SX-200® DIGITAL
PRIVATE AUTOMATIC BRANCH EXCHANGE (PABX)

CONTROL SHEET – VOLUME 2 (PN 9108-092-002-NA)
INSTALLATION AND CUSTOMER DATA ENTRY
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SX-200® DIGITAL

PRIVATE AUTOMATIC BRANCH EXCHANGE (PABX)

SHIPPING, RECEIVING, AND INSTALLATION INFORMATION

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1. INTRODUCTION

General

1.01 This section provides a general identification, shipping, receiving, and installation procedures for the SX-200® DIGITAL PABX. Depending on the configuration of the system, the PABX consists of one or two cabinets. The Control cabinet contains a control shelf and an optional peripheral shelf. The 2-cabinet configuration consists of the Control cabinet, and a Peripheral cabinet containing two peripheral shelves.

Reason for Reissue

1.02 This Section is reissued to provide additional information required for installing the SX-200® DIGITAL PABX, with Generic 1000 or Generic 1001 software, in either a 336-port or a 480-port configuration

Compliance with Regulatory Requirements

1.03 Refer to Appendix A for specifications and instructions with respect to this equipment complying with regulatory requirements.

2. CONFIGURATION

General

2.01 The SX-200® DIGITAL 480-port configuration, with either Generic 1000 or Generic 1001 software, has six configurations in either one or two cabinets. In the Control cabinet, the Control shelf has Bay 1 on the left and Bay 2 on the right; the optional Peripheral shelf is Bay 3. In the Peripheral cabinet, the lower and upper shelves are Bays 4 and 5 respectively. The configurations are shown in Figures 2-1, and are as follows:

Bays 1,2	Control shelf only (single cabinet)
Bays 1,2,3	Control shelf plus Peripheral shelf (single cabinet)
Bays 1,2,4	Control shelf and lower shelf of Peripheral cabinet
Bays 1,2,4,5	Control shelf and both shelves of Peripheral cabinet
Bays 1,2,3,4	Control shelf plus Peripheral shelf, and lower shelf of Peripheral cabinet
Bays 1,2,3,4,5	Control shelf plus Peripheral shelf, and both shelves of Peripheral cabinet

2.02 The maximum ports available for each configuration, are:

Bays 1,2	144 voice/data ports
Bays 1,2,3	144 voice/data ports plus 120 voice ports
Bays 1,2,4	144 voice/data ports plus 120 voice ports
Bays 1,2,4,5	144 voice/data ports plus 216 voice ports
Bays 1,2,3,4	144 voice/data ports plus 240 voice ports
Bays 1,2,3,4,5	144 voice/data ports plus 336 voice ports

2.03 The SX-200® 336-Port Configuration with Generic 1001 software and the Universal cabinet is available with a Control shelf, an optional digital Peripheral shelf, in the following configurations (as shown in Figure 2-2):

Bays 1,2	Control shelf
Bays 1,2,3	Control shelf plus one digital Peripheral Bay
Bays 1,2,3,4	Control shelf plus two digital Peripheral Bays

2.04   The maximum ports available for each configuration are:

Bays 1,2   144 voice/data ports

Bays 1,2,3   240 voice/data ports

Bays 1,2,3,4   336 voice/data ports

2.05   Both configurations are compatible with most existing station, key telephone, private branch exchange, and central office equipment, and provide:

- use of a flexible numbering plan

- simultaneous use of DTMF and rotary dial stations

- optional use of attendant consoles

- extensive selection of standard and optional features

- data port facility for traffic analysis and other requirements

- automatic diagnostics

- six to 36 power fail transfer trunks - max 18 PFT (336 ports)
$\qquad\qquad\qquad\qquad\qquad\qquad\qquad\quad$ - max 24 PFT (480 ports)

- optional reserve power supply or uninterruptible power supply

- SUPERSET 3^{TM} set

- SUPERSET 4^{TM} set.

Control Cabinet

2.06   The SX-200$^{®}$ DIGITAL PABX Control cabinet consists of a metal frame enclosed by back, top, and side panels. The digital Control shelf in the lower position has two Bays; Bay 1 is on the left, and Bay 2 on the right. Access to the Bays is through the front door of the cabinet. The rear panel allows access to line, trunk, and PCM cable entries. Figure 2-3 shows an SX-200$^{®}$ DIGITAL PABX Universal Control Cabinet; Figure 2-4 shows an SX-200$^{®}$ DIGITAL PABX in a Universal Control Cabinet.

Universal Cabinet

2.07   The Universal cabinet is similar to the existing Control cabinet. The major differences are: its maintenance panel is located immediately above the digital Control shelf, its Floppy Disk Drive plugs directly into the backplane, it can have a digital Peripheral shelf, and its Main Control Card directly controls up to three 6-circuit Power Fail Transfer cards. Figure 2-5 shows an SX-200$^{®}$ DIGITAL PABX Universal Control Cabinet with Digital Peripheral Shelf.

Single Cabinet System

2.08   The Control cabinet contains a digital Control shelf in the lower position and a maintenance panel at the top of the cabinet. The Control shelf has Bay 1 on the left and Bay 2 on the right. The PABX can be expanded by adding a 120-port shelf (Bay 3), which contains

three control cards and up to 15 voice cards, above the Control shelf. A standard SX-200® power supply is also installed concurrently, replacing the rear door of the cabinet.

The SX-200® PABX in the Universal cabinet is similar, but can be expanded by installing either an analog peripheral shelf or a digital peripheral shelf in the upper shelf. If an analog shelf (120-port) is installed (Generics 1000 and 1001), a Peripheral cabinet may also be connected, adding an additional 216 ports to the PABX. If a digital shelf (2 x 96 ports) is installed (Generic 1001), Bays 3 and 4 are each similar to Bay 1, except with the addition of Bay Control card.

Peripheral Cabinet

2.09 The Peripheral cabinet (shown in Figure 2-6) is an SX-200® cabinet with one or two shelves (Bays) equipped with Control cards and Peripheral cards.

480-Port Configuration

2.10 The 480-port configuration can be equipped as follows:

Bay	Control Card(s)	Optional Peripheral Cards
1	BPS	ONS, LS/GS, Universal, COV, DID, OPS (up to 08)
2	MCC, BPS, FDD	ONS, LS/GS, Universal, COV, DID, OPS (up to 04)
3	DIC, PCC, Scanner	CO Trk, Line, SUPERSET, E&M Trk, DID/Tie (up to 15)
4	DIC, PCC, Scanner	CO Trk, Line, SUPERSET, E&M Trk, DID/Tie (up to 15)
5	DIC	CO Trk, Line, SUPERSET, E&M Trk, DID/Tie (up to 12)

Note: Each bay in use must have all its Control cards present. Peripheral cards are installed as required.

Card Type	Description
MCC	Main Control Card
BPS	Bay Power Supply
FDD	Floppy Disk Drive
ONS	On-premises Line Card (12 circuit)
LS/GS	Loop Start / Ground Start CO Trunk Card (6 circuit)
Universal	Universal Card (accepts up to four modules)
DID	Direct Inward Dial Trunk Card (6 circuit)

OPS	Off-premises Line Card (6 circuit)
COV	Control Over Voice Line Card (6 circuit) (for SUPERSET® sets)
CO Trk	CO Trunk Card (4 circuit)
Line	Line Card (8 circuit)
SUPERSET	SUPERSET® set Line Card (8 circuit)
E&M Trk	E&M Trunk Card (2 circuit)
DID/Tie	Direct Inward Dial or Tie Trunk (2 circuit).

336-Port Configuration

2.11 If a digital shelf is added to the Universal Cabinet, the SX-200®
DIGITAL 336-port configuration can be equipped as follows:

Bay	Control Card(s)	Optional Peripheral Cards
1	BPS	ONS, LS/GS, Universal, COV, DID, OPS (up to 08)
2	MCC, BPS, FDD	ONS, LS/GS, Universal, COV, DID, OPS (up to 04)
3	BPS, BC	ONS, LS/GS, Universal, COV, DID, OPS (up to 08)
4	BPS, BC	ONS, LS/GS, Universal, COV, DID, OPS (up to 08)

Note: Each bay in use must have all its Control cards present.
Peripheral cards are installed as required.

Card Type	Description
MCC	Main Control Card
BPS	Bay Power Supply
BC	Bay Controller
FDD	Floppy Disk Drive
ONS	On-premises Line Card (12 circuit)
LS/GS	Loop Start / Ground Start CO Trunk Card (6 circuit)
Universal	Universal Card (accepts up to four modules)
DID	Direct Inward Dial Trunk Card (6 circuit)
OPS	Off-premises Line Card (6 circuit)
COV	Control Over Voice Line Card for SUPERSET® sets (6 circuit)

Figure 2-1 SX-200® DIGITAL PABX Bay and Slot Assignments (480-Port Configuration)

MAIN CONTROL CABINET

PERIPHERAL CONTROL CABINET
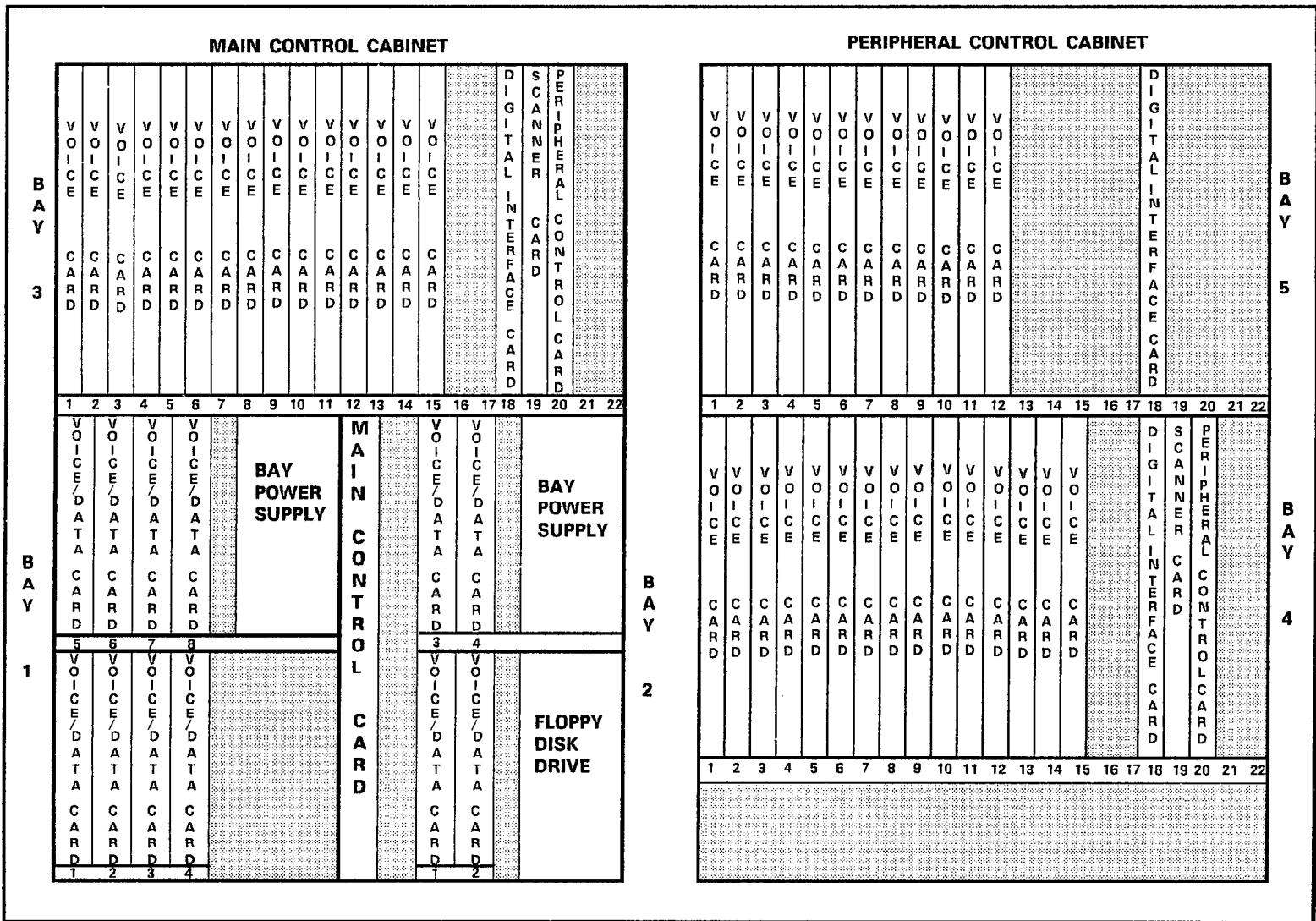
VOICE/DATA CARDS
6 CCT TRUNK
12 CCT STATION
6 CCT CONTROL OVER VOICE
6 CCT OFF PREMISE STATION
6 CCT DIRECT INWARD DIAL
    UNIVERSAL

VOICE CARDS
8 CCT SUPERSET
8 CCT STATION
4 CCT CO TRUNK
2 CCT E&M TRUNK
2 CCT DID/TIE TRUNK

7277R0E2

Figure 2-2 SX-200® DIGITAL PABX Bay and Slot Assignments (336-Port Configuration)

BAY 3

MAINTENANCE PANEL

PERIPHERAL SHELF

CONTROL SHELF

FAN ASSEMBLY

BAY 1

BAY 2

PERIPHERAL
SHELF

CONTROL
SHELF

REAR DOOR
POWER SUPPLY
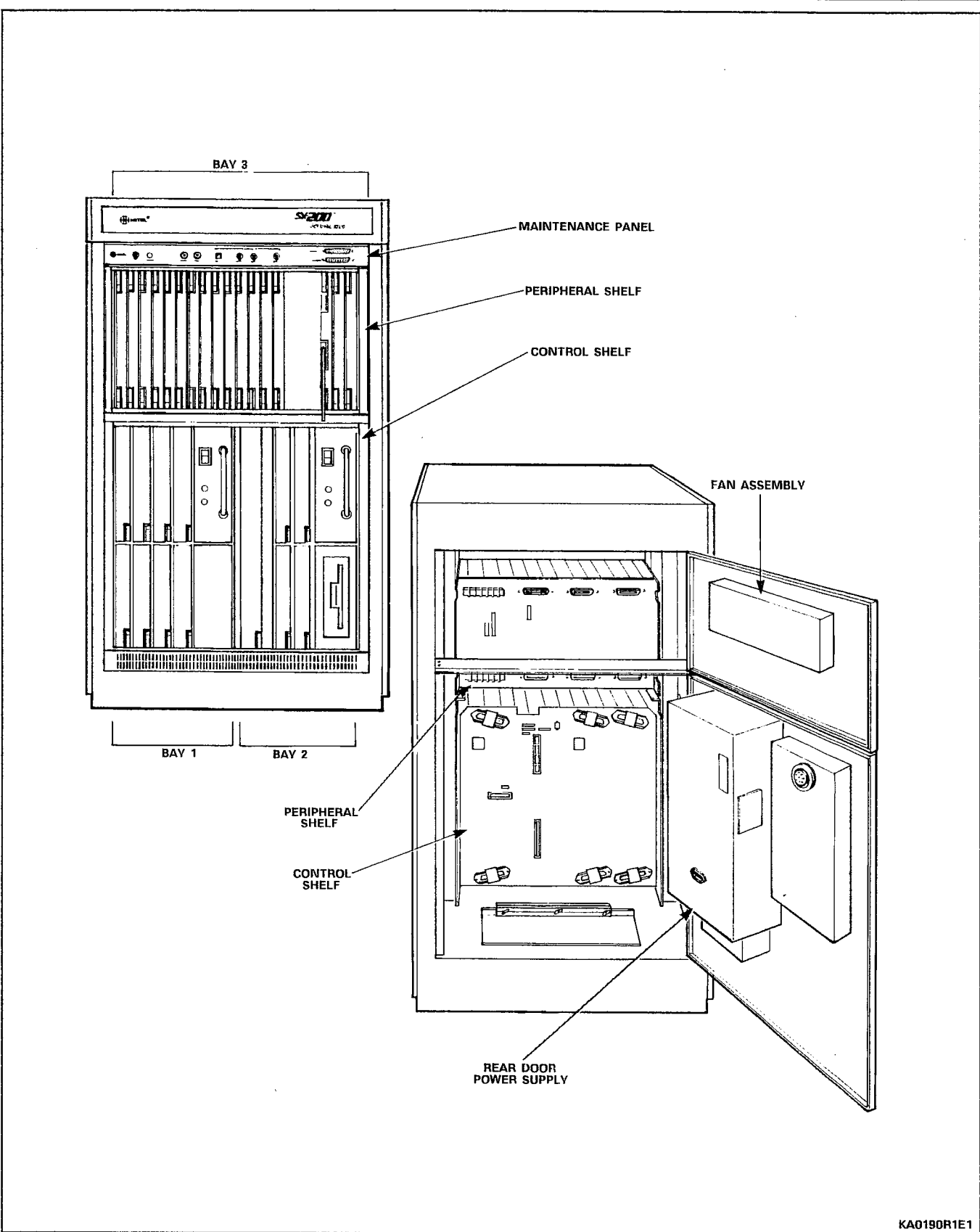
KA0190R1E1

Figure 2-3 SX-200® DIGITAL PABX Control Cabinet

BAY 3 POWER SWITCH

PERIPHERAL SHELF
(BAY 3)

MAINTENANCE PANEL

PERIPHERAL
SHELF

FAN ASSEMBLY

BAY 1

BAY 2

CONTROL SHELF

CONTROL
SHELF

POWER SUPPLY

KA0112R1E1
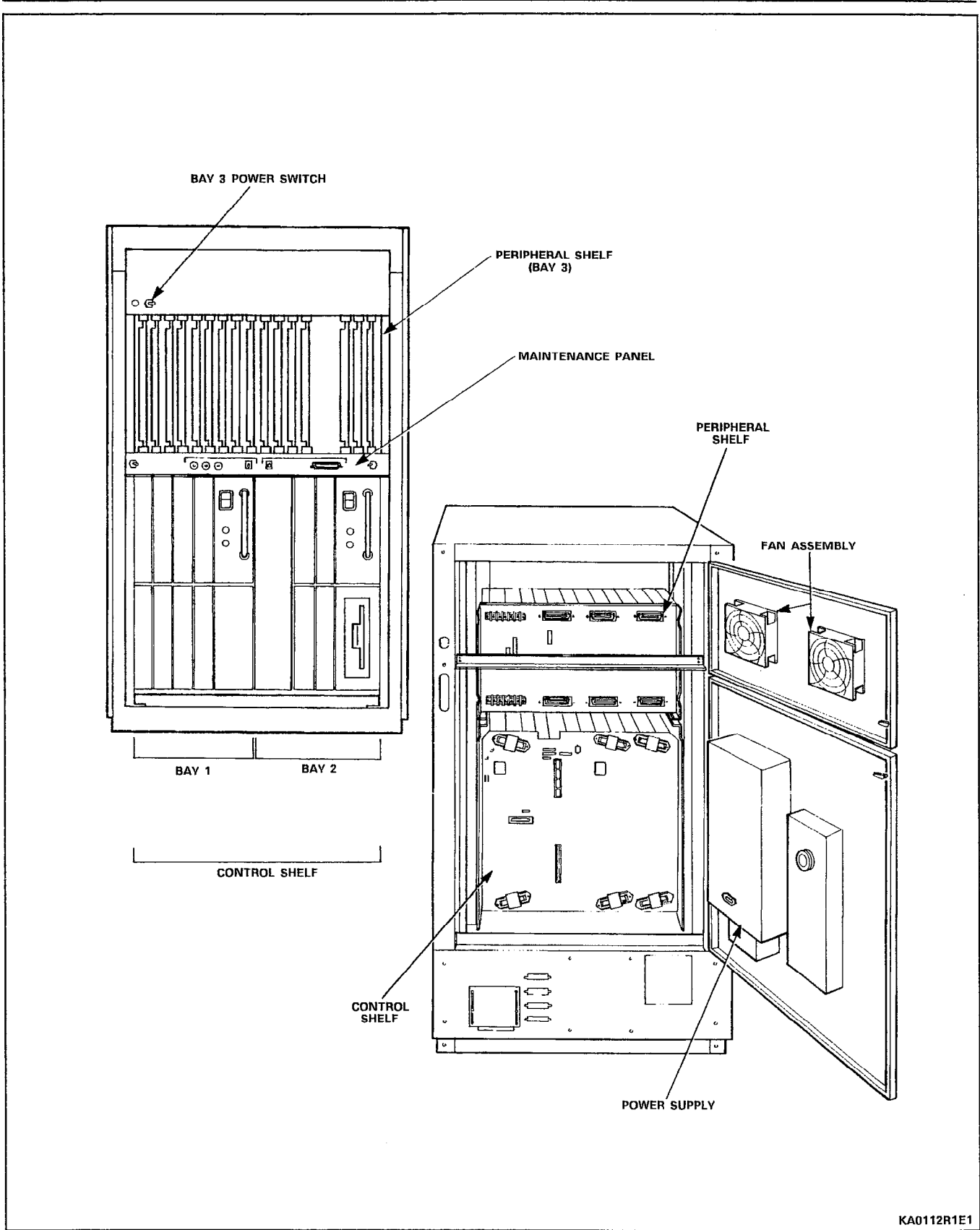
Figure 2-4 SX-200® Universal Control Cabinet

PERIPHERAL SHELF

BAY 4   BAY 3

MAINTENANCE PANEL

FANS

BAY 1   BAY 2

CONTROL SHELF

POWER
DISTRIBUTION

AC FILTER

KA0133R2E2
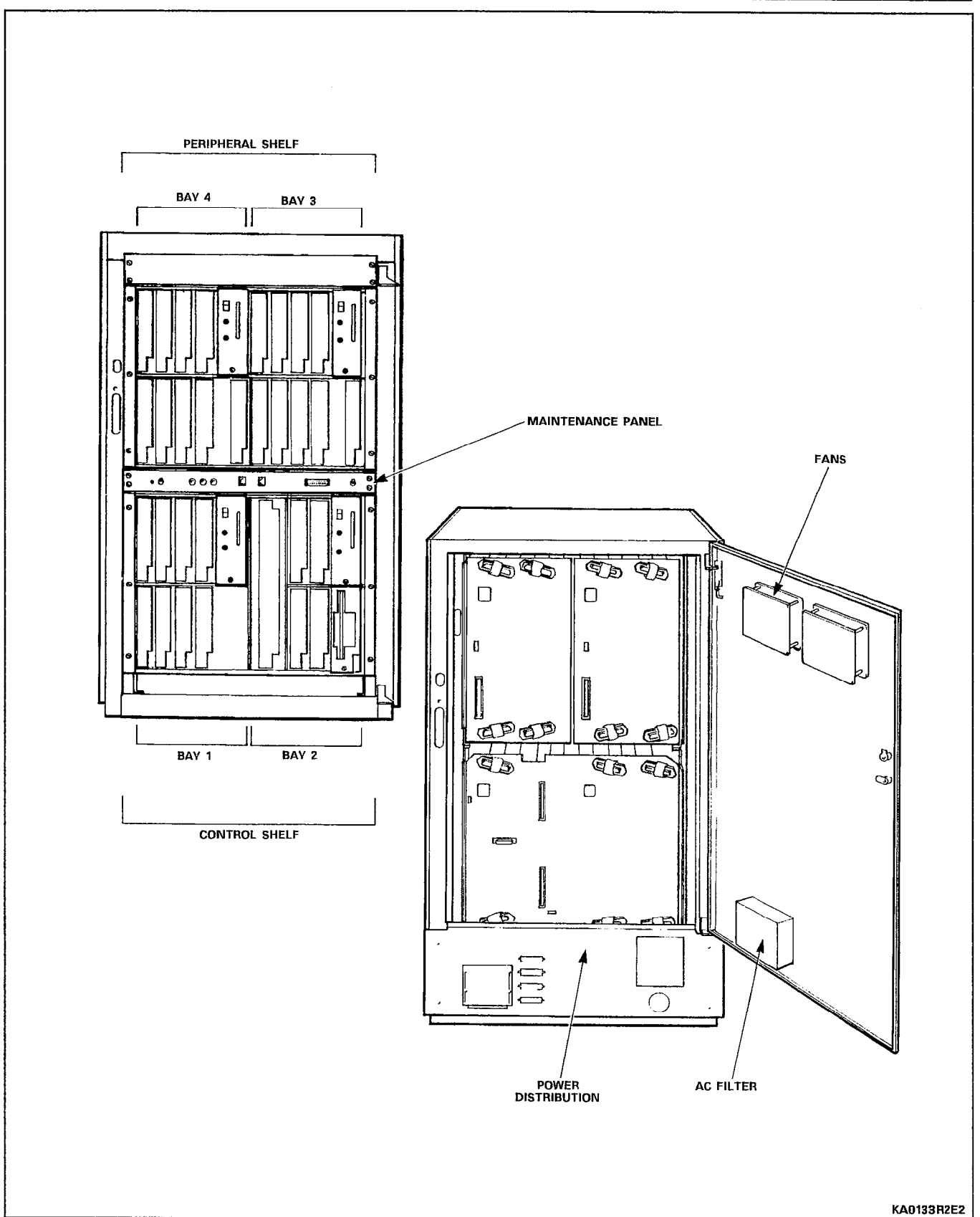
Figure 2-5 SX-200® DIGITAL PABX Universal Control Cabinet with Digital Peripheral Shelf

MAINTENANCE PANEL

BAY 5

BAY 4-5 PCM CABLE

BAY 4

BAY 2-4 PCM CABLE

RESERVE POWER SUPPLY (OPTIONAL)

BAY 5

BAY 4

CABLE CLAMP

POWER SUPPLY
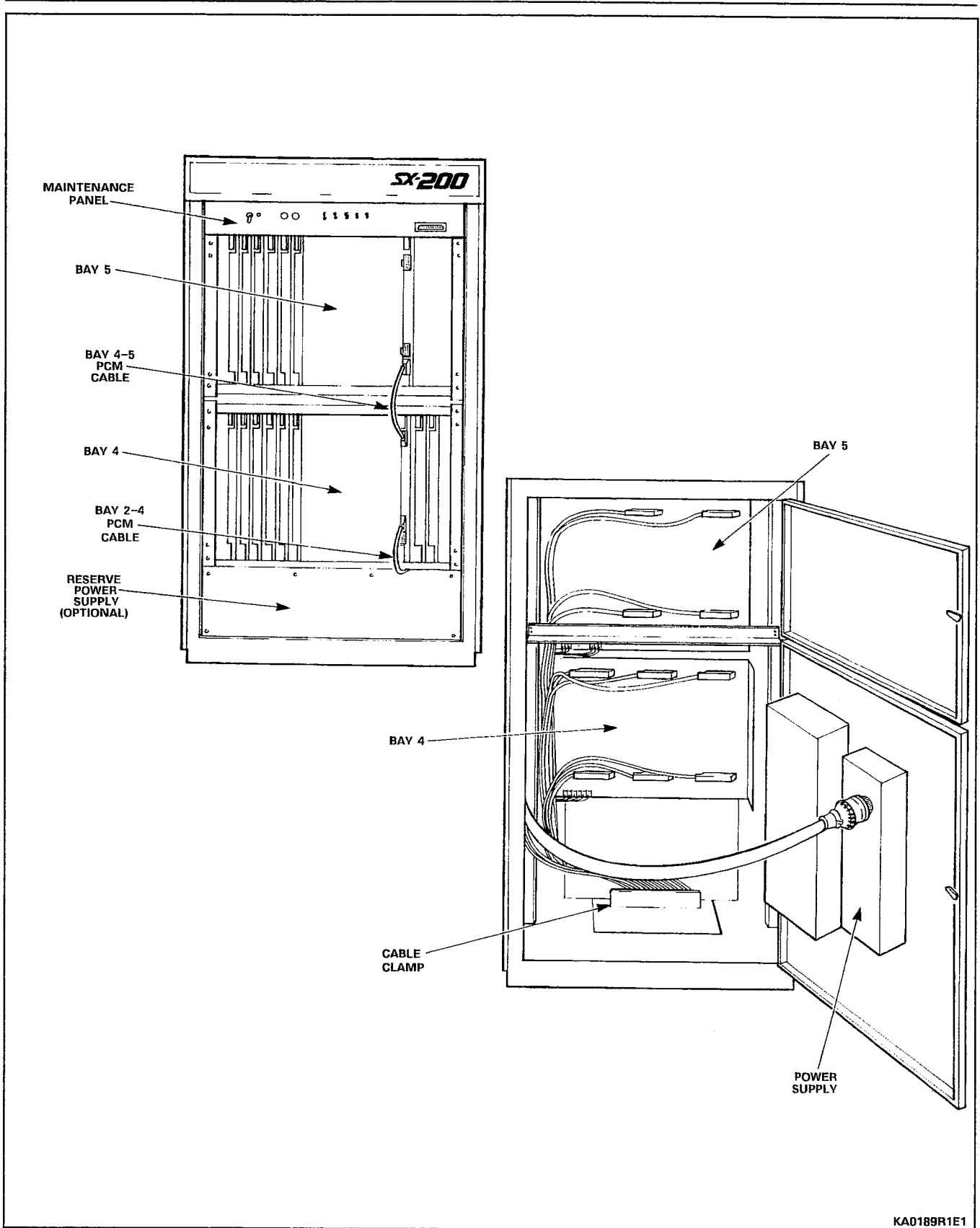
KA0189R1E1

Figure 2-6 SX-200® DIGITAL PABX Peripheral Cabinet

Printed Circuit Cards

2.12 All printed circuit cards are packed separately and sent in shipping cartons, five or 10 to a carton.

CAUTION: **Always wear an antistatic wrist strap when handling cards. Handle printed circuit cards by their edges only. Handling the board faces or components may cause damage. Do not touch the gold edge connectors.**

Each peripheral bay card has two card extractors which enable the card to be easily removed. Control shelf cards have only one extractor per card. In the closed position, the card extractors ensure that the circuit cards are held firmly in position. Cards which must not be removed or inserted while the system power is on, carry a Caution notice.

Control Shelf

2.13 **Main Control Card.** The Main Control Card (MCC) is located in the Control shelf between Bay 1 and Bay 2, and provides overall control of PABX operation. It has a digital interface, through the backplane to the cards in the Control shelf, and through the PCM cable to the Digital Interface Cards in each Peripheral shelf. In addition, the MCC holds the Decryption module which is associated with the software (each diskette release of system software has its own unique Decryption module). Whenever the system software release is changed, the Decryption module must also be changed. The MCC also contains alarm LEDs, RESET switch, and other system indicators. Figure 2-7 shows the MCC and the Decryption module. The dimensions of this card are as follows: 325.8 mm (12.825 inches) high and 358.8 mm (14.125 inches) wide. Two card extractors are mounted at top and bottom of the front edge of the card. When the extractors are in the locked position, the MCC is firmly seated in three DIN connectors on the backplane at the rear of the shelf.

2.14 **Control Shelf Circuit Cards.** The circuit cards in the Control shelf, other than the MCC, measure 157.5 mm (6.2 inches) high and 366.4 mm (14.425 inches) wide.

2.15 **Universal Card.** A Universal card can plug into any of the upper peripheral slots in a digital shelf. The card is capable of carrying four plug-in modules.

2.16 The total power rating allowed per universal card is 10. Up to four modules (as long as the total power rating is 10 or less) may be mounted on a universal card.

2.17 Four types of modules are available that can be plugged into the Universal card. These are:

- **DTMF Receiver/Relay Module** – Has four Dual-Tone Multi-Frequency (DTMF) receiver circuits and two relays. The relays
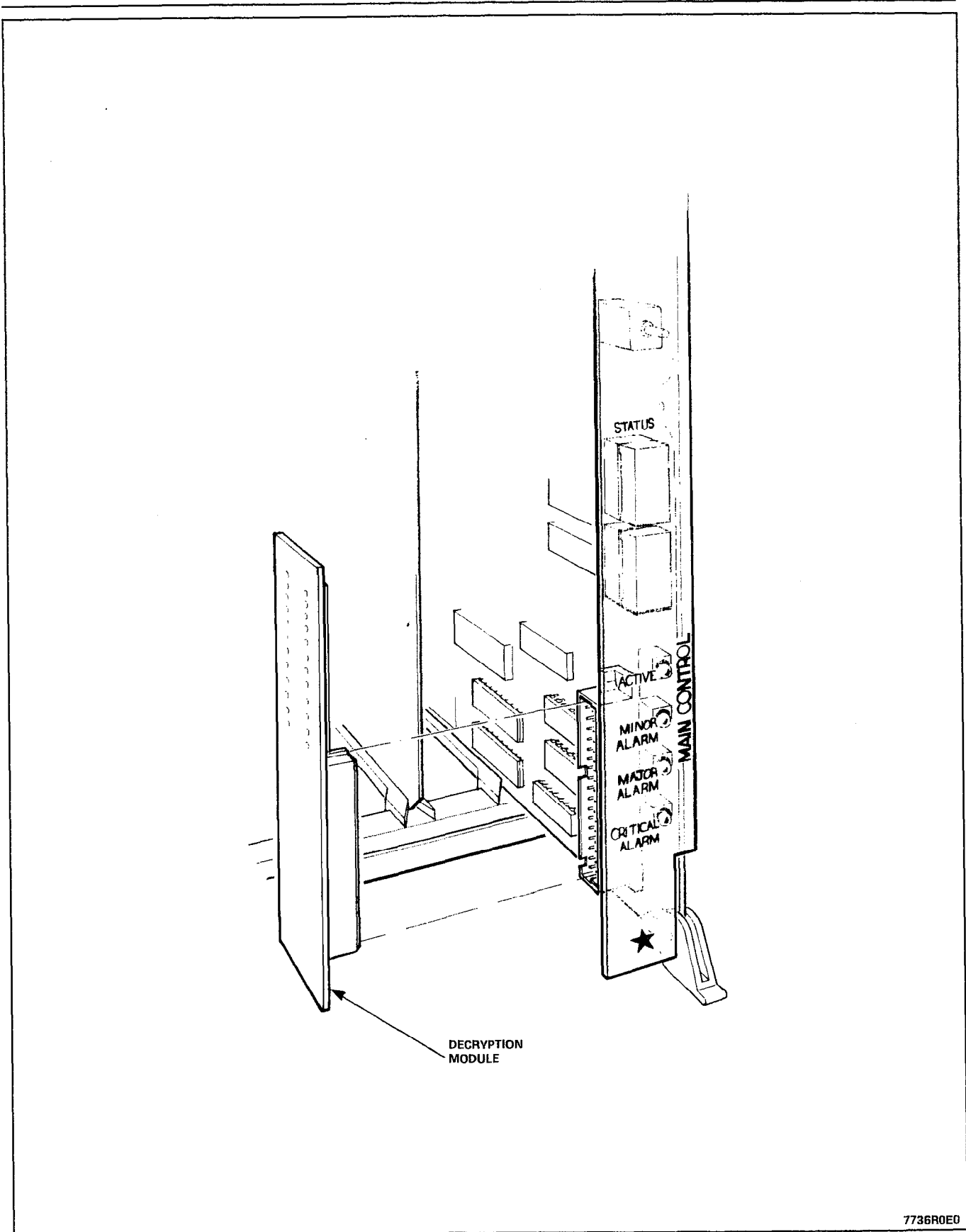
Figure 2-7 Main Control Card and Decryption Module

can be used for night bells, alarms, etc. Module power rating is 2.

- **Music/Paging Module** – Provides one 600 ohm balanced audio (music) input and a 200 ohm output, to a paging amplifier. There is also one relay contact, which can be used for controlling an amplifier. Module power rating is 1.

- **Console Module** – Provides interface to certain Digital Line Interface Circuit-based peripheral devices. Each Attendant Console requires a CONSOLE module to interface it to the PABX. Module power rating is 5. Any one of four positions, maximum of two per card.

- **E&M Trunk Module** – Interfaces the PABX to a standard E&M trunk; its power rating is 3.

- **Bay Power Supply** – Each Digital bay has its own plug-in power supply. Before inserting or removing a Bay Power Supply, turn off the unit and remove its line cord connection.

Analog Peripheral Shelf

2.18 Line or trunk cards can be placed in positions identified with blue or black colour-coded strips. (Figure 2-1 defines card positions which may be used). It is recommended that line cards be placed in the lowest numbered card positions and trunk cards in the highest numbered card positions.

This arrangement allows ease of identification of card type during installation and maintenance.

2.19 **Peripheral Cards.** The peripheral cards used in the peripheral shelves measure 254 mm (10 inches) high and 330 mm (13 inches) wide.

2.20 **Digital Interface Card.** The Digital Interface Card (DIC) is installed in slot 18 of Bays 3, 4 and 5 to interface between the MCC and each Peripheral shelf through a PCM cable. Within each shelf, speech paths are analog, but speech paths over the PCM cable are digital. Figure 2-8 shows the Digital Interface Card.

2.21 **Peripheral Control Card.** The Peripheral Control Card (PCC) is installed in slot 20 of Bays 3 and 4, to control the interface between the analog cards and the DIC on each Peripheral shelf. The PCC in Bay 3 controls Bay 3, and the PCC in Bay 4 controls both Bay 4 and Bay 5.

2.22 **Scanner Card.** The Scanner Card scans all ports to determine which require service, and informs the DIC accordingly.
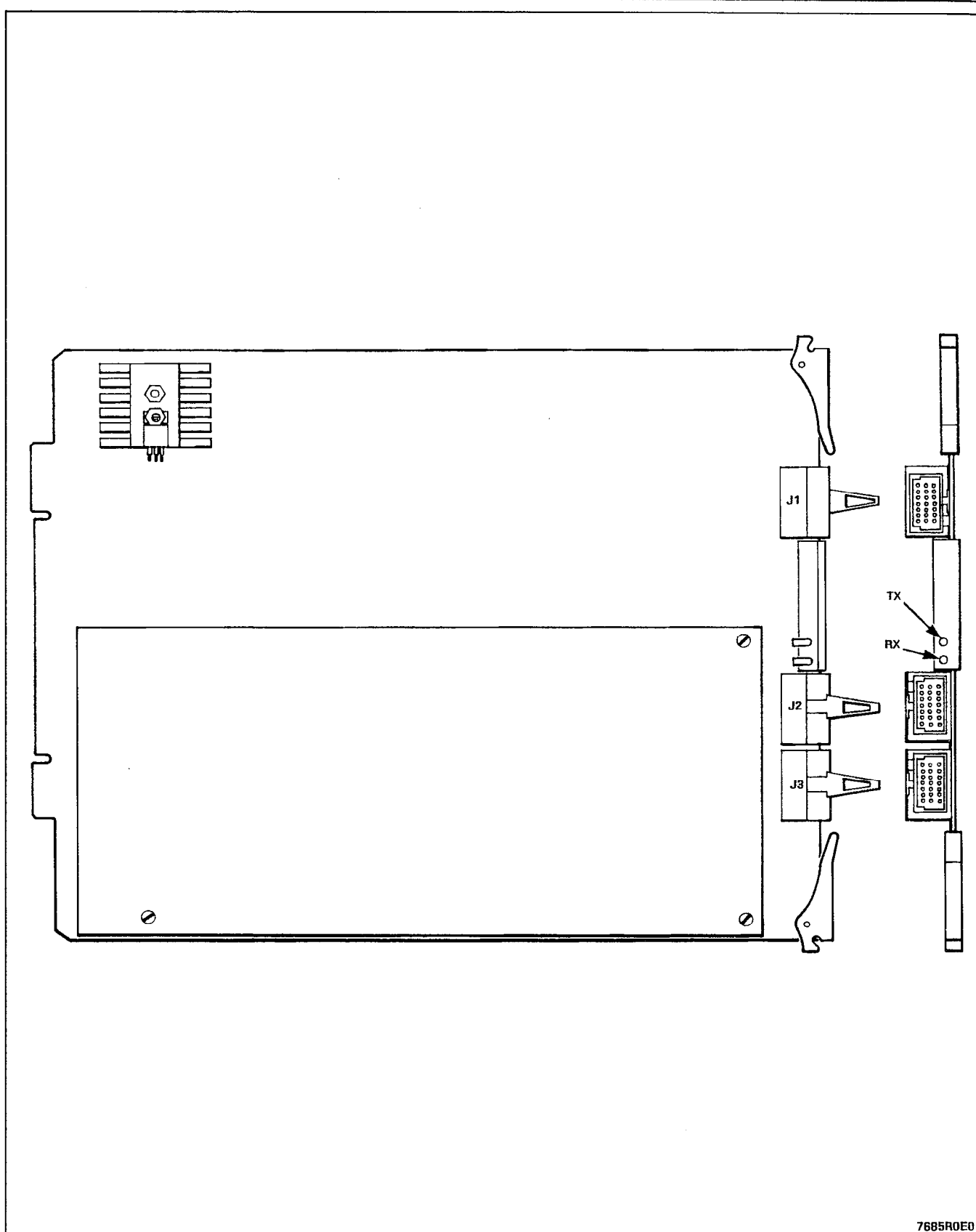
7685R0E0

Figure 2-8 Digital Interface Card

Digital Peripheral Shelf

> **2.23** **Bay Control Card.** The Bay Control Card (BCC) is installed in the lower rightmost slot of digital Bays 3 and 4. This card monitors lines, trunks and other circuits within the bay.

Maintenance Panels

> **2.24** **Control Cabinet.** The maintenance panel is located at the top front of the control cabinet, behind the door, and contains the following controls and connections for the PABX:

Top Shelf Power	– controls bay 3 power
Test line	– system test line (bay 2, slot 1, cct 1)
Power Fail Control Switches	– controls source of power fail transfer initiation
Master Switch	– operate to TRANSFER position to force system power fail transfer
Maintenance Port	– connect EITHER local OR remote terminal but not both at once
Maintenance Console Jack	– connect a maintenance console (not terminal) here; bay 2, slot 3 must have Universal card with console module in position 1.

> **2.25** **Universal Control Cabinet.** The Maintenance panel is located between the Control shelf and the peripheral shelf, and contains the following controls and connections for the PABX:

Power Fail Transfer Control Switch	– controls source of power fail transfer initiation
Test Line	– system test line
Maintenance Ports	– console jack – connector for an RS–232 terminal
Maintenance Ports Selection Switch	– Selects whether a terminal is connected directly to maintenance panel or through a modem to connector at rear of cabinet.

Note: The POWER switch for the upper shelf (and its LED) is located on the filler plate above Bay 3.

> **2.26** **Peripheral Cainbet.** The maintenance panel is located at the top of the cabinet, inside the front door. Set the console power switches to DISABLE and the master PFT switch to NORMAL. The maintenance port is not used; the Test Line is connected to Bay 4, Slot 1, Circuit 1, but has no special features associated with it. The following switches are functional:

System Power Supply	– turns cabinet DC power ON or OFF

PFT Switches   – control source of power fail transfer
                                          initiation.

Default Hardware Assignments

2.27 The following hardware equipment assignments are pro-
grammed into the default database; it is recommended that
these default assignments be followed when first configuring or in-
stalling a system.

test line (terminal and jack)   Bay 2, Slot 1, Circuit 1
(requires ONS Line card at Bay 2, Slot 1)

maintenance panel console jack   bay 2, slot 3, circuits 1, 2
(requires Universal card at Bay 2, Slot 3;
console module in position 1)

Connecting Cables

2.28 The connections between the MCC Control cabinet and the
Peripheral shelves are made using connector-ended 12-pair
PCM cables.

Power Fail Transfer

2.29 In the event of a major alarm condition, the power fail transfer
relays located on the Power Fail Transfer (PFT) board, will con-
nect Central Office (CO) trunks to selected station lines. Any of the
following conditions will cause power fail transfer:

- Commercial power failure (if no reserve power supply is used).
- Common control failure.
- Manual transfer from control cabinet.

Each SX-200® cabinet, providing it has an analog Bay 3 (including rear
door power supply), may be equipped with a 12-circuit PFT board.
Each Universal cabinet is equipped with one 6-relay PFT card; two
additional 6-circuit cards can be added. A plug-in Loop Start to
Ground Start module is available for 6-cct PFT cards. Each PFT relay
can connect a standard telephone set directly to a CO trunk (dial pulse
trunks must connect to rotary dial telephones and DTMF trunks must
connect to DTMF telephones). SUPERSET® Sets cannot be used for
PFT. If ground start trunks are used, the PFT telephones must be
equipped with either ground start keys or loop start to ground start
converters. Calls in progress when PFT occurs will be dropped; how-
ever calls made while in PFT mode will not be dropped when the
system returns to normal operation, but will terminate normally at the
end of the call. No PABX features are available while PFT is in effect.

(a) Incoming Calls – After a power fail transfer has occurred, ring-
ing of extensions for incoming calls is applied directly to the
selected extension line from the CO.

(b) Outgoing Calls – To place an outgoing call through a ground
start CO trunk during PFT, press the ground start key, go off-

hook, and dial the required number. With a loop start trunk, go off-hook and dial the required number. Since the telephones are connected directly to the CO, usual PABX access codes are not dialed.

Relays

2.30   Two relays are provided on the receiver module, which can be operated under control of the program, to control various system functions, such as night bells or alarms.

relay contact ratings   90 Vrms at 0.1 A
48 Vdc at 0.5 A

Note: This relay contact may be connected only to a secondary circuit that has no direct connection to a primary cirucit, and receives its power from a transformer, converter, or equivalent isolation device situated within the equipment.

Attendant Console

2.31   Attendant consoles may be connected to the SX-200® DIGITAL PABX. Two consoles may be connected to a Universal Card, up to a system maximum of 11 consoles. Refer to Section MITL9108-093-315-NA, Console Description, for a detailed description of the Attendant Console.

Reserve Power Supply

2.32   The reserve power supply for the Control Cabinet is a stand-alone, uninterruptible power supply (UPS) or Standby Power Supply (SPS) comprising a battery pack, a charger, and an inverter. The UPS or SPS backup time is dependent upon the unit selected and the capacity of the batteries provided. The unit must be able to provide 115 Vac at 15A. The Peripheral cabinet can have its own standard reserve power supply (in the base of the cabinet), or can be supported by an additional UPS. The UPS is an assembly not manufactured by MITEL Corporation.

2.33   Mitel Corporation has evaluated several Uninterruptible Power Supplies (UPS) and Standby Power Supplies (SPS) for this application. Transfer times of SPSs are generally unreliable under all conditions of line and load, resulting in dropped calls. However, several SPS and UPS do meet all requirements, and are recommended by Mitel. Marketing and Sales literature, which is available from authorized representatives, identifies the approved products.

2.34   The UPS should be a true Uninterruptible Power Supply (except for the one SPS recommended by MITEL) which always supplies the output load from its inverter and which includes a reverse transfer switch to automatically bypass the UPS if it fails.

Rating   1.5 kVA minimum
Input Voltage   120 Vrms +10%,-15%, 60 Hz ±5%
Output Voltage   120 Vrms +10%,-15%, 60 Hz ±5%

Output Waveform	Sinewave or Quasi square wave (not square wave)
Output Receptacle	NEMA 15 A 3-pin grounded
Holdup/Recharge Times	Per customer requirements.

Several recommended manufacturers of Uninterruptible Power Supplies has provided samples of their equipment which have proved to be compatible with an SX-200® DIGITAL PABX in laboratory tests. Please note that compliance to electrical installation and building codes is the responsibility of the purchaser of the equipment. Consult local municipal and electrical utility authorities before proceeding with the installation of equipment.

2.35 An Uninterruptible Power Supply (UPS) may have an external connection (from an internal relay) which provides a closed contact to remotely indicate status or condition. Conditions which may be indicated include:

- an ALARM condition is present within the UPS

- the UPS is operating from its batteries (probably because commercial AC power has been interrupted).

The relay contact may be connected to a remote alarm or to a "Contact Monitor" line circuit to promptly indicate the condition.

Refer to the Manufacturer's Installation Manual, which describes conditions that are indicated. Refer to Section MITL9108-093-105-NA for a description of "Contact Monitor" line circuit operation.

Paging, Music on Hold Equipment

2.36 The paging equipment and the music source for the 'music on hold' are located outside the SX-200® DIGITAL PABX. They should be in an environment specified by the individual suppliers of the equipment and connected to the SX-200® DIGITAL PABX through the cross-connect field.

Music on Hold/Paging Module Specifications

MOH i/p	input impedance	600 ohms
	input level	-6 dBm
PAGING o/p	output impedance (low)	200 ohms
	output level into 600 ohms	-6 dBm
RELAY CONTACT	maximums	90 Vrms at 0.1 A
		48 Vdc at 0.5 A.

Note: This relay contact may be connected only to a secondary circuit that has no direct connection to a primary circuit, and receives its power from a transformer, converter, or equivalent isolation device situated within the equipment.

E&M Trunk Module

2.37 The E&M Trunk Module plugs into the Universal Card. It provides interface to Types 1 or 5 E&M trunks. The module has a power consumption category of 3. Because of this, only three of these modules can be used per Universal Card.

2.38 The E&M Trunk Module is set for the type of trunk in use by setting its eight DIL switches.

2.39 Facilities provided by the E&M Trunk Module include:

- selectable Type 1 or Type 5 signaling

- selectable gain/loss plan for normal of satellite working trunks

- selectable 600 ohm or AT&T Complex termination (350 ohms + 1000 ohms in parallel with 0.21 μF)

- selectable 2- or 4-wire transmission

- on board filter/codec for analog/digital and digital/analog conversions (μlaw).

2.40 Types 1 and 5 E&M trunks differ in the signaling applied to the E and M leads. In the on-hook condition, the Type 1 interface grounds the M lead and leaves the E lead open; the Type 5 interface leaves both leads open. In the off-hook condition, the Type 1 interface grounds the E lead and applies -48 volts to the M lead; the Type 5 interface grounds both leads.

Remote Maintenance of an SX-200® DIGITAL PABX

2.41 An auto-answer modem must be connected to the remote terminal connector on the maintenance panel and a remote terminal and modem connected to the local external auto-answer modem. Local and remote maintenance are performed in the same way; the only difference is the use of modems to extend overall cable length. Access is by dedicated trunk. CO trunk using DISA, or by Attendant transfer to a station port.

3. INSTALLATION REQUIREMENTS

Environmental Requirements

3.01 The SX-200® DIGITAL PABX equipment may be installed in any location which fulfills the space requirements as detailed in paragraph 3.02, and is within the following temperature and humidity ranges:

- Temperature +10 to +40°C (+50 to +104°F)

- Relative Humidity 20-80% (non-condensing)

- Maximum Altitude 4000 meters.

Floor Space

3.02 The minimum floor space for installation and subsequent maintenance of the SX-200® DIGITAL PABX is 75 cm (30 in.) front and rear, 60 cm (24 in.) at one side, and 5 cm (2 in.) at the other side. The minimum room size is 215 cm x 230 cm (7 ft x 7.5 ft).

Equipment Location

3.03 The following requirements must be met when selecting a location for the SX-200® DIGITAL PABX equipment. For cooling purposes, the Control cabinet has a fan assembly mounted in the rear door of the cabinet; the Peripheral cabinet relies on natural air flow. It is therefore mandatory that the bottom areas of the cabinets be unobstructed so that the air vents are clear, and not too close to a wall or other equipment.

The location MUST be:

- Dry, clean, and well ventilated

- Well lit

- Readily accessible.

The location MUST NOT be:

- Near a sprinkler system, sweating pipes, steam pipes, or steam vents

- In areas of extreme heat or cold (less than 10°C or greater than 40°C)

- In areas where corrosive fumes or exhaust from machinery is present

- In passageways

- Near a reproducing or copying machine. A minimum clearance of 3 m (10 ft) must be provided if the reproducing machine is not equipped with a filtering system, and the room should be ventilated by an exhaust fan.

Power Supply Requirements

3.04 The customer must provide one single-phase power receptacle for each cabinet, as follows:

- Each cabinet should have its own 120 V, 60 Hz, 15 A branch circuit.

- The power receptacle must be a 3-wire type, with the ground wire connected to the ground of the electrical system.

- Each equipment cabinet is provided with a line cord terminated in a 5-15P 3-prong plug.

Recommendations

3.05 It is recommended that the following suggestions be adhered to:

- A warning tag should be attached to circuit breakers to prevent unauthorized manual operation.

- There must be no attempt to defeat the grounding conductor.

- The power receptacle must not be controlled by a switch.

- For 2-cabinet installations, a split receptacle is recommended.

- The receptacle location should be selected to prevent accidental removal of the power cord, while remaining accessible for removal of the plug for maintenance.

- The routing of the power cord between the cabinet and the receptacle should not present a hazard to the user.

- A warning tag should be attached to the plug end of the power cord to prevent accidental removal of the cord by anyone.

- One AC surge protector, MITEL PN9180-066-001-NA, should be provided for each cabinet.

Equipment Grounding

3.06 The following grounding procedures must be followed for the SX-200® DIGITAL PABX:

(a) All circuit commons within each cabinet shall derive ground from a single ground concentration point within one of the cabinets. This ground concentration point shall derive ground

from a cold water pipe or other equally grounded point, using a #6 AWG insulated green wire connected directly to both points only.

(b) The system cabinets and associated ducting hardware shall not be exposed to any ground source other than that described in subparagraph (a) above.

(c) AC service wires bringing AC to the cabinets shall not share an enclosure or raceway with other system grounds, DC power distribution wires, or signaling wires.

(d) All system hardware shall be provided with connections to the system single point ground which in turn shall be provided with a reliable path to the equipment grounding conductor (i.e., green wire ground or safety ground), which shall be connected to an approval building ground (cold water pipe).

(e) All sources of external ground (eg, system signaling ground to the approved ground source) shall connect only to the system single point ground.

(f) A separate grounding conductor (minimum size 14 AWG) shall be run from the system single point ground to the communications ground system on the cross-connect field.

(g) All doors, shelves, and similar assemblies are to be connected by straps to their designated connection points on the cabinet.

4. CONTROL SHELF AND PERIPHERAL SHELF BACKPLANES AND WIRING

Control Shelf

4.01   The Control Shelf combination backplane is an integral part of the Control Shelf and serves Bay 1 and Bay 2 to connect the various circuit cards.

4.02   The 12 Peripheral cards are arranged in two rows; the upper row designated by square and circular identifications, and the lower row by circular identifications. Four of the Peripheral cards are on Bay 2 (two rows of two cards) and Bay 1 contains eight Peripheral cards (two rows of four). Cards with a square on their faceplate may only be installed in upper card slots; cards with a circle on their faceplate may be installed in either upper or lower card slots. Similarly, the MCC has a star; the Bay Power Supply has a right triangle, and the Disk Drive has an equilateral triangle to identify their respective card slots.

4.03   The Peripheral card slot numbers designate the bay as well as the slot number (for example, Slot 2.7 is Slot 7 in Bay 2).

4.04   **Control Cabinet** – Figure 4-1 shows the approximate locations of the backplane connectors as viewed from the rear of a Control cabinet. Note that the floppy disk drive connects to the backplane with a ribbon cable and a power cable. Figure 4-2 shows Control cabinet grounding connections; Figure 4-3 shows Control cabinet power distribution; Figure 4-4 shows signal cable routing.

4.05   **SX-200® Universal Control Cabinet** – Figure 4-5 shows the approximate locations of the backplane connectors as viewed from the rear of an SX-200® Control cabinet. Note that the floppy disk drive plugs directly into the backplane. Figure 4-6 shows Control cabinet grounding connections; Figure 4-7 shows Control cabinet power distribution; Figure 4-8 shows signal cable routing.

Peripheral Shelf – 480-Port Configuration

4.06   Up to three Peripheral shelves may be supplied with an SX-200® DIGITAL PABX. The peripheral shelf in the Control cabinet is Bay 3; the lower peripheral shelf in the peripheral cabinet is Bay 4; the upper shelf in the peripheral cabinet is Bay 5. Bays 3 and 4 are identical, while Bay 5 has fewer printed circuit boards. In an SX-100® PABX upgrade, the SX-100® cabinet contains only Bay 4.

Peripheral Shelf PCB Assignments

PCB Type	Slots	Bay 3	Bay 4	Bay 5
Trunk or Station	1-12	x	x	x
Trunk or Station	13,14,15	x	x	
DIC	18	x	x	x
Scanner	19	x	x	
PCC	20	x	x	

Figure 4-9 shows wiring in the peripheral cabinet. Figure 4-10 shows Power Fail Transfer wiring. Figure 4-11 shows Peripheral cabinet backplane wiring.

Surge Clamp

4.07   Each Peripheral Shelf requires a Surge Clamp on its backplane at Slot 16, Pin 10 as shown in Figure 4-11.

Peripheral Shelf – 336-Port Configuration

4.08   The Universal Cabinet can be expanded by adding a Digital Peripheral shelf above the Control shelf; it contains Digital Bay 3 and (optionally) Digital Bay 4; each Bay contains 96 ports. These bays are the same as Bay 1, except each contains a Bay Controller instead of a Floppy Disk Drive. Figure 4-12 shows AC and ground distribution, while Figure 4-13 shows signal cable distribution within the Universal cabinet.
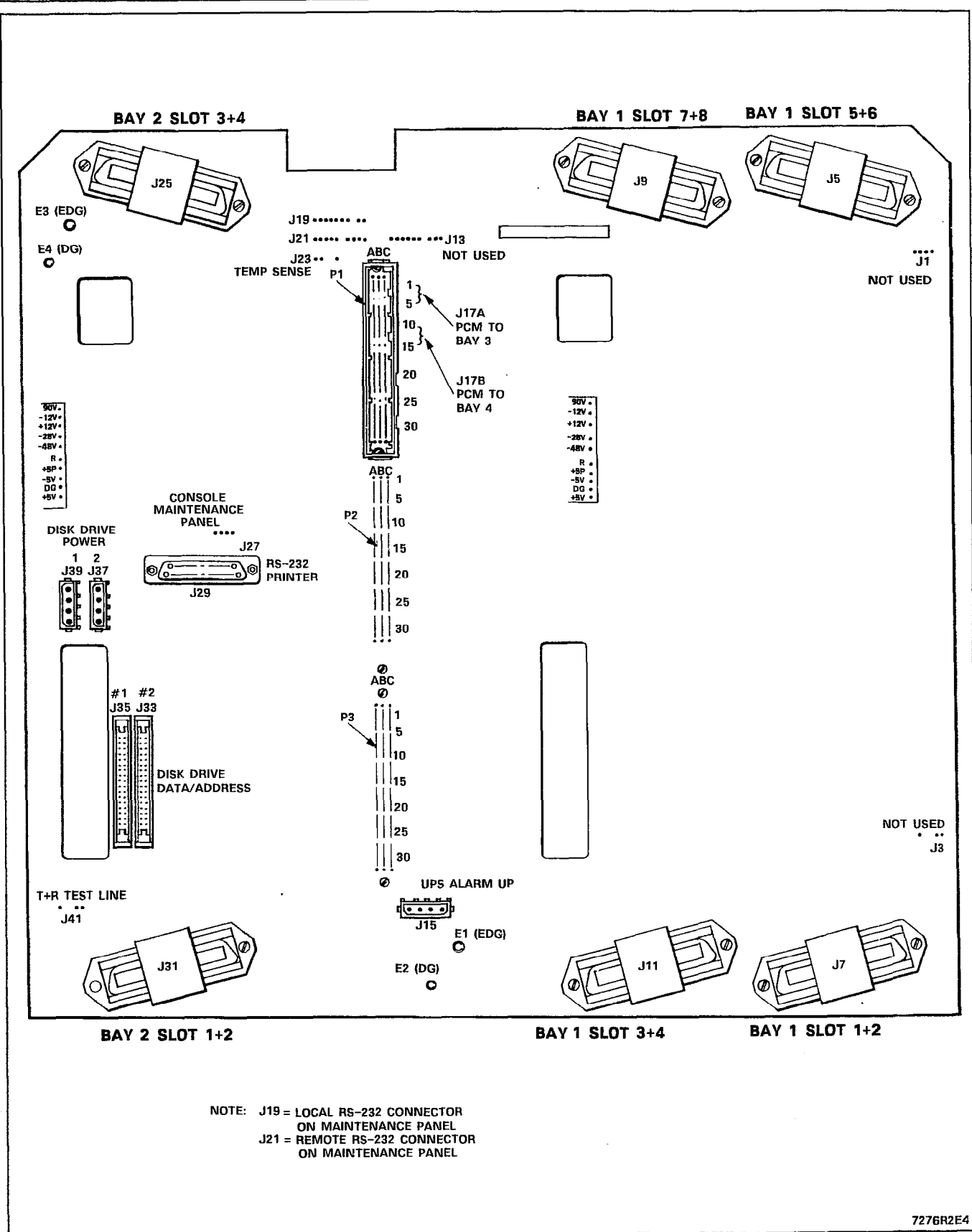
Figure 4-1 SX-200® Control Shelf Backplane
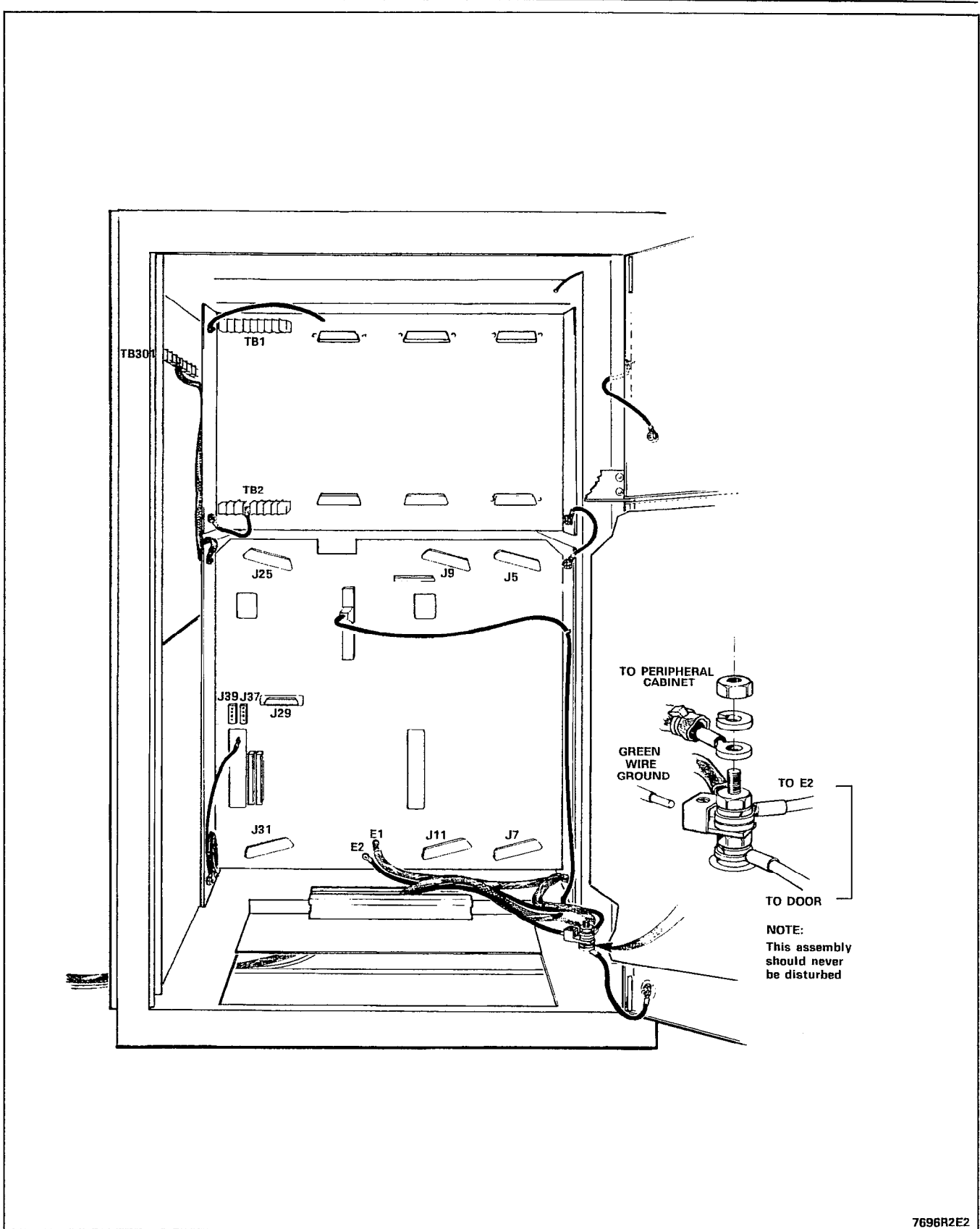
Figure 4-2 Rear View of SX-200® Control Cabinet – Grounding

7696R2E2

FAN
ASSEMBLY

TB301

TB1

TB2

TB401

BAY
POWER
SUPPLY

BAY
POWER
SUPPLY
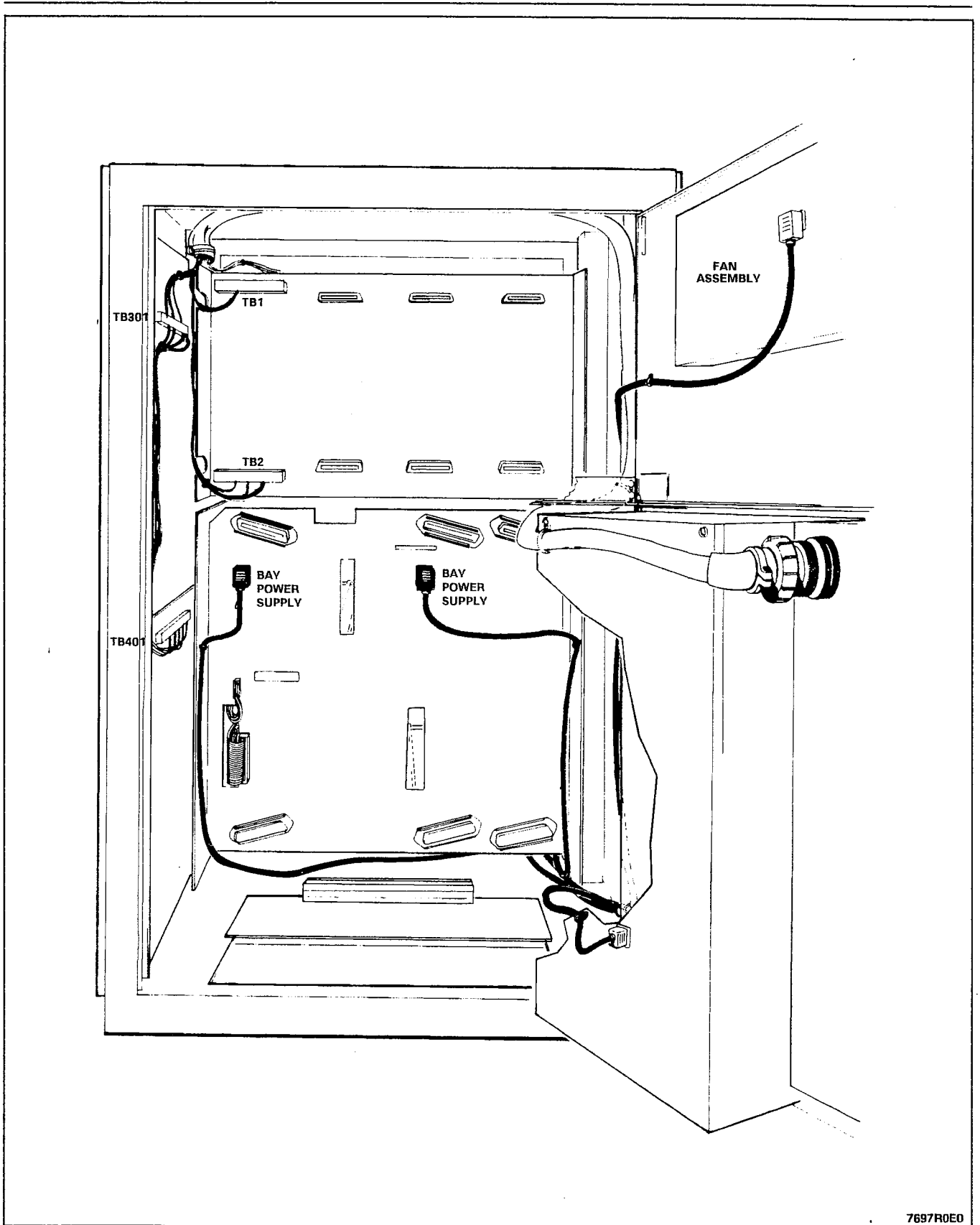
7697R0E0

Figure 4-3 Rear View of SX-200® Control Cabinet - Power
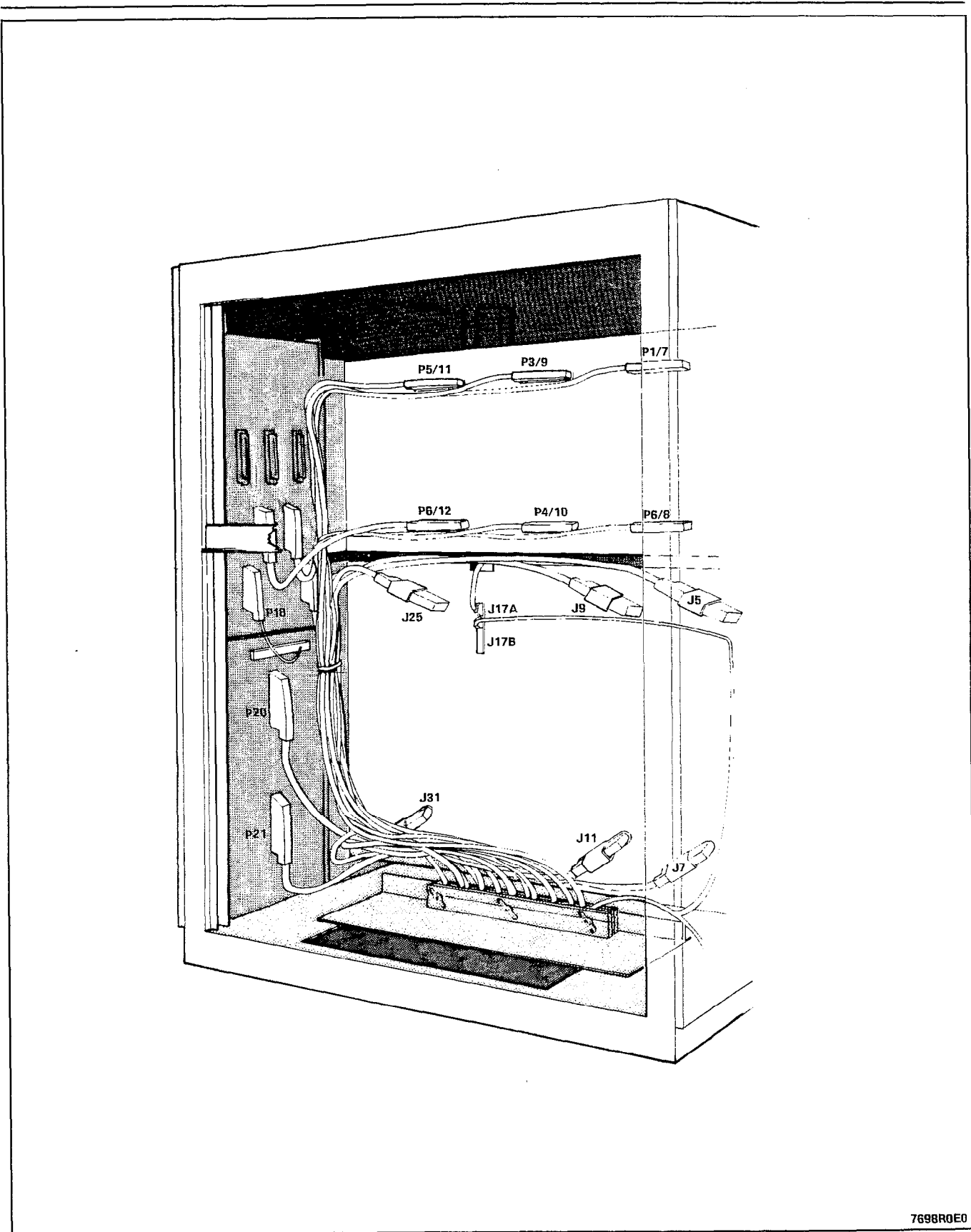
Figure 4-4   Rear View of SX-200® Control Cabinet - Signal Cables

7698R0E0

BAY 2 SLOT 3+4

BAY 1 SLOT 7+8   BAY 1 SLOT 5+6

J25

E3 (EDG)

E4 (DG)

J19 ········ ·· J13
J21 ······ ····   NOT USED
J23 ·· ·
ABC
TEMP SENSE

J9

J5

NIGHT
BELL
CONNECTION

P1

1
5

10

15

J17A
PCM TO
BAY 3

J17B
PCM TO
BAY 4

90V=
-12V•
+12V•

-28V•
-48V•
R•
+5P•
-5V•
DG•
+5V•

20

25

30

P2   ABC
1

CONSOLE
MAINTENANCE
PANEL

5

10

J27
J29

RS-232
PRINTER

15

20

90V=
-12V•
+12V•

-28V•
-48V•

R.
+5P•
-5V•
DG•
+5V•

25

30
ABC

P3

1
5

10

15 P3

20

25

30   UPS ALARM UP

T+R TEST LINE

J41

J31

J15   E1 (EDG)

E2 (DG)

J11

J7

BAY 2 SLOT 1+2

BAY 1 SLOT 3+4   BAY 1 SLOT 1+2

NOTE: J19 = LOCAL RS-232 CONNECTOR
ON MAINTENANCE PANEL
J21 = REMOTE RS-232 CONNECTOR
ON CABINET REAR CABLE PANEL

8544R1E3

Figure 4-5 SX-200® Universal Cabinet Control Shelf Backplane
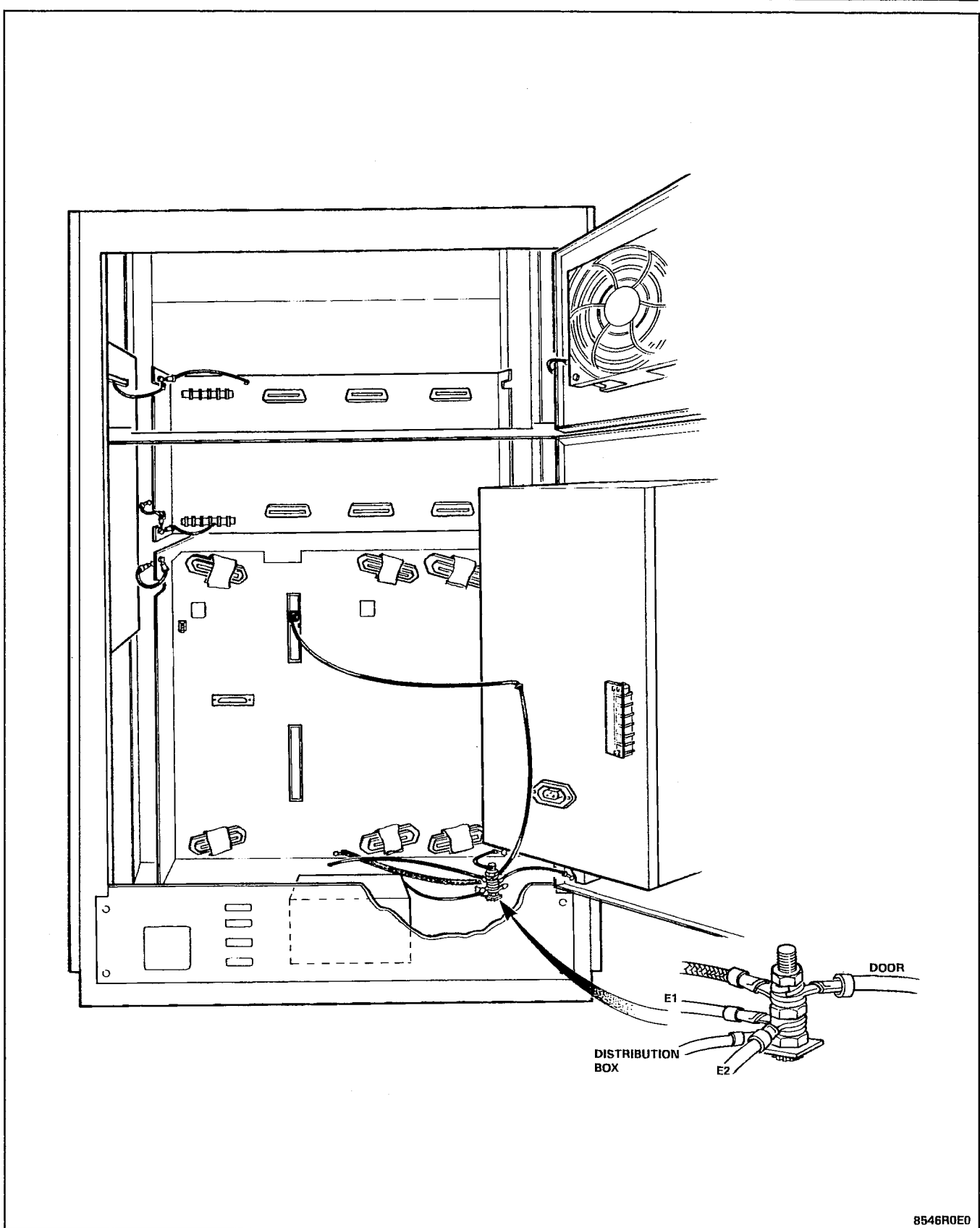
Figure 4-6 Rear View of SX-200® Universal Control Cabinet - Grounding

FAN
ASSEMBLY

POWER HARNESS
IS DRESSED
AROUND HINGE

PERIPHERAL
SHELF

INTERCONNECT
CARD

CONTROL
SHELF

POWER
SUPPLY

AC
DISTRIBUTION

8545R0E0
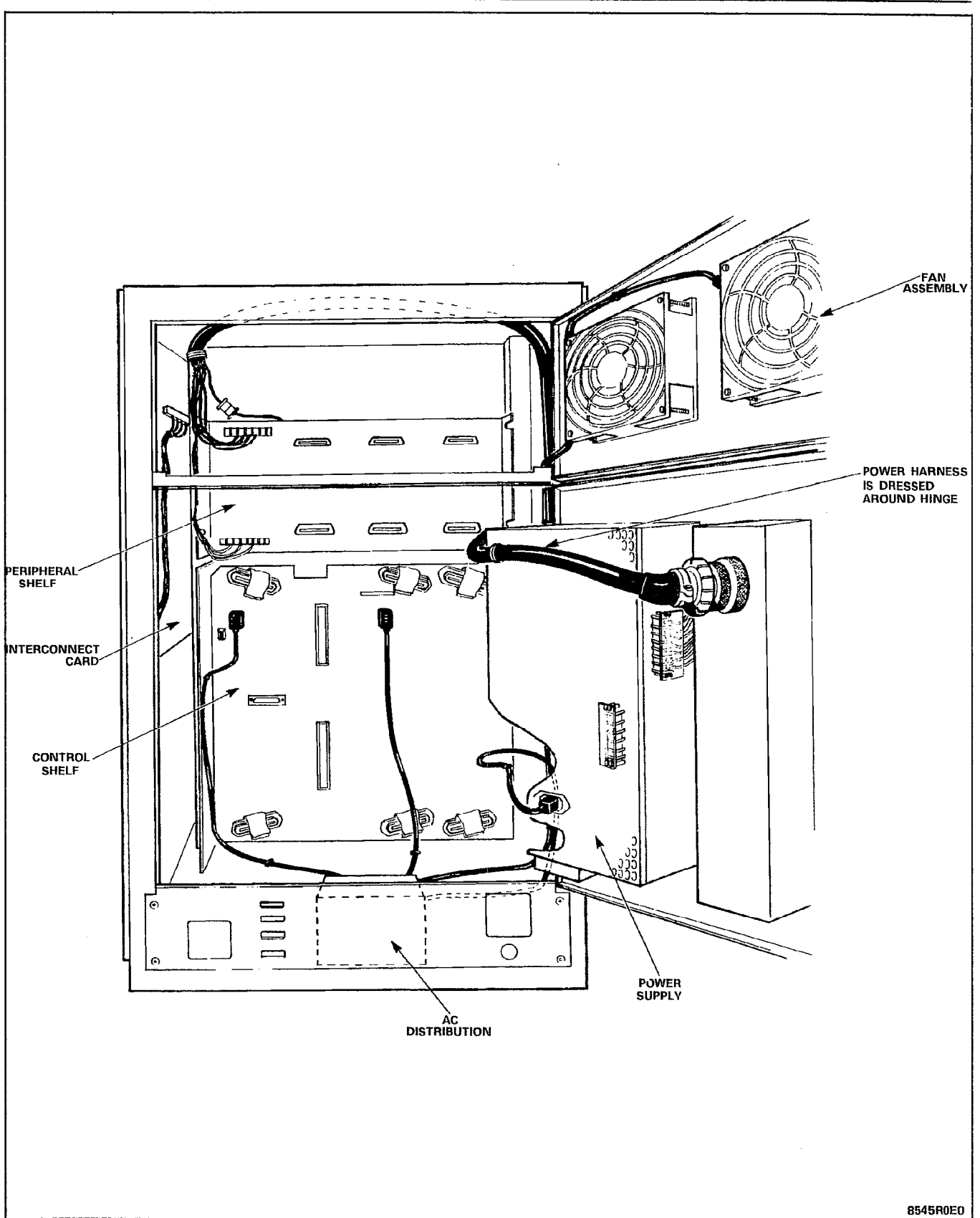
Figure 4-7 Rear View of SX-200® Universal Control Cabinet – Power
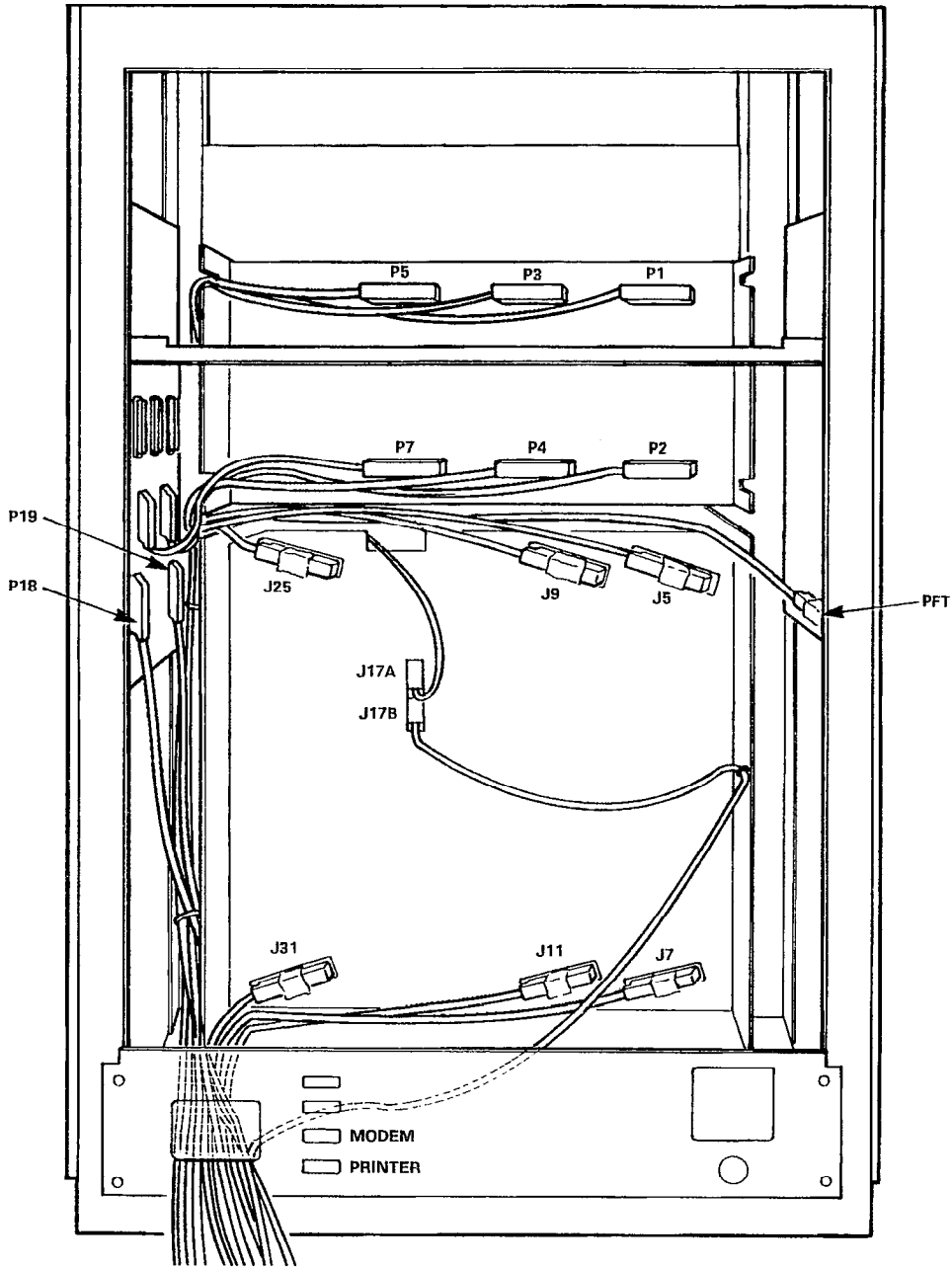
Figure 4-8 Rear View of SX-200® Universal Control Cabinet – Signal Cables

J302

P303
(6 PIN)

FEMALE

MALE

P301
(14 PIN)

J302
(25 PIN)

NOTES:
1. ALL PLUGS AND CONNECTORS EXCEPT AS NOTED ARE STANDARD 25 PAIR (AMPHENOL TYPE). THE MALE AND FEMALE DESIGNATORS REFER TO THE CONNECTORS MOUNTED ON THE EQUIPMENT, NOT TO THE CABLE CONNECTORS.

