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**AUDIX® Voice Power™ System R3.0**  
System Upgrade Instructions

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### **Comments**

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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

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This document, *AUDIX® Voice Power™ System Upgrade Instructions* (585-310-116), describes the procedures for upgrading existing AUDIX Voice Power systems from R1.1 or 2.0/2.1.1 to R3.0.

## 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), and helpline 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 tools required and safety considerations, and provides an upgrades installation checklist.
- Chapter 2, *Upgrading from R1.1*, describes how to upgrade AUDIX Voice Power from R1.1 to R2.0. You must complete the procedures in this chapter first when upgrading to R3.0 from R1.1.
- Chapter 3, *Upgrading from R2.0/2.1.1*, describes how to upgrade AUDIX Voice Power from R2.0 or R2.1.1 to R3.0. For any existing system with a hard disk drive less than 300 Mbytes, this includes installing a new 300-Mbyte hard disk drive.
- Chapter 4, *Readministering the System*, describes how to readminister the AUDIX Voice Power system and the switch prior to acceptance testing and cutover of the upgraded system.
- Chapter 5, *Performing Acceptance Tests*, describes the procedures for verifying the installation and operation of an AUDIX Voice Power system R3.0.
- Chapter 6, *Cutting to Service*, describes procedures required for cutting an AUDIX Voice Power system R3.0 upgrade into service.

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

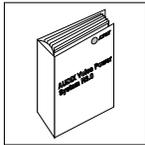
## HOW TO USE THIS DOCUMENT

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 with the following documents:

- *AUDIX Voice Power System R3.0 Planning* (585-310-602), for accessing information on the customer site and recording specific upgrade 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 either 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 to mean the following: move to the desired menu item using the arrow keys and press .

## TRADEMARKS AND SERVICE MARKS

The following trademarked products are mentioned in this document:

- AUDIX® is a registered trademark of AT&T.
- DEFINITY® is a registered trademark of AT&T.
- Voice Power™ is a trademark of AT&T.
- UNIX® is a registered trademark of UNIX System Laboratories, Inc.
- Phillips® is a registered trademark of the Phillips Screw Co.

## 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.

To order additional AT&T documents, call the AT&T Customer Information Center by dialing the toll-free number, 1-800-432-6600. Refer to the document number when making your request.

## HOW TO COMMENT ON THIS DOCUMENT

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# 1. Prerequisites

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This chapter describes the following prerequisites for upgrading to an AUDIX Voice Power R3.0 system:

- Gathering the tools required
- Reviewing safety considerations
- Using the upgrades checklists

## GATHERING THE TOOLS REQUIRED

If the AUDIX Voice Power system you are upgrading does not already have at least one 300-Mbyte hard disk drive installed, you must remove the existing drive and replace it with a new 300-Mbyte hard disk drive. To complete those tasks, you need the following tools:

- No. 1 or no. 2 Phillips® screwdriver
- Medium-width, flat-blade screwdriver
- Antistatic grounded wrist strap
- Antistatic grounded work mat

To perform the low-level format on the new disk drive, you will also need the system diagnostics diskette for the WGS (6386/33 or 6386/25) on which you are installing the upgrade. A copy of this diskette is included with each of the following documents:

- *6386E/33 Work Group System Service Manual (562-200-108)*
- *6386/25 Work Group System Service Manual (562-200-105)*

## 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.)

## USING THE UPGRADES CHECKLISTS

This section includes a series of checklists to follow when upgrading an existing AUDIX Voice Power R1.1, 2.0, or 2.1.1 system to R3.0. Each checklist provides a description of the required procedures numbered in the sequence in which you must complete them. If a procedure is switch specific, the letters "SW" (for "switch") are used in the first column instead of a number. A reference to one of the following documents is included in the last column labeled "Reference." This is where you will find the detailed procedure for performing the task described.

- *AUDIX Voice Power Upgrade Instructions* (585-310-116). This is the primary reference document for installing an upgrade. The "Reference" column of the checklist indicates the chapter number to go to when you must refer to this document for the detailed procedure.
- AUDIX Voice Power R3.0 switch integration documents (for various switches). These documents contain procedures that are specific to the type of switch you are integrating with the AUDIX Voice Power system. The "Reference" column of the checklist indicates "SW" (for "switch") when you must refer to the switch integration document for the detailed procedure.

As you finish a procedure, make a check mark in the column labeled "✓." This will help ensure that you complete the required procedures in the proper sequence.

## Upgrading from R1.1

No.	Description	Comments	Reference	✓
1.	Gather the required tools.		Chapter 1	
2.	Review safety considerations.		Chapter 1	
SW	Cut the system from service.		SW	
3.	Install the upgrade utility.		Chapter 2	
4.	Install the UNIX R3.2.2 operating system: Verify the hard disk size. Install the UNIX Base System Package. Verify the disk partitioning. Install the FMLI Package. Install the FACE Package. Install the FACE HELP Package. Install the Editing Package. Verify the UNIX system installation.		Chapter 2	
5.	Create an administrative login.		Chapter 2	
6.	Install file system modification software.		Chapter 2	
7.	Install IVPSS R1.1.		Chapter 2	
8.	Restore file systems: Take the voice channels out of service. Restore administrative and speech files. Return the voice channels to service.		Chapter 2	
9.	Reboot the system.		Chapter 2	
10.	Install AUDIX Voice Power Application Software R2.0.		Chapter 2	
11.	Verify the software installation.		Chapter 2	
12.	Upgrade to R3.0.		Chapter 3	

## Upgrading from R2.0/2.1.1

No.	Description	Comments	Reference	✓
1.	Gather the required tools.	Already completed if you are upgrading from R1.1.	Chapter 1	
2.	Review safety considerations.	Already completed if you are upgrading from R1.1.	Chapter 1	
SW	Cut the system from service.	Already completed if you are upgrading from R1.1.	SW	
3.	Back up the system files: Calculate and format the floppy disks required. Stop the voice system. Back up the administrative, UNIX, and speech files.		Chapter 3	
4.	Install a new hard disk drive: Remove the existing hard disk drive. Connect a new 300-Mbyte hard disk drive. Run the set-up utility. Boot the machine and perform a low-level format.	Required only for existing systems with a hard disk drive <300 Mbytes.	Chapter 3	
5.	Install the UNIX R3.2.2 operating system: Install the UNIX Base System Package. Verify disk partitioning . Install the FMLI Package. Install the FACE Package. Install the FACE HELP Package. Install the Editing Package. Install the Remote Terminal Package. Verify the UNIX system installation.		Chapter 3	
6.	Install IVPSS R3.0.		Chapter 3	
7.	Create an administrative login.		Chapter 3	
8.	Install AUDIX Voice Power R3.0 Software: Speech.		Chapter 3	
9.	Restore system files: Take the voice channels out of service. Restore administrative and speech files. Return the voice channels to service.		Chapter 3	
10.	Reboot the system.		Chapter 3	

(Continued)

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**Upgrading from R2.0/2.1.1 (continued)**

No.	Description	Comments	Reference	✓
11.	Install AUDIX Voice Power R3.0 Software: Software.		Chapter 3	
SW	Install switch integration software.		SW	
12.	Verify the software installation.		Chapter 3	
13.	Start the voice system.		Chapter 3	
14.	Readminister the system.		Chapter 4	
15.	Perform acceptance tests.		Chapter 5	
16.	Cut the system into service.		Chapter 6	

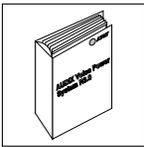


## 2. Upgrading from R1.1

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To upgrade to AUDIX Voice Power R3.0 from R1.1, you must first complete the procedures in this chapter to upgrade to R2.0. This includes rebuilding the UNIX operating system with the disk partitioning specified for R2.0.

### **CUTTING THE AUDIX VOICE POWER SYSTEM FROM SERVICE**



The first step in the upgrade process is to cut the AUDIX Voice Power system from service. This procedure is switch dependent. Therefore, you must now turn to the *Cut From Service* section in the *Cut To Service* chapter of the switch integration document supplied with the AUDIX Voice Power documentation set for instructions.

When you have completed the cut from service, return to this document and continue with the next section, *Installing the Upgrade Utility*.

## INSTALLING THE UPGRADE UTILITY

1. Enter **root** at the UNIX system prompt (#).

The system responds with the Password prompt.

2. Press **ENTER**.

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

3. 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, instruction will be provided for  
inserting the remaining floppy disks.
```

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

4. Insert diskette 1 of 1 of the AUDIX Voice Power Utility Upgrade into the floppy drive and press **ENTER**.

If it is running, the voice system is stopped automatically so that no more calls are accepted.

5. When prompted, remove the AUDIX Voice Power Upgrade Utility disk from the drive.

The system displays the following prompt:

```
Please indicate the installation medium you intend to use.
```

```
Strike "C" to install from CARTRIDGE TAPE  
or "F" to install from FLOPPY DISKETTE.
```

```
Strike ESC to stop.
```

6. Enter **f** to select Floppy Diskette.
7. The system calculates the number of diskettes required and the amount of time the backup will take. The system also formats the floppy disks for you.
8. When prompted, insert the first diskette and press **ENTER**.

The system begins the backup.

9. Follow the prompts to back up the speech files and then the administrative files.

NOTE	Use separate sets of floppy disks for the speech and administrative files. Label them according to the files they contain (for example, Administrative Files 1 of X, 2 of X, etc.).
------	---

When the backup is finished, the voice system starts automatically if it was previously stopped.

Continue with the next section, *Installing the UNIX Operating System*.

## INSTALLING THE UNIX OPERATING SYSTEM

There are eight parts to this procedure:

- Verifying the size of the hard disk drive
- Installing the UNIX base system package
- Verifying disk partitioning
- Installing the FMLI package
- Installing the FACE package
- Installing the FACE HELP package
- Installing the editing package
- Verifying UNIX system installation

### Verifying the Size of the Hard Disk Drive

1. Insert the customer test diskette into the floppy drive.
2. Power on the system.

If the system is already on, press the reset button to begin the reboot.

The system reboots from the customer test diskette. When the reboot is complete, the system displays the CUSTOMER TEST INTRODUCTION screen.

3. Press  to continue. The system displays a main menu similar to the following:

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

- 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 - 142 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

- Turn to Table B-2 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 lines in the table.
- Press **ESC** several times until you return to the customer test main menu.
- Select **Exit the Program**.
- Press **ENTER**.

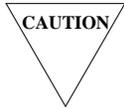
The system responds with the following prompt:

```
Do you want to quit?
```

- Enter **y** to confirm.
- Remove the customer test diskette from the disk drive.

Continue with the next section, *Installing the UNIX Base System Package*.

## Installing the UNIX Base System Package



As you install the UNIX base system package, you destroy any files currently on the disk. If you are reinstalling the UNIX operating system or reallocating space on the disk, ensure that the AUDIX Voice Power administrator has backed up any required files before you continue.

1. Insert the first diskette of the UNIX base system package into the floppy drive and press the reset button.

The system boots from the disk in the floppy drive and begins the power-on self test (POST). When POST is complete, the system displays the following prompt:

```
Strike ENTER to install the UNIX system on your hard disk.
```

2. Press  to begin the installation.

If the system has previously been loaded with the UNIX operating system, the system responds with the following prompt:

```
Is this a new installation or a release upgrade to your
existing system? (Strike 'n' (new) or 'u' (upgrade)
followed by ENTER)
```

3. Enter **n**

(You want to completely reload the UNIX software as if it were a new installation.)

The system responds with the following prompt:

```
WARNING: A new installation of the UNIX system will destroy
all files currently on the system. Do you wish to continue (y
or n)?
```

4. Enter **y**

The system displays the following prompt:

```
Do you want to partition your hard disk as follows:
```

```
90% "UNIX System" -- lets you run UNIX system programs
10% "DOS (v. 3.2 or later) only"
```

To do this, please type "y". To partition your hard disk differently, type "n" and the "fdisk" program will let you select other partitions.

5. Enter **n**

The system displays the DISK PARTITION OPTIONS menu, as follows:

```
Total hard disk size is xxxxx cylinders

                                Cylinders
Partition Status Type   Start  End  Length  %
=====  =====  =====  =====  =====  =====
```

6. Turn to Table B-2 in Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning*. Copy the total hard disk size in cylinders from the screen onto the line provided in the table.

The system also displays one of the following messages:

```
1 Active UNIX SYS 0 xxx yyy 100
```

or

```
THERE ARE NO PARTITIONS CURRENTLY DEFINED
```

and asks you to choose from the following list of options:

```
SELECT ONE OF THE FOLLOWING:
```

1. Create a partition
2. Change Active (Boot from ) partition
3. Delete a partition
4. Exit (Update disk configuration and exit)
5. Cancel (Exit without updating disk configuration)

```
Enter Selection:
```

7. If the message displayed indicates there are no partitions currently defined, skip to step 8.

If the message indicates that one or more partitions are defined, complete the following steps a through d:

- a. Enter 3 to select Delete a partition.

The system responds with the following prompt:

```
Enter the number of the partition you want to delete (or
enter x to exit):
```

- b. Enter the first partition number listed in the DISK PARTITION OPTIONS menu.

The system responds with the following prompt:

```
Do you want to delete partition x?
This will erase all files and programs in
this partition (type "y" or "n").
```

- c. Enter **y**

The system redisplay the DISK PARTITIONING OPTION menu (shown in step 5).

- d. Repeat steps a, b, and c until all existing partitions are deleted.

8. Enter **1** to select Create a partition.

The system responds with the following prompt:

```
Indicate the type of partition you want to create
(1=UNIX System, 2=DOS only, 3=Other, x=Exit).
```

9. Enter **1** to select UNIX System.

The system responds with the following prompt:

```
The UNIX System partition must use at least xx% of the hard disk.
Indicate the percentage (xx-100) of the hard disk you want this
partition to use (or enter "c" to specify in cylinders):
```

10. Enter **100**

The system responds with the following prompt:

```
Do you want this to become the Active partition?
If so, it will be activated each time you reset
your computer or when you turn it on again.
Please type "y" or "n".
```

11. Enter **y**

The system again displays the DISK PARTITIONING OPTIONS menu (showing partition 1 as the active partition).

12. Enter **4** to select Exit (Update disk configuration and exit).

The system responds with the following prompt:

```
Hard disk partitioning complete.

