Lucent Technologies
Bell Labs Innovations

Integrated Solution II

for **MERLIN LEGEND™** Communications System

Installation Guide

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General

This guide is designed to assist AT&T field technicians and your AT&T-authorized dealer responsible for installing and maintaining IS-II. It provides procedures for connecting major system components, customizing applications (if necessary), adding application packages, recovering from catastrophic failure, and troubleshooting.

The MERLIN LEGEND™ Communications System, Integrated Solution II (IS-II), Release 1 consists of a Master Controller II (or II+) processor that is delivered to the customer with the UNIX® System V/386 Release 32-2 operating system, the IS-II Platform Software, the application packages ordered by the customer, and the appropriate expansion boards already installed. You will, however, need to know how to install the-system software in case the customer's system experiences a hard disk crash, or if a customer purchases an application to be installed after delivery of the Master Controller II.

> ⮞ **NOTE:**
> Throughout this guide, references to the Master Controller II apply to the Master Controller II+ as well. Any information that differs between the two processors will be noted specifically for the Master Controller II+.

The IS-II Platform Software is an "umbrella" program for the following software packages:

- System Programming & Maintenance Utility (SPM)

- Call Accounting System (CAS)

- AUDIX™ Voice Power (AVP)

- Automated Attendant (AA)

The IS-II Platform Software is designed to:

- Assist with the installation, upgrade, and customization of IS-II applications.

- Provide a single window for an end-user to access each application package and any user-specific maintenance items.

- Provide a single window for a Systems Technician to access each application package, user-specific maintenance items, and Systems Technician-specific maintenance items.

- Limit installation of software application packages to those supported.

After you make the physical connections from the IS-II to the customer's MERLIN LEGEND Communications System, the customer simply logs into the computer and IS-II is ready to be administered.

System Configuration

The Master Controller II has main components consisting of the system module, the video display, the keyboard, and an optional tape drive.
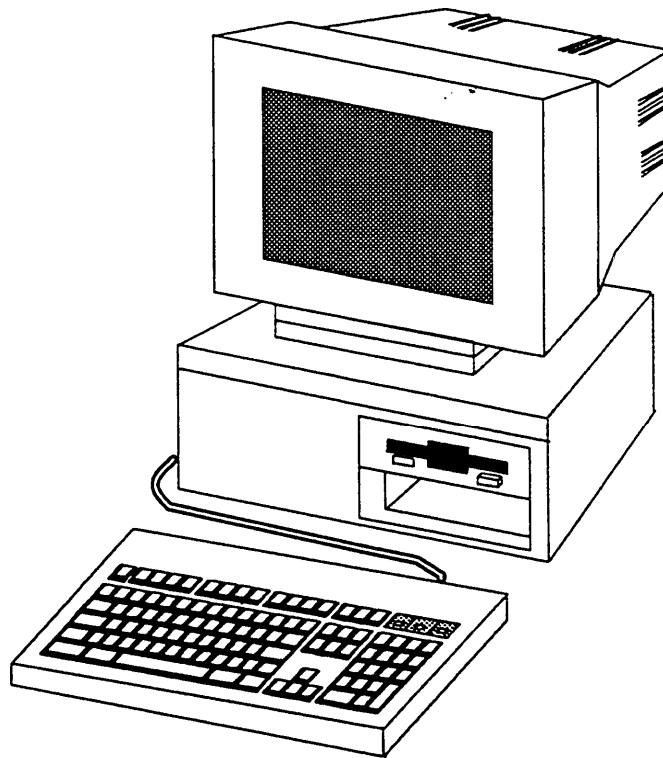
Figure 1-1. The Master Controller II

The system module contains the system board, internal magnetic peripherals, a power supply, and slots for expansion boards. Performance features of the Master Controller II include:

■ 16 MHz 80386SX CPU

➡ NOTE:
For the Master Controller II+, the CPU is 20 MHz.

■ 40MB, 80MB, or 200MB hard disk

➡ NOTE:
For the Master Controller II+, a 100MB hard disk is also an option.

