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6386/33 and 6386/25
Voice Processing
Hardware Installation

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Acknowledgment

This document was prepared by the BCSystems Product Documentation Development Department, Denver, CO.

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About This Document

This document, *6386/33 and 6386/25 Voice Processing Hardware Installation* (585-310-111), describes the procedures for installing the hardware required for operation of an AUDIX® Voice Power™ R3.0 system.

INTENDED AUDIENCES

This document is designed primarily for the on-site AT&T services technician and customer technical personnel. Secondary audiences include the following from AT&T: field support; the Technical Service Center (TSC); provisioning project managers; the Sales and Technical Resource Center (STRC); helpline personnel; and factory assemble, load, and test (ALT) personnel.

PREREQUISITE SKILLS AND KNOWLEDGE

We assume that the primary users of this document have completed an AT&T AUDIX Voice Power installation training course.

ORGANIZATION OF THIS DOCUMENT

This document is organized as follows:

- Chapter 1, *Prerequisites*, discusses site requirements, required tools, safety considerations, and how to identify factory-assembled (ALT) systems.
- Chapter 2, *Preparing the Mother Board*, describes how to install additional memory and disable the second serial port on the mother board.
- Chapter 3, *Installing Circuit Boards*, describes how to install the VDC600 and IVP4 circuit boards.
- Chapter 4, *Making System Connections*, describes how to connect voice lines to the IVP4 ports and connect the AUDIX Voice Power system to the switch.
- Chapter 5, *Connecting Peripherals*, describes how to connect the monitor and keyboard, remote access modem, and the optional printer.
- Chapter 6, *Performing Operational Testing*, describes how to verify the hardware installation by running the power-on self test (POST) and how to determine hard disk partitioning by running the set-up utility from the customer test diskette.
- Appendix A, *Removing/Replacing the Computer Cover*, describes how to remove and replace the cover of the AUDIX Voice Power computer.

A list of abbreviations used, a glossary, and an index are included following the last chapter.

HOW TO USE THIS DOCUMENT

This document takes a procedure-oriented approach. It includes high-level overviews of tasks followed by detailed step-by-step instructions for completing them. Procedures appear in the order in which you must perform them.

This document is designed for interactive use in conjunction with the following additional documents:

- The *AUDIX Voice Power System R3.0 Installer's Checklist* (585-310-112), which gives the installer a place to record system data and helps ensure the sequential completion of installation procedures.
- *AUDIX Voice Power System R3.0 Planning* (585-310-602), for information on the customer site and specific installation parameters such as extensions, logins, and passwords.
- A switch integration document that provides procedures for connecting an AUDIX Voice Power R3.0 system to your customer's particular PBX.

These additional documents are provided as part of the standard AUDIX Voice Power R3.0 documentation set.



You will see this symbol when you must turn to any of these documents for additional information.

CONVENTIONS USED IN THIS DOCUMENT

The following typographic conventions are used in this document:

- Terminal keys that you press are shown in rounded boxes. For example, an instruction to press the enter key is shown as

Press **ENTER**.

- The word "enter" means to type a value and press **ENTER**. For example, an instruction to type `y` and press **ENTER** is shown as

Enter `y` to continue.

- Two or three keys that you press at the same time (that is, you hold down the first key while pressing the second and/or third key) are shown together in a rounded box and are separated by hyphens. For example, an instruction to press and hold **ALT** while typing the letter `d` is shown as

Press **ALT-D**.

- Information that is displayed on your terminal screen — including screen displays, field names, prompts, and error messages — is shown in typewriter-style constant-width type. Information that you enter from your keyboard is shown in **bold** type. Both are illustrated in the following example:

At the Login ID? prompt, enter **audix**

- Variables that the system supplies or that you must supply are shown in italic type. For example, an error message that is displayed on the screen with one of your specific filenames might be shown generically as

Your file *filename* is formatted incorrectly.

- The word "select" is used in this document to mean the following: move to the desired menu item using the arrow keys and press .

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RELATED RESOURCES

Always refer to the appropriate document for specific information on planning, installing, administering, or maintaining an AUDIX Voice Power system. The *AUDIX Voice Power System R3.0 Documentation Guide* (585-310-013) provides a complete description of other AUDIX Voice Power R3.0 documents. This guide is included with the AUDIX Voice Power documentation set.

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1. Prerequisites

This chapter describes the following prerequisites for the installation of hardware for an AUDIX Voice Power R3.0 system:

- Verifying the selected site
- Gathering the tools required
- Reviewing safety considerations
- Identifying factory-assembled (ALT) systems

VERIFYING THE SELECTED SITE

Verify that the site selected for the AUDIX Voice Power R3.0 equipment provides the following:

- Easy access for cabling
- Adequate working space for the system administrator and others who will be using the system
- A grounded, nonswitched outlet providing 115 VAC, 50-60 Hz, and 220W dedicated exclusively to the the AUDIX Voice Power R3.0 computer

NOTE

In areas with volatile power (brown-outs or frequent power surges), you must also provide surge protection and power backup.

- Temperature range of 50 to 100° F (10 to 38° C)
- Humidity range of 20 to 80%, noncondensing

In addition, make sure the site is secure and provides protection from excessive sunlight, heat, cold, chemicals, static electricity, magnetic fields, vibration, and grime.

GATHERING THE TOOLS REQUIRED

To install AUDIX Voice Power R3.0 hardware, you must have the following tools:

- No. 1 or no. 2 Phillips® screwdriver
- Medium-width, flat-blade screwdriver
- 3/16-inch nut driver (recommended)
- Antistatic grounded wrist strap
- Antistatic grounded work mat

REVIEWING SAFETY CONSIDERATIONS



Electronic equipment can be damaged by electrostatic discharge. Do not touch any electronic component unless you are properly grounded.

Take the following precautions to prevent damage to the equipment and yourself:

- Make sure you are familiar 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. (Your wrist strap must contact your skin directly—do *not* wear it over your clothes.)

IDENTIFYING FACTORY-ASSEMBLED (ALT) SYSTEMS

If your customer ordered the complete hardware platform (an AT&T 6386 WGS) with the AUDIX Voice Power R3.0 package, the AT&T factory has preassembled much of the hardware and all of the software as part of the assemble, load, and test (ALT) process. The factory identifies ALT systems by placing an orange sticker over the door of the floppy disk drive.

Before beginning the installation, look for this sticker. If it is present, the procedures in Chapter 2, *Preparing the Mother Board*, and Chapter 3, *Installing Circuit Boards*, have been completed at the factory. You will only have to make the necessary connections to the switch and peripherals and perform the required testing.

If you are installing an ALT system, skip the next two chapters. Begin with Chapter 4, *Making System Connections*, and continue to the end of this document.

2. Preparing the Mother Board

Certain configurations of an AUDIX Voice Power system require that you access the mother board to install additional memory and/or disable the second serial port.

INSTALLING ADDITIONAL MEMORY

This procedure is required for all systems with less than 8Mbytes of RAM currently installed. If you do *not* need to install additional memory, skip this section. Your next step will be one of the following:

- If you are integrating the AUDIX Voice Power system with a System 75/DEFINITY® G1 or G3 Communications System, continue with *Disabling the Second Serial Port* later in this chapter.
- If you are integrating the AUDIX Voice Power system with any other switch, continue with Chapter 3, *Installing Circuit Boards*.

There are two parts to this procedure:

- Adding single in-line memory modules (SIMMs) to the mother board
- Installing the total onboard RAM jumper

Adding SIMMs to the Mother Board

1. Locate the empty SIMM sockets on the WGS mother board.

NOTE

The location differs for each WGS model; see Figures 2-1 through 2-3 for the SIMM socket location on individual models. (There are two versions of the 6386/25 mother board. Compare the mother board in the WGS you are installing to Figures 2-2 and 2-3 to determine which version you have.)

2. If you are installing a 6386/33 WGS, disconnect all cables that cover the air deflector. Remove the air deflector by gently pulling it outward from the chassis. Remove the cables connected to the hard drive and floppy drive and fold them out of the way (near the disk controller circuit card) to gain access to the SIMM sockets.

If you are installing a 6386/25 WGS, skip this step and continue with step 3.