A surface analysis will now be done.
This will destroy all data on the hard disk.
Strike ENTER to continue or DEL to abort.
```

13. Press **ENTER**.

The surface analysis takes 10 to 60 minutes, depending on the size of the disk. During the analysis, the system displays results. When complete, the system displays the following messages and prompt:

```
The UNIX System partition has xxx cylinders assigned to it.

1 cylinder will be used for alternate sectors.
This leaves xxx cylinders (xxxxxx bytes) available.

The following seems like a reasonable
partitioning of your UNIX system disk space:

A root filesystem of xx cylinders (xxxxx
bytes), a user (/usr) filesystem of xx cylinders
(xxxxx bytes), an extra user filesystem (/usr2)
of xx cylinders (xxxx bytes), and
a swap/paging area of xx cylinders (xxxx bytes).

Is this allocation acceptable to you (y/n)?
```

14. Enter **n**

The system responds with the following prompt:

```
Do you wish to have separate root and usr filesystems (y/n)?
```

15. Enter **y**

The system responds with the following prompt:

```
Do you want an additional /usr2 filesystem (y/n)?
```

16. Enter **y**

The system responds with the following prompt:

```
Do you want to allocate a crash/dump area on your disk? If
you do not, the swap/paging area will be used to save the
memory image in the event of a system panic (y/n)?
```

17. Enter **n**

The system responds with the following prompt:

```
How many cylinders would you like for swap/paging (1-xxx)?
```

18. Turn to Table B-2 of Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning*. Using the values you wrote down for the hard disk size (in megabytes and cylinders), complete the following steps a and b to determine the number of cylinders to allocate for the swap file system:

- a. Divide the number of cylinders by the number of megabytes. Round the result upward to the nearest whole number. Write that number here: \_\_\_\_\_
- b. Multiply the number you wrote down in step 18a by 6. Enter that value in response to the prompt. Also write the value for swap on the appropriate line of Table B-2 of Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning*.

The system responds with the following prompt:

```
How many cylinders would you like for /root
(1-xxx)?
```

19. Multiply the value you wrote down in step 18a by 14. Enter that value in response to the prompt. Also write the value for root on the appropriate line of Table B-2 of Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning*.

The system responds with the following prompt:

```
How many cylinders would you like for /usr (1-xxx)?
```

20. Multiply the value you wrote down in step 18a by 17. Enter that value in response to the prompt. Also write the value for usr on the appropriate line of Table B-2 of Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning*.

The system responds with the following message:

```
The remaining xxx cylinders will be assigned to /usr2.
```

The system then displays the disk allocation values you just assigned and the following prompt:

```
Is this allocation acceptable to you (y/n)?
```

21. If the allocation is correct, enter **y**

If it is not correct, enter **n** and reallocate the cylinders.

When the system has reallocated the cylinders, it displays the following message:

```
UNIX filesystem(s) will now be created on your hard disk . . .
```

It takes approximately 25 minutes to create these file systems. During this time, the system displays messages about the process. When creation of the file systems is complete, the system responds with the following prompt:

```
Reboot the system now.
```

22. Remove the diskette from the floppy drive and press **CTRL-ALT-DEL** to reboot the system.

NOTE	Use the <b>DEL</b> key located on the number pad to reboot. Pressing the key labeled <b>DELETE</b> does not work.
------	---

When the reboot is complete, the system responds with the following prompt:

```
Confirm.
```

```
Please indicate the installation medium you intend to use.
```

```
Strike "C" to install from CARTRIDGE TAPE  
or "F" to install from FLOPPY DISKETTE.
```

```
Strike ESC to stop.
```

23. Enter **f** to select Floppy Diskette.

The system responds with the following prompt:

```
Please insert the UNIX System "Base System Package"  
Floppy disk x of y and then strike ENTER.
```

24. Insert the next diskette into the floppy drive and press **ENTER**.

The system responds with the following message:

```
Installation is in progress -- do not remove floppy disk.
```

When the system has loaded this diskette (this will take from 3 to 5 minutes), it "beeps" and prompts you to install the next one.

25. Remove the current diskette and repeat the above step for each of the remaining base system diskettes.

When you have installed the last UNIX base set diskette, the system responds with the following messages and prompt:

```
UNIX System files have been copied to the hard disk. It is now  
safe  
to remove the floppy disk. Additional file systems will now be  
set up.  
Please stand by . . .
```

---

---

System time is: *day date, time*

Enter a password for the 'root' or super user.

(Note: This password must be kept EXTREMELY secure):

New Password:

26. If you have not already done so, remove the last UNIX base system diskette from the drive. Then press  in response to the prompt. This action assigns no password for root.
27. Turn to the *Logins and Passwords* section of Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning*. Write "none assigned" in the space provided for the root password. (Even though you did not assign a password, keep this information and all passwords secure.)

The system responds with the following prompt:

Re-enter the new password:

28. Press  again.

The system responds with the following prompt:

Enter a password for the 'install' user.

(Note: This password must be kept EXTREMELY secure  
and should be different from the root password):

New password:

29. Press  in response to the prompt. This action assigns no password for install.
30. Turn to the *Logins and Passwords* section of Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning*. Write "none assigned" in the space provided for the root password. (Even though you did not assign a password, keep this information and all passwords secure.)

The system responds with the following prompt:

Re-enter the new password:

31. Press  again.

The system responds with the following message:

The UNIX operating system will now be rebuilt.  
This will take approximately 2 minutes. Please wait.

After approximately 2 minutes, the system prompts you to reboot.

32. Make sure the floppy drive is empty. Then press  simultaneously to reboot the system.

When the reboot is complete, the system displays the Console Login prompt.

Continue with the next section, *Verifying Disk Partitioning*.

## Verifying Disk Partitioning

1. Enter **root** at the Console Login prompt.

The system responds with the Password prompt.

2. Press **ENTER**.

The system responds with the following message showing the file system space allocation:

```
/          :          Disk Space : X MB of X MB available (X%).  
Total Disk Space:      X MB of X MB available (X%).
```

**NOTE**

If the system does not respond with the file system space allocation in response to steps 1 and 2, enter **/etc/dfspace** to obtain it.

3. Verify that the screen displays the size of / (root) as the same value you wrote down in Table B-2 of Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning*. (The value displayed is acceptable if it is within 2Mbytes.)

If the disk space is not allocated correctly, repeat the previous procedure, *Installing the Unix V3.2.2 Base System Package*, to reinstall the UNIX base system package. Ensure that you allocate the correct amount of space for the root file system.

If the disk space is allocated correctly, continue with the next section, *Installing the FMLI Package*.

## Installing the FMLI Package

1. 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.
```

2. Insert diskette 1 of 1 of the FMLI package into the floppy drive and press **ENTER**.

The system displays messages about the installation for approximately 2 minutes, depending on the size of your filesystem. It then displays the following message:

```
The installation of the FMLI Package is now complete.
```

3. Remove diskette 1 of 1 of the FMLI package from the floppy drive.

Continue with the next section, *Installing the FACE Package*.

## Installing the FACE Package

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

The system responds with the following message:

```
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.
```

2. Insert diskette 1 of 2 of the FACE package into the floppy drive and press **ENTER**.

When the system has copied the first FACE diskette, it displays the following message:

```
Reached end of medium on input.
```

```
You may remove this floppy disk.
```

```
To continue—insert floppy disk number 2 and strike <ENTER> key.
```

```
To QUIT—strike <q> followed by <ENTER>
```

3. Remove diskette 1 of 2 from the floppy drive.
4. Insert diskette 2 of 2 of the FACE package into the floppy drive and press **ENTER**.  
When the installation is complete, the system displays the UNIX system prompt (#).
5. Remove diskette 2 of 2 of the FACE package from the floppy drive.

Continue with the next section, *Installing the FACE Help Package*.

## Installing the FACE HELP Package

1. 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.
```

2. Insert diskette 1 of 1 of the FACE HELP package into the floppy drive and press **ENTER**.

The system responds with the following FACE HELP menu:

```
1 Install Office HELP Files ONLY.  
2 Install System Administration HELP Files ONLY.  
3 Install Printer Operations HELP Files ONLY.  
4 Install ALL HELP Files.  
5 Terminate Installation.
```

```
Type the number that corresponds to the option desired and  
strike the ENTER key:
```

3. Enter **4** to select Install ALL HELP Files.

The system installs all the FACE HELP files. When the installation is complete, the system displays the FACE HELP menu again.

4. Enter **5** to select Terminate Installation.

When the installation is complete, the system displays the UNIX system prompt (#).

5. Remove FACE HELP diskette 1 of 1 from the floppy drive.

Continue with the next section, *Installing the UNIX Editing Package*.

## Installing the UNIX Editing Package

1. 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.
```

2. Insert UNIX editing package diskette 1 of 1 into the floppy drive and press **ENTER**.  
When the installation is complete, the system displays the UNIX system prompt (#).
3. Remove UNIX editing package diskette 1 of 1 from the floppy drive.

Continue with the next section, *Verifying UNIX System Installation*.

## Verifying UNIX System Installation

1. Enter **root** at the Console Login prompt.

The system responds with the Password prompt.

2. Press **ENTER**.

The system responds with the following message showing the file system space allocation:

```
 /           :           Disk Space : X MB of X MB available (X%).  
Total Disk Space:      X MB of X MB available (X%).
```

3. Verify that the screen displays the size of / (root) as the same value you wrote down in Table B-2 of Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning*. (The value displayed is acceptable if it is within 2Mbytes.)

If the value for / (root) is acceptable, continue with step 4. If the value is not acceptable, return to *Installing the UNIX Base System Package* earlier in this chapter and begin reinstallation of the UNIX operating system.

4. Enter **uname -a**

If the UNIX operating system is installed correctly, the system responds with the following message:

```
unix unix 3.2 2.2 i386
```

If this message appears exactly as shown, the UNIX operating system is correctly installed. Continue with the next section, *Creating an Administrative Login*.

If this message does not appear exactly as shown, you have installed an incorrect version of the UNIX operating system. Return to *Installing the UNIX V3.2.2 Base System Package* earlier in this chapter to install V3.2.2 of the UNIX operating system.

## CREATING AN ADMINISTRATIVE LOGIN

Before installing the AUDIX Voice Power software, you must create a login for voice administration through AT&T FACE.

1. If you are already logged in as **root**, skip to step 3. If you are not already logged in as root, enter **root** at the Console Login prompt.

The system responds with the Password prompt.

2. Press **ENTER**.

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

3. Enter **face** at the UNIX system prompt (#).

The system responds with following the AT&T FACE main menu:

```

      AT&T FACE
-----
> Office of root
  Printer Operations
  Programs
  System Administration
  UNIX System
  Exit
  
```

4. From the AT&T FACE main menu, select the following sequence:

```

  System Administration
  User Logins
  Add
  
```

The system displays the LOGIN NAME AND FULL NAME menu.

5. With the cursor at the Login Name field, enter **audix**
6. Move the cursor to the Full Name field and enter **AUDIX Voice Adm**
7. Move the cursor to the System Administration Privileges field. Press **CHOICES** (F2) to display Yes, and press **ENTER**.

This assigns system administrative privileges to the administrator login.

8. Press **SAVE** (F3).

The system displays a login confirmation window.

9. Press **CONT** (F3) to confirm the login information.

The system responds with the following prompt:

```

  Enter a password for audix
  
```

10. Press **ENTER**.

The system responds with the following prompt:

```

  Re-enter the new password
  
```

11. Press `ENTER`.
12. Turn to the *Logins and Passwords* section of Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning*. Fill in the information for the administrator login. This will provide the customer with a record of the login and password you assigned. (Even though you did not assign a password, keep this information and all passwords secure.)
13. Press `ENTER` to continue.

The system displays the following message:

```
Confirmation
```

```
User audix has been added to the system.
```

14. Press `CANCEL` (F6) three times to return to the AT&T FACE main menu.
15. Select `Exit`.
16. Press `CONT` (F3) twice to return to the UNIX system prompt (#).

Continue with the next section, *Installing the File System Modification Software*.

## INSTALLING THE FILE SYSTEM MODIFICATION SOFTWARE

1. If you are already logged in as `root`, skip to step 3.

If you are not already logged in as `root`, enter `root` at the Console Login prompt.

The system responds with the Password prompt.

2. Press `(ENTER)`.

The system responds with the UNIX system prompt (`#`).

3. 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, instruction will be provided for  
inserting the remaining floppy disks.
```

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

4. Insert diskette 1 of 1 of the AUDIX Voice Power File System Modification Software into the floppy drive and press `(ENTER)`.

The system displays messages about the installation and then the following:

```
The UNIX filesystem modification procedure is complete.
```

5. Press `(ENTER)` to return to the UNIX system prompt (`#`).
6. Remove the AUDIX Voice Power File System Modification diskette from the floppy drive.

Continue with the next section, *Installing IVPSS R1.1*

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---

## INSTALLING IVPSS R1.1

1. If you are already logged in as `root`, skip to step 3.

If you are not already logged in as `root`, enter `root` at the Console Login prompt.

The system responds with the Password prompt.

2. Press `(ENTER)`.

The system responds with the UNIX system prompt (`#`).

3. 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, instruction will be provided for  
inserting the remaining floppy disks.
```

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

4. Insert the first diskette of the Integrated Voice Power System Software R1.1 into the floppy drive and press `(ENTER)`.