FEMALE   FEMALE   FEMALE

J13   J14   J15

P11   P9   P7

MALE   MALE   MALE

P104 P103 P102 P101   SHELF 2

MALE   MALE   MALE
P12   P10   P8

MALE   MALE

P16   P17

P5   P3   P1

MALE   MALE   MALE

P104 P103 P102 P101   SHELF 1

MALE   MALE   MALE
P6   P4   P2

MALE   MALE

P18   P19

INTERCONNECT BOARD

TB-7

MALE

P20

MALE

P21

POWER FAIL TRANSFER BOARD

SHELF	CONNECTOR NO.	DESTINATION
1	P1	X – CONNECT
	P2	X – CONNECT
	P3	X – CONNECT
	P4	X – CONNECT
	P5	P17
	P6	P16
2	P7	X – CONNECT
	P8	X – CONNECT
	P9	X – CONNECT
	P10	X – CONNECT
	P11	
	P12	

SHELF 1 TO SHELF 2	
P104	P104
P103	P103

BOARD	CONNECTOR NO.	DESTINATION
INTER-CONNECT	J13	
	J14	
	J15	
	P16	P6
	P17	P5
	P18	
	P19	
	P301	POWER SUPPLY
	P302	
	J302	
	P303	
	P20	X – CONNECT
	P21	X – CONNECT

7263R1E1

Figure 4–9 SX-200® Connector Locations (Peripheral Cabinet)

STATION

PART OF
25-PAIR
CABLE

BACKPLANE PLUG (MALE)

**EQUIPMENT
SHELF**

RING (LINE CARD)
RING (TRUNK CARD)
TIP (TRUNK CARD)
TIP (LINE CARD)

JUMBER A
JUMPER B
JUMPER C
JUMPER D

TIP

LINE CARD TIP
STATION TIP

TRUNK CARD TIP
TRUNK TIP

RELAYS SHOWN IN
TRANSFER POSITION

TIP

CO TRUNK

RING

TRUNK CARD RING
TRUNK RING

RING

STATION CARD RING
STATION RING

RING

PART OF
POWER FAIL
TRANSFER CABLE

CROSS-
CONNECT
FIELD

P20
OR
P21
(MALE)

PART OF
POWER FAIL
TRANSFER
BOARD

PABX EQUIPMENT CABLE
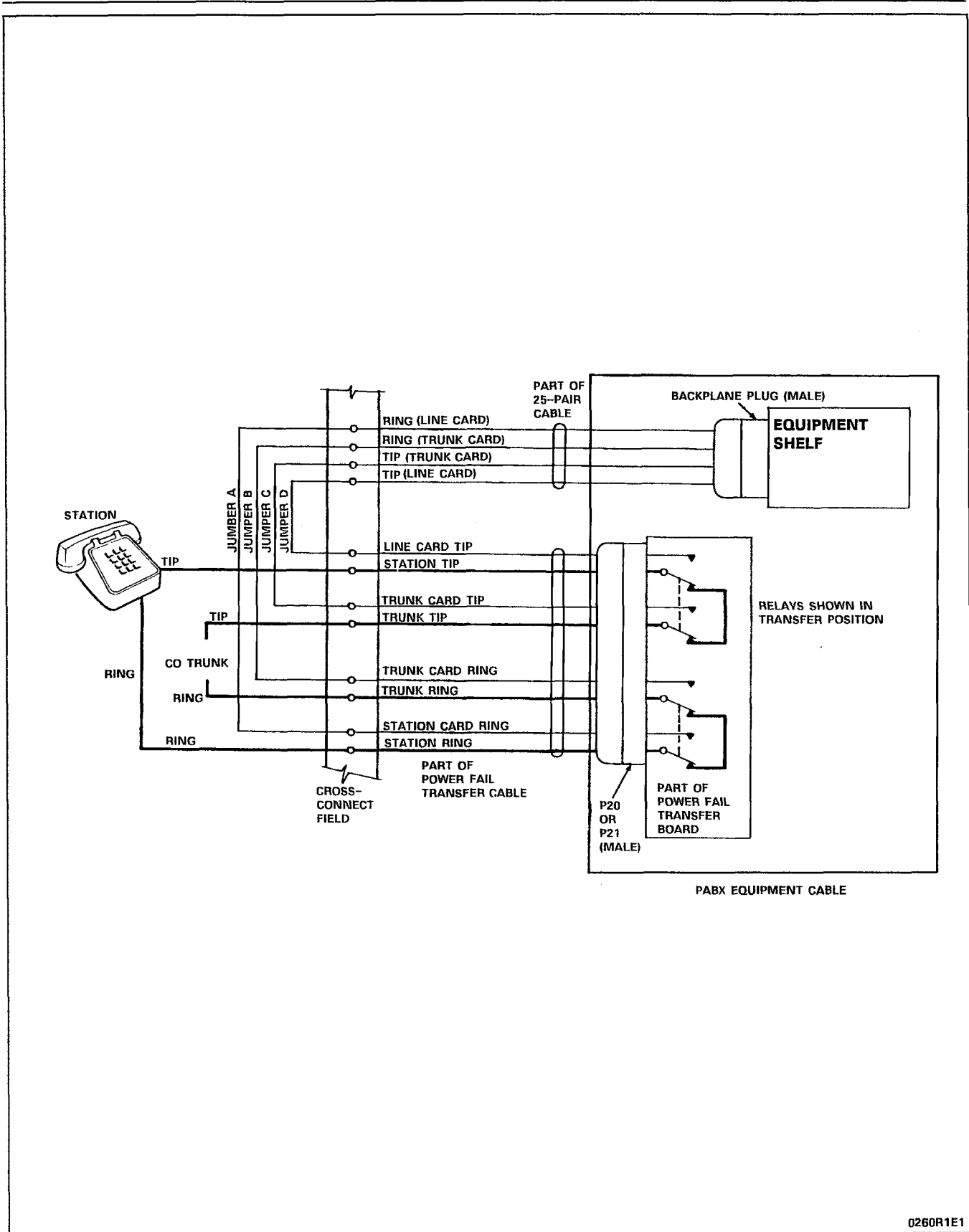
0260R1E1

Figure 4-10 Power Fail Transfer Wiring Diagram

NOTE: IF UPGRADING AN EXISTING SYSTEM TO BECOME A PERIPHERAL CABINET, REMOVE CABLES P101 AND P102 (SHOWN REMOVED)
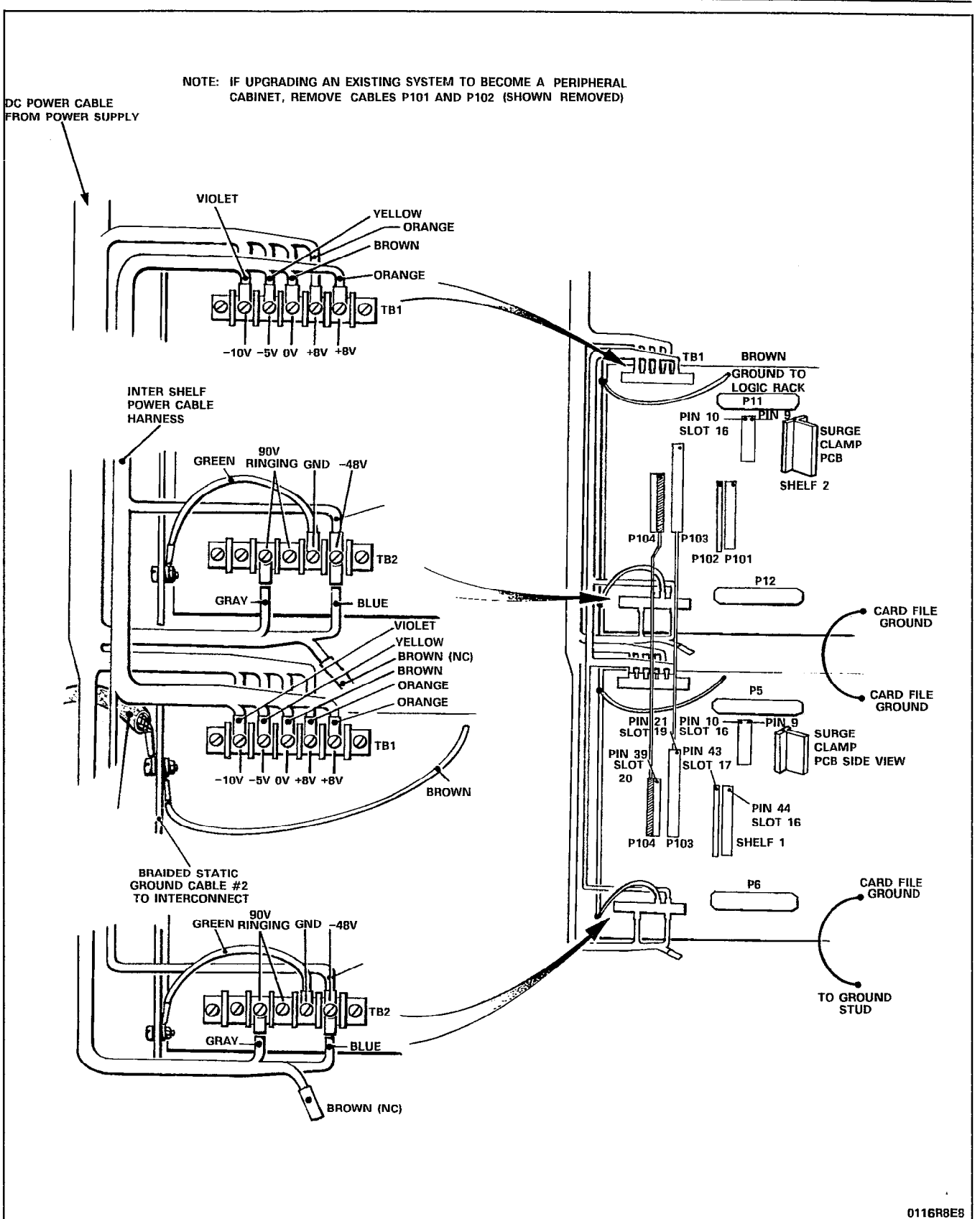
Figure 4-11 SX-200® Peripheral Cabinet Backplanes

0116R8E8

BAY 3

BAY 4

TO FANS

BAY 2

BAY 1

FROM LINE FILTER

AC DISTRIBUTION

AC POWER CABLES

GROUND WIRES

KA0130R0E0
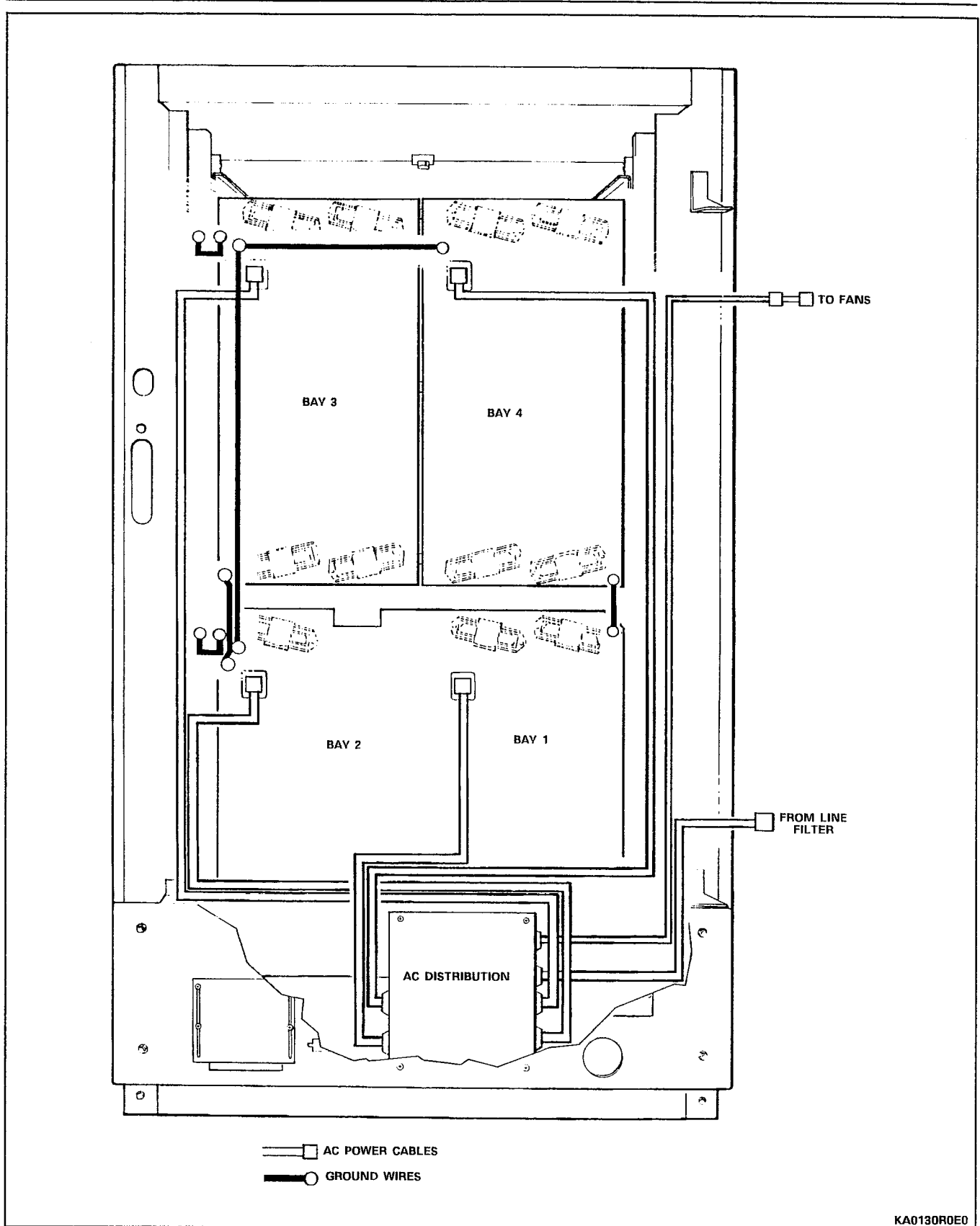
Figure 4-12 AC Distribution and Grounding within a Universal Cabinet with a Digital Peripheral Shelf

THERMAL SENSOR
AND HARNESS

BAY 4
PCM CABLE

BAY 3
PCM CABLE

PFT CABLE

MAINTENANCE
PANEL AND
CONNECTORS
HARNESS
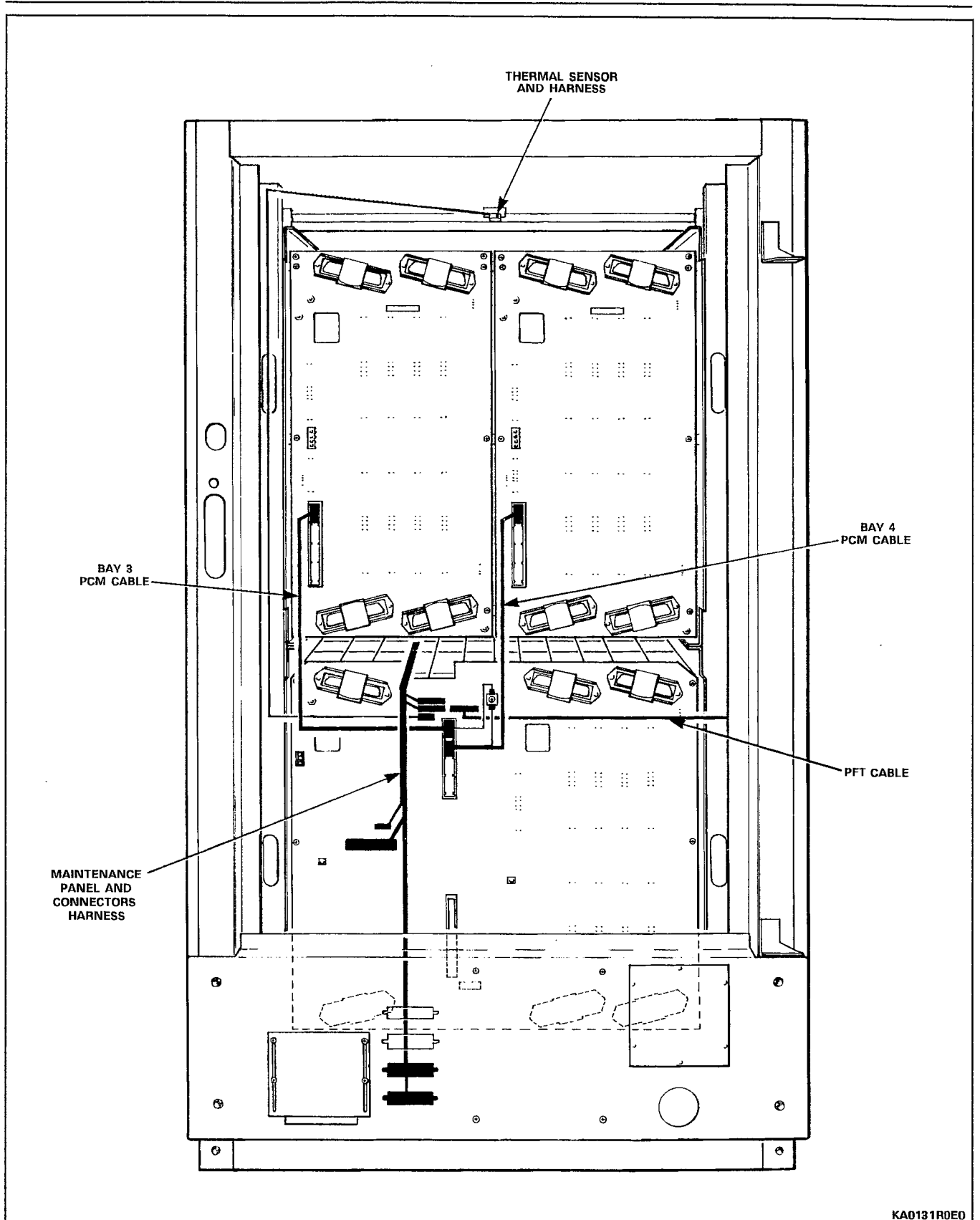
KA0131R0E0

**Figure 4-13 Signal Cables (except to MDF) within a Universal Cabinet with a Digital
Peripheral Shelf**

5. INSTALLATION CHARTS

5.01 Follow the Installation Charts, in sequence, to install an SX-200® DIGITAL PABX. Skip those charts for equipment that is not being installed at this site.

5.02 Section MITL9108-093-210-NA, Customer Data Entry, describes how to enter data into the system to make it operational. Installation Forms, Section MITL9108-093-206-NA includes Tip and Ring assignment forms for all card positions in the system.

Precautions

5.03 When installing the system certain precautions must be observed, particularly when handling PCB cards, using test equipment to measure voltages. These precautions are detailed below:

(a) When replacing PCB cards ensure that power is first switched off (where this is possible), but maintain the ground connections to the equipment. Power must be OFF, when inserting or removing common control cards, as identified on the card front panels.

(b) Always wear an antistatic wrist strap when handling printed circuit cards. Handle PCB cards only by the edges and avoid contact with any exposed electrical connections. When removing a new card from its package, touch the ground bar first to release any static voltage buildup, prior to inserting it in the equipment.

(c) Conductive packages (antistatic bags) should be grounded prior to opening them to remove the contents, and similarly grounded prior to placing a card in the package. Suspected faulty cards should be placed in conductive packages to prevent further possible damage to the cards. Cards that are not correctly packed in antistatic bags when returned will not be covered by any warranty.

Overview of System Installation

5.04 The Installation charts are designed to instruct an installer how to install a maximum configured system. Whenever less than a maximum system is being installed, some of the instructions will not be applicable. It is imperative that the System Configuration for each installation be completed accurately, to allow the installer to determine which equipment is being installed and which instructions are relevant.

5.05 An upgrade from an SX-200® PABX to an SX-200® DIGITAL PABX is performed in the same method as an installation of a 2-cabinet system, except that the Peripheral cabinet and some of its equipment is already in place (note that equipment which is not used in an SX-200® DIGITAL PABX configuration must be removed from the existing configuration).

System Configuration

5.06 The System Configuration identifies all equipment that is part of this installation, defines where each is located within the PABX, and to which circuit or equipment each is connected external to the PABX. The Configuration also identifies the information that must be programmed into the database to define this equipment to the processor.

Printed Circuit Card Distribution

5.07 When assigning printed circuit cards within the card shelves, observe the following guidelines. Add additional trunks to the Control shelf and distribute existing trunks evenly across the Peripheral shelves; with this method most trunk calls will require only one speech path for completion. Place Direct-In Line (DIL) trunks in the same Bay (3, 4, 5) as the extension(s) to which they ring.

CHART 5-1
PREPARE SYSTEM CONFIGURATION

Step	Action	Comments
1.	Identify all stations, trunks, and other equipment to be connected to the system.	This information may be prepared before the installation begins, by a customer service representative for the installer.
2.	Determine the quantities and types of printed circuit cards to be installed.	
3.	Assign stations and trunks to specific cards and assign cards to appropriate slots within the system.	This ensures proper handling and distribution of traffic.
4.	Ensure that all material required for the installation is present, such as telephone sets, cables, cross-connection blocks.	This practice describes the installation of the equipment cabinets only; however, this other equipment is required to make the system function.
5.	Complete a Tip & Ring Assignment form for each 25-pair cable terminated at the cross-connection field.	Keep these forms with the system to assist in troubleshooting and changing the configuration. Keep them up-to-date since they cross-reference all peripheral equipment, connections, and cards.

CHART 5-2
UNPACK EQUIPMENT CABINETS AND EQUIPMENT EXCEPT PRINTED CIRCUIT BOARDS

Step	Action	Comments
1.	Cut and remove retaining straps.	
2.	Open and remove triwall cartons and other packing material. (Refer to Figure 5-1).	
3.	Remove the cabinet from the shipping pallet.	
4.	Remove plastic sheet from cabinet. **CAUTION: DO NOT OPEN OR UNPACK ANY PRINTED CIRCUIT BOARD CARTONS.**	
5.	Unpack cartons and check contents against paging lists.	Retain some packing material in case any items must be returned.

Labels in figure:
- SECURING STRAPS
- TOP CAP
- SHOCK-ABSORBING BOLSTER
- SLEEVE
- CABINET
- SHOCK-ABSORBING BASE
- WOODEN PALLET
- SHOCK-ABSORBING BASE

KA0187R0E0
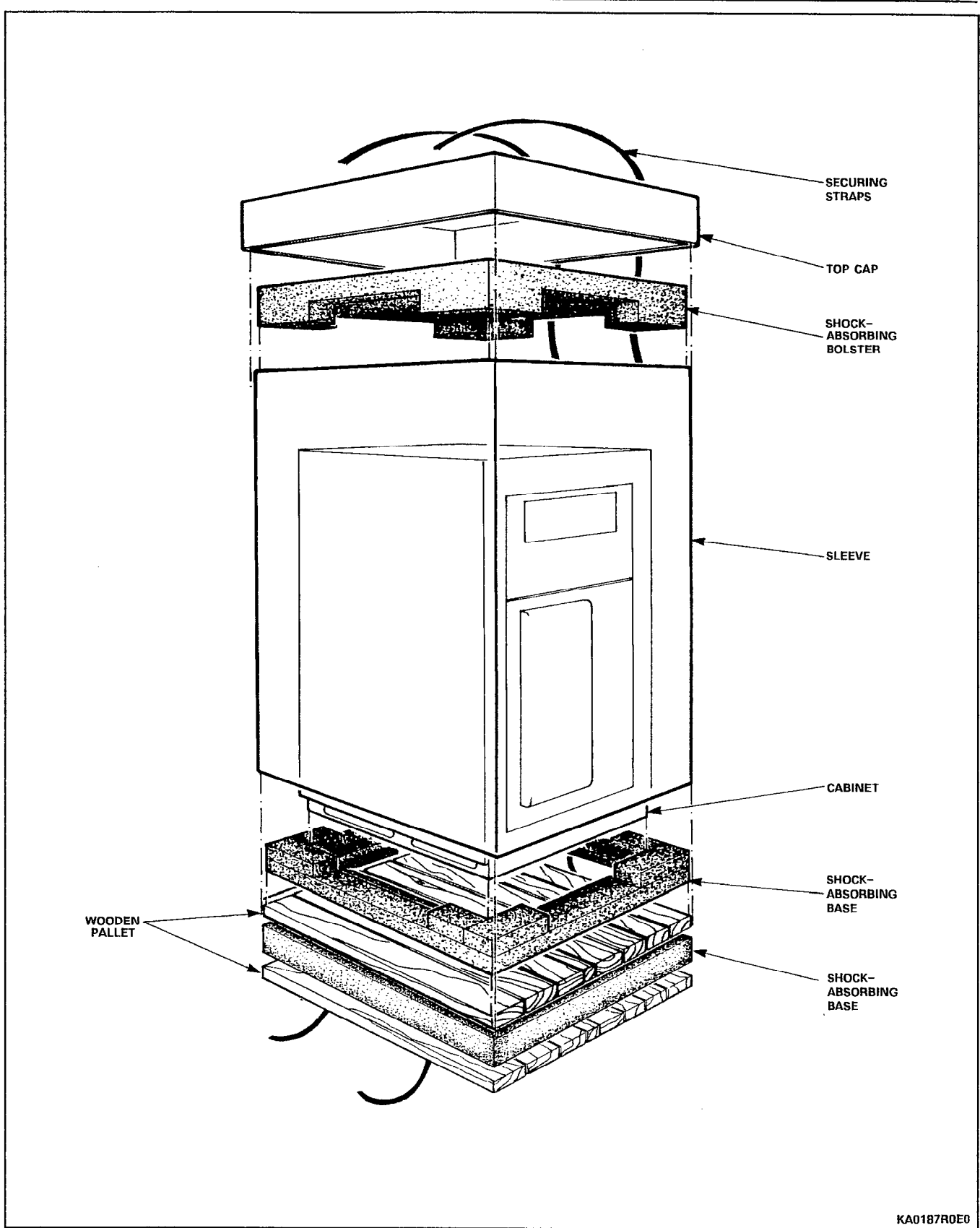
Figure 5-1 Remove External Packaging

CHART 5-3
INSPECT EQUIPMENT

Step	Action	Comments
1.	Remove keys taped to top of cabinet.	
2.	Unlock and open cabinet front door.	Ensure that cabinet doors open and close easily.
3.	Tighten all shelf retaining screws.	Make sure that all components within the cabinet are secure and undamaged.
4.	Verify cards received against invoices.	DO NOT UNPACK PCB CARTONS OR REMOVE cards from their antistatic bags at this time.
5.	Visually check shelves for damage. Ensure that all connector contacts are free of foreign matter and undamaged.	
6.	Tag any damaged items and complete relevant section of Damage Report.	
7.	Close and lock cabinet door.	
8.	Remove shipping screws from rear door power supply.	Not applicable for single shelf cabinet.
9.	Unlock and open rear door.	
10.	Open power supply door, if present.	
11.	Visually inspect power supply for loose or damaged components.	
12.	Check that power supply cable harness is secure and free from damage.	
13.	Tag any defective item and continue with inspection; complete relevant portion of Damage Report.	
14.	Check that all cable connectors are seated firmly and free from damage.	
15.	Visually inspect backplane for damage.	
16.	Close power supply door.	
17.	Tag defective items and continue. Fill in relevant portion of Damage Report.	
18.	Repack tagged items and return according to local procedures.	

CHART 5-4
INSTALL CONTROL CABINET

Note: Ideally, a Control cabinet is installed to the left of a Peripheral cabinet (existing SX-200®️ cabinet if upgrading). The cabinets may be separated by up to the length of the PCM cable which connects them together.

Step	Action	Comments
1.	Place the Control cabinet into its assigned position.	
2.	Ensure that the doors open freely, that there is adequate room for access, and that the AC receptacle and cross-connect blocks are within reach of the cables from the cabinet.	
3.	Before making any connections, perform the "Verify Ground Connection" chart to ensure an adequate ground. When the ground has been verified, connect the ground wire to the ground stud within the Control cabinet.	
4.	Allow enough room for cables to enter the base of the Control cabinet from the sides or rear.	

WARNING

THE FANS INSTALLED IN THE UPPER BACK DOOR OF THE CONTROL CABINET ARE HIGH AIR-FLOW DEVICES. LOOSE FOREIGN OBJECTS PLACED IN CLOSE PROXIMITY TO THE FANS MAY BE PULLED INTO THE IMPELLERS. SERVICE AND INSTALLATION PERSONNEL MUST MAINTAIN A SAFE DISTANCE FROM THE FANS IN ORDER TO PREVENT LOOSE PARTS OF CLOTHING OR HAIR FROM BECOMING ENTANGLED IN THE FAN. THE COVERS OVER THE FANS PREVENT ACCIDENTAL CONTACT WITH THE ROTATING PARTS, AND MUST ALWAYS BE IN-STALLED.

CHART 5-5
VERIFY GROUND CONNECTION

Note: Before installation can begin a #6 AWG green ground wire must be connected between the equipment location and an approved ground (metallic cold water pipe or equivalent where it enters building).

Step	Action	Comments
1.	Before plugging any cards into the cabinet, or connecting the Equipment Ground wire, ensure the equipment circuit breakers are turned off.	Do not power up the PABX.
2.	Plug the AC line cord into the building AC receptacle.	The #6 AWG green ground wire should be connected to an approved ground, but not to the PABX.
3.	Measure the AC voltage between the PABX ground lug and the "approved" ground wire.	Use a good quality, calibrated digital multimeter, and always begin measurements at the highest range setting.
4.	If the voltage is greater than 1.0 V, stop, and locate another approved ground.	If help is needed, consult your engineering support group.
5.	When the voltage is less than 1.0 V, measure the resistance; it should be less than 5 ohms. If the resistance is greater than 5 ohms, take corrective action to reduce the resistance to less than 5 ohms.	Begin the measurements at the highest resistance range. If help is needed, consult your engineering support group.
6.	Connect the verified ground wire to the common ground stud in the control cabinet.	

CHART 5-6
INSTALL PERIPHERAL CABINET

Step	Action	Comments
1.	Unpack the cabinet and other items, except printed circuit cards. Check items received against packing list.	
2.	Inspect the cabinet, shelf, and other items for loose, missing, or damaged parts.	Ensure that the doors open and close freely, and all cables are secure and in place. Remove shipping screws from rear door.
3.	Place the peripheral cabinet on the right side of the control cabinet.	
4.	Route PCM cable PN9108-026-000-NA between the two cabinets; at this time connect only the ground braid to the ground stud in each cabinet, and the Control cabinet end to J17B of the Control shelf backplane.	
5.	Install Surge Clamp on Bay 4, Slot 16, pin 10, as shown in Figure 4-5. Ensure that the top of Surge Clamp is towards the top of the shelf. The top of the connector plugs onto pins 9 and 10.	

CHART 5-7
INSTALL ANALOG BAY 3 KIT

Step	Action	Comments
1.	Unpack kit and inspect contents for loose, damaged, or missing items.	
2.	Open Control cabinet doors, set power switches to OFF, set main breaker on rear door to OFF, and remove line cord from wall outlet.	
3.	Remove rear door fan assembly – unplug fan supply cord, detach cord strain relief at stud – remove door ground wire at door stud – remove door	
4.	Remove rear door – unplug AC distribution unit supply cord and unfasten cord strain relief – remove door ground wire at door stud – loosen four screws securing rear door retaining bar – slide retaining bar up, releasing the rear door – replace lower right hand retaining bar securing screw with #10 x 7/8" screw from kit (to secure main power cable strain relief).	
5.	Unpack the Interconnect and Power Fail Transfer (PFT) cards; inspect for loose, damaged, or missing items.	The optional PFT card should be installed concurrently.
6.	Install the Interconnect card on the upper left side of the cabinet (from rear) with six sets (screws, lockwashers, and flat washers).	
7.	If a PFT card is to be installed also, remove the six securing screws from the front of the Control shelf and slide it forward.	
8.	Install the PFT card below the Interconnect card with six sets (8-32 x 3/8" screws, lockwashers, flat washers).	The PFT card is optional.
9.	Replace the Control shelf with its associated hardware.	Be sure that the antistatic wrist strap is securely in its original location.

CHART 5-7 (CONT'D)
INSTALL ANALOG BAY 3 KIT

Step	Action	Comments
10.	Connect the wiring harness, 2nd D.C., (pn 103148501) between the Interconnect card and the PFT card. **Interconnect Colour PFT** TB301-1 Brown TB-3 TB301-2 Blue TB-5 TB301-3 TB301-4 White TB-6 TB301-5 Red TB-7 TB301-6 Orange TB-4 TB301-7 Yellow TB-2	
11.	Install cutover monitor cable (pn 114905501) from P18 on Interconnect card to TB-7 on PFT card. Secure connector with a tie wrap.	
12.	Connect ground strap (pn 105671501) from TB301-3 to Control shelf frame with 6-32 x 5/16" screw, lockwasher and external tooth lockwasher.	
13.	Unpack shelf; refer to Figure 5-2.	
14.	Check backplane and shelf for cracks, bent pins, loose or missing items, or other damage. Connect brown backplane wire near TB1 to shelf frame with 6-32 x 3/8" screw, external tooth lockwasher, lockwasher, nut.	
15.	Place shelf onto shelf guides and secure from front with eight 10-32 screws, lockwashers, and flat washers.	
16.	Connect ground wire found attached to upper right corner of Control shelf frame to lower right corner of Peripheral shelf (Bay 3), using 6-32 x 3/8" screw, external lock washer, lockwasher, and nut.	
17.	Route the DC power cable (pn 114904501) within the cabinet. The cable is routed up from the power supply, across the top of the cabinet, and down to the terminal blocks on the backplane and interconnect card.	

EQUIPMENT
SHELF

POLYETHYLENE
PACKING
PIECES

END
SUPPORT

BOX

KA0185R0E0

Figure 5-2 Equipment Analog Shelf Packaging

CHART 5-7 (CONT'D)
INSTALL ANALOG BAY 3 KIT

Step	Action	Comments
18.	Connect the DC power cable leads to the Bay 3 backplane, as shown in Figure 4-11.	
19.	Connect the DC power cable to the Interconnect card as follows: 　TB301-1 brown 　TB301-2 blue 　TB301-3 braided gnd cable to Control shelf 　　　　　frame 　TB301-4 nc 　TB301-5 nc 　TB301-6 orange 　TB301-7 yellow	
20.	Connect connectors from Maintenance Panel cable to P301 and P303 of Interconnect Card.	
21.	Route intershelf PCM Control cabinet cable into space between shelves; connect marked end to J17A on the Control backplane.	
22.	Install cables between Bay 3 and Interconnect card; 18 inch (pn 114909501) between P6 and P16, and 25 inch (pn 114910501) between P5 and P17. Secure each cable with a cable tie and a connector screw.	
23.	Install a surge clamp onto the Bay 3 backplane at slot 16, pins 9 to 32; ensure that surge clamp is installed right side up (see label on clamp). Refer to Figure 4-11.	
24.	Install cables between Bay 3 and distribution frame.	
25.	Unpack rear door power supply assembly (pn 102966503); inspect for physical damage, and correct type.	If damaged or wrong type, repack in original container and return with completed Damage Report.
26.	Place rear door power supply onto lower door support and lock into closed position (this will hold the rear door power supply while installing upper support).	

CHART 5-7 (CONT'D)
INSTALL ANALOG BAY 3 KIT

Step	Action	Comments
27.	Install upper support over power supply hinge pin and secure to cabinet with four screws and lockwashers.	
27.	Connect ground lead to rear door power supply using hardware from original door.	
29.	Plug AC distribution unit assembly supply cord into the power supply outlet. Attach cable strain relief to power supply door by removing power supply cover screw and replacing it with an 8-32 x 5/8" long screw which also secures the cable strain relief.	
30.	Connect the DC power cable connector to the power supply. Attach power cable strain relief by removing a power supply cover hold down screw and replacing it with an 8-32 x 5/8" screw to fasten cable strain relief to cover.	
31.	Install rear door fan assembly and two nuts on hinge bracket.	
32.	Attach door ground wire to door ground stud, using hardware removed from old door.	
33.	Plug fan power supply cord into connector on fan door and attach cord strain relief to stud on fan door; use previously removed hardware.	
34.	Put on the antistatic wrist strap.	Always wear the antistatic wrist strap when handling printed circuit cards.
35.	Unpack each printed circuit card and insert it into its assigned slot.	
36.	Connect PCM cable previously routed between the shelves to connector J2 on the front of the Digital Interface Card at Bay 3, Slot 18.	
37.	Power up PABX and reprogram using Customer Data Entry.	

CHART 5-8
INSTALL BAY 3 KIT INTO AN SX-200® UNIVERSAL CABINET

Step	Action	Comments
1.	Unpack kit contents and inspect for loose, damaged, or missing items.	
2.	Open Control cabinet doors, set BPS switches to OFF, set main breaker on rear door to OFF, and remove line cord from wall outlet.	
3.	Install Interconnect card with six screws on the upper left side of the cabinet (viewed from rear).	Top right mounting hole goes to sixth hole from top of center side rail
4.	Install shelf rails 1/2 inch above Control shelf, and secure to cabinet vertical frame using 10-32 x 1/2 screws.	Screws into third hole above Control shelf, with horizontal support below, pointing inward
5.	Unpack shelf; refer to Figure 5-2.	
6.	Check backplane and shelf for cracks, bent pins, loose or missing items, or other damage.	
7.	Connect ground wires from backplane to card file side panel.	Refer to Figure 5-3, 5-4 and 5-5 for installation details
8.	Place shelf onto shelf rails and secure to front frame with eight 10-32 screws.	
9.	Install blank panel above shelf and route leads from switch and LED to rear of cabinet.	
10.	At rear of cabinet, disconnect AC wiring from door, fan assembly, and remove ground strap from frame stud; retain hardware. Remove door.	
11.	Connect braided wire from upper side panel to Interconnect card (TB301-3). Connect green wire from lower side panel to frame, using an external tooth washer between terminal and frame.	
12.	Route the DC power cable (pn 114904501) within the cabinet. The cable is routed up from the power supply, across the top of the cabinet, and down to the terminal blocks on the backplane and Interconnect card.	

CHART 5-8 (CONT'D)
INSTALL BAY 3 KIT INTO AN SX-200® UNIVERSAL CABINET

Step	Action	Comments
13.	Connect the DC power cable leads to the Bay 3 backplane, as shown in Figure 4-7.	
14.	Connect the DC power cable to the Interconnect card as follows: TB301-1 brown TB301-2 blue TB301-3 braided gnd cable to Control shelf frame TB301-4 nc TB301-5 nc TB301-6 orange TB301-7 yellow	
15.	Connect leads from switch and LED on blank panel mating connector on main DC harness.	
16.	Route intershelf PCM Control cabinet cable into space between shelves; connect marked end to J17A on the Control backplane.	
17.	Install cables between Bay 3 and Interconnect card; 18 inch (pn 114909501) between P6 and P16, and 25 inch (pn 114910501) between P5 and P17. Secure each cable with a cable tie and a connector screw.	
18.	Install a surge clamp onto the Bay 3 backplane at slot 16, pins 9 to 32; ensure that surge clamp is installed right side up (see label on clamp). Refer to Figure 4-11.	
19.	Install cables between Bay 3 and distribution frame.	
20.	Remove four screws that hold power panel to cabinet; install lower door support onto cabinet and secure with 10-32 screws, as shown in Figure 5-3.	

CHART 5-8 (CONT'D)
INSTALL BAY 3 KIT INTO AN SX-200® UNIVERSAL CABINET

Step	Action	Comments
21.	Replace power panel onto cabinet.	
22.	Unpack rear door power supply assembly (pn 102966503); inspect for physical damage, and correct type.	If damaged or wrong type, repack in original container and return with completed Damage Report.
23.	Place rear door power supply onto lower door support, using shim washer, and lock door into closed position (this will hold the rear door power supply while installing upper support).	
24.	Install upper support and shim washer over power supply hinge pin and secure to cabinet with 10-32 screws.	
25.	Open rear door and install blanking plate to cover openings in left side frame, and fasten with screw, lockwasher, and nut. Remove hinges from right side of frame.	
26.	Connect ground lead from rear door power supply to frame ground stud using existing hardware.	
27.	Plug AC distribution unit assembly supply cord into the power supply outlet. Attach cable strain relief to power supply door by removing power supply cover screw and replacing it with an 8-32 x 5/8" long screw which also secures the cable strain relief. Secure AC cable to frame of cabinet near center of power supply.	
28.	Connect the DC power cable connector to the power supply. Attach power cable strain relief by removing a power supply cover hold down screw and replacing it with an 8-32 x 5/8" screw to fasten cable strain relief to cover.	
29.	Install rear door fan assembly and tighten two nuts on hinge bracket.	
30.	Attach door ground wire from door ground stud to frame using 10-32 screw and external tooth lockwasher.	
31.	Plug fan power supply cord into connector on fan door and attach cord strain relief to stud on fan door.	
32.	Put on the antistatic wrist strap.	Always wear the antistatic wrist strap when handling printed circuit cards.

CHART 5-8 (CONT'D)
INSTALL BAY 3 KIT INTO AN SX-200® UNIVERSAL CABINET

Step	Action	Comments
33.	Unpack each printed circuit card and insert it into its assigned slot.	
34.	Connect PCM cable previously routed between the shelves to connector J2 on the front of the Digital Interface Card at Bay 3, slot 18.	
35.	Power up DPABX and reprogram using Customer Data Entry.	
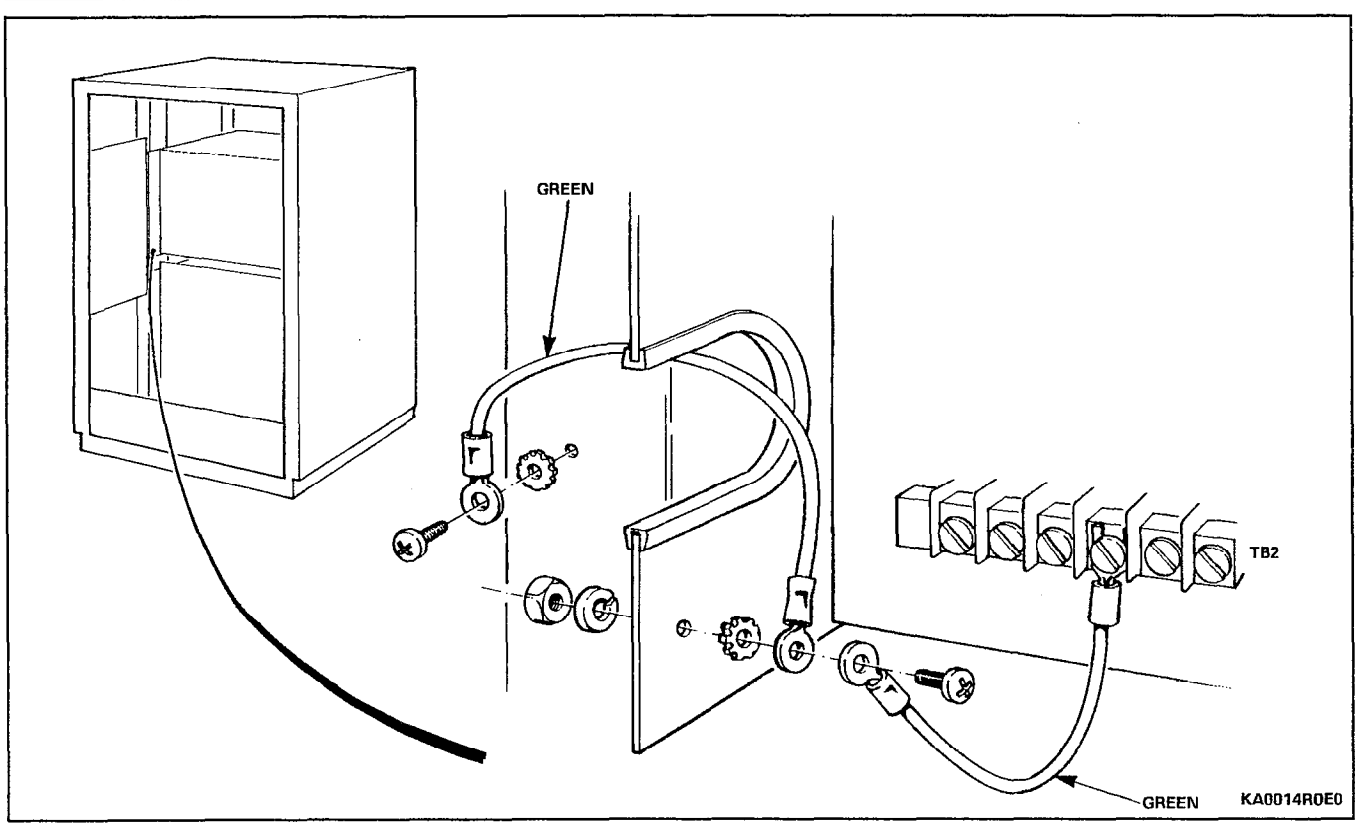
Figure 5-3 Grounding – Bay 3 to Frame
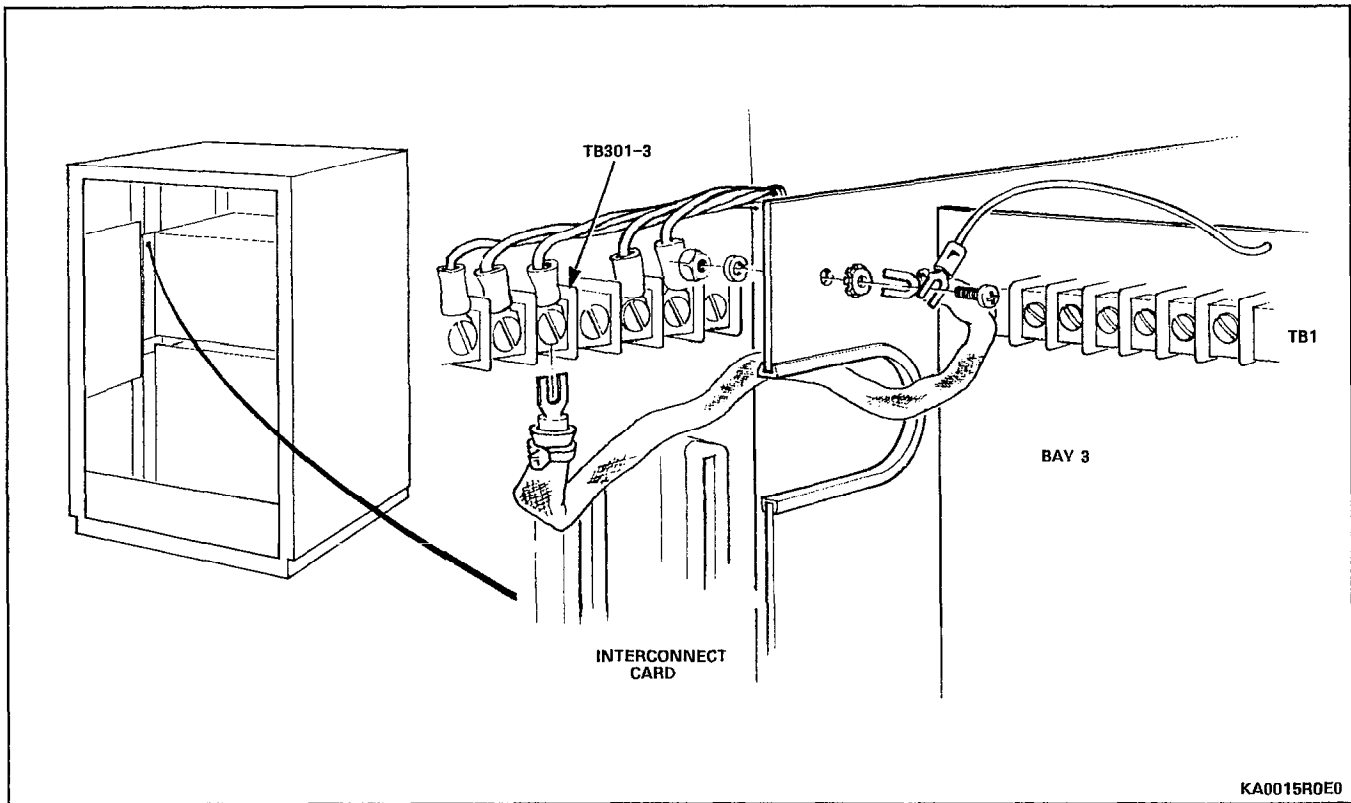
Figure 5-4 Grounding – Bay 3 to Interconnect Card

UPPER SUPPORT

SHIM WASHERS

TO FANS

REAR DOOR
POWER SUPPLY

REAR DOOR
FAN ASSEMBLY
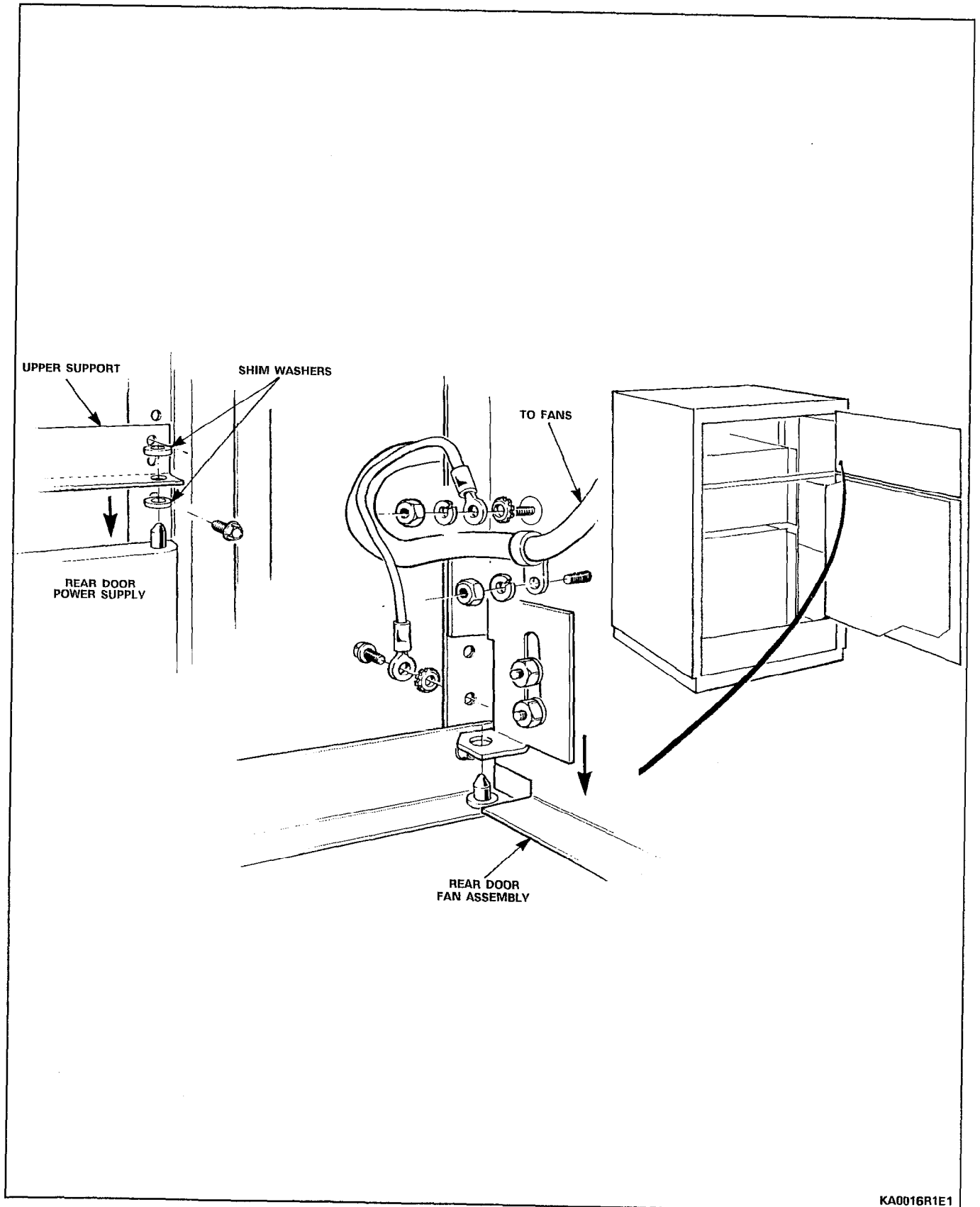
KA0016R1E1

Figure 5-5 Grounding – Fan Door to Frame

CHART 5-9
INSTALL DIGITAL PERIPHERAL SHELF

Step	Action	Comments
	INSTALL BAY 3 KIT	
1	Unpack and inspect contents of kit.	
2	Power down system.	
3	Open front door and slide digital peripheral shelf onto top of Control shelf, and fasten to front rails with eight 10-32 x 0.5 in. screws, as shown in Figure 5-6.	
4	Install filler plate above shelf, and fasten to front rails with two 10-32 x 0.5 in. screws, as shown in Figure 5-6.	
5	Open rear door, and connect ground wires from new shelf as shown in Figure 5-7. Use 10-32 x 0.5 in. screw and external tooth lock washer to connect to side frame. Refer to Figure 5-8 for details of ground connections.	
6	At front of cabinet, attach antistatic wrist strap to your wrist, and install Bay Power Supply.	
7	At rear of cabinet, connect PCM cable between J17A of Control shelf backplane and J17A of Bay 3 backplane; connect ground leads to associated fasten connectors.	
8	At rear of cabinet, cut off cable ties securing power cable to bottom of cabinet.	
9	Route power cable from AC distribution along inside side of cardfile side plates, tying power cable and braided ground cable to tie down clip, and connect plug to Bay Power Supply.	
10	Connect signal cables to Bay 3 backplane, route out of cabinet with existing signal cables, and cross connect at MDF.	
11	If installing Bay 4 kit concurrently, proceed to INSTALL BAY 4 KIT instructions.	
12	At front of cabinet, attach antistatic wrist strap to your wrist, and install Bay Control Card and new peripheral cards.	
13	Close doors, power up system, and update CDE to include new equipment.	

CHART 5-9 (CONT'D)
INSTALL DIGITAL PERIPHERAL SHELF

Step	Action	Comments
	INSTALL BAY 4 KIT	
1	Unpack and inspect Bay 4 kit.	
2	Power down system, and open rear door.	
3	Attach backplane to cardfile with six screws, flat washers, and lock washers (as Bay 3); place double tab connector at lower left corner instead of flat washer.	
4	Connect two ground wires to Bay 3 and to Bay 2, as shown in Figure 5-7, using hex nuts and split lock washers. Refer to Figure 5-8 for details of ground connections.	
5	Open front door and install Bay Power Supply in its slot.	
6	At rear of cabinet, cut off cable ties securing power cable to bottom of cabinet.	
7	Route Bay 4 AC power cord up inside side of cardfile, tie-wrap in place on tiedown clip, and plug into Bay Power Supply.	
8	At rear of cabinet, connect PCM cable between J17B of Control shelf backplane and J17A of Bay 4 backplane; connect ground leads to associated fasten connectors.	
9	Connect signal cables to connectors, and route out of cabinet with existing signal cables, and cross connect at MDF.	
10	At front of cabinet, while wearing the antistatic wrist strap, unpack and install new circuit cards.	
11	Close doors, power up system, and update CDE to include new equipment.	

PANEL

SCREWS (2)

SCREWS (8)

CARD FILE
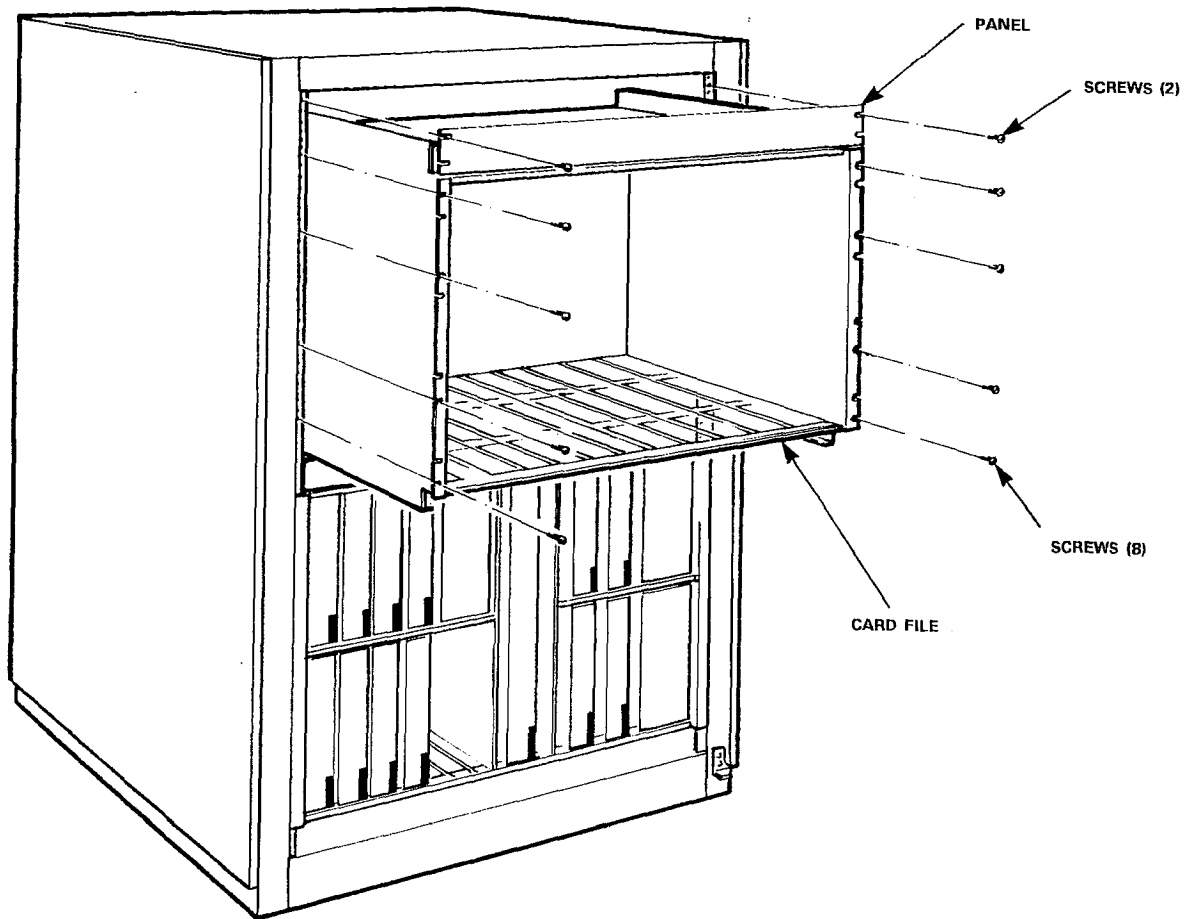
KA0239R0E0

Figure 5-6 Install Digital Peripheral Bay and Panel

E1
EDG

CARD FILE
TO CABINET
FRAME

E1
EDG

AC LINE
CORD

BAY 3

BAY 4

J17A

J17A

PCM CABLES
WITH GROUNDS
TO FASTON TABS

E6

E5

E4
DG

E5

E3
EDG

J17A

J17B

AC CORDS

GROUND WIRES

BRAIDED GROUNDING SHIELD
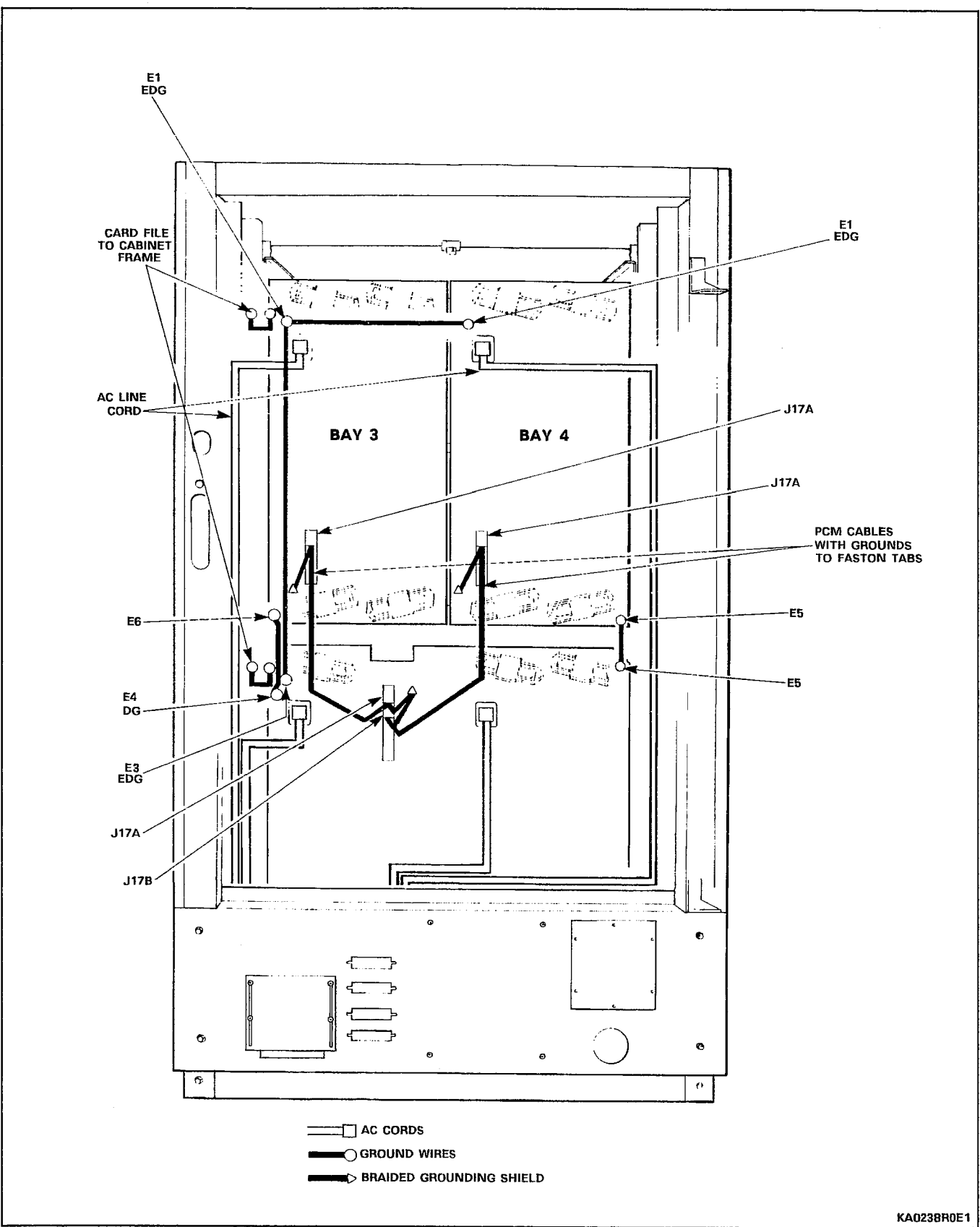
KA0238R0E1

Figure 5-7 Digital Peripheral Bay Connections
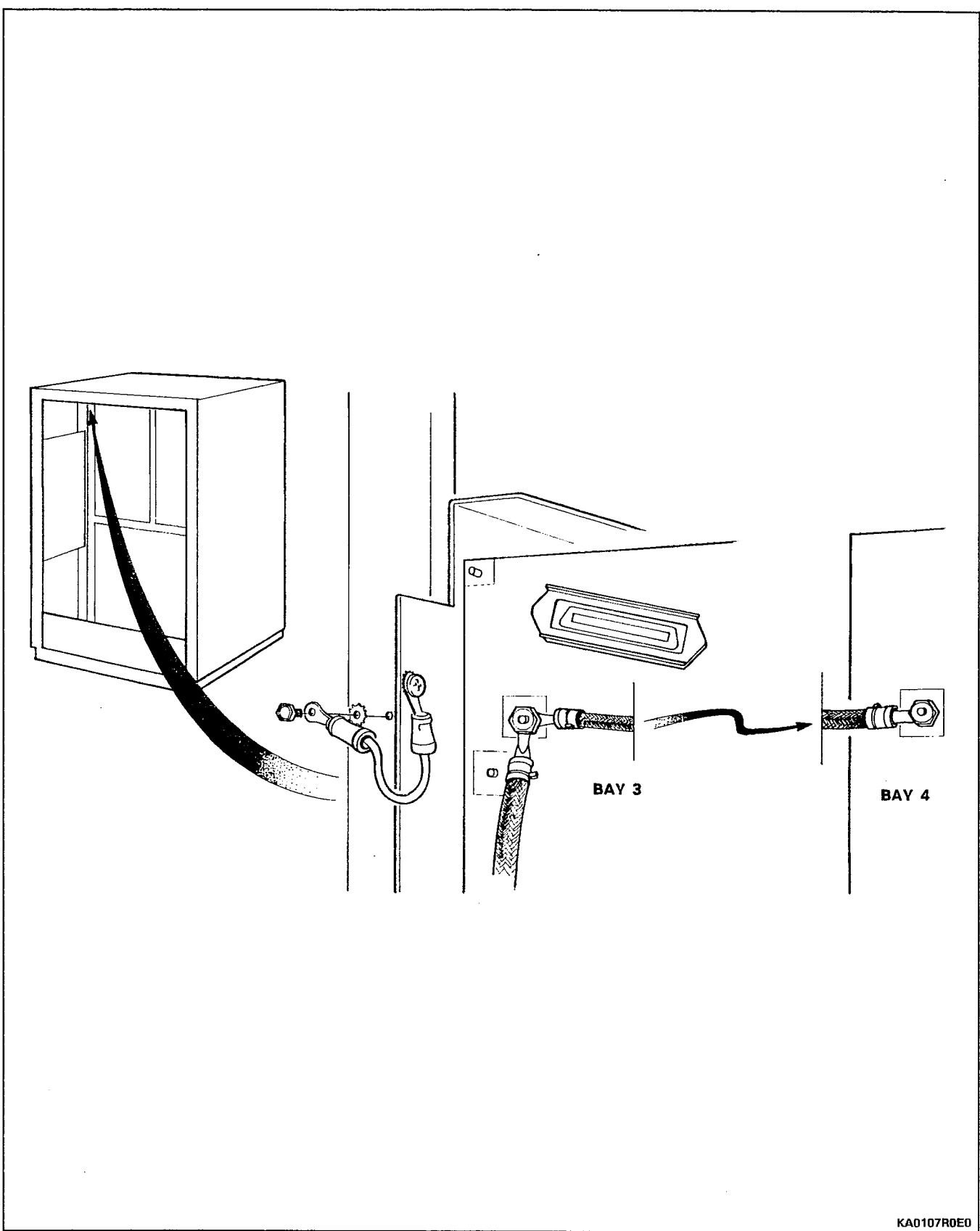
KA0107R0E0

Figure 5-8 Digital Peripheral Bay Ground Connection Details

CHART 5-10
POWER FAIL TRANSFER KIT INSTALLATION INSTRUCTIONS - UNIVERSAL CABINET

Step	Action	Comments
1.	Unlock and open rear door of cabinet.	
2.	Attach antistatic wrist strap to your wrist and carefully unpack PFT card(s).	Figure 5-9 shows a PFT card.
3.	Power down system.	
4.	Place PFT card into position as shown in Figure 5-10 and identify its two mounting holes on frame. Remove card.	Following this sequence minimizes the chance of damaging a PFT card when initially installing self-tapping screws.
5.	Insert two self-tapping screws into identified holes, creating threads. Remove screws.	
6.	Install a loop start to ground start module (as required) onto each card and attach it to the standoffs with the screws supplied.	
7.	Install PFT card and secure with two self-tapping screws.	
8.	Install remaining PFT cards using the above sequence.	
9.	Connect the wiring harness from J13 of the Control Shelf backplane to J3 of the upper PFT card. Refer to Figure 5-11.	
10.	If more than one card is being installed, connect the wiring harness from J2 of the upper card to J3 of the middle card (repeat from the middle card to the lower card, if present).	
11.	Connect the ALARM pair from TB1-1 and TB1-3 of the upper card to TB1-2 and TB1-4 respectively, of the middle card (repeat from the middle card to the lower card, if present).	
12.	Connect an optional remote alarm (customer-supplied) to TB1-1 and TB1-3 of the last equipped PFT card.	The PFT card supplies a closed contact signal when in PFT mode.

Note: The PFT relays are controlled from Bays 2. All lines and trunks through the PFT cards should originate from Bays 1 and 2, since they are controlled independent of the rest of the PABX when power fails or a fault is detected.

POWER FAIL TRANSFER CARD

OPTIONAL LS/GS CONVERSION MODULE FOR PFT CARD
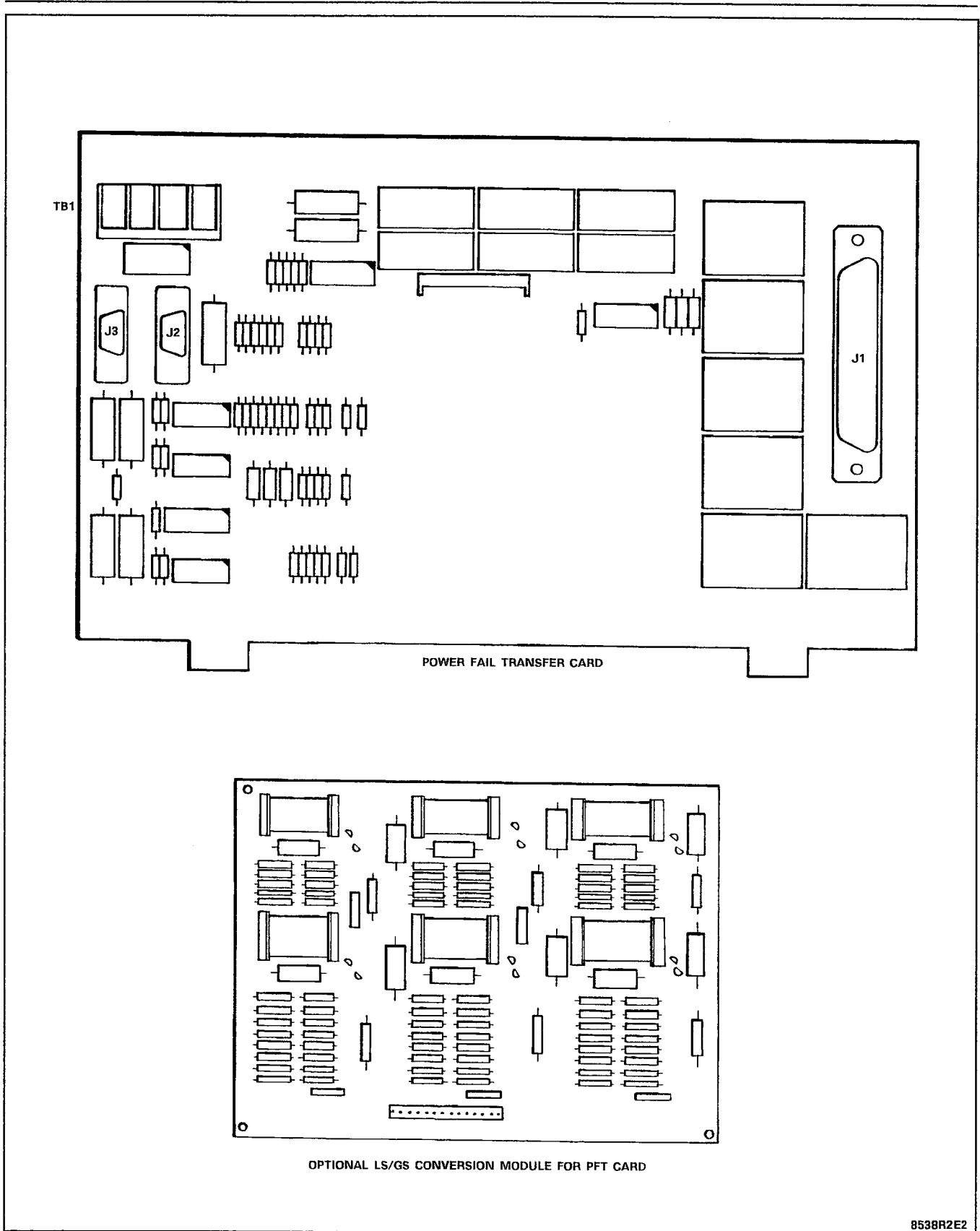
8538R2E2

Figure 5-9 Power Fail Transfer Card

J3

J2

TB1

LOOP START
TO
GROUND START
CONVERTER

CARD
FILE

J1

RIGHT HAND SIDE
OF CABINET
(FROM REAR)

8539R0E1
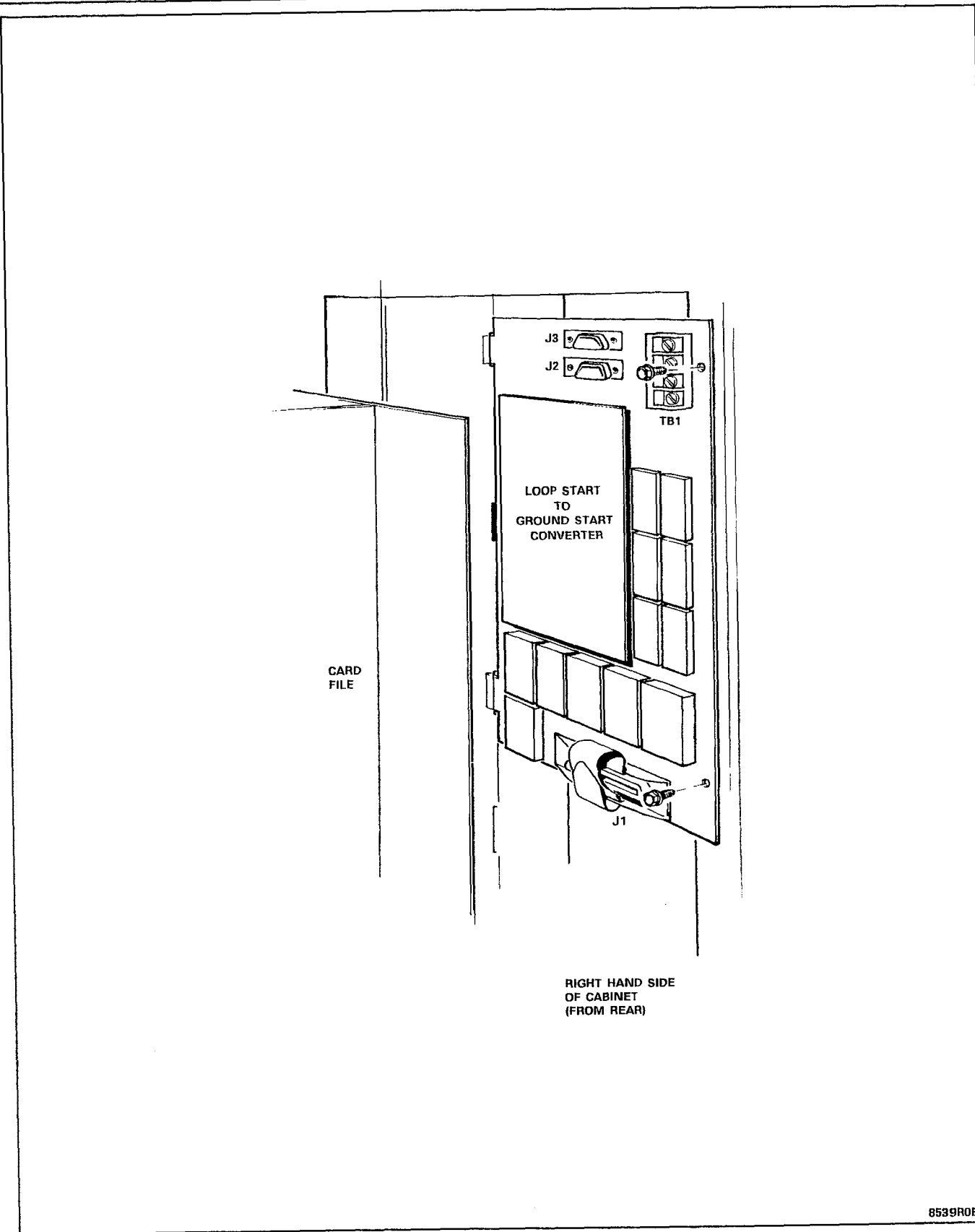
Figure 5-10 Locating PFT Card in SX-200® Cabinet
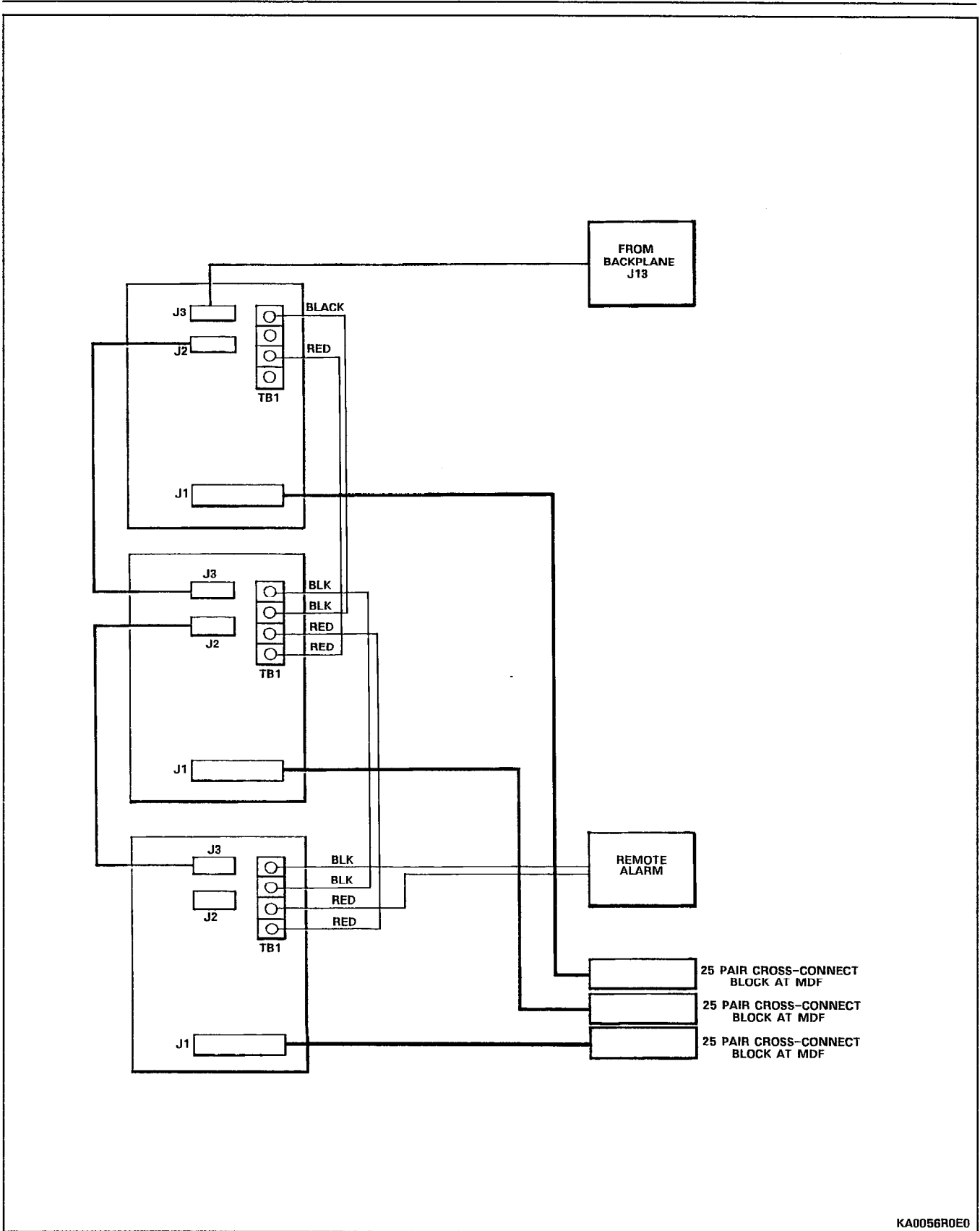
Figure 5-11 PFT Card Connections

CHART 5-11
INSTALL BAY 5

Step	Action	Comments
1.	Unpack shelf. Check backplane for cracks, bent pins, loose or missing items, and other damage. Check hardware against packing slip. Check fuses (if supplied)	
2.	Set POWER and BATTERY switches off and remove line cords from AC outlets.	
3.	Unlock and open front door. Attach ground wire to side of shelf before installing shelf into cabinet	
4.	Place shelf onto shelf guides	
5.	Fasten shelf to equipment cabinet using eight screws	
6.	At rear of cabinet, on Bay 5, remove insulation from terminals, and connect as shown in Figure 4-11. Connect ground wires between card files.	
7.	Install Surge Clamp on Bay 5 as shown in Figure 4-11. Ensure that the TOP of the Surge Clamp is towards the top of the shelf; the first pins plug onto pins 9 and 10.	
8.	Connect interconnect cable 103 to Bay 4 P103 and Bay 5 P103.	
9.	Connect interconnect cable 104 to Bay 4 P104 and Bay 5 P104.	
10.	Install printed circuit cards into shelf according to line and trunk assignments. Route 25-pair cables through bottom of cabinet to distribution frame, and secure to associated connections with cable ties. Cross connect distribution frame according to Tables in Part 6.	
11.	Connect PCM cable PN9108-027-000-NA between DICs in Bay 4, Slot 18, J1 and Bay 5, Slot 18, J3.	
12.	Power up system according to "INITIAL SYSTEM POWER-ON" chart.	

CHART 5-12
PERIPHERAL CABINET RESERVE POWER SUPPLY INSTALLATION

Step	Action	Comments
	WARNING: Reserve supply is for peripheral cabinet only. DO NOT ATTEMPT TO CONNECT IT TO CONTROL CABINET. The Control Cabinet requires a UPS.	CAUTION: Check that the BATTERY switch on the reserve battery pack is set to OFF. Check that the three switches on the battery charging unit are set to OFF.
1.	Unpack reserve power supply equipment.	
2.	Inspect items for damage.	
3.	Check items received against packing slip; report missing items.	Complete a damage report form, repack, and return damaged items.
4.	Unlock and open front and rear doors of cabinet.	
5.	Set all power switches to OFF position.	
6.	Remove power cords from power outlets.	
7.	Locate the mounting holes for the charging unit on the bottom of the vertical cabinet support bar (refer to Figure 5-12).	
8.	Place the charging unit into position (refer to Figure 5-12).	
9.	Secure the charging unit to the cabinet support bar using three 10-32 screws.	
10.	Slide the reserve battery pack into the bottom of the equipment cabinet from the front.	CAUTION: The reserve battery pack weight is 57 kg (125 lb). Care must be taken when lifting the battery pack.
11.	Secure the reserve battery pack to the cabinet with four pan-head screws.	
12.	Route the Red, Black, and Green leads marked "TO BATTERY" from the charging unit to the battery pack.	
13.	Check that the BATTERY switch on the battery pack is set to OFF.	
14.	Connect the Red lead to the terminal on rear of reserve battery pack marked +RED.	
15.	Connect the Black lead to the terminal on rear of reserve battery pack marked -BLACK.	
16.	Connect the Green lead to the ground screw on the rear of the battery pack.	
17.	Route the Red, Black, and Green leads marked "TO POWER SUPPLY" from the charging unit to the power supply.	

CHART 5-12 (CONT'D)
PERIPHERAL CABINET RESERVE POWER SUPPLY INSTALLATION

Step	Action	Comments
18.	Connect the Red, Black and Green leads as shown in Figure 5-13.	
19.	Route the charging unit power lead to the adapter, and plug the adapter into the receptacle on the rear door power supply.	
20.	Plug system power cord into its receptacle.	AC Power LED is on
21.	On Battery Pack, set BATTERY switch to ON.	
22.	On Charging Unit, set AC switch to ON, set DC switch to ON and set BATTERY switch to ON.	BATTERY CHARGING LED lights
23.	On Power Supply set CONVERTER INPUT switch to ON.	CONVERTER INPUT LED LIGHTS RESERVE BATTERY CONNECTED LED LIGHTS
24.	On Maintenance Panel set SYSTEM POWER switch to ON.	SYSTEM POWER LED lights Power Supply EQUIPMENT SHELF POWER LED lights.
25.	Close and lock all cabinet doors.	
26.	Place cabinet in final position.	

MOUNTING
HOLES
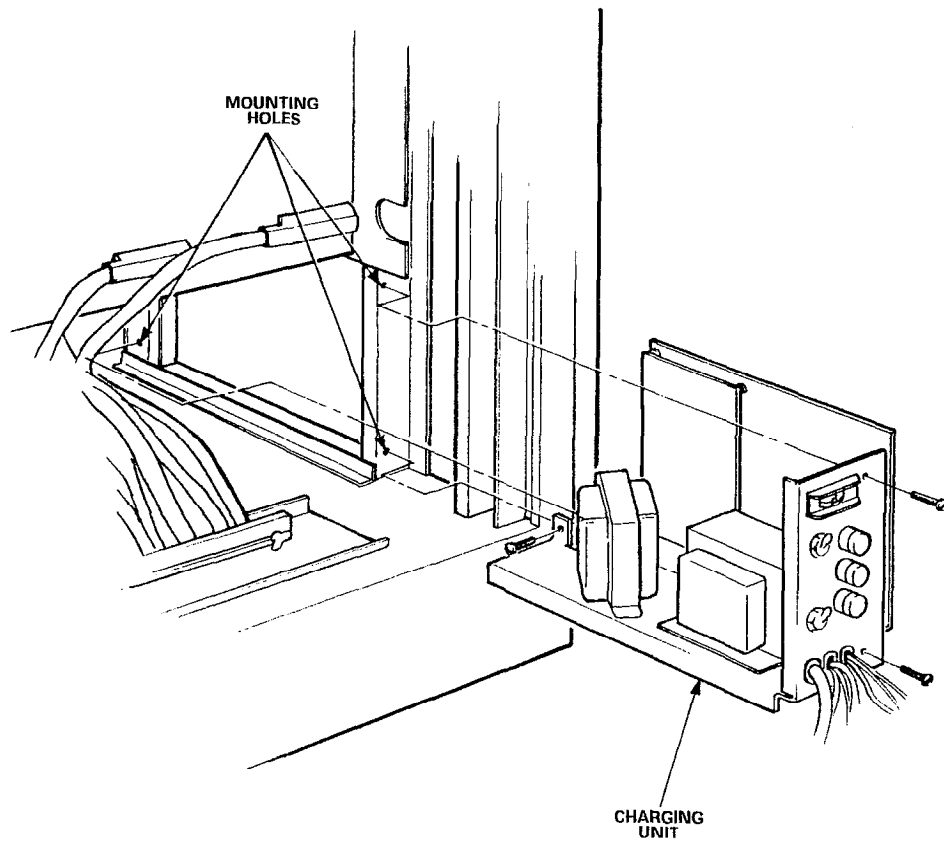
CHARGING
UNIT

0606R1E1

Figure 5-12 Charging Unit

BLACK
LEAD
RED
LEAD
TB2

CHARGING
UNIT

RESERVE
BATTERY PACK

RED
LEAD

BLACK
LEAD

GREEN
LEAD

POWER
CABLE

GREEN
LEAD

CABLE
TIE

POWER
CORD
ADAPTER

GROUND
STUD
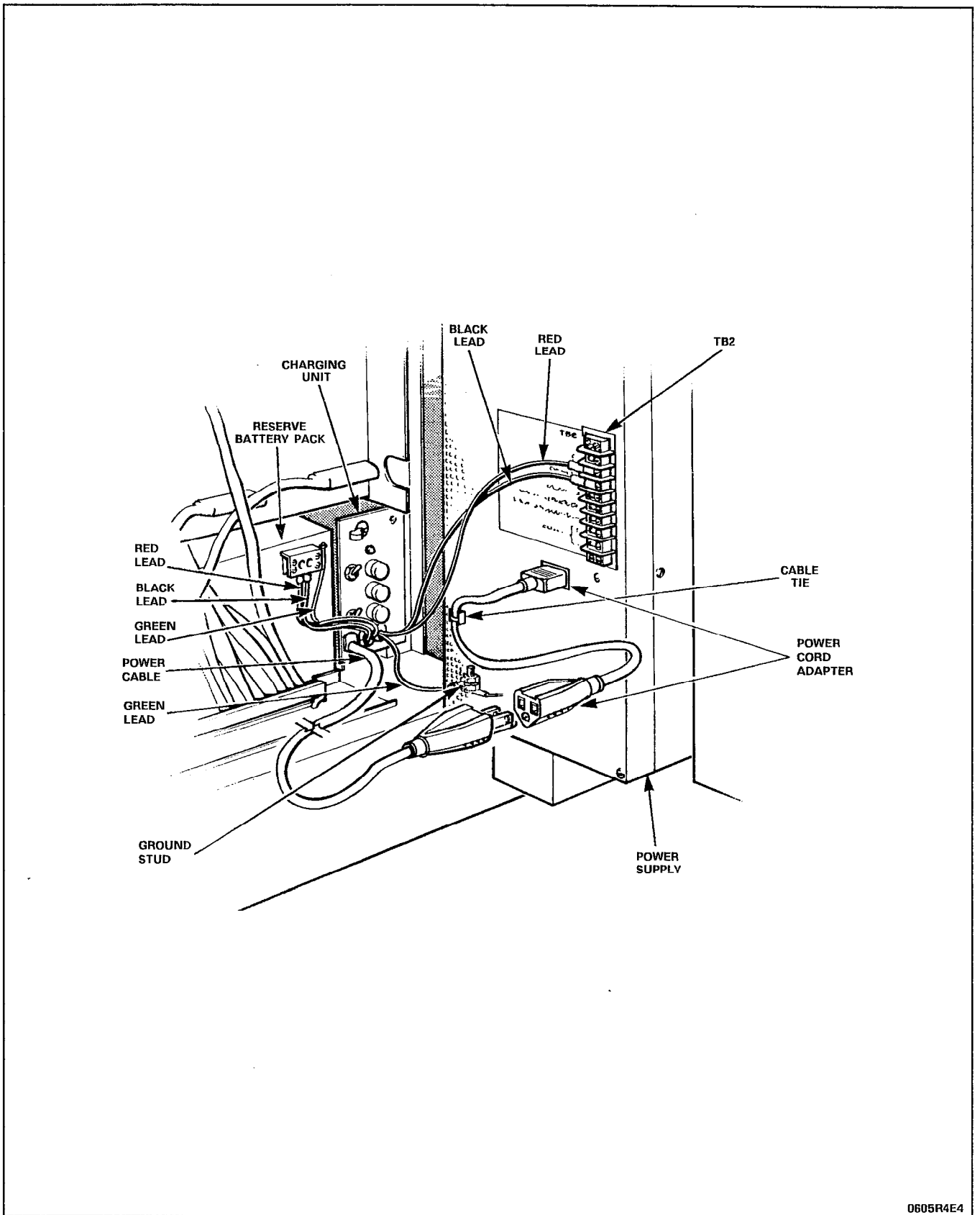
POWER
SUPPLY

0605R4E4

Figure 5-13 Reserve Power Supply

CHART 5-13
INSTALL UNINTERRUPTIBLE POWER SUPPLY (UPS)

Step	Action	Comments
1.	Unpack, and inspect the UPS.	
2.	Position the UPS near the PABX and its power receptacle.	
3.	Install batteries and make connections, except to plug PABX line cord into UPS, according to manufacturer's instructions.	

CHART 5-14
CONNECT CABLES TO SYSTEM AND CROSS-CONNECT FIELD

Step	Action	Comments
1.	Install required connection blocks at cross-connect field, and connect 25-pair cables to them.	Cables are for stations, trunks, Power Fail Transfer relays, and other equipment.
2.	Refer to Part 6 of this Section for cross-connection tables.	
3.	Mark each cable connector or plug with its corresponding cabinet plug number.	
4.	Run the 25-pair cables between cabinet and cross-connect field.	
5.	Position all cables within equipment cabinet. Route cables through cable ducts as required.	
6.	Attach each cable connector to its cabinet plug, tighten connector retaining screw, and/or VELCRO strap.	
7.	Dress cables inside cabinet, attach strain reliefs, and pull excess cable through cable duct.	

CHART 5-15
CROSS-CONNECT CABLES AT CROSS-CONNECT FIELD

Step	Action	Comments
1.	Cross-connect station lines, CO trunks, other trunks, and equipment to cross-connection blocks for cables from within PABX according to tables in Part 6 of this Section.	Refer to the Tip & Ring Assignments to identify which equipment connects to each pin on the connecting block.
2.	Record cross-connections on the appropriate Tip & Ring Connector Pin Assignment form.	Use the Tip & Ring Assignment forms to keep an on-site record of assignments for all peripheral equipment, connections, and cards.

CHART 5-16
INSTALL MAINTENANCE TERMINAL INTO SX-200® CABINET

Step	Action	Comments
1.	Unpack and install the maintenance terminal (VT-100 or equivalent) in its assigned position.	Set terminal BAUD rate to 9600
2.	Connect an RS-232 cable between the terminal and the local port on the maintenance panel on the front of the system.	The maximum length of the RS-232 cable is 15 m (50 ft).
3.	If installing a remote terminal, connect a modem to the remote port on the maintenance panel, and connect another modem to the terminal.	NOTE: Connection can be made to only one port at a time, either local or remote, but not both.
4.	Connect the modems to each other; as required by their installation instructions, and local site wiring. Refer to Figure 5-14.	Modems may be interconnected through the TELCO switched network only when required; however, an auto-answer modem is required at the PABX.
5.	Plug in line cords and turn on both modems and the terminal.	

Notes:

1. An RS-232 type cable that is to be permanently connected to either the local or remote MAINTENANCE PORT connector of the maintenance panel must be a flat ribbon type to allow the front door to be closed with the cable connected. A permanently connected cable is to be routed between the maintenance panel and the Peripheral shelf to the back of the cabinet, and is to exit with the connectorized cables.

2. LOCAL (DTE) port is designed to interface with a terminal. It is wired as a DCE port designed to interface with a DTE device.

3. REMOTE (DCE) port is designed to interface with a modem. It is wired as a DTE port designed to interface with a DCE device.

4. The KONTACT™ workstation may be connected to the LOCAL port if pin 4 is connected to pin 8.

TABLE 5-1
MAINTENANCE PANEL RS-232 CONNECTOR PIN ASSIGNMENTS

RS-232 pin	RS-232 signal	DCE data communication equipment [local (dte) port]	DTE data terminal equipment [remote (dce) port]
2	DATA	RX	TX
3	DATA	TX	RX
4	READY TO SEND	I/P	O/P
5	CLEAR TO SEND	O/P	I/P
6	DATA SET READY	O/P	I/P
7	SIG. GROUND		
8	CARRIER DETECT	O/P (not used)	I/P (not used)
20	DATA TERMINAL READY	I/P (not used)	O/P

TABLE 5-2
MAINTENANCE PANEL RS-232 CONNECTOR VOLTAGE MEASUREMENTS

REMOTE (DCE) pin	LOCAL (DTE) pin
13	13
25	25
12	12
24	24
11	11
23	23
10	10
22	22
09	09
21	21
08	08
+10 (O/P) — 20	20
07 — GND	07 — GND
19	19
06 — +3.8 (O/P)	06
18	18
05 — +3.8 (I/P)	05 — +10 (O/P)
17	17
04 — +10 (O/P)	04 — +3.8 (I/P)
16	16
03 — 0	03 — -10 (TX)
15	15
02 — -10 (TX)	02 — 0
14	14
01	01

LOCAL

RS-232 CABLE

LOCAL

TERMINAL

REMOTE - DEDICATED, PUBLIC NETWORK

REMOTE

TX

RX

MODEM

MODEM

RX

TX

REMOTELY LOCATED
TERMINAL

REMOTE - DIAL-UP

REMOTE

TO DPABX VIA
CENTRAL OFFICE

MODEM

REMOTELY LOCATED
TERMINAL

ASSIGNED
TIP & RING PAIR
FOR AUTO-ANSWER
MODEM.

