Electra

PROFESSIONAL

LEVEL II & LEVEL II ADVANCED INSTALLATION SERVICE MANUAL

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PREFACE

THIS MANUAL

The Installation Service Manual provides the information required to install, program, and maintain the Electra Professional Level II and Level II Advanced systems.

This manual is divided into three chapters as follows:

Chapter 1: Hardware Specifications and Installation

Chapter 1 provides the information required to prepare and install the systems, including applicable FCC requirements and UL regulatory information.

Chapter 2: Programming

Chapter 2 provides detailed instructions for performing System Programming.

Chapter 3: Guide to Feature Programming

Chapter 3 provides a guide or "roadmap" of the Memory Blocks associated with a feature that are either required or can be programmed.

Chapter 4: System Maintenance

Chapter 4 provides maintenance instructions and flowcharts for the systems.

SUPPORTING DOCUMENTS

In addition to the Installation Service Manual, the Electra Professional Level II and Level II Advanced systems are supported by the following technical manuals:

Electra Professional Level II and Level II Advanced General Description Manual (Stock Number 722020)

Designed and developed to provide a general overview of the Electra Professional Level II and Level II Advanced systems, its features, configuration, service features, specifications, and standards.

<u>Electra Professional Level II and Level II Advanced Features and</u> Specifications Manual (Stock Number 722021)

Provides an expanded discussion of each feature that is available for the Electra Professional Level II and Level II Advanced systems. In addition, the Features and Specifications Manual provides Station Application, Operating Procedures, and Service Conditions.

Electra Professional Level II and Level II Advanced Station Operations Manual (Stock Number 722023)

This manual explains in detail the station operations for all station user features. This manual is designed for use by installers and end users.

Electra Professional Level II and Level II Advanced Job Specifications Manual (Stock Number 722024)

Used in conjunction with the Installation Service Manual, the Job Specifications Manual is designed for the service technicians who are responsible for planning the system installation, maintaining the system, and keeping records of system programming and configuration. [This manual is included with the CPU-F()-20 KTU.]

Electra Professional Level II and Level II Advanced Automatic Call Distribution Manual (Stock Number 720234)

This manual is also included with the MIF-F(A)-10 KTU (Stock Number 720233). It is designed to provide the service technician with the instructions for programming the ACD feature. This manual is also intended for the ACD supervisor, at the customer's site, to use to become familiar with the system in order to take full advantage of the ACD/MIS feature.

Electra Professional Level II and Level II Advanced Least Cost Routing Manual

This manual is included with the Least Cost Routing software (Stock No. 722302). It provides instructions for the service technician for programming the customer's site for Least Cost Routing.

Electra Professional Level II and Level II Advanced System Program Technician Manual

This manual is included with the System Program Technician Software (Stock No. 722305). It is intended for use by the service technician when using the PC software to program the Electra Professional Level II and Level II Advanced systems. This manual explains the use of the various screens within the PC software that allow the technician to program the system to meet the individual customer's needs.

Electra Professional Level II and Level II Advanced System Program End-User Manual

This manual is included with the System Program End-User Software (Stock No. 722306). It is intended for use by the end-user when using PC software to make day-to-day changes in the Electra Professional Level II and Level II Advanced systems program. This manual explains the use of various screens within the PC software.

CHAPTER 1 HARDWARE SPECIFICATIONS AND INSTALLATION

CHAPTER 1

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CHAPTER 1 HARDWARE SPECIFICATIONS AND INSTALLATION

SECTION 1 INTRODUCTION

1.1 General Information

The Electra Professional Level II is a fully digital system serving a maximum of 56 outside (CO/PBX, DID, T1/FT1, and Tie) lines and a maximum of 56 terminals. The Electra Professional Level II Advanced system serves a maximum of 64 outside lines and a maximum of 96 terminals. Both systems provide for flexible configuration, allowing the customer to purchase only what is needed. The Level II basic cabinet can accommodate a combined total of 40 ports, consisting of outside lines and/or telephones and/or other options. As a customer's business grows this system can be expanded to accommodate a combined total of 64 ports. The Level II Advanced system basic KSU can accommodate 64 ports. Each of the two available expansion KSUs also support up to 64 universal ports. Additional equipment such as: Single Line Telephones, external speakers, voice mail, facsimile machines, etc., can be connected to these systems to enhance their capabilities. (Figure 1-1 - Outside View of the Electra Professional Level II KSUs and Figure 1-2 - Outside View of the Electra Professional Level II Advanced KSUs.)

This chapter is designed to provide the technician, installing the Electra Professional Level II or Level II Advanced, a comprehensive explanation of the systems specifications, hardware, and installation procedures. The technician should read this chapter in its entirety before installing the system. This will enable more efficient installation and cut-over.

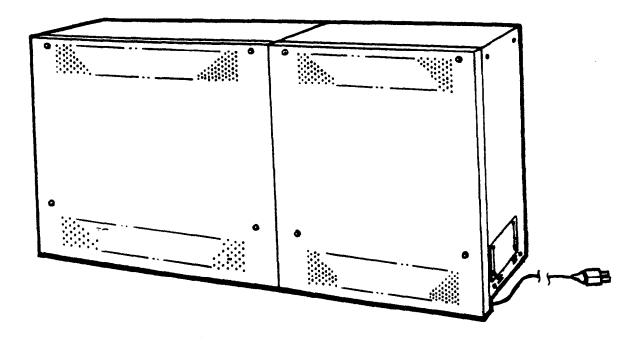


Figure 1-1 Outside View of the Electra Professional Level II KSUs

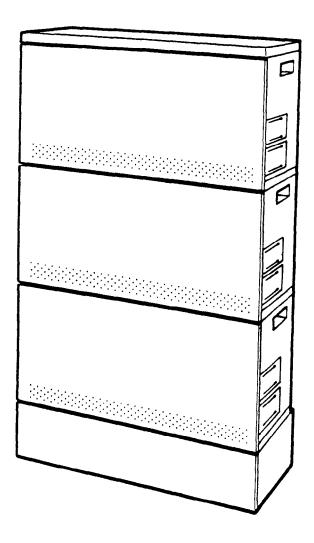


Figure 1-2 Outside View of the Electra Professional Level II Advanced KSUs

1.2 Regulatory Information

The Federal Communications Commission (FCC) has established rules that permit this telephone system to be directly connected to the telephone network. A jack is provided by the telephone company. Jacks for this type of customer provided equipment will not be provided on party lines or coin lines.

The telephone company may make changes in its technical operations and procedures. If such changes affect the compatibility or use of this system, the telephone company is required to give adequate notice of the changes.

1.2.1 Company Notification

Before connecting this telephone system to the telephone network, the following information must be provided to the telephone company:

1. Your telephone number.

2. FCC registration number:

• If the system is to be installed as a Key System (no dial access to Trunk Groups/Route Advance Blocks) use the following number:

Level II System:

AY5USA-73702-KF-E

Level II Advanced:

AY5USA-74750-KF-E

• If the system is to be installed as a Multi-Function System, use the following number:

Level II System:

AY5USA-73705-MF-E

Level II Advanced:

AY5USA-74743-MF-E

3. Facility Interface Codes (FIC), Ringer Equivalence Number (REN), Service Order Codes (SOC), and Jack types are shown in Table 1-1 - FIC, REN, SOC, and Jack Types for KTUs.

Table 1-1 FIC, REN, SOC, and Jack Types for KTUs

Interface KTU Type	FIC	REN	soc	Jack
COI-F(4)-20 KTU by Loop Start	02LS2	0.7A	9.0F	RJ21X
COI-F(4)-20 KTU by Ground Start	02GS2	0.7A	9.0F	RJ21X
COI-F(8)-20 KTU by Loop Start	02LS2	0.7A	9.0F	RJ21X
COI-F(8)-20 KTU by Ground Start	02GS2	0.7A	9.0 F	RJ21X
DID-F(4)-10 KTU	02RV2T	N/A	9.0F	RJ21X
TLI-F(2)-10 KTU of M Lead	TL31M	N/A	9.0F	RJ21X
TLI-F(2)-10 KTU of E Lead	TL31E	N/A	9.0F	RJ21X
LLT-F(2G)-10 KTU	OL13C	N/A	9.0F	RJ21X
DTI-F()-10 KTU	04DU9-BN, 04DU9-DN, 04DU9-1KN, 04DU9-1SN, 04DU9-1ZN	N/A	6.0P	N/A
DTI-F(A)-20 KTU [Series 300 or higher]	04DU9-BN, 04DU9-DN, 04DU9-1KN, 04DU9-1SN, 04DU9-1ZN	N/A	6.0P	N/A

IMPORTANT NOTE

"This equipment is capable of providing user's access to interstate providers of operator services through the use of equal access codes. Modifications by aggregaters to alter these capabilities may be a violation of the Telephone Operator Consumer Service Improvement Act of 1990 and Part 68 of FCC Rules."

1.2.2 Battery Disposal

The Electra Professional Level II and/or Level II Advanced systems include the batteries listed in Table 1-2 - Battery Types and Quantities for KSUs and KTUs. When disposing of these batteries, KSUs, and/or KTUs, you must comply with applicable federal and state regulations regarding proper disposal procedures.

Unit Name	Type of Battery	Quantity
ESF-SB-10 KSU	Lead Acid	2
ESF-SE-10 KSU	Lead Acid	2
ESF-XB-10 KSU	Lead Acid	2
ESF-XE-10 KSU	Lead Acid	2
CPU-F()-20 KTU	NiCad	1
VRS-F(4)-11 KTU	NiCad	2
MIF-F(S)-10 KTU	Lithium	1
MIF-F(L)-10 KTU	Lithium	1
MIF-F(A)-10 KTU	Lithium	1
MIF-F(U)-10 KTU	Lithium	1

Table 1-2 Battery Types and Quantities for KSUs and KTUs

IMPORTANT SAFEGUARDS FOR BATTERY DISPOSAL

DO NOT PLACE USED BATTERIES IN YOUR REGULAR TRASH! THE PRODUCT YOU PURCHASED CONTAINS A NICKEL-CADMIUM OR SEALED LEAD BATTERY. NICKEL-CADMIUM OR SEALED LEAD BATTERIES MUST BE COLLECTED, RECYCLED, OR DISPOSED OF IN AN ENVIRONMENTALLY SOUND MANNER.

The incineration, landfilling or mixing of nickel-cadmium or sealed lead batteries with the municipal solid waste stream is PROHIBITED BY LAW in most areas. Contact your local solid waste management officials for other information regarding the environmentally sound collection, recycling, and disposal of the battery.

Nickel-cadmium (or sealed lead) batteries must be returned to a federal or state approved nickel-cadmium (or sealed lead) battery recycler. This may be where the batteries were originally sold or a local seller of automotive batteries. In Minnesota call 1-800-225-PRBA if further disposal information is required, or call 1-800-232-9632 for further information.

The packaging for the Electra Professional Level II & Level II Advanced systems will contain the following labels regarding the proper disposal.

PRODUCT PACKAGE LABELING



CONTAINS NICKEL-CADMIUM BATTERY. MUST BE RECYCLED OR DISPOSED OF PROPERLY. MUST NOT BE DISPOSED OF IN MUNICIPAL WASTE.

Ni-Cd



CONTAINS SEALED LEAD BATTERY. MUST BE RECYCLED OR DISPOSED OF PROPERLY. MUST NOT BE DISPOSED OF IN MUNICIPAL WASTE.

1.2.3 Incidence of Harm

If the system is malfunctioning, it may also be causing harm to the telephone network. The telephone system should be disconnected until the source of the problem can be determined and until repair has been made. If this is not done, the telephone company may temporarily disconnect service.

1.2.4 Radio Frequency Interference

In compliance with FCC Part 15 rules, the following statement is provided:

IMPORTANT NOTE

"This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the Installation Service Manual, may cause interference to radio communications. This equipment has been tested and approved for compliance with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this telephone system in a residential area is likely to cause interference, in which case, the user, at his or her own expense, will be required to take whatever measures may be required to correct the interference."

1.2.5 Hearing Aid Compatibility

The NEC Multiline Terminals and NEC Single Line Telephones that are provided for this system are hearing aid compatible. The manufacturer of other Single Line Telephones for use with the system must provide notice of hearing aid compatibility to comply with FCC rules. FCC rules prohibit the use of non-hearing aid compatible telephones (after August 16, 1989).

1.2.6 Direct Inward Dialing

Allowing this equipment to be operated in such a manner as to not provide for proper answer supervision is a violation of Part 68 of the FCC's rules.

Proper answer supervision is provided when either of the following cases exist:

- A. This equipment returns answer supervision to the Public Switched Telephone Network (PSTN) and Direct Inward Dialing (DID) calls are:
 - Answered by the called station.
 - Answered by the Attendant.
 - Routed to a recorded announcement that can be administered by the Customer Premise Equipment (CPE) user.
 - Routed to a dial prompt.
- B. This equipment returns answer supervision on all DID calls forwarded to the PSTN. Permissible exceptions are:
 - A call is unanswered.
 - A busy tone is received.
 - A reorder tone is received.

1.2.7 Voice Announcement/Monitoring Over DID Lines

CAUTION

The use of the Voice Announcement feature to eavesdrop or record sound activities at the other end of the telephone line may be illegal under certain circumstances and laws. Consult a legal advisor before implementing any practice involving the monitoring or recording of a telephone conversation. Some federal and state laws require a party monitoring or recording a telephone conversation to use a beep-tone(s), make notification to all parties to the telephone conversation and/or obtain consent of all parties to the telephone conversation. In monitoring or recording sound activities at the other end of the telephone line by means of the Voice Announcement feature, the sound of the alert tone at the beginning of the Voice Announcement may or may not be considered sufficient under applicable laws. Some of the applicable laws provide for strict penalties for illegal monitoring or recording of telephone conversations.

1.2.8 Music On Hold

IMPORTANT NOTE

"In accordance with U.S. Copyright Law, a license may be required from the American Society of Composers, Authors and Publishers, or other similar organization, if radio or TV broadcasts are transmitted through the Music On Hold feature of this telecommunication system. NEC America Inc., hereby disclaims any liability arising out of the failure to obtain such a license."

1.2.9 Service Requirements

In the event of equipment malfunction, all repairs should be performed by an authorized agent of NEC America, Inc. or by NEC America, Inc. It is the responsibility of users requiring service to report the need for service to one of NEC America, Inc.'s authorized agents or to NEC America, Inc.

1.2.10 UL Regulatory Information

This equipment has been listed by Underwriters Laboratories and found to comply with all applicable requirements of the standard for telephone equipment UL 1459 2^{nd} Edition.

1.2.11 DOC Requirements

The Department of Communications (DOC) has established rules that permit this telephone system to be directly connected to the telephone network. Prior to the connection or disconnection of this telephone system to or from the telephone network, the telephone company must be provided with the following information.

- 1. Your telephone number.
- 2. DOC registration number: 140 4963 A
- 3. The Load Number of the equipment: 9

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.

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 load numbers of all the devices does not exceed 100.

This equipment has been listed by the Canadian Standards Association and found to comply with all applicable requirements of the standard for telephone equipment C 22.2 No. 225.

This equipment meets DOC requirements CS03.

Use of the LLT-F(2G)-10 KTU has not been approved by the DOC for support of off-premise extensions.

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

and

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de Classe A prescrites dans le reglement sur le brouillage radioelectrique edicte par le Ministère Des Communications Du Canada.

1.3 Equipment List

The following equipment is available for use in the Electra Professional Level II and Level II Advanced systems. The maximum quantities that can be installed in each system are listed in the following tables.

Equipment Maximum Description Designation Quantity/System ESF-SB-10 KSU 1 Basic KSU with Wall and Floor Mount Brackets 1 Expansion KSU with Wall and Floor Mount Brackets ESF-SE-10 KSU PSF-S-20 PSU 1 for each KSU Power Supply Unit 2 for each KSU Battery For Battery Backup

Table 1-3 Level II KSUs and PSUs

Table 1-4	LavalII	Advance	KSIIc and	a PSIIe
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Equipment Designation	Maximum Quantity/System	Description
ESF-XB-10 KSU	1	Basic KSU with Wall and Floor Mount Brackets
ESF-XE-10 KSU	2	Expansion KSU with Wall and Floor Mount Brackets
PSF-P-20 PSU	1 for each KSU	Power Supply Unit
Battery	2 for each KSU	For Battery Backup

Table 1-5 Common Control KTU

Equipment		imum :y/System	Dogovintion	Slot
Designation Level II Advanced		- Description	Slot	
CPU-F()-20 KTU	1	1	Central Processing Unit, PBR 4-channel, TNG, CNF, MOH Mounted	Fixed
CLK-F-21 Unit	1	1	T1/FT1 synchronization unit piggybacked on CPU-F()-20 KTU	On CPU-F()-20 KTU
MMC-F-11 KTU	0	2	Module Memory Controller for ESF-XE-10 KSU	Fixed

Table 1-6 Station Interface KTUs

Equipment		imum y/System	- Description		
Designation	Level II	Level II Advanced	Description	Slot	
ESI-F(8)-21 KTU	7	12	8-channel, 2-wire Electronic Station Interface	Interface	
SLI-F(8G)-21 KTU	6	11	8-channel SLT/VM Interface with RSG, MW, PFT (2-channel)	Interface	
LLT-F(2G)-10 KTU	6	22	2-channel Off-Premise Extension	Interface	

Table 1-7 Trunk Interface KTUs

Equipment		imum y/System	Description Slot			
Designation	Level II	Level II Advanced	Description	Slot		
COI-F(4)-20 KTU	7	16	4-channel, Loop or GND Start Trunk Interface	Interface		
COI-F(8)-20 KTU	7	8	8-channel, Loop or GND Start Trunk Interface	Interface		
DID-F(4)-10 KTU	7	8	4-channel, DID Line Interface	Interface		
TLI-F(2)-10 KTU	7	16	2-channel, 4-wire E&M Tie Line Interface	Interface		
DTI-F()-10 KTU	1	3	T1/FT1 (Fractional T1) Trunk Interface with Loop and Ground Start Trunk Signaling capability	Interface		
DTI-F(A)-20 KTU	1	3	T1/FT1 (Fractional T1) Trunk Interface with Loop and Ground Start Trunk Signaling capability, Tie line (E&M), and DID Signaling capability - [Series 300 or higher]	Interface		

Table 1-8 Other Optional KTUs

Equipment		imum y/System	Description	Slot
Designation	Level II	Level II Advanced	Description	
PBR-F(4)-11 KTU	1	2	4-channel, DTMF/Push Button Receiver (PBR)	Interface
VRS-F(4)-11 KTU	2	2	4-channel, Voice Recording Service (VRS)	Interface
ECR-F-11 KTU	1	1	Eight relays for Paging, External Tone Ringers, and Night Chime, two RCA jacks for in/output paging, output ring tone	Interface
MIF-F(S)-10 KTU	1	1	PC and SMDR Interface	Option
MIF-F(L)-10 KTU	1	1	PC, SMDR, and LCR Interface	Option
MIF-F(A)-10 KTU	1	1	ACD and MIS Interface	Option
MIF-F(U)-10 KTU	1	1	UCD	Option

Equipment Designation	Maximum Quantity/System		Description
Equipment Designation	Level II	Level II Advanced	Description
ETW-8-1 (BK) TEL	55	95	8-line non-display with built-in speakerphone, large LED, eight function keys, and ADA compatible
ETW-16DC-1 (BK) TEL	56	96	16-line Display Compact with built-in speakerphone, large LED, eight function keys, and ADA compatible
ETW-16DD-1 (BK) TEL	56	96	16-line Display Deluxe with built-in speakerphone, large LED, eight function keys, 20 programmable One-Touch keys with red LEDs, and ADA compatible
ETW-24DS-1 (BK) TEL	56	96	24-line Display Special with built-in speakerphone, dual path capability, large LED, eight function keys, 12 programmable One-Touch keys, and ADA compatible
EDW-48-() (BK) Console	4	4	48-line Attendant Add-On Console with 12 function keys
ADA(1)-W (BK) Unit	56	96	Ancillary Device Adaptor (for connection of headset, recording interface, external speakerphone)
ADA(2)-W (BK) Unit	16 (See Note)	16 (See Note)	Ancillary Device Adaptor (for connection of an SLT, modem, answering machine, or fax)
WMU-W (BK) Unit	56	96	Wall Mount Unit
SLT-F(1G)-10 ADP	55	95	1-channel Single Line Telephone Adaptor

Table 1-9 Terminals and Optional Units

Note:

The recommended maximum is 16 ADA(2)-W (BK) Units, however, additional units can be installed depending on system traffic and the number of PBR circuits available.

1.4 Equipment General Information

One Electra Professional Level II and Level II Advanced Job Specifications Manual (Stock No. 722024) is included with the CPU-F()-20 KTU. All optional equipment: external amplifiers, Music On Hold source, Background Music source, external speakers, etc., must be locally provided.

1.5 Equipment Description

1.5.1 Level II Key Service Units and Power Supply Units

ESF-SB-10 KSU

The Key Service Unit (KSU) of the Electra Professional Level II system provides service for outside lines, Attendant Add-On Consoles, and interconnection of Multiline Terminals. The basic KSU provides 40 ports and can be expanded to 64 ports with an expansion module. A PSF-S-20 PSU (Power Supply Unit) and backup batteries are included with this KSU.

Fixed slots are intended for the CPU and MIF KTUs. The remaining interface slots are intended for 2-, 4-, or 8-channel KTUs: ESI, SLI, COI, DID, TLI, PBR, VRS, ECR, LLT, DTI. (Only one DTI can be installed. It must be installed in the first interface slot.)

ESF-SE-10 KSU

This expansion unit provides for an additional 24 ports that can accommodate up to three KTUs.

This KSU is designed to accommodate 2-, 4-, or 8-channel interface cards. A PSF-S-20 PSU (Power Supply Unit) and backup batteries are included with this KSU.

PSF-S-20 PSU

This power supply unit is provided with both the basic and expansion KSUs. It has a backup interface, accepts 117 Vac and outputs +5V, -5V, and -24V to the system.

1.5.2 Level II Advanced Key Service Units and Power Supply Units

ESF-XB-10 KSU

The Key Service Unit (KSU) of the Electra Professional Level II Advanced system provides service for outside lines, Attendant Add-On Consoles, and interconnection of Multiline Terminals. The basic KSU provides 64 ports and can be expanded in 64 port increments up to 192 ports with expansion modules. PSF-P-20 PSU (Power Supply Unit) and backup batteries are included with this KSU.

Fixed slots are intended for the CPU and MIF KTUs. The remaining interface slots are intended for 2-, 4-, or 8-channel KTUs: ESI, SLI, COI, DID, TLI, PBR, VRS, ECR, LLT, DTI. (Up to three DTI KTUs can be installed.)

ESF-XE-10 KSU

This Level II Advanced system expansion unit provides for an additional 64 ports that can accommodate up to 8 KTUs. Fixed slots are intended for the MMC and MIF KTUs.

This KSU is designed to accommodate 2-, 4-, or 8-channel interface cards. PSF-P-20 PSU (Power Supply Unit) and backup batteries are included with this KSU.

PSF-P-20 PSU

This power supply unit is provided with both the basic and expansion KSUs. It has a backup interface, accepts 117 Vac and outputs +5V, -5V, and -24V to the system.

1.5.3 Common Control Key Telephone Unit

CPU-F()-20 KTU

The Central Processing Unit KTU contains a 16-bit microprocessor which has overall control of the system. This KTU provides an advanced feature package for the Electra Professional Level II and Level II Advanced system user. Included with this KTU are six, 4-party conference circuits, PBR (four channels are included), TNG, MOH input, and a built-in music source.

CLK-F-21 Unit

The CLK-F-21 (Clock) Unit provides synchronization for a T1 line that is connected to the system. This unit is attached to the CPU-F()-20 KTU and works in conjunction with the DTI-F()-10 KTU or DTI-F(A)-20 KTU.

One CLK-F-21 Unit can be installed in the system.

MMC-F-11 KTU

The Module Memory Controller, with a 4-bit microprocessor and Controller Unit, is required for each ESF-XE-10 KSU used in the Level II Advanced system. It controls data transmission between the CPU-F()-20 KTU and the interface cards installed in the ESF-XE-10 KSU. A maximum of two MMC-F-11 KTUs can be installed in the fixed slots.

1.5.4 Station Interface Key Telephone Units

ESI-F(8)-21 KTU

This Electronic Station Interface KTU contains eight circuits, each of which can support any type Multiline Terminal, EDW-48-() (BK) Console, or an SLT Adaptor.

A maximum of seven ESI-F(8)-21 KTUs can be installed in interface slots in the Level II system and a maximum of 12 in the Level II Advanced system.

SLI-F(8G)-21 KTU

The Single Line Interface KTU can support eight Single Line Telephones and/or voice mail ports. This KTU provides Ringing Signal Generator (RSG), Power Failure Transfer (PFT), and Message Waiting (MW) LED voltage to the Single Line Telephones.

A maximum of six SLI-F(8G)-21 KTUs can be installed in interface slots in the Level II system and a maximum of 11 in the Level II Advanced system.

LLT-F(2G)-10 KTU

The Long Line Telephone (LLT) KTU provides for the termination and operation of up to two Off-Premise Extensions (OPX). Each LLT-F(2G)-10 KTU has a built-in ringer (RSG). Up to 3000 ohms of loop resistance (including the Single Line Instrument) is acceptable between the LLT-F(2G)-10 KTU and SLT.

A maximum of six LLT-F(2G)-10 KTUs can be installed in interface slots in the Level II system and a maximum of 22 in the Level II Advanced system.

1.5.5 Trunk Interface Key Telephone Units

COI-F(4)-20 KTU

This Central Office Interface KTU complies with UL 1459 2nd Edition requirements. Electrical fuses (posistors) are built into this KTU. The COI-F(4)-20 KTU supports four outside (CO/PBX) lines and provides circuitry for ring detection, holding, and dialing. The outside lines can be any combination of Loop or Ground start, DTMF, or Dial Pulse dialing trunks.

A maximum of seven COI-F(4)-20 KTUs can be installed in interface slots in the Level II system and a maximum of 16 in the Level II Advanced system.

COI-F(8)-20 KTU

This Central Office Interface KTU complies with UL 1459 2nd Edition requirements. Electrical fuses (posistors) are built into this KTU. The COI-F(8)-20 KTU supports eight outside (CO/PBX) lines and provides circuitry for ring detection, holding, and dialing. The outside lines can be any combination of Loop or Ground Start, DTMF, or Dial Pulse dialing trunks.

A maximum of seven COI-F(8)-20 KTUs can be installed in interface slots in the Level II system and a maximum of eight in the Level II Advanced system.

DID-F(4)-10 KTU

The Direct Inward Dialing interface KTU complies with UL 1459 2nd Edition requirements. The DID-F(4)-10 KTU supports the termination and operation of up to four DID lines. Electrical fuses (posistors) are built into this KTU. Immediate start, wink start, and delay dial are accommodated. Dial Pulse and DTMF are supported.

A maximum of seven DID-F(4)-10 KTUs can be installed in interface slots in the Level II system and a maximum of eight in the Level II Advanced system.

TLI-F(2)-11 KTU

This Tie Line Interface KTU supports the termination and operation of up to two E&M Tie Lines (4-wire, type I and type V, and 10/20 pps Dial Pulse or DTMF). Immediate or wink start, delay start, or second dial tone signaling is accommodated.

A maximum of seven TLI-F(2)-11 KTUs can be installed in interface slots in the Level II system and a maximum of 16 in the Level II Advanced system.

DTI-F()-10 KTU

The Digital Trunk Interface (DTI) KTU provides for the termination of a T1/Fractional T1 (24 DS-0 channels or fewer) line. The DTI-F()-10 KTU contains circuitry for outside ring detection, holding, dialing, and control functions.

A combination of Loop and Ground Start Trunks can be used on this DTI KTU. DTMF or Dial Pulse dialing is also supported.

The two interface slots to the right of this KTU may need to be left vacant depending on System Programming. A CLK-F-21 Unit must be connected to the CPU-F()-20 KTU.

One DTI-F()-10 KTU or DTI-F(A)-20 KTU can be installed in the Level II system and three in the Level II Advanced system.

DTI-F(A)-20 KTU

This Digital Trunk Interface (DTI) KTU includes the functions of the DTI-F()-10 KTU in addition to Tie line (E&M) and DID signaling capabilities. (Available with Series 300 or higher.)

A combination, in groups of four, of Loop and Ground Start Trunks, Tie line, or DID Trunks can be used on this DTI KTU. DTMF or Dial Pulse dialing is also supported.

The two interface slots to the right of this KTU may need to be left vacant depending on System Programming. A CLK-F-21 Unit must be connected to the CPU-F()-20 KTU.

One DTI-F()-10 KTU or DTI-F(A)-20 KTU can be installed in the Level II system and three in the Level II Advanced system.

1.5.6 Optional Key Telephone Units

ECR-F-11 KTU

The External Control Relay (ECR) KTU provides common audible tone signaling with relay contacts for external ringing equipment and an audible output for External Paging Systems. Eight relays are provided, four for External Tone Ringer control, one for Night Chime, and three for External Paging.

One ECR-F-11 KTU can be installed in either system.

PBR-F(4)-11 KTU

The Push Button Receiver KTU detects and translates DTMF tones generated only by Single Line Telephones, modems, or facsimile machines. The PBR-F(4)-11 KTU provides four circuits.

The Level II interface slots can accommodate one PBR-F(4)-11 KTU for a maximum of eight circuits per system with a CPU-F($\,$)-20 KTU, and two PBR-F(4)-11 KTUs in the Level II Advanced system for a maximum of 12 circuits.

VRS-F(4)-11 KTU

The Voice Recording Service KTU provides voice recording messages for internal stations, automatic answering of incoming CO/PBX calls, and Delay Announcement messages for ACD/UCD by a voice recorded message. The PBR circuits on the CPU-F()-20 support the VRS-F(4)-11 KTU when it is installed.

A maximum of two VRS-F(4)-11 KTUs can be installed in any of the systems interface slots providing eight channels.

MIF-F(S)-10 KTU

The Multipurpose Interface KTU provides two capabilities. First, it generates detailed call records of incoming, outgoing, conference, and transferred outside calls. Reports include digits dialed, call duration, trunks used, etc. Secondly, this KTU also allows interfacing between a personal computer, with the PC software programming package, and the CPU-F()-20 KTU for programming System Data and up/down loading System Data.

One MIF-F(S)-10 KTU can be installed in the option slot or any of the first four interface slots (IF1/OP1 \sim IF4/OP4) provided in the ESF-SB-10 KSU, the ESF-XB-10 KSU, or the first ESF-XE-10 KSU installed.

MIF-F(L)-10 KTU

The MIF-F(L)-10 KTU provides three features: it allows the connection of a personal computer for performing System Programming and up/down loading of System Data, provides Station Message Detail Recording (SMDR) to be output via an RS-232 cable to a printer, and provides Least Cost Routing (LCR) capability.

One MIF-F(L)-10 KTU can be installed in the option slot or any of the first four interface slots (IF1/OP1 \sim IF4/OP4) provided in the ESF-SB-10 KSU, the ESF-XB-10 KSU, or the first ESF-XE-10 KSU installed.

Refer to the Electra Professional Level II and Level II Advanced Least Cost Routing Manual (included with the LCR software) for LCR instructions.

MIF-F(A)-10 KTU

The MIF-F(A)-10 KTU provides the Automatic Call Distribution (ACD) feature and an interface to an MIS terminal.

One MIF-F(A)-10 KTU can be installed in the option slot or any of the first four interface slots (IF1/OP1 \sim IF4/OP4) provided in the ESF-SB-10 KSU, ESF-XB-10 KSU, or the first ESF-XE-10 KSU installed.

MIF-F(U)-10 KTU

The MIF-F(U)-10 KTU provides the Uniform Call Distribution (UCD) feature.

One MIF-F(U)-10 KTU can be installed in the option slot or any of the first four interface slots (IF1/OP1 \sim IF4/OP4) provided in the ESF-SB-10 KSU, ESF-XB-10 KSU, or the first ESF-XE-10 KSU installed.

Note: Only one MIF-F(A)-10 KTU or MIF-F(U)-10 KTU can be installed in the system.

1.5.7 Multiline Terminals and Associated Equipment

ETW-8-1 (BK) TEL

This Multiline Terminal is a fully modular instrument with eight Flexible Line keys (each with a two-color LED), eight function keys, built-in speakerphone, ADA compatibility, and a large LED to indicate incoming calls and messages.

A maximum of 55 ETW-8-1 (BK) TELs can be installed in a Level II system and 95 in a Level II Advanced system.

ETW-16DC-1 (BK) TEL

This Multiline Terminal is a fully modular instrument with 16 Flexible Line keys (each with a two-color LED), eight function keys, built-in speakerphone, a 16-character Liquid Crystal Display (LCD), ADA compatibility, and a large LED to indicate incoming calls and messages.

A maximum of 56 ETW-16DC-1 (BK) TELs can be installed in a Level II system and 96 in a Level II Advanced system.

ETW-16DD-1 (BK) TEL

This Multiline Terminal is a fully modular instrument with 16 Flexible Line keys (each with a two-color LED), eight function keys, built-in speakerphone, a 16-character Liquid Crystal Display (LCD), 20 programmable One-Touch keys with red LEDs, ADA compatibility, and a large LED to indicate incoming calls and messages.

A maximum of 56 ETW-16DD-1 (BK) TELs can be installed in a Level II system and 96 in a Level II Advanced system.

ETW-24DS-1 (BK) TEL

This Multiline Terminal is a fully modular instrument with 24 Flexible Line keys (each with a two-color LED), eight function keys, built-in speakerphone, dual path capability, 12 programmable One-Touch keys, ADA compatibility, and a large LED to indicate incoming calls and messages.

A maximum of 56 ETW-24DS-1 (BK) TELs can be installed in a Level II system and 96 in a Level II Advanced system.

EDW-48-()(BK) Console

The Attendant Add-On Console is equipped with 48 programmable keys with two-color (red and green) LED indications and 12 function keys with one-color (red) LED. The 48 programmable keys can be assigned as Direct Station Selection keys, function keys, or outside line keys.

A maximum of four EDW-48-() (BK) Consoles can be installed in either system.

ADA(1)-W (BK) Unit

The ADA(1)-W (BK) Unit (Ancillary Device Adaptor) provides the Multiline Terminal with connection for a headset, external speakerphone, tape recorder, or other ancillary devices. An ADA(1)-W (BK) Unit can be installed in any Multiline Terminal.

A maximum of 56 ADA(1)-W (BK) Units can be installed in a Level II system or 96 in a Level II Advanced system, one per Multiline Terminal.

ADA(2)-W (BK) Unit

The ADA(2)-W (BK) Unit (Ancillary Device Adaptor) provides the Multiline Terminal with connection for a cordless Single Line Telephone, modem, facsimile, or answering machine. An ADA (2)-W (BK) Unit can be installed in any Multiline Terminal.

The recommended maximum is 16 ADA(2)-W (BK) Units, however, additional units can be installed depending on system traffic and the number of PBR circuits available.

WMU-W (BK) Unit

The WMU-W is a universal Wall Mount Unit which can be used to mount any Multiline Terminal.

1.5.8 Single Line Telephone Adaptor

SLT-F(1G)-10 ADP

This Single Line Telephone Adaptor provides an interface for a Single Line Telephone or similar device from an ESI-F(8)-21 KTU channel.

A maximum of 55 SLT-F(1G)-10 ADP adaptors can be installed in a Level II system and a maximum of 95 in a Level II Advanced system.

SECTION 2 SYSTEM SPECIFICATIONS

2.1 General Information

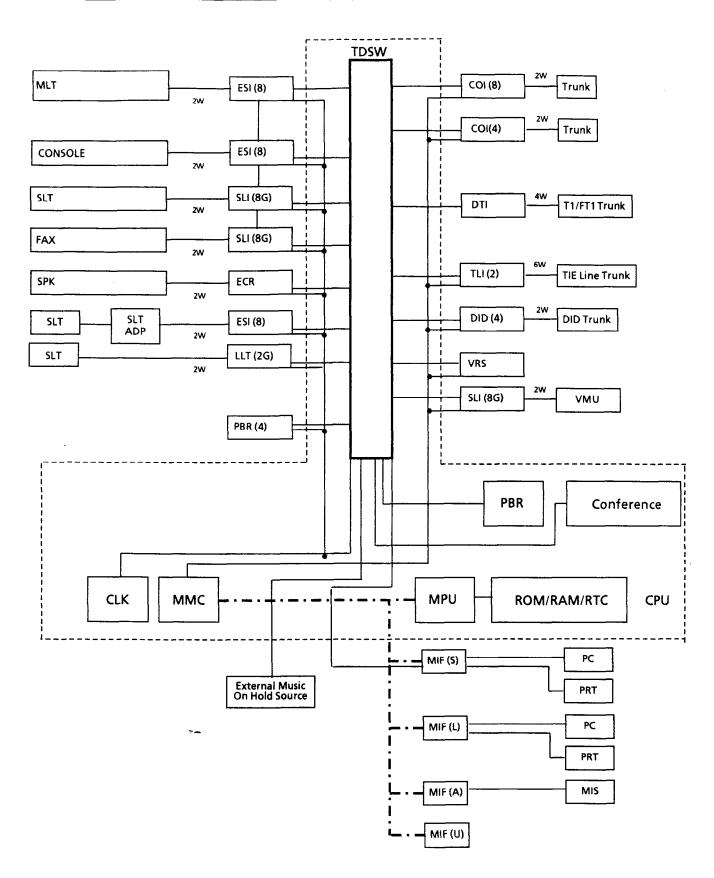
The following diagrams and tables show specifications for the Electra Professional Level II and Level II Advanced systems. The technician should review these carefully before attempting to install the systems.

2.2 System Block Diagram

The system block diagram shows a conceptual representation of an installed system. (Refer to Figure 1-3 - System Block Diagram. Also refer to Table 1-10 - Abbreviations for a list of abbreviations used in the system block diagram.)

Table 1-10 Abbreviations

Abbreviation	Description
CLK	Digital Network Synchronous Clock Oscillator
COI	Central Office Line Interface
CONSOLE	Attendant Add-On Console
CPU	Central Processing Unit
DID	Direct Inward Dial Trunk
DTI	Digital Trunk Interface
ECR	External Control Relay
ESI	Electronic Station Interface
FAX	Facsimile Transceiver
LLT	Long Line Telephone
MIF	Multipurpose Interface
MLT	Multiline Terminal
MMC	Module Memory Controller
MPU	Microprocessor
PBR	DTMF Signal Receiver Circuit Unit (Push Button Receiver)
PC	Personal Computer (with RS-232C Interface)
PRT	Printer with RS-232C Interface
ROM/RAM	Read Only Memory/Random Access Memory
RTC	Real Time Clock
SLI	Single Line Telephone Interface
SLT	Single Line Telephone
SLT ADP	Single Line Telephone Adaptor
SMDR	Station Message Detail Recording
SPK	External Speaker
TDSW	Time Division Switch
TLI	Tie Line Interface
VMU	Voice Mail Unit
VRS	Voice Recording Service



Numbers in () designate the number of channels supported when using the equipment listed.

Figure 1-3 System Block Diagram

2.3 System Control Capacities

The control capacities of the system are shown in Table 1-11 - System Control Capacities.

Table 1-11 System Control Capacities

			el II	Level II Advanced		
	Item	Basic	Basic + Expansion	Basic	Basic + 2 Expansions	Unit
Slot	Interface	5	8	8	24	
Slot	Application	1	1	2	4	
Number of	Outside Lines	32	56	56	64	N/A
	CO/PBX	32	56	56	64	COI
	DID	16	28	28	32	DID
	E&M	8	14	14	32	TLI
	T1	1 (24 channels)	1 (24 channels)	2 (48 channels)	3 (64 channels)	DTI
Number of	Intercom Lines		Non-B	locking	<u> </u>	N/A
stations th	number of outside lines and at can be simultaneously (Non-Blocking)	40	64	64	160	N/A
Multiline T	[erminal	32	56	56	96	ESI
Attendant	Add-On Console	4	4	4	4	ESI
SLT		24	48	48	88	SLI
SLT Adapt	or	31	55	55	95	ESI
External S	peaker	3	3	3	3	ECR
DTMF Rec	eiver	8	8	8	8	PBR
Voice Reco	rding Service	8	8	8	8	VRS
Station Me	ssage Detail Recording (SMDR)	1	1	1	1	MIF (S/L)
PC Program	n	1	1	1	1	MIF (S/L)
Least Cost	Routing (LCR)	1	1	1	1	MIF (L)
Automatic	Call Distribution (ACD)	1	1	1	1	MIF (A)
Uniform Ca	all Distribution (UCD)	1	1	1	1	MIF (U)
Conference		6	6	6	6	CPU
Tenant		48	48	48	48	N/A
Trunk Grou	пр	32	32	32	32	N/A
Route Adva	ance Block	16	16	16	16	N/A
System Spe	eed Dial	1000/90	1000/90	1000/90	1000/90	N/A

Note 1: The number of Attendant Add-On Consoles is included in the number of Multiline Terminals.

Note 2: Four of the eight channels are accommodated in the CPU.

2.4 Cabling Requirements

2.4.1 Cabling Specifications

The KSU is connected with each of the Multiline Terminals and Single Line Telephones by a separate twisted 1-pair cable or 2-pair cable (only for Multiline Terminals). Table 1-12 - Multiline Terminal Loop Resistance and Cable Length and Table 1-13 - Single Line Telephone Connection Cable Length show the cables used for wiring between the KSU and individual terminals or adaptors.

Terminal or Adaptor	Maximum Loop Resistance	Maximum Feet by Twisted 1-Pair Cable	Maximum Feet by Twisted 2-Pair Cable	
	(Ohms)	24 AWG	24 AWG	
ETW-8-1 (BK) TEL	61	600	1500	
ETW-16DC-1 (BK) TEL	46	450	1300	
ETW-16DD-1 (BK) TEL	37	360	820	
ETW-24DS-1 (BK) TEL	46	450	820	
EDW-48-() (BK) Attendant Add-On Console with AC Adaptor	102	1000	2000	
SLT-F(1G)-10 ADP	61	600	1200	

Note 1: When installing an Attendant Add-On Console, the use of an AC Adaptor is required.

Note 2: The length for the specified SLT Adaptor is the length between the ESI KTU and the SLT Adaptor.

Note 3: When additional length is required between the ESI and a Multiline Terminal, Attendant Add-On Console, or SLT Adaptor, use twisted 2-pair cable as shown in Figure 1-4 Connecting the ESI to the Multiline Terminal Using Twisted 2-Pair Cable.

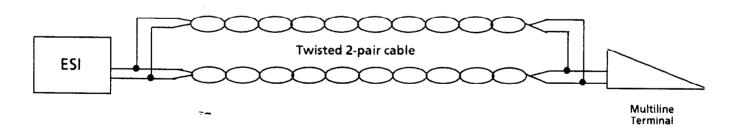


Figure 1-4 Connecting the ESI to the Multiline Terminal Using Twisted 2-Pair Cable

Connected Equipment	Cable	Maximum Loop Resistance (24 AWG) from Connected Equipment to Telephone
SLI-F(8G)-21 KTU	Twisted 1-pair	300 ohm
LLT-F(2G)-10 KTU	Twisted 1-pair	1500 ohm
SLT-F(1G)-10 ADP	Twisted 1-pair	300 ohm
ADA(2)-W (BK) Unit	Twisted 1-pair	10 feet

Table 1-13 Single Line Telephone Connection Cable Length

Note: Mixing digital and analog ports through the same 25-pair cable runs is not recommended.

The following types of cabling are required for the equipment listed below:

- Music Source (for MOH and BGM inputs): Hi-Fi Shielded Audio Cable
- External Amplifier:

Hi-Fi Shielded Audio Cable

2.4.2 Cabling Precautions

When selecting cables and Main Distribution Frames (MDF), future expansion or assignment changes should be given due consideration. Avoid running cables in the following places:

- A place exposed to wind or rain.
- A place near heat radiating equipment or where the quality of station cable covering could be affected by gases and chemicals.
- An unstable place subject to vibration.

2.5 Power Requirements

2.5.1 Power Supply Inputs

AC Input (PSF-S-20 PSU or PSF-P-20 PSU):

- 117 Vac ± 10%
- $60 \text{ Hz} \pm 10\%$
- Single Phase
- 1.5A maximum current
- A dedicated outlet, separately fused and grounded, is required.

2.5.2 Power Supply Outputs Table

Table 1-14 Power Outputs

DC	Lev	el II	Level II Advanced		
Voltage	Minimum Current	Maximum Current	Minimum Current	Maximum Current	
-24V	0.3A	5.9A	0.3A	7.5A	
+ 5V	0.3A	4.3A	0.3A	6.5A	
-5V	0A	0.8A	0A	1.2A	

2.5.3 Power Consumption and Dissipation Table

Table 1-15 Power Consumption and Dissipation

	Module	Maximum RMS Current	Watts Used (Idle)	Watts Used (Maximum)	
	Basic	1.3A	120	150	
Level II	Basic + Expansion	1.9A	180	220	
Level II Advanced	Basic	1.9A	180	220	
	Basic + 2 Expansions	5.7 A	540	660	

2.5.4 Fuse Replacement Table

Table 1-16 Fuse Replacement

Unit	Fuse No.	Specifications	Description	Dimensions
PSF-S-20 PSU	F1	125V, 4.0A	AC Input	1/4" X 1-1/4"
161-6-20160	F2	125V, 7.0A	DC Input	1/4" X 1-1/4"
PSF-P-20 PSU	F1	125V, 6.3A	AC Input	1/4" X 1-1/4"
151-1-2015.0	F2	250V, 12.0A	DC Input	1/4" X 1-1/4"

Note: All fuses are normal blown glass tube. Do not use slow blow fuses.

2.6 Environmental Conditions

• Temperature

1. Operating:

 $50^{\circ} \text{F} \sim 104^{\circ} \text{F} (10^{\circ} \text{C} \sim 104^{\circ} \text{C})$

2. Recommended Long Term:

 $50^{\circ} \text{F} \sim 90^{\circ} \text{F} (10^{\circ} \text{C} \sim 32.2^{\circ} \text{C})$

• Operating Humidity:

 $10\% \sim 90\%$ noncondensing

2.7 Outside Line Types

- 2-wire, Loop Start or Ground Start Trunks
- 2-wire, Loop Dial, DID Lines (Dial Pulse or DTMF)
- 4-wire, E & M Tie Lines (Type I or V, Dial Pulse, or DTMF)
- Digital Trunk T1/FT1 (Loop Start or Ground Start, Tie Line (E&M), or DID Signaling)

2.8 Network and Control Specifications

- 2.8.1 Transmission
 - Data Length:

From Multiline Terminal to ESI-F(8)-21 KTU: 23 bits

From ESI-F(8)-21 KTU to Multiline Terminal: 23 bits

Data Transmission Rates:

Between ESI-F(8)-21 KTU and Multiline Terminal: 184K bits/sec.

(voice and signaling)

• Scanning Time for each Multiline Terminal:

32 ms.

2.8.2 Network

• TDM Switching: PCM (μ Law)

TDM Clock:

2.048 MHz

TDM Data Bus:

8 bit

TDM Timeframe: 125 us.

2.8.3 Control

• Control: Stored program with distributed processing

• Central Processor:

16-bit microprocessor

Clock:

 $8\,\mathrm{MHz}$

Interface KTU:

4-bit microprocessor

• Optional KTUs (MIF and DTI): 8-bit microprocessor

Multiline Terminal and

Attendant Add-On Console:

4-bit microprocessor

SLT Adaptor:

4-bit microprocessor

2.8.4 Telephones

• Multiline Terminal and Attendant Add-On Console:

Voltage:

 $-11 \sim -26 \, \text{Vdc}$

Maximum Current:

 $200 \, \mathrm{mA}$

• Single Line Telephone:

Standard 2500 set:

500 type network

Nominal Current:

 $35 \, mA$

Ring Signal:

56 Vac RMS @ 20 Hz

• Single Line Telephone Adaptor:

Standard 2500 set:

500 type network

Nominal Current:

30 mA

Ring Signal:

56 Vac RMS @ 20 Hz

• ADA(2)-W(BK) Unit:

Standard 2500 set:

500 type network

Nominal Current:

30 mA

Ring Signal:

56 Vac RMS @ 20 Hz

2.9 Dialing Specifications

2.9.1 Dial Pulse Address Signaling

Standard 2500 set:

500 type network

Nominal Current:

 $30 \, \mathrm{mA}$

Ring Signal:

56 Vac RMS @ 20 Hz

• ADA(2)-W (BK) Unit:

Standard 2500 set:

500 type network

Nominal Current:

30 mA Signaling

• Pulse Rate:

 $10 \pm 0.5 \, \text{pps/} 20 \pm 1.0 \, \text{pps}$

• Percent Break:

 $60 \pm 1.5\%$

• Interdigit Interval:

10 pps/20 pps 770 ms. $\sim 830 \text{ ms}$.

2.9.2 DTMF Address Signaling

• Frequencies:

Two sinusoidal signals, one from a high group of three frequencies and one from a low group of four frequencies.

• Frequency deviation:

Less than \pm 1.0 percent

Signal level:

Nominal level per frequency:

 $-6 \sim -4 \, dBm$

Minimum level per frequency:

Low Group:

-10 dBm -8 dBm

High Group:

Maximum level per frequency pair: 0 dBm

Rise time:

Within 5 ms.

Duration of dual frequency signal: 100 ms. default/70 ms. minimum

Interdigital time:

70 ms. default/60 ms. minimum

Nominal High Group Frequencies (Hz)

Nominal Low Group Frequencies (Hz)

	1209	1336	1477
697	1	2	3
770	4	5	6
852	7	8	9
941	*	0	#

2.10 Battery Backup

Both systems have two battery backup functions: one is for system backup and a second for memory backup.

2.10.1System Backup

The system is backed up by a rechargeable battery. This battery backup will support all of the system functions for approximately 30 minutes in the event of a power failure.

2.10.2 Memory Backup

A backup battery is equipped on the CPU-F()-20 KTU, VRS-F(4)-11 KTU. MIF-F(S)-10 KTU, MIF-F(L)-10 KTU, MIF-F(A)-10 KTU and the MIF-F(U)-10 KTU. These batteries, when fully charged, retain the system memory in the event of a power failure. (Refer to Table 1-17 - KTU Battery Backup Time for the approximate backup times for the KTUs.)

Table 1-17 KTU Battery Backup Time

KTUs	Approximate Backup Time
CPU-F()-20 KTU	14 days
VRS-F(4)-11 KTU	1 hour
MIF-F(S)-10 KTU	1 month
MIF-F(L)-10 KTU	1 month
MIF-F(A)-10 KTU	1 month
MIF-F(U)-10 KTU	1 month

2.11 Weights and Dimensions

Table 1-18 Weights and Dimensions

Unit	Shipping Weight*	Height	Width	Depth
ESF-SB-10 KSU	37 lbs. 6 oz.	14.96"	15.67"	9.06"
	(17 kg)	(380 mm)	(398 mm)	(230 mm)
ESF-SE-10 KSU	26 lbs. 8 oz.	14.96"	11.54"	9.06"
	(12 kg)	(380 mm)	(293 mm)	(230 mm)
ESF-XB-10 KSU	42 lbs. 11 oz.	18.31"	24.80"	10.67"
	(19.4 kg)	(465 mm)	(630 mm)	(271 mm)
ESF-XE-10 KSU	21 lbs. 5 oz.	11.81"	24.80"	10.67"
	(9.7 kg)	(300 mm)	(630 mm)	(271 mm)
PSF-S-20 PSU	4 lbs. 13 oz.	14.96"	3.54"	7.09"
	(2.2 kg)	(380 mm)	(90 mm)	(180 mm)
PSF-P-20 PSU	3 lbs. 8 oz.	14.96"	3.54"	7.09"
	(1.6 kg)	(380 mm)	(90 mm)	(180 mm)
ETW-8-1 (BK) TEL	2 lbs.	3.98"	6.89"	8.81"
	(0.9 kg)	(101 mm)	(175 mm)	(223 mm)
ETW-16DC-1 (BK) TEL	2 lbs. 3 oz.	3.98"	6.89"	8.81"
	(1 kg)	(101 mm)	(175 mm)	(223 mm)
ETW-16DD-1 (BK) TEL	2 lbs. 7 oz.	3.98"	8.07"	8.81"
	(1.1 kg)	(101 mm)	(205 mm)	(223 mm)
ETW-24DS-1 (BK) TEL	2 lbs. 7 oz.	3.98"	8.07"	8.81"
	(1.1 kg)	(101 mm)	(205 mm)	(223 mm)
EDW-48-() (BK) CONSOLE	3 lbs. 1 oz.	2.72"	6.89"	8.81"
	(1.4 kg)	(69 mm)	(175 mm)	(223 mm)
ETE-1-2 TEL (SLT)	1 lb. 14 oz.	3.15"	6.30"	9.06"
	(0.9 kg)	(80 mm)	(160 mm)	(230 mm)
ETE-1HM-2 TEL (SLT)	1 lb. 10 oz.	2.36"	6.30"	9.06"
	(0.7 kg)	(60 mm)	(160 mm)	(230 mm)
SLT-F(1G)-10 ADP	9 oz.	1.80"	2.80"	4.80"
	(0.29 kg)	(45 mm)	(70 mm)	(120 mm)

^{*} Shipping weight includes the shipping carton.

2.12 External Equipment Interface

2.12.1 Music On Hold/Station Background Music

• Auxiliary Input:

0.6V RMS Signal Level

• Input Impedance:

10K Ω

2.12.2 External Paging (Audio)

Output Power:

-10 dBm Signal Level

• Output Impedance:

 600Ω

Relay Contact Rating: 500 mA, 24 Vdc

2.12.3 External Tone Ringer/Night Chime Output

• Output Level:

-10 dBm

• Output Impedance:

 600Ω

• Relay Contact Rating: 500 mA, 24 Vdc

2.12.4 SMDR Output

• Female Connector

(System Output) Standard RS-232C

2.12.5 PC Connection

• Female Connector

(System Output) Standard RS-232C

2.12.6 Relay Contact

All Relay Contact Ratings: 500 mA, 24 Vdc

2.13 Visual and Audible Indications

2.13.1 Tone Patterns Table

Table 1-19 Tone Patterns

Tone	Frequency (Hz)	Tone Patterns
Dial Tone	350/440	
Second Dial Tone	350/440	
Busy Tone	480/620	
Call Waiting Tone	440	60 IPM
Ringback Tone (1)	440/480	1 sec. ON 2 secs. OFF
Ringback Tone (2)	440/480	2 sec. ON 4 secs. OFF
Reorder Tone	480/620	
Attendant/Tone Override Camp-On Tone Call Alert Notification	440	0.7 sec.
Call Forward Alert Tone Call Forward Confirmation Tone	350/440	0.25 sec. ON x 2 ~ 3 bursts
Confirmation LCR Dial Tone	440	
Error Tone Burst	620	0.25 sec. ON x 2 ~ 3 bursts
Recall Tone	1024	
CO/PBX Ring Tone (1)	480/606	2 sec. ON 4 secs. OFF
CO/PBX Ring Tone (2)	480/606	
Internal Ring Tone	480/606	1 sec. ON 2 secs. OFF
Attendant Ring Tone	480/606	0.5 sec
Tone Burst	440	1 sec. ON
Howler Tone	2400	Continuous 16 Hz modulation
DIT Alert Tone	480/620	0.5 sec. ON
CO Ring Transfer	480/606	0.5 sec. ON 0.5 sec. OFF

2.13.2 Multiline Terminal LED Flash Pattern Table

Table 1-20 Multiline Terminal LED Flash Patterns

LED	Condition	Color	Flash Patterns
Line Key	I-Use Busy Incoming Call I-Hold Call Hold Hold Recall Transfer Recall	Green Red Red Green Red Green Green	
Microphone	ON	Red	
ICM	I-Use ICM Incoming Call	Red Red	
Large LED	Incoming Internal Call Incoming Outside Call Message from Attendant Voice Mail Message	Red Green Green Red	
Speaker	ON System Data Entry	Red Red	
Conference	Conference in Progress All Conference Circuits Used Hold Conference Call ICM Call Hold SPD Confirmation	Red Red Red Red	
Answer	Incoming Trunk Exclusive Hold	Red Green	
Function	Callback Set Auto Repeat Set ON (to set function)	Red Red Red	
LNR/SPD	Other Tenant CO Line Key Seized Exclusive Hold	Green Green	
BLF or DSS Key	Use, Hold DND, Call FWD-All Calls Set Special Mode (While pressing FNC key or going off-line)	Red Red Red	

2.13.3 DSS/BLF LED Indications Table

Table 1-21	DSS/RLF	LED In	dications
1 4 1 1 5 1 5 4 1	DOD/DDF.		uications

Function	Color	Status
Attendant Message	Green	ON
Idle		OFF
Talking (Other)	Red	ON
Hold	Red	ON
FWD All (DND)	Red (Flashing)	ON
Other Use (Multiline Terminal is off-line, station user is programming Feature Access/One-Touch keys, etc.)	Red (Flashing)	ON
Incoming Call	Red (Flashing)	ON
CO line in use	Red	ON

SECTION 3 HARDWARE REQUIREMENTS

3.1 General Information

Before configuring the system, complete the worksheets in the *Electra Professional Level II and Level II Advanced Job Specifications Manual* (Stock No. 722024). Make sure all types of station equipment, timeouts, and feature options are considered when completing the worksheets. It is necessary to understand System Programming to properly complete these worksheets. (Refer to Chapter 2 - Programming in this manual.)

Note: One Electra Professional Level II and Level II Advanced Job Specifications Manual is included with the CPU-F()-20 KTU.

The Level II Basic KSU has five interface slots and the Expansion KSU has three interface slots. The Level II Advanced Basic KSU and Expansion KSU each have eight interface slots. Each slot supports up to eight ports. The hardware requirements dictate the number of ports available for installing station equipment.

When possible, the same type KTUs should be paired together within a cable binder (25-pair cable binders to the MDF should be used.) This will simplify MDF wiring.

3.1.1 Programming Stations

A maximum of three programming positions are available in the system. Station equipment, connected to the first two ports of the first ESI-F(8)-21 KTU, are automatically set as programming positions and must be an ETW-16DC-1 (BK) TEL, ETW-16DD-1 (BK) TEL, or ETW-24DS-1 (BK) TEL.

A third programming position becomes available when an MIF-F(S)-10 KTU or MIF-F(L)-10 KTU, and the Electra Professional Level II and Level II Advanced System Program Technician software (Stock No. 722305) are installed.

3.1.2 Attendant Station

A maximum of four Attendant positions can be installed in a system with EDW-48-()(BK) Consoles. Each Attendant Add-On Console must be supported by an ESI-F(8)-21 KTU. A maximum of four EDW-48-()(BK) Consoles can be installed in each system.

EXPANSION KSU

3.2 Determining Required Equipment

3.2.1 Station Equipment

Determine the type and quantity of station equipment being installed. The type of station equipment that is available includes:

- ETW-8-1 (BK) TEL (8-line Multiline Terminal without LCD)
 ETW-16DC-1 (BK) TEL (16-line Multiline Terminal with LCD)
- ETW-16DD-1 (BK) TEL (16-line Multiline Terminal with LCD)
- ETW-24DS-1 (BK) TEL (24-line Multiline Terminal with LCD and built-in Dual Path Adaptor)
- Single Line Telephone with Message Wait Lamp
- Single Line Telephone without Message Wait Lamp
- EDW-48-()(BK)Console

BASIC KSU

SLT-F(1G)-10 ADP

3.2.2 Interface KTUs

A. Slot and System Port Numbers for the Level II system are shown in Figure 1-5 - Level II Interface Slots and System Port Numbers.

			8	16	24	32	40	48	56	64
			7	15	23	31	39	47	55	63
			6	14	22	30	38	46	54	62
P	0	С	5	13	21	29	37	45	53	61
s	P	P	4	12	20	28	36	44	52	60
U	В	U	3	11	19	27	35	43	51	59 .
	t i		2	10	18	26	34	42	50	58
			1	9	17	25	33	41	49	57
			IF1/OP1	IF2/OP2	IF3/OP3	IF4/OP4	IF5	IF6	IF7	IF8

Figure 1-5 Level II Interface Slots and System Port Numbers

B. Slot and System Port Numbers for the Level II Advanced system are shown in Figure 1-6 - Level II Advanced Interface Slots and System Port Numbers.

Note: The two fixed slots and the first four slots in KSU3 are not labeled with the "OP" designation in Figure 1-6 - Level II Advanced Interface Slots and System Port Numbers. This is only to show that an MIF-F()-10 KTU cannot be installed in these slots. The actual KSUs will be labeled with "OP."

					136	144	152	160	168	176	184	192
					135	143	151	159	167	175	183	191
			į		134	142	150	158	166	174	182	190
	Р			M	133	141	149	157	165	173	181	189
KSU3	s			M	132	140	148	156	164	172	180	188
	U			С	131	139	147	155	163	171	179	187
					130	138	146	154	162	170	178	186
					129	137	145	153	161	169	177	185
					IF1	IF2	IF3	IF4	IF5	IF6	IF7	IF8
L	L	L									<u> </u>	

					72	80	88	96	104	112	120	128
					71	79	87	95	103	111	119	127
					70	78	86	94	102	110	118	126
	P	О	0	M	69	77	85	93	101	109	117	125
KSU2	S	P	P	M	68	76	84	92	100	108	116	124
	U	A	В	С	67	75	83	91	99	107	115	123
				 	66	74	82	90	98	106	114	122
					65	73	81	89	97	105	113	121
					IF1/OP1	IF2/OP2	IF3/OP3	IF4/OP4	IF5	IF6	IF7	IF8

					8	16	24	32	40	48	56	64
					7	15	23	31	39	47	55	63
					6	14	22	30	38	46	54	62
	P	0	0	C	5	13	21	29	37	45	53	61
KSU1	s	P	P	Ł	4	12	20	28	36	44	52	60
	U	A	В	U	3	11	19	27	35	43	51	59
					2	10	18	26	34	42	50	58
					1	9	17	25	33	41	49	57
					IF1/OP1	IF2/OP2	IF3/OP3	IF4/OP4	IF5	IF6	IF7	IF8

Figure 1-6 Level II Advanced Interface Slots and System Port Numbers

Telephone and CO Port Numbers C.

Telephone and CO Ports Numbers are available in the system. The port numbers are used to count the number of station numbers and trunk numbers when programming System Data. (Refer to Figure 1-7 -Telephone and CO Port Number Example.)

In the following example of a Level II system, the KTUs installed in each slot are:

Slot	KTU
IF1/OP1	DTI-F()-10 KTU or DTI-F(A)-20 KTU
IF2/OP2	OPEN
IF3/OP3	OPEN
IF4/OP4	ESI-F(8)-21 KTU
IF5	TLI-F(2)-10 KTU
IF6	COI-F(8)-20 KTU
IF7	SLI-F(8G)-21 KTU
IF8	DID-F(4)-10 KTU

BASIC KSU

EXPANSION KSU

C8	C16	C24	Т8		C36	T16	
C7	C15	C23	Т7		C35	T15	
C6	C14	C22	Т6		C34	T14	
C5	C13	C21	Т5		C33	T13	
C4	C12	C20	T4		C32	T12	C42
СЗ	C11	C19	ТЗ		C31	T11	C41
C2	C10	C18	Т2	C26	C30	T10	C38
C1	С9	C17	Т1	C25	C29	Т9	C37
IF1/OP1	IF2/OP2	IF3/OP3	IF4/OP4	IF5	IF6	IF7	IF8

CO Port Number C =

T =Telephone Port Number

Note 1: The TLI KTU has four available channels, but only two are

Note 2: The DID KTU has eight available channels, but only four are

used.

Figure 1-7 Level II Telephone and CO Port Number Example

Interface KTUs D.

To determine the quantity of interface KTUs that are required, refer to Table 1-22 - Number of Required Interface KTUs.

Table 1-22 Number of Required Interface KTUs

KTU	Circuits per	Table 1-22 Number of Required Interfa	Maxim	ım KTUs ystem	Allowed Insertion Slots	
	KTU	Calculations/Comments	Level II	Level II Advanced		
COI-F(4)-20 KTU	4	Divide the number of CO/PBX/Centrex lines being used by 4.	7	16	IF1/OP1~IF4/OP4 and IF5~1F8	
COI-F(8)-20 KTU	8	Divide the number of CO/PBX/Centrex lines being used by 8.	7	8	IF1/OP1~IF4/OP4 and IF5~IF8	
ESI-F(8)-21 KTU	8	Divide the number of Multiline Terminals, Attendant Add-On Consoles, SLT Adaptors being used by 8.	7	12	IF1/OP1~IF4/OP4 and IF5~IF8	
SLI-F(8G)-21 KTU	8	Divide the number of Single Line Telephones and/or Voice Mail ports being used by 8.	6	11	IF1/OP1~IF4/OP4 and IF5~IF8	
PBR-F(4)-11 KTU	4	PBR Requirements (Refer to Section E - PBR Requirements on the next page.)	1	2	IF1/OP1~IF4/OP4 and IF5~IF8	
DID-F(4)-10 KTU	4	Divide the number of DID trunks being used by 4.	7	8	IF1/OP1~IF4/OP4 and IF5~IF8	
TLI-F(2)-10 KTU	2	Divide the number of Tie lines being used by 2.	7	16	IF1/OP1~IF4/OP4 and IF5~IF8	
DTI-F()-10 KTU or DTI-F(A)-20 KTU	24	The number of T1/FT1 channels being used.	1	3	See Notes 1 and 2	
ECR-F-11 KTU	8 Relays	Required when installing multiple zones for external paging, tone ring and/or chime.	1	1	IF1/OP1∼IF4/OP4 and IF5∼IF8	
MIF-F(S)-10 KTU		Required when connecting an SMDR printer and/or when using System Program Technician Software.	1	1	OP and/or IF1/OP1~IF4/OP4	
MIF-F(L)-10 KTU	~-	Required when connecting an SMDR printer and/or when using System Program Technician Software and/or LCR.	1	1	OP and/or IF1/OP1~IF4/OP4	
MIF-F(A)-10 KTU		Required for the ACD feature.	1	1	OP and/or IF1/OP1~IF4/OP4	
MIF-F(U)-10 KTU		Required for the UCD feature.	1	1	OP and/or IF1/OP1~IF4/OP4	
VRS-F(4)-11 KTU	4	Automated Attendant, DISA, Voice Prompt and/or Delay Announcement.	2	2	IF1/OP1~IF4/OP4 and IF5~IF8	

Note 1: For the Level II system, use slot IF1/OP1 in the Basic KSU.

Note 2: For the Level II Advanced system, use slot IF1/OP1 and/or IF4/OP4 in the Basic KSU, and IF1/OP1 in the First Expansion KSU.

E. PBR Requirements

The Electra Professional Level II and Level II Advanced systems have four channels of built-in PBR circuits in the CPU-F()-20 KTU. The PBR circuit can detect DTMF signals from a Single Line Telephone, facsimile, modem, and voice mail ports. Incoming DTMF signals can also be detected from a CO trunk by an Automated Attendant and DISA feature. An optional PBR-F(4)-11 KTU can only detect DTMF signals from Single Line Telephones, facsimiles, modems, and voice mail.

The quantity of PBR-F(4)-11 KTUs that are needed depends on the number of Single Line Telephones, modems, facsimiles, voice mail ports, and whether Automated Attendant/DISA trunks are connected to the system. Up to 24 Single Line Telephones or Automated Attendant/DISA trunks can be supported by one PBR circuit.

3.3 Installation Example

The following example will aid in understanding some of the requirements when configuring an Electra Professional Level II system. (Refer to Table 1-23 - System Configuration Example.) The equipment used in this example includes:

- 12 CO Lines
- 12 Multiline Terminals [ETW-16DD-1 (BK) TEL only]
- Voice Mail Connection (4 ports)
- SMDR
- External Paging

Table 1-23 System Configuration Example

Device Type	Units	Quantity
Key Service Unit	ESF-SB-10 KSU	1
	ESF-SE-10 KSU	1
Power Supply	PSF-S-20 PSU	2
CO Line	COI-F(8)-20 KTU	2
Multiline Terminal Interface	ESI-F(8)-21 KTU	2
Multiline Terminal	ETW-16DD-1 (BK) TEL	12
Voice Mail Connection	SLI-F(8G)-21 KTU	1
SMDR	MIF-F(S)-10 KTU	1
External Paging	ECR-F-11 KTU	1

SECTION 4 KSU INSTALLATION

4.1 General Information

This section provides the requirements for installing the system. The installer should be familiar with this section before installing the system.

4.2 Site Preparation and MDF/IDF Construction

The technician should plan the installation before actual work begins. Advanced planning will minimize time, cost, and disruption of the customer's business activities. Additional benefits include flexibility for changes and expansion, efficient maintenance, and increased customer satisfaction.

4.2.1 Precautionary Information

The following warnings shall be observed during installation:

- Never install telephone wiring during a lightning storm.
- 2. Never install telephone jacks in wet locations unless the jack is specifically designed for wet locations.
- 3. Never touch uninsulated telephone wires or terminals unless the telephone line has been disconnected at the network interface.
- 4. Use caution when installing or modifying telephone lines.

4.2.2 Site Survey

In most cases, a survey of the customer's premises is needed to determine the placement of the Main Distribution Frame (MDF). A second visit to the site may be necessary to obtain the exact dimensions of the area selected for MDF, cable lengths, and possible IDF (Intermediate Distribution Frame) locations.

Collected information about the job site will generally permit the MDF to be partially assembled at the technician's shop, which helps to minimize time spent at the customer's premises.

4.2.3 Site Limitations

In selecting a permanent site for the MDF, the technician may encounter problems such as, but not limited to, the following:

- Limited space is available and must be used regardless of its suitability.
- The available space may be adequate but may pose one or more environmental hazards.
- The proposed location has limitations, such as, insufficient lighting or the lack of a suitable ground for grounding the KSUs.

Whatever the nature of the adversities encountered, the technician must make the necessary decisions to arrive at the best possible solution for installing the equipment. It is beyond the scope of this document to cover all possible situations, precautions, and actions.

4.2.4 Site Selection Conditions

KSU Installation Site:

The following conditions should be met at the site selected for the key service unit (KSU).

- KSUs are normally wall mounted to protect against accident or flooding.
- The KSU should not be located directly beneath pipes, due to the possibility of leaks or condensation causing damage to the Electra Professional Level II system equipment.
- The area where the KSU is to be located must be free of corrosive and inflammable gases, excessive chemical or industrial dusts, and other materials that could cause a hazard to personnel or to the proper functioning of the equipment.
- Operating ambient temperature and humidity must be within the limits specified in Section 2.6 Environmental Conditions.
- The operation of the system is virtually noiseless and allows a wide selection of installation sites, care should be taken to ensure the KSUs do not present a hazard to office traffic. For purposes of economy, a central location to minimize cabling is often used.
- The KSU must be located at a site where it can be easily connected to an AC power source.
- The Level II KSUs (Basic and Expansion) weigh approximately 40 lb. ~ 70 lb. The Level II Advanced KSUs (Basic and Expansion) weigh approximately 40 lb. ~ 100 lb. Therefore, select a strong wall for mounting purposes.
- Place the KSU according to the following spacing specifications:

Space distance between the KSU and the ceiling: 20 in. or more Space distance on both sides of the KSU: 12 in. or more Space distance on front of KSU: 20 in. or more

• Avoid connection of the KSU to an AC receptacle used in common with any other device (computer, facsimile machine, copier, etc.).

Telephone Installation Site:

The following conditions should be met at the site selected for Multiline Terminals.

- Ensure the cable length and line resistance (loop), between the KSU and the telephones, comply with the specifications shown in Table 1-12 Multiline Terminal Loop Resistance and Cable Length and Table 1-13 Single Line Telephone Connection Table Length.
- Some devices require an external power supply. Select a place where they can be easily connected to an AC outlet.

4.2.5 MDF Construction

The Main Distribution Frame (MDF) consists of two different types of standard quick-connect terminal blocks that are mounted on a 3/4" plywood backboard. It is recommended that the blocks be mounted on standoffs for ease of access. The recommended blocks are: 66B50 type, for termination of the MDF Cable Assembly and 66M50 type, for termination of the station cables.

The Intermediate Distribution Frame (IDF) requires only the 66M50 type blocks.

Both the MDF and IDF utilize standard bridging clips for each type of terminal block. The bridging clips are used to mate the left half of the terminal block (terminated cable run) to the right half of the terminal block (cross-connection wire) to the terminal block (cross-connection wire). The bridging clips are also useful during trouble shooting to help isolate the cable runs and terminals/telephones from the central equipment and the Central Office Network from the system. (Refer to Figure 1-8 - Typical Full MDF Layout. Also refer to Section 4.3.4 - Wall Mounting the Basic and/or Expansion KSUs.)

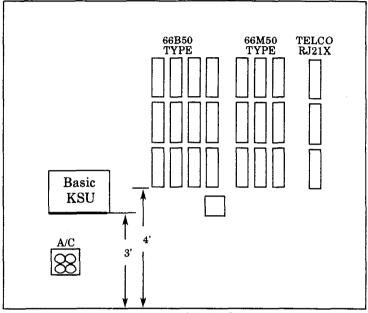


Figure 1-8 Typical Full MDF Layout

4.3 Installing the Level II Key Service Unit (KSU)

Installation Precautions:

Before installation and cabling of the KSU observe these precautions:

- Before starting the work, be sure the PSU power switch is OFF and disconnect the power cord from the AC outlet.
- Do not directly touch the soldered surfaces of the KTUs with your hands.

4.3.1 Basic KSU (ESF-SB-10 KSU)

The ESF-SB-10 KSU is the basic system cabinet. There are two fixed slots for the CPU and MIF KTUs, one PSU slot, a battery installation space, and five interface slots for the installation of telephones, CO/PBX lines, Tie lines, VRS, DID, Digital Trunk (T1), PBR, and ECR KTUs. The KSU can be either floor mounted or wall mounted. (Refer to Figure 1-9 - Level II Basic KSU.)

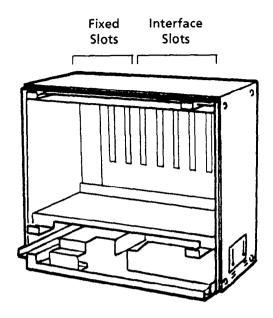


Figure 1-9 Level II Basic KSU

4.3.2 Expansion KSU (ESF-SE-10 KSU)

The ESF-SE-10 KSU is the expansion cabinet that provides the system with one PSU slot, battery installation space, and three additional interface slots. Only one expansion KSU can be installed with the system. This KSU is floor or wall mounted with the ESF-SB-10 KSU. (Refer to Figure 1-10 - Level II Expansion KSU.)

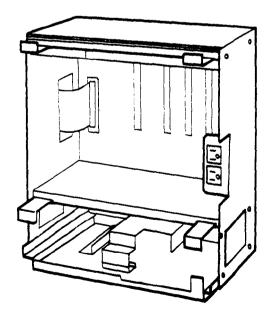


Figure 1-10 Level II Expansion KSU

4.3.3 Opening the KSU Cover

Before floor or wall mounting the KSU, the KSU cover must be removed.

1. Loosen the four cover screws and remove the front cover. (Refer to Figure 1-11 - Removing the Level II Basic KSU Cover.)

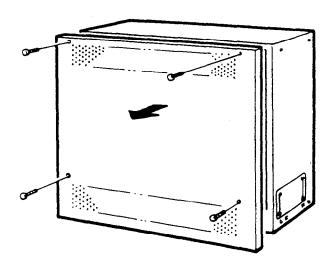


Figure 1-11 Removing the Level II Basic KSU Cover

4.3.4 Wall Mounting the Basic and/or Expansion KSUs

4.3.4.1 Wall Mounting the Basic KSU

Before wall mounting the basic KSU, the wall mount bracket <u>must</u> be attached to a piece of plywood. Using 3/4" fire retardant plywood backboard is recommended.

1. Using four screws (locally provided), attach the wall mount bracket to the wall. (Refer to Figure 1-12 - Attaching the Wall Mount Bracket of the Level II Basic KSU to the Wall.)

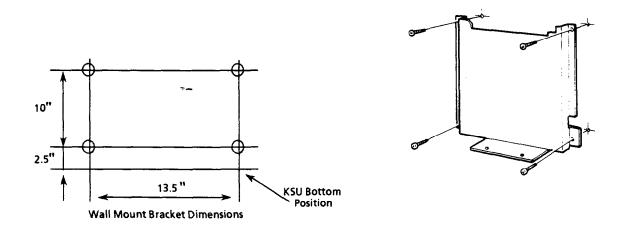


Figure 1-12 Attaching the Wall Mount Bracket of the Level II Basic KSU to the Wall

 Holding the Basic ESF-SB-10 KSU, lower the two hooks that protrude from the rear of the KSU over the wall mount bracket. (Refer to Figure 1-13 - Attaching the Level II Basic KSU to the Wall Mount Bracket.)

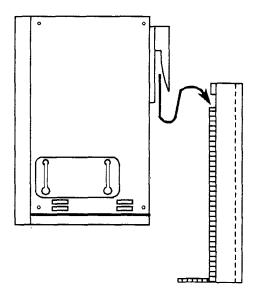


Figure 1-13 Attaching the Level II Basic KSU to the Wall
Mount Bracket

3. Using the two provided bolts, secure the KSU to the wall mount bracket from the bottom. (Refer to Figure 1-14 - Securing the Level II KSU to the Wall Mount Bracket.)

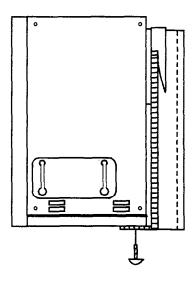


Figure 1-14 Securing the Level II KSU to the Wall Mount Bracket

4.3.4.2 Wall Mounting the Expansion KSU

1. Remove the side panel (four screws) from the Basic KSU before installing the expansion KSU. (Refer to Figure 1-15 - Removing the Side Panel.)

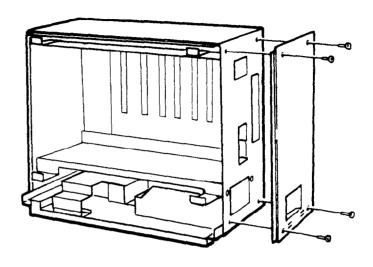


Figure 1-15 Removing the Side Panel

2. Attach the ESF-SE-10 KSU wall mount bracket to the existing ESF-SB-10 KSU wall mount bracket and secure it to the wall using two (locally provided) screws. (Refer to Figure 1-16 - Attaching the Wall Mount Bracket of the Level II Expansion KSU to the Wall.)

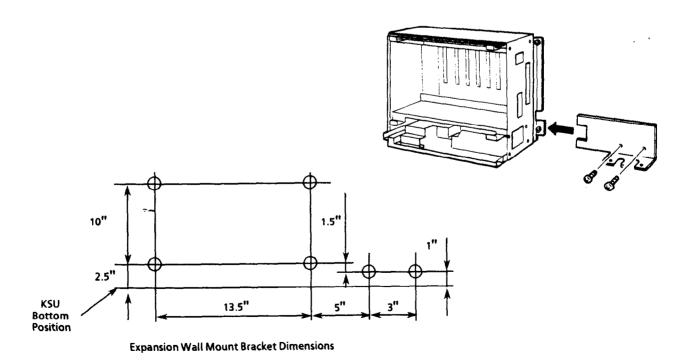


Figure 1-16 Attaching the Wall Mount Bracket of the Level II Expansion KSU to the Wall

3. Lift the Expansion KSU and attach it to the Basic KSU by placing the hook through the slot. (Refer to Figure 1-17 - Hooking the Level II Basic and Expansion KSUs Together.)

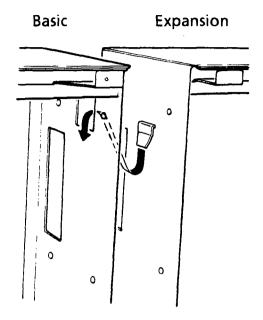


Figure 1-17 Hooking the Level II Basic and Expansion KSUs Together

4. Bolt the Expansion KSU to the Basic KSU using the four provided bolts. (Refer to Figure 1-18 - Bolting the Level II Expansion KSU to the Basic KSU.)

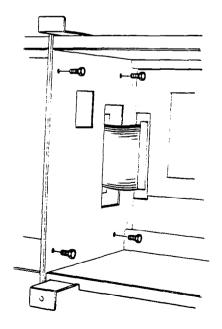


Figure 1-18 Bolting the Level II Expansion KSU to the Basic KSU

5. Using the provided bolts, attach the ESF-SE-10 KSU to the expansion wall mounting bracket from the bottom. (Refer to Figure 1-19 - Attaching the Level II Expansion KSU to the Wall Mounting Bracket.)

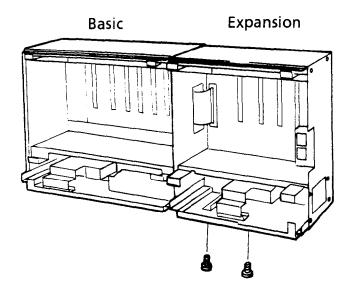


Figure 1-19 Attaching the Level II Expansion KSU to the Wall Mounting Bracket

6. Attach the ribbon cable, mounted on the Expansion KSU, through the opening between the Basic and Expansion KSUs. (Refer to Figure 1-20 - Connecting the Cable Between the Level II Basic and Expansion KSUs.)

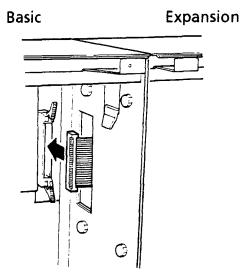


Figure 1-20 Connecting the Cable Between Level II Basic and Expansion KSUs

7. Attach the side panel (taken from the Basic KSU) to the right side of the Expansion KSU.

- 8. Remount the front covers and retighten the screws after the installation of the PSU, batteries, grounding cable, and KTUs is complete.
- 4.3.5 Floor Mounting the Basic and/or Expansion KSUs

4.3.5.1 Floor Mounting the Basic KSU

1. Attach the two provided floor mounting brackets to the underside of the Basic KSU. (Refer to Figure 1-21 - Bottom View of the Floor Mounting Brackets.)

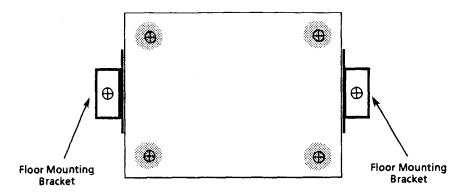


Figure 1-21 Bottom View of the Floor Mounting Brackets

2. Set the Basic KSU on a level surface, near an AC outlet and against a wall. Using two screws (locally provided) attach the KSU to the floor.

4.3.5.2 Floor Mounting the Expansion KSU

1. Remove the side panel on the Basic KSU. (Refer to Figure 1-22 - Removing the Level II Basic KSU Side Panel.)

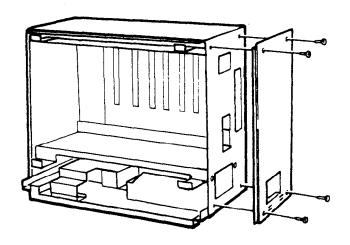


Figure 1-22 Removing the Level II Basic KSU Side Panel

2. Lift the Expansion KSU and attach it to the Basic KSU by placing the hook through the slot. (Refer to Figure 1-23 - Hooking the Level II Basic and Expansion KSUs Together.)

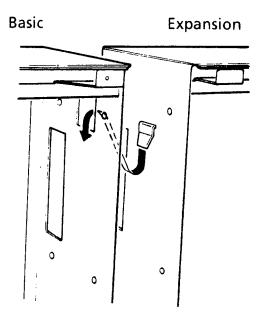


Figure 1-23 Hooking the Level II Basic and Expansion KSUs Together

3. Bolt the Expansion KSU to the Basic KSU using the four provided bolts. (Refer to Figure 1-24 - Bolting the Level II Expansion KSU to the Basic KSU.)

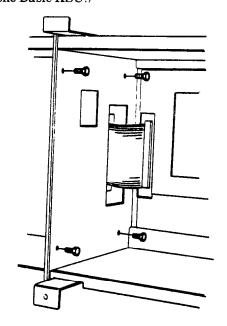


Figure 1-24 Bolting the Level II Expansion KSU to the Basic KSU

4. Attach the ribbon cable, mounted on the Expansion KSU, through the opening between the Basic and Expansion KSUs. (Refer to Figure 1-25 - Connecting the Cable Between the Level II Basic and Expansion KSUs.)

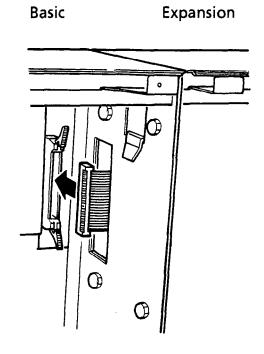


Figure 1-25 Connecting the Cable Between the Level II
Basic and Expansion KSUs

- 5. Attach the side panel (taken from the Basic KSU) to the right side of the Expansion KSU using the four screws.
- 6. Remount the front covers and retighten the screws after the installation of the PSU, batteries, grounding cable, and KTUs is complete.

- 4.3.6 Adding the Expansion KSU to an Installed System
 - 1. Loosen the four screws on the front cover and remove the cover panel. (Refer to Section 4.3.3 Opening the KSU Cover and to Figure 1-26 Removing the Level II Basic KSU Cover.)

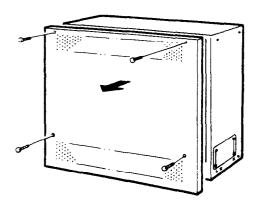


Figure 1-26 Removing the Level II Basic KSU Cover

- 2. Turn the PSU power switch, on the Basic KSU, to the OFF position and disconnect the KSU from the power source.
- 3. Disconnect the connectors from the KTU(s). (When disconnecting, note the position of the special connectors on the KTU.) (Refer to Figure 1-27 Disconnecting the KTUs from the Level II Basic KSU.)

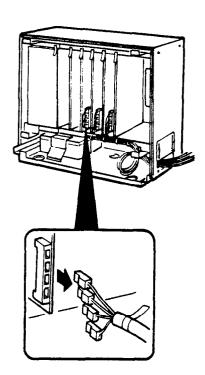


Figure 1-27 Disconnecting the KTUs from the Level II Basic KSU

4. Remove the slide bracket, on the Basic KSU, and pull the cable through the opening. (Refer to Figure 1-28 - Removing the Slide Bracket on the Level II Basic KSU.)

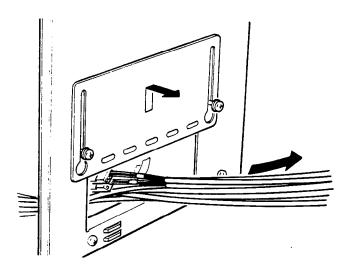


Figure 1-28 Removing the Slide Bracket on the Level II Basic KSU

5. If wall mounting the system, refer to Section 4.3.4.2 - Wall Mounting the Expansion KSU.

If floor mounting the system, refer to Section 4.3.5.2 - Floor Mounting the Expansion KSU.

4.3.7 Installing a PSF-S-20 PSU in the Basic and Expansion KSUs

4.3.7.1 General Information

This power supply unit is provided with both the Basic and Expansion KSUs. It has a backup interface, accepts 117 Vac and outputs +5V, -5V, and -24V to the system.

Fuse Replacement:

To replace the fuse(s) in this PSU, first remove the PSU from the KSU. (Refer to Figure 1-29 - PSF-S-20 PSU Fuse Locations.) Fuse F1 is a 125V, 4A fuse for AC input. Fuse F2 is a 125V, 7A fuse for DC input.

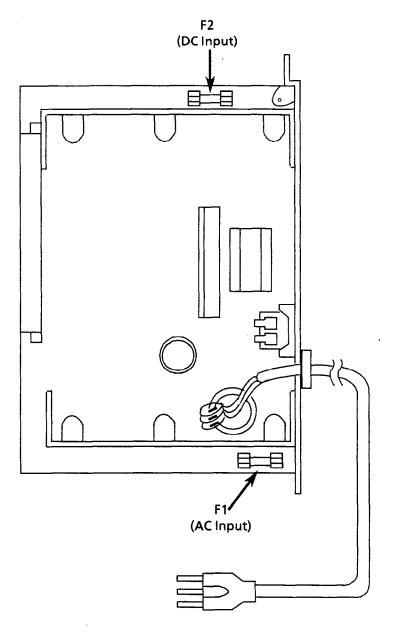


Figure 1-29 PSF-S-20 PSU Fuse Locations

4.3.7.2 Installing a PSF-S-20 PSU in the Basic KSU

1. Mount the PSF-S-20 PSU into the left slot of the Basic KSU and secure using the two provided bolts. (Refer to Figure 1-30 - Installing the PSF-S-20 PSU into the Level II Basic KSU.)

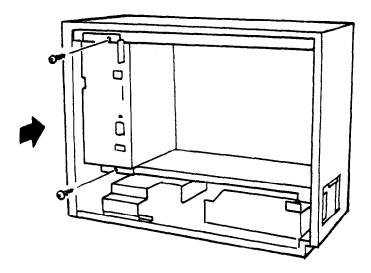


Figure 1-30 Installing the PSF-S-20 PSU into the Level II Basic KSU

4.3.7.3 Installing a PSF-S-20 PSU in the Expansion KSU

1. Mount the PSF-S-20 PSU into the left slot of the Expansion KSU and secure using the two provided bolts. (Refer to Figure 1-31 - Installing the PSF-S-20 PSU into the Level II Expansion KSU.)

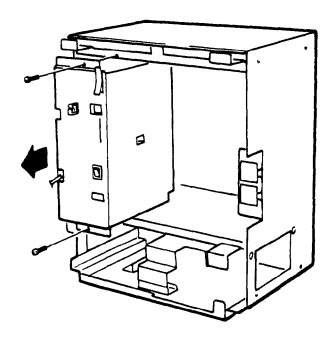


Figure 1-31 Installing the PSF-S-20 PSU into the Level II Expansion KSU

2. Attach a tie wrap (locally provided) 5 feet from the plug. (Refer to Figure 1-32 - Securing the PSU Cable Using a Tie Wrap.)

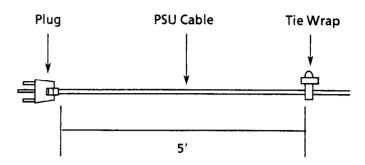


Figure 1-32 Securing the PSU Cable Using a Tie Wrap

3. Using the provided clamp and screw, attach the PSU cable to the KSU as shown in the following diagram. (Refer to Figure 1-33 - Attaching the PSU Cable to the KSU.)

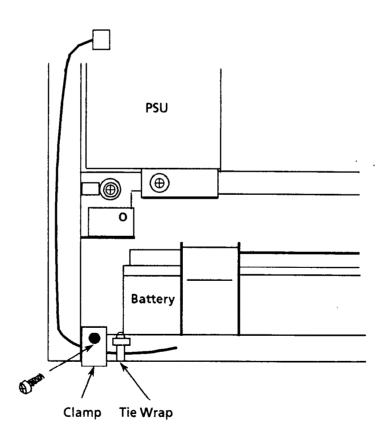


Figure 1-33 Attaching the PSU Cable to the KSU

4.3.8 Battery Installation

4.3.8.1 Connecting the Built-In Batteries

1. Connect the two batteries in series. (Refer to Figure 1-34 - Connecting the Two PSF Built-In Batteries.)

Red Cord $\rightarrow \oplus$ Black Cord $\rightarrow \ominus$

CAUTION

Be careful not to reverse the \oplus and \ominus of the batteries.

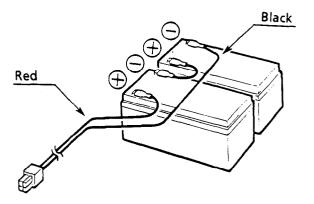


Figure 1-34 Connecting the Two PSF Built-In Batteries

2. Mount the battery hold-down plate and tighten the screw. (Refer to Figure 1-35 - Placing the Batteries in the Level II KSU.)

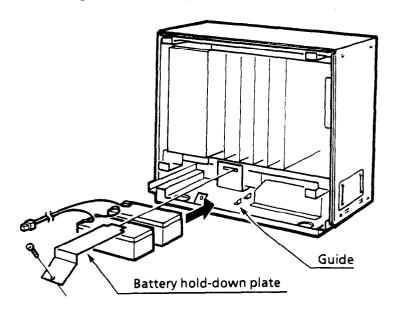


Figure 1-35 Placing the Batteries in the Level II KSU

3. Connect the cord to the DC IN connector of the power supply unit. (Refer to Figure 1-36 - Connecting the Batteries to the Power Supply Unit.)

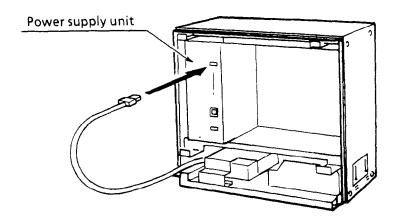


Figure 1-36 Connecting the Batteries to the Power Supply Unit

4.3.8.2 Installing and Connecting Expansion Batteries

- 1. Take out the original batteries and disconnect the cords from the batteries.
- 2. Using the provided cords, connect the pairs of built-in batteries and expansion batteries in parallel with each other. (Refer to Figure 1-37 Connecting Expansion Batteries to the Original Batteries.)

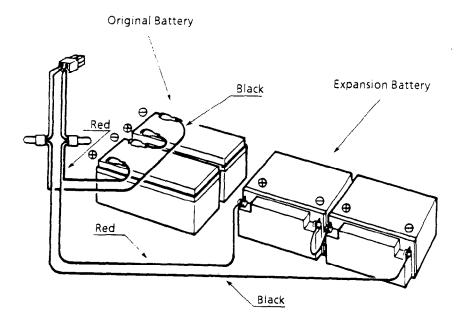


Figure 1-37 Connecting Expansion Batteries to the Original Batteries

expansion batteries outside of the KSU.

4. Connect the cord to the DC IN on the power supply unit of the KSU. (Refer to Figure 1-38 - Connecting the Batteries to the Power Supply.)

3. Mount the original batteries into the KSU and install the

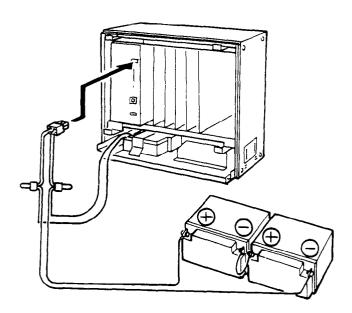


Figure 1-38 Connecting the Batteries to the Power Supply

CAUTION

- Make sure the cord connected to the DC IN, on the power supply unit, is disconnected before connecting the batteries.
- ullet Be careful not to reverse the \oplus and \ominus polarities on the batteries.
- When the batteries are connected, be sure the batteries are not in contact with any metal on the KSU.

4.3.8.3 Cable Routing

The cable routing (with only the Basic KSU) and the cable connections for built-in batteries are shown in Figure 1-39 - Cable Connections for the Expansion KSU.

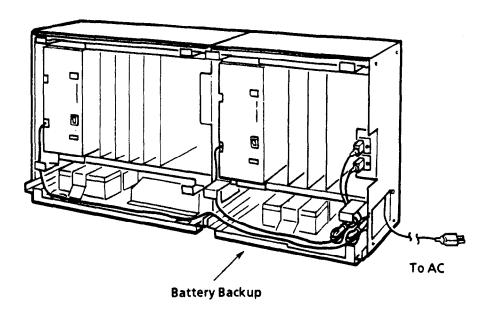


Figure 1-39 Cable Connections for the Expansion KSU

4.3.9 Grounding Requirements

The KSUs must be properly grounded. The KSU is provided with two redundant grounding methods. However, only one grounding method should be used on a system.

- 1. A dedicated AC outlet.
- 2. Provide a suitable cold water pipe ground in accordance with the local operating telephone company procedures.
- 3. If no water pipe ground is available, a ground rod should be installed in accordance with the local operating telephone company procedures.
- 4. A grounding terminal is provided on the ESF-SB-10 KSU. Connect the grounding conductor to the hexagonal screw with the green colored head terminal. (Refer to Figure 1-40 KSU Grounding.)

Note: The provided ferrite core should be wrapped with the ground cable.

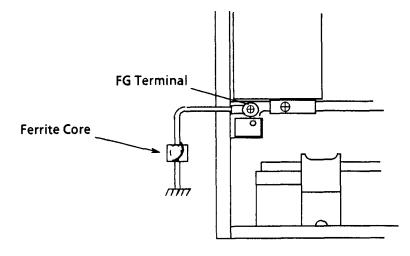


Figure 1-40 KSU Grounding

4.4 Installing the Level II Advanced Key Service Unit (KSU)

Installation Precautions:

Before installation and cabling of the KSU observe these precautions:

- Be sure the PSU power switch is OFF and disconnect the power cord from the AC outlet.
- Do not directly touch the soldered surfaces of the KTUs with your hands.

4.4.1 Basic KSU (ESF-XB-10 KSU)

The ESF-XB-10 KSU is the basic system cabinet. There are three fixed slots for the CPU and MIF KTUs, one PSU slot, a battery installation space, and eight interface slots for the installation of telephones, CO/PBX lines, Tie lines, VRS, DID, Digital Trunk (T1), PBR, and ECR KTUs. The KSU can be either floor mounted or wall mounted. (Refer to Figure 1-41 - Level II Advanced Basic KSU.)

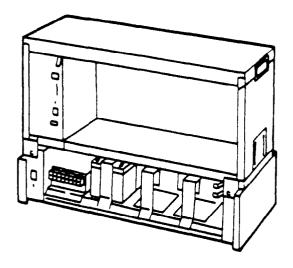


Figure 1-41 Level II Advanced Basic KSU

4.4.2 Expansion KSU (ESF-XE-10 KSU)

The ESF-XE-10 KSU is the expansion cabinet. There are three fixed slots for the MMC and MIF KTUs, one PSU slot, and eight additional interface slots. A maximum of two expansion KSUs can be installed with the system. This KSU is installed on the Basic KSU as a building block. (Refer to Figure 1-42 - Level II Advanced Expansion KSU.)

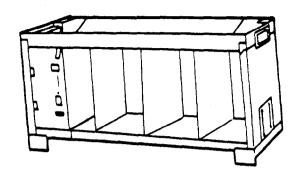


Figure 1-42 Level II Advanced Expansion KSU

4.4.3 Opening the KSU Cover

Before floor or wall mounting the KSU, the KSU cover must be removed.

 Loosen the eight cover screws and remove the front cover. (Refer to Figure 1-43 - Removing the Level II Advanced Basic KSU Cover.)

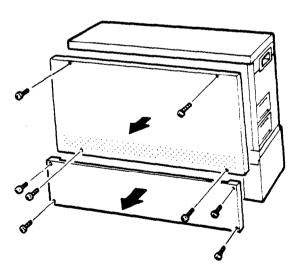


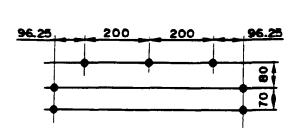
Figure 1-43 Removing the Level II Advanced Basic KSU Cover

4.4.4 Wall Mounting the Basic and/or Expansion KSUs

4.4.4.1 Wall Mounting the Basic KSU

Before wall mounting the basic KSU, the wall mount bracket <u>must</u> be attached to a piece of plywood. Using 3/4" fire retardant plywood backboard is recommended.

 Using seven screws (locally provided), attach the wall mount bracket to the wall using the template. (Refer to Figure 1-44 -Attaching the Wall Mount Bracket of the Level II Advanced Basic KSU to the Wall.)



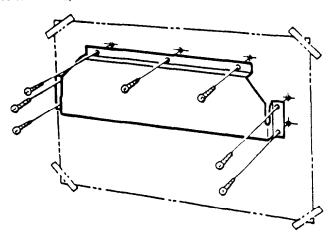


Figure 1-44 Attaching the Wall Mount Bracket of the Level II
Advanced Basic KSU to the Wall

Holding the Basic ESF-XB-10 KSU, lower the two hooks that
protrude from the rear of the KSU over the wall mount bracket
and secure to the wall mount bracket from the side using the two
provided bolts. (Refer to Figure 1-45 - Attaching the Level II
Advanced Basic KSU to the Wall Mount Bracket.)

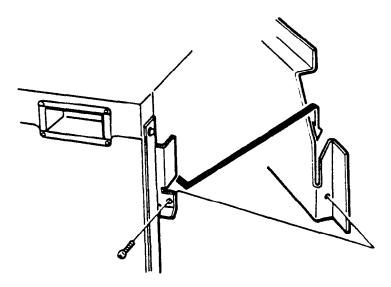


Figure 1-45 Attaching the Level II Advanced Basic KSU to the Wall Mount Bracket

4.4.4.2 Wall Mounting the Expansion KSU

1. Remove the front and back panels from the Basic KSU before installing the expansion KSU. (Refer to Figure 1-46 - Removing the Front and Top Panels.)

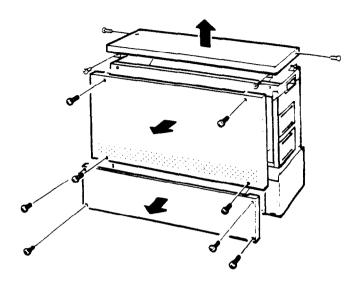


Figure 1-46 Removing the Front and Top Panels

2. Using the seven screws (locally provided) attach the wall mount bracket to the wall using the template. (Refer to Figure 1-47 - Attaching the Wall Mount Bracket of the Level II Advanced Expansion KSU to the Wall.)

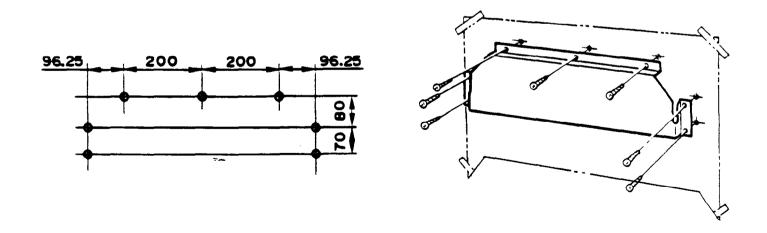


Figure 1-47 Attaching the Wall Mount Bracket of the Level II Advanced Expansion KSU to the Wall

3. Holding the Expansion KSU, lower the two hooks that protrude from the rear of the KSU over the wall mount bracket and secure to the wall mount bracket from the side using the two provided bolts. (Refer to Figure 1-48 - Securing the Level II Advanced Expansion KSU to the Wall Mount Bracket.)

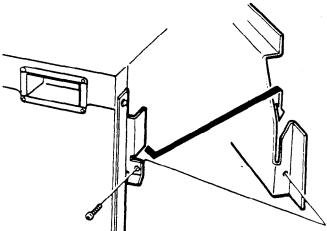


Figure 1-48 Securing the Level II Advanced Expansion KSU to the Wall Mount Bracket

4. Attach each Expansion KSU and top panel using the provided screws. (Refer to Figure 1-49 - Attaching Each Level II Advanced Expansion KSU.)

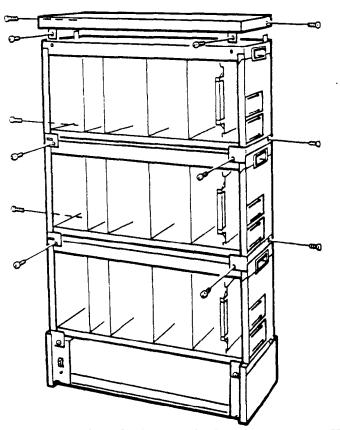


Figure 1-49 Attaching Each Level II Advanced Expansion KSU

- 4.4.5 Floor Mounting the Basic and/or Expansion KSUs
 - 4.4.5.1 Floor Mounting the Basic KSU
 - 1. Attach the Floor Mounting Bracket to the bottom side of the Basic KSU, using the bolts provided. (Refer to Figure 1-50 Attaching the Floor Mount Bracket to Basic KSU.)

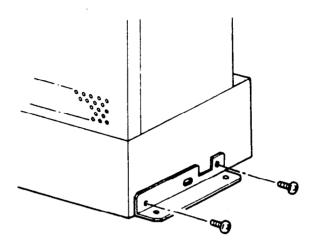


Figure 1-50 Attaching the Floor Mount Bracket to Basic KSU

2. Attach the Floor Mounting Bracket to the floor using the screws locally provided. (Refer to Figure 1-51 - Attaching the Floor Mount Bracket to the Floor.)

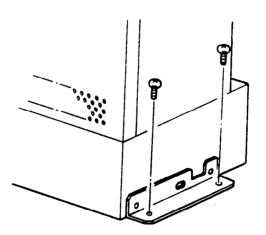


Figure 1-51 Attaching the Floor Mount Bracket to the Floor

4.4.5.2 Floor Mounting the Expansion KSU

1. Remove the top panel on the Level II Advanced Basic KSU. (Refer to Figure 1-52 - Removing the Level II Advanced Basic KSU Top Panel.)

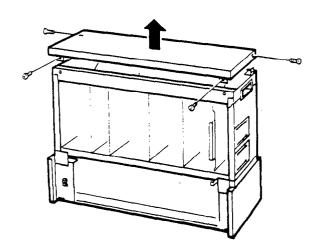


Figure 1-52 Removing the Level II Advanced Basic KSU Top Panel

2. Remove the front panel from the Level II Advanced Expansion KSU. (Refer to Figure 1-53 - Removing the Level II Advanced Expansion KSU Front Panel.)

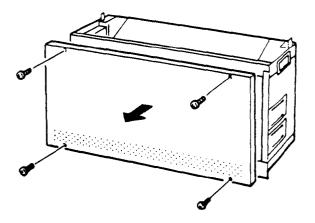


Figure 1-53 Removing the Level II Advanced Expansion KSU Front Panel

3. Attach each KSU and top panel using the provided screws. (Refer to Figure 1-54 - Attaching Each Level II Advanced Expansion KSU.)

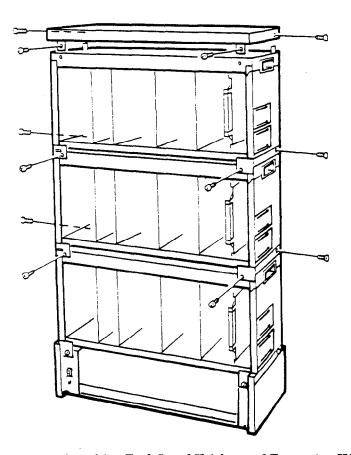


Figure 1-54 Attaching Each Level II Advanced Expansion KSU

4.4.6 Installing a PSF-P-20 PSU in the Basic and Expansion KSUs

4.4.6.1 General Information

This power supply unit is supplied with both the Basic and Expansion KSUs. It has a backup interface, accepts 117 Vac, and outputs +5V, -5V, and -24V to the system.

Fuse Replacement:

To replace the fuse(s) in this PSU, first remove the PSU from the KSU. Fuse F1 is a 125V, 4A fuse for AC input. Fuse F2 is a 125V, 7A fuse for DC input. (Refer to Figure 1-55 - PSF-P-20 PSU Fuse Locations.)

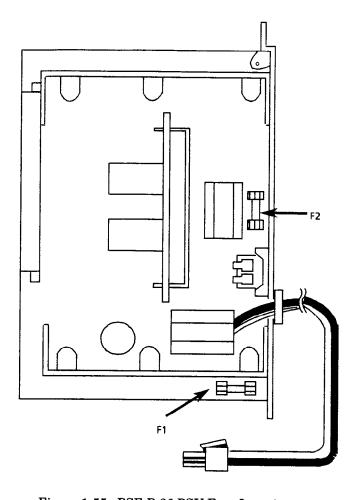


Figure 1-55 - PSF-P-20 PSU Fuse Locations

4.4.6.2 Installing a PSF-P-20 PSU in the Basic KSU

1. Mount the PSF-P-20 PSU into the left slot of the Level II Advanced Basic KSU and secure using the two provided bolts. (Refer to Figure 1-56 - Installing the PSF-P-20 PSU into the Level II Advanced Basic KSU.)

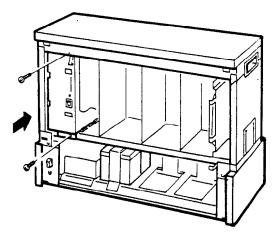


Figure 1-56 Installing the PSF-P-20 PSU into the Level II Advanced Basic KSU

2. Connect the PSU cord to the terminal board. (Refer to Figure 1-57 - Connecting the PSF-P-20 PSU to the Terminal Board.)

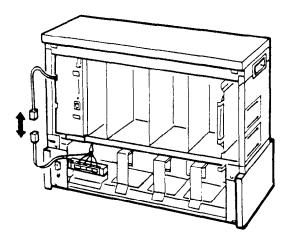


Figure 1-57 Connecting the PSF-P-20 PSU to the Terminal Board

4.4.6.3 Installing a PSF-P-20 PSU in the Expansion KSU

 Mount the PSF-P-20 PSU into the left slot of the Expansion KSU and secure using the two provided bolts. (Refer to Figure 1-58 -Installing the PSF-P-20 PSU into the Level II Advanced Expansion KSU.)

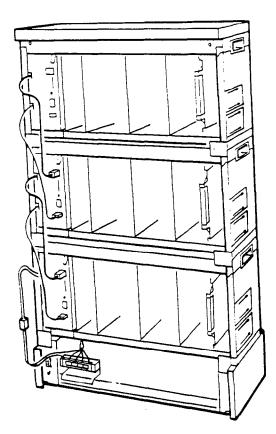


Figure 1-58 Installing the PSF-P-20 PSU into the Level II Advanced Expansion KSU

2. Connect the AC IN and AC OUT and the DC IN and DC OUT of the respective PSUs. (Refer to Figure 1-59 - Connecting the PSUs in the Level II Advanced Expansion KSUs.)

