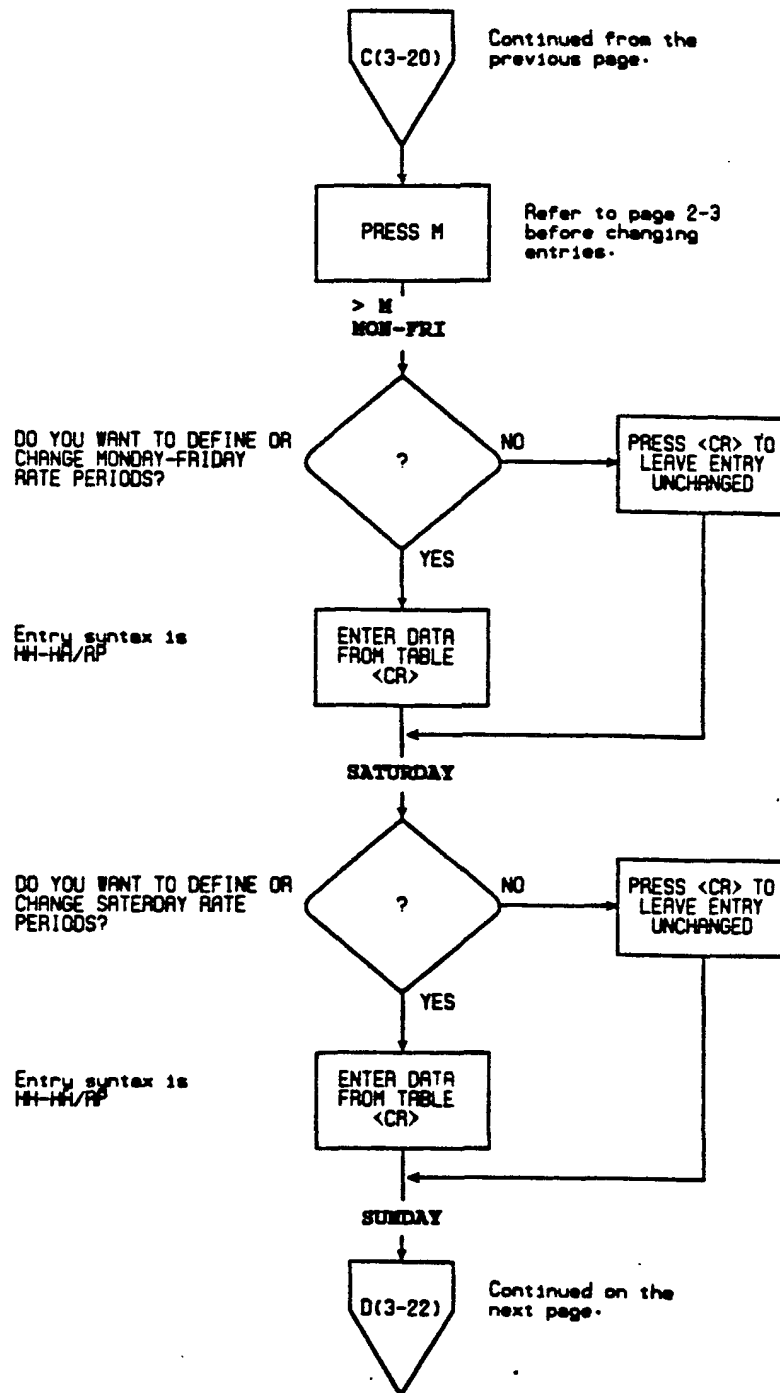
ARS-10

**ARS> CNF> CONFIGURE RP> RATE PERIODS (Page 3 of 5)**



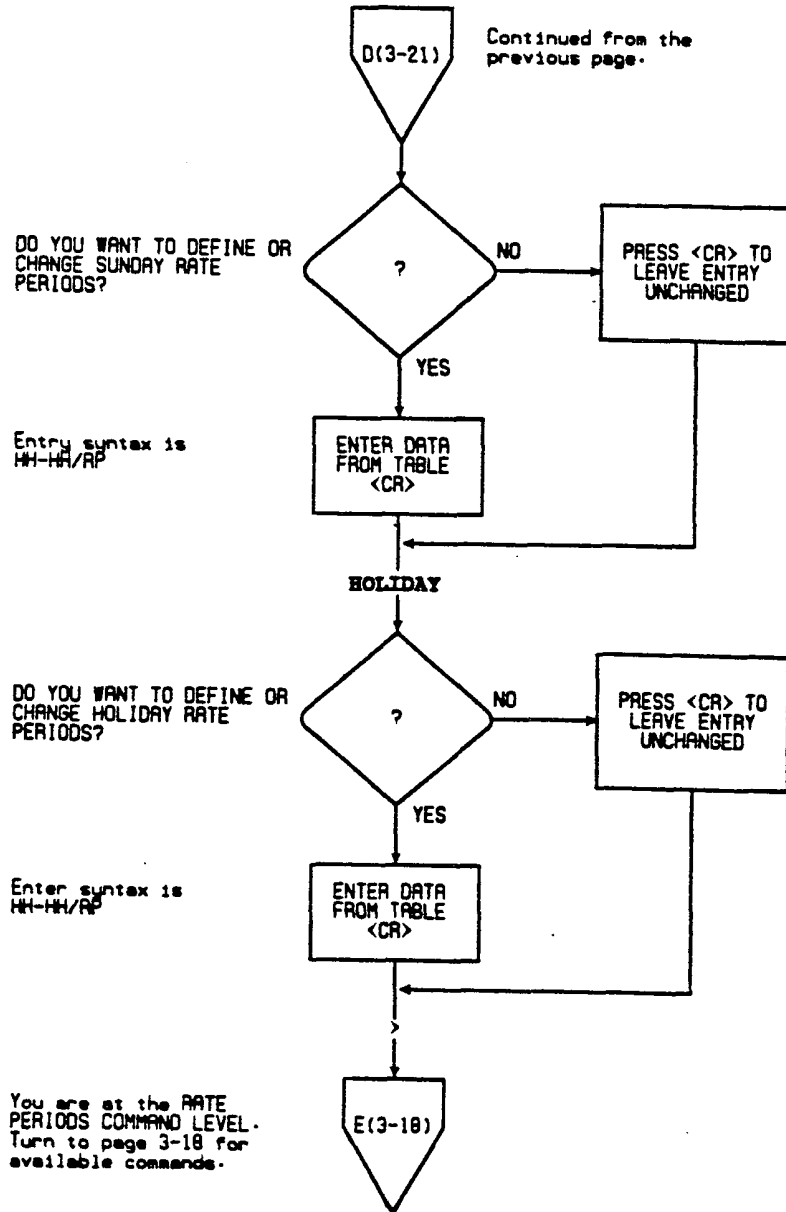
ARS-19

ARS> CNF> CONFIGURE RP> RATE PERIODS (Page 4 of 5)



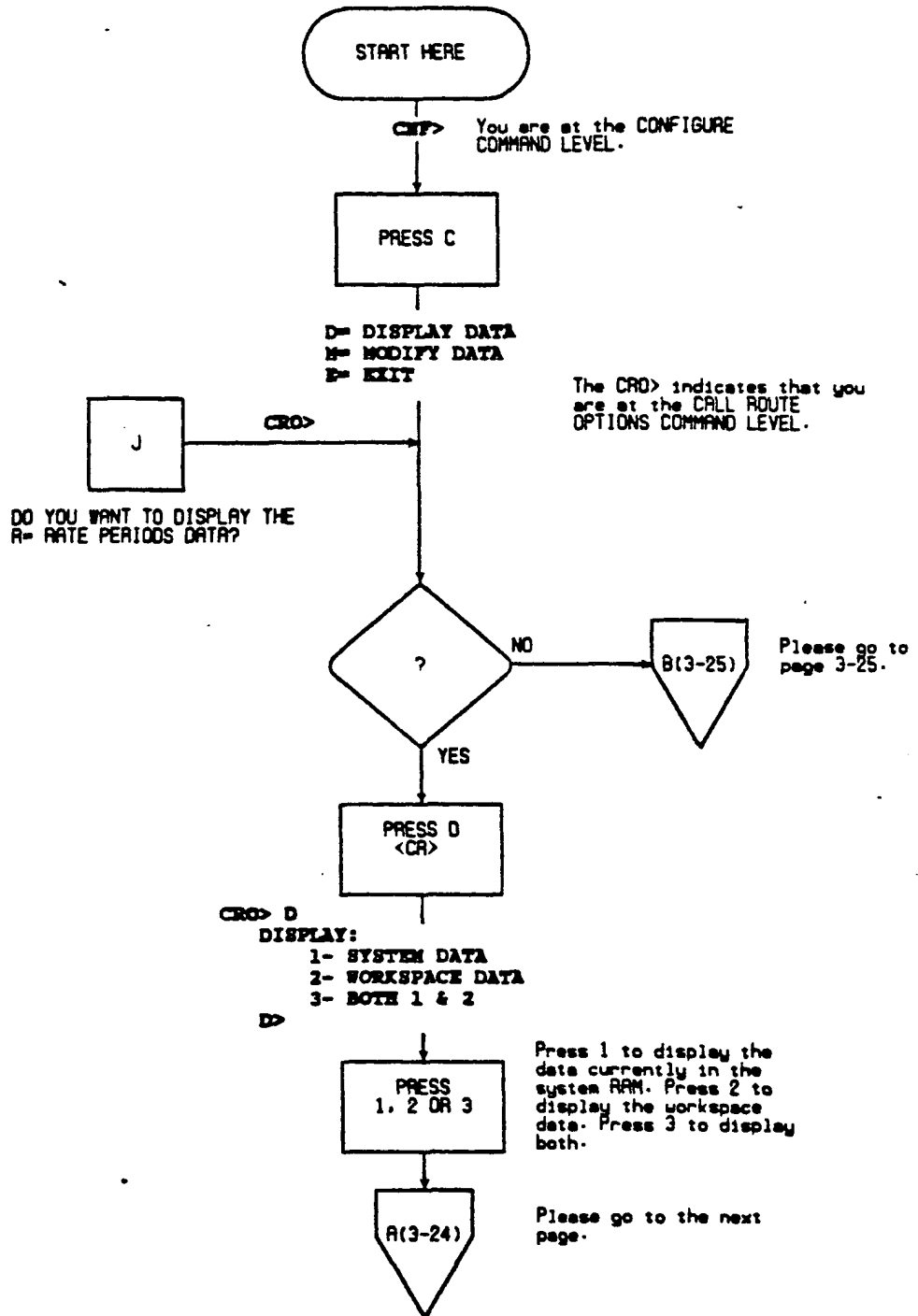
ARS-20

**ARS> CNF> CONFIGURE RP> RATE PERIODS (Page 5 of 5)**



ARS-21

PURPOSE: This chart shows you how to access C= CALL ROUTE OPTIONS after you have entered the M= CONFIGURE (CNF>) programming sub-field.



ARS-22

**ARS> CNF> CONFIGURE CRO> CALL ROUTE OPTIONS (Page 2 of 10)**



Continued from the previous page.

**SYSTEM DATA**

Refer to page 2-14 for explanation.

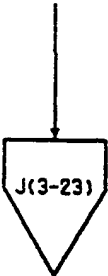
| S# | RATE PERIOD | MAX COS | TRUNK GROUP | DIAL TREATMENT |
|----|-------------|---------|-------------|----------------|
| 01 | 01          | NO DATA |             |                |
|    | 02          | 02      | 02          | 01             |
|    |             | 02      | 02          | 00             |
| 02 | 04          | 05      | 05          | 05             |

**WORKSPACE DATA**

Refer to page 2-14 for explanation.

| S# | RATE PERIOD | MAX COS | TRUNK GROUP | DIAL TREATMENT |
|----|-------------|---------|-------------|----------------|
| 01 | 01          | 03      | 03          | 15             |

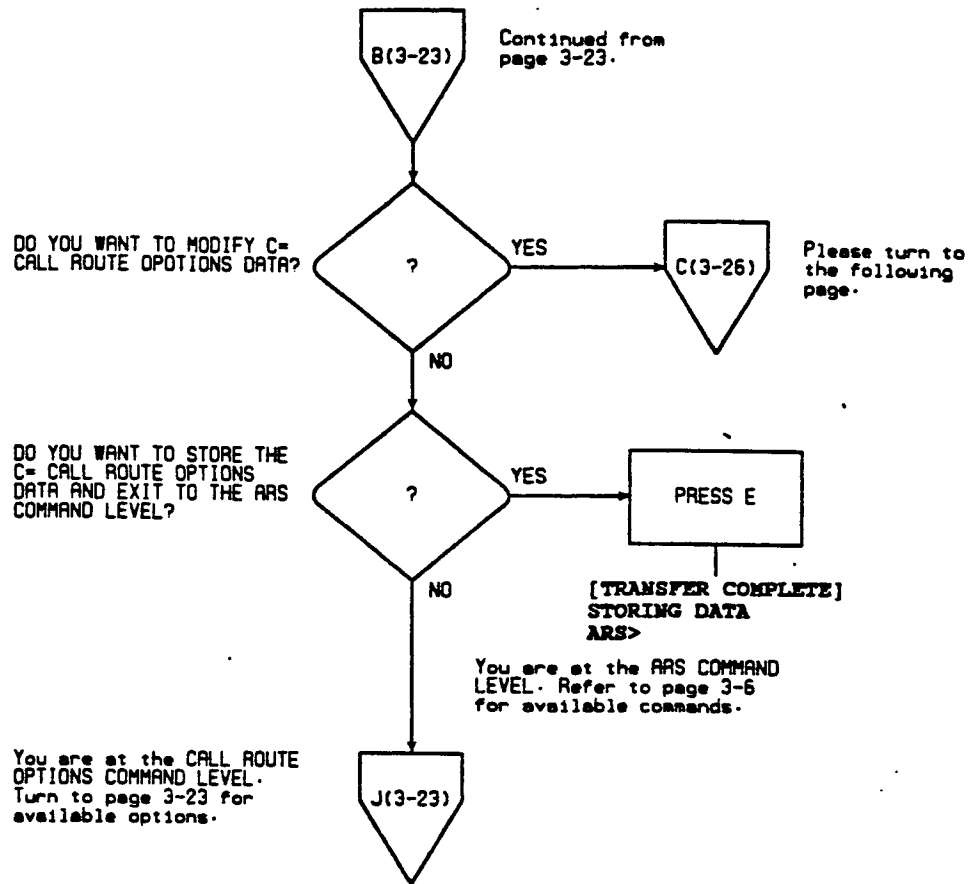
CRO>



You are at the CALL ROUTE OPTIONS COMMAND LEVEL. Turn to page 3-23 for available commands.

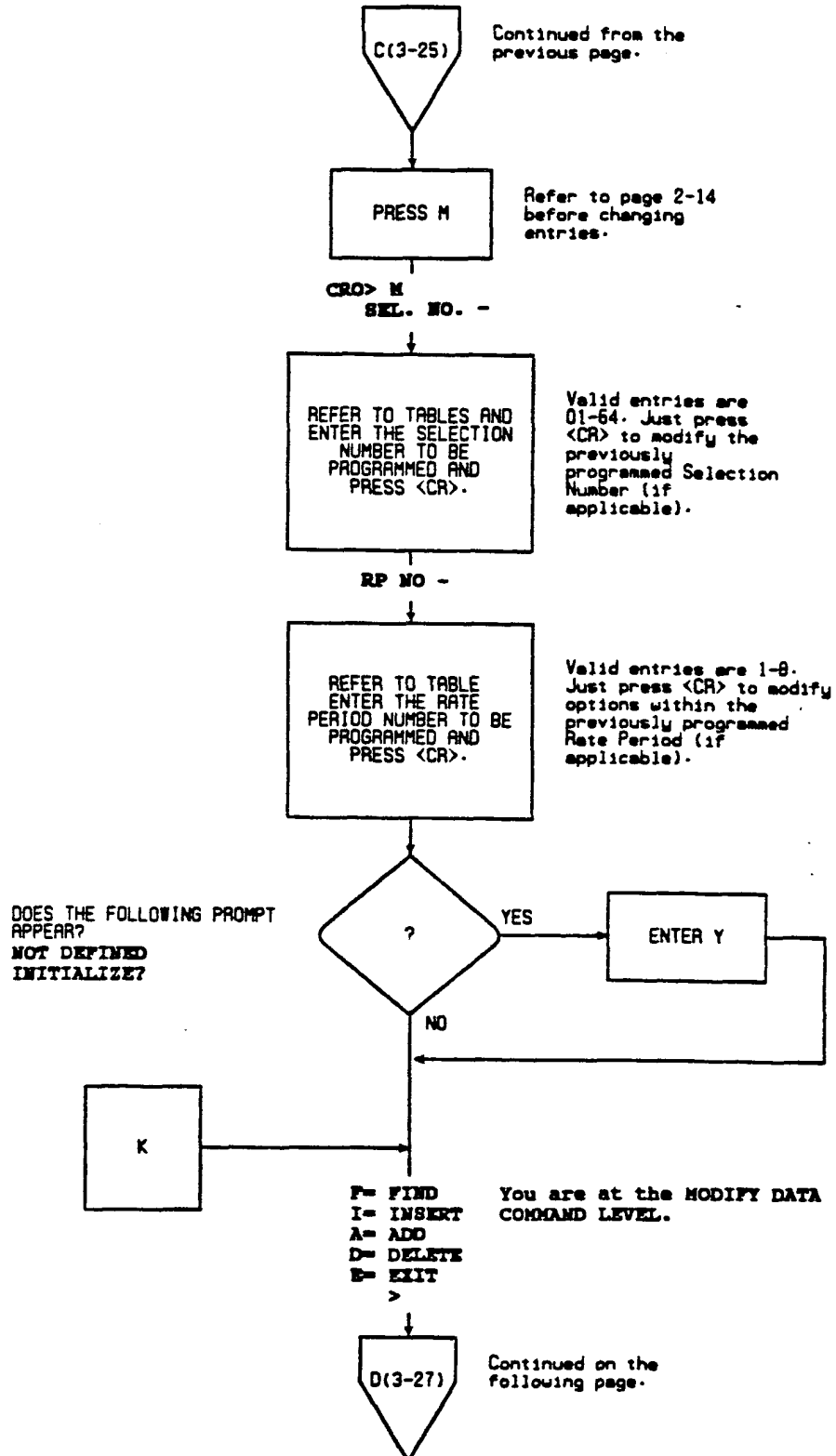
ARS-23

**ARS> CNF> CONFIGURE CRO> CALL ROUTE OPTIONS (Page 3 of 10)**



ARS-24

**ARS> CNF> CONFIGURE CRO> CALL ROUTE OPTIONS (Page 4 of 10)**

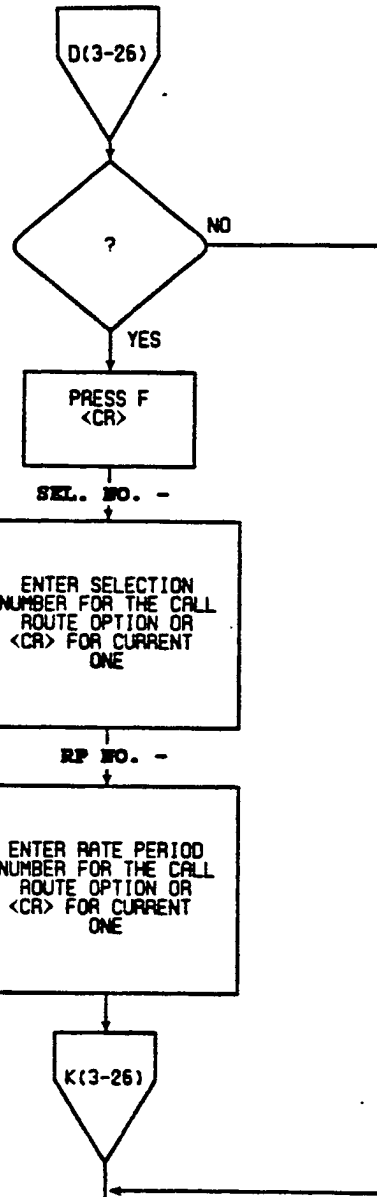


ARS-25



**ARS> CNF> CONFIGURE CRO> CALL ROUTE OPTIONS (Page 5 of 10)**

DO YOU WANT TO MODIFY A CALL ROUTE OPTION FOR A SELECTION NUMBER OR RATE PERIOD DIFFERENT FROM THAT INITIALLY SELECTED?

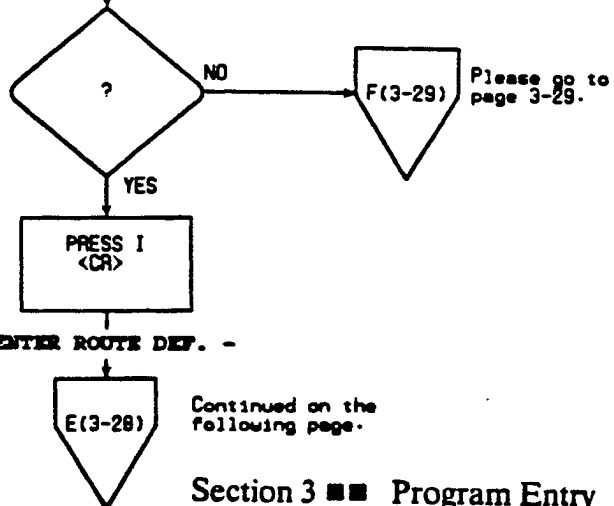


Valid entries are 01-64. Press ESC to return to the current Selection #, Rate Period and option #.

Valid entries are 1-8.

Return to page 3-26.

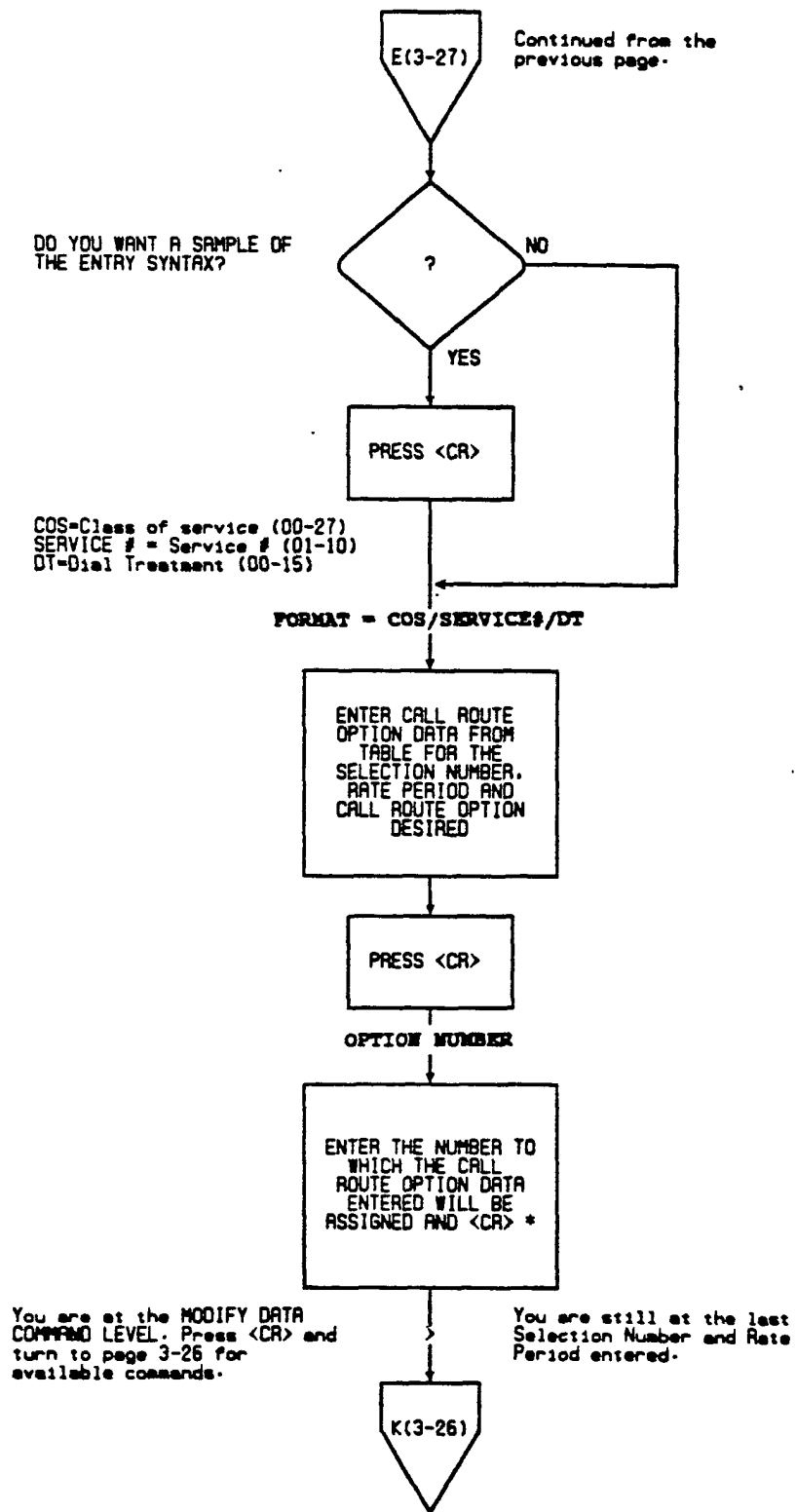
DO YOU WANT TO CREATE A CALL ROUTE OPTION AND INSERT IT AT A SPECIFIC POINT IN THE RATE PERIOD'S CALL ROUTE OPTION LIST?



Continued on the following page.

ARS-26

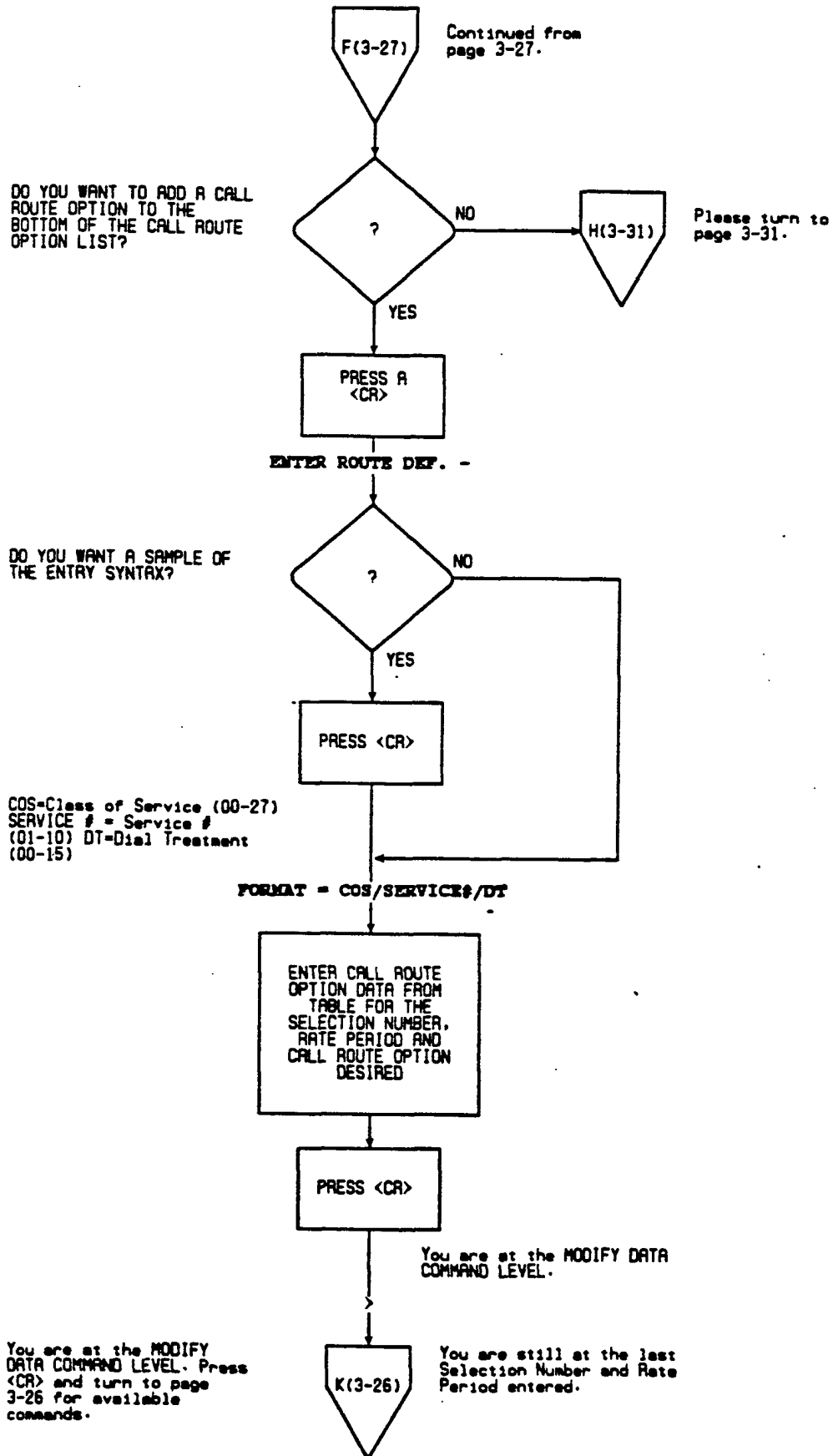
**ARS> CNF> CONFIGURE CRO> CALL ROUTE OPTIONS (Page 6 of 10)**



ARS-27

\* Enter the position, within the Rate Period list of options, where the new Call Route Option belongs (01-16). If the number entered is higher than any existing option number, then the option will be placed at the end of the current group of options.

**hARS> CNF> CONFIGURE CRO> CALL ROUTE OPTIONS (Page 7 of 10)**

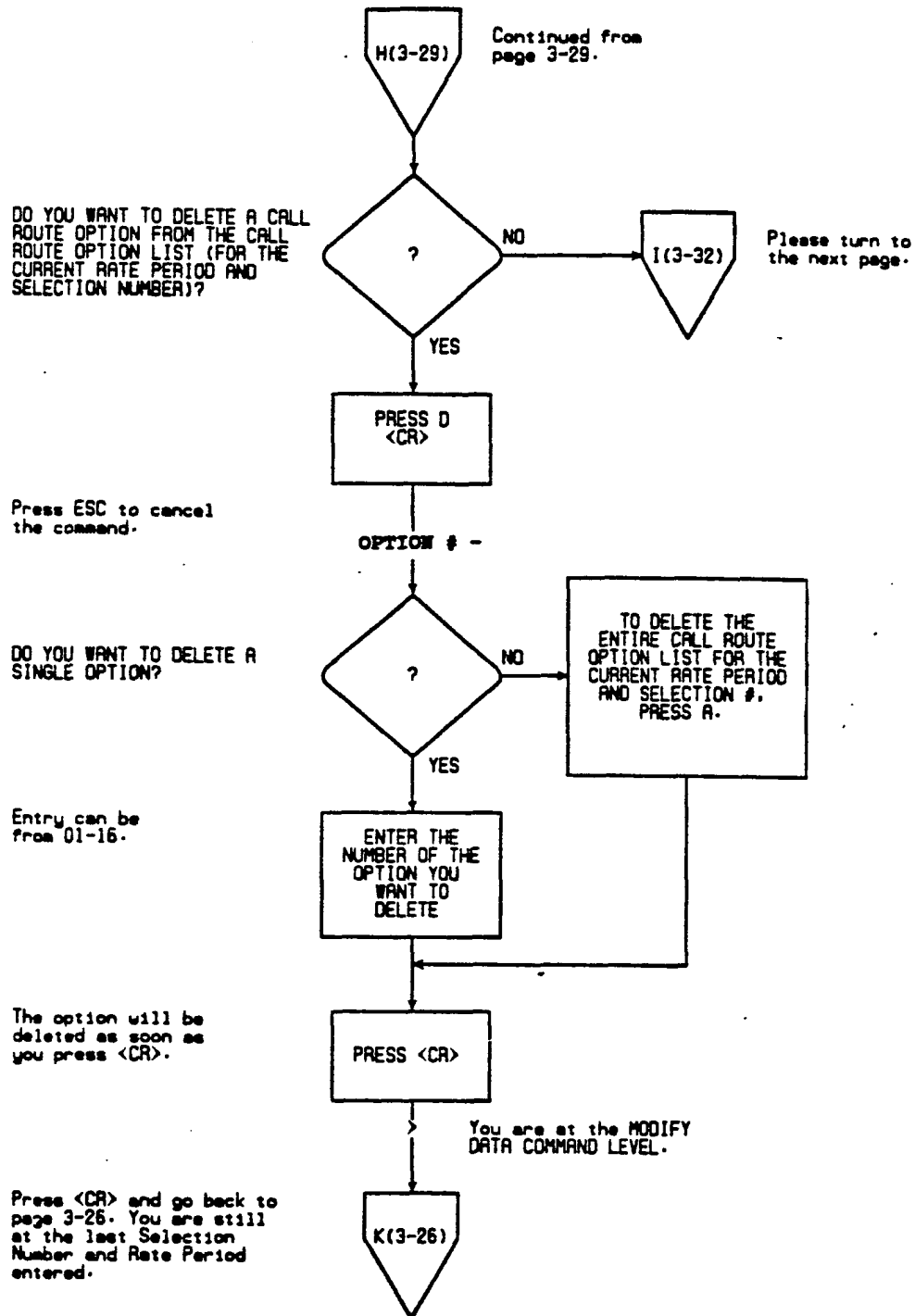


**ARS> CNF> CONFIGURE CRO> CALL ROUTE OPTIONS (Page 8 of 10)**

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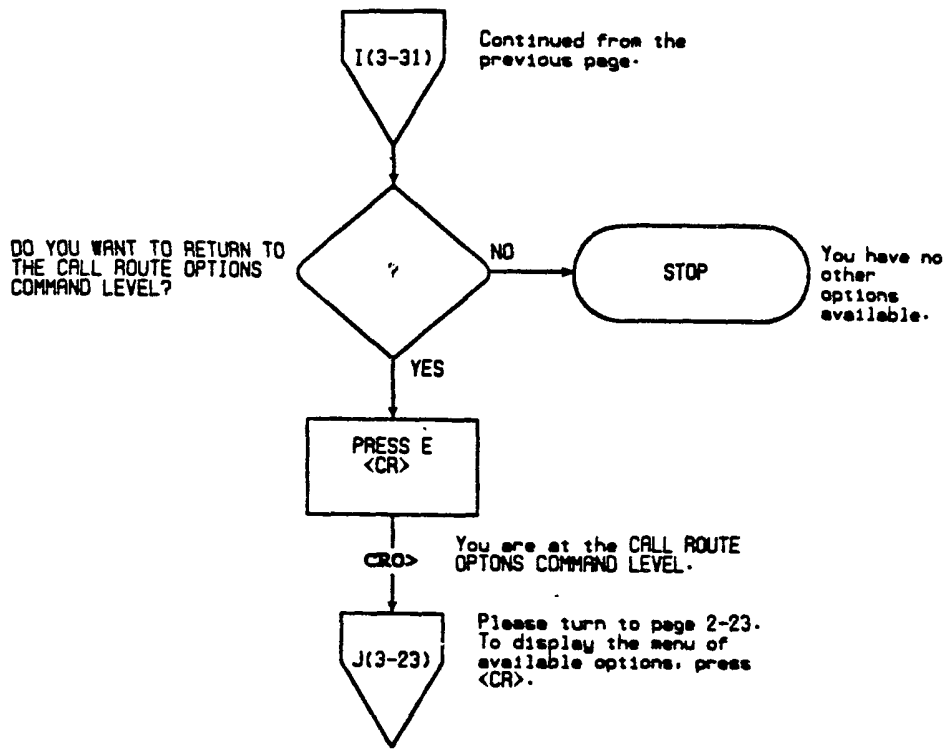
**For Your Notes**

ARS> CNF> CONFIGURE CRO> CALL ROUTE OPTIONS (Page 9 of 10)



ARS-29

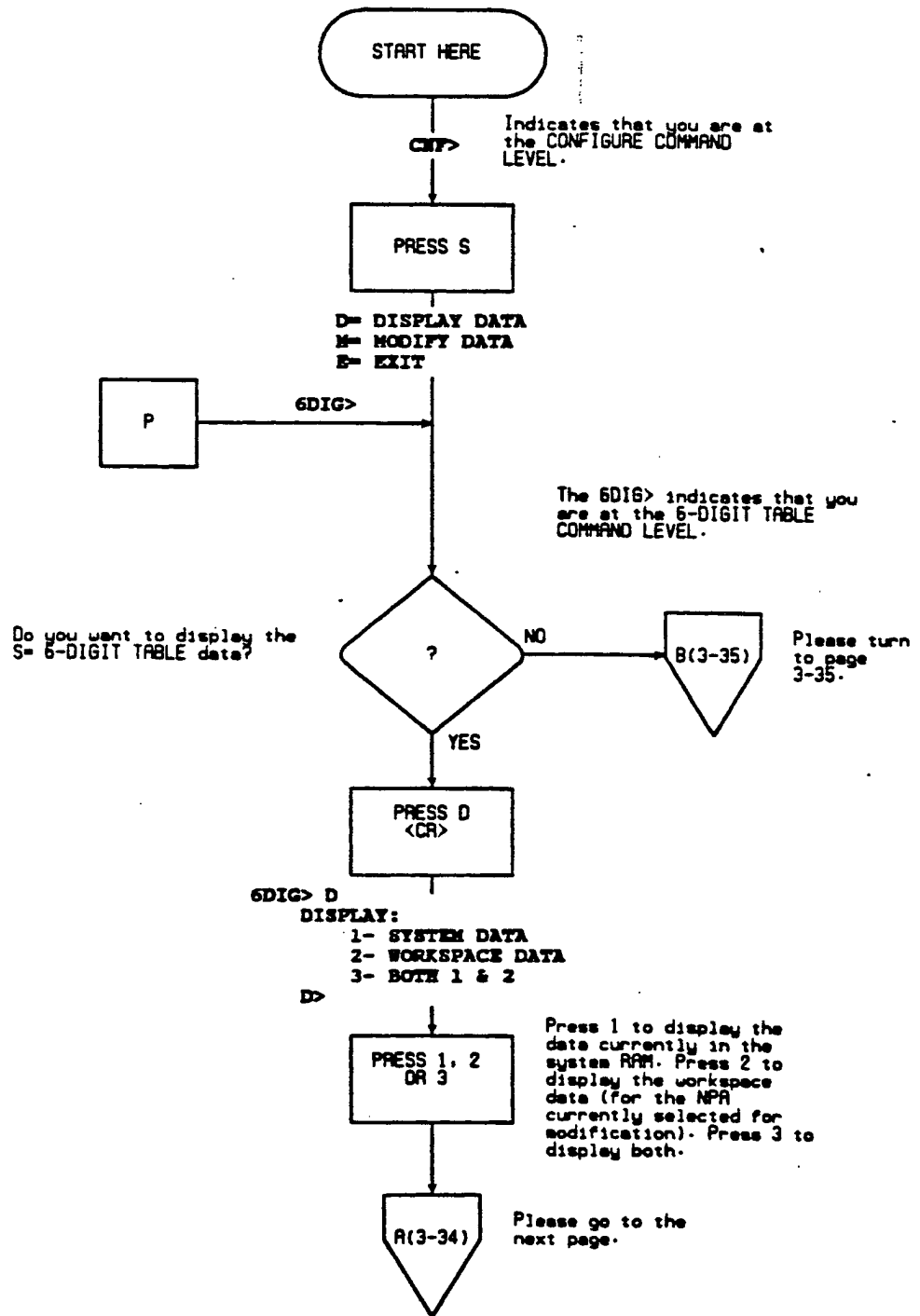
**ARS> CNF> CONFIGURE CRO> CALL ROUTE OPTIONS (Page 10 of 10)**



ARS-30

ARS> CNF> CONFIGURE 6DIG> 6-DIGIT TABLE (Page 1 of 14)

PURPOSE: This chart shows you how to access S= 6-DIGIT TABLE after you have entered the M= CONFIGURE (CNF>) programming sub-field.