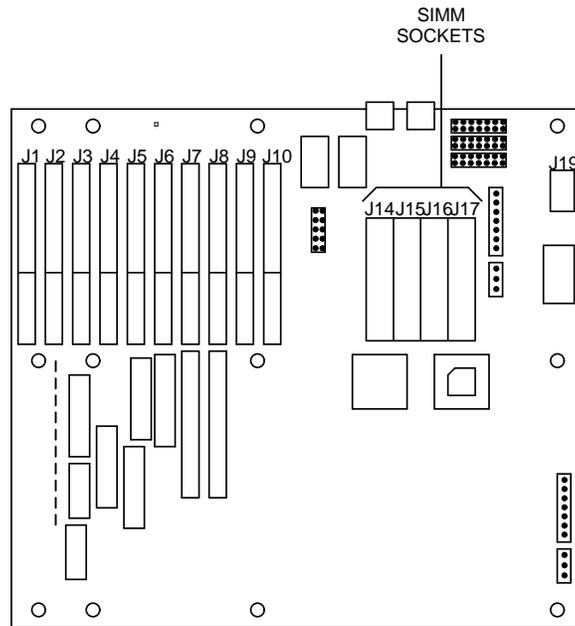


Figure 2-1. 6386/33 SIMM Socket Locations

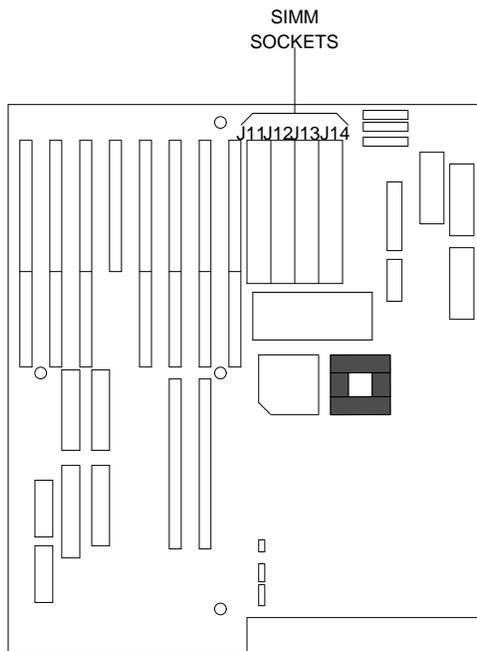


Figure 2-2. 6386/25 SIMM Socket Locations, Version 1

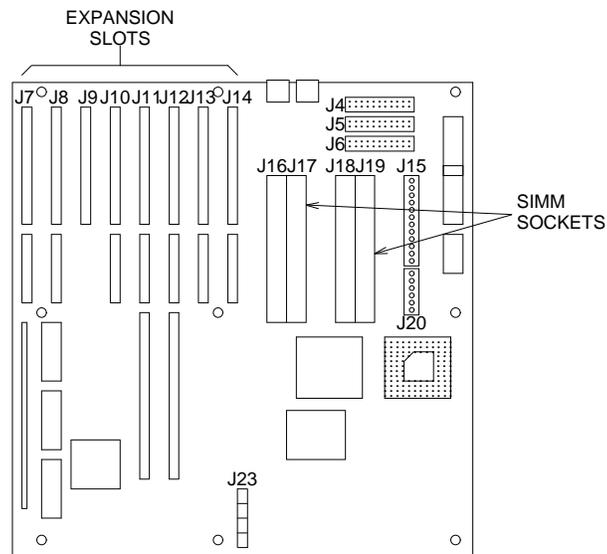


Figure 2-3. 6386/25 SIMM Socket Locations, Version 2

3. Using Figure 2-4 as a guide, complete the following steps a through c to insert the first SIMM into the empty socket:

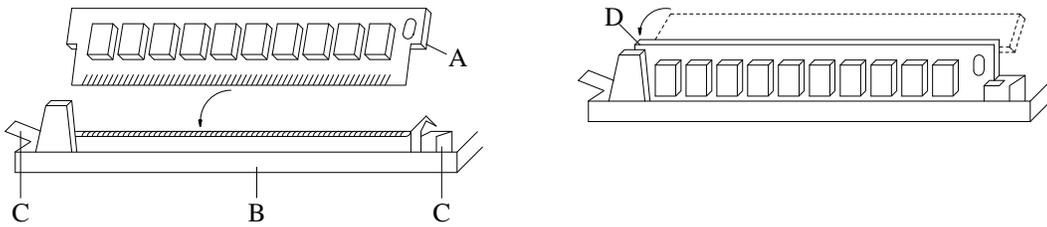
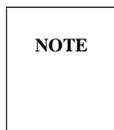


Figure 2-4. Inserting the SIMMs Into Sockets

- a. Holding the SIMM by the edges (A) *only*, align the first SIMM with the left slot of the first socket (B).



Always insert the *first* SIMM into the *left* slot and the *second* SIMM into the *right* slot of each socket.



Use extreme care when inserting the SIMM. Too much force will break the plastic retaining clips (C).

- b. Insert the contact edge into the socket first (the chips should be on the left side of the SIMM). Holding the SIMM at an angle, press down *gently* until you feel the SIMM seat in the socket (you will feel only a slight difference when the SIMM seats).
If you do not think the SIMM is seated correctly, gently open the retaining clips just enough to pull the top edge of the SIMM away from the clips. Reseat the SIMM.
- c. When the SIMM is seated, gently push the top edge of the SIMM into a vertical position (toward the top edge of the retaining clips) until it snaps into place (D).
4. Repeat steps 3a through 3c to insert the second SIMM into the right slot of the same socket.
5. Repeat steps 3a through 3c for the remaining SIMMs, if applicable.

Continue with the next section, *Installing the Total Onboard RAM Jumper*.

Installing the Total Onboard RAM Jumper

This procedure provides instructions for installing/moving the total onboard RAM jumper to indicate 8Mbytes of memory. It is required *only* if you completed the previous procedure, *Installing Additional Memory*.

Refer to Figures 2-5 through 2-7 for the jumper locations on the 6386/33, 6386/25 version 1, and the 6386/25 version 2 WGS, respectively.

On a 6386/33 WGS

1. Leave the jumper on pins E6 and E8.
2. Move the jumper from pins E11 and E13 and place it on pins E7 and E9.

If you are integrating the AUDIX Voice Power system with a System 75/DEFINITY G1 or G3 Communications System, continue with the next section, *Disabling the Second Serial Port*.

If you are integrating the AUDIX Voice Power system with any other switch, skip the next section and continue with Chapter 3, *Installing Circuit Boards*.

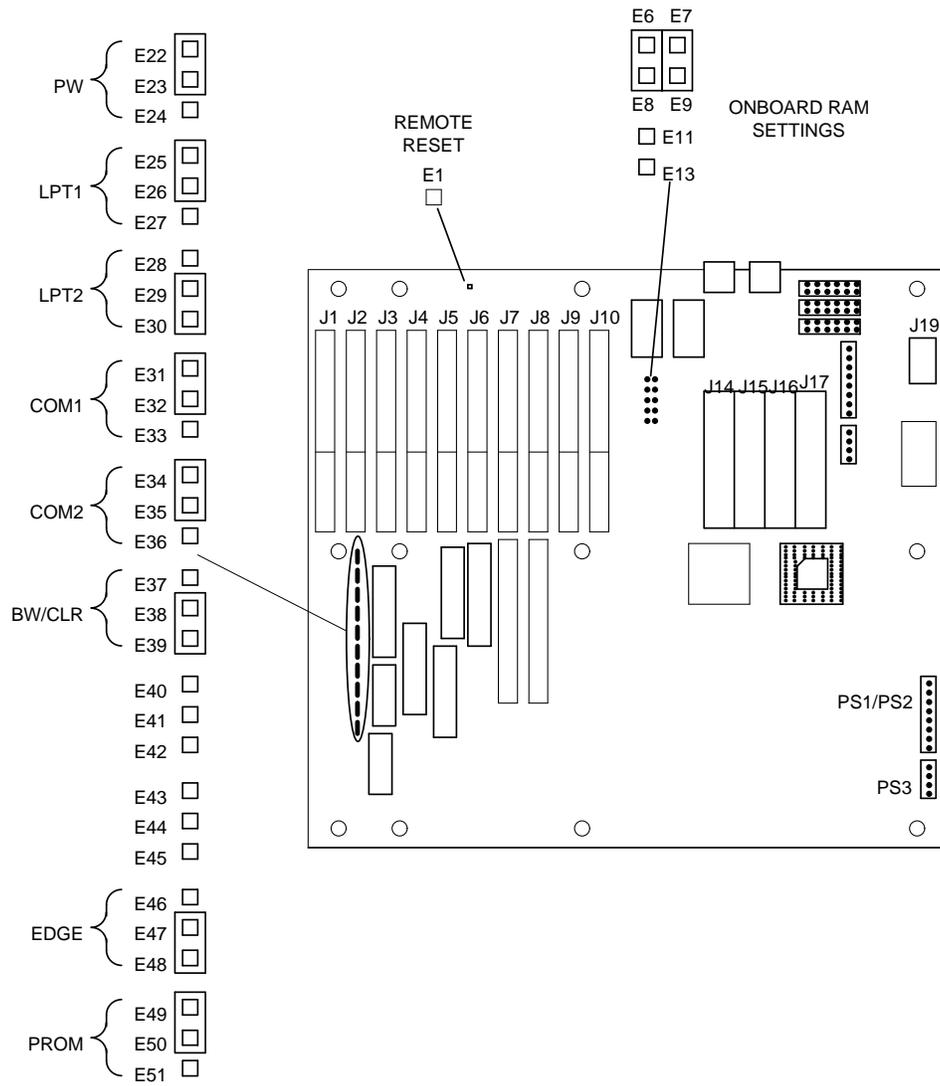


Figure 2-5. 6386/33 Mother Board Jumper Location and Settings

On a 6386/25 Version 1 WGS

1. Leave the jumper on pins E60 and E62 in place.
2. Place a jumper on pins E61 and E63. (Spare jumpers are packed in the plastic bag with the power cord.)

If you are integrating the AUDIX Voice Power system with a System 75/DEFINITY G1 or G3 Communications System, continue with the next section, *Disabling the Second Serial Port*.

If you are integrating the AUDIX Voice Power system with any other switch, skip the next section and continue with Chapter 3, *Installing Circuit Boards*.