When this diskette is installed, the system responds with a "beep" and displays the following prompt:

```
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 x and strike the <ENTER>  
key.
```

5. Remove the diskette currently in the floppy drive.
6. Repeat steps 4 and 5 for the remaining IVPSS diskettes.

While installing diskette 4 of 4, the system displays the following message and prompt:

```
Select the time zone for this installation.
```

- 1) Eastern
- 2) Central
- 3) Mountain
- 4) Pacific

```
Enter selection
```

7. Enter the number corresponding to the time zone in which the system is being installed (that is, enter either **1**, **2**, **3**, or **4**).

The system responds with the following prompt:

```
Confirm: the installation time zone number is x. (y/n)
```

8. Enter **y**

The system responds with the following prompt:

```
Is Daylight Savings ever used? (y/n)
```

9. Enter **y** or **n** as appropriate.

The system responds with a list of the files as they are copied to the hard disk, then displays the following prompt:

```
Reserving a disk slice for speech.  
Disk 0 Slice 4 will be reserved for speech.[y/n]
```

10. Enter **y**

The system responds with the following prompt:

```
A speech filesystem does not exist on slice 0s4. Confirm: A  
speech filesystem will now be built on slice 0s4 [y/n]
```

11. Enter **y**

The system responds with the following messages:

```
Building speech filesystem slice 0s4.  
Inittab successfully rebuilt.  
Voice System successfully installed.  
Installing the IVP4 driver.
```

When the speech file system is built, the system responds with the following messages:

```
The Integrated Voice Power System Software has been successfully  
installed.
```

```
The UNIX operating system will now be rebuilt.  
This will take approximately 2 minutes. Please wait.
```

```
The UNIX kernel has been rebuilt.
```

The system then prompts you for an automatic shutdown.

12. Remove IVPSS R1.1 diskette 4 of 4 from the floppy drive. Press  to begin the automatic shutdown.

When the shutdown is complete, the system prompts you to reboot.

13. Press  simultaneously to reboot the system.

When the reboot is complete, the system displays the Console Login prompt.

Continue with the next section, *Restoring System Files*.

## RESTORING SYSTEM FILES

There are three parts to this procedure:

- Taking the voice channels out of service
- Restoring the administrative and speech files
- Returning the voice channels to service

### Taking the Voice Channels Out of Service

1. From the Console Login prompt, enter **audix**  
The system responds with the Password prompt.
2. Enter the administrator's terminal-based password.
3. Begin at the USER LOGIN menu and select the following sequence:

```

Voice System Administration
Configuration Management
Voice Equipment
    
```

The VOICE EQUIPMENT window appears, similar to the following:

Voice Equipment								
CHN	CD.PT	STATE	STATE-CHNG-TIME	SERVICE-NAME	PHONE	GROUP	OPTS	TYPE
0	0.0	INSERV	Aug 28 19:24:25		2003	2	Talk	IVP4
1	0.1	INSERV	Aug 28 19:24:25		2004	2	Talk	IVP4
2	0.3	INSERV	Aug 28 19:24:25		2001	2	Talk	IVP4
3	0.4	INSERV	Aug 28 19:24:25		2002	2	Talk	IVP4
4	1.0	INSERV	Aug 28 19:24:25		2005	2	Talk	IVP4
5	1.1	INSERV	Aug 28 19:24:25		2006	2	Talk	IVP4
6	1.3	INSERV	Aug 28 19:24:25		2007	2	Talk	IVP4
7	1.4	INSERV	Aug 28 19:24:25		2008	2	Talk	IVP4
8	2.0	INSERV	Aug 28 19:24:25		2009	2	Talk	IVP4
9	2.1	INSERV	Aug 28 19:24:25		2010	2	Talk	IVP4
10	2.3	INSERV	Aug 28 19:24:25		2011	2	Talk	IVP4
11	2.4	INSERV	Aug 28 19:24:25		2012	2	Talk	IVP4

4. Press **CHG-KEYS** (F8), then **CHGSTATE** (F2).

The CHANGE STATE OF VOICE EQUIPMENT window appears, similar to the following:

Change State of Voice Equipment
New State: Equipment: Equipment Number: Change Immediately?

5. Press **CHOICES** (F2).
6. Select **manoos** and press **ENTER** to move to the Equipment field.
7. Press **CHOICES** (F2).
8. Select channel and press **ENTER** to move to the Equipment Number field.
9. Enter **a11** in the Equipment Number field.
10. Enter **y** in the Change Immediately field.
11. Press **SAVE** (F3).

When the change of state has been made, a **COMMAND OUTPUT** window appears.

12. Verify that the current state of all channels is **manoos**.
13. Press **CANCEL** (F6) four times to return to the **USER LOGIN** main menu.
14. Select **Exit** from the **USER LOGIN** menu.

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

Continue with the next section, *Restoring the Administrative and Speech Files*

## Restoring the Administrative and Speech Files

**NOTE**

This procedure also restores the passwords that were in effect when you executed the backup.

1. From the `Console Login` prompt, enter **audix**  
The system responds with the `Password` prompt.
2. Enter the administrator's terminal-based password.
3. Begin at the `USER LOGIN` menu and select the following sequence:
 

```
Voice System Administration
Configuration Management
System Control
Report Voice System Status
```

A window appears. If the following message is displayed in the window, the voice system is running:

```
The voice system is up and running at run level 4.
```

If the following message is displayed in the window, the voice system is not running:

```
The voice system is down and stopped at run level 2.
```
4. If the voice system is already running, skip to step 7.  
If the voice system is *not* running, press `CANCEL` (F6) to return to the `SYSTEM CONTROL` window.
5. Select `Start Voice System` from the `SYSTEM CONTROL` menu.  
When the start-up process is finished, the system displays the following message:
 

```
Startup of the Voice System is complete
```
6. Press `ENTER` to continue.
7. Press `CANCEL` (F6) three times to return to the `USER LOGIN` menu.
8. Move the cursor to `Exit` and press `ENTER`.  
The system returns you to the `Console Login` prompt.
9. At the `Console Login` prompt, enter **root**  
The system responds with the `Password` prompt.
10. Press `ENTER`.  
The system displays the UNIX system prompt (#).
11. Enter **face**  
The system displays the AT&T FACE menu.

12. Begin at the AT&T FACE menu, and select the following sequence:

```
System Administration
Restore from Removable Media
Personal Restore
Restore Files under /
```

13. If you have more than one floppy diskette drive, the system displays the SELECT REMOVABLE MEDIA menu. Make your choice and press **(ENTER)**.

The system displays the DISK RESTORE form asking if existing files on disk should be overwritten with files being restored.

14. Enter **y** or press **(CHOICES)** (F2) to select yes.

15. Press **(SAVE)** (F3).

The system displays a confirmation message telling you to insert the diskette containing the files that you want to restore.

16. Insert the diskette and press **(ENTER)**.

After it begins the file restoration, the system displays the following message:

```
Restore in progress.
```

17. If more than one diskette is needed, the system prompts you to insert subsequent diskettes as follows:

```
Please insert disk # X . . .
then type <enter> to continue.
```

18. When the system informs you that it has completed the file restoration, remove the last diskette and press **(ENTER)**.

The system returns you to the RESTORE FROM REMOVABLE MEDIA menu.

19. At the RESTORE FROM REMOVABLE MEDIA menu, restore the speech files by selecting the following sequence:

```
Speech Restore
Restore All Talkfiles and Phrases
```

20. If you have more than one floppy disk drive, the system displays the SELECT REMOVABLE MEDIA menu. Make your choice and press **(ENTER)**.

The system displays a confirmation message telling you to insert the diskette containing the files you want to restore.

21. Insert the diskette and press **(ENTER)**.

After the system begins the file restoration, it displays the phrase and talkfile numbers it is restoring.

22. If more than one diskette is needed, the system prompts you to insert subsequent diskettes as follows:

```
Please insert disk # X . . .
then type <enter> to continue.
```

23. When the system informs you that it has completed the file restoration, remove the last diskette and press `ENTER`.
24. Press `CANCEL` (F6) repeatedly to return to the AT&T FACE menu.
25. Move the cursor to `Exit` and press `ENTER`.
26. Press `CONT` (F3) to continue.
27. Enter `/vs/bin/stop_vs` at the UNIX system prompt to stop the voice system.  
When the process is finished, the system displays the following message:  

```
The Voice System has stopped.
```
28. Enter `/vs/bin/start_vs` at the UNIX system prompt to start the voice system.  
When the process is finished, the system displays the following message:  

```
Startup of the Voice System is complete.
```
29. Enter `exit`  
The system returns you to the `Console Login` prompt.

Continue with the next section, *Returning the Voice Channels to Service*.

## Returning the Voice Channels to Service

1. Enter **audix** from the Console Login prompt.  
The system responds with the Password prompt.
2. Enter the administrator's terminal-based password.
3. Begin at the USER LOGIN menu and select the following sequence:

```

Voice System Administration
Configuration Management
Voice Equipment

```

The VOICE EQUIPMENT window appears, similar to the following:

Voice Equipment									
CHN	CD.PT	STATE	STATE-CHNG-TIME	SERVICE-NAME	PHONE	GROUP	OPTS	TYPE	
0	0.0	INSERV	Aug 28 19:24:25		2003	2	Talk	IVP4	
1	0.1	INSERV	Aug 28 19:24:25		2004	2	Talk	IVP4	
2	0.3	INSERV	Aug 28 19:24:25		2001	2	Talk	IVP4	
3	0.4	INSERV	Aug 28 19:24:25		2002	2	Talk	IVP4	
4	1.0	INSERV	Aug 28 19:24:25		2005	2	Talk	IVP4	
5	1.1	INSERV	Aug 28 19:24:25		2006	2	Talk	IVP4	
6	1.3	INSERV	Aug 28 19:24:25		2007	2	Talk	IVP4	
7	1.4	INSERV	Aug 28 19:24:25		2008	2	Talk	IVP4	
8	2.0	INSERV	Aug 28 19:24:25		2009	2	Talk	IVP4	
9	2.1	INSERV	Aug 28 19:24:25		2010	2	Talk	IVP4	
10	2.3	INSERV	Aug 28 19:24:25		2011	2	Talk	IVP4	
11	2.4	INSERV	Aug 28 19:24:25		2012	2	Talk	IVP4	

4. Press **CHG-KEYS** (F8), then **CHGSTATE** (F2).

The CHANGE STATE OF VOICE EQUIPMENT window appears, similar to the following:

Change State of Voice Equipment
New State: Equipment: Equipment Number: Change Immediately?

5. Press **CHOICES** (F2).
6. Select **inserv** and press **ENTER** to move to the Equipment field.
7. Press **CHOICES** (F2).
8. Select channel and press **ENTER** to move to the Equipment Number field.
9. Enter **all** in the Equipment Number field.
10. Enter **y** in the Change Immediately field.

11. Press **SAVE** (F3).

When the change of state has been made, a `COMMAND OUTPUT` window appears.

12. Verify that the current state of all channels is `inserv`.
13. Press **CANCEL** (F6) four times to return to the `USER LOGIN` main menu.
14. Select `Exit` from the `USER LOGIN` menu.

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

Continue with the next section, *Rebooting the System*.

## REBOOTING THE SYSTEM

1. Ensure that the floppy drive is empty.
2. Enter **root** at the Console Login prompt.

The system returns you to the UNIX system prompt (#).

3. Enter **/etc/shutdown -g0 -y -i6** at the UNIX system prompt.

When the reboot is complete, the system displays the UNIX system prompt (#).

Continue with the next section, *Installing AUDIX Voice Power R2.0 Application Software*.

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## INSTALLING AUDIX VOICE POWER R2.0 APPLICATION SOFTWARE

Installing AUDIX Voice Power Application Software R2.0 automatically upgrades the R1.1 database to an R2.0-compatible database.

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

The system responds with the following prompt:

```
Please indicate the installation medium you intend to use.
```

```
Strike "C" to install from CARTRIDGE TAPE  
or "F" to install from FLOPPY DISKETTE.
```

```
Strike ESC to stop.
```

2. Enter **f** to select Floppy Diskette.

The system responds with the following prompt:

```
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.
```

3. Insert diskette 1 of the AUDIX Voice Power Application Software R2.0 into the floppy drive and press **Enter**.

When this diskette is installed, the system responds with a "beep" and the following prompt:

```
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 x and strike the <ENTER>  
key.
```

4. Remove the diskette currently in the floppy drive.

5. Repeat steps 3 and 4 for each remaining diskette.

While installing the last diskette, the system displays a series of dots. Each dot represents a phrase added to the speech database. This takes approximately 10 minutes.

When the installation is complete, the system displays the following message:

```
You may now remove the floppy disk.
```

6. Remove the last diskette from the drive.

The system then displays the following prompt:

```
Enter the login of the AUDIX Voice Power system administrator:
```

7. Enter **audix**

8. The system responds with the following prompt:

```
Confirm: The login id of the Voice System Administrator is
audix? (y/n)
Is this correct? (press <Enter> for yes)
```

9. Press **ENTER**. The system displays a series of file names as they are installed on the hard disk.

When the installation is complete, the system displays the following message:

```
You may now remove the floppy disk.
```

```
Successful enable of automatic starting voice system.
```

```
The installation of the AUDIX Voice Power Application Software
R2.0 is now complete.
```

10. Remove the last diskette of the AUDIX Voice Power Application Software R2.0 from the floppy disk drive.

Continue with the next section, *Verifying the Software Installation*.

## VERIFYING THE SOFTWARE INSTALLATION

1. Enter **root** at the Console Login prompt.

The system responds with the Password prompt.

2. Press **ENTER**.

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

3. Enter **displaypkg** at the UNIX system prompt (#).

The system displays the following alphabetical list:

```
AUDIX Voice Power Application Software R2.0
Editing Package
FACE Help
FACE Package
FMLI Package
Integrated Voice Power System Software R1.1
```

4. If the list displayed on your screen matches the list above, you have completed the AUDIX Voice Power upgrade from R1.1 to R2.0.