**ARS> CNF> CONFIGURE 6DIG> 6-DIGIT TABLE (Page 2 of 14)**



Continued from the previous page.

**SYSTEM DATA (Typical data shown)**

Refer to page 2-19 for explanation.

| NPA | SELECTION NUMBER |         | NWX LIST        |
|-----|------------------|---------|-----------------|
|     | MATCH            | DEFAULT |                 |
| 203 | 01               | 00      | 554-558 321-329 |
|     | 45               | 00      | 222             |
| 816 | 32               | 02      | 223-229 427 866 |

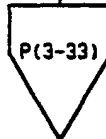
**WORKSPACE DATA**

Refer to page 2-19 for explanation.

| NPA | SELECTION NUMBER |         | NWX LIST        |
|-----|------------------|---------|-----------------|
|     | MATCH            | DEFAULT |                 |
| 203 | 01               | 00      | 554-558 321-329 |
|     | 45               | 00      | 222             |



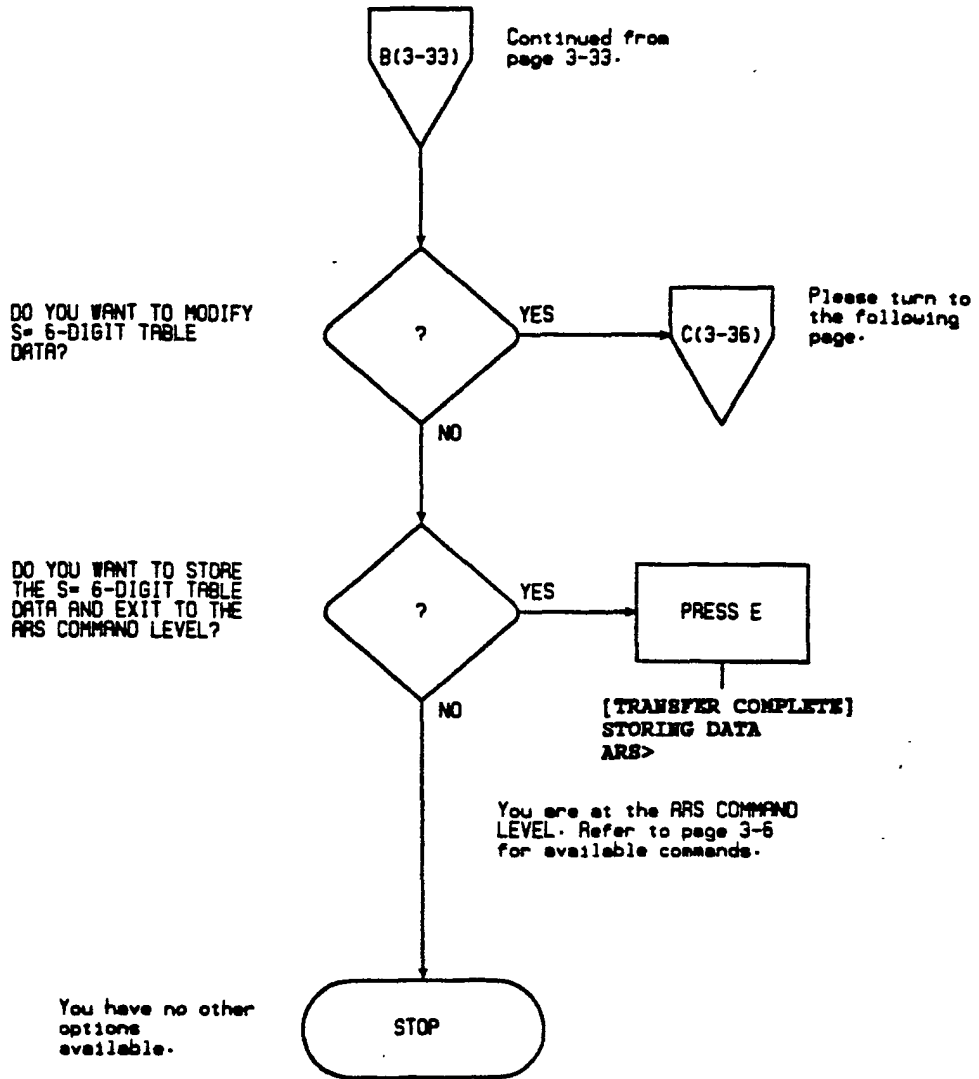
Please go back to page 3-33. You are at the 6-DIGIT TABLE COMMAND LEVEL.



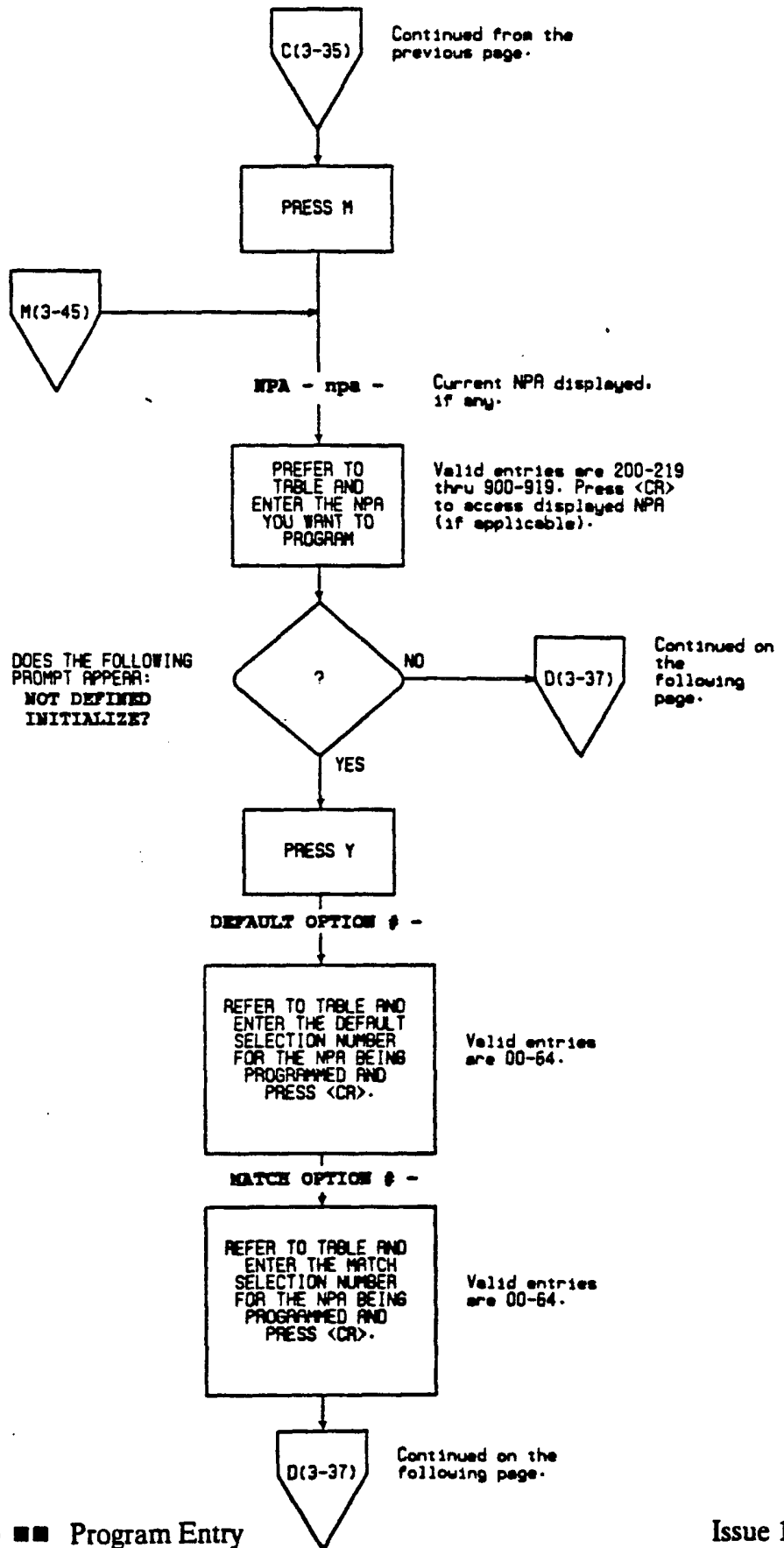
NOTE: For the NPA currently selected for modification, the workspace data and the system data will be identical. This is because 6-digit table data is stored directly into system RAM, without first being buffered in the ARS workspace.

ARS-32

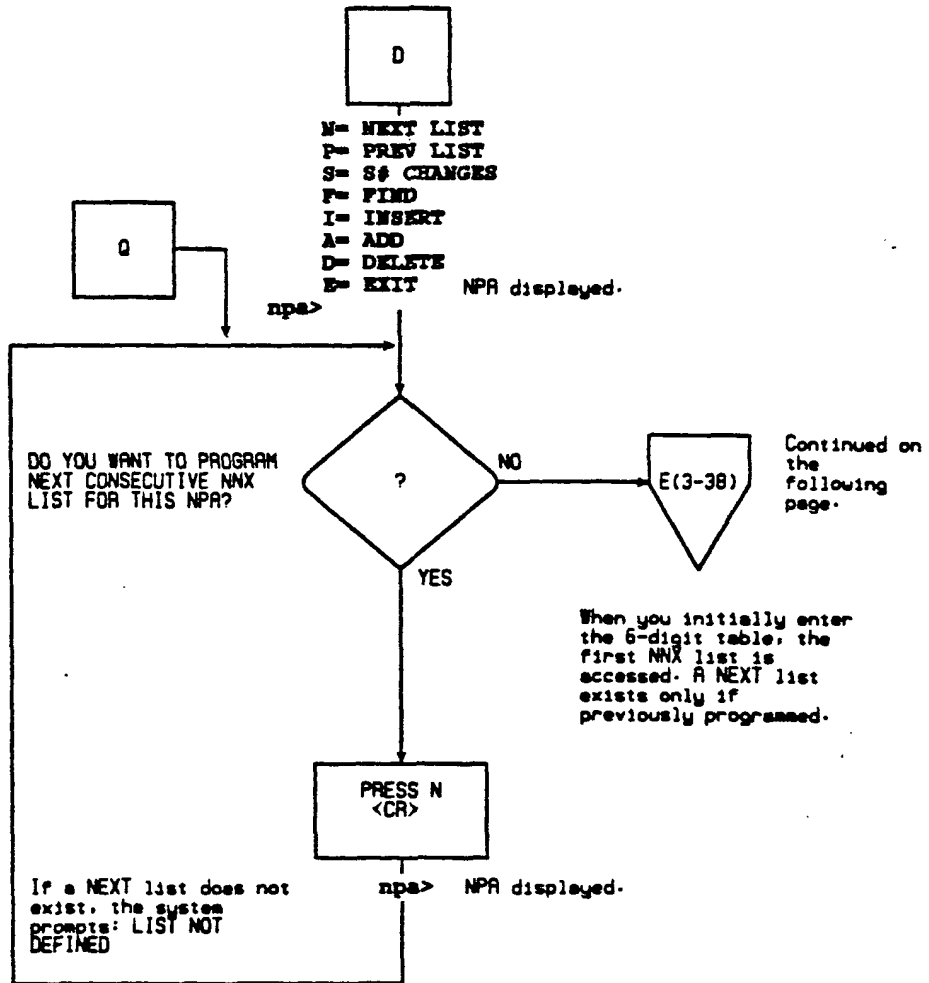




ARS-33

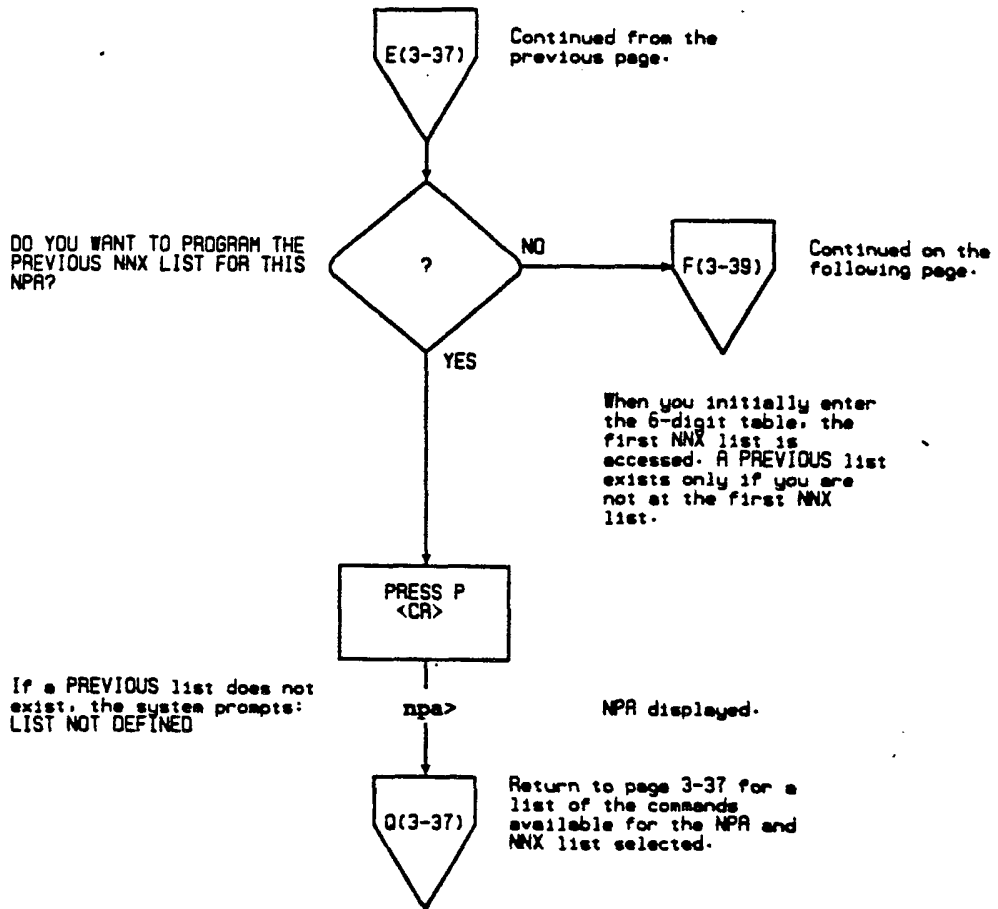


ARS-34

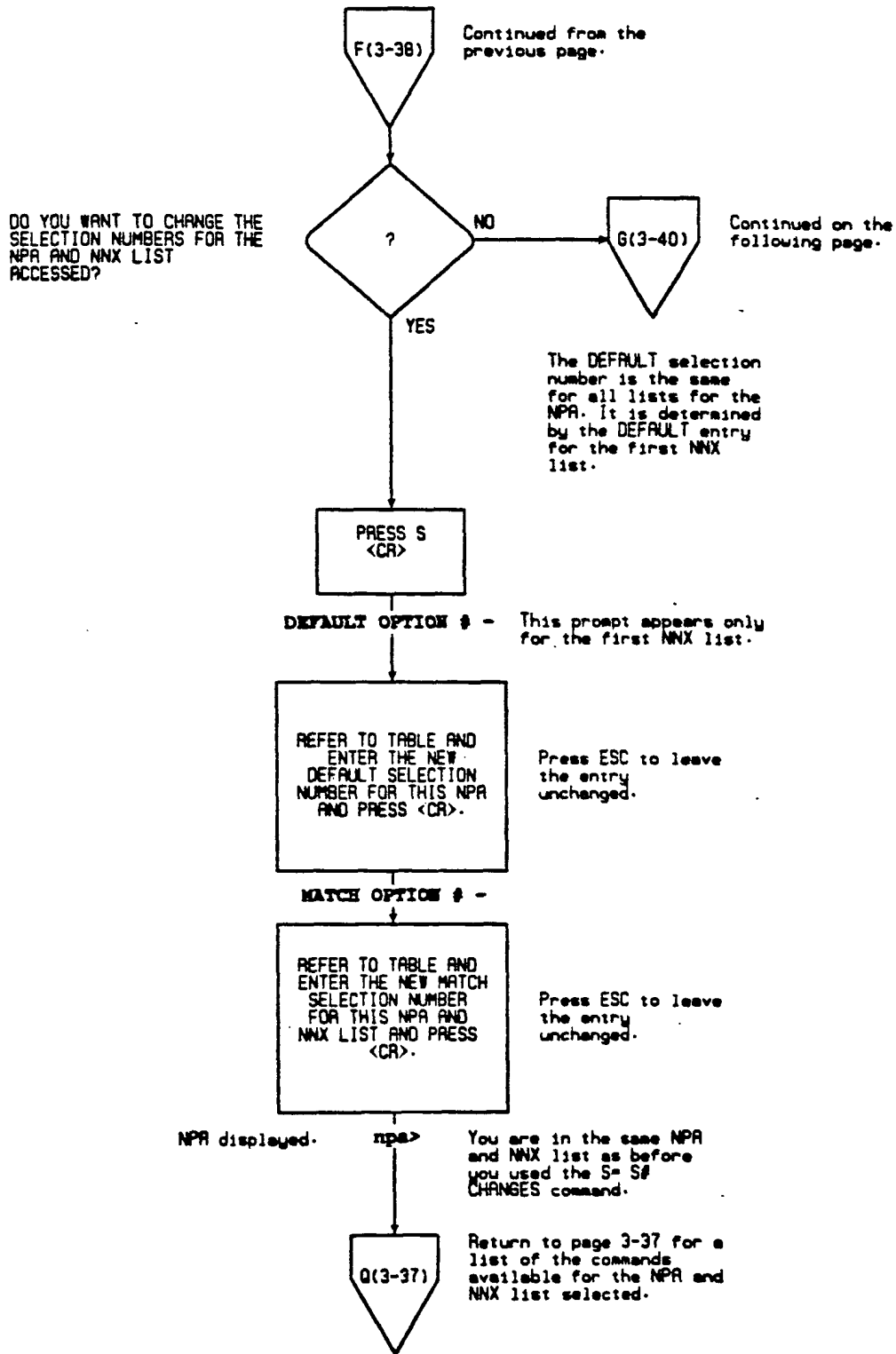


ARS-35

**ARS> CNF> CONFIGURE 6DIG> 6-DIGIT TABLE (Page 6 of 14)**

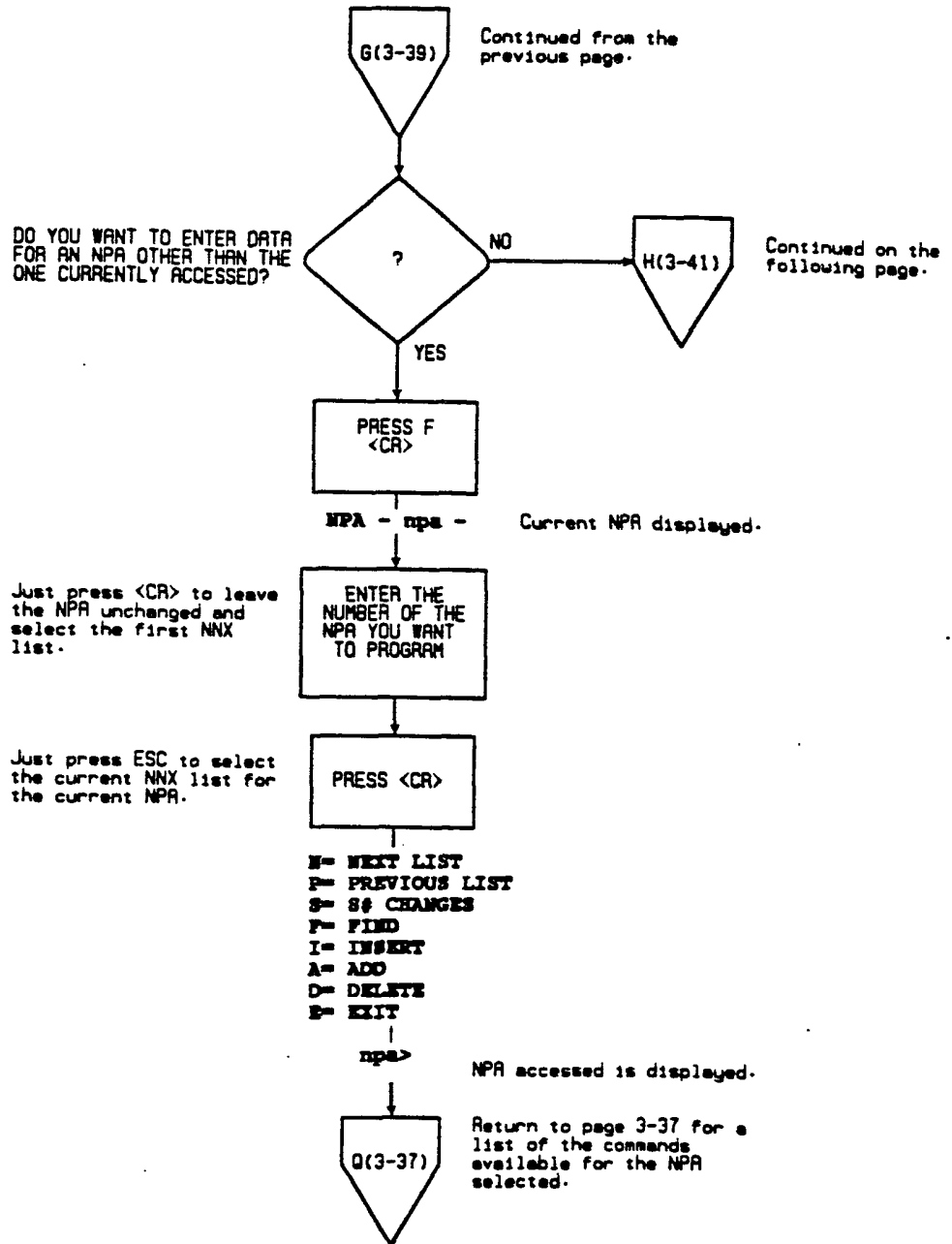


ARS-36

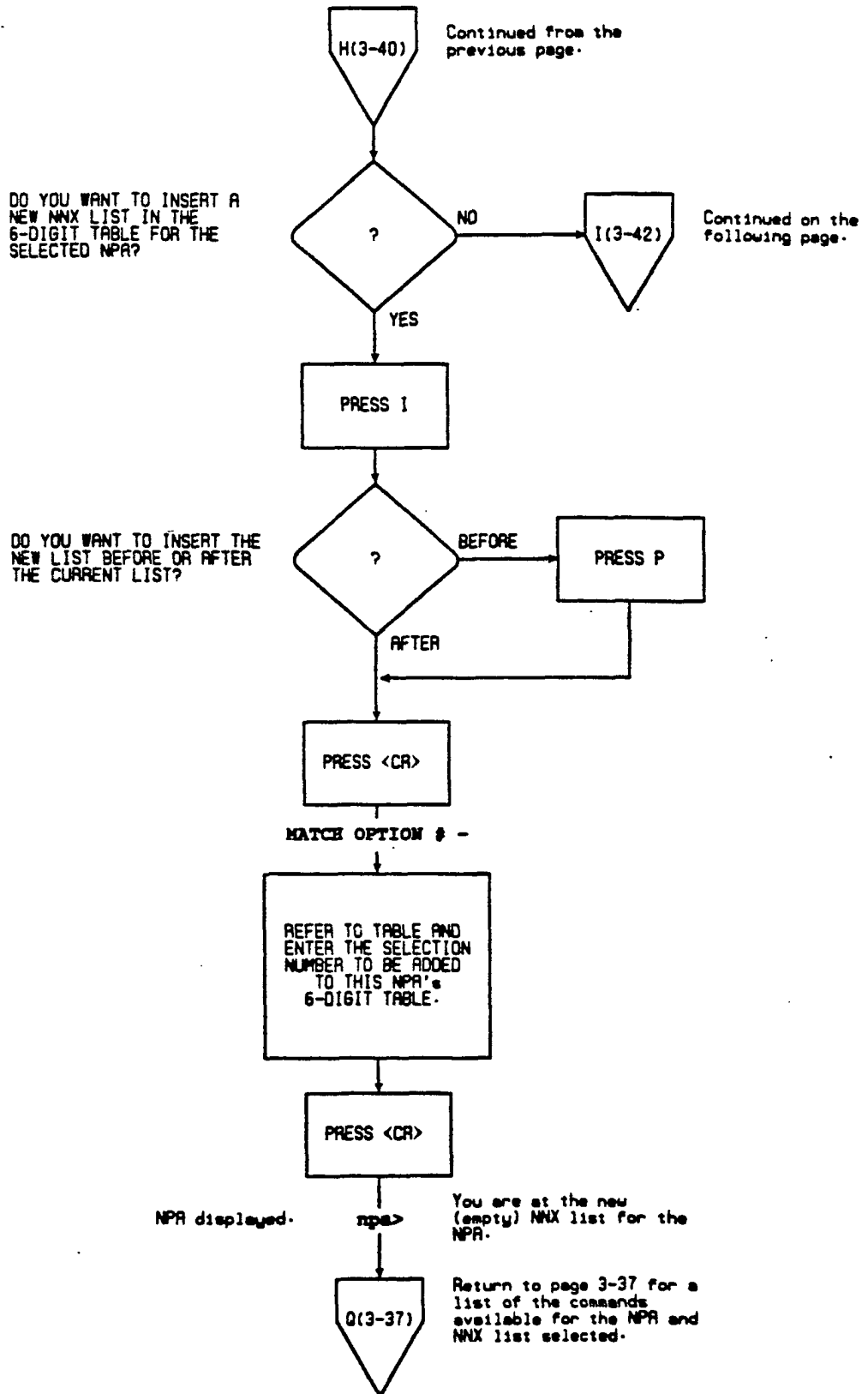


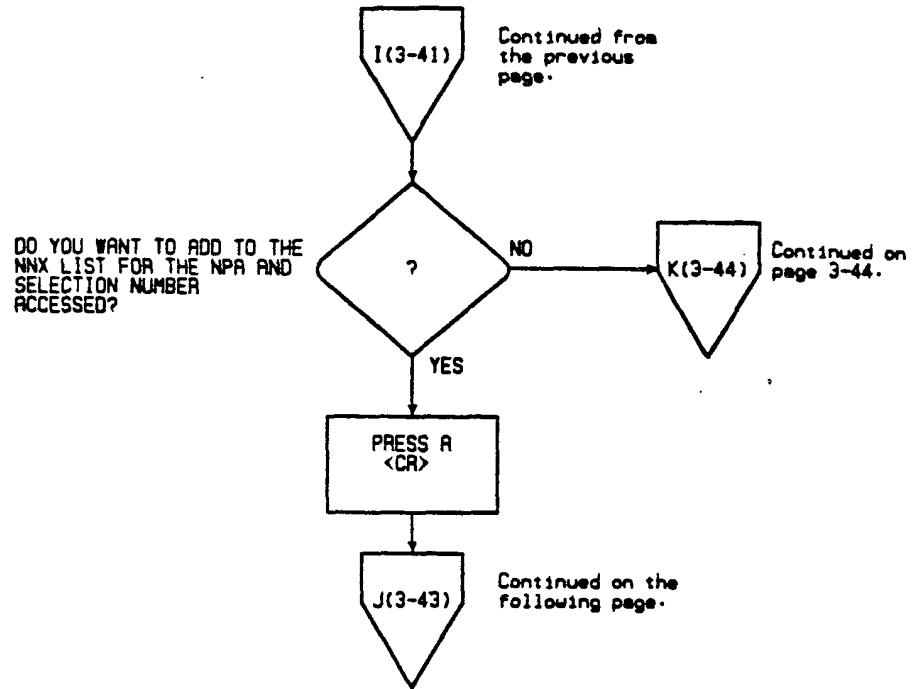
ARS-37

**ARS> CNF> CONFIGURE 6DIG> 6-DIGIT TABLE (Page 8 of 14)**



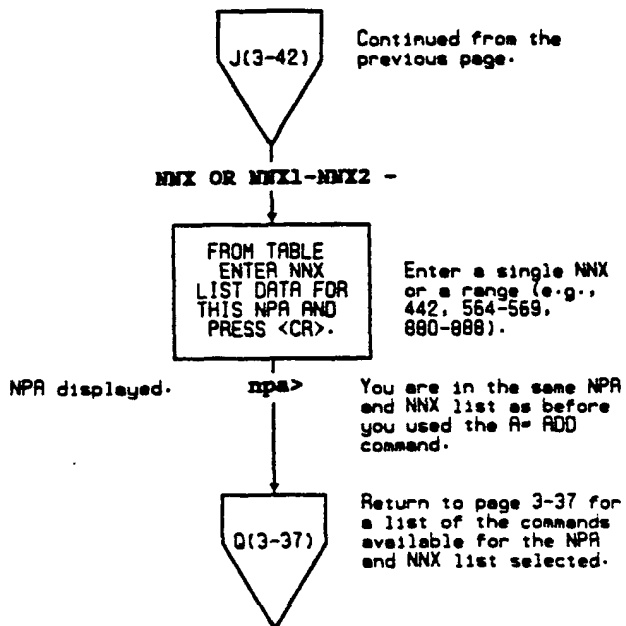
ARS-38





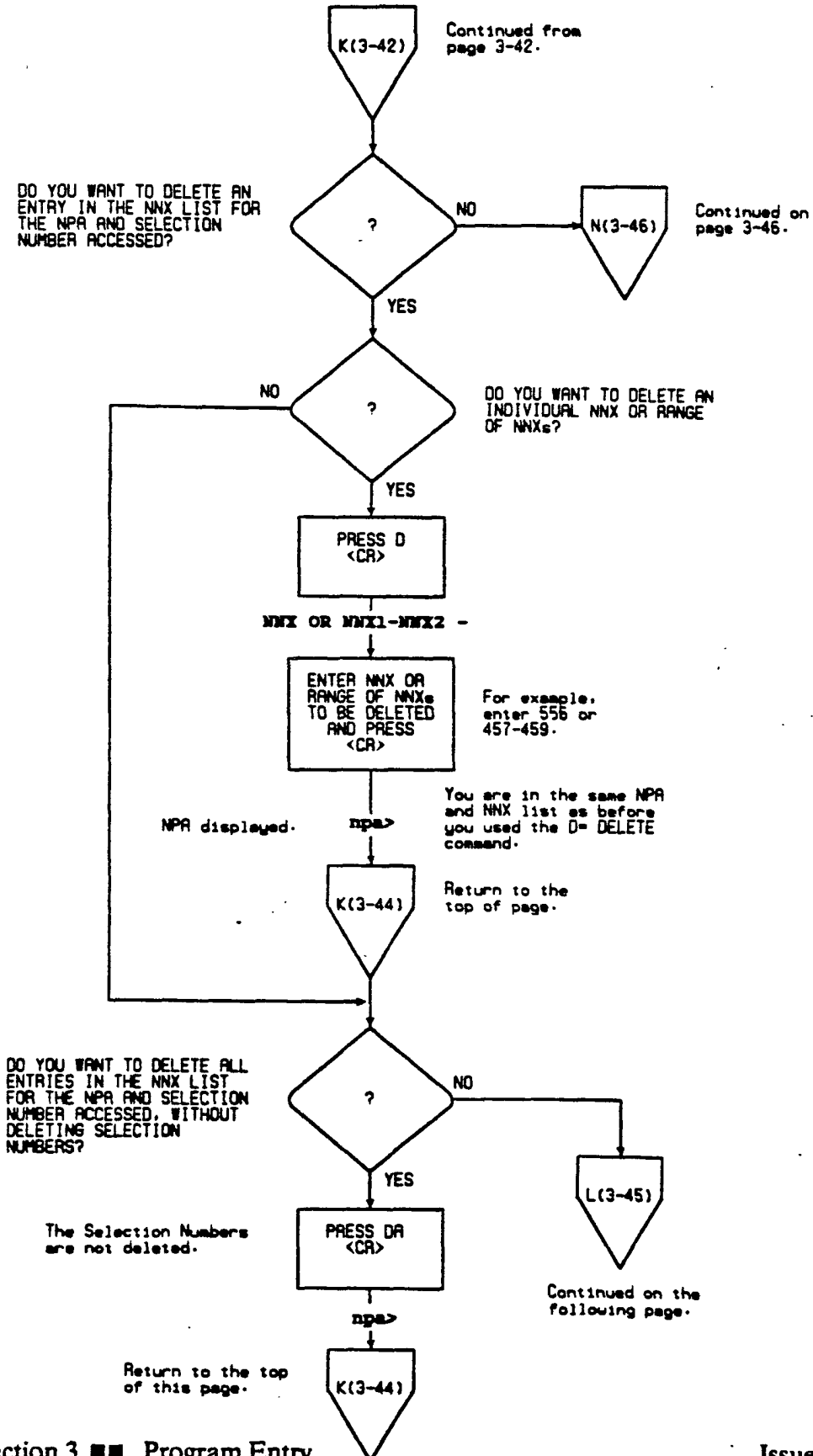
ARS-40



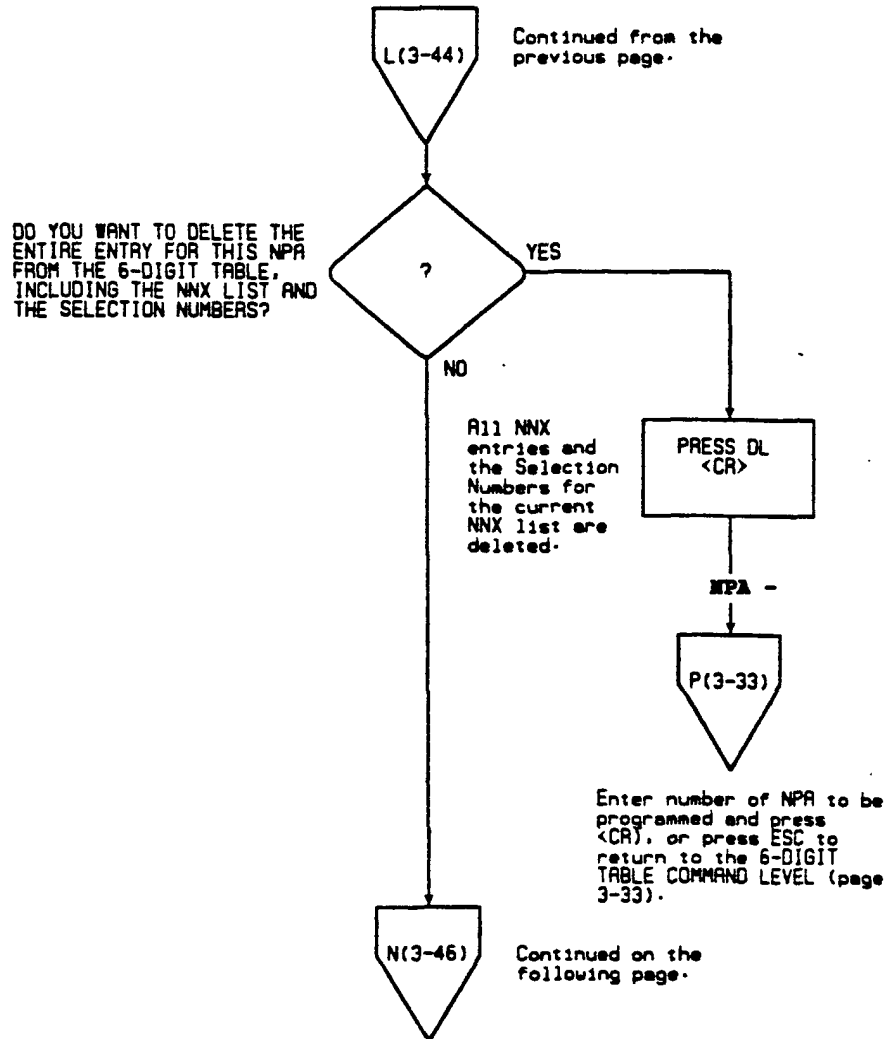


ARS-41

ARS> CNF> CONFIGURE 6DIG> 6-DIGIT TABLE (Page 12 of 14)