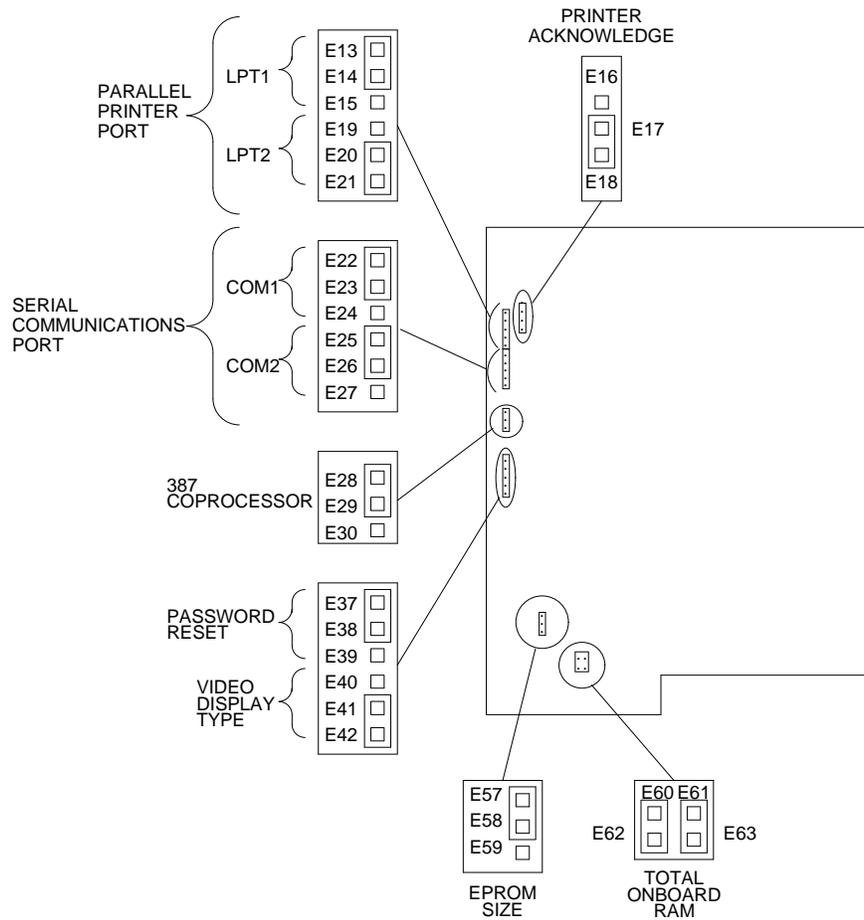


Figure 2-6. 6386/25 Version 1 Mother Board Jumper Location and Settings

On a 6386/25 Version 2 WGS

1. Leave the jumpers on the following pins in place:
 - E29 and E30
 - E36 and E37
 - E38 and E39

2. Move the jumper from pins E33 and E34 and place it on pins E32 and E33.

If you are integrating the AUDIX Voice Power system with a System 75/DEFINITY G1 or G3 Communications System, continue with the next section, *Disabling the Second Serial Port*.

If you are integrating the AUDIX Voice Power system with any other switch, skip the next section and continue with Chapter 3, *Installing Circuit Boards*.

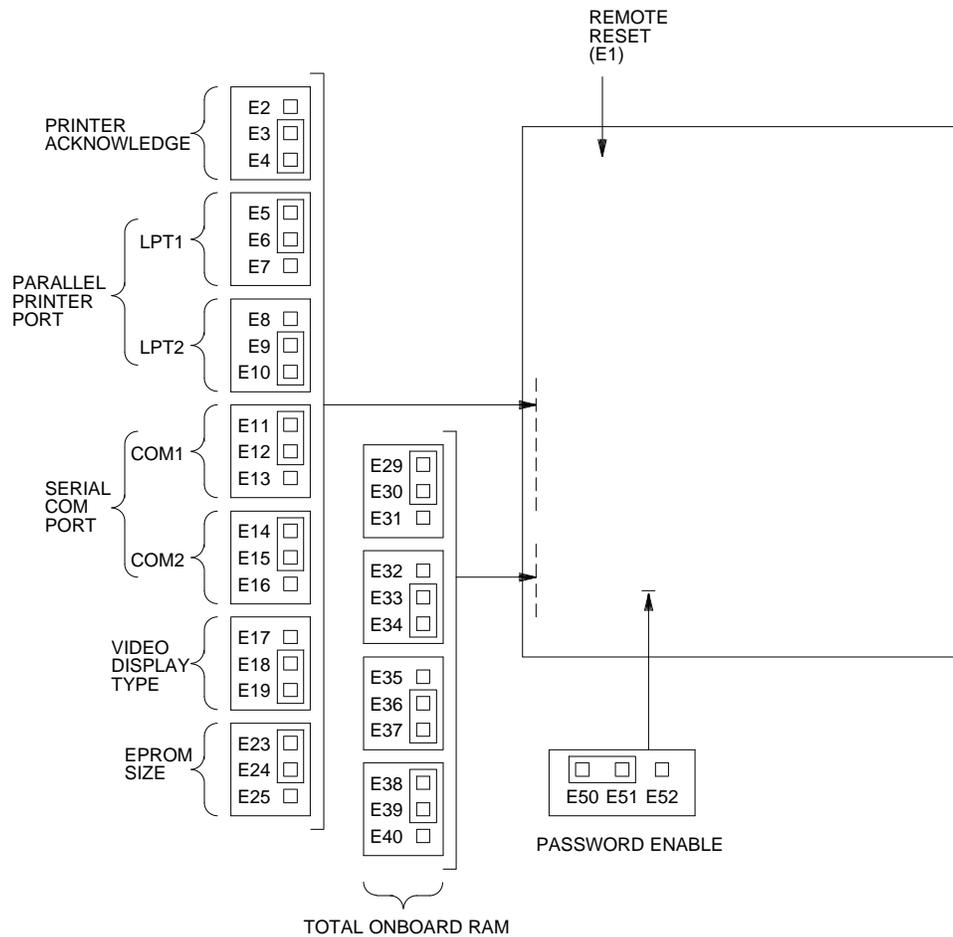


Figure 2-7. 6386/25 Version 2 Mother Board Jumper Location and Settings

DISABLING THE SECOND SERIAL PORT

Perform this procedure *only* if you are installing a Digital Communications Protocol (DCP) board (also known as a PC/PBX Platform) to integrate the AUDIX Voice Power system with the System 75/DEFINITY G1 or G3 Communications System. If you are integrating the AUDIX Voice Power system with any other switch, skip this section and continue with Chapter 3, *Installing Circuit Boards*.

Refer to Figures 2-5 through 2-7 for the jumper locations on the 6386/33, 6386/25 version 1, and 6386/25 version 2 WGS, respectively.

On the 6386/33 WGS

1. Move the COM2 jumper from pins E34 and E35 and place it on pins E35 and E36.
2. Continue with the next section, *Replacing the Air Deflector and Disk Cables*.

On the 6386/25 Version 1 WGS

1. Move the COM2 jumper from pins E25 and E26 and place it on pins E26 and E27.
2. Skip the next section and continue with Chapter 3, *Installing Circuit Boards*.

On the 6386/25 Version 2 WGS

1. Move the COM2 jumper from pins E14 and E15 and place it on pins E15 and E16.
2. Skip the next section and continue with Chapter 3, *Installing Circuit Boards*.

REPLACING THE AIR DEFLECTOR AND DISK CABLES

This task is required *only* if you are installing a 6386/33 WGS.

1. Slide the air deflector into place.
2. Connect the hard disk data cable (the wide gray cable with two connectors — one on the end and one a few inches from the end) to the disk I/O controller board.

Attach either the end- or the mid-cable connector (whichever fits better between the controller and disk drive) to the matching connector on the disk I/O controller board. Ensure there are no twists in the cable between the controller and the drive. If the cable is twisted, the disk will not be recognized when you reboot the system.

3. Connect the hard disk control cable (the narrow gray cable) to the hard disk.
Attach the end connector on this cable to the matching connector on the hard disk.
4. Connect the floppy control and data cable (another two-connector, wide gray cable that is connected near the bottom of the disk controller) to the floppy drive.

Attach the end connector (not the mid connector) to the matching connector on the floppy disk drive.

5. Route and fold the cables so that they are not in the way when you replace the computer cover.

Continue with Chapter 3, *Installing Circuit Boards*.

3. Installing Circuit Boards

This chapter provides procedures for configuring and installing the VDC600 and IVP4 boards.

INSTALLING THE VDC600 BOARD

NOTE For additional information, see the *Video Display Controller Installation Guide* packed with the VDC600 board.

1. Check the settings on the DIP switch and jumpers on the VDC600 board. Ensure they are set as shown in Figure 3-1.

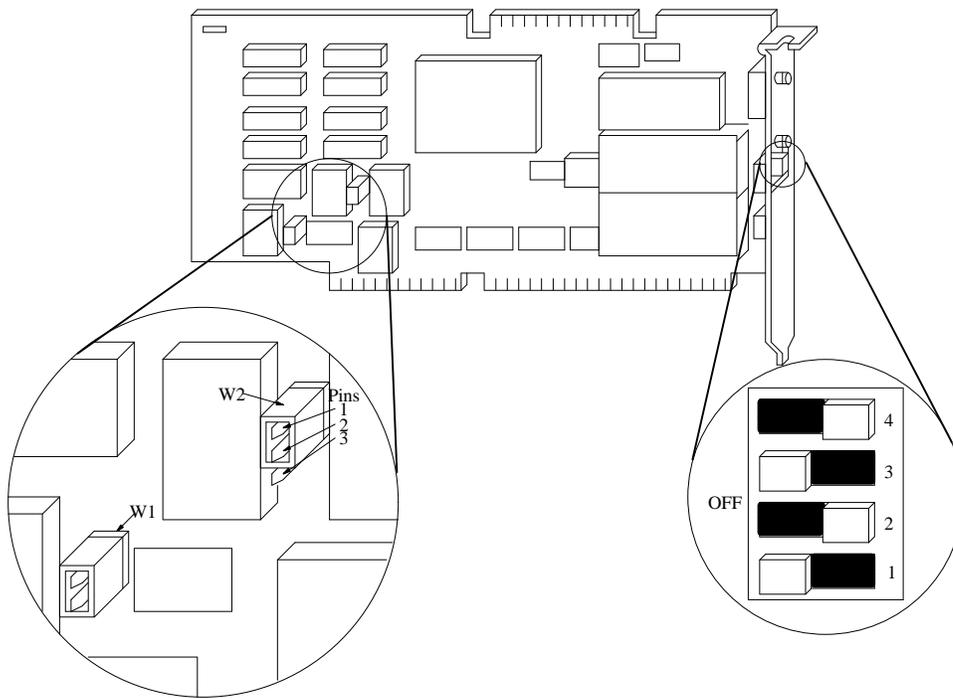


Figure 3-1. VDC600 Switch and Jumper Locations and Settings

2. Complete the following steps a through f to install the VDC600 board:
 - a. Select an open 16-bit expansion slot as far to the left (on floor models, as far to the rear) as possible.
 - b. Remove the screw from the metal cover of the expansion slot you selected (Figure 3-2). Lift out the metal cover. Set the screw aside.

