
SX-50™

**Technical
Practices**

Volume 2

**Installation and
Customer Data Entry**



SX-50™
DIGITAL PRIVATE AUTOMATIC BRANCH EXCHANGE (DPABX)

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5X-50™

DIGITAL PRIVATE AUTOMATIC BRANCH EXCHANGE (DPABX)
SHIPPING, RECEIVING AND INSTALLATION INFORMATION

I. INTRODUCTION

contains the detailed shipping re...
for the SX-50™ Digital Private Au...
the SX-50™ system is compatible...
PBX and Central Office (CO) ...
General Description
SX-50™ system

SECTION MITL9104-091-200-NA

NOTICE

The information contained in this document is believed to be accurate in all respects but is not warranted by Mitel Corporation (MITEL). The information is subject to change without notice and should not be construed in any way as a commitment by Mitel or any of its affiliates or subsidiaries. Mitel and its affiliates and subsidiaries assume no responsibility for any errors or omissions in this document. Revisions of this document or new editions of it may be issued to incorporate such changes.

Equipment (Cables, Grounds)
Grounding
Power Supply Requirements
Location Constraints
Space Requirements
Temperature
Clearance

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Installation Order
Order of Cables

3. CABLING AND CROSS CONNECTIONS
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Cable Termination
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RFD Cross-Connection Frame Recommendations
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APPENDIX A
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TELEPHONE COMPANY INTERCONNECTION

APPENDIX B
SYSTEM GROUNDING AND SURGE PROTECTION REQUIREMENTS

1. INTRODUCTION

General

1.01 This Section contains the detailed shipping, receiving and installation procedures for the SX-50™ Digital Private Automatic Branch Exchange (DPABX). The SX-50™ system is compatible with most Private Branch Exchange (PBX) and Central Office (CO) equipment. Refer to Section MITL9104-091-100-NA, General Description for an overall description of the SX-50™ system.

Reason for Reissue

1.02 This is the second issue of Section MITL9104-091-200-NA, Shipping, Receiving and Installation Information. Changes from Issue 1 are indicated by change bars at the right hand side of the page.

Section Overview

1.03 This Section is divided into six parts:

1. **Introduction:** explains the organization of the Section.
2. **Configuration Limits:** briefly describes the two physical configurations.
3. **Shipping and Receiving Information:** includes the unpacking and inspection of the delivered items.
4. **Installation Requirements:** lists the environmental requirements, the temperature limitations, the space requirements, location constraints and the input power requirements for the SX-50™ system. Also included, is a brief description of an approved ground.
5. **Installation Procedures:** lists the procedures required to install the SX-50™ system in a set of Installation Tables.
6. **Cabling and Cross-Connections:** describes the cabling and cross-connections required for installing the SX-50™ system.

Appendices

1.04 There are two appendices. Appendix A details the FCC interconnection requirements and Appendix B lists the system grounding and surge protection requirements.

Compliance with Regulatory Requirements

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

2. CONFIGURATION LIMITS

General

- 2.01 The following paragraphs describe the two possible configurations for the SX-50™ system.

Module 1

- 2.02 Module 1 permits SX-50™ system operation to the following limits:

1. No more than 56 lines, which can be
 - ONS Lines
 - or
 - COV Lines (no more than 32).
2. No more than 16 LS/GS trunks.
3. No more than 2 Universal Cards, total of 8 modules. Module types are:
 - E&M Trunk Module
 - RMA Module (1 per system)
 - MOH/Pager Module (1 per system).

Module 2

- 2.03 Module 2 supports SX-50™ system operation to the following limits:

1. No more than 112 lines, which can be
 - ONS Lines,
 - or
 - COV Lines (no more than 64).
2. No more than 32 trunks, which can be:
 - LS/GS Trunks
 - or
 - E&M Trunks (no more than 8).
3. No more than 4 Universal Cards, a total of 16 modules. Module types are:
 - E&M Trunk Module
 - RMA Module (1 per system)
 - MOH/Pager Module (1 per system).

3. SHIPPING AND RECEIVING INFORMATION

General

1.01. The unit is shipped in a standard 48" x 24" x 12" cardboard box. The weight of the unit is approximately 25 lbs. The unit is shipped in a standard 48" x 24" x 12" cardboard box. The weight of the unit is approximately 25 lbs.

1.02. The unit is shipped in a standard 48" x 24" x 12" cardboard box. The weight of the unit is approximately 25 lbs.

1.03. The unit is shipped in a standard 48" x 24" x 12" cardboard box. The weight of the unit is approximately 25 lbs.

1.04. The unit is shipped in a standard 48" x 24" x 12" cardboard box. The weight of the unit is approximately 25 lbs.

1.05. The unit is shipped in a standard 48" x 24" x 12" cardboard box. The weight of the unit is approximately 25 lbs.

System

1.06. The unit is shipped in a standard 48" x 24" x 12" cardboard box. The weight of the unit is approximately 25 lbs.

- 1.07. The unit is shipped in a standard 48" x 24" x 12" cardboard box. The weight of the unit is approximately 25 lbs.
- 1.08. The unit is shipped in a standard 48" x 24" x 12" cardboard box. The weight of the unit is approximately 25 lbs.
- 1.09. The unit is shipped in a standard 48" x 24" x 12" cardboard box. The weight of the unit is approximately 25 lbs.
- 1.10. The unit is shipped in a standard 48" x 24" x 12" cardboard box. The weight of the unit is approximately 25 lbs.
- 1.11. The unit is shipped in a standard 48" x 24" x 12" cardboard box. The weight of the unit is approximately 25 lbs.
- 1.12. The unit is shipped in a standard 48" x 24" x 12" cardboard box. The weight of the unit is approximately 25 lbs.

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1.14. The unit is shipped in a standard 48" x 24" x 12" cardboard box. The weight of the unit is approximately 25 lbs.

1.15. The unit is shipped in a standard 48" x 24" x 12" cardboard box. The weight of the unit is approximately 25 lbs.

Case

1.16. The unit is shipped in a standard 48" x 24" x 12" cardboard box. The weight of the unit is approximately 25 lbs.

- 3.06 Inspect each card and module to ensure that the printed circuit board is not cracked and no damaged or loose components are apparent.

CAUTION: It is recommended that Cards and Modules be handled by their edges only to avoid damage due to static electrical discharge.

Lithium Battery

- 3.07 Included in the Generic Module package is the Lithium battery which is wrapped separately.

Attendant Console

- 3.08 The Attendant Console carton contains the following:

- main assembly
- handset
- handset cord
- Attendant Console cord.

CAUTION: The Liquid Crystal Display on the Attendant Console is fragile. Do not drop the Attendant Console or subject it to any other abnormal shock. Do not apply pressure to the surface of the Liquid Crystal Display.

Defective Items

- 3.09 Tag any defective items and return to the supplier in accordance with accepted procedures. Refer to Section MITL9104-091-350-NA, Troubleshooting for instructions on completing the Repair Tag.

Repacking for Reshipment

- 3.10 When the SX-50™ system is shipped from one location to another, pack all items to prevent damage. Figures 5-1 through 5-3 show how the equipment was originally packaged. Follow this method of packaging as closely as possible.

- 3.11 If the original packaging material is not available, then place the returned parts in antistatic bags, wrap in several layers of air-cushion type wrap, place in a suitable container and surround with paper to minimize movement of all items.

installation must conform to local building and electrical codes regarding the mounting of electrical equipment.

Power Supply Requirements

4.06 The customer must provide a dedicated single phase power receptacle, which should adhere to the following recommendations:

- 115 V, 60 Hz, fused and capable of delivering a minimum of 5 A.
- Should be wired and fused independently from all other receptacles.
- Must not be controlled by a switch.
- Must be a 3-wire type, with the third wire grounded to the ground of the electrical system.
- Should be easily accessible for the removal of the plug for maintenance.
- Should be located to prevent accidental removal of the power cable.
- The power cable between the Power Supply and the receptacle should not present a hazard to the subscriber.
- A warning tag should be attached to the plug-end of the power cable to prevent accidental removal of the cable by the subscriber.
- A warning tag should be attached to circuit-breaker-type fuses to prevent unauthorized manual operation.
- If main power is subject to frequent fluctuations or "brown-outs", an uninterruptable power supply with battery backup response within 50 milliseconds should be considered.

Grounding

4.07 Proper grounding is essential for reliable operation. The following paragraphs outline the system grounding requirements. Refer to Appendix B, System Grounding and Surge Protection Requirements and Table 5-4, System Grounding Procedures for details.

Equipment (Chassis) Ground

4.08 The following is a description of the required communications system equipment grounding practice:

- (a) All circuits common within the system derive the ground from a single ground concentration point within the Card Frame. The

system ground concentration point serves all peripherals collocated with the system.

- (b) Do not expose the system cabinet and all associated ducting hardware along with all collocated peripherals to any ground sources other than the system single point ground described above.
- (c) Do not share an enclosure or raceway between AC service wires bringing AC power to the system and any other system grounds, DC power distribution wires, or signaling wires.
- (d) All system hardware is provided with an AC fault return path to the system single point ground, which in turn is provided with a reliable path to the equipment grounding conductor (i.e., green wire ground or safety ground).
- (e) Refer Appendix A for FCC Interconnection Requirements.
- (f) All sources of external ground (i.e., system signaling ground to the approved ground source, etc.) shall connect to the system single point ground. Providing for a system single point ground minimizes ground loops and prevents lightning from finding a path through system components.

5.06 IF ANY OF THE WARRANTY SEALS ON ANY MITEL DPABX OF SUPERSET SET PRODUCTS ARE BROKEN, THEN MITEL RESERVES THE RIGHT TO REFUSE TO SERVICE THE EQUIPMENT OR TO VOID ANY REMAINING WARRANTY ON THE EQUIPMENT.

5.07 IF ANY MITEL EQUIPMENT HAS BEEN MODIFIED SO THAT IT IS NOT WITHIN THE MANUFACTURER'S SPECIFICATIONS (INCLUDING, BUT NOT LIMITED TO, THE INSTALLATION OF ANY NON-MITEL PARTS, COMPONENTS, OR REPLACEMENT CARDS), THEN MITEL RESERVES THE RIGHT TO: REFUSE TO SERVICE THE EQUIPMENT; VOID ANY REMAINING WARRANTY; REMOVE AND REPLACE ANY NON-MITEL PARTS FOUND IN THE EQUIPMENT; AND TO MAKE THOSE MODIFICATIONS THAT ARE NECESSARY TO RETURN THE EQUIPMENT TO ORIGINAL MANUFACTURER'S SPECIFICATIONS.

TABLE 5-2
UNPACKING AND INSPECTION OF EQUIPMENT

Step	Action	Comments
1.	Remove Equipment from Shipping Carton. <ul style="list-style-type: none"> Lift the required equipment from the main assembly. 	Refer to Figure 5-1, SX-50™ System Packaging.
2.	Inspect the Equipment. <ul style="list-style-type: none"> Check equipment against the invoice. Visually check equipment for damage. 	Report any missing equipment. Tag any defective items, repackage and return.
3.	Remove the Required Cards and Modules. <ul style="list-style-type: none"> Remove the Control Card. Unpack additional peripheral cards. Unpack the Generic Module. 	Refer to Figure 5-2, Typical Printed Circuit Card Packaging.
4.	Inspect the Cards and Modules. <ul style="list-style-type: none"> Check against the invoice. Visually check for damage. DO NOT REMOVE FROM ANTISTATIC BAG AT THIS TIME. 	Report any missing modules or cards. Tag any defective items, repackage and return.
5.	Unpack Attendant Console.	Refer to Figure 5-3, Attendant Console Packaging.
6.	Inspect Attendant Console. <ul style="list-style-type: none"> Check against invoice. Visually check for damage. 	Report any missing parts. Tag the defective items, repackage and return.
7.	Store Shipping Cartons. <ul style="list-style-type: none"> Store cartons for use when transporting the SX-50™ system to a new site. 	

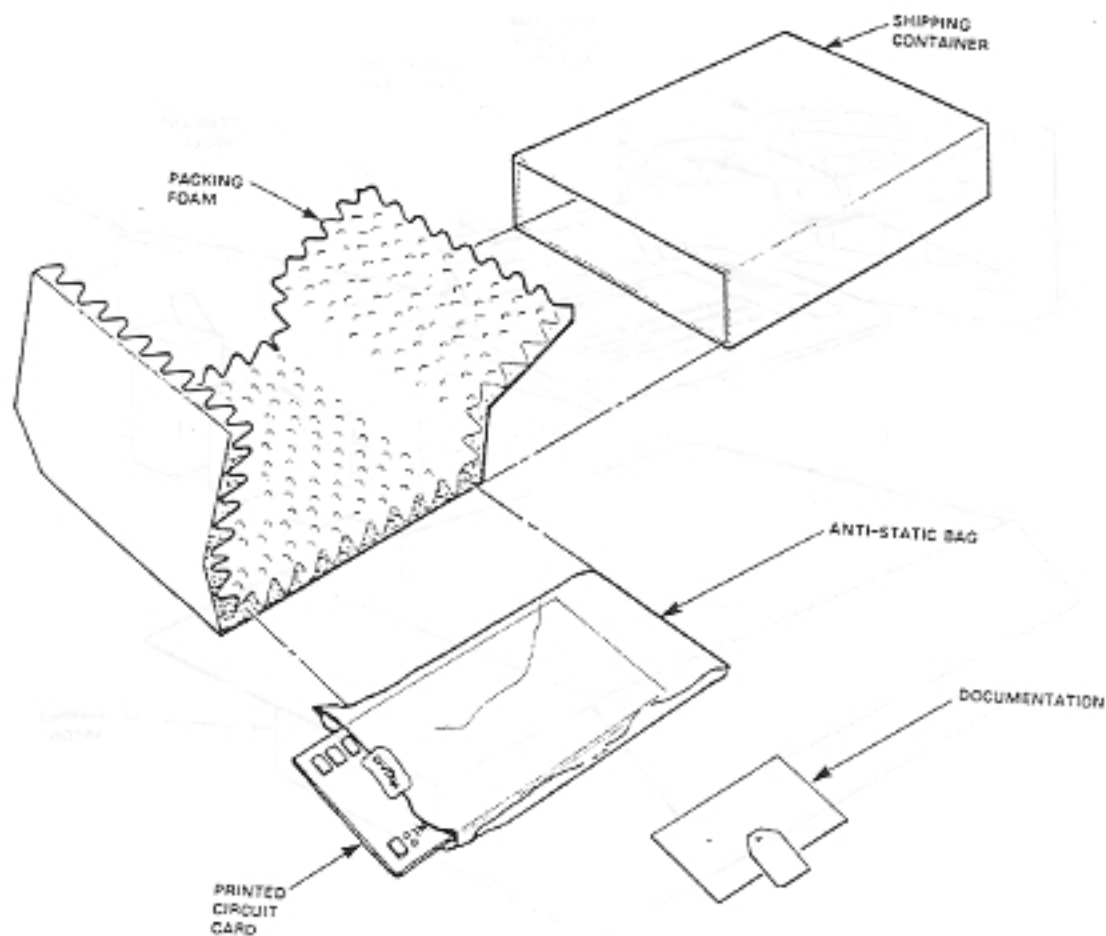


Figure 5-2 Typical Printed Circuit Card Packaging

8408R0E1

**TABLE 5-3
MOUNTING EQUIPMENT**

Step	Action	Comments
1.	Mount the Backplate to the Backboard. <ul style="list-style-type: none"> • Use 1 1/4 inch #14 or #16 round head wood-screws. • Tighten securely. 	
2.	Mount the Card Frame. <ul style="list-style-type: none"> • Position the Card Frame above the top Card Frame Guide. • Push the Card Frame towards the wall, connecting the bottom of the Card Frame with the lower Card Frame Guide. • Lock the Card Frame Latch into position (towards the wall) and tighten the Card Frame Latch Screw. 	Refer to Figure 5-4, Card Frame Installation.
3.	Mount the Power Supply. <ul style="list-style-type: none"> • Slide the Power Supply into the Power Supply Guide from the top. • Attach the Power Supply to the Card Frame with the push-in fasteners (the push-in fasteners are stored in an accessory bag). 	Refer to Figure 5-5, Power Supply Installation.

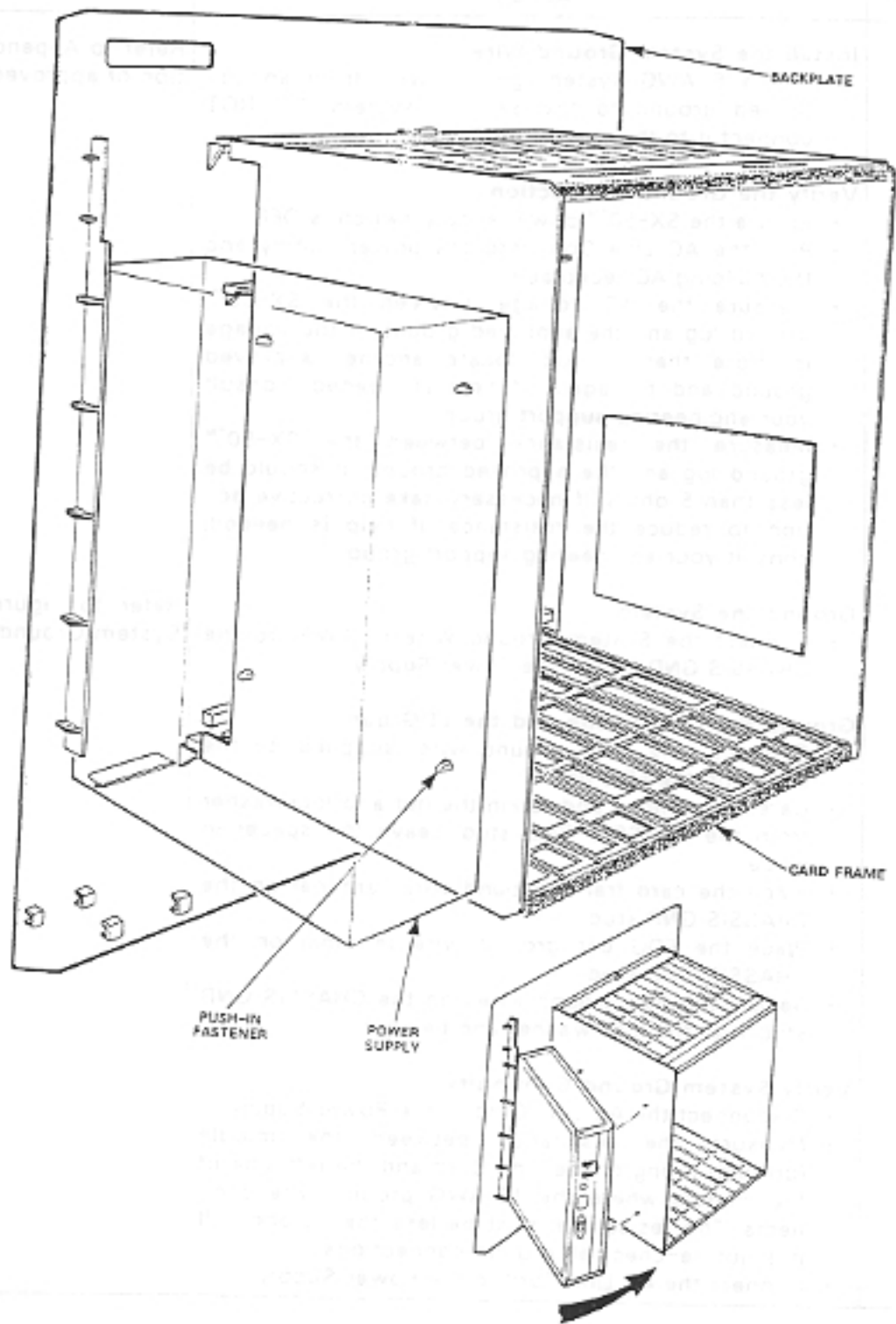


Figure 5-5 Power Supply Installation

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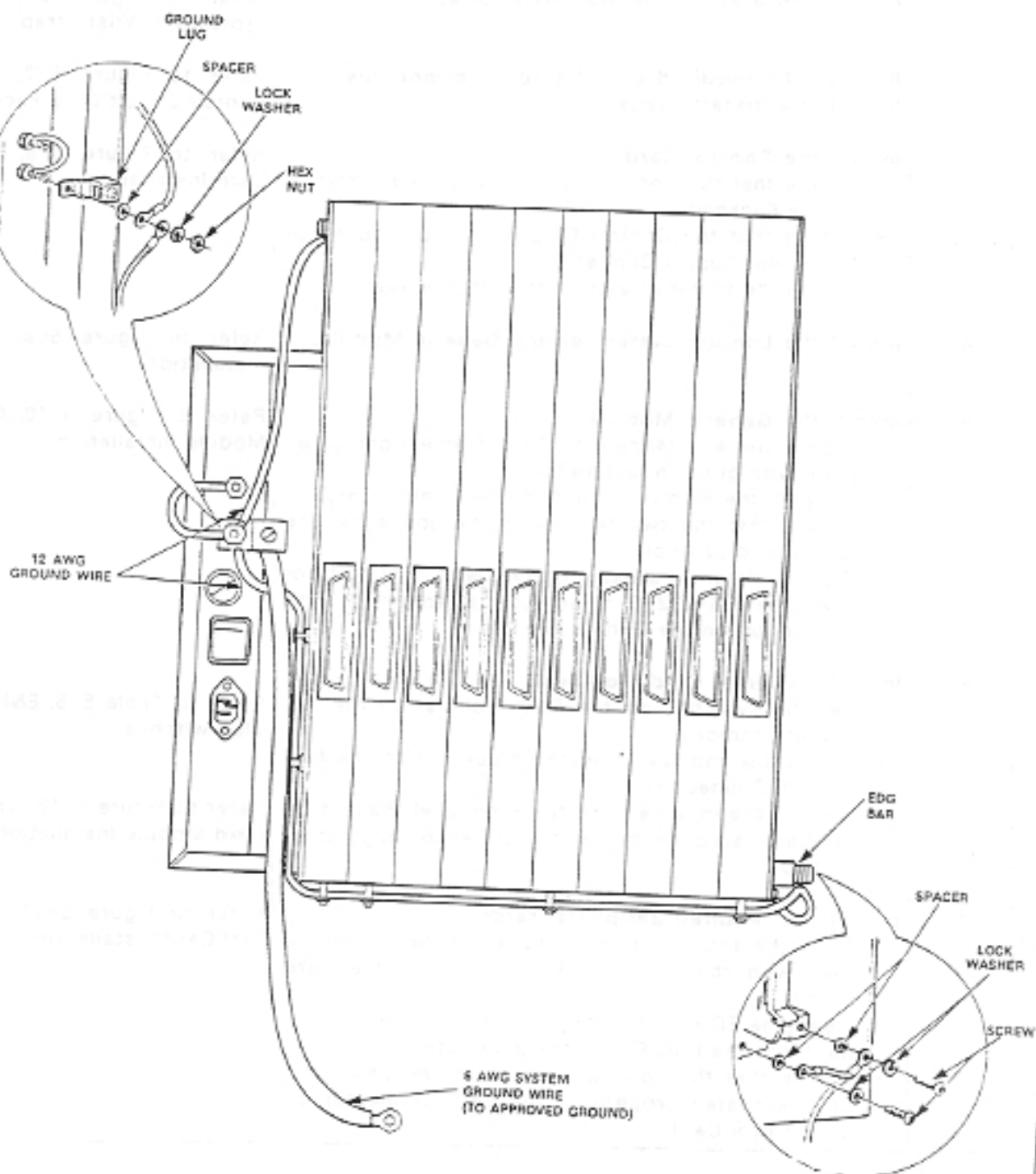


Figure 5-6 SX-50™ System Grounding

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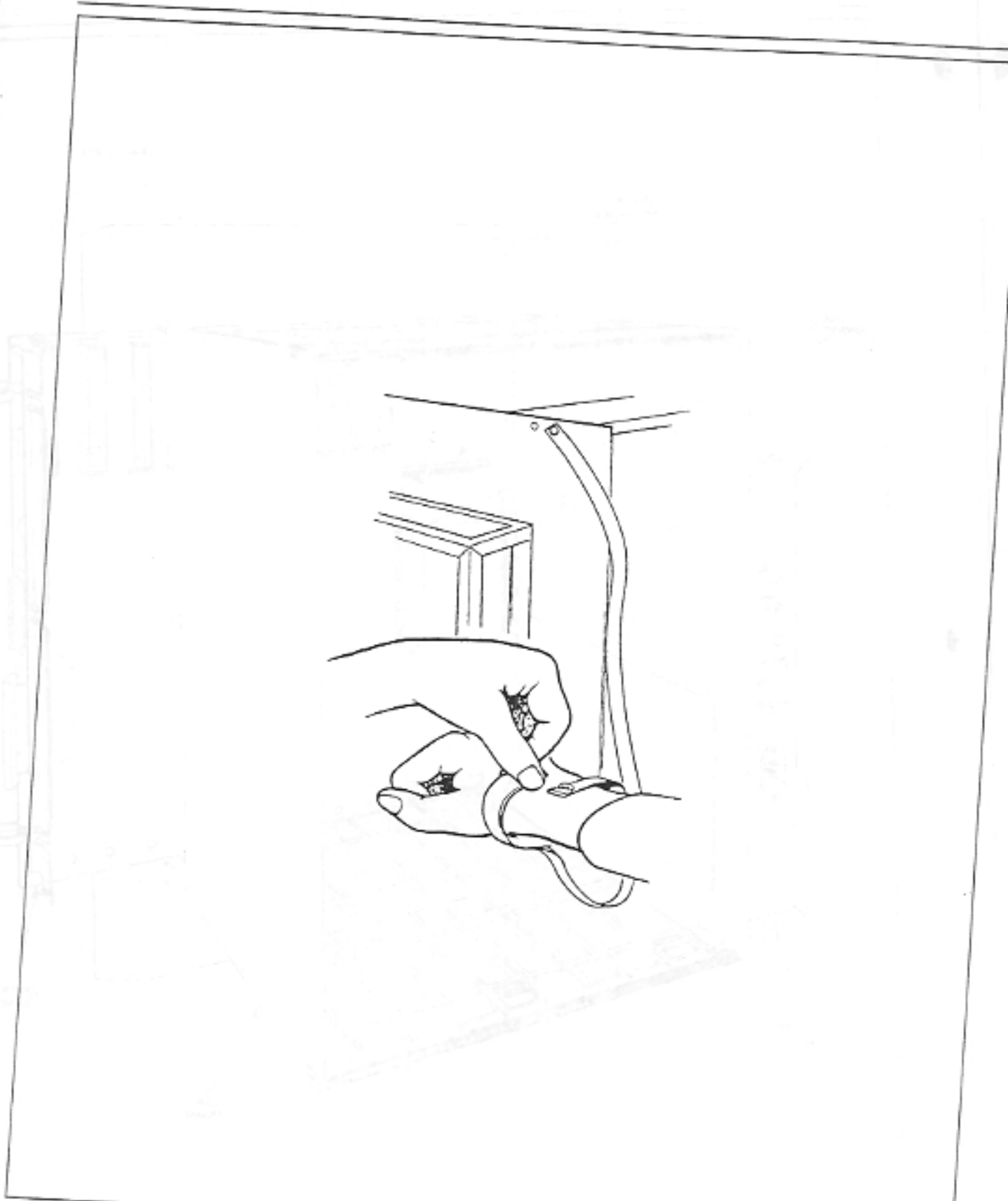


Figure 5-7 Static Protection Wrist Strap

8830RD

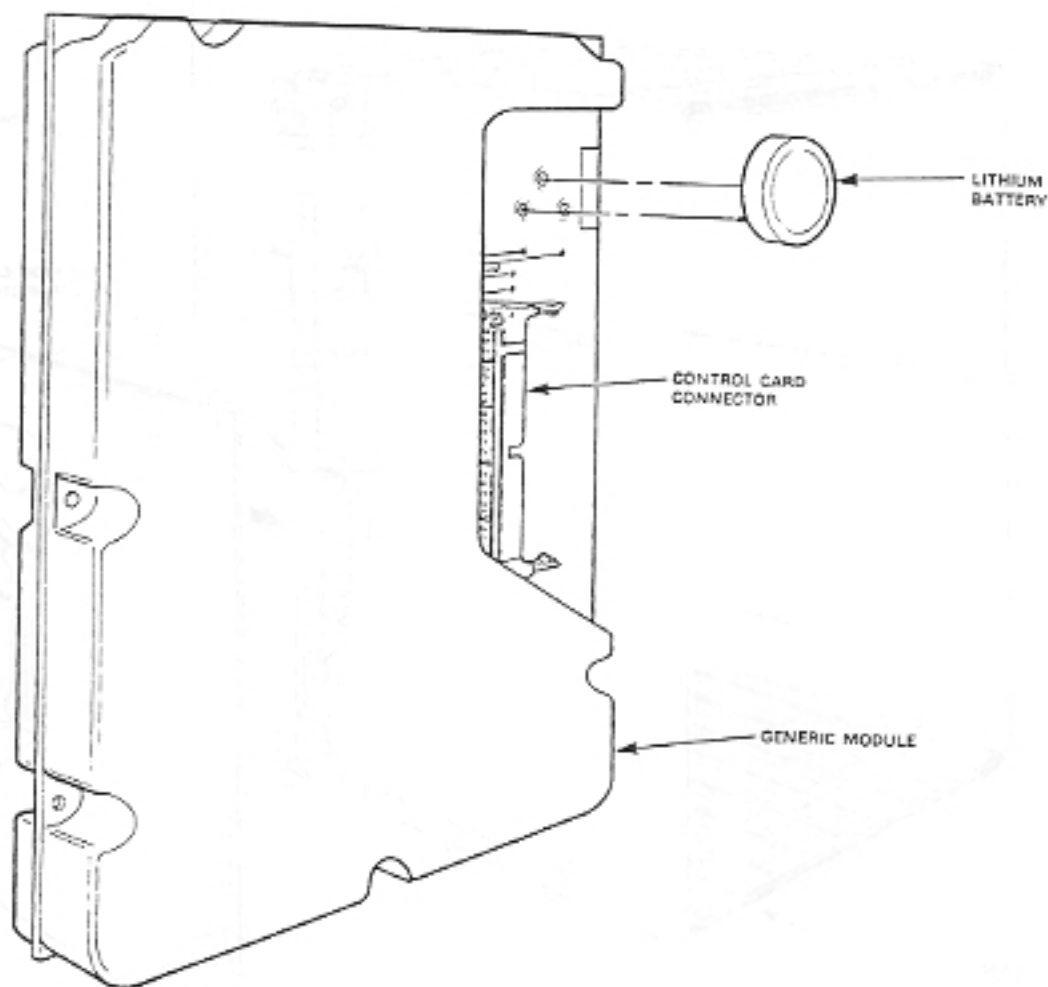


Figure 5-9 Battery Installation

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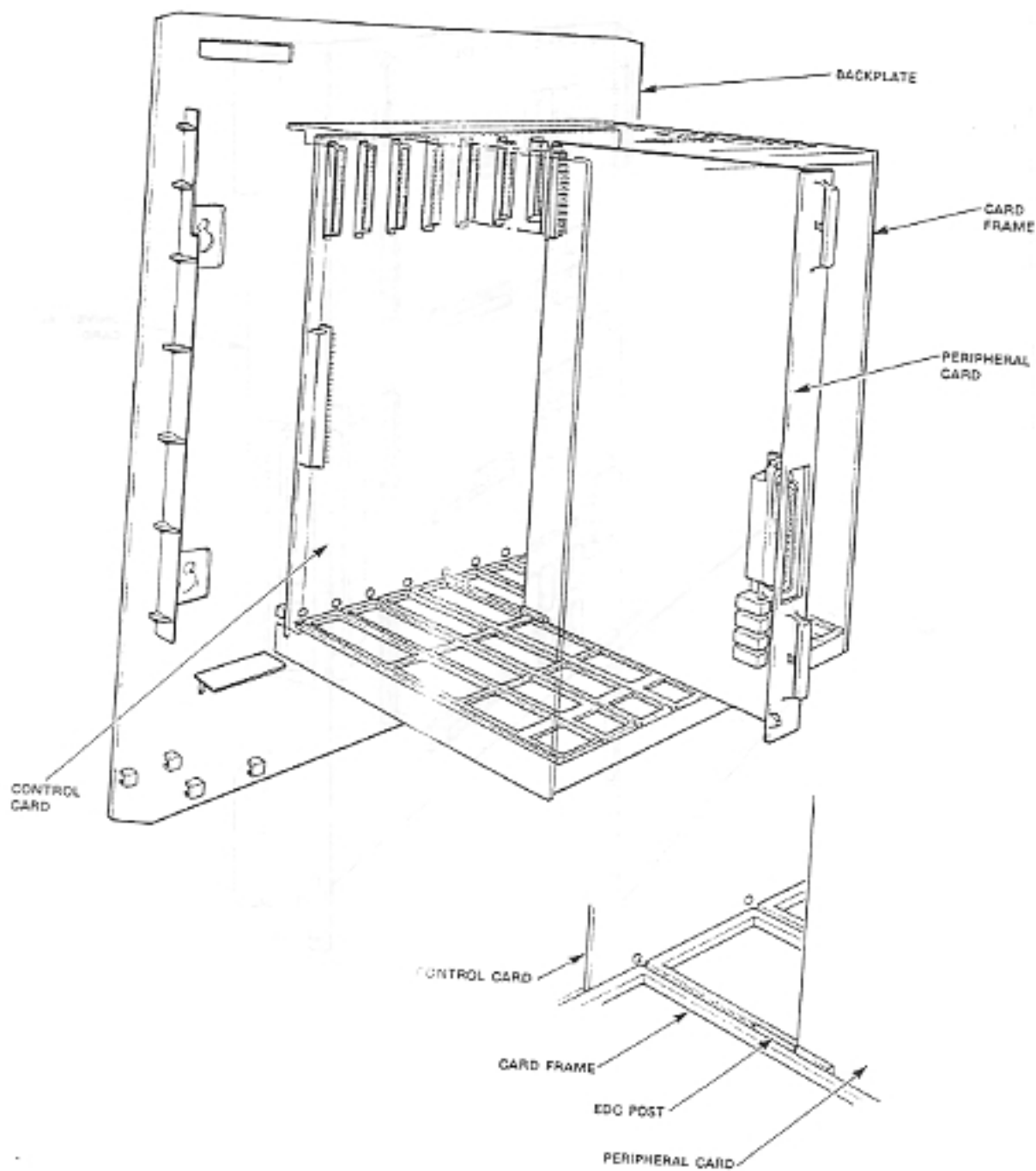


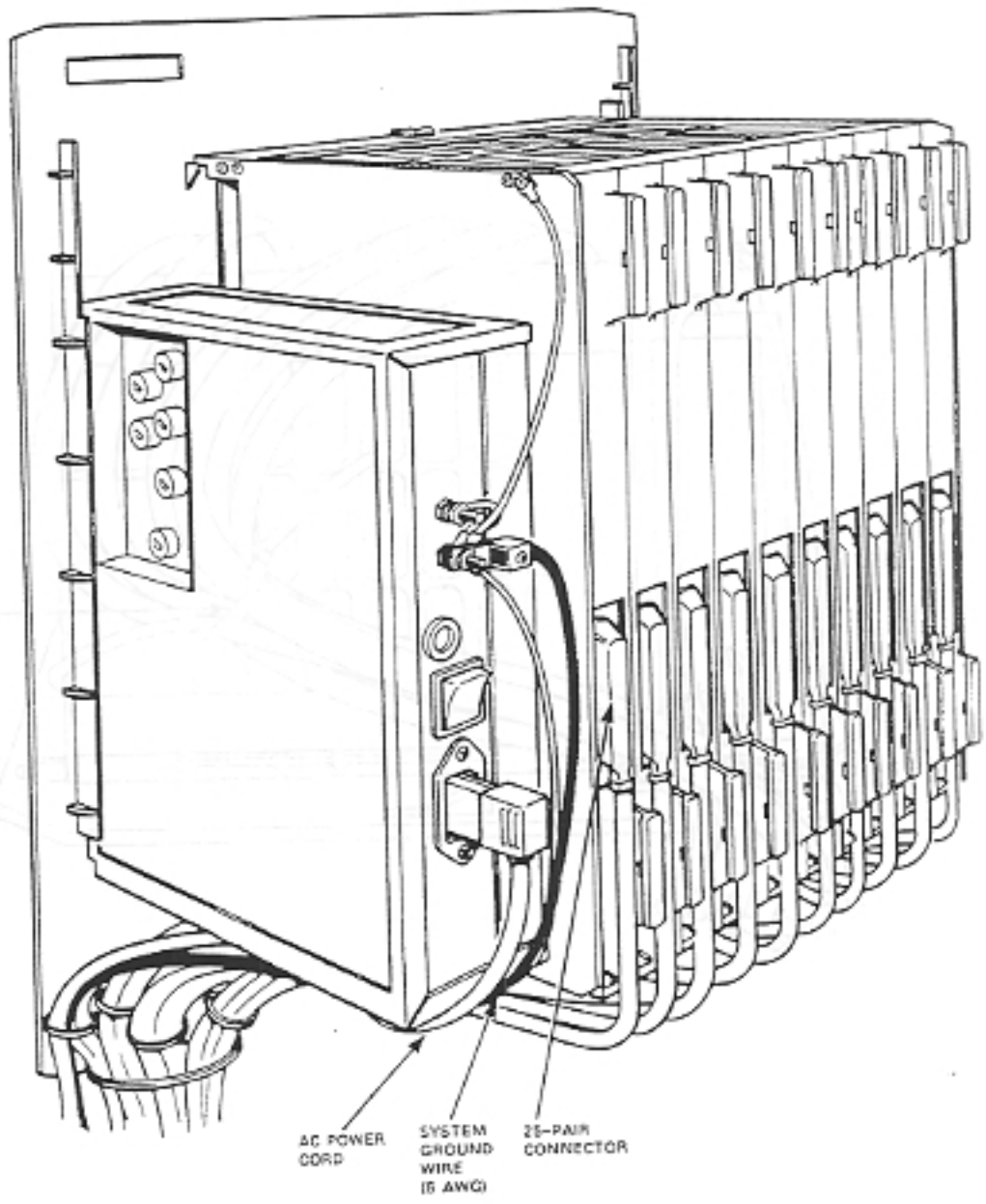
Figure 5-11 Peripheral Card Installation

8197R2

TABLE 5-6
E&M MODULE SWITCH FUNCTIONS

Switch Number	Function
1	OPEN - PBX to Line = +3 dB CLOSED - PBX to Line = -13 dB
2	OPEN - Line to PBX = -4 dB CLOSED - Line to PBX = -11 dB
3	OPEN - Complex Balance Enabled CLOSED - 600 Ohm Balance Enabled
4	OPEN - 600 Ohm Balance Enabled CLOSED - Complex Balance Enabled
5	OPEN - 4-Wire Operation CLOSED - 2-Wire Operation
6	OPEN - Type 5 Signaling CLOSED - Type 1 Signaling
7	NOT USED
8	NOT USED

Note: The settings of Switch 3 and Switch 4 must agree. It is not possible to have both 600 Ω Balance and Complex Balance enabled simultaneously.



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Figure 5-13(a) System Cabling

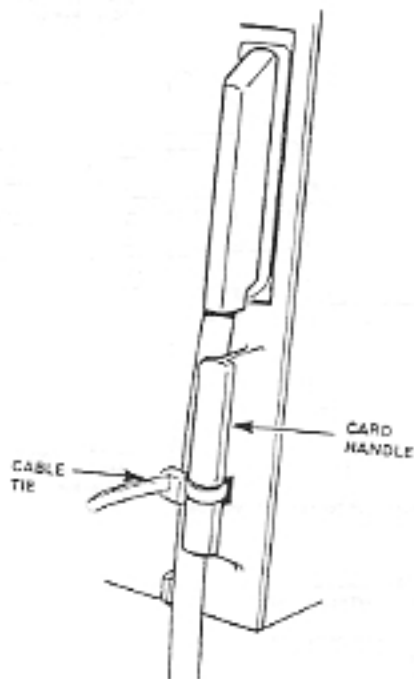


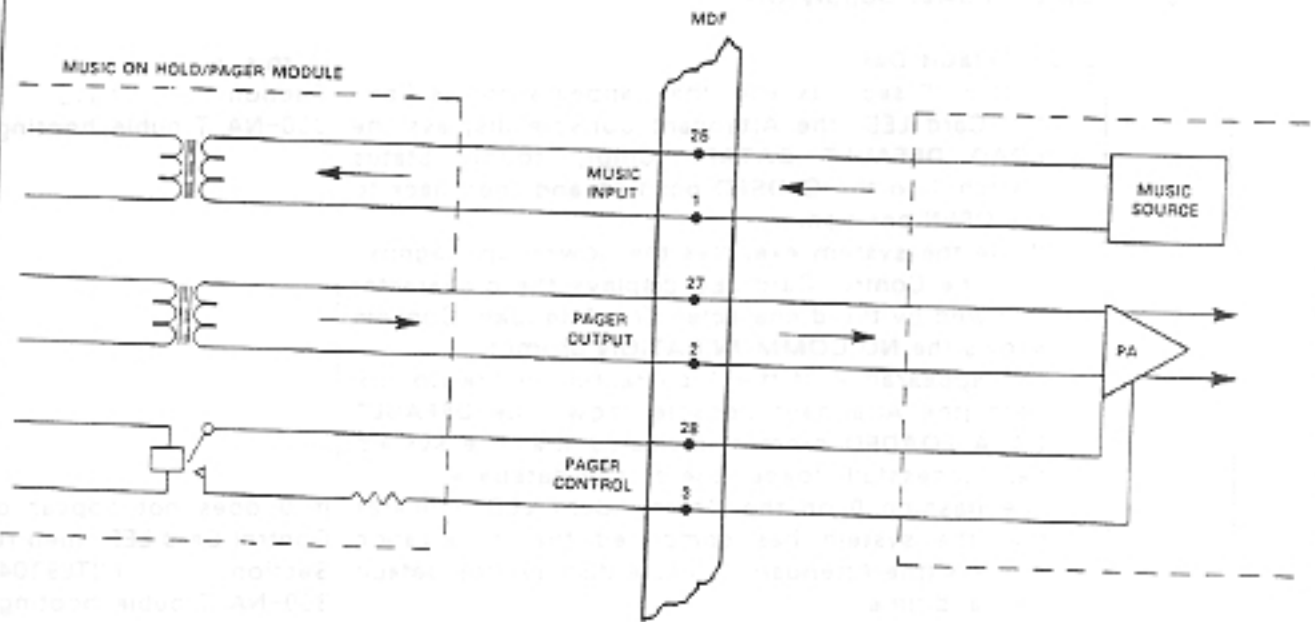
Figure 5-13(c) System Cabling

**TABLE 5-8
ATTENDANT CONSOLE INSTALLATION**

Step	Action	Comments
1.	Install the Cable at the Attendant Console. <ul style="list-style-type: none"> • Insert the Attendant Console Cable into the socket. • Note that the Attendant Console can be placed a maximum of 200 m (218 yd.) from the SX-50™ System. 	Refer to Figure 5-15, Cable Installation on the Attendant Console.
2.	Install the Handset. <ul style="list-style-type: none"> • Plug one end of the Handset Cord into the Handset. • Plug the other end of the Handset Cord into one of the two sockets on the left-hand side of the Attendant Console. 	
3.	If non-default Programmable Function Key designations are to be used, <ul style="list-style-type: none"> • Prepare the Attendant Console feature designations for the Programmable Function Keys as required. • Remove Key Designation Cover: Gently bend the cover to pull the upper and lower tabs out of their slots in the console housing. • Remove default Key Designation Card. • Complete and install the new Key Designation Card. • Replace Key Designation Cover: Gently bend the cover to place both the upper and lower tabs in the slots in the console housing. 	Refer to Section MITL9104-091-210-NA, Customer Data Entry.

TABLE 5-9
MISCELLANEOUS EQUIPMENT INSTALLATION

Step	Action	Comments
1.	<p>Install the Customer-provided Night Bells Equipment.</p> <ul style="list-style-type: none"> • Connect the leads to the terminal block on the Control Card. • For AC Night Bells with a capacitor, terminate the bell circuit between B and C. Connect terminals A and D together on the terminal block. • For AC Night Bells without a capacitor, terminate the bell circuit between B and C. Add a 1.8 μF/250 V capacitor between terminals A and D on the terminal block. • For DC Night Bells with a separate ringing supply, terminate one lead of the bell circuit to A. The ringing supply MUST be connected in series with the bells. Terminate the other lead of the bell circuit to B. Terminals C and D are not used. 	Refer to Figure 5-17, Night Bell Connections.
2.	<p>Install the Customer-provided Printer.</p> <ul style="list-style-type: none"> • Connect the printer cable to the RS-232-C Extender Cable. • Connect the Extender Cable to the Printer Port on the Control Card. • Note that the printer can be located a maximum of 15 m away from the SX-50™ system. 	Refer to Table 5-11, Printer Port Pin Assignments.
3.	<p>Install the Customer-provided Paging Equipment.</p> <ul style="list-style-type: none"> • The MOH/Pager Module mounts on the Universal Card; one per SX-50™ system. • Connect the leads to the proper terminal blocks on the MDF. 	Refer to Figure 5-12, Universal Card Module Installation. Refer to Table 6-1, Tip and Ring Assignments.
4.	<p>Install Customer-provided Paging Equipment</p> <ul style="list-style-type: none"> • Connect the leads to the proper terminal blocks on the MDF. 	Refer to Figure 5-16, Music/Paging Connections.



NOTES:

1. PIN DESIGNATIONS SHOW MOH/PAGER MODULE IN FIRST POSITION OF UNIVERSAL CARD.
2. THE SX-50™ SYSTEM SUPPORTS ONE MOH/PAGER MODULE.

Figure 5-17 Music/Paging Connections

8523R1E2

TABLE 5-11
 PRINTER PORT PIN ASSIGNMENTS

Pin	Source	Assignment
1		Not Used
2	Printer	TxD (Transmit Data)
3	SX-50™ System	RxD (Receive Data)
4	Printer	RTS (Request to Send)
5	SX-50™ System	CTS (Clear to Send)
6		Not Used
7	Common	GND (Ground)
8 - 25		Not Used

TABLE 5-12
 CONTROL CARD STATUS SWITCH FUNCTIONS

Switch Number	Function
1	OPEN - Programming: Security Code Required CLOSED - Programming: No Security Code Required
2	OPEN - Test Line Disabled CLOSED - Test Line Enabled
3	NOT USED
4	NOT USED - MUST BE SET TO OPEN

6. CABLING AND CROSS-CONNECTIONS

General

- 6.01 This Part details the cabling and cross-connections required for installing the SX-50™ communications system.

Telephone Set and Trunk Cabling

- 6.02 Telephone set and trunk cabling terminates on the building cross-connect terminal in the normal manner. Central Office trunk loop resistance limit is 1600 ohms.

Cross-Connections

- 6.03 Connection between the equipment cabinet and the MDF should be made using 28 AWG connector-ended 25-pair cables. Cross-connections should be made in accordance with Table 6-1, Tip and Ring Assignments. For message registration connections refer to Figure 6-1, Message Registration Connections. For E&M trunk connection, refer to Figure 6-3, E&M Trunk Wiring.

- 6.04 Run jumpers using A-type 24 AWG cross-connecting cables.

FCC Cross-Connection Frame Recommendations

- 6.05 Trunk circuits must be connected sequentially to the telephone company interface jack. The cabling requirements and limits for trunks are as detailed above. All cables connecting trunk circuit pairs must be connectorized.

Power Failure Transfer

- 6.06 The "cut-through" relays provided can connect Central Office trunks (two trunks per LS/GS Trunk Card) to selected station lines (refer to Figure 6-2, Power Fail Transfer Connections). The sets must be compatible with the ONS Line Card and the trunk. (Note: DTMF sets can be used only if the trunks accept DTMF dialing). The relays operate under the following conditions:

Incoming Calls. After a power failure transfer has occurred, the Central Office applies ringing to the station for incoming calls directly to the selected station line.

Outgoing Calls. To place an outgoing call through a ground start CO trunk, with the system in Power Fail Transfer Mode, the station originating the call must be equipped with a ground key (i.e., CM1470). Pressing the ground key momentarily, applies a ground to the ring side of the line, which energizes the CO equipment. One side of the ground key must be connected to a ground and the other to the ring conduc-

tor of the station line. Call origination over loop-start trunks does not require a ground start key.

TABLE 6-1 (CONT'D)
TIP AND RING ASSIGNMENTS

NOTES:

- * MM Lead is the Ring Message Lead and M Lead is the Tip Message Lead. Refer to Figure 6-1, Message Registration Connections.
- ** Pins 43, 18 are the first lead designations for the Power Fail Transfer circuits (2 per LS/GS Trunk Card). Refer to Figure 6-2, Power Fail Transfer Connections for details.
- † The SX-50™ system (both Module 1 and 2 configurations) only supports one MOH/Pager Module and one RMATS Module.
- †† For 2-Wire E&M Trunk Operation, DO NOT connect RR and TR leads. Refer to Figure 6-3, E&M Trunk Wiring.
- When the Pager is engaged, Contact A connects with Contact B.

Note: The Power Fail Transfer Connections drawing now appears **before** the E&M Trunk Wiring Drawing.