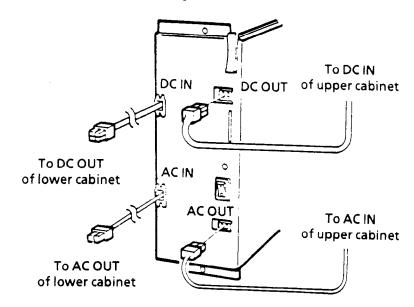


Figure 1-59 Connecting the PSUs in the Level II Advanced Expansion KSUs

4.4.7 Battery Installation

4.4.7.1 Connecting the Built-In Batteries

1. Connect the two batteries in series. (Refer to Figure 1-60 - Connecting the Two PSF Built-In Batteries.)

Red Cord $\rightarrow \oplus$ Black Cord $\rightarrow \ominus$

CAUTION

Be careful not to reverse the \oplus and \ominus of the batteries.

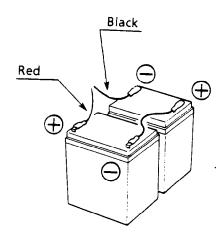


Figure 1-60 Connecting the Two PSF Built-In Batteries

2. Mount the battery hold-down plate and tighten the screw. (Refer to Figure 1-61 - Placing the Batteries in the Battery Box.)

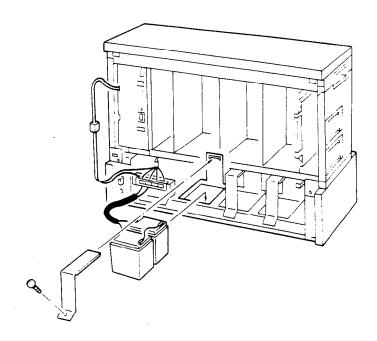


Figure 1-61 Placing the Batteries in the Battery Box

3. Connect the battery cord to the terminal board. (Refer to Figure 1-62 - Connecting the Battery Cable to the Terminal Board.)

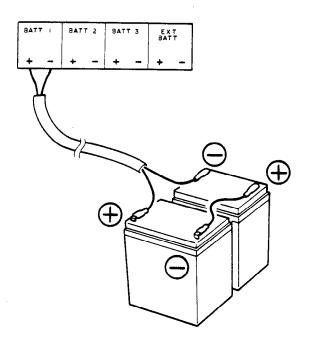


Figure 1-62 Connecting the Battery Cable to the Terminal Board

4.4.7.2 Installing and Connecting Level II Advanced Expansion Batteries

1. Connect the external battery cable to the battery. (Refer to Figure 1-63 - Connecting the Expansion Cable and Battery.)

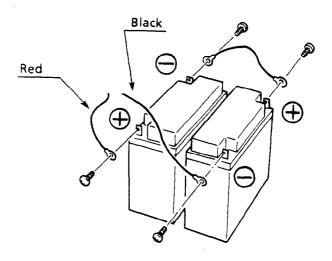


Figure 1-63 Connecting the Expansion Cable and Battery

2. Connect the external battery to the terminal board. (Refer to Figure 1-64 - Connecting the External Battery to the Terminal Board.)

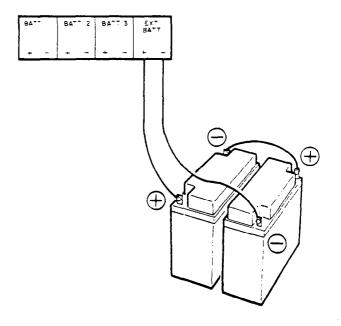


Figure 1-64 Connecting the External Battery to the Terminal Board

4.4.8 Grounding Requirements

The KSUs must be properly grounded. The KSU is provided with two redundant grounding methods. However, only one grounding method should be used on a system.

- 1. A dedicated AC outlet.
- 2a. Provide a suitable cold water pipe ground in accordance with the local operating telephone company procedures.
- 2b. If no water pipe ground is available, a ground rod should be installed in accordance with the local operating telephone company procedures.
- 2c. A grounding terminal is provided on the ESF-XB-10 KSU. Connect the grounding conductor to the hexagonal bolt with the green colored head terminal. (Refer to Figure 1-65 Level II Advanced KSU Grounding.)

Note: The provided ferrite core should be wrapped with the ground cable.

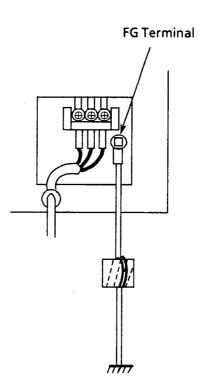


Figure 1-65 Level II Advanced KSU Grounding

SECTION 5 INSTALLING A KEY TELEPHONE UNIT (KTU)

5.1 General Information

5.1.1 Installation Precautions

Before installation of the KTUs observe these precautions:

- To prevent accidental damage to equipment, it is recommended that power be OFF during installation and maintenance, unless this will seriously inconvenience the user.
- The KTUs used in this system make extensive use of CMOS technology. CMOS technology is very susceptible to static; therefore, extreme care must be taken to avoid static discharge when handling KTUs.

5.1.2 KTU Installation

- Make any connections and switch settings on the KTUs before inserting them in the KSU. (Refer to Sections 5.2 - Common Control KTUs, 5.3 -Interface KTUs, and 5.4 - Optional KTUs for the switch settings for individual KTUs.)
- 2. A switch (MB) is provided on the KTUs (except the CPU and MMC KTUs) to protect circuitry from any damage during installation. When the system power is ON (while installing KTUs), ensure the MB switch is in the OFF position. (Refer to Figure 1-66 KTU Positions on the KSU.)

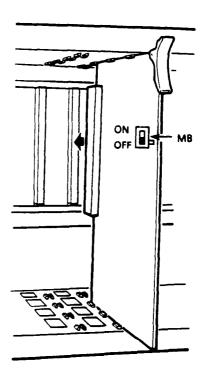


Figure 1-66 KTU Positions on the KSU

3. The component side of all KTUs must face the left side of the KSU when installed. Ejector tabs are always on the top. (Refer to Figure 1-67 - Removing a KTU from the KSU.)

CAUTION

When a unit is mounted or removed, make sure that the power switch of the KSU is in the OFF position or that the MB switch of the KTU is in the OFF position.

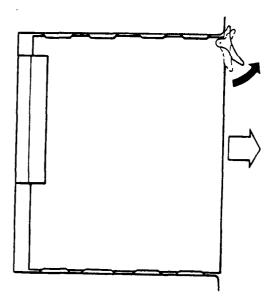


Figure 1-67 Removing a KTU from the KSU

5.2 Common Control KTUs

5.2.1 CPU-F()-20 KTU

The CPU-F()-20 KTU is the central processing unit (CPU). A 16-bit microprocessor executes the programs stored on the ROM ICs to control the whole system, while transferring data to and from other KTUs.

This KTU consists of a main control section and a Time Division Switch (TDSW) section. It also has a built-in external hold tone interface circuit. Other capabilities include CNF (six, 4-party) circuits, internal MOH source, DTMF receivers (PBR), and KF (Key Function) and MF (Multi-Function) registration.

The RAM memory, on the CPU, is backed up with a rechargeable battery, which will retain the memory for approximately 14 days.

This KTU must be installed in the CPU slot of the ESF-SB-10 KSU or ESF-XB-10 KSU. Only one CPU-F()-20 KTU can be installed in the system.

Switch Settings:

Before programming System Data, the switch labeled BTS must be set to the ON position to allow memory retention in case of a power failure or brownout. Failure to activate the backup battery circuit (SW BTS ON) will result in System Data reset to the default values, the status of all stations will reset to the default values, and the data programmed on the station will clear, if a power failure or brownout occurs. [Refer to Chapter 2 - Programming in this manual for instructions, if programming using a Multiline Terminal. Refer to the Electra Professional Level II and Level II Advanced System Program Technician Manual (included with the System Program Technician Software - Stock No. 722305) for instructions, if programming using a PC.]

Anytime a CPU-F()-20 KTU is installed in the system, the clock/calendar must be set. This also applies when battery backup fails for any reason.

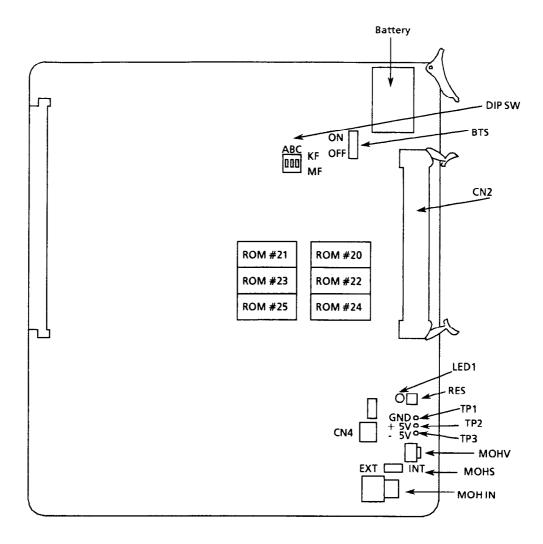
When the CPU-F()-20 KTU is removed for long term storage, set the SW BTS switch to OFF. This will prevent the battery from constantly discharging. The battery, when fully charged, will retain memory contents for approximately 14 days.

Switch RES is the reset switch. When pressed, this switch interrupts all service in progress, causing a Second Initialization. This switch should not be used in an operating system unless absolutely necessary.

MOH INT/EXT is used to select the MOH source from either an internal or external source. When the built-in music is used for the MOH source, set this switch to the INT position. If an external MOH source is connected, set this switch to the EXT position. [Refer to Figure 1-68- CPU-F()-20 KTU Switch Settings and Table 1-24 - CPU-F()-20 KTU Adjustments.]

IMPORTANT

DIP switch position C is used to set KF or MF mode of operation. Be sure to set this switch in the desired position before powering up the system.



The operation verification LED (LED1) always flashes when the system is in normal operation, and steadily lights when the system is reset.

Figure 1-68 CPU-F()-20 KTU Switch Settings

Initial Name of Adjustment Adjustment Item Switch Setting BTS OFF Should be set to ON to retain system data. Memory Backup Set the switch to ON before inserting the unit. INT Set the switch to "EXT" when an external hold MOH INT/EXT MOHS tone source (MOH) is to be used. (Note 1) Center To adjust the volume of MOH. MOH Volume MOHV Control OFF Not Used DIPSWA(1) Not Used **DIP SW B (2)** DIP Switch "OFF": **DIP SW C (3)** OFF Multi-Function System "ON": Key Function System (Note 2) ON CN2 N/A Not Used N/A CN4 Connector For connecting the CLK-F-21 Unit. CN101 N/A TP1 N/A Ground voltage check terminal N/A TP2 + 5V voltage check terminal TP TP3 N/A - 5V voltage check terminal

Table 1-24 CPU-F()-20 KTU Adjustments

- Note 1: Internal MOH has two melodies. Select by System Programming melodies:
 - 1. "Melody Fair"
 - 2. "Let It Be"
- Note 2: Refer to Section 1.2.1 Company Notification. A First Initialization is required to change this switch status.

5.2.2 MMC-F-11 KTU

The MMC-F-11 KTU is the Module Memory Controller. A 4-bit microprocessor and controller unit are required for each ESF-XE-10 KSU used in the Level II Advanced system. This KTU controls data transmission between the CPU-F()-20 KTU and the interface cards installed in the ESF-XE-10 KSU where it is installed.

Switch Settings/LED Indications:

LED1 on this KTU continuously flashes indicating it is receiving power. The RES button allows this KTU to be reset. This resets the entire KSU where it is installed. (Refer to Figure 1-69 - MMC-F-11 KTU Switch Settings.)

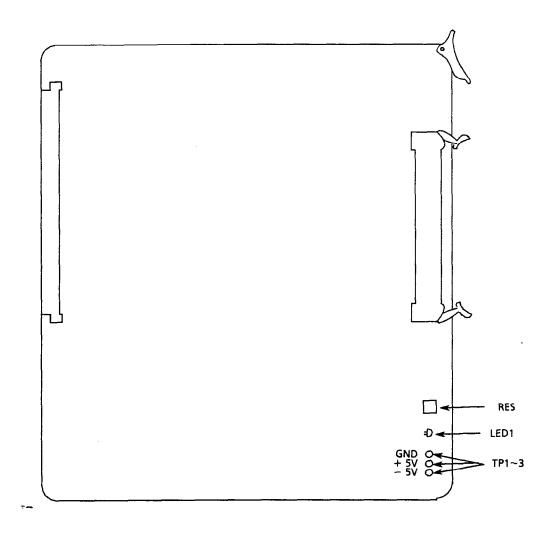


Figure 1-69 MMC-F-11 KTU Switch Settings

Installation:

The MMC-F-11 KTU is installed in a fixed MMC slot on the ESF-XE-10 KSU. The mounted ribbon cable is then connected to the CPU-F()-20 KTU, located on the ESF-XB-10 KSU. Before installing the MMC-F-11 KTU in the ESF-XE-10 KSU, the attached ferrite core has to be installed to the ribbon cable as shown below. [Refer to Figure 1-70 - Ferrite Core Installation to MMC-F-11 KTU Ribbon Cable.]

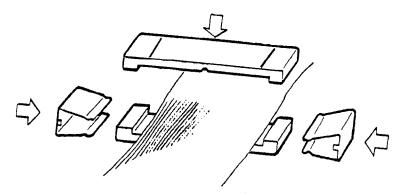


Figure 1-70 Ferrite Core Installation to MMC-F-11 KTU Ribbon Cable

CAUTION

This procedure can only be performed when the system power is off.

If a second expansion cabinet (ESF-XE-10 KSU) is to be installed, the ribbon cable of the MMC-F-11 KTU in this KSU must be attached to the MMC-F-11 KTU in the first expansion cabinet. [Refer to Figure 1-71 - MMC-F-11 KTU and CPU-F')-20 KTU Installation.]

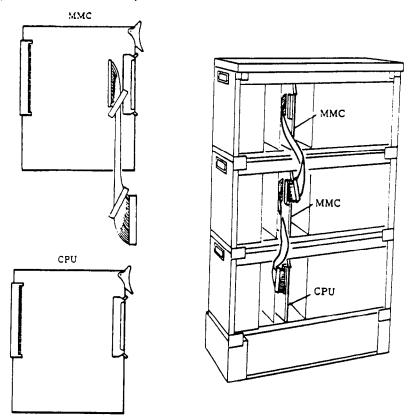


Figure 1-71 MMC-F-11 KTU and CPU-F()-20 KTU Installation

5.3 Interface KTUs

5.3.1 ESI-F(8)-21 KTU

This KTU is an interface for Multiline Terminals, Attendant Add-On Consoles, and SLT Adaptors [SLT-F(1G)-10 ADP]. The ESI allows connection of any combination of eight Multiline Terminals, Attendant Add-On Consoles, or SLT Adaptors.

A maximum of seven ESI-F(8)-21 KTUs can be installed in the Level II system and a maximum of 12 in the Level II Advanced system.

Switch Settings/LED Indications:

When the green LED (LED2) is lit, it indicates the ESI KTU is receiving power. The red LED (LED1) indicates one or more of the eight circuits of the KTU is in use. Switch MB is the ON/OFF switch for this KTU. [Refer to Figure 1-72 - ESI-F(8)-21 KTU Switch Layout.]

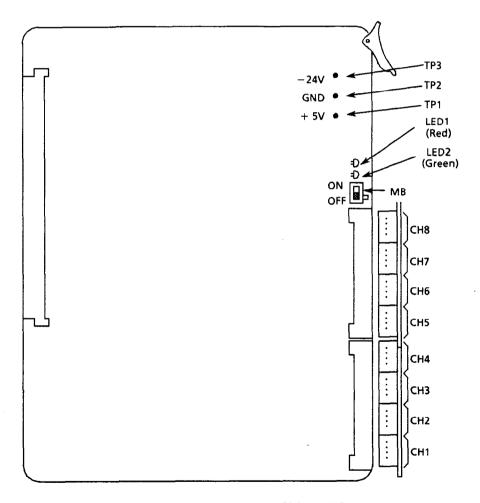


Figure 1-72 ESI-F(8)-21 KTU Switch Layout

5.3.2 SLI-F(8G)-21 KTU

The SLI-F(8G)-21 KTU is an interface for Single Line Telephones. It has a built-in ringing generator (RSG) and can support eight Single Line Telephones or Voice Mail ports. If connecting Voice Mail to an SLI-F(8G)-21 KTU, it must be assigned in System Programming.

The Single Line Telephone Interface Unit (SLI) provides circuitry for loop status detection, talk battery, sending ringing signal from the RSG unit to SLTs, and message waiting.

Note:

The PBR circuits in the CPU-F()-20 KTU or the PBR-F(4)-11 KTU are required with Voice Mail or Push Button Single Line Telephone connection.

A maximum of six SLI-F(8G)-21 KTUs can be installed in the Level II system and a maximum of 11 in the Level II Advanced system.

Switch Settings/LED Indications:

An SLI can support up to eight Single Line Telephones, modems, Voice Mail ports, or fax ports. This SLI is required when power failure transfer of CO lines (two maximum per KTU) and/or message wait signaling to Single Line Telephones is used in the system.

When the green LED (LED1) is lit, it indicates that the SLI-F(8G)-21 KTU is receiving power. The red LED (LED2) indicates one or more of the eight circuits of the KTU are in use. Switch MB is the ON/OFF control for this KTU. [Refer to Figure 1-73 - SLI-F(8G)-21 KTU Switch Layout.]

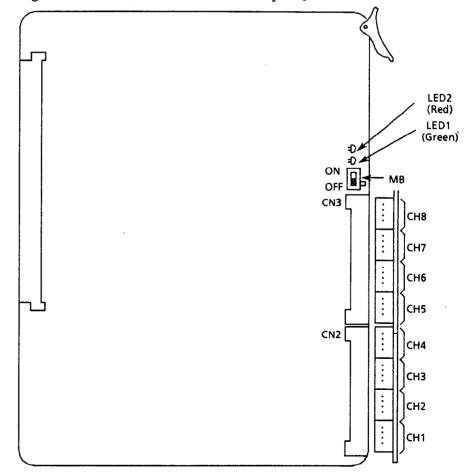
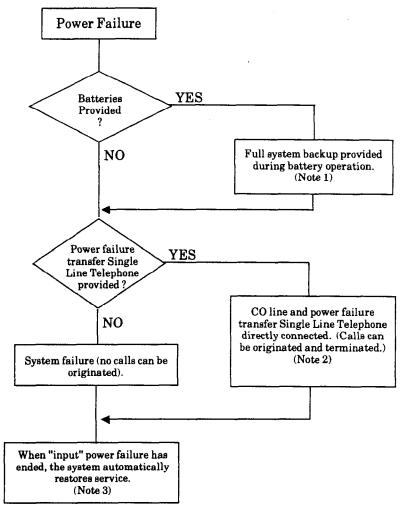


Figure 1-73 SLI-F(8G)-21 KTU Switch Layout

5.3.2.1 Power Failure Backup

Operation in the Event of a Power Failure

In the event of a power failure, the built-in batteries or external batteries (locally provided) provide full backup of system operation for a period of 30 minutes or longer if using external batteries (the period is dependent on the system configuration and service conditions). If a power failure transfer (PFT) Single Line Telephone Interface Unit (up to two channels can be connected to the SLI-F(8G)-21 KTU) is connected, the unit will connect a Single Line Telephone directly to a CO/PBX line to allow origination and termination of calls. (Refer to Figure 1-74 - Power Failure Backup Flowchart.)



- Note 1: The backup period for the Electra Professional Level II and Level II Advanced systems is approximately 30 minutes (with built-in batteries) or longer (external batteries added).
- Note 2: All calls in progress are interrupted when switchover is made to connect the power failure transfer Single Line Telephone directly to a CO/PBX line. This occurs after backup batteries have expired.
- Note 3: If the power switch of the KSU is in the OFF position, the system will not automatically restore service.

Figure 1.74 Power Failure Rackup Flowchart

Operation When Input Power Failure Has Resumed

When input power is resumed, the system is automatically reset and restores service. A call in progress by the PFT Single Line Telephone will be disconnected.

Single Line Telephone for Power Failure Transfer

Only a Single Line Telephone can be used as a power failure transfer telephone.

Connections:

Connect a CO line and Single Line Telephone for power failure transfer via the SLI-F(8G)-21 KTU to the COI-F(4)-20 or COI-F(8)-20 KTU. A 4-conductor cable (locally provided) is required to connect the SLI-F(8G)-21 KTU to the 66 M150 block. (Refer to Figure 1-75 - Connecting CO Line and Single Line Telephone for Power Failure Transfer.)

Note: When selecting a Single Line Telephone for power failure transfer, make sure it matches the dialing type of the CO line (10 pps, 20 pps, or DTMF) where it will be connected. If Ground Start trunks are used, a Single Line Telephone with a ground button must be used.

PFT WITH SLI KTU

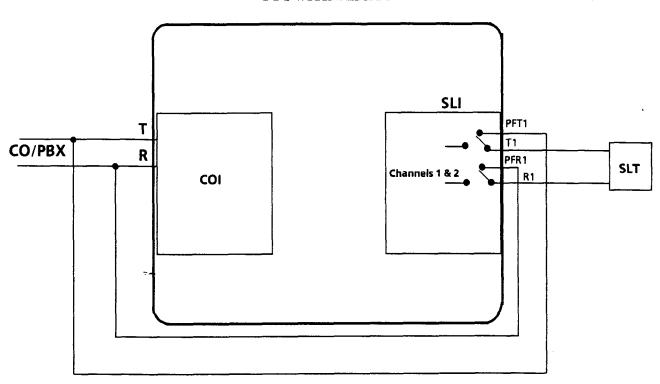


Figure 1-75 Connecting CO Line and Single Line Telephone for Power Failure Transfer

5.3.3 LLT-F(2G)-10 KTU

The Long Line Telephone (LLT) KTU provides for the termination and operation of up to two Off-Premise Extensions (OPX). Each LLT-F(2G)-10 KTU has a built-in ring supply generator (RSG). Up to 3000 ohms of loop resistance (including the Single Line Telephone) is acceptable between the LLT-F(2G)-10 KTU and a Single Line Telephone. The LLT-F(2G)-10 KTU does not support message waiting.

A maximum of six LLT-F(2G)-10 KTUs can be installed in the interface slots of the Level II system and a maximum of 22 in the Level II Advanced system.

Switch Settings/LED Indications:

The green LED (LED1), when lit, indicates the LLT-F(2G)-10 KTU is receiving power. The red LED (LED2), when lit, indicates one or more of the two circuits of the KTU are in use. Switch MB is the ON/OFF control for this KTU. [Refer to Figure 1-76 - LLT-F(2G)-10 KTU Switch Layout.]

Note: PBR in the CPU-F()-20 KTU or PBR-F(4)-11 KTU is required with Push Button SLT Connection.

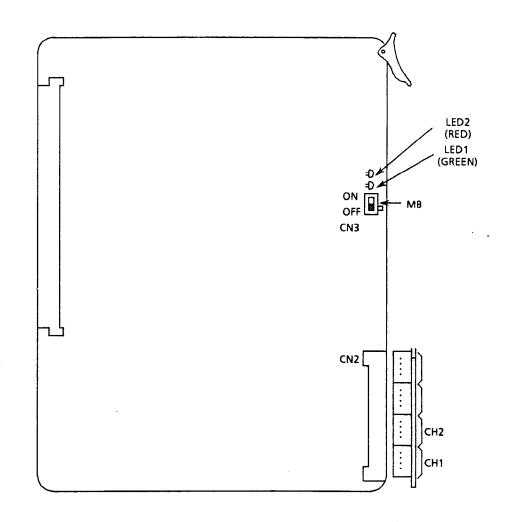


Figure 1-76 LLT-F(2G)-10 KTU Switch Layout

5.3.4 COI-F(4)-20 KTU

The Central Office Line Interface Unit (COI) contains circuitry for outside ring detection, holding, dialing, and control function.

Each COI-F(4)-20 KTU provides four identical circuits to support up to four CO trunks which can be any mix of Loop Start or Ground Start, DTMF or Dial Pulse dialing. In addition, Tip and Ring electrical fuses (posistors) PST101 ~ PST402 are provided to comply with UL 1459 2nd Edition requirements.

A maximum of seven COI-F(4)-20 KTUs can be installed in the Level II system and a maximum of 16 in the Level II Advanced system.

Switch Settings/LED Indications:

This COI KTU contains four switches that are designated SW1 \sim SW4 for the selection of trunk type (Loop or Ground Start). Each switch is associated with an individual circuit. Red LEDs ($101 \sim 401$) indicate the status of the circuit.

When a Loop Start trunk is connected to a circuit, its associated switch must be set to the LP position. If a Ground Start trunk is connected, the switch must be set to the GS position.

When the green LED (LED1) is lit, it indicates that the COI is receiving power. Switch MB is the ON/OFF control for this KTU. [Refer to Figure 1-77 - COI-F(4)-20 KTU Switch Layout.]

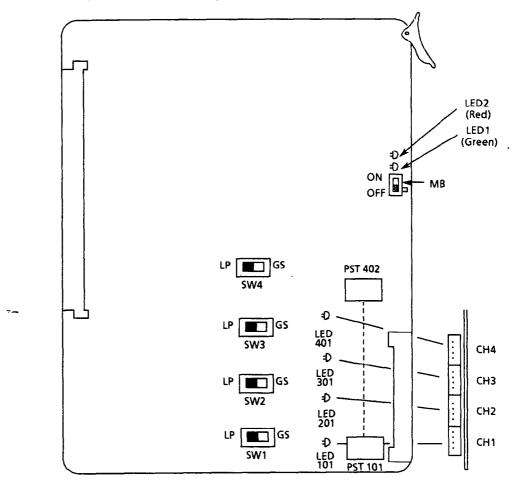


Figure 1-77 COI-F(4)-20 KTU Switch Layout

5.3.5 COI-F(8)-20 KTU

The Central Office Line Interface Unit (COI) contains circuitry for outside ring detection, hold, dialing, and control function.

Each COI-F(8)-20 KTU provides eight identical circuits to serve up to eight CO trunks which can be any mix of Loop Start or Ground Start, DTMF or Dial Pulse dialing. Tip and Ring electrical fuses (posistors) PST101 \sim PST802 are provided to comply with UL 1459 2nd Edition requirements.

A maximum of seven COI KTUs can be installed in the interface slots in the Level II system and a maximum of eight in the Level II Advanced system.

Switch Settings/LED Indications:

This COI KTU contains eight switches that are designated SW1 \sim SW8 for the selection of trunk type (Loop or Ground Start). Each switch is associated with an individual circuit. LEDs ($101 \sim 801$) indicate the status of each circuit.

When a Loop Start trunk is connected to a circuit, its associated switch must be set to the LP position. If a Ground Start trunk is connected, the switch must be set to the GS position.

When the green LED (LED1) is lit, it indicates that the COI is receiving power. Switch MB is the ON/OFF control for this KTU. [Refer to Figure 1-78 - COI-F(8)-20 KTU Switch Layout.]

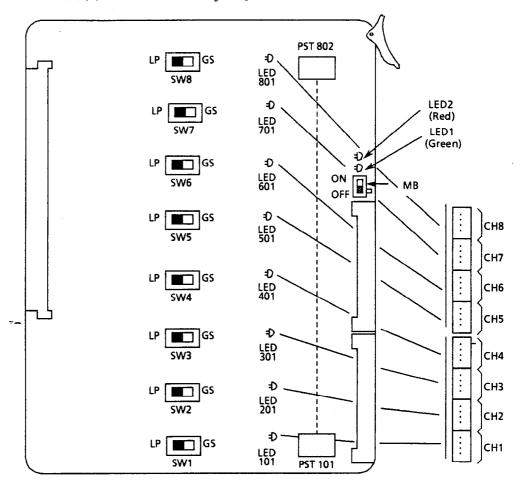


Figure 1-78 COI-F(8)-20 KTU Switch Layout

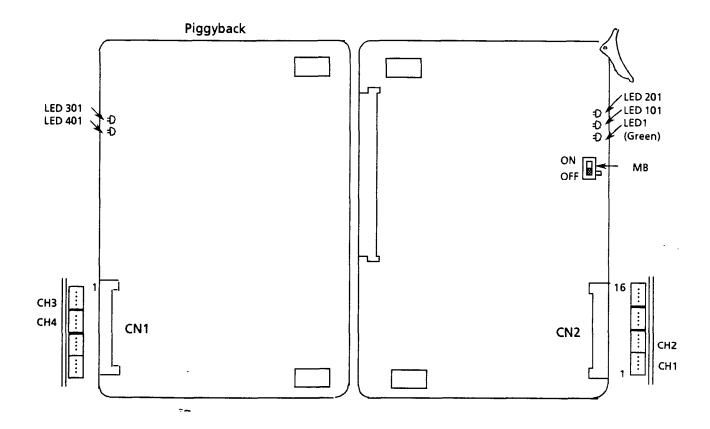
5.3.6 DID-F(4)-10 KTU

The DID KTU provides for the termination and operation of up to four DID lines. Wink start, delay start, or immediate start are accommodated. Dial Pulse and DTMF are supported.

A maximum of seven DID-F(4)-10 KTUs can be installed in the Level II system and a maximum of eight in the Level II Advanced system.

Switch Settings/LED Indications:

When the green LED (LED1) is lit, it indicates that the DID-F(4)-10 KTU is receiving power. Switch MB is the ON/OFF control for this KTU. LEDs $101 \sim 401$ represent the four individual circuits and their status. A busy line indication lamp (LED $101 \sim \text{LED } 401$) lights when the associated line (CH1 \sim CH 4) is busy. [Refer to Figure 1-79 - DID-F(4)-10 KTU Switch Layout.]



This KTU includes a piggybacked package and cannot be separated.

Figure 1-79 DID-F(4)-10 KTU Switch Layout

5.3.7 TLI-F(2)-10 KTU

The TLI KTU provides for the termination and operation of up to two E&M Tie lines (4-wire E&M, Type I or Type V, 10 or 20 pps, Dial Pulse, or DTMF). Immediate start, wink start, delay start, and second dial tone signaling are provided.

A maximum of seven TLI-F(2)-10 KTUs can be installed in the Level II system and a maximum of 16 in the Level II Advanced system.

Switch Settings/LED Indications:

Switches designated SW101 and SW201 allow selection of Type I or Type V for channels 1 and 2 respectively.

Red LEDs 101 and 201 indicate the status of the two associated circuits.

When the green LED (LED1) is lit, it indicates the TLI-F(2)-10 KTU is receiving power. Switch MB is the ON/OFF control for this KTU. [Refer to 6.2.3.1 - TLI-F(2)-10 KTU Cable Connections and to Figure 1-80 - TLI-F(2)-10 KTU Switch Layout.]

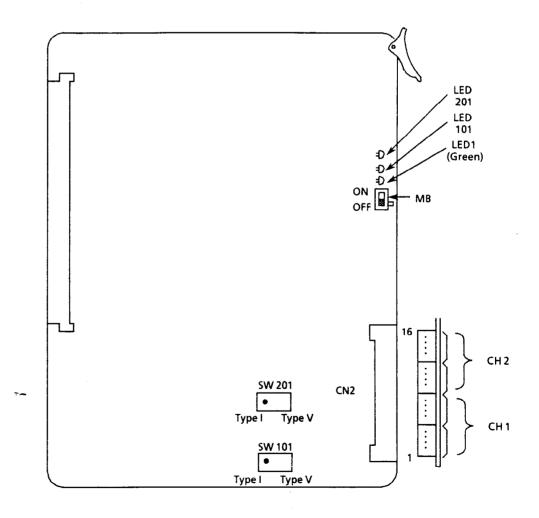


Figure 1-80 TLI-F(2)-10 KTU Switch Layout

5.3.8 DTI-F()-10 KTU/DTI-F(A)-20 KTU and CLK-F-21 Unit

5.3.8.1 DTI-F()-10 KTU/DTI-F(A)-20 KTU

The Digital Trunk Interface (DTI) KTU provides for the termination of a T1/FT1 [24 DS-0 (Digital Service - Level 0) or fewer] line.

A combination of Loop and Ground Start signaling can be used on one DTI-F()-10 KTU. DTMF or Dial Pulse dialing is also supported. The DTI-F(A)-20 KTU also supports Tie lines (E&M) and DID signaling. [Refer to Figure 1-82 - DTI-F(A)-20 KTU Switch Layout (Series 300 or higher.]

Only one DTI KTU can be supported in the Level II system and must be installed in the IF1/OP1 slot. Up to three DTI KTUs can be installed in the Level II Advanced system and must be installed in the IF1/OP1 or IF4/OP4 slots of the Basic KSU or the IF1/OP1 slot of the first Expansion KSU that is installed. If a DTI KTU is used, the interface slot(s) adjacent to the DTI interface slot may need to be left vacant. The number of slots that must remain vacant depends on the number of DTI channels being used. To use this KTU, a CLK-F-21 synchronization unit must be connected on the CPU-F()-20 KTU. [Refer to Figure 1-86 - Installing the DTI-F()-10 KTU or DTI-F(A)-20 KTU in the ESF-SB-10 KSU and Table 1-29 - Required Slots for DTI-F()-10 KTU or DTI-F(A)-20 KTU Installation.]

When using a second DTI KTU in the Level II Advanced system, this KTU must be connected to the first DTI KTU installed in the system. A third DTI KTU is then connected to the second DTI KTU that is installed. [Refer to Figure 1-88 - Connecting the Cable Between the DTI-F()-10 KTUs or DTI-F(A)-20 KTUs and the CLK-F-21 Unit.]

Switch Settings/LED Indications:

The green LED (LED11), when lit, indicates the DTI KTU is receiving power. LEDs 1 \sim 8 indicate various statuses depending on the switch setting. The red LED (LED9) is the operation verification lamp. LED 9 flashes when the system is operating normally; it lights steadily when the system is reset. Switch MB is the ON/OFF control for this KTU. [Refer to Figure 1-81 - DTI-F()-10 KTU Switch Layout, Figure 1-82 - DTI-F(A)-20 KTU Switch Layout, Table 1-25 - DTI-F()-10 KTU/DTI-F(A)-20 KTU Switch Settings for MB and SW1, Table 1-26 - DTI-F()-10 KTU/DTI-F(A)-20 KTU Switch Settings for SW2, and Table 1-27 DTI-F()-10 KTU/DTI-F(A)-20 KTU LED Indications.]

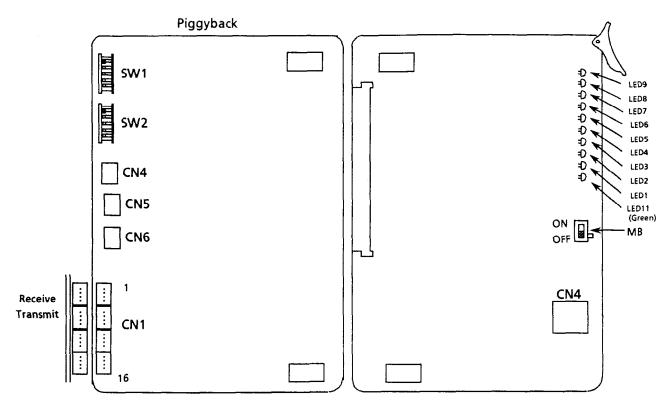


Figure 1-81 DTI-F()-10 KTU Switch Layout

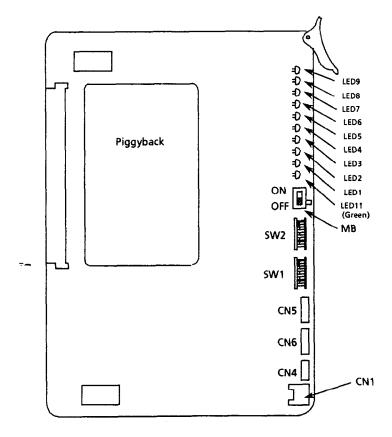


Figure 1-82 DTI-F(A)-20 KTU Switch Layout (Series 300 or higher)

Switch	Switch Position	Initial Setting (0 = OFF 1 = ON)	Adjustment		
МВ	N/A	OFF	Power supply to the KTU must be ON during operation.		
SW1	2	OFF: 0	Loop Back Setting SW1-1 SW1-2 0 0 No Loop Back 0 1 Future Use 1 0 Line Loop Back ON 1 1 Not Used		
	3 4 5 6 7 8	OFF: 0 OFF: 0 OFF: 0 OFF: 0 OFF: 0	Not Used (Must be 0 when operating.)		

Table 1-25 DTI-F()-10 KTU/DTI-F(A)-20 KTU Switch Settings for MB and SW1

Note 1: Alarm Indication Signal (AIS) (also known as "blue" signal) is provided by the Central Office to ensure continuity of the output signal. AIS is applied to ensure that no more than 80 consecutive zeros are transmitted. When a valid signal is available, the AIS may be removed. The AIS is an unframed, all "ones" signal. Either the Central Office or far end equipment may busy out an entire DS-1 facility by sending an AIS. If an AIS is received (and since it is unframed), the Yellow Alarm is transmitted to the far end.

Note 2: Explanation of Switch Positions:

- SW1-1 = 0 and SW1-2 = 0 This position is used for normal operation (talking, idle, etc.).
- SW1-1 = 0 and SW1-2 = 1 Future Use
- SW1-1 = 1 and SW1-2 = 0

 This position is used to receive patterns, listed for inband line loopback, without framing, to accommodate embedded equipment that sends unframed control signals. When this position is set, the data signals that are received by the system are transmitted back to the network. These data signals are regenerated, by the system, without changing the framing format or removing any bipolar violations.
- SW1-1 = 1 and SW1-2 = 1 Not Used

Table 1-26 $\,$ DTI-F()-10 KTU/DTI-F(A)-20 KTU Switch Settings for SW2

Switch	Switch Position	Initial Setting (0 = OFI 1 = ON)	Adjustment		
MB	N/A	OFF			
	1	OFF: 0	If this switch is ON, LED 1 \sim 8 indicates the status of CH 1 \sim 8 of the T1 (24 DS-0) channel.		
	2	OFF: 0	If this switch is ON, LED 1 \sim 8 indicates the status of CH 9 \sim 16 of the T1 (24 DS-0) channel. If this switch is ON, LED 1 \sim 8 indicates the status of CH 17 \sim 24 of the T1 (24 DS-0) channel.		
	3	OFF: 0			
SW2	4	OFF: 0	If this switch is ON, LED 1 \sim 8 indicates the status of the alarm from the T1 trunk.		
	5	OFF: 0	If this switch is ON, LED 1 \sim 8 indicates the status of the alarm from the T1 trunk.		
	6	OFF: 0			
	7	OFF: 0	Not Used (Must be 0 when operating.)		
	8	OFF: 0			

Note: If multiple switches are set to ON, the lower numbered switch has the highest priority. (This applies to $SW2-1 \sim SW2-5$.)

LED	SW2-1 ON (Note 1)	SW2-2 ON (Note 1)	SW2-3 ON (Note 1)	SW2-4 ON (Notes 2 and 3)	SW2-5 ON (Notes 2, 3, and 4)
LED1	CH1	СН9	CH17	LSA detection	TSC detection
LED2	CH2	CH10	CH18	AIS detection	ESA detection
LED3	СНЗ	CH11	CH19	OOF detection	LOS detection
LED4	CH4	CH12	CH20	RAI detection	
LED5	CH5	CH13	CH21	CRC detection	
LED6	СН6	CH14	CH22	BPV detection	
LED7	CH7	CH15	CH23	SLIP detection	
LED8	CH8	CH16	CH24		

Table 1-27 DTI-F()-10 KTU/DTI-F(A)-20 KTU LED Indications

Note 1: $SW2-1 \sim SW2-3$ indicate the status of T1 (24 DS-0) channels.

Note 2: $SW2-4 \sim SW2-5$ indicate the status of the T1 trunk alarm.

Note 3: Explanation of Alarm Conditions:

- LED1: Line Synchronization Alarm (LSA) Detection
 If the T1 trunk has lost frame synchronization, the LED lights red.
- LED2: Alarm Indication Signal (AIS) Detection
 If the system is receiving AIS from the T1 trunk, the LED lights red.
- LED3: Out-of-Frame Condition (OOF) Detection
 If two of the four or five data framing bits that are received are in error, this LED lights red.
- LED4: Remote Alarm Indication (RAI) Detection
 If the remote alarm signal is received, this LED lights red.
- LED5: Cyclic Redundancy Check (CRC) Error Event Detection If a CRC error has occurred, the LED lights red.
- LED6: Excessive Bipolar Violations (BPV) Detection
 If an excessive bipolar violation condition is detected, the LED lights red.
- LED7: Controlled Slip Event (Slip) Detection
 If the difference between the timing of a synchronous receiving terminal and the received signal exceeds the buffering capability of the synchronous terminal, the LED lights red.

Note 4: SW2-5 = 1

- LED1: Transmit Short Circuit (TSC) detection
- LED2: Jitter Attenuator Alarm (ESA) detection
- LED3: Loss of Signal (LOS) Detection
 If the T1 signal from the trunk is not received, the LED lights red.

5.3.8.2 CLK-F-21 Unit

The CLK Unit provides synchronization for a T1 line that is connected to the system. This unit works in conjunction with the DTI-F()-10 KTU or DTI-F(A)-20 KTU and is piggybacked on the CPU-F()-20 KTU.

Only one CLK-F-21 Unit can be installed in either system.

Switch Settings/LED Indications:

LED1 lights when the 1.5 MHz clock is not provided from the T1 trunk. LED2 lights when the output clock to the CPU-F()-20 KTU (16 MHz) is not provided from the CLK-F-21 Unit. (Refer to Figure 1-83 - Mounted CLK-F-21 Unit.)

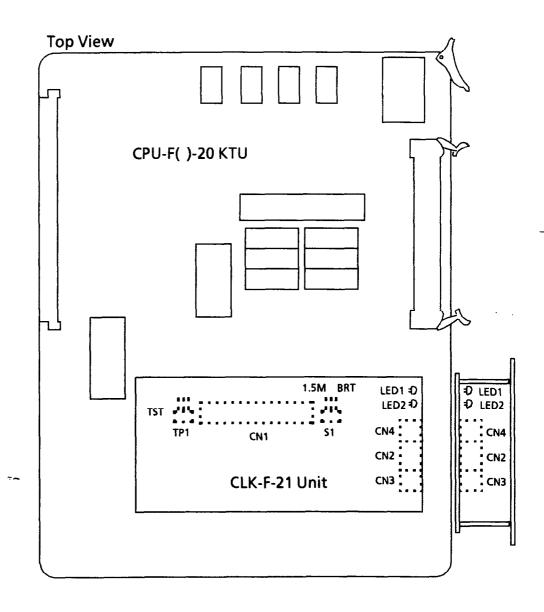


Figure 1-83 Mounted CLK-F-21 Unit

Connection:

IMPORTANT NOTE

Before installing the CLK-F-21 unit in the CPU-F()-20 KTU, the S1 strap on the CLK-F-21 unit must be moved from the BRT setting to the 1.5M setting.

To connect the CPU-F()-20 KTU and the CLK-F-21 Unit make the following connections:

- CLK CN1 and CPU CN101
- CLK CN4 and CPU CN4

T1 Considerations 5.3.8.3

General:

The term T1/FT1 refers to a physical communications facility (circuit) commonly referred to as T1/FT1 pipe with 1.544 mbps of bandwidth.

The T1/FT1 pipe can be divided into 24 channels, each rated DS-0 (Digital Signal, Level 0). This is equivalent to 24 or more voice circuits and/or multiple data channels (leased lines). Each DS-0 is 64 kbps of bandwidth. The carrier uses 8 Kbps of T1/FT1 bandwidth for network supervision and diagnostics, leaving 1.536 mbps for user data.

Electrical Specifications:

The electrical specifications describe the T1/FT1 interface, the T1/FT1 cross-connect interface, and the characteristics of the signals received from and transmitted to the T1/FT1 facility.

1. Support Digital Trunk Type: T1, FT1

2. Support Trunk Signal Type: DTI-F()-10 KTU:

CO/FX/WATS, Loop and Ground Start (Determined in System

Programming)

DTI-F(A)-20 KTU:

CO/FX/WATS, Loop and Ground Start, Tie line (E&M), DID (Determined in System

Programming)

3. Support Line Coding:*

ZCS or B8ZS Method (Determined

in System Programming)

4. Output Characteristics:

Line Rate:

1.544 mbps + -50 bps

Line Impedance:

 100Ω

Pulse Amplitude (Base to Peak): CCITT G. 703

5. Input Characteristics:

Line Rate:

1.544 mbps + -200 bps

Pulse Amplitude (Base to Peak): $1.5V \sim 3V$

Frame Synchronization:*

12-Multiframe *

24-Multiframe *

Input Jitter:

CCITT G. 743

Cable Length from Electra

Professional Level II to CSU: Maximum 655 ft. (with 22

AWG)

CSU:

Channel Service Unit

* Refer to the notes for an explanation.

Notes:

Line Coding

If zero data is being continuously transmitted over a T1/FT1 trunk, the end equipment (Electra Professional Level II system, Level II Advanced system, or digital PBX) cannot operate normally because there will be no clock synchronization. EIA/TIA-464-A specifies two line coding methods for normal operation.

- 1. Zero Code Suppression (ZCS)
- 2. Bipolar Eight Zero Substitution (B8ZS)
 This method depends on the LXC (Local Exchange)/IXC (Interexchange). The installer must ask the LXC/IXC to determine whether the configuration is ZCS or B8ZS. The installer must assign this configuration via the Electra Professional Level II and Level II Advanced System Programming.

Frame Synchronization

According to EIA/TIA-464-A for 24-channel transmission, there are two types of frame configurations: 12-multiframe and 24-multiframe. This method depends on the LXC/IXC. The installer must ask the LXC/IXC to determine whether the configuration is 12- or 24-Multiframe. The installer must assign this configuration via the Electra Professional Level II and Level II Advanced System Programming.

12-Multiframe

This frame has 12-Multiframes and each Multiframe has a 24-channel PCM signal (8 bits/channel) and an F bit (Super Frame Bit). (Refer to Figure 1-84 - 12-Multiframe Configuration and Bit Assignment.)

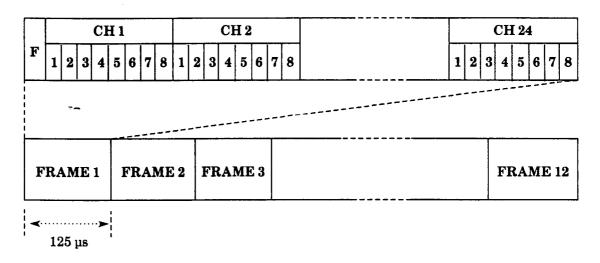


Figure 1-84 12-Multiframe Configuration and Bit Assignment

24-Multiframe

This frame has 24-Multiframes and each Multiframe has a 24-Channel PCM signal (8 bits/channel) and an F bit (Super Frame Bit). (Refer to Figure 1-85 - 24-Multiframe Configuration and Bit Assignment.)

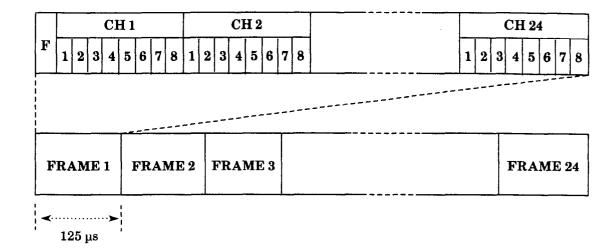


Figure 1-85 24-Multiframe Configuration and Bit Assignment

Installation:

Required Equipment:

The following chart shows the equipment that is required for T1.

Table 1-28 Equipment Required for T1 Installation

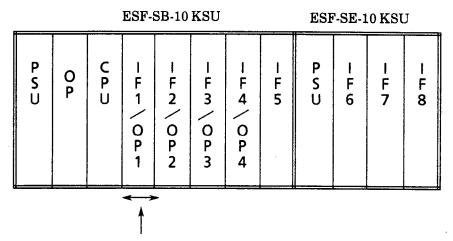
Equipment	Description	Quantity
DTI-F()-10 KTU or DTI-F(A)-20 KTU	24 channels T1/FT1 trunk interface board	1, 2, or 3
CLK-F-21 Unit	T1/FT1 Clock Synchronization Unit	1
	Connection cable between DTI and CLK package (4 MHz clock)	1 per DTI KTU and CLK interface (included with DTI KTU) - OR - 1 per DTI KTU and DTI KTU interface
Installation Cable	Twisted pair transmission cable between DTI and MDF	
	Connection cable between DTI and CLK (1.5 MHz clock)	1 per CLK Unit (included with CLK Unit)
CSU	Interface equipment between T1 Trunk and DTI KTU	1 per DTI KTU

To install:

1. Install the DTI-F()-10 KTU or DTI-F(A)-20 KTU and the CLK-F-21 Unit in the Level II ESF-SB-10 KSU. [Refer to Figure 1-86 - Installing the DTI-F()-10 KTU or DTI-F(A)-20 KTU in the ESF-SB-10 KSU.]

To install the DTI-F()-10 KTU or DTI-F(A)-20 KTU in the Level II Advanced system use interface slots IF1/OP1 or IF4/OP4 slots on the ESF-XB-10 KSU or the IF1/OP1 slot on the first ESF-XE-10 KSU installed. [Refer to Figure 1-87 - Installing the DTI-F()-10 KTU or DTI-F(A)-20 KTU in the ESF-XB-10 KSU or ESF-XE-10 KSU.]

Note: If the DTI KTU is used, the interface slot(s), adjacent to the DTI interface slot, can be used. The number of slots that must remain empty depends on the number of DTI channels being used.



DTI-F()-10 KTU or DTI-F(A)-20 KTU

Figure 1-86 Installing the DTI-F()-10 KTU or DTI-F(A)-20 KTU in the ESF-SB-10 KSU

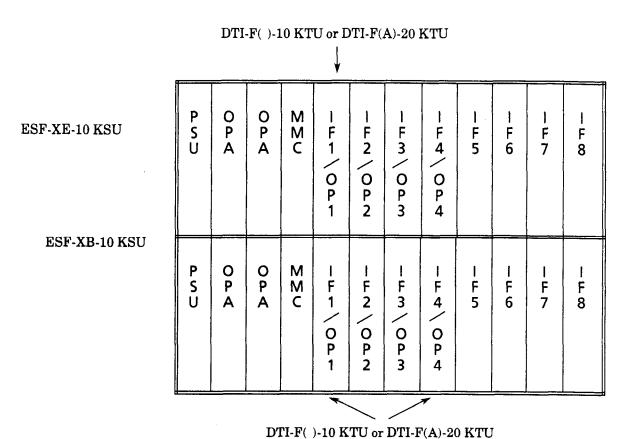


Figure 1-87 Installing the DTI-F()-10 KTU or DTI-F(A)-20 KTU in the ESF-XB-10 KSU or ESF-XE-10 KSU

Table 1-29 Required Slots for DTI-F()-10 KTU or DTI-F(A)-20 KTU Installation

No. of DTI-F()-10 KTU or DTI-F(A)-20 KTU Channels Used	Required Slots for DTI-F()-10 KTU or DTI-F(A)-20 KTU Installation
1~8	1
9 ~ 16	2
17 ~ 24	3

- 2. Install the cable between the T1/FT1 trunk and the DTI-F()-10 KTU or DTI-F(A)-20 KTU.
 - a. Connect the T1/FT1 trunk to the MDF. (Refer to Table 1-43 Connection Information/Connection and Port Relationships.)
 - b. Connect the T1 trunk from the MDF to the CSU.
 - c. To connect the cable from the CSU to CN1 on the DTI-F()-10 KTU or DTI-F(A)-20 KTU:
 - (1) Wrap the cables, provided with the DTI-F()-10 KTU or DTI-F(A)-20 KTU, twice (two turns) around a ferrite core.
 - (2) Connect the cable from the CSU to CN1 on the DTI-F()-10 KTU or DTI-F(A)-20 KTU, using the MDF Cable Assembly. [Refer to 1-88 Connecting the Cable Between the DTI-F()-10 KTUs or DTI-F(A)-20 KTUs and the CLK-F-21 Unit.]
 - Note 1: The maximum distance from the DTI-F()-10 KTU or DTI-F(A)-20 KTU to the CSU is 655 feet, using 22 AWG.
 - Note 2: The customer <u>must</u> purchase the CSU equipment to install the T1 trunk.
 - d. To connect the DTI-F()-10 KTU or DTI-F(A)-20 KTU and the CLK-F-21 Unit:
 - (1) Wrap the cables, provided with the DTI-F()-10 KTU or DTI-F(A)-20 KTU, twice (two turns) around a ferrite core.
 - (2) Connect CN6 and CN4, on the DTI-F()-10 KTU or DTI-F(A)-20 KTU, to CN2 and CN3, on the CLK-F-21 Unit, using the provided cable with the DTI-F()-10 KTU or DTI-F(A)-20 KTU. [Refer to Figure 1-88 Connecting the Cable Between the DTI-F()-10 KTUs or DTI-F(A)-20 KTUs and the CLK-F-21 Unit.]
 - (3) When connecting a second DTI-F()-10 KTU or DTI-F(A)-20 KTU in the Level II Advanced system, connect CN6 on the second DTI-F()-10 KTU or DTI-F(A)-20 to CN5 on the first DTI-F()-10 KTU or DTI-F(A)-20 KTU after wrapping this cable [provided with the DTI-F()-10 KTU or DTI-F(A)-20 KTU] twice (two turns) around a ferrite core.
 - (4) When installing a third DTI-F()-10 KTU or DTI-F(A)-20 KTU in the Level II Advanced system, follow the same procedure in step 3 for connection between the third and second DTI-F()-10 KTU or DTI-F(A)-20 KTU. [Refer to Figure 1-89-Example of Three DTI-F()-10 KTUs or DTI-F(A)-20 KTUs Attached to the CLK-F-21 Unit.]

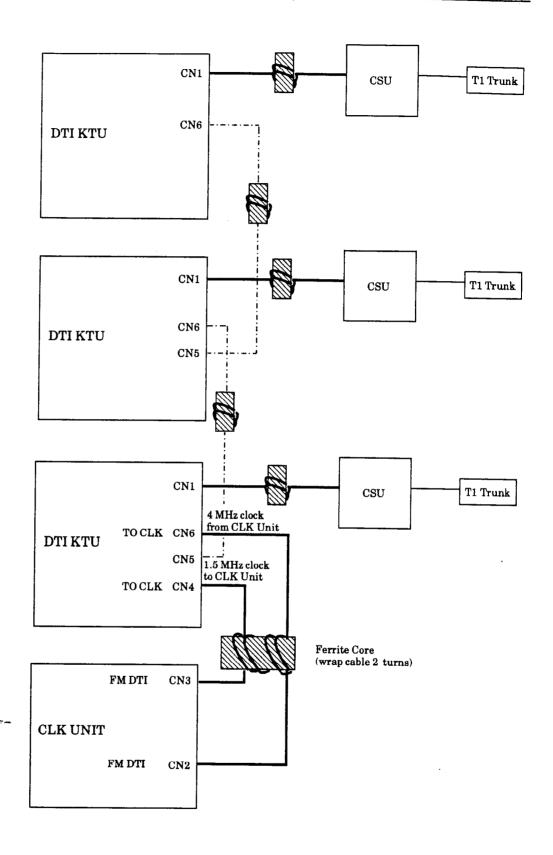
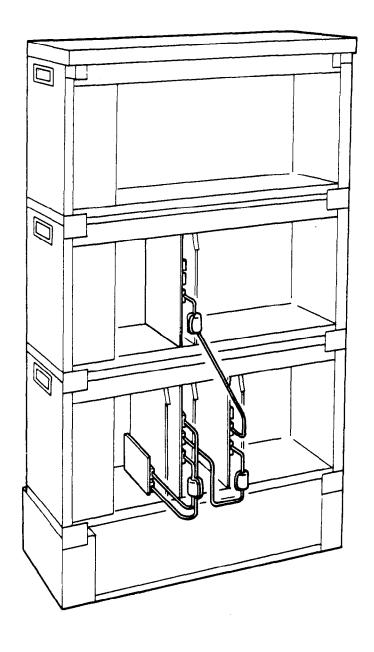


Figure 1-88 Connecting the Cable Between the DTI-F()-10 KTUs or DTI-F(A)-20 KTUs and the CLK-F-21 Unit



 $Figure 1-89 \quad Example of \ Three \ DTI-F(\)-10 \ KTUs \ or \ DTI-F(A)-20 \ KTUs \ Attached \ to \ the \ CLK-F-21 \ Unit$

5.4 Optional KTUs

5.4.1 PBR-F(4)-11 KTU

The Push Button Receiver (PBR) KTU detects and translates DTMF tones generated by Single Line Telephones, modems, or facsimile machines. This KTU is required if the four built-in PBR channels (CPU) are not enough to support all of the single line devices of the system.

Only one PBR-F(4)-11 KTU can be installed in the Level II system and two can be installed in the Level II Advanced system.

Switch Setting/LED Indications:

The green LED (LED1) on the PBR-F(4)-11 KTU, when lit, indicates the KTU is receiving power. The red LED (LED2) is the DTMF signal indication LED that, when lit, indicates one or more DTMF signal receiver circuits are receiving DTMF signals. Switch MB is the ON/OFF control for this KTU. [Refer to Figure 1-90 - PBR-F(4)-11 KTU Switch Settings.]

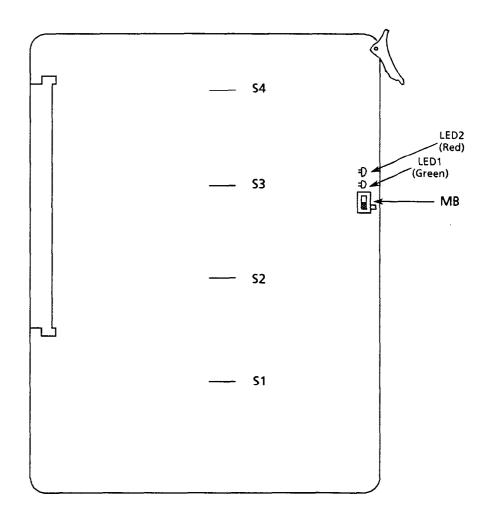


Figure 1-90 PBR-F(4)-11 KTU Switch Settings

If adjustment to the DTMF signal detection level is required, adjust using strap wire $S1 \sim S4$. (Refer to Table 1-30 - DTMF Signal Adjustments.)

Table 1-30 DTMF Signal Adjustments

Option	Strap Wire Settings	Default Settings	Adjustment
DTMF signal receiving gain	Strap wires: S1 ~ S4	Strapping wires connected	Default settings are done to allow reception of $-34 \text{ dBm} \sim -4 \text{ dBm}$ DTMF signals. To increase the receiving gain, cut the strap wires ($-42 \text{ dBm} \sim -12 \text{ dBm}$ DTMF signals can be received). S1: Channel 1 receiving gain S2: Channel 2 receiving gain S3: Channel 3 receiving gain S4: Channel 4 receiving gain

5.4.2 VRS-F(4)-11 KTU

The VRS-F(4)-11 KTU provides record/playback of voice messages for the Automated Attendant, Voice Prompt, and Delay Announcement features.

A maximum of two VRS-F(4)-11 KTUs can be installed in either system.

Each VRS-F(4)-11 KTU has four record/playback channels. The maximum recording time of each channel is 240 seconds. The recording time for each channel can be divided as follows:

15 sec. * 16 messages = 240 sec.
 30 sec. * 8 messages = 240 sec.
 60 sec. * 4 messages = 240 sec.
 120 sec. * 2 messages = 240 sec.

Switch Settings/LED Indications:

SW1, on both the Main and Expansion PCBs, controls battery power for memory backup. These must be turned ON for retention of VRS memory for this KTU in case of power failure.

Note: Do not separate the Main or Expansion PCBs.

LEDs 1 and 2 (on the Main PCB) represent channels 1 and 2. LEDs 1 and 2 (on the Expansion PCB) represent channels 3 and 4. These LEDs light red when in use (recording or playing messages). The green LED 3 on the VRS-F(4)-11 KTU, when lit, indicates the KTU is receiving power. Switch MB is the ON/OFF control for this KTU. [Refer to Figure 1-91 - VRS-F(4)-11 KTU Switch Layout.]

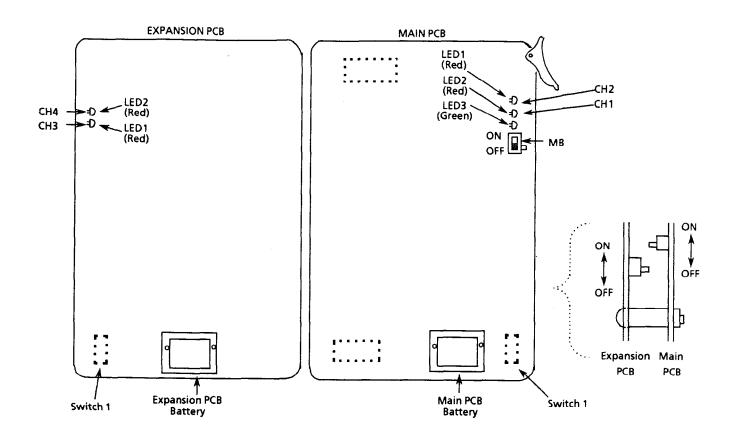


Figure 1-91 VRS-F(4)-11 KTU Switch Layout

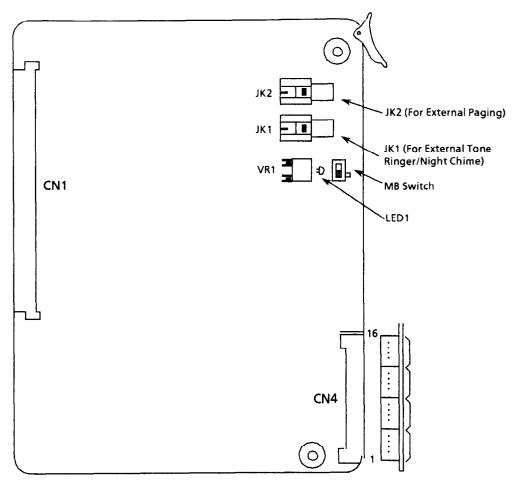
5.4.3 ECR-F-11 KTU

The ECR-F-11 KTU provides two RCA jacks and eight relay contacts. Three of the eight relays are used for External Paging contact, one is used for Night Chime contact, and the other four are used for External Tone Ringer. One of the two RCA jacks is used for External Tone Ringer/Night Chime audible output. The other RCA jack is used for External Paging audible input/output. (Refer to Figure 1-92 - ECR-F-11 KTU Switch Layout and Table 1-31 - ECR-F-11 KTU Connectors/Adjustments.)

Only one ECR-F-11 KTU can be installed in either system.

Switch Setting/LED Indications:

The green LED (LED1) on the ECR-F-11 KTU, when lit, indicates that this KTU is receiving power. Switch MB is the ON/OFF control for this KTU. (Refer to Figure 1-92 - ECR-F-11 KTU Switch Layout and Table 1-32 - ECR-F-11 KTU Optional Device Connection Terminals.)



For Maximum Volume of External Ringer Output: Turn VR1 Counterclockwise

Figure 1-92 ECR-F-11 KTU Switch Layout

Initial Adjustment Name of Adjustment Item Switch Setting External Tone Ringer JK1 N/A To connect the External Speaker for External Tone Ringer/Night Chime JK2 N/A External Paging To connect the External Speaker for External Paging External Tone VR1 Center To adjust the External Tone Output Level Ringer/Night Chime Volume Control

Table 1-31 ECR-F-11 KTU Connectors/Adjustments

Table 1-32 ECR-F-11 KTU Optional Device Connection Terminals

Pin No.	Terminal Name	Function
16	8 RM	P
15	8 RC	External Tone - Ringer 4
14	7 RM	F
13	7 RC	External Tone - Ringer 3
12	6 RM	n 4 1m n o
11	6 RC	External Tone - Ringer 2
10	5 RM	D / 1/11 D' 1
9	5 RC	External Tone - Ringer 1
8	4 RM	Mind a Oli in
7	4 RC	Night Chime
6	3 RM	Eustamal Danima 7
5	3 RC	External Paging - Zone C
4	2 RM	n (1n : 7 n
3	2 RC	External Paging - Zone B
2	1 RM	Enternal Design 7 and A
1	1 RC	External Paging - Zone A

5.4.4 MIF-F(S)-10 KTU

The MIF KTU serves two purposes: it allows the connection of a personal computer to perform System Programming and up/down loading of System Data and it provides Station Message Detail Recording (SMDR) to be output via the RS-232 cable to a printer. (Refer to Figure 1-97 - SMDR Print Formats.) These two functions can be operated at the same time.

Only one MIF-F(S)-10 KTU can be installed in either system. [Refer to the Electra Professional Level II and Level II Advanced System Program Technician Manual (included with the System Program Technician software - Stock No. 722305) for programming instructions using a PC.]

Switch Settings/LED Indications:

The green LED (LED1), when lit, indicates the MIF-F(S)-10 KTU is receiving power. The red LED (LED2), when flashing, indicates the MIF is exchanging data communications with the system CPU. The red LED (LED3), when lit, indicates the SMDR function is outputting a call record. [Refer to Figure 1-93 - MIF-F(S)-10 KTU Switch Layout. Switch MB is the ON/OFF control for the KTU. Also refer to Table 1-33 - MIF-F(S)-10 KTU Switch (SW3) Settings for PC and MNP Modem Connections, Table 1-34 - MIF-F(S)-10 KTU Switch (SW4) Settings for Printers, Table 1-35 - MIF-F(S)-10 KTU - DTE PC or Printer Connections, and Table 1-36 - MIF-F(S)-10 KTU - DCE MNP Modem Connections.]

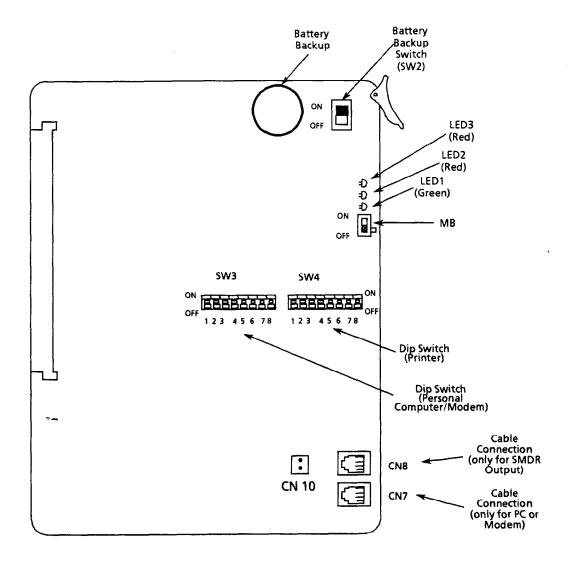


Figure 1-93 MIF-F(S)-10 KTU Switch Layout

 $Table 1-33 \quad MIF-F(S)-10 \; KTU \; Switch \; (SW3) \; Settings \; for \; PC \; and \; MNP \; Modem \; Connections$

Switch Position (SW3)	ON/O Sett		Description								
1	OFF: ON:	0	Cor	Connection to CN7 0: PC Direct 1: MNP Modem Connected							
2	OFF: ON:	0	No	t Used							
3	OFF: ON:	0 1	No	Not Used							
4	OFF: ON:	0 1	No	Not Used							
5	OFF: ON:	0	Pa	rity and Sto							
				SW3 - 5	SW3 - 6	Parity	Stop Bits				
	OFF		-	0	0	None None	2				
6	OFF: ON:	0		0	1	Even	1				
				1	1	Odd	1				
7	OFF:	0	Ba	ud Rates:							
	ON:	1		SW3 - 7	SW3 - 8	RS-232C					
				0 0 9600 bps							
8	OFF:	0	1	1	0	4800 bps					
	ON:	1	}	0	1	2400 bps					
	1			1	1	1200 bps					

Table 1-34 $\,$ MIF-F(S)-10 KTU Switch (SW4) Settings for Printers

Switch Position (SW4)	ON/O Sett		Description							
1	OFF: ON:	0	Mode Setting: 0: Operation Mode 1: Test Mode: Note: Operation of MIF stops when set to the Test Mode.							
2	OFF: ON:	0	Not	Used						
3	OFF: ON:	0 1	Not	Used						
4	OFF: ON:	0	(Data Bits (RS-232C for Printer) 0: 8-bit 1: 7-bit						
5	OFF:	0	Par	ity and St	op Bits:					
	ON:	1		SW4 - 5	SW4-6	Parity	Stop Bits			
				0	0	None	2			
6	OFF:	0] [1	0	None	1			
	ON:	1		0	1	Even	1			
				1	1	Odd	1			
7	OFF: ON:	0	Bau	d Rates:						
		_		SW4 - 7	SW4-8	RS-232C	·			
	1			0	0	4800 bps				
8	OFF: ON:	0 1		1	0	2400 bps				
	OIN.	1	0 1 1200 bps							
				1	1	300 bps]			

Table 1-35 MIF-F(S)-10 KTU - DTE PC or Printer Connections

MIF (CN7 & CN8)		→		MIF Cable Assembly		Straight RS-232 Cable	PC or Printer
FG(FG)	1		1	(FG)FG	1		1 (FG)FG
RXD(RD)	5	←	2	(SD)TXD	2	<	2 (SD)TXD
TXD(SD)	4	→	3	(RD)RXD	3	>	3 (RD)RXD
CTS(CS)	6	←	4	(RS)RTS	4	<	4 (RS)RTS
RTS(RS)	3	→	5	(CS)CTS	5	>	5 (CS)CTS
DTR(ER)	7	→	6	(DR)DSR	6	>	6 (DR)DSR
SG(SG)	8 .		7	(SG)SG	7		7 (SG)SG
DSR(DR)	2	←	20	(ER)DTR	20	<	20 (ER)DTR
DCD(CN10)		←	8	(CD)DCD	8	<	8 (CD)DCD

Note: The arrows show the direction of data flow during operation.

Table 1-36 MIF-F(S)-10 KTU - DCE MNP Modem Connections

MIF (CN8)		→		MIF Cable Assembly		Reverse RS-232 Cable	MNP Modem	
FG(FG)	1	†	1	(FG)FG	1		1 (FG)FG	
RXD(RD)	5	←	2	(SD)TXD	2	<	3 (RD)RXD	
TXD(SD)	4	→	3	(RD)RXD	3	>	2 (SD)TXD	
CTS(CS)	6	←	4	(RS)RTS	4	<	5 (CS)CTS	
RTS(RS)	3	→	5	(CS)CTS	5	>	4 (RS)RTS	
DTR(ER)	7	\rightarrow	6	(DR)DSR	6	>	20 (ER)DTR	
SG(SG)	8		7	(SG)SG	7		7 (SG)SG	
DCD(CN10)		←	8	(CD)DCD	8	<	8 (CD)DCD	
DSR(DR)	2	←	20	(ER)DTR	20	<	6 (DR)DSR	

Note: The arrows show the direction of data flow during operation.

Installation:

The MIF-F(S)-10 KTU can be installed into an Option Slot (OP) or into one of the four Interface/Option Slots (IF1/OP1 \sim IF4/OP4), in the ESF-SB-10 KSU, ESF-XB-10 KSU, or the first ESF-XE-10 KSU installed. This KTU is shipped with two cable assemblies (MIF cable assembly). One end of each cable has an RJ35 (8-pin) connector. The other end of the cable terminates at an RS-232 connector. This connector must be mounted on one of the above mentioned KSUs.

After installing the KTU, connect the RJ35 pin connectors to CN8 or CN7 into the MIF-F(S)-10 KTU. When connecting a PC, connect the small connector on the MIF Cable Assembly to CN10 on the MIF-F(S)-10 KTU, then remove the RS-232 connection bracket from the KSU and attach the RS-232, on the MIF Cable Assembly, to the RS-232 connection bracket using the screws on the RS-232 connectors. This same type connection procedure must also be performed on the ESF-XB-10 KSU or ESF-XE-10 KSUs. [Refer to Figure 1-94 - Connecting the MIF Cable Assembly and the MIF-F(S)-10 KTU to the ESF-SB-10 KSU and Figure 1-95 - Connecting the MIF Cable Assembly and the MIF-F(S)-10 KTU to the ESF-XB-10 KSU.]

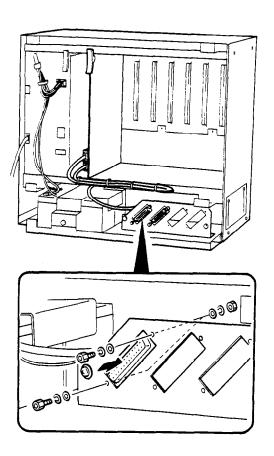
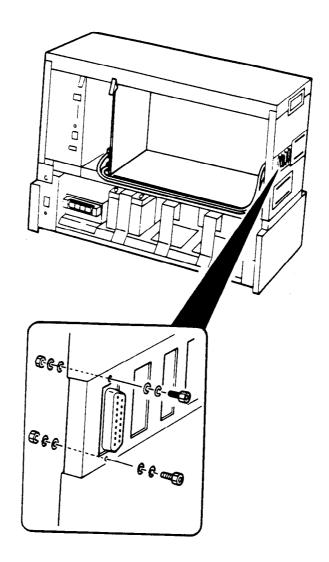


Figure 1-94 Connecting the MIF Cable Assembly and the MIF-F(S)-10 KTU to the ESF-SB-10 KSU



Connecting the MIF Cable Assembly and the MIF-F(S)-10 KTU to the Figure 1-95 ESF-XB-10 KSU

Printer Connection for SMDR:

Required Equipment:

- 1. MIF-F(S)-10 KTU with the NEC provided MDF Cable Assembly
- 2. RS-232 Straight Cable
- 3. Standard Printer

To install:

- 1. Set SW4 DIP switch to adjust for the printer on the MIF-F(S)-10 KTU.
- 2. Install the MIF-F(S)-10 KTU into the KSU.
- 3. Connect the MIF Cable Assembly to CN8 on the MIF-F(S)-10 KTU and the Basic KSU. [Refer to Figure 1-94 Connecting the MIF Cable Assembly and the MIF-F(S)-10 KTU to the ESF-SB-10 KSU.]
- 4. Connect the standard printer using the straight RS-232 cable.
- 5. Turn the MB switch, on the MIF-F(S)-10 KTU, to the ON position.
- 6. Program Memory Blocks: System Mode (LK1) SMDR/LCR (LK5) No. 02, 13, 14, 25, and 26.

PC or MNP Class 5 Modem Connection for Electra Professional Level II and Level II Advanced System Program Technician Software:

The information given in this section is a basic overview of System Programming using a PC. For specific information, refer to the *Electra Professional Level II and Level II Advanced System Program Technician Manual* (included with the Electra Professional Level II and Level II Advanced System Technician software). [Also, refer to Figure 1-96 - MIF-F() -10 KTU Direct and Remote Connections, Figure 1-97 - SMDR Print Formats, and Figure 1-98 - Print Formats Item Numbers.]

Required Equipment:

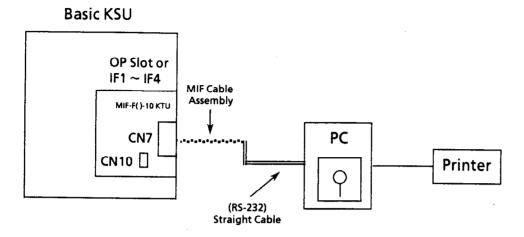
- 1. MIF-F(S)-10 KTU with NEC provided MIF Cable Assembly
- 2. RS-232 straight cable (for direct connection) or reverse cable (for remote connection)
- 3. IBM® or IBM compatible PC with 286 or higher and MS-DOS® Version 3.3 or higher¹
- 4. NEC's Electra Professional Level II and Level II Advanced System Program Technician Software (Stock No. 722305)
- 5. Standard dot matrix printer (if required for printing job specifications or station labels)
- 6. MNP Modem Class 5 or higher (required for remote connection)

To install:

- 1. Set SW3 DIP switch to adjust for a PC or modem on the MIF-F(S)-10 KTU.
- 2. Install the MIF-F(S)-10 KTU into the KSU.
- 3. Connect the MIF Cable Assembly to CN7 and CN10 on the MIF-F(S)-10 KTU and the KSU. [Refer to Figure 1-94 Connecting the MIF Cable Assembly and the MIF-F(S)-10 KTU to the ESF-SB-10 KSU.]
- 4. Connect the PC using a straight RS-232 cable or connect the MNP modem using a reverse RS-232 cable.
- 5. Turn the MB switch, on the MIF-F(S)-10 KTU, to the ON position.

The following are registered trademarks of the following companies: IBM of International Business Machines. MS-DOS of Microsoft Corporation.

Direct Connection: PC and System



Remote Connection: MNP Modem Used

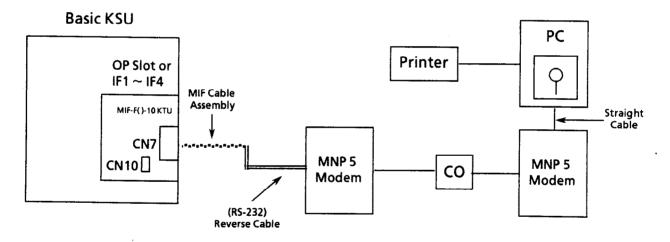
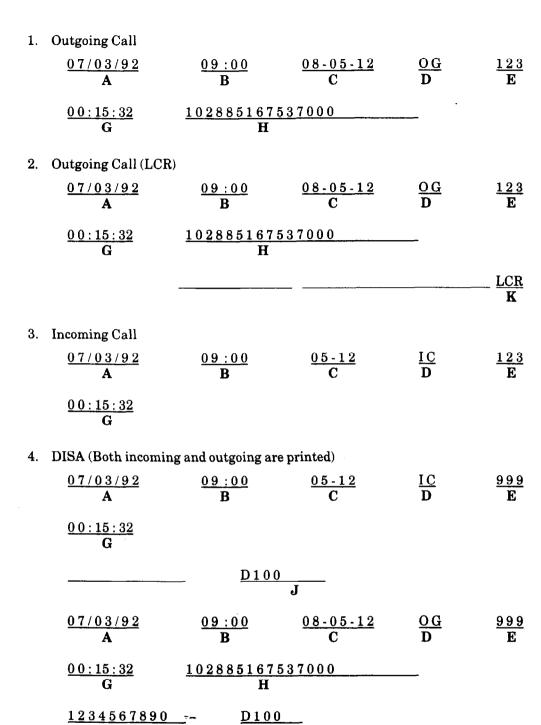


Figure 1-96 MIF-F()-10 KTU Direct and Remote Connections



Note 1: Example number 4, above, is the SMDR output format when the incoming caller hangs up first. If the called party hangs up first, the SMDR output information is reversed.

Note 2: $A \sim K$ are the printout item numbers. The temporary station number is 999. (Refer to Figure 1-98 - SMDR Print Formats Item Numbers.)

Figure 1-97 SMDR Print Formats

The following provides an explanation of each item that appears on the SMDR printout.

```
A. Start Date: 07/03/92
```

07 = month

03 = day

92 = year

B. Start Time: 09:00

09 = hour

03 = minute

C. Trunk Information: 08-05-12

08 = Route Advance Block

05 = Trunk Group

12 = Trunk Number

D. Type of Call:

IC = Incoming Call

OG = Outgoing Call

ICC = Conference on Incoming Call

OGC = Conference on Outgoing Call

IT = Transferred Incoming Call

OT = Transferred Outgoing Call

ITC = Conference on Transferred Incoming Call

OTC = Conference on Transferred Outgoing Call

E. Station Number: 123

This number depends on whether the system is set as 2-, 3-, or 4-digit station number in System Programming.

F. Transferred Station Number: 234

This number depends on whether the system is set as 2-, 3-, or 4-digit station number in System Programming.

G. Call Duration: 00:15:32

00 = hour

15 = minute

32 = seconds

H. Number Dialed: 102885167537000

Maximum number of characters is 24.

I. Account Code Entry: 1234567890

Maximum number of characters is 16.

J. Station Number of the DISA Caller

Maximum number of characters is 4.

K. LCR

LCR = Least Cost Routing

Figure 1-98 SMDR Print Formats Item Numbers

5.4.5 MIF-F(L)-10 KTU

The MIF-F(L)-10 KTU serves three purposes: it allows the connection of a personal computer to perform System Programming and up/down loading of System Data, it provides Station Message Detail Recording (SMDR) to be output via the RS-232 cable to a serial printer, and it provides Least Cost Routing (LCR) capability.

Only one MIF-F(L)-10 KTU can be installed in either system. [Refer to the Electra Professional Level II and Level II Advanced Least Cost Routing Manual (included with the Electra Professional Level II and Level II Advanced Least Cost Routing software, Stock No. 722302) for LCR instructions. [Refer to the Electra Professional Level II and Level II Advanced System Program Technician Manual (included with the Electra Professional Level II and Level II Advanced System Program Technician software, Stock No. 722305) for programming instructions using a PC.]

Switch Settings/LED Indications:

The green LED (LED1), when lit, indicates the MIF-F(L)-10 KTU is receiving power. The red LED (LED2), when flashing, indicates the MIF is exchanging data communications with the system CPU. The red LED (LED3), when lit, indicates the SMDR function is outputting a call record. [Refer to Figure 1-99 - MIF-F(L)-10 KTU Switch Layout. Switch MB is the ON/OFF control for this KTU. Also refer to Table 1-37 - MIF-F(L)-10 KTU Switch (SW3) Settings for PC and MNP Modem Connections, Table 1-38 - MIF-F(L)-10 KTU - DTE PC or Printer Connections, Table 1-40 - MIF-F(L)-10 KTU - DCE MNP Modem Connections.]

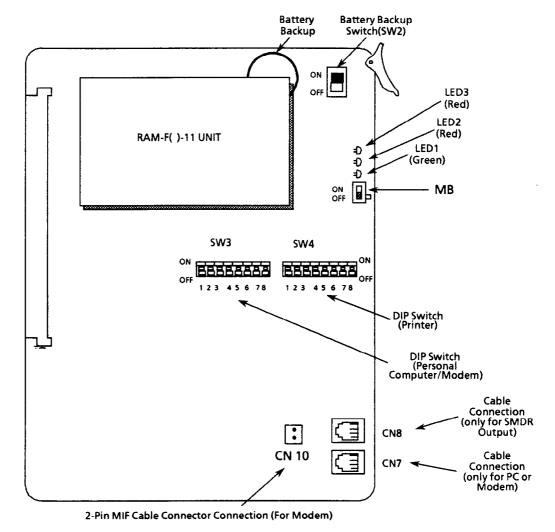


Figure 1-99 MIF-F(L)-10 KTU Switch Layout

Table 1-37 MIF-F(L)-10 KTU Switch (SW3) Settings for PC and MNP Modem Connections

Switch Position (SW3)	ON/6 Sett		Description							
1	OFF: ON:	0	Co	Connection to CN7 0: PC Direct 1: MNP Modem Connected						
2	OFF: ON:	0 1	No	t Used						
3	OFF: ON:	0 1	No	t Used						
4	OFF: ON:	0 1	No	Not Used .						
5	OFF: ON:	0	Parity and Stop Bits: SW3 - 5 SW3 - 6 Parity Stop Bits							
6	OFF: ON:	0		0 0 None 2 1 0 None 1 0 1 Even 1 1 1 Odd 1						
7	OFF: ON:	0	Baud Rates: SW3 - 7 SW3 - 8 RS-232C 0							
8	OFF: ON:	0 1	1 0 4800 bps 0 1 2400 bps 1 1 1 1200 bps							

Table 1-38 MIF-F(L)-10 KTU Switch (SW4) Settings for Printers

Switch Position (SW4)	ON/G Sett		Description							
1	OFF: ON:	0	Mode Setting: 0: Operation Mode 1: Test Mode: Note: Operation of MIF stops when set to the test mode.							
2	OFF: ON:	0 1	Not U	sed						
3	OFF: ON:	0 1	Not U	sed						
4	OFF: ON:	0	Data I 0: 1:							
5	OFF:	0	Par	ity and St	op Bits:					
	ON:	1		SW4 - 5	SW4-6	Parity	Stop Bits			
				0	0	None	2			
6	OFF:	0		1	0	None	1			
	ON:	1		0	1	Even	1			
				1	1	Odd	1			
7	OFF: ON:	0	Bau	ıd Rates:						
		_		SW4 - 7	SW4-8	RS-232C				
			_	0	0	4800 bps				
8	OFF: ON:	$0 \\ 1$		1	0	2400 bps				
	OIV.	1		0	1	1200 bps				
				1	1	300 bps				

Table 1-39 MIF-F(L)-10 KTU - DTE PC or Printer Connections

MIF (CN7 & CN8)		→		MIF Cable Assembly		Straight RS-232 Cable	PC or Printer
FG(FG)	1		1	(FG)FG	1		1 (FG)FG
RXD(RD)	5	←	2	(SD)TXD	2	<	2 (SD)TXD
TXD(SD)	4	→	3	(RD)RXD	3	>	3 (RD)RXD
CTS(CS)	6	←	4	(RS)RTS	4	<	4 (RS)RTS
RTS(RS)	3	→	5	(CS)CTS	5	>	5 (CS)CTS
DTR(ER)	7	→	6	(DR)DSR	6	>	6 (DR)DSR
SG(SG)	8		7	(SG)SG	7		7 (SG)SG
DSR(DR)	2	←	20	(ER)DTR	20	<	20 (ER)DTR
DCD(CN10)		←	8	(CD)DCD	8	<	8 (CD)DCD

Note: The arrows show the direction of data flow during operation.

Table 1-40 MIF-F(L)-10 KTU - DCE MNP Modem Connections

MIF (C)	N8)	→		MIF Cable Assembly		Reverse RS-232 Cable	MNP Modem
FG (FG)	1		1	(FG)FG	1		1 (FG)FG
RXD(RD)	5	←	2	(SD)TXD	2	<	3 (RD)RXD
TXD(SD)	4	->	3	(RD)RXD	3	>	2 (SD)TXD
CTS(CS)	6	←-	4	(RS)RTS	4	<	5 (CS)CTS
RTS(RS)	3	→	5	(CS)CTS	5	>	4 (RS)RTS
DTR(ER)	7	→	6	(DR)DSR	6	>	20 (ER)DTR
SG(SG)	8		7	(SG)SG	7		7 (SG)SG
DCD(CN10)		←	8	(CD)DCD	8	<	8 (CD)DCD
DSR(DR)	2	←	20	(ER)DTR	20	<	6 (DR)DSR

Note: The arrows show the direction of data flow during operation.

Installation:

The MIF-F(L)-10 KTU can be installed into an Option Slot (OP) or into one of the four Interface/Option Slots (IF1/OP1 \sim IF4/OP4), in the ESF-SB-10 KSU, ESF-XB-10 KSU, or the first ESF-XE-10 KSU installed. This KTU is shipped with two cable assemblies (MIF cable assembly). One end of each cable has an RJ35 (8-pin) connector. The other end of the cable terminates at an RS-232 connector. This connector must be mounted in the KSU. This same type of connection procedure must be performed on the ESF-XB-10 KSU or ESF-XE-10 KSUs. [Refer to Figure 1-100 - Connecting the MIF Cable Assembly and the MIF-F(L)-10 KTU to the ESF-SB-10 KSU and Figure 1-101 - Connecting the MIF Cable Assembly and the MIF-F(L)-10 KTU to the ESF-XB-10 KSU.]

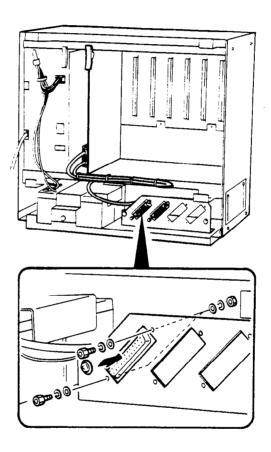


Figure 1-100 Connecting the MIF Cable Assembly and the MIF-F(L)-10 KTU to the ESF-SB-10 KSU

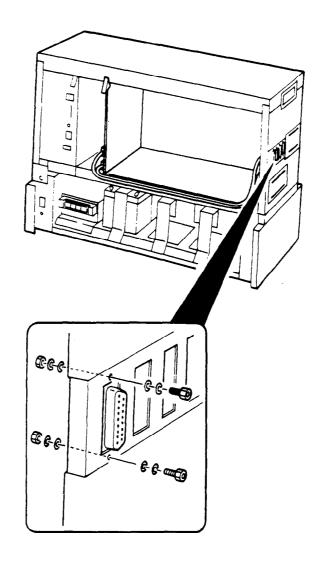


Figure 1-101 Connecting the MIF Cable Assembly and the MIF-F(L)-10 KTU to the ESF-XB-10 KSU

Printer Connection for SMDR:

Required Equipment:

- 1. MIF-F(L)-10 KTU with the NEC provided MDF Cable Assembly
- 2. RS-232 Straight Cable
- 3. Standard Printer

To install:

- 1. Set SW4 DIP switch to adjust for the printer, on the MIF-F(L)-10 KTU.
- 2. Install the MIF-F(L)-10 KTU into the KSU.
- 3. Connect the MIF Cable Assembly to CN8 on the MIF-F(L)-10 KTU and the KSU. [Refer to Figure 1-100 Connecting the MIF Cable Assembly and the MIF-F(L)-10 KTU to the ESF-SB-10 KSU.]
- 4. Connect the standard printer using the straight RS-232 cable.
- 5. Turn the MB switch, on the MIF-F(L)-10 KTU, to the ON position.
- 6. Program Memory Blocks: System Mode (LK1) SMDR/LCR (LK5) No. 02, 13, 14, 25, and 26.

PC or MNP Class 5 Modem Connection for Electra Professional Level II and Level II Advanced System Program Technician Software:

The information given in this section is a basic overview of System Programming using a PC. For specific information, refer to the *Electra Professional Level II and Level II Advanced System Program Technician Manual* (included with the Electra Professional Level II and Level II Advanced System Technician software).

Required Equipment:

- 1. MIF-F(L)-10 KTU with NEC provided MIF Cable Assembly
- 2. RS-232 straight cable (for direct connection) or reverse cable (for remote connection)
- 3. IBM or IBM compatible PC with 286 or higher and MS-DOS Version 3.3 or higher
- 4. NEC's Electra Professional Level II and Level II Advanced System Program Technician Software (Stock No. 722305).
- 5. Standard dot matrix printer (if required for printing job specifications or station labels)
- 6. MNP Modem Class 5 (required for remote connection)

~ To install:

- 1. Set SW3 DIP switch to adjust for a PC or modem, on the MIF-F(L)-10 KTU.
- 2. Install the MIF-F(L)-10 KTU into the KSU.
- 3. Connect the MIF Cable Assembly to CN7 and CN10 on the MIF-F(L)-10 KTU and the KSU. [Refer to Figure 1-100 Connecting the MIF Cable Assembly and the MIF-F(L)-10 KTU to the ESF-SB-10 KSU.]
- 4. Connect the PC using a straight RS-232 cable or connect the MNP modem using a reverse RS-232 cable.
- 5. Turn the MB switch, on the MIF-F(L)-10 KTU, to the ON position.

5.4.6 MIF-F(A)-10 KTU

The MIF-F(A)-10 KTU allows an interface to an MIS (ACD) terminal.

Only one MIF-F(A)-10 KTU can be installed in either system. [Refer to the Electra Professional Level II and Level II Advanced Automatic Call Distribution Manual (Stock No. 720234) for detailed instructions for the MIF-F(A)-10 KTU.]

Switch Settings/LED Indications:

The green LED (LED1), when lit, indicates the MIF-F(A)-10 KTU is receiving power. The red LED (LED2), when lit, indicates the MIF is exchanging data communications with the system CPU. [Refer to Figure 1-102 - MIF-F(A)-10 KTU Switch Layout, Table 1-41 - MIF-F(A)-10 KTU Switch (SW3) Settings for PC Connection, and Table 1-42 - MIF-F(A)-10 KTU - DTE PC Connections.] Switch MB is the ON/OFF control for this KTU.

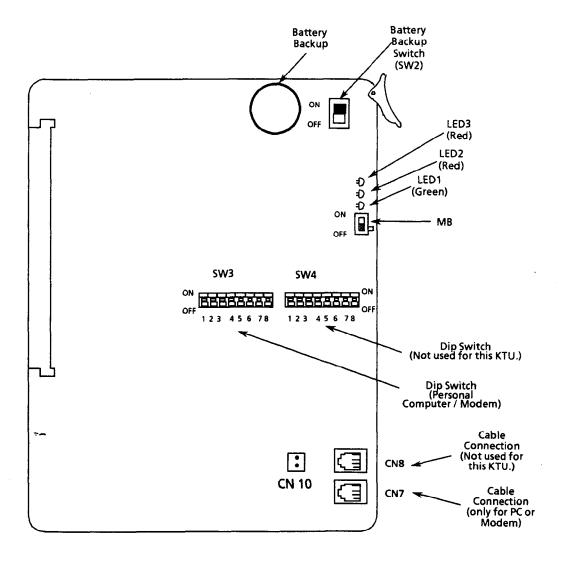


Figure 1-102 MIF-F(A)-10 KTU Switch Layout

Table 1-41 MIF-F(A)-10 KTU Switch (SW3) Settings for PC Connection

Switch Position (SW3)	ON/OFF Setting		Description					
1	OFF: ON:	0 1	N	ot Used				
2	OFF: ON:	0	Fo	Forward - No Answer 0: Allow 1: Deny				
3	OFF: ON:	0 1	N	Not Used				
4	OFF: ON:	0 1	N	Not Used				
5	OFF: ON:	0 1	Parity and Stop Bits:					
				SW3 - 5	SW3 - 6	Parity	Stop Bits	
				0	0	None	2	
6	OFF: ON:	0 1		1	0	None	1	
				0	1	Even	1	
				1	1	Odd	1	
7	OFF: ON:	0	Ba	Baud Rates:				
				SW3 - 7	SW3.8	RS-232C		
				0	0	9600 bps		
8	OFF: ON:	0		1	0	4800 bps		
				0	1	2400 bps		
				1	1	1200 bps		

Straight MIF Cable MIF (CN7 & CN8) **RS-232** PC or Printer Assembly Cable FG(FG) 1 1 (FG)FG 1 -----(FG)FG 2 2 RXD(RD) 5 (SD)TXD ---<---← (SD)TXD 3 (RD)RXD 3 TXD(SD) 4 --->---(RD)RXD CTS(CS) 6 4 (RS)RTS 4 ---<---(RS)RTS RTS(RS) 3 5 (CS)CTS 5 (CS)CTS --->---7 6 DTR(ER) (DR)DSR 6 --->---(DR)DSR \rightarrow 7 7 8 (SG)SG SG(SG) -----(SG)SG -----2 20 20 DSR(DR)(ER)DTR ---<---20 (ER)DTR DCD(CN10) 8 (CD)DCD 8 ---<---(CD)DCD

Table 1-42 MIF-F(A)-10 KTU - DTE PC Connections

Note: The arrows show the direction of data flow during operation.

Installation:

The MIF-F(A)-10 KTU can be installed into an Option Slot (OP) or into one of the four Interface/Option Slots (IF1/OP1 ~ IF4/OP4), in the ESF-SB-10 KSU, ESF-XB-10 KSU, or the first ESF-XE-10 KSU installed. This KTU is shipped with two cable assemblies (MIF cable assembly). One end of each cable has an RJ35 (8-pin) connector. The other end of the cable terminates at an RS-232 connector. This connector must be mounted on the KSU. This same type of connection procedure must be performed on the ESF-XB-10 KSU of ESF-XE-10 KSUs. [Refer to Figure 1-103 - Connecting the MIF Cable Assembly and the MIF-F(A)-10 KTU to the ESF-SB-10 KSU and Figure 1-104 - Connecting the MIF Cable Assembly and the MIF-F(A)-10 KTU to the ESF-XB-10 KSU.]

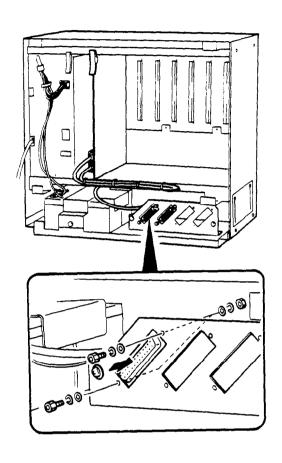


Figure 1-103 Connecting the MIF Cable Assembly and the MIF-F(A)-10 KTU to the ESF-SB-10 KSU

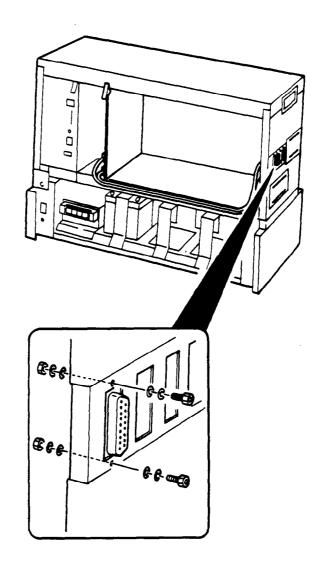


Figure 1-104 Connecting the MIF Cable Assembly and the MIF-F(A)-10 KTU to the ESF-XB-10 KSU

MIS Terminal Connection for ACD:

Required Equipment:

- 1. MIF-F(A)-10 KTU with NEC provided MDF Cable Assembly
- 2. RS-232 Straight Cable
- 3. IBM or IBM compatible PC with 286 or higher

To install:

- Set SW3 DIP switch to adjust for the PC connection on the MIF-F(A)-10 KTU.
- 2. Install the MIF-F(A)-10 KTU into the KSU.
- 3. Connect the MIF Cable Assembly to CN7 and CN10 on the MIF-F(A)-10 KTU and the KSU. [Refer to Figure 1-103 Connecting the MIF Cable Assembly and the MIF-F(A)-10 KTU to the ESF-SB-10 KSU.]
- 4. Connect the MIS Terminal to use the straight RS-232 cable.
- 5. Turn the MB switch, on the MIF-F(A)-10 KTU, to the ON position.
- 6. Program Memory Block(s): 1-8-25 (ACD Group Agent Assignment), 1-12-00 (ACD Group Pilot Number Assignment), 1-12-01 (ACD Group Overflow Destination Assignment) and 1-12-02 (ACD Overflow Timer Selection).

5.4.7 MIF-F(U)-10 KTU

The MIF-F(U)-10 KTU provides the Uniform Call Distribution (UCD) feature.

Only one MIF-F(U)-10 KTU can be installed in either system.

Note: MIF-F(A)-10 KTU and MIF-F(U)-10 KTU cannot both be installed in the same system.

Switch Settings/LED Indications:

The green LED (LED1), when lit, indicates the MIF-F(U)-10 KTU is receiving power. The red LED (LED2), when lit, indicates the MIF is exchanging data communications with the system CPU. [Refer to Figure 1-105 - MIF-F(U)-10 KTU Switch Layout.]

Installation:

The MIF-F(U)-10 KTU can be installed into an Option Slot (OP) or into one of the four Interface/Option Slots (IF1/OP1 \sim IF4/OP4), in the ESF-SB-10 KSU, ESF-XB-10 KSU, or the first ESF-XE-10 KSU installed.

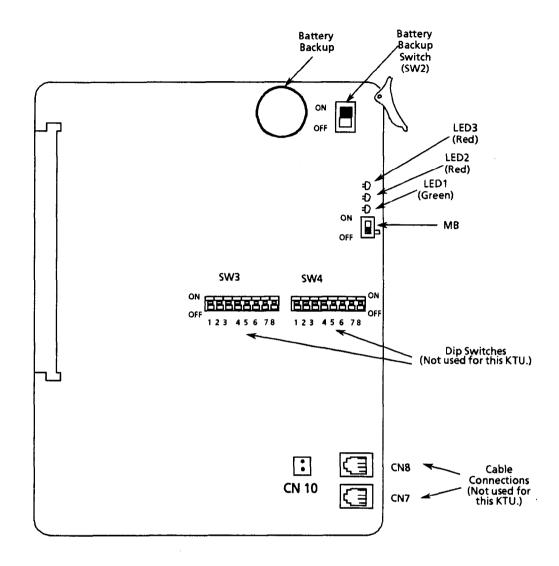


Figure 1-105 MIF-F(U)-10 KTU Switch Layout

SECTION 6 CABLE CONNECTIONS

6.1 **General Information**

6.1.1 Connection Requirements

The KSU is connected with each of the Multiline Terminals, Single Line Telephones, optional equipment, CO/PBX, DID, 4-wire E&M Tie lines (Types I and V), and digital trunks (T1/FT1) by a separate twisted-pair cable through the MDF. The 4-wire E&M Tie lines are T1/FT1 lines and require multiple twisted-pair cabling.

6.1.2Cabling Precautions

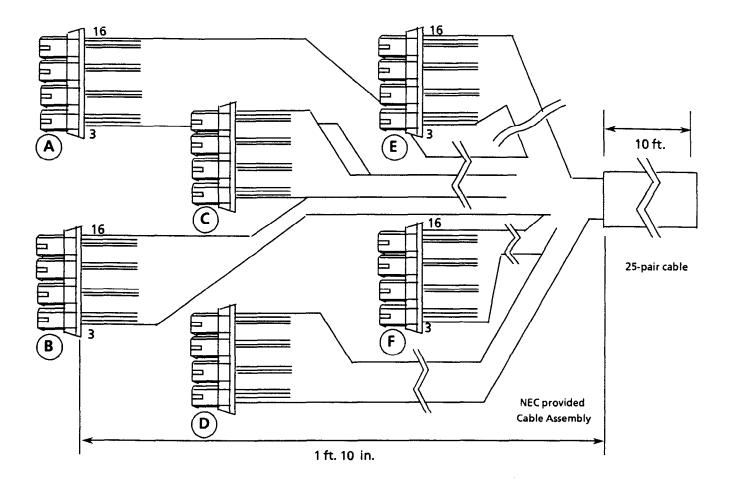
When selecting cables and the MDF, future expansion or assignment changes should be given due consideration. Avoid running cables in the following places:

- A place exposed to wind or rain [except the LLT-F(2G)-10 KTU].
- A place near heat radiating equipment or where the quality of PVC covering could be affected by gases and chemicals.
- An unstable place subject to vibration.

6.2 Wiring Between the KSU and the MDF

6.2.1 KSU Cables

The Level II Basic KSU is equipped with two MDF Cable Assemblies and the Expansion KSU is equipped with one MDF Cable Assembly. Each of the Level II Advanced Basic and Expansion KSUs are equipped with three MDF Cable Assemblies. NEC recommends that the MDF Cable Assembly be used to connect the Multiline Terminals, Single Line Telephones (except PFT), CO/PBX, and DID lines. (Refer to Figure 1-106 - MDF Cable Assembly Diagram and Table 1-43 - Connection Information/Connection and Port Relationships.) When installing 4-wire E&M Tie lines, Single Line Telephones with PFT, and other optional equipment with the ECR-F-11 KTU, NEC provides the connector; however, the cabling must be locally provided. (Refer to Section 6.2.2 - Connecting Cables to Special Connectors.)



ļ	CABLE COLORS						
	Α	В	С	D	E	F	
1							
2							
3	BL-WH	SL-WH	BR-RD	GN-BK	OR-YL	BL-VI	
4	WH-BL	WH-SL	RD-BR	BK-GN	YL-OR	VI-BL	
5	****						
6							
7	OR-WH	BL-RD	SL-RD	BR-BK	GN-YL	OR-VI	
8	WH-OR	RD-BL	RD-SL	BK-BR	YL-GN	VI-OR	
9							
10							
11	GN-WH	OR-RD	BL-BK	SL-BK	BR-YL	GN-VI	
12	WH-GN	RD-OR	BK-BL	BK-SL	YL-BR	VI-GN	
13							
14					*****		
15	BR-WH	GN-RD	OR-BK	BL-YL	SL-YL	BR-VI	
16	WH-BR	RD-GN	BK-OR	YL-BL	YL-SL	VI-BR	

 $Figure 1-106 \quad MDF \ Cable \ Assembly \ Diagram$

Table 1-43 Connection Information/Connection and Port Relationships

Table 1-43 Connection Information/Connection and Port Relationships Multiline Terminals, Others									
			Attendar	t Add-On					
ļ	MDF	Running	Console, or	SLT Adaptor	Station		Lead	Functions	·
Connectors	Pin No.	Cable	Station Cable	Lead Functions	Cable	CO Line	SLT (Note 1)	Loop Dial, DID LLT	DTI
	26 1	WH-BL BL-WH	BK YL	R T	GN RD	T R	T R	T R	RT RR
	27 2	WH-OR OR-WH	BK YL	R T	GN RD	T R	T R	T R	TT TR
A	28 3	WH-GN GN-WH	BK YL	R T	GN RD	T R	T R		
	29 4	WH-BR BR-WH	BK YL	R T	GN RD	T R	T R		
	30 5	WH-SL SL-WH	BK YL	R T	GN RD	T R	T R	T R	RT RR
.	31 6	RD-BL BL-RD	BK YL	R T	GN RD	T R	T R	T R	TT TR
В	32 7	RD-OR OR-RD	BK YL	R T	GN RD	T R	T R		
	33 8	RD-GN GN-RD	BK YL	R T	GN RD	T R	T R		
	34 9	RD-BR BR-RD	BK YL	R T	GN RD	T R	T R	T R	RT RR
	35 10	RD-SL SL-RD	BK YL	R T	GN RD	T R	T R	T R	TT TR
C	36 11	BK-BL BL-BK	BK YL	R T	GN RD	T R	T R		
	37 12	BK-OR OR-BK	BK YL	R T	GN RD	T R	T R		
	38 13	BK-GN GN-BK	BK YL	R T	GN RD	T R	T R	T R	RT RR
5	39 14	BK-BR BR-BK	BK YL	R T	GN RD	T R	T R	T R	TT TR
D	40 15	BK-SL SL-BK	BK YL	R T	GN RD	T R	T R		
	41 16	YL-BL BL-YL	BK YL	R T	GN RD	T R	T R		
	42 17	YL-OR OR-YL	BK YL	R T	GN RD	T R	T R	T R	RT RR
_	43 18	YL-GN GN-YL	BK YL	R T	GN RD	T R	T R	T R	TT TR
E	44 19	YL-BR BR-YL	BK YL	R T	GN RD	T R	T R		····
	45 20	YL-SL SL-YL	BK YL	R T	GN RD	T R	T R		
	46 2 1	VI-BL BL-VI	BK YL	R T	GN RD	T R	T R	T R	RT RR
F	47 22	VI-OR OR-VI	BK YL	R T	GN RD	T R	T R	T R	TT TR
IT	48 23	VI-GN GN-VI	BK YL	R T	GN RD	T R	T R		:
	49 24 50	VI-BR BR-VI	BK YL	R T R	GN RD	T R	T R		
	25	VI-SL SL-VI	N/C	T T	N/C	N/C	N/C	N/C	

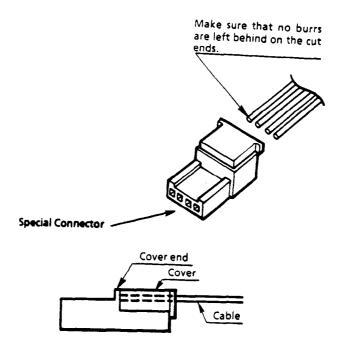
Note 1: SLI PFT required assembly of one 4-position connector by the installer. Only the first two channels provide for PFT connection. (Refer to Section 5.3.2.1 - Power Failure Backup for connector assembly.)

Note 2: The TLI-F(2)-10 KTU and ECR-F-11 KTU require assembly of the connectors by the installer. (Refer to Sections 6.2.3.1 - TLI-F(2)-10 KTU Cable Connections and 6.2.3.2 - ECR-F-11 KTU Cable Connections.)

6.2.2 Connecting Cables to Special Connectors

If installing a TLI-F(2)-10 KTU, ECR-F-11 KTU and/or an SLI-F(8G)-21 KTU with PFT, the cables must be connected to the provided connectors, in the KTU packing box. The following instructions explain this procedure.

1. Cut the four cables the same length and insert them into the connector. Ensure that all four cables have been inserted all the way to the end of the cover. (Refer to Figure 1-107 - Attaching the Cables to the Connector.)



Adaptable Cable			
	Core	Covering Outside Diameter	
	0.40 mm.	0.66 mm.	
ICT Cable	0.50 mm.	0.80 mm.	
	0.65 mm.	1.20 mm. +0	

Figure 1-107 Attaching the Cables to the Connector

2. Lightly hold the connecter with the pliers. In this case, make sure that the crimping portion is held between the lower portion of the jaws of the plier. (Refer to Figure 1-108 - Holding the Connector with the Pliers.)

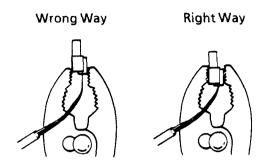


Figure 1-108 Holding the Connector with the Pliers

3. Squeeze the pliers to crimp the cables. If the cover is loose, press the cover again with the pliers.

Note: If sufficient pressure cannot be applied when the screw of the pliers is in the center position, change the position of the screw that allows the jaws of the pliers to close. Be careful when squeezing the hands of the pliers, excessive pressure could cause damage to the connector. (Refer to Figure 1-109 - Positioning the Screw of the Pliers.)

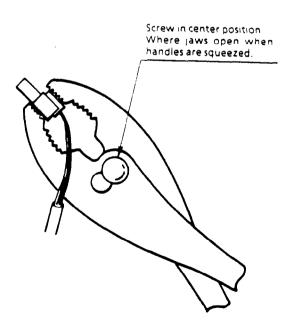


Figure 1-109 Positioning the Screw of the Pliers

6.2.3 Outside Lines

The FCC authorized connector for the connection of CO lines is an RJ21X. The CO lines will be connected in sequence within this termination block. Therefore, the lines must be ordered in the appearance order best suited to the customer's usage. (Refer to Table 1-43 - Connection Information/Connection & Port Relationships for information about the MDF Connector Assembly Cable positions, the cable number, and lead functions.)