CROSS
CONNECT

NOTE: The Auto-Answer MODEM is
permanently connected to one
local station circuit (extension).
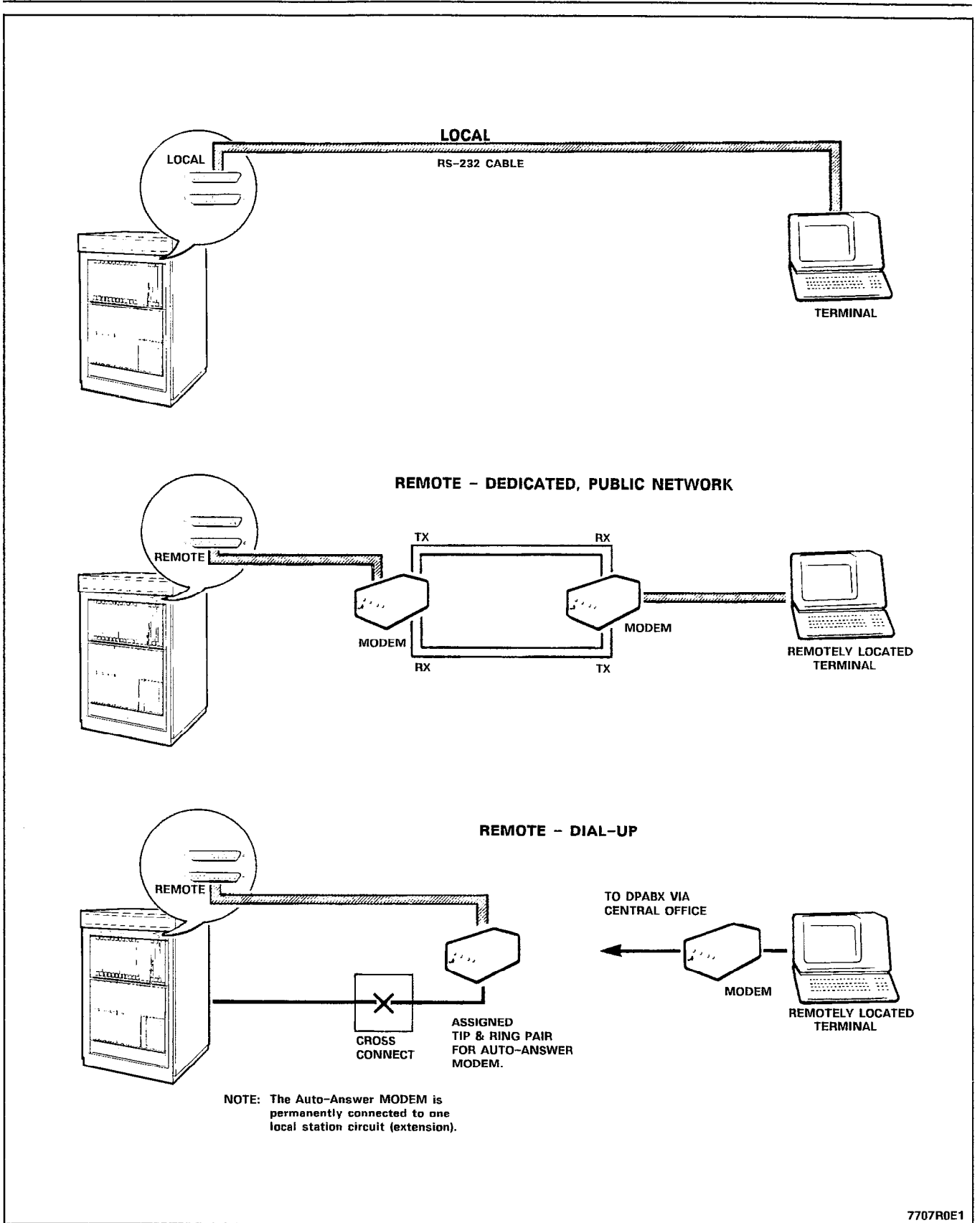
7707R0E1

Figure 5-14 Maintenance Terminal Connections - SX-200® Cabinet

CHART 5-17
INSTALL MAINTENANCE TERMINAL INTO SX-200® UNIVERSAL CABINET

Step	Action	Comments
1.	Unpack, inspect, and install the maintenance terminal (VT-100 or equivalent) in its assigned position.	Set terminal BAUD rate to 9600
2.	Connect an RS-232 cable between the terminal and the port on the maintenance panel. Set switch to DTE.	Maximum RS-232 cable length is 15 m (50 ft)
3.	If installing a remote terminal, connect a modem to the DCE port on the lower rear panel, and connect a similar modem to the terminal. See Figure 4-8.	A modem may be connected to the maintenance panel port if the switch is set to DCE
4.	Connect the modems to each other, following their instructions and local wiring requirements. Refer to Figure 5-15.	Modems may be interconnected through the public switched network, on a when required basis; however, an auto-answer modem is then required at the PABX
5.	Plug in line cords and turn on both modems and the terminal.	
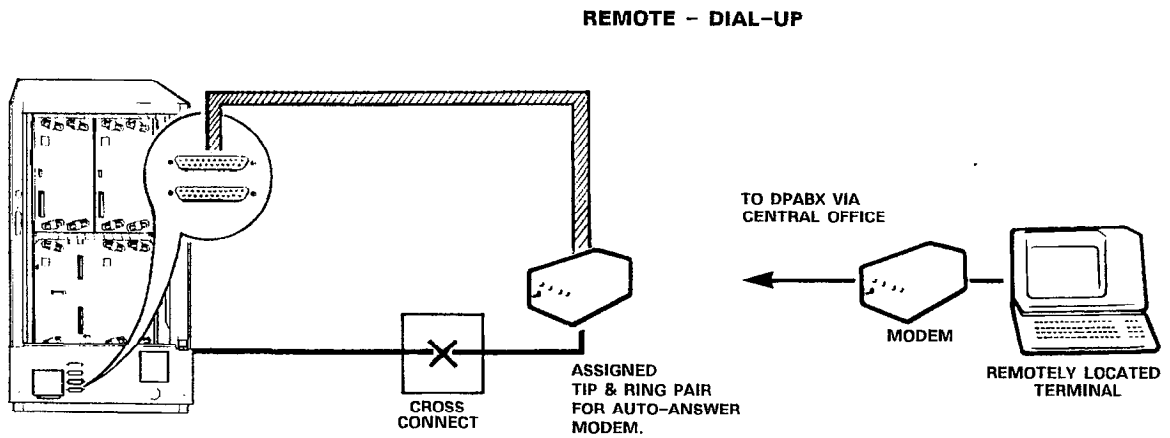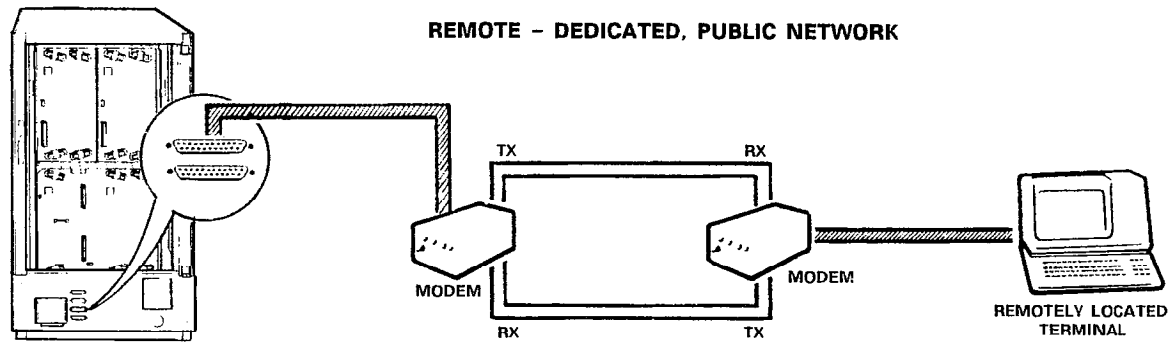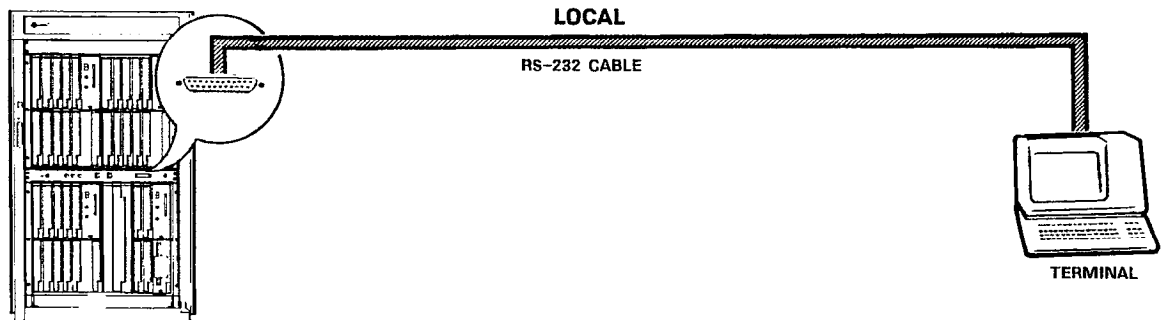
LOCAL

RS-232 CABLE

TERMINAL

REMOTE – DEDICATED, PUBLIC NETWORK

TX
RX
MODEM
MODEM
RX
TX

REMOTELY LOCATED
TERMINAL

REMOTE – DIAL-UP

TO DPABX VIA
CENTRAL OFFICE

MODEM

REMOTELY LOCATED
TERMINAL

ASSIGNED
TIP & RING PAIR
FOR AUTO-ANSWER
MODEM.

CROSS
CONNECT

NOTE: The Auto-Answer MODEM is
permanently connected to one
local station circuit (extension).

KA0197R0E0

Figure 5–15 Maintenance Terminal Connections – SX-200® Universal Cabinet

CHART 5-18
INSTALL ATTENDANT CONSOLE

Step	Action	Comments
1.	Unpack console and place it in position at Attendant workstation.	Refer to Figure 5-16.
2.	Connect headset (or handset) to its cord, and plug cord into jack at side of console.	The two jacks are in parallel; either may be used.
3.	Plug the console modular cord into the jack at the back of the console and into its assigned modular telephone jack.	Jack is marked LINE PORT.
4.	At the distribution frame, cross connect the cable from the modular jack to the cable from the console module of the Universal card. Refer to Figure 5-17.	Refer to Table 5-6 for wiring information for the console module and the console modular jack.

Notes:

1. The Console must be connected to its default position (Bay 2, Slot 3, Position 1) to access the default database during installation and initial Customer Data Entry. Bay 2, Slot 3 must contain a Universal Card with a Console module in position 1.

2. The maximum loop length from the cabinet to the console is 300 m (1000 ft) using 26-AWG wire.

DOCUMENTATION

LINE CORD

PRE-FORMED
FOAM
PACKAGING

HANDSET

CONSOLE

HANDSET
CORD

PRE-FORMED
FOAM
PACKAGING

SHIPPING
CARTON

7959R0E0
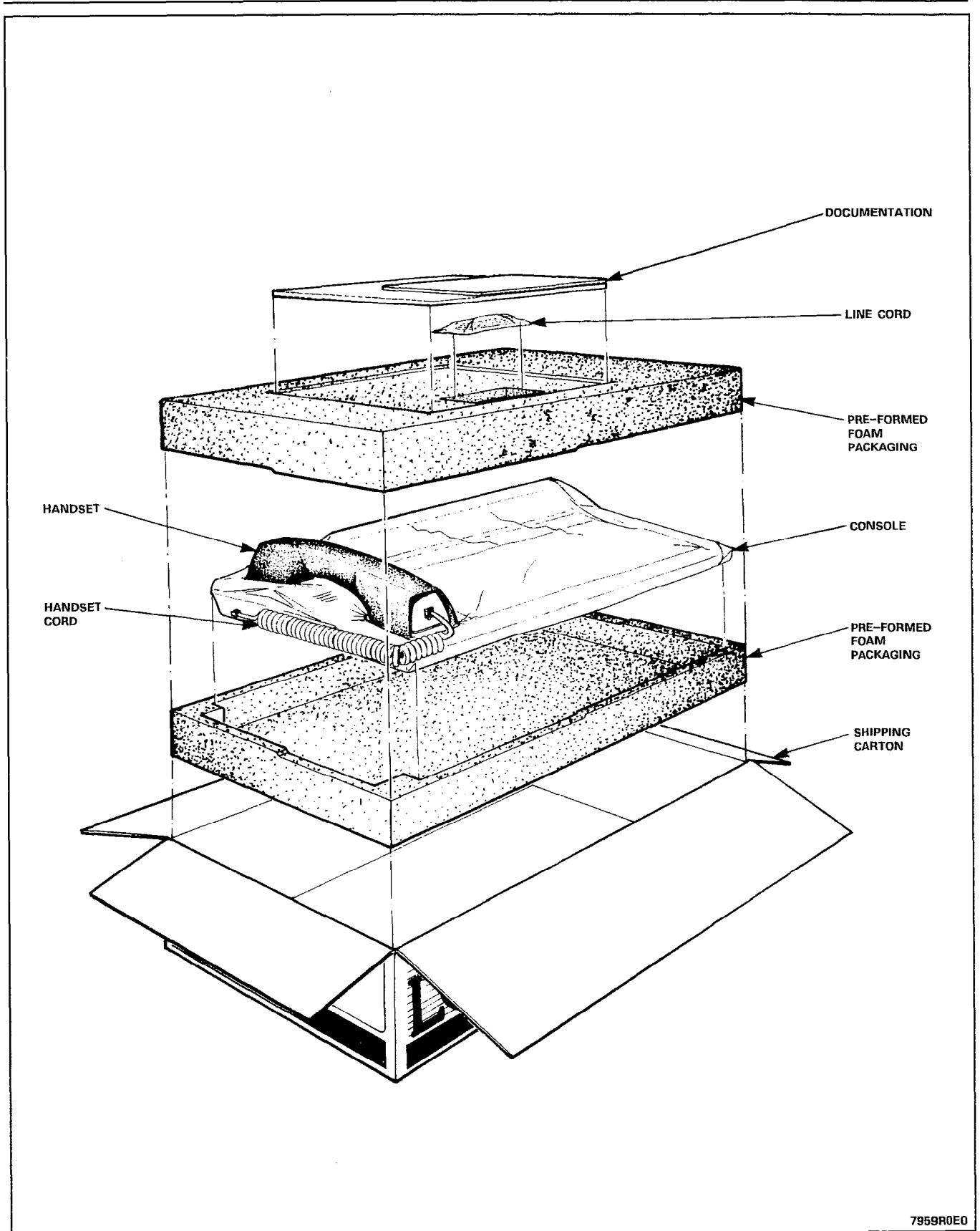
Figure 5-16 Unpacking Attendant Console

DPABX

CROSS
CONNECT
FIELD

MODULAR
JACK

LOCAL
CONSOLE

25 PAIR
CONNECTORIZED
CABLE

QUAD
STATION
WIRE

CONSOLE
MODULAR
CORD

CONSOLE MODULE
ON UNIVERSAL
CARD

NOTE: USE ONLY MITEL CABLE
         P/N 559900007 FOR THE
         CONSOLE MODULAR CORD.

7706R1E2
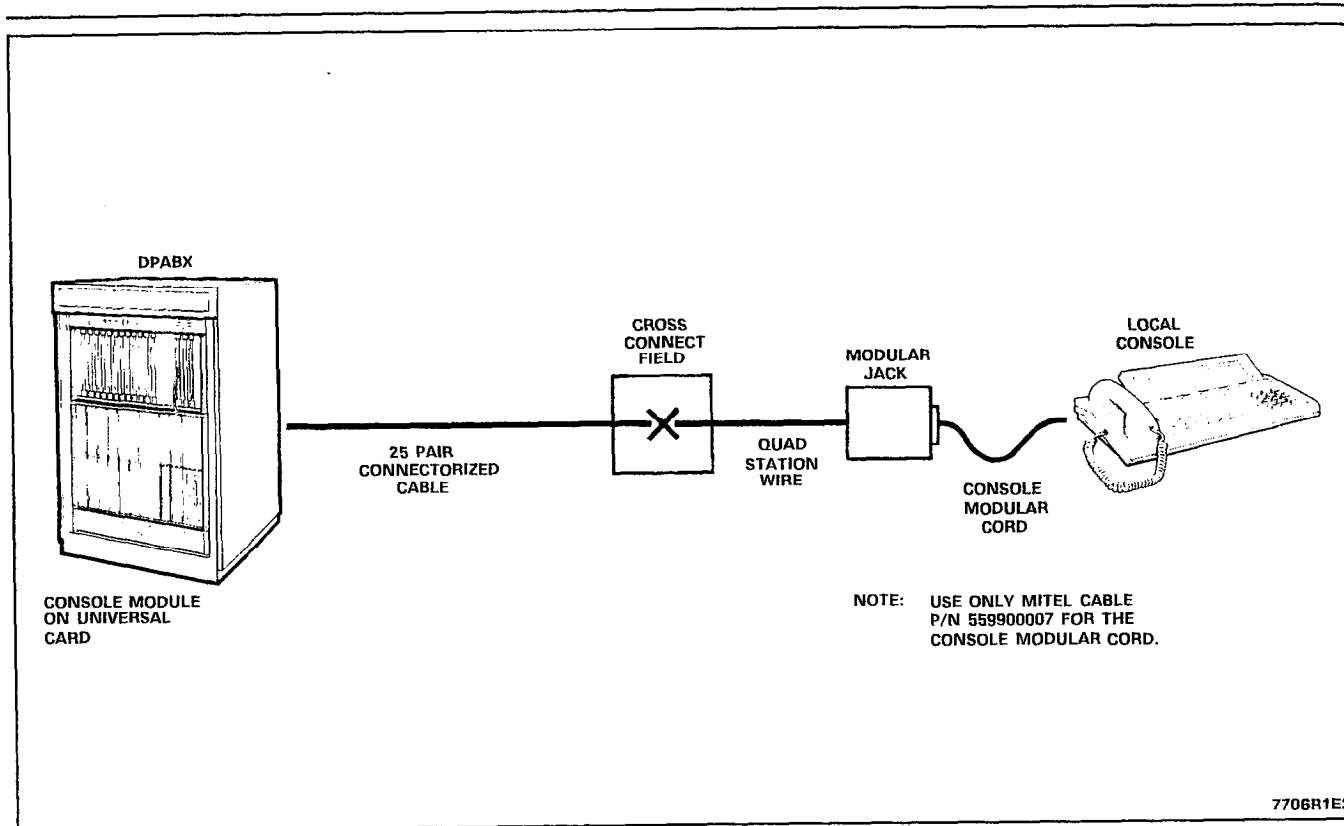
Figure 5-17   Console Installation

CHART 5-19
INSTALL UNIVERSAL CARD AND MODULES

Step	Action	Comments
1.	While wearing the antistatic wrist strap, unpack the universal card(s) and its modules.	Figure 5-18 shows a Universal C and Modules.
2.	Inspect for loose or missing components, and for damage.	Complete repair tag, repack, and return any damaged or incorrect items.
3.	Insert the modules into their assigned locations, press them until they snap into their standoffs and then insert the universal card into its assigned slot in the card shelf. (Refer to Figure 5-19).	Total power rating per universal card cannot exceed 10.
4.	Complete the Tip & Ring Assignment form for each module on the Universal Card. Ensure that the correct equipment cross-connections are performed at the MDF to connect this card with its associated equipment.	Refer to Figure 5-20 and Tables 5-3 and 5-4 for Tip & Ring assignments for each Universal Card module. Refer to Table 5-5 for module power ratings.

Note: If a Console Module is not being installed in Bay 2, Slot 3, Circuit 1, remove the maintenance panel cable from J27 of the backplane.

TABLE 5-3
BACKPLANE T&R ASSIGNMENTS FOR EACH MODULE POSITION

Module Position	Module TxRx		
	T1 R1	T2R2	T3R3
1	T1 R1	T2 R2	T3 R3
2	T4 R4	T5 R5	T6 R6
3	T7 R7	T8 R8	T9 R9
4	T10 R10	T11 R11	T12 R12

TABLE 5-4
TIP & RING ASSIGNMENTS

Module	T1 R1	T2 R2	T3 R3
Console Receiver/relay	Rx nc	Tx Relay 1 (subcircuit 5)	nc Relay 2 (subcircuit 6)
MOH/Pager	music input	PA output	relay contacts
E&M Trunk	T1 R1	TR1 RR1	E1 M1

Note: The relays on the Receiver card are program-controlled. The relay on the MOH/Pager is operated when the paging circuit is in use (primarily for controlling an external amplifier). The system will indicate an alarm and ignore the universal card if its power rating is greater than 10.

TABLE 5-5
MODULE POWER RATING

Module	Power Rating
Console	5
Receiver/Relay	2
MOH/Pager	1
E&M Trunk	3

TABLE 5-6
CONSOLE MODULAR JACK CONNECTIONS

Jack Pin	Pair Colour	Description
2	yellow	T1 – line out
5	black	R1 – line out
3	green	T2 – line in
4	red	R2 – line in
1	blue	not used
6	white	not used

Refer to Figure 5-20.

TABLE 5-7
E&M TRUNK MODULE SWITCH SETTINGS

Function	Switches 1 2 3 4 5 6 7 8
PABX to Line Gain	
3 dB	0 x x x x x x x
-13 dB	1 x x x x x x x
Line to PABX Gain	
-4 dB	x 0 x x x x x x
-11 dB	x 1 x x x x x x
Termination	
600 ohm	x x 1 0 x x x x
Complex	x x 0 1 x x x x
Transmission	
2 wire	x x x x 1 x x x
4 wire	x x x x 0 x x x
Signaling	
Type 1	x x x x x 1 x x
Type 5	x x x x x 0 x x

0= open, 1= closed, x= not applicable

MUSIC ON HOLD/PAGER MODULE

RECEIVER/RELAY MODULE

CONSOLE MODULE

E&M TRUNK ——SWITCH

LED's
- ○◀—— MODULE 1
- ○◀—— MODULE 2
- ○◀—— MODULE 3
- ○◀—— MODULE 4
- ○◀—— ALARM

MODULE 4   MODULE 3   MODULE 2   MODULE 1

UNIVERSAL CARD

KA0021R0E0
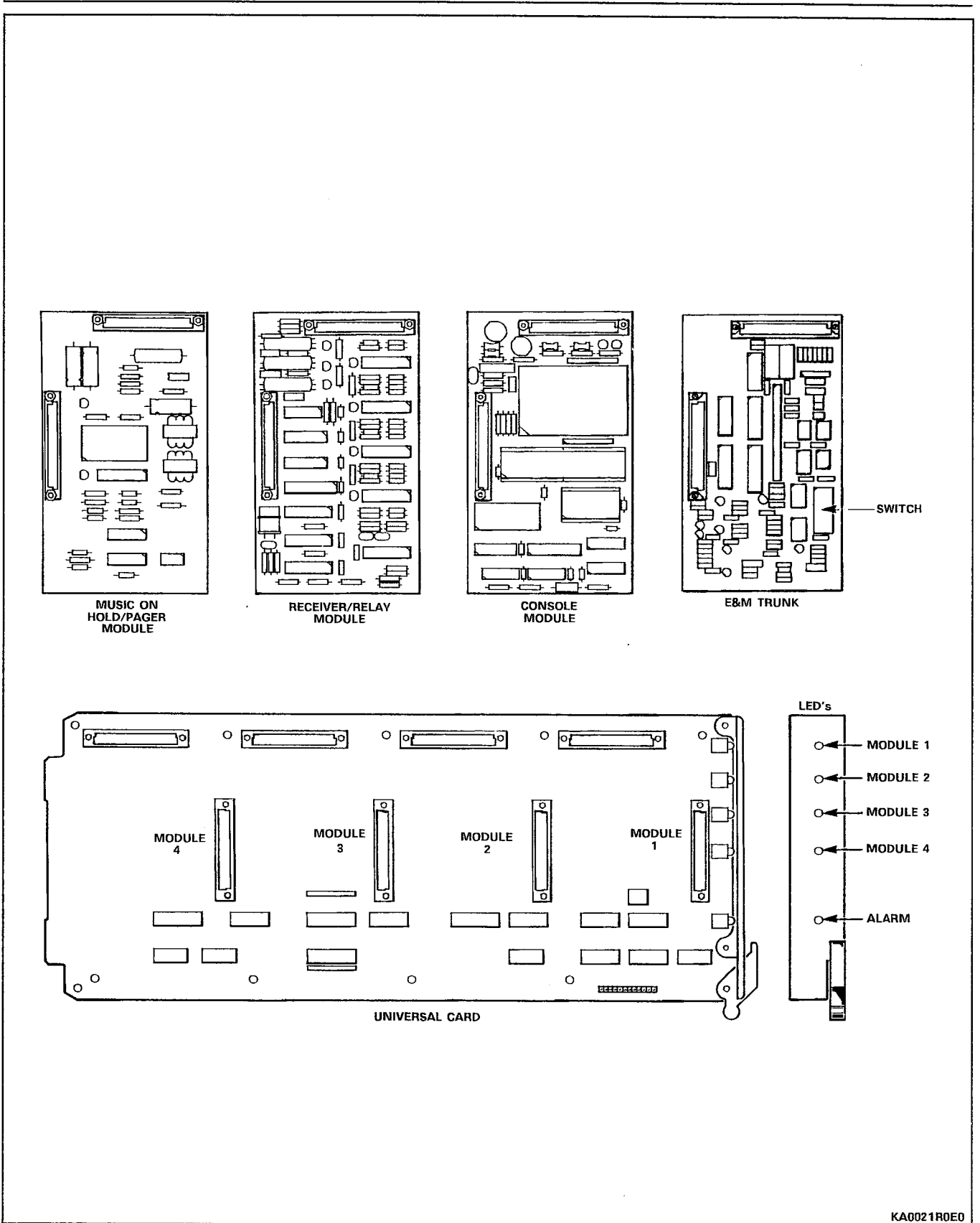
Figure 5-18 Universal Card and Modules
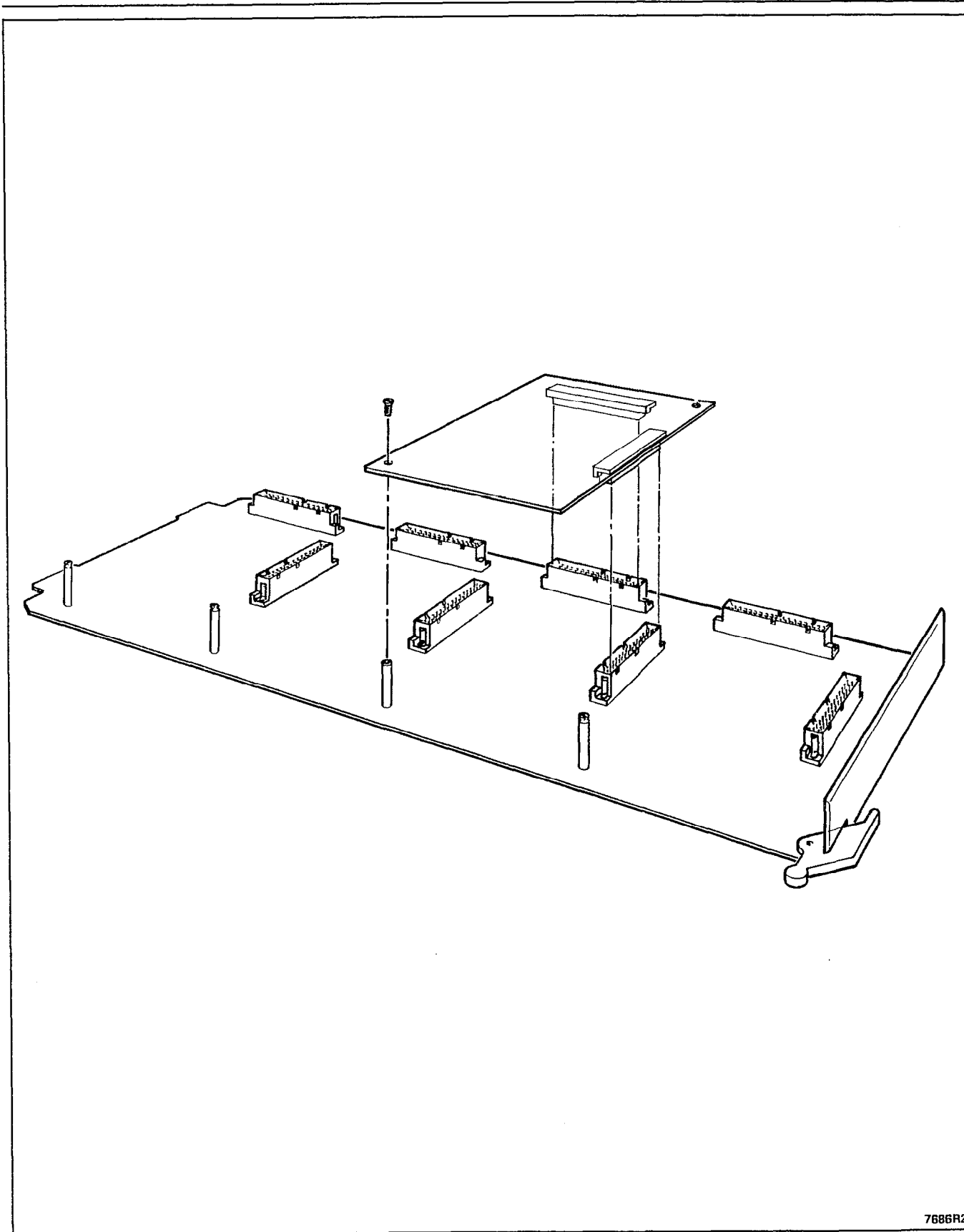
7686R2

Figure 5-19 Installation of Module onto Universal Card
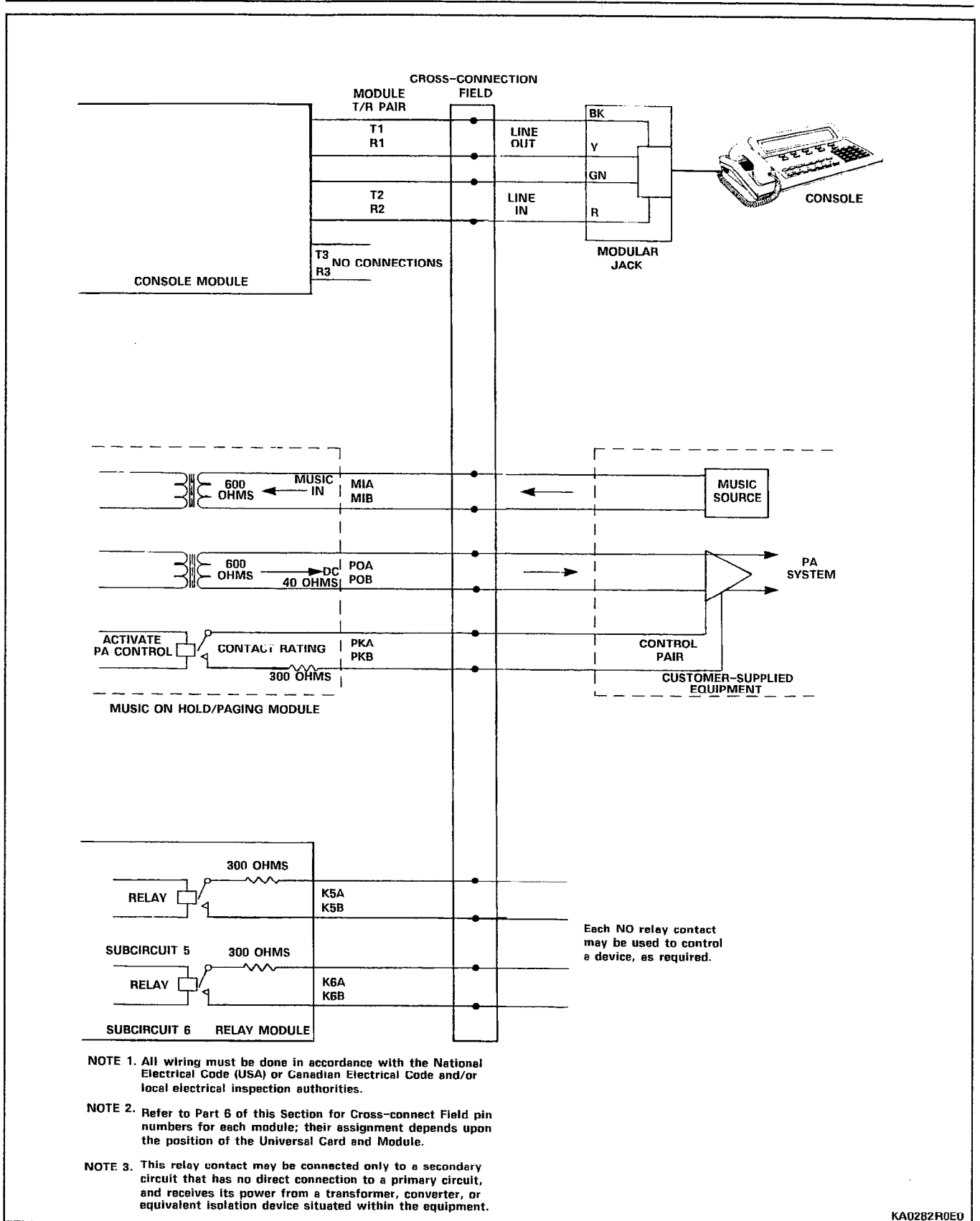
Figure 5-20 Music, Paging and Relay Connections

KA0282R0E0

CHART 5-20
INSTALL FLOPPY DISK DRIVE

Note: Remove diskette from drive while power is on and LED is off. Remove power from the Bay before removing or installing a disk drive.

Step	Action	Comments
INSTALLATION INSTRUCTIONS FOR PLOPPY DISK DRIVE pn 9109-024-000		
1.	While wearing the antistatic wrist strap, unpack and inspect the floppy disk drive.	
2.	Insert the floppy disk drive into its slot in Bay 2. Ensure that the signal ribbon cable and the power cable extend through the opening in the backplane (Figure 5-21).	Floppy disk drive 1 goes into Bay 2; floppy disk drive 2, if required in future releases, goes into Bay 1.
3.	Tighten the locking screw to secure the floppy disk drive into the card shelf. Refer to Figure 5-21.	
4.	At the back of the control cabinet, connect the ribbon cable to its backplane connector, J35 (or J33) and connect the power cable to its backplane connector J39 (or J37). Refer to Figure 4-2 and 5-22. Connect ground wire to disk drive ground lug.	Drive 1, Bay 2: J39 and J35 Drive 2, Bay 1: J37 and J33
5.	Open the floppy disk drive door, and remove the dummy shipping disk.	Retain dummy disk for future use if shipping disk drive.
6.	Power up and initialize system.	
INSTALLATION INSTRUCTIONS FOR FLOPPY DISK DRIVE pn 9109-124-000		
1.	While wearing antistatic wrist strap, unpack and inspect new disk drive.	
2.	Install drive into its slot in Bay 2, and secure it with its latch and locking screw.	Install second disk drive, if present, in Bay 1.
3.	If installing drive into an SX-200® cabinet, open rear door of cabinet.	Disk drive 9109-124-000 requires Disk Drive Adapter 9108-038-000.
4.	Remove ground wire and tie strap which holds it, from side of shelf. Refer to Figure 5-22.	
5.	Attach ground wire from adapter to frame of shelf using screw, external tooth washer, and nut.	
6.	Plug adapter into DIN connector of floppy disk drive.	
7.	Connect adapter ribbon cable to J39 and power cable to J35 on Control Shelf backplane. Refer to Figure 5-22.	NOTE: Bay 1 adapter, 9108-037-000, connects to J37 and J33.
8.	Power up and initialize system.	
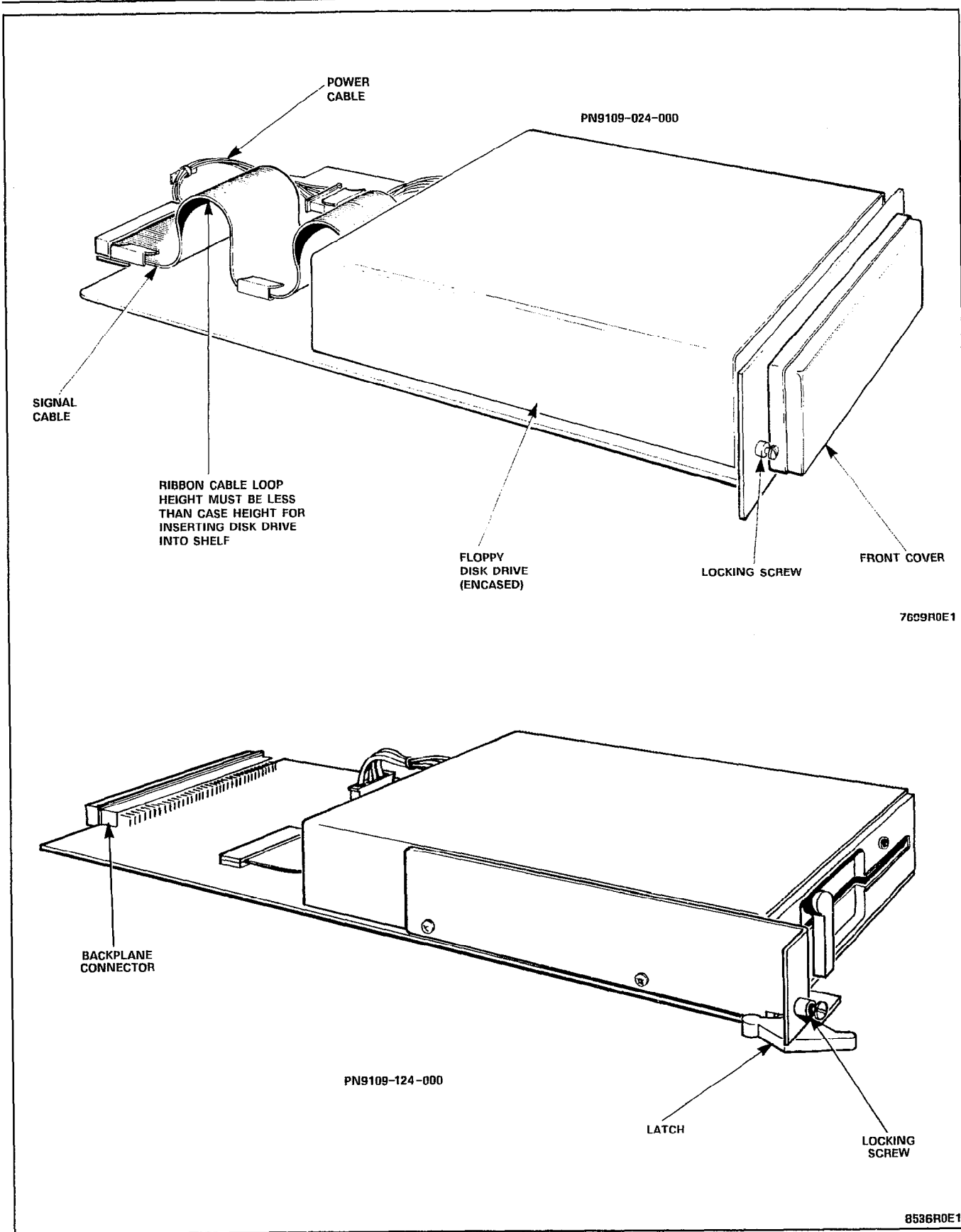
Figure 5-21 Floppy Disk Drives
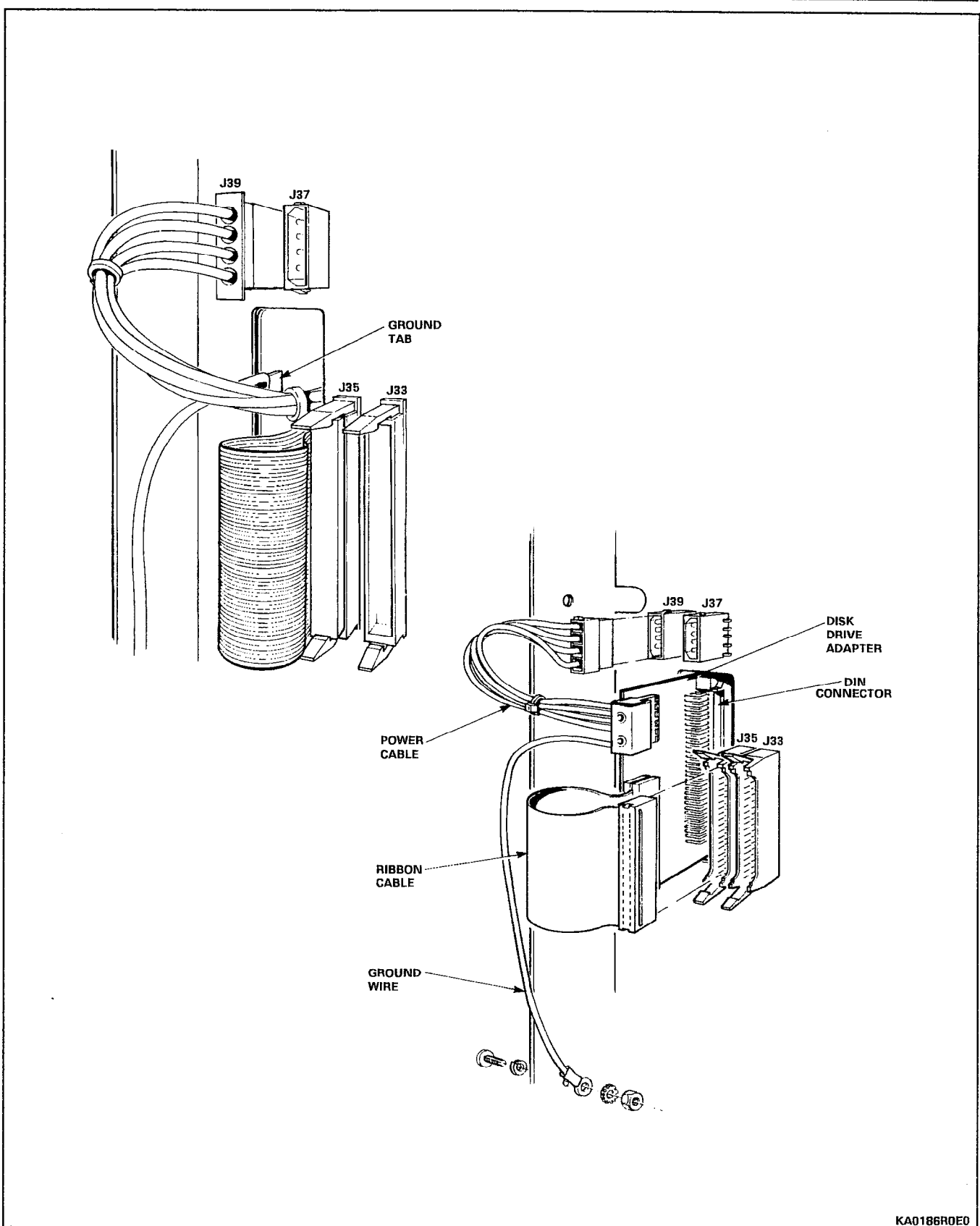
Figure 5-22 Disk Drive Connections

CHART 5-21
UNPACK AND INSTALL PRINTED CIRCUIT CARDS

Step	Action	Comments
	CAUTION: DO NOT OPEN OR UNPACK ANY PRINTED CIRCUIT CARD CARTONS UNLESS YOU ARE WEARING THE ANTISTATIC WRIST STRAP.	THE ANTISTATIC WRIST STRAP MUST BE CONNECTED TO THE PABX CHASSIS, WHICH MUST BE CONNECTED TO AN APPROVED GROUND TO PROVIDE PROTECTION FROM STATIC DISCHARGES.
1.	Attach the antistatic wrist strap to your wrist, and handle printed circuit cards by their edges only. Figure 5-23 shows typical card packaging.	The system configuration and/or the Tip & Ring Assignment forms identify which card type goes into each slot.
2.	Unpack and inspect the Bay Power Supply (BPS) module.	Return damaged or defective items, and report missing items according to local procedures.
3.	Insert the BPS into its slot in Bay 2, and tighten the thumbscrew at the upper front of the BPS to secure it to the card file.	Ensure that the BPS I/O (ON/OFF) switch is in the O (OFF) position. The first BPS must be in Bay 2; if any cards are to be installed in Bay 1, a BPS must also be installed in Bay 1.
4.	At the rear of the Control cabinet, connect the AC line cord to the BPS plug, as shown in Figure 4-3.	
5.	Unpack and inspect the Main Control Card and the Decryption module, which is packaged with the system software diskette.	Note: Whenever a new release of system software is received, the system must be powered down, so that the new Decryption module can be installed on the MCC. Each software release has a unique Decryption module associated with it.
6.	Install the Decryption module onto the MCC (refer to Figure 2-7).	Figure 5-24 shows jumper and switch settings for the MCC. These are factory set and do not require changing.
7.	Install the MCC into its slot in the Control Shelf.	
8.	480-PORT CONFIGURATION Install Digital Interface Cards (DIC) in Bays 3, 4, and 5. Connect PCM cables to their associated DIC (each PCM cable connector is labeled to identify the DIC it connects with). 336-PORT CONFIGURATION Install Bay Control Card (BCC), Bay Power Supply (BPS) module and PCM cables.	

CHART 5-21 (CONT'D)
UNPACK AND INSTALL PRINTED CIRCUIT CARDS

Step	Action	Comments
9.	Unpack trunk cards (for Control and Peripheral bays), set switches or jumpers (refer to Charts 5-22 through 5-26) and install into assigned slots.	
10.	Unpack, inspect, and install the remaining PCB cards according to Figures 2-1 or 2-2 and the equipment assignment for this system.	
11.	Retain some packing material for returning cards for repair. Discard the remainder according to local practice.	

Note: The following Digital Peripheral Cards are high power cards and are installed in upper slots:

- COV Line Card

- OPS

- DID

- Universal

The LS/GS and ONS cards are low power cards and can be installed in upper or lower slots.

SHIPPING CARTON
HOLDING 10 OR 5
INDIVIDUALLY PACKAGED
CIRCUIT CARDS

SLEEVE

PACKING
FOAM

ANTISTATIC
BAG
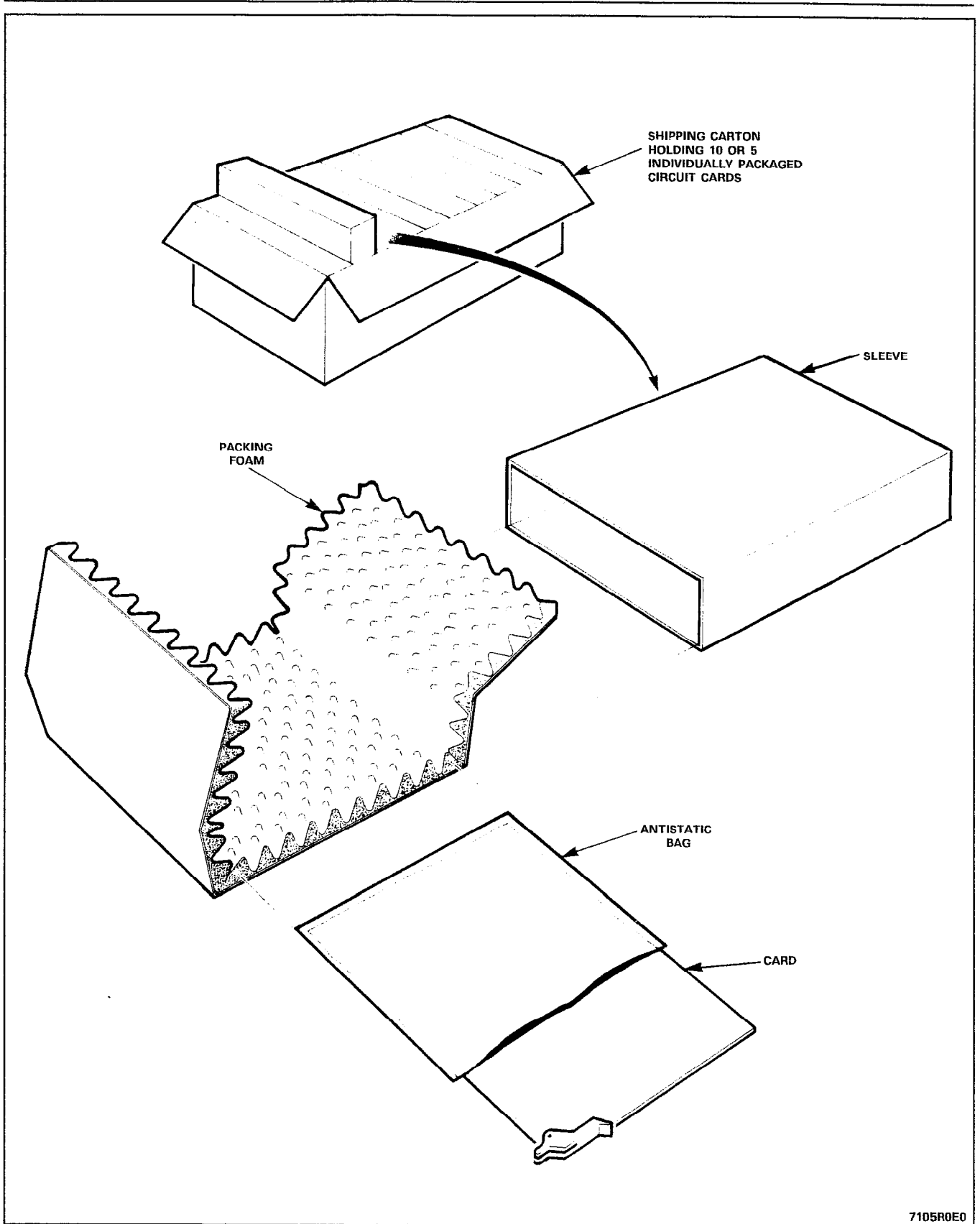
CARD

7105R0E0

Figure 5-23 Printed Circuit Card Packaging

Figure 5-24 Main Control Card Jumpers and Switches

8600R0
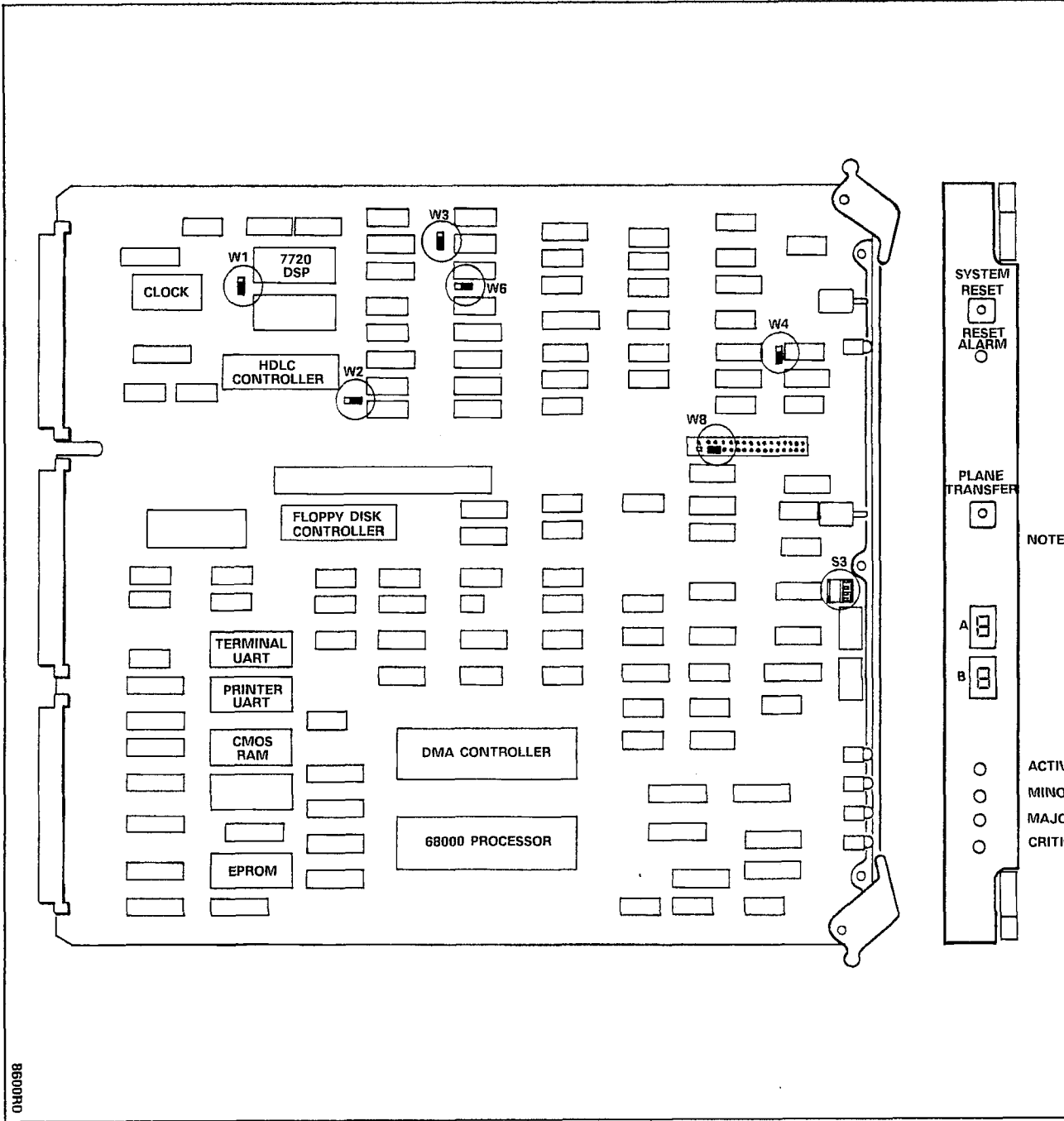
CHART 5-22
SET CO TRUNK CARD SWITCHES (TYPES -011/111)

Step	Action	Comments
	CAUTION FOLLOW THE PROCEDURES OUTLINED IN PARAGRAPH 5.03 WHILE HANDLING PRINTED CIRCUIT CARDS OR MODULES.	NOTE Complete installation forms for trunk card switch settings before setting switches.
1.	Identify trunk circuit by card position, type, and circuit number.	
2.	While wearing the antistatic wrist strap, remove the card from its package or from the equipment shelf.	
3.	Set TRUNK BUSY switches to the required configuration.	Refer to Figure 5-25 and notes for all switch settings.
4.	Set the LOOP-GROUND start switch to LOOP for a loop start trunk, or to GROUND for a ground start trunk.	
5.	Set 3rd-wire switch to OPEN if trunk is to be used as Dictation Trunk or XT lead is to give busy condition (otherwise to CLOSED).	
6.	Set IGN REVS to OPEN if trunk is to ignore line reversals as an incoming call, or to CLOSED if it is to recognize line reversals as an incoming call.	
7.	Set Trunk Control switches 6 and 8 to the required release time setting - normally closed is 500 ms release time.	
8.	Install card in shelf.	

NORMAL

NON-MODULAR TYPE

TRUNK 1
LOOP
TRUNK 2 GROUND

(NOTE 4)
TRUNK CONTROL SWITCHES
10 ‖‖‖‖‖‖‖‖ 1
PROM
TRUNK 3

TRUNK 4

LOOP GROUND
START SWITCHES
(NOTE 6)

(NOTES 1 AND 2)
TRUNK BUSY
SWITCHES

TRUNK 1
TRUNK 2
OUTGOING
TRUNK 3
TRUNK 4

TRUNK 1
TRUNK 2
INCOMING
TRUNK 3
TRUNK 4

BUSY   IDLE

NORMAL OPERATION HAS
OUTGOING SWITCHES SET
TO IDLE AND INCOMING
SWITCHES SET TO BUSY.

MODULAR TYPE

TRUNK SWITCHES ON REVERSE OF BOARD
TRUNK 1
GROUND
LOOP
TRUNK 2

TRUNK CONTROL SWITCHES
10 ‖‖‖‖‖‖‖‖ 1
PROM
TRUNK 3

TRUNK 4

LOOP GROUND
START SWITCHES
(NOTE 6)

INDIVIDUAL TRUNK CONTROL SWITCHES HAVE MEANINGS ACCORDING
TO THE IDENTITY OF THE PROM INSTALLED ON THE CARD. THESE
MEANINGS ARE SHOWN IN THE FOLLOWING DIAGRAM.

3RD WIRE TRUNK 1 (NOTE 5)
3RD WIRE TRUNK 2 (NOTE 5)
3RD WIRE TRUNK 3 (NOTE 5)
3RD WIRE TRUNK 4 (NOTE 5)
IGNORE REVERSALS (NOTE 9)
RELEASE TIME (NOTE 7)
NOT USED
NOT USED
NOT USED
NOT USED

NOT USED
NOT USED
RELEASE TIME B (NOTE 8)
NOT USED

RELEASE TIME A (NOTE 9)
IGNORE REVERSALS (NOTE 9)
3RD WIRE TRUNK 4 (NOTE 5)
3RD WIRE TRUNK 3 (NOTE 5)
3RD WIRE TRUNK 2 (NOTE 5)
3RD WIRE TRUNK 1 (NOTE 5)

| 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

DESIGNATIONS WHEN FOLLOWING
PROM IDENTITIES INSTALLED:

80304-0100
80304-0101
80304-0102
80304-0103

OPEN

CLOSED

DESIGNATIONS WHEN FOLLOWING
PROM IDENTITIES INSTALLED:

80304-0004

NORMAL
10   1

1267R4E4

Figure 5-25 CO Trunk Card Types 9110-011 and -111

NOTES TO FIGURE 5-25
CO TRUNK CARD TYPES 9110-011 AND -111

TRUNK BUSY SWITCHES

1. OUTGOING BUSY SWITCHES (1 PER TRUNK) CAN BE SET FOR EITHER:
   IDLE   - NORMAL TRUNK OPERATION
   BUSY   - TRUNK CANNOT BE SEIZED FOR OUTGOING CALL.

2. THE "OUTGOING BUSY" CONDITION MAY BE SET EITHER BY THE OUTGOING BUSY SWITCH (NOTE 1), OR BY THE CONSOLE "TRUNK BUSY OUT" FUNCTION. WHEN THIS CONDITION IS IN EFFECT THE INCOMING BUSY SWITCH AFFECTS THE TRUNK CONDITION AS FOLLOWS:
   IDLE   - NO ANSWER WILL BE GIVEN TO INCOMING LOCAL EXCHANGE CALLS
   BUSY   - A PERMANENT SEIZURE CONDITION IS GIVEN TOWARDS THE LOCAL EXCHANGE.

3. INCOMING BUSY HAS NO EFFECT WHILE OUTGOING BUSY IS NOT SET.

TRUNK CONTROL SWITCHES

4. ACTIVE TRUNK CONTROL SWITCHES ON NON-MODULAR ASUs ARE CONFINED TO SWITCHES 1, 2, 3 AND 4, CORRESPONDING TO TRUNK 1, 2, 3 AND 4, 3RD WIRE CONDITIONS RESPECTIVELY (NOTE 5).

3RD-WIRE SWITCHES

5. THE 3RD-WIRE LEAD WHEN REQUIRED IS CONNECTED TO THE LOCAL EXCHANGE TO PROVIDE CERTAIN FACILITIES. THESE INCLUDE THE RECORDING OF METER PULSES (EXTENDED FROM THE CO); OR ANOTHER REQUIREMENT MAY BE A BUSY CONDITION WHEN DICTATION OR CODE CALLING EQUIPMENT AT THE LOCAL EXCHANGE HAS BEEN TAKEN INTO SERVICE BY OTHER TRUNKS. THE SWITCH SETTING IS EITHER:
   OPEN   - RECOGNIZED EARTH FROM THE LOCAL EXCHANGE AS A BUSY CONDITION
   CLOSED   - 3RD WIRE SWITCH IS INEFFECTIVE

LOOP/GROUND CALLING SWITCHES

6. THE LOOP/GROUND CALLING SWITCHES (1 PER TRUNK) CAN BE SET TO RESULT IN THE FOLLOWING CONDITIONS:
   LOOP (1) SETTING - USED FOR LOOP-CALLING TYPE TRUNKS
   GROUND (2) SETTING - USED FOR EARTH-CALLING TYPE TRUNKS

RELEASE TIME SWITCHES

7. VALID TRUNK RELEASE TIMES ARE RECOGNIZED BY THE FOLLOWING RELEASE TIME SETTINGS ON -0100 TO -0103 TYPE PROMS:
   OPEN   - GREATER THAN 50 ms OF NO LOOP CURRENT
   CLOSED   - GREATER THAN 500 ms OF NO LOOP CURRENT

8. VALID TRUNK RELEASE TIMES ARE RECOGNIZED BY THE FOLLOWING RELEASE TIME SETTINGS FOR PROM TYPE -0004 WITH SWITCHES "A" AND "B":

"A" SETTING	"B" SETTING	RELEASE TIME
OPEN	CLOSED	50 ms
CLOSED	CLOSED	500 ms
OPEN	OPEN	2.5 s
CLOSED	OPEN	INFINITE (NON-RELEASE)

IGNORE REVERSALS

9. IF LINE REVERSALS ON THE TRUNK CIRCUIT ARE REQUIRED TO HAVE NO EFFECT THE IGNORE REVERSALS SWITCH IS SET TO "OPEN". IF LINE REVERSALS ARE TO BE RECOGNIZED THE SWITCH IS SET TO CLOSED.

CHART 5-23
SET CO TRUNK CARD SWITCHES (TYPES -211/311)

Step	Action	Comments
	CAUTION FOLLOW THE PROCEDURES OUTLINED IN PARAGRAPH 5.03 WHILE HANDLING PRINTED CIRCUIT CARDS OR MODULES.	NOTE Complete installation forms for trunk card switch settings before setting switches.
1.	Attach antistatic wrist strap to your wrist.	
2.	Identify the trunk circuit by card position, type, and circuit.	
3.	Set the Trunk Busy switches to the required configuration.	Refer to Figure 5-26 and notes for all switch settings.
4.	If trunk is to be GROUND start, set the LOOP-GROUND start switch to GROUND; if LOOP start, set switch to LOOP.	
5.	Set the 3rd-wire switch to OPEN if this is a Dictation Trunk or if the XT lead is used to give busy condition. If busy condition is a ground on the XT lead, set XT switch to GROUND; if not, set XT switch to -48. If trunk is not used as a Dictation trunk and XT lead is not used to give busy condition, set 3rd-wire switch to CLOSED.	
6.	If trunk circuit is to ignore line reversals as an incoming call, set IGN REVS switch to OPEN; if it is to recognize reversals as an incoming call, set to CLOSED.	
7.	Set Trunk Control Switches 6 and 8 to the required release time setting, normally 500 ms.	
8.	Set switches for remaining trunks on this card.	
9.	Install card into its assigned slot in the card shelf.	

HIGH IMPEDANCE SWITCHES

OPEN	NORMAL SETTING
GND HIGH Z	1 = OPEN
(NOTE 10) XT [1 2] HIGH-Z (NOTE 11)	2 = CLOSED
-48V NORMAL	

TRUNK BUSY SWITCHES (NOTES 1 AND 2)

		NORMAL SETTING
OUTGOING BUSY	TRUNK 1 / TRUNK 2 / TRUNK 3 / TRUNK 4	OUTGOING IDLE	1 = OPEN
			2 = OPEN
			3 = OPEN
			4 = OPEN
INCOMING BUSY	TRUNK 1 / TRUNK 2 / TRUNK 3 / TRUNK 4	INCOMING IDLE	5 = CLOSED
			6 = CLOSED
			7 = CLOSED
			8 = CLOSED

TRUNK 1
GND
LOOP
2 1 2 1
TRUNK 2 TR2 TR1
GND
LOOP

B
OPEN   8
10 [||||||||] 1
A
TRUNK CONTROL   TRUNK BUSY
SWITCHES   SWITCHES
PROMS   1

TRUNK 3
GND
LOOP
2 1 2 1
TRUNK 4 TR4 TR3
GND
LOOP

TRUNK CONTROL SWITCHES

NORMAL SETTING	SWITCH NUMBER	FUNCTION	TYPE -211	TYPE -311	NOTES
CLOSED	1	3RD WIRE TRUNK 1	X	X	5
CLOSED	2	3RD WIRE TRUNK 2	X	X	5
CLOSED	3	3RD WIRE TRUNK 3	X	X	5
CLOSED	4	3RD WIRE TRUNK 4	X	X	5
OPEN	5	IGNORE REVERSALS	X	X	6
CLOSED	6	RELEASE TIME "A"	X	X	7
CLOSED	7	MAKE/BREAK RATIO	–	X	8
CLOSED	8	RELEASE TIME "B"	X	X	7
CLOSED	9	NOT USED	–	–	
CLOSED	10	NOT USED	–	–	

"X" INDICATES THAT FUNCTION IS APPLICABLE FOR THE TYPE
9110-211-000 OR 9110-311-000 TRUNK CARDS.

5493R1E1

Figure 5-26 CO Trunk Card Switch Functions

NOTES FOR FIGURE 5-26
CO TRUNK CARD SWITCH FUNCTIONS

TRUNK BUSY SWITCHES

1. OUTGOING BUSY SWITCHES (1 PER TRUNK) CAN BE SET FOR EITHER:
   - IDLE — NORMAL TRUNK OPERATION
   - BUSY — TRUNK CANNOT BE SEIZED FOR OUTGOING CALL.

2. THE "OUTGOING BUSY" CONDITION MAY BE SET EITHER BY THE OUTGOING BUSY SWITCH (NOTE 1), OR BY THE CONSOLE "TRUNK BUSY OUT" FUNCTION. WHEN THIS CONDITION IS IN EFFECT THE INCOMING BUSY SWITCH AFFECTS THE TRUNK CONDITION AS FOLLOWS:
   - IDLE — NO ANSWER WILL BE GIVEN TO INCOMING LOCAL EXCHANGE CALLS
   - BUSY — A PERMANENT SEIZURE CONDITION IS GIVEN TOWARDS THE LOCAL EXCHANGE.

3. INCOMING BUSY HAS NO EFFECT WHILE OUTGOING BUSY IS NOT SET.

TRUNK CONTROL SWITCHES

4. THE TRUNK CONTROL SWITCHES ARE PROGRAMMED TO RESULT IN THE FEATURES SHOWN BELOW.

3RD-WIRE SWITCHES

5. THE 3RD-WIRE LEAD WHEN REQUIRED IS CONNECTED TO THE LOCAL EXCHANGE TO PROVIDE CERTAIN FACILITIES. THESE INCLUDE THE RECORDING OF METER PULSES (EXTENDED FROM THE CO); OR ANOTHER REQUIREMENT MAY BE A BUSY CONDITION WHEN DICTATION OR CODE CALLING EQUIPMENT AT THE LOCAL EXCHANGE HAS BEEN TAKEN INTO SERVICE BY OTHER TRUNKS. THE SWITCH SETTING IS EITHER:
   - OPEN — RECOGNIZES EARTH FROM THE LOCAL EXCHANGE AS A BUSY CONDITION.
   - CLOSED — 3RD WIRE SWITCH IS INEFFECTIVE.

IGNORE REVERSALS

6. IF LINE REVERSALS ON THE TRUNK CIRCUIT ARE REQUIRED TO HAVE NO EFFECT THE IGNORE REVERSALS SWITCH IS SET TO "OPEN". IF LINE REVERSALS ARE TO BE RECOGNIZED THE SWITCH IS SET TO CLOSED.

RELEASE TIME SWITCHES

7. VALID TRUNK RELEASE TIMES ARE RECOGNIZED BY THE FOLLOWING RELEASE TIME SETTINGS FOR PROM TYPE -0004 WITH SWITCHES "A" AND "B":

"A" SETTING	"B" SETTING	RELEASE TIME
OPEN	CLOSED	50 ms
CLOSED	CLOSED	500 ms
OPEN	OPEN	2.5 s
CLOSED	OPEN	INFINITE (NON-RELEASE)

MAKE/BREAK RATIO

8. THE MAKE/BREAK RATIO SWITCH FUNCTION IS PROGRAMMED FOR TYPE 9110-311 ONLY. THE SWITCH SETTINGS RESULT IN THE FOLLOWING RATIOS:
   - OPEN — 33/66 (33% MAKE; 66% BREAK)
   - CLOSED — 40/60 (40% MAKE; 60% BREAK)
   - TYPE 9110-211 IS FIXED AT 40/60 RATIO.

LOOP/GROUND CALLING SWITCHES

9. THE LOOP/GROUND CALLING SWITCHES (1 PER TRUNK) CAN BE SET TO:
   - LOOP — USED FOR LOOP-CALLING TYPE TRUNKS
   - GROUND — USED FOR EARTH-CALLING TYPE TRUNKS

XT SWITCH

10. THE XT SWITCH (1 PER TRUNK) IS USED IN CONJUNCTION WITH THE 3RD WIRE SWITCH (NOTE 5) AND CAN BE SET TO PROVIDE THE FOLLOWING CONDITIONS:
    - -48 V — THE CIRCUIT RESPONDS TO A -48 Vdc SIGNAL (E.G., WHEN IT IS A METER PULSE OR A BUSY CONDITION). AN EARTH IS EQUIVALENT TO AN OPEN.
    - GND — THE CIRCUIT RESPONDS TO AN EARTH SIGNAL (E.G., WHEN IT IS A METER PULSE OR A BUSY CONDITION). A -48 Vdc SIGNAL IS EQUIVALENT TO OPEN.

HI-Z SWITCH

11. THE HI-Z SWITCH ALLOWS THE PROPER IMPEDANCE ON INCOMING CALLS, TO BE PRESENTED ACCORDING TO REQUIREMENTS. THE TWO SETTINGS FOR THE SWITCH RESULT IN THE FOLLOWING:

    HI-Z SETTING — PRESENTS THE NORMAL IMPEDANCE TO INCOMING RINGING SIGNALS, BUT A HIGH BLOCKING IMPEDANCE TO VOICE SIGNALS

    NORM SETTING — PRESENTS A NORMAL IMPEDANCE TO BOTH RINGING SIGNALS AND VOICE SIGNALS. IN CANADA THE HI-Z SWITCH MUST BE SET TO HI-Z.

CHART 5-24
SET E&M/TIE TRUNK CARD OPTION SWITCHES

Step	Action	Comments
	CAUTION FOLLOW THE PROCEDURES OUTLINED IN PARAGRAPH 5.03 WHILE HANDLING PRINTED CIRCUIT CARDS OR MODULES.	NOTE Complete installation forms for Trunk Card switch settings before setting any switches on the card.
1.	Attach the antistatic wrist strap to your wrist.	
2.	Select the required trunk card and set the busy switches to idle or busy as required.	Refer to Figure 5-27 and notes for setting of switches.
3.	Set the trunk impedance switches to 600 ohms or 900 ohms as required.	
4.	Set the 2-wire/4-wire switches on the front and back of the card for either 2-wire or 4-wire as required for this trunk.	
5.	Set the INCOMING WINK switch on the face of the trunk card to INCOMING WINK or to NOT INCOMING WINK as required for this trunk.	
6.	Set the OUTGOING WINK switch on the face of the trunk card to OUTGOING WINK or to NOT OUTGOING WINK as required for this trunk.	
7.	Set the STOP DIAL switch on the circuit card faceplate to STOP DIAL or to NOT STOP DIAL as required for this trunk.	
8.	Set the GAIN switch to either NORMAL or to SPECIAL as required for the trunk.	
9.	Set M LEAD switch to M INV if inversion of the M lead signal is required.	
10.	Set switches for other trunk on this card.	
11.	Insert card into its assigned slot in the card shelf.	

TRUNK CONTROL SWITCHES

OPEN

OUTGOING WINK — INCOMING WINK — 2-WIRE — SPECIAL GAIN (NOTE 3)

| NOT USED | NOT USED | TRUNK 2 | TRUNK 1 | TRUNK 2 | TRUNK 1 | TRUNK 2 | TRUNK 1 | TRUNK 2 | TRUNK 1 |

10   1

NOT OUTGOING WINK — NOT INCOMING WINK — 4-WIRE — NORMAL GAIN

NORMAL SETTING

1 = CLOSED
2 = CLOSED
3 = OPEN
4 = OPEN
5 = CLOSED
6 = CLOSED
7 = CLOSED
8 = CLOSED
9 = NOT USED
10 = NOT USED

PN103026

600 Ω
TRUNK 1 IMPEDANCE SWITCHES (NOTE 1)
900 Ω

2-WIRE
600 Ω
2 1
4-WIRE
900 Ω

10   1
TRUNK CONTROL SWITCHES

8
TRUNK BUSY SWITCHES
1

600 Ω
TRUNK 2 IMPEDANCE SWITCHES (NOTE 1)
900 Ω

2-WIRE
600 Ω
2 1
4-WIRE
900 Ω

TRUNK BUSY SWITCHES

8

OUTGOING BUSY — TRUNK 1 / TRUNK 2 — OUTGOING IDLE (NOTE 2)

INCOMING BUSY — TRUNK 1 / TRUNK 2 — INCOMING IDLE (NOTE 2)

STOP DIAL — TRUNK 1 / TRUNK 2 — NOT STOP DIAL

M LEAD INVERT (NOTE 4) — TRUNK 1 / TRUNK 2 — M LEAD NORMAL

1

OPEN

NORMAL SETTING

1 = CLOSED
2 = CLOSED
3 = CLOSED
4 = CLOSED
5 = OPEN
6 = OPEN
7 = CLOSED
8 = CLOSED

8084R0E0

Figure 5-27 E&M/Tie Trunk Card Switch Settings

NOTES FOR FIGURE 5-27
E&M/TIE TRUNK CARD SWITCH FUNCTIONS

Notes:

1. Trunk impedance switches are located on the rear face of the trunk card.

2. Outgoing/incoming switch settings:

Outgoing Busy Switch Set to	Incoming Busy Switch Set to	Result
Idle	Busy	Normal trunk operation – if trunk is made busy by attendant, outgoing busy, incoming busy condition results. See below.
Busy	Busy	Trunk cannot be seized, incoming or outgoing from the PABX. Recommended setting if trunk is not connected to trunk circuit.
Busy	Idle	Outgoing calls receive busy tone. Incoming calls receive ringing tone but cannot be answered.
Idle	Idle	If trunk is made busy by attendant, outgoing busy, incoming idle condition results. See below.

Incoming busy switch, when operated, will provide an outgoing seize signal whenever the trunk is made outgoing busy (either from the outgoing busy switch on the trunk, or from the console).

3. Normal gain provides 0.5 dB insertion loss through the PABX. Special gain provides for 4-wire operation with carrier systems requiring signal levels of +7 dB on the Rx pair, and -16 dB on the Tx pair.

CHART 5-25
SET DID/TIE TRUNK CARD OPTION SWITCHES

Step	Action	Comments
	CAUTION FOLLOW THE PROCEDURES OUTLINED IN PARAGRAPH 5.03 WHILE HANDLING PRINTED CIRCUIT CARDS.	NOTE Complete installation forms for Trunk Card settings before setting any switches on the card.
1.	Attach the antistatic wrist strap to your wrist and select the required trunk card.	Refer to Figure 5-28 and notes for setting of switches.
2.	Set TRUNK BUSY switches as required for this trunk.	
3.	Set SW1, SW2, SW3 switches to either 600 ohms or 900 ohms as required.	
4.	Set trunk type switches A and B to required configuration.	
5.	Set INCOMING WINK switch to INCOMING WINK or to NOT INCOMING WINK, as required for this trunk.	INCOMING WINK results in a 180 ms off-hook signal sent as a "ready to receive dial information" condition
6.	Set OUTGOING WINK START switch to OUTGOING WINK or to NOT OUTGOING WINK as required for this trunk.	OUTGOING WINK results in a waiting period until an off-hook signal of ≥ 100 ms is received from far end.
7.	Set the BG-PULS switch to select either LOOP pulsing or BATTERY and GROUND pulsing.	
8.	Set the STOP DIAL switch to either STOP DIAL or to NOT STOP DIAL as required for this DID/TIE trunk.	
9.	Set all switches for the other trunk on this card.	
10.	Install the trunk card into its assigned slot in the card shelf.	

TRUNK CONTROL SWITCHES

TABLE

TRUNK TYPE	SWITCH A	SWITCH B
DID TRUNK	CLOSED	CLOSED
LOOP TIE TRUNK	CLOSED	OPEN
INCOMING DIAL – OUTGOING AUTO	OPEN	CLOSED
NOT USED	OPEN	OPEN

NORMAL SETTING

5 = CLOSED
6 = CLOSED
7 = CLOSED
8 = CLOSED
9 = NOT USED
10 = NOT USED

TRUNK BUSY SWITCHES

NORMAL SETTING

1 = CLOSED
2 = CLOSED
3 = CLOSED
4 = CLOSED
5 = OPEN
6 = OPEN
7 = CLOSED
8 = CLOSED

5496R1E1

Figure 5-28   DID/Tie Trunk Card Switch Functions

NOTES FOR FIGURE 5-28
DID/TIE TRUNK CARD SWITCH FUNCTIONS

Notes:

1. Trunk impedance switches are located on the rear face of the Trunk Card.

   Trunk Busy Switches

2. Outgoing Busy Switches (1 per trunk) can be set for either of the following conditions:
   Idle setting – normal trunk operation
   Busy setting – trunk cannot be seized for outgoing call.

3. The "outgoing busy" condition may be set either by the outgoing busy switch (Note 2), or by the console "Trunk Busy Out" function. When this condition is in effect the incoming Busy Switch affects the trunk condition as follows:
   Idle setting – no answer will be given to incoming trunk calls
   Busy setting – a permanent seizure condition is given towards the trunk.

CHART 5-26
SET LS/GS TRUNK CARD JUMPERS

Step	Action	Comments
	CAUTION FOLLOW THE PROCEDURES OUTLINED IN PARAGRAPH 5.03 WHILE HANDLING PRINTED CIRCUIT CARDS OR MODULES.	
1.	Identify trunk circuit by bay, slot, circuit and type (loop start or ground start).	
2.	While wearing the antistatic wrist strap, remove the card from its package or from the equipment bay.	
3.	Set the jumpers into position for each of the six trunks on the card. Position the marked end to G for a Ground start or L for a Loop start trunk.	Refer to Figure 5-29.
4.	Install card into its assigned bay/slot position.	

MARKED END
SHOWN FOR
LOOP START TRUNK

G
W1
L

TRUNK
4

TRUNK
5

TRUNK
6

TRUNK
1

TRUNK
2

TRUNK
3

LEDs

TRUNK 1

TRUNK 2

TRUNK 3

TRUNK 4

TRUNK 5

TRUNK 6

ALARM
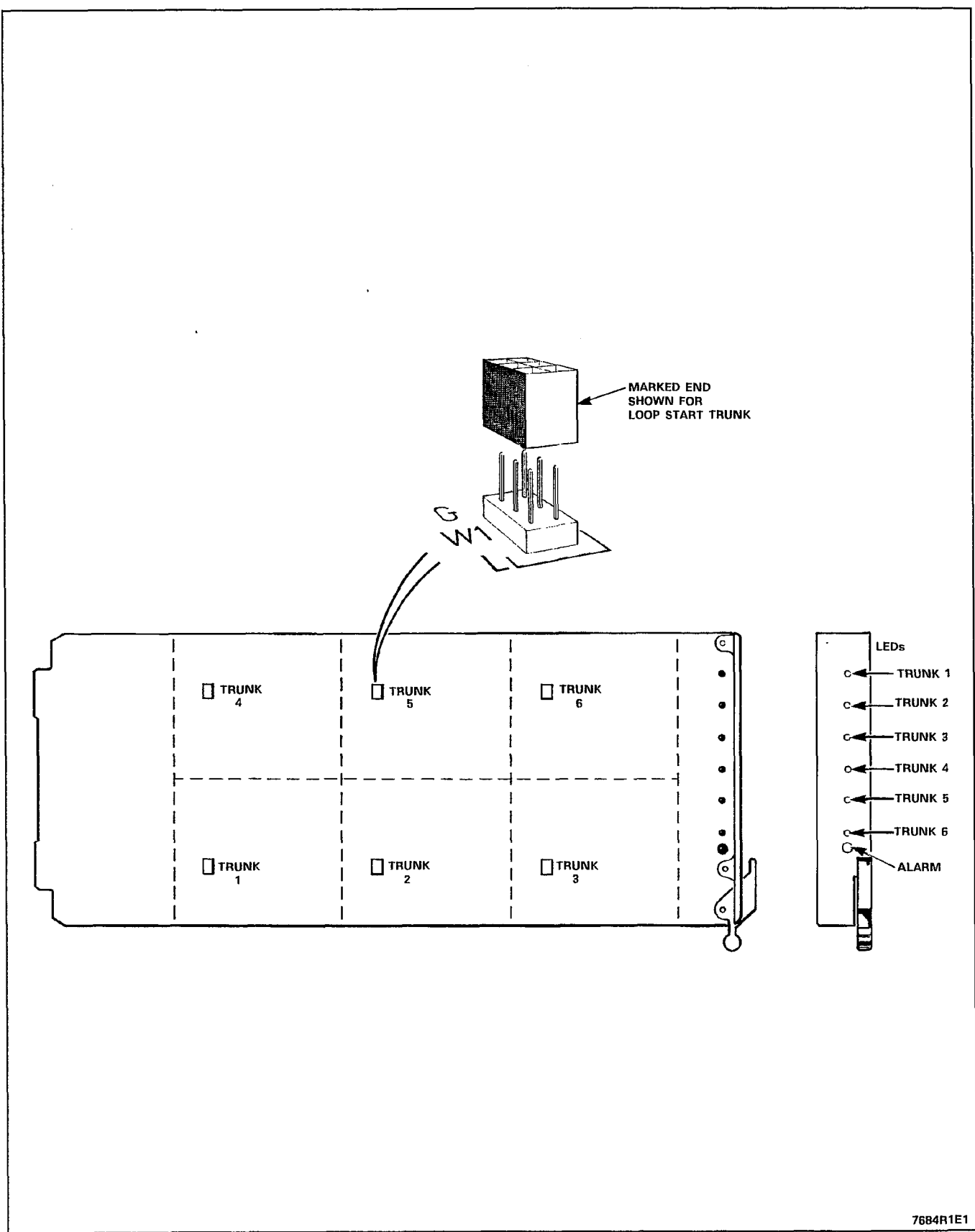
7684R1E1

Figure 5-29 LS/GS Trunk Card

CHART 5-27
INITIAL SYSTEM POWER-ON

Step	Action	Comments
1.	Check that all cards are in place and that all cables within the cabinets, including uninterruptible power supply, are connected.	
2.	Plug line cord(s) into AC receptacles.	If Control cabinet has a UPS, plug line cord into UPS and UPS line cord into AC receptacle, according to manufacturer's instructions.
3.	Turn on main circuit breakers and UPS.	
4.	Turn on power switch on maintenance panels, and bay power supplies.	
5.	Insert diskette into floppy disk drive. (Refer to Chart 5-28.)	System goes through power-on diagnostics for 1 minute.
	NOTE: The console may be connected to the console jack on the front of the maintenance panel for working on the PABX, rather than being at the usual attendant console location.	
6.	At console, after diagnostics are completed, press the FUNCTION key.	Function softkey prompts are displayed.
7.	Press the APPLICATION softkey.	Attendant Console LCD responds by displaying the message: Select An Application OR Press Any Hard Key To Return and MAINTENANCE and CDE softkeys are displayed.
8.	Press MAINTENANCE or CDE softkey.	LCD displays the message: Choose a Username. . . The following softkeys are displayed: INSTALLER MAINT1 MAINT2 SUPERVISOR ATTENDANT
9.	Press the INSTALLER or another softkey.	LCD responds by displaying the message: Enter Password: The ENTER softkey is displayed:
10.	Enter the numeric password from the telephony keypad.	Digits are not displayed.

CHART 5-27 (CONT'D)
INITIAL SYSTEM POWER-ON

Step	Action	Comments
12.	Press the ENTER softkey.	LCD display responds with the message: PLEASE WAIT. . . Disk drive is accessed. LCD display updates with a display of Maintenance or CDE softkeys and menu.
13.	Proceed with Maintenance or CDE application, as required.	Refer to Section MITL9108-093-351-NA, RS-232 Maintenance Terminal, or Section MITL9108-093-210-NA, Customer Data Entry.

CHART 5-28
INSTALL DISKETTE INTO DISK DRIVE

Step	Action	Comments
	Note: The disk drive must have system power ON before removing or inserting a diskette.	
1.	Put the system into maintenance mode at the terminal (not in CDE mode).	This inhibits system reading and writing to the disk.
2.	Open the door of the disk drive.	Hold the door open with one hand.
3.	Unlatch the disk (refer to Figure 5-30).	Note that there are two types of disk drive latches.
4.	Carefully grasp the diskette between thumb and index finger and pull straight out (refer to Figure 5-30).	
5.	To install a diskette, hold it as shown in Figure 5-30 and insert it straight into the drive, then latch the drive.	

5.08   Disk Handling Procedures

- Do not touch the magnetic media

- Keep disks away from magnetic fields

- When necessary to write on a disk envelope, only use a felt tipped marker (no pen or pencil) and press very softly

- Do not place paper clips onto disk envelope

- Do not bend, squeeze, or put pressure onto a disk or its envelope

- Disks must be stored in the same environment as they operate: +10 to 40°C, 20 to 80% R.H. (non-condensing)

- Before using a disk, it must be acclimatized for 24 hours in the environment in which it will operate

- System power must be on before inserting a disk into or removing a disk from the drive

- Whenever the disk is to be removed or inserted, ensure that there is no read or write activity in progress from the system, the LED on the disk drive must be OFF.

DISKETTE
REMOVAL
POSITION

TURN LEVER
TO RIGHT AFTER
INSERTING DISKETTE

PUSH TO
RIGHT AFTER
INSERTING
DISKETTE

PUSH IN
TO REMOVE
DISKETTE
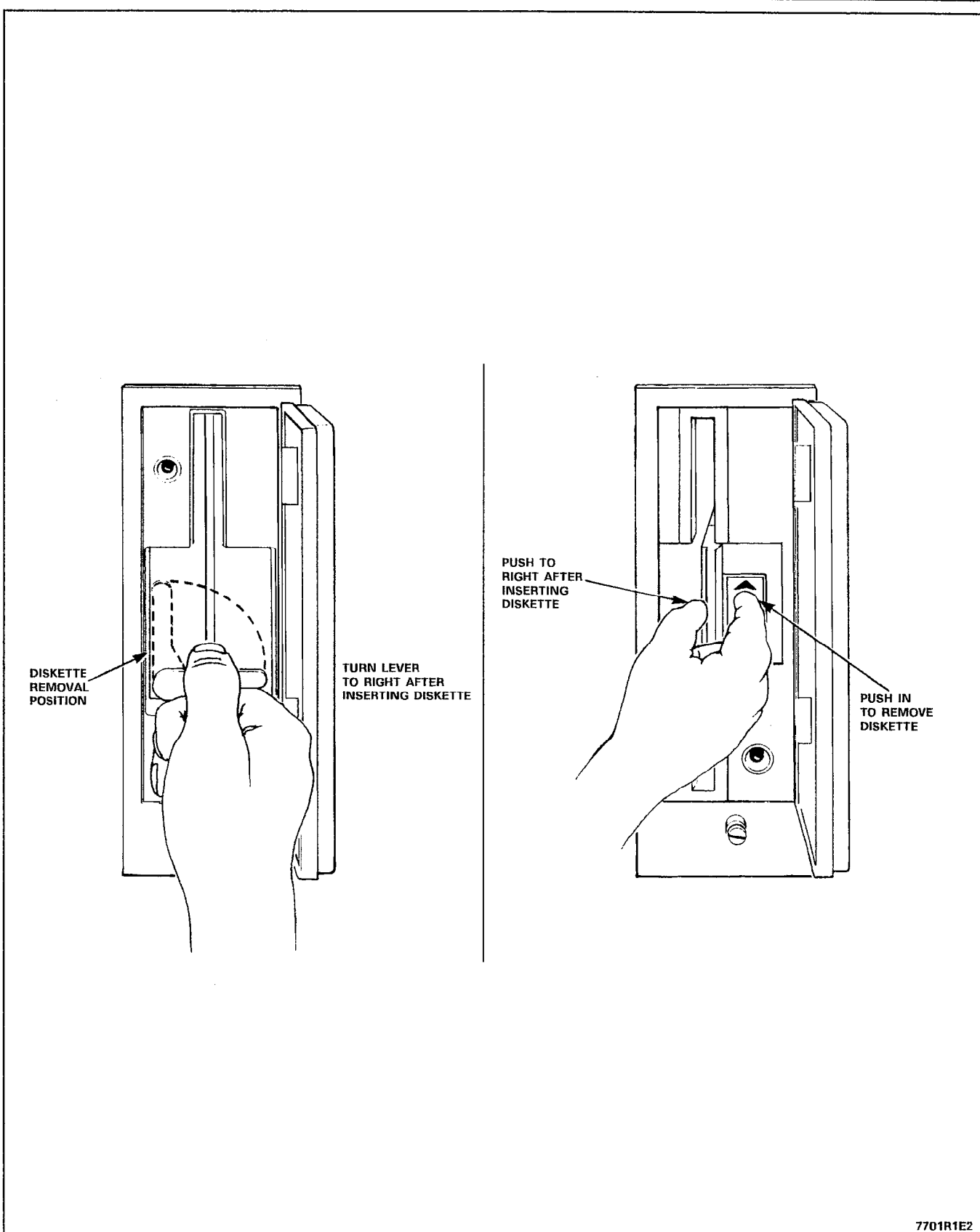
7701R1E2

Figure 5-30 Disk Drive Latches

CHART 5-29
REPACKING FOR SHIPMENT

Step	Action	Comments
1.	Repack all items carefully, and list the contents of each carton on the label.	Ensure that items within the carton cannot shift about, and will not get scratched or damaged.
2.	Wrap all items with air-cushion type material, and surround with loose paper to minimize movement within the carton.	
3.	All printed circuit cards must be packed in antistatic bags and in regular PC card shipping cartons. Handle cards by the edges only, and follow all the usual card handling procedures.	Wear the antistatic wrist strap while handling cards. **NOTE:** Do not disconnect the system ground connection until after all cards have been properly packed.

Note: Whenever possible, re-use original packing material to repack an SX-200® DIGITAL PABX.

6. CABLING AND CROSS-CONNECTIONS

General

6.01   This Part details the cabling and cross-connections require
when installing the SX-200® DIGITAL PABX.

Telephone Set and Trunk Cabling

6.02   Telephone set and trunk cabling terminates on the buildir
cross-connect terminal in the normal manner.

System Cable Terminations

6.03   All interconnecting cables must be terminated in accordanc
with Tables 6-1 to 6-9 according to the number of bays suf
plied and equipped.

Complete the Tip & Ring Assignment forms for the stations, trunl
and other equipment being installed. These forms will provide a pe
manent on-site record of this installation and should be maintaine
up-to-date.

CONTROL SHELF TIP & RING ASSIGNMENTS (Plug connects to Cross-Connect Field)

TABLE 6-1
PLUG J5, J9, J25 (DIGITAL BAYS 1 THROUGH 4 TIP & RING ASSIGNMENTS)

Bay-Slot	Plug	Pin	Pair	Lead Designation									
				Cct	ONS	Cct	COV	Cct	LS/GS	Cct	DID	Cct	OPS
		26	W-BL	1	T1	1	T1	1	T1	1	T1	1	T1
		1	BL-W		R1		R1		R1		R1		R1
		27	W-O	2	T2	2	T2		MM1				
		2	O-W		R2		R2		M1				
		28	W-G	3	T3	3	T3	2	T2	2	T2	2	T2
		3	G-W		R3		R3		R2		R2		R2
		29	W-BR	4	T4	4	T4		MM2				
		4	BR-W		R4		R4		M2				
		30	W-S	5	T5	5	T5	3	T3	3	T3	3	T3
1-6	J5	5	S-W		R5		R5		R3		R3		R3
1-8	J9	31	R-BL	6	T6	6	T6		MM3				
		6	BL-R		R6		R6		M3				
		32	R-O	7	T7			4	T4	4	T4	4	T4
2-4	J25	7	O-R		R7				R4		R4		R4
		33	R-G	8	T8				MM4				
3-6	J5	8	G-R		R8				M4				
3-8	J9	34	R-BR	9	T9			5	T5	5	T5	5	T5
		9	BR-R		R9				R5		R5		R5
4-6	J5	35	R-S	10	T10				MM5				
4-8	J9	10	S-R		R10				M5				
		36	BK-BL	11	T11			6	T6	6	T6	6	T6
		11	BL-BK		R11				R6		R6		R6
		37	BK-O	12	T12				MM6				
		12	O-BK		R12				M6				
		38	BK-G	spare									
		13	G-BK	spare									
		39	BK-BR	1	T1	1	T1	1	T1	1	T1	1	T1
		14	BR-BK		R1		R1		R1		R1		R1
		40	BK-S	2	T2	2	T2		MM1				
		15	S-BK		R2		R2		M1				
		41	Y-BL	3	T3	3	T3	2	T2	2	T2	2	T2
		16	BL-Y		R3		R3		R2		R2		R2
		42	Y-O	4	T4	4	T4		MM2				
		17	O-Y		R4		R4		M2				
		43	Y-G	5	T5	5	T5	3	T3	3	T3	3	T3
		18	G-Y		R5		R5		R3		R3		R3
		44	Y-BR	6	T6	6	T6		MM3				
		19	BR-Y		R6		R6		M3				
1-5	J5	45	Y-S	7	T7			4	T4	4	T4	4	T4
1-7	J9	20	S-Y		R7				R4		R4		R4
		46	V-BL	8	T8				MM4				
		21	BL-V		R8				M4				
2-3	J25	47	V-O	9	T9			5	T5	5	T5	5	T5
		22	O-V		R9				R5		R5		R5
3-5	J5	48	V-G	10	T10				MM5				
3-7	J9	23	G-V		R10				M5				
4-5	J5	49	V-BR	11	T11			6	T6	6	T6	6	T6
4-7	J9	24	BR-V		R11				R6		R6		R6
		50	V-S	12	T12				MM6				
		25	S-V		R12				M6				

CONTROL SHELF TIP & RING ASSIGNMENTS (Plug connects to Cross-Connect Field)

TABLE 6-2
PLUG J5, J9, J25 (DIGITAL BAYS 1 THROUGH 4 TIP & RING ASSIGNMENTS)

Bay-Slot	Plug	Pin	Pair	Cct	DLIC	Cct	MOH/Pag	Cct	DTMF Rly	Cct	E&M TRUNK
		26	W-BL	1	T1	1	MIA1	1		1	T1
		1	BL-W		R1		MIB1				R1
		27	W-O		T2		POA1		K5A1		TR1
		2	O-W		R2		POB1		K5B1		RR1
		28	W-G				PKA1		K6A1		E1
		3	G-W				PKB1		K6B1		M1
		29	W-BR	2	T1	2	MIA2	2		2	T2
		4	BR-W		R1		MIB2				R2
		30	W-S		T2		POA2		K5A2		TR2
1-6	J5	5	S-W		R2		POB2		K5B2		RR2
1-8	J9	31	R-BL				PKA2		K6A2		E2
		6	BL-R				PKB2		K6B2		M2
		32	R-O	3	T1	3	MIA3	3		3	T3
2-4	J25	7	O-R		R1		MIB3				R3
		33	R-G		T2		POA3		K5A3		TR3
3-6	J5	8	G-R		R2		POB3		K5B3		RR3
3-8	J9	34	R-BR				PKA3		K6A3		E3
		9	BR-R				PKB3		K6B3		M3
4-6	J5	35	R-S	4	T1	4	MIA4	4		4	T4
4-8	J5	10	S-R		R1		MIB4				R4
		36	BK-BL		T2		POA4		K5A4		TR4
		11	BL-BK		R2		POB4		K5B4		RR4
		37	BK-O				PKA4		K6A4		E4
		12	O-BK				PKB4		K6B4		M4
		38	BK-G		spare						
		13	G-BK		spare						
		39	BK-BR	1	T1	1	MIA1	1		1	T1
		14	BR-BK		R1		MIB1				R1
		40	BK-S		T2		POA1		K5A1		TR1
		15	S-BK		R2		POB1		K5S1		RR1
		41	Y-BL				PKA1		K6A1		E1
		16	BL-Y				PKB1		K6B1		M1
		42	Y-O	2	T1	2	MIA2	2		2	T2
		17	O-Y		R1		MIB2				R2
		43	Y-G		T2		POA2		K5A2		TR2
		18	G-Y		R2		POB2		K5B2		RR2
		44	Y-BR				PKA2		K6A2		E2
		19	BR-Y				PKB2		K6B2		M2
1-5	J5	45	Y-S	3	T1	3	MIA3	3		3	T3
1-7	J9	20	S-Y		R1		MIB3				R3
		46	V-BL		T2		POA3		K5A3		TR3
		21	BL-V		R2		POB3		K5B3		RR3
2-3	J25	47	V-O				PKA3		K6A3		E3
		22	O-V				PKB3		K6B3		M3
3-5	J5	48	V-G	4	T1	4	MIA4	4		4	T4
3-7	J9	23	G-V		R1		MIB4				R4
4-5	J5	49	V-BR		T2		POA4		K5A4		TR4
4-7	J9	24	BR-V		R2		POB4		K5B4		RR4
		50	V-S				PKA4		K6A4		E4
		25	S-V				PKB4		K6B4		M4

CONTROL SHELF TIP & RING ASSIGNMENTS (Plug connects to Cross-Connect Field)

TABLE 6-3
PLUG J7, J11, J31 (DIGITAL BAYS 1 THROUGH 4 TIP & RING ASSIGNMENTS)

Bay-Slot	Plug	Pin	Pair	Cct	ONS	Cct	LS/GS
		26	W-BL	1	T1	1	T1
		1	BL-W		R1		R1
		27	W-O	2	T2		MM1
		2	O-W		R2		M1
		28	W-G	3	T3	2	T2
		3	G-W		R3		R2
		29	W-BR	4	T4		MM2
1-2	J7	4	BR-W		R4		M2
1-4	J11	30	W-S	5	T5	3	T3
		5	S-W		R5		R3
		31	R-BL	6	T6		MM3
		6	BL-R		R6		M3
2-2	J31	32	R-O	7	T7	4	T4
		7	O-R		R7		R4
3-2	J7	33	R-G	8	T8		MM4
3-4	J11	8	G-R		R8		M4
4-2	J7	34	R-BR	9	T9	5	T5
4-4	J11	9	BR-R		R9		R5
		35	R-S	10	T10		MM5
		10	S-R		R10		M5
		36	BK-BL	11	T11	6	T6
		11	BL-BK		R11		R6
		37	BK-O	12	T12		MM6
		12	O-BK		R12		M6
		38	BK-G		spare		
		13	G-BK		spare		
		39	BK-BR	1	T1	1	T1
		14	BR-BK		R1		R1
		40	BK-S	2	T2		MM1
		15	S-BK		R2		M1
		41	Y-BL	3	T3	2	T2
		16	BL-Y		R3		R2
		42	Y-O	4	T4		MM2
		17	O-Y		R4		M2
		43	Y-G	5	T5	3	T3
		18	G-Y		R5		R3
1-1	J7	44	Y-BR	6	T6		MM3
1-3	J11	19	BR-Y		R6		M3
		45	Y-S	7	T7	4	T4
		20	S-Y		R7		R4
		46	V-BL	8	T8		MM4
2-1	J31	21	BL-V		R8		M4
		47	V-O	9	T9	5	T5
3-1	J7	22	O-V		R9		R5
3-3	J11	48	V-G	10	T10		MM5
4-1	J7	23	G-V		R10		M5
4-3	J11	49	V-BR	11	T11	6	T6
		24	BR-V		R11		R6
		50	V-S	12	T12		MM6
		25	S-V		R12		M6

TABLE 6-4
POWER FAIL TRANSFER J1 CONNECTIONS

Pin	Pair Color	Lead Designation
26	W–BL	TRUNK R1
1	BL–W	TRUNK T1
27	W–O	TRUNK R2
2	O–W	TRUNK T2
28	W–G	TRUNK R3
3	G–W	TRUNK T3
29	W–BR	TRUNK R4
4	BR–W	TRUNK T4
30	W–S	TRUNK R5
5	S–W	TRUNK T5
31	R–BL	TRUNK R6
6	BL–R	TRUNK T6
32	R–O	TRUNK CARD R1
7	O–R	TRUNK CARD T1
33	R–G	TRUNK CARD R2
8	G–R	TRUNK CARD T2
34	R–BR	TRUNK CARD R3
9	BR–R	TRUNK CARD T3
35	R–S	TRUNK CARD R4
10	S–R	TRUNK CARD T4
36	BK–BL	TRUNK CARD R5
11	BL–BK	TRUNK CARD T5
37	BK–O	TRUNK CARD R6
12	O–BK	TRUNK CARD T6
38	BK–G	SPARE
13	G–BK	SPARE
39	BK–BR	LINE CARD R1
14	BR–BK	LINE CARD T1
40	BK–S	LINE CARD R2
15	S–BK	LINE CARD T2
41	Y–BL	LINE CARD R3
16	BL–Y	LINE CARD T3
42	Y–O	LINE CARD R4
17	O–Y	LINE CARD T4
43	Y–G	LINE CARD R5
18	G–Y	LINE CARD T5
44	Y–BR	LINE CARD R6
19	BR–Y	LINE CARD T6
45	Y–S	STATION R1
20	S–Y	STATION T1
46	V–BL	STATION R2
21	BL–V	STATION T2
47	V–O	STATION R3
22	O–V	STATION T3
48	V–G	STATION R4
23	G–V	STATION T4
49	V–BR	STATION R5
24	BR–V	STATION T5
50	V–S	STATION R6
25	S–V	STATION T6

Note: There are six circuits per PFT card, and up to three PFT cards may be present.

