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AUDIX® Voice Power™

Switch Integration to NEC™ NEAX® 2400 MCI

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Acknowledgment

This document was prepared by the BCSystems Product Documentation Development Department, Columbus, Ohio.

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About This Document

AUDIX Voice Power Switch Integration to NEC NEAX 2400 MCI (585-310-201) contains installation and administration instructions for integrating an NEC NEAX 2400 switch with an AUDIX Voice Power system Release 2.1.1 (R2.1.1), an AUDIX Voice Power system Release 3.0 (R3.0), and an AUDIX Voice Power Lodging system Release 1.1 (R1.1). The document includes the following information:

- Switch integration planning strategies
- Switch Integration Device (SID) hardware installation instructions
- Software installation instructions
- NEAX 2400 administration instructions
- Acceptance test procedures
- Cut-to-Service procedures
- SID troubleshooting guide

The document contains information only for the NEAX 2400 integration with AUDIX Voice Power and AUDIX Voice Power Lodging. If you have another type of switch, refer to the switch integration document for that switch.

INTENDED AUDIENCES

This document is designed primarily for the on-site AT&T services technician and customer technical personnel. Use the document to install AUDIX Voice Power or AUDIX Voice Power Lodging integration-required hardware and software, perform acceptance tests, and perform cut-to-service. The customer or the customers' switch vendor should use the document when performing switch administration tasks and customer required tasks such as connecting the Message Center Interface (MCI) cable to the switch.

Secondary audiences include the AT&T personnel shown in the following list.

- field support
- the Technical Service Center (TSC)
- provisioning project managers
- the Sales and Technical Resource Center (STRC)
- helpline personnel
- factory assemble, load, and test (ALT) personnel

PREREQUISITE SKILLS OR KNOWLEDGE

Typical readers should understand AT&T computer systems, switches, and hardware and software installation procedures. Customers should be familiar with the NEC NEAX 2400 switch or contact their switch vendor.

DOCUMENT ORGANIZATION

- Chapter 1, *Prerequisites*, explains each AUDIX Voice Power and AUDIX Voice Power Lodging configuration and includes component connectivity diagrams to show you each component in the configuration. The chapter also contains a hardware and software component checklist.
- Chapter 2, *Switch Integration Device Basics*, explains the basic components of the SID and how to use the system "forms" or screens. The chapter contains SID hardware component descriptions and illustrations, menu, edit, and action form explanations, and provides basic help functions.
- Chapter 3, *Switch Integration Planning*, helps you plan, track, and record the switch integration. The chapter includes instructions for completing SID and switch integration worksheets that you use throughout the document as you complete the integration.
- Chapter 4, *Hardware Installation*, describes the installation of the SID, cables to the switch, and cables to AUDIX Voice Power and AUDIX Voice Power Lodging. This chapter only contains information for installing the hardware components required for the integration.
- Chapter 5, *Software Installation*, contains instructions for installing AUDIX Voice Power and AUDIX Voice Power Lodging software required to integrate to the NEC NEAX 2400.
- Chapter 6, *AUDIX Voice Power R3.0 Switch Parameters*, contains instructions for administering an AUDIX Voice Power system R3.0 to integrate with the switch. The chapter includes instructions for setting the message waiting lamp parameters, setting the switch interface parameters, and associating the application and the switch interface.
- Chapter 7, *NEAX 2400 Switch Administration*, contains information and instructions for administering a NEAX 2400 switch to work with AUDIX Voice Power and AUDIX Voice Power Lodging.
- Chapter 8, *Switch Integration Device Administration*, contains information and instructions for administering the SID to work with AUDIX Voice Power and AUDIX Voice Power Lodging.
- Chapter 9, *Acceptance Tests*, provides instructions for the switch administration you must perform before you can continue with the acceptance tests.
- Chapter 10, *Cut-to-Service*, provides instructions for the switch administration you must perform before you can continue with cut-to-service.

The document also includes a list of common abbreviations, a glossary, and an index.

HOW TO USE THIS DOCUMENT

This document provides additional information you need to know when integrating a NEAX 2400 MCI switch with an AUDIX Voice Power system R2.1.1, R3.0 or AUDIX Voice Power Lodging R1.1. Use this document as additional information with the following documents:

- *AUDIX Voice Power Lodging R1.1 Installation* (585-310-125)
- *AUDIX Voice Power Release 2.1.1 Installation and Maintenance Guide* (585-310-108)
- *6386/33 and 6386/25 Voice Processing Hardware Installation* (585-310-111)
- *AUDIX Voice Power System R3.0 Software Installation* (585-310-115)
- *AUDIX Voice Power System Upgrade Instructions* (585-310-116)

Do not perform any tasks in this document until you complete the required tasks in the installation documents.

CONVENTIONS USED IN THIS DOCUMENT

The document uses the following typographic conventions.

- Rounded boxes represent terminal keys that you must press.

  Example: Press (ENTER) shows you an instruction to press the enter, carriage return, or equivalent key.

- Square boxes represent phone pad keys that you must press.

  Example: Press [0] shows you an instruction to press zero.

- The word *enter* means to type a value and press (ENTER)

  Example: Enter **y** to continue.

  instructs you to type **y** and press (ENTER).

- A rounded box that contains two or more words separated by hyphens represents two or three keys that you press at the same time. To use these keys, you hold down the first key while pressing the second key and, if appropriate, the third key.

  Example: Press (ALT-d).

  shows you an instruction to press and hold (ALT) while typing the letter *d*.

- Typewriter-style constant-width type represents information you see displayed on your terminal screen, including screen displays, field names, prompts, and error messages. Constant-width bold type represents information you must enter from your keyboard.

  Example: At the `Login ID?` prompt, enter **`snowfox`**

- Italic type represents variables that the system supplies or that you must supply.

  Example: `Your file` *filename* `is formatted incorrectly`.

  shows you a generic error message displayed on the screen that would include one of your filenames.

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RELATED RESOURCES

In addition to this document, you may need to reference the following documents.

- *AUDIX Voice Power Release 2.1.1 Installation and Maintenance Guide* (585-310-108)
- *AUDIX Voice Power Release 2.1.1 System Manager's Guide* (585-310-520)
- *AUDIX Voice Power Release 2.1.1 Planning Guide and Forms* (585-310-901)
- *AUDIX Voice Power Lodging R1.1 Installation* (585-310-125)
- *AUDIX Voice Power Lodging R1.1 Installer's Checklist* (585-310-126)
- *AUDIX Voice Power Lodging R1.1 Property Management Specifications* (585-310-128)
- *AUDIX Voice Power Lodging R1.1 Administration* (585-310-525)
- *AUDIX Voice Power Lodging R1.1 Guest Quick Reference Artwork* (585-310-707)
- *6386/33 and 6386/25 Voice Processing Hardware Installation* (585-310-111)
- *AUDIX Voice Power System R3.0 Software Installation* (585-310-115)
- *AUDIX Voice Power System Upgrade Instructions* (585-310-116)
- *AUDIX Voice Power System Release 3.0 Installation Checklist* (585-310-112)
- *AUDIX Voice Power System Release 3.0 Maintenance* (585-310-113)
- *AUDIX Voice Power System Release 3.0 Administration* (585-310-532)
- *AUDIX Voice Power System Release 3.0 Installation Planning* (585-310-602)
- *NEAX2400 IMS Message Center System Data Line Specifications*, Issue 1.0, May 1986, NEC Telephone, Inc. (PN TR-24006)
- *NEAX2400 IMS Programming Manual*, Issue 1.0, December 1987, NEC Telephone, Inc. (PN NDA-24042)

HOW TO MAKE COMMENTS ABOUT THIS DOCUMENT

Behind the title page of this document you can find Reader Comment cards. While we have tried to make this document fit your needs, we need your suggestions for improving the document and urge you to complete and return the reader comment card.

If the reader comment cards have been removed from this document, please send your comments to the following address.

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1. Introduction and Requirements for Integration

This chapter describes and defines requirements for the NEC NEAX 2400 MCI switch integration with AUDIX Voice Power Release 2.1.1 (R2.1.1), an AUDIX Voice Power System Release 3.0 (R3.0), and AUDIX Voice Power Lodging Release 1.1 (R1.1). The chapter includes diagrams and checklists that show the different configurations for AUDIX Voice Power and AUDIX Voice Power Lodging R1.1. For information on AUDIX Voice Power R2.1.1, R3.0, or AUDIX Voice Power Lodging R1.1, read the following documents:

- *AUDIX Voice Power R2.1.1 Installation and Maintenance Guide* (585-310-108)
- *6386/33 and 6386/25 Voice Processing Hardware Installation* (585-310-111)
- *AUDIX Voice Power System R3.0 Software Installation* (585-310-115)
- *AUDIX Voice Power Lodging R1.1 Installation* (585-310-125).

To create an integrated environment between AUDIX Voice Power or AUDIX Voice Power Lodging and an NEC NEAX 2400 MCI switch, AT&T uses an electronic box called a Switch Integration Device (SID). The SID operates as a protocol converter between the switch and AUDIX Voice Power or AUDIX Voice Power Lodging, converting NEAX 2400 call information into Simplified Message Desk Interface (SMDI) format and sending the information to the application. The SID does not restrict any switch features.

For the SID to perform integrated call transactions, the switch must contain a Message Center Interface (MCI) link. The MCI link provides an RS-232 connection between the NEAX 2400 and the SID. The NEAX 2400 sends call information to the SID through the MCI link. Figure 1-1 shows the connections between the NEAX 2400 switch, the SID, and AUDIX Voice Power or AUDIX Voice Power Lodging.

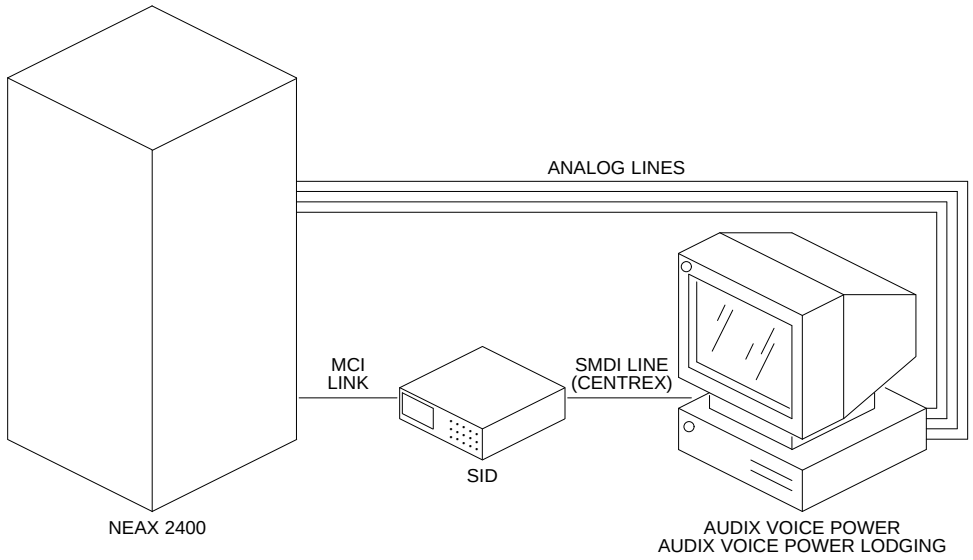


Figure 1-1. NEAX 2400 integration hardware connections

All channels reserved for AUDIX Voice Power or AUDIX Voice Power Lodging must be administered in a Uniform Call Distribution (UCD) group. The first channel in the UCD serves as the "forwarding" or central number for AUDIX Voice Power or AUDIX Voice Power Lodging subscribers. After administering the switch, all covered and forwarded calls transfer to the first channel or central number of the UCD group. If the first channel is busy, the system searches through the other members of the UCD group until the system finds an open channel. Figure 1-2 shows you an example of an incoming call and the hunting process.

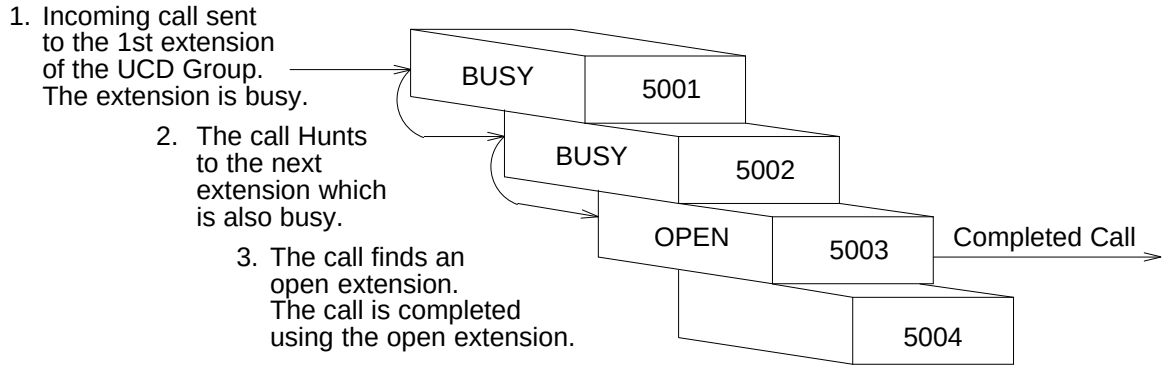


Figure 1-2. UCD Group hunting process

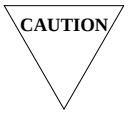
By administering the UCD group, you enable the switch to support the following features.

- Calling party information for incoming calls
- Call forward to a personal extension
- Set and cancel message waiting indications

Subscribers also use the UCD central number to access AUDIX Voice Power or AUDIX Voice Power Lodging voice mail and retrieve their messages.

Before you connect the NEAX 2400 MCI to the SID and AUDIX Voice Power or AUDIX Voice Power Lodging, confirm that you have all required hardware and software integration components. This chapter provides you with hardware and software diagrams, checklists, and explanations. Use the information to confirm that you have all required integration components.

SAFETY CONSIDERATIONS



Electrostatic discharge damages electronic equipment. Do not touch any electronic component until you properly ground yourself.

To prevent damage to the equipment and yourself, follow these precautions:

- Familiarize yourself with the procedures necessary to prevent electrostatic damage to equipment.
- Shut off all power and remove all cables from equipment.
- Properly ground a work mat and wrist strap.
- Place the equipment on the work mat.
- Place the grounded wrist strap on your bare wrist. The wrist strap must contact your bare skin directly. *Do not* wear the wrist strap over your clothes.

FACTORY ASSEMBLED SYSTEMS

If your customer ordered the complete hardware platform (an AT&T 6386 WGS) with the AUDIX Voice Power R2.1.1, AUDIX Voice Power system R3.0, or AUDIX Voice Power Lodging R1.1 package, the factory performs assembly, load, and test (ALT) processes for most of the hardware and software before shipping the 6386 WGS to the site. The factory identifies these systems by placing an orange sticker over the floppy disk drive door. The sticker indicates that you do not need to reload the software.

Before beginning the installation, look for the ALT sticker. If you see the sticker, use the information in this chapter to confirm that the system contains the hardware and software for your configuration. If the hardware and software is installed, do not perform the hardware and software installation tasks. Perform all tasks not completed during ALT, such as connecting the voice and data lines, setting up and cabling the peripherals, and installing switch communications software.

DETERMINING THE PLACEMENT OF THE SID

The Switch Integration Device (SID) and the 6386 application computer represent *local* devices. Place the SID and the 6386 computer in the same area and close enough together so the RS-232 cable supplied with the SID can connect to the computer. During installation, the AT&T technician will place the SID and the 6386 in the location specified by the customer.

For the link between the MCI port and the AUDIX Voice Power system or the AUDIX Voice Power Lodging system, AT&T uses an Electronic Industries Association (EIA) RS-232-C serial data electrical interface. AT&T supplies an EIA standard RS-232 cable with a 25-pin connector. You cannot directly connect the cable to the switch. The MCI port on the backplane of the switch has a 25-pair connector. AT&T supplies the 25-pair to 25-pin adaptor required to connect the RS-232 cable to the backplane of the switch. The customer or the switch vendor representative must connect the adaptor to the switch. AT&T assumes responsibility only for the RS-232 cable that connects to the SID.

If the distance from the switch to the SID is longer than the RS-232 cable reaches, you, the customer, must supply a cable that attaches between the AT&T supplied cable and the NEAX 2400 MCI port adaptor. Use a cable that meets the EIA RS-232 standards, including the 50 feet maximum cable length. Failure to meet EIA communication standards may cause data transmission errors. If you cannot reach the switch with the 50 feet maximum cable length, you, the customer, must determine and engineer a method of connecting the SID and the switch, such as using a limited-distance modem. AT&T does not recommend any particular methods.

SYSTEM CONFIGURATIONS

You can operate more than one application at one time on one 6386 platform, such as AUDIX Voice Power R2.1.1 and AUDIX Voice Power Lodging R1.1. When multiple applications reside on the same platform, the process is called *coresidency*. The different system coresidency options are called *configurations*. The following list shows you the different AUDIX Voice Power 2.1.1 and AUDIX Voice Power Lodging R1.1 system configurations.

- Configuration 1: AUDIX Voice Power R2.1.1 only
- Configuration 2: AUDIX Voice Power Lodging R1.1 only
- Configuration 3: AUDIX Voice Power Lodging R1.1 with a Property Management System (PMS)
- Configuration 4: AUDIX Voice Power Lodging R1.1 coresident with AUDIX Voice Power R2.1.1
- Configuration 5: AUDIX Voice Power R2.1.1 coresident with AUDIX Voice Power Lodging R1.1 with a PMS

NOTE

The AUDIX Voice Power system R3.0 cannot operate as a coresident system. The system only operates as a standalone application.

The connectivity diagrams on the next few pages show you the different configurations. Each item in the diagram contains a number. Following the connectivity diagrams, you can read a hardware and software component checklist. The numbers in the connectivity diagrams match the numbers of the items in the checklist. Use the connectivity diagrams and the component checklist to confirm that you have everything required for the integration. If you have an AUDIX Voice Power system R3.0, refer to *AUDIX Voice Power System R3.0 Maintenance* (585-310-113) for connectivity diagrams and a list of components.

Component Connections for Configuration 1

Figure 1-3 shows the component connections for configuration 1, AUDIX Voice Power R2.1.1 only. For factory ALT systems, components H1 through H3 are installed. Check the factory ALT system to verify that the components have been installed before you continue.

NOTE

The number in the diagram corresponds to the numbered items in the component checklist located in the next section. Read the component checklist for more information on the numbered items.

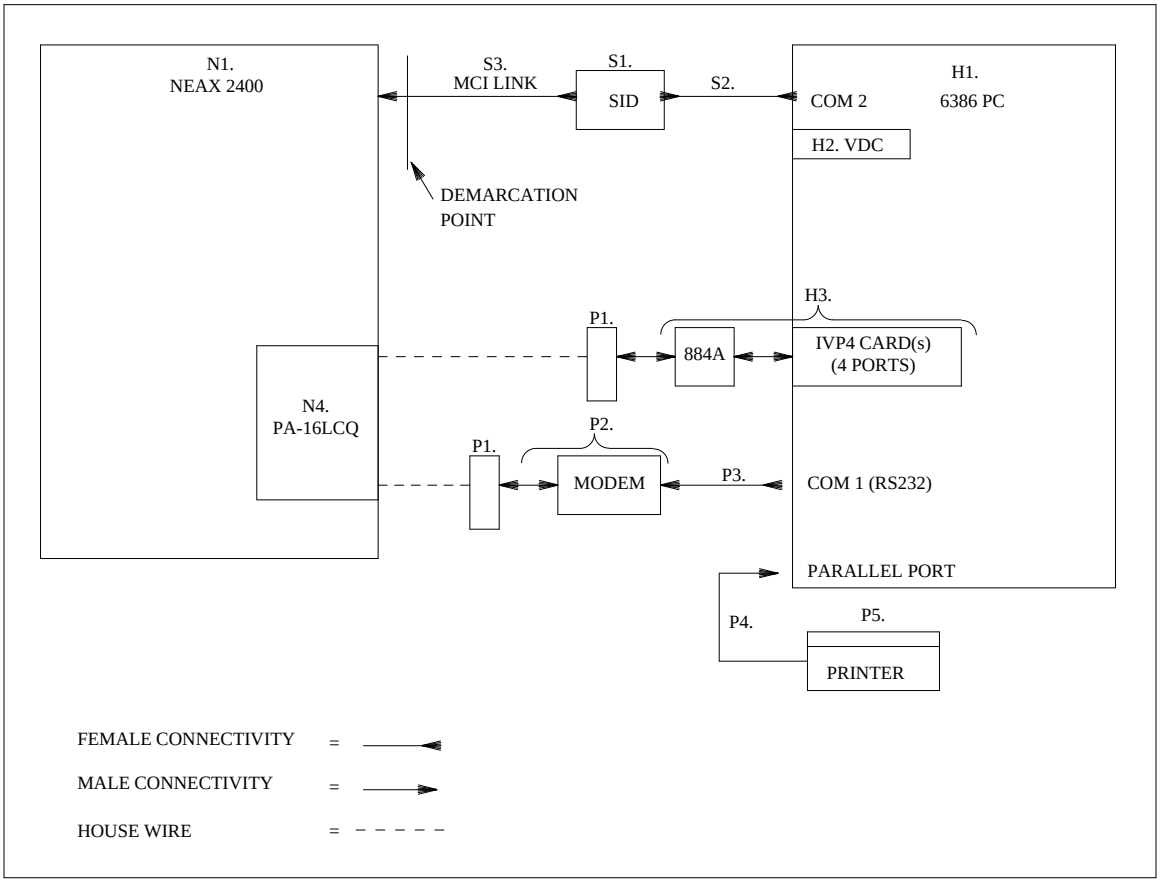


Figure 1-3. Configuration 1 Component Connection Diagram

Component Connections for Configuration 2

Figure 1-4 shows you the component connections for configuration 2, AUDIX Voice Power Lodging only. For factory ALT systems, components H1 through H3 are installed. Check the factory ALT system to verify that the components have been installed before you continue.

NOTE

The number in the diagram corresponds to the numbered items in the component checklist located in the next section. Read the component checklist for more information on the numbered items.

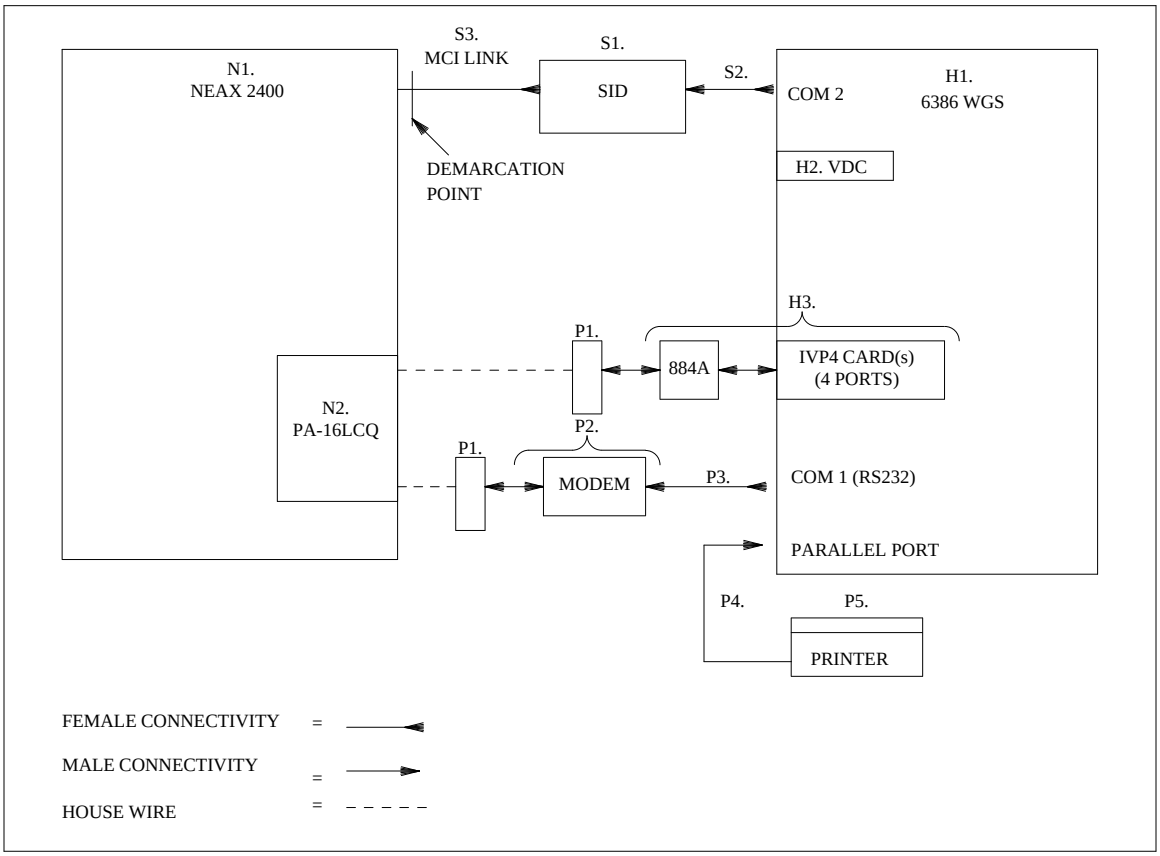


Figure 1-4. Configuration 2 Component Connection Diagram

Component Connections for Configuration 3

Figure 1-5 shows you the component connections for configuration 3, AUDIX Voice Power Lodging with PMS. For factory ALT systems, components H1 through H4 are installed. Check the factory ALT system to verify that the components have been installed before you continue.

NOTE

The PMS vendor has the responsibility of providing the cables for the PMS to the AUDIX Voice Power Lodging system connection.

The number in the diagram corresponds to the numbered items in the component checklist located in the next section. Read the component checklist for more information on the numbered items.