■ 1.44MB diskette drive

■ 2MB of onboard system RAM (Random Access Memory) that can be expanded to 4MB

■ An integral VGA (video graphics adapter) video display controller with enhanced 800 x 600 graphics and 132-column text modes

The Master Controller II also provides these additional features:

■ One internal speaker interface

■ AT intelligent fixed-disk interface with a built-in hard disk controller

■ One real-time clock/calendar CMOS (complementary metal oxide semiconductor) chip with battery backup

■ Four expansion slots

■ 128-Kbyte ROM (read-only memory) BIOS

■ Two built-in serial ports and one printer (parallel) port

The following table illustrates the applications allowed depending on the configuration of the Master Controller II. Note that AVP and AA require an 80MB or larger hard disk.

Table I-1. Configurations and Applications

Configurations	SPM	CAS	A A	AVP
40MB x 2MB RAM	x	x		
80MB X 4MB RAM	x	x	x	
	x	x		x
100MB X 4MB RAM (Master Controller II+ only)	x	x	x	
	x	x		x
200MB x 4MB RAM	x	x	x	
	x	x		x

➡ **NOTE:**
You can have either AA or AVP installed; you cannot have both.

Using this Guide

Chapter 1- Introduction

This chapter offers an overview of the Integrated Solution II (IS-II) including basic components and software applications supported.

Chapter 2- Hardware Setup

This chapter details system components as originally shipped, materials required for getting the system started, how to make connections to the MERLIN LEGEND Communications System, and what is required if additional applications are to be installed.

Chapter 3- Maintaining IS-II

This chapter describes the contents of the Technician Maintenance Menu and directs you to full information on each menu choice.

Chapter 4- Maintaining IS-II Applications

This chapter explains how to install each application package, either as a new add-on or as part of reinstallation after a complete system failure. It also explains how to remove applications.

Chapter 5- Customizing Applications

This chapter describes how to customize Call Accounting System, AUDIX Voice Power, and Automated Attendant based on information provided by the customer.

Chapter 6- Recovering from Catastrophic Failure

This chapter categorizes possible failure conditions and describes recovery from hard disk failure and data corruption.

Chapter 7- **Upgrading to a New IS-II Release**

This chapter describes how to upgrade hardware and software to a new release.

Chapter 8- **Troubleshooting**

This chapter describes common problems that may be encountered and how to rectify them.

Conventions Used in this Guide

The following conventions are used in this guide:

- Commands and text you should type appear in *this style of type.*

- Values, instructions, and prompts that appear on the screen are in this style of type.

- Key names that are always located in the same place on the PC keyboard appear in boxes, as in [ENTER]

- Key combinations (holding down one key while pressing another key) are connected with hyphens; for example [CTRL] — [ALT] — [DEL]

- Function keys that have changeable names appear in boxes, as in [SAVE].

Hardware Setup

2

Preparing for Setup

IS-II is pre-loaded with all of the software applications when shipped from AT&T. Even though all of the software is loaded, the customer will receive a copy of the software on diskettes to use in case of catastrophic failure.

This chapter includes the following information on setting up the system:

- Preparation
- Required tools and equipment
- Specific procedures for setting up, connecting, and checking the system

Selecting a Site for the System

The Master Controller II (or II+) can be used in a variety of environments.

> **NOTE:**
> References to the Master Controller II apply to the Master Controller II+ as well. Any information that differs between the two processors will be noted specifically for the Master Controller II+.

Certain factors must be considered before installing the Master Controller II for the customer. The system operates reliably in an office environment, but it is important to adhere to the following guidelines when choosing a site.

⚠ **CAUTION:**

Inform your customer that the Master Controller II needs to be located in an area that meets all of the following requirements:

■ *Connected to a grounded power outlet. Nongrounded machines maybe harmed by static electricity, may fail to work properly, and can be a safety hazard. Improper program execution, unreadable disks, and extensive machine damage can result.*

■ *Clean and dust free. Airborne dust, dirt, and smoke can cause excessive wear on the disks and read/write errors.*

■ *Well-ventilated and away from heat sources. Excessive heat and direct sunlight can cause undesirable conditions such as low-humidity, which can cause static problems.*

■ *Isolated from strong electromagnetic fields produced by electrical devices (for example, air conditioners, large fans, large electric motors, radio and television transmitters, and high-frequency security devices).*

■ *Away from water and excessive humidity.*

■ *Within 50 feet of the telephone switch (central unit) sharing the same green wire ground.*