Ground Start and/or Loop Start, Loop Dial, DID, 4-wire E&M Tie lines (Types I and V) and T1 can be connected to this system. It is recommended that only twisted pair wiring be used to cross-connect the lines from the RJ21X termination block to the MDF.

Half-tapping or parallel connections must not be used on outside lines connected to the system.

6.2.3.1 TLI-F(2)-10 KTU Cable Connections

Channel	Pins	
	16	T12
	15	R12
	14	T2
2	13	R2
_	12	E2
	11	M2
	10	
	9	
	8	T11
	7	R11
	6	T1
1	5	R1
-	4	E1
	3	M1
	2	
1	1	

- Note 1: TLI-F(2)-10 KTU contains one, 4-position connector for assembly by the installer.
- Note 2: The NEC provided six, 4-position connector cable CANNOT be used to support 4-wire E&M service. (Refer to Figure 1-106 MDF Cable Assembly Diagram.)
- Note 3: Connector pins 1~16 are counted from the bottom to the top of the KTU when it is installed into an interface slot.

6.2.3.2 ECR-F-11 KTU Cable Connections

Pin No.	Terminal Name	Function
16	8 RM	Enternal Description
15	8 RC	External Tone - Ringer 4
14	7 RM	10 D' 0
13	7 RC	External Tone - Ringer 3
12	6 RM	D
11	6 RC	External Tone - Ringer 2
10	5 RM	D . 100 D' 1
9	5 RC	External Tone - Ringer 1
8	4 RM	M: -1 4 O1 :
7	4 RC	Night Chime
6	3 RM	External Paging - Zone C
5	3 RC	External Faging - Zone C
4	2 RM	E-town al Danis - 7. D
3	2 RC	External Paging - Zone B
2	1 RM	Eutomal Daging Zone A
1	1 RC	External Paging - Zone A

- Note 1: ECR-F-11 KTU contains one, 4-position connector and two RCA plugs.
- Note 2: The NEC provided six, 4-position connector cable CANNOT be used to support this KTU. (Refer to Figure 1-106 MDF Cable Assembly Diagram.)
- Note 3: Connector pins 1 ~16 are counted from the bottom to the top of the KTU when it is installed into an interface slot.
- Note 4: External speakers and amplifiers must be locally provided.
- Note 5: External speakers must be 600Ω .

6.2.3.3 DTI-F()-10 KTU/DTI-F(A)-20 KTU Cable Connections

To install the cable between the T1/FT1 trunk and the DTI-F()-10 KTU or DTI-F(A)-20 KTU:

- 1. Connect the T1/FT1 trunk to the MDF. (Refer to Figure 1-110 MDF Trunk Connection.)
- 2. Connect this cable from the MDF to the DTI-F()-10 KTU or DTI-F(A)-20 KTU by twisted-pair cable. (Refer to Figure 1-110 MDF Trunk Connection.)

DTI-F()-10 KTU Terminal Pins Name 1 2 RT 3 4 RR 5 6 TT 7 8 TR 9 10

 DTI-F(A)-20 KTU

 Pins
 Terminal Name

 1
 TT

 2
 TR

 3
 RT

 4
 RR

Note 1: The maximum distance from the DTI-F()-10 KTU or DTI-F(A)-20 KTU to CSU is 655 feet, using 22 AWG.

Note 2: CSU is recommended for maintenance (loop back or alarm function) or surge protection. The customer needs to purchase and install the CSU.

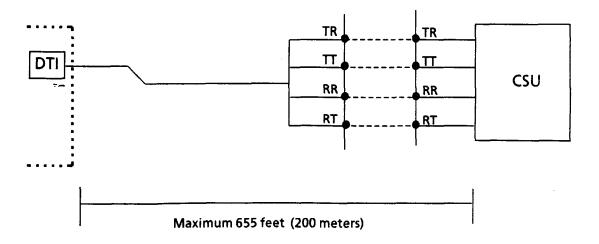


Figure 1-110 MDF Trunk Connection

6.2.3.4 SLI-F(8G)-21 KTU Cable Connections

Channel Pins				
	16	T4		
4	15	R4		
*	14			
	13			
	12	Т3		
3	11	R3		
J	10			
	9			
	8	T2		
2	7	R2		
4	6	PF T2		
	5	PF R2		
	4	T1		
1	3	R1		
1	2	PF T1		
	1	PF R1		

- Note 1: SLI-F(8G)-21 KTU contains two, 4-position connectors providing eight channels.
- Note 2: Channels 1 and 2 can be used for PFT. If PFT is to be used, the NEC provided six, 4-position connector cable CANNOT be used for channels 1~4. However, it can be used for channels 5~8. (Refer to Section 5.3.2.1 Power Failure Backup.)

6.2.4 Modular Terminal Connections

When connecting Multiline Terminals, Attendant Add-On Consoles, or SLT Adaptors to the MDF or IDF, individually twisted 1-pair cabling must be used. [Refer to Table 1-43 - Connection Information/Connection and Port Relationships for lead functions. Refer to Figure 1-111 - Modular Terminal for Connection of Multiline Terminals and Attendant Add-On Consoles for station modular jack (RJ13C/W) connection.]

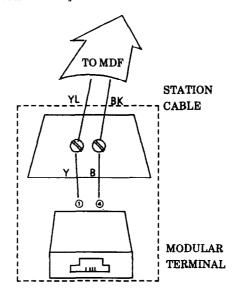


Figure 1-111 Modular Terminal for Connection of Multiline Terminals and Attendant Add-On Consoles

One-pair cabling is required; use of twisted pair cabling is recommended. (Refer to Table 1-43 - Connection Information/Connection and Port Relationships for lead functions. Refer to Figure 1-112 - Simplified Schematic of Single Line Telephone Connection for station termination.)

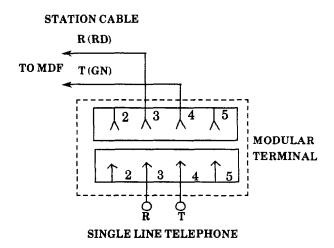


Figure 1-112 Simplified Schematic of Single Line Telephone Connection

For additional CO line connections to additional Single Line Telephones, similar cross connections should be made.

If dialing during power failure is required, Single Line Telephones should be equipped with DP/DTMF dialing to match the outside lines. If trunks are Ground Start, then Single Line Telephones must be equipped with a ground button.

When Single Line Telephones are installed, they can operate as power failure telephones, via cross connection on the MDF. (Refer to Figure 1-113 - Cross Connection of Single Line Telephones.)

Note: Single Line Telephones used for Power Failure Transfer must be supported by an SLI-F(8G)-21 KTU.

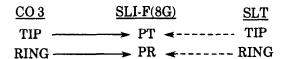


Figure 1-113 Cross Connection of Single Line Telephones

SECTION 7 TERMINAL INSTALLATIONS

7.1 General Information

The system has four kinds of Multiline Terminals, an Attendant Add-On Console, and an SLT Adaptor, which allows connection of Single Line Telephones.

This section provides the instructions for wall mounting a Multiline Terminal, for installing the plastic panels that are provided with the telephones, etc.

7.2 Multiline Terminals

7.2.1 ETW-8-1 (BK) TEL

This Multiline Terminal is a fully modular instrument with eight Flexible Line keys (each with a two-color LED), eight function keys, built-in speakerphone, Ancillary Device Adaptor (ADA) compatibility, a large LED to indicate incoming calls and messages, and a tilt stand. [Refer to Figure 1-114 - ETW-8-1 (BK) TEL Multiline Terminal.]

A maximum of 55 ETW-8-1 (BK) TELs can be installed in a Level II system and a maximum of 95 in a Level II Advanced system.



Figure 1-114 ETW-8-1 (BK) TEL Multiline Terminal

7.2.2 ETW-16DC-1 (BK) TEL

This Multiline Terminal is a fully modular instrument with 16 Flexible Line keys (each with a two-color LED), eight function keys, built-in speakerphone, Ancillary Device Adaptor (ADA) compatibility, 16-character by 2-line Liquid Crystal Display (LCD), a large LED to indicate incoming calls and messages, and a tilt stand. [Refer to Figure 1-115 - ETW-16DC-1 (BK) TEL Multiline Terminal.]

A maximum of 56 ETW-16DC-1 (BK) TELs can be installed in a Level II system and a maximum of 96 in a Level II Advanced system.



Figure 1-115 ETW-16DC-1 (BK) TEL Multiline Terminal

7.2.3 ETW-16DD-1 (BK) TEL

This Multiline Terminal is a fully modular instrument with 16 Flexible Line keys (each with a two-color LED), eight function keys, built-in speakerphone, Ancillary Device Adaptor (ADA) compatibility, 16-character by 2-line Liquid Crystal Display (LCD), 20 programmable One-Touch keys (with red LEDs for BLF), a large LED to indicate incoming calls and messages, and a tilt stand. [Refer to Figure 1-116 - ETW-16DD-1 (BK) TEL Multiline Terminal.]

A maximum of 56 ETW-16DD-1 (BK) TELs can be installed in a Level II system and a maximum of 96 in a Level II Advanced system.



Figure 1-116 ETW-16DD-1 (BK) TEL Multiline Terminal

7.2.4 ETW-24DS-1 (BK) TEL

This Multiline Terminal is a fully modular instrument with 24 Flexible Line keys (each with a two-color LED), eight function keys, built-in speakerphone, built-in dual path capability, Ancillary Device Adaptor (ADA) compatibility, 16-character by 2-line Liquid Crystal Display (LCD), 12 programmable One-Touch keys, a large LED to indicate incoming calls and messages, and a tilt stand. [Refer to Figure 1-117 - ETW-24DS-1 (BK) TEL Multiline Terminal.]

A maximum of 56 ETW-24DS-1 (BK) TELs can be installed in a Level II system and a maximum of 96 in a Level II Advanced system.



Figure 1-117 ETW-24DS-1 (BK) TEL Multiline Terminal

7.2.5 Connecting a Multiline Terminal to the System

- Plug a telephone cord into the modular jack on the bottom side of the Multiline Terminal. (Refer to Figure 1-118 - Connecting a Multiline Terminal to the System.)
- 2. Lead the cord out through the cord groove.

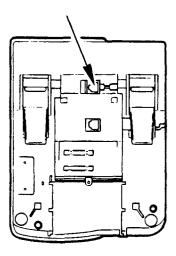
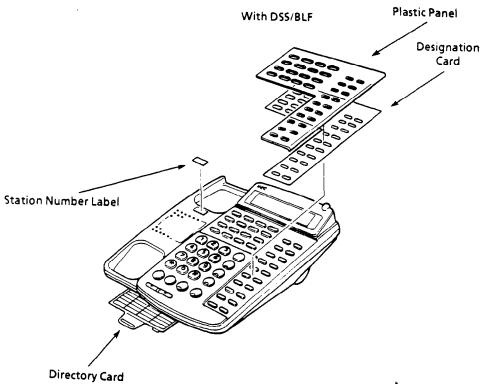


Figure 1-118 Connecting a Multiline Terminal to the System

- 7.2.6 Installing the Designation Card, Plastic Panel, and Labels on a Multiline Terminal
 - 1. Place the designation card over the keys on the Multiline Terminal. (Refer to Figure 1-119 Installing the Designation Card, Plastic Panel, and Labels on a Multiline Terminal.)
 - 2. Insert the top hooks of the clear plastic panel in the appropriate holes on the Multiline Terminal, then place the bottom hooks in the Multiline Terminal. Snap the plastic panel into place to secure it. (Refer to Figure 1-119 Installing the Designation Card, Plastic Panel, and Labels on a Multiline Terminal.)
 - 3. Remove the station number label and place on the handset hook.
 - 4. Remove the Directory Card from the sheet and put it on the Directory Tray. (Refer to Figure 1-119 Installing the Designation Card, Plastic Panel, and Labels on a Multiline Terminal.)



Without DSS/BLF

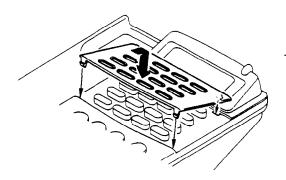


Figure 1-119 Installing the Designation Card, Plastic Panel, and Labels on a Multiline Terminal

7.2.7 Tilt Stand Adjustment

- 1. To unfold the legs on the tilt stand:
 - a. Turn the Multiline Terminal upside down.
 - b. Unfold the legs until they lock. (Refer to Figure 1-120 Unfolding the Legs on the Tilt Stand.)

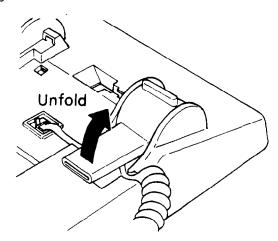


Figure 1-120 Unfolding the Legs on the Tilt Stand

- 2. To fold the legs on the tilt stand:
 - a. Turn the Multiline Terminal upside down.
 - b. Press the mold under the legs.
 - c. Fold the legs toward the body of the telephone. (Refer to Figure 1-121 Folding the Legs on the Tilt Stand.)

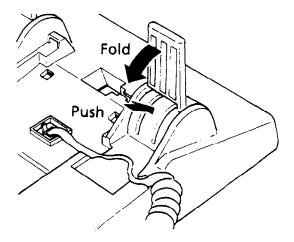


Figure 1-121 Folding the Legs on the Tilt Stand

7.3 EDW-48-() (BK) Console

The Attendant Add-On Console is equipped with 48 programmable keys with two LEDs (red and green), 12 function keys with one-color LED (red), and a tilt stand. [Refer to Figure 1-122 - EDW-48-() (BK) Console.]

A maximum of four EDW-48-() (BK) Consoles can be installed in the system.

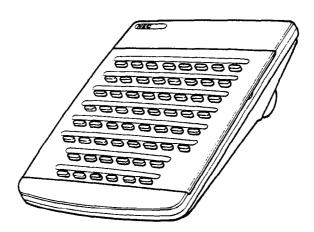


Figure 1-122 EDW-48-() (BK) Console

7.3.1 Connecting the EDW-48-() (BK) Console to the System

The EDW-48-() (BK) Console may be associated with any of the following Multiline Terminals: ETW-16DC-1 (BK) TEL, ETW-16DD-1 (BK) TEL, or ETW-24DS-1 (BK) TEL.

- 1. Plug a telephone cord into the modular jack on the bottom side of the Attendant Add-On Console.
- 2. Lead the cord out through the cord groove. (Refer to Figure 1-123 Connecting an Attendant Add-On Console to the System.)

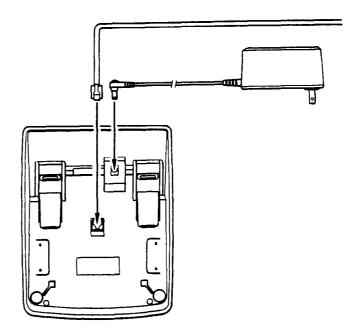


Figure 1-123 Connecting an Attendant Add-On Console to the System

3. Plug the AC/DC Adaptor into the jack located on the bottom of the Attendant Add-On Console.

7.3.2 Installing the Plastic Panel on an Attendant Add-On Console

- Place the Designation Card over the keys on the Attendant Add-On Console.
- 2. Insert the bottom hooks of the clear plastic panel in the appropriate holes in the Attendant Add-On Console and snap the panel into place.

7.4 SLT-F(1G)-10 ADP

This Single Line Telephone Adaptor provides an interface for a Single Line Telephone or similar device to an ESI-F(8)-21 KTU port. This adaptor includes a built-in ringing signal (RSG) generator.

One cable, with RJ11 connections at both ends, is provided with this unit. This cable is used to connect the adaptor to an ESI-F(8)-21 KTU port. The other RJ11 connector is used to connect an SLT or other similar device.

7.4.1 Connection

Figure 1-124 - Connecting a Single Line Telephone using the SLT-F(1G)-10 ADP, shows the connection from an ESI-F(8)-21 KTU port to a Single Line Telephone using the SLT-F(1G)-10 ADP.

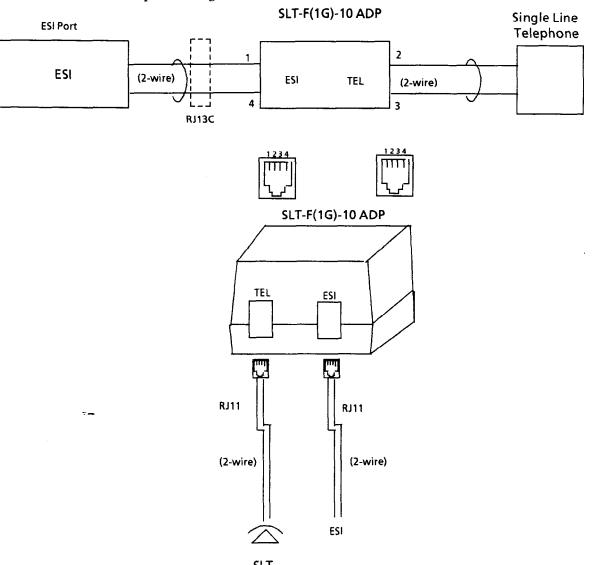


Figure 1-124 Connecting a Single Line Telephone using the SLT-F(1G)-10 ADP

7.4.2 Wall Mounting the SLT-F(1G)-10 ADP

There are two ways to wall mount this adaptor.

1. Use the wall mount location on the rear with one screw.

-OR-

1. Open the unit by removing the two screws from the top of the SLT-F(1G)-10 ADP. [Refer to Figure 1-125 - Removing the Screws from the SLT-F(1G)-10 ADP.]

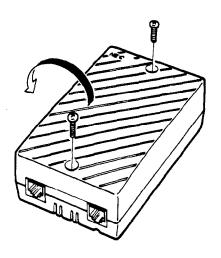


Figure 1-125 Removing the Screws from the SLT-F(1G)-10 ADP

2. Using the two provided wood screws, attach the unit to the wall. Close the unit and secure with the two screws previously removed. [Refer to Figure 1-126 - Attaching the SLT-F(1G)-10 ADP to a Wall.]

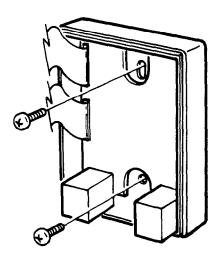


Figure 1-126 Attaching the SLT-F(1G)-10 ADP to a Wall

7.5 Wall Mounting Unit

7.5.1 General Information

The WMU-W (BK) Unit is a universal Wall Mount Unit which can be used to mount any Multiline Terminal.

7.5.2 Installing the Wall Mounting Unit [WMU-W (BK)]

The WMU-W Unit can be connected to any Multiline Terminal in the system.

- 1. Remove the station number plate and designation strip.
- 2. Remove the hanger by sliding it out. Remount it back in the original position with the projected side facing upward. (Refer to Figure 1-127 Wall Mounting Preparation.)

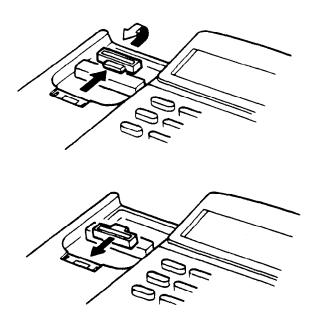


Figure 1-127 Wall Mounting Preparation

3. Reinstall the station number plate and designation strip.

4. Fasten the optional WMU-W (BK) Unit to the wall using the two provided screws. [Refer to Figure 1-128 - Mounting the WMU-W (BK) Unit to the Wall.]

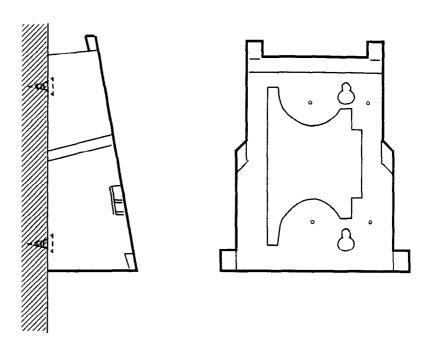


Figure 1-128 Mounting the WMU-W (BK) Unit to the Wall

5. Mount the Multiline Terminal onto the wall mounting unit by aligning the notches on the bottom of the Multiline Terminal with the rails on the wall mounting unit. [Refer to Figure 1-129 - Mounting the Multiline Terminal to the WMU-W (BK) Unit.]

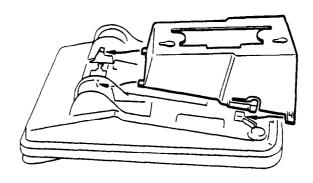


Figure 1-129 Mounting the Multiline Terminal to the WMU-W (BK) Unit

SECTION 8 ANCILLARY DEVICE CONNECTION

8.1 General Information

ADA(1)-W (BK) Unit

This Ancillary Device Adaptor Unit provides the Multiline Terminal with connection for a headset, external speakerphone, or other ancillary devices. An ADA(1)-W (BK) Unit can be installed in any Multiline Terminal.

A maximum of 56 ADA(1)-W (BK) Units can be installed in a Level II system and a maximum of 96 in a Level II Advanced system, one per Multiline Terminal.

ADA(2)-W (BK) Unit

This Ancillary Device Adaptor Unit provides the Multiline Terminal with a Single Line Telephone interface. An ADA(2)-W (BK) Unit can be installed in any Multiline Terminal and allows connection of a Single Line Telephone, cordless telephone, fax, modem, an automatic dialer (which generates DTMF tones for dialing), and an answering machine. The maximum distance between the ADA(2)-W (BK) Unit and the equipment is 10 feet, using 24 AWG. An AC/DC adaptor is required for power supply to the ADA(2)-W (BK) Unit. The ADA(2)-W (BK) Unit has a built-in RSG. Hookflash detection, Message Wait, and disconnect signal are not supported.

The recommended maximum is 16 ADA(2)-W (BK) Units, however, additional units can be installed depending on system traffic and the number of PBR circuits available.

8.2 Installing the Ancillary Device Adaptor Unit [ADA(1)-W (BK) or ADA(2)-W (BK)] in the Multiline Terminal

The ADA(1)-W (BK) Unit or ADA(2)-W (BK) Unit can be connected to any Multiline Terminal in the system.

- 1. Unplug the line and handset cords.
- 2. Turn the Multiline Terminal upside down and place it on a dry surface.
- 3. Remove the knockout (second from the top) on the bottom of the Multiline Terminal. [Refer to Figure 1-130 Removing the Knockouts to Install ADA(1)-W (BK) Unit or ADA(2)-W (BK) Unit.]

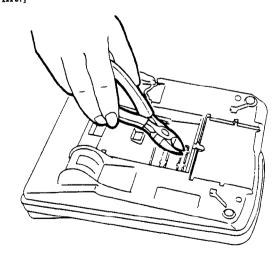


Figure 1-130 Removing the Knockouts to Install ADA(1)-W (BK) Unit or ADA(2)-W (BK) Unit

- 4. Plug the connector labeled CN1, from the ADA(1)-W (BK) Unit or ADA(2)-W (BK) Unit, into the jack labeled CN4, on the Main Board. [Refer to Figure 1-131 ADA(1)-W (BK) Unit or ADA(2)-W (BK) Unit Installation, Table 1-44 ADA(1)-W (BK) Unit Cable Connection, and Table 1-45 ADA(2)-W (BK) Unit Cable Connection.]
- 5. Mount the ADA(1)-W (BK) Unit into the Multiline Terminal using the screw provided (component side down). [Refer to Figure 1-131 ADA(1)-W (BK) Unit or ADA(2)-W (BK) Unit Installation.]
- 6. Connect the external device (fax, modem, answering machine, etc.) using the information provided in ETIs.

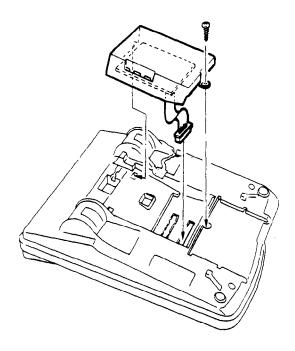


Figure 1-131 ADA(1)-W (BK) Unit or ADA(2)-W (BK) Unit Installation .

Table 1-44 ADA(1)-W (BK) Unit Cable Connection

ADA(1)-W	V (BK) Unit
From	То
CN1	CN4

Table 1-45 ADA(2)-W (BK) Unit Cable Connection

ADA(2)-W	(BK) Unit
From	То
CN1	CN4

- 7a. For ADA(2)-W (BK) Unit only:
 - Plug the AC/DC adaptor in the jack, located on the side of the ADA(2)-W (BK) Unit.
- 7b. Plug in the handset and line cords.
- 8. Test the operation of the Multiline Terminal and then test the operation of the external device.

SECTION 9 OPTIONAL EQUIPMENT CONNECTION

9.1 General Information

The system can support the following:

- External Music On Hold
- External Paging
- External Tone Ring/Night Chime

9.2 Music On Hold

Provision has been made to allow connection of a locally provided external music source to provide Music On Hold for held calls.

Music source input is made using the MOH jack located on the CPU-F()-20 KTU. For music source input level and impedance, refer to Section 2.12.1 - Music On Hold/Station Background Music, in this chapter.

To install:

- 1. Make a slit on the cable insulation approximately 1-1/2 inches long, at a distance of 12 inches from the plug end, on the cable to be connected to the MOH jack. Take special care not to cut into the shield wire and inner wire insulation.
- 2. Make a circular cut in the cable insulation at one end of the slit.
- 3. Pull the cut insulation from the cable to expose the shield for the length of the slit and cut the insulation off.
- 4. Bend the cable near the middle of the exposed shield and separate the shield from the inner insulation in preparation for soldering. (Refer to Figure 1-132 MOH Cable Shield Ground Exposed.)

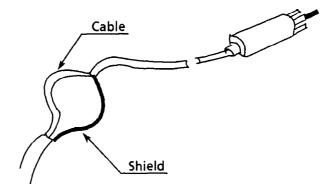


Figure 1-132 MOH Cable Shield Ground Exposed

- 5. Obtain a 7 inch length of 20~24 AWG stranded wire and connect a ring tongue type connector at one end.
- 6. Strip a 1/2 inch length of insulation from the other end of the 7 inch wire. Solder this end to the shield previously exposed in step 3. Place tape around this connection to prevent the possibility of short circuits.
- 7. Connect the plug end into the CPU-F()-20 KTU MOH jack. (Refer to Figure 1-133 Music Source Connection.)

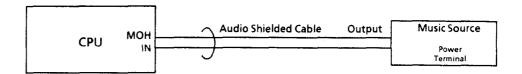


Figure 1-133 Music Source Connection

8. Route the cable down and to the right side of the KSU to avoid interference with the insertion and the removal of KTUs. Exit the other end of the cable at the right rear side of the KSU. (Refer to Figure 1-134 - MOH Cable Route.)

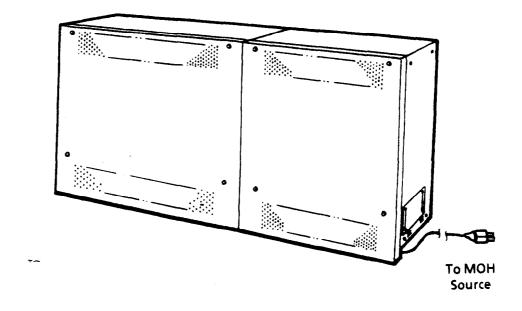


Figure 1-134 MOH Cable Route

9.3 External Paging

The ECR-F-11 KTU provides audio output for External Paging (which is available at phone jack JK2 on the ECR-F-11 KTU) and three contact closures (one per zone) for use in zone paging with Meet-Me Answer. These contacts are labeled 1RC and 1RM, 2RC and 2RM, 3RC and 3RM. (Refer to Section 6.2.3.2 - ECR-F-11 KTU Cable Connections.) A maximum of one ECR-F-11 KTU can be installed in a system providing a total of three paging zones.

It is necessary for the audio output to be connected to a locally provided amplifier and speaker(s), which are connected to the output of the amplifier. If the amplifier is a 2-way amplifier, 2-way paging is available. Shielded audio cable should be used for external paging audio connections. This audio cable, from JK2 to the external amplifier, should be wrapped three turns around a ferrite core. (For connection information to a locally provided amplifier, refer to Figure 1-135 - Connecting External Paging. For external paging audio output level and impedance, refer to Section 2.12 - External Equipment Interface, in this chapter.)

When External Paging is answered by Meet-Me Answer, the external paging audio circuit and the control circuits in the ECR-F-11 KTU are released to allow access for another page.

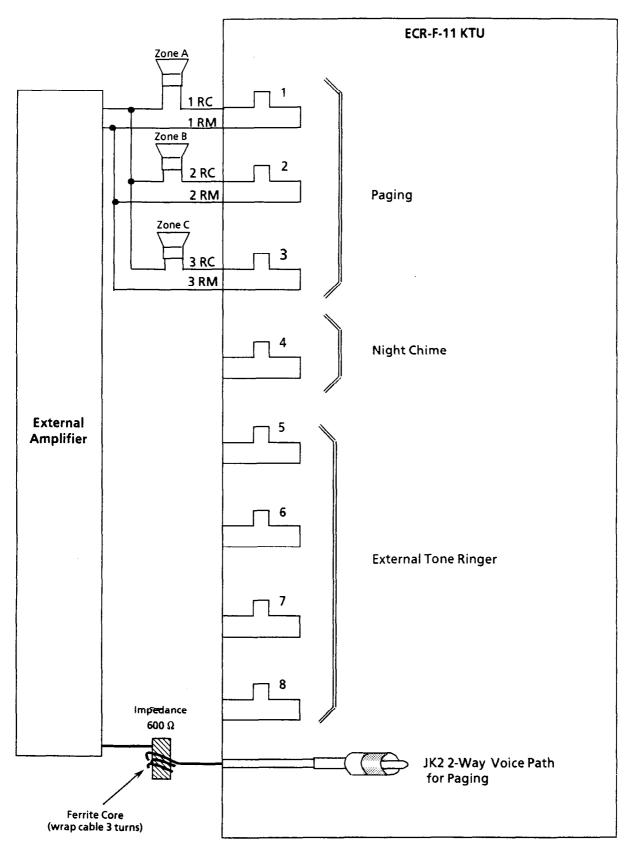


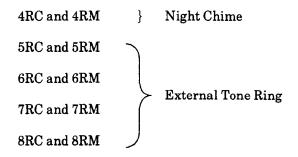
Figure 1-135 Connecting External Paging

9.4 External Tone Ring/Night Chime

External Tone Ring/Night Chime is available when the ECR-F-11 KTU is installed. The ECR-F-11 KTU provides a continuous tone source for external tone ringing. The external tone can be set to any of five ringing patterns. These patterns are selected in System Programming. (Refer to Chapter 2 - Programming, Manual System Mode (LK1), ESP (LK7) No. 07, in this manual.)

The audio output for external tone ringing appears at the phone jack JK1 on the ECR-F-11 KTU. The level is adjustable with the volume control VR1 on the ECR-F-11 KTU.

Shielded audio cable is required for this feature. The ECR-F-11 KTU provides five relay contacts for External Tone Ring/Night Chime. (Refer to Section 6.2.3.2 - ECR-F-11 KTU Cable Connections.) These contacts are labeled as follows:



(Refer to Figure 1-136 - Connecting External Tone Ring/Night Chime for connecting locally provided amplifiers and speakers and Section 2.12 - External Equipment Interface for audio output specifications.)

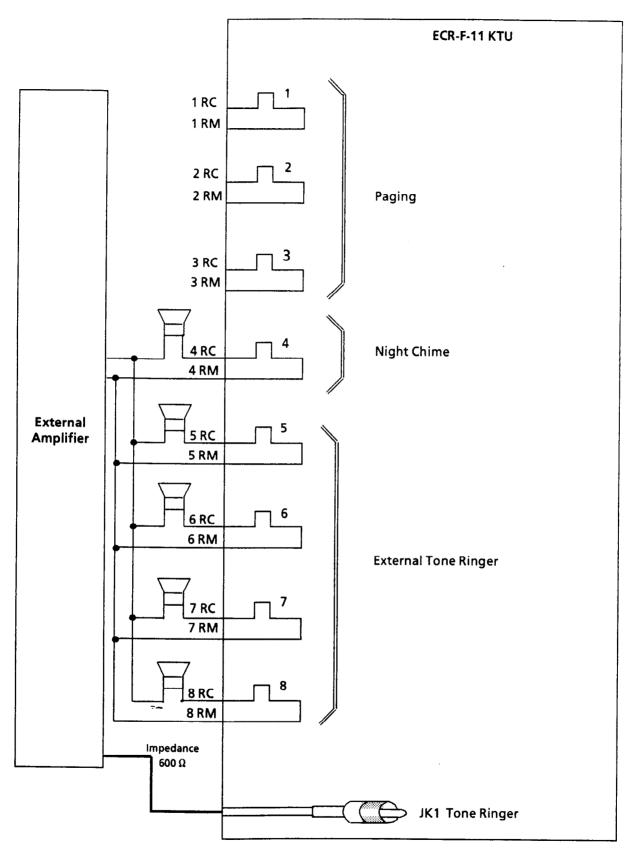


Figure 1-136 Connecting External Tone Ring/Night Chime

SECTION 10 LCD INDICATIONS TABLE

Table 1-46 LCD Indications

All Stations with Clock/Calendar	Display	Location	Definition
ALL FWD CANCLD Canceling DND/Call Forward - All Calls System-Wide Canceling DND/Call Forward - All Calls At Individual Stations FWD SET [] Originator FWD RESET[] Setting Call Forward - All Calls From Forward To Extension FWD RESET[] Resetting Call Forward - All Calls From Forward To Extension BUSY 100 -> [] Setting Call Forward - Busy FWD BUSY CANCLD NOANS 100 -> [] Setting Call Forward - No Answer FWD NA CANCLD FWD RA CANCLD FWD BNA CANCLD Canceling Call Forward - No Answer FWD BNA CANCL Canceling Call Forward Busy - No Answer FWD BNA CANCL Canceling Call Forward Busy - No Answer Canceling Call Forward Busy - No Answer FWD BNA CANCL Canceling Call Forward Busy - No Answer Canceling Call Forward Busy - No Answer Canceling Call Forward Busy - No Answer FWD BNA CANCL Canceling Call Forward Busy - No Answer Canceling Call Forward Busy - No Answer Setting Customized Message System-Wide or From Individual Station NIGHT MODE SET Night Mode Switch Night Mode Switch NIGHT MODE RESET Resetting Night Mode For Tenant CALLBACK CANCLD Canceling Callback System-Wide Canceling Callback System-Wide Resetting FNC LED CURRENT PASSWORD? Originator Telephone Password (1) NEW PASSWORD? Originator Telephone Password (2) ENTER PASSWORD Originator After Setting Password CALL DENIED Originator After Setting Password CALL DENIED Originator CALL DENIED Originator After Canceling Outgoing Restricted Telephone RESTRICT EANCLD Originator After Canceling Outgoing Call Restricted Telephone RESTRICT CANCLD Originator After Canceling Outgoing Call Restricted Telephone Relay On Re	12:24 AM WED 10		Clock/Calendar
FWD CANCL Originator Canceling DND/Call Forward - All Calls At Individual Stations FWD SET [] Originator FWD RESET[] Resetting Call Forward - All Calls From Forward To Extension FWD RESET[] Resetting Call Forward - All Calls From Forward To Extension BUSY 100 -> [] Sotting Call Forward - Busy NOANS 100 -> [] Setting Call Forward - Busy NOANS 100 -> [] Setting Call Forward - No Answer FWD BUSY CANCLD Canceling Call Forward - No Answer FWD BNA - [] Setting Call Forward Busy - No Answer FWD BNA CANCLD Canceling Call Forward Busy - No Answer FWD BNA CANCL BACK 79777777 Setting Customized Message Canceling Customized Message System-Wide or From Individual Station Night Mode Switch Night Mode Switch Night Mode For Tenant CALLBACK CANCLD TRESHAM CALLBACK CANCLD Canceling Callback System-Wide FNC LAMP OFF CURRENT PASSWORD? Originator Telephone Password (1) NEW PASSWORD? Originator RESTRICT SET Originator CALL DENIED Originator RESTRICT SET Originator CALL DENIED Originator RESTRICT CANCLD Originator After Canceling Outgoing Call Restriction After Canceling Outgoing Call Restricted Telephone RESTRICT CANCLD Originator After Canceling Outgoing Call Restricted Telephone RESTRICT CANCLD Originator After Canceling Outgoing Call Restricted Telephone RESTRICT CANCLD Originator After Canceling Outgoing Call Restricted Telephone RESTRICT CANCLD Originator After Canceling Outgoing Call Restricted Telephone RESTRICT CANCLD Originator After Canceling Outgoing Call Restricted Telephone RESTRICT CANCLD Originator After Canceling Alarm For A.M. Setting Alarm For P.M. ALARM PM 00: 00 Setting Alarm For D.M. Setting Dalarm System-Wide Setting Timed Alarm System-Wide Setting Timed Alarm System-Wide Setting Timed Alarm For SLT Originator Save and Repeat Number Is Stored	FWD 100 - > []		Setting Call Forward - All Calls
FWD SET {] Originator Setting Call Forward - All Calls From Forward To Extension FWD RESET {] Resetting Call Forward - All Calls From Forward To Extension BUSY 100> { _ } Setting Call Forward - Busy FWD BUSY CANCLD Canceling Call Forward - Busy NOANS 100 -> { _ } Setting Call Forward - Busy NOANS 100 -> { _ } Setting Call Forward - No Answer FWD BNA -> { _ } Setting Call Forward - No Answer FWD BNA -> { _ } Setting Call Forward - No Answer FWD BNA -> { _ } Setting Call Forward - No Answer FWD BNA -> { _ } Setting Call Forward Busy - No Answer FWD BNA -> { _ } Setting Call Forward Busy - No Answer FWD BNA -> { _ } Setting Customized Message MESSAGE CLEAR MIGHT MODE SET Night Mode Switch Night Mode Switch NIGHT MODE RESET Resetting Night Mode NT TENANT CALLBACK CANCLD FNC LAMP OFF CURRENT PASSWORD Originator Telephone Password (1) NEW PASSWORD? Originator Telephone Password (2) ENTER PASSWORD Originator CALL DENIED Originator CALL DENIED Originator CALL DENIED Originator CALL DENIED Originator CANCEL TEL ??? Canceling Restriction on Another Telephone RESTRICT CANCLD Originator Relay On Relay On RLY 0 ON Relay On RLY 0 ON Relay Off ALARM AM 00: 00 ALARM PM 00: 00 ALARM PM 00: 00 ALARM PM 00: 00 ALARM Setting Timed Alarm For P.M. ALLARM SET TIME REMINDER Originator Setting Timed Alarm System-Wide Setting Timed Alarm For SLT Originator Setting Timed Alarm For SLT Originator Setting Timed Alarm System-Wide Setting Timed Alarm For SLT Originator Setting Do Not Disturb Save and Repeat Number Is Stored	ALL FWD CANCLD		
Extension Resetting Call Forward - All Calls From Forward To Extension Setting Call Forward - Busy	FWD CANCL	Originator	Canceling DND/Call Forward - All Calls At Individual Stations
BUSY 100> [] Setting Call Forward - Busy FWD BUSY CANCLD NOANS 100 -> [] Setting Call Forward - No Answer FWD BNA CANCLD Canceling Call Forward - No Answer FWD BNA -> [] Setting Call Forward Busy - No Answer FWD BNA CNCL Canceling Call Forward Busy - No Answer FWD BNA CNCL BACK ???? ???? Setting Customized Message Canceling Customized Message Canceling Customized Message System-Wide or From Individual Station NIGHT MODE SET Night Mode Switch NIGHT MODE RESET Resetting Night Mode NT TENANT CALLBACK CANCLD Canceling Callback System-Wide FNC LAMP OFF CURRENT PASSWORD? Originator CURRENT PASSWORD? Originator RESTRICT SET Originator CALL DENIED Originator CANCLD Originator After Setting Password CANCLD CANCEL TEL ??? CANCEL TEL ??? Relay Off ALARM AM 00: 00 ALARM PM 00: 00 Setting Alarm For A.M. ALLALARM CANCLD Canceling Callbar System-Wide Setting Alarm For A.M. ALLALARM PM 00: 00 Setting Alarm For SLT Originator Setting Alarm System-Wide Setting Alarm System-Wide Setting Alarm For A.M. Setting Alarm For SLT Originator Setting Alarm System-Wide Setting Alarm System-Wide Setting Alarm System-Wide Setting Alarm System-Wide Setting Alarm For SLT DND SET Originator Originator Setting Do Not Disturb Save and Repeat Number Is Stored	FWD SET[]	Originator	Setting Call Forward - All Calls From Forward To Extension
Canceling Call Forward - Busy	FWD RESET[]		
Setting Call Forward - No Answer	BUSY 100 > []		Setting Call Forward - Busy
FWDNA CANCLD Canceling Call Forward - No Answer FWD BNA -> [] Setting Call Forward Busy - No Answer FWD BNA CNCL Canceling Call Forward Busy - No Answer Setting Customized Message MESSAGE CLEAR MESSAGE CLEAR MIGHT MODE SET Night Mode Switch NIGHT MODE RESET Night Mode Switch NIGHT MODE RESET Resetting Night Mode NT TENANT CALLBACK CANCLD Canceling Callback System-Wide FNC LAMP OFF CURRENT PASSWORD? Originator CURRENT PASSWORD? Originator RESTRICT SET Originator CALL DENIED Originator CALL DENIED Originator CANCEL TEL ??? Canceling Call Forward Busy - No Answer Setting Customized Message Canceling Customized Message Setting Night Mode Switch Night Mode Switch Night Mode Switch Night Mode FOR Tenant Canceling Callback System-Wide Resetting Pashord (1) Telephone Password (1) Telephone Password (2) Setting Password (CO/PBX Restriction) After Setting Password CO/PBX Restriction After Canceling Outgoing Restricted Telephone RESTRICT CANCLD Originator After Canceling Outgoing Call Restriction CANCEL TEL ??? Canceling Restriction on Another Telephone REY 0 ON Relay On Relay On Relay On RLY 0 OFF Relay Off ALARM AM 00:00 ALARM PM 00:00 Setting Alarm For A.M. ALARM PM 00:00 Canceling Alarm For P.M. ALL ALARM CANCLD Canceling Alarm System-Wide Setting Timed Alarm for SLT DND SET Originator Save and Repeat Number Is Stored	FWD BUSY CANCLD		
FWD BNA ->[] Setting Call Forward Busy - No Answer FWD BNA CNCL Canceling Call Forward Busy - No Answer BACK ????? ???? Setting Customized Message MESSAGE CLEAR Canceling Customized Message System-Wide or From Individual Station NIGHT MODE SET Night Mode Switch NIGHT MODE RESET Resetting Night Mode NT TENANT Setting Night Mode For Tenant CALLBACK CANCLD Canceling Callback System-Wide FNC LAMP OFF Resetting FNC LED CURRENT PASSWORD? Originator Telephone Password (1) NEW PASSWORD? Originator Telephone Password (2) ENTER PASSWORD Originator Setting Password (CO/PBX Restriction) RESTRICT SET Originator Display on Station Outgoing Restricted Telephone RESTRICT CANCLD Originator After Canceling Outgoing Call Restriction CANCEL TEL ??? Canceling Restriction on Another Telephone RLY 0 ON Relay On RLY 0 OFF Relay Off ALARM AM 00: 00 Setting Alarm For A.M. ALARM PM 00: 00 Setting Alarm For P.M. ALL ALARM CANCLD Canceling Alarm For P.M. ALL ALARM CANCLD Canceling Alarm System-Wide SET TIME REMINDER Setting Do Not Disturb SAVE & REPEAT Originator Save and Repeat Number Is Stored	NOANS 100 - > []		Setting Call Forward - No Answer
FWD BNA CNCL BACK ???? ??? Setting Customized Message MESSAGE CLEAR MIGHT MODE SET Night Mode Switch NIGHT MODE RESET Night Mode For Tenant CALLBACK CANCLD From Individual Station Night Mode For Tenant CALLBACK CANCLD Current PASSWORD? Originator ENTER PASSWORD Originator CALL DENIED Originator CANCEL TEL ??? Canceling Customized Message System-Wide or From Individual Station Night Mode Switch Night Mode Switch Night Mode For Tenant Canceling Callback System-Wide Resetting Night Mode For Tenant Canceling Callback System-Wide Resetting FNC LED Current PASSWORD? Originator Telephone Password (1) NEW PASSWORD? Originator Setting Password (CO/PBX Restriction) RESTRICT SET Originator After Setting Password CALL DENIED Originator After Canceling Outgoing Restricted Telephone RESTRICT CANCLD Originator After Canceling Outgoing Call Restriction CANCEL TEL ??? Canceling Restriction on Another Telephone RLY 0 ON Relay On Relay On Relay On Relay On ALARM AM 00:00 Setting Alarm For A.M. ALARM FM 00:00 ALARM PM 00:00 Setting Alarm For P.M. ALL ALARM CANCLD Canceling Alarm System-Wide Setting Timed Alarm for SLT DND SET Originator Seve and Repeat Number Is Stored	FWDNA CANCLD		Canceling Call Forward - No Answer
BACK ???????? Setting Customized Message Canceling Customized Message System-Wide or From Individual Station NIGHT MODE SET Night Mode Switch Night Mode Switch Resetting Night Mode NT TENANT CALLBACK CANCLD Canceling Callback System-Wide FNC LAMP OFF CURRENT PASSWORD? Originator New PASSWORD? Originator ENTER PASSWORD Originator CALL DENIED Originator RESTRICT SET Originator CANCEL TEL ??? Canceling Callback System-Wide Resetting FNC LED CURRENT PASSWORD Originator After Setting Password (2) Setting Password (CO/PBX Restriction) After Setting Password CALL DENIED Originator CANCEL TEL ??? Canceling Outgoing Call Restricted Telephone RESTRICT CANCLD Originator After Canceling Outgoing Call Restriction CANCEL TEL ??? Canceling Restriction on Another Telephone RLY 0 ON Relay On RLY 0 OFF ALARM AM 00:00 Setting Alarm For A.M. ALARM FM 00:00 ALARM PM 00:00 Canceling Alarm For P.M. ALL ALARM CANCLD Canceling Alarm System-Wide SET TIME REMINDER Originator Setting Do Not Disturb SAVE & REPEAT Originator Save and Repeat Number Is Stored	FWD BNA - > []		Setting Call Forward Busy - No Answer
MESSAGE CLEAR Canceling Customized Message System-Wide or From Individual Station NIGHT MODE SET Night Mode Switch Resetting Night Mode NT TENANT CALLBACK CANCLD Canceling Callback System-Wide FNC LAMP OFF CURRENT PASSWORD? Originator NEW PASSWORD? Originator ENTER PASSWORD Originator CALL DENIED Originator CANCEL TEL ??? Canceling Restriction on Another Telephone Relay On Relay On Relay On RLY 0 OFF ALARM AM 00:00 ALL ALARM CANCLD Canceling Alarm For P.M. ALL ALARM CANCLD Coriginator Originator Canceling Alarm System-Wide Setting Password (CO/PBX Restriction) Canceling Restriction on Another Telephone Relay On Relay On Relay On Setting Alarm For A.M. Setting Alarm For P.M. Setting Alarm System-Wide Setting Alarm System-Wide Setting Timed Alarm for SLT DND SET Originator Save and Repeat Number Is Stored	FWD BNA CNCL		Canceling Call Forward Busy - No Answer
NIGHT MODE SET NIGHT MODE RESET Night Mode Switch Night Mode For Tenant CALLBACK CANCLD Canceling Callback System-Wide FNC LAMP OFF Resetting FNC LED CURRENT PASSWORD? Originator Telephone Password (1) NEW PASSWORD? Originator ENTER PASSWORD Originator Originator CALL DENIED Originator CALL DENIED Originator CANCEL TEL ??? Canceling Restriction on Another Telephone RESTRICT CANCLD CANCEL TEL ??? Canceling Restriction on Another Telephone RLY 0 ON Relay On RLY 0 OFF ALARM AM 00:00 ALARM PM 00:00 ALARM PM 00:00 ALL ALARM CANCLD Canceling Alarm For A.M. ALL ALARM CANCLD Canceling Alarm System-Wide SET TIME REMINDER Originator Save and Repeat Number Is Stored	BACK ??/?? ??:??		Setting Customized Message
NIGHT MODE RESET Resetting Night Mode NT TENANT CALLBACK CANCLD FNC LAMP OFF CURRENT PASSWORD? Originator NEW PASSWORD Originator ENTER PASSWORD Originator CALL DENIED Originator CALL DENIED Originator CANCEL TEL?? Resetting FNC LED Originator After Canceling Callback System-Wide After Canceling Password (1) NEW PASSWORD Originator After Setting Password (2) Display on Station Outgoing Restricted Telephone RESTRICT CANCLD Originator CANCEL TEL ??? Canceling Restriction on Another Telephone RLY 0 ON Relay On RLY 0 OFF ALARM AM 00:00 ASEtting Alarm For A.M. ALARM PM 00:00 Setting Alarm For P.M. ALL ALARM CANCLD Canceling Alarm System-Wide SET TIME REMINDER Originator Setting Do Not Disturb SAVE & REPEAT Originator Save and Repeat Number Is Stored	MESSAGE CLEAR		Canceling Customized Message System-Wide or From Individual Station
NT TENANT CALLBACK CANCLD Canceling Callback System-Wide FNC LAMP OFF Resetting FNC LED CURRENT PASSWORD? Originator NEW PASSWORD? Originator Telephone Password (1) NEW PASSWORD Originator ENTER PASSWORD Originator RESTRICT SET Originator CALL DENIED Originator Originator Originator Originator Originator Originator After Setting Password CALL DENIED Originator Originator After Canceling Outgoing Restricted Telephone RESTRICT CANCLD Originator CANCEL TEL ??? Canceling Restriction on Another Telephone RLY 0 ON Relay On RLY 0 OFF ALARM AM 00:00 Setting Alarm For A.M. Setting Alarm For P.M. ALL ALARM CANCLD Canceling Alarm System-Wide SET TIME REMINDER Setting Timed Alarm for SLT DND SET Originator Save and Repeat Number Is Stored	NIGHT MODE SET		Night Mode Switch
CALLBACK CANCLD FNC LAMP OFF CURRENT PASSWORD? Originator Telephone Password (1) NEW PASSWORD? Originator ENTER PASSWORD Originator Telephone Password (2) ENTER PASSWORD Originator RESTRICT SET Originator CALL DENIED Originator RESTRICT CANCLD Originator CANCEL TEL??? Canceling Restriction on Another Telephone RLY 0 ON RLY 0 OFF ALARM AM 00:00 ALARM PM 00:00 ALARM PM 00:00 ALL ALARM CANCLD Canceling Alarm For P.M. ALL ALARM CANCLD Canceling Alarm System-Wide SET TIME REMINDER Originator Originator Setting Do Not Disturb Save and Repeat Number Is Stored	NIGHT MODE RESET		Resetting Night Mode
Telephone Password (1) NEW PASSWORD? Originator Telephone Password (2) ENTER PASSWORD Originator Telephone Password (CO/PBX Restriction) RESTRICT SET Originator CALL DENIED Originator Originator Telephone Password (CO/PBX Restriction) After Setting Password CALL DENIED Originator Display on Station Outgoing Restricted Telephone RESTRICT CANCLD Originator CANCEL TEL??? Canceling Restriction on Another Telephone RLY 0 ON Relay On RLY 0 OFF Relay Off ALARM AM 00:00 Setting Alarm For A.M. ALARM PM 00:00 Setting Alarm For P.M. ALL ALARM CANCLD Canceling Alarm System-Wide SET TIME REMINDER Setting Timed Alarm for SLT DND SET Originator Save and Repeat Number Is Stored	NT TENANT		Setting Night Mode For Tenant
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ENTER PASSWORD Originator Setting Password (CO/PBX Restriction) RESTRICT SET Originator Originator Display on Station Outgoing Restricted Telephone RESTRICT CANCLD Originator After Canceling Outgoing Call Restriction CANCEL TEL ??? Canceling Restriction on Another Telephone RLY 0 ON RLY 0 OFF Relay On RLY 0 OFF ALARM AM 00:00 Setting Alarm For A.M. ALARM PM 00:00 Setting Alarm For P.M. ALL ALARM CANCLD Canceling Alarm System-Wide SET TIME REMINDER Setting Timed Alarm for SLT DND SET Originator Save and Repeat Number Is Stored	CURRENT PASSWORD?	Originator	Telephone Password (1)
RESTRICT SET Originator Originator Display on Station Outgoing Restricted Telephone RESTRICT CANCLD Originator After Canceling Outgoing Call Restriction CANCEL TEL??? Canceling Restriction on Another Telephone RLY 0 ON RLY 0 OFF Relay Off ALARM AM 00:00 Setting Alarm For A.M. Setting Alarm For P.M. ALARM CANCLD Canceling Alarm System-Wide SET TIME REMINDER Setting Timed Alarm for SLT DND SET Originator Save and Repeat Number Is Stored	NEW PASSWORD?	Originator	Telephone Password (2)
CALL DENIED Originator Display on Station Outgoing Restricted Telephone RESTRICT CANCLD Originator CANCEL TEL??? Canceling Restriction on Another Telephone RLY 0 ON RLY 0 OFF Relay Off ALARM AM 00:00 Setting Alarm For A.M. ALARM PM 00:00 Setting Alarm For P.M. ALL ALARM CANCLD Canceling Alarm System-Wide SET TIME REMINDER Setting Timed Alarm for SLT DND SET Originator SAVE & REPEAT Originator Save and Repeat Number Is Stored	ENTER PASSWORD	Originator	Setting Password (CO/PBX Restriction)
RESTRICT CANCLD Originator CANCEL TEL??? Canceling Restriction on Another Telephone RLY 0 ON RLY 0 OFF Relay Off ALARM AM 00:00 Setting Alarm For A.M. ALARM PM 00:00 Setting Alarm For P.M. Canceling Alarm System-Wide SET TIME REMINDER DND SET Originator SAVE & REPEAT Originator Save and Repeat Number Is Stored	RESTRICT SET	Originator	After Setting Password
CANCEL TEL ??? Canceling Restriction on Another Telephone RLY 0 ON Relay On RLY 0 OFF Relay Off ALARM AM 00:00 Setting Alarm For A.M. Setting Alarm For P.M. ALL ALARM CANCLD Canceling Alarm System-Wide SET TIME REMINDER DND SET Originator Setting Do Not Disturb SAVE & REPEAT Originator Save and Repeat Number Is Stored	CALL DENIED	Originator	Display on Station Outgoing Restricted Telephone
RLY 0 ON Relay On RLY 0 OFF Relay Off ALARM AM 00:00 Setting Alarm For A.M. ALARM PM 00:00 Setting Alarm For P.M. ALL ALARM CANCLD Canceling Alarm System-Wide SET TIME REMINDER Setting Timed Alarm for SLT DND SET Originator Setting Do Not Disturb SAVE & REPEAT Originator Save and Repeat Number Is Stored	RESTRICT CANCLD	Originator	After Canceling Outgoing Call Restriction
RLY 0 OFF Relay Off ALARM AM 00:00 Setting Alarm For A.M. ALARM PM 00:00 Setting Alarm For P.M. ALL ALARM CANCLD Canceling Alarm System-Wide SET TIME REMINDER Setting Timed Alarm for SLT DND SET Originator Setting Do Not Disturb SAVE & REPEAT Originator Save and Repeat Number Is Stored	CANCEL TEL ???		Canceling Restriction on Another Telephone
ALARM AM 00:00 ALARM PM 00:00 Setting Alarm For A.M. Setting Alarm For P.M. Canceling Alarm System-Wide SET TIME REMINDER Setting Timed Alarm for SLT DND SET Originator SAVE & REPEAT Originator Save and Repeat Number Is Stored	RLY 0 ON		Relay On
ALARM PM 00:00 ALL ALARM CANCLD Canceling Alarm System-Wide SET TIME REMINDER Setting Timed Alarm for SLT DND SET Originator Setting Do Not Disturb SAVE & REPEAT Originator Save and Repeat Number Is Stored	RLY 0 OFF		Relay Off
ALARM PM 00:00 ALL ALARM CANCLD Canceling Alarm System-Wide SET TIME REMINDER Setting Timed Alarm for SLT DND SET Originator Setting Do Not Disturb SAVE & REPEAT Originator Save and Repeat Number Is Stored	ALARM AM 00:00		Setting Alarm For A.M.
ALL ALARM CANCLD SET TIME REMINDER Setting Timed Alarm for SLT DND SET Originator Setting Do Not Disturb SAVE & REPEAT Originator Save and Repeat Number Is Stored			
SET TIME REMINDERSetting Timed Alarm for SLTDND SETOriginatorSetting Do Not DisturbSAVE & REPEATOriginatorSave and Repeat Number Is Stored	ALL ALARM CANCLD		-
DND SET Originator Setting Do Not Disturb SAVE & REPEAT Originator Save and Repeat Number Is Stored	SET TIME REMINDER		.
SAVE & REPEAT Originator Save and Repeat Number Is Stored	DND SET	Originator	
	SAVE & REPEAT	 	-
	INT ALL PAGE		

Display	Location	Definition
INT PAGE [A]		Group Paging
TENT[]		Tenant Paging
SPKR [A]	Originator	External Speaker
TRF SET CO =		Setting Automatic Tandem Trunk Transfer IN/OUT Trunk
TRF CNCL CO =		Resetting Automatic Tandem Trunk Transfer
TRF TO CO =		Setting or Confirmation of Transferred Trunk of Automatic Tandem Trunk Transfer
TRNS TO N/A		Transferred Trunk Not Assigned
00 : EMPTY		No Speed Dial Number Entered
00:0123456789		Speed Dial Number Confirmation
NO SMDR		Station Message Detail Recording Not Available
ERROR		Error Message
BUSY		Busy Message
PRINTER TROUBLE		Printer Problems
SPKR[A,B,C]	Originator	External All Paging
LINE IDLE	Originator	Trunk Queuing; CO/PBX Trunk Idle
TRUNK QUE SET	Originator	Trunk Queuing Set
LNR [#] / SPD []		Press LNR/SPD Key
TRUNK QUE CANCLD	Originator	Trunk Queue Canceled
RCL:01,02,03,04	Originator	Hold Recall
120 < -[110] TRANSF	Destination	Ring Transfer
120 = = [110] TRANSF		Automatic Ring Transfer
OVD > []		Barge-In On CO/PBX Line (1)
OVD - > CO[]		Barge-In On CO/PBX Line (2)
100 < - TIE LNXX		Tie Line Answer
100 < - DID LNXX		DID Answer
DATA ENTRY		Entering Data Via System Programming

SECTION 11 FEATURE ACCESS CODES

Some of the codes are set as system defaults and some codes have no default defined but are programmable in System Programming. The table is divided according to the status of the telephone. An explanation of the notes column is listed below, these are referenced throughout the table. (Refer to Table 1-47 - Access Codes Tables.)

Explanation of Notes Column:

Installation:

Operable only on telephones specified at the time of installation.

Single Line Only:

Operable only on Single Line Telephones.

Single Line OK:

Operable on Multiline Terminals or Single Line Telephones.

Note 1:

The controls in parentheses are not necessary for your own telephone or

own tenant.

Note 2:

Operable only when the Speed Dial number is set to 2 digits (90 mode).

Note 3:

Enter the new values in the Access Code Table.

Note 4:

No system default is defined, this code must be assigned in System

Programming.

Table 1-47 Access Code Tables

When the telephone is idle (handset is on-hook):

Function	Operation	Notes
Microphone ON/OFF	FNC → Dial 1	
System Name Confirmation	FNC → Dial 3	
Verifying Station Number	FNC → Dial 4	
Confirming Timed Alarm	FNC → Dial 51 → FNC	
Resetting Timed Alarm System	FNC → Dial 58 → FNC	Installation
Resetting Timed Alarm	FNC → Dial 59 → FNC	
Setting Do Not Disturb	FNC → Dial 60 → FNC	
Setting Call Forward - All Calls	$FNC \rightarrow Dial 60 \rightarrow Dial XXX \rightarrow FNC$ $XXX = Station number where call is to be forwarded.$	Installation

Function	Operation	Notes
Setting Automatic Trunk-to-Trunk Transfer Mode	FNC → Dial 61 → Dial XX → FNC XX = Incoming Trunk Port Number (01 ~ 64; 00 = All Trunks)	Installation
Canceling Automatic Trunk-to-Trunk Transfer to Outside Mode	FNC → Dial 62 → Dial XX → FNC XX = Incoming Trunk Port Number (01 ~ 64; 00 = All Trunks)	Installation
Setting Automatic Trunk-to-Trunk Transfer Outgoing Trunk	FNC → Dial 63 → Dial XX → Dial # → Dial YY~Y → FNC XX = Incoming Trunk Port Number (01 ~ 64; 00 = All Trunks) YY~Y = Transfer Telephone Number (maximum 24 digits)	Installation
Confirming Transfer Number for Automatic Trunk-to-Trunk Transfer	FNC \rightarrow Dial 64 \rightarrow Dial XX \rightarrow FNC XX = Trunk Port Number (01 \sim 64)	Installation
Canceling Call Forward - All Calls by System	$FNC \rightarrow Dial 68 \rightarrow FNC$	Installation
Canceling Do Not Disturb/Call Forward - All Calls	FNC → Dial 69 → FNC	Installation
Setting Customized Message Display	FNC → Dial 70 → Dial * → Dial # → [Dial XX:XX, YY:YY] → FNC * = Selects Display # = Sets Display XX:XX = Date of Return YY:YY = Time of Return	
Canceling Customized Message Display by System	Operations enclosed in [] are optional. FNC → Dial 78 → FNC	Installation
Canceling Customized Message Display	FNC → Dial 79 → FNC	
Setting/Canceling Night Mode Switch (System)	FNC → Dial 80 → FNC	Installation Attendant Only
Setting Automated Attendant/DISA Mode	FNC → Dial 81 → Dial XX → FNC XX = Incoming Trunk Port Number (01 ~ 64; 00 = All Trunks)	Installation
Canceling Automated Attendant/DISA Mode	FNC → Dial 82 → Dial XX → FNC XX = Incoming Trunk Port Number (01 ~ 64; 00 = All Trunks)	Installation
Setting/Canceling Night Mode Switch (Tenant)	FNC \rightarrow Dial 85 \rightarrow Dial XX \rightarrow FNC XX = Tenant Number (00 \sim 47)	Installation
Setting/Canceling Weekend Mode Switch (Tenant)	FNC \rightarrow Dial 86 \rightarrow Dial XX \rightarrow FNC XX = Tenant Number (00 \sim 47)	Installation

Function	Operation	Notes
Canceling Callback Message by System	FNC → Dial 88 → FNC	Installation
Canceling FNC LED	FNC → Dial 99 → FNC	
Programming System Speed Dial Buffer Number	FNC \rightarrow LNR/SPD \rightarrow Dial XXX \rightarrow Dial YYYY \rightarrow Dial ZZ \sim Z \rightarrow [HOLD \rightarrow Dial xx \sim x] \rightarrow FNC	Installation
	XXX = Speed Dial Buffer Number (00 ~ 89 / 000 ~ 999) YYYY = Access Code (maximum 4 digits) ZZ ~ Z = Telephone Number (maximum 24 digits) xx ~ x = Name of Other Party (maximum 13 letters)	
	Operations enclosed in [] are optional.	
Programming Station Speed Dial Buffer Number	FNC \rightarrow LNR/SPD \rightarrow Dial 9 X \rightarrow Dial YYYY \rightarrow Dial ZZ \sim Z \rightarrow [HOLD \rightarrow Dial xx \sim x] \rightarrow FNC	Note 2
	9X = Speed Dial Buffer Number (90 ~ 99). Enter 0 ~ 9 for last digit. YYYY = Access Code (maximum 4 digits) ZZ ~ Z = Telephone Number (maximum 24 digits) xx ~ x = Name of Other Party (maximum 13 letters)	
	Operations enclosed in [] are optional.	İ
Confirming System Speed	CNF → LNR/SPD → Dial XXX	
Dial Number	$XXX = $ Speed Dial Buffer Number $(00 \sim 89/000 \sim 999)$	
Confirming Station Speed Dial Number	CNF → LNR/SPD → Dial 9 X	Note 2
	$9X = $ Speed Dial Buffer Number (90 \sim 99). Enter 0 \sim 9 for last digit.	
Canceling System Speed Dial	$FNC \rightarrow LNR/SPD \rightarrow Dial XXX \rightarrow FNC$	Installation
Number	XXX = Speed Dial Buffer Number (00 ~ 89 / 000 ~ 999)	
Canceling Station Speed Dial	$FNC \rightarrow LNR/SPD \rightarrow Dial 9 X \rightarrow FNC$	Note 2
Number	$9X = $ Speed Dial Buffer Number (90 \sim 99). Enter 0 \sim 9 for last digit.	
Placing a Call - Speed Dial	LNR/SPD Key → Dial XXX	
	XXX = Speed Dial Buffer Number (00 ~ 89 / 000 ~ 999)	
Confirming Last Number Dialed Memory	CNF → LNR/SPD → Dial*	
Placing a Call Using Store & Repeat/Save & Repeat	LNR/SPD → Dial #	
Setting/Canceling Answer Preset (Ringing Line Preference)	FNC → ANS	
Last Number Dialed Memory to a Station Speed Dial	$FNC \rightarrow LNR/SPD \rightarrow Dial 9 X \rightarrow LNR/SPD \rightarrow FNC$	Note 2
Buffer Number	$9X = $ Speed Dial Buffer Number (90 \sim 99). Enter 0 \sim 9 for last digit.	

Function	Operation	Notes	
Programming Feature Access Keys (for DSS/BLF)	FNC \rightarrow LNR/SPD \rightarrow Dial 9 X \rightarrow Feature Access Key \rightarrow Dial 1 \rightarrow Dial YYYY \rightarrow [Dial 1] \rightarrow FNC	Installation Note 2	
	9X = Speed Dial Buffer Number (90 \sim 99). Enter 0 \sim 9 for last digit. YYYY = Station number (2, 3, or 4 digits)		
	Operations enclosed in [] are optional (when the digit 1 is dialed, the call is switched from Voice to Tone or from Tone to Voice).		
Programming Feature Access Keys (for Station Speed Dial)	FNC \rightarrow LNR/SPD \rightarrow Dial 9 X \rightarrow Feature Access Key \rightarrow Dial 0 \rightarrow Dial Y \rightarrow Dial ZZ \sim Z \rightarrow [HOLD \rightarrow Dial XX \sim X] \rightarrow FNC	Installation Note 2	
	9X = Speed Dial Buffer Number (90 ~ 99). Enter 0 ~ 9 for last digit. Y = CO/PBX Access Code (maximum 4 digits) ZZ ~ Z = Telephone Number to be stored (maximum 22 digits). XX ~ X = Name to be stored using the Character Code (maximum 13 characters).		
	Operations enclosed in [] are optional.		
Programming Feature Access Keys (for Nesting Dial)	FNC \rightarrow LNR/SPD \rightarrow 9 X \rightarrow Feature Access Key \rightarrow Dial 0 \rightarrow Dial Y \rightarrow ANS \rightarrow Dial ZZ \rightarrow [ANS \rightarrow ZZ (repeat up to 3 times)] \rightarrow [HOLD \rightarrow Dial XX \sim X] \rightarrow FNC	Installation Note 2	
	9X = Speed Dial Buffer Number (90 ~ 99). Enter 0 ~ 9 for last digit. Y = CO/PBX Access Code (maximum 4 digits) ZZ = System or Station Speed Dial Buffer Number (00 ~ 99) XX ~ X = Name to be stored using the Character Code (maximum 13 characters).		
	Operations enclosed in [] are optional.		
Programming Feature Access Keys (for Feature Access)	FNC → LNR/SPD → 9 X → Feature Access Key → Dial # → Dial YY → FNC	Installation Note 2	
	$9X = $ Speed Dial Buffer Number $(90 \sim 99)$. Enter $0 \sim 9$ for last digit. $YY = $ Feature Access Code		
Confirming Feature Access Key	FNC → Feature Access Key	Note 2	
Canceling Feature Access	$FNC \rightarrow LNR/SPD \rightarrow Dial 9 X \rightarrow FNC$	Note 2	
Key	$9X = $ Speed Dial Buffer Number($90 \sim 99$). Enter $0 \sim 9$ for last digit.		
Placing a Call with Feature Access Key	ress the Feature Access Key programmed for the desired Note 2 eature.		
Programming One-Touch Keys (for DSS/BLF)	FNC \rightarrow LNR/SPD \rightarrow One-Touch Key \rightarrow Dial 1 \rightarrow Dial YYY \rightarrow [Dial 1] \rightarrow FNC		
	YYY = Station number (2, 3, or 4 digits)		
	Operations enclosed in [] are optional (when the digit 1 is dialed, the call is switched from Voice to Tone or from Tone to Voice).		

Function	Operation	Notes
Programming One-Touch Keys (for Station Speed Dial)	$FNC \rightarrow LNR/SPD \rightarrow One-Touch Key \rightarrow Dial 0 \rightarrow Dial Y \rightarrow Dial ZZ \sim Z \rightarrow FNC$	
	Y = CO/PBX Access Code (maximum 4 digits) ZZ ~ Z = Telephone Number to be stored (maximum 16 digits).	
Programming One-Touch Keys (for Nesting Dial)	FNC \rightarrow LNR/SPD \rightarrow One-Touch Key \rightarrow Dial $\mathbf{V} \rightarrow$ ANS \rightarrow Dial $\mathbf{ZZ} \rightarrow$ [ANS \rightarrow Dial \mathbf{ZZ} (repeat up to 3 times)] \rightarrow FNC	
	Y = CO/PBX Access Code (maximum 4 digits) ZZ = System or Station Speed Dial Buffer Number (00 ~ 99)	
	Operations enclosed in [] are optional.	
Programming One-Touch Keys (for Feature Access)	FNC \rightarrow LNR/SPD \rightarrow One-Touch Key \rightarrow Dial # \rightarrow Dial YY \rightarrow FNC	
	YY = Feature Access Code	
Confirming One-Touch Key	FNC → One-Touch Key { → FNC }	W
	Operation in { } is required only if the arrow is displayed.	
Canceling One-Touch Key	$FNC \rightarrow LNR/SPD \rightarrow One-Touch Key \rightarrow FNC$	
Placing a Call with One-Touch Key	Press the One-Touch key programmed for the desired feature.	

While the extension is being seized (handset is lifted or the SPKR key is pressed and ICM lamp is lit): Note: The default setting for the Access Codes are shown in this table.

Function	Operation (Default)	Notes
Trunk Group 1	Dial 9	CO/PBX Trunk (Outgoing)
Trunk Group 2	Dial 8	Tie Trunk (Outgoing)
Trunk Group 3	Dial 70	
Trunk Group 4	Dial 71	
Trunk Group 5	Dial 72	
Trunk Group 6	Dial 73	
Trunk Group 7	Dial 74	
Trunk Group 8	Dial 75	

Function	Operation (Default)	Notes
Call Pickup CO/PBX/Tie Line for Another Tenant	Dial 🗆 🗆	Note 4
Call Pickup Internal in Same Tenant	Dial 🗆 🗆	Note 4
Call Transfer in Same Tenant	Dial 🗆 🗆	Note 4
Specified CO/PBX Line	Dial □□ → Dial XX	Note 4
Seizure	$XX = CO/PBX$ Line Number $(01 \sim 64)$	
Setting Trunk Queuing	Dial 78 → Hang Up	Installation
	Note: When busy tone is heard.	Note 4
Canceling Trunk Queuing	Dial 79 → Hang Up	Installation Note 4
Specified Tenant CO/PBX	Dial □□ → Dial XX	Note 4
Line Seizure	$\mathbf{XX} = \text{Tenant Number} (00 \sim 47)$	
Intra-Tenant Call Pickup	Dial 68	Note 4
Call Pickup (Tie) in Same Tenant	Dial 🗆 🗆	Note 4
Call Pickup (PBX) in Same Tenant	Dial 🗆 🗆	Note 4
Call Pickup (CO) in Same Tenant	Dial 🗆 🗆	Note 4
Internal Emergency All Call Paging	Dial 🗆 🗆	
All Internal Zone Paging	Dial 51	
Internal Zone A Paging	Dial 52	
Internal Zone B Paging	Dial 53	
Internal Zone C Paging	Dial 54	
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External Zone C Paging	Dial 58	
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Function	Operation (Default)	Notes
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Route Advance $(1 \sim 16)$	Dial 🗆 🗆	Notes 3 & 4
DSS 1 Call	Dial 🗆 🗆	Note 4
DSS 2 Call	Dial 🗆 🗆	Note 4
Special Station Access Code (00 ~ 23)	Dial 🗆 🗆	Note 4
Timed Alarm Set at SLTs	Dial □□ → Dial XXXX → Dial YY:YY → Hang Up XXXX = Station number YY:YY = Time (according to 24-hour clock)	Installation Note 4
Timed Alarm Cancel at SLTs	Dial □□ → Dial XXXX → Dial 9999 → Hang Up XXXX = Station number	Installation Note 4
Station Outgoing Lockout Set	Dial $\square \square \rightarrow$ Dial $XX \sim X \rightarrow$ Hang Up $XX \sim X = Password (maximum 10 digits)$	Installation Note 4
Station Outgoing Lockout Cancel	Dial □□ → Dial XXX → Hang Up XXX = Password (maximum 10 digits)	Note 4
Station Outgoing Lockout Password Change	Dial □□ → Dial XX ~ X → Dial YY ~ Y → Hang Up XX~ X = Old Password (maximum 10 digits) YY~ Y = New Password (maximum 10 digits)	Installation Note 4
Station Outgoing Lockout Cancel from Attendant	Dial $\square \square \rightarrow$ Dial XXXX \rightarrow Hang Up XXXX = Station number	Installation Note 4
Setting Do Not Disturb	Dial 40 → Hang Up	Installation
Setting Call Forward - All Calls	Dial 41 → Dial XXXX → Hang Up XXXX = Station number of forward destination	Installation
Canceling Call Forward - All Calls/Do Not Disturb	Dial 42 → Hang Up	Installation
Setting Call Forward - No Answer	Dial □□ → Dial XXXX XXXX = Station number of forward destination	Installation
Canceling Call Forward - No Answer	Dial □□ → Hang Up	Installation

(continued on next page)

Function	Operation (Default)	Notes
Setting Call Forward -	Dial □□ → Dial XXXX → Hang Up	Installation
Busy	XXXX = Station number of forward destination	
Canceling Call Forward - Busy	Dial □□ → Hang Up	
Setting Call Forward - All	Dial □□ → Dial XXX → Hang Up	Installation
Calls from Destination	XXX = Station number of transfer origin	
Canceling Call Forward - All Calls from Destination	Dial □□ → Dial XXX → Hang Up	Installation
	XXX = Station number of forwarding party	
Call Forward Busy/ No Answer Set	Dial 43 → Dial XXXX	Installation
No Answer Set	XXXX = Station number of forward destination	
Call Forward Busy/ No Answer Cancel	Dial 44 → Hang Up	Installation
Programming Station	Dial 76 → Dial 9 X → Dial YYYY → Dial ZZ ~ Z	
Speed Dial Buffer Number by Single Line Telephone	9X = Speed Dial Buffer Number (90 ~ 99). Enter 0 ~ 9 for last digit. YYYY = Access Code (maximum 4 digits) ZZ ~ Z = Telephone Number (maximum 24 digits)	Notes 2 & 4
Clearing Station Speed Dial Buffer Number by Single Line Telephone	Dial 76 → Dial 9 X → Hang Up	
	$9X = $ Speed Dial Buffer Number (90 \sim 99). Enter 0 \sim 9 for last digit.	Notes 2 & 4
Placing a Call Using a	Dial 77/* → Dial 9 X	
Speed Dial Buffer Number by Single Line Telephone	* = MF Type 9X = Speed Dial Buffer Number (90 ~ 99). Enter 0 ~ 9 for last digit.	
Last Number Dialed by Single Line Telephone	Dial *	
Setting Timed Alarm at Single Line Telephone	Dial □□ → Dial XX:XX	Installation Note 4
	XX:XX = Time (24-hour clock in 5 minute increments)	
Canceling Timed Alarm at Single Line Telephone	Dial □□ → Hang Up	Installation Note 4
Barge-In by Station	$FNC \rightarrow CNF \rightarrow Dial XXXX \rightarrow FNC$	Installation
Number	XXXX = Station number to be interrupted	
Barge-In by Trunk Number	$FNC \rightarrow CNF \rightarrow Dial * \rightarrow Dial XX \rightarrow FNC$	Installation
,	XX = CO/PBX Trunk Number (01 ~ 64) to be interrupted	

(continued on next page)

Function	Operation	Notes
Transfer to Call Park - System	Dial 4 * → Dial X X ≈ Call Park Number (0 ~ 9)	
Answer or Retrieve Call Park - System	Dial 4 # → Dial X X = Call Park Number (0 ~ 9)	
Automated Attendant Message (Recording/Confirmation/ Erasing)	Dial □ □ → Dial X → Dial 1 → Dial Y → Dial Z X = 1 = Recording = 2 = Confirmation = 3 = Erasing Y = Enter Automated Attendant Number (1 ~ 8) Z = 1 = Day Mode = 2 = Night Mode = 3 = Weekend Mode	Note 4
Voice Prompt Message (Recording/Confirmation/ Erasing)	Dial □ □ → Dial X → Dial 2 → Dial Y X = 1 = Recording = 2 = Confirmation = 3 = Erasing Y = 1 = Message for Dial Tone 2 = Message for Call Waiting Tone	Note 4
Delay Announcement (Recording/Confirmation/ Erasing)	Dial □ □ → Dial X → Dial 3 X = 1 = Recording = 2 = Confirmation = 3 = Erasing	Note 4
Attendant Call	Dial 0	Installation

While calling an extension:

Function	Operation	Notes
Tone/Voice Switching	Dial 1	
Callback Message	Dial#	Installation

(continued on next page)

While a call is waiting (when calling an extension and Call Waiting Tone is heard):

Function	Operation	Notes
Automatic Callback	Dial 0 → Hang Up	Installation
Step Call	Dial 1	Single Line OK (only for DP type telephones)
Tone Override	Dial *	Installation
Callback Message	Dial#	Installation

While seizing a CO/PBX Line:

Function	Operation	Note
Microphone ON/OFF	FNC → Dial 1	
Seized Outside Line Number Display	FNC → Dial 3	
Drop Key	FNC → Dial 5	
Store and Repeat	FNC → Dial 7	
Save and Repeat	FNC → Dial 9	
Exclusive Hold	$FNC \rightarrow HOLD$	
Seized Internal Line	FNC → 6 *	

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CHAPTER 2 PROGRAMMING

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CO/PBX Ringing Pattern Selection

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CHAPTER 2 **PROGRAMMING**

SECTION 1 GENERAL

1.1 Introduction

The Electra Professional Level II and Level II Advanced systems are stored program controlled systems. When these systems are initially powered up, the CPU-F()-20 KTU scans each of the possible interface slots to determine the hardware configuration. The systems store this information as well as the default values in memory. This area of memory is referred to as the Resident System Program. After the system has been initially powered up, a trained technician can change the Resident System Program to meet the specific needs of the individual customer.

Before attempting to program these systems, the Job Specifications Worksheets should be completed. These worksheets help organize the customer's programming needs. Copies of the worksheets should be retained at the job site and on file at the technician's office. [Refer to the Electra Professional Level II and Level II Advanced Job Specifications Manual included with the CPU-F()-20 KTU.

WARNING

The battery on the CPU-F()-20 KTU must be on. Failure to ensure the battery is on. before programming begins, may result in the loss of data in the event of a power outage.

1.2 **Using This Chapter**

This chapter is divided into the following sections:

Section 1 - General

Gives a general overview of System Programming.

Section 2 - System Programming

Presents in outline format the terms and structure that the technician should be familiar with before attempting to program the Electra Professional Level II or Level II Advanced systems.

Section 3 - System Data List

Presents a complete list of Data Numbers, Timer and Function Names, Default values, and Timing values.

Section 4 - Programming Procedures

Gives detailed instructions and procedures for programming all Memory Blocks.

Section 5 - Function Timer Chart

Presents the parameters of the various timers utilized within the Electra Professional Level II and Level II Advanced systems.

Section 6 - Code Restriction

Defines the parameters of dial restrictions that can be assigned on a per station basis.

Section 7 - Character Code Tables

Defines Setting Data for some of the functions available within the Electra Professional Level II and Level II Advanced systems.

Section 8 - Display Abbreviations

Defines abbreviations used within the Electra Professional Level II and Level II Advanced systems.

1.3 Entering the Programming Mode

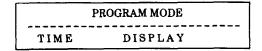
To program information into the system, an ETW-16DC-1 (BK), ETW-16DD-1 (BK) or ETW-24DS-1 (BK) Multiline Terminal can be used as programming stations. (Two stations are automatically assigned as programming stations.) These stations are assigned to the two lowest ports (Port Numbers 01 and 02) in the system.

When entering any area of programming, the programming station must be in the OFF-LINE mode.

TO GO OFF-LINE

- 1. Press the FNC key, then the HOLD key.
- 2. Dial #, 0, * in sequence.

After completing the above steps, the LCD on the Multiline Terminal will show:



While the programming terminal is **OFF-LINE** it cannot be signaled by any station in the system.

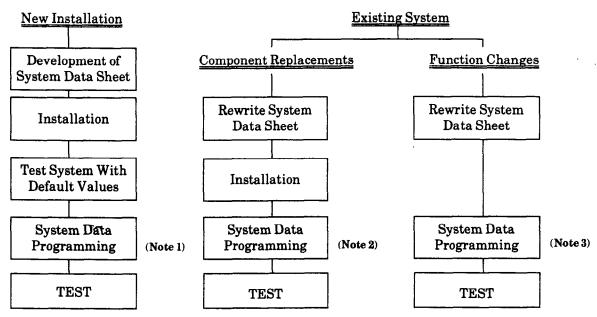
Note: The off-line mode does not timeout.

1.4 System Data Programming

System Data Programming may be required for the following reasons:

- When the system is installed for the first time.
- When components of an existing system are replaced.
- When functions of an existing system are changed.

(Refer to Figure 2-1 - Programing Flowchart.)



- Note 1: In new installations, system default values are assigned when the power is turned on. Therefore, program only the System Data to be changed.
- Note 2: In component replacements, program the relevant System Data.
- Note 3: In function changes, program the System Data to be revised.

Figure 2-1 Programming Flowchart

SECTION 2 SYSTEM PROGRAMMING

2.1 Features

- The system operates from a default program after initial power up. Program only the parameters that need to be changed from the default assignments.
- The System Programming characters are displayed on the LCD.
- Several types of System Programming can be entered at the same time.
- Data that has been programmed for one telephone (i.e., Tenant Mode, CO/PBX Line Mode, Telephone Mode, etc.) can be copied to another telephone.
- Two Multiline Terminals, connected to Port Numbers 01 and 02, can be used to program at the same time.

2.2 System Programming

System Programming is divided into eight modes and some of the modes subdivided into sub-modes. The following shows the modes and sub-modes for the Level II and Level II Advanced systems.

<u>Mode</u>		Sub-Mod	<u>e</u>
LK 1	System Mode	LK 1	CO Line
		LK 2	ICM
		LK 3	SLT
		LK 4	Transfer/Automated Attendant (A.A.)
		LK 5	SMDR/LCR
		LK 6	DSS
		LK 7	ESP
		LK 8	PBR/Miscellaneous
		LK9	DISA
		LK 10	CAR
		LK 11	DTI
		LK 12	ACD/UCD
LK 2	Tenant Mode		
LK 3	CO/PBX Line Mode		
LK 4	Telephone Mode		
LK 5	Trunk Group Mode		
LK 6	Copy Mode	LK 2	Tenant Mode Copy Assignment
		LK 3	CO Line Mode Copy Assignment
		LK 4	Telephone Mode Copy Assignment
		LK 5	Trunk Group Mode Copy Assignment
LK 7	KTU Mode		
7		LK 1	Card Interface Slot Assignment
		LK 2	Telephone Type Assignment
		LK 3-00	MIF (ACD) Assignment
		LK 3-01	MIF (LCR) Assignment
		LK 3-02	MIF (SMDR) Assignment
		LK 3-03	MIF (UCD) Assignment
LK 8	Special Mode	LK 1	ROM Version Confirmation
	•	LK 2	System Speed Dial Memory Clear
		LK 3	Station Speed Dial Memory Clear
		LK 8	Second Initialization

Programming 2-3

2.3 Preparation Before Programming

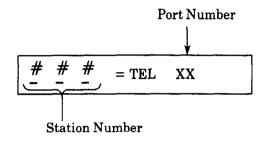
- Check Points:
 - Confirmation of ROM ----version

Some features may not be available depending on the ROM version. Refer to Memory Block 8-1 (ROM Version Confirmation).

 Confirmation of Port Number Port numbers are used for System Programming. Refer to Memory Block 7-1 (Card Interface Slot Assignment).

To confirm station numbers from display terminals, press:





- 2. Preliminary Points:
 - Refer to Section 1.4 System Data
 Selection of System _____ Programming to select the data to be programmed.
 - Prepare System
 Programming sheet ----Refer to Section 4 Programming Procedures to enter the data.

2.4 Writing of System Data

After turning the system power on, Programming System Data can be performed from a Multiline Terminal that is connected to Port 01 or 02 (the Multiline Terminal must be idle). Although System Programming can be performed while other Multiline Terminals are in use, some of the System Programming is written into memory immediately after the programming process, while other System Programming will not be written until the stations are idle.

In the latter case, the programming station display shows "DATA ENTRY" even after the programming process is completed, indicating the System Programming is still underway. When the in-use stations become idle, the data is written and the display shows only the time.

The following System Programming is not written while certain equipment is in use:

• When telephones are in use: Memory Block 2-01 (Trunk to Tenant Assignment)

Memory Block 2-05 (Line Key Selection)

Memory Block 2-07 (System Speed Dial Display

Assignment)

Memory Block 4-09 (Telephone to Tenant Assignment)

• When PBR is in use:

Memory Block 1-8-01 (SLT or Automated

Attendant/DISA to PBR Selection)

Memory Block 1-8-02 (PBR Receive Level Assignment

for Automated Attendant/DISA)

2.5 Programming Methods

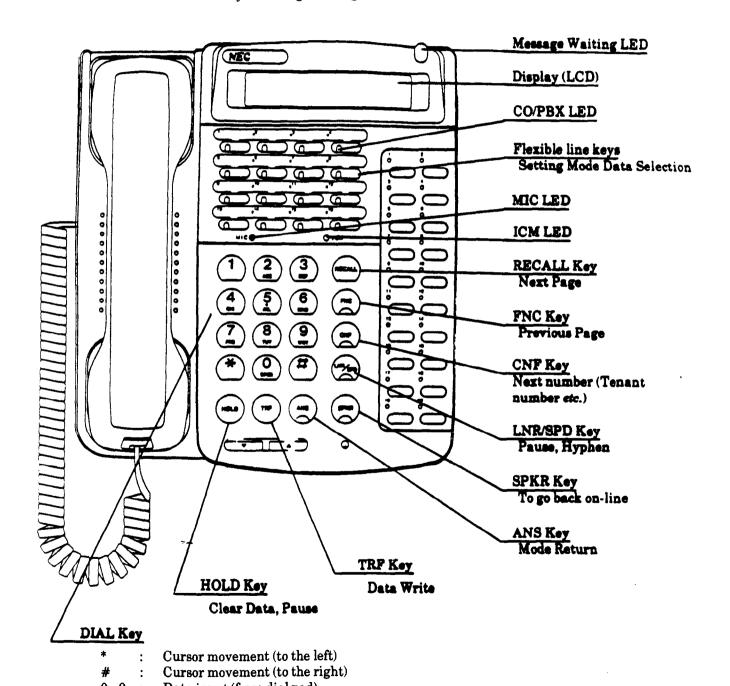
2.5.1 Initializing the System

Turn the Key Service Unit (KSU) power supply on. After 30 seconds, the system operates with system default values.

2.5.2 How to Use the Multiline Terminal for Programming

System Programming is performed using a Multiline Terminal (with LCD) connected to station Ports 01 or 02.

The following describes the key operations, LED indications, and the display for System Programming.



0~9 : Data input (from dial pad)
Figure 2-2 Electra Professional Level II and Level II Advanced System Multiline Terminal

Key Functions:	
CO/PBX	Flexible Line keys are used to specify a mode or sub-mode when selecting a memory block, or to select programming data for input.
(RECALL)	Use this key to proceed to the next page in System Programming.
FNC	The FNC key is used to return to the preceding page in registering System Programming.
(CNF)	Each time the CNF key is pressed, Memory Block item changes are as follows:
	 Tenant Mode: The tenant number increments by one. CO/PBX Line Mode: The CO/PBX line number increments by one. Telephone Mode: The telephone port number increments by one. Trunk Group Mode: The Trunk Group number increments by one.
SPKR	Used for exiting the programming mode (go back on-line).
*	Used for moving the cursor. The cursor moves one character space to the left each time * is pressed.
#	Used for moving the cursor. The cursor moves one character space to the right each time # is pressed.
(TRF)	Used for writing data. After entering data, press TRF and the data is written into memory and the Memory Block Data No. increments by one.
ANS	 Used for selecting another mode. Press ANS to switch modes as follows: Mode or Sub-Mode selection: Returns to PROGRAM MODE. Data No. Mode: Returns to a Mode or Sub-Mode selection, or PROGRAM MODE (if no Sub-Mode exists).
HOLD	The HOLD key is used to enter a pause in Speed Dial Programming Mode or to clear data in System Programming Mode.
LNR BPD	The LNR/SPD key is used to enter a pause, hyphen, etc., and for entering * and #.

After pressing the LNR/SPD key (the Message Waiting LED turns on and turns off after pressing * or #), the desired selection is entered.

 $\binom{0}{1}$ \sim $\binom{9}{1}$ Used to enter data from the dial pad and to specify a Memory Block location in each input mode.

LED Indications (MIC and ICM)

These LED indications for mode selection status indicate the following:

MIC	ICM	
•	•	(Both LEDs off): Waiting for mode selection.
0	•	(Only MIC LED on): Mode selected. Waiting for sub-mode selection.
0	0	(Both LEDs on): Sub-Mode selected. (If no sub-mode exists, both LEDs
		light when a mode is selected.)

Off-Line Program Mode:

A. To go off-line, press: ---
$$(FNC) \rightarrow (HOLD) \rightarrow (\#) \rightarrow (0) \rightarrow (*)$$

After entering the off-line mode for programming, the following displays appear:

		PROGRAM MODE
B. Selecting Memory Blo	ock locations	TIME DISPLAY
System Mode	LK 1	SYSTEM BASE 1
	LK = Line Key	TIME DISPLAY
		TIME DISTERT
	$\rightarrow \left(LK1 \right)$	00 : PAUSE 3.0s
		TIME DISPLAY
Tenant Mode	(_LK 2)	00 / 00 NOT HOLD
renamt Wode		00 / 00 : NOT USED
		TIME DISPLAY
CO/PBX Line Mode	(LK3)	01 /
		TIME DISPLAY
		TIME DISTERT
Telephone Mode	(LK4)	01 / 01 : RING DY +01
	•	TIME DISPLAY
Trunk Group Mode	(LK 5)	01 / 00 : ADD / DEL 000
		TIME DISPLAY
0 1 1		
Copy Mode	LK 6	COPY MODE
		TIME DISPLAY
*=	→ (_LK2)	TNAT→
	, (1)	TIME DISPLAY
		TIME DISPLAT
KTU Mode	(LK7)	ASSIGNMENT MODE
		TIME DISPLAY
		TIME DIST EAT
Special Mode	(LK8)	SPECIAL MODE
		TIME DISPLAY
	$\rightarrow \left(LK1 \right)$	SP 171 : MMC = 01
	***	1 - 0C : CPU = 1.00

2.5.3 Page Switching

To select System Programming data, CO/PBX line numbers, tenant numbers, etc., use the Flexible Line keys.

In Memory Block 1-1-18 (System Speed Dial Restriction by Tenant) tenant numbers $00\sim07$ are assigned to the Flexible Line keys on the first page. Tenant numbers $08\sim15$ are assigned to the Flexible Line keys on the second page. The tenant number corresponding to Flexible Line key 1 of the current page is displayed at the right side of the display.

Example: CO/PBX line keys on each page and corresponding tenant numbers.

24-Key Multiline Terminal 16-Key Multiline Terminal (Flexible Line Keys) (Flexible Line Keys) (Display) Page 1 Page 2

For System Programming, a value (piece of data) is assigned to each Flexible Line key. When there are more value assignments than there are Flexible Line keys, entering value assignments can continue on the following page. The page number is displayed at the right side of the display.

Example:

Flexible Line keys and corresponding data on each page (when there are 10 data entries).

16 Key Multiline Terminal

	(Display)	(]	Flexible	Line Ke	ey)
Page 1	5 01	Data 1	Data 2	Data 3	Data 4
-		Data 5	Data 6	Data 7	Data 8
7-					
Page 2	\bigcirc 02	Data 9	Data 10		
	<u> </u>				

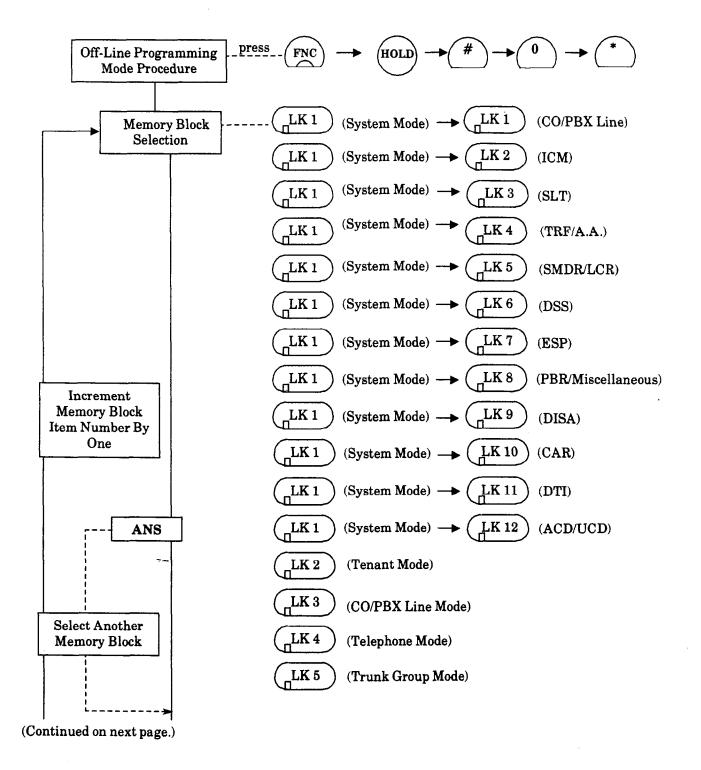
Note: Press the RECALL key to advance to the next page. Press the FNC key to turn back to the previous page.

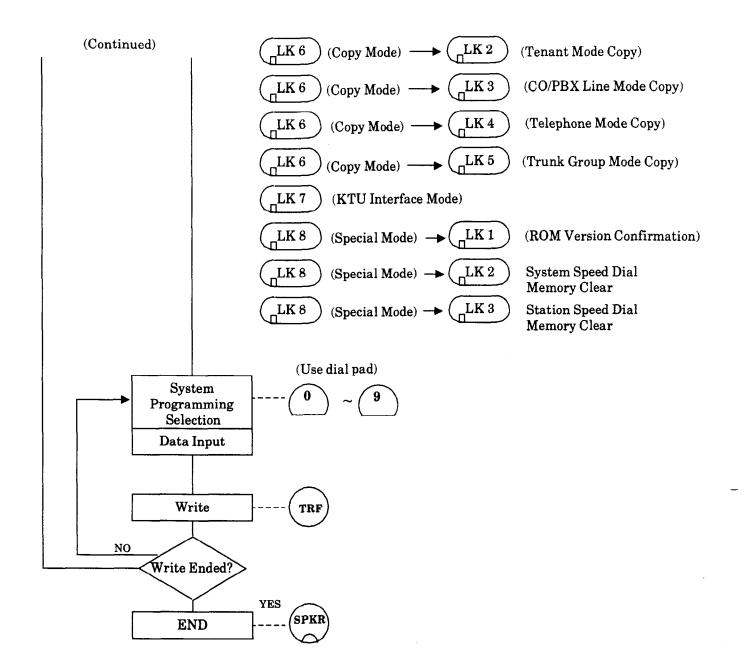
2.5.4 Data Copy

Data entry for a Multiline Terminal in CO/PBX Line Mode, Tenant Mode, or Trunk Group Mode can all be copied simultaneously to another Multiline Terminal. [Refer to Section 4 - Programming Procedures (LK6 Copy Mode).]

2.5.5 Data Entry Selection

System Programming is performed by using the keys on Multiline Terminals connected to Ports 01 and 02. During programming, System Data is shown on the LCD of the off-line terminal.





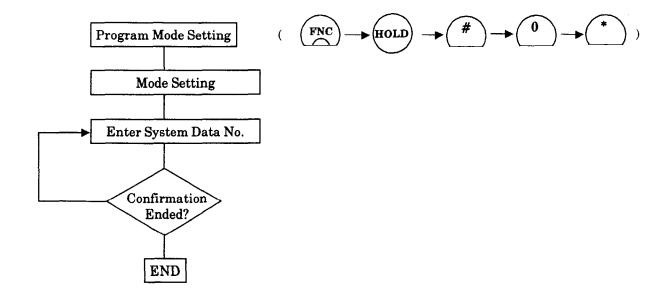
Example: Memory Block 1-2-02 (Automatic Callback Release Timer Selection) 3 minutes (default) \rightarrow 1 minute (Display) (Key) (LED) Off-line Programming 0 (Goes on) Procedure FNC LED Flashing **PROGRAM** MODE (Goes off) TIME DISPLAY Flashing FNC CO/PBX **SYSTEM** BASE TIME DISPLAY Memory Block_ (Goes on) LK 1 Selection MIC CO/PBX 00: PAGING 90s(Goes on) LK 2 0: PAGING 90s System Programming Setting (Use dial pad) 02: CALL **BACK** 30m 02: CALL **BACK** 10m CO/PBX Data Entry --LK 2 03: STA. NO. 3DGT 0 (Goes on) CO/PBX 2 Write ----(Goes off) TRF CO/PBX 2 (Goes off) SPKR

SPKR MIC

ICM

2.5.6 Confirmation

To confirm programmed data, select the desired Memory Block after entering the off-line programming mode and enter the Data Entry Number. The data is shown on the display.



2.6 Test

After completion of programming, test the functions of System Programming for proper operation.

SECTION 3 SYSTEM DATA LIST

LK 1 System Mode

LK 1 CO Line

Data No.	Function Name	Default	Programming Value
00	Pause Time Selection	3 sec.	1 sec. 3 sec.
01	DP Interdigit Time Selection	Pattern B	Pattern A, Pattern B
02	Hookflash Time Selection	600 ms.	Page 1: 20 ms., 40 ms., 60 ms., 80 ms., 100 ms., 140 ms., 160 ms., 200 ms. Page 2: 400 ms., 600 ms., 800 ms., 1 sec., 1.5 sec., 2 sec., 3 sec., 5 sec.
03	Hold Recall Timer Selection (Non-Exclusive Hold)	1 min.	1, 2, 4 (min.), No Limit
04	Automatic Redial Time Selection	Table 1 30 sec. Table 2 60 sec. Table 3 2 times	Table 1 $1 \sim 100$ sec. Table 2 $1 \sim 100$ sec. Table 3 $1 \sim 255$ times
05	Start Timer Selection	20 sec.	10 sec., 20 sec., 30 sec., 40 sec., 50 sec., 60 sec., 70 sec., 80 sec.
06	CO/PBX Incoming Ringing Alarm Time Selection	No Limit	10 sec., 20 sec., 30 sec., No Limit
07	Tie/DID Line Delay Ringing Timer Selection	No Limit	10 sec., 20 sec., 30 sec., No Limit
09	Manual Pause Selection	No	No, Yes
11	System Transfer/Camp-On Selection	Yes	No, Yes
12	Station Transfer/Camp-On Recall Timer Selection	60 sec.	30 sec., 60 sec., 120 sec., 240 sec.
18	System Speed Dial Restriction by Tenant	Not Restricted	LED ON: Not Restricted LED OFF: Restricted
24	PBX/CTX Access Code Assignment I	9 -	Up to six digits (three numeric, three pauses)
25	PBX/CTX Access Code Assignment II	8 -	Up to six digits (three numeric, three pauses)
26	Off-Hook Ringing Selection	Yes	Yes, No
27	Automatic Day/Night Mode Switching Time Assignment	Not Specified	Day/Night Mode Start Time (24 hours)
28	Distinctive Ringing by Telephone or CO Selection	Tel	Tel, CO
29	Private Line Assignment	Not Specified	CO/PBX Line Number. Tel Port Number, up to two lines
30	Route Advance Block Assignment	All Block 00 (not set)	Priority Trunk Group Number

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LK1 CO Line (continued)

Data No.	Function Name	Default	Programming Value
32	Automatic Day/Night Mode by Day of Week Selection	Sunday~Saturday = Pattern 1	Pattern 1, Pattern 2
33	Speed Dial Number/Name Display Selection	Dialed Number	Number or Name
34	Tie/DID Line First Ring Pattern Selection	Pattern 3	Pattern 1, Pattern 2, Pattern 3, Pattern 4, ICM, Voice
35	Speed Dial Buffer Allocation	100 memories	100 memories, 1000 memories
36	CO/PBX Call Forward - All Calls Selection	No	No, Yes
37	Trunk Queuing Timeout Selection	10 sec.	10 sec., 20 sec., 30 sec., 60 sec.
46	Access Code (1-Digit) Assignment	Refer to Memory Block	
47	Access Code (2-Digit) Assignment	Refer to Memory Block	
48	Access Code (3-Digit) Assignment	All Dial 000 (Not Used)	
49	Networking Trunk Group/Route Advance Assignment	Not Specified	
50	CO/PBX Outgoing Digit Add Assignment	Not Specified	
51	CO Line First Ringing Pattern Selection	Ring Pattern A	Pattern A~H, Nil
52	PBX Line First Ringing Pattern Selection	Ring Pattern B	Pattern A~H, Nil
53	Tie/DID Line Delay Ring Pattern Selection	Ring Pattern D	Pattern A~H, Nil
54	Automated Attendant Transfer Ring Pattern	Ring Pattern C	Pattern A~H, Nil
56	CO/PBX Ringing Pattern Selection	Ring Pattern H	Pattern A~H, Nil
57	CO/PBX Prepause Timer Selection	1 sec.	None 1 sec. 2 sec. 3 sec. 4 sec. 5 sec. 6 sec. 7 sec. 8 sec. 9 sec. 10 sec. 11 sec. 12 sec. 13 sec. 14 sec. 15 sec.
59	Synchronous Ringing Selection	Yes	Yes, No
60	8-Digit Matching Table Assignment	Refer to Memory Block	
61	8-Digit Matching Table to Class Assignment	Refer to Memory Block	

LK 1 CO Line (continued)

Data No.	Function Name	Default	Programming Value
62	System Speed Dial Override by Class Selection	Not Restricted (YS)	No = Restricted Yes = Not Restricted
63	Hold Recall Time Selection (Exclusive)	1 min.	0.5 min. 1 min. 1.5 min. 2 min. 3 min. 5 min. 8 min. No Limit
64	Attendant Add-On Console Transfer/Camp-On Recall Timer Selection	1 min.	0.5 min. 1 min. 1.5 min. 2 min. 3 min. 5 min. 8 min. 10 min.
65	Class Allow/Deny Selection	Class 01~04 Allow Class 05~14 Deny	
66	8-Digit Matching Table to Normal Dial Assignment	Tables 00~14 Used Table 15 Unused	
67	OCC Table Assignment	Tables 00~15 Blank Table 16 10XXX	
68	8-Digit Matching Table to OCC Table Assignment	Refer to Memory Block	
69	Tie Line Code Restriction Assignment	All Restricted	
70	Code Restriction Class Assignment When Lockout is Set	Class 15	
71	First Delay Announcement Start Time Selection	20 sec.	0 sec. 10 sec. 20 sec. 30 sec. 40 sec. 50 sec. 60 sec.
72	First Delay Announcement Repeat Selection	1 Time	1, 2, 3, 4, 5, 6, 7, 8 times
73	First to Second Delay Announcement Interval Time Selection	20 sec.	0 sec. 10 sec. 20 sec. 30 sec. 40 sec. 50 sec. 60 sec., No Limit
74	Second Delay Announcement Repeat Selection	1 Time	1, 2, 3, 4, 5, 6, 7, 8 times
75	Second Delay Announcement Repeat Interval Time Selection	20 sec.	0 sec. 10 sec. 20 sec. 30 sec. 40 sec. 50 sec. 60 sec. No Limit
76	Barge-In Alert Tone Assignment	Yes	Yes = Send Alert Tone No = Do not send Alert Tone
77	Delayed Ringing Timer Assignment (CO)	15 sec.	5 sec. 10 sec. 15 sec. 20 sec. 30 sec. 40 sec. 50 sec. 60 sec.

LK 2 ICM

Data No.	Function Name	Default	Programming Value
00	Internal Paging Timeout Selection	90 sec.	90 sec., 120 sec., No Limit
01	Intercom Call Voice/Tone Signal Selection	Voice	Tone, Voice
02	Automatic Callback Release Timer Selection	30 min.	5 min., 10 min., 20 min., 30 min.
03	2-, 3-, 4-Digit Station Number Selection	3-digit	2-digit, 3-digit, 4-digit
04	Call Arrival Key Block Assignment	Not Specified	
08	Specified Station Access Code Assignment	00 01 01~23 Not Set	Station No.
09 ∫ 18	Absence Message 1~10 Assignment	9) DND 10) Meeting 11) Business Trip 12) Not In 13) With Guest 14) Out of Office 15~18) Not Specified	A maximum of 13 characters. (Refer to Character Code Table.)
19	Intercom Ring Pattern Selection	Pattern B	Tone Off, Tone On, Pattern A~Pattern H
20	Intercom Ring Tone Selection	Tone A	Tone A~Tone H
22	Call Forward No Answer Timer Selection	10 sec.	10 sec., 20 sec., 30 sec., 60 sec., 120 sec., 240 sec.
23	System Call Park Recall Time Selection	1 min.	.5 min., 1 min., 1.5 min., 2 min., 3 min., 5 min., 8 min., 10 min.
24	Intercom Feature Access Code Assignment	Refer to Memory Block	
25	Internal Paging Alert Tone Selection	Tone YS	Tone YS Tone No
26	Delayed Ringing Timer Assignment (ICM)-	10 sec.	5 sec. 10 sec. 15 sec. 20 sec. 30 sec. 40 sec. 50 sec. 60 sec.

LK3 SLT

Data No.	Function Name	Default	Programming Value
01	Bounce Protect Time Selection	300 ms.	Page 1: 0 ms., 100 ms., 200 ms., 300 ms., 400 ms., 500 ms., 600 ms., 700 ms.
			Page 2: 800 ms., 900 ms., 1000 ms., 1100 ms., 1200 ms., 1300 ms., 1400 ms., 1500 ms.
02	SLT Hookflash Signal Selection	Hold	Hold, Flash
03	First Digit PBR Release Timer	10 sec.	10 sec., 20 sec., 30 sec., 40 sec.,
	Selection		50 sec., 60 sec.
04	Dial 1 (DP) Hookflash Selection	Yes	Yes, No
05	Hookflash Start Time Selection	300 ms.	Page 1: 100 ms., 150 ms., 200 ms., 250 ms., 300 ms., 350 ms., 400 ms., 450 ms., Page 2: 500 ms., 550 ms., 600 ms., 650 ms., 700 ms., 750 ms., 800 ms., 850 ms.
06	Hookflash End Time Selection	Refer to Memory Block	
07	Voice Mail Digit Add Assignment	All Blank	
08	Voice Mail DTMF Delay Timer Selection	1 sec.	0 sec., 1 sec., 2 sec., 3 sec., 4 sec., 5 sec., 6 sec., 8 sec.
09	Voice Mail Disconnect Time Selection	1.5 sec.	0.6 sec., 1 sec., 1.5 sec., 2 sec., 3 sec., 5 sec.
10	Voice Mail DTMF Duration/Interdigit Time Selection	100/70 ms.	70/60 ms., 100/70 ms., 400/100 ms., 600/100 ms., 900/200 ms.

LK 4 Transfer/Automated Attendant (A.A.)