TABLE 6-5
BAY 3, BAY 4, OR BAY 5 EXTERNAL PLUG AND JACK CONNECTIONS

PLUG P1, P1, or P7 (Connects to Cross-Connect Field)

Slot	Cct	Pin	Pair Color	Lead Designation			
				Lines	CO	DID/TIE	E&M†
1	1	26	W-BL	T1	T1	T1	T1
		1	BL-W	R1	R1	R1	R1
	2	27	W-O	T2	XT2		TR1
		2	O-W	R2	XT1		RR1
	3	28	W-G	T3	T2		E1
		3	G-W	R3	R2		M1
	4	29	W-BR	T4			
		4	BR-W	R4			
2	1	30	W-S	T1	T1	T1	T1
		5	S-W	R1	R1	R1	R1
	2	31	R-BL	T2	XT2		TR1
		6	BL-R	R2	XT1		RR1
	3	32	R-O	T3	T2		E1
		7	O-R	R3	R2		M1
	4	33	R-G	T4			
		8	G-R	R4			
3	1	34	R-BR	T1	T1	T1	T1
		9	BR-R	R1	R1	R1	R1
	2	35	R-S	T2	XT2		TR1
		10	S-R	R2	XT1		RR1
	3	36	BK-BL	T3	T2		E1
		11	BL-BK	R3	R2		M1
	4	37	BK-O	T4			
		12	O-BK	R4			
4	1	38		T1	T1	T1	T1
		13		R1	R1	R1	R1
	2	39	BK-BR	T2	XT2		TR1
		14	BR-BK	R2	XT1		RR1
	3	40	BK-S	T3	T2		E1
		15	S-BK	R3	R2		M1
	4	41	Y-BL	T4			
		16	BL-Y	R4			
5	1	42	Y-O	T1	T1	T1	T1
		17	O-Y	R1	R1	R1	R1
	2	43	Y-G	T2	XT2		TR1
		18	G-Y	R2	XT1		RR1
	3	44	Y-BR	T3	T2		E1
		19	BR-Y	R3	R2		M1
	4	45	Y-S	T4			
		20	S-Y	R4			
6	1	46	V-BL	T1	T1	T1	T1
		21	BL-V	R1	R1	R1	R1
	2	47	V-O	T2	XT2		TR1
		22	O-V	R2	XT1		RR1
	3	48	V-G	T3	T2		E1
		23	G-V	R3	R2		M1
	4	49	V-BR	T4			
		24	BR-V	R4			
		50	V-S	SPARE			
		25	S-V	SPARE			

†For 2-wire E&M Trunk operation DO NOT connect RR and TR leads.

TABLE 6-6
BAY 3, BAY 4, OR BAY 5 EXTERNAL PLUG AND JACK CONNECTIONS

PLUG P2, P2, or P8 (Connects to Cross-Connect Field)

Slot	Cct	Pin	Pair Color	Lead Designation			
				Lines	CO	DID/TIE	E&M†
1	5	26	W-BL	T5	T3	T2	T2
		1	BL-W	R5	R3	R2	R2
	6	27	W-O	T6	XT4		TR2
		2	O-W	R6	XT3		RR2
	7	28	W-G	T7	T4		E2
		3	G-W	R7	R4		M2
	8	29	W-BR	T8			
		4	BR-W	R8			
2	5	30	W-S	T5	T3	T2	T2
		5	S-W	R5	R3	R2	R2
	6	31	R-BL	T6	XT4		TR2
		6	BL-R	R6	XT3		RR2
	7	32	R-O	T7	T4		E2
		7	O-R	R7	R4		M2
	8	33	R-G	T8			
		8	G-R	R8			
3	5	34	R-BR	T5	T3	T2	T2
		9	BR-R	R5	R3	R2	R2
	6	35	R-S	T6	XT4		TR2
		10	S-R	R6	XT3		RR2
	7	36	BK-BL	T7	T4		E2
		11	BL-BK	R7	R4		M2
	8	37	BK-O	T8			
		12	O-BK	R8			
4	5	38	BK-G	T5	T3	T2	T2
		13	G-BK	R5	R3	R2	R2
	6	39	BK-BR	T6	XT4		TR2
		14	BR-BK	R6	XT3		RR2
	7	40	BK-S	T7	T4		E2
		15	S-BK	R7	R4		M2
	8	41	Y-BL	T8			
		16	BL-Y	R8			
5	5	42	Y-O	T5	T3	T2	T2
		17	O-Y	R5	R3	R2	R2
	6	43	Y-G	T6	XT4		TR2
		18	G-Y	R6	XT3		RR2
	7	44	Y-BR	T7	T4		E2
		19	BR-Y	R7	R4		M2
	8	45	Y-S	T8			
		20	S-Y	R8			
6	5	46	V-BL	T5	T3	T2	T2
		21	BL-V	R5	R3	R2	R2
	6	47	V-O	T6	XT4		TR2
		22	O-V	R6	XT3		RR2
	7	48	V-G	T7	T4		E2
		23	G-V	R7	R4		M2
	8	49	V-BR	T8			
		24	BR-V	R8			
		50	V-S	SPARE			
		25	S-V	SPARE			

†For 2-wire E&M Trunk operation DO NOT connect RR and TR leads.

TABLE 6-7
BAY 3, BAY 4, OR BAY 5 EXTERNAL PLUG AND JACK CONNECTIONS

PLUG P3, P3, or P9 (Connects to Cross-Connect Field)

Slot	Cct	Pin	Pair Color	Lead Designation			
				Lines	CO	DID/TIE	E&M†
7	1	26	W-BL	T1	T1	T1	T1
		1	BL-W	R1	R1	R1	R1
	2	27	W-O	T2	XT2		TR1
		2	O-W	R2	XT1	\	RR1
	3	28	W-G	T3	T2		E1
		3	G-W	R3	R2		M1
	4	29	W-BR	T4			
		4	BR-W	R4			
8	1	30	W-S	T1	T1	T1	T1
		5	S-W	R1	R1	R1	R1
	2	31	R-BL	T2	XT2		TR1
		6	BL-R	R2	XT1		RR1
	3	32	R-O	T3	T2		E1
		7	O-R	R3	R2		M1
	4	33	R-G	T4			
		8	G-R	R4			
9	1	34	R-BR	T1	T1	T1	T1
		9	BR-R	R1	R1	R1	R1
	2	35	R-S	T2	XT2		TR1
		10	S-R	R2	XT1		RR1
	3	36	BK-BL	T3	T2		E1
		11	BL-BK	R3	R2		M1
	4	37	BK-O	T4			
		12	O-BK	R4			
10	1	38	BK-G	T1	T1	T1	T1
		13	G-BK	R1	R1	R1	R1
	2	39	BK-BR	T2	XT2		TR1
		14	BR-BK	R2	XT1		RR1
	3	40	BK-S	T3	T2		E1
		15	S-BK	R3	R2		M1
	4	41	Y-BL	T4			
		16	BL-Y	R4			
11	1	42	Y-O	T1	T1	T1	T1
		17	O-Y	R1	R1	R1	R1
	2	43	Y-G	T2	XT2		TR1
		18	G-Y	R2	XT1		RR1
	3	44	Y-BR	T3	T2		E1
		19	BR-Y	R3	R2		M1
	4	45	Y-S	T4			
		20	S-Y	R4			
12	1	46	V-BL	T1	T1	T1	T1
		21	BL-V	R1	R1	R1	R1
	2	47	V-O	T2	XT2		TR1
		22	O-V	R2	XT1		RR1
	3	48	V-G	T3	T2		E1
		23	G-V	R3	R2		M1
	4	49	V-BR	T4			
		24	BR-V	R4			
		50	V-S	SPARE			
		25	S-V	SPARE			

†For 2-wire E&M Trunk operation DO NOT connect RR and TR leads.

TABLE 6-8
BAY 3, BAY 4, OR BAY 5 EXTERNAL PLUG AND JACK CONNECTIONS

PLUG P4, P4, or P10 (Connects to Cross-Connect Field)

Slot	Cct	Pin	Pair Color	Lead Designation			
				Lines	CO	DID/TIE	E&M†
7	5	26	W-BL	T5	T3	T2	T2
		1	BL-W	R5	R3	R2	R2
	6	27	W-O	T6	XT4		TR2
		2	O-W	R6	XT3		RR2
	7	28	W-G	T7	T4		E2
		3	G-W	R7	R4		M2
	8	29	W-BR	T8			
		4	BR-W	R8			
8	5	30	W-S	T5	T3	T2	T2
		5	S-W	R5	R3	R2	R2
	6	31	R-BL	T6	XT4		TR2
		6	BL-R	R6	XT3		RR2
	7	32	R-O	T7	T4		E2
		7	O-R	R7	R4		M2
	8	33	R-G	T8			
		8	G-R	R8			
9	5	34	R-BR	T5	T3	T2	T2
		9	BR-R	R5	R3	R2	R2
	6	35	R-S	T6	XT4		TR2
		10	S-R	R6	XT3		RR2
	7	36	BK-BL	T7	T4		E2
		11	BL-BK	R7	R4		M2
	8	37	BK-O	T8			
		12	O-BK	R8			
10	5	38	BK-G	T5	T3	T2	T2
		13	G-BK	R5	R3	R2	R2
	6	39	BK-BR	T6	XT4		TR2
		14	BR-BK	R6	XT3		RR2
	7	40	BK-S	T7	T4		E2
		15	S-BK	R7	R4		M2
	8	41	Y-BL	T8			
		16	BL-Y	R8			
11	5	42	Y-O	T5	T3	T2	T2
		17	O-Y	R5	R3	R2	R2
	6	43	Y-G	T6	XT4		TR2
		18	G-Y	R6	XT3		RR2
	7	44	Y-BR	T7	T4		E2
		19	BR-Y	R7	R4		M2
	8	45	Y-S	T8			
		20	S-Y	R8			
12	5	46	V-BL	T5	T3	T2	T2
		21	BL-V	R5	R3	R2	R2
	6	47	V-O	T6	XT4		TR2
		22	O-V	R6	XT3		RR2
	7	48	V-G	T7	T4		E2
		23	G-V	R7	R4		M2
	8	49	V-BR	T8			
		24	BR-V	R8			
		50	V-S	SPARE			
		25	S-V	SPARE			

†For 2-wire E&M Trunk operation DO NOT connect RR and TR leads.

TABLE 6-9
BAY 3 OR BAY 4 INTERCONNECT CARD PLUG AND JACK CONNECTIONS

PLUG P19 ON INTERCONNECT CARD (Miscellaneous Connections to Cross-Connect Field)

Slot	Cct	Pin	Pair Color	Lead Designation			
				Lines	CO	DID/TIE	E&M†
		26	SPARE				
		1	SPARE				
15	8	27	W-O	T8			
		2	O-W	R8			
	7	28	W-G	T7	T4		E2
		3	G-W	R7	R4		M2
	6	29	W-BR	T6	XT3		TR2
		4	BR-W	R6	XT4		RR2
	5	30	W-S	T5	T3	T2	T2
		5	S-W	R5	R3	R2	R2
14	8	31	R-BL	T8			
		6	BL-R	R8			
	7	32	R-O	T7	T4		E2
		7	O-R	R7	R4		M2
	6	33	R-G	T6	XT3		TR2
		8	G-R	R6	XT4		RR2
	5	34	R-BR	T5	T3	T2	T2
		9	BR-R	R5	R3	R2	R2
13	8	35	R-S	T8			
		10	S-R	R8			
	7	36	BK-BL	T7	T4		E2
		11	BL-BK	R7	R4		M2
	6	37	BK-O	T6	XT3		TR2
		12	O-BK	R6	XT4		RR2
	5	38	BK-G	T5	T3	T2	T2
		13	G-BK	R5	R3	R2	R2
15	4	39	BK-BR	T4			
		14	BR-BK	R4			
	3	40	BK-S	T3	T2		E1
		15	S-BK	R3	R2		M1
	2	41	Y-BL	T2	XT1		TR1
		16	BL-Y	R2	XT2		RR1
	1	42	Y-O	T1	T1	T1	T1
		17	O-Y	R1	R1	R1	R1
14	4	43	Y-G	T4			
		18	G-Y	R4			
	3	44	Y-BR	T3	T2		E1
		19	BR-Y	R3	R2		M1
	2	45	Y-S	T2	XT1		TR1
		20	S-Y	R2	XT2		RR1
	1	46	V-BL	T1	T1	T1	T1
		21	BL-V	R1	R1	R1	R1
13	4	47	V-O	T4			
		22	O-V	R4			
	3	48	V-G	T3	T2		E1
		23	G-V	R3	R2		M1
	2	49	V-BR	T2	XT1		TR1
		24	BR-V	R2	XT2		RR1
	1	50	V-S	T1	T1	T1	T1
		25	S-V	R1	R1	R1	R1

†For 2-wire E&M Trunk operation DO NOT connect RR and TR leads.

TABLE 6-10
BAY 3 OR BAY 4 POWER FAIL TRANSFER CARD PLUG AND JACK CONNECTIONS

PLUG P20
(Power Fail Transfer Connections to Cross-Connect Field)

PLUGS P21, P21
(Power Fail Transfer Connections to Cross-Connect Field)

Pin	Pair Color	Lead Designation		Pin	Pair Color	Lead Designation
26	W-BL	STATION T1		26	W-BL	STATION T7
1	BL-W	STATION R1		1	BL-W	STATION R7
27	W-O	LINE CARD T1		27	W-O	LINE CARD T7
2	O-W	LINE CARD R1		2	O-W	LINE CARD R7
28	W-G	TRUNK T1		28	W-G	TRUNK T7
3	G-W	TRUNK R1		3	G-W	TRUNK R7
29	W-BR	TRUNK CARD T1		29	W-BR	TRUNK CARD T7
4	BR-W	TRUNK CARD R1		4	BR-W	TRUNK CARD R7
30	W-S	STATION T2		30	W-S	STATION T8
5	S-W	STATION R2		5	S-W	STATION R8
31	R-BL	LINE CARD T2		31	R-BL	LINE CARD T8
6	BL-R	LINE CARD R2		6	BL-R	LINE CARD R8
32	R-O	TRUNK T2		32	R-O	TRUNK T8
7	R-O	TRUNK R2		7	R-O	TRUNK R8
33	R-G	TRUNK CARD T2		33	R-G	TRUNK CARD T8
8	G-R	TRUNK CARD R2		8	G-R	TRUNK CARD R8
34	R-BR	STATION T3		34	R-BR	STATION T9
9	BR-R	STATION R3		9	BR-R	STATION R9
35	R-S	LINE CARD T3		35	R-S	LINE CARD T9
10	S-R	LINE CARD R3		10	S-R	LINE CARD R9
36	BK-BL	TRUNK T3		36	BK-BL	TRUNK T9
11	BL-BK	TRUNK R3		11	BL-BK	TRUNK R9
37	BK-O	TRUNK CARD T3		37	BK-O	TRUNK CARD T9
12	O-BK	TRUNK CARD R3		12	O-BK	TRUNK CARD R9
38	BK-G	STATION T4		38	BK-G	STATION T10
13	G-BK	STATION R4		13	G-BK	STATION R10
39	BK-BR	LINE CARD T4		39	BK-BR	LINE CARD T10
14	BR-BK	LINE CARD R4		14	BR-BK	LINE CARD R10
40	BK-S	TRUNK T4		40	BK-S	TRUNK T10
15	S-BK	TRUNK R4		15	S-BK	TRUNK R10
41	Y-BL	TRUNK CARD T4		41	Y-BL	TRUNK CARD T10
16	BL-Y	TRUNK CARD R4		16	BL-Y	TRUNK CARD R10
42	Y-O	STATION T5		42	Y-O	STATION T11
17	O-Y	STATION R5		17	O-Y	STATION R11
43	Y-G	LINE CARD T5		43	Y-G	LINE CARD T11
18	G-Y	LINE CARD R5		18	G-Y	LINE CARD R11
44	Y-BR	TRUNK T5		44	Y-BR	TRUNK T11
19	BR-Y	TRUNK R5		19	BR-Y	TRUNK R11
45	Y-S	TRUNK CARD T5		45	Y-S	TRUNK CARD T11
20	S-Y	TRUNK CARD R5		20	S-Y	TRUNK CARD R11
46	V-BL	STATION T6		46	V-BL	STATION T12
21	BL-V	STATION R6		21	BL-V	STATION R12
47	V-O	LINE CARD T6		47	V-O	LINE CARD T12
22	O-V	LINE CARD R6		22	O-V	LINE CARD R12
48	V-G	TRUNK T6		48	V-G	TRUNK T12
23	G-V	TRUNK R6		23	G-V	TRUNK R12
49	V-BR	TRUNK CARD T6		49	V-BR	TRUNK CARD T12
24	BR-V	TRUNK CARD R6		24	BR-V	TRUNK CARD R12
50	V-S	SPARE		50	V-S	SPARE
25	S-V	SPARE		25	S-V	SPARE

7. UPGRADING AN EXISTING SX-200® PABX TO AN SX-200® DIGITAL PABX

Strategy

7.01 The control cabinet will be installed beside the existing SX-200® DIGITAL PABX cabinet, equipped with the new attendant console, new stations, trunks, or features for Bays, 1, 2 or 3, and powered up. All testing can be completed and the new database entered with CDE, including all equipment in the existing SX-200® system. The existing SX-200® DIGITAL PABX is then reconfigured as a Peripheral cabinet and added to the SX-200® DIGITAL PABX Control cabinet. This procedure assumes that most of the existing stations and trunks will remain the same in the peripheral cabinet, and that expansion will be provided by the control cabinet. All reassignments and wiring changes will be performed at the time of installation.

General Comments

7.02 The following special circuits must be disconnected from the SX-200® DIGITAL PABX and connected to the SX-200® DIGITAL PABX at the cross-connect field during final cutover:

- Music on hold source

- Paging voice lines

- Paging control lines

- Night bell control lines.

7.03 The following SX-200® DIGITAL PABX (Peripheral Cabinet) connections are not used after an upgrade to SX-200® DIGITAL PABX:

- Console connections, including connector on maintenance panel.

- Test line terminals (still connected to Bay 4, Slot 1, Circuit 1)

- Special connections described above (now connect to Control cabinet cables)

- RMATS modem or modules

- Recorded Announcement Cards (RAC).

CHART 7-1
SX-200® PABX UPGRADE TO SX-200® DIGITAL PABX

Step	Action	Comments
1.	Unpack the Control cabinet and place it in its assigned location following the installation charts in Part 5 of this Section.	
2.	Relocate the #6 AWG system ground to the common ground stud in the control cabinet. Concurrently install the PCM cable between the cabinets connecting the braid to the ground stud in each cabinet. Do not connect the signal part of the PCM cable.	**NOTE:** Connect a temporary jumper between the SX-200® cabinet and the ground wire so that an electrical connection is continuously maintained between the PABX and the building ground (to keep ground start trunks operational). Since the connection is for only a few minutes, lighter wire, such as #14, may be used.
3.	Install the control cabinet as a stand-alone installation, following the instructions in Part 5 of this Section.	
4.	Install the attendant console, maintenance terminal, stations, and at least one trunk, and make the PABX operational.	The stations may be located alongside the Digital PABX, for ease of testing, and to minimize disruption to the existing PABX.
5.	Add the existing stations, trunks and related features, COS, COR, and other information to the SX-200® DIGITAL PABX database.	To minimize wiring changes, keep existing station and trunk connections the same for both systems.
6.	At a period of no traffic, complete the upgrade as follows.	
7.	Power down the SX-200® DIGITAL PABX system, including its reserve power supply if equipped, and remove the line cord from the wall receptacle.	It is not necessary to power down the Control cabinet.
8.	While wearing the antistatic wrist strap, remove the following printed circuit boards and pack them in antistatic bags and PCB shipping cartons: Console, RCP, Tone, IPC, memory (if present in position 21 or 22), Receiver, RAD, RAC.	Existing station and trunk cards, and the Scanner card remain in their present positions.
9.	From the rear of the cabinet, remove the following: console cables, intershelf jumpers P101 and P102, printer cable, console interface boards.	To remove the console interface boards it is necessary to loosen the shelf and move it forward to access the screws in the boards.
10.	Connect the printer cable, if present, to J29 on the Control Shelf backplane.	

CHART 7-1 (CONT'D)
SX-200® PABX UPGRADE TO SX-200® DIGITAL PABX

Step	Action	Comments
11.	Remove all existing consoles from the system and repack them.	
12.	If peripheral shelf card assignments are to be changed, reposition the cards at this time.	
13.	Continue with the installation by following the charts for installing a peripheral cabinet (Bays 4 and 5). **NOTE:** Many of the steps can be skipped since the cabinet and cables are in place and have been working. The main steps are to add the new cards, PCM cables, and miscellaneous features such as Music on Hold, Paging, and Night Bells.	To minimize wiring changes, it is recommended that existing station and trunk assignments in the peripheral cabinet not be changed at this time.

APPENDIX A

FCC INTERCONNECTION REQUIREMENTS

TELEPHONE COMPANY INTERCONNECTION

General

A1.01 This equipment has been approved by the Federal Communications Commission (FCC) as not being harmful to the telephone network when connected directly to the telephone lines through the standard 50-pin blue ribbon prescribed by the FCC Rule. This Section is applicable to telephone interconnection in the United States.

Notification

A1.02 Prior to the interconnection of this equipment, the local telephone company is to be notified; inform the company that you have FCC-registered equipment which you wish to connect to their trunks. Give them the following information:

- The PABX being connected is a MITEL Incorporated Model SX-200® DIGITAL PABX.

- The 14-digit FCC Registration Number for the SX-200® DIGITAL PABX is BN285B64724MFE.

- The Ringer Equivalence number which is 2.1B.

- The jacks or connectors required are RJ21X, RJ2EX or RJ2GX as shown in Table A1-1.

Connection Limitations

A1.03 Due to the FCC Part 68 Rule, no connection can be made to party lines and to coin telephone service.

Network Changes

A1.04 The telephone company may make changes to its communication service; such changes may include the change of trunk circuits, changes in the operational characteristics of its trunk, etc. Before doing this, however, the company shall provide official notification, so that the operation of the PABX service will not be interrupted.

Maintenance Limitation

A1.05 This equipment has been registered with the FCC for direct connection to the telephone network. Under the FCC Program, the user is restricted from making any changes or repairs and from

performing any maintenance operations other than those specifically included in this Standard Practice.

A1.06 Circuit cards may be removed by the user; however, replacement cards are to be supplied only by MITEL or its authorized agent. No field repair of circuit cards by the user is authorized.

A1.07 No cabling or wiring changes within the console are permitted by the user. Plug-ended cables, as detailed in this Standard Practice, are to be used for all external connections between the console and the telephone company interface jack.

A1.08 Power supply components and cabling is only to be changed or maintained by MITEL or by an authorized agent of MITEL.

Trouble Corrections

A1.09 Most troubles are diagnosed by the circuitry of the system, and the console readout idicates the circuit and card that is malfunctioning. Card replacement can be made by the user.

A1.10 For more complex malfunction, appropriate field service is provided by MITEL or its authorized agents.

TABLE A1-1
USOC CONNECTOR PIN DESIGNATIONS

Pin	Pair Colour	RJ21X	RJ2EX	RJ2GX	Pin	Pair Colour	RJ21X	RJ2EX	RJ2GX
26	W-BL	T	T	T	38	BK-G	T	T	T
1	BL-W	R	R	R	13	G-BK	R	R	R
27	W-O	T	E	T1	39	BK-BR	T	E	T1
2	O-W	R	M	R1	14	BR-BK	R	M	R1
28	W-G	T	T	E	40	BK-S	T	T	E
3	G-W	R	R	M	15	S-BK	R	R	M
29	W-BR	T	E	T	41	Y-BL	T	E	T
4	BR-W	R	M	R	16	BL-Y	R	M	R
30	W-S	T	T	T1	42	Y-O	T	T	T1
5	S-W	R	R	R1	17	O-Y	R	R	R1
31	R-BL	T	E	E	43	Y-G	T	E	E
6	BL-R	R	M	M	18	G-Y	R	M	M
32	R-O	T	T	T	44	Y-BR	T	T	T
7	O-R	R	R	R	19	BR-Y	R	R	R
33	R-G	T	E	T1	45	Y-S	T	E	T1
8	G-R	R	M	R1	20	S-Y	R	M	R1
34	R-BR	T	T	E	46	V-BL	T	T	E
9	BR-R	R	R	M	21	BL-V	R	R	M
35	R-S	T	E	T	47	V-O	T	E	T
10	S-R	R	M	R	22	O-V	R	M	R
36	BK-BL	T	T	T1	48	V-G	T	T	T1
11	BL-BK	R	R	R1	23	G-V	R	R	R1
37	BK-O	T	E	E	49	V-BR	T	E	E
12	O-BK	R	M	M	24	BR-V	R	M	M
					50	V-S	SPARE		
					25	S-V	SPARE		

Remarks

The types of Universal Service Order Code (USOC) connectors shown have pin designation according to type of interface required by the Telephone Company. Use of these connectors ar determined as follows:

RJ2IX: 2-wire loop, or ground start trunk
2-wire reverse battery (DID)
2-wire off-premises extension
(Class A through E)
2-wire Automatic Identified Outward
Dialing (AIOD)
2-wire message register

RJ2EX: 2-wire tie trunk with E and M Type I signaling

RJ2GX: 4-wire tie trunk with E and M Type I signaling

SX-200® DIGITAL

PRIVATE AUTOMATIC BRANCH EXCHANGE (PABX)

INSTALLATION FORMS

i

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LIST OF ILLUSTRATIONS

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LIST OF CHARTS

1. INTRODUCTION

General

1.01 This document contains the forms required to install and prc gram the SX-200® DIGITAL PABX with Generic 1000 or Gener 1001 software. Note that these forms are not an exact replica of th forms displayed on the CDE terminal. Note also that those forms whic cannot be edited are not included in this Section; specifically, Revie List for Form 09, Review List for Form 13, Review List for Form 29, ar Form 31, CDE Data Print. This document is used as an installer's guid therefore a comprehensive knowledge of Sectic MITL9108-093-210-NA, Customer Data Entry and Sectic MITL9108-093-200-NA, Shipping, Receiving and Installation Informa tion is required before these forms are completed.

1.02 Certain features require more than one COS Option setting. 1 ensure the correct operation of all features, these forms shou be completed in accordance with the information contained in Sectic MITL9108-093-105-NA, Features Description.

Reason for Reissue

1.03 This is a reissue of Section MITL9108-093-206-NA, Installatic Forms, to include the 336-port and 480-port configuration.

Section Overview

1.04 This Section is divided into four subsequent Parts as describe below:

1. Part 2 – System Initialization

2. Part 3 – Customer Data Entry Forms

3. Part 4 – Trunk Card Switch Assignment Forms

4. Part 5 – Cabling and Cross-Connection Forms.

2. SYSTEM INITIALIZATION

General

2.01 When the system is first installed, the default data must be loaded into the system. Refer to Chart 2-1, Initial Power-up Procedures From the Terminal, Chart 2-2, Initial Power-up Procedures From the Attendant Console and refer to Section MITL9108-093-200-NA, Shipping, Receiving, and Installation Information for details.

CHART 2-1
INITIAL POWER-UP PROCEDURES FROM THE TERMINAL

1. Ensure that the correct Decryption Module is installed. Refer to Section MITL9108-093-200-NA, Shipping, Receiving, and Installation Information.

2. Turn power supplies ON.

3. Insert the diskette in the Bay 2 disk drive. Refer to the illustration on the disk drive door for the correct diskette orientation.

4. Close the disk drive door. The disk drive should begin to operate. If not, depress the System Reset button on the Master Control Card.

5. Power-up or reset the terminal.

6. Press the RETURN key; the terminal display returns the following:

   1 - VT-100 COMPATIBLE
   2 - TTY TYPE
   SELECT A TERMINAL TYPE :

7. Select the terminal type by entering "1". The display returns the following:

   1 - MAINTENANCE
   2 - CDE
   6 - QUIT
   SELECT AN APPLICATION (OR QUIT TO START OVER) :

8. Select the Customer Data Entry application by entering "2". The display returns the following:

   ENTER USERNAME :

9. Enter the INSTALLER level of access. The display returns the following:

   ENTER PASSWORD :

10. Enter the required password to gain Customer Data Entry access. The password is defined in Form 27, Form Access Restriction Definition. The default password is 1000. If the correct password is entered, then the display returns the following:

    PLEASE WAIT... and then shows the system's forms. Refer to Table 3-1, Available Forms.

CHART 2-2
INITIAL POWER-UP PROCEDURES FROM THE ATTENDANT CONSOLE

1. Repeat Steps 1 to 4 from Chart 2-1, Initial Power-up Procedures from the Terminal.

2. All LEDs on the console light and the LCD displays the following on two rows:

   ▯

   —

3. If the HOLD 1 LED flashes then the RAM Test failed. If the HOLD 2 LED flashes, then the EPROM Test failed. If the HOLD 3 LED flashes, then the IRQ Interrupt Test failed. Refer to Section MITL9108-093-350-NA, Troubleshooting and Section MITL9108-093-353-NA, General Maintenance Information for details.

4. The Attendant Console LEDs go dark and the LCD now displays the console EPROM version in the top right corner.

5. If any one of the following messages appear on the LCD, then refer to Section MITL9108-093-350-NA, Troubleshooting and Section MITL9108-093-353-NA, General Maintenance Information:

   CONSOLE HARDWARE PROBLEM
   ERROR CODE 1
   PLEASE NOTE DETAILS ON REPAIR TAG

6. While the system establishes communication with the Attendant Console, the LCD displays **NO COMMUNICATION.** If communication is not established within 5 seconds, then the LCD displays the following:

   POSSIBLE WIRING ERROR OR SYSTEM FAILURE
   CHECK FOR CROSSED PAIRS
   CHECK CUSTOMER DATA ENTRY

7. Once communication is established, the Attendant Console LCD displays the following:

TUE. JUN 3, 1986				14:12
				NIGHT 1
[F1 >	[F2 >	[F3 >	[F4 >	[F5 >
[F6 >	[F7 >	[F8 >	[F9 >	[F0 >

8. Press the FUNCTION key; the console LCD returns the following:

TUE. JUN 3, 1986				14:12
				NIGHT 1
[F1 > EXIT	[F2 >ATT FUNCTION	[F3 >DAY SERVICE	[F4 >NIGHT 2	[F5 >
[F6 >APPLICATION	[F7 >	[F8 > BELL OFF	[F9 >	[F0 > IDENTITY

9. Press the APPLICATION softkey; the console LCD returns the following:

   Choose An Application OR Depress A Hard Key to Return

[F1 >MAINTENANCE	[F2 >CDE	[F3 >	[F4 >	[F5 >
[F6 >	[F7 >	[F8 >	[F9 >	[F0 >

10. Press the CDE softkey; the console LCD returns the following:

    Choose a Username ...

[F1 >INSTALLER	[F2 >MAINT1	[F3 >MAINT2	[F4 >SUPERVISOR	[F5 >ATTENDANT
[F6 >	[F7 >	[F8 >	[F9 >	[F0 >

CHART 2-2 (CONT'D)
INITIAL POWER-UP PROCEDURES FROM THE ATTENDANT CONSOLE

11. Press the INSTALLER softkey; the console LCD returns the following:

   Enter Password :
   [F1 >   [F2 >   [F3 >   [F4 >   [F5 >
   [F6 >   [F7 >   [F8 >   [F9 >   [F0 >ENTER

12. Enter the required password and press the ENTER softkey to gain Customer Data Entry access. The password is defined in Form 27, Form Access Restriction Definition. The default password is 1000. If the correct password is entered, then the Attendant Console LCD returns the following:

                              FORMS
          01 = SYSTEM CONFIGURATION   02 = FEATURE ACCESS CODES
          ENTER FORM NUMBER: _
      [F6 >QUIT   [F7 >TOP   [F8 >BOTTOM   [F9 >   [F0 >ENTER

3. CUSTOMER DATA ENTRY FORMS

General

3.01 The following forms enable the installer to configure the system prior to the initial system power-up sequence. Space is allocated to record the customer data. Table 3-1 lists the available forms for the Customer Data Entry package. Special notes for each form appear at the end of the form.

TABLE 3-1
AVAILABLE FORMS

FORMS	
01 = SYSTEM CONFIGURATION	02 = FEATURE ACCESS CODES
03 = COS DEFINE	04 = SYSTEM OPTIONS/SYSTEM TIMERS
05 = TENANT INTERCONNECTION TABLE	06 = TENANT NIGHT SWITCHING CONTROL
07 = CONSOLE ASSIGNMENTS	08 = ATTENDANT LDN ASSIGNMENTS
09 = STATIONS/SUPERSET® SETS	10 = PICKUP GROUPS
11 = RESERVED	12 = RESERVED
13 = TRUNK CIRCUIT DESCRIPTORS	14 = NON-DIAL-IN TRUNKS
15 = DIAL-IN TRUNKS	16 = TRUNK GROUPS
17 = HUNT GROUPS	18 = MISCELLANEOUS SYSTEM PORTS
19 = CALL REROUTING TABLE	20 = ARS: COR GROUP DEFINITION
21 = ARS: DAY ZONE DEFINITION	22 = ARS MODIFIED DIGIT TABLE
23 = ARS: ROUTE DEFINITION	24 = ARS: ROUTE LISTS
25 = ARS: ROUTE PLANS	26 = ARS: DIGIT STRINGS
27 = FORM ACCESS RESTRICTION DEF'N	28 = RESERVED
29 = DEVICE INTERCONNECTION TABLE **	30 = SYSTEM ABBREVIATED DIAL ENTRY **
31 = CDE DATA PRINT **	32 = ACCOUNT CODE ENTRY **

* **Generic 1000**   ** **Generic 1001**

TABLE 3-2
FORM 01 - SYSTEM CONFIGURATION

SHEET 1 OF 4

BAY	SLT	CCT	PROGRAMMED	COMMENTS
1	1	–		
1	2	–		
1	3	–		
1	4	–		
1	5	1		
1	5	2		
1	5	3		
1	5	4		
1	6	1		
1	6	2		
1	6	3		
1	6	4		
1	7	1		
1	7	2		
1	7	3		
1	7	4		
1	8	1		
1	8	2		
1	8	3		
1	8	4		
2	1	–		
2	2	–		
2	3	1		
2	3	2		
2	3	3		
2	3	4		
2	4	1		
2	4	2		
2	4	3		
2	4	4		
3	1	–		
3	2	–		
3	3	–		
3	4	–		
3	5	–		
3	6	–		

BAY	SLT	CCT	PROGRAMMED	COMMENTS
3	7	–		
3	8	–		
3	9	–		
3	10	–		
3	11	–		
3	12	–		
3	13	–		
3	14	–		
3	15	–		
4	1	–		
4	2	–		
4	3	–		
4	4	–		
4	5	–		
4	6	–		
4	7	–		
4	8	–		
4	9	–		
4	10	–		
4	11	–		
4	12	–		
4	13	–		
4	14	–		
4	15	–		
5	1	–		
5	2	–		
5	3	–		
5	4	–		
5	5	–		
5	6	–		
5	7	–		
5	8	–		
5	9	–		
5	10	–		
5	11	–		
5	12	–		

TABLE 3-2 (CONT'D)
FORM 01 - SYSTEM CONFIGURATION
480-PORT CONFIGURATION

SHEET 2 OF 4

BAY	SLT	CCT	PROGRAMMED	COMMENTS
1	1	-		
1	2	-		
1	3	-		
1	4	-		
1	5	1		
1	5	2		
1	5	3		
1	5	4		
1	6	1		
1	6	2		
1	6	3		
1	6	4		
1	7	1		
1	7	2		
1	7	3		
1	7	4		
1	8	1		
1	8	2		
1	8	3		
1	8	4		
2	1	-		
2	2	-		
2	3	1		
2	3	2		
2	3	3		
2	3	4		
2	4	1		
2	4	2		
2	4	3		
2	4	4		
3	1	-		
3	2	-		
3	3	-		
3	4	-		
3	5	-		
3	6	-		

BAY	SLT	CCT	PROGRAMMED	COMMENTS
3	7	-		
3	8	-		
3	9	-		
3	10	-		
3	11	-		
3	12	-		
3	13	-		
3	14	-		
3	15	-		
4	1	-		
4	2	-		
4	3	-		
4	4	-		
4	5	-		
4	6	-		
4	7	-		
4	8	-		
4	9	-		
4	10	-		
4	11	-		
4	12	-		
4	13	-		
4	14	-		
4	15	-		
5	1	-		
5	2	-		
5	3	-		
5	4	-		
5	5	-		
5	6	-		
5	7	-		
5	8	-		
5	9	-		
5	10	-		
5	11	-		
5	12	-		

TABLE 3-2 (CONT'D)
FORM 01 - SYSTEM CONFIGURATION
336-PORT CONFIGURATION

BAY	SLT	CCT	PROGRAMMED	COMMENTS
1	1	-		
1	2	-		
1	3	-		
1	4	-		
1	5	1		
1	5	2		
1	5	3		
1	5	4		
1	6	1		
1	6	2		
1	6	3		
1	6	4		
1	7	1		
1	7	2		
1	7	3		
1	7	4		
1	8	1		
1	8	2		
1	8	3		
1	8	4		
2	1	-		
2	2	-		
2	3	1		
2	3	2		
2	3	3		
2	3	4		
2	4	1		
2	4	2		
2	4	3		
2	4	4		
3	1	-		
3	2	-		
3	3	-		
3	4	-		

BAY	SLT	CCT	PROGRAMMED	COMMENTS
3	5	1		
3	5	2		
3	5	3		
3	5	4		
3	6	1		
3	6	2		
3	6	3		
3	6	4		
3	7	1		
3	7	2		
3	7	3		
3	7	4		
3	8	1		
3	8	2		
3	8	3		
3	8	4		
4	1	-		
4	2	-		
4	3	-		
4	4	-		
4	5	1		
4	5	2		
4	5	3		
4	5	4		
4	6	1		
4	6	2		
4	6	3		
4	6	4		
4	7	1		
4	7	2		
4	7	3		
4	7	4		
4	8	1		
4	8	2		
4	8	3		
4	8	4		

TABLE 3-2 (CONT'D)
FORM 01 - SYSTEM CONFIGURATION

Notes: 1. Enter the card type in the PROGRAMMED column. Most slots have no circuit designations (represented by a "-" in the CCT column), as the cards for these slots have identical circuit types.

2. Those slots with circuit designations are high powered slots. The Universal Card must be installed in one of these high powered slots. The circuit designations indicate the four module positions on the Universal Card.

3. The Attendant Console default location is Bay 2, Slot 3, Circuit 1. The Test Line default location is Bay 2, Slot 1, Circuit 1. The Test Line location cannot be modified.

TABLE 3-3
FORM 02 – FEATURE ACCESS CODES

SHEET 1 OF 2

Number	Feature Name	Assigned Access Code
01	Account Code Access	
02	Auto-Answer Activation	
03	Call Forwarding – Busy	
04	Call Forwarding – Don't Answer	
05	Call Forwarding – Busy/Don't Answer	
06	Call Forwarding – Follow Me	
07	Call Forwarding – I'm Here	
08	Dial Call Pickup	
09	Directed Call Pickup	
10	Do Not Disturb	
11	Extension General Attendant Access	
12	Paging Access to Default Zone(s)	
13	Paging Access to Specific Zones	
14	TAFAS – Any	
15	TAFAS – Local Tenant	
16	Hold Pickup Access (Attendant Hold Slots)	
17	Console Lockout Access Code	
18	Maintenance Function (Test Line)	
19	Direct Inward System Access	
20	Callback Busy (Single Digit)	
21	Call Hold	
22	Call Hold Retrieve (Local)	
23	Call Hold Retrieve (Remote)	
24	Abbreviated Dialing Access	
25	Clear All Features	
26	SUPERSET 4™ Set Loopback Test	
27	Tone Demonstration	
28	RESERVED	
29	RESERVED	
30	Executive Busy Override (single digit)	
31 **	Automatic Wake-Up	

TABLE 3-3 (CONT'D)
FORM 02 - FEATURE ACCESS CODES

SHEET 2 OF 2

Number	Feature Name	Assigned Access Code
32 **	Call Park	
33 **	Node ID	
34 **	Maid in Room	
35 **	SUPERSET 4™ Set Room Status Display	
36 **	Direct to ARS	

* Generic 1000   ** Generic 1001

Notes: 1. Specify the Feature Access Code in the Assigned Access Code column.

2. Feature Access Codes can be a maximum of five digits (except for the Callback Busy Access Code and the Executive Busy Override Access Code which are only one digit).

3. The Feature Access Codes may not have a level conflict with any other access code in the system. That is ARS Leading Digits and Feature Access Codes cannot be a subset of any other access code in the system software. The system uses System Option 39, Dialing Conflict Timer, to resolve level conflicts. The user must include the appropriate delay in the dialing sequence.

TABLE 3-4
FORM 03 - CLASS-OF-SERVICE OPTIONS   SHEET __ OF __

		ATTENDANT-RELATED									
		Class-of-Service Number (1 → 50)									
Option Number	**Class-of-Service Option Name**	_1	_2	_3	_4	_5	_6	_7	_8	_9	_0
		Class-of-Service Status									
100	Attendant Bell-Off										
101 **	Attendant O/G Restriction/Room Status Setup										
102	Attendant Display of System Alarms										
103	Attendant DISA Code Setup										
104	Attendant Flexible Night Service Setup										
105 **	Attendant Guest Room Key										
106	Attendant New Call Tone										
107	Attendant Call Forward - No Answer										
108	RESERVED										
109	Attendant Serial Call										
110	Attendant Abbreviated Dialing Confidential Number Display										
111	Attendant Abbreviated Programming										
112	Attendant Station Busy-Out										
113 **	Attendant Call Block Key										
114	Attendant Trunk Busy-Out										
115	Attendant-Timed Recall (NO ANSWER) 10 → 60 Seconds Default is 30 Seconds										
116	Attendant-Timed Recall (HOLD) 10 → 60 Seconds Default is 30 Seconds										
117	Attendant-Timed Recall (CAMP-ON) 10 → 60 Seconds Default is 30 Seconds										
118	Attendant Automatic Call Forward - No Answer Timer 10 → 60 Seconds Default is 30 Seconds										
119 **	Attendant Tone Signaling on Trunks										
	STATION/SUPERSET® - RELATED										
200	Account Code, Forced Entry - External Calls										
201	Account Code, Forced Entry - Long Distance Calls										
202	Alarm Call										
203	Broker's Call										
204 **	Call Block Applies (Room to Room)										
205 *	SUPERSET® Set Headset Operation										
205 **	Call Distribution Agent Position										
206	Call Forwarding - Busy										
207	Call Forwarding - Don't Answer										
208	Call Forwarding - External										
209	Call Forwarding - Follow Me										

* Generic 1000   ** Generic 1001

TABLE 3-4 (CONT'D)
FORM 03 - CLASS-OF-SERVICE OPTIONS

SHEET __ OF __

Option Number	Class-of-Service Option Name	Class-of-Service Number (1 → 50)									
		__1	__2	__3	__4	__5	__6	__7	__8	__9	__0
		Class-of-Service Status									
210	Call Forwarding Inhibit on Dial-In Trunks										
211	Call Hold and Retrieve Access										
212	Can Flash if Talking to an Incoming Trunk										
213	Can Flash if Talking to an Outgoing Trunk										
214	Cannot Dial a Trunk After Flashing										
215	Cannot Dial a Trunk if Holding or Conferencing with A Trunk										
216	Data Security										
217 *	RESERVED										
217 **	Direct to ARS										
218	Directed Call Pickup										
219	Discriminating Dial Tone										
220	Do Not Disturb										
221	Clear All Features										
222 *	EXT NON-CO Trunk to Trunk Connect										
222 **	RESERVED										
223	Flash Disable										
224	Flash for Attendant										
225	Hold Pickup (Attendant Paged Access)										
226	Inward Restriction (DID)										
227	Lockout Alarm Applies										
228	Manual Line										
229	Message Registar Applies										
230 **	Message Register Overflow Alarm										
231	Message Waiting Setup - Bell										
232	Message Waiting Setup - Lamp										
233	Never a Consultee										
234	Never a Forwardee										
235	Originate Only										
236	Outgoing Trunk Callback										
237	Outgoing Trunk Camp-on										
238	Override Security										
239	Priority Dial 0										
240	Privacy Disable										
241	Receive Only										
242	Repeated Camp-on Beeps										

STATION/SUPERSET® - RELATED (CONT'D)

* Generic 1000   ** Generic 1001

TABLE 3-4 (CONT'D)
FORM 03 - CLASS-OF-SERVICE OPTIONS

SHEET __ OF __

Option Number	Class-of-Service Option Name	Class-of-Service Number (1 → 50)									
		_1	_2	_3	_4	_5	_6	_7	_8	_9	_0
	STATION/SUPERSET®- RELATED (CONT'D)	Class-of-Service Status									
243	Non-Busy Extension										
244 **	Room Status Applies										
245	Abbreviated Dial Access										
246	TAFAS Any Access										
247	TAFAS Access Tenant										
248	TAFAS Access During Day Service										
249	Transfer Dial Tone										
250	Transfer With Privacy										
251	Call Forward - Don't Answer Timer (2 → 6 Rings) Default is 3 Rings										
252	Call Hold Recall Timer (1 → 5 Minutes) Default is 1 Minute										
253	Repeated Camp-on Beeps Timer (5 → 15 Seconds) Default is 10 Seconds										
254 **	UCD Music on Hold Timer (0 → 50 Minutes)										
	ATTENDANT/STATION/SUPERSET®- RELATED										
300	Automatic Callback										
301	Camp-on										
302	Flash-in Conference (Greater than 3)										
303	Paging Access - Zone 1										
304	Paging Access - Zone 2										
305	Paging Access - Zone 3										
306	Paging Access - Zone 4										
307	Paging Access - Zone 5										
308	Paging Access - Zone 6										
309	Paging Access - Zone 7										
310	Paging Access - Zone 8										
311	Paging Access - Zone 9										
312	Default Paging Zone (0 Gives All Zones Enabled) (0-9)										
313 **	CO Trunk To CO Trunk Connect										
314 **	CO Trunk To Tie Trunk Connect										
315 **	CO Trunk To DID Trunk Connect										
316 **	Tie Trunk To Tie Trunk Connect										
317 **	Tie Trunk To DID Trunk Connect										
318 **	DID Trunk To DID Trunk Connect										
319 **	Extension Non-Co Trunk to Trunk Connect										

* Generic 1000   ** Generic 1001

TABLE 3-4 (CONT'D)
FORM 03 - CLASS-OF-SERVICE OPTIONS   SHEET __ OF __

		STATION-RELATED									
Option Number	**Class-of-Service Option Name**	**Class-of-Service Number (1 → 50)**									
		_1	_2	_3	_4	_5	_6	_7	_8	_9	_0
		Class-of-Service Status									
400	Contact Monitor										
401 **	Call Park										
402 **	Long Loop (Off-Premises Extension Only)										
403 **	Trunk Recall Partial Inhibit										
	ATTENDANT/SUPERSET®- RELATED										
500	Override										
501	Override Announce										
600	SUPERSET® - Auto Answer										
601	SUPERSET® - Auto-Hold Disable										
602	SUPERSET® - Background Music										
603	SUPERSET® - Disconnect Alarm										
604	SUPERSET® - Immediate Line Select										
605	SUPERSET® - Message Program										
606	SUPERSET® - Sub-Attendant										
607 **	SUPERSET® - Associated Modem Line										
608 **	SUPERSET® - Room Status Display										
609 **	SUPERSET® - Night Service Switching										
	ALL DEVICES										
700	SMDR - Does Not Apply										
701	No Dial Tone										
702 **	SMDR - Overwrite Buffer										
	TRUNK-RELATED										
800	ANI Applies										
801	Incoming Trunk Call Rotary										
802	Limited Wait For Dial Tone										
803 *	SMDR - Drop Calls < 8 digits										
803 **	SMDR - Drop Calls Less Than N Digits (N= 0 to 11, 0= Disabled)										
804	SMDR - Drop Incomplete Outgoing Calls										
805	SMDR - Extended Record										
806 *	SMDR - Overwrite Buffer										
806 **	RESERVED										
807	SMDR - Record Incoming Calls										
808	SMDR - Record Meter Pulses										
809	RESERVED										

* Generic 1000   ** Generic 1001

TABLE 3-4 (CONT'D)
FORM 03 – CLASS-OF-SERVICE OPTIONS   SHEET __ OF __

		Class-of-Service Number (1 → 50)									
TRUNK–RELATED (CONT'D)											
Option Number	**Class–of–Service Option Name**	__1	__2	__3	__4	__5	__6	__7	__8	__9	__0
		Class–of–Service Status									
810	Special DISA										
811	Standard Ring Applies										
812 **	DISA During Night Service Only										
DATA STATIONS–RELATED											
900	RESERVED										

* Generic 1000   ** Generic 1001

Notes: 1. Specify the Class-of-Service number (1 → 50).

2. Specify the enabled options with an "E" for each Class of Service.

3. Specify the disabled options with a "D" for each Class of Service.

4. Specify the timer value for the timer options.

TABLE 3-5
FORM 04 - SYSTEM OPTIONS/SYSTEM TIMERS

SHEET 1 OF 1

Option No.	System Options/System Timers	Status	Option No.	System Options/System Timers	Status
01	24 Hour Clock		26	No Overlap Outpulsing	
02 *	Account Code Length 4 Digits		27 **	Room Status Audit	
02 **	RESERVED		28	SMDR Indicate Long Calls	
03 *	Account Code Length 8 Digits		29	SUPERSET® Last Number Redial	
03 **	RESERVED		30	RESERVED	
04 *	Account Code Length 12 Digits		31	Satellite PBX	
04 **	Message Waiting and Message Register Change Print		32 **	Outgoing Call Restriction	
05 *	Variable Account Code Length		33 **	Room Status	
05 **	Verified Account Codes		34 **	Auto Room Status Conversion/Auto Wake-up Print	
06 *	Attendant CO Trunk to CO Trunk Connect		32 * 35 **	Digit Translation Plan 0 → 3	
06 **	RESERVED		33 * 36 **	ARS Unknown Digit Length Time-out (1 s units) 2 → 15 Seconds	
07 *	Attendant CO Trunk to Non-CO Trunk Connect		34 * 37 **	Limited Wait For Dial Tone (1 s units) 1 → 15 Seconds	
07 **	RESERVED		35 * 38 **	Pseudo Answer Supervision Timer (1 s units) 10 → 60 Seconds	
08 *	Attendant Non-CO Trunk to Non-Co Trunk Connect		36 * 39 **	Dialing Conflict Timer (1 s units) 2 → 10 Seconds	
08 **	RESERVED		37 * 40 **	Final Ring Time-out (1 min units) 1 → 30 Minutes	
09 **	Attendant Call Block		38 * 41 **	Minimum Flash Timer (10 ms units) 20 → 50 ms	
10	Attendant Conference Beeps		39 * 42 **	Maximum Flash Timer (10 ms units) 20 → 150 ms	
11 **	Automatic Wake-Up		43 **	DISA Answer Timer 1 → 8 Seconds	
12 **	Automatic Wake-up Alarm		44 **	Account Code Length Variable or 4 → 12 digits	
13 **	Automatic Wake-up Print		45 **	Auto Room Status Conversion Wake-up Print Timer	
14 **	Automatic Wake-up Music		46 **	Room Status Call Restriction Default	
15	Data Demultiplexer				
16	RESERVED				
17	Discriminating Ringing				
18	Discriminating Ringing Always				
19 **	RESERVED				
20	Holiday Messages				
21	Incoming to Outgoing Call Forward				
22	Last Party Clear - Dial Tone				
23	Message Register Count Additional Supervisions				
24	Message Register Audit				
25	Message Register Zero After Audit				

* Generic 1000   ** Generic 1001

Notes: 1. Specify the enabled options with an "E".

2. Specify the disabled options with a "D".

3. Specify a timer value for the timer options.

TABLE 3-6
FORM 05 - TENANT INTERCONNECTION TABLE

TENANT NAME		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	01	0																								
	02		0																							
	03			0																						
	04				0																					
	05					0																				
	06						0																			
	07							0																		
	08								0																	
	09									0																
	10										0															
	11											0														
	12												0													
	13													0												
	14														0											
	15															0										
	16																0									
	17																	0								
	18																		0							
	19																			0						
	20																				0					
	21																					0				
	22																						0			
	23																							0		
	24																								0	
	25																									0

Notes: 1. Specify all inhibited connections with an X (indicated by a period on the CRT). Tenant Group interconnection is inhibited unidirectionally. An X in row 21 column 1 prevents Tenant Group 21 from communicating with Tenant Group 1. However, Tenant Group 1 can still call Tenant Group 21.

2. On initialization, the system interconnects all Tenant Groups (indicated by an asterisk on the CRT).

TABLE 3-7
FORM 06 – TENANT NIGHT SWITCHING CONTROL

TENANT NAME		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	01	0																								
	02		0																							
	03			0																						
	04				0																					
	05					0																				
	06						0																			
	07							0																		
	08								0																	
	09									0																
	10										0															
	11											0														
	12												0													
	13													0												
	14														0											
	15															0										
	16																0									
	17																	0								
	18																		0							
	19																			0						
	20																				0					
	21																					0				
	22																						0			
	23																							0		
	24																								0	
	25																									0

Notes: 1. Specify with an X those Tenant Groups allowed to switch into Night Service simultaneously (indicated by an asterisk on the CRT). An X in row 10 column 1 allows Tenant Group 10 to switch both Tenant Groups 10 and 1 into Night Service simultaneously. However, Tenant Group 1 can only switch itself into Night Service.

2. On initialization, the system defaults to Tenant Groups switching to Night Service one at a time (indicated by a period on the CRT).

TABLE 3-8
FORM 07 - CONSOLE ASSIGNMENTS

SHEET 1 OF 1

BAY	SLT	CCT	EXT NUM	COS	COR	TENANT	COMMENTS

Notes: 1. There are a maximum of 11 consoles. The Attendant Console default location is Bay 2, Slot 3, Circuit 1. This Attendant Console is required if the VT-100 compatible terminal is not used for Customer Data Entry.

2. Specify the physical location (bay, slot and circuit) of each console.

3. Specify the extension number of each console. Calls directed to the console's extension number route to softkey 2. However, another extension number can be assigned in Form 08, Attendant LDN Assignments for softkey 2. In other words, two different extension numbers share the same softkey.

4. Specify the COS, COR and Tenant Group number of each console.

5. The COMMENTS field stores additional information for each console; it is not used by the system and can have a maximum of 15 characters.

TABLE 3-9
FORM 08 – ATTENDANT LDN ASSIGNMENTS

SHEET ___ OF ___
BAY/SLT/CCT: _____   CONSOLE EXTENSION NUMBER: _____

KEY	DIR NUMBER	LABEL	COMMENTS
2			
3			
4			
5			
6			
7			
8			
9			
0			

BAY/SLT/CCT: _____   CONSOLE EXTENSION NUMBER: _____

KEY	DIR NUMBER	LABEL	COMMENTS
2			
3			
4			
5			
6			
7			
8			
9			
0			

Notes: 1. There are a maximum of 11 consoles.

2. The directory number is a maximum of five digits. It links this form to Form 19, Call Rerouting Table, where the actual call type is defined for each directory number. The directory number programmed for softkey 2 shares the softkey with calls to the console's extension number (as defined in the EXT NUM field of Form 07, Console Assignments).

3. The LABEL field specifies the actual text that the console LCD displays as softkey prompts. Console softkey 2 label defaults to INTERNAL.

4. Console softkey 1 is reserved for the RECALL softkey. It cannot be modified.

5. The COMMENTS field further specifies the Attendant LDN assignments with text. It is stored by the system but not used and can have a maximum of 15 characters.

TABLE 3-10
FORM 09 - STATION/SUPERSET® SETS

SHEET ___ OF ___

BAY	SLOT	CCT	TEN	EXT NUM	COS	COR	TYP	ANNOUNCE			COMMENTS

Notes: 1. Specify the Tenant Group, Extension Number, COS number and COR number for each device.

2. Specify the device type in the TYP field as a Rotary Dial or DTMF set (STN), SUPERSET® set (SET) or Call Announce Port (CAP). The CAP can be a Station Circuit, a SUPERSET® set circuit or COV circuit. Hardware restrictions prevent a digital ONS circuit from being a CAP.

3. Specify the physical location (by the bay, slot and circuit numbers) of the Call Announce Port in the ANNOUNCE field for the appropriate SUPERSET® set.

4. The COMMENTS field stores additional information for each device. It is not used by the system and can have a maximum of 15 characters.

5. Refer to Section MITL9108-093-106-NA, SUPERSET 3™ Set Information and Section MITL9108-093-107-NA, SUPERSET 4™ Set Information for details.

TABLE 3-11
SUPERSET® SET LINES

SHEET ___ OF ___
BAY/SLT/CCT: _____   EXTENSION NUMBER: _____

KEY	TYPE	DIRECTION	RING	SECRETARIAL	EXT NUM	TRUNK NUMBER
01	PRIME	BOTH	IMMED	NO		
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						

Notes:
1. This form is a nested form and can only be accessed from the previous form (Station/SUPERSET® Sets).
2. Key 1 is the Prime Line and cannot be modified.
3. For each Line Select key, select a variant for each of the following four categories:

   TYPE KEY = Key Line
   　　　 Multiple = Multiple Call Line
   　　　 Personal = Personal Outgoing Line
   　　　 DTS = Direct Trunk Select
   　　　 Private = Private Trunk
   　　　 Speed Call (default for keys 2 → 15)

   DIRECTION BOTH = Both Way
   　　　　　 IN = In Only

   RING IMMED = Immediate Ring
   　　　 DELAY = Delay Ring
   　　　 NO = No Ring

   SECRETARIAL NON = Non-Secretarial
   　　　　　　 SEC = Secretarial

4. The TYPE field defaults to Speed Call (undefined) and must be defined before the other categories can be assigned. Refer to Section MITL9108-093-106-NA, SUPERSET 3™ Set Information and Section MITL9108-093-107-NA, SUPERSET 4™ Set Information.
5. The EXT NUM field must be specified for each line appearance. If however, the TYPE field is set to Direct Trunk Access or Private Trunk, then the TRUNK NUMBER field must be specified. The EXT NUM and TRUNK NUMBER fields are mutually exclusive.

TABLE 3-12
FORM 10 - PICKUP GROUPS

SHEET ___ OF ___

GROUP NUMBER (1 → 50):									
EXTENSION NUMBERS									

GROUP NUMBER (1 → 50):									
EXTENSION NUMBERS									

GROUP NUMBER (1 → 50):									
EXTENSION NUMBERS									

Notes: 1. The system supports a maximum of 50 Pickup Groups and each Pickup Group supports a maximum of 50 members.

2. The order in which the Pickup Group members are entered is not significant.

3. Pickup Group members are restricted to extension numbers of Rotary Dial or DTMF sets or Prime Line numbers of SUPERSET® sets. Attendant Consoles are not allowed in Pickup Groups.

TABLE 3-13
FORM 13 - TRUNK CIRCUIT DESCRIPTORS

SHEET 1 OF 1

DESCRIPTOR NO.	TRUNK TYPE	COMMENTS
01		
02		
03		
04		
05		
06		
07		
08		
09		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		

Notes: 1. Specify a Trunk Type for the required trunk circuit descriptors. The Trunk Types include: 4-CCT CO, 4-CCT DISA, E&M CARD, E&M Module**, 2-CCT DID/TIE, 6-CCT DID**, 6-CCT CO and 6-CCT DISA.

2. The COMMENTS field stores additional information. It is not used by the system and can have a maximum of 20 characters.

* Generic 1000   ** Generic 1001

TABLE 3-14
TRUNK CIRCUIT DESCRIPTOR OPTIONS   SHEET __ OF __

4-CIRCUIT CO TRUNK and 4-CIRCUIT DISA OPTIONS	TRUNK CIRCUIT DESCRIPTOR NUMBER (1 → 25)									
Far-End Gives Answer Supervision (Y or N)										
Inhibit Automatic Supervision (Y or N)										
No Seize Alarm (Y or N)										
No Release Alarm (Y or N)										
Toll Office (Y or N)										
Is this a CO (Y or N)										
DTMF (Y or N)										
Impedance (600 Ohms or Complex)										
Dictation Trunk (Y or N)										

Notes: 1.   This form is a nested form and can only be accessed from the previous form (Trunk Circuit Descriptors).

2.   Specify the hardware options for the selected trunk circuit descriptor number. The options can be specified only after a trunk type has been assigned to a trunk circuit descriptor number.

TABLE 3-14 (CONT'D)
TRUNK CIRCUIT DESCRIPTOR OPTIONS   SHEET __ OF __

6-CIRCUIT CO TRUNK and 6-CIRCUIT DISA OPTIONS	TRUNK CIRCUIT DESCRIPTOR NUMBER (1 → 25)									
Far-End Gives Answer Supervision (Y or N)										
Inhibit Automatic Supervision (Y or N)										
No Seize Alarm (Y or N)										
No Release Alarm (Y or N)										
Toll Office (Y or N)										
Is this a CO (Y or N)										
DTMF (Y or N)										
Impedance (600 Ohms or Complex)										
Post Call Metering (0 → 15 s) x (1 s increments)										
Calling Party Disconnect Timer (1 → 12 min) x (1 min increments)										
Dictation Trunk (Y or N)										
Ignore Remote Disconnect (Y or N)										
Disconnect Timer (100 → 9900 ms) x (100 ms increments)										
Supervision Direction: Incoming Trunk Calls Also (Y or N)										
Guard Timer (0 → 3000 ms) x (100 ms increments)										
Ring Cycle Timer (6 → 10 s) x (1 s increments)										
Ignore Line Reversal During Seizure (Y or N)										
Ringing Expected (Y or N)										
Ringing Debounce Timer (5 → 12 s) x (1 s increments)										
Seize Timer (10 → 60 s) x (10 s increments)										
Flash Timer (200 → 700 ms) x (100 ms increments)										
Interdigit Timer (300 → 800 ms) x (100 ms increments)										
Digit Outpulsing Ratio (60/40, 30/20, 66/33) **										

* Generic 1000   ** Generic 1001

TABLE 3-14 (CONT'D)
TRUNK CIRCUIT DESCRIPTOR OPTIONS   **SHEET __ OF __**

Notes: 1. This form is a nested form and can only be accessed from the previous form (Trunk Circuit Descriptors).

2. Specify the hardware options for the selected trunk circuit descriptor number. The options can be specified only after a trunk type has been assigned to a trunk circuit descriptor number.

TABLE 3-14 (CONT'D)
TRUNK CIRCUIT DESCRIPTOR OPTIONS   SHEET __ OF __

E&M MODULE OPTIONS **	TRUNK CIRCUIT DESCRIPTOR NUMBER (1 - 25)									
Far-End Gives Answer Supervision (Y or N)										
Inhibit Automatic Supervision (Y or N)										
No Seize Alarm (Y or N)										
No Release Alarm (Y or N)										
Toll Office (Y or N)										
Is this a CO (Y or N)										
DTMF (Y or N)										
Impedance ** Use DIP Switch on the Module to Program ** (600 Ohms or Complex)										
E Lead Invert (Y or N)										
M Lead Invert (Y or N)										
Disconnect Timer (150 → 300 ms) x (50 ms increments)										
Release Acknowledge Timer (2000 → 9900 ms) x (100 ms increments)										
Guard Timer (200 → 1000 ms) x (100 ms increments)										
Dictation Trunk (Y or N)										
Incoming Start Type (Immed, Wink or Delay)										
Debounce Timer (20 → 150 ms) x (10 ms increments)										
Wink Timer (150 → 300 ms) x (50 ms increments)										
Outgoing Start Time (Immed, Wink, Delay or Delay Integ)										
Digit Outpulsing Ratio (60/40, 30/20, 66/33)										
Outpulse Delay Timer (100 → 2000 ms) x (100 ms increments)										
Flash Timer (200 → 700 ms) x (100 ms increments)										
Interdigit Timer (300 → 800 ms) x (100 ms increments)										
Wait for Delay Timer (300 → 5000 ms) x (100 ms increments)										
Remote End is a Satellite (Y or N)										

TABLE 3-14 (CONT'D)
TRUNK CIRCUIT DESCRIPTOR OPTIONS   SHEET __ OF __

E&M MODULE OPTIONS **	TRUNK CIRCUIT DESCRIPTOR NUMBER (1 → 25)									
Remote End is a Satellite with OPS Lines (Y or N)										
4-Wire (Y or N)										
4-Wire Unamplified (Y or N)										

* Generic 1000   ** Generic 1001

Notes: 1. This form is a nested form and can only be accessed from the previous form (Trunk Circuit Descriptors).

2. Specify the hardware options for the selected trunk circuit descriptor number. The options can be specified only after a trunk type has been assigned to a trunk circuit descriptor number.

TABLE 3-14 (CONT'D)
TRUNK CIRCUIT DESCRIPTOR OPTIONS

SHEET __ OF __

E&M CARD OPTIONS	TRUNK CIRCUIT DESCRIPTOR NUMBER (1 – 25)									
Far-End Gives Answer Supervision (Y or N)										
Inhibit Automatic Supervision (Y or N)										
No Seize Alarm (Y or N)										
No Release Alarm (Y or N)										
Toll Office (Y or N)										
Is this a CO (Y or N)										
DTMF (Y or N)										
Impedance (600 Ohms or Complex)										
Remote End is a Satellite (Y or N)										
Remote End is a Satellite with OPS Lines (Y or N)										
Dictation Trunk (Y or N)										

Notes: 1. This form is a nested form and can only be accessed from the previous form (Trunk Circuit Descriptors).

2. Specify the hardware options for the selected trunk circuit descriptor number. The options can be specified only after a trunk type has been assigned to a trunk circuit descriptor number.

TABLE 3-14 (CONT'D)
TRUNK CIRCUIT DESCRIPTOR OPTIONS

SHEET __ OF __

2-CIRCUIT DID/TIE OPTIONS	TRUNK CIRCUIT DESCRIPTOR NUMBER (1 → 25)									
Far-End Gives Answer Supervision (Y or N)										
Inhibit Automatic Supervision (Y or N)										
No Seize Alarm (Y or N)										
No Release Alarm (Y or N)										
Toll Office (Y or N)										
Is this a CO (Y or N)										
DTMF (Y or N)										
Impedance (600 Ohms or Complex)										
Remote End is a Satellite (Y or N)										
Remote End is a Satellite with OPS Lines (Y or N)										

Notes: 1. This form is a nested form and can only be accessed from the previous form (Trunk Circuit Descriptors).

2. Specify the hardware options for the selected trunk circuit descriptor number. The options can be specified only after a trunk type has been assigned to a trunk circuit descriptor number.

TABLE 3-14 (CONT'D)
TRUNK CIRCUIT DESCRIPTOR OPTIONS

SHEET __ OF __

6-CIRCUIT DID OPTIONS **	TRUNK CIRCUIT DESCRIPTOR NUMBER (1 → 25)										
Far-End Gives Answer Supervision (Y or N)											
Inhibit Automatic Supervision (Y or N)											
No Seize Alarm (Y or N)											
No Release Alarm (Y or N)											
Toll Office (Y or N)											
Is this a CO (Y or N)											
DTMF (Y or N)											
Impedance (600 Ω or Complex)											
Disconnect Timer (150 → 300 ms) x (50 ms increments)											
Release Acknowledge Timer (2000 → 9900 ms) x (100 ms increments)											
Start Type (Immed, Wink, or Delay)											
Debounce Timer (20 → 150 ms) x (10 ms increments)											
Wink Timer (150 → 300 ms) x (50 ms increments)											
Remote End is a Satellite (Y or N)											
Remote End is a Satellite with OPS Lines (Y or N)											

* Generic 1000   ** Generic 1001

Notes: 1. This form is a nested form and can only be accessed from the previous form (Trunk Circuit Descriptors).

2. Specify the hardware options for the selected trunk circuit descriptor number. The options can be specified only after a trunk type has been assigned to a trunk circuit descriptor number.

TABLE 3-15
FORM 14 - NON-DIAL-IN TRUNKS

SHEET ___ OF ___

BAY	SLT	CCT	COS	TEN	DAY	N1	N2	CDN	TK NUM	COMMENTS

Notes: 1. Specify the COS number, Tenant Group number and the trunk number (1 → 200).

2. Specify the answer points for Day, Night1, and Night2 Service Modes. The answer points may be specified as an LDN on the Attendant Console, a station number (or a SUPERSET® set Prime Line number), a Hunt Group Access Code or a Night Bell equipment extension number. An LDN and Night Bell cannot be rung simultaneously.

3. Assign a trunk circuit descriptor number in the CDN field for each Non-Dial-In Trunk. The CDN field links this form to Form 13, Trunk Circuit Descriptors which defines the trunk hardware parameters.

4. The COMMENTS field is reserved for additional information. It is not used by the system and can have a maximum of 15 characters.

TABLE 3-16
FORM 15 - DIAL-IN TRUNKS

SHEET ___ OF ___

BAY	SLT	CCT	COS	COR	TEN	N	M	X	CDN	TK NUM	COMMENTS

Notes: 1. Specify COS number, COR number, Tenant Group number and the trunk number (1 → 200).

2. Assign a trunk circuit descriptor number in the CDN field for each Dial-In Trunk. The CDN field links this form to Form 13, Trunk Circuit Descriptors which defines the trunk hardware parameters.

3. Specify the number of expected digits (1 to 9) if required in the N field. Digit translation on incoming calls occurs after the system receives the specified number of digits (if the N field is filled in).

4. Specify the number of digits (0 to 8) in the M field that must be absorbed after the incoming trunk is seized.

5. Specify the actual digits (if required) in the X field (a maximum of 2) that will be inserted before the digit string.

6. The COMMENTS field is reserved for additional information. It is not used by the system and can have a maximum of 15 characters.

TABLE 3-17
FORM 16 - TRUNK GROUPS

SHEET ___ OF ___

TRUNK GROUP NUMBER (1 – 50):					TRUNK GROUP NAME:			
HUNTING (TERMINAL/CIRCULAR):					SMDR (Y/N):			
Trunk Group Function:								
TRUNK NUMBERS								

TRUNK GROUP NUMBER (1 – 50):					TRUNK GROUP NAME:			
HUNTING (TERMINAL/CIRCULAR):					SMDR (Y/N):			
Trunk Group Function:								
TRUNK NUMBERS								

Notes: 1. There are maximum of 50 members per Trunk Group and the system supports a maximum of 50 Trunk Groups.

2. Specify each member of the Trunk Group by trunk number. Trunk Group hunting occurs in the order that the members are entered.

3. The Trunk Group name can be a maximum of eight characters in length.

TABLE 3-18
FORM 17 - HUNT GROUPS

HUNT GROUP NUMBER (1 - 50):					ACCESS CODE:				
HUNTING TYPE (TERMINAL/CIRCULAR):					HUNT GROUP TYPE:				
Hunt Group Function:									
EXTENSION NUMBERS									

HUNT GROUP NUMBER (1 - 50):					ACCESS CODE:				
HUNTING TYPE (TERMINAL/CIRCULAR):					HUNT GROUP TYPE:				
Hunt Group Function:									
EXTENSION NUMBERS									

Notes: 1. There are maximum of 50 members per Hunt Group and the system supports a maximum of 50 Hunt Groups.

2. Specify each member of the Hunt Group by extension number. Hunting occurs in the order that the members are entered.

3. Specify the Hunt Group Types; STN/SET (for Stations and SUPERSET®sets, RCD (for Recorded Announcement Devices) or AGT (for Agent Hunt Group).

TABLE 3-19
FORM 18 - MISCELLANEOUS SYSTEM PORTS

SHEET 1 OF 2

ENTRY NUMBER	DESCRIPTION	BAY	SLT	CCT	SCT	EXTENSION NUMBER
01	Music on Hold				—	——
02	Pager 1				—	——
03	Pager 2				—	——
04	Pager 3				—	——
05	Pager 4				—	——
06	Pager 5				—	——
07	Pager 6				—	——
08	Pager 7				—	——
09	Pager 8				—	——
10	Pager 9				—	——
11	Minor Alarm					——
12	Major Alarm					——
13	Critical Alarm					——
14	Night Bell 1					
15	Night Bell 2					
16	Night Bell 3					
17	Night Bell 4					
18	Night Bell 5					
19	Night Bell 6					
20	Night Bell 7					
21	Night Bell 8					
22	Night Bell 9					
23	Night Bell 10					
24	Night Bell 11					
25	Night Bell 12					
26	Night Bell 13					
27	Night Bell 14					
28	Night Bell 15					
29	Night Bell 16					
30	Night Bell 17					

TABLE 3-19 (CONT'D)
FORM 18 - MISCELLANEOUS SYSTEM PORTS

SHEET 2 OF 2

ENTRY NUMBER	DESCRIPTION	BAY	SLT	CCT	SCT	EXTENSION NUMBER
31	Night Bell 18					
32	Night Bell 19					
33	Night Bell 20					
34	Night Bell 21					
35	Night Bell 22					
36	Night Bell 23					
37	Night Bell 24					
38	Night Bell 25					

Notes: 1. Specify the physical location (bay, slot, circuit and subcircuit numbers) of the miscellaneous devices.

2. Specification of the extension numbers is only required for the Night Bell relays. Night Bell definitions are restricted to Universal Card slots.

3. The subcircuit (SCT) fields for the music on hold module and the nine paging zones will be filled in by the system.

TABLE 3-20
FORM 19 - CALL REROUTING TABLE

TENANT GROUP (1 → 25): _____   SHEET ___ OF ___

TYPE OF CALL	DAY	N1	N2
Station Dial 0 Routing			
Priority Dial 0 Routing			
DID Recall Points on Busy			
DID Recall Points on No Answer			
DID Routing for Calls into this Tenant			
DID Intercept Routing For Calls into this Tenant			
DID Vacant Number Routing for this Tenant			
DID Attendant Night Access Points	———		
Non-Dial-In Trunks Alternate Recall Points			
Dial-In Tie Recall Points On Busy			
Dial-In Tie Recall Points On No Answer			
Dial-In Tie Routing for Calls into this Tenant			
Dial-In Tie Intercept for Calls into this Tenant			
Dial-In Tie Vacant Number Routing for this Tenant			
Dial-In Tie Attendant Access Night Points			
Do Not Disturb Intercept Routing for this Tenant			
Automatic Wake-up Routing for this Tenant **			
UCD Recording Routing for this Tenant **			
UCD on Hold Time-out for this Tenant **			
DISA Day Service Routing for this Tenant **			
Station Vacant Number Routing for this Tenant			
Station Illegal Number Routing for this Tenant			

* Generic 1000   ** Generic 1001

Notes: 1. Assign an extension number an Attendant Console directory number, an Attendant Console LDN number, Key Line appearance, Hunt Group Access Code or a Night Bell number for each type of call in Day Service Mode, Night1 Service Mode and Night2 Service Mode.

2. A Call Rerouting Table is required for each Tenant Group in the system.

3. Attendant Console directory numbers are not valid for all routing points; restrictions apply.

TABLE 3-21
FORM 20 - ARS: COR GROUP DEFINITION

SHEET ___ OF ___

COR GROUP	COR GROUP MEMBERS							COMMENTS
_ 1								
_ 2								
_ 3								
_ 4								
_ 5								
_ 6								
_ 7								
_ 8								
_ 9								
_ 0								

Notes: 1. The system supports a maximum of 50 COR Groups numbered 1 → 50.

2. Each COR Group accommodates a maximum of 25 members numbered 1 → 25.

3. COR Group members are separated by a space. Consecutive numbered COR Group members are separated by a dash. For example, **3-7** instead of **3 4 5 6 7**.

4. The COMMENTS field is reserved for additional information. It is not used by the system and can be a maximum of 20 characters.

TABLE 3-22
FORM 21 - ARS: DAY ZONE DEFINITION

SHEET 1 OF 1

DAY ZONE	MON.	TUE.	WED.	THU.	FRI.	SAT.	SUN.
01							
02							
03							

Notes: 1. Specify a Day Zone for each day of the week with an asterisk (*).

2. Only one Day Zone can be assigned to each day.

3. A Day Zone must be assigned to each day of the week before this form can be saved.

TABLE 3-23
FORM 22 – ARS: MODIFIED DIGIT TABLE

ENTRY NUM	QTY TO DELETE	DIGITS TO BE INSERTED	COMMENTS
01			
02			
03			
04			
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

TABLE 3-23 (CONT'D)
FORM 22 - ARS: MODIFIED DIGIT TABLE

ENTRY NUM	QTY TO DELETE	DIGITS TO BE INSERTED	COMMENTS
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			

Notes: 1. Specify the number of digits (a maximum of 25) that will be deleted for each Entry Number (1 → 50).

2. Specify the number of digits (a maximum of 27 for Generic 1001 and 20 for Generic 1000) that will be inserted for each Entry Number. Special number sequences that can be included in the DIGITS TO BE INSERTED field are:

   *1 = Pause 5 Seconds
   *2 = Wait for Dial Tone
   *3 = Switch to DTMF for Subsequent Digits
   *4 = Do Not Display Further Modified Digits on Sets or SMDR
   *5 = Pause for 10 Seconds
   ** = *

3. The COMMENTS field is reserved for additional information and is not used by the system. It can have a maximum of 20 characters.

TABLE 3-24
FORM 23 - ARS: ROUTE DEFINITION

SHEET ___ OF ___

ROUTE NUM	TRUNK GROUP (1 → 50)	COR GROUP (1 → 50)	MOD DIGIT ENTRY (1 → 50)	COMMENTS
__1				
__2				
__3				
__4				
__5				
__6				
__7				
__8				
__9				
__0				
__1				
__2				
__3				
__4				
__5				
__6				
__7				
__8				
__9				
__0				

Notes: 1. There are a maximum of 200 Route numbers.

2. Assign a Trunk Group number, COR Group number and a Mod Digit Entry number for each Route number.

3. The COR GROUP number links this form to Form 20, COR Group Definition. Assigning a COR Group number restricts those COR Group members from that route. Therefore, if no COR Group number is assigned, then all users can use this route.

4. The COMMENTS field is reserved for additional information and is not used by the system. It can have a maximum of 20 characters.

TABLE 3-25
FORM 24 - ARS: ROUTE LISTS

SHEET ___ OF ___

LIST NUM	FIRST	SECOND	WT	THIRD	WT	FOURTH	WT	FIFTH	WT	SIXTH	WT
__1											
__2											
__3											
__4											
__5											
__6											
__7											
__8											
__9											
__0											
__1											
__2											
__3											
__4											
__5											
__6											
__7											
__8											
__9											
__0											

Notes: 1. Specify the Route List numbers (01 → 100).

2. Assign the required Route numbers for each Route List number. Route selection occurs in the order that the Route numbers are entered.

3. Indicate the expensive routes with an "E" in the WT (Warning Tone) field. An enabled warning tone is represented by **ON** on the display.

TABLE 3-26
FORM 25 - ARS: ROUTE PLANS

ROUTE PLAN: ___   ROUTE PLAN FUNCTION: _____   SHEET ___ OF ___

TIME ZONE	DAY ZONE 1		DAY ZONE 2		DAY ZONE 3	
	START HOUR	ROUTE LIST (1 → 100)	START HOUR	ROUTE LIST (1 → 100)	START HOUR	ROUTE LIST (1 → 100)
01						
02						
03						
04						
05						
06						

ROUTE PLAN: ___   ROUTE PLAN FUNCTION: _____

TIME ZONE	DAY ZONE 1		DAY ZONE 2		DAY ZONE 3	
	START HOUR	ROUTE LIST (1 → 100)	START HOUR	ROUTE LIST (1 → 100)	START HOUR	ROUTE LIST (1 → 100)
01						
02						
03						
04						
05						
06						

ROUTE PLAN: ___   ROUTE PLAN FUNCTION: _____

TIME ZONE	DAY ZONE 1		DAY ZONE 2		DAY ZONE 3	
	START HOUR	ROUTE LIST (1 → 100)	START HOUR	ROUTE LIST (1 → 100)	START HOUR	ROUTE LIST (1 → 100)
01						
02						
03						
04						
05						
06						

Notes: 1. There are a maximum of 50 Route Plan numbers.

2. Specify the starting hour and Route List number for each time zone.

TABLE 3-27
FORM 26 – ARS: DIGIT STRINGS   SHEET ___ OF ___

LEADING DIGITS	RETURN DIAL TONE	RESTRICTED COR GROUP

* Generic 1000   ** Generic 1001

Notes: 1. List the digits that will be dialed for external trunk access in the LEADING DIGITS field. The system supports a maximum of 100 Leading Digit entries. Each entry can be a maximum of five digits.
** Users with COS Option 244 enabled (Room Status) and a Room Status condition of INTERNAL are denied calls to these numbers.

2. Specify which entries require dial tone with a "YES" in the RETURN DIAL TONE field. The default value for this field is "NO" for no return dial tone.

3. Specify the COR Group that is denied access to each leading digit entry.

TABLE 3-28
ARS: NESTED DIGIT STRINGS   SHEET ___ OF ___

LEADING DIGITS: _____   RETURN DIAL TONE (YES/NO): ___   RESTRICTED COR GROUP: _____

DIGITS TO BE ANALYZED	QTY TO FOLLOW	ACC CODE REQD	TERM TYPE AND NUM	

* **Generic 1000**   ** **Generic 1001**

Notes: 1. Specify the leading digits, the presence of dial tone and the restricted COR Groups.

2. Specify the user dialed digits that require analysis, BEFORE routing occurs, in the DIGITS TO BE ANALYZED field. The total number of digits in the DIGITS TO BE ANALYZED field, the QTY TO FOLLOW field and LEADING DIGITS field in the previous form (refer to Table 3-27, ARS: Digits Strings) cannot exceed 26. Specify the number of user dialed digits that follow the analyzed digits in the QTY TO FOLLOW field.

3. Wild card digits that can be included in the DIGITS TO BE ANALYZED field are: **NOX**, **N1X** and **X** where **N** is any digit from 2 to 9 and **X** is any digit from 0 to 9.
The **X** wild card can be used at the end of a digit string but not in the middle. The **NOX**, and **N1X** wild cards can only be used at the beginning of a digit string.

4. Specify which entries require an account code with a YES in the ACC CODE REQD field. Users with COS Option 201 enabled (Account Code, Forced Entry – Long Distance Calls), must enter an account code.
** Specify which entries are long distance (a YES in the ACC CODE REQD field). Users with COS Option 244 enabled (Room Status) and a Room Status condition of LOCAL are denied long distance calls.

5. Specify the route termination and number for each entry. Enter ROUTE if for a Route, PLAN for a Route Plan and LIST for a Route List.

TABLE 3-29
FORM 27 - FORM ACCESS RESTRICTION DEFINITION

SHEET 1 OF 2

FORM NAME	INST	MAINT1	MAINT2	SUPER	ATT
01 = SYSTEM CONFIGURATION	R/W				
02 = FEATURE ACCESS CODES	R/W				
03 = COS DEFINE	R/W				
04 = SYS OPTIONS/SYS TIMERS	R/W				
05 = TENANT INTERCONNECTION TABLE	R/W				
06 = TENANT NIGHT SWITCHING TIMERS	R/W				
07 = CONSOLE ASSIGNMENTS	R/W				
08 = ATTENDANT LDN ASGN	R/W				
09 = STATION/SUPERSET® SETS	R/W				
10 = PICKUP GROUPS	R/W				
11 = RESERVED	R/W	——	——	——	——
12 = RESERVED	R/W	——	——	——	——
13 = TRUNK CIRCUIT DESC	R/W				
14 = NON-DIAL-IN TRUNKS	R/W				
15 = DIAL-IN TRUNKS	R/W				
16 = TRUNK GROUPS	R/W				
17 = HUNT GROUPS	R/W				
18 = MISC SYSTEM PORTS	R/W				
19 = CALL REROUTING TABLE	R/W				
20 = ARS: COR GRP DEFINITION	R/W				
21 = ARS: DAY ZONE DEFINITION	R/W				
22 = ARS: MODIFIED DGT TABLE	R/W				
23 = ARS: ROUTE DEFINITION	R/W				
24 = ARS: ROUTE LIST	R/W				
25 = ARS: ROUTE PLANS	R/W				
26 = ARS: DIGIT STRINGS	R/W				
27 = FORM ACCESS RESTRICTION	R/W				
28 = RESERVED	R/W	——	——	——	——
29 = DEVICE INTERCONNECTION TABLE **					

TABLE 3-29 (CONT'D)
FORM 27 – FORM ACCESS RESTRICTION DEFINITION

SHEET 2 OF 2

FORM NAME	INST	MAINT1	MAINT2	SUPER	ATT
30 = SYSTEM DIAL ENTRY **					
31 = CDE DATA PRINT **					
32 = ACCOUNT CODE ENTRY **					

* **Generic 1000**   ** **Generic 1001**

Notes: 1. The Installer level of access defaults to a Read/Write (R/W) access for each form. All other levels of access default to No Access (none).

2. The Installer level of access has the highest degree of access and cannot be modified.

3. Specify an access type: Read/Write (R/W), Read Only (R) or No Access (none) for each required form.

TABLE 3-30
FORM 29 - DEVICE INTERCONNECTION TABLE **

DEVICE TYPE		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
STATION/ SET	01																									
CONSOLE	02																									
LOOP START TRUNK	03																									
GROUND START TRUNK	04																									
DID/TIE TRUNK	05																									
2-WIRE E&M	06																									
4-WIRE UNAMPLIFIED E&M	07																									
4-WIRE AMPLIFIED E&M	08																									
RESERVED	09																									
RESERVED	10																									
RESERVED	11																									
RESERVED	12																									
RESERVED	13																									
RESERVED	14																									
RESERVED	15																									
RESERVED	16																									
RESERVED	17																									
RESERVED	18																									
RESERVED	19																									
RESERVED	20																									
RESERVED	21																									
RESERVED	22																									
RESERVED	23																									
RESERVED	24																									
RESERVED	25																									

* Generic 1000   ** Generic 1001

Notes: 1. Specify all inhibited connections with an X (indicated by a period on the CRT). Device interconnection is inhibited unidirectionally. An X in row 21 column 1 prevents device 21 from communicating with device 1. However, device 1 can still communicate with device 21.

2. On initialization, the system interconnects all devices (as indicated by an asterisk on the CRT).

TABLE 3-31
FORM 30 - SYSTEM ABBREVIATED DIAL ENTRY **　　　　SHEET __ OF __

INDEX NUMBER	DIGIT STRING	PRIVATE (Y OR N)

* Generic 1000　　** Generic 1001

Notes: 1. Specify the Index Number; a maximum of three digits.

2. Specify the Digit String; a maximum of 26 digits (25 if private).

3. Specify which entries are Private (Y) or Non-Private (N).

TABLE 3-32
FORM 32 – ACCOUNT CODE ENTRY *

SHEET __ OF __

ACCOUNT CODE	COS NUMBER	COR NUMBER	ACTIVE

* **Generic 1000** ** **Generic 1001**

Notes: 1. Specify the Account Code number. The length is determined by System Option 44, Account Code Length (set to a fixed value from 4 to 12 digits or variable from 1 to 12 digits).

2. Specify the COS and COR numbers. This field may be left blank.

3. Indicate the accessible Account Codes with "Active" in the ACTIVE field. Specifiy those Account Codes which are denied access with "Inactive" in the ACTIVE field.