If the list displayed on your screen does not include all the software listed above, refer to the appropriate sections in this chapter to reinstall the missing packages.

<b>NOTE</b>
-------------

You can install the FACE HELP and editing packages from the UNIX foundation set in any order. For all other software, however, you must follow the order of installation specified in this chapter. This means that before you can install a missing package, it may first be necessary to remove some installed software and reinstall it in the proper order.

When all software is properly installed, continue with the next chapter, *Upgrading from R2.0/R2.1.1*.



## 3. Upgrading from 2.0/2.1.1

---

Complete the following procedures to upgrade to AUDIX Voice Power R3.0 from R2.0 or 2.1.1. For any existing system with a disk drive less than 300 Mbytes, this includes installing a new 300-Mbyte hard disk drive.

### **CUTTING THE AUDIX VOICE POWER SYSTEM FROM SERVICE**



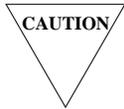
If you have not already done so as part of the upgrade from R1.1, you must cut the AUDIX Voice Power system from service. This procedure is switch dependent. Therefore, you must now turn to the *Cut From Service* section in the *Cut To Service* chapter of the switch integration document supplied with the AUDIX Voice Power documentation set for instructions.

When you have completed the cut from service, return to this document and continue with the next section, *Backing up the AUDIX Voice Power System*.

## BACKING UP THE AUDIX VOICE POWER SYSTEM

There are three parts to this procedure:

- Formatting a floppy diskette
- Calculating and formatting the number of floppy diskettes required
- Backing up the administrative, UNIX, and speech files



Channel assignments are not preserved by the upgrade process. Therefore, before you begin this procedure, ensure that the services and telephone numbers assigned to each channel are recorded in Table B-1 of Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning*.

---

---

## Formatting a Floppy Diskette

Follow this procedure to format a single floppy diskette. You will use this formatted diskette when you perform the next procedure, *Calculating and Formatting the Total Number of Diskettes Required*.

1. Enter **root** at the Console Login prompt.  
The system responds with the Password prompt.
2. Press **ENTER**.  
The system responds with the UNIX system prompt (#).
3. Enter **face**  
The system displays the AT&T FACE menu.
4. Begin at the AT&T FACE menu, and select the following sequence:  
System Administration  
Disk Operations  
The system responds with the following choices window:  
Floppy-to-Floppy Copy  
Format 1.44 MB UNIX Floppy Disk  
Format 720 KB UNIX Floppy Disk
5. Select the size of the floppy diskette you want to format and press **ENTER**.  
The system responds by asking you to verify the size of the floppy you want to format and then with the following prompt:  
Insert floppy, close latch, and  
strike CONT function key to continue.
6. Insert an unformatted floppy diskette into the floppy drive and press **CONT** (F3).  
When the floppy disk is formatted, the system responds with the following message:  
<Your size> floppy has been formatted.
7. Remove the floppy diskette from the floppy drive.
8. Press **CANCEL** (F6) three times to return to the AT&T FACE menu.

Continue with the next section, *Calculating and Formatting the Total Number of Diskettes Required*.

## Calculating and Formatting the Total Number of Diskettes Required

The system estimates the number of formatted floppy diskettes required for the backup only when you execute the back-up command. To access this information and format the required number of disks in advance of executing the back-up command, complete the following procedure:

1. If you are already at the AT&T FACE MENU, skip to step 4.

If you are not already at the AT&T FACE MENU, enter **root** at the Console Login prompt.

The system responds with the Password prompt.

2. Press **ENTER**.

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

3. Enter **face**

The system displays the following:

```

      AT&T FACE
-----
> Office of root
  Printer Operations
  Programs
  System Administration
  UNIX System
  Exit
  
```

4. From the AT&T FACE menu, select the following sequence to determine the number of floppy diskettes required to back up the administrative files:

```

System Administration
Backup to Removable Media
Personal Backup
Selective Backup of Files Under /
  
```

If you have more than one floppy disk drive, the system displays the SELECT REMOVABLE MEDIUM menu.

5. Make your choice and press **ENTER**.

The system displays the SELECTIVE BACKUP OF FILES UNDER / screen.

6. Type the following sequence of file names, beginning each one on a new line:

```

/usr/vmdb
/usr/ocdb
/avp/data
  
```

7. Press **SAVE** (F3).

The system calculates the number of diskettes required.

8. Copy that number from the screen here: \_\_\_\_\_

9. Press **DELETE** to abort the backup.

10. Press **ENTER**.

The system returns to the **BACKUP TO REMOVABLE MEDIA** menu.

11. From the **BACKUP TO REMOVABLE MEDIA** menu, select the following sequence to determine the number of diskettes required to back up the UNIX files:

```
Personal Backup
Selective Backup of Files Under /
```

If you have more than one floppy disk drive, the system displays the **SELECT REMOVABLE MEDIUM** menu.

12. Make your choice and press **ENTER**.

The system displays the **SELECTIVE BACKUP OF FILES UNDER /** screen.

13. Type the following sequence of file names, beginning each on a new line:

```
/etc/passwd
/etc/shadow
/etc/conf/init.d/ua_tty*
/etc/.devices
/etc/rc2.d/S11uname
/usr/lib/uucp/Systems
/usr/lib/uucp/Dialers
/usr/lib/uucp/Devices
/usr/spool/lp/
```

**NOTE**

The file `/etc/rc2.d/S11uname` does not reside on every system. If the system responds with the message that it cannot find this file, reenter the list of file names without it in response to the prompt.

14. Press **SAVE** (F3).

The system calculates the number of diskettes required.

15. Copy that number from the screen here: \_\_\_\_\_

16. Press **DELETE** to abort the backup.

17. Press **ENTER**.

The system returns to the **BACKUP TO REMOVABLE MEDIA** menu.

18. From the **BACKUP TO REMOVABLE MEDIA** menu, select the following sequence to determine the number of diskettes required to back up the speech files:

```
Speech Backup
Selective Backup of Talkfiles/Phrases
```

If you have more than one floppy disk drive, the system displays the **SELECT REMOVABLE MEDIUM** menu.

19. Make your choice and press **ENTER**.

The system responds with the following:

```
Talkfiles (t <range>) and/or phrases (p <range>) to back up:
```

---



---

20. Type in the following:

```
talkfile 46 phrase all
talkfile 47 phrase all
```

21. Press  (F3).

The system displays the SELECT REMOVABLE MEDIUM menu.

22. Make your choice and press .

The system prompts you to insert the first formatted floppy disk and to enter **c** when ready.

23. Insert the diskette you formatted in the previous procedure into the floppy disk drive and enter **c**

The system begins the backup by calculating the number of diskettes required.

24. Copy that number from the screen here: \_\_\_\_\_

25. Press  *immediately* to abort the backup.

26. Press  to return to the SPEECH BACKUP MENU.

27. Press  (F6) twice to return to the SYSTEM ADMINISTRATION menu.

28. From the SYSTEM ADMINISTRATION menu, select Disk Operations.

The system responds with the following choices window:

```
Floppy-to-Floppy Copy
Format 1.44 MB UNIX Floppy Disk
Format 720 KB UNIX Floppy Disk
```

29. Select the size of the floppy diskette you want to format and press .

The system responds by verifying the size of the floppy diskette you want to format and the following prompt:

```
Insert floppy, close latch, and
strike CONT function key to continue.
```

30. Insert an unformatted floppy diskette into the floppy drive and press  (F3).

When the floppy disk is formatted, the system responds with the following message:

```
<Your size> floppy has been formatted.
```

31. Remove the floppy diskette from the floppy drive.

32. Repeat steps 30 and 31 until you have formatted the *total* number of diskettes you need to back up the administrative and speech files (that is, the sum of the numbers you wrote down in steps 8, 15, and 24). We also recommend that you back up at least five extra diskettes as a safety measure.

33. When you are finished formatting the diskettes, press  three times to return to the AT&T FACE MENU.

34. Select `Exit`.

The system responds with the following message:

```
You are about to exit AT&T FACE.
```

35. Press `CONT` (F3).

The system returns you to the UNIX prompt (#).

36. Enter `exit`

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

Continue with the next section, *Backing up the Administrative and Speech Files*.

## Backing up the Administrative and Speech Files

1. From the Console Login prompt, enter **audix**

The system responds with the Password prompt.

2. Enter the administrator's terminal-based password.
3. Begin at the IVPSS menu and select the following sequence:

```
Voice System Administration
Configuration Management
System Control
Report Voice System Status
```

A window appears. If the following message is displayed in the window, the voice system is running:

```
The voice system is up and running at run level 4.
```

If the following message is displayed in the window, the voice system is not running:

```
The voice system is down and stopped at run level 2.
```

4. Press **CANCEL** (F6) to return to the SYSTEM CONTROL window.
5. If the voice system is *not* running, skip to step 8.  
If the voice system is running, select **Stop Voice System** from the SYSTEM CONTROL menu.

A WAIT TIME window appears.

6. Type **60** and press **SAVE** (F3).

The system waits for 60 seconds and then shuts down the voice system. When the process is finished, the system displays the following message:

```
The Voice System is down and stopped,
with run level 2.
```

7. Press **ENTER** to continue.
8. Press **CANCEL** (F6) several times to return to the IVPSS menu.
9. Move the cursor to **Exit** and press **ENTER**.
10. Press **CONT** (F3) to continue.

The system returns you to the Console Login prompt.

11. Enter **root** at the Console Login prompt.  
The system responds with the Password prompt.
12. Press **ENTER**.  
The system displays the UNIX system prompt (#).

13. Enter **face** at the UNIX system prompt (#).

The system displays the following:

```

      AT&T FACE
-----
> Office of root
  Printer Operations
  Programs
  System Administration
  UNIX System
  Exit
  
```

14. From the AT&T FACE menu, select the following sequence to back up the administrative files:

```

System Administration
Backup to Removable Media
Personal Backup
Selective Backup of Files Under /
  
```

If you have more than one floppy disk drive, the system displays the SELECT REMOVABLE MEDIUM menu.

15. Make your choice and press **ENTER**.

The system displays the SELECTIVE BACKUP OF FILES UNDER / screen.

16. Type the following sequence of file names, beginning each on a new line:

```

/usr/vmdb
/usr/ocdb
/avp/data
  
```

17. Press **SAVE** (F3).

The system calculates the number of diskettes required and the amount of time the backup will take.

18. When prompted, insert a formatted floppy diskette and press **ENTER**.

The system begins the backup.

19. When prompted, remove the backed-up diskette and label it. Use the following labeling scheme, where *X* equals the total number of diskettes containing administrative files:

- Administrative Files 1 of *X*, 2 of *X*, etc.

20. If necessary, repeat steps 18 and 19 until you have backed up all the required administrative files.

21. When the backup of the administrative files is complete, press **ENTER**.

The system returns to the BACKUP TO REMOVABLE MEDIA menu.

22. From the BACKUP TO REMOVABLE MEDIA menu, select the following sequence to back up the UNIX files:

```

Personal Backup
Selective Backup of Files Under /
  
```

If you have more than one floppy disk drive, the system displays the SELECT REMOVABLE MEDIUM menu.

23. Make your choice and press **ENTER**.

The system displays the SELECTIVE BACKUP OF FILES UNDER / screen.

24. Type the following sequence of file names, beginning each one on a new line:

```

/etc/passwd
/etc/shadow
/etc/conf/init.d/ua_tty*
/etc/.devices
/etc/rc2.d/S11uname
/usr/lib/uucp/Systems
/usr/lib/uucp/Dialers
/usr/lib/uucp/Devices
/usr/spool/lp/

```

## NOTE

The file `/etc/rc2.d/S11uname` does not reside on every system. If the system responds with the message that it cannot find this file, reenter the list of file names without it in response to the prompt.

25. Press **SAVE** (F3).

The system calculates the number of diskettes required and the amount of time the backup will take.

26. When prompted, insert a formatted floppy diskette and press **ENTER**.

The system begins the backup.

27. When prompted, remove the backed-up diskette and label it. Use the following labeling scheme, where *X* equals the total number of diskettes containing UNIX files:

- UNIX Files 1 of *X*, 2 of *X*, etc.

28. If necessary, repeat steps 26 and 27 until you have backed up all the required UNIX files.

29. When the backup of UNIX files is complete, press **ENTER**.

The system returns to the `BACKUP TO REMOVABLE MEDIA` menu.

30. From the `BACKUP TO REMOVABLE MEDIA` menu, select the following sequence to back up the speech files:

```

Speech Backup
Selective Backup of Talkfiles/Phrases

```

If you have more than one floppy disk drive, the system responds with the `SELECT REMOVABLE MEDIUM` menu.

31. Make your choice and press **ENTER**.

The system responds with the following:

```

Talkfiles (t <range>) and/or phrases (p <range>) to back up:
_____
_____

```

32. Type in the following:

```

Talkfile 46 phrase all
Talkfile 47 phrase all

```

- 
33. Press **SAVE** (F3).  
The system displays the SELECT REMOVABLE MEDIUM menu.
  34. Make your choice and press **ENTER**.  
The system prompts you to insert the first formatted floppy disk and to enter **c** when ready.
  35. Insert a formatted diskette and enter **c**.  
The system begins the backup by calculating the number of diskettes required and the time the backup will take.
  36. When prompted, remove the backed-up diskette and label it. Use the following labeling scheme, where *X* equals the total number of diskettes containing speech files:
    - Speech Files 1 of *X*, 2 of *X*, etc.
  37. If necessary, repeat steps 35 and 36 until you have backed up all the required speech files.
  38. When the backup is complete, press **ENTER**.  
The system returns to the SPEECH BACKUP menu.
  39. Press **CANCEL** (F6) repeatedly to return to the AT&T FACE menu.
  40. Move the cursor to **Exit** and press **ENTER**.  
The system responds with the following message:  

```
    You are about to exit AT&T FACE.
```
  41. Press **CONT** (F3).  
The system returns you to the UNIX prompt (#).