Data No.	Function Name	Default	Programming Value
00	Tandem Transfer Automatic Disconnect Timer Selection	1 hr.	30 min., 1 hr., 2 hr., 3 hr.
01	Automated Attendant First Digit PBR Release Timer Selection	20 sec.	10 sec., 20 sec., 30 sec., 40 sec., 50 sec., 60 sec.
02	Automated Attendant Transfer Delayed Ringing Time Selection	No limit	10 sec., 20 sec., 30 sec., No Limit
03	Automated Attendant No Answer Disconnect Time Selection	2 min.	1 min., 2 min., 3 min., 4 min.
04	Tandem Transfer SMDR Print Extension Assignment	999	2-digit = 99 3-digit = 999 4-digit = 9999
05	Automatic Tandem Trunk by Night Mode Selection	No	Yes, No
08	Automated Attendant PBR Timeout Response Selection	Normal Call	Normal Call, Release
09	Automated Attendant PBR Start Time Selection	FR	FR = Same time AF = After
11	Automated Attendant Message Day/Night Mode Selection	No	Yes, No
12	Automated Attendant Message to Tenant Assignment	00	All Automated Attendant Messages: Tenant Number 00
13	Automated Attendant Answer Delay Time Assignment	4 sec.	$00 \sim 99 \text{ sec.}, 1 \sim 8$
14	Automated Attendant Message Access Code (1-Digit) Assignment	Refer to Memory Block	
15	Automated Attendant Message Access Code (2-Digit) Assignment	Refer to Memory Block	
16	Automated Attendant Message Repeat Selection	All Messages One Time	One Time, Two Times, Three Times, Four Times, Five Times, Six Times, Seven Times, Eight Times

LK 5 SMDR/LCR

Data No.	Function Name	Default	Programming Value
02	SMDR Print Format	All	All, Mask
13	Printer Connected (Alarm) Selection	No	No, Non, Yes
14	Printer Line Feed Control Selection	Yes	Yes, No
24	DISA ID Code Digit Selection	3-digit	2-digit, 3-digit, 4-digit
25	SMDR Valid Call Timer Assignment	40 sec.	0~990 sec. (in 10 second increments)
26	SMDR Incoming/Outgoing Print Selection	Outgoing	All, Outgoing, Incoming

LK6 DSS

Data No.	Function Name	Default	Programming Value
01	Attendant Add-On Console to Telephone Port Assignment	Refer to Memory Block	
03	DSS Call Voice/Tone Signal Selection	Voice	Tone, Voice
05	Attendant Add-On Console Key Selection	Refer to Memory Block	

LK7 ESP

Data No.	Function Name	Default	Programming Value
02	External Speaker Connection Selection	All Speakers (A~C)	Yes, No
03	External Paging Alert Tone Selection	Yes	Yes/No
06	External Paging-Timeout Selection	5.0 min.	0.5 min. 1 min. 1.5 min. 2 min. 3 min. 5 min. 8 min. No Limit
07	External Ring Relay Cycle Selection	Pattern 3	Refer to Memory Block

Programming 2-19

LK8 PBR/Miscellaneous

Data No.	Function Name	Default	Programming Value
01	SLT or Automated Attendant/DISA to PBR Selection	Single Line Telephones	Off = Single Line Telephone On = Automated Attendant/DISA
02	PBR Receive Level Assignment for Automated Attendant/DISA	- 36.1 dBm	Refer to Memory Block
04	Time Display (12h/24h) Selection	12 hr. Display	12 hr. Display, 24 hr. Display
07	Class of Service (Attendant) Feature Selection 1	Refer to Memory Block	
08	Class of Service (Station) Feature Selection 2	Refer to Memory Block	
09	Music On Hold Pattern Selection	Pattern A	Pattern A, ~ Pattern D
10	PBR Interdigit Release Timer Selection	7 sec.	3 sec., 4 sec., 5 sec., 6 sec., 7 sec., 8 sec., 9 sec., 10 sec.
11	System Refresh Timer Assignment	4 hr.	No Refresh, 4 hr., 8 hr., 12 hr., 24 hr.
12	VRS Message Recording Time Selection	15 sec. / 16 messages	15 sec./16 messages, 30 sec./8 messages, 60 sec./4 messages, 120 sec./2 messages
13	VRS Message Function Assignment	No Message	
15	Tone Assignment	Refer to Memory Block	
16	Voice Prompt to Tone Assignment	Refer to Memory Block	
17	PC Programming Password Assignment	Class 1, 2 All Blank	
18	Site Name Assignment	No Assignment	
25	ACD/UCD Group Agent Assignment	Not Specified	Agent Extension Number and ACD/UCD Group Number

LK9 DISA

Data No.	Function Name	Default	Programming Value
00	DISA ID Code Assignment	Refer to Memory Block	
02	DISA Password Effect/Invalid Selection		DISA Password Invalid DISA Password Effect

LK 10 CAR

Data No.	Function Name	Default	Programming Value
01	Call Arrival Key Number Assignment	Not Specified	
02	Call Arrival Key Master Hunt Number Selection	No	No, Yes
03	Call Arrival Key Hunt Number Forward Assignment	Not Specified	
04	Call Arrival Key Port Name Assignment	Not Specified	
05	Call Arrival Key to Call Appearance Block Assignment	Not Specified	

LK 11 DTI

Data No.	Function Name	Default	Programming Value	
00	Signal Format Selection	ESF (24)	SF (12) ESF (24)	
01	Clear Channel Selection	ZCS	B8ZS ZCS	
02	Line Length Selection	0 - 131 ft.	Refer to Memory Block	
03	Robbed Bit Signaling Channel Selection	4-State (A and B)	4-State (A and B) 16-State (A, B, C, and D)	
04	DTI Maintenance Selection	Remote Loopback	Remote Loopback, Local Loopback	
05	TI Channel Selection	Refer to Memory Block		
06	Signaling Selection	Loop Start	Loop Start, Ground Start	
07	DTI Trunk Type Assignment	СО	CO E&M DID	

LK 12 ACD/UCD

Data No.	Function Name	Default	Programming Value
00	ACD/UCD Group Pilot Number Assignment	Not Specified	
01	ACD/UCD Group Overflow Destination Assignment	Not Specified	
02	ACD/UCD Overflow Timer Selection	60 sec.	∞ 10 sec. 30 sec. 60 sec. 120 sec. 180 sec. 240 sec.

Programming 2-21

LK 2 Tenant Mode

Data No.	Function Name	Default	Programming Value
01	Trunk to Tenant Assignment	Refer to Memory Block	
05	Line Key Selection	Telephone Mode	Tenant-Wide Mode, Telephone Mode
06	Line Key Selection for Tenant Mode	Refer to Memory Block	
07	System Speed Dial Display Assignment	All Speed Dial Confirmation Allowed	
08	ECR Relay to Tenant Assignment	All Tenant No Assignment	

LK 3 CO/PBX Line Mode

Data No.	Function Name	Default	Programming Value		
00	Telephone Number to Trunk Assignment	Not Specified	A maximum of 13 digits (numbers, hyphens, spaces)		
02	Trunk Status Selection	Out and In	Out and In, In		
03	Trunk-to-Trunk Group Assignment	Refer to Memory Block			
04	Trunk-to-Trunk Transfer Yes/No Selection	No	No, Yes		
05	Trunk Incoming Answer Mode Selection	Normal	Normal, Automatic Trunk-to-Trunk Transfer, Automated Attendant/DISA		
06	Automatic Tandem Trunk Assignment	Not Specified			
07	CO/PBX Ringing Variation Selection	Medium (M)	Medium (M), Low (L), High (H)		
14	Tie/DID Line Type Assignment	2 nd Dial Tone	2 nd Dial Tone, Immediate, Delayed, Wink Start		
15	Trunk DTMF Duration/Interdigit Selection	Duration: 100 ms. Interdigit Time: 70 ms.	70 ms 60 ms. 100 ms 70 ms. 400 ms 100 ms. 600 ms 100 ms. 900 ms 200 ms.		
16	Tie Line Prepause Time Selection	0 sec.	0 sec. 0.5 sec. 1 sec. 1.5 sec. 2 sec. 3 sec. 4 sec. 5 sec. 6 sec. 7 sec. 8 sec. 9 sec. 10 sec. 11 sec. 12 sec. 13 sec.		

LK 3 CO/PBX Line Mode (continued)

Data No.	Function Name Tie Line Answer Detect Time Selection	Default 520 ms.	Programming Value			
17			0 ms. 130 m 390 ms. 520 m 780 ms. 910 m 1170 ms. 1300 m 1560 ms. 1690 m 1950 ms.	s. 650 ms. s. 1040 ms. s. 1430 ms.		
18	Tie Line Release Detect Time Selection	520 ms.	0 ms. 130 m 390 ms. 520 m 780 ms. 910 m 1170 ms. 1300 m 1560 ms. 1690 m 1950 ms.	s. 650 ms. s. 1040 ms. s. 1430 ms.		
19	Tie Line/CO/PBX Incoming Signal Detect Time Selection	Refer to Memory Block				
20	Tie Line Loop Off-Guard Time Selection	2 sec.	0 sec. 0.5 se 1.5 sec. 2 se 4 sec. 5 se 7 sec. 8 se 10 sec. 11 se 13 sec.	c. 3 sec. c. 6 sec. c. 9 sec.		
21	Tie Line Length of Wink Signal Selection	180 ms.	30 ms. 60 m 120 ms. 150 m 210 ms. 240 m 300 ms. 330 m 390 ms. 420 m 480 ms.	s. 180 ms. s. 270 ms. s. 360 ms.		
22	Tie Line Length of Delay Signal Selection	300 ms.	0 ms. 300 m 900 ms. 1200 m 1800 ms. 2100 m 2700 ms. 3000 m 3600 ms. 3900 m 4500 ms.	s. 1500 ms. s. 2400 ms. s. 3300 ms.		
23	Tie Line Outgoing Timeout Selection	12 sec.	1 sec. 1.5 se 3 sec. 4 se 6 sec. 7 se 9 sec. 10 se 12 sec. 13 se 15 sec. No Lim	c. 5 sec. c. 8 sec. c. 11 sec. c. 14 sec.		
24	Tie Line Incoming Interdigit Timeout Selection	6 sec.	1 sec. 1.5 sec. 2 se 5 sec. 6 sec. 7 se 10 sec. 11 sec. 12 se 15 sec. No Lim	c. 8 sec. 9 sec. c. 13 sec. 14 sec.		
25	Tie Line Wink/Delay Signal Detect Timeout Selection	7 sec.	1 sec. 1.5 sec. 2 se 5 sec. 6 sec. 7 se 10 sec. 11 sec. 12 se 15 sec. No Lim	c. 8 sec. 9 sec. c. 13 sec. 14 sec.		

Programming 2-23

LK 3 CO/PBX Line Mode (continued)

Data No.	Function Name	Default	Pr	ogrammiı	ng Value	e
26	Tie Line Outgoing Guard Time Selection	3 sec.	0.02 sec. 4 sec. 8 sec. 12 sec.	1 sec. 5 sec. 9 sec. 13 sec.	2 sec. 6 sec. 10 sec. 14 sec.	
27	Tie Line Dial Tone Selection	Yes	Yes, No			
28	Tie Line Reorder Tone Selection	Sending (Yes)	Sending (Yes) Not Sen	ding (No	o)
29	Tie Line Internal Transmit Pad Selection	2 dB	2 dB 8 dB S1	4 dB 12 dB S2	1	6 dB 6 dB 0 dB
30	Tie Line Internal Receive Pad Selection	2 dB	2 dB 8 dB S1	4 dB 12 dB S2	1	6 dB 6 dB 0 dB
31	Tie Line External Transmit Pad Selection	2 dB	2 dB 8 dB S1	4 dB 12 dB S2	1	6 dB 6 dB 0 dB
32	Tie Line External Receive Pad Selection	2 dB	2 dB 8 dB S1	4 dB 12 dB S2		6 dB 6 dB 0 dB
33	Disconnect Recognition Time Selection	.3 sec.	0 sec. .3 sec. .6 sec. .9 sec. 1.3 sec.	.1 sec. .4 sec. .7 sec. 1.0 sec. 1.4 sec.	.8 .8 1.2	2 sec. 5 sec. 3 sec. 2 sec. 5 sec.
38	Automated Attendant Message to Trunk Selection	Message 1				
40	Automatic Release Signal Detection Time Selection	350 ms.	0 ms. 200 ms. 400 ms. 600 ms.	50 ms. 250 ms. 450 ms. 650 ms.	100 ms. 300 ms. 500 ms. 700 ms.	150 ms. 350 ms. 550 ms. No Limit
41	Delay Announcement Assignment	Refer to Memory Block				
42	DIT Assignment	No Assignment				
43	ANA Assignment	No Assignment				
91	Trunk Type Selection	СО	CO, PBX, Tie	/DID line		
92	Trunk (Installed, DP/DTMF) Selection	MF	Nil, DP 10 pp	os, DP 20 p	ps, MF	

LK 4 Telephone Mode

Data No.	Function Name	Default	Programming Value	
01	CO/PBX Ring Assignment (Day Mode)	Refer to Memory Block	No Ring, Immediate Ring, Delayed Ring	
02	CO/PBX Ring Assignment (Night Mode)	Refer to Memory Block	No Ring, Immediate Ring, Delayed Ring	
07	Code Restriction Class Assignment (Day Mode)	All Stations Class 00		
08	Code Restriction Class Assignment (Night Mode)	All Stations Class 00		
09	Telephone to Tenant Assignment	All Telephones Tenant 00	Tenant Number	
10	Station Number Assignment	Refer to Memory Block		
11	Ringing Line Preference Selection	No	No, Yes	
12	Line Key Selection for Telephone Mode	Refer to Memory Block		
13	CO/PBX Busy Forward Station Assignment	Not Specified		
14	Intercom Master Hunt Number Selection	No	No, Yes	
15	Intercom Master Hunt Number Forward Assignment	All Telephones Not Specified	Station Number	
17	Station to Class of Service Feature Assignment	Refer to Memory Block		
18	Station Name Assignment	Not Specified	Up to 6 digits (characters)	
19	Trunk Outgoing Restriction	Not Restricted	No (Not Restricted) Yes (Restricted)	
20	Off-Hook Voice Announcement Terminal Assignment	No	No = Off-hook Voice Deny Yes = Off-hook Voice Allow	
23	Prime Line/Hot Line Assignment	Not Specified	Up to 10 digits	
24	SLT Hookflash Assignment	Hold	Hold, Disconnect	
26	DISA ID Number Station Assignment	Refer to Memory Block		
28	Bilingual LCD Indication Selection	English	English, Japanese	
29	HFU Selection	No	No, Yes	
30	Hold/Transfer Recall Display Selection	Yes	Yes, No	

LK 4 Telephone Mode (continued)

Data No.	Function Name	Default	Programming Value	
31	Receiving Internal/All Call Page Selection	Yes	Yes, No	
32	Trunk Digit Restriction	00 (No Limit)	00 ~ 99	
33	Fax Indication Station Assignment	00 for all ports		
34	Fax Indication Networking Assignment	00 for all ports		
35	Voice Mail/SLT Selection	No	No, Yes	
36	Voice Prompt Selection	No	No, Yes	
37	Extension Line Key Ring Assignment (Day Mode)	All Telephones: No Ring	No Ring, Immediate Ring, Delayed Ring	
38	Extension Line Key Ring Assignment (Night Mode)	All Telephones: No Ring	No Ring, Immediate Ring, Delayed Ring	
39	ADA (2) Ring Mode Assignment	Station Number (only)	No Ring, Station Number (only), All Ring	
40	LCR Class Selection	Class 0	Class 0~Class 4	
41	SIE/CAR Ringing Line Preference Selection	Yes	Yes, No	
42	Call Forward - Busy Immediately/Delay Selection	No	No = Delay Yes = Immediately	
43	Station to Call Appearance Block Assignment	Not Specified		
90	SLT Data Line Security Assignment	SLT Norm	SLT Norm - SLT Data	
91	Telephone Ringing Variation Selection	Medium (M)	Medium (M), Low (L), High (H)	
92	Receiving Volume Selection	Down	Down, Up	
93	Internal Zone Paging Selection	No	No, Zone A, Zone B, Zone C	
94	3-Minute Alarm Selection	No	No, Yes	
95	DTMF/DP SLT Type Selection	DTMF	DP, DTMF	

LK 5 Trunk Group Mode

Data No.	Function Name	Default	Programming Value
00	Digit Add/Del For Tie Line Networking	All Trunk Group 000 (No Addition and Deletion)	Delete up to two digits, add up to two digits
01	Tie Line Networking Tandem Connection Assignment	All Trunk Groups	On = Yes (Enabled) Off = No (Disabled)
02	8-Digit Matching Table to Trunk Group Assignment	Use All Tables	On = Use (Enabled) Off = Not Used (Disabled)
03	OCC Table to Trunk Group Assignment	Use All Tables	On = Use (Enabled) Off = Not Used (Disabled)

LK 6 Copy Mode

Data No.	Function Name	Default	Programming Value
2	Tenant Mode Copy Assignment	N/A	N/A
3	CO Line Mode Copy Assignment	N/A	N/A
4	Telephone Mode Copy Assignment	N/A	N/A
5	Trunk Group Mode Copy Assignment	N/A	N/A

LK7 KTU Mode

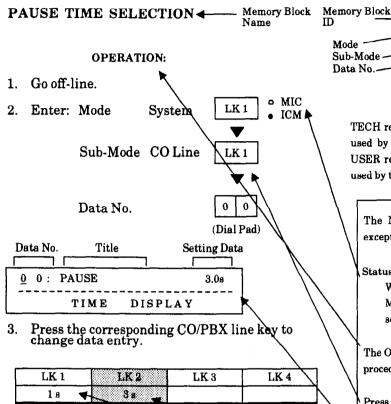
Data No.	Function Name	Default	Programming Value
1	Card Interface Slot Assignment	Refer to Memory Block	
2	Telephone Type Assignment	Telephone	Non, Telephone, DSS Console, SLT Adaptor
3-00	MIF (ACD) Assignment	No Function (00)	
3-01	MIF (LCR) Assignment	No Function (00)	
3-02	MIF (SMDR) Assignment	No Function (00)	
3-03	MIF (UCD) Assignment	No Function (00)	

LK8 Special Mode

Data No.	Function Name	Default	Programming Value
1	ROM Version Confirmation	N/A	
2	System Speed Dial Memory Clear	N/A	
3	Station Speed Dial Memory Clear	N/A	
8800	Second Initialization	N/A	

SECTION 4 PROGRAMMING PROCEDURES

Section 4 contains detailed instructions for programming System Data. The example below describes the format of programming procedures for each data item (Memory Block) function.



CO/PBX line key

LK 7

- To change Pause Time from 3 seconds to 1 second, press CO/PBX line key 1.
- 4. Press the TRF key to write the data.

LK 6

- 5. Press the SPKR key to go back on-line.
- Additional Programming 4

LK 5

Memory Block No.	Memory Block Name	Required
1-1-09	Manual Pause Selection	
1-1-24	PBX/CTX Access Code Assignment I	
1-1-25	PBX/CTX Access Code Assignment II	
3-91	Trunk Type Selection	

Memory Block
ID

System

CO Line

Data No.

Mode
Sub-Mode
Data No.

PC Programming Guide

TECH B: C: C: D

USER

TECH refers to the System Program Technician Manual to be

TECH refers to the System Program Technician Manual to be used by the Technician for PC Programming Procedures. USER refers to the System Program End-User Manual to be used by the End-User for PC Programming Procedures.

NOTES:

The NOTES section is used to alert the Technician of exceptions to programming.

Status indication LEDs

When CO/PBX line key 1 (System Mode) is pressed, the MIC LED lights. When CO/PBX line key 1 is pressed a second time (CO line), the ICM LED lights.

The OPERATIONS are for guiding the Technician through the procedures for programming a specific Memory Block.

Press these keys in this sequence.

Display

LK8

Data assigned to associated CO/PBX line keys.

In some instances, additional data must be programmed before or after a specific Memory Block can be programmed. This table contains those additional Memory Blocks.

If additional information is needed on this page, some or all of the notes in the NOTE section will continue on the next page.

A brief description of the function(s) of a specific Memory Block.

GENERAL INFORMATION - PAUSE TIME SELECTION

A pause may be inserted between digits dialed on CO/PBX and Tie lines. This Memory Block specifies the length of the pause. A pause is automatically inserted following a "behind a CO/PBX" Access Code (for example, "9") by registering Memory Blocks 24 and 25 for CO line in the System Mode.

PAUSE TIME SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK1 MIC ICM

 Data No. 0 0 0

 (Dial Pad)

Data No.	Title	Setting Data
0 0:	PAUSE	3.0s
TIME	DISPLAY	

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change Pause Time from 3 seconds to 1 second, press CO/PBX line key 1.

LK 1	LK 2	LK 3	LK 4
1 sec.	3 sec.	<u>-</u> -	
LK 5	LK 6	LK 7	LK 8
	<u> </u>		
CO/PE	X line keys	Def	ault

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-01 (DP Interdigit Time Selection).
- 5. Press the SPKR key to go back on-line.
 - Additional Programming

Memory Block No.	Memory-Block Name	Required
1-1-09	Manual Pause Selection	
1-1-24	PBX/CTX Access Code Assignment I	
1-1-25	PBX/CTX Access Code Assignment II	
3-91	Trunk Type Selection	

System	CO Line	Data No.
1	1	00

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NOTES:

- A pause is automatically inserted following a "behind CO/PBX" Access Code (for example, "9") by programming CO/PBX lines as PBX in Memory Block 3-91 (Trunk Type Selection) and 1-1-24/25 (PBX/CTX Access Code Assignments I/II).
- 2. Manual pauses can be stored to be used when dialing outside lines by the Last Number Redial or Save/Store and Repeat features when Memory Block 1-1-09 (Manual Pause Selection) is programmed.
- 3. Pauses can be stored as part of System and Station Speed Dial buffers when needed.

GENERAL INFORMATION - PAUSE TIME SELECTION

A pause can be inserted between digits dialed on CO/PBX and Tie lines. This Memory Block specifies the length of the pause.

DPINTERDIGIT TIME SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK1 MIC ICM

 Data No.

 Data No.

 O 1

 (Dial Pad)

Data No.	Title	Setting Data	
0 1:	DP INTER	В	
TIME	DISPLAY		

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change Pattern B to Pattern A, press CO/PBX line key 1.

LK 1	LK2	LK 3	LK 4
Pattern A	Pattern B		
LK 5	LK 6	LK 7	LK 8

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-02 (Hookflash Time Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

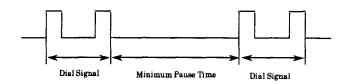
Memory Block No.	Memory Block Name	Required
3-92	Trunk (Installed, DP/DTMF) Selection	

System	CO Line	Data No.
1	1	01

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TECH	B:C:C:B	USER	

NOTES:

1. This Memory Block is used when CO/PBX or Tie lines are assigned to send Dial Pulse signaling in Memory Block 3-92 [Trunk (Installed, DP/DTMF) Selection].



DP dial	10 pps	20 pps
Pattern A	650 ms.	500 ms.
Pattern B	800 ms.	800 ms.

GENERAL INFORMATION - DP INTERDIGIT TIME SELECTION

The DP Interdigit Time is the minimum pause time interval between Dial Pulse dialing. Either Pattern A or Pattern B can be selected.

HOOKFLASH TIME SELECTION

OPERATION:

- 1. Go off-line.
- MIC 2. Enter: Mode LK 1 System **ICM** MIC Sub-Mode CO Line LK 1 ICM 2 Data No. (Dial Pad)

Data No.	Title Setting Data	Page
<u>0</u> 2:	FLSH 600 ms.	2
TIME	DISPLAY	

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 600 ms. to 140 ms.
 - Press the RECALL key to go to page 1.
 - Press CO/PBX line key 6.

LK 1	LK 2	LK 3	LK 4
20 ms.	40 ms.	60 ms.	80 ms.
LK 5	LK 6	LK 7	LK 8
100 ms.	140 ms.	160 ms.	200 ms.

CO/P	CO/PBX line keys		ult
Page 2			
LK 1	LK 2	LK 3	L

Page 2			
LK 1	LK 2	LK 3	LK 4
400 ms.	600 ms.	800 ms.	1 sec.
LK 5	LK 6	LK 7	LK 8
1.5 sec.	2 sec.	3 вес.	5 вес.

RECALL	key	:	Next page.
FNC	key	:	Previous page.

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-03 [Hold Recall Timer Selection (Non-Exclusive Hold)].
- Press the SPKR key to go back on-line.

Sy	stem	CO Line	Data No.
	1	1	02
	PC Pro	ogramming (J uide
TECH	B:C:C:0	USER	

NOTES:

- 1. A 1- or 2-digit Access Code can be assigned in Memory Block 1-1-46/47 [Access Code (1-Digit/ 2-Digit) Assignment] for Single Line Telephones to send a hookflash signal on a CO/PBX line (default: 6 #).
- 2. On a per Single Line Telephone basis, a hookflash from the Single Line Telephone can put an existing call on hold or send a hookflash signal on the CO/PBX line.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-46	Access Code (1-Digit) Assignment	
1-1-47	Access Code (2-Digit) Assignment	
1-3-02	SLT Hookflash Signal Selection	
4-24	SLT Hookflash Assignment	

GENERAL INFORMATION - HOOKFLASH TIME SELECTION

This Memory Block specifies the length of break time for a hookflash signal (that breaks the DC loop of a CO/PBX line) sent to the CO or PBX when the RECALL key on a Multiline Terminal is pressed, or an SLT generates a hookflash and the system is assigned to send the hookflash.

HOLD RECALL TIMER SELECTION (NON-EXCLUSIVE HOLD)

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK1 MIC ICM

 Data No. 0 3

 (Dial Pad)

Data No.	Title	Setting Data
	7	
0 3:	HOLD RECL	1 m
TIME	DISPLAY	

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 1 min. to 2 min., press CO/PBX line key 2.

LK 1	LK 2	LK 3	LK 4
l minute	2 minutes	4 minutes	No Limit
LK 5	LK 6	LK 7	LK 8
		l 	
CO/PB	X line kevs	Def	ault

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-04 (Automatic Redial Time Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required		
1-1-63	Hold Recall Time Selection (Exclusive)			
1-2-23	System Call Park Recall Time Selection			

	Data No.
1	03
	1

PC Programming Guide			
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NOTES:

- 1. Calls put on Exclusive Hold will recall using the data selected in Memory Block 1-1-63 [Hold Recall Time Selection (Exclusive)].
- 2. Calls placed on Hold on call appearence keys will recall using this Memory Block.
- 3. Calls parked in System Call Park locations will recall using Memory Block 1-2-23 (System Call Park Recall Time Selection).

GENERAL INFORMATION - HOLD RECALL TIMER SELECTION (NON-EXCLUSIVE HOLD)

This Memory Block specifies the time interval of a Non-Exclusive held outside call until a recall tone is generated. If "No Limit" is selected, no hold alarm tone is generated.

AUTOMATIC REDIAL TIME SELECTION

OPERATION:

1. Go off-line.

0 4:

- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK1 MIC ICM

 Data No. 0 4

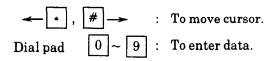
 (Dial Pad)

 Data No. Title Table Setting Data
- 3. Use the dial pad to enter the table number and Setting Data.

(1/2/3)

DISPLAY

030



REDIAL

TIME

Default	Table 1: Calling Time 30 sec. Table 2: Call Waiting Time 60 sec. Table 3: Call Attempts 2
---------	---

- 4. After entering data for Table 3, pressing the TRF key will write the selected data and advance to Memory Block 1-1-05 (Start Timer Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

System	CO Line	Data No.
1	1	04

PC Programming Guide			
TECH	B:J:A	USER	

NOTES:

1. Definitions:

<u>Calling Time</u>: The time that the system will automatically ring the busy CO/PBX number. After the specified time limit is reached, the ringing will stop.

<u>Call Waiting Time</u>: The time the system will wait before redialing the called party's number.

<u>Call Attempts</u>: The number of times the system will redial the busy CO/PBX number.

2. Setting Data (Allowed)

Table 1:Calling Time $(001\sim100 \text{ sec.})$ Table 2:Call Waiting Time $(001\sim100 \text{ sec.})$ Table 3:Call Attempts $(001\sim255 \text{ times})$

(000 cannot be entered.)

 If call Pick-up groups are assigned using Memory Block 4-09, the CO limits must be alligned to the same Tennant Group in Memory Block 2-01 for this feature to work.

GENERAL INFORMATION - AUTOMATIC REDIAL TIME SELECTION

When the called party is busy, the station user dials an Access Code and restores the handset. As programmed in this Memory Block, the system will automatically redial the busy CO/PBX number. After the specified number of call attempts with no answer, the system will cease trying to dial.

START TIMER SELECTION

OPERATION:

1. Go off-line.

TIME

- o MIC 2. Enter: Mode System LK 1 **ICM** o MIC Sub-Mode CO Line LK 1 ICM Data No. (Dial Pad) Title Setting Data Data No. <u>0</u> 5: CALL START 20 s
- 3. Press the corresponding CO/PBX line key to change data option.

DISPLAY

• To change 20 sec. to 10 sec., press CO/PBX line key 1.

LK 1	LE 2	LK 3	LK 4
10 sec.	20 sec	30 sec.	40 sec
LK 5	LK 6	L K 7	LK 8
50 sec.	60 sec.	70 sec.	80 sec

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-06 (CO/PBX Incoming Ringing Alarm Time Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-5-25	SMDR Valid Call Timer Assignment	

System	CO Line	Data No.			
1	1	0 5			
PC Pro	PC Programming Guide				

USER

NOTES:

TECH B:I:C

- 1. This timer is used for three different features.

 These features and their functions are described below:
 - <u>Elapsed Call Timer</u>: The time needed after dialing until the Elapsed Call Timer is displayed and started.
 - <u>SMDR Start Timer</u>: The time needed after dialing until the SMDR Valid Call Timer is started [see Memory Block 1-5-25 (SMDR Valid Call Timer Assignment)]. For outgoing calls, both timers (SMDR Start Timer and SMDR Valid Call Timer) must elapse before a call record is generated.
 - <u>Talk Start Timer</u>: The time needed after dialing on a CO/PBX line to establish a Trunk-to-Trunk transfer. (Software lower than V2.25 or V2.77)

GENERAL INFORMATION - START TIMER SELECTION

This Memory Block is used to specify the length of time needed after dialing for the system to start the Elapsed Call Timer, SMDR Start Timer and/or Talk Start Timer. Refer to Notes above for a description of each timer.

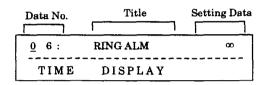
CO/PBX INCOMING RINGING ALARM TIME SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK1 MIC ICM

 Data No. 0 6
 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change No Limit to 10 sec., press CO/PBX line kev 1.

LK 1	LK 2	LK 3	LK 4
10 sec.	20 sec.	30 sec.	90
LK 5	LK 6	LK 7	LK 8
	L	<u> </u>	<u> </u>
CO/PB	X line keys	De	fault

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-07 (Tie/DID Line Delay Ringing Timer Selection).
- 5. Press the SPKR key to go back on-line.

System	CO Line	Data No.
1	1	06

PC Programming Guide			
тесн		USER	S:G

NOTES:

- 1. Memory Blocks 4-01 and 4-02 [CO/PBX Ring Assignment (Day Mode/Night Mode)], must be set to RING.
- 2. CO/PBX lines assigned for DIT/ANA will not activate this feature.
- 3. Tie/DID lines assigned for Delayed Ringing will follow this assignment after the delayed ringing starts.
- 4. This feature uses the same ringing tone (Low, Medium, High) that can be selected in Memory Blocks 3-07 (CO/PBX Ringing Variation Selection) and 4-91 (Telephone Ringing Variation Selection). If "High" is selected in those Memory Blocks, this feature will not function.
- 5. Selection of No Limit (∞) disables this feature.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-07	Tie/DID Line Delay Ringing Timer Selection	
3-07	CO/PBX Ringing Variation Selection	
4-01	CO/PBX Ring Assignment (Day Mode)	
4-02	CO/PBX Ring Assignment (Night Mode)	V
4-91	Telephone Ringing Variation Selection	

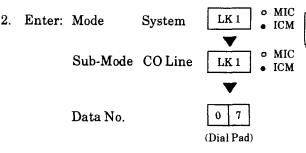
GENERAL INFORMATION - CO/PBX INCOMING RINGING ALARM TIME SELECTION

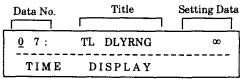
This Memory Block specifies the time interval from the incoming of a CO/PBX call until the ringing tone changes to a different ringing tone ("higher pitch") level if the call is not answered. If "No Limit" is selected, the ringing tone does not change.

TIE/DID LINE DELAY RINGING TIMER SELECTION

OPERATION:







- 3. Press the corresponding CO/PBX line key to change data option.
 - To change No Limit to 10 sec., press CO/PBX line key 1.

	I	<u> </u>	
LK 5	LK 6	LK 7	LK 8
10 sec.	20 sec.	30 sec.	5 00
LK 1	LK 2	LK 3	LK 4

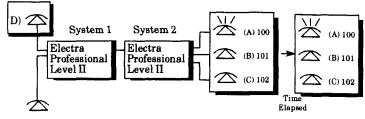
- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-09 (Manual Pause Selection).
- 5. Press the SPKR key to go back on-line.

■ Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-34	Tie/DID Line First Ring Pattern Selection	
4-01	CO/PBX Ring Assignment (Day Mode)	V
4-02	CO/PBX Ring Assignment (Night Mode)	V
4-12	Line Key Selection for Telephone Mode	

System	CO Line	Data No.	
1	1	07	
PC I	Programming G	uide	
TECH	USER		

Example:



- Systems 1 and 2 are connected to each other.
- Station A (ext. 100) and Station C (ext. 102) are assigned to ring on the Tie line in Memory Blocks 4-01 and 4-02 [CO/PBX Ring Assignment (Day/Night) Mode].

NOTES:

- 1. When station user D wishes to speak to station user A dial ext. 100.
- 2. At Station A:
 - a. The ICM LED blinks and a ring tone different from the normal ringing tone is heard.
 - b. The call can be answered by lifting the handset.
 - c. In this instance, Station B and C cannot answer the call by pressing the line key on the Multiline Terminals.
- If station user A does not answer within the specified time:
 - a. The ringing tone changes to the normal tone and Station C starts ringing.
 - Any Station (A, B, or C) can answer the call by pressing the flashing line key.
- 4. After timeout, the system uses the Day and Night Ringing Assignment and rings the assigned station.
- 5. Selection of No Limit (∞) disables this feature.

GENERAL INFORMATION - TIE/DID LINE DELAY RINGING TIMER SELECTION

This Memory Block specifies the delay interval between the time a telephone (accessed by a ringing call on a Tie line) is not answered (within a specified time) and the time other telephones (assigned to ring on that Tie line) start ringing. Refer to the example and the notes above.

MANUAL PAUSE SELECTION

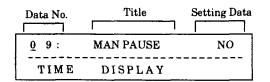
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK1 MIC ICM

 Data No. 0 9

 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change NO to YES, press CO/PBX line key 2.

CO/PB	K line keys	Def	ault
LK 5	LK 6	LK 7	LK 8
NO	YES		
LK 1	LK 2	L K 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-11 (System Transfer/Camp-On Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

System	CO Line	Data No.
1	1	09
PC Pro	ogramming G	uide
TECH D. D. A.	TIONE	

NOTES:

1. If you dial 907-4000 LNR/SPD 12345 after seizing a CO/PBX line:

When manual pause is not specified.

(Data in Speed Dial buffer 12.)

When manual pause is specified.

dialed number 907 4000 _____ 12345 is sent out.

(Pause)

- 2. The pause is inserted if Last Number Redial, Save and Repeat, or Store and Repeat is used to redial the number.
- When this feature is allowed, Multiline Terminal users will not be capable of using consecutive Speed Dial via the LNR/SPD key.

GENERAL INFORMATION - MANUAL PAUSE SELECTION

This Memory Block specifies either "Pause Insertion" or "Last Number Dialed/Speed Dial" to be executed using the LNR/SPD key if it is pressed after one or more digits of a dialed number has been entered. Refer to the notes above.

SYSTEM TRANSFER/CAMP-ON SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK1 MIC ICM

 Data No. 1 1 1

 (Dial Pad)

Data No.	Title	Setting Data
<u>1</u> 1:	RING TRF	YS
TIME	DISPLAY	

- Press the corresponding CO/PBX line key to change data option.
 - To change YES to NO, press CO/PBX line key 1.

LK 1	LK 2	LK 3	LK 4
NO	YES		
LK 5	LK 6	LK 7	LK 8
	<u> </u>		L
CO/PE	X line keys	Def	ault

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-12 (Station Transfer/Camp-On Recall Timer Selection).
- 5. Press the SPKR key to go back on-line.
 - Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-12	Station Transfer/Camp-On Recall Timer Selection	

System	CO Line	Data No.
1	1	11

	PC Program	ming	Guide
ТЕСН	B: B: A: I	USER	

NOTES:

 Transfers/Camp-Ons from Attendant Add-On Consoles are also activated by this Memory Block.

GENERAL INFORMATION - SYSTEM TRANSFER/CAMP-ON SELECTION

This Memory Block is used to allow or deny station users the capability of performing a Ring Transfer or Station Camp-On on a system-wide basis. If allowed, Multiline Terminal users can perform a Ring Transfer by pressing the TRF key.

STATION TRANSFER/CAMP-ON RECALL TIMER SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK1 MIC ICM

 Data No. 1 2

 (Dial Pad)

Data No.	Title	Setting Data
<u>1</u> 2:	TRF RECL	60 в
TIME	DISPLAY	

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 60 sec. to 120 sec., press CO/PBX line key 3.

LK 1	LK 2	LK 3	LK 4
30 вес.	60 sec	120 sec.	240 sec.
LK 5	LK 6	LK 7	LK 8
COÆ	X line keys	Def	ault

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-18 (System Speed Dial Restriction by Tenant).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-11	System Transfer/Camp-On Selection	
1-6-01	Attendant Add-On Console to Telephone Port Assignment	
1-8-08	Class of Service (Station) Feature Selection 2	

System	CO Line	Data No.
1	1	12

	PC Program	ming	Guide
тесн	B:I:H	USER	S:K

NOTES:

 When a station with an Attendant Add-On Console assigned to it transfers or camps on a call to a station and the call goes unanswered, the call recalls using Memory Block 1-1-64 (Attendant Add-on Console Transfer/Camp-On Recall Timer Selection).

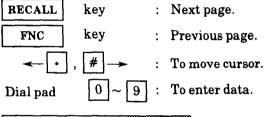
GENERAL INFORMATION - STATION TRANSFER/CAMP-ON RECALL TIMER SELECTION

This Memory Block specifies the time interval before a Ring Transfer or Station Camp-On from a station without an Attendant Add-On Console will recall back to the originating station if the call is not answered.

SYSTEM SPEED DIAL RESTRICTION BY TENANT

OPERATION:

- 1. Go off-line.
- o MIC LK 1 2. Enter: Mode System **ICM** o MIC Sub-Mode CO Line LK 1 ICM Data No. (Dial Pad) Speed Dial Tenant No. No. in groups Data No. Title 0X~XX of 8 00 1 8: SPEED (0X) TIME DISPLAY
- 3. Press the corresponding CO/PBX line key for each tenant.



CO/PBX Line LED	off of	□ on	Default
Data	Restricted	Not Restricted	2014411

- 4. The LED indication changes to indicate the option entry each time the CO/PBX line key is pressed.
- 5. After entering all pages of Access Code 0X, press the TRF key to display the next 1X.
- 6. Use the dial pad to change the Access Code.
- 7. After entering all pages of 8X, pressing the TRF key will write the selected data and advance to Memory Block 1-1-24 (PBX/CTX Access Code Assignment I).
- 8. Press the SPKR key to go back on-line.

System	CO Line	Data No.
1	1	18

	PC Prog	ramming Guid	e
ТЕСН	B : K : E	USER	

Page Switching:

Tenant Number (00~47) corresponds to CO/PBX line key.

e 1 (Tenanta	00~07)		
LK 1	LK 2	LK 3	LK 4
00	01	02	03
LK 5	LK 6	LK 7	LK 8
04	05	06	07

LK 1	LK 2	LK 3	LK 4
08	09	10	11
LK 5	LK 6	LK 7	LK 8
12	13	14	15

3 (Tenants LK 1	LK 2	LK 3	LK 4
16	17	18	19
LK 5	LK 6	LK 7	LK 8
20	21	22	23

Page 4 (Tenanta	24~31)		
LK 1	LK 2	LK 3	LK 4
24	25	26	27
LK 5	LK 6	LK 7	LK 8
28	29	30	31

LK 1	LK 2	LK 3	LK 4
32	33	34	35
LK 5	LK 6	LK 7	LK 8

6 (Tenants LK 1	LK 2	LK 3	LK 4
40	41	42	43
LK 5	LK 6	LK 7	LK 8
44	45	46	47

CO/PBX line keys

(Continued on next page.)

SYSTEM SPEED DIAL RESTRICTION BY TENANT (continued)

System	CO Line	Data No.
1	1	18

System Speed Dial Number Access Code Table

Access Code	Speed Dial Number		
Access Code	90 Codes	1000 Codes	
0X	00 ~ 09	000 ~ 099	
1X	10 ~ 19	100 ~ 199	
ſ	ſ	ſ	
7X	70 ~ 79	700 ~ 799	
8X	80 ~ 89	800 ~ 899	

Default	All System Sp be dialed from	peed Dial buffers co any tenant.	ın
---------	---------------------------------	-------------------------------------	----

NOTES:

- Speed Dial buffers are divided into nine groups. (Refer to System Speed Dial Number Access Code Table.)
- 2. One or more tenants can be enabled to use each of the groups.
- 3. This Memory Block determines which tenants can use each group.
- 4. When Speed Dial is set to 1000, 900 ~ 999 cannot be restricted.
- 5. "X" in each Access Code is displayed even if it is not entered.
- 6. "X" = anydigit $0 \sim 9$.

Additional Programming-

Memory Block No.	Memory Block Name	Required
1-1-33	Speed Dial Number/Name Display Selection	
1-1-35	Speed Dial Buffer Allocation	
4-09	Telephone to Tenant Assignment	

GENERAL INFORMATION - SYSTEM SPEED DIAL RESTRICTION BY TENANT

This Memory Block specifies whether System Speed Dial is enabled for each tenant.

PBX/CTX ACCESS CODE ASSIGNMENT I

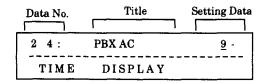
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK1 MIC ICM

 Data No. 2 4

 (Dial Pad)



3. Enter data by using the dial pad.

Example: To program 91 pause, dial: 91 LNR/SPD.

(Use the LNR/SPD key to insert a pause.)



Dial pad $\boxed{0} \sim \boxed{9}$: To enter data.

LNR/SPD key : To insert a pause.

HOLD key : To clear all data.



- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-25 (PBX/CTX Access Code Assignment II).
- 5. Press the SPKR key to go back on-line.

■ Additional Programming

Memory Block No.	Memory Block Name	Required
3-91	Trunk Type Selection	

station of the system that is connected behind a PBX or Centrex.

System CO Line Data No. 1 1 24

	PC Program	ming	Guide
TECH	B : G : E	USER	

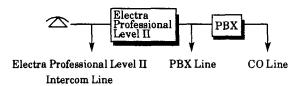
NOTES:

- 1. Features, such as Code Restriction, do not operate properly unless a behind PBX/CTX Access Code is specified. (Only PBX lines assigned in Memory Block 3-91).
- 2. A pause is not inserted in the number of an outgoing call on a CO line.
- 3. Up to six characters, three numeric and three pauses can be specified.
- 4. A pause cannot be inserted as the first or as consecutive digits.

Example:

GENERAL INFORMATION - PBX/CTX ACCESS CODE ASSIGNMENT I

This Memory Block specifies a CO line PBX/CTX Access Code together with pauses for outgoing calls from a



Programming

PBX/CTX ACCESS CODE ASSIGNMENT II

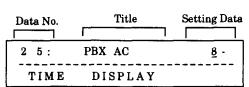
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK1 MIC ICM

 Data No. 2 5

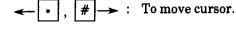
 (Dial Pad)



3. Enter option by using the dial pad.

Example: To program 81 pause, dial: 81 LNR/SPD.

(Use the LNR/SPD key to insert a pause.)



Dial pad 0~9

: To enter data.

LNR/SPD key

To insert a pause.

(Cannot be inserted as

first digit.)

HOLD key

To clear all data.



- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-26 (Off-Hook Ringing Selection).
- 5. Press the SPKR key to go back on-line.
 - Additional Programming

Memory Block No.	Memory Block Name	Required
3-91	Trunk Type Selection	

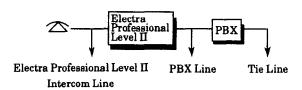
System	CO Line	Data No.
1	1	25

	PC Progr	ramming C	uide
TECH	B:G:F	USER	

NOTES:

- 1. Features, such as Code Restriction, do not operate properly unless behind a PBX/CTX Access Code is specified. (Only PBX lines assigned in Memory Block 3-91).
- 2. A pause is not inserted in the number of an outgoing call on a CO line.
- 3. Up to six characters, three numeric and three pauses, can be specified.
- 4. A pause cannot be inserted as the first or as consecutive digits.

Example:



GENERAL INFORMATION - PBX/CTX ACCESS CODE ASSIGNMENT II

This Memory Block specifies a Tie line PBX/CTX Access Code, together with pauses for outgoing calls from a station of the system that is connected behind a PBX or Centrex.

OFF-HOOK RINGING SELECTION

OPERATION:

- 1. Go off-line.
- o MIC LK 1 2. Enter: Mode System **ICM** MIC Sub-Mode CO Line LK 1 ICM Data No. (Dial Pad)

Data No.	Title	Setting Data
<u>2</u> 6:	OFF RING	YS
TIME	DISPLAY	

- 3. Press the corresponding CO/PBX line key to change the data option.
 - To change YES to NO, press CO/PBX line key 2.

CO/PB	X line keys	Def	ault
	III 0		
YES LK 5	NO LK 6	LK 7	LK 8
LK 1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-27 (Automatic Day/Night Mode Switching Time Assignment).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
4-01	CO/PBX Ring Assignment (Day Mode)	√
4-02	CO/PBX Ring Assignment (Night Mode)	V

System	CO Line	Data No.
1	1	26

PC Programming Guide			
тесн	B:B:A:H	USER	S:J

NOTES:

- Off-hook ring tone volume is lower than on-hook ring volume.
- 2. Off-hook ringing selection is made on a systemwide basis.

GENERAL INFORMATION - OFF-HOOK RINGING SELECTION

This Memory Block specifies whether a ringing tone is generated to a station for calls coming into a ring-assigned CO/PBX line at a station that is off-hook.

AUTOMATIC DAY/NIGHT MODE SWITCHING TIME ASSIGNMENT

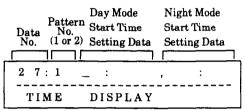
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

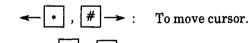
 Sub-Mode CO Line LK1 MIC ICM

 Data No. 2 7

 (Dial Pad)



- 3. Enter data by using the dial pad.
 - Example: To switch Time number 1, enter 08:00 and 20:00.



Dial pad $\boxed{0} \sim \boxed{9}$: To enter data.

HOLD key : To clear all data when cursor is at Data No. position.

Default Not Specified

- 4. Press the TRF key to write the data.
 - Number 2 Switching Time is displayed.
- 5. Use dial pad to change Time numbers.
- 6. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-28 (Distinctive Ringing by Telephone or CO Selection).
- 7. Press the SPKR key to go back on-line.

System	CO Line	Data No.	
1	1	27	

PC Programming Guide			
тесн	B : J : E/F	USER	S:B / S:C

NOTES:

- 1. The system can be placed into Day or Night Mode at any time from a terminal assigned this feature.
- 2. The start times of Day Mode and Night Mode can be specified in System Programming to automatically switch modes at the specified times.
- 3. A start time for Day Mode only or Night Mode only cannot be programmed.
- 4. Day Mode and Night Mode cannot be programmed to have the same start time.
- 5. The time is entered in military time only.
- 6. The first time input represents when Day Mode begins. The second time input represents the beginning of Night Mode.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-32	Automatic Day/Night Mode By Day of Week Selection	
1-4-05	Automatic Tandem Trunk By Night Mode Selection	
1-8-07	Class of Service (Attendant) Feature Selection 1	
4-07	Code Restriction Class Assignment (Day Mode)	
4-08	Code Restriction Class Assignment (Night Mode)	
4-09	Telephone to Tenant Assignment	
4-17	Station to Class of Service Feature Assignment	
4-37	Extension Line Key Ring Assignment (Day Mode)	
4-38	Extension Line Key Ring Assignment (Night Mode)	

GENERAL INFORMATION - AUTOMATIC DAY/NIGHT MODE SWITCHING TIME ASSIGNMENT

This Memory Block allows automatic switching of the system between Day Mode and Night Mode.

DISTINCTIVE RINGING BY TELEPHONE OR CO SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC
 Sub-Mode CO Line LK1 MIC
 LK1 MIC
 ICM

 Data No.

Data No.	Title	Setting Data
28:	DST RING	TEL
TIME	DISPLAY	

- 3. Press the corresponding CO/PBX line key to change the data option.
 - To change TEL to CO, press CO/PBX line key 2.

CO/PBX line keys		Def	ault
LK 5	LK 6	LK 7	LK 8
TEL.	CO		
LK1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-29 (Private Line Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name Memory Block Name	
3-07	CO/PBX Ringing Variation Selection	
4-01	CO/PBX Ring Assignment (Day Mode)	V
4-02	CO/PBX Ring Assignment (Night Mode)	\vee
4-91	Telephone Ringing Variation Selection	

System	CO Line	Data No.	
1	1	28	

PC Programming Guide			
тесн	B: B: A: E	USER	

NOTES:

- 1. TEL refers to Telephone Mode.
 - The type of ringing tone is specified for each telephone in Memory Blocks 4-01 and 4-02 [CO/PBX Ring Assignment (Day/Night Mode)], or 4-91 (Telephone Ringing Variation Selection)].
- 2. CO refers to CO/PBX Line Mode.
 - The type of ringing tone is specified for each CO/PBX line in Memory Block 3-07 (CO/PBX Ringing Variation Selection).

GENERAL INFORMATION - DISTINCTIVE RINGING BY TELEPHONE OR CO SELECTION

This Memory Block allows assignment of distinctive ringing tones on a per telephone or per CO/PBX line basis.

PRIVATE LINE ASSIGNMENT

OPERATION:

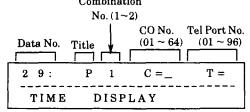
- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC

 Sub-Mode CO Line LK1 MIC

 LK1 ICM

 Data No.

 Combination (Dial Pad)



- 3. Enter options by using the dial pad.
 - Example: CO line 5 is assigned as Private Line of Tel Port Number 11.

 \leftarrow \downarrow , # \rightarrow : To move cursor.

Dial pad 0 ~ 9

To enter CO No. and

Setting Data.

HOLD key

To clear all data when

cursor is at CO No. or

Setting Data.

Default Not Specified

- 4. Press the TRF key to write the data.
 - Data for the second line is displayed.
 - Move the cursor to change the data.
- 5. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-30 (Route Advance Block Assignment).
- 6. Press the SPKR key to go back on-line.
 - Additional Programming

Memory Block No.	Memory Block Name	Required
2-06	Line Key Selection for Tenant Mode	
4-12	Line Key Selection for Telephone Mode	

System	CO Line	Data No.
1	1	29

PC Programming Guide			
TECH	B:C:A:H/I	USER	

NOTES:

- Two Private Lines can be assigned to one station or one Private Line can be assigned to two stations.
- 2. If a Private Line is assigned to a Single Line Telephone, the Single Line Telephone cannot access the line by dialing the Trunk Group Access Code. However, the Single Line Telephone can access the line by dialing the Specified Line Seizure Access Code if assigned in Memory Blocks 1-1-46/1-1-47 [Access Code (1-Digit/2-Digit) Assignment] (Function No. 063 or 064).
- 3. If a station is allowed (Barge-In originate) and a second station is allowed (Barge-In receive), Barge-In is not allowed on a Private Line unless both stations share the Private Line.

GENERAL INFORMATION - PRIVATE LINE ASSIGNMENT

This Memory Block is used to assign an outside line for use as a Private Line. The Private Line cannot be seized by any other telephone, and no LED indication is provided to other terminals.

ROUTE ADVANCE BLOCK ASSIGNMENT

OPERATION:

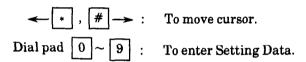
1. Go off-line.

TIME

- o MIC 2. Enter: Mode LK 1 System ICM o MIC Sub-Mode CO Line LK 1 • ICM Data No. 3 0 (Dial Pad) Block No. (1~16) Priority No. (1~4) Setting Data Title Data No. 3 0: RT ADV $01 \cdot 1 = 00$
- 3. Enter option by using the dial pad.

DISPLAY

• Example: To select Trunk Group 05 as priority 1 for block 1.



- 4. Press the TRF key.
 - Data for priority 2 ~ 4 is displayed successively.
 - After entering the data for priority 4, press the TRF key.
 - Data for priority 1 in the next block is displayed.
 - After entering the data for priority 4.
- 5. After entering data for Block 16, pressing the TRF key will write the selected data and advance to Memory Block 1-1-32 (Automatic Day/Night Mode by Day of Week Selection).
- 6. Press the SPKR key to go back on-line.
 - Additional Programming

Memory Block No.	Memory Block Name	Required
3-03	Trunk-to-Trunk Group Assignment	

GENERAL INFORMATION - ROUTE ADVANCE BLOCK ASSIGNMENT
This Memory Block is used to assign priority levels (1~4) to each Trunk Group in Memory Block 3-03

(Trunk-to-Trunk Group Assignment). The system has a total of 16 blocks that can be specified.

Sy	stem	CO Line	Data No.	
	1	1	30	
	PC Programming Guide			
TECH	B:C:A:F	USER		

NOTES:

- If 00 (not set) is programmed, no trunks will be accessed for this priority setting.
- 2. If Route Advance Block Numbers are assigned and a line key is pressed, or an Access Code is dialed, the system will start searching for an idle line in a specified group (beginning with the Trunk Group assigned priority 1).
- 3. If all CO/PBX lines are in use, the line with the next highest priority is seized.

Block No.	Priority No.	Set Data
	Priority 1	Trunk Group No. 01~32
D11- 1	Priority 2	Trunk Group No. 01~32
Block 1	Priority 3	Trunk Group No. 01~32
_	Priority 4	Trunk Group No. 01~32

ſ	ſ	ſ
DI 1.10	Priority 1	Trunk Group No. 01~32
	Priority 2	Trunk Group No. 01~32
Block 16	Priority 3	Trunk Group No. 01~32
	Priority 4	Trunk Group No. 01~32

Default All Blocks 00

Programming

AUTOMATIC DAY/NIGHT MODE BY DAY OF WEEK SELECTION

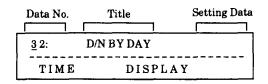
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK1 MIC ICM

 Data No. 3 2

 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change the day of week.
 - The LED indication changes to indicate the data set when a CO/PBX line key is pressed.

GO (D)	V line hove	Def	ault
THU	FRI	SAT	
L K 5	LK 6	LK 7	LK 8
SUN	MON	TUE	WED
LK 1	LK 2	LK 3	LK 4

COLED	■ Off	On
Data	Day/Night Automatic Switching Pattern 1	Day/Night Automatic Switching Pattern 2

CO/PBX line keys

Default	Sunday to Saturday = Pattern 1

- Pressing the TRF key will write the selected data and advance to Memory Block 1-1-33 (Speed Dial Number/Name Display Selection).
- 5. Press the SPKR key to go back on-line.

System	CO Line	Data No.
1	1	32

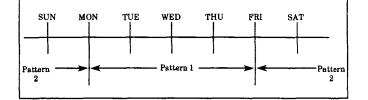
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TECH	B: J: D	USER	S:D

NOTES:

 By designating two time settings in Memory Block 1-1-27 (Automatic Day/Night Mode Switching Time Assignment), one of the two settings can be assigned to each day of the week.

Example:

 To specify Day/Night Mode automatic switching time 1 for Monday~Friday, and Day/Night Mode automatic switching time 2 for Saturday and Sunday, press CO/PBX line keys 1 and 7.



Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-27	Automatic Day/Night Mode Switching Time Assignment	V
1-8-07	Class of Service (Attendant) Feature Selection 1	
4-09	Telephone to Tenant Assignment	
4-17	Station to Class of Service Feature Assignment	

GENERAL INFORMATION - AUTOMATIC DAY/NIGHT MODE BY DAY OF WEEK SELECTION

This Memory Block specifies automatic switching between Day Mode and Night Mode by day of the week.

SPEED DIAL NUMBER/NAME DISPLAY SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK1 MIC ICM

 Data No. 3 3

 (Dial Pad)

Data No.	Title	Setting Data	Title
<u>3</u> 3:	SPD	DIAL	DISP
TIME		DISPLAY	

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change Dialed Number to Name, press CO/PBX line key 2.

Dialed Name Number LK 5 LK 6 LK 7 LK 6
LK5 LK6 LK7 LK

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-34 (Tie/DID Line First Ring Pattern Selection).
- 5. Press the SPKR key to go back on-line.
 - Additional Programming~

Memory Block No.	Memory Block Name	Required
1-1-18	System Speed Dial Restriction by Tenant	
1-1-35	Speed Dial Buffer Allocation	

GENERAL INFORMATION - SPEED DIAL NUMBER/NAME DISPLAY SELECTION

This Memory Block specifies whether the dialed number or name is displayed first on the LCD of the originating station when an outgoing call is made via Speed Dial.

System	CO Line	Data No.
1	1	33
PC Pr	ogramming G	uide
TECH B:H:B	USER	

NOTES:

 If a message (the name of the dialed party) has not been entered, only the dialed number will be displayed regardless of programming in this Memory Block.

TIE/DID LINE FIRST RING PATTERN SELECTION

OPERATION:

1. Go off-line.

TIME

- o MIC LK 1 2. Enter: Mode System ICM o MIC Sub-Mode CO Line LK 1 ICM 3 4 Data No. (Dial Pad) Title **Setting Data** Data No. 34: TLI RNG PAT 3
- 3. Press the corresponding CO/PBX line key to change data option.

DISPLAY

• To change Pattern 3 to Pattern 2, press CO/PBX line key 2.

TERN 4	ST DAG	2277227279999989757		
	No PAI	PATTE	PATTERN 2	PATTERN 1
LK 8		LK 7	LK 6	LK 5
			VOICE	ICM
_		LIK		

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-35 (Speed Dial Buffer Allocation).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory B lo ck Name	Required
1-1-07	Tie/DID Line Delay Ringing Timer Selection	
1-1-53	Tie/DID Line Delay Ring Pattern Selection	
1-2-19	Intercom Ring Pattern Selection	
4-01	CO/PBX Ring Assignment (Day Mode)	
4-02	CO/PBX Ring Assignment (Night Mode)	

Sy	stem	CO Line	Data No.		
	1	1	34		
	PC Programming Guide				
тесн	A:D:B:D	USER			

NOTES:

- 1. Specify one of the following ringing tones for incoming calls on Tie lines.
 - 1. Pattern 1
 - ſ
 - 4. Pattern 4
 - 5. Internal Ring (Signal Tone)
 - 6. Voice Announce
- If Voice is selected, switching from Voice to Tone is not allowed, Memory Block 1-1-07 (Tie/DID Line Delay Ringing Timer Selection) is not used and Handsfree Answerback is not allowed at the receiving station.

Pattern	0s 1s 2s 3s 4s 5s 6s
1	
2	
3	2 sec: On — 4 sec: Off
4	
5	Same as Internal Ring (See M.B. 1-2-19.)
6	Voice Announce

GENERAL INFORMATION - TIE/DID LINE FIRST RING PATTERN SELECTION

This Memory Block allows specific ringing tones for incoming calls on Tie lines.

SPEED DIAL BUFFER ALLOCATION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC
 Sub-Mode CO Line LK1 MIC

 Sub-Mode CO Line LK1 ICM

 Data No. 3 5

 (Dial Pad)

Data No.	Title	Setting Data
<u>3</u> 5:	SPD ALLO	100
TIME	DISPLAY	

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 100 to 1000, press CO/PBX line key 2.

LK1 100 memories	LK 2 1000 memories	LK 3	LK 4
LK 5	LK 6	LK 7	LK 8
			L
CO/PBX line keys Default			

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-36 (CO/PBX Call Forward All Calls Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-18	System Speed Dial Restriction by Tenant	
1-1-33	Speed Dial Number/Name Display Selection	

System	CO Line	Data No.
1	1	35

PC Programming Guide					
тесн	B: H: A	USER			

NOTES:

- The 100 code option allows for 90 System Speed Dial memories and 10 Station Speed Dial memories.
- The 1000 code option does not allow for Station Speed Dial memories.

GENERAL INFORMATION - SPEED DIAL BUFFER ALLOCATION

This Memory Block is used to specify either the 100 memories or 1000 memories allocation.

CO/PBX CALL FORWARD - ALL CALLS SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC
 ICM

 Sub-Mode CO Line LK1 MIC
 ICM

 Data No.

 3 6
 (Dial Pad)

Data No.		Title	Setting Data
1		7	
<u>3</u> 6:	CO	FWDG	NO
TIME		DISPLAY	

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change NO to YES, press CO/PBX line key 2.

NO	YES	LK 3	
LK 5	LK 6	LK 7	LK 8
		<u> </u>	
CO/PB	K line keys	Def	ault

- Pressing the TRF key will write the selected data and advance to Memory Block 1-1-37 (Trunk Queuing Timeout Selection).
- 5. Press the SPKR key to go back on-line.
 - Additional Programming

Memory Block No.	Memory Block Name	Required
4-01	CO/PBX Ring Assignment (Day Mode)	$\overline{}$
4-02	CO/PBX Ring Assignment (Night Mode)	V

System	CO Line	Data No.
1	1	-36

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TECH	B:C:A:B	USER			

NOTES:

 If YES is programmed, and outside lines are assigned to ring at a station that has Call Forward - All Calls set to another Multiline Terminal or Single Line Telephone, the second telephone rings instead of the first telephone.

GENERAL INFORMATION - CO/PBX CALL FORWARD-ALL CALLS SELECTION

This Memory Block determines whether incoming CO/PBX calls will follow a Call Forward - All Calls setting.

TRUNK QUEUING TIMEOUT SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK 1 MIC ICM

 Sub-Mode CO Line LK 1 MIC ICM

 Data No. 3 7

 (Dial Pad)

Data No.	Title		Setting Data	
<u>3</u> 7:	TRUNK	QUE	10s	
TIME	DISPI	AY		

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 10 sec. to 30 sec., press CO/PBX line key 3.

CO/PB	X line keys	Def	ault
LK 5	LK 6	LK 7	LK 8
10 sec	20 sec.	30 sec.	60 sec.
LK.1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-46 [Access Code (1-Digit) Assignment].
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

System	CO Line	Data No.
1	1	37

PC Programming Guide				
тесн	B:I:K	USER		

NOTES:

 When all trunks in a particular Trunk Group are busy, the station user can dial an Access Code to "queue" onto the busy Trunk Group. When a Trunk (within that group) becomes idle, the queued station will be signaled.

GENERAL INFORMATION - TRUNK QUEUING TIMEOUT SELECTION

This Memory Block determines the length of time that a station, where Trunk Queue was set, will ring before the queue is automatically canceled.

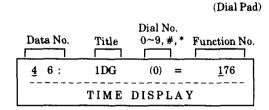
ACCESS CODE (1-DIGIT) ASSIGNMENT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

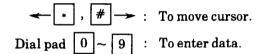
 Sub-Mode CO Line LK1 MIC ICM

 Data No. 4 6



3. Enter option using the dial pad.

Example: To dial digit 1 for Call Forward enter the Function Number 030.



Data: Function Number:

000~132, 140~143, 176~199, 201~216, 250~253,301~304, 401~416, 501~503.

Dial Number:

0~9, *, # (LNR/SPD, *, #)

- 4. Press the TRF key, data of dial 2~9, *, and # are displayed successively.
- 5. Enter the Function Number for the Dial Number to be assigned.
- 6. Press the TRF key, next data is displayed.
- 7. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-47 [Access Code (2-Digit) Assignment].
- 8. Press the SPKR key to go back on-line.

System	CO Line	Data No.	
1	1	46	
PC Pr	ogramming G	uide	
TECH B:G:A	USER		

NOTES:

- 1. The assigned Access Code can be dialed after lifting the handset or after the SPKR key is pressed.
- Select options from the list of function numbers in Memory Block 1-1-46 [Access Code (1-Digit) Assignment] and assign a number (from 0~9, * or #) to each selected function.
 - When a function is assigned a 1-digit Access Code, 2-digit Access Codes with the same first digit become invalid (i.e., if a function is assigned to Access Code 5, Access Codes 50~59, 5*, and 5# cannot be used.)
- 3. To enter # or * as part of an Access Code: Press LNR/SPD then # or *.
- 4. This Memory Block is used when 2- or 3-Digit Station Numbering Plan is programmed.

Default

Dial No.	Function No. Function Name		
0	176	Specified Intercom Call	
1~3	001	Station Number	
4~7	000	Not Used	
8	102	Trunk Group 2	
9	101	Trunk Group 1	
*	096	Last Number Redial	
#	026	Callback Message Answer	

ACCESS CODE (1-DIGIT) ASSIGNMENT (continued)

System	CO Line	Data No.
1	1	46

Note: This table applies to Data Numbers 46, 47 and 48.

Default Dial No.	Function No.	Function Name
4, 5, 6, 7	000	Not Used
1, 2, 3	001	Station Number
	002	Not Used
	ſ	ı
	019	Not Used
	020	Call Forward No Answer Set
	021	Call Forward No Answer Cancel
	022	Call Forward Busy Set
	023	Call Forward Busy Cancel
43	024	Call Forward Busy/No Answer Set
44	025	Call Forward Busy/No Answer Cancel
#	026	Callback Message Answer
6#	027	SLT Hookflash
	028	Not Used
	029	Not Used
41	030	Call Forward All Call Set
40	031	DND Set
42	032	Call Forward All Call/DND Cancel
	033	Call Forward All Call Set from Destination
	034	Call Forward All Call Cancel from Destination
	035	Station Outgoing Lockout Set
	036	Station Outgoing Lockout Cancel
	037	Change Password
	038	Reset Password from Attendant
	039	Fax Status Indication (Tie/DID lines)
	040	Log - ON/OFF (Series 200 or higher)
	041	Account Code Entry (Series 300 or higher)
	042	Not Used
	043	Not Used

5. 		
Default Dial No.	Function No.	Function Name
	044	Timed Alarm Set at SLTs
	045	Timed Alarm Cancel at SLTs
	046	Set and Cancel of Timed Alarm for Single Line Telephone from Attendant
4*	047	Call Park System Transfer
4#	048	Call Park System Answer
60	049	Volume/LCD Control
	050	Specified Tenant on CO/PBX/Centrex Line Seizure (1-digit)
	051	Specified Tenant on CO/PBX/Centrex Line Seizure (2-digit)
	052	Call Pickup CO/PBX by Tenant (1-digit)
	053	Call Pickup CO/PBX/Centrex by Tenant (2-digit)
	054	Specified Tenant Internal Paging (1-digit)
	055	Specified Tenant Internal Paging (2-digit)
	056	Internal Emergency All Call Paging
68	057	Intra-Tenant Call Pickup
69	058	Night Chime Call Pickup
	059	Not Used
	060	Call Pickup CO/PBX for other Tenants
	061	Internal/CO/PBX Transfer Call Pickup in Same Tenant
	062	SLT Park to Non-Exclusive Hold
	063	Specified CO/PBX/Centrex Line Seizure (1-digit)
	064	Specified CO/PBX/Centrex Line Seizure (2-digit)
	065	Not Used
6*	066	Call Pickup CO/PBX in Same Tenant
	067	Call Pickup (Tie only) in Same Tenant
	068	Call Pickup (PBX only) in Same Tenant
	069	Call Pickup (CO only) in Same Tenant

ACCESS CODE (1-DIGIT) ASSIGNMENT (continued)

System	CO Line	Data No.
1	1	46

Note: This table applies to Data Numbers 46, 47 and 48.

Default Dial No.	Function No.	Function Name	Default Dial No.	Function No.	Function Name		
51	070	All Internal Zone Paging	9	101	Trunk Group 01		
52	071	Internal Zone A Paging	8	102	Trunk Group 02		
53	072	Internal Zone B Paging	70	103	Trunk Group 03		
54	073	Internal Zone C Paging	71	104	Trunk Group 04		
5*	074	Internal/External Meet-Me	72	105	Trunk Group 05		
55	075	All External Zone Paging	73	106	Trunk Group 06		
56	076	External Zone A Paging	74	107	Trunk Group 07		
57	077	External Zone B Paging	75	108	Trunk Group 08		
58	078	External Zone C Paging		ì	ı		
5#	079	External Meet-Me		132	Trunk Group 32		
	080	Outgoing (CO only) Access in Same Tenant		133	Not Used		
59	081	All Internal/External Zone Paging		ı	ı		
	082	System I.D. Number for Tie Line		139	Not Used		
	083	Networking Not Used	45	140	Call Forward Busy / No Answer Set for Call Arrival Key (Series 250 or higher)		
	084	ı	46	141	Call Forward Busy / No Answer Cancel for		
	085	Not Used			Call Arrival Key (Series 250 or higher)		
	086	Tie Line Seizure in Same Tenant	47	142	Call Forward All Call Set for Call Arrival Key (Series 250 or higher)		
	087	PBX Line Seizure in Same Tenant	48	143	Call Forward All Call Cancel for Call		
78	088	Trunk Queuing Set			Arrival Key (Series 250 or higher)		
79	089	Trunk Queuing Cancel		159	Not Used		
76	090	Station Speed Dial Programming (Single		ſ	ſ		
		Line Telephone)		175	Not Used		
77	095	Station Speed Dial Call	0	176	Specified Station Access Code 00		
*	096	Last Number Redial		177	Specified Station Access Code 01		
	097	Not Used		178	Specified Station Access Code 02		
	098	DSS 1 CALL		179	Specified Station Access Code 03		
	099	DSS 2 CALL		180	Specified Station Access Code 04		
	100	Not Used	L	181	Specified Station Access Code 05		

ACCESS CODE (1-DIGIT) ASSIGNMENT (continued)

System	CO Line	Data No.
1	1	46

Note: This table applies to Data Numbers 46, 47 and 48.

		applies to Bata It allisers 10, 11 and	
Default Dial No.	Function No.	Function Name	
	182	Specified Station Access Code 06	
	183	Specified Station Access Code 07	
	184	Specified Station Access Code 08	
	185	Specified Station Access Code 09	
	186	Specified Station Access Code 10	
	187	Specified Station Access Code 11	
	188	Specified Station Access Code 12	
	189	Specified Station Access Code 13	
	190	Specified Station Access Code 14	
	191	Specified Station Access Code 15	
	192	Specified Station Access Code 16	
	193	Specified Station Access Code 17	
	194	Specified Station Access Code 18	
	195	Specified Station Access Code 19	
	196	Specified Station Access Code 20	
-	197	Specified Station Access Code 21	
	198	Specified Station Access Code 22	
	199	Specified Station Access Code 23	
	200	Not Used	
	201	Route Advance Block 01	
	S	ſ	
	216	Route Advance Block 16	
	217	Not Used	
	ı	ı	
	250	Not Used_	
	251	DISA Password Set (Any station)	
	252	DISA Password Reset (Attendant only)	
	253	DISA Password Confirmation (Attendant only)	

Default Dial No.	Function No.	Function Name
	254	Not Used
	255	Not Used
	301	Third Digit Table Number 01 (2-digit Numbering Plan can only be entered.)
	ı	ſ
	304	Third Digit Table Number 04 (2-digit Numbering Plan can only be entered.)
	401	Closed Number Block 01
	ſ	ı
	416	Closed Number Block 16
	501	VRS Voice Message Record/Verify/Erase (Voice Prompt, Automated Attendant)
	502	Voice Mail Message Set
	503	Voice Mail Message Cancel

Note: For Series 100 software, these Default Dial Numbers have the following settings:

Default Dial No.	Function No.	Function Name
45	000	Not Used
46	000	Not Used
47	033	Call Forward All Call Set from Destination
48	034	Call Forward All Call Cancel from Destination

GENERAL INFORMATION - ACCESS CODE (1-DIGIT) ASSIGNMENT

This Memory Block allows assignment of a 1-digit number as an Access Code or station number.

ACCESS CODE (2-DIGIT) ASSIGNMENT

OPERATION:

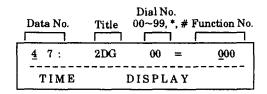
- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC

 Sub-Mode CO Line LK1 MIC

 LK1 MIC

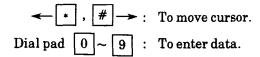
 LK1 ICM

 Data No.



3. Enter data using the dial pad.

Example: Enter 030 (Call Forward) on dial 11 using dial pad.



Data: Function Number:

000~132, 140~143, 176~199, 201~216,

250~253, 401~416, 501~503.

Dial Number:

0~9, *, # (LNR/SPD, *, #)

■ Additional Programming

Memory Block No. Memory Block Name		Required
1-1-46	Access Code (1-Digit) Assignment	

System	CO Line	Data No.
1.	1	47

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- 4. Press the TRF key, data of the next Dial No. is displayed successively.*
- 5. Dial 00.
- 6. Press the TRF key, next data is displayed.
- 7. Pressing the **TRF** key will write the selected data and advance to Memory Block 1-1-48 [Access Code (3-Digit) Assignment].
- 8. Press the SPKR key to go back on-line.
 - * The order of Dial No. to be displayed. 11~19, 10
 - $\rightarrow 21\sim29, 20$
 - → 91~99, 90
 - $\rightarrow 01 \sim 09,00$

NOTES:

- The assigned Access Code can be dialed after lifting the handset or after the SPKR key is pressed.
- 2. Select options from the list of function numbers in Memory Block 1-1-46 [Access Code (1-Digit) Assignment] and assign to an Access Code (from 00~99 including * and #) to each selected function.
 - When a function is assigned a 1-digit Access Code, 2-digit Access Codes with the same first digit become invalid (i.e., if a function is assigned to Access Code 5, Access Codes 50~59, 5*, and 5# cannot be used.)
- 3. To enter # or * as part of the Access Code: Press LNR/SPD, then # or *.
- 4. This Memory Block is used when 4-Digit Station Numbering Plan is programmed.

GENERAL INFORMATION - ACCESS CODE (2-DIGIT) ASSIGNMENT

This Memory Block allows assignment of a 2-digit number as an Access Code.

ACCESS CODE (3-DIGIT) ASSIGNMENT

OPERATION:

- 1. Go off-line.
- o MIC LK 1 2. Enter: Mode System ICM o MIC Sub-Mode CO Line LK 1 ICM Data No. (Dial Pad) Third Digit Table No. Dial No. 0~9, *, # Function Data No. Title No. <u>4</u> 8: 000 3DG / 01 (0) =TIME DISPLAY
- 3. Enter option using the dial pad.

 Example: Enter 101 (Trunk Group 01) on
 Table No. 01.

 \leftarrow \uparrow , # \rightarrow : To move cursor.

Dial pad $\boxed{0} \sim \boxed{9}$: To enter data. \uparrow , # : LNR + *, #.

Data:	Table No.	Dial No.	Function No.
	01~04	0~9,*,#	$000 \sim 132, 140 \sim 143,$ $176 \sim 199, 201 \sim 216,$ $250 \sim 253, 401 \sim 416,$ $501 \sim 503$

Default All Dial 000 (Not Used)

- 4. Press the TRF key, numbers 2~9 and 0 are displayed successively.
- 5. Dial 04.
- 6. Press the TRF key, next data is displayed.
- Pressing the TRF key will write the selected data and advance to Memory Block 1-1-49 (Networking Trunk Group/Route Advance Assignment).
- 8. Press the SPKR key to go back on-line.

System	CO Line	Data No.
1	1	48

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ТЕСН	B:G:C	USER	

NOTES:

- The assigned Access Code can be dialed after lifting the handset or after the SPKR key is pressed.
- 2. Select options from the list of function numbers in Memory Block 1-1-46 [Access Code (1-Digit) Assignment] and assign to a 3-digit Access Code.
 - When a function is assigned a 1-digit Access Code, 3-digit Access Codes with the same first digit become invalid (i.e., if a function is assigned to Access Code 5, Access Codes 50~59, 5*, and 5# or 5XX cannot be used.)
- 3. A Station Number is not assigned in this Memory Block.
- 4. To enter # or * as part of the Access Code: Press LNR/SPD, then # or *.
- 5. All items except function number 001 (Station Number) in 1-digit Assignment are valid in this Memory Block.
- 6. Four groups of Access Codes can be used $(0 \sim 9, *$ and # on four Tables).
- 7. Before using this function, assign function numbers 301~304 (table number for third digit) in Memory Block 1-1-47 [Access Code (2-Digit) Assignment].
- 8. To program this Memory Block, refer to the following example:

Example:

81 2 The third digit

 Assign function number 301 (Third Digit Table Number 01) to 81. [Make the assignment using Access Code (2-Digit) Assignment.]

■ Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-46	Access Code (1-Digit) Assignment	
1-1-47	Access Code (2-Digit) Assignment	

ACCESS CODE (3-DIGIT) ASSIGNMENT (continued)

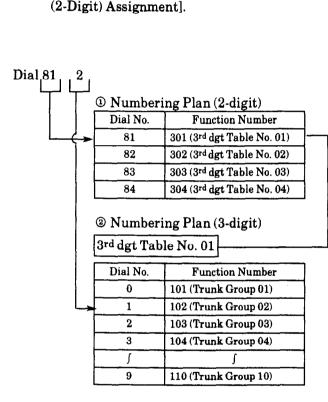
System	CO Line	Data No.
1	1	48

NOTES:

• The third digit number automatically corresponds to one of the numbers (00~09) in Table 01. Set the appropriate function number.

Example: To set Access Code 812 for Trunk Groups 02.

• Refer to Memory Block 1-1-47 [Access Code (2-Digit) Assignment].



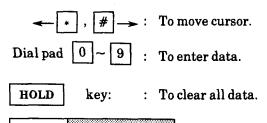
GENERAL INFORMATION - ACCESS CODE (3-DIGIT) ASSIGNMENT

This Memory Block allows assignment of a 3-digit number as an Access Code.

NETWORKING TRUNK GROUP/ROUTE ADVANCE ASSIGNMENT

OPERATION:

- 1. Go off-line.
- MIC 2. Enter: Mode LK 1 System **ICM** o MIC Sub-Mode CO Line LK 1 ICM 9 Data No. (Dial Pad) Closed Number Block Enter 01~16 unction Data No. Number 01 = RT4 9: TIME DISPLAY
- Use the dial pad to enter the Function No. of the Trunk Group or Route Advance Block to be used.



Not Specified

- Pressing the TRF key will write the selected data and advance to Memory Block 1-1-50 (CO/PBX Outgoing Digit Add Assignment).
- 5. Press SPKR to go back on-line.

System CO Line Data No. 1 1 49

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NOTES:

Function Number 101~132 (Trunk Group 1~32 respectively) or 201~216 (Route Advance Block 1~16 respectively) is assigned to Closed Number blocks 1~16.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-30	Route Advance Block Assignment	
3-03	Trunk-to-Trunk Group Assignment	

GENERAL INFORMATION - NETWORKING TRUNK GROUP/ROUTE ADVANCE ASSIGNMENT

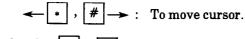
This Memory Block is used to assign the number of the Trunk Group to be used when connecting an Electra Professional Level II or Level II Advanced system to another system or to CO/PBX/CTX lines.

Default

CO/PBX OUTGOING DIGIT ADD ASSIGNMENT

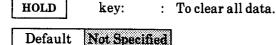
OPERATION:

- Go off-line.
- o MIC Enter: Mode LK 1 System **ICM** • MIC Sub-Mode CO Line LK 1 **ICM** 0 Data No. 5 (Dial Pad) **Closed Number** Block Add Digit Data No. (max. 10 digits) 50: 0.1 =TIME DISPLAY
- 3. Use the dial pad to enter the digits to be added.



Dial pad To enter data.





Default

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-51 (CO
- 5. Press the SPKR key to go back on-line.

Line First Ringing Pattern Selection).

Additional Programming Refer to Chapter 3 - Guide to Feature Programming in this manual.

System	CO Line	Data No.
1	1	50

	PC Program	aming	Guide
TECH	A:D:B:E	USER	

NOTES:

Digits are added when the Access Code is dialed from Internal Dial Tone.

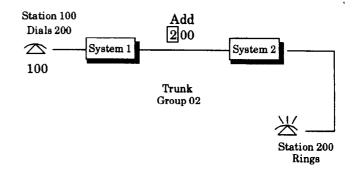
Example:

To assign the following in System Programming:

1. System 1

Memory Block 1-1-46 [Access Code (1-Digit) Assignment] $1 \rightarrow 082$ (System ID Number for Tie Line Networking).

- 2. System 1
 - 1-1-46 [Access Code (1-Digit) Assignment] 2 → 401 (Closed Number Block 01).
- 3. System 1
 - 1-1-49 (Networking Trunk Group/Route Advance Assignment) Block $01 \rightarrow 102$ (Trunk Group 02).
- 4. System 1
 - 1-1-50 (CO/PBX Outgoing Digit Add Assignment) (1-Digit) Block $01 \rightarrow Assign 2$.



GENERAL INFORMATION - CO/PBX OUTGOING DIGIT ADD ASSIGNMENT

This Memory Block is used to allow an additional 10 digits (maximum) to be specified when a Trunk within the , | Trunk Group or Route Advance Block [assigned in Memory Block 1-1-49 (Networking Trunk Group/Route | Advance Assignment)], is seized and a number is dialed.

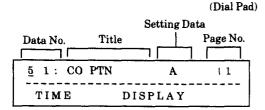
CO LINE FIRST RINGING PATTERN SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK1 MIC ICM

 Data No. 5 1



- 3. Press the corresponding CO/PBX line key to change Setting Data option.
 - To change Ring Pattern A to Ring Pattern B, press CO/PBX line key 2.

RECALL key : Next page.

FNC key : Previous page.

Page 1

Page 2

LK 1

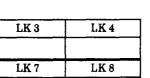
NIL LK 5

g Pattern B	Ring Pattern C	Ring Pattern D
LK 6	LK 7	LK 8
g Pattern F	Ring Pattern G	Ring Pattern H
		

CO/PBX line keys

LK 2

LK 6



Default

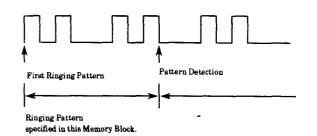
- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-52 (PBX Line First Ringing Pattern Selection).
- 5. Press the SPKR key to go back on-line.

System	CO Line	Data No.
1	1	51

PC Programming Guide			
TECH	B:C:A:A	USER	

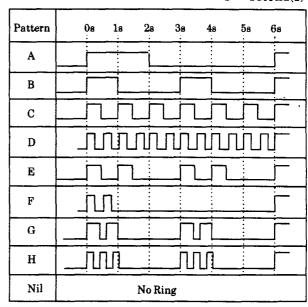
NOTES:

- After an actual ringing pattern is detected, ringing in the pattern specified in Memory Block 1-1-56 (CO/PBX Ringing Pattern Selection) is used.
- 2. Do not program this Memory Block if Memory Block 1-1-59 (Synchronous Ringing Selection) is assigned YES.



Ring patterns are as follows:

s = second(s)



Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-56	CO/PBX Ringing Pattern Selection	

GENERAL INFORMATION - CO LINE FIRST RINGING PATTERN SELECTION

This Memory Block is used to select an initial ringing pattern for incoming calls on a CO line.

PBX LINE FIRST RINGING PATTERN SELECTION

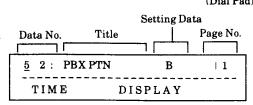
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC
 ICM

 Sub-Mode CO Line LK1 MIC
 ICM

 Data No. 5 2

 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data entry.
 - To change B to F, press CO/PBX line key 6.

RECALL key : Next page.

FNC key : Previous page.

Page 1

LK 1 LK 2 LK 3 LK 4 Ring Pattern A Ring Pattern B Ring Pattern C Ring Pattern D LK 5 LK 6 LK 7 LK 8 Ring Pattern E Ring Pattern G Ring Pattern H				
Ring Pattern A B C Ring Pattern D C D LK 5 LK 6 LK 7 LK 8	Ring Pattern E	Ring Pattern F	Ring Pattern G	Ring Pattern H
			LK 7	LK 8
LK1 LK2 LK3 LK4	Ring Pattern A	Ring Pattern B	Ring Pattern C	Ring Pattern D
	LK 1	LK 2	LK 3	LK 4

CO/PBX line keys

ge 2			
LK 1	LK 2	LK 3	LK 4
NIL			
LK 5	LK 6	LK 7	LK 8

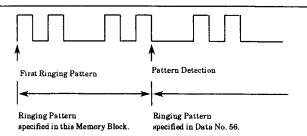
- Pressing the TRF key will write the selected data and advance to Memory Block 1-1-53 (Tie/DID Line Delay Ring Pattern Selection).
- 5. Press the SPKR key to go back on-line.

System	CO Line	Data No.
1	1	52

PC Programming Guide			Guide
тесн	B:C:A:E	USER	

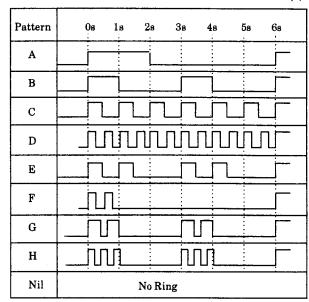
NOTES:

- After an actual ringing pattern is detected, ringing in the pattern specified in Memory Block 1-1-56 (CO/PBX Ringing Pattern Selection) is used.
- 2. Do not program this Memory Block if Memory Block 1-1-59 (Synchronous Ringing Selection) is assigned YES.



Ring patterns are as follows:

s = second(s)



Additional Programming

Mem Block		Memory Block Name	Required
1-1-	56	CO/PBX Ringing Pattern Selection	

GENERAL INFORMATION - PBX LINE FIRST RINGING PATTERN SELECTION

This Memory Block is used to select an initial ringing pattern for incoming calls on a PBX line.

Default

TIE/DID LINE DELAY RING PATTERN **SELECTION**

OPERATION:

- 1. Go off-line.
- o MIC LK 1 2. Enter: Mode System ICM o MIC Sub-Mode CO Line LK 1 ICM 3 5 Data No. (Dial Pad)

	Setting Data		
Data No.	Title		Page No.
<u>5</u> 3:	TLI PTN	D	+ 1
TIME	DISPL	ΑΥ	

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change D to F, press CO/PBX line key 6.

RECALL key : Next page. **FNC** key : Previous page.

CO/PBX line keys

Page 1

E	F	G	Н
Ring Pattern	Ring Pattern	Ring Pattern	Ring Pattern
LK 5	LK 6	LK 7	LK8
Ring Pattern A	Ring Pattern B	Ring Pattern C	Ring Pattern D
LK 1	LK 2	LK 3	LK4

Page 2

LK 1	LK 2	LK 3	LK 4
NIL			
LK 5	LK 6	LK 7	LK 8

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-54 (Automated Attendant Transfer Ring Pattern).
- 5. Press the SPKR key to go back on-line.

System	CO Line	Data No.
1	1	53
PC Pr	ogramming G	uide
TECH A:D:B:	C USER	

Ring patterns are as follows:

s = second(s)

Pattern	0s 1s 2s 3s 4s 5s 6s
A	
В	
С	
D	
E	
F	
G	
Н	
Nil	No Ring

Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-07	Tie/DID Line Delay Ringing Timer Selection	
1-1-34	Tie/DID Line First Ring Pattern Selection	
4-01	CO/PBX Ring Assignment (Day Mode)	
4-02	CO/PBX Ring Assignment (Night Mode)	

GENERAL INFORMATION - TIE/DID LINE DELAY RING PATTERN SELECTION

This Memory Block is used to select a ringing pattern for incoming calls on a Tie line after the Timeout set in Memory Block 1-1-07 (Tie/DID Line Delay Ringing Timer Selection).

AUTOMATED ATTENDANT TRANSFER RING PATTERN

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

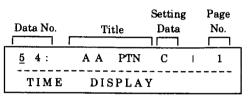
 Sub-Mode CO Line LK1 MIC
 ICM

 T

Data No.

5 4
(Dial Pad)

Default



- 3. Press the corresponding CO/PBX line key to change the data entry.
 - To change Ring Pattern C to Ring Pattern D, press CO/PBX line key 4.

Page 1

LK 1	LK 2	TK 9	LK 4
Ring Pattern A	Ring Pattern B	Ring Pattern C	Ring Pattern D
LK 5	LK 6	LK 7	LK 8
Ring Pattern E	Ring Pattern F	Ring Pattern G	Ring Pattern H

CO/PBX line keys

LK 1	LK 2	LK 3	LK 4
	LILE	LIKU	LILT
NIL	ĺ		
LK 5	LK 6	LK7	LK 8

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-56 (CO/PBX Ringing Pattern Selection).
- 5. Press the SPKR key to go back on-line.

System	CO Line	Data No.
1	1	54

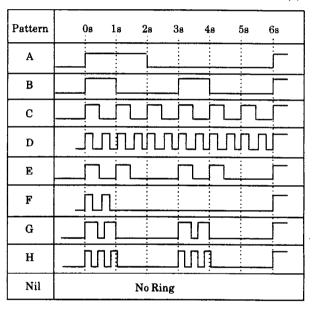
PC Programming Guide				
TECH	A:I:N	USER		

NOTES:

- If Nil pattern is specified in this Memory Block, there will not be a ring tone.
- 2. Ringing patterns are shown below.

Ring patterns are as follows:

s = second(s)



Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - AUTOMATED ATTENDANT TRANSFER RING PATTERN

This Memory Block is used to specify the ringing pattern sent to the Multiline Terminal when an incoming call is received at the Automated Attendant and transferred.

CO/PBX RINGING PATTERN SELECTION

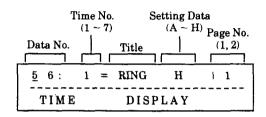
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK1 MIC ICM

 Data No. 5 6

 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change Ring Pattern H on Time No. 1 to Ring Pattern G, press CO/PBX line key 7.

RECALL key : Next page.

FNC key : Previous page.

Page 1

			LK 4
Ring Pattern Ring P	attern Rin	ng Pattern C	Ring Pattern D
LK 5 LK	6	LK 7	LK 8
Ring Pattern Ring P	attern Rin	ng Pattern G	Ring Pattern H

Page 2

LK 1	LK 2	LK 3	LK 4
NIL			
LK 5	LK 6	LK 7	LK8

System	CO Line	Data No.			
1	1	56			
PC Programming Guide					
TECH B:C:A:	C USER				

- 4. Pressing the TRF key will write the selected data and advance to the next Ring Pattern.
- 5. After all Ring pattern data has been entered, pressing the **TRF** key will write the selected data and advance to Memory Block 1-1-57 (CO/PBX Prepause Timer Selection).
- 6. Press the SPKR key to go back on-line.

NOTES:

- 1. Ringing Tone for calls on CO/PBX lines are sent to the telephones as is.
- The default value shown is for Time No. 1 only.
 Default ring patterns are also assigned to Time No. 2~7. Refer to the Default Table on the following page for a complete list of defaults.
- 3. Ringing Tones A~H are available.
- 4. Continuous ringing time is divided into seven ranges (1~7). Refer to the Ringing Time Range Table on the following page.
- 5. If a ringing pattern is not specified in this Memory Block, a ringing tone that has been specified in 1-1-51 (CO Line First Ringing Pattern Selection) or 1-1-52 (PBX Line First Ringing Pattern Selection) will be used, even after the continuous ringing time is detected.

Additional Programming

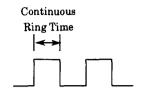
Memory Block No.		
1-1-51	CO Line First Ringing Pattern Selection	
1-1-52	1-1-52 PBX Line First Ringing Pattern Selection	

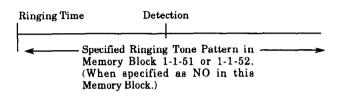
CO/PBX RINGING PATTERN SELECTION (continued)

System	CO Line	Data No.
1	1	56

Defaults for Continuous Ringing Time are as follows:

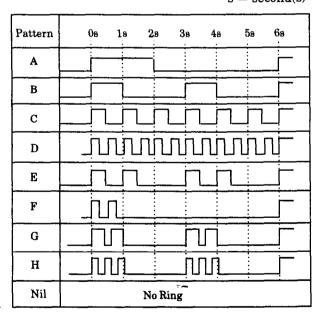
Default				
Time No.	Continuous Ringing Time Range	Ringing Time Pattern		
1	0.10 - 0.30 sec.	Н		
2	0.30 - 0.45 sec.	G		
3	0.45 - 0.65 sec.	E		
4	0.65 - 0.90 sec.	E		
5	0.90 - 1.50 sec.	В		
6	1.50 - 2.50 sec.	A		
7	over 2.5 sec.	A		





Patterns for ringing tones are as follows:

s = second(s)



GENERAL INFORMATION - CO/PBX RINGING PATTERN SELECTION

This Memory Block is used to select a continuous ringing pattern (A~H) for incoming calls on a CO/PBX line.

CO/PBX PREPAUSE TIMER SELECTION

OPERATION:

- 1. Go off-line.
- MIC LK 1 2. Enter: Mode System • ICM o MIC Sub-Mode CO Line LK 1 ICM 7 Data No. (Dial Pad) Setting Data Data No. Title Page No. PRE PAUSE 5 7: 1 S TIME DISPLAY
- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 1 sec. to NONE, press CO/PBX line key 1.

Page 1

LK 1	LK 2	LK 3	LK 4
NONE	l sec,	2 sec.	3 sec.
LK 5	LK 6	LK 7	LK 8
4 sec.	5 sec.	6 sec.	7 вес.

Page 2

LK 1	LK 2	LK 3	LK 4
8 sec.	9 sec.	10 sec.	11 sec.
LK 5	LK 6	LK 7	LK 8
12 sec.	13 sec.	14 sec.	15 sec.

CO/PBX line keys



- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-59 (Synchronous Ringing Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

GENERAL INFORMATION - CO/PBX PREPAUSE TIMER SELECTION

This Memory Block allows an assignment of a pause time to be set before dialed digits can be sent over a CO/PBX line (after the trunk is seized by a system user).

Sy	stem	CO Line	Data No.
	1	1	57
	PC Pro	gramming C	Guide
TECH	B:C:C:A	USER	

SYNCHRONOUS RINGING SELECTION

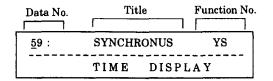
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC
 ICM

 Sub-Mode CO Line LK1 MIC
 ICM

 Data No.

 Data No.



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change YES to NO, press CO/PBX line key 2.

CO/PBX	line keys	Def	ault
LK 5	LK 6	LK 7	LK 8
YES	NO		
LK1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-60 (8-Digit Matching Table Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming ~~
 Refer to Chapter 3 Guide to Feature Programming in this manual.

Sy	stem	CO Line	Data No.
	1	1	59
	PC Pro	gramming G	uide
ТЕСН	B : C : A : G	USER	

NOTES:

1. Synchronous Ringing is supported only with the following:

COI-F(8)-20 KTU COI-F(4)-20 KTU ESI-F(8)-21 KTU SLI-F(8G)-21 KTU

 Synchronous Ringing does not apply to incoming DID calls, off-hook ringing calls, or CO/PBX ring transfer calls.

GENERAL INFORMATION - SYNCHRONOUS RINGING SELECTION

This Memory Block is used to specify whether CO/PBX calls follow Synchronous Ringing.

0

8-DIGIT MATCHING TABLE ASSIGNMENT

OPERATION:

- 1. Go off-line.
- MIC LK 1 2. Enter: Mode System ICM o MIC Sub-Mode CO Line LK 1 ICM

(Dial Pad) Title Data No. 60: 8 DIGIT TABLE 0.0 / 0.0 = 9118-Digit Dial Dial Digit Matching Code (max. 8)Table

Data No.

System CO Line Data No. 1 1 60 PC Programming Guide USER TECH A:A:E

- 4. Press the TRF key to write the selected data and advance to the next Dial Code. After all Dial Codes have been entered, pressing the TRF key will advance to Memory Block 1-1-61 (8-Digit Matching Table to Class Assignment).
- 5. Press the SPKR key to go back on-line.

NOTES:

- There are 16, 8-Digit Matching Tables. Each 8-Digit Matching Table contains 16 Dial Codes. Each Dial Code can be assigned a maximum of eight digits, including *, #, X, P, and N.
- NANP = North American Numbering Plan.

3. Use the dial pad to enter the data.

To move cursor.

Dial pad To enter data.

Operation Data	Dial Number	Operation
X	0~9,*,#	LNR/SPD key + 7
P	0~1	LNR/SPD key + 8
N	2~9,	LNR/SPD key + 9
*	*	LNR/SPD key + *
#	#	LNR/SPD key + #

Data: Matching Table:

 $00 \sim 15 \, (8 - digit)$

Dial Code:

 $00 \sim 15$

 $0 \sim 9, * \#,$

Dial Digit:

NANP = X, P, N

(Maximum eight digits)

HOLD key:

Data Clear

Operation Data:

(Move cursor to the left)

Default **Matching Table** Dial Code Setting Data 00 00 911 11 00 0 12 00 976 13 00 1800 14 00 1X 00 X 15

Additional Programming

Refer to Section 6 - Code Restriction in this chapter.

GENERAL INFORMATION - 8-DIGIT MATCHING TABLE ASSIGNMENT

This Memory Block is used to assign the outgoing dial digit for Code Restriction (except OCC Dial Digit-Normal Dial). There are two ways to program this assignment: a) If the user dials a digit(s) and there is a match, the system can allow free dialing or deny dialing by disconnecting. This is programmed in Memory; Block 1-1-61 (8-Digit Matching Table to Class Assignment). b) If the user dials a digit(s) and there is not a match, the system can allow free dialing or deny dialing by disconnecting. This is programmed in Memory! Block 1-1-65 (Class Allow/Deny Selection).

Class

8-DIGIT MATCHING TABLE TO CLASS ASSIGNMENT

OPERATION:

- Go off-line.
- 2. Enter: Mode

o MIC LK 1 System ICM

Sub-Mode CO Line

o MIC LK 1

Data No.

6 1

(Dial Pad) Class No. Table No. Data No. Title Setting Data <u>6</u> 1: CLS 01 (00)YS TIME DISPLAY

3. Press the corresponding CO/PBX line key to change data option.

Data: Class:

01~14

8-digit matching table:

00~15*

Class 00 and 15 cannot be programmed.

Class 00: No Restriction (Allow)

Class 15: Restricted Outgoing (Deny)

Setting Data: YS

= Allow

NO = Deny

NON = Not Assigned

LK 1	LK 2	LK 3	LK 4
Non	Allow (YB)	Deny (NO)	
LK 5	LK 6	LK 7	LK 8
COÆ	 BX line keve	Defa	ult

- 4. Pressing the TRF key will write the selected data and advance to the next Table.
- 5. Press the TRF key to advance to Memory Block 1-1-62 (System Speed Dial Override by Class Selection).
- Press the SPKR key to go back on-line.

Sy	stem	CO Line	Data No.
	1	1	61
	PC Pr	ogramming G	uide
тесн	A: A: F	USER	

		Table															
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	01	A											D			D	D
	02	A											D		A	D	D
	03	A											D	D	A	D	D
ı	04	A													A	D	D
	05	A															
	06	A															
	07	Α															
	80	A.															
	09	A															
	10	A															
	11	A															
	12	A															
	13	Ā															
	14	A															

Additional Programming

Refer to Section 6 - Code Restriction in this chapter.

GENERAL INFORMATION - 8-DIGIT MATCHING TABLE TO CLASS ASSIGNMENT

Each 8-Digit Matching Table can be programmed as Allow or Deny on a per class basis. Class 00 and 15 are fixed (nonprogrammable). Classes $01 \sim 14$ can be programmed.

(Dial Pad)

SYSTEM SPEED DIAL OVERRIDE BY CLASS SELECTION

OPERATION:

- 1. Go off-line.
- o MIC LK 1 2. Enter: Mode System ICM o MIC Sub-Mode CO Line LK 1 • ICM Data No.

Data No.	Title	Class 01 ~ 14 Setting Da	ta]
<u>6</u> 2:	SPDOVR	(01) = YS	
	TIME	DISPLAY	

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change YS to NO, press CO/PBX line key 1.

Data:

Class 01 ~ 14

Setting Data: NO = No Override

YS = Override

LK 1	LK 2	LK 3	LK 4
NO	YS		
LK 5	LK 6	LK 7	LK 8
CO/F	BX line keys	Def	ault

- 4. Press the TRF key to advance to the next Class.
- 5. After all data has been entered, pressing the TRF key will write the selected data and advance to Memory Block 1-1-63 [Hold Recall Time Selection (Exclusive)].
- 6. Press the SPKR key to go back on-line.

CO Line System Data No. 1 1 62

PC Programming Guide						
тесн	A : A : L	USER				

NOTES:

1. At system default, all stations are set to Class 00 (allows Override for System Speed Dial).

Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-18	System Speed Dial Restriction by Tenant	

GENERAL INFORMATION - SYSTEM SPEED DIAL OVERRIDE BY CLASS SELECTION

This Memory Block specifies whether a user can override System Speed Dial on a per Class basis.

HOLD RECALL TIME SELECTION (EXCLUSIVE)

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK1 MIC ICM

 Data No. 6 3

 (Dial Pad)

Data No.	Title	Setting Data
<u>6</u> 3:	HOLD RECL	1.0
TIME	DISPLAY	

- Press the corresponding CO/PBX line key to change data option.
 - To change 1 min. to 1.5 min., press CO/PBX line key 3.

LK 1	LK 2	LK 3	LK 4
0.5 min.	l min.	1.5 min.	2 min.
LK 5	LK 6	LK 7	LK 8
3 min.	5 min.	8 min.	No Limit

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-64 (Attendant Add-On Console Transfer/Camp-On Recall Timer Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-03	Hold Recall Timer Selection (Non-Exclusive Hold)	
1-2-23	System Call Park Recall Time Selection	

(Non-Exclusive Hold)

This Memory Block specifies the time interval for Exclusive Hold Recall tone. If "No Limit" is selected, no Exclusive Hold Recall tone is provided.

GENERAL INFORMATION - HOLD RECALL TIME SELECTION (EXCLUSIVE)

System	CO Line	Data No.
1	1	63

PC Programming Guide			
TECH	B: I : E	USER	S: F

NOTES:

 When an Exclusive Hold call recalls, the held call switches to a Non-Exclusive Hold call.

ATTENDANT ADD-ON CONSOLE TRANSFER/CAMP-ON RECALL TIMER SELECTION

OPERATION:

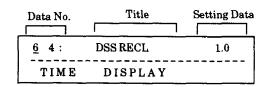
Sy	stem	CO Line	Data No.			
	1	1	64			
	PC Programming Guide					
TECH	B:I:I	USER	S:L			

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK1 MIC ICM

 Data No. 6 4

 (Dial Pad)



- Press the corresponding CO/PBX line key to change data option.
 - To change 1 min. to 1.5 min., press CO/PBX line key 3.

LK 1	LK 2	LK 3	LK 4
0.5 min.	1 min.	1.5 min.	2 min.
LK 5	LK 6	LK 7	LK 8
3 min. 5 min.		8 min.	10 min.

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-65 (Class Allow/Deny Selection).
- 5. Press the SPKR key to go back on-line.

NOTES:

- 1. When a station without an Attendant Add-On Console assigned to it transfers or camps on a call to a station, and the call goes unanswered, the call recalls using Memory Block 1-1-12 (Station Transfer/Camp-On Recall Timer Selection).
- This timer is valid only for stations assigned with an Attendant Add-On console in Memory Block 1-6-01 (Attendant Add-On Console to Telephone Port Assignment). Both the TRF key on the station and the Transfer key on the console are affected.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-11	System Transfer/Camp-On Selection	
1-1-12	Station Transfer/Camp-On Recall Timer Selection	
1-6-01	Attendant Add-On Console to Telephone Port Assignment	
1-8-08	Class of Service (Station) Feature Selection 2	

GENERAL INFORMATION - ATTENDANT ADD-ON CONSOLE TRANSFER/CAMP-ON RECALL TIMER SELECTION

This Memory Block specifies the time interval before a Ring Transfer or Station Camp-On from a station with an Attendant Add-On Console will recall back to the originating station if the call is not answered.

CLASS ALLOW/DENY SELECTION

OPERATION:

- 1. Go off-line.
- o MIC Enter: Mode LK 1 System ICM ◦ MIC Sub-Mode CO Line LK 1 **ICM** Data No. 5 (Dial Pad) Class Title Data No. 01~14 Function <u>6</u> 5: **CLASS** $(0\ 1)$ YS TIME DISPLAY

Data: Class: $01 \sim 14$

3. Press the corresponding CO/PBX line key to change data option.

	LK 2	L K 3	LK 4
Allow (YS)	Deny (NO)		
LK 5	LK 6	LK 7	LK 8

CO/PBX line keys

Default Class 05~14 Deny (No)

- Pressing the TRF key will write the selected data and advance to Memory Block 1-1-66 (8-Digit Matching Table to Normal Dial Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Section 6 Code Restriction in this chapter.

Sy	stem	CO Line	Data No.	
1		1	65	
PC Programming Guide				
TECH A: A: A USER				

NOTES:

- 1. If no match is found or a duplicate match is made in opposite Allow/Deny 8-Digit Matching Tables, the system uses this Memory Block (Class Allow/Deny Selection). If the Class is assigned as Allow, the call is allowed and if the Class is assigned as Deny, the call is denied.
- 2. If the interdigit time duration of the dialing party exceeds 10 seconds, while a restricted station user is dialing on an outside line and the system is searching the assigned tables, the system automatically drops the call.

GENERAL INFORMATION - CLASS ALLOW/DENY SELECTION

This Memory Block is used to assign the Code Restriction Classes (01~14) as Allow or Deny. This assignment is used when there is no match or when there is an overlap (duplicate numbers in tables with opposite Allow/Deny assignments) of numbers in the 8-Digit Matching Tables.

8-DIGIT MATCHING TABLE TO NORMAL DIAL ASSIGNMENT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC
 ICM

 Sub-Mode CO Line LK1 MIC
 ICM

 Data No. 6 6
 (Dial Pad)

Data No.	Title	Setting Data
<u>6</u> 6:	NORMAL DIAL	+1
TIME	DISPLAY	

3. Press the corresponding CO/PBX line key to change data option.

LK 1	LK 2	LK 3	LK 4
Table 00	Table 01	Table 02	Table 03
LK 5	LK 6	LK 7	LK 8
Table 04	Table 05	Table 06	Table 07

LK 1	LK 2	LK 3	LK 4
Table 08	Table 09	Table 10	Table 11
LK 5	LK 6	LK 7	LK 8
Table 12	Table 13	Table 14	Table 15

CO/PBX line keys

Default	Tables 00~14 Used Table 15 Unused
---------	--------------------------------------

RECALL 1

key

Next page.

FNC

kev

Previous page.

COLED	Off	On On
Data	UNUSED	USED

System CO Line Data No.

1 1 66

<u> </u>		<u> </u>	00
	PC Pr	ogramming G	uide
тесн	A: A: G	USER	

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-67 (OCC Table Assignment).
- 5. Press the SPKR key to go back on-line.

NOTES:

1. The following selections are defined as:

Used = Non-OCC and OCC calls. Unused = OCC calls only.

Additional Programming

Refer to Section 6 - Code Restriction in this chapter.

GENERAL INFORMATION - 8-DIGIT MATCHING TABLE TO NORMAL DIAL ASSIGNMENT

This Memory Block is used to assign the 8-Digit Matching Table by class basis for normal dialing as used or unused. If the 8-Digit Matching Table is assigned as unused, the system does not check during normal dialing even if Memory Block 1-1-61 (8-Digit Matching Table to Class Assignment) is programmed.

OCC TABLE ASSIGNMENT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK1 MIC ICM

 Data No. 6 7

		(Dial Pad)
Data No.	OCC Table $(01 \sim 16)$	Setting Data
6 7:	(01)	=
TIME	DISPLAY	

3. Use the dial pad to change data option.

+ , # : To move cursor. Dial pad $\boxed{0} \sim \boxed{9}$: To enter data.

Operation Data	Dial Number	Operation
X	0~9,*,#	LNR/SPD key + 7
P	0,1	LNR/SPD key + 8
N	2~9	LNR/SPD key + 9
*	*	LNR/SPD key + *
#	#	LNR/SPD key + #

Data: OCC Table:

01~16

Setting Data:

0~9, *, #, X, P, N

(maximum 8 digits)

HOLD

key:

Set Data Clear

Operation Data:

Default		able 01 able 16		
---------	--	--------------------	--	--

System	CO Line	Data No.
1	1	67

	PC Program	ming	Guide
TECH	A: A: I	USER	

- 4. Press the TRF key to write the selected data and advance to the next OCC Table.
- After data for all OCC Tables has been entered, press the TRF to advance to Memory Block 1-1-68 (8-Digit Matching Table to OCC Table Assignment).
- 6. Press the SPKR key to go back on-line.

Additional Programming

Refer to Section 6 - Code Restriction in this chapter.

GENERAL INFORMATION - OCC TABLE ASSIGNMENT

This Memory Block allows an OCC code (maximum of eight digits) to be assigned in this table. Up to 16 OCC codes can be assigned in this table.

(Dial Pad)

8-DIGIT MATCHING TABLE TO OCC TABLE ASSIGNMENT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK1 MIC ICM

 Data No. 6 8

3. Press the corresponding CO/PBX line key to change data option.

LK 1	LK 2	LK 3	4
Table 00	Table 01	Table 02	Table 03
LK 5	LK 6	LK 7	LK 8
Table 04	Table 05	Table 06	Table 07

CO/PBX line keys

age 2			
LK 1	LK 2	LK 3	LK 4
Table 08	Table 09	Table 10	Table 11
LK 5	LK 6	LK 7	LK 8
Table 12	Table 13	Table 14	Table 15

RECALL key: Next Page
FNC key: Previous Page

COLED	Off	On On
Data	NOT USED	USED

Sy	stem	CO Line	Data No.
	1	1	68
	PC Pro	gramming G	uide
тесн	A:A:J	USER	

- 4. Press the TRF key to write the selected data and advance to the next OCC Table.
- 5. After data for all OCC Tables has been entered, press the TRF to advance to Memory Block 1-1-69 (Tie Line Code Restriction Assignment).
- 6. Press the SPKR key to go back on-line.

	OCC Table 01 ~ 15 = All 8-Digit Matching
	Tables Not Used
Default	OCC Table 16 = 8-Digit Matching
	Tables 00~14 Not Used
	8-Digit Matching
	Table 15 Used

Additional Programming

Refer to Section 6 - Code Restriction in this chapter.

GENERAL INFORMATION - 8-DIGIT MATCHING TABLE TO OCC TABLE ASSIGNMENT

This Memory Block can be used to assign each of the 8-Digit Matching Tables to each of the OCC Code Tables.