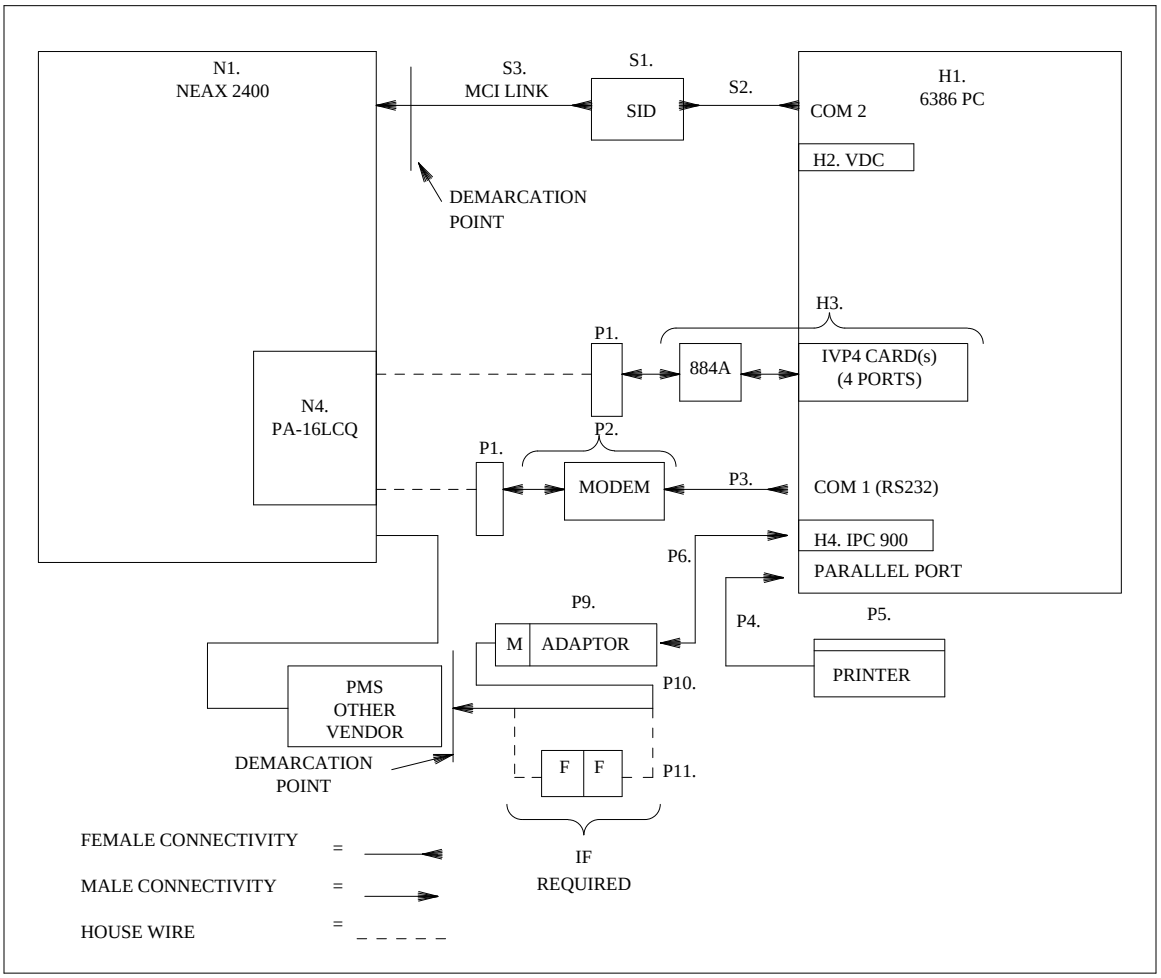


Figure 1-5. Configuration 3 Component Connection Diagram

Component Connections for Configuration 4

Figure 1-6 shows the component connections for configuration 4, AUDIX Voice Power Lodging coresident with AUDIX Voice Power R2.1.1. For factory ALT systems, components H1 through H4 are installed. Check the factory ALT system to verify that the components have been installed before you continue.

NOTE

The number in the diagram corresponds to the numbered items in the component checklist located in the next section. Read the component checklist for more information on the numbered items.

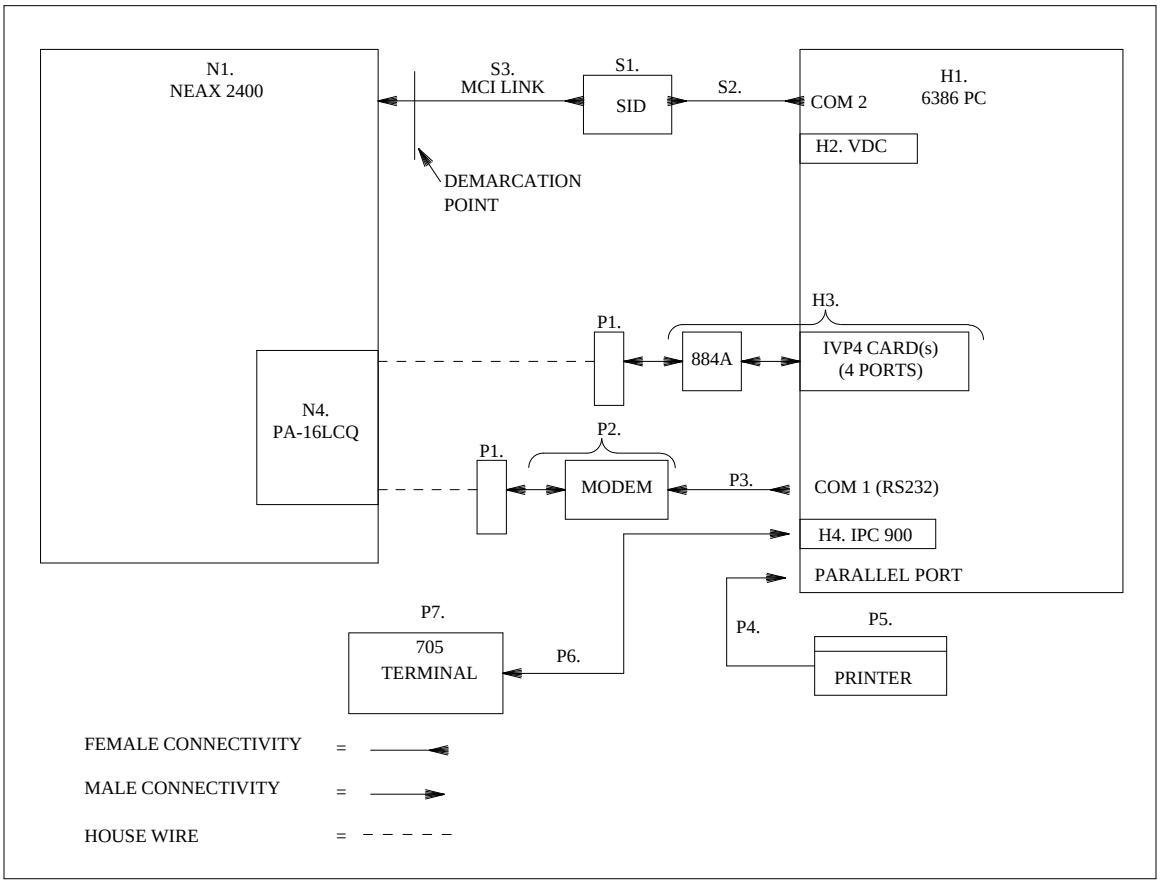


Figure 1-6. Configuration 4 Component Connection Diagram

Component Connections for Configuration 5

Figure 1-7 shows the component connections for configuration 5, AUDIX Voice Power R2.1.1 coresident with AUDIX Voice Power Lodging and PMS. For factory ALT systems, components H1 through H4 are installed. Check the factory ALT system to verify that the components have been installed before you continue.

NOTE

Figure 1-7 shows a sample connection from an IPC-900 port to the PMS. Although this figure does not show a terminal connection, you may connect a terminal to one of the IPC-900 ports. You cannot use COM2 for the PMS connection because the Switch Integration Device (SID) connects to COM2.

The PMS vendor has the responsibility of providing the cables for the PMS to the AUDIX Voice Power Lodging system connection.

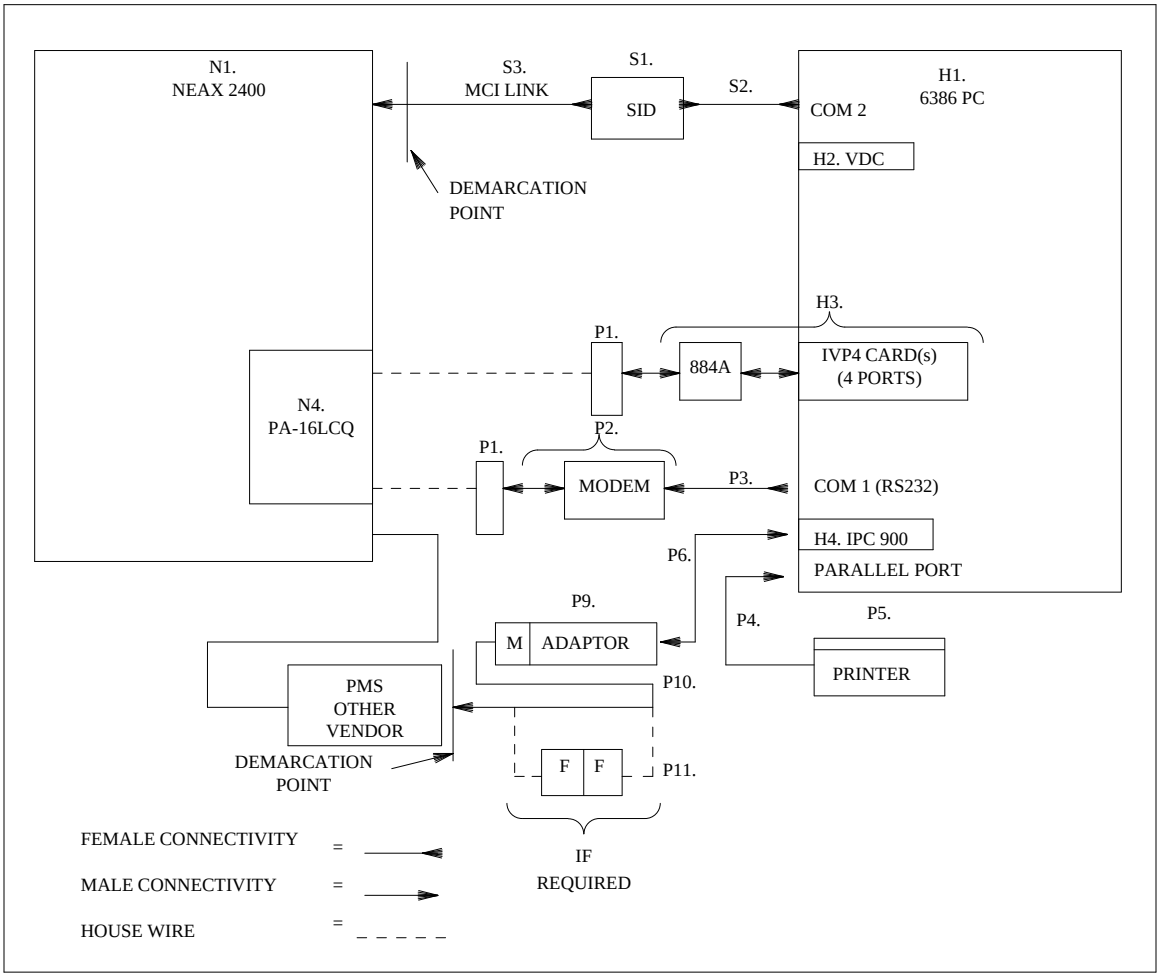


Figure 1-7. Configuration 5 Component Connection Diagram

COMPONENTS CHECKLIST

The component checklists in this section identify the components required for each AUDIX Voice Power R2.1.1 and AUDIX Voice Power Lodging R1.1 configuration. Each hardware component in the checklist contains an item number. The item numbers correspond to the numbers in the connectivity diagrams. The checklists also identify which configuration requires the component.

Compare the components that you have on site with the checklists. As you identify each component and confirm that you have the component, place a checkmark in the column labeled with a ✔.

> If you are integrating the NEC NEAX 2400 switch with an AUDIX Voice Power system R3.0, refer to *AUDIX Voice Power System R3.0 Maintenance* (585-310-113) for a list of hardware and software components, peripherals, and PEC codes.

NEC NEAX 2400 MCI Hardware

The customer must provide the correct switch and related components. The customer should use this NEAX 2400 component checklist to make sure that they have all required items before an AT&T technician arrives to install the system. The AUDIX Voice Power system R2.1.1, AUDIX Voice Power system R3.0, and AUDIX Voice Power Lodging R1.1 integrate only with the NEC NEAX 2400 switch and related components listed in the following table.

Item #	Description	Configuration	✔
N1.	NEC NEAX 2400 switch with the following: models UMG and MMG: software series 4000 or greater models SIM and IMG: software series 5200 or greater The switch must have the *5200 Feature Application Floppy Disk* software installed. After installing the software, reboot the switch.	all configurations	
N2.	PA-16LCQ analog ports	all configurations	

In addition to the hardware and software, you must provide the following administration on the NEAX 2400.

- Program the PA-16LCQ analog ports to provide an adequate loop current disconnect, or *wink*. The PA-16LCQ card provides a default value of approximately 128ms wink. The wink can be increased to approximately 448ms with a firmware upgrade from NEC. Without the upgrade and the increase, two items occur:
  - — call holding times increase substantially because the default disconnect time is lower than the minimum time required by AUDIX Voice Power and AUDIX Voice Power Lodging.
  - — call answer messages end with a reorder tone of approximately one second.
- Set the recall timer on the NEAX switch to an amount of time longer than the ring-no-answer time. If you do not, calls blind transferred to subscribers administered for *forward on ring-no-answer* recall back to the AUDIX Voice Power or AUDIX Voice Power Lodging channel.
- Administer AUDIX Voice Power or AUDIX Voice Power Lodging to transfer calls to a station other than an actual attendant console, for example a digital telephone capable of displaying calling party information. The NEAX 2400 switch does not allow stations to transfer calls to an attendant console.

Switch Integration Device Hardware

Item #	Description	PEC	Configuration	✔
S1.	Switch Integration Device (SID)	1228-NE3	all configurations	
S2.	RS-232 cable used to connect the SID to AUDIX Voice Power or AUDIX Voice Power Lodging		all configurations	
S3.	RS-232 cable used to connect the SID to the MCI link adaptor on the switch. AT&T only assumes responsibility for connecting the cable to the SID.		all configurations	

AUDIX Voice Power and Lodging System Hardware

Item #	Description	PEC	Configuration	✔
H1.	One of the following AT&T 6386 system modules:		all	
	6386/25 WGS	6950-DB2 6950-DB3 6950-DB1		
	6386/33 WGS	3714-324 6950-DC1		
	6386/SX WGS	6950-DF2		
	With the following equipment: 300 Mbyte hard drive kit	69595	optional	
	2-2Mbyte memory kit	69581	for systems with less than 8Mbyte	
	Either a 329D VGA color monitor or a 324LN VGA monochrome monitor	69586 69579	all	
H2.	1 AT&T VGA Video Display Controller (VDC600)	69587	not required on 6386/SX	
H3.	1-6 Integrated Voice Processing (IVP4) cards (including 1 884A adaptor and cables)	8304-IV4	all	
H4.	1 Intelligent Ports Card (IPC-900)	69597	for connecting PMS (Configurations 3 and 5) and optional for other I/O devices	

Peripherals, Adaptors, and Cables

Item #	Description	PEC	Configuration	✔
P1.	1-4 103A Connect Block	2750-D08	all	
P2.	1 1200/2400 baud, asynchronous modem with cord	2260-24A	all	
P3.	1 RS-232, M/F cable	2721-28E	required with modem	
P4.	1 7-ft, 25-36 parallel cable	6950-E81	required with printer	
P5.	1 9-pin, 80-column parallel printer	6950-EP3	optional	
P6.	1 10-conductor modular cable	69607 (50ft) 69606 (25ft) 69605 (10ft)	required with IPC card	
P7.	remote terminals		optional	
P8.	1 RJ-45 (10) to female D8-9 straight adapter	69614	see note	
P9.	1 RJ-45 (10) to male DB25 DTE adapter	69608	see note	
P10.	1 9-ft, M/F, RS-232 M25A cord	2721-01J	see note	
P11.	1 gender changer	2750-A53	see note	

NOTE

The PMS vendor supplies the hardware required for the PMS connection. You can order the hardware shown in the checklist through AT&T instead of using the PMS vendor supplied hardware.

Software Components

Description	PEC	Configuration	✔
UNIX® Operating System Release 3.2.2 Foundation Set, which includes: Editing Package FMLI Package FACE Package FACE HELP Package Remote Terminal Package	6950-BD1	all	
IPC-900 Driver Package Version 4.0		required when you have an IPC-900 card	
Integrated Voice Processing System Software Release 2.0	included with 1228-101 or 1228-025 or	all	
AUDIX Voice Power R2.1.1 Application Package	1228-025	configurations 1, 4, and 5	
AUDIX Voice Power Lodging Software R1.1	1228-101 (new)	configurations 1, 4, and 5	
AUDIX Voice Power NEAX 2400 Switch Integration	1228-102	all	
AUDIX Voice Power Lodging PMS Integration Package R1.1	1228-103	configurations 3 and 5	
AUDIX Voice Power Lodging Spanish Guest Interface Package R1.0	1228-104	optional	
AUDIX Voice Power Lodging Japanese Guest Interface Package R1.0	1228-105	optional	

2. Switch Integration Device Basics

Before you attempt to operate and administer the Switch Integration Device (SID) and integrate an NEC NEAX 2400 MCI switch to AUDIX Voice Power or AUDIX Voice Power Lodging, you need to understand the hardware components of the SID and how to use the device. The information in this chapter explains the basic components of the SID and how to use the system "forms" or screens. The chapter covers the following topics.

- SID hardware component descriptions
- SID hardware component illustrations
- Menu forms
- Edit forms
- Actions forms
- Help functions

Read the information in this chapter to understand the SID hardware and software.

THE SWITCH INTEGRATION DEVICE HARDWARE

Before you use the SID, you need to understand each hardware component. Read the descriptions below of each component and refer to Figure 2-1 to locate the component.

Front Panel

LCD display A two-line, 40-character, backlighted LCD display screen used to show all menus and information on the SID.

Diagnostic lights LED lights used to indicate and trace possible problems in the SID. The LEDs help to determine if problems exist in the SID, the link to the PBX, the link to AUDIX Voice Power, or any combination of the different links or systems. The Status LED lights when you power on the SID.

Keypad A 19-key, membrane-style keypad used to select menu items, enter information, and perform all administration on the SID. The keys include ten numbered keys (0-9), four directional arrow keys, a pound sign (#) key, a star key (*), a Function key, a Mode key, and an Enter key. Chapter 8, *Switch Integration Device Administration*, of this document contains tables that show the function of each key, if different than marked.

Rear Panel

Power switch The toggle switch used to turn the SID on and off.

Power cord outlet The male outlet where you plug in the power cord shipped with the SID.

Link A and Link B Two RS-232 ports used to connect the SID to the PBX and AUDIX Voice Power or AUDIX Voice Power Lodging. Chapter 4, *Hardware Installation* of this document explains the proper connections for the two ports.

Modem port The SID contains an internal modem used for diagnostic and software upgrade purposes. Use the modem port to connect the SID's modem to an analog line.

Continue to the next section, *Using the SID Software*, for an explanation of how to use the SID displays and menus.

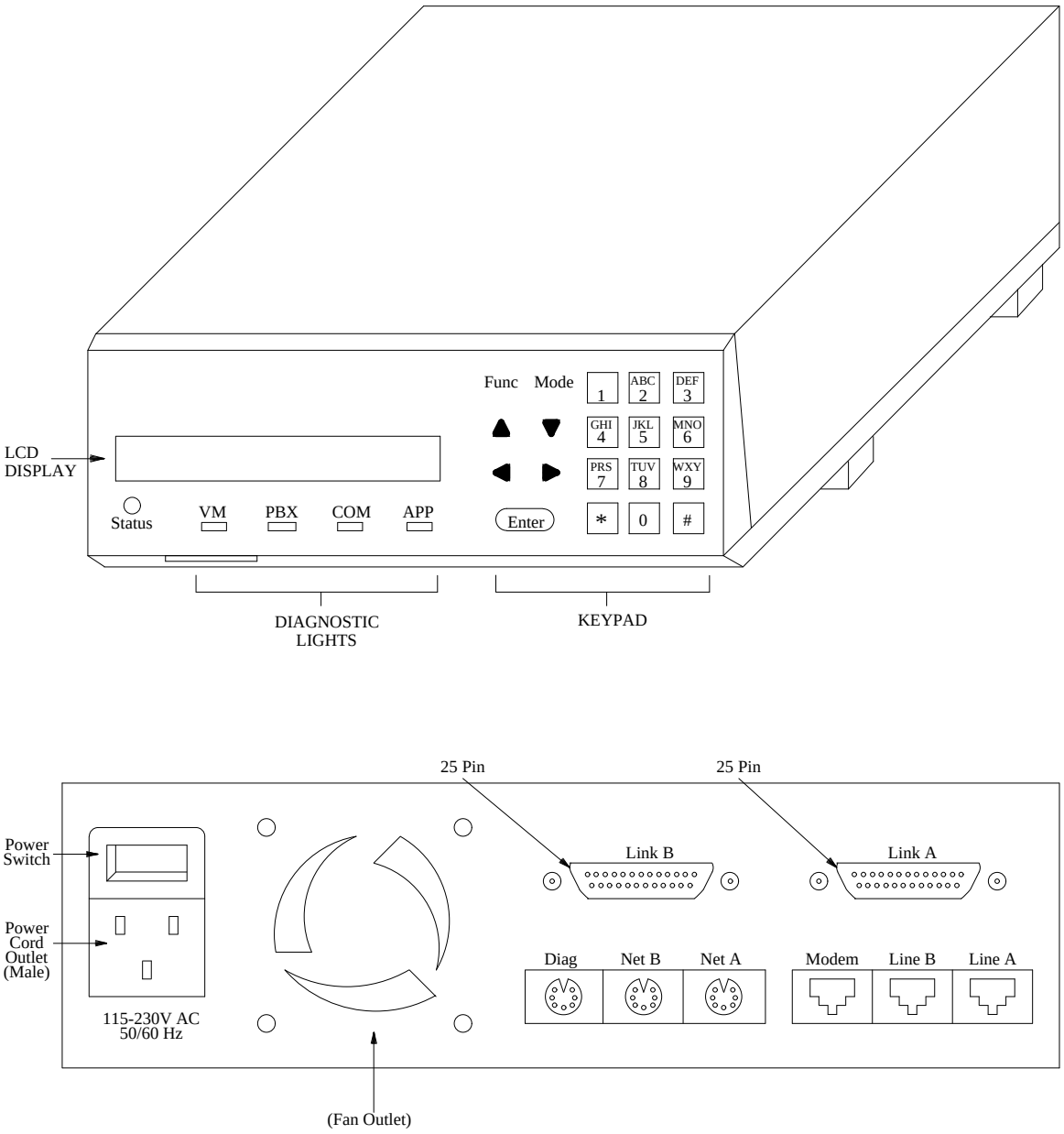


Figure 2-1. Top: SID front panel Bottom: SID back panel

THE SWITCH INTEGRATION DEVICE SOFTWARE

The SID contains software that allows you to perform installation, configuration, and diagnostic tasks by using the keypad and the LCD screen. As you administer the SID, you use three types of forms or screen displays. Each type of form has a specific task.

- Menu Forms - used to select one of several options.
- Edit Forms - used to enter information into the SID's configuration.
- Action Forms - used to perform an action, view event logs, or monitor the system.

This section contains descriptions and examples of each form and provides you with instructions for using the forms. You also can find tables that show you valid key actions for each form.

Menu Forms

Menu forms allow you to select options by pressing a key. You can select another menu, an edit form, or an action form. The menu forms allow you to move between important forms by pressing only a few keys. Figure 2-2 shows you the MCI USER INTERFACE MAIN MENU.

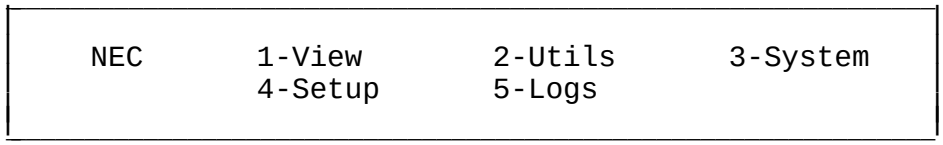


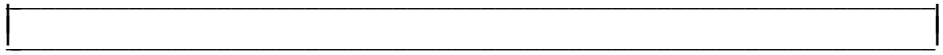
Figure 2-2. The MCI User Interface Main Menu

A menu form contains two items:

Name You can find the menu name in the upper left hand corner of the LCD display. Use the name as a reference item.

List of options Menus show you different options. Each option has a number and a label. Not all menus contain the same number of options. To select an option from a menu, press the option number on the keypad. The SID clears the current form from the LCD display and places the form you selected on the display. The label you selected appears as the name of the form.

Example: If you wanted option 4, SETUP, from the MCI USER INTERFACE MAIN MENU shown in Figure 2-2, press **4** on the keypad. After you press **4**, you see the SETUP form appear on the screen as shown in Figure 2-3.



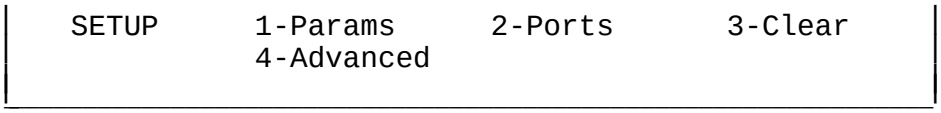


Figure 2-3. The Setup form

The SID uses menus to organize all options and functions into categories. Menus also permit the user to navigate easily through the forms by pressing one or more keys.

Each type of form requires you to use different keys on the keypad to make selections and enter information. The table below shows you what keys to use with the menu forms.

Key	Action
1,2,3,4,5,6,7,8,9,0	Select menu option
*,#	No action
Func	Return to main menu
Mode	No action
Arrows	No action
Enter	No action

Edit Forms

Edit forms allow you to use the keypad to enter information into the SID's configuration. There are three types of edit forms:

- Single Item
- Two Item
- Scroll Item

This section contains descriptions and examples of each type of edit form and provides you with instructions for using the forms.

Single Item Edit Forms

On a Single Item Edit form, you must enter one piece of information or answer one question. Figure 2-4 shows you an example of a single item edit form, the SETUP form. On the form, you need to enter the number of ports assigned to AUDIX Voice Power or AUDIX Voice Power Lodging. In this example, you enter the appropriate value using the digits on the keypad and press ENTER.

```
SETUP      Number of Ports            ------
```

Figure 2-4. The Setup form

Two Item Edit Forms

Two Item Edit forms ask two related questions. After you answer the first question and press ENTER, the cursor moves to the second line. You must now enter information for the second question. When you press ENTER the second time, the cursor *wraps* or moves back to the first line. If you have entered all information correctly, press ↑ or ↓ to move to the next edit form. You can press FUNC to return to Main Menu. If you did not enter the information correctly, you can change the information until you have everything correct. Figure 2-5 shows you the VM PORT form, an example of a two item edit form.

```
VM Port    LTN:                       ------
           Extension:                 ------
```

Figure 2-5. The VM Port form

Scroll Item Edit Forms

Scroll Item Edit forms ask questions that have a limited number of answers. The SID places a default value in the field, but allows you to "scroll" or search through the options. You use the left and right arrow keys on the keypad to scroll through the options. Figure 2-6 shows you a sample scroll item edit form, the MCI form.

```
MCI       Baud Rate:                1200
<- ->
```

Figure 2-6. The MCI form

In the example, you use the MCI form to set the baud rate for the MCI link. You can set the baud rate to specific values between 300 and 9600 baud. On the form you see a default value of 1200. To see the other options, you press the left arrow key to decrease the baud rate or press the right arrow key to increase the rate. When you find the rate you want, press ENTER to confirm your choice. You can recognize scroll item edit forms by the small arrow symbols (<- ->) shown below the form name.

Edit Form Keys

Edit forms require you to enter data for SID setup and configuration. Most edit forms have default values already entered on them. If you choose to use the default value, press FUNC to exit the form. As you edit forms, you can move to the next or previous edit form, return to the main menu, or access a help screen. Refer to the table below for a list of keys and the action each key performs.