If the size of the hard disk drive on the system you are upgrading is less than 300 Mbytes, continue with the next section, *Installing a New Hard Disk Drive*.

If the system you are upgrading includes one or two existing 300-Mbyte hard disk drives, skip the next section. Continue with *Installing the UNIX Operating System*.

## INSTALLING A NEW HARD DISK DRIVE

There are four parts to this procedure:

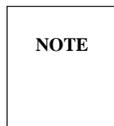
- Removing the existing hard disk drive
- Connecting a new 300-Mbyte disk drive
- Running the set-up utility
- Booting the machine and performing a low-level format



The disk drive is susceptible to damage if dropped, bounced, or otherwise exposed to mechanical shock.

### Removing the Existing Disk Drive

1. Enter `/etc/shutdown -g0 -y` at the UNIX system prompt.
2. Remove the cover from the AUDIX Voice Power computer. Refer to Appendix A, *Removing/Replacing the Computer Cover, of 6386/33 and 6386/25 Voice Processing Hardware Installation* for instructions.
3. Disconnect all cables from the hard disk drive. *Do not* disconnect the cables from the WGS.
4. Remove the hard disk drive from the WGS.



This hard disk drive is the property of the customer. *Do not remove it from the customer site.*

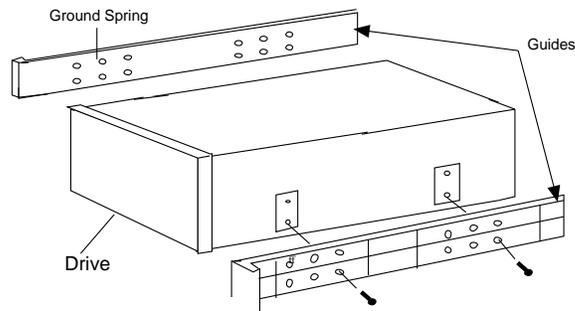
Continue with the next section, *Connecting a New Hard Disk Drive*.

## Connecting a New Hard Disk Drive

1. Verify that the jumpers on the hard disk drive are set to designate it as hard disk 0.

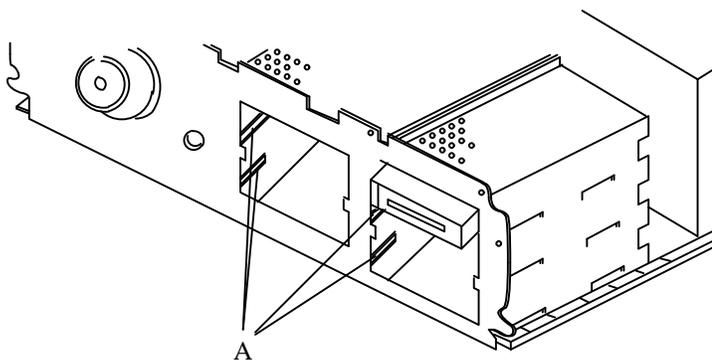
**NOTE** This is the factory-default setting.

2. Using the screws provided with the hard disk drive, attach the mounting rails to the drive as shown in Figure 3-1. The ground spring must be between the drive and the drive guide as shown.



**Figure 3-1.** Securing the Guides to the Hard Disk Drive

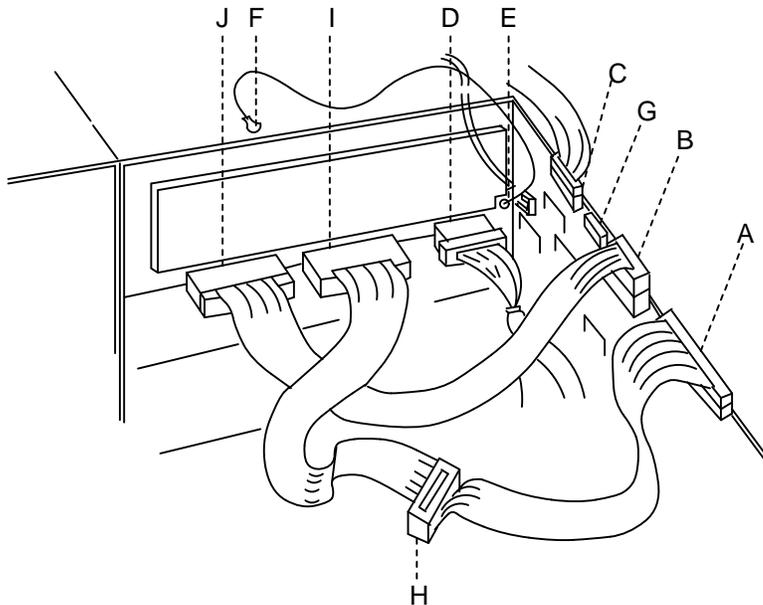
3. Remove the screws and metal covers over the bay directly under the floppy drive. Retain the screws for installation.
4. Line up the mounting rails with the the grooves (A) in the bay. Carefully slide the disk drive all the way into the bay as shown in Figure 3-2.



**Figure 3-2.** Hard Disk Drive Mounting Screws

5. Insert the two screws you just removed through the slots in the mounting rails and chassis. Tighten the screws to secure the drive to the chassis.

6. As shown in Figure 3-3, attach one of the spare ground wires from the top of the center bay to the ground (F) standoff at the rear of the drive (E).



**Figure 3-3.** Hard Disk Drive Connections

7. Plug in one of the spare power supply connectors (PS3-PS6) to the mating power connector located at the rear of the drive (D).
8. Connect the two ribbon cables (A and B) from the controller board to the connectors at the rear of the drive (I and J). Ensure that the connectors seat correctly and the pin orientation is correct.
9. Attach the power supply cable to the rear of the drive.
10. Connect the end connector of the three-conductor cable to the hard disk controller board (A).
11. Connect the 20-conductor cable from the new drive to the hard disk controller board (B).
12. Replace the computer cover. Refer to Appendix A, *Removing/Replacing the Computer Cover*, of *6386/33 and 6386/25 Voice Processing Hardware Installation* for instructions.
13. Plug the WGS power cable into the wall outlet.

Continue with the next section, *Running the Set-Up Utility*.

## Running the Set-Up Utility

**NOTE**

To complete this procedure, you must have the WGS system diagnostics diskette that corresponds to the model of the WGS (6386/33 or 6386/25) on which you are installing the upgrade. See Chapter 1, *Prerequisites*, for additional information.

1. Insert the AT&T WGS system diagnostics diskette into the floppy drive.
2. Power on the system.

The system reboots from the AT&T WGS system diagnostics diskette. When the reboot is complete, the system displays the AT&T WGS system diagnostics introduction screen.

3. Press **ENTER** to continue. The system displays the following main menu:

```

Configuration Check
Setup Utility
Test One Module
Set Test Options
Error Log Utilities
Disk Utilities
Password Utilities
Screen Utilities
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 - 142 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. Move the cursor to Hard Disk #1.
6. Press **ENTER**.

The system responds with the following choices window:

```
ESDI - 304 MB
Not Present
```

<b>NOTE</b>	When the choices window appears on the screen, ESDI - 304 MB should be highlighted. If it is not, the jumper settings on the hard disk drive may be set incorrectly.
-------------	--

7. Press **ENTER** to select ESDI - 304 . The system returns you to the current system settings screen shown in step 4.
8. Verify that the setting for Hard Disk #1 is now shown as 304 MB.
9. 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 lines in the table.
10. Press **ESC**.

The system responds with the following prompt:

```
Select 'Update' to save
the new CMOS setup
or you can 'Quit'
```

11. Select Update and press **ENTER**.  
The system begins to reboot. When the reboot is complete, the system returns you to the AT&T WGS system diagnostics introduction screen.
12. Press **ENTER**.  
The system responds with the customer test main menu shown in step 3.
13. Select Disk Utilities.  
The system responds with the Disk Utilities menu.
14. Select Low Level Format .  
The system responds with a warning that data will be destroyed on hard disk #1.
15. Press **ALT-F5** to continue.  
The system begins the low-level format of the new disk. After approximately 25 minutes, the system responds with a message that the formatting is complete.
16. Press **ENTER**.  
The system returns you to the Disk Utilities menu.
17. Press **ESC** to return to the customer test main menu.

18. Select **Exit** the Program.

19. Press **ENTER**.

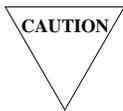
The system responds with the following prompt:

```
Want to quit?
```

20. Select **yes** to confirm.

The system begins to reboot.

21. Remove the AT&T WGS system diagnostics diskette from the disk drive and *immediately* insert diskette 1 of 7 of the UNIX base system package in its place.



Be sure to remove the AT&T WGS system diagnostics diskette and insert the UNIX diskette *immediately* so that the system begins the reboot from the UNIX base system diskette rather than from the WGS diagnostics diskette.

The system boots from the diskette in the floppy disk drive and begins the power-on self test (POST). When POST is complete, the system displays the following prompt:

```
Strike ENTER to install the UNIX system on your hard disk.
```

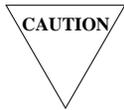
Continue with the next section, *Installing the UNIX Operating System*.

## INSTALLING THE UNIX OPERATING SYSTEM

There are eight parts to this procedure:

- Installing the UNIX V3.2.2 base system package
- Verifying disk partitioning
- Installing the FMLI package
- Installing the FACE package
- Installing the FACE HELP package
- Installing the editing package
- Installing the remote terminal package
- Verifying UNIX system installation

### Installing the UNIX V3.2.2 Base System Package



As you install the UNIX base system package, you will destroy any files currently on the disk. If you are reinstalling the UNIX operating system or reallocating space on the disk, ensure that the AUDIX Voice Power administrator has backed up any required files before you continue.

If you have installed a new 300-Mbyte hard disk drive, the first UNIX base system diskette is already in the floppy drive. Begin this procedure with step 2.

If you did *not* install a new hard disk drive, begin with step 1.

1. Insert diskette 1 of 7 of the UNIX base system package into the floppy drive and press the reset button.

The system boots from the disk in the floppy drive and begins the power-on self test (POST). When POST is complete, the system displays the following prompt:

```
Strike ENTER to install the UNIX system on your hard disk.
```

2. Press  to begin the installation.

If the system has previously been loaded with the UNIX operating system, the system responds with the following prompt:

```
Is this a new installation or a release upgrade to your  
existing system? (Strike 'n' (new) or 'u' (upgrade)  
followed by ENTER)
```

3. Enter **n** (you want to completely reload the UNIX software as if it were a new installation).

The system responds with the following prompt:

```
WARNING: A new installation of the UNIX system will destroy
all files currently on the system. Do you wish to continue (y
or n)?
```

4. Enter **y**

The system displays the following prompt:

```
Do you want to partition your hard disk as follows:
```

```
90% "UNIX System" -- lets you run UNIX system programs
10% "DOS (v. 3.2 or later) only"
```

```
To do this, please type "y". To partition your hard disk
differently, type "n" and the "fdisk" program will let you
select other partitions.
```

5. Enter **n**

The system displays the DISK PARTITION OPTIONS menu, as follows:

```
Total hard disk size is xxxx cylinders

                                Cylinders
Partition Status Type   Start  End  Length  %
===== ===== =====
                                =====
```

6. Turn to Table B-3 in Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning*. Copy the total hard disk size in cylinders from the screen onto the appropriate line in the table.

The system also displays one of the following messages:

```
1 Active UNIX SYS 0 xxx yyy 100
```

or

```
THERE ARE NO PARTITIONS CURRENTLY DEFINED
```

and asks you to choose from the following list of options:

```
SELECT ONE OF THE FOLLOWING:
```

1. Create a partition
2. Change Active (Boot from ) partition
3. Delete a partition
4. Exit (Update disk configuration and exit)
5. Cancel (Exit without updating disk configuration)

```
Enter Selection:
```

7. If the message displayed indicates there are no partitions currently defined, skip to step 8.

If the message indicates that one or more partitions are defined, complete the following steps a through d:

- a. Enter **3** to select Delete a partition.

The system responds with the following prompt:

```
Enter the number of the partition you want to delete (or
enter x to exit):
```

- b. Enter the first partition number listed in the DISK PARTITION OPTIONS menu.

The system responds with the following prompt:

```
Do you want to delete partition x?
This will erase all files and programs in
this partition (type "y" or "n").
```

- c. Enter **y**

The system redisplay the DISK PARTITIONING OPTION menu (shown in step 5).

- d. Repeat steps a, b, and c until all existing partitions are deleted.

8. Enter **1** to select Create a partition.

The system responds with the following prompt:

```
Indicate the type of partition you want to create
(1=UNIX System, 2=DOS only, 3=Other, x=Exit).
```

9. Enter **1** to select UNIX System.

The system responds with the following prompt:

```
The UNIX System partition must use at least xx% of the hard disk.
Indicate the percentage (xx-100) of the hard disk you want this
partition to use (or enter "c" to specify in cylinders):
```

10. Enter **100**

The system responds with the following prompt:

```
Do you want this to become the Active partition?
If so, it will be activated each time you reset
your computer or when you turn it on again.
Please type "y" or "n".
```

11. Enter **y**

The system again displays the DISK PARTITIONING OPTIONS menu (showing partition 1 as the active partition).

- 
- 
- Enter **4** to select Exit (Update disk configuration and exit).

The system responds with the following prompt:

```
Hard disk partitioning complete.  
  
A surface analysis will now be done.  
This will destroy all data on the hard disk.  
Strike ENTER to continue or DEL to abort.
```

- Press **ENTER**.

The surface analysis takes 10 to 60 minutes, depending on the size of the disk. During the analysis, the system displays results. When complete, the system displays the following messages and prompt:

```
The UNIX System partition has xxx cylinders  
assigned to it.  
  