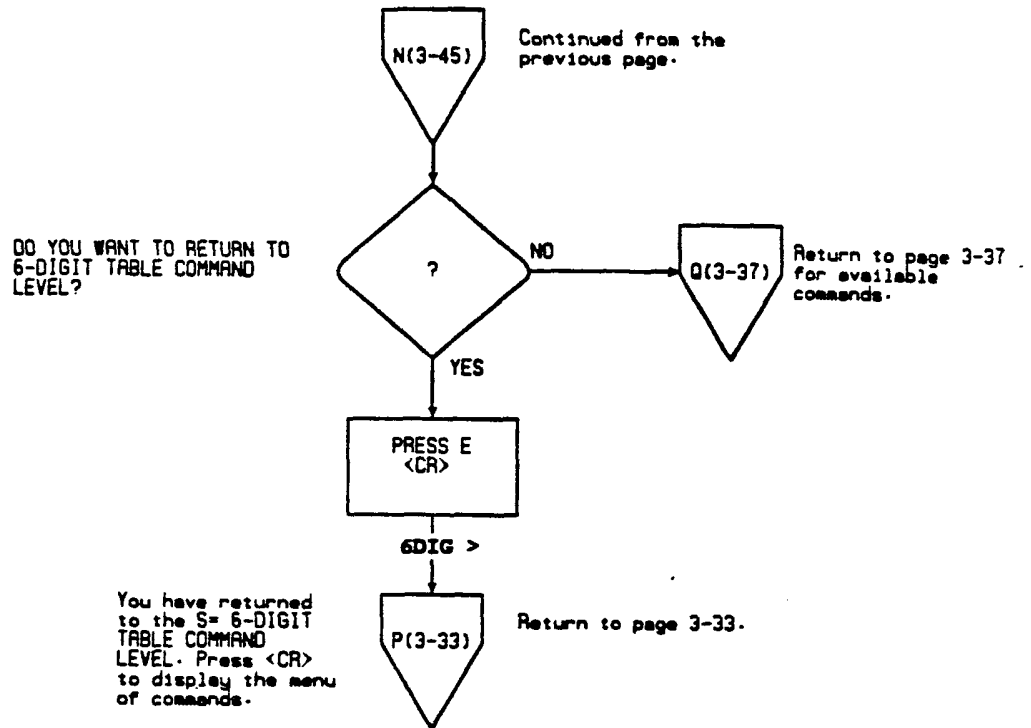


ARS-42



ARS-43

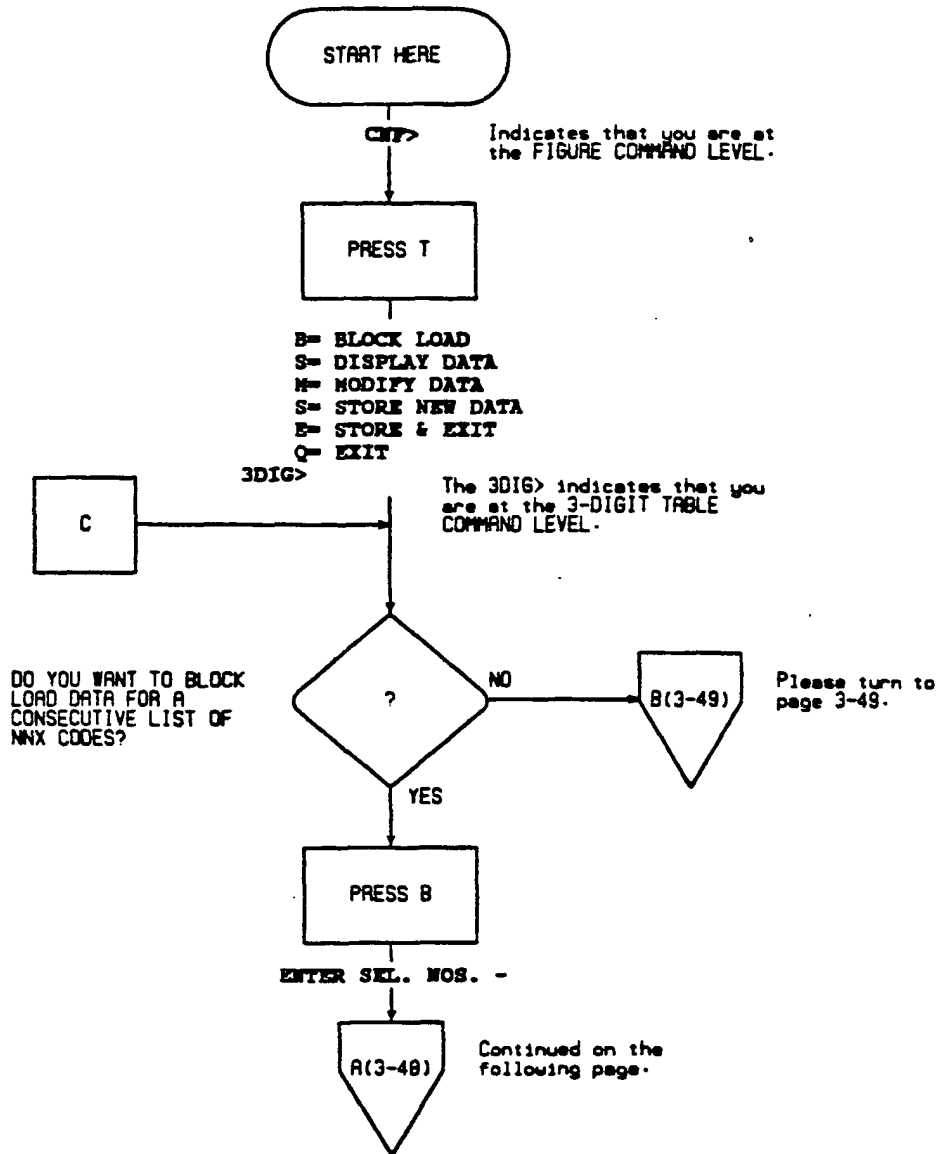
**ARS> CNF> CONFIGURE 6DIG> 6-DIGIT TABLE (Page 14 of 14)**



ARS-44

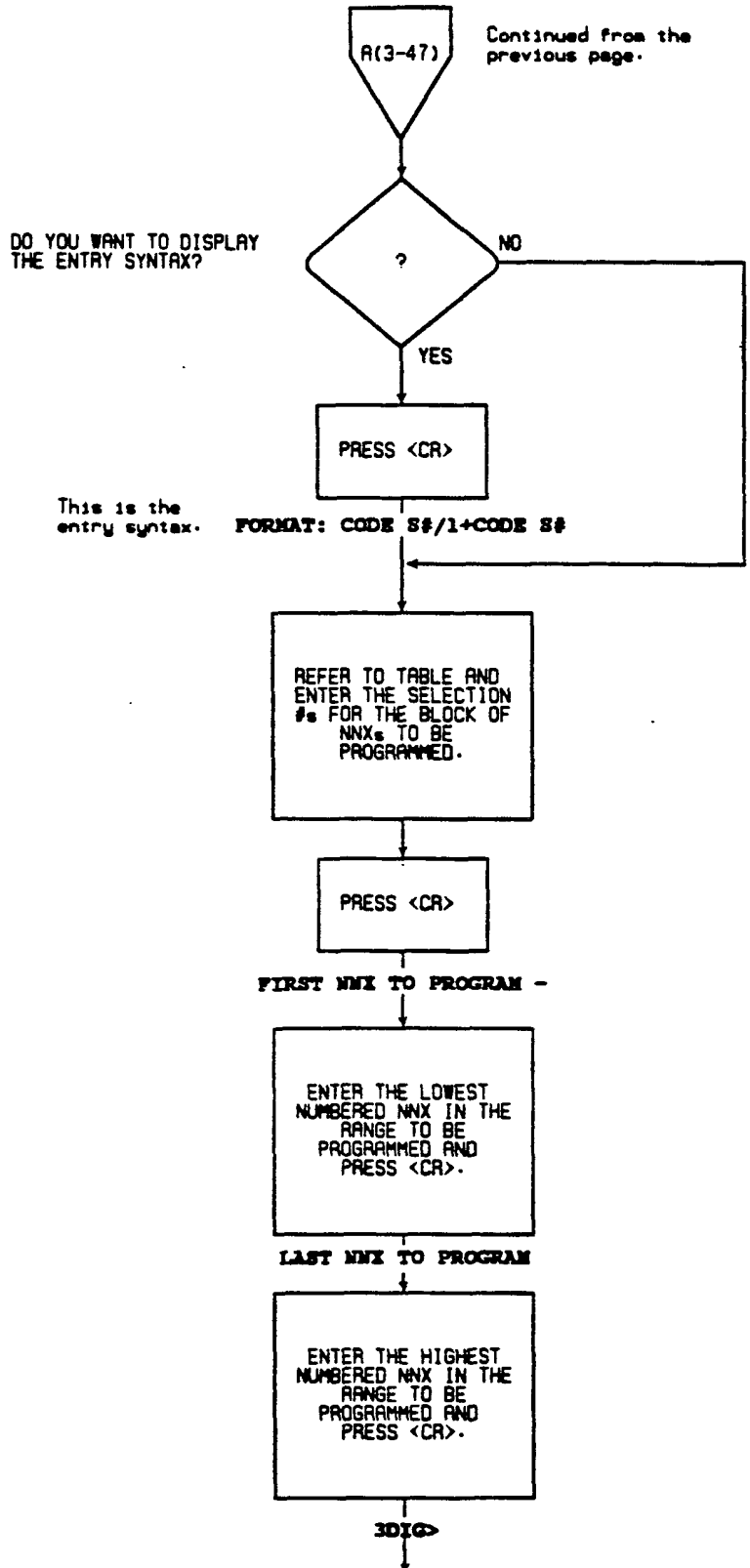
**ARS> CNF> CONFIGURE 3DIG> 3-DIGIT TABLE (Page 1 of 8)**

PURPOSE: This chart shows you how to access the T= 3-DIGIT TABLE commands after you have entered the M= CONFIGURE (CNF>) programming sub-field.



ARS-45

**ARS> CNF> CONFIGURE 3DIG> 3-DIGIT TABLE (Page 2 of 8)**



Continued from the previous page.

DO YOU WANT TO DISPLAY THE ENTRY SYNTAX?

This is the entry syntax. **FORMAT: CODE S#/1+CODE S#**

REFER TO TABLE AND ENTER THE SELECTION #s FOR THE BLOCK OF NNXs TO BE PROGRAMMED.

PRESS <CR>

FIRST NNX TO PROGRAM -

ENTER THE LOWEST NUMBERED NNX IN THE RANGE TO BE PROGRAMMED AND PRESS <CR>.

LAST NNX TO PROGRAM

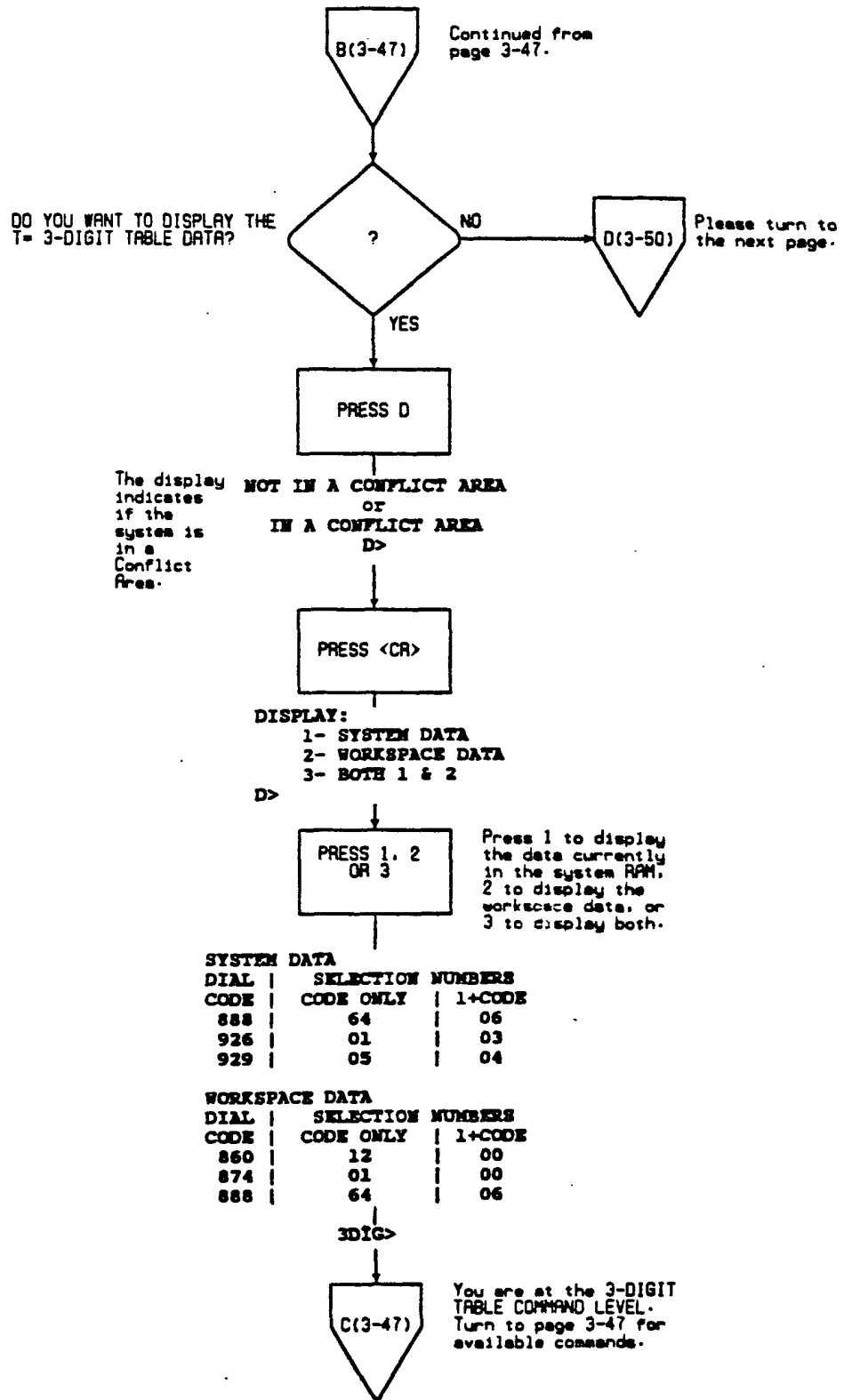
ENTER THE HIGHEST NUMBERED NNX IN THE RANGE TO BE PROGRAMMED AND PRESS <CR>.

3DIG>

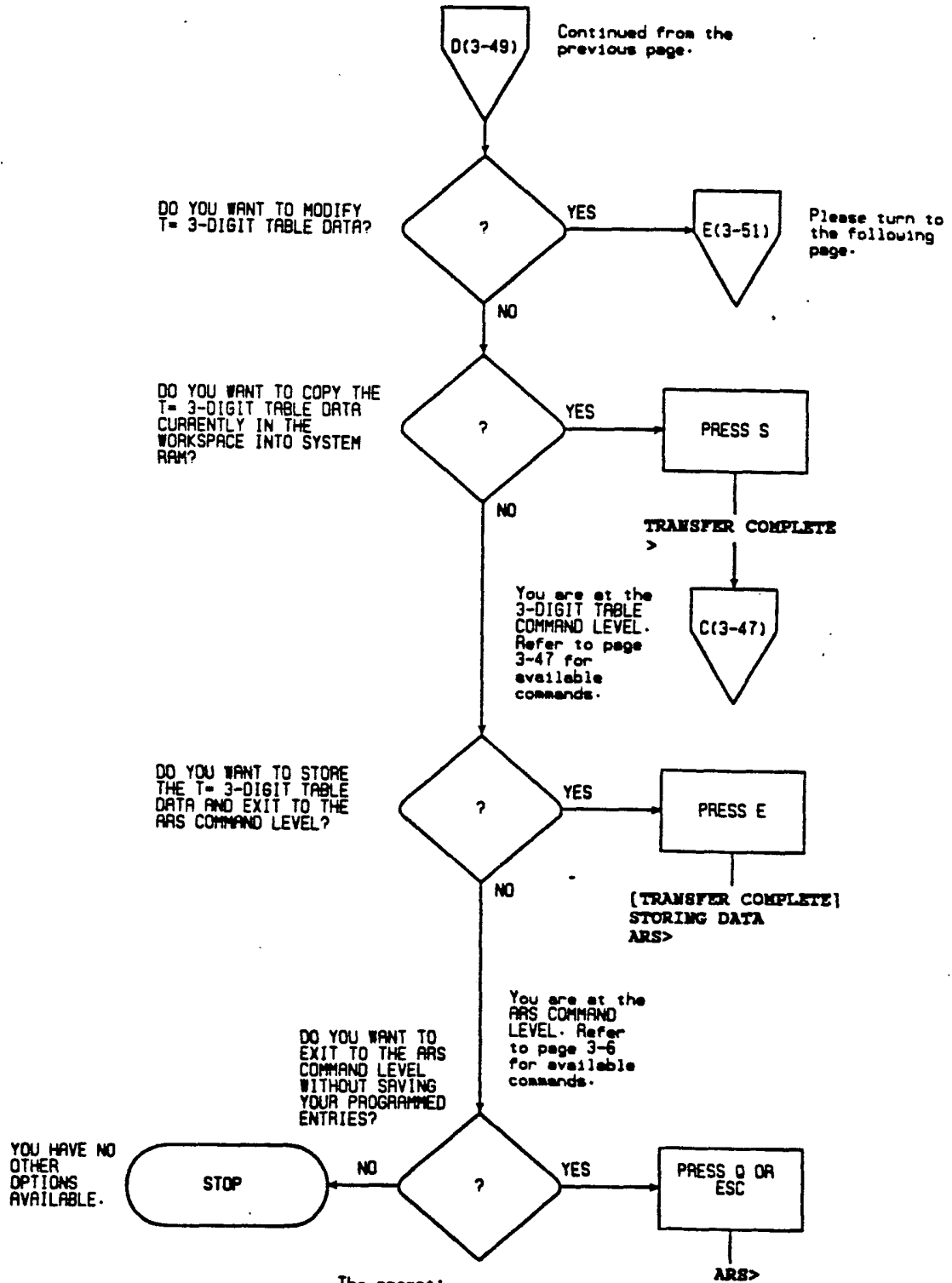
ARS-46

You are at the 3-DIGIT TABLE COMMAND LEVEL. Turn to page 3-47 for available commands.

ARS> CNF> CONFIGURE 3DIG> 3-DIGIT TABLE (Page 3 of 8)



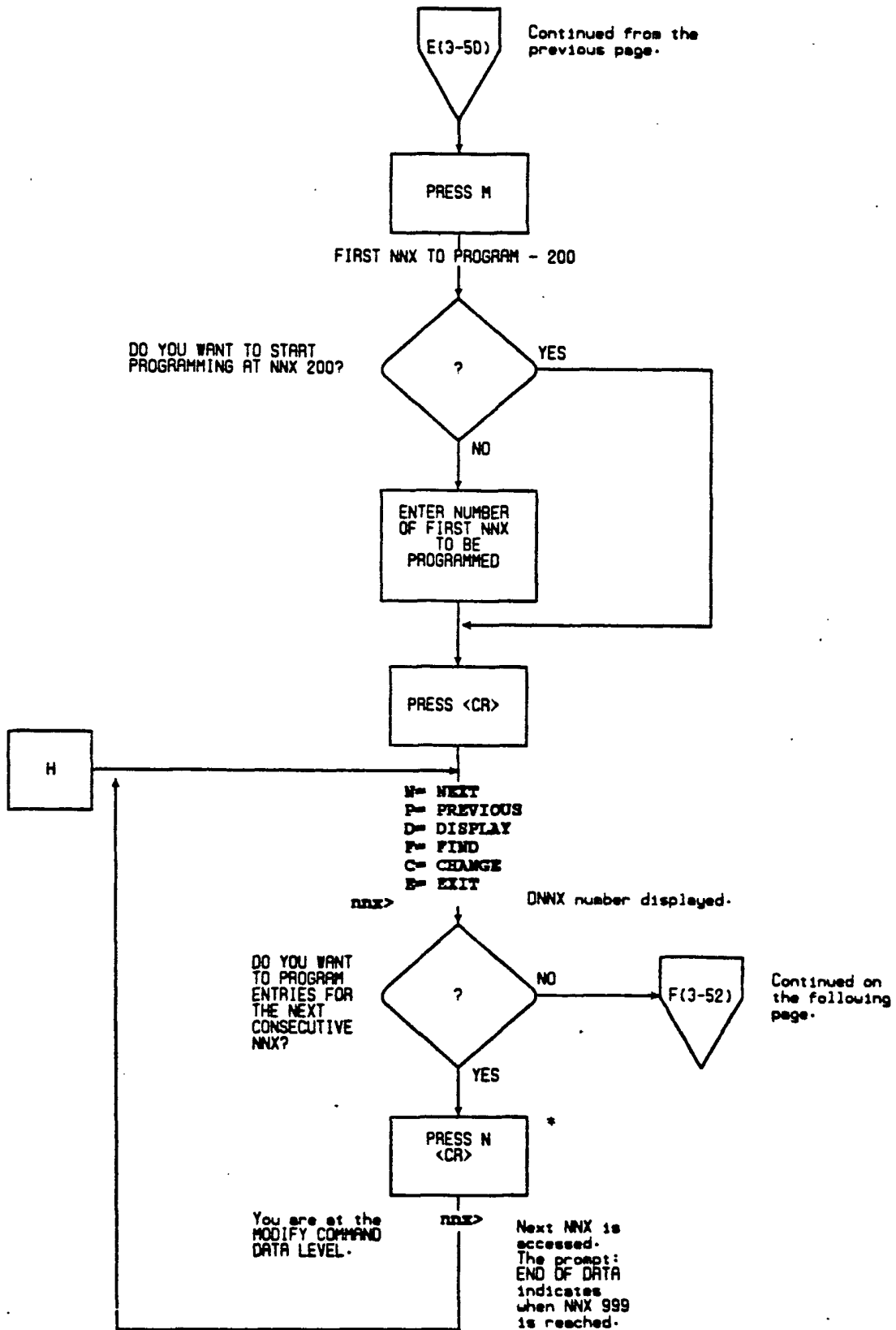
ARS> CNF> CONFIGURE 3DIG> 3-DIGIT TABLE (Page 4 of 8)



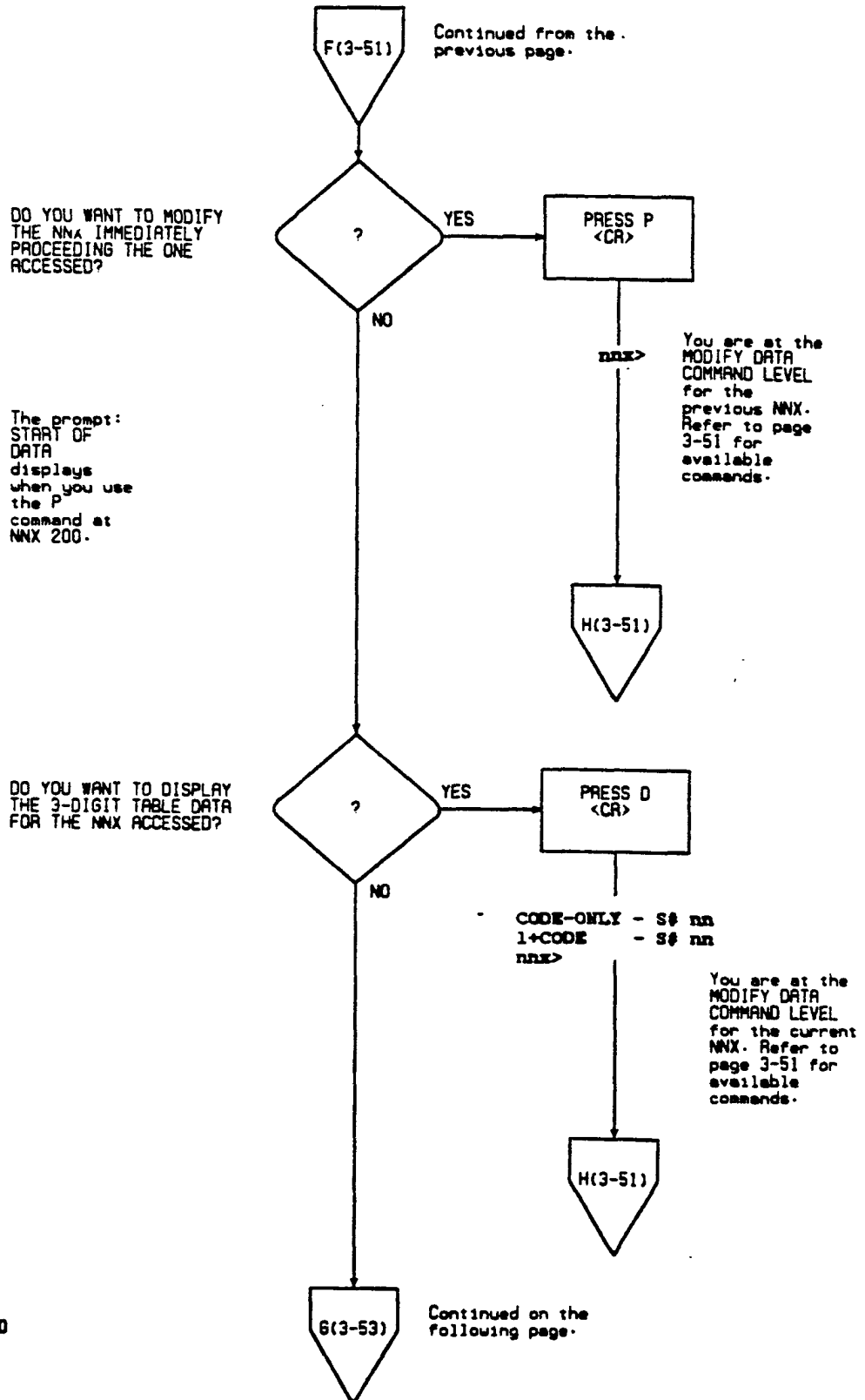
The prompt:  
 WANT TO LOSE CHANGES?  
 allows you to change your mind.  
 Enter Y to initiate the command  
 and go to the ARS COMMAND LEVEL  
 (page 3-6); N to return to the  
 3-DIGIT COMMAND LEVEL (page  
 3-47).

ARS-48





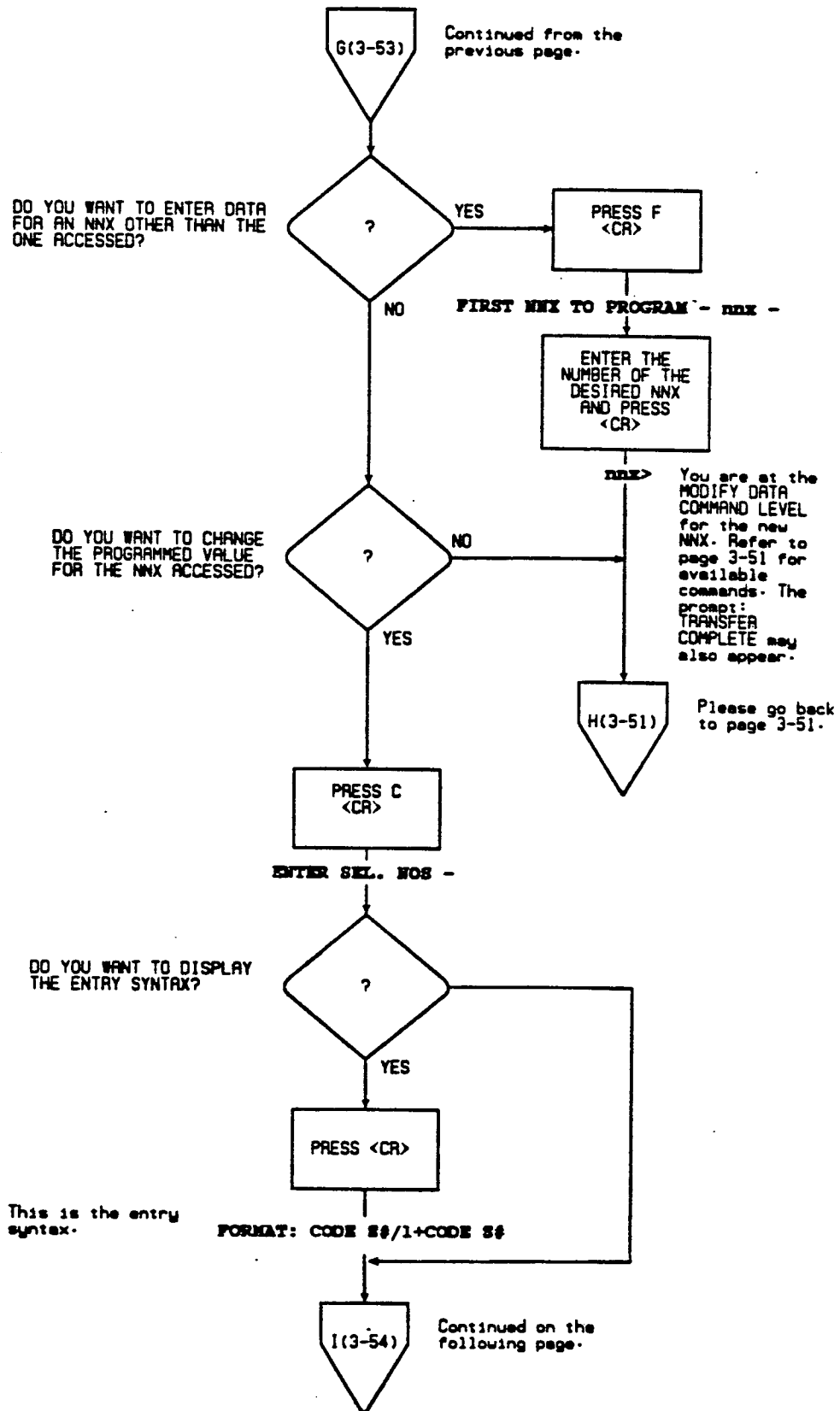
**ARS> CNF> CONFIGURE 3DIG> 3-DIGIT TABLE (Page 6 of 8)**



ARS-50

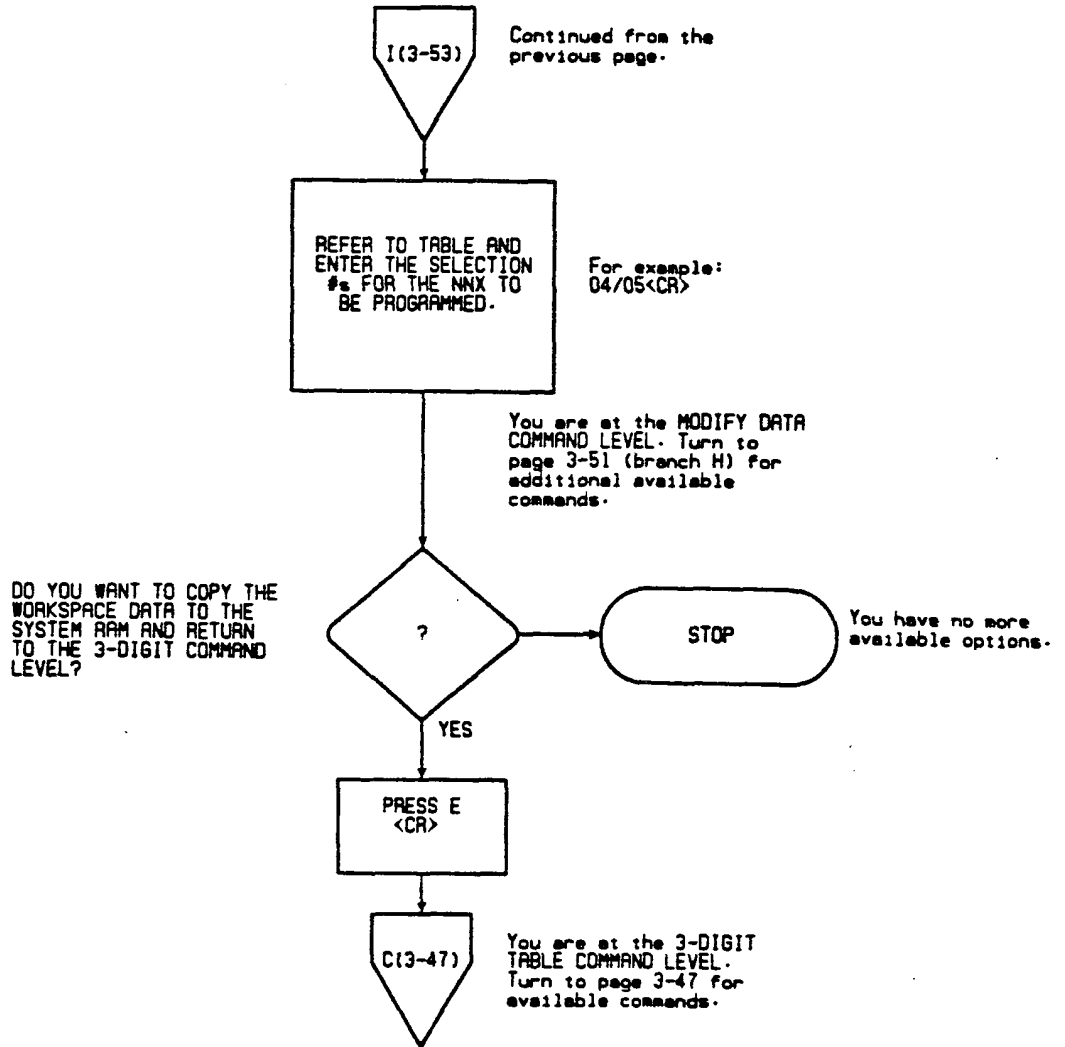
\* If the prompt PREV PAGE ? [Y/N] appears, press Y and continue programming. If you press N, you will return to the MODIFY DATA COMMAND LEVEL.

**ARS> CNF> CONFIGURE 3DIG> 3-DIGIT TABLE (Page 7 of 8)**



ARS-51

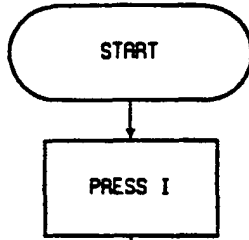
**ARS> CNF> CONFIGURE 3DIG> 3-DIGIT TABLE (Page 8 of 8)**



ARS-52

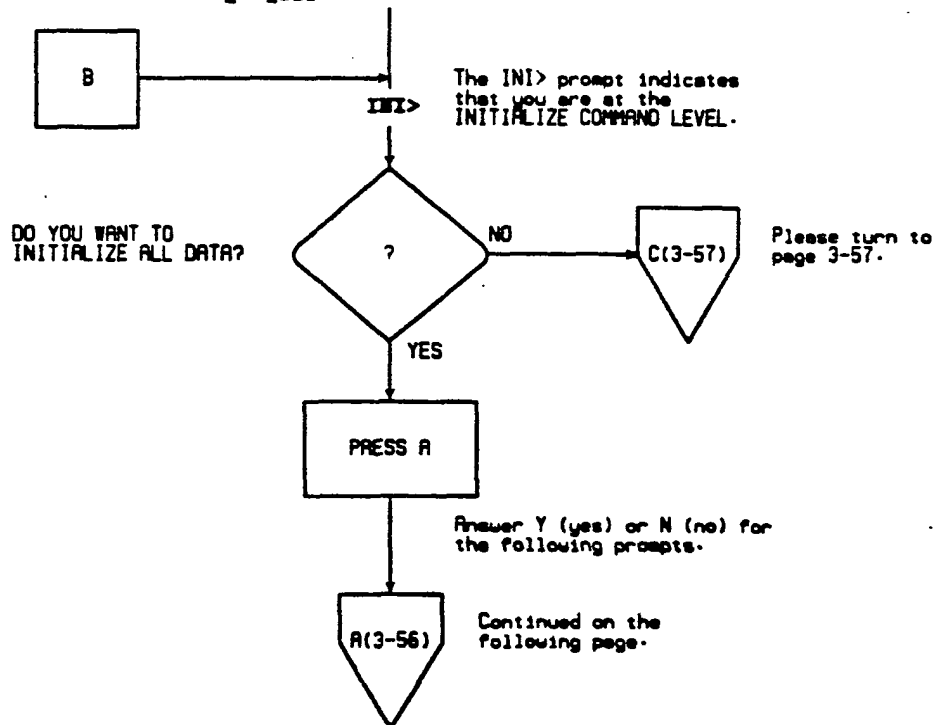
**ARS> CNF> CONFIGURE INI> INITIALIZE (Page 1 of 6)**

PURPOSE: This chart shows you how to access I= INITIALIZE after you have entered the ARS COMMAND LEVEL. ARS must be initialized prior to initial programming.