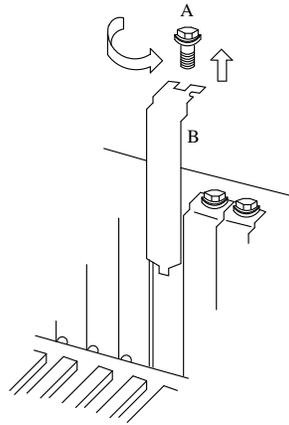


Figure 3-2. Removing the Expansion Slot Cover

- c. Hold the VDC600 board by either end and insert it into the expansion slot (Figure 3-3).
If the WGS you are installing has pressure tabs (to help hold the expansion boards), gently push down on these tabs as you slide the board into the slot.
Ensure that the connector on the VDC600 board is aligned with the expansion slot socket.

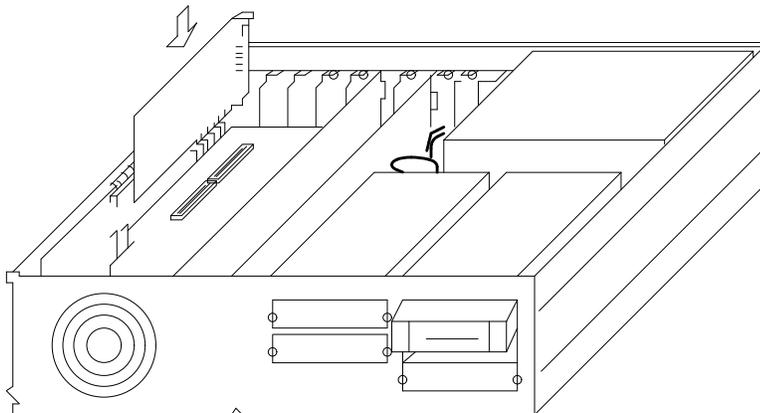


Figure 3-3. Inserting a Card into an Expansion Slot on a 6386/25

- d. Press firmly along the top (or front) edge of the VDC600 board until it locks into place and is flush with the frame of the WGS.
- e. Ensure that the VDC600 board is properly aligned in the slot.
- f. Secure the VDC600 board in the slot with the screw from the metal expansion slot cover.

Continue with the next section, *Installing the IVP4 Boards*.

INSTALLING THE IVP4 BOARDS

There are two parts to this procedure:

- Setting SW1.1 and SW12.1
- Inserting the IVP4 boards into the AUDIX Voice Power computer

Setting SW1.1 and SW12.1

NOTE The AUDIX Voice Power R3.0 system supports up to three IVP4 boards. In this procedure, the IVP4 boards (also referred to as "cards") are numbered 0 through 2.

Before you install the IVP4 boards you must set the termination impedance (SW1.1) and I/O address switches (SW12.1) on each board. The location of the switches is shown in Figure 3-4.

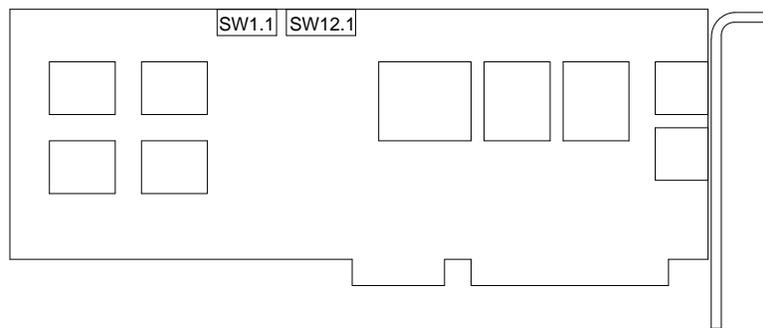


Figure 3-4. IVP4 Board SW1.1 (left) and SW12.1 (right) Switch Locations

The SW1.1 and SW12.1 switches on the IVP4 boards are one of the following three types:

- *Slide style A* has slide switches with the OPEN setting at the top of the switch.
- *Rocker style B* has rocker switches with the OPEN setting at the bottom of the switch.
- *Slide style B* has slide switches with the OPEN setting at the bottom of the switch.

- Determine which type of switch each IVP4 board has by comparing its factory default settings with Figure 3-5. (SW1.1 default settings are in the left column and SW12.1 default settings are in the right column of the figure.)

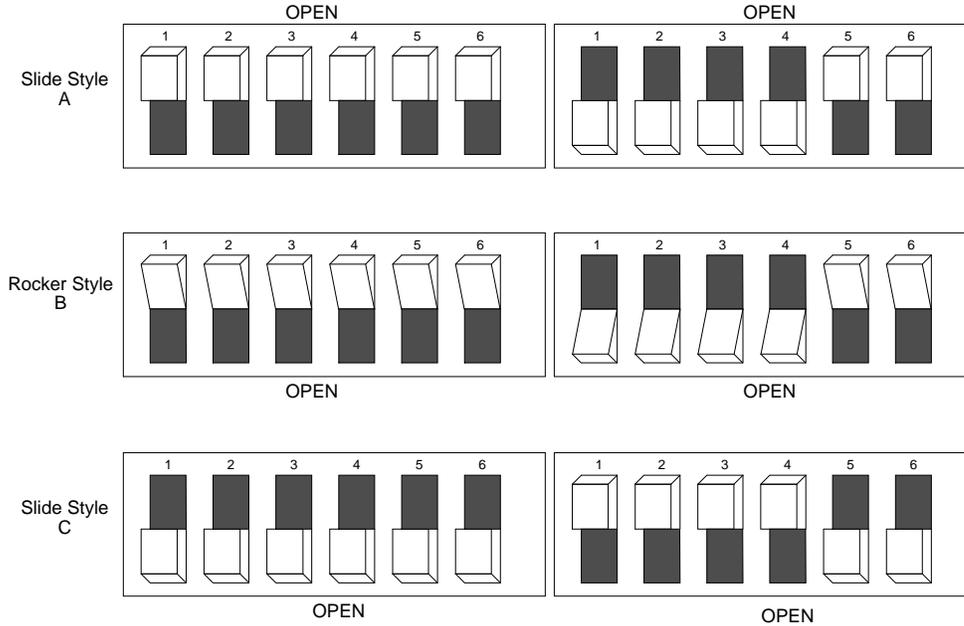


Figure 3-5. Default IPV4 SW1.1 (left) and SW12.1 (right) Settings

- Leave the SW1.1 switches in the factory default position (OPEN).
- Set SW12.1 using the information provided in Table 3-1 and Figure 3-6.
- Turn to the *Board Information* section of Appendix B, *Technician Worksheets*, of *AUDIX Voice Power System R3.0 Planning*. Record the switch type of each IVP4 board (slide style a, rocker style b, slide style c). Also record the slot number in which you are installing the IVP4 board.

There is also a telephone numbers field on the *Technician Worksheets*. You will fill in these numbers when you connect the voice lines to the IVP4 board(s) (refer to *Connecting Voice Lines to IVP4 Boards* later in this chapter).

Repeat steps 1 through 4 for each IVP4 board.

Continue with the next section, *Inserting the IVP4 Boards*.

Table 3-1. IVP4 SW12.1 Settings

IVP4 Board #	SW12.1 Segment					
	1	2	3	4	5	6
0*	CLOSED	CLOSED	CLOSED	CLOSED	OPEN	OPEN
1	OPEN	CLOSED	CLOSED	CLOSED	OPEN	OPEN
2	CLOSED	OPEN	CLOSED	CLOSED	OPEN	OPEN

* This is the factory-set default address.

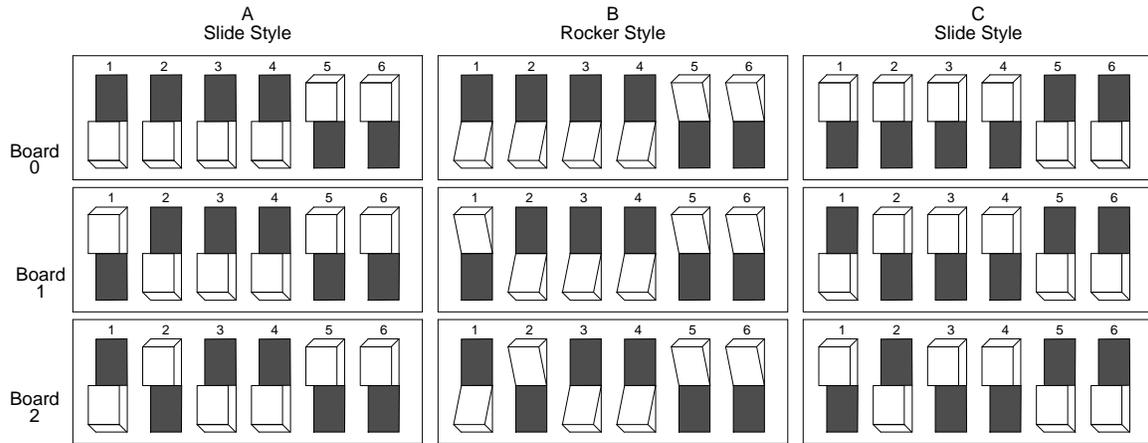


Figure 3-6. IVP4 SW12.1 Settings

Inserting the IVP4 Boards

1. Select an 8-bit expansion slot for each of the IVP4 boards you are installing. (The IVP4 board can be installed in a 16- or 32-bit slot, but using an 8-bit slot now can help to prevent reconfiguration problems in future installations.)
2. Remove the screw from the metal cover of the expansion slot you selected. Lift out the metal cover. Set the screw aside (see Figure 3-2).