1 cylinder will be used for alternate sectors.  
This leaves xxx cylinders (xxxxxx bytes)  
available.  
  
The following seems like a reasonable  
partitioning of your UNIX system disk space:  
  
A root filesystem of xxx cylinders (xxxxx  
bytes), a user (/usr) filesystem of xxx cylinders  
(xxxxxx bytes), an extra user filesystem (/usr2)  
of xxx cylinders (xxxx bytes), and  
a swap/paging area of xxx cylinders (xxxx  
bytes).  
  
Is this allocation acceptable to you (y/n)?
```

- Enter **n**

The system responds with the following prompt:

```
Do you wish to have separate root and usr filesystems (y/n)?
```

- Enter **n**

The system responds with the following prompt:

```
Do you want an additional /usr2 filesystem (y/n)?
```

- Enter **y**

The system responds with the following prompt:

```
Do you want to allocate a crash/dump area on your disk? If  
you do not, the swap/paging area will be used to save the  
memory image in the event of a system panic (y/n)?
```

17. Enter **n**

The system responds with the following prompt:

```
How many cylinders would you like for swap/paging (1-xxx)?
```

18. Turn to Table B-3 of Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning*. Using the values you wrote down for the hard disk size (in megabytes and cylinders), complete the following steps a and b to determine the number of cylinders to allocate for the swap file system:
- Divide the number of cylinders by the number of megabytes. Round the result upward to the nearest whole number. Write that number here: \_\_\_\_\_
  - Multiply the number you wrote down in step 18a by 6. Enter that value in response to the prompt. Also write the value for swap on the appropriate line of Table B-3 of Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning*.

The system responds with the following prompt:

```
How many cylinders would you like for root/usr  
(1-xxx)?
```

19. Multiply the value you wrote down in step 18a by 75. Enter that value in response to the prompt. Also write the value for root on the appropriate line of Table B-3 of Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning*.

The system responds with the following message:

```
The remaining xxx cylinders will be assigned to /usr2.
```

The system then displays the disk allocation values you just assigned and the following prompt:

```
Is this allocation acceptable to you (y/n)?
```

20. If the allocation is correct, enter **y**

If it is not correct, enter **n** and reallocate the cylinders.

When the system has reallocated the cylinders, it displays the following message:

```
UNIX filesystem(s) will now be created on your hard disk. . .
```

It takes approximately 25 minutes to create these file systems. During this time, the system displays messages about the process. When creation of the file systems is complete, the system responds with the following prompt:

```
Reboot the system now.
```

21. Remove diskette 1 of 7 from the floppy drive and press `CTRL-ALT-DEL` to reboot the system.

NOTE	Use the <code>DEL</code> key located on the number pad to reboot. Pressing the key labeled <code>DELETE</code> does not work.
------	---

When the reboot is complete, the system responds with the following prompt:

Confirm.

Please indicate the installation medium you intend to use.

Strike "C" to install from CARTRIDGE TAPE

or "F" to install from FLOPPY DISKETTE.

Strike ESC to stop.

22. Enter `f` to select Floppy Diskette.

The system responds with the following prompt:

Please insert the UNIX System "Base System Package"

Floppy Disk *x* of *y* and then strike ENTER.

23. Insert the next diskette into the floppy drive and press `ENTER`.

The system responds with the following message:

Installation is in progress -- do not remove floppy disk.

When the system has loaded this diskette (this will take from 3 to 5 minutes), it "beeps" and prompts you to install the next one.

24. Remove the current diskette and repeat step 23 for the remaining base system diskettes.

When you have installed the last UNIX base set diskette, the system responds with the following messages and prompt:

UNIX System files have been copied to the hard disk. It is now safe to remove the floppy disk. Additional file systems will now be set up.

Please stand by . . .

System time is: *day date, time*

Enter a password for the 'root' or super-user.

(Note: This password must be kept EXTREMELY secure):

New Password:

25. If you have not already done so, remove UNIX base system diskette 7 of 7 from the drive. Then press `ENTER` in response to the prompt. This action assigns no password for root.

26. Turn to the *Logins and Passwords* section of Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning*. Write "none assigned" in the space provided for the `root` password. (Even though you did not assign a password, keep this information and all passwords secure.)

The system responds with the following prompt:

```
Re-enter the new password:
```

27. Press `ENTER` again.

The system responds with the following prompt:

```
Enter a password for the 'install' user.
```

```
(Note: This password must be kept EXTREMELY secure  
and should be different from the root password):
```

```
New password:
```

28. Press `ENTER` in response to the prompt. This action assigns no password for `install`.
29. Turn to the *Logins and Passwords* section of Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning*. Write "none assigned" in the space provided for the `install` password. (Even though you did not assign a password, keep this information and all passwords secure.)

The system responds with the following prompt:

```
Re-enter the new password:
```

30. Press `ENTER` again.

The system responds with the following message:

```
The UNIX operating system will now be rebuilt.  
This will take approximately 2 minutes. Please wait.
```

After approximately 2 minutes, the system prompts you to reboot.

31. Make sure the floppy drive is empty. Then press `CTRL-ALT-DEL` simultaneously to reboot the system.

When the reboot is complete, the system displays the `Console Login` prompt.

Continue with the next section, *Verifying Disk Partitioning*.

## Verifying Disk Partitioning

1. Enter **root** at the Console Login prompt.

The system responds with the Password prompt.

2. Press **ENTER**.

The system responds with the following message showing the file system space allocation:

```
 /           :           Disk Space : X MB of X MB available (X%).  
Total Disk Space:      X MB of X MB available (X%).
```

<b>NOTE</b>
-------------

If the system does not respond with the file system space allocation in response to steps 1 and 2, enter **/etc/dfspace** to obtain it.

3. Verify that the screen displays the size of / (root) as approximately 75 Mbytes. (The value displayed is acceptable if it is within 2Mbytes.)

If the disk space is not allocated correctly, repeat the previous procedure, *Installing the Unix V3.2.2 Base System Package*, to reinstall the UNIX base system package. Ensure that you allocate at least 75 Mbytes of space for the root file system.

If the disk space is allocated correctly, continue with the next section, *Installing the FMLI Package*.

## Installing the FMLI Package

1. 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.
```

2. Insert diskette 1 of 1 of the FMLI package into the floppy drive and press **ENTER**.

The system displays messages about the installation for approximately 2 minutes, depending on the size of your filesystem. It then displays the following message:

```
The installation of the FMLI Version 1.2 is now complete.
```

3. Remove diskette 1 of 1 of the FMLI package from the floppy drive.

Continue with the next section, *Installing the FACE Package*.

## Installing the FACE Package

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

The system responds with the following message:

```
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.
```

2. Insert diskette 1 of 2 of the FACE package into the floppy drive and press **ENTER**.

When the system has copied the first FACE diskette, it displays the following message:

```
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 <ENTER> key.
```

3. Remove diskette 1 of 2 from the floppy drive.
4. Insert diskette 2 of 2 of the FACE package into the floppy drive and press **ENTER**.

When the installation is complete, the system displays the UNIX system prompt (#).

5. Remove diskette 2 of 2 of the FACE package from the floppy drive.

Continue with the next section, *Installing the FACE Help Package*.

## Installing the FACE HELP Package

1. 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.
```

2. Insert diskette 1 of 1 of the FACE HELP package into the floppy drive and press **ENTER**.

The system responds with the following FACE HELP menu:

```
1 Install Office HELP Files ONLY.  
2 Install System Administration HELP Files ONLY.  
3 Install Printer Operations HELP Files ONLY.  
4 Install ALL HELP Files.  
5 Terminate Installation.
```

```
Type the number that corresponds to the option desired and  
strike the ENTER key:
```

3. Enter **4** to select Install ALL HELP Files.

The system installs all the FACE HELP files. When the installation is complete, the system displays the FACE HELP menu again.

4. Enter **5** to select Terminate Installation.

When the installation is complete, the system displays the UNIX system prompt (#).

5. Remove FACE HELP diskette 1 of 1 from the floppy drive.

Continue with the next section, *Installing the UNIX Editing Package*.

## Installing the UNIX Editing Package

1. 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.
```

2. Insert UNIX editing package diskette 1 of 1 into the floppy drive and press **ENTER**.  
When the installation is complete, the system displays the UNIX system prompt (#).
3. Remove UNIX editing package diskette 1 of 1 from the floppy drive.

Continue with the next section, *Installing the Remote Terminal Package*.

## Installing the Remote Terminal Package

1. 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.
```

2. Insert the remote terminal package diskette 1 of 1 into the floppy drive and press **ENTER**.

The system responds with the following prompt:

```
Please install the terminal files you wish from the diskette.
Selective installation of the Remote Terminal Package Version
2.0 database.
```

```
0 Terminate Installation
1 Install terminfo file(s)
2 Locate a specific terminal within terminfo file(s)
3 Compile a SINGLE terminal entry
```

Enter option:

3. Enter **1** to select Install terminfo file(s).

The system responds with a list of the terminfo files for you to select for installation and displays the following prompt:

```
Enter a file name, 'all', 'done', or 'files':
```

4. Enter **all**

The system displays messages about creating and linking these files. When all the files are installed, the system again displays the following prompt:

```
Enter a file name, 'all', 'done', or 'files':
```

5. Enter **done**

The system again displays the REMOTE TERMINAL PACKAGE menu and prompts you to enter an option.

6. Enter **0** to select Terminate Installation.

The system responds with the following message:

```
The installation of Remote Terminal Package Version 2.0 is now
complete.
```

7. Remove the remote terminal package diskette 1 of 1 from the floppy drive.
8. Enter **exit** at the UNIX system prompt (#) to log off the system. (You must log off before continuing with the next procedure so that the UNIX environment you just installed will be running when you log on again.)

The system returns you to the Console Login prompt.

Continue with the next section, *Verifying UNIX System Installation*.

---

---

## Verifying UNIX System Installation

1. Enter **root** at the Console Login prompt.

The system responds with the Password prompt.

2. Press **ENTER**.

The system responds with the following message showing the file system space allocation:

```
 /           :           Disk Space : X MB of X MB available (X%).  
Total Disk Space:      X MB of X MB available (X%).
```

3. Verify that the screen displays the size of / (root) as approximately 75 Mbytes. (The value displayed is acceptable if it is within 2Mbytes.)

If the value for / (root) is acceptable, continue with step 4. If the value is not acceptable, return to *Installing the UNIX V3.2.2 Base System Package* earlier in this chapter and begin reinstallation of the UNIX operating system.

4. Enter **uname -a**

If the UNIX operating system is installed correctly, the system responds with the following message:

```
unix unix 3.2 2.2 i386
```

If this message appears exactly as shown, the UNIX operating system is correctly installed. Continue with the next section, *Installing IVPSS R3.0*.

If this message does not appear exactly as shown, you have installed an incorrect version of the UNIX operating system. Return to *Installing the UNIX V3.2.2 Base System Package* earlier in this chapter to install V3.2.2 of the UNIX operating system.

## INSTALLING IVPSS R3.0

1. If you are already logged in as `root`, skip to step 3.

If you are not already logged in as `root`, enter `root` at the Console Login prompt.

The system responds with the Password prompt.

2. Press `(ENTER)`.

The system responds with the UNIX system prompt (`#`).

3. 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, instruction will be provided for  
inserting the remaining floppy disks.
```

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

4. Insert diskette 1 of 4 of the Integrated Voice Power System Software R3.0 into the floppy drive and press `(ENTER)`.

When this diskette is installed, the system responds with a "beep" and displays the following prompt:

```
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 x and strike the <ENTER>  
key.
```

5. Remove the diskette currently in the floppy drive.

6. Repeat steps 4 and 5 for IVPSS diskettes 2, 3, and 4 of 4.

While installing diskette 4 of 4, the system displays the following message and prompt:

```
*****
          First serial port uses interrupt level 4
          Second serial port uses interrupt level 3
          Parallel port uses interrupt level 7
*****

If you wish to reclaim some of these interrupts for other
devices,
          you may DISABLE some of these ports.
However, at least ONE serial port must be enabled at all times.
*****

For serial ports, would you like to:

    1) ENABLE both first and second serial port.
    2) DISABLE first and ENABLE second serial port.
    3) ENABLE first and DISABLE second serial port.

Please enter your selection [1, 2 or 3]:
```

7. If this installation includes or will include a DCP board (for integration with the System 75/DEFINITY G1 or G3 Communications System), enter **3**

If this installation does not and will not include a DCP board, enter **1**

The system responds with the following prompt:

```
For the parallel port (interrupt level 7) would you like to:

    1) ENABLE the parallel port.
    2) DISABLE the parallel port.

Please enter your selection [1 or 2]:
```

8. Enter **1**

The system displays a message confirming your selection, then displays the following prompt:

```
Select interrupt number for TR boards.
Press <Enter> for default value [2] or one of [2, 3, 5, 15]
or q to quit:
```

9. Press  to assign the default 2. (The TR, for "tip/ring" boards, are the same as the IVP4 boards.)

The system responds with the following prompt:

```
Press <Enter> to confirm or any other key to reject:
```

10. Press `ENTER`.

The system responds with the following message.

```
Moving files for IVPSS Software! It will take a few minutes!
```

When the system finishes moving the IVPSS files, it displays the following prompt:

```
Select the monitor type:
```

- 1) Color (AT386)
- 2) Monochrome (at386-m)

```
Enter selection:
```

11. Enter the number corresponding to the type of monitor you are using (that is, enter either **1** or **2**).

The system responds with the following prompt:

```
Confirm: you are using monitor type x. [y/n]
```

12. If the confirmation message displays the correct monitor type, enter **y**

If the message does not display the correct monitor type, you must reassign the monitor type. To reassign the monitor type, enter **n**

The system responds with the prompt shown in step 10 and once again asks you to assign and confirm the correct monitor type.