NOT INITIALIZED  
 E.A. & OPR-ASSIST SEL. NOS.  
 SIX-DIGIT TABLE  
 THREE-DIGIT TABLE  
 ROUTING DEFINITIONS  
 RATE PERIOD TABLE  
 DIAL TREATMENT TABLE

SELECT DATA TO BE INITIALIZED:  
 A= ALL DATA  
 D= DIAL TREATMENTS  
 O= OPR-ASSIST & E.A. SEL. NOS.  
 R= RATE PERIODS  
 S= 6-DIGIT & SEL. NO. LISTS  
 T= 3-DIGIT TABLE  
 C= CHECK DATA  
 B= EXIT  
 Q= QUIT





Continued from the previous page.

Refer to page 3-57 for more information.

DIAL TREATMENT TABLE  
INITIALIZE? [Y/N]

Refer to page 3-57 for more information.

E.A. & OPR-ASSIST SEL. NOS.  
INITIALIZE? [Y/N]

Refer to page 3-58 for more information.

RATE PERIOD TABLE  
INITIALIZE [Y/N]

Refer to page 3-58 for more information.

SIX-DIGIT TABLE AND ROUTING DEFINITION  
INITIALIZE [Y/N]?

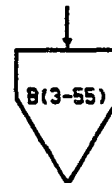
Refer to page 3-59 for more information.

THREE DIGIT TABLE

IN A CONFLICT AREA [Y/N] -  
MAX COS TO DIAL 976 - 00 -

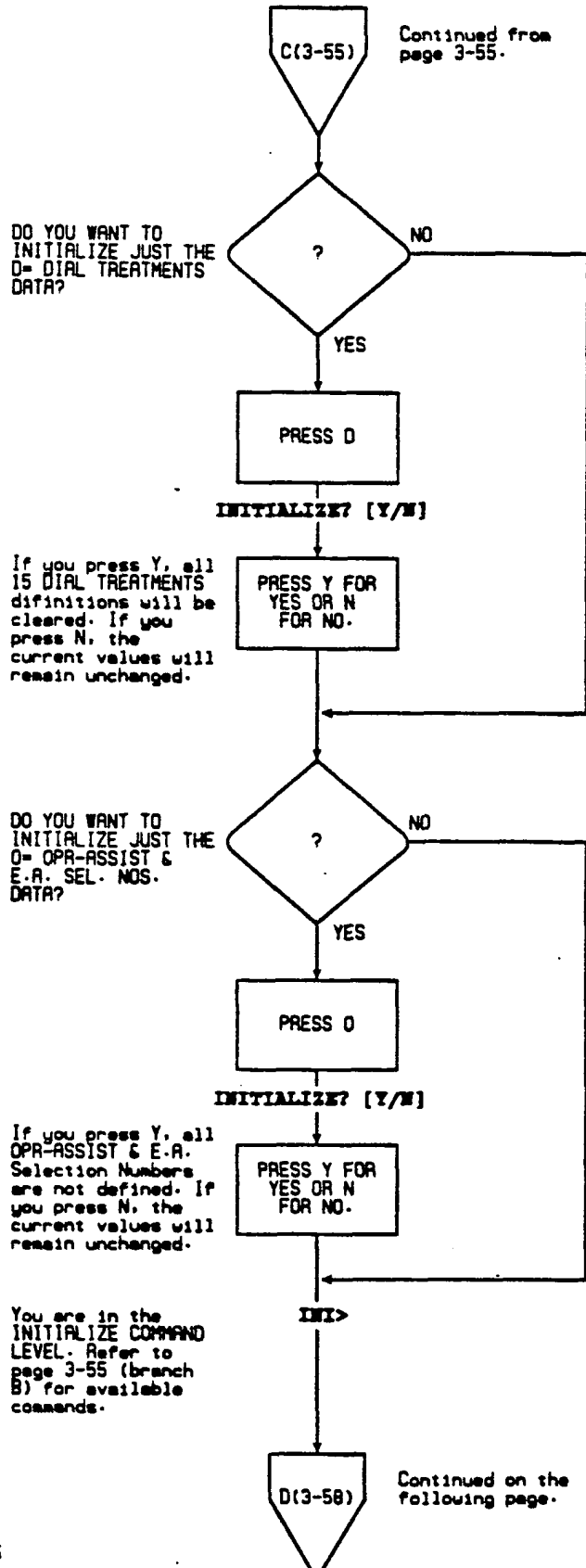
INITIALIZE [Y/N]

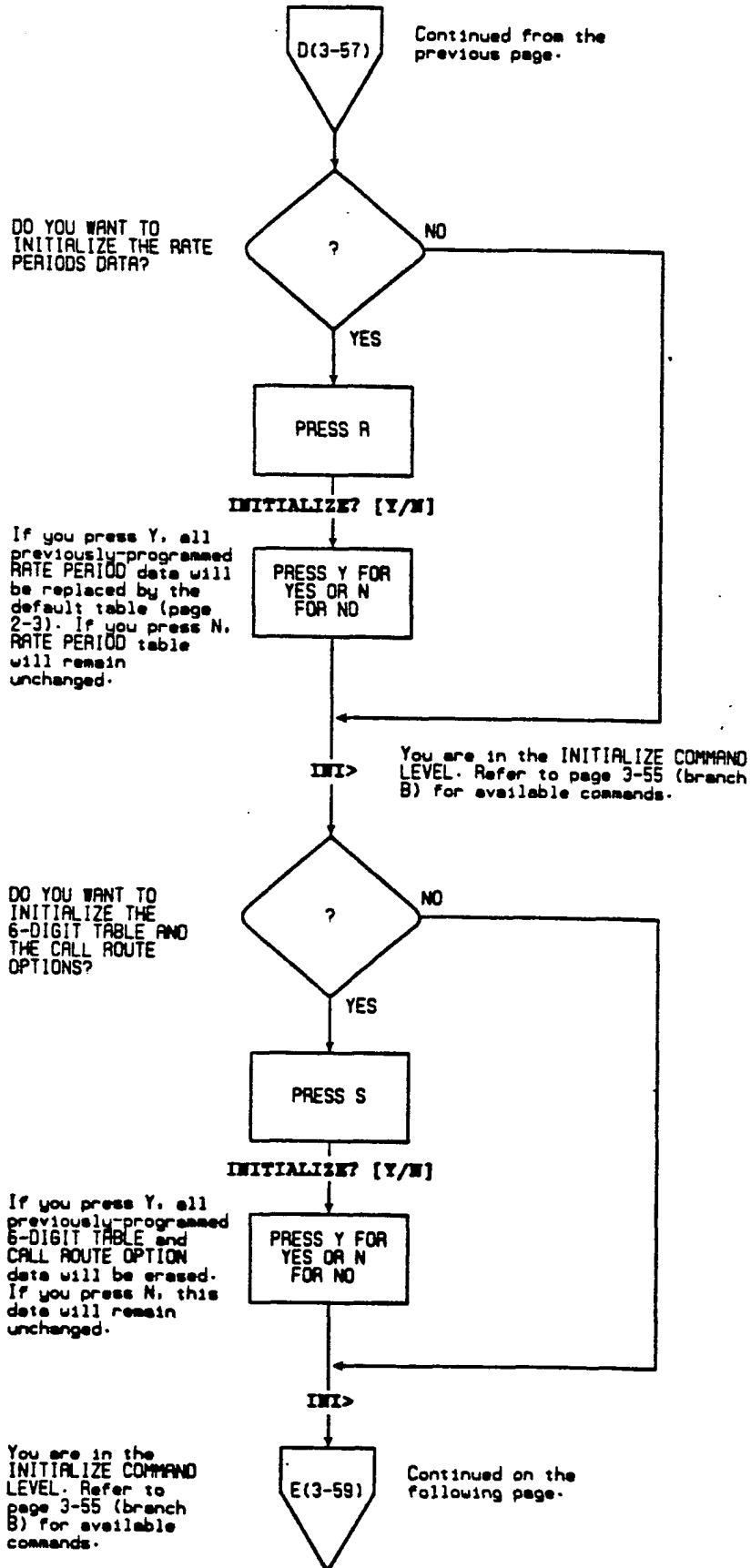
DATABASE FUNCTIONAL  
INI>



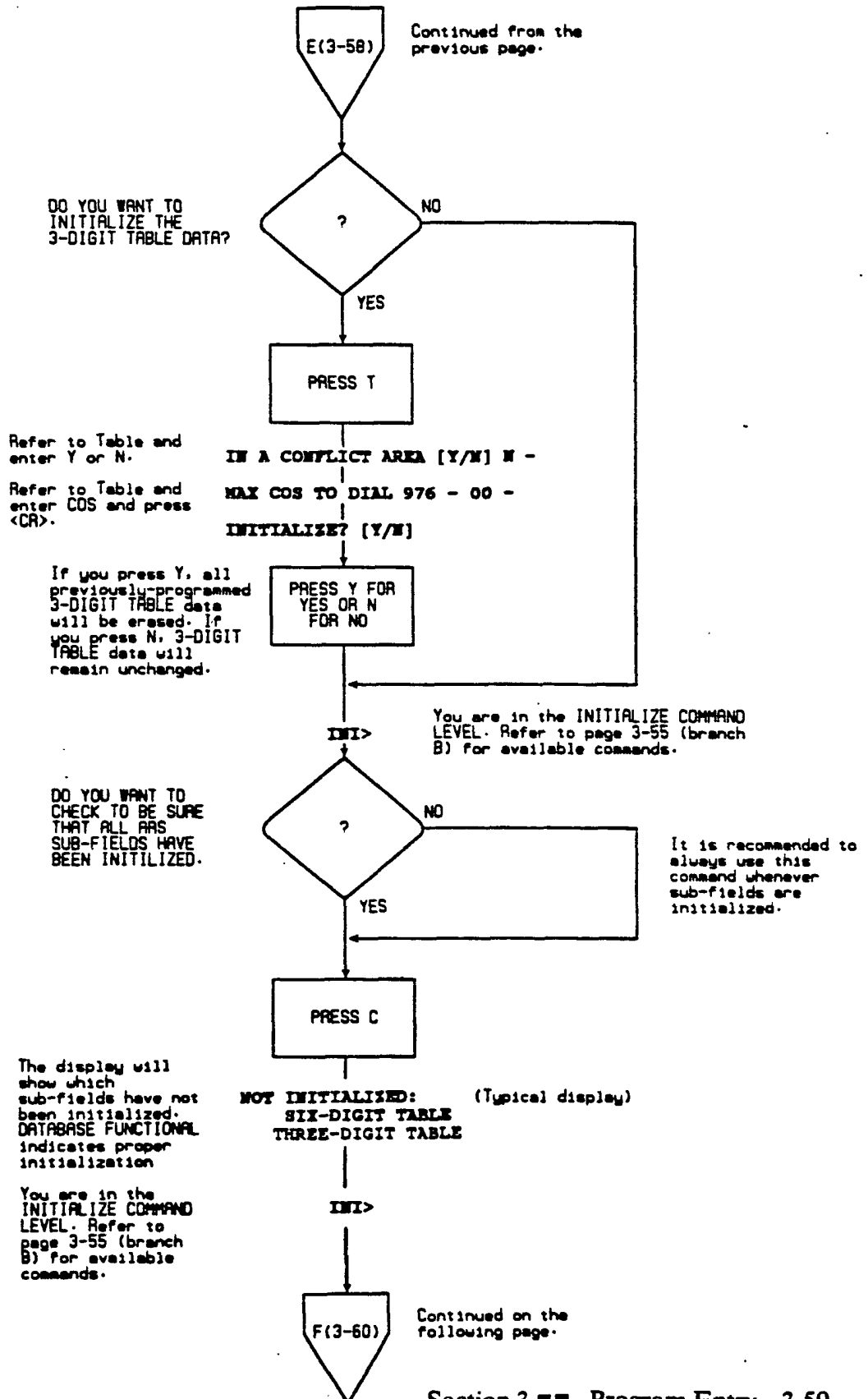
You are at the INITIALIZE COMMAND LEVEL. Return to page 3-55 (branch B) for available commands.

ARS-54

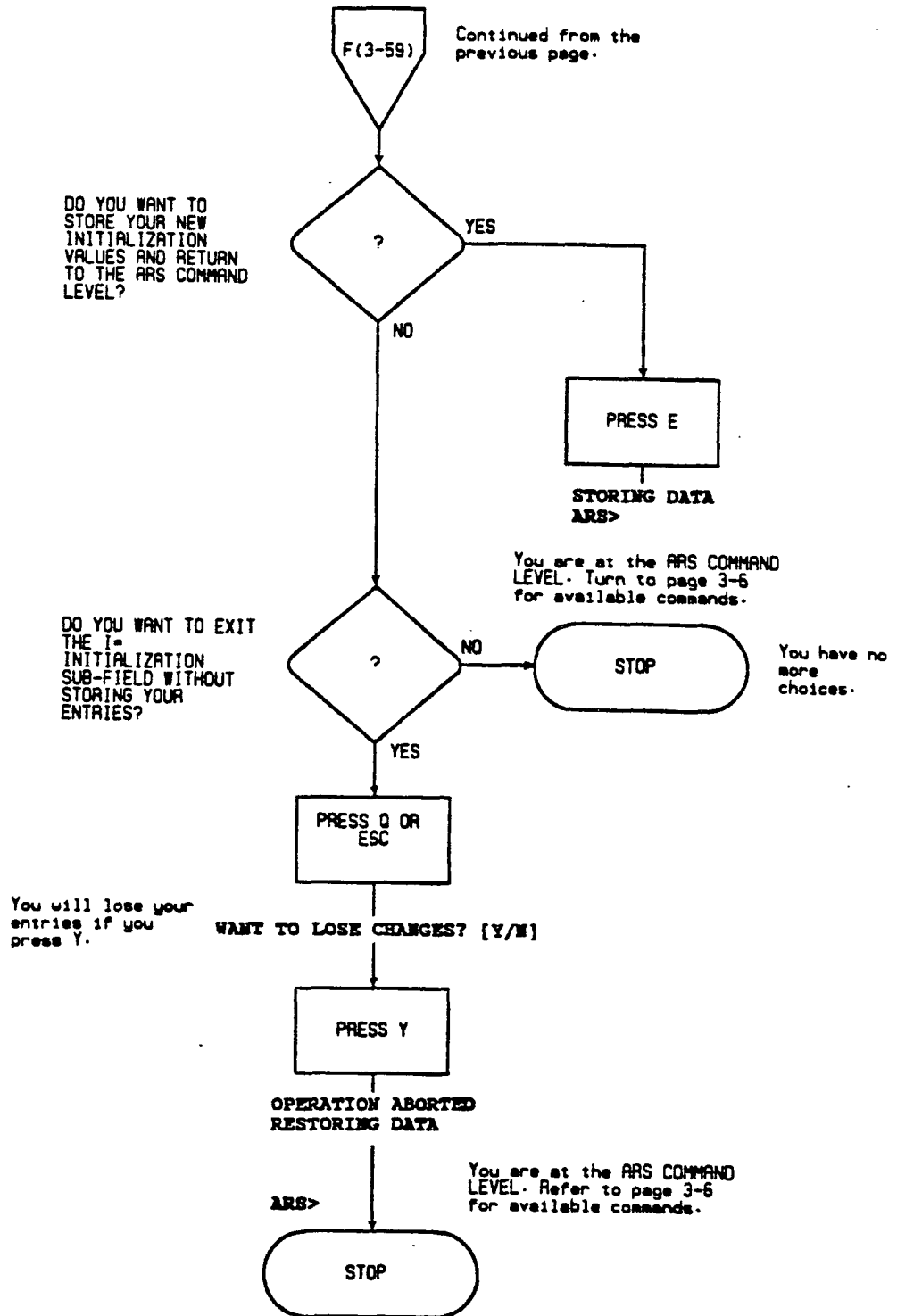






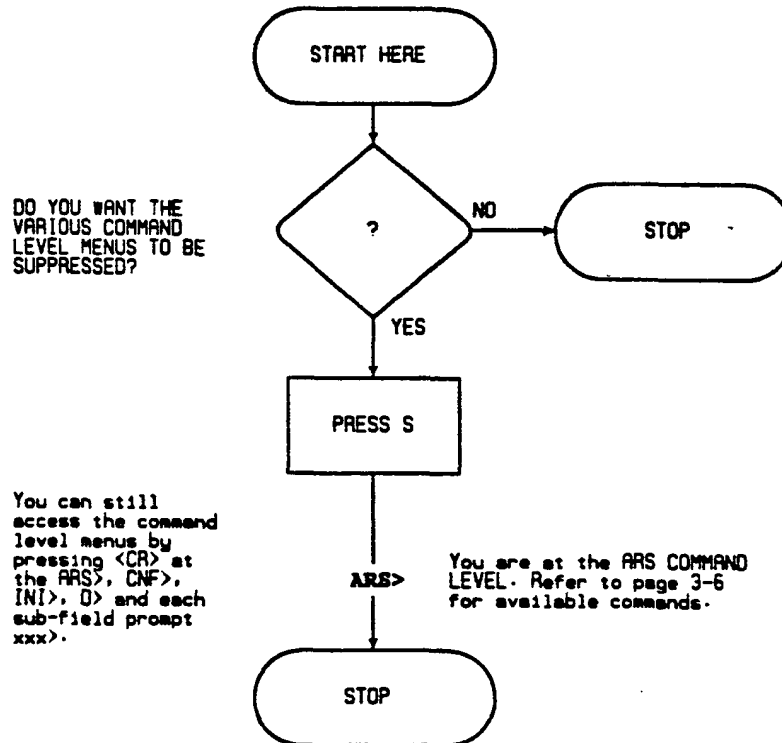


**ARS> CNF> CONFIGURE INI> INITIALIZE (Page 6 of 6)**



# ARS> SHORT

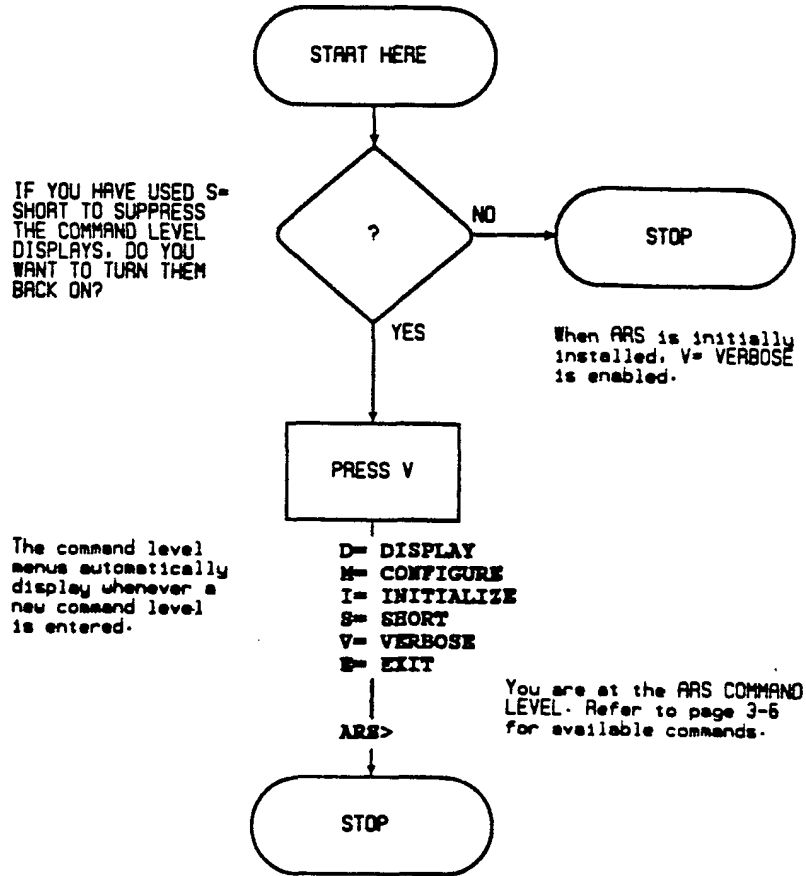
PURPOSE: This chart shows you how to access S=SHORT after you have entered the ARS COMMAND LEVEL.



ARS-59

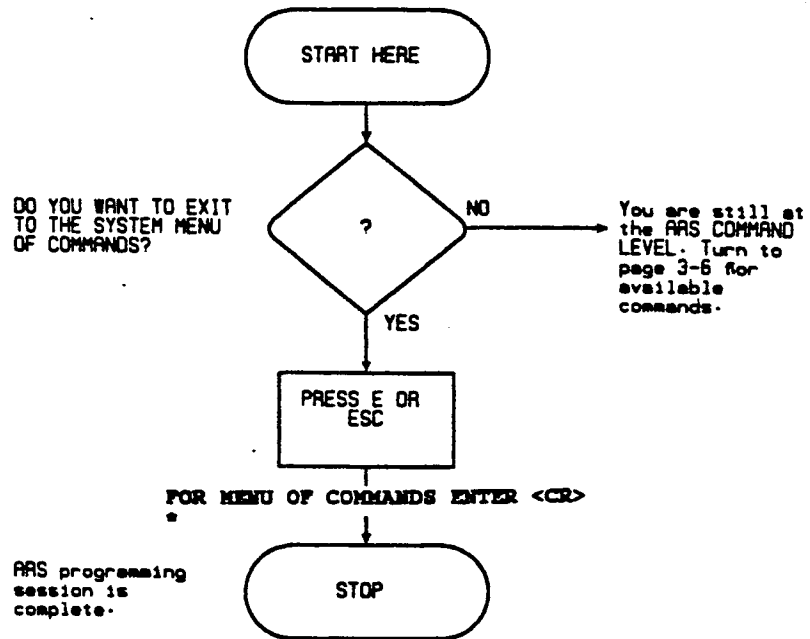
# ARS> VERBOSE

PURPOSE: This chart shows you how to access V=VERBOSE after you have entered the ARS COMMAND LEVEL.

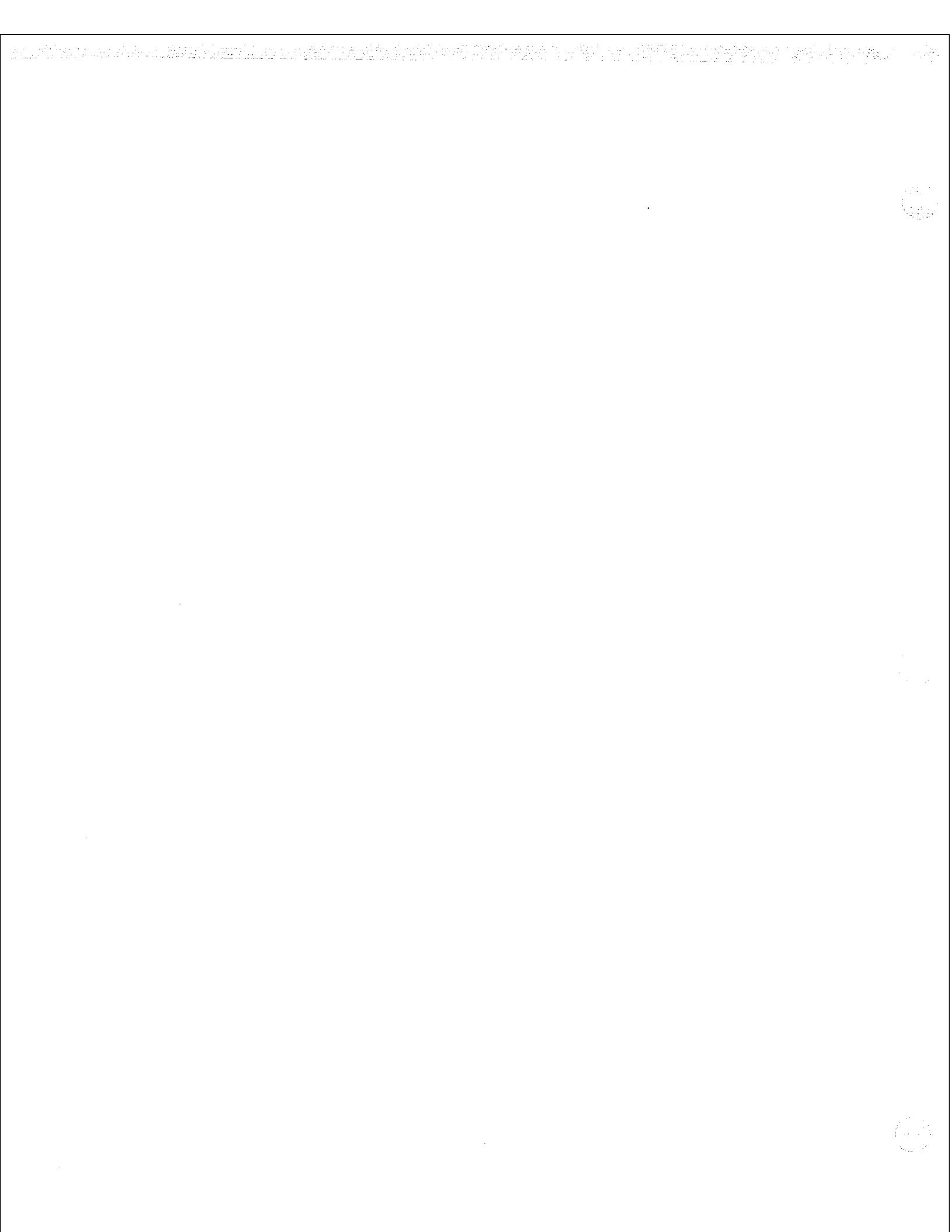


ARS-60

PURPOSE: This chart shows you how to access E= EXIT after you have entered the ARS COMMAND LEVEL.



ARS-61

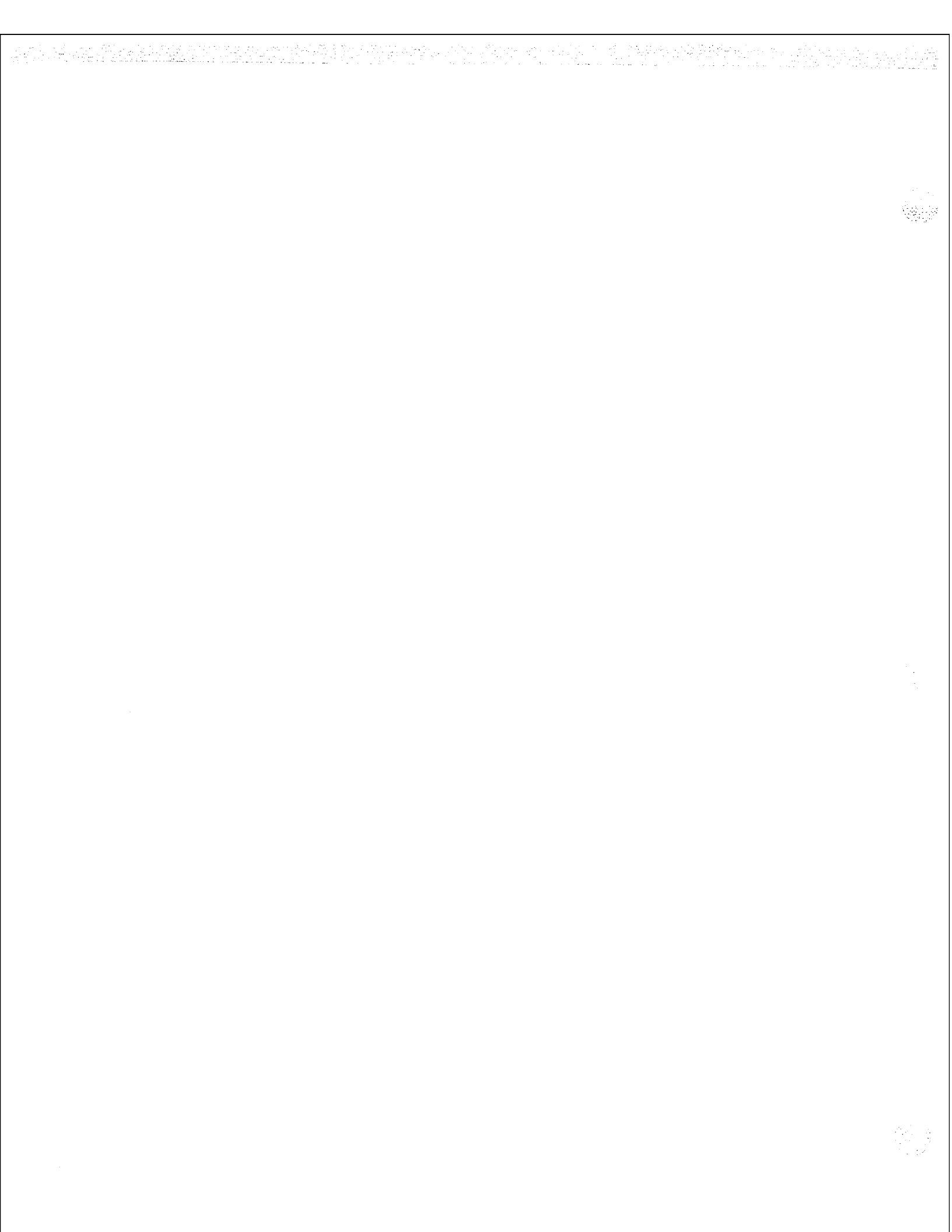


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## Section 4, Operation

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## USING ARS TO PLACE A CALL

---

This section tells you how to place a call from your telephone if ARS is enabled for your system. For additional information on how to use your telephone, refer to your extension's Feature Handbook.

### Placing a Call from a Multibutton Telephone

---

#### To place a call using ARS:

- Lift handset.
- Press INTERCOM. You hear Intercom dial tone.
- Dial 9 or 90. You hear ARS dial tone.

*Check with your communications manager to see which code you should dial. You may also be able to press a programmable key to access ARS.*

- Dial number.

*After a route for your call is selected, you hear ARS redial the number you dialed.*

*If you are not permitted to place the call you dial, you hear reorder tone and the call is denied.*

*If the preferred route for the call is busy (and your call is redirected), you hear the voice message, "The lowest cost line is busy. Please wait for the next one." If your system doesn't have a VAU PCB, you hear two short beeps instead.*

*If the preferred route for your call is busy and you are not allowed access to any other route, you hear, "All lines are busy. For automatic callback, please press the Callback key."*

*Use Trunk Queuing to wait for an available line. Refer to your telephone's Feature Handbook.*

## USING ARS TO PLACE A CALL

---

### Placing a Call from a Single Line Telephone

---

#### To place a call using ARS:

- Lift handset. You hear Intercom dial tone.
- Dial 9 or 90. You hear ARS dial tone.

*Check with your communications manager to see which code you should dial.*

- Dial number.

*After a route for your call is selected, you hear ARS redial the number you dialed.*

*If you are not permitted to place the call you dial, you hear reorder tone and the call is denied.*

*If the preferred route for the call is busy (and your call is redirected), you hear the voice message, "The lowest cost line is busy. Please wait for the next one." If your system doesn't have a VAU PCB, you hear two short beeps instead.*

*If the preferred route for your call is busy and you are not allowed access to any other route, you hear, "All lines are busy. For automatic callback, please press the Callback key."*

*Use Trunk Queuing to wait for an available line. Refer to your telephone's Feature Handbook.*

## **ARS WITH SMDR ACCOUNT CODES (FORCED ACCOUNT CODE)**

ARS may require you to enter an SMDR Account Code before the call you dial can be placed. The number entered can be any valid SMDR Account Code (refer to SMDR Account Code in your extension's Feature Handbook). The Forced Account Code feature is enabled in system programming. If activated, it applies to all calls placed using ARS. Check with your attendant or communications manager to see if these Account Codes are required.

### **Using SMDR Account Codes**

#### **To enter an SMDR Account Code:**

- Place call.
- Dial #.
- Dial SMDR Account Code (up to 10 digits).
- Dial #.

*The system routes the call.*

*If you hear dial tone after you enter the SMDR Account Code, you must also enter a Dial Treatment Authorization Code (see page 4-4 of this appendix).*

*You can optionally use Speed Dial for one-button SMDR Account Code entry.*

## **ARS WITH DIAL TREATMENT AUTHORIZATION CODES**

---

You may be required to enter a Dial Treatment Authorization code before certain calls can be placed. Check with your attendant or communications manager to see if you are required to enter these codes, and, if so, what the valid Dial Treatment Authorization Codes are. If an SMDR Account Code is also required, the Dial Treatment code is entered after the SMDR Account Code.

### **Using Dial Treatment Authorization Codes**

---

**To enter a Dial Treatment Authorization Code:**

- Place call. You hear ARS dial tone.
- Dial #. Dial tone stops.
- Dial Authorization Code (up to 10 digits).
- Dial #.

*The system routes the call.*

*You can optionally use Speed Dial for one-button SMDR Account Code entry.*

## **BYPASSING ARS**

---

Your extension may be allowed to bypass ARS for certain types of calls. Check with your attendant or communications manager to see if you have this capability.

**Note:** When ARS is bypassed, the call is restricted according to Toll Restriction and Class of Service programming.

### **To bypass ARS:**

- Press any loop key not assigned to trunk group 90.
- OR
- Use a two-digit dial-up trunk group code (91-98).
- OR
- Use Direct Trunk Access (396-427).
- OR
- Press any line key.
- OR
- Dial the three-digit trunk access code (801-832).

Refer to your extension's Feature Handbook for step by step instructions on the above procedures.

## COMMAND STRUCTURE, ARS (Page 1 of 2)

### ARS COMMAND LEVEL (ARS>)

D= DISPLAY (ALL DATA) ..... Display all ARS data.  
M= CONFIGURE ..... Enter or change ARS data.

#### CONFIGURE COMMAND LEVEL (CNF>)

##### D= DIAL TREATMENTS

#### DIAL TREATMENTS COMMAND LEVEL (DT>)

D= DISPLAY DATA ..... Display workspace and/or system RAM data.  
M= MODIFY DATA ..... Enter or change Dial Treatment data.

#### MODIFY DATA COMMAND LEVEL (DT#>)

D= DISPLAY ..... Display entry for Dial Treatment currently being modified.  
F= FIND ..... Select another Dial Treatment for modification.  
C= CHANGE ..... Change entry for the Dial Treatment currently being modified.  
E= EXIT ..... Store Dial Treatment entries.  
S= STORE NEW DATA ..... Store new Dial Treatment entries in system RAM.  
Z= STORE & EXIT ..... Store entries and exit to the ARS Command Level.  
Q= EXIT ..... Exit without saving entries from programming session.

##### E= E.A. & OPR-ASSIST

#### E.A. & OPR-ASSIST COMMAND LEVEL (EA&OP>)

D= DISPLAY DATA ..... Display workspace and/or system RAM data.  
M= MODIFY DATA ..... Enter or change E.A. & OPR-ASSIST data.

#### MODIFY DATA COMMAND LEVEL

OPR-ASSISTED CALLS - S# ..... Specify Selection Number for operator-assisted calls.  
INTERNATIONAL CALLS - S# ..... Specify Selection Number for international calls.  
EQUAL-ACCESS - S# ..... Specify Selection Number for Equal Access calls.  
E= EXIT ..... Store entries and exit to the ARS Command Level.

##### R= RATE PERIODS

#### RATE PERIODS COMMAND LEVEL (RP>)

D= DISPLAY DATA ..... Display workspace and/or system RAM data.  
M= MODIFY DATA ..... Enter or change Rate Periods data.

#### MODIFY DATA COMMAND LEVEL

MON-FRI ..... Program or change Monday through Friday Rate Periods.  
SATURDAY ..... Program or change Saturday Rate Periods.  
SUNDAY ..... Program or change Sunday Rate Periods.  
HOLIDAY ..... Program or change Holiday Rate Periods.  
S= STORE NEW DATA ..... Store new Rate Periods data in system RAM.  
E= STORE & EXIT ..... Store entries and exit to the ARS Command Level.  
Q= EXIT ..... Exit to the ARS Command Level without saving changes

##### C= CALL ROUTE OPTIONS (CRO>)

#### CALL ROUTE OPTIONS COMMAND LEVEL

D= DISPLAY DATA ..... Display workspace and/or system RAM data.  
M= MODIFY DATA ..... Enter or change Call Route Options data.  
SEL. NO. - ..... Designate Selection Number for option to be modified.  
RP NO. .... Designate Rate Period for option to be modified.