Ensure that the slot number you selected matches the slot number you entered in the *Board Information* section of Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning* (refer to step 4 of the previous procedure).

3. Hold the IVP4 board by each end and insert it into the expansion slot (see Figure 3-3).

If the WGS you are installing has pressure tabs (to help hold the expansion boards), *gently* push down on these tabs as you slide the board into the slot.

Ensure that the connector on the IVP4 board is aligned with the expansion slot socket. Also, ensure that the back edge of the board fits into the plastic guide (or board support bracket).

4. Press firmly along the top (or front) edge of the IVP4 board until it locks into place and is flush with the frame of the WGS.
5. Ensure that the IVP4 board is properly aligned in the slot.
6. Secure the IVP4 board in the slot with the screw from the metal expansion slot cover.
7. Repeat steps 1 through 6 for each IVP4 board you are installing.

Continue with Chapter 4, *Making System Connections*.

4. Making System Connections

This chapter provides procedures for connecting the voice lines to the IVP4 boards and connecting the AUDIX Voice Power system to the switch.

CONNECTING VOICE LINES TO THE IVP4 BOARDS

This procedure describes how to cable the voice lines from the IVP4 boards to 103A connect blocks.

Refer to Figure 4-1 when performing this procedure.



There is a magnet on the back of the 884A adapter. *Do not* place it near the hard drive or floppy disks.

1. Connect one of the D4 cables from the 103A connect block to the RJ11C jack labeled "LINE A" on the 884A adapter.
If you are connecting only one line to the IVP4 board, connect it directly to the line jack labeled "1-2" on the IVP4 board, bypassing the 884A adapter. Then skip to step 5.
2. Connect subsequent D4 cables between the 103A connect blocks and LINES B, C, and D, respectively, on the 884A adapter.
3. Connect one end of the first D8W four-conductor cord (labeled "1-2" on each end) to the RJ14C jack with the matching label ("1-2") on the 884A adapter. Connect the other end to the line jack with the matching label ("1-2") on the board. (Two of these four-conductor cords are included with each IVP4 board.)
4. Connect the second D8W cord (labeled "3-4" on each end) to the matching jacks on both the 884A adapter and the IVP4 board.
5. Turn to the *Board Information* section of Appendix B, *Technician Worksheets*, in *AUDIX Voice Power R3.0 System Planning*. Record the telephone numbers of the lines connected to the IVP4 board(s).

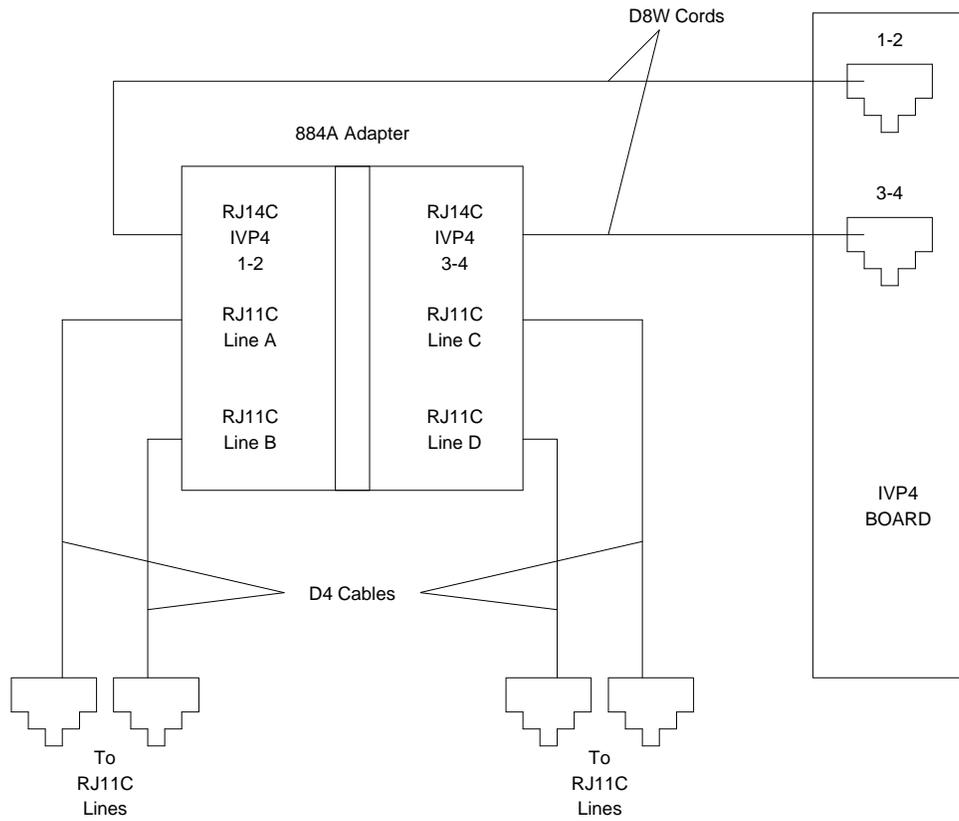
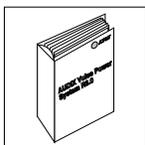


Figure 4-1. Connecting Voice Lines to the IVP4 Board

CONNECTING THE AUDIX VOICE POWER SYSTEM TO THE SWITCH

The AUDIX Voice Power R3.0 system can be integrated with several different switches, from both AT&T and other manufacturers. Figures 4-2 through 4-4 provide general connectivity diagrams for System 75, DEFINITY G1 and G3; System 25; and non-AT&T switches, respectively.



The AUDIX Voice Power documentation set includes a switch integration document that corresponds to the particular type of switch your customer is using. Refer to the *Hardware Installation* chapter of that document for more details.

When you have completed the connection to the switch, return to this document and continue with Chapter 5, *Connecting Peripherals*.