After you confirm the monitor selection, the system responds with the following prompt:

```
Select the time zone for this installation.
```

- 1) Eastern
- 2) Central
- 3) Mountain
- 4) Pacific

```
Enter selection
```

13. Enter the number corresponding to the time zone in which the system is being installed (that is, enter either **1**, **2**, **3**, or **4**).

The system responds with the following prompt:

```
Confirm: the installation time zone number is x. (y/n)
```

14. Enter **y**

The system responds with the following prompt:

```
Is Daylight Savings ever used? (y/n)
```

15. Enter **y** or **n** as appropriate.

The IVPSS R3.0 install script then attempts to determine the memory configuration. If it is unsuccessful in determining the memory configuration, the system displays the following prompt:

```
Select the appropriate memory
configuration:
```

- 1. 4 Megabytes
- 2. 8 Megabytes
- 3. 12 Megabytes

```
Enter Selection:
```

16. If the above prompt is *not* displayed, skip to step 17.

If the above prompt is displayed, enter **2** to select 8 Megabytes.

The system responds with the following prompt:

```
Confirm: You have 8 megabytes of memory [y/n]
```

17. Enter **y**

The system responds with a list of the files as they are copied to the hard disk, then displays the following prompt:

```
Reserving a disk slice for speech.
Disk 0 Slice 4 will be reserved for speech.[y/n]
```

18. Enter **y**

The system responds with the following prompt:

```
A speech filesystem does not exist on slice 0s4. Confirm: A
speech filesystem will now be built on slice 0s4 [y/n]
```

19. Enter **y**

The system responds with the following prompt:

```
Building speech filesystem slice 0s4.
Do you want to overwrite slice /dev/rdisk/0s4 on your disk? (y/n)
```

20. Enter **y**

When the speech file system is built, the system responds with the following messages:

```
The Integrated Voice Power System Software has been successfully
installed.
```

```
The UNIX operating system will now be rebuilt.
This will take approximately 2 minutes. Please wait.
```

```
The UNIX kernel has been rebuilt.
```

The system then prompts you for an automatic shutdown.

21. Remove IVPSS R3.0 diskette 4 of 4 from the floppy drive. Press **ENTER** to begin the automatic shutdown.

When the shutdown is complete, the system prompts you to reboot.

22. Press **CTRL-ALT-DEL** simultaneously to reboot the system.

When the reboot is complete, the system displays the Console Login prompt.

Continue with the next section, *Installing AUDIX Voice Power R3.0 Software: Speech*.

## INSTALLING AUDIX VOICE POWER R3.0 SOFTWARE: SPEECH

There are two parts to this procedure:

- Creating an administrative login
- Installing AUDIX Voice Power Application Software R3.0: Speech

### Creating an Administrative Login

Before installing the AUDIX Voice Power application software, complete the following procedure to create a login for voice administration through AT&T FACE.

1. If you are already logged in as `root`, skip to step 3. If you are not already logged in as `root`, enter `root` at the `Console Login` prompt.

The system responds with the `Password` prompt.

2. Press `ENTER`.

The system responds with the UNIX system prompt (`#`).

3. Enter `face` at the UNIX system prompt (`#`).

4. The system responds with the AT&T FACE main menu:

```

      AT&T FACE
-----
> Office of root
  Printer Operations
  Programs
  System Administration
  UNIX System
  Exit
  
```

5. From the AT&T FACE main menu, select the following sequence:

```

System Administration
User Logins
Add
  
```

The system displays the `LOGIN NAME AND FULL NAME` menu.

6. With the cursor at the `Login Name` field, enter `audix`
7. Move the cursor to the `Full Name` field and enter `Audix Voice Adm`
8. Move the cursor to the `System Administration Privileges` field. Press `CHOICES` (F2) to display `Yes`, and press `ENTER`.

This assigns system administrative privileges to the administrator login.

9. Press `SAVE` (F3).

The system displays a login confirmation window.

10. Press **CONT** (F3) to confirm the login information.

The system responds with the following prompt:

```
Enter a password for audix
```

11. Press **ENTER**.

The system responds with the following prompt:

```
Re-enter the new password
```

12. Press **ENTER**.

13. Turn to the *Logins and Passwords* section of Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning*. Fill in the information for the administrator login. This will provide the customer with a record of the login and password you assigned. (Even though you did not assign a password, keep this information and all passwords secure.)

14. Press **ENTER** to continue.

The system displays the following message:

```
Confirmation
```

```
User audix has been added to the system.
```

15. Press **CANCEL** (F6) three times to return to the AT&T FACE main menu.

16. Select **Exit**.

17. Press **CONT** (F3) to return to the UNIX system prompt (#).

Continue with the next section, *Installing AUDIX Voice Power Application Software R3.0: Speech*.

---

---

## Installing AUDIX Voice Power R3.0 Software: Speech

1. If you are already logged in as `root`, skip to step 3.

If you are not already logged in as `root`, enter `root` at the `Console Login` prompt.

The system responds with the `Password` prompt.

2. Press `(ENTER)`.

The system responds with the UNIX system prompt (`#`).

3. 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.
```

4. Insert diskette 1 of 3 of the AUDIX Voice Power Application Software: Speech into the floppy drive and press `(ENTER)`.

When this diskette is installed, the system responds with a "beep" and the following prompt:

```
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 x and strike the <ENTER> key.
```

5. Remove the diskette currently in the floppy drive.
6. Repeat steps 4 and 5 for speech diskettes 2 and 3 of 3.

While installing diskette 3 of 3, the system displays a series of dots. Each dot represents a phrase added to the speech database. This takes approximately 10 minutes.

When the installation is complete, the system displays the following message:

```
You may now remove the floppy disk.
```

```
The installation of the AUDIX Voice Power Application Software  
R3.0: Speech is now complete.
```

7. Remove diskette 3 of 3 from the drive.

If the AUDIX Voice Power system you are upgrading includes dual 300-Mbyte hard disk drives, continue with step 8.

If the AUDIX Voice Power system you are upgrading does *not* include dual 300-Mbyte hard disk drives, skip step 8.

8. Enter **/vs/bin/util/addspdisk**

9. Enter **exit** to log out.

The system returns you to the Console Login prompt.

Continue with the next section, *Restoring System Files*.

## RESTORING SYSTEM FILES

There are three parts to this procedure:

- Taking the voice channels out of service
- Restoring the administrative, UNIX, and speech files
- Returning the voice channels to service

### Taking the Voice Channels Out of Service

1. From the Console Login prompt, enter **audix**  
The system responds with the Password prompt.
2. Enter the administrator's terminal-based password.
3. Begin at the IVPSS menu and select the following sequence:

```

Voice System Administration
Configuration Management
Voice Equipment
    
```

The VOICE EQUIPMENT window appears, similar to the following:

Voice Equipment								
CHN	CD.PT	STATE	STATE-CHNG-TIME	SERVICE-NAME	PHONE	GROUP	OPTS	TYPE
0	0.0	INSERV	Aug 28 19:24:25		2003	2	Talk	IVP4
1	0.1	INSERV	Aug 28 19:24:25		2004	2	Talk	IVP4
2	0.3	INSERV	Aug 28 19:24:25		2001	2	Talk	IVP4
3	0.4	INSERV	Aug 28 19:24:25		2002	2	Talk	IVP4
4	1.0	INSERV	Aug 28 19:24:25		2005	2	Talk	IVP4
5	1.1	INSERV	Aug 28 19:24:25		2006	2	Talk	IVP4
6	1.3	INSERV	Aug 28 19:24:25		2007	2	Talk	IVP4
7	1.4	INSERV	Aug 28 19:24:25		2008	2	Talk	IVP4
8	2.0	INSERV	Aug 28 19:24:25		2009	2	Talk	IVP4
9	2.1	INSERV	Aug 28 19:24:25		2010	2	Talk	IVP4
10	2.3	INSERV	Aug 28 19:24:25		2011	2	Talk	IVP4
11	2.4	INSERV	Aug 28 19:24:25		2012	2	Talk	IVP4

4. Press **CHG-KEYS** (F8), then **CHGSTATE** (F2).

The CHANGE STATE OF VOICE EQUIPMENT window appears, similar to the following:

Change State of Voice Equipment
New State: Equipment: Equipment Number: Change Immediately?

5. Press **CHOICES** (F2).
6. Select **manoos** and press **ENTER** to move to the Equipment field.
7. Press **CHOICES** (F2).
8. Select **channel** and press **ENTER** to move to the Equipment Number field.
9. Enter **a11** in the Equipment Number field.
10. Enter **y** in the Change Immediately field.
11. Press **SAVE** (F3).

When the change of state has been made, a COMMAND OUTPUT window appears.

12. Press **CANCEL** (F6) several times to return to the IVPSS R3.0 main menu.
13. Select **Exit** from the IVPSS R3.0 menu.

The system returns you to the Console Login prompt.

Continue with the next section, *Restoring the Administrative, UNIX, and Speech Files*.

## Restoring the Administrative, UNIX, and Speech Files

**NOTE**

This procedure also restores the passwords that were in effect when you executed the backup.

1. From the `Console Login` prompt, enter **audix**

The system responds with the `Password` prompt.

2. Enter the administrator's terminal-based password.
3. Begin at the `IVPSS R3.0` menu and select the following sequence:

```
Voice System Administration
Configuration Management
System Control
Report Voice System Status
```

A window appears. If the following message is displayed in the window, the voice system is running:

```
The voice system is up and running at run level 4.
```

If the following message is displayed in the window, the voice system is *not* running:

```
The voice system is down and stopped at run level 2.
```

4. Press `CANCEL`.

The system returns you to the `SYSTEM CONTROL` menu.

5. If the voice system is already running, skip to step 7.

If the voice system is *not* running, select `Start Voice System` from the `SYSTEM CONTROL` menu.

When the start-up process is finished, the system displays the following message:

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

6. Press `ENTER` to continue.
7. Press `CANCEL` (F6) three times to return to the `IVPSS 3.0` main menu.
8. Move the cursor to `Exit` and press `ENTER`.

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

9. At the `Console Login` prompt, enter **root**

The system responds with the `Password` prompt.

10. Press `ENTER`.

The system displays the UNIX system prompt (#).

11. Enter **face**

The system displays the `AT&T FACE` menu.

12. Beginning at the AT&T FACE menu, select the following sequence:

```
System Administration
Restore from Removable Media
Personal Restore
Restore Files under /
```

13. If you have more than one floppy diskette drive, the system displays the SELECT REMOVABLE MEDIA menu. Make your choice and press **(ENTER)**.

The system displays the DISK RESTORE form asking if existing files on disk should be overwritten with files being restored.

14. Enter **y** or press **(CHOICES)** (F2) to select yes.

15. Press **(SAVE)** (F3).

The system displays a confirmation message telling you to insert the diskette containing the files you want to restore.

Restore the files labeled "Administrative Files" first (1 of X, 2 of X, etc.) followed by those labeled "UNIX Files" (1 of X, 2 of X, etc.).

16. Insert the diskette and press **(ENTER)**.

After it begins the file restoration, the system displays the following message:

```
Restore in progress.
```

17. If more than one diskette is needed, the system prompts you to insert subsequent diskettes as follows:

```
Please insert disk # X . . .
then type <enter> to continue.
```

When the system informs you that it has completed the file restoration, remove the last diskette and press **(ENTER)**.

The system returns you to the RESTORE FROM REMOVABLE MEDIA menu.

18. At the RESTORE FROM REMOVABLE MEDIA menu, restore the speech files by selecting the following sequence:

```
Speech Restore
Restore All Talkfiles and Phrases
```

19. If you have more than one floppy diskette drive, the system displays the SELECT REMOVABLE MEDIA menu. Make your choice and press **(ENTER)**.

The system displays a confirmation message telling you to insert the diskette containing files you want to restore.

20. Insert the diskette labeled "Speech Files 1 of X" and press **(ENTER)**.

The system begins the file restoration and displays the phrase and talkfile numbers it is restoring.

21. If more than one diskette is needed, the system prompts you to insert subsequent diskettes as follows:

```
Please insert disk # X . . .
then type <enter> to continue.
```

22. When the system informs you that it has completed the file restoration, press **(ENTER)**.

23. Press **CANCEL** (F6) repeatedly to return to the AT&T FACE menu.
24. Move the cursor to **Exit** and press **ENTER**.
25. Press **CONT** (F3) to continue.

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

Continue with the next section, *Returning the Voice Channels to Service*.

## Returning the Voice Channels to Service

1. Enter **audix** from the Console Login prompt.  
The system responds with the Password prompt.
2. Enter the administrator's terminal-based password.
3. Begin at the IVPSS R1.1 menu and select the following sequence:

```

Voice System Administration
Configuration Management
Voice Equipment
    
```

The VOICE EQUIPMENT window appears, similar to the following:

Voice Equipment									
CHN	CD.PT	STATE	STATE-CHNG-TIME	SERVICE-NAME	PHONE	GROUP	OPTS	TYPE	
0	0.0	INSERV	Aug 28 19:24:25		2003	2	Talk	IVP4	
1	0.1	INSERV	Aug 28 19:24:25		2004	2	Talk	IVP4	
2	0.3	INSERV	Aug 28 19:24:25		2001	2	Talk	IVP4	
3	0.4	INSERV	Aug 28 19:24:25		2002	2	Talk	IVP4	
4	1.0	INSERV	Aug 28 19:24:25		2005	2	Talk	IVP4	
5	1.1	INSERV	Aug 28 19:24:25		2006	2	Talk	IVP4	
6	1.3	INSERV	Aug 28 19:24:25		2007	2	Talk	IVP4	
7	1.4	INSERV	Aug 28 19:24:25		2008	2	Talk	IVP4	
8	2.0	INSERV	Aug 28 19:24:25		2009	2	Talk	IVP4	
9	2.1	INSERV	Aug 28 19:24:25		2010	2	Talk	IVP4	
10	2.3	INSERV	Aug 28 19:24:25		2011	2	Talk	IVP4	
11	2.4	INSERV	Aug 28 19:24:25		2012	2	Talk	IVP4	

4. Press **CHG-KEYS** (F8), then **CHGSTATE** (F2).

The CHANGE STATE OF VOICE EQUIPMENT window appears, similar to the following:

Change State of Voice Equipment
<pre> New State: Equipment: Equipment Number: Change Immediately?                     </pre>

5. Press **CHOICES** (F2).
6. Select `inserv` and press **ENTER** to move to the Equipment field.
7. Press **CHOICES** (F2).
8. Select channel and press **ENTER** to move to the Equipment Number field.
9. Enter **a11** in the Equipment Number field.
10. Enter **y** in the Change Immediately field.
11. Press **SAVE** (F3).

When the change of state has been made, a `COMMAND OUTPUT` window appears.

12. Verify that the current state of all channels is `inserv`.
13. Press **CANCEL** (F6) four times to return to the IVPSS main menu.
14. Select `Exit` from the IVPSS menu.

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

Continue with the next section, *Rebooting the System*.

## REBOOTING THE SYSTEM

1. Ensure that the floppy drive is empty.
2. Enter **root** at the Console Login prompt.  
The system returns you to the UNIX system prompt (#).
3. Enter **/etc/shutdown -g0 -y -i6** at the UNIX system prompt.  
When the reboot is complete, the system displays the UNIX system prompt (#).

Continue with the next section, *Installing the AUDIX Voice Power Application Software: Software*.

## INSTALLING AUDIX VOICE POWER APPLICATION SOFTWARE R3.0: SOFTWARE

The installation of this software automatically upgrades the R2.0/2.1.1 database to an R3.0-compatible database.

1. 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.
```

2. Insert diskette 1 of 5 of the AUDIX Voice Power Application Software R3.0: Software into the floppy drive and press **ENTER**.