Key	Action
1,2,3,4,5,6,7,8,9,0	Data entry keys
*,#	Data entry keys
Func	Return to main menu
Mode	Help
Up Arrow	Go to previous edit form
Down Arrow	Go to next edit form
Right Arrow	Get higher value
Left Arrow	Get lower value
Enter	Confirm entry

With some menu selections, you can access multiple edit forms that link together. When you access multiple edit forms, press ↓ to move to the next form or press ↑ to move to the previous form.

Edit Form Help Functions

Edit forms allow you to actively access help screens. To access the help screen, press MODE at any edit form. The SID places the help screen on the LCD display. The SID retains any information you may have entered on the edit form and places the edit form with your information back on the display when you exit the help screen. You do not lose any information. Most help screens appear as shown in Figure 2-7, although certain edit forms add or delete options.

```
EDIT      1-Overtype   2-Insert     3-Clear
          4-Undo
```

Figure 2-7. Help screen options accessed from an edit form

The following list shows you each available option and explains the action of each option shown on the help screen.

Overtype The option places the editor into a mode that allows you to enter new characters over existing characters.

Insert The option changes the editor into a mode that allows you to insert new characters between existing characters.

Clear The option erases all characters in the field.

Undo The option replaces any new information typed in the field with information from the stored configuration.

Action Forms

Action Forms provide you with a "window" or a view into the integration application. With action forms, you can monitor the application activity, review event logs, or check statistical information. Figure 2-8 shows a sample action form, the STATISTICS VIEW form.

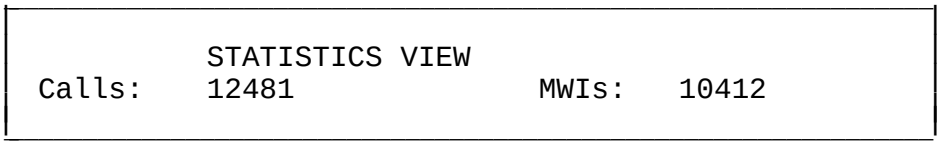


Figure 2-8. The Statistic View action form

Action forms operate in a dynamic or real-time mode. The screen changes with each transaction processed by the SID. When you finish observing an action form, you can press FUNC to return to the main menu. You also can press MODE to access any available help options for the action form. Although not all action forms have help options, by pressing MODE you usually can find optional ways to look at the information presented on the action form.

All action forms use the same keys on the keypad to perform functions and make selections. The table below shows you what keys to use with the action forms.

Key	Action
1,2,3,4,5,6,7,8,9,0	No action
*,#	No action
Func	Return to main menu
Mode	Help for Action Form
Arrows	No action
Enter	No action

You have read the basic information necessary to integrate AUDIX Voice Power or AUDIX Voice Power Lodging with an NEC NEAX 2400 MCI switch. Proceed to Chapter 3, *Switch Integration Planning*, to plan the switch integration and prepare for the installation and administration procedures.

3. Switch Integration Planning

Before you implement the NEC NEAX 2400 Message Center Interface (MCI) integration with AUDIX Voice Power R2.1.1 or AUDIX Voice Power Lodging R1.1, you must plan the process. This chapter provides worksheets and information to help you plan and record the integration. You use the worksheets later to complete the switch integration process.

By completing the worksheets you collect the following information:

- Number of voice mail ports
- Message desk number
- Calling party identification pad string
- Message waiting indicator pad string
- Message waiting indicator features
- Extensions/logical terminal number plan
- Message center interface baud rate
- Simplified message desk interface baud rate

Continue with the instructions on the next page to plan the switch integration.

DETERMINING THE NUMBER OF VOICE MAIL PORTS

You must specify the number of voice mail ports for the Switch Integration Device (SID) to support and monitor. The number of ports for the SID is the same as the number of ports assigned to the AUDIX Voice Power system or AUDIX Voice Power Lodging. The maximum number of supported lines depends on the switch software level. Your switch software must support the UCD overflow feature. The SID assigns a default value of 140 to this field. To determine the number of ports, multiply the number of IVP4 cards on your AUDIX Voice Power system or AUDIX Voice Power Lodging system by 4. After you determine the number of voice mail ports you need to assign on the SID, write the number on line 1 of worksheet A.

Worksheet A: Switch Integration Information

Line	Field or Feature Name	Value
1.	Number of voice mail ports:	_____
2.	Message Desk Number:	001
3.	CPID Pad String Number:	0000000
4.	MWI Pad String Number:	0000000
5.	MWI Feature: (ENABLE = on, DISABLE = off)	_____
6.	MCI Baud Rate:	_____
7.	SMDI Baud Rate:	_____

SETTING THE MESSAGE DESK NUMBER

The Simplified Message Desk Interface (SMDI) message desk number must match the number assigned on the voice mail system. For AUDIX Voice Power and AUDIX Voice Power Lodging, use the default value assigned to the SID. The default value is **001**. Line 2 of worksheet A already contains the value 001 as the message desk number.

SETTING THE CALLING PARTY IDENTIFICATION PAD STRING

The Message Center Interface (MCI) protocol, used by the NEAX 2400 switch to communicate with the SID, provides calling and called party information consistent with the dial plan administered on the switch. The SID operates on Simplified Message Desk Interface (SMDI) protocol which uses a seven-digit field. To compensate for the difference between the MCI and SMDI protocols, the SID uses a seven-digit string, called the Calling Party Identification Pad (CPID) string, that the SID overwrites with caller identification information. The SID assigns the field a default value of 0000000. For AUDIX Voice Power and AUDIX Voice Power Lodging, use the default CPID string of 0000000. Line 3 of worksheet A already contains the value 0000000 as the CPID pad string.

Example: If you set the CPID pad string to 0000000 and the SID receives a caller ID of 245, the SMDI caller ID information becomes 0000245.

SETTING THE MESSAGE WAITING INDICATOR PAD STRING

The Message Waiting Indicator (MWI) Pad String operates on the same basis as the CPID Pad String. As with the CPID Pad String, the SID uses a seven-digit string, called the Message Waiting Indicator (MWI) pad string, that informs the SID about the format of MWI information generated by AUDIX Voice Power or AUDIX Voice Power Lodging. The SID uses the MWI pad string to strip off digits not required by MCI. The SID assigns a default MWI pad string of 0000000. For AUDIX Voice Power and AUDIX Voice Power Lodging, use the default MWI pad string of 0000000. Line 4 of worksheet A already contains the value 0000000 as the MWI pad string.

SETTING THE MESSAGE WAITING INDICATOR FEATURE

By using the MWI feature, you can allow AUDIX Voice Power R2.1.1, R3.0, or AUDIX Voice Power Lodging R1.1 to activate message waiting lamps. The SID sets the default value for this field to `ENABLE`, which activates the MWI feature. If you do not want AUDIX Voice Power or AUDIX Voice Power Lodging to activate the MWIs, change the field to `DISABLE`. Write the value on line 5 of worksheet A.

DETERMINING THE MESSAGE CENTER INTERFACE BAUD RATE

You must set the baud rate for the MCI link. The SID provides baud rate selections of 300, 1200, 2400, and 9600 baud and sets a default of 1200 baud. Make sure that the baud rate equals the dip switch settings on the MCI link switch I/O card. Write the MCI link baud rate on line 6 of worksheet A. If you plan to use the default setting, write **`1200`** on the worksheet.

DETERMINING THE SMDI BAUD RATE

You must set the baud rate for the Simplified Message Desk Interface (SMDI) link. The SID provides baud rate selections of 300, 1200, 2400, and 9600 baud and sets a default of 1200 baud. Write the SMDI link baud rate on line 7 of worksheet A. If you plan to use the default setting, write **`1200`** on the worksheet.

DETERMINING THE EXTENSION/LOGICAL TERMINAL NUMBER PLAN

On AUDIX Voice Power or AUDIX Voice Power Lodging, you assign a channel to each extension to allow for switch communications. For the SID application, you associate a Logical Terminal Number (LTN) with each analog extension number used by AUDIX Voice Power or AUDIX Voice Power Lodging.

For example, if AUDIX Voice Power Lodging assigns channel 0 to extension 2222, you assign LTN 1 (0001) to the extension. Assigning the LTN to an extension tells the SID where to send information for the extension. If you do not assign the LTNs, the SID does not integrate calls properly.

NOTE

AUDIX Voice Power and AUDIX Voice Power Lodging use `0` as the first channel number assigned to an extension. The SID assigns `1` as the first LTN assigned to an extension. As you assign channels and LTNs, the number is always one greater than the AUDIX Voice Power or AUDIX Voice Power Lodging assigned number.

To assign LTNs and extensions on the SID, refer to the planning document or have your switch administrator list the extensions of all the analog ports assigned on AUDIX Voice Power or AUDIX Voice Power Lodging. Use worksheet B on the next page to record the LTNs, channels, and extensions. After you complete all of the worksheets, proceed to Chapter 4, *Hardware Installation*.

Worksheet B: Extension/LTN Plan

Extension	LTN	Extension	LTN
_____	0001	_____	0013
_____	0002	_____	0014
_____	0003	_____	0015
_____	0004	_____	0016
_____	0005	_____	0017
_____	0006	_____	0018
_____	0007	_____	0019
_____	0008	_____	0020
_____	0009	_____	0021
_____	0010	_____	0022
_____	0011	_____	0023
_____	0012	_____	0024

4. Hardware Installation

This chapter describes the hardware and cable installation tasks required to integrate the NEAX 2400 MCI switch with the AUDIX Voice Power system R2.1.1, AUDIX Voice Power system R3.0, or AUDIX Voice Power Lodging R1.1 through a switch integration device (SID). Before you perform the tasks in this chapter, complete one of the following instructions:

- If you are installing a standalone version of AUDIX Voice Power Lodging R1.1, complete Tasks 1 through 7 in *AUDIX Voice Power Lodging R1.1 Installation* (585-310-125).
- If you are installing a standalone version of AUDIX Voice Power 2.1.1, complete the instructions in *AUDIX Voice Power 2.1.1 Installation*
- If you are installing AUDIX Voice Power Lodging R1.1 coresident with AUDIX Voice Power 2.1.1, complete Tasks 1 through 7 in *AUDIX Voice Power Lodging R1.1 Installation* (585-310-125). (585-310-108).
- If you are installing an AUDIX Voice Power system R3.0, complete the instructions in *6386/33 and 6386/25 Voice Processing Hardware Installation* (585-310-111).

NOTE

For an ALT system, you may not need to perform the steps in the other documents. Verify that the hardware has been installed and continue with the instructions in this chapter.

This chapter covers the installation of all integration-related hardware components. All configurations require the tasks in this chapter. The tasks must be performed by the installation technician, the customer, or the customer's switch vendor. Each task provides an explanation of who should perform the task. If you do not know the different configurations or the hardware components required for each configuration, refer to Chapter 1, *Prerequisites*, of this document for more information.

The hardware installation tasks covered in this chapter include:

- Replacing the cover (all configurations)
- Connecting the power cord to the SID
- Connecting the analog line to the SID modem
- Connecting the MCI line to the switch
- Connecting the MCI line to the SID
- Connecting the cable from the SID to COM2

Continue with the instructions on the next page to install the hardware.

TASK 1: REPLACE THE COVER

Continue to Task 2 if you are installing a standalone version of an AUDIX Voice Power system R2.1.1 or R3.0. The cover should already be on the 6386.

If you are installing a standalone version of AUDIX Voice Power Lodging R1.1 or a coresident version with AUDIX Voice Power R2.1.1, you must perform this task. For some switch applications, you must install specific boards in the 6386 WGS for switch communication purposes. Not all switches require the same boards. For this reason, this document contains the instructions for replacing the 6386 WGS cover. This task should be performed by the installation technician.

The NEAX 2400 MCI switch does not require you to place any specific boards in the 6386 WGS. Before you connect any cables to the computer, you must replace the cover. Use the instructions in this section to replace the cover.

6386-SX or 6386-25 WGS

1. Replace the main unit's cover by carefully sliding the cover from the front of the main unit until the cover presses securely against the rear of the unit.

   Raise the front of the cover slightly higher than the rear as shown in Figure 4-1 and Figure 4-2. Slide the cover towards the back of the main unit until the cover almost reaches the rear cover. Lower the front of the cover, pressing back gently, until the cover fits securely in place.

2. Tighten the cover mounting screws. Figures 4-1 and 4-2 show you where the screws are located. On a 6386-SX WGS, you must tighten three screws. On a 6386-25 WGS, you must tighten five screws.

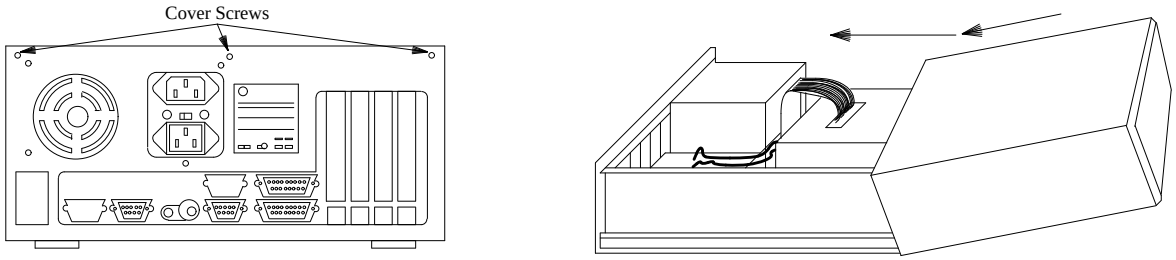


Figure 4-1. Replacing the cover on a 6386SX WGS

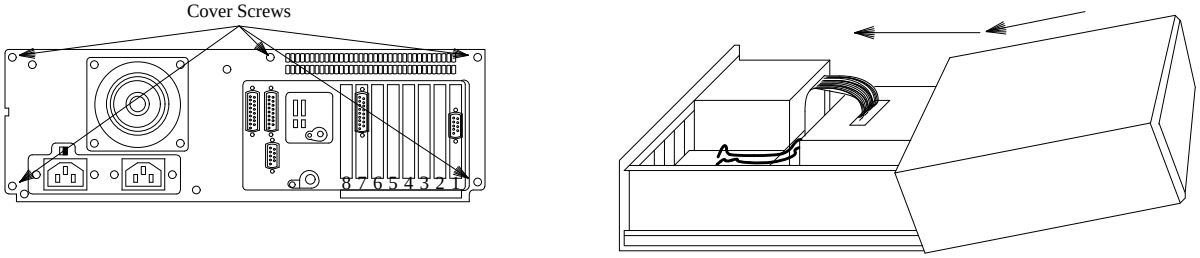


Figure 4-2. Replacing the cover on a 6386-25 WGS

6386-33 WGS

1. Replace the expansion slot cover by sliding the cover back over the chassis as shown in Figure 4-3.
2. Replace the four retaining screws on the expansion slot cover.
3. Replace the chassis cover by sliding the cover over the chassis from the front to the back.
4. Tighten the cover retaining screw.
5. Replace the top cover.

Proceed to Task 2, *Connecting an Analog Line to the Modem*.

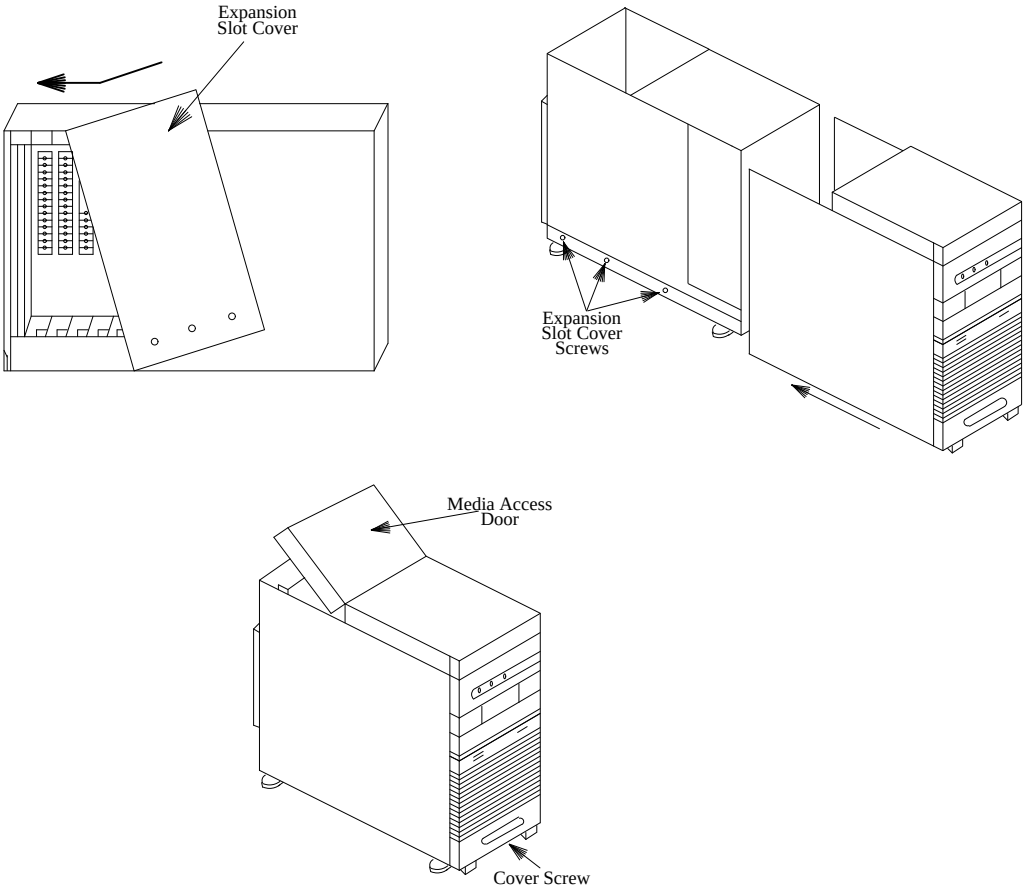


Figure 4-3. Replacing the cover on a 6386-33 WGS

TASK 2: CONNECT AN ANALOG LINE TO THE MODEM

The SID contains an internal modem that allows for remote site access and maintenance. You must connect an analog line from the switch to the remote modem to allow for maintenance. This task should be performed by the installation technician and the customer or the customer's switch vendor. The customer or the customer's switch vendor should connect the analog line to the switch before the installation technician arrives.

Use the following procedure to connect the analog line to the modem.

1. Connect the analog line to the **MODEM** port on the SID, as shown in Figure 4-4.

Proceed to Task 3 on the next page, *Connect the MCI line to the Switch*.

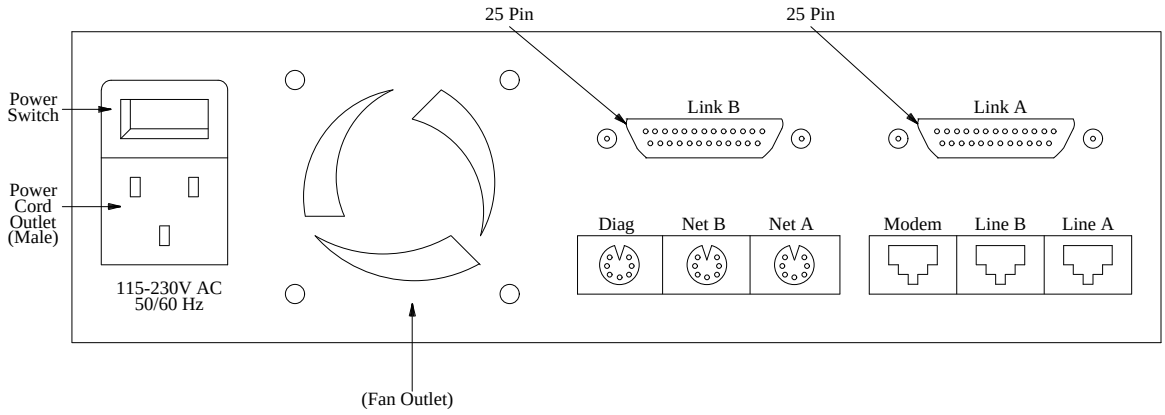


Figure 4-4. Back view of the SID

TASK 3: CONNECT THE MCI LINE TO THE SWITCH

The customer or the customer's switch vendor must complete this task. AT&T does not assume responsibility for any cable connections to the NEAX 2400 switch.

The NEAX 2400 switch communicates with the SID through a Message Center Interface (MCI) link. The RS-232 cable connected to the SID does not connect directly to the switch. The switch uses a 25-pair outlet and the cable from the SID requires an RS-232 25-pin connector. To connect the SID to the switch, you must use the 25-pair-to-25-pin adapter supplied with the switch integration package.

After attaching the adaptor to the switch, you connect the RS-232 cable supplied with the SID to the adaptor. If you need a cable longer than the one shipped with the SID, you must supply the cable.

NOTE

To reduce the chance for data communication errors, do not exceed the Electronics Industry of America (EIA) RS-232 standard cable length of 50 feet.

Use the following instructions to connect the MCI line to the NEAX 2400 switch.

1. Set the MCI I/O port (PN PAIO02) at the same baud rate as the SID, 1200 baud. Use Table 4-1 to set the Dip-switches on the MCI I/O port.

Table 4-1. MCI I/O Port Dip-Switch SW01 or SW11 Settings for Switches 1 through 3

NOTE

To set the baud rate for the MCI Link, you must set switches 1, 2, and 3 in a specific combination. For example, to set the baud rate at 1200BPS, set switch 1 to on, switch 2 to off, and switch 3 to on.

Switch Number	1	2	3	Function
Settings	on	on	on	300BPS
	on	on	off	600BPS
	on	off	on	1200BPS
	on	off	off	2400BPS
	off	on	on	4800BPS
	off	on	off	9600BPS

2. Set the parity of the MCI link to none and the word length to 8 bits.

   Use Tables 4-2 and Table 4-3 to set the dip-switches on the MCI I/O card in the switch.

NOTE

If you need more information for setting the baud rate, parity, and dip-switches on the NEAX 2400 MCI port, refer to the documentation supplied with your switch or contact your switch service representative.

Table 4-2. MCI I/O Port Dip-Switch SW01 or SW11 Settings for Switches 4 through 8

Switch Number	Setting	Function
4	on	Parity bit valid
	off	Parity bit invalid
5	on	Odd parity
	off	Even parity
6	on	7 bits
	off	8 bits
7	on	1 stop bit
	off	2 stop bits
8	on	Send side FIFO is 1 byte
	off	Send side FIFO is 64 bytes

Table 4-3. MCI I/O Port Dip-Switch SW02 or SW12 Settings for Switches 1 through 8

Switch Number	Setting	Function
1	on	When PB lead is - terminal is busy
	off	When PB lead is + terminal is busy
2	on	DTR signal is always on
	off	DTR signal is controlled by the CPU
3	on	DSR signal is not provided
	off	DSR signal is provided
4	on	CD is not provided
	off	CD is provided
5	on	CS is not provided
	off	CS is provided
6	on	CI is not provided
	off	CI is provided
7	on	PB signal is not provided
	off	PB signal is provided
8	off	Not used

NOTE

Recommended Default Settings:

- If you use port 0, configure switches 01 and 02. If you use port 1, configure switches 11 and 12.
- Standard switch settings for SW01 or SW11 are 1 on, 2 off, 3 on, 4 off, 5 off, 6 off, 7 on, and 8 on.
- Standard switch settings for SW02 or SW12 are 1 on, 2 on, 3 on, 4 on, 5 on, 6 on, 7 on, and 8 off.

3. Connect the MCI I/O port 25-pair-to-25-pin adaptor supplied with the SID.

   The following table shows you the pinouts for the adaptor.

Table 4-4. 25-Pair to RS-232 Adaptor Pinouts

NEAX 2400 25 Pair	RS-232 Function	RS-232 Pin Number
Port 0		
Violet/Slate	Frame Ground	1
Blue/White	Transmit Data	3
Orange/White	Receive Data	2
Blue/Red	Signal Ground	7
Port 1		
Violet/Slate	Frame Ground	1
Green/Black	Transmit Data	3
Brown/Black	Receive Data	2
Green/Yellow	Signal Ground	7

4. Connect one end of the 6’ RS-232 cable supplied with the SID to the 25-pair to 25-pin adaptor.

Proceed to Task 4, *Connect the MCI Line to the SID*.

TASK 4: CONNECT THE MCI LINE TO THE SID

After connecting the RS-232 cable to the switch, you must connect the RS-232 cable to the SID. The installation technician will connect the cable. Use the following instructions to connect the MCI line to the SID.

1. Connect the free end of the RS-232 cable to **LINK B** on the back of the SID. Figure 4-5 shows you the location of **LINK B**.
2. Tighten the screws on the connector.

Proceed to Task 5, *Connect the SID to AUDIX Voice Power*.

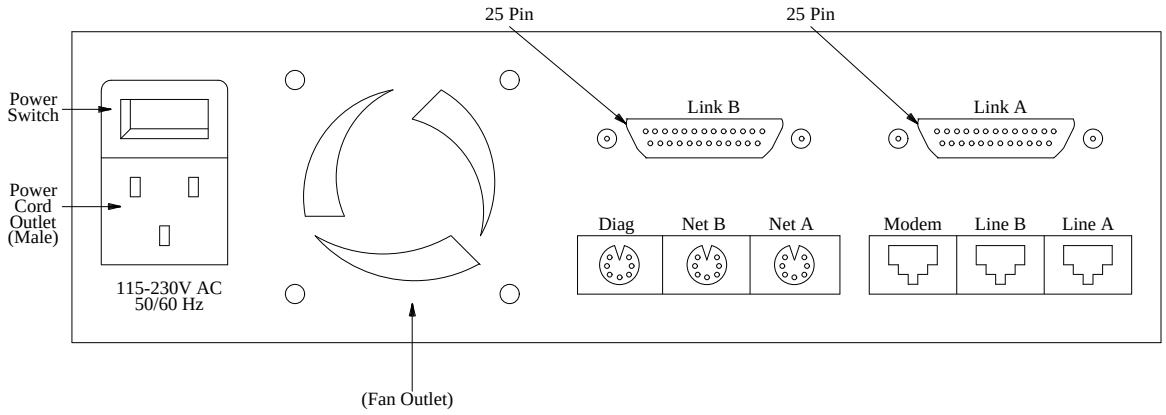


Figure 4-5. Back view of the SID

TASK 5: CONNECT THE SID TO AUDIX VOICE POWER

This task requires you to connect the 6' RS-232 cable to the SID and to AUDIX Voice Power or AUDIX Voice Power Lodging and should be completed by the installation technician. The cable connects to the SID through an RS-232 adaptor. For AUDIX Voice Power or AUDIX Voice Power Lodging, the cable connects through a 9-pin connector. Use the following instructions to connect the SID to AUDIX Voice Power or AUDIX Voice Power Lodging.

1. Connect the 25-pin RS-232 connector to **LINK A** on the back of the SID. Figure 4-5 shows you the location of **LINK A**.
2. Connect the 9-pin connector to COM2 on the AUDIX Voice Power or AUDIX Voice Power Lodging computer.

Proceed to Task 6 on the next page, *Connect the SID Power Cord.*

TASK 6: CONNECT THE SID POWER CORD

The installation technician or the customer must complete this task.