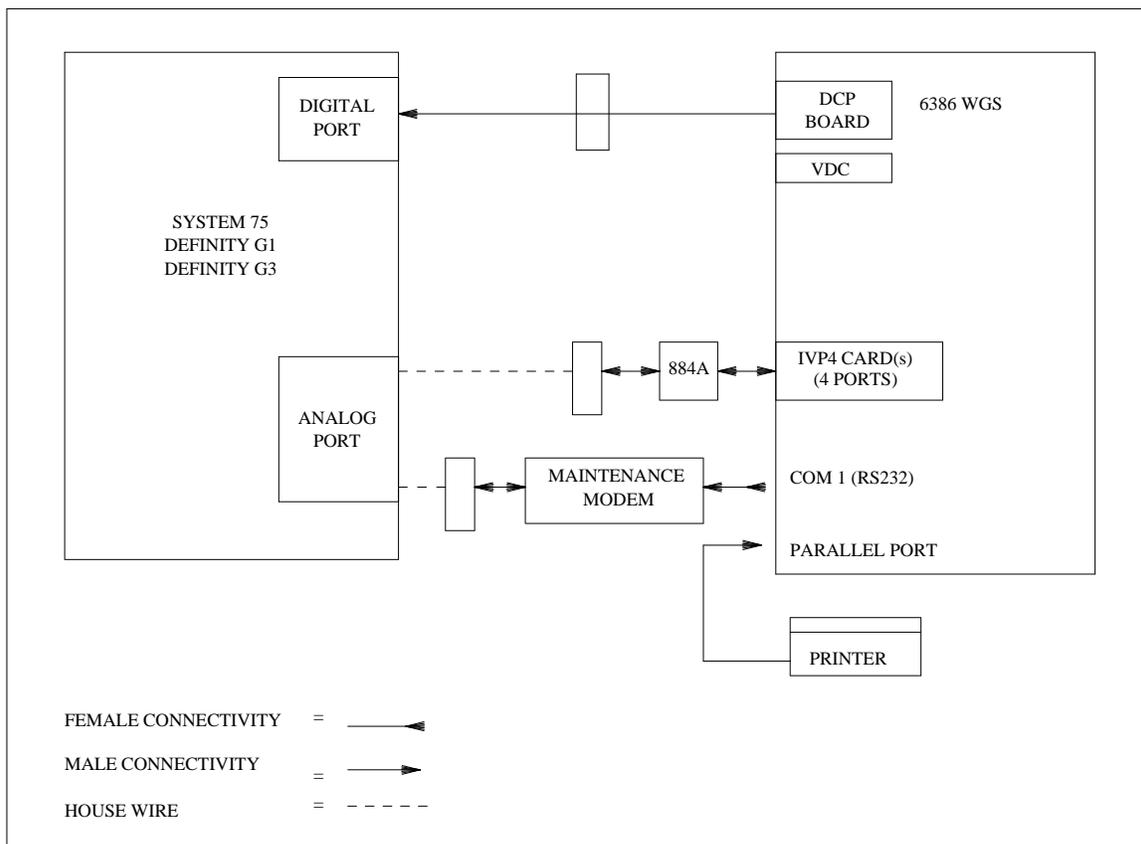


Figure 4-2. General Connectivity Diagram for System 75, DEFINITY G1 and G3

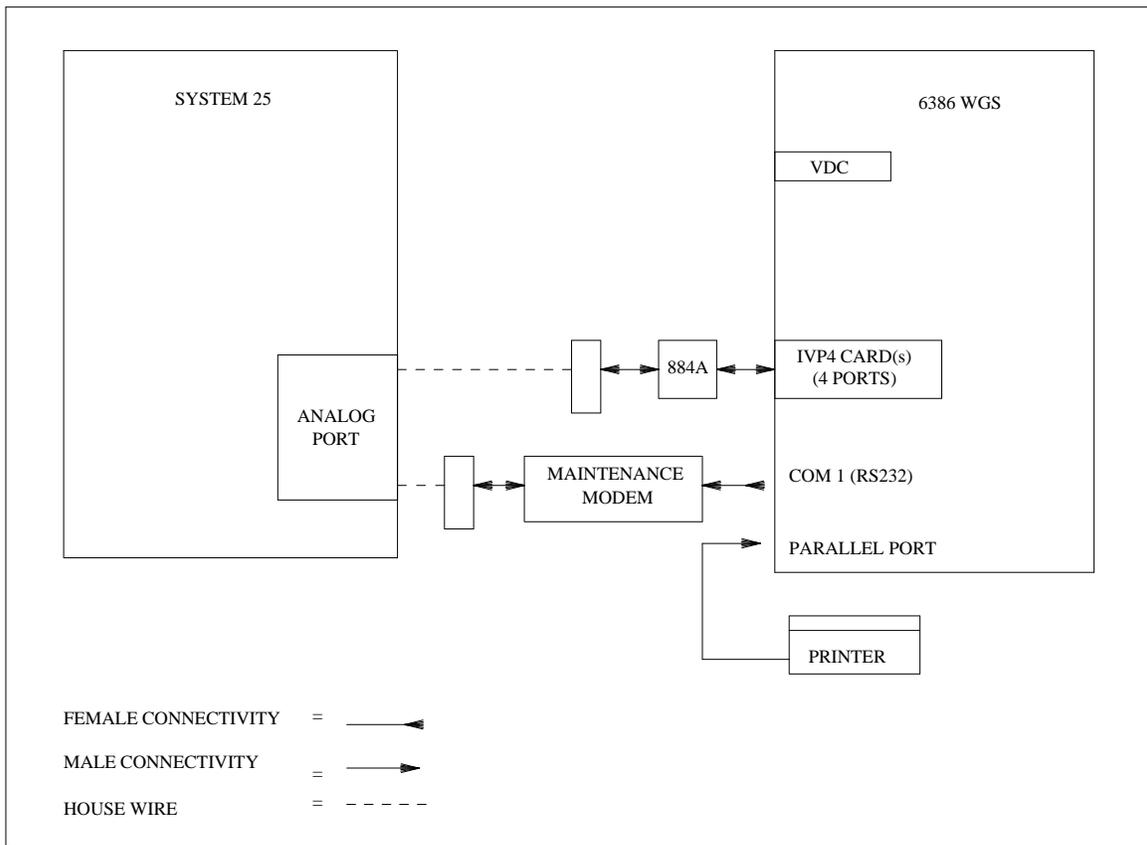


Figure 4-3. General Connectivity Diagram for System 25

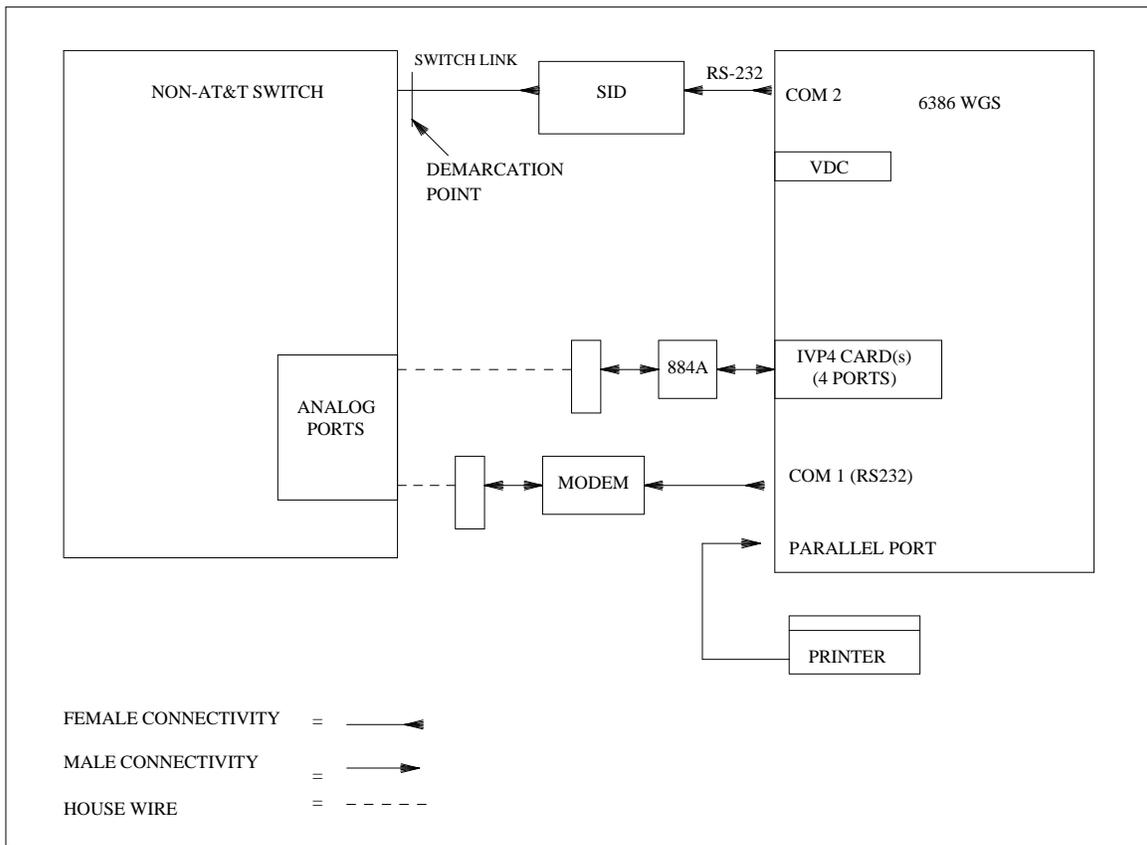


Figure 4-4. General Connectivity Diagram for Non-AT&T Switches

5. Connecting Peripherals

You will connect either two or three of the following peripherals, depending on whether or not the AUDIX Voice Power system you are installing includes a printer:

- Monitor and keyboard
- Remote access maintenance modem
- Printer (optional)

Figures 5-1 and 5-2 show the connectors on the 6386/33 and 6386/25 WGS, respectively. Refer to the appropriate figure when performing these procedures.

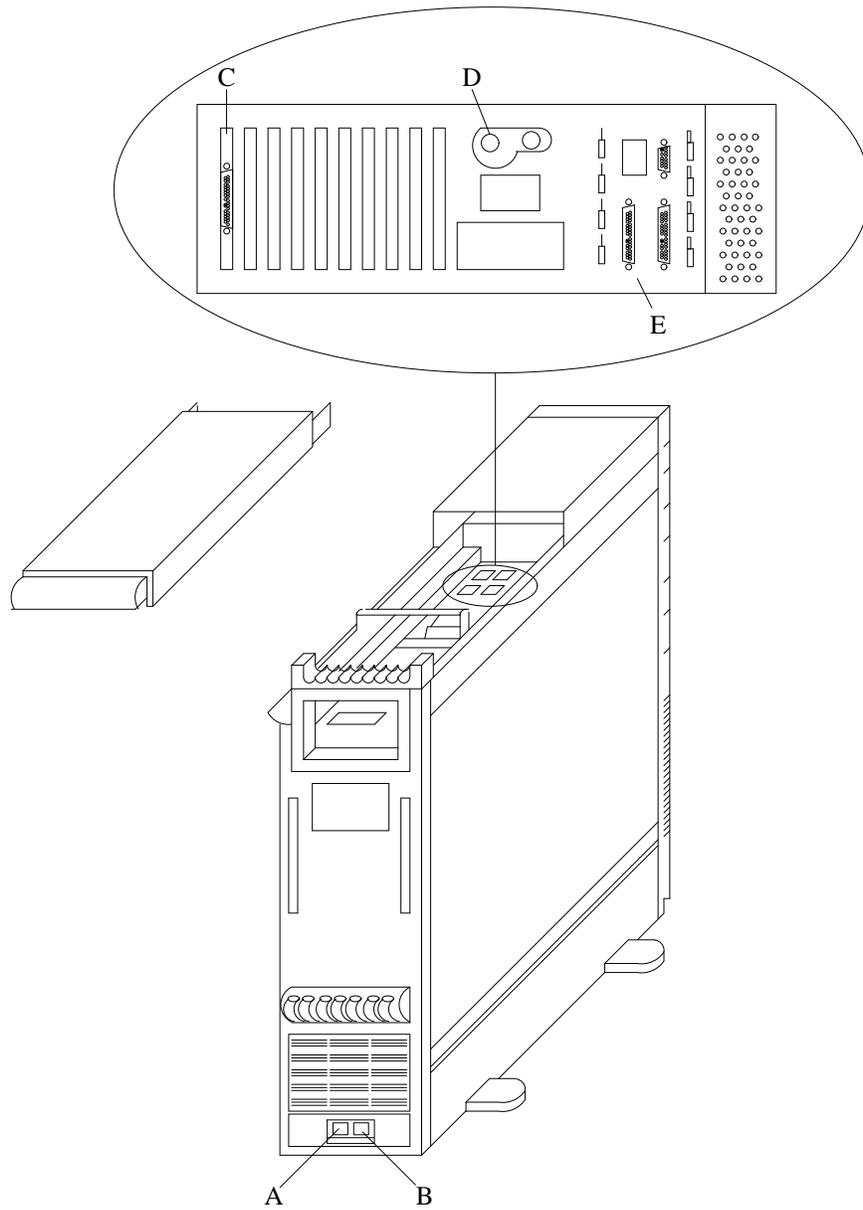


Figure 5-1. 6386/33 WGS Peripheral Connectors

CONNECTING THE MONITOR AND KEYBOARD

1. Connect the line cord to the AC power-in socket (A) on the WGS.
2. Connect one end of the video monitor power cord to the video monitor and the other end to the monitor power outlet (B) on the WGS.
3. Connect the video monitor signal cable to the connector (C) on the VDC600 board (in the leftmost expansion slot).
4. Connect the keyboard cable to the keyboard interface port (D).