4. TRUNK CARD SWITCH ASSIGNMENT FORMS

General

4.01 The following forms enable the installer to configure the switches of the system's Trunk Cards. There are switch assignments for CO Trunk Cards, E&M/Tie Trunk Cards and DID/Tie Trunk Cards. These forms complement Form 13 – Trunk Circuit Descriptors (refer to Table 3-13, in this Section). Each form is accompanied by a diagram indicating the switch locations and special notes.

TABLE 4-1 TRUNK CARD SWITCH SETTINGS – CO TRUNK CARD

CO DIRECTORY NO.	BAY NO. 3,4 or 5	CIRCUIT NUMBER	TRUNK NUMBER (1-200)	INCOMING CONDITION		OUTGOING CONDITION		LOOP/GND START		3RD WIRE CONDITION		SENSE REVERSALS		RELEASE TIME				
														"B" SHRT		"B" LONG		3!
				BUSY	IDLE	BUSY	IDLE	LOOP	GND	ENAB	DIS	IGN	EFF	"A" SHRT	"A" LONG	"A" SHRT	"A" LONG	
SLOT NO.		1																
		2																
		3																
		4																
SLOT NO.		1																
		2																
		3																
		4																
SLOT NO.		1																
		2																
		3																
		4																
SLOT NO.		1																
		2																
		3																
		4																
SLOT NO.		1																
		2																
		3																
		4																

NOTES

1. EARLIER TRUNK CARD VERSIONS DO NOT HAVE ALL SWITCHES LISTED ABOVE.

2. CHECK APPROPRIATE COLUMN E.G. "BUSY" OR "IDLE" FOR DESIRED SETTING.'

3. REFER TO SECTION MITL9108-093-200-NA. SHIPPING, RECEIVING AND INSTALLATION INFORMATION FC PROCEDURES USED IN SETTING TRUNK CARD SWITCHES.

* IN CANADA THE CO TRUNK HI – Z SWITCH MUST ALWAYS BE SET TO THE HI – Z POSITION

HIGH IMPEDANCE SWITCHES

OPEN

GND   HIGH Z

(NOTE 10) XT | 1 | 2 | HIGH–Z (NOTE 11)

−48V   NORMAL

NORMAL SETTING

1 = OPEN
2 = CLOSED

TRUNK BUSY SWITCHES (NOTES 1 AND 2)

TRUNK 1

OUTGOING
BUSY

TRUNK 2

TRUNK 3

TRUNK 4

OUTGOING
IDLE

OPEN

TRUNK 1

INCOMING
BUSY

TRUNK 2

TRUNK 3

TRUNK 4

INCOMING
IDLE

NORMAL
SETTING

1 = OPEN
2 = OPEN
3 = OPEN
4 = OPEN
5 = CLOSED
6 = CLOSED
7 = CLOSED
8 = CLOSED

TRUNK 1
GND
LOOP

2 1   2 1
TR2   TR1

TRUNK 2
GND
LOOP

B
10 | | | | | | | | | | | 1
A
TRUNK CONTROL
SWITCHES
PROMS

OPEN

8
TRUNK BUSY
SWITCHES
1

TRUNK 3
GND
LOOP

2 1   2 1
TR4   TR3

TRUNK 4
GND
LOOP

TRUNK CONTROL SWITCHES

NORMAL SETTING	SWITCH NUMBER	FUNCTION	TYPE –211	TYPE –311	NOTES
CLOSED	1	3RD WIRE TRUNK 1	X	X	5
CLOSED	2	3RD WIRE TRUNK 2	X	X	5
CLOSED	3	3RD WIRE TRUNK 3	X	X	5
CLOSED	4	3RD WIRE TRUNK 4	X	X	5
OPEN	5	IGNORE REVERSALS	X	X	6
CLOSED	6	RELEASE TIME "A"	X	X	7
CLOSED	7	MAKE/BREAK RATIO	–	X	8
CLOSED	8	RELEASE TIME "B"	X	X	7
CLOSED	9	NOT USED	–	–	
CLOSED	10	NOT USED	–	–	

"X" INDICATES THAT FUNCTION IS APPLICABLE FOR THE TYPE
9110–211–000 OR 9110–311–000 TRUNK CARDS.

5493R1E1

Figure 4–1 CO Trunk Card Switch Functions

NOTES FOR FIGURE 4-1
CO TRUNK CARD SWITCH FUNCTIONS

TRUNK BUSY SWITCHES

1. OUTGOING BUSY SWITCHES (1 PER TRUNK) CAN BE SET FOR EITHER:
   IDLE   – NORMAL TRUNK OPERATION
   BUSY   – TRUNK CANNOT BE SEIZED FOR OUTGOING CALL

2. THE "OUTGOING BUSY" CONDITION MAY BE SET EITHER BY THE OUTGOING BUSY SWITCH (NOTE 1), OR BY THE CONSOLE "TRUNK BUSY OUT" FUNCTION. WHEN THIS CONDITION IS IN EFFECT, THE INCOMING BUSY SWITCH AFFECTS THE TRUNK CONDITION AS FOLLOWS:
   IDLE   – NO ANSWER WILL BE GIVEN TO INCOMING LOCAL EXCHANGE CALLS
   BUSY   – A PERMANENT SEIZURE CONDITION IS GIVEN TOWARDS THE LOCAL EXCHANGE

3. INCOMING BUSY HAS NO EFFECT WHILE OUTGOING BUSY IS NOT SET.

TRUNK CONTROL SWITCHES

4. THE TRUNK CONTROL SWITCHES ARE PROGRAMMED TO RESULT IN THE FEATURES BELOW.

3RD WIRE SWITCHES

5. THE 3RD WIRE LEAD WHEN REQUIRED IS CONNECTED TO THE LOCAL EXCHANGE TO PROVIDE CERTAIN FACILITIES. THESE INCLUDE THE RECORDING OF METER PULSES (EXTENDED FROM THE CO); OR ANOTHER REQUIREMENT MAY BE A BUSY CONDITION WHEN DICTATION OR CODE CALLING EQUIPMENT AT THE LOCAL EXCHANGE HAS BEEN TAKEN INTO SERVICE BY OTHER TRUNKS. THE SWITCH SETTING IS EITHER:
   OPEN   – RECOGNIZES EARTH FROM THE LOCAL EXCHANGE AS A BUSY CONDITION.
   CLOSED – 3RD WIRE SWITCH IS INEFFECTIVE.

IGNORE REVERSALS

6. IF LINE REVERSALS ON THE TRUNK CIRCUIT ARE REQUIRED TO HAVE NO EFFECT, THEN THE IGNORE REVERSALS SWITCH IS SET TO "OPEN". IF LINE REVERSALS ARE TO BE RECOGNIZED, THEN THE SWITCH IS SET TO CLOSED.

RELEASE TIME SWITCHES

7. VALID TRUNK RELEASE TIMES ARE RECOGNIZED BY THE FOLLOWING RELEASE TIME SETTINGS FOR PROM TYPE -0004 WITH SWITCHES "A" AND "B":

"A" SETTING	"B" SETTING	RELEASE TIME
OPEN	CLOSED	50 ms
CLOSED	CLOSED	500 ms
OPEN	OPEN	2.5 s
CLOSED	OPEN	INFINITE (NON-RELEASE)

MAKE/BREAK RATIO

8. THE MAKE/BREAK SWITCH FUNCTION IS PROGRAMMED FOR TYPE 9110-311 ONLY. THE SWITCH SETTINGS RESULT IN THE FOLLOWING RATIOS:
   OPEN   – 33/66 (33% MAKE; 66% BREAK)
   CLOSED – 40/60 (40% MAKE; 60% BREAK)
   TYPE 9110-211 IS FIXED AT 40/60 RATIO.

LOOP/GROUND CALLING SWITCHES

9. THE LOOP/GROUND CALLING SWITCHES (1 PER TRUNK) CAN BE SET TO:
   LOOP   – USED FOR LOOP-CALLING TYPE TRUNKS
   GROUND – USED FOR EARTH-CALLING TYPE TRUNKS

XT SWITCH

10. THE XT SWITCH (1 PER TRUNK) IS USED IN CONJUNCTION WITH THE 3RD WIRE SWITCH (NOTE 5) AND CAN BE SET TO PROVIDE FOLLOWING CONDITIONS:
    -48 V   – THE CIRCUIT RESPONDS TO A -48 Vdc SIGNAL (E.G., WHEN IT IS A METER PULSE OR A BUSY CONDITION). AN EARTH IS EQUIVALENT TO AN OPEN.
    GND   – THE CIRCUIT RESPONDS TO AN EARTH SIGNAL (E.G., WHEN IT IS A METER PULSE OR A BUSY CONDITION). A -48 Vdc SIGNAL IS EQUIVALENT TO OPEN.

HI-Z SWITCH

11. THE HI-Z SWITCH ALLOWS THE PROPER IMPEDANCE ON INCOMING CALLS, TO BE PRESENTED ACCORDING TO REQUIREMENTS. THE TWO SETTINGS FOR THE SWITCH RESULT IN THE FOLLOWING:

    HI-Z SETTING – PRESENTS THE NORMAL IMPEDANCE TO INCOMING RINGING SIGNALS, BUT A HIGH BLOCKING IMPEDANCE TO VOICE SIGNALS

    NORM SETTING – PRESENTS A NORMAL IMPEDANCE TO BOTH RINGING SIGNALS AND VOICE SIGNALS. IN CANADA THE HI-Z SWITCH MUST BE SET TO HI-Z.

TABLE 4-2
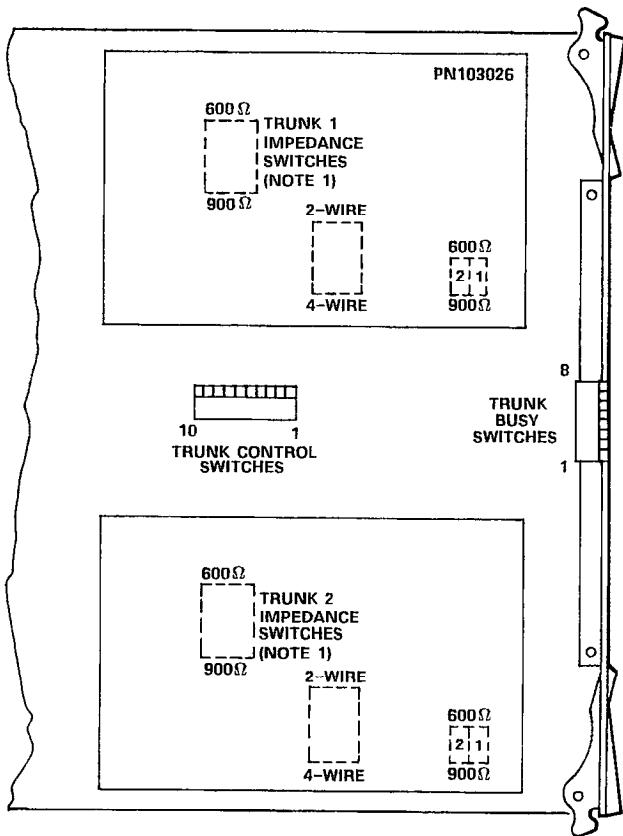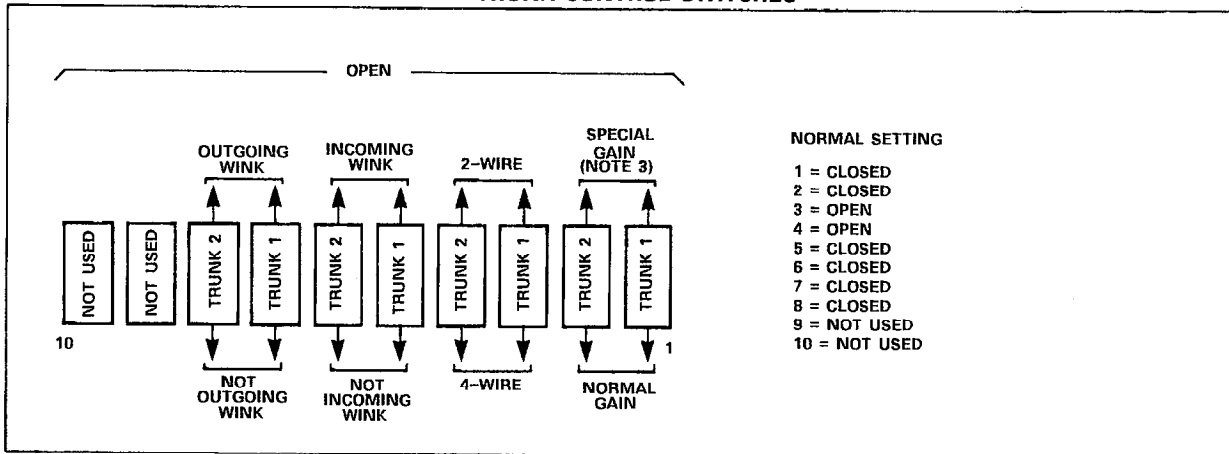## TRUNK CARD SWITCH SETTINGS – E&M/TIE TRUNK CARD

SHEET __ OF __

TRUNK 1 ————————
TRUNK 2 ————————
BAY NUMBER ————————
SLOT NUMBER ————————
CIRCUIT NUMBER ————————
TRUNK NUMBER (1–200) ————————

SWITCH SETTINGS		TRUNK 1	TRUNK 2
INCOMING CONDITIONS	BUSY		
	IDLE		
OUTGOING CONDITIONS	BUSY		
	IDLE		
OUTGOING WINK	WINK		
	NO WINK		
INCOMING WINK	WINK		
	NO WINK		
2/4 WIRE CONDITIONS	2 WIRE		
	4 WIRE		
GAIN	SPECIAL		
	NORMAL		
TRUNK IMPEDANCE	600 OHM		
	900 OHM		
LOOP CONDITION	SHORT		
	LONG		
DIALING CONDITION	STOP DIAL		
	NOT STOP DIAL		
M–LEAD CONDITION	NORMAL		
	INVERT		

TRUNK 1 ————————
TRUNK 2 ————————
BAY NUMBER ————————
SLOT NUMBER ————————
CIRCUIT NUMBER ————————
TRUNK NUMBER (1–200) ————————

SWITCH SETTINGS		TRUNK	TRUNK 2
INCOMING CONDITIONS	BUSY		
	IDLE		
OUTGOING CONDITIONS	BUSY		
	IDLE		
OUTGOING WINK	WINK		
	NO WINK		
INCOMING WINK	WINK		
	NO WINK		
2/4 WIRE CONDITIONS	2 WIRE		
	4 WIRE		
GAIN	SPECIAL		
	NORMAL		
TRUNK IMPEDANCE	600 OHM		
	900 OHM		
LOOP CONDITION	SHORT		
	LONG		
DIALING CONDITION	STOP DIAL		
	NOT STOP DIAL		
M–LEAD CONDITION	NORMAL		
	INVERT		

NOTE: TRUNK CARD SWITCHES MUST BE SET TO ONE OF THE TWO POSSIBLE SETTINGS FOR EACH SWITCH AS DETAILED IN SECTION MITL9108–093–200–NA, SHIPPING, RECEIVING AND INSTALLATION INFORMATION.

FORM0129R0

Page 4–5

TRUNK CONTROL SWITCHES

OPEN

OUTGOING WINK   INCOMING WINK   2-WIRE   SPECIAL GAIN (NOTE 3)

NOT USED   NOT USED   TRUNK 2   TRUNK 1   TRUNK 2   TRUNK 1   TRUNK 2   TRUNK 1   TRUNK 2   TRUNK 1

10   1

NOT OUTGOING WINK   NOT INCOMING WINK   4-WIRE   NORMAL GAIN

NORMAL SETTING

1 = CLOSED
2 = CLOSED
3 = OPEN
4 = OPEN
5 = CLOSED
6 = CLOSED
7 = CLOSED
8 = CLOSED
9 = NOT USED
10 = NOT USED

PN103026

600 Ω
TRUNK 1 IMPEDANCE SWITCHES (NOTE 1)
900 Ω

2-WIRE
600 Ω
|2|1|
4-WIRE
900 Ω

10   1
TRUNK CONTROL SWITCHES

TRUNK BUSY SWITCHES

8

600 Ω
TRUNK 2 IMPEDANCE SWITCHES (NOTE 1)
900 Ω

2-WIRE
600 Ω
|2|1|
4-WIRE
900 Ω

TRUNK BUSY SWITCHES

8

OUTGOING BUSY   TRUNK 1 / TRUNK 2   OUTGOING IDLE (NOTE 2)

INCOMING BUSY   TRUNK 1 / TRUNK 2   INCOMING IDLE (NOTE 2)

STOP DIAL   TRUNK 1 / TRUNK 2   NOT STOP DIAL

M LEAD INVERT (NOTE 4)   TRUNK 1 / TRUNK 2   M LEAD NORMAL

1

OPEN

NORMAL SETTING

1 = CLOSED
2 = CLOSED
3 = CLOSED
4 = CLOSED
5 = OPEN
6 = OPEN
7 = CLOSED
8 = CLOSED
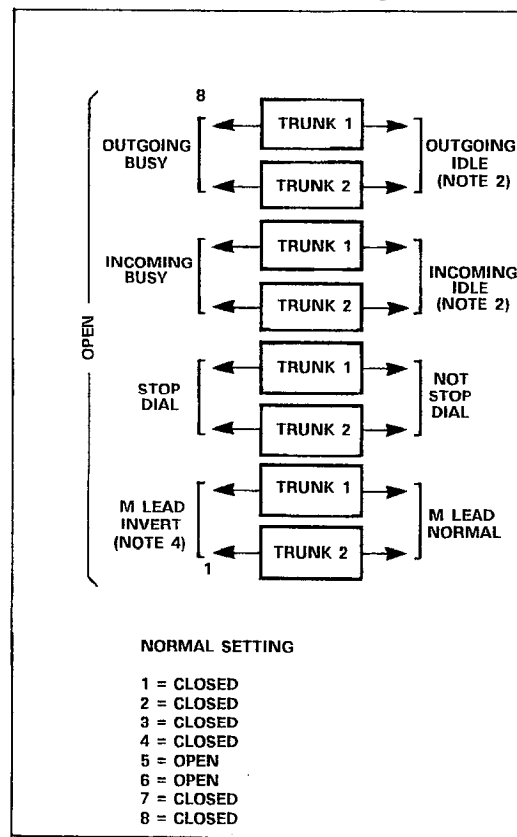
8084R0E0

Figure 4-2 E&M/Tie Trunk Card Switch Functions

NOTES FOR FIGURE 4-2
E&M/TIE TRUNK CARD SWITCH FUNCTIONS

Notes: 1. Trunk impedance switches are located on the rear face of the Trunk Card.

2. Outgoing/incoming switch settings:

Outgoing Busy Switch Set to	Incoming Busy Switch Set to	Result
Idle	Busy	Normal trunk operation – if trunk is made busy by attendant, outgoing busy, incoming busy condition results. See below.
Busy	Busy	Trunk cannot be seized, incoming or outgoing from the ACD system. Recommended setting if trunk is not connected to trunk circuit.
Busy	Idle	Outgoing calls receive busy tone. Incoming calls receive ringing tone but cannot be answered.
Idle	Idle	If trunk is made busy by attendant, outgoing busy, incoming idle condition results. See below.

Incoming busy switch, when operated, will provide an outgoing seize signal whenever the trunk is made outgoing busy (either from the outgoing busy switch on the trunk, or from the console).

3. Normal gain provides 0.5 dB insertion loss through the ACD. Special gain provides for 4-wire operation with carrier systems requiring signal levels of +7 dB on the Rx pair, and −16 dB on the Tx pair.

TABLE 4-3
TRUNK CARD SWITCH SETTINGS - DID/TIE TRUNK CARD

SHEET __ OF __

TRUNK 1 ——————————
TRUNK 2 ——————————
BAY NUMBER ——————————
SLOT NUMBER ——————————
CIRCUIT NUMBER ——————————
TRUNK NUMBER (1-200) ——————————

SWITCH SETTINGS		TRUNK 1	TRUNK 2
INCOMING CONDITIONS	BUSY		
	IDLE		
OUTGOING CONDITIONS	BUSY		
	IDLE		
SWITCH "A" SETTING	CLOSED		
	OPEN		
SWITCH "B" SETTING	CLOSED		
	OPEN		
INCOMING WINK	WINK		
	NO WINK		
OUTGOING WINK	WINK		
	NO WINK		
TRUNK IMPEDANCE SWITCHES (3)	600 OHM		
	900 OHM		
PULSING CONDITION	BATTERY/GROUND		
	LOOP		
DIALING CONDITIONS	STOP DIAL		
	NOT STOP DIAL		

TRUNK 1 ——————————
TRUNK 2 ——————————
BAY NUMBER ——————————
SLOT NUMBER ——————————
CIRCUIT NUMBER ——————————
TRUNK NUMBER (1-200) ——————————

SWITCH SETTINGS		TRUNK 1	TRUNK 2
INCOMING CONDITIONS	BUSY		
	IDLE		
OUTGOING CONDITIONS	BUSY		
	IDLE		
SWITCH "A" SETTING	CLOSED		
	OPEN		
SWITCH "B" SETTING	CLOSED		
	OPEN		
INCOMING WINK	WINK		
	NO WINK		
OUTGOING WINK	WINK		
	NO WINK		
TRUNK IMPEDANCE SWITCHES (3)	600 OHM		
	900 OHM		
PULSING CONDITION	BATTERY/GROUND		
	LOOP		
DIALING CONDITIONS	STOP DIAL		
	NOT STOP DIAL		

NOTE: TRUNK CARD SWITCHES MUST BE SET TO ONE POSSIBLE SETTING FOR EACH SWITCH AS DETAILED IN SECTION MITL9108-093-200-NA, SHIPPING, RECEIVING AND INSTALLATION INFORMATION.

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TRUNK CONTROL SWITCHES

TABLE

TRUNK TYPE	SWITCH A	SWITCH B
DID TRUNK	CLOSED	CLOSED
LOOP TIE TRUNK	CLOSED	OPEN
INCOMING DIAL – OUTGOING AUTO	OPEN	CLOSED
NOT USED	OPEN	OPEN

NORMAL SETTING

5 = CLOSED
6 = CLOSED
7 = CLOSED
8 = CLOSED
9 = NOT USED
10 = NOT USED
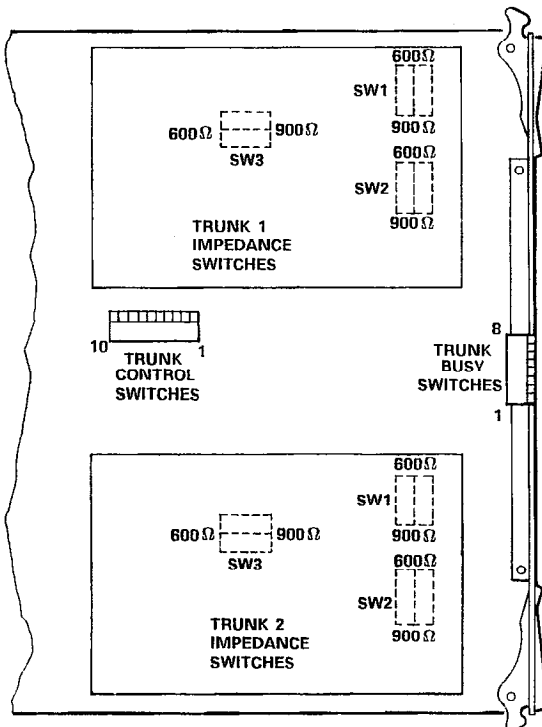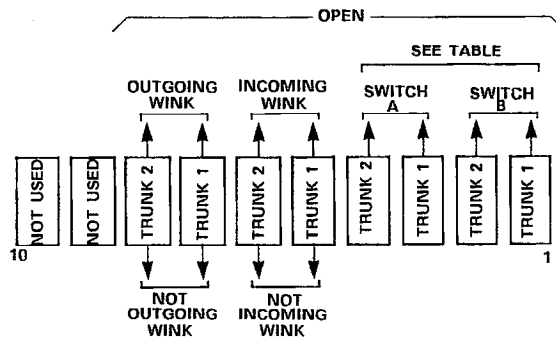
TRUNK BUSY SWITCHES
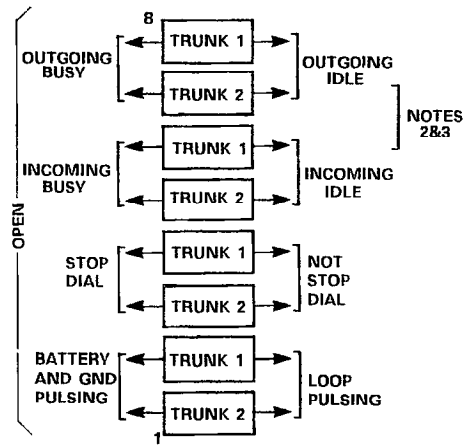
NORMAL SETTING

1 = CLOSED
2 = CLOSED
3 = CLOSED
4 = CLOSED
5 = OPEN
6 = OPEN
7 = CLOSED
8 = CLOSED

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Figure 4-3 DID/Tie Trunk Card Switch Functions

NOTES FOR FIGURE 4-3
DID/TIE TRUNK CARD SWITCH FUNCTIONS

Notes: 1. Trunk impedance switches are located on the rear face of the Trunk Card.

Trunk Busy Switches

2. Outgoing Busy Switches (1 per trunk) can be set for either of the following conditions:
   Idle setting – normal trunk operation
   Busy setting – trunk cannot be seized for outgoing call

3. The "outgoing busy" condition may be set either by the outgoing busy switch (Note 2), or by the console "Trunk Busy Out" function. When this condition is in effect the incoming Busy Switch affects the trunk condition as follows:
   Idle setting – no answer will be given to incoming trunk calls
   Busy setting – a permanent seizure condition is given towards the trunk.

TABLE 4-4
E&M TRUNK MODULE SWITCH SETTINGS

Function	Switch Positions 1 2 3 4 5 6 7 8
Digital PABX to Line Gain (3 dB) Digital PABX to Line Gain (-13 dB)	0 x x x x x x x 1 x x x x x x x
Line to Digital PABX Gain (-4 dB) Line to Digital PABX Gain (-11 dB)	x 0 x x x x x x x 1 x x x x x x
600 Ohm Termination Complex Termination	x x 1 0 x x x x x x 0 1 x x x x
2-Wire Transmission 4-Wire Transmission	x x x x 1 x x x x x x x 0 x x x
Type 1 Signaling Type 5 Signaling	x x x x x 1 x x x x x x x 0 x x

Note: 0 = Open, 1 = Closed and x = Not Applicable.

5. CABLING AND CROSS-CONNECTIONS

General

5.01 The forms contained in this Part show the plug assignments for each circuit of each bay. The first four forms cover the four bays in the all-digital configuration. Plug assignment forms are also included for analog Bay 3 and Peripheral Cabinet, if needed. Power Fail Transfer card assignment forms are included for both Control and Peripheral cabinets. For more information, refer to Section MITL9108-093-200-NA, Shipping, Receiving and Installation Information.

TABLE 5-1
BAY 1 PLUG ASSIGNMENTS

PLUG J7 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
1-2		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	O-BK	
		38	BK-G	_____ Not Used _____
		13	G-BK	_____ Not Used _____
1-1		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
		46	V-BL	
		21	BL-V	
		47	V-O	
		22	O-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	
		25	S-V	

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-1 (CONT'D)
BAY 1 PLUG ASSIGNMENTS

PLUG J11 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
1-4		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	O-BK	
		38	BK-G	_____ Not Used _____
		13	G-BK	_____ Not Used _____
1-3		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
		46	V-BL	
		21	BL-V	
		47	V-O	
		22	O-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	
		25	S-V	

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-1 (CONT'D)
BAY 1 PLUG ASSIGNMENTS

PLUG J5 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
1-6		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	O-BK	
		38	BK-G	_____ Not Used _____
		13	G-BK	_____ Not Used _____
1-5		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
		46	V-BL	
		21	BL-V	
		47	V-O	
		22	O-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	
		25	S-V	

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-1 (CONT'D)
BAY 1 PLUG ASSIGNMENTS

PLUG J9 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
1-8		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	O-BK	
		38	BK-G	_____ Not Used _____
		13	G-BK	_____ Not Used _____
1-7		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
		46	V-BL	
		21	BL-V	
		47	V-O	
		22	O-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	
		25	S-V	

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-2
BAY 2 PLUG ASSIGNMENTS

PLUG J31 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
2-2		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	O-BK	
		38	BK-G	_____ Not Used _____
		13	G-BK	_____ Not Used _____
2-1		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
		46	V-BL	
		21	BL-V	
		47	V-O	
		22	O-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	
		25	S-V	

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-2 (CONT'D)
BAY 2 PLUG ASSIGNMENTS

PLUG J25 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
2-4		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	0-BK	
		38	BK-G	_____ Not Used _____
		13	G-BK	_____ Not Used _____
2-3		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
		46	V-BL	
		21	BL-V	
		47	V-O	
		22	0-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	
		25	S-V	

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5–3
DIGITAL BAY 3 PLUG ASSIGNMENTS

PLUG J7 (at Cross–Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
3-2		26	W–BL	
		1	BL–W	
		27	W–O	
		2	O–W	
		28	W–G	
		3	G–W	
		29	W–BR	
		4	BR–W	
		30	W–S	
		5	S–W	
		31	R–BL	
		6	BL–R	
		32	R–O	
		7	O–R	
		33	R–G	
		8	G–R	
		34	R–BR	
		9	BR–R	
		35	R–S	
		10	S–R	
		36	BK–BL	
		11	BL–BK	
		37	BK–O	
		12	O–BK	
		38	BK–G	_____ Not Used _____
		13	G–BK	_____ Not Used _____
3-1		39	BK–BR	
		14	BR–BK	
		40	BK–S	
		15	S–BK	
		41	Y–BL	
		16	BL–Y	
		42	Y–O	
		17	O–Y	
		43	Y–G	
		18	G–Y	
		44	Y–BR	
		19	BR–Y	
		45	Y–S	
		20	S–Y	
		46	V–BL	
		21	BL–V	
		47	V–O	
		22	O–V	
		48	V–G	
		23	G–V	
		49	V–BR	
		24	BR–V	
		50	V–S	
		25	S–V	

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-3 (CONT'D)
DIGITAL BAY 3 PLUG ASSIGNMENTS

PLUG J11 (at Cross-Connect Field)

Bay/Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
3-4		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	O-BK	
		38	BK-G	_____ Not Used _____
		13	G-BK	_____ Not Used _____
3-3		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
		46	V-BL	
		21	BL-V	
		47	V-O	
		22	O-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	
		25	S-V	

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-3 (CONT'D)
DIGITAL BAY 3 PLUG ASSIGNMENTS

PLUG J5 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
3-6		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	O-BK	
		38	BK-G	_____ Not Used _____
		13	G-BK	_____ Not Used _____
3-5		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
		46	V-BL	
		21	BL-V	
		47	V-O	
		22	O-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	
		25	S-V	

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-3 (CONT'D)
DIGITAL BAY 3 PLUG ASSIGNMENTS

PLUG J9 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
3-8		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	O-BK	
		38	BK-G	_____ Not Used _____
		13	G-BK	_____ Not Used _____
3-7		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
		46	V-BL	
		21	BL-V	
		47	V-O	
		22	O-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	
		25	S-V	

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-4
DIGITAL BAY 4 PLUG ASSIGNMENTS

PLUG J7 (at Cross-Connect Field)

Bay/Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
4-2		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	O-BK	
		38	BK-G	_____ Not Used _____
		13	G-BK	_____ Not Used _____
4-1		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
		46	V-BL	
		21	BL-V	
		47	V-O	
		22	O-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	
		25	S-V	

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-4 (CONT'D)
DIGITAL BAY 4 PLUG ASSIGNMENTS

PLUG J11 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
4-4		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	O-BK	
		38	BK-G	_____ Not Used _____
		13	G-BK	_____ Not Used _____
4-3		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
		46	V-BL	
		21	BL-V	
		47	V-O	
		22	O-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	
		25	S-V	

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-4 (CONT'D)
DIGITAL BAY 4 PLUG ASSIGNMENTS

PLUG J5 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
4-6		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	O-BK	
		38	BK-G	_____ Not Used _____
		13	G-BK	_____ Not Used _____
4-5		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
		46	V-BL	
		21	BL-V	
		47	V-O	
		22	O-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	
		25	S-V	

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-4 (CONT'D)
DIGITAL BAY 4 PLUG ASSIGNMENTS

PLUG J9 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
4-8		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	0-BK	
		38	BK-G	_____ Not Used _____
		13	G-BK	_____ Not Used _____
4-7		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
		46	V-BL	
		21	BL-V	
		47	V-O	
		22	0-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	
		25	S-V	

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-5
CONTROL CABINET POWER FAIL TRANSFER CARD ASSIGNMENTS

CARD 1

Pin	Pair Colour	Lead Designation	Connection/Comments (Extension, Circuit, Feature)
26	W-BL	TRUNK R1	
1	BL-W	TRUNK T1	
27	W-O	TRUNK R2	
2	O-W	TRUNK T2	
28	W-G	TRUNK R3	
3	G-W	TRUNK T3	
29	W-BR	TRUNK R4	
4	BR-W	TRUNK T4	
30	W-S	TRUNK R5	
5	S-W	TRUNK T5	
31	R-BL	TRUNK R6	
6	BL-R	TRUNK T6	
32	R-O	TRUNK CARD R1	
7	O-R	TRUNK CARD T1	
33	R-G	TRUNK CARD R2	
8	G-R	TRUNK CARD T2	
34	R-BR	TRUNK CARD R3	
9	BR-R	TRUNK CARD T3	
35	R-S	TRUNK CARD R4	
10	S-R	TRUNK CARD T4	
36	BK-BL	TRUNK CARD R5	
11	BL-BK	TRUNK CARD T5	
37	BK-O	TRUNK CARD R6	
12	O-BK	TRUNK CARD T6	
38	BK-G	SPARE	
13	G-BK	SPARE	
39	BK-BR	LINE CARD R1	
14	BR-BK	LINE CARD T1	
40	BK-S	LINE CARD R2	
15	S-BK	LINE CARD T2	
41	Y-BL	LINE CARD R3	
16	BL-Y	LINE CARD T3	
42	Y-O	LINE CARD R4	
17	O-Y	LINE CARD T4	
43	Y-G	LINE CARD R5	
18	G-Y	LINE CARD T5	
44	Y-BR	LINE CARD R6	
19	BR-Y	LINE CARD T6	
45	Y-S	STATION R1	
20	S-Y	STATION T1	
46	V-BL	STATION R2	
21	BL-V	STATION T2	
47	V-O	STATION R3	
22	O-V	STATION T3	
48	V-G	STATION R4	
23	G-V	STATION T4	
49	V-BR	STATION R5	
24	BR-V	STATION T5	
50	V-S	STATION R6	
25	S-V	STATION T6	

TABLE 5-5 (CONT'D)
CONTROL CABINET POWER FAIL TRANSFER CARD ASSIGNMENTS

CARD 2 (optional)

Pin	Pair Colour	Lead Designation	Connection/Comments (Extension, Circuit, Feature)
26	W-BL	TRUNK R1	
1	BL-W	TRUNK T1	
27	W-O	TRUNK R2	
2	O-W	TRUNK T2	
28	W-G	TRUNK R3	
3	G-W	TRUNK T3	
29	W-BR	TRUNK R4	
4	BR-W	TRUNK T4	
30	W-S	TRUNK R5	
5	S-W	TRUNK T5	
31	R-BL	TRUNK R6	
6	BL-R	TRUNK T6	
32	R-O	TRUNK CARD R1	
7	O-R	TRUNK CARD T1	
33	R-G	TRUNK CARD R2	
8	G-R	TRUNK CARD T2	
34	R-BR	TRUNK CARD R3	
9	BR-R	TRUNK CARD T3	
35	R-S	TRUNK CARD R4	
10	S-R	TRUNK CARD T4	
36	BK-BL	TRUNK CARD R5	
11	BL-BK	TRUNK CARD T5	
37	BK-O	TRUNK CARD R6	
12	O-BK	TRUNK CARD T6	
38	BK-G	SPARE	
13	G-BK	SPARE	
39	BK-BR	LINE CARD R1	
14	BR-BK	LINE CARD T1	
40	BK-S	LINE CARD R2	
15	S-BK	LINE CARD T2	
41	Y-BL	LINE CARD R3	
16	BL-Y	LINE CARD T3	
42	Y-O	LINE CARD R4	
17	O-Y	LINE CARD T4	
43	Y-G	LINE CARD R5	
18	G-Y	LINE CARD T5	
44	Y-BR	LINE CARD R6	
19	BR-Y	LINE CARD T6	
45	Y-S	STATION R1	
20	S-Y	STATION T1	
46	V-BL	STATION R2	
21	BL-V	STATION T2	
47	V-O	STATION R3	
22	O-V	STATION T3	
48	V-G	STATION R4	
23	G-V	STATION T4	
49	V-BR	STATION R5	
24	BR-V	STATION T5	
50	V-S	STATION R6	
25	S-V	STATION T6	

TABLE 5-5 (CONT'D)
CONTROL CABINET POWER FAIL TRANSFER CARD ASSIGNMENTS

CARD 3 (optional)

Pin	Pair Colour	Lead Designation	Connection/Comments (Extension, Circuit, Feature)
26	W-BL	TRUNK R1	
1	BL-W	TRUNK T1	
27	W-O	TRUNK R2	
2	O-W	TRUNK T2	
28	W-G	TRUNK R3	
3	G-W	TRUNK T3	
29	W-BR	TRUNK R4	
4	BR-W	TRUNK T4	
30	W-S	TRUNK R5	
5	S-W	TRUNK T5	
31	R-BL	TRUNK R6	
6	BL-R	TRUNK T6	
32	R-O	TRUNK CARD R1	
7	O-R	TRUNK CARD T1	
33	R-G	TRUNK CARD R2	
8	G-R	TRUNK CARD T2	
34	R-BR	TRUNK CARD R3	
9	BR-R	TRUNK CARD T3	
35	R-S	TRUNK CARD R4	
10	S-R	TRUNK CARD T4	
36	BK-BL	TRUNK CARD R5	
11	BL-BK	TRUNK CARD T5	
37	BK-O	TRUNK CARD R6	
12	O-BK	TRUNK CARD T6	
38	BK-G	SPARE	
13	G-BK	SPARE	
39	BK-BR	LINE CARD R1	
14	BR-BK	LINE CARD T1	
40	BK-S	LINE CARD R2	
15	S-BK	LINE CARD T2	
41	Y-BL	LINE CARD R3	
16	BL-Y	LINE CARD T3	
42	Y-O	LINE CARD R4	
17	O-Y	LINE CARD T4	
43	Y-G	LINE CARD R5	
18	G-Y	LINE CARD T5	
44	Y-BR	LINE CARD R6	
19	BR-Y	LINE CARD T6	
45	Y-S	STATION R1	
20	S-Y	STATION T1	
46	V-BL	STATION R2	
21	BL-V	STATION T2	
47	V-O	STATION R3	
22	O-V	STATION T3	
48	V-G	STATION R4	
23	G-V	STATION T4	
49	V-BR	STATION R5	
24	BR-V	STATION T5	
50	V-S	STATION R6	
25	S-V	STATION T6	

TABLE 5-6
ANALOG BAY 3 PLUG ASSIGNMENTS

PLUG P1 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
3-1		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
3-2		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
3-3		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	O-BK	
3-4		38	BK-G	
		13	G-BK	
		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
3-5		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
3-6		46	V-BL	
		21	BL-V	
		47	V-O	
		22	O-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	SPARE
		25	S-V	SPARE

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-6 (CONT'D)
ANALOG BAY 3 PLUG ASSIGNMENTS

PLUG P2 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
3-1		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
3-2		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
3-3		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	O-BK	
3-4		38	BK-G	
		13	G-BK	
		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
3-5		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
3-6		46	V-BL	
		21	BL-V	
		47	V-O	
		22	O-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	SPARE
		25	S-V	SPARE

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-6 (CONT'D)
ANALOG BAY 3 PLUG ASSIGNMENTS

PLUG P3 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
3-7		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
3-8		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
3-9		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	O-BK	
3-10		38	BK-G	
		13	G-BK	
		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
3-11		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
3-12		46	V-BL	
		21	BL-V	
		47	V-O	
		22	O-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	SPARE
		25	S-V	SPARE

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-6 (CONT'D)
ANALOG BAY 3 PLUG ASSIGNMENTS

PLUG P4 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
3-7		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
3-8		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
3-9		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	0-BK	
3-10		38	BK-G	
		13	G-BK	
		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
3-11		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
3-12		46	V-BL	
		21	BL-V	
		47	V-O	
		22	0-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	SPARE
		25	S-V	SPARE

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-6 (CONT'D)
ANALOG BAY 3 PLUG ASSIGNMENTS

PLUG P5 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
3-13		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
3-14		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
3-15		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	O-BK	

PLUG P6 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
3-13		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
3-14		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
3-15		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	O-BK	

TABLE 5-7
PERIPHERAL CABINET PLUG ASSIGNMENTS

PLUG P1 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
4-1		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
4-2		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
4-3		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	0-BK	
4-4		38	BK-G	
		13	G-BK	
		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
4-5		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
4-6		46	V-BL	
		21	BL-V	
		47	V-O	
		22	0-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	SPARE
		25	S-V	SPARE

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5–7 (CONT'D)
PERIPHERAL CABINET PLUG ASSIGNMENTS

PLUG P2 (at Cross–Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
4–1		26	W–BL	
		1	BL–W	
		27	W–O	
		2	O–W	
		28	W–G	
		3	G–W	
		29	W–BR	
		4	BR–W	
4–2		30	W–S	
		5	S–W	
		31	R–BL	
		6	BL–R	
		32	R–O	
		7	O–R	
		33	R–G	
		8	G–R	
4–3		34	R–BR	
		9	BR–R	
		35	R–S	
		10	S–R	
		36	BK–BL	
		11	BL–BK	
		37	BK–O	
		12	O–BK	
4–4		38	BK–G	
		13	G–BK	
		39	BK–BR	
		14	BR–BK	
		40	BK–S	
		15	S–BK	
		41	Y–BL	
		16	BL–Y	
4–5		42	Y–O	
		17	O–Y	
		43	Y–G	
		18	G–Y	
		44	Y–BR	
		19	BR–Y	
		45	Y–S	
		20	S–Y	
4–6		46	V–BL	
		21	BL–V	
		47	V–O	
		22	O–V	
		48	V–G	
		23	G–V	
		49	V–BR	
		24	BR–V	
		50	V–S	SPARE
		25	S–V	SPARE

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-7 (CONT'D)
PERIPHERAL CABINET PLUG ASSIGNMENTS

PLUG P3 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
4-7		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
4-8		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
4-9		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	O-BK	
4-10		38	BK-G	
		13	G-BK	
		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
4-11		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
4-12		46	V-BL	
		21	BL-V	
		47	V-O	
		22	O-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	SPARE
		25	S-V	SPARE

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-7 (CONT'D)
PERIPHERAL CABINET PLUG ASSIGNMENTS

PLUG P4 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
4-7		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
4-8		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
4-9		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	O-BK	
4-10		38	BK-G	
		13	G-BK	
		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
4-11		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
4-12		46	V-BL	
		21	BL-V	
		47	V-O	
		22	O-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	SPARE
		25	S-V	SPARE

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-7 (CONT'D)
PERIPHERAL CABINET PLUG ASSIGNMENTS

PLUG P19 on Interconnect Card (Miscellaneous Connections to Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
		26	W-BL	SPARE
		1	BL-W	SPARE
4-15		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
		30	W-S	
		5	S-W	
4-14		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
		34	R-BR	
		9	BR-R	
4-13		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	O-BK	
		38	BK-G	
		13	G-BK	
4-15		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
		42	Y-O	
		17	O-Y	
4-14		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
		46	V-BL	
		21	BL-V	
4-13		47	V-O	
		22	O-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	
		25	S-V	

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-7 (CONT'D)
PERIPHREAL CABINET PLUG ASSIGNMENTS

PLUG P7 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
5-1		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
5-2		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
5-3		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	O-BK	
5-4 .		38	BK-G	
		13	G-BK	
		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
5-5		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
5-6		46	V-BL	
		21	BL-V	
		47	V-O	
		22	O-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	SPARE
		25	S-V	SPARE

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-7 (CONT'D)
PERIPHERAL CABINET PLUG ASSIGNMENTS

PLUG P8 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
5-1		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
5-2		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
5-3		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	0-BK	
5-4		38	BK-G	
		13	G-BK	
		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
5-5		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
5-6		46	V-BL	
		21	BL-V	
		47	V-O	
		22	0-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	SPARE
		25	S-V	SPARE

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-7 (CONT'D)
PERIPHERAL CABINET PLUG ASSIGNMENTS

PLUG P9 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
5-7		26	W-BL	
		1	BL-W	
		27.	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
5-8		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
5-9		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	0-BK	
5-10		38	BK-G	
		13	G-BK	
		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
5-11		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
5-12	.	46	V-BL	
		21	BL-V	
		47	V-O	
		22	0-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	SPARE
		25	S-V	SPARE

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-7 (CONT'D)
PERIPHERAL CABINET PLUG ASSIGNMENTS

PLUG P10 (at Cross-Connect Field)

Bay/ Slot	Cct	Pin	Pair Colour	Connection/Comments (Extension, Circuit, Feature)
5-7		26	W-BL	
		1	BL-W	
		27	W-O	
		2	O-W	
		28	W-G	
		3	G-W	
		29	W-BR	
		4	BR-W	
5-8		30	W-S	
		5	S-W	
		31	R-BL	
		6	BL-R	
		32	R-O	
		7	O-R	
		33	R-G	
		8	G-R	
5-9		34	R-BR	
		9	BR-R	
		35	R-S	
		10	S-R	
		36	BK-BL	
		11	BL-BK	
		37	BK-O	
		12	0-BK	
5-10		38	BK-G	
		13	G-BK	
		39	BK-BR	
		14	BR-BK	
		40	BK-S	
		15	S-BK	
		41	Y-BL	
		16	BL-Y	
5-11		42	Y-O	
		17	O-Y	
		43	Y-G	
		18	G-Y	
		44	Y-BR	
		19	BR-Y	
		45	Y-S	
		20	S-Y	
5-12		46	V-BL	
		21	BL-V	
		47	V-O	
		22	0-V	
		48	V-G	
		23	G-V	
		49	V-BR	
		24	BR-V	
		50	V-S	SPARE
		25	S-V	SPARE

Note: Specify the appropriate Circuit number to match the card type.

TABLE 5-8
PERIPHERAL CABINET POWER FAIL TRANSFER CARD ASSIGNMENTS
PLUG P20 (Power Fail Connections to to Cross-Connect Field)

Pin	Pair Colour	Lead Designation	Connection/Comments (Extension, Circuit, Feature)
26	W-BL	STATION T1	
1	BL-W	STATION R1	
27	W-O	LINE CARD T1	
2	O-W	LINE CARD R1	
28	W-G	TRUNK T1	
3	G-W	TRUNK R1	
29	W-BR	TRUNK CARD T1	
4	BR-W	TRUNK CARD R1	
30	W-S	STATION T2	
5	S-W	STATION R2	
31	R-BL	LINE CARD T2	
6	BL-R	LINE CARD R2	
32	R-O	TRUNK T2	
7	O-R	TRUNK R2	
33	R-G	TRUNK CARD T2	
8	G-R	TRUNK CARD R2	
34	R-BR	STATION T3	
9	BR-R	STATION R3	
35	R-S	LINE CARD T3	
10	S-R	LINE CARD R3	
36	BK-BL	TRUNK T3	
11	BL-BK	TRUNK R3	
37	BK-O	TRUNK CARD T3	
12	O-BK	TRUNK CARD R3	
38	BK-G	STATION T4	
13	G-BK	STATION R4	
39	BK-BR	LINE CARD T4	
14	BR-BK	LINE CARD R4	
40	BK-S	TRUNK T4	
15	S-BK	TRUNK R4	
41	Y-BL	TRUNK CARD T4	
16	BL-Y	TRUNK CARD R4	
42	Y-O	STATION T5	
17	O-Y	STATION R5	
43	Y-G	LINE CARD T5	
18	G-Y	LINE CARD R5	
44	Y-BR	TRUNK T5	
19	BR-Y	TRUNK R5	
45	Y-S	TRUNK CARD T5	
20	S-Y	TRUNK CARD R5	
46	V-BL	STATION T6	
21	BL-V	STATION R6	
47	V-O	LINE CARD T6	
22	O-V	LINE CARD T6	
48	V-G	TRUNK T6	
23	G-V	TRUNK R6	
49	V-BR	TRUNK CARD T6	
24	BR-V	TRUNK CARD R6	
50	V-S	SPARE	
25	S-V	SPARE	

TABLE 5-8 (CONT'D)
PERIPHERAL POWER FAIL TRANSFER CARD ASSIGNMENTS

PLUG P21 (Power Fail Connections to to Cross-Connect Field)

Pin	Pair Colour	Lead Designation	Connection/Comments (Extension, Circuit, Feature)
26	W-BL	STATION T7	
1	BL-W	STATION R7	
27	W-O	LINE CARD T7	
2	O-W	LINE CARD R7	
28	W-G	TRUNK T7	
3	G-W	TRUNK R7	
29	W-BR	TRUNK CARD T7	
4	BR-W	TRUNK CARD R7	
30	W-S	STATION T8	
5	S-W	STATION R8	
31	R-BL	LINE CARD T8	
6	BL-R	LINE CARD R8	
32	R-O	TRUNK T8	
7	O-R	TRUNK R8	
33	R-G	TRUNK CARD T8	
8	G-R	TRUNK CARD R8	
34	R-BR	STATION T9	
9	BR-R	STATION R9	
35	R-S	LINE CARD T9	
10	S-R	LINE CARD R9	
36	BK-BL	TRUNK T9	
11	BL-BK	TRUNK R9	
37	BK-O	TRUNK CARD T9	
12	O-BK	TRUNK CARD R9	
38	BK-G	STATION T10	
13	G-BK	STATION R10	
39	BK-BR	LINE CARD T10	
14	BR-BK	LINE CARD R10	
40	BK-S	TRUNK T10	
15	S-BK	TRUNK R10	
41	Y-BL	TRUNK CARD T10	
16	BL-Y	TRUNK CARD R10	
42	Y-O	STATION T11	
17	O-Y	STATION R11	
43	Y-G	LINE CARD T11	
18	G-Y	LINE CARD R11	
44	Y-BR	TRUNK T11	
19	BR-Y	TRUNK R11	
45	Y-S	TRUNK CARD T11	
20	S-Y	TRUNK CARD R11	
46	V-BL	STATION T12	
21	BL-V	STATION R12	
47	V-O	LINE CARD T12	
22	O-V	LINE CARD R12	
48	V-G	TRUNK T12	
23	G-V	TRUNK R12	
49	V-BR	TRUNK CARD T12	
24	BR-V	TRUNK CARD R12	
50	V-S	SPARE	
25	S-V	SPARE	

SX-200® DIGITAL

PRIVATE AUTOMATIC BRANCH EXCHANGE (PABX)

CUSTOMER DATA ENTRY (CDE)

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LIST OF ILLUSTRATIONS

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1. INTRODUCTION

General

1.01 After the successful mechanical installation of the SX-200®
DIGITAL PABX with Generic 1000 or Generic 1001 software (refer to Section MITL9108-093-200-NA, Shipping, Receiving and Installation Information), the system is ready for the programming stage. This Section describes the Customer Data Entry package and outlines the procedures for entering Customer Data Entry (CDE) Mode.

Reason for Reissue

1.02 This Section has been reissued to describe new Customer Data Entry Functionality.

2. EQUIPMENT USED FOR CUSTOMER DATA ENTRY

General

2.01 The programming of the system is supported by three device the Floppy Disk Drive, the Attendant Console and an ASCII CF terminal (VT-100 compatible).

2.02 **Attendant Console.** The Attendant Console can be used f(on-site programming. Customer Data Entry is facilitated by th console softkeys and LCD display. The LCD has four lines of 80 chai acters. These lines are the header line, a command line (which display the data that can be edited) and two lines for the 10 softkeys. No that some forms vary and have two header lines, a command line ar only one line for the softkey display.

2.03 **ASCII CRT Terminal.** Accessing Customer Data Entry throug the terminal is required for remote programming. The termin can also be used for local programming instead of the Attendai Console. For local programming, the terminal is connected via ε RS-232 connection to the LOCAL (DTE) connector on the Maintenanc Panel. For remote programming, the terminal is connected remotely v added modems to the REMOTE (DCE) connector. A terminal that VT-100 compatible displays the full screen version of the CDE packag This includes a header line, 12 lines of data, a command line and tw rows of softkey displays. Softkeys on a terminal are selected by pres: ing the ESC key once followed by the softkey number. There are ' softkeys numbered 1 through 0 (0 represents the tenth softkey).

Form Editing

2.04 **Cursor Movement.** The forms in the CDE package have sever columns and lines of information. On the Attendant Console, (on a terminal that has cursor control keys, the left and right arro keys (← and →) move the cursor from field to field on the commar line. On a terminal, the TAB and DEL keys perform an equivale function. Note that both the DEL and left arrow keys delete edited da as the cursor moves left. The up and down arrow keys move th cursor up and down the form. On a terminal, the LINE FEED key al: moves the cursor down the form. Note also that the RETURN key on terminal performs the same function as the ENTER softkey. On th Attendant Console, cursor movement is indicated by the undersco character (_). On the terminal, cursor movement is indicated by flashing solid block and by a line pointer (represented by > characters).

Levels of Access to Customer Data Entry

2.05 The system provides five levels of CDE access. These levels a Attendant, Supervisor, Maintenance 1, Maintenance 2 and li staller. The access for any of these levels may be set to 'read/wri access', 'no access' or 'read only access' for each of the CDE forms.

2.06 An attendant may be restricted to moves of station numbers and review of Pickup Groups only. A maintenance person may be given access to Class-of-Service modifications and station/SUPERSET® set additions but not to ARS programming. Installers must be able to access the entire database.

2.07 The user can exit CDE Mode (for Call Handling) by pressing any hardkey on the Attendant Console. Pressing the FUNCTION key and then the APPLICATION softkey automatically returns the system to CDE Mode.

3. CDE PACKAGE GROUPING

General

3.01 The system is programmed in groups. Classes of Service group together users with the same COS restrictions. Pickup Groups assemble users in a department. Hunt Goups classify users together with a common knowledge about how to handle certain calls. Trunks are grouped together with common incoming answering points and common outgoing characteristics.

3.02 Tenant Groups also relate to this grouping theme. Tenant Groups facilitate separate attendant services for different areas of a corporation. These services include handling "DIAL 0" calls locally, routing and recalling incoming trunk calls as required and locally switching to Night Service Mode.

3.03 One variant of this multi-tenant operation occurs when each group may be separate customers that cannot access each other's trunks. Another variant occurs when DID Trunk service handles incoming calls into a number of different customers. For this plan, each customer requires identification of its incoming calls.

4. OPERATION

Loading of System Software

4.01 When initializing the system, two steps must be followed for correct operation. First, the Bay 2 power supply must be on BEFORE the diskette is inserted in the Bay 2 disk drive. Second, the diskette must be positioned correctly. Refer to the illustration on the disk drive door for proper diskette insertion. Refer also to Section MITL9108-093-200-NA, Shipping, Receiving, and Installation Information for the power-up procedures.

4.02 The following tables describe the CDE forms and their associated commands for both the CRT terminal and the console LCD.

Initial Customer Data Entry Access

4.03 The login procedure for initial CDE access (from a terminal) consists of four basic steps. These steps are:

1. Specifying the terminal type
   1- VT-100 COMPATIBLE
   2- TTY TYPE   (reserved for future use)

2. Selecting the function
   1- MAINTENANCE
   2- CDE
   6- QUIT

3. Selecting a level of access
   INSTALLER,
   MAINT1,
   MAINT2,
   SUPERVISOR or
   ATTENDANT

4. Entering the password
   The default password is 1000.

4.04 **CDE Terminal Display.** The terminal displays the date, time and alarm status of the system. Refer to Table 4-1, List of Customer Data Entry Forms for a complete list and refer to Table 4-2, Available Forms (CDE Terminal Display) for the form layout.

4.05 The login procedure for initial CDE access from the Attendant Console consists of the following steps:

1. Pressing the FUNCTION key.

2. Pressing the APPLICATION softkey (refer to Figure 4-1, Console Application Prompt).

3. Pressing the CDE softkey.

4. Selecting a level of access.

5. Entering the password (default is 1000).

6. Pressing the ENTER softkey.

4.06   Attendant Console Display. The user is presented with the first two forms that may be accessed. Refer to Table 4-2, Available Forms (Attendant Console Display). Pressing the cursor control keys display subsequent forms.

Available Forms

4.07   This form displays those forms obtainable in the Customer Data Entry package. Refer to Table 4-1, List of Customer Data Entry Forms for a complete list and refer to Table 4-2, Available Forms (CDE Terminal Display) for the form layout. Note that this form cannot be modified.

4.08   Field Description. The application area on the terminal displays the 25 forms. Forms 11, 12 and 28 are reserved for future use. The command line displays the **ENTER FORM NUMBER:** prompt. The user selects a form by entering a valid form number.

Choose An Application OR Depress A Hard Key to Return
▨ F1>MAINTENANCE   ▨ F2 >CDE   ▨ F3>   ▨ F4>   ▨ F5>
▨ F6>   ▨ F7>   ▨ F8>   ▨ F9>   ▨ F0>
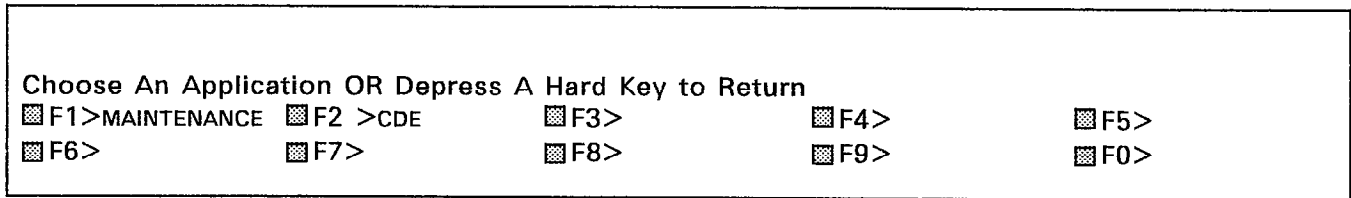
Figure 4-1   Console Application Prompt

TABLE 4-1
LIST OF CUSTOMER DATA ENTRY FORMS

Number	Title
01	System Configuration
02	Feature Access Codes
03	Class-of-Service Define
04	System Options/System Timers
05	Tenant Interconnection Table
06	Tenant Night Switching Control
07	Console Assignments
08	Attendant LDN Assignments
09	Stations/SUPERSET® Sets
10	Pickup Groups
11	RESERVED
12	RESERVED
13	Trunk Circuit Descriptors
14	Non-Dial-In Trunks
15	Dial-In Trunks
16	Trunk Groups
17	Hunt Groups
18	Miscellaneous System Ports
19	Call Rerouting Table
20	ARS: COR Group Definition
21	ARS: Day Zone Definition
22	ARS: Modified Digit Table
23	ARS: Route Definition
24	ARS: Route Lists
25	ARS: Route Plans
26	ARS: Digit Strings
27	Form Access Restriction Definition
28	RESERVED
29	Device Interconnection Table
30	System Abbreviated Dial Entry
31	CDE Data Print
32	Account Code Entry

TABLE 4-2
AVAILABLE FORMS

CDE TERMINAL DISPLAY

4:26 1-JUN-86   alarm status = NO ALARM

FORMS	
01 = SYSTEM CONFIGURATION	02 = FEATURE ACCESS CODES
03 = COS DEFINE	04 = SYSTEM OPTIONS/SYSTEM TIMERS
05 = TENANT INTERCONNECTION TABLE	06 = TENANT NIGHT SWITCHING CONTROL
07 = CONSOLE ASSIGNMENTS	08 = ATTENDANT LDN ASSIGNMENTS
09 = STATIONS/SUPERSET SETS	10 = PICKUP GROUPS
11 = RESERVED	12 = RESERVED
13 = TRUNK CIRCUIT DESCRIPTORS	14 = NON-DIAL-IN TRUNKS
15 = DIAL-IN TRUNKS	16 = TRUNK GROUPS
17 = HUNT GROUPS	18 = MISCELLANEOUS SYSTEM PORTS
19 = CALL REROUTING TABLE	20 = ARS: COR GROUP DEFINITION
21 = ARS: DAY ZONE DEFINITION	22 = ARS: MODIFIED DIGIT TABLE
23 = ARS: ROUTE DEFINITION	24 = ARS: ROUTE LISTS
25 = ARS: ROUTE PLANS	26 = ARS: DIGIT STRINGS
27 = FORM ACCESS RESTRICTION DEF'N	28 = RESERVED

ENTER FORM NUM:

6-QUIT	7-TOP	8-BOTTOM	9-	0-

ATTENDANT CONSOLE DISPLAY

FORMS
01 = SYSTEM CONFIGURATION   02 = FEATURE ACCESS CODES
ENTER FORM NUM:
F6>QUIT   F7>TOP   F8>BOTTOM   F9>   F0>

FRM0040R1

4.09 Commands

6–QUIT Pressing the QUIT softkey when selecting a form number returns the display to the level before the form was selected. At all other times, pressing the QUIT softkey exits the CDE package. The console returns to the level that is displayed in Figure 4–1, Console Application Prompt. The terminal returns to the level of selecting an application; the system is now ready for another application (such as Maintenance).

6–CANCEL This softkey appears after a programming error has occurred. Pressing the CANCEL softkey returns the display to the level where the programming error was made. The CANCEL softkey appears with an error message. Refer to Table 4–45, Programming Error Messages for a list of these error messages.

7–TOP Pressing the TOP softkey moves the line pointer to the first line of the form. The command line displays the first line.

8–BOTTOM Pressing the BOTTOM softkey moves the line pointer to the last line of the form. The command line displays this line.

0–ENTER This softkey appears only after a form number has been entered. Pressing the ENTER softkey displays the selected form. Immediately after this softkey is pressed, the command line briefly displays the following message: **-- Please wait, loading form from disk --**. This message appears whenever data is fetched from the Floppy Disk Drive.

Form 01 - System Configuration

4.10 This form specifies the intended location of each peripheral card for the system. Refer to Table 4-3, System Configuration. If the peripheral cards are installed before the system is programmed, then this form enables the user to configure the system according to the actual installation. If the system is programmed prior to the peripheral card installation, then this form acts as a guide during the installation process. If the installed card type does not match the card type in the PROGRAMMED field, then that device does not function. No error message is provided.

4.11 When the system is programmed, the CDE software uses the PROGRAMMED field of this form to generate a list of physical location (bay, slot and circuit) numbers that can be programmed in subsequent forms. These forms include:

- Form 07, Console Assignments,
- Form 08, Attendant LDN Assignments,
- Form 09, Station and SUPERSET® Sets,
- Form 14, Non-Dial-In Trunks,
- Form 15, Dial-In Trunks and
- Form 18, Miscellaneous System Ports.

When a device is assigned to a physical location, the system first checks the appropriate card type in this form.

TABLE 4-3
FORM 01 - SYSTEM CONFIGURATION

CDE TERMINAL DISPLAY

4:26 1-JUN-86   alarm status = NO ALARM

BAY	SLT	CCT	PROGRAMMED	INSTALLED	COMMENTS
01	05	–	LS/GS TRUNK CARD		
02	02	–	ONS LINE CARD		
02	03	–	UNIVERSAL CARD		
02	03	01	CONSOLE MODULE		
02	03	02	MUSIC PAGER MODULE		
02	03	03			
02	03	04			
03	01	–	STATION LINE CARD		
03	02	–	SUPERSET LINE CARD		
03	03	–	CO TRUNK CARD		
01	05	–	LS/GS TRUNK CARD		

1-LINE CARDS	2-TRUNK CARDS	3-UNIVERSAL	4-	5-CONFIGURE
6-QUIT	7-BAY/SLT/CCT	8-DELETE	9-VERIFY DATA	O-

ATTENDANT CONSOLE DISPLAY

```
BAY     SLT    CCT         PROGRAMMED            INSTALLED            COMMENTS
01      05      -    LS/GS TRUNK CARD
F1>LINE CARDS F2>TRUNK CARDS   F3>UNIVERSAL       F4>                F5>CONFIGURE
F6>QUIT         F7>BAY/SLT/CCT  F8>DELETE          F9>VERIFY DATA  FO>
```

FORM0039R0

4.12 Field Description

BAY, SLT and CCT Fields These fields specify the physical location of each card type. The circuit number represents the physical location of each module on the Universal Card.

PROGRAMMED Field This field specifies the intended location of the required card types. Data can be assigned to the PROGRAMMED field before the cards are installed.

INSTALLED Field This field cannot be edited by the installer as it is updated by the system. The data in the INSTALLED field reflects the actual installed cards.

COMMENTS Field This field is reserved for additional data (a maximum of 20 characters). It is stored by the system but not used.

4.13 Commands

1-LINE CARDS Pressing the LINE CARDS softkey sets the selected card slot as a line card. If the slot is in a digital peripheral bay, three softkeys appear for selection of line card type. Refer to Figure 4-2, Line Card Types for Digital Bays for this softkey presentation. Otherwise, two card type softkeys appear. Refer to Figure 4-3, Other Line Card Types for this softkey presentation. In either case, pressing the QUIT softkey returns the display to its previous state.

1-ONS LINE	2-OPS LINE	3-	4-COV LINE	5-
6-QUIT	7-	8-	9-	O-

FIGURE 4-2   LINE CARD TYPES FOR BAYS 1 AND 2   FRM0096R1

1-ONS LINE Pressing the ONS LINE softkey sets the selected card slot as an ONS Line Card. Pressing the ENTER softkey completes the selection and the PROGRAMMED field displays the **ONS LINE CARD** prompt.

2-OPS LINE Pressing the OPS LINE softkey sets the selected card slot as an OPS Line Card. Pressing the ENTER softkey completes the selection and the PROGRAMMED field displays the **OPS LINE CARD** prompt.

4-COV LINE Pressing the COV LINE softkey sets the selected card slot as a COV Line Card. Pressing the ENTER softkey completes the selection and the PROGRAMMED field displays the **COV LINE** prompt. The COV Line Card is a high power card and is restricted to the upper slots of any digital bay. If the COV Line Card is placed in any other slot, the system returns the following error message: **High power card cannot be programmed at Bay/slot/circuit – xx/xx/xx.**

1-STATION	2-	3-	4-SUPERSET	5-
6-QUIT	7-	8-	9-	O-

FIGURE 4-3   OTHER LINE CARD TYPES   FRM0101R1

1-STATION Pressing the STATION softkey sets the selected card slot as a Station Line Card. Pressing the ENTER softkey completes the selection and the PROGRAMMED field displays the **STATION LINE CARD** prompt.

4-SUPERSET Pressing the SUPERSET softkey designates the selected card slot as a SUPERSET® Line Card. Pressing the ENTER softkey completes the selection and the PROGRAMMED field displays the **SUPERSET LINE CARD** prompt.

1-TRUNK CARDS Pressing the TRUNK CARDS softkey sets the selected card slot as a trunk card. If the slot is in a digital peripheral bay, three softkeys appear for selection of trunk card type. Refer to Figure 4-4, Trunk Card Types for Digital Bays, for this softkey presentation. Otherwise, two card type softkeys appear. Refer to Figure 4-5, Other Trunk Card Types for this softkey presentation. In either case, pressing the QUIT softkey returns the display to its previous state.

1-LS/GS TRUNK	2-	3-	4-6 CCT DID	5-
6-QUIT	7-	8-	9-	O-

FIGURE 4-4   TRUNK CARD TYPES FOR DIGITAL BAYS   FRM0100R1

1-LS/GS TRUNK Pressing the LS/GS TRUNK softkey sets the selected card slot as a LS/GS Trunk Card. Pressing the ENTER softkey completes the selection and the PROGRAMMED field displays the **LS/GS TRUNK CARD** prompt.

4-6 CCT DID Pressing the 6 CCT DID softkey sets the selected card slot as a DID Trunk Card. Pressing the ENTER softkey completes the selection and the PROGRAMMED field displays the **DID TRUNK CARD** prompt.

1-CO TRUNK	2-	3-E & M TRUNK	4-DID/TIE	5-
6-QUIT	7-	8-	9-	O-

FIGURE 4-5   OTHER TRUNK CARD TYPES

FRM0099R1

1–CO TRUNK Pressing the CO TRUNK softkey designates the selected card slot as a CO Trunk Card. Pressing the ENTER softkey completes the selection and the PROGRAMMED field displays the **CO TRUNK CARD** prompt.

3–E & M TRUNK Pressing the E & M TRUNK softkey sets the selected card slot as an E&M Trunk Card. Pressing the ENTER softkey completes the selection and the PROGRAMMED field displays the **E & M TRUNK CARD** prompt.

4–DID/TIE Pressing this softkey sets the selected card slot as a DID/Loop Tie Trunk Card. Pressing the ENTER softkey completes the selection and the PROGRAMMED field displays **DID/TIE TRUNK CARD** prompt.

3–UNIVERSAL Pressing the UNIVERSAL softkey designates that card slot as the Universal Card and displays the module types on the softkeys. Refer to Figure 4-6, Module Types for this softkey presentation. Note that the Universal Card can only be assigned to those card slots rated for high power consumption. These are the upper slots of any digital bay. Pressing the QUIT softkey returns the display to the previous state.

1-	2-MUSIC PAGER	3-E&M MODULE	4-CONSOLE	5-
6-QUIT	7-	8-	9-	O-

FIGURE 4-6 MODULE TYPES   FRM0097R1

2–MUSIC PAGER Pressing this softkey sets the selected circuit as a Music on Hold/Pager Module. The PROGRAMMED field displays **MUSIC PAGER MODULE**. Each MOH/Pager Module has a power rating of 1. Therefore, a Universal Card can support four of these modules.

3–CONSOLE Pressing the CONSOLE softkey sets the selected circuit as a Console Module. The PROGRAMMED field displays **CONSOLE MODULE**. Since the Universal Card has a power rating of 10, and each Console Module has a power rating of 5, a Universal Card can support a maximum of two Console Modules.

5–CONFIGURE Before the system can function properly, the PROGRAMMED field must match the INSTALLED field. Pressing the CONFIGURE softkey matches the PROGRAMMED field to the INSTALLED field. Note that devices can be assigned to the cards in the PROGRAMMED field but the card type cannot change. The CONFIGURE softkey cannot be pressed if any device is specified (e.g., defining a station in Form 9, Station/SUPERSET® Sets). When a new peripheral card is added to the system, it is necessary to manually update the PROGRAMMED field. The INSTALLED field updates upon exiting and re-entering this form.

6–QUIT If another softkey was activated (e.g., LINE CARDS), then pressing the QUIT softkey returns the display to the previous state. Pressing the QUIT softkey after a field has been edited displays the

DATA HAS BEEN CHANGED, BUT NOT YET SAVED IN DATABASE --
"ENTER" TO SAVE prompt on the command line. The QUIT softkey
must be pressed again to restore the form to the level before the field
was modified. The change is not saved. At all other times, pressing the
QUIT softkey exits Form 01 and returns the display to the level where
the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL This softkey appears after a programming error has oc-
curred. Pressing the CANCEL softkey returns the display to the level
where the programming error was made. The CANCEL softkey appears
with an error message. Refer to Table 4-45, Programming Error Mes-
sages for a list of these error messages.

7-BAY/SLT/CCT Pressing this softkey displays information about a
particular bay, slot and circuit. The command line displays the **Bay:**
Slot: Circuit: prompts. The cursor appears to the right of the **Bay:**
prompt. Entering a 1-digit number specifies the bay location. Note that
if the user enters an invalid number, then the system inhibits subse-
quent cursor movement. Refer to Table 4-45, Programming Error Mes-
sages. Similarly, the user specifies the slot and circuit locations. The
user must specify the bay and slot locations. If no circuit number is
specified, then the system automatically points to the first circuit of
the selected bay/slot number. Once the location is fully designated, the
command line updates with the information about that device and the
cursor moves to the PROGRAMMED field. The TAB key and → cursor
key control cursor movement.

8-DELETE This softkey appears when the pointer is pointing to data
(i.e., data on the command line). Pressing the DELETE softkey removes
the selected entry from the form. The ENTER softkey must be pressed
to complete the deletion. Note that any devices programmed on that
card slot must be deleted first by using the appropriate form for that
device type.

9-VERIFY DATA Pressing the VERIFY DATA softkey begins a series of
system tests on the database. The command line displays a message
as each test completes successfully. These messages are:

> PLID TO SWID CONVERSION SUCCESSFUL
> ALL RECEIVERS ARE IN VALID STATES
> ALL HUNT GROUPS ARE VALID
> ALL TRUNK GROUPS ARE VALID
> ALL PICKUP GROUPS ARE VALID
> ALL SUPERSET KEYS ARE VALID
> ALL TRUNK NUMBERS ARE VALID
> DISK TO RAM DATABASE
> COMPARISON INITIATED
> DISK DATA BASE IS (VALID)/(CORRUPTED)

If a test fails, then the command line displays an error message and
creates a maintenance log. Refer to Section MITL9108-093-350-NA,
Troubleshooting. When all tests are complete, the form reverts to the
original softkey display (refer to Table 4-2, Form 01 - System Configu-
ration).

0-ENTER. This softkey appears only after data for an entry has been

modified. Pressing the ENTER softkey stores the change in the database.

Form 02 – Feature Access Codes

    4.14   This form specifies the Feature Access Codes for the system (refer to Table 4-5, Feature Access Codes). Feature Access Codes can be a maximum of five digits (except for the Callback Busy Access Code and Executive Busy Override Access Code which can only be one digit). The codes must be unique; they cannot match any listed directory number nor can they be a subset of any other access code in the system database. The system updates the database after each code is entered. Refer to Table 4-4, Programmable Feature Access Codes for a complete list of the access codes.

<div align="center">

TABLE 4-4
PROGRAMMABLE FEATURE ACCESS CODES

</div>

Number	Feature Name
01	Account Code Access
02	Auto-Answer Activation
03	Call Forwarding – Busy
04	Call Forwarding – Don't Answer
05	Call Forwarding – Busy/Don't Answer
06	Call Forwarding – Follow Me
07	Call Forwarding – I'm Here
08	Dial Call Pickup
09	Directed Call Pickup
10	Do Not Disturb
11	Extension General Attendant Access
12	Paging Access to Default Zone
13	Paging Access to Specific Zones
14	TAFAS – Any
15	TAFAS – Local Tenant
16	Hold Pickup Access (Attendant Hold Slots)
17	Console Lockout Access Code
18	Maintenance Functions (Test Line)
19	Direct Inward System Access
20	Callback Busy (Single Digit)
21	Call Hold
22	Call Hold Retrieve (Local)
23	Call Hold Retrieve (Remote)
24	Abbreviated Dial Access
25	Clear All Features
26	SUPERSET 4™ Set Loopback Test
27	Tone Demonstration
28	RESERVED
29	RESERVED
30	Executive Busy Override (Single Digit)
31	Automatic Wake-up
32	Call Park
33	Node ID
34	Maid In Room
35	SUPERSET 4™ Set Room Status Display
36	Direct to ARS

TABLE 4-5
FORM 02 - FEATURE ACCESS CODES

CDE TERMINAL DISPLAY

4:26   1-JUN-86   alarm status = NO ALARM

FEATURE	FEATURE NAME	ACCESS CODE
01	Account Code Access	75
02	Auto-Answer Activation	
03	Call Forwarding - Busy	61
04	Call Forwarding - Don't Answer	66
05	Call Forwarding - Busy/Don't Answer	67
06	Call Forwarding - Follow Me	60
07	Call Forwarding - I'm Here	62
08	Dial Call Pickup	64
09	Directed Call Pickup	65
10	Do Not Disturb	80
11	Extension General Attendant Access	0
12	Paging Access To Default Zone(s)	68
01	Account Code Access	75

1-	2-	3-	4-TOP	5-BOTTOM
6-QUIT	7-FEATURE NUM	8-DELETE	9-	0-

ATTENDANT CONSOLE DISPLAY

FEATURE	FEATURE NAME		ACCESS CODE
01	Account Code Access		75
F1>	F2>	F3>	F4>TOP	F5>BOTTOM
F6>QUIT	F7>FEATURE NUM F8>DELETE	F9>	FO>

FRM0038R1

4.15 Field Description

FEATURE Field This field lists the feature numbers in numerical order. The FEATURE field cannot be modified.

FEATURE NAME Field This field lists the names of the features. The FEATURE NAME field cannot be modified.

ACCESS CODE Field This field displays the access code for each feature.

4.16 Commands

4-TOP Pressing the TOP softkey moves the line pointer to the first line of the form. The command line displays the first line.

5-BOTTOM Pressing the BOTTOM softkey moves the line pointer to the last line of the form. The command line displays this line.

6-QUIT Pressing the QUIT softkey when editing this form returns the display to the level before the field was modified. The change is not saved. At all other times, pressing this softkey exits Form 02 and returns the display to the level where the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL This softkey appears after a programming error has occurred. Pressing the CANCEL softkey returns the display to the level where the programming error was made. The CANCEL softkey appears with an error message. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-FEATURE NUM The FEATURE NUM softkey allows the user to select a Feature Access Code by number. Pressing this key clears the command line and positions the cursor after the **ENTER FEATURE NUM:** prompt. Entering the 1- or 2-digit feature number displays that access code with its name on the command line. The cursor moves to the start of the ACCESS CODE field on the command line ready for a new access code entry.

8-DELETE Pressing the DELETE softkey clears the selected access code from the database. The deletion is completed by pressing the ENTER softkey. This feature is no longer accessible; the code is available for use elsewhere in the database. Note that the ENTER softkey must be pressed to save the deletion in the database.

0-ENTER Pressing the ENTER softkey (or the RETURN key on a terminal) stores the access code in the database. Note that the ENTER softkey appears only after a Feature Access Code is changed.

Form 03 - COS Define

4.17 This form defines the Classes of Services for the system (refer to Table 4-7, COS Define for the form layout). Classes of Service group together stations with common feature operations and restrictions. The SX-200® DIGITAL PABX with Generic 1001 software accommodates a maximum of 50 Classes of Service. Each device (including attendants and all trunks) are supplied with a Class of Service. This provides for the multi-attendant environment where one attendant may access the night service assignments. Also, each console can disable or enable on a per-trunk basis incoming SMDR recordings. COS options are listed in groups. Refer to Table 4-6, Class-of-Service Options for the total list of COS options.

TABLE 4-6
CLASS-OF-SERVICE OPTIONS

ATTENDANT-RELATED	
Option Number	**Class-of-Service Name**
100	Attendant Bell-Off
101	Attendant O/G Restriction/Room Status Setup
102	Attendant Display of System Alarms
103	Attendant DISA Code Setup
104	Attendant Flexible Night Service Setup
105	Attendant Guest Room Key
106	Attendant New Call Tone
107	Attendant Automatic Call Forward - No Answer
108	RESERVED
109	Attendant Serial Call
110	Attendant Abbr. Dial Confidential Number Display
111	Attendant Abbreviated Dial Programming
112	Attendant Station Busy-Out
113	Attendant Call Block Key
114	Attendant Trunk Busy-Out
115	Attendant-Timed Recall (No Answer) 10 → 60 Seconds Default is 30 Seconds
116	Attendant-Timed Recall (Hold) 10 → 60 Seconds Default is 30 Seconds
117	Attendant-Timed Recall (Camp-on) 10 → 60 Seconds Default is 30 Seconds
118	Attendant Automatic Call Forward - No Answer Timer 10 → 60 Seconds Default is 30 Seconds
119	Attendant Tone Signalling on Trunks
STATION/SUPERSET®-RELATED	
Option Number	**Class-of-Service Name**
200	Account Code, Forced Entry - External Calls
201	Account Code, Forced Entry - Long Distance Calls
202	Alarm Call

TABLE 4-6 (CONT'D)
CLASS-OF-SERVICE OPTIONS

STATION/SUPERSET®-RELATED	
Option Number	**Class-of-Service Name**
203	Broker's Call
204	Call Block Applies (Room To Room)
205	Call Distribution Agent Position
206	Call Forwarding – Busy
207	Call Forwarding – Don't Answer
208	Call Forwarding – External
209	Call Forwarding – Follow Me
210	Call Forwarding Inhibit on Dial-In Trunks
211	Call Hold and Retrieve Access
212	Can Flash if Talking to an Incoming Trunk
213	Can Flash if Talking to an Outgoing Trunk
214	Cannot Dial a Trunk After Flashing
215	Cannot Dial a Trunk If Holding or Conferencing With One
216	Data Security
217	Direct to ARS
218	Directed Call Pickup
219	Discriminating Dial Tone
220	Do Not Disturb
221	Clear All Features
222	RESERVED
223	Flash Disable
224	Flash for Attendant
225	Hold Pickup (Attendant Paged Access)
226	Inward Restriction (DID)
227	Lockout Alarm Applies
228	Manual Line
229	Message Register Applies
230	Message Register Overflow Alarm
231	Message Waiting Setup – Bell
232	Message Waiting Setup – Lamp
233	Never a Consultee
234	Never a Forwardee
235	Originate Only
236	Outgoing Trunk Callback
237	Outgoing Trunk Camp-on
238	Override Security
239	Priority Dial 0
240	Privacy Disable
241	Receive Only
242	Repeated Camp-on Beeps
243	Non-Busy Extension
244	Room Status Applies
245	Abbreviated Dial Access
246	TAFAS Any Access
247	TAFAS Access Tenant
248	TAFAS Access During Day Service
249	Transfer Dial Tone

TABLE 4-6 (CONT'D)
CLASS-OF-SERVICE OPTIONS

STATION/SUPERSET®-RELATED	
Option Number	**Class-of-Service Name**
250	Transfer With Privacy
251	Call Forward – Don't Answer Timer (2 → 6 Rings)
	Default is 3 Rings
252	Call Hold Recall Timer (1 → 5 Minutes)
	Default is 1 Minute
253	Repeated Camp-on Beeps Timer (5 → 15 Seconds)
	Default is 10 Seconds
254	UCD Music on Hold Timer (0 → 50 Minutes)

ATTENDANT/STATION/SUPERSET®-RELATED	
Option Number	**Class-of-Service Name**
300	Automatic Callback
301	Camp-on
302	Flash-in Conference (Greater than 3)
303	Paging Zone 1 Access
304	Paging Zone 2 Access
305	Paging Zone 3 Access
306	Paging Zone 4 Access
307	Paging Zone 5 Access
308	Paging Zone 6 Access
309	Paging Zone 7 Access
310	Paging Zone 8 Access
311	Paging Zone 9 Access
312	Paging Default (0 Gives All Zones Enabled) (0 → 9)
313	CO Trunk To CO Trunk Connect
314	CO Trunk To Tie Trunk Connect
315	CO Trunk To DID Trunk Connect
316	Tie Trunk To Tie Trunk Connect
317	Tie Trunk To DID Trunk Connect
318	DID Trunk To DID Trunk Connect
319	Extension Non-CO Trunk To Trunk Connect

STATION-RELATED	
Option Number	**Class-of-Service Name**
400	Contact Monitor
401	Call Park
402	Long Loop (Off-Premises Extension Only)
403	Trunk Recall Partial Inhibit

ATTENDANT/SUPERSET®-RELATED	
Option Number	**Class-of-Service Name**
500	Override
501	Override Announce
600	SUPERSET® – Auto-Answer
601	SUPERSET® – Auto-Hold Disable

TABLE 4-6 (CONT'D)
CLASS-OF-SERVICE OPTIONS

SUPERSET®-RELATED	
Option Number	**Class-of-Service Name**
602	SUPERSET® – Background Music
603	SUPERSET® – Disconnect Alarm
604	SUPERSET® – Immediate Line Select
605	SUPERSET® – Message Program
606	SUPERSET® – Sub-Attendant
607	SUPERSET® – Associated Modem Line
608	SUPERSET® – Room Status Display
609	SUPERSET® – Night Service Switching

ALL DEVICES	
Option Number	**Class-of-Service Name**
700	SMDR – Does Not Apply
701	No Dial Tone
702	SMDR – Overwrite Buffer

TRUNK-RELATED	
Option Number	**Class-of-Service Name**
800	ANI Applies
801	Incoming Trunk Call Rotary
802	Limited Wait For Dial Tone
803	SMDR – Drop Calls Less Than N Digits (N= 0 to 11, 0= Disabled)
804	SMDR – Drop Incomplete Outgoing Calls
805	SMDR – Extended Record
806	RESERVED
807	SMDR – Record Incoming Calls
808	SMDR – Record Meter Pulses
809	RESERVED
810	Special DISA
811	Standard Ring Applies
812	DISA During Night Service Only

DATASET-RELATED	
Option Number	**Class-of-Service Name**
900	RESERVED

TABLE 4-7
FORM 03 - COS DEFINE

CDE TERMINAL DISPLAY

4:26   1-JUN-86   alarm status = NO ALARM

[COS : 1] OPTION NAME (DISPLAYING ENABLED)	STATUS	OPTION NUM
Attendant Bell-Off	ENABLED	100
Attendant Display of System Alarms	ENABLED	102
Attendant DISA Code Setup	ENABLED	103
Attendant Flexible Night Service Setup	ENABLED	104
Attendant New Call Tone	ENABLED	106
Attendant Automatic Call Forward - No Answer	ENABLED	107
Attendant Serial Call	ENABLED	109
Attendant Abbr. Dial Confidential Number Display	ENABLED	110
Attendant Abbreviated Dial Programming	ENABLED	111
Attendant Station Busy-Out	ENABLED	112
Attendant-Timed Recall (NO ANSWER) 10-60 s	30	115
Attendant-Timed Recall (HOLD) 10-60 s	30	116
Attendant Bell-Off	ENABLED	100

1-DISABLE	2-COPY COS	3-COS NUMBER	4-TOP	5-BOTTOM
6-QUIT	7-OPTION NUM	8-SHOW DISABLE	9-	O-

ATTENDANT CONSOLE DISPLAY

```
[ COS : 1 ]      OPTION NAME      (DISPLAYING ENABLED )      STATUS      OPTION NUM
 Attendant Bell-Off                                          ENABLED         100
F1>DISABLE      F2>COPY COS      F3>COS NUMBER    F4>TOP              F5>BOTTOM
F6>QUIT         F7>OPTION NUM    F8>SHOW DISABLE  F9>                 FO>
```

FORM0037R0

4.18   Field Description. The header line indicates the Class of Service being programmed and which set of options are selected; either the enabled or disabled options. The command line displays the current indexed option. When Form 03 – COS Define is selected, the command line displays the first enabled option of the first Class of Service.

OPTION NAME Field This field lists the option titles. The actual option names cannot be modified. The option names are classified into two groups: enabled options and disabled options.

STATUS Field This field displays the status of each option; either DISABLED, ENABLED or a timer value.

OPTION NUM This field displays the number of each Class of Service option. The actual option number cannot be modified.

4.19 Commands

1-DISABLE/ENABLE This softkey has two functions; it disables and enables COS options. Pressing the DISABLE softkey disables the selected COS option. Pressing the ENTER softkey completes the process; the display shows the next ENABLED COS option. Pressing the ENABLE softkey enables the selected COS option. Pressing the ENTER softkey completes the process; the display shows the next DISABLED option. After pressing the DISABLE (or ENABLE) softkey, the status of the COS option on the command line reflects this change. Pressing the ENTER softkey completes this process; the selected COS option disappears from the list. Note: For those COS options which have a status other than "ENABLED" or "DISABLED", this softkey has no function or indication.

2-COPY COS Pressing the COPY COS softkey copies the contents of one Class of Service to another. This is useful when two Classes of Service are similar. The command line displays the **COPY FROM COS** prompt; the user enters the 1- or 2-digit COS number. The command line then displays the **TO COS** prompt; the user enters the second 1- or 2-digit COS number. Pressing the ENTER softkey completes the copy process.

3-COS NUMBER Pressing the COS NUMBER softkey prompts the user for a COS number (one or two digits) which selects a specific COS number. The header line displays the new COS number.

4-TOP Pressing the TOP softkey moves the line pointer to the first line of the disabled or enabled options. The command line displays the first line.

5-BOTTOM Pressing the BOTTOM softkey moves the line pointer to the last line disabled or enabled options. The command line displays this line.

6-QUIT Pressing the QUIT softkey after a field has been edited re-stores the form to the level before the field was modified. The change is not saved. At all other times, pressing this softkey exits Form 03 and returns the display to the level where the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL This softkey appears after a programming error has oc-curred. Pressing the CANCEL softkey returns the display to the level where the programming error was made. The CANCEL softkey appears with an error message. Refer to Table 4-45, Programming Error Mes-sages for a list of these error messages.

7-OPTION NUM This softkey selects a specific COS option. Pressing the OPTION NUM softkey displays the **ENTER OPTION NUM:** prompt on the command line. The selection is completed by entering a valid option number (100 to 811). The command line displays that COS option name, status and number.

8-SHOW DISABLE/SHOW ENABLE This softkey has two functions; it displays the disabled and enabled COS options. Pressing the SHOW DISABLE softkey displays the currently disabled COS options. This softkey now shows the **SHOW ENABLE** prompt and softkey 1 displays the **ENABLE** prompt. Pressing the SHOW ENABLE softkey shows those COS options that are enabled. This softkey returns to the **SHOW DISABLE** prompt and softkey 1 displays the **DISABLE** prompt. Note: Those options with a status other than "ENABLED" or "DISABLED" are listed when the SHOW ENABLE softkey is pressed.

0-ENTER Pressing the ENTER softkey once converts the working copy of the COS Define Form to reflect the modification to the COS option. If the QUIT softkey is pressed after the ENTER softkey has been pressed only once, then the command line displays a warning mes-sage. The message is: **DATA HAS BEEN CHANGED, BUT NOT YET SAVED IN DATABASE -- "ENTER" TO SAVE.** The ENTER softkey must be pressed again to commit the COS to the database.

Form 04 - System Options/System Timers

4.20 This form specifies the system's options and timers that are systemwide. Refer to Table 4-8, System Options and Timers for the complete list and refer to Table 4-9, System Options/System Timers for the form layout.

TABLE 4-8
SYSTEM OPTIONS AND TIMERS

Option Number	System Options/System Timers
01	24 Hour Clock
02	RESERVED
03	RESERVED
04	Message Waiting and Message Register Change Print
05	Verified Account Codes
06	RESERVED
07	RESERVED
08	RESERVED
09	Attendant Call Block
10	Attendant Conference Beeps
11	Automatic Wake-up
12	Automatic Wake-up Alarm
13	Automatic Wake-up Print
14	Automatic Wake-up Music
15	Data Demultiplexer
16	DID To Non-Co Trunk Via Attendant Inhibit
17	Discriminating Ringing
18	Discriminating Ringing Always
19	RESERVED
20	Holiday Messages
21	Incoming to Outgoing Call Forward
22	Last Party Clear - Dial Tone
23	Message Register Count Additional Supervisions
24	Message Register Audit
25	Message Register Zero After Audit
26	No Overlap Outpulsing
27	Room Status Audit
28	SMDR Indicate Long Calls
29	SUPERSET® Set Last Number Redial
30	RESERVED
31	Satellite PBX
32	Outgoing Call Restriction
33	Room Status
34	Auto Room Status Conversion/Auto Wake-up Print
35	Digit Translation Plan (0 → 3)
36	ARS Unknown Digit Length Time-out (2 → 15 Seconds)
37	Limited Wait For Dial Tone (1 → 15 Seconds)
38	Pseudo Answer Supervision Timer (10 → 60 Seconds)
39	Dialing Conflict Timer (2 → 10 Seconds)
40	Final Ring Time-out (1 → 30 Minutes)
41	Minimum Flash Timer (10 ms units) 20 → 50

TABLE 4-8 (CONT'D)
SYSTEM OPTIONS AND TIMERS

Option Number	System Options/System Timers
42	Maximum Flash Timer (10 ms units) 20 → 150
43	DISA Answer Timer (1 → 8 Seconds)
44	Account Code Length (VARIABLE or 4 → 12 digits)
45	Auto Room Status Conversion/Auto Wake-up Print Timer
46	Room Status Call Restriction Default

TABLE 4-9
FORM 04 - SYSTEM OPTIONS/SYSTEM TIMERS

CDE TERMINAL DISPLAY

4:26 1-JUN-86   alarm status = NO ALARM

System Options (Displaying ENABLED Options)	STATUS	OPTION NUM
Discriminating Ringing	ENABLED	17
Holiday Messages	ENABLED	20
Incoming to Outgoing Call Forward	ENABLED	21
SUPERSET Set Last Number Redial	ENABLED	29
Digit Translation Plan 0-3	1	35
ARS Unknown Digit Length Time-out 2-15 seconds	5	36
Limited Wait For Dial Tone 3-15 seconds	5	37
Pseudo Answer Supervision Timer 10-60 seconds	20	38
Dialing Conflict Timer 2-10 seconds	5	39
Final Ring Time-out 1-30 minutes	1	40
Minimum Flash Timer (10 ms units) 20-50	O	41
Maximum Flash Timer (10 ms units) 20-150	O	42
Discriminating Ringing	ENABLED	17

1-DISABLE	2-	3-	4-TOP	5-BOTTOM
6-QUIT	7-OPTION NUM	8-SHOW DISABLE	9-	O-

ATTENDANT CONSOLE DISPLAY

System Options (Displaying ENABLED Options)		STATUS	OPTION NUM	
Discriminating Ringing		ENABLED	17	
F1>DISABLE	F2>	F3>	F4>TOP	F5>BOTTOM
F6>QUIT	F7>OPTION NUM	F8>SHOW DISABLE F9>		FO>

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4.21   Field Description. The header line indicates which set of options are selected; either the enabled or disabled options. Note that the system timers are included with the enabled options.