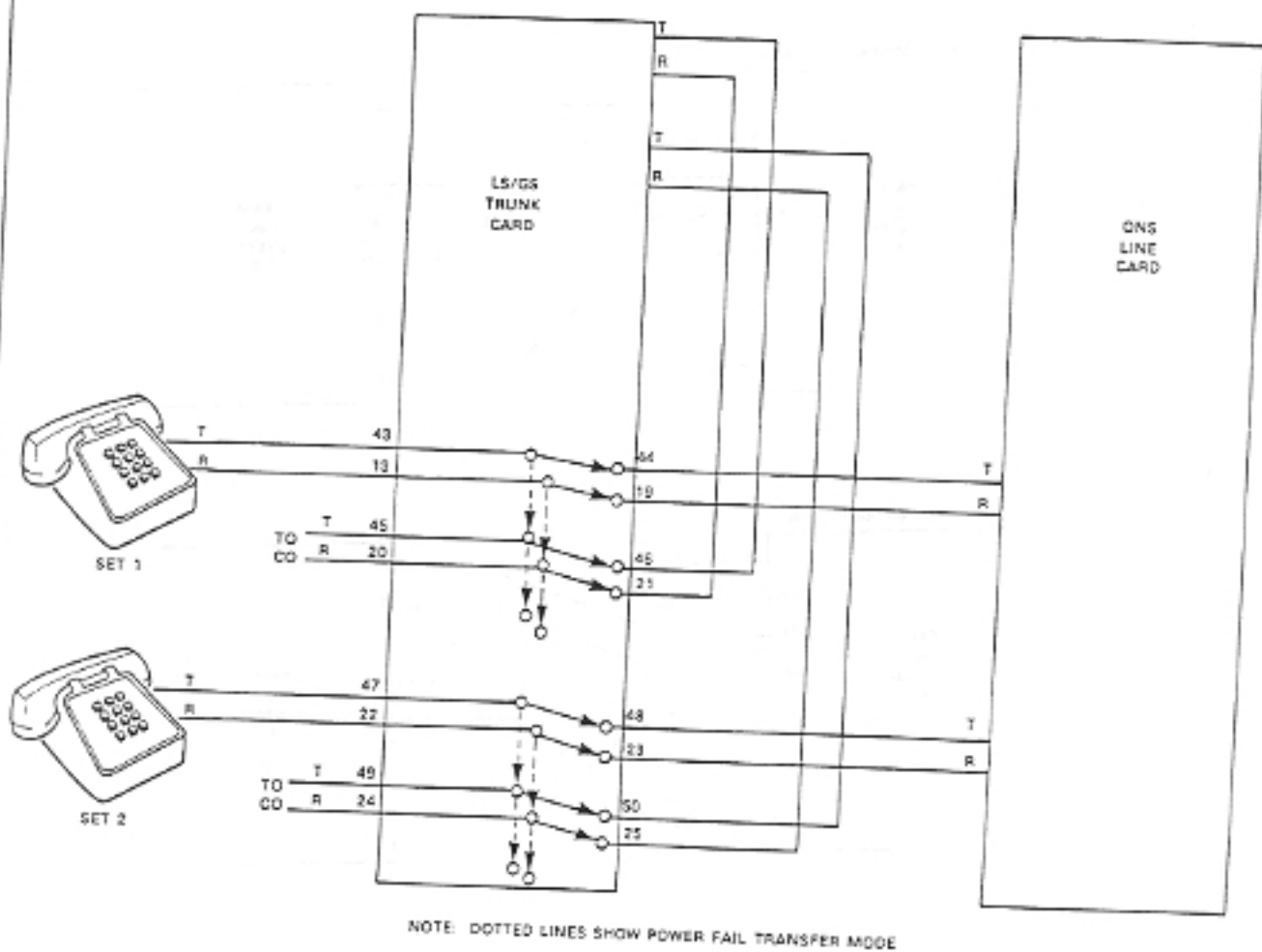


Figure 6-2 Power Fail Transfer Connections

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APPENDIX A

FCC INTERCONNECTION REQUIREMENTS

TELEPHONE COMPANY INTERCONNECTION

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

Notification

A1.02 Prior to the interconnection of this equipment, the local telephone company must be notified; inform the company of the FCC-registered equipment connected to their trunks and give them the following information:

- The Communications System being connected is a MITEL Model SX-50™ system.
- The 14-digit FCC Registration Number which is BN285B-16887-MF-E for systems manufactured in the United States, BN24CK-16185-MF-E for systems manufactured in the United Kingdom.
- The Ringer Equivalence Number which is 1.0B.
- The jacks or connectors required are RJ21X. (One jack is required for each group of eight trunks).
- Private line terminations are:

<u>Circuit</u>	<u>Facility Interconnect</u>	<u>Connector/ Jack</u>
2-wire E&M Type I	TL11M	RJ2EX
4-wire E&M Type I	TL31M	RJ2GX

Connection Limitations

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

Network Changes

A1.04 The telephone company may make changes to its communication service. Such changes may include the change of trunk circuits, but, for such changes, the company shall provide official notification so that the operation of the DPABX service is not interrupted.

Maintenance Limitations

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 set of MITEL Standard Practices.

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

A1.07 The user is not permitted to make cabling or wiring changes within the Attendant Console. Plug-ended cables as detailed in the MITEL Standard Practices, are required for all external connections between the SX-50™ system and the Main Distribution Frame (MDF).

A1.08 Power Supply components and cabling can only be changed and maintained by MITEL or by an authorized agent of MITEL.

Trouble Corrections

A1.09 System Diagnostics report most troubles and the Attendant Console LCD indicates the circuit and card that is malfunctioning. The user can replace cards. The user should always ensure that the system power is turned OFF when replacing the the Generic Module.

A1.10 For more complex malfunctions, MITEL or its authorized agents provide appropriate field service.

- **Persistent Overvoltage.** If the overvoltage on the AC power persists, a "thermal circuit breaker" in the arrester mechanically disconnects the DPABX. When the overvoltage ceases, and it is safe, the AC power returns, the gas tube arrester stops conducting and the thermal circuit breaker reconnects the DPABX.

B1.05 Installation. The surge protector plugs into the standard 3-prong outlet and then provides a receptacle for the AC power cord of the DPABX. The installer should check that the 3-prong AC power receptacle has been properly wired with a safety ground. Devices are commercially available which indicate if the outlet has been wired correctly. Note that this type of surge protector can be used on AC circuits equipped with ground fault detectors; however, the ground fault detector may operate when the surge protector shunts to ground.

Protection for Off-Premises Cables

B1.06 Although AC power surge protection is recommended in problem areas, it is mandatory to provide protection on off-premises wiring (trunks, OPXs). Failure to ensure such protection results in unreliable DPABX service (equipment failures) and may invalidate the manufacturer's warranty.

B1.07 Lightning is an atmospheric effect produced by very high voltages existing for a very short period of time. Currents produced by lightning in the earth's surface induce large currents in buried telephone cables, typically 100 amps per conductor. A small DPABX with 10 off-premises circuits (trunks or OPXs) can easily experience $20 \times 100 = 2000$ Amps of total induced current flowing in the underground cable. Overhead cables are susceptible to direct strikes of lightning with the same results.

B1.08 Classical DPABX Protection. This type of protection uses carbon blocks or gas tube protectors installed where the off-premises wiring enters the building. Figure B1-2 illustrates the equivalent circuit run-on. When the voltage at node A exceeds the protector breakdown voltage, the protector arcs and the surge current shunts into the protector ground. For electronic DPABXs, 3-element gas tubes are recommended as they have uniform breakdown characteristics for both Tip and Ring.

B1.09 Incremental Transient Protection. This protection is not necessary for MITEL DPABXs; some installations provide incremental transient protection during the surge rise-time by using a "coupled bonding wire". This coupled wire is usually No. 10 AWG stranded copper wire tie-wrapped in the center of off-premises cabling and bonded at both the protector ground point and the equipment ground point. Figure B1-3 illustrates the equivalent circuit.

B1.10 In Figure B1-3, the coupled conductor develops an induced voltage in inductor L4 equal to the surge voltage developed in inductor L2. If inductors L2 and L4 are coupled as an ideal transformer, the resultant voltage across the circuit pack is zero. This provides extra protection for the circuit pack.

B1.11 Installation. The installation procedure is critical for safe, reliable protection. Figure B1-4 illustrates an installation arrangement using protector blocks, AC surge protection and coupled bonding conductors. Two important items in the installation are:

- An approved ground and
- Quality power connectors (lug-type) at ground bonding points.

B1.12 The following definitions apply to the installation description:

- **Approved Ground.** A cold metallic water pipe. The cold (not hot) water pipe must have a continuous diameter of not less than 1.25 cm (0.5 in.) and be electrically connected to the street side of the water meter. Even when the water meter is metallic, a No. 6 AWG bond wire must be placed around the meter. Appropriate clamps must be used to bond the No. 6 AWG wire to the water pipe. The bond wire must be copper.
- **Bonded Connection.** A bonded connection implies that appropriate lug type connectors are to be used. Such connectors are sized to the wire gauge.
- **AC Ground.** The AC Ground is the green wire (safety ground) which appears at the AC duplex receptacle.
- **DPABX Chassis Ground.** The DPABX Chassis Ground is a No. 6 AWG copper wire which connects from the ground stud on the Power Supply to an approved ground (refer to Approved Ground definition in this Paragraph).
- **Protector Ground.** The Protector Ground is a No. 6 AWG copper wire which connects the ground lug on the protector to an approved ground (refer to Approved Ground definition in this Paragraph).

B1.13 Once the installation has been completed, check the following:

- Ensure the presence of primary protection for trunks and OPXs. Three-element gas tubes are recommended as they provide consistent breakdown characteristics for both Tip and Ring, thus avoiding metallic voltages between Tip and Ring. Appropriate protectors are readily available from various distributors.
- Ensure that the NO. 6 AWG wire for the Protector Ground is bonded to an approved ground. The quality of this connection is important; use approved connectors. If a cold water pipe ground is used as the approved ground, then ensure that it is clean (shiny) and free of contaminants at the bonding point.
- Where possible, physically separate the off-premises cabling from the on-premises cabling where the cables meet in the building. Separate ducts or compartmentalized ducts are preferred.

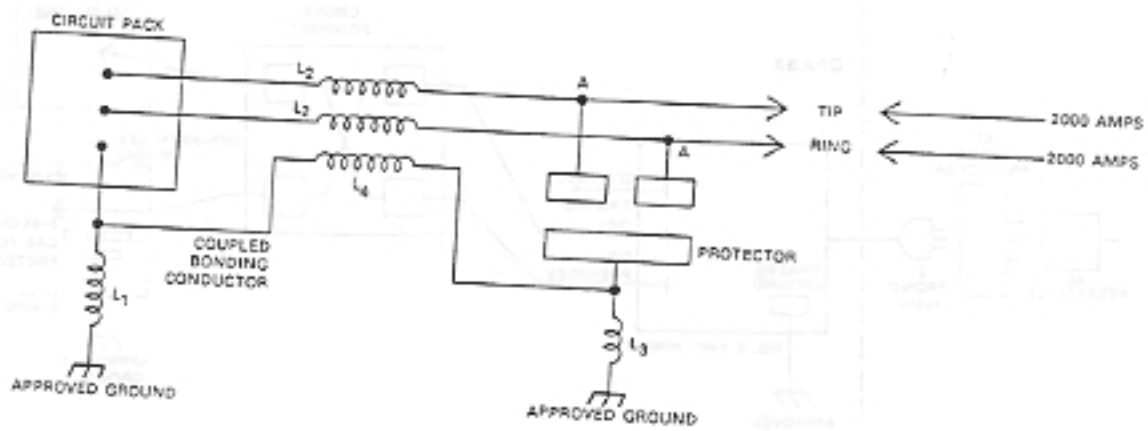
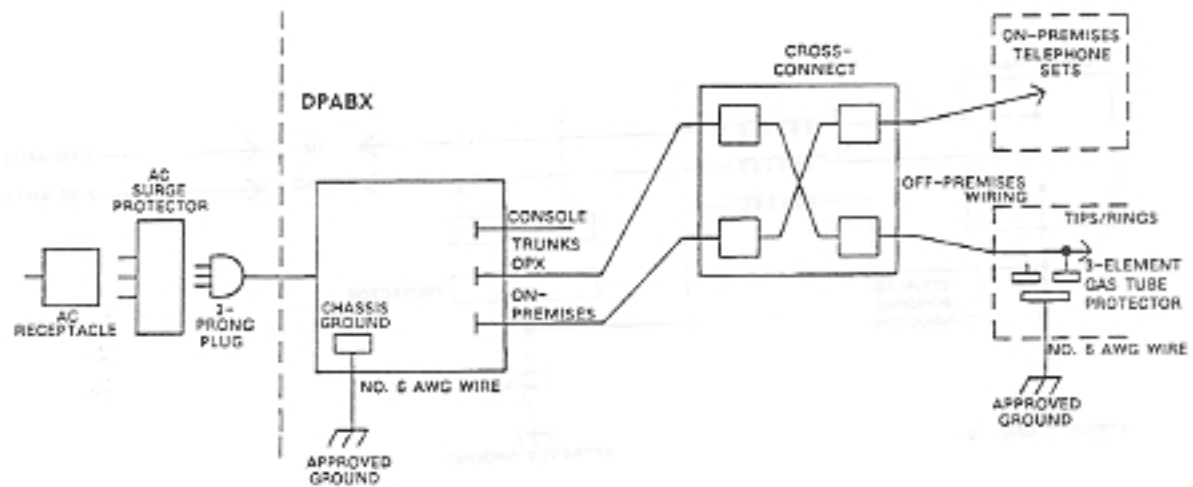


Figure B1-3 Protection with "Coupled Bonding Conductor"

5510RDE0



5511R0E0

Figure B1-4 Installation of Protectors

B1.14 Chassis Ground Test. This test should be done before connecting the No. 6 AWG wire to the ground lug on the Power Supply.

- Plug the DPABX AC power cord into the surge protector and the AC receptacle. It is not necessary to power up the DPABX.
- Use a good quality, calibrated digital multimeter and prepare to measure any AC voltage between the DPABX ground lug (on the Power Supply) and the approved ground (the No. 6 AWG wire connected to the cold water pipe). Set the multimeter to the highest AC voltage range and measure between the Power Supply ground lug and the approved ground. Switch the multimeter from the highest to the lowest voltage range. If voltages greater than 1.0 volt are found, stop and locate an alternative approved ground or refer the problem to an engineering support group.
- After ensuring that the voltage between the ground lug on the Power Supply and the approved ground is less than 1.0 volt, set the multimeter to the ohms scale. The meter should read less than 5 ohms. If the reading is higher than 5 ohms, stop and take steps to reduce the resistance to 5 ohms (shorten the No. 6 AWG wire and/or clean the surface of the cold water pipe) or refer the problem to an engineering support group.

Electrostatic Protection at the Telephone Set

B1.15 If static is a problem at a specific installation site, it may be necessary to provide some protection on a per-line (telephone set) basis. Such protection is seldom necessary if the cabling between the telephone set and the DPABX is greater than 30 m (100 ft). In cases where the cables are less than 30 m (100 ft), it may become necessary to provide a 30 m (100 ft) cable loop on a per-line basis (or a MITEL Static Protection Unit, Part Number 9180-067-001-NA), between the telephone set and the DPABX.

SX-50™

DIGITAL PRIVATE AUTOMATIC BRANCH EXCHANGE (DPABX) SYSTEM
CUSTOMER DATA ENTRY (CDE)

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1. INTRODUCTION

General

1.01 After the successful mechanical installation of the SX-50™ system (refer to Section MITL9104-091-200-NA, Shipping, Receiving and Installation Information), the system is ready for programming. This Section outlines the procedures for entering customer data, describes the programming options, indicates the default options and provides space for the installer to record the data.

Reason for Reissue

1.02 This is the second issue of Section MITL9104-091-210-NA, Customer Data Entry (CDE). The programming forms have been improved and more information is given about trunk options. Changes from Issue 1 are indicated by change bars at the right hand side of the page.

Section Overview

1.03 This Section is divided into five Parts:

- a) **Introduction.**
- b) **System Initialization:** details the initial power-up procedures and loading of default data.
- c) **Customer Data Entry Forms:** provides a paper form for each data register. The form lists the bit settings for the available options and provides space for the programmer to record the required values.
- d) **Programming Error Codes and Messages:** lists and describes the error codes that may appear during Customer Data Entry.
- e) **Feature Index:** provides a quick reference to the command, register and bit numbers that affect each feature available on the SX-50™ system.

2. SYSTEM INITIALIZATION AND DATA ENTRY

Default Data

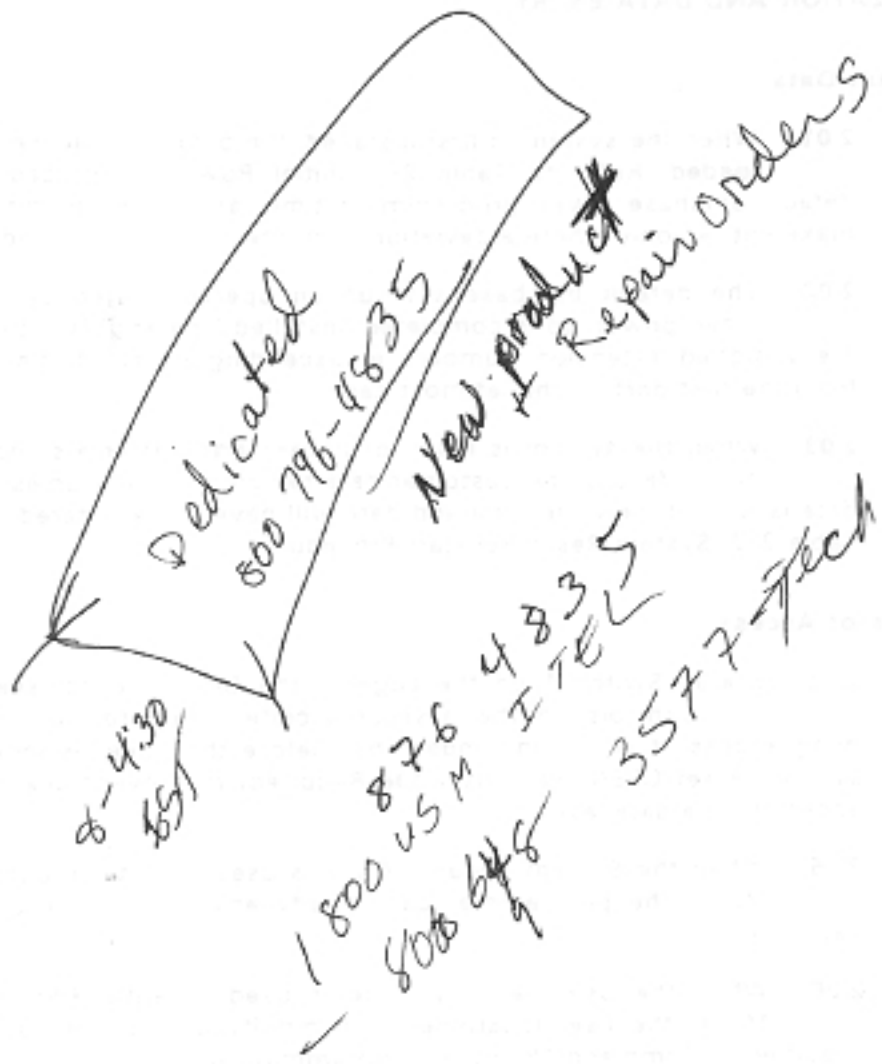
- 2.01 When the system is first installed, the default database must be loaded. Refer to Table 2-1, Initial Power-up Procedure. The default database saves programming time, as the programmer need make entries only where a deviation from the default is desired.
- 2.02 The default database sets up an operable telephone system when power-up is completed. Installed Line and COV card ports are assigned extension numbers in ascending order starting at 100 from the first port on the leftmost card.
- 2.03 When the system is reset, or is re-started after a shutdown or power failure, the customer data remains in place unless default data is loaded; only the time and date will have to be entered. Refer to Table 2-2, System Reset/Re-start Procedure.

Levels of Access

- 2.04 Status Switch 1 on the edge of the Control Card (see Figure 2-1) controls whether a security code is required for programming access. It is recommended that before the cover is locked this switch be set OPEN (Security Code Required) to prevent unauthorized access to the database.
- 2.05 When the System Security Code is used to enter Programming Mode, the programmer can modify any part of the customer database.
- 2.06 When the User Security Code is used to enter Programming Mode, the user (customer) can modify only those commands specified in Command 180 (User Programming Access).
- 2.07 When no security code is entered, the user cannot modify the database. The user can view all of the database except the following:
- Command 190, System Security Code Programming,
 - Command 191, User Security Code Programming,
 - Command 192, RMATS Security Code Programming,
 - Command 193, DISA Access Code Programming.

Programming Access

- 2.08 If Status Switch 1 is CLOSED, simply press # (or dial 70) at the Console or Test Line. If the switch is OPEN, follow the procedure in Table 2-3, Programming Access from the Attendant Console or Table 2-4, Programming Access from the Test Line.



8-430
657

1 800 876
800 648

4835
ITEL

3577 Tech

TABLE 2-1
INITIAL POWER-UP PROCEDURE

INITIAL POWER-UP AND LOAD DEFAULT DATA

- With the system power OFF, set all the Control Card status switches OPEN. Refer to Figure 2-1, Control Card Connectors.
- Switch the Power Supply ON.
- Within 10 seconds the ? prompt appears on the Control Card LED and the Attendant Console LCD shows LOAD DEFAULT DATA? Within 10 seconds move Status Switch 1 to the CLOSED position, then move it back to the OPEN position.
- The Control Card LED displays c for 40 seconds while the default data is loading. The display then shows d for 10 seconds.
- The Control Card LED briefly displays the A character indicating that the system has successfully loaded the Default Data. The display then flashes the number of alarms in the alarm queue. The idle time/date display appears on the Console LCD.
- If desired, set Status Switch 1 CLOSED to enable Programming Access without a Security Code, but remember to set the switch OPEN when data entry is complete.
- If use of a Test Line is anticipated, set Status Switch 2 CLOSED.

TABLE 2-2
SYSTEM RESET/RE-START PROCEDURE

POWER-UP WITH CUSTOMER DATABASE

- If the Power Supply is OFF, switch it ON. If it is ON, press RESET. Refer to Figure 2-1, Control Connectors.
- If Status Switch 1 is OPEN, within 10 seconds the ? prompt appears on the Control Card LED and the Attendant Console LCD shows LOAD DEFAULT DATA ?. If the switch is CLOSED, only a decimal point is displayed. In either case, wait 10 seconds.
- The Control Card LED flashes the number of alarms in the alarm queue. The idle time/date display appears on the Console LCD.

TABLE 2-3
PROGRAMMING ACCESS FROM THE ATTENDANT CONSOLE

ENTER PROGRAMMING MODE FROM THE ATTENDANT CONSOLE

Note: For read-only access, omit the steps involving the STATUS key.

- Press and hold down the STATUS key.
- The Attendant Console LCD displays the generic and the revision levels.

GENERIC 3504A-79-02-00 FP1-M2

- Enter a security code (System Security Code default is 7772 and User Security Code default is 1234).*
- The Attendant Console LCD flashes the word GENERIC if the security code is correct.
- Release the STATUS key.
- Press # or dial 70.
- The Console LCD displays the first command number. The system is now in Programming Mode.

COMMAND 100?	ENTER	EXIT
--------------	-------	------

EXIT PROGRAMMING MODE

- Press the RELEASE key or the EXIT softkey.

TABLE 2-4
PROGRAMMING ACCESS FROM THE TEST LINE

ENTER PROGRAMMING MODE FROM THE TEST LINE
<p>Notes:</p> <ol style="list-style-type: none"> 1. Status Switch 2 on the Control Card must be CLOSED for Test Line operation. 2. It is recommended that a SUPERSET 4™ set be used as a Test Line as it has an LCD display. 3. Command 100 Register 1 bits e, f, g must be programmed with the equipment number of the Test Line set. Default is 001. <ul style="list-style-type: none"> • Press # or dial 70. The SUPERSET 4™ Set LCD displays ENTER CODE and the EXIT and READ softkeys. For read-only access, press the READ softkey instead of entering a security code. • Dial a security code (System Security Code default is 7772 and User Security Code default is 1234).* • If the code is correct, the LCD displays COMMAND 100? with the EXIT and the YES softkeys. The system is now in Programming Mode.
EXIT PROGRAMMING MODE
<ul style="list-style-type: none"> • Press the EXIT softkey or toggle the switchhook.

Programming Levels

2.09 Command Level. This is the first level of Programming Mode. The LCD shows a command number and a question mark. Refer to Figure 2-2, Command Level Display. The command number shown can be changed to any other valid command number using the telephone keypad. The softkeys permit the user to:

- enter the register level for the command number shown,
or,
- advance the display to the next command (in a series of related commands),
or,
- leave Programming Mode.

Refer to the paragraphs on Console and Test Line softkeys for more information.

2.10 Register Level. This is the second level of Programming Mode. The Attendant Console LCD displays the contents of the first register of the selected command.

The register number occupies Bit a (and Bit b if required). Upon first entering the Register Level, the register number flashes. The displayed

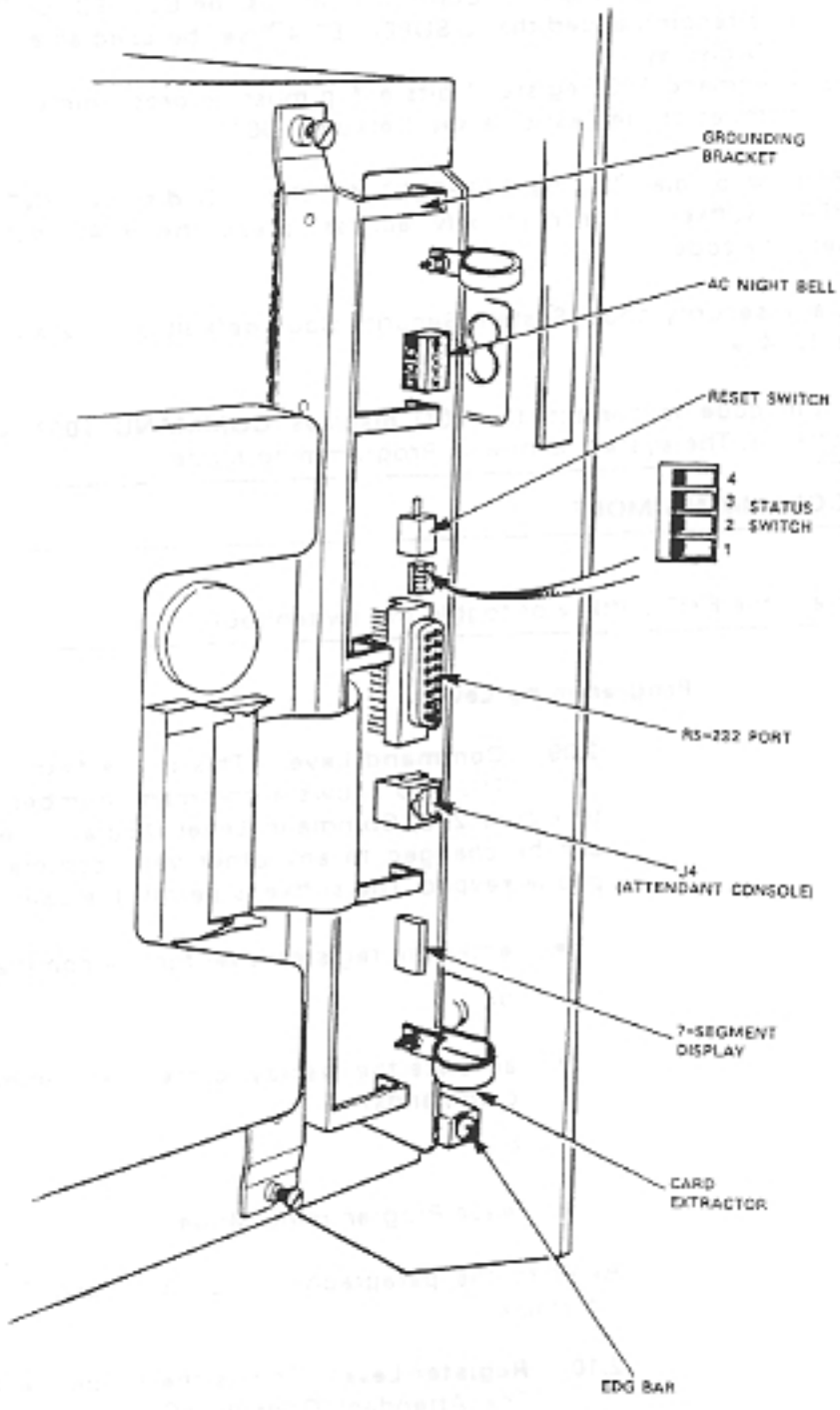


Figure 2-1 Control Card Connectors

8551R2E1

register number can be changed to any other valid register number using the telephone keypad. Refer to Figure 2-3, Register Level Display. Once the - softkey is pressed or a new register number is dialed the system leaves the Register Level and enters the Bit Level.

2.11 Bit Level. This is the third and final level of Programming Mode. The LCD shows the same display as at the Register Level except:

- the NEXT softkey is replaced with the SAVE softkey and,
- the Register Number lights solidly; the first bit that can be modified now flashes.

At this level, the user can modify the separate bits of the register using the telephone keypad and the - softkey.

COMMAND 100?	
ENTER	EXIT

Figure 2-2 Command Level Display

(a)01000011	CMD 100 R1
NEXT QUIT	EXIT -

Figure 2-3 Register Level Display

Attendant Console Softkeys

2.12 There are 5 softkeys on the Attendant Console, below the LCD display. There are 6 possible functions for these keys. The function name appears above the key, on the LCD, when the function is available. The functions are as follows:

ENTER Pressing the ENTER softkey at the Command Level enters the Register Level of the selected Command Number.

EXIT Pressing the EXIT softkey at any level of programming exits Programming Mode and returns the console to Call Processing Mode.

QUIT Pressing the QUIT softkey after a bit has been edited restores the display to the preceding level. The change is not saved. This softkey also appears, with an error message, when a programming error is made. Refer to Table 5-1, Programming Error Codes for a list of error codes and messages.

NEXT Pressing the NEXT softkey selects the next Command Number in a group (if at the Command Level) or the next Register Number in a group (if at the Register Level). The upper right-hand corner of the Attendant Console LCD indicates the selected Command and Register Numbers.

- This softkey only appears if the level of access permits modification of the database. Pressing the - softkey moves the pointer one location to the right. Pressing this softkey when the pointer is at the extreme right-hand position, erases the - prompt from the Attendant Console Display; subsequent movement to the right is disabled. Pressing the QUIT softkey returns the pointer to the beginning of the register.

SAVE This softkey appears only after data for a register has been modified. Pressing the SAVE softkey stores the new data.

Test Line Softkeys

2.13 There are 6 softkeys on the SUPERSET 4™ Set below the LCD display. There are 7 possible Test Line functions for these keys. The function name appears above the key, on the LCD, when the function is available. The functions are as follows:

READ Pressing the READ softkey allows the user to read, but not modify, the database. Refer to LEVELS OF ACCESS in this Part for details.

YES Pressing the YES softkey at the Command Level access the Register Level of the selected Command Number.

EXIT Pressing the EXIT softkey at any level of programming exits Programming Mode (or Display Mode) and returns the set to Ca Processing Mode.

CANCEL Pressing the CANCEL softkey after a bit has been edited restores the display to the preceding level. The change is not saved. This softkey also appears, with an error message, when a programming error is made. Refer to Table 5-1, Programming Error Codes for a list of error codes and messages.

FWD Pressing the FWD softkey selects the next Command Number in a group (if at the Command Level) or the next Register Number in a group (if at the Register Level).

- This softkey only appears if the level of access permits modification of the database. Pressing the - softkey moves the pointer one bit location to the right. Pressing this softkey when the pointer is at the extreme right-hand position, erases the - prompt from the SUPERSET 4™ set LCD Display; subsequent movement to the right is disabled. Pressing the CANCEL softkey returns the pointer to the beginning of the register.

SAVE This softkey appears only after data for an entry has been modified. Pressing the SAVE softkey stores the new data.

2.14 Several softkeys which can appear at the Console do not appear at the SUPERSET 4™ set or have a different prompt. All the softkeys have equivalent key sequences:

Console Softkey	Test Line Softkey	Test Line Key Sequence
ENTER	YES	*1
NEXT	FWD	*2
-	-	*3
VIEW		*4
DELETE		*5
WFDT		*6
PAUSE		*7
EXIT	EXIT	*0
SAVE	SAVE	**
QUIT	CANCEL	*#

3. CUSTOMER DATA ENTRY FORMS

General

3.01 The following forms enable the installer to plan customer programming prior to actual data entry. Space is allocated to record the customer data.

3.02 Those Commands which cannot be edited are not included in this Section. Refer to Section MITL9104-091-350-NA, Troubleshooting Procedures and General Maintenance Information for details. These Commands include:

- Command 980, System Status Display
- Command 981, Inter-DX Link Status Display
- Command 982, Station Status Display
- Command 983, SUPERSET[®] Set Status Display
- Command 984, Trunk Status Display
- Command 999, Software Identity Display

Physical Configuration

3.03 Form 3-1 provides space to record the placement of circuit cards and Universal Card modules in the system. Table 3-1 lists the available card and module types.

3.04 Table 3-2 enables the installer to determine quickly the equipment number of any station or trunk in the system. Many command registers require the entry of equipment numbers.

FORM 3-1 CARD AND MODULE PLACEMENT

Slot Number	Card Type
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Universal Card 1		Universal Card 2	
Module Position	Module Type	Module Position	Module Type
1		1	
2		2	
3		3	
4		4	
Universal Card 3		Universal Card 4	
Module Position	Module Type	Module Position	Module Type
1		1	
2		2	
3		3	
4		4	

TABLE 3-1
CARD AND MODULE TYPES

Card/Module Type	Abbreviation
ONS Line Card (16 Lines)	ONS 16
ONS Line Card (8 Lines)	ONS 8
COV Line Card (8 Lines)	COV 8
LS/GS Trunk Card (8 Trunks)	LS/GS 8
LS/GS Trunk Card (4 Trunks)	LS/GS 4
Universal Card	UNIVERSAL
• Music on Hold/Pager Module	MOH/PAGER
• E&M Trunk Module	E&M MOD
• RMATS Module	RMATS

TABLE 3-2
STATION EQUIPMENT NUMBERS

Station Equipment Numbers

Circuit Number	Slot Number									
	1	2	3	4	5	6	7	8	9	10
01	001	017	033	049	065	081	097	113	129	145
02	002	018	034	050	066	082	098	114	130	146
03	003	019	035	051	067	083	099	115	131	147
04	004	020	036	052	068	084	100	116	132	148
05	005	021	037	053	069	085	101	117	133	149
06	006	022	038	054	070	086	102	118	134	150
07	007	023	039	055	071	087	103	119	135	151
08	008	024	040	056	072	088	104	120	136	152
09	009	025	041	057	073	089	105	121	137	153
10	010	026	042	058	074	090	106	122	138	154
11	011	027	043	059	075	091	107	123	139	155
12	012	028	044	060	076	092	108	124	140	156
13	013	029	045	061	077	093	109	125	141	157
14	014	030	046	062	078	094	110	126	142	158
15	015	031	047	063	079	095	111	127	143	159
16	016	032	048	064	080	096	112	128	144	160

SUPERSET/Trunk Equipment Numbers

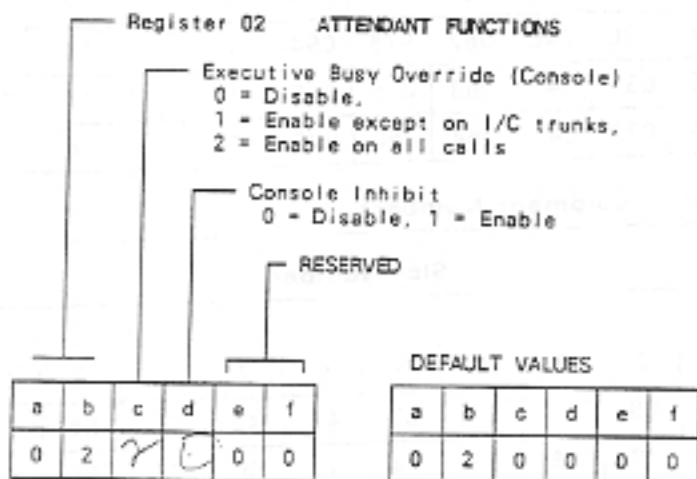
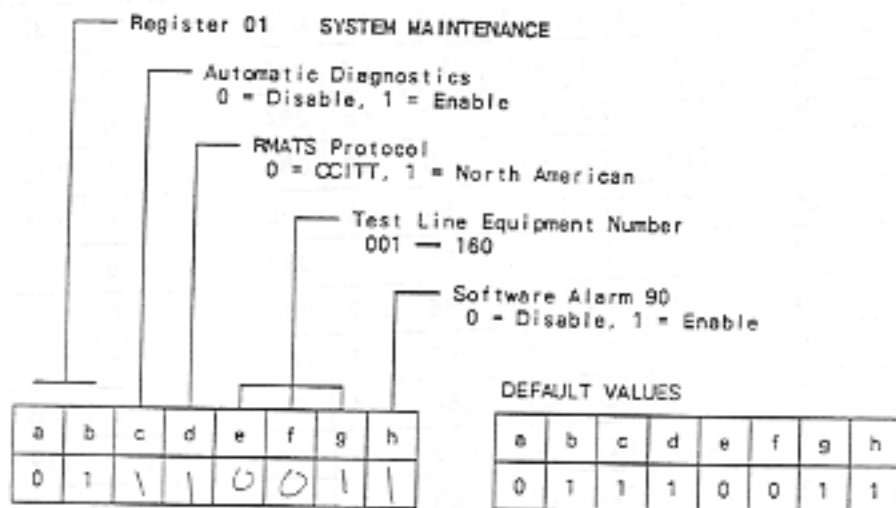
Circuit Number	Slot Number									
	1	2	3	4	5	6	7	8	9	10
01	01	09	17	25	33	41	49	57	65	73
02	02	10	18	26	34	42	50	58	66	74
03	03	11	19	27	35	43	51	59	67	75
04	04	12	20	28	36	44	52	60	68	76
05	05	13	21	29	37	45	53	61	69	77
06	06	14	22	30	38	46	54	62	70	78
07	07	15	23	31	39	47	55	63	71	79
08	08	16	24	32	40	48	56	64	72	80

E&M Trunks use ODD Equipment Numbers only.

SYSTEM OPTIONS PROGRAMMING

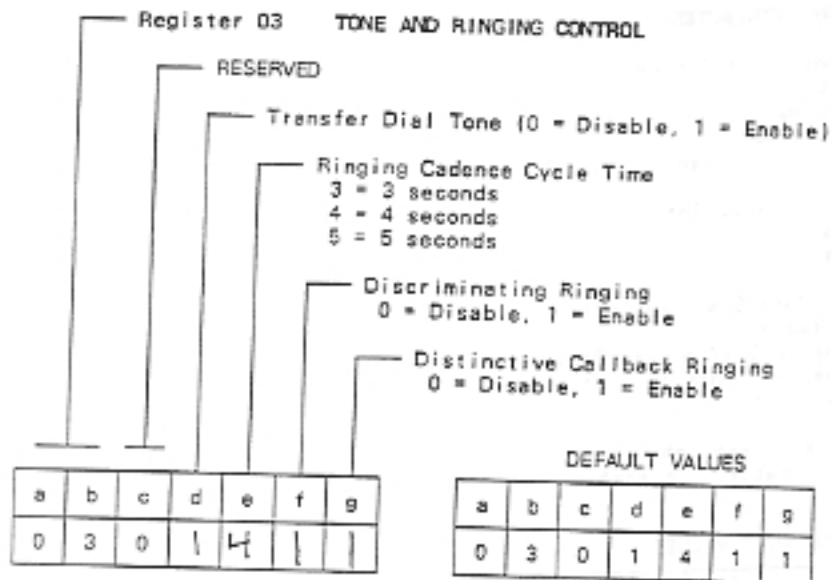
3.05 The System Options commands set parameters and feature options that apply throughout the system. Likewise, the Feature Access Codes table assigns access codes available throughout the system. In both cases there are default values; the installer need only perform data entry where a change from the default value is desired.

COMMAND 100

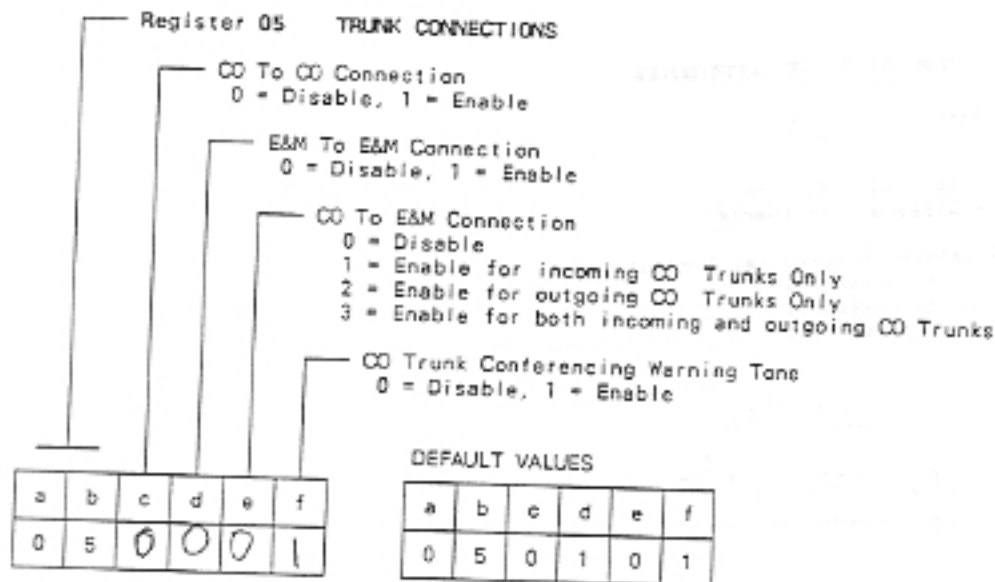


SYSTEM OPTIONS PROGRAMMING

COMMAND 100

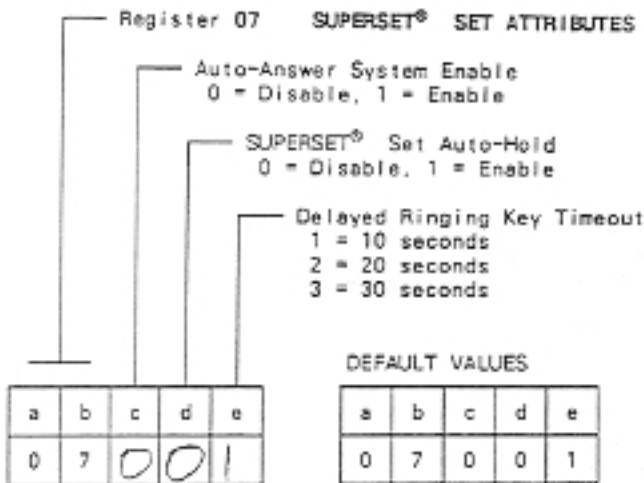
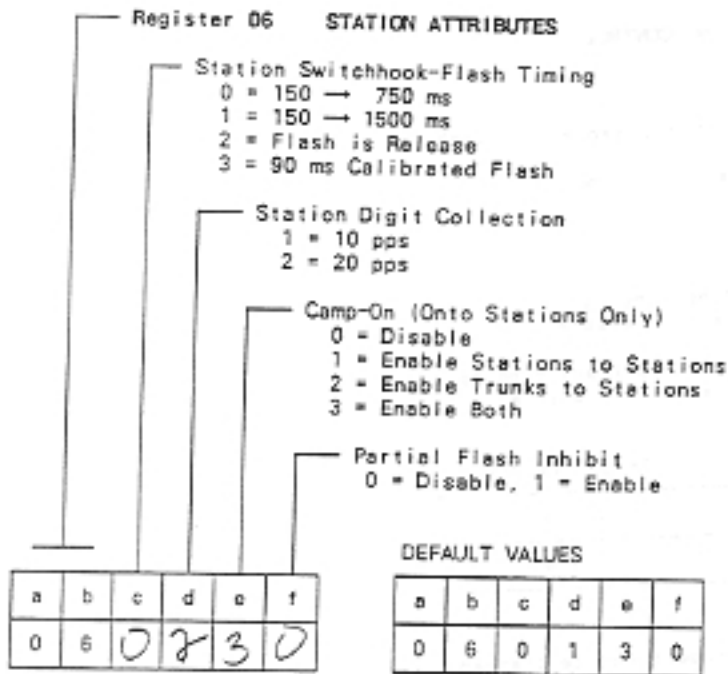


Register 04 is RESERVED. Bit values should not be changed.



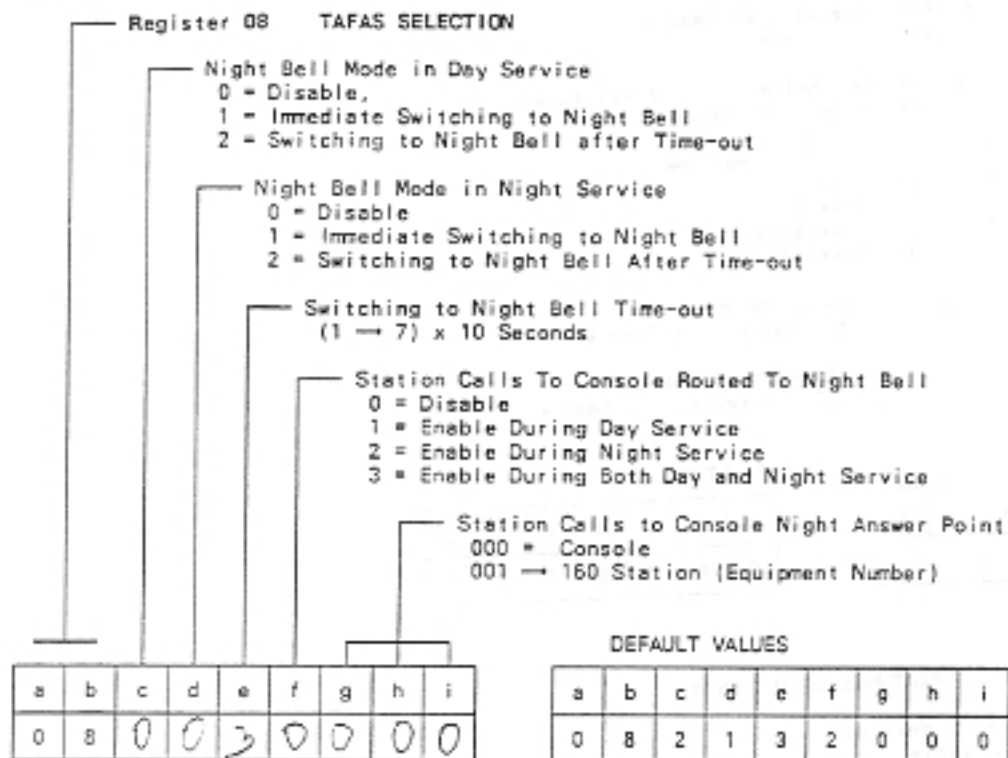
COMMAND 100

SYSTEM OPTIONS PROGRAMMING



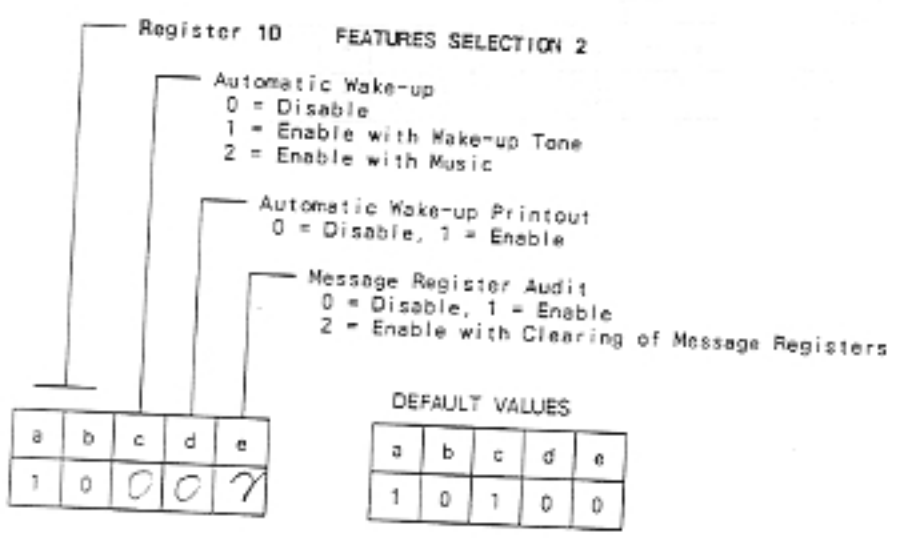
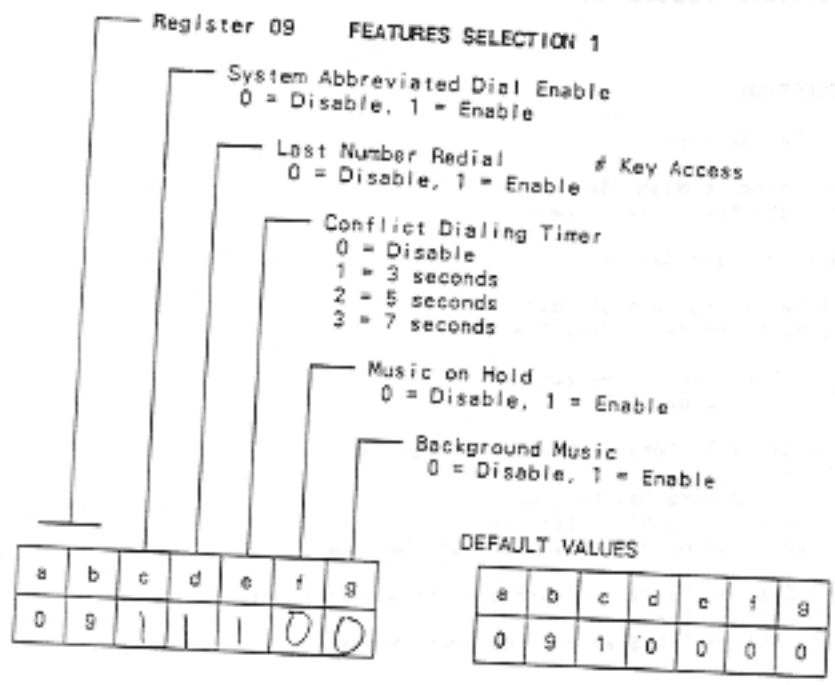
SYSTEM OPTIONS PROGRAMMING

COMMAND 100



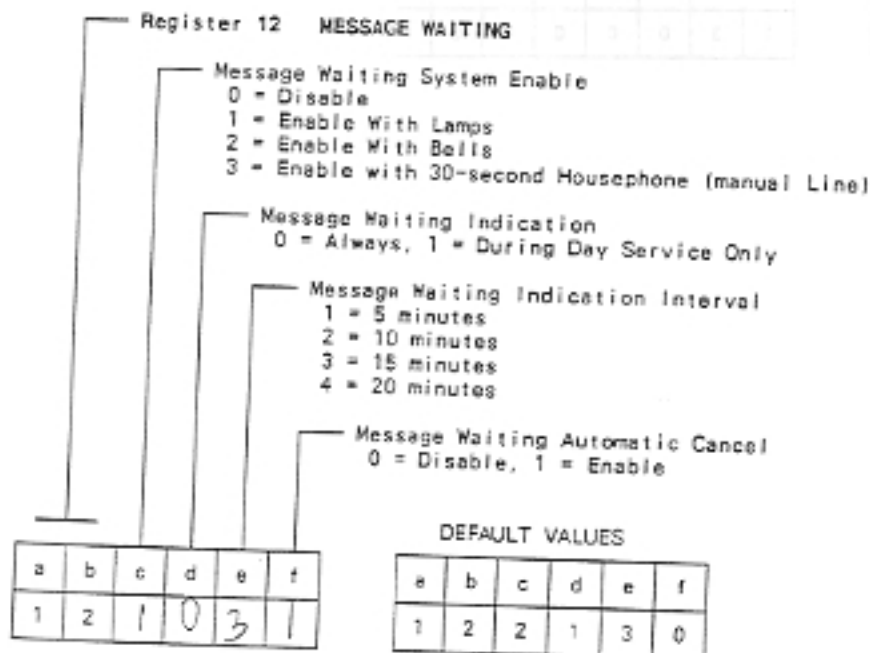
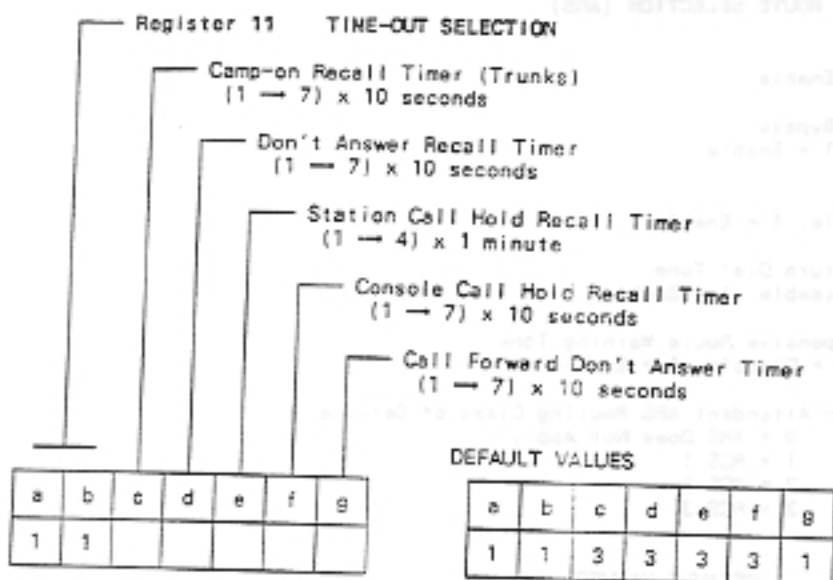
COMMAND 100