TIE LINE CODE RESTRICTION ASSIGNMENT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK 1 MIC ICM

 Sub-Mode CO Line LK 1 MIC ICM

 Data No. 6 9

 (Dial Pad)

Data No.	Title	Setting Data
<u>6</u> 9:	TIE REST =	YS
TIME	DISPLAY	

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change Restriction to No Restriction, press CO/PBX line key 1.

LK 1	LK2	LK 3	LK 4
No Restriction (NO)	Restriction (YS)		
LK 5	LK 6	LK 7	LK 8

CO/PBX line keys

Default								1			8	2	į	L	ľ	i	C	ŧ	ì	ŧ	•	¥	•									
---------	--	--	--	--	--	--	--	---	--	--	---	---	---	---	---	---	---	---	---	---	---	---	---	--	--	--	--	--	--	--	--	--

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-70 (Code Restriction Class Assignment When Lockout is Set).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Section 6 - Code Restriction in this chapter.

System	CO Line	Data No.
1	1	69

	PC Progr	amming Guide	
TECH	A:A:N	USER	

NOTES:

 When Tie lines are assigned code restriction, the Access Code used to dial out of the distant system must be entered in front of the dialed number in the 8-Digit Matching Tables.

GENERAL INFORMATION - TIE LINE CODE RESTRICTION ASSIGNMENT

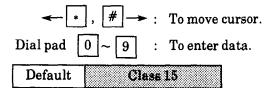
This Memory Block can be used to assign Restriction/No Restriction to outgoing Tie line dialed digits.

CODE RESTRICTION CLASS ASSIGNMENT WHEN LOCKOUT IS SET

OPERATION:

- 1. Go off-line.
- o MIC 2. Enter: Mode LK 1 System **ICM** MIC Sub-Mode CO Line LK 1 **ICM** 0 Data No. (Dial Pad) Title Setting Data Data No. 7 0: REST CLASS = <u>1</u>5 TIME DISPLAY
- 3. Use the dial pad to enter the class restriction (00~15).

Data: Restriction Class: 00~15



- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-71 (First Delay Announcement Start Time Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Section 6 Code Restriction in this chapter.

Sy	stem	CO Line	Data No.
	1	1	70
	PC Pr	ogramming (Guide
TECH	A:A:D	USER	

NOTES:

1. When a station is locked out, the Code Restriction Class Assignment of this Memory Block is used instead of the Code Restriction Class assigned to the station in Memory Blocks 4-07 [Code Restriction Class Assignment (Day Mode)] and 4-08 [Code Restriction Class Assignment (Night Mode).]

GENERAL INFORMATION - CODE RESTRICTION CLASS ASSIGNMENT WHEN LOCKOUT IS SET

This Memory Block is used to assign the restriction class when a station user sets the Station Lockout or when the Attendant sets the Attendant Station Lockout feature.

FIRST DELAY ANNOUNCEMENT START TIME SELECTION

OPERATION:

- 1. Go off-line.
- o MIC LK 1 2. Enter: Mode System ICM o MIC Sub-Mode CO Line LK 1 ICM Data No. 1 (Dial Pad)

Data No.	Title		Setting Data
		\neg	
<u>7</u> 1:	MSG START	=	20
TIME	DISPLAY		

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 20 sec. to 10 sec., press CO/PBX line key 2.

LK 1	LK 2	LK.3	LK 4
0 sec.	10 sec.	20 sec.	30 sec
LK 5	LK 6	LK 7	LK 8
40 sec.	50 sec.	60 sec.	

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-72 (First Delay Announcement Repeat Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-72	First Delay Announcement Repeat Selection	
1-8-13	VRS Message Function Assignment	√
3-41	Delay Announcement Assignment	√

System	CO Line	Data No.
1	1	71

	PC Progr	amming Guide	
TECH	A:H:C	USER	

NOTES:

- 1. This feature requires version 2.00 software or higher.
- 2. Requires the use of MIF-F(A)-10 or MIF-F(U)-10 KTU and a VRS-F(4)-11 KTU to support this feature.

GENERAL INFORMATION - FIRST DELAY ANNOUNCEMENT START TIME **SELECTION**

This Memory Block specifies the delayed time between receiving a CO call and sending a First Delay! Announcement to the calling party.

FIRST DELAY ANNOUNCEMENT REPEAT SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC
 Sub-Mode CO Line LK1 MIC
 ICM

 Data No. 7 2
 (Dial Pad)

Data No.	Title	Setting Data
7 2:	MSG1 SEND	= 1
TIME	DISPLAY	Y

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 1 Time to 2 Times, press CO/PBX line key 2.

LKI	LK 2	LK 3	LK 4
l Time	2 Times	3 Times	4 Times
LK 5	LK 6	LK 7	LK 8
5 Times	6 Times	7 Times	8 Times

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-73 (First to Second Delay Announcement Interval Time Selection).
- 5. Press the SPKR key to go back on-line.
 - Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-71	First Delay Announcement Start Time Selection	V
1-8-12	VRS Message Recording Time Selection	
1-8-13	VRS Message Function Assignment	V
3-41	Delay Announcement Assignment	\ \ \

System	CO Line	Data No.
1	1	72

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TECH	A:H:B	USER	

NOTES:

- 1. This feature requires version 2.00 software or higher.
- 2. Requires use of the MIF-F(A)-10 or MIF-F(U)-10 KTU and a VRS-F(4)-11 KTU to support this feature.

GENERAL INFORMATION - FIRST DELAY ANNOUNCEMENT REPEAT SELECTION

This Memory Block specifies the number of times the First Delay Announcement will be repeated.

FIRST TO SECOND DELAY ANNOUNCEMENT INTERVAL TIME SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK1 MIC ICM

 Data No. 7 3

 (Dial Pad)

Data No.	Title	_	Setting Data
7 3:	MSG INTVL	그_ =	20
TIME	DISPLAY		

- Press the corresponding CO/PBX line key to change data option.
 - To change 20 sec. to 10 sec., press CO/PBX line key 2.

LK 1	LK 2	LK3	LK 4
0 sec.	10 sec.	20 sec.	30 sec.
LK 5	LK 6	LK7	LK 8
40 sec.	50 sec.	60 sec.	No Limit

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-74 (Second Delay Announcement Repeat Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-74	Second Delay Announcement Repeat Selection	
1-1-75	Second Delay Announcement Repeat Interval Time Selection	
1-8-13	VRS Message Function Assignment	V
3-41	Delay Announcement Assignment	$\overline{}$

System	CO Line	Data No.
1	1	73

PC Programming Guide				
TECH	A:H:D	USER		

NOTES:

- 1. This feature requires version 2.00 software or higher.
- Requires use of the MIF-F(A)-10 or MIF-F(U)-10 KTU and a VRS-F(4)-11 KTU to support this feature.

GENERAL INFORMATION - FIRST TO SECOND DELAY ANNOUNCEMENT INTERVAL TIME SELECTION

This Memory Block specifies the interval time between First Delay Announcement sending time finish and the send start time of Second Delay Announcement to the calling party.

SECOND DELAY ANNOUNCEMENT REPEAT SELECTION

OPERATION:

- 1. Go off-line.
- o MIC 2. Enter: Mode System LK 1 ICM MIC Sub-Mode CO Line LK 1 ICM Data No. (Dial Pad)

Data No.	Title	Setting Data
<u>7</u> 4:	MSG2 SEND =	= 1
TIME	DISPLAY	7

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 1 Time to 2 Times, press CO/PBX line key 2.

LK 1	LK 2	LK 3	LK 4
1 Time	2 Times	3 Times	4 Times
LK 5	LK 6	LK 7	LK 8
5 Times	6 Times	7 Times	8 Times

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-75 (Second Delay Announcement Repeat Interval Time Selection).
- 5. Press the SPKR key to go back on-line.
 - Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-73	First to Second Delay Announcement Interval Time Selection	
1-1-75	Second Delay Announcement Repeat Interval Time Selection	
1-8-12	VRS Message Recording Time Selection	
1-8-13	VRS Message Function Assignment	V
3-41	Delay Announcement Assignment	V

System	CO Line	Data No.
1	1	74

PC Programming Guide			
тесн	A:H:F	USER	

NOTES:

- 1. This feature requires version 2.00 software or higher.
- Requires use of the MIF-F(A)-10 or MIF-F(U)-10 KTU and a VRS-F(4)-11 KTU to support this feature.

GENERAL INFORMATION - SECOND DELAY ANNOUNCEMENT REPEAT SELECTION

This Memory Block specifies the number of times for repeating Second Delay Announcement.

SECOND DELAY ANNOUNCEMENT REPEAT INTERVAL TIME SELECTION

System	CO Line	Data No.
1	1	75

PC Programming Guide			
TECH A:H:E	USER		

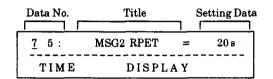
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK1 MIC ICM

 Data No. 7 5

 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 20 sec. to 10 sec., press CO/PBX line key 2.

CO/P	l BX line keys	Def	ault
40 sec.	50 sec.	60 sec.	No Limi
LK 5	LK 6	L K 7	LK 8
0 sec.	10 sec.	20 sec.	30 sec.
LK 1	LK 2	LK3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-76 (Barge-In Alert Tone Assignment).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory_Block Name	Required
1-1-73	First to Second Delay Announcement Interval Time Selection	
1-1-74	Second Delay Announcement Repeat Selection	
3-41	Delay Announcement Assignment	V

NOTES:

- 1. This function requires version 2.00 software or higher.
- Requires use of the MIF-F(A)-10 or MIF-F(U)-10 KTU and a VRS-F(4)-11 KTU to support this feature.

GENERAL INFORMATION - SECOND DELAY ANNOUNCEMENT REPEAT INTERVAL TIME SELECTION

This Memory Block specifies the interval time to repeat Second Delay Announcement.

BARGE-IN ALERT TONE ASSIGNMENT

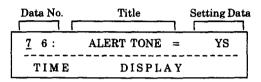
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK1 MIC ICM

 Data No. 7 6

 (Dial Pad)



- 3. Press the corresponding CO/PBX Line key to change data option.
 - To change YES to NO, press CO/PBX line key 2.

YES = Send Alert Tone

NO = Do Not Send Alert Tone

T	K line keys	Def	ault
LK 5	LK 6	LK 7	LK 8
YES	NO		
LK 1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-1-77 [Delayed Ringing Timer Assignment (CO)].
- 5. Press the SPKR key to go back on-line.
 - Additional Programming

Memory Block No.	Memory Block Name	Required
1-8-08	Class of Service (Station) Feature Selection 2	
4-17	Station to Class of Service Feature Assignment	
4-90	SLT Data Line Security Assignment	

System	CO Line	Data No.
1	1	76

PC Programming Guide			
тесн	B:B:A:B	USER	S:N

NOTES:

- Monitoring telephone conversations may be illegal under certain circumstances and laws. Consult a legal advisor before implementing the monitoring of telephone conversations. Some federal and state laws require a party monitoring a telephone conversation to use an alert tone to notify all parties to the telephone conversation, and/or obtain consent from all parties to the telephone conversation. Some of these laws provide strict penalties for illegal monitoring of telephone conversations.
- 2. When YES is assigned, both parties (internal and external) receive the Alert Tone.

GENERAL INFORMATION - BARGE-IN ALERT TONE ASSIGNMENT

This Memory Block specifies whether Barge-In Alert Tone is allowed or denied.

Data No.

DELAYED RINGING TIMER ASSIGNMENT (CO)

PC Programming Guide

System

OPERATION:

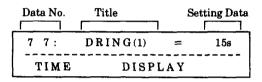
- 1. Go off-line.
- o MIC LK 1 2. Enter: Mode System ICM Sub-Mode CO Line LK 1 7 Data No. (Dial Pad)

1 1 77 B:C:C:EUSER

CO Line

NOTES:

This feature requires version 3.00 software or



- 3. Enter the data using the dialpad
 - To change 15 seconds to 10 seconds, dial 10 from the dialpad.

Default: 15 seconds

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-2-00 (Internal Paging Timeout Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.		Memory Block Name	Required
	1-2-26	Delayed Ringing Timer Assignment (ICM)	

GENERAL INFORMATION - DELAYED RINGING TIMER ASSIGNMENT (CO)

This Memory Block is used to assign the delayed ringing timer for incoming outside line calls.

INTERNAL PAGING TIMEOUT SELECTION

OPERATION:

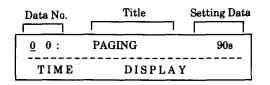
- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode ICM LK2 MIC

 LK2 MIC

 ICM

 Data No. (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 90 sec. to 120 sec., press CO/PBX line key 2.

CO/PBX line keys		Defa	ult
LK 5	LK 6	LK 7	LK 8
90 sec.	120 sec.	No Limit	
LK1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-2-01 (Intercom Call Voice/Tone Signal Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
1-7-02	External Speaker Connection Selection	
1-7-06	External Paging Timeout Selection	
4-93	Internal Zone Paging Selection	

Sy	stem	ICM	Data No.
	1	2	00
	PC Pro	gramming G	uide
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NOTES:

- 1. There are six types of paging:
 - All Internal Zone (51)
 - Internal Zone Paging (52~54)
 - Internal All Zone Paging (56)
 - External Zone Paging (all speakers) (55)
 - External Zone Paging (individual speakers) (56~58)
 - Internal/External Zone Paging (59)
- 2. There are three selections for length of internal paging time; 90 sec., 120 sec., and No Limit.
- 3. External Paging Timeout is programmed in Memory Block 1-7-06 (External Paging Timeout Selection).

GENERAL INFORMATION - INTERNAL PAGING TIMEOUT SELECTION

This Memory Block is used to program the length of time allowed for paging.

INTERCOM CALL VOICE/TONE SIGNAL SELECTION

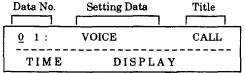
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode ICM LK2 MIC ICM

 Data No. 0 1

 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change Voice to Tone, press CO/PBX line key 1.

LK 1	LK 2	LK 3	LK 4
Tone	Voice		
LK 5	LK 6	LK 7	LK 8
	1		
CO/PI	3X line keys	Def	ault

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-2-02 (Automatic Callback Release Timer Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-6-03	DSS Call Voice/Tone Signal Selection	

System I		Data No.
1	2	01

PC Programming Guide			
TECH	B: D: K	USER	

NOTES:

- 1. Switching from voice to tone signaling or from tone to voice can be accomplished by dialing a station number, then dialing the digit 1.
- 2. If tone signaling is programmed in this Memory Block, the called party cannot answer handsfree unless the originator of the call switches to Voice by dialing the digit 1.
- 3. Call voice/tone signaling from the Attendant Add-On Console is programmed in Memory Block 1-6-03 (DSS Call Voice/Tone Signal Selection).
- 4. This Memory Block has no effect on incoming Voice Announcement Tie/DID line calls. [Refer to Memory Block 1-1-34 (Tie/DID Line First Ring Pattern Selection).]

GENERAL INFORMATION - INTERCOM CALL VOICE/TONE SIGNAL SELECTION

This Memory Block is used to determine whether signal tone or voice is used first for an intercom call.

AUTOMATIC CALLBACK RELEASE TIMER SELECTION

System	ICM	Data No.
1	2	02

<u></u>	PC Programming Guide		
TECH	B:I: A	USER	

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC

 Sub-Mode ICM LK2 MIC

 LK2 MIC

 ICM

 Data No. 0 2

 (Dial Pad)

Data No.	Title	Setting Data
<u>0</u> 2:	CALL BACK	30m
TIME	DISPLAY	

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 30 min. to 5 min., press CO/PBX line key 1.

LK 1	LK 2	LK 3	LK 4
5 min.	10 min.	20 min.	80 min.
LK 5	LK 6	LK 7	LK 8
<u> </u>	· · · · · · · · · · · · · · · · · · ·		
CO/PBX	line keys	Defa	ult

- 4. Pressing the **TRF** key will write the selected data and advance to Memory Block 1-2-03 (2-, 3-, or 4-Digit Station Number Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Chapter 3 - Guide to-Feature Programming in this manual.

GENERAL INFORMATION - AUTOMATIC CALLBACK RELEASE TIMER SELECTION

This Memory Block is used to determine the length of time allowed for an automatic callback to occur before the request is automatically canceled.

2-, 3-, or 4-DIGIT STATION NUMBER SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC

 Sub-Mode ICM

 LK2 MIC

 LK2 MIC

 LK2 ICM

 Data No.

 (Dial Pad)

Data No.		Title	Setting Data
	_ f		
<u>0</u> 3:	STA.	NO.	3DGT
TIME		DISPLA	Y

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 3-digit to 2-digit, press CO/PBX line key 1.

4-digit LK 7	LK 8
LK 7	TKS
	De

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-2-04 (Call Arrival Key Block Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-46	Access Code (1-Digit) Assignment	
1-1-47	Access Code (2-Digit) Assignment	
4-10	Station Number Assignment	$\overline{}$

System	ICM	Data No.
1	2	03
PC I	Programming (Guide
TECH R: A:	USER	

NOTES:

- 1. The Station Numbering Plan can be 2-, 3-, or 4-digits, however, only one plan can be used at a time.
- 2. After a change is made in this Memory Block, all station numbers must be reassigned in Memory Block 4-10 (Station Number Assignment).

GENERAL INFORMATION - 2-, 3-, or 4-DIGIT STATION NUMBER SELECTION

This Memory Block is used to determine the number of digits for station numbers. Either 2-digit $(00\sim99)$, 3-digit $(000\sim999)$, or 4-digit $(0000\sim9999)$ assignment is available.

CALL ARRIVAL KEY BLOCK ASSIGNMENT

OPERATION:

1. Go off-line.

TIME

- o MIC 2. Enter: Mode System LK 1 ICM MIC Sub-Mode ICM LK 2 ICM Data No. (Dial Pad) Title Data No. Page No. 04: **CAR ASSIGN** 1
- 3. Press the corresponding CO/PBX line key to change the data option.

DISPLAY

• To change CAR 01~08 to CAR 09~16, press CO/PBX line key 2.

Page 1

LK 1	LK 2	LK 3	LK 4
CAR 01~08	CAR 09~16	CAR 17~24	CAR 25~32
LK 5	LK 6	LK 7	LK 8
CAR 33~40	CAR 41~48	CAR 49~56	CAR 57~64

Page 2

LK 1	LK 2	LK 3	LK 4
CAR 65~72	CAR 73~80	CAR 81~88	
LK 5	LK 6	LK 7	LK 8

Default	All Call Arrival Keys are not assigned.
---------	---

- 4. Pressing the TRF key writes the selected data and advances to Memory Block 1-2-08 (Specified Station Access Code Assignment).
- 5. Press the SPKR key to go back on-line.

System	ICM	Data No.
1	2	04

PC Programming Guide			
тесн	B: A : C	USER	

NOTES:

- The Call Arrival Key feature requires version 2.50 software or higher.
- A maximum of 96 ports to be shared by station ports (ESI, SLI and LLT) and Call Arrival Keys are allowed in the system. If 32 station ports are being used, 64 remain for use as Call Arrival Keys.
- 3. If 30 Call Arrival Keys are required, Line Keys 1~4 must be turned on.

Additional Programming
 Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - CALL ARRIVAL KEY BLOCK ASSIGNMENT

This Memory Block specifies the number of Call Arrival Keys which can be used in the system.

SPECIFIED STATION ACCESS CODE ASSIGNMENT

OPERATION:

- 1. Go off-line.
- o MIC 2. Enter: Mode LK 1 System ICM o MIC Sub-Mode ICM LK 2 ICM 8 Data No. (Dial Pad) Specified Station Access Code No. 00~23 Tel Port No. Data No. 01~96 Title 08: SPCL STA 00 = 0 1 TIME DISPLAY
- 3. Enter data using the dial pad.
 - To assign a Specified Station Access Code (00~23) to Tel Port Number 01, enter Access Code from the dial pad.

← * , # **→**

To move cursor.

Dial pad $\boxed{0} \sim \boxed{9}$

To enter data.

HOLD key

To clear all data.

Setting data

Tel Port No. 01~96.

Specified Station Access Code

 $00 \sim 23$

Default

Specified Station 00: 01 Specified Station 01~23: Not Set

- Press the TRF key, Tel Port No. 01 is displayed.
- After entering Specified Station No. Access Code, press the TRF key to advance to the next Station No.
- After entering all data, pressing the TRF key will write the selected data and advance to Memory Block 1-2-09~18 (Absence Message 1~10 Assignment).
- Press the SPKR key to go back on-line.

System	ICM	Data No.
1	2	08

PC Programming Guide				
TECH	B:G:G	USER		

NOTES:

- A specified station can be called either by lifting the handset (or by pressing the SPKR key) when Memory Block 4-23 (Prime Line/Hot Line Assignment) is assigned to ring a specified station or from an outside party via the Auto Attendant Feature and dialing an Access Code.
 - Up to 24 stations can be assigned a specific ringing assignment.
- 2. The Specified Access Code is assigned in Memory Blocks 1-1-46 or 1-1-47 [Access Code (1-Digit/2-Digit) Assignment].

Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-46	Access Code (1-Digit) Assignment	
1-1-47	Access Code (2-Digit) Assignment	
1-4-14	Automated Attendant Message Access Code (1-Digit) Assignment	
1-4-15	Automated Attendant Message Access Code (2-Digit) Assignment	

GENERAL INFORMATION - SPECIFIED STATION ACCESS CODE ASSIGNMENT

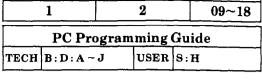
I This Memory Block is used to assign specific stations the capability to be called using abbreviated dialing. Up to 24 stations can be assigned.

ABSENCE MESSAGE 1~10 ASSIGNMENT

System	ICM	Data No.
1	2	09~18
PC Pro	gramming (Guide

OPERATION:

- 1. Go off-line.
- o MIC 2. Enter: Mode LK 1 System **ICM** o MIC Sub-Mode ICM LK 2 **ICM** Data No. 1 8 (Dial Pad)



NOTE:

1. Ten messages are available, the first six are assigned at default.

Data No.	Setting Data (13 digits max.)
0 9:	DND
TIME	DISPLAY

3. Enter data using the dial pad.

To move cursor.

To enter setting data. Dial pad

HOLD key To clear all data when the cursor is at the

Setting Data position.

- 4. Enter the characters that are to be displayed. Refer to Section 7 (Character Code Tables).
- 5. After entering all data for Memory Block 1-2-9~18 (Absence Message 1~10 Assignment), press the TRF key to write the selected data and advance to Memory Block 1-2-19 (Intercom Ring Pattern Selection).
- 6. Press the SPKR key to go back on-line.

	Data No.	Message
	09	DND
	10	MEETING
	11	BUSINESS TRIP
Default	12	NOT IN
	13	WITH GUEST
	14	OUT OF OFFICE
	15	
	ſ	Not Specified
	18)

Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - ABSENCE MESSAGE 1~10 ASSIGNMENT

This Memory Block is used to program various messages that can be set at a station LCD. ICM calls to that station, while in DND, will show the message in the LCD (if equipped) at the calling station.

Pattern

Tone

Off

Tone

On

Α

В

С

D

E

F

G

Н

Line

Key

LK 1

LK 2

LK3

LK 4

LK 5

LK 6

LK7

LK8

LK 1

(Page 2) LK 2

(Page 2)

08

18

28

3в

 Π

48

58

6s

INTERCOM RING PATTERN SELECTION

System	ICM	Data No.
1 _	2	19

PC Program	ming	Guide
TECH B:D:L	USER	

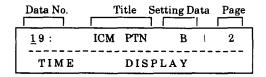
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC

 Sub-Mode ICM LK2 MIC

 The LK1 ICM

 Data No. (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change Pattern B to Pattern A, press CO/PBX line key 3.

_				_	
υ	a	r	•	1	

LK 1	LK 2	LK 3	LK4
Tone Off	Tone On	Pattern A	Pattern B
LK 5	LK 6	LK 7	LK 8
Pattern C	Pattern D	Pattern E	Pattern F

Page 2

LK 1	LK 2	LK 3	LK 4
Pattern G	Pattern H		
LK 5	LK 6	LK 7	LK 8

CO/PBX line keys Default

FNC key

RECALL

key

Previous page.

Next page.

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-2-20 (Intercom Ring Tone Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

 $\Pi\Pi$

GENERAL INFORMATION - INTERCOM RING PATTERN SELECTION

This Memory Block is used to select a Ring Pattern when ICM calls are made.

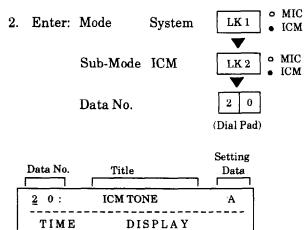
INTERCOM RING TONE SELECTION

System	ICM	Data No.
1	2	20
PC Proc	remmina C	luido

PC Programming Guide TECH B: D: M USER

OPERATION:





- 3. Press the corresponding CO/PBX line key to change data option.
 - To change Tone A to Tone B, press CO/PBX line key 2.

CO/PB	X Line keys	Def	ault
Tone E	Tone F	Tone G	Tone H
LK 5	LK 6	LK 7	LK 8
Tone A	Tone B	Tone C	Tone D
LK1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-2-22 (Call Forward No Answer Timer Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming --Refer to Chapter 3 Guide to Feature Programming in this manual.

NOTES:

1. The available tones	are shown below.
Tone $A = (480/606)$:	Modulation (16 Hz)
Tone $B = (480/606)$:	Modulation (8 Hz)
Tone $C = (1024/1285)$	
Tone $D = (1024)$	
Tone E = (500)	
Tone $F = (1024/1285)$:	Modulation (16 Hz)
Tone $G = (600/700)$:	Modulation (16 Hz)
Tone $H = (1024)$:	Envelope 2 sec.

GENERAL INFORMATION - INTERCOM RING TONE SELECTION

This Memory Block is used to select a ring tone for ICM calls.

CALL FORWARD NO ANSWER TIMER SELECTION

OPERATION:

- 1. Go off-line.
- o MIC 2. Enter: Mode LK 1 System ICM • MIC Sub-Mode ICM LK 2 ICM Data No. 2 2 (Dial Pad) Setting Data No. Title Data 22: FWD NOANS 10 s TIME DISPLAY
- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 10 sec. to 20 sec., press CO/PBX line key 2.

LKI	LK 2	LK 3	LK 4
10 sec.	20 sec.	30 sec.	60 sec.
LK 5	LK 6	LK 7	LK 8
120 sec.	240 sec.		

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-2-23 (System Call Park Recall Time Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-46	Access Code (1-Digit) Assignment	
1-1-47	Access Code (2-Digit) Assignment	
1-1-48	Access Code (3-Digit) Assignment	
1-2-01	Intercom Call Voice/Tone Signal Selection	
1-8-08	Class of Service (Station) Feature Selection 2	
4-17	Station to Class of Service Feature Assignment	
4-42	Call Forward-Busy Immediately/Delay Selection	

GENERAL INFORMATION - CALL FORWARD NO ANSWER TIMER SELECTION

This Memory Block specifies the time before incoming ICM calls or incoming CO/PBX lines are forwarded to another station number when the called party does not answer.

System	ICM	Data No.
1	2	22

	PC Program	ming	Guide
тесн	B: I: B	USER	S:A

SYSTEM CALL PARK RECALL TIME SELECTION

OPERATION:

- 1. Go off-line.
- o MIC 2. Enter: Mode System LK 1 ICM v o MIC Sub-Mode ICM LK 2 **ICM** Data No. (Dial Pad) Setting Data No. Title Data 2 3: PARK RECL 1.0 TIME DISPLAY
- Press the corresponding CO/PBX line key to change data option.
 - To change 1 min. to 1.5 min., press CO/PBX line key 3.

LK 1	LK 2	LK 3	LK 4
.5 min.	l min.	1.5 min.	2 min.
LK 5	LK 6	LK 7	LK 8
3 min.	5 min.	8 min.	10 min.

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-2-24 (Intercom Feature Access Code Assignment).
- 5. Press the SPKR key to go back on-line.

System ICM Data No. 1 2 23

	PC Program	ming	Guide
тесн	B:I:L	USER	S:M

GENERAL INFORMATION - SYSTEM CALL PARK RECALL TIME SELECTION

This Memory Block is used to specify the time before the system will recall the user's station when using Call Park.

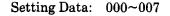
INTERCOM FEATURE ACCESS CODE ASSIGNMENT

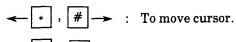
OPERATION:

- 1. Go off-line.
- o MIC 2. Enter: Mode System LK 1 ICM MIC Sub-Mode ICM LK 2 ICM 2 4 Data No. (Dial Pad)

Data No.	Title	Dial No. 1	Setting Data
2 4:	FEA AC	(0)	<u>0</u> 04
TIME	DIS	SPLAY	

3. Use the dial pad to enter the Setting Data.





Dial pad 0 : To enter data.

	Setting Code	0 = 004
		1 = 001 $2 = 002$
Default		3~5 = 000
		6 = 000 $7 = 000$
	**************************************	$8 \sim 9 = 000$
		* = 003 # = 005

- 4. Press the TRF key to write the data and advance to the next Dial No.
- 5. After entering all data, pressing the TRF key will write the selected data and advance to Memory Block 1-2-25 (Internal Paging Alert Tone Selection).
- 6. Press the SPKR key to go back on-line.

System	ICM	Data No.
1	2	24

PC Programming Guide			
TECH	B:G:D	USER	

NOTE:

Features can be assigned to more than one dial number.

Setting Data

Setting Code	Feature
000	Not Used
001	Voice/Tone Switching
002	Step Call
003	Tone Override
004	Automatic Callback
005	Callback Request

Additional Programming

Memory Block No.	Memory Block Name	Required
1-2-01	Intercom Call Voice/Tone Signal Selection	
1-8-08	Class of Service (Station) Feature Selection 2	
4-17	Station to Class of Service Feature Assignment	

GENERAL INFORMATION - INTERCOM FEATURE ACCESS CODE ASSIGNMENT

This Memory Block is used to assign the Access Code for Voice/Tone change, Step Call, etc.

INTERNAL PAGING ALERT TONE SELECTION

OPERATION:

- 1. Go off-line.
- MIC 2. Enter: Mode System LK 1 **ICM** o MIC Sub-Mode ICM LK 2 • ICM 5 Data No. 2 (Dial Pad) Setting Data No. Title Data IN PG TON YS 2 5: TIME DISPLAY
- 3. Press the corresponding CO/PBX line key to change data option.
 - To change Tone YS to Tone NO, press CO/PBX line key 2.

Fone YS Tone NO LK 5 LK 6 LK 7	
LK5 LK6 LK7	
·	LK 8

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-2-26 [Delayed Ringing Timer Assignment (ICM)].
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

System ICM Data No. 1 2 25 PC Programming Guide TECH B: F: G USER

GENERAL INFORMATION - INTERNAL PAGING ALERT TONE SELECTION

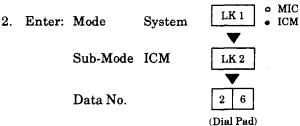
This Memory Block is used to determine whether a call alert tone is provided when Internal Paging is used.

DELAYED RINGING TIMER ASSIGNMENT (ICM)

OPERATION:

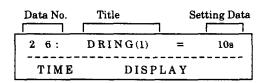
Sy	stem	ICM	Data No.			
1		2	26			
	PC Programming Guide					
TECH	B:D:O	USER				

1. Go off-line.



NOTES:

 This feature requires version 3.00 software or higher.



- 3. Enter the data using the dial pad.
 - To change 10 seconds to 5 seconds, dial 05 from the dial pad.

Default	10 seconds.
---------	-------------

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-3-01 (Bounce Protect Time Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
4-37	Extension Line Key Ring Assignment (Day Mode)	
4-38	Extension Line Key Ring Assignment (Night Mode)	

GENERAL INFORMATION - DELAYED RINGING TIMER ASSIGNMENT (ICM)

This Memory Block is used to assign the delayed ringing timer for incoming internal calls.

BOUNCE PROTECT TIME SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode SLT LK3 MIC ICM

 Data No. 0 1

 (Dial Pad)

Data No.	Title	Setting Dat	a Page No.
<u>0</u> 1:	BNCE	300 ms	1
TIME	DIS	SPLAY	

- 3. Press the corresponding CO/PBX line key to change the data option.
 - To change 300 ms. to 700 ms., press CO/PBX line key 8 while on Page 1.

Page 1

LK 1	LK 2	LK 3	LK4
0 ms.	100 ms.	200 ms.	300 ms.
LK 5	LK 6	LK 7	LK 8
400 ms.	500 ms.	600 ms.	700 ms.

Page 2

LK 1	LK 2	LK 3	LK 4
800 ms.	900 ms.	1000 ms.	1100 ms.
LK 5	LK 6	LK 7	LK 8
1200 ms.	1300 ms.	1400 ms.	1500 ms

4. Pressing the TRF key will write the selected data and advance to Memory Block 1-3-02 (SLT Hookflash Signal Selection).

Default

- 5. Press the SPKR key to go back on-line.
- Additional Programming

CO/PBX line keys

Memory Block No.	Memory Block Name	Required
1-3-05	Hookflash Start Time Selection	

Sy	stem	SLT	Data No.	
	1	3	01	
PC Programming Guide				
ТЕСН	B: B: D: A	USER		

NOTES:

 Bounce Protect Time should be equal to Hookflash Start Time in Memory Block 1-3-05 (Hookflash Start Time Section).

GENERAL INFORMATION - BOUNCE PROTECT TIME SELECTION

This Memory Block is used to specify the length of time before a valid hookflash is detected from a Single Line Telephone or Voice Mail system.

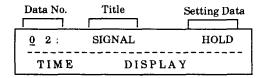
SLT HOOKFLASH SIGNAL SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC
 Sub-Mode SLT LK3 MIC
 LK3 MIC
 LK3 ICM

 Data No.

 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change HOLD to FLASH, press CO/PBX line key 2.

CO/PBX	line keys	Defa	ault
LK 5	LK 6	LK	LK 8
HOLD LK 5	FLASH	LK 7	LK 8
LK 1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-3-03 (First Digit PBR Release Timer Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-02	Hookflash Time Selection	
4-24	SLT Hookflash Assignment	

Sy	stem	SLT	Data No.		
	1	3	02		
	PC Programming Guide				
TECH	B: B: D: I	USER			

NOTES:

- If HOLD is specified, the CO/PBX line is put on Exclusive Hold.
- 2. If HOLD is selected, the PBX/CTX line can be sent an HF signal via Access Code 6# (default).
- If "FLASH" is specified, a hookflash will be sent to the PBX/CTX line when the hookswitch is pressed.

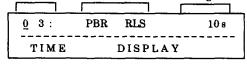
GENERAL INFORMATION - SLT HOOKFLASH SIGNAL SELECTION

This Memory Block is used to specify whether a line is held internally, or if behind a PBX, a hookflash signal is sent to the line when an SLT user performs a hookflash.

FIRST DIGIT PBR RELEASE TIMER SELECTION

OPERATION:

- 1. Go off-line.
- MIC 2. Enter: Mode System LK 1 **ICM** MIC Sub-Mode SLT LK 3 ICM Data No. (Dial Pad) Data No. Title Setting Data **PBR** RLS



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 10 sec. to 20 sec., press CO/PBX line key 2.

LK 1	LK 2	LK 3	LK 4
IO sec.	20 sec.	30 sec.	40 sec
LK 5	LK 6	LK 7	LK 8
50 вес.	60 sec.		

- 4. Pressing the **TRF** key will write the selected data and advance to Memory Block 1-3-04 [Dial 1 (DP) Hookflash Selection].
- 5. Press the SPKR key to go back on-line.

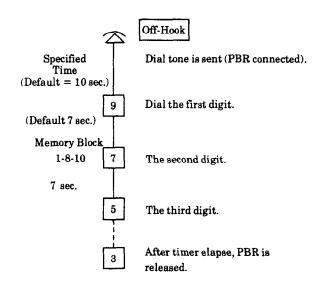
■ Additional Programming

Memory Block No.	Memory Block Name	Required
1-8-10	PBR Interdigit Release Timer Selection	
4-95	DTMF/DP SLT Type Selection	

System	SLT	Data No.
1	3	03
PC Pro	gramming (Guide

USER

TECH | B : B : D : F



GENERAL INFORMATION - FIRST DIGIT PBR RELEASE TIMER SELECTION

This Memory Block is used to specify the time interval during which a receiver circuit is connected when a DTMF type Single Line Telephone user goes off-hook and dials the first digit.

DIAL 1 (DP) HOOKFLASH SELECTION

System	SLT	Data No.
1	3	04

	PC Program	ming	Guide
TECH	B: B: D: B	USER	

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC
 Sub-Mode SLT LK3 MIC
 ICM

 Data No. 0 4

 (Dial Pad)

Data No.	Title	Setting Data
0 4:	DIAL 1 FLSH	YS
TIME	DISPLA	Y

- Press the corresponding CO/PBX line key to change data option.
 - To change YES to NO, press CO/PBX line key 2.

† CO/PBX line keys		Def	ault
LK 5	LK 6	LK 7	LK 8
YES	NO		
LK 1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-3-05 (Hookflash Start Time Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
4-90	SLT Data Line Security Assignment	
4-95	DTMF/DP SLT Type Selection	V

GENERAL INFORMATION - DIAL 1 (DP) HOOKFLASH SELECTION

This Memory Block is used to specify whether dialing the digit 1 during an intercom call or a CO/PBX call on a DP Single Line Telephone provides a hookflash signal.

HOOKFLASH START TIME SELECTION

System	SLT	Data No.
1	3	05

PC Programming Guide				
TECH	B: B: D: E	USER		

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK 1 MIC ICM
 Sub-Mode SLT LK 3 MIC LK 3 ICM

Data No.

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 300 ms. to 400 ms., press CO/PBX line key 7 while in Page 1.

D۵	ma	1

LK 1	LK 2	LK 3	LK 4
100 ms.	150 ms.	200 ms.	250 ms.
LK 5	LK 6	LK 7	LK 8
300 ms.	350 ms.	400 ms.	450 ms.

Page 2

LK 1	LK 2	LK 3	LK 4
500 ms.	550 ms.	600 ms.	650 ms.
LK 5	LK 6	LK 7	LK 8
700 ms.	750 ms.	800 ms.	850 ms.

CO/PBX line keys



- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-3-06 (Hookflash End Time Selection).
- 5. Press the SPKR key to go back on-line.

NOTES:

- 1. Performing a hookflash during a CO/PBX call places the line on hold or sends a hookflash to the CO/PBX.
- 2. When a hookflash is 0.1 second or less, or 0.85 seconds or more, it is not considered a flash.
- 3. Bounce Protect (1-3-01) and HF Start Timer should be equal.

Example:

BP = 300 ms.HFS = 300 ms.

Additional Programming

	Memory Block No.	Memory Block Name	Required
ſ	1-3-01	Bounce Protect Time Selection	
ſ	1-3-06	Hookflash End Time Selection	

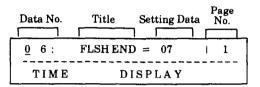
GENERAL INFORMATION - HOOKFLASH START TIME SELECTION

This Memory Block is used to specify a minimum hookflash duration from a Single Line Telephone in order to receive second dial tone.

HOOKFLASH END TIME SELECTION

OPERATION:

- 1. Go off-line.
- o MIC 2. Enter: Mode LK 1 System **ICM** o MIC Sub-Mode SLT LK 3 ICM 0 6 Data No. (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 700 ms. to 400 ms., press CO/PBX line key 5 while in Page 1.

-	_
Page	ı

LK 1	LK 2	LK 3	LK 4
HST+0	HST+100 ms.	HST + 200 ms.	HST + 300 ms.
LK 5	LK 6	LK 7	LK 8
HST + 400 ms.	HST + 500 ms.	HST + 600 ms.	HST+700 ma.

HST = Hookflash Start Time

Page	2
------	---

LK 1	LK 2	LK 3	LK 4
HST + 800 ms.	HST+900 ms.	HST+ 1000 ms.	HST + 1100 ms.
LK 5	LK 6	LK 7	LK 8
HST+ 1200 ms.	HST+ 1300 ms.	HST+ 1400 ms.	HST + 1500 ms.

HST = Hookflash Start Time

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-3-07 (Voice Mail Digit Add Assignment).
- 5. Press the SPKR key to go back on-line.

Sy	stem	SLT	Data No.
	1	3	06
	PC Progr	ramming G	uide
TECH	B : B : D : D	USER	

NOTES:

Refer to the table below for corresponding display.

Setting Data	Data Display
Hookflash Start Time + 0 ms.	00
Hookflash Start Time + 100 ms.	01
Hookflash Start Time + 200 ms.	02
Hookflash Start Time + 300 ms.	03
Hookflash Start Time + 400 ms.	04
Hookflash Start Time + 500 ms.	05
Hookflash Start Time + 600 ms.	06
Hookflash Start Time + 700 ms.	07
Hookflash Start Time + 800 ms.	08
Hookflash Start Time + 900 ms.	09
Hookflash Start Time + 1000 ms.	10
Hookflash Start Time + 1100 ms.	11
Hookflash Start Time + 1200 ms.	12
Hookflash Start Time + 1300 ms.	13
Hookflash Start Time + 1400 ms.	14
Hookflash Start Time + 1500 ms.	15

Additional Programming

Memory Block No.	Memory Block Name	Required
1-3-05	Hookflash Start Time Selection	V

GENERAL INFORMATION - HOOKFLASH END TIME SELECTION

This Memory Block is used to specify a maximum duration from a Single Line Telephone in order to receive a second dial tone.

VOICE MAIL DIGIT ADD ASSIGNMENT

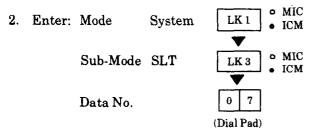
System SLT Data No. 1 3 07 PC Programming Guide

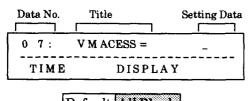
USER

TECH A:G:A

OPERATION:

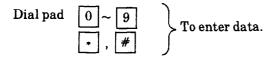
1. Go off-line.





Default All Blank

3. Enter data using the dial pad.



To enter *, #, press the LNR/SPD key first, then press * or #.

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-3-08 (Voice Mail DTMF Delay Timer Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
4-35	Voice Mail/SLT Selection	V

GENERAL INFORMATION - VOICE MAIL DIGIT ADD ASSIGNMENT

This Memory Block is used to assign up to four digits in front of a station number that is sent to the Voice Mail when a call has been forwarded.

1. Go off-line.

VOICE MAIL DTMF DELAY TIMER SELECTION

OPERATION:

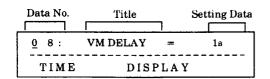
System	SLT	Data No.
1	3	08

PC Programming Guide			
TECH	A:G:C	USER	

2. Enter: Mode System LK1 • MIC • ICM

Sub-Mode SLT LK3 • MIC • ICM

Data No. (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 1 sec. to 2 sec., press CO/PBX line key 3.

CO/P	I BX line keys	Def	ault
4 sec.	5 sec.	6 sec.	8 sec
LK 5	LK 6	LK 7	LK 8
0 sec.	1 sec.	2 sec.	3 sec.
LK 1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-3-09 (Voice Mail Disconnect Time Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
4-35	Voice Mail/SLT Selection	V

GENERAL INFORMATION - VOICE MAIL DTMF DELAY TIMER SELECTION

This Memory Block is used to specify the delay time before DTMF tones are sent to the VMI ports.

Data No.

09

SLT

3

USER

PC Programming Guide

System

1

TECH A:G:B

VOICE MAIL DISCONNECT TIME SELECTION

OPERATION:

- 1. Go off-line.
- o MIC 2. Enter: Mode LK 1 System ICM MIC Sub-Mode SLT LK 3 • ICM 9 Data No. (Dial Pad) Data No. Title Setting Data <u>0</u> 9: V M DSCON 1.5sTIME DISPLAY
- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 1.5 sec. to 2.0 sec., press CO/PBX line key 4.

	LK 2	LK3	LK 4
0.6 sec.	1.0 sec.	1.5 sec.	2.0 sec
LK 5	LK 6	LK 7	LK 8
3.0 sec.	5.0 sec.		-

- Pressing the TRF key will write the selected data and advance to Memory Block 1-3-10 (Voice Mail DTMF Duration/Interdigit Time Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
4-35	Voice Mail/SLT Selection	V

GENERAL INFORMATION - VOICE MAIL DISCONNECT TIME SELECTION

This Memory Block is used to specify the timing of a disconnect signal that is sent to the connected equipment.

Programming

VOICE MAIL DTMF DURATION/INTERDIGIT TIME SELECTION

System	SLT	Data No.
1	3	10

PC Programming Guide			
тесн	A:G:D	USER	

OPERATION:

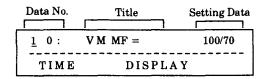
- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC

 Sub-Mode SLT LK3 MIC

 LK3 MIC

 LK3 ICM

 Data No. (Dial Pad)



3. Press the corresponding CO/PBX line key to change data option.

LK 1	LK 2	LK 3	LK 4
70/60 ms.	100/70 ms	400/100 ms.	600/100 ms.
LK 5	LK 6	LK 7	LK 8
900/200 ms.			
CO/PB	X line keys	Def	ault

Default	Duration Time: 100 ms. Interdigit Time: 70 ms.
---------	---

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-4-00 (Tandem Transfer Automatic Disconnect Timer Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
4-35	Voice Mail/SLT Selection	√

GENERAL INFORMATION - VOICE MAIL DTMF DURATION/INTERDIGIT TIME SELECTION

This Memory Block is used to specify the DTMF duration and interdigit time for voice mail.

TANDEM TRANSFER AUTOMATIC DISCONNECT TIMER SELECTION

OPERATION:

UTOMATIC System Transfer/A.A. Data No.

1 4 00

PC Programming Guide			
TECH	A:C:C	USER	

NOTES:

This Memory Block is used for DISA, Trunk-to-

Trunk Transfer and Tie Line Tandem features.

- 1. Go off-line.
- 2. Enter: Mode System

 LK 1

 O MIC

 ICM

 Sub-Mode Transfer/A.A.

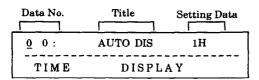
 LK 4

 O MIC

 ICM

 Data No.

 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 1hr. to 3 hr., press CO/PBX line key 4.

LK 1	LK 2	LK 3	LK 4
30 min.	1 hr.	2 hr.	3 hr.
LK 5	LK 6	LK 7	LK 8
	<u> </u>		<u></u>
CO/PI	X line keys	Def	ault

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-4-01 (Automated Attendant First Digit PBR Release Timer Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

GENERAL INFORMATION - TANDEM TRANSFER AUTOMATIC DISCONNECT TIMER SELECTION

This Memory Block is used to specify a maximum time before the system automatically disconnects a Trunk-to-Trunk connection.

AUTOMATED ATTENDANT FIRST DIGIT PBR RELEASE TIMER SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System

 LK 1

 O MIC

 Sub-Mode Transfer/A.A.

 LK 4

 O MIC

 ICM

 Data No.

 (Dial Pad)

Data No.	Title	Setting Data
<u>0</u> 1:	AA PBR TIME	20s
TIME	DISPLA	Y

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 20 sec. to 30 sec., press CO/PBX line key 3.

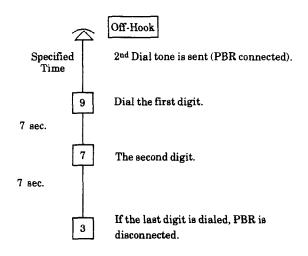
LK 1	LK2	LK 3	LK 4
10 вес.	20 вес.	30 sec.	40 sec.
LK 5	LK 6	LK 7	LK 8
50 sec.	60 sec.		
CO/PE	X line keys	Def	ault

- Pressing the TRF key will write the selected data and advance to Memory Block 1-4-02 (Automated Attendant Transfer Delayed Ringing Time Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Chapter 3 - Guide to Easture Programming in this manual.

System	Transfer/A.A.	Data No.
1	4	01

PC Programming Guide			
TECH	A:I:J	USER	



GENERAL INFORMATION - AUTOMATED ATTENDANT FIRST DIGIT PBR RELEASE TIMER SELECTION

This Memory Block is used to specify the time interval a PBR circuit will remain connected after the Automated Attendant message is played when a calling party calls in through an Automated Attendant trunk.

AUTOMATED ATTENDANT TRANSFER DELAYED RINGING TIME SELECTION

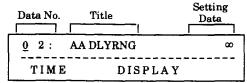
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode Transfer/A.A. LK4 MIC ICM

 Data No. 0 2

 (Dial Pad)



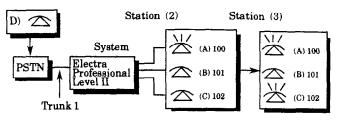
- 3. Press the corresponding CO/PBX line key to change data option.
 - To change No Limit to 30 sec., press CO/PBX line key 3.

COÆ	X line kevs	De	fault
LK 5	LK 6	LK 7	LK 8
10 sec.	20 sec.	30 вес.	00
LK 1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-4-03 (Automated Attendant No Answer Disconnect Time Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

System	Transfer/A.A.	Data No.
1	4	02

	PC Progr	ramming Guide	
TECH	A:1:M	USER	



100~102 = Station Number

PSTN = Public Switching Telephone Network

- Station A (ext. 100) and Station C (ext. 102) are ring assigned on Trunk 1.
- Trunk 1 is assigned to A.A. Trunk.

NOTES:

Example (Notes $1\sim3$):

- 1. When outside party D wishes to speak to station user A:
 - a. Dial the telephone number corresponding to Trunk 1.
 - b. Confirm Automated Attendant message.
 - c. Dial Ext. 100.
- 2. At Station A:
 - a. The ICM LED blinks and a ring tone different from the normal ringing tone is heard.
 - The call can be answered by lifting the handset.
- 3. If station user A does not answer within the specified time:
 - a. The system uses Day or Night Mode Ring Assignment and Station C starts ringing.
 - b. Any station (A, B, or C) can answer the call.
- 4. Selection of No Limit (∞) disables this feature.

GENERAL INFORMATION - AUTOMATED ATTENDANT TRANSFER DELAYED RINGING TIME SELECTION

This Memory Block is used to specify the time for a No Answer at the transferred station before the Automated Attendant will ring a predetermined station.

Data No.

 $0\overline{3}$

Transfer/A.A.

USER

AUTOMATED ATTENDANT NO ANSWER DISCONNECT TIME SELECTION

1 PC Programming Guide

System

TECH A:I:I

OPERATION:

- 1. Go off-line.
- o MIC 2. Enter: Mode System LK 1 ICM • MIC Sub-Mode Transfer/A.A. LK 4 ICM 3

(Dial Pad)

Data No.	Title	Setting Data	
		<u> </u>	_
0 3:	AA DIS	2m	١
TIME	D	ISPLAY	

Data No.

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 2 min. to 3 min., press CO/PBX line key 3.

LK 1	LK 2	LK 3	LK 4
1 min.	2 min.	3 min.	4 min.
LK 5	LK 6	LK 7	LK 8
			1
CO/F	BX line keys	Def	ault

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-4-04 (Tandem Transfer SMDR Print Extension Assignment).
- 5. Press the SPKR key to go back on-line.
- **Additional Programming**

Refer to Chapter 3 - Guide to Feature Programming in this manual.

NOTES:

If the called party does not answer within the predetermined time, the call is dropped.

GENERAL INFORMATION - AUTOMATED ATTENDANT NO ANSWER DISCONNECT TIME SELECTION

This Memory Block is used to determine how long the Automated Attendant will ring a station before automatically disconnecting the caller.

TANDEM TRANSFER SMDR PRINT EXTENSION ASSIGNMENT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC
 Sub-Mode Transfer/A.A. LK4 ICM

 Data No. (Dial Pad)

Data No.	Title	Setting Data
0 4:	TAND EXT $=$	999
TIME	DISP	LAY

Setting Data: 2-digit number = $00\sim99$

3-digit number = 000~999 4-digit number = 0000~9999

Default 3-digit number = 999

- Pressing the TRF key will write the selected data and advance to Memory Block 1-4-05 (Automatic Tandem Trunk by Night Mode Selection).
- 4. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-2-03	2-, 3- or 4-Digit Station Number Selection	

System	Transfer/A.A.	Data No.
1	4	04
PCI	Programming Gu	ide

USER

NOTES:

TECH

A:C:D

- When the system is initially powered up, this Memory Block defaults to 3-digit number = 999.
- 2. If 2-digit station numbers are selected, this Memory Block defaults to 2-digit number = 99.
- 3. If 4-digit station numbers are selected, this Memory Block defaults to 4-digit number = 9999.

GENERAL INFORMATION - TANDEM TRANSFER SMDR PRINT EXTENSION ASSIGNMENT

This Memory Block is used to specify a special number to be output from SMDR for an automatic Trunk-to-Trunk transfer.

AUTOMATIC TANDEM TRUNK BY NIGHT MODE SELECTION

OPERATION:

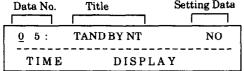
- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC

 Sub-Mode Transfer/A.A. LK4 MIC

 Data No. O 5

 (Dial Pad)

 Data No. Title Setting Data



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change NO to YES, press CO/PBX line key 2.

CO/PB2	K line keys	Def	ault
LK 5	LK 6	LK 7	LK 8
NO	YES		
LK1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-4-08 (Automated Attendant PBR Timeout Response Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-27	Automatic Day/Night Mode Switching Time Assignment	
1-1-33	Speed Dial Number/Name Display Selection	
3-05	Trunk Incoming Answer Mode Selection	V
3-06	Automatic Tandem Trunk Assignment	

System Transfer/A.A. Data No. 1 4 05

	PC Program	mming	Guide
TECH	A:C:B	USER	

GENERAL INFORMATION - AUTOMATIC TANDEM TRUNK BY NIGHT MODE SELECTION

This Memory Block is used to determine whether the Automatic Trunk-to-Trunk Transfer feature will follow the Night Mode assignment.

AUTOMATED ATTENDANT PBR TIMEOUT RESPONSE SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System

 LK 1

 O MIC

 Sub-Mode Transfer/A.A.

 LK 4

 O MIC

 ICM

 Data No.

 (Dial Pad)

Data	a No.	Title	Setting Data
0	8:	AA RES	NORMAL
T	IME	DISP	LAY

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change Normal Call to Release, press CO/PBX line key 2.

CO/PB:	X line keys	Def	ault
LK 5	LK 6	LK 7	LK 8
Normal Call	Release		
LK1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-4-09 (Automated Attendant PBR Start Time Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

System	Transfer/A.A.	Data No.
1	4	08
PCI	Programming Gu	ide
TECH A:I:L	USER	

NOTES:

- 1. When Normal Call is selected, if a DTMF tone is not received during the Automated Attendant message, or during the Automated Attendant PBR Release Timer [Memory Block 1-4-01 (Automated Attendant First Digit PBR Release Timer Selection), default: 20 seconds] after the Automated Attendant message, the system rings selected stations using the CO/PBX Ring Assignment (Day/Night Mode).
- 2. When Release is selected, if a DTMF tone is not received during the Automated Attendant message, or during the Automated Attendant PBR Release Timer [Memory Block 1-4-01 (Automated Attendant First Digit PBR Release Timer Selection), default: 20 seconds] after the Automated Attendant message, the system will drop the call after 30 seconds. The 30 second timer is fixed.

GENERAL INFORMATION - AUTOMATED ATTENDANT PBR TIMEOUT RESPONSE SELECTION

This Memory Block is used to specify how a call answered by the Automated Attendant should be processed if a DTMF tone is not received.

AUTOMATED ATTENDANT PBR START TIME SELECTION

OPERATION:

- 1. Go off-line.
- o MIC LK 1 2. Enter: Mode System **ICM** o MIC LK 4 Sub-Mode Transfer/A.A. **ICM** 9 0 Data No. (Dial Pad)

Data No.		litle	Setting Data
<u>0</u> 9:	PBR	STRT	FR
TIME		DISPLA	Y

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change FR to AF, press CO/PBX line key

Setting Data:

- FR = Same time the Automated Attendant sends the message
- AF = After the Automated Attendant sends the message

CO/PBX line keys		Def	ault
	7		
LK 5	LK 6	LK 7	LK 8
FR	AF		-
LK 1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-4-11 (Automated Attendant Message Day/Night Mode Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming Refer to Chapter 3 - Guide to Feature Programming in this manual.

System	Transfer/A.A.	Data No.
1	4	09

PC Programming Guide			
ТЕСН	A : I : K	USER	

NOTES:

1. If FR is assigned, Automated Attendant message send start time and the PBR connected to Automated Attendant trunk start time are the same.

GENERAL INFORMATION - AUTOMATED ATTENDANT PBR START TIME **SELECTION**

The Automated Attendant is used to automatically answer incoming calls. This Memory Block determines when the PBR is able to receive DTMF signaling, while the Automated Attendant is sending the message or only after the message is completed.

AUTOMATED ATTENDANT MESSAGE DAY/NIGHT MODE SELECTION

OPERATION:

- 1. Go off-line.
- o MIC LK 1 2. Enter: Mode System ICM o MIC Sub-Mode Transfer/A.A. LK 4 **ICM** Data No. (Dial Pad) A.A. Mag. Day/Night No. 1~8 Mode Setting Data No. Title Data 1 1: AAMSG (DY) =NO DISPLAY TIME
- 3. Press the corresponding CO/PBX line key to change data option.
 - To change NO to YES, press CO/PBX line key 1.

LK 1	LK 2	LK 3	LK 4
YES	NO		
LK 5	LK 6	LK 7	LK 8
	<u> </u>		
CO/PB	X line keys	Def	fault
Press L	NR/SPD key	to toggle Da	y/Night Mode
Use the D	ial pad 1 ~		cify the A.A.

- 4. Press the TRF key to enter selected data and advance to the next Automated Attendant No.
- 5. After entering all data, pressing the TRF key will write the selected data and advance to Memory Block 1-4-12 (Automated Attendant Message to Tenant Assignment).
- 6. Press the SPKR key to go back on-line.

System Transfer/A.A. Data No.
1 4 11

PC Programming Guide			
TECH	A:I:E	USER	

Additional Programming Refer to Chapter 3 - Guide to Feature Programming in this manual.

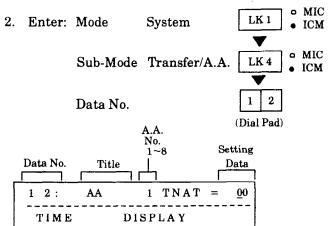
GENERAL INFORMATION - AUTOMATED ATTENDANT MESSAGE DAY/NIGHT MODE SELECTION

This Memory Block is used to specify which Automated Attendant messages are available for use in a Day/Night Mode setting.

AUTOMATED ATTENDANT MESSAGE TO TENANT ASSIGNMENT

OPERATION:

1.	α	off-	1:	n ^
1.	GO	on-	11	ne.



Data:

Automated Attendant Message No:

Setting Data:

1~8

Tenant No.

 $00 \sim 47$

HOLD key:

Data Clear

Default All Automated Attendant Messages: Tenant No. 00

3. Use the dial pad to enter the Tenant Number.

Dial pad $\boxed{0} \sim \boxed{9}$: To enter Tenant Number

- 4. Press the TRF key to write the selected data and advance to next Tenant Number.
- 5. After all data has been entered, pressing the TRF key will write the selected data and advance to Memory Block 1-4-13 (Automated Attendant Answer Delay Time Assignment).
- 6. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

System	Transfer/A.A.	Data No.
1	4	12

PC Programming Guide		
TECH A:I:G	USER	

GENERAL INFORMATION - AUTOMATED ATTENDANT MESSAGE TO TENANT ASSIGNMENT

This Memory Block is used to assign Tenant Numbers to one of eight automated messages. If the tenant is not assigned to a specific automated message, then the Automated Attendant will send the message assigned in Memory Block 1-4-11 (Automated Attendant Assignment Day/Night Mode Selection).

AUTOMATED ATTENDANT ANSWER DELAY TIME ASSIGNMENT

OPERATION:

- 1. Go off-line.
- MIC LK 1 2. Enter: Mode System ICM • МІС LK 4 Sub-Mode Transfer/A.A. ICM 3 Data No. (Dial Pad) No. Setting Data No. Data 1 3: AADLY 048 TIME DISPLAY

Data:

Automated Attendant Message No:

 $1 \sim 8$

Setting Data:

 $00 \sim 99 \text{ sec.}$

Default All Automated Attendant Messages	s:
--	----

- Use the dial pad to enter the message number and seconds.
- 4. Press the TRF key to write the selected data and advance to the next Automated Attendant No.
- After all data has been entered, pressing the TRF key will write the selected data and advance to Memory Block 1-4-14 [Automated Attendant Message Access Code (1-Digit) Assignment].
- 6. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

System	Transfer/A.A.	Data No.
1	4	13

PC Programming Guide			
тесн	A : I : A	USER	

GENERAL INFORMATION - AUTOMATED ATTENDANT ANSWER DELAY TIME ASSIGNMENT

This Memory Block is used to assign the number of seconds before the Automated Attendant will answer an incoming CO/PBX call.

AUTOMATED ATTENDANT MESSAGE ACCESS CODE (1-DIGIT) ASSIGNMENT

OPERATION:

- 1. Go off-line.
- o MIC LK 1 2. Enter: Mode System • ICM • MIC Sub-Mode Transfer/A.A. LK 4 ICM 1 4 Data No. (Dial Pad) Dial Setting No. 0~9 Data No. Title Data AA AC 0 = 0301 4: DISPLAY TIME
- 3. Enter data using the dial pad.

Automated Attendant $\boxed{1} \sim \boxed{8}$: Message No.

Dial pad $\boxed{0} \sim \boxed{9}$: To enter data.

Setting Data: A.A. Message Function Code 000 (unused), 001~053

- 4. Press the TRF key will write the selected data and advance to the next Dial No., then Automated Attendant No.
- 5. After all data has been entered, pressing the TRF key will write the selected data and advance to Memory Block 1-4-15 [Automated Attendant Message Access Code (2-Digit) Assignment].
- 6. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

Sys	tem	Transfer/A.A.	Data No.
	1	4	14
PC Programming Guide			
TECH	A : I : C	USER	

Function Code	Contents
000	Unregistered
001	
	Automated Attendant Message (1)
002	Automated Attendant Message (2)
003	Automated Attendant Message (3)
004	Automated Attendant Message (4)
005	Automated Attendant Message (5)
006	Automated Attendant Message (6)
007	Automated Attendant Message (7)
008	Automated Attendant Message (8)
009	
010	Internal Number (Station Number)
011	Bypass Automated Attendant
012	
013	
014	
015	Paging Zone A Call
016	Paging Zone B Call
017	Paging Zone C Call
018	Fax Status Indication (CO/PBX lines)
019	
020	DSS 1 Call
021	DSS 2 Call
022	DISA Access Code
023	
024	
025	
026	
027	
028	
029	
030	Specified Station Call (0) (See Memory Block 1-2-08 (Specified Station Access Code Assignment)
031	Specified Station Call (01)
032	Specified Station Call (02)
033	Specified Station Call (03)

Continued on next page.

AUTOMATED ATTENDANT MESSAGE ACCESS CODE (1-DIGIT) ASSIGNMENT

(continued)

Function Code	Contents
034	Specified Station Call (04)
035	Specified Station Call (05)
036	Specified Station Call (06)
037	Specified Station Call (07)
038	Specified Station Call (08)
039	Specified Station Call (09)
040	Specified Station Call (10)
041	Specified Station Call (11)
042	Specified Station Call (12)
043	Specified Station Call (13)
044	Specified Station Call (14)
045	Specified Station Call (15)
046	Specified Station Call (16)
047	Specified Station Call (17)
048	Specified Station Call (18)
049	Specified Station Call (19)
050	Specified Station Call (20)
051	Specified Station Call (21)
052	Specified Station Call (22)
053	Specified Station Call (23)

System	Transfer/A.A.	Data No.
1	4	14

NOTES:

- 1. Function 011 (Bypass Automated Attendant) uses Memory Blocks 4-01 and 4-02 [CO/PBX Ring Assignment (Day/Night Mode).]
- 2. If a caller receives a busy signal after being transferred by the Automated Attendant, the following Fixed Access Codes apply:

Dial	Action
1	Step Call
*	Receive 2nd Dial Tone
#	CO rings based on Day/Night Ring Assignment. In V2.25 or V2.77 or higher version, software Ringback is provided.

Default

Dial Number	Function Code	Contents
0	030	Specified Station Call (0)
1	010	Station Number
2	010	Station Number
3	010	Station Number
4~9	000	Unregistered

GENERAL INFORMATION - AUTOMATED ATTENDANT MESSAGE ACCESS CODE (1-DIGIT) ASSIGNMENT

This Memory Block is used to route a call that has come in to the Automated Attendant by entering a 1-digit code.

AUTOMATED ATTENDANT MESSAGE ACCESS CODE (2-DIGIT) ASSIGNMENT

System Transfer/A.A. Data No. 1 4 15

PC Programming Guide			
TECH	A:I:D	USER	

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System

 LK1

 O MIC

 Sub-Mode Transfer/A.A.

 LK4

 O MIC

 ICM

 Data No.

 Data No.

 A.A.

 No.

 No.

Data No.	A.A. No. 1~8 Dial Setting Title No. Data
<u>1</u> 5:	AA AC 1 - 00 = 030
TIME	DISPLAY

3. Enter data using the dial pad.

Automated Attendant $\boxed{1} \sim \boxed{8}$: Message No.

Dial pad $\boxed{0} \boxed{0} \sim \boxed{9} \boxed{9}$ To enter data.

- 4. Pressing the TRF key will write the selected data and advance to next the Dial No., then Automated Attendant No.
- After all data has been entered, pressing the TRF key will write the selected data and advance to Memory Block 1-4-16 (Automated Attendant Message Repeat Selection).
- 6. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

		Default
Dial Number	Function Code	Contents
00~50	030	Specified Station Call (0)
51	011	Bypass Automated Attendant
52	015	Paging Zone A Call
53	016	Paging Zone B Call
54	017	Paging Zone C Call
55~73	000	Unused
74	022	DISA Access Code
75~99	000	Unused

GENERAL INFORMATION - AUTOMATED ATTENDANT MESSAGE ACCESS CODE (2-DIGIT) ASSIGNMENT

This Memory Block is used to route a call that has come in to the Automated Attendant by entering a 2-digit code.

AUTOMATED ATTENDANT MESSAGE REPEAT SELECTION

System Transfer/A.A. Data No. 1 4 16

	PC Program	ming	Guide
TECH	A : I : F	USER	

OPERATION:

- 1. Go off-line.
- o MIC LK 1 2. Enter: Mode System **ICM** MIC Sub-Mode Transfer/A.A. LK 4 **ICM** 6 Data No. 1 (Dial Pad) A.A. No. Setting Data No. Title Data 1 6: **AAMSG** 1 1 TIME DISPLAY
- Press the corresponding CO/PBX line key to change data option.
 - To change One Time to Three Times, press CO/PBX line key 3.

Five Times	Six Times	Seven Times	Eight Times
One Time LK 5	Two Times LK 6	Three Times	Four Times LK 8
LK 1	LK 2	LK 3	LK 4

- 4. Press the TRF key write the selected data and advance to the next Automated Attendant No.
- 5. After all data has been entered, pressing the TRF key will write the selected data and advance to Memory Block 1-5-02 (SMDR Print Format).
- 6. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

GENERAL INFORMATION - AUTOMATED ATTENDANT MESSAGE REPEAT SELECTION

This Memory Block is used to specify the number of times a message from the Automated Attendant will be repeated for the calling party.

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SMDR PRINT FORMAT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK 1 MIC ICM

 Sub-Mode SMDR/LCR LK 5 MIC ICM

 Data No. 0 2

 (Dial Pad)

Data No.	Title	Setting Data
0 2:	FORMAT	ALL
TIME	DISPLA	Y

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change ALL to MASK, press CO/PBX line key 2.

	<u> </u>		
LK 5	LK 6	LK 7	LK 8
ALL	MASK		
LK 1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-5-13 [Printer Connected (Alarm) Selection].
- 5. Press the SPKR key to go back on-line.
- Additional Programming -

Memory Block No.	Memory Block Name	Required
1-5-13	Printer Connected (Alarm) Selection	V

System	SMDR/LCR	Data No.
1	5	02

	PC Program	nming (Guide
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NOTES:

 This Memory Block is required only when an MIF-F(S)-10 KTU or an MIF-F(L)-10 KTU and printer are installed in the system.

GENERAL INFORMATION - SMDR PRINT FORMAT

This Memory Block specifies whether ALL digits are to be printed. If ALL is specified, all digits are printed. If MASK is specified, the last four digits are masked and "XXXX" is printed.

PRINTER CONNECTED (ALARM) SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode SMDR/LCR LK5 MIC ICM

 Data No. (Dial Pad)

Data No.	Title	Setting Data
<u>1</u> 3:	PRINTER	NO
TIME	DISPLAY	

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change NO to YES, press CO/PBX line key 3.

 CO/PBX line keys		Def	ault
LK 5	LK 6	LK7	LK 8
NO	NON	YES	
LK 1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-5-14 (Printer Line Feed Control Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-5-02	SMDR Print Format	
1-5-14	Printer Line Feed Control Selection	

System	SMDR/LCR	Data No.
1	5	13

PC Programming Guide			
тесн	A: B: A	USER	

NOTES:

- 1. Program for YES when a printer is connected.
- 2. SMDR cannot be used if this Memory Block is programmed for NO or NON.
- 3. Programming this Memory Block is required only when the MIF-F(S)-10 KTU or MIF-F(L)-10 KTU unit is installed.

GENERAL INFORMATION - PRINTER CONNECTED (ALARM) SELECTION

This Memory Block should be programmed for YES when a printer is connected. If the printer is disconnected from the system, an alarm will sound at stations connected to Ports 01 and 02.

PRINTER LINE FEED CONTROL SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode SMDR/LCR LK5 MIC ICM

 Data No. 1 4

 (Dial Pad)

Data No.	Title	Setting Data
1 4:	LINE FEED	YS
TIME	DISPLAY	

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change YES to NO, press CO/PBX line key 2.

l CO/PBX line keys		Def	ault
LK 5	LK 6	LK 7	LK 8
YES	NO		
LK 1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-5-24 (DISA ID Code Digit Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-5-02	SMDR Print Format	
1-5-13	Printer Connected (Alarm) Selection	V

System	SMDR/LCR	Data No.
1	5	14

PC Programming Guide			
тесн	A : B : B	USER	

NOTES:

1. Line Feed Control Assignment is valid only when an MIF-F(S)-10 KTU or MIF-F(L)-10 KTU and printer are installed and being used for SMDR.

Example: Settings to specify the format of communication data output to the printer.

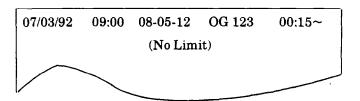
• Line feed control in effect.

07/03/92 09:00 08-05-12 OG 123 00:15:32 102885167537000 LCR FWD234 12345678

No Line feed control.

GENERAL INFORMATION - PRINTER LINE FEED CONTROL SELECTION

This Memory Block is used to specify the format of the data sent to the printer.



DISA ID CODE DIGIT SELECTION

OPERATION:

- 1. Go off-line.
- o MIC LK 1 2. Enter: Mode System ICM o MIC LK 5 Sub-Mode SMDR/LCR ICM Data No. (Dial Pad)

Data No.	Title	Se	tting Data
2 4:	I D CODE	<u> </u>	3 DG
TIME	TIME DISPLAY		

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 3-digit to 4-digit, press CO/PBX line key 3.

LK 1	LK 2	LK 3	LK 4
2-digit	3-digit	4-digit	
LK 5	LK 6	LK 7	LK 8
			_
 CO/PBX line keys		Defa	ault

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-5-25 (SMDR Valid Call Timer Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

Sy	stem	SMDR/LCR	Data No.		
	1	5	24		
	PC Programming Guide				
TECH	B : E : A	USER			

NOTES:

1. If either 2- or 4- digit is specified, Memory Block 1-9-00 (DISA ID Code Assignment) must be changed for DISA ID codes to work.

GENERAL INFORMATION - DISA ID CODE DIGIT SELECTION

This Memory Block is used to select the number of digits for DISA ID codes.

SMDR VALID CALL TIMER ASSIGNMENT

OPERATION:

- 1. Go off-line.
- o MIC LK 1 2. Enter: Mode System ICM o MIC Sub-Mode SMDR/LCR LK 5 ICM 2 5 Data No. (Dial Pad) Title Setting Data Data No. 2 5: SMDR TIM 040 s TIME DISPLAY Default 40 sec.
- 3. Enter data using the dial pad.
 - Minimum time assignment is 000 sec.
 - Time assignment can be set from 000 sec. ~990 sec. in increments of 10.

Example: To change 040 sec. to 090 sec., enter 09 from the dial pad.

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-5-26 (SMDR Incoming/Outgoing Print Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-05	Start Timer Selection	V
1-5-13	Printer Connected (Alarm) Selection	

System SMDR/LCR Data No. 1 5 25

	PC Program	ming	Guide
TECH	A : B : E	USER	

GENERAL INFORMATION - SMDR VALID CALL TIMER ASSIGNMENT

This Memory Block is used to assign the minimum length of time before the SMDR will output a record of an outgoing CO/PBX call.

SMDR INCOMING/OUTGOING PRINT SELECTION

OPERATION:

Go off-line.

TIME

- o MIC LK 1 2. Enter: Mode System ICM o MIC LK 5 Sub-Mode SMDR/LCR ICM 2 6 Data No. (Dial Pad) Title Setting Data Data No. 2 6: PRINT MOD =
- 3. Press the corresponding CO/PBX line key to change data option.

DISPLAY

To change OUT to INC, press CO/PBX line key 3.

CO/P	BX line keys	Def	fault
LK 5	LK 6	LK 7	LK 8
ALL	OUT	INC	
LK 1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-6-01 (Attendant Add-On Console to Telephone Port Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
1-5-13	Printer Connected (Alarm) Selection	\checkmark

System	SMDR/LCR	Data No.
1	5	26

	PC Program	ming G	uide
TECH	A : B : D	USER	

GENERAL INFORMATION - SMDR INCOMING/OUTGOING PRINT SELECTION

This Memory Block is used to specify the type of call records to be output from the SMDR: OUT = print outgoing call records only, INC = print incoming call records only, ALL = print incoming and outgoing call records.

ATTENDANT ADD-ON CONSOLE TO TELEPHONE PORT ASSIGNMENT

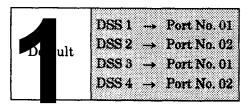
OPERATION:

- 1. Go off-line.
- MIC 2. Enter: Mode System LK 1 o MIC Sub-Mode DSS LK 6 ICM Data No. 0 1 (Dial Pad) DSS No. Data No. Title **Setting Data** DSS 1: 01~96 TIME DISPLAY
- 3. Enter data using the dial pad.

Example: Enter Tel port No. 01 on DSS 1.



Dial pad $0 \sim 9$: To enter data.



- 4. Press the TRF key to write the data.
 - DSS 2 is displayed.
- 5. Change data using the dial pad.
- 6. After all data has been entered, pressing the TRF key will write the selected data and advance to Memory Block 1-6-03 (DSS Call Voice/Tone Signal Selection).
- 7. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
7-2	Telephone Type Assignment	V

Syst	em	DSS	Data No.
1		6	01
	PC Progr	amming G	uide
TECH D	. D . E . D	TICER	

NOTES:

- 1. The telephone to which an Attendant Add-On Console is connected must be specified by port number.
- 2. A maximum of four Attendant Add-On Consoles can be connected to a system.
- 3. There can be a maximum of four Attendant Add-On Consoles connected to one telephone.

GENERAL INFORMATION - ATTENDANT ADD-ON CONSOLE TO TELEPHONE PORT ASSIGNMENT

This Memory Block is used to assign an Attendant Add-On Console to a telephone port number.

DSS CALL VOICE/TONE SIGNAL SELECTION

OPERATION:

1. Go off-line.

TIME

- MIC 2. Enter: Mode LK 1 System **ICM** o MIC Sub-Mode DSS LK6 ICM Data No. 3 (Dial Pad) Title Data No. Setting Data 0 3: VOICE CALL
- 3. Press the corresponding CO/PBX line key to change data option.

DISPLAY

• To change VOICE to TONE, press CO/PBX line key 1.

LK 1	LK 2	LK 3	LK 4
TONE	VOICE		
LK 5	LK 6	LK 7	LK 8
 -	r		
CO/PB	X line keys	Def	ault

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-6-05 (Attendant Add-On Console Key Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

System	DSS	Data No.
1	6	03

PC Programming Guide			
тесн	B: B: E: C	USER	

NOTES:

- Voice/Tone Signaling can also be switched by dialing the digit 1 from a station.
- 2. If Tone Signaling is programmed in this Memory Block, the called party cannot answer handsfree unless the DSS station switches it to Voice by dialing the digit 1.

GENERAL INFORMATION - DSS CALL VOICE/TONE SIGNAL SELECTION

This Memory Block is used to specify which is to be used first, Voice or Tone signaling, when calling an extension from an Attendant Add-On Console.

ATTENDANT ADD-ON CONSOLE KEY SELECTION

OPERATION:

- 1. Go off-line.
- MIC 2. Enter: Mode LK 1 System ICM o MIC Sub-Mode DSS LK 6 ICM 5 Data No. (Dial Pad) Button DSS No. Setting No. 01~60 Page Data Data No. No. 0 5: 01 = TEL 01

DISPLAY

To move cursor.

Dial pad

To enter data.

HOLD key

TIME

To set data

when assigning

TELNo. 01~96.

RECALL

key

Next page.

FNC key

Previous page.

3. Press the corresponding CO/PBX line key and dial pad keys to change data option.

Example: To change TEL 01 assigned to key 1 on DSS 1 to External Speaker A:

- Press CO/PBX line key 6.
- New data is displayed.
- Press the TRF key.
- No. 02~60 is displayed successively.
- After entering data for key 60 on DSS 4.
- 4. Press the TRF key to write the selected data and advance to Memory Block 1-7-02 (External Speaker Connection Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
1-6-01	Attendant Add-On Console to Telephone Port Assignment	V
7-2	Telephone Type Assignment	V

Sy	stem	DSS	Data No.	
1		6	05	
	PC Pro	gramming G	uide	
TECH	B : B : E : A	USER		

Page 1

LK 1	LK 2	LK 3	LK 4
Vacant	TEL No.	Internal	Internal
	01~96	Paging Zone A	Paging Zone B
LK 5	LK 6	LK 7	LK 8
Internal	All Internal	External Zone	External Zone
Paging Zone C	Zone Paging	A	B

SPKR = Speaker ICM TEL = Intercom Telephone

Page 2

LK 1	LK 2	LK 3	LK 4
External Zone C	All External Zone Paging	Message Waiting	Night Mode Change
LK 5	LK 6	LK 7	LK 8
Transfer	Attendant Station Outgoing Lockout	†Call Arrival Key	Trunk (01~64)

CO/PBX line keys

†Series 250 or higher.

Continued on next page.

ATTENDANT ADD-ON CONSOLE KEY SELECTION

(continued)

Functions can be assigned to keys 01~60 on Attendant Add-On Consoles 1~4.

Functions to be programmed

- 1. Station No. 01~96
- 2. Internal Paging Zone A
- 3. Internal Paging Zone B
- 4. Internal Paging Zone C
- 5. Internal Paging Zone ALL
- 6. External Paging Zone A
- 7. External Paging Zone B
- 8. External Paging Zone C
- 9. External Zone Paging ALL
- 10. Message Waiting
- 11. Night Mode Switching
- 12. Trunk (01~64) [Series 200 or higher]
- 13. Transfer
- 14. Attendant Station Outgoing Lockout
- 15. Call Arrival Key (01~88) [Series 250 or higher]

System	DSS	Data No.
1	6	05

	Default			
DSS No.	Key No.	Setting Data		
	01	TEL No. 01		
	02	TEL No. 02		
	ı	l		
	48	TEL No. 48		
	49	Night Mode Switching		
	50	Internal Paging Zone A (INT A)		
1~4	51	Internal Paging Zone B (INT B)		
	52	Internal Paging Zone C (INT C)		
	53	All Internal Zone Paging (INT ALL)		
	54	Vacant		
	55	Message Waiting (MSG)		
	56	External Paging Zone A (EXT A)		
	57	External Paging Zone B (EXT B)		
	58	External Paging Zone C (EXT C)		
	59	External Zone Paging All (EXT ALL)		
	60	Transfer (TRF)		

DSS Key Number

12345678

00000000	01→08 Key Number
00000000	09→16 01~48: Two-color LED (green and red)
00000000	49~60: red LED only 17→24
00000000	25→32
00000000	33→40
0000000	41→48
000000	49-→54
000000	55→60

NOTES:

- When TEL is assigned to a key with only a red LED, the message function cannot be confirmed.
- 2. When a function (Message, Paging, etc.) that does not require a green LED is assigned to a two-color LED key, the green LED will not function.
- 3. Telephone number setting data for telephone sets is determined by number of installed ESI-F(8)-21 KTUs.
- 4. Message Waiting and Attendant Station Outgoing Lockout cannot be assigned on the same console.
- DSS/CO lines must be programmed on DSS keys 1~48 only.
- 6. Call Arrival Keys assigned on the console are used to make DSS calls and for BLF indications. Calls cannot be received at these keys. (Assignment of Call Arrival Keys requires version 2.50 software or higher.)

GENERAL INFORMATION - ATTENDANT ADD-ON CONSOLE KEY SELECTION

This Memory Block is used to assign functions to the Attendant Add-On Console(s) keys.

EXTERNAL SPEAKER CONNECTION SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC

 Sub-Mode ESP LK7 MIC

 LK1 ICM

 Data No. (Dial Pad)

Data No.	Title
<u>0</u> 2:	ESPCONN
TIME	DISPLAY

- 3. Press the CO/PBX line key corresponding to each ESP Zone.
 - The LED indication changes to indicate the data each time the CO/PBX line key is pressed.

LK 1	1	.K.2	LKS	LK 4
ESPA	15	SPB	ESP C	
LK 5	I	K 6	LK 7	LK 8
		1		L
cc)/PBX line	keys	Def	ault
COLED	O/PBX line	keys	23 E	ault

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-7-03 (External Paging Alert Tone Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

İ	System	ESP	Data No.
	1	7	02

PC Programming Guide			
TECH	B : F : B	USER	

NOTES:

 A maximum of three external speaker zones can be connected to the system.

GENERAL INFORMATION - EXTERNAL SPEAKER CONNECTION SELECTION

This Memory Block is used to specify whether external speakers are connected to the system.

EXTERNAL PAGING ALERT TONE SELECTION

OPERATION:

- 1. Go off-line.
- o MIC 2. Enter: Mode LK 1 System ICM V • MIC Sub-Mode ESP LK 7 ICM 0 3 Data No. (Dial Pad) Title Setting Data Data No. **0** 3: **ESP TONE** YS TIME DISPLAY
- 3. Press the corresponding CO/PBX line key to to change the data option.
 - To change YES to NO, press CO/PBX line key 2.

CO/PBX line keys		Def	ault
LK 5	LK 6	LK 7	LK 8
YES	NO		
LK 1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-7-06 (External Paging Timeout Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
1-7-02	External Speaker Connection Selection	V

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GENERAL INFORMATION - EXTERNAL PAGING ALERT TONE SELECTION

This Memory Block is used to specify whether a Paging Alert Tone is sent on External Zone Paging (all speakers/individual speakers).

EXTERNAL PAGING TIMEOUT SELECTION

OPERATION:

1. Go off-line.

TIME

- o MIC 2. Enter: Mode System LK 1 • ICM o MIC Sub-Mode ESP LK 7 ICM 6 0 Data No. (Dial Pad) Title Data No. Setting Data 0 6: **ESP TIMER** 5.0
- 3. Press the corresponding CO/PBX line key to to change the data option.

DISPLAY

• To change 5.0 minutes to 3.0 minutes, press CO/PBX line key 5.

CO/P	I BX line keys	Det	fault
3.0 min. 5.0 min.		8.0 min.	No Limit
LK 5	LK 6	LK 7	LK 8
0.5 min.	1.0 min.	1.5 min.	2.0 min.
LK 1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-7-07 (External Ring Relay Cycle Selection).
- 5. Press the SPKR key to go back on-line.

■ Additional Programming

Memory Block No.	Memory Block Name	Required
1-2-00	Internal Paging Timeout Selection	
1-7-02	External Speaker Connection Selection	V

System ESP Data No. 1 7 06 PC Programming Guide TECH B: F: H USER

GENERAL INFORMATION - EXTERNAL PAGING TIMEOUT SELECTION

This Memory Block is used to specify the time allowed for External Page before timeout and release of the paging circuit.

EXTERNAL RING RELAY CYCLE SELECTION

OPERATION:

- 1. Go off-line.
- o MIC 2. Enter: Mode LK 1 System ICM • MIC Sub-Mode ESP LK 7 ICM 7 Data No. (Dial Pad) Ext. Ring Relay Data No. Title Setting Data 0 7: **EXT RING** = PAT3 TIME DISPLAY
- 3. Press the corresponding CO/PBX line key to to change the data option.
 - To change Pattern 3 to Pattern 2, press CO/PBX line key 2.

LK 1	LK 2	LK.3	LK 4
PATTERN 1	PATTERN 2	PATTERN 8	PATTERN 4
LK 5	LK 6	LK 7	LK 8
Continuous			
	·		
l CO/PBX line keys		Def	ault

- 4. Press the TRF key to write the selected data and advance to the next External Ring Cycle.
- 5. After all data has been entered, pressing the TRF key will write the selected data and advance to Memory Block 1-8-01 (SLT or Automated Attendant/DISA to PBR Selection).
- 6. Press the SPKR key to go back on-line.
- Additional Programming

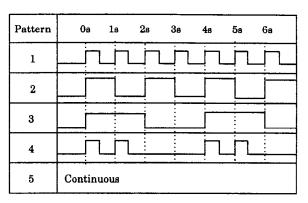
Memory Block No.	Memory Block Name	Required
1-2-00	Internal Paging Timeout Selection	
1-7-02	External Speaker Connection Selection	
2-08	ECR Relay to Tenant Assignment	√

Sy	stem	ESP	Da	ta No.	
	1			07	
	PC Programming Guide				
тесн	B: F: C, D,	E, F USI	ER		

NOTES:

 An External Tone Relay or the Night Chime Relay must be assigned in Memory Block 2-08 (ECR Relay to Tenant Assignment) before the tone is generated from JK1.

s = seconds



GENERAL INFORMATION - EXTERNAL RING RELAY CYCLE SELECTION

This Memory Block is used to assign relay circuits one of five distinctive ringing control/intervals.

SLT OR AUTOMATED ATTENDANT/DISA TO PBR SELECTION

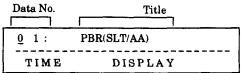
System PBR/Misc. Data No. 1 8 01 PC Programming Guide TECH B:B:D:J USER

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC

 Sub-Mode PBR/Misc. LK8 MIC

 TOTAL OF THE PROPERTY OF THE PR



- 3. Press the corresponding CO/PBX line key to change the data option.
 - The LED indication changes to indicate the data each time the CO/PBX line key is pressed.

LK 1		LK 2	LK 3	LK 4
PBR 1		PBR 2		
LK 5		LK 6	LK 7	LK 8
				İ
	CO/P	BX line keys	Def	ault
OLED	CO/P	BX line keys OFF	Def	ault

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-8-02 (PBR Receive Level Assignment for Automated Attendant/DISA).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

NOTES:

- 1. Specify if PBR 1 (Channel 1 and 2 in the CPU KTU) and 2 (Channel 3 and 4 in the CPU KTU) are to be used for Single Line Telephones.
- 2. If both line key 1 and line key 2 are assigned to the Automated Attendant/DISA feature, the PBR-F(4)-11 KTU must be installed in the system if Single Line Telephones will be used.

GENERAL INFORMATION - SLT OR AUTOMATED ATTENDANT/DISA TO PBR SELECTION

This Memory Block is used to specify whether the PBR circuits in the CPU KTU are to be used for Single Line Telephones or the Automated Attendant/DISA.

PBR RECEIVE LEVEL ASSIGNMENT FOR AUTOMATED ATTENDANT/DISA

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode PBR/Misc. LK8 MIC ICM

 Data No. 0 2

 (Dial Pad)

Data No.	Title	PBR No.	Setting Data
0 2:	PBR	1 :	= 05
TIME	DI	SPLAY	

Data: PBR 1: 1st and 2nd channel in the CPU KTU PBR 2: 3rd and 4th channel in the CPU KTU

3. Use the dial pad to change data option.

Setting Data	Receiving Level
00	$-32.4\mathrm{dBm}$
01	$-33.0\mathrm{dBm}$
02	$-33.8\mathrm{dBm}$
03	$-34.6\mathrm{dBm}$
04	$-35.3\mathrm{dBm}$
05	-36.1 dBm ←
06	-37.0 dBm
07	$-38.0\mathrm{dBm}$
08	$-39.1\mathrm{dBm}$
09	$-40.2\mathrm{dBm}$
10	$-41.5\mathrm{dBm}$
11	$-42.5\mathrm{dBm}$
12	$-43.8\mathrm{dBm}$
13	-45.1 dBm
14	$-46.2\mathrm{dBm}$
15	-47.5 dBm

Sy	stem	PBR/Misc.	Data No.	
	1	8	02	
	PC Programming Guide			
TECH	A : T : B	USER		

- 4. Press the **TRF** key to write the selected data and advance to the next PBR.
- 5. After all data has been entered, pressing the TRF key will write the selected data and advance to Memory Block 1-8-04 [Time Display (12h/24h) Selection].
- 6. Press the SPKR key to go back on-line.

NOTES:

- 1. The DTMF signal level from the calling party when the Automated Attendant answers is reduced for Public Switching Telephone Network (PSTN). This Memory Block specifies the minimum detectable receiving level.
- 2. Setting Data 15 is the most sensitive setting.

Default (PBR 1 and 2)

Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - PBR RECEIVE LEVEL ASSIGNMENT FOR AUTOMATED ATTENDANT/DISA

This Memory Block is used to specify the receiving level from a PBR at the Automated Attendant/DISA.

TIME DISPLAY (12h/24h) SELECTION

OPERATION:

- 1. Go off-line.
- MIC 2. Enter: Mode System ICM • MIC Sub-Mode PBR/Misc. LK8 • ICM Data No. 0 (Dial Pad) Setting Data No. Title Data 04: 12 HOUR DISP TIME DISPLAY
- 3. Press the corresponding CO/PBX line key to to change the data option.
 - To change 12 HR to 24 HR, press CO/PBX line key 2.

CO/PI	BX line keys	Def	ault
12 HR LK 5	24 HR LK 6	LK 7	LK 8
LK 1	LK 2	LK 3	LK 4

- 4. Pressing the **TRF** key will write the selected data and advance to Memory Block 1-8-07 [Class of Service (Attendant) Feature Selection 1].
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - TIME DISPLAY (12h/24h) SELECTION

This Memory Block is used to specify either a 12-hour (12:00AM - 11:59 PM) or 24-hour (00:00 - 23:59) time display.

System	PBR/Misc.	Data No.	
1	8	04	

PC Programming Guide				
TECH	B:I:J	USER		

CLASS OF SERVICE (ATTENDANT) FEATURE SELECTION 1

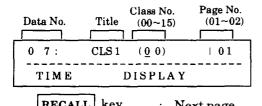
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode PBR/Misc. LK8 MIC ICM

 Data No. 0 7

 (Dial Pad)



RECALL	Key	•	Mexi page.
FNC	key	:	Previous page

COLED	■ OFF	□ on
Data	Deny	Allow

- 3. Press the corresponding CO/PBX line key to enter the data.
 - The LED indication changes to indicate the data each time a CO/PBX line key is pressed.
 - To assign Night Mode per tenant as NO, press CO/PBX line key 2 to turn CO/PBX LED off.
- 4. Press the TRF key, data of class 01~15 is displayed successively.
- After entering data for Class 15, press TRF key to write the data and advance to Memory Block 1-8-08 [Class of Service (Station) Feature Selection 2].
- 6. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
4-17	Station to Class of Service Feature Assignment	

Sy	stem	PBR/Misc.	Data No.		
1		8	07		
	PC Programming Guide				
тесн	B : B : A :	C USER			

NOTES:

- 1. The System-wide reset selsction provides the ability to reset on a system-wide basis the following: Timed Alarm, Call Forward-All Calls, Do Not Disturb, Customized Message, and Callback Request.
- 2. The Password (Outgoing Restriction) selection provides the ability to cancel the Staion Lockout and default password for another station.
- Sixteen classes (00~15) of feature restriction
 patterns allow a station user to activate
 particular features while restricting the user
 from other features.
- 4. Page 3 in this Memory Block is not used.
- 5. At default, stations 100 and 101 are in class 00 and all other stations are in class 15.
- 6. Stations are assigned to a Class of Service in Memory Block 4-17 (Station to Class of Service Feature Assignment).

Page 1

LK 1	LK 2	LK 3	LK 4
Night Mode Switching	Night Mode Switching Per Tenant	System Speed Dial Programming	Not Used
LK 5	LK 6	LK 7	LK 8
Not Used	Not Used	Automatic Trunk-To- Trunk Transfer Set/Reset	Automated Attendant / DISA Set/Reset Mode

Page 2

LK 1	LK 2	LK 3	LK 4
Timed Alarm for Single Line Telephone Set/Reset	Call Forward Set/Cancel from Destination Station	System-Wide Reset (See Note 1 for functions.)	Password (Outgoing Restriction)
LK 5	LK 6	LK 7	LK 8
DISA Password Cancel	DISA Password Confirmation	Weekend Mode Per Tenant	Not Used

CO/PBX line keys

Continued on next page.

CLASS OF SERVICE (ATTENDANT) FEATURE SELECTION 1 (continued)

System	PBR/Misc.	Data No.
1	8	07

Classes $00\sim15$ programmed in this Memory Block are programmed as feature restriction classes. In Telephone Mode, Data No. 17, specify any of the classes for each telephone to assign the features that the user can or cannot activate.

Page 1

Corresponding CO/PBX Line Key	Function Name	Default Class 00	Default Class 01~15
LK 1	Night Mode Switching (System-Wide)	Allow	Deny
LK 2	Night Mode Switching (Tenant Basis)	Allow	Deny
LK 3	System Speed Dial Programming	Allow	Deny
LK 4	Not Used	N/A	N/A
LK 5	Not Used	N/A	N/A
LK 6	Not Used	N/A	N/A
LK 7	Automatic Trunk-to-Trunk Transfer (Set/Reset) and Programming of Outgoing Numbers	Allow	Deny
LK 8	Automated Attendant/DISA Mode (Set/Reset)	Allow	Deny

Page 2

I age 2			
Corresponding CO/PBX Line Key	Function Name	Default Class 00	Default Class 01~15
LK 1	Timed Alarm (Set/Reset) for Single Line Telephones	Allow	Deny
LK 2	 Call Forward-All Calls (Set/Reset) from Destination Station Call Forward All Call Set Call Forward Busy/No Answer Set 	Allow	Deny
LK 3	System-Wide Reset of Timed Alarm, Call Forward - All Calls, Do Not Disturb, Customized Message, and Callback Request	Allow	Deny
LK 4	Cancel Station Lockout and Default Password for another Station	Allow	Deny
LK 5	DISA Password Cancel	Allow	Deny
LK 6	DISA Password Confirmation	Allow	Deny
LK 7	Automated Attendant Weekend Mode (Set/Reset) Tenant Basis	Allow	Deny
LK 8	Not Used	N/A	N/A

GENERAL INFORMATION - CLASS OF SERVICE (ATTENDANT) FEATURE SELECTION 1

This Memory Block is used to allow or deny specific attendant-type features for each Class of Service. When individual stations are assigned to a Class of Service, the station user can access only those attendant features specified as allow for that Class of Service.

CLASS OF SERVICE (STATION) FEATURE SELECTION 2

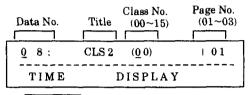
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode PBR/Misc. LK8 MIC ICM

 Data No. 0 8

 (Dial Pad)



RECALL

: Next page.

key

: Previous page.

CO/PBX Line LED	off	□ ON
Data	Deny	Allow

key

- 3. Press the corresponding CO/PBX line key to to change the data option.
 - The LED indication changes to indicate the data each time the CO/PBX line key is pressed.
 - To assign CLASS 00, Tone Override, press CO/PBX line key 8 to turn CO/PBX LED off or on.
- 4. Press the **TRF** key, data for class 01~15 is displayed successively.
- 5. After entering data for Class 15, pressing the **TRF** key will write the selected data and advance to Memory Block 1-8-09 (Music On Hold Pattern Selection).
- 6. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
	Station to Class of Service Feature Assignment	

System	PBR/Misc.	Data No.
1	8	08

PC Programming Guide			
тесн	B : B : A : D	USER	

NOTES:

- Sixteen classes (00~15) of feature restriction patterns allow a station user to activate particular features while restricting the user from other features.
- 2. At default, all stations are in Class 00.
- 3. Stations are assigned to a Class of Service in Memory Block 4-17 (Station to Class of Service Feature Assignment).

Page 01

LK 1	LK 2	LK 3	LK 4
Call Forward All Call	Trunk Queuing	Automatic Callback	Barge-In (Calling Party)
LK 5	LK 6	LK 7	LK 8
Rejection of Barge-In (Called Party)	Timed Alarm For SLT	Not Used	Tone Override

Page 02

LK 1	LK 2	LK 3	LK 4
Absence Message	Callback Message	Station Outgoing Lockout Set	Not Used
LK 5	LK 6	LK 7	LK 8
Call Forward Busy/No Ans Set	VRS Voice Message	Not Used	DISA Password Set

Page 03

LK 1	LK 2	LK 3	LK 4
Not Used	User Ringing Line Preference Set/Reset	Tone Override (Called Party)	LCR Bypass
LK 5	6	LK 7	LK 8
Station Trunk- to-Trunk Transfer	‡Account Code Entry	Not Used	†Call Alert Notification

Page 04

LK 1	LK 2	LK 3	LK 4
¥LCR Recall	‡DSS Key Transfer Operation	Not Used	Not Used
LK 5	6	LK 7	LK 8
Not Used	Not Used	Not Used	Not Used

CO/PBX line keys

‡Series 300 or higher. †V2.16 and V2.60 or higher.

¥V2.77C or higher.

Continued on next page.

CLASS OF SERVICE (STATION) FEATURE SELECTION 2 (continued)

System	PBR/Misc.	Data No.
1	8	08

Page 01

Corresponding CO/PBX Line Key	Function Name	Default Class 00	Default Class 01~15
LK 1	Set Call Forward - All Calls , Do Not Disturb (DND)	Allow	Deny
LK 2	Trunk Queuing	Allow	Deny
LK 3	Automatic Callback	Allow	Deny
LK 4	Barge-In Originate on a CO/PBX Line	Deny	Deny
LK 5	Barge-In Receive	Allow	Deny
LK 6	Timed Alarm (Set/Cancel)	Allow	Deny
LK 7	Not Used	N/A	N/A
LK 8	Tone Override Originate	Allow	Deny

Page 02

Corresponding CO/PBX Line Key	Function Name	Default Class 00	Default Class 01~15
LK 1	Absence Message	Allow	Deny
LK 2	Callback Request Originate	Allow	Deny
LK 3	Station Outgoing Lockout (Set/Cancel)	Allow	Deny
LK 4	Not Used	N/A	N/A
LK 5	Call Forward Busy, No Answer, Busy/No Answer Set	Allow	Deny
LK 6	VRS Voice Message Record/Verify/Erase	Allow	Deny
LK 7	Not Used	N/A	N/A
LK 8	DISA Password Set	Allow	Deny

Page 03

Corresponding CO/PBX Line Key	Function Name	Default Class 00	Default Class 01~15
LK 1	Not Used	N/A	N/A
LK 2	Uger Ringing Line Preference Set/Reset	Allow	Deny
LK 3	Tone Override/Camp-On Receive Tone	Allow	Deny
LK 4	LCR Bypass (Trunk Groups 02 ~ 32)	Deny	Deny
LK 5	Station Trunk-to-Trunk Transfer	Deny	Deny
LK 6	Account Code Entry (Series 300 or higher)	Deny	Deny
LK 7	Not Used	N/A	N/A
LK 8	Call Alert Notification (V2.16 and 2.60 or higher)	Allow	Deny

Continued on next page.

CLASS OF SERVICE (STATION) FEATURE SELECTION 2 (continued)

System	PBR/Misc.	Data No.
1	8	08

Page 4

Corresponding CO/PBX Line Key	Function Name	Default Class 00	Default Class 01~15
LK 1	LCR Recall (V2.77C or higher)	Allow	Deny
LK 2	DSS Key Transfer Operation (Series 300 or higher) (Refer to Note below.)	Deny	Deny
LK 3	Not Used	N/A	N/A
LK 4	Not Used	N/A	N/A
LK 5	Not Used	N/A	N/A
LK 6	Not Used	N/A	N/A
LK 7	Not Used	N/A	N/A
LK 8	Not Used	N/A	N/A

Note: DSS Key Transfer Operation applies to Feature Access/One-Touch keys and Attendant Add-On keys programmed for DSS. The following applies while on a call, after pressing a DSS key and then going on-hook:

DENY = Call is not transferred ALLOW = Call is transferred

GENERAL INFORMATION - CLASS OF SERVICE (STATION) FEATURE SELECTION 2

This Memory Block is used to allow or deny specific station features for each Class of Service. When individual stations are assigned to a Class of Service, the station user can access only those features specified as allow for that Class of Service.

MUSIC ON HOLD PATTERN SELECTION

OPERATION:

1. Go off-line.

TIME

o MIC 2. Enter: Mode System LK 1 ICM • MIC Sub-Mode PBR/Misc. LK8 ICM Data No. (Dial Pad) **Setting Data** Data No. Title <u>0</u> 9: MOH Α

System	PBR/Misc.	Data No.
1	8	09
PC P	rogramming G	uide
TECH B:C:A:	D USER	

NOTES:

- 1. Music On Hold can be provided to CO/PBX and intercom calls that are put on hold.
- 2. One of four melodies (A~D) for Music On Hold can be selected in this Memory Block.

A = "Let It Be"

B = "Melody Fair"

C = Chime

D = Chime

3. Press the corresponding CO/PBX line key to change data option.

DISPLAY

• To change Pattern A to Pattern B, press CO/PBX line key 2.

COMP	X line keys	Def	 ault
LK 5	LK 6	LK 7	LK 8
A	В	С	D
LK1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-8-10 (PBR Interdigit Release Timer Selection).
- 5. Press the SPKR key to go back on-line.

GENERAL INFORMATION - MUSIC ON HOLD PATTERN SELECTION

This Memory Block is used to specify the Music On Hold Pattern Selection.

PBR INTERDIGIT RELEASE TIMER SELECTION

OPERATION:

- 1. Go off-line.
- o MIC 2. Enter: Mode System LK 1 ICM o MIC Sub-Mode PBR/Misc. LK8 **ICM** Data No. 0 (Dial Pad) Setting Data No. Title Data PBR RELEAS 7 s 0: TIME DISPLAY
- Press the corresponding CO/PBX line key to change data option.
 - To change 7.0 sec. to 5.0 sec., press CO/PBX line key 3.

LK 1	LK 2	LK 3	LK 4
3.0 sec.	4.0 sec.	5.0 sec.	6.0 sec.
LK 5	LK 6	LK 7	LK 8
7.0 sec.	8.0 sec.	9.0 sec.	10.0 sec.

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-8-11 (System Refresh Timer Assignment).
- 5. Press the SPKR key to go back on-line.

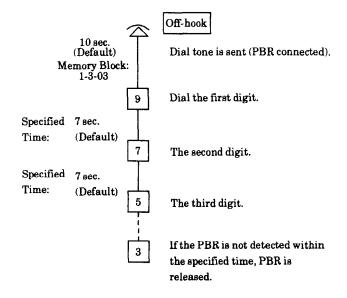
Additional Programming

Memory Block No.	Memory Block Name Memory Block Name	
1-3-03	First Digit PBR Release Timer Selection	
1-8-01	SLT or Automated Attendant/DISA to PBR Selection	

Sy	stem	PBR/Misc.	Data No.
	1	8	10
	PC Pr	ogramming G	uide
тесн	B:1:G	USER	

NOTES:

1. A DTMF Single Line Telephone connected to the Level II and/or Level II Advanced system must be supported by PBR that receives DTMF signals.



GENERAL INFORMATION - PBR INTERDIGIT RELEASE TIMER SELECTION

This Memory Block is used to specify the interdigit release time for the PBR.

SYSTEM REFRESH TIMER ASSIGNMENT

OPERATION:

- 1. Go off-line.
- o MIC 2. Enter: Mode System LK 1 ICM o MIC Sub-Mode PBR/Misc. LK8 ICM Data No. 1 1 (Dial Pad) Setting Data No. Title Data <u>1</u> 1: REFRESH 4 H TIME DISPLAY
- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 4 hr. to 8 hr., press CO/PBX line key 3.

LK 1	LK2	LK 3	LK 4
No Refresh	4 hr.	8 hr.	12 hr.
LK 5	LK 6	LK 7	LK 8
24 hr.			

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-8-12 (VRS Message Recording Time Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

System	PBR/Misc.	Data No.
1	8	11

PC Programming Guide			
TECH	B:I:M	USER	

NOTES:

1. The system automatically refreshes itself during idle periods based on the time specified in this Memory Block.

GENERAL INFORMATION - SYSTEM REFRESH TIMER ASSIGNMENT

This Memory Block is used to assign the System Refresh Time. (The system will refresh itself during idle periods.)

VRS MESSAGE RECORDING TIME SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode PBR/Misc. LK8 MIC ICM

 Data No. 1 2

 (Dial Pad)

 VRS

 Data No. Title Channel Setting Data

Data No.	Title	VRS Channel Setting Data	
	Г		1
<u>1</u> 2:	VRS	$1 15s \times 16$	
TIME		DISPLAY	•

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 16 messages to 8 messages, press CO/PBX line key 2.

LK 1	LK 2	LK 3	LK 4
R.T. (15.0 sec.) *16	R.T. (30.0 sec.) * 8	R.T. (60.0 sec.) * 4	R.T. (120.0 sec.) * 2
LK 5	LK 6	LK 7	LK 8

CO/PBX line keys

R.T = Recording Time * = No. of messages

4. Use dial pad to enter VRS Channel 1~8.

Dial Pad $0 \sim 8$: To enter data.

- 5. Press the TRF key to write the selected data and advance to the next VRS Channel.
- 6. After all data has been entered, pressing the TRF key will write the selected data and advance to Memory Block 1-8-13 (VRS Message Function Assignment).
- 7. Press the SPKR key to go back on-line.

Sy	stem	PBI	R/Misc	. Data No.
	1	8		12
PC Programming Guide			Guide	
тесн	A: H: M		USER	

NOTES:

- VRS (Voice Recording Services) Channel 1 has a maximum of 240 seconds for message recording.
 - The number of messages that can be used in VRS depends on the length of the particular messages (240 sec. ÷ Length of messages = No. of messages).

Example:

Message length 15 sec.: 16 messages
" " 30 sec.: 8 messages
" " 60 sec.: 4 messages
" " 120 sec.: 2 messages

All VRS channels
Default Recording Time = (15.0 sec.)
16 messages

Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - VRS MESSAGE RECORDING TIME SELECTION

This Memory Block is used to specify the length and number of messages. (The number of messages depends on the length of the messages.)

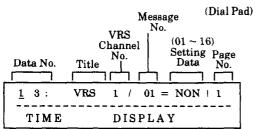
VRS MESSAGE FUNCTION ASSIGNMENT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 ICM

 Sub-Mode PBR/Misc. LK8 MIC

 Data No.



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change No Message to Voice Prompt 1, press CO/PBX line key 2.

Page 1

LKi	LK 2	LK 3	LK 4
No Message	Voice Prompt 1	Voice Prompt 2	1st Delay Announce.
LK 5	LK 6	LK7	LK8
2nd Delay Announce.	Not Used	Not Used	Not Used

CO/PBX line keys

Default	All Channels of Block: No Message
---------	-----------------------------------

4. Use the dial pad to enter VRS Channel 1~8 and Message No. 1~16. (Maximum of 16 messages per channel when Message record time is 15.0 sec.)

Dial pad 0 ~ 9 : To enter data.

- Pressing the TRF key will write the selected data and advance to Memory Block 1-8-15 (Tone Assignment).
- 6. Press the SPKR key to go back on-line.

Sy	stem	PBR/Misc.	Data No.
	1	8	13
	PC Pr	ogramming G	uide
TECH	A:H:G	USER	

Page 2

LK 1	LK 2	LK 3	LK 4
Day Mode Auto	Day Mode Auto	Day Mode Auto	Day Mode Auto
Attendant 1	Attendant 2	Attendant 3	Attendant 4
LK 5	LK 6	LK 7	LK 8
Day Mode Auto	Day Mode Auto	Day Mode Auto	Day Mode Auto
Attendant 5	Attendant 6	Attendant 7	Attendant 8

Page 3

LK 1	LK 2	LK 3	LK 4
Night Mode	Night Mode	Night Mode	Night Mode
Auto	Auto	Auto	Auto
Attendant 1	Attendant 2	Attendant 3	Attendant 4
LK 5	LK 6	LK 7	LK 8
Night Mode	Night Mode	Night Mode	Night Mode
Auto	Auto	Auto	Auto
Attendant 5	Attendant 6	Attendant 7	Attendant 8

Page 4

LK 1	LK 2	LK 3	LK 4
Weekend Mode	Weekend Mode	Weekend Mode	Weekend Mode
Auto	Auto	Auto	Auto
Attendant 1	Attendant 2	Attendant 3	Attendant 4
LK 5	LK 6	LK 7	LK 8
Weekend Mode	Weekend Mode	Weekend Mode	Weekend Mode
Auto	Auto	Auto	Auto
Attendant 5	Attendant 6	Attendant 7	Attendant 8

■ Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - VRS MESSAGE FUNCTION ASSIGNMENT

This Memory Block is used to assign the recorded voice prompt/DID Automated Attendant Message type to the VRS Message Block Division. Refer to Memory Block 1-8-12 (VRS Message Recording Time Selection).