Continue with the next section, *Connecting the Maintenance Modem*.

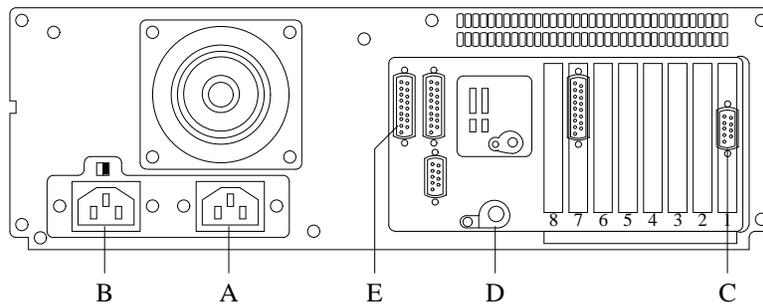


Figure 5-2. 6386/25 WGS Peripheral Connectors

CONNECTING THE MAINTENANCE MODEM

Use this procedure to connect the Hayes® Smartmodem™ OPTIMA™ 2400 for remote access maintenance. You will set up the maintenance modem software options in *AUDIX Voice Power System R3.0 Software Installation*, Chapter 7, *Setting Up Peripherals*.

1. Remove the front panel of the maintenance modem.
2. Remove the jumper from pins 2 and 3 and place it on pins 1 and 2 as shown in Figure 5-3.
3. Replace the front panel.
4. Place the maintenance modem near a power source, a telephone line modular jack, and the WGS.
5. Connect the male end of the RS232 M/F cable to COM1 (or serial port 1) on the WGS. Connect the female end to the maintenance modem.
6. Plug one end of an RJ11 telephone cord (D4 cord) into the modular telephone jack. Plug the other end into the **LINE** jack on the back panel of the maintenance modem.
7. If you plan to share the telephone line between the maintenance modem and a telephone, plug a second RJ11 telephone cable into the telephone set. Plug the other end into the **PHONE** jack on the back panel of the maintenance modem.
8. Plug one end of the power cord into the **PWR** jack on the back panel of the maintenance modem. Plug the other end into an AC outlet.

If you are connecting a printer, continue with the next section, *Connecting the Printer*.

If you are *not* connecting a printer, skip the next section and continue with Chapter 6, *Performing Operational Testing*.

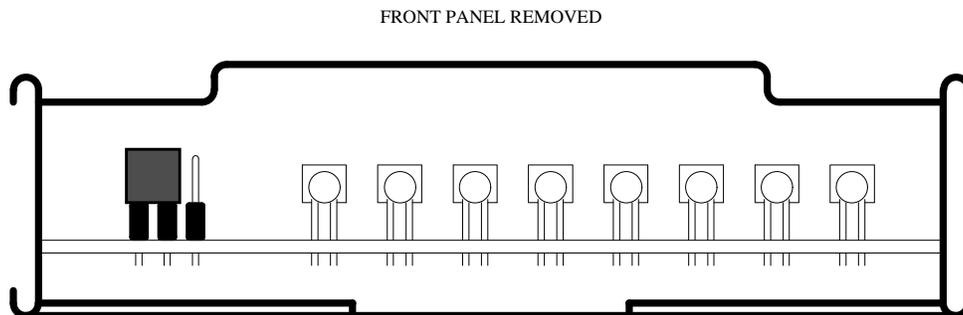


Figure 5-3. Place the Jumper on Pins 1 and 2 of the Maintenance Modem

CONNECTING THE PRINTER

This procedure describes how to connect and set up AT&T 570 or 571 printer hardware. You will set up the printer software options in *AUDIX Voice Power System R3.0 Software Installation*, Chapter 7, *Setting Up Peripherals*.

1. Unpack and set up the printer according to the instructions supplied with the printer.
2. Ensure that there is paper in the printer, the ribbon is properly installed, and the cover is closed. (The printer will not enter set-up mode if it is out of paper or if the cover is open.)
3. Set the printer default values by completing the following steps a through f:
 - a. While holding down the **FUNCTION** and **SCROLL ↓** switches, turn the power ON.
The printer runs a set of self-test functions. When the self-test functions are complete, the printer displays set-up function number 99.
 - b. Press **SCROLL ↑** to select set-up function number 98 (set default values).
 - c. Press **MENU** to enter menu mode.
 - d. Press **SCROLL ↓** to select menu item 02.
 - e. Press **FUNCTION** to set the default values.
 - f. Turn the power OFF.
4. Complete the following steps a and b to connect the printer to the WGS:
 - a. Plug the 25-pin connector end of the DB25 parallel printer cable into the parallel port (E) on the WGS. Secure the connector with the captive screws.
 - b. Connect the other end of the parallel printer cable to the matching Centronics® port on the printer. Secure it using the spring clips.

Continue with Chapter 6, *Performing Operational Testing*.

6. Performing Operational Testing

Run the power-on self test (POST) to verify the hardware installation. To determine disk partitioning for the root (combined root and usr) and swap file systems (based on the size of the hard disk), run the set-up utility from the customer test diskette.

RUNNING THE POWER-ON SELF TEST

1. Plug one end of the power cord into the jack (refer to "A" in Figures 5-1 and 5-2 for the location of this jack on the 6386/33 and 6386/25 WGS, respectively) on the back panel of the WGS. Plug the other end into an AC outlet.
2. Reboot the system by powering it on. If it is already powered on, press **CTRL-ALT-DEL** simultaneously.

The system runs the power-on self test (POST). While POST is running, it displays the PASS/FAIL results for each component and the amount of memory in the system.

The following lists of some of the components that POST tests:

- CPU
- CMOS RAM
- ROM checksum
- Memory refresh
- DMA controllers
- Interrupt controller
- Keyboard
- Dedicated memory
- Base memory
- Extended memory
- Total memory
- Calendar/clock
- Floppy disk
- Hard disk

If all tests pass, continue with the next section, *Running the Set-Up Utility*.

If all tests do not pass, refer to *AUDIX Voice Power System R3.0 Maintenance* to determine and correct the problem before continuing with the next section.

RUNNING THE SET-UP UTILITY

To determine disk partitioning for the root (combined root and usr) and the swap file systems (based on the size of the hard disk), you must run the set-up utility from the customer test diskette.

1. Insert the customer test diskette into the floppy drive.
2. Press **CTRL-ALT-DEL** simultaneously to reboot the system. The system reboots from the customer test diskette. When the reboot is complete, the system displays the CUSTOMER TEST INTRODUCTION screen.
3. Press **ENTER** to continue. The system displays the following customer test main menu:

```

Configuration Check
Setup Utility
Test All Modules
Test One Module
Disk Utilities
Password Utilities
Customization Screen
Exit the Program

```

4. Using the down arrow key, move the highlight to Setup Utility and press **ENTER**. The system displays a menu similar to the following showing the current system settings:

```

System Date                10-10-91 Thu
System Time                 10:52:59
Base Memory Size           640 kB
Base Memory Configuration  All Enabled
Extended Memory            7168 kB
Floppy Drive A:            3.5 inch, 1.44 MB
Floppy Drive B:            Not Present
Hard Disk #1               ESDI - 300 MB
Hard Disk #2               Not Present
80387 Numeric Coprocessor  Not Present
3167 Numeric Coprocessor   Not Present
Video Display              EGA or VGA
Keyboard                   Present
System Serial Port #1     Enabled as Com 1
System Serial Port #2     Enabled as Com 2
ROM BIOS Map Address       1 MB Only

```

5. Turn to Table B-3 of Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning*. Copy the drive type and number of megabytes for Hard Disk #1 from the screen to the appropriate line in the table.

6. If you did *not* install additional memory, skip to step 7.

If you *did* install additional memory, complete the following steps a and b:

- a. Use the arrow keys to move to `Extended Memory` and press `ENTER`.
 - b. Use the arrow keys to move to `7` and press `ENTER`.
7. Press `ESC` to return to the customer test main menu.

The system displays the following prompt:

```
Select 'Update' to save the new CMOS set up, or you can 'Quit.'
```

8. Select `Update`.
9. Remove the Customer Test diskette from the drive.

The system begins the reboot sequence showing the new settings. When the reboot is complete, the system displays the `Console Login` prompt.