SYSTEM OPTIONS PROGRAMMING



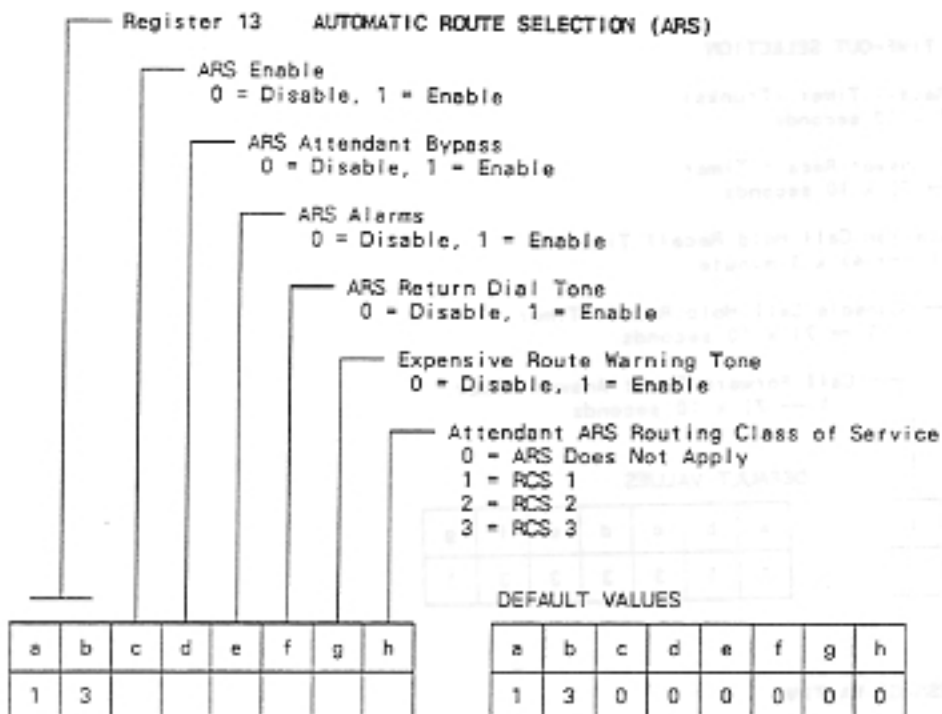
SYSTEM OPTIONS PROGRAMMING

COMMAND 100



SYSTEM OPTIONS PROGRAMMING

COMMAND 100



SYSTEM OPTIONS PROGRAMMING

COMMAND 100

Register 14 SYSTEM MESSAGE DETAIL RECORDING (SHDR)

SMDR System Enable
 0 = Disable
 1 = Enable Incoming Trunks Calls Only
 2 = Enable Outgoing Trunks Calls Only
 3 = Enable Both Incoming and Outgoing Trunks Calls

Record Meter Pulses
 0 = Disable, 1 = Enable

Long Call Indicator
 0 = Disable, 1 = Enable

Record Only Incoming CO Trunk Calls
 0 = Disable, 1 = Enable

Drop Calls Of Less Than Eight Digits
 0 = Disable, 1 = Enable

Drop Incomplete Outgoing Calls
 0 = Disable, 1 = Enable

Overwrite Queued Printer Buffer
 0 = Disable, 1 = Enable

a	b	c	d	e	f	g	h	i
1	4							

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
1	4	0	0	0	0	0	0	0

Register 15 ACCOUNT CODE CONTROL

Number of Digits (maximum if Variable Length enabled)
 0 = Disable Account Codes
 1 - 8 Digits

Variable Length Account Codes
 0 = Disable
 1 = Enable

a	b	c	d
1	5		

DEFAULT VALUES

a	b	c	d
1	5	0	0

SYSTEM OPTIONS PROGRAMMING

COMMAND 100

Register 16 PRINTER CONTROL

Data Demultiplexer Enable (0 = Disable, 1 = Enable)

Printer Baud Rate

- 0 = 110
- 1 = 150
- 2 = 300
- 3 = 600
- 4 = 1200
- 5 = 1800
- 6 = 2400
- 7 = 4800
- 8 = 9600

Printer Parity

- 0 = None
- 1 = Odd
- 2 = Even

Number of Tx Bits

5 → 8

Number of Stop Bits

1 → 2

Slow Carriage Return Option

- 0 = Disable
- 1 = Output Six Nulls at End-of-Line

DEFAULT VALUES

a	b	c	d	e	f	g	h
1	6						

a	b	c	d	e	f	g	h
1	6	0	4	0	8	2	0

COMMAND 110

FEATURE ACCESS CODE PROGRAMMING

- Register: 01 -- DIAL ACCESS TO ATTENDANT
 02 -- PAGING ACCESS
 03 -- CALL HOLD
 04 -- CALL HOLD RETRIEVE - LOCAL
 05 -- CALL HOLD RETRIEVE - REMOTE
 06 -- DIAL CALL PICKUP
 07 -- SYSTEM ABBREVIATED DIAL ACCESS
 08 -- CALL FORWARD - FOLLOW ME
 09 -- TAFAS PICKUP
 10 -- CALL FORWARD - DON'T ANSWER
 11 -- CALL FORWARD - BUSY
 12 -- CALL FORWARD - BUSY/DON'T ANSWER
 13 -- PROGRAMMING ACCESS
 14 -- ATTENDANT FUNCTIONS

Access Code

a	b	c	d	e	f
0	1				
0	2				
0	3				
0	4				
0	5				
0	6				
0	7				
0	8				
0	9				
1	0				
1	1				
1	2				
1	3				
1	4				

DEFAULT VALUES

a	b	c	d	e	f
0	1	0			
0	2	5	0		
0	3	5	1		
0	4	5	2		
0	5	5	3		
0	6	5	4		
0	7	5	5		
0	8	5	6		
0	9	5	7		
1	0	5	8		
1	1	5	9		
1	2	6	0		
1	3	7	0		
1	4	7	1		

a	b	c	d	e	f

COMMAND 110

FEATURE ACCESS CODE PROGRAMMING

Register: 15 -- STATION FEATURES RESET
 16 -- CALL PARK (ATTENDANT)
 17 -- CALL PARK (ATTENDANT)
 18 -- CALL PARK (ATTENDANT)
 19 -- HUNT GROUP 1 ACCESS
 20 -- HUNT GROUP 2 ACCESS
 21 -- HUNT GROUP 3 ACCESS
 22 -- HUNT GROUP 4 ACCESS
 23 -- HUNT GROUP 5 ACCESS
 24 -- HUNT GROUP 6 ACCESS
 25 -- RING GROUP ACCESS
 26 -- RMATS MODEM ACCESS
 27 -- RESERVED
 28 -- ACCOUNT CODE ENTRY

Access Code

	a	b	c	d	e	f
1	5					
1	6					
1	7					
1	8					
1	9					
2	0					
2	1					
2	2					
2	3					
2	4					
2	5					
2	6					
2	7					
2	8					

DEFAULT VALUES

	a	b	c	d	e	f
1	5	4	4	4		
1	6	4	5	1		
1	7	4	5	2		
1	8	4	5	3		
1	9	4	9	1		
2	0	4	9	2		
2	1	4	9	3		
2	2	4	9	4		
2	3	4	9	5		
2	4	4	9	6		
2	5	4	9	7		
2	6	4	9	8		
2	7					
2	8	7	5			

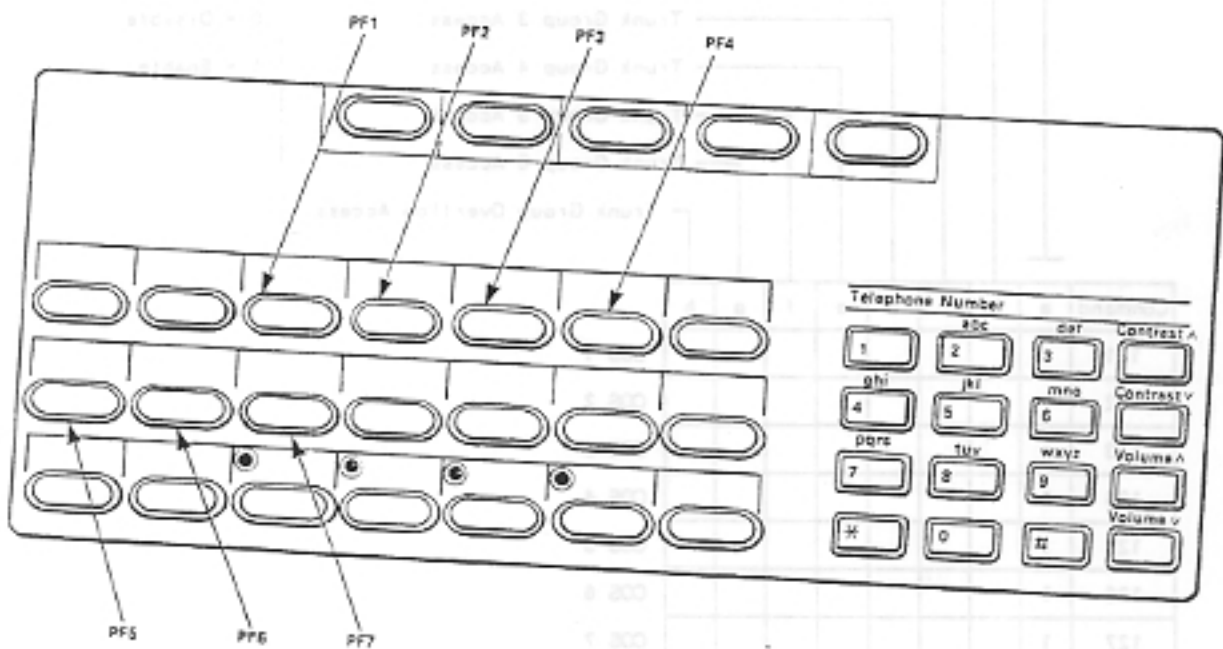


Figure 3-1 Programmable Function Keys

8E01R1E1

CLASS OF SERVICE (COS) PROGRAMMING

3.06 The Class of Service Programming commands set parameters and feature options that apply only to the devices in that COS. In all cases there are default values; the installer need only perform data entry where a change from the default value is desired. The COS Programming command numbers are 121 through 129, corresponding to COSs 1 through 9.

COS 1 → COS 9 PROGRAMMING

COMMANDS 121 → 129

Command	a	b	c	d	e	f	g	h	
121	1								COS 1
122	1								COS 2
123	1								COS 3
124	1								COS 4
125	1								COS 5
126	1								COS 6
127	1								COS 7
128	1								COS 8
129	1								COS 9
Default:	1	1	1	1	1	1	1	0	

Register 1

Trunk Group 1 Access

Trunk Group 2 Access

Trunk Group 3 Access

Trunk Group 4 Access

Trunk Group 5 Access

Trunk Group 6 Access

Trunk Group Overflow Access

0 = Disable

1 = Enable

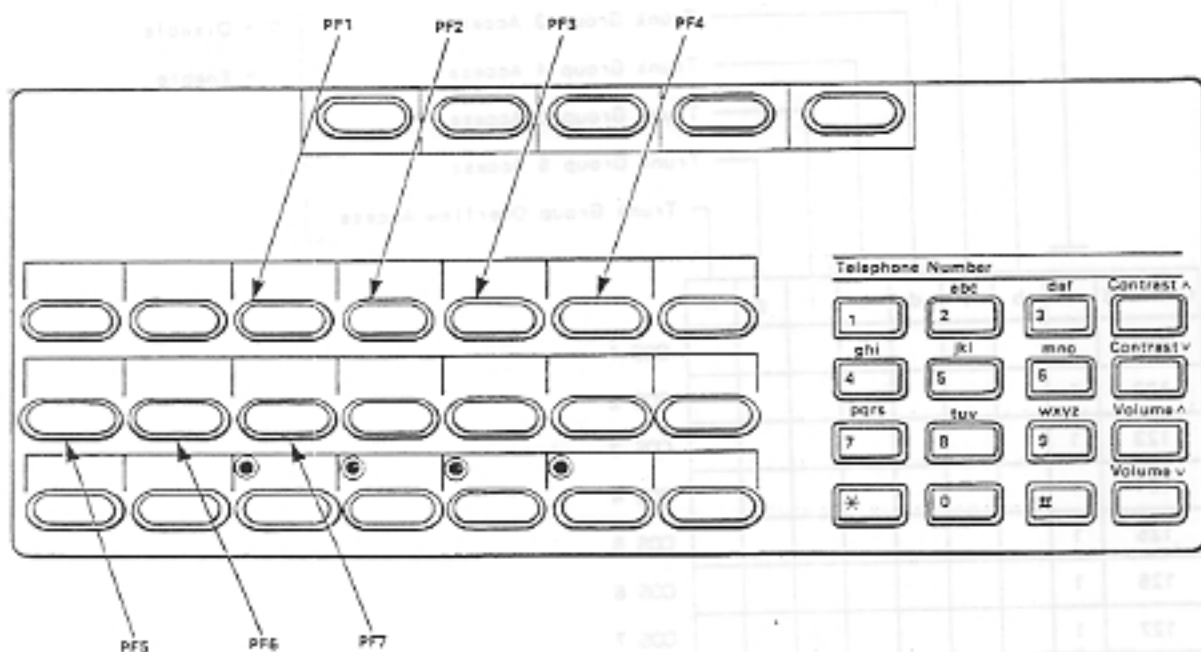


Figure 3-1 Programmable Function Keys

8501R1E1

CLASS OF SERVICE (COS) PROGRAMMING

3.06 The Class of Service Programming commands set parameters and feature options that apply only to the devices in that CC. In all cases there are default values; the installer need only perform data entry where a change from the default value is desired. The COS Programming command numbers are 121 through 129, corresponding to COSs 1 through 9.

COS 1 — COS 9 PROGRAMMING

COMMANDS 121 — 129

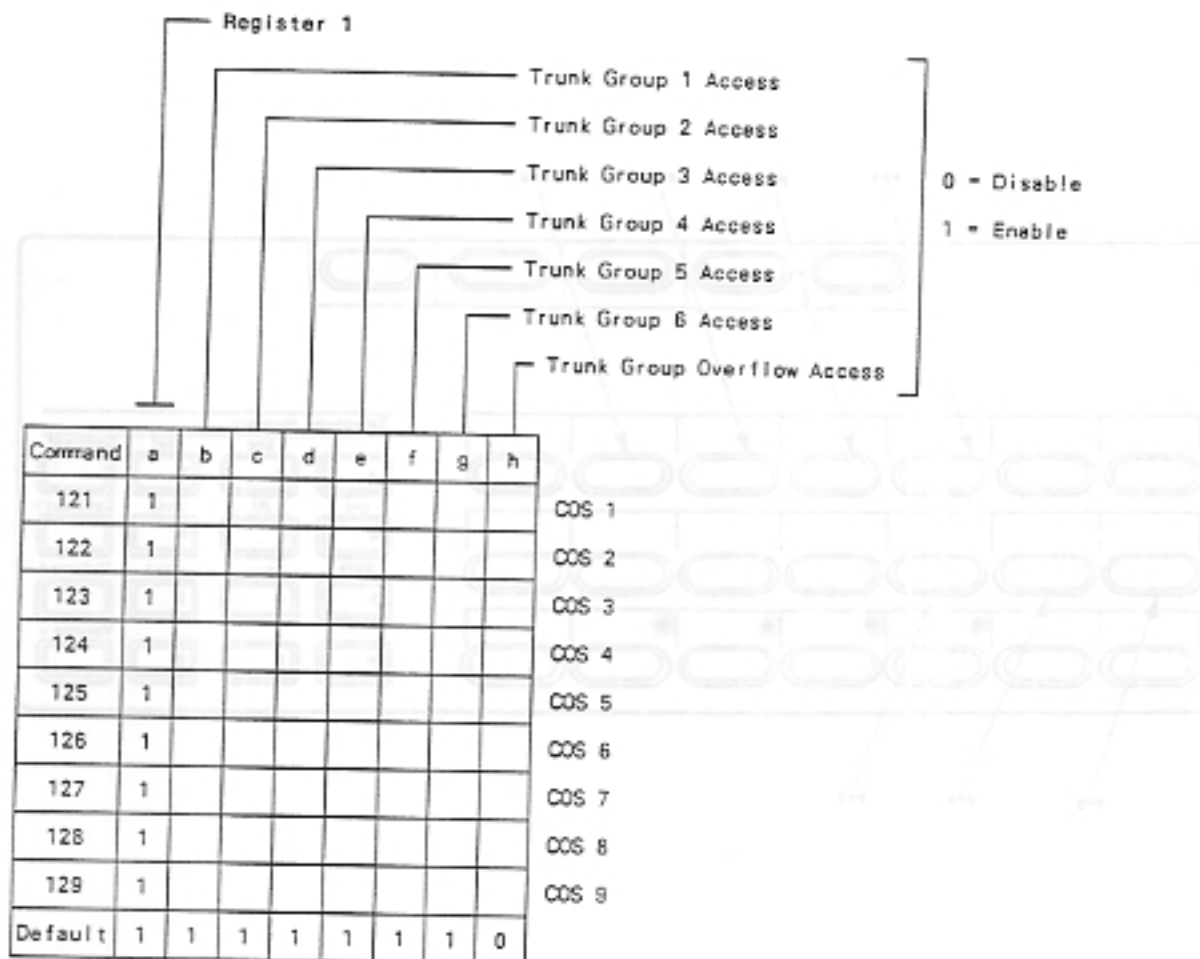


Figure 3-1 Programmable Function Keys

COS 1 -- COS 9 PROGRAMMING

COMMANDS 121 -- 129

EXT -- EXT DURATION

Register 2

Switchhook/Ground Button Flash
 0 = Disable
 1 = Flash For Consultation Hold
 2 = Flash For Test Line/Attendant

Call Direction
 0 = Originate only
 1 = Bothway calling
 2 = Receive Only

Housephone (Manual Line)
 0 = Disable, 1 = Enable

DISA Access Code Required
 0 = Disable, 1 = Enable

Message Registration/Restrictive Station Control
 0 = Disable both
 1 = Enable restrictive station control only
 2 = Enable message registration only
 3 = Enable both

Message Waiting
 0 = Disable, 1 = Enable

Rotary Only (DISA EM trunks only)
 0 = Disable, 1 = Enable

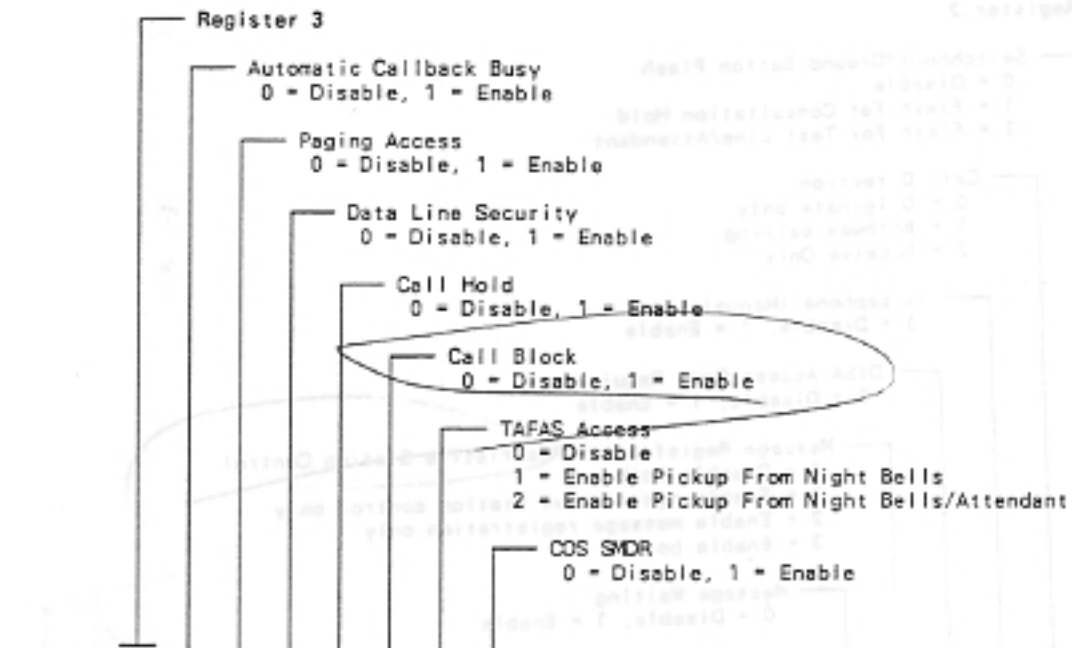
Command	a	b	c	d	e	f	g	h
121	2							
122	2							
123	2							
124	2							
125	2							
126	2							
127	2							
128	2							
129	2							
Default	2	1	1	0	0	0	1	0

COS 1
 COS 2
 COS 3
 COS 4
 COS 5
 COS 6
 COS 7
 COS 8
 COS 9

Command	a	b	c	d	e	f	g	h
121								
122								
123								
124								
125								
126								
127								
128								
129								
Default	2	1	1	0	0	0	1	0

COS 1 - COS 9 PROGRAMMING

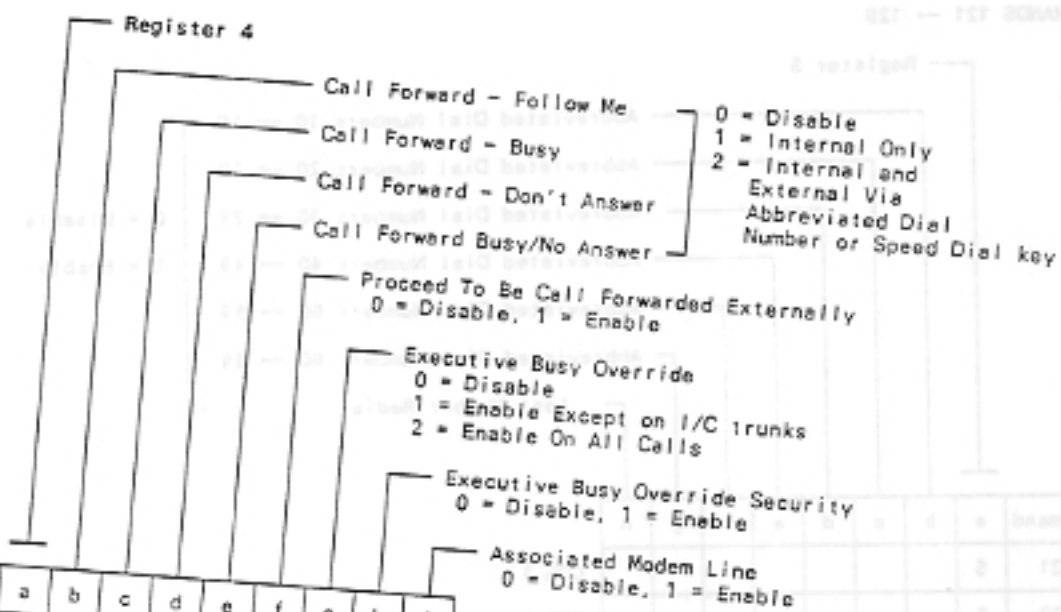
COMMANDS 121 → 129



Command	a	b	c	d	e	f	g	h
121	3							
122	3							
123	3							
124	3							
125	3							
126	3							
127	3							
128	3							
129	3							
Default	3	1	1	0	1	0	1	1

COS 1
COS 2
COS 3
COS 4
COS 5
COS 6
COS 7
COS 8
COS 9

COMMANDS 121 - 129

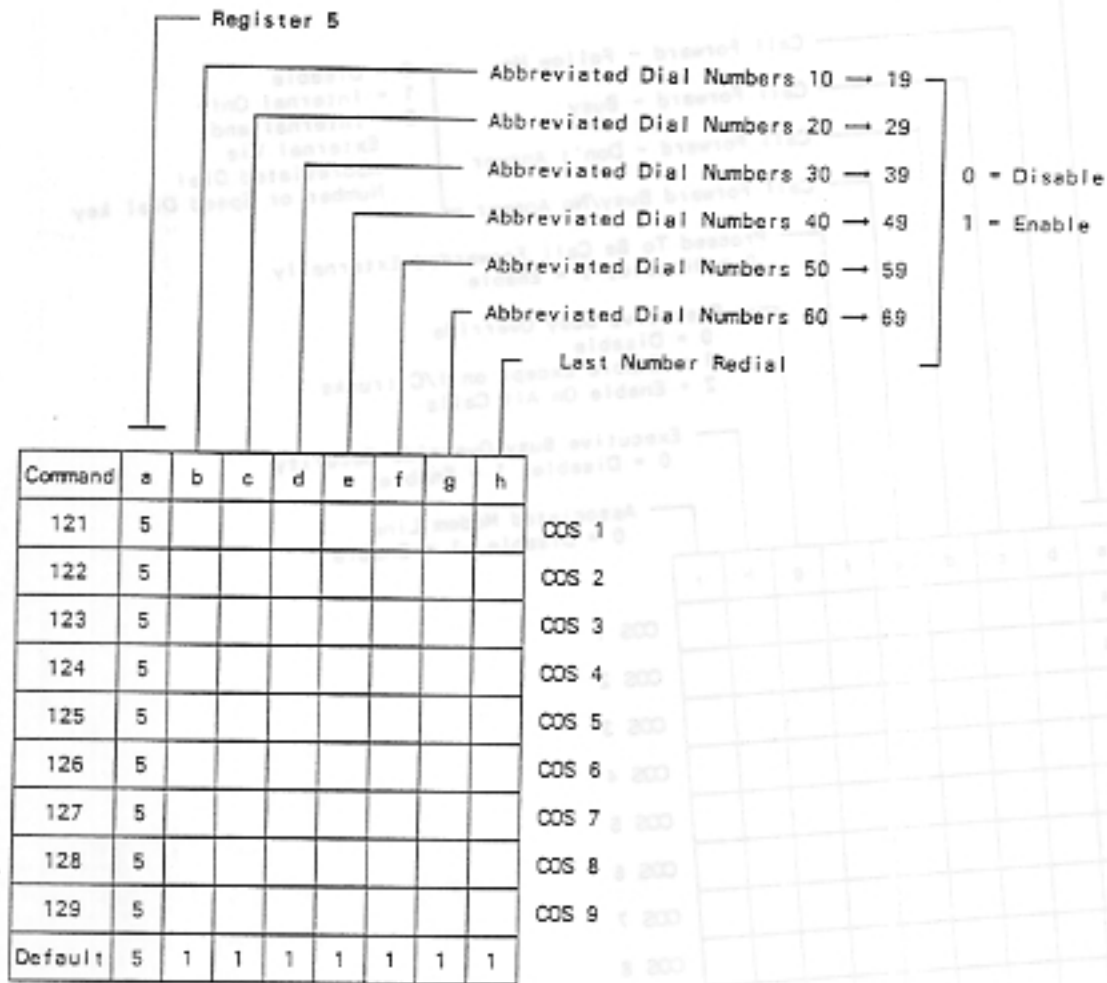


Command	a	b	c	d	e	f	g	h	i
121	4								
122	4								
123	4								
124	4								
125	4								
126	4								
127	4								
128	4								
129	4								
Default	4	1	1	1	1	0	0	0	0

Command	a	b	c	d	e	f	g	h	i
COS 1	000								
COS 2	000								
COS 3	000								
COS 4	000								
COS 5	000								
COS 6	000								
COS 7	000								
COS 8									
COS 9									

COS 1 - COS 9 PROGRAMMING

COMMANDS 121 - 129



COS 1 - COS 9 PROGRAMMING

COMMANDS 121 → 129

Register 6

NOT USED

Outgoing Access To E&M Tie Trunks
0 = Disable, 1 = Enable

Outgoing Access To CO Trunks
0 = Disable, 1 = Enable

Command	a	b	c	d
121	6			
122	6			
123	6			
124	6			
125	6			
126	6			
127	6			
128	6			
129	6			
Default	6	1	1	1

COS 1

COS 2

COS 3

COS 4

COS 5

COS 6

COS 7

COS 8

COS 9

Register 7

Outgoing Access To E&M Tie Trunks
0 = Disable, 1 = Enable

Outgoing Access To CO Trunks
0 = Disable, 1 = Enable

Command	a	b	c	d
121				
122				
123				
124				
125				
126				
127				
128				
129				
Default				

COS 1 - COS 9 PROGRAMMING

COMMANDS 121 - 129

Register 7

SUPERSET 4 Set Message Programming
0 = Disable, 1 = Enable

Account Code Entry
0 = Not allowed
1 = Optional
2 = Required

Command	a	b	c
121	7		
122	7		
123	7		
124	7		
125	7		
126	7		
127	7		
128	7		
129	7		
Default	7	1	0

COS 1

COS 2

COS 3

COS 4

COS 5

COS 6

COS 7

COS 8

COS 9

Command	a	b	c
121	7		
122	7		
123	7		
124	7		
125	7		
126	7		
127	7		
128	7		
129	7		
Default	7	1	0

TRUNK GROUP PROGRAMMING

3.07 The Trunk Group Programming commands set parameters and feature options that apply only to the trunks in the Trunk Group. In all cases there are default values; the installer need only perform data entry where a change from the default value is desired. The Trunk Group Programming command numbers are 151 through 156, corresponding to Trunk Groups 1 through 6.

Explanation of Options

Type of Hunting - Circular, Terminal: When a user dials a Trunk Group Access Code, the SX-50™ system automatically checks each trunk in the group in order of equipment number until it finds one idle. Terminal hunting always begins at the first trunk in the group. Circular hunting starts each hunt from the trunk following the one last accessed, returning to the group's first trunk when the last one has been accessed. Circular hunting has the advantage of more even use of trunk equipment.

Trunk Group Overflow: If all the trunks in a Trunk Group are busy, busy tone is returned. Optionally, the SX-50™ may hunt for a trunk in another group. If all the trunks in the overflow group are busy and that group has no overflow group programmed, busy tone is returned. Overflow groups must be of the same trunk type and must be compatible in the digits required to complete any call.

Identified Trunk Group: After any trunk in an identified trunk group has been seized outgoing, it outputpulses the trunk group access code before the digits dialed at the calling telephone. This option is applicable to some types of networking.

Wait for Dial Tone: Outputpulsing of the dialed digits begins when dial tone is received or 5 seconds after trunk seizure, whichever is sooner. The other options are:

- dial after a programmed delay of up to 5 seconds,
- check for dial tone every 5 seconds, dial when received
- let the user listen for dial tone. The user then flashes the switchhook (or dials '1' if at a SUPERSET® set).

Supervision: The default setting is None. This should be used on LS/GS trunks if they do not provide supervision. For an E&M trunk, set supervision to 1.

DTMF or Rotary Outputpulsing By default, the SX-50™ supports DTMF-only trunks; tone-to-pulse conversion is disabled. Pulse-only trunks can be supported by enabling conversion. Problems can occur on trunks that accept both DTMF and pulse dialing: both the DTMF from the calling set and the trunk circuit outputpulsing reach the trunk. The

SX-50™ can be set to block all outgoing audio or just the DTMF tones during dialing.

Manual Non-CO Trunk: This should be enabled on E&M Trunks that ring directly at the far end Attendant to ensure that a two-way audio connection is established immediately.

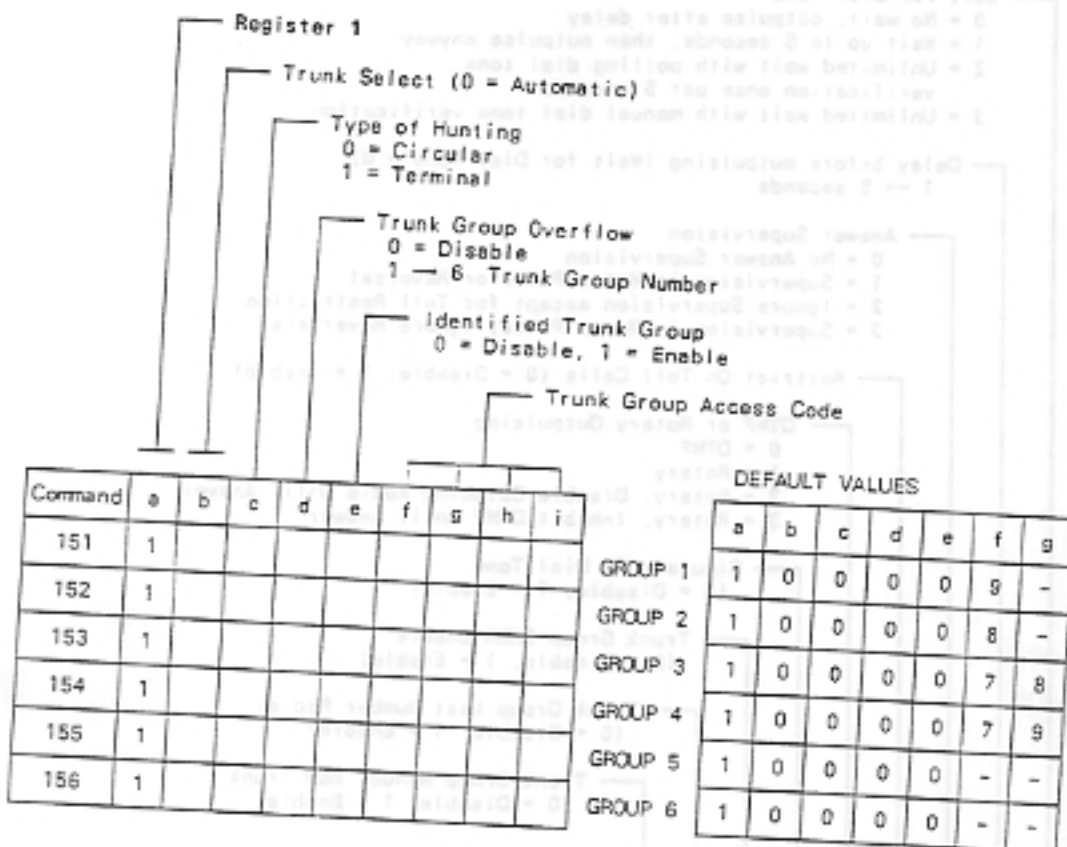
Sending Answer on Incoming Dial Trunks: Some PBXs require an answer supervision signal be sent to them to enable audio. This option applies to E&M and CO trunks.

Behind PABX Operation: This option permits an SX-50™ used as a slave PABX to transmit a switchhook flash from an extension user to the main PABX through the LS/GS Trunk Card. Enable "Flash is Loop Disconnect" or "Flash is Ring Ground" as required by the host PBX.

SECTION MITL9104-091-210-NA

TRUNK GROUP PROGRAMMING

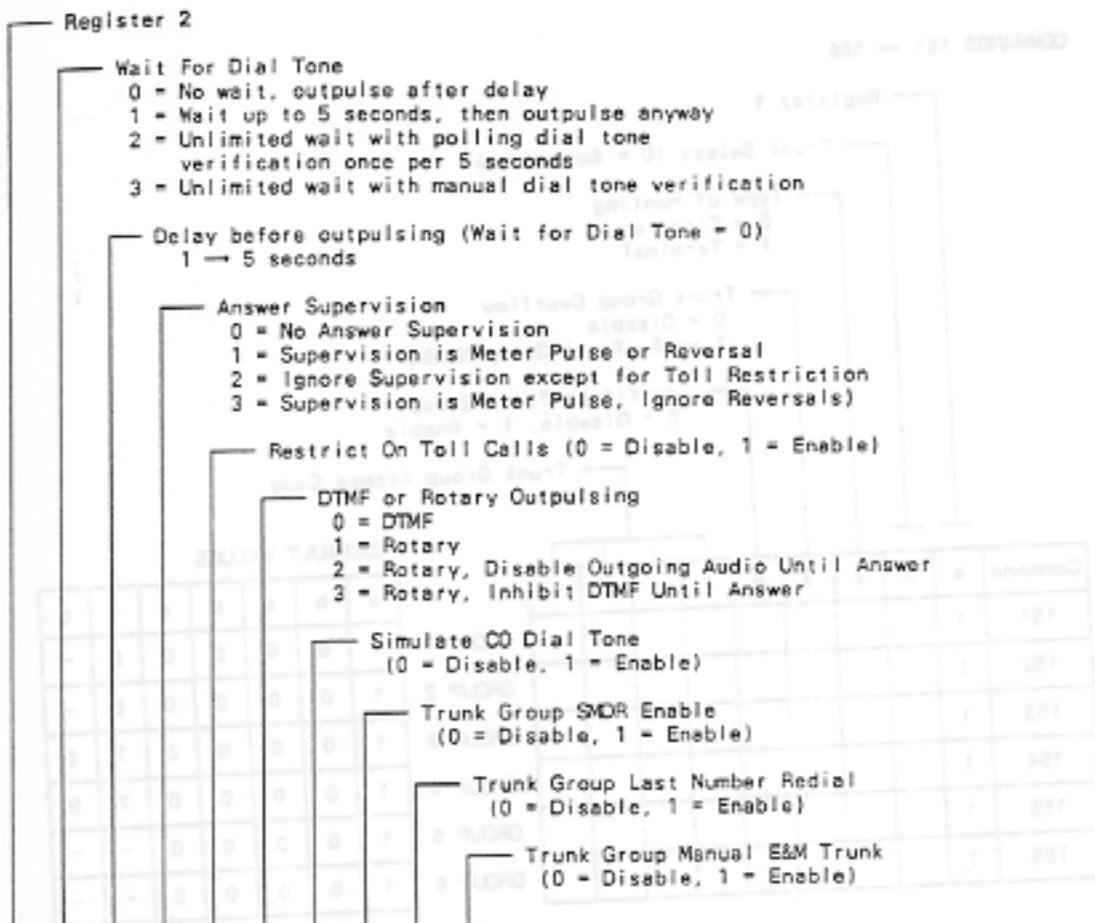
COMMANDS 151 — 156



Command	a	b	c	d	e	f	g	h	i
151	1	0	0	0	0	9	-		
152	1	0	0	0	0	8	-		
153	1	0	0	0	0	7	8		
154	1	0	0	0	0	7	9		
155	1	0	0	0	0	-	-		
156	1	0	0	0	0	-	-		

TRUNK GROUP PROGRAMMING

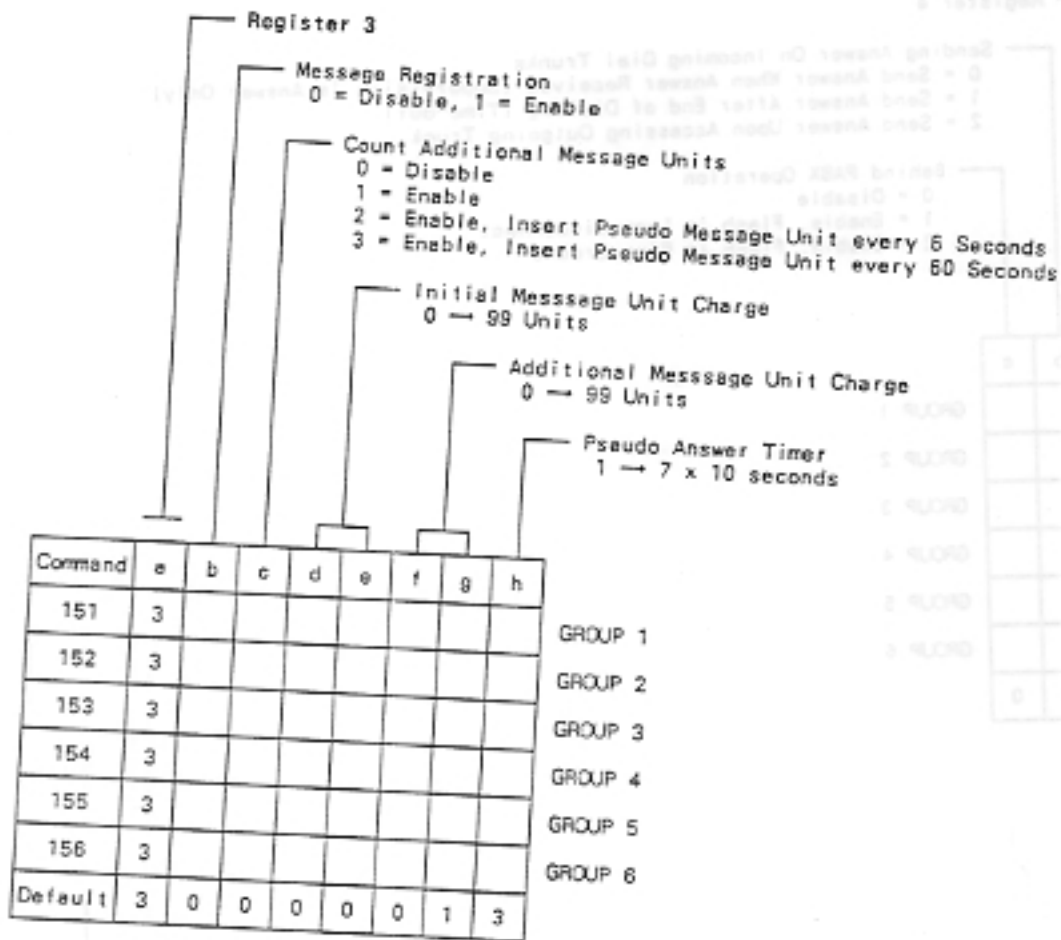
COMMANDS 151 → 156



Command	a	b	c	d	e	f	g	h	i	j	
151	2	0	2	0	0	0	0	0	1	0	GROUP 1
152	2										GROUP 2
153	2										GROUP 3
154	2										GROUP 4
155	2										GROUP 5
156	2										GROUP 6
Default	2	1	2	0	1	0	0	1	1	0	

TRUNK GROUP PROGRAMMING

COMMANDS 151 → 156



Command	a	b	c	d	e	f	g	h
151	3							
152	3							
153	3							
154	3							
155	3							
156	3							
Default	3	0	0	0	0	0	1	3

TRUNK GROUP PROGRAMMING

COMMANDS 151 → 156

Register 4

Sending Answer On Incoming Dial Trunks
 0 = Send Answer When Answer Received (Supervision is Answer Only)
 1 = Send Answer After End of Dialing (Timeout)
 2 = Send Answer Upon Accessing Outgoing Trunk

Behind PABX Operation
 0 = Disable
 1 = Enable, Flash is Loop Disconnect
 2 = Enable, Flash is Ring Ground

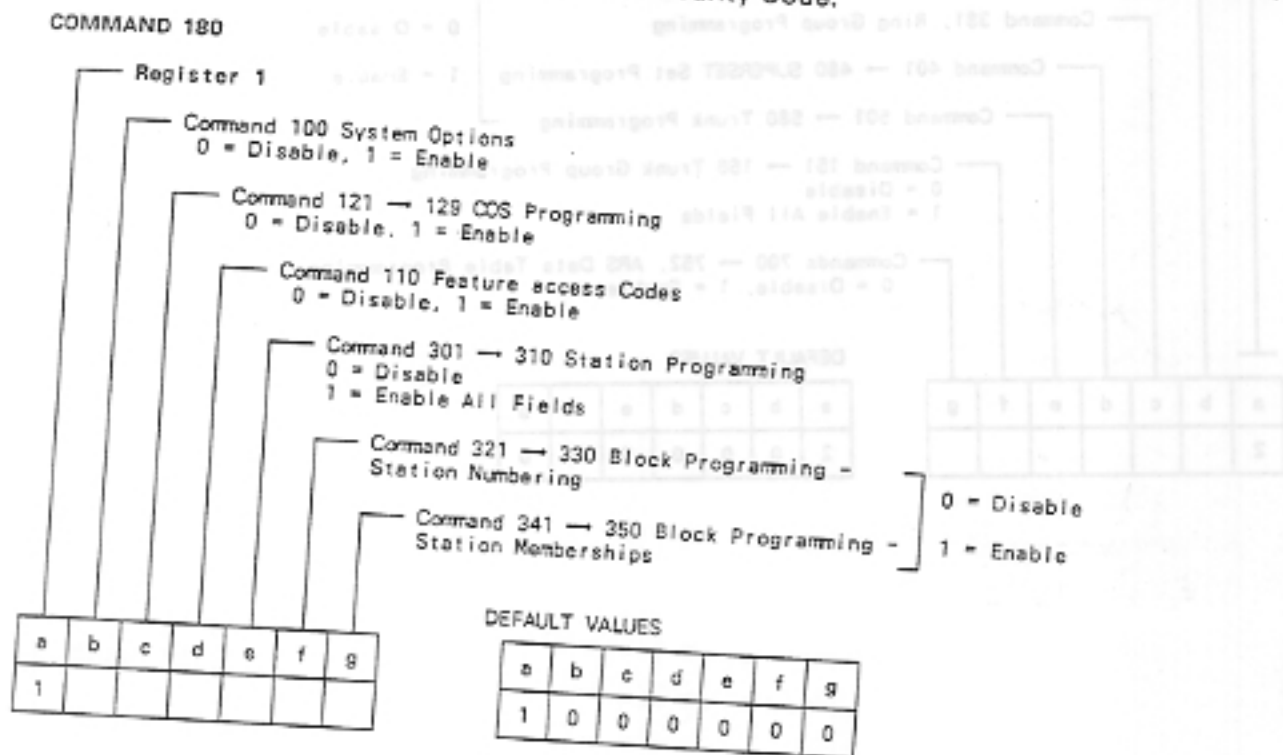
Command	a	b	c
151	4		
151	4		
151	4		
151	4		
151	4		
151	4		
Default	4	0	0

GROUP 1
 GROUP 2
 GROUP 3
 GROUP 4
 GROUP 5
 GROUP 6

Command	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
151																										
152																										
153																										
154																										
155																										
156																										
Default																										

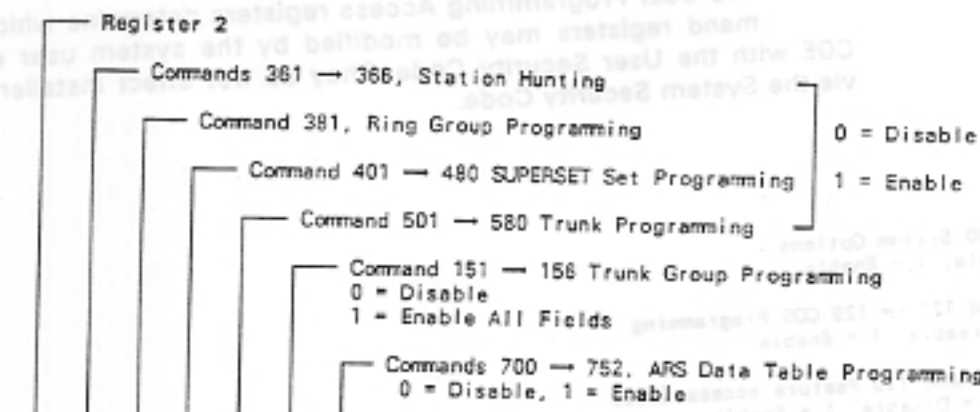
USER PROGRAMMING ACCESS

3.08 The User Programming Access registers determine which command registers may be modified by the system user entering CDE with the User Security Code. They do not affect installer access via the System Security Code.