#### MODIFY DATA COMMAND LEVEL (>)

F= FIND ..... Select another Selection # and Rate Period for modification.  
I= INSERT ..... Create and insert option at specified point in option list.  
A= ADD ..... Create and insert option at bottom of option list.  
D= DELETE ..... Delete option (s) from option list.  
E= EXIT ..... Store Call Route Option entries.  
E= EXIT ..... Store entries and exit to the ARS Command Level.

# COMMAND STRUCTURE, ARS (Page 2 of 2)

## S= 6-DIGIT TABLE

### 6-DIGIT TABLE COMMAND LEVEL (6DIG>)

D= DISPLAY DATA..... Display workspace and/or system RAM data.  
M= MODIFY DATA..... Enter or change 6-digit table data.  
NPA -..... Access portion of 6-digit table assigned to specified NPA.

### MODIFY DATA COMMAND LEVEL (NPA#)

N= NEXT LIST..... Enter NNX codes in next NNX list for NPA selected.  
P= PREV LIST..... Enter NNX codes in previous NNX list for NPA selected.  
S= S# CHANGES..... Change Selection Numbers for NPA selected  
F= FIND..... Select another NPA for modification.  
I= INSERT..... Create and insert a new NNX list for NPA selected.  
A= ADD..... Add NNX codes to NNX list currently selected for NPA.  
D= DELETE..... Delete specified portions of 6-digit table.  
E= EXIT..... Store 6-digit table entries.

E= EXIT..... Store entries and exit to the ARS Command Level.

## T= 3-DIGIT TABLE

### 3-DIGIT TABLE COMMAND LEVEL (3DIG>)

B= BLOCK LOAD..... Enter data for a block (consecutive group) of codes.  
D= DISPLAY DATA..... Display workspace and/or system RAM data.  
M= MODIFY DATA..... Enter or change individual codes in 3-digit table.  
FIRST NNX TO PROGRAM..... Specify code to be modified.

### MODIFY DATA COMMAND LEVEL (NPA# or NNX#)

N= NEXT..... Select next consecutive code for modification.  
P= PREV..... Select previous consecutive code for modification.  
D= DISPLAY..... Display entered value for code selected for modification.  
F= FIND..... Select a new code for modification.  
C= CHANGE..... Change programmed entries for code selected for modification.  
E= EXIT..... Store 3-digit table entries.

S= STORE NEW DATA..... Load current 3-digit table entries into system RAM.

E= STORE & EXIT..... Store entries and exit to the ARS Command Level.

Q= EXIT..... Exit to the ARS Command Level without saving changes.

Q= EXIT..... Exit from the M= Configure Command Level.

## I= INITIALIZE

### INITIALIZE COMMAND LEVEL (INI>)

A= ALL DATA..... Initialize all data.  
D= DIAL TREATMENTS..... Initialize just the Dial Treatments data.  
O= OPR-ASSIST & E.A. SEL. NOS..... Initialize just the E.A. & OPR. ASSIST data.  
R= RATE PERIODS..... Erase current Rate Periods table and load standard values.  
S= 6-DIGIT & SEL. NO. LISTS..... Initialize the 6-digit table and the Call Route Options.  
T= 3-DIGIT TABLE..... Initialize just the 3-digit table.  
C= CHECK DATA..... Verify that all portions of ARS have been initialized.  
E= EXIT..... Store entries and exit to the ARS Command Level.  
Q= QUIT..... Exit to the ARS Command Level without storing changes.

S= SHORT..... Suppress command level menu displays.

V= VERBOSE..... Allow command level menu displays.

E= EXIT..... Exit to main menu of commands.

1200

1201

1202



## REFERENCE SHEET, EXTENSION PROGRAMMING (Page 2 of 2)

| ACCESS | PROMPT                            | RANGE                                          | CIRCUIT TYPE |   |   |   |   |   |   |                |    |   |   |   |   |   |
|--------|-----------------------------------|------------------------------------------------|--------------|---|---|---|---|---|---|----------------|----|---|---|---|---|---|
|        |                                   |                                                | 0            | 1 | 2 | 3 | 4 | 5 | 6 | 6 <sup>2</sup> | 51 | M | Z | X |   |   |
| EG     | PROGRAMMABLE KEYS                 | 18/21/24                                       |              | ✓ | ✓ | ✓ | ✓ |   |   |                |    |   |   |   | ✓ |   |
| EH     | SUPPRESS DSS LAMPS                | Y/N                                            |              | ✓ | ✓ | ✓ | ✓ |   |   |                |    |   |   |   | ✓ |   |
| EK     | RETAIN TRK VOLUME SETTING         | Y/N                                            | ✓            | ✓ | ✓ | ✓ | ✓ |   |   |                |    |   |   |   |   | ✓ |
|        | ALLOW DND                         | Y/N                                            |              | ✓ | ✓ | ✓ | ✓ | ✓ |   |                |    |   | ✓ |   | ✓ |   |
|        | VX                                | Y/N                                            |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
| EL     | PRIME LINE KEY                    | 01-24/R,Z                                      |              | ✓ | ✓ | ✓ | ✓ |   |   |                |    |   |   |   | ✓ |   |
| EM     | CONFIG DATA MODULE                |                                                |              | ✓ | ✓ |   |   |   |   |                |    |   |   |   | ✓ |   |
|        | DATA MODULE BAUD RATES            | 0-7                                            |              | ✓ | ✓ |   |   |   |   |                |    |   |   |   | ✓ |   |
|        | DATA MODULE PARITY OPTIONS        | 0-2                                            |              | ✓ | ✓ |   |   |   |   |                |    |   |   |   | ✓ |   |
|        | INTERACTIVE MODE?                 | Y/N                                            |              | ✓ | ✓ |   |   |   |   |                |    |   |   |   | ✓ |   |
|        | INTERACTIVE ECHO                  | Y/N                                            |              | ✓ | ✓ |   |   |   |   |                |    |   |   |   | ✓ |   |
|        | RS232 CONTROLS ACTIVE?            | Y/N                                            |              | ✓ | ✓ |   |   |   |   |                |    |   |   |   | ✓ |   |
|        | ALLOW DTR DISCONNECT?             | Y/N                                            |              | ✓ | ✓ |   |   |   |   |                |    |   |   |   | ✓ |   |
|        | ALLOW BREAK DISCONNECT?           | Y/N                                            |              | ✓ | ✓ |   |   |   |   |                |    |   |   |   | ✓ |   |
|        | AUTO BAUD?                        | Y/N                                            |              | ✓ | ✓ |   |   |   |   |                |    |   |   |   | ✓ |   |
|        | BUSY ON DTR LOW?                  | Y/N                                            |              | ✓ | ✓ |   |   |   |   |                |    |   |   |   | ✓ |   |
| EP     | PRIORITY (ACD)                    | 0-99                                           |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
| EU     | MASTER EXT OF ACD GROUP           | See Abbreviated Number Plan Chart <sup>1</sup> |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
|        | GROUP #                           | 0-16                                           |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
|        | SUPERVISOR'S EXT                  | See Abbreviated Number Plan Chart <sup>1</sup> |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
|        | NO. OF CALLS WAITING BEFORE ALERT | 0-99                                           |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
|        | CALL WAITING TIME BEFORE ALERT    | 0-255 Seconds                                  |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
|        | MANUAL CONTROL OF NIGHT MODE      | Y/N                                            |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
|        | OVERFLOW EXT                      | See Abbreviated Number Plan Chart <sup>1</sup> |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
|        | AGENT'S WORK TIME                 | 0-255 Seconds                                  |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
|        | DELAY BEFORE OVERFLOW FROM QUEUE  | 0-255 (1 count=10 seconds)                     |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
|        | DIRECT ALL CALLS TO ANN. MESSAGE  | Y/N                                            |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
|        | INITIAL ANNOUNCEMENT EXT          | See Abbreviated Number Plan Chart <sup>1</sup> |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
|        | DELAY BEFORE ANSWERING W/ DGTR    | 0-255 Seconds                                  |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
|        | VAU RECORDING #                   | 0-7                                            |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
|        | DELAY BEFORE ANSWERING WITH VAU   | 0-255 Seconds                                  |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
|        | MAILBOX ACCESS CODE               | Node Mailbox number                            |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
|        | DELAY BEFORE ANSWERING WITH VX    | 0-255 Seconds                                  |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
|        | REPETITIVE ANNOUNCEMENT EXT       | See Abbreviated Number Plan Chart <sup>1</sup> |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
|        | VAU RECORDING #                   | 0-7                                            |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
|        | PLAYBACK INTERVAL WITH VAU        | 0-255 (1 count=10 seconds)                     |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
|        | MAILBOX ACCESS CODE               | Node Mailbox number                            |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
|        | PLAYBACK INTERVAL WITH VX         | 0-255 (1 count=10 seconds)                     |              |   |   |   |   |   |   |                |    |   |   |   |   |   |
| NP     | Name                              | 16 characters                                  | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              | ✓  | ✓ | ✓ | ✓ | ✓ | ✓ |

Extension circuit types:

- 00 = Electronic Single Line telephone
- 01 = Keypad (without display) and Data Module
- 02 = Multibutton Display Keypad
- 03 = Dual-channel Data Set
- 04 = Dual-channel Display Keypad
- 05 = OPX or ASI w/o receiver (P/N 89748)
- 06 = 80-Button DSS Console

- 51 = ASI with receiver (P/N 89749)
- M = Modem Pooling extension
- Z = Data Port, data-only Data Set
- X = not installed or STI port

<sup>1</sup> In Software Manual

<sup>2</sup> PBX Attendant Console

## REFERENCE SHEET, TRUNK PROGRAMMING

| ACCESS | PROMPT              | RANGE                                          | CIRCUIT TYPE |       |       |       |   |
|--------|---------------------|------------------------------------------------|--------------|-------|-------|-------|---|
|        |                     |                                                | 07           | 08-11 | 12-15 | 16-19 | X |
| E0     | EXT                 | See Abbreviated Number Plan Chart <sup>1</sup> | ✓            | ✓     | ✓     | ✓     | ✓ |
| E1     | PORT                | See Abbreviated Number Plan Chart <sup>1</sup> | ✓            | ✓     | ✓     | ✓     | ✓ |
| E2     | CIRCUIT TYPE        | 07-19                                          | ✓            | ✓     | ✓     | ✓     | ✓ |
|        | STI CIRCUIT #       | See Abbreviated Number Plan Chart <sup>1</sup> | ✓            |       |       | ✓     |   |
| E3     | COS                 | 00-27,30                                       | ✓            | ✓     | ✓     | ✓     | ✓ |
| E4     | NEXT LINE IN ROTARY | See Abbreviated Number Plan Chart <sup>1</sup> |              | ✓     |       |       | ✓ |
|        | NEXT EXT IN HUNT    | See Abbreviated Number Plan Chart <sup>1</sup> |              |       | ✓     | ✓     |   |
| E7     | SERVICE #           | 00-11                                          |              | ✓     | ✓     | ✓     | ✓ |
| E8     | ALLOW LINE DIAL-UP  | Y/N                                            |              |       | ✓     | ✓     |   |
|        | ACCESS TO GROUP 90? | Y/N                                            |              |       | ✓     | ✓     |   |
|        | ACCESS TO GROUP 91? | Y/N                                            |              |       | ✓     | ✓     |   |
|        | ACCESS TO GROUP 92? | Y/N                                            |              |       | ✓     | ✓     |   |
|        | ACCESS TO GROUP 93? | Y/N                                            |              |       | ✓     | ✓     |   |
|        | ACCESS TO GROUP 94? | Y/N                                            |              |       | ✓     | ✓     |   |
|        | ACCESS TO GROUP 95? | Y/N                                            |              |       | ✓     | ✓     |   |
| E9     | DIR TERM OR OPR EXT | See Abbreviated Number Plan Chart <sup>1</sup> | ✓            | ✓     | ✓     | ✓     | ✓ |
| EA     | FIRST LINE IN GROUP | See Abbreviated Number Plan Chart <sup>1</sup> |              | ✓     |       |       | ✓ |
|        | UDC MASTER EXT      | See Abbreviated Number Plan Chart <sup>1</sup> |              |       | ✓     | ✓     |   |
| EB     | SPD DIAL BLOCK      | See Abbreviated Number Plan Chart <sup>1</sup> |              |       | ✓     | ✓     |   |
| EC     | CALL PICK-UP GROUP  | 00-23                                          |              | ✓     | ✓     | ✓     | ✓ |
| ED     | ACCESS CONTROL      | (Table 6)                                      |              |       | ✓     | ✓     |   |
|        | CALL-OUT CONTROL    | (Table 6)                                      |              |       | ✓     | ✓     |   |
| EI     | NIGHT CALL TO EXT   | See Abbreviated Number Plan Chart <sup>1</sup> |              | ✓     |       |       | ✓ |
|        | TANDEM OK           | Y/N                                            |              | ✓     |       |       | ✓ |
| EJ     | TOLL RESTRICT       | Y/N                                            |              | ✓     |       |       | ✓ |
| EL     | LOOP NUMBER         | 0-4                                            | ✓            | ✓     | ✓     | ✓     | ✓ |
| EP     | PRIORITY (ACD)      | 0-99                                           | ✓            | ✓     | ✓     | ✓     | ✓ |
| NP     | Name                | 16 characters                                  |              | ✓     | ✓     |       | ✓ |

**Trunk and special circuit types:**

05/51 = see Reference Sheet, Extension Programming

- 07 = DID
- 08 = CO, ground start, DTMF
- 09 = CO, ground start, DP
- 10 = CO, loop start, DTMF
- 11 = CO, loop start, DP
- 12 = DISA, DTMF
- 13 = DISA, DP
- 14 = DISA, DTMF, Night only
- 15 = DISA, DP, Night only
- 16 = Tie, DTMF, wink start
- 17 = Tie, DP, wink start
- 18 = Tie, DTMF, immediate dial
- 19 = Tie, DP, immediate dial
- X = not installed

<sup>1</sup> In Software Manual.

|                                                               |           |
|---------------------------------------------------------------|-----------|
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| QM- EXT PAGE/NIGHT AUDIBLE LINE . . . . .             | 2   |
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# ONYX II/III™

## PROGRAM RECORD FORMS

Customer: \_\_\_\_\_ Date: \_\_\_\_\_

Location: \_\_\_\_\_ No. Stations: \_\_\_\_\_

System Type: \_\_\_\_\_ No. Lines: \_\_\_\_\_

The Program Record Forms are used to record the software options selected in Section 2 of the ONYX II/III System Manual. These forms should be completed and kept in a safe place. A copy of the forms can be left at the customer site for future reference.

**NOTE:** Shaded prompts apply only to ONYX III.

This manual has been developed by TIE/communications, Inc. It is intended for the use of its customers and service personnel, and should be read in its entirety before attempting to install or program the system. Any comments or suggestions for improving this manual would be appreciated. Forward your remarks to:

TIE/communications, Inc.  
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Seymour, CT 06483

Attention: Manager, Technical Publications

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**Table 2-1 PROGRAM RECORD FORM, TOLL RESTRICTION (Page 1 of 3)**

|                                     |     |                |
|-------------------------------------|-----|----------------|
| ENTER TOLL LEVEL                    | --- | [1-7]          |
| ACTIVE DIAL PAD?                    | --- | [Y/N]          |
| ALLOW SPECIAL ACCESS (N11) DIALING? | --- | [Y/N]          |
| ALLOW 0+ DIALING?                   | --- | [Y/N]          |
| ALLOW DIRECT INT'L DIALING?         | --- | [Y/N]          |
| ALLOW EQUAL ACCESS?                 | --- | [Y/N]          |
| ALLOW OR DENY TABLE?                | --- | [A/D]          |
| DATA                                |     | [000-999, XXX] |
| ---                                 | --- | ---            |
| ---                                 | --- | ---            |
| ---                                 | --- | ---            |
| ---                                 | --- | ---            |
| ---                                 | --- | ---            |
| ALLOW 1+NNX DIALING?                | --- | [Y/N]          |
| ALLOW OR DENY TABLE?                | --- | [A/D]          |
| DATA                                |     | [200-999, XXX] |
| ---                                 | --- | ---            |
| ---                                 | --- | ---            |
| ---                                 | --- | ---            |
| ---                                 | --- | ---            |
| ---                                 | --- | ---            |
| ---                                 | --- | ---            |
| ALLOW NNX DIALING?                  | --- | [Y/N]          |
| ALLOW OR DENY TABLE?                | --- | [A/D]          |
| DATA                                |     | [200-999, XXX] |
| ---                                 | --- | ---            |
| ---                                 | --- | ---            |
| ---                                 | --- | ---            |
| ---                                 | --- | ---            |
| ---                                 | --- | ---            |
| ---                                 | --- | ---            |
| ALLOW NPA DIALING?                  | --- | [Y/N]          |
| ALLOW OR DENY TABLE?                | --- | [A/D]          |
| DATA                                |     | [200-919, XXX] |
| ---                                 | --- | ---            |
| ---                                 | --- | ---            |
| ---                                 | --- | ---            |
| ---                                 | --- | ---            |
| ---                                 | --- | ---            |
| ---                                 | --- | ---            |

**Table 2-1 PROGRAM RECORD FORM, TOLL RESTRICTION (Page 2 of 3)**

|                      |        |                |
|----------------------|--------|----------------|
| SIX DIGIT ANALYSIS?  | ---    | [Y/N]          |
| AREA CODE            | --- -- | [200-919, XXX] |
| ALLOW OR DENY TABLE? | ---    | [A/D]          |
| DATA                 |        | [200-999, XXX] |
| ---                  | ---    |                |
| ---                  | ---    |                |
| ---                  | ---    |                |
| ---                  | ---    |                |
| ---                  | ---    |                |
| AREA CODE            | --- -- | [200-919, XXX] |
| ALLOW OR DENY TABLE? | ---    | [A/D]          |
| DATA                 |        | [200-999, XXX] |
| ---                  | ---    |                |
| ---                  | ---    |                |
| ---                  | ---    |                |
| ---                  | ---    |                |
| ---                  | ---    |                |
| AREA CODE            | --- -- | [200-919, XXX] |
| ALLOW OR DENY TABLE? | ---    | [A/D]          |
| DATA                 |        | [200-999, XXX] |
| ---                  | ---    |                |
| ---                  | ---    |                |
| ---                  | ---    |                |
| ---                  | ---    |                |
| ---                  | ---    |                |
| AREA CODE            | --- -- | [200-919, XXX] |
| ALLOW OR DENY TABLE? | ---    | [A/D]          |
| DATA                 |        | [200-999, XXX] |
| ---                  | ---    |                |
| ---                  | ---    |                |
| ---                  | ---    |                |
| ---                  | ---    |                |
| ---                  | ---    |                |



**Table 2-1 PROGRAM RECORD FORM, TOLL RESTRICTION (Page 3 of 3)**

|                      |     |     |     |     |                |
|----------------------|-----|-----|-----|-----|----------------|
| AREA CODE            | --- | --- | --- |     | [200-919, XXX] |
| ALLOW OR DENY TABLE? | --- |     |     |     | [A/D]          |
| DATA                 |     |     |     |     | [200-999, XXX] |
| ---                  | --- | --- | --- | --- | ---            |
| ---                  | --- | --- | --- | --- | ---            |
| ---                  | --- | --- | --- | --- | ---            |
| ---                  | --- | --- | --- | --- | ---            |
| ---                  | --- | --- | --- | --- | ---            |
| AREA CODE            | --- | --- | --- |     | [200-919, XXX] |
| ALLOW OR DENY TABLE? | --- |     |     |     | [A/D]          |
| DATA                 |     |     |     |     | [200-999, XXX] |
| ---                  | --- | --- | --- | --- | ---            |
| ---                  | --- | --- | --- | --- | ---            |
| ---                  | --- | --- | --- | --- | ---            |
| ---                  | --- | --- | --- | --- | ---            |
| ---                  | --- | --- | --- | --- | ---            |
| AREA CODE            | --- | --- | --- |     | [200-919, XXX] |
| ALLOW OR DENY TABLE? | --- |     |     |     | [A/D]          |
| DATA                 |     |     |     |     | [200-999, XXX] |
| ---                  | --- | --- | --- | --- | ---            |
| ---                  | --- | --- | --- | --- | ---            |
| ---                  | --- | --- | --- | --- | ---            |
| ---                  | --- | --- | --- | --- | ---            |
| ---                  | --- | --- | --- | --- | ---            |
| AREA CODE            | --- | --- | --- |     | [200-919, XXX] |
| ALLOW OR DENY TABLE? | --- |     |     |     | [A/D]          |
| DATA                 |     |     |     |     | [200-999, XXX] |
| ---                  | --- | --- | --- | --- | ---            |
| ---                  | --- | --- | --- | --- | ---            |
| ---                  | --- | --- | --- | --- | ---            |
| ---                  | --- | --- | --- | --- | ---            |
| ---                  | --- | --- | --- | --- | ---            |

**Table 2-2 PROGRAM RECORD FORM, CLASS OF SERVICE**

| CLASS OF SERVICE NUMBER | BYTE 0             |   |   |   |   |   |   |   | BYTE 1                |   |   |   |   | BYTE 2             |   |   |   |   |   |   |   |   |  |  |
|-------------------------|--------------------|---|---|---|---|---|---|---|-----------------------|---|---|---|---|--------------------|---|---|---|---|---|---|---|---|--|--|
|                         | BIT 7              | 6 | 5 | 4 | 3 | 2 | 1 | 0 | 7                     | 6 | 5 | 4 | 3 | 2-0                | 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |  |  |
|                         | INH SYS SPEED DIAL |   |   |   |   |   |   |   | CBACK PRIORITY        |   |   |   |   | X                  |   |   |   |   |   |   |   |   |  |  |
|                         | INH CALL FWD       |   |   |   |   |   |   |   | PRIVACY               |   |   |   |   | NO SLS FLASH/SPVSR |   |   |   |   |   |   |   |   |  |  |
|                         | INH CAMP ON        |   |   |   |   |   |   |   | EXTENDED RING         |   |   |   |   | MONITOR            |   |   |   |   |   |   |   |   |  |  |
|                         | BREAK-IN           |   |   |   |   |   |   |   | LOCAL CALL AT NIGHT   |   |   |   |   | INH PG ZN 3        |   |   |   |   |   |   |   |   |  |  |
|                         | OFF-P CFWD         |   |   |   |   |   |   |   | LOCAL ONLY            |   |   |   |   | INH PG ZN 2        |   |   |   |   |   |   |   |   |  |  |
|                         | ICM NITE ONLY      |   |   |   |   |   |   |   | TOLL RESTRICT [B2-B0] |   |   |   |   | INH PG ZN 1        |   |   |   |   |   |   |   |   |  |  |
|                         | ABSORB             |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
|                         | BELL CAS           |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 00                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 01                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 02                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 03                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 04                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 05                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 06                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 07                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 08                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 09                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 10                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 11                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 12                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 13                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 14                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 15                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 16                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 17                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 18                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 19                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 20                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 21                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 22                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 23                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 24                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 25                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 26                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |
| 27                      |                    |   |   |   |   |   |   |   |                       |   |   |   |   |                    |   |   |   |   |   |   |   |   |  |  |

**Table 2-3 PROGRAM RECORD FORM, LINE (See Note below)**

| ACCESS | PROMPT                    | PROGRAM ENTRY |  |  |  |  |
|--------|---------------------------|---------------|--|--|--|--|
| E0     | EXT                       |               |  |  |  |  |
| E1     | PORT                      |               |  |  |  |  |
| E2     | CIRCUIT TYPE              |               |  |  |  |  |
| E3     | COS                       |               |  |  |  |  |
| E4     | NEXT LINE IN ROTARY       |               |  |  |  |  |
|        | NEXT EXT IN HUNT          |               |  |  |  |  |
| E7     | SERVICE #                 |               |  |  |  |  |
| E8     | ALLOW LINE DIAL-UP [Y/N]  |               |  |  |  |  |
|        | ACCESS TO GROUP 90? [Y/N] |               |  |  |  |  |
|        | ACCESS TO GROUP 91? [Y/N] |               |  |  |  |  |
|        | ACCESS TO GROUP 92? [Y/N] |               |  |  |  |  |
|        | ACCESS TO GROUP 93? [Y/N] |               |  |  |  |  |
|        | ACCESS TO GROUP 94? [Y/N] |               |  |  |  |  |
|        | ACCESS TO GROUP 95? [Y/N] |               |  |  |  |  |
| E9     | DIR TERM OR OPR EXT       |               |  |  |  |  |
| EA     | FIRST LINE IN GROUP       |               |  |  |  |  |
|        | UCD MASTER EXT            |               |  |  |  |  |
| EB     | SPD DIAL BLOCK            |               |  |  |  |  |
| EC     | CALL PICKUP GROUP         |               |  |  |  |  |
| ED     | LINE CONTROL (Table 2-5)  |               |  |  |  |  |
| EI     | NIGHT CALL TO EXT         |               |  |  |  |  |
|        | TANDEM OK [Y/N]           |               |  |  |  |  |
| EJ     | TOLL RESTRICT [Y/N]       |               |  |  |  |  |
| NP     | Name                      |               |  |  |  |  |

NOTE: Not all prompts apply to all line circuit types. Use the REFERENCE SHEET, LINE PROGRAMMING on Page 24 when completing this PRF.

**Table 2-4 PROGRAM RECORD FORM, STATION (See Note below)**

| ACCESS | PROMPT                             | PROGRAM ENTRY |  |  |  |  |
|--------|------------------------------------|---------------|--|--|--|--|
| E0     | EXT                                |               |  |  |  |  |
| E1     | PORT                               |               |  |  |  |  |
| E2     | CIRCUIT TYPE                       |               |  |  |  |  |
| E3     | COS                                |               |  |  |  |  |
| E4     | NEXT EXIT IN HUNT                  |               |  |  |  |  |
| E5     | HUNT TYPE                          |               |  |  |  |  |
| E6     | DATA SET [Y/N]                     |               |  |  |  |  |
| E7     | PAGE ZONE                          |               |  |  |  |  |
| E8     | RING-LINE PREFERENCE? [Y/N]        |               |  |  |  |  |
|        | OFF-HOOK RINGING? [Y/N]            |               |  |  |  |  |
|        | KEY ACCESS TO OUTBOUND LINES [Y/N] |               |  |  |  |  |
|        | ALLOW LINE DIAL-UP [Y/N]           |               |  |  |  |  |
|        | ACCESS TO GROUP 90? [Y/N]          |               |  |  |  |  |
|        | ACCESS TO GROUP 91? [Y/N]          |               |  |  |  |  |
|        | ACCESS TO GROUP 92? [Y/N]          |               |  |  |  |  |
|        | ACCESS TO GROUP 93? [Y/N]          |               |  |  |  |  |
|        | ACCESS TO GROUP 94? [Y/N]          |               |  |  |  |  |
|        | ACCESS TO GROUP 95? [Y/N]          |               |  |  |  |  |
| E9     | DIR TERM OR OPR EXT                |               |  |  |  |  |
| EA     | UCD MASTER EXT                     |               |  |  |  |  |
| EB     | SPD DIAL BLOCK                     |               |  |  |  |  |
| EC     | CALL PICKUP GROUP                  |               |  |  |  |  |
|        | PRVCY RLS GROUP                    |               |  |  |  |  |
| ED     | LINE CONTROL (Table 2-5)           |               |  |  |  |  |
| EE     | RING GROUP #                       |               |  |  |  |  |
| EF     | PAGING THRU SPKR [Y/N]             |               |  |  |  |  |
|        | INCOMING VOICE CALL [Y/N]          |               |  |  |  |  |
|        | HEADSET [Y/N]                      |               |  |  |  |  |
|        | INHIBIT VOICE OVER [Y/N]           |               |  |  |  |  |
| EG     | PROGRAMMABLE KEYS [24/18]          |               |  |  |  |  |
| EH     | SUPPRESS DSS LAMPS [Y/N]           |               |  |  |  |  |
| EK     | ALLOW DND [Y/N]                    |               |  |  |  |  |
|        | VX [Y/N]                           |               |  |  |  |  |
| EL     | PRIME LINE KEY                     |               |  |  |  |  |
| NP     | Name                               |               |  |  |  |  |

NOTE Not all prompts apply to all station circuit types. Use the REFERENCE SHEET, STATION PROGRAMMING on Page 25 when completing this PRF

**Table 2-5 PROGRAM RECORD FORM, LINE CONTROL (ED Command)**

|                  |     |
|------------------|-----|
| Ext. number      | --- |
| RING CONTROL     | --- |
| COPY? [Y/N]      | --- |
| FROM EXT #       | --- |
| LINES 1 TO 8     | --- |
| 9 TO 16          | --- |
| 17 TO 24         | --- |
| 25 TO 32         | --- |
| ACCESS CONTROL   | --- |
| COPY? [Y/N]      | --- |
| FROM EXT #       | --- |
| LINES 1 TO 8     | --- |
| 9 TO 16          | --- |
| 17 TO 24         | --- |
| 25 TO 32         | --- |
| CALL-OUT CONTROL | --- |
| COPY? [Y/N]      | --- |
| FROM EXT #       | --- |
| LINES 1 TO 8     | --- |
| 9 TO 16          | --- |
| 17 TO 24         | --- |
| 25 TO 32         | --- |

|                  |     |
|------------------|-----|
| Ext. number      | --- |
| RING CONTROL     | --- |
| COPY? [Y/N]      | --- |
| FROM EXT #       | --- |
| LINES 1 TO 8     | --- |
| 9 TO 16          | --- |
| 17 TO 24         | --- |
| 25 TO 32         | --- |
| ACCESS CONTROL   | --- |
| COPY? [Y/N]      | --- |
| FROM EXT #       | --- |
| LINES 1 TO 8     | --- |
| 9 TO 16          | --- |
| 17 TO 24         | --- |
| 25 TO 32         | --- |
| CALL-OUT CONTROL | --- |
| COPY? [Y/N]      | --- |
| FROM EXT #       | --- |
| LINES 1 TO 8     | --- |
| 9 TO 16          | --- |
| 17 TO 24         | --- |
| 25 TO 32         | --- |

RING CONTROL options:

- D = Delay ring
- L = Lamp only (no ring)
- N = Night only
- R = Ring immediately

ACCESS CONTROL and CALL-OUT CONTROL options:

- N = No (do not allow)
- Y = Yes (allow)

RING CONTROL options:

- D = Delay ring
- L = Lamp only (no ring)
- N = Night only
- R = Ring immediately

ACCESS CONTROL and CALL-OUT CONTROL options:

- N = No (do not allow)
- Y = Yes (allow)

**Table 2-6 PROGRAM RECORD FORM, KEYSSET KEY DEFINITION**

|                    |       |       |       |
|--------------------|-------|-------|-------|
| KEYSET EXT # _____ |       |       |       |
| KEY #01            | _____ | _____ | _____ |
| KEY #02            | _____ | _____ | _____ |
| KEY #03            | _____ | _____ | _____ |
| KEY #04            | _____ | _____ | _____ |
| KEY #05            | _____ | _____ | _____ |
| KEY #06            | _____ | _____ | _____ |
| KEY #07            | _____ | _____ | _____ |
| KEY #08            | _____ | _____ | _____ |
| KEY #09            | _____ | _____ | _____ |
| KEY #10            | _____ | _____ | _____ |
| KEY #11            | _____ | _____ | _____ |
| KEY #12            | _____ | _____ | _____ |
| KEY #13            | _____ | _____ | _____ |
| KEY #14            | _____ | _____ | _____ |
| KEY #15            | _____ | _____ | _____ |
| KEY #16            | _____ | _____ | _____ |
| KEY #17            | _____ | _____ | _____ |
| KEY #18            | _____ | _____ | _____ |
| KEY #19            | _____ | _____ | _____ |
| KEY #20            | _____ | _____ | _____ |
| KEY #21            | _____ | _____ | _____ |
| KEY #22            | _____ | _____ | _____ |
| KEY #23            | _____ | _____ | _____ |
| KEY #24            | _____ | _____ | _____ |

ENTRY IDENTIFIER  
 OPTIONS:  
 F = Centrex-Type Feature Key

LINE NUMBER OPTIONS:  
 (Use only if ENTRY IDENTIFIER = F)  
 801-832 = Line  
 90-99 = Line Group

DEFINITION

KEY OPTIONS:  
 G01-G23 = Pickup Group  
 R = Record Key  
 U = Undefined  
 300-427 = Hotline  
 50-59, 20-29 = Pers. Speed Dial  
 70-79, 700-799, 7000-7999 = Sys. Speed Dial  
 801-832 = Line  
 90-99 = Fixed Loop  
 9 = Switched Loop  
 P0-P7 = Page Zone  
 S300-S427 = Call Coverage  
 60-69 = Park Orbit

CENTREX-TYPE FEATURE KEY OPTIONS

0-9, \*# = Digits  
 D = Delay F = Flash P = Pause

RING OPTIONS:  
 (Use only for Pickup  
 Group and Call Coverage  
 Keys)  
 N = No Y = Yes  
 D = Delay

**Table 2-7 PROGRAM RECORD FORM, DSS KEY DEFINITION**

|                      |               |               |                 |
|----------------------|---------------|---------------|-----------------|
| DSS EXT ?            | _____         |               |                 |
| DSS OWNER ?          | _____         |               |                 |
| OPR #                | _____         |               |                 |
| DSS BLOCK NO. (1-16) | _____         |               |                 |
| KEY #01 _____        | KEY #21 _____ | KEY #41 _____ | KEY #61 _____   |
| KEY #02 _____        | KEY #22 _____ | KEY #42 _____ | KEY #62 _____   |
| KEY #03 _____        | KEY #23 _____ | KEY #43 _____ | KEY #63 _____   |
| KEY #04 _____        | KEY #24 _____ | KEY #44 _____ | KEY #64 _____   |
| KEY #05 _____        | KEY #25 _____ | KEY #45 _____ | KEY #65 _____   |
| KEY #06 _____        | KEY #26 _____ | KEY #46 _____ | KEY #66 _____   |
| KEY #07 _____        | KEY #27 _____ | KEY #47 _____ | KEY #67 _____   |
| KEY #08 _____        | KEY #28 _____ | KEY #48 _____ | KEY #68 _____   |
| KEY #09 _____        | KEY #29 _____ | KEY #49 _____ | KEY #69 _____   |
| KEY #10 _____        | KEY #30 _____ | KEY #50 _____ | KEY #70 _____   |
| KEY #11 _____        | KEY #31 _____ | KEY #51 _____ | KEY #71 _____   |
| KEY #12 _____        | KEY #32 _____ | KEY #52 _____ | KEY #72 _____   |
| KEY #13 _____        | KEY #33 _____ | KEY #53 _____ | KEY #73 _____   |
| KEY #14 _____        | KEY #34 _____ | KEY #54 _____ | KEY #74 _____   |
| KEY #15 _____        | KEY #35 _____ | KEY #55 _____ | KEY #75 _____   |
| KEY #16 _____        | KEY #36 _____ | KEY #56 _____ | KEY #76 _____   |
| KEY #17 _____        | KEY #37 _____ | KEY #57 _____ | KEY #77 _____   |
| KEY #18 _____        | KEY #38 _____ | KEY #58 _____ | KEY #78 _____   |
| KEY #19 _____        | KEY #39 _____ | KEY #59 _____ | KEY #79 _____   |
| KEY #20 _____        | KEY #40 _____ | KEY #60 _____ | KEY #80 RELEASE |

**OPTIONS:**

- |                   |                            |
|-------------------|----------------------------|
| P0-P7 = Page Zone | S01-S80 = Pers. Speed Dial |
| 300-427 = Hotline | 60-69 = Park Orbit         |
| 801-832 = Line    | U = Undefined              |

NOTE: DSS BLOCK NO. does not apply to an 80-button DSS Console owned by an Attendant.