     — *Use two Asynchronous Data Units (ADUs) to connect the Master Controller II to the MERLIN LEGEND Communications System if they are more than 50 feet apart or if they are not connected to the same circuit as the MERLIN LEGEND Communications System.*

■ *Close to a phone if AUDIX Voice Power or Automated Attendant is to be installed so that Automated Attendant can be administered.*

Installation Tools

Before you start, make sure you have the proper tools ready

■ 3/16" flat-blade screwdriver

■ #1 Phillips® head screwdriver

■ Pen or penal

■ 3/16" nutdriver

■ Antistatic wrist strap (to prevent electrostatic discharge)

Hardware Setup

When you have selected the proper site, gathered all required tools, and checked the components, you are ready to setup the system. To prevent damage from electrostatic discharge, remember to take precautions in handling, packing, and storing circuit packs; and remember to ground yourself.

Setup Checklist

The system should be set up in the following order:

1.   Verify that all equipment components were shipped.
2.   Connect the video display.
3.   Connect the keyboard.
4.   Prepare the printer (if one is being used).
5.   Connect the printer (if applicable).
6.   initialize the printer (if applicable).
7.   Install IVP4 boards (if applicable).
8.   Connect tip/ring to IVP4 boards.
9.   Supply power to the Master Controller Il.
10.   Start the system.
11.   Perform the Power On Self Test (POST).
12.   Log onto IS-II.
13.   Make sure that proper software packages are installed.
14.   Add, change, or delete passwords (if applicable).
15.   Change the monitor type (if applicable).
16.   Connect TTY ports.
17.   Check TTY connections.
18.   Change printer setup (if applicable).
19.   Test the printer.
20.   Run IVP diagnostics (if applicable).
21.   Customize the system (if applicable).

Verification of Equipment

Verify that all ordered and shipped equipment is on the premises and not damaged in anyway. Unpack the system components from the boxes and make sure they are in good condition. Check for the following:

■ Master Controller II system module

■ Two keys for system module chassis lock

■ System module power cord

■ Video display and cables

■ Keyboard and cable

■ Mounting rails for additional magnetic devices

> **NOTE:**
> Mounting rails are optional for the Master Controller II+.

■ Starter kit

■ Equipment Log form

Check the system module, video display, and keyboard. Make sure all associated cables and power cords are present, and if IVP4 boards are included, verify that the correct number have been installed. Store unused magnetic device mounting rails in a secure place for later use in Master Controller II upgrades. A set of matching keys is provided with the system module to operate the mechanical chassis lock. (Tell your customer to keep the keys in a secure place.)

The Equipment Log is completed by AT&T or your AT&T-authorized dealer prior to shipment of the equipment and is included with the equipment when shipped. Store the form in a safe place with this guide so that it will be available when needed. Doing so will be helpful should the equipment become lost, stolen or damaged. Update this Equipment Log whenever options are added so that it can provide a complete warranty record of when equipment was placed in service, upgraded, and reconfigured.

Connecting the Video Display

To connect the video display

1. Connect the video display cable between the connector on the system module and the video display. If you need more connection details, refer to the video display manual that came with the component

2. Attach the video-display power cord to the power socket on the back of the video display. Then connect it to the outlet on the system module (or external power outlet for the Master Controller II+, which does not have an outlet on the system module).

   The outlet on the Master controller II (not the II+) is controlled by the system module power switch, which allows you to power up the system module and video display from a single switch.

   ### NOTE:
   The color monitor has a detached power cord that must be plugged into the monitor and PC. The attached power cord for the monochrome monitor must be plugged into the PC.

   ## ⚠ WARNING:
   If your monitor has a power switch, do not turn it on at this time.

3. Tighten the screws on all connections.

Connecting the Keyboard

Connect the keyboard by inserting the keyboard cable connector into the socket on the rear of the system module. A label on the back of the Master Controller II indicates which of the two sockets to use. (Be sure the keyway faces up.)

NOTE:
The socket for the keyboard connector is on the *side* of the Master Controller II+.

Preparing the Printer

The printers that are supported by IS-II are AT&T 570/571 (dot matrix printer with Centronics-type parallel interface) and the AT&T Models 473 and 474 (manufacturer-discontinued).