TONE ASSIGNMENT

OPERATION:

- 1. Go off-line.
- MIC 2. Enter: Mode System LK 1 **ICM** o MIC Sub-Mode PBR/Misc. LK8 ICM Data No. 5 (Dial Pad) Item Setting Page Data No. Tone No. Data 1 5: (00)DΤ Α TIME DISPLAY

3. Press the corresponding CO/PBX line key to change data option.

Page 1	

LK1	LK 2	LK 3	LK 4
Tone A	Tone B	Tone C	Tone D
LK 5	LK 6	LK 7	LK 8
Tone E	Tone F	Tone G	Tone H

Page 2

LK 1	LK 2	LK 3	LK 4
Tone I	Tone J	Tone K	Tone L
LK 5	LK 6	LK 7	LK 8
Tone M			

CO/PBX line keys

- 4. Use the Dial pad to enter Table No. $00\sim12$.
- 5. Setting Data:

Tone A~M

- 6. Press the TRF key to advance to the next Table.
- After all data has been entered, pressing the TRF key will write the selected data and advance to Memory Block 1-8-16 (Voice Prompt to Tone Assignment).
- 8. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

System	PBR/Misc.	Data No.
1	8	15

PC Programming Guide			
тесн	B: D: N	USER	

NOTES:

- 1. Tone Burst 2 is used for Transfer Inform Tone, Tone Override (calling party), External Speaker Call Notice Tone, etc.
- 2. The 2nd Dial Tone is used for DISA Dial Tone.

Default Table

Item No.	Tone L	CD Indication	Default
00	ICM Dial Tone	(DT)	A
01	2nd Dial Tone	(2DT)	В
02	Special Dial Tone	e (SPDT)	C
03	Busy Tone	(BT)	D
04	Reorder Tone	(ROT)	E
05	Howler Tone	(HWT)	F
06	Service Set Tone	(SST)	G
07	ICM Ringback To	one (RBT1)	I ·
08	Tie/DID Ringbac		Н
		(RBT2)	
09	Call Waiting Ton	ie (CWT)	J
10	LCR Dial Tone	(SDT)	K
11	Tone Burst 1	(TB1)	G
12	Tone Burst 2	(TB2)	K

Continued on next page.

TONE ASSIGNMENT (continued)

TONE	FREQ.	INTERMIT	CYCLE
A	350/440	Continuous	
В	350/440	120 IPM	0.25 0.25
С	440	240 IPM	0.125
D	480/620	60 IPM	0.5 0.5
E	480/620	120 IPM	0.25 0.25
F	240 16 Modulation	Continuous	
G	440	Continuous	
н	440/480	ON: 2s OFF: 4s	2 sec. 4 sec.
I	440/480	ON: 1s OFF: 2s	1 sec. 2 sec.
J	440	60 IPM	0.5 0.5
К	400	Continuous	
L	800	60 IPM	0.5 0.5
М	No Tone	Continuous	

GENERAL INFORMATION - TONE ASSIGNMENT

This Memory Block is used to assign each system tone to the flexible tables.

VOICE PROMPT TO TONE ASSIGNMENT

OPERATION:

- 1. Go off-line.
- o MIC Enter: Mode System LK 1 **ICM** MIC Sub-Mode PBR/Misc. LK8 ICM Data No. 6 (Dial Pad) Table Tone Setting Data Data No. No. Name <u>1</u> 6: PR 1 01: DT DISPLAY TIME
- 3. Press the corresponding CO/PBX line key to change data option.
 - To change Voice Prompt 1 to Voice Prompt 2, press CO/PBX line key 2.

LK 1	LK 2	LK 3	LK 4
Voice Prompt 1	Voice Prompt 2		
LK 5	LK 6	LK 7	LK 8
CO/PB	X line kevs	Def	ault

Table No. 01: Dial Tone

Table No. 02: Call Waiting Tone

Default	Dial Tone : Voice Prompt 1 Call Waiting Tone : Voice Prompt 2
---------	---

- 4. Press the TRF key to write the selected data and to advance to the next Table No.
- After all data has been entered, pressing the TRF key will write the selected data and advance to Memory Block 1-8-17 (PC Programming Password Assignment).
- 6. Press the SPKR key to go back on-line.

System PBR/Misc. Data No.
1 8 16

PC Programming Guide			
ТЕСН	A:H:I:J	USER	

Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - VOICE PROMPT TO TONE ASSIGNMENT

This Memory Block is used to assign the voice prompt to each tone. A voice prompt can only be provided during Internal Dial Tone or Call Waiting Tone.

PC PROGRAMMING PASSWORD ASSIGNMENT

OPERATION:

- 1. Go off-line.
- MIC 2. Enter: Mode System LK 1 **ICM** • MIC Sub-Mode PBR/Misc. LK8 ICM Data No. (Dial Pad) Class No. Setting Data Data No. 1, 2 <u>1</u> 7: (1)

DISPLAY

Class No. 1:

Technician Mode

No. 2:

End user Mode

Setting Data:

TIME

0~9 (maximum eight digits)

Dial pad $\boxed{0} \sim \boxed{9}$

: To enter data.

HOLD

key:

: To clear data.

Default Class 1, 2 All Blank

- 3. Press the TRF key to write the selected data and advance to the next Class No.
- 4. After all data has been entered, pressing the TRF key will write the selected data and advance to Memory Block 1-8-18 (Site Name Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

Sy	stem	PBR/Misc.	Data No.
	1	8	17
	PC Pr	ogramming (Guide
TECH	C:A:A	USER	

NOTES:

- Programming from a Multiline Terminal allows a maximum of eight digits to be entered for both classes.
- 2. PC Programming allows only "FIVE" digits to be entered. If more than 5 digits are entered in the memory block, PC Programming will recognize only the first five.
- 3. Only digits can be entered.

GENERAL INFORMATION - PC PROGRAMMING PASSWORD ASSIGNMENT

This Memory Block is used to set a system password that must be entered when using PC Programming.

SITE NAME ASSIGNMENT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode PBR/Misc. LK8 MIC ICM

 Data No. 1 8

 (Dial Pad)

Data No.	Title	Setting	g Data
<u>1</u> 8:	SITE	=	
TIME I		ISPLAY	

HOLD

key

: To clear data at cursor

position.

Setting Data

Enter character (maximum of eight characters) using the Character Code Table in Section 7.

- Pressing the TRF key will write the selected data and advance to Memory Block 1-8-25 (ACD/UCD Group Agent Assignment).
- 4. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

System	PBR/Misc.	Data No.
1	8	18

PC Programming Guide			Guide
TECH		USER	

NOTES:

1. This assignment, when programmed, creates a directory in the PC after a download is performed.

GENERAL INFORMATION - SITE NAME ASSIGNMENT

This Memory Block is used to indicate Level II and/or Level II Advanced system name. This system name will be used when using the PC Programming software to program the system.

ACD/UCD GROUP AGENT ASSIGNMENT

OPERATION:

- 1. Go off-line.
- o MIC 2. Enter: Mode LK 1 System **ICM** o MIC Sub-Mode PBR/Misc. LK 8 ICM 5 Data No. (Dial Pad) Agent No. Setting Data $(1 \sim 32)$ Group No. Station No. (1~4) (max. 4 digits) Data No. Title 2 5: AG 01 G P

3. Enter data using the dial pad.

TIME

Agent No. 1~32

Setting Data:

Agent Station Number (00~9999)

DISPLAY

- 2-digit (00~99)
- 3-digit (000~999)
- 4-digit (0000~9999)

ACD/UCD Group Number $(1\sim4)$ to which the Agent belongs.

Default	Not Specified
---------	---------------

- 4. Press the TRF key to advance to the next Agent No.
- 5. After all data has been entered, pressing the TRF key will write the selected data and advance to Memory Block 1-1-00 (Pause Time Selection).
- 6. Press the SPKR key to go back on-line.

System	PBR/Misc.	Data No.
1	8	25

PC Programming Guide			
ТЕСН	A:F:A	USER	

NOTES:

- 1. The ACD/UCD feature requires version 2.00 software or higher.
- 2. The UCD feature requires installation of an MIF-F(U)-10 KTU. The ACD feature requires installation of an MIF-F(A)-10 KTU.
- 3. UCD and ACD cannot be installed in the same system.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-46	Access Code (1-Digit) Assignment	
1-1-47	Access Code (2-Digit) Assignment	
1-1-48	Access Code (3-Digit) Assignment	
1-2-00	Internal Paging Timeout Selection	
1-2-03	2-, 3-, or 4-Digit Station Number Selection	

GENERAL INFORMATION - ACD/UCD GROUP AGENT ASSIGNMENT

This Memory Block is used to specify the Agent Extension Number and the ACD/UCD Group Numbers to which each Agent belongs. Up to 32 Agents can be programmed into the ACD/UCD system.

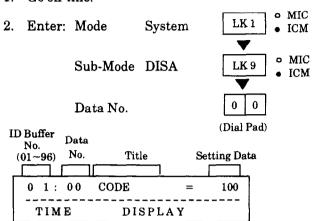
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Installation Service Manual Electra Professional Level II & Level II Advanced

DISA ID CODE ASSIGNMENT

OPERATION:

Go off-line.



3. Enter data using the dial pad.

Setting Data: 2-digit DISA ID Code: 00~99

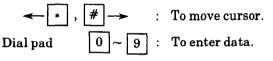
(00 no data)

3-digit DISA ID Code: 000~999

(000 no data)

4-digit DISA ID Code: 0000~9999

(0000 no data)



kev CNF

To access next ID **Buffer Number**

If DISA ID Code is assigned as 2-digit: ID Buffer Number 01~10 = DISA ID Code 10 ID Buffer Number 11~20= DISA ID Code 11 If DISA ID Code is assigned as 3-digit etc.: Default ID Buffer Number 01~96 = DISA ID Code 100~195 If DISA ID Code is assigned as 4-digit: ID Buffer Number $01\sim10 = DISA ID Code 1010$ ID Buffer Number $11 \sim 20 = DISA$ ID Code 1020 etc.

- 4. Press the TRF key to write the selected data and advance to Memory Block 1-9-02 (DISA Password Effect/Invalid Selection).
- 5. Press the SPKR key to go back on-line.

System	DISA	Data No.
1	9	00

	PC Program	ming	Guide
тесн	B: E: B	USER	

NOTES:

- DISA ID Code Assignment is performed in Memory Block 1-5-24 (DISA ID Code Digit Assignment).
- 2. Different DISA ID Codes cannot be assigned to the same ID Buffer Number.
- If Memory Block 1-5-24 (DISA ID Code Digit Assignment) is changed from 3- to 4- or 2- digit, each ID buffer must be reassigned.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-5-24	DISA ID Code Digit Selection	V

GENERAL INFORMATION - DISA ID CODE ASSIGNMENT

This Memory Block is used to specify the DISA ID Code numbers.

DISA PASSWORD EFFECT/INVALID SELECTION

OPERATION:

1. Go off-line.

0 1 / 02

TIME

o MIC LK 1 2. Enter: Mode System ICM Y MIC LK 9 Sub-Mode DISA ICM 2 0 Data No. (Dial Pad) ID Buffer No. Data (01~96) No. Title Setting Data

PASWORD

3. Press the corresponding CO/PBX line key to change data option.

DISPLAY

To change NO to YES, press CO/PBX line key 2.

NO

LK 5	LK 6	LK 7	LK 8
NO	YES		
LK1	LK 2	LK 3	LK 4

Setting Data:

NO = DISA Password Invalid

YES = DISA Password in Effect

- 4. Press the TRF key to write the selected data and advance to Memory Block 1-9-00 (DISA ID Code Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming Refer to Chapter 3 - Guide to Feature Programming in this manual.

System DISA Data No. 1 9 02 PC Programming Guide

TECH

B:E:C

USER

GENERAL INFORMATION - DISA PASSWORD EFFECT/INVALID SELECTION

This Memory Block is used to assign DISA Password as Invalid or Effective. If Invalid is assigned, the calling party can use the DISA feature without a DISA Password.

(Dial Pad)

CALL ARRIVAL KEY NUMBER ASSIGNMENT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

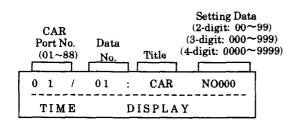
 Sub-Mode CAR LK10 MIC ICM

 Data No.

Sy	stem	CAR	Data No.			
1		10	01			
	PC Programming Guide					
тесн	B:G:A	USER				

NOTES:

 This feature requires version 2.50 software or higher.



3. Enter data using the dial pad.

Example: To assign CAR Port Number 01 as CAR No. 200, enter 200 using the

dial pad. # : To move cursor.

Dial pad $0 \sim 9$: To enter setting data.

CNF key : Next CAR No.

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-10-02 (Call Arrival Key Master Hunt Number Selection).
- 5. Press the SPKR key to go back on-line.

Default All Call Arrival Keys Not Specified (000)

■ Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - CALL ARRIVAL KEY NUMBER ASSIGNMENT

This Memory Block specifies the Call Arrival Key number.

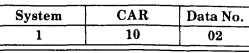
ICM

CALL ARRIVAL KEY MASTER HUNT NUMBER SELECTION

OPERATION:

- 1. Go off-line.
- o MIC 2. Enter: Mode LK 1 System ICM MIC Sub-Mode CAR LK 10

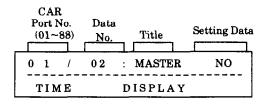
2 Data No. (Dial Pad)



PC Programming Guide					
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NOTES:

This feature requires version 2.50 software or higher.



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change NO to YES, press CO/PBX line key 2.

CO/PBX	line keys	Def	ault
LK 5	LK 6	LK 7	LK 8
LK 1 NO	LK 2 YES	LK3	LK 4

CNF

key

Next CAR No.

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-10-03 (Call Arrival Key Hunt Number Forward Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - CALL ARRIVAL KEY MASTER HUNT NUMBER SELECTION

This Memory Block is used to specify the assignment of a Master Hunt Number for a Call Arrival Key.

CALL ARRIVAL KEY HUNT NUMBER FORWARD ASSIGNMENT

OPERATION:

1	0.	- ec	1:
1.	GO	OII-	line.

1.	GU 011-1	IIIC.		
2.	Enter:	Mode	System	LK 1 • MIC
		Sub-Mode	CAR	LK 10 • MIC • ICM
		Data No.		0 3
				(Dial Pad)

CAF Port 1 (01~	٧o.	Data No.	7_	Title	Setting D Station or CA (2-digit: 00 (3-digit: 000 (4-digit: 0000	AR No. (~99) (~999)
0 1	1	03	:	CAR	FWD000	
TIM	I E		D	ISPLA	Y]

3. Enter data using the dial pad.

Example: To set CAR Port Number 01 to forward to Tel 100, enter 100 using the dial pad.

➤: To move cursor.

Dial pad To enter data.

To clear all data when the cursor is at the HOLD key setting data position.

CNF key Next Tel. No.

All Call Arrival Keys Not Specified Default (000)

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-10-04 (Call Arrival Key Port Name Assignment).
- 5. Press the SPKR key to go back on-line.

System CAR Data No. 10 1 03 PC Programming Guide TECH B:G:A USER

NOTES:

- This feature requires version 2.50 software or higher.
- An ACD/UCD Pilot number cannot be assigned as the forwarding station number.

Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - CALL ARRIVAL KEY HUNT NUMBER FORWARD ASSIGNMENT

This Memory Block specifies the Call Arrival Key Hunt Forward station number.

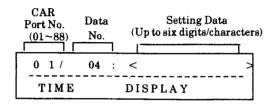
CALL ARRIVAL KEY PORT NAME ASSIGNMENT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CAR LK 10 MIC ICM

 Data No.



3. Enter data using the dial pad.

Example: To assign "DANE" to CAR 01, enter the characters. (Refer to Section 7 - Character Code Tables

in this manual.)

After entering the 3-digit code, the characters are automatically

(Dial Pad)

displayed.

Setting Data: Enter by Character Code.

 \leftarrow \downarrow , # \rightarrow : To move cursor. al pad $\boxed{0} \sim \boxed{9}$: To enter data.

Dial pad $\boxed{0} \sim \boxed{9}$: To enter data.

key : To clear all data when the cursor is at the

setting data position.

CNF key : Next CAR No.

Default Not Specified

System	CAR	Data No.
1	10	04

PC Programming Guide				
TECH	B:G:A	USER		

- 4. Pressing the TRF key writes the selected data and advances to Memory Block 1-10-05 (Call Arrival Key to Call Appearance Block Assignment).
- 5. Press the SPKR key to go back on-line.

NOTES:

- 1. This feature requires version 2.50 software or higher.
- 2. The Call Arrival Key part name only appears when the Call Arrival number is called.

Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - CALL ARRIVAL KEY PORT NAME ASSIGNMENT

This Memory Block specifies the Call Arrival Key Port name that is indicated on the Multiline Terminal LCD when an internal call is made to the Call Arrival Key.

HOLD

(Dial Pad)

CALL ARRIVAL KEY TO CALL APPEARANCE BLOCK ASSIGNMENT

OPERATION:

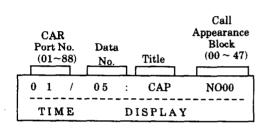
_	_		
1	C_{α}	ΛÆ '	line.
1.	Uτυ	UII-	шце.

	400	1220.		
2.	Enter:	Mode	System	LK 1 • MIC
				▼
		Sub-Mode	CAR	LK 10 • MIC • ICM
				lacktriangle
		Data No.		0 5

Sy	stem	CAR	Data No.
	1	10	05
	PC Pro	gramming G	uide
TECH	B: L: F	USER	

NOTES:

 This function requires version 2.50 software or higher.



3. Enter data using the dial pad.

Example: To assign CAR Port Number 01 to Call Appearance Block 01, enter 01

using the dial pad.

 \leftarrow \ast , # \rightarrow : To move cursor.

Dial pad $0 \sim 9$: To enter setting data.

CNF key : Next CAR No.

- Pressing the TRF key will write the selected data and advance to Memory Block 1-10-01 (Call Arrival Key Number Assignment).
- 5. Press the SPKR key to go back on-line.

Default All CARs assigned to Block (00)

Additional Programming
 Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - CALL ARRIVAL KEY TO CALL APPEARANCE BLOCK ASSIGNMENT

This Memory Block is used to assign the Call Arrival Key to a Call Appearance Block.

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SIGNAL FORMAT SELECTION

OPERATION:

- 1. Go off-line.
- o MIC LK 1 2. Enter: Mode System ICM o MIC Sub-Mode DTI LK 11 ICM 0 0 Data No. (Dial Pad) DTI No. Data **Setting Data** Title (01~03) No. 00 FRAME 24 01 TIME DISPLAY
- 3. Press the corresponding CO/PBX Line key to change data option.
 - To change ESF to SF, press CO/PBX line key 1.

SF = Superframe Format (12

Multi-Frame)

= Extended Superframe Format (24 **ESF** Multi-Frame)

LK 1	LK 2	LK 3	LK 4
SF (12)	ESF (24)		
LK 5	LK 6	LK 7	LK 8
	<u></u>	·	<u> </u>

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-11-01 (Clear Channel Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
7-1	Card Interface Slot Assignment	

Sy	stem	DTI	Data No.
	1	11	00
	PC Prog	ramming G	uide
TECH	A:E:E	USER	

NOTES:

- 1. A DTI-F()-10 or DTI-F(A)-20 KTU must be assigned in the system to set this Memory Block.
- The DTI-F(A)-20 KTU is supported by system software version 3.00 or higher.

GENERAL INFORMATION - SIGNAL FORMAT SELECTION

This Memory Block specifies the signal format of the T1 trunk connected to the system. The Signal Format used (12- or 24-Multi-Frame) depends on the CSU or D mark equipment being used.

CLEAR CHANNEL SELECTION

OPERATION:

- 1. Go off-line.
- o MIC LK 1 2. Enter: Mode System ICM o MIC Sub-Mode DTI LK 11 ICM Data No. 1 (Dial Pad) DTI No. Data Setting Data Title No. $(01 \sim 03)$ 01 01 BYTE ZCS TIME DISPLAY
- 3. Press the corresponding CO/PBX Line key to change data option.
 - To change ZCS to B8ZS, press CO/PBX line key 2.

CO/PB	X line keys	Def	ault
LK 5	LK 6	LK 7	LK 8
ZC8	B8ZS		
LK 1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-11-02 (Line Length Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
7-1	Card Interface Slot Assignment	

Sy	stem	DTI	Data No.
	1	11	01
	PC Pro	gramming G	uide
TECU	A.F.D	HEED	

NOTES:

- .. A DTI-F()-10 or DTI-F(A)-20 KTU must be assigned in the system to set this Memory Block.
- 2. The DTI-F(A)-20 KTU is supported by system software version 3.00 or higher.

GENERAL INFORMATION - CLEAR CHANNEL SELECTION

This Memory Block specifies the clear channel capability. If the Zero Byte Time channel is available, the CLK-F-11 Unit cannot extract a clock signal from the T1 trunk. The T1 trunk will modify the Zero Byte Time channel to extract a clock signal for the CLK-F-11 Unit.

LINE LENGTH SELECTION

OPERATION:

- 1. Go off-line.
- o MIC 2. Enter: Mode System LK 1 **ICM** MIC Sub-Mode DTI LK 11 ICM 2 0 Data No. (Dial Pad) DTI No. Data Setting Data Title (01~03) No. 01 02: LINE 1 TIME DISPLAY

System DTI Data No. 1 11 02 PC Programming Guide TECH A:E:CUSER

NOTES:

- A DTI-F()-10 or DTI-F(A)-20 KTU must be assigned in the system to set this Memory Block.
- 2. The DTI-F(A)-20 KTU is supported by system software version 3.00 or higher.

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 0 131 Feet to 132 262 Feet, press CO/PBX line key 2.

LK 1	LK 2	LK 3	LK 4
0 - 181 Feet (1)	132 - 262 Feet (2)	263 - 393 Feet (3)	394 - 524 Feet (4)
LK 5	LK 6	LK 7	LK 8
525 - 655 Feet (5)			

Setting Data

erning D	aia.	
Line Key	LCD Indication	Description
LK 1	1	0~131 feet
LK 2	2	132~262 feet
LK 3	3	263~393 feet
LK 4	4	394~524 feet
LK 5	5	525~655 feet

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-11-03 (Robbed Bit Signaling Channel Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
7-1	Card Interface Slot Assignment	

GENERAL INFORMATION - LINE LENGTH SELECTION

This Memory Block specifies the line length between the CSU/D mark and the DTI KTU. This specifies the equalization values of the detect signal in the DTI KTU.

ROBBED BIT SIGNALING CHANNEL SELECTION

OPERATION:

- 1. Go off-line.
- MIC LK 1 2. Enter: Mode System ICM o MIC Sub-Mode DTI LK 11 ICM 0 3 Data No. (Dial Pad) DTI No. Data Setting Data Title $(01 \sim 03)$ No. 01 03: SIGNAL A B TIME DISPLAY

Sy	stem	DTI	Data No.	
1		11	03	
	PC Prog	ramming G	uide	
тесн	A:E:E	USER		

NOTES:

- A DTI-F()-10 or DTI-F(A)-20 KTU must be assigned in the system to set this Memory Block.
- 2. The DTI-F(A)-20 KTU is supported by system software version 3.00 or higher.

- Press the corresponding CO/PBX Line key to change data option.
 - To change 4-State to 16-State, press CO/PBX line key 2.

		Defa	
LK 5	LK 6	LK 7	LK 8
4-State (A and B)	16-State (A, B, C, and D)		_
LK1	LK 2	LK 3	LK 4

WARNING

I This Memory Block should not be programmed, I leave at the default setting.

Option LK2 [16-State (A, B, C, and D)] is reserved for future use. If programmed, it has no laffect.

- Pressing the TRF key will write the selected data and advance to Memory Block 1-11-04 (DTI Maintenance Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - ROBBED BIT SIGNALING CHANNEL SELECTION

This Memory Block specifies the robbed bit signaling method (4-state or 16-state) if Extended Superframe Format (ESF) is specified in Memory Block 1-11-00 (Signal Format Selection).

DTI MAINTENANCE SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK 1 MIC ICM

 Sub-Mode DTI LK 11 MIC ICM

 Data No. 0 4

 (Dial Pad)

DTI No. (01~03)	Data No.	Title	Setting Data
01 /	04 :	LBK	= REMOTE
TIME	DI	SPLAY	

- 3. Press the corresponding CO/PBX Line key to change data option.
 - To change Remote Loopback to Local Loopback, press CO/PBX line key 2.

CO/PF	X line keys	Defa	ıult
LK 5	LK 6	LK 7	LK 8
Remote Loopback	Local Loopback		
LK 1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-11-05 (T1 Channel Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
7-1	Card Interface Slot Assignment	

Sys	tem	DTI	Data No.				
	1	11	04				
	PC Programming Guide						
тесн	A : E : D	USER					

NOTES:

- 1. A DTI-F()-10 or DTI-F(A)-20 must be assigned in the system to set this Memory Block.
- 2. The DTI-F(A)-20 KTU is supported by system software version 3.00 or higher.

WARNING

This Memory Block should not be programmed, I leave at the default setting.

Option LK2 (Local Loopback) is reserved for lafuture use. If programmed, it has no affect.

GENERAL INFORMATION - DTI MAINTENANCE SELECTION

This Memory Block specifies the maintenance method: Remote Loopback or Local Loopback.

T1 CHANNEL SELECTION

OPERATION:

- 1. Go off-line.
- o MIC 2. Enter: Mode LK 1 System ICM o MIC Sub-Mode DTI LK 11 ICM Data No. 0 5 (Dial Pad) DTI No. Data First (01~03) No. Title Port No. 05 **CHANEL** 01 TIME DISPLAY
- 3. Use the Line keys to enter DTI channel numbers.

Default	DTI No. 1 Channels 01~24=ON DTI No. 2 Channels 25~49=ON DTI No. 3 Channels 48~64=ON
I	

CO/PBX Line LED	OFF	□ on
Data	NO (Not Assigned)	YES (Assigned)

- The LED indication changes to indicate the data each time the CO/PBX line key is pressed.
- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-11-06 (Signaling Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
7-1	Card Interface Slot Assignment	

System	DTI	Data No.
1	11	05

	PC Program	ming	Guide
TECH	A:E:A	USER	

NOTES:

- A DTI-F()-10 or DTI-F(A)-20 must be assigned in the system to set this Memory Block.
- 2. The DTI-F(A)-20 KTU is supported by system software version 3.00 or higher.

Channel Numbers (01 \sim 24) correspond to CO/PBX line key.

Page 1

CO/PBX	Channel No.			
Line Key	DTI No. 1	DTI No. 2	DTI No. 3	
01	01	25	49	
ſ	ſ	ſ	ſ	
08	08	32	56	

Page 2

rage 2			
CO/PBX Line Key	Channel No.		
	DTI No. 1	DTI No. 2	DTI No. 3
09	09	33	57
ſ	ſ	ſ	ſ
16	16	40	64

Page 3

rageo			
CO/PBX	C	hannel N	о.
Line Key	TI o. 1	DTI No. 2	DTI No. 3
17	17	41	N/A
ſ	ſ	ſ	N/A
24	24	48	N/A

GENERAL INFORMATION - T1 CHANNEL SELECTION

This Memory Block specifies the DTI channel numbers to be used. DTI Trunks 1 and 2 have a maximum of 24 channels, and DTI Trunk 3 has a maximum of 16 channels.

ACD/UCD GROUP PILOT NUMBER ASSIGNMENT

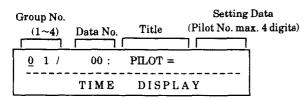
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK 1 MIC ICM

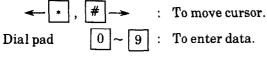
 Sub-Mode ACD/UCD LK 12 MIC ICM

 Data No. 0 0 0

 (Dial Pad)



3. Enter data using the dial pad.



Default	Not Specified
---------	---------------

Setting Data:

Pilot No. (00~9999) 2-digit (00~99) 3-digit (000~999) 4-digit (0000~9999)

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-12-01 (ACD/UCD Group Overflow Destination Assignment).
- 5. Press the SPKR key to go back on-line.

System	ACD/UCD	Data No.
1	12	00

PC Programming Guide			
TECH	A:F:B	USER	

NOTES:

- 1. The ACD/UCD feature requires version 2.00 software or higher.
- 2. The UCD feature requires installation of an MIF-F(U)-10 KTU. The ACD feature requires installation of an MIF-F(A)-10 KTU.
- 3. UCD and ACD cannot be installed in the same system.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-46	Access Code (1-Digit) Assignment	
1-1-47	Access Code (2-Digit) Assignment	
1-1-48	Access Code (3-Digit) Assignment	
1-2-03	2-, 3-, or 4-Digit Station Number Selection	
1-12-01	ACD/UCD Group Overflow Destination Assignment	
1-8-25	ACD/UCD Group Agent Assignment	

GENERAL INFORMATION - ACD/UCD GROUP PILOT NUMBER ASSIGNMENT

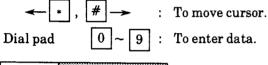
This Memory Block is used to specify the Pilot Number of each ACD/UCD Group where incoming calls are terminated.

ACD/UCD GROUP OVERFLOW DESTINATION ASSIGNMENT

OPERATION:

- 1. Go off-line.
- o MIC LK 1 Enter: Mode System **ICM** o MIC Sub-Mode ACD/UCD LK 12 ICM Data No. 1 (Dial Pad) Setting Data Group No. Data No. (Sta. No. max. 4 digits) Title 0 1/ 01: OVFLW =
- 3. Enter data using the dial pad.

TIME



DISPLAY

Default Not Specified

Setting Data:

Station No. (00~9999) 2-digit (00~99) 3-digit (000~999) 4-digit (0000~9999)

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-12-02 (ACD/UCD Overflow Timer Selection).
- 5. Press the SPKR key to go back on-line.

Sy	stem	ACD/UCD	Data No.	
	1	12	01	
PC Programming Guide				
TECH	A : F : C	USER		

NOTES:

- 1. ACD/UCD Group Pilot Numbers cannot be programmed as the overflow destination.
- 2. The ACD/UCD feature requires version 2.00 software or higher.
- 3. The UCD feature requires installation of an MIF-F(U)-10 KTU. The ACD feature requires installation of an MIF-F(A)-10 KTU.
- 4. UCD and ACD cannot be installed in the same system.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-46	Access Code (1-Digit) Assignment	
1-1-47	Access Code (2-Digit) Assignment	
1-1-48	Access Code (3-Digit) Assignment	<u> </u>
1-2-03	2-, 3- or 4-Digit Station Number Selection	
1-8-25	ACD/UCD Group Agent Assignment	

GENERAL INFORMATION - ACD/UCD GROUP OVERFLOW DESTINATION ASSIGNMENT

This Memory Block is used to specify the station or Station Hunt Group where the call of each ACD/UCD Group is routed when there is an overflow of incoming calls.

SIGNALING SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK1 MIC ICM

 Sub-Mode CO Line LK11 MIC ICM

 Data No. 0 6

 (Dial Pad)

DT1 No. Data (01~03) No.	Channe Title No.	Setting Data
01 / 06:	TRNK 01	= LS
TIME I	DISPLAY	

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change Loop Start to Ground Start, press CO/PBX line key 2.

LK1	LK 2 Ground Start	LK 3	LK 4
Loop Start LK 5	LK 6	LK 7	LK 8
			L
CO/PB	X line keys	Defa	ult

- 4. Press the TRF key to advance to the next Channel No.
- 5. After all data has been entered, pressing the TRF key will write the selected data and advance to Memory Block 1-11-07 (DTI Trunk Type Assignment).
- 6. Press the SPKR key to go back on-line.
- Additional Programming **

Memory Block No.	Memory Block Name	Required
1-11-07	DTI Trunk Type Assignment	
7-1	Card Interface Slot Assignment	

Sy	stem	DTI	Data No.		
	1	11	06		
	PC Programming Guide				
тесн	A:E:F	USER			

NOTES:

- 1. A DTI-F()-10 or DTI-F(A)-20 must be assigned in the system to set this Memory Block.
- 2. The DTI-F(A)-20 KTU is supported by system software version 3.00 or higher.

GENERAL INFORMATION - SIGNALING SELECTION

This Memory Block specifies the signaling method: Loop Start Trunk Signaling or Ground Start Trunk Signaling.

DTI TRUNK TYPE ASSIGNMENT

OPERATION:

System		DTI	Data No.		
1		11	07		
	PC Programming Guide				
тесн	A:E:H	USER			

1. Go off-line. MIC LK 1 Enter: Mode System ICM Sub-Mode DTI LK 11 Data No. 7 (Dial Pad) Block No. DTI No. Data 1~6 Setting Data (01~03) No. Title ז רוו נ

TRK

DISPLAY

07:

TIME

NOTES:

- This function requires version 3.00 software or higher.
- 2. A DTI-F()-10 or DTI-F(A)-20 must be assigned in the system to set this Memory Block.
- 3. If the default setting is changed to E&M or DID, the affected trunks are automatically reassigned to Trunk Group 00. If trunks $00 \sim 08$ are affected, default line key assignment for all Multiline Terminals change to "Not Used" and must be reassigned.
- 3. Press the corresponding CO/PBX line key to change data.

(1)

 To change DTI Trunk Type from CO to DID, press CO/PBX line key 3.

 CO/PBX line keys		Def	ault
LK 5	LK 6	LK 7	LK 8
LK1 CO	LK 2 E&M	DID	LK 4

- 4. Enter the next TRK No. using the dial pad, and select the corresponding CO/PBX line key to change data.
- Pressing the TRF key will write the selected data and advance to Memory Block 1-11-00 (Signal Format Selection).
- 6. Press the SPKR key to go back on-line.

■ Additional Programming

	Memory Block No.	Memory Block Name	Required
ſ	1-11-06	Signaling Selection	
	7-1	Card Interface Slot Assignment	

Data

TRK No.	4-Channel Unit		
IKK No.	DTI No. 1	DTI No. 2	DTI No. 3
1	01~04	25~28	49~52
2	05~08	29~32	53~56
3	09~12	33~36	57~60
4	13~16	37~40	61~64
5	17~20	41~44	N/A
6	21~24	45~48	N/A

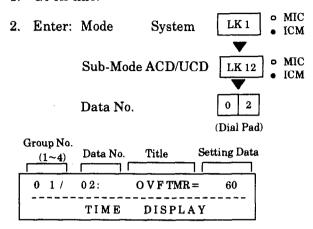
GENERAL INFORMATION - DTI TRUNK TYPE ASSIGNMENT

This Memory Block is used to assign the trunk type (CO/DID/E & M Tie line) by 4-channel unit.

ACD/UCD OVERFLOW TIMER SELECTION

OPERATION:

1. Go off-line.



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 60 seconds to 10 seconds, press CO/PBX line key 2.

CO/PB	K line kevs	Def	ault
60 sec.	120 sec.	180 sec.	240 sec.
LK.5	LK 6	LK 7	LK 8
90	10 sec.	20 sec.	30 sec.
LK 1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 1-12-00 (ACD/UCD Group Pilot Number Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

System	ACD/UCD	Data No.	
1	12	02	
PC Programming Guide			
TECH A:F:D	USER		

NOTES:

- 1. ACD/UCD Group Pilot Numbers cannot be programmed as the overflow destination.
- 2. The ACD/UCD feature requires version 2.00 software or higher.
- 3. The UCD feature requires installation of an MIF-F(U)-10 KTU. The ACD feature requires installation of an MIF-F(A)-10 KTU.
- 4. UCD and ACD cannot be installed in the same system.

GENERAL INFORMATION - ACD/UCD OVERFLOW TIMER SELECTION

This Memory Block is used to specify the maximum length of time a waiting ACD/UCD call remains at an ACD/UCD Group before overflowing to a specified Station or Station Hunt Group.

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TRUNK TO TENANT ASSIGNMENT

OPERATION:

- 1. Go off-line.
- MIC 2. Enter: Mode Tenant LK 2 **ICM** Data No. (Dial Pad) Tenant No. (00~47) Data No. Title Page No. 01: TRK — TNT 00 | 01 TIME DISPLAY
- 3. Press the corresponding CO/PBX line key to change data option.

* To move cursor.

Dial pad $0 \sim 9$: To enter data.

CNF key : Next Tenant No.

RECALL key : Next page.

FNC key : Previous page.

CO/PBX Line LED	OFF	□ом
Data	NO	YES
	(Not Assigned)	(Assigned)

- The LED indication changes to indicate the data each time the CO/PBX line key is pressed.
- 4. Pressing the TRF key will write the selected data and advance to Memory Block 2-05 (Line Key Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
2-05	Line Key Selection	
4-09	Telephone to Tenant Assignment	

Te	nant	•	Data l	Vo.	
2		•	01	01	
	PC Pro	gramming	Guide		
тесн	B:K:D	USER			

NOTES:

1. If data is changed while the system is busy, "Data Entry" is displayed at the programming station until the system becomes idle.

Continued on next page.

TRUNK TO TENANT ASSIGNMENT (continued)

Tenant	-	Data No.
2	-	01

CO/PBX Number (01~64) corresponds to CO/PBX line key.

Page 1 (CO/PBX 01~08)

			. '
LK 1	LK 2	LK 3	LK 4
01	02	03	04
LK 5	LK 6	LK 7	LK 8
05	06	07	08

Page	5 (CO/PBX	33~40

LK 1	LK 2	LK 3	LK 4
33	34	35	36
LK 5	LK 6	LK 7	LK 8
37	38	39	40

	200	$100 \mathrm{and}$	Series	Default	
49	Tenant 01~47: Not assigned		assigned (YES)	Tenant 00: All CO/PBX lines (01~64)	
	×				

Page 2 (CO/PBX 09~16)

LK 1	LK 2	LK 3	LK 4
09	10	11	12
T 72 -		7	
LK 5	LK 6	LK 7	LK 8

LK 1	LK 2	LK 3	LK 4
41	42	43	44
LK 5	LK 6	LK 7	LK8

47

48

Page 6 (CO/PBX 41~48)

Page 3 (CO/PBX 17~24)

LK 1	LK 2	LK 3	LK 4
17	18	19	20
LK 5	LK 6	LK 7	LK 8

Page 7	(CO/PBX	49~56)
--------	---------	--------

46

45

U			
LK 1	LK 2	LK 3	LK 4
49	50	51	52
LK 5	LK 6	LK 7	LK 8
53	54	55	56

Page 4 (CO/PBX 25~32)

LK 1	LK 2	LK 3	LK 4
25	26	27	28
LK 5	LK 6	LK 7	LK 8
29	30	31	32
1	•		

Page 8 (CO/PBX 57~64)

LK 1	LK 2	LK 3	LK 4
57	58	59	60
LK 5	LK 6	LK 7	LK 8
61	62	63	64

CO/PBX line keys

Default
Series
250 or
higher

Tenant 00: CO/PBX lines 01~64
assigned (YES)

Tenant 01~47: Not assigned

GENERAL INFORMATION - TRUNK TO TENANT ASSIGNMENT

This Memory Block specifies assignment of CO/PBX lines to each tenant.

LINE KEY SELECTION

OPERATION:

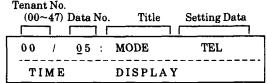
- 1. Go off-line.
- 2. Enter: Mode Tenant LK2 o MIC

 Data No.

 Data No.

 (Dial Pad)

 Tenant No.



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change Telephone Mode to Tenant-Wide Mode, press CO/PBX line key 1.

Tenant-Wide Mode Mode LK 5 LK 6	LK 7	LK 8
LK 5 LK 6	LK 7	LK 8
CO/PBX line keys	Def	ault

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 2-06 (Line Key Selection for Tenant Mode).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
2-06	Line Key Selection for Tenant Mode	
4-12	Line Key Selection for Telephone Mode	

Tenant 2			Data No.
		•	05
	PC Prog	ramming G	uide
тесн	B : K : B	USER	_

NOTES:

- 1. Mixed use of Tenant-Wide Mode and Telephone Mode in the system is permitted.
- 2. Tenant-Wide Mode:

Memory Block 2-06 (Line Key Selection for Tenant Mode) permits assignment of any desired feature to each of the CO/PBX line keys. All the telephones in a tenant are assigned the same features.

3. Telephone Mode:

Memory Block 4-12 (Line Key Selection for Telephone Mode) permits assignment of any feature to each of the CO/PBX line keys. Each telephone can be assigned different features.

GENERAL INFORMATION - LINE KEY SELECTION

This Memory Block allows each tenant to specify either of the two CO/PBX key assignment modes: Tenant-Wide Mode or Telephone Mode.

LINE KEY SELECTION FOR TENANT MODE

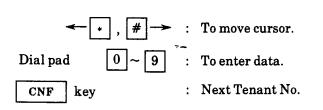
OPERATION:

- 1. Go off-line.
- o MIC 2. Enter: Mode Tenant LK 2 **ICM** Data No. 6 (Dial Pad) Line Kev Tenant No. No. Setting $(00 \sim 47)$ $(01 \sim 24)$ Data (2) Data Setting Data (1) No. CO 06: L01 = 01 TIME DISPLAY
- 3. Press the corresponding CO/PBX line key to change data option.

LK 1	LK 2	LK 3	LK 4
Not Specified	CO/PBX Line	Not Used	Not Used
LK 5	LK 6	LK 7	LK 8
†Call Appearance	Feature Access	Trunk Group	Route Advance

LK 9	LK 10	LK 11	LK 12	
Secondary Incoming Extension	†Call Arrival Key	Microphone Key	Headset	
LK 13	LK 14	LK 15	LK 16	

CO/PBX line keys †Series 250 or higher.



Te	nant	•	Data No.	
2		•	06	
	PC Prog	ramming G	uide	
TECH	B : K : C	USER	-	

Example: To assign Trunk Group 05 to CO/PBX line key 1.

- 4. Press CO/PBX line key 7, TKGP is displayed.
- 5. Enter 05 (for RT 05) using the dial pad.
- 6. Press the **TRF** key, data of CO/PBX line keys 01~24 is displayed successively.
- 7. After entering data for CO/PBX line key 24, pressing the TRF key will write the selected data and advance to Memory Block 2-07 (System Speed Dial Display Assignment).
- 8. Press the SPKR key to go back on-line.

This Memory Block assigns the following functions to each of the CO/PBX line keys on each telephone within a tenant specified as Tenant Mode in Memory Block 2-05 (Line Key Selection).

Functions:

- Not specified (NON)
- CO/PBX Line (CO) 01~64
- †Call Appearance (C) 00 ~ 47 01 ~ 24 (Refer to Note)
- Feature Access (FA) 01~10
- Trunk Group (TKGP) 01~32
- Route Advance Block (ADV) 01~16
- Secondary Incoming Extension (SIE) 01~96
- †Call Arrival Keys (CAR) 01~88
- Microphone (MIC)
- Headset (H SET)
 †Series 250 or higher.

Note: Each Call Appearance Block may have a maxium of 24 Call Appearane Keys.

■ Additional Programming

Memory Block No.	Memory Block Name	Required
2-05	Line Key Selection	V

Continued on next page.

LINE KEY SELECTION FOR TENANT MODE (continued)

T :	<u> </u>	LOD	
Line Key	Setting Data 1	LCD Indication	Setting Data 2
1	Not Specified	NON	N/A
2	CO	CO	01~64
3	Not Used	N/A	N/A
4	Not Used	N/A	N/A
5	Call Appearance Block (00~47)	С	Call Appearance Key 01~24
6	Feature Access	FA	01~10
7	Trunk Group	TKGP	01~32
8	Route Advance	ADV	01~16
9	Secondary Incoming Extension	SIE	Telephone Port No. 01~96
10	Call Arrival Key	CAR	01~88
11	Microphone	MIC	N/A
12	Headset	H SET	N/A

Tenant	-	Data No.
2	-	06

NOTES:

- 1. Specify "CO/PBX line" for square system and "Call Appearance" for call appearance system.
- 2. Specify "Call Appearance" as the call appearance [call appearance number of Call Appearance Block numbers from Memory Block 4-43 (Station to Call Appearance Block Assignment).]
- A maximum of 56 station ports in the Level II
 system and 96 station ports in the Level II
 Advanced system are available to be shared by
 the ESI, SLI, and LLT KTUs.
- 4. The Call Arrival Key and Call Appearance features require version 2.50 software or higher.

GENERAL INFORMATION - LINE KEY SELECTION FOR TENANT MODE

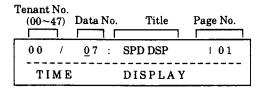
This Memory Block allows the assignment of functions to each of the CO/PBX line keys on each telephone within a tenant specified as Tenant Mode in Memory Block 2-05 (Line Key Selection).

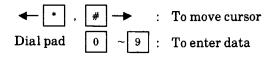
SYSTEM SPEED DIAL DISPLAY ASSIGNMENT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Tenant LK2 MIC ICM

 Data No. (Dial Pad)







CO/PBX Line LED	OFF	□ on
Data	Deny	Allowed

Default	All Speed Dial confirmation allowed

- 3. The LED indication changes to indicate the data each time the CO/PBX line key is pressed.
 - Press RECALL, FNC keys to turn pages.
 - After entering data for all pages, pressing the TRF key will write the selected data and advance to Memory Block 2-08 (ECR Relay to Tenant Assignment).
- 4. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-35	Speed Dial Buffer Allocation	V
1-8-07	Class of Service (Attendant) Feature Selection 1	

Te	nant	•	Data No.
2		•	07
	PC Pro	gramming	Guide
ТЕСН	B : K : E	USER	

NOTES:

- 1. If "Deny" is specified, no display will be presented even when a System Speed Dial call is originated.
- Divide the Speed Dial numbers into groups and specify, on a per tenant basis, whether confirmation is allowed or denied.
- 3. SMDR will print telephone numbers.

When System Speed Dial is 90 buffers.

[]	LK 1	LK 2	LK 3	LK 4
	00~09	10~19	20~29	30~39
Page 1	LK 5	LK 6	LK7	LK 8
	40~49	50~59	60~69	70~79
ÍΙ	LK 1	LK 2	LK 3	LK 4
Page 2	80~89		ĺ	
	LK 5	LK 6	LK 7	LK 8
		ĺ		

When System Speed Dial is 1000 buffers.

	LK 1	LK 2	LK 3	LK 4
	000~099	100~199	200~299	300~399
Page 1 <	LK 5	LK 6	LK 7	LK 8
	400~499	500~599	600~699	700~799
ſ	LK 1	LK 2	LK 3	LK 4
	800~899	900~999		
Page 2	LK 5	LK 6	LK 7	LK 8
`				

GENERAL INFORMATION - SYSTEM SPEED DIAL DISPLAY ASSIGNMENT

This Memory Block is used to specify whether confirmation of the Speed Dial numbers and messages stored in the System Speed Dial memory is allowed.

ECR RELAY TO TENANT ASSIGNMENT

OPERATION:

1. Go off-line.

TIME

- 2. Enter: Mode Tenant LK2 MIC

 Data No.

 Data No.

 (00~47) Data No. Title

 00 / 08: RLY TENANT
- 3. Press the corresponding CO/PBX line key to change data option.

DISPLAY

← • ,	#	:	To move cursor
CNF	key	:	Next Tenant No.

LK 1	LK 2	LK 3	LK 4
External Tone Relay 1	External Tone Relay 2	External Tone Relay 3	External Tone Relay 4
LK 5	LK 6	LK 7	LK 8
Night Chime	No Assignment	·	

CO/PBX line keys

Default	All Tenants No A	Assignment
---------	------------------	------------

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 2-01 (Trunk to Tenant Assignment).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-7-07	External Ring Relay Cycle Selection	

Tenant 2		-	Data No.
		-	08
PC Programming Guide			
TECH	B : K : A	USER	

NOTES:

- By assigning Night Chime to a Tenant, incoming calls to the Tenant Group in Night Mode can be answered using the Night Call Pickup Access Code.
- 2. The relays are Fixed (nonprogrammable).
- Night Chime must be assigned for Night Call Pickup to work. A relay may be assigned even if no ECR-F-11 KTU is installed in the system.

GENERAL INFORMATION - ECR RELAY TO TENANT ASSIGNMENT

This Memory Block is used to specify Tenant Assignment for External Tone Ring/Night Chime function.

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TELEPHONE NUMBER TO TRUNK ASSIGNMENT

CO/PBX Data No. 3 00 PC Programming Guide

USER

TECH B:C:B:I

OPI	ERA	TIO	N:
-----	-----	-----	----

- 1. Go off-line.
- 2. Enter: Mode

CO/PBX

o MIC LK 3 ICM

CO/PBX No. (01~64)	Setting Data (13 digits max.)	
0 1/_		
TIME	DISPLAY	

- 3. Enter data using the dial pad.
 - To program 214-751-7600, enter 214-751-7600 using the dial pad.

To move cursor

To enter data (13 digits maximum) Dial pad 0 9

LNR/SPD key " - " (Hyphen)

key " "(Space) HOLD

kev : Next CO/PBX Line No. CNF

Default Not Specified

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-02 (Trunk Status Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - TELEPHONE NUMBER TO TRUNK ASSIGNMENT

This Memory Block specifies telephone numbers for the CO/PBX lines accommodated so that the telephone number of a seized CO/PBX line will be displayed on the LCD of the telephone when originating or answering a CO/PBX call. (13 digits maximum)

TRUNK STATUS SELECTION

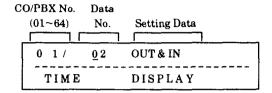
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode CO/PBX LK3 MIC

 TRF

 Data No. 0 2

 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change OUT & IN to IN, press CO/PBX line key 2.

LK 1	LK 2	:]	LK 3	LK 4
OUT & IN	IN			
LK 5	LK 6	;	LK 7	LK 8
COA	ı PBX line key	18	Def	ault
CNF	key	:	Next CO/P	BX Line No.

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-03 (Trunk-to-Trunk Group Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

CO/PBX - Data No. 3 - 02 PC Programming Guide TECH B: C: B: K USER

GENERAL INFORMATION - TRUNK STATUS SELECTION

This Memory Block is used to specify whether a CO/PBX line is used for call origination and termination or termination only.

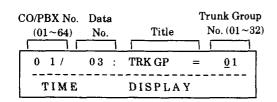
TRUNK-TO-TRUNK GROUP ASSIGNMENT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode CO/PBX LK3 MIC

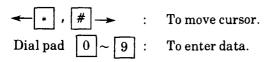
 TRF

 Data No. (Dial Pad)



3. Enter data using the dial pad.

Example: Enter TRK GP 15 at CO 01, using the dial pad.



CNF	key	:	Next CO/PBX Line No
-----	-----	---	---------------------

Data {	00	:	Not Set
	$01 \sim 32$:	Trunk Group 01~32

Default Series 100 and 200	All CO/PBX lines in Trunk Group 01 All Tie lines in Trunk Group 02 All DID lines in Trunk Group 00
Default Series 250 and Higher	CO/PBX lines (01 ~ 08) in Trunk Group 01 CO/PBX lines (09 ~ 64) in Trunk Group 00 All Tie lines in Trunk Group 02 All DID lines in Trunk Group 00

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-04 (Trunk-to-Trunk Transfer Yes/No Selection).
- 5. Press the SPKR key to go back on-line.

CO	/PBX	-	Data No.	
3		- -	03	
	PC Prog	ramming G	uide	
тесн	B:C:B:L	USER		

NOTES:

- 1. There are 32 Trunk Groups available to the system.
- 2. When an Access Code corresponding to a Trunk Group is dialed, an idle CO line is automatically selected and seized from the same Trunk Group (CO line of either same tenant or another tenant can be seized).
- 3. By specifying the priority order, up to four routes (Trunk Groups) can be selected in Memory Block 1-1-30 (Route Advance Block Assignment). Idle CO lines are selected and seized in this sequence.

Additional Programming
 Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - TRUNK-TO-TRUNK GROUP ASSIGNMENT

This Memory Block is used to assign a Trunk Group Number $(01\sim32)$ to each CO/PBX line.

TRUNK-TO-TRUNK TRANSFER YES/NO SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode CO/PBX

 LK 3

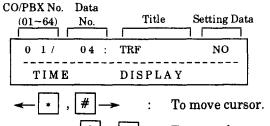
 MIC

 TRF

 TRF

 Data No.

 (Dial Pad)



Dial pad $0 \sim 9$: To enter data.

CNF key: Next CO/PBX Line No.

CNF key : Next CO

- 3. Enter data using the dial pad.
 - To change NO to YES, press CO/PBX line key 2.

CO/PB	K line keys	Def	ault
LK 5	LK 6	LK 7	LK 8
NO	YES		
LK 1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-05 (Trunk Incoming Answer Mode Selection).
- 5. Press the SPKR key to go back on-line.

CO/PBX Data No. 3 04

PC Programming Guide			
тесн	B: C: B: M	USER	

NOTES:

 YES must be assigned for both trunks to be connected via the Trunk-to-Trunk Transfer or an Automatic Trunk-to-Trunk Transfer feature.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-8-07	Class of Service (Attendant) Feature Selection 1	
1-8-08	Class of Service (Station) Feature Selection 2	
3-05	Trunk Incoming Answer Mode Selection	
3-06	Automatic Tandem Trunk Assignment	
5-01	Tie Line Networking Tandem Connection Assignment	

GENERAL INFORMATION - TRUNK-TO-TRUNK TRANSFER YES/NO SELECTION

This Memory Block is used to specify whether to allow Trunk-to-Trunk Transfer.

TRUNK INCOMING ANSWER MODE SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode CO/PBX LK3 MIC

 TRF

 Data No. 0 5

 (Dial Pad)

 CO/PBX No. Data
 (01~64) No. Setting Data

CO/PBX No. (01~64)	Data No.	Setting Data	
0 1/	<u>0</u> 5	NO ASSIGN	
TIME		DISPLAY	

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change Normal to Automated Attendant/DISA, press CO/PBX line key 3.

LK 1	LK 2	LK 3	LK 4
Normal	Automatic Trunk-to- Trunk Transfer	Automated Attendant / DISA	
LK 5	LK 6	LK 7	LK 8
со	/PBX line keys	Defa	ult
CNF	key : N	Next CO Port N	To.

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-06 (Automatic Tandem Trunk Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

CO	/PBX	-	Data No.	
	3	•	05	
	PC Progr	amming G	uide	
тесн	B:C:B:J	USER		

Setting Data:

Line Key	LCD Indication when selected	Definition
LK1	NO ASSIGN	Normal
LK2	TANDM TRF	Automatic Trunk-to- Trunk Transfer
LK3	AA	Automated Attendant / DISA

GENERAL INFORMATION - TRUNK INCOMING ANSWER MODE SELECTION

This Memory Block is used to specify the incoming answer mode (Automatic Trunk-to-Trunk Transfer, Automated Attendant, and DISA) on a per outside line basis.

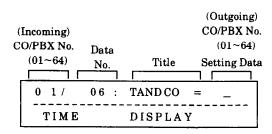
AUTOMATIC TANDEM TRUNK ASSIGNMENT

OPERATION:

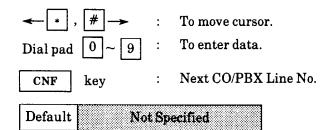
- 1. Go off-line.
- 2. Enter: Mode CO/PBX LK3 MIC

 TRF

 Data No. (Dial Pad)



3. Enter data using the dial pad.



- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-07 (CO/PBX Ringing Variation Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

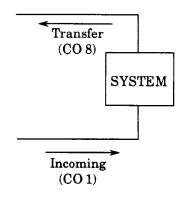
Memory Block No.	Memory Block Name	Required
3-04	Trunk-to-Trunk Transfer Yes/No Selection	√

CO/PBX Data No. 3 06

PC Programming Guide			
TECH	A : C : A	USER	

Example of Tandem Trunk Assignment:

Automatic Trunk-to-Trunk Transfer of incoming CO 1 to CO 8.



CO/PBX No. = 01 Setting Data = 08

This Memory Block specifies the incoming trunk and transferring trunk for Trunk-to-Trunk Transfer.

(Dial Pad)

CO/PBX RINGING VARIATION SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode CO/PBX LK3 MIC

 TRF

 Data No.

 0 7

CO/PBX No. (01~64)	Data No.	Title	s	etting Data
			<u> </u>	
0 1 /	<u>0</u> 7	DST RING	=	M
TIME		DISPLAY		

- 3. Press the corresponding CO/PBX line line key to change data option.
 - To change M to H, press CO/PBX line key 3.

LK 1	LK 2	LK 3	LK 4
Medium (M)	Low (L)	High (H)	
LK 5	LK 6	LK 7	LK 8
CO/PB)	K line keys	Defa	ult
CNF	key :	Next CO/PB	X Line No

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-14 (Tie/DID Line Type Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-28	Distinctive Ringing by Telephone or CO Selection	

CO/PBX	-	Data No.
3	-	07

PC Programming Guide					
тесн	B: C: B: C	USER			

NOTES:

- 1. This Memory Block is not applicable if Telephone is selected in Memory Block 1-1-28 (Distinctive Ringing by Telephone or CO Selection).
- 2. High, medium or low ringing tone follows when transferring calls.

GENERAL INFORMATION - CO/PBX RINGING VARIATION SELECTION

This Memory Block is used to specify a ringing tone (Low, Medium, or High) for each CO/PBX line.

TIE/DID LINE TYPE ASSIGNMENT

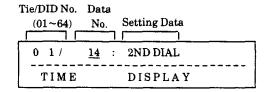
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode CO/PBX LK3 MIC

 TRF

 Data No. 1 4

 (Dial Pad)



- 3. Press the corresponding CO/PBX line line key to change data option.
 - To change 2nd dial tone to Immediate, press CO/PBX line key 2.

LK1	LK 2	LK 3	LK 4
2 nd itial tone	Immediate	Delayed	Wink Start
LK 5	LK 6	LK 7	LK 8
			<u></u>
CO/PB	X line keys	De	fault

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-15 (Trunk DTMF Duration/Interdigit Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
3-92	Trunk (Installed, DP/DTMF) Selection	

CO/PBX	•	Data No.
3	-	14
PC Prog	ramming G	uide
TECH A:D:A:E	USER	

NOTES:

- Line keys 1~4 correspond to the following methods of loop supervision:
 - 1 Second Dial Tone
 - 2 Immediate Start
 - 3 Delay Dial
 - 4 Wink Start
- 2. This Memory Block does not apply to CO/PBX lines.
- 3. This Memory Block affects T1 Channels assigned as Tie/DID lines. [Requires DT1-F(A)-20 KTU and System software V3.00 or higher.]

GENERAL INFORMATION - TIE/DID LINE TYPE ASSIGNMENT

This Memory Block is used to assign the method of loop supervision to be used for each Trunk associated with a Tie line.

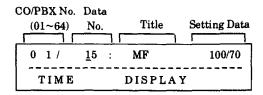
TRUNK DTMF DURATION/INTERDIGIT SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode CO/PBX LK3 MIC

 TRF

 Data No. (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change Digit DTMF Duration 100 ms. and Interdigit Time - 70 ms. to D.T - 70 ms. and I.T. to 60 ms., press CO/PBX line key 1.

	LK 1		LK1 LK2 LK3		LK 4	
*	D.D. 70 ms.	I.T. 60 ms.	DD. IT. 100 ms. 70 ms.	D.D. I.T. 400 ms.100 ms.	D.D. I.T. 600 ms.100 ms.	
	LI	K 5	LK 6	LK 7	LK 8	
	D.D. 900 ms.	I.T. 200 ms.				

CO/PBX line keys

Default

CNF key

Next CO/PBX Line No.

*D.D. = DTMF Digit Duration

I.T. = Interdigit Time

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-16 (Tie Line Prepause Time Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
3-92	Trunk (Installed, DP/DTMF) Selection	

CO	/PBX	•	Data No.
	3	•	15
	PC Prog	ramming G	uide
TECH	B:C:B:D	USER	

NOTES:

- When DTMF is selected for the CO line in Memory Block 3-92 [Trunk (Installed, DP/DTMF) Selection], specify the time duration between sending the DTMF signal and sending the next signal.
- 2. This is also used for Tie lines.
- 3. This Memory Block affects T1 Channels assigned as Tie/DID lines. [Requires DT1-F(A)-20 KTU and System software V3.00 or higher.]

GENERAL INFORMATION - TRUNK DTMF DURATION/INTERDIGIT SELECTION

This Memory Block is used to specify the tone duration and interdigit time of DTMF signals.

TIE LINE PREPAUSE TIME SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode CO/PBX LK3 MIC

 TRF

 Data No. 1 6

CO/PBX No. Data Setting Page
(01~64) No. Title Data No.

0 1 / 16 : PRE 0 | 1

TIME DISPLAY

- Press the corresponding CO/PBX line key to change data option.
 - To change 0 seconds to 5.0 seconds, press CO/PBX line key 8.

RECALL key

Next page.

FNC

key : Previous page.

CNF

key

Next CO/PBX Line No.

(Dial Pad)

Page 1

LK 1	LK 2	LK 3	LK 4
0 sec.	0.5 sec.	1.0 sec.	1.5 sec.
LK 5	LK 6	LK 7	LK 8
2.0 sec.	3.0 вес.	4.0 sec.	5.0 sec.

Page 2

LK 1	L K 2	LK 3	LK 4
6.0 sec.	7.0 sec.	8.0 sec.	9.0 sec.
LK 5	LK 6	LK 7	LK 8
10.0 вес.	11.0 sec.	12.0 sec.	13.0 sec.

CO/PBX line keys



- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-17 (Tie Line Answer Detect Time Selection).
- 5. Press the SPKR key to go back on-line.

CC	/PBX	•	Data No.
	3	•	16
	PC Progr	ramming G	uide
TECH	A:D:C:I	USER	

NOTES:

- 1. Prepause time differs according to the acknowledgment signaling method.
- 2. This Memory Block affects T1 Channels assigned as Tie/DID lines. [Requires DT1-F(A)-20 KTU and System software V3.00 or higher.]

Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - TIE LINE PREPAUSE TIME SELECTION

This Memory Block specifies the time (prepause) when the originating side becomes able to send dial pulse or DTMF to the distant system.

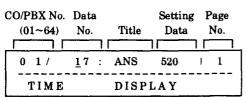
TIE LINE ANSWER DETECT TIME SELECTION

OPERATION:

- 1. Go off-line.
- MIC LK3 CO/PBX 2. Enter: Mode ICM TRF

Data No.

1 7 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 520 ms. to 910 ms., press CO/PBX line key 8.

RECALL

kev

Next page.

FNC

key

Previous page.

CNF

key

Next CO/PBX Line No.

Page 1

LK 1	LK 2	LK 3	LK 4
0 ms.	130 ms.	260 ms.	390 ms.
LK 5	LK 6	LK 7	LK 8
520 ms.	650 ms.	780 ms.	910 ma.

Page 2

LK 1	LK 2	LK 3	LK 4
1040 ms.	1170 ma.	1300 ms.	1430 ms.
LK 5	LK 6	LK 7	LK 8
1560 ms.	1690 ms.	1820 ms.	1950 ms.

CO/PBX line keys



- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-18 (Tie Line Release Detect Time Selection).
- 5. Press the SPKR key to go back on-line.

CO/PBX Data No. 3 17 PC Programming Guide USER

NOTES:

TECH A:D:C:A

- Answering a call may not be possible if the CO answer detect time is too long.
- 2. This Memory Block affects T1 Channels assigned as Tie/DID lines. [Requires DT1-F(A)-20 KTU and System software V3.00 or higher.]

Additional Programming Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - TIE LINE ANSWER DETECT TIME SELECTION

This Memory Block specifies the duration between the time when the receiving Level II and/or Level II Advanced system answers (off-hook) and the time when it is recognized as an answer.

TIE LINE RELEASE DETECT TIME SELECTION

(Dial Pad)

OPERATION:

- 1. Go off-line.
- o MIC 2. Enter: Mode LK 3 CO/PBX ICM TRF Data No. 8

CO/PBX No. Data Setting Page $(01 \sim 64)$ Title No. Data No. 0 1/ 18: RLS 520 1 TIME DISPLAY

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 520 ms. to 910 ms., press CO/PBX line kev 8.

RECALL key Next page. key Previous page. FNC CNF key Next CO/PBX Line No.

rageı	
LK 1	Γ
0. 20	Г

LK 1	LK 2	LK 3	LK 4
0 ms.	130 ms.	260 ms.	390 ms.
LK 5	LK 6	LK 7	LK 8
520 ms	650 ms.	780 ms.	910 ms.

Page 2

LK 1	LK 2	LK 3	LK 4
1040 ms.	1170 ms.	1300 ms.	1430 ms.
LK 5	LK 6	LK 7	LK 8
1560 ms.	1690 ms.	1820 ms.	1950 ms.

Default CO/PBX Line Key

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-19 (Tie Line/CO/PBX Incoming Signal Detect Time Selection).
- 5. Press the SPKR key to go back on-line.

CO	/PBX	•	Data No.
	3	-	18
	PC Pro	gramming G	uide
тесн	A:D:C:J	USER	

NOTES:

- Specify distinguishing circuit release from on-hook, noise, and temporary interruption. There are four probable situations for CO release detection.
 - a. Called side hangs up first. The circuit is considered to be released 92 ms. + specified time after the other party disconnects the call.
 - b. Called side hangs up second. The circuit is considered to be released when the specified time has elapsed after the other party hangs
 - c. Originating side hangs up first. The circuit is considered to be released 92 ms. + specified time after the other party hangs up.
 - d. Originating side hangs up second. The circuit is considered to be released when the specified time has elapsed after the other party hangs up.
- This Memory Block affects T1 Channels assigned as Tie/DID lines. [Requires DT1-F(A)-20 KTU and System software V3.00 or higher.]

Additional Programming Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - TIE LINE RELEASE DETECT TIME SELECTION

This Memory Block specifies the duration between the time when the circuit disconnection is detected on the Tie line on the distant system side or intra-system side and the time when it is recognized as Tie line release.

TIE LINE/CO/PBX INCOMING SIGNAL DETECT TIME SELECTION

OPERATION:

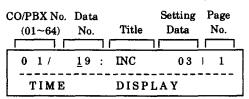
1. Go off-line.

2. Enter: Mode CO/PBX LK3 • MIC
• ICM

TRF

Data No.

1 9 (Dial Pad)



3. Press the corresponding CO/PBX line key to change data option.

Example: In Wink Start method.

 To change 390 ms. to 910 ms., press CO/PBX line key 8.

RECALL key

Next page.

FNC

: Previous page.

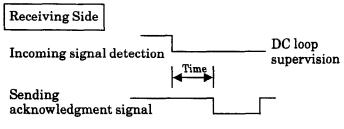
CNF

key

key

Next CO/PBX Line No.

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-20 (Tie Line Loop Off-Guard Time Selection).
- 5. Press the SPKR key to go back on-line.



Additional Programming

Memory Block No.	Memory Block Name	Required
3-14	Tie/DID Line Type Assignment	

CO	/PBX		Data No.			
	3	•	19			
	PC Programming Guide					
тесн	A : D : C : I	USE	R			

* In Wink Start method

Page 1

LK 1	LK 2	LK 3	LK 4
0 ms. (00)	130 ms. (01)	260 ms. (02)	390 ms. (03)
LK 5	LK 6	LK 7	LK8
520 ms. (G4)	650 ms. (05)	780 ms. (06)	910 ms. (07)

Page 2

LK 1	LK 2	LK 3	LK 4
1040 ms. (08)	1170 ms. (09)	1300 ms. (10)	1430 ms. (11)
LK 5	LK 6	LK 7	LK 8
1560 ms. (12)	1690 ms. (13)	1820 ms. (14)	1950 ms. (15)

* In Delay method

Page 1

LK 1	LK 2	LK 3	LK 4
0 ms. (00)	30 ms. (01)	60 ms. (02)	90 ms. (03)
LK 5	LK 6	LK 7	LK 8
120 ms. (04)	150 ms. (05)	180 ms. (180	210 ms. (07)

Page 2

LK 1	LK 2	LK 3	LK 4
240 ms. (08)	270 ms. (09)	300 ms. (10)	330 ms. (11)
LK 5	LK 6	LK 7	LK 8
360 ms. (12)	390 ms. (13)	420 ms. (14)	450 ms. (15)

* In COI

Page 1

LK 1	LK 2	LK 3	LK4
50 ms. (00)	100 ms. (01)	150 ms. (02)	200 ms. (83)
LK 5	LK 6	LK 7	LK 8
250 ms. (04)	300 ms. (05)	350 ms. (06)	400 ms. (07)

Page 2

LK 1	LK 2	LK 3	LK 4
450 ms. (08)	500 ms. (09)	550 ms. (10)	600 ms. (11)
LK 5	LK 6	LK 7	LK 8
650 ms. (12)	700 ms. (13)	750 ms. (14)	800 ms. (15)

CO/PBX line keys



NOTES:

For second dial tone method and immediate method, the time is fixed at 30 ms.

2. This Memory Block affects T1 Channels assigned as Tie/DID lines. [Requires DT1-F(A)-20 KTU and System software V3.00 or higher.]

GENERAL INFORMATION - TIE LINE/CO/PBX INCOMING SIGNAL DETECT TIME SELECTION

This Memory Block specifies the duration between the time when the incoming signal from another system is detected and the time when acknowledgment signal is sent out.

TIE LINE LOOP OFF-GUARD TIME SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode CO/PBX LK3 ICM

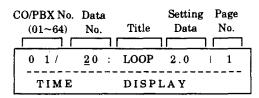
TRF

TRF

2 0

Data No.

(Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 2.0 sec. to 5.0 sec., press CO/PBX line key 8.

RECALL key

Next page.

FNC

key

Previous page.

CNF

key

Next CO/PBX Line No.

Page 1

LK 1	LK 2	LK 3	LK 4
0 sec.	0.5 sec.	1.0 sec.	1.5 sec.
LK 5	LK 6	LK 7	LK 8
2.0 sec.	3.0 sec.	4.0 sec.	5.0 sec.

Page 2

LK 1	L K 2	LK 3	LK 4
6.0 вес.	7.0 sec.	8.0 sec.	9.0 sec.
LK 5	LK 6	LK 7	LK 8
10.0 sec.	11.0 sec.	12.0 sec.	13.0 sec.

CO/PBX line keys



- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-21 (Tie Line Length of Wink Signal Selection).
- 5. Press the SPKR key to go back on-line.

CO	/PBX	-	Data No.
	3	•	20
	PC Progra	mming G	uide
TECH	A:D:C:F	USER	

NOTES:

- 1. Assign a loop off-guard time to eliminate the possibility of system malfunction caused by noise when going off-hook to answer a call from another system on a Tie line call.
- The system ignores any noise that may be detected during the time specified in this Memory Block.
- 3. This Memory Block affects T1 Channels assigned as Tie/DID lines. [Requires DT1-F(A)-20 KTU and System software V3.00 or higher.]

Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - TIE LINE LOOP OFF-GUARD TIME SELECTION

This Memory Block is used to assign loop off-guard protection to prevent noise that may cause the system to be unable to answer an incoming Tie line.

TIE LINE LENGTH OF WINK SIGNAL SELECTION

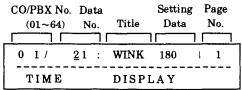
OPERATION:

- 1. Go off-line.
- MIC CO/PBX LK3 2. Enter: Mode V

TRF 2 1 ICM

Data No.

(Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 180 ms. to 240 ms., press CO/PBX line key 8.

RECALL key

key

key

Next page.

FNC

Previous page.

CNF

Next CO/PBX Line No.

Page 1

0			
LK 1	LK 2	LK 3	LK 4
30 ms.	60 ms.	90 ms.	120 ms.
LK 5	LK 6	LK 7	LK 8
150 ms.	180 ms.	210 ms.	240 ms.

Page 2

LK 1	LK 2	LK 3	LK 4
270 ms.	300 ms.	330 ms.	360 ms.
LK 5	LK 6	LK 7	LK 8
390 ms.	420 ms.	450 ms.	480 ms.

CO/PBX line keys



- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-22 (Tie Line Length of Delay Signal Selection).
- 5. Press the SPKR key to go back on-line.

CO/PBX	•	Data No.
3	-	21

	PC Program	ming	Guide
тесн	A:D:C:L	USER	

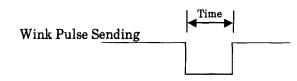
NOTES:

- Specify Wink Start method in Memory Block 3-14 (Tie/DID Line Type Assignment).
- This Memory Block affects T1 Channels assigned as Tie/DID lines. [Requires DT1-F(A)-20 KTU and System software V3.00 or higher.]

Receiving Side

Receiving Signal Detection

DC loop supervision



Additional Programming

Memory Block No.	Memory Block Name	Required
3-14	Tie/DID Line Type Assignment	

GENERAL INFORMATION - TIE LINE LENGTH OF WINK SIGNAL SELECTION

This Memory Block is used to specify the length of time a wink pulse is sent to another system.

DC loop supervision

Time

TIE LINE LENGTH OF DELAY SIGNAL SELECTION

PC Programming Guide TECH A:D:C:C USER

NOTES:

(Tie/DID Line Type Assignment).

Specify Delay Method in Memory Block 3-14

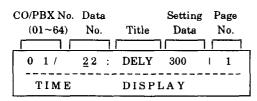
OPERATION:

- 1. Go off-line.

TRF

Data No.

2 2 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 300 ms. to 2100 ms., press CO/PBX line key 8.

RECALL key : Next page.

FNC key : Previous page.

CNF key : Next CO/PBX Line No.

evious page.

2. This Memory Block affects T1 Channels assigned as Tie/DID lines. [Requires DT1-F(A)-20 KTU and System software V3.00 or higher.]

Receiving Side

Receiving signal

Delay Pulse Sending

detection

Page 1

LK 1	LK 2	LK 3	LK 4
0 ms.	300 ms.	600 ms.	900 ms.
LK 5	LK 6	LK 7	LK 8
1200 ms.	1500 ms.	1800 ms.	2100 ms.

Page 2

LK 1	LK 2	LK 3	LK 4
2400 ms.	2700 ma.	3000 ms.	3300 ms.
LK 5	LK 6	LK 7	LK 8
3600 ms.	3900 ms.	4200 ms.	4500 ms.

CO/PBX line keys

4. Pressing the TRF key will write the selected data and advance to Memory Block 3-23 (Tie

Default

Line Outgoing Timeout Selection).

5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
3-14	Tie/DID Line Type Assignment	

GENERAL INFORMATION - TIE LINE LENGTH OF DELAY SIGNAL SELECTION

This Memory Block is used to specify the length of time a delay pulse is sent to another system.

TIE LINE OUTGOING TIMEOUT SELECTION

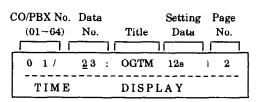
2 3

(Dial Pad)

OPERATION:

- 1. Go off-line.
- MIC CO/PBX LK3 2. Enter: Mode **ICM** TRF

Data No.



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 12 sec. to 7 sec., press the **RECALL** key to turn to Page 1.
 - Press CO/PBX line key 8.

RECALL key Next page.

FNC

Previous page.

CNF key

kev

Next CO/PBX Line No.

Page 1

LK 1	LK 2	LK 3	LK 4
No Limit	1 sec.	2 sec.	3 sec.
LK 5	LK 6	LK 7	LK 8
4 sec.	5 sec.	6 sec.	7 sec.

Page 2

LK 1	LK 2	LK 3	LK 4
8 sec.	9 sec.	10 sec.	11 sec.
LK 5	LK 6	LK 7	LK 8
12 sec.	13 sec.	14 sec.	15 sec.

CO/PBX line keys

Default

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-24 (Tie Line Incoming Interdigit Timeout Selection).
- 5. Press the SPKR key to go back on-line.

CO/PBX Data No. 3 23

PC Programming Guide				
тесн	A:D:C:H	USER		

NOTES:

- Specify a maximum interval before the Tie line sender times out.
- 2. A timeout will occur when:
 - The calling station fails to send dial pulses within the time interval specified in this Memory Block after the prepause time.
 - The calling station, after sending dial pulses, fails to send the next dial pulse within the time interval specified.
- This Memory Block affects T1 Channels assigned as Tie/DID lines. [Requires DT1-F(A)-20 KTU and System software V3.00 or higher.]

Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - TIE LINE OUTGOING TIMEOUT SELECTION

This Memory Block is used to specify the maximum time interval between the origination of an outgoing call

TIE LINE INCOMING INTERDIGIT TIMEOUT SELECTION

OPERATION:

2

(Dial Pad)

- 1. Go off-line.
- o MIC 2. Enter: Mode CO/PBX LK3 ICM TRF TRF

Data No.

CO/PBX No. (01~64)	Data No.	Title	Setting Data	Page No.
0 1/	<u>2</u> 4 :	INCOM	6s	1
TIME		DISPI	ΑΥ	

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 6 sec. to 7 sec., press CO/PBX line key 8.

RECALL key Next page. **FNC** Previous page.

key CNF

Next CO/PBX Line No.

Page 1			
LK 1	LK 2	LK 3	LK 4
No Limit	l sec.	2 sec.	3 sec.
LK 5	LK 6	LK7	LK 8
4 sec.	5 sec.	6 sec.	7 sec.

LK 1	LK 2	LK 3	LK 4
8 sec.	9 sec.	10 sec.	11 sec.
LK 5	LK 6	LK 7	LK 8
12 sec.	13 sec.	14 sec.	15 sec.

CO/PBX line keys



Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

CO	/PBX	-	Data No.	
	3	-	24	
	PC Progra	amming G	uide	
ТЕСН	A:D:C:D	USER		

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-25 (Tie Line Wink/Delay Signal Detect Timeout Selection).
- 5. Press the SPKR key to go back on-line.

NOTES:

- Specify a maximum effective interval between the gaps of incoming address signals.
- 2. A timeout will occur when:
 - A dial pulse is not received within the time specified by this Memory Block after the receiving side detects the off-hook signal.
 - The next dial pulse is not received within the time specified by this Memory Block after the receiving side detects (receives) a dial pulse.
- 3. This Memory Block affects T1 Channels assigned as Tie/DID lines. [Requires DT1-F(A)-20 KTU and System software V3.00 or higher.]

GENERAL INFORMATION - TIE LINE INCOMING INTERDIGIT TIMEOUT SELECTION

This Memory Block is used to specify a time interval during the incoming call detection process. If an address signal is not received within a specified time, an error tone is returned to the other system.

TIE LINE WINK/DELAY SIGNAL DETECT TIMEOUT SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode

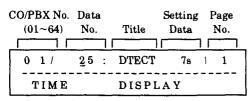
MIC CO/PBX LK3 ICM w

TRF

Data No.

5 2

(Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 7 sec. to 5 sec., press CO/PBX line kev 6.

RECALL

Next page. key

FNC

Previous page.

CNF

key

key

Next CO/PBX Line No.

Page 1			
LK 1	LK 2	LK 3	LK 4
No Limit	1 sec.	2 sec.	3 sec.
LK 5	LK 6	LK 7	LK 8
4 sec.	5 sec.	6 sec.	7 sec.

Page	2	
	LK	

LK 1	LK 2	LK 3	LK 4
8 sec.	9 sec.	10 sec.	11 sec.
LK 5	LK 6	LK 7	LK 8
12 sec.	13 sec.	14 sec.	15 sec.

CO/PBX line keys



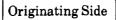
- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-26 (Tie Line Outgoing Guard Time Selection).
- 5. Press the SPKR key to go back on-line.

CO/PBX Data No. 25

PC Programming Guide				
тесн	A:D:C:K	USER		

NOTES:

- 1. If the acknowledgment signal is not received within a predetermined amount of time after an outgoing signal is sent to the other system, a busy tone is sent to the telephone.
- 3. This Memory Block affects T1 Channels assigned as Tie/DID lines. [Requires DT1-F(A)-20 KTU and System software V3.00 or higher.]



Sending an Outgoing signal Receiving Time acknowledgment signal Timeout when the acknowledgment signal is not

received.

Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - TIE LINE WINK/DELAY SIGNAL DETECT TIMEOUT SELECTION

I This Memory Block is used to specify a maximum time for receiving an acknowledgment signal from a distant I system before sending a busy tone.

TIE LINE OUTGOING GUARD TIME SELECTION

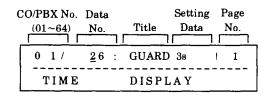
OPERATION:

(Dial Pad)

- 1. Go off-line.
- 2. Enter: Mode CO/PBX LK3 MIC

 TRF

 Data No.



- Press the corresponding CO/PBX line key to change data option.
 - To change 3 sec. to 7 sec., press CO/PBX line key 8.

RECALL key : Next page.

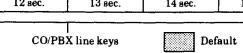
FNC key : Previous page.

CNF key : Next CO/PBX Line No.

•	age	
1		7

LK 1	LK 2	LK 3	LK 4
0.02 sec.	1 sec.	2 sec.	3 sec.
LK 5	LK 6	LK 7	LK 8
4 sec.	5 вес.	6 sec.	7 sec.

Page 2 LK 1 LK 2 LK3 LK 4 8 sec. 9 sec. 10 sec. 11 sec. LK 5 LK 6 LK 7 LK 8 12 sec. 13 sec. 14 sec. 15 sec.



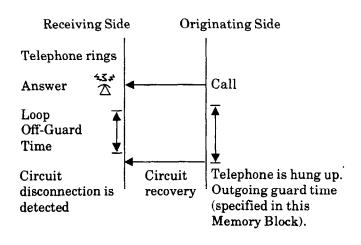
- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-27 (Tie Line Dial Tone Selection).
- 5. Press the SPKR key to go back on-line.

CO/PBX	-	Data No.
3	•	26

PC Programming Guide				
TECH	A:D:C:G	USER		

NOTES:

- 1. When a call is made on a Tie line using a loop dial method and the call is hung up immediately before the other side answers, the other side must be notified that the line was disconnected after the loop off-guard time has elapsed to prevent collision with answering. (The other side will ignore circuit disconnection during the loop off-guard time.)
- This Memory Block affects T1 Channels assigned as Tie/DID lines. [Requires DT1-F(A)-20 KTU and System software V3.00 or higher.]



Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - TIE LINE OUTGOING GUARD TIME SELECTION

This Memory Block is used to specify the duration between the time when a Tie line is released and the time when the other side is notified of circuit disconnection. This occurs when the originated call is hung up before the other side answers. The time specified here must be longer than the loop off-guard time assigned on the distant system.

(Dial Pad)

TIE LINE DIAL TONE SELECTION

CO/PBX - Data No. 3 - 27 PC Programming Guide TECH A:D:A:E USER

OPERATION:

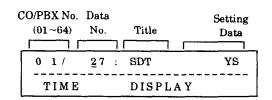
- 1. Go off-line.
- 2. Enter: Mode CO/PBX LK3 MIC

 TRF

 Data No.

This Memory Block affects T1 Channels assigned as Tie/DID lines. [Requires DT1-F(A)-20 KTU and System software V3.00 or higher.]

NOTES:



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change YES to NO, press CO/PBX line key 1.

RECALL key

Next page.

FNC key

Previous page.

CNF key

Next CO/PBX Line No.

COÆ	BX line keys	Def	ault
LK 5	LK 6	LK 7	LK 8
NO	YES		
LK 1	LK.2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-28 (Tie Line Reorder Tone Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.		
3-14	Tie/DID Line Type Assignment	

GENERAL INFORMATION - TIE LINE DIAL TONE SELECTION

This Memory Block is used to specify whether or not to send a dial tone to the distant system.

TIE LINE REORDER TONE SELECTION

CO	/PBX	•	Data No.	
3		•	28	
	PC Progra	amming G	uide	
TECH	A:D:A:F	USER		

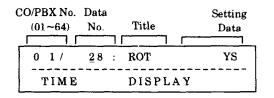
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode CO/PBX LK3 MIC

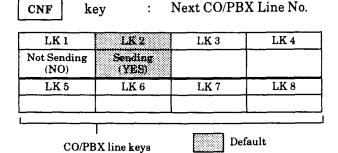
 TRF

 Data No. 2 8

 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change YES to NO, press CO/PBX line key 1.

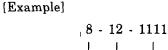


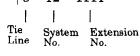
- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-29 (Tie Line Internal Transmit Pad Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

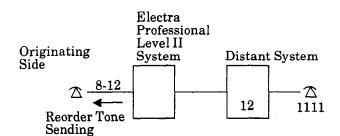
Memory Block No.	Memory Block Name	Required
3-14	Tie/DID Line Type Assignment	

NOTES:

1. This Memory Block affects T1 Channels assigned as Tie/DID lines. [Requires DT1-F(A)-20 KTU and System software V3.00 or higher.]







GENERAL INFORMATION - TIE LINE REORDER TONE SELECTION

This Memory Block is used to specify whether or not to send a reorder tone to the originating station when the number of a distant system is used to originate a call over a Tie line.

TIE LINE INTERNAL TRANSMIT PAD SELECTION

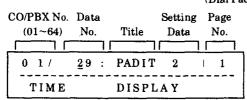
OPERATION:

- 1. Go off-line.
- o MIC LK 3 CO/PBX 2. Enter: Mode ICM T



Data No.

(Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 2 dB to 6 dB sec., press CO/PBX line key 3.

RECALL key

Next page.

FNC

Previous page.

CNF

key kev

Next CO/PBX Line No.

Page 1	Page 1				
LK 1	LK 2	LK 3	LK 4		
2dB	4 dB	6 dB	8 dB		
LK 5	LK 6	LK 7	LK 8		
12 dB	16 dB	S1	S2		

0 d B			
LK 5	LK 6	LK 7	LK 8

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-30 (Tie Line Internal Receive Pad Selection).
- 5. Press the SPKR key to go back on-line.

CO/PBX line keys

CO	/PBX	-	Data No.		
3		-	29		
	PC Programming Guide				
TECH	A:D:A:D	USER			

NOTES:

- Setting data options S1 and S2 allows any desired level to be set by installing a resistor on the KTU. (If S1 and S2 are specified with no resistor installed, the level will be set at 0 dB.)
- 2. When two or more Level II and/or Level II Advanced systems are connected by Tie lines, the volume level (circuit loss) may differ from circuit to circuit, depending on the connection.
- 3. The Level II and/or Level II Advanced systems divide the connections into the following patterns:

(Specify the sending and receiving levels of each pattern for each of the Tie lines.)

Pattern A (Intercom Mode) Connections estab-

lished between the intercom stations of the local system and another system.

Sending level

(To be specified in this Memory

Block.)

Receiving level

Pattern B (Tandem Mode)

Connections established between two systems, with the local system as a tandem system.

Sending level

Receiving level

- 4. Setting data option S1 on DTI allows 3 dB. Setting data option S2 on DTI allows -3 dB.
- 5. This Memory Block affects T1 Channels assigned as Tie/DID lines. [Requires DT1-F(A)-20 KTU and System software V3.00 or higher.]
- **Additional Programming**

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - TIE LINE INTERNAL TRANSMIT PAD SELECTION

This Memory Block is used to specify a volume level for calls originated from the extensions of a local system to a distant system.

TIE LINE INTERNAL RECEIVE PAD SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode

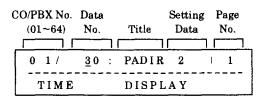
o MIC CO/PBX LK 3



ICM

Data No.

3 0 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 2 dB to 6 dB sec., press CO/PBX line key 3.

RECALL key

key

kev

Next page.

FNC

Previous page.

CNF

Next CO/PBX Line No.

Page 1

LK 1	LK 2	LK 3	LK4
2 dB	4 dB	6 dB	8 dB
LK 5	LK 6	LK 7	LK 8
12 dB	16 dB	S1	S2

Daga 9

LK 1	LK 2	LK 3	LK 4
0 dB			
LK 5	LK 6	LK 7	LK 8

CO/PBX line keys



- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-31 (Tie Line External Transmit Pad Selection).
- 5. Press the SPKR key to go back on-line.

CO/PBX	•	Data No.
3		30

PC Programming Guide				
TECH	A:D:A:C	USER		

NOTES:

- Setting data options S1 and S2 allows any desired volume level to be set by installing a resistor on the KTU. (If S1 and S2 are specified with no resistor installed, the level will be set at 0 dB.)
- 2. When two or more Level II and/or Level II Advanced systems are connected by Tie lines, the volume level (circuit loss) may differ from circuit to circuit, depending on the connection.
- The Level II and/or Level II Advanced systems divide the connections into the following patterns:

(Specify the sending and receiving levels of each pattern for each of the Tie lines.)

Pattern A (Intercom Mode) Connections estab-

lished between the intercom stations of the local system and another system.

Sending level

Receiving level (To be specified in this Memory Block.)

Pattern B (Tandem Mode)

Connections established between two systems, with the local system as a tandem system.

Sending level

Receiving level

- 4. Setting data option S1 on DTI allows 3 dB. Setting data option S2 on DTI allows -3 dB.
- 5. This Memory Block affects T1 Channels assigned as Tie/DID lines. [Requires DT1-F(A)-20 KTU and System software V3.00 or higher.]
- Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - TIE LINE INTERNAL RECEIVE PAD SELECTION

This Memory Block is used to specify a volume level for calls coming into extensions of a local system from a distant system.

TIE LINE EXTERNAL TRANSMIT PAD SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode

CO/PBX

LK 3 • MIC • ICM

TRF

Data No.

3 1 (Dial Pad)

 CO/PBX No.
 Data
 Setting Page

 (01~64)
 No.
 Title
 Data
 No.

 0 1 / 31 : PADET 2 | 1
 1
 TIME
 DISPLAY

- Press the corresponding CO/PBX line key to change data option.
 - To change 2 dB to 6 dB, press CO/PBX line key 3.

RECALL key

Next page.

FNC

Previous page.

CNF

kev

key

Next CO/PBX Line No.

Page 1

LK1	LK 2	LK 3	LK 4
2dB	4 dB	6 dB	8 dB
LK 5	LK 6	LK 7	LK 8
12 dB	16 dB	S1	S2

Page 2

0 dB LK5 LK6 LK7 LK	LK 1	LK 2	LK 3	LK 4
LK5 LK6 LK7 LK	0 dB			
	LK 5	LK 6	LK 7	LK 8

CO/PBX line keys

Default

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-32 (Tie Line External Receive Pad Selection).
- 5. Press the SPKR key to go back on-line.

- CO/PBX
 Data No.

 3
 31
- PC Programming Guide
 TECH A:D:A:B USER

NOTES:

- Setting data options S1 and S2 allows any desired volume level to be set by installing a resistor on the KTU. (If S1 and S2 are specified with no resistor installed, the level will be set at 0 dB.)
- 2. When two or more Level II and/or Level II Advanced systems are connected by Tie lines, the volume level (circuit loss) may differ from circuit to circuit, depending on the connection.
- The Level II and/or Level II Advanced systems divide the connections into the following patterns:

(Specify the sending and receiving levels of each pattern for each of the Tie lines.)

Pattern A (Intercom Mode) Connections estab-

lished between the intercom stations of the local system and another system.

Sending level

Receiving level

Pattern B (Tandem Mode)

Connections established between two systems, with the local system as a tandem system.

Sending level

(To be specified in this Memory Block.)

Receiving level

- 4. Setting data option S1 on DTI allows 3 dB. Setting data option S2 on DTI allows -3 dB.
- 5. This Memory Block affects T1 Channels assigned as Tie/DID lines. [Requires DT1-F(A)-20 KTU and System software V3.00 or higher.]
- Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - TIE LINE EXTERNAL TRANSMIT PAD SELECTION

This Memory Block is used to specify a volume level for the outgoing calls of the local system to a distant system.

TIE LINE EXTERNAL RECEIVE PAD SELECTION

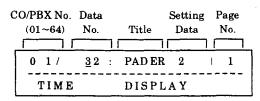
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode CO/PBX LK3 MIC
 ICM

TRF

Data No.

(Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 2 dB to 6 dB, press CO/PBX line key 3.

RECALL

key

Next page.

FNC

key

Previous page.

CNF

kev

Next CO/PBX Line No.

Page 1

LK1	LK 2	LK 3	LK 4
2 dB	4 dB	6 dB	8 dB
LK 5	LK 6	LK 7	LK 8
12 dB	16 dB	S1	S2

Page 2

LK1	LK 2	LK 3	LK 4
0 dB			
LK 5	LK 6	LK 7	LK 8

CO/PBX line keys



- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-33 (Disconnect Recognition Time Selection).
- 5. Press the SPKR key to go back on-line.

CO	/PBX	•	Data No.
	3	-	32
	PC Progra	mming G	uide
TECH	A:D:A:A	USER	

NOTES:

- 1. Setting data options S1 and S2 allows any desired volume level to be set by installing the corresponding resistor on the unit. (If S1 and S2 are specified with no resistor installed, the volume level will be set at 0 dB.)
- 2. When two or more Level II and/or Level II Advanced systems are connected by Tie lines, the volume level (circuit loss) may differ from circuit to circuit, depending on the connection.
- The Level II and/or Level II Advanced systems divide the connections into the following patterns:

(Specify the sending and receiving levels of each pattern for each of the Tie lines.)

Pattern A (Intercom Mode) Connections estab-

Connections established between the intercom stations of the local system and another system.

Sending level

Receiving level

Pattern B (Tandem Mode)

Connections established between two systems, with the local system as a tandem system.

Sending level

Receiving level (To be specified in this Memory Block.)

- 4. Setting data option S1 on DTI allows 3 dB. Setting data option S2 on DTI allows -3 dB.
- 5. This Memory Block affects T1 Channels assigned as Tie/DID lines. [Requires DT1-F(A)-20 KTU and System software V3.00 or higher.]
- Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - TIE LINE EXTERNAL RECEIVE PAD SELECTION

This Memory Block is used to specify a volume level for incoming calls from a distant system.

DISCONNECT RECOGNITION TIME SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode

• MIC CO/PBX LK 3 ICM T

TRF

Data No.

3 3 (Dial Pad)

CO/PBX No. Data Setting Page $(01 \sim 64)$ No. Title Data No. 0 1/ 33 : DISTM TIME DISPLAY

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 0.3 sec. to 0.5 sec., press CO/PBX line key 6.

RECALL

key

Next page.

FNC

key

Previous page.

CNF

key

Next CO/PBX Line No.

Page 1

LK 1	LK 2	LK 3	LK 4
0 sec.	.1 sec.	.2 вес.	.3 sec.
LK 5	LK 6	LK 7	LK 8
.4 sec.	.5 вес.	.6 sec.	.7 sec.

Page 2

LK 1	LK 2	LK 3	LK 4
.8 sec.	.9 вес.	1.0 sec.	1.1 sec.
LK 5	LK 6	LK 7	LK 8
1.2 sec.	1.3 sec.	1.4 sec.	1.5 sec.

CO/PBX line keys



- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-38 (Automated Attendant Message to Trunk Selection).
- 5. Press the SPKR key to go back on-line.

CO/PBX Data No. 3 33 PC Programming Guide TECH B:C:B:G USER

NOTES:

When a call origination on a CO/PBX line or Tie line is interrupted or dropped while in progress, and an attempt is made to reseize the line, the seized line must be disconnected and cleared before it can be accessed again.

Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - DISCONNECT RECOGNITION TIME SELECTION

This Memory Block is used to specify the minimum time for a circuit that has been disconnected to be accessed again.

AUTOMATED ATTENDANT MESSAGE TO TRUNK SELECTION

CO/PBX Data No. _ 3 38 PC Programming Guide TECH USER A:I:H

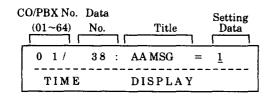
NOTES:

Access Code to activate this feature.

The attendant telephone position must dial an

OPERATION:

- 1. Go off-line.
- MIC 2. Enter: Mode CO/PBX LK3 ICM TRF 3 8 Data No. (Dial Pad)



3. Enter data using the dial pad.

Setting Data

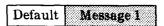
: 1~8 Automated

Attendant Message 1~8

CNF

key

: Next CO/PBX Line No.



- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-40 (Automatic Release Signal Detection Time Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - AUTOMATED ATTENDANT MESSAGE TO TRUNK SELECTION

This Memory Block is used to assign the Automated Attendant Message on a per CO/PBX Trunk basis. When Automated Attendant Message is assigned to each CO/PBX Trunk, the system will automatically answer the incoming call and send an Automated Attendant Message to the calling party.

Data No.

AUTOMATIC RELEASE SIGNAL DETECTION TIME SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode CO/PBX LK3 MIC

TRF
4 0

(Dial Pad)

Data No.

CO/PBX No. Data Setting
(01~64) No. Title Data

0 1 / 40 : RLST 350 YS|1

TIME DISPLAY

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change 350 ms. to 250 ms., press CO/PBX line key 6 while in Page 1.

RECALL key : Next page.

FNC key : Previous page.

CNF key : Next CO/PBX Line No.

Page 1			
LK 1	LK 2	LK 3	LK 4
0 ms	50 ms	100 ms	150 ms
LK 5	LK 6	LK 7	LK 8
200 ms	250 ms	300 ms	350 ms

200 ms	250 ms	300 ms	350 ms
Page 2			
LK 1	LK 2	LK 3	LK 4
400 ms	450 ms	500 ms	550 ms
LK 5	LK 6	LK 7	LK 8

700 ms

CO/PBX line keys -_ Default

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-41 (Delay Announcement Assignment).
- 5. Press the SPKR key to go back on-line.

650 ms

Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

CO/PBX

3

TECH B:C:B:B

PC Programming Guide

USER

GENERAL INFORMATION - AUTOMATIC RELEASE SIGNAL DETECTION TIME SELECTION

This Memory Block is used to specify the signal detection time for release of a CO or PBX line, when a disconnect signal is received from the distant Central Office or PBX.

600 ms

DELAY ANNOUNCEMENT ASSIGNMENT

CO/PBX	•	Data No.
3	-	41

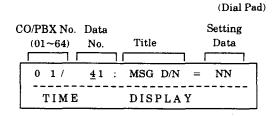
	PC Program	ming (Guide
TECH	A:H:A	USER	

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode CO/PBX LK3 MIC

 TRF

 Data No. 4 1



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change NN to YN (Delay Announcement Day only), press CO/PBX line key 2.

LK 1	LK 2	LK 3	LK 4
NN	YN	NY	YY
LK 5	LK 6	LK 7	LK 8
	<u> L</u>		L

Setting	Data
Selling	Data

Line Key	LCD Indication	Delay Announcement
1	NN	No
2	YN	Day only
3	NY	Night only
4	YY	Day and Night

- Pressing the TRF key will write the selected data and advance to Memory Block 3-42 (DIT Assignment).
- 5. Press the SPKR key to go back on-line.

NOTES:

- This function requires version 2.00 software or higher.
- This feature requires an MIF-F(A)-10 or MIF-F(U)-10 KTU and a VRS-F(4)-11 KTU.

Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - DELAY ANNOUNCEMENT ASSIGNMENT

This Memory Block is used to specify whether Delay Announcement is sent to the calling party (on a per CO Port basis) for Day and/or Night Mode.

(Dial Pad)

DIT ASSIGNMENT

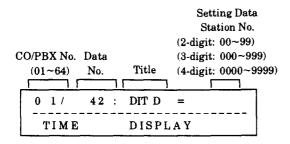
OPERATION:

1. Go off-line.

2. Enter: Mode CO/PBX LK3 • MIC

TRF

Data No. 4 2



- 3. Use the dial pad to enter data.
 - Station No. (2-, 3-, or 4-digits 00~9999)
 - COPort No. (01~64)

Dial pad $0 \sim 9$: To enter data.

CNF key : Next CO Port No.

Default No Assignment

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-43 (ANA Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
3-43	ANA Assignment	

CO	/PBX	•	Data No.
	3	-	42
	PC Progr	amming G	uide
rech	B:C:B:H	USER	

NOTES:

1. A trunk can terminate at only one station, but any number of trunks can terminate at the same station.

GENERAL INFORMATION - DIT ASSIGNMENT

This Memory Block is used to independently assign Day Mode station terminations to incoming trunk calls.

ANA ASSIGNMENT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode CO/PBX LK3 MIC ICM
 TRF

Data No.

4 3 (Dial Pad)

Setting Data
(2-digit: 00~99)

CO/PBX No. Data
(01~64) No. Title (4-digit: 0000~999)

0 1 / 43 : DIT N =

TIME DISPLAY

- 3. Use the dial pad to enter data.
 - Station No. (2-, 3-, or 4-digits 00~9999)
 - CO Port No. (01~64)

Dial pad 0 ~ 9 : To enter data.

CNF

0 ~ 3

: Next CO Port No.

Default No Assignment

key

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-00 (Telephone Number to Trunk Number Assignment).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
3-42	DIT Assignment	

CC	/PBX	-	Data No.
	3	•	43
	PC Progra	amming G	uide
TECH	B · C · B · H	USER	

NOTES:

1. A trunk can terminate at only one station, but any number of trunks can terminate at the same station.

GENERAL INFORMATION - ANA ASSIGNMENT

This Memory Block is used to assign Night Answer Mode (ANA) station terminations for incoming CO/PBX calls.

(Dial Pad)

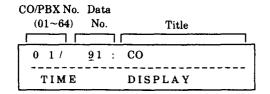
TRUNK TYPE SELECTION

OPERATION:

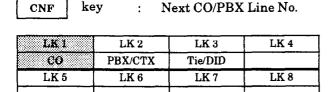
- 1. Go off-line.
- 2. Enter: Mode CO/PBX LK3 MIC

 TRF

 Data No. 9 1



- Press the corresponding CO/PBX line key to change data option.
 - To change CO to Tie/DID, press CO/PBX line key 3.



CO/PBX line keys Default

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-92 [Trunk (Installed, DP/DTMF) Selection].
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

CO	/PBX	•	Data No.
	3	•	91
PC Programming Guide			
TECH	B:C:B:N	USER	

NOTES:

 This Memory Block affects T1 Channels assigned as Tie/DID lines. [Requires DT1-F(A)-20 KTU and System software V3.00 or higher.]

GENERAL INFORMATION - TRUNK TYPE SELECTION

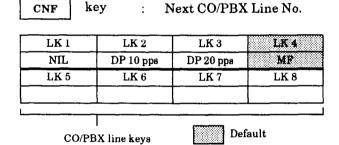
This Memory Block is used to specify each external line as CO Line, PBX/CTX line, or Tie line.

TRUNK (INSTALLED, DP/DTMF) SELECTION

CO	/PBX	-	Data No.
	3	•	92
	PC Progr	ramming G	uide
тесн	B : C : B : F	USER	

OPERATION:

- 1. Go off-line.
- o MIC CO/PBX LK3 2. Enter: Mode ICM TRF Data No. 9 2 (Dial Pad) CO/PBX No. Data Setting $(01 \sim 64)$ Data 0 1/ 92: MF TIME DISPLAY
- 3. Press the corresponding CO/PBX line key to change data option.
 - To change MF to DP 10 pps, press CO/PBX line key 2.



- 4. Pressing the TRF key will write the selected data and advance to Memory Block 3-91 (Trunk Type Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
3-14	Tie/DID Line Type Assignment	
4-12	Line Key Selection for Telephone Mode	

GENERAL INFORMATION - TRUNK (INSTALLED, DP/DTMF) SELECTION

This Memory Block is used to specify each external line as a DP (10 pps or 20 pps) or DTMF line, or not connected (NIL).

CO/PBX RING ASSIGNMENT (DAY MODE)

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Telephone LK 4 MIC

 Data No. 0 1

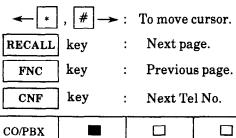
Tel Port No. Data

(01~96) No. Title Page

0 1 / 01 : RNG DY + 01

TIME DISPLAY

- 3. Press the CO/PBX line key corresponding to each CO/PBX number.
 - The LED indication changes to indicate the data each time a CO/PBX line key is pressed.



CO/PBX Line LED	OFF	ON (green)	ON (red)
Data	No Ring	Immediate Ring	‡Delayed Ring

‡Series 300 or higher.

Default	Tel Port numbers 01 and 02 ring on all incoming CO/PBX calls.
Series	incoming CO/PBX calls.
l 100 🖹	
and	Tel Port numbers 03-96 do not ring on any
200	Tel Port numbers 03—96 do not ring on any incoming CO/PBX calls.

Default	Tel Port numbers 01 and 02 ring on CO/PBX lines 01~08.
Delauit	CO/DRY lines 01 = 00
Series	CON DA MIGS SE TOO.
250	
or	liel Fort numbers 03~96 do not ring on any
Higher	Tel Port numbers 03~96 do not ring on any incoming CO/PBX calls.

Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

Telephone	•	Data No.
4	-	01
nan		

- PC Programming Guide
 TECH B:B:B:B USER T:B
- 4. After entering all data for all pages, pressing the TRF key will write the selected data and advance to Memory Block 4-02 [CO/PBX Ring Assignment (Night Mode)].
- 5. Press the SPKR key to go back on-line.

CO/PBX Number (01 \sim 64) correspond to CO/PBX line key.

Page 01 (Port 01~08)

LK 1 LK 2 LK 3 LK 4

01 02 03 04

LK 5 LK 6 LK 7 LK 8

05 06 07 08

		1280 10 (101000 10)		
LK 1	LK 2	LK 3	LK 4	
33	34	35	36	
LK 5	LK 6	LK 7	LK 8	
37	38	39	40	

Page 05 (Port 33~40)

CO/PBX line keys

Page 0	2 (Por	t 09~1	6)
--------	--------	--------	----

LK 1	LK 2	LK 3	LK 4
09	10	11	12
LK 5	LK 6	LK 7	LK 8
13	14	15	16

LK 1	LK 2	LK 3	LK 4
41	42	43	44
LK 5	LK 6	LK 7	LK8
45	46	47	48

Page 06 (Port 41~48)

Page 03 (Port 17~24)			
LK 1	LK 2	LK 3	LK 4
17	18	19	20
LK 5	LK 6	LK 7	LK 8
21	22	23	24

rage 07 (Port 49~30)			
LK 1	LK 2	LK 3	LK 4
49	50	51	52
LK 5	LK 6	LK 7	LK 8
53	54	55	56

Page 08 (Port 57~64)			
LK 1	LK 2	LK 3	LK 4
57	58	59	60
LK 5	LK 6	LK 7	LK 8
61	62	63	64

NOTES:

 Delay ring is not supported for Single Line Telephones.

GENERAL INFORMATION - CO/PBX RING ASSIGNMENT (DAY MODE)

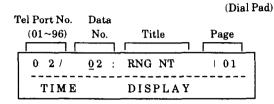
This Memory Block is used to assign Multiline Terminals to ring on incoming CO/PBX calls in the Day Mode.

CO/PBX RING ASSIGNMENT (NIGHT MODE)

OPERATION:

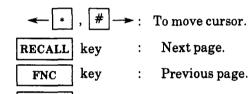
- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 MIC

 Data No.



- 3. Press the CO/PBX line key corresponding to each CO/PBX number.
 - The LED indication changes to indicate the data each time a CO/PBX line key is pressed.

Next Tel No.



CO/PBX Line LED	OFF	ON (green)	ON (red)
Data	No Ring	Immediate Ring	‡Delayed Ring

‡Series 300 or higher.

key

CNF

Default Series 100	Tel Port numbers 01 and 02 ring on all incoming CO/PBX calls.
and 200	Tel Port numbers 03~96 do not ring on any incoming CO/PBX calls.
Default Series 250	Tel Port numbers 01 and 02 ring on CO/PBX lines 01_08.
or Higher	Tel Port numbers 03-96 do not ring on any incoming CO/PBX calls.

Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

Telep	hone	-	Data No.
4		-	02
	PC Prog	ramming	Guide
тесн в	: B : B : C	USER	T:C

- 4. After entering all data for all pages; pressing the TRF key will write the selected data and advance to Memory Block 4-07 [Code Restriction Class Assignment (Day Mode)].
- 5. Press the SPKR key to go back on-line.

CO/PBX Number (01~64) correspond to CO/PBX line key.

Page 01 (Port 01~08)

LK 1 LK 2 LK 3 LK 4

01 02 03 04

LK 5 LK 6 LK 7 LK 8

05 06 07 08

	- \ •		
LK 1	LK 2	LK 3	LK 4
33	34	35	36
LK 5	LK 6	LK 7	LK8
37	38	39	40

Page 05 (Port 33~40)

CO/PBX line keys

Page 02 (Port 09~16)				
LK 1	LK 2	LK 3	LK 4	
09	10	11	12	
LK 5	LK 6	LK 7	LK 8	
13	14	15	16	

LK 1	LK 2	LK 3	LK 4
41	42	43	44
LK 5	LK 6	LK 7	LK8
45	46	47	48

Page 06 (Port 41~48)

Page (Page 03 (Port 17~24)				
LK 1	LK 2	LK 3	LK 4		
17	18	19	20		
LK 5	LK 6	LK 7	LK 8		
21	22	23	24		

Page (Page 07 (Port 49~56)				
LK 1	LK 2	LK 3	LK 4		
49	50	51	52		
LK 5	LK 6	LK 7	LK8		
53	54	55	56		

Page 0	Page 04 (Port 25~32)				
LK 1	LK 2	LK 3	LK 4		
25	26	27	28		
LK 5	LK 6	LK 7	LK 8		
29	30	31	32		

Page 08 (Port 57~64)				
LK 1	LK 2	LK 3	LK 4	
57	58	59	60	
LK 5	LK 6	LK 7	LK8	
61	62	63	64	

NOTES:

 Delay ring is not supported for Single Line Telephones.

GENERAL INFORMATION - CO/PBX RING ASSIGNMENT (NIGHT MODE)

This Memory Block is used to assign Multiline Terminals to ring on incoming CO/PBX calls in the Night Mode.