USER PROGRAMMING ACCESS

COMMAND 180



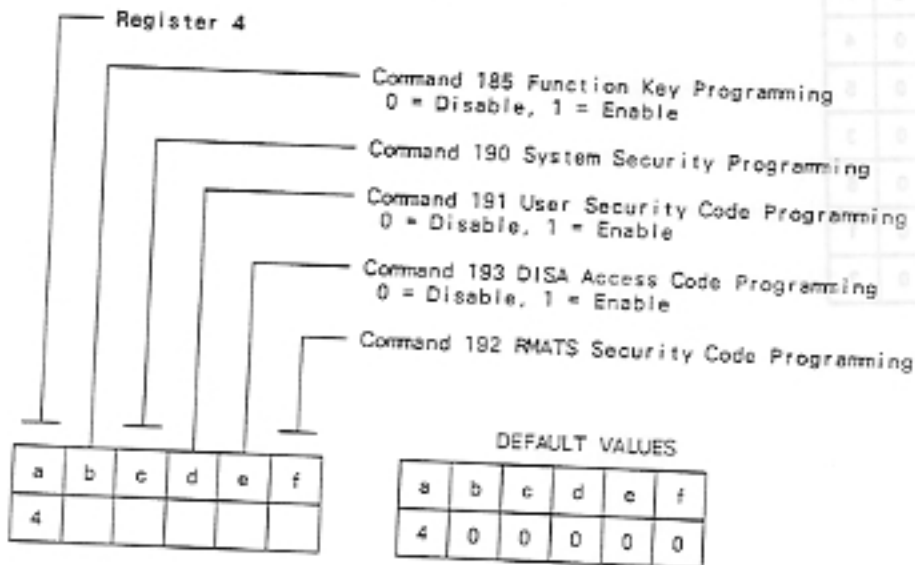
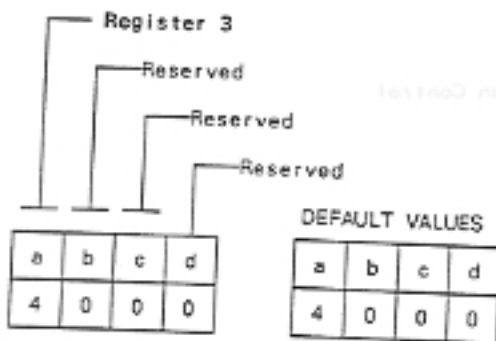
a	b	c	d	e	f	g
2						

DEFAULT VALUES

a	b	c	d	e	f	g
2	0	0	0	0	0	0

USER PROGRAMMING ACCESS

COMMAND 180



COMMAND 185

ATTENDANT CONSOLE FUNCTION KEY PROGRAMMING

- Key Number (1→7)
- Key Function:
- 00 = Unassigned
 - 01 = Message Registration/Restrictive Station Control
 - 02 = Override
 - 03 = Page
 - 04 = Call Block
 - 05 = TAFAS
 - 06 = Automatic Wake-up
 - 07 = Trunk Status
 - 08 = Account Code Entry

a	b	c
1		
2		
3		
4		
5		
6		
7		

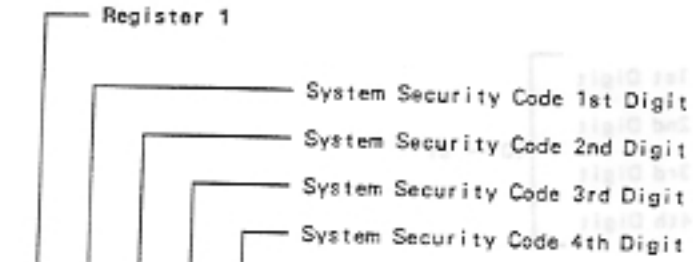
DEFAULT VALUES

a	b	c
1	0	7
2	0	4
3	0	5
4	0	3
5	0	6
6	0	1
7	0	2



SYSTEM SECURITY CODE PROGRAMMING

COMMAND 190



(0 - 9)

DEFAULT VALUES

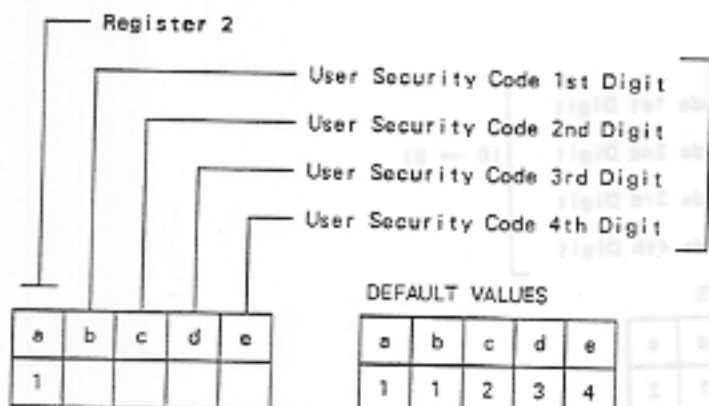
a	b	c	d	e
1				

a	b	c	d	e
1	7	7	7	2



USER SECURITY CODE PROGRAMMING

COMMAND 191



DEFAULT VALUES

a	b	c	d	e
1	1	2	3	4

DEFAULT VALUES

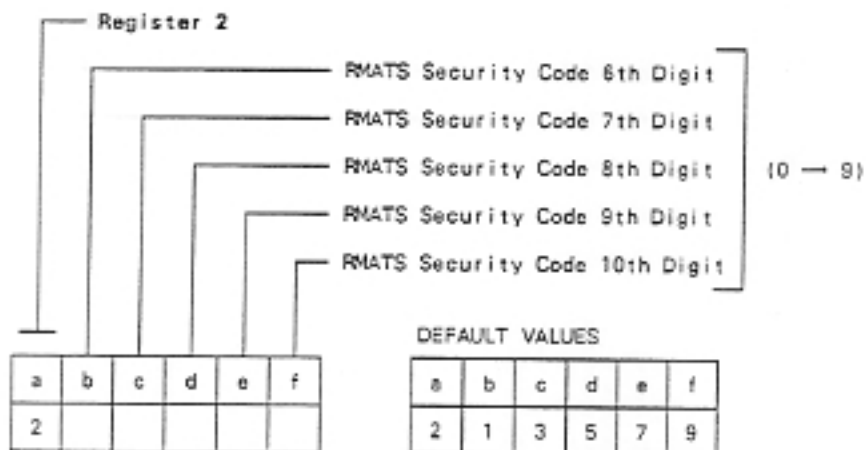
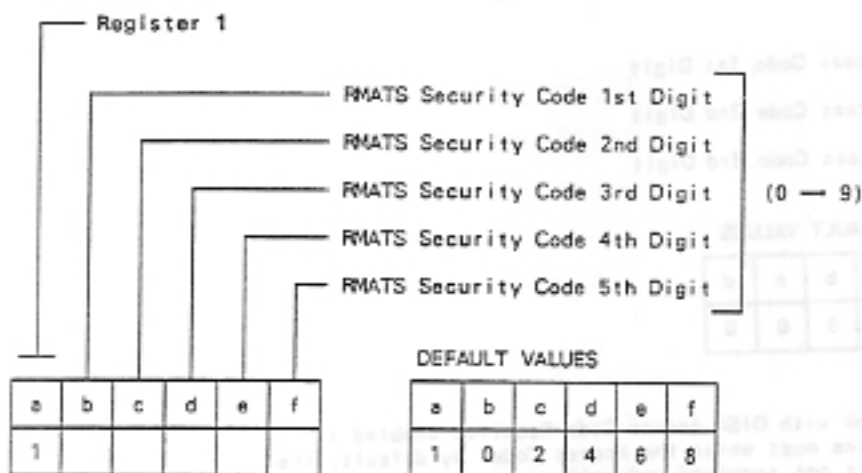
a	b	c	d	e
1	1	2	3	4

COMMAND 191



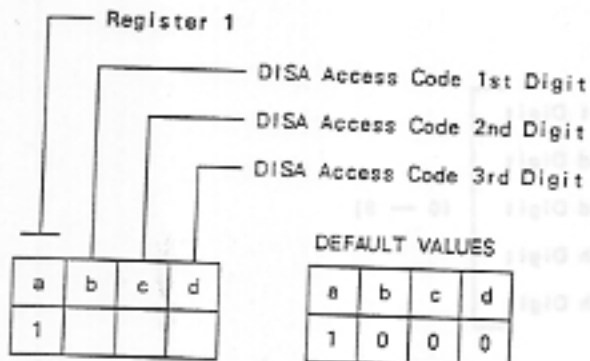
RMATS SECURITY CODE PROGRAMMING

COMMAND 192



DISA ACCESS CODE PROGRAMMING

COMMAND 193



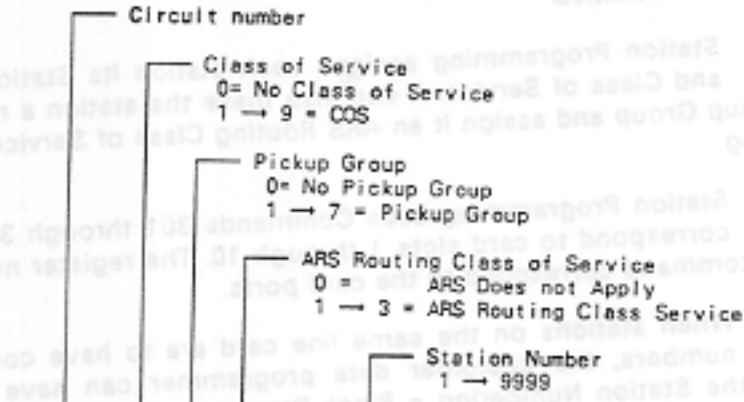
DEFAULT VALUES

a	b	c	d
1	0	0	0

Note: Callers on a DISA Trunk with DISA Access Code Required enabled in its Class of Service must enter the Access Code. By default, the DISA Access Code is not required and callers have immediate access to SX-50™ system features.

STATION PROGRAMMING - SLOT 1

COMMAND 301



a	b	c	d	e	f	g	h	i
0	1							
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							
1	6							
Default	1	1	0					

305 12 } 00 } 001 } 0626
 305 13 } 01 } 04 } 10636

200 3/6
200 6/37

STATION PROGRAMMING - SLOT 2

COMMAND 302

COMMAND 302

Circuit number

Class of Service
0 = No Class of Service
1 - 9 = COS

Pickup Group
0 = No Pickup Group
1 - 7 = Pickup Group

ARS Routing Class of Service
0 = ARS Does not Apply
1 - 3 = ARS Routing Class Service

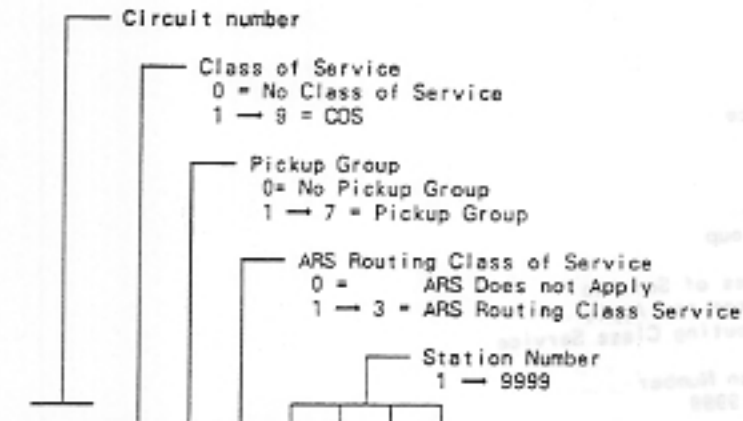
Station Number
1 - 9999

a	b	c	d	e	f	g	h	i
0	1							
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							
1	6							
Default	1	1	0					

1	2	3	4	5	6	7	8	9

STATION PROGRAMMING - SLOT 3

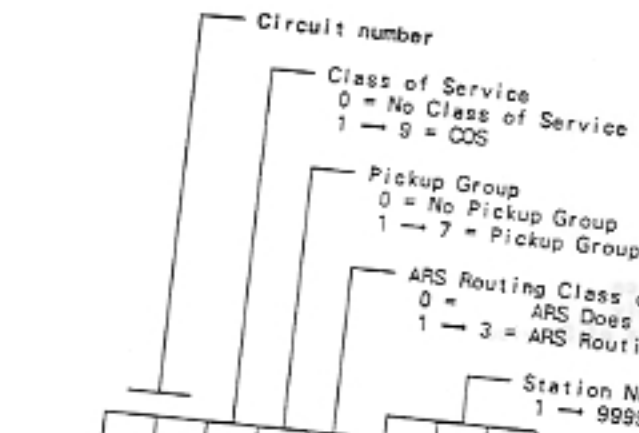
COMMAND 303



a	b	c	d	e	f	g	h	i
0	1							
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							
1	6							
Default	1	1	0					

STATION PROGRAMMING - SLOT 4

COMMAND 304



	a	b	c	d	e	f	g	h	i
0	1								
0	2								
0	3								
0	4								
0	5								
0	6								
0	7								
0	8								
0	9								
1	0								
1	1								
1	2								
1	3								
1	4								
1	5								
1	6								
Default	1	1	0						

STATION PROGRAMMING - SLOT 5

COMMAND 305

Circuit number

Class of Service
 0 = No Class of Service
 1 → 9 = CCS

Pickup Group
 0 = No Pickup Group
 1 → 7 = Pickup Group

ARS Routing Class of Service
 0 = ARS Does not Apply
 1 → 3 = ARS Routing Class of Service

Station Number
 1 → 9999

a	b	c	d	e	f	g	h	i
0	1							
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							
1	6							
Default	1	1	0					

COMMAND 306

Circuit number

Class of Service
 0 = No Class of Service
 1 → 9 = COS

Pickup Group
 0 = No Pickup Group
 1 → 7 = Pickup Group

ARS Routing Class of Service
 0 = ARS Does not Apply
 1 → 3 = ARS Routing Class of Service

Station Number
 1 → 9999

a	b	c	d	e	f	g	h	i
0	1							
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							
1	6							
Default	1	1	0					

1	a	b	c	d	e	f	g	h	i

COMMAND 307

STATION PROGRAMMING - SLOT 7

Circuit number

Class of Service
 0 = No Class of Service
 1 → 9 = COS

Pickup Group
 0 = No Pickup Group
 1 → 7 = Pickup Group

ARS Routing Class of Service
 0 = ARS Does not Apply
 1 → 3 = ARS Routing Class of Service

Station Number
 1 → 9999

a	b	c	d	e	f	g	h	i
0	1							
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							
1	6							
Default	1	1	0					

COMMAND 308

Circuit number

Class of Service
0 = No Class of Service
1 → 9 = COS

Pickup Group
0 = No Pickup Group
1 → 7 = Pickup Group

ARS Routing Class of Service
0 = ARS Does not Apply
1 → 3 = ARS Routing Class of Service

Station Number
1 → 9999

a	b	c	d	e	f	g	h	i
0	1							
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							
1	6							
Default	1	1	0					

Circuit number

Class of Service
0 = No Class of Service
1 → 9 = COS

Pickup Group
0 = No Pickup Group
1 → 7 = Pickup Group

ARS Routing Class of Service
0 = ARS Does not Apply
1 → 3 = ARS Routing Class of Service

Station Number
1 → 9999

i	h	g	f	e	d	c	b	a
Default	1	1	0					

STATION PROGRAMMING - SLOT 9

COMMAND 309

Circuit number

Class of Service
0 = No Class of Service
1 → 9 = COS

Pickup Group
0 = No Pickup Group
1 → 7 = Pickup Group

ARS Routing Class of Service
0 = ARS Does not Apply
1 → 3 = ARS Routing Class of Service

Station Number
1 → 9999

a	b	c	d	e	f	g	h	i
0	1							
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							
1	6							
Default	1	1	0					

a	b	c	d	e	f	g	h	i
	0	1	1					

STATION PROGRAMMING - SLOT 10

COMMAND 310

Circuit number

Class of Service
0 = No Class of Service
1 → 9 = COS

Pickup Group
0 = No Pickup Group
1 → 7 = Pickup Group

ARS Routing Class of Service
0 = ARS Does not Apply
1 → 3 = ARS Routing Class of Service

Station Number
1 → 9999

a	b	c	d	e	f	g	h	i
0	1							
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							
1	6							
Default:	1	1	0					

COMMAND 310

Slot	a	b	c	d	e	f	g	h	i
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

STATION NUMBERING - BLOCK PROGRAMMING

3.12 Station Numbering - Block Programming assigns consecutive station numbers to stations on the same card. These commands save time during Customer Data Entry. The installer enters the first and last port to be programmed and the first station number.

3.13 Station Numbering - Block Programming uses Commands 321 through 330, corresponding to card ports 1 through 10. There are no register numbers.

COMMANDS 321 → 330

Command	a	b	c	d	e	f	g	h	
321									SLOT 1
322									SLOT 2
323									SLOT 3
324									SLOT 4
325									SLOT 5
326									SLOT 6
327									SLOT 7
328									SLOT 8
329									SLOT 9
330									SLOT 10
Default	0	1	0	1					

Diagram labels:

- Circuit number of First Station in Block (01 → 16) points to column 'a'.
- Circuit number of Last Station in Block (01 → 16) points to column 'd'.
- Station Number of First Circuit in Block points to column 'e'.

STATION MEMBERSHIPS - BLOCK PROGRAMMING

3.14 Station Memberships - Block Programming assigns a group of stations on a card the same Class of Service, Pickup Group and ARS Routing Class of Service. This command saves time during Customer Data Entry. The installer enters the first and last port to be programmed, the COS, the Pickup Group and the ARS Routing Class of Service.

3.15 Station Memberships - Block Programming uses Commands 341 through 350, corresponding to card ports 1 through 10. There are no register numbers.

COMMANDS 341 - 350

Command	a	b	c	d	e	f	g	
341								SLOT 1
342								SLOT 2
343								SLOT 3
344								SLOT 4
345								SLOT 5
346								SLOT 6
347								SLOT 7
348								SLOT 8
349								SLOT 9
350								SLOT 10
Default	0	1	0	1	1	1	0	

Circuit number of First Station in Block (01 → 16)
 Circuit number of Last Station in Block (01 → 16)
 Class of Service
 0 = No Class of Service
 1 → 9 = COS
 Pickup Group
 0 = No Pickup Group
 1 → 7 = Pickup Group
 ARS Routing Class of Service
 0 = ARS Does not Apply
 1 → 3 = ARS Routing Class of Service

Station Hunt Group Programming

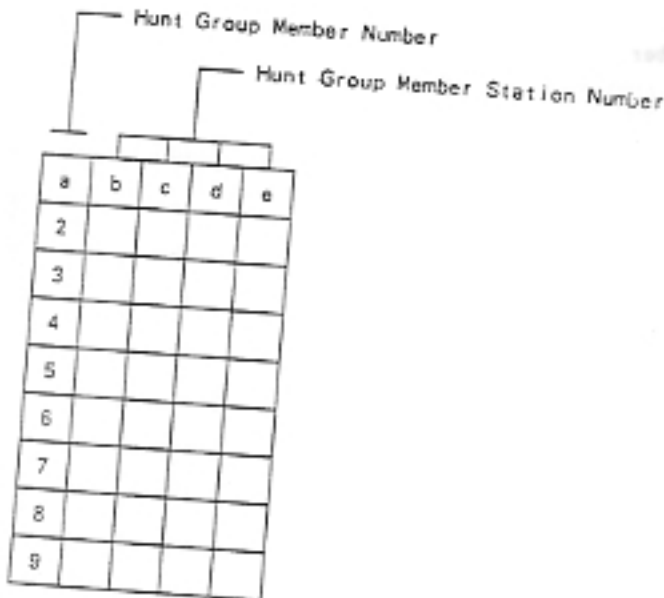
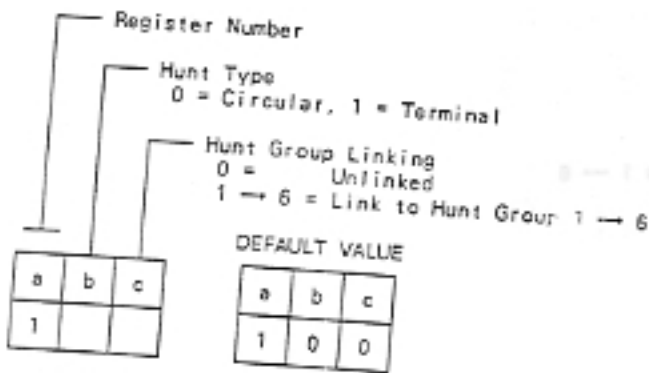
3.15 Station Hunt Group Programming assigns stations to Hunt Groups. The installer enters the type of hunting, the linked Hunt Group number (if any) and up to 8 station numbers.

3.16 Station Hunt Group Programming uses Commands 361 through 366, corresponding to Hunt Groups 1 through 6. In each command, Register 1 contains the type of hunting and linked Hunt Group number. Registers 2 through 9 contain the member station numbers.



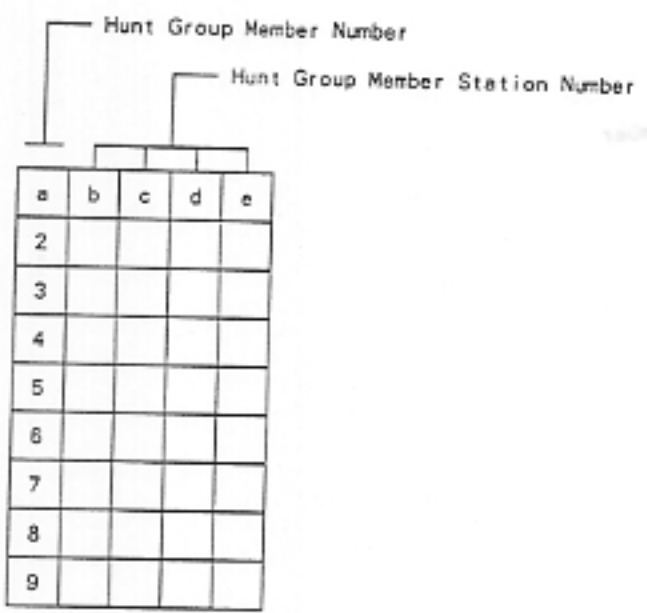
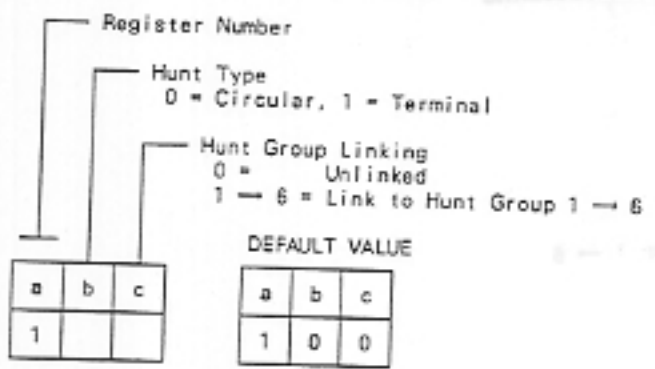
STATION HUNT GROUP 1 PROGRAMMING

COMMAND 361



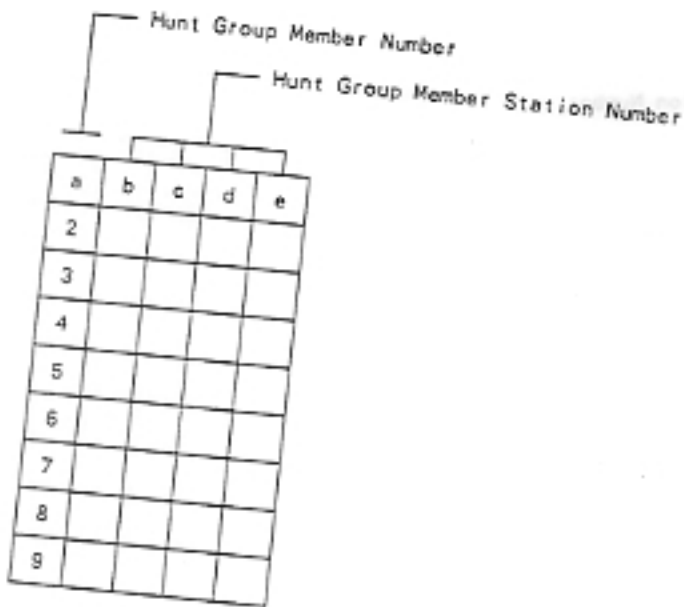
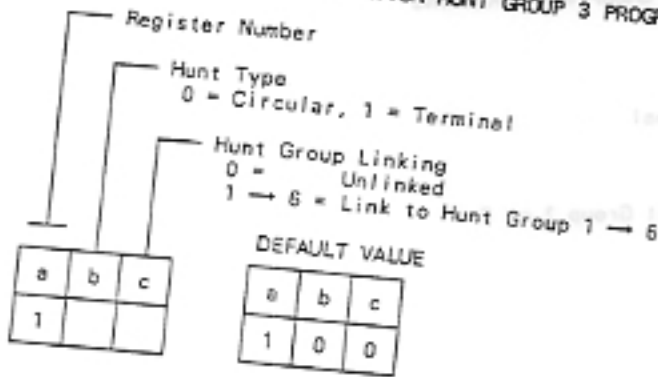
COMMAND 362

STATION HUNT GROUP 2 PROGRAMMING



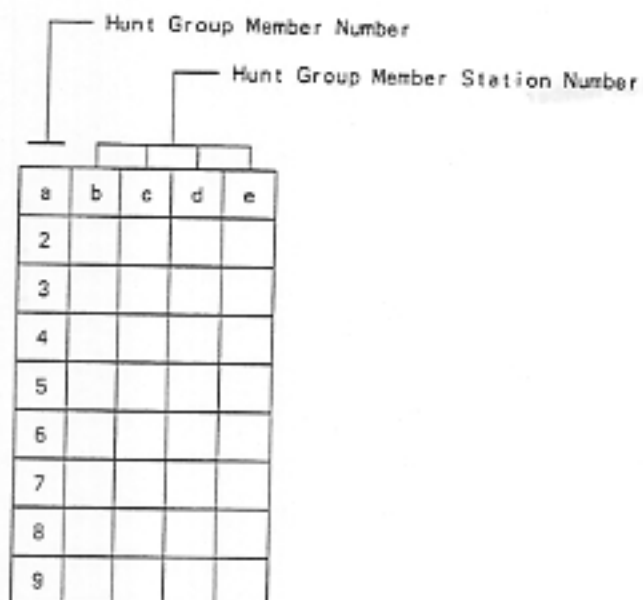
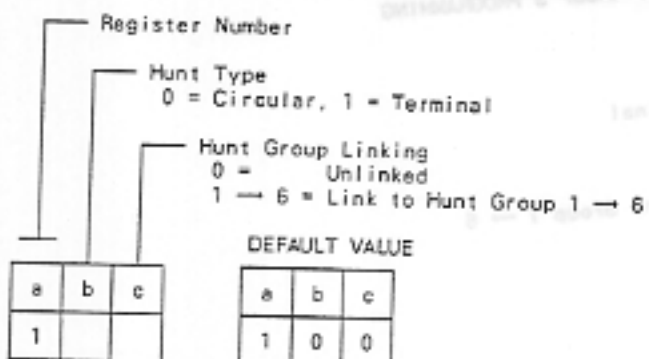
COMMAND 363

STATION HUNT GROUP 3 PROGRAMMING



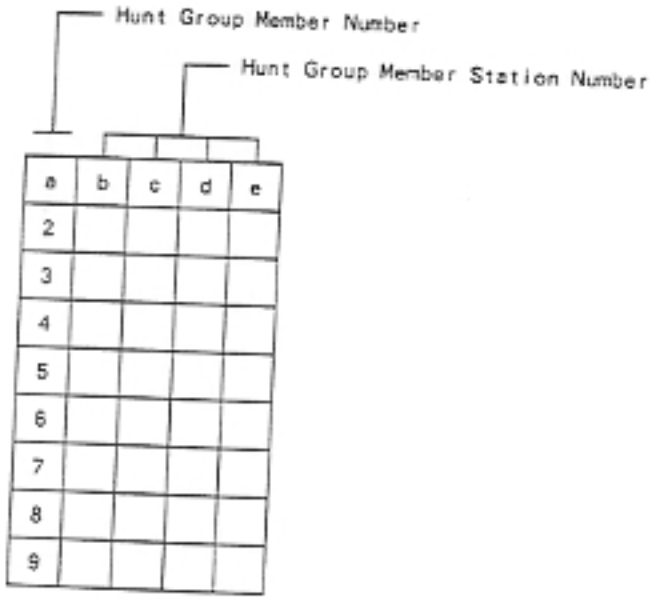
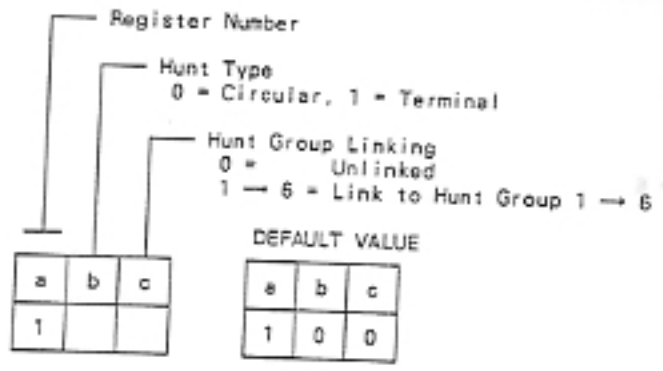
COMMAND 364

STATION HUNT GROUP 4 PROGRAMMING



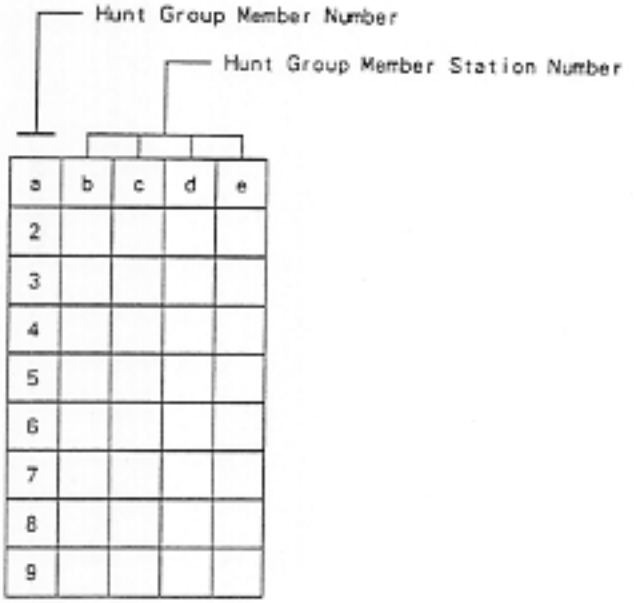
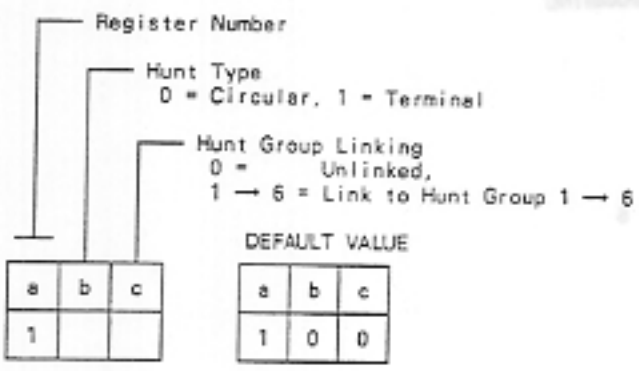
COMMAND 365

STATION HUNT GROUP 5 PROGRAMMING



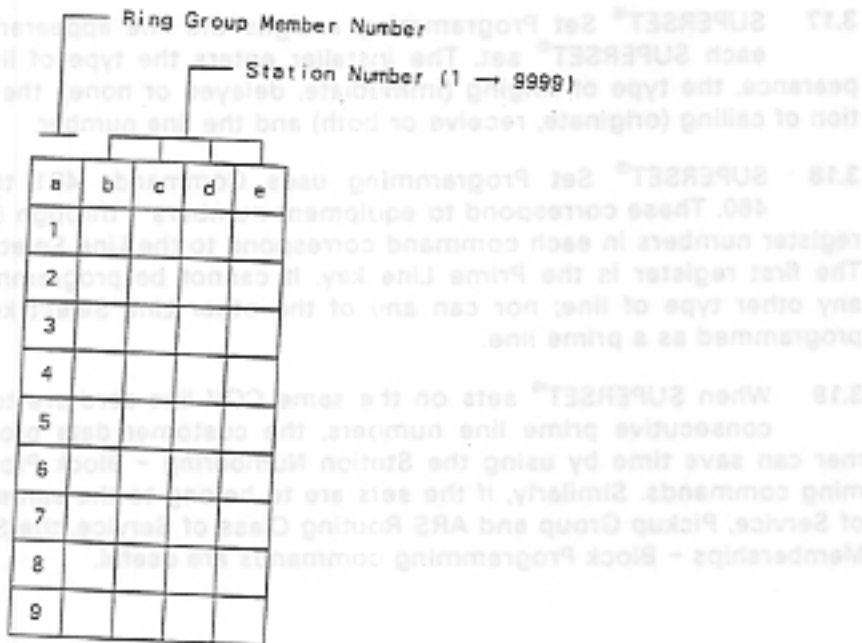
COMMAND 366

STATION HUNT GROUP 6 PROGRAMMING



COMMAND 381

STATION RING GROUP PROGRAMMING



SUPERSET® Set Programming

- 3.17 SUPERSET® Set Programming assigns the line appearances at each SUPERSET® set. The installer enters the type of line appearance, the type of ringing (immediate, delayed or none), the direction of calling (originate, receive or both) and the line number.
- 3.18 SUPERSET® Set Programming uses Commands 401 through 480. These correspond to equipment numbers 1 through 80. The register numbers in each command correspond to the Line Select keys. The first register is the Prime Line key. It cannot be programmed as any other type of line; nor can any of the other Line Select keys be programmed as a prime line.
- 3.19 When SUPERSET® sets on the same COV line card are to have consecutive prime line numbers, the customer data programmer can save time by using the Station Numbering - Block Programming commands. Similarly, if the sets are to belong to the same Class of Service, Pickup Group and ARS Routing Class of Service, the Station Memberships - Block Programming commands are useful.

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Equipment No. 433

SUPERSET Set Key Number

- Line Appearance Type
- 0 = Speed Dial Key
- 1 = Prime Line (key 1 only - nonprogrammable)
- 2 = Key Line, 3 = Multiple Call Line
- 4 = Direct Trunk Select, 5 = Direct Line Select
- 6 = Private Line
- 7 = Personal Outgoing line

- Ringing Type (Line Appearance Type ≠ 0)
- 1 = Immediate Ring
- 0 = No Ring, 2 = Delay Ring

- Call Direction (Line Appearance Type ≠ 0)
- 1 = Bothway Calling
- 0 = Originate Only, 2 = Receive Only

- Station Or Trunk Number
- Station Number for line Types 1, 2, 3 & 7
- Trunk Number for Line Types 4, 5 & 6

	a	b	c	d	e	f	g	h	i
0	1	1	1	1					
0	2								
0	3								
0	4								
0	5								
0	6								
0	7								
0	8								
0	9								
1	0								
1	1								
1	2								
1	3								
1	4								
1	5								

DEFAULT VALUES

	a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-	-
0	2	0	-	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No. _____

Line Appearance Type

- 0 = Speed Dial Key
- 1 = Prime Line (key 1 only = nonprogrammable)
- 2 = Key Line, 3 = Multiple Call Line
- 4 = Direct Trunk Select, 5 = Direct Line Select
- 6 = Private Line
- 7 = Personal Outgoing line

Ringing Type (Line Appearance Type ≠ 0)

- 1 = Immediate Ring
- 0 = No Ring, 2 = Delay Ring

Call Direction (Line Appearance Type ≠ 0)

- 1 = Bothway Calling
- 0 = Originate Only, 2 = Receive Only

Station Or Trunk Number

- Station Number for line Types 1, 2, 3 & 7
- Trunk Number for Line Types 4, 5 & 6

DEFAULT VALUES

	a	b	c	d	e	f	g	h	i
0	1	1	1	1					
0	2								
0	3								
0	4								
0	5								
0	6								
0	7								
0	8								
0	9								
1	0								
1	1								
1	2								
1	3								
1	4								
1	5								

	a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-	-
0	2	0	-	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-	-

SECTION MITL9104-091-210-NA

COMMANDS 401 → 480

SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Equipment No.

SUPERSET Set Key Number

- Line Appearance Type
- 0 = Speed Dial Key
 - 1 = Prime Line (key 1 only - nonprogrammable)
 - 2 = Key Line, 3 = Multiple Call Line
 - 4 = Direct Trunk Select, 5 = Direct Line Select
 - 6 = Private Line
 - 7 = Personal Outgoing line

- Ringing Type (Line Appearance Type ≠ 0)
- 1 = Immediate Ring
 - 0 = No Ring, 2 = Delay Ring

- Call Direction (Line Appearance Type ≠ 0)
- 1 = Bothway Calling
 - 0 = Originate Only, 2 = Receive Only

- Station Or Trunk Number
- Station Number for line Types 1, 2, 3 & 7
 - Trunk Number for Line Types 4, 5 & 6

	a	b	c	d	e	f	g	h	i
0	1	1	1	1					
0	2								
0	3								
0	4								
0	5								
0	6								
0	7								
0	8								
0	9								
1	0								
1	1								
1	2								
1	3								
1	4								
1	5								

DEFAULT VALUES

	a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-	-
0	2	0	-	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number									SUPERSET Set Equipment No.								
Line Appearance Type																	
0 = Speed Dial Key																	
1 = Prime Line (key 1 only - nonprogrammable)																	
2 = Key Line, 3 = Multiple Call Line																	
4 = Direct Trunk Select, 5 = Direct Line Select																	
6 = Private Line																	
7 = Personal Outgoing line																	
Ringing Type (Line Appearance Type ≠ 0)																	
1 = Immediate Ring																	
0 = No Ring, 2 = Delay Ring																	
Call Direction (Line Appearance Type ≠ 0)																	
1 = Bothway Calling																	
0 = Originate Only, 2 = Receive Only																	
Station Or Trunk Number																	
Station Number for line Types 1, 2, 3 & 7																	
Trunk Number for Line Types 4, 5 & 6																	
DEFAULT VALUES																	
a	b	c	d	e	f	g	h	i	a	b	c	d	e	f	g	h	i
0	1	1	1	1					0	1	1	1	1	-	-	-	-
0	2								0	2	0	-	-	-	-	-	-
0	3								0	3	0	-	-	-	-	-	-
0	4								0	4	0	-	-	-	-	-	-
0	5								0	5	0	-	-	-	-	-	-
0	6								0	6	0	-	-	-	-	-	-
0	7								0	7	0	-	-	-	-	-	-
0	8								0	8	0	-	-	-	-	-	-
0	9								0	9	0	-	-	-	-	-	-
1	0								1	0	0	-	-	-	-	-	-
1	1								1	1	0	-	-	-	-	-	-
1	2								1	2	0	-	-	-	-	-	-
1	3								1	3	0	-	-	-	-	-	-
1	4								1	4	0	-	-	-	-	-	-
1	5								1	5	0	-	-	-	-	-	-

SECTION MITL9104-091-210-NA

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No.

Line Appearance Type

- 0 = Speed Dial Key
- 1 = Prime Line (key 1 only - nonprogrammable)
- 2 = Key Line, 3 = Multiple Call Line
- 4 = Direct Trunk Select, 5 = Direct Line Select
- 6 = Private Line
- 7 = Personal Outgoing line

Ringing Type (Line Appearance Type ≠ 0)

- 1 = Immediate Ring
- 0 = No Ring, 2 = Delay Ring

Call Direction (Line Appearance Type ≠ 0)

- 1 = Bothway Calling
- 0 = Originate Only, 2 = Receive Only

Station Or Trunk Number

- Station Number for line Types 1, 2, 3 & 7
- Trunk Number for Line Types 4, 5 & 6

a	b	c	d	e	f	g	h	i
0	1	1	1	1				
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No. _____

- Line Appearance Type
- 0 = Speed Dial Key
 - 1 = Prime Line (key 1 only - nonprogrammable)
 - 2 = Key Line, 3 = Multiple Call Line
 - 4 = Direct Trunk Select, 5 = Direct Line Select
 - 6 = Private Line
 - 7 = Personal Outgoing line

- Ringing Type (Line Appearance Type ≠ 0)
- 1 = Immediate Ring
 - 0 = No Ring, 2 = Delay Ring

- Call Direction (Line Appearance Type ≠ 0)
- 1 = Bothway Calling
 - 0 = Originate Only, 2 = Receive Only

Station Or Trunk Number
 Station Number for line Types 1, 2, 3 & 7
 Trunk Number for Line Types 4, 5 & 6

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
0	1	1	1	1				
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No.

- Line Appearance Type
 0 = Speed Dial Key
 1 = Prime Line (key 1 only - nonprogrammable)
 2 = Key Line, 3 = Multiple Call Line
 4 = Direct Trunk Select, 5 = Direct Line Select
 6 = Private Line
 7 = Personal Outgoing line

- Ringing Type (Line Appearance Type ≠ 0)
 1 = Immediate Ring
 0 = No Ring, 2 = Delay Ring

- Call Direction (Line Appearance Type ≠ 0)
 1 = Bothway Calling
 0 = Originate Only, 2 = Receive Only

- Station Or Trunk Number
 Station Number for line Types 1, 2, 3 & 7
 Trunk Number for Line Types 4, 5 & 6

a	b	c	d	e	f	g	h	i
0	1	1	1	1				
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No.

- Line Appearance Type
 0 = Speed Dial Key
 1 = Prime Line (key 1 only - nonprogrammable)
 2 = Key Line, 3 = Multiple Call Line
 4 = Direct Trunk Select, 5 = Direct Line Select
 6 = Private Line
 7 = Personal Outgoing line

- Ringing Type (Line Appearance Type ≠ 0)
 1 = Immediate Ring
 0 = No Ring, 2 = Delay Ring

- Call Direction (Line Appearance Type ≠ 0)
 1 = Bothway Calling
 0 = Originate Only, 2 = Receive Only

- Station Or Trunk Number
 Station Number for line Types 1, 2, 3 & 7
 Trunk Number for Line Types 4, 5 & 6

	a	b	c	d	e	f	g	h	i
0	1	1	1	1					
0	2								
0	3								
0	4								
0	5								
0	6								
0	7								
0	8								
0	9								
1	0								
1	1								
1	2								
1	3								
1	4								
1	5								

DEFAULT VALUES

	a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-	-
0	2	0	-	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-	-

SECTION MITL9104-091-210-NA

COMMANDS 401 → 480

SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Equipment No.

SUPERSET Set Key Number

- Line Appearance Type
 0 = Speed Dial Key
 1 = Prime Line (key 1 only - nonprogrammable)
 2 = Key Line, 3 = Multiple Call Line
 4 = Direct Trunk Select, 5 = Direct Line Select
 6 = Private Line
 7 = Personal Outgoing line

- Ring Type (Line Appearance Type ≠ 0)
 1 = Immediate Ring
 0 = No Ring, 2 = Delay Ring

- Call Direction (Line Appearance Type ≠ 0)
 1 = Bothway Calling
 0 = Originate Only, 2 = Receive Only

- Station Or Trunk Number
 Station Number for line Types 1, 2, 3 & 7
 Trunk Number for Line Types 4, 5 & 6

a	b	c	d	e	f	g	h	i
0	1	1	1	1				
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No.

Line Appearance Type

- 0 = Speed Dial Key
- 1 = Prime Line (key 1 only - nonprogrammable)
- 2 = Key Line, 3 = Multiple Call Line
- 4 = Direct Trunk Select, 5 = Direct Line Select
- 6 = Private Line
- 7 = Personal Outgoing line

Ringing Type (Line Appearance Type ≠ 0)

- 1 = Immediate Ring
- 0 = No Ring, 2 = Delay Ring

Call Direction (Line Appearance Type ≠ 0)

- 1 = Bothway Calling
- 0 = Originate Only, 2 = Receive Only

Station Or Trunk Number

- Station Number for line Types 1, 2, 3 & 7
- Trunk Number for Line Types 4, 5 & 6

	a	b	c	d	e	f	g	h	i
0	1	1	1	1					
0	2								
0	3								
0	4								
0	5								
0	6								
0	7								
0	8								
0	9								
1	0								
1	1								
1	2								
1	3								
1	4								
1	5								

DEFAULT VALUES

	a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-	-
0	2	0	-	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-	-

SECTION MITL9104-091-210-NA

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No.

- Line Appearance Type
 0 = Speed Dial Key
 1 = Prime Line (key 1 only - nonprogrammable)
 2 = Key Line, 3 = Multiple Call Line
 4 = Direct Trunk Select, 5 = Direct Line Select
 6 = Private Line
 7 = Personal Outgoing line

- Ringing Type (Line Appearance Type ≠ 0)
 1 = Immediate Ring
 0 = No Ring, 2 = Delay Ring

- Call Direction (Line Appearance Type ≠ 0)
 1 = Bothway Calling
 0 = Originate Only, 2 = Receive Only

- Station Or Trunk Number
 Station Number for line Types 1, 2, 3 & 7
 Trunk Number for Line Types 4, 5 & 6

a	b	c	d	e	f	g	h	i
0	1	1	1	1				
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No.

Line Appearance Type

- 0 = Speed Dial Key
- 1 = Prime Line (key 1 only - nonprogrammable)
- 2 = Key Line, 3 = Multiple Call Line
- 4 = Direct Trunk Select, 5 = Direct Line Select
- 6 = Private Line
- 7 = Personal Outgoing line

Ringing Type (Line Appearance Type ≠ 0)

- 1 = Immediate Ring
- 0 = No Ring, 2 = Delay Ring

Call Direction (Line Appearance Type ≠ 0)

- 1 = Bothway Calling
- 0 = Originate Only, 2 = Receive Only

Station Or Trunk Number

- Station Number for line Types 1, 2, 3 & 7
- Trunk Number for Line Types 4, 5 & 6

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
0	1	1	1	1				
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

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COMMANDS 401 — 480 SUPERSET SETS 01 — 80 PROGRAMMING

SUPERSET Set Equipment No. _____

SUPERSET Set Key Number

- Line Appearance Type
 0 = Speed Dial Key
 1 = Prime Line (key 1 only - nonprogrammable)
 2 = Key Line, 3 = Multiple Call Line
 4 = Direct Trunk Select, 5 = Direct Line Select
 6 = Private Line
 7 = Personal Outgoing line

- Ringing Type (Line Appearance Type ≠ 0)
 1 = Immediate Ring
 0 = No Ring, 2 = Delay Ring

- Call Direction (Line Appearance Type ≠ 0)
 1 = Bothway Calling
 0 = Originate Only, 2 = Receive Only

- Station Or Trunk Number
 Station Number for line Types 1, 2, 3 & 7
 Trunk Number for Line Types 4, 5 & 6

a	b	c	d	e	f	g	h	i
0	1	1	1	1				
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number _____

SUPERSET Set Equipment No. _____

Line Appearance Type

- 0 = Speed Dial Key
- 1 = Prime Line (key 1 only - nonprogrammable)
- 2 = Key Line, 3 = Multiple Call Line
- 4 = Direct Trunk Select, 5 = Direct Line Select
- 6 = Private Line
- 7 = Personal Outgoing line

Ringing Type (Line Appearance Type ≠ 0)

- 1 = Immediate Ring
- 0 = No Ring, 2 = Delay Ring

Call Direction (Line Appearance Type ≠ 0)

- 1 = Bothway Calling
- 0 = Originate Only, 2 = Receive Only

Station Or Trunk Number

- Station Number for line Types 1, 2, 3 & 7
- Trunk Number for Line Types 4, 5 & 6

a	b	c	d	e	f	g	h	i
0	1	1	1	1				
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET

01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No.

- Line Appearance
- 0 = Speed Dial
 - 1 = Prime Line
 - 2 = Key Line
 - 4 = Direct Trunk
 - 6 = Private Line
 - 7 = Personal Call

- 1 only - nonprogrammable)
- Multiple Call Line
- Direct Line Select

- Ringing Type
- 1 = Immediate
 - 0 = No Ring

- Appearance Type ≠ 0)
- Delay Ring

- Call Direction
- 1 = Both
 - 0 = One

- on (Line Appearance Type ≠ 0)
- Calling
- Receive Only. 2 = Receive Only

Station Or Trunk Number
 Station Number for line Types 1, 2, 3 & 7
 Trunk Number for Line Types 4, 5 & 6

	a	b	c	d	e	f	g
0	1	1	1	1			
0	2						
0	3						
0	4						
0	5						
0	6						
0	7						
0	8						
0	9						
1	0						
1	1						
1	2						
1	3						
1	4						
1	5						

DEFAULT VALUES

	a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-	-
0	2	0	-	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No.

Line Appearance Type

- 0 = Speed Dial Key
- 1 = Prime Line (key 1 only - nonprogrammable)
- 2 = Key Line, 3 = Multiple Call Line
- 4 = Direct Trunk Select, 5 = Direct Line Select
- 6 = Private Line
- 7 = Personal Outgoing line

Ringing Type (Line Appearance Type ≠ 0)

- 1 = Immediate Ring
- 0 = No Ring, 2 = Delay Ring

Call Direction (Line Appearance Type ≠ 0)

- 1 = Bothway Calling
- 0 = Originate Only, 2 = Receive Only

Station Or Trunk Number

- Station Number for line Types 1, 2, 3 & 7
- Trunk Number for Line Types 4, 5 & 6

a	b	c	d	e	f	g	h	i
0	1	1	1	1				
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

SECTION MITL9104-091-210-NA

COMMANDS 401 → 480

SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Equipment No. _____

SUPERSET Set Key Number

- Line Appearance Type
 0 = Speed Dial Key
 1 = Prime Line (key 1 only - nonprogrammable)
 2 = Key Line, 3 = Multiple Call Line
 4 = Direct Trunk Select, 5 = Direct Line Select
 6 = Private Line
 7 = Personal Outgoing line

- Ringing Type (Line Appearance Type ≠ 0)
 1 = Immediate Ring
 0 = No Ring, 2 = Delay Ring

- Call Direction (Line Appearance Type ≠ 0)
 1 = Bothway Calling
 0 = Originate Only, 2 = Receive Only

- Station Or Trunk Number
 Station Number for line Types 1, 2, 3 & 7
 Trunk Number for Line Types 4, 5 & 6

	a	b	c	d	e	f	g	h	i
0	1	1	1	1					
0	2								
0	3								
0	4								
0	5								
0	6								
0	7								
0	8								
0	9								
1	0								
1	1								
1	2								
1	3								
1	4								
1	5								

DEFAULT VALUES

	a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-	-
0	2	0	-	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No. _____

- Line Appearance Type
 0 = Speed Dial Key
 1 = Prime Line (key 1 only - nonprogrammable)
 2 = Key Line, 3 = Multiple Call Line
 4 = Direct Trunk Select, 5 = Direct Line Select
 6 = Private Line
 7 = Personal Outgoing line

- Ringing Type (Line Appearance Type ≠ 0)
 1 = Immediate Ring
 0 = No Ring, 2 = Delay Ring

- Call Direction (Line Appearance Type ≠ 0)
 1 = Bothway Calling
 0 = Originate Only, 2 = Receive Only

- Station Or Trunk Number
 Station Number for line Types 1, 2, 3 & 7
 Trunk Number for Line Types 4, 5 & 6

a	b	c	d	e	f	g	h	i
0	1	1	1	1				
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No.

- Line Appearance Type
 0 = Speed Dial Key
 1 = Prime Line (key 1 only - nonprogrammable)
 2 = Key Line, 3 = Multiple Call Line
 4 = Direct Trunk Select, 5 = Direct Line Select
 6 = Private Line
 7 = Personal Outgoing line

- Ringing Type (Line Appearance Type ≠ 0)
 1 = Immediate Ring
 0 = No Ring, 2 = Delay Ring

- Call Direction (Line Appearance Type ≠ 0)
 1 = Bothway Calling
 0 = Originate Only, 2 = Receive Only

- Station Or Trunk Number
 Station Number for line Types 1, 2, 3 & 7
 Trunk Number for Line Types 4, 5 & 6

a	b	c	d	e	f	g	h	i
0	1	1	1	1				
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No. _____

Line Appearance Type

- 0 = Speed Dial Key
- 1 = Prime Line (key 1 only - nonprogrammable)
- 2 = Key Line, 3 = Multiple Call Line
- 4 = Direct Trunk Select, 5 = Direct Line Select
- 6 = Private Line
- 7 = Personal Outgoing line

Ringing Type (Line Appearance Type ≠ 0)

- 1 = Immediate Ring
- 0 = No Ring, 2 = Delay Ring

Call Direction (Line Appearance Type ≠ 0)

- 1 = Bothway Calling
- 0 = Originate Only, 2 = Receive Only

Station Or Trunk Number

- Station Number for line Types 1, 2, 3 & 7
- Trunk Number for Line Types 4, 5 & 6

a	b	c	d	e	f	g	h	i
0	1	1	1	1				
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No.