1. Plug the female end of the power cord into the AC power-in socket (A) on the SID as shown in Figure 4-6.

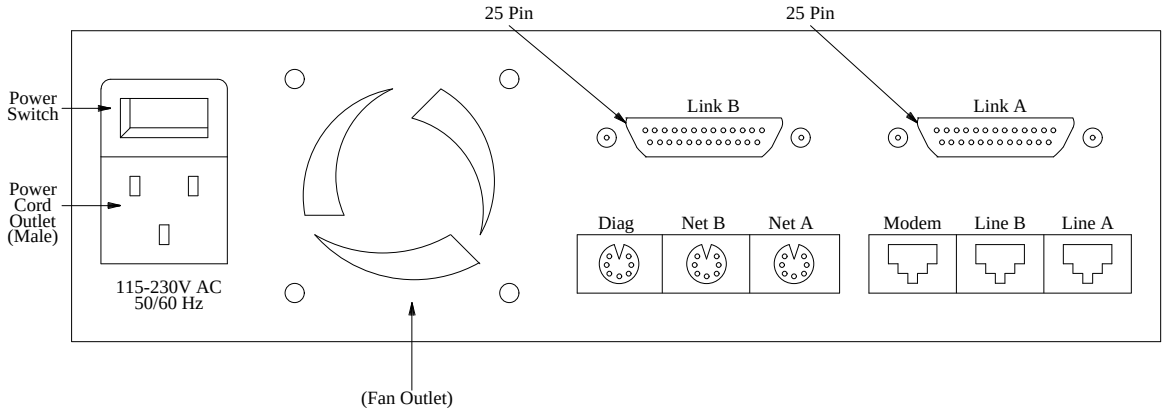


Figure 4-6. Power cord connection on the SID

2. Plug the male end of the power cord into the AC outlet provided by the customer.
3. Locate the power switch on the back of the SID, shown in Figure 4-6.
4. Toggle the power switch to the **ON** position.

   When you turn on the power switch, the Status LED on the front of the SID illuminates.

You have completed the hardware installation steps required for the NEAX 2400 integration.

- If you are installing a standalone version of AUDIX Voice Power R2.1.1, return to Chapter 2, *Hardware Installation*, in *AUDIX Voice Power R2.1.1 Installation and Maintenance Guide* (585-310-108).
- If you are installing a coresident version of AUDIX Voice Power R2.1.1 or any version of AUDIX Voice Power Lodging R1.1, return to Task 8 in Chapter 2, *Hardware Installation*, of *AUDIX Voice Power Lodging R1.1 Installation* (585-310-125).
- If you are installing an AUDIX Voice Power system R3.0, continue to Chapter 5, *Software Installation*, in this document.

5. Software Installation

Chapter 5 contains instructions for installing the software on the 6386 platform required to integrate an NEC NEAX 2400 MCI switch with an AUDIX Voice Power system R2.1.1, R3.0, or AUDIX Voice Power Lodging R1.1.

Select one of the following options before proceeding with the instructions in this chapter.

- If you are integrating to a standalone version of an AUDIX Voice Power system R2.1.1 or a version coresident with an AUDIX Voice Power Lodging R1.1 system, proceed to the *R2.1.1 and Lodging R1.1 Software Installation* section of this chapter.
- If you are integrating to an AUDIX Voice Power system R3.0, proceed to the *R3.0 Software Installation* section of this chapter.

R2.1.1 AND LODGING R1.1 SOFTWARE INSTALLATION

Perform the instructions in this section if you are installing a standalone version of an AUDIX Voice Power system R2.1.1 or a version coresident with an AUDIX Voice Power Lodging R1.1 system. If you are installing an AUDIX Voice Power system R3.0, *do not* perform the instructions in this section. Proceed to the *R3.0 Software Installation* section.

Installing NEAX Switch Integration Software

All configurations require this task. This task should be performed by an installation technician.

- If you are installing AUDIX Voice Power R2.1.1 coresident with AUDIX Voice Power Lodging R1.1, you should have just completed Task 9, *Installing AUDIX Voice Power Lodging R1.1 Software*, in Chapter 3 of *AUDIX Voice Power Lodging Installation* (585-310-125).
- If you are installing a standalone version of AUDIX Voice Power, perform this task instead of the *Installing the Switch Integration Software* task in Chapter 3, *Software Installation*, of *AUDIX Voice Power R2.1.1 Installation and Maintenance Guide* (585-310-108).

You use two diskettes to install the NEAX switch integration software. Make sure you have both diskettes before you begin the task. Use the following instructions to install the NEAX integration software.

1. At the UNIX system prompt (**#**), type **`installpkg`** and press ENTER.

   After you press the key, you see the following prompt on the screen:

   ```
   Confirm

   Please insert the floppy disk.

   If the program installation requires more than one floppy disk,
   be sure to insert the disks in the proper order, starting with
   disk number 1.
   After the first floppy disk, instructions will be provided for
   inserting the remaining floppy disks.

   Strike ENTER when ready
   or ESC to stop.
   ```

   If your 6386 WGS has two floppy drives, you see the following prompt on the screen:

   ```
   This system has two floppy drives.
   Strike ENTER to install from drive 0
   or 1 to install from drive 1.
   ```

   Select the appropriate drive and continue to the next step.

2. Insert the *NEAX 2400 Integration Software* diskette in the floppy drive and press ENTER.

   After you press the key, the system installs the software from the first floppy disk. The process lasts several minutes. When the system finishes installing the first floppy disk, you see the following prompt on the screen:

   ```
   Reached end of medium on input.
   You may remove this floppy disk.

   To QUIT - strike <q> followed by <ENTER>.
   To continue - insert floppy disk number 2 and strike the <ENTER>
   key.
   ```

3. Remove the first floppy disk.

4. Insert the second *NEAX 2400 Integration Software* diskette in the floppy drive.

5. Press ENTER.

   After you press the key, you see several messages on the screen. The installation process lasts several minutes. At the end of the process, you see the following message on the screen:

```
You will now be asked whether you are ready to assign the tty
port to be used by the integration device for all AUDIX Voice
Power applications currently installed on the system.

This would be something like /dev/tty00 or /dev/tty01.
If you are not ready to do this at this time, or
this must be changed sometime after installation,
refer to the documentation to see how to do this.

Do you want to do any Voice Power Application to Switch
Integration Association at this time? (y/n)
```

6. If you *do not* want to associate the switch integration application to the AUDIX Voice Power application, enter **n**

   If you *do* want to perform the association, enter **y**

NOTE

For most applications, enter **y** and perform the association procedure. The instructions in this section assume that you do enter **y**. If you enter **n** and do not associate the switch, you must perform the instructions in the *Associating Application to Switch* section of this chapter when you do want to associate the switch.

After you enter **y**, you see the ASSIGN NECVTG TO APPLICATION window as shown in the following example.

```
Assign NECVTG to Applications

TTY Port: /dev/tty01

Baud Rate: 1200
```

For the NEAX 2400 MCI integration to AUDIX Voice Power or AUDIX Voice Power Lodging, you must use `tty01`.

7. Select `tty01` by pressing SAVE (F3).

   After you press the key, you see the DONE confirmation window as shown in the following example.

```
DONE

Add done successfully

Press <Enter> to continue
```

8. Press ENTER.
9. If you are installing a standalone configuration of AUDIX Voice Power 2.1.1 or AUDIX Voice Power Lodging R1.1, proceed to step 10.

   If you are installing a coresident version of AUDIX Voice Power 2.1.1 or AUDIX Voice Power Lodging R1.1, the system returns you to the ASSIGN NECVTG TO APPLICATION window. To assign a port for the coresident application, repeat steps 7 and 8. Use `tty01` for the coresident application also.

   Select `tty01` for the second application package and press SAVE. Press ENTER at the DONE window. You see the CONFIRM window as shown in the following example.

```
Confirm

This tty device has already been
used by another application.
do you really want to use the
same tty for this application?

Press <y> to confirm.
Press <n> to cancel.
```

   Press y to confirm that you want to assign `tty01` for both applications. After you press the key, you see the DONE window confirming the assignment of the port. Proceed to the next step.
10. After you assign the applications to the switch and press ENTER, you see the following message:

```
Association of the AVP package complete.
Remove the floppy disk.
```

11. Remove the floppy disk. You have completed the NEAX integration software installation.

Select one of the options below and continue with the AUDIX Voice Power R2.1.1 or AUDIX Voice Power Lodging software installation.

- If you need to install AUDIX Voice Power Lodging PMS Integration software, continue with Task 10 in Chapter 3 of *AUDIX Voice Power Lodging R1.1 Installation*.
- If you do not need to install a PMS but do need to install either of the AUDIX Voice Power Lodging Guest Language Packages, continue with Task 11 in Chapter 3 of *AUDIX Voice Power Lodging R1.1 Installation*.
- If you do not need to install a PMS or the Guest packages, continue with Task 12 in Chapter 3 of *AUDIX Voice Power Lodging R1.1 Installation*.
- If you need to install a standalone version of AUDIX Voice Power 2.1.1, return to Chapter 3, *Software Installation*, of *AUDIX Voice Power R2.1.1 Installation and Maintenance Guide* and continue with the software installation.

Associating the Application with the Switch

Perform this step only if you *did not* associate the application with the switch during the installation of the NEAX Integration software.

Before you perform this task, complete Tasks 1 through 4 in Chapter 5, *Initial Administration*, of *AUDIX Voice Power Lodging R1.1 Installation*. If you are performing an upgrade, you should have completed Task 6 or Task 7 in Appendix A, *Upgrades*, in *AUDIX Voice Power Lodging R1.1 Installation.*

Use the following instructions to associate AUDIX Voice Power Lodging with the switch integration package.

1. At the VOICE SYSTEM ADMINISTRATION menu, select the following series of windows.

   ```
   Configuration Management
   System Control
   Stop Voice System
   ```

   A WAIT TIME window appears.

2. Enter `60`

   This is the number of seconds the system will wait before shutting down.

3. Press SAVE (F3).

   When the process is finished, you see the following message: `The Voice System has stopped`

4. Press ENTER to continue.

5. Press CANCEL (F6) to exit the SYSTEM CONTROL window.

6. Press CANCEL (F6) to exit the CONFIGURATION MANAGEMENT window and return to the VOICE SYSTEM ADMINISTRATION window.

7. At the VOICE SYSTEM ADMINISTRATION menu, select the following series of windows.

   ```
   Application Package Administration
   Application/Switch Integration Association
   ```

8. Press CHG-KEYS (F8) then ASSIGN (F3).

   After you press the key, you see the ASSIGN APPLICATION TO SWITCH INTEGRATION window as shown in the following example.

```
Assign Application to Switch Integration

  Application Package:

  Switch Integration Package:
```

9. Press CHOICES (F2).
10. If you are installing coresident applications, select the first application, `AUDIX Voice Power Application Software R1.1`
11. Press ENTER
12. Use the arrow key to move the cursor to `Switch Integration Package`
13. Press CHOICES (F2).
14. Select `NEAX 2400 VTG Switch Integration Package R1.0`
15. Press SAVE (F3).

    After you press the key, you see the ASSIGN NECVTG TO APPLICATION window as shown in the following example.

```
Assign NECVTG To Application

  TTY Port :  _________
Baud Rate :   1200
```

16. Press CHOICES (F2) and select the name of the port connection.

    NOTE

    You must use `ttys01` for AUDIX Voice Power 2.1.1 and AUDIX Voice Power Lodging R1.1.

    Do not change the `Baud Rate` default of 1200.

17. Press SAVE (F3).

    After you press the key, you see the DONE confirmation window.

18. Press ENTER to continue.

    After you press the key, you see another confirmation window telling you that the system assigned the port.

19. Press ENTER to exit the confirmation window.

20. If you are installing a coresident configuration of AUDIX Voice Power (Configuration 3 or 4), repeat steps 9 through 19. Use `AUDIX Voice Power Lodging Application Software R1.1` as the application. Use `tty01` as the port assignment for the AUDIX Voice Power Lodging R1.1 application.
21. Press CANCEL (F6) to exit the ASSIGN APPLICATION TO SWITCH INTEGRATION window.
22. When all applications are associated with switch packages, press CANCEL (F6) to exit the APPLICATION/SWITCH INTEGRATION ASSOCIATION window.
23. Press CANCEL (F6) to exit the APPLICATION PACKAGE ADMINISTRATION window.
24. At the VOICE SYSTEM ADMINISTRATION menu, select the following series of windows.

    ```
    Configuration Management
    System Control
    Start Voice System
    ```

    When the process finishes, you see the following message:

    ```
    Startup of the Voice System is complete
    ```

25. Press ENTER to continue.
26. Press CANCEL (F6) to exit the SYSTEM CONTROL menu.
27. Press CANCEL (F6) to exit the CONFIGURATION MANAGEMENT menu.

You have completed the association process.

- To continue with a new AUDIX Voice Power Lodging R1.1 installation, coresident with AUDIX Voice Power R2.1.1 or as a standalone configuration, return to Task 5 in Chapter 5, *Initial Administration*, in *AUDIX Voice Power Lodging R1.1 Installation*.
- To continue with an upgrade of AUDIX Voice Power Lodging R1.1, coresident with AUDIX Voice Power R2.1.1 or as a standalone configuration, return to Task 10 in Appendix A, *Upgrades*, of *AUDIX Voice Power Lodging R1.1 Installation*.
- To continue with a standalone installation of AUDIX Voice Power 2.1.1, return to Chapter 3, *Software Installation* of *AUDIX Voice Power R2.1.1 Installation and Maintenance Guide*.

R3.0 SOFTWARE INSTALLATION

Perform the instructions in this section if you are installing an AUDIX Voice Power system R3.0. If you are installing a standalone version of an AUDIX Voice Power system R2.1.1 or a coresident version with an AUDIX Voice Power Lodging R1.1 system, *do not* perform the instructions in this section. Proceed to the *R2.1.1 and Lodging R1.1 Software Installation* section in this chapter.

Installing NEAX Switch Integration Software for R3.0

The *AUDIX Voice Power Switch Integration Software for NEC NEAX PBX* contains the software required to integrate an NEC NEAX 2400 MCI switch with AUDIX Voice Power R3.0. The software should be installed only by an authorized and trained installation technician or by the system administrator.

Before you install the switch integration software, install all AUDIX Voice Power software as instructed in *AUDIX Voice Power System R3.0 Software Installation* (585-310-115). Use the following instructions to install the switch integration software.

1. Enter **`root`** at the `Console Login` prompt to log in as the AUDIX Voice Power administrator.

   The system responds with the `Password` prompt.

2. Press ENTER.

3. The system responds with the UNIX system prompt (**#**).

4. Enter **`installpkg`** at the UNIX system prompt (**#**).

   The system responds with the following prompt:

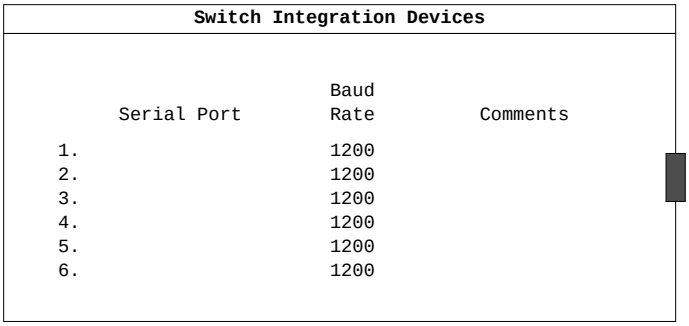
   ```
   Confirm

   Please insert the floppy disk.

   If the program installation requires more than one floppy
   disk, be sure to insert the disks in the proper order,
   starting with disk number 1.
   After the first floppy disk, instructions will be provided
   for inserting the remaining floppy disks.

   Strike ENTER when ready
   or ESC to stop.
   ```

5. Insert the *AUDIX Voice Power Switch Integration Software R3.0 for NEAX 2400 PBX* diskette in the floppy drive and press ENTER.

   The system starts the installation process and displays the following series of informational messages.

   ```
   Moving files to proper directories...done.
   Switch package associated with AUDIX Voice Power R3.0.
   Adding NEC NEAX switch related information.
   ```

6. After displaying the messages, the system displays the SWITCH INTEGRATION DEVICES form as shown in the following example.



   The form you see may appear different than the example, depending on the hardware installed in your system. On the form you need to enter the port number connected to the SID.

7. With the cursor in the first `Serial Port` field, press CHOICES to view a list of valid port names.

   After you press the key, you see a menu that lists each port name.

8. Use the arrow keys to move the cursor to the **`/dev/tty01`** port name.

   The SID connects to the serial port on the 6386. The name for the serial port is **`/dev/tty01`**. You can enter comments about the port name in the `Comments` field.

9. Press ENTER to select the port and return to the SWITCH INTEGRATION DEVICES form.

10. Press SAVE to enter the information and continue with the installation process.

    After you press the key, the system saves the port name information and completes the installation process. You see the following messages on the screen:

```
Neax Switch Integration  Package R3.0 has been successfully
installed.

You may now remove the floppy disk.
The voice system is not presently running.
Use the "start_vs" command to start the voice system.

The installation of the AUDIX Voice Power Switch
Integration Software (for NEC PBX) R3.0 is now
complete.
```

    The system returns you to the `Console Login` prompt.

11. Remove the diskette from the floppy disk drive.

Return to Chapter 6, *Verifying the Software Installation*, in *AUDIX Voice Power System R3.0 Software Installation* (585-310-115).

6. AUDIX Voice Power R3.0 Switch Parameters

This chapter contains administration information for integrating AUDIX Voice Power R3.0 with the NEAX 2400 switch. The AUDIX Voice Power system needs to know specific information about the switch, for example whether to activate message waiting lamps and the type and length of the disconnect. This chapter includes instructions for the following procedures:

- associating the application and the switch interface
- setting the message waiting lamp parameters
- setting the switch interface parameters

Use the information in this chapter only if you have an AUDIX Voice Power system R3.0. You can find switch parameter information for AUDIX Voice Power R2.1.1 in *AUDIX Voice Power Release 2.1.1 Installation and Maintenance Guide* (585-310-108) and *AUDIX Voice Power Release 2.1.1 System Manager's Guide* (585-310-520). You can find switch parameter information for AUDIX Voice Power Lodging R1.1 in *AUDIX Voice Power Lodging R1.1 Administration* (585-310-525).

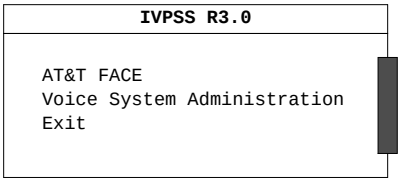
Continue with the procedures on the next page to integrate an AUDIX Voice Power system R3.0 with an NEC NEAX 2400 MCI switch.

SET THE MESSAGE WAITING INDICATOR PARAMETERS

You need to instruct the AUDIX Voice Power system R3.0 if you want to activate the message waiting indicator option. If you plan to activate the message waiting indicator feature, you also need to determine if you want the system to "refresh" or make sure the message waiting indicators are in the correct state. To use the refresh feature, you also need to set a time interval for the AUDIX Voice Power system to perform the sequential refresh process. Use the instructions in this section to set the message waiting indicator parameters.

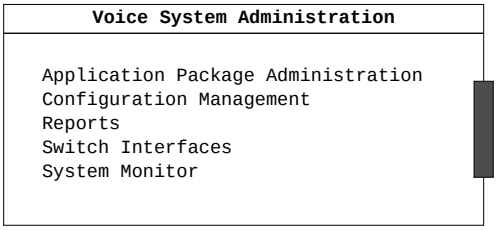
1. Enter **audix** at the `Console Login` prompt.
2. Enter your password at the `Password` prompt.

   After you enter the password, you see the IVPSS 3.0 menu as shown in the following example.



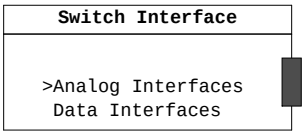
3. Select the `Voice System Administration` option from the menu.

   After you select the option, you see the VOICE SYSTEM ADMINISTRATION menu as shown in the following example.



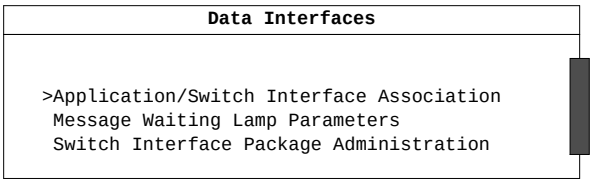
4. Select the `Switch Interfaces` option from the menu.

   After you select the option, you see the SWITCH INTERFACES menu as shown in the following example.



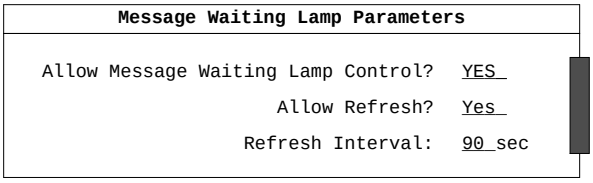
5. Select the `Data Interfaces` option from the menu.

   After you select the option, you see the DATA INTERFACES menu as shown in the following example.



6. Select the `Message Waiting Lamp Parameters` option from the DATA INTERFACES menu.

   After you select the option, you see the MESSAGE WAITING LAMP PARAMETERS form as shown in the following example.



7. Enter **Y** for yes or **N** for no in the `Allow Message Waiting Lamp Control` field.

   The field allows you to turn the message waiting lamp option on or off. If you enter `NO`, the system does not update any message waiting lamps.

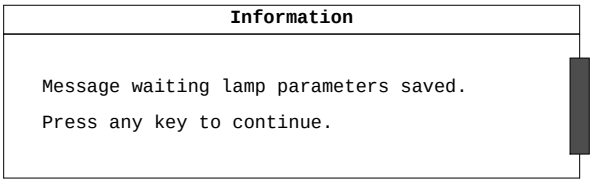
8. Enter **Y** for yes or **N** for no in the `Allow Refresh` field.

   By turning the feature on, AUDIX Voice Power "refreshes" or makes sure the message waiting lamps are in the correct state. Different types of telephones use different methods of turning message waiting lamps off and on. Refresh turns the lamp off or on again to make sure the lamp is in the correct state.

9. Enter a time, in seconds, in the `Refresh Interval` field.

   The Allow Refresh feature selects one lamp at a time in a sequential method and performs the refresh process. The `Refresh Interval` field specifies the amount of time to pause between each lamp refresh.

10. When you finish entering the information, press SAVE to enter the information into the system. After you press the key, you see a confirmation window as shown in the following example.



11. Press ENTER to exit the window and return to the DATA INTERFACES menu.

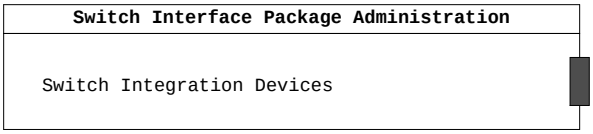
Proceed to the next section, *Administer the Switch Interface Package*.

ADMINISTER THE SWITCH INTERFACE PACKAGE

The AUDIX Voice Power system R3.0 needs to know which communication port connects to the SID. This section explains how you specify the port used. You use the SWITCH INTEGRATION PACKAGE screen to specify the port. Use the following procedure to administer the port.

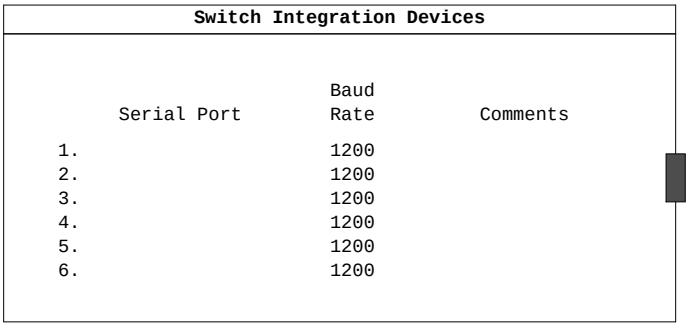
1. Select the `Switch Interface Package Administration` option from the DATA INTERFACES menu.

   After you select the option, you see the SWITCH INTERFACE PACKAGE ADMINISTRATION menu as shown in the following example.



2. Select the `Switch Integration Devices` option from the menu.

   After you press the key, you see the SWITCH INTEGRATION DEVICES form as shown in the following example.



   You need to enter the number of the port connected to the SID. The system uses a default port number of **`/dev/tty01`**. The default identifies the serial part, or COM 2.

3. With the cursor in the first `Serial Port` field, press CHOICES to view a list of valid port names.

   After you press the key, you see a menu that lists each port name.

4. Use the arrow keys to move the cursor to the **`/dev/tty01`** port name.

   The SID connects to the serial port on the 6386. The name for the serial port is **`/dev/tty01`**. You also can enter comments about the port name in the `Comments` field.

5. Press ENTER to select the port and return to the SWITCH INTEGRATION PACKAGE ADMINISTRATION menu.

6. Press SAVE to enter the information into the system and return to the DATA INTERFACES form.

Proceed to the next section, *Set the Switch Interface Parameters.*

SET THE SWITCH INTERFACE PARAMETERS

AUDIX Voice Power R3.0 must know specific switch interface parameters to communicate with a NEAX 2400 switch. The values for the parameters are set at the factory as the system defaults. Table 6-1 shows you the system default switch interface values.

Table 6-1. Switch Interface Parameter Values

Parameter	Default Value
Switchhook Flash Duration	600
Wink Disconnect Interval	300
Signaling Type	TT

NOTE

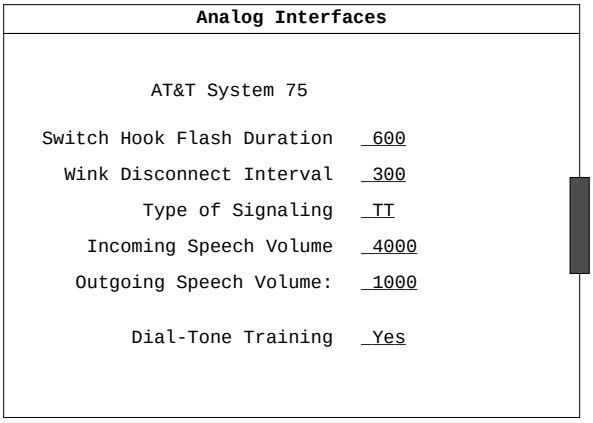
You must set Signaling Type to **TT** (touch-tone dialing) for the system to operate correctly. If you set the field to **DP** (dial-pulse dialing), the AUDIX Voice Power system R3.0 cannot dial the pound sign (#) or a star (*).

Although the parameters are set at the factory, you need to check the parameters to make sure they are correctly set. Use the following instructions to access the ANALOG INTERFACES form and check the parameters.

1. After completing the instructions in the previous section, *Administer the Switch Interface Package*, you should see the DATA INTERFACES menu on the screen. Press CANCEL to exit the menu and return to the SWITCH INTERFACES menu as shown in the following example.

2. Select the `Analog Interfaces` option from the menu.

   After you select the option, you see the ANALOG INTERFACES form as shown in the following example.