570/571 Printer

Do *not* connect the printer cable to the Master Controller II yet.

1. Unpack the printer and insert the ribbon according to instructions that were boxed with your printer.

2. Connect the power cable from the back of the printer to an AC outlet.

3. Turn on the printer power switch.

4. Follow the procedures detailed in section 3.2 of the *AT&T 570/571 Printer User's Guide.*

5. Administer the printer according to section 7.2.1 of the *AT&T 570/571 Printer User's Guide.*

6. Turn off the printer power switch.

Testing the 570/571 Printer

⚠ CAUTION:
Do not run this test until after the ribbon cassette and paper are installed.

1. Connect the AC power cord.

2. Turn the power on while pressing the Form Feed switch on the operation panel.

3. The self-test pattern appears.

473/474 Printer

Do not connect the printer cable to the Master Controller II yet.

1. Connect the power cable from the back of the printer to an AC outlet.

2. Turn on the printer power switch.

3. Follow the procedures detailed in the instructions that came with the printer on setting the printer up.

4. Turn off the printer power switch.

Testing the 473/474 Printer

⚠ CAUTION:

Do not run this test until after the ribbon cassette and paper are installed

Test the printer using the self-test procedure.

1. Connect the AC power cord and switch the power on. Be sure the printhead is returned to the "home" position at the far left of the platen. Shut the power off.

2. Press and hold down the Form Feed switch located on the far right of the front panel.

3. Switch the power on.

4. Release the Form Feed switch.

5. The "Self-Test Printout" should be generated.

6. Shut the printer off to stop the Self-Test. If you do not receive the printout, retry the procedure.

Connecting the Printer
to the Master Controller II

You are now ready to connect the printer to the Master Controller ll. Connect the interface cable as follows:

1. Plug the connector of the cable into the printer's interface outlet and push the two spring clips into position to hold the connector in place.

   — Make sure you have the printer interface cable, made especially for the Master Controller II printer connection. (See Appendix A, "Ordering Information.")

2. Install the other end of the cable to the Master Controller II in the female parallel slot on the back of the computer.

Initializing the 570/571 Printer
- UNIX System Operation

The connection is always made to the parallel port of the computer. To initialize the printer and UNIX system operation, perform the following steps:

1. Press the print-quality and on-line buttons and hold them down; turn the power on and then release the print-quality and on-line buttons.

    — This activates and prints the printer's default options so that you can configure the printer to work with IS-II.

2. Use the scroll-down portion of the line-feed key to get to the line marked 17.

3. Press the on-line key, release it, press the scroll key, and change to the option CR+LF.

4. Press the print-quality button and release it.

5. Use the scroll-down portion of the line-feed key to get to line 28.

6. The option needed for this line is Type 1. Press the on-line key and the scroll-down portion of the line-feed key to change the option to Type 1.

7. Press the print-quality key and then the line-feed key to scroll down to line 61. Press the on-line key and the scroll-down key to change the option to resewed.

8. Once these options have been set, press the print-quality key twice.

IVP4 Board Configuration and Installation

Voice applications may have up to three IVP4 boards. If the system has been shipped with the IVP4 boards installed, skip to the section "Supplying Power to the Master Controller Il."

If you need to add IVP4 boards to the system, the IVP4 board(s) must be configured before they are installed. Each IVP4 board has two banks of switches. The location of the switches is shown in Figure 2-1.
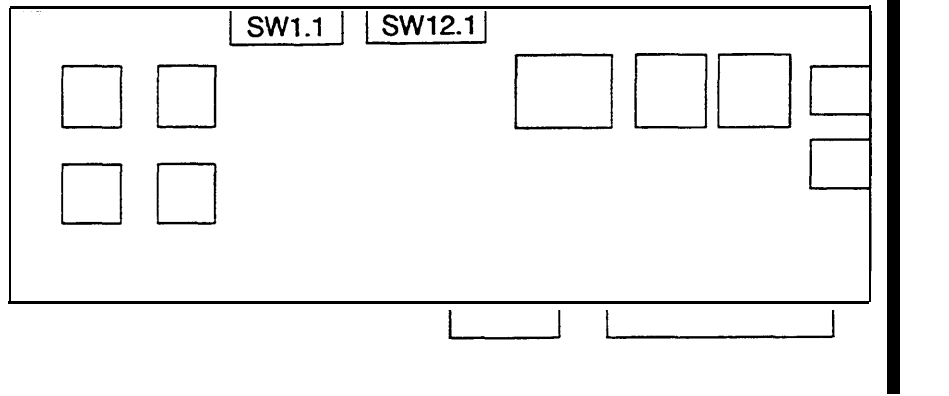
Figure 2-1. Location of Switches on IVP4 Board