- Line Appearance Type
 0 = Speed Dial Key
 1 = Prime Line (key 1 only - nonprogrammable)
 2 = Key Line, 3 = Multiple Call Line
 4 = Direct Trunk Select, 5 = Direct Line Select
 6 = Private Line
 7 = Personal Outgoing line

- Ringing Type (Line Appearance Type ≠ 0)
 1 = Immediate Ring
 0 = No Ring, 2 = Delay Ring

- Call Direction (Line Appearance Type ≠ 0)
 1 = Bothway Calling
 0 = Originate Only, 2 = Receive Only

- Station Or Trunk Number
 Station Number for line Types 1, 2, 3 & 7
 Trunk Number for Line Types 4, 5 & 6

a	b	c	d	e	f	g	h	i
0	1	1	1	1				
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No.

- Line Appearance Type
 0 = Speed Dial Key
 1 = Prime Line (key 1 only - nonprogrammable)
 2 = Key Line, 3 = Multiple Call Line
 4 = Direct Trunk Select, 5 = Direct Line Select
 6 = Private Line
 7 = Personal Outgoing line

- Ringing Type (Line Appearance Type ≠ 0)
 1 = Immediate Ring
 0 = No Ring, 2 = Delay Ring

- Call Direction (Line Appearance Type ≠ 0)
 1 = Bothway Calling
 0 = Originate Only, 2 = Receive Only

Station Or Trunk Number
 Station Number for line Types 1, 2, 3 & 7
 Trunk Number for Line Types 4, 5 & 6

a	b	c	d	e	f	g	h	i
0	1	1	1	1				
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

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COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No.

- Line Appearance Type
 0 = Speed Dial Key
 1 = Prime Line (key 1 only - nonprogrammable)
 2 = Key Line, 3 = Multiple Call Line
 4 = Direct Trunk Select, 5 = Direct Line Select
 6 = Private Line
 7 = Personal Outgoing line

- Ringing Type (Line Appearance Type ≠ 0)
 1 = Immediate Ring
 0 = No Ring, 2 = Delay Ring

- Call Direction (Line Appearance Type ≠ 0)
 1 = Bothway Calling
 0 = Originate Only, 2 = Receive Only

- Station Or Trunk Number
 Station Number for line Types 1, 2, 3 & 7
 Trunk Number for Line Types 4, 5 & 6

	a	b	c	d	e	f	g	h	i
0	1	1	1	1					
0	2								
0	3								
0	4								
0	5								
0	6								
0	7								
0	8								
0	9								
1	0								
1	1								
1	2								
1	3								
1	4								
1	5								

DEFAULT VALUES

	a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-	-
0	2	0	-	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No. _____

Line Appearance Type

- 0 = Speed Dial Key
- 1 = Prime Line (key 1 only - nonprogrammable)
- 2 = Key Line, 3 = Multiple Call Line
- 4 = Direct Trunk Select, 5 = Direct Line Select
- 6 = Private Line
- 7 = Personal Outgoing line

Ringing Type (Line Appearance Type ≠ 0)

- 1 = Immediate Ring
- 0 = No Ring, 2 = Delay Ring

Call Direction (Line Appearance Type ≠ 0)

- 1 = Bothway Calling
- 0 = Originate Only, 2 = Receive Only

Station Or Trunk Number

- Station Number for line Types 1, 2, 3 & 7
- Trunk Number for Line Types 4, 5 & 6

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
0	1	1	1	1				
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

COMMANDS 4: 480 SUPERSET SETS 01 PROGRAMMING SUPERSET Set Equipment No. _____

Set Key Number
 Line Appearance Type
 0 = Speed Dial Key
 1 = Prime Line (key 1 or nonprogrammable)
 2 = Key Line, 3 = Multi- All Line
 4 = Direct Trunk Select Direct Line Select
 6 = Private Line
 7 = Personal Outgoing I

Ringing Type (Line Appearance Type ≠ 0)
 1 = Immediate Ring
 0 = No Ring, 2 = De ing

Call Direction (Line Appearance Type ≠ 0)
 1 = Bothway Cal
 0 = Originate C 2 = Receive Only

Static Trunk Number
 Static Trunk Number for line Types 1, 2, 3 & 7
 Trunk Number for Line Types 4, 5 & 6

DEFAULT VALUES

a	b
0	1
0	2
0	3
0	4
0	5
0	6
0	7
0	8
0	9
1	0
1	1
1	2
1	3
1	4
1	5

d	e	f	g	h	i
1	1				

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number _____

SUPERSET Set Equipment No. _____

Line Appearance Type

- 0 = Speed Dial Key
- 1 = Prime Line (key 1 only - nonprogrammable)
- 2 = Key Line, 3 = Multiple Call Line
- 4 = Direct Trunk Select, 5 = Direct Line Select
- 6 = Private Line
- 7 = Personal Outgoing line

Ringing Type (Line Appearance Type ≠ 0)

- 1 = Immediate Ring
- 0 = No Ring, 2 = Delay Ring

Call Direction (Line Appearance Type ≠ 0)

- 1 = Bothway Calling
- 0 = Originate Only, 2 = Receive Only

Station Or Trunk Number

- Station Number for line Types 1, 2, 3 & 7
- Trunk Number for Line Types 4, 5 & 6

a	b	c	d	e	f	g	h	i
0	1	1	1	1				
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

COMMANDS 401 → 480

SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Equipment No. _____

SUPERSET Set Key Number

Line Appearance Type

- 0 = Speed Dial Key
- 1 = Prime Line (key 1 only - nonprogrammable)
- 2 = Key Line, 3 = Multiple Call Line
- 4 = Direct Trunk Select, 5 = Direct Line Select
- 6 = Private Line
- 7 = Personal Outgoing line

Ringing Type (Line Appearance Type ≠ 0)

- 1 = Immediate Ring
- 0 = No Ring, 2 = Delay Ring

Call Direction (Line Appearance Type ≠ 0)

- 1 = Bothway Calling
- 0 = Originate Only, 2 = Receive Only

Station Or Trunk Number

- Station Number for line Types 1, 2, 3 & 7
- Trunk Number for Line Types 4, 5 & 6

	a	b	c	d	e	f	g	h	i
0	1	1	1	1					
0	2								
0	3								
0	4								
0	5								
0	6								
0	7								
0	8								
0	9								
1	0								
1	1								
1	2								
1	3								
1	4								
1	5								

DEFAULT VALUES

	a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-	-
0	2	0	-	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No. _____

Line Appearance Type

- 0 = Speed Dial Key
- 1 = Prime Line (key 1 only - nonprogrammable)
- 2 = Key Line, 3 = Multiple Call Line
- 4 = Direct Trunk Select, 5 = Direct Line Select
- 6 = Private Line
- 7 = Personal Outgoing line

Ringing Type (Line Appearance Type ≠ 0)

- 1 = Immediate Ring
- 0 = No Ring, 2 = Delay Ring

Call Direction (Line Appearance Type ≠ 0)

- 1 = Bothway Calling
- 0 = Originate Only, 2 = Receive Only

Station Or Trunk Number

- Station Number for line Types 1, 2, 3 & 7
- Trunk Number for Line Types 4, 5 & 6

a	b	c	d	e	f	g	h	i
0	1	1	1	1				
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

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COMMANDS 401 → 480

SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Equipment No. _____

SUPERSET Set Key Number

- Line Appearance Type
 0 = Speed Dial Key
 1 = Prime Line (key 1 only - nonprogrammable)
 2 = Key Line, 3 = Multiple Call Line
 4 = Direct Trunk Select, 5 = Direct Line Select
 6 = Private Line
 7 = Personal Outgoing line

- Ringing Type (Line Appearance Type ≠ 0)
 1 = Immediate Ring
 0 = No Ring, 2 = Delay Ring

- Call Direction (Line Appearance Type ≠ 0)
 1 = Bothway Calling
 0 = Originate Only, 2 = Receive Only

- Station Or Trunk Number
 Station Number for line Types 1, 2, 3 & 7
 Trunk Number for Line Types 4, 5 & 6

	a	b	c	d	e	f	g	h	i
0	1	1	1	1					
0	2								
0	3								
0	4								
0	5								
0	6								
0	7								
0	8								
0	9								
1	0								
1	1								
1	2								
1	3								
1	4								
1	5								

DEFAULT VALUES

	a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-	-
0	2	0	-	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No. _____

Line Appearance Type

- 0 = Speed Dial Key
- 1 = Prime Line (key 1 only - nonprogrammable)
- 2 = Key Line, 3 = Multiple Call Line
- 4 = Direct Trunk Select, 5 = Direct Line Select
- 6 = Private Line
- 7 = Personal Outgoing line

Ringing Type (Line Appearance Type ≠ 0)

- 1 = Immediate Ring
- 0 = No Ring, 2 = Delay Ring

Call Direction (Line Appearance Type ≠ 0)

- 1 = Bothway Calling
- 0 = Originate Only, 2 = Receive Only

Station Or Trunk Number

- Station Number for line Types 1, 2, 3 & 7
- Trunk Number for Line Types 4, 5 & 6

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
0	1	1	1	1				
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

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COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No. _____

- Line Appearance Type
 0 = Speed Dial Key
 1 = Prime Line (key 1 only - nonprogrammable)
 2 = Key Line, 3 = Multiple Call Line
 4 = Direct Trunk Select, 5 = Direct Line Select
 6 = Private Line
 7 = Personal Outgoing line

- Ringing Type (Line Appearance Type ≠ 0)
 1 = Immediate Ring
 0 = No Ring, 2 = Delay Ring

- Call Direction (Line Appearance Type ≠ 0)
 1 = Bothway Calling
 0 = Originate Only, 2 = Receive Only

- Station Or Trunk Number
 Station Number for line Types 1, 2, 3 & 7
 Trunk Number for Line Types 4, 5 & 6

	a	b	c	d	e	f	g	h	i
0	1	1	1	1					
0	2								
0	3								
0	4								
0	5								
0	6								
0	7								
0	8								
0	9								
1	0								
1	1								
1	2								
1	3								
1	4								
1	5								

DEFAULT VALUES

	a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-	-
0	2	0	-	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No. _____

Line Appearance Type

- 0 = Speed Dial Key
- 1 = Prime Line (key 1 only - nonprogrammable)
- 2 = Key Line, 3 = Multiple Call Line
- 4 = Direct Trunk Select, 5 = Direct Line Select
- 6 = Private Line
- 7 = Personal Outgoing line

Ringing Type (Line Appearance Type ≠ 0)

- 1 = Immediate Ring
- 0 = No Ring, 2 = Delay Ring

Call Direction (Line Appearance Type ≠ 0)

- 1 = Bothway Calling
- 0 = Originate Only, 2 = Receive Only

Station Or Trunk Number

- Station Number for line Types 1, 2, 3 & 7
- Trunk Number for Line Types 4, 5 & 6

a	b	c	d	e	f	g	h	i
0	1	1	1	1				
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

SECTION MITL9104-091-210-NA

COMMANDS 401 → 480

SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Equipment No. _____

SUPERSET Set Key Number

- Line Appearance Type
 0 = Speed Dial Key
 1 = Prime Line (key 1 only - nonprogrammable)
 2 = Key Line, 3 = Multiple Call Line
 4 = Direct Trunk Select, 5 = Direct Line Select
 6 = Private Line
 7 = Personal Outgoing line

- Ringing Type (Line Appearance Type ≠ 0)
 1 = Immediate Ring
 0 = No Ring, 2 = Delay Ring

- Call Direction (Line Appearance Type ≠ 0)
 1 = Bothway Calling
 0 = Originate Only, 2 = Receive Only

- Station Or Trunk Number
 Station Number for line Types 1, 2, 3 & 7
 Trunk Number for Line Types 4, 5 & 6

	a	b	c	d	e	f	g	h	i
0	1	1	1	1					
0	2								
0	3								
0	4								
0	5								
0	6								
0	7								
0	8								
0	9								
1	0								
1	1								
1	2								
1	3								
1	4								
1	5								

DEFAULT VALUES

	a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-	-
0	2	0	-	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No. _____

Line Appearance Type

- 0 = Speed Dial Key
- 1 = Prime Line (key 1 only - nonprogrammable)
- 2 = Key Line, 3 = Multiple Call Line
- 4 = Direct Trunk Select, 5 = Direct Line Select
- 6 = Private Line
- 7 = Personal Outgoing line

Ringing Type (Line Appearance Type ≠ 0)

- 1 = Immediate Ring
- 0 = No Ring, 2 = Delay Ring

Call Direction (Line Appearance Type ≠ 0)

- 1 = Bothway Calling
- 0 = Originate Only, 2 = Receive Only

Station Or Trunk Number

- Station Number for line Types 1, 2, 3 & 7
- Trunk Number for Line Types 4, 5 & 6

DEFAULT VALUES

	a	b	c	d	e	f	g	h	i
0	1	1	1	1					
0	2								
0	3								
0	4								
0	5								
0	6								
0	7								
0	8								
0	9								
1	0								
1	1								
1	2								
1	3								
1	4								
1	5								

	a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-	-
0	2	0	-	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No.

Line Appearance Type

- 0 = Speed Dial Key
- 1 = Prime Line (key 1 only - nonprogrammable)
- 2 = Key Line, 3 = Multiple Call Line
- 4 = Direct Trunk Select, 5 = Direct Line Select
- 6 = Private Line
- 7 = Personal Outgoing line

Ringing Type (Line Appearance Type ≠ 0)

- 1 = Immediate Ring
- 0 = No Ring, 2 = Delay Ring

Call Direction (Line Appearance Type ≠ 0)

- 1 = Bothway Calling
- 0 = Originate Only, 2 = Receive Only

Station Or Trunk Number

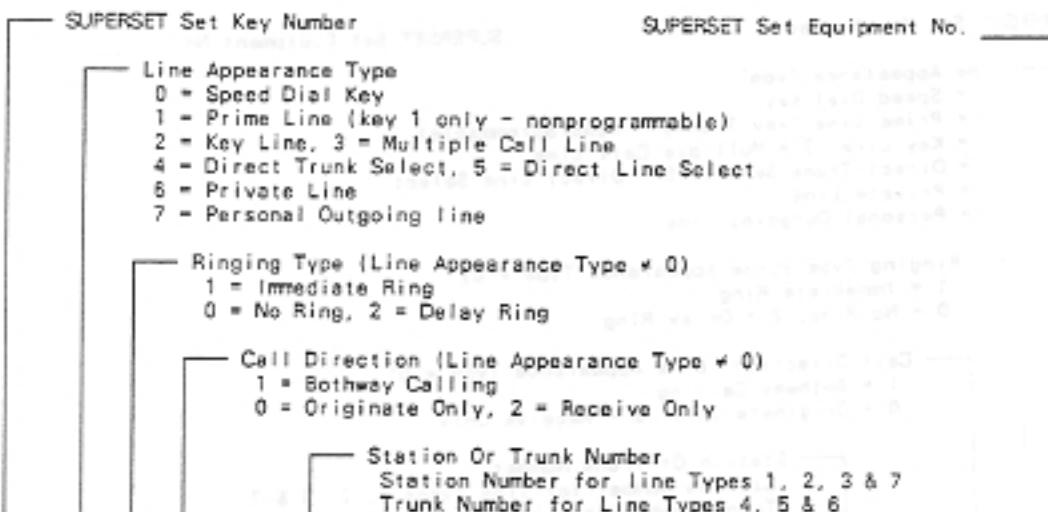
- Station Number for line Types 1, 2, 3 & 7
- Trunk Number for Line Types 4, 5 & 6

	a	b	c	d	e	f	g	h	i
0	1	1	1	1					
0	2								
0	3								
0	4								
0	5								
0	6								
0	7								
0	8								
0	9								
1	0								
1	1								
1	2								
1	3								
1	4								
1	5								

DEFAULT VALUES

	a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-	-
0	2	0	-	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING



a	b	c	d	e	f	g	h	i
0	1	1	1	1				
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

SECTION MITL9104-091-210-NA

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Equipment No. _____

SUPERSET Set Key Number

- Line Appearance Type
 0 = Speed Dial Key
 1 = Prime Line (key 1 only - nonprogrammable)
 2 = Key Line, 3 = Multiple Call Line
 4 = Direct Trunk Select, 5 = Direct Line Select
 6 = Private Line
 7 = Personal Outgoing line

- Ringing Type (Line Appearance Type ≠ 0)
 1 = Immediate Ring
 0 = No Ring, 2 = Delay Ring

- Call Direction (Line Appearance Type ≠ 0)
 1 = Bothway Calling
 0 = Originate Only, 2 = Receive Only

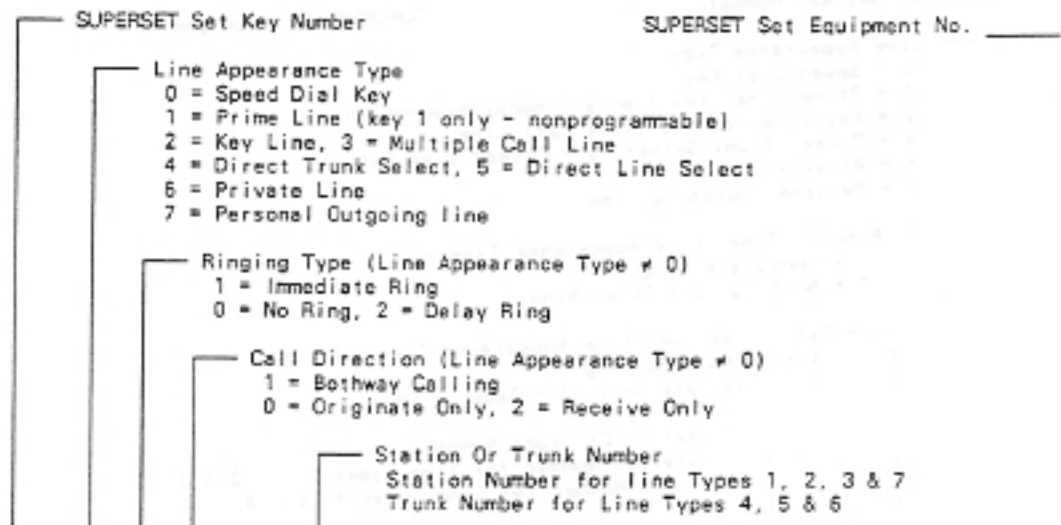
- Station Or Trunk Number
 Station Number for line Types 1, 2, 3 & 7
 Trunk Number for Line Types 4, 5 & 6

	a	b	c	d	e	f	g	h	i
0	1	1	1	1					
0	2								
0	3								
0	4								
0	5								
0	6								
0	7								
0	8								
0	9								
1	0								
1	1								
1	2								
1	3								
1	4								
1	5								

DEFAULT VALUES

	a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-	-
0	2	0	-	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-	-

COMMANDS 401 → 490 SUPERSET SETS 01 → 80 PROGRAMMING



a	b	c	d	e	f	g	h	i
0	1	1	1	1				
0	2							
0	3							
0	4							
0	5							
0	6							
0	7							
0	8							
0	9							
1	0							
1	1							
1	2							
1	3							
1	4							
1	5							

DEFAULT VALUES

a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-
0	2	0	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-

SECTION MITL9104-091-210-NA

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Equipment No. _____

SUPERSET Set Key Number

- Line Appearance Type
 0 = Speed Dial Key
 1 = Prime Line (key 1 only - nonprogrammable)
 2 = Key Line, 3 = Multiple Call Line
 4 = Direct Trunk Select, 5 = Direct Line Select
 6 = Private Line
 7 = Personal Outgoing line

- Ringing Type (Line Appearance Type ≠ 0)
 1 = Immediate Ring
 0 = No Ring, 2 = Delay Ring

- Call Direction (Line Appearance Type ≠ 0)
 1 = Bothway Calling
 0 = Originate Only, 2 = Receive Only

- Station Or Trunk Number
 Station Number for line Types 1, 2, 3 & 7
 Trunk Number for Line Types 4, 5 & 6

	a	b	c	d	e	f	g	h	i
0	1	1	1	1					
0	2								
0	3								
0	4								
0	5								
0	6								
0	7								
0	8								
0	9								
1	0								
1	1								
1	2								
1	3								
1	4								
1	5								

DEFAULT VALUES

	a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-	-
0	2	0	-	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-	-

COMMANDS 401 → 480 SUPERSET SETS 01 → 80 PROGRAMMING

SUPERSET Set Key Number

SUPERSET Set Equipment No. _____

- Line Appearance Type
 0 = Speed Dial Key
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 4 = Direct Trunk Select, 5 = Direct Line Select
 6 = Private Line
 7 = Personal Outgoing line

- Ringing Type (Line Appearance Type ≠ 0)
 1 = Immediate Ring
 0 = No Ring, 2 = Delay Ring

- Call Direction (Line Appearance Type ≠ 0)
 1 = Bothway Calling
 0 = Originate Only, 2 = Receive Only

- Station Or Trunk Number
 Station Number for line Types 1, 2, 3 & 7
 Trunk Number for Line Types 4, 5 & 6

	a	b	c	d	e	f	g	h	i
0	1	1	1	1					
0	2								
0	3								
0	4								
0	5								
0	6								
0	7								
0	8								
0	9								
1	0								
1	1								
1	2								
1	3								
1	4								
1	5								

DEFAULT VALUES

	a	b	c	d	e	f	g	h	i
0	1	1	1	1	-	-	-	-	-
0	2	0	-	-	-	-	-	-	-
0	3	0	-	-	-	-	-	-	-
0	4	0	-	-	-	-	-	-	-
0	5	0	-	-	-	-	-	-	-
0	6	0	-	-	-	-	-	-	-
0	7	0	-	-	-	-	-	-	-
0	8	0	-	-	-	-	-	-	-
0	9	0	-	-	-	-	-	-	-
1	0	0	-	-	-	-	-	-	-
1	1	0	-	-	-	-	-	-	-
1	2	0	-	-	-	-	-	-	-
1	3	0	-	-	-	-	-	-	-
1	4	0	-	-	-	-	-	-	-
1	5	0	-	-	-	-	-	-	-

TRUNK PROGRAMMING

3.20 The Trunk Programming commands set parameters and feature options that apply only to the particular trunk. In all cases there are default values; the installer need only perform data entry where a change from the default value is desired.

3.21 Trunk Programming uses Commands 501 through 580, corresponding to trunk equipment numbers 1 through 80. The register numbers correspond to the port numbers on the trunk card.

Command	Register	Port
501	1	1
502	2	2
503	3	3
504	4	4
505	5	5
506	6	6
507	7	7
508	8	8
509	9	9
510	10	10
511	11	11
512	12	12
513	13	13
514	14	14
515	15	15
516	16	16
517	17	17
518	18	18
519	19	19
520	20	20
521	21	21
522	22	22
523	23	23
524	24	24
525	25	25
526	26	26
527	27	27
528	28	28
529	29	29
530	30	30
531	31	31
532	32	32
533	33	33
534	34	34
535	35	35
536	36	36
537	37	37
538	38	38
539	39	39
540	40	40
541	41	41
542	42	42
543	43	43
544	44	44
545	45	45
546	46	46
547	47	47
548	48	48
549	49	49
550	50	50
551	51	51
552	52	52
553	53	53
554	54	54
555	55	55
556	56	56
557	57	57
558	58	58
559	59	59
560	60	60
561	61	61
562	62	62
563	63	63
564	64	64
565	65	65
566	66	66
567	67	67
568	68	68
569	69	69
570	70	70
571	71	71
572	72	72
573	73	73
574	74	74
575	75	75
576	76	76
577	77	77
578	78	78
579	79	79
580	80	80

Command	Register	Port
581	1	1
582	2	2
583	3	3
584	4	4
585	5	5
586	6	6
587	7	7
588	8	8
589	9	9
590	10	10
591	11	11
592	12	12
593	13	13
594	14	14
595	15	15
596	16	16
597	17	17
598	18	18
599	19	19
600	20	20
601	21	21
602	22	22
603	23	23
604	24	24
605	25	25
606	26	26
607	27	27
608	28	28
609	29	29
610	30	30
611	31	31
612	32	32
613	33	33
614	34	34
615	35	35
616	36	36
617	37	37
618	38	38
619	39	39
620	40	40
621	41	41
622	42	42
623	43	43
624	44	44
625	45	45
626	46	46
627	47	47
628	48	48
629	49	49
630	50	50
631	51	51
632	52	52
633	53	53
634	54	54
635	55	55
636	56	56
637	57	57
638	58	58
639	59	59
640	60	60
641	61	61
642	62	62
643	63	63
644	64	64
645	65	65
646	66	66
647	67	67
648	68	68
649	69	69
650	70	70
651	71	71
652	72	72
653	73	73
654	74	74
655	75	75
656	76	76
657	77	77
658	78	78
659	79	79
660	80	80

COMMANDS 501 → 508

TRUNK PROGRAMMING - SLOT 1

Register 1

Trunk Group Membership
 0 = Incoming Calls Only
 1 → 8 = Trunk Group Number

Trunk Alarm Control
 0 = Disable
 1 = Enable

Trunk Hardware Type
 0 = Short Analog CO Trunk
 1 = Long Analog CO Trunk
 2 = Analog Toll Office Trunk
 3 = Analog Tie Trunk
 4 = Satellite Tie Trunk

Inward Dial Class of Service
 0 = Not Inward Dial Trunk
 1 → 9 = COS 1 → 9

Inward Dial Delay Before Answer
 0 = No Delay
 1 = 8 sec delay
 Note: this applies to all trunk types.

Connect to Outgoing Trunk
 without Third Party
 0 = Disable
 1 = Enable

Inward Dialing
 ARS Routing Class Of Service
 0 = ARS Does Not Apply
 1 → 3 = RCS 1→3

Command	a	b	c	d	e	f	g	h
501	1							
502	1							
503	1							
504	1							
505	1							
506	1							
507	1							
508	1							

DEFAULT VALUES

a	b	c	d	e	f	g	h
1	0	1	0	0	0	1	0

1 0 1 1 1 0 1 0 0 0

COMMANDS 501 - 508

TRUNK PROGRAMMING - SLOT 1

Register 2

Trunk Outpulsing Make/break Ratio

- 0 = 60/40
- 1 = 65/35
- 2 = 30/20
- 3 = 35/15

Disconnect Supervision Guaranteed?

- 0 = No, 1 = Yes

Disappearance of Reversal

- 0 = is Ignored
- 1 = means Disconnect

Reversal On Call Origination Means

- 0 = Not Incoming Call
- 1 = Incoming Call

Disconnect Timing

- 0 = 60 msec
- 1 = 500 msec
- 2 = 1.5 sec
- 3 = 4.0 sec
- 4 = 10.0 sec
- 5 = Disconnect Ignored

Start Type (CO Trunks)

- 0 = Loop Start
- 1 = Ground Start

Trunk Hang-up Delay (Guard) Timer

- 0 = No Delay
- 1 - 9 = 1-9 Seconds

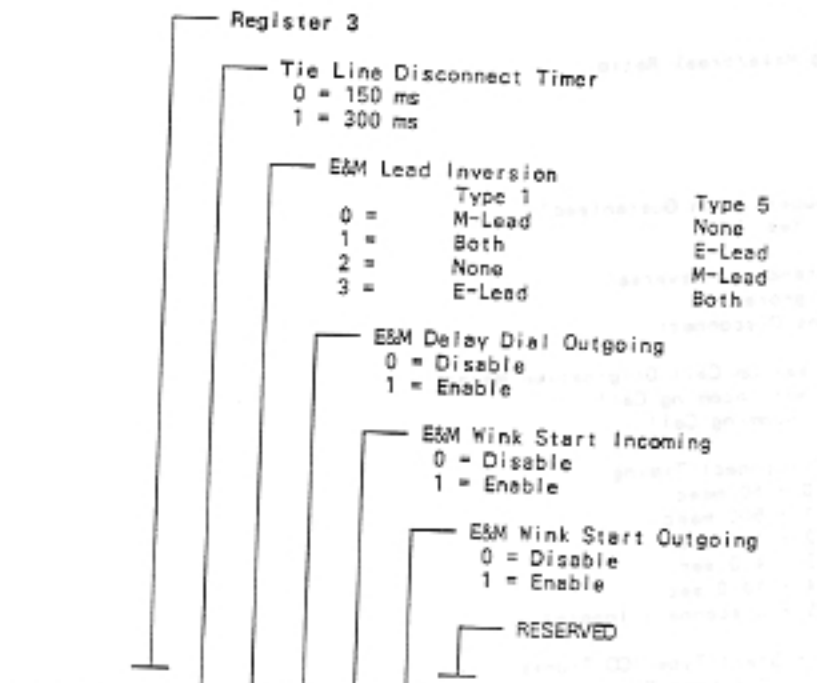
Command	a	b	c	d	e	f	g	h
501	2							
502	2							
503	2							
504	2							
505	2							
506	2							
507	2							
508	2							

DEFAULT VALUES

a	b	c	d	e	f	g	h
2	0	0	0	0	1	0	0

COMMANDS 501 - 508

TRUNK PROGRAMMING - SLOT 1



Command	a	b	c	d	e	f	g
501	3						2
502	3						2
503	3						2
504	3						2
505	3						2
506	3						2
507	3						2
508	3						2

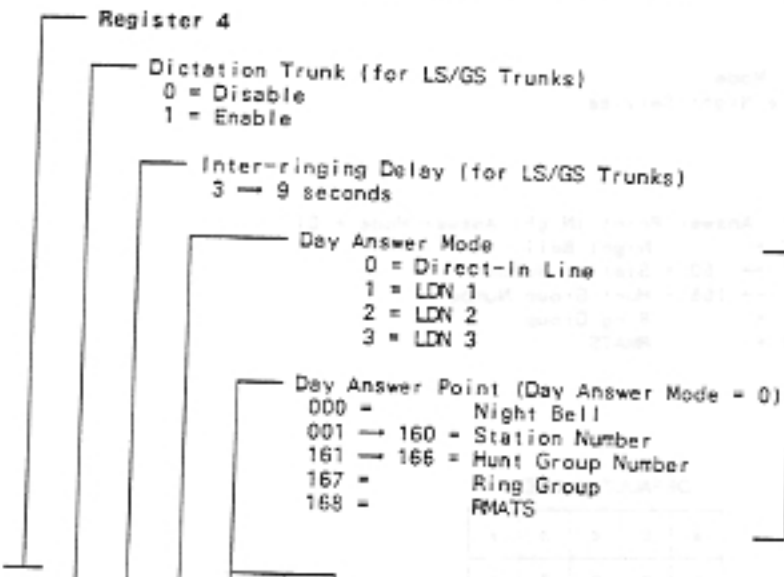
DEFAULT VALUES

a	b	c	d	e	f	g
3	1	0	0	1	1	2

SECTION MITL9104-091-210-NA

COMMANDS 501 — 508

TRUNK PROGRAMMING - SLOT 1



Applicable only if COS = 0 (Register 1, bit e).

Command	a	b	c	d	e	f	g
501	4						
502	4						
503	4						
504	4						
505	4						
506	4						
507	4						
508	4						

DEFAULT VALUES

a	b	c	d	e	f	g
4	0	5	3	0	0	1

COMMAND 501 → 508

TRUNK PROGRAMMING - SLOT 1

Register 5

Night Answer Mode
 0 = Flexible Night Service
 1 = LDN 1
 2 = LDN 2
 3 = LDN 3

Night Answer Point (Night Answer Mode = 0)
 000 = Night Bell
 001 → 160 = Station Number
 161 → 166 = Hunt Group Number
 167 = Ring Group
 168 = RMATS

Command	a	b	c	d	e
501	5				
502	5				
503	5				
504	5				
505	5				
506	5				
507	5				
508	5				

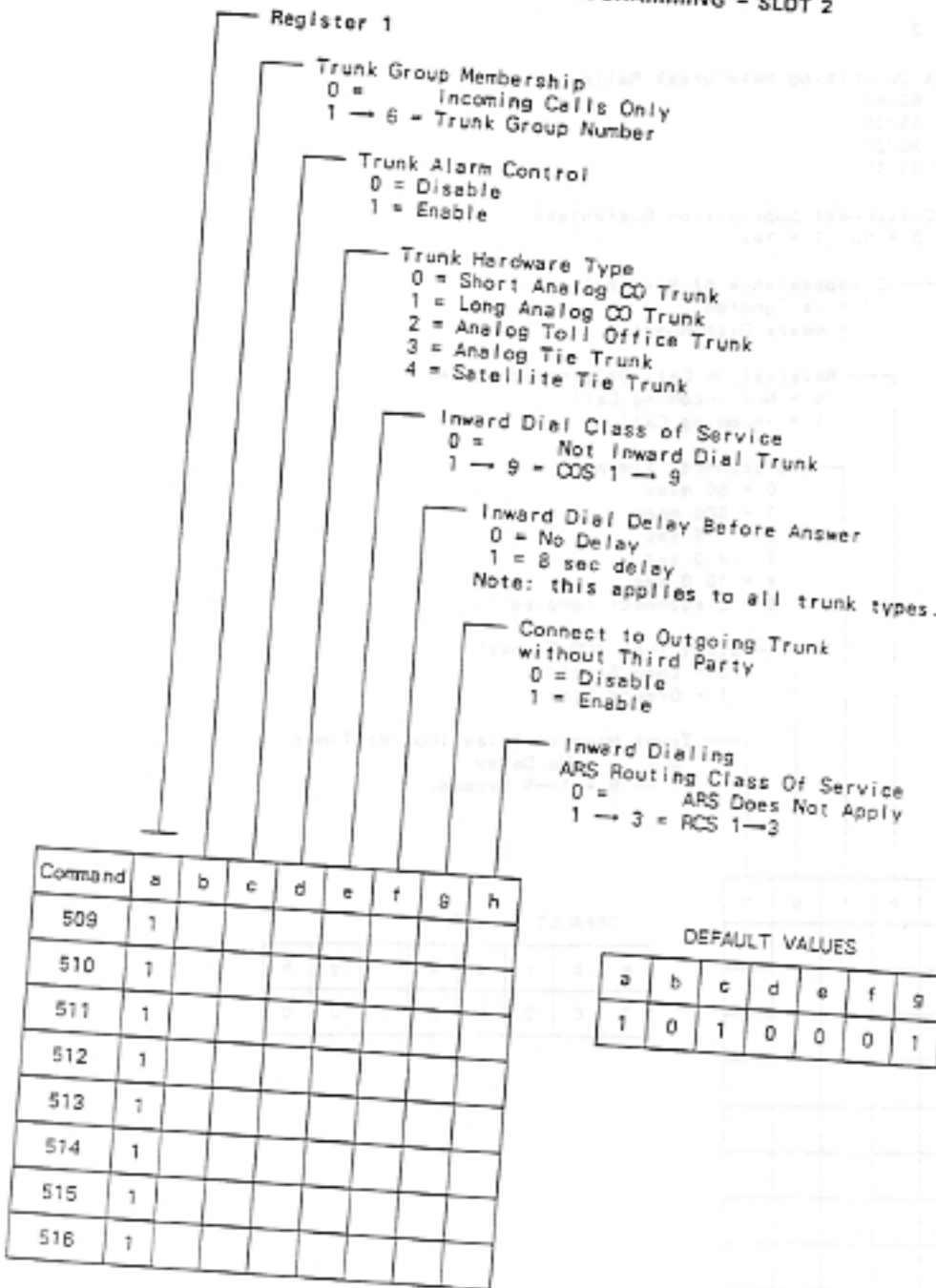
DEFAULT VALUES

a	b	c	d	e
5	0	0	0	0

SECTION MITL9104-091-210-NA

COMMANDS 509 - 516

TRUNK PROGRAMMING - SLOT 2



COMMANDS 509 — 516

TRUNK PROGRAMMING - SLOT 2

Register 2

Trunk Outpulsing Make/break Ratio

- 0 = 60/40
- 1 = 65/35
- 2 = 30/20
- 3 = 35/15

Disconnect Supervision Guaranteed?

- 0 = No, 1 = Yes

Disappearance of Reversal

- 0 = is Ignored
- 1 = means Disconnect

Reversal On Call Origination Means

- 0 = Not Incoming Call
- 1 = Incoming Call

Disconnect Timing

- 0 = 60 msec
- 1 = 500 msec
- 2 = 1.5 sec
- 3 = 4.0 sec
- 4 = 10.0 sec
- 5 = Disconnect Ignored

Start Type (CO Trunks)

- 0 = Loop Start
- 1 = Ground Start

Trunk Hang-up Delay (Guard) Timer

- 0 = No Delay
- 1 → 9 = 1→9 Seconds

Command	a	b	c	d	e	f	g	h
509	2							
510	2							
511	2							
512	2							
513	2							
514	2							
515	2							
516	2							

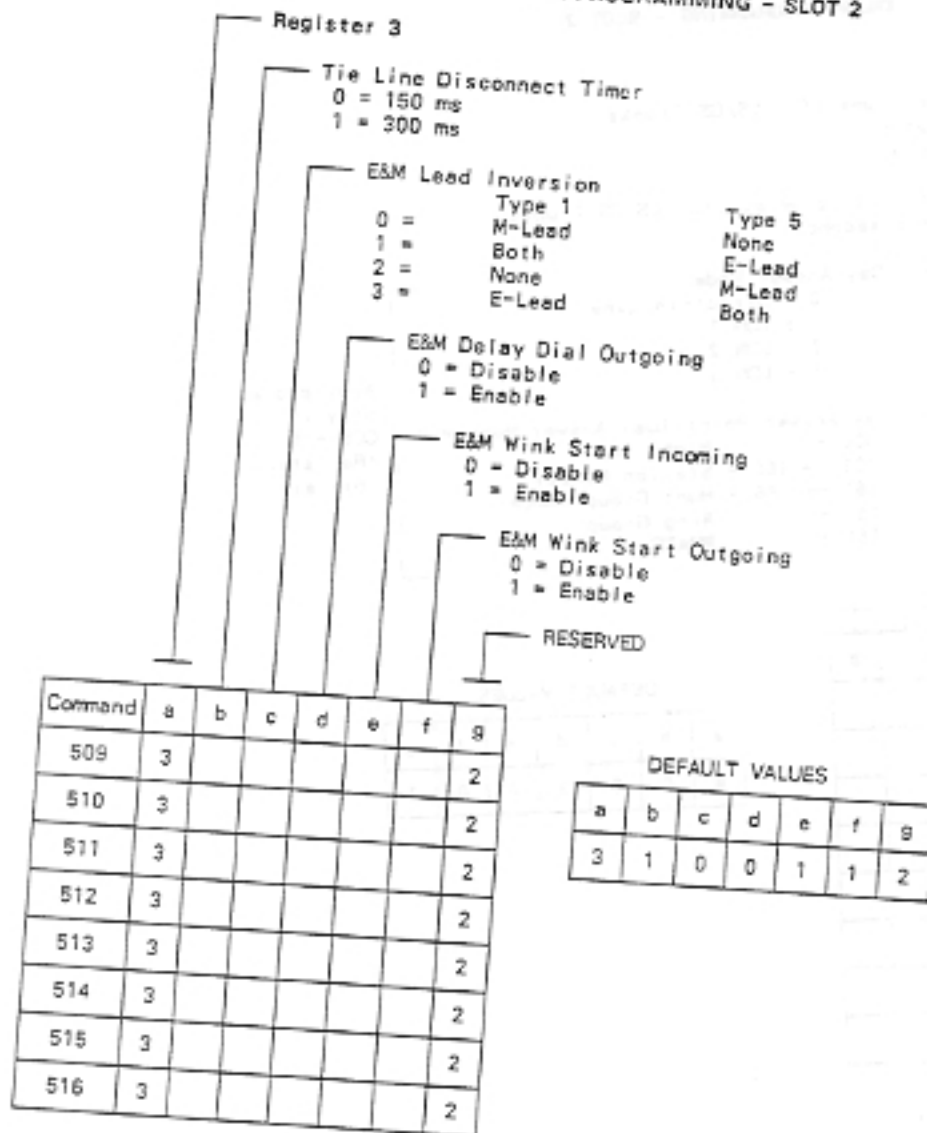
DEFAULT VALUES

a	b	c	d	e	f	g	h
2	0	0	0	0	1	0	0

SECTION MITL9104-091-210-NA

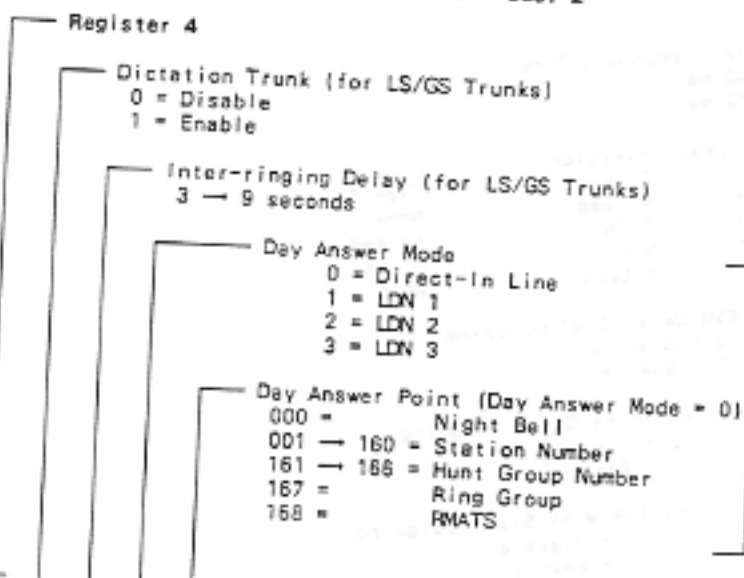
COMMANDS 509 - 516

TRUNK PROGRAMMING - SLOT 2



COMMANDS 509 → 516

TRUNK PROGRAMMING - SLOT 2



Applicable only if COS = 0 (Register 1, bit e).

Command	a	b	c	d	e	f	g
509	4						
510	4						
511	4						
512	4						
513	4						
514	4						
515	4						
516	4						

DEFAULT VALUES

a	b	c	d	e	f	g
4	0	5	3	0	0	1

COMMAND 509 → 516

TRUNK PROGRAMMING - SLOT 2

Register 5

Night Answer Mode
 0 = Flexible Night Service
 1 = LDN 1
 2 = LDN 2
 3 = LDN 3

Night Answer Point (Night Answer Mode = 0)
 000 = Night Bell
 001 → 160 = Station Number
 161 → 166 = Hunt Group Number
 167 = Ring Group
 168 = RMATS

Command	a	b	c	d	e
509	5				
510	5				
511	5				
512	5				
513	5				
514	5				
515	5				
516	5				

DEFAULT VALUES

a	b	c	d	e
5	0	0	0	0

COMMANDS 517 → 524

TRUNK PROGRAMMING - SLOT 3

Register 1

Trunk Group Membership
 0 = Incoming Calls Only
 1 → 6 = Trunk Group Number

Trunk Alarm Control
 0 = Disable
 1 = Enable

Trunk Hardware Type
 0 = Short Analog CO Trunk
 1 = Long Analog CO Trunk
 2 = Analog Toll Office Trunk
 3 = Analog Tie Trunk
 4 = Satellite Tie Trunk

Inward Dial Class of Service
 0 = Not Inward Dial Trunk
 1 → 9 = COS 1 → 9

Inward Dial Delay Before Answer
 0 = No Delay
 1 = 6 sec delay
 Note: this applies to all trunk types.

Connect to Outgoing Trunk
 without Third Party
 0 = Disable
 1 = Enable

Inward Dialing
 ARS Routing Class Of Service
 0 = ARS Does Not Apply
 1 → 3 = RCS 1 → 3

Command	a	b	c	d	e	f	g	h
517	1							
518	1							
519	1							
520	1							
521	1							
522	1							
523	1							
524	1							

DEFAULT VALUES

a	b	c	d	e	f	g	h
1	0	1	0	0	0	1	0

SECTION MITL9104-091-210-NA

COMMANDS 517 - 524

TRUNK PROGRAMMING - SLOT 3

Register 2

Trunk Outpulsing Make/break Ratio

- 0 = 60/40
- 1 = 65/35
- 2 = 30/20
- 3 = 35/15

Disconnect Supervision Guaranteed?