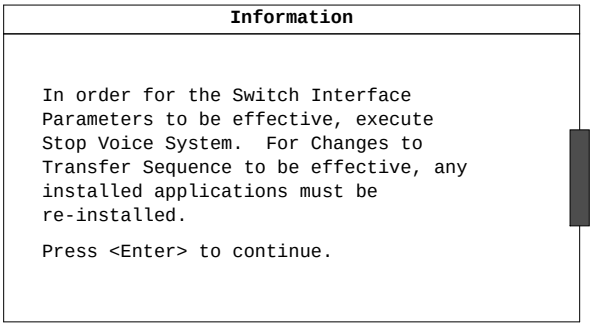
Compare the values you see on the ANALOG INTERFACES form with the values shown in the example form and in Table 6-1. Select one of the following options.

- If the values on the form match the values in the example and Table 6-1, proceed to step 7.
- If any value on the form does not match the value shown in the example or Table 6-1, continue with the next step.

3. Use the arrow keys to move the cursor to the field that contains a different value.
4. Enter the correct value in the field. Use Table 6-1 and the example ANALOG INTERFACES form to enter all correct values.

   The `Incoming Speech Volume` and the `Outgoing Speech Volume` fields are display only. You cannot change the information in the fields.

5. Press SAVE to enter the information into the system database. After you press the key, you see the following information window.



6. Press ENTER to exit the information window and return to the SWITCH INTERFACES menu.
7. Press CANCEL to exit the menu and return to the VOICE SYSTEM ADMINISTRATION menu.

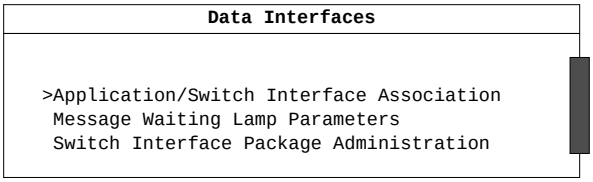
Proceed to the next section, *Associate the Application and Switch Interface*.

ASSOCIATE THE APPLICATION AND SWITCH INTERFACE

When you install the *AUDIX Voice Power R3.0 Switch Integration to NEC NEAX PBX* software, the installation process automatically associates the switch integration with the AUDIX Voice Power system R3.0. By associating the software packages, the AUDIX Voice Power system R3.0 knows to use the NEAX switch integration software to receive call information and complete transactions. Perform the procedure in this section only to verify that the system is associated with the software packages.

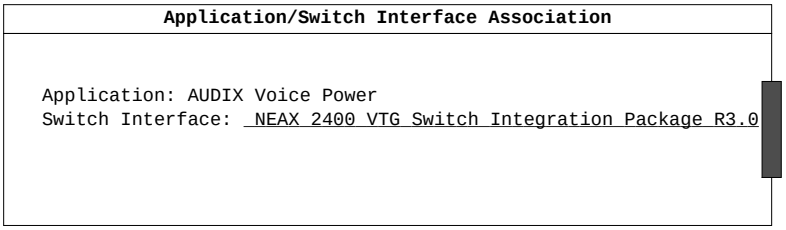
1. Select the `Data Interfaces` option from the SWITCH INTERFACES menu.

   After you select the option, you see the DATA INTERFACES menu as shown in the following example.



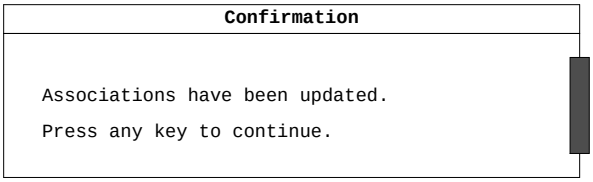
2. Select the `Application/Switch Interface Association` option from the menu.

   After you select the option, you see the APPLICATION/SWITCH INTERFACE ASSOCIATION form as shown in the following example.



3. If the `Switch Interface` field does not contain the correct application, `NEAX 2400 VTG Switch Integration Package R3.0`, press CHOICES to view and select the options.

4. Press SAVE to enter the information into the system. After you press the key, you see a confirmation window as shown in the following example.



5. Press ENTER to exit the confirmation window and return to the DATA INTERFACES menu.

You need to stop and start the voice system. Return to *Administering System Parameters* in Chapter 9, *Initial Administration*, of *AUDIX Voice Power System R3.0 Software Installation* (585-310-115) and complete the initial administration procedures. As you complete the instructions, you will stop and start the voice system.

7. NEAX 2400 Switch Administration

This chapter contains instructions for administering an NEC NEAX 2400 MCI switch to work with an AUDIX Voice Power system R2.1.1, an AUDIX Voice Power system R3.0, or AUDIX Voice Power Lodging R1.1. If you have another type of switch, refer to the documentation provided with that switch or the switch integration package for more information.

The instructions in this chapter only explain the screen fields and information necessary to integrate the NEAX 2400 switch with an AUDIX Voice Power system and AUDIX Voice Power Lodging R1.1. If you require more information for any screens or processes not explained in this chapter, refer to the documentation supplied with your switch for more information.

As you integrate or "administer" the switch, you must perform the following processes:

- Administer analog voice mail ports
- Assign voice mail ports to a UCD group (switch group)
- Configure the Message Center Interface link

NOTE

The information presented in this chapter represents guidelines for administering the NEAX 2400 switch to integrate with an AUDIX Voice Power system. The switch administration process should be performed by a trained NEC switch technician.

ADMINISTER ANALOG VOICE MAIL PORTS

Each voice mail port connects to the switch through an analog line. For the integration process to function, you must configure the voice mail port analog lines in the same manner as you configure analog lines for a 2500 telephone set. After configuring the ports on the switch, you must assign the analog port extension numbers on the SID configuration. You perform the SID processes in Chapter 8, *Switch Integration Device Administration*.

NOTE

Automated Attendant may not work properly on the NEAX 2400 with software version 4200 due to limitations in the NEAX 2400 switch.

Use the following instructions to administer the analog lines for the voice mail ports.

1. Log on to the NEAX 2400 MAT terminal. For NEAX 2400 Maintenance and Administration Terminal (MAT) logon instructions, contact your system administrator.
2. After you log on to the MAT terminal, you see the 2400 MAINTENANCE COMMAND MENU as shown in Figure 7-1.

```
                    ***   2400 MAINTENANCE COMMAND MENU   ***

  1   SYSTEM CONTROL
  2   SYSTEM BACKUP
  3   MAKE BUSY CONTROL
  4   TRAFFIC DATA
  5   TEST
  6   STATION DATA
  7   TRUNK DATA
  8   NUMBERING PLAN
  9   SERVICE FEATURE DATA (1)
 10   SERVICE FEATURE DATA (2)
 11   SIGNAL TRANSLATION DATA
 12   RESTRICTION DATA
 13   INSTALLATION
 14   LIST UP


                   ENTER MENU ITEM NO [ 6 ]
```

Figure 7-1. 2400 Maintenance Command Menu

3. Enter **6** to select the `Station Data` option. After you select the option, you see the STATION DATA COMMANDS screen as shown in Figure 7-2 on the next page.

```
            *** STATION DATA COMMANDS ***

  1   ASDT:  Assignment of Station Data                          [CM01]
  2   ASCL:  Assignment of Station Class Data                    [CM01]
  3   ASTN:  Assignment of Station Number                        [CM01]
  4   DSTN:  Display of Station Data                             [CM01]
  5   AKYD:  Assignment of Key Data for Dterm                    [CM01]
  6   ASHP:  Assignment of Station Hunting-Pilot                 [CM01]
  7   RSHP:  Remove Station Hunting-Pilot                        [CM01]
  8   ASHC:  Assignment of Station Hunting-Circularn             [CM01]
  9   RSHC:  Remove Station Hunting-Circular                     [CM01]
 10   ACPG:  Assignment of Call Pickup Group                     [CM01]
 11   AISA:  Assignment of Individual Speed Calling Entry Area   [CM02]
 12   APHN:  Assignment of Phantom Station Number                [CM02]
 13   ASHU:  Assignment of Station Hunting-UCD                   [CM01]
 14   RSHU:  Remove Station Hunting-UCD                          [CM01]
 15   AUOG:  Assignment of UCD Overflow Group                    [CM01]

            ENTER MENU ITEM NO [ 1 ]
```

Figure 7-2. Station Data Commands menu

4. Enter **1** to select the `Assignment of Station Data` option and enter station administration information for each voice mail port. After you select the option, you see the screen as shown in Figure 7-3.

```
Assignment of Station Data

   TN:  1  STN:                        TN  :  Tenant Number
   LENS:  000000                       STN :  Station Number
   TEC:  1  RSC:  0  SFC:  0           LENS:  Line Equipment Number (6 Digits)
                                       TEC :  Telephone Class (1-31)
                                                 1-DP (10PPS) 22-EMM
                                                 2-PB
                                                 3-DP/PB
                                                11-VMM/VMZ
                                                12-Dterm V
                                                13-Data Terminal via Dterm V
                                                14-Hot Line
                                                15-Cas Line
   RSC:  Route Restriction Class (0-15)         16-Data Terminal via Data Module
         for assignment of RSC,ARSC cmnd        18-Virtual Line Appearance
   SFC:  Service Feature Class (0-15)           19-TMM
         for assignment of SFC,ASFC cmnd        20-PSM
```

Figure 7-3. Assignment of Station Data screen

5. In the TN (Tenant Number) field, you see a default value of 1. To select the default value, press ENTER. The cursor moves to the STN field.

   Contact your switch system administrator to determine if this value must be modified.

6. At the STN (station) field, enter the number you plan to use as an analog voice mail port extension. After you press ENTER the cursor moves to the LENS field.

   For example, if you want to assign extensions 500, 501, 502, and 503 to a four port system, enter 500 as the first extension.

7. In the LENS (Line Equipment Number) field, you see a default value of 00000. Enter the correct LENS. After you press ENTER the cursor moves to the TEC field.

   Contact your switch system administrator for the correct line equipment assignment.

8. In the TEC (Telephone Class) field, you see a default value of 1. Enter **3** in the field to permit dial pulse and push button functionality. After you press ENTER the cursor moves to RSC field.

9. In the RSC (Route Restriction Class) field, you see a default value of 0. Enter the correct RSC. After you press ENTER the cursor moves to the SFC field.

   Contact your switch system administrator to determine if the default value is correct.

10. In the SFC (Service Feature Class) field, you see a default value of 0. Enter the correct SFC.

    Contact your switch system administrator for the correct SFC value.

11. When you finish editing the final field, press ENTER to confirm the station administration.

12. When you assign the first station data command for a Line Package, the message PKG CHECK appears on the screen. Check that the correct circuit card is in the correct slot and press ENTER. After you press ENTER the cursor returns to the first field.

    If you continue to assign station data commands to the same Line Package, you receive a WRT? message after entering the station information. Enter **Y** to confirm the information. After you press ENTER the cursor returns to the first field.

13. Repeat steps 5 through 12 for each analog voice mail port you need to assign. For example, if you have already assigned extension 500 but you still need to assign extensions 501, 502, and 503, return to Step 5 and enter 501 as the second extension. Repeat the process until 502 and 503 have been assigned. When you finish entering the analog voice mail port numbers, press / to return to the STATION DATA COMMANDS menu.

    Proceed to the next section, *Assign Voice Mail Extensions to a UCD Group.*

ASSIGN VOICE MAIL EXTENSIONS TO A UCD GROUP

After administering the analog voice mail ports, you assign the ports to a Uniformed Call Distribution (UCD) group or switch group. *AUDIX Voice Power System R3.0 Administration* (585-310-532) refers to UCD groups as switch groups. Switch groups and UCD group are the same. Another telephony term for the groups is "call coverage group". The first extension of a UCD group becomes the forwarding target number for the group. When a subscriber calls AUDIX Voice Power or AUDIX Voice Power Lodging they call the target number of the UCD group. If the target number is busy, the system "hunts" or moves through the other members of the UCD group until the system finds an open channel and completes the call.

The examples in the previous section assigned extensions 500, 501, 502, and 503 to the analog voice mail ports. 500 was assigned as the first port extension and is the target number.

The NEAX 2400 supports up to seven UCD groups with twenty members in each group. The UCD groups do not automatically transfer calls to each other. To connect the groups, you must use the UCD Overflow feature. Using UCD Overflow, calls flow to the next UCD group if all members of the first UCD group are busy. AUDIX Voice Power Lodging R1.1 supports 24 analog ports. If you have a 24 port Lodging system, you must use UCD Overflow. The end of this section contains instructions for setting up UCD Overflow groups.

Use the following instructions to assign voice mail port extensions to a UCD group.

1. At the STATION DATA COMMANDS MENU shown in Figure 7-2, enter **13** to select the `Assignment of Station Hunting-UCD` option. After you enter the selection, you see the ASSIGNMENT OF STATION HUNTING- UCD screen as shown in Figure 7-4.

```
Assignment of Station Hunting - UCD

   TN:  1                                TN :  Tenant Number
   STN:  500                             STN:  Station Number
   CNT:  4    2    STN:  501             CNT:  Number of Stations to entered
                                              (Recommend Max of 20 stations)
                                         ADD:  Number of Stations to be added
                                              (Recommend Max of 20 stations)
                                           *STN:  Station Numbers of the Stations
                                                  included in the UCD group
                                                  (* indicates the order of
                                                  a station in the group)
```

Figure 7-4. Assignment of Station Hunting -UCD screen

2. In the TN field, enter the Tenant Number you assigned to the analog voice mail ports. The system shows a default value of 1 in the field.

   After you press (ENTER) the cursor moves to the STN field.

3. In the STN field, enter the number you assigned as the first voice mail port extension. After you enter the station number, the cursor moves to the CNT field.

   For example, in the previous section a group of analog voice mail ports was assigned extensions 500, 501, 502, and 503. 500 was the first extension assigned.

4. In the CNT (count) field, enter the number of extensions you need to include in the UCD group. After you enter the count, the cursor moves to the second STN field.

   For example, to set up a UCD group using extensions 500, 501, 502, and 503, enter 4.

5. In the second STN field, enter the second voice mail port station you need to assign to the UCD group.

   Using the 500, 501, 502, and 503 example, enter 501 as the second voice mail port station.

6. Repeat Step 5 until you enter all voice mail port extensions in the UCD group. The system continues to ask for voice mail port extensions until you enter the enough stations to match the CNT field.

   In the examples above, CNT was set to 4. Extensions 500, 501, 502, and 503 were assigned to the UCD group. 503 is the fourth and last extension you need to enter.

7. After you enter the last extension for the UCD group, you see the message WRT? on the screen. Enter **Y** to confirm and save the information you entered.

8. Press (/) to exit the screen and return to the STATION DATA COMMANDS menu.

Setting Up a UCD Overflow Group

On the NEAX 2400 switch, you can create a maximum of 7 UCD groups with 20 station extensions in each UCD group. If all the extensions in a UCD group are busy, calls do not automatically transfer to the next group. You must use the UCD Overflow feature to link the groups together. By using the UCD Overflow feature, an incoming call transfers from a busy UCD group to another UCD group.

AUDIX Voice Power R2.1.1 and R3.0 support a maximum of 12 analog ports. AUDIX Voice Power Lodging R1.1 supports a maximum of 24 analog ports. If you plan to use a 24 port AUDIX Voice Power Lodging R1.1 system, you need to use the UCD overflow feature.

NOTE

The NEAX 2400 switch must have software version 4200 or greater to support UCD overflow. If the switch does not contain software version 4200 or greater, the SID only supports 20 voice mail extensions, the maximum allowed in one UCD group.

Use the following instructions to administer UCD Overflow.

1. Use the instructions in the previous section, *Assign Voice Mail Extensions to a UCD Group* to assign all voice mail ports to UCD groups.

   For example, if you are setting up an AUDIX Voice Power Lodging R1.1 system with 24 ports, you could set up 4 UCD groups with 6 ports in each group. Determine the best method for your application.

2. After you create all necessary UCD groups and return to the STATION DATA COMMAND menu, enter **15** to select the `Assignment of UCD Overflow` option.

   After you select the option, you see the ASSIGNMENT OF UCD OVERFLOW GROUP screen as shown in Figure 7-5 on the next page.

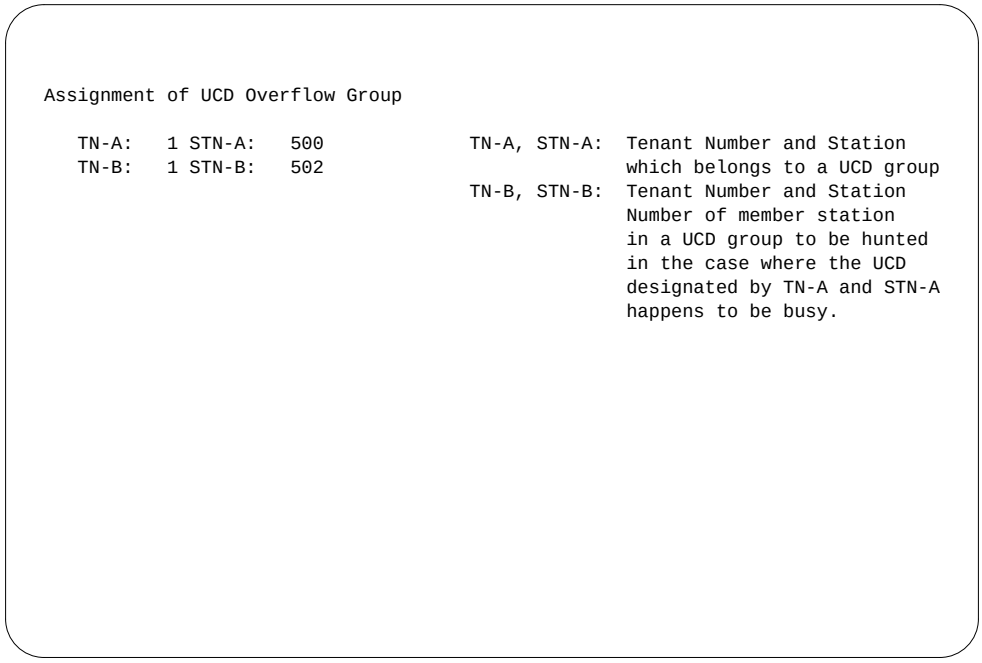


Figure 7-5. Assignment of UCD Overflow Group screen

3. In the TN-A field, enter the Tenant Number you assigned to the first UCD group you created. After you press ENTER the cursor moves to the STN-A field.
4. In the STN-A field, enter the target number of the first UCD group you created. After you press ENTER the cursor moves to the TN-B field.

   For example, if you create two UCD groups with extensions 500 and 501 in the first group and extensions 502 and 503 in the second group, the target number for the first UCD group is 500.
5. In the TN-B field, enter the Tenant Number you assigned to the UCD group you want the system to transfer to when the first UCD group is busy.

   Figure 7-5 uses 1.
6. In the STN-B field, enter the target number of the UCD group you want the system to transfer to when the first UCD group is busy.

   Figure 7-5 uses 502 as the target number of the second group.

In the example, when all stations in UCD group 500 are busy, voice messaging traffic automatically "overflows" or transfers to the target number of the second UCD group, 502. You can link more than two UCD groups. If you do need to link more than two UCD group, assign overflow for the target number of the second UCD group to the target number of the third UCD group. You may assign overflow to as many as 7 groups of 20 stations each.

CONFIGURING THE MESSAGE CENTER INTERFACE LINK

Voice messaging information travels from the switch to the SID through the Message Center Interface (MCI) link. For the MCI link to function properly, you must configure the MCI data link. During the process you perform the following actions:

- Administer the Message Waiting Lamp
- Assign a port for the MCI link
- Define the MCI port as a terminal

Administer the Message Waiting Lamp

You must administer the switch to assign Message Waiting Lamp (MWL) control to the MCI link. Use the following instructions to administer the MCI link MWL parameters.

NOTE

Do not change any information on any screen until you contact your NEAX 2400 switch administrator. Few switches are identically configured. The instructions in this section provide the minimum requirements for the MCI integration to function with the SID. If you need more information on configuring the NEAX 2400 switch, contact your switch administrator or consult the documentation supplied with the switch.

1. At the 2400 MAINTENANCE COMMAND MENU, shown in Figure 7-1, enter **13** to select the `Installation` option. After you select the option, you see the INSTALLATION COMMANDS menu as shown in Figure 7-6 on the next page.

```
            ***    INSTALLATION COMMANDS    ***


 1   ASYD:  Assignment of System Data                          [CM03]
 2   AUNT:  Assignment of Unit Data                            [CM03]
 3   ASTD:  Assignment of State Translation Data               [CM03]
 4   ATCC:  Assignment Terminal Configuration Command          [CM03]
 5   ASMD:  Assignment Service Module Data                     [CM03]
 6   MMNF:  Make Menu File                                     [CM02]


            ENTER MENU ITEM NO [ 1 ]
```

Figure 7-6. Installation Commands menu

2. Enter **1** to select the `System Data` option. After you press (ENTER) you see the ASSIGNMENT OF STATION DATA screen as shown in Figure 7-7.

```
Assignment of System Data

   SYS:  1                                  SYS  : System Data Items
   INDEX:   28     DATA:   20                        1-System Data 1
                                                     2-System Data 2
                                                     3-System Data 3
                                            TN   : Tenant Number
                                            INDEX: System Data Index
                                                     System   Index
                                                       1      0-255
                                                       2      0-15
                                                       3      0-31
                                            DATA : System Data (Hexa-decimal)
```

Figure 7-7. Assignment of System Data screen

3. Enter **1** in the SYS field.

   You can select three types of switch system parameters. Each type has a different effect on the switch, as shown in the following list.

   - Type 1 - parameters that effect the entire system
   - Type 2 - parameters that effect specific system tenants
   - Type 3 - parameters that effect the system timing

   MWL control effects the entire system.

4. Enter **28** in the INDEX field.

   System data (SYS) 1, which you specified in Step 3, uses 255 indexes to control a variety of system parameters. Index 28 controls MWLs.

5. Enter **20** in the DATA field.

   The value of 20 works with the information you entered in SYS and INDEX to set MWL control to the MCI link.

6. After entering the information, press (/) to exit the screen and return to the INSTALLATION COMMANDS menu as shown in Figure 7-6.

If you need more information for any of the screen fields or processes described in this section, contact your switch system administrator or consult the documentation supplied with your switch.

Assign a Port for the Message Center Interface Link

Use the instructions in this section to assign a port for the MCI link. Assigning a port tells the switch the proper port to send information to the SID through the MCI link.

1. At the INSTALLATION COMMANDS menu, shown in Figure 7-6, enter **1** to select the `System Data` option. After you press ENTER you see the ASSIGNMENT OF STATION DATA screen as shown in Figure 7-8.

```
Assignment of System Data

   SYS:  1                                    SYS  : System Data Items
   INDEX:   29    DATA:   02                         1-System Data 1
                                                     2-System Data 2
                                                     3-System Data 3
                                              TN   : Tenant Number
                                              INDEX: System Data Index
                                                       System   Index
                                                         1      0-255
                                                         2      0-15
                                                         3      0-31
                                              DATA : System Data (Hexa-decimal)
```

Figure 7-8. Assignment of System Data screen

2. Enter **1** in the `SYS` field to tell the switch that the parameter changes effect the entire system.
3. Enter **29** in the `INDEX` field.

   System data (SYS) 1 uses 255 indexes to control a variety of system parameters. Index 29 controls the port assignment for the MCI link.
4. Enter the port assignment number in the `DATA` field. Use Table 7-1 on the next page to determine the port assignment for the MCI link.

   To use the chart, find the port number you want to use under the Port heading. When you find the port number, find the Data value in the Data column across from the port number. One port is reserved for the Maintenance and Administration Terminal (MAT). The example in Figure 7-8 uses port 1 (Data 02).

Table 7-1. Port Assignment Data Field Values

Port	Data	Bit
MAT Terminal		
1	02	1
2	04	2
3	08	3
4	20	4
5	40	5

5. After entering the information, press (/) to exit the screen and return to the INSTALLATION COMMANDS menu as shown in Figure 7-6.

If you need more information for any of the screen fields or processes used in this section, contact your switch system administrator or consult the documentation supplied with your switch.

Define the Port as a Terminal

You must now designate that the port assigned to the MCI link is a terminal or two-way communication port. If you do not perform this step, the switch uses the port as a printer or one-way communication port.

Use the following instructions to define the MCI port type.

1. At the INSTALLATION COMMANDS menu, shown in Figure 7-6, enter **1** to select the `System Data` option. After you press ENTER, you see the ASSIGNMENT OF STATION DATA screen as shown in Figure 7-9.

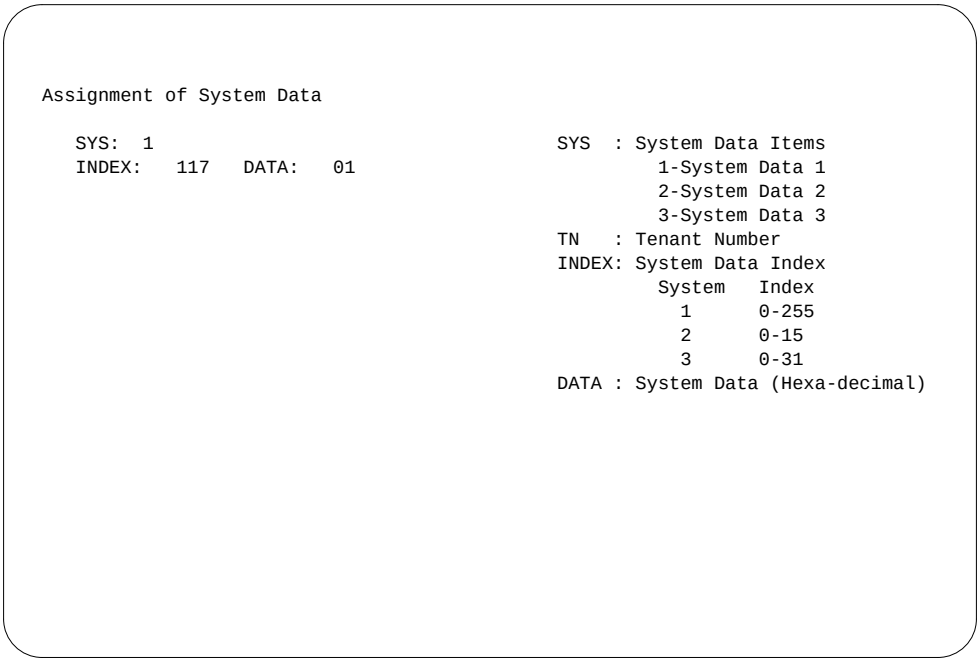


Figure 7-9. Assignment of System Data

Enter **1** in the SYS field to tell the switch that the parameter changes effect the entire system.

Enter the index number in the `INDEX` field that corresponds to the port number you entered in the previous section, *Assign a Port for the Message Center Interface Link.* Use Table 7-2 on the next page to determine the index number for the port.

Under the Port heading, find the port number you assigned to the MCI link in the *Assign a Port for the Message Center Interface Link* section. When you find the port number, locate the index value in the Index column across from the port number. Figure 7-9 uses an index value of 117, showing that the MCI link was assigned port number 1.

Table 7-2. Index Assignment Values

Port	Index	Data
MAT Terminal		
1	117	01
2	118	01
3	119	01
4	120	01
5	121	01

2. Enter **1** in the DATA field. The number tells the switch that the port is a terminal and allows two-way communication.

Assign the MCI Link to a UCD Group

You must instruct the switch that the MCI link is associated with the UCD group you created in the previous section. If you do not perform this step, the switch does not communicate through the MCI link.