STATUS Field This field specifies which options are enabled, disabled or the value of the timers.

OPTION NUM Field This field lists the option number for each option or timer.

4.22 Commands

1-DISABLE/ENABLE This softkey has two functions; it disables and enables System Options. The DISABLE softkey appears when the form shows the enabled options. Pressing the DISABLE softkey disables the selected option. The STATUS field shows the **DISABLED** prompt. The ENABLE softkey appears when the form displays the disabled options. Pressing the ENABLE softkey enables the selected option. The STATUS field shows the **ENABLED** prompt. Note: The enable (or disable) process is completed by pressing the ENTER softkey.

1-VARIABLE This softkey appears only when System Option 44 is selected (displayed on the command line). Pressing the VARIABLE softkey sets the status of System Option 44 to Variable; the STATUS field shows the **VARIABLE** prompt. The selection is completed by pressing the ENTER softkey. Now, Account Codes entered into Form 32, Account Code Entry, can be from 1 to 12 digits in length.

1-INTERNAL This softkey appears only when System Option 46 is selected (displayed on the command line). Pressing the INTERNAL softkey sets the status of System Option 46 to Internal; only internal calls can be made. The selection is completed by pressing the ENTER softkey; the **INTERNAL** prompt disappears from the softkey display and the STATUS field now displays the **INTERNAL** prompt to indicate this selection.

2-LOCAL This softkey appears only when System Option 46 is selected (displayed on the command line). Pressing the LOCAL softkey sets the status of System Option 46 to Local; only local calls can be made. The selection is completed by pressing the ENTER softkey; the **LOCAL** prompt disappears from the softkey display and the STATUS field now displays the **LOCAL** prompt.

3-LONG DIST This softkey appears only when System Option 46 is selected (displayed on the command line). Pressing the LONG DIST softkey enables long distance calls. The selection is completed by pressing the ENTER softkey; the **LONG DIST** prompt disappears from the softkey display and the STATUS field displays the **LNG DIST** prompt.

4-TOP Pressing the TOP softkey moves the line pointer to the first line of the disabled or enabled options. The command line displays the first line.

5-BOTTOM Pressing the BOTTOM softkey moves the line pointer to the last line of the disabled or enabled options. The command line displays this line.

6-QUIT Pressing the QUIT softkey when editing this form returns the display to the level before the field was modified. The change is not saved. At all other times, pressing this softkey exits Form 04 and returns the display to the level where the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL Pressing the CANCEL softkey cancels the entry. This softkey appears after a programming error. It is accompanied with an error message on the command line. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-OPTION NUM This softkey selects a specific System Option or System Timer. Pressing the OPTION NUM softkey displays the **ENTER OPTION NUM:** prompt on the command line. The selection is completed by entering a valid option number (1 to 39). The command line displays that System Option (or System Timer) name, status and number.

8-SHOW DISABLE/SHOW ENABLE This softkey has two functions; it displays the disabled and enabled System Options. Pressing the SHOW DISABLE softkey displays the currently disabled System Options; the softkey now shows the **SHOW ENABLE** prompt. Pressing the SHOW ENABLE softkey shows those System Options that are enabled; the softkey returns to the **SHOW DISABLE** prompt. Note: Those options with a timer value are listed when the SHOW ENABLE softkey is pressed.

9-ENTER TIME This softkey only appears when System Timer 45 is selected (displayed on the command line). Pressing the ENTER TIME softkey, displays the **ENTER TIME (HH:MM):** prompt on the command line. The time selection is completed by entering the time (00:00 to 23:59 are valid) in a 24-hour format and then pressing the ENTER softkey.

0-ENTER For this form, the ENTER softkey must be pressed twice to store a change in the database. Pressing the ENTER softkey once adds the modification to the form only. Pressing the QUIT softkey at this time displays the **DATA HAS BEEN CHANGED, BUT NOT YET SAVED -- "ENTER" TO SAVE** prompt on the command line. Pressing the ENTER softkey twice stores the edited option in the database; the softkey display returns to its original format (refer to Table 4-9, System Options/System Timers). Subsequent modification to the form can now occur.

Form 05 – Tenant Interconnection Table

4.23 This form specifies which Tenant Groups may be connected together. Refer to Table 4-10, Tenant Interconnection Table. The system allows for a maximum of 25 Tenant Groups. Each group specifies its own trunk answering points, attendant answering points and night service status.

4.24 **Field Description.** Initially, the system interconnects all Tenant Groups. The asterisk (*) character indicates this condition. When the system inhibits Tenant Group interconnection, it is indicated by the period (.) character. The Tenant Group numbers are listed in the header line and the first column. The letter (O) functions as a marker and cannot be modified.

TABLE 4-10
FORM 05 — TENANT INTERCONNECTION TABLE

CDE TERMINAL DISPLAY

4:26 1-JUN-86   alarm status = NO ALARM

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
01	O	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02	*	O	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03	*	*	O	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04	*	*	*	O	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05	*	*	*	*	O	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06	*	*	*	*	*	O	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07	*	*	*	*	*	*	O	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08	*	*	*	*	*	*	*	O	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09	*	*	*	*	*	*	*	*	O	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10	*	*	*	*	*	*	*	*	*	O	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11	*	*	*	*	*	*	*	*	*	*	O	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12	*	*	*	*	*	*	*	*	*	*	*	O	*	*	*	*	*	*	*	*	*	*	*	*	*

01	O	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

1-	2-	3-	4-TOP	5-BOTTOM
6-QUIT	7-TENANT NUM	8-DISALLOW	9-	O-

ATTENDANT CONSOLE DISPLAY

```
   01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
01  O  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *
F1>              F2>              F3>              F4>TOP           F5>BOTTOM
F6>QUIT          F7>TENANT NUM    F8>DISALLOW      F9>              FO>
```

FORM0035R0

4.25 Commands

4-TOP Pressing the TOP softkey moves the line pointer to the first line of the form. The command line displays the first line.

5-BOTTOM Pressing the BOTTOM softkey moves the line pointer to the last line of the form. The command line displays this line.

6-QUIT Pressing the QUIT softkey when editing this form displays the following warning on the command line: **DATA HAS BEEN CHANGED BUT NOT YET SAVED -- "ENTER" TO SAVE.** Pressing this softkey again exits Form 05 and returns the display to the level where the forms are selected. The change is not saved. Refer to Table 4-2, Available Forms.

6-CANCEL Pressing the CANCEL softkey cancels the tenant number entry. This softkey appears after a programming error. It is accompanied with an error message on the command line. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-TENANT NUM The TENANT NUM softkey allows a user to select a Tenant Group by number. Pressing this softkey displays the **ENTER TENANT GROUP NUM:** prompt. Entering the 2-digit tenant number (1 to 25) displays that Tenant Group with a series of '*' characters (allow interconnection) and '.' characters (disallow interconnection). Cursor movement on the command line is controlled by the right and left cursor control keys.

8-DISALLOW/ALLOW This softkey has two functions; it enables and disables interconnection between Tenant Groups. Pressing the DIS-ALLOW softkey disables the interconnection between those two Tenant Groups unidirectionally. For example, when modifying connections for Tenant Group 5 (the command line displays line 5) and the DISALLOW softkey is pressed when the cursor is under the sixth column, then Tenant Group 5 cannot call Tenant Group 6. However, Tenant Group 6 can still call Tenant Group 5. Total interconnection is inhibited only when a '.' (disallow) character is inserted at row 6 (Tenant Group 6) under the fifth column (Tenant Group 5). The softkey now displays the **ALLOW** prompt. Pressing the ALLOW softkey enables the unidirectional interconnection between the selected Tenant Groups; the '*' character replaces the '.' character.

0-ENTER This softkey appears only after data for a Tenant Number has been modified. Pressing the ENTER softkey stores the modifications in the database.

Form 06 – Tenant Night Switching Control

4.26 In some systems it is necessary for one attendant to control the Night Service switching of more than one Tenant Group. This form specifies which Tenant Groups are switched to Night Service simultaneously. Note that the system defaults to Tenant Groups switching to Night Service independently of each other. Refer to Table 4-11, Tenant Night Switching Control.

```
                          TABLE 4-11
              FORM 06 - TENANT NIGHT SWITCHING CONTROL

                      CDE TERMINAL DISPLAY

4:26  1-JUN-86                            alarm status = NO ALARM
```

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
01	O	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
02	.	O	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
03	.	.	O	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
04	.	.	.	O	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
05	.	.	.	.	O	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
06	.	.	.	.	.	O	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
07	.	.	.	.	.	.	O	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
08	.	.	.	.	.	.	.	O	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
09	.	.	.	.	.	.	.	.	O	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
10	.	.	.	.	.	.	.	.	.	O	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
11	.	.	.	.	.	.	.	.	.	.	O	.	.	.	.	.	.	.	.	.	.	.	.	.	.
12	.	.	.	.	.	.	.	.	.	.	.	O	.	.	.	.	.	.	.	.	.	.	.	.	.

```
01  O   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
```

1-	2-	3-	4-TOP	5-BOTTOM
6-QUIT	7-TENANT NUM	8-SWITCHED	9-	0-

```
                     ATTENDANT CONSOLE DISPLAY

    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
01  O   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .   .
F1>              F2>              F3>              F4>TOP           F5>BOTTOM
F6>QUIT          F7>TENANT NUM    F8>SWITCHED      F9>              FO>
```

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4.27   Field Description. Initially, the system inhibits Tenant Groups from switching each other into Night Service. This condition is indicated by the period (.) character. When the system permits Tenant Groups to switch each other into Night Service, it is indicated by the asterisk (*) character. The Tenant Group numbers are listed in the header line and the first column. The letter (O) functions as a marker and cannot be modified.

4.28 Commands

4-TOP Pressing the TOP softkey moves the line pointer to the first line of the form. The command line displays the first line.

5-BOTTOM Pressing the BOTTOM softkey moves the line pointer to the last line of the form. The command line displays this line.

6-QUIT Pressing the QUIT softkey when editing this form displays the following warning on the command line: **DATA HAS BEEN CHANGED BUT NOT YET SAVED -- "ENTER" TO SAVE**. Pressing this softkey again exits Form 06 and returns the display to the level where the forms are selected. The change is not saved. Refer to Table 4-2, Available Forms.

6-CANCEL This softkey appears after a programming error has occurred. Pressing the CANCEL softkey returns the display to the level where the programming error occurred. The CANCEL softkey appears with an error message on the command line. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-TENANT NUM The TENANT NUM softkey allows a user to select a Tenant Group by number. Pressing this softkey displays the **ENTER TENANT GROUP NUM:** prompt. Entering the 1- or 2-digit tenant number displays that Tenant Group with a series of '.' characters (single Tenant Group entry into Night Service) and '*' characters (multiple Tenant Group entry into Night Service). Cursor movement on the command line is controlled by the right and left cursor control keys.

8-SWITCHED/NOT SWITCHED This softkey has two functions. It enables and disables multiple Tenant Group switching into Night Service. This softkey displays the **SWITCHED** prompt when the cursor is at a period (.) character. Pressing the SWITCHED softkey specifies that the Tenant Group being programmed (as indicated by the row number) can switch the other Tenant Group (as indicated by the column number) into Night Service. The system reflects this modification by replacing the '.' character with the '*' character. The softkey now displays the **NOT SWITCHED** prompt. Pressing the NOT SWITCHED softkey specifies that the Tenant Group being programmed cannot switch the other Tenant Group into Night Service. The '.' character replaces the '*' character and the softkey now displays the **SWITCHED** prompt.

0-ENTER This softkey appears only after data for a Tenant Number has been modified. Pressing the ENTER softkey stores the modifications in the database.

Form 07 — Console Assignments

4.29 This form specifies the physical location of each Attendant Console. Refer to Table 4-12, Console Assignments for the form layout. The default location for an Attendant Console is Bay 2, Slot 3, Circuit 1. The location of the Attendant Console must be specified because it is interfaced to the system through the Universal Card which must be installed in those slots rated for high power consumption (the upper slots of any digital bay). The system can support a maximum of 11 Attendant Consoles (two Console Modules per Universal Card).

4.30 Each Attendant Console is provided with a Class of Service (COS), a Class of Restriction (COR), a Tenant Group number and an extension number. The extension number enables calls between Attendant Consoles. These calls appear on the INTERNAL softkey. Note that the provision of a COR means that Attendant Consoles are not necessarily toll-allowed on all calls.

4.31 Field Description

BAY, SLT and CCT Fields These fields specify the physical location of each Attendant Console. They are generated by the system based on what was entered in the PROGRAMMED field in Form 01, System Configuration. This field cannot be modified.

EXT NUM Field This field displays the extension number of each Attendant Console. Calls directed to the console's extension number route to softkey 2 on the Attendant Console.

COS Field This field lists the Class-of-Service number specification for each console (1 to 50).

COR Field This field lists the Class-of-Restriction number specification for each console (1 to 25).

TENANT Field The Tenant Group for each Attendant Console is specified in this field (1 to 25).

COMMENTS Field This field is reserved for notes about each console. It contains a maximum of 15 alphanumeric characters. The COMMENTS field is stored by the system but not used.

TABLE 4-12
FORM 07 - CONSOLE ASSIGNMENTS

CDE TERMINAL DISPLAY

4:26   1-JUN-86   alarm status = NO ALARM

BAY	SLT	CCT	EXT NUM	COS	COR	TENANT	COMMENTS
1	O8	O2	122	1	1	1	RECEPTION
1	O8	O4	125	1	1	2	PURCHASING
2	O3	O2	131	1	2	3	MARKETING
2	O3	O4					
1	O8	O2	122	1	1	1	RECEPTION

1-		2-	3-	4-	5-
6-QUIT		7-BAY/SLT/CCT	8-DELETE	9-	O-

ATTENDANT CONSOLE DISPLAY

```
BAY   SLT   CCT   EXT NUM   COS      COR      TENANT      COMMENTS
 1    O8    O2      122      1        1          1        RECEPTION
F1>          F2>           F3>       F4>                 F5>
F6>QUIT      F7>BAY/SLT/CCT F8>DELETE F9>                FO>
```

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4.32 Commands

6-QUIT Pressing the QUIT softkey when editing this form returns the display to the level before the field was modified. The change is not saved. At all other times, pressing this softkey exits Form 07 and returns the display to the level where the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL This softkey appears after the occurrence of a programming error. Pressing the CANCEL softkey returns the display to the level where the programming error occurred. The CANCEL softkey appears with an error message on the command line. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-BAY/SLT/CCT Pressing this softkey locates an Attendant Console via its bay, slot and circuit numbers. The command line displays the **Bay: Slot: Circuit:** prompts. The cursor appears to the right of the **Bay:** prompt. Entering a 1-digit number specifies the bay location. Note that if the user enters an invalid number, then the system inhibits subsequent cursor movement. Refer to Table 4-45, Programming Error Messages. Similarly, the user specifies the slot and circuit locations. Once the location is fully designated, the command line updates with the information about that console and the cursor moves to the EXT NUM field. The TAB key and → cursor key control cursor movement.

8-DELETE This softkey appears only when the line pointer is pointing to data (i.e., data is on the command line). Pressing the DELETE softkey removes an Attendant Console from the system. The deletion is completed by pressing the ENTER softkey. The Attendant Console must first be located by specifying the BAY/SLT/CCT number or by positioning the line pointer at the selected Attendant Console. Note that the Attendant LDN assignment must be removed from Form 08, Attendant LDN Assignments first.

0-ENTER This softkey appears only after data for an entry has been modified. Pressing the ENTER softkey commits the data for each Attendant Console to the database. Attendant Consoles can only be programmed one at a time. Therefore, the ENTER softkey must be pressed after each Attendant Console is modified.

Form 08 – Attendant LDN Assignments

4.33   This form specifies the LDN assignments for the consoles (refer to Table 4-13, Attendant LDN Assignments). A maximum of nine LDN assignments can be programmed for each Attendant Console. The attendant LDNs are assigned to the softkeys. Console softkey 1 is reserved for the RECALL function. Each LDN assignment is identified by a directory number. The directory numbers are subject to the same constraints as all Listed Directory Numbers (i.e., number conflicts are not allowed). If there are many Attendant Consoles in one Tenant Group and if "DIAL 0" calls are shared, then a common Listed Directory Number must be specified for the consoles.

4.34 Field Description

BAY/SLT/CCT Field   This field specifies the physical location of each Attendant Console. The list is generated by the system based on what was entered in the PROGRAMMED field of Form 01, System Configuration. Note that this field cannot be modified.

KEY Field   This field displays the console softkeys 2 through 10 (10 is displayed as 0). The KEY field cannot be modified.

DIR NUMBER Field   This field is reserved for assigning a directory number for console softkeys 2 to 10. This number (a maximum of five digits) links this form to Form 19 (refer to Table 4-29, Call Rerouting Table) and to Form 14 (refer to Table 4-22, Non-Dial-In Trunks) where the call type is defined for the directory number. An LDN directory number can only appear once per console. If it is required that two consoles share the same LDN, then both consoles must be in the same Tenant Group.

LABEL Field   This field specifies the actual text that the console LCD displays as softkey prompts. The LABEL field provides for a maximum of 12 characters. The label for console softkey 1 defaults to RECALL and cannot be modified. The label for console softkey 2 defaults to INTERNAL. Softkey 2 is shared between the extension number programmed in the DIR NUMBER field and calls directed to the Attendant Console's extension number (as defined in the EXT NUM field of Form 07, Console Assignments). Console softkeys 2 to 10 can be edited.

COMMENTS Field   This field further specifies the Attendant LDN assignments with text. The COMMENTS field has a maximum of 15 characters. It is stored by the system but not used.

TABLE 4-13
FORM 08 - ATTENDANT LDN ASSIGNMENTS

CDE TERMINAL DISPLAY

4:26 1-JUN-86   alarm status = NO ALARM

[BAY/SLT/CCT :01_08_02]	KEY	DIR NUMBER	LABEL	COMMENTS
	2	111	INTERNAL	
	3	O	DIAL O	
	4	222	LDN 2	
	5	223	LDN 3	
	6	224	LDN 4	
	7	225	LDN 5	
	8	226	LDN 6	
	9	227	LDN 7	
	O	228	LDN 8	
	2	111	INTERNAL	

1-	2-	3-	4-TOP	5-BOTTOM
6-QUIT	7-BAY/SLT/CCT	8-DELETE	9-	O-

ATTENDANT CONSOLE DISPLAY

[BAY/SLT/CCT :01_08_02]	KEY	DIR NUMBER	LABEL	COMMENTS
	2	111	INTERNAL	
F1>	F2>	F3>	F4>TOP	F5>BOTTOM
F6>QUIT	F7>BAY/SLT/CCT	F8>DELETE	F9>NEXT	FO>

FRM0032R2

4.35 Commands

4-TOP Pressing the TOP softkey moves the line pointer to the first line of the form. The command line displays the first line.

5-BOTTOM Pressing the BOTTOM softkey moves the line pointer to the last line of the form. The command line displays this line.

6-QUIT Pressing the QUIT softkey when editing this form returns the display to the level before the field was modified. The change is not saved. At all other times, pressing this softkey exits Form 08 and returns the display to the level where the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL Pressing the CANCEL softkey cancels the last entry. This softkey appears after the occurrence of a programming error. It is accompanied with an error message on the command line. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-BAY/SLT/CCT Pressing this softkey locates an Attendant Console via its bay, slot and circuit numbers. The command line displays the **Bay: Slot: Circuit:** prompts. The cursor appears to the right of the **Bay:** prompt. Entering a 1-digit number specifies the bay location. Note that if the user enters an invalid number, then the system inhibits subsequent cursor movement. Refer to Table 4-45, Programming Error Messages. Similarly, the user specifies the slot and circuit locations. Once the location is fully designated, the display updates with the new information about that console.

8-DELETE This softkey appears when the pointer is pointing to data (i.e., data on the command line). Pressing the DELETE softkey removes an Attendant LDN appearance from the form. The ENTER softkey must be pressed to complete the deletion. The softkey for that LDN appearance remains blank when a call rings the Attendant Console. Note: Before an Attendant LDN appearance can be deleted, the Attendant Console must first be located by specifying the BAY/SLT/CCT number.

9-NEXT Pressing the NEXT softkey displays the physical location (bay, slot and circuit numbers) of the next programmed Attendant Console. If the physical location of the last programmed console is displayed, then pressing this softkey again displays the bay, slot and circuit numbers of the first programmed console.

0-ENTER This softkey appears only after data for an entry has been modified. Pressing the ENTER softkey commits the LDN assignments for each Attendant Console to the database. Attendant Consoles can only be programmed one at a time. Therefore, the ENTER softkey must be pressed after each Attendant Console is modified.

Form 09 – Station/SUPERSET® Sets

4.36 This form assigns stations and SUPERSET® sets to the system. Refer to Table 4-14, Station/SUPERSET® Sets. It also specifies the parameters for these devices. These parameters include COS, COR and Tenant Group assignments. Extension numbers are a maximum of five digits. Only level conflicts are permitted. For example, both "4" and "414" are valid as extension numbers.

4.37 Field Description

BAY, SLOT and CCT Fields These fields list the physical location number of each station or SUPERSET® set. They are generated by the system based on what was entered in the PROGRAMMED field of Form 01, System Configuration. This field cannot be modified.

TEN Field This field lists the Tenant Group number for each station or SUPERSET® set.

EXT NUM Field This field lists the extension number of each station or the Prime Line extension number of each SUPERSET® set.

COS Field This field lists the Class-of-Service number for each station or SUPERSET® set. Default COS number is 1.

COR Field This field lists the Class-of-Restriction number for each station or SUPERSET® set. Default COR number is 1.

TYP Field When a station is being programmed, the TYP field displays the **Stn** prompt. For a SUPERSET® set, this field displays the **Set** prompt. When a physical location (Bay, Slot and Circuit) is defined as a Call Announce Port, this field displays the **CAP** prompt. The Call Announce Port can be a Station Circuit, a SUPERSET® Set Circuit or a COV Circuit. Hardware restrictions prevent a digital ONS Circuit from being a Call Announce Port and only a SUPERSET® set can OWN one. Note that this field cannot be modified; it is generated by the system based on what was entered in the PROGRAMMED field of Form 01, System Configuration.

ANNOUNCE Field This field is reserved for programming the call announce port to SUPERSET® sets. Refer to Section MITL9108-093-107-NA, SUPERSET 4™ Set Information, for details on the CALL ANNOUNCE feature.

BLF Field This field is reserved for future use.

COMMENTS Field This field is reserved for additional data (a maximum of 15 characters). It is stored by the system but not used.

TABLE 4-14
FORM 09 - STATION/SUPERSET® SETS

CDE TERMINAL DISPLAY

4:26 1-JUN-86   alarm status = NO ALARM

BAY	SLOT	CCT	TEN	EXT NUM	COS	COR	TYP	ANNOUNCE			BLF	COMMENTS
1	1	01	1	111	1	1	Set					M. SMITH
1	1	02	1	112	1	1	Set					J. DOE
1	1	03	1	113	1	1	Set					M. WILLIAMS
1	1	04	1	114	1	1	Set					B. BROWN
1	1	05	1	115	1	1	Set					M. BLANC
1	1	06	1	116	1	1	Set					L. GREENE
1	1	07	1	117	1	1	Set					L. JOHNSON
1	1	08	1	118	1	1	Set					G. WHITE
1	2	01	1	101	1	1	Stn					R. FOX
1	2	02	1	102	1	1	Stn					J. HENRY
1	2	03	1	103	1	1	Stn					D. JONES
1	2	04	1	104	1	1	Stn					T. SCOTT
1	1	01	1	111	1	1	Set					M. SMITH

1-	2-FIND EXT	3-EXPAND SET	4-	5-RANGE
6-QUIT	7-BAY/SLT/CCT	8-DELETE	9-REVIEW	0-

ATTENDANT CONSOLE DISPLAY

```
BAY SLOT  CCT  TEN EXT NUM  COS  COR   TYP    ANNOUNCE    BLF       COMMENTS
  1    1   01    1    111     1    1    Set                          M. SMITH
F1>                  F2>FIND EXT     F3>EXPAND SET  F4>             F5>RANGE
F6>QUIT              F7>BAY/SLT/CCT F8>DELETE       F9>REVIEW       FO>
```

FORM0031R0

4.38 Commands

2-FIND EXT This softkey selects a device by its extension number. Pressing the FIND EXT softkey displays the **ENTER EXTENSION NUM:** prompt on the command line. The selection is completed by entering an extension number of a station or the Prime Line number of a SUPERSET® set. The selected device information appears on the command line.

3-EXPAND SET Pressing this softkey displays a new form. Refer to Table 4-15, SUPERSET® Set Lines. Note: This softkey is valid only when reviewing or programming a SUPERSET® set and appears only when a SUPERSET® set has been defined.

5-RANGE This softkey facilitates block programming for stations and SUPERSET® sets. Pressing this softkey displays the **Bay:, Slot:** and **Circuit:** prompts on the command line. The range of devices is then specified by entering valid bay, slot and circuit numbers for the first and last devices. After the user presses the ENTER softkey, the user then assigns the extension number for the first device. The system automatically assigns incremented extension numbers to the rest of the devices in the block. The system assigns each device of the range the same COS, COR and Tenant Group numbers. During range programming the COMMENTS and ANNOUNCE fields blank. These fields cannot be accessed until range programming is complete.

6-QUIT Pressing the QUIT softkey when editing this form returns the display to the level before the field was modified. The change is not saved. At all other times, pressing this softkey exits Form 09 and returns the display to the level where the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL This softkey appears after a programming error has occurred and is accompanied with an error message. Pressing the CANCEL softkey cancels the last entry. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-BAY/SLT/CCT Pressing this softkey locates a device via its bay, slot and circuit numbers. The command line displays the **Bay: Slot: Circuit:** prompts. The cursor appears to the right of the **Bay:** prompt. Entering a 1-digit number specifies the bay location. Note that if the user enters an invalid number, then the system inhibits subsequent cursor movement. Refer to Table 4-45, Programming Error Messages. Similarly, the user specifies the slot and circuit locations. Once the location is fully designated, the command line updates with the information about that device and the cursor moves to the EXT NUM field. The TAB key and → cursor key control cursor movement.

8-DELETE This softkey appears when the pointer is pointing to data (i.e., data on the command line). Pressing the DELETE softkey removes the selected station (or SUPERSET® set) data from the form. The deletion is completed by pressing the ENTER softkey. The system deletes the selected data regardless of the cursor location on the command line. Note that pressing the DELETE softkey also removes

the selected device from Form 10 (Pickup Groups) and Form 17 (Hunt Groups).

9-REVIEW Pressing the REVIEW softkey displays a new form (refer to Table 4-16, Review List for Form 09). This form lists all programmed appearances of the selected extension number (or the Prime Line number) on other SUPERSET® sets.

0-ENTER This softkey appears only after data for an entry has been modified. Pressing the ENTER softkey stores the data corresponding to the selected physical location (bay, slot and circuit numbers) in the database. Stations and SUPERSET® sets can only be programmed one at time. Therefore, the ENTER softkey must be pressed after each device is modified.

SUPERSET® Set Lines

4.39 This form appears when the EXPAND SET softkey from the previous form (Table 4-14, Station/SUPERSET® Sets) is pressed and is reserved for the programming of SUPERSET® sets. Refer to Table 4-15, SUPERSET® Set Lines for the form layout.

4.40 Field Description

KEY Field This field lists the SUPERSET® set Line Select key numbers and cannot be modified.

TYPE Field When the cursor is at the TYPE field on the command line, the softkeys display five line types (refer to Figure 4-7, Line Types). These line types are: Key Line, Multiple Call Line, Personal Outgoing Line, Direct Trunk Access and Private Trunk. Note that a line type can only be assigned to those keys that have the default value of Speed Dial (undefined). In other words, the assigned line type must first be deleted before it can be modified. Note also that the Line Select key type must be specified before the DIRECTION, RING and SECRETARIAL fields can be defined. Key 1 defaults to Prime and cannot be modified. Refer to Section MITL9108-093-106-NA, SUPERSET 3™ Set Information and Section MITL9108-093-107-NA, SUPERSET 4™ Set Information for details on the line types.

1-KEY LINE	2-MULTI-CALL	3-PERSONAL O/G	4-DIR TRK ACC	5-PRIVATE TRK
6-QUIT	7-KEY	8-DELETE	9-REVIEW	O-

FIGURE 4-7   LINE TYPES   FORM0132R0

DIRECTION Field When the cursor is at the DIRECTION field on the command line, the softkeys display three directional variants (refer to Figure 4-8, Directional Variants). These directional types are Both Way, Incoming Only and Outgoing Only. Note that the DIRECTION field cannot be set to Outgoing Only if the RING field is set to Immediate or Delay Ring. Refer to Section MITL9108-093-106-NA, SUPERSET 3™ Set Information and Section MITL9108-093-107-NA, SUPERSET 4™ Set Information for details on these directional variants.

1-BOTH WAY	2-IN ONLY	3-OUT ONLY	4-	5-
6-QUIT	7-KEY	8-DELETE	9-REVIEW	O-

FIGURE 4-8   DIRECTIONAL VARIANTS   FORM0093R0

RING Field When the cursor is at the RING field on the command line, the softkeys display three ring types (refer to Figure 4-9, Ring Types). These ring variants are Immediate Ring, Delay Ring and No Ring. Note

that the RING field cannot be set to Immediate or Delay Ring if the DIRECTION field is set to Outgoing Only. Refer to Section MITL9108-093-106-NA, SUPERSET 3™ Set Information and Section MITL9108-093-107-NA, SUPERSET 4™ Set Information.

1-IMMED RING	2-DELAY RING	3-NO RING	4-	5-
6-QUIT	7-KEY	8-DELETE	9-REVIEW	O-

FIGURE 4-9 RING TYPES   FORM0098R0

SECRETARIAL Field When the cursor is at the SECRETARIAL field on the command line, and when the TYPE field is set to a Multiple Call Line, the softkeys display two selections (refer to Figure 4-10, Secretarial Variants). The two variants are secretarial and non- secretarial. Refer to Section MITL9108-093-106-NA, SUPERSET 3™ Set Information and Section MITL9108-093-107-NA, SUPERSET 4™ Set Information for details.

1-NON SECR	2-SECRETARIAL	3-	4-	5-
6-QUIT	7-KEY	8-DELETE	9-REVIEW	O-

FIGURE 4-10 SECRETARIAL VARIANTS   FORM0095R0

EXT NUM Field This field lists the Prime Line number and the line appearance numbers of those SUPERSET® set Line Select keys specified as Key, Multiple Call or Personal Outgoing. Note that when this field is filled for a specific Key, no entry is allowed in the corresponding TRUNK NUMBER field.

TRUNK NUMBER Field This field lists the trunk numbers assigned to those line select keys specified as DTS or Private Trunk. Trunk numbers are defined in Form 14 (refer to Table 4-22, Non-Dial-In Trunks) and Form 15 (refer to Table 4-23, Dial-In Trunks). Note that when this field is filled for a specific Key, no entry is allowed in the corresponding EXT NUM field.

TABLE 4-15
FORM 09 - SUPERSET® SET LINES

CDE TERMINAL DISPLAY

4:26 1-JUN-86   alarm status = NO ALARM

KEY	TYPE	DIRECTION	RING	SECRETARIAL	EXT NUM	TRUNK NUMBER
01	Prime	In/Out	Immed	No	1110	
02	Personal	Outgoing	None	No		
03	Key	In/Out	Delay	No	1301	
04	Multiple	In/Out	Delay	No	1302	
05	Multiple	In/Out	Immed	No	100	
06	Key	In/Out	Immed	No	101	
07	DTS	In/Out	Immed	No		12
08	Private	In/Out	Delay	No		14
09	Speed Dial					
10	Speed Dial					
11	Speed Dial					
12	Speed Dial					
04	Multiple	In/Out	Delay	No	1302	

1-BOTH WAY	2-IN ONLY	3-OUT ONLY	4-	5-TYPES
6-QUIT	7-KEY	8-DELETE	9-REVIEW	O-

ATTENDANT CONSOLE DISPLAY

```
KEY      TYPE      DIRECTION    RING        SECRETARIAL   EXT NUM   TRUNK NUMBER
02      Multiple   In/Out       Delay       No            1302
F1>BOTH WAY        F2>IN ONLY   F3>OUT ONLY    F4>                 F5>TYPES
F6>QUIT            F7>KEY       F8>DELETE      F9>REVIEW           FO>
```

FORM0030R0

4.41 Commands

a) The following five softkeys appear only when the TYPE field is set to the default value (Speed Dial) and when the cursor is at the TYPE field on the command line:

1-KEY LINE Pressing this softkey sets the selected SUPERSET® key as a Key Line. The form updates and displays **Key** in the TYPE field.

2-MULTI-CALL Pressing this softkey designates the selected SUPER-SET® key as a Multiple Call Line. The form updates and displays **Multiple** in the TYPE field.

3-PERSONAL O/G Pressing this softkey establishes the selected SUPERSET® key as a Personal Outgoing Line. The form displays **Personal** in the TYPE field to indicate this change. Note that for Personal Outgoing Lines, no other fields for the selected SUPERSET® key can be edited.

4-DIR TRK ACC Pressing this softkey sets the selected SUPERSET® key as a Direct Trunk Access line. The **DTS** indication appears in the TYPE field.

5-PRIVATE TRK Pressing this softkey designates the selected SUPER-SET® key as a Private Trunk. The form displays **Private** in the TYPE field.

b) The following three softkeys appear when the cursor is at the DIRECTION field on the command line:

1-BOTH WAY Pressing this softkey enables the selected SUPERSET® key (line appearance) to originate and receive calls. The DIRECTION field displays the **In/Out** indication.

2-IN ONLY Pressing this softkey restricts the selected SUPERSET® key (line appearance) to receiving incoming calls. No call originations are permitted. The DIRECTION field displays **Incoming** to indicate this condition.

3-OUT ONLY Pressing this softkey enables the selected SUPERSET® key (line appearance) to originate calls. No calls are received on this line appearance. The appearance of **Outgoing** in the DIRECTION field indicates this condition.

c) The following three softkeys appear when the cursor is at the RING field on the command line:

1-IMMED RING Pressing this softkey sets the selected SUPERSET® key (line appearance) to ring the SUPERSET® set immediately for incoming calls. The form displays **Immed** in the RING field to indicate this condition.

2-DELAY RING Pressing this softkey causes incoming calls to flash the selected key (line appearance) for a programmable period of time

and then ring the SUPERSET® set for incoming calls. The **Delay** indication appears in the RING field.

3-NO RING Pressing this softkey prevents incoming calls from ringing the SUPERSET® set ringer. Only the line appearance flashes. The **None** indication appears in the RING field.

d) The following two softkey descriptions appear when the TYPE field is set to Multiple Call Line and the cursor is at the SECRETARIAL field on the command line:

1-NON SECR Pressing this softkey disables the secretarial function for the selected SUPERSET® key (line appearance). The **No** indication appears in the SECRETARIAL field.

2-SECRETARIAL Pressing this softkey enables the secretarial function for the selected SUPERSET® key (line appearance). The **Yes** indication appears in the SECRETARIAL field. When a Line Select key is set as a secretarial key, then the user can override the DO NOT DISTURB feature on the SUPERSET® set corresponding to that line appearance.

e) The following softkeys usually appear:

6-QUIT Pressing the QUIT softkey when editing this form returns the display to the level before the field was modified. The change is not saved. At all other times, pressing the QUIT softkey returns the display to the previous form at the entry where the EXPAND SET softkey was pressed.

6-CANCEL When a programming error is made, the system displays an error message on the command line and displays **CANCEL** at the sixth softkey. Pressing the CANCEL softkey returns the display to the level where the programming error occurred. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-KEY This softkey selects a SUPERSET® key by number. Pressing the KEY softkey displays the **ENTER KEY NUM:** prompt on the command line. Any SUPERSET® key may be selected except for Key 01 (Prime Line).

8-DELETE This softkey appears when the pointer is pointing to data (i.e., data on the command line). Pressing the DELETE softkey sets the selected SUPERSET® key to the default value. This process is completed by pressing the ENTER softkey. The display shows the **Speed Dial** indication.

9-REVIEW Pressing the REVIEW softkey displays a new form (refer to Table 4-16, Review List for Form 09). This form displays a list of all programmed appearances of the selected Line Select key on all stations and SUPERSET® sets.

0-ENTER This softkey appears only after data for an entry has been modified. Pressing the ENTER softkey commits the Line Select Key information in the database.

Review List for Form 09

> **4.42** This form appears when the REVIEW softkey is pressed for both the Station/SUPERSET® Sets Form and the SUPERSET® Set Lines Form. When entered from the Station/SUPERSET® Form, this form displays a list of all programmed appearances of the selected station extension number or SUPERSET® Prime Line number. When entered from the SUPERSET® Set Lines Form, this form displays appearances of the selected key extension number or selected key trunk number. If the cursor was at an undefined key in the SUPERSET® Set Lines Form when the REVIEW softkey was pressed, then this form displays the Prime Line appearance of the SUPERSET® set. Refer to Table 4-16, Review List for Form 09 for the form layout. Note that the data in this form cannot be modified.

> **4.43** **Field Description.** The header line displays the selected line appearance by its extension number.

> **BAY, SLT and CCT Fields** These fields list the bay, slot and circuit numbers of each extension or SUPERSET® set that has a Dial-In Trunk appearance. They are generated by the system based on what was entered in the PROGRAMMED field of Form 01, System Configuration. These fields cannot be modified.

> **STN/SUPERSET Field** This field displays the type of listed devices. The **STATION** prompt marks the Rotary Dial or DTMF set and the **SUPERSET** prompt indicates the SUPERSET® set.

> **KEY Field** For listed SUPERSET® sets, the KEY field displays the key number where the line appears.

4.44 Commands

> **3-TRUNK NUMBER** This softkey selects a trunk by its trunk number. Pressing this softkey displays **ENTER TRUNK NUM:** prompt on the command line. The trunk selection is completed by entering a valid trunk number (1 → 200).

> **6-QUIT** Pressing the QUIT softkey returns the display to the point where the REVIEW softkey was pressed. Refer to Table 4-15, Form 09 – SUPERSET® Set Lines.

> **6-CANCEL** This softkey appears after a programming error has been made. It appears with an error message. Pressing this softkey returns the display to the level where the programming error occurred. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

> **7-EXT NUM** This softkey selects a device by its extension number. Pressing this softkey displays the **ENTER EXTENSION NUM:** prompt. The selection is completed by entering a valid Station Number or SUPERSET® Set Number and then pressing the ENTER softkey.

> **0-ENTER** Since this form reviews the programmed data, pressing the ENTER softkey completes a request for viewing a particular extension number or trunk number. No data changes occur and no data is stored in the database.

TABLE 4-16
REVIEW LIST FOR FORM 09

CDE TERMINAL DISPLAY

4:26 1-JUN-86   alarm status = NO ALARM

LINE : 1101		BAY	SLOT	CCT	STN/SUPERSET	KEY	
		1	1	O1	SUPERSET	1	
		1	1	O2	SUPERSET	2	
		1	1	O3	SUPERSET	2	
		1	1	O1	SUPERSET	1	
1-	2-		3-TRUNK NUMBER		4-		5-
6-QUIT	7-EXT NUM		8-		9-		O-

ATTENDANT CONSOLE DISPLAY

```
 LINE : 1101              BAY  SLOT  CCT   STN/SUPERSET   KEY
                           1    1    O1       SUPERSET     1
F1>              F2>              F3>TRUNK NUMBERF4>              F5>
F6>QUIT          F7>EXT NUM       F8>               F9>          FO>
```

FORM0029R0

Form 10 – Pickup Groups

4.45   This form specifies the members of each Pickup Group. Refer to Table 4-17, Pickup Groups for the form layout. Memberships are specified by the extension number of a Rotary Dial or DTMF set or the Prime Line number of a SUPERSET® set. Attendant Consoles are not allowed. The SX-200® DIGITAL PABX with Generic 1001 software supports a maximum of 50 Pickup Groups; each group supports a maximum of 50 members.

4.46 Field Description

EXT NUM Field   This field lists the Pickup Group members by extension number. Members are added by entering an extension number when the cursor is at the EXT NUM field on the command line.

BAY/SLT/CCT and COMMENTS Fields   These fields are for informational purposes only; i.e., the system does not use the data in these fields. When a station number is entered into the Pickup Group list, the BAY/SLT/CCT and COMMENTS fields from Form 09 (Station/SUPERSET® Sets) that correspond to that station number are displayed. The data in these fields cannot be modified.

TABLE 4-17
FORM 10 - PICKUP GROUPS

CDE TERMINAL DISPLAY

4:26   1-JUN-86   alarm status = NO ALARM

[PICKUP GROUP : 1]		EXT NUM	BAY	SLT	CCT	COMMENTS
		1131	2	1	1	PURCHASING
		1132	2	1	2	PURCHASING
		1134	2	1	3	PURCHASING
		1131	2	1	1	PURCHASING
1-	2-	3-INSERT		4-		5-PICKUP GROUP
6-QUIT	7-EXT NUM	8-DELETE		9-		O-

ATTENDANT CONSOLE DISPLAY

```
[ PICKUP GROUP :   1 ]          EXT NUM   BAY     SLT   CCT   COMMENTS
                                 1131      2       1     1     PURCHASING
F1>                  F2>           F3>INSERT       F4>          F5>PICKUP GROUP
F6>QUIT              F7>EXT NUM    F8>DELETE       F9>          FO>
```

FORM0028R0

4.47 Commands

3-INSERT   This softkey adds new members to the Pickup Group. Pressing the INSERT softkey clears the command line and moves the cursor to the EXT NUM field. The addition is completed by entering a valid extension number. The system inserts the addition the line after that line that was displayed on the command line. Note that this softkey only appears if there is data present in this form.

5-PICKUP GROUP   This softkey selects a Pickup Group. Pressing the PICKUP GROUP softkey displays the **ENTER PICKUP GROUP NUM:** prompt on the command line. Entering the Pickup Group number displays that Pickup Group on the header line and all its members.

6-QUIT   Pressing the QUIT softkey when editing this form returns the display to the level before the field was modified. The change is not saved. At all other times, pressing this softkey exits Form 10 and returns the display to the level where the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL   This softkey appears after the occurrence of a programming error. Pressing the CANCEL softkey returns the display to the level where the programming error was made. The CANCEL softkey appears with an error message. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-EXT NUM   This softkey selects a Pickup Group member by its extension number (or Prime Line number). Pressing the EXT NUM softkey displays the **ENTER EXTENSION NUM:** prompt on the command line. Entering the extension number displays that member with its bay, slot and circuit location, and (if any) comments. Note that if the selected extension number is not in the current Pickup Group, then the system automatically displays the Pickup Group where the selected device is located.

8-DELETE   This softkey appears when the pointer is pointing to data (i.e., data on the command line). Pressing the DELETE softkey removes the selected Pickup Group member from the form. The deletion is completed by pressing the ENTER softkey.

0-ENTER   This softkey appears only after data for an entry has been modified. Pressing the ENTER softkey commits each modification one at a time to the database.

Form 13 - Trunk Circuit Descriptors

4.48 Trunk circuit descriptors are similar to Classes of Service. A trunk circuit descriptor specifies the hardware options for each type of Trunk Card. Refer to Table 4-18, Trunk Circuit Descriptors for the form layout. Trunk circuit descriptors are complemented by the switch settings on the SX-200® type Trunk Cards. Refer to the Trunk Card Switch Assignments Forms in Part Number 9108-093-206-NA, Installation Forms. There are six Trunk Card types: 4-Circuit CO, 6-Circuit CO, 4-Circuit DISA, 6-Circuit DISA, 2-Circuit DID, 6-Circuit DID, E&M Trunk and E&M Trunk Module. Each Trunk Card type has its own set of parameters as detailed in Table 4-20, Trunk Hardware Options. The system supports a maximum of 25 trunk circuit descriptors.

4.49 Field Description

DESCRIPTOR Field This field lists the trunk circuit descriptors, numbers 01 to 25.

TRUNK TYPE Field This field lists one of six trunk types for each trunk circuit descriptor. Note that the selected trunk type (the one that appears on the command line) is not displayed on the softkeys.

NUMBER OF TRKS ASSIGNED Field This field records the number of trunks which use each trunk circuit descriptor. The trunk circuit descriptor can be assigned a new trunk type only if this field is blank. To clear the NUMBER OF TRKS ASSIGNED field, the trunks must first be deassigned. Refer to Table 4-22, Non-Dial-In Trunks and Table 4-23, Dial-In Trunks. When a trunk type is assigned to a trunk circuit descriptor, the system prohibits any changes by clearing those softkeys that can alter the trunk types.

COMMENTS Field This field is reserved for additional data (a maximum of 15 characters). It is stored by the system but not used.

TABLE 4-18
FORM 13 - TRUNK CIRCUIT DESCRIPTORS

CDE TERMINAL DISPLAY

4:26   1-JUN-86   alarm status = NO ALARM

DESCRIPTOR	TRUNK TYPE	NUMBER OF TRKS ASSIGNED	COMMENTS
01	4-CIRCUIT CO	0	
02	4-CIRCUIT CO	0	
03	4-CIRCUIT CO	0	
04	6-CIRCUIT CO	4	
05	6-CIRCUIT CO	3	
06	2-CCT DID/TIE	0	
07	4-CIRCUIT DISA	0	
08			
09			
10			
11			
12			
01	4-CIRCUIT CO	0	

1-6 CCT CO	2-6 CCT DISA	3-E&M MODULE	4-6 CCT DID	5-** MORE **
6-QUIT	7-	8-SEL. OPTION	9-REVIEW	0-

ATTENDANT CONSOLE DISPLAY

DESCRIPTOR	TRUNK TYPE	NUMBER OF TRKS ASSIGNED	COMMENTS
01	4-CIRCUIT CO	0	
F1>6 CCT CO	F2>6 CCT DISA	F3>E&M MODULE F4>6 CCT DID	F5>** MORE **
F6>QUIT	F7>	F8>SEL. OPTION F9>REVIEW	FO>

FRM0027R1

4.50 Commands

1-4 CCT CO Pressing this softkey assigns the CO Trunk type to the selected trunk circuit descriptor. Pressing the ENTER softkey completes the selection and the TYPE field displays the **4-CIRCUIT CO** prompt.

2-4 CCT DISA Pressing this softkey selects the DISA Trunk type for that trunk circuit descriptor. Pressing the ENTER softkey completes the selection and the TYPE field displays the **4-CIRCUIT DISA** prompt.

3-E & M TRUNK Pressing this softkey sets the selected trunk circuit descriptor as an E&M Trunk Card. Pressing the ENTER softkey completes the selection and the TYPE field displays the **E&M CARD** prompt.

4-DID/TIE Pressing this softkey specifies the selected trunk circuit descriptor as a DID/Tie Trunk. Pressing the ENTER softkey completes the selection and the TYPE field displays the **2-CCT DID/TIE** prompt.

5- ** MORE ** This softkey presents three more trunk type selections. Pressing this softkey once displays three new Trunk types (refer to Figure 4-11, More Trunk Types). Pressing this softkey again returns the softkeys to their original format (refer to Table 4-18, Trunk Circuit Descriptors). Note that the selected trunk type does not appear on a softkey.

1-4 CCT CO	2-4 CCT DISA	3-E & M TRUNK	4-DID/TIE	5-** MORE **
6-QUIT	7-	8-SEL. OPTION	9-REVIEW	O-

FIGURE 4-11   MORE TRUNK TYPES   FRM0094R1

1-6 CCT CO Pressing this softkey specifies the selected trunk circuit descriptor as a CO Trunk type. Pressing the ENTER softkey completes the selection and the TYPE field displays the **6-CIRCUIT CO** prompt.

2-6 CCT DISA Pressing this softkey assigns the DISA Trunk type to the selected trunk circuit descriptor. Pressing the ENTER softkey completes the selection and the TYPE field displays the **6-CIRCUIT DISA** prompt.

3-E&M MODULE Pressing this softkey sets the selected trunk circuit descriptor as an E&M Trunk Module. Pressing the ENTER softkey completes the selection and the TYPE field displays the **E&M MODULE** prompt.

4-6 CCT DID Pressing this softkey sets the selected trunk circuit descriptor as a DID Trunk. Pressing the ENTER softkey completes the selection and the TYPE field displays the **6 CCT DID** prompt.

6-QUIT Pressing the QUIT softkey when editing this form returns the display to the level before the field was modified. The change is not saved. At all other times, pressing this softkey exits Form 13 and returns the display to the level where the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL This softkey appears after a programming error has occurred. Pressing the CANCEL softkey returns the display to the level where the programming error occurred. The CANCEL softkey appears with an error message. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

8-SEL. OPTIONS Pressing the SEL. OPTIONS softkey displays a new form. This form displays the options (parameters) associated with the trunk type that is assigned to that trunk circuit descriptor. Refer to Table 4-20, Trunk Circuit Descriptor Options.

9-REVIEW Pressing the REVIEW softkey displays a new form (refer to Table 4-19, Review List for Form 13). This form displays a list of trunks that use the selected trunk circuit descriptor.

0-ENTER This softkey appears only after data for an entry has been modified. Pressing the ENTER softkey commits each modification one at a time to the database.

Review List for Form 13

4.51   This form appears when the REVIEW softkey is pressed in Form 13 – Trunk Circuit Descriptors. The form lists the trunks that use the selected trunk circuit descriptor. Refer to Table 4-19, Review List for Form 13 for the form layout. Note that the data in this form cannot be modified.

4.52   **Field Description.**   The header line displays the descriptor number and the trunk type.

TRK NUM Field   This field lists the trunk numbers assigned to the selected trunk circuit descriptor number. Trunk numbers are arbitrarily assigned to the trunks in Form 14 (refer to Table 4-22, Non-Dial-In Trunks) and Form 15 (refer to Table 4-23, Dial-In Trunks).

BAY, SLT and CCT Fields   These fields list the physical location of each trunk number according to their bay, slot and circuit numbers.

COMMENTS Field   This field displays any additional information about each trunk as it was entered on Form 14 (refer to Table 4-22, Non-Dial-In Trunks) and Form 15 (refer to Table 4-23, Dial-In Trunks). The COMMENTS field stores a maximum of 15 characters. The data in this field is stored by the system but not used.

TABLE 4-19
REVIEW LIST FOR FORM 13

CDE TERMINAL DISPLAY

4:26   1-JUN-86   alarm status = NO ALARM

[6 CCT CO TRUNK: 2]		TRK NUM	BAY	SLT	CCT	COMMENTS
		2	1	5	2	
		9	3	5	1	
		10	3	5	2	
		11	3	5	3	
		12	3	5	4	
		13	3	6	1	
		14	3	6	2	
		15	4	5	1	
		16	4	5	2	
		17	4	5	3	
		18	4	5	4	
		19	4	6	1	
		2	1	5	2	
1-	2-	3-		4-		5-
6-QUIT	7-DESC NUMBER	8-		9-		0-

ATTENDANT CONSOLE DISPLAY

```
[ 6 CCT CO TRUNK:  2 ]          TRK NUM    BAY    SLT    CCT        COMMENTS
                                    2        1      5      2
F1>             F2>             F3>              F4>                F5>
F6>QUIT         F7>DESC NUMBER  F8>              F9>                FO>
```

FORM0026R0

4.53 Commands

6-QUIT Pressing the QUIT softkey returns the display to the point where the REVIEW softkey was pressed.

6-CANCEL This softkey appears after a programming error has occurred. Pressing the CANCEL softkey returns the display to the level where the programming error occurred. The CANCEL softkey appears with an error message. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-DESC NUMBER This softkey selects a trunk circuit descriptor number. Pressing the DESC NUMBER softkey displays the **ENTER DESC. NUM:** prompt. The selection is completed by entering a valid number (1 to 25).

0-ENTER Since this form is reserved for reviewing programmed data, pressing the ENTER softkey completes a request for viewing a trunk circuit descriptor number. No data changes occur and no data is stored in the database.

Options for Trunk Circuit Descriptors

4.54 This form appears only when the SEL. OPTIONS softkey is pressed (refer to Table 4-18, Trunk Circuit Descriptors). This form displays the options (parameters) associated with each trunk type assigned to each trunk circuit descriptor. Refer to Table 4-21, Trunk Circuit Descriptor Options.

4.55 Field Description. The header line displays the trunk type, the trunk circuit descriptor number and the type of parameter under observation. The parameter types are: Supervision, Transmission, Incoming, Outgoing and In/Out Going. Refer to Table 4-20, Trunk Hardware Options for a complete list of these options.

STATUS Field This field lists the status of each option. The following is a list of the possible entries:

* YES (enabled)/NO (disabled)
* 600 OHM/COMPLEX
* IMMED/WINK/DELAY
* 60/40 or 30/20 or 66/33.

TABLE 4-20
TRUNK HARDWARE OPTIONS

Trunk Type: 4-CIRCUIT CO TRUNK and 4-CIRCUIT DISA
Far-End Gives Answer Supervision Inhibit Automatic Supervision No Seize Alarm No Release Alarm Toll Office Is this a CO DTMF Impedance (600 Ohms or Complex) Dictation Trunk
Type: 6-CIRCUIT CO TRUNK and 6-CIRCUIT DISA
Far-End Gives Answer Supervision Inhibit Automatic Supervision No Seize Alarm No Release Alarm Toll Office Is this a CO DTMF Impedance (600 Ohms or Complex) Post Call Metering (0 → 15 s) x (1 s increments) Calling Party Disconnect Timer (1 → 12 min) x (1 min inc) Dictation Trunk Ignore Remote Disconnect Disconnect Timer (100 → 9900 ms) x (100 ms increments)

TABLE 4-20 (CONT'D)
TRUNK HARDWARE OPTIONS

Trunk Type: 6-CIRCUIT CO and 6-CIRCUIT DISA (cont'd)
Supervision Direction: Incoming Trunk Calls Also Guard Timer (0 → 3000 ms) x (100 ms increments) Ring Cycle Timer (6 → 10 s) x (1 s increments) Ignore Line Reversal During Seizure Ringing Expected Ringing Debounce Timer (5 → 12 s) x (1 s increments) Seize Timer (10 → 60 s) x (10 s increments) Flash Timer (200 → 700 ms) x (100 ms increments) Interdigit Timer (300 → 800 ms) x (100 ms increments) Digit Outpulsing Ratio (60/40, 30/20, 66/33)
Type: E&M MODULE
Far-End Gives Answer Supervision Inhibit Automatic Supervision No Seize Alarm No Release Alarm Toll Office Is this a CO DTMF Impedance ** Use Dip Switch on the Module to Program ** (600 Ohms or Complex) E Lead Invert M Lead Invert Disconnect Timer (150 → 300 ms) x (50 ms increments) Release Acknowledge Timer (2000 → 9900 ms) x (100 ms inc) Guard Timer (200 → 1000 ms) x (100 ms increments) Dictation Trunk Incoming Start Type (Immed, Wink, Delay) Debounce Timer (20 → 300 ms) x (10 ms increments) Wink Timer (150 → 150 ms) x (50 ms increments) Outgoing Start Time (Immed, Wink, Delay or Delay Integ) Digit Outpulsing Ratio (60/40, 30/20, 66/33) Outpulse Delay Timer (100 → 2000 ms) x (100 ms inc) Flash Timer (200 → 700 ms) x (100 ms increments) Interdigit Timer (300 → 800 ms) x (100 ms increments) Wait for Delay Timer (300 → 5000 ms) x (100 ms inc) Remote End is a Satellite Remote End is a Satellite with OPS Lines
Trunk Type: E&M CARD
Far-End Gives Answer Supervision Inhibit Automatic Supervision No Seize Alarm No Release Alarm

TABLE 4-20 (CONT'D)
TRUNK HARDWARE OPTIONS

Trunk Type: E&M CARD (Cont'd)
Toll Office Is this a CO DTMF Impedance (600 Ohms or Complex) Remote End is a Satellite Remote End is a Satellite with OPS Lines Dictation Trunk
Type: 2-CCT DID/TIE
Far-End Gives Answer Supervision Inhibit Automatic Supervision No Seize Alarm No Release Alarm Toll Office Is this a CO DTMF Impedance (600 Ohms or Complex) Remote End is a Satellite Remote End is a Satellite with OPS Lines
Trunk Type: 6-CCT DID
Far-End Gives Answer Supervision Inhibit Automatic Supervision No Seize Alarm No Release Alarm Toll Office Is this a CO DTMF Impedance (600 Ohms or Complex) Disconnect Timer (150 → 300 ms) x (50 ms increments) Release Acknowledge Timer (2000 → 9900 ms) x (100 ms inc) Start Type Debounce Timer (20 → 150 ms) (10 ms increments) Wink Timer (150 → 300 ms) x (50 ms increments) Remote End is a Satellite Remote End is a Satellite with OPS Lines

TABLE 4-21
FORM 13 - TRUNK CIRCUIT DESCRIPTOR OPTIONS

CDE TERMINAL DISPLAY

4:26 1-JUN-86   alarm status = NO ALARM

[4 CCT CO TRUNK : 2] OPTION NAME [SUPERVISION PARAMETER]	STATUS
Far-end gives answer supervision	NO
Inhibit automatic supervision	NO
No seize alarm	YES
No release alarm	YES
Toll office	NO
Is this a CO	YES
DTMF	YES
Impedance	COMPLEX
Dictation Trunk	NO

Far-end gives supervision				NO
1-YES	2-	3-	4-	5-
6-QUIT	7-	8-	9-	O-

ATTENDANT CONSOLE DISPLAY

```
[ 4 CCT CO TRUNK : 2 ]  OPTION  NAME  [SUPERVISION PARAMETER ]     STATUS
 Far-end gives answer supervision                                    NO
F1>YES        F2>            F3>            F4>            F5>
F6>QUIT       F7>            F8>            F9>            FO>
```

FORM0025R0

4.56 Commands

1-YES, NO, COMPLEX, 600 OHM, 60/40, IMMED This softkey toggles the status of the parameters.

2-30/20, WINK This softkey toggles the status of the parameters.

3-66/33, DELAY This softkey toggles the status of the parameters.

4-DELAY INTEG This softkey toggles the status of the parameters.

6-QUIT Pressing the QUIT softkey when editing this form returns the display to the level before the field was modified. The change is not saved. The following warning prompt appears on the command line: **DATA HAS BEEN CHANGED BUT NOT YET SAVED IN DATABASE -- "ENTER" TO SAVE.** At all other times, pressing this softkey returns the display to the point where the SEL. OPTION softkey was pressed.

6-CANCEL This softkey appears after a programming error has occurred. Pressing the CANCEL softkey returns the display to the level where the programming error was made. The CANCEL softkey appears with an error message. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

0-ENTER This softkey appears only after data for an entry has been modified. Pressing the ENTER softkey commits each modification one at a time to the database. After all changes have been completed, the user must press the ENTER softkey again to commit the form to the database.

Form 14 – Non-Dial-In Trunks

4.57 This form specifies the characteristics of the system's Non-Dial-In Trunks. These trunks cannot dial any digits into the PABX and are usually a CO Trunk. The Day, N1, N2 answer points are assigned in this form. Alternate recall points are assigned in Form 19 (refer to Table 4–29, Call Rerouting Table). Refer to Table 4–22, Non-Dial-In Trunks for the form layout.

4.58 Field Description

BAY, SLT, and CCT Fields These fields list the physical location of each Non-Dial-In Trunk. They are generated by the system based on what was entered in the PROGRAMMED field in Form 01, System Configuration. This field cannot be modified.

COS Field This field specifies the Class of Service of each Non-Dial-In Trunk. The default COS is 1.

TEN Field This field specifies the Tenant Group number of each Non-Dial-In Trunk. The default Tenant Group number is 1.

DAY, N1 and N2 Fields These fields are reserved for the Day, Night1 and Night2 answer points. The answer points may be specified as an LDN on the Attendant Console, an extension number of a Rotary Dial, DTMF set or a SUPERSET® set, a Hunt Group Access Code or a Night Bell extension number. Note then that an LDN and Night Bell cannot be rung simultaneously. Note that the DAY field must be filled in before any changes for the selected physical location are stored in the database. If the N1 or N2 field is not specified, then the system defaults the night answer points to the day answer point. If only one of the night answer points is specified, then the other night answer point defaults to the specified night answer point.

CDN Field The CDN (Circuit Descriptor Number) field links this form to Form 13, Trunk Circuit Descriptors (Table 4–18) which defines the trunk hardware parameters. Note that this field must be filled in before any changes for the selected physical location are stored in the database.

TK NUM Field This field lists the trunk locations. Note that this field must be filled in before any changes for the selected physical location are stored in the database. In this field, trunks are listed according to their trunk number (1 to 200). This method of identifying trunks is used for the following:

    a)   SMDR records of a trunk call (only three digits are allocated for trunk identification)

    b)   identification of a trunk in a call on the Attendant Console or on the SUPERSET 4™ set LCD,

    c)   attendant Direct Trunk Select (DTS) capability,

d)   Form 09 for SUPERSET® set line appearance programming (DTS or Private Trunk) and

e)   Form 16 for listing members of Trunk Groups.

BLF Field   This field is reserved for future use.

COMMENTS Field   This field is reserved for additional data (a maximum of 15 characters). It is stored by the system but not used.

TABLE 4-22
FORM 14 - NON-DIAL-IN TRUNKS

CDE TERMINAL DISPLAY

4:26   1-JUN-86   alarm status = NO ALARM

BAY	SLT	CCT	COS	TEN	DAY	N1	N2	CDN	TK NUM	BLF	COMMENTS
1	05	01	1	1	110	3302					
1	05	02	1	1	112						
1	05	03	1	1	113						
1	05	04	1	1	114						
1	05	05	1	1	115						
1	05	06	1	1	116						
2	02	01	1	1	117						
2	02	02	1	1	118						
2	02	03									
2	02	04									
2	02	05									
2	02	06									
1	05	01	1	1	110	3302					

1-	2-	3-TRUNK NUMBER	4-	5-
6-QUIT	7-BAY/SLT/CCT	8-DELETE	9-	O-

ATTENDANT CONSOLE DISPLAY

```
BAY SLT CCT COS  TEN   DAY   N1    N2    CDN    TK NUM   BLF      COMMENTS
 1  05  01  1    1     110   3302
F1>              F2>               F3>TRUNK NUMBER  F4>             F5>
F6>QUIT          F7>BAY/SLT/CCT  F8>DELETE         F9>             FO>
```

FORM0024R0

4.59 Commands

3-TRUNK NUMBER This softkey selects a trunk by its trunk number. Trunk numbers are assigned in Form 14 (Table 4-22, Non-Dial-In Trunks) and Form 15 (Table 4-23, Dial-In Trunks). Pressing the TRUNK NUMBER softkey displays the **ENTER TRUNK NUM:** prompt on the command line. Entering a valid trunk number (1 to 200) selects that Non-Dial-In Trunk and displays it on the command line.

6-QUIT Pressing the QUIT softkey after a field has been edited restores the form to the level before the field was modified. The change is not saved. At all other times, pressing this softkey returns the display to the level where the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL This softkey appears after a programming error has occurred. Pressing the CANCEL softkey returns the display to the level where the programming error was made. The CANCEL softkey appears with an error message. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-BAY/SLT/CCT Pressing this softkey locates trunk via its bay, slot and circuit numbers. The command line displays the **Bay:**, **Slot:** and **Circuit:** prompts. The cursor appears to the right of the **Bay:** prompt. Entering a 1-digit number specifies the bay location. Note that if the user enters an invalid number, then the system inhibits subsequent cursor movement. Refer to Table 4-45, Programming Error Messages. Similarly, the user specifies the slot and circuit locations. Once the location is fully designated, the command line updates with the information about that trunk and the cursor moves to the COS field. The TAB key and → cursor key control cursor movement.

8-DELETE This softkey appears when the pointer is pointing to data (i.e., data on the command line). Pressing the DELETE softkey removes the selected entry from the form. The deletion is completed by pressing the ENTER softkey. Note that the system also removes the selected trunk from Form 16, Trunk Groups.

0-ENTER This softkey appears only after data for an entry has been modified. Pressing the ENTER softkey commits each modification one at a time to the database.

Form 15 - Dial-In Trunks

4.60 This form specifies the characteristics of the system's Dial-In Trunks. This form also designates where incoming calls on Dial-In Trunks are routed by modifying the incoming digits. Refer to Table 4-23, Dial-In Trunks for form layout.

4.61 Field Description

BAY, SLT and CCT Fields These fields list the physical location identification of each Dial-In Trunk. They are generated by the system based on what was entered in the PROGRAMMED field of Form 01, System Configuration. This field cannot be modified.

COS Field This field specifies the Class of Service for each entry. The COS defaults to 1.

COR Field This field lists the Class of Restriction for each entry. The COR defaults to 1.

TEN Field Tenant Group specifications are listed in this field. The Tenant Group number defaults to 1.

N Field This field lists the number of expected digits (1 to 9). If a value is specified in this field, then digit translation on incoming calls does not commence until the system receives the specified number of digits. Note: This field must be filled for a DID Trunk. Otherwise, this field defaults to 0.

M Field This field specifies the number of digits (0 to 8) that must be absorbed after the incoming trunk is seized. The M field defaults to 0. This field is applicable for any type of Dial-In Trunk.

X Field This field specifies a maximum of two digits that may be inserted before the digit string. This field is applicable for any type of Dial-In Trunk.

CDN Field The CDN (Circuit Descriptor Number) field lists the circuit descriptor numbers for each Dial-In Trunk. This field links this form to Form 13 (Trunk Circuit Descriptors), which defines the trunk hardware parameters. Note that this field must be filled in before any changes for the selected physical location are stored in the database.

TK NUM Field This field displays the Dial-In Trunks according to their trunk number. Note that this field must be filled in before any changes for the selected physical location are stored in the database. Trunk numbers range from 1 to 200 and are used for the following:

a) SMDR records of a trunk call (only three digits are allocated for trunk identification),

b) identification of a trunk in a call on the Attendant Console or on the SUPERSET 4™ set LCD,

c) attendant Direct Trunk Select (DTS) capability,

d) Form 09 for SUPERSET® set line appearance programming (DTS or Private Trunk) and

e) Form 16 for listing members of Trunk Groups.

BLF Field This field is reserved for future use.

COMMENTS Field This field is reserved for additional data (a maximum of 15 characters). It Is stored by the system but not used.

TABLE 4-23
FORM 15 - DIAL-IN TRUNKS

CDE TERMINAL DISPLAY

4:26   1-JUN-86   alarm status = NO ALARM

BAY	SLT	CCT	COS	COR	TEN	N	M	X	CDN	TK NUM	BLF	COMMENTS
2	02	03	1	1	1	O	O		2	1		
2	02	04										
2	02	05										
2	02	06										
2	06	03										
3	06	04										
3	07	01	1	1	1	O	O		16	27		
3	07	02	1	1	1	O	O		16	28		
3	08	01	1	1	1	O	O		16	29		
3	08	02	1	1	1	O	O		16	30		
4	06	03										
4	06	04										

BAY	SLT	CCT	COS	COR	TEN	N	M	X	CDN	TK NUM	BLF	COMMENTS
2	02	03	1	1	1	O	O		2	1		

1-	2-		3-TRUNK NUMBER	4-	5-
6-QUIT	7-BAY/SLT/CCT	8-DELETE	9-	0-	

ATTENDANT CONSOLE DISPLAY

```
BAY SLT CCT COS  COR    TEN    N   M   X    CDN    TK NUM    BLF         COMMENTS
 2  02  03   1    1      1     O   O        2        1
F1>                F2>               F3>TRUNK NUMBER F4>                F5>
F6>QUIT            F7>BAY/SLT/CCT F8>DELETE          F9>                FO>
```

FORM0023R0

4.62 Commands

3–TRUNK NUMBER This softkey selects a trunk by its trunk number. Pressing the TRUNK NUMBER softkey displays the **ENTER TRUNK NUM:** prompt on the command line. Entering a valid trunk number (1 to 200) selects that Dial–In Trunk and displays it on the command line.

6–QUIT Pressing the QUIT softkey directly after a field has been modified restores the form to the level before the field was edited. The change is not saved. At all other times, pressing this softkey returns the display to the level where the forms are selected.

6–CANCEL This softkey appears after a programming error has occurred. Pressing the CANCEL softkey returns the display to the level where the programming error was made. The CANCEL softkey appears with an error message. Refer to Table 4–45, Programming Error Messages for a list of these error messages.

7–BAY/SLT/CCT Pressing this softkey locates trunk via its bay, slot and circuit numbers. The command line displays the **Bay:**, **Slot:** and **Circuit:** prompts. The cursor appears to the right of the **Bay:** prompt. Entering a 1–digit number specifies the bay location. Note that if the user enters an invalid number, then the system inhibits subsequent cursor movement. Refer to Table 4–45, Programming Error Messages. Similarly, the user specifies the slot and circuit locations. Once the location is fully designated, the command line updates with the information about that trunk and the cursor moves to the COS field. The TAB key and → cursor key control cursor movement.

8–DELETE This softkey appears when the pointer is pointing to data (i.e., data on the command line). Pressing the DELETE softkey removes the selected entry from the form. The deletion is completed by pressing the ENTER softkey. Note that the system also removes the selected trunk from Form 16, Trunk Groups.

0–ENTER This softkey appears only after data for an entry has been modified. Pressing the ENTER softkey commits each modification one at a time to the database.

Form 16 – Trunk Groups

4.63 This form specifies the members of each Trunk Group by trunk numbers. The trunk number is assigned in Form 14 (refer to Table 4-22, Non-Dial-In Trunks) and Form 15 (refer to Table 4-23, Dial-In Trunks). The system supports a maximum of 50 Trunk Groups; each group supports a maximum of 50 members. Refer to Table 4-24, Trunk Groups for the form layout.

4.64 **Field Description.** The header line indicates the Trunk Group being programmed, via a number and a name (maximum of eight characters). This line also indicates the presence of the SMDR option and whether the Trunk Group is subjected to Terminal Hunting or Circular Hunting.

TK NUM Field This field lists the members of each Trunk Group according to their trunk number. Members are added by entering a valid trunk number (1 to 200) when the cursor is at the TK NUM field on the command line. The Trunk Group is displayed on the header line.

BAY, SLT, CCT and COMMENTS Fields These fields are informational fields only. They cannot be modified in this form. When a trunk number is added to the Trunk Group, the physical identification (BAY, SLT and CCT) and the COMMENTS fields from Form 14 (Non-Dial-In Trunks) or Form 15 (Dial-In Trunks) are automatically displayed.

TABLE 4-24
FORM 16 - TRUNK GROUPS

CDE TERMINAL DISPLAY

4:26   1-JUN-86   alarm status = NO ALARM

[GRP: 1-TORONTO] [NO SMDR][TERM]	TK NUM	BAY	SLT	CCT	COMMENTS
	1	03	09	01	
	2	03	10	01	
	1	03	09	01	

1-SMDR	2-CIRCULAR	3-INSERT	4-TK GRP NAME	5-TRUNK GROUP
6-QUIT	7-	8-DELETE	9-	O-

ATTENDANT CONSOLE DISPLAY

[GRP: 1-TORONTO] [NO SMDR][TERM]	TK NUM	BAY	SLT	CCT	COMMENTS
	1	03	09	01	
F1>SMDR F2>CIRCULAR F3>INSERT		F4>TK GRP NAME		F5>TRUNK GROUP
F6>QUIT F7> F8>DELETE		F9>		FO>

FORM0022R0

4.65 Commands

1-SMDR/NO SMDR This softkey has two functions. It enables and disables the Station Message Detail Recording (SMDR) feature for each Trunk Group. When the SMDR feature is enabled, the header line displays **[SMDR   ]** and the softkey displays **NO SMDR**. Pressing the NO SMDR softkey disables the SMDR feature for that Trunk Group. The softkey now displays **SMDR** and the header line displays **[NO SMDR]**.

2-CIRCULAR/TERMINAL This softkey has two functions. It specifies the selected Trunk Group as a Circular or Terminal type. Refer to Section MITL9108-093-105-NA, Features Description for details on Circular and Terminal Trunk Groups. When the Trunk Group is defined as a Terminal type, the header line displays **[TERM]** and the softkey displays **CIRCULAR**. Pressing the CIRCULAR softkey sets the selected Trunk Group as a Circular type. The header line now displays **[CIRC]** and the softkey displays **TERMINAL**.

3-INSERT This softkey adds new members to the Trunk Group. Pressing the INSERT softkey clears the command line and moves the cursor to the TK NUM field. The addition is completed by entering a valid trunk number. The system inserts the addition the line after that line that was displayed on the command line. Note that this softkey only appears if there is data present in this form.

4-TK GRP NAME This softkey specifies a character name for the selected Trunk Group. Pressing the TK GRP NAME softkey displays the following prompt on the command line: **ENTER TRUNK GROUP NAME:**. The name specification is completed by entering a character name (a maximum of eight characters). The Trunk Group name is displayed on the header line beside the Trunk Group number.

5-TRUNK GROUP This softkey selects a Trunk Group. Pressing the TRUNK GROUP softkey displays the **ENTER TRUNK GROUP NUM:** prompt on the command line. The selection is completed by entering a valid Trunk Group number (1 to 50).

6-QUIT Pressing the QUIT softkey directly after a field has been edited restores the form to the level before the field was modified. The change is not saved. At all other times, pressing the QUIT softkey returns the display to the level where the forms are selected (refer to Table 4-2, Available Forms).

6-CANCEL This softkey appears after a programming error has occurred. Pressing the CANCEL softkey returns the display to the level where the programming error was made. The CANCEL softkey appears with an error message. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

8-DELETE Pressing the DELETE softkey removes the selected trunk from the Trunk Group. The deletion is completed by pressing the ENTER softkey.

0-ENTER This softkey appears only after data for an entry has been modified. Pressing the ENTER softkey commits each modification one at a time to the database.

Form 17 – Hunt Groups

4.66 This form specifies the members of each Hunt Group by extension numbers. Refer to Table 4-25, Hunt Groups. The system supports a maximum of 50 Hunt Groups; each group supports a maximum of 50 members.

4.67 **Field Description.** The header line indicates which Hunt Group is being programmed and whether it is a Terminal or Circular Hunt Group.

EXT NUM Field This field lists the members of each Hunt Group according to their extension numbers. Valid numbers include extension numbers of Rotary Dial or DTMF sets and SUPERSET® Prime Line numbers.

BAY, SLT, CCT and COMMENTS Fields These fields are informational fields only. They cannot be modified in this form. When an extension number is added to the Hunt Group, the corresponding physical location number (BAY, SLT and CCT) and the COMMENTS fields from Form 09 (Station/SUPERSET® Sets) are automatically displayed.

TABLE 4-25
FORM 17 - HUNT GROUPS

CDE TERMINAL DISPLAY

4:26   1-JUN-86   alarm status = NO ALARM

[GRP 1:7798] [CIRC][STN/SET]	EXT NUM	BAY	SLT	CCT	COMMENTS
	111	01	03	01	M. SMITH
	112	01	03	02	G. BROWN
	113	01	03	03	L. GREENE
	114	01	03	04	J. HENRY
	111	01	03	01	M. SMITH

1-GROUP TYPE	2-TERMINAL	3-INSERT	4-	5-HUNT GROUP
6-QUIT	7-ACCESS CODE	8-DELETE	9-	0-

ATTENDANT CONSOLE DISPLAY

```
 [GRP   1:7798   ] [CIRC][STN/SET]    EXT NUM    BAY   SLT   CCT      COMMENTS
                                        111      01    03    01      M. SMITH
F1>GROUP TYPE      F2>TERMINAL     F3>INSERT      F4>                F5>HUNT GROUP
F6>QUIT            F7>ACCESS CODE  F8>DELETE      F9>                FO>
```

FORM0021R0

4.68 Commands

1-GROUP TYPE Pressing this softkey displays three new softkeys which represent three Hunt Group types. Softkeys GROUP TYPE and CIRCULAR/TERMINAL do not appear until the hunt group exists. A hunt group is not created until the first member is defined. Refer to Figure 4-12, Hunt Group Types. Note that the selected group type does not appear on the softkey display.

1-STN/SET	2-RECORDING	3-AGENT	4-	5-
6-QUIT	7-	8-	9-	O-

FIGURE 4-12 HUNT GROUP TYPES   FORM0131R0

1-STN/SET Pressing this softkey sets the selected Hunt Group as a Station/SUPERSET® Set type. A bay/slot/circuit number of any type of line card can be used with this type of Hunt Group. The header line displays the [STN/SET] prompt to indicate this type of Hunt Group.

2-RECORDING Pressing this softkey sets the selected Hunt Group as a Recording type. Only those bay/slot/circuit numbers referring to the ONS Line Card can be used with this type of Hunt Group. The header line displays the [RECORD.] prompt.

3-AGENT Pressing this softkey sets the selected Hunt Group as an Agent type. The header line displays the [AGENT] prompt.

2-CIRCULAR/TERMINAL This softkey has two functions. It specifies the selected Hunt Group as a Circular or Terminal type. Refer to Section MITL9108-093-105-NA, Features Description for details on Circular and Terminal Hunt Groups. When the Hunt Group is defined as a Terminal type, the header line displays [TERM] and the softkey displays **CIRCULAR**. Pressing the CIRCULAR softkey sets the Hunt Group as a Circular type. The header line now displays [CIRC] and the softkey displays **TERMINAL**.

3-INSERT This softkey adds new members to the selected Hunt Group. Pressing the INSERT softkey clears the command line and moves the cursor to the EXT NUM field. The addition is completed by entering a valid extension number. The system inserts the addition the line after that line that was displayed on the command line. Note that this softkey only appears if there is data present in this form.

5-HUNT GROUP This softkey selects a Hunt Group. Pressing the HUNT GROUP softkey displays the **ENTER HUNT GROUP NUM:** prompt on the command line. The selection is completed by entering a valid Hunt Group number (1 to 50).

6-QUIT Pressing the QUIT softkey when editing this form returns the display to the level before the field was modified. The change is not

saved. At all other times, pressing this softkey exits Form 17 and returns the display to the level where the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL This softkey appears after a programming error has occurred. Pressing the CANCEL softkey returns the display to the level where the programming error was made. The CANCEL softkey appears with an error message. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-ACCESS CODE This softkey assigns an access code for each Hunt Group. Pressing the ACCESS CODE softkey displays the **ENTER NEW ACCESS CODE:** prompt on the command line. The access code specification is completed by entering a valid number which must be unique in the database. The access code is displayed on the header line and can be a maximum of five digits.

8-DELETE Pressing the DELETE softkey removes the selected extension number from the Hunt Group. The deletion is completed by pressing the ENTER softkey. After the last member is deleted from the Hunt Group, the system deletes the access code from the database.

0-ENTER This softkey appears only after data for an entry has been modified. Pressing the ENTER softkey commits each modification one at a time to the database.

Form 18 – Miscellaneous System Ports

4.69   This form assigns a physical identification location to three types of devices and three alarms. The devices are a Music on Hold source, Paging equipment and Night Bells equipment. The alarms are Minor, Major and Critical. The system supports 25 night bells, nine paging zones and one Music on Hold source. Refer to Table 4-26, Entry Number Designations and Table 4-27, Miscellaneous System Ports for the form layout.

4.70 Field Description

ENTRY NUMBER Field   This field lists the entry numbers for the miscellaneous ports. There is a total of 38 entry numbers. The ENTRY NUMBER field cannot be modified.

DESCRIPTION Field   This field lists the titles assigned to the entry numbers. The DESCRIPTION field cannot be modified.

BAY, SLT and CCT Fields   These fields list the bay, slot and circuit numbers of the device being programmed.

SCT Field   The SCT (subcircuit) field specifies the relay location on each module for each night bell and each alarm circuit. Refer to Figure 4-13, Universal Card Circuits and Subcircuits.

EXTENSION NUMBER Field   This field applies only to the night bell entries. The EXTENSION NUMBER field lists the extension numbers (a maximum of five digits) assigned to the night bells. This field links the night bell designations to Form 19 (refer to Table 4-29, Call Rerouting Table). This field also links the incoming trunks of Form 14 (refer to Table 4-22, Non-Dial-In Trunks) the night bell designations.

TABLE 4-26
ENTRY NUMBER DESIGNATIONS

Entry Number	Title
01	Music on Hold
02	Pager 1
03	Pager 2
04	Pager 3
05	Pager 4
06	Pager 5
07	Pager 6
08	Pager 7
09	Pager 8
10	Pager 9
11	Minor Alarm
12	Major Alarm
13	Critical Alarm
14	Night Bell 1
15	Night Bell 2
16	Night Bell 3
17	Night Bell 4
18	Night Bell 5
19	Night Bell 6
20	Night Bell 7
21	Night Bell 8
22	Night Bell 9
23	Night Bell 10
24	Night Bell 11
25	Night Bell 12
26	Night Bell 13
27	Night Bell 14
28	Night Bell 15
29	Night Bell 16
30	Night Bell 17
31	Night Bell 18
32	Night Bell 19
33	Night Bell 20
34	Night Bell 21
35	Night Bell 22
36	Night Bell 23
37	Night Bell 24
38	Night Bell 25
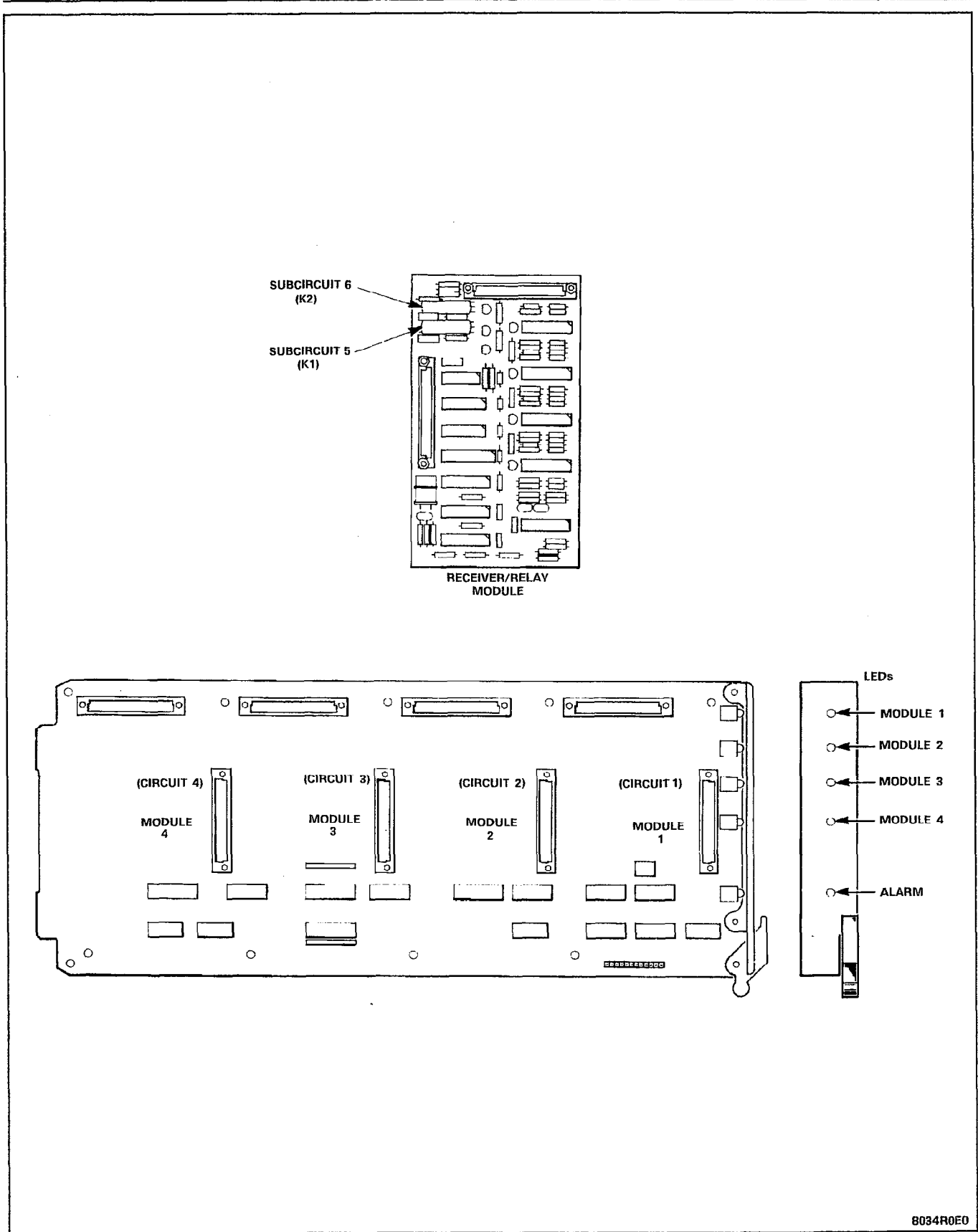
Figure 4-13 Universal Card Circuits and Subcircuits

TABLE 4-27
FORM 18 – MISCELLANEOUS SYSTEM PORTS

CDE TERMINAL DISPLAY

4:26   1-JUN-86   alarm status = NO ALARM

ENTRY NUMBER	DESCRIPTION	BAY	SLT	CCT	SCT	EXTENSION NUMBER
01	Music on Hold	02	03	01	01	
02	Pager 1	02	03	01	02	
03	Pager 2					
04	Pager 3					
05	Pager 4					
06	Pager 5					
07	Pager 6					
08	Pager 7					
09	Pager 8					
10	Pager 9					
11	Minor Alarm					
12	Major Alarm					
01	Music on Hold	02	04	03	02	

1-	2-	3-	4-TOP	5-BOTTOM
6-QUIT	7-ENTRY NUM	8-DELETE	9-	O-

ATTENDANT CONSOLE DISPLAY

ENTRY NUMBER	DESCRIPTION	BAY	SLT	CCT	SCT	EXTENSION NUMBER
01	Music on Hold	02	03	01	01	
F1>	F2>	F3>		F4>TOP		F5>BOTTOM
F6>QUIT	F7>ENTRY NUM	F8>DELETE		F9>		FO>

FRM0020R2

4.71 Commands

4-TOP Pressing the TOP softkey moves the line pointer to the first line of the form. The command line displays the first line.

5-BOTTOM Pressing the BOTTOM softkey moves the line pointer to the last line of the form. The command line displays this line.

6-QUIT Pressing the QUIT softkey when editing this form returns the display to the level before the field was modified. The change is not saved. At all other times, pressing this softkey exits Form 18 and returns the display to the level where the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL This softkey appears when a programming error occurs. Pressing the CANCEL softkey returns the display to the level where the programming error occurred. This softkey appears with an error message. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-ENTRY NUM This softkey selects an entry number. Pressing the ENTRY NUM softkey displays the **ENTER ENTRY NUM:** prompt on the command line. The selection is completed by entering a valid entry number (1 to 38). This entry number can now be specified by its bay, slot, circuit and (if applicable) subcircuit numbers.

8-DELETE This softkey appears when the pointer is pointing to data (i.e., data on the command line). Pressing the DELETE softkey deletes the selected entry number. The deletion is completed by pressing the ENTER softkey. This entry number can now be assigned to a new physical location.

0-ENTER This softkey appears only after data for an entry number has been modified. Pressing the ENTER softkey stores the modifications in the database.

Form 19 – Call Rerouting Table

4.72   This form designates where intercepted and attendant-directed calls will route based on Day Service, Night1 Service and Night2 Service. Refer to Table 4-28, Call Rerouting Options. Refer also to Table 4-29, Call Rerouting Table for the form layout. Each Tenant Group requires a Call Rerouting Table. "DIAL 0" calls can be directed to an LDN, Rotary Dial or DTMF set, SUPERSET® set or Night Bell extension number, or to an individual console.

4.73   **Field Description.**   The header line displays the Tenant Group number being programmed.

DAY Field   This field designates a directory number for each type of call in Day Service Mode. The directory number is defined in one of the following forms:

- Form 07, Console Assignments,
- Form 08, Attendant LDN Assignments,
- Form 09, Station/SUPERSET® Sets,
- Form 17, Hunt Groups or
- Form 18, Miscellaneous System Ports.

If this field is blank, then the call does not reroute (such as no answer or busy forwarding) or reorder tone is heard (such as vacant number intercept or Do Not Disturb intercept).

N1 Field   This field specifies where calls route during Night1 Service Mode by the extension number. If this field is blank, then the call reroutes to the number specified in the DAY field.

N2 Field   This field specifies where calls route during Night2 Service Mode by the extension number. If this field is blank, then the call does not reroute.

TABLE 4-28
CALL REROUTING OPTIONS

Call Type
Station Dial 0 Routing
Priority Dial 0 Routing
DID Recall Points on Busy
DID Recall Points on No Answer
DID Routing for Calls into this Tenant
DID Intercept Routing for Calls into this Tenant
DID Vacant Number Routing for this Tenant
DID Attendant Night Access Points
Non-Dial-In Trunks Alternate Recall Points
Dial-In Tie Recall Points on Busy
Dial-In Tie Recall Points on No Answer
Dial-In Tie Routing for Calls into this Tenant
Dial-In Tie Intercept for Calls into this Tenant
Dial-In Tie Vacant Number Routing for this Tenant
Dial-In Tie Attendant Access Night Points
Do Not Disturb Intercept Routing for this Tenant
Automatic Wake-up Routing for this Tenant
UCD Recording Routing for this Tenant
UCD on Hold Time-out Routing for this Tenant
DISA Day Service Routing for this Tenant
Station Vacant Number Routing for this Tenant
Station Illegal Number Routing for this Tenant

TABLE 4-29
FORM 19 - CALL REROUTING TABLE

CDE TERMINAL DISPLAY

4:26   1-JUN-86   alarm status = NO ALARM

[TENANT : 1] TYPE OF CALL				DAY	N1	N2
Station Dial O Routing Priority Dial O Routing DID Recall Points On Busy DID Recall Points On No Answer DID Routing For Calls Into This Tenant DID Intercept Routing For Calls Into This Tenant DID Vacant Number Routing For This Tenant DID Attendant Night Access Points Non-Dial-In Trunks Alternate Recall Points Dial-In Tie Recall Points On Busy Dial-In Tie Recall Points On No Answer Dial-In Tie Routing For Calls Into This Tenant				1821 -----	1821	
Station Dial O Routing				1821	1821	
1-	2-	3-	4-TOP	5-BOTTOM		
6-QUIT	7-TENANT	8-	9-	O-		

ATTENDANT CONSOLE DISPLAY

```
[TENANT :   1]      TYPE OF CALL                 DAY      N1       N2
Station  Dial O  Routing                         1821     1821
F1>           F2>           F3>        F4>TOP          F5>BOTTOM
F6>QUIT       F7>TENANT     F8>        F9>             FO>
```

FRM0019R2

4.74 Commands

4-TOP Pressing the TOP softkey moves the line pointer to the first line of the form. The command line displays the first line.

5-BOTTOM Pressing the BOTTOM softkey moves the line pointer to the last line of the form. The command line displays this line.

6-QUIT Pressing the QUIT softkey when editing this form returns the display to the level before the field was modified. The change is not saved. At all other times, pressing this softkey exits Form 19 and returns the display to the level where the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL This softkey appears after a programming error has occurred. Pressing the CANCEL softkey returns the display to the level where the programming error was made. The CANCEL softkey appears with an error message. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-TENANT This softkey selects a Tenant Group. Pressing the TENANT softkey displays the **ENTER TENANT GROUP NUM:** prompt on the command line. The selection is completed by entering a valid number (1 to 25). The system displays the selected Tenant Group number on the header line.

8-DELETE This softkey appears when the pointer is pointing to data (i.e., data on the command line). Pressing the DELETE softkey removes the selected rerouting designation from the form. The deletion is completed by pressing the ENTER softkey.

0-ENTER This softkey appears only after data for an entry number has been modified. Pressing the ENTER softkey commits each modification one at a time to the database.