When this diskette is installed, the system responds with a "beep" and the following prompt:

```
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 x and strike the <ENTER>  
key.
```

3. Remove the diskette currently in the floppy drive.
4. Repeat steps 2 and 3 for diskettes 2, 3, and 4 of 5 of AUDIX Voice Power Application Software R3.0: Software.

While installing diskette 5 of 5 of AUDIX Voice Power Application Software R3.0: Software, the system responds with the following prompt after approximately 90 seconds:

```
Type the login of the Voice System Administrator:
```

5. Enter **audix**

The system responds with the following prompt:

```
Confirm: The login id of the Voice System Administrator is  
audix? (y/n)
```

```
Is this correct? [press <Enter> for yes]
```

6. Press `ENTER`.

The system displays a series of file names as they are installed on the hard disk.

When the installation is complete, the system displays the following message:

```
You may now remove the floppy disk.
```

```
Successful enable of automatic starting voice system.
```

```
The installation of the AUDIX Voice Power Application Software  
R3.0: Software is now complete.
```

7. Remove diskette 5 of 5 of the AUDIX Voice Power Application Software R3.0: Software.

Continue with the next section, *Installing Switch Integration Software*.

## INSTALLING SWITCH INTEGRATION SOFTWARE



The AUDIX Voice Power R3.0 system can be integrated with several different switches, from both AT&T and other vendors. The procedure for switch integration depends on the switch type. The AUDIX Voice Power documentation set includes a switch integration document that corresponds to the particular switch your customer is using. You must now refer to the *Software Installation* chapter of that document for instructions on installing the switch integration software.

When you have installed the switch integration software, return to this document. Continue with the next section, *Verifying the Software Installation*.

---

---

## VERIFYING THE SOFTWARE INSTALLATION

1. Enter **root** at the Console Login prompt.

The system responds with the Password prompt.

2. Press **ENTER**.

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

3. Enter **displaypkg**

The system displays the following alphabetical listing of the software residing on the hard drive:

```
AUDIX Voice Power Application Software R3.0: Software
AUDIX Voice Power Application Software R3.0: Speech
Editing Package Version 2.0
FACE HELP Version 1.2
FACE Version 1.2.1
FMLI Version 1.2
Integrated Voice Processing System Software R3.0
Remote Terminal Package Version 2.0
```

**NOTE**

A switch integration software package will also be listed.

4. Compare the list displayed on your screen against this list.
5. If there is any missing software, install it now by referring to the appropriate section(s) in this chapter for instructions.

**NOTE**

You can install switch integration software and the FACE HELP, editing, and remote terminal packages from the UNIX foundation set in any order. For all other software, however, you must follow the order of installation specified in this chapter. This means that before you can install a missing package, it may first be necessary to remove some installed software and reinstall it in the proper order.

If the software installation is correct, enter **exit** to log out as root.

The system returns you to the Console Login prompt.

Continue with the next section, *Starting the Voice System*.

## STARTING THE VOICE SYSTEM

1. Enter **audix** at the Console Login prompt.
2. Begin at the IVPSS R3.0 menu and select the following sequence:

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

When the start-up process is finished, the system displays the following message:

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

3. Press **ENTER**.
- The system returns you to the SYSTEM CONTROL menu.
4. Press **CANCEL** three times to return to the IVPSS R3.0 menu.

Continue with the next chapter, *Readministering the System*.

## 4. Readministering the System

---

Complete the procedures in this chapter to readminister the AUDIX Voice Power system and the switch following the upgrade installation.

### READMINISTERING THE AUDIX VOICE POWER SYSTEM

1. Begin at the IVPSS R3.0 menu and select the following sequence:

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

The system displays the WAIT TIME window.

2. Type **60** and press **ENTER**.

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

3. Press **SAVE** (F3).

When the process is finished, the system displays the following message:

```
The Voice System has stopped
```

4. Press **ENTER** to continue.
5. Press **CANCEL** (F6) to exit the SYSTEM CONTROL window.
6. Select **Voice Equipment** from the CONFIGURATION MANAGEMENT window.

The system displays information similar to the following:

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

7. Press **CHG-KEYS** (F8), then **ASSIGN** (F3).
8. From the **ASSIGN** menu, select **Channel to PBX Extension**.

The system displays the following:

Channel to PBX Extension
PBX Extension: Channel:

9. Move the cursor to the **PBX Extension** field. Turn to Table B-1 of Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning*. Type the PBX extension for channel 0 (or the first channel number that is filled in in the table) into the **PBX Extension** field.

Move the cursor to the **Channel** field. Type **0** (or the channel number matching the extension number you just typed) into the **Channel** field.

10. Press **SAVE** (F3).

The system displays an information window confirming that the PBX extension has been mapped to the channel.

<b>NOTE</b>	The system does not update the <b>VOICE EQUIPMENT</b> window until you close the <b>CHANNEL TO PBX EXTENSION</b> window.
-------------	--

11. Press **ENTER** to continue.
12. Repeat steps 9 through 11 for each channel.
13. When you are finished mapping PBX extensions to the channels, press **CANCEL** (F6).
14. From the **ASSIGN** menu, select **Services to Channels**.
15. Press **CHOICES** (F2).

This displays all possible services.

16. Turn to Table B-1 of Appendix B, *Technician Worksheets*, in *AUDIX Voice Power System R3.0 Planning*. From the list of services displayed on the screen, select the first service that is written in the "Service" column of the table.
17. Referring again to Table B-1, determine the number of the channels to be assigned to the service you just selected. Type that number into the **Channels** field on the screen.

You can type a single channel number, a range of channels (for example, **0-4**), or **all** (to assign all channels to the selected service).

18. Press **SAVE** (F3).

The system displays a **COMMAND OUTPUT WINDOW** verifying the channels and their assigned services.

19. Press **CANCEL** (F6).

20. If all channels have not been assigned to a service, press **CHG-KEYS** (F8), then press **ASSIGN** (F3) and repeat steps 14 through 21 to assign services to the remaining channels.
21. Press **CANCEL** (F6) twice to return to the VOICE SYSTEM ADMINISTRATION menu.
22. Begin at the VOICE SYSTEM ADMINISTRATION menu and select the following sequence:  
Configuration Management  
System Control  
Start Voice System  
  
When the process is finished, the system displays the following message:  
Startup of the Voice System is complete.
23. Press **ENTER** to continue.
24. Press **CANCEL** (F6) three times to return to the IVPSS R3.0 menu.

Continue with the next section, *Readministering the Switch*.

## READMINISTERING THE SWITCH



The next step in the readministration process is to perform the required switch administration procedures. These procedures are switch specific. Therefore, you must now turn to the *Switch Administration* chapter of the switch integration document supplied with the AUDIX Voice Power documentation set for instructions.

When you have completed these procedures, return to this document and continue with the next chapter, *Performing Acceptance Tests*.

## 5. Performing Acceptance Tests

---



Acceptance tests for upgrades are the same as those for new installations. Refer to Chapter 10, *Acceptance Tests*, in *AUDIX Voice Power System R3.0 Software Installation* for instructions on performing these tests.

When you have completed the acceptance tests, return to this document and continue with the next chapter, *Cutting to Service*.



## 6. Cutting to Service

---



The final step in the upgrade installation process is to perform certain switch administration procedures necessary for the system to cut over. These procedures are switch specific. Therefore, you must now turn to the *Cut To Service* chapter of the switch integration document supplied with the AUDIX Voice Power documentation set for instructions.

When you have completed these procedures, inform the AUDIX Voice Power administrator that you are ready to put the system back into service. Also remind the administrator that certain features will have to be readministered following the upgrade. This information is detailed in Appendix B, *Upgrades*, in *AUDIX Voice Power System R3.0 Administration*.



# Abbreviations

---

<b>ALT</b>	assemble, load, and test
<b>AUDIX</b>	Audio Information Exchange
<b>CA+VM</b>	call answer + voice mail
<b>COR</b>	class of restriction
<b>COS</b>	class of service
<b>CPU</b>	central processing unit
<b>DCP</b>	digital communications protocol
<b>DIP</b>	data interface process
<b>FACE</b>	framed access command environment
<b>FMLI</b>	form and menu language interpreter
<b>FOOS</b>	facility out of service
<b>I/O</b>	input/output
<b>IVP4</b>	Integrated Voice Processing board (4 analog channels)
<b>IVPSS</b>	Integrated Voice Processing System Software
<b>LWC</b>	leave word calling
<b>MANOOS</b>	manual out of service
<b>MWL</b>	message waiting lamp
<b>PEC</b>	price element code
<b>POST</b>	power-on self test
<b>RAM</b>	random access memory
<b>SID</b>	switch integration device
<b>SIMM</b>	single inline memory module
<b>TSC</b>	Technical Support Center
<b>TRIP</b>	tip ring interface process
<b>VDC</b>	video display card
<b>WGS</b>	Work Group Station



# Glossary

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<b>administration</b>	The process of setting up software on a system so that the software functions as needed.
<b>analog</b>	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.
<b>attendant console</b>	A larger, special-purpose telephone with numerous lines and features used by the attendant or operator to answer and transfer calls.
<b>Audio Information Exchange (AUDIX)</b>	A complete voice-mail messaging system accessed and operated by touch-tone telephones and integrated with a switch or PBX.
<b>automated attendant</b>	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.
<b>backup</b>	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 is corrupted (damaged) or lost.
<b>call answer</b>	A feature that allows the AUDIX Voice Power™ system to answer a call and record a message when the subscriber is not available.
<b>call coverage</b>	A switch feature that defines a preselected path for calls to follow if the first or second coverage points are not answered.
<b>channel</b>	A telecommunications transmission path for voice and/or data.
<b>class of service (COS)</b>	The set of features and privileges given to subscribers when they are administered on the system.
<b>cold boot</b>	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.
<b>configuration</b>	The set of hardware and software components selected for a system, including internal components and external or peripheral components.
<b>coverage path</b>	An ordered sequence of coverage points to which coverage calls are redirected.
<b>data base</b>	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.
<b>data link</b>	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.

<b>data terminal equipment (DTE)</b>	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.
<b>default</b>	A value automatically supplied by the system if you do not specify any other value.
<b>digital</b>	Discontinuous or discrete data or signals such as zero (0) or one (1), as opposed to continuous analog signals.
<b>digital communications protocol (DCP)</b>	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.
<b>direct call</b>	A call made directly to the AUDIX Voice Power hunt group extension, usually for voice mail retrieval.
<b>direct inward dialing (DID)</b>	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.
<b>extension</b>	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.
<b>field</b>	An area on a screen, menu, or report where you type information or see information displayed.
<b>file system</b>	A collection of related files, programs, or data stored on disk.
<b>Generic</b>	An AT&T DEFINITY® Communications System software release.
<b>host switch</b>	The switch or PBX connected directly to the AUDIX Voice Power system over the data link.
<b>hunt group</b>	A group of analog ports on the switch usually administered to search for available ports in a circular pattern.
<b>leave word calling (LWC)</b>	A switch feature that allows the calling party to leave a standard (nonvoice) message for the called party using a feature button or dial access code.
<b>local installation</b>	A system, adjunct, or piece of peripheral equipment installed physically near the host switch or system.
<b>maintenance</b>	The process of identifying system errors and correcting them, or taking steps to prevent problems from occurring.
<b>message waiting lamp (MWL)</b>	A small light on a telephone that lights or flashes when the subscriber has voice mail messages.
<b>switch integration device (SID)</b>	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.
<b>system administrator</b>	The person at the customer site responsible for AUDIX Voice Power system administration.

<b>terminal-based</b>	A term applied to tasks performed at the AUDIX Voice Power computer terminal or information pertaining to the terminal interface.
<b>voice link</b>	The call distribution group, or hunt group, of analog ports on the switch.
<b>voice mail</b>	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.
<b>warm boot</b>	A process to restart the computer while you have the computer turned on.



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