- 0 = No, 1 = Yes

Disappearance of Reversal

- 0 = is Ignored
- 1 = means Disconnect

Reversal On Call Origination Means

- 0 = Not Incoming Call
- 1 = Incoming Call

Disconnect Timing

- 0 = 60 msec
- 1 = 500 msec
- 2 = 1.5 sec
- 3 = 4.0 sec
- 4 = 10.0 sec
- 5 = Disconnect Ignored

Start Type (CO Trunks)

- 0 = Loop Start
- 1 = Ground Start

Trunk Hang-up Delay (Guard) Timer

- 0 = No Delay
- 1 - 9 = 1-9 Seconds

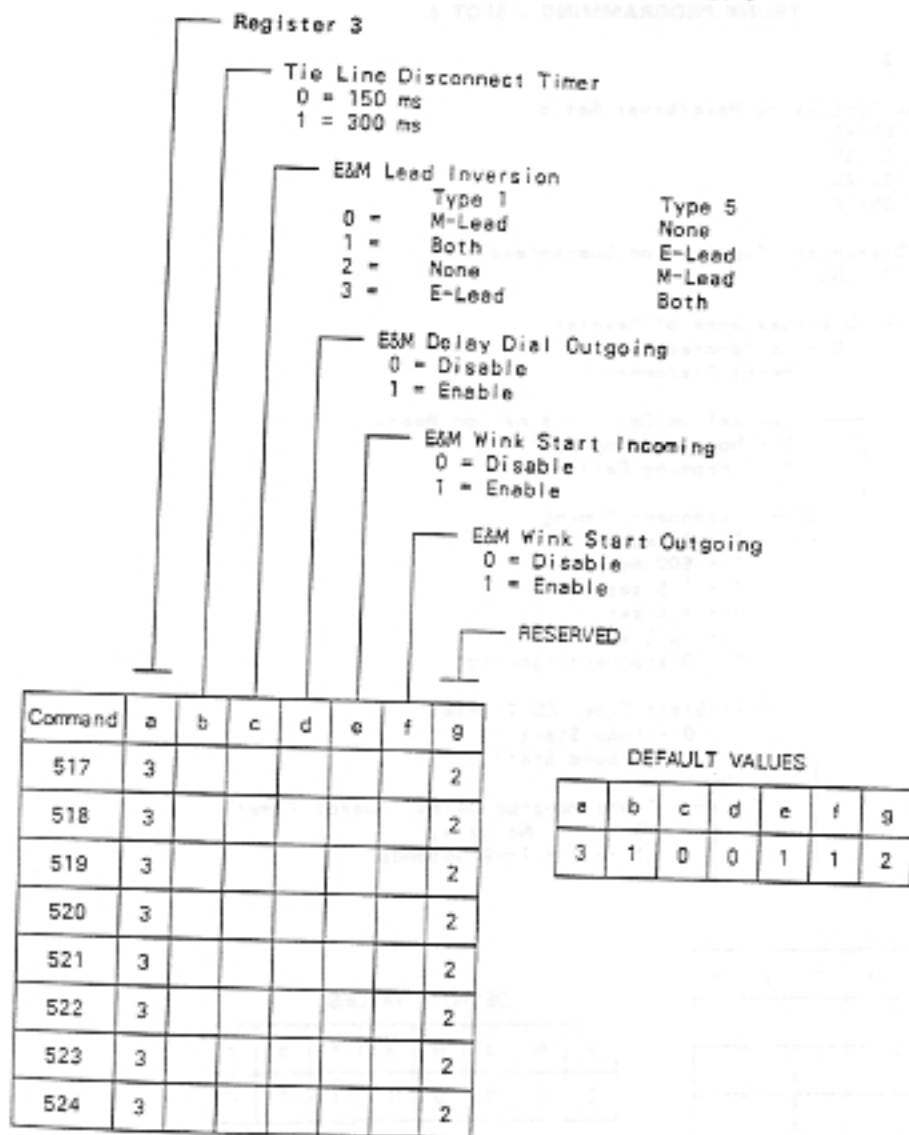
Command	a	b	c	d	e	f	g	h
517	2							
518	2							
519	2							
520	2							
521	2							
522	2							
523	2							
524	2							

DEFAULT VALUES

a	b	c	d	e	f	g	h
2	0	0	0	0	1	0	0

COMMANDS 517 → 524

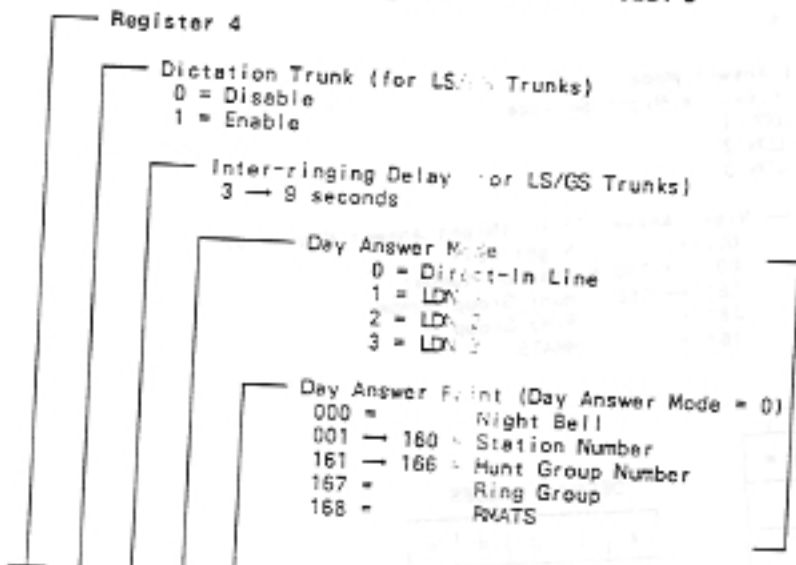
TRUNK PROGRAMMING - SLOT 3



SECTION MITL9104-091-210-NA

COMMANDS 517 - 524

TRUNK PROGRAMMING - SLOT 3



Command	a	b	c	d	e	f	g
517	4						
518	4						
519	4						
520	4						
521	4						
522	4						
523	4						
524	4						

DEFAULT VALUES

a	b	c	d	e	f	g
4	0	5	3	0	0	1

COMMAND 517 — 524

TRUNK PROGRAMMING - SLOT 3

Register 5

Night Answer Mode
 0 = Flexible Night Service
 1 = LDN 1
 2 = LDN 2
 3 = LDN 3

Night Answer Point (Night Answer Mode = 0)
 000 = Night Bell
 001 — 160 = Station Number
 161 — 166 = Hunt Group Number
 167 = Ring Group
 168 = RMATS

Command	a	b	c	d	e
517	5				
518	5				
519	5				
520	5				
521	5				
522	5				
523	5				
524	5				

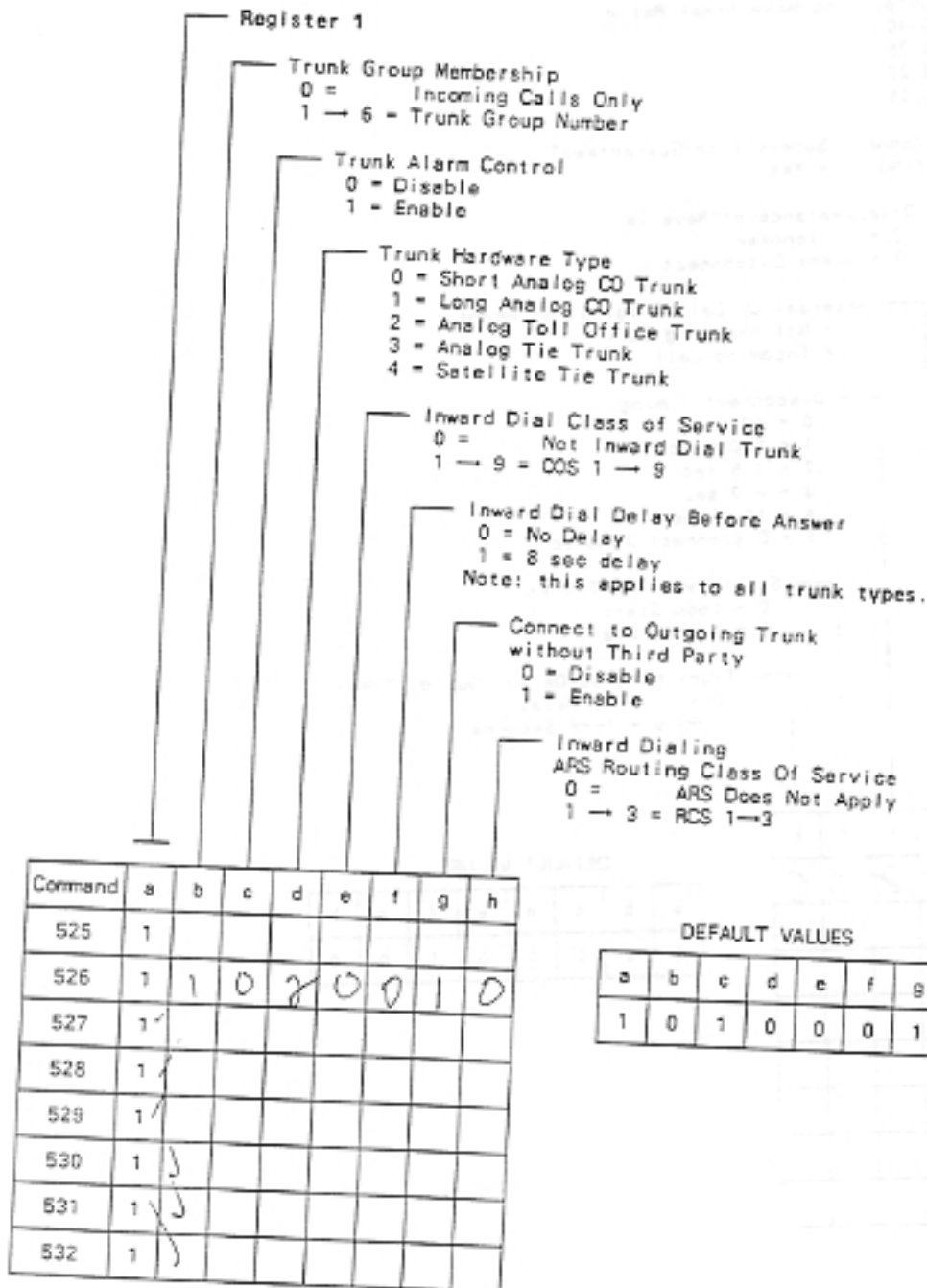
DEFAULT VALUES

a	b	c	d	e
5	0	0	0	0

SECTION MITL9104-091-210-NA

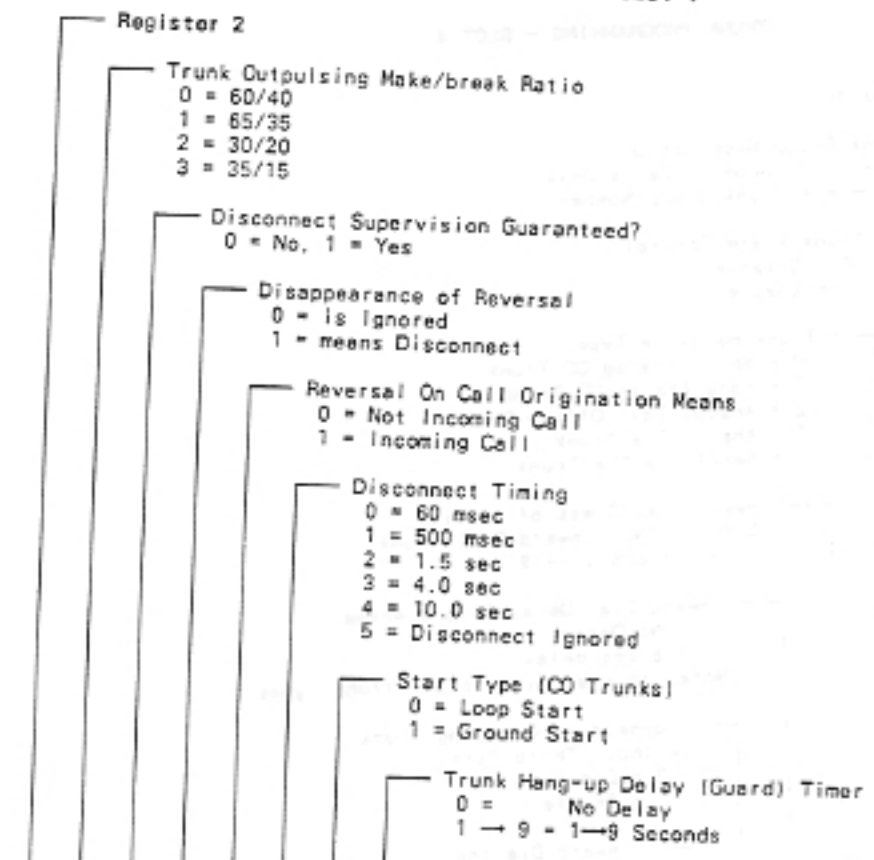
COMMANDS 525 → 532

TRUNK PROGRAMMING - SLOT 4



COMMANDS 525 - 532

TRUNK PROGRAMMING - SLOT 4



Command	a	b	c	d	e	f	g	h
525	2	2	1	0	0	2	0	0
526	2							
527	2							
528	2							
529	2							
530	2							
531	2							
532	2							

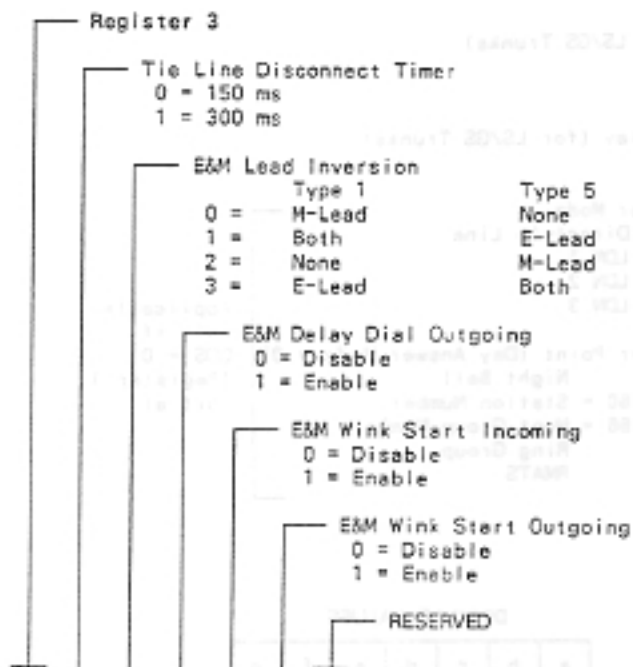
DEFAULT VALUES

a	b	c	d	e	f	g	h
2	0	0	0	0	1	0	0

SECTION MITL9104-091-210-NA

COMMANDS 525 - 532

TRUNK PROGRAMMING - SLOT 4



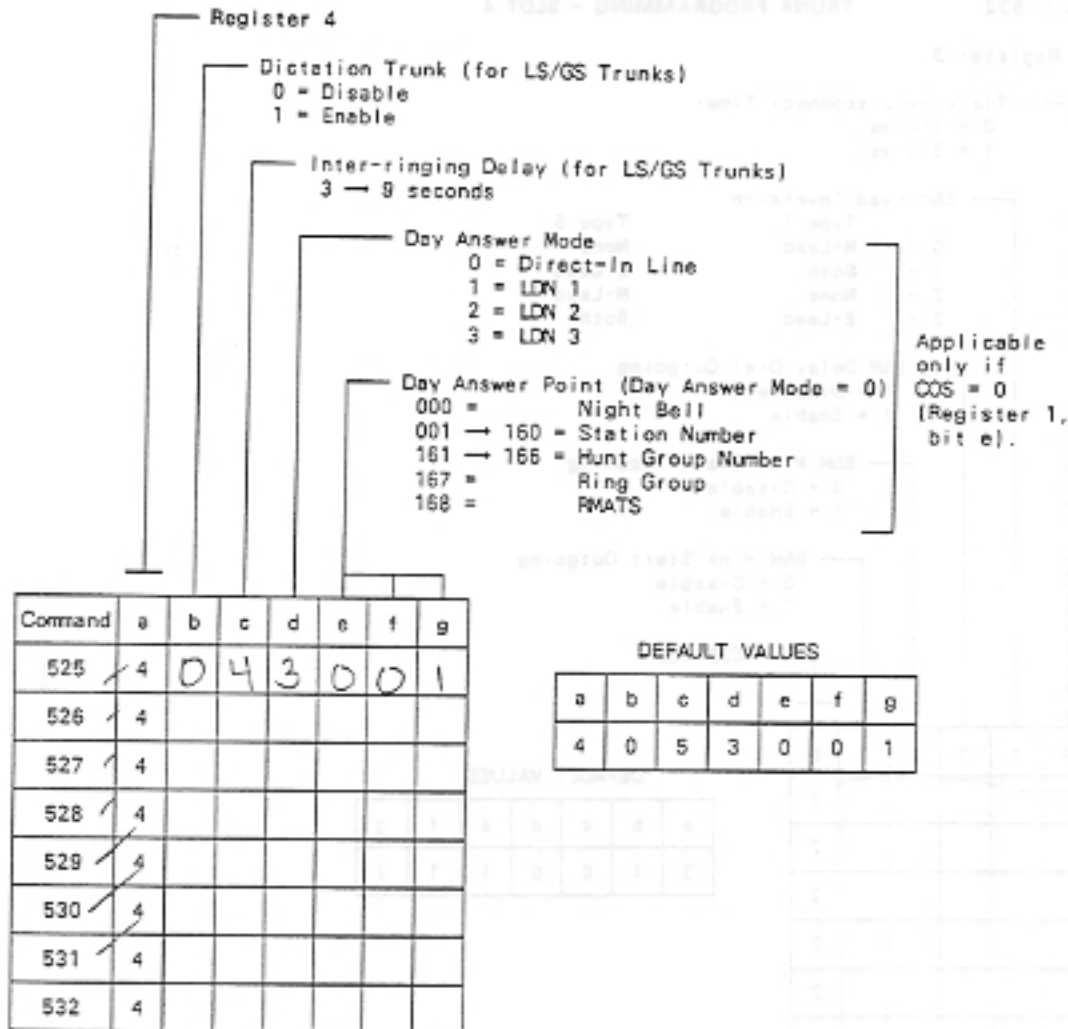
Command	a	b	c	d	e	f	g
525	3						2
526	3						2
527	3						2
528	3						2
529	3						2
530	3						2
531	3						2
532	3						2

DEFAULT VALUES

a	b	c	d	e	f	g
3	1	0	0	1	1	2

COMMANDS 525 — 532

TRUNK PROGRAMMING - SLOT 4



SECTION MITL9104-091-210-NA

COMMAND 525 → 532

TRUNK PROGRAMMING - SLOT 4

Register 5

Night Answer Mode
 0 = Flexible Night Service
 1 = LDN 1
 2 = LDN 2
 3 = LDN 3

Night Answer Point (Night Answer Mode = 0)
 000 = Night Bell
 001 → 160 = Station Number
 161 → 166 = Hunt Group Number
 167 = Ring Group
 168 = RNATS

Command	a	b	c	d	e
525	5	0	0	3	8
526	5				
527	5				
528	5				
529	5				
530	5				
531	5				
532	5				

DEFAULT VALUES

a	b	c	d	e
5	0	0	0	0

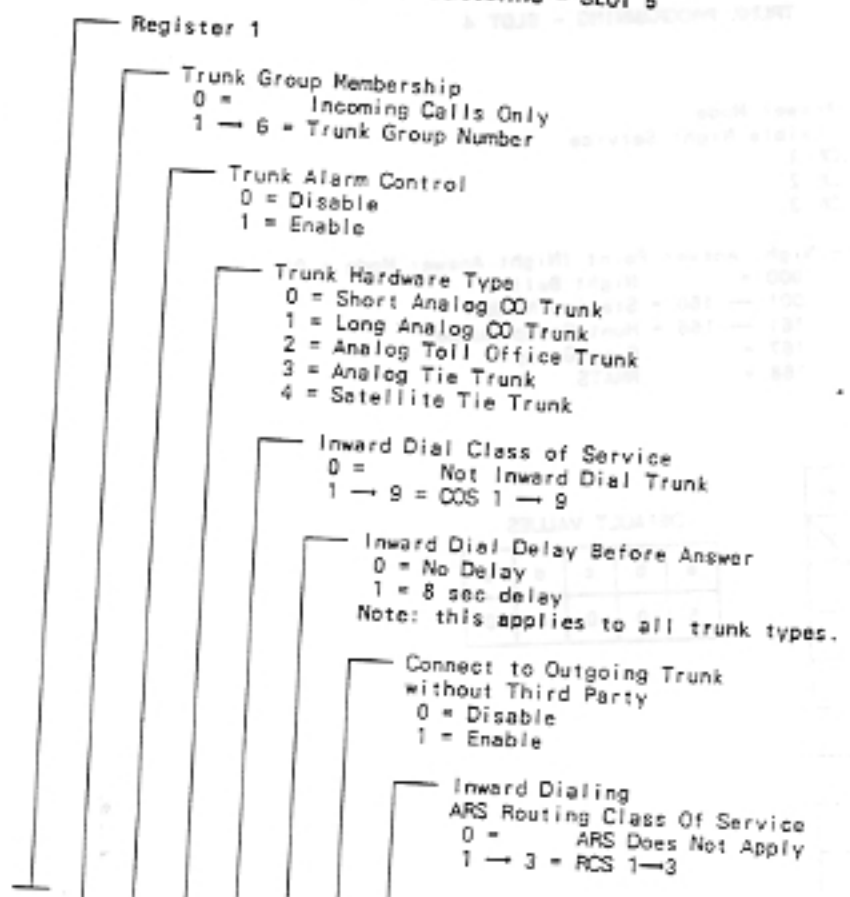
a	b	c	d	e
5	0	0	0	0

Command	a	b	c	d	e
525	5	0	0	3	8
526	5				
527	5				
528	5				
529	5				
530	5				
531	5				
532	5				

Customer Data Entry (CDE)

COMMANDS 533 → 540

TRUNK PROGRAMMING - SLOT 5



Command	a	b	c	d	e	f	g	h
533	1	1	0	0	0	0	1	0
534	1	1	1	0	0	0	1	1
535	1	1	1	0	0	0	1	1
536	1	1	1	0	0	0	1	1
537	1	2	1	0	0	0	1	1
538	1	2	1	0	0	0	1	1
539	1	0	1	1	0	0	1	1
540	1							

DEFAULT VALUES

a	b	c	d	e	f	g	h
1	0	1	0	0	0	1	0

SECTION MITL9104-091-210-NA

COMMANDS 533 - 540

TRUNK PROGRAMMING - SLOT 5

042 -- 122 DOWNWARD

Register 2

Trunk Outpulsing Make/break Ratio

- 0 = 60/40
- 1 = 65/35
- 2 = 30/20
- 3 = 35/15

Disconnect Supervision Guaranteed?

- 0 = No, 1 = Yes

Disappearance of Reversal

- 0 = is Ignored
- 1 = means Disconnect

Reversal On Call Origination Means

- 0 = Not Incoming Call
- 1 = Incoming Call

Disconnect Timing

- 0 = 60 msec
- 1 = 500 msec
- 2 = 1.5 sec
- 3 = 4.0 sec
- 4 = 10.0 sec
- 5 = Disconnect Ignored

Start Type (CO Trunks)

- 0 = Loop Start
- 1 = Ground Start

Trunk Hang-up Delay (Guard) Timer

- 0 = No Delay
- 1 - 9 = 1-9 Seconds

Command	a	b	c	d	e	f	g	h
533	2	0	0	0	0	0	0	0
534	2	0	0	0	0	1	1	0
535	2	0	0	0	0	1	1	0
536	2	0	0	0	0	1	1	0
537	2	0	0	0	0	1	1	0
538	2	0	0	0	0	1	1	0
539	2	0	0	0	0	1	0	0
540	2							

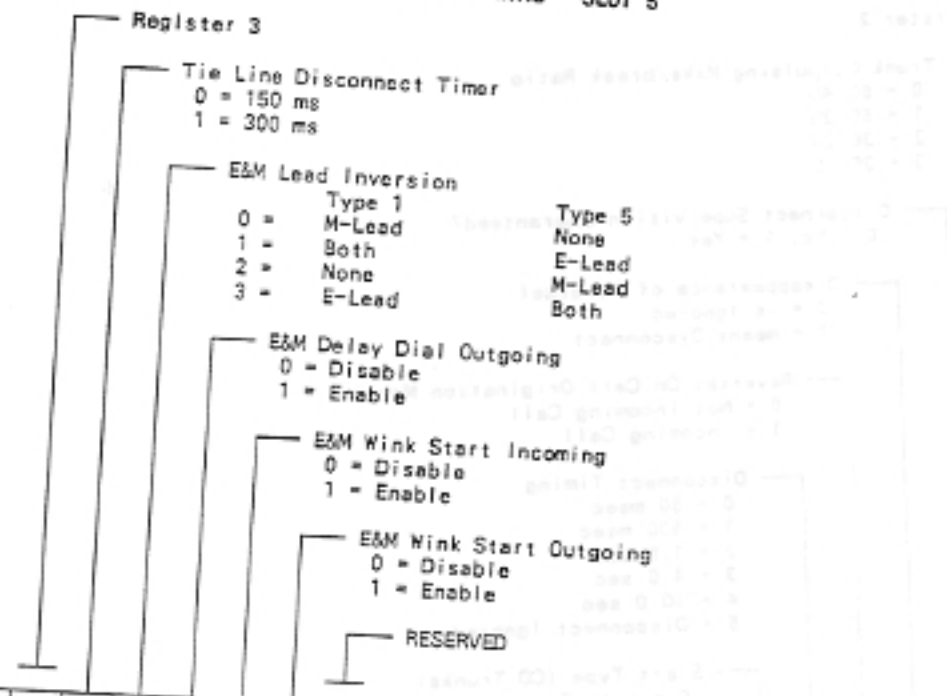
DEFAULT VALUES

a	b	c	d	e	f	g	h
2	0	0	0	0	1	0	0

Customer Data Entry (CDE)

COMMANDS 533 → 540

TRUNK PROGRAMMING - SLOT 5



Command	a	b	c	d	e	f	g
533	3	1	2	0	0	0	2
534	3	1	2	0	0	0	2
535	3	1	2	0	0	0	2
536	3	1	2	0	0	0	2
537	3	1	2	0	0	0	2
538	3	1	2	0	0	0	2
539	3						2
540	3						2

DEFAULT VALUES

a	b	c	d	e	f	g
3	1	0	0	1	1	2

Command	a	b	c	d	e	f	g
533	3	1	2	0	0	0	2
534	3	1	2	0	0	0	2
535	3	1	2	0	0	0	2
536	3	1	2	0	0	0	2
537	3	1	2	0	0	0	2
538	3	1	2	0	0	0	2
539	3						2
540	3						2

COMMANDS 533 - 540

TRUNK PROGRAMMING - SLOT 5

Register 4

Dictation Trunk (for LS/GS Trunks)

- 0 = Disable
- 1 = Enable

Inter-ringing Delay (for LS/GS Trunks)

3 - 9 seconds

Day Answer Mode

- 0 = Direct-In Line
- 1 = LDN 1
- 2 = LDN 2
- 3 = LDN 3

Day Answer Point (Day Answer Mode = 0)

- 000 = Night Bell
- 001 - 160 = Station Number
- 161 - 166 = Hunt Group Number
- 167 = Ring Group
- 168 = RMATS

Applicable only if
COS = 0
(Register 1,
bit e).

Command	a	b	c	d	e	f	g
533	4	0	5	3	0	0	0
534	4	0	5	1	0	0	0
535	4	0	5	1	0	0	0
536	4	0	5	1	0	0	0
537	4	0	5	2	0	0	0
538	4	0	5	2	0	0	0
539	4						
540	4						

DEFAULT VALUES

a	b	c	d	e	f	g
4	0	5	3	0	0	1

COMMAND 533 → 540

TRUNK PROGRAMMING - SLOT 5

Register 5

Night Answer Mode
 0 = Flexible Night Service
 1 = LDN 1
 2 = LDN 2
 3 = LDN 3

Night Answer Point (Night Answer Mode = 0)
 000 = Night Bell
 001 → 160 = Station Number
 161 → 166 = Hunt Group Number
 167 = Ring Group
 168 = RMATS

Command	a	b	c	d	e
533	5	0	0	5	6
534	5	0	0	5	6
535	5	0	0	5	6
536	5	0	0	5	6
537	5	0	0	5	6
538	5	0	0	5	6
539	5				
540	5				

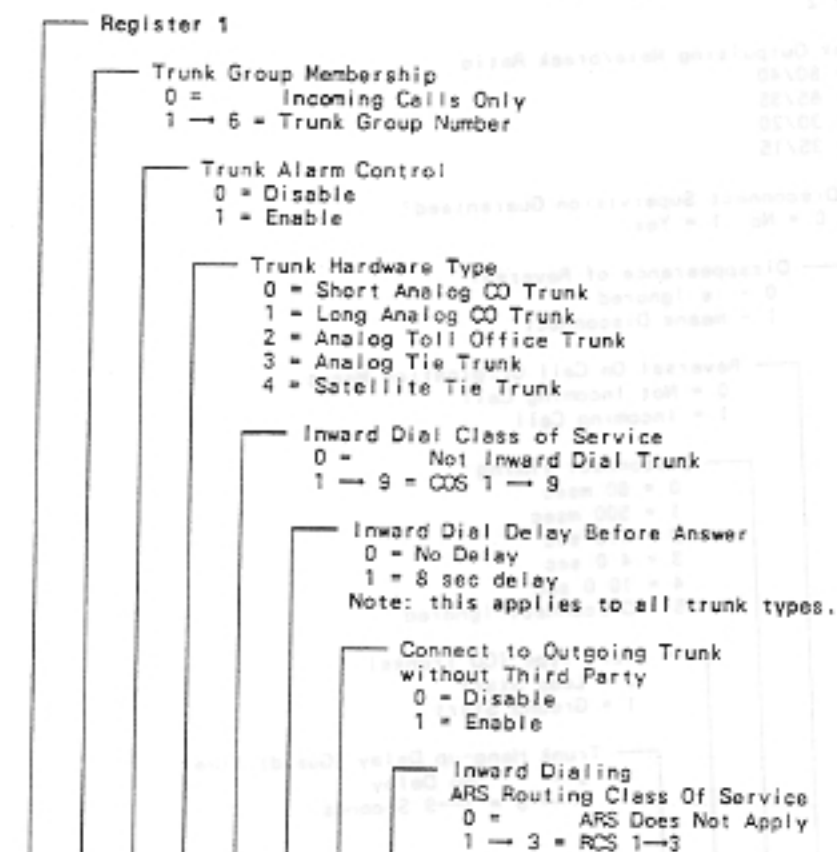
DEFAULT VALUES

a	b	c	d	e
5	0	0	0	0

SECTION MITL9104-091-210-NA

COMMANDS 541 → 548

TRUNK PROGRAMMING - SLOT 6



Command	a	b	c	d	e	f	g	h
541	1							
542	1							
543	1							
544	1							
545	1							
546	1							
547	1							
548	1							

DEFAULT VALUES

a	b	c	d	e	f	g	h
1	0	1	0	0	0	1	0

COMMANDS 541 - 548

TRUNK PROGRAMMING - SLOT 6

Register 2

Trunk Outpulsing Make/break Ratio

- 0 = 60/40
- 1 = 65/35
- 2 = 30/20
- 3 = 35/15

Disconnect Supervision Guaranteed?

- 0 = No, 1 = Yes

Disappearance of Reversal

- 0 = is Ignored
- 1 = means Disconnect

Reversal On Call Origination Means

- 0 = Not Incoming Call
- 1 = Incoming Call

Disconnect Timing

- 0 = 60 msec
- 1 = 500 msec
- 2 = 1.5 sec
- 3 = 4.0 sec
- 4 = 10.0 sec
- 5 = Disconnect Ignored

Start Type (CO Trunks)

- 0 = Loop Start
- 1 = Ground Start

Trunk Hang-up Delay (Guard) Timer

- 0 = No Delay
- 1 - 9 = 1-9 Seconds

Command	a	b	c	d	e	f	g	h
541	2							
542	2							
543	2							
544	2							
545	2							
546	2							
547	2							
548	2							

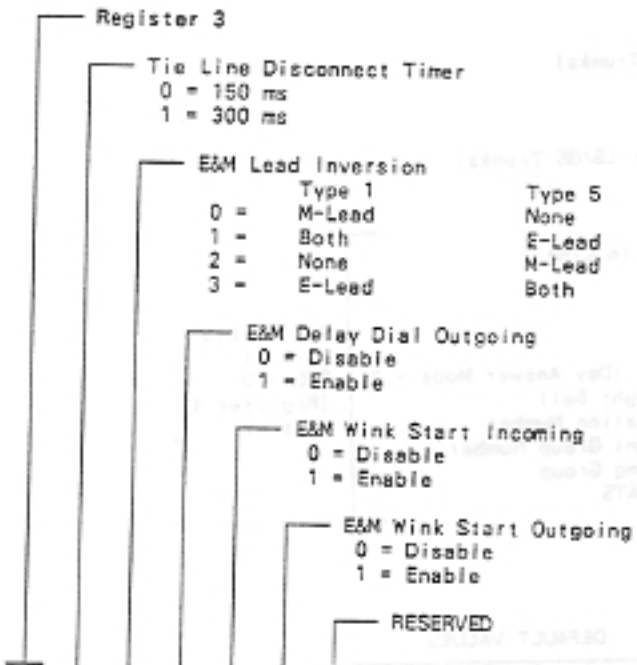
DEFAULT VALUES

a	b	c	d	e	f	g	h
2	0	0	0	0	1	0	0

SECTION MITL9104-091-210-NA

COMMANDS 541 → 548

TRUNK PROGRAMMING - SLOT 6



Command	a	b	c	d	e	f	g
541	3						2
542	3						2
543	3						2
544	3						2
545	3						2
546	3						2
547	3						2
548	3						2

DEFAULT VALUES

a	b	c	d	e	f	g
3	1	0	0	1	1	2

COMMANDS 541 - 548

TRUNK PROGRAMMING - SLOT 6

Register 4

Dictation Trunk (for LS/GS Trunks)

- 0 = Disable
- 1 = Enable

Inter-ringing Delay (for LS/GS Trunks)

3 - 9 seconds

Day Answer Mode

- 0 = Direct-In Line
- 1 = LDN 1
- 2 = LDN 2
- 3 = LDN 3

Day Answer Point (Day Answer Mode = 0)

- 000 = Night Bell
- 001 - 160 = Station Number
- 161 - 166 = Hunt Group Number
- 167 = Ring Group
- 168 = RMATS

Applicable only if COS = 0 (Register 1, bit e).

Command	a	b	c	d	e	f	g
541	4						
542	4						
543	4						
544	4						
545	4						
546	4						
547	4						
548	4						

DEFAULT VALUES

a	b	c	d	e	f	g
4	0	5	3	0	0	1

COMMANDS 549 - 556

TRUNK PROGRAMMING - SLOT 7

Register 4

Dictation Trunk (for LS/GS Trunks)
 0 = Disable
 1 = Enable

Inter-ringing Delay (for LS/GS Trunks)
 3 - 9 seconds

Day Answer Mode
 0 = Direct-In Line
 1 = LDN 1
 2 = LDN 2
 3 = LDN 3

Day Answer Point (Day Answer Mode = 0)
 000 = Night Bell
 001 - 160 = Station Number
 161 - 166 = Hunt Group Number
 167 = Ring Group
 168 = RMATS

Applicable only if
 COS = 0
 (Register 1,
 bit e).

Command	a	b	c	d	e	f	g
549	4						
550	4						
551	4						
552	4						
553	4						
554	4						
555	4						
556	4						

DEFAULT VALUES

a	b	c	d	e	f	g
4	0	5	3	0	0	1

COMMAND 549 → 556

TRUNK PROGRAMMING - SLOT 7

Register 5

- Night Answer Mode
 0 = Flexible Night Service
 1 = LDN 1
 2 = LDN 2
 3 = LDN 3

- Night Answer Point (Night Answer Mode = 0)
 000 = Night Bell
 001 → 160 = Station Number
 161 → 166 = Hunt Group Number
 167 = Ring Group
 168 = RMATS

Command	a	b	c	d	e
549	5				
550	5				
551	5				
552	5				
553	5				
554	5				
555	5				
556	5				

DEFAULT VALUES

a	b	c	d	e
5	0	0	0	0

SECTION MITL9104-091-210-NA

COMMANDS 557 → 564

TRUNK PROGRAMMING - SLOT 8

Register 1

Trunk Group Membership
 0 = Incoming Calls Only
 1 → 6 = Trunk Group Number

Trunk Alarm Control
 0 = Disable
 1 = Enable

Trunk Hardware Type
 0 = Short Analog CO Trunk
 1 = Long Analog CO Trunk
 2 = Analog Toll Office Trunk
 3 = Analog Tie Trunk
 4 = Satellite Tie Trunk

Inward Dial Class of Service
 0 = Not Inward Dial Trunk
 1 → 9 = COS 1 → 9

Inward Dial Delay Before Answer
 0 = No Delay
 1 = 8 sec delay
 Note: this applies to all trunk types.

Connect to Outgoing Trunk
 without Third Party
 0 = Disable
 1 = Enable

Inward Dialing
 ARS Routing Class Of Service
 0 = ARS Does Not Apply
 1 → 3 = RCS 1→3

Command	a	b	c	d	e	f	g	h
557	1							
558	1							
559	1							
560	1							
561	1							
562	1							
563	1							
564	1							

DEFAULT VALUES

a	b	c	d	e	f	g	h
1	0	1	0	0	0	1	0

COMMANDS 557 - 564

TRUNK PROGRAMMING - SLOT 8

Register 2

Trunk Outpulsing Make/break Ratio

- 0 = 60/40
- 1 = 65/35
- 2 = 30/20
- 3 = 35/15

Disconnect Supervision Guaranteed?

- 0 = No, 1 = Yes

Disappearance of Reversal

- 0 = is Ignored
- 1 = means Disconnect

Reversal On Call Origination Means

- 0 = Not Incoming Call
- 1 = Incoming Call

Disconnect Timing

- 0 = 60 msec
- 1 = 500 msec
- 2 = 1.5 sec
- 3 = 4.0 sec
- 4 = 10.0 sec
- 5 = Disconnect Ignored

Start Type (CO Trunks)

- 0 = Loop Start
- 1 = Ground Start

Trunk Hang-up Delay (Guard) Timer

- 0 = No Delay
- 1 - 9 = 1-9 Seconds

Command	a	b	c	d	e	f	g	h
557	2							
558	2							
559	2							
560	2							
561	2							
562	2							
563	2							
564	2							

DEFAULT VALUES

a	b	c	d	e	f	g	h
2	0	0	0	0	1	0	0

SECTION MITL9104-091-210-NA

COMMANDS 557 → 564

TRUNK PROGRAMMING - SLOT 8

Register 3

Tie Line Disconnect Timer
 0 = 150 ms
 1 = 300 ms

E&M Lead Inversion
 Type 1 Type 5
 0 = M-Lead None
 1 = Both E-Lead
 2 = None M-Lead
 3 = E-Lead Both

E&M Delay Dial Outgoing
 0 = Disable
 1 = Enable

E&M Wink Start Incoming
 0 = Disable
 1 = Enable

E&M Wink Start Outgoing
 0 = Disable
 1 = Enable

RESERVED

Command	a	b	c	d	e	f	g
557	3						2
558	3						2
559	3						2
560	3						2
561	3						2
562	3						2
563	3						2
564	3						2

DEFAULT VALUES

a	b	c	d	e	f	g
3	1	0	0	1	1	2

COMMANDS 557 - 564

TRUNK PROGRAMMING - SLOT 8

Register 4

Dictation Trunk (for LS/GS Trunks)
0 = Disable
1 = Enable

Inter-ringing Delay (for LS/GS Trunks)
3 → 9 seconds

Day Answer Mode
0 = Direct-in Line
1 = LDN 1
2 = LDN 2
3 = LDN 3

Day Answer Point (Day Answer Mode = 0)
000 = Night Bell
001 → 160 = Station Number
161 → 166 = Hunt Group Number
167 = Ring Group
168 = RMATS

Applicable only if
COS = 0
(Register 1, bit e).

Command	a	b	c	d	e	f	g
557	4						
558	4						
559	4						
560	4						
561	4						
562	4						
563	4						
564	4						

DEFAULT VALUES

a	b	c	d	e	f	g
4	0	5	3	0	0	1

SECTION MITL9104-091-210-NA

COMMAND 557 → 564

TRUNK PROGRAMMING - SLOT 8

Register 5

Night Answer Mode
 0 = Flexible Night Service
 1 = LDN 1
 2 = LDN 2
 3 = LDN 3

Night Answer Point (Night Answer Mode = 0)
 000 = Night Bell
 001 → 160 = Station Number
 161 → 166 = Hunt Group Number
 167 = Ring Group
 168 = RMATS

Command	a	b	c	d	e
557	5				
558	5				
559	5				
560	5				
561	5				
562	5				
563	5				
564	5				

DEFAULT VALUES

a	b	c	d	e
5	0	0	0	0

a	b	c	d	e
5	0	0	0	0

Command	a	b	c	d	e
557					
558					
559					
560					
561					
562					
563					
564					

COMMANDS 565 → 572

TRUNK PROGRAMMING - SLOT 9

Register 1

Trunk Group Membership
 0 = Incoming Calls Only
 1 → 6 = Trunk Group Number

Trunk Alarm Control
 0 = Disable
 1 = Enable

Trunk Hardware Type
 0 = Short Analog CO Trunk
 1 = Long Analog CO Trunk
 2 = Analog Toll Office Trunk
 3 = Analog Tie Trunk
 4 = Satellite Tie Trunk

Inward Dial Class of Service
 0 = Not Inward Dial Trunk
 1 → 9 = COS 1 → 9

Inward Dial Delay Before Answer
 0 = No Delay
 1 = 8 sec delay
 Note: this applies to all trunk types.

Connect to Outgoing Trunk
 without Third Party
 0 = Disable
 1 = Enable

Inward Dialing
 ARS Routing Class Of Service
 0 = ARS Does Not Apply
 1 → 3 = RCS 1→3

Command	a	b	c	d	e	f	g	h
565	1							
566	1							
567	1							
568	1							
569	1							
570	1							
571	1							
572	1							

DEFAULT VALUES

a	b	c	d	e	f	g	h
1	0	1	0	0	0	1	0

SECTION MITL9104-091-210-NA

COMMANDS 565 - 572

TRUNK PROGRAMMING - SLOT 9

Register 2

Trunk Outpulsing Make/break Ratio

- 0 = 60/40
- 1 = 65/35
- 2 = 30/20
- 3 = 35/15

Disconnect Supervision Guaranteed?

- 0 = No, 1 = Yes

Disappearance of Reversal

- 0 = is Ignored

- 1 = means Disconnect

Reversal On Call Origination Means

- 0 = Not Incoming Call

- 1 = Incoming Call

Disconnect Timing

- 0 = 60 msec

- 1 = 500 msec

- 2 = 1.5 sec

- 3 = 4.0 sec

- 4 = 10.0 sec

- 5 = Disconnect Ignored

Start Type (CO Trunks)

- 0 = Loop Start

- 1 = Ground Start

Trunk Hang-up Delay (Guard) Timer

- 0 = No Delay

- 1 - 9 = 1-9 Seconds

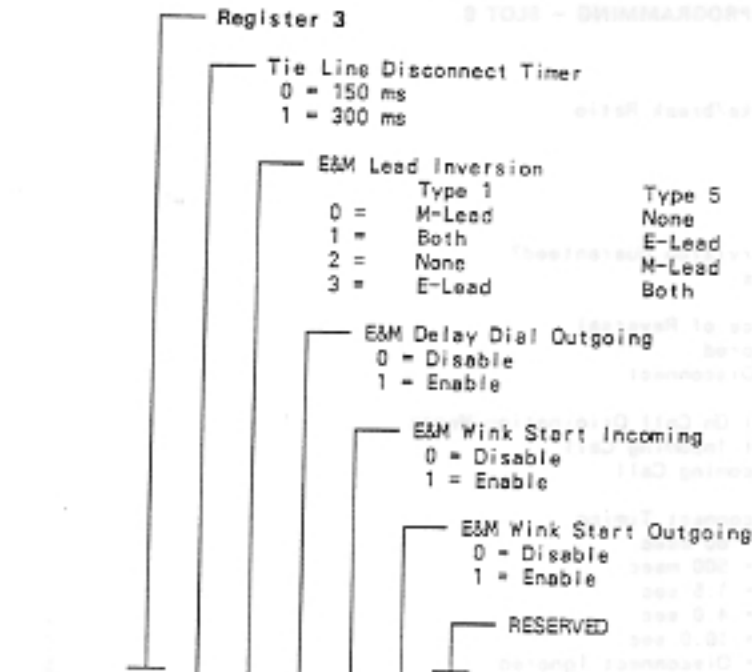
Command	a	b	c	d	e	f	g	h
565	2							
566	2							
567	2							
568	2							
569	2							
570	2							
571	2							
572	2							

DEFAULT VALUES

a	b	c	d	e	f	g	h
2	0	0	0	0	1	0	0

COMMANDS 565 - 572

TRUNK PROGRAMMING - SLOT 9



Command	a	b	c	d	e	f	g
565	3						2
566	3						2
567	3						2
568	3						2
569	3						2
570	3						2
571	3						2
572	3						2

DEFAULT VALUES

a	b	c	d	e	f	g
3	1	0	0	1	1	2

COMMANDS 565 - 572

TRUNK PROGRAMMING - SLOT 9

Register 4

Dictation Trunk (for LS/GS Trunks)

- 0 = Disable
- 1 = Enable

Inter-ringing Delay (for LS/GS Trunks)

3 → 9 seconds

Day Answer Mode

- 0 = Direct-In Line
- 1 = LDN 1
- 2 = LDN 2
- 3 = LDN 3

Day Answer Point (Day Answer Mode = 0)

- 000 = Night Bell
- 001 → 160 = Station Number
- 161 → 166 = Hunt Group Number
- 167 = Ring Group
- 168 = RMATS

Applicable only if COS = 0 (Register 1, bit e).

Command	a	b	c	d	e	f	g
565	4						
566	4						
567	4						
568	4						
569	4						
570	4						
571	4						
572	4						

DEFAULT VALUES

a	b	c	d	e	f	g
4	0	5	3	0	0	1

Command	a	b	c	d	e	f	g
565	4						
566	4						
567	4						
568	4						
569	4						
570	4						
571	4						
572	4						

COMMAND 565 → 572

TRUNK PROGRAMMING - SLOT 9

ST2 - CDE ZOHANMOO

Register 5

- Night Answer Mode
 0 = Flexible Night Service
 1 = LDN 1
 2 = LDN 2
 3 = LDN 3

- Night Answer Point (Night Answer Mode = 0)
 000 = Night Bell
 001 → 160 = Station Number
 161 → 166 = Hunt Group Number
 167 = Ring Group
 168 = RMATS

Command	a	b	c	d	e
565	5				
566	5				
567	5				
568	5				
569	5				
570	5				
571	5				
572	5				

DEFAULT VALUES

a	b	c	d	e
5	0	0	0	0

SECTION MITL9104-091-210-NA

COMMANDS 573 → 580

TRUNK PROGRAMMING - SLOT 10

Register 1

Trunk Group Membership
 0 = Incoming Calls Only
 1 → 6 = Trunk Group Number

Trunk Alarm Control
 0 = Disable
 1 = Enable

Trunk Hardware Type
 0 = Short Analog CO Trunk
 1 = Long Analog CO Trunk
 2 = Analog Toll Office Trunk
 3 = Analog Tie Trunk
 4 = Satellite Tie Trunk

Inward Dial Class of Service
 0 = Not Inward Dial Trunk
 1 → 9 = COS 1 → 9

Inward Dial Delay Before Answer
 0 = No Delay
 1 = 6 sec delay
 Note: this applies to all trunk types.

Connect to Outgoing Trunk
 without Third Party
 0 = Disable
 1 = Enable

Inward Dialing
 ARS Routing Class Of Service
 0 = ARS Does Not Apply
 1 → 3 = RCS 1→3

Command	a	b	c	d	e	f	g	h
573	1							
574	1							
575	1							
576	1							
577	1							
578	1							
579	1							
580	1							

DEFAULT VALUES

a	b	c	d	e	f	g	h
1	0	1	0	0	0	1	0

COMMANDS 573 - 580

TRUNK PROGRAMMING - SLOT 10

Register 2

Trunk Outpulsing Make/break Ratio

- 0 = 60/40
- 1 = 65/35
- 2 = 30/20
- 3 = 35/15

Disconnect Supervision Guaranteed?

- 0 = No, 1 = Yes

Disappearance of Reversal

- 0 = is Ignored
- 1 = means Disconnect

Reversal On Call Origination Means

- 0 = Not Incoming Call
- 1 = Incoming Call

Disconnect Timing

- 0 = 60 msec
- 1 = 500 msec
- 2 = 1.5 sec
- 3 = 4.0 sec
- 4 = 10.0 sec
- 5 = Disconnect Ignored

Start Type (CO Trunks)

- 0 = Loop Start
- 1 = Ground Start

Trunk Hang-up Delay (Guard) Timer

- 0 = No Delay
- 1 - 9 = 1-9 Seconds

Command	a	b	c	d	e	f	g	h
573	2							
574	2							
575	2							
576	2							
577	2							
578	2							
579	2							
580	2							

DEFAULT VALUES

a	b	c	d	e	f	g	h
2	0	0	0	0	1	0	0

COMMANDS 573 → 580

TRUNK PROGRAMMING - SLOT 10

Register 3

Tie Line Disconnect Timer
 0 = 150 ms
 1 = 300 ms

E&M Lead Inversion

0 =	Type 1 M-Lead	Type 5 None
1 =	Both	E-Lead
2 =	None	M-Lead
3 =	E-Lead	Both

E&M Delay Dial Outgoing

0 = Disable
 1 = Enable

E&M Wink Start Incoming

0 = Disable
 1 = Enable

E&M Wink Start Outgoing

0 = Disable
 1 = Enable

RESERVED

Command	a	b	c	d	e	f	g
573	3						2
574	3						2
575	3						2
576	3						2
577	3						2
578	3						2
579	3						2
580	3						2

DEFAULT VALUES

a	b	c	d	e	f	g
3	1	0	0	1	1	2

a	b	c	d	e	g
					070
					070
					070
					070
					070
					000

COMMANDS 573 - 580

TRUNK PROGRAMMING - SLOT 10

Register 4

Dictation Trunk (for LS/GS Trunks)

0 = Disable

1 = Enable

Inter-ringing Delay (for LS/GS Trunks)

3 → 9 seconds

Day Answer Mode

0 = Direct-In Line

1 = LDN 1

2 = LDN 2

3 = LDN 3

Day Answer Point (Day Answer Mode = 0)

000 = Night Bell

001 → 160 = Station Number

161 → 168 = Hunt Group Number

167 = Ring Group

168 = RMATS

Applicable
only if
COS = 0
(Register 1,
bit e).

Command	a	b	c	d	e	f	g
573	4						
574	4						
575	4						
576	4						
577	4						
578	4						
579	4						
580	4						

DEFAULT VALUES

a	b	c	d	e	f	g
4	0	5	3	0	0	1

COMMAND 573 → 580

TRUNK PROGRAMMING - SLOT 10

Register 5

Night Answer Mode
 0 = Flexible Night Service
 1 = LDN 1
 2 = LDN 2
 3 = LDN 3

Night Answer Point (Night Answer Mode = 0)
 000 = Night Bell
 001 → 160 = Station Number
 161 → 166 = Hunt Group Number
 167 = Ring Group
 168 = RMATS

Command	a	b	c	d	e
573	5				
574	5				
575	5				
576	5				
577	5				
578	5				
579	5				
580	5				

DEFAULT VALUES

a	b	c	d	e
5	0	0	0	0

SECTION MITL9104-091-210-NA

COMMANDS 549 - 556

TRUNK PROGRAMMING - SLOT 7

Register 2

Trunk Outpulsing Make/break Ratio

- 0 = 60/40
- 1 = 65/35
- 2 = 30/20
- 3 = 35/15

Disconnect Supervision Guaranteed?

- 0 = No, 1 = Yes

Disappearance of Reversal

- 0 = is Ignored
- 1 = means Disconnect

Reversal On Call Origination Means

- 0 = Not Incoming Call
- 1 = Incoming Call

Disconnect Timing

- 0 = 60 msec
- 1 = 500 msec
- 2 = 1.5 sec
- 3 = 4.0 sec
- 4 = 10.0 sec
- 5 = Disconnect Ignored

Start Type (CO Trunks)

- 0 = Loop Start
- 1 = Ground Start

Trunk Hang-up Delay (Guard) Timer

- 0 = No Delay
- 1 - 9 = 1-9 Seconds

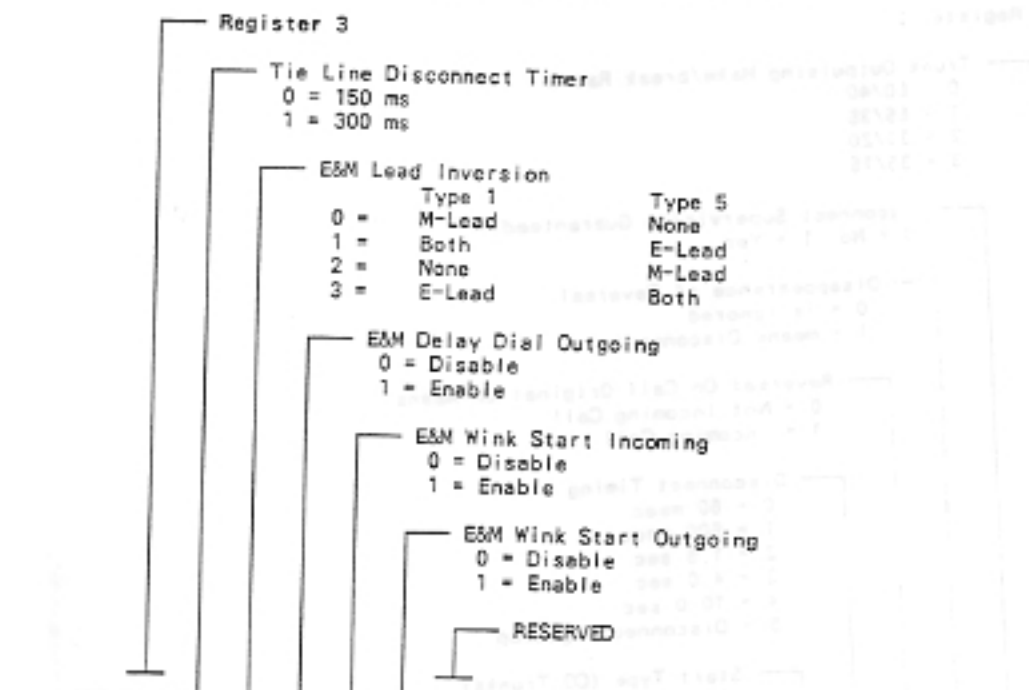
Command	a	b	c	d	e	f	g	h
549	2							
550	2							
551	2							
552	2							
553	2							
554	2							
555	2							
556	2							

DEFAULT VALUES

a	b	c	d	e	f	g	h
2	0	0	0	0	1	0	0

COMMANDS 549 → 556

TRUNK PROGRAMMING - SLOT 7



Command	a	b	c	d	e	f	g
549	3						2
550	3						2
551	3						2
552	3						2
553	3						2
554	3						2
555	3						2
556	3						2

DEFAULT VALUES

a	b	c	d	e	f	g
3	1	0	0	1	1	2

SECTION MITL9104-091-210-NA

COMMAND 541 → 548 TRUNK PROGRAMMING - SLOT 6

Register 5

Night Answer Mode
 0 = Flexible Night Service
 1 = LDN 1
 2 = LDN 2
 3 = LDN 3

Night Answer Point (Night Answer Mode = 0)
 000 = Night Bell
 001 → 160 = Station Number
 161 → 166 = Hunt Group Number
 167 = Ring Group
 168 = RMATS

Command	a	b	c	d	e
541	5				
542	5				
543	5				
544	5				
545	5				
546	5				
547	5				
548	5				

DEFAULT VALUES

a	b	c	d	e
5	0	0	0	0

DEFAULT VALUES

a	b	c	d	e
5	0	0	0	0

Command	a	b	c	d	e
540	1				
541	1				
542	1				
543	1				
544	1				
545	1				
546	1				
547	1				
548	1				

COMMANDS 549 — 556

TRUNK PROGRAMMING - SLOT 7

Register 1

Trunk Group Membership
 0 = Incoming Calls Only
 1 — 6 = Trunk Group Number

Trunk Alarm Control
 0 = Disable
 1 = Enable

Trunk Hardware Type
 0 = Short Analog CO Trunk
 1 = Long Analog CO Trunk
 2 = Analog Toll Office Trunk
 3 = Analog Tie Trunk
 4 = Satellite Tie Trunk

Inward Dial Class of Service
 0 = Not Inward Dial Trunk
 1 — 9 = COS 1 — 9

Inward Dial Delay Before Answer
 0 = No Delay
 1 = 8 sec delay
 Note: this applies to all trunk types.