**Table 2-8 PROGRAM RECORD FORM,  
SELECTABLE DISPLAY MESSAGES (Page 1 of 2)**

|           |       |
|-----------|-------|
| MSG # 600 | _____ |
| MSG # 601 | _____ |
| MSG # 602 | _____ |
| MSG # 603 | _____ |
| MSG # 604 | _____ |
| MSG # 605 | _____ |
| MSG # 606 | _____ |
| MSG # 607 | _____ |
| MSG # 608 | _____ |
| MSG # 609 | _____ |
| MSG # 610 | _____ |
| MSG # 611 | _____ |
| MSG # 612 | _____ |
| MSG # 613 | _____ |
| MSG # 614 | _____ |
| MSG # 615 | _____ |
| MSG # 616 | _____ |
| MSG # 617 | _____ |
| MSG # 618 | _____ |
| MSG # 619 | _____ |
| MSG # 620 | _____ |
| MSG # 621 | _____ |
| MSG # 622 | _____ |
| MSG # 623 | _____ |
| MSG # 624 | _____ |
| MSG # 625 | _____ |
| MSG # 626 | _____ |
| MSG # 627 | _____ |
| MSG # 628 | _____ |
| MSG # 629 | _____ |
| MSG # 630 | _____ |
| MSG # 631 | _____ |



|           |       |
|-----------|-------|
| MSG # 632 | ----- |
| MSG # 633 | ----- |
| MSG # 634 | ----- |
| MSG # 635 | ----- |
| MSG # 636 | ----- |
| MSG # 637 | ----- |
| MSG # 638 | ----- |
| MSG # 639 | ----- |
| MSG # 640 | ----- |
| MSG # 641 | ----- |
| MSG # 642 | ----- |
| MSG # 643 | ----- |
| MSG # 644 | ----- |
| MSG # 645 | ----- |
| MSG # 646 | ----- |
| MSG # 647 | ----- |
| MSG # 648 | ----- |
| MSG # 649 | ----- |
| MSG # 650 | ----- |
| MSG # 651 | ----- |
| MSG # 652 | ----- |
| MSG # 653 | ----- |
| MSG # 654 | ----- |
| MSG # 655 | ----- |
| MSG # 656 | ----- |
| MSG # 657 | ----- |
| MSG # 658 | ----- |
| MSG # 659 | ----- |
| MSG # 660 | ----- |
| MSG # 661 | ----- |
| MSG # 662 | ----- |
| MSG # 663 | ----- |

Table 2-8 PROGRAM RECORD FORM,  
SELECTABLE DISPLAY MESSAGES (Page 2 of 2)

**Table 2-9 PROGRAM RECORD FORM, SYSTEM PARAMETERS (Page 1 of 5)**

| SYSTEM PROMPTS               |   | PROGRAM ENTRY | SYSTEM PROMPTS                      | PROGRAM ENTRY |
|------------------------------|---|---------------|-------------------------------------|---------------|
| <b>QA - NUMBER PLAN</b>      |   |               | OPR'S EXT? 3 EXT                    | _____         |
| RINGDOWN DGT?                | 1 | _____         | OPR'S EXT? 4 EXT                    | _____         |
| 2ND TEN SPEED DIAL DGT?      | 2 | _____         | <b>QD - SYS SPEED DIAL</b>          |               |
| 1ST HUNDRED BLOCK EXT DGT?   | 3 | _____         | NO. OF SYS SPD DIAL DIGITS? (2,3,4) | _____         |
| 2ND HUNDRED BLOCK EXT DGT?   | 4 | _____         | <b>QE - LINE TABLE</b>              |               |
| 1ST TEN SPEED DIAL DGT?      | 5 | _____         | AUTO-HANDSFREE? - [Y/N]             | _____         |
| ORBIT DGT?                   | 6 | _____         | LINE # 01 396                       | _____         |
| SYSTEM SPD DIAL DGT?         | 7 | _____         | GAIN: ndB                           | _____         |
| LINE ACCESS DGT?             | 8 | _____         | LINE # 02 397                       | _____         |
| LINE GROUP DGT?              | 9 | _____         | GAIN: ndB                           | _____         |
| OPERATOR DGT?                | 0 | _____         | LINE # 03 398                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               | LINE # 04 399                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               | LINE # 05 400                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               | LINE # 06 401                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               | LINE # 07 402                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               | LINE # 08 403                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               | LINE # 09 404                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               | LINE # 10 405                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               | LINE # 11 406                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               | LINE # 12 407                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               | LINE # 13 408                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               | LINE # 14 409                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               | LINE # 15 410                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               | LINE # 16 411                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               | LINE # 17 412                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               | LINE # 18 413                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               | LINE # 19 414                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               | LINE # 20 415                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               | LINE # 21 416                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               | LINE # 22 417                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               | LINE # 23 418                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               | LINE # 24 419                       | _____         |
|                              |   |               | GAIN: ndB                           | _____         |
|                              |   |               |                                     | _____         |
| <b>QB - PBX ACCESS CODES</b> |   |               |                                     |               |
| PBX ACCESS CODE 01 ?         |   | _____         |                                     |               |
| PBX ACCESS CODE 02 ?         |   | _____         |                                     |               |
| PBX ACCESS CODE 03 ?         |   | _____         |                                     |               |
| PBX ACCESS CODE 04 ?         |   | _____         |                                     |               |
| PBX ACCESS CODE 05 ?         |   | _____         |                                     |               |
| PBX ACCESS CODE 06 ?         |   | _____         |                                     |               |
| PBX ACCESS CODE 07 ?         |   | _____         |                                     |               |
| PBX ACCESS CODE 08 ?         |   | _____         |                                     |               |
| PBX ACCESS CODE 09 ?         |   | _____         |                                     |               |
| PBX ACCESS CODE 10 ?         |   | _____         |                                     |               |
| PBX ACCESS CODE 11 ?         |   | _____         |                                     |               |
| <b>QC - # OF OPERATORS</b>   |   |               |                                     |               |
| NUMBER OF OPRS?              |   | _____         |                                     |               |
| OPR'S EXT? 1 EXT             |   | _____         |                                     |               |
| OPR'S EXT? 2 EXT             |   | _____         |                                     |               |

**Table 2-9 PROGRAM RECORD FORM, SYSTEM PARAMETERS (Page 2 of 5)**

| SYSTEM PROMPTS                                   | PROGRAM ENTRY | SYSTEM PROMPTS                                            | PROGRAM ENTRY |
|--------------------------------------------------|---------------|-----------------------------------------------------------|---------------|
| LINE # 25 420<br>GAIN. ndB                       | _____         | QK - KSU IDENT                                            |               |
| LINE # 26 421<br>GAIN ndB                        | _____         | KSU ID.                                                   | _____         |
| LINE # 27 422<br>GAIN. ndB                       | _____         |                                                           | _____         |
| LINE # 28 423<br>GAIN: ndB                       | _____         |                                                           | _____         |
| LINE # 29 424<br>GAIN: ndB                       | _____         |                                                           | _____         |
| LINE # 30 425<br>GAIN ndB                        | _____         | QL - LCR                                                  |               |
| LINE # 31 426<br>GAIN. ndB                       | _____         | ACCT CODES MANDATORY? - [Y/N]                             | _____         |
| LINE # 32 427<br>GAIN. ndB                       | _____         | VERIFY CODES? - [Y/N]                                     | _____         |
| <b>QF - LINE GROUP ACCESSS</b>                   |               | ACCT CODES FOR TOLL CALL ONLY?<br>[Y/N]                   | _____         |
| <b>GROUP # 90 LINE NUMBER?</b>                   | _____         | MIN. COS REQUIRING ACCT CODE?                             | _____         |
| <b>GROUP # 91 LINE NUMBER?</b>                   | _____         | <b>LCR (0=NOT INST'D, 1=LCR INST'D,<br/>2=ARS INST'D)</b> | _____         |
| <b>GROUP # 92 LINE NUMBER?</b>                   | _____         | <b>NO. OF CO SERVICES (01 thru 10)</b>                    | _____         |
| <b>GROUP # 93 LINE NUMBER?</b>                   | _____         | <b>SERVICE 01 LINE NUMBER?</b>                            | _____         |
| <b>GROUP # 94 LINE NUMBER?</b>                   | _____         | <b>COS NEEDED TO ACCESS ALT<br/>ROUTE?</b>                | _____         |
| <b>GROUP # 95 LINE NUMBER?</b>                   | _____         | <b>TYPE OF SERVICE?</b>                                   | _____         |
| <b>GROUP # 96 LINE NUMBER?</b>                   | _____         | <b>ACCESS CODE?</b>                                       | _____         |
| <b>GROUP # 97 LINE NUMBER?</b>                   | _____         | <b>SECURITY CODE?</b>                                     | _____         |
| <b>GROUP # 98 LINE NUMBER?</b>                   | _____         | <b>SERVICE 02 LINE NUMBER?</b>                            | _____         |
| <b>QG - DISA CODE</b>                            |               | <b>COS NEEDED TO ACCESS ALT<br/>ROUTE?</b>                | _____         |
| DISA CODE (8 DGTS MAX)?                          | _____         | <b>TYPE OF SERVICE?</b>                                   | _____         |
| <b>QI - VERIFIABLE CODES</b><br>(see Table 2-10) |               | <b>ACCESS CODE?</b>                                       | _____         |
| <b>QJ - ICM CALL CONTROL</b>                     |               | <b>SECURITY CODE?</b>                                     | _____         |
| ONLY HOTLINE ACCESS TO 2ND<br>CHAN? [Y/N]        | _____         |                                                           |               |
| INHIBIT VOICE CALL? [Y/N]                        | _____         |                                                           |               |
| INHIBIT HANDSFREE REPLY? [Y/N]                   | _____         |                                                           |               |
| CALL WAITING? [Y/N]                              | _____         |                                                           |               |
| CALL FORWARD? [Y/N]                              | _____         |                                                           |               |
| MESSAGE? [Y/N]                                   | _____         |                                                           |               |

**Table 2-9 PROGRAM RECORD FORM, SYSTEM PARAMETERS (Page 3 of 5)**

| SYSTEM PROMPTS                  | PROGRAM ENTRY | SYSTEM PROMPTS                               | PROGRAM ENTRY |
|---------------------------------|---------------|----------------------------------------------|---------------|
| SERVICE 03 LINE NUMBER?         | _____         | SERVICE 08 LINE NUMBER?                      | _____         |
| COS NEEDED TO ACCESS ALT ROUTE? | ____          | COS NEEDED TO ACCESS ALT ROUTE?              | ____          |
| TYPE OF SERVICE?                | ____          | TYPE OF SERVICE?                             | ____          |
| ACCESS CODE?                    | _____         | ACCESS CODE?                                 | _____         |
| SECURITY CODE?                  | _____         | SECURITY CODE?                               | _____         |
| SERVICE 04 LINE NUMBER?         | _____         | SERVICE 09 LINE NUMBER?                      | _____         |
| COS NEEDED TO ACCESS ALT ROUTE? | ____          | COS NEEDED TO ACCESS ALT ROUTE?              | ____          |
| TYPE OF SERVICE?                | ____          | TYPE OF SERVICE?                             | ____          |
| ACCESS CODE?                    | _____         | ACCESS CODE?                                 | _____         |
| SECURITY CODE?                  | _____         | SECURITY CODE?                               | _____         |
| SERVICE 05 LINE NUMBER?         | _____         | SERVICE 10 LINE NUMBER?                      | _____         |
| COS NEEDED TO ACCESS ALT ROUTE? | ____          | COS NEEDED TO ACCESS ALT ROUTE?              | ____          |
| TYPE OF SERVICE?                | ____          | TYPE OF SERVICE?                             | ____          |
| ACCESS CODE?                    | _____         | ACCESS CODE?                                 | _____         |
| SECURITY CODE?                  | _____         | SECURITY CODE?                               | _____         |
| SERVICE 06 LINE NUMBER?         | _____         | QM - MUSIC & RELAY CTL                       |               |
| COS NEEDED TO ACCESS ALT ROUTE? | ____          | BGM LINE NUMBER?                             | _____         |
| TYPE OF SERVICE?                | ____          | MOH LINE NUMBER?                             | _____         |
| ACCESS CODE?                    | _____         | EXT ALL PAGE/NIGHT AUDIBLE LINE LINE NUMBER? | _____         |
| SECURITY CODE?                  | _____         | INHIBIT AUDIBLE RING? [Y/N]                  | ____          |
| SERVICE 07 LINE NUMBER?         | _____         | ZONE 1 LINE NUMBER?                          | _____         |
| COS NEEDED TO ACCESS ALT ROUTE? | ____          | ZONE 2 LINE NUMBER                           | _____         |
| TYPE OF SERVICE?                | ____          | ZONE 3 LINE NUMBER                           | _____         |
| ACCESS CODE?                    | _____         | BGM TO ALL EXT PAGE ZONES? [Y/N]             | ____          |
| SECURITY CODE?                  | _____         | INTERRUPTED RING RELAYS? [Y/N]               | ____          |

**Table 2-9 PROGRAM RECORD FORM, SYSTEM PARAMETERS (Page 4 of 5)**

| SYSTEM PROMPTS                                             | PROGRAM ENTRY      | SYSTEM PROMPTS                                                                                                                      | PROGRAM ENTRY                             |
|------------------------------------------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| RELAY 0:<br>RINGER ON [Y/N]<br>PAGE ON [Y/N]<br>PAGE OWNER | <br>—<br>—<br>———— | QR - SIDE TONE TEST DIGIT<br>SIDE TONE TEST DIGIT?<br>QS - INSTALL CARDS                                                            | <br><br><br>—<br>—                        |
| RELAY 1:<br>RINGER ON [Y/N]<br>PAGE ON [Y/N]<br>PAGE OWNER | <br>—<br>—<br>———— | LINE 0 INSTALLED? [Y/N]<br>LINE 1 INSTALLED? [Y/N]<br>LINE 2 INSTALLED? [Y/N]<br>LINE 3 INSTALLED? [Y/N]<br>LINE 4 INSTALLED? [Y/N] | <br><br><br><br><br>—<br>—<br>—<br>—<br>— |
| RELAY 2:<br>RINGER ON [Y/N]<br>PAGE ON [Y/N]<br>PAGE OWNER | <br>—<br>—<br>———— | LINE 5 INSTALLED? [Y/N]<br>LINE 6 INSTALLED? [Y/N]<br>LINE 7 INSTALLED? [Y/N]                                                       | <br><br><br><br><br>—<br>—<br>—           |
| RELAY 3:<br>RINGER ON [Y/N]<br>PAGE ON [Y/N]<br>PAGE OWNER | <br>—<br>—<br>———— | QT - SYSTEM TIMERS:<br>ORBIT TIME? (30 TO 970 SECS)                                                                                 | <br><br><br>—<br>—<br>—                   |
| ON - RESTORE STANDARD PORT ASSIGNMENTS                     | <br>————           | HOLD-RCL TIME FOR KEYSSET?<br>(30 TO 970 SECS)                                                                                      | <br>—<br>—                                |
| RESTORE STD PORT NUMBERS? [Y/N]                            | <br>————           | CAMP-ON TIME? (30 TO 970 SECS)                                                                                                      | <br>—<br>—                                |
| QO - DID INTERCEPT TREATMENT                               | <br>————           | LINE RESP TIME? (5 TO 99 TENTH SECS)                                                                                                | <br>—<br>—                                |
| VACANT NUMBER? [Y/N]                                       | <br>————           | MODEM RSRV TIME? (30 TO 970 SECS)                                                                                                   | <br>—<br>—                                |
| BUSY? [Y/N]                                                | <br>————           | RINGS BEFORE RCL? (3 TO 15 MAX)                                                                                                     | <br>—<br>—                                |
| RING-NO-ANSWER? [Y/N]                                      | <br>————           | DELAY RING? (1 TO 10 MAX)                                                                                                           | <br>—<br>—                                |
| QP - VOICE MAIL                                            | <br>————           | FLASH RESP TIME?<br>(0 TO 25 TENTH SECS)                                                                                            | <br>—<br>—                                |
| MAILBOX INSTALLED? [Y/N]                                   | <br>————           | DT DETECT CNT? (1 TO 6, 10 SECS/CNT)                                                                                                | <br>—<br>—                                |
| VX MASTER STATION                                          | <br>————           | FEATURE KEY DELAY?<br>(5 TO 99 TENTH SECS)                                                                                          | <br>—<br>—                                |
| QQ - '1' PREFIX REQUIRED FOR NPA CALLS                     | <br>————           | TMS WAIT TIME (5 TO 99 SECS)?                                                                                                       | <br>—<br>—                                |
| '1' PREFIX REQUIRED FOR NPA CALL [Y/N]                     | <br>————           | QU - MODEM POOL MASTER EXT                                                                                                          | <br>—<br>—                                |
|                                                            |                    | POOL MASTER EXT                                                                                                                     | <br>—<br>—                                |
|                                                            |                    | QV - TROUBLE REPORT TEL #                                                                                                           | <br>—<br>—                                |
|                                                            |                    | TEL # (24 DGTS MAX)?                                                                                                                | <br>—<br>—                                |

**Table 2-9 PROGRAM RECORD FORM, SYSTEM PARAMETERS (Page 5 of 5)**

| SYSTEM PROMPTS                                      | PROGRAM ENTRY | SYSTEM PROMPTS                    | PROGRAM ENTRY |
|-----------------------------------------------------|---------------|-----------------------------------|---------------|
| <b>CW - AUTHORIZATION CODES</b><br>(see Table 2-11) |               | PRINT TMS DATA AT 18 00? [Y/N]    | _____         |
| QX - SUPPRESS '#' KEY XMIT                          |               | PRINT TMS DATA AT 19 00? [Y/N]    | _____         |
| SUPPRESS '#' KEY TONE? [Y/N]                        | _____         | PRINT TMS DATA AT 20 00? [Y/N]    | _____         |
| <b>QY - SINGLE DIGIT LINE ACCESS</b>                |               | PRINT TMS DATA AT 21 00? [Y/N]    | _____         |
| SINGLE DIGIT LINE ACCESS? [Y/N]                     | _____         | PRINT TMS DATA AT 22 00? [Y/N]    | _____         |
| <b>QZ - SMDR SETUP</b>                              |               | PRINT TMS DATA AT 23:00? [Y/N]    | _____         |
| MODE?                                               | _____         | SMDR FOR TOLL CALLS ONLY? [Y/N]   | _____         |
| SET UP TMS PRINT TIMES? [Y/N]                       | _____         | INBOUND SMDR? [Y/N]               | _____         |
| PRINT TMS DATA AT 00:00? [Y/N]                      | _____         | SMDR PRINTOUT ALL THE TIME? [Y/N] | _____         |
| PRINT TMS DATA AT 01:00? [Y/N]                      | _____         | SMDR START HOUR? (00 TO 23)       | ____          |
| PRINT TMS DATA AT 02:00? [Y/N]                      | _____         |                                   |               |
| PRINT TMS DATA AT 03:00? [Y/N]                      | _____         |                                   |               |
| PRINT TMS DATA AT 04 00? [Y/N]                      | _____         |                                   |               |
| PRINT TMS DATA AT 05 00? [Y/N]                      | _____         |                                   |               |
| PRINT TMS DATA AT 06 00? [Y/N]                      | _____         |                                   |               |
| PRINT TMS DATA AT 07 00? [Y/N]                      | _____         |                                   |               |
| PRINT TMS DATA AT 08 00? [Y/N]                      | _____         |                                   |               |
| PRINT TMS DATA AT 09 00? [Y/N]                      | _____         |                                   |               |
| PRINT TMS DATA AT 10 00? [Y/N]                      | _____         |                                   |               |
| PRINT TMS DATA AT 11 00? [Y/N]                      | _____         |                                   |               |
| PRINT TMS DATA AT 12 00? [Y/N]                      | _____         |                                   |               |
| PRINT TMS DATA AT 13:00? [Y/N]                      | _____         |                                   |               |
| PRINT TMS DATA AT 14 00? [Y/N]                      | _____         |                                   |               |
| PRINT TMS DATA AT 15:00? [Y/N]                      | _____         |                                   |               |
| PRINT TMS DATA AT 16:00? [Y/N]                      | _____         |                                   |               |
| PRINT TMS DATA AT 17 00? [Y/N]                      | _____         |                                   |               |



**Table 2-11 PROGRAM RECORD FORM, ARS AUTHORIZATION CODES (Page 1 of 3)  
(QW Command)**

|     |       |     |       |
|-----|-------|-----|-------|
| 001 | _____ | 032 | _____ |
| 002 | _____ | 033 | _____ |
| 003 | _____ | 034 | _____ |
| 004 | _____ | 035 | _____ |
| 005 | _____ | 036 | _____ |
| 006 | _____ | 037 | _____ |
| 007 | _____ | 038 | _____ |
| 008 | _____ | 039 | _____ |
| 009 | _____ | 040 | _____ |
| 010 | _____ | 041 | _____ |
| 011 | _____ | 042 | _____ |
| 012 | _____ | 043 | _____ |
| 013 | _____ | 044 | _____ |
| 014 | _____ | 045 | _____ |
| 015 | _____ | 046 | _____ |
| 016 | _____ | 047 | _____ |
| 017 | _____ | 048 | _____ |
| 018 | _____ | 049 | _____ |
| 019 | _____ | 050 | _____ |
| 020 | _____ | 051 | _____ |
| 021 | _____ | 052 | _____ |
| 022 | _____ | 053 | _____ |
| 023 | _____ | 054 | _____ |
| 024 | _____ | 055 | _____ |
| 025 | _____ | 056 | _____ |
| 026 | _____ | 057 | _____ |
| 027 | _____ | 058 | _____ |
| 028 | _____ | 059 | _____ |
| 029 | _____ | 060 | _____ |
| 030 | _____ | 061 | _____ |
| 031 | _____ | 062 | _____ |



**Table 2-11 PROGRAM RECORD FORM, ARS AUTHORIZATION CODES (Page 2 of 3)  
(QW Command)**

|     |       |     |       |
|-----|-------|-----|-------|
| 063 | _____ | 094 | _____ |
| 064 | _____ | 095 | _____ |
| 065 | _____ | 096 | _____ |
| 066 | _____ | 097 | _____ |
| 067 | _____ | 098 | _____ |
| 068 | _____ | 099 | _____ |
| 069 | _____ | 100 | _____ |
| 070 | _____ | 101 | _____ |
| 071 | _____ | 102 | _____ |
| 072 | _____ | 103 | _____ |
| 073 | _____ | 104 | _____ |
| 074 | _____ | 105 | _____ |
| 075 | _____ | 106 | _____ |
| 076 | _____ | 107 | _____ |
| 077 | _____ | 108 | _____ |
| 078 | _____ | 109 | _____ |
| 079 | _____ | 110 | _____ |
| 080 | _____ | 111 | _____ |
| 081 | _____ | 112 | _____ |
| 082 | _____ | 113 | _____ |
| 083 | _____ | 114 | _____ |
| 084 | _____ | 115 | _____ |
| 085 | _____ | 116 | _____ |
| 086 | _____ | 117 | _____ |
| 087 | _____ | 118 | _____ |
| 088 | _____ | 119 | _____ |
| 089 | _____ | 120 | _____ |
| 090 | _____ | 121 | _____ |
| 091 | _____ | 122 | _____ |
| 092 | _____ | 123 | _____ |
| 093 | _____ | 124 | _____ |

**Table 2-11 PROGRAM RECORD FORM, ARS AUTHORIZATION CODES (Page 3 of 3)  
(QW Command)**

|     |       |     |       |
|-----|-------|-----|-------|
| 125 | _____ | 155 | _____ |
| 126 | _____ | 156 | _____ |
| 127 | _____ | 157 | _____ |
| 128 | _____ | 158 | _____ |
| 129 | _____ | 159 | _____ |
| 130 | _____ | 160 | _____ |
| 131 | _____ | 161 | _____ |
| 132 | _____ | 162 | _____ |
| 133 | _____ | 163 | _____ |
| 134 | _____ | 164 | _____ |
| 135 | _____ | 165 | _____ |
| 136 | _____ | 166 | _____ |
| 137 | _____ | 167 | _____ |
| 138 | _____ | 168 | _____ |
| 139 | _____ | 169 | _____ |
| 140 | _____ | 170 | _____ |
| 141 | _____ | 171 | _____ |
| 142 | _____ | 172 | _____ |
| 143 | _____ | 173 | _____ |
| 144 | _____ | 174 | _____ |
| 145 | _____ | 175 | _____ |
| 146 | _____ | 176 | _____ |
| 147 | _____ | 177 | _____ |
| 148 | _____ | 178 | _____ |
| 149 | _____ | 179 | _____ |
| 150 | _____ | 180 | _____ |
| 151 | _____ | 181 | _____ |
| 152 | _____ | 182 | _____ |
| 153 | _____ | 183 | _____ |
| 154 | _____ | 184 | _____ |

**Table 2-12 PROGRAM RECORD FORM, SYSTEM SPEED DIAL**

|                     |       |       |
|---------------------|-------|-------|
| SPEED DIAL #7 _____ | _____ | _____ |
| NAME                | _____ | _____ |
| SPEED DIAL #7 _____ | _____ | _____ |
| NAME                | _____ | _____ |
| SPEED DIAL #7 _____ | _____ | _____ |
| NAME                | _____ | _____ |
| SPEED DIAL #7 _____ | _____ | _____ |
| NAME                | _____ | _____ |
| SPEED DIAL #7 _____ | _____ | _____ |
| NAME                | _____ | _____ |
| SPEED DIAL #7 _____ | _____ | _____ |
| NAME                | _____ | _____ |
| SPEED DIAL #7 _____ | _____ | _____ |
| NAME                | _____ | _____ |
| SPEED DIAL #7 _____ | _____ | _____ |
| NAME                | _____ | _____ |
| SPEED DIAL #7 _____ | _____ | _____ |
| NAME                | _____ | _____ |
| SPEED DIAL #7 _____ | _____ | _____ |
| NAME                | _____ | _____ |
| SPEED DIAL #7 _____ | _____ | _____ |
| NAME                | _____ | _____ |
| SPEED DIAL #7 _____ | _____ | _____ |
| NAME                | _____ | _____ |

Line Number 396-427 801-832 ~~90-96~~ Telephone Number P = Pause

**Table 2-13 PROGRAM RECORD FORM, PERSONAL SPEED DIAL (Page 1 of 2)**

|                |       |       |
|----------------|-------|-------|
| SPEED DIAL #50 | _____ | _____ |
| NAME           | _____ | _____ |
| SPEED DIAL #51 | _____ | _____ |
| NAME           | _____ | _____ |
| SPEED DIAL #52 | _____ | _____ |
| NAME           | _____ | _____ |
| SPEED DIAL #53 | _____ | _____ |
| NAME           | _____ | _____ |
| SPEED DIAL #54 | _____ | _____ |
| NAME           | _____ | _____ |
| SPEED DIAL #55 | _____ | _____ |
| NAME           | _____ | _____ |
| SPEED DIAL #56 | _____ | _____ |
| NAME           | _____ | _____ |
| SPEED DIAL #57 | _____ | _____ |
| NAME           | _____ | _____ |
| SPEED DIAL #58 | _____ | _____ |
| NAME           | _____ | _____ |
| SPEED DIAL #59 | _____ | _____ |
| NAME           | _____ | _____ |

Line Number 396-427 801-832  
90-88

Telephone Number P = Pause  
OR

I = Intercom Speed Dial

Intercom Feature Code

**Table 2-13 PROGRAM RECORD FORM, PERSONAL SPEED DIAL (Page 2 of 2)**

|                |       |       |
|----------------|-------|-------|
| SPEED DIAL #20 | _____ | _____ |
| NAME           | _____ | _____ |
| SPEED DIAL #21 | _____ | _____ |
| NAME           | _____ | _____ |
| SPEED DIAL #22 | _____ | _____ |
| NAME           | _____ | _____ |
| SPEED DIAL #23 | _____ | _____ |
| NAME           | _____ | _____ |
| SPEED DIAL #24 | _____ | _____ |
| NAME           | _____ | _____ |
| SPEED DIAL #25 | _____ | _____ |
| NAME           | _____ | _____ |
| SPEED DIAL #26 | _____ | _____ |
| NAME           | _____ | _____ |
| SPEED DIAL #27 | _____ | _____ |
| NAME           | _____ | _____ |
| SPEED DIAL #28 | _____ | _____ |
| NAME           | _____ | _____ |
| SPEED DIAL #29 | _____ | _____ |
| NAME           | _____ | _____ |

Line Number 396-427 801-832  
~~80-88~~

Telephone Number P = Pause

OR

I = Intercom Speed Dial

Intercom Feature Code

## REFERENCE SHEET, LINE PROGRAMMING

When filling in Table 2-3 PROGRAM RECORD FORM, LINE use this sheet as a reference. The prompts listed include the range of values shown and apply to the line circuit types checked.

| ACCESS | PROMPT              | RANGE         | CIRCUIT TYPE |       |
|--------|---------------------|---------------|--------------|-------|
|        |                     |               | 08-11        | 12-15 |
| E0     | EXT                 | 300-427       | ✓            | ✓     |
| E1     | PORT                | 96-127        | ✓            | ✓     |
| E2     | CIRCUIT TYPE        | 08-15.X       | ✓            | ✓     |
| E3     | COS                 | 00-27         | ✓            | ✓     |
| E4     | NEXT LINE IN ROTARY | 300-427       | ✓            |       |
| E4     | NEXT EXT IN HUNT    | 300-427       |              | ✓     |
| E7     | SERVICE #           | 00-11         | ✓            | ✓     |
| E8     | ALLOW LINE DIAL-UP  | Y/N           |              | ✓     |
| E8     | ACCESS TO GROUP 90? | Y/N           |              | ✓     |
| E8     | ACCESS TO GROUP 91? | Y/N           |              | ✓     |
| E8     | ACCESS TO GROUP 92? | Y/N           |              | ✓     |
| E8     | ACCESS TO GROUP 93? | Y/N           |              | ✓     |
| E8     | ACCESS TO GROUP 94? | Y/N           |              | ✓     |
| E8     | ACCESS TO GROUP 95? | Y/N           |              | ✓     |
| E9     | DIR TERM OR OPR EXT | 300-435       | ✓            | ✓     |
| EA     | FIRST LINE IN GROUP | 300-427       | ✓            |       |
| EA     | UCD MASTER EXT      | 300-427       |              | ✓     |
| EB     | SPD DIAL BLOCK      | 00-102        |              | ✓     |
| EC     | CALL PICKUP GROUP   | 00-23         | ✓            | ✓     |
| ED     | ACCESS CONTROL      | (Table 2-4)   |              | ✓     |
| ED     | CALL-OUT CONTROL    | (Table 2-4)   |              | ✓     |
| EI     | NIGHT CALL TO EXT   | 300-435       | ✓            |       |
| EI     | TANDEM OK           | Y/N           | ✓            |       |
| EJ     | TOLL RESTRICT       | Y/N           | ✓            |       |
| NP     | Name                | 16 characters | ✓            | ✓     |

Line circuit types:

- 08 = CO, ground start, DTMF
- 09 = CO, ground start, DP
- 10 = CO, loop start, DTMF
- 11 = CO, loop start, DP
- 12 = DISA, ground start, DTMF
- 13 = DISA, ground start, DP
- 14 = DISA, ground start, DTMF, Night only
- 15 = DISA, ground start, DP, Night only
- X = not installed

## REFERENCE SHEET, STATION PROGRAMMING

When filling in Table 2-4 PROGRAM RECORD FORM, STATION use this sheet as a reference. The prompts listed include the range of values shown and apply to the station circuit types checked.

| ACCESS | PROMPT                       | RANGE             | CIRCUIT TYPE |   |   |   |   |   |   |   |
|--------|------------------------------|-------------------|--------------|---|---|---|---|---|---|---|
|        |                              |                   | 0            | 1 | 2 | 3 | 5 | 6 | M | Z |
| E0     | EXT                          | 300-427           | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E1     | PORT                         | 00-95             | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E2     | CIRCUIT TYPE                 | 00-03,05,06,M,X,Z | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E3     | COS                          | 00-27,30          | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E4     | NEXT EXT IN HUNT             | 300-427           | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E5     | HUNT TYPE                    | 00-06             | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E6     | DATA SET                     | Y/N               |              | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E7     | PAGE ZONE                    | 00-07             | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E8     | RING-LINE PREFERENCE?        | Y/N               |              | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E8     | OFF-HOOK RINGING?            | Y/N               |              | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E8     | KEY ACCESS TO OUTBOUND LINES | Y/N               |              | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E8     | ALLOW LINE DIAL-UP           | Y/N               | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E8     | ACCESS TO GROUP 90?          | Y/N               | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E8     | ACCESS TO GROUP 91?          | Y/N               | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E8     | ACCESS TO GROUP 92?          | Y/N               | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E8     | ACCESS TO GROUP 93?          | Y/N               | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E8     | ACCESS TO GROUP 94?          | Y/N               | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E8     | ACCESS TO GROUP 95?          | Y/N               | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E9     | DIR TERM OR OPR EXT          | 300-427           | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| EA     | UCD MASTER EXT               | 300-427           | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| EB     | SPD DIAL BLOCK               | 00-102            | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| EC     | CALL PICKUP GROUP            | 00-23             | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| EC     | PRVCY RLS GROUP              | 00-99             |              | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| ED     | RING CONTROL                 | (Table 2-4)       |              | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| ED     | ACCESS CONTROL               | (Table 2-4)       | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| ED     | CALL-OUT CONTROL             | (Table 2-4)       | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| EE     | RING GROUP #                 | 00-08             | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| EF     | PAGING THRU SPKR             | Y/N               | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| EF     | INCOMING VOICE CALL          | Y/N               | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| EF     | HEADSET                      | Y/N               | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| EF     | INHIBIT VOICE OVER           | Y/N               |              | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| EG     | PROGRAMMABLE KEYS            | 18/24             |              | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| EH     | SUPPRESS DSS LAMPS           | Y/N               |              | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| EK     | ALLOW DND                    | Y/N               |              | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| EK     | VX                           | Y/N               |              |   |   |   | ✓ | ✓ | ✓ | ✓ |
| EL     | PRIME LINE KEY               | 01-24//R,Z        |              | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| NP     | Name                         | 16 characters     | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

**Station circuit types:**

- 00 = Electronic Single Line telephone
- 01 = signal-channel Data Set, Ten-Button and Thirty-Button telephones
- 02 = Thirty-Button Display telephone
- 03 = dual-channel Data Set
- 05 = OPX/ASI
- 06 = 80-Button DSS Console
- ✓ = Modem Pooling extension
- X = not installed
- Z = Data Port, data-only Data Set

# **TIE/communications, Inc.**

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## **TIE CORPORATE HEADQUARTERS AND REGIONAL OFFICES**

### **Corporate Headquarters**

4 Progress Ave.  
Seymour CT 06483  
(203) 888-8000

You should always make your initial contact through a TIE regional office. Each office is prepared to offer:

- Sales Support
- Technical Support
- Technical Training

### **Regional Offices**

#### **EASTERN REGION SALES OFFICE**

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Shelton, CT 06484  
Phone: (203) 926-2100  
Fax: (203) 926-2527

#### **ATLANTA OFFICE**

680 Engineering Drive  
Suite 150  
Norcross, GA 30092  
Phone: (404) 447-1314  
Fax: (404) 447-8850

#### **WESTERN REGION SALES OFFICE**

350 Shuman Boulevard  
Suite 270  
Naperville, IL 60563  
Phone: (708) 355-0808  
Fax: (708) 355-0983

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317 Inverness Way South  
Englewood, CO 80112  
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Fax: (303) 792-3416