CODE RESTRICTION CLASS ASSIGNMENT (DAY MODE)

Telephone - Data No. 4 - 07 PC Programming Guide TECH A: A: B USER

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Telephone LK 4 O MIC

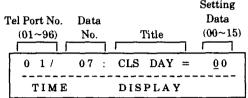
 Data No. O 7

 (Dial Pad)

 Setting

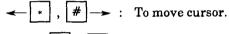
 Tel Port No. Data

 Data



Restriction Class 00~15.

3. Enter data using the dial pad.



Dial pad $0 \sim 9$: To enter setting data.



Default All Stations Class 00

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-08 [Code Restriction Class Assignment (Night Mode)].
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Section 6 - Code Restriction in this chapter.

GENERAL INFORMATION - CODE RESTRICTION CLASS ASSIGNMENT (DAY MODE)

This Memory Block is used to specify Code Restriction Class in Day Mode on a per station basis.

CODE RESTRICTION CLASS ASSIGNMENT (NIGHT MODE)

Telephone - Data No. 4 - 08 PC Programming Guide TECH A: A: C USER

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 MIC

 Data No.

 O 8

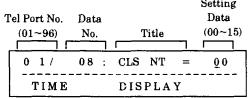
 (Dial Pad)

 Setting

 Tel Port No. Data

 Data

 (Ol = 96) No. Title (00 = 15)



Restriction Class 00~15.

3. Enter data using the dial pad.

*, # : To move cursor.

Dial pad 0 ~ 9 : To enter setting data.

CNF key : Next Tel No.

Default All Stations Class 00

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-09 (Telephone to Tenant Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Section 6 - Code Restriction in this chapter.

GENERAL INFORMATION - CODE RESTRICTION CLASS ASSIGNMENT (NIGHT MODE)

This Memory Block is used to specify Code Restriction Class in Night Mode on a per station basis.

TELEPHONE TO TENANT ASSIGNMENT

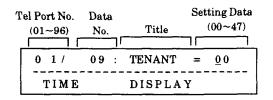
Tele	phone		•		Dat	a No.
	4		-			09
	PC Pro	gram	ming	Gui	de	
TECH	B: B: B: K		USER			

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 ICM

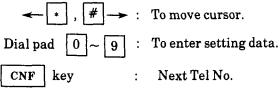
 Data No. 0 9

 (Dial Pad)



3. Enter data using the dial pad.

Example: To enter TENANT 08 for TEL 01, enter 08 using the dial pad.



Default All Telephones Tenant 00

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-10 (Station Number Assignment).
- 5. Press the SPKR key to go back on-line.

■ Additional Programming

Memory Block No.	Memory Block Name	Required
2-01	Trunk to Tenant Assignment	
2-05	Line Key Selection	
2-06	Line Key Selection for Tenant Mode	
2-07	System Speed Dial Display Assignment	
2-08	ECR Relay to Tenant Assignment	

NOTES:

- 1. Stations can be assigned to 48 possible Tenant Numbers (00~47).
- 2. Call Pickup Group is determined by Tenant assignment.

GENERAL INFORMATION - TELEPHONE TO TENANT ASSIGNMENT

This Memory Block is used to specify Tenant Assignment on a per station basis.

STATION NUMBER ASSIGNMENT

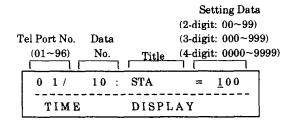
Tele	phone	-	Data No.
	4	•	10
	PC Prog	ramming G	ıide
TECH	B: A: D	USER	

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 MIC

 Data No. 1 0

 (Dial Pad)



3. Enter data using the dial pad.

Example: To change Tel 01 to Station No. 11, enter 11 using the dial pad.

→ ▼ , # → : To move cursor.

Dial pad 0 ~ 9 : To enter setting data.

CNF key : Next Tel No.

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-11 (Ringing Line Preference Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Bl ock Name	Required
1-1-46	Access Code (1-Digit) Assignment	V
1-1-47	Access Code (2-Digit) Assignment	V
1-2-03	2-, 3-, or 4-Digit Station Number Selection	V

NOTES:

- 1. Station Number Assignment is on a per station basis. (A telephone cannot have two station numbers and a station number cannot be assigned to more than one telephone.)
- 2. At default, the valid station numbers are 100 to 399.
- 3. When changing Station Numbers to a different numbering plan (e.g., 3-digit to 4-digit), these steps should be preformed in the following order:
 - a. Select 2-, 3-, or 4-digit Station Numbers in Memory Block 1-2-03 (2-, 3-, or 4-Digit Station Number Selection).
 - b. Program the appropriate Access Codes for Function 001 in Memory Blocks 1-1-46 [Access Code (1-Digit) Assignment)] or 1-1-47 [Access Code (2-Digit) Assignment)].
 - c. Reprogram all Station Numbers using this Memory Block.

GENERAL INFORMATION - STATION NUMBER ASSIGNMENT

This Memory Block is used to assign a station number to each telephone.

RINGING LINE PREFERENCE SELECTION

Telephone - Data No. 4 - 11 PC Programming Guide TECH B: B: C: K USER T: L

OPERATION:

1. Go off-line.

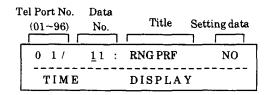
CNF

key

2. Enter: Mode Telephone LK4 • MIC

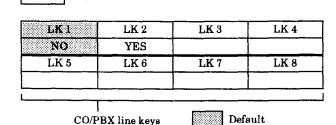
Data No. 1 1 1

(Dial Pad)



- 3. Press the corresponding CO/PBX line key to change the data option.
 - To change NO to YES, press CO/PBX line key 2.

Next Tel No.



- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-12 (Line Key Selection for Telephone Mode).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
4-01	CO/PBX Ring Assignment (Day Mode)	V
4-02	CO/PBX Ring Assignment (Night Mode)	V

NOTES:

- This Memory Block programming applies to Ring Assigned telephones only.
- 2. An intercom call cannot be originated when a ring assigned CO/PBX line call has terminated on the telephone.

GENERAL INFORMATION - RINGING LINE PREFERENCE SELECTION

This Memory Block is used to specify whether each station user can answer incoming CO/PBX calls on ring assigned CO/PBX lines by going off-hook.

LINE KEY SELECTION FOR TELEPHONE MODE

OPERATION:

- 1. Go off-line.
- o MIC 2. Enter: Mode Telephone LK 4 **ICM** Data No. (Dial Pad) Line Key Tel Port No. Setting No. (01~96) Data $(01 \sim 24)$ Data (2) Setting No. Data (1) CO 12: L 0 1 TIME DISPLAY
- 3. Press the corresponding CO/PBX line key to change data option.

LK 1	LK 2	LK 3	LK 4
Not Specified	CO/PBX Lane	Not Used	Not Used
LK 5	LK 6	LK 7	LK 8
†Call Appearance	Feature Access	Trunk Group	Route Advance

LK 9	LK 10	LK 11	LK 12
2nd Incoming Extension	†Call Arrival Key	Microphone Key	Headset
LK 13	LK 14	LK 15	LK 16

†Series 250 or higher. CO/PBX line keys

To move cursor.

Dial pad

To enter data.

CNF key : Next Tel No.

Telephone	-	Data No.
4	-	12

PC Programming Guide			
TECH	B : B : C : I	USER	T:J

Example: To assign Trunk Group 05 to CO/PBX line key 1.

- 4. Press CO/PBX line key 7, TKGP is displayed.
- 5. Enter 05 (for RT 05) using the dial pad.
- 6. Press the TRF key to write new data entry.
- 7. The next line key assignment is displayed.
- 8. Repeat these steps until all line key assignments are completed.
- 9. Press the TRF key to advance to Memory Block 4-13 (CO/PBX Busy Forward Station Assignment).
- 10. Press the SPKR key to go back on-line.

This Memory Block assigns the following functions to each of the CO/PBX line keys on each telephone within a tenant specified as Telephone Mode in Memory Block 2-05 (Line Key Selection).

Functions:

- Not specified (NON)
- CO/PBX Line (CO) 01~64
- †Call Appearance (C) 01~24
- Feature Access (FA) 01~10
- Trunk Group (TKGP) 01~32
- Route Advance Block (ADV) 01~16
- Secondary Incoming Extension (SIE) 01~96
- †Call Arrival Keys (CAR) 01~88
- Microphone (MIC)
- Headset (HSET)

†Series 250 or higher.

Additional Programming

Memory Block No.	Memory Block Name	Required
2-05	Line Key Selection	√

Continued on next page.

LINE KEY SELECTION FOR TELEPHONE MODE (continued)

Telephone	•	Data No.
4	-	12

NOTES:

Line Key	Setting Data 1	LCD Indication	Setting Data 2
1	Not Specified	NON	N/A
2	CO	CO	01~64
3	Not Used	N/A	N/A
4	Not Used	N/A	N/A
5	Call Appearance Block (00~47) (See Note 6.)	С	Call Appearance Key 01~24
6	Feature Access	FA	01~10
7	Trunk Group	TKGP	01~32
8	Route Advance	ADV	01~16
9	Secondary Incoming Extension	SIE	Telephone Port No. 01~96
10	Call Arrival Key	CAR	01~88
11	Microphone	MIC	N/A
12	Headset	H SET	N/A

- If the Level II and/or Level II Advanced system is installed as a KF system, all COs must be assigned to the line keys.
 - Trunk Groups, Route Advance and LCR may not be assigned if the Level II and/or Level II Advanced system is installed as a KF system.
- 2. If the Level II and/or Level II Advanced system is installed as a MF system, at least one Call Appearance Key must be assigned.
 - Call Appearance Key must be assigned on a per block basis.
- 3. Repetitive assignments cannot be copied to a Multiline Terminal (Secondary Incoming Extension) port.
- 4. An ADA(1)-W (BK) Unit is required to use a headset.
- 5. At system default, CO/PBX lines 01~08 are assigned to line keys 01~08 respectively; the remaining line keys 09~24 are not assigned.
- 6. Each Call Appearance Block may have a maximum of 24 Call Appearance Keys.

GENERAL INFORMATION - LINE KEY SELECTION FOR TELEPHONE MODE

This Memory Block allows the assignment of functions to each of the CO/PBX line keys on each telephone within a tenant specified as Telephone Mode in Memory Block 2-05 (Line Key Selection).

CO/PBX BUSY FORWARD STATION ASSIGNMENT

OPERATION:

1. Go off-line.

TIME

o MIC 2. Enter: Mode Telephone LK 4 ICM Data No. 3 (Dial Pad) Forward Tel Port No.. Data No. $(01\sim 96)$ Title **Setting Data** No. (1 or 2) 10 13: **FWD** 1

DISPLAY

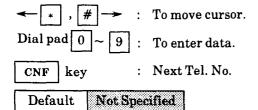
Telephone - Data No.
4 - 13

PC Programming Guide
TECH B: B: B: A USER

NOTES:

- 1. If the Multiline Terminal, where the forward is initially set (Forward 1) is busy, the call is forwarded to a second specified station (Forward 2).
- 2. If all three stations are busy, the first station rings.

3. Use the dial pad to change data.



Telephone Port No.: 01~96 Forward No.: 1,2

Setting Data: Port No. 01~96

- 4. Press the TRF key to write the data for the first transfer to station.
- 5. Enter the second transfer to station.
- 6. Pressing the TRF key will write the selected data and advance to Memory Block 4-14 (Intercom Master Hunt Number Selection).
- 7. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

GENERAL INFORMATION - CO/PBX BUSY FORWARD STATION ASSIGNMENT

This Memory Block is used to specify up to two telephones to ring on a CO/PBX call terminating at a busy station.

INTERCOM MASTER HUNT NUMBER SELECTION

Telephone - Data No. 4 - 14 PC Programming Guide TECH B:B:B:D USER

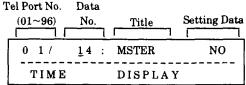
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 MIC

 Data No. 1 4

 (Dial Pad)

 Tel Port No. Data
 (01~96) No. Title Setting Data



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change NO to YES, press CO/PBX line key 2.

СО/РВХ	line keys	Def	ault
LK 5	LK 6	LK 7	LK 8
NO	YES		
LK 1	LK 2	LK 3	LK 4

- CNF key : Next Tel No.
- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-15 (Intercom Master Hunt Number Forward Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
4-15	Intercom Master Hunt Number Forward Assignment	

NOTES:

 If assigned YES, incoming internal calls from another station, Automated Attendant transferred call, or a DIT/ANA/DID/Tie line designated call, will be forwarded to a specified station when busy in Memory Block 4-15 (Intercom Master Hunt Number Forward Assignment).

GENERAL INFORMATION - INTERCOM MASTER HUNT NUMBER SELECTION

This Memory Block is used to specify the assignment of a master intercom number to each telephone.

INTERCOM MASTER HUNT NUMBER FORWARD ASSIGNMENT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 MIC

 Data No. 1 5

 (Dial Pad)

| Setting Data | FWD Station No. (2-digit: 00-99) | (3-digit: 000-999) | (4-digit: 0000-9999) | (4-digit: 0000-9999) | (5-digit: 0000-999

3. Enter data using the dial pad.

Example: To set Tel. Port 01 to forward to Station Number 300, enter 300 using the dial pad.

 \leftarrow *, # \rightarrow : To move cursor.

Dial pad $\boxed{0} \sim \boxed{9}$: To enter data.

HOLD key : To clear all data when the cursor is at the

setting data position.

CNF key : Next Tel. No.

Default All Telephones Not Specified

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-17 (Station to Class of Service Feature Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

	 _	
Memory Block No.	Memory Block Name	Required
4-14	Intercom Master Hunt Number Selection	

Tele	phone	•	Data No.	
	4	•	15	
	PC Progr	ramming G	uide	
гесн	B: B: B: D	USER		

Example:

To assign the following by Memory Block:

- Memory Block 4-14
 Telephone Port No. 01 → YES
 Another Port No. → NO
- 2. Memory Block 4-10

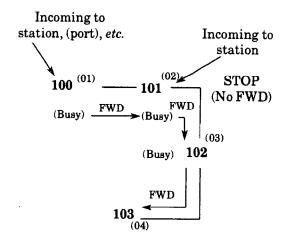
Telephone Port No. and related Station No.

Port Station No. No. $01 \to 100$ $02 \to 101$ $03 \to 102$ $04 \to 103$

3. This Memory Block

Telephone Port No. (Port No. forwards to Station No.)

Port Station No. No. $01 \rightarrow 101$ $02 \rightarrow 102$ $03 \rightarrow 103$



GENERAL INFORMATION - INTERCOM MASTER HUNT NUMBER FORWARD ASSIGNMENT

This Memory Block is used to specify a telephone to ring when a telephone Master Hunt Number was specified as a master number station in Memory Block 4-14 (Intercom Master Hunt Number Selection) is busy.

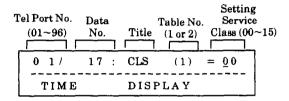
STATION TO CLASS OF SERVICE FEATURE **ASSIGNMENT**

Telephone Data No. 17 PC Programming Guide TECH B:B:B:I USER

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode LK4 Telephone

Data No. (Dial Pad)



3. Enter data using the dial pad.

Example: To enter CLASS 02 to Table 1, enter 02 using the Dial pad.

: To move cursor. Dial pad To enter data.

- 4. Press the TRF key, data of Table 2 is displayed.
- 5. After all data is entered into Table 2, press the TRF key to write the selected data and advance to Memory Block 4-18 (Station Name Assignment).
- 7. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
1-8-07	Class of Service (Attendant) Feature Selection 1	
1-8-08	Class of Service (Station) Feature Selection 2	

NOTES:

- 1. Refer to Memory Blocks 1-8-07 [Class of Service (Attendant) Feature Selection 11 and 1-8-08 [Class of Service (Station) Feature Selection 2].
- 2. Enable/Disable patterns are specified in the above for individual classes.
 - Table 1 = The features that telephone Port Numbers 01 and 02 are normally allowed to activate.

Specify any of the classes (00~15) whose patterns have been specified in Memory Block 1-8-07 [Class of Service (Attendant) Feature Selection 11.

Table 2 = The features that all the telephones are normally allowed to activate.

Specify any of the classes (00~15) whose patterns have been specified in Memory Block 1-8-08 [Class of Service (Station) Feature Selection 21.

	Default	
Tel No.	Table No.	Setting Data
01	1 ATTN	Service Class 00
01	2 STA	Service Class 00
00	1 ATTN	Service Class 00
02	2 STA	Service Class 00
02	1 ATTN	Service Class 15
03	2 STA	Service Class 00
J	ſ	ſ
oc	1 ATTN	Service Class 15
96	2 STA	Service Class 00

GENERAL INFORMATION - STATION TO CLASS OF SERVICE FEATURE ASSIGNMENT

This Memory Block is used to specify a class for each Table (1 and 2) to enable or disable features on a per I station basis.

o MIC

STATION NAME ASSIGNMENT

OPERATION:

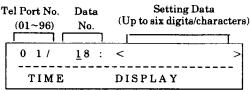
- 1. Go off-line.
- 2. Enter: Mode Telephone LK 4

Data No.

Telephone LK4 • ICM

1 8

(Dial Pad)

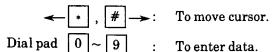


3. Enter data using the dial pad.

Example: To assign "DANE" to Tel 01, enter characters. (For a list of characters, refer to Section 7 - Character Code Tables).

After entering the 3-digit code, the characters are automatically displayed.

Setting Data: Enter by Character Code.



HOLD key

To clear all data when the cursor is at the

setting data position.

CNF key : Next Tel No.

Default	Not Specified

- 4. Pressing the **TRF** key will write the selected data and advance to Memory Block 4-19 (Trunk Outgoing Restriction).
- 5. Press the SPKR key to go back on-line.
- Additional Programming None.

Telephone		•	Data No.
	4	•	18
	PC Pro	gramming	Guide
ТЕСН	B : B : B : J	USER	T: M

NOTES:

- 1. While ringing or talking on an internal line, the station number as well as the name of the other party is displayed.
- 2. The name is not displayed when Tone Override, Automatic Callback, or Callback Request is displayed.
- 3. A maximum of six digits/characters can be used for each name.

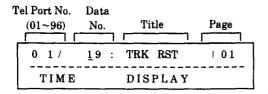
GENERAL INFORMATION - STATION NAME ASSIGNMENT

This Memory Block is used to assign names corresponding to the telephones.

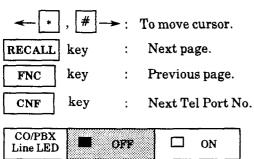
TRUNK OUTGOING RESTRICTION

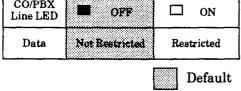
OPERATION:

- 1. Go off-line.
- o MIC LK 4 2. Enter: Mode Telephone ICM Data No. 9 (Dial Pad)



- 3. Press the CO/PBX key corresponding to each CO/PBX line.
 - The LED indication changes to indicate the data each time a CO/PBX line key is pressed.
 - Press RECALL or FNC key to turn pages.





- 4. After entering all data for all pages; pressing the TRF key will write the selected data and advance to Memory Block 4-20 (Off-Hook Voice Announcement Terminal Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming Refer to Chapter 3 - Guide to Feature Programming in this manual.

Telephone 4		<u> </u>	Data No.
		-	19
	PC Progr	ramming G	uide
TECH 1	B: B: B: M	USER	

CO/PBX Number (01~64) corresponds to CO/PBX line key:

Page 1	(Port 0	1~08)			Page 5	(Port 3	3~40)	
LK 1	LK 2	LK 3	LK 4		LK 1	LK 2	LK 3	LK 4
01	02	03	04		33	34	35	36
LK 5	LK 6	LK 7	LK 8		LK 5	LK 6	LK7	LK 8
05	06	07	08		37	38	39	40
Page 2	(Port 0	9~16)			Page 6	(Port 4	1~48)	
LK 1	LK 2	LK 3	LK 4		LK 1	LK 2	LK 3	LK 4
09	10	11	12		41	42	43	44
LK 5	LK 6	LK 7	LK 8		LK 5	LK 6	LK 7	LK 8
13	14	15	16		45	46	47	48
Page 3	(Port 1	7~24)			Page 7	(Port 4	9~56)	
LK 1	LK 2	LK 3	LK 4		LK 1	LK 2	LK 3	LK 4
17	18	19	20		49	50	51	52
IK 5	IKG	IK7	TKS	1	LK 5	IKG	LK 7	TKS

LK 1	LK 2	LK 3	LK 4	LK 1	LK 2	LK 3	LK 4
17	18	19	20	49	50	51	52
LK 5	LK 6	LK 7	LK 8	LK 5	LK 6	LK 7	LK 8
21	22	23	24	53	54	55	56
				_			

Page 4	(Port 2	5~32)		Page 8	(Po
LK 1	LK 2	LK 3	LK 4	LK 1	LI
25	26	27	28	57	5
LK 5	LK 6	LK 7	LK 8	LK 5	LF
29	30	31	32	61	6

Page 8	Page 8 (Port 57~64)			
LK 1	LK 2	LK 3	LK 4	
57	58	59	60	
LK 5	LK 6	LK 7	LK'8	
61	62	63	64	

NOTES:

- 1. A "restricted" CO/PBX line allows the station user to answer an incoming call or access a held call, but does not allow the user to originate a CO/PBX call.
- 2. If "restricted" is specified in this section, the following data, even if specified, will be treated as invalid.
 - Memory Blocks 4-07 and 4-08 [Code Restriction Class Assignment (Day/Night) Mode].

GENERAL INFORMATION - TRUNK OUTGOING RESTRICTION

This Memory Block is used to specify whether to restrict line seizure for an outgoing call on a per CO/PBX line

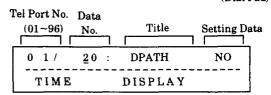
OFF-HOOK VOICE ANNOUNCEMENT TERMINAL ASSIGNMENT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 MIC

 Data No. 2 0

 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change NO to YES, press CO/PBX line key 2.

YES = Off-Hook Voice Allow NO = Off-Hook Voice Deny

CO/PB	X line kevs	Def	ault
LK 5	LK 6	LK 7	LK 8
NO	YES		
LK 1	L K 2	LK 3	LK 4

- 4. Press the CNF key to advance to the next Telephone Port No.
- Pressing the TRF key will write the selected data and advance to Memory Block 4-23 (Prime Line/Hot Line Assignment).
- 6. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

Tele	phone	•	Data No.
	4	-	20
PC Programming Guide			
TECH	B: B: C: J	USER	

NOTES:

- 1. If Off-Hook Voice Announcement is assigned as allow, the maximum telephone port numbers is reduced by one, corresponding to the number of Off-Hook Voice channels.
- 2. Multiline Terminals assigned for Off-Hook Voice Announcement must be installed in the first four ESI-F(8)-21 KTU ports.
- 3. The following lists the port relations on an ESI-F(8)-21 KTU if Off-Hook Voice Announcement is assigned:

ESI-F(8)-21 KTU Port		Dual Path Port
1	\rightarrow	5
2	\rightarrow	6
3	\rightarrow	7
4	→	8
9	→	13
10	\rightarrow	14
11	\rightarrow	15
12	\rightarrow	16
ſ	\rightarrow	ſ
59	\rightarrow	63
60	\rightarrow	64

GENERAL INFORMATION - OFF-HOOK VOICE ANNOUNCEMENT TERMINAL ASSIGNMENT

This Memory Block is used to specify whether to allow or deny Off-Hook Voice Announcement function for ETW-24DS-1 (BK) Terminals.

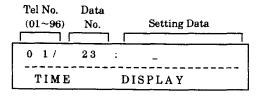
PRIME LINE/HOT LINE ASSIGNMENT

OPERATION:

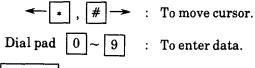
- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 MIC

 Data No. 2 3

 (Dial Pad)



3. Use the dial pad to enter data.



LNR/SPD key + * : * input

LNR/SPD key + # : # input

Setting Data: 0~9,*,#



- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-24 (SLT Hookflash Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

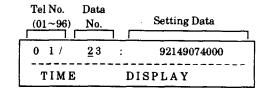
Telephone	<u> </u>	Data No.
4	•	23
PC Prog	ramming G	uide
TECH B:B:B:F	USER	

NOTES:

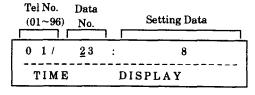
- 1. Prime Line function enables the user to seize a specified trunk when the Multiline Terminal goes off-hook.
- 2. To call a specified station number or CO Line while on Hot Line, go off-hook.
- 3. When using Prime Line, an Access Code must be entered to seize the ICM for internal call processing (FNC +6+*).
- 4. To use the Hot Line function, one of the following must be entered:
 - Station Number
 - Access Code + Dial Number
 - Speed Dial Access Code + Speed Dial Buffer Number
- 5. Up to 10 digits can be assigned.

Example:

1. Hot Line



2. Prime Line



8 = Tie Line Access Code

GENERAL INFORMATION - PRIME LINE/HOT LINE ASSIGNMENT

This Memory Block is used to enable the user to access various features when going off-hook.

SLT HOOKFLASH ASSIGNMENT

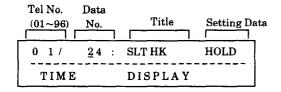
Telephone - Data No. 4 - 24 PC Programming Guide TECH B: B: D: H USER

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 MIC

 Data No. 2 4

 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change HOLD to DISC (Disconnect), press CO/PBX line key 2.

CO/PB)	Cline keys	Def	ault
LK 5	LK 6	LK 7	LK 8
HOLD	DISC		
LK1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-26 (DISA ID Number Station Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
1-3-02	SLT Hookflash Signal Selection	

NOTES:

- 1. This Memory Block affects only the Single Line Telephone station assigned Prime Line in Memory Block 4-23 (Prime Line/Hot Line Assignment).
- 2. When Prime Line is assigned to a Single Line Telephone, hookflash will drop the CO and issue ICM dial tone if this Memory Block is set to disconnect.
- 3. After the Single Line Telephone begins to dial out "9+" hookflash will follow in Memory Block 1-3-02 (SLT Hookflash Signal Selection).

GENERAL INFORMATION - SLT HOOKFLASH ASSIGNMENT

This Memory Block specifies the Single Line Telephone hooking operation to either HOLD or disconnect the trunk.

DISA ID NUMBER STATION ASSIGNMENT

Telephone - Data No. 4 - 26 PC Programming Guide TECH B: E: D USER

OPERATION:

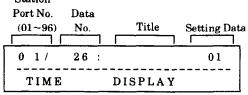
- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 MIC

 Data No. 2 6

 (Dial Pad)

 Station

 Port No. Data



- 3. Use the dial pad to enter data.
 - Assign DISA ID Buffer Number (01~96).

 \leftarrow , # \rightarrow : To move cursor.

Dial pad \bigcirc \sim 9 : To enter data.

CNF key : Next Station Port No.

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-28 (Bilingual LCD Indication Selection).
- 5. Press the SPKR key to go back on-line.

Default		
Station Port Number	DISA ID Buffer Number	
01	01	
02	02	
l	ſ	
96	96	

Additional Programming
 Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - DISA ID NUMBER STATION ASSIGNMENT

This Memory Block is used to assign the DISA ID Buffer Number corresponding to the station port number. The SMDR printout of the station number corresponds to the calling party who dialed the DISA ID number.

BILINGUAL LCD INDICATION SELECTION

Tele	phone	•	Data No.
	4	-	28
	PC Progr	amming	Guide
TECH	B: B: C: A	USER	T : A

OPERATION:

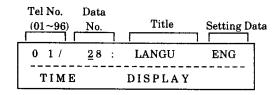
- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 ICM

 Data No. 2 8

 (Dial Pad)

NOTES:

 English or Japanese can be displayed on the LCD of a Multiline Terminal.



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change ENG (English) to JAPA (Japanese), press CO/PBX line key 1.

LK 1	LK 2	LK 3	LK 4
JAPA	ENG		
LK 5	LK 6	LK 7	LK 8
CO/P	 BX line keys	Def	ault

- Pressing the TRF key will write the selected data and advance to Memory Block 4-29 (HFU Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

GENERAL INFORMATION - BILINGUAL LCD INDICATION SELECTION

This Memory Block is used to specify which language (Japanese/English) is displayed on the Multiline Terminal LCD.

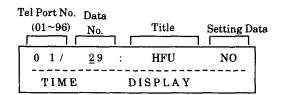
HFU SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 ICM

 Data No. 2 9

 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change NO to YES, press CO/PBX line key 2.

CO/PB	X line keys	Def	ault
LK 5	LK 6	LK 7	LK 8
NO	YES		
LK 1	LK 2	LK 3	LK 4

NO = Handsfree Unit not operational YES = Handsfree Unit operational

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-30 (Hold/Transfer Recall Display Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

GENERAL INFORMATION - HFU SELECTION

This Memory Block is used to enable the built-in Handsfree Unit on a per station basis.

Telephone	-	Data No.
4	-	29
PC Prog	ramming	Guide

USER T: F

TECH B:B:C:F

USER T:G

HOLD/TRANSFER RECALL DISPLAY SELECTION

Telephone - Data No. 4 - 30 PC Programming Guide

TECH B:B:C:G

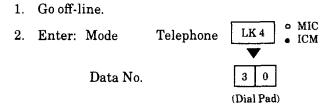
assigned for YES.

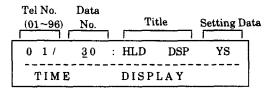
assignment.

NOTES:

The Hold Recall display appears on the bottom line of the display if this Memory Block is

OPERATION:





- 2. An LCD indication of the CO line number will appear on the upper line of the display when a recall occurs regardless of this Memory Block
- 3. Press the corresponding CO/PBX line key to change data option.
 - To change YS to NO, press CO/PBX line key 2.

CO/PB	CO/PBX line keys		ault
LK 5	LK 6	LK 7	LK 8
YS	NO		
LK 1	L K 2	LK 3	LK 4

YES = LCD indication available

LCD Example:

If Yes: RCL 01 From [101]

NO = LCD indication is not available

LCD Example:

If No: RCL 01 __ Time Display

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-31 (Receiving Internal/All Call Page Selection).
- Additional Programming

 Refer to Chapter 3 Guide to Feature Programming in this manual.
- 5. Press the SPKR key to go back on-line.

GENERAL INFORMATION - HOLD/TRANSFER RECALL DISPLAY SELECTION

This Memory Block allows enabling of the Hold Recall indication on the LCD.

2-248

Programming

RECEIVING INTERNAL/ALL CALL PAGE SELECTION

Tele	phone		Data No.		
	4	•	31		
	PC Programming Guide				
тесн	B: B: B: G	USER	T : H		

NOTES:

Code (1-Digit) Assignment].

Internal Emergency All Call Page and Internal

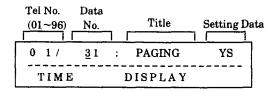
Paging by Tenant Group overrides this Memory Block. Refer to Memory Block 1-1-46 [Access

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 MIC

 Data No. 3 1

 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change YES to NO, press CO/PBX line key 2.

l CO/PBX line keys		Def	ault
LK 5	LK 6	LK 7	LK 8
YS	NO		
LK 1	LK 2	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-32 (Trunk Digit Restriction).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

GENERAL INFORMATION - RECEIVING INTERNAL/ALL CALL PAGE SELECTION

This Memory Block is used to assign capability to receive an Internal Zone or an Internal All Zone Page on a per station basis.

TRUNK DIGIT RESTRICTION

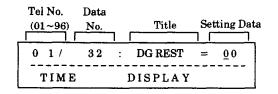
Telephone - Data No. 4 - 32 PC Programming Guide TECH B:B:B:L USER

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 ICM

 Data No. 3 2

 (Dial Pad)



3. Enter data using the dial pad.

Setting Data:

00,01~99

digits (00: No Limit)

CNF

key

Next Tel. No.



- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-33 (Fax Indication Station Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Section 6 Code Restriction in this chapter.

NOTES:

- 1. Enter the digit that when dialed the call will be dropped.
- 2. Code Restriction must be assigned before this feature is used.
- 3. Trunk Digit Restriction applies to all CO/PBX lines.
- 4. Tie Line Code Restriction must be assigned before this feature will work on Tie lines.

GENERAL INFORMATION - TRUNK DIGIT RESTRICTION

This Memory Block is used to specify, on a per station basis, the maximum number of digits that can be dialed while on any outside line.

FAX INDICATION STATION ASSIGNMENT

Telephone - Data No. 4 - 33 PC Programming Guide

TECH B:B:C:E

NOTES:

One-Touch key on a Multiline Terminal.

The station number of the Fax station must be

programmed under a Feature Access or a

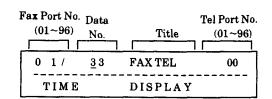
USER

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 ICM

 Data No. 3 3

 (Dial Pad)



3. Enter the data using the dial pad.

 \leftarrow : To move cursor.

Dial pad $0 \sim 9$: To enter data.

Telephone Port No.: 00 (Not Assigned)

Fax Port No.: $01 \sim 96$



- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-34 (Fax Indication Networking Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

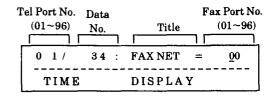
GENERAL INFORMATION - FAX INDICATION STATION ASSIGNMENT

This Memory Block is used to specify which Multiline Terminal will display the Fax indication.

FAX INDICATION NETWORKING ASSIGNMENT

OPERATION:

- 1. Go off-line.
- o MIC LK 4 2. Enter: Mode Telephone ICM Data No. (Dial Pad)



3. Use the dial pad to enter the data.

Setting Data:

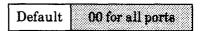
CNF

00 (Not Assigned) $01 \sim 96 (Fax Port No.)$

To move cursor. To enter data.

Dial pad key

Next Tel. Port No.



- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-35 (Voice Mail/SLT Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

Telephone Data No. 34

PC Programming Guide			
TECH	B: B: C: D	USER	

NOTES:

1. This Memory Block must be programmed when requiring Fax messages over Tie/DID lines or the Automated Attendant with CO/PBX lines.

GENERAL INFORMATION - FAX INDICATION NETWORKING ASSIGNMENT

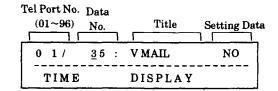
This Memory Block is used to specify the station port that will receive a Fax message over a Tie line network or when using the Automated Attendant feature with CO/PBX lines.

VOICE MAIL/SLT SELECTION

OPERATION:

1. Go off-line.

2.	Enter:	Mode	Telephone	LK 4 • ICM
		Data No.		3 5 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change NO to YES, press CO/PBX line key 2.

CO/PBX li		Def	ault
LK 5	LK 6	LK 7	LK 8
LK 1 NO	LK 2 YES	LK 3	LK 4

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-36 (Voice Prompt Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

Tele	phone	_	Data No.		
	4	•	35		
	PC Programming Guide				
тесн	B:B:D:K	USER			

NOTES:

- 1. The SLT Adaptor and the ADA (2) will not support Voice Mail.
- 2. A maximum number of 16 voice mail ports is supported by this system.

GENERAL INFORMATION - VOICE MAIL/SLT SELECTION

This Memory Block specifies whether a Voice Mail system is to be interfaced with the system for SLT ports.

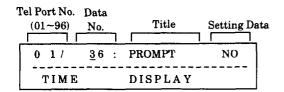
VOICE PROMPT SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 ICM

 Data No. 3 6

 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change NO to YES, press CO/PBX line key 2.

CO/PB)	K line keys	Def	ault
LK 5	LK 6	LK 7	LK 8
NO	YES		
LK 1	LK 2	LK 3	LK 4

YES = Allow

NO = Deny

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-37 [Extension Line Key Ring Assignment (Day Mode)].
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - VOICE PROMPT SELECTION

This Memory Block is used to specify whether to allow or deny the Voice Prompt feature on a per station basis.

Telephone	-	Data No.
4	-	36

PC Programming Guide			
ТЕСН	B:B:B:N	USER T: P	

EXTENSION LINE KEY RING ASSIGNMENT (DAY MODE)

OPERATION:

- 1. Go off-line.
- o MIC LK 4 2. Enter: Mode Telephone ICM

Data No.

7 (Dial Pad)

> LK 4 4 LK8

> > 8

Tel Port No. (01~96)	Data No	Title	Setting Data
0 1 /	<u>3</u> 7 :	EXT DAY	01
TIME		DISPLAY	

3. Use the dial pad to enter data.

RECALL

5

key

Next page.

FNC

key

Previous page.

CNF

key

Next Tel. No.

Page I (Line Ke	ys 1~8)		
LK 1	LK 2	LK 3	I
1	2	3	Ţ
LK 5	LK 6	I.K 7	Ī

2 (Line Ke	eys 9~16)		
LK 1	LK 2	LK 3	LK 4
9	10	11	12
LK 5	LK 6	LK 7	LK 8
13	14	15	16

age 3 (Line Ke	ys 17~24)		
LK 1	LK 2	LK 3	LK 4
17	18	19	20
LK 5	LK 6	LK 7	LK 8
21	22	23	24

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-38 [Extension Line Key Ring Assignment (Night Mode)].
- 5. Press the SPKR key to go back on-line.

Tele	phone	•	Data No.
	4 -		37
	PC Progr	amming G	uide
TECH	B:B:C:I	USER	

NOTES:

- 1. When Ring is set, the LED will light green.
- This Memory Block applies only when a Secondary Incoming Extension or a Call Arrival Key is programmed for line key appearance.
- The Call Arrival Key feature requires version 2.50 software or higher.

CO/PBX Line LED	OFF	ON (green)	ON (red)
Data	Data No Ring		‡Delayed Ring

‡Series 300 or higher.

Default All telephones: No Ring

Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - EXTENSION LINE KEY RING ASSIGNMENT (DAY MODE)

This Memory Block is used to specify the ringing assignment on incoming calls to a Secondary Incoming Extension or a Call Arrival Key.

EXTENSION LINE KEY RING ASSIGNMENT (NIGHT MODE)

Telephone - Data No. 4 - 38

PC Programming Guide TECH B:B:E USER

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 MIC ICM

Data No.

3 8 (Dial Pad)

Tel Port No. Data

(01~96) No. Title Setting Data

0 1 / 38 : EXT NT | 01

TIME DISPLAY

3. Use the dial pad to enter data.

RECALL

key

Next page.

FNC

key

Previous page.

CNF

key

Next Tel No.

Page 1 (Line Key 1~8)

L K 1	LK 2	LK 3	LK 4
1	2	3	4
LK 5	LK 6	LK 7	LK 8
5	6	7	8

Page 2 (Line Kev 9~18)

LK 1	LK 2	LK 3	LK 4
9	10	11	12
LK 5	LK 6	LK 7	LK 8
13	14	15	16

Page 3 (Line Key 17~24)

LK 1	LK 2	LK 3	LK 4	
17	17 18		20	
LK 5	LK 6	LK 7	LK 8	
21	22	23	24	

- Pressing the TRF key will write the selected data and advance to Memory Block 4-39 [ADA (2) Ring Mode Assignment].
- 5. Press the SPKR key to go back on-line.

NOTES:

- 1. When Ring is set, the LED will light green.
- 2. This Memory Block applies only when a Secondary Incoming Extension or a Call Arrival Key is programmed for line key appearance.
- 3. The Call Arrival Key feature requires version 2.50 software or higher.

CO/PBX Line LED	OFF	ON (green)	ON (red)
Data	Data No Ring		‡Delayed Ring

‡Series 300 or higher.

Default All telephones: No Ring

Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - EXTENSION LINE KEY RING ASSIGNMENT (NIGHT MODE)

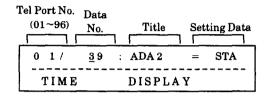
This Memory Block is used to specify the ringing assignment on an incoming call to a Secondary Incoming Extension or a Call Arrival Key.

ADA (2) RING MODE ASSIGNMENT

Tele	phone	•	Data No.			
4		•	39			
PC Programming Guide						
TECH	B · B · C · A	USER				

OPERATION:

- 1. Go off-line.
- o MIC LK 4 2. Enter: Mode Telephone ICM 9 Data No. (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change Station No. Ring to All Ring, press CO/PBX line key 3.

Station	All Ring	
Number (only)		
LK 6	LK 7	LK 8
	(only)	(only)

CNF key

: Next Tel. Port No.

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-40 (LCR Class Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

NOTES:

- No Ring: No calls ring at the Single Line Telephone.
- Station Number Ring: Only calls directed to the Multiline Terminal Station Number will ring at the Single Line Telephone.
- 3. All Ring: All calls that ring at the Multiline Terminal will also ring at the Single Line Telephone.
- 4. A maximum of 96 ADA(2)-W (BK) units can be installed in the system.

GENERAL INFORMATION - ADA (2) RING MODE ASSIGNMENT

This Memory Block is used to specify the SLT to be connected to the ADA(2)-W (BK) Unit ringing mode.

Go off-line

LCR CLASS SELECTION

OPERATION:

(Dial Pad)

 Enter:		Telephone	LK 4 • MIC
	Data No.		4 0

Data No.

Tel Port No. (01~96)	Data No.	Title	Setti	ing Data
0 1/	<u>4</u> 0	: LCRCLS	=	0
TIME		DISPLA	Y	

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change Class 0 to Class 1, press CO/PBX line key 2.

LK1	LK 2		LK 4
Class 0	Class 1	LK 3 Class 2	Class 3
LK 5	LK 6	LK 7	LK 8
Class 4			

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-41 (SIE/CAR Ringing Line Preference Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

Tele	phone	•	Data No.
	4	-	40
	PC Prog	ramming	Guide
ТЕСН	B: B: B: E	USER	T:O

NOTES:

1.	LCR	Class	Selection	corresponds	to	Area	Code
	Table	es as fo	llows:				

$Class\ 0$	No LCR
Class 1	Use Area Code Table 1
Class 2	Use Area Code Table 2
Class 3	Use Area Code Table 3
Class 4	Use Area Code Table 4

- 2. Stations cannot be assigned to multiple LCR classes.
- 3. An MIF-F(L)-10 KTU must be installed in the system to support this feature.

GENERAL INFORMATION - LCR CLASS SELECTION

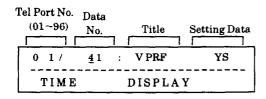
This Memory Block is used to specify the LCR Class on a per station basis. The Level II and/or Level II Advanced system has four Area Code Tables. Each LCR Class can be allowed different Trunk Group access, allowing priority levels for the station user.

SIE/CAR RINGING LINE PREFERENCE SELECTION

Telephone Data No. 4 41 PC Programming Guide TECH B:B:C:M USER T:O

OPERATION:

1. Go off-line. o MIC LK4 2. Enter: Mode Telephone ICM Data No. (Dial Pad)



NOTES:

- This function requires version 2.00 software or higher.
- The Call Arrival Key feature requires version 2.50 software or higher.

- 3. Press the corresponding CO/PBX line key to change the data option.
 - To change YES to NO, press CO/PBX line key 1.

CNF key Next Tel No.

LK 1	LK 2	LK 3	LK 4
NO	YES		
LK 5	LK 6	LK 7	LK 8
	<u> </u>		
	I		
CO/I	PBX line keys	Defa	ault

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-42 (Call Forward-Busy Immediately/Delay Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - SIE/CAR RINGING LINE PREFERENCE SELECTION

| This Memory Block is used to specify whether to allow or deny Ringing Line Preference (go off-hook or press | SPKR) on all telephones that are assigned Secondary Incoming Extensions and/or Call Arrival Keys.

ICM

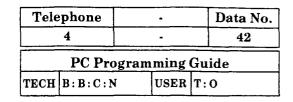
1. Setting Data:

YES = Delay forward

NO = Immediately forward

CALL FORWARD-BUSY IMMEDIATELY/DELAY SELECTION

OPERATION:

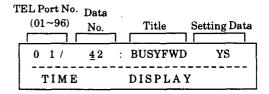


NOTES:

2. Requires system software version 2.00 or higher.

1. Go off-line. o MIC LK 4 2. Enter: Mode Telephone Data No.

(Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change YES to NO, press CO/PBX line key 1.

CO/P	I BX line keys	Def	ault
LK 5	LK 6	LK 7	LK 8
NO	YES		
LK 1	LK 2	LK 3	LK 4

CNF key

Next TEL No.

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-01 [CO/PBX Assignment (Day Mode).]
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
1-2-22	Call Forward No Answer Timer Selection	

GENERAL INFORMATION - CALL FORWARD-BUSY IMMEDIATELY/DELAY SELECTION

This Memory Block is used to specify an immediate forward or delay forward for a Call Waiting incoming call if the station is set for Call Forward Busy.

STATION TO CALL APPEARANCE BLOCK ASSIGNMENT

OPERATION:

	_		
1	α	- 22	line.
	1+0	ATT-	เาทด

TIME

o MIC LK 4 2. Enter: Mode System ICM

			▼
Da	ata No.		4 3
			(Dial Pad)
TEL Port No. (01~96)	Data <u>No.</u>	Title	Call Appearance Block (00 ~ 47)
0 1 /	43 :	CAP	NO00

DISPLAY

3. Enter data using the dial pad.

Example: To assign TEL Port Number 01 to Call Appearance Block 01, enter 01 using the dial pad.

To move cursor.

Dial pad To enter setting data.

Next CAR No. CNF

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-01 [CO/PBX Ring Assignment (Day Mode)].
- 5. Press the SPKR key to go back on-line.

Default All Stations are assigned to Call Appearance Block 00.

Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

GENERAL INFORMATION - STATION TO CALL APPEARANCE **BLOCK ASSIGNMENT**

This Memory Block is used to assign a Multiline Terminal to a Call Appearance Block.

System	 Data No.
4	43

		PC Progr	amming	Guide
TI	ЕСН	B:B:B:O	USER	

NOTES:

This feature requires version 2.50 software or higher.

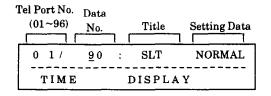
SLT DATA LINE SECURITY ASSIGNMENT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 MIC

 Data No. 9 0

 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change SLT NORM to SLT DATA, press CO/PBX line key 2.

LK 1	LK 2	LK 3	LK 4
SLT NORM	SLT DATA		
LK 5	LK 6	LK 7	LK 8
	<u> </u>		
		Def	ault
CO/PB	X line keys	Def	ault

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-91 (Telephone Ringing Variation Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Refer to Chapter 3 - Guide to Feature Programming in this manual.

Telephone	-	Data No.
4	•	90
PC Prog	ramming G	uide
TECH B:B:D:G	USER	

NOTES:

- If connecting SLT/VM, then assign SLT NORM; if connecting FAX/Modem, then assign SLT DATA.
- 2. If a Multiline Terminal is assigned for data line security, Tone Override and Call Alert Notification tones will not be heard from the handset, however, the tone is still sent and heard from the speaker when off-hook.
- Data Line Security will deny a station from barging in, even if Barge-In is allowed in Class of Service.

GENERAL INFORMATION - SLT DATA LINE SECURITY ASSIGNMENT

This Memory Block is used to specify the Normal/Data position for Single Line Telephones.

TELEPHONE RINGING VARIATION SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 o MIC

 Data No. 9 1

 (Dial Pad)

 Tel Port No. Data
 (01~96) No. Title Setting Data

Tel Port No. Data (01~96) No.	Title_	Setting Data
0 1 / 91	: RNG TONE	= M
TIME	DISPLAY	

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change M to H, press CO/PBX line key 3.

CO/PB)	Cline keys	Defa	ult
LK 5	LK 6	LK 7	LK 8
Medium (M)	Low (L)	High (H)	
LK1	LK 2	LK 3	LK 4

CNF key : Next Tel. No.

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-92 (Receiving Volume Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-28	Distinctive Ringing by Telephone or CO Selection	

Telephone - Data No. 4 - 91 PC Programming Guide TECH B:B:C:C USER T:D

NOTES:

- 1. This Memory Block is applicable if Telephone is selected in Memory Block 1-1-28 (Distinctive Ringing by Telephone or CO Selection).
- 2. High, medium or low ringing tone follows when transferring calls.

GENERAL INFORMATION - TELEPHONE RINGING VARIATION SELECTION

Refer to Memory Block 1-1-28 (Distinctive Ringing by Telephone or CO Selection). If "Telephone" was specified in that Memory Block, then each telephone in the system can be assigned a ringing tone frequency (Low, Medium, or High).

RECEIVING VOLUME SELECTION

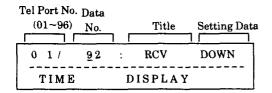
OPERATION:

(Dial Pad)

1.	Go	off-	line.

2. Enter: Mode Telephone LK4 ° MIC

Data No. 9 2



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change DOWN to UP, press CO/PBX line key 2.

CO/PB)	K line keys	Def	ault
LK 5	LK 6	LK 7	LK 8
DOWN	UP		
LK1	LK 2	LK 3	LK 4



: Next Tel No.

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-93 (Internal Zone Paging Selection).
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-28	Distinctive Ringing by Telephone or CO Selection	

Tele	phone	•	Data No.
	4	•	92
	PC Prog	ramming	Guide
TECH	B:B:B:H	USER	T: K

NOTES:

1. Receiving Volume Down

Multiline Terminal:

The volume (increased by

FNC + 2) is reset when

you hang up.

Single Line Telephone: Normal

2. Receiving Volume Up

Multiline Terminal:

The volume (increased by

FNC + 2) is not reset

when you hang up.

Single Line Telephone: The volume is up by 6 dB.

This Memory Block specifies one of the above two modes.

3. This feature only applies to internal calls.

GENERAL INFORMATION - RECEIVING VOLUME SELECTION

This Memory Block is used to specify whether the receiving volume is returned to normal (down) or kept as is (up) on a call after hanging up.

INTERNAL ZONE PAGING SELECTION

(Dial Pad)

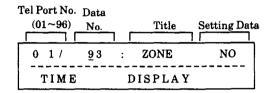
Telephone - Data No. 4 - 93

PC Programming Guide			
TECH	B: B: C: H	USER	T:I

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 ICM

 Data No. 9 3



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change NO to Zone A, press CO/PBX line key 2.

LK1	LK 2	LK 3	LK 4
NO	Zone A	Zone B	Zone C
LK 5	LK 6	LK 7	LK 8
1		<u> </u>	
_T			
CO/PBX line keys		Def	ault

CNF

key

: Next Tel. No.

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-94 (3-Minute Alarm Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming --

Memory Block No.	Memory Block Name	Required
1-1-28	Distinctive Ringing by Telephone or CO Selection	

NOTES:

1. Any of the following three zones can be specified.

All Internal Zones: Paged by Dialing 51

Zone A: Paged by Dialing 52.

Zone B: Paged by Dialing 53.

Zone C: Paged by Dialing 54.

- Telephones can be assigned to No Zone. An All Internal Zone (51) will page the telephone unless assignment of No Page Receive is assigned Memory Block 4-31 (Receiving Internal/All Call Page Selection).
- 3. All Internal Zone Paging will page all idle Multiline Terminals.

GENERAL INFORMATION - INTERNAL ZONE PAGING SELECTION

This Memory Block is used to place stations into Internal Page Zones.

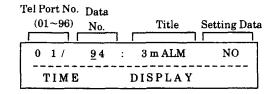
3-MINUTE ALARM SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 MIC

 Data No. 9 4

 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to change data option.
 - To change NO to YES, press CO/PBX line key 2.

CO/PBI	K line keys	Def	ault
LK 5	LK 6	LK 7	LK 8
NO	YES		
LK1	LK 2	LK 3	LK 4

CNF key : Next Tel. No.

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 4-95 (DTMF/DP SLT Type Selection).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

Tele	phone	-	Data No.	
4		•	94	
	PC Progr	amming G	uide	
TECH	B: B: C: L	USER		

NOTES:

- 1. A warning signal (approximately one second in length) sounds every three minutes during CO/PBX calls.
- 2. The Alarm Tone sounds only through the terminal speaker.
- 3. If using the built-in speakerphone, the warning signal does not sound.

GENERAL INFORMATION - 3-MINUTE ALARM SELECTION

This Memory Block is used to specify whether a warning signal tone is generated at 3-minute intervals during an outgoing or incoming call on a per station basis.

DTMF/DP SLT TYPE SELECTION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Telephone LK4 a MIC

 Data No. 9 5

 (Dial Pad)

Tel Port No. Data (01~96) No.	Title	Setting Data
0 1 / 95	SLT	MF
TIME	DISPLAY	

- 3. Press the corresponding CO/PBX line key to change data option.
 - To change DTMF to DP, press CO/PBX line key 1.

LK 1	LK 2	LK 3	LK 4
DP	DTMP		
LK 5	LK 6	LK 7	LK 8
	_ <u></u>		
CO/	PBX line keys	Def	ault

- 4. Pressing the TRF key twice will write the selected data and advance to Memory Block 4-90 (SLT Data Line Security Assignment).
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

Telephone - Data No. 4 - 95 PC Programming Guide TECH B: B: D: C USER

NOTES:

1. Both 10pps or 20pps are supported under the DP selection.

GENERAL INFORMATION - DTMF/DP SLT TYPE SELECTION

This Memory Block is used to specify the type of Single Line Telephone that is connected to the system (DP or DTMF) on a per port basis.

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DIGIT ADD/DEL FOR TIE LINE NETWORKING

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Trunk Group LK5 MIC ICM

TRF

O 0

Data No.

Trunk Group

No.

Data

(01~32) No.

Title Setting Data

0 1 / 00 : ADD/DEL 000

TIME DISPLAY

3. Enter data using the dial pad.

 \leftarrow , # \rightarrow : To move cursor.

Dial pad $0 \sim 9$: To enter data.

CNF key

: Next Trunk Group No.

Default No Addition and Delete = 000

Setting Data

000 : No Addition or Deletion

001~009: [1]~[9] Addition 010: [0] Digit Addition 100~199: [00]~[99] Addition 201: 1 Digit Deletion 202: 2 Digit Deletion

301~309 : 1 digit Delete and "1" ~ "9" Add 310 : 1 digit Delete and "0" Add

 $400\sim499$: 1 digit Delete and "00" \sim "99" Add $501\sim509$: 2 digit Delete and "1" \sim "9" Add

510 : 2 digit Delete and "0" Add

 $600\sim699$: 2 digit Delete and "00" \sim "99" Add

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 5-01 (Tie Line Networking Tandem Connection Assignment).
- 5. Press the SPKR key to go back on-line.

Trunk Group	•	Data No.
5	-	00
PC Progr	amming G	uide
TECH A:D:B:A	USER	

NOTES:

- 1. This Memory Block applies only when two or more systems are connected by Tie lines and when the systems are connected by a DID line.
- 2. If the call is directed to the local system, it will be connected to an intercom line that is served by the system.
- 3. If the call is intended for another system, the Tie line will be directed to resend the number.
- 4. At default, DID lines are not assigned to a Trunk Group.
- 5. This Memory Block affects T1 Channels assigned as Tie/DID lines. [Requires DT1-F(A)-20 KTU and System software V3.00 or higher.]

Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-46	Access Code (1-Digit) Assignment	
3-03	Trunk-to-Trunk Group Assignment	$\sqrt{}$

GENERAL INFORMATION - DIGIT ADD/DEL FOR TIE LINE NETWORKING

This Memory Block is used to specify the number of digits to be added to and/or deleted from the telephone number sent from a distant system over Tie lines or from DID lines. The digits enable the system to determine whether a call is directed to itself (local) or another system (distant). Refer to the notes above.

TIE LINE NETWORKING TANDEM CONNECTION ASSIGNMENT

OPERATION:

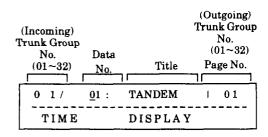
- 1. Go off-line.
- 2. Enter: Mode Trunk Group

LK 5 • MIC
• ICM

TRF

Data No.

0 1 (Dial Pad)



- 3. Press the corresponding CO/PBX line key to enter the data.
 - Press RECALL or FNC key to change page.

← , # → :

To move cursor.

RECALL key

y :

Next page.

FNC

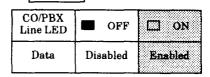
key

Previous page.

CNF

kev

Next Trunk Group No.



- Default
- 4. After entering all data for all pages; pressing the TRF key will write the selected data and advance to Memory Block 5-02 (8-Digit Matching Table to Trunk Group Assignment).
- 5. Press the SPKR key to go back on-line.

Trunk Group	•	Data No.
5	•	01
PC Progra	amming G	uide
TECH A:D:B:B	USER	

Trunk Group Number $(01\sim32)$ corresponds to CO/PBX line key.

Page 1 (01)

Lugu	1 ugo 1 (01)						
LK 1	LK 2	LK 3	LK 4				
01	02	03	04				
LK 5	LK 6	LK 7	LK 8				
05	06	07	08				

Page 3 (17)

LK 1	LK 2	LK 3	LK 4
17	18	19	20
LK 5	LK 6	LK 7	LK 8
21	22	23	24

CO/PBX line keys

Page 2 (09)

LK 1	LK 2	LK 3	LK 4
09	10	11	12
LK 5	LK 6	LK 7	LK8

Page 4 (25)

LK 1	LK 2	LK 3	LK 4
25	26	27	28
LK 5	LK 6	LK 7	LK8

Default All Trunk Groups

NOTES:

1. Tandem connection of Trunk Group to Trunk Group must be specified separately.

Additional Programming

Memory Block No.	Memory Block Name	Required
3-03	Trunk-to-Trunk Group Assignment	
4-09	Telephone to Tenant Assignment	

GENERAL INFORMATION - TIE LINE NETWORKING TANDEM CONNECTION ASSIGNMENT

This Memory Block is used to specify whether Trunk Groups, connected to the system, allow incoming Trunk Groups to be connected to outgoing Trunk Groups for tandem connections.

8-DIGIT MATCHING TABLE TO TRUNK GROUP ASSIGNMENT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Trunk Group LK5 MIC

 ICM

Data No.

Trunk Group	Data			(Dial Pa
No. (01~32)	No.	Title	Page	No.
0 1/	<u>0</u> 2 :	8DG = TRKG	1	1
TIME		DISPLAY		

- 3. Press the corresponding CO/PBX line key to enter the data option.
 - Press the RECALL or FNC key to turn pages.

★ , **#** → : To move cursor.

RECALL key

Next page.

FNC key

Previous page.

CNF key

Next Trunk Group No.

Default

CO/PBX Line LED	OFF	□ ON	
Data	Disabled	Enabled	

LK 1	LK 2	LK 3	LK 4
Table 00	Table 01	Table 02	Table 03
LK 5	LK 6	LK 7	LK 8
Table 04	Table 05	Table 06	Table 07

ge 2				
LK 1	LK 2	LK 3	LK 4	
Table 08	Table 09	Table 10	Table 11	
LK 5	LK 6	LK 7	LK 8	
Table 12	Table 13	Table 14	Table 15	

- Trunk Group Data No.
 5 02

 PC Programming Guide
 TECH A: A: H USER
- 4. After entering all data for all pages; pressing the TRF key will write the selected data and advance to Memory Block 5-03 (OCC Table to Trunk Group Assignment).
- 5. Press the SPKR key to go back on-line.

Additional Programming
 Refer to Section 6 - Code Restriction in this chapter.

GENERAL INFORMATION - 8-DIGIT MATCHING TABLE TO TRUNK GROUP ASSIGNMENT

This Memory Block is used to assign each Trunk Group to the 8-Digit Matching Tables.

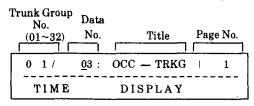
OCC TABLE TO TRUNK GROUP ASSIGNMENT **OPERATION:**

- 1. Go off-line.
- 2. Enter: Mode Trunk Group

o MIC LK 5 TRF

Data No.

(Dial Pad)



- 3. Press the corresponding CO/PBX line key to enter the data option.
 - Press the RECALL or FNC key to change pages.

To move cursor.

RECALL key

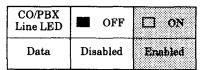
Next page.

FNC

key Previous page.

key CNF

Next Trunk Group No.



Default

age 1			
LK 1	LK 2	LK 3	LK 4
Table 00	Table 01	Table 02	Table 03
LK 5	LK 6	LK 7	LK 8
Table 04	Table 05	Table 06	Table 07

Page 2			
LK 1	LK 2	LK 3	LK 4
Table 08	Table 09	_ Table 10	Table 11
LK 5	LK 6	LK 7	LK 8
Table 12	Table 13	Table 14	Table 15

Default	Use all tables
Delault	Ose HII Ladies

- Trunk Group Data No. 03
- PC Programming Guide TECH A:A:K USER
- 4. After entering all data for all pages; pressing the TRF key will write the selected data and advance to Memory Block 5-00 (Digit Add/Del for Tie Line Networking).
- 5. Press the SPKR key to go back on-line.

Additional Programming Refer to Section 6 - Code Restriction in this chapter.

GENERAL INFORMATION - OCC TABLE TO TRUNK GROUP ASSIGNMENT

This Memory Block is used to assign each of the 16 OCC Tables to each Trunk Group.

TENANT MODE COPY ASSIGNMENT

OPERATION:

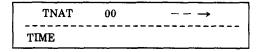
- 1. Go off-line.
- 2. Enter: Mode Copy LK6 MIC

 Sub-Mode Tenant LK2

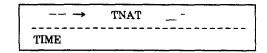
•	Сору	Tenant	Data No.
	6	2	
	PC Prog	ramming G	uide
TECH	F-3 COPY	USER	

EXAMPLE:

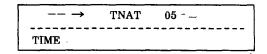
1. Enter the original Tenant No. From the dial pad press 0 0.



2. Press the TRF key.



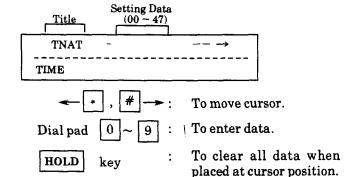
3. Enter the destination TNAT No. $(00 \sim 47)$. From the dial pad press 0 5.



4. From the dial pad press 07.

→	TNAT	05 - 07	
TIME			

5. Press the TRF key.



For example, to copy data of Tenant 00 to Tenant $05\sim07$.

- Enter original Tenant No. 00 using the dial pad and press the TRF key.
- Enter the Start Tenant No. 05 and press the TRF key.
- Enter the End Tenant No. 07 and press the TRF key.
- The upper line in the display returns to the setting above to copy another Tenant.

This Memory Block is used to enable copying data from one tenant to another tenant or multiple (consecutive) tenants.

CO LINE MODE COPY ASSIGNMENT

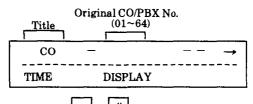
OPERATION:

1. Go off-line.

o MIC LK 6 2. Enter: Mode Copy ICM

Sub-Mode CO/PBX LK 3

(Сору	CO/PBX	Data No.
	6	3	<u> </u>
	PC Prog	ramming G	uide
тесн	F3-COPY	USER	



Dial pad 0 9 To move cursor.

To enter data.

HOLD key To clear all data when placed at cursor position.

For example, to copy data of CO/PBX line 01 to CO/PBX line $05\sim07$:

Enter original CO/PBX Line 01 using the dial pad; press the TRF key.

Original

CO/PBX No.

* CO/PBX No.

 $(01 \sim 64)$

 $(01 \sim 64)$

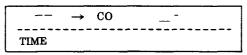
- Enter the Start CO/PBX No. and press the TRF kev.
- Enter the End CO/PBX No. and press the TRF key.
 - Entry is not needed when copying to a single CO/PBX-number only.
- The upper line in the display disappears, leaving only the time display in the lower line.

EXAMPLE:

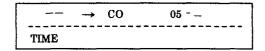
1. Enter the original CO/PBX No. From the dial pad press 01.

СО	01	-→
TIME		

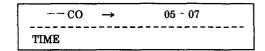
2. Press the TRF key.



3. Enter the destination CO/PBX No. $(02 \sim 64)$. From the dial pad press 0.5.



4. From the dial pad press 07.



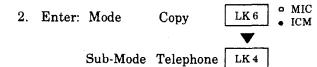
5. Press the TRF key.

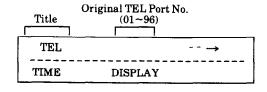
GENERAL INFORMATION - CO LINE MODE COPY ASSIGNMENT

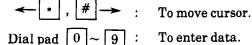
This Memory Block is used to enable copying data from one CO/PBX line to another CO/PBX line or multiple (consecutive) CO/PBX lines.

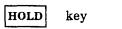
TELEPHONE MODE COPY ASSIGNMENT OPERATION:

1. Go off-line.









To clear all data when placed at cursor position.

For example, to copy data of telephone port 10 to telephone ports 20~30.

• Enter original telephone port number 01 using the dial pad, press the TRF key.

Original

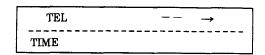
Port No. * Port No. (01~96) (01~96)

- Enter the Start Tel. No. and press the TRF key.
- Enter the End Tel. No. and press the TRF key.
 - * Entry is not needed when copying to a single Tel. No. only.
- The upper line in the display disappears, leaving only the time display in the lower line.

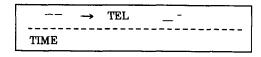
Сору		Telephone	Data No.
	6	4	
	PC Pro	gramming Gu	ide
ТЕСН	F3-COPY	USER	

EXAMPLE:

1. Enter the original Tel No. From the dial pad press 00.



2. Press the TRF key.



3. Enter the destination Tel Port No. $(01 \sim 96)$. From the dial pad press 20.

→	TEL	20	
TIME			

4. From the dial pad press 30.

-	TEL	20 - 30
TIME		

5. Press the TRF key.

GENERAL INFORMATION - TELEPHONE MODE COPY ASSIGNMENT

This Memory Block is used to enable copying data from one telephone port to another telephone port or multiple (consecutive) telephone ports.

TRUNK GROUP MODE COPY ASSIGNMENT

OPERATION:

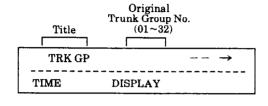
- 1. Go off-line.
- 2. Enter: Mode Copy

 LK 6
 ICM

 Sub-Mode Trunk Group

 LK 5

Co	ру	Trunk Group	Data No.
6		5	•
	PC P	ogramming G	uide
тесн	F3-COP	USER	



←[*], [#]→:

To move cursor.

Dial pad $\boxed{0} \sim \boxed{9}$:

To enter data.

HOLD key

To clear all data when placed at cursor position.

For example, to copy data of Trunk Group 01 to Trunk Groups 10~14.

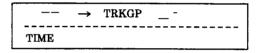
- Enter original Trunk Group number 01 using the dial pad and press the TRF key.
- Enter Start Trunk Group Number 10.
- Enter the End Trunk Group No. 14 and press the TRF key.
 - * Entry is not needed when copying to a single Trunk Group number only.
- The upper line in the display disappears, leaving only the time display in the lower line.

EXAMPLE:

1. Enter the original Trunk Group from the dial pad press 01~32.

TRKGP	01	 \rightarrow
TIME		

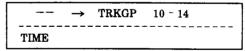
2. Press the TRF key.



3. Enter the Start Trunk Group No. $(01 \sim 32)$. From the dial pad press 10.

	→	TRKGP	10	
TIME				

4. Enter the End Trunk Group (01~32) from the dial pad press 14.



5. Press the TRF key.

GENERAL INFORMATION - TRUNK GROUP MODE COPY ASSIGNMENT

This Memory Block is used to enable copying data from one Trunk Group to another Trunk Group or multiple (consecutive) Trunk Groups.

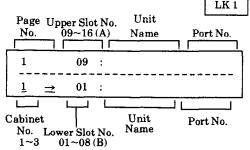
CARD INTERFACE SLOT ASSIGNMENT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Copy LK7 MIC

 LK 1

 LK 1



3. Enter data using the line key.

* , # ->: To move cursor.

Dial pad 0 ~ 9: To change lower Slot No. and Cabinet No.

RECALL key : Next page.

FNC key : Previous page.

Enter Slot No. A using dial pad (9)

Enter Slot No. B using dial pad (0)

To assign upper Slot No. for DTI-F()-10/DTI-F(A)-20 KTU, press the LNR/SPD key.

- 4. Pressing the TRF key will write the selected data and advance to the next lower Slot No.
- 5. Press the SPKR key to go back on-line.

Additional Programming

Memory Block No.	Memory Block Name	Required
1-1-46	Access Code (1-Digit) Assignment	
3-03	Trunk-to-Trunk Group Assignment	

	KTU	Slot	•
	7	1	-
	PC Progra	amming Gui	de
TECH	B: A: A, B	USER	

Page 1

Line Key	Setting Data	LCD Indication
1	NON	· · · · · · · · · · · · · · · · · · ·
2	COI-F(4)-20	COI 4-20
3	COI-F(8)-20	COI 8-20
4	NON	
5	NON	
6	ESI-F(8)-21	ESI 8-21
7	NON	
8	SLI-F(8G)-21	SLI 8G-21

Page 2

Line Key	Setting Data	LCD Indication
1	LLT-F(2G)-10	
2	TLI-F(2)-10	TLI 2-10
3	DID-F(4)-10	DID 4-10
4	NON	
5	NON	
6	PBR-F(4)-11	PBR 4-11
7	NON	
8	ECR-F-11	ECR-11

Page 3

Line Key	Setting Data	LCD Indication
1	NON	
2	VRS-F(4)-11	VRS 4-11
3	DTI-F()-10/ DTI-F(A)-20 KTU	DTI-11
4	MIF	MIF
5	NON	
6	NON	
7	NON	
8	NON	

CARD INTERFACE SLOT ASSIGNMENT (continued)

KTU	Slot	-
7	1	-

KTU UNIT	PORT NO. *1	UPPER *2	SLOT *3 1~8	OPTION SLOT *3 B
COI-F(4)-20	С	0	0	
COI-F(8)-20	С	X	0	
ESI-F(8)-21	Т	X	0	
SLI-F(8G)-21	T	X	0	
LLT-F(2G)-10	T	0	0	
TLI-F(2)-11	C	0	0	
DID-F(4)-10	С	0	0	
ESP-F-11	-	0	0	
PBR-F(4)-11	-	Х	0	
ECR-F-11	-	Х	0	
VRS-F(4)-11	V	X	0	
DTI-F()-10	C	Х	0	
DTI-F(A)-20	C	X	0	
MIF-F(S)-10	-	Х	0	0
MIF-F(L)-10	-	X	0	0
MIF-F(A)-10		X	0	0
MIF-F(U)-10	-	X	0	0

*1 C: Port Number of CO/PBX Line

T: Telephone Port Number (smallest number is displayed)

V: Voice Recording Service Package

- : No Display

*2 O: When the KTU is assigned to a lower slot, it can also be assigned to an upper slot in the same manner.

X: When the KTU is assigned to a lower slot, it cannot be assigned to another unit in an upper slot.

*3 O: Enabled Space: Disabled

NOTES:

- 1. KTU interface cards are automatically assigned during initial power up.
- 2. The ESI KTU with port numbers 01 and 02 cannot be changed.
- An attempt to install KTUs in excess of system capacity will result in an "ERR" display in the LCD, and using the TRF key to write the data will not be accepted.
- 4. When assigning the DTI KTU it must be assigned in both the upper and lower slot.
- 5. When changing an interface slot assignment from its current KTU type to a different type, use the following procedure:
 - a. Remove the KTU installed in the slot.
 - b. Reprogram the slot for the new KTU in this Memory Block.
 - c. Install the new KTU.

GENERAL INFORMATION - CARD INTERFACE SLOT ASSIGNMENT

This Memory Block is used to specify the type of installed KTUs.

LK 2

TELEPHONE TYPE ASSIGNMENT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode KTU LK7 MIC
 ICM

- 3. To change data, press the corresponding CO/PBX line key.
 - To change Telephone to Attendant Add-On Console, press CO/PBX line key 3.

CNF key : Next Tel Port No.

LK 1	LK2	LK 3	LK 4
Non	Telephone	DSS Console	SLT Adaptor
LK 5	LK 6	LK 7	LK 8
		L	
L	7		
COÆ	BX line keve	Def	ault

- 4. Pressing the TRF key will write the selected data and advance to the next Telephone Port No.
- 5. Press the SPKR key to go back on-line.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

	KTU	TEL		
	7	2		
PC Programming Guide				
тесн	B : A : D	USER		

NOTES:

- 1. Only Multiline Terminals can be assigned to Ports 01 and 02.
- 2. A maximum of four Attendant Add-On Consoles can be installed in the system.
- 3. A maximum of 55 SLT Adaptors can be installed in the system.

GENERAL INFORMATION - TELEPHONE TYPE ASSIGNMENT

This Memory Block is used to specify the type of device that is connected to an ESI port.

MIF (ACD) ASSIGNMENT

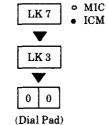
KTU MIF Data No. 7 3 00

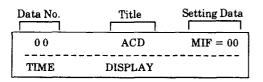
PC Programming Guide			
тесн	B: A: G	USER	

OPERATION:

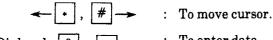
- Go off-line.
- 2. Enter: Mode

KTU





3. Enter data using the dial pad.



Dial pad

To enter data.



Setting Data: 01,02

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 7-3-01 [MIF (LCR) Assignment].
- 5. Press the SPKR key to go back on-line.

NOTES:

1. MIF KTUs can only be installed in the ESF-SB-10 KSU in any of the following Interface Slots:

OP, IF1/OP1 \sim IF4/OPS4

In the ESF-XB-10 KSU or the first ESF-XE-10 KSU installed, the following slots are available:

OPA, OPB, IF1/OP1 \sim IF4/OP4

2. This Memory Block allows assignment of the MIF KTU(s) in order sequence.

Example: Beginning with slot IF/OP1, the first installed MIF KTU is assigned 01 (regardless of which slot it is installed in). The second MIF KTU is assigned 02 (regardless of which slot it is installed in).

3. MIF-F(A)-10 KTU and MIF-F(U)-10 KTU cannot be installed in the same system.

GENERAL INFORMATION - MIF (ACD) ASSIGNMENT

This Memory Block enables the ACD function and allows the assignment of KTU order for an MIF-F(A)-10

(Dial Pad)

MIF (LCR) ASSIGNMENT

OPERATION:

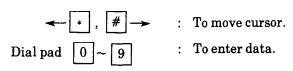
- 1. Go off-line.
- 2. Enter: Mode KTU LK7 MIC

 LK3

 0 1

Data No.	Title	Setting Data
0 1	LCR	MIF = 00
TIME	DISPLAY	

3. Enter data using the dial pad.



Default No Assignment (00)

Setting Data: 01,02

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 7-3-02 [MIF (SMDR) Assignment].
- 5. Press the SPKR key to go back on-line.

	KTU	MIF	Data No.
	7	3	01
	PC Prog	ramming G	uide
тесн	B: A: F	USER	

NOTES:

 MIF KTUs can only be installed in the ESF-SB-10 KSU in any of the following Interface Slots:

OP, IF1/OP1 \sim IF4/OP4

In the ESF-XB-10 KSU or the first ESF-XE-10 KSU installed, the following slots are available:

OPA, OPB, IF1/OP1 ~ IF4/OP4

2. This Memory Block allows assignment of the MIF KTU(s) in order sequence.

Example: Beginning with slot AP/IF 1, the first installed MIF KTU is assigned 01 (regardless of which slot it is installed in). The second MIF KTU is assigned 02 (regardless of which slot it is installed in).

GENERAL INFORMATION - MIF (LCR) ASSIGNMENT

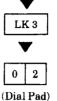
This Memory Block enables the LCR function and allows the assignment of KTU order for an MIF-F(L)-10 KTU.

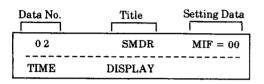
MIF (SMDR) ASSIGNMENT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode

KTU LK 7 • MIC





3. Enter data using the dial pad.

← * , # →

To move cursor.

Dial pad $0 \sim 9$

: To enter data.

Default No Assignment (00)

Setting Data: 01,02

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 7-3-00 [MIF (ACD) Assignment].
- 5. Press the SPKR key to go back on-line.

	KTU	MIF	Data No.
	7	3	02
	PC Prog	ramming G	uide
TECH	B: A: E	USER	

NOTES:

1. MIF KTUs can only be installed in the ESF-SB-10 KSU in any of the following Interface Slots:

OP, IF $1/OP1 \sim IF 4/OP4$

In the ESF-XB-10 KSU or the first ESF-XE-10 KSU installed, the following slots are available:

OPA, OPB, IF $1/OP1 \sim IF 4/OP4$

 This Memory Block allows assignment of the MIF KTU(s) in order sequence.

Example: Beginning with slot AP/IF 1, the first installed MIF KTU is assigned 01 (regardless of which slot it is installed in). The second MIF KTU is assigned 02 (regardless of which slot it is installed in).

GENERAL INFORMATION - MIF (SMDR) ASSIGNMENT

This Memory Block enables the SMDR function and allows the assignment of KTU order for an MIF-F(S)-10 KTU.

MIF (UCD) ASSIGNMENT

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode KTU LK7

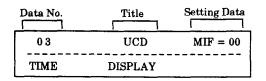
LK 3

LK 3

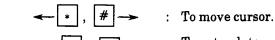
O 3

(Dial Pad)

MIC



- 3. Enter data using the dial pad.
 - Enter the slot number of installed MIF-F(U)-10 KTU.



Dial pad $\boxed{0} \sim \boxed{9}$

To enter data.

Default No Assignment (00)

Setting Data: 01,02

- 4. Pressing the TRF key will write the selected data and advance to Memory Block 7-3-00 [MIF (ACD) Assignment].
- 5. Press the SPKR key to go back on-line.

KTU	MIF	Data No.
7	3	03

PC Programming Guide			
TECH	B : A	USER	

NOTES:

 MIF KTUs can only be installed in the ESF-SB-10 KSU in any of the following Interface Slots:

OP, IF1/OP1 \sim IF/OP44

In the ESF-XB-10 KSU or the first ESF-XE-10 KSU installed, the following slots are available:

OPA, OPB, IF1/OP1 ~ IF4/OP4

2. This Memory Block allows assignment of the MIF KTU(s) in order sequence.

Example: Beginning with slot AP/IF 1, the first installed MIF KTU is assigned 01 (regardless of which slot it is installed in). The second MIF KTU is assigned 02 (regardless of which slot it is installed in).

3. MIF-F(A)-10 KTU and MIF-F(U)-10 KTU cannot be installed in the same system.

GENERAL INFORMATION - MIF (UCD) ASSIGNMENT

This Memory Block enables the UCD function and allows the assignment of KTU order for an MIF-F(U)-10 KTU.

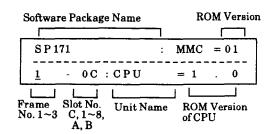
THIS PAGE INTENTIONALLY LEFT BLANK

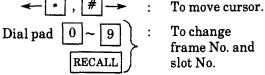
ROM VERSION CONFIRMATION

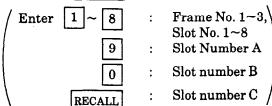
OPERATION:

- 1. Go off-line.
- 2. Enter: Mode Special LK8 MIC

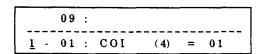
 Sub-Mode ROM LK1







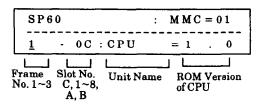
Type of unit, in the order of slot number and ROM version, is displayed each time a CO/PBX line key is pressed.



Frame number, slot number, interface name, and ROM Version are shown on the display.

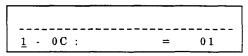
There are three display patterns.

① For basic frame (frame 1 or slot C) CPU:

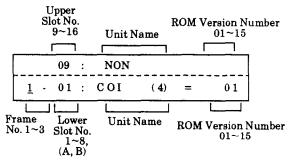


Special	ROM	Data No.
8	1	-
PC P	ogramming G	luide
TECH F2-INFO	USER	

② For slot C of expansion frame:



Tor another slot type:



 When both upper and lower slots are occupied by COI, ESI, and SLI cards, an 8-channel unit {COI (8)} is displayed in lower slot.

Display of the order is as follows:

- ① Frame 1 Slot $C \rightarrow 1 \rightarrow 2 \cdots$ $\rightarrow 8 \rightarrow A \rightarrow B$
- ② Frame 2 Slot C→1→2---→8→A→B
- ③ Frame 3 Slot $C \rightarrow 1 \rightarrow 2 \rightarrow 8$
 - After the input of slot 8 of frame 3, press TRF key, slot C of frame 1 is displayed.
 - The upper line in the display disappears, leaving only the time display in the lower line.

GENERAL INFORMATION - ROM VERSION CONFIRMATION

This Memory Block is used to confirm the program version without removing the card from the KSU.

SYSTEM SPEED DIAL MEMORY CLEAR

OPERATION:

1. Go off-line.

CLR

TIME

Use dial pad

SYS

SPD?

0

DISPLAY

9

2. Enter: Mode

Special

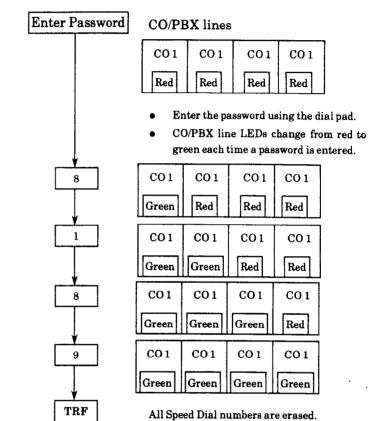
LK 8 • MIC

LK 2

Sub-Mode SPD-CLR-SYS

Special	SPD-CLR-SYS	Data No.
8	2	•

	PC Program	ming	Guide
TECH	B: H : C	USER	



WARNING

Before performing this procedure, understand completely the meaning and implications of erasing all System Speed Dial buffers in the system.

NOTES:

1. Areas to be erased:

SPKR

In 100 code mode; Speed Dial numbers 00~89.

The upper line in the display disappears, leaving only the time

display in the lower line.

 In 1000 code mode; Speed Dial numbers 000~999.

GENERAL INFORMATION - SYSTEM SPEED DIAL MEMORY CLEAR

This Memory Block is used to clear all System Speed Dial programming in the system.

To enter password

STATION SPEED DIAL MEMORY CLEAR

OPERATION:

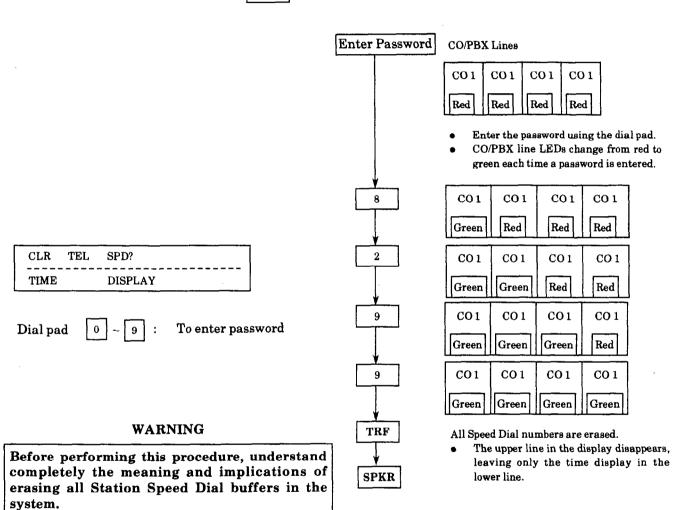
- 1. Go off-line.
- 2. Enter: Mode

Special LK8 • MIC • ICM

LK 3

Sub-Mode SPD-CLR-STA

Spe	cial	SPD	CLR-STA	Data No.
	3	3		
	PC	Progra	amming G	uide
тесн	B : H :	D:E	USER	



GENERAL INFORMATION - STATION SPEED DIAL MEMORY CLEAR

 $This\ Memory\ Block\ is\ used\ to\ clear\ the\ Station\ Speed\ Dial\ memories\ of\ all\ programmed\ Speed\ Dial\ numbers.$

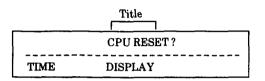
SECOND INITIALIZATION

OPERATION:

- 1. Go off-line.
- 2. Enter: Mode System LK 8 MIC

 Sub-Mode CO Line LK 8

 Data No. (Dial Pad)



- 3. Press the TRF key; begin the initialization process.
- Additional Programming
 Refer to Chapter 3 Guide to Feature Programming in this manual.

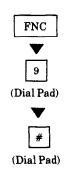
Special CO Line Data No. 8 8 8800 PC Programming Guide TECH C: J USER

GENERAL INFORMATION - SECOND INITIALIZATION

This Memory Block is used to reinitialize all the system hardware. All system software and user programming is retained after the Second Initialization.

CLOCK/CALENDAR SETTING

OPERATION:



	11:08AM
TIME	DISPLAY

To move cursor.

Dial pad

To enter Time, Date,

Month, Year

RECALL key

To switch a.m./p.m.

To switch month and

weekdays.

- Pressing the RECALL key while the cursor is at the Day or Month allows the user to scroll through the selections.
- All other items can be changed by moving the cursor to the desired position and entering the data using the dial pad.

(Refer to the example on the next page.)

-	Clock/Calendar Setting	Data No.
-	•	-
	PC Programming Gui	de
тесн	USER	

NOTES:

- 1. This is a station operation performed by the Attendant station.
- 2. The Clock/Calendar cannot be set using PC Programming.

CLOCK/CALENDAR SETTING (continued)

EXAMPLE:

To change the time and date to 12:00 p.m. Sunday, December 31, 1992:

<u>1</u> 1:08AM	
TIME	

1. From the dial pad press 1 2 0 0.

1 2:00 <u>A</u> M
TIME

2. Press the RECALL key.

	12:00PM	
TIME		

3. Press the HOLD key.

MON	01	JAN	1991
TIME			

4. Press the RECALL key and select SUN.

SUN	01	JAN	1991
TIME			

5. Move the cursor to the 01 position.

SU	N <u>0</u> :	l	JAN	1991
TIM	. – – – – – . ЛЕ			

6. From the dial pad press 31.

SUN	31	JAN	1991
TIME			

7. Press the RECALL key and select DEC.

SUN	31	DEC	1991
TIME			

8. Move the cursor to the 1991 position.

SUN	31	DEC	19 <u>9</u> 1
TIME			

9. From the dial pad press 92.

SUN	31	DEC	1992
TIME			
TIME			

10. Press the FNC key.

			1
			- 1
TIME			1
1174772			l l

GENERAL INFORMATION - CLOCK/CALENDAR SETTING

This Memory Block is used to program the year, month, day, hour, and minute, and a.m. or p.m.

SECTION 5 FUNCTION TIMER CHART

Function Timer Chart

Timer	Memory	Definition		Timing Value	•
11mer	Block	Denimion	Minimum	Default	Maximum
Pause Time Selection	1-1-00	Duration when no signal is being sent to a CO/PBX line.	1 sec.	3 sec.	3 sec.
DP Interdigit Time Selection	1-1-01	Minimum interval between dialing signals in DP dialing.	650/500 ms.	650/500 ms.	800/800 ms.
Hookflash Time Selection	1-1-02	Timing of a CO/PBX hookflash from the RECALL key of a Multiline Terminal or a Single Line Telephone to the CO/PBX line.	20 ms.	600 ms.	5000 ms. (5 sec.)
Hold Recall Timer Selection (Non-Exclusive Hold)	1-1-03	Amount of time before a held CO/PBX line recalls the station that put that line on hold.	1 min.	1 min.	No Limit
Start Timer Selection	1-1-05	Specify the time interval for after dialing and the start of call duration display and Talk Start Timer.	10 sec.	20 sec.	80 sec.
CO/PBX Incoming Ringing Alarm Time Selection	1-1-06	Specify the time interval from receiving an incoming CO/PBX call until the ringing tone changes to a different ringing tone level if the call is not answered.	10 sec.	No Limit	No Limit
Tie/DID Line Delay Ringing Timer Selection	1-1-07	Specify the delay interval between the time a telephone rings (accessed by a ringing call in the Tie/DID) line and the time other telephones start ringing.	10 sec.	No Limit	No Limit
Station Transfer/Camp-On Recall Timer Selection	1-1-12	The amount of time before a ring transferred call will recall to the station that transferred the call.	30 sec.	60 sec.	240 sec.
Trunk Queuing Timeout Selection	1-1-37	Specify the length of time queuing for a CO/PBX line will recall before being automatically canceled.	10 sec.	10 sec.	60 sec.
CO/PBX Prepause Timer Selection	1-1-57	Specify the pause time before dialed digits will be sent over a CO/PBX line.	None	1 sec.	15 sec.
Hold Recall Time Selection (Exclusive)	1-1-63	Specify the time for Exclusive Hold Recall.	30 sec.	1 min.	No Limit
Attendant Add-On Console Transfer/ Camp-On Recall Timer Selection	1-1-64	Specify the time for a ring transfer from DSS Console until recall alarm is sent.	30 sec.	1 min.	10 min.

Timer	Memory	D 6" 'L'	Timing Value			
Timer	Block	Definition	Minimum	Default	Maximum	
First Delay Announcement Start Time Selection	1-1-71	Specify the time between receiving an incoming CO call and sending the First Delay Announcement to the caller.	0 sec.	20 sec.	60 sec.	
First to Second Delay Announcement Interval Time Selection	1-1-73	Specify the time between the First and Second Delay Announcement.	0 sec.	20 sec.	No Limit	
Second Delay Announcement Repeat Interval Time Selection	1-1-75	Specify the time between repeated Second Delay Announcement.	0 sec.	20 sec.	No Limit	
Delayed Ringing Timer Assignment (CO)	1-1-77	Specify the length of time for delayed ringing on incoming outside line calls.	0 sec.	15 sec.	99 sec.	
Internal Paging Timeout Selection	1-2-00	Specify the length of time allowed for paging.	90 sec.	90 sec.	No Limit	
Automatic Callback Release Timer Selection	1-2-02	Time duration before Automatic Callback is automatically canceled.	5 min.	30 min.	30 min.	
Call Forward No Answer Timer Selection	1-2-22	Specify time before ICM or Trunk calls are forwarded.	10 sec.	10 sec.	240 sec.	
System Call Park Recall Time Selection	1-2-23	Time before a parked call will recall to the station that parked the call.	30 sec.	1 min.	10 min.	
Delayed Ringing Timer Assignment (ICM)	1-2-26	Specify the length of time for delayed ringing on internal calls.	0 sec.	10 sec.	99 sec.	
Bounce Protect Time Selection	1-3-01	Specify the length of time before a valid hookflash is detected from a Single Line Telephone or Voice Mail System.	0 ms.	300 ms.	1500 ms.	
First Digit PBR Release Timer Selection	1-3-03	Specify the time interval during which a receiver is connected when a DTMF Single Line Telephone user is dialing.	10 sec.	10 sec.	60 sec.	
Hookflash Start Time Selection	1-3-05	Specify a minimum hookflash duration for a Single Line Telephone in order to receive a second dial tone.	100 ms.	300 ms.	850 ms.	
Hookflash End Time Selection	1-3-06	Specify a maximum duration from a Single Line Telephone in order to receive a second dial tone. (HST = Hookflash Start Time.)	HST + 0 ms.	HST + 700 ms.	HST + 1500 ms.	
Voice Mail DTMF Delay Timer Selection	1-3-08	Specify the delay time before DTMF tones are sent to the VMI port.	0 sec.	1 sec.	8 sec.	
Voice Mail Disconnect Time Selection	1-3-09	Specify the sending time of a disconnect signal that is sent to the connected equipment.	.6 sec.	1.5 sec.	5 sec.	

7 0°	Memory	D. Ci., i.	Timing Value				
Timer	Block	Definition	Minimum	Default	Maximum		
Voice Mail DTMF Duration/Interdigit Time Selection	1-3-10	Used to specify the DTMF duration/interdigit time for voice mail.	70/60 ms.	100/70 ms.	900/200 ms.		
Tandem Transfer Automatic Disconnect Timer Selection	1-4-00	Used to specify a maximum time before automatic disconnect of a Trunk-to-Trunk transfer occurs.	30 min.	1 hr.	3 hr.		
Automated Attendant First Digit PBR Release Timer Selection	1-4-01	Used to specify the PBR connection time to the Automated Attendant trunk to receive DTMF signal from the calling party before automatically disconnecting.	10 sec.	20 sec.	60 sec.		
Automated Attendant Transfer Delayed Ringing Time Selection	1-4-02	Used to specify the time for a No Answer at the transferred station before the Automated Attendant will ring a predetermined station.	10 sec.	No Limit	No Limit		
Automated Attendant No Answer Disconnect Time Selection	1-4-03	Used to determine how long the Automated Attendant will ring a station before dropping the call.	1 min.	2 min.	4 min.		
Automated Attendant Answer Delay Time Assignment	1-4-13	Assign the number of seconds before the Automated Attendant answers an incoming CO/PBX call, when there is no answer.	0 sec.	4 sec.	99 sec.		
SMDR Valid Call Timer Assignment	1-5-25	Minimum duration of an outside call before the system provides an SMDR report. (Set from 0~990 seconds in 10 second increments.)	0 sec.	40 sec.	990 sec.		
External Paging Timeout Selection	1-7-06	Length of time before an external paging is automatically disconnected.	30 sec.	5 min.	No Limit		
PBR Interdigit Release Timer Selection	1-8-10	Specify the interdigit release time for the PBR.	3 sec.	7 sec.	10 sec.		
System Refresh Timer Assignment	1-8-11	Assign the system refresh time.	No Refresh	4 hr.	24 hrs.		
Trunk DTMF Duration/Interdigit Selection	3-15	Specify the tone duration and interdigit time of DTMF signals. (Expressed as duration/interdigit time.)	70/60 ms.	100/70 ms.	900/200 ms.		
Tie Line Prepause Time Selection	3-16	Specify the prepause time for when the originating side becomes capable of sending dial pulse or DTMF to a distant system.	0 sec.	0 sec.	13 sec.		
Tie Line Answer Detect Time Selection	3-17	Specify the duration between the time when the receiving system answers and the time when it is recognized as an answer.	0 ms.	520 ms.	1950 ms.		

<i>T</i> :	Memory	D. finition	Timing Value				
limer	Timer Block Definition		Minimum	Default	Maximum		
Tie Line Release Detect Time Selection	3-18	Specify the duration between the circuit disconnection detection on the Tie Line on the distant system side and the time it is recognized as Tie Line Release.	0 ms.	520 ms.	1950 ms.		
Tie Line/CO/PBX Incoming Signal Detect Time Selection	3-19	Specify the time between the detection of an incoming signal from another Level II and/or Level II Advanced system and the time when acknowledgement signal is sent. (Expressed as Wink Start/Delay/COI ms.)	0/0/50	390/120/200	1950/450/800		
Tie Line Loop Off-Guard Time Selection	3-20	Use to assign loop off-guard protection to prevent noise that may cause the system to be unable to answer an incoming Tie Line.	0 sec.	2 sec.	13 sec.		
Tie Line Length of Wink Signal Selection	3-21	Specify the time between the incoming signal detection from another Level II and/or Level II Advanced system and when the acknowledgement signal is sent out.	30 ms.	180 ms.	480 ms.		
Tie Line Length of Delay Signal Selection	3-22	Specify the length of time a delay pulse is sent to another system.	0 ms.	300 ms.	4500 ms.		
Tie Line Outgoing Timeout Selection	3-23	Specify the maximum time interval between the origination of an outgoing call and, if dialing is delayed, when the call is dropped.	1 sec.	12 sec.	No Limit		
Tie Line Incoming Interdigit Timeout Selection	3-24	Specify the maximum time interval during the incoming call detection process. If an address signal is to received within a specified time, an error tone is returned to the other system.	1 sec.	6 sec.	No Limit		
Tie Line Wink/Delay Signal Detect Timeout Selection	3-25	Specify the maximum time for receiving an acknowledgement signal from a distant system before sending a busy tone.	1 sec.	7 sec.	No Limit		
Tie Line Outgoing Guard Time Selection	3-26	Specify the duration between the time a Tie Line is released and the time the other side is notified of circuit disconnection.	.02 sec.	3 sec.	15 sec.		
Disconnect Recognition Time Selection	3-33	Specify a minimum time for a circuit that has been disconnected before it can be accessed again.	0 sec.	0.3 sec.	1.5 sec.		
Automatic Release Signal Detection Time Selection	3-40	Specify Allow or Deny of Automatic Release for each CO/PBX line.	0 ms.	350 ms.	No Limit		

SECTION 6 CODE RESTRICTION

6.1 General

The Level II and Level II Advanced systems provide an advanced method of restricting outgoing calls based on the first eight digits dialed. Code Restriction denies placement of outside calls based on Trunk Groups and accommodates equal access to Other Common Carriers (OCC). This eliminates unauthorized calls and configures system calling functions to provide cost control.

There are 16 Code Restriction Classes in System Programming. Class 00 is fixed and allows free dialing. Class 15 is fixed and denies all outside calls. Classes 01~14 are programmable in system software. Stations are assigned to Code Restriction Class on a per station basis. A separate Day Mode and Night Mode station to Code Restriction Class assignment is available.

6.2 Default Assignments

At default, all stations are assigned to Code Restriction Class 00 for both Day and Night Mode, which allows free dialing.

At default, the Code Restriction Classes have been setup with the following restrictions to provide the most common Code Restriction requirements and simplify Code Restriction programming.

Class 01: Deny: 0 and 1+ calls

Class 02: Deny: 0 and 1 + calls Allow: 1-800 calls
Class 03: Deny: 0, 1 +, and 976 calls Allow: 1-800 calls

Class 04: Deny: 1+ calls Allow: 1-800 calls

Class 05~14: Allow: 911 calls only

At default, all OCC calls are denied for Code Restriction Classes 01~14.

At default, System Speed Dial buffers will override Code Restriction Classes 01~14.

At default, Code Restriction is not applied to Tie lines.

At default, when Station Lockout is set at a station, the station is outgoing restricted.

At default, Digit Restriction is not assigned.

Note: Refer to Section 6.5 - Code Restriction Tables (Default Values).

6.3 Memory Blocks

The following is a list of related Memory Blocks used when assigning Code Restriction.

Title	Memory Block
Trunk to Tenant Assignment	. 2-01
Trunk-to-Trunk Group Assignment	. 3-03
Trunk Type Selection	. 3-91
PBX/CTX Access Code Assignment I	. 1-1-24
PBX/CTX Access Code Assignment II	. 1-1-25
OCC Table Assignment	. 1-1-67
OCC Table to Trunk Group Assignment	. 5-03
8-Digit Matching Table to OCC Table Assignment	. 1-1-68
8-Digit Matching Table to Normal Dial Assignment	. 1-1-66
8-Digit Matching Table to Trunk Group Assignment	. 5-02
8-Digit Matching Table Assignment	. 1-1-60
8-Digit Matching Table to Class Assignment	. 1-1-61
Class Allow/Deny Assignment	. 1-1-65
System Speed Dial Restriction by Tenant	. 1-1-18
System Speed Dial Override by Class Selection	. 1-1-62
Tie Line Code Restriction Assignment	. 1-1-69
Code Restriction Class Assignment when Lockout is Set	. 1-1-70
Trunk Digit Restriction	. 4-32
Code Restriction Class Assignment (Day Mode)	. 4-07
Code Restriction Class Assignment (Night Mode)	. 4-08
Telephone to Tenant Assignment	4-09

6.4 Memory Block Description

6.4.1 General

This section describes the function of the Memory Blocks that are directly related to Code Restriction. Some Memory Blocks from the previous list are not described here but are included because of their effect on Code Restriction (e.g., Trunk to Tenant Assignment). Code Restriction is based on a Trunk Group basis and consideration should be given to this Memory Block because stations are assigned to a tenant, and trunks are assigned to a Trunk Group.

6.4.2 OCC Assignment/Operation

OCC Table Assignment (Memory Block 1-1-67)

This Memory Block allows an OCC Access Code (maximum of eight digits to be assigned. There are 16 OCC Tables (01~16) in System Programming. Each Table can have one OCC Access Code assigned.

OCC Table to Trunk Group Assignment (Memory Block 5-03)

This Memory Block is used to assign Trunk Groups to the OCC Tables. Any combination of Trunk Groups can be assigned to the OCC Tables.

8-Digit Matching Table to OCC Table Assignment (Memory Block 1-1-68)

This Memory Block is used to assign the 8-Digit Matching Table to the OCC Tables. Any combination of 8-Digit Matching Tables can be assigned to the OCC Tables.

OCC Operation

When a restricted station user dials an OCC Access Code, the system searches the OCC Tables for a match. If no match is found, the user is allowed free dialing. If a match is found, the system monitors the next eight digits dialed and searches the 8-Digit Matching Tables assigned to the OCC Table. The system searches only the 8-Digit Matching Tables assigned to the Code Restriction Class the station is assigned to and has the Trunk Group assigned to it for the in-use trunk the station is on. While the station user is dialing on an outside line, and the system is searching the assigned tables, if the interdigit time duration of the dialing party exceeds 10 seconds, the system automatically drops the call.

6.4.3 8-Digit Matching Table Assignment/Operation

8-Digit Matching Table to Normal Dial Assignment (Memory Block 1-1-66)

This Memory Block is used to assign the 8-Digit Matching Table to be Used or Unused for non OCC calls. If an 8-Digit Matching Table is assigned as Unused, the table will only be used for OCC calls. There are 16, 8-Digit Matching Tables (00~15) in System Programming. Each table is independently assigned to be Used or Unused.

8-Digit Matching Table to Trunk Group Assignment (Memory Block 5-02)

This Memory Block is used to assign Trunk Groups to the 8-Digit Matching Tables. Any combination of Trunk Groups can be assigned to the 8-Digit Matching Tables.

8-Digit Matching Table Assignment (Memory Block 1-1-60)

This Memory Block is used to assign the 8-Digit Matching Tables. Each 8-Digit Matching Table can have 16, 8-digit entries. In order to cover the many possible combinations (without listing each individual number), code restriction letters can be used in place of digits. The code restriction letters used and their numerical values are as follows:

 $X = 0 \sim 9, *, and #$

P = 0 and 1

 $N = 2 \sim 9$

When 1X is entered in a table, and the table is assigned as a day table in the 8-Digit Matching Table to Class Assignment, any 1+ any digit call will be denied if the table is used. Using X, P, and N accommodates several combinations with just one entry.

Note: The Trunk Access Code should not be placed in the 8-Digit Matching Table. Code Restriction starts after a trunk is seized.

8-Digit Matching Table to Class Assignment (Memory Block 1-1-61)

This Memory Block is used to assign the 8-Digit Matching Tables to the Code Restriction Classes. The 8-Digit Matching Tables are also assigned as Allow/Deny Tables in this Memory Block. Any combination of 8-Digit Matching Tables (Allow, Deny, or Not Used) can be assigned to Code Restriction Classes 01~14. Classes 00 and 15 are fixed and are nonprogrammable.

Class Allow/Deny Selection (Memory Block 1-1-65)

This Memory Block is used to assign the Code Restriction Classes (01~14) as Allow or Deny. This assignment is used when there is no match or when there is an overlap (duplicate numbers in tables with opposite Allow/Deny assignments) of numbers in the 8-Digit Matching Tables.

8-Digit Matching Table Operations

The 8-Digit Matching Tables are used to restrict or allow OCC calls and non OCC calls. To understand the relationship of the 8-Digit Matching Tables with OCC calls. (Refer to Section 6.4.2 - OCC Assignment/Operation.)

When a restricted station user makes a non OCC call, the system monitors the first eight digits dialed and searches the 8-Digit Matching Tables assigned for "Used" in Memory Block 1-1-66 (8-Digit Matching Table to Normal Dial Assignment). The system searches only the 8-Digit Matching Tables assigned to the Code Restriction Class the station is assigned to and has the Trunk Group assigned to it for the in-use trunk the station is on.

If a match is found, the system looks at the 8-Digit Matching Table to Class Assignment for the Allow or Deny Assignment. If the table is assigned as Allow, the call is allowed. If the table is assigned as Deny, the call is denied.

If no match is found or a duplicate match is made with opposite Allow/Deny assignments, the system looks at the class Allow/Deny Assignment. If the class is assigned as Allow, the call is allowed. If the Class is assigned as Deny, the call is denied. While the station user is dialing on an outside line and the system is searching the assigned tables, if the interdigit time duration of the dialing party exceeds 10 seconds, the system automatically drops the call.

6.4.4 System Speed Dial Override by Class Selection (Memory Block 1-1-62)

This Memory Block is used to allow System Speed Dial buffers to override or not override Code Restriction. Each Code Restriction Class $(01\sim14)$ is assigned as Allow or Deny.

- 6.4.5 Tie Line Code Restriction Assignment (Memory Block 1-1-69)
 - This Memory Block assigns Code Restriction to be used or not used for calls made on Tie Line on a system-wide basis.
- 6.4.6 Code Restriction Class Assignment When Lockout is Set (Memory Block 1-1-70)

This Memory Block assigns the Code Restriction Class to be used when Station Lockout (Outgoing) is set at a station. Station Lockout can be set by the Attendant or from any station if allowed in System Programming.

Trunk Digit Restriction Assignment (Memory Block 4-32) 6.4.7

> This Memory Block is used to specify, on a per station basis, the maximum number of digits that can be dialed while on any outside line.

Code Restriction Class Assignment (Day Mode) (Memory Block 4-07) 6.4.8

> This Memory Block is used to specify, on a per station basis, the Code Restriction Class to be used when the system or stations assigned tenant is in the Day Mode.

6.4.9 Code Restriction Class Assignment (Night Mode) (Memory Block 4-08)

> This Memory Block is used to specify, on a per station basis, the Code Restriction Class to be used when the system or stations assigned tenant is in the Night Mode.