Identifying the IVP4 Board Configuration

There are three versions of the IVP4 board that differ only in the type of switches used. To properly set the switches, you must identify which configuration is used on the board.

Configuration of New Boards

If your IVP4 board is new and is still packed in the factory box, take note of the type of switch and the factory switch settings. The board should be shipped from the factory with the switches correctly set for use as board 1.

Confirm that the board is appropriately configured:

■ If the board has rocker switches, it is always configuration A as shown in Figure 2-2.

■ If the board has slide switches, it will have one of the configurations (B or C) shown in Figure 2-2.

Mark the board with a small label to indicate whether configuration A, B, or C is used. If you do not mark the board, it may be difficult to determine the correct configuration for future changes. If you are unable to determine the correct configuration by examining the switch settings, you will have to test the board as described later in this section to determine the correct configuration.

SW1.1   SW12.1

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

Rocker Style A

                OPEN   OPEN
                OPEN   OPEN

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

Slide Style B

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

Slide Style C

                OPEN   OPEN
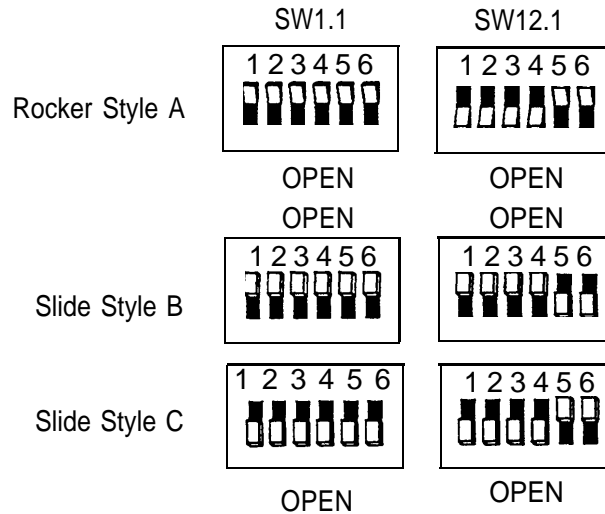
Figure 2-2. Factory Switch Configuration

Configuration of Previously Installed Boards

For boards that are already in use, examine the second bank of switches (SW12.1):

■ If the board has rocker switches, the configuration is A.

■ If the board has slide switches that are marked "OPEN" on the top or bottom (or on the side with an arrow toward the top or bottom), the configuration is B (top) or C (bottom) respectively.

■ If the board has unmarked slide switches, the setting of the second switch (SW12.1) should correspond to one of the settings shown in Figure 2-4. Use the configuration letter at the top of the column in which the match is found.

■ If you are unable to determine the correct configuration by examining the switch settings, you will have to test the board as described later in this section to determine the correct configuration.

Mark the board with the corresponding configuration letter (A, B, or C) for reference in resetting the switches.

Setting Switch SW1.1

The first switch (SW1.1) controls the line impedance. The settings should all be set to the "OPEN" position initially (as shown in Figure 2-3 for each configuration). If problems are encountered with Touch-Tone recognition, change all of the switches on the first bank (SW1.1) to the opposite (closed) position.

SW1.1

Rocker Style A

```
1 2 3 4 5 6
⊓⊓⊓⊓⊓⊓
```

OPEN

OPEN

```
1 2 3 4 5 6
⊓⊓⊓⊓⊓⊓
```

Slide Style B

```
1 2 3 4 5 6
⊔⊔⊔⊔⊔⊔
```

Slide Style C

OPEN
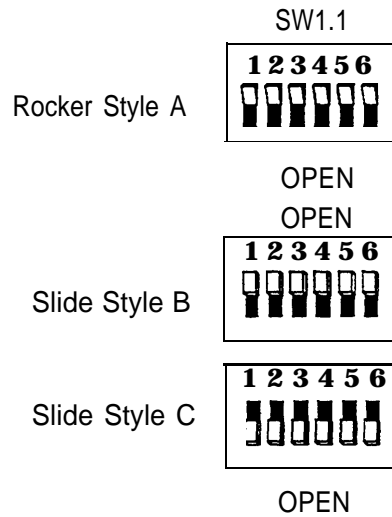
Figure 2-3. Settings for SW1.1

Setting Switch SW12.1

The second switch (SW12.1) sets the board address. Figure 2-4
shows the correct settings for each of the three configurations.