Use the following instructions to configure the UCD group with the MCI link.

1. At the INSTALLATION COMMANDS menu, shown in Figure 7-6, enter **1** to select the `System Data` option. After you press (ENTER), you see the ASSIGNMENT OF STATION DATA screen as shown in Figure 7-10.

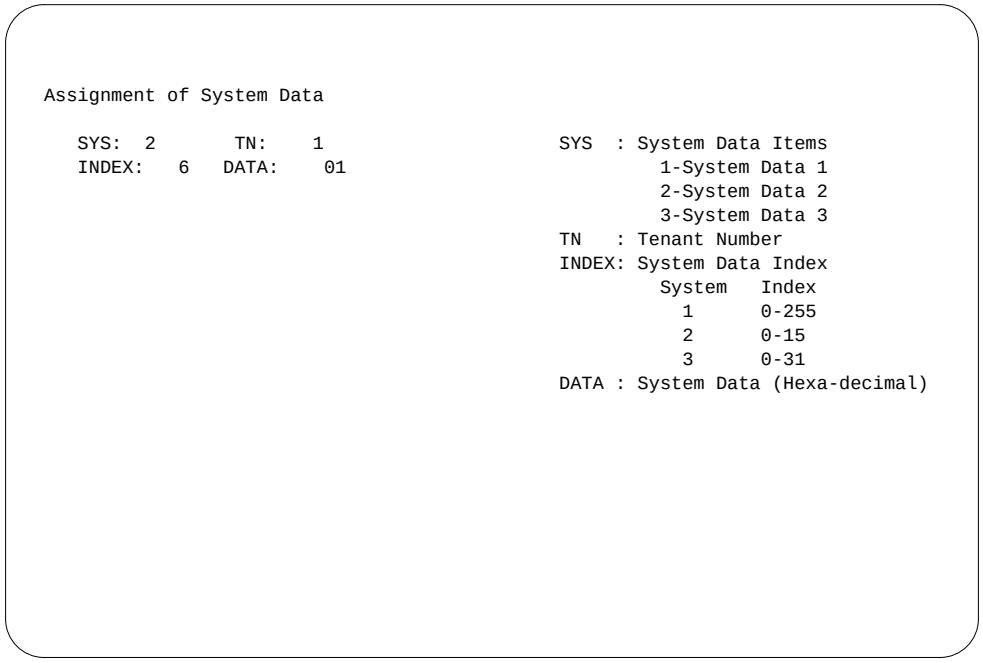


Figure 7-10. Assignment of System Data

2. Enter **2** in the SYS field to tell the switch to associate the MCI link with a UCD group on a tenant by tenant basis.
3. Enter **1** in the TN field. You must use the same tenant value that you used to create the analog stations and UCD groups.
4. Enter **6** in the INDEX field. The value contains fields that allow the system to associate the MCI link with the UCD group or groups.
5. Look at the value in the DATA field and write the value on the following line.

Current DATA value: _____

NOTE

Do not change the value in the DATA field until you consult with your switch administrator. This index contains other fields that control features not related to MCI.

6. Enter **01** in the DATA field.

You have completed the NEAX 2400 MCI switch administration. Proceed to Chapter 8, *Switch Integration Device Administration*, to configure the switch integration device.

8. Switch Integration Device Administration

The instructions in this chapter explain how to configure the SID to integrate with an NEAX 2400 MCI switch and an AUDIX Voice Power system R2.1.1, R3.0, or AUDIX Voice Power Lodging R1.1. The installation technician administers the SID based on NEAX switch administration information provided by the customer. As you administer the SID configuration, you must perform the following tasks:

- Administer the basic parameters
  - — Number of voice mail ports
  - — Message desk number
  - — CPID pad string
  - — MWI pad string
  - — MWI feature
- Administer the extensions and logical terminal numbers
- Save and start the configuration
- Administer the serial data links
- Set the security level
- Change the system parameters
  - — Set the date and time
  - — Adjust the LCD contrast

ADMINISTER THE BASIC PARAMETERS

In Chapter 3, *Switch Integration Planning*, you completed switch integration planning worksheets and determined the values for each of the basic parameters. If you did not complete the worksheets, turn to Chapter 3 and complete them now before you proceed with the instructions in this chapter.

After you complete the worksheets in Chapter 3, continue with the instructions on the next page to configure the basic parameters.

1. To access the basic parameters edit forms, press FUNC on the SID keypad.

   After you press the key, you see the MCI MAIN MENU as shown in the following example.

```
NEC       1-View       2-Utils       3-System
          4-Setup      5-Logs
```

2. To set up the basic parameters for the MCI data link, press 4 on the SID keypad to select the SETUP option.

   After you press the key, you see the SETUP menu as shown in the following example.

```
SETUP     1-Params     2-Ports       3-Clear
          4-Advanced
```

3. Press 1 on the SID keypad to access the first in a series of eight PARAMS edit forms as shown in the following example.

```
SETUP     Number of Ports           140
```

4. Enter the number of analog voice mail ports from worksheet A that the SID must support for AUDIX Voice Power or AUDIX Voice Power Lodging.
5. Press ↓ to confirm the number and move to the next basic parameter edit form, the MSG DESK NUMBER form, as shown in the following example.

```
SETUP     Msg Desk Number:          001
```

6. Enter the three-digit message desk number from worksheet A in Chapter 3.
7. Press (↓) to confirm the number and move to the next basic parameter edit form, the CPID PAD STRING form, as shown in the following example.

```
SETUP      CPID Pad String:          0000000
```

8. Press (↓) to accept the default CPID Pad String number of `0000000` and move to the next basic parameter edit form, the MWI PAD STRING form, as shown in the following example.

```
SETUP      MWI Pad String:           0000000
```

9. Press (↓) to accept the default MWI pad string number of **`0000000`** and move to the next basic parameter edit form, the MWI FEATURE form, as shown in the following example.

```
SETUP      MWI Feature:                ENABLE
<-  ->
```

10. Set the value for the message waiting feature as listed on worksheet A in Chapter 2.

    The SID defaults to `Enable`. If you want to turn off the feature, press the left or right arrow key to change the value to `Disable`.

11. Press (ENTER) to confirm the information.

You have finished entering the MCI basic parameter information. To return to the MCI MAIN MENU, press (FUNC).

Proceed to the *Assign Extensions and LTNs* section on the next page to continue the SID configuration.

ASSIGN EXTENSIONS AND LTNS

If you are installing a standalone version of AUDIX Voice Power 2.1.1, you need to perform the initial administration tasks for the system if you have not already performed the administration. Refer to Appendix C, *AUDIX Voice Power Initial Administration*, in this document to administer the system.

As you assign extensions and LTNs, you associate an LTN (Centrex LTN) with each analog extension number used by an AUDIX Voice Power system R2.1.1, R3.0, or AUDIX Voice Power Lodging. For each extension, you must assign the same LTN to the extension as AUDIX Voice Power or AUDIX Voice Power Lodging assigns to the extension. If you do not assign the same LTN, the SID does not integrate calls properly. Read the section on the AutoFill feature before you assign extensions and LTNs.

Use the following instructions to assign extensions and LTNs.

1. To access the extension and LTN edit forms, press FUNC on the SID keypad.

   After you press the key, you see the SETUP menu as shown in the following example.

```
SETUP      1-Params      2-Ports      3-Clear
           4-Advanced
```

2. Press 2 to select `Ports` and access the chain of forms used to enter and edit extension and LTN information.

   After you press the key, you see the VM PORT form as shown in the following example.

```
VM Port 1    LTN:                        0001
             Extension:                  ------
```

   The VM PORT form and the next series of forms link together. The number of VM PORT forms linked together depends on the number you entered on the NUMBER OF VOICE MAIL PORTS form in the *Basic Parameters* section. If you entered 4, for example, the SID would link 4 VM PORT forms together.

3. If you do not want to use the default LTN, use the keypad to type an LTN over the default. The sample screen uses an LTN of `0001`.

   In Chapter 3, you completed worksheet B, *Extension/LTN Plan*. Use worksheet B as you enter LTNs and extensions.

4. Press (ENTER) to confirm the LTN. The cursor moves to the `Extension` field.
5. Use the keypad to type an extension for the LTN.

   Use worksheet B as you enter LTNs and extensions.

NOTE

Each VM PORT form contains a default LTN, starting with `0001`. If you want to use the default, press (ENTER) to select the default and move the cursor to the `Extension` field. Enter the extension number for the LTN. Press (ENTER) to confirm the number then press (↓) to move to the next form.

6. After you enter the extension, press (↓) to move to the next VM PORT form as shown in the following example.

```
VM Port 2    LTN:                    0002
             Extension:              211__
```

   In the example, notice that the LTN default automatically increased by one to `0002`. You also can set the extension field to automatically increase by using the Autofill feature. For more information on the Autofill feature, refer to the section titled *Using Autofill*.
7. Repeat steps 4 through 6 until you have entered an LTN and an extension for each analog voice mail port.
8. After you have entered valid LTNs and extensions for all forms, press (FUNC) to return to the MCI MAIN MENU.

Using AutoFill

If you use consecutive extension numbers, numbers that increase by one, the SID provides an *AutoFill* feature that automates the entry process. Using AutoFill, you enter the first extension number on the first VM PORT form. As you move to the next VM PORT form, AutoFill adds one to the extension you entered and places the number in the `Extension` field.

Example: At the first VM PORT form for a four port configuration, you enter **`210`** in the `Extension` field. After selecting AutoFill, you move to the next VM PORT form. The SID adds one to the extension and places `211` in the `Extension` field. On the next form, the SID places `212` in the field and `213` in the extension number field on the fourth (last) form.

Follow the instructions on the next page to use the AutoFill feature.

1. After accessing the first VM PORT form as instructed in the previous section of this document, enter an extension number in the `Extension` field. The following example uses `210` as the first extension number.

```
VM Port 1    LTN:                    0001
             Extension:              210__
```

2. Position the cursor on the extension number you entered.
3. Press the MODE key for editor help.

   After you press the key, you see an editor help screen as shown in the following example.

```
   EDIT      1-Overtype   2-Insert     3-Clear
             4-Undo       5-AutoFill
```

4. Press (5) to activate the AutoFill option. The SID now uses the number you entered in the first extension field as the base number, adds one to the number for each form, and places the new number in the extension fields of the remaining forms. In the example, `210` was used as the first extension number. AutoFill automatically places the extension numbers 211, 212, and 213 into the second, third and fourth forms and returns you to the VM PORT form.

If only part of your extensions are numbered consecutively, you can still use the AutoFill feature.

Example: You have a 12 port system. The five extension numbers from 100 to 104 are consecutive. After extension 104, your extensions skip to 200 and continue consecutively to 206. To use the AutoFill feature, follow the regular Autofill instructions for numbers 100 to 104. When you reach the form that contains extension `105`, move the cursor to the `Extension` field. Enter `200` in the field and turn on AutoFill again. The SID places extensions 201 to 206 in the remaining 6 edit forms.

You also can use AutoFill for LTN data. If you need to start your LTNs at `0010`, for example, enter **`0010`** into the first form. Turn on AutoFill. AutoFill enters 0011 and up in the LTN fields of the remaining forms.

Continue to the procedure in the next section, *Saving and Starting the Configuration*.

SAVING AND STARTING THE CONFIGURATION

After you administer the basic parameters and assign extensions and LTNs, you must save the configuration. You also can start the integration at this point, although you should perform the tasks in the *Administer Serial Data Links* section to check the default settings for the MCI and SMDI communication links.

Use the following instructions to save the configuration and start the system.

1. Press FUNC on the SID keypad.

   After you press the key, you see the SETUP menu.

2. Press FUNC again to return to the MAIN MENU.

   After you press the key and return to the MAIN MENU, the SID checks the current configuration against the information you entered. Because you made changes to the configuration, the SID places the following prompt on the screen.

```
SAVE EDITS?     1-Yes         2-No
```

3. Press 1 to select Yes and save your configuration changes.

   After you press the key, the SID saves the information you entered and shows the following message on the screen.

```
Setup Saved...
```

4. After a short pause, the SID places another prompt on the screen as shown below.

```
START SYSTEM?    1-Yes         2-No
```

5. If you want to start the integration, press 1 to select `Yes`.

   If you are not ready to start the integration, press 2 to select `No`.

After you press 1 you see the `Restarting System...` message on the screen. The SID pauses for a few seconds then starts the integration. When the integration starts, you see the SMDI VIEW MODE screen as shown in the following diagram.

```
SMDI Idle
```

When the SID receives calls, the screen changes to show the SMDI packet being sent to AUDIX Voice Power or AUDIX Voice Power Lodging. The screen appears similar to the following example.

```
SMDI MWI:    OP:MWI 0000202!.
    CPID:   ..MD0010001D 0000201 ...
```

For more information on view modes, refer to Appendix B, *Using Views During Integration*, in this document. Continue to the procedure in the next section, *Administer Serial Data Links*.

ADMINISTER SERIAL DATA LINKS

The SID assigns default configurations to both the MCI and SMDI communication ports. You need to check the SID to make sure the defaults are set correctly and match the requirements of your integration. The SID sets the defaults shown in Table 8-1 for the serial data links.

Table 8-1. Serial Data Link Default Values

Link Type	Settings
SMDI:	1200 baud 7 data bits 1 stop bit EVEN parity
MCI:	1200 baud 7 data bits 1 stop bit EVEN parity

Use the following instructions to check or correct the default settings.

1. To access the edit forms used to change the serial data links, press (FUNC) to access the MCI MAIN MENU.

   After you press the key, you see the MCI MAIN MENU as shown in the following example.

```
NEC       1-View       2-Utils       3-System
          4-Setup      5-Logs
```

2. Select `Utils` from the menu by pressing (2) on the SID keypad.

   After you press the key, you see the UTILS menu as shown in the following example.

```
UTILS     1-Login      2-Date/Time   3-Serial
```

3. Press (3) on the SID keypad to access the SERIAL menu.

   After you press the key you see the SERIAL menu as shown in the following example.

```
SERIAL      1-Centrex     2-MCI
```

4. Enter the menu item number of the serial data link you need to edit.

   When you select MCI or Centrex (SMDI) from the menu, you access four edit forms. Use the forms to set the serial data to the values your application requires. For example, press (2) on the keypad.

NOTE

Both the MCI and Centrex edit forms appear the same, except for the edit form name. The MCI forms were chosen only as an example in this document. You can select either serial data link or both. You also can use the default values, as described earlier in this section.

5. After you press the key, you see the BAUD RATE edit form as shown in the following example.

```
 MCI        Baud Rate:                    1200
<-  ->
```

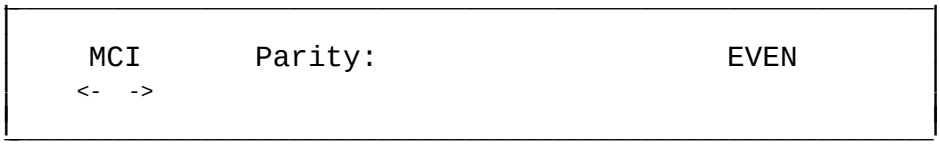
6. To change the default value shown, press the left or right arrow key to toggle through the optional values. The value you set for the baud rate must equal the value set for the SID to AUDIX Voice Power or AUDIX Voice Power Lodging communication link baud rate. Do not set two different values for these links. Stop pressing the arrow keys when you find the value you want to use.

NOTE

In Chapter 3 you completed worksheet A which contained lines for the MCI baud rate and the SMDI baud rate. Refer to the worksheet to review the baud rates you selected.

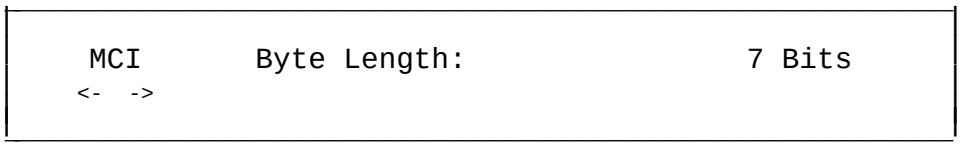
7. After you select a baud rate, press (↓) to confirm your choice and move to the next form.

   After you press enter, you see the PARITY form as shown in the following example.



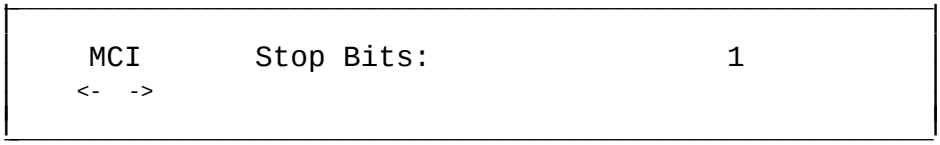
8. To change the default parity value shown in the field, press the left or right arrow key to toggle through the optional values. Stop pressing the arrow keys when you find the parity value you want to use.
9. After you select a parity, press (↓) to confirm your choice and move to the next form.

   After you press enter, you see the BYTE LENGTH form as shown in the following example.



10. To change the default byte length shown in the field, press the left or right arrow key to toggle through the optional values. Stop pressing the arrow keys when you find the byte length you want to use.
11. After you select a byte length, press (↓) to confirm your choice and move to the last form.

    After you press the key, you see the STOP BITS form as shown in the following example.



12. To change the default stop bit value shown in the field, press the left or right arrow key to toggle through the optional values. Stop pressing the arrow keys when you find the stop bit value you want to use.
13. After you select a stop bit value, press (ENTER) to confirm your choice.
14. Press (FUNC) to return to the MCI MAIN MENU. If you need to reconfigure the SMDI data link, return to step 2.

You have completed the MCI or SMDI configuration setup. The SID automatically accepts and saves any information you change. Continue to the procedure in the next section, *Changing System Parameters*.

CHANGING SYSTEM PARAMETERS

The SID provides access to some adjustable global system parameters. You can change the following two parameters.

- Time and date
- LCD contrast setting

Use the instructions in this section to change the two system parameters.

Setting the Date and Time

Set the date and time when you install your SID system so error log messages are properly timestamped. Although the date and time are set at the factory, you may need to change the time to correct differences in time zones. Follow the instructions below to set the date and time.

1. Press (FUNC) to access the MCI MAIN MENU.
2. Press (2) to access the UTILITIES menu.
3. Press (2) to access the DATE AND TIME form.

   After you press the key, you see the DT/TM form as shown in the following example. The cursor appears in the month field.

```
DT/TM            Date:   11/18/91
                  Time   15:35:00
```

4. Place the cursor on the `Date` field.
5. Enter the correct date in the format MM/DD/YY (month/day/year) by pressing (ENTER) and typing the month, day, and year in each each part of the date field. If the date is correct, do not change the information and proceed to the next step.
6. After you enter the year in the last date field, press (ENTER) to confirm the date and move the cursor to the `Time` field.
7. Enter the correct time in the format HH:MM:SS (hour:minute:second) by pressing (ENTER) and typing the hour, minutes, and seconds in each each part of the time field. If the time shown is correct, proceed to the next step.
8. Press (FUNC) to return to the MCI MAIN MENU.

The SID accepts and uses the information. You do not have to save the information or restart the integration. Continue to the next section, *Adjusting the LCD Contrast*.

Adjusting the LCD Contrast

The LCD has a contrast adjustment edit form that you use to adjust the screen. Follow the instructions below to adjust the LCD contrast.

1. Press (FUNC) to access the MCI MAIN MENU.
2. Press (3) to access the SYSTEM TOOLS menu.

   After you press the key, you see the SYSTEM TOOLS menu as shown in the following example.

```
SYSTEM     1-Info       2-Contrast   3-Start
           4-Stop       5-Reboot
```

3. Press (2) to access the CONTRAST form.

   After you press the key, you see the CONTRAST form as shown in the following example.

4. Change the setting by pressing the right and left arrow keys. As you press the arrow keys, the display changes.
5. Stop pressing the arrow keys when you adjust the LCD to a comfortable level.
6. Press (FUNC) to return to the MCI MAIN MENU.

Continue to the procedure in the next section, *Special Processing for Message Waiting Lamps*.

SPECIAL PROCESSING FOR MESSAGE WAITING LAMPS

NOTE

The instructions in this section only can be performed by trained AT&T software specialists.

The SID can buffer up to 4000 individual message waiting transactions and wait for small intervals of time to perform the transactions. Incoming calls receive a higher priority. If you use the Metrics View and discover that the SID is holding large numbers of MWL transactions you can perform one of the following actions.

- You can alter the MWL Interleave Factor. By decreasing the MWL Interleave Factor, the speed of transactions out of the queue increases, but call processing speed decreases. See the documentation supplied with your switch for more information.
- You can use the SID's enhanced MWL processing. Continue with the instructions in this section to use the enhanced MWL processing.

On a very active voice mail system, a subscriber can receive multiple messages in a very short period of time. Each message turns on the MWL which quickly increases the size of the buffer. Enhanced MWL handling insures that only a single entry in the MWL queue is used for a specific subscriber, which reduces the queue loading.

For example, AUDIX Voice Power receives three MWL requests in rapid succession. The first turns on John Smith's lamp, the second turns off J. Doe's lamp, and the third turns on John Smith's lamp. Each is a valid request and each is queued for processing. John Smith's lamp does not need to be lit twice, however.

Enhanced MWL processing defaults to disabled and the SID queues and processes all MWL requests in sequence. In the example above, all three requests would be processed and John Smith's lamp would be lit twice in quick succession.

If you enable enhanced MWL processing, the MWL command for John Smith is sent to the queue as a normal request. Any future requests for John Smith overwrite the first, insuring that John's lamp is only turned on once and set to the state that the voice messaging system expects at the time of the operation. When enhanced MWL processing is activated, the number of requests made by AUDIX Voice Power can be considerably larger than the actual number of transactions undertaken by the SID.

Use the instructions on the next page to enable the enhanced MWL processing feature.

1. Press (FUNC) to access the the SETUP menu as shown in the following example.

```
SETUP      1-Params      2-Ports       3-Clear
           4-Advanced
```

2. Press (4) to select the Advanced option. After you press the key, you see the ADVNC screen as shown in the following example.

```
ADVNC      MWI Compress:      OFF
<-  ->
```

3. Use the left and right arrow keys to turn MWL Enhanced processing to **On**.

After you set enable MWL Enhanced processing, the SID automatically begins to use the feature. You do not have to save or restart the configuration. Continue to the procedure in the next section, *Setting a Security Level*.

SETTING A SECURITY LEVEL

The various features and functions of the SID are available only at specific security levels. The list below shows each security level and the options available to that level.

- Access Level 0 - The lowest security level. The only options available to level 0 are the ability to view integration activities, change the contrast on the LCD display, see the software version level, and log in to other access levels. The SID normally operates at level 0 and you do not need a password to access level 0.
- Access Level 1 - The second security level. Level 1 allows you to access all level 0 features and all of the tools needed to administer the system. The password for this level is the last five digits of your serial number.
- Access Level 2 - The highest level of security. Level 2 allows you to access all level 0 and level 1 features and several special diagnostic tools available only to trained personnel. Only AT&T authorized personnel can access this level, either on-site or remotely, to perform testing and diagnostics on the SID. The password for this level is only given to authorized personnel.

The factory sets the SID to access level 1. When you first power on the SID, the unit accesses the SETUP menu and allows you to access all tools required to perform the administration tasks. You can select a security level for the SID and make the security level part of the configuration. AT&T recommends that you select security level 0 as the normal operating mode for the SID. Users only can access level 0 features, which reduces the risk of tampering by unauthorized users.

Use the following instructions to set the security level on the SID.

1. Press (FUNC) to access the MAIN menu as shown in the following example.

```
NEC       1-View       2-Utils      3-System
          4-Setup      5-Logs
```

2. Press (2) to select the UTILS menu as shown in the following example.

```
UTILS     1-Login      2-Date/Time  3-Serial
```

3. Press (1) to select the LOGIN form as shown in the following example.

4. Press the arrow (<- ->) keys to change the access level to 0.
5. Press (ENTER) to save the change. The SID immediately updates your security level.

To log in to level 1, use the instructions above to access the LOGIN form. Use the arrow keys to set `Access Level` to **1**. The SID now asks you for a password. Type in the level 1 password and press (ENTER).

NOTE

As you type the password, you do not see the letters on the screen.

When you complete the instructions in this chapter, proceed to Chapter 9, *Acceptance Tests*, in this document.

9. Acceptance Tests

Acceptance tests begin after you complete initial administration and administer two test subscribers on the AUDIX Voice Power system. The process includes call-through tests to each AUDIX Voice Power system port and voice mail tests for each test subscriber. Before you can perform the acceptance tests, though, you must administer the two test subscribers on the NEAX 2400 switch. Use the instructions in this chapter to administer the test subscribers before you perform the acceptance tests.

- If you are installing an AUDIX Voice Power system R3.0, you can read instructions for performing the acceptance tests in Chapter 10, *Acceptance Tests*, in *AUDIX Voice Power System R3.0 Software Installation* (585-310-115).
- If you are installing a standalone configuration of AUDIX Voice Power R2.1.1, complete the tasks in this chapter before you complete the *Acceptance Testing* section in Chapter 3, *Software Installation*, of *AUDIX Voice Power R2.1.1 Installation and Maintenance Guide* (585-310-108).
- If you are installing a standalone version of AUDIX Voice Power Lodging R1.1 or a coresident version with AUDIX Voice Power R2.1.1, *do not* perform any tasks in this chapter until you complete Tasks 1 through 3 in Chapter 7 of *AUDIX Voice Power Lodging R1.1 Installation* (585-310-125).

This chapter explains how to administer two test subscribers on the NEAX 2400 MCI switch for performing acceptance tests. If you have another type of switch, refer to the documentation provided with that switch or the switch integration package for more information.

NOTE

The MCI link controls the message waiting indication. Four- and eight-button Dterm telephones have a message waiting lamp. On a 16-button Dterm telephone, you see `VMM` on the display to tell you that you have voice mail. Analog (2500) sets require neon lamps and the switch must have an auxiliary 90v power supply to operate the lamps.

Continue with the procedures in this chapter to administer the switch for acceptance tests. Before you proceed, though, select two test extensions to use for acceptance tests. For an AUDIX Voice Power R3.0 system, use the test subscribers listed in *AUDIX Voice Power System Release 3.0 Installation Planning* (585-310-602).

ADMINISTER THE TEST SUBSCRIBERS

By forwarding a subscriber extension to the main extension of the Uniformed Caller Distribution (UCD) group, the switch sends call information over the MCI link to the SID. The SID converts and sends the information to AUDIX Voice Power or AUDIX Voice Power Lodging. A call forwarded from the switch to the application is called an "integrated" call. You can set the following call forwarding conditions:

- Forward subscribers for ring-no-answer
- Forward subscribers for busy conditions
- Forward subscribers for all calls

For acceptance tests, activate all three conditions.

Task 1: Forward Calls for Ring-No-Answer

"Ring-No-Answer" (RNA) refers to an unanswered call. After a specific length of time, set on the switch, without the call being answered, the call transfers to the UCD group assigned to AUDIX Voice Power or AUDIX Voice Power Lodging.

NOTE

The test subscriber's service feature class must contain call forward RNA SFI=8. Dterm sets may have a function key for forward on busy (FKY=22).