You have completed hardware installation for the AUDIX Voice Power R3.0 system. Continue with software installation, as described in *AUDIX Voice Power System R3.0 Software Installation*.

A. Removing/Replacing the Computer Cover

To install additional memory and circuit boards, you must first remove the cover from the AUDIX Voice Power computer. When you have completed installation of the circuit boards and any additional memory required, follow the appropriate procedure below to replace the cover on the AUDIX Voice Power computer.



Electronic equipment can be damaged by electrostatic discharge. Do not touch any electronic equipment unless you are properly grounded. Refer to Chapter 1, *Prerequisites*, for a description of proper grounding techniques.

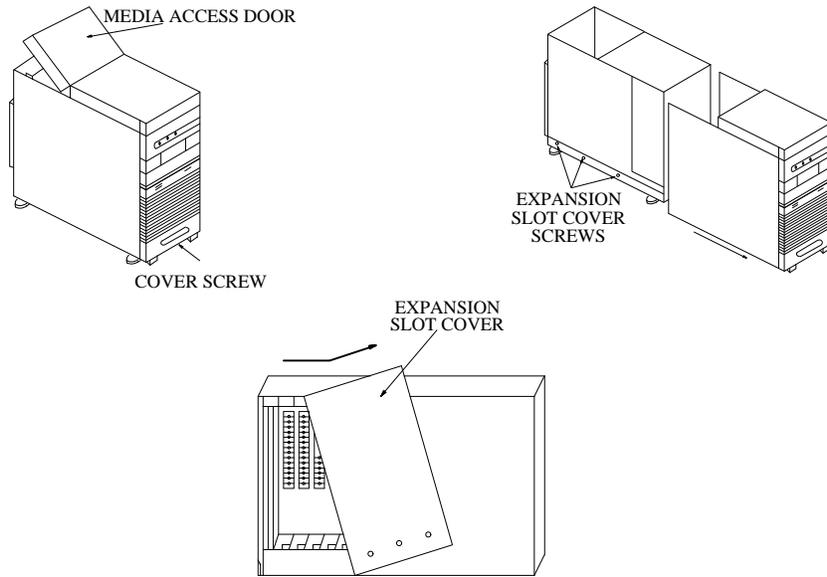
REMOVING THE COVER FROM THE 6386/33 WGS

1. Remove the top cover (or "media access door" as shown in Figure A-1) by lifting it from the rear.
2. Loosen the cover-retaining screw on the bottom front.
3. Slide the cover off the chassis by pulling it forward.
4. Remove the retaining screws from the expansion slot cover.
5. Slide the expansion slot cover forward and away from the chassis.

REMOVING THE COVER FROM THE 6386/25 WGS

1. Loosen the five screws securing the main cover on the back panel (see Figure A-1).
2. Slide the cover off the WGS by pulling it forward until it clears the back half of the chassis. Tilt the cover up and remove it. Take care not to catch the cover on any internal cables or wires.

6386/33



6386/25

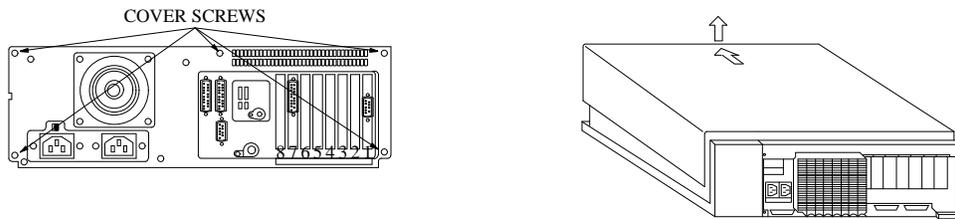


Figure A-1. Removing the Cover From the WGS

REPLACING THE COVER ON THE 6386/33 WGS

1. Replace the expansion slot cover by sliding the cover back over the chassis as shown in Figure A-2.
2. Replace the four retaining screws on the card-cage 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.

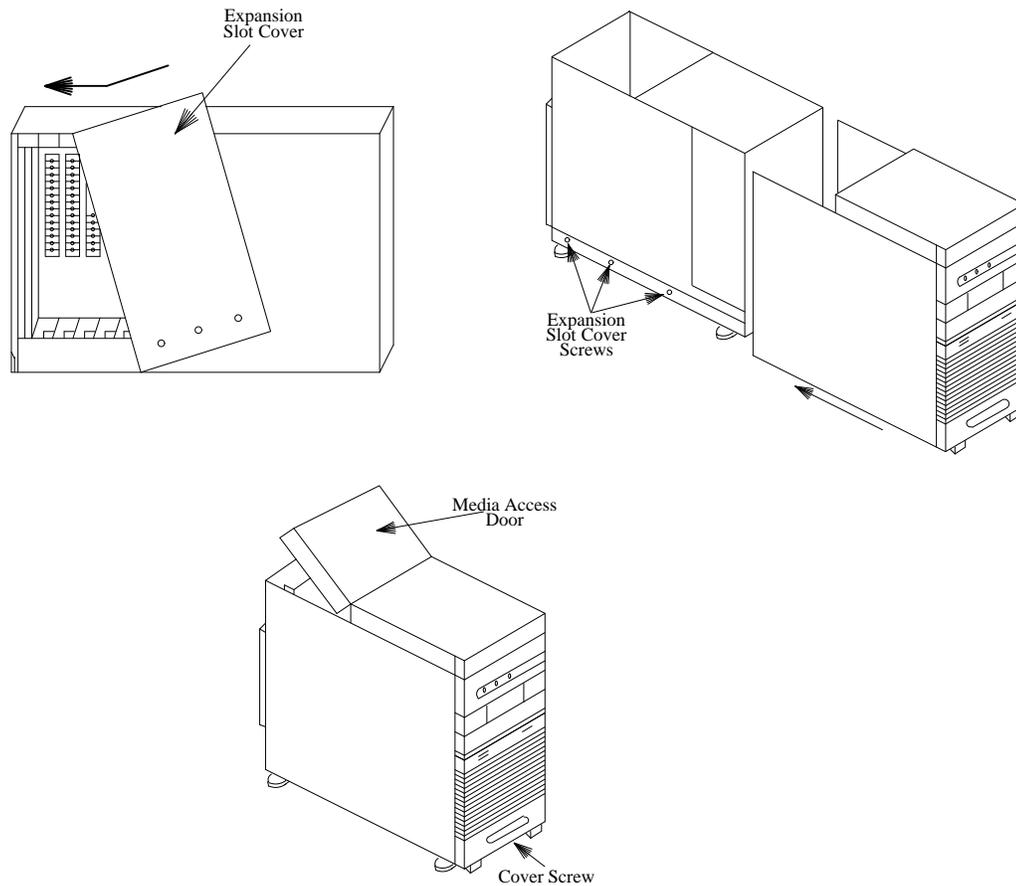


Figure A-2. Replacing the Cover on the 6386/33 WGS

REPLACING THE COVER ON THE 6386/25 WGS

1. Slide the cover carefully from the front of the main unit until it presses securely against the rear cover.
2. Raise the front of the cover slightly higher than the rear as shown in Figure A-3. Slide the cover towards the back of the main unit until it almost reaches the rear cover. Lower the front, pressing back gently until it fits securely into place.
3. Tighten the cover-mounting screws. Figure A-3 shows you where the screws are located.

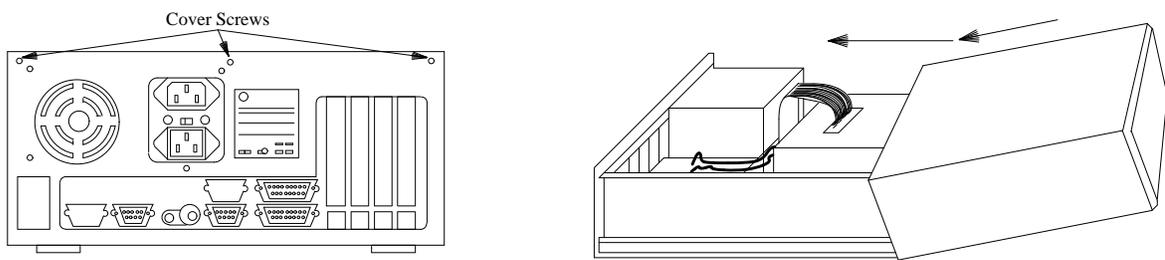


Figure A-3. Replacing the Cover on a 6386-25 WGS

Abbreviations

ALT	assemble, load, and test
AUDIX	Audio Information Exchange
CA+VM	call answer + voice mail
COR	class of restriction
COS	class of service
DCP	digital communications protocol
DIP	data interface process
DTE	data terminal equipment
FACE	framed access command environment
FMLI	form and menu language interpreter
FOOS	facility out of service
I/O	input/output
IVP4	Integrated Voice Processing board (4 analog channels)
IVPSS	Integrated Voice Processing System Software
LWC	leave word calling
MANOOS	manual out of service
MWL	message waiting lamp
POST	power-on self test
SID	switch integration device
SIMM	single inline memory module
TSC	Technical Support Center
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 <i>digital</i>). 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.
class of restriction (COR)	The set of call origination and termination parameters given to subscribers when they are administered on the system.
class of service (COS)	The set of features and privileges given to subscribers when they are administered on the system.
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 switch interface 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 and most terminals 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.
digital communications protocol (DCP)	A 64-Kbps digital data transmission code with a 160-Kbps bipolar bit stream divided into two information (I) channels and one signaling (S) channel.
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.
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 lamp (MWL)	A small light on a telephone that lights or flashes when the subscriber has voice mail messages.
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.
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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