Connect to Outgoing Trunk
 without Third Party
 0 = Disable
 1 = Enable

Inward Dialing
 ARS Routing Class Of Service
 0 = ARS Does Not Apply
 1 — 3 = RCS 1—3

Command	a	b	c	d	e	f	g	h
549	1							
550	1							
551	1							
552	1							
553	1							
554	1							
555	1							
556	1							

DEFAULT VALUES

a	b	c	d	e	f	g	h
1	0	1	0	0	0	1	0

COMMAND 700 ARS DIGIT COMPARISON TABLE PROGRAMMING

Entry Number
001 - 800

Time-of-Day Table Number
01 - 45

Dialled Digit String (maximum of 26 digits)

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	aa	ab	ac	ad	ae	af	ag	ah	ai	aj	ak	al	am	an	ao	ap	aq	ar	as	at	au	av	aw	ax	ay	az	ba	bb	bc	bd	be	bf	bg	bh	bi	bj	bk	bl	bm	bn	bo	bp	bq	br	bs	bt	bu	bv	bw	bx	by	bz	ca	cb	cc	cd	ce	cf	cg	ch	ci	cj	ck	cl	cm	cn	co	cp	cq	cr	cs	ct	cu	cv	cw	cx	cy	cz	da	db	dc	dd	de	df	dg	dh	di	dj	dk	dl	dm	dn	do	dp	dq	dr	ds	dt	du	dv	dw	dx	dy	dz	ea	eb	ec	ed	ee	ef	eg	eh	ei	ej	ek	el	em	en	eo	ep	eq	er	es	et	eu	ev	ew	ex	ey	ez	fa	fb	fc	fd	fe	ff	fg	fh	fi	fj	fk	fl	fm	fn	fo	fp	fq	fr	fs	ft	fu	fv	fw	fx	fy	fz	ga	gb	gc	gd	ge	gf	gg	gh	gi	gj	gk	gl	gm	gn	go	gp	gq	gr	gs	gt	gu	gv	gw	gx	gy	gz	ha	hb	hc	hd	he	hf	hg	hh	hi	hj	hk	hl	hm	hn	ho	hp	hq	hr	hs	ht	hu	hv	hw	hx	hy	hz	ia	ib	ic	id	ie	if	ig	ih	ii	ij	ik	il	im	in	io	ip	iq	ir	is	it	iu	iv	iw	ix	iy	iz	ja	jb	jc	jd	je	jf	jj	jh	ji	jj	jk	jl	jm	jn	jo	jp	jq	jr	js	jt	ju	jv	jw	jx	ky	kz	la	lb	lc	ld	le	lf	lg	lh	li	lj	lk	ll	lm	ln	lo	lp	lq	lr	ls	lt	lu	lv	lw	lx	ly	lz	ma	mb	mc	md	me	mf	mg	mh	mi	mj	mk	ml	mm	mn	mo	mp	mq	mr	ms	mt	mu	mv	mw	mx	my	mz	na	nb	nc	nd	ne	nf	ng	nh	ni	nj	nk	nl	nm	nn	no	np	nq	nr	ns	nt	nu	nv	nw	nx	ny	nz	oa	ob	oc	od	oe	of	og	oh	oi	oj	ok	ol	om	on	oo	op	oq	or	os	ot	ou	ov	ow	ox	oy	oz	pa	pb	pc	pd	pe	pf	pg	ph	pi	pj	pk	pl	pm	pn	po	pp	pq	pr	ps	pt	pu	pv	pw	px	py	pz	qa	qb	qc	qd	qe	qf	qg	qh	qi	qj	qk	ql	qm	qn	qo	qp	qq	qr	qs	qt	qu	qv	qw	qx	qy	qz	ra	rb	rc	rd	re	rf	rg	rh	ri	rj	rk	rl	rm	rn	ro	rp	rq	rr	rs	rt	ru	rv	rw	rx	ry	rz	sa	sb	sc	sd	se	sf	sg	sh	si	sj	sk	sl	sm	sn	so	sp	sq	sr	ss	st	su	sv	sw	sx	sy	sz	ta	tb	tc	td	te	tf	tg	th	ti	tj	tk	tl	tm	tn	to	tp	tq	tr	ts	tt	tu	tv	tw	tx	ty	tz	ua	ub	uc	ud	ue	uf	ug	uh	ui	uj	uk	ul	um	un	uo	up	uq	ur	us	ut	uu	uv	uw	ux	uy	uz	va	vb	vc	vd	ve	vf	vg	vh	vi	vj	vk	vl	vm	vn	vo	vp	vq	vr	vs	vt	vu	vv	vw	vx	vy	vz	wa	wb	wc	wd	we	wf	wg	wh	wi	wj	wk	wl	wm	wn	wo	wp	wq	wr	ws	wt	wu	wv	ww	wx	wy	wz	xa	xb	xc	xd	xe	xf	xg	xh	xi	xj	xk	xl	xm	xn	xo	xp	xq	xr	xs	xt	xu	xv	xw	xa	xb	xc	xd	xe	xf	xg	xh	xi	xj	xk	xl	xm	xn	xo	xp	xq	xr	xs	xt	xu	xv	xw	ya	yb	yc	yd	ye	yf	yg	yh	yi	yj	yk	yl	ym	yn	yo	yp	yq	yr	ys	yt	yu	yv	yw	ya	yb	yc	yd	ye	yf	yg	yh	yi	yj	yk	yl	ym	yn	yo	yp	yq	yr	ys	yt	yu	yv	yw	za	zb	zc	zd	ze	zf	zg	zh	zi	zj	zk	zl	zm	zn	zo	zp	zq	zr	zs	zt	zu	zv	zw	za	zb	zc	zd	ze	zf	zg	zh	zi	zj	zk	zl	zm	zn	zo	zp	zq	zr	zs	zt	zu	zv	zw	za	zb	zc	zd	ze	zf	zg	zh	zi	zj	zk	zl	zm	zn	zo	zp	zq	zr	zs	zt	zu	zv	zw	za	zb	zc	zd	ze	zf	zg	zh	zi	zj	zk	zl	zm	zn	zo	zp	zq	zr	zs	zt	zu	zv	zw
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COMMAND 7__ (701 - 745): ARS TIME-OF-DAY TABLE PROGRAMMING

Period Number

Start Hour 00 - 23

Start Minute 00 - 59

Route List 001 - 200, 000 = not programmed

RCS 1 Route List

RCS 2 Route List

RCS 3 Route List

a	b	c	d	e	f	g	h	i	j	k	l	m	n
1	0	0	0	0	0	0	0	0	0	0	0	0	1
2													
3	1	0	0	0	0	0	0	1	0	0	1	0	
4													
5													
6													

710

Default

-	-	-	-	0	0	0	0	0	0	0	0	0	0
---	---	---	---	---	---	---	---	---	---	---	---	---	---

720

0	0	0	0	0	8	1	0	8	2	0	0	0	0
---	---	---	---	---	---	---	---	---	---	---	---	---	---

009 | 1 | 911 | 03

702

1	0	0	0	0	0	0	2	1	0	0	0	0	2
2	0	0	0	1	0	0	2	1	0	0	0	0	2

703

1	0	0	0	0	0	0	3	0	0	3	0	0	3
---	---	---	---	---	---	---	---	---	---	---	---	---	---

701

0	0	0	0	1	0	1	0	1	0	1	0	1	0
0	0	0	0	1	0	1	0	2	0	0	3		

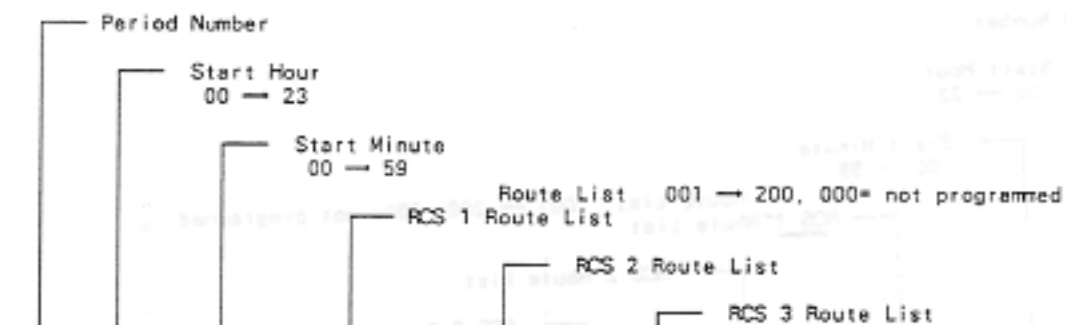
711

0	0	0	0	0	0	9	1	0	9	1	0	9	1
---	---	---	---	---	---	---	---	---	---	---	---	---	---

700

0	0	0	0	0	3	1	0	3	2	0	0	0	0
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COMMAND 7__ (701 - 745): ARS TIME-OF-DAY TABLE PROGRAMMING



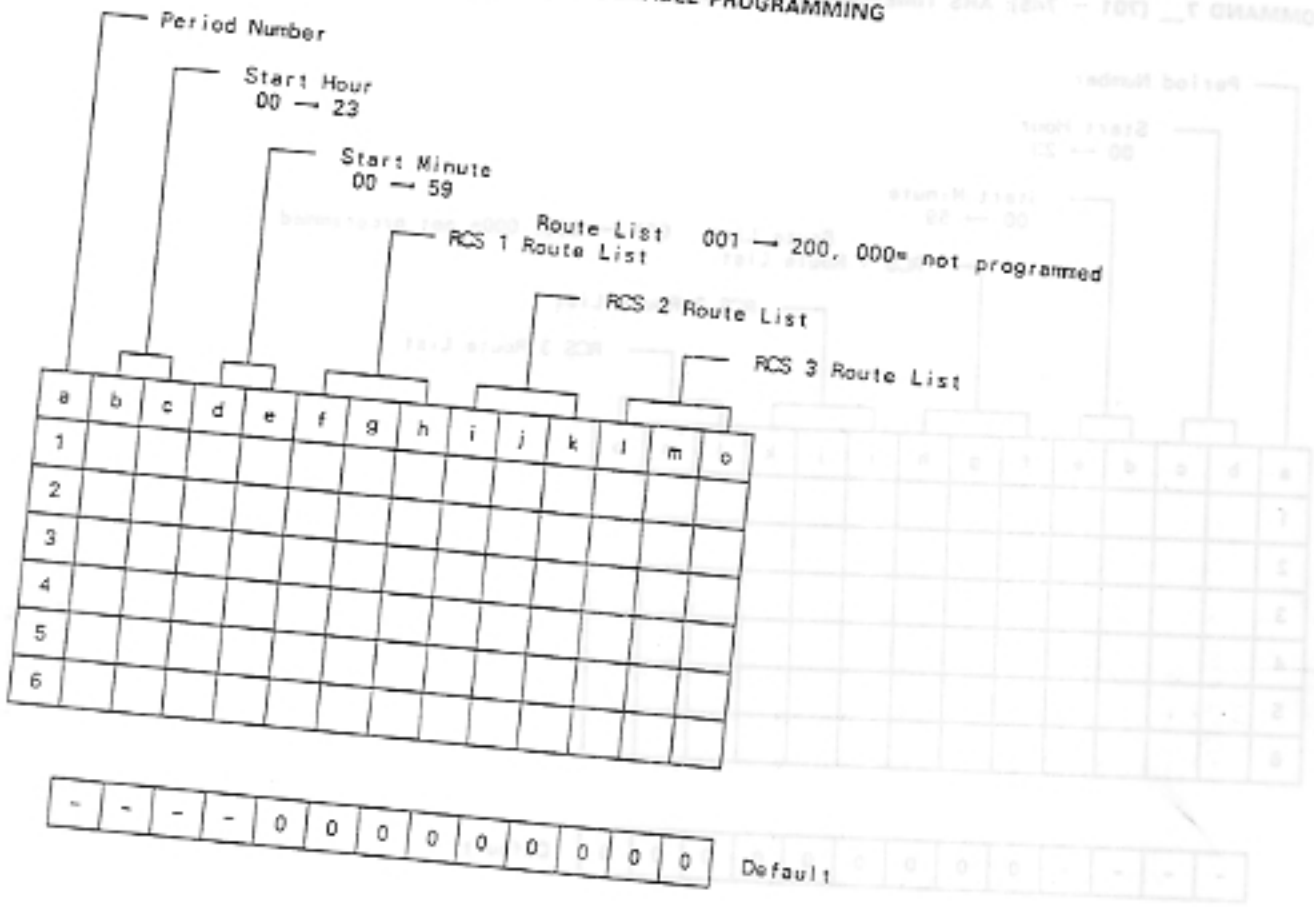
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
1														
2														
3														
4														
5														
6														

- - - - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Default

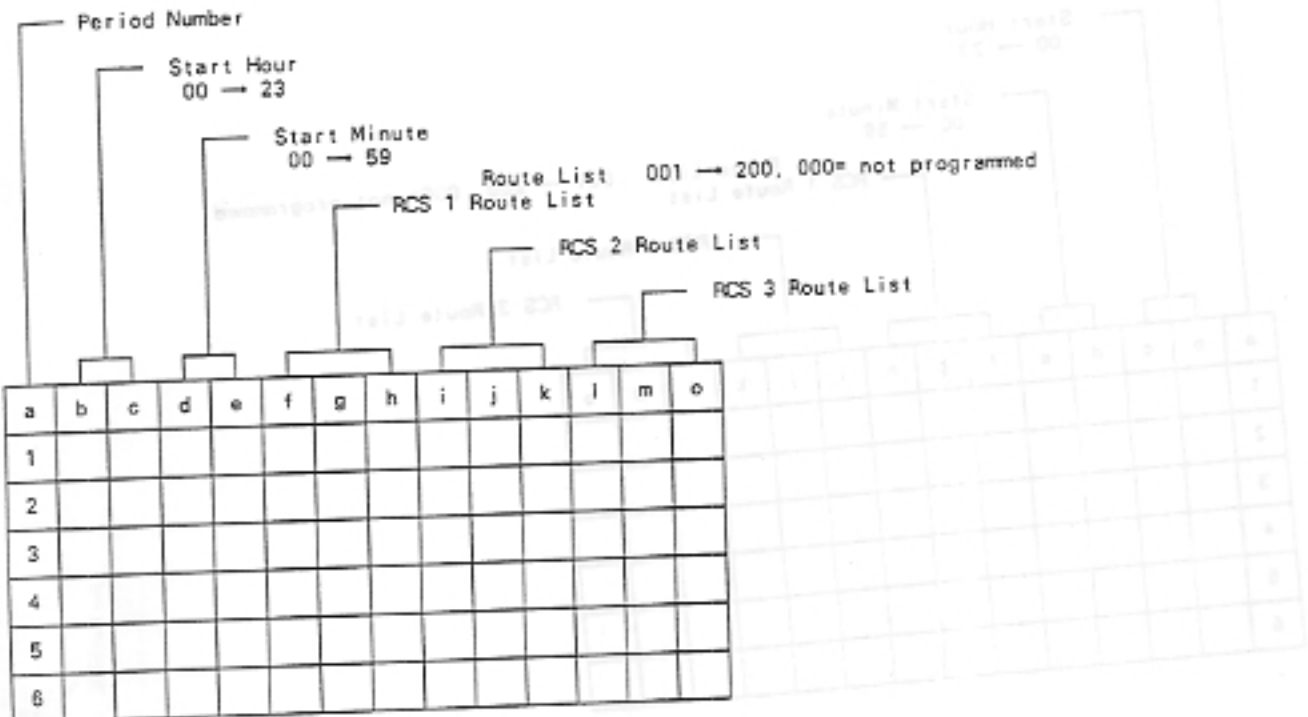
Handwritten notes and diagrams on a grid background. Includes a large '1998' at the top right, a '7' below the table, and several boxes containing numbers and symbols. One box contains '5000015 00010000' and another contains '5000015 00100005'. There are also some scribbles and other numbers like '119 10' and '500'.

SECTION MITL9104-091-210-NA

COMMAND 7__ (701 - 745): ARS TIME-OF-DAY TABLE PROGRAMMING



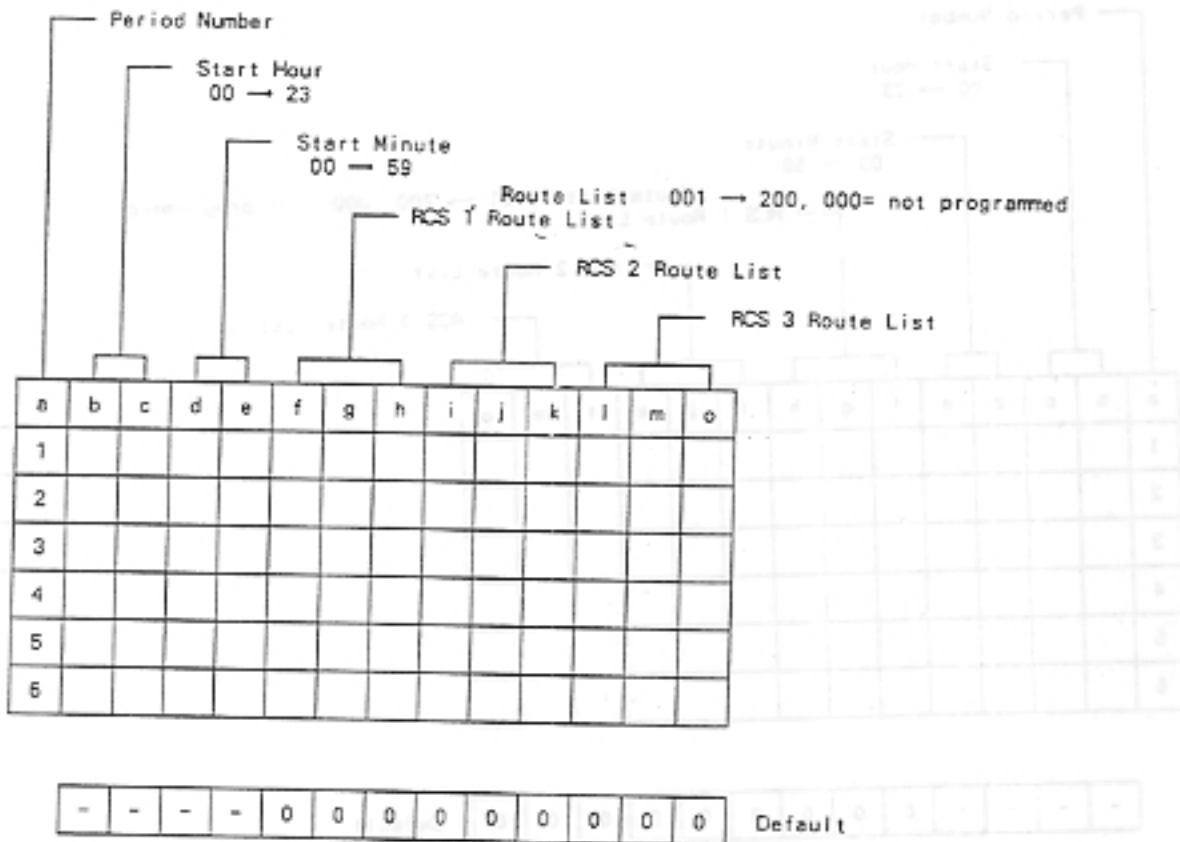
COMMAND 7__ (701 - 745): ARS TIME-OF-DAY TABLE PROGRAMMING



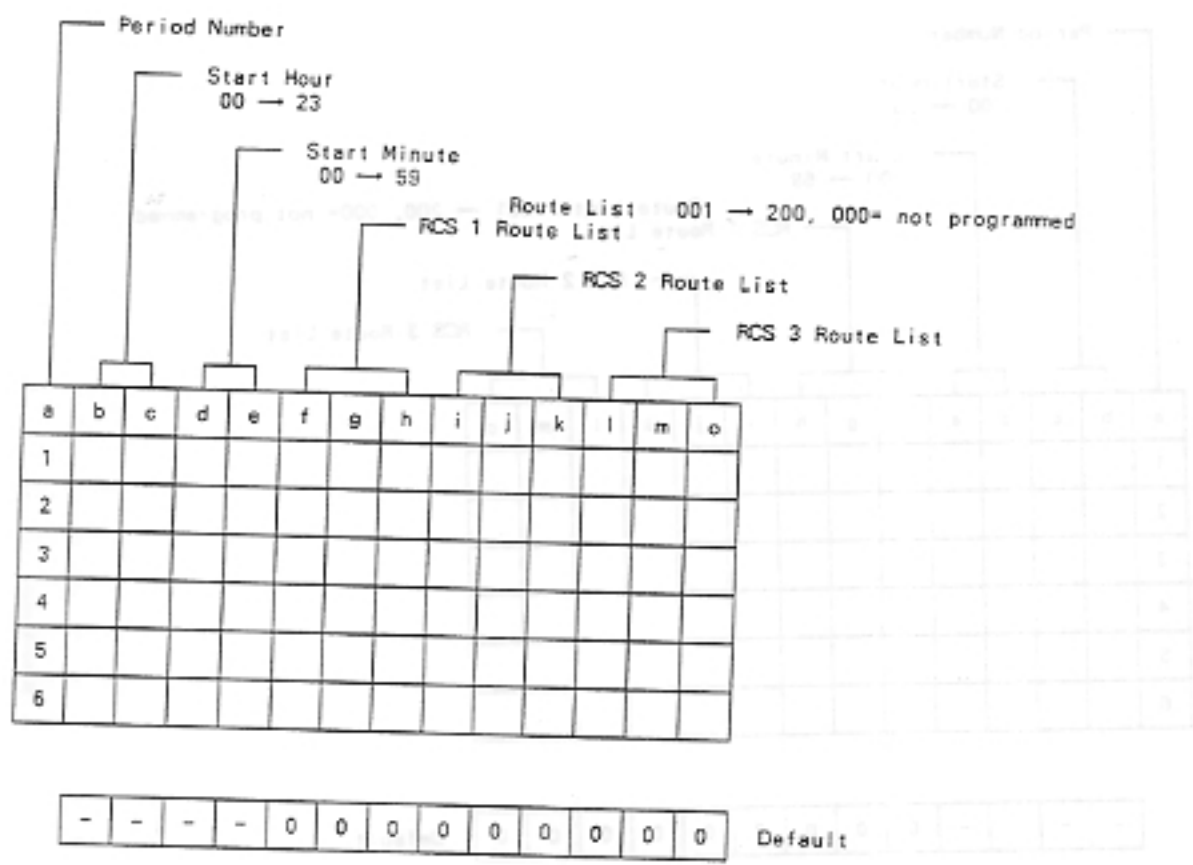
- - - - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 Default

SECTION MITL9104-091-210-NA

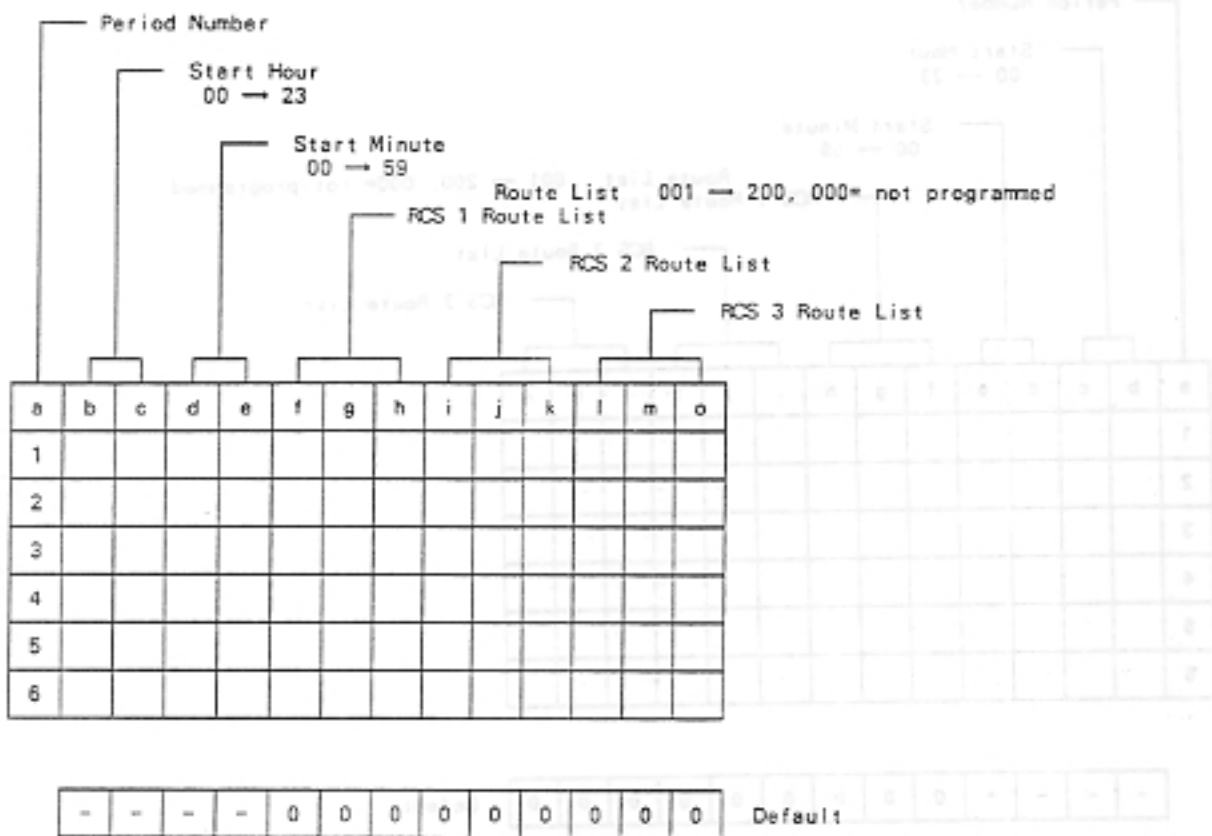
COMMAND 7__ (701 - 745): ARS TIME-OF-DAY TABLE PROGRAMMING



COMMAND 7__ (701 - 745): ARS TIME-OF-DAY TABLE PROGRAMMING



COMMAND 7__ (701 - 745): ARS TIME-OF-DAY TABLE PROGRAMMING



COMMAND 7__ (701 - 745): ARS TIME-OF-DAY TABLE PROGRAMMING

Period Number

Start Hour 00 → 23

Start Minute 00 → 59

Route List 001 → 200, 000= not programmed

RCS 1 Route List

RCS 2 Route List

RCS 3 Route List

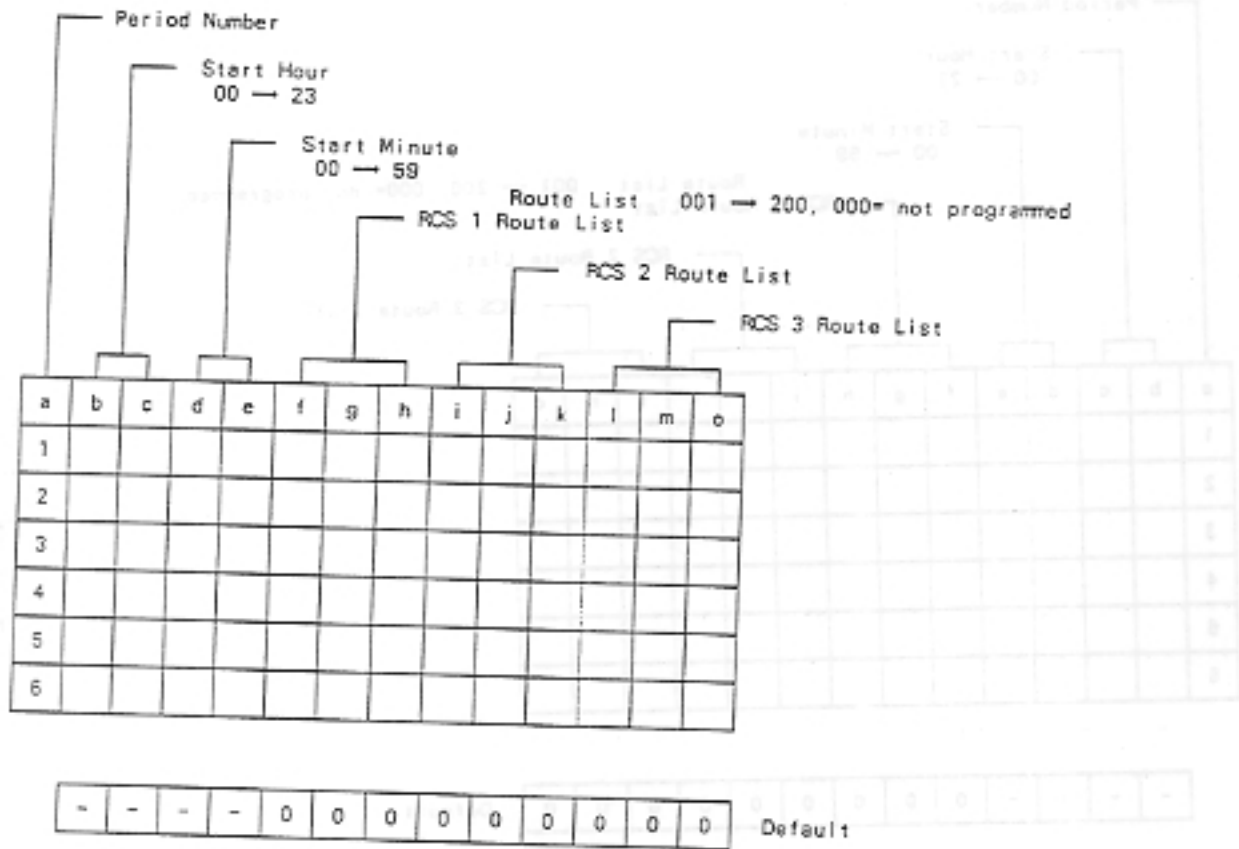
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z
1																									
2																									
3																									
4																									
5																									
6																									

-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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Default

SECTION MITL9104-091-210-NA

COMMAND 7__ (701 - 745): ARS TIME-OF-DAY TABLE PROGRAMMING



COMMAND 7__ (701 - 745): ARS TIME-OF-DAY TABLE PROGRAMMING

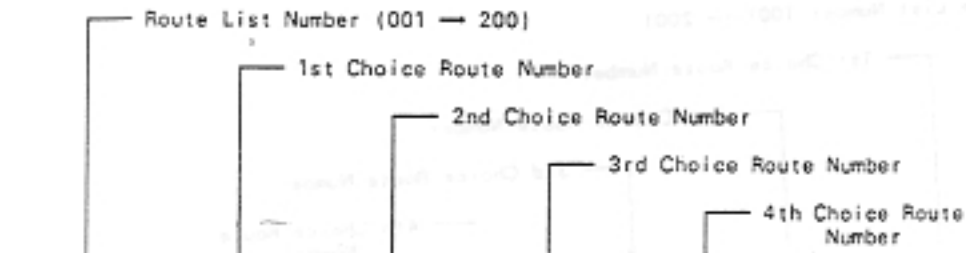
Period Number
 Start Hour 00 → 23
 Start Minute 00 → 59
 Route List 001 → 200, 000= not programmed
 RCS 1 Route List
 RCS 2 Route List
 RCS 3 Route List

	a	b	c	d	e	f	g	h	i	j	k	l	m	n
1														
2														
3														
4														
5														
6														

-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	Default
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---------

SECTION MITL9104-091-210-NA

COMMAND 750 ARS ROUTE LIST TABLE PROGRAMMING



a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
0	0	2	0	0	2	0	0	2	0	0	2	0	0	2
0	0	3	0	0	3	0	0	3	0	0	3	0	0	3
0	3	1	0	3	1	0	0	0	0	0	0	0	0	0
0	7	2	0	3	2	0	0	0	0	0	0	0	0	0
0	8	1	0	8	1	0	0	0	0	0	0	0	0	0
0	8	2	0	8	2	0	8	2	0	8	2	0	8	2
0	9	1	0	7	1	0	7	1	0	7	1	0	7	1
1	0	0	1	0	0	1	0	0	1	0	0	1	0	0
1	0	1	0	9	1	0	9	1	0	9	1	0	9	1
1	0	2	0	9	2	0	9	2	0	9	2	0	9	2

COMMAND 752 ARS DIGIT MODIFICATION TABLE PROGRAMMING

Digit Modification Number 001 — 100

Number of Digits to be Deleted 00 — 26

Digits to Insert (maximum of 26 digits)
0—0; #: #; P; W
where P = Pause for 5 seconds;
W = Wait for dial tone

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DU	DV	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GZ	HA	HB	HC	HD	HE	HF	HG	HH	HI	HJ	HK	HL	HM	HN	HO	HP	HQ	HR	HS	HT	HU	HV	HW	HX	HY	HZ	IA	IB	IC	ID	IE	IF	IG	IH	II	IJ	IK	IL	IM	IN	IO	IP	IQ	IR	IS	IT	IU	IV	IW	IX	IY	IZ	JA	JB	JC	JD	JE	JF	JG	JH	JI	JJ	JK	JL	JM	JN	JO	JP	JQ	JR	JS	JT	JU	JV	JW	JX	JY	JZ	KA	KB	KC	KD	KE	KF	KG	KH	KI	KJ	KK	KL	KM	KN	KO	KP	KQ	KR	KS	KT	KU	KV	KW	KX	KY	KZ	LA	LB	LC	LD	LE	LF	LG	LH	LI	LJ	LK	LL	LM	LN	LO	LP	LQ	LR	LS	LT	LU	LV	LW	LX	LY	LZ	MA	MB	MC	MD	ME	MF	MG	MH	MI	MJ	MK	ML	MM	MN	MO	MP	MQ	MR	MS	MT	MU	MV	MW	MX	MY	MZ	NA	NB	NC	ND	NE	NF	NG	NH	NI	NJ	NK	NL	NM	NN	NO	NP	NQ	NR	NS	NT	NU	NV	NW	NX	NY	NZ	OA	OB	OC	OD	OE	OF	OG	OH	OI	OJ	OK	OL	OM	ON	OO	OP	OQ	OR	OS	OT	OU	OV	OW	OX	OY	OZ	PA	PB	PC	PD	PE	PF	PG	PH	PI	PJ	PK	PL	PM	PN	PO	PP	PQ	PR	PS	PT	PU	PV	PW	PX	PY	PZ	QA	QB	QC	QD	QE	QF	QG	QH	QI	QJ	QK	QL	QM	QN	QO	QP	QQ	QR	QS	QT	QU	QV	QW	QX	QY	QZ	RA	RB	RC	RD	RE	RF	RG	RH	RI	RJ	RK	RL	RM	RN	RO	RP	RQ	RR	RS	RT	RU	RV	RW	RX	RY	RZ	SA	SB	SC	SD	SE	SF	SG	SH	SI	SJ	SK	SL	SM	SN	SO	SP	SQ	SR	SS	ST	SU	SV	SW	SX	SY	SZ	TA	TB	TC	TD	TE	TF	TG	TH	TI	TJ	TK	TL	TM	TN	TO	TP	TQ	TR	TS	TT	TU	TV	TW	TX	TY	TZ	UA	UB	UC	UD	UE	UF	UG	UH	UI	UJ	UK	UL	UM	UN	UO	UP	UQ	UR	US	UT	UU	UV	UW	UX	UY	UZ	VA	VB	VC	VD	VE	VF	VG	VH	VI	VJ	VK	VL	VM	VN	VO	VP	VQ	VR	VS	VT	VU	VV	VW	VX	VY	VZ	WA	WB	WC	WD	WE	WF	WG	WH	WI	WJ	WK	WL	WM	WN	WO	WP	WQ	WR	WS	WT	WU	WV	WW	WX	WY	WZ	XA	XB	XC	XD	XE	XF	XG	XH	XI	XJ	XK	XL	XM	XN	XO	XP	XQ	XR	XS	XT	XU	XV	XW	XX	XY	XZ	YA	YB	YC	YD	YE	YF	YG	YH	YI	YJ	YK	YL	YM	YN	YO	YP	YQ	YR	YS	YT	YU	YV	YW	YX	YY	YZ	ZA	ZB	ZC	ZD	ZE	ZF	ZG	ZH	ZI	ZJ	ZK	ZL	ZM	ZN	ZO	ZP	ZQ	ZR	ZS	ZT	ZU	ZV	ZW	ZX	ZY	ZZ	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	BW	BX	BY	BZ	CA	CB	CC	CD	CE	CF	CG	CH	CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR	CS	CT	CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	DG	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	DS	DT	DU	DV	DW	DX	DY	DZ	EA	EB	EC	ED	EE	EF	EG	EH	EI	EJ	EK	EL	EM	EN	EO	EP	EQ	ER	ES	ET	EU	EV	EW	EX	EY	EZ	FA	FB	FC	FD	FE	FF	FG	FH	FI	FJ	FK	FL	FM	FN	FO	FP	FQ	FR	FS	FT	FU	FV	FW	FX	FY	FZ	GA	GB	GC	GD	GE	GF	GG	GH	GI	GJ	GK	GL	GM	GN	GO	GP	GQ	GR	GS	GT	GU	GV	GW	GX	GY	GZ	HA	HB	HC	HD	HE	HF	HG	HH	HI	HJ	HK	HL	HM	HN	HO	HP	HQ	HR	HS	HT	HU	HV	HW	HX	HY	HZ	IA	IB	IC	ID	IE	IF	IG	IH	II	IJ	IK	IL	IM	IN	IO	IP	IQ	IR	IS	IT	IU	IV	IW	IX	IY	IZ	JA	JB	JC	JD	JE	JF	JG	JH	JI	JJ	JK	JL	JM	JN	JO	JP	JQ	JR	JS	JT	JU	JV	JW	JX	JY	JZ	KA	KB	KC	KD	KE	KF	KG	KH	KI	KJ	KK	KL	KM	KN	KO	KP	KQ	KR	KS	KT	KU	KV	KW	KX	KY	KZ	LA	LB	LC	LD	LE	LF	LG	LH	LI	LJ	LK	LL	LM	LN	LO	LP	LQ	LR	LS	LT	LU	LV	LW	LX	LY	LZ	MA	MB	MC	MD	ME	MF	MG	MH	MI	MJ	MK	ML	MM	MN	MO	MP	MQ	MR	MS	MT	MU	MV	MW	MX	MY	MZ	NA	NB	NC	ND	NE	NF	NG	NH	NI	NJ	NK	NL	NM	NN	NO	NP	NQ	NR	NS	NT	NU	NV	NW	NX	NY	NZ	OA	OB	OC	OD	OE	OF	OG	OH	OI	OJ	OK	OL	OM	ON	OO	OP	OQ	OR	OS	OT	OU	OV	OW	OX	OY	OZ	PA	PB	PC	PD	PE	PF	PG	PH	PI	PJ	PK	PL	PM	PN	PO	PP	PQ	PR	PS	PT	PU	PV	PW	PX	PY	PZ	QA	QB	QC	QD	QE	QF	QG	QH	QI	QJ	QK	QL	QM	QN	QO	QP	QQ	QR	QS	QT	QU	QV	QW	QX	QY	QZ	RA	RB	RC	RD	RE	RF	RG	RH	RI	RJ	RK	RL	RM	RN	RO	RP	RQ	RR	RS	RT	RU	RV	RW	RX	RY	RZ	SA	SB	SC	SD	SE	SF	SG	SH	SI	SJ	SK	SL	SM	SN	SO	SP	SQ	SR	SS	ST	SU	SV	SW	SX	SY	SZ	TA	TB	TC	TD	TE	TF	TG	TH	TI	TJ	TK	TL	TM	TN	TO	TP	TQ	TR	TS	TT	TU	TV	TW	TX	TY	TZ	UA	UB	UC	UD	UE	UF	UG	UH	UI	UJ	UK	UL	UM	UN	UO	UP	UQ	UR	US	UT	UU	UV	UW	UX	UY	UZ	VA	VB	VC	VD	VE	VF	VG	VH	VI	VJ	VK	VL	VM	VN	VO	VP	VQ	VR	VS	VT	VU	VV	VW	VX	VY	VZ	WA	WB	WC	WD	WE	WF	WG	WH	WI	WJ	WK	WL	WM	WN	WO	WP	WQ	WR	WS	WT	WU	WV	WW	WX	WY	WZ	XA	XB	XC	XD	XE	XF	XG	XH	XI	XJ	XK	XL	XM	XN	XO	XP	XQ	XR	XS	XT	XU	XV	XW	XX	XY	XZ	YA	YB	YC	YD	YE	YF	YG	YH	YI	YJ	YK	YL	YM	YN	YO	YP	YQ	YR	YS	YT	YU	YV	YW	YX	YY	YZ	ZA	ZB	ZC	ZD	ZE	ZF	ZG	ZH	ZI	ZJ	ZK	ZL	ZM	ZN	ZO	ZP	ZQ	ZR	ZS	ZT	ZU	ZV	ZW	ZX	ZY	ZZ
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4. PROGRAMMING ERRORS

General

4.01 The SX-50™ system can detect certain errors made during CDE. The detection of a programming error results in a display similar to that shown in Figure 4-1, Alarm Message Format. The meaning of each code is listed in Table 4-1, Summary of Error Codes.

Exit From Error Mode

4.02 After the error code has been checked and the correct data determined, the programmer can exit the Error Mode by:

- Pressing the QUIT softkey on the Attendant Console,
OR
- pressing the CANCEL softkey from the Test Line (SUPERSET 4™ Set)
OR
- dialing *# from the Test Line (DTMF set),
OR
- flashing the switchhook twice on the Test Line (Rotary Dial set).

The system restores the original data and data entry begins at the start of the register.

TABLE 4-1
PROGRAMMING ERROR CODES

Error Code	Description
E01	Illegal Command Identity
E02	Digit keyed while Access Mode Error displayed
E03	Directory Number already exists
E04	Data out of range
E05	Illegal Directory Number length
E06	Directory Number range insufficient
E07	Too many digits keyed
E08	Illegal Device range
E09	Write protected command
E10	Insufficient software package level
E11	Write protected data
E12	Data field incomplete
E13	RESERVED
E14	RESERVED
E15	Programmed a loop into a Hunt Group; i.e., programmed Hunt Group 1 to Hunt Group 6 and then back again to Hunt Group 1
E16	Duplicate assignment of Programmable Function Key
E17	Attempt to program non-idle key
E18	SUPERSET [®] Set Prime Line Programming Error
E20	Invalid double-digit command
E21	Directory number already in Ring Group
E22	Device must be an extension
E23	ARS Busy - Calls in progress
E24	Digit String already programmed
E25	Digit String register overflow
E26	No Digit String entered

TABLE 4-1 (CONT'D)
PROGRAMMING ERROR CODES

Error Code	Description
E27	Digit area is full
E28	The selected time period is less than or equal to the previous time period. The time periods must be entered in ascending order.
E29	The selected time period is greater than or equal to the subsequent time period. The time periods must be entered in ascending order.
E30	RESERVED
E31	Attempting to program a DTS, DLS or Private Line in SUPERSET [®] Set Programming when the trunk does not have a Trunk Group assignment. Refer to Commands 151 -156, Trunk Group Programming.
E32	SUPERSET 4 [™] Set key type conflict
E33	Attempt to display System Security Code
E34	Attempt to display User Security Code
E35	Attempt to display DISA Access Code
E36	RESERVED
E37	Specified card type not found in slot position
E38	Attempt to overflow current Trunk Group
E39	Invalid Trunk Number keyed
E40	RESERVED
E41	RESERVED
E42	RESERVED
E43	Invalid base Directory Number
E44	Invalid Directory Number

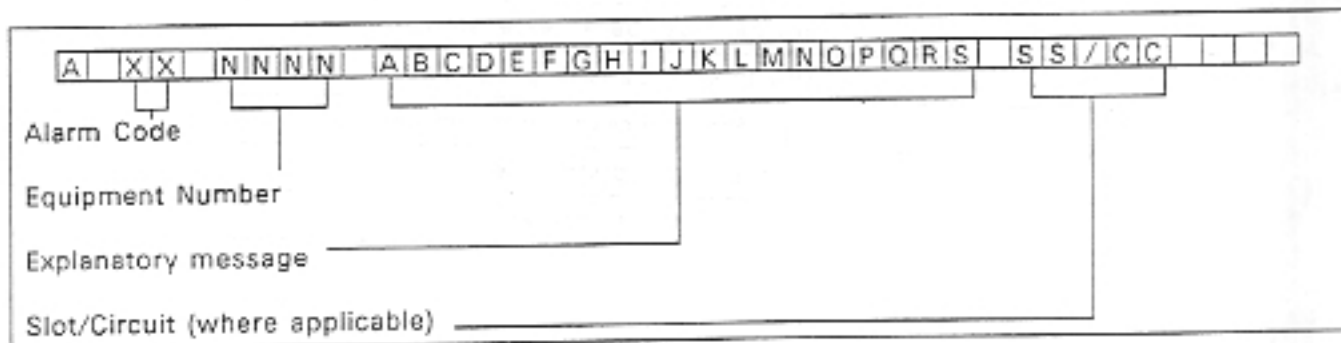


Figure 4-1 Alarm Message Format

5. FEATURE INDEX

General

5.01 Table 5-1, Feature Index lists the programmable features of the SX-50™ system with their corresponding Command Number, Register Number(s) and Bit Number(s) for quick reference.

TABLE 5-1
FEATURE INDEX

Feature Name	Command Number(s)	Register Number(s)	Bit Number(s)
Abbreviated Dial	110 121 - 129	07 05	c,d,e,f b - g
Account Codes (Note that SMDR options must be enabled; refer to SMDR in this table.)	100 110 121 - 129	15 28 07	c,d c,d,e,f c
Attendant Access	110	01	c,d,e,f
Attendant and Maintenance Functions	110	13,14	c,d,e,f
Attendant Overflow to TAFAS	100 110 121 - 129 185	08 09 03 01 - 07	c,d,e,f c,d,e,f g B,C
Automatic Callback Busy	100 121 - 129	03 03	g b
Automatic Diagnostics	100	01	c
Automatic Route Selection and Toll Control	100 301 - 310 341 - 350 501 - 580 700 701 - 745 750 751 752	13 01 - 16 01 001 - 800 01 - 06 001 - 200 001 - 100 001 - 100	c,d,e,f,g,h e g h d,e,g - i b - n d - o d,e,f,g d,e,g - i
Automatic Wake-Up (If a printer is required, refer to PRINTER in this table.)	100 185	10 01 - 07	c,d b,c
Background Music	100	09	g
Behind DPABX Operation	151 - 156	01 02 04	f,g,h,i d c

R13 110 10000

TABLE 5-1 (CONT'D)
FEATURE INDEX

Feature Name	Command Number(s)	Register Number(s)	Bit Number(s)
Block Programming	321 -330 341 -350		c -h a -g
Calibrated Flash	100	06	c
Call Block	121 -129 185	03 01 -07	f b,c
Call Direction	121 -129	02	c
Call Forwarding - Busy	110 121 -129	11 04	c,d,e,f c
Call Forwarding - Busy/Don't Answer	100 110 121 -129	11 12 04	d c,d,e,f e
Call Forwarding - Don't Answer	100 110 121 -129	11 10 04	d c,d,e,f d
Call Forwarding - Follow Me	110 121 -129	08 04	c,d,e,f b
Call Hold (Attendant)	100 110	11 16,17,18	f c,d,e,f
Call Hold (Station)	100 110 121 -129	11 03,04,05 03	e c,d,e,f e
Call Selection	501 -580	04 05	d b
Camp-On	100	06 11	e c
Conflict Dialing	100	09	e
Consoleless Operation	100 110 121 -129 501 -580	06 08 09 03 04 05	e c,d,f -i c,d,e,f g d,e,f,g b,c,d,e
Data Line Security	121 -129	03	d

TABLE 5-1 (CONT'D)
FEATURE INDEX

Feature Name	Command Number(s)	Register Number(s)	Bit Number(s)
Dictation Trunk	151 - 156	02	f
	501 - 580	04	b
Direct-In Lines	100	06	e
	501 - 580	04	d - g
Direct Outward Dialing	121 - 129	01	b - g
	151 - 156	01	f - i
	301 - 310	01 - 16	c
DISA Trunks	121 - 129	02	e
	501 - 580	01	e, f, h
	193	01	b, c, d
Discriminating Ringing	100	03	f
Distinctive Callback Ringing	100	03	g
E&M Trunks	151 - 156 501 - 580	01	f - i
		01	b, d
		02	c
		03	b - f
		04	d
Executive Busy Override (Console)	100	02	c
	185	01 - 07	b, c
External Call Forwarding	100	09	c
	121 - 129	04	b - f
		05	b - g
	501 - 580	02	c
Flash Disable	121 - 129	02	b
Flash for Attendant	121 - 129	02	b
Flash is Release	100	06	c
Flexible Night Service	100	08	e
	501 - 580	05	b - e
Flexible Numbering Plan	110	01 - 28	c, d, e, f
	151 - 156	01	f - i
	301 - 310	01 - 16	f - i

TABLE 5-1 (CONT'D)
FEATURE INDEX

Feature Name	Command Number(s)	Register Number(s)	Bit Number(s)
Housephone (Manual Line)	100	12	c
	121 -129	02	d
Hunt Groups (Stations)	110	19 -24	c,d,e,f
	361 -366	01	b,c
		02 -09	b -e
Hunt Groups (Trunks)	151 -156	01	c
Identified Trunk Group	151 -156	01	e -i
		02	b,c,f
	501 -580	02	c
Incoming Call Identification	501 -580	04	d
		05	b
Last Number Redial	100	09	d
	121 -129	05	h
Make/Break Ratio	501 -580	02	b
		10	e
Message Register Audit (A printer is required; refer to PRINTER in this table.)	100	02	f
		03	b -h
Message Waiting	100	12	c -f
	121 -129	02	g
Message Waiting Indication During Day Service Only	100	12	d
Music on Hold	100	09	f
Paging Access	110	02	c,d,e,f
	121 -129	03	c
	501 -580	02	c
Pickup Groups	110	06	c,d,e,f
	301 -310	01 -16	d
Printer	100	16	c -h

TABLE 5-1 (CONT'D)
FEATURE INDEX

Feature Name	Command Number(s)	Register Number(s)	Bi. Number(s)
Remote Maintenance Administration and Test System (RMATS)	110 192 501 -580	26 01 02 04 05	c,d,e,f b -f b -f d,e,f,g b,c,d,e
Restrictive Station Control	121 -129	02	f
Reversal Meaning	501 -580	02	e
Ring Group	110 381 501 -580	25 01 -09 04 05	c,d,e,f b -e e,f,g b,c,d,e
Selectable Ringing Cadence Cycle Time	100	03	e
Station Calls to Attendant Night Answer Point	100	08	g,h,i
Station Feature Reset	110	15	c,d,e,f
Station Message Detail Recording (SMDR)	100	14	c -i
Station Switchhook-Flash Timing	100	06	c
SUPERSET 3 TM Sets	100 301 -310 401 -480	07 01 -16 01 -15	c,d,e c -i c -i
SUPERSET 4 TM Sets	100 301 -310 401 -480	07 01 -16 01 -15	c,d,e c -i c -i
System Security Code Programming	190	01	b -e
TAFAS Overflow	100 121 -129 185	08 03 01 -07	c -e g b,c

TABLE 5-1 (CONT'D)
FEATURE INDEX

Feature Name	Command Number(s)	Register Number(s)	Bit Number(s)
Test Line	100	01 08	e,f,g f
Tone-to-Pulse Conversion	151 - 156	02	f
Transfer/Add-on/Consultation Hold	100 121 - 129	06 11 02	e c,d b
Transfer Dial Tone	100	03	d
Trunk Alarm Control	501 - 580	01	c
Trunk Answer From Any Station (TAFAS)	100 110 121 - 129 185	08 09 03 01 - 07	c - f c,d,e,f g b,c
Trunk Group Overflow	121 - 129 151 - 156	01 01	h d
Trunk Groups	121 - 129 151 - 156 501 - 580	01 01 02 03 04 01	b - g b - i b - j b - h b - c b
Trunk-to-Trunk Plus Station Conferencing	100 501 - 580	05 01 02	f d c
Unlimited Wait For Dial Tone	151 - 156	02	b
User Security Code Programming	191	01	b - e
Wait For Dial Tone	151 - 156	02	b

SX-50™

DIGITAL PRIVATE AUTOMATIC BRANCH EXCHANGE (DPABX)
SYSTEM TEST PROCEDURES

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NOTICE

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1. GENERAL

1.01 After installation of the SX-50™ system, the tests outlined in this Section should be performed to verify feature operation. Refer to Section MITL9104-091-200-NA for system installation procedures. Refer to Section MITL9104-091-210-NA for customer data entry procedures.