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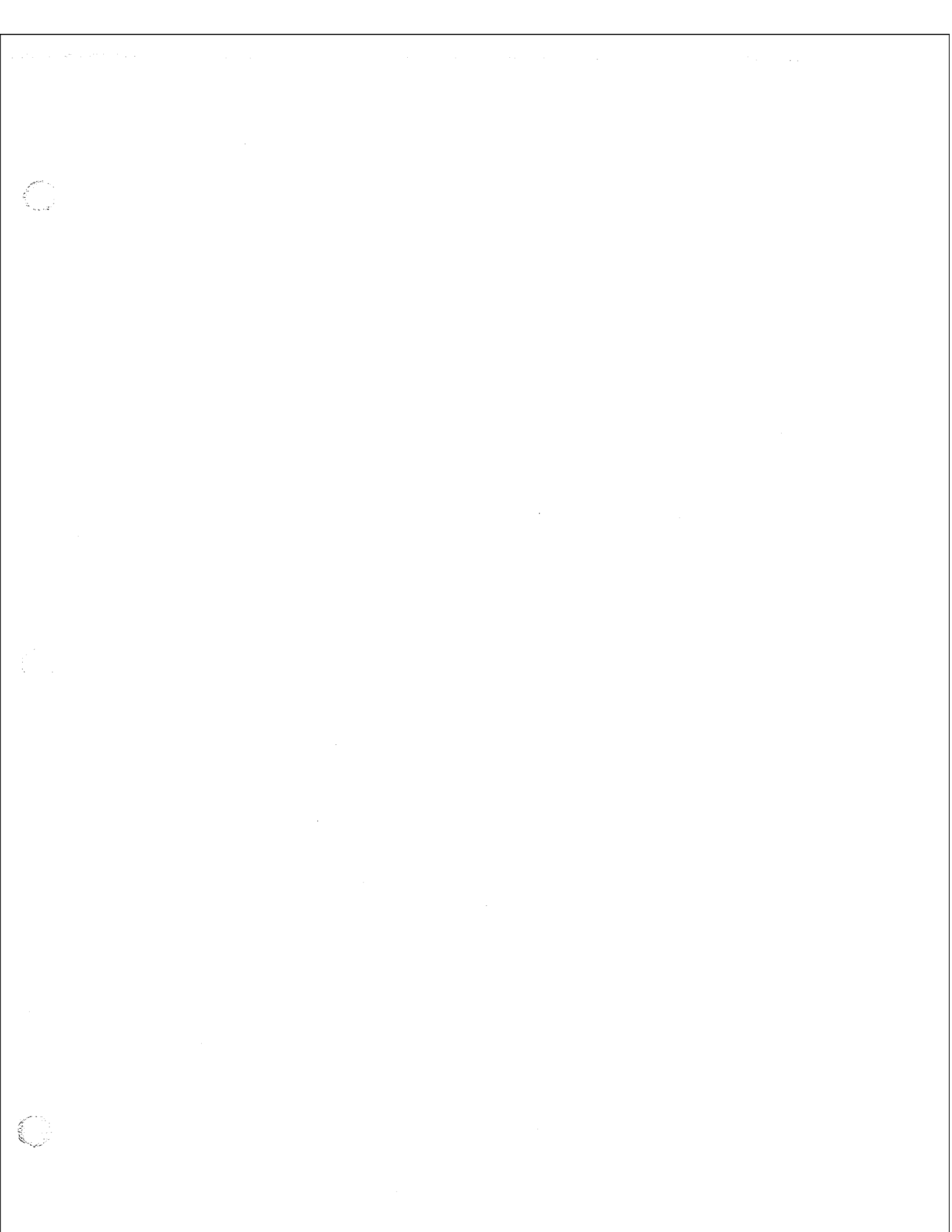
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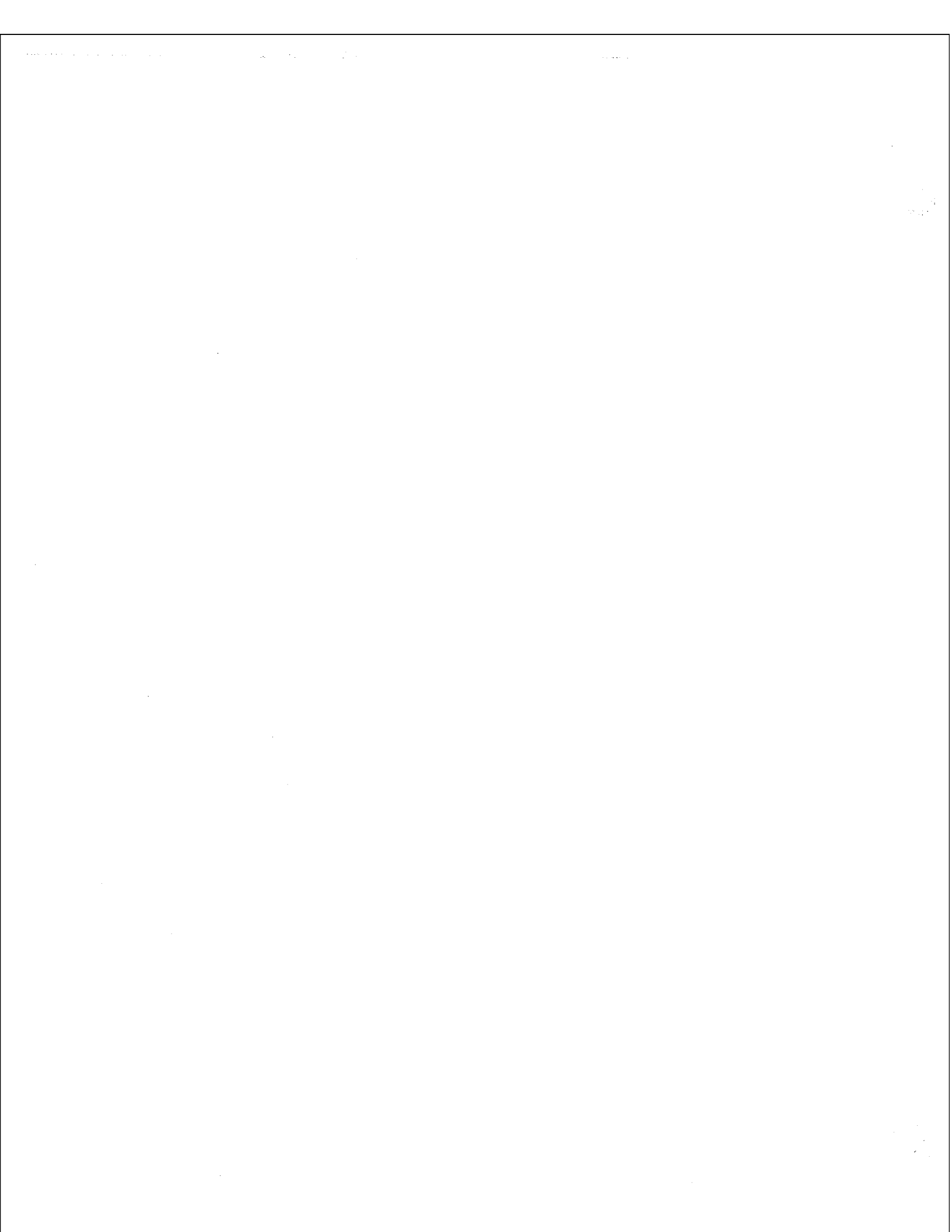
For technical troubleshooting assistance in the event of an ABSOLUTE EMERGENCY between the hours of 5PM and 8:30AM Eastern Time, call:

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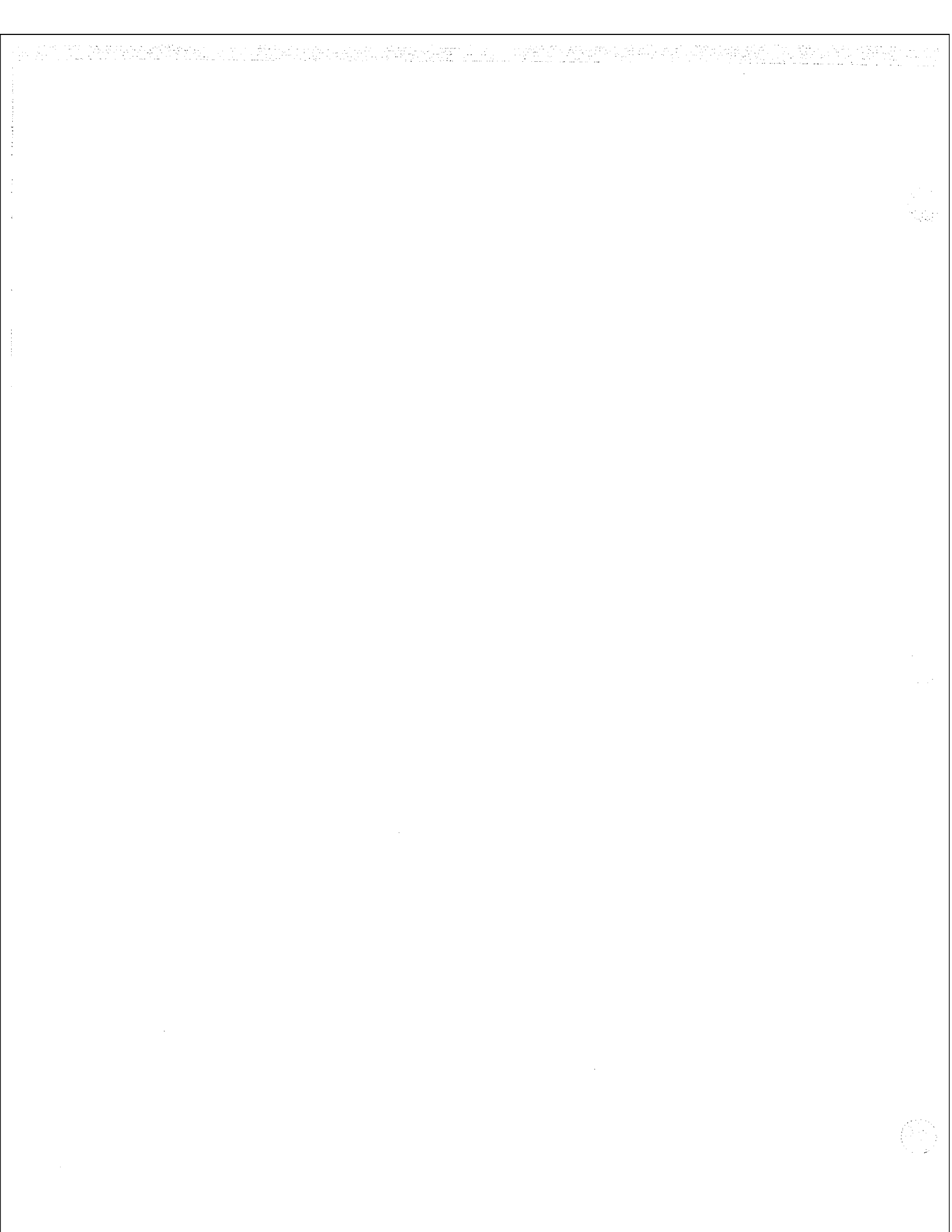
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# CHARTS



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## SYSTEM PROGRAMMABLE OPTIONS

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# SOFTWARE TROUBLESHOOTING CHART

| Feature                                              | EXTENSIONS                       |                                  |                                  |                                  | TRUNKS      |                             |             | SYSTEM                     |
|------------------------------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|-------------|-----------------------------|-------------|----------------------------|
|                                                      | Attendant                        | Keyset                           | ESL Set                          | ASI/OPX                          | CO          | DISA                        | Tie         |                            |
| Account Code Capability                              | Always<br>If set in system<br>E3 | Always<br>If set in system<br>E3 | Always<br>If set in system<br>E3 | Always<br>If set in system<br>E3 |             |                             |             | QI,QL,OX                   |
| Alphanumeric Display                                 | E2                               | E2                               |                                  |                                  |             |                             |             |                            |
| Alternate Attendant                                  | CP                               | E2                               |                                  |                                  |             |                             |             |                            |
| Alternate Attendant, Attendant Console (ONYX IV)     | E2                               | EE                               |                                  |                                  |             |                             |             | QC                         |
| Analog Station Interface (ASI)                       |                                  |                                  |                                  | E2                               |             |                             |             |                            |
| Attendant Console (ONYX IV)                          | E1,QC,E2,ED                      |                                  |                                  |                                  |             |                             |             |                            |
| Attendant Positions                                  | QC,E2,E8                         | E9                               |                                  | E9                               |             |                             |             | QC                         |
| Automatic Answer (ONYX IV)                           |                                  |                                  |                                  |                                  |             |                             |             | QC                         |
| Automatic Call Distribution                          | CP,E3,E5,EA<br>KD                | CP,E3,E5,EA<br>KD                | E5,EA                            | E5,EA                            |             |                             |             | FC1,OT<br>E2,E4 (master)   |
| Refer to programming charts beginning on page 1-32D. |                                  |                                  |                                  |                                  |             |                             |             |                            |
| Automatic Call Distribution (ONYX IV)                |                                  |                                  |                                  |                                  |             |                             |             |                            |
| Automatic Fault Reporting                            | QC                               |                                  |                                  |                                  |             |                             |             | J,QK,QV,OS,OZ              |
| Automatic Handsfree                                  | KS                               | KS                               |                                  |                                  |             |                             |             | QE                         |
| Automatic Ringdown (ONYX IV)                         |                                  |                                  | E9                               | E9                               |             |                             |             |                            |
| Automatic Route Selection                            | E3,E8,ED,KS                      | E3,E8,ED,KS                      | E3,E8,ED                         | E3,E8,ED                         | E4,E7,E2,EA | E4,E7,E2,EA<br>CO mode only | E4,E7,E2,EA | GA,QL,OC<br>OO,OT,OW,OX,OY |
| Background Music                                     |                                  |                                  |                                  |                                  | E2          |                             |             | QM                         |
| Battery Backup                                       | Hardware option only             |                                  |                                  |                                  |             |                             |             |                            |
| Call Coverage Keys                                   | KS,ED                            | KS,ED                            |                                  |                                  |             |                             |             | QT                         |
| Call Forwarding                                      |                                  | CP,E3,ED                         | CP,E3,ED                         | CP,E3,ED                         | E1          | E1                          | E1          | Q1,OT                      |

Always=Feature always allowed  
 E2 (regular type)=Required Program  
 E2 (italics type)=Other Program





# SOFTWARE TROUBLESHOOTING CHART

| Feature                                       | EXTENSIONS  |                |                             |             | TRUNKS |              |     | SYSTEM |                       |
|-----------------------------------------------|-------------|----------------|-----------------------------|-------------|--------|--------------|-----|--------|-----------------------|
|                                               | Attendant   | Keyset         | ESL Set                     | ASI/OPX     | CO     | DISA         | Tie |        | DID                   |
| Direct Station Selection, DSS Console         | E2,KD,EB    | E2,KD,EB       |                             |             |        |              |     |        | QC                    |
| Direct Station Selection, Extension           | EH          | EH             |                             |             |        |              |     |        |                       |
| Direct Trunk Access                           | CP,E3,ED    | CP,E3,ED       | CP,E3,ED                    | CP,E3,ED    |        |              |     |        |                       |
| Directed Call Pickup                          | ED          | ED             | ED                          | ED          |        |              |     |        |                       |
| Directory Dialing                             | E2          | E2             |                             |             |        |              |     |        | NP,SP                 |
| Directory Dialing (ONYX IV)                   | KS          | KS             |                             |             |        |              |     |        | NP,QC                 |
| Distinctive Ringing, Tones and Flash Patterns |             |                | See Tables 1-1, 1-2 and 1-3 | CP,E3       |        |              |     |        |                       |
| Do Not Disturb                                | KS          | EK,KS          |                             |             |        |              |     |        |                       |
| Dual Line Appearance (ONYX IV)                | KS          | KS             |                             |             |        |              |     |        |                       |
| Equal Access Compatibility                    | AP,CP,E3    | AP,CP,E3       | AP,CP,E3                    | AP,CP,E3    |        |              |     |        |                       |
| Extended Ringing                              | CP,E3       | CP,E3          | CP,E3                       | CP,E3       |        |              |     |        |                       |
| Extension Hunting Circular and Terminal       | E4,E5       | E4,E5          | E4,E5                       | E4,E5       |        |              |     |        | OT                    |
| Extension Hunting UCID                        | E4,E5,EA    | E4,E5,EA       | E4,E5,EA                    | E4,E5,EA    |        |              |     |        | E2 (master)<br>FC1,OT |
| External Alerting Devices                     | ED          | ED             | ED                          | ED          |        |              |     |        | QM                    |
| Flash                                         | ED          | ED             | CP,E3,ED                    | ED          |        |              |     |        | OT                    |
| Flexible Numbering Plan                       |             |                |                             |             |        |              |     |        | QA                    |
| Forced Trunk Disconnect                       | CP,E8,ED,KS | CP,E3,E8,ED,KS | CP,E3,E8,ED                 | CP,E3,E8,ED |        |              |     |        |                       |
| Group Call Pickup                             | EC,ED,KS    | EC,ED,KS       | EC,ED                       | EC,ED       | EC     | EC mode only | EC  |        | OT                    |

Always=Feature always allowed  
 E2 (regular type)=Required Program  
 E2 (italics type)=Other Program

|                                      |  |                  |             |          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |                           |
|--------------------------------------|--|------------------|-------------|----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------------------|
| Group Listen                         |  | EF               |             |          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |                           |
| Group Ring (Ring Groups)             |  | EE               | EE          | EE       |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |                           |
| Handsfree (Speakerphone) and Monitor |  | EF               |             |          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |                           |
| Headset Compatibility                |  | EF               |             |          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |                           |
| Hold                                 |  | ED,KS            | ED          | ED       |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | QT                        |
| Holline                              |  | KS               |             |          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |                           |
| Intercept of Calls                   |  | Not Programmable |             |          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |                           |
| Intercom                             |  | E9,EF            | E9,EF       | E9       |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | NP,OA,OC,QJ               |
| Intrusion (Barge-In)                 |  | CP,E3            | CP,E3       | CP,E3    |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |                           |
| Last Number Redial                   |  | ED               | ED          | ED       |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |                           |
| Least Cost Routing                   |  | E3,E8,ED,KS      | E3,E8,ED,KS | E3,E8,ED | E7,E2,E4,EA | E7,E2,E4,EA | E7,E2,E4,EA | E7,E2,E4,EA | E7,E2,E4,EA | E7,E2,E4,EA | E7,E2,E4,EA | E7,E2,E4,EA | E7,E2,E4,EA | E7,E2,E4,EA | E7,E2,E4,EA | E7,E2,E4,EA | E7,E2,E4,EA | E7,E2,E4,EA | E7,E2,E4,EA | GL,QL,OO,OT<br>OX,OY      |
| Line (Trunk) Queuing                 |  | CP,E3,ED         | CP,E3,ED    | CP,E3,ED |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |                           |
| Line (Trunk) Rotaries                |  | E8,ED,KS         | E8,ED,KS    | E8,ED    | E4,EA,E2    | E4,EA,E2    | E4,EA,E2    | E4,EA,E2    | E4,EA,E2    | E4,EA,E2    | E4,EA,E2    | E4,EA,E2    | E4,EA,E2    | E4,EA,E2    | E4,EA,E2    | E4,EA,E2    | E4,EA,E2    | E4,EA,E2    | E4,EA,E2    | See Central.<br>Alt. Serv |
| Loop Keys                            |  | KS,E8,ED         | KS,E8,ED    | E8,ED    | E4,EA       | E4,EA       | E4,EA       | E4,EA       | E4,EA       | E4,EA       | E4,EA       | E4,EA       | E4,EA       | E4,EA       | E4,EA       | E4,EA       | E4,EA       | E4,EA       | E4,EA       | QF                        |
| Meet Me Conference                   |  | Not Programmable |             |          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |                           |
| Message Waiting                      |  |                  |             |          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | QJ                        |
| Microphone Mute                      |  | Not Programmable |             |          |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |                           |
| Multiple Directory Numbers (ONYX IV) |  | KS               | KS          | KS       |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             | E2                        |

Always=Feature always allowed  
E2 (regular type)=Required Proo.

# SOFTWARE TROUBLESHOOTING CHART

| Feature                            | EXTENSIONS                   |                              |                              | TRUNKS                       |                         |                       | SYSTEM |                      |
|------------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-------------------------|-----------------------|--------|----------------------|
|                                    | Attendant                    | Keyset                       | ESL Set                      | AS/OPX                       | CO                      | DISA                  |        | Tie | DID |
| Music On Hold                      |                              |                              |                              |                              |                         |                       |        | E2 (MOH Trunk)<br>QM |
| Night Answer (Off-Hours Ringing)   | EK                           |                              |                              |                              | E9                      | E9<br>CO Mode Only    |        |                      |
| Assigned Night Answer              | ED                           | ED                           | ED                           | ED                           | EI                      | EI<br>CO Mode Only    |        | OT                   |
| Universal Night Answer             | ED                           | ED                           | ED                           | ED                           | E2 (UNA Trunk)<br>E9,EI | E2<br>E9,EI           |        | CP,QM                |
| Non-Blocking Architecture          | Not Programmable             |                              |                              |                              |                         |                       |        |                      |
| Off-Hook Signaling                 | E8/EF                        | E8/EF                        | E8/EF                        | E8/EF                        |                         |                       |        |                      |
| Off-Premise Extension (OPX)        |                              |                              |                              | E2                           |                         |                       |        | OT                   |
| Operator Assistance (OPA)          | CP/E3,ED,KS                  | CP/E3,ED,KS                  | CP/E3,ED                     | CP/E3,ED                     | E9,EI                   | E9<br>CO mode only    |        | QE,QH,OT             |
| Paging, Auto                       |                              | with<br>VAU,OPANVAU          | with<br>VAU,OPANVAU          | with<br>VAU,OPANVAU          |                         |                       |        |                      |
| Paging, Internal (Zone & All Call) | CP,E3,E7,EF<br>KD,KS         | CP,E3,E7,EF<br>KD,KS         | CP,E3,E7,EF                  | CP,E3<br>Placing only        |                         |                       |        |                      |
| External                           |                              |                              |                              |                              | E2 (Page Trunk)         |                       |        | QM                   |
| PBX/Centrex Compatibility          | KS                           | KS                           |                              |                              | E7,E2                   | E7,E2<br>CO mode only |        | QB,OT                |
| Personal Greeting                  | with<br>VAU,OPANVAU<br>CP,E3 | with<br>VAU,OPANVAU<br>CP,E3 | with<br>VAU,OPANVAU<br>CP,E3 | with<br>VAU,OPANVAU<br>CP,E3 |                         |                       |        |                      |
| Prime Line Selection               | E8,ED,EL,KS                  | E8,ED,EL,KS                  |                              |                              |                         |                       |        |                      |
| Privacy                            | CP,E3                        | CP,E3                        | CP,E3                        | CP,E3                        |                         |                       |        |                      |
| Privacy Groups                     | EC,KS,E8,ED                  | EC,KS,E8,ED                  |                              |                              |                         |                       |        |                      |

Always=Feature always allowed  
E2 (regular type)=Required Program  
E2 (italics type)=Other Program

|                                                       |                                                                                   |                       |                    |                    |                    |                    |                         |  |
|-------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------|--------------------|--------------------|--------------------|--------------------|-------------------------|--|
| Private Line                                          | E8,ED,KS                                                                          | E8,ED,KS              |                    | E2                 | E2<br>CO mode only |                    | NP                      |  |
| Programmable Keys                                     | KS                                                                                | KS                    |                    |                    |                    |                    |                         |  |
| Release Key                                           | EF,KD                                                                             | EF,KD                 |                    |                    |                    |                    | IP,OC                   |  |
| Removing Trunks and Extensions from Service           | CP                                                                                |                       |                    |                    |                    |                    |                         |  |
| Reverse Voice Over (ONYX IV)                          | KS                                                                                | KS                    |                    |                    |                    |                    |                         |  |
| Ringing Line Preference                               | KS,ED                                                                             | E8,KS,ED              | ED                 | E9                 | E9<br>CO mode only |                    |                         |  |
| Save                                                  | Not Programmable                                                                  |                       |                    |                    |                    |                    |                         |  |
| Selectable Display Messages                           | CP,E3                                                                             | CP,E3                 | CP,E3              | CP,E3              |                    |                    | NP                      |  |
| Silent Monitor                                        | CP,E3,EC                                                                          | CP,E3,EC              | CP,E3,EC           | CP,E3,EC           |                    |                    |                         |  |
| Special Services and OCC Compatibility                | AP,CP,E3                                                                          | AP,CP,E3              | AP,CP,E3           | AP,CP,E3           | E2                 | E2<br>CO mode only | QT                      |  |
| Special Trunk Interface                               | Refer to the STI Installation and Programming Manual (P/N 01650ST101)             |                       |                    |                    |                    |                    |                         |  |
| Speed Dial                                            | CP,E3,EB,<br>E8,ED,KS                                                             | CP,E3,EB,<br>E8,ED,KS | CP,E3,EB,<br>E8,ED | CP,E3,EB,<br>E8,ED | CP,E3,EB,<br>E8,ED |                    | QD,QA,QT<br>OX,SL,SP,SR |  |
| Split                                                 | KS                                                                                | KS                    |                    |                    |                    |                    |                         |  |
| Station Message Detail Recording                      |                                                                                   |                       |                    |                    |                    | P, QZ, Z           |                         |  |
| System Identification                                 |                                                                                   |                       |                    |                    |                    |                    | QK,J,OV                 |  |
| System Programming Password Protection                |                                                                                   |                       |                    |                    |                    |                    | M,Y                     |  |
| System Reports, Diagnostics and Maintenance Utilities | Read the System Reports, Diagnostics and Maintenance Utilities for the specifics. |                       |                    |                    |                    |                    |                         |  |
| System Timers                                         |                                                                                   |                       |                    |                    |                    |                    | QT                      |  |

Always=Feature always allowed  
E2 (regular type)=Required Pro

# SOFTWARE TROUBLESHOOTING CHART

| Feature                                | EXTENSIONS            |                            |                               | TRUNKS            |       |                    | SYSTEM                                 |     |
|----------------------------------------|-----------------------|----------------------------|-------------------------------|-------------------|-------|--------------------|----------------------------------------|-----|
|                                        | Attendant             | Keyset                     | ESL Set                       | ASI/OPX           | CO    | DISA               |                                        | Tie | DID |
| Tandem Calls (Tandem Trunking)         |                       |                            |                               |                   | EI    | EI<br>CO mode only |                                        |     |
| Tenant Service                         | CP,E3,E8,E9,<br>ED,KS | CP,E3,E7,E8<br>E9,ED,EF,KS | CP,E3,E7,E8<br>E9,ED,EF       | CP,E3,E8<br>E9,ED |       |                    | E2 (Page trunk),QM                     |     |
| Tie Lines                              |                       |                            |                               |                   |       |                    | NP,OT                                  |     |
| Time and Date Setting                  | E3                    | E3                         |                               |                   |       |                    | T                                      |     |
| Toll Restriction                       | AP,CP,E3,ED           | AP,CP,E3,ED                | AP,CP,E3,ED                   | AP,CP,E3,ED       | EJ    | EJ<br>CO mode only | AI,AL,OO                               |     |
| Traffic Management Reporting           |                       |                            |                               |                   |       |                    | HE, HF, QT, QZ, T                      |     |
| Traffic Management Reporting (ONYX IV) | See above.            |                            |                               |                   |       |                    |                                        |     |
| Transfer                               | ED,KS                 | ED,KS                      | ED                            | ED                |       |                    | OT                                     |     |
| Voice Mail Compatibility               | KS                    | KS                         | VX ports-E2,E5<br>EA,EK,E4,ED | E9,EI             | E9,EI | E9<br>CO mode only | OP,FC1,FC3,OC,CJ                       |     |
| Voice Prompting Messages               |                       |                            |                               |                   |       |                    | Requires OPA<br>or OPAN/VAU PCB<br>.CJ |     |
| Volume Controls                        |                       |                            |                               |                   |       |                    | OE                                     |     |
| Walking Class of Service               |                       |                            |                               |                   |       |                    | OG                                     |     |

Always=Feature always allowed  
E2 (regular type)=Required Program  
E2 (italics type)=Other Program

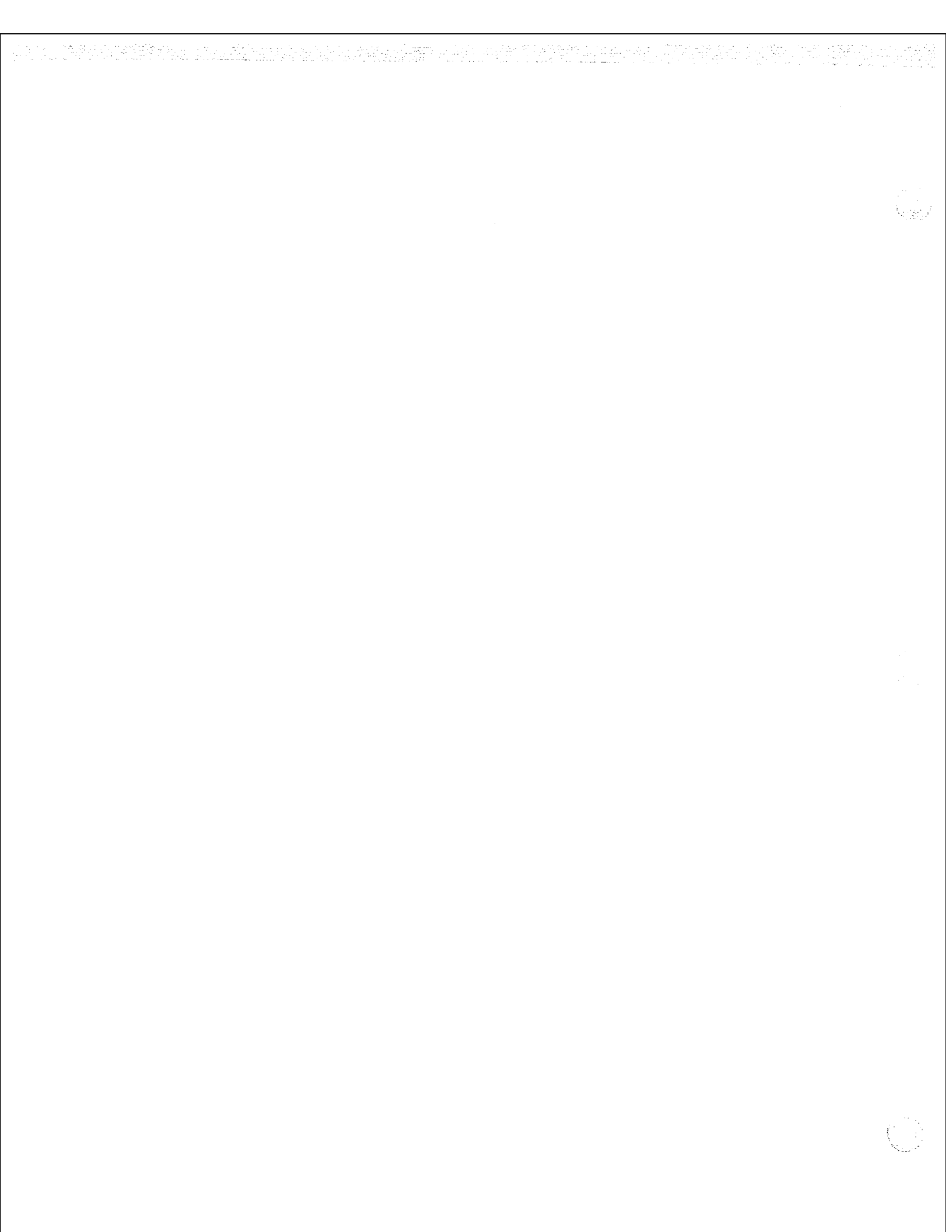
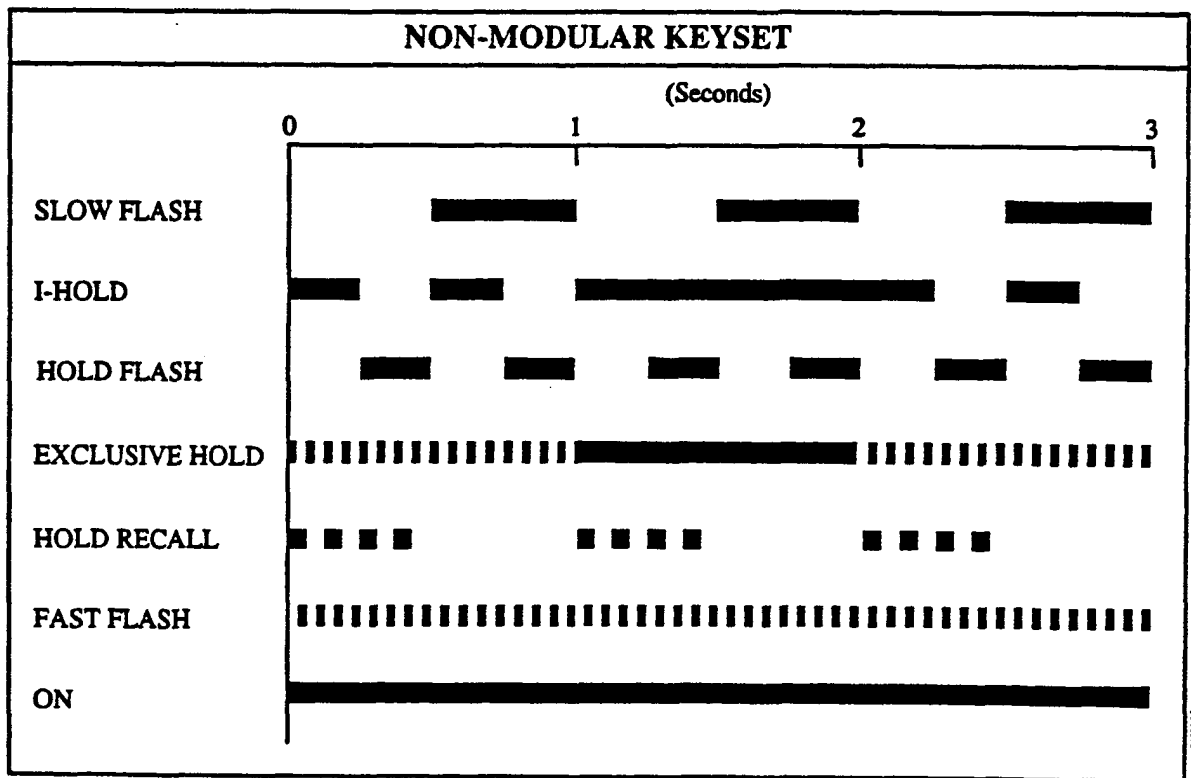
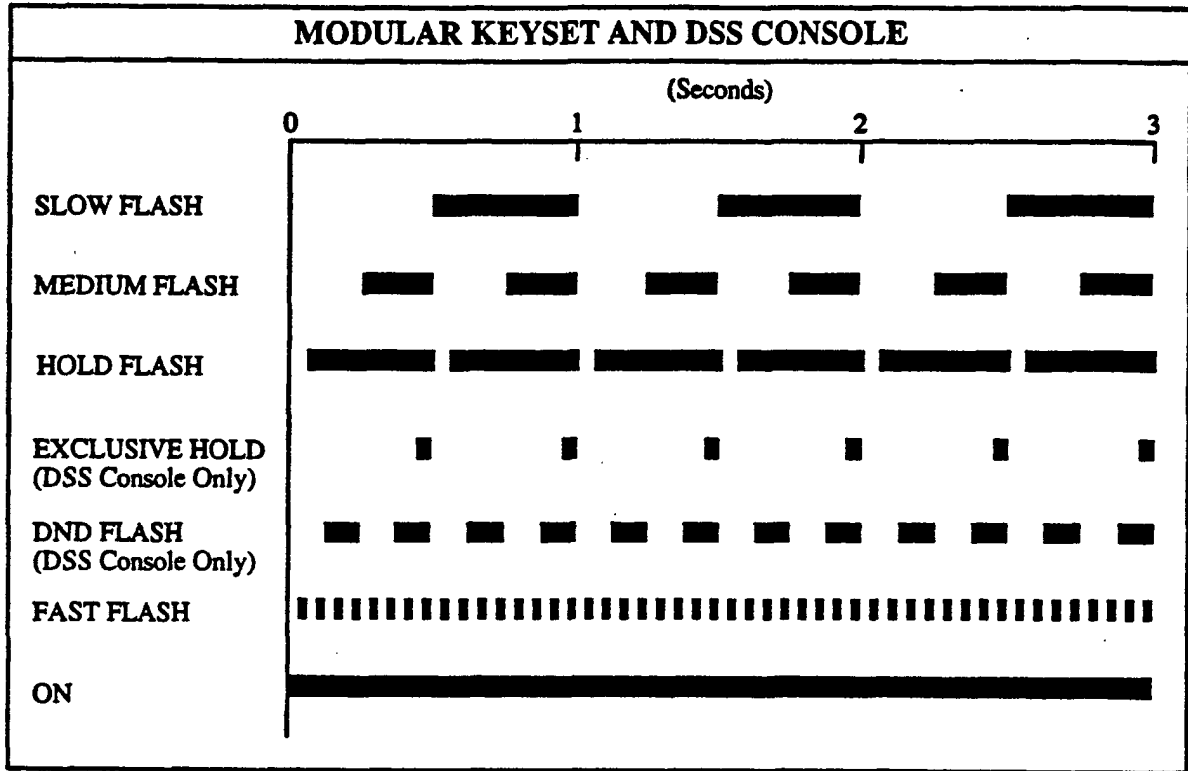
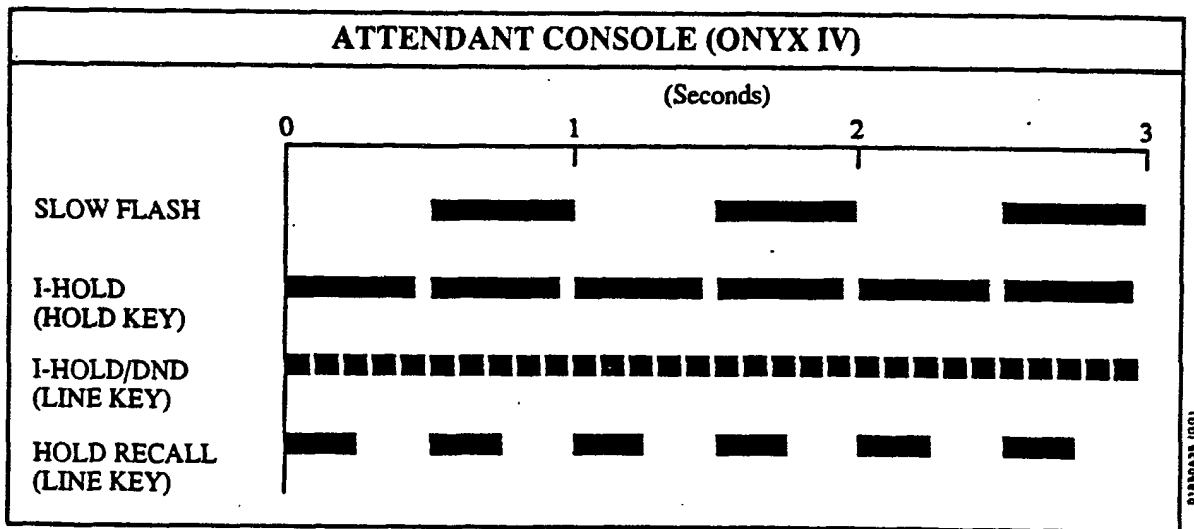
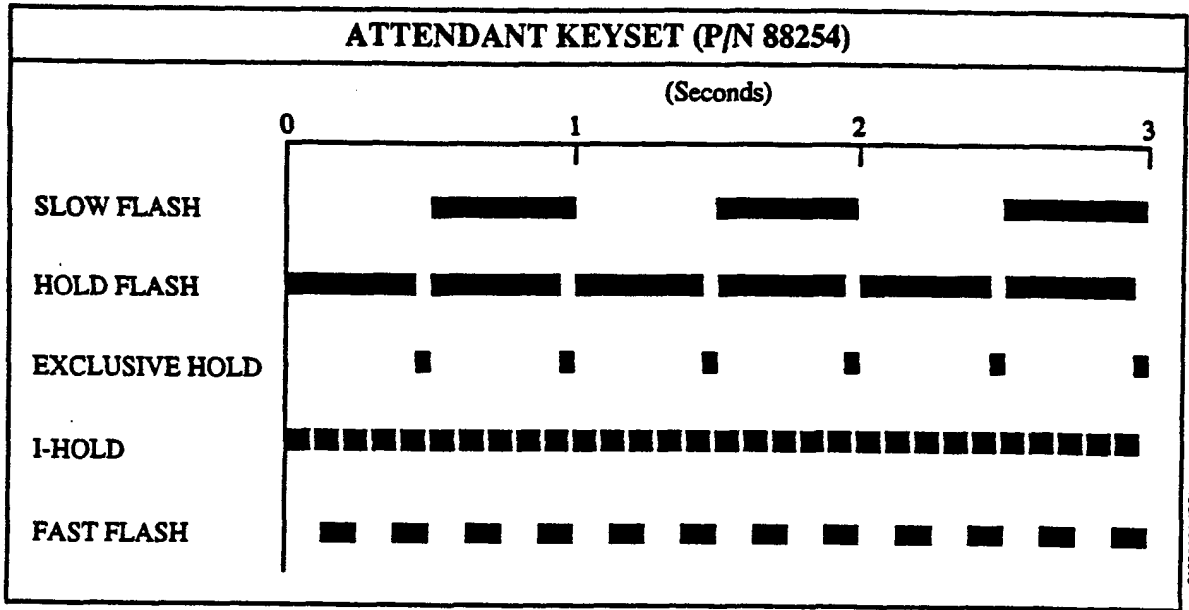