6.5 Code Restriction Tables (Default Values)

OCC Tables with Default Values 6.5.1

The following Memory Blocks are displayed:

OCC Table Assignment (1-1-67)

OCC Table to Trunk Group Assignment (5-03)

8-Digit Matching Table to OCC Table Assignment (1-1-68)

Memory Block (1-1-67) Memory Block (5-03) Memory Block (1-1-68)	TABLE 01 T.G. 01~32	TABLE 02 T.G. 01~32	TABLE 03 T.G. 01~32	TABLE 04 T.G. 01~32
Memory Block (1-1-67) Memory Block (5-03) Memory Block (1-1-68)	TABLE 05 T.G. 01~32	TABLE 06 T.G. 01~32	TABLE 07 T.G. 01~32	TABLE 08 T.G. 01~32
Memory Block (1-1-67) Memory Block (5-03) Memory Block (1-1-68)	TABLE 09 T.G. 01~32	TABLE 10 111111 T.G. 01~32	TABLE 11 T.G. 01~32	TABLE 12 T.G. 01~32
Memory Block (1-1-67) Memory Block (5-03) Memory Block (1-1-68)	TABLE 13 T.G. 01~32	TABLE 14 T.G. 01~32	TABLE 15 T.G. 01~32	TABLE 16 1 0 ××× T.G. 01~32 Table 15

Note: $X = 0 \sim 9, *, #$ P = 0, 1 $N = 2 \sim 9$

6.5.2 8-Digit Matching Tables with Default Values

The following Memory Blocks are displayed:

- 8-Digit Matching Table to Normal Dial Assignment (1-1-66)
- 8-Digit Matching Table to Trunk Group Assignment (5-02)
- 8-Digit Matching Table Assignment (1-1-60)

	TABLE 00	TABLE 00 TABLE 01		TABLE 03	
Memory Block (1-1-66)	Use Table	Use Table	Use Table	Use Table	
Memory Block (5-02)	T.G. 01~32	T.G. 01~32	T.G. 01~32	T.G. 01~32	
Memory Block (5-02) Memory Block (1-1-60)	00 911 01 02 03 04 05 06 06 06 07 08 08 08 08 08 08 08	00 01 01 02 03 04 05 06 06 06 07 08 08 08 08 08 08 08	00 01 01 02 03 04 05 06 06	00 01 02 03 04 05 06 06 07 07 08 08 08 08 08 08	
	07	07	07	07	
	15	15	15	15	

Note: $X = 0 \sim 9, *, #$ P = 0, 1 $N = 2 \sim 9$

8-Digit Matching Tables with default values:

The following Memory Blocks are displayed:

- 8-Digit Matching Table to Normal Dial Assignment (1-1-66)
- 8-Digit Matching Table to Trunk Group Assignment (5-02)
- 8-Digit Matching Table Assignment (1-1-60)

	TABLE 04	TABLE 05	TABLE 06	TABLE 07	
Memory Block (1-1-66)	Use Table	Use Table	Use Table	Use Table	
Memory Block (5-02)	T.G. 01~32	T.G. 01~32	T.G. 01~32	T.G. 01~32	
Memory Block (1-1-60)	00	00	00	00	
	01	01	01	01	
	02	02	02	02	
	03	03	03	03	
	04	04	04	04	
	05	05	05	05	
	06	06	06	06	
	07	07	07	07	
	08	08	08	08	
	09	09	09	09	
	10	10	10	10	
	11	11	11	11	
	12	12	12	12	
	13	13	13	13	
	14	14	14	14	
	15	15	15	15	

Note: $X = 0 \sim 9, *, #$ P = 0, 1 $N = 2 \sim 9$

8-Digit Matching Tables with Default Values

The following Memory Blocks are displayed:

- 8-Digit Matching Table to Normal Dial Assignment (1-1-66)
- 8-Digit Matching Table to Trunk Group Assignment (5-02)
- 8-Digit Matching Table Assignment (1-1-60)

Memory Block (1-1-66) Memory Block (5-02) Memory Block (1-1-60)

TABLE 08	TABLE 09	TABLE 10	TABLE 11
Use Table	Use Table	Use Table	Use Table
T.G. 01~32	T.G. 01~32	T.G. 01~32	T.G. 01~32
00	00	00	00 0
01	01	01	01
02	02	02	02
03	03	03	03
04	04	04	04
05	05	05	05
06	06	06	06
07	07	07	07
08	08	08	08
09	09	09	09
10	10	10	10
11	11	11	11
12	12	12	12
13	13	13	13
14	14	14	14
15	15	15	15

Note: $X = 0 \sim 9, *, #$ P = 0, 1 $N = 2 \sim 9$

8-Digit Matching Tables with Default Values

The following Memory Blocks are displayed:

- 8-Digit Matching Table to Normal Dial Assignment (1-1-66)
- 8-Digit Matching Table to Trunk Group Assignment (5-02)
- 8-Digit Matching Table Assignment (1-1-60)

	TABLE 12	TABLE 13	TABLE 14	TABLE 15	
Memory Block (1-1-66)	Use Table	Use Table	Use Table	Unused Table	
Memory Block (5-02)	T.G. 01~32	T.G. 01~32	T.G. 01~32	T.G. 01~32	
Memory Block (1-1-60)	00 976	00 1800	00 1×	00 ×	
	01	01	01	01	
	02		02	02	
	03	03	03	03	
	04	04	04	04	
	04	04	04	04	
	05	05	05	05	
	06	06	06	06	
	07	07	07	07	
	08	08	08	08	
		00	00	00	
,	09	09	09	09	
	10	10	10	10	
	11	11	11	11	
	12	12	12	12	
			12		
	13	13	13	13	
	14		14	14	
	14	14	14	14	
÷=-	15	15	15	15	

Note: $X = 0 \sim 9, *, #$ P = 0, 1 $N = 2 \sim 9$

8-Digit Matching Tables with Default Values
The following Memory Blocks are displayed:
8-Digit Matching Table to Class Assignment (1-1-61)
Class Allow/Deny Selection (1-1-65)

Memory Block (1-1-61)

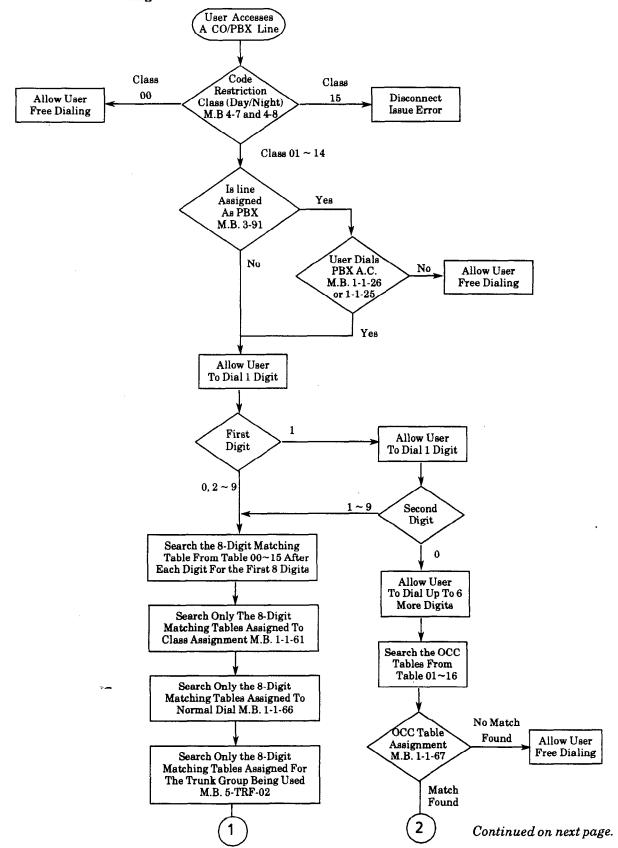
		8-Digit Matching Table										Class Allow/Deny Assignment Memory Block					
	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	(1-1-65)
Class 01	A											D			D	D	ALLOW
Class 02	A											D		A	D	D	ALLOW
Class 03	A											D	D	A	D	D	ALLOW
Class 04	A													A	D	D	ALLOW
Class 05	A																DENY
Class 06	A																DENY
Class 07	A																DENY
Class 08	A																DENY
Class 09	A																DENY
Class 10	A																DENY
Class 11	A																DENY
Class 12	A																DENY
Class 13	A																DENY
Class 14	A																DENY

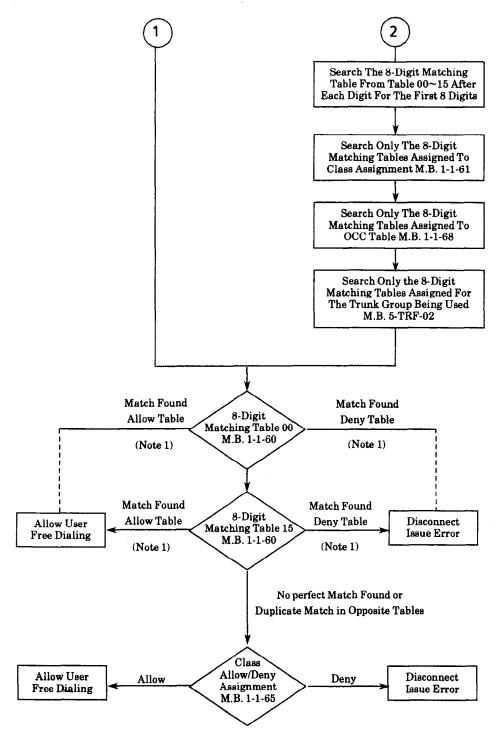
Note: A = Allow

D = Deny

Blank = Notused

6.6 Code Restriction Algorithm





Note 1: Tables are assigned as Allow or Deny in the 8-Digit Matching Table to Class Assignment (Memory Block 1-1-61).

Note 2: If the interdigit time duration of the dialing party exceeds 10 seconds while the Code Restriction Tables are being searched, the system automatically drops the call.

SECTION 7 CHARACTER CODE TABLES

These tables are used for some of the functions available to the Electra Professional Level II and Level II Advanced systems.

Note: Codes 166~221 and 250~252 are used for Japanese characters only.

Character	Code	
Blank	032	
!	033	
	034	
#	035	
\$	036	
%	037	
&	038	
,	039	
(040	
)	041	
*	042	
+	043	
,	044	
_	045	
-	046	
1	047	
0	048	
1	049	
2	050	
3	051	
4	052	
5	053	
6	054	
7	055	
8	056	
9	057	-
:	058	
;	059	
<	060	
=	061	
>	062]
?	063	

@ 064 A 065 B 066 C 067 D 068 E 069 F 070 G 071 H 072 I 073 J 074 K 075 L 076 M 077 N 078 O 079 P 080 Q 081 R 082 S 083 T 084 U 085 V 086 W 087 X 088 Y 089 Z 090 I 091 ¥ 092 I 093	Character	Code
B 066 C 067 D 068 E 069 F 070 G 071 H 072 I 073 J 074 K 075 L 076 M 077 N 078 O 079 P 080 Q 081 R 082 S 083 T 084 U 085 V 086 W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ∧ 094	@	064
C 067 D 068 E 069 F 070 G 071 H 072 I 073 J 074 K 075 L 076 M 077 N 078 O 079 P 080 Q 081 R 082 S 083 T 084 U 085 V 086 W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ∧ 094	A	065
D 068 E 069 F 070 G 071 H 072 I 073 J 074 K 075 L 076 M 077 N 078 O 079 P 080 Q 081 R 082 S 083 T 084 U 085 V 086 W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ∧ 094	В	066
E 069 F 070 G 071 H 072 I 073 J 074 K 075 L 076 M 077 N 078 O 079 P 080 Q 081 R 082 S 083 T 084 U 085 V 086 W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ∧ 094	C	067
F 070 G 071 H 072 I 073 J 074 K 075 L 076 M 077 N 078 O 079 P 080 Q 081 R 082 S 083 T 084 U 085 V 086 W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ∧ 094	D	068
G 071 H 072 I 073 J 074 K 075 L 076 M 077 N 078 O 079 P 080 Q 081 R 082 S 083 T 084 U 085 V 086 W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ∧ 094	E	069
H 072 I 073 J 074 K 075 L 076 M 077 N 078 O 079 P 080 Q 081 R 082 S 083 T 084 U 085 V 086 W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ∧ 094	F	070
I 073 J 074 K 075 L 076 M 077 N 078 O 079 P 080 Q 081 R 082 S 083 T 084 U 085 V 086 W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ∧ 094	G	071
J 074 K 075 L 076 M 077 N 078 O 079 P 080 Q 081 R 082 S 083 T 084 U 085 V 086 W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ∧ 094	H	072
K 075 L 076 M 077 N 078 O 079 P 080 Q 081 R 082 S 083 T 084 U 085 V 086 W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ∧ 094	I	073
L 076 M 077 N 078 O 079 P 080 Q 081 R 082 S 083 T 084 U 085 V 086 W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ∧ 094	J	074
M 077 N 078 O 079 P 080 Q 081 R 082 S 083 T 084 U 085 V 086 W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ∧ 094	K	075
N 078 O 079 P 080 Q 081 R 082 S 083 T 084 U 085 V 086 W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ∧ 094	L	076
O 079 P 080 Q 081 R 082 S 083 T 084 U 085 V 086 W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ^ 094	M	077
P 080 Q 081 R 082 S 083 T 084 U 085 V 086 W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ^ 094	N	078
Q 081 R 082 S 083 T 084 U 085 V 086 W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ∧ 094	0	079
R 082 S 083 T 084 U 085 V 086 W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ^ 094	Р	080
S 083 T 084 U 085 V 086 W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ∧ 094	Q	081
T 084 U 085 V 086 W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ∧ 094	R	082
U 085 V 086 W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ∧ 094	S	083
V 086 W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ∧ 094	T	084
W 087 X 088 Y 089 Z 090 [091 ¥ 092] 093 ∧ 094	U	085
X 088 Y 089 Z 090 [091 ¥ 092] 093 ∧ 094	V	086
Y 089 Z 090 [091 ¥ 092] 093 ∧ 094	W	087
Z 090 [091 ¥ 092] 093 ∧ 094	X	088
[091 ¥ 092] 093 ∧ 094	Y	089
¥ 092] 093 ∧ 094	Z	090
] 093 ^ 094	[091
∧ 094	¥	092
]	093
_ 095	^	094
	_	095

Character	Code
\	096
a	097
b	098
С	099
d	100
e	101
f	102
g	103
h	104
i	105
j	106
k	107
11	108
m	109
n	110
0	111
р	112
q	113
r	114
s	115
t	116
u	117
v	118
w	119
х	120
у	121
z	122
{	123
I	124
}	125
→	126
←	127

	,
Character	Code
Blank	160
٠	161
	162
j	163
,	164
	165
7	166
7	167
1	168
י	169
I	170
#	171
7	172
٦.	173
3	174
"	175
-	176
ア	177
1	178
ウ	179
I	180
オ	181
カ	182
*	183
ク	184
ク ケ	185
ı	186
y	187
サ シ	188
ス	189
t	190
ソ	191

Character	Code
	192
3	193
<i>F</i>	
ツ	194
7	195
<u> </u>	196
ナ	197
=	198
ヌ	199
<u></u>	200
)	201
<i>/</i> \	202
٤	203
フ	204
_ ^	205
ホ	206
7	207
	208
4	209
×	210
ŧ	211
ヤ	212
ı	213
3	214
ラ	215
IJ	216
ル	217
<u></u>	218
0	219
ワ	220
ン	221
"	222
•	223

Character	Code
a.	224
ä	225
β	226
9	227
μ	228
σ	229
ρ	230
2	231
√	232
-1	233
j	234
×	235
ę	236
£	237
ัก	238
ö	239
ρ	240
q	241
θ.	242
90	243
Ω	244
ü	245
Σ	246
α	247
x	248
q	249
7	250
万	251
P	252
+	253
Blank	254
	255

SECTION 8 DISPLAY ABBREVIATIONS

Abbreviations in the display have the following meanings:

ADD/DEL	: Addition/Deletion	IMDT	: Immediate
AL	: All	IN	: Incoming
ALM	: Alarm	INC	: Incoming Signal Detection Time Assignment
ANS	: Answer	INDV	: Individual
ANSWR	: Answer	INTRPT	: Interruption
ASSGN	: Assignment	L	: Low
AUT	: Automatic	LCD	: Liquid Crystal Display
AUTANS	: Autoanswer	LN	: Line
BLANK	: Service Class	LOOP	: Loop Off-Guard Assignment
BNCE	: Bounce	LNR/SPD	: Last Number/Speed Dial
BTN	: Button	M	: Medium
CAL	: Call	MAN	: Manual
CANCLD	: Canceled	MF	: Dual Tone Multifrequency (DTMF)
CKT	: Circuit	MIN	: Minimum
CNF	: Confirmation	мон	: Music On Hold
CL	: Class	MSTER	: Master
CLD	: CO Line Display	NBR	: Number
CLR	: Clear	NT	: Night Mode
CLS	: Class	OUT	: Outgoing
CONN	: Connection	OG TM	: Outgoing Time Out Assignment
DESG	: Designation	ov	: Over
DGT	: Digit	PAD AT	: PAD Pattern A Transmission Assignment
DISP	: Display	PAD AR	: PAD Pattern A Receiving Assignment
DISTM	: Disconnection Recognition Time	PAD BT	: PAD Pattern B Transmission Assignment
DIVERT	: Diversion	PAD BR	: PAD Pattern B Receiving Assignment
DLY	: Delay Signal Time	PRE	: Prepause Time Selection
DP	: Dial Pulse	PBR	: Push Button Signal Receiver
DSS	: Direct Station Selection	PBX	: Private Branch Exchange
DY	: Day Mode	PRNT	: Print
ESP	: External Speaker	PTRN	: Pattern
FWDG	: Forwarding	PV	: Tie Line
FLSH	: Flash	PVT	: Tie Line
GUARD	: Outgoing Guard Time	PWRFAIL	: Power Failure
Н	: High	RCV	: Receiving
HR	: Hour	RCVR	: Receiver
ICM	: Intercom (Extension)	RES	: Restriction

Continued on next page.

RINGTONE : Ringing Tone SPD : Speed Dial RLY : Relay ST : Start RNGTONE : Ringing Tone TEL : Telephone

RT : Route : TERM : Terminating RT ADV : Route Advance Block : TMR : Timer

RVS : Reversal TMD : Timed
SDT : Second Dial Tone Assignment TRNS : Transfer
SEND : Transmission TRK : Trunk

SEL : Selection TRK GP : Trunk Group

SLT : Single Line Telephone WDSD : Wink/Delay Signal Detection Time Out

CHAPTER 3 GUIDE TO FEATURE PROGRAMMING

CHAPTER 3

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SECTION 1 INTRODUCTION

This chapter provides a guide or "roadmap" of the Memory Blocks associated with a feature that are either required or can be programmed for a feature.

SECTION 2 GUIDE TO FEATURE PROGRAMMING

This section lists several features and the associated Memory Blocks that must be programmed to use the feature. Additional Memory Blocks that may affect use of the feature are also listed.

The * in front of the Memory Block Title indicates that this Memory Block must be programmed before the associated feature can be used.

ACCOUNT CODE ENTRY

	Title	Memory Block
	Start Timer Selection	1-1-05
	Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48
	Printer Connected (Alarm) Selection	1-5-13
ķ	SMDR Valid Call Timer Assignment	1-5-25
ķ	Class of Service (Station) Feature Selection 2	1-8-08

ALL CALL PAGE

Title	Memory Block
Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48
Internal Paging Timeout Selection	1-2-00
Internal Paging Alert Tone Selection	1-2-25
External Speaker Connection Selection	1-7-02
External Paging Alert Tone Selection	1-7-03
External Page Timeout Selection	1-7-06
Receiving Internal/All Call Page Selection	4-31
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ALPHANUMERIC DISPLAY

	Title	Memory Block
	Speed Dial Number/Name Display Selection	1-1-33
	Absence Message 1-10 Assignment	1-2-09 ~ 18
	Call Arrival Key Port Name Assignment	1-10-04
•	Telephone Number to Trunk Assignment	3-00
¢	Station Name Assignment	4-18
	Bilingual LCD Indication Selection	4-28
٩.	NCILLARY DEVICE CONNECTION	
	Title	Memory Block
	ADA(2) Ring Mode Assignment	4-39
١.	NSWER HOLD	
	Title	Memory Block
	Hold Recall Timer Selection (Non-Exclusive Hold)	1-1-03
;	Off-Hook Ringing Selection	1-1-26
	Trunk to Tenant Assignment	2-01
;	CO/PBX Ring Assignment (Day Mode)	4-01
	CO/PBX Ring Assignment (Night Mode)	4-02
•	NSWER KEY	
	Title	Memory Block
	Off-Hook Ringing Selection	1-1-26
	Trunk to Tenant Assignment	2-01
	DIT Assignment	3-42
	ANA Assignment	3-43
	CO/PBX Ring Assignment (Day Mode)	4-01
	CO/PBX Ring Assignment (Night Mode)	4-02

Ringing Line Preference Selection 4-11

ASSIGNED NIGHT ANSWER (ANA)

7	ADDIGITED MIGHT AND WELL (AMA)	
	Title	Memory Block
*	ANA Assignment	3-43
A	ATTENDANT ADD-ON CONSOLE (SERIES 200 OR HIGHER)	
	Title	Memory Block
*	Attendant Add-On Console to Telephone Port Assignment	1-6-01
*	Attendant Add-On Console Key Selection	1-6-05
	CO/PBX Ring Assignment (Day Mode)	4-01
	CO/PBX Ring Assignment (Night Mode)	4-02
	Line Key Selection for Telephone Mode	4-12
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A	TTENDANT CAMP-ON	
A	ATTENDANT CAMP-ON Title	Memory Block
A		
A	Title	Block 1-1-11
A	Title System Transfer/Camp-On Selection Attendant Add-On Console Transfer/Camp-On	Block 1-1-11 1-1-64
A	Title System Transfer/Camp-On Selection Attendant Add-On Console Transfer/Camp-On Recall Timer Selection	Block 1-1-11 1-1-64 1-8-08
	Title System Transfer/Camp-On Selection Attendant Add-On Console Transfer/Camp-On Recall Timer Selection Class of Service (Station) Feature Selection 2	Block 1-1-11 1-1-64 1-8-08
	Title System Transfer/Camp-On Selection Attendant Add-On Console Transfer/Camp-On Recall Timer Selection Class of Service (Station) Feature Selection 2 SLT Data Line Security Assignment	Block 1-1-11 1-1-64 1-8-08
	Title System Transfer/Camp-On Selection Attendant Add-On Console Transfer/Camp-On Recall Timer Selection Class of Service (Station) Feature Selection 2 SLT Data Line Security Assignment	Block 1-1-11 1-1-64 1-8-08 4-90 Memory
A	Title System Transfer/Camp-On Selection Attendant Add-On Console Transfer/Camp-On Recall Timer Selection Class of Service (Station) Feature Selection 2 SLT Data Line Security Assignment TTENDANT POSITIONS Title Attendant Add-On Console to Telephone Port Assignment	Block 1-1-11 1-1-64 1-8-08 4-90 Memory Block

ATTENDANT STATION OUTGOING LOCKOUT

	Title	Memory Block
	Code Restriction Class Assignment when Lockout is Set	1-1-70
*	Attendant Add-On Console Key Selection	1-6-05
	Code Restriction Class Assignment (Day Mode)	4-07
	Code Restriction Class Assignment (Night Mode)	4-08
A	TTENDANT TRANSFER	
	Title	Memory Block
*	System Transfer/Camp-On Selection	1-1-11
	Attendant Add-On Console Transfer/Camp-On	1-1-64
	Attendant Add-On Console Key Assignment	1-6-05
A	UTOMATED ATTENDANT	
	Title	Memory Block
*	Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48 Item 501
	Automated Attendant Transfer Ring Pattern	1-1-54
	Specified Station Access Code Assignment	1-2-08
	Automated Attendant First Digit PBR Release Timer Selection	1-4-01
	Automated Attendant Transfer Delayed Ringing Time Selection \ldots	1-4-02
	Automated Attendant No Answer Disconnect Time Selection $\ \ldots \ \ldots$	1-4-03
	Tandem Transfer SMDR Print Extension Assignment	1-4-04
	Automated Attendant PBR Timeout Response Selection	1-4-08
	Automated Attendant PBR Start Time Selection	1-4-09
*	Automated Attendant Message Day/Night Mode Selection	1-4-11
	Automated Attendant Message to Tenant Assignment	1-4-12
	Automated Attendant Answer Delay Time Assignment	1-4-13
	${\bf Automated\ Attendant\ Message\ Access\ Code\ (1-Digit)\ Assignment} .$	1-4-14
	${\bf Automated\ Attendant\ Message\ Access\ Code\ (2-Digit)\ Assignment} .$	1-4-15
	Automated Attendant Message Repeat Selection	1-4-16
*	SLT or Automated Attendant/DISA to PBR Selection	1-8-01
	PRR Receive Level Assignment for Automated Attendant/DISA	1-8-02

AUTOMATED ATTENDANT (continued)

	·	
	Title	Memory Block
	Class of Service (Attendant) Feature Selection 1	1-8-07 (Pg. 1 LK8 and Pg. 2 LK7)
	Class of Service (Station) Feature Selection 2	1-8-08 (Pg. 2 LK 6)
	VRS Message Recording Time Selection	1-8-12
*	VRS Message Function Assignment	1-8-13
	Tone Assignment	1-8-15 (Table 1)
*	Trunk Incoming Answer Mode Selection	3-05
	Automated Attendant Message to Trunk Selection	3-38
	CO/PBX Ring Assignment (Day Mode)	4-01
	CO/PBX Ring Assignment (Night Mode)	4-02
A	UTOMATIC CALLBACK	
	Title	Memory Block
	Automatic Callback Release Timer Selection	1-2-02
	Intercom Feature Access Code Assignment	1-2-24
	Class of Service (Station) Feature Selection 2	1-8-08
A	UTOMATIC CALL DISTRIBUTION (ACD) (SERIES 200 OR HIG	HER)
	Title	Memory Block
*	Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48 (Items 031/032)
*	Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48 (Item 040)
	Barge-In Alert Tone Assignment	1-1-76
	Call Forward No Answer Timer Selection	1-2-22
	Class of Service (Station) Feature Selection $2 \ \dots \ \dots \ \dots$	1-8-08 (Pg. 1 LK4/LK 5)
*	ACD/UCD Group Agent Assignment	1-8-25
*	ACD/UCD Group Pilot Number Assignment	1-12-00
	ACD/UCD Group Overflow Destination Assignment	
	ACD/UCD Overflow Timer Selection	1-12-02
*	DIT Assignment	
*	ANA Assignment	3-43

AUTOMATIC CALL DISTRIBUTION (ACD) (SERIES 200 OR HIGHER) (continued)

	Title	Memory Block
	Line Key Selection for Telephone Mode	4-12
	Card Interface Slot Assignment	7-1
	MIF (ACD) Assignment	7-3-00
A	UTOMATIC DAY/NIGHT MODE SWITCHING	
	Title	Memory Block
*	Automatic Day/Night Mode Switching Time Assignment	1-1-27
	Automatic Day/Night Mode by Day of Week Selection	1-1-32
	Class of Service (Attendant) Feature Selection 1	1-8-07
	CO/PBX Ring Assignment (Day Mode)	4-01
	CO/PBX Ring Assignment (Night Mode)	4-02
	Code Restriction Class Assignment (Day Mode)	4-07
	Code Restriction Class Assignment (Night Mode)	4-08
A	UTOMATIC HOLD	
	Title	Memory Block
	Hold Recall Timer Selection (Non-Exclusive Hold)	1-1-03
	Attendant Add-On Console to Telephone Port Assignment	1-6-01
	Attendant Add-On Console Key Assignment	1-6-05
	Line Key Selection for Tenant Mode	2-06
	Line Key Selection for Telephone Mode	4-12
A	UTOMATIC REDIAL	
	Title	Memory Block
	Automatic Redial Time Selection	1-1-04

AUTOMATIC RELEASE

A	UIUMAIIC RELEASE	
	Title	Memory Block
	Automatic Release Signal Detection Time Selection	3-40
A	UTOMATIC TRUNK-TO-TRUNK TRANSFER	
	Title	Memory Block
	Tandem Transfer Automatic Disconnect Timer Selection	1-4-00
	Automatic Tandem Trunk by Night Mode Selection	1-4-05
	Class of Service (Attendant) Feature Selection 1	1-8-07
*	Trunk-to-Trunk Transfer Yes/No Selection	3-04
*	Trunk Incoming Answer Mode Selection	3-05
*	Automatic Tandem Trunk Assignment	3-06
	Automatic Release Signal Detection Time Selection	3-40
В	ARGE-IN Title	Memory Block
	Start Timer Selection	1-1-05
	Private Line Assignment	1-1-29
	Barge-In Alert Tone Assignment	1-1-76
*	Class of Service (Station) Feature Selection 2	1-8-08
	Trunk to Tenant Assignment	2-01
	SLT Data Line Security Assignment	4-90
В	ILINGUAL LCD INDICATION	
	Title	Memory Block
	Absence Message 1 \sim 10 Assignment	1-2-09 ~ 18
	Call Arrival Key Port Name Assignment	1-10-04
	Station Name Assignment	4-18

1. 1

BUSY LAMP FIELD ON MULTILINE TERMINALS

DOOL MINIT LIED ON MODITALINE LEMMINING	
Title	Memory Block
Speed Dial Buffer Allocation	1-1-35
Line Key Selection	2-05
Line Key Selection for Tenant Mode	2-06
Line Key Selection for Telephone Mode	4-12
CALL ALERT NOTIFICATION (SERIES 200 OR HIGHER)	
Title	Memory Block
Call Forward No Answer Timer Selection	1-2-22
Call Forward-Busy Immediately/Delay Selection	4-42
SLT Data Line Security Assignment	4-90
CALL APPEARANCE KEYS (SERIES 250 OR HIGHER)	
Title	Memory Block
* Line Key Selection	2-05
Line Key Selection for Tenant Mode	2-06
* Line Key Selection for Telephone Mode	4-12
* Station to Call Appearance Block Assignment	4-43
CALL ARRIVAL KEYS (SERIES 250 OR HIGHER)	
Title	Memory Block
Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48
* Call Arrival Key Block Assignment	1-2-04
Attendant Add-On Console Key Selection	1-6-05
* Call Arrival Key Number Assignment	1-10-01
Call Arrival Key Master Hunt Number Selection	1-10-02
Call Arrival Key Hunt Number Forward Assignment	1-10-03
Call Arrival Key Port Name Assignment	1-10-04
* Call Arrival Key Appearance Block Assignment	1-10-05
Line Key Selection	2-05
Line Key Selection for Tenant Mode	2-06
* Line Key Selection for Telephone Mode	4-12

CALL ARRIVAL KEYS (SERIES 250 OR HIGHER) (continued)

	Title	Memory Block
*	$Extension\ Line\ Key\ Ring/Delayed\ Ring\ Assignment\ (Day\ Mode) \dots$	4-37
*	$Extension\ Line\ Key\ Ring/Delayed\ Ring\ Assignment\ (Night\ Mode).$	4-38
	SIE/CAR Ringing Line Preference Selection	4-41
	Station to Call Appearance Block Assignment	4-43

Note: The Call Arrival Keys feature requires version 2.50 software or higher.

CALLBACK REQUEST

Title	Memory Block
Intercom Feature Access Code Assignment	1-2-24
Class of Service (Station) Feature Selection 2	1-8-08
Station to Class of Service Feature Assignment	4-17

CALL FORWARD - ALL CALLS

Title	Memory Block
CO/PBX Call Forward - All Calls Selection	1-1-36
Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48
$Class\ of\ Service\ (Attendant)\ Feature\ Selection\ 1 \dots \qquad \dots \qquad .$	1-8-07
Class of Service (Station) Feature Selection 2 \dots	1-8-08
Line Key Selection	2-05
Line Key Selection for Tenant Mode	2-06
Line Key Selection for Telephone Mode	4-12
Station to Class of Service Feature Assignment	4-17

CALL FORWARD - BUSY/NO ANSWER

CALL FORWARD - DOST/NO ANSWER	
Title	Memory Block
Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48
Class of Service (Attendant) Feature Selection 1	1-8-07
Class of Service (Station) Feature Selection 2	1-8-08
Line Key Selection	2-05
Line Key Selection for Tenant Mode	2-06
Line Key Selection for Telephone Mode	4-12
Station to Class of Service Feature Assignment	4-17
CALL PARK - SYSTEM	
Title	Memory Block
Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48
System Call Park Recall Time Selection	1-2-23
CALL PICKUP	
Title	Memory Block
Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48
Trunk to Tenant Assignment	2-01
Telephone to Tenant Assignment	4-09
CLASS OF SERVICE	
Title	Memory Block
Class of Service (Attendant) Feature Selection 1	1-8-07
Class of Service (Station) Feature Selection 2	1-8-08
Station to Class of Service Feature Assignment	4-17

CLOCK/CALENDAR DISPLAY

Title	Memory Block
Time Display (12h/24h) Selection	 1-8-04

Note: The Clock/Calendar can only be set from Ports 01 and 02.

CODE RESTRICTION

Title	Memory Block
System Speed Dial Restriction by Tenant	1-1-18
PBX/CTX Access Code Assignment I	1-1-24
PBX/CTX Access Code Assignment II	1-1-25
8-Digit Matching Table Assignment	1-1-60
8-Digit Matching Table to Class Assignment	1-1-61
System Speed Dial Override by Class Assignment	1-1-62
Class Allow/Deny Assignment	1-1-65
8-Digit Matching Table to Normal Dial Assignment	1-1-66
OCC Table Assignment	1-1-67
8-Digit Matching Table to OCC Table Assignment	1-1-68
Tie Line Code Restriction Assignment	1-1-69
Code Restriction Class Assignment When Lockout is Set	1-1-70
Trunk to Tenant Assignment	2-01
Trunk-to-Trunk Group Assignment	3-03
Trunk Type Selection	3-91
Code Restriction Class Assignment (Day Mode)	4-07
Code Restriction Class Assignment (Night Mode)	4-08
Telephone to Tenant Assignment	4-09
Trunk Digit Restriction	4-32
8 ² Digit Matching Table to Trunk Group Assignment	5-02
OCC Table to Trunk Group Assignment	5-03

Note: Refer to Section 6 (Code Restriction) in Chapter 2 for additional information.

CO/PBX/TIE LINE DIGIT RESTRICTION

	Title	Memory Block
	Trunk Digit Restriction	
	 Note 1: Refer to Section 6 (Code Restriction) in Chapter 2 for additional information. Note 2: Refer to E&M Tie Lines (4-Wire) Memory Blocks in this chapter 2. 	
C	CORDLESS TELEPHONE CONNECTION	
	Title	Memory Block
	ADA(2) Ring Mode Assignment	4-39
C	USTOMIZED MESSAGE	
	Title	Memory Block
	Absence Message 1 \sim 10 Assignment	1-2-09 ~ 18
	Class of Service (Station) Feature Selection 2	1-8-08
	Station to Class of Service Feature Assignment	4-17
D	ATA LINE SECURITY	·
	Title	Memory Block
*	SLT Data Line Security Assignment	4-90
D	ELAY ANNOUNCEMENT (SERIES 200 OR HIGHER)	
	Title	Memory Block
*	Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48 (Item 501)
	First Delay Announcement Start Time Selection	1-1-71
	First Delay Announcement Repeat Selection	1-1-72
	First to Second Delay Announcement Interval Time Selection	1-1-73
	Second Delay Announcement Repeat Selection	1-1-74
	Second Delay Announcement Repeat Interval Time Selection	1-1-75
	VRS Message Recording Time Selection	1-8-12

DELAY ANNOUNCEMENT (SERIES 200 OR HIGHER) (continued)

	Title	Memory Block
*	VRS Message Function Assignment	1-8-13
*	Delay Announcement Assignment	3-41

Note 1: To record the Delay Announcements:

<u>First Announcement</u> - Dial Access Codes (Set in Memory Blocks 1-1-46, 1-1-47 and/or 1-1-48) \rightarrow Dial 1 \rightarrow Dial 3 \rightarrow Dial 1.

Second Announcement - Dial Access Codes (Set in Memory Blocks 1-1-46, 1-1-47 and/or 1-1-48) \rightarrow Dial 1 \rightarrow Dial 3 \rightarrow Dial 2.

Note 2: Requires MIF-F(A) or MIF-F(U) KTU before Memory Block can be programmed.

DELAYED RINGING

	Title	Memory Block
*	$Delayed\ Ringing\ Timer\ Assignment\ (CO)\ \dots \dots \dots \dots$	1-1-77
	Delayed Ringing Timer Assignment (ICM)	1-2-26
	CO/PBX Ring Assignment (Day Mode)	4-01
	CO/PBX Ring Assignment (Night Mode)	4-02
	Line Selection for Telephone Mode	4-12
	Extension Line Key Ring Assignment (Day Mode)	4-37
	Extension Line Key Ring Assignment (Night Mode)	4-38

DIAL 0 FOR ATTENDANT

Title	Memory Block
Access Code (1-Digit) Assignment	1-1-46
Specified Station Access Code Assignment	1-2-08
Class of Service (Attendant) Feature Selection 1	1-8-07
Station to Class of Service Feature Assignment	4-17

DIGIT INSERTION

	Title	Memory Block
*	Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48
*	Network Trunk Group/Route Advance Assignment	1-1-49
*	CO/PBX Outgoing Digit Add Assignment	1-1-50
	Trunk-to-Trunk Group Assignment	3-03
	Station Number Assignment	4-10

Refer to the diagram for an example of the Memory Blocks programmed for Digit Insertion. Listed below is an explanation of the abbreviations used in the example.

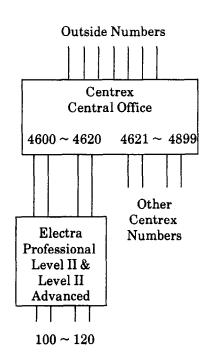
Abbreviations:

 \mathbf{AC} = Access Code

BLK = Block

MB= Memory Block

Example:



Calling

- Outside Call: Dial 9 (System add a '9')

Centrex Call: 46XX ~ 48XX

MB 1-1-46	MB 1-1-47	<u>MB 1-1-49</u>	MB 1-1-50
AC 9 = Item 401	AC 46 = Item 402	BLK 01 = 101	BLK 01 = Add 9
	AC 47 = Item 403	BLK 02 = 101	BLK 02 = Add 46
	AC 48 = Item 404	BLK 03 = 101	BLK 03 = Add 47
		BLK 04 = 101	BLK 04 = Add 48

DIRECT INWARD DIALING (DID)

Title	Memory Block
Tie/DID Line Delay Ringing Timer Selection	1-1-07
Tie/DID Line First Ring Pattern Selection	1-1-34
Tie/DID Line Delay Ring Pattern Selection	1-1-53
Trunk-to-Trunk Group Assignment	3-03
Tie/DID Line Type Assignment	3-14
Tie Line Length of Wink Signal Selection	3-21
Tie Line Length of Delay Signal Selection	3-22
Tie Line Dial Tone Selection	3-27
Digit Add/Delete for Tie Line Networking	5-00
Card Interface Slot Assignment	7-1

DIRECT INWARD SYSTEM ACCESS (DISA)

Direct Inward System Access (DISA) without VRS Message

	Title	Memory Block
	Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48 (Items 251/252/ 253)
	$Automated\ Attendant\ First\ Digit\ PBR\ Release\ Timer\ Selection\ \dots.$	1-4-01
	Automated Attendant PBR Timeout Response Selection	1-4-08
*	Automated Attendant Message Day/Night Mode Selection	1-4-11
	${\bf Automated\ Attendant\ Message\ Access\ Code\ (1-Digit)\ Assignment\ \dots}$	1-4-14
	${\bf Automated\ Attendant\ Message\ Access\ Code\ (2-Digit)\ Assignment\ \dots}$	1-4-15
	DISA ID Code Digit Selection	1-5-24
*	SLT or Automated Attendant/DISA to PBR Selection	1-8-01
	PBR Receive Level Assignment for Automated Attendant/DISA	1-8-02
	Class of Service (Attendant) Feature Selection 1	1-8-07 (Pg. 2 LK 5/ LK 6)
	Class of Service (Station) Feature Selection 2	1-8-08 (Pg. 2 LK 8)
	DISA ID Code Assignment	1-9-00
	DISA Password Effect/Invalid Selection	1-9-02
*	Trunk Incoming Answer Mode Selection	3-05
	DISA ID Number Station Assignment	4-26

Direct Inward System Access (DISA) with VRS Message

	Title	Memory Block
	Access Code (1-, -2, or 3-Digit) Assignment	1-1-46/47/48 (Items 251/ 252/253)
*	Access Code (1-, 2-, or 3-Digit) Assignment	1-1-4/47/48 (Item 501)
	Automated Attendant First Digit PBR Release Timer Selection	1-4-01
	Tandem Transfer SMDR Print Extension Assignment	1-4-04
	Automated Attendant PBR Timeout Response Selection	1-4-08
	Automated Attendant PBR Start Time Selection	1-4-09
ķ	Automated Attendant Message Day/Night Mode Selection	1-4-11
	Automated Attendant Message to Tenant Assignment	1-4-12
	Automated Attendant Answer Delay Time Assignment	1-4-13
	${\bf Automated\ Attendant\ Message\ Access\ Code\ (1-Digit)\ Assignment}.$	1-4-14
	${\bf Automated\ Attendant\ Message\ Access\ Code\ (2-Digit)\ Assignment} .$	1-4-15
	Automated Attendant Message Repeat Selection	1-4-16
	DISA ID Code Digit Selection	1-5-24
•	SLT or Automated Attendant/DISA to PBR Selection	1-8-01
	PBR Receive Level Assignment for Automated Attendant/DISA	1-8-02
	Class of Service (Attendant) Feature Selection 1	1-8-07 (Pg. 2 LK 5/ LK 6)
	Class of Service (Station) Feature Selection 2	1-8-08 (Pg. 2 LK 8)
	VRS Message Recording Time Selection	1-8-12
	VRS Message Function Assignment	1-8-13
	Tone Assignment	1-8-15 (Table 2)
	DISA ID Code Assignment	1-9-00
	DISA Password Effect/Invalid Selection	1-9-02
	Trunk Incoming Answer Mode Selection	3-05
	Automated Attendant Message to Trunk Selection	3-38
	DISA ID Number Station Assignment	4-26

Г	DIRECT INWARD TERMINATION	
	Title	Memory Block
	Call Forward No Answer Timer Selection	1-2-22
*	DIT Assignment	3-42
*	ANA Assignment	3-43
	Call Forward-Busy Immediately/Delay Selection	4-42
D	DIRECT PAGING ACCESS	
	Title	Memory Block
	Access Code (1-, -2 or 3-Digit) Assignment	1-1-46/47/48
	Attendant Add-On Console Key Selection	1-6-05
	Line Key Selection for Telephone Mode	4-12
D	DIRECT STATION SELECTION	
	Title	Memory Block
	Line Key Selection	2-05
	Line Key Selection for Tenant Mode	2-06
	Line Key Selection for Telephone Mode	4-12
D	DISTINCTIVE RINGING	
	Title	Memory Block
	CO/PBX Incoming Ringing Alarm Time Selection	1-1-06
	Distinctive Ringing by Telephone or CO Selection	1-1-28
	CO Line First Ringing Pattern Selection	1-1-51
	PBX Line First Ringing Pattern Selection	1-1-52
	Tie/DID Line Delay Ring Pattern Selection	1-1-53
	CO/PBX Ringing Pattern Selection	1-1-56
	Synchronous Ringing Selection	1-1-59
	CO/PBX Ringing Variation Selection	3-07

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DO NOT DISTURB	
Title	Memory Block
Class of Service (Attendant) Feature Selection 1	1-8-07
Class of Service (Station) Feature Selection 2	1-8-08
Station to Class of Service Feature Assignment	4-17
DROP KEY	
Title	Memory Block
Line Key Selection	2-05
Line Key Selection for Tenant Mode	2-06
Line Key Selection for Telephone Mode	4-12
DTI	
DTI Title	Memory Block
	•
Title	Block
Title Signal Format Selection	Block 1-11-00
Title Signal Format Selection	Block 1-11-00 1-11-01
Title Signal Format Selection Clear Channel Selection Line Length Selection	Block 1-11-00 1-11-01 1-11-02
Title Signal Format Selection Clear Channel Selection Line Length Selection Robbed Bit Signaling Channel Selection	Block 1-11-00 1-11-01 1-11-02 1-11-03
Title Signal Format Selection Clear Channel Selection Line Length Selection Robbed Bit Signaling Channel Selection DTI Maintenance Selection	Block 1-11-00 1-11-01 1-11-02 1-11-03 1-11-04
Title Signal Format Selection Clear Channel Selection Line Length Selection Robbed Bit Signaling Channel Selection DTI Maintenance Selection T1 Channel Selection	Block 1-11-00 1-11-01 1-11-02 1-11-03 1-11-04 1-11-05
Title Signal Format Selection Clear Channel Selection Line Length Selection Robbed Bit Signaling Channel Selection DTI Maintenance Selection T1 Channel Selection Signaling Selection	Block 1-11-00 1-11-01 1-11-02 1-11-03 1-11-04 1-11-05 1-11-06
Title Signal Format Selection Clear Channel Selection Line Length Selection Robbed Bit Signaling Channel Selection DTI Maintenance Selection T1 Channel Selection Signaling Selection DTI Trunk Type Assignment	Block 1-11-00 1-11-01 1-11-02 1-11-03 1-11-04 1-11-05 1-11-06 1-11-07

ΕI

Title	Memory Block
Start Timer Selection	1-1-05

E&M TIE LINES (4-WIRE)

Title	Memory Block
Tie/DID Line Delay Ringing Timer Selection	1-1-07
Tie/DID Line First Ring Pattern Selection	1-1-34
Tie/DID Line Delay Ring Pattern Selection	1-1-53
Tie Line Code Restriction Assignment	1-1-69
Trunk-to-Trunk Group Assignment	3-03
Tie/DID Line Type Assignment	3-14
Trunk DTMF Duration/Interdigit Selection	3-15
Tie Line Prepause Time Selection	3-16
Tie Line Answer Detect Time Selection	3-17
Tie Line Release Detect Time Selection	3-18
Tie Line CO/PBX Incoming Signal Detect Time Selection $\ \ldots \ \ldots$	3-19
Tie Line Loop Off-Guard Time Selection	3-20
Tie Line Length of Wink Signal Selection	3-21
Tie Line Length of Delay Signal Selection	3-22
Tie Line Outgoing Timeout Selection	3-23
Tie Line Incoming Interdigit Timeout Selection	3-24
Tie Line Wink/Delay Signal Detect Timeout Selection	3-25
Tie Line Outgoing Guard Time Selection	3-26
Tie Line Dial Tone Selection	3-27
Tie Line Reorder Tone Selection	3-28
Tie Line Internal Transmit Pad Selection	3-29
Tie Line Internal Receive Pad Selection	3-30
Tie Line External Transmit Pad Selection	3-31
Tie Line External Receive Pad Selection	3-32
Trunk Type Selection	3-91
Trunk (Installed DP/DTMF) Selection	3-92

E	QUAL ACCESS ACCOMMODATION	
	Title	Memory Block
	8-Digit Matching Table to Class Assignment	1-1-61
	OCC Table Assignment	1-1-67
	8-Digit Matching Table to OCC Table Assignment	1-1-68
*	Code Restriction Class Assignment (Day Mode)	4-07
*	Code Restriction Class Assignment (Night Mode)	4-08
	OCC Table to Trunk Group Assignment	5-03
Đ	XTERNAL TONE RINGER	
	Title	Memory Block
	External Ring Relay Cycle Selection	1-7-07
*	ECR Relay to Tenant Assignment	2-08
E	XTERNAL ZONE PAGING (MEET-ME)	
	Title	Memory Block
	Access Code (1-, -2 or 3-Digit) Assignment	1-1-46/47/48
	Attendant Add-On Console Key Assignment	1-6-05
	Line Key Selection	2-05
	Line Key Selection for Tenant Mode	2-06
	Line Key Selection for Telephone Mode	4-12
F	AX STATUS INDICATION	
	Title	Memory Block
	Access Code (1-, 2- or 3-Digit) Assignment	1-1-46/47/488
	${\bf Automated\ Attendant\ Message\ Access\ Code\ (1-Digit)\ Assignment} .$	1-4-14
	${\bf Automated\ Attendant\ Message\ Access\ Code\ (2-Digit)\ Assignment} .$	1-4-15
	Line Key Selection	2-05
	Line Key Selection for Tenant Mode	2-06
	Line Key Selection for Telephone Mode	4-12
*	Fax Indication Station Assignment	4-33

* Fax Indication Networking Assignment 4-34

FEATURE ACCESS - USER PROGRAMMABLE

Title	Memory Block
Line Key Selection	2-05
Line Key Selection for Tenant Mode	2-06
Line Key Selection for Telephone Mode	4-12
FLEXIBLE LINE ASSIGNMENT	
Title	Memory Block
Line Key Selection	2-05
Line Key Selection for Tenant Mode	2-06
Line Key Selection for Telephone Mode	4-12
FLEXIBLE NUMBERING PLAN	
Title	Memory Block
Access Code (1-or 2-Digit) Assignment	1-1-46/47
2-, 3-, or 4-Digit Station Numbering Selection	1-2-03
* Station Number Assignment	4-10
FLEXIBLE RINGING ASSIGNMENT	
Title	Memory Block
* Off-Hook Ringing Selection	1-1-26
CO/PBX Ring (Day) Mode	4-01
CO/PBX Ring (Night) Mode	4-02
Extension Line Key Ring Assignment (Day Mode)	4-37
Extension Line Key Ring Assignment (Night Mode)	4-38

FLEXIBLE TIMEOUTS

Title	Memory Block
Pause Time Selection	1-1-00
DP Interdigit Time Selection	1-1-01
Hookflash Time Selection	1-1-02
Hold Recall Time Selection (Non-Exclusive Hold)	1-1-03
Start Timer Selection	1-1-05
CO/PBX Incoming Ringing Alarm Time Selection	1-1-06
Tie/DID Line Delay Ringing Timer Selection	1-1-07
Station Transfer/Camp-On Recall Timer Selection	1-1-12
Trunk Queuing Timeout Selection	1-1-37
CO/PBX Prepause Timer Selection	1-1-57
Hold Recall Time Selection (Exclusive)	1-1-63
Attendant Add-On Console Transfer/Camp-On	1-1-64
First Delay Announcement Start Time Selection	1-1-71
First to Second Delay Announcement Interval Time Selection	1-1-73
Second Delay Announcement Repeat Interval Time Selection	1-1-75
Internal Paging Timeout Selection	1-2-00
Automatic Callback Release Timer Selection	1-2-02
Call Forward No Answer Timer Selection	1-2-22
System Call Park Recall Time Selection	1-2-23
Bounce Protect Time Selection	1-3-01
First Digit PBR Release Timer Selection	1-3-03
Hookflash Start Time Selection	1-3-05
Hookflash End Time Selection	1-3-06
Voice Mail DTMF Delay Timer Selection	1-3-08
Voice Mail Disconnect Time Selection	1-3-09
Voice Mail DTMF Duration/Interdigit Time Selection	1-3-10
Tandem Transfer Automatic Disconnect Timer Selection	1-4-00
Automated Attendant First Digit PBR Release Timer Selection	1-4-01
Automated Attendant Transfer Delayed Ringing Time Selection	1-4-02
Automated Attendant No Answer Disconnect Time Selection	1-4-03
Automated Attendant Answer Delay Time Assignment	1-4-13
SMDR Valid Call Timer Assignment	1-5-25
External Page Timeout Selection	1-7-06
PBR Interdigit Release Timer Selection	1-8-10
System Refresh Timer Assignment	1-8-11

FLEXIBLE TIMEOUTS (continued)

Title	Memory Block
Trunk DTMF Duration/Interdigit Selection	3-15
Tie Line Prepause Time Selection	3-16
Tie Line Answer Detect Time Selection	3-17
Tie Line Release Detect Time Selection	3-18
Tie Line CO/PBX Incoming Signal Detect Time Selection	3-19
Tie Line Loop Off-Guard Time Selection	3-20
Tie Line Length of Wink Signal Selection	3-21
Tie Line Length of Delay Signal Selection	3-22
Tie Line Outgoing Timeout Selection	3-23
Tie Line Incoming Interdigit Timeout Selection	3-24
Tie Line Wink/Delay Signal Detect Timeout Selection	3-25
Tie Line Outgoing Guard Time Selection	3-26
Disconnect Recognition Time Selection	3-33
Automatic Release Signal Detection Time Selection	3-40
FULL HANDSFREE OPERATION	
Title	Memory Block
* HFU Selection	4-29
HEADSET CONNECTION VIA ADA(1)-W(BK) UNIT	
Title	Memory
Title	Block
Line Key Selection	Block
	Block 2-05
Line Key Selection	Block 2-05 2-06
Line Key Selection	Block 2-05 2-06
Line Key Selection	Block 2-05 2-06
Line Key Selection Line Key Selection for Tenant Mode * Line Key Selection for Telephone Mode HOLD WITH RECALL (EXCLUSIVE AND NON-EXCLUSIVE)	Block 2-05 2-06 4-12 Memory Block
Line Key Selection Line Key Selection for Tenant Mode * Line Key Selection for Telephone Mode HOLD WITH RECALL (EXCLUSIVE AND NON-EXCLUSIVE) Title	Block 2-05 2-06 4-12 Memory Block 1-1-03

HOT LINE

Title	Memory Block
Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48
Prime Line/Hot Line Assignment	4-23
HOWLER TONE SERVICE	
Title	Memory Block
Tone Assignment	1-8-15
INCOMING CALL IDENTIFICATION	
Title	Memory Block
Telephone Number to Trunk Assignment	3-00
Station Name Assignment	4-18
INTERNAL VOICE/TONE SIGNALING	
Title	Memory Block
Intercom Call Voice/Tone Signal Selection	1-2-01
DSS Call Voice/Tone Signal Selection	1-6-03
INTERNAL ZONE PAGING (MEET-ME)	
Title	Memory Block
Internal Paging Timeout Selection	1-2-00
Internal Paging Alert Tone Selection	1-2-25
Receiving Internal/All Call Page Selection	4-31
* Internal Zone Paging Selection	4-93

KEY FUNCTION/MULTI FUNCTION REGISTRATION

This function is set on the CPU-F()-20 KTU.

- * Dip Switch (Switch 3 is set to MF or KF).
- * A First Initialization is required to change the switch status.

Title

Music On Hold Pattern Selection 1-8-09

LEAST COST ROUTING (LCR)

LEAST COST ROUTING (LCR)	
Title	Memory Block
Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48
Trunk-to-Trunk Group Assignment	3-03
* LCR Class Selection	4-40
Card Interface Slot Assignment	7-1
MIF (LCR) Assignment	7-3-01
MESSAGE WAITING	
Title	Memory Block
Attendant Add-On Console Key Selection	1-06-05
MULTIPLE TRUNK GROUPS	
Title	Memory Block
Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48
Trunk-to-Trunk Group Assignment	3-03
MUSIC ON HOLD	

Memory Block

NIGHT CALL PICKUP

Title	Memory Block
Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48
ECR Relay to Tenant Assignment	2-08
NIGHT CHIME	
Title	Memory Block
* ECR Relay to Tenant Assignment	2-08
Card Interface Slot Assignment	7-1
NIGHT TRANSFER	
Title	Memory Block
Attendant Add-On Console Key Selection	1-6-05
Class of Service (Attendant) Feature Selection 1	1-8-07
Trunk to Tenant Assignment	2-01
Trunk-to-Trunk Group Assignment	3-03
CO/PBX Ring Assignment (Day Mode)	4-01
CO/PBX Ring Assignment (Night Mode)	4-02
Code Restriction Class Assignment (Day Mode)	4-07
Code Restriction Class Assignment (Night Mode)	4-08
Telephone to Tenant Assignment	4-09
Station to Class of Service Feature Assignment	4-17
Extension Line Key Ring/Delayed Ring Assignment (Day Mode)	4-37
Extension Line Key Ring/Delayed Ring Assignment (Night Mode) .	4-38
7- -	
OFF-HOOK RINGING	
Title	Memory Block
Off-Hook Ringing Selection	1-1-96

OFF-HOOK VOICE ANNOUNCEMENT TERMINAL ASSIGNMENT

	Title	Memory Block
4	Off-Hook Voice Announcement Terminal Assignment	4-20
1	PC PROGRAMMING	
	Title	Memory Block
	P.C. Programming Password Assignment	1-8-17
	Site Name Assignment	1-8-18
	Card Interface Slot Assignment	7-1
	MIF (LCR) Assignment	7-3-01
	MIF (SMDR) Assignment	7-3-02
F	POOLED LINE (OUTGOING)	
	Title	Memory Block
	Line Key Selection	2-05
	Line Key Selection for Tenant Mode	2-06
	Trunk-to-Trunk Group Assignment	3-03
*	Line Key Selection for Telephone Mode	4-12
P	RIME LINE ASSIGNMENT	
	Title	Memory Block
	Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48
*	Prime Line/Hot Line Assignment	4-23
	7	
P	RIVATE LINES	
	Title	Memory Block
ķ	Private Line Assignment	1-1-29

RECALL KEY

Title	Memory Block
Hookflash Time Selection	1-1-02
RESTRICTION (OUTGOING)	
Title	Memory Block
* Trunk Outgoing Restriction	4-19
RINGING LINE PREFERENCE	
Title	Memory Block
* Ringing Line Preference Selection	4-11
Class of Service (Station) Feature Selection 2	1-8-08
SIE/CAR Ringing Line Preference Selection	4-41
ROUTE ADVANCE BLOCK	
Title	Memory Block
Title * Route Advance Block Assignment	Block
	Block 1-1-30
* Route Advance Block Assignment	Block 1-1-30
* Route Advance Block Assignment Access Code (1-, 2-, or 3-Digit) Assignment	Block 1-1-30 1-1-46/47/48 2-05
* Route Advance Block Assignment Access Code (1-, 2-, or 3-Digit) Assignment Line Key Selection	Block 1-1-30 1-1-46/47/48 2-05
* Route Advance Block Assignment Access Code (1-, 2-, or 3-Digit) Assignment Line Key Selection Line Key Selection for Tenant Mode	Block 1-1-30 1-1-46/47/48 2-05 2-06 3-03
* Route Advance Block Assignment Access Code (1-, 2-, or 3-Digit) Assignment Line Key Selection Line Key Selection for Tenant Mode Trunk-to-Trunk Group Assignment	Block 1-1-30 1-1-46/47/48 2-05 2-06 3-03
* Route Advance Block Assignment Access Code (1-, 2-, or 3-Digit) Assignment Line Key Selection Line Key Selection for Tenant Mode Trunk-to-Trunk Group Assignment * Line Key Selection for Telephone Mode	Block 1-1-30 1-1-46/47/48 2-05 2-06 3-03
* Route Advance Block Assignment Access Code (1-, 2-, or 3-Digit) Assignment Line Key Selection Line Key Selection for Tenant Mode Trunk-to-Trunk Group Assignment * Line Key Selection for Telephone Mode SECONDARY INCOMING EXTENSION	Block 1-1-30 1-1-46/47/48 2-05 2-06 3-03 4-12
* Route Advance Block Assignment Access Code (1-, 2-, or 3-Digit) Assignment Line Key Selection Line Key Selection for Tenant Mode Trunk-to-Trunk Group Assignment * Line Key Selection for Telephone Mode SECONDARY INCOMING EXTENSION Title	Block 1-1-30 1-1-46/47/48 2-05 2-06 3-03 4-12 Memory Block
* Route Advance Block Assignment Access Code (1-, 2-, or 3-Digit) Assignment Line Key Selection Line Key Selection for Tenant Mode Trunk-to-Trunk Group Assignment * Line Key Selection for Telephone Mode SECONDARY INCOMING EXTENSION Title Line Key Selection	Block 1-1-30 1-1-46/47/48 2-05 2-06 3-03 4-12 Memory Block 2-05
* Route Advance Block Assignment Access Code (1-, 2-, or 3-Digit) Assignment Line Key Selection Line Key Selection for Tenant Mode Trunk-to-Trunk Group Assignment * Line Key Selection for Telephone Mode SECONDARY INCOMING EXTENSION Title Line Key Selection Line Key Selection for Tenant Mode	Block 1-1-30 1-1-46/47/48 2-05 2-06 3-03 4-12 Memory Block 2-05 2-06
* Route Advance Block Assignment Access Code (1-, 2-, or 3-Digit) Assignment Line Key Selection Line Key Selection for Tenant Mode Trunk-to-Trunk Group Assignment * Line Key Selection for Telephone Mode SECONDARY INCOMING EXTENSION Title Line Key Selection Line Key Selection for Tenant Mode * Line Key Selection for Tenant Mode * Line Key Selection for Telephone Mode	Block 1-1-30 1-1-46/47/48 2-05 2-06 3-03 4-12 Memory Block 2-05 2-06 4-12

SEIZED TRUNK NUMBER DISPLAY

	Title	Memory Block
*	Telephone Number to Trunk Assignment	3-00
s	INGLE LINE TELEPHONE ACCESS	
	Title	Memory Block
	Bounce Protect Time Selection	1-3-01
	SLT Hookflash Signal Selection	1-3-02
	First Digit PBR Release Timer Selection	1-3-03
	Dial 1 (DP) Hookflash Selection	1-3-04
	Hookflash Start Time Selection	1-3-05
	Hookflash End Time Selection	1-3-06
	SLT or Automated Attendant/DISA to PBR Selection	1-8-01
	DIT Assignment	3-42
	ANA Assignment	3-43
	CO/PBX Ring Assignment (Day Mode)	4-01
	CO/PBX Ring Assignment (Night Mode)	4-02
	Telephone to Tenant Assignment	4-09
	Station Name Assignment	4-18
	SLT Hookflash Assignment	4-24
	Voice Mail/SLT Selection	4-35
	SLT Data Line Security Assignment	4-90
	DTMF/DP SLT Type Selection	4-95
S	LT ADAPTER	
	Title	Memory Block
	Station Number Assignment	4-10
	Telephone Type Assignment	7-2

SLT TIMED ALARM

Title	MEMORY BLOCK
Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48
Class of Service (Attendant) Feature Selection 1	1-8-07
Station to Class of Service Feature Assignment	4-17
SPEED DIAL STORED CHARACTERS	
Title	Memory Block
Speed Dial Number/Name Display Selection	1-1-33
SPEED DIAL STATION	
Title	Memory Block
Speed Dial Buffer Allocation	1-1-35
SPEED DIAL SYSTEM	
Title	Memory Block
Speed Dial Buffer Allocation	1-1-35
STATION HUNTING	
Title	Memory Block
* Intercom Master Hunt Number Selection	4-14
* Intercom Master Hunt Number Forward Assignment	4-15

STATION MESSAGE DETAILED RECORDING (SMDR)

	Title	Memory Block
	Start Timer Selection	1-1-05
	SMDR Print Format	1-5-02
*	Printer Connected (Alarm) Selection	1-5-13
	Printer Line Feed Control Selection	1-5-14
	SMDR Valid Call Timer Assignment	1-5-25
	SMDR Incoming/Outgoing Print Selection	1-5-26
	Card Interface Slot Assignment	7-1
	MIF (LCR) Assignment	7-3-01
	MIF (SMDR) Assignment	7-3-02
s	TATION OUTGOING LOCKOUT	
	Title	Memory Block
*	Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48
	Code Restriction Class Assignment When Lockout is Set	1-1-70
	Class of Service (Station) Feature Selection $2 \ \ldots \ \ldots$	1-8-08
	Station to Class of Service Feature Assignment	4-17
S	TATION TRANSFER	
	Title	Memory Block
	System Transfer/Camp-On Selection	1-1-11
	System Transfer/Camp-On Recall Timer Selection	1-1-12
S	TEP CALL	
	Title	Memory Block
	Intercom Feature Access Code Assignment	1-2-24
	Class of Service (Station) Feature Selection 2	1-8-08
	Station to Class of Service Feature Assignment	4-17

STORED HOOKFLASH

Title	Memory Block
Hookflash Time Selection	1-1-02
SYNCHRONOUS RINGING	
Title	Memory Block
Synchronous Ringing Selection	1-1-59
T1 CONNECTION	
Title	Memory Block
Signal Format Selection	1-11-00
Clear Channel Selection	1-11-01
Line Length Selection	1-11-02
Robbed Bit Signal Channel Selection	1-11-03
DTI Maintenance Selection	1-11-04
T1 Channel Selection	1-11-05
Signaling Selection	1-11-06
Trunk to Tenant Assignment	2-01
Trunk-to-Trunk Group Assignment	3-03
Card Interface Slot Assignment	7-1
TANDEM SWITCHING OF 4-WIRE E&M TIE LINES	
Title	Memory Block
Tie Line Networking Tandem Connection Assignment	5-01
Note 1: Refer to E&M Tie Lines (4-Wire).	
Note 2: Refer to Uniform Numbering Network (Closed or Open Plan)) .

TENANT SERVICE

Title	Memory Block
Automated Attendant Message to Tenant Assignment	1-4-12
Trunk to Tenant Assignment	2-01
Line Key Selection	2-05
Line Key Selection for Tenant Mode	2-06
System Speed Dial Display Assignment	2-07
ECR Relay to Tenant Assignment	2-08
Telephone to Tenant Assignment	4-09
THREE MINUTE REMINDER	
Title	Memory Block
3-Minute Alarm Selection	4-94
TONE OVERRIDE	
Title	Memory Block
Class of Service (Station) Feature Selection 2	1-8-08
Station to Class of Service Feature Assignment	4-17
TRUNK QUEUING	
Title	Memory Block
Trunk Queuing Timeout Selection	1-1-37
Class of Service (Station) Feature Selection 2	1-8-08
Station to Class of Service Feature Assignment	4-17

TRUNK-TO-TRUNK TRANSFER

	Title	Memory Block
	Tandem Transfer Automatic Disconnect Timer Selection	1-4-00
	$Class\ of\ Service\ (Attendant)\ Feature\ Selection\ 1 \qquad \dots \qquad \dots$	1-8-07
*	Class of Service (Station) Feature Selection 2	1-8-08
*	Trunk-to-Trunk Transfer Yes/No Selection	3-04
	Station to Class of Service Feature Assignment	4-17

UNIFORM CALL DISTRIBUTION (UCD) (SERIES 200 OR HIGHER)

	Title	Memory Block
*	Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48 (Item 031/032)
*	Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48 (Item 040)
	Barge-In Alert Tone Assignment	1-1-76
	Call Forward No Answer Timer Selection	1-2-22
	Class of Service (Station) Feature Selection 2	1-8-08 (Pg. 1 LK 4 and LK 5)
*	ACD/UCD Group Agent Assignment	1-8-25
*	ACD/UCD Group Pilot Number Assignment	1-12-00
	$ACD/UCD\ Group\ Overflow\ Destination\ Assignment\ \dots \dots \dots$	1-12-01
	ACD/UCD Group Overflow Timer Selection	1-12-02
*	DIT Assignment	3-42
*	ANA Assignment	3-43
	Line Key Selection for Telephone Mode	4-12
	Card Interface Slot Assignment	7-1
	MIF (UCD) Assignment	7-3-03

Note: Refer to Delay Announcement Memory Blocks in this chapter.

UNIFORM NUMBERING NETWORK

Uniform Numbering Network (Closed Numbering Plan)

	Title	Memory Block
:	Access Code (1-, 2, or 3-Digit) Assignment	1-1-46/47/48
:	Networking Trunk Group/Route Advance Assignment	1-1-49
:	CO/PBX Outgoing Digit Add Assignment	1-1-50
	Trunk-to-Trunk Group Assignment	3-03
	Trunk (Installed, DP/DTMF) Selection	3-92
	Station Number Assignment	4-10
	Tie Line Networking Tandem Connection Assignment	5-01

Refer to the diagram on the next page for an example of the Memory Blocks programmed for the Closed Numbering Plan. Listed below is an explanation of the abbreviations used in the example.

Abbreviations:

AC = Access Codes

ACG = Access Item Code

BLK = Block

MB = Memory Block

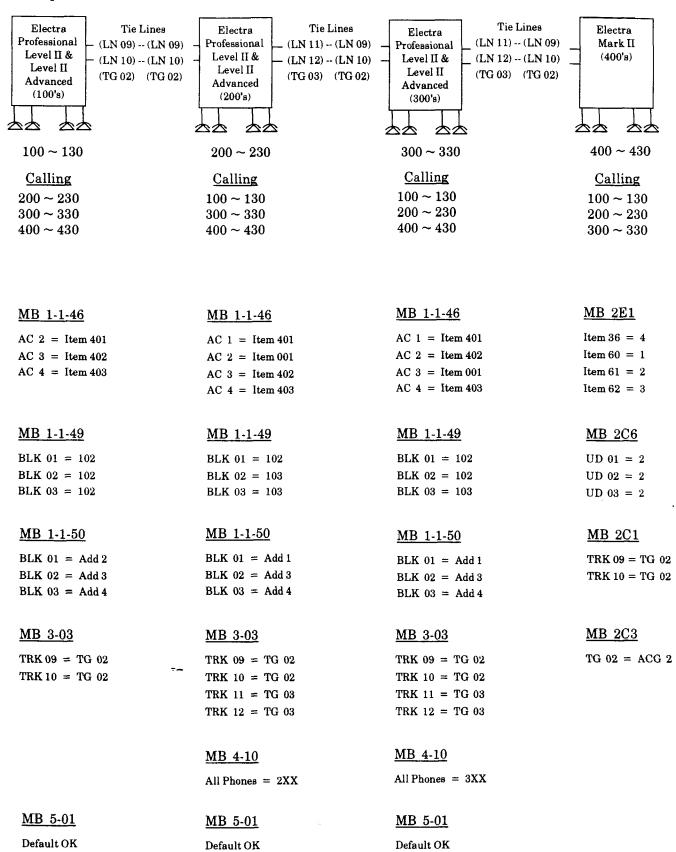
LN = Line

TRK = Trunk

TG = Trunk Group

UD = Uniform Dial

Example:



Uniform Numbering Network (Open Numbering Plan)

	Title	Memory Block
	Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48
	Networking Trunk Group/Route Advance Assignment	1-1-49
:	CO/PBX Outgoing Digit Add Assignment	1-1-50
	Trunk-to-Trunk Group Assignment	3-03
	Trunk (Installed, DP/DTMF) Selection	3-92
	Station Number Assignment	4-10
	Tie Line Networking Tandem Connection Assignment	5-01

* Indicates the Memory Blocks that must be programmed before the Uniform Numbering Network feature can be used.

Refer to the diagram on the next page for an example of the Memory Blocks programmed for the Open Numbering Plan. Listed below is an explanation of the abbreviations used in the example.

Abbreviations:

AC = Access Codes

BLK = Block

MB = Memory Block

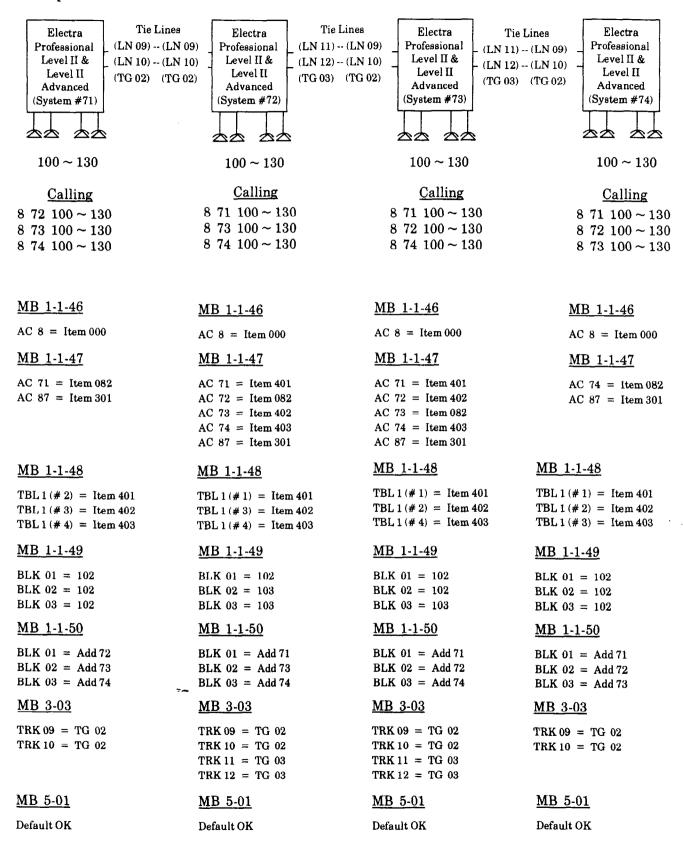
LN = Line

TBL = Table

TRK = Trunk

TG = Trunk Group

Example:



UNIVERSAL SLOTS

	Title	Memory Block
C	ard Interface Slot Assignment	7-1
M	IIF (ACD) Assignment	7-3-00
M	IIF (LCR) Assignment	7-3-01
M	IIF (SMDR) Assignment	7-3-02
M	IIF (UCD) Assignment	7-3-03
V	OICE MAIL INTEGRATION	
	Title	Memory Block
*	Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48
	Bounce Protect Time Selection	1-3-01
	Hookflash Start Time Selection	1-3-05
	Hookflash End Time Selection	1-3-06
	Voice Mail Digit Add Assignment	1-3-07
	Voice Mail DTMF Delay Time Selection	1-3-08
	Voice Mail Disconnect Time Selection	1-3-09
	Voice Mail DTMF Duration/Interdigit Time Selection	1-3-10
*	Voice Mail/SLT Connection	4-35
V	OICE PROMPT	
	Title	Memory Block
*	Access Code (1-, 2-, or 3-Digit) Assignment	1-1-46/47/48 (Item 501)
	VRS Message Recording Time Selection	1-8-12
*	VRS Message Function Assignment	1-8-13
	Voice Prompt to Tone Assignment	1-8-16
*	Voice Prompt Selection	4-36

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CHAPTER 4 SYSTEM MAINTENANCE

CHAPTER 4

SYSTEM MAINTENANCE

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C1	No CO/PBX Ring or Intermittent CO/PBX Ring Problems	4-9
C2	Call Dropping 4-	-10
C3	No Outside Dial Tone Access 4-	-11
C4	CO/PBX Dialing Problem (Cannot Dial Out on CO) 4-	.12
D1	Multiline Terminal Function Problems 4-	.13
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CHAPTER 4 SYSTEM MAINTENANCE

SECTION 1 INTRODUCTION

This chapter is to be used as a guide to diagnose and troubleshoot problems during and after system installation. The troubleshooting flow charts and general test procedures will help the technician to identify the possible cause of a problem by defining the problem area and isolating the valid symptoms.

In addition, with the System Data Up/Down Load feature, all System Programming and Speed Dial Data can be stored on diskette. (Refer to *The Electra Professional Level II and Level II Advanced System Program Technician Manual.*) After all System Programming has been completed, it should be down loaded onto a diskette for a backup copy of the System Programming. In case of system memory failure, the system can be up loaded from the backup diskette.

SECTION 2 OPERATIONAL CURRENT AND VOLTAGE CHECKS

2.1 Power Requirements

The effectiveness of this portion of the maintenance section depends upon the technician's ability to answer correctly all questions posed as accurately as possible. Due to external factors, it is important that no answer be assumed. For example, it cannot be assumed that a power supply is working properly because it has been replaced with another power supply. It is necessary to test the output of the power supply with a volt meter.

In the Basic KSU, this can be done by measuring +5V and -5V from the CPU-F()-20 KTU. The ESI-F(8)-21 KTU allows the measurement of +5V and -24V. This KTU can be used in the expansion KSU for power output measurements. (Refer to Table $4 \cdot 1 - V$) degree Measurement.) Before a technician can attempt any troubleshooting, the correct tools should be available.

- A. Digital or Analog Multimeter, capable of reading:
 - 1. DC current and voltage
 - 2. AC current and voltage
 - 3. DC Resistance
- B. Test Set (lineman) being capable of:
 - 1. Termination and Monitor Modes
- 2. DTMF and Dial Pulse dialing
- C. Hand tools:
 - 1. Set of screwdrivers (flat blade and Phillips head)
 - 2. Set of pliers, long nose and diagonals
 - 3. Punch down tool
- D. The current issue of the this manual, as well as the completed Job Specifications Worksheets. (The Electra Professional Level II and Level II Advanced Job Specifications Manual Stock No. 722024 is included with the CPU KTU.)

System Maintenance 4-1

SECTION 3 OPERATIONAL TEST PROCEDURES

3.1 General

When the Electra Professional Level II and Level II Advanced systems are first powered up, it performs an initialization process. During this process, the CPU-F()-20 KTU, in the Basic KSU, scans each of the interface slots to determine the hardware configuration used. This information is stored in the Resident System Program memory with the system default values. This section provides test procedures to be used before, during, and after the initialization process.

3.2 Before Initialization

It is important that the following steps be taken by the installation technician:

A. Cable Connections

All wiring for power supplies, flat cable connectors, etc., should be checked for solid connections. (Refer to Chapter 1 – Hardware Specifications and Installation in this manual for connection instructions.)

B. AC/DC Power

Check all power with an AC/DC multimeter. (Refer to Table 4-1 - Voltage Measurement). It is recommended that this test be run with only the CPU-F()-20 KTU and one ESI-F(8)-21 KTU installed.

Voltages	Tolerance	Measuring Points
<u>CPU-F()-20 KTU</u> +5V -5V	+5 ± 0.25V -5 ± 0.25V	CPU-F() TP1 GND TP2 +5V TP3 -5V
ESI-F(8)-21KTU + 5V - 24V	+ 5 ± 0.25V -24 ± 0.25V	ESI-F() TP1 +5V TP2 GND TP3 -24V
AC Voltage (117 Vac) Line to Neutral Line to Conduit Ground Neutral to Conduit Ground	117 ± 15% Vac 117 ± 15% Vac .05 Vac (max.)	AC TERMINAL STRIP Line L to N Line L to G N to G
Ring Generator (SLT)	70~120 Vac @ 20 Hz (Refer to Note below.)	Across TIP & RING of ringing SLT
CO Line Off-hook line current	25 to 50 mA	In series with TIP side of CO line at MDF

Table 4-1 Voltage Measurement

Note: Measurement of ring voltage may be lower if the meter is designed for measuring 60 Hz signals only.

C. Initialization Check

To determine if the system is initializing correctly, it is suggested that only the Basic KSU be powered up with the CPU-F()-20 KTU and one ESI-F(8)-21 KTU with terminals installed. After initialization, all the terminals assigned to the ESI-F(8)-21 KTU should be able to be used for internal calls to each other. (These stations, by default, will be assigned station numbers 100~107.)

3.3 System Initialization

After the three steps in Section 3.2 (Before Installation) are completed and verified, the entire system should be initialized.

With the power off, all the interface and option cards can be installed in the basic KSU as indicated on the Job Specifications Worksheet. It is important to ensure that the battery switch (BTS) on the CPU-F()-20 KTU is turned off and all interface and optional KTU switches are on. At this point the technician can power up the system. This performs a First Initialization of the system. After the initialization process, each station display will show default time and date indication.

Example: 12:00 A.M. WED 01.

3.4 After Initialization

Before any programming is attempted, the battery switch (BTS) on the CPU-F()-20 KTU should be turned ON. This will prevent all completed programming from being lost if the system loses power.

All KTU slots should be checked in software to ensure the initialization process scanned all hardware correctly. This can be done by displaying the contents of Memory Block 7-1 — Card Interface Slot Assignment from the System Programming terminal. [Refer to Chapter 2 (Programming) for an explanation of Memory Blocks.]

A general system operation check should be performed using default values prior to System Programming.

After all previous steps have been performed and any problems corrected, the System Programming can be completed. Using the Job Specifications Worksheets from the Electra Professional Level II and Level II Advanced Job Specifications Manual (supplied with the CPU KTU) helps to simplify the programming process.

CAUTION

Ensure the battery switch (BTS) on the CPU-F()-20 KTU is turned ON.

After System Programming is complete, the technician should perform a Second Initialization. Performing a First Initialization a second time will cause all programming memory to be lost, whereas the Second Initialization "cleans out" or "refreshes" the system RAM without any loss of memory.

This completes the installation procedure for the Electra Professional Level II and Level II Advanced systems. The technician should check the operation of each Multiline Terminal to ensure the system is working properly.

SECTION 4 TROUBLESHOOTING FLOWCHARTS

4.1 Problem Solving

To find the cause of a problem, first consider all the symptoms carefully. As each aspect of the problem is considered, the technician is guided to a probable solution. It is imperative the problem be defined as accurately as possible, so the most efficient steps to a solution can be taken. The troubleshooting flow charts in this section will help define problems and direct the technician through the troubleshooting steps.

A. System Down

Although this term is used to describe many conditions, it will only be used in this section to describe one of the following situations:

System Maintenance 4-3

- No access to internal dial tone on any Multiline Terminal or Single Line Telephone installed.
- 2. No LED indications or no display indications on any Multiline Terminal installed.
- 3. No system tones are generated.

B. Partial Operation

This term will refer to any situation which cannot be completely described under the conditions of a **SYSTEM DOWN**. (Refer to Table 4-2 - Index Table of Flowcharts listing these conditions.)

C. Reset Definition

In the troubleshooting flow charts, the technician is at times directed to reset the station and/or KTU.

- 1. Terminal Reset Is accomplished by unplugging the station line cord from the station and then plugging it back in.
- 2. KTU Reset The KTUs are reset by turning the MB switch on the KTU to the OFF position and then turning it back ON. To give capacitors in the KTU time to discharge, allow approximately five seconds before turning the switch back to the ON position.
- 3. Before reinstalling the following KTUs, the battery ON/OFF switches should be left off for at least two minutes.

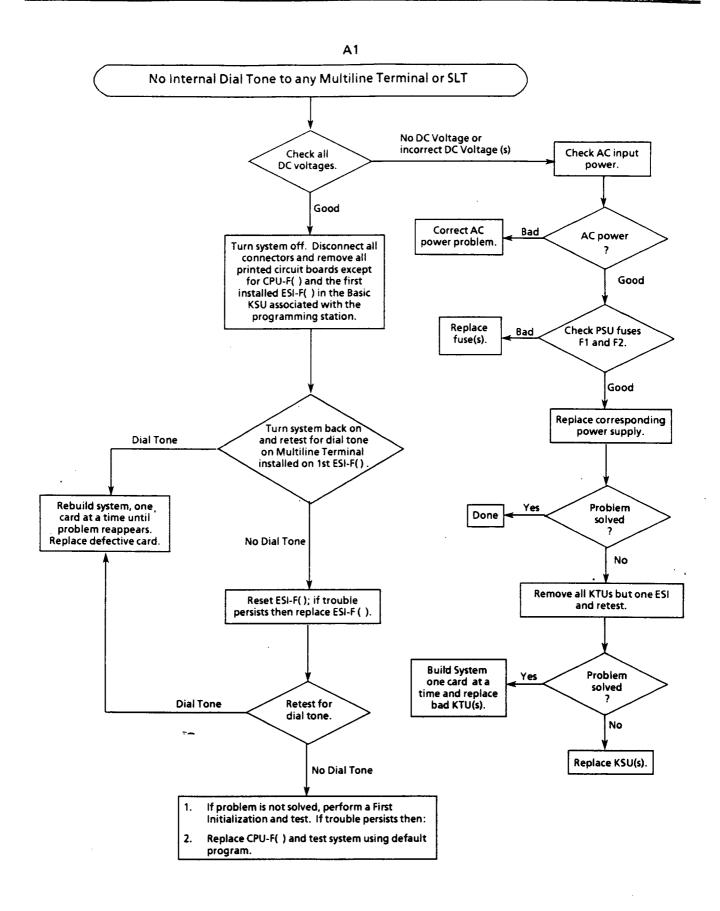
MIF-F()-10 (SW2)

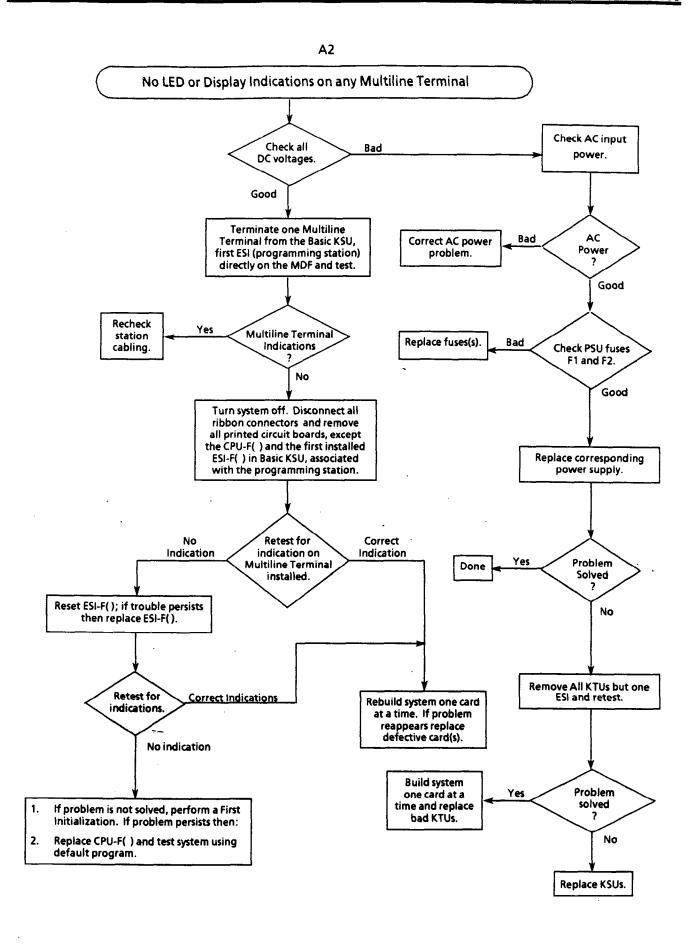
CPU-F()-20 (BTS)

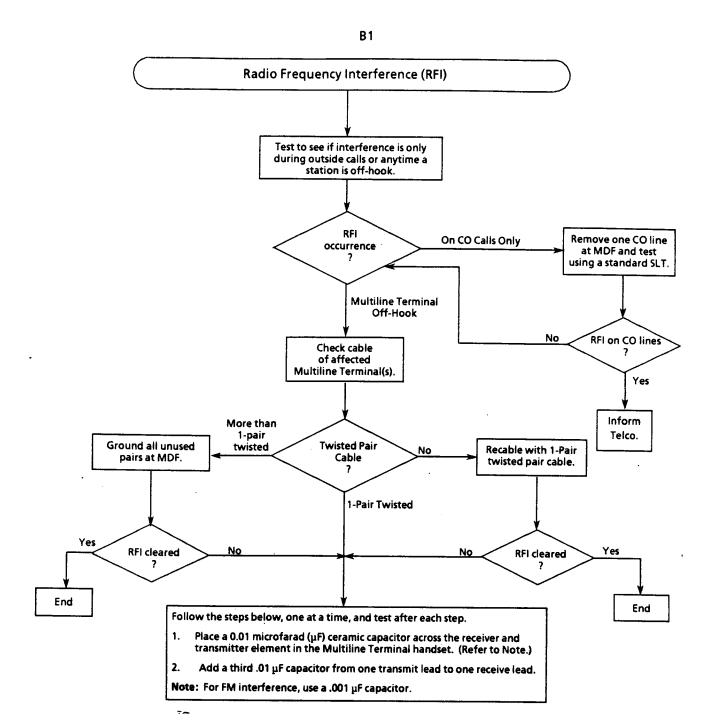
VRS-F(4)-11 (SW1) (Both packages)

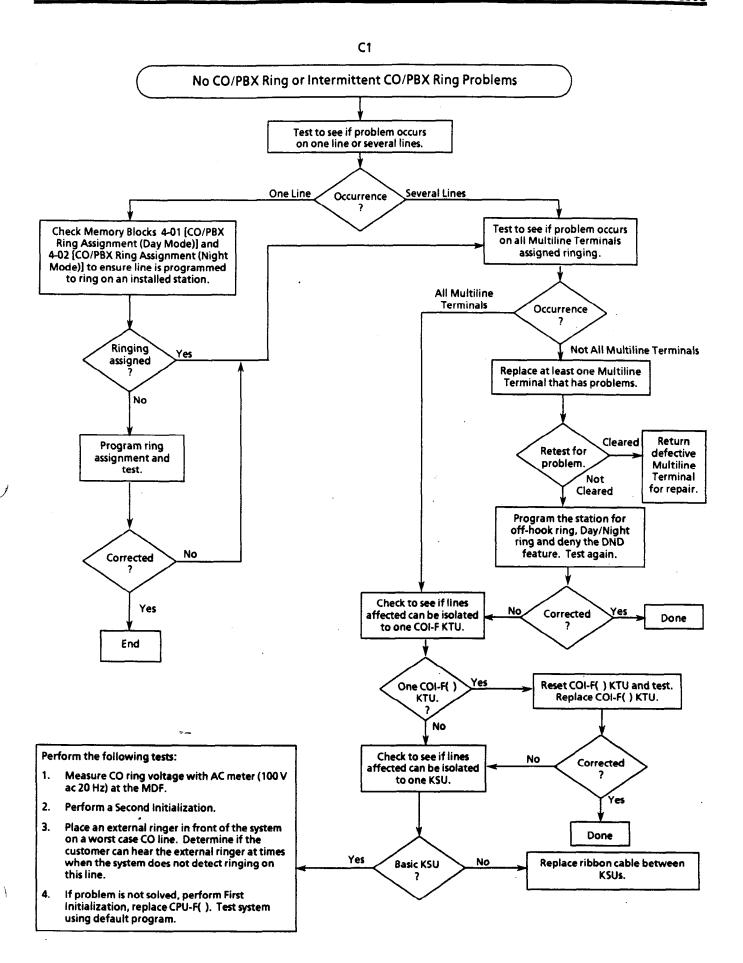
Table 4-2 Index Table of Flowcharts

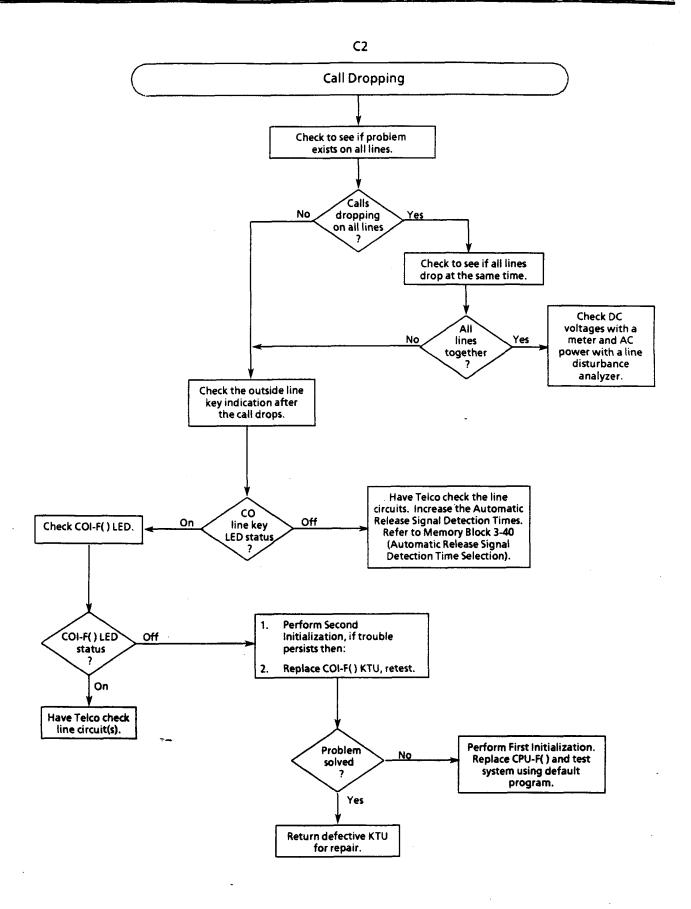
Condition		Flowchart Number	Page Number
A. System Down			
1.	No Internal Dial Tone to any Multiline Terminal or SLT	A1	4 - 6
2.	No LED or Display Indications on any Multiline Terminal	A2	4 - 7
B. Pa	artial Operations		
1.	Radio Frequency Interference (RFI)	B1	4-8
2.	Central Office Line Problems:		
	a. No CO/PBX Ring or Intermittent CO/PBX Ring Problems	C1	4 - 9
	b. Call Dropping	C2	4 - 10
	c. No Outside Dial Tone Access	C3	4-11
	d. CO/PBX Dialing Problem (Cannot Dial Out on CO)	C4	4 - 12
3.	Multiline Terminal Problems:	•	
	a. Multiline Terminal Function Problems	D1	4 - 13
	b. Multiline Terminal Ringing Problems	D2	4 - 14
	c. Multiline Terminal Dial Tone Access Problems	D3	4 - 15
4.	Single Line Telephone Problems:		
	a. No Dial Tone Access on SLT (including LLTs)	E1	4 - 16
	b. Ringing Problem on SLT or LLT	E2	4 - 17
	c. No Dial Access to Features on SLT	E 3	4 - 18
5.	Low Volume Problems	F1	4 - 19
6.	External Paging Problem	G1	4 - 20
7.	SMDR Output Problems (No Call Accounting System)	H1	4 - 21

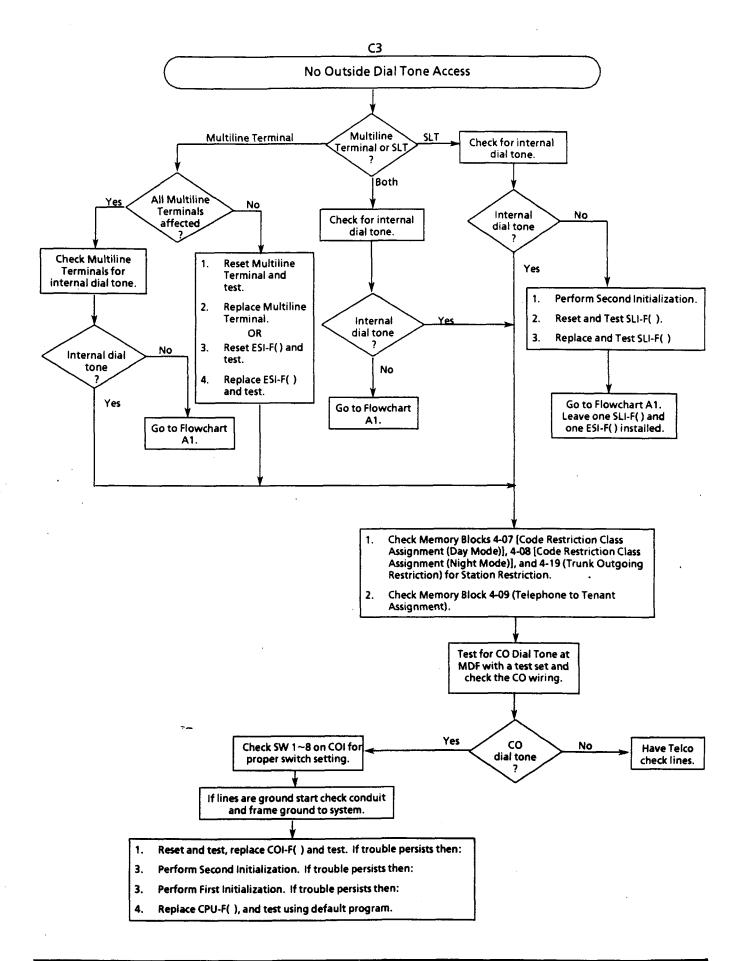


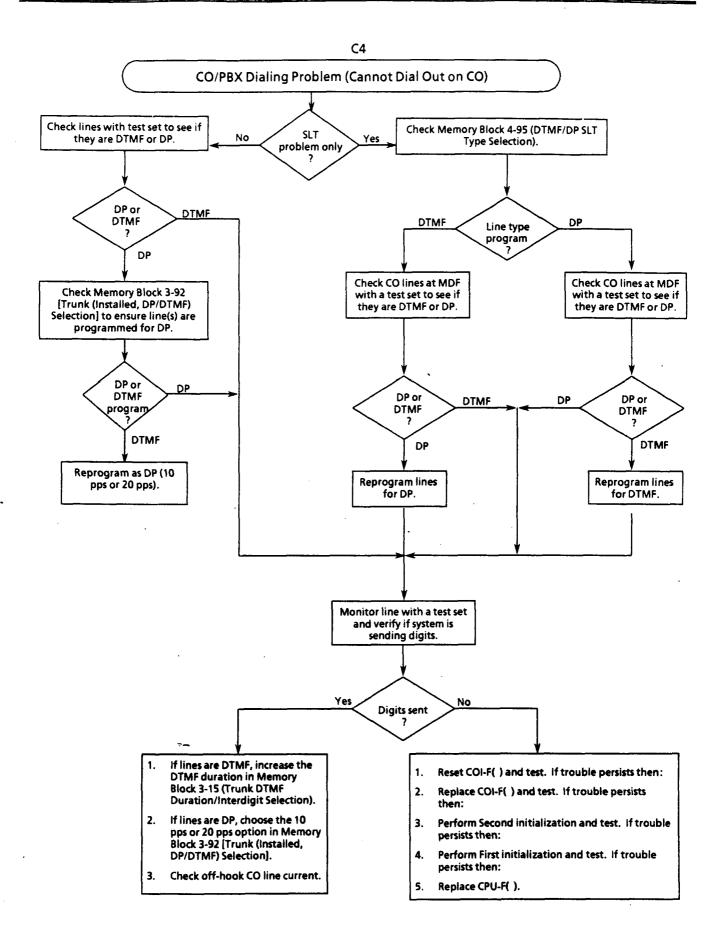


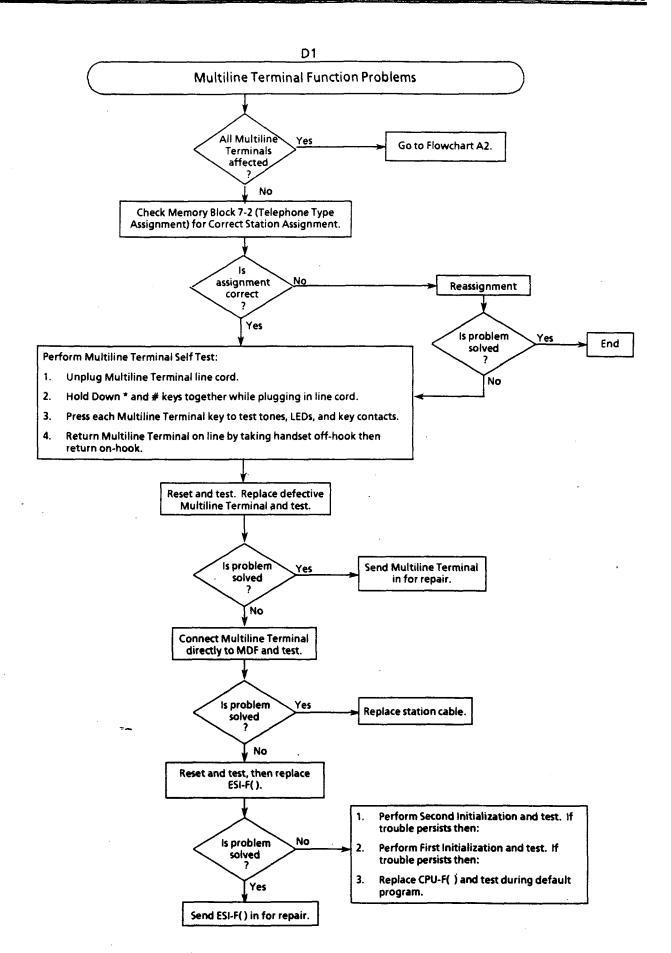


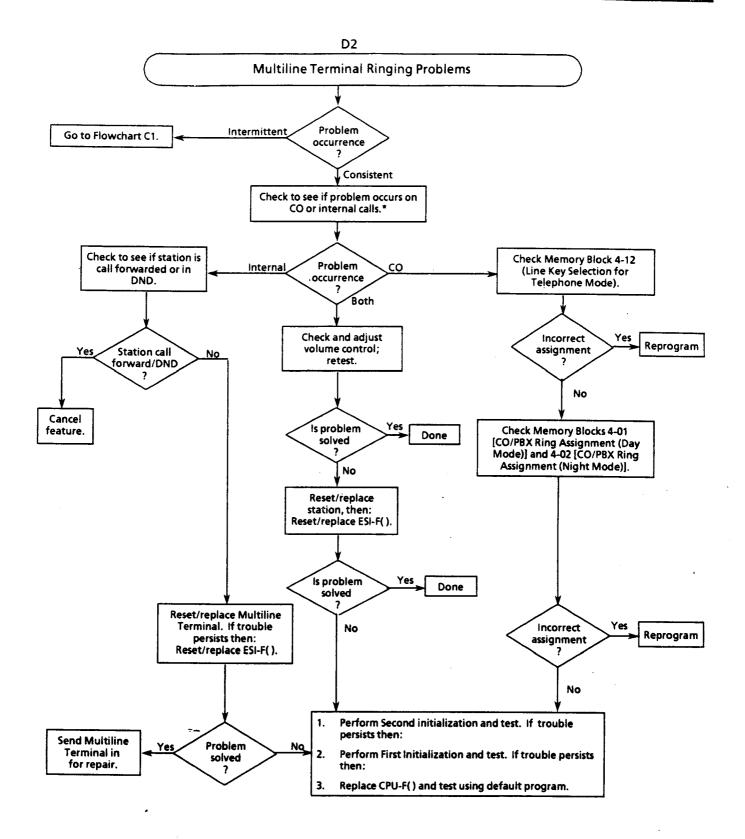




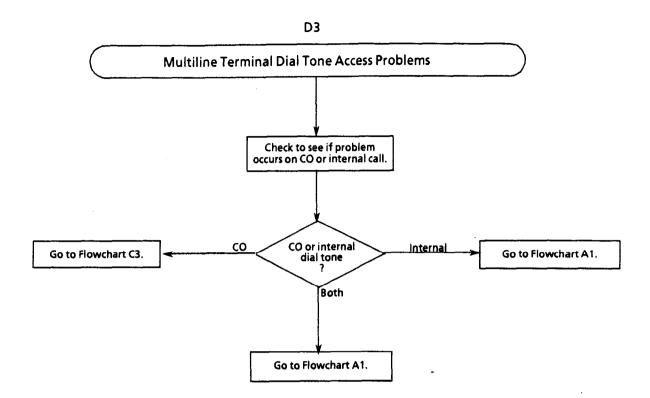


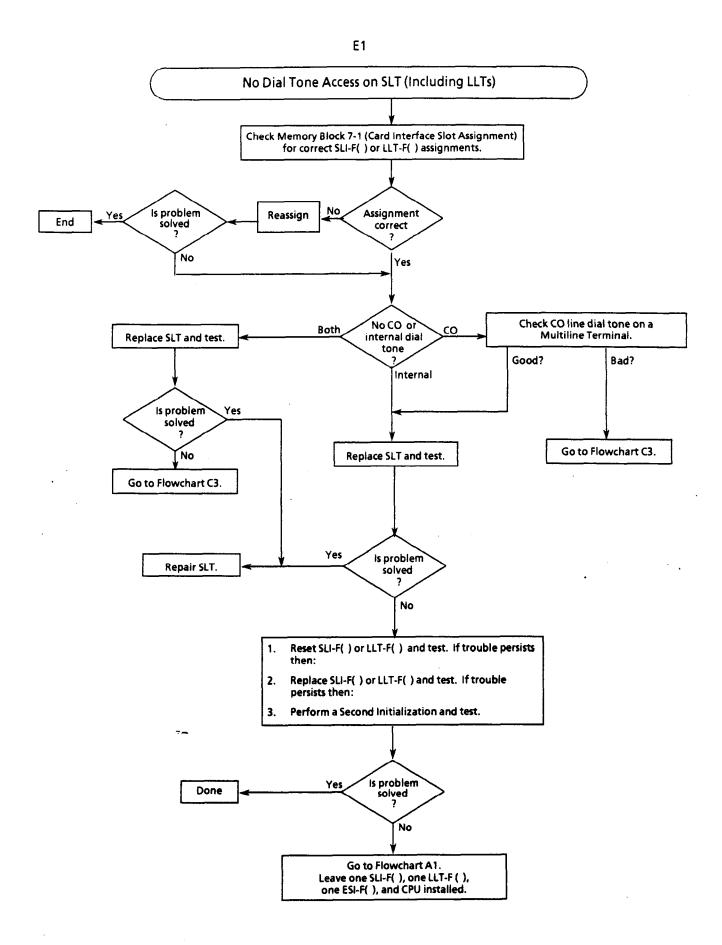


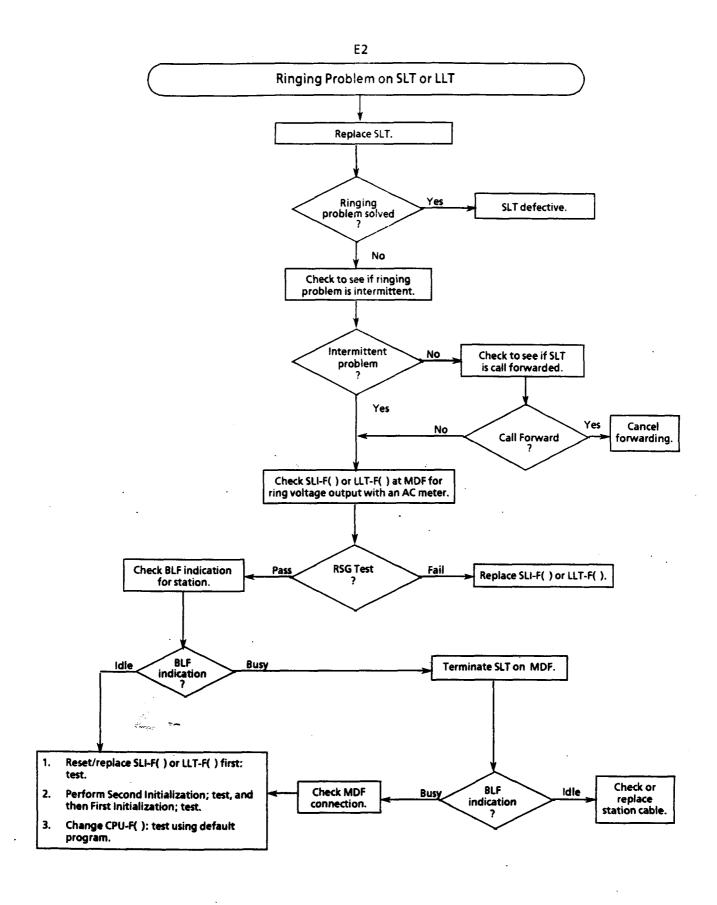




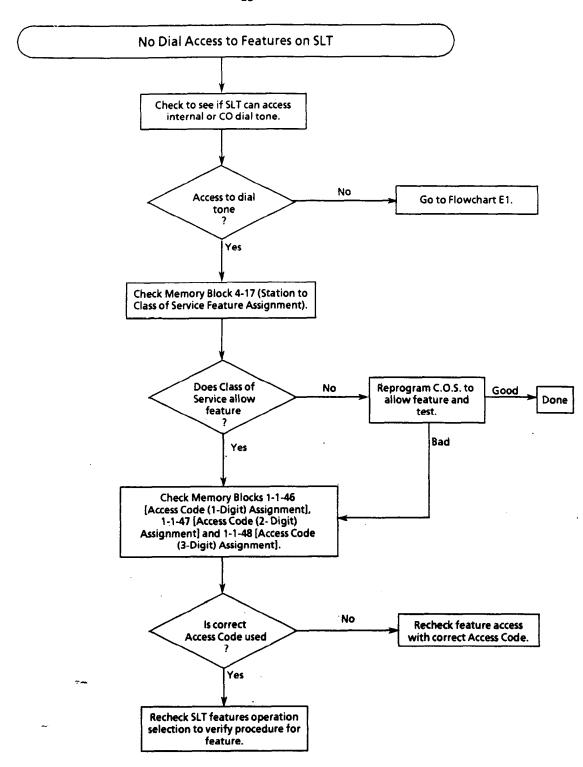
^{*}Internal calls include station to station as well as transferred calls.

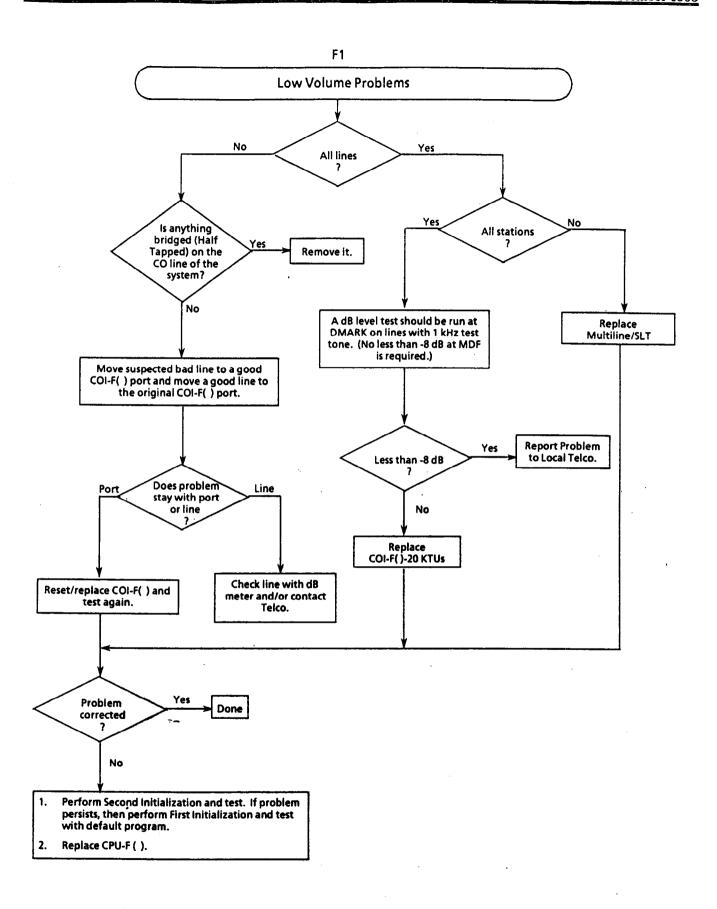


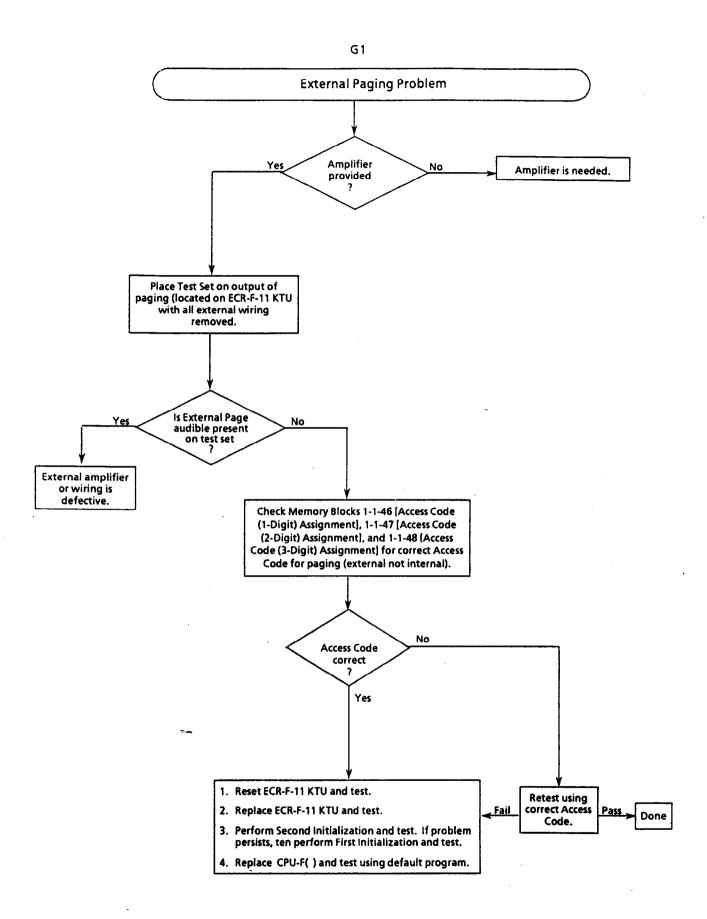


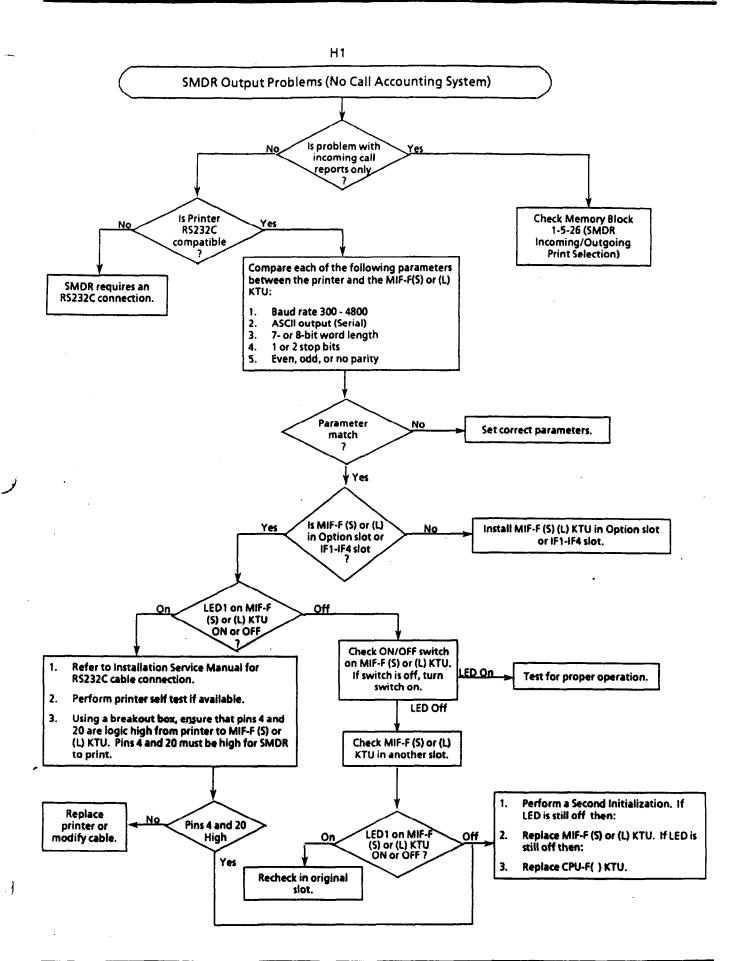


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