For a station transferred blindly to a ring-no-answer station, the recall timer takes priority over forward RNA. A call transferred to a busy extension transfers back to the station that initiated the transfer.

Use the following instructions to forward an RNA call for the test subscribers.

1. Using the phone of the first test subscriber, lift the handset and listen for the dial tone.
2. Dial the access code or press the function key for forward RNA.

   After you perform the action, you hear a second dial tone.

   NOTE

   If you do not know the access code or the function key for forward RNA, contact your switch administrator. The switch administrator sets the codes and function keys during the initial setup of the switch.

3. Dial the main extension of the UCD group to forward RNA calls to integrated voice mail. You created the UCD main extension during the switch administration process in Chapter 7, *NEAX 2400 Switch Administration*, of this document. If you have a coresident system, make sure you enter the correct UCD main extension. For AUDIX Voice Power Lodging acceptance tests, dial the UCD group main extension you created for Lodging. For AUDIX Voice Power acceptance tests, dial the UCD group main extension you created for AUDIX Voice Power.

After you complete the process, process to the next task, *Forward Calls for Busy Conditions*.

Task 2: Forward Calls for Busy Conditions

Use this feature to forward a call when the extension is busy. When the switch attempts to send a call and finds a busy extension, the switch transfers the call to AUDIX Voice Power or AUDIX Voice Power Lodging.

NOTE

The subscriber's service feature class must contain call forward busy SFI=9. Dterm sets may have a function key for forward on busy (FKY=1).

Use the following instructions to forward a busy call for acceptance tests.

1. Using the phone of the first test subscriber, lift the handset and listen for the dial tone.
2. Dial the access code or press the function key for forward on busy.

   After you perform the action you hear a second dial tone.

   NOTE

   If you do not know the access code or the function key for forward on busy, contact your switch administrator. The switch administrator sets the codes and function keys during the initial setup of the switch.

3. Dial the main extension of the UCD group to forward busy calls to integrated voice mail.

   You created the UCD main extension during the switch administration process in Chapter 7 of this document. If you have a coresident system, make sure you enter the correct UCD main extension. For AUDIX Voice Power Lodging acceptance tests, dial the UCD group main extension you created for Lodging. For AUDIX Voice Power acceptance tests, dial the UCD group main extension you created for AUDIX Voice Power.

Task 3: Forward Subscribers for All Calls

Use this feature to forward all calls to AUDIX Voice Power or AUDIX Voice Power Lodging. The switch automatically transfers the call to the UCD group administered for AUDIX Voice Power or AUDIX Voice Power Lodging.

NOTE

The subscriber's service feature class must contain call forward RNA SFI=7. Dterm sets may have a function key for forward on busy (FKY=2).

Use the following instructions to forward all calls for acceptance tests.

1. Using the phone of the first test subscriber, lift the handset and listen for the dial tone.
2. Dial the access code or press the function key for forward all calls.

   After you perform the action you hear a second dial tone.

   NOTE

   If you do not know the access code or the function key for forward all calls, contact your switch administrator. The switch administrator sets the codes and function keys during the initial setup of the switch.

3. Dial the main extension of the UCD group to forward all calls to integrated voice mail. You created the UCD main extension during the switch administration process in Chapter 7 of this document. If you have a coresident system, make sure you enter the correct UCD main extension. For AUDIX Voice Power Lodging acceptance tests, dial the UCD group main extension you created for Lodging. For AUDIX Voice Power acceptance tests, dial the UCD group main extension you created for AUDIX Voice Power.

Repeat Task 1, 2, and 3 for the second test subscriber. After you administer all features for the two test subscribers, perform one of the following actions.

- If you are installing a standalone configuration of AUDIX Voice Power R2.1.1, return to the *Acceptance Testing* section in Chapter 3, *Software Installation*, in *AUDIX Voice Power R2.1.1 Installation and Maintenance Guide* (585-310-108).
- If you are installing a standalone configuration of AUDIX Voice Power Lodging R1.1 or a coresident version with AUDIX Voice Power R2.1.1, return to Chapter 6, Task 4, in *AUDIX Voice Power Lodging R1.1 Installation* (585-310-125) and complete the acceptance tests.
- If you are installing an AUDIX Voice Power system R3.0, return to the *Acceptance Tests* chapter in *AUDIX Voice Power System R3.0 Software Installation* (585-310-115).

CANCEL THE TEST SUBSCRIBERS

- If you are installing a standalone version of AUDIX Voice Power R2.1.1 or R3.0, do not perform the instructions in this section. Proceed to Chapter 10, *Cut-to-Service* in this document.
- If you are installing a standalone version of AUDIX Voice Power Lodging R1.1 or a coresident version with AUDIX Voice Power R2.1.1, do not perform the tasks in this section until you complete Tasks 1 through 9 in Chapter 6 of *AUDIX Voice Power Lodging R1.1 Installation* (585-310-125).

After you complete the acceptance test tasks, you must remove the test subscribers from coverage. Use the instructions in this section to cancel the test subscribers.

Task 1: Cancel Forwarded RNA Calls

1. Using the phone of the first test subscriber, lift the handset and listen for the dial tone.
2. Dial the access code or press the function key for canceling forward RNA.

   After you perform the action, you hear a confirmation tone.

NOTE

If you do not know the access code or the function key for canceling forward RNA, contact your switch administrator. The switch administrator sets the codes and function keys during the initial setup of the switch.

Task 2: Cancel Forwarded Busy Calls

1. Using the phone of the first test subscriber, lift the handset and listen for the dial tone.
2. Dial the access code or press the function key for canceling forward on busy.

   After you perform the action you hear a confirmation tone.

NOTE

If you do not know the access code or the function key for canceling forward on busy, contact your switch administrator. The switch administrator sets the codes and function keys during the initial setup of the switch.

Task 3: Cancel Forwarding for All Calls

1. Lift the handset and listen for the dial tone.
2. Dial the access code or press the function key used to cancel forwarded calls.

   After you perform the action you hear a confirmation tone.

NOTE

If you do not know the access code or the function key used to cancel forwarded calls, contact your switch administrator. The switch administrator sets the codes and function keys during the initial setup of the switch.

Repeat Task 1, 2, and 3 for the second test subscriber. After you cancel all features for the two test subscribers, perform one of the following actions.

For a standalone version of AUDIX Voice Power Lodging R1.1 or a coresident version with AUDIX Voice Power R2.1.1, return to Chapter 6, Task 10, in *AUDIX Voice Power Lodging R1.1 Installation* (585-310-125) and complete the acceptance tests.

10. Cut-to-Service

Read the following information before proceeding with this chapter.

- If you are installing a standalone version of AUDIX Voice Power Lodging R1.1 or a coresident version with AUDIX Voice Power R2.1.1, *do not* perform any tasks in this chapter until you complete Task 1 in Chapter 7, *Cut-to-Service*, of *AUDIX Voice Power Lodging R1.1 Installation* (585-310-125). The installation document explains the cut-to-service procedures you must perform before you perform the instructions in this chapter.
- If you are installing a standalone version of AUDIX Voice Power R2.1.1, do not complete any tasks in this chapter until you complete the instructions in Chapters 1 through 4 in the *AUDIX Voice Power R2.1.1 System Manager's Guide* (585-310-520). The document explains the cut-to-service procedures you must perform before you perform the instructions in this chapter.
- If you are installing an AUDIX Voice Power system R3.0, do not complete any tasks in this chapter until you complete the instructions in Chapter 11, *Cut-to-Service*, in *AUDIX Voice Power System R3.0 Software Installation* (585-310-115) or Chapter 3, *Getting Started*, in *AUDIX Voice Power System R3.0 Administration* (585-310-532). The documents explain the cut-to-service procedures you must perform before you perform the instructions in this chapter.

This chapter explains how to administer the NEAX 2400 MCI switch to start or "cut-to-service" the subscribers on AUDIX Voice Power R2.1.1, R3.0, or AUDIX Voice Power Lodging R1.1. If you have another type of switch, refer to the documentation provided with that switch or the switch integration package for more information.

Cutting to service on the NEAX 2400 MCI switch is a phone-based task. A procedure must be performed at each subscriber telephone to administer the extension on the switch. Although each telephone only requires administration once, the process may require a large amount of time if you have a large subscriber base. Instead of having the system administrator perform the subscriber telephone tasks, have each subscriber perform the task. Use the "In-service" letter to provide instructions to the user for performing the tasks. Use the instructions in this chapter to write the user instructions. Refer to the *Writing the In-Service Letter* section of Chapter 3, *Personnel Planning*, of *AUDIX Voice Power System Release 3.0 Planning* (585-310-602) for instructions on planning and writing the letter. Determine the best cut-to-service strategy in advance and plan a time to administer the subscriber extensions. You do not have to administer the phone each time a guest checks in or out on the Lodging system.

NOTE

When you cut the subscribers into service, all subscribers receive AUDIX Voice Power or AUDIX Voice Power Lodging service. You need to prepare the subscribers and train the system attendants before you cut to service.

Continue with the instructions on the next page to cut to service.

ADMINISTER THE SUBSCRIBER TELEPHONES

By forwarding a subscriber extension to the main extension of the UCD group, the switch sends call information over the MCI link to the SID. The SID converts the information to SMDI protocol and sends the information to AUDIX Voice Power or AUDIX Voice Power Lodging. A call forwarded from the switch to AUDIX Voice Power or AUDIX Voice Power Lodging is called an *integrated* call. You can set three different call forwarding conditions, listed below, depending on your needs or the needs of the individual subscribers.

- Forward subscribers for ring-no-answer
- Forward subscribers for busy conditions
- Forward subscribers for all calls

Task 1: Forward Subscribers for Ring-No-Answer

Ring-No-Answer (RNA) refers to an unanswered call. After a specific number of rings without the call being answered, the call transfers to the UCD group assigned to AUDIX Voice Power or AUDIX Voice Power Lodging.

NOTE

The subscriber's service feature class must contain call forward RNA SFI=8. Dterm sets may have a function key for forward RNA (FKY=22).

For a station transferred blindly to a ring-no-answer station, the recall timer takes priority over forward RNA. A call transferred to a busy extension transfers back to the station that initiated the transfer.

Use the following instructions to forward an RNA call for cut-to-service.

1. Using the subscriber telephone, lift the handset and listen for the dial tone.
2. Dial the access code or press the function key for forward RNA.

   After you perform the action, you hear a second dial tone.

   NOTE

   If you do not know the access code or the function key for forward RNA, contact your switch administrator. The switch administrator sets the codes and function keys during the initial setup of the switch.

3. Dial the main extension of the UCD group administered for AUDIX Voice Power or AUDIX Voice Power Lodging.

   You created the UCD main extension during the switch administration process in Chapter 7 of this document. The switch now forwards RNA calls to the AUDIX Voice Power or AUDIX Voice Power Lodging UCD group, creating an integrated voice mail system.

After you complete the process, proceed to the next task, *Forward Calls for Busy Conditions*.

Task 2: Forward Calls for Busy Conditions

Use this feature to forward calls that reach busy extensions. When the switch attempts to send a call and finds a busy extension, the switch transfers the call to the UCD group assigned to AUDIX Voice Power or AUDIX Voice Power Lodging.

NOTE

The subscriber's service feature class must contain call forward busy SFI=9. Dterm sets may have a function key for forward on busy (FKY=1).

Use the following instructions to forward a busy call.

1. Using the subscriber telephone, lift the handset and listen for the dial tone.
2. Dial the access code or press the function key for forward on busy.

   After you perform the action you hear a second dial tone.

   NOTE

   If you do not know the access code or the function key for forward on busy, contact your switch administrator. The switch administrator sets the codes and function keys during the initial setup of the switch.

3. Dial the main extension of the UCD group administered for AUDIX Voice Power or AUDIX Voice Power Lodging.

   You created the UCD main extension during the switch administration process in Chapter 7 of this document. The switch now forwards busy calls to the AUDIX Voice Power or AUDIX Voice Power Lodging UCD group, creating an integrated voice mail system.

Task 3: Forward Subscribers for All Calls

Use this feature to forward subscribers for all calls to AUDIX Voice Power or AUDIX Voice Power Lodging. The switch automatically transfers the call to the UCD group administered for AUDIX Voice Power or AUDIX Voice Power Lodging.

NOTE

The subscriber's service feature class must contain call forward RNA SFI=7. Dterm sets may have a function key for forward all calls (FKY=2).

Use the following instructions to forward all calls.

1. Using the subscriber telephone, lift the handset and listen for the dial tone.
2. Dial the access code or press the function key for forward all calls.

   After you perform the action you hear a second dial tone.

   NOTE

   If you do not know the access code or the function key for forward all calls, contact your switch administrator. The switch administrator sets the codes and function keys during the initial setup of the switch.

3. Dial the main extension of the UCD group administered for AUDIX Voice Power or AUDIX Voice Power Lodging.

   You created the UCD main extension during the switch administration process in Chapter 7 of this document. The switch now forwards all calls to the application UCD group, creating an integrated voice mail system.

Repeat Task 1, 2, and 3 for each subscriber extension that uses the AUDIX Voice Power or AUDIX Voice Power Lodging system.

When you finish cutting all subscribers to service, perform one of the following actions.

- If you are installing a standalone version of AUDIX Voice Power R2.1.1, refer to Chapter 5, of the *AUDIX Voice Power R2.1.1 System Manager's Guide* (585-310-520).
- If you are installing an AUDIX Voice Power system R3.0, you have completed the installation and administration process. Your system is receiving and processing calls. Refer to Chapter 3, *Getting Started*, in *AUDIX Voice Power System R3.0 Administration* (585-310-532) for information on using and maintaining the system.
- If you are installing a standalone version of AUDIX Voice Power Lodging R1.1 or a coresident version with AUDIX Voice Power R2.1.1, perform the tasks in the *Initial Activities* section of Chapter 3, *Administrator's Activities*, in *AUDIX Voice Power Lodging Administration* (585-310-525). Use *AUDIX Voice Power Lodging Administration* to help you operate the AUDIX Voice Power Lodging system.

CUT-FROM-SERVICE PROCEDURES

When you install system upgrades or perform system maintenance, you may have to cut the subscriber from AUDIX Voice Power or AUDIX Voice Power Lodging system service. To perform the task, you must cancel the subscriber administration on the NEAX 2400 MCI switch. Do not perform the cut-from-service tasks unless instructed by one of the documents in the AUDIX Voice Power R2.1.1, AUDIX Voice Power system R3.0, or AUDIX Voice Power Lodging R1.1 documentation sets.

Cutting from service on the NEAX 2400 MCI switch is a phone-based task. A procedure must be performed at each subscriber telephone to remove the extension from the switch. The process may require a large amount of time if you have a large subscriber base. Instead of having the system administrator perform the subscriber telephone tasks, have each subscriber perform the task. Use the "In-service" letter to provide instructions to the user for performing the tasks. Use the instructions in this chapter to write the user instructions. Refer to the *Writing the In-Service Letter* section of Chapter 3, *Personnel Planning*, of *AUDIX Voice Power System Release 3.0 Planning* (585-310-602) for instructions on planning and writing the letter. Determine the best cut-from-service strategy in advance and plan a time to remove the subscriber administration.

Task 1: Cancel Forwarded RNA Calls

1. Using the subscriber telephone, lift the handset and listen for the dial tone.
2. Dial the access code or press the function key for canceling forward RNA.

   After you perform the action, you hear a confirmation tone.

NOTE

If you do not know the access code or the function key for canceling forward RNA, contact your switch administrator. The switch administrator sets the codes and function keys during the initial setup of the switch.

Task 2: Cancel Forwarded Busy Calls

1. Using the subscriber telephone, lift the handset and listen for the dial tone.
2. Dial the access code or press the function key for canceling forward on busy.

   After you perform the action you hear a confirmation tone.

NOTE

If you do not know the access code or the function key for canceling forward on busy, contact your switch administrator. The switch administrator sets the codes and function keys during the initial setup of the switch.

Task 3: Cancel Forwarding for All Calls

1. Using the subscriber telephone, lift the handset and listen for the dial tone.
2. Dial the access code or press the function key used to cancel forwarded calls.

   After you perform the action you hear a confirmation tone.

NOTE

If you do not know the access code or the function key used to cancel forwarded calls, contact your switch administrator. The switch administrator sets the codes and function keys during the initial setup of the switch.

Repeat Task 1, 2, and 3 for all subscribers on the AUDIX Voice Power or AUDIX Voice Power Lodging system. After you cancel all features for the subscribers, perform one of the following actions.

- Return to the document that instructed you to perform the cut-from-service.
- If you are upgrading a standalone version of AUDIX Voice Power Lodging R1.1 or a coresident version with AUDIX Voice Power R2.1.1, return to Appendix A, Task 2, in *AUDIX Voice Power Lodging R1.1 Installation* (585-310-125) and complete the upgrade procedures.

A. Troubleshooting and Error Logs

Appendix A provides troubleshooting information to help you isolate and correct problems that may occur with an AUDIX Voice Power system R2.1.1, AUDIX Voice Power system R3.0, and AUDIX Voice Power Lodging R1.1 system integrated with the NEAX 2400 MCI switch. The problems outlined in this appendix only refer to problems related to the integration device and processes. If you do not find your problem in this appendix, refer to the *Troubleshooting* chapter in *AUDIX Voice Power Lodging R1.1 Administration*, *Configuration Testing and Troubleshooting* in *AUDIX Voice Power Release 2.1.1 Installation and Maintenance Guide*, or *AUDIX Voice Power System R3.0 Maintenance* (585-310-113) for more information.

SWITCH INTEGRATION DEVICE PROBLEMS

The SID does not power on.

Possible Reason:	The power cord connection may be loose or not completed.
Remedy:	Make sure the power cord is firmly plugged into the wall outlet and the SID.
Possible Reason:	The wall outlet may not have power.
Remedy:	Make sure the circuit breaker for the wall outlet is on.
Possible Reason:	The SID power switch may be set to the **off** position.
Remedy:	Turn the SID power switch to the **on** position.
Possible Reason:	The SID may have a bad fuse.
Remedy:	Check the fuse on the SID.

Nothing appears on the LCD display.

Possible Reason:	You may need to adjust the LCD contrast.
Remedy:	Refer to Chapter 8, *Switch Integration Device Administration* for instructions on adjusting the LCD contrast.

Calls are not integrated.

Possible Reason:	The cables between the SID and the AUDIX Voice Power or AUDIX Voice Power Lodging computer may not be connected correctly.
Remedy:	Refer to Chapter 4, *Hardware Installation*, and check the cable connections.
Possible Reason:	AUDIX Voice Power or AUDIX Voice Power Lodging may not be administered correctly.
Remedy:	For an AUDIX Voice Power system R2.1.1, refer to *AUDIX Voice Power R2.1.1 System Managers Guide* and check the administration of the system. For an AUDIX Voice Power system R3.0, refer to *AUDIX Voice Power System R3.0 Administration* and check the administration of the system. For AUDIX Voice Power Lodging, refer to *AUDIX Voice Power Lodging R1.1 Administration* and check the administration of the system.
Possible Reason:	The SID may be administered incorrectly.
Remedy:	Refer to Chapter 8, *Switch Integration Device Administration* and check the administration of the system. Make sure the channels and extensions are configured correctly.
Possible Reason:	The baud rate for the SID-to-AUDIX Voice Power connection may not be set correctly.
Remedy:	Refer to Chapter 8, *Switch Integration Device Administration* and set the baud rate correctly.
Possible Reason:	The baud rate for the SID-to-PBX MCI connection may not be set correctly.
Remedy:	Refer to Chapter 8, *Switch Integration Device Administration* and set the baud rate correctly.

Calls are integrated but the message waiting lamp (MWL) does not work.

Possible Reason:	The MWL may not be administered correctly on AUDIX Voice Power or AUDIX Voice Power Lodging.
Remedy:	For an AUDIX Voice Power system R2.1.1, refer to *AUDIX Voice Power R2.1.1 System Managers Guide* and check the administration of the system. For an AUDIX Voice Power system R3.0, refer to Chapter 6, *AUDIX Voice Power R3.0 Switch Parameters* and check the administration of the system. For AUDIX Voice Power Lodging, refer to *AUDIX Voice Power Lodging R1.1 Administration* and check the administration of the system.

Possible Reason:	The packet format and MWL codes are set incorrectly on the switch.
Remedy:	Refer to Chapter 7, *NEAX 2400 Switch Administration* and set the information correctly.

Possible Reason:	The SMDI cable between AUDIX Voice Power Lodging or AUDIX Voice Power may be defective.
Remedy:	Replace the cable.

You receive constant MWI Packet error messages.

Possible Reason:	The RS-232 MCI cable may be defective.
Remedy:	Replace the cable.

Possible Reason:	The baud rate and parity are not configured correctly on the SID.
Remedy:	Refer to Chapter 8, *Switch Integration Device Administration*, for instructions on configuring the baud rate and parity for the MCI link and the SMDI link.

The LCD display contains the message `Waiting for Remote Access`.

Possible Reason:	You did not connect an analog phone line to the modem port.
Remedy:	Refer to Chapter 4, *Hardware Installation*, for instructions on connecting an analog phone line to the modem port.

The VM LED is yellow constantly (more than 5% packet transmission error).

Possible Reason:	The SMDI cable is loose.
Remedy:	Tighten the SMDI cable connections.

Possible Reason:	The SMDI communications port baud rate, parity, and other settings are not correct.
Remedy:	Refer to Chapter 8, *Switch Integration Device Administration*, for instructions on configuring the SMDI link.

Possible Reason:	The SMDI cable may be defective.
Remedy:	Replace the cable. Refer to Chapter 4, *Hardware Installation*, for instructions on connecting the SMDI cable.

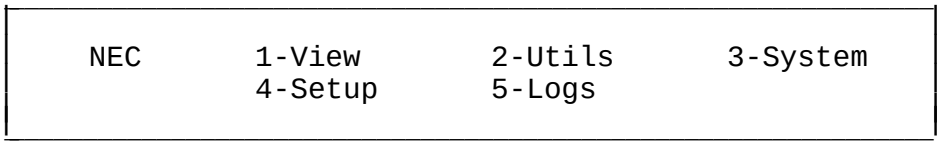
VM LED is red constantly (more than 50% packet transmission error).

Possible Reason:	The SMDI cable is loose.
Remedy:	Tighten the SMDI cable connections.
Possible Reason:	The SMDI communications port baud rate, parity, and other settings are not correct.
Remedy:	Refer to Chapter 8, *Switch Integration Device Administration*, for instructions on configuring the SMDI link.
Possible Reason:	The SMDI cable may be defective.
Remedy:	Replace the cable. Refer to Chapter 4, *Hardware Installation*, for instructions on connecting the SMDI cable.

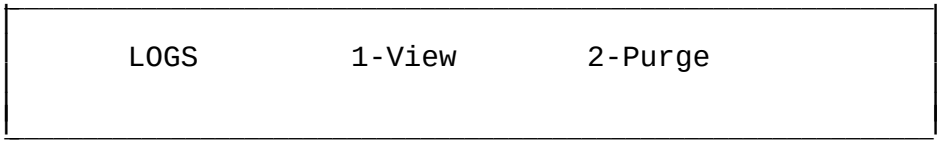
ERROR LOGS

The SID accumulates and records or "logs" error messages. The error messages can help solve problems and trace errors. You can access the error logs on the SID if you are authorized to use security level 1 features. The error logs also are available to trained support personnel to assist with troubleshooting. Use the instructions in this section to log on to the SID and view the error logs.

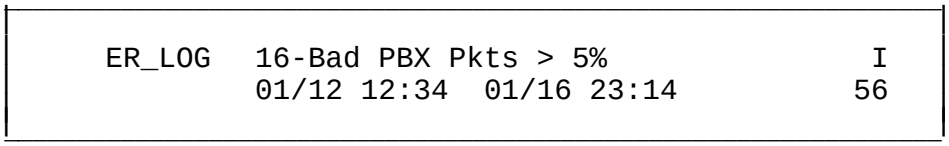
1. Press (FUNC) to access the MAIN MENU as shown in the following example.



2. Press (5) to select `Logs`. After you press the key, you see the LOGS menu as shown in the following example.



3. Press (1) to view the error logs. After you press the key, you see the an error log screen similar to the following example.



Read the explanation of the error log below to understand the information shown on an error log screen.

NOTE

Your error log screens may appear different than the screen shown in the example.

16	The error code number used by AT&T support personnel when they access the SID through the remote maintenance modem.
No PBX Pkts in 60 Secs.	Informational text that provides a brief description of the error. In the example, the SID wrote an informational message indicating that no packets had been received from the switch in the previous 60 seconds.
I	A letter that indicates the error type and severity. The error messages can be informational (I), warning (W), or error (E) types.
01/12_12:34	The date and time, rounded to the nearest minute, that the error or warning first occurred.
01/16_23:14	The date and time the error or warning last occurred.
56	The number of times the SID produced the error or warning between the first and last occurrence. The number tells you the how frequently the errors occur. If you see a severe error occurring frequently, contact your support representative.

The SID can record many different errors. All errors are displayed in the same format, explained in the above example. You may use the up arrow and down arrow to scroll through the list of messages. The table on the next page lists all SID error codes and contains a description and action for each error code.

Code	Description	Type	Action
1	VM Comm Error	W	Check SMDI connection and parameters
2	No Free VM_IN Packets	W	Check SMDI connection and parameters
3	Excess Data -- VM_IN Pkts	W	Check SMDI connection and parameters
5	Bad MWI Pkt	W	Check SMDI connection and parameters
6	No Free Centrex Pkts	W	Check SMDI connection and parameters
10	Excess Data - PBX_IN pkt	W	Check MCI connection and parameters
11	Kernel Error	E	
12	No Free PBX_OUT Packets	W	Check MCI connection and parameters
13	Idle Task Not Enough Time	W	
15	Bad PBX Pkts > 50%	I	Check MCI connection and parameters
16	Bad PBX Pkts > 5%	I	Check MCI connection and parameters
17	System Startup	I	No action required
19	System Powerdown	I	No action required
20	VM Comm Error > 5%	E	Check SMDI connection and parameters
21	VM Comm Error > 50%	E	Check SMDI connection and parameters
22	Boot Error: RTC	E	Set time and date
23	Boot Error: SCC	E	
24	Boot Error: LED	E	
25	Boot Error: Modem	E	
26	Boot Error: DPRAM	E	
27	Bad MWI Pkts > 50%	I	Check SMDI connection and parameters
28	Bad MWI Pkts > 5%	I	Check SMDI connection and parameters
29	PBX Comm Error > 5%	E	Check MCI connection and parameters
30	PBX Comm Error > 50%	E	Check MCI connection and parameters
31	Bad PBX Packet	W	Check MCI connection and parameters
32	Hardware Watchdog Reboot	E	
33	Integration Stop	I	No action required
34	Integration Start	I	No action required
35	No Free PBX_IN Packets	W	Check MCI connection and parameters
36	Hardware Reset	I	No action required
37	VM Remote Reset	I	No action required
38	Software Reset	I	No action required

From time to time, you may need to purge your error logs. You can purge error logs on the SID if you have authorization to access security level 1 features. Use the following instructions to purge error logs.