Form 20 - ARS: COR Group Definition

4.75   Class of Restriction groups together users with the same out-
side call capabilities. A COR is assigned to each Attendant
Console, station, SUPERSET® set and Dial-In Trunk. This form specifies
the Class-of-Restriction (COR) Group members. Refer to Table 4-30,
ARS: COR Group Definition for the form layout. The system supports a
maximum of 50 COR Groups with up to 25 CORs per group. Each COR
Group specifies by COR number those extensions which are restricted
from accessing the route.

4.76 Field Description

COR GROUP Field   This field lists the COR Group numbers from 1 to
50. Note that the COR GROUP field cannot be modified.

COR GROUP MEMBERS Field   This field lists the separate members of
each COR Group. Note that the COR Group members must be sepa-
rated by a space (the → key, TAB key or space bar on the terminal or
the → key on the console). Consecutive numbered CORs can be sepa-
rated by a dash (by pressing the "-" key on the terminal or the ninth
softkey on the console).

COMMENTS Field   This field is reserved for additional data (a maxi-
mum of 20 characters). It is stored by the system but not used.

TABLE 4-30
FORM 20 - ARS: COR GROUP DEFINITION

CDE TERMINAL DISPLAY

4:26 1-JUN-86   alarm status = NO ALARM

COR GROUP	COR GROUP MEMBERS (SEPARATE WITH SPACES)			COMMENTS
01 02 03 04 05 06 07 08 09 10 11 12	15 18 20-22 1-12 5 7 13			LONG DISTANCE - DDD WATS BAND 2 ACCESS
01	15 18 20-22			LONG DISTANCE - DDD
1-	2-	3-	4-TOP	5-BOTTOM
6-QUIT	7-COR GROUP	8-DELETE	9-	0-

ATTENDANT CONSOLE DISPLAY

```
COR GROUP     COR GROUP MEMBERS (SEPARATE WITH SPACES)        COMMENTS
    01        15 18 20-22                                LONG DISTANCE - DDD
F1>              F2>              F3>              F4>TOP          F5>BOTTOM
F6>QUIT          F7>COR GROUP     F8>DELETE        F9>             FO>
```

FORM0018R0

4.77 Commands

4-TOP Pressing the TOP softkey moves the line pointer to the first line of the form. The command line displays the first line.

5-BOTTOM Pressing the BOTTOM softkey moves the line pointer to the last line of the form. The command line displays this line.

6-QUIT Pressing the QUIT softkey when editing this form returns the display to the level before the field was modified. The change is not saved. At all other times, pressing this softkey exits Form 20 and returns the display to the level where the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL This softkey appears after a programming error has occurred. Pressing the CANCEL softkey returns the display to the level where the programming error occurred. The CANCEL softkey appears with an error message. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-COR GROUP This softkey selects a Class-of-Restriction (COR) Group. Pressing the COR GROUP softkey displays the **ENTER COR GROUP NUM:** prompt on the command line. The selection is completed by entering a valid number (1 to 50). The selected COR Group number is displayed on the command line.

8-DELETE This softkey appears when the pointer is pointing to data (i.e., data on the command line). Pressing the DELETE softkey removes the members from the selected COR Group. The deletion is completed by pressing the ENTER softkey.

9- '-' Pressing this softkey inserts a dash between a set of consecutive COR Group members. It is valid only when it is inserted between consecutive COR Group members. For example, 1 2 3 4 5 is equivalent to 1-5.

0-ENTER Pressing the ENTER softkey commits the edited COR Group to the database.

Form 21 – ARS: Day Zone Definition

4.78 This form defines the day zones for each day of the week. There are a maximum of three day zones. Note that all days of the week must have a zone specification before this form can be saved. Refer to Table 4-31, ARS: Day Zone Definition for the form layout.

4.79 Field Description

DAY ZONE Field This field lists the day zones for the system. Pressing the up and down arrow keys select different day zones. Note that this field cannot be modified.

MON., TUE., WED., THU., FRI., SAT. and SUN. Fields These fields list the zone specification. Pressing the right and left arrow keys (or the TAB key on the CRT terminal) select separate days. Note that only one Day Zone number can be assigned to each day of the week. When a day is assigned to a day zone, the form displays an asterisk (*) in that day field.

TABLE 4-31
FORM 21 — ARS: DAY ZONE DEFINITION

CDE TERMINAL DISPLAY

4:26   1-JUN-86   alarm status = NO ALARM

DAY ZONE	MON.	TUE.	WED.	THU.	FRI.	SAT.	SUN.
01 02 03	*	*	*	*	*	* 	*
01	*	*	*	*	*		

1-ENABLE	2-	3-	4-	5-
6-QUIT	7-	8-DELETE	9-	O-

ATTENDANT CONSOLE DISPLAY

DAY ZONE	MON.	TUE.	WED.	THU.	FRI.	SAT.	SUN.
01	*	*	*	*	*		
F1>ENABLE	F2>		F3>		F4>		F5>
F6>QUIT	F7>		F8>DELETE		F9>		FO>

FORM0017R0

4.80 Commands

1-ENABLE/DISABLE This softkey has two functions; it enables and disables the day zone specification for each day. Pressing the ENABLE softkey sets the selected day to the day zone that is displayed on the command line. The form displays an asterisk (*) in the selected day field opposite the chosen day zone. When the cursor is at an asterisk, this softkey displays **DISABLE**. Pressing the DISABLE softkey removes that day specification from the selected day zone. The asterisk disappears and the softkey displays 'ENABLE again.

6-QUIT Pressing the QUIT softkey when editing this form returns the display to the level before the field was modified. The change is not saved. At all other times, pressing this softkey exits Form 21 and returns the display to the level where the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL This softkey appears when a programming error occurs. Pressing the CANCEL softkey returns the display to the level where the programming error occurred. This softkey appears with an error message. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

8-DELETE This softkey appears when the pointer is pointing to data (i.e., data on the command line). Pressing the DELETE softkey removes all day zone specifications for the selected day zone. The deletion is completed by pressing the ENTER softkey. All asterisks for the selected day zone disappear.

0-ENTER This softkey appears only after data for a day of the week has been modified. Pressing the ENTER softkey stores each modification one at a time in the database. Note that there must be a Day Zone specification (asterisk) in each day of the week before the database can be updated.

Form 22 – ARS: Modified Digit Table

4.81 This form specifies those digits that modify the user-dialed digits. The digit modification prepares the dialed digits for dialing out on certain trunks such as FX, TIE and WATS. Refer to Section MITL9108-093-220-NA, Automatic Route Selection and Toll Control for details. Refer to Table 4-32, ARS: Modified Digit Table for the form layout.

4.82 Field Description

ENTRY NUM Field This field lists the entry numbers. There are a maximum of 50 entry numbers. The ENTRY NUM field links this form to Form 23 (refer to Table 4-33, ARS: Route Definition).

QTY TO DELETE Field This field lists the quantity of digits that the system removes from the user-dialed digits before outpulsing on a trunk. A maximum of 25 digits can be deleted from each entry number. The digit "1" instructs the system to delete the first dialed digit.

DIGITS TO BE INSERTED Field This field lists those digits that the system adds to the user-dialed digits for each entry number. A maximum of 27 digits can be inserted; including any pauses and wait for dial tone symbols. Special number sequences are:

> *1 = Pause for 5 Seconds
> *2 = Wait for Dial Tone
> *3 = Switch to DTMF for Subsequent Digits
> *4 = Do not Display Further Modified Digits on Sets or SMDR
> *5 = Pause 10 Seconds.

The asterisk (*) character above is generated on the Attendant Console and the terminal by pressing the * key. If however, the asterisk character is required in a string of characters, the * key must be pressed twice.

COMMENTS Field This field is reserved for additional data (a maximum of 20 characters). It is stored by the system but not used.

TABLE 4-32
FORM 22 - ARS: MODIFIED DIGIT TABLE

CDE TERMINAL DISPLAY

4:26   1-JUN-86   alarm status = NO ALARM

ENTRY NUM	QTY TO DELETE	DIGITS TO BE INSERTED	COMMENTS
01 02 03 04 05 06 07 08 09 10 11 12	1	*1416	TIE LINE TO TORONTO
01	1	*1416	TIE LINE TO TORONTO

1-	2-	3-	4-TOP	5-BOTTOM
6-QUIT	7-ENTRY NUM	8-DELETE	9-	O-

ATTENDANT CONSOLE DISPLAY

ENTRY NUM	QTY TO DELETE	DIGITS TO BE INSERTED		COMMENTS
01	1	*1416		TIE LINE TO TORONTO
F1>	F2>	F3>	F4>TOP	F5>BOTTOM
F6>QUIT	F7>ENTRY NUM	F8>DELETE	F9>	FO>

FORM0016R0

4.83 Commands

4-TOP Pressing the TOP softkey moves the line pointer to the first line of the form. The command line displays the first line.

5-BOTTOM Pressing the BOTTOM softkey moves the line pointer to the last line of the form. The command line displays this line.

6-QUIT Pressing the QUIT softkey when editing this form returns the display to the level before the field was modified. The change is not saved. At all other times, pressing this softkey exits Form 22 and returns the display to the level where the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL This softkey appears after a programming error has oc-curred. Pressing the CANCEL softkey returns the display to the level where the programming error occurred. This softkey appears with an error message. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-ENTRY NUM This softkey selects an entry number and displays it on the command line. Pressing the ENTRY NUM softkey displays the **ENTER ENTRY NUM:** prompt on the command line. The selection is completed by entering a valid number (1 to 50).

8-DELETE This softkey appears when the pointer is pointing to data (i.e., data on the command line). Pressing the DELETE softkey removes the data from the selected field. The deletion is completed by pressing the ENTER softkey. The field is ready for new data.

0-ENTER This softkey appears only after data for an entry number has been modified. Pressing the ENTER softkey commits the entry to the database.

Form 23 – ARS: Route Definition

4.84 This form defines each ARS Route by specifying the Trunk Group number, COR Group number and the Modified Digit Entry. Refer to Table 4-33, ARS: Route Definition for the form layout.

4.85 Field Description

ROUTE NUM Field This field lists the Route numbers. Note that the ROUTE NUM field cannot be modified. There is a maximum of 200 Route numbers.

TRUNK GROUP Field This field displays the Trunk Group number specification (1 to 50) for each Route number.

COR GROUP Field This field lists the COR Group number specification (1 to 50) for each Route number. This field links this form to Form 20 (refer to Table 4-30, ARS: COR Group Definition). Those users with CORs in the listed COR Group number are restricted from using this route. If no COR Group number is specified, then all users can use this route.

MOD DIGIT ENTRY Field This field lists the entry number specification (1 to 50) for each Route number. This field links this form to Form 22 (refer to Table 4-32, ARS: Modified Digit Table).

COMMENTS Field This field is reserved for additional data (a maximum of 20 characters). It is stored by the system but not used.

TABLE 4-33
FORM 23 - ARS: ROUTE DEFINITION

CDE TERMINAL DISPLAY

4:26   1-JUN-86   alarm status = NO ALARM

ROUTE NUM	TRUNK GROUP	COR GROUP	MOD DIGIT ENTRY	COMMENTS
01	1	1	1	LOCAL DDD
02	1	2	2	LONG DISTANCE DDD
03	2	1	3	BAND II WATS
04				
05				
06				
07				
08				
09				
10				
11				
12				
01	1	1	1	LOCAL DDD

1-	2-	3-	4-TOP	5-BOTTOM
6-QUIT	7-ROUTE NUM	8-DELETE	9-	0-

ATTENDANT CONSOLE DISPLAY

```
ROUTE NUM     TRUNK GROUP     COR GROUP     MOD DIGIT ENTRY          COMMENTS
    01             1              1                 1            LOCAL DDD
F1>            F2>            F3>              F4>TOP            F5>BOTTOM
F6>QUIT        F7>ROUTE NUM   F8>DELETE        F9>               FO>
```

FORM0015R0

4.86 Commands

4-TOP Pressing the TOP softkey moves the line pointer to the first line of the form. The command line displays the first line.

5-BOTTOM Pressing the BOTTOM softkey moves the line pointer to the last line of the form. The command line displays this line.

6-QUIT Pressing the QUIT softkey when editing this form returns the display to the level before the field was modified. The change is not saved. At all other times, pressing this softkey exits Form 23 and returns the display to the level where the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL This softkey appears after a programming error has occurred. Pressing the CANCEL softkey returns the display to the level where the programming error occurred. This softkey appears with an error message. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-ROUTE NUM This softkey selects a Route number and displays it on the command line. Pressing the ROUTE NUM softkey displays the **ENTER ROUTE NUM:** prompt on the command line. The selection is completed by entering a valid number (1 to 200).

8-DELETE This softkey appears when the pointer is pointing to data (i.e., data on the command line). Pressing the DELETE softkey removes the data from the selected field. The line is deleted if the cursor is positioned in the first $\times$ field; otherwise only the field position is deleted. The deletion is completed by pressing the ENTER softkey. The field is ready for new data.

0-ENTER This softkey appears only after data for a Route number has been modified. Pressing the ENTER softkey stores any changes in the database.

Form 24 – ARS: Route Lists

4.87 This form specifies the order that the Route numbers are selected. There are 100 Route List numbers; each Route List number accommodates a maximum of six Route numbers. Refer to Table 4-34, ARS: Route Lists for the form layout.

4.88 Field Description

LIST NUM Field This field displays the Route List numbers. Note that the LIST NUM field cannot be modified.

FIRST, SECOND, THIRD, FOURTH, FIFTH and SIXTH Fields These fields specify the Route numbers for each Route List number. Valid entries are 01 to 200. These fields link this form to Form 23 (refer to Table 4-33, ARS: Route Definition).

WT Field There are five of these; one for each of the SECOND, THIRD, FOURTH, FIFTH and SIXTH fields. **ON** in this field indicates that the chosen Route number is an expensive route. The system indicates this by providing an audible warning tone when that route is selected.

TABLE 4-34
FORM 24 - ARS: ROUTE LISTS

CDE TERMINAL DISPLAY

4:26 1-JUN-86   alarm status = NO ALARM

LIST NUM	FIRST	SECOND	WT	THIRD	WT	FOURTH	WT	FIFTH	WT	SIXTH	WT
O1	3	2	ON								
O2	2	3									
O3											
O4											
O5											
O6											
O7											
O8											
O9											
10											
11											
12											
O1	3	2	ON								

1-	2-	3-	4-TOP	5-BOTTOM
6-QUIT	7-LIST NUM	8-DELETE	9-	O-

ATTENDANT CONSOLE DISPLAY

```
LIST NUM    FIRST    SECOND   WT   THIRD   WT   FOURTH   WT   FIFTH   WT   SIXTH   WT
   O1         3         2     ON
F1>          F2>             F3>             F4>TOP            F5>BOTTOM
F6>QUIT      F7>LIST NUM     F8>DELETE       F9>               FO>
```

FORM0014R0

4.89 Commands

4–TOP Pressing the TOP softkey moves the line pointer to the first line of the form. The command line displays the first line.

5–BOTTOM Pressing the BOTTOM softkey moves the line pointer to the last line of the form. The command line displays this line.

6–QUIT Pressing the QUIT softkey when editing this form returns the display to the level before the field was modified. The change is not saved. At all other times, pressing this softkey exits Form 24 and returns the display to the level where the forms are selected. Refer to Table 4–2, Available Forms.

6–CANCEL This softkey appears after a programming error has occurred. Pressing the CANCEL softkey returns the display to the level where the programming error occurred. This softkey appears with an error message. Refer to Table 4–45, Programming Error Messages for a list of these error messages.

7–LIST NUM This softkey selects a Route List number and displays it on the command line. Pressing the LIST NUM softkey displays the **ENTER ROUTE LIST NUM:** prompt on the command line. The selection is completed by entering a valid Route List number (01 to 100).

8–DELETE/ADD This softkey appears when the pointer is pointing to data (i.e., data on the command line). This softkey has two functions; it deletes and adds data to the form. Pressing the DELETE softkey removes the data from the selected field. The deletion is completed by pressing the ENTER softkey. If the delete key is pressed while the cursor is in the [FIRST] field, data on that line is deleted. The field is ready for new data and the softkey blanks. When the cursor is at a blank WT field on the command line, this softkey displays **ADD**. Pressing the ADD softkey enables the warning tone. The WT field displays **ON** and the softkey now displays **DELETE**.

0–ENTER This softkey appears only after data for a List number has been modified. Pressing the ENTER softkey stores any modifications in the database.

Form 25 – ARS: Route Plans

4.90   This form assigns the Route Lists to the time and day zones.
There are 18 time zones (six for each day zone). Each time zone
has a start time that can be set by the installer. The last specified start
time creates a time period from its start time to the first specified start
time of that day zone. If a time zone has no assigned Route List
number, then all calls during that time period are restricted from this
Route Plan. There are a maximum of 50 Route Plans. Refer to Table
4-35, ARS: Route Plans for the form layout.

4.91 Field Description

TIME ZONE Field   This field lists the six time zones for each day zone.
The TIME ZONE field cannot be modified.

START HOUR Field   There are three of these fields (one for each day
zone). The START HOUR field specifies the starting time of each time
zone. The time is represented by two digits in 24 hour format. For
example, 18 represents 18:00.

ROUTE LIST Field   There are three of these fields (one for each day
zone). The ROUTE LIST field displays the Route List numbers and links
this form to Form 24 (refer to Table 4-34, ARS: Route Lists). Valid
entries are 01 to 100.

TABLE 4-35
FORM 25 - ARS: ROUTE PLANS

CDE TERMINAL DISPLAY

4:26   1-JUN-86   alarm status = NO ALARM

TIME ZONE	DAY ZONE 1		DAY ZONE 2		DAY ZONE 3	
	START HOUR	ROUTE LIST	START HOUR	ROUTE LIST	START HOUR	ROUTE LIST
01 02 03 04 05 06	12	003	14	005	18	010
01	12	003	14	005	18	010
6-QUIT	7-ROUTE PLAN		8-DELETE	9-		O-

ATTENDANT CONSOLE DISPLAY

TIME ZONE	DAY ZONE 1		DAY ZONE 2		DAY ZONE 3	
	START HOUR	ROUTE LIST	START HOUR	ROUTE LIST	START HOUR	ROUTE LIST
01	12	003	14	005	18	010
F6>QUIT		F7>ROUTE PLAN	F8>DELETE	F9>	FO>	

FORM0013R0

4.92 Commands

6–QUIT Pressing the QUIT softkey when editing this form returns the display to the level before the field was modified. The change is not saved. At all other times, pressing this softkey exits Form 25 and returns the display to the level where the forms are selected. Refer to Table 4–2, Available Forms.

6–CANCEL This softkey appears after a programming error has occurred. Pressing the CANCEL softkey returns the display to the level where the programming error occurred. This softkey appears with an error message. Refer to Table 4–45, Programming Error Messages for a list of these error messages.

7–ROUTE PLAN This softkey has two functions. It displays the selected Route Plan number and enables the user to select an alternate Route Plan. Pressing the ROUTE PLAN softkey displays the following on the command line: **CURRENT ROUTE PLAN: XX ENTER ROUTE PLAN NUM: ROUTE PLAN:** where **XX** is Route Plan number 01 to 50. The Route Plan selection is completed by entering a new Route Plan number.

8–DELETE This softkey appears when the pointer is pointing to data (i.e., data on the command line). Pressing the DELETE softkey removes the data from the selected field. The deletion is completed by pressing the ENTER softkey. The field is ready for new data.

0–ENTER This softkey appears only after data for a Route Plan number has been modified. Pressing the ENTER softkey stores any changes in the database.

Form 26 – ARS: Digit Strings

4.93   This form (and its nested form) link the digits dialed by the user to the appropriate Route, Route List or Route Plan. It selects the relevant Route (if there is only one route), or Route List (if there is more than one route and the time of day is not important), or Route Plan (if the choice of routes vary with the time of day) by the user-dialed digits. Refer to Table 4-36, ARS: Digit Strings for the form layout. Refer to Section MITL9108-093-220-NA, Automatic Route Selection and Toll Control for details.

4.94 Field Description

LEADING DIGITS Field This field displays the first digits of each digit string for digit analysis. The maximum number of digits in this field is five.

RETURN DIAL TONE Field If this field displays **YES**, then the system provides a dial tone after the leading digits have been dialed. Alternately, the system does not provide a temporary dial tone when **NO** is displayed in this field. Refer to Section MITL9108-093-220-NA, Automatic Route Selection and Toll Control for details.

RESTRICTED COR GROUP Field This field lists the COR Group which cannot dial the specified leading digit(s). If this field is left blank, then every COR Group can access the specified leading digit(s).

TABLE 4-36
FORM 26 - ARS: DIGIT STRINGS

CDE TERMINAL DISPLAY

4:26   1-JUN-86   alarm status = NO ALARM

LEADING DIGITS	RETURN DIAL TONE	RESTRICTED COR GROUP
9	NO	2
8	YES	1
7	YES	UNRESTRICTED
9	NO	2

1-	2-	3-	4-	5-
6-QUIT	7-LEADING DIG	8-DELETE	9-SHOW STRINGS	O-

ATTENDANT CONSOLE DISPLAY

LEADING DIGITS		RETURN DIAL TONE		RESTRICTED COR GROUP
9		NO		2
F1>	F2>	F3>	F4>	F5>
F6>QUIT	F7>LEADING DIG	F8>DELETE	F9>SHOW STRINGS	FO>

FRM0012R1

4.95 Commands

1-YES/NO This softkey has two functions; it enables or disables system dial tone for each entry. Pressing the YES softkey enables the system dial tone when that leading digit is accessed. The RETURN DIAL TONE field displays **YES** and the softkey now displays **NO**. Pressing the NO softkey disables the system dial tone when that leading digit is accessed. The RETURN DIAL TONE field displays **NO** and the softkey displays **YES** again.

3-INSERT This softkey adds new entries to the form. Pressing the INSERT softkey clears the command line and moves the cursor to the LEADING DIGITS field. The addition is completed by entering the new data for each field and pressing the ENTER softkey. Note that the system inserts the addition the line after the line that was displayed on the command line.

6-QUIT Pressing the QUIT softkey when editing this form returns the display to the level before the field was modified. The change is not saved. At all other times, pressing this softkey exits Form 26 and returns the display to the level where the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL This softkey appears after a programming error has occurred. Pressing the CANCEL softkey returns the display to the level where the programming error occurred. This softkey appears with an error message. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-LEADING DIG This softkey selects an entry in the LEADING DIGITS field. Pressing the LEADING DIG softkey displays the **ENTER LEADING DIGITS:** prompt on the command line. The selection is completed by entering a valid number.

8-DELETE This softkey appears when the pointer is pointing to data (i.e., data on the command line). Pressing the DELETE softkey removes the data from the selected field. The deletion is completed by pressing the ENTER softkey. The field is ready for new data.

9-SHOW STRINGS Pressing this softkey accesses the nested form for any defined Leading Digits entry. Refer to Table 4-37, ARS: Nested Digit Strings.

0-ENTER This softkey appears only after data for an entry number has been modified. Pressing the ENTER softkey commits each modification one at a time to the database.

ARS: Nested Digit Strings

4.96 This form is reserved for specifying subsequent digits for each entry in the LEADING DIGITS field of the previous form. It can only be accessed from the previous form. Refer to Table 4-37, ARS: Nested Digit Strings for the form layout. Refer to Section MITL9108-093-220-NA, Automatic Route Selection and Toll Control for details.

4.97 Field Description

DIGITS TO BE ANALYZED Field This field displays those digits for digit analysis. Digit analysis is required so that the appropriate Route, Route List or Route Plan can be selected. The total number of digits in this field, the number of digits in the QTY TO FOLLOW field plus the digits in the LEADING DIGITS field in the previous form (refer to Table 4-36, ARS: Digit Strings) cannot exceed 26.

QTY TO FOLLOW Field This field lists the number of digits that the user dials AFTER the analyzed digits. The **Unknown** prompt in this field indicates that the number of subsequent digits is unknown to the system.

ACC CODE REQD Field This field specifies which digit string entries require "long distance" management. When this field displays **YES**, the system expects an account code for that digit string entry from users with COS Option 201 (Account Code, Forced Entry – Long Distance Calls) enabled. Default condition is NO.

TERM TYPE AND NUM Field This field specifies where the digit string terminates. If there is only one route, then **ROUTE** is selected. If there is more than one route, but the time of day is not important, then **LIST** is selected. If the choice of routes vary with the time of day, then **PLAN** is selected.

TABLE 4-37
FORM 26 - ARS: NESTED DIGIT STRINGS

CDE TERMINAL DISPLAY

4:26 1-JUN-86   alarm status = NO ALARM

DIGITS TO BE ANALYZED	QTY TO FOLLOW	ACC CODE REQD	TERM TYPE AND NUM	
416	7	NO	ROUTE	1
604	7	NO	LIST	1
NOX	7	YES	PLAN	3
N1X	7	NO	LIST	2
No Digits To Analyze	7	NO	ROUTE	1
416	7	NO	ROUTE	1

1-	2-	3-INSERT	4-NOX	5-	X
6-QUIT	7-FIND STRING	8-DELETE	9-N1X	0-	

ATTENDANT CONSOLE DISPLAY

```
 DIGITS TO BE ANALYZED     QTY TO FOLLOW    ACC CODE REQD    TERM TYPE AND NUM
416                              7               NO           ROUTE        1
F1>           F2>          F3>INSERT        F4>NOX            F5>   X
F6>QUIT       F7>FIND STRING  F8>DELETE     F9>N1X            FO>
```

FORM0103R0

4.98 Commands

1-YES This softkey only appears when the cursor is at the ACC CODE REQD field. Pressing the YES softkey indicates to the system that this entry requires "long distance" management. **YES** appears in the ACC CODE REQD field. The default condition is no "long distance" management required as indicated by the **NO** prompt.

2-UNKNOWN This softkey appears only when the cursor is at the the QTY TO FOLLOW field. Pressing the UNKNOWN softkey indicates to the system that the quantity of dialed digits AFTER the analyzed digits is unknown.

3-INSERT This softkey adds new entries to the form. Pressing the INSERT softkey clears the command line and moves the cursor to the DIGITS TO BE ANALYZED field. The addition is completed by entering the new data for each field and pressing the ENTER softkey. Note that the system inserts the addition one line after the line that was displayed on the command line.

4-N0X This softkey functions as a wild card sequence; it represents half of the area codes in North America. Pressing this softkey displays **N0X** in the DIGITS TO BE ANALYZED field. Note that this softkey can only be pressed at the beginning of a digit string.

4-ROUTE This softkey only appears when the cursor is at the TERM TYPE AND NUM field. Pressing the ROUTE softkey terminates that entry at a Route (the Route number must still be defined). **ROUTE** appears in the TERM TYPE AND NUM field.

5-   X This softkey functions as a wild card digit; it represents any digit from 0 to 9. Pressing this softkey displays **X** in the DIGITS TO BE ANALYZED field. Note that this softkey can only be pressed at the end of a digit string.

5-PLAN This softkey only appears when the cursor is at the TERM TYPE AND NUM field. Pressing the PLAN softkey terminates that entry at a Route Plan (the number must still be defined). **PLAN** appears in the TERM TYPE AND NUM field.

6-QUIT Pressing the QUIT softkey when editing this form returns the display to the level before the field was modified. The change is not saved. At all other times, pressing this softkey returns the display to the previous form at the entry where the SHOW STRINGS softkey was pressed.

6-CANCEL This softkey appears after a programming error has occurred. Pressing the CANCEL softkey returns the display to the level where the programming error occurred. This softkey appears with an error message. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-FIND STRING This softkey selects an entry in the DIGITS TO BE ANALYZED field. Pressing the FIND STRING softkey displays the **ENTER**

DIGIT STRING: prompt on the command line. The selection is completed by entering a valid digit string. Note: The entered digit string does not have to be an exact match; the system accepts subsets of digit strings and moves the cursor to the closest entry.

8-DELETE This softkey appears when the pointer is pointing to data (i.e., data on the command line). Pressing the DELETE softkey removes the data from the selected field. The deletion is completed by pressing the ENTER softkey. The field is ready for new data.

9-N1X This softkey functions as a wild card sequence; it represents half of the area codes in North America. Pressing this softkey displays **N1X** in the DIGITS TO BE ANALYZED field. Note that this softkey can only be pressed at the beginning of a digit string.

9-LIST This softkey appears only when the cursor is at the TERM TYPE AND NUM field. Pressing the LIST softkey terminates that entry at a Route List (the number must still be defined). **LIST** appears in the TERM TYPE AND NUM field.

0-ENTER This softkey appears only after data for an entry number has been modified. Pressing the ENTER softkey commits each modification one at a time to the database.

Form 27 – Form Access Restriction Definition

4.99   This form specifies the level of access for Forms 01 to 32.
    There are five levels of access; the Installer level has the highest degree of access and the Attendant has the lowest degree of access. Each form is defined as Read Only, Read/Write or No Access. When the system is first initialized, the Installer level has a Read/Write access for each form; the rest of the levels default to No Access. Note that at each level of access the user can only modify those forms plus the forms at the lower levels of access. For example, the user at the SUPERVISOR level can only modify those forms at SUPERVISOR and ATTENDANT levels. Refer to Table 4–38, Form Access Restriction Definition for the form layout.

4.100 Field Description

FORM NAME Field   This field lists all the form numbers and names of the CDE package. The FORM NAME field cannot be modified. Note that Forms 11, 12 and 28 are reserved for future use.

INST, MAINT1, MAINT2, SUPER and ATT Fields   These fields represent the five levels of access and list the access type (Read Only, Read/Write or No Access) for each form. Note that the selected level of access is not displayed on the softkeys. The INST field cannot be modified.

TABLE 4-38
FORM 27 - FORM ACCESS RESTRICTION DEFINITION

CDE TERMINAL DISPLAY

4:26   1-JUN-86   alarm status = NO ALARM

FORM NAME	INST	MAINT1	MAINT2	SUPER	ATT
01 = SYSTEM CONFIGURATION	R/W	none	none	none	none
02 = FEATURE ACCESS CODES	R/W	none	none	none	none
03 = COS DEFINE	R/W	none	none	none	none
04 = SYS OPTIONS/SYS TIMERS	R/W	none	none	none	none
05 = TENANT INTERCONNECTION	R/W	none	none	none	none
06 = TENANT NIGHT SWITCHING	R/W	none	none	none	none
07 = CONSOLE ASSIGNMENTS	R/W	none	none	none	none
08 = ATTENDANT LDN ASGN	R/W	none	none	none	none
09 = STATION/SUPERSET SETS	R/W	none	none	none	none
10 = PICKUP GROUPS	R/W	none	none	none	none
11 = RESERVED	R/W	none	none	none	none
12 = RESERVED	R/W	none	none	none	none

01 = SYSTEM CONFIGURATION	R/W	none	none	none	none

1-	2-	3-	4-TOP	5-BOTTOM
6-QUIT	7-SET PASSWORD	8-	9-FORM NUM	O-

ATTENDANT CONSOLE DISPLAY

```
      FORM NAME                   INST    MAINT1   MAINT2    SUPER    ATT
  01 = SYSTEM CONFIGURATION       R/W     none     none      none     none
F1>            F2>         F3>             F4>TOP          F5>BOTTOM
F6>QUIT        F7>SET PASSWORDF8>          F9>FORM NUM     FO>
```

FORM0011R1

4.101 Commands

1-READ ONLY Pressing the READ ONLY softkey restricts the user to viewing the selected form; no modifications can occur. The **R** prompt appears beside the selected form and under the selected access level.

2-READ/WRITE Pressing the READ/WRITE softkey enables the user to view and modify the selected form. The form displays the **R/W** prompt to indicate this state.

3-NO ACCESS Pressing the NO ACCESS softkey restricts form access. The form displays the **none** prompt to indicate this state.

4-TOP Pressing the TOP softkey moves the line pointer to the first line of the form. The command line displays the first line.

5-BOTTOM Pressing the BOTTOM softkey moves the line pointer to the last line of the form. The command line displays the last line.

6-QUIT Pressing the QUIT softkey when editing this form returns the display to the level before the field was modified. The change is not saved. At all other times, pressing this softkey exits Form 27 and returns the display to the level where the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL This softkey appears after a programming error has occurred. Pressing the CANCEL softkey returns the display to the level where the programming error occurred. This softkey appears with an error message. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-SET PASSWORD This softkey changes the password for Customer Data Entry. Pressing the SET PASSWORD softkey shows a new softkey display (refer to Figure 4-14, Levels of Access) and the following prompt: **SELECT LEVEL OF ACCESS:**. After the user selects a level of access, the system prompts the user for that level's old password with the following prompt: **ENTER XXXXXXXX OLD PASSWORD:** where **XXXXXXXX** is the selected level of access. The user is then prompted twice for the new password wth the following prompts: **ENTER XXXXXXXX NEW PASSWORD:** and **ENTER XXXXXXXX NEW PASSWORD TO VERIFY:**.

9-FORM NUM This softkey selects a form by number. Pressing the FORM NUM softkey displays the **ENTER FORM NUMBER:** prompt on the command line. The selection is completed by entering a valid form number (1 to 27).

0-ENTER This softkey appears only after data for an entry number has been modified. Pressing the ENTER softkey commits each modification one at a time to the database.
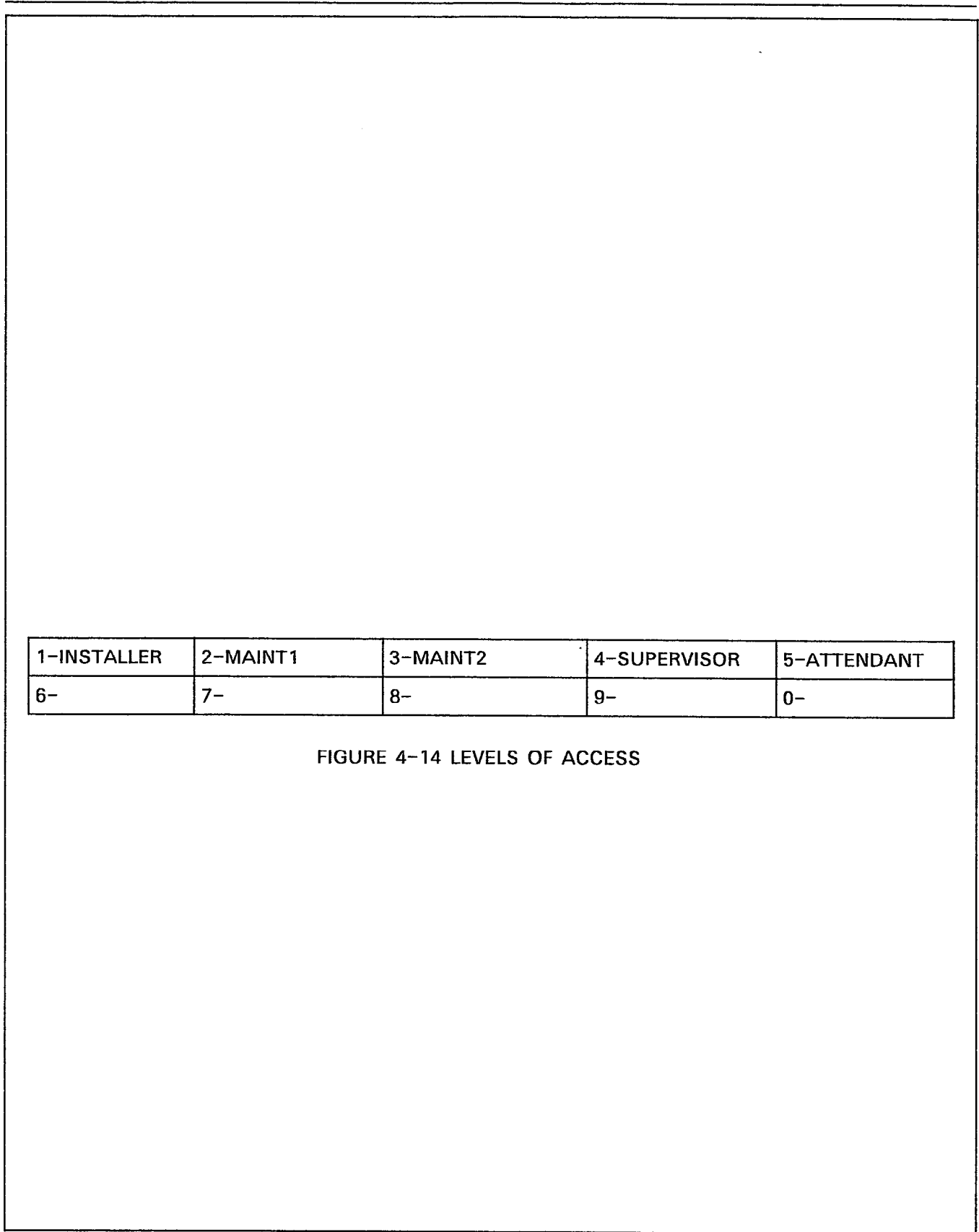
1-INSTALLER	2-MAINT1	3-MAINT2	4-SUPERVISOR	5-ATTENDANT
6-	7-	8-	9-	0-

FIGURE 4-14 LEVELS OF ACCESS

Form 29 – Device Interconnection Table

4.102 This form specifies which devices may be connected together. Refer to Table 4-39, Device Interconnection Table. The system allows for a maximum of 25 devices.

4.103 Field Description. Initially, the system interconnects all devices. The asterisk (*) character indicates this condition. When the system inhibits device interconnection, it is indicated by the period (.) character. The device numbers are listed in the header line and the first column.

TABLE 4-39
FORM 29 - DEVICE INTERCONNECTION TABLE

CDE TERMINAL DISPLAY

4:26   1-JAN-86   alarm status = NO ALARM

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
01	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

| 01 | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * | * |

1-	2-	3-	4-TOP	5-BOTTOM
6-QUIT	7-INTERCON NUM	8-DISALLOW	9-REVIEW	0-

ATTENDANT CONSOLE DISPLAY

```
    01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
01 *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *  *
F1>              F2>            F3>            F4>TOP           F5>BOTTOM
F6>QUIT          F7>INTERCON NUM F8>DISALLOW   F9>REVIEW        FO>
```

FORM0010R0

4.104 Commands

4-TOP Pressing the TOP softkey moves the line pointer to the first line of the form. The command line displays the first line.

5-BOTTOM Pressing the BOTTOM softkey moves the line pointer to the last line of the form. The command line displays this line.

6-QUIT Pressing the QUIT softkey when editing this form displays the following warning on the command line: **DATA HAS BEEN CHANGED BUT NOT YET SAVED -- "ENTER" TO SAVE.** Pressing this softkey again exits Form 29 and returns the display to the level where the forms are selected. The change is not saved. Refer to Table 4-2, Available Forms.

6-CANCEL Pressing the CANCEL softkey cancels the tenant number entry. This softkey appears after a programming error. It is accompanied with an error message on the command line. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-INTERCON NUM The INTERCON NUM softkey allows a user to select a device by number. Pressing this softkey displays the **ENTER INTERCONNECT NUM:** prompt. Entering the interconnect number (1 to 25) displays that device with a series of '*' characters (allow interconnection) and '.' characters (disallow interconnection). Cursor movement on the command line is controlled by the right and left cursor control keys.

8-DISALLOW/ALLOW This softkey has two functions; it enables and disables interconnection between devices. Pressing the DISALLOW softkey disables the interconnection between those two devices unidirectionally. For example, when modifying connections for device 5 (the command line displays line 5) and the DISALLOW softkey is pressed when the cursor is under the sixth column, then device 5 cannot communicate with device 6. However, device 6 can still communicate with device 5. Total interconnection is inhibited only when a '.' (disallow) character is inserted at row 6 (device 6) under the fifth column (device 5). The softkey now displays the **ALLOW** prompt. Pressing the ALLOW softkey enables the unidirectional interconnection between the selected devices; the '*' character replaces the '.' character.

9-REVIEW Pressing the REVIEW softkey displays a new form (refer to Table 4-40, Review List for Form 29). This form lists all the device types.

0-ENTER This softkey only appears only after data for an interconnect number has been modified. Pressing the ENTER softkey stores the changes in the database.

Review List for Form 29

4.105 This form appears when the REVIEW softkey is pressed in Device Interconnection Table Form. When entered from Form 29, this form displays a list of the device types. Refer to Table 4-40, Review List for Form 29 for the form layout. Note that the data in this form cannot be modified.

4.106 Field Description

ENTRY NUM Field This field lists the entry numbers for the device types. There is a total of 25 entry numbers. The ENTRY NUM field cannot be modified.

DEVICE TYPE DESCRIPTION Field This field lists the titles assigned to the entry numbers. The DEVICE TYPE DESCRIPTION field cannot be modified. The last 13 entries are reserved for future use.

INTERCONNECT NUM Field This field lists all the interconnect numbers; it links this form to the previous form (refer to Table 4-39, Device Interconnection Table). The interconnect numbers range from 1 to 25. The INTERCONNECT NUM field cannot be modified.

TABLE 4-40
REVIEW LIST FOR FORM 29

CDE TERMINAL DISPLAY

4:26   1-JAN-86   alarm status = NO ALARM

ENTRY NUM	DEVICE TYPE DESCRIPTION	INTERCONNECT NUM
01	Station/Set	1
02	Console	2
03	Loop Start Trunk	3
04	Ground Start Trunk	4
05	DID/Tie Trunk	5
06	2-Wire E&M	6
07	4-Wire Unamplified E&M	7
08	4-Wire Amplified E&M	8
09	RESERVED	9
10	RESERVED	10
11	RESERVED	11
12	RESERVED	12
01	Station/Set	1

1-	2-ENTRY NUM	3-	4-TOP	5-BOTTOM
6-QUIT	7-INTERCON NUM	8-	9-	O-

ATTENDANT CONSOLE DISPLAY

ENTRY NUM	DEVICE TYPE DESCRIPTION	INTERCONNECT NUM
01	Station/Set	1
F1>	F2>ENTRY NUM F3>	F4>TOP F5>BOTTOM
F6>QUIT	F7>INTERCON NUM F8>	F9> FO>

FORM0009R0

4.107 Commands

2-ENTRY NUM This softkey selects an entry number. Pressing the ENTRY NUM softkey displays the **ENTER ENTRY NUM:** on the command line. The selection is completed by entering a valid entry number (1 to 25).

4-TOP Pressing the TOP softkey moves the line pointer to the first line of the form. The command line displays the first line.

5-BOTTOM Pressing the BOTTOM softkey moves the line pointer to the last line of the form. The command line displays this line.

6-QUIT Pressing the QUIT softkey returns the display to the point where the REVIEW softkey was pressed. Refer to Table 4-39, Form 29 – Device Interconnection Table.

6-CANCEL Pressing the CANCEL softkey cancels the last entry. This softkey appears after a programming error. It is accompanied with an error message on the command line. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-INTERCON NUM This softkey selects a device type by its interconnect number. Pressing the INTERCON NUM softkey displays **ENTER INTERCONNECT NUM:** on the command line. The selection is completed by entering a valid interconnect number (1 to 25).

0-ENTER Since this form reviews the programmed data, pressing the ENTER softkey completes a request for viewing a particular interconnect number or entry number. No data changes occur and no data is stored in the database.

Form 30 – System Abbreviated Dial Entry

4.108 This form specifies the Index Number, the digit strings for each Index Number and the status of that Index Number (Private or Non-Private). Refer to Table 4-41, Form 30 – System Abbreviated Dial Entry for the form layout. Refer to Section MITL9108-093-223-NA, Abbreviated Dialing for details.

4.109 Field Description

INDEX NUMBER Field This field lists the index numbers; one for each entry in the DIGIT STRING field. The Index number with the System Abbreviated Dial Access Code forms the Abbreviated Dial number. Each index number can be a maximum of three digits.

DIGIT STRING Field This field lists the digit strings; one for each Index number. The digit string can be a maximum of 26 digits.

PRIVATE Field This field specifies which entries are Private (as indicated with the **PRIVATE** prompt) and which are non-Private (as indicated by a blank).

TABLE 4-41
FORM 30 - SYSTEM ABBREVIATED DIAL ENTRY

CDE TERMINAL DISPLAY

4:26 1-JAN-86   alarm status = NO ALARM

INDEX NUMBER	DIGIT STRING	PRIVATE	
22	8367965	PRIVATE	
123	5922122		
77	2240667	PRIVATE	
123	5922122		

1-	2-FIND INDEX	3-	4-TOP	5-BOTTOM
6-QUIT	7-	8-	9-PRIVATE	O-

ATTENDANT CONSOLE DISPLAY

```
  INDEX NUMBER        DIGIT STRING                 PRIVATE
       123              5922122
F1>               F2>FIND INDEX    F3>           F4>TOP        F5>BOTTOM
F6>QUIT           F7>              F8>           F9>PRIVATE    FO>
```

FORM0007R0

4.110 Commands

2-FIND INDEX This softkey selects an Index Number. Pressing the FIND INDEX softkey displays **ENTER INDEX NUM:** on the command line. The selection is completed by entering a valid Index Number (a maximum of three digits).

3-INSERT This softkey adds new digit strings to this form. Pressing the INSERT softkey clears the command line and moves the cursor to the INDEX NUMBER field. The addition is completed by entering a valid extension number. The system inserts the addition the line after that line that was displayed on the command line. Note that if there is no data in this form or the line pointer is pointing to the last line of data, then this softkey does not appear.

4-TOP Pressing the TOP softkey moves the line pointer to the first line of the form. The command line displays the first line.

5-BOTTOM Pressing the BOTTOM softkey moves the line pointer to the last line of the form. The command line displays this line.

6-QUIT Pressing the QUIT softkey when editing this form erases the data on the command line. The change is not saved. Pressing the QUIT softkey again exits Form 30 and returns the display to the level where the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL Pressing the CANCEL softkey cancels the last entry. This softkey appears after a programming error. It is accompanied with an error message on the command line. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

8-DELETE This softkey appears when the pointer is pointing to data (i.e., data on the command line). Pressing the DELETE softkey removes the data from the selected field. The deletion is completed by pressing the ENTER softkey. The field is ready for new data.

9-PRIVATE/NON-PRIVATE This softkey has two functions. Pressing the PRIVATE softkey sets the selected digit string entry to Private; the **PRIVATE** prompt appears in the PRIVATE field and the softkey now displays the **NON-PRIVATE** prompt. Pressing the NON-PRIVATE softkey sets the selected digit string to non-private; the PRIVATE field blanks and the softkey displays the **PRIVATE** prompt once again.

0-ENTER This softkey only appears after an Index Number has been modified. Pressing the ENTER softkey stores the modifications in the database.

Form 31 – Customer Data Print

4.111 This form lists all the Customer Data options that can be sent to an output device, such as a printer or a terminal. The options are selected by Print Option Number. Note that this form cannot be modified. Refer to Table 4–42. Customer Data Print Options for a complete list of these options and to Table 4–43, Form 31 – Customer Data Print for the form layout.

4.112 Field Description

PRINT OPTION Field This field lists the print option numbers for the CDE options that can be sent to an output device (a terminal or a printer). There is a maximum of 33 print option numbers. The PRINT OPTION field cannot be modified.

CDE DATA PRINT Field This field lists the titles associated with the print option numbers. The CDE DATA PRINT field cannot be modified. Refer to Table 4–42, Customer Data Print Options for a complete list of these electives.

TABLE 4-42
CUSTOMER DATA PRINT OPTIONS

Number	Customer Data Print Option
01	System Configuration
02	Feature Access Codes
03	COS Definition
04	System Options/System Timers
05	Tenant Interconnection Table
06	Tenant Night Switching
07	Console Assignments
08	Attendant LDN Assignments
09	Station/SUPERSET Sets
09*	SUPERSET/Line Appearances
10	Pickup Groups
11	RESERVED
12	RESERVED
13	Trunk Circuit Descriptors
13*	Trunk Circuit Descriptor Reviews
14	Non-Dial-In Trunks
15	Dial-In Trunks
16	Trunk Groups
17	Hunt Groups
18	Miscellaneous System Ports
19	Call Rerouting Table
20	ARS: COR Group Definition
21	ARS: Day Zone Definition
22	ARS: Modified Digit Table
23	ARS: Route Definition
24	ARS: Route Lists
25	ARS: Route Plans
26	ARS: Leading Digit Strings
26*	ARS: Digit Strings
27	Form Access Restriction
28	RESERVED
29	Device Interconnection Table
29*	Device Interconnect Translation
30	Abbreviated Dial Numbers
31	RESERVED
32	Account Codes
50	Automatic Route Selection

TABLE 4-43
FORM 31 - CUSTOMER DATA PRINT

CDE TERMINAL DISPLAY

4:26   1-JUN-86   alarm status = NO ALARM

PRINT OPTION	CDE DATA PRINT
01	System Configuration
02	Feature Access Codes
03	COS Definition
04	System Options/System Timers
05	Tenant Interconnection Table
06	Tenant Night Switching
07	Console Assignments
08	Attendant LDN Assignments
09	Station/SUPERSET Sets
09*	SUPERSET Line Appearances
10	Pickup Groups
11	RESERVED
01	System Configuration

1-	2-	3-	4-TOP	5-BOTTOM
6-	7-PRINT OPTION	8-	9-PRINT	O-

ATTENDANT CONSOLE DISPLAY

```
 PRINT OPTION                      CDE DATA PRINT
    01            System Configuration
F1>            F2>              F3>           F4>TOP        F5>BOTTOM
F6>QUIT        F7>PRINT OPTION F8>           F9>PRINT       FO>
```

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4.113 Commands

4-TOP Pressing the TOP softkey moves the line pointer to the first line of the form. The command line displays the first line.

5-BOTTOM Pressing the BOTTOM softkey moves the line pointer to the last line of the form. The command line displays this line.

6-QUIT Pressing the QUIT softkey during a print operation halts that process and displays the following message on the command line: **CDE DATA PRINT OPTION XX HAS BEEN ABORTED** where **XX** is the Print Option number. At all other times, pressing the QUIT softkey exits Form 32 and returns the display to the level where the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL Pressing the CANCEL softkey cancels the tenant number entry. This softkey appears after a programming error. It is accompanied with an error message on the command line. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-PRINT OPTION This softkey selects a print option number. Pressing the PRINT OPTION softkey displays **ENTER PRINT OPTION:** on the command line. The selection is completed by entering a valid print option number.

9-PRINT This softkey transmits the contents of the selected print option to an output device (printer or terminal). Pressing the PRINT softkey blanks the softkey display (except for the QUIT softkey) for the duration of the print operation. When completed, the system displays **CDE DATA PRINT OPTION XX HAS COMPLETED PRINTING** where **XX** is the Print Option number. The softkey display returns to the original format (refer to Table 4-43, Form 31 – Customer Data Print).

0-ENTER This softkey only appears after a Print Option number has been selected. Since this form reviews the programmed data, pressing the ENTER softkey completes a request for viewing a particular Print Option number.

Form 32 - Account Code Entry

4.114 This form specifies the Account Codes in the database. If the Account Codes are verified, they are stored in the Account Code database and recorded on SMDR. If they are not verified, then they are only recorded on SMDR. Refer to Table 4-44, Form 32 - Account Code Entry for the form layout. Refer also the Section MITL9108-093-451-NA, Station Message Detail Recording (SMDR). Note that this form can only be accessed if System Option 04, Verified Account Codes is enabled (refer to Form 04, System Options/System Timers).

4.115 Field Description

ACCOUNT CODE Field This field lists the Account Code entries. The length of the Account Code is specified in Form 04, System Options/System Timers (System Option 44, Account Code Length). Depending on the status of System Option 44, Account Codes can be variable from 1 to 12 digits or fixed to a set value from 4 to 12 digits.

COS Field This field specifies a COS number for each entry in the ACCOUNT CODE field. This COS number replaces the caller's COS number for the duration of the call. When the call is finished, the system restores the caller's original COS number. If this field remains blank, then the caller's original COS number is used for the call.

COR Field This field specifies a COR number for each Account Code entry. The system replaces the caller's COR number with this COR number for the tenure of the call. Upon call completion, the caller's original COR number is restored. If there is no specified COR number, then the caller's original COR number is used for the call.

ACTIVE Field This field specifies which Account Codes can be accessed (as marked by the **ACTIVE** prompt) and which Account Codes are denied access (as marked by the **INACTIVE** prompt).

TABLE 4-44
FORM 32 - ACCOUNT CODE ENTRY

CDE TERMINAL DISPLAY

4:26   1-JUN-86   alarm status = NO ALARM

ACCOUNT CODE	COS	COR	ACTIVE
123456	1	1	ACTIVE
345678	3	2	INACTIVE
445679			ACTIVE
123456	1	1	ACTIVE

1-	2-NULL COS	3-INSERT	4-TOP	5-BOTTOM
6-QUIT	7-DELETE RANGE	8-DELETE	9-FIND	O-

ATTENDANT CONSOLE DISPLAY

```
     ACCOUNT CODE              COS              COR              ACTIVE
     123456                    1                1                ACTIVE
F1>            F2>NULL COS     F3>INSERT        F4>TOP              F5>BOTTOM
F6>QUIT        F7>DELETE RANGE F8>DELETE        F9>FIND            FO>
```

FRM0008R1

4.116 Commands

1-ACTIVE/INACTIVE This softkey has two functions. Pressing the ACTIVE softkey sets the selected Account Code entry to Active; that Account Code can now be accessed. The **ACTIVE** prompt appears in the ACTIVE field and the softkey now displays the **INACTIVE** prompt. Pressing the INACTIVE softkey sets the selected Account Code entry to Inactive; that Account Code can no longer be accessed. The ACTIVE field now displays the **INACTIVE** prompt and the softkey displays the **ACTIVE** prompt once again. Note that this softkey only appears when the cursor is in the ACTIVE field.

2-NULL COS/NULL COR This softkey has two functions; it deletes selected COS and COR number entries. When the cursor is in a COS field which has a COS number, the **NULL COS** prompt appears on the softkey display. Pressing the NULL COS softkey erases the data in the COS field; the **NULL COS** prompt disappears from the softkey display. Similarly, when the cursor is in a COR field which has a COR number, the **NULL COR** prompt appears on the softkey display. Pressing the NULL COR softkey erases the data in the COR field; the **NULL COR** prompt disappears from the softkey display.

3-INSERT This softkey adds new digit strings to this form. Pressing the INSERT softkey opens a window with a clear command line and moves the cursor to the ACCOUNT CODE field. The new account code is programmed by entering an Account Code value, a COS number and a COR number (if required). The system inserts the new account in its appropriate sequential position. The line pointer now points to the new account code. Note that if there is no data in this form or if the line pointer is pointing to the last line of data, then this softkey does not appear.

4-TOP Pressing the TOP softkey moves the line pointer to the first line of the form. The command line displays the first line.

5-BOTTOM Pressing the BOTTOM softkey moves the line pointer to the last line of the form. The command line displays this line.

6-QUIT Pressing the QUIT softkey when editing this form erases the data on the command line. The change is not saved. Pressing this softkey again exits Form 32 and returns the display to the level where the forms are selected. Refer to Table 4-2, Available Forms.

6-CANCEL Pressing the CANCEL softkey cancels the last entry. This softkey appears after a programming error. It is accompanied with an error message on the command line. Refer to Table 4-45, Programming Error Messages for a list of these error messages.

7-DELETE RANGE This softkey appears when there are verified account codes to delete. Pressing the DELETE RANGE softkey displays the **FIRST ACCOUNT CODE TO DELETE:** prompt on the command line. After an Account Code has been entered, the display returns the **LAST ACCOUNT CODE TO DELETE:** prompt. The deletion is completed by entering another Account Code. All Account Code entries between and

including these specified Account Codes are removed from the form.

8-DELETE This softkey appears when the pointer is pointing to data (i.e., data on the command line). Pressing the DELETE softkey removes the data from the selected field. The deletion is completed by pressing the ENTER softkey.

9-FIND This softkey selects an Account Code and appears only when there is data in the form. Pressing the FIND softkey displays the **ENTER ACCOUNT CODE:** prompt on the command line. The selection is completed by entering a valid Account Code.

0-ENTER This softkey appears only after an Account Code entry has been modified or added. That is, the length of the Account Code must match the specified Account Code length (refer to System Option 44 in Form 04, System Options/System Timers). Pressing the ENTER softkey stores the addition or modifications in the database.

TABLE 4-45
PROGRAMMING ERROR MESSAGES

Error Message	Meaning
XXXX already has day zone X specified	The selected day already has a day zone specification. Only one day zone can be specified to each day. Refer to Form 25, ARS: Route Plans.
XXXX has no zone specified	All days of the week must have a day zone specification.
*3 must be followed by 01 to 14	In Form 30, System Abbreviated Dial Entry, the "*3" indicates that the subsequent digits will be manually dialed. The number of digits that will be manually dialed follows the "*3" indicator, and can be from 01 to 14.
*5 cannot be followed by further digits	In Form 30, System Abbreviated Dial Entry, the "*5" indicates that the previous number is an Intercom Number. Therefore, no digits can follow the "*5" terminator.
* must be followed by 3 or 5	In Form 30, System Abbreviated Dial Entry, only the numbers "3" and "5" are valid entries after an "*" entry.
A FATAL disk error has been detected, check with your supervisor!	The diskette could be damaged. Read and write operations cannot occur. See your supervisor.
Access Code XXXXX conflicts with a Console Access Code	The code entered has already been defined as an extension number for a console in Form 07, Console Assignments. Select a new code or change the console extension number.
Access Code XXXXX conflicts with a Night Bell Access Code	The code entered has already been defined as an extension number for a night bell equipment in Form 18, Miscellaneous System Ports. Select a new code or change the night bell extension number.
Access Code XXXXX conflicts with a station or SUPERSET prime number	The code entered has already been defined as a station number or the Prime Line number of a SUPERSET® set. Select a new code or change the station number (or Prime Line number) in Form 09, Station/SUPERSET® Sets.
Access Code XXXXX conflicts with an ARS Leading Digits Entry	The system does not allow a partial match between an ARS Leading Digit and an access code. Leading Digit strings must be total unique. Refer to Form 26, ARS: Digit Strings and select a new code or change the ARS Leading Digit entry.
Access Code XXXXX conflicts with an Attendant LDN Access Code	The code entered has already been defined as an LDN Access Code in Form 08, Attendant LDN Assignments. Select a new code or change the LDN assignment.

TABLE 4-45 (CONT'D)
PROGRAMMING ERROR MESSAGES

Error Message	Meaning
Access Code XXXXX conflicts with SUPERSET line number	The code entered has already been defined as a SUPERSET® line extension number in Form 09, SUPERSET® Set Lines. Select a new code or change the SUPERSET® line extension number.
Access Code XXXXX conflicts with the Access Code for HUNT GROUP NUM XX	The code entered has already been defined as a Hunt Group Access Code in Form 17, Hunt Groups. Select a new code or change the Hunt Group Access Code.
Access Code XXXXX conflicts with the Feature Access Code for FEATURE NUMBER XX	The code entered has already been defined as a Feature Access Code. Select a new code or change the code in Form 02, Feature Access Codes.
Access code XXXXX does not correspond to a Stn, Set or logical line	Only those access codes (extension numbers) which correspond to a station, SUPERSET® key or logical line can be used.
Access Code XXXXX does not match with ARS Leading Digits	The access code entered does not match the access code entry for the Direct to ARS option. Refer to Form 02, Feature Access Codes.
Access code XXXXX is not a valid answer point	The following are valid answer points for the DAY, N1 and N2 fields in Form 14, Non-Dial-In Trunks: • an LDN on the Attendant Console, • a Rotary Dial or DTMF set extension number, • a SUPERSET® set directory number, • a Hunt Group Access Code or a • a Night Bell extension number.
Account code value exists in the database.	In Form 32, Account Code Entry, the entered Account Code already exists. Select a new Account Code.
Account codes of unspecified lengths exist; delete these first	Ensure that all of the account codes in Form 32, Account Code Entry are equal to the specified account code length in Form 04, System Options/System Timers.
Attempting to add more than XXX members to this group	There are a maximum of 50 members for each Pickup Group, Trunk Group and Hunt Group.
Attempting to define multiple KEY LINE appearances of XXXXX on this SET	An access code for a Key Line appearance cannot be duplicated on another Key Line appearance on that SUPERSET® set. Refer to Form 09 - SUPERSET® Set Lines.
Attempting to define multiple key types for Access Code XXXXX	In Form 09, SUPERSET® Set Lines, only one key type can be assigned to each station number.
Attempting to define multiple key types for Trunk Number XX	In Form 09, SUPERSET® Set Lines, only one key type can be assigned to each Trunk Number.
Attempting to delete a device for which a disk operation is pending - retry	Attempting to delete data that has not been fully written to the disk yet. Try again at a later time.

TABLE 4-45 (CONT'D)
PROGRAMMING ERROR MESSAGES

Error Message	Meaning
Attempting to enter invalid access code	A blank access code is not allowed.
Attempting update/delete of a device that is currently in use	The selected device is being used; modify this device at a later time.
Bay/Slot/Circuit XX/XX/XX is already assigned	The specified bay/slot/circuit is assigned elsewhere. Select a new bay/slot/circuit number or change the assignment of that bay/slot/circuit number. Refer to Form 01, System Configuration and Form 09, Station/SUPERSET® Sets.
Can only use "X" wildcard at end of strings.	The X softkey can only be pressed at the end of a digit string entry. Refer to Form 26, Digit Strings.
Cannot modify LEADING DIGITS until digit strings deleted	In Form 26, Digit Strings, the digit entries in the DIGITS TO BE ANALYZED field must be deleted before the digit entries in the LEADING DIGITS field can be modified.
Cannot update music/pager assignment – must delete and re-enter	To modify the selected music/pager assignment, it must first be deleted and then re-entered.
Circuit descriptor type must match programmed trunk hardware type	The selected trunk circuit descriptor type in Form 13, Trunk Circuit Descriptors must match the specified Trunk Card type in Form 01, System Configuration.
Configuration can not be changed for the Bay/Slot/Circuit – XX/XX/XX	In Form 01, System Configuration, the data in the PROGRAMMED field cannot be matched to the data in the INSTALLED field as devices are already assigned to that physical location. Cannot change the configuration until the devices are deassigned.
Consoles that share an LDN access code must be in the same TENANT GROUP	Attendant Consoles that share the same LDN Access Code must also share the same Tenant Group. Refer to Form 07, Console Assignments.
COR group out of range. Valid range is (1 – 50)	There are a maximum of 50 COR Groups.
COR value is out of range.	In Form 31, CDE Data Print, the COR value specified must be valid (1 → 25 for each COR Group). There are a maximum of 50 COR Groups. Refer to Form 20, ARS: COR Group Definition.
COS number must be 1 to 50	Valid range for COS numbers is 1 to 50.
COS value is out of range.	In Form 31, CDE Data Print, the COS value specified must be valid (1 → 50).
Database is out of sync.	The database copy in RAM does not match the database copy on the diskette. Delete the selected device and re-enter the device in the appropriate form.

TABLE 4-45 (CONT'D)
PROGRAMMING ERROR MESSAGES

Error Message	Meaning
Disk is write-protected – data was not written to disk	Remove the write-protect tag from the disk. Re-insert the disk in the disk drive and activate the write process again.
Disk is not ready – data was not written to disk	The disk was not ready. Initiate the write process at a later time.
Disk I/O failure – database may be corrupted	Due to the disk I/O failure, the database may be corrupted. Exit CDE Mode, reset the system and then re-enter CDE Mode.
Entered string is not in the system	In Form 26, ARS Nested Digit String, the selected digit string is not defined.
Error in "*" sequences. * (1,2,3,4,5,*) are the only valid sequences	The asterisk sequence in the DIGITS TO BE INSERTED field in Form 22, ARS: Modified Digit Table is restricted to the following: *1 = Pause for 5 seconds, *2 = Wait for Dial Tone, *3 = Switch to DTMF for subsequent digits, *4 = Do not display further modified digits on sets or SMDR, *5 = Pause 10 seconds or ** = asterisk character.
Error in COR members. Use spaces between CORs. eg. 1 3 5-14 25	The members for each COR Group must be separated by a space. For consecutive CORs, a dash is inserted.
Error in QTY TO DELETE field. Can only delete up to 25	Only 25 digits can be deleted. Refer to the QTY TO DELETE field in Form 22, ARS: Modified Digit Table.
EXTENSION NUMBER XXXXX is a member of HUNT GROUP XX.	The selected extension number is a member of the Hunt Group shown. An extension number can be a member of only one Hunt Group at a time.
EXTENSION NUMBER XXXXX is a member of PICKUP GROUP XX.	The selected extension number is a member of the Pickup Group shown. An extension number can be a member of only one Pickup Group at a time.
Feature Number out of range. Valid range is (1 – 30)	Feature numbers range from 1 to 30. Refer to Form 02, Feature Access Codes.
First account code position value greater than last.	When Print Option number 14 in (Form 31, CDE Data Print) is selected, the first specified Account Code must be less than the last specified Account Code.
Form access disallowed; enable verified account codes system option.	To access Form 32, Account Code Entry, System Option 05, Verified Account Code must first be enabled. Refer to Form 04, System Options/System Timers.

TABLE 4-45 (CONT'D)
PROGRAMMING ERROR MESSAGES

Error Message	Meaning
Form number XX cannot be accessed	The selected form number is reserved for future use or the selected form number has restricted user access. Refer to Form 27, Form Access Restriction for the level of access for each form.
Form number out of range!	The selected Form number is invalid. The range is 1 to 32 with the exception of Forms 11, 12 and 28. Refer to Table 4-2, Available Forms.
High power card cannot be programmed at this location	The Universal Card can only be assigned to those card slots rated for high power consumption. These are the upper slots of any digital bay.
Incorrect specification of Bay/Slot/Circuit for range programming	The specified start bay/slot/circuit numbers must be less than the end bay/slot/circuit numbers.
Inserted too many digits. Up to 20 allowed, with '*n' counted as 1	The specified entry exceeds the maximum. A maximum of 20 entries are allowed in the DIGITS TO BE INSERTED field in Form 22, ARS: Modified Digit Table. Each asterisk entry is considered as one entry.
Invalid digit to insert. Use 0-9 or "* (1,2,3,4,5,*)" only	The specified entry is invalid. The entries in the DIGITS TO BE INSERTED field are restricted to the following: • 0 to 9 and • the valid asterisk sequences.
MODIFIED DIGIT ENTRY out of range. Valid range is (1 - 50)	The selected Entry Number is invalid. The range is 1 to 50. Refer to Form 22, ARS: Modified Digit Table.
Modified digit table entries are from 1 to 50	The selected Entry number is invalid. The range is 01 to 50. Select a new Entry number. Refer to Form 22, ARS: Modified Digit Table.
Must enter LEADING DIGITS	To complete the entry in Form 26, ARS Digit Strings, must enter digits in the LEADING DIGITS field.
Must delete all appearances of XXXXX from CALL REROUTING TABLE	The selected device must have its access code or extension number deleted from the Call Rerouting Table before it can be removed from the system. Refer to Form 19, Call Rerouting Table.
Must delete all key definitions before deleting set	The selected SUPERSET® set must have all its key definitions deleted before it can be removed from the system. Refer to Form 09, SUPERSET® Set Lines.
Must delete appearances of XXXXX from answer points in NON-DIAL-IN TRUNKS	The selected device must have its access code or extension number deleted from the answer points in Form 14, Non-Dial-In Trunks before it can be removed from the system.

TABLE 4-45 (CONT'D)
PROGRAMMING ERROR MESSAGES

Error Message	Meaning
Must delete the appearances of XXXXX on all sets before deleting set	All appearances of the station number (or Prime Line number) must be deleted before that set can be removed from the system.
Must enter first choice for route list to be defined (leave no gaps)	In Form 24, ARS: Route Lists, the FIRST field must be specified with a valid Route List number before the SECOND field is specified.
Neither Option #246 Nor #247 are enabled yet	One of these COS Options must be enabled for correct system operation.
No CONSOLE MODULES are programmed	The Console Module must be assigned to a bay/slot/circuit/subcircuit in Form 01, System Configuration.
No DIAL-IN trunk cards are programmed	A card that supports Dial-In Trunks must be defined in Form 01, System Configuration.
No more space available for comments	Subsequent comments that are entered in the CDE Forms are not saved.
No NON-DIAL-IN trunk cards are programmed	A card that supports Non-Dial-In Trunks must be defined in Form 01, System Configuration.
No STATION or SUPERSET cards are programmed	A card that supports Rotary Dial or DTMF sets or a card that supports SUPERSET® sets must be defined in Form 01, System Configuration.
No trunks are assigned to circuit descriptor number X	The trunk circuit descriptor number entered has not been specified in Form 13, Trunk Circuit Descriptors.
Non-existent account code value has been entered.	During a search in Form 31, CDE Data Print, the entered Account Code does not exist. Select another Account Code.
NUMBER OF DIGITS TO ABSORB must be in the range (0 - 8)	In the M field of Form 15, Dial-In Trunks, the maximum quantity of digits allowed is 8.
Option XX conflicts with this option.	The selected option is mutually exclusive with the option number shown.
Option number XXX is out of range; must be between XXX and XXX	The selected option number is out of range. For COS Options, the valid range is 100 to 811. For System Options, the valid range is 1 to 39.
Previous transaction encountered a permanent I/O failure; data was not written to disk	Due to the I/O failure, the last write process did not occur. Exit CDE Mode, reset the system and re-enter CDE Mode.
Print Option out of range. Valid range is (1 - 33).	In Form 31, Customer Data Print, there are only 33 Print Option numbers. Select a new Print Option number.

TABLE 4-45 (CONT'D)
PROGRAMMING ERROR MESSAGES

Error Message	Meaning
ROUTE LIST out of range. Valid range is (1 - 100)	The selected Route List number is invalid. The range is 1 to 100. Refer to Form 24, ARS: Route Lists.
ROUTE out of range. Valid range is (1 - 200)	The selected Route number is invalid. The range is 1 to 200. Refer to Form 23, ARS: Route Definition.
ROUTE PLAN out of range. Valid range is (1 - 50)	The selected Route Plan number is invalid. The range is 1 to 50. Refer to Form 25, ARS: Route Plans.
RTE PLN= X, DZ= X, TZ= X, Field= START HOUR, Error= Entry < = previous entry	The START HOUR field entry is less than or equal to the previous START HOUR field entry. The entries in the START HOUR field must be listed in ascending order. Refer to Form 25, ARS: Route Plans.
RTE PLN= X, DZ= X, TZ= X, Field= ROUTE LIST: Error= entry must be blank	The entered Route List number does not have a corresponding entry in the START HOUR field. Therefore, the ROUTE LIST field must be cleared or a starting time must be specified in the START HOUR field. Refer to Form 25, ARS: Route Plans.
RTE PLN= X, DZ= X, TZ= X, Field= START HOUR, Error= Entry cannot be deleted	A blank entry in the START HOUR field represents 24 hours. Therefore, the subsequent entry in the START HOUR field is less than or equal to the blank entry. Starting times must be listed in ascending order. Refer to Form 25, ARS: Route Plans.
TENANT NUMBER is out of range. Valid is 1 to 25.	There are a maximum of 25 Tenant Groups.
The access code XXXXX does not exist	The selected access code has not been assigned.
The access code XXXXX is already assigned	The access code is used elsewhere in the database. Select another access code.
The access code for field XXX is invalid	The extension number, Hunt Group Access Code, Night Bell extension number or Attendant Console directory number assigned to one of the DAY, N1 or N2 fields in Form 19, Call Rerouting is invalid. Assign a new code in that field.
The access codes for fields XXX & XXX are invalid	The extension numbers, Hunt Group Access Codes, Night Bell extension numbers, or Attendant Console directory numbers assigned to two of the DAY, N1 or N2 fields in Form 19, Call Rerouting Table are invalid. Assign new codes in the fields.
The access codes for fields XXX, XXX & XXX are invalid	The extension numbers, Hunt Group Access Codes, Night Bell extension numbers or Attendant Console directory numbers assigned to the DAY N1 and N2 fields in Form 19, Call Rerouting Table are invalid. Assign new codes in the fields.

TABLE 4-45 (CONT'D)
PROGRAMMING ERROR MESSAGES

Error Message	Meaning
The Bay/Slot/Circuit - XX/XX/XX cannot be programmed	Devices are assigned to the selected bay/slot/circuit. Before a new card type can be programmed for the bay/slot/circuit, these devices must be removed from the system's database.
The Bay/Slot/Circuit - XX/XX/XX is not present	The specified circuit number is not applicable for these bay and slot numbers. Re-enter the bay and slot numbers without the circuit number or enter 0 for the circuit number.
The Bay/Slot/Circuit - XX/XX/XX is not programmed as a console	The selected bay/slot/circuit is not a console. Refer to Form 01, System Configuration and reprogram this bay/slot/circuit as a console.
The Bay/Slot/Circuit - XX/XX/XX is not programmed as a DIAL-IN trunk	The selected bay/slot/circuit is programmed as a Non-Dial-In Trunk. Refer to Form 14, Dial-In Trunks.
The Bay/Slot/Circuit - XX/XX/XX is not programmed as a MUSIC/PAGER MODULE	The selected bay/slot/circuit is not a music/pager assignment. Refer to Form 01, System Configuration and reprogram this bay/slot/circuit as a Music/Pager Module.
The Bay/Slot/Circuit - XX/XX/XX is not programmed as a NON-DIAL-IN trunk	The selected bay/slot/circuit is programmed as a Dial-In Trunk. Refer to Form 15, Dial-In Trunks.
The Bay/Slot/Circuit - XX/XX/XX is not programmed as a RECEIVER MODULE	Relays (Subcircuits 5 and 6) are located on the Receiver/Relay Module only. Ensure that there is a Receiver/Relay Module on a Universal Card at that location in Form 01, System Configuration.
The Bay/Slot/Circuit - XX/XX/XX is not programmed as a STATION or SUPERSET	The selected bay/slot/circuit must first be assigned to a card that supports Rotary Dial or DTMF sets or to a card that supports SUPERSET® sets in Form 01, System Configuration.
The Bay/Slot/Circuit - XX/XX/XX is not programmed as a trunk	The selected trunk number corresponds to a bay/slot/circuit that is not programmed as a trunk.
The Bay/Slot/Circuit - XX/XX/XX is not programmed as a UNIVERSAL CARD	The selected bay/slot/circuit is not a Universal Card assignment. Refer to Form 01, System Configuration and reprogram this bay/slot/circuit as a Universal Card.
The extension number XXXXX does not exist	The selected extension number is undefined. The extension number must first be defined in Form 09, Station/SUPERSET® Sets.
The hour value XX is out of range.	The hour value can range from 01 to 24. Refer to Form 04, System Options/System Timers.

TABLE 4-45 (CONT'D)
PROGRAMMING ERROR MESSAGES

Error Message	Meaning
The power rating of the UNIVERSAL CARD is exceeded.	The power rating of the Universal Card is 10. Therefore, the number of modules that can be installed on the Universal Card depends on the individual power rating of the modules. The Console Module has a power rating of 5, the Receiver/Relay Module has a power rating of 2, the Music on Hold/Pager Module has a power rating of 1 and the E&M Trunk Module has a power rating of 3.
The TRUNK NUMBER XXX has not been assigned	Entered trunk number does not correspond to a trunk. It must be defined in Form 14, Non-Dial-In Trunks or Form 15, Dial-In Trunks.
The TRUNK NUMBER XXX is already assigned	Trunk numbers can be assigned to only one trunk. Trunk numbers are assigned in Form 14, Non-Dial-In Trunks and Form 15, Dial-In Trunks.
The value XX is outside the valid range for KEY NUMBERS (2 - 15)	The selected SUPERSET® key number is invalid. Key numbers range from 2 to 15. SUPERSET® key 1 is reserved for the Prime Line and cannot be programmed in Form 09, SUPERSET® Set Lines.
The value XX is outside the valid range for the selected timer option	The selected timer value is invalid. Refer to Table 4-20, Trunk Hardware Options for a list of valid timer values.
The value X is outside valid range for BAY (1 - 5)	The selected bay number is invalid. The range is 1 to 5.
The value XX is outside valid range for CIRCUIT (1 - XX)	The selected circuit number is invalid. In Bays 1 and 2, the range for the ONS Line Card is 1 to 12; for the LS/GS Trunk Card is 1 to 8 and for the Universal Card is 1 to 4. In Bays 3, 4 and 5, the range for the Station Line Card is 1 to 8; for the SUPERSET® Line Card is 1 to 8; for the CO Trunk Card is 1 to 4 and for the E&M Trunk Card is 1 to 2.
The value XX is outside valid range for CIRCUIT DESCRIPTORS (1 - 25)	There are a maximum of 25 trunk circuit descriptors.
The value XX is outside valid range for COR (1 - 25)	The selected COR Group number is out of range. The range is 1 to 25.
The value XX is outside valid range for COS (1 - 50)	The selected COS number is out of range; the range is 1 to 50.
The value XX is outside valid range for ENTRY NUMBER (1 - XX)	In Form 18, Miscellaneous System Ports, there are only 38 Entry Numbers.
The minute value XX is out of range.	The minute value can range from 01 to XX, where XX is option specific. Refer to Form 04, System Options/System Timers.

TABLE 4-45 (CONT'D)
PROGRAMMING ERROR MESSAGES

Error Message	Meaning
The value X is outside valid range for HUNT GROUP (1 – 50)	The selected Hunt Group number is invalid. The range is 1 to 50.
The value XX is outside valid range for INTERCONNECT NUMBER (1 – XX)	In Form 29, Device Interconnection Table, there are only 25 Interconnect Numbers.
The value XX is outside valid range for PICKUP GROUP (1 – 50)	The selected Pickup Group number is invalid; the range is 1 to 50.
The value XX is outside valid range for SLOT (1 – XX)	The selected slot number is invalid. In Bay 1, the range is 1 to 8. In Bay 2, the range is 1 to 4. In Bays 3 and 4, the range is 1 to 15. In Bay 5, the range is 1 to 12.
The value XX is outside valid range for START HOUR (0 – 23)	In Form 25, ARS Route Plans, the START HOUR specifes the starting time for each time zone. The time is represented by two digits in 24 hour format.
The value XX is outside valid range for SUBCIRCUIT (X – X)	Subcircuits 1 to 4 refer to the DTMF Receivers; they cannot be accessed. The only subcircuits that can be accessed are the three relays on the Receiver/Relay Module. These are Subcircuits 5 and 6.
The value XX is outside valid range for TENANT (1 – 25)	The selected Tenant Group number is invalid; the range is 1 to 25. Tenant Group numbers are used in the following forms: • Form 05, Tenant Interconnection Table, • Form 06, Tenant Night Switching Control, • Form 07, Console Assignments, • Form 09, Station/SUPERSET® Sets, • Form 14, Non-Dial-In Trunks, • Form 15, Dial-In Trunks and • Form 19, Call Rerouting Table.
The value X is outside valid range for TRUNK GROUP (1 – 50)	The selected Trunk Group number is invalid. The range is 1 to 50.
The value XXX is outside valid range for TRUNK NUMBERS (1 – 200)	Trunk numbers range from 1 to 200.
This console has LDN assigned – cannot delete!	An Attendant Console can only be deleted from the system if all of its LDN assignments are removed first. Refer to Form 08, Attendant LDN Assignments.
TOTAL DIGITS EXPECTED must be in the range (1 – 9)	In Form 15, Dial-In Trunks, the N field (total digits expected) is restricted to digits 1 to 9.
Total number of SUPERSET sets programmed in Bay 3 cannot exceed 64	The power supply restricts the total number of SUPERSET® sets for the Control Cabinet to 64.
Total number of SUPERSET sets programmed in Bays 4 and 5 cannot exceed 64	The power supply restricts the total number of SUPERSET® sets for the Peripheral Cabinet to 64.

TABLE 4-45 (CONT'D)
PROGRAMMING ERROR MESSAGES

Error Message	Meaning
Total string is too long. Limit is 26 digits	The total number of digits in the DIGITS TO BE ANALYZED field plus the digits in the LEADING DIGITS field cannot exceed 26. Refer to Form 26, Digit Strings.
TRUNK GROUP must be entered for a route to be defined	To complete the Route definition, the Trunk Group number must be specified. Refer to Form 23, ARS: Route Definition.
TRUNK NUMBER XX does not correspond to a CO trunk	Only CO trunks can be assigned as DTS in Form 09, SUPERSET® Set Lines.
TRUNK NUMBER XXX is a member of TRUNK GROUP XX.	The selected trunk number is a member of the Trunk Group shown. A trunk number can be a member of only one Trunk Group at a time.
Unable to delete – A device is programmed for the Bay/Slot/Circuit – XX/XX/XX	Circuits are assigned to the selected card in that bay and slot. Cannot delete the card in that slot until the devices are deassigned from the forms.
Unable to locate extension XXXXX assigned to a PICKUP GROUP	The selected extension number is not assigned to any station or set. Refer to Form 09, Station/SUPERSET® Sets.
Unable to stop CDE print. Try again later.	The Customer Data print process cannot be halted. Try again later.
Undefined access number or digit string	In Form 30, System Abbreviated Dial Entry, either the Index Number or the Digit String is blank. Specify the required Index Number or Digit String.
Unmatched Account code length; system option account code length enabled.	The entered Account Code does not match the specified Account Code Length (System Option 44 of Form 04, System Options/System Timers). Enter a new Account Code or change the length of the Account Codes in Form 04.
Update of database failed.	The changes to the database were not stored properly on the diskette. Ensure that there is a diskette in the drive and that the drive door is closed.
Valid COS range must be entered before COS print is initiated	Before a print operation can occur, a valid COS range must be entered (1 to 50). Refer to Form 03, COS Define.
Valid TRK CCT DESC range must be entered before print is initiated	This error occurs in Form 31, CDE Data Print. The valid Trunk Circuit Descriptor range is 1 to 25.
Verified account codes system option must be enabled first.	In Form 32, Account Code Entry, the Account Code can only be modified if System Option 05, Verified Account Codes is enabled. Refer to Form 04, System Options/System Timers.

SX-200® DIGITAL

PRIVATE AUTOMATIC BRANCH EXCHANGE (PABX)

SYSTEM TEST PROCEDURES

CONTENTS   PAGE

LIST OF CHARTS (CONT'D)

1. INTRODUCTION

General

1.01 This Section details the system tests to be performed after the system installation (refer to Section MITL9108-093-200-NA, Installation) and programming (refer to Section MITL9108-093-210-NA, Customer Data Entry) have been completed. Upon completion of the tests detailed in this Section, all programming system options and features will have been verified.

Reason for Reissue

1.02 This Section has been reissued to provide procedures for systematically testing the SX-200® DIGITAL PABX features and options, in 336-port and 480-port configurations.

SUPERSET 3™ and SUPERSET 4™ Sets

1.03 The SUPERSET 3™ and SUPERSET 4™ sets are similar to standard telephones in that all are subject to Class-of-Service limitations. To ensure that all Class-of-Service-related features are activated it is only necessary to perform the system tests for that particular Class of Service at a standard telephone. To test the actual functionality of the SUPERSET® sets, refer to Section MITL9108-093-106-NA, SUPERSET 3™ Set Information, and Section MITL9108-093-107-NA, SUPERSET 4™ Set Information.

Section Overview

1.04 This Section consists of a series of tests of the system and provides a system confidence check on individual features. The Section is divided into a number of parts, each of which deals with a specific area or function. These are:

- Maintenance Terminal Commands

- Alarm System Tests

- Station Features

- Attendant Console Features

- Customer Feature Tests.

Test Equipment

1.05 System tests are designed to be carried out without specialized test equipment.

Associated Sections

1.06 The following Sections are also associated with system tests:

- MITL9108-093-200-NA, Shipping, Receiving, and Installation
- MITL9108-093-206-NA, Installation Forms
- MITL9108-093-315-NA, Attendant Console Description
- MITL9108-093-350-NA, Troubleshooting
- MITL9108-093-351-NA, RS-232 Maintenance Terminal.

Initial System State

1.07 Before beginning system testing, the SX-200® DIGITAL PABX must have been installed and tested to verify correct operation from a hardware standpoint.

1.08 Ensure the Maintenance Terminal and a printer have been installed and function correctly.

1.09 Ensure the SX-200® DIGITAL PABX is programmed with Customer Data appropriate to the installation. Failure to program the PABX with Customer Data will prevent full testing of the system. For information concerning Customer Data Entry, refer to Sections MITL9108-093-206-NA, Installation Forms, and MITL9108-093-210-NA, Customer Data Entry.

1.10 Maintenance Terminal commands must be entered in accordance with the procedures detailed in Section MITL9108-093-351-NA, RS-232 Maintenance Terminal.

1.11 Ensure stations (extensions) and Attendant Consoles have the appropriate Class of Service allocated to them for the test involved. The tests performed must be appropriate to the system installed.

1.12 Ensure the Maintenance Terminal, Attendant Consoles, and installed cards do not indicate any CRITICAL, MAJOR or MINOR alarms. If alarm conditions exist, refer to Section MITL9108-093-350-NA, Troubleshooting.

1.13 Ensure that Maintenance and Customer Data Entry are currently not accessed by any user.

2. MAINTENANCE TERMINAL COMMAND VERIFICATION

General

2.01 Successful completion of the following tests will confirm that the Maintenance Terminal has been correctly installed and can access the SX-200® DIGITAL PABX to perform directed diagnostic and maintenance commands satisfactorily for each of the different levels of entry. Section MITL9108-093-351-NA, RS-232 Maintenance Terminal, is required for reference during these tests.

Note: In verifying the functions available at the Maintenance Terminal, it is possible that system-generated messages unrelated to the tests being performed will appear at the Maintenance Terminal. These messages do not affect the outcome of the tests, and should be disregarded for the duration of system tests.

System Access

2.02 There are five different levels of system access. Passwords for access by the various levels are programmable and alterable through Maintenance functions. Levels of access are shown in Table 2-1. Chart 2-1 describes the procedures to be followed to verify the correct operation of the system access facilities.

Maintenance Levels

2.03 There are several levels of maintenance functions available. These are: System Level, Diagnostics Level, Traffic Measurement Level, Logs Level, and Reports Level. The levels are accessed via softkeys from the Maintenance Menu. Various functions are available within each level. The following procedures test each function accessible within each level. Charts 2-1 through 2-11 test the System Level functions.

TABLE 2-1
SYSTEM ACCESS

ACCESS LEVEL	USERNAME	DEFAULT PASSWORD
Installer	INSTALLER	1000
Maintenance 2	MAINT2	
Maintenance 1	MAINT1	
Supervisor	SUPERVISOR	
Attendant	ATTENDANT	

CHART 2-1
LOGGING IN AND OUT OF THE SYSTEM

Step	Action	Verify
1	Ensure the terminal is connected and turned on.	Screen displays a flashing cursor.
2	Press RETURN twice.	Screen displays: 1 - VT-100 2 - TTY TYPE SELECT A TERMINAL TYPE:
3	Press 1, and RETURN	Screen displays: 1 - MAINTENANCE 2 - CDE 6 - QUIT SELECT AN APPLICATION (OR QUIT TO START OVER):
4	Press 1, and RETURN	System responds with: ENTER USERNAME:
5	Enter INSTALLER, and press RETURN	System responds with: PASSWORD:
6	Enter 1000, and press RETURN	The password does not appear on screen. The system responds with: PLEASE WAIT... if username and password has been correctly entered, or: Authorization Failure if username or password has been incorrectly entered. If Authorization Failure appears, return to Step 2, and repeat Steps 2 though 6. System clears screen, then draws the Maintenance menu.
7	Press 6 (QUIT softkey)	System responds with prompts to choose an application (Step 3). Go to Step 8.

CHART 2-1 (CONT'D)
LOGGING IN AND OUT OF THE SYSTEM

Step	Action	Verify
8	Press 2, and RETURN.	System responds with prompt for username.
9	Enter INSTALLER, and press RETURN.	System responds with prompt for password.
10	Enter 1000, and press RETURN.	System responds as in Step 6. If Authorization Failure appears, return to Step 1. Repeat Steps 1 to 3, then Steps 8 and 9. System clears screen, then draws the Customer Data Entry menu (FORMS).
11	Press 6 (QUIT softkey)	System responds with prompts to choose an application (Step 3).
12	Press 6, and RETURN.	System responds with: ...QUIT If passwords have been assigned to other levels of access (MAINT2, MAINT1, SUPERVISOR, ATTENDANT) return to Step 1 and repeat Steps 1 through 11 for each level of access. The softkeys displayed on the Maintenance menu will vary with each access level, permitting access to only those functions appropriate to the access level entered.

Setting System Date

2.04 System date may be set from the Maintenance Terminal. The new date will be reflected on the Maintenance Terminal display, the Attendant Console LCD display, and SUPERSET 4™ set LCD displays. Chart 2-2 shows the steps for testing setting of the system date.

CHART 2-2
SETTING SYSTEM DATE

Step	Action	Verify
1	Access MAINTENANCE application.	System responds by displaying Maintenance menu.
2	Press 1 (SYSTEM softkey).	Softkey prompts change. System Level is accessed.
3	Press 1 (SET softkey).	Command line responds with: SET and softkey prompts change.
4	Press 1 (DATE softkey).	Command line responds with: SET DATE enter Date DD/MM/YY and no softkey prompts are displayed.
5	Enter date according to displayed numeric format (e.g., enter 010585)	Command line displays digits as they are entered; day, month, and year, separated by / . Softkey prompts change to display ENTER and CANCEL commands.
6	Press 0 (ENTER softkey).	New date is displayed on system, Attendant Consoles, and SUPERSET 4™ sets. Note: The date is shown on the Maintenance Terminal and SUPERSET 4™ sets in the format: 1-MAY-85 and on Attendant Consoles in the format: WED. MAY 1, 1985 Softkey prompts change, returning to System Level format. Test completed.

Setting System Time

2.05 System time may be set from the Maintenance Terminal. The new time will be reflected on the Maintenance Terminal display, the Attendant Console LCD display, and the SUPERSET 4™ set LCD display. Chart 2-3 shows the steps for testing setting of system time.

CHART 2-3
SETTING SYSTEM TIME

Step	Action	Verify
1	Access MAINTENANCE application.	System responds by displaying Maintenance menu.
2	Press 1 (SYSTEM softkey).	Softkey prompts change. System Level is accessed.
3	Press 1 (SET softkey).	Command line responds with: SET and softkey prompts change.
4	Press 2 (TIME softkey).	Command line responds with: SET TIME enter Time HH:MM and softkeys are disabled.
5	Enter time in either 12- or 24-hour format.	Command line shows digits entered, and PM, ENTER and CANCEL softkeys are enabled.
6	Press 0 (ENTER softkey).	Command line clears, and new time is displayed. Softkey prompts return to system level functions.
7	Repeat Step 3 through Step 5.	Command line shows digits entered, and PM, ENTER and CANCEL softkeys are enabled.
8	Press 1 (PM softkey).	Command line shows: SET TIME XX:XX PM and ENTER and CANCEL softkeys are enabled.
9	Press 0 (ENTER softkey).	New time is displayed. Test completed.

Changing Passwords

2.06 Passwords may be changed by a user for his or her access level, and all lower access levels. At the INSTALLER access level, all passwords may be changed. Chart 2-4 shows the steps for testing changing passwords at the INSTALLER level. If a different access level is chosen, only those levels equal to or below the chosen level will be available for testing setting of passwords.

CHART 2-4
CHANGING PASSWORDS

Step	Action	Verify
1	Access MAINTENANCE application.	System responds by displaying Maintenance menu.
2	Press 1 (SYSTEM softkey).	Softkey prompts change. System Level is accessed.
3	Press 1 (SET softkey).	Command line responds with: SET and softkey prompts change.
4	Press 3 (PASSWORD softkey).	Command line responds with: SET PASSWORD and softkey prompts change.
5	Press 7 (INSTALLER softkey).	Command line responds with: SET PASSWORD INSTALLER and softkey prompts clear except for CANCEL and ENTER.
6	Press 0 (ENTER softkey).	Command line responds with: Enter Old Password then press RETURN: and no softkey prompts are displayed.

CHART 2-4 (CONT'D)
CHANGING PASSWORDS

Step	Action	Verify
7	Enter Installer level password and press RETURN.	Password is not displayed. Command line responds with: Enter New Password then press RETURN: if old password was correctly entered or: An invalid or incorrect password was entered if old password was incorrectly entered. If old password was correctly entered go to Step 8; if incorrectly entered, press 5 (CANCEL softkey) and go to Step 7.
8	Enter new Installer password and press RETURN.	Password is not displayed. Command line responds with: Enter New Password to verify then press RETURN:
9	Enter new Installer password again and press RETURN.	Password is not displayed. Command line clears and softkey prompts change to System Level format if password is verified. If password fails to verify, command line responds with: An invalid or incorrect password was entered. If password fails to verify, press 5 (CANCEL softkey) and go to Step 7.
10	Repeat Steps 3 through 9 for remaining levels of access (SUPERVISOR, MAINT1, MAINT2, ATTENDANT).	NOTE: When setting passwords for a lower level than the current level of access, the prompt "Enter old Password then press RETURN:" (as in step 6) will not appear. Instead the prompt to enter new password (as in step 7) appears immediately.
11	Press 6 (QUIT softkey) to return to Maintenance menu.	Test completed.