Reason for Issue

1.02 This is the second issue of Section MITL9104-091-320-NA, System Test Procedures. It has been issued to incorporate minor corrections. Changes from Issue 1 are indicated by change bars at the right hand side of the page.

2. TEST PROCEDURES

- 2.01 Satisfactory completion of the tests in this Section confirms that the system has been installed and programmed correctly.
- 2.02 If any test procedure cannot be completed as described, verify that:
- the procedure is applicable to the station
 - any apparatus required to provide the feature (e.g., night bells) is correctly installed
 - there are no options set in Customer Data Entry (e.g., Data Line Security) that conflict with the feature being tested.
- 2.03 The tests are divided into four sections:
- Console Test Procedures, Charts 3-1 to 3-22
 - Station Test Procedures, Charts 4-1 to 4-25
 - SUPERSET 4™ Set Test Procedures, Charts 5-1 to 5-9
 - SUPERSET 3™ Set Test Procedures, Charts 6-1 to 6-5.
- 2.04 Throughout this practice the default database is assumed. Changes to this database for any particular test are detailed in preparation actions at the top of the chart.

3. CONSOLE TEST PROCEDURES

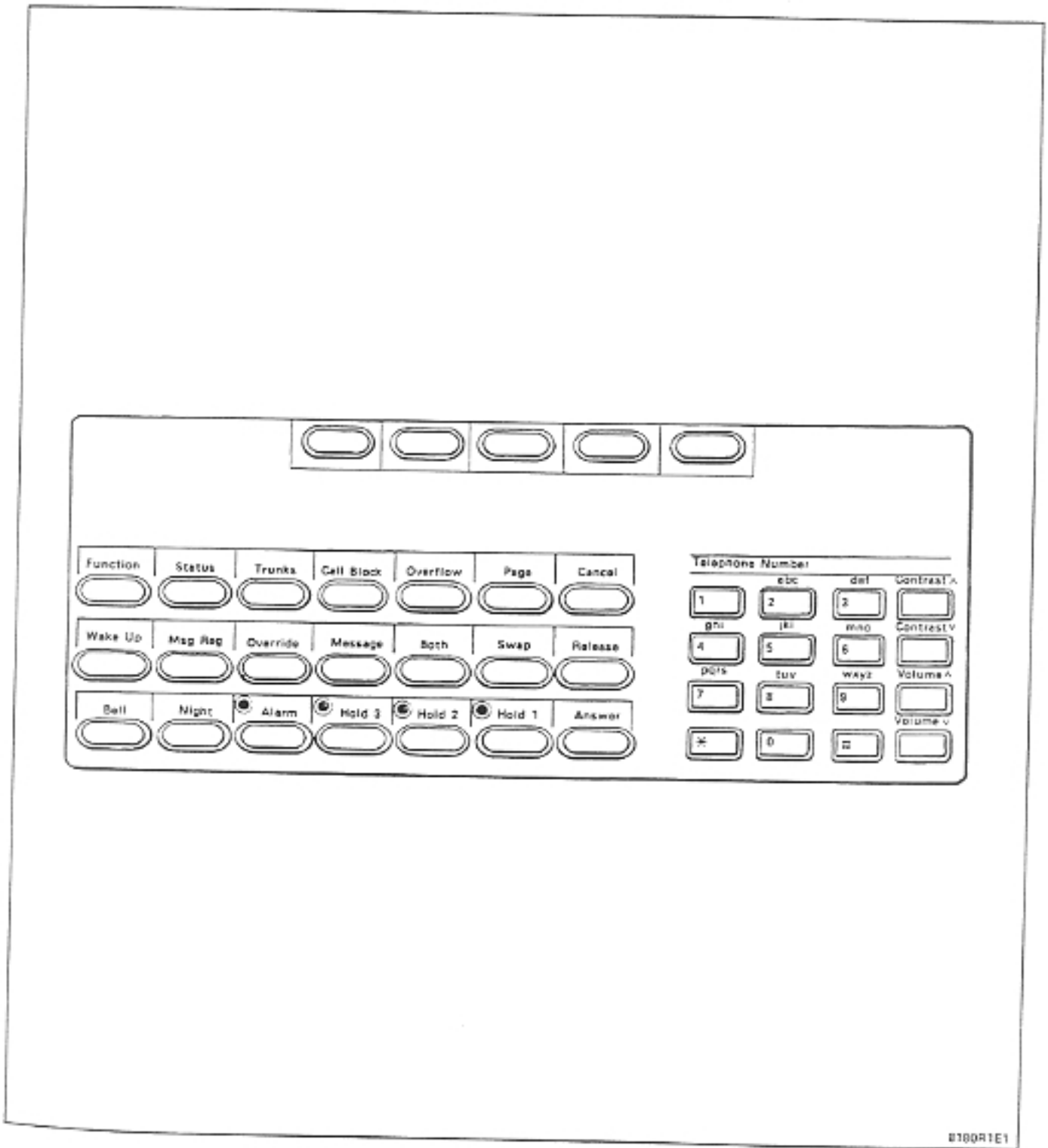


Figure 3-1 Attendant Console Keyboard Layout

0100R1E1

**CHART 3-1
ABBREVIATED DIAL SETUP**

Step	Action	Verification
Make an entry in the Abbreviated Dial table:		
1	Press FUNCTION.	Display: FUNCTION ?
2	Dial 65.	Display: CHANGE ABBREVIATED DIAL ENTRY
3	Dial Entry Number. (e.g., 10)	Display: 10- (example)
4	Dial telephone number to be entered, including Trunk Group Access Code. (e.g., 95922122)	Display: 10-95922122 (example)
5	Press RELEASE.	Display returns to time/date.
View an entry in the Abbreviated Dial table:		
6	Press FUNCTION.	Display: FUNCTION ?
7	Dial 60.	Display: VIEW ABBREVIATED DIAL ENTRY ?
8	Dial Entry Number. (e.g., 10)	Display: 10-95922122 (example)
9	Press RELEASE.	Display returns to time/date.

**CHART 3-2
ATTENDANT ACCESS**

Step	Action	Verification
1	Make a dial 0 call from a station.	DIAL0 LDN key and BELL flash on display. Console bell sounds, if not muted.
2	Press DIAL 0 or ANSWER key.	DIAL0 and BELL disappear; bell stops. Attendant is connected to calling party. Display: EXT-10; TALK (example).
3	Press RELEASE key.	

CHART 3-3
ATTENDANT CALL HOLD

Step	Action	Verification
Place a call on Hold:		
1	Dial 0 at any station or make an incoming trunk call to the Attendant.	The number of calls waiting is shown at the right of the display: CW1 (example). DIAL0 LDN key and BELL flash on display. Console bell rings, if not muted.
2	Press flashing LDN or Dial0 key or ANSWER.	Display: EXT-108 TALK (example)
3	Hold down HOLD1, HOLD2, or HOLD3.	LED beside Hold key lights. Display shows Pickup Code 451, 452 or 453.
4	Release HOLD key.	Display returns to time/date.
Retrieve call from Hold before recall:		
4	Press appropriate Hold key (LED lit).	Hold LED goes out. Display: EXT-108 TALK (example) Attendant connected to held call.
5	Press RELEASE.	
Retrieve call from Hold after recall:		
6	Repeat steps 1 through 3. Wait 30 seconds.	Hold LED and BELL flash. Console bell rings, if not muted.
7	Press Hold key or ANSWER.	Display: EXT-108 TALK (example) Attendant connected to held call.
8	Press RELEASE.	

**CHART 3-4
ATTENDANT CAMP-ON**

Step	Action	Verification
Camp-on without recall:		
1	Establish an incoming trunk call to the Attendant.	Press the key under the flashing LDN label (e.g. LDN1).
2	Press flashing LDN key.	Display: TRK-09 TALK (example) Attendant is connected to calling party.
3	Dial a busy station.	Busy tone is returned. Display: EXT-108 BUSY TRK-09 HELD (example).
4	Press RELEASE.	Busy station hears two beeps to indicate camp-on.
5	Go on-hook at busy station.	Station rings.
6	Answer call.	Incoming call is connected to station.
Camp-on with recall:		
7	Follow steps 1-5 above.	As above.
8	Allow station to ring.	After 15 seconds (length programmable) the attendant console also rings and RECALL appears in the lower right of the display.
9	Press ANSWER.	Attendant is connected to incoming call.
10	Press RELEASE.	

**CHART 3-5
ATTENDANT DIRECT TRUNK ACCESS**

Step	Action	Verification
1	Press FUNCTION or *.	FUNCTION ?
2	Dial 19.	Display: DIRECT ACCESS TO TRUNK ?
3	Dial trunk number (e.g., 01).	Display: TRK-01 TALK

CHART 3-6³
ATTENDANT INCOMING CALL IDENTIFICATION

Step	Action	Verification
Station call:		
1	Dial 0 at any station.	DIAL0 LDN key and BELL flash. Console bell sounds if not muted. DIAL0 and BELL disappear; bell stops. Attendant is connected to calling party. Display: EXT-108 TALK (example).
2	Press DIAL0 or ANSWER.	
3	Press RELEASE.	
Trunk call:		
4	Make an incoming trunk call to the Attendant.	LDN1 key (example) and BELL flash. Console bell sounds if not muted. Bell stops. LDN1 and BELL disappear. Attendant is connected to calling party. Display: TRK-09 TALK (example).
5	Press LDN or ANSWER key.	
6	Hold down ANSWER key.	Bell stops. BELL disappears. Attendant is connected to calling party LDN1 stops flashing. Remains on. Display: TRK-09 (example). LDN1 disappears.
7	Release ANSWER key.	
8	Press RELEASE.	

CHART 3-7
AUTOMATIC SWITCHING TO TAFAS AFTER TIME-OUT

Step	Action	Verification
Preparation:		
Place system in Day Service.		
1	Establish a trunk call to the console.	Console rings.
2	Wait 30 seconds (default TAFAS time-out).	The call is transferred to the TAFAS equipment.
3	Dial 57 (default TAFAS access code) at a station.	Incoming trunk call connected to station.

**CHART 3-8
AUTOMATIC WAKE-UP**

Step	Action	Verification
Set up Automatic Wake-up Time:		
1	Press FUNCTION.	Display: FUNCTION ?
2	Dial 71.	Display: CHANGE WAKE-UP TIME FOR EXT-?
3	Dial station number (e.g., 100).	Display: 100----- Last four dashes flash.
4	Enter time hhmm (e.g., 0730).	Display returns to normal.
Cancel Automatic Wake-up Time:		
5	Repeat steps 1 through 3.	
6	Dial 9999.	
Display Automatic Wake-up Time:		
7	Press FUNCTION.	
8	Dial 72.	Display: VIEW WAKE-UP TIME FOR EXT-?
9	Dial station number.	Display: 100-0730 (example)

**CHART 3-9
BACKGROUND MUSIC**

Step	Action	Verification
Preparation:		
Enable Background Music: CMD 100 Reg. 9 bit g = 1 (Note: Music/Pager Module must be installed and programmed.)		
Turn Background Music on:		
1	Press FUNCTION.	Display: FUNCTION ?
2	Dial 17.	
Turn Background Music off:		
3	Press FUNCTION.	Display: FUNCTION ?
4	Dial 18.	Display: MUSIC OFF then returns to normal. Background Music is off.

CHART 3-10
CALL BLOCK

Step	Action	Verification
Enable Call Block:		
1	Perform steps 2 and 3 or step 4. End of test.	CALL BLOCK shows briefly at left, then at top centre of normal time/date display. Stations with Call Block in their COS receive reorder tone when they attempt to call each other.
2	Press FUNCTION.	Display: FUNCTION ?
3	Dial 23.	
4	Press the CALL BLOCK key.	
Cancel Call Block:		
5	Perform steps 6 and 7 or step 8. End of test.	CALL BLOCK disappears from the display. All stations may call each other.
6	Press FUNCTION.	Display: FUNCTION ?
7	Dial 24.	
8	Press the CALL BLOCK key.	

CHART 3-11
CONSOLE BELL MUTE

Step	Action	Verification
Preparation: If display indicates MUTE in top right corner, bell is already muted. If so, press BELL once before performing the test.		
Mute Console Bell:		
1	Press BELL.	MUTE appears in top right of display.
2	Dial 0 from a station.	BELL and DIAL0 flash on display, but bell does not ring.
Enable Console Bell:		
3	Press BELL.	MUTE disappears from display.
4	Dial 0 from a station.	BELL and DIAL0 flash on display. Bell rings.

CHART 3-12
CONSOLE BUSY OVERRIDE

Step	Action	Verification
Preparation:		
Enable Console Busy Override in System Options Programming: CMD 100 Reg. 2 bit c = 1		
1	Establish a call between station A and station B.	
2	From the console, call station A.	Console receives busy tone. Display: EXT-110 BUSY (example)
3	Press and hold OVERRIDE.	Display: EXT-110 OVRD (example) Console is connected to conversation. All parties hear short tone every 2 seconds.
4	Release OVERRIDE.	Display EXT-110 BUSY (example) Console hears busy tone.
5	Press RELEASE.	
6	Go on-hook at A and B.	

CHART 3-13
FLEXIBLE NIGHT SERVICE

Step	Action	Verification
Preparation:		
1. Determine the Equipment Number of the Night Answer point station. Use the charts in Appendix A. 2. Enable Flexible Night Service for the trunks under test: CMD 501- 580 Trunk 01 - 80 Programming, Reg. 5 bit b = 0 bits c,d,e = Night Answer point Equipment Number		
View Night Service Assignments:		
1	Press and hold NIGHT key. Press * to view trunk night answer assignments sequentially.	Display: (example) TRK-01 NIGHT ANSWER POINT EXT-100
OR		
2	Press FUNCTION.	Display: FUNCTION ?
3	Dial 21.	Display: NIGHT ANSWER POINT FOR TRUNK ?
4	Dial trunk number.	Display: (example) TRK-01 NIGHT ANSWER POINT EXT-100
Change Night Service Assignments:		
5	Repeat step 1 or steps 2 through 4.	Display: (example) TRK-01 NIGHT ANSWER POINT EXT-110 (Display returns to time/date if steps 2 through 4 were followed). During Night Service incoming trunk calls are directed to the station.
6	Dial new station number. (e.g., 110)	
7	Repeat step 1 or steps 2 through 4.	Display: (example) TRK-01 NIGHT ANSWER POINT BELLS-57 (Display returns to time/date if steps 2 through 4 were followed). During Night Service incoming calls are directed to TAFAS. Night Bells ring.
8	Dial 57 (default TAFAS Access Code).	
9	Release NIGHT key, if held. OR Press RELEASE.	

CHART 3-14
LAMP TEST

Step	Action	Verification
1	Press FUNCTION.	Display: FUNCTION ?
2	Dial 16.	Display: LAMP TEST Hold1, Hold2, Hold3 and ALARM LEDs light.
3	Press CANCEL.	LEDs go out. Display returns to time/date.

CHART 3-15
MESSAGE REGISTRATION/RESTRICTIVE STATION CONTROL

Step	Action	Verification
Preparation:		
1. Enable Message Registration in the test station's COS: CMD 121- 129 COS 1 - COS 9 Programming. Reg. 2 bit f = 3		
2. Enable Message Registration in Trunk Group programming: CMD 151- 156 Trunk Group 1- 6, Trunk Group Programming Reg. 3 bit b = 1		
View Message Registration:		
1	Press FUNCTION.	Display: FUNCTION ?
2	Dial 22.	Display: VIEW MESSAGE REGISTRATION FOR EXT- ?
3	Dial station number.	Display: 108-0000 (example) Display shows number of message units used.
OR		
4	Press and hold the MSG REG key.	Display: EXT-NUMBER ?
5	Dial station number. Continue to hold MSG REG.	Display: EXT-108 0000 UNITS (example) Display shows number of message units used.
If 9999 or 9998 is shown, restrictive station control is enabled. 9998 indicates this is because the station has used all its message units.		
6	Release the MSG REG key, if held.	
OR		
7	Press RELEASE.	

CHART 3-15 (CONT'D)
MESSAGE REGISTRATION/RESTRICTIVE STATION CONTROL

Step	Action	Verification
Reset Message Registration/Disable Restrictive Station Control:		
8	Repeat steps 1 through 3 or 4 and 5.	Message unit count set to 0000. Restrictive station control disabled.
9	Dial 0.	
10	Release the MSG REG key, if used.	
Enable Restrictive Station Control:		
11	Repeat steps 1 through 3 or 4 and 5.	Message unit count set to 9999. Restrictive station control enabled. Station cannot make trunk calls.
12	Dial 9.	
13	Release the MSG REG key, if used.	

CHART 3-16
MESSAGE WAITING

Step	Action	Verification
To set Message Waiting:		
1	From console, dial station.	Display: EXT-108 RING (example) Display: EXT-108 MSG-ON (example)
2	Press and hold MESSAGE.	
3	Release MESSAGE.	
4	Press RELEASE.	
OR		
5	Press and hold MESSAGE.	Display: EXT-NUMBER ? Display: EXT-108 MSG-OFF (example) Display: EXT-108 MSG-ON (example) Station gives three short rings every 15 minutes, and 10 seconds after going on-/off-hook.
6	Dial station number. Continue to hold MESSAGE.	
7	Dial 1 to set Message waiting ON.	
8	Release MESSAGE.	

CHART 3-16 (CONT'D)
MESSAGE WAITING

Step	Action	Verification
To cancel Message Waiting:		
9	Call Attendant from station.	
10	At console, answer call.	Display: EXT-108 MSG
11	Press and hold MESSAGE.	Display: EXT-108 MSG-OFF TOTAL MSG
12	Release MESSAGE. Press RELEASE.	
	OR	
13	Press and hold MESSAGE.	Display: EXT-NUMBER ?
14	Dial station number. Continue to hold MESSAGE.	Display: EXT-108 MSG-ON (example)
15	Dial 0 to set Message Waiting OFF. Release MESSAGE.	
Display stations with Message Waiting:		
16	Press and hold MESSAGE.	Display: (example) EXT-NUMBER ? 108 109 110 112 TOTAL MSG 004

CHART 3-17
PAGING

Step	Action	Verification
1	Press and hold PAGE key OR Dial 50 (default Paging Access Code).	Attendant is connected to paging equipment.
2	Make announcement.	
3	Release PAGE key.	

CHART 3-18
SET TIME AND DATE

Step	Action	Verification
Set Time:		
1	Press FUNCTION.	Display: FUNCTION ?
2	Dial 15.	Display: 24-HOUR CLOCK HHMM ?
3	Dial time. (e.g., 1403)	Display: 14:03 1-JAN
Set Date:		
4	Press FUNCTION.	Display: FUNCTION ?
5	Dial 80.	Display: (example) CHANGE DATE FROM 01-01-85 TO DD-MM-YY
6	Dial date. (e.g., 010787)	Display: 08:10 1-JUL (example)

CHART 3-19
STATION CALLS TO ATTENDANT NIGHT ANSWER POINT

Step	Action	Verification
Preparation:		
1. Determine the Equipment Number of the Night Answer point station. Use the charts in Appendix A.		
2. Enable Station Calls to Attendant during Night Service: CMD 100 Reg. 8 bit f = 2 bits g,h,i = Night Answer point equipment no.		
1	Put system in night service.	NIGHT appears on right of display. (If it does not, press NIGHT again).
2	At a station other than the Night Answer point, dial 0.	Night Answer point rings.

CHART 3-22
FORCED TRUNK RELEASE

Step	Action	Verification
1	Press FUNCTION.	Display: FUNCTION ?
2	Dial 20.	Display: FORCED RELEASE FOR TRUNK ?
3	Dial Trunk number.	Trunk is released. (Callers on trunk are disconnected. Use discretion).

**CHART 3-20
TRUNK ALARM CONTROL**

Step	Action	Verification
1	Unplug the connectors from all the trunk cards in a Trunk Group.	
2	Dial the Trunk Group Access Code.	
3	Wait for trunk time-out (minimum 30 seconds).	Trunk Alarm is raised. Bell rings. Alarm LED flashes.
4	Dial 32.	Alarm is cleared.
Disable Trunk Alarms in Trunk Programming: CMD 501- 580 Trunk 01- 80 Programming, Reg. 1 bit c = 0		
5	Repeat steps 1 through 3.	No alarm is raised.
6	Reconnect cables to trunk cards.	

**CHART 3-21
TRUNK BUSY-OUT/UNBUSY**

Step	Action	Verification
Busy out a Trunk:		
1	Press FUNCTION.	Display: FUNCTION ?
2	Dial 41.	Display: TRUNK TO BUSY OUT ?
3	Dial Trunk number.	EQP-BSY appears beside time display. Trunk status LED on Trunk Card lights.
4	Press STATUS key twice to verify trunk status. (Hold key down).	Display: (example) BUSY-OUTS 00 00 00 00 01 TOTAL 01
Unbusy a Trunk:		
1	Press FUNCTION.	Display: FUNCTION ?
2	Dial 51.	Display: TRUNK TO FREE ?
3	Dial Trunk number.	Display returns to normal. Trunk status LED on Trunk Card goes dark. Trunk is free and may be accessed normally.

4. STATION TEST PROCEDURES

CHART 4-1
ABBREVIATED DIAL SETUP

Step	Action	Verification
Preparation: 1. Make an entry in the Abbreviated Dial table; see chart 3-1.		
1	Dial 55 (default Abbreviated Dial Access Code).	System dials call. Ringback, busy or reorder returned, as appropriate.
2	Dial Entry Number (e.g., 10)	

CHART 4-2
AUTOMATIC CALLBACK - BUSY

Step	Action	Verification
Preparation: 1. Enable Distinctive Callback Ringing: CMD 100 Reg. 3 bit g = 1 2. Enable Automatic Callback - Busy in the test station's COS: CMD 121- 129 COS 1 - COS 9 Programming, Reg. 3 bit b = 1		
Set up Automatic Callback - Busy:		
1	Establish a call between station A and station B.	Busy tone is heard. Dial tone is returned. Station may be used normally. Station C rings with special cadence.
2	Dial station A from station C.	
3	Dial 5 within 10 seconds of start of busy tone.	
4	Go on-hook at station C.	
5	Go on-hook at station A. Go on-hook at station B.	
Answer an Automatic Callback - Busy:		
6	Go off-hook at station C.	Station C hears ringback tone. Station A rings. (Normal cadence). Station A is connected to station C.
7	Go off-hook at station A.	
8	Go on-hook at station A. Go on-hook at station C.	

CHART 4-2 (CONT'D)
AUTOMATIC CALLBACK - BUSY

Step	Action	Verification
<p>Callback - Busy to a trunk: Preparation: Busy out trunks in the trunk group to be used in the test. Disable ARS. (CMD 100 Register 13, bit c=0).</p>		
Set up Automatic Callback - Busy:		
9	Dial the Trunk Group Access Code at station A.	Busy tone is returned.
10	Dial 6 within 10 seconds of start of busy tone.	Dial tone is returned. Station may be used normally.
11	Go on-hook.	
12	Unbusy a trunk in the Trunk Group.	Station A rings with special cadence.
Answer an Automatic Callback - Busy:		
13	Go off-hook at station A.	Station A hears CO dial tone.
14	Unbusy remaining trunks.	

**CHART 4-3
CALL BLOCK**

Step	Action	Verification
Preparation:		
Enable Call Block in the test stations' COS: CMD 121- 129 COS 1 - COS 9 Programming. Reg. 3 bit f = 1		
With Call Block activated:		
1	From a station with Call Block enabled in its COS dial another station with the same COS.	Calling station receives reorder tone.
2	Go on-hook at station.	
3	From the same station, dial a Trunk Group Access Code.	CO dial tone returned.
4	Go on-hook.	
With Call Block not activated:		
5	From a station with Call Block enabled in its COS dial another station with the same COS.	Called station rings. Calling station receives ringback tone.
6	Repeat Steps 2 through 4.	

CHART 4-4
CALL FORWARDING - BUSY

Step	Action	Verification
Set up Call Forwarding - Busy:		
1	Go off-hook at station A.	Station A receives dial tone.
2	Dial 59. (Default Call Forwarding - Busy Access Code).	A short burst of dial tone.
3	Dial forwarding number. (Station B)	Dial tone returned. Station available for normal use.
4	Remain off-hook.	
5	From station C, make a call to station A.	Station B rings.
6	Answer call at Station B.	Station C is connected to Station B.
Cancel Call Forwarding - Busy:		
7	Go off-hook at station A.	Station A receives dial tone.
8	Dial 59. (Default Call Forwarding - Busy Access Code).	A short burst of dial tone.
9	Go on-hook at station A.	
10	Go off-hook at station A.	
11	From another station, make a call to station A.	Calling station hears busy tone.

CHART 4-5
CALL FORWARDING - DON'T ANSWER

Step	Action	Verification
Set up Call Forwarding - Don't Answer:		
1	Go off-hook at station A.	Station A receives dial tone.
2	Dial 58. (Default Call Forwarding - Don't Answer Access Code).	A short burst of dial tone.
3	Dial forwarding number. (Station B)	Dial tone returned.
4	Go on-hook.	Station available for normal use.
5	From station C, make a call to station A. Don't answer.	Station A rings until time-out, then Station B rings.
Cancel Call Forwarding - Don't Answer:		
6	Go off-hook at station A.	Station A receives dial tone.
7	Dial 58. (Default Call Forwarding - Don't Answer Access Code).	A short burst of dial tone.
8	Go on-hook at station A.	
9	From another station, make a call to station A.	Station A rings, and does not stop after time-out period.

CHART 4-6
CALL FORWARDING - FOLLOW ME

Step	Action	Verification
Set up Call Forwarding - Follow Me:		
1	Go off-hook at station A.	Station A receives dial tone.
2	Dial Call Forwarding - Follow Me Access Code.	A short burst of dial tone.
3	Dial forwarding number. (Station B)	Interrupted dial tone returned.
4	Go on-hook.	Station available for call origination.
5	From station C, make a call to station A.	Station B rings.
Cancel Call Forwarding - Follow Me:		
6	Go off-hook at station A.	Station A receives dial tone.
7	Dial 56 (default Call Forwarding - Follow Me Access Code).	A short burst of dial tone.
8	Go on-hook at station A.	
9	From another station, make a call to station A.	Station A rings.

CHART 4-7
CALL HOLD

Step	Action	Verification
Place a trunk call on hold:		
1	Establish an incoming trunk call to station A.	Station A is connected to Trunk.
2	Flash switchhook at A.	Station A receives Transfer Dial Tone.
3	Dial 51 (default Call Hold Code).	Station A receives dial tone and is available for normal use.
4	Go on-hook at station A.	Trunk receives Music On Hold, if provided.
Retrieve a held call (from the station that placed it on hold):		
5	Go off-hook at station A.	Dial tone is heard.
6	Dial 52 (default Call Hold Retrieve - Local code).	Station is connected to held call.
Retrieve a held call (from another station):		
7	Go off-hook at station B.	Dial tone is heard.
8	Dial 53 (default Call Hold Retrieve - Remote code).	A short burst of dial tone.
9	Dial number of station that placed call on hold.	Station is connected to held call.
10	Go on-hook at station and trunk.	

CHART 4-8
CALL HOLD PICKUP

Step	Action	Verification
1	Park a call at the console under Hold 1.	
2	At a station, dial 451 (Default Call Park Access Code).	Station connected to parked call.
3	Go on-hook.	
4	Park a call at the console under Hold 2.	
5	At a station, dial 452 (Default Call Park Access Code).	Station connected to parked call.
6	Go on-hook.	
7	Park a call at the console under Hold 3.	
8	At a station, dial 453 (Default Call Park Access Code).	Station connected to parked call.
9	Go on-hook.	

CHART 4-9
CONSULTATION HOLD/ADD-ON/TRANSFER

Step	Action	Verification
1	Establish a call between station A and station B.	Station A receives interrupted dial tone. Station B is on Consultation Hold, but does not receive Music on Hold.
2	Flash switchhook at station A.	
3	Establish a call between station A and station C.	
Add-on:		
4	Perform steps 1 to 3.	All three stations are connected.
5	Flash switchhook at station A.	
Transfer:		
6	Perform steps 1 and 2.	Station C rings. Station B hears ringback tone. When station C answers, station B is connected to station C. It is also possible to go on-hook at station A after station C has answered, in order to announce the call.
7	Dial station C from station A.	
8	Go on-hook at station A.	

CHART 4-10
DIAL CALL PICKUP

Step	Action	Verification
1	Dial station B from station A.	Station A rings.
2	Go off-hook at station C and dial 54 (default Call Pickup Code).	Station A stops ringing. Station C is connected to station A.

**CHART 4-11
DIRECT-IN LINES**

Step	Action	Verification
Preparation:		
1. Determine Equipment Number of Direct-In Line answer station. Use the charts in Appendix A.		
2. Program a trunk as a Direct-In Line: CMD 501- 580, Trunk 01- 80 Programming, Reg. 4 digit d = 0 digits e,f,g = equipment no		
1	Put system in Day Service. (Press NIGHT).	NIGHT does not appear at right of display. (If it does, press NIGHT again).
2	Establish incoming trunk call to Direct-In Line trunk.	Direct-In Line answer point rings. Console does not ring.
3	Answer call.	Trunk call is connected to station.
4	Go on-hook at station and trunk.	

**CHART 4-12
DIRECT OUTWARD DIALING**

Step	Action	Verification
Preparation:		
1. Assign at least one trunk to each trunk group to be tested: CMD 501- 580 Trunk 01- 80 Programming, Reg. 1 bit b = Trunk Group number		
2. Default Trunk Group Access Codes are:		
	Group 1	9
	Group 2	8
	Group 3	78
	Group 4	79
If trunk groups 5 and 6 are to be tested, access codes must be defined. CMD 151- 156 Trunk Group 1- 6 Programming, Reg. 1 bits f,g,h,i = Access Code		
1	Go off-hook at station.	Station receives dial tone.
2	Dial Trunk Group Access Code.	Station receives CO dial tone. Station may dial out on trunk.
3	Go on-hook.	
4	If desired, repeat steps 1 through 3 for each trunk group.	

CHART 4-13
DISCRIMINATING RINGING

Step	Action	Verification
Disable Discriminating Ringing: CMD 100 Reg. 3 bit f = 0		
1	Make a call between stations.	Called station rings. Cadence: 1 second ON, 3 seconds OFF.
2	Terminate call.	
3	Call a station from the Console.	
4	Press RELEASE.	
Enable Discriminating Ringing: CMD 100 Reg. 3 bit f = 1		
5	Make a call between stations.	Called station rings. Cadence: 1 second ON, 3 seconds OFF.
6	Terminate call.	
7	Call a station from the Console.	
8	Press RELEASE.	

**CHART 4-14
EXECUTIVE BUSY OVERRIDE**

Step	Action	Verification
Preparation:		
1. Enable Executive Busy Override in the overriding test station's COS: CMD 121- 129 COS 1- COS 9 Programming, Reg. 4 bit g = 1		
1	Establish a call between station A and station B.	
2	From station C, call station A.	Station C receives busy tone.
3	Dial 5 (Executive Busy Override Access Code).	Station C is connected to conversation. All parties hear short tone every 2 seconds (Override tone).
4	Go on-hook at station C.	Override tone stops. Conversation continues between station A and station B.
5	Go on-hook at A and B.	

CHART 4-15
EXTERNAL CALL FORWARDING

Step	Action	Verification
Preparation:		
1. Enable Proceed To Be Call Forwarded Externally in the test station's COS. CMD 121- 129 COS 1- COS 9 Programming, Reg. 4 bit f = 1		
2. Assign a Abbreviated Dial number for the test. See Abbreviated Dial test procedure.		
Call Forward - Busy:		
1	Go off-hook at station.	Station hears dial tone.
2	Dial 59 (default Call Forward - Busy Access Code).	A short burst of dial tone.
3	Dial 55 (default Abbreviated Dial Access Code).	No tone.
4	Dial Abbreviated Dial entry number.	Station receives dial tone. Station available for normal use.
5	Go on-hook at station.	
6	Go off-hook at station.	
7	From another station, dial the forwarded station.	Station receives ringback tone. Forwarding destination rings.
Call Forward - Don't Answer:		
8	Go off-hook at station.	Station hears dial tone.
9	Dial 58 (default Call Forward - Don't Answer Access Code).	A short burst of dial tone.
10	Repeat steps 3, 4 and 5.	
11	From another station, dial the forwarded station. Don't answer.	Forwarded station rings until time-out. Then, forwarding destination rings.

CHART 4-15 (CONT'D)
EXTERNAL CALL FORWARDING

Step	Action	Verification
Call Forward - Follow Me:		
12	Go off-hook at station.	Station hears dial tone.
13	Dial 56 (default Call Forward - Follow Me Access Code).	A short burst of dial tone.
14	Repeat steps 3, 4 and 5.	
15	From another station, dial the forwarded station.	Forwarding destination rings.

CHART 4-16
FLASH FOR ATTENDANT

Step	Action	Verification
Preparation:		
1. Enable Flash for Attendant in test station's COS: CMD 121- 129 COS 1 - COS 9 Programming, Reg. 2 bit b = 2		
1	Establish a call between station A and station B.	
2	Flash switchhook at station A.	Station A hears ringback tone. Console rings.
3	Answer console.	Display: EXT-110 TALK EXT-111 HELD
4	Go on-hook at console.	Station A is reconnected to station B.

CHART 4-17
MANUAL LINE

Step	Action	Verification
Preparation:		
Enable Manual Line in the test station's COS: CMD 121- 129 COS 1- COS 9 Programming, Reg. 2 bit d = 1		
1	Go off-hook at test station.	Station hears ringback tone. Console rings.
Disable Manual Line: CMD 121- 129 COS 1- COS 9 Programming, Reg. 2 bit d = 0		

AM 000-100-101N17P
 CHART 4-18
 PAGING

Step	Action	Verification
1	Dial 50 (default Paging Access Code).	Warning tone is heard. Station is connected to paging equipment.
2	Make announcement.	
3	Go on-hook.	

CHART 4-19
 RING GROUP

Step	Action	Verification
Preparation:		
1. Enable Feature Access Codes: CMD 180 Reg. 1 bit d = 1		
2. Enable Ring Group Programming: CMD 180 Reg. 2 bit c = 1		
3. Assign sets to the Ring Group: CMD 381 Register number = member number bits b,c,d = station number		
All members of Ring Group idle:		
1	From a station not in the Ring Group, dial 497 (default Ring Group Access Code).	All stations in Ring Group ring.
All members of Ring Group busy:		
2	Repeat step 1.	First member of Ring Group (CMD 381 Reg. 1) hears Camp-on tone. Caller hears ringback tone. Caller will be connected to the first station in the Ring Group to become idle.

CHART 4-20
STATION CAMP-ON

Step	Action	Verification
Station-to-Station Camp-on:		
1	Establish a call between station A and station B.	
2	Call station A from station C.	Busy tone is returned.
3	Listen to busy tone for 10 seconds.	After 10 seconds, station C hears different busy tone and station A hears a camp-on tone.
4	Go on-hook at station A. Go on-hook at station B.	Station A rings. Station C hears ringback.
5	Answer station A.	Station C is connected to station A.
Trunk Camp-on to Station:		
6	Establish a call between station A and station B.	
7	At station C, answer an incoming trunk call (transferred from console or picked up by TAFAS).	
8	Flash switchhook.	Transfer dial tone is heard. Trunk call is put on consultation hold.
9	Dial station A. Go on-hook.	Station A hears camp-on tone. Trunk call remains on consultation hold.
10	Go on-hook at B.	
11	Go on-hook at A.	Station A rings. Trunk call hears ringback.

CHART 4-21
STATION HUNTING

Step	Action	Verification
Preparation: 1. Enable Feature Access Codes: CMD 180 Reg. 1 bit d = 1 2. Enable Station Hunting: CMD 180 Reg. 2 bit b = 1 3. Assign stations to the Hunt Group: CMD 361 Register number = member number + 1 bits b,c,d = station number		
Circular Hunting:		
1	From a station not in the Hunt Group, dial 491 (default Hunt Group 1 Access Code).	First station in Hunt Group rings.
2	Go on-hook.	
3	Repeat step 1.	Second station in Hunt Group rings.
4	Go on-hook.	
5	Repeat step 1.	Third station in Hunt Group rings.
6	Go on-hook.	
Terminal Hunting: set CMD 361 Reg. 1 bit b = 1		
7	From a station not in the Hunt Group, dial 491 (default Hunt Group 1 Access Code).	First station in Hunt Group rings.
8	Go on-hook.	
9	Repeat step 7.	First station in Hunt Group rings.
10	Go on-hook.	

CHART 4-22
STATION-TO-STATION CALL

Step	Action	Verification
1	Go off-hook at station A.	Station receives dial tone.
2	Dial station B.	Station A receives ringback tone. Station B rings.
3	Answer station B.	Station A is connected to station B.
4	Go on-hook at both stations.	

CHART 4-23
THROUGH DIALING

Step	Action	Verification
1	At station A, with trunk access restriction, call station B or Attendant, which has no such restriction.	Attendant Console rings.
2	Answer station B. Flash switchhook.	Station B hears interrupted dial tone. Station A receives silence.
3	Dial Trunk Group Access Code and go on-hook. (If at Attendant Console press RELEASE).	Station A hears CO dial tone.
4	At station A, dial trunk call.	
5	Go on-hook at station A.	

CHART 4-24
TRUNK ANSWER FROM ANY STATION (TAFAS)

Step	Action	Verification
1	Establish incoming call to TAFAS equipment.	
2	Go off-hook at station and dial 57 (default TAFAS Access Code).	Night bells ring. Station is connected to trunk call.

CHART 4-25
TRUNK-TO-TRUNK PLUS STATION CONFERENCING

Step	Action	Verification
1	At a station, establish a trunk call.	Station receives interrupted dial tone. Trunk call is put on Consultation Hold.
2	Flash switchhook.	
3	Dial a Trunk Group Access Code.	Station hears CO dial tone.
4	Dial external number.	Station hears ringback tone. External station rings.
5	External station answers.	Station is connected to second trunk call, First trunk call remains on Consultation Hold.
6	Flash switchhook.	The two trunk calls and the station are connected.

5. SUPERSET 4TM TEST PROCEDURESCHART 5-1
ANSWER AN INCOMING CALL

Step	Action	Verification
Standard Operation:		
1	From another station, call the SUPERSET 4 TM set.	Line Status Display flashes. Display: 300 (example) Set rings.
2	Answer.	Line Status Display shows a solid square. Display: 300 (example) TRANS/CONF and HANG-UP prompts appear.
3	Go on-hook.	Line Status Display blanks. Display returns to time/date.
Handsfree Operation:		
4	From another station, call the SUPERSET 4 TM set.	Line Status Display flashes. Display: 300 (example) Set rings.
5	Press SPEAKER ON/OFF or the appropriate Line Select key (beside flashing indicator).	Line Status Display shows a solid square. Display: 300 (example) TRANS/CONF and HANG-UP prompts appear.
6	Press SPEAKER ON/OFF key. OR	Call is terminated if handset is on rest. (If handset is off rest, set returns to standard operation).
7	Press HANG-UP key.	



CHART 5-2
CALLBACK BUSY

Step	Action	Verification
1	At station A, a SUPERSET 4™ set, establish a call to another station.	
2	From station B, another SUPERSET 4™ set, dial station A.	Special Busy tone is heard. CAMP-ON, CALLBACK, SEND MSG and HANG-UP prompts appear.
3	Press CALL BACK key.	Dial tone is returned. All prompts except HANG-UP disappear.
4	Go on-hook at station B.	
5	Go on-hook at station A.	Station B display: CALL BACK Line Status Display flashes for prime line. Station B rings.
6	Answer station B.	Station B hears ringback tone. Station A rings. Station B display: 300 RINGING (example) Station A display: 300 (example)
7	Answer station A.	Station A is connected to station B.
8	Go on-hook at both stations.	

CHART 5-3
CAMP-ON

Step	Action	Verification
1	At station A, a SUPERSET 4™ set, establish a call to another station.	
2	From station B, another SUPERSET 4™ set, dial station A.	Special Busy tone is heard. CAMP-ON, CALLBACK, SEND MSG and HANG-UP prompts appear.
3	Press CAMP-ON feature key or wait 10 seconds for camp-on to occur automatically.	Station A hears Camp-on tone. Station A display: 300 CAMPED ON After a few seconds, reverts to station number. SWAP and TRANS/CONF prompts appear. Station B hears normal busy tone. Station B display: CAMPED ON All prompts except HANG-UP disappear.
4	Remain off-hook at B.	
5	Go on-hook at station A.	Station A rings. Display shows camped-on station number or name, if programmed.
6	Answer station A.	Station A is connected to station B.
7	Go on-hook at A and B.	

CHART 5-4
CONFERENCE/SPLIT

Step	Action	Verification
1	Establish a call.	Display: 108 (example) TRANS/CONF and HANG-UP prompts appear.
2	Press TRANS/CONF key.	Transfer dial tone is heard. Called station is put on hold. Flashing box appears on right of display.
3	Establish a call to another station. (e.g., 300)	Display: 300 (example) SUPERSET 4™ set is connected to station 300. SWAP, CONF, CANCEL and RELEASE prompts appear.
4	Press CONF feature key.	All three sets are connected. Display: 108 + 300 SPLIT and HANG-UP prompts appear.
5	Press SPLIT feature key.	Display: 108 SUPERSET 4™ set is connected to station 108. Station 300 is put on hold. Flashing box appears on right of display. SWAP, CONF, CANCEL and RELEASE prompts appear.
6	Press SWAP feature key.	Display: 300 (example) SUPERSET 4™ set is connected to station 300. Station 108 is put on hold.
7	Press CANCEL feature key.	Call to station 300 is terminated. SUPERSET 4™ set is connected to station 108.
8	Go on-hook at all stations.	

CHART 5-5
ESTABLISH A CALL

Step	Action	Verification
Standard Operation:		
1	Go off-hook at station.	Station hears dial tone. Line Status Display shows a solid square beside Prime Line (bottom white line key). PAGE and HANG-UP prompts appear. Display: 110 RINGING (example) If the called station is a SUPERSET® set, the SEND MESSAGE prompt appears. HANG-UP prompt remains visible. Called station rings. Display: 110 (example) TRANS/CONF (transfer/conference) prompt replaces SEND MESSAGE prompt. Line Status Display blanks. Display returns to time and date.
2	Dial number. (e.g., 110)	
3	Answer ringing station.	
4	Go on-hook at both stations.	
Handsfree Operation:		
5	(Optional). Press SPEAKER ON/OFF key.	Prime Line shows on Line Status Indicator. Dial tone heard through speaker. MIC ON and HANG-UP prompts appear. Same as steps 2 and 3, above. MIC ON prompt disappears. Microphone disabled. MIC ON prompt reappears. Microphone enabled. Call is terminated if handset is on rest. (If handset is off rest, set returns to standard operation).
6	Dial number. Answer ringing station.	
7	Press MIC ON/OFF key.	
8	Press MIC ON/OFF key.	
9	Press SPEAKER ON/OFF key.	

CHART 5-6
HOLD/SWAP/TRANSFER

Step	Action	Verification
1	Establish a call.	Display: 108 (example) TRANS/CONF and HANG-UP prompts appear.
2	Press TRANS/CONF key.	Transfer dial tone is heard. Called station is put on hold. Flashing box appears on right of display.
3	Establish a call to another station. (e.g., 300)	Display: 300 (example) SUPERSET 4™ set is connected to station 300. SWAP, CONF, CANCEL and RELEASE prompts appear.
4	Press SWAP feature key.	Display: 108 (example) SUPERSET 4™ set is connected to station 108. Station 300 is put on hold.
5	Press SWAP feature key.	Display: 300 (example) SUPERSET 4™ set is connected to station 300. Station 108 is put on hold.
6	Press RELEASE feature key.	Stations 300 and 108 are connected.
7	Go on-hook at all stations.	

CHART 5-7
LINE SELECT/SPEED CALL/HOLD

Step	Action	Verification
Preparation:		
1. Determine Equipment Number for test SUPERSET 4™ Set: Use the charts in Appendix A.		
2. Assign the test station a key line in Special Set Programming: CMD 401- 480 SUPERSET® Sets 01 - 80 Programming, bits a,b = 02 bit c = 2 bits f,g,h = line number (e.g., 400)		
1	Press the bottom line select key. This is the prime line.	The Line Status Display shows a solid square beside the Line Select key. Station hears dial tone.
2	Establish a call to a station.	
3	Press the red HOLD key.	Line Status symbol flashes. Display: SELECT LINE
4	Press the next line select key.	The Line Status Display shows a solid square beside the Line Select key. Held line display symbol flashes. Station hears dial tone.
5	Establish a call to another station. Dial or press a preprogrammed speed call key.	
6	Press the red HOLD key.	Line Status symbols for both lines flash. Display: SELECT LINE
7	Press either Line Select Key.	Station is connected to caller on selected line. Line status symbol stops flashing. Other line remains on hold. Symbol flashes.

CHART 5-8
RECEIVING A MESSAGE

Step	Action	Verification
1	Ensure that a message is waiting at the set.	MSG flashes in the top right corner of the display.
2	Press the MSG feature key.	Display: 1 MESSAGE (example) EXIT and READ MSG prompts appear.
3	Press READ MSG.	Display: 300/14:30 (example) (Note: if caller has name programmed, message will read CALL name and a left arrow prompt will appear. Pressing this feature key will display a message like the one above). EXIT, CALL and CANCEL prompts appear.
4	Press CALL feature key. OR	Ringback returned through speaker. (May lift and use handset). Station that left message rings.
5	Press CANCEL feature key.	Next message (if any) appears. Otherwise, NO MORE MESSAGES is displayed. EXIT prompt appears.
6	Press EXIT.	Display returns to time/date.

CHART 5-9
SENDING A MESSAGE

Step	Action	Verification
1	Call another SUPERSET 4™ set.	Ringback tone is returned. SEND MSG and HANG-UP prompts appear.
2	Press SEND MSG key.	Display blanks. Dial tone is heard.
3	Go on-hook.	

6. SUPERSET 3TM TEST PROCEDURESCHART 6-1
ANSWER AN INCOMING CALL

Step	Action	Verification
Standard Operation:		
1	From another station, call the SUPERSET 3 TM set.	Prime Line LED flashes. Set rings.
2	Go off-hook.	Prime Line LED lights.
3	Go on-hook.	Prime Line LED goes out.
Handsfree Operation:		
4	From another station, call the SUPERSET 3 TM set.	Prime Line LED flashes. Set rings.
5	Press SPEAKER ON/OFF or the appropriate Line Select key (beside flashing indicator).	Prime Line LED lights. Communication is via microphone and speaker.
6	Press SPEAKER ON/OFF key. OR	Call is terminated if handset is on rest. (If handset is off rest, set returns to standard operation).
7	Press HANG-UP key.	

CHART 6-2
CONFERENCE

Step	Action	Verification
1	Establish a call.	Transfer dial tone is heard. Called station is put on hold.
2	Press TRANS/CONF key.	
3	Establish a call to another station.	All three sets are connected. The two called stations remain connected. SUPERSET 3 TM set is disconnected.
4	Press TRANS/CONF key.	
5	Press CANCEL key.	
6	Go on-hook at all stations.	

CHART 6-3
ESTABLISH A CALL

Step	Action	Verification
Standard Operation:		
1	Go off-hook at station.	Station hears dial tone. Prime Line LED (leftmost) lights.
2	Dial number. (e.g., 110)	Station hears ringback tone. Called station rings.
3	Answer ringing station.	
4	Go on-hook at both stations.	Prime Line LED goes out.
Handsfree Operation:		
5	(Optional). Press SPEAKER ON/OFF key.	Prime Line LED lights. Dial tone heard through speaker.
6	Dial number. Answer ringing station.	Same as steps 2 and 3, above.
7	Set Microphone switch to OFF.	Microphone disabled.
8	Set Microphone switch to ON.	Microphone enabled.
9	Press SPEAKER ON/OFF key.	Call is terminated if handset is on rest. (If handset is off rest, set returns to standard operation).

CHART 6-4
HOLD/SWAP/TRANSFER

Step	Action	Verification
1	Establish a call to the SUPERSET [®] set from station A.	Conversation with station A.
2	Press TRANS/CONF key.	Transfer dial tone is heard. Station A is put on hold.
3	Establish a call to station B.	Conversation with station B.
4	Press SWAP feature key.	Station B is put on hold. SUPERSET 3 [™] set is connected to station A.
5	Press SWAP feature key.	Station A is put on hold. SUPERSET 3 [™] set is connected to station B.
6	Go on-hook.	Stations A and B are connected.

CHART 6-5
REDIAL

Step	Action	Verification
1	Make a trunk call from the SUPERSET 3 [™] set.	
2	Terminate the call.	
3	Go off-hook or press the SPEAKER ON/OFF key.	
4	Press the REDIAL key.	Last external call is redialed.

APPENDIX A - EQUIPMENT NUMBER CHARTS

CHART A1-1
STATION EQUIPMENT NUMBERS

CIRCUIT NUMBER	SLOT NUMBER									
	1	2	3	4	5	6	7	8	9	10
01	001	017	033	049	065	081	097	113	129	145
02	002	018	034	050	066	082	098	114	130	146
03	003	019	035	051	067	083	099	115	131	147
04	004	020	036	052	068	084	100	116	132	148
05	005	021	037	053	069	085	101	117	133	149
06	006	022	038	054	070	086	102	118	134	150
07	007	023	039	055	071	087	103	119	135	151
08	008	024	040	056	072	088	104	120	136	152
09	009	025	041	057	073	089	105	121	137	153
10	010	026	042	058	074	090	106	122	138	154
11	011	027	043	059	075	091	107	123	139	155
12	012	028	044	060	076	092	108	124	140	156
13	013	029	045	061	077	093	109	125	141	157
14	014	030	046	062	078	094	110	126	142	158
15	015	031	047	063	079	095	111	127	143	159
16	016	032	048	064	080	096	112	128	144	160

Equipment Numbers 161 to 166: Hunt Groups 1 to 6

Equipment Number 167: Ring Group

Equipment Number 168: RMATS

CHART A1-2
SUPERSET®/TRUNK EQUIPMENT NUMBERS

CIRCUIT NUMBER	SLOT NUMBER									
	1	2	3	4	5	6	7	8	9	10
01	01	09	17	25	33	41	49	57	65	73
02	02	10	18	26	34	42	50	58	66	74
03	03	11	19	27	35	43	51	59	67	75
04	04	12	20	28	36	44	52	60	68	76
05	05	13	21	29	37	45	53	61	69	77
06	06	14	22	30	38	46	54	62	70	78
07	07	15	23	31	39	47	55	63	71	79
08	08	16	24	32	40	48	56	64	72	80