1. Press (FUNC) to access the MAIN MENU.
2. Press (5) to select `Logs`. After you press the key, you see the LOGS menu as shown in the following example.

```
LOGS          1-View        2-Purge
```

3. Press (2) to select `Purge`. After you press the key, you see the screen shown in the following example.

```
PURGE LOGS?     1-Yes         2-No
```

4. Press (2) to cancel the purge. The SID save the error logs.

   Press (1) to erase the error logs. The SID starts to record new error messages after you purge the old logs. After the SID completes the purge, you see the following message on the screen.

```
Purging Logs...
```

CLEARING YOUR CONFIGURATION

When you add voice mail ports or change the switch dial plan, you may need to reconfigure the SID. In most cases, you can accomplish the task by editing the existing setup and restarting the system. If required, the SID provides the capability to restore the factory default settings. To clear your configuration and restore the factory setting, use the following instructions.

1. Press (FUNC) to access the MAIN MENU.
2. Press (4) to select the `Setup` option. After you press the key, you see the SETUP menu as shown in the following example.

```
SETUP      1-Params      2-Ports      3-Clear
           4-Advanced
```

3. Press (3) to select `Clear`. After you press the key, you see the CLEAR SETUP screen as shown in the following example.

```
CLEAR SETUP?     1-Yes         2-No
```

4. Press (2) to cancel the clear and return to the SETUP menu.

   Press (1) to restore the factory default settings. When you clear your configuration, you remove all global parameter information, dial plan, logical terminal number information, and SMDI and MCI serial port information. The contrast and Enhanced MWI handling settings are restored to the factory defaults. The only information preserved are your error logs and statistical tables. Using the clear command stops the integration. You must configure and start the system to integrate calls.

B. Using Views During Integration

The SID provides you with four real-time views of the integration process:

- SMDI monitor mode
- MCI monitor mode
- Statistics mode
- Metrics mode

Each mode shows you different information in a common screen layout. A typical view mode appears as shown in the following example.

```
SMDI MWI:    OP:MWI 0000202
    CPID:   ..MD0010001D 0000201...
```

View modes remain on the screen, constantly changing as calls and message waiting transactions are processed. Use the information in this appendix to access and use the view modes.

SMDI MONITOR MODE

The first option on the VIEW menu is the `SMDI` monitor mode. The mode permits you to observe transactions as they occur on the SMDI data link that connects the SID to AUDIX Voice Power or AUDIX Voice Power Lodging. The SMDI monitor is a useful tool that provides condensed, real-time reporting of all transactions on the SMDI data link. The SMDI link connects the SID to AUDIX Voice Power or AUDIX Voice Power Lodging. The view is set as the default display mode for a configured SID. When the system first boots up and is idle, the display appears as shown in the following example.

```
SMDI Idle
```

Use the following instructions to access the SMDI monitor mode.

1. At the NEC MAIN MENU, press (1) to select the `View` option. You see the following screen.

```
VIEW      1-SMDI        2-MCI         3-Stats
          4-Metrics
```

2. Press (1) to select the `SMDI` option and access the SMDI view screen as shown in the following example.

```
SMDI MWI
    CPID   ..MD0010002B0000201 0000202...
```

3. To exit the SMDI view screen, press (MODE) to return to the NEC MAIN MENU.

When transactions are being processed, the screen updates continuously. The example SMDI view screen above shows a call covered to the pilot number of the UCD group. The following descriptions explain the content of each field. Each type of view screen contains similar fields.

CPID The bottom line of the display is reserved for calling party ID packets, or information about the call that AUDIX Voice Power or AUDIX Voice Power Lodging is about to answer.

MD0010002 The number notifies AUDIX Voice Power or AUDIX Voice Power Lodging that the calling party information is specific to message desk 1 and logical terminal number (LTN) 2. This permits the appropriate mail box to be opened on the correct analog voice mail port.

B0000201
0000202 The information represents calling and called party information. In this case, extension 201 called a busy extension 202. The call covered to the UCD group pilot number. The caller at extension 201 listens to the personal greeting for mailbox 202.

When the SID processes a message waiting command, the screen appears as shown in the following example.

```
SMDI MWI:     RMV:MWI  0000201!.
```

The example indicates that the message waiting lamp at extension 201 has been turned on. Since the SID preserves the most recent CPID or MWI transaction on the screen, you can see a mix of information on the screen, as shown in the following example.

```
SMDI MWI:    OP:MWI 0000202!.
    CPID:   ..MD0010001D 0000201 ...
```

If you attempt to use the view monitor before configuring the SID, the warning shown below appears on your screen. You must first configure your system before you use the view modes.

```
SMDI  Integration Stopped
```

USING MCI MONITOR MODE

The SID provides an MCI data link monitor that allows you to view transactions sent between the switch and the SID. This view is similar in format to the SMDI Monitor. The top line on the display shows message waiting commands and the bottom line shows calling party data. Use the following instructions to use the MCI monitor view.

1. Access the VIEW menu as described in the previous section.
2. Press (MODE).
3. Press (2) to select the `MCI` option. You see the following screen.

```
MCI   .0!B2301      01.
.0!J001372    43001375   01371
```

The display updates as packets are transmitted and received on the MCI data link. You see the "Idle" message and the "Integration Stopped" message under the same circumstances as in the SMDI monitor mode.

USING STATISTICS MODE

Use the following instructions to use the Statistics monitor mode.

1. Access the VIEW menu as described in the previous section.
2. Press (MODE).
3. Press (3) to select the `Statistics` option. You see the following screen.

```
STATS   Calls:   978 BdPkts:                    4
        MWIs:    456 BdMWIs: 3 Q: 120-03%
```

The screen updates continuously, showing the total number of calls processed and the number of bad packets received from the switch. The screen also shows the total number of message waiting commands processed, the number of bad MWI packets received from AUDIX Voice Power or AUDIX Voice Power Lodging, and the total number of MWI commands residing in the SID's queue. Use the Statistics mode to monitor activity on your integrated system.

USING METRICS MODE

Use the following instructions to use the Metrics monitor mode.

1. Access the VIEW menu as described in the previous section.
2. Press (MODE).
3. Press (4) to select the `Statistics` option. You see the following screen.

```
  METRICS     Calls/Hr:     12001
              MWIs/Hr:      9071
```

This display updates occasionally, showing performance measurements for both the SID's call processing and message waiting activities. The top line shows a running average for the number of calls serviced by AUDIX Voice Power or AUDIX Voice Power Lodging per hour. The bottom line shows a similar statistic for the number of message waiting commands serviced by the SID per hour. Use the Metric mode to monitor the performance characteristics of your integrated system.

CLEARING STATISTICAL INFORMATION

The SID accumulates data that supports the Statistics and Metrics views. You may wish to purge the data to begin taking new measurements, especially when you add subscribers to the system, analog voice mail ports, or change your usage habits. To clear the data, use the following instructions.

1. Log into security level 1. For instructions on logging in to the security level, refer to Chapter 7, *Switch Integration Device Administration,* in this document.
2. Press (MODE) at the VIEW action form.
3. Press (5) to select `Clear` and and remove the old statistics. After you press the key, you see the following message on the screen.

```
Clearing Statistics...
```

The SID clears all statistical information. After a few seconds, the display clears and the SID returns to the VIEW menu.

C. AUDIX Voice Power Initial Administration

Do not perform initial administration tasks for AUDIX Voice Power R2.1.1 until after you install the hardware and software. Initial administration tasks prepare the system for acceptance tests and for the final cut-to-service.

NOTE

The information in this chapter explains how to perform initial administration tasks only for a standalone configuration of AUDIX Voice Power R2.1.1.

- If you are installing a coresident configuration of AUDIX Voice Power R2.1.1 or any configuration of AUDIX Voice Power Lodging R1.1, refer to *AUDIX Voice Power Lodging R1.1 Installation* (585-310-125) for initial administration instructions.
- If you are installing an AUDIX Voice Power system R3.0, refer to *AUDIX Voice Power System R3.0 Administration* (585-310-532) for initial administration instructions.

This chapter includes instructions for the following AUDIX Voice Power R2.1.1 tasks.

- Mapping PBX extensions to channels
- Assigning services to channels
- Verifying the channel state
- Verifying extensions and channels
- Associating application with switch packages
- Stopping and starting the voice system
- Diagnosing Equipment

TASK 1: MAPPING PBX EXTENSIONS TO CHANNELS

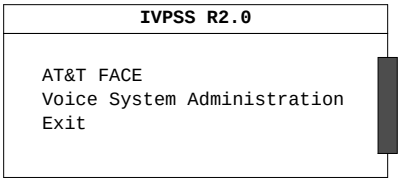
Use the following instructions to map PBX extensions to AUDIX Voice Power channels.

1. At the `Console Login` prompt, type **`audix`** and press ENTER.

   The system responds with the `Password` prompt.

2. Press ENTER.

   After you press the key, you see the IVPSS R2.0 menu as shown in the following example.



3. If you do not know the extensions, ask the PBX administrator for the extensions of the analog lines that run to the IVP4 cards.

4. Write the extensions in the PBX Extension column of Table C-1.

   The table contains spaces for 12 channels. Your site may have less than 12 channels.

IVP4 Card Number	Port Number	Channel Number	PBX Extension	Service
Card 0	Port 0	0		
	1	1		
	3	2		
	4	3		
Card 1	Port 0	4		
	1	5		
	3	6		
	4	7		
Card 2	Port 0	8		
	1	9		
	3	10		
	4	11		

Table C-1. Channels/PBX Extensions/Services

5. At the IVPSS R2.0 menu, select the following sequence of menus.

   ```
   Voice System Administration
   Configuration Management
   System Control
   Stop Voice System
   ```

   The system displays the WAIT TIME window.

6. Type **60** at the prompt.

   This is the number of seconds the system waits for activity to complete before stopping the voice system.

7. Press SAVE (F3).

   When the process finishes, you see the following message on the screen.

   ```
   The Voice System has stopped
   ```

8. Press ENTER to continue.

9. Press CANCEL (F6) to exit the SYSTEM CONTROL window.

10. At the CONFIGURATION MANAGEMENT window, select the `Voice Equipment` option.

    After you select the options, you see the `Voice Equipment` window as shown in the following example.

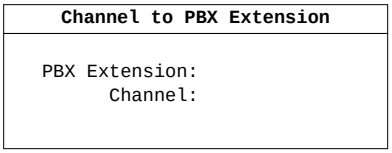
Voice Equipment

CHN	CD.PT	STATE	STATE-CHNG-TIME	SERVICE-NAME	PHONE	GROUP	OPTS	TYPE
0	0.0	INSERV	Aug 28 19:24:25			2	Talk	IVP4
1	0.1	INSERV	Aug 28 19:24:25			2	Talk	IVP4
2	0.3	INSERV	Aug 28 19:24:25			2	Talk	IVP4
3	0.4	INSERV	Aug 28 19:24:25			2	Talk	IVP4
4	1.0	INSERV	Aug 28 19:24:25			2	Talk	IVP4
5	1.1	INSERV	Aug 28 19:24:25			2	Talk	IVP4
6	1.3	INSERV	Aug 28 19:24:25			2	Talk	IVP4
7	1.4	INSERV	Aug 28 19:24:25			2	Talk	IVP4
8	2.0	INSERV	Aug 28 19:24:25			2	Talk	IVP4
9	2.1	INSERV	Aug 28 19:24:25			2	Talk	IVP4
10	2.3	INSERV	Aug 28 19:24:25			2	Talk	IVP4
11	2.4	INSERV	Aug 28 19:24:25			2	Talk	IVP4

11. Press CHG-KEYS (F8), then ASSIGN (F3).

12. At the ASSIGN menu, select the `Channel to PBX Extension` option.

    After you select the options, you see the `Channel to PBX Extension` window as shown in the following example.



13. Use the arrow keys to move the cursor to the `PBX Extension` field.
14. Type the PBX extension for channel 0 in the `PBX Extension` field.

    Refer to Table C-1 for your list of channel numbers and extensions. If you did not use channel 0 as the first channel, type the first channel number you listed on the table.
15. Use the arrow keys to move the cursor to the `Channel` field.
16. Type **`0`** in the `Channel` field. If you did not use channel 0 as the first channel, type the channel number that matches the extension number you entered in the previous step.
17. Press SAVE (F3).

    After you press the key, you see an information window confirming that the system mapped the PBX extension to the channel.

NOTE

The VOICE EQUIPMENT window does not update until you close the CHANNEL TO PBX EXTENSION window.

18. Press ENTER to continue.
19. Repeat steps 12 through 18 for each channel.
20. When you finish mapping PBX extensions to all of the channels, press CANCEL (F6).

Continue with task 2, *Assigning Services to Channels*.

TASK 2: ASSIGNING SERVICES TO CHANNELS

Use the instructions in this task to assign services to channels. Before you perform the instructions, you need to plan your strategy. For AUDIX Voice Power R2.1.1, you can assign five different services as shown in the following list.

- Automated Attendant - The feature directs callers through a series of menu selections to reach a desired department, extension, or attendant. Spoken prompts greet callers and guide them through touch-tone buttons until they reach their destination.
- Message Drop - The feature is an answering service that presents a message to the caller then allows the caller to leave a return message.
- Voice Mail - The feature allows subscribers to send messages to other subscribers, listen to received messages, forward messages received with comments attached, and reply to messages.
- Information Service - The feature is a customer-oriented, call-in information facility. The caller hears a prerecorded, informational message and is then disconnected.
- Non-integrated Call Answer (NICA) - The feature allows a subscriber to transfer a caller directly to another subscriber's voice mailbox without ringing the telephone. For example, Ms. Smith has a meeting in her office and has asked not to be disturbed. When callers ask for Ms. Smith, the attendant can transfer the callers directly to Ms. Smith's voice mailbox without ringing the telephone. To perform the transfer, the attendant uses the channel assigned to the NICA service.

Each service you want to assign requires at least one channel. Before you assign services, determine the number of services you want to use and then select a channel or series of channels to which you want to assign the service. If a service requires more than one channel, administer a UCD group for the channels.

For example, if you have an eight port system and you want to use the NICA service, and the Message Drop service, and the Voice Mail service, you need to assign at least three channels. The Voice Mail service will receive the most calls. You can assign two channels in a UCD group for NICA, two channels in a UCD group for Message Drop, and the remaining four in a UCD group for Voice mail.

NOTE

The instructions for assigning services to channels represent guidelines. You do not have to assign the services to the exact channels used in the instructions.

For more information and a channel assignment planning form, refer to Chapter 2, *System Planning*, in *AUDIX Voice Power Release 2.1.1 Planning Guide and Forms.*

1. On Table C-1, write **`info_service/voice_mail`** in the service column next to each channel you plan to assign to AUDIX Voice Power.

   Use the `info_service` service to test the channel. After you test and confirm the channel, change these channels to the *voice_mail* service. For example, if you needed to assign 4 channels to AUDIX Voice Power, write `info_service/voice_mail` in the service column for channels 0, 1, 2, and 3.

2. At the ASSIGN menu, select `Services to Channels`.

   After you make the selection, you see the ASSIGN SERVICE TO CHANNELS window as shown in the following example.

```
Assign Service to Voice Channels

   Service:
  Channels:
```

3. Press CHOICES (F2).

   When you press the key, you see a menu that lists all services you can select.

4. Select `info_service`.

5. In the `Channels` field, type the number of channels you want to assign to the service.

   You may type a single channel number, a range of channels such as `0-4`, or `all` to assign all channels to the service.

6. Press SAVE (F3).

   After you press the key, you see the COMMAND OUTPUT WINDOW. The window confirms the channels and the service you assigned to the channels.

7. Press CANCEL (F6).

8. If all channels have not been assigned to a service, press CHG-KEYS (F8), then press ASSIGN (F3). Repeat steps 2 through 7 until all channels have services assigned to them.

After you assign a service to all channels, continue with task 3, *Verifying the Channel State*.

TASK 3: VERIFYING THE CHANNEL STATE

Use the following instructions to verify the state of the channels.

1. Look at the STATE field on the VOICE EQUIPMENT window for all channels.

   If the field contains `Inserv` for all channels, proceed to step 2.

   If you see FOOS or MANOOS in the STATE field for any channel, use the following procedure to change the state.

   a. At the VOICE EQUIPMENT window, press CHG-KEYS (F8) to view the alternate key selections.

   b. Press CHGSTATE (F2).

      After you press the key, you see the CHANGE STATE OF VOICE EQUIPMENT window.

   c. Enter **`inserv`** in the `New State` field.

   d. Enter **`card`** in the `Equipment` field.

   e. Enter **`all`** in the `Equipment Number` field.

   f. Enter **`yes`** in the `Change Immediately` field.

   g. Press SAVE (F3) to save your changes.

      After you press the key, you see a confirmation window informing you that the system has changed the state of the channels.

   h. Press CANCEL (F6) to continue.

      After you press the key, you see the VOICE EQUIPMENT window.

   i. Look at the STATE field on the VOICE EQUIPMENT window for all channels.

      If the field contains `Inserv` for all channels, proceed to step 2.

      If you still see FOOS or MANOOS in the STATE field for any channel, the IVP4 card connection may be loose or incorrect. Check the connection of the line at both ends, then proceed to the *Diagnosing Equipment* section at the end of this appendix.

2. When all of the channels read `Inserv`, press CANCEL (F6) to exit the VOICE EQUIPMENT window.

3. Continue with task 4, *Verifying Extensions and Channels*.

TASK 4: VERIFYING THE EXTENSIONS AND CHANNELS

Use the following instructions to verify the IVP4 extensions and channels.

1. At the CONFIGURATION MANAGEMENT menu, select the following sequence of windows.

   ```
   System Control
   Start Voice System
   ```

   After you select `Start Voice System`, the system starts to operate. You see the following message on the screen:

   ```
   Startup of the Voice System is complete
   ```

2. Press ENTER to continue.
3. Press CANCEL (F6) two times to return to the VOICE SYSTEM ADMINISTRATION menu.
4. Select the `System Monitor` option.
5. Verify that all channels read `On-Hook`.

   If the state of a channel reads `Initing`, wait a few seconds. When the initialization finishes, the state changes to `On-Hook`.
6. Call each channel number using the extensions that you wrote in Table C-1.
7. Look at the SYSTEM MONITOR window. Verify that the call comes through on the proper channel. You see `On-Hook` change to `Talking` and the name of the assigned service, `info_service` appear in the `Voice Service` field.

   For channels assigned to info_service, you will hear "Information announcement" when you call the channel number.
8. When you finish verifying channels, press CANCEL (F6).
9. Change all channels assigned to the `info_service` service to the `voice_mail` service by performing the following instructions.

   a. At the VOICE SYSTEM ADMINISTRATION menu, select the following sequence of windows.

      ```
      Configuration Management
      Voice Equipment
      ```

   b. Press CHG-KEYS (F8).

   c. Press ASSIGN (F3).

   d. Change all of the channels assigned as `info_service` to `voice_mail`. To change the channel assignments, perform steps 2 through 7 in Task 2, *Assigning Services to Channels*, in this chapter. Refer to Table C-1 to make sure you change all channels you assigned as `info_service`.
10. Press CANCEL (F6) until you return to the IVPSS R2.0 menu.

Continue with Task 5 on the next page, *Associating Application with Switch*.

TASK 5: ASSOCIATING APPLICATION WITH SWITCH

All configurations require this task.

At this point you must associate the application software with the switch interface software. Refer to the heading *Associating Application with Switch* in Chapter 5, *Software Installation* of this document for instructions on associating the application with the NEAX 2400 MCI PBX.

TASK 6: STOPPING AND STARTING THE VOICE SYSTEM

Use the following instructions to stop and start the voice system.

1. At the VOICE SYSTEM ADMINISTRATION menu, select the following sequence of menus.

   ```
   Configuration Management
   System Control
   Stop Voice System
   ```

   After you select the `Stop Voice System` option, you see the WAIT TIME window.

2. At the prompt, type **`60`**

   The number represents the time in seconds that the system waits for all activities to complete before stopping the voice system.

3. Press SAVE (F3) to stop the voice system in 60 seconds.

   When the process finishes, you see the following message in the window.

   ```
   The Voice System has stopped
   ```

4. Press ENTER to continue.
5. From the SYSTEM CONTROL menu, select `Start Voice System`.

   When the process finishes, you see the following message in the window.

   ```
   Startup of the Voice System is complete
   ```

6. Press ENTER to continue.
7. Press CANCEL (F6) until you return to the IVPSS R2.0 menu.

Return to the *Assign Extensions and LTN* section in Chapter 8, *Switch Integration Device Administration* and continue with the instructions in that section.

DIAGNOSING EQUIPMENT

Use the instructions in this section to diagnose the IVP4 cards and channels.

1. At the IVPSS R2.0 menu, select the following series of menus.

   ```
   Voice System Administration
   Configuration Management
   System Control
   Diagnose Equipment
   ```

   After you select `Diagnose Equipment`, you see the DIAGNOSE EQUIPMENT window.

2. Enter **`card`** as the equipment to diagnose.
3. Enter **`all`** as the equipment number.
4. Enter one of the following selections and perform the procedure.
   A. Enter **`y`** to perform IVP4 card diagnostic procedures immediately.

   NOTE

   If you enter **`y`**, you disconnect all calls in progress.

   Press (SAVE) and type **`y`** to confirm your choice of diagnosing IVP4 cards immediately, regardless of calls in progress. The diagnostic process may take several minutes. When the process ends you see the results in a window. The procedure diagnoses one card at a time. Each card contains four channels.

   If the diagnosis shows `No Dial Tone Found` for more than one card or if the analysis reads `Failed`, replace the card. If the analysis does not show any problems, the IVP4 cards are probably not the source of the problem.

   B. Enter **`n`** to perform IVP4 card diagnostic procedures during a period when the cards are free of any call transactions. The process may take more time, but you do not disconnect any calls.
5. Press (SAVE) (F3) to exit the process.

Abbreviations

ALT	assemble, load, and test
AUDIX	Audio Information Exchange
CNT	count
CPU	central processing unit
DIP	data interface process
EXT	Extension
FACE	framed access command environment
FMLI	form and menu language interpreter
FOOS	facility out of service
FKY	function key
IMG	Interface Module Group
I/O	input/output
IVP4	Integrated Voice Processing board (4 analog channels)
IVPSS	Integrated Voice Processing System Software
LENS	logical equipment number
LTN	logical terminal number
MANOOS	manual out of service
MCI	Message Center Interface
MD	Message Desk
MMG	multi-module group
MWI	message waiting indicator
MWL	message waiting lamp
OP	operate
PBX	Private Branch Exchange
PEC	price element code
POST	power-on self test
RAM	random access memory
RMV	remove
RNA	ring-no-answer

RSC	route restriction class
SID	switch integration device
SFC	service feature class
SFI	service feature index
SIM	single interface module
SIMM	single inline memory module
SMDI	Simplified Message Desk Interface
STN	station
SYS	system
TEC	telephone class
TSC	Technical Support Center
TN	tenant number
TRIP	tip ring interface process
UCD	uniform call distribution
UMG	ultra-module group
VDC	video display card
WGS	Work Group Station

Glossary

administration	The process of setting up software on a system so that the software functions as needed.
analog	The representation of numerical quantities by means of physical variables such as translation, rotation, voltage, or resistance (contrasted with *digital*.) In teleprocessing usage, an analog channel usually refers to a voice-grade telephone line.
attendant console	A larger, special-purpose telephone with numerous lines and features used by the attendant or operator to answer and transfer calls.
Audio Information Exchange (AUDIX)	A complete voice-mail messaging system accessed and operated by touch-tone telephones and integrated with a switch or PBX.
automated attendant	A feature that allows customers to set up a main number with a menu of options that route callers to an appropriate department at the touch of a button.
backup	A duplicate copy of a file system saved on a removable cartridge or a separate disk than the original. You can restore the back-up file system if the original active version becomes corrupted (damaged) or lost.
call answer	A feature that allows the AUDIX Voice Power™ system to answer a call and record a message when the subscriber is not available.
call coverage	A switch feature that defines a preselected path for calls to follow if the first or second coverage points are not answered.
channel	A telecommunications transmission path for voice and/or data.
cold boot	A process of restarting the computer by turning the computer off then on. A cold boot erases the contents of the system's volatile memory.
configuration	The set of hardware and software components selected for a system, including internal components and external or peripheral components.
coverage path	An ordered sequence of coverage points to which coverage calls are redirected.
data base	A collection of file systems and files in disk memory that store the voice and nonvoice or program information necessary for the operation of the AUDIX Voice Power system and the switch.
data link	The connection from the AUDIX Voice Power computer to the processor interface or switch communications interface (SCI) boards that enables nonvoice data messages to pass between the AUDIX Voice Power system and the switch. The link setup varies depending on your configuration.
data terminal equipment (DTE)	A standard type of data interface normally used for the endpoints in a connection. Normally, the AUDIX Voice Power system, most terminals, and the switch communications interface (SCI) are DTE devices.

default	A value automatically supplied by the system if you do not specify any other value.
digital	Discontinuous or discrete data or signals such as zero (0) or one (1), as opposed to continuous analog signals.
direct call	A call made directly to the AUDIX Voice Power hunt group extension, usually for voice mail retrieval.
direct inward dialing (DID)	A feature that allows an incoming call from the public network to reach a specific telephone without attendant assistance. DID calls to DID-restricted telephone lines are routed to an attendant or recorded announcement, depending on the option selected.
extension	A one- to five-digit number that routes calls through a switch or private network. Extension numbers are primarily associated with telephones and data terminals, but can also be used for functions associated with specific features.
field	An area on a screen, menu, or report where you type information or see information displayed.
file system	A collection of related files, programs, or data stored on disk.
host switch	The switch or PBX connected directly to the AUDIX Voice Power system over the data link.
UCD group	A group of ports on the switch administered to search for available ports in a circular pattern.
local installation	A system, adjunct, or piece of peripheral equipment installed physically near the host switch or system.
maintenance	The process of identifying system errors and correcting them, or taking steps to prevent problems from occurring.
message waiting indicator (MWI)	A method of alerting subscribers that they have voice mail messages, such as a stutter dial tone or message waiting lamp.
message waiting lamp (MWL)	A small light on a telephone that lights or flashes when the subscriber has voice mail messages.
peripheral	An external hardware component connected to the AUDIX Voice Power computer such as a voice terminal, printer, or display terminal.
phone-based	The term applies to tasks performed at the telephone or information pertaining to the telephone interface.
port	A connection or link between two devices that allows information to travel through the connection to a desired location.
private branch exchange (PBX)	An analog, digital, or electronic communication system where data and voice transmissions are not confined to fixed communications paths, but are routed among available ports or channels; also known as a "switch."
switch	See "PBX."
switch integration device (SID)	A protocol converter connected between a non-AT&T switch and the AUDIX Voice Power system. The SID converts switch call information into Simplified Message Desk Interface (SMDI) format and passes the information on to the AUDIX Voice Power system.

system administrator	The person at the customer site responsible for AUDIX Voice Power system administration.
terminal-based	The term applies to tasks performed at the AUDIX Voice Power computer terminal or information pertaining to the terminal interface.
voice link	The call distribution group, or hunt group, of analog ports on the switch.
voice mail	An AUDIX Voice Power feature similar to a "verbal letter" that you can send to one or more AUDIX Voice Power system subscribers. The AUDIX Voice Power system acts as an electronic post office that delivers spoken messages.
warm boot	A process to restart the computer while you have the computer turned on.

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