Table 1-1 SYSTEM FLASH RATES (Page 1 of 2)

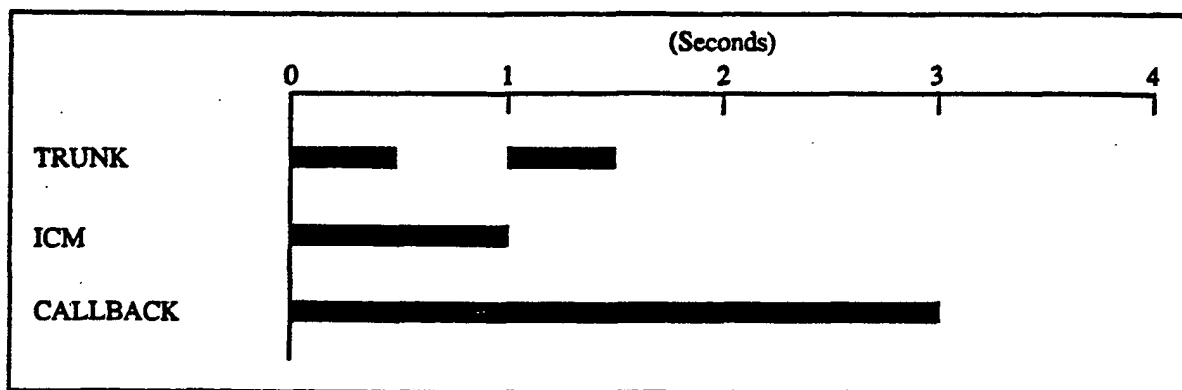


**Table 1-1 SYSTEM FLASH RATES (Page 2 of 2)**





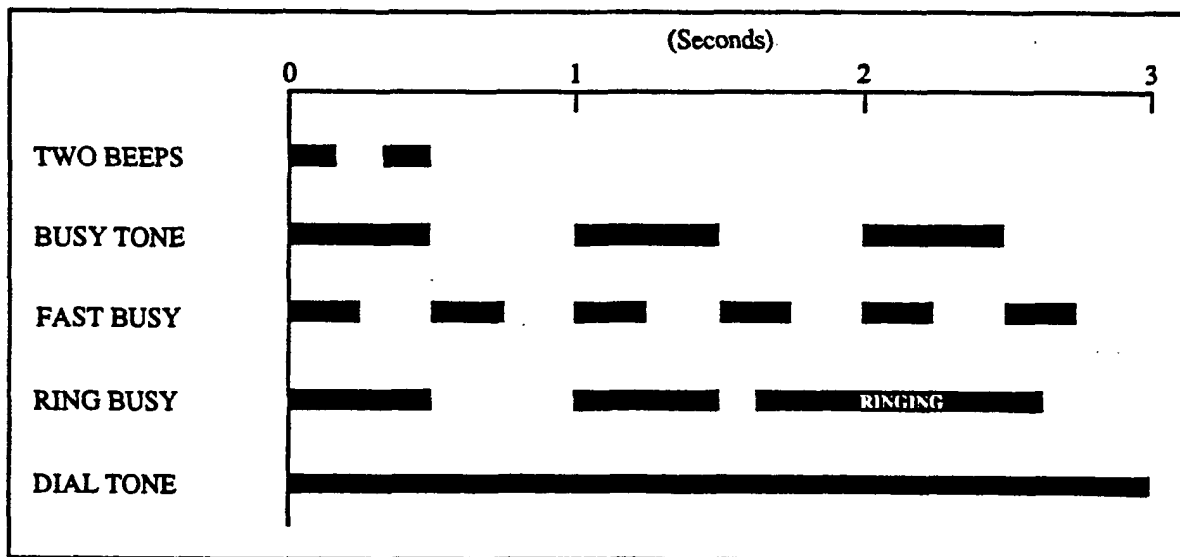
**Table 1-2 SYSTEM RING RATES**



**Note:** Each group of four extensions rings with different tones. This is called Distinctive Ringing. For example, extension 300 rings differently than extension 301. Extension 301 rings differently than extension 302.

Every fourth extension, the Distinctive Ringing pattern repeats. For example, extension 300 rings the same as extension 304. Extension 301 rings the same as extension 305, and so on.

**Table 1-3 SYSTEM TONES**



**Table 1-4 SYSTEM NUMBER PLAN (Page 1 of 3)**

**Note:** All the functions below are from Intercom dial tone (except where noted).

| Code                                                                                               | Function                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #+10 dig.                                                                                          | <b>Account Codes</b><br>Account Code number                                                                                                                                                                                                                                                                                                                  |
| #+6+8+6+9 or 6<br>#DSS Con.+4<br>#DSS Con.+7                                                       | <b>Automatic Call Distribution</b><br>ACD agent puts self back in service<br>ACD agent removes self from service<br>Erase OPA\ACD messages (dial 9) or abort procedure (dial 6)<br>ACD supervisor puts agent back in service<br>ACD supervisor removes agent from service                                                                                    |
| #<br>#+0<br>#+ext+1<br>#+ext+2<br>#+ext+3                                                          | <b>Call Forwarding</b><br>Cancel Call Forwarding<br>Forward calls to main attendant<br>Call Forwarding option 1 (ring no answer)<br>Call Forwarding option 2 (ring no answer and busy)<br>Call Forwarding option 3 (all calls)                                                                                                                               |
| 60-69<br>*560-*569                                                                                 | <b>Call Parking</b><br>Park Orbits<br>At ASI/OPX, transfer call to Park Orbits 60-69                                                                                                                                                                                                                                                                         |
| #8                                                                                                 | <b>Call Timer</b><br>Call Timer On/Off                                                                                                                                                                                                                                                                                                                       |
| *2                                                                                                 | <b>Call Waiting</b><br>Call Waiting (answering a waiting call from an ESL set)                                                                                                                                                                                                                                                                               |
| 2<br>*FTR<br>**                                                                                    | <b>Callback</b><br>When hearing busy/ring busy, dial 2 and hang up to leave Callback<br>Cancel Callback left at own extension<br>Cancel all Callbacks at own extension                                                                                                                                                                                       |
| 348-363<br>396-408<br>396-427<br>480-551<br>801-816<br>801-812<br>801-832<br>801-872<br>9<br>90-98 | <b>Central Office Calls (Trunk Numbers and Access Codes)</b><br>VS trunk numbers<br>12x36 trunk numbers<br>32x60 trunk numbers<br>56x120/72x180 trunk numbers<br>VS trunk access codes<br>12x36 trunk access codes<br>32x60 trunk access codes<br>56x120/72x180 trunk access codes<br>Single digit access to group 1 (90)<br>Trunk group access (groups 1-9) |
| 11,12<br>*#                                                                                        | <b>Conference</b><br>Meet-Me Conference<br>Retrieve Conference from Hold at ASI/OPX/ESL                                                                                                                                                                                                                                                                      |
| * or FTR                                                                                           | <b>Dialing Number Preview</b><br>While idle, dial * or FTR to activate Dialing Number Preview                                                                                                                                                                                                                                                                |
| *300-*347<br>*300-*395<br>*300-*479                                                                | <b>Directed Call Pickup</b><br>VS Directed Call Pickup codes<br>12x36/32x60 Directed Call Pickup codes<br>56x120/72x180 Directed Call Pickup codes                                                                                                                                                                                                           |

**Table 1-4 SYSTEM NUMBER PLAN (Page 2 of 3)**

**Note:** All the functions below are from Intercom dial tone (except where noted).

| Code                                                               | Function                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3<br>32<br>34<br>37                                                | <b>Directory Dialing</b><br>While idle, dial 3 to activate Directory Dialing<br>While idle, dial 32 to access the Company-Wide Directory<br>While idle, dial 34 to access the Directory<br>While idle, dial 37 to access the Personal Speed Dial directory            |
| #                                                                  | <b>Forced Line Disconnect</b><br>While hearing busy, dial # to disconnect trunk                                                                                                                                                                                       |
| FTR                                                                | <b>Flash</b><br>Flash the trunk                                                                                                                                                                                                                                       |
| *1<br>#+key+3<br>#+key+5<br>#+key+7                                | <b>Group Call Pickup</b><br>Group Call Pickup<br>From idle, assign delayed ringing to pickup key<br>From idle, assign lamp-only (no ringing) to pickup key<br>From idle, assign immediate ringing to pickup key                                                       |
| 364-371<br>428-435<br>548-555<br>556-563                           | <b>Group Ring</b><br>VS Ring Groups<br>12x36/32x60 Ring Groups<br>56x120/72x180 Ring Groups (when programming DILs)<br>56x120/72x180 Ring Groups (for transfer and calling)                                                                                           |
| *801-*816<br>*801-*812<br>*801-*832<br>*801-*873                   | <b>Hold</b><br>VS retrieve trunk call from Hold<br>12x36 retrieve trunk call from Hold<br>32x60 retrieve trunk call from Hold<br>56x120/72x180 retrieve trunk call from Hold                                                                                          |
| 1 + ext<br>300-347<br>300-395<br>300-479<br>0<br>01-04<br>#0<br>#1 | <b>Intercom</b><br>Intercom call, forced ringing<br>VS extension numbers<br>12x36/32x60 extension numbers<br>56x120/72x180 extension numbers<br>Your attendant<br>Attendants 1-4<br>While idle, incoming Voice Announce off<br>While idle, incoming Voice Announce on |
| 4                                                                  | <b>Intrusion</b><br>When hearing busy/ring busy, dial 4 to intrude                                                                                                                                                                                                    |
| **<br>DIAL+LAST                                                    | <b>Last Number Redial</b><br>Last Number Redial<br>From idle, redial last number dialed                                                                                                                                                                               |
| 6<br>*6<br>**                                                      | <b>Message Waiting</b><br>While hearing busy tone at ASI/OPX/ESL set, dial 6 to send message<br>Retrieve Message Waiting<br>Cancel all Messages Waiting left at own extension                                                                                         |
| *0<br>*01-*04                                                      | <b>Night Answer</b><br>Pick up night mode call ringing External Paging<br>Pick up night mode call ringing operator (ONYX IV only)                                                                                                                                     |
| #+6+8+02-07<br>#+6+8+5+02-07<br>#+6+8+#+9 or 6                     | <b>Operator Assistance</b><br>Record OPA message 02-07<br>Listen to previously recorded message 02-07<br>Erase OPA/ACD messages (dial 9) or abort procedure (dial 6)                                                                                                  |

**Table 1-4 SYSTEM NUMBER PLAN (Page 3 of 3)**

**Note:** All the functions below are from Intercom dial tone (except where noted).

| Code                                                                                           | Function                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>1*<br/>2*<br/>3*<br/>4*<br/>5*<br/>6*<br/>7*<br/>8*</p>                                     | <p><b>Paging</b><br/>All Call Paging<br/>Page Zone 1<br/>Page Zone 2<br/>Page Zone 3<br/>Page Zone 4<br/>Page Zone 5<br/>Page Zone 6<br/>Page Zone 7</p>                                                                                                                                                                                                                                                                                |
| <p>#+ext+0</p>                                                                                 | <p><b>Removing Lines and Extensions from Service</b><br/>Remove extension from service</p>                                                                                                                                                                                                                                                                                                                                              |
| <p>DIAL SAVE</p>                                                                               | <p><b>Save</b><br/>Steps for saving the last number dialed or dialing a saved number</p>                                                                                                                                                                                                                                                                                                                                                |
| <p>#600-#615<br/>#600-#663</p>                                                                 | <p><b>Selectable Display Messages</b><br/>VS select messages 600-615<br/>Select messages 600-663</p>                                                                                                                                                                                                                                                                                                                                    |
| <p>#+ext+6<br/>6</p>                                                                           | <p><b>Silent Monitor</b><br/>Activate Silent Monitor for extension dialed<br/>When busy/ring busy, dial 6 to activate Silent Monitor</p>                                                                                                                                                                                                                                                                                                |
| <p>20-29<br/>50-59<br/>70-7999<br/>#20-#29<br/>#50-#59<br/>#70-7999<br/>#+key<br/>DIAL+key</p> | <p><b>Speed Dial</b><br/>Personal Speed Dial bins (second 10 bins)<br/>Personal Speed Dial bins (first 10 bins)<br/>System Speed Dial bins<br/>Program Personal Speed Dial (second 10 bins)<br/>Program Personal Speed Dial (first 10 bins - not available on 56x120 and 72x180 systems))<br/>Program System Speed dial bins<br/>From idle, program One-Touch Speed Dial key<br/>From idle, dial Speed Dial number stored under key</p> |
| <p>*7</p>                                                                                      | <p><b>Split</b><br/>Retrieve second call</p>                                                                                                                                                                                                                                                                                                                                                                                            |
| <p>#8<br/>#9<br/>6<br/>8</p>                                                                   | <p><b>Time and Date</b><br/>Set Time<br/>Set Date<br/>While idle, dial 6 to hear the extension number<br/>While idle, dial 8 to hear the time</p>                                                                                                                                                                                                                                                                                       |
| <p>##</p>                                                                                      | <p><b>Walking Class of Service</b><br/>Digits dialed before Walking Class of Service code</p>                                                                                                                                                                                                                                                                                                                                           |
| <p>#+0<br/>1,2<br/>0-5</p>                                                                     | <p><b>Miscellaneous</b><br/>From attendant, set baud rate of COM ports (see page 2-2)<br/>After attendant dials #0, dial 1 to program modem baud rate or 2 to set local baud rate (see page 2-2)<br/>After attendant dials #+0+1 or 2, 0-5 sets baud rate (see page 2-2)</p>                                                                                                                                                            |

**Table 1-5 ATTENDANT DISPLAYS**

| <b>This display...</b> | <b>Appears when using...</b> | <b>And shows...</b>                                                                                               |
|------------------------|------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 0-5=300-19200          | Terminal Programming         | Attendant has dialed INTERCOM, #, 0, selected port to program (1 or 2), and system is asking for port speed entry |
| 1=MODEM,2=LOCAL        | Terminal Programming         | Attendant has dialed INTERCOM, #, 0 and system is asking for port selection (1 or 2)                              |
| 300                    | Terminal Programming         | Port speed of 300 baud selected                                                                                   |
| 1200                   | Terminal Programming         | Port speed of 1200 baud selected                                                                                  |
| 2400                   | Terminal Programming         | Port speed of 2400 baud selected                                                                                  |
| 4800                   | Terminal Programming         | Port speed of 4800 baud selected                                                                                  |
| 9600                   | Terminal Programming         | Port speed of 9600 baud selected                                                                                  |
| 19200                  | Terminal Programming         | Port speed of 19,200 baud selected                                                                                |
| ABORTED                | Selectable Display Messages  | Attendant has dialed N to abort the procedure which cancels all Selectable Display Message selections             |
| ALT OPR ASSIGNED       | Alternate Operator           | Attendant just enabled Alternate Operator                                                                         |
| CANCEL ALT OPR         | Alternate Operator           | Attendant pressed DND/MIC to cancel Alternate Operator                                                            |
| COMPLETED              | Selectable Display Messages  | Attendant has dialed Y to cancel all Selectable Display Message selections                                        |
| DELETE ALL MSG ?       | ACD/Personal Greeting/OPA    | Attendant/supervisor dialed INTERCOM #68# to cancel all messages                                                  |
| EXPD KSU FAILED        | Automatic Fault Reporting    | In VS, shows attendant that expansion KSU has failed                                                              |
| LINE nnn FAILED        | Automatic Fault Reporting    | Trunk circuit nnn failed                                                                                          |
| LINECRD nn FAILED      | Automatic Fault Reporting    | Trunk/Line PCB nn failed                                                                                          |
| MAJOR ALARM            | Automatic Fault Reporting    | Major alarm(s) has occurred in system                                                                             |
| MAJOR/MINOR ALRM       | Automatic Fault Reporting    | Both major and minor alarms have occurred in system                                                               |
| MINOR ALARM            | Automatic Fault Reporting    | Minor alarm(s) has occurred in system                                                                             |
| NIGHT MODE OFF         | Night Answer                 | Attendant pressed DND/MIC to disable Night Mode operation                                                         |
| NIGHT MODE ON          | Night Answer                 | Attendant pressed DND/MIC to enable Night Mode operation                                                          |
| PARKED IN nn           | Park                         | Attendant parked call in orbit nn                                                                                 |
| STA nnn FAILED         | Automatic Fault Reporting    | Extension nnn failed                                                                                              |

**Table 1-6 ACD SUPERVISOR DISPLAYS**

| <b>This display...</b>                  | <b>Appears when using...</b>                                       | <b>And shows...</b>                                                                                                                |
|-----------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| <b>02 X-304 1:23</b>                    | <b>Automatic Call Distribution</b>                                 | <b>Two calls are waiting and extension 304 has the longest waiting call (1 minute, 23 seconds)</b>                                 |
| <b>01 L-01 3:21<br/>4=INST,7=REMOVE</b> | <b>Automatic Call Distribution<br/>Automatic Call Distribution</b> | <b>Line 01 has one call waiting for 3:21<br/>ACD Supervisor dialed INTERCOM # and pressed DSS Console key for member extension</b> |
| <b>ABORTED</b>                          | <b>Selectable Display Messages</b>                                 | <b>ACD supervisor has dialed N to abort the procedure which cancels all Selectable Display Message selections</b>                  |
| <b>COMPLETED</b>                        | <b>Selectable Display Messages</b>                                 | <b>ACD supervisor has dialed Y to cancel all Selectable Display Message selections</b>                                             |
| <b>DELETE ALL MSG ?</b>                 | <b>Selectable Display Messages</b>                                 | <b>ACD supervisor dials INTERCOM #68# to cancel all Selectable Display Messages selected by extension users</b>                    |

**Table 1-7 TELEPHONE DISPLAYS (Page 1 of 3)**

| <b>This display...</b>  | <b>Appears when using...</b>                                                 | <b>And shows...</b>                                                                                       |
|-------------------------|------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <b>0,1,PK,SPD KEY</b>   | Intercom, Speed Dial                                                         | Options when programming Intercom Voice Announce, Group Call Pickup ringing and One-Touch Speed Dial keys |
| <b>A-Y,0=SPACE,Q,Z</b>  | Speed Dial                                                                   | In the Speed Dial programming mode, user has dialed Y to program Speed Dial names                         |
| <b>A-Y,0=QZ,#=ALL</b>   | Directory Dialing                                                            | After dialing I, P or C for Directory Dialing, user dials * for options                                   |
| <b>ACCESS DENIED</b>    | Directory Dialing                                                            | User tries to use company-wide directory (System Speed Dial) from a restricted phone                      |
| <b>AUTHORIZATION NO</b> | ARS                                                                          | User places an outside call and ARS requests an Authorization Code                                        |
| <b>AUTO TIMER ON</b>    | Call Timer                                                                   | User activates Call Timer                                                                                 |
| <b>AUTO TIMER OFF</b>   | Call Timer                                                                   | User deactivates Call Timer                                                                               |
| <b>B Assigned name</b>  | Transfer                                                                     | User answered Trunk recalling from busy extension (with indicated name) after an incomplete Transfer      |
| <b>BUSY RECALL nnn</b>  | Transfer                                                                     | User answered Trunk recalling from busy extension nnn after an incomplete Transfer                        |
| <b>CALL FROM nnn</b>    | Call Waiting, Intercom, Hotline, Station Call Coverage                       | Intercom call from extension nnn                                                                          |
| <b>CALL FROM Lnn</b>    | Central Office Calls, Answ.                                                  | User presses a line key to answer a trunk without an assigned name                                        |
| <b>CALL FROM ORBIT</b>  | Park                                                                         | Call retrieved from Orbit                                                                                 |
| <b>CALL WAITING</b>     | Call Waiting                                                                 | Caller (with programmed name) waiting                                                                     |
| <b>Callers name</b>     | Call Waiting, Intercom, Hotline, Station Call Coverage, Central Office Calls | Call from extension or trunk with indicated name                                                          |
| <b>CFWD FROM nnn</b>    | Call Forwarding                                                              | Call forwarded from extension nnn                                                                         |
| <b>COMPANY WIDE DIR</b> | Directory Dialing                                                            | User dialed C for company-wide directory                                                                  |
| <b>CONFERENCE CALL</b>  | Conference, Privacy                                                          | User established Conference or joined a call using Privacy Release                                        |
| <b>COST \$ nn/nn</b>    | Least Cost Routing                                                           | Cost of current outside call                                                                              |
| <b>Date and Time</b>    | Time and Date Setting                                                        | The current date and time (while the extension is idle)                                                   |
| <b>DELAYR,RING,LAMP</b> | Station Call Coverage                                                        | User is programming ringing options for a Call Coverage key                                               |
| <b>DIAL PREVIEW</b>     | Dialing Number Preview                                                       | User dialed * to activate Dialing Number Preview                                                          |
| <b>Digits</b>           | Central Office Calls, Last Number Redial, Save, Speed Dial                   | Digits as trunk call dials out                                                                            |
| <b>DIRECTORY LP,C</b>   | Directory Dialing                                                            | User dials D when extension is on hook to view Directory Dialing options                                  |
| <b>DND OFF</b>          | Do Not Disturb                                                               | User disabled DND                                                                                         |
| <b>DND ON</b>           | Do Not Disturb                                                               | User enabled DND                                                                                          |
| <b>DO NOT DISTURB</b>   | Intercom, Station Call Coverage                                              | User called extension in DND                                                                              |
| <b>DSS LAMP FIELD</b>   | Intercom, Direct Station Selection                                           | User pressed INTERCOM and enabled DSS keys                                                                |
| <b>DSS,EXT,6,9,8 ?</b>  | Call Forwarding, DSS, Selectable Display Messages                            | User dialed INTERCOM # and system shows selection options                                                 |

**Table 1-7 TELEPHONE DISPLAYS (Page 2 of 3)**

| <b>This display...</b>             | <b>Appears when using...</b>                                                             | <b>And shows...</b>                                                                                                                                                               |
|------------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ENTER A/C CODE                     | LCR                                                                                      | User places an outside call and LCR requests an Account Code                                                                                                                      |
| ENTER BIN #<br>ENTER FEAT. CODE    | Speed Dial<br>Speed Dial                                                                 | User is programming Speed Dial bins<br>User is programming Intercom Feature in a Speed Dial bin (or under a One-Touch Speed Dial key)                                             |
| EXT                                | Call Forwarding<br>Selectable Display Messages                                           | User (with DSS suppressed) dials INTERCOM # and system shows selection options                                                                                                    |
| F Assigned name<br>FWD TO nnn      | Call Forwarding, Intercom                                                                | User placed Intercom call to extension forwarded to extension nnn                                                                                                                 |
| GROUP-R PICK-UP                    | Group Ring                                                                               | User answered an outside call ringing a Ring Group (of which the user's extension is not a member)                                                                                |
| HF CIRCUIT BUSY                    | Intercom                                                                                 | User places an Intercom call to a dual channel Data Set that has both channels busy. Also occurs if user tries to use Handsfree and no system Speakerphone circuits are available |
| HOLD RECALL Lnn<br>HOLD RECALL nnn | Hold<br>Hold                                                                             | Tie line has a trunk on Hold<br>User picks up a call abandoned on Hold by extension nnn                                                                                           |
| HOLD/WAIT xx/yy                    | Transfer                                                                                 | User is Transferring a call to a busy extension that has xx calls on Hold and yy calls camped-on (waiting)                                                                        |
| ICM ANNOUNCE ON                    | Intercom                                                                                 | User dialed #1 to allow incoming Intercom voice announcements                                                                                                                     |
| ICM ANNOUNCE OFF                   | Intercom                                                                                 | User dialed #0 to block incoming Intercom Voice announcements                                                                                                                     |
| ICM DIRECTORY<br>LINE [01-31,9X]   | Directory Dialing<br>Speed Dial                                                          | User dialed I for Intercom directory<br>User is programming a Speed Dial bin or One-Touch Speed dial key, and system is asking for a trunk number                                 |
| LINE nn                            | Central Office Calls                                                                     | User placing an outside call has seized trunk nn                                                                                                                                  |
| MIKE MUTED                         | Microphone Mute                                                                          | User pressed DND/MIC to mute the phone's mic                                                                                                                                      |
| MSG. FRM. nnn                      | Message Waiting                                                                          | User is viewing messages, and has Message Waiting from extension nnn                                                                                                              |
| Name                               | Central Office Calls,<br>Intercom, Hotline,<br>Message Waiting,<br>Station Call Coverage | User is placing a call, answering a call, or viewing a message for an extension with a programmed name                                                                            |
| NO RAM INSTALLED                   | Directory Dialing                                                                        | User trying to use Directory Dialing in a system with a MEM-A PCB or a VS without an Aux Module                                                                                   |
| NO SPEED DIAL                      | Speed Dial                                                                               | User is trying to enter the users Personal Directory with no Speed Dial blocks assigned in programming                                                                            |
| NO. OF MSG=nn                      | Voice Mail Compatibility                                                                 | User pressed MSG to check the number of Voice Mail messages waiting                                                                                                               |
| NUMBER SAVED                       | SAVE                                                                                     | Number accepted as Saved number (ONYX IV only)                                                                                                                                    |



**Table 1-7 TELEPHONE DISPLAYS (Page 3 of 3)**

| <b>This display...</b>    | <b>Appears when using..</b>                   | <b>And shows...</b>                                                                                                     |
|---------------------------|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>ORBIT RECALL nnn</b>   | <b>Park</b>                                   | Call user parked is recalling user extension (nnn)                                                                      |
| <b>P Assigned name</b>    | <b>Directed Call Pickup,<br/>Group Pickup</b> | User has picked up a call from extension with assigned name                                                             |
| <b>PARKED IN nn</b>       | <b>Park</b>                                   | User Parks call in orbit                                                                                                |
| <b>PERSONAL DIR.</b>      | <b>Directory Dialing</b>                      | User dialed P for personal directory                                                                                    |
| <b>PICKUP FROM nnn</b>    | <b>Group Call Pickup</b>                      | User picked up a call ringing extension nnn                                                                             |
| <b>PRIVACY .</b>          | <b>Privacy Groups</b>                         | User presses line key to have privacy                                                                                   |
| <b>PRIVATE CALL</b>       | <b>Privacy Groups</b>                         | User pressed line key for trunk that has Privacy enabled by Hotline partner. Trunk normally must have Privacy released. |
| <b>PROGM NAME Y/N</b>     | <b>Speed Dial</b>                             | User is programming Speed Dial and system is asking for a name entry                                                    |
| <b>PROG MESSAGE</b>       | <b>Personal Greeting</b>                      | User is programming a Personal Greeting                                                                                 |
| <b>R Assigned name</b>    | <b>Hold, Park, Transfer</b>                   | User answered recalling trunk call from extension with assigned name                                                    |
|                           | <b>DID</b>                                    | User answered call routed from extension with Assigned name via DID RNA Intercept                                       |
| <b>RELEASE PRIVACY</b>    | <b>Privacy</b>                                | User pressed a line key to release privacy on a call where privacy was previously established                           |
| <b>RING NO ANS nnn</b>    | <b>Hold, Park, Transfer</b>                   | User answered trunk call recalling from extension nnn                                                                   |
|                           | <b>DID</b>                                    | User answered call routed from extension nnn via DID RNA Intercept                                                      |
| <b>SELECTED IDLE LINE</b> | <b>Dialing Number Preview</b>                 | After entering number, user pressed DIAL to place call                                                                  |
| <b>SET DATE MMDDYY</b>    | <b>Time and Date Setting</b>                  | User is setting system date                                                                                             |
| <b>SET TIME HHMMSS</b>    | <b>Time and Date Setting</b>                  | User is setting system time                                                                                             |
| <b>SPEED DIAL BINS</b>    | <b>Speed dial</b>                             | User presses DIAL to program or use Speed dial                                                                          |
| <b>Speed Dial name</b>    | <b>Speed Dial</b>                             | User dialing out a Speed Dial with a stored name                                                                        |
| <b>TEL NUMBER?</b>        | <b>Speed Dial</b>                             | User is programming Speed Dial and the system is requesting a number                                                    |
| <b>UNLISTED NAME</b>      | <b>Directory Dialing</b>                      | User tries to access Directory Dialing, and the system has no names programmed                                          |
| <b>V Assigned name</b>    | <b>DID</b>                                    | User answered call routed from extension with assigned name via DID Vacant Number Intercept                             |
| <b>VACANT NO nnn</b>      | <b>DID</b>                                    | User answered call routed from extension nnn via DID Vacant Number Intercept                                            |
| <b>VACANT NUMBER</b>      | <b>Direct Station Selection</b>               | User has pressed an undefined DSS Console key                                                                           |
| <b>WELCOME</b>            |                                               | Initial message after system start-up or reset                                                                          |

## REFERENCE SHEET, EXTENSION PROGRAMMING (Page 1 of 2)

| ACCESS | PROMPT                         | RANGE                                          | CIRCUIT TYPE |   |   |   |   |   |                |    |   |   |   |   |   |   |
|--------|--------------------------------|------------------------------------------------|--------------|---|---|---|---|---|----------------|----|---|---|---|---|---|---|
|        |                                |                                                | 0            | 1 | 2 | 3 | 4 | 5 | 6 <sup>3</sup> | 51 | M | Z | X |   |   |   |
| E0     | EXT                            | See Abbreviated Number Plan Chart <sup>1</sup> | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              | ✓  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E1/EZ  | PORT                           | See Abbreviated Number Plan Chart <sup>1</sup> | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              | ✓  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E2     | CIRCUIT TYPE                   | 00-06,51,M,X,Z                                 | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              | ✓  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|        | DATA MODULE/DATA PORT          | Y/N                                            |              |   |   |   |   |   |                |    |   |   |   |   | ✓ |   |
| E3     | COS                            | 00-27,30,31                                    | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              | ✓  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E4     | NEXT EXT IN HUNT               | See Abbreviated Number Plan Chart <sup>1</sup> | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              | ✓  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E5     | HUNT TYPE                      | 00-06                                          | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              | ✓  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E6     | DATA SET OR DATA MODULE        | Y/N                                            |              | ✓ | ✓ | ✓ | ✓ | ✓ |                |    |   |   |   |   | ✓ |   |
| E7     | PAGE ZONE                      | 00-07                                          | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ |                | ✓  |   |   |   |   | ✓ | ✓ |
| E8     | RING-LINE PREFERENCE?          | Y/N                                            |              | ✓ | ✓ | ✓ | ✓ |   |                |    |   |   |   |   | ✓ |   |
|        | OFF-HOOK RINGING? <sup>2</sup> | Y/N                                            |              | ✓ | ✓ | ✓ | ✓ |   |                |    |   |   |   |   | ✓ |   |
|        | KEY ACCESS TO OUTBOUND LINES   | Y/N                                            |              | ✓ | ✓ | ✓ | ✓ |   |                | ✓  |   |   |   |   | ✓ |   |
|        | ALLOW LINE DIAL-UP             | Y/N                                            | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              | ✓  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|        | ACCESS TO GROUP 907            | Y/N                                            | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              | ✓  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|        | ACCESS TO GROUP 917            | Y/N                                            | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              | ✓  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|        | ACCESS TO GROUP 927            | Y/N                                            | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              | ✓  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|        | ACCESS TO GROUP 937            | Y/N                                            | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              | ✓  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|        | ACCESS TO GROUP 947            | Y/N                                            | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              | ✓  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|        | ACCESS TO GROUP 957            | Y/N                                            | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              | ✓  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| E9     | DIR TERM OR OPR EXT            | See Abbreviated Number Plan Chart <sup>1</sup> | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              | ✓  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|        | RING DOWN                      | See Abbreviated Number Plan Chart <sup>1</sup> | ✓            |   |   |   |   |   | ✓              |    |   |   |   | ✓ |   |   |
| EA     | UCD MASTER EXT                 | See Abbreviated Number Plan Chart <sup>1</sup> | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              | ✓  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| EB     | SPD DIAL BLOCK                 | See Abbreviated Number Plan Chart <sup>1</sup> | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              | ✓  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| EC     | CALL PICKUP GROUP              | 00-23                                          | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              | ✓  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
|        | PRVCY RLS GROUP                | 00-99                                          |              | ✓ | ✓ | ✓ | ✓ | ✓ |                |    |   |   |   |   | ✓ |   |
| ED     | RING CONTROL                   | (Table 6)                                      |              | ✓ | ✓ | ✓ | ✓ | ✓ |                | ✓  |   |   |   |   | ✓ |   |
|        | ACCESS CONTROL                 | (Table 6)                                      | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              |    |   |   |   | ✓ | ✓ | ✓ |
|        | CALL-OUT CONTROL               | (Table 6)                                      | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              |    |   |   |   | ✓ | ✓ | ✓ |
| EE     | RING GROUP #                   | 00-08                                          | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              |    |   |   |   | ✓ | ✓ | ✓ |
|        | ALTERNATE ATTENDANT GROUP #    | A1-A4                                          | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ | ✓              | ✓  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| EF     | PAGING THRU SPKR               | Y/N                                            | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ |                | ✓  |   |   |   |   | ✓ | ✓ |
|        | INCOMING VOICE CALL            | Y/N                                            | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ |                |    |   |   |   |   | ✓ | ✓ |
|        | HEADSET                        | Y/N                                            | ✓            | ✓ | ✓ | ✓ | ✓ | ✓ |                |    |   |   |   |   | ✓ | ✓ |
|        | INHIBIT VOICE OVER             | Y/N                                            |              | ✓ | ✓ | ✓ | ✓ | ✓ |                |    |   |   |   |   | ✓ |   |

**Extension circuit types:**

00 = Electronic Single Line telephone  
 01 = Keypad (without display) and Data Module  
 02 = Multibutton Display Keypad  
 03 = Dual-channel Data Set  
 04 = Dual-channel Display Keypad  
 05 = OPX or ASI w/o receiver (P/N 89748)  
 06 = 80-Button DSS Console

51 = ASI with receiver (P/N 89749)  
 M = Modem Pooling extension  
 Z = Data Port, data-only Data Set  
 X = not installed or STI port

<sup>1</sup> In Software Manual

<sup>2</sup> Does not appear for all telephone types.

<sup>3</sup> PBX Attendant Console

1103028 (M)

# ABBREVIATED NUMBER PLAN

| SYSTEM                         | VS                                      | 12x36<br>32x60                          | 56x120<br>72x180                                  |
|--------------------------------|-----------------------------------------|-----------------------------------------|---------------------------------------------------|
| EXTENSIONS                     | 300-347                                 | 300-359                                 | 300-479                                           |
| PORTS                          | 00-47                                   | 00-59                                   | 00-179                                            |
| TRUNKS                         | 01-16<br>or<br>348-363<br>or<br>801-816 | 01-32<br>or<br>396-427<br>or<br>801-832 | 01-72<br>or<br>480-551<br>or<br>801-872           |
| PORTS                          | 48-63                                   | 96-127                                  | 180-251                                           |
| RING GROUPS                    | 364-371                                 | 428-435                                 | 548-555<br>(for DILs)<br>556-563<br>(for calling) |
| SELECTABLE<br>DISPLAY MESSAGES | 600-615                                 | 600-663                                 | 600-663                                           |
| SPEED DIAL BLOCKS              | 1-57                                    | 1-102                                   | 1-204                                             |