Setting Maintenance Terminal Port Baud Rate

2.07 The baud rate of the Maintenance Terminal port may be changed from the value set at the time of login. Any one of six baud rates may be chosen: 300, 600, 1200, 2400, 4800 or 9600 baud. Note that this operation changes the baud rate of the Maintenance Terminal port only; the baud rate of the terminal itself must be changed separately. Chart 2-5 shows the steps for testing changing of the Maintenance Terminal port baud rate.

CHART 2-5
SETTING MAINTENANCE TERMINAL PORT BAUD RATE

Step	Action	Verify
1	Access MAINTENANCE application.	System responds by displaying Maintenance menu.
2	Press 1 (SYSTEM softkey).	Softkey prompts change. System Level is accessed.
3	Press 1 (SET softkey).	Command line responds with: SET and softkey prompts change.
4	Press 4 (SPEED softkey).	Command line responds with: SET SPEED and softkey prompts change.
5	Press 1 (MAINT-PORT softkey).	Command line responds with: SET SPEED MAINT-PORT enter Speed then press RETURN: and no softkey prompts are displayed.
6	Enter an invalid baud rate; e.g., 8000, and press 0 (ENTER softkey).	Command line responds with: The value "8000" is invalid for SPEED.
7	Press 5 (CANCEL softkey).	Command line clears and softkey prompts return to System Level format.
8	Repeat Steps 3 through 5.	Command line displays: SET SPEED MAINT-PORT enter Speed then press RETURN:

CHART 2-5 (CONT'D)
SETTING MAINTENANCE TERMINAL PORT BAUD RATE

Step	Action	Verify
9	Enter a valid baud rate; e.g., 9600, and press 0 (ENTER softkey).	Command line responds with: Change terminal speed and press RETURN when ready. Go to Step 10.
10	Check to ensure terminal speed is the same value as the maintenance port; if different, change terminal speed to coincide with selected Maintenance Port value.	
11	Press RETURN.	Command line clears and softkey prompts return to System Level format.
12	Press 6 (QUIT softkey) to return to Maintenance menu.	Test completed.

Setting Printer Port Baud Rate

2.08 The baud rate of the Printer Port may be changed from its default value of 1200 baud. Any one of six baud rates may be chosen: 300, 600, 1200, 2400, 4800 or 9600 baud. Note that this operation changes the baud rate of the Printer Port only; the baud rate of the printer itself must be changed separately. Chart 2-6 shows the steps for testing changing of the Printer Port baud rate.

CHART 2-6
SETTING PRINTER PORT BAUD RATE

Step	Action	Verify
1	Access MAINTENANCE application.	System responds by displaying Maintenance menu.
2	Press 1 (SYSTEM softkey).	Softkey prompts change. System Level is accessed.
3	Press 1 (SET softkey).	Command line responds with: SET and softkey prompts change.
4	Press 4 (SPEED softkey).	Command line responds with: SET SPEED and softkey prompts change.
5	Press 2 (PRINTER-PORT softkey).	Command line responds with: SET SPEED PRINTER-PORT enter Speed then press RETURN: and no softkey prompts are displayed.
6	Enter an invalid baud rate; e.g., 8000, and press 0 (ENTER softkey).	Command line responds with: The value "8000" is invalid for SPEED
7	Press 5 (CANCEL softkey).	Command line clears, and softkey prompts return to System Level format.
8	Repeat Steps 3 through 5.	Command line displays: SET SPEED PRINTER-PORT enter Speed: Go to Step 9.

CHART 2-6 (CONT'D)
SETTING PRINTER PORT BAUD RATE

Step	Action	Verify
9	Enter a valid baud rate and press 0 (ENTER softkey).	Command line clears, and softkey prompts return to System Level format.
10	Ensure printer speed coincides with selected printer port speed. If speeds do not coincide, either change printer speed, or repeat Steps 8 and 9, selecting a printer port speed which coincides with the selected speed of the printer.	
11	Press 6 (QUIT softkey) to return to Maintenance menu.	Test completed.

Setting Print Device

2.09   The print device may be either the Maintenance Terminal, or a printer. Setting the print device allows information normally presented to the printer port to be routed to either of these devices. On system initialization, access is automatically set (i.e., the printer is the print device). Changing this default condition permits Maintenance logs, SMDR reports, and Traffic reports to be printed on the Maintenance Terminal. Chart 2-7 shows the steps for testing the setting of the print device.

CHART 2-7
SETTING PRINT DEVICE

Step	Action	Verify
1	Access MAINTENANCE application.	System responds by displaying Maintenance menu.
2	Press 1 (SYSTEM softkey).	Softkey prompts change. System Level is accessed.
3	Press 1 (SET softkey).	Command line responds with: SET and softkey prompts change.
4	Press 7 (PRINT-DEVICE softkey).	Command line responds with: SET PRINT-DEVICE and softkey prompts change.
5	Press 1 (MAINT-PORT softkey).	Command line responds with: SET PRINT-DEVICE MAINT-PORT and softkey prompts change.
6	Press 0 (ENTER softkey).	Command line clears, and softkey prompts return to System Level format. Any PRINT command now selected will result in reports appearing on the Maintenance Terminal, and not being sent to the printer.
7	Repeat Steps 3 through 6, selecting PRINTER-PORT softkey in Step 5, to reset print device to its default setting (i.e., printer).	
8	Press 6 (QUIT softkey) to return to Maintenance menu.	Test completed.

SHOW Command

2.10 The SHOW command, accessed from the System Level, can be used to display current parameters, namely system date, system time, Maintenance Port and Printer Port parameters, and system identity (including the current software load identification). Chart 2-8 shows the steps for testing the SHOW command.

CHART 2-8
SYSTEM LEVEL: SHOW COMMAND

Step	Action	Verify
1	Access MAINTENANCE application.	System responds by displaying Maintenance menu.
2	Press 1 (SYSTEM softkey).	Softkey prompts change. System Level is accessed.
3	Press 2 (SHOW softkey).	Command line responds with: SHOW and softkey prompts change.
4	Press 1 (DATE softkey).	Command line responds with: SHOW DATE and softkey prompts change.
5	Press 0 (ENTER softkey).	Command line clears and system date is displayed in maintenance display area. Softkey prompts return to System Level format.
6	Repeat Steps 3 through 5 for remaining parameters (TIME, DEVICE, IDENTITY, RESET_TIME). When testing DEVICE, test both device options (MAINT-PORT and PRINTER-PORT).	
7	Press 6 (QUIT softkey) to return to Maintenance menu	Test completed.

Database Copying

2.11 Customer Data may be copied from one floppy diskette to another for use as a backup source. When database copying takes place, only Customer Data is copied, not the system software. The diskette to which the data is being copied must already contain the system software. Chart 2-9 shows the steps for testing copying of the Customer Database.

CHART 2-9
SYSTEM LEVEL: DATABASE COPYING

Step	Action	Verify
1	Access MAINTENANCE application.	System responds by displaying Maintenance menu.
2	Press 1 (SYSTEM softkey).	Softkey prompts change. System Level is accessed.
3	Press 3 (COPY softkey).	Command line responds with: COPY and softkey prompts change.
4	Press 1 (DATABASE softkey).	Command line responds with: COPY DATABASE and softkey prompts change.
5	Press 0 (ENTER softkey).	Command line responds with: Reading database, please wait ... and then responds with: Insert new disk, close door and press CONTINUE and softkey prompts change.
6	Press 5 (CANCEL softkey).	Command line clears, display area shows message: Copy operation aborted and softkeys return to System Level format.
7	Repeat Steps 3 through 5.	Command line responds with: Insert new disk, close door and press CONTINUE and softkey prompts change. Go to Step 8.

CHART 2-9 (CONT'D)
SYSTEM LEVEL: DATABASE COPYING

Step	Action	Verify
8	Insert a disk containing system software but no Customer Data, then go to Step 9. OR Go to Step 9.	
9	Press 0 (CONTINUE softkey).	Command line displays message: Writing database, please wait ... System copies Customer Data to disk. When copy is complete, command line responds with: Copy successful. If upgrading then RESET – else press CANCEL to continue.
10	Press 5 (CANCEL softkey).	Softkey prompts return to System Level format.
11	Press 6 (QUIT softkey) to Maintenance menu.	Test completed.

MONITOR Command

2.12   The MONITOR command (accessed from the System Level
functions of the Maintenance Terminal) allows the user to mon-
itor the progress of system diagnostics as they are run, of main-
tenance logs as they occur, and of SMDR reports as they occur. For
further   information   regarding   these,   refer   to   Section
MITL9108-093-351-NA, RS-232 Maintenance Terminal. Chart 2-10
shows the steps for testing the MONITOR command.

CHART 2-10
SYSTEM LEVEL: MONITOR COMMAND

Step	Action	Verify
1	Access MAINTENANCE application.	System responds by displaying Maintenance menu.
2	Press 1 (SYSTEM softkey).	Softkey prompts change. System Level is accessed.
3	Press 4 (MONITOR softkey).	Command line responds with: MONITOR and softkey prompts change.
4	Press 1 (SMDR softkey).	Command line responds with: MONITOR SMDR and softkey prompts change.
5	Press 5 (CANCEL softkey).	Command line clears. Softkey prompts return to System Level format.
6	Repeat Steps 3 through 5 for each MONITOR function (DIAGNOSTICS, LOGS).	Command line clears. Refer to Section MITL9108-093-351-NA for the meaning of the displays and functions. (NOTE: For MONITOR LOGS, CANCEL softkey (Step 5) does not appear and softkey prompts return to System Level format.)
7	Press 6 (QUIT softkey) to return to Maintenance menu.	Test Completed.

STOP Command

2.13 The STOP command (accessed from the System Level) allows the user to stop the system monitoring of logs. For information regarding monitoring of logs, refer to MITL9108-093-351-NA, RS-232 Maintenance Terminal. Chart 2-11 shows the steps for testing the STOP command.

CHART 2-11
SYSTEM LEVEL: STOP COMMAND

Step	Action	Verify
1	Access MAINTENANCE application.	System responds by displaying Maintenance menu.
2	Press 1 (SYSTEM softkey).	Softkey prompts change. System Level is accessed.
3	Press 9 (STOP softkey).	Command line responds with: STOP MONITOR and softkey prompts change.
4	Press 7 (LOGS softkey).	Command line responds with: STOP MONITOR LOGS and softkey prompts change.
5	Press 0 (ENTER softkey).	Command line clears, and softkey prompts return to System Level format.
6	To reactivate logs monitor, press the following softkeys (refer to Chart 2-10): 4 (MONITOR softkey) 7 (LOGS softkey) 0 (ENTER softkey).	
7	Press 6 (QUIT softkey) to return to Maintenance menu.	Test completed.

Diagnostics

2.14   The Diagnostics Level (accessed from the Maintenance menu) allows the user to enable, schedule, and initiate system diagnostic testing, take equipment out of service, and return it to service. For further information regarding these, refer to Section MITL9108-093-351-NA, RS-232 Maintenance Terminal. Charts 2-12 through 2-16 show the steps for testing the Diagnostics Level commands.

CHART 2-12
DIAGNOSTICS LEVEL: TEST COMMAND

Step	Action	Verify
1	Access MAINTENANCE application.	System responds by displaying Maintenance menu.
2	Press 3 (DIAGNOSTICS softkey).	Softkey prompts change. Diagnostics Level is accessed.
3	Press 1 (TEST softkey).	Command line responds with: TEST and softkey prompts change.
4	Press 1(BAY/SLOT/CCT softkey).	Command line responds with: TEST enter Bay then press RETURN: and softkey prompts change.
5	Enter 01.	Command line responds with: TEST 01 enter Slot then press RETURN:
6	Enter 01.	Command line responds with: TEST 01 01 enter Circuit then press RETURN:
7	Enter 01.	Command line responds with: TEST 01 01 01 enter Sub-circuit then press RETURN:
8	Press RETURN.	Command line responds with: TEST 01 01 01 ** and softkey prompts change.

CHART 2-12 (CONT'D)
DIAGNOSTICS LEVEL: TEST COMMAND

Step	Action	Verify
9	Press 0 (ENTER softkey).	Command line clears, and the test command is displayed in the display area. If no cards are present in the Bay tested, no other action is seen, and softkey prompts return to the diagnostics level format. If an analog Bay is tested, the message:
		This function is not available for this device.
		appears and CANCEL softkey prompt is displayed. If a Bay/Slot/Circuit location is tested, a message in the format:
		TOTAL TESTS RUN = TOTAL TESTS FAILED = PLID TESTED = appears in the display area, and softkey prompts return to the Diagnostics Level format.
10	If necessary, press 5 (CANCEL). Press 1 (TEST softkey).	Command line responds with:
		TEST
		and softkey prompts change.
11	Press 2 (DEVICE TYPE softkey).	Softkey prompts change, displaying names of devices which can be tested:
		ONS, COTRUNK, RECEIVERS, JUNCTOR, PRINTER, and CONSOLE. DSP, EM, [COV, DID, OPS] displayed after pressing 0 (MORE_KEYS softkey).
12	Select a device type, then press 0 (ENTER softkey).	Test messages will appear in the display area. Refer to Section MITL9108-093-351-NA, RS-232 Maintenance Terminal, for further information.
		When test is completed, softkey prompts return to Diagnostics Level format. Go to Step 13.

CHART 2-12 (CONT'D)
DIAGNOSTICS LEVEL: TEST COMMAND

Step	Action	Verify
13	Repeat Steps 10 through 12 for remaining device types.	
14	Press 1 (TEST softkey).	Command line responds with: TEST and softkey prompts change.
15	Press 3 (EXT-NUM softkey).	Command line responds with: TEST EXT-NUM enter Ext. Number then press RETURN: and no softkey prompts are displayed.
16	Enter an extension number, press RETURN (if extension number is less than five digits) and press 0 (ENTER softkey).	Command line clears, and a test message appears in the display area in the format as given in Step 9, above. When test has been completed, softkey prompts return to Diagnostics Level format.
17	Press 6 (QUIT softkey) to return to Maintenance menu.	Test completed.

CHART 2-13
DIAGNOSTICS LEVEL: SHOW COMMAND

Step	Action	Verify
1	Access MAINTENANCE application.	System responds by displaying Maintenance menu.
2	Press 3 (DIAGNOSTICS softkey).	Softkey prompts change. Diagnostics Level is accessed.
3	Press 2 (SHOW softkey).	Command line responds with: SHOW and softkey prompts change.
4	Press 7 (SSET_ERRORS softkey).	Command line responds with: SHOW SSET_ERRORS
5	Press 0 (ENTER softkey).	A summary of SUPERSET 4™ set errors by physical location (bay/slot/circuit) and extension number appears in the display area. If no SUPERSET® cards are programmed, the message: No STATION or SUPERSET cards are programmed is displayed.
6	Press 0 (MORE_KEYS softkey).	The summary continues OR command line clears and softkey prompts return to Diagnostics Level format. Note: 5(CANCEL softkey) appears only when summary does not exceed the display area size.
7	Press 6 (QUIT softkey) to return to Maintenance menu.	Test completed.

CLEAR Command

2.15 The CLEAR command is the complementary command to the Diagnostics Level SHOW SSET_ERRORS command. Selecting this command results in prompts to clear SUPERSET 4™ set errors by location (bay/slot/circuit) or extension number, or simply to clear all SUPERSET 4™ set errors. Chart 2-14 shows the steps for testing the Diagnostics Level CLEAR command.

CHART 2-14
DIAGNOSTICS LEVEL: CLEAR COMMAND

Step	Action	Verify
1	Access MAINTENANCE application.	System responds by displaying Maintenance menu.
2	Press 3 (DIAGNOSTICS softkey).	Softkey prompts change. Diagnostics Level is accessed.
3	Press 3 (CLEAR softkey).	Command line responds with: CLEAR and softkey prompts change.
4	Press 7 (SSET_ERRORS softkey).	Command line responds with: CLEAR SSET_ERRORS and softkey prompts change.
5	Enter choice, either 1 (BAY/SLOT/CCT softkey), 3 (EXT-NUM softkey), or 4 (ALL softkey)	Command line prompts for appropriate information (i.e., Bay/Slot/Circuit or Extension Number).
6	Enter appropriate information and press RETURN; then press 0 (ENTER softkey).	A CLEAR SSET_ERRORS message appears in display area, and softkey prompts return to Diagnostics Level format. (NOTE: If 4 (ALL softkey) is pressed then softkey prompts change and 5 (CANCEL softkey), 8 (CONFIRM softkey) are displayed. Press 8 (CONFIRM softkey) followed by 0 (ENTER softkey) to clear all SSET_ERRORS).
7	Press 6 (QUIT softkey) to return to Maintenance menu.	Test completed

Accessing Enabling and Disabling of Diagnostic Functions

2.16 The MORE_KEYS command is used in the Diagnostics Level to access the enabling and disabling of diagnostics functions (either Power-up or Background diagnostics), removing equipment from service, or returning equipment to service. When the Diagnostics Level softkeys are displayed, press 0 (MORE_KEYS) to access these functions. Chart 2-15 shows the steps for testing enabling and disabling of diagnostic functions. Chart 2-16 shows the steps for testing the removal from service and return to service functions.

CHART 2-15
DIAGNOSTICS LEVEL: ENABLING AND DISABLING DIAGNOSTICS

Step	Action	Verify
1	Access MAINTENANCE application.	System responds by displaying Maintenance menu.
2	Press 3 (DIAGNOSTICS softkey).	Softkey prompts change. Diagnostics Level is accessed.
3	Press 0 (MORE_KEYS softkey).	Softkey prompts change.
4	Press 2 (ENABLE-DIAG softkey).	Command line responds with: ENABLE-DIAG . and softkey prompts change.
5	Press 1 (BACKGROUND softkey).	Command line responds with: ENABLE-DIAG BACKGROUND and softkey prompts change, displaying Background Diagnostics choices: BAY/SLOT/CCT, DEVICE TYPE, or EXT-NUM.
6	Select Background Diagnostics qualifier, by pressing either 1 (BAY/SLOT/CCT), 2 (DEVICE TYPE), or 3 (EXT-NUM).	System prompts for input, and no softkeys are displayed.
7	Enter required information (press RETURN if required after entry) and press 0 (ENTER softkey).	Background Diagnostics enabled message appears in display area. The selected diagnostics are enabled. Softkey prompts return to Diagnostics Level format. Go to Step 8.

CHART 2-15 (CONT'D)
DIAGNOSTICS LEVEL: ENABLING AND DISABLING DIAGNOSTICS

Step	Action	Verify
8	Press 7 (DISABLE-DIAG softkey).	Command line responds with: DISABLE-DIAG and softkey prompts change.
9	Press 1 (BACKGROUND softkey.	Command line responds with: DISABLE-DIAG BACKGROUND and softkeys change, as in Step 5.
10	Repeat Steps 6 and 7.	Background Diagnostics disable message appears in display area. The selected diagnostics are disabled. Softkey prompts return to Diagnostics Level format.
11	Repeat for POWER-UP diagnostics.	
12	Press 6 (QUIT softkey) to return to Maintenance menu.	Test completed.

CHART 2-16
REMOVING EQUIPMENT FROM AND RETURNING EQUIPMENT TO SERVICE

Step	Action	Verify
1	Access MAINTENANCE application.	System responds by displaying Maintenance menu.
2	Press 3 (DIAGNOSTICS softkey).	Softkey prompts change. Diagnostics Level is accessed.
3	Press 0 (MORE_KEYS softkey).	Softkey prompts change.
4	Press 3 (BUSY-OUT softkey).	Command line responds with: BUSY-OUT and softkey prompts change.
5	Select qualifier, by pressing either 1 (BAY/SLOT/CCT), 2 (DEVICE TYPE) , or 3 (EXT-NUM).	System prompts for input, and no softkey prompts are displayed.
6	Enter required information (press RETURN if required after entry) and press 0 (ENTER softkey).	Busy-out message appears in display area. The selected equipment is removed from service.
7	Press 5 (CANCEL softkey).	Softkey prompts return to Diagnostics Level format.
8	Press 8 (RET-TO-SVC softkey).	Command line responds with: RET-TO-SVC and softkey prompts change.
9	Repeat Steps 5 through 7 for same device.	Return To Service message appears in display area. The selected equipment is returned to service. Softkey prompts return to Diagnostics Level format.
10	Press 6 (QUIT softkey) to return to Maintenance menu.	Test completed.

Traffic Measurement

2.17 The Traffic Measurement Level (accessed from the Maintenance menu of the Maintenance Terminal) allows the user to SET and SHOW, Traffic Measurement parameters, and PRINT and READ Traffic Measurement reports from the Maintenance Terminal. Chart 2-17 shows the steps for testing the Traffic Measurement Level.

CHART 2-17
TRAFFIC MEASUREMENT

Step	Action	Verify
1	Access MAINTENANCE application.	System responds by displaying Maintenance menu.
2	Press 5 (TRAFFIC MEAS softkey).	Softkey prompts change. Traffic Measurement Level is accessed.
3	Press 1 (SET softkey).	Command line responds with: SET and softkey prompts change.
4	Select a SET qualifier (UNITS, PERIOD, DURATION, AUTOPRINT, START TIME, or CONDENSED softkeys).	Command line prompts for information to be input, and softkey prompts change.
5	Enter appropriate information, either by pressing the required softkey, or by entering the required digits, then pressing ENTER.	Display area displays parameter set, and softkey prompts return to Traffic Measurement Level format.
6	Repeat Steps 4 and 5 for remaining SET qualifiers.	
7	Press 2 (SHOW softkey).	Command line responds with: SHOW and softkey prompts change.
8	Press 3 (STATUS softkey).	Command line responds with: SHOW STATUS TM and softkey prompts change. Go to Step 9.

CHART 2-17 (CONT'D)
TRAFFIC MEASUREMENT

Step	Action	Verify
9	Press 0 (ENTER softkey).	Command line clears, and display area displays Traffic Measurement status, measurement units, period, duration, autoprint status, and condensed report status. Softkey prompts return to Traffic Measurement Level format.
10	Press 3 (PRINT softkey).	Command line responds with: PRINT TRAFFRPT ALL and softkey prompts change.
11	Press 0 (ENTER softkey).	Command line clears, softkey prompts return to Traffic Measurement Level format, display area displays PRINT TRAFFRPT ALL message, and traffic report is printed on the printer or Maintenance Terminal, depending on which device has been set.
12	Press 4 (READ softkey).	Command line responds with: READ TRAFFRPT ALL and softkey prompts change.
13	Press 0 (ENTER softkey).	Command line clears, softkey prompts return to Traffic Measurement Level format. The message: ***** No Traffic Report Available ***** appears in display area if no reports are available. Otherwise, traffic reports appear in display area.
14	Press 9 (STOP softkey).	Command line responds with: STOP and softkey prompts change. Go to Step 15.

CHART 2-17 (CONT'D)
TRAFFIC MEASUREMENT

Step	Action	Verify
15	Press 1 (TRAFFRPT softkey).	Command line responds with: STOP TRAFFRPT and softkey prompts change.
16	Press 0 (ENTER softkey).	Command line clears, STOP TRAFFRPT message appears in display area, traffic reports are halted, and softkey prompts return to Traffic Measurement Level format.
17	Repeat Step 14.	
18	Press 3 (PRINT softkey).	Command line responds with: STOP PRINT TM and softkey prompts change.
19	Press 0 (ENTER softkey).	Command line clears. STOP PRINT TM message appears in display area. Softkey prompts return to Traffic Measurement Level format.
20	Press 6 (QUIT softkey) to return to Maintenance menu.	Test completed.

Logs

2.18 The Logs Level (accessed from the Maintenance menu of the Maintenance Terminal) allows the user to read, print, and delete maintenance log entries made by the system. Log entries consist of anything which affects the functioning of the system, such as failed circuits, removed or installed cards, and Bay resets. Chart 2-18 shows the steps for testing the Logs Level.

CHART 2-18
LOGS LEVEL

Step	Action	Verify
1	Access MAINTENANCE application.	System responds by displaying Maintenance menu.
2	Press 7 (LOGS softkey).	Softkey prompts change. Logs Level is accessed.
3	Press 1 (SET softkey).	Command line responds with: SET and softkey prompts change.
4	Press 1 (PRINT-DEVICE softkey).	Command line responds with: SET PRINT-DEVICE and softkey prompts change.
5	Select a print device (MAINT-PORT softkey) 1 or 2 (PRINTER-PORT softkey).	System responds as in Chart 2-7. Log entries will be directed to the selected print device. Softkey prompts return to Logs Level format.
6	Press 1 (SET softkey).	As in Step 3.
7	Press 4 (AUTOPRINT softkey).	Command line responds with: SET AUTOPRINT LOGS and softkey prompts change.
8	Press 1 (ON softkey).	Command line responds with: SET AUTOPRINT LOGS ON and softkey prompts change.
9	Press 0 (ENTER softkey).	Command line clears, SET AUTOPRINT LOGS ON message appears in display area, and softkey prompts return to Logs Level format. Log entries will be printed on the printer as they occur.

CHART 2-18 (CONT'D)
LOGS LEVEL

Step	Action	Verify
10	Repeat Steps 6 and 7.	As in Step 7. Go to Step 11.
11	Press 2 (OFF softkey).	Command line responds with: SET AUTOPRINT LOGS OFF and softkey prompts change.
12	Press 0 (ENTER softkey).	Command line clears, SET AUTOPRINT LOGS OFF message appears in display area, and softkey prompts return to Logs Level format. Autoprint is disabled.
13	Press 2 (READ softkey).	Command line responds with: READ LOGS and softkey prompts change.
14	Select READ LOGS qualifier by pressing 1 (NEWEST softkey), 2 (OLDEST softkey), or 4 (ALL softkey).	If NEWEST or OLDEST softkey pressed, command line responds with: enter Number Of Entries, then press RETURN:
15	If NEWEST or OLDEST softkeys pressed, enter number of entries desired (e.g., 5) either in the format 005 or 5. If entered as less than three digits, press RETURN.	Command line responds with: READ LOGS NEWEST 005 or READ LOGS OLDEST 005 or, if ALL softkey pressed, READ LOGS ALL
16	Press 0 (ENTER softkey).	Read Logs message appears in display area. Command line clears. Requested log entries scroll into display area. If more than four log entries are available, scrolling halts at end of fourth log entry.
17	If more than four log entries are available, press 0 (MORE softkey) to continue reading log entries, or 5 (CANCEL softkey) to cancel reading logs.	If MORE softkey pressed, next log entries scroll into display area. Scrolling halts at end of next four entries (or fewer, if no more entries are available). If CANCEL softkey pressed, command line clears, reading of logs is halted, and softkey prompts return to Logs Level format. Go to Step 18.

CHART 2-18 (CONT'D)
LOGS LEVEL

Step	Action	Verify
18	Generate a log entry by extracting then re-installing a voice card. DO NOT extract any of the following: • Main Control Card • Digital Interface Cards • Peripheral Control Cards • Scanner Cards	
	Repeat Steps 13-15, selecting NEWEST as the READ LOGS qualifier, and when instructed enter 002 to read the two newest log entries.	Command line responds with: READ LOGS NEWEST 002 and softkey prompts change.
19	Press 0 (ENTER softkey).	Newest log entries are displayed in display area, reporting card extraction and re-installation. Command line clears, and softkey prompts return to Logs Level format.
20	Press 3 (PRINT softkey).	Command line responds with: PRINT LOGS and softkey prompts change.
21	Select a PRINT LOGS qualifier by pressing either 1 (NEWEST softkey), 2 (OLDEST softkey), or 4 (ALL softkey).	Command line responds with either: PRINT LOGS NEWEST enter Number of Entries: or PRINT LOGS OLDEST enter Number of Entries: or PRINT LOGS ALL depending on which softkey was pressed, and softkey prompts change. Go to Step 22.

CHART 2-18 (CONT'D)
LOGS LEVEL

Step	Action	Verify
22	Press 0 (ENTER softkey). NOTE: Printing of logs can be halted at any time by pressing 9 (STOP softkey) and 0 (ENTER softkey).	Selected logs are printed on printer. Softkey prompts return to Logs Level format.
23	Press 4 (DELETE softkey).	Command line responds with: DELETE LOGS and softkey prompts change.
24	Select DELETE LOGS qualifier by pressing either 1 (NEWEST softkey) or 2 (OLDEST softkey) or 3 (ALL softkeys)	Command line responds with: DELETE LOGS NEWEST enter Number Of Entries, then press RETURN: or DELETE LOGS OLDEST enter Number Of Entries, then press RETURN: or DELETE LOGS ALL (CONFIRM softkey appears. Skip step 25.)
25	Enter number of entries to be deleted. NOTE: Once deleted, entries cannot be recovered. If a record of log entries is required, print logs to be deleted, prior to executing step 26.	Command line displays entries to be deleted, in the format: DELETE LOGS OLDEST 002
26	Press 0 (ENTER softkey). (Press 8 (CONFIRM softkey) followed by 0 (ENTER softkey) in case of DELETE LOGS ALL.)	Selected log entries are deleted. Command line clears. Softkey prompts return to Logs Level format. Verify log entries have been deleted by reading log entries (Steps 13-16, above).
27	Press 6 (QUIT softkey) to return to Maintenance menu.	Test completed.

Reports

2.19 The Reports Level (accessed from the Maintenance Menu of the Maintenance Terminal) allows the user to have various maintenance reports displayed. The types of reports available are: System Configuration, Alarm Status, Circuit Status, and SUPERSET 4™ Set Errors. For further information regarding these, refer to Section MITL9108-093-351-NA, RS-232 Maintenance Terminal. Chart 2-19 shows the steps for testing the Reports Level commands.

CHART 2-19
REPORTS

Step	Action	Verify
1	Access MAINTENANCE application.	System responds by displaying Maintenance menu.
2	Press 9 (REPORTS softkey).	Reports Level is accessed. Softkey prompts change.
3	Press 2 (SHOW softkey).	Command line responds with: SHOW and softkey prompts change.
4	Press 1 (CONFIG softkey).	Command line responds with: SHOW CONFIG and softkey prompts change.
5	Press one of the following: 1 (BAY/SLOT/CCT softkey), 3 (EXT-NUM softkey), or 4 (ALL softkey).	Command line responds with prompts for input corresponding to the qualifier selected (e.g., SHOW CONFIG enter Bay, then press RETURN: SHOW CONFIG EXT-NUM enter Ext: Number then press RETURN: or SHOW CONFIG ALL).
6	Enter required information.	Command line responds by displaying information as it is entered. NOTE: Depending on format chosen to enter information (e.g., 5 or 05) it may be necessary to press RETURN before prompts request next input.
7	Press 0 (ENTER softkey).	Screen updates. Requested report is displayed in display area. If the screen is full, press 0 (MORE softkey) to display more information or 5 (CANCEL softkey) to cancel the SHOW CONFIG Command. If CANCEL softkey pressed, command line clears. Softkey prompts return to Reports Level format (SHOW and QUIT softkeys displayed).

CHART 2-19 (CONT'D)
REPORTS

Step	Action	Verify
8	Repeat Steps 5 through 7 for remaining SHOW CONFIG qualifiers.	Go to Step 9.
9	Press 2 (SHOW softkey).	As in Step 3.
10	Press 2 (ALARMS softkey).	Command line responds with: SHOW ALARMS and softkey prompts change.
11	Select an ALARMS qualifier by pressing either 2 (DEVICE TYPE softkey) or 4 (ALL softkey).	Command line responds with: SHOW ALARMS or: SHOW ALARMS ALL and softkey prompts change.
12	If 2 was pressed in Step 11, select a DEVICE TYPE qualifier by pressing wither 1 (LINES softkey), 2 (TRUNKS softkey), or 3 (RECEIVERS softkey). If 4 was pressed in Step 11 (ALL softkey), select an ALL qualifier by pressing either 1 (BAY_NUM softkey) or 4 (ALL softkey).	Command line responds with: SHOW ALARMS LINES or: SHOW ALARMS TRUNKS or: SHOW ALARMS RECEIVERS if DEVICE TYPE was selected. If ALL was selected, and 1 (BAY_NUM softkey) was selected, command line responds with: SHOW ALARMS ALL BAY_NUM enter Bay # then press RETURN: or 4 (ALL softkey) was selected, Command line responds with: SHOW ALARMS ALL ALL

CHART 2-19 (CONT'D)
REPORTS

Step	Action	Verify
13	If a device type was selected in Step 12, select a location by pressing either 1 (BAY_NUM softkey) or 4 (ALL softkey). If ALL was selected in Step 12, go to Step 14.	Command line responds (for example) with: SHOW ALARMS LINES BAY_NUM enter Bay number then press RETURN: or: SHOW ALARMS LINES ALL and softkey prompts change. Go to Step 15.
14	Enter Bay number, if required.	Command line displays location as it is entered. Go to Step 16.
15	Enter Bay number, if required.	Command line displays Bay number as it is entered. Go to Step 16.
16	Press 0 (ENTER softkey).	Screen updates, and softkey prompts change. Requested report is displayed. CANCEL softkey is displayed. Press 5 (CANCEL softkey), then command line clears. Softkey prompts return to Reports Level format.
17	Press 2 (SHOW softkey).	Command line responds with: SHOW and softkey prompts change.
18	Press 3 (STATUS softkey).	Command line responds with: SHOW STATUS and softkey prompts change.
19	Select a STATUS qualifier by pressing 1 (BAY/SLOT/CCT softkey) or 3 (EXT-NUM softkey).	Command line responds with: SHOW STATUS enter Bay, then press RETURN; enter SLOT then press RETURN; enter CIRCUIT, then press RETURN; enter SUBCIRCUIT, then press RETURN; if 1 was pressed, or: SHOW STATUS EXT-NUM enter Ext. Number, then press RETURN: if 3 was pressed.

CHART 2-19 (CONT'D)
REPORTS

Step	Action	Verify
20	Enter required information, then press 0 (ENTER softkey).	Screen updates. Status of selected equipment is shown. Command line displays SHOW STATUS message. Softkey prompts change.
21	The equipment status report can be halted at any time by pressing 5 (CANCEL softkey).	Equipment status line of Maintenance Terminal display updates continuously.
22	Change status of selected equipment by taking off-hook, or returning on-hook.	Status line shows change in equipment status.
23	Press 5 (CANCEL softkey).	Status report halts, command line clears, and softkey prompts return to Reports Level format.
24	Press 2 (SHOW softkey).	As in Step 17.
25	Press 7 (SSET_ERRORS softkey).	Command line responds with: SHOW SSET_ERRORS and softkey prompts change.
26	Press 0 (ENTER softkey).	Screen updates. SUPERSET 4™ set errors are displayed. CANCEL softkey displayed. Press 5(CANCEL softkey), command line clears. Softkey prompts return to Reports Level format.
27	Press 2 (SHOW softkey)	As in Step 17.
28	Press 6 (channel-map softkey)	Command line responds with: SHOW CHANNEL-MAP. Softkey prompts change.
29	Press 1 (LOGICAL softkey) or 2 (PHYSICAL softkey)	Command line responds with: SHOW CHANNEL-MAP LOGICAL if 1 was pressed (Go to step 30) or: SHOW CHANNEL-MAP PHYSICAL if 2 was pressed (Go to step 32). Softkey prompts change.
30	Press 1 (CHANNEL-NUM softkey)	Command line responds with SHOW CHANNEL-MAP LOGICAL CHANNEL-NUM enter channel # then press RETURN:

CHART 2-19 (CONT'D)
REPORTS

Step	Action	Verify
31	Enter required information then press 0(ENTER softkey)	Screen updates. Channel map of selected logical channel # is displayed. CANCEL softkey is displayed. Go to step 34.
32	Press 1(LINK-NUMBER softkey)	Command line responds with: SHOW CHANNEL-MAP PHYSICAL LINK-NUMBER enter link # then press RETURN:
33	Enter required information then press 0(ENTER softkey)	Screen updates. Channel map of selected Physical link number is displayed. If the screen is full MORE softkey appears. Pressing 0(MORE softkey) updates the screen with more information. Softkey prompts change.
34	Press 5 (CANCEL softkey	Command line clears, and softkey prompts return to reports level format.
35	Press 6 (QUIT softkey) to return to Maintenance menu.	Test completed.

3. ALARM SYSTEM TESTS

General

3.01 Satisfactory completion of these tests confirms that the SX-200® Alarm System functions correctly. Alarms appear on the system in several ways: LED indications on individual cards; an alarm status message at the Maintenance Terminal; or an alarm status message on Attendant Consoles, when programmed to report alarms. The raising of an alarm also results in a flashing ALARM message appearing on Attendant Consoles. Canceling this message at the Attendant Console is not a solution to the problem which resulted in the alarm being raised. Cancellation of the message permits the Attendant Console to alert the Attendant to new alarms as they are raised.

3.02 Ensure the PABX is fully functional, and that no alarm conditions exist. If alarms are present, refer to Section MITL9108-093-350-NA, Troubleshooting, before carrying out Alarm System tests.

3.03 Chart 3-1 shows the steps for testing the SX-200® Alarm System.

CHART 3-1
ALARMS

Step	Action	Verify
1	Generate an alarm condition by busying out a line circuit.	Alarm status (displayed on Maintenance Terminal and, if programmed to do so, on Attendant Consoles) changes from NO ALARM to MINOR ALARM. Alarm LED on line card lights.
2	Return the busied line circuit to service.	Alarm status changes from MINOR ALARM to NO ALARM.
3	Busy enough line cards to exceed the major alarm threshold.	Alarm status changes from NO ALARM to MAJOR ALARM. Appropriate alarm LEDs light on line cards.
4	Return enough line cards to service to reduce the percentage of out-of-service cards to less than major alarm threshold value.	Alarm status changes from MAJOR to MINOR ALARM.
5	Return all line circuits to service.	Alarm status changes from MINOR to NO ALARM. Test complete.

Setting Alarm Threshold

3.04 The Alarm Threshold for either the system or one bay may be set from the Maintenance terminal or from the Console. The Alarm Threshold determines the percent quantity of devices that can be out of service before a Minor, or Major alarm is raised. (For critical alarm it is the absolute number of devices that can be out of service). Chart 3-2 shows how to set the Alarm Threshold.

CHART 3-2
SETTING ALARM THRESHOLD RATE

Step	Action	Verify
1	Access MAINTENANCE application	System responds by displaying Maintenance menu.
2	Press 1 (SYSTEM softkey)	Softkey prompts change. System level is accessed.
3	Press 1 (SET softkey)	Command line responds with SET and softkey prompts change.
4	Press 9 (ALARM_THRESH)	Command line responds with SET ALARM_THRESH and softkey prompts change.
5	Press 1 (SYSTEM softkey) or 2 (BAY softkey) (followed by BAY #) and 0 (ENTER softkey)	System responds with SET ALARM_THRESH SYSTEM or SET ALARM_THRESH BAY and the softkey prompts change to 1-LINES 2-TRUNKS 3-RECEIVERS 4-PCM_CHANNELS 5-CANCEL.
6	Press 1 (LINES softkey)	System responds with SET ALARM THRESHOLD - LINES Minor =
7	Enter percent threshold (2 digits) or (1 digit and RETURN)	System responds with SET ALARM'THRESHOLD - LINES Minor=xx, Major=
8	Enter percent threshold (2 digits) or (1 digit and RETURN)	System responds with SET ALARM THRESHOLD - Minor=xx, Major=xx, Critical=
9	Enter threshold (2 digits) OR (1 digit and RETURN)	System responds with SET ALARM THRESHOLD - Minor=xx, Major=xx, Cricital=xx
10	Press 0 (ENTER softkey)	
11	Repeat above steps to set other alarm thresholds or to set Bay thresholds	

4. STATION FEATURE TESTS

General

4.01 This Part describes the station tests for the SX-200® DIGITAL PABX. These tests are performed prior to the PABX being brought into service in order to verify the correct operation of the stations and the features associated with them. Refer to Section MITL9108-093-105-NA, Features Description, for details of the features tested.

4.02 Some of the features may be COS-restricted. Consequently, not all features may be accessed from all stations. Refer to the customer database (either by checking station COS levels at the Maintenance Terminal, or by referring to Section MITL9108-093-206-NA, Installation Forms) to determine which COS level is assigned to which stations, and to determine which COS options are enabled within each COS level.

4.03 Satisfactory completion of the station feature tests confirms that the stations have been installed and programmed correctly according to the instructions provided in Section MITL9108-093-206-NA, Installation Forms, and Section MITL9108-093-210-NA, Customer Data Entry, and that the features operate properly according to the features descriptions in Section MITL9108-093-105-NA, Features Description.

4.04 The tests performed in this Part cover the following features:

- Abbreviated Dial
- Broker's Call
- Call Forwarding (All Types)
- Call Hold
- Call Hold Retrieve (Local and Remote)
- Callback Busy
- Camp-on
- Conflict Dialing
- Dial Call Pickup
- Directed Call Pickup
- Do Not Disturb
- Extension Reset
- Flash for Attendant
- Hunt Groups
- Line Lockout
- Station Conference
- Station-to-Station Call
- Station Transfer.

4.05 Charts 4-1 through 4-19 show the steps for testing station features.

CHART 4-1
ABBREVIATED DIAL

Step	Action	Verify
1	Station "A" lifts handset.	Station "A" receives dial tone.
2	Station "A" dials the Abbreviated Dial Access Code and number.	Dial tone is removed on the first dialed digit. Following the last dialed digit, outpulsing may be heard (if the selected number is external). Ringback or busy tone is returned.
3	Return handset.	Test complete.

CHART 4-2
BROKER'S CALL

Step	Action	Verify
1	Station "A" lifts handset.	Dial tone is returned.
2	Station "A" dials station "B" directory number.	Station "B" rings. Ringback tone is heard at station "A".
3	Station "B" lifts handset.	Station "B" stops ringing. Ringback tone removed from station "A". Stations "A" and "B" are connected.
4	Station "A" flashes switchhook.	Station "A" receives Interrupted Dial Tone. Station "B" receives silence (Consultation Hold).
5	Station "A" dials station "C" and establishes a connection.	As above, Steps 2 and 3, except for stations "A" and "C".
6	Station "A" flashes switchhook.	Station "C" receives silence (Consultation Hold). Stations "A" and "B" are connected.
7	Station "A" flashes switchhook.	Station "B" receives silence (Consultation Hold). Stations "A" and "C" are connected.
8	Station "A" replaces handset.	Stations "B" and "C" are NOT connected together.
9	Station "A" lifts handset.	Station "C" receives silence, and goes to a locked-out condition if handset is not replaced. Station "B" receives ringback tone. Station "A" rings. Station "A" lifts handset. Station "A" and "B" are connected.
10	Replace all handsets.	Test completed.

CHART 4-3
CALL FORWARDING (ALL TYPES)

Step	Action	Verify
CALL FORWARDING - BUSY		
Part 1 - Testing activation of Call Forwarding - Busy		
1	Station "A" lifts handset.	Dial Tone returned.
2	Station "A" dials Call Forwarding - Busy access code, followed by station "C" directory number, then sets handset on-hook.	Dial Tone removed on first digit of access code dialed. Dial Tone returned after station "C" directory number has been entered. (Call Forwarding - Busy activated.)
3	Station "A" stays off-hook. Station "B" dials station "A" directory number.	Station "B" receives Ringback Tone. Station "C" rings.
4	Station "C" lifts handset.	Station "C" stops ringing. Ringback Tone removed from station "B". Stations "B" and "C" are connected.
5	All stations replace handsets.	Part 1 completed.
Part 2 - Testing deactivation of Call Forwarding - Busy		
1	Station "A" lifts handset, dials any Call Forwarding access code and goes on-hook.	Dial tone removed on first digit of access code dialed. (Call Forwarding deactivated.)
2	Station "A" lifts handset. Station "B" dials station "A" directory number.	Station "A" receives Dial Tone. Station "B" receives Busy Tone.
3	Replace all handsets.	Test completed.

CHART 4-3 (CONT'D)
CALL FORWARDING (ALL TYPES)

Step	Action	Verify
CALL FORWARDING – NO ANSWER		
Part 1 – Testing activation of Call Forwarding – No Answer		
1	Station "A" lifts handset.	Dial Tone returned.
2	Station "A" dials Call Forwarding – no Answer Access Code, followed by station "C" directory number, then sets handset on-hook.	Dial Tone removed on first digit of access code dialed. Dial Tone returned after last digit of station "C" directory number. (Call Forwarding – No Answer activated.)
3	Station "B" dials station "A" directory number.	Station "B" receives Ringback Tone. Station "A" rings for two ringing cycles. Station "A" stops ringing and station "C" rings.
4	Station "C" goes off-hook.	Station "C" stops ringing and Ringback Tone is removed from station "B". Stations "B" and "C" are connected together.
5	Set handsets on-hook.	Part 1 completed.
Part 2 – Testing deactivation of Call Forwarding – No Answer		
1	Station "A" lifts handset and dials any Call Forwarding Access Code and hangs up.	Dial Tone removed after first digit of access code dialed. (Call Forwarding – No Answer deactivated.)
2	Station "B" dials station "A" directory number. Allow station "A" to ring for more than two ringing cycles.	Station "A" rings; station "B" receives Ringback Tone.
3	Station "A" goes off-hook.	Station "A" stops ringing; Ringback Tone removed from station "B". Stations "A" and "B" are connected together.
4	Set handsets on-hook.	Test completed.

CHART 4-3 (CONT'D)
CALL FORWARDING (ALL TYPES)

Step	Action	Verify
CALL FORWARDING - BUSY/NO ANSWER		
Part 1 - Testing activation of Call Forwarding - Busy/No Answer		
1	Station "A" lifts handset.	Dial Tone returned.
2	Station "A" dials Call Forwarding - Busy/No Answer access code, followed by Station "C" directory number, and remains off-hook.	Dial Tone removed on first digit of access code dialed. Dial Tone returned after last digit of Station "C" directory number. (Call Forwarding - Busy/No Answer activated.)
3	Station "B" dials Station "A" directory number.	Station "B" receives Ringback Tone. Station "C" rings.
4	Station "C" lifts handset.	Stations "B" and "C" are connected.
5	All stations replace handsets. Station "B" dials Station "A".	Station "B" receives Ringback Tone. Station "A" rings twice, then stops ringing. Station "C" rings.
6	Station "C" lifts handset.	Stations "B" and "C" are connected.
7	Replace handsets.	Part 1 completed.
Part 2 - Testing deactivation of Call Forwarding - Busy/No Answer		
1	Station "A" lifts handset and dials any Call Forwarding access code, then hangs up.	Dial Tone removed after first digit of access code dialed. (Call Forwarding - Busy/No Answer deactivated.)
2	Station "B" dials Station "A". Allow Station "A" to ring for more than two ringing cycles.	Station "A" rings. Station "B" receives Ringback Tone. Station "C" does not ring (call not forwarded to Station "C").
3	Station "B" goes on-hook.	Station "A" stops ringing.
4	Station "A" lifts handset, and Station "B" dials Station "A".	Station "A" receives Dial Tone. Station "B" receives Busy Tone.
5	Replace all handsets.	Test completed.

CHART 4-3 (CONT'D)
CALL FORWARDING (ALL TYPES)

Step	Action	Verify
CALL FORWARDING – FOLLOW ME		
Part 1 – Testing activation of Call Forwarding – Follow Me		
1	Station "A" lifts handset.	Dial Tone returned.
2	Station "A" dials Call Forwarding – Follow Me Access Code, followed by station "C" directory number, then sets handset on-hook.	Dial Tone removed on first digit of access code dialed. Dial Tone returned after station "C" directory number has been dialed. (Call Forwarding – Follow Me activated.)
3	Station "B" lifts handset.	Dial Tone returned.
4	Station "B" dials station "A" directory number.	Station "B" receives Ringback Tone. Station "C" rings.
5	Station "C" goes off-hook.	Station "C" stops ringing. Ringback Tone removed from station "B". Stations "B" and "C" are connected together.
6	Set handsets on-hook.	Part 1 completed.
Part 2 – Testing deactivation of Call Forwarding – Follow Me		
1	Station "A" lifts handset.	Interrupted Dial Tone returned.
2	Station "A" dials any Call Forwarding Access Code, then sets handset on-hook.	Dial Tone removed on first digit of access code dialed.
3	Station "B" dials station "A" directory number and Station "A" lifts handset.	Station "A" rings. Station "B" receives Ringback Tone. When station "A" lifts handset, stations "A" and "B" are connected together.
4	Set handsets on-hook.	Test completed.

CHART 4-3 (CONT'D)
CALL FORWARDING (ALL TYPES)

Step	Action	Verify
CALL FORWARDING - I'M HERE		
Part 1 - Testing activation of Call Forwarding - I'm Here		
1	Station "B" lifts handset.	Dial Tone returned.
2	Station "B" dials Call Forwarding - I'm Here Access Code followed by station "A" directory number, then sets handset on-hook.	Dial Tone removed on first digit of access code dialed. Dial Tone returned after station "A" directory number dialed. (Call Forwarding - I'm Here activated.)
3	Station "C" lifts handset and dials station "A" directory number.	Station "C" receives Ringback Tone. Station "B" rings.
4	Station "B" lifts handset.	Station "B" stops ringing; Ringback Tone removed from station "C". Stations "B" and "C" are connected together.
5	Set handsets on-hook.	Part 1 completed.
Part 2 - Testing deactivation of Call Forwarding - I'm Here		
1	Station "A" lifts handset.	Interrupted Dial Tone returned.
2	Station "A" dials any Call Forwarding Access Code, then sets handset on-hook.	Dial Tone removed on first digit of access code dialed. (Call Forwarding - I'm Here deactivated.)
3	Station "C" lifts handset and dials station "A" directory number.	Station "C" receives Ringback Tone; station "A" rings.
4	Station "A" lifts handset.	Station "C" and station "A" are connected together.
5	Set handsets on-hook.	Test completed.

CHART 4-3 (CONT'D)
CALL FORWARDING (ALL TYPES)

Step	Action	Verify
CALL FORWARDING - EXTERNAL		
Part 1 - Testing activation of Call Forwarding - External		
1	At Attendant Console, program a number external to the PABX as an Abbreviated Dialing number.	Refer to Section MITL9108-093-315-NA, Attendant Console Description, for information regarding programming of Abbreviated Dialing numbers at the Attendant Console.
2	Station "A" lifts handset.	Dial Tone returned.
3	Station "A" dials a Call Forwarding Access Code, followed by Abbreviated Dialing access code and entry number.	Dial Tone removed on first digit of access code dialed. Dial Tone returns after last digit of Abbreviated Dialing entry number.
4	Station "A" sets handset on-hook.	
5	Station "A" remains on-hook if Call Forwarding - No Answer, Call Forwarding - Busy/No Answer, or Call Forwarding - Follow Me selected. Station "A" establishes a call to station "C" if Call Forwarding - Busy selected.	
6	Station "B" dials station "A" directory number.	Station "B" receives Ringback Tone. Station "B" is routed to external number. External number rings. Station "B" receives external call ringback (or Busy Tone, if external number is off-hook).
7	External line goes off-hook.	Station "B" and external number are connected together.
8	External line and station "B" set handsets on-hook.	Part 1 completed. Go to Part 2.

CHART 4-3 (CONT'D)
CALL FORWARDING (ALL TYPES)

Step	Action	Verify
CALL FORWARDING – EXTERNAL		
Part 2 – Testing Deactivation of Call Forwarding – External		
1	Station "A" lifts handset.	Dial Tone returned.
2	Station "A" dials any call Forwarding Access Code, then sets handset on-hook.	Dial Tone removed on first digit of access code dialed. (Call Forwarding deactivated.)
3	Station "B" lifts handset then dials station "A" directory number.	Station "A" rings. Station "B" receives Ringback Tone.
4	Station "A" lifts handset.	Station "A" and station "B" are connected together.
5	Set handsets on-hook.	Test completed.

CHART 4-4
CALL HOLD

Step	Action	Verify
1	Station "A" lifts handset, dials station "B" directory number, and establishes a connection.	Dial Tone returned on first dialed digit. Ringback Tone heard at station "A" after station "B" directory number dialed, and station "B" rings. Connection established when station "B" goes off-hook.
2	Station "A" flashes switchhook.	Station "A" receives Transfer Dial Tone, station "B" hears Music On Hold if provided, or silence. (Station "B" is on Consultation Hold.)
3	Station "A" dials Call Hold Access Code.	Transfer Dial Tone is removed from station "A" on first digit of access code dialed, and returns when dialing completed. (Station "B" is on Call Hold.)
4	Station "A" sets handset on-hook.	Station "A" is free to make or receive calls.
5	Station "A" lifts handset.	Dial Tone returned.
6	Station "A" dials Call Hold Local Retrieve Access Code.	Dial Tone removed on first digit of access code dialed. Station "A" and station "B" are connected together.
7	Set handsets on-hook.	Test completed.

CHART 4-5
CALL HOLD RETRIEVE (LOCAL AND REMOTE)

Step	Action	Verify
CALL HOLD RETRIEVE - LOCAL		
1	Station "A" establishes a call to station "B".	Station "A" and station "B" are connected together.
2	Station "A" places station "B" on Call Hold (see Chart 4-4).	Station "B" hears Music on Hold, if provided, or silence. Station "A" receives Dial Tone, and is free to make or receive calls.
3	Station "A" dials Call Hold Local Retrieve Access Code.	Station "A" and station "B" are connected together.
4	Set all handsets on-hook.	Test completed.
CALL HOLD RETRIEVE - REMOTE		
1	Repeat Steps 1 and 2 above (CALL HOLD RETRIEVE - LOCAL).	As above, in Step 2.
2	Station "A" sets handset on-hook.	
3	Station "C" lifts handset, dials Call Hold Remote Retrieve Access Code, followed by station "A" directory number.	Dial Tone is removed from station "C" on first digit of access code dialed. Stations "C" and "B" are connected together after last digit of station "A" directory number dialed. Station "A" is free to make or receive calls.
4	Set all handsets on-hook.	Test completed.

CHART 4-6
CALLBACK BUSY

Step	Action	Verify
1	Stations "A" and "B" go off-hook, and station "A" dials station "B" directory number.	Station "A" receives Busy Tone.
2	Station "A" dials Callback Busy Access Code.	Station "A" receives Dial Tone when dialing of access code completed.
3	Station "A" then station "B" set handsets on-hook.	Station "A" rings.
4	Station "A" lifts handset.	Station "A" receives Ringback Tone. Station "B" rings.
5	Station "B" lifts handset.	Station "A" and station "B" are connected together.
6	Set handsets on-hook.	Test completed.

CHART 4-7
CAMP-ON

Step	Action	Verify
1	Station "A" dials station "B" and establishes a call.	Station "A" and station "B" are connected together.
2	Station "C" goes off-hook and dials station "A" directory number.	Station "C" receives Busy Tone.
3	Station "C" remains off-hook for 10 seconds.	Busy Tone at station "C" changes. Station "A" receives Camp-on Warning Tone.
4	Stations "A" and "B" go on-hook.	Station "A" is rung.
5	Station "A" goes off-hook.	Stations "A" and "C" are connected together.
6	Set handsets on-hook.	Test completed.

Conflict Dialing

4.06 For this test, ensure that two stations are programmed with conflicting numbers (for example: 123, and 1234). After a CDE-programmed time-out period, the system resolves the conflicting numbers. Assign the 3-digit extension number to station "B", and the 4-digit extension number to station "C".

CHART 4-8
CONFLICT DIALING

Step	Action	Verify
1	Station "A" lifts handset, and dials a 3-digit directory number (station "B").	Dial Tone returned. Dial Tone removed after first digit of directory number dialed.
2	System waits the programmed time-out period, then rings station "B".	Station "A" receives Ringback Tone. Station "B" rings.
3	Station "B" goes off-hook.	Station "A" and station "B" are connected together.
4	Set handsets on-hook.	
5	Station "A" lifts handset, and dials a 4-digit directory number (station "C").	Dial Tone returned. Dial Tone removed after first digit of directory number dialed.
6	Station "C" rings.	Station "A" receives Ringback Tone. Station "C" rings.
7	Station "C" goes off-hook.	Station "A" and station "C" are connected together.
8	Set handsets on-hook.	Test completed.

Note: At no point during this test should stations "B" and "C" ring at the same time.

Dial Call Pickup

4.07 For this test, ensure that two of the three stations are in the same Pickup Group. Pickup Groups are programmed in CDE Form 10, PICKUP GROUPS.

CHART 4-9
DIAL CALL PICKUP

Step	Action	Verify
1	Station "C" lifts handset.	Dial Tone returned.
2	Station "C" dials station "B" directory number.	Station "C" receives Ringback Tone. Station "B" rings.
3	Station "A" lifts handset.	Dial Tone returned.
4	Station "A" dials Dial Call Pickup Access Code.	Dial Tone removed on first digit of access code dialed. Station "A" and "C" are connected together. Ringing removed from station "B".
5	Set handsets on-hook.	Test completed.

Note: Callbacks cannot be picked up by Dial Call Pickup.

CHART 4-10
DIRECTED CALL PICKUP

Step	Action	Verify
1	Station "A" lifts handset.	Dial Tone returned.
2	Station "A" dials station "B".	Station "A" receives Ringback Tone. Station "B" rings.
3	Station "C" lifts handset.	Dial Tone returned.
4	Station "C" dials Directed Call Pickup Access Code, followed by station "B" directory number.	Station "C" is connected to station "A" and ring is removed from station "B".
5	Set handsets on-hook.	Test completed.

CHART 4-11
DO NOT DISTURB

Step	Action	Verify
Part 1 – Setting Do Not Disturb		
1	Station "A" lifts handset.	Dial Tone returned.
2	Station "A" dials Do Not Disturb Access Code, followed by the digit 1.	Dial Tone removed on first digit of access code dialed. Dial Tone returned after digit 1 dialed.
3	Station "B" lifts handset.	Dial Tone returned.
4	Station "B" dials station "A" directory number.	Special Busy Tone returned after last digit dialed. Station "A" does not ring.
5	Station "B" sets handset on-hook.	Part 1 completed.
Part 2 – Canceling Do Not Disturb		
1	Station "A" lifts handset.	Station "A" receives Interrupted Dial Tone.
2	Station "A" dials Do Not Disturb Access Code, followed by the digit 2.	Dial Tone removed on first digit of access code dialed, and returned after digit 2 dialed.
3	Station "A" sets handset on-hook.	
4	Station "B" lifts handset.	Dial Tone returned.
5	Station "B" dials station "A" directory number.	Station "B" receives Ringback Tone. Station "A" rings.
6	Station "A" lifts handset.	Station "A" and station "B" are connected together. Ringback Tone removed from station "B". Ringing removed from station "A".
7	Set handsets on-hook.	Test completed.

Extension Reset (Clear All Features)

4.08 For this test, ensure that COS Option 221, Clear All Features, is enabled in the class of service of test station "A".

CHART 4-12
EXTENSION RESET (CLEAR ALL FEATURES)

Step	Action	Verify
1	Enable any type of Call Forwarding, and Do Not Disturb at station "A".	See Call Forwarding (All Types) and Do Not Disturb, above.
2	Station "A" lifts handset.	Interrupted Dial Tone returned. Station-to-station calls can be made at station "A" in the normal manner. Dialing can be done into Interrupted Dial Tone.
3	Station "A" dials the Clear All Features Access Code.	Dial Tone returned.
4	Station "A" sets handset on-hook.	
5	Station "B" dials station "A" directory number.	Station "B" receives Ringback Tone. Station "A" rings. (Do Not Disturb is disabled; Call Forwarding is disabled.)
6	Station "A" lifts handset.	Station "A" and station "B" are connected together.
7	Set handsets on-hook.	Test completed.

Flash For Attendant

4.09 For this test, ensure that COS Option 203, Broker's Call, is disabled, and that COS Option 224, Flash For Attendant, is enabled in the Class of Service of the test stations.

CHART 4-13
FLASH FOR ATTENDANT

Step	Action	Verify
1	Station "A" lifts handset.	Dial Tone returned.
2	Station "A" dials station "B" directory number.	Dial Tone removed on first digit dialed. Station "B" rings. Station "A" receives Ringback Tone.
3	Station "B" lifts handset.	Ringback Tone removed from station "A". Ringing removed from station "B". Stations "A" and "B" are connected together.
4	Station "A" flashes switchhook.	Attendant Console shows appearance of call waiting. Station "B" receives silence (Consultation Hold). Station "A" receives Ringback Tone.
5	Attendant answers call.	Station "A" and Attendant Console are connected together. Attendant is free to act on call.
6	Set handsets on-hook.	Test completed.

CHART 4-14
HUNT GROUPS (CIRCULAR)

Note: Stations "A", "B" and "C" are assumed to be in a circular hunt in the indicated order.

Step	Action	Verify
Part 1 - Testing Hunt Group Operation.		
1	Station "D" lifts handset.	Dial Tone returned.
2	Station "D" dials Hunt Group Access Code.	Station "A" rings. Station "D" receives Ringback Tone.
3	Station "A" answers.	Stations "A" and "D" are connected.
4	Set handsets on-hook.	
5	Repeat Steps 1 and 2.	Station "B" rings. Station "D" receives Ringback Tone.
6	Station "B" answers.	Stations "B" and "D" are connected.
7	Set handsets on-hook.	
8	Repeat Steps 1 and 2.	Station "C" rings. Station "D" receives Ringback Tone.
9	Station "C" answers.	Stations "C" and "D" are connected.
10	Set handsets on-hook.	Part 1 completed.

Step	Action	Verify
Part 2 - Testing Hunt Group for unwanted members.		
1	Stations "A", "B" and "C" lift handsets.	Dial Tone returned at each station.
2	Station "D" lifts handset and dials Hunt Group Access Code.	Busy Tone returned following last digit of access code dialed.
3	Set all handsets on-hook.	Test completed.

CHART 4-15
HUNT GROUPS (TERMINAL)

Note: Stations "A", "B" and "C" are assumed to be in a terminal hunt group, in the indicated order.

Step	Action	Verify
Part 1 – Testing Hunt Group Operation.		
1	Station "D" lifts handset.	Dial Tone returned.
2	Station "D" dials Hunt Group Access Code.	Station "A" rings. Station "D" receives Ringback Tone.
3	Station "A" answers.	Stations "A" and "D" are connected.
4	Set handsets on-hook.	
5	Repeat Steps 1 through 3.	As above.
6	Set all handsets on-hook.	Part 1 completed.
Part 2 – Testing that hunting goes beyond first station.		
1	Station "A" lifts handset.	Dial Tone returned.
2	Station "D" lifts handset and dials Hunt Group Access Code.	Station "B" rings. Station "D" receives Ringback Tone.
3	Station "B" lifts handset.	Station "B" and station "D" are connected together.
4	Set handsets on-hook.	Part 2 completed.
Part 3 – Testing Hunt Group for unwanted members.		
1	Stations "A" through "C" lift handsets.	Stations "A" through "C" receive Dial Tone.
2	Station "D" lifts handsets and dials Hunt Group Access Code.	Busy Tone returned after last digit of access code dialed.
3	Set handsets on-hook.	Test completed.

CHART 4-16
LINE LOCKOUT

Step	Action	Verify
1	Station "A" lifts handset.	Dial Tone returned.
2	Station "A" remains off-hook.	Dial Tone changes to Reorder Tone.
3	Station "A" continues to remain off-hook.	Reorder Tone replaced by silence. Station "A" is locked out. If COS Option 227, Lockout Alarm Applies is enabled, a minor alarm is reported at the Attendant Console.
4	Station "B" lifts handset.	Dial Tone returned.
5	Station "B" dials station "A" directory number.	Busy Tone returned.
6	Set handsets on-hook.	Test completed.

Station Conference

4.10 For this test, ensure that COS Option 302, Flash-in Conference, is enabled, and that COS Option 224, Flash For Attendant, is disabled in the Class of Service for the test stations.

CHART 4-17
STATION CONFERENCE

Step	Action	Verify
1	Station "A" lifts handset.	Dial Tone returned.
2	Station "A" dials station "B" directory number.	Station "B" rings. Station "A" receives Ringback Tone.
3	Station "B" lifts handset.	Station "A" and station "B" are connected together.
4	Station "A" flashes switchhook.	Station "A" receives Transfer Dial Tone. Station "B" receives Music On Hold, if provided, or silence. (Station "B" is on Consultation Hold.)
5	Station "A" dials station "C" directory number.	Station "A" receives Ringback Tone, and station "C" rings.
6	Station "C" lifts handset.	Station "A" and station "C" are connected together.
7	Station "A" flashes switchhook.	Stations "A", "B" and "C" are connected in conference.
8	Station "A", "B" or "C" repeats Steps 4 through 7.	New stations added into conference (maximum of five conferees).
9	Set all handsets on-hook.	Test completed.

CHART 4-18
STATION-TO-STATION CALL

Step	Action	Verify
1	Station "A" lifts handset.	Dial Tone returned.
2	Station "A" dials station "B" directory number.	Dial Tone removed on first digit dialed. Ringback Tone returned when dialing completed, if station "B" is on-hook. (If station "B" is off-hook, Busy Tone returned to station "A".)
3	Station "B" lifts handset.	Station "A" and station "B" are connected together.
4	Set handsets on-hook.	Test completed.

CHART 4-19
STATION TRANSFER

Step	Action	Verify
1	Station "A" lifts handset.	Dial Tone returned.
2	Station "A" dials station "B" directory number.	Dial Tone removed on first digit dialed. Station "A" receives Ringback Tone. Station "B" rings.
3	Station "B" lifts handset.	Station "A" and station "B" are connected together.
4	Station "B" flashes switchhook.	Station "A" receives Music On Hold, if provided, or silence. Station "B" receives Transfer Dial Tone.
5	Station "B" dials station "C" directory number.	Station "B" receives Ringback Tone. Station "C" rings.
6	Station "C" lifts handset.	Station "B" and station "C" are connected together.
7	Station "B" sets handset on-hook.	Station "C" and station "A" are connected together.
8	Set handsets on-hook.	Test completed.

5. ATTENDANT CONSOLE TESTS

General

5.01 This Part provides a series of tests to verify the operation of the SX-200® DIGITAL PABX Attendant Console. Refer to Section MITL9108-093-315-NA, Attendant Console Description, and Section MITL9108-093-105-NA, Features Description, for details on the features tested in this Part.

5.02 The features tested in this Part are:

- Answering Calls
- Originating Calls
- Call Hold and Retrieve
- Recall
- Serial Call
- Attendant-Controlled Conference
- Abbreviated Dial
- Do Not Disturb
- Override
- Flexible Night Service
- Trunk Busy Out Operation
- Message Waiting
- Attendant Call Forwarding
- Attendant Station Busy-out
- Attendant Direct Trunk Select
- Attendant DISA Code Setup
- Attendant Display of SUPERSET 4™ Set Messages
- Attendant Last Number Redial
- Attendant Night Switching
- System Identifier
- Maintenance and Customer Data Entry Applications.

5.03 Charts 5-1 through 5-21 show the steps for testing Attendant Console features.

CHART 5-1
ANSWERING CALLS

Step	Action	Verify
Part 1 – Internal Source		
1	Station "A" lifts handset.	Station "A" receives Dial Tone.
2	Station "A" dials the Attendant access code.	Dial Tone removed from station "A" and replaced by Ringback Tone. Attendant Console warbler sounds, and ANSWER LED flashes. INTERNAL softkey appears. Call Waiting indicator (C/W) shows one call waiting.
3	Attendant presses the ANSWER key.	Ringback Tone removed from station "A". Warbler stops. Call Waiting indicator shows 0 calls waiting. ANSWER LED is on. The SRC area is highlighted and returns data on station "A". Attendant Console and station "A" are connected together.
4	Attendant presses the RELEASE key.	Attendant Console returns to idle state. Attendant Console and station "A" are disconnected.
5	Set handsets on-hook.	Part 1 completed.
Part 2 – External Source		
1	Station "A" lifts handset.	Station "A" receives Dial Tone.
2	Station "A" accesses an outgoing trunk and dials the number of an incoming trunk.	Dial Tone removed on first digit dialed. Ringback Tone returned. Attendant Console warbler sounds. ANSWER LED flashes. Call Waiting indicator shows one call waiting. EXTERNAL softkey appears.
3	Attendant presses ANSWER key.	Station "A" and console are connected. The SRC display is highlighted and displays data on the incoming trunk. SERIAL CALL softkey appears. ANSWER LED is on.
4	Attendant presses the RELEASE key.	Attendant Console returns to the idle state. Station "A" and Attendant Console are disconnected.
5	Set handsets on-hook.	Test completed.

CHART 5-2
ORIGINATING CALLS

Step	Action	Verify
1	Attendant dials station "A" directory number.	Digits appear on LCD display in DST area as they are dialed. ANSWER LED lights. No softkey labels are displayed. Station "A" rings. Station "A" data is displayed. MSG WAITING and CALLBACK softkeys are displayed. DST area shows the message RINGING. Attendant Console receives Ringback Tone.
2	Station "A" answers.	Station "A" stops ringing. Ringback Tone removed from Attendant Console. NO DISTB and MSG WAITING softkeys are displayed. Station "A" and Attendant Console are connected together.
3	Attendant presses RELEASE key.	Station "A" and Attendant Console are disconnected. Attendant Console returns to idle display.
4	Set handsets on-hook.	Test completed.

CHART 5-3
CALL HOLD AND RETRIEVE

Step	Action	Verify
1	Station "A" lifts handset.	Dial Tone returned.
2	Station "A" dials Attendant Access Code.	See Chart 5-1.
3	Attendant presses HOLD 1 key.	Station "A" receives Music On Hold, if provided, or silence. The SRC area of the Attendant Console LCD is blanked. HOLD 1 LED is on. ANSWER LED is off.
4	Wait the time-out period.	HOLD 1 LED flashes. Warbler sounds with Attendant Console Recall Tone (one burst of tone for HOLD slot 1).
5	Press HOLD 1.	Call is retrieved. Station "A" and Attendant Console are connected together. HOLD 1 LED is off. ANSWER LED is on.
6	Press HOLD 2.	As above, in Step 3. HOLD 2 LED is on.
7	Wait the time-out period.	HOLD 2 LED flashes. Warbler sounds with Attendant Console Recall Tone (two bursts of tone for HOLD slot 2).
8	Press HOLD 2.	As above, in Step 5.
9	Press HOLD 4.	HOLD slots 4 through 8 are displayed as softkeys on LCD, along with the status of each hold slot (HOLD 4 through HOLD 8).
10	Press HOLD 6.	As above, in Step 3. HOLD 4 LED is on.
11	Wait the time-out period.	HOLD 4 LED flashes. Warbler sounds with Attendant Console Recall Tone (four bursts of tone for HOLD slot 4).
12	Press HOLD 4.	As above, in Step 9. HOLD 6 displays *RCL (recall) status.
13	Press HOLD 6 softkey.	As above, in Step 5.
14	Press the RELEASE key.	Station "A" and Attendant Console are disconnected. SRC display blanks. Attendant Console returns to idle condition.
15	Set handsets on-hook.	Test completed.

CHART 5-4
RECALL

Step	Action	Verify
1	Perform Steps 1 through 3 of Answering Calls – Part 1 (Internal).	See Chart 5-1.
2	Attendant dials station "B" directory number, then presses RELEASE.	Station "B" rings. Station "A" receives Ringback Tone. Attendant Console returns to idle condition.
3	Allow station "B" to ring until recall timer causes recall.	Attendant Console rings. ANSWER LED flashes. Station "B" stops ringing. RECALL softkey appears on Attendant Console LCD.
4	Press ANSWER key or RECALL softkey.	ANSWER LED is on. Attendant Console is connected to station "A". SRC display shows data on station "A". DST display shows data on station "B", and status of station "B" (NO ANSR). RING AGAIN softkey appears on Attendant Console LCD.
5	Press RELEASE.	Attendant Console and station "A" are disconnected. Station "B" rings. Station "A" receives Ringback Tone.
6	Station "B" lifts handset.	Stations "A" and "B" are connected.
7	Set handsets on-hook.	Test completed.

CHART 5-5
SERIAL CALL

Step	Action	Verify
1	Station "A" lifts handset, accesses an outgoing trunk, then accesses an incoming trunk.	Incoming trunk call appears at Attendant Console (see Chart 5-1). SERIAL CALL softkey is displayed.
2	Press SERIAL CALL softkey.	SRC display shows incoming trunk data and SER status flag.
3	Attendant dials station "B" directory number, then presses RELEASE.	Station "B" rings. Station "A" receives Ringback Tone. Attendant Console returns to idle condition.
4	Station "B" lifts handset.	Station "A" and station "B" are connected together.
5	Station "B" sets handset on-hook.	Station "A" receives Ringback Tone. Attendant Console rings. RECALL softkey is displayed.
6	Attendant presses ANSWER key, or RECALL softkey.	Station "A" and Attendant Console are connected. SRC display shows incoming trunk data and SER status flag. SERIAL CALL softkey is displayed.
7	Attendant presses SERIAL CALL softkey.	SER status flag is removed from SRC display. SERIAL CALL softkey remains displayed.
8	Repeat Steps 3 through 5.	Incoming trunk call does not recall to Attendant Console.
9	Set handsets on-hook.	Test completed.

CHART 5-6
ATTENDANT-CONTROLLED CONFERENCE

Step	Action	Verify
1	Attendant dials station "A" directory number.	See Chart 5-2.
2	Attendant dials station "B" directory number, and station "B" answers.	The DST display is highlighted and station "B" data appears. SOURCE and CONF softkeys are displayed.
3	Attendant presses the CONF softkey.	Attendant, station "A" and station "B" are connected together. Both SRC and DST displays are highlighted. SOURCE and DEST softkeys are displayed.
4	Attendant presses the RELEASE key.	Attendant is removed from conference. Attendant Console returns to idle condition. Station "A" and station "B" remain connected together.
5	Set handsets on-hook.	Test completed.

CHART 5-7
ABBREVIATED DIAL

Part 1 - Programming Abbreviated Dial Numbers		
1	Press the FUNCTION key.	Softkey prompts change. SRC and DST displays blank.
2	Press ATT FUNCTION softkey (F2).	Softkey prompts change.
3	Press ABBR DIAL softkey (F6).	LCD responds by displaying the message: Enter Index Number:_
4	Enter Abbreviated Dial Entry Number (000-999).	Digits are displayed as they are entered from telephony keypad. The ← key can be used to back up to and clear incorrect entries. ENTER softkey is displayed (F2).
5	Press ENTER softkey (F2).	LCD responds by displaying entry number and the message: Dial Number:_ Note: If a dial number is already applied to the entered Abbreviated Dial entry number, the dial number is displayed against the entry number in the format: 000 = 1234
6	Enter Dial Number.	Digits are displayed as they are entered from the telephony keypad. SET softkey is displayed (F2).
7	Press SET softkey (F2).	LCD responds by displaying the message: Enter Index Number:_
8	Repeat Steps 4 and 5, using same Entry Number.	Number entered in Step 6 is displayed against entry number.
9	Press EXIT softkey (F1).	LCD responds by returning to Call Processing mode idle condition. Part 1 completed.
Part 2 - Testing operation of Abbreviated Dial		
1	Attendant dials Abbreviated Dial Feature Access Code and Entry Number.	Dialed digits are displayed in DST display area. Display updates and shows actual number being rung. Ringback Tone or Busy Tone returned. ANSWER LED is on.
2	Press RELEASE.	Test completed.

CHART 5-8
DO NOT DISTURB

Step	Action	Verify
1	Attendant dials station "A" directory number.	See Chart 5-2.
2	Station "A" lifts handset.	Station "A" and Attendant Console are connected. DST display shows station "A" data. NO DTSTB softkey is displayed.
3	Attendant presses F6 (NO DTSTB softkey).	DND status flag appears in DST display. (Do Not Disturb is enabled.)
4	Attendant presses F6 (NO DTSTB softkey).	DND status flag removed in DST display. (Do Not Disturb is disabled.)
5	Press RELEASE.	Station "A" and Attendant are disconnected. Attendant Console returns to idle condition.
6	Set handsets on-hook.	
7	Press FUNCTION key.	Function softkeys are displayed.
8	Press ATT FUNCTION softkey.	Softkey prompts change.
9	Press STATIONS softkey.	LCD responds by displaying message: Enter Extension Number:_
10	Dial station "A" directory number.	Digits appear on LCD as they are dialed. NO DTSTB softkey is displayed.
11	Press NO DTSTB softkey.	DND status flag is displayed for station "A".
12	Station "B" dials station "A" directory number.	Station "B" receives Reorder Tone.
13	Attendant presses NO DTSTB softkey.	DND status flag is removed for station "A".
14	Repeat Step 12.	Station "B" receives Ringback Tone. Station "A" rings.
15	Set handsets on-hook.	Ringing removed from station "A".
16	Press EXIT softkey.	Attendant Console display returns to idle condition. Test completed.

CHART 5-9
OVERRIDE

Step	Action	Verify
1	Enable Do Not Disturb on station "A".	See Chart 5-8.
2	Attendant dials station "A" directory number.	Reorder Tone returned. DST display shows DND status flag for station "A".
3	Press OVERRIDE softkey.	Ringback Tone returned. Station "A" rings.
4	Station "A" lifts handset.	Station "A" and Attendant Console are connected.
5	Press RELEASE.	Station "A" and Attendant Console are disconnected. Attendant Console display returns to idle condition.
6	Set handsets on-hook.	Test completed.

CHART 5-10
FLEXIBLE NIGHT SERVICE

Step	Action	Verify
1	Press FUNCTION key.	Function softkeys are displayed.
2	Press ATT FUNCTION softkey.	Softkey prompts change.
3	Press MORE... softkey.	Softkey prompts change.
4	Press FLEX NIGHT softkey.	LCD responds by displaying the message: Enter Trunk Number:_
5	Enter digits of trunk number.	Digits are displayed as they are entered from the telephony keypad.
6	Press either the NIGHT 1 or NIGHT 2 softkey.	LCD responds by displaying trunk data, and the message: Currently to:XXXX Forward to:_ where XXXX is the Night Service extension number for the given trunk.
7	Enter the extension number to which the selected trunk is to be forwarded.	Digits are displayed as they are entered. After last digit is entered, SET and EXIT softkeys are displayed.
8	Press SET softkey.	LCD display returns to idle condition.
9	Press FUNCTION key and NIGHT 1 or NIGHT 2 softkey (whichever was selected in Step 6).	Attendant Console shows NIGHT 1 or NIGHT 2.
10	Access the trunk number selected in Step 5.	Extension number selected in Step 7 rings. Ringback Tone returned on trunk.
11	Rung extension lifts handset.	Extension and trunk are connected.
12	Set handsets on-hook.	Test completed.

CHART 5-11
TRUNK BUSY OUT OPERATION

Step	Action	Verify
1	Press the FUNCTION key.	Function softkeys displayed.
2	Press ATT FUNCTION softkey.	Softkey prompts change.
3	Press TRUNKS softkey.	LCD responds by displaying the message: Enter Trunk Number:_
4	Enter trunk number digits.	Softkey prompts change. Digits appear as they are entered from telephony keypad.
5	Press BUSY OUT softkey.	Trunk data is displayed on LCD. IDLE status flag appears, and SET softkey appears.
6	Press SET softkey.	Display returns to idle console condition.
7	Access trunk selected in Step 4.	Reorder Tone returned. Trunk data is displayed on LCD.
8	Release trunk by pressing RELEASE key.	Trunk is released.
9	Repeat steps 1 through 5.	As in Step 5, but CLEAR softkey is displayed.
10	Press CLEAR softkey.	Display returns to idle console condition.
11	Access trunk selected in step 4.	Trunk is seized. Dial Tone returned.
12	Press RELEASE key.	Trunk is released. Test completed.

CHART 5-12
MESSAGE WAITING

Step	Action	Verify
1	Attendant dials station "A" directory number.	Station "A" rings. Attendant Console receives ringback tone. DST display shows station "A" data. MSG WAITING softkey is displayed.
2	Press MSG WAITING softkey.	MSW status flag appears against station "A" data.
3	Press RELEASE.	Attendant Console returns to idle condition. After a delay station "A" receives three bursts of ringing, indicating there is a message waiting.
4	Station "A" dials Attendant Console Access Code.	Call appears at Attendant Console. Station "A" receives Ringback Tone. INTERNAL softkey is displayed.
5	Press INTERNAL softkey or ANSWER key.	Station "A" is connected to Attendant Console. Attendant Console shows station "A" as the source (SRC) and displays station "A" data. MSW status flag is displayed. MSG WAITING softkey is displayed.
6	Press MSG WAITING softkey.	MSW status flag is removed.
7	Press RELEASE.	Attendant Console and station "A" are disconnected. Attendant Console display returns to idle condition.
8	Set handsets on-hook.	Station "A" does not ring (no message waiting). Test completed.

CHART 5-13
ATTENDANT CALL FORWARDING

Step	Action	Verify
1	Press FUNCTION key.	Function softkeys are displayed.
2	Press ATT FUNCTION softkey.	Softkey prompts change.
3	Press STATIONS softkey.	LCD display responds by displaying the message: Enter Extension Number:_
4	Enter station "A" directory number.	Digits appear on LCD as they are entered from telephony keypad. CALL FWD softkey is displayed.
5	Press CALL FWD softkey.	Softkey prompts change. LCD displays message: Currently not set Forward to:_
6	Dial station "B" directory number.	Digits appear on LCD display as they are dialed. Softkey prompts change.
7	Select Call Forwarding type by pressing the appropriate softkey (e.g., ALWAYS).	Attendant Console display returns to idle condition.
8	Ensure station "A" is in appropriate state (on-hook or off-hook) for type of Call Forwarding selected in Step 7.	
9	Attendant dials station "A" directory number.	DST display shows station "B" directory number and message: Fwd From XXXX (where XXXX is station "A" directory number). Station "B" rings. Attendant Console receives Ringback Tone.
10	Press RELEASE.	Station "B" stops ringing. Ringback Tone removed from Attendant Console.
11	Repeat Steps 1 through 5.	Station "A" data is displayed. LCD displays message: Currently to XXXX Forward to:_ where XXXX is station "B" directory number. Go to Step 12.

CHART 5-13 (CONT'D)
ATTENDANT CALL FORWARDING

Step	Action	Verify
12	Press CANCEL softkey.	LCD display returns to idle condition. (Call Forwarding is canceled at station "A".)
13	Repeat Step 9.	Station "A" rings. Attendant Console receives Ringback Tone. Station "A" appears as DST.
14	Press RELEASE.	Station "A" stops ringing. Ringback Tone removed from Attendant Console. Attendant Console display returns to idle condition.
15	Repeat Steps 1 through 5.	Call Forwarding is enabled for station "A".
16	Repeat Steps 1 through 7, forwarding station "B" to station "C" directory number.	Call Forwarding is enabled for station "B".
17	Press FUNCTION and the following softkeys: ATT FUNCTION, MORE..., CAN ALL FWD	Call Forwarding is canceled for all stations. Attendant Console returns to idle condition.
18	Dial station "A" directory number.	Station "A" rings. Ringback Tone returned to Attendant Console.
19	Press RELEASE.	Station "A" stops ringing. Ringback Tone removed from Attendant Console.
20	Dial station "B" directory number.	Station "B" rings. Ringback Tone returned to Attendant Console.
21	Press RELEASE.	Station "B" stops ringing. Ringback Tone removed from Attendant Console.
22	Set handsets on-hook.	Test completed.

CHART 5-14
ATTENDANT STATION BUSY-OUT

Step	Action	Verify
1	Press the FUNCTION key.	Function softkeys are displayed.
2	Press ATT FUNCTION softkey.	Softkey prompts change.
3	Press STATIONS softkey.	Attendant Console LCD displays the message: Enter Extension Number:_
4	Enter station "A" directory number.	Digits are displayed on LCD display as they are entered from telephony keypad. BUSY OUT softkey is displayed.
5	Press BUSY OUT softkey.	SET softkey is displayed.
6	Press SET softkey.	Attendant Console LCD display returns to idle condition.
7	Station "B" lifts handset and dials station "A" directory number.	Station "B" receives Reorder Tone. Station "A" does not ring.
8	Station "B" sets handset on-hook.	
9	Attendant dials station "A" directory number.	DST display shows station "A" data and BSY OUT status flag. Attendant Console receives Reorder Tone.
10	Press RELEASE.	Attendant Console returns to idle condition.
11	Repeat Steps 1 through 5.	CLEAR softkey is displayed.
12	Press CLEAR softkey.	Attendant Console returns to idle condition.
13	Repeat Step 7.	Station "A" rings. Station "B" receives Ringback Tone.
14	Station "A" lifts handset.	Stations "A" and "B" are connected together.
15	Set handsets on-hook.	Test completed.

CHART 5-15
ATTENDANT DIRECT TRUNK SELECT

Step	Action	Verify
1	Press the FUNCTION key.	Function softkeys are displayed.
2	Press ATT FUNCTION softkey.	Softkey prompts change.
3	Press TRUNKS softkey.	Attendant Console LCD display responds by displaying the message: Enter Trunk Number:_
4	Enter trunk number.	Digits are displayed on LCD as they are entered from the telephony keypad. ATT ACCESS softkey is displayed.
5	Press ATT ACCESS softkey.	DST display shows selected trunk. If idle, trunk is accessed. Status flag BUSY is displayed if trunk is busy. If busy, FORCE RLS softkey is displayed.
6	Press RELEASE key, or FORCE RLS softkey.	Attendant Console is disconnected from trunk. Attendant Console returns to idle condition. Test completed.

CHART 5-16
ATTENDANT DISA CODE SETUP

Step	Action	Verify
1	Press the FUNCTION key.	Function softkey prompts are displayed.
2	Press the ATT FUNCTION softkey.	Softkey prompts change.
3	Press the MORE... softkey.	Softkey prompts change.
4	Press the DISA CODE softkey.	Attendant Console LCD responds by displaying the message: Enter DISA Access Code:_
5	Enter DISA Access Code. (Access Code may be up to five digits long.)	Digits are displayed on LCD as they are entered from the telephony keypad. SET softkey is displayed.
6	Press SET softkey.	DISA Code is set. Attendant Console returns to idle condition. Test completed.

CHART 5-17
ATTENDANT DISPLAY OF SUPERSET 4™ SET MESSAGES

Step	Action	Verify
1	At a SUPERSET 4™ set, enable a message.	SUPERSET 4™ LCD displays the message enabled.
2	Attendant dials the SUPERSET 4™ set directory number.	Attendant Console DST display shows the SUPERSET 4™ set data. The message enabled at the SUPERSET 4™ set is displayed. The SUPERSET 4™ set rings. The Attendant Console receives Ringback Tone.
3	Press the RELEASE key.	Attendant Console returns to idle condition. Ringing removed from the SUPERSET 4™ set.
4	At the SUPERSET 4™ set, disable the message.	SUPERSET 4™ LCD displays time and date. Test completed.

CHART 5-18
ATTENDANT LAST NUMBER REDIAL

Step	Action	Verify
1	Attendant dials trunk access code and external number.	Attendant Console receives Ringback Tone or Busy Tone. The dialed number is displayed in DST area.
2	Press the RELEASE key.	Attendant Console returns to idle condition. REDIAL softkey is displayed.
3	Press the REDIAL softkey.	The last external number dialed is redialed by the system. The dialed number is displayed in the DST area. Ringback or Busy Tone is returned.
4	Press the RELEASE key and set handset on-hook.	Test completed.

CHART 5-19
ATTENDANT NIGHT SWITCHING

Step	Action	Verify
1	Press the FUNCTION key.	Function softkey prompts are displayed.
2	Press the NIGHT 1 softkey.	Attendant Console returns to idle condition. System enters Night Service 1. NIGHT 1 status flag is displayed on Attendant Console LCD.
3	Station "A" lifts handset, accesses an outgoing trunk, then accesses an incoming trunk.	Night Service 1 night bells are rung. Station "A" receives Ringback Tone. Call does not appear at Attendant Console.
4	Set handset on-hook.	Night bells stop ringing.
5	Repeat Step 1.	As above, Step 1.
6	Press the NIGHT 2 softkey.	Attendant Console returns to idle condition. System enters Night Service 2. NIGHT 2 status flag is displayed on Attendant Console LCD.
7	Repeat Step 3.	Night Service 2 night bells are rung. Station "A" receives Ringback Tone. Call does not appear at Attendant Console.
8	Repeat Step 4.	As above, Step 4.
9	Repeat Step 1.	As above, Step 1.
10	Press DAY SERVICE softkey.	Attendant Console returns to idle condition. NIGHT 2 status flag is not displayed on LCD.
11	Repeat Step 3.	Attendant Console receives ringing. Station "A" receives Ringback Tone.
12	Attendant presses ANSWER.	Attendant Console and station "A" are connected.
13	Press the RELEASE key.	Attendant Console and station "A" are disconnected.
14	Set handsets on-hook.	Test completed.

CHART 5-20
SYSTEM IDENTIFIER

Step	Action	Verify
1	Press the FUNCTION key.	Function softkey prompts are displayed.
2	Press the IDENTITY SOFTKEY.	System identity (including software release) and Attendant Console LDN are displayed on Attendant Console LCD.
3	Press the EXIT softkey.	Attendant Console returns to idle condition. Test completed.

Maintenance and Customer Data Entry Applications

5.04 For this test, ensure that Maintenance and Customer Data Entry Applications are not accessed by any Maintenance Terminal or Attendant Console.

CHART 5-21
MAINTENANCE AND CUSTOMER DATA ENTRY APPLICATIONS

Step	Action	Verify
1	Press the FUNCTION key.	Function softkey prompts are displayed.
2	Press the APPLICATION SOFTKEY.	Attendant Console LCD responds by displaying the message: Choose An Application OR Depress Any Hard Key To Return and MAINTENANCE and CDE softkeys are displayed.
3	Press MAINTENANCE softkey.	LCD displays the message: Choose a Username... and the following softkeys are displayed: INSTALLER MAINT1 MAINT2 SUPERVISOR ATTENDANT
4	Press the INSTALLER softkey.	LCD responds by displaying the message: Enter Password: and the ENTER softkey is displayed.
5	Enter the numeric password from the telephony keypad.	Digits are not displayed.
6	Press the ENTER softkey.	LCD display responds with the message: PLEASE WAIT... and disk drive is accessed. LCD display updates with a display of Maintenance softkeys and menu.
7	Station "A" lifts handset and dials the Attendant Console Access Code.	ANSWER LED flashes at Attendant Console and warbler sounds.
8	Press any fixed key.	Attendant Console display returns to Call Processing mode. INTERNAL softkey is displayed. Go to Step 9.

CHART 5-21 (CONT'D)
MAINTENANCE AND CUSTOMER DATA ENTRY APPLICATIONS

Step	Action	Verify
9	Press ANSWER or INTERNAL softkey.	Station "A" and Attendant Console are connected. ANSWER LED is on. SRC display shows station "A" data.
10	Press FUNCTION key and APPLICATION softkey.	Attendant Console display returns to Maintenance Application, at point where Maintenance Application was exited. Attendant Console was not logged out of Maintenance Application.
11	Press the RELEASE key.	Attendant Console and station "A" are disconnected. Attendant Console display returns to an idle condition but is still engaged in Maintenance Application. Attendant Console is free to perform Maintenance functions, or to make or receive calls.
12	Press FUNCTION key and APPLICATION softkey.	Maintenance application display is returned.
13	Press the QUIT softkey.	Attendant Console LCD displays the message: Choose An Application OR Depress Any Hard Key To Return and MAINTENANCE and CDE softkeys are displayed. Attendant Console is logged out of Maintenance Application.
14	Press the CDE softkey.	Attendant Console LCD display responds as in Step 3.
15	Repeat Steps 4 through 6.	Customer Data Entry softkeys and menu are displayed on LCD.
16	Repeat Steps 7 through 10.	Attendant Console was not logged out of Customer Data Entry Application.
17	Repeat Step 11.	As above. Attendant Console is free to perform CDE functions, or to make or receive calls.
18	Press the QUIT softkey.	Attendant Console LCD displays the message: Choose An Application OR Depress Any Hard Key To Return and MAINTENANCE and CDE softkeys are displayed. Attendant Console is logged out of CDE Application.
19	Press any fixed key.	Attendant Console display returns to idle condition. Test completed.

6. CUSTOMER FEATURE TESTS

Class-of-Service Tests

6.01 The system has up to 50 Classes of Service. One station for each Class of Service is selected. Each option for that station is then tested.

1. Refer to the Class-of-Service Option forms. Make a note of each of the COS Numbers.

2. Refer to the Station Assignment forms. Each station is assigned a COS Number. For each COS Number, select a station number.

3. Again refer to the Class-of-Service Option forms. For each station selected, verify that each option available to the station is consistent with the options specified on the COS Option form. Refer to Section MITL9108-093-105-NA, Features Description, and test each COS Option enabled at each station.

Class-of-Restriction Tests

6.02 Test Class-of-Restriction operation by selecting various stations with different Classes of Restriction. Dial restricted and unrestricted numbers from these stations to verify that the appropriate Class of Restriction applies.