Rocker Style A

```
1 2 3 4 5 6
```

Slide Style B

```
1 2 3 4 5 6
```

Slide Style C

```
1 2 3 4 5 6
```

```
1 2 3 4 5 6
```

OPEN

```
1 2 3 4 5 6
```

```
1 2 3 4 5 6
```

OPEN

```
1 2 3 4 5 6
```

OPEN

```
1 2 3 4 5 6
```

```
1 2 3 4 5 6
```

```
1 2 3 4 5 6
```
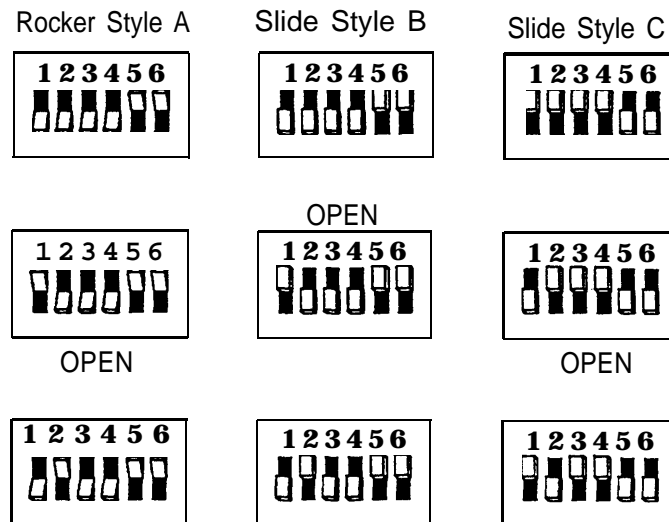
Figure 2-4. Settings for SW12.1

Determining the IVP4 Board Configuration by Testing

If the board has slide switches, it maybe necessary to test the board to determine if it has configuration B or C. If you already know the configuration, use the test in the next section to confirm board operation.

To determine the configuration by testing:

1. Set the switches to match configuration B in Figure 2-2.

2. Install the board and close the case.

3. Install the voice application software if it is not already installed. See Chapter 4 in this guide.

4. All application software that uses the IVP System Software will have a "System Monitor" function available. Open the System Monitor window and examine the Service Status column. If the Service Status is blank, or if the System Monitor window shows no fields at all, the board is either defective or has the other configuration.

    > ⇒ **NOTE:**
    > If channels 0-3 are populated, the first board is configured property. If channels 4-7 are populated, the second board is configured properly. If channels 6-11 are populated, the third board is configured properly.

5. Open the case and change the switches to match configuration C in Figure 2-2. (Be sure to do a shutdown first and then reboot.)

6. Test again. If the board is still not recognized, contact the next tier of AT&T Services support

Testing the IVP4 Switch Settings

If you know the board configuration, set the switches on each board correctly and then perform this test to verify the correctness of the switch settings.

1. Set the switches for each board according to its configuration and board number. See Figure 2-3 and Figure 2-4.

2. Install the board(s) and close the case.

3. Install the voice application software if it is not already installed. See Chapter 4 in this guide.

4. All application software that uses the IVP System Software will have a "System Monitor" function available. Open the System Monitor window and examine the Service Status column. If the Service Status is blank, or if the System Monitor window shows no fields at ail, the board is either defective, or it should have another configuration.

5. Check the configuration and switch settings and test again. If the board is still not recognized, contact the next tier of AT&T Services support.

Connecting the IVP4 Voice Lines

Voice lines must be connected to the IVP4 boards. Each IVP4 board has two 6-position modular jacks. Each of these modular jacks is used to connect two voice lines in the RJ14C configuration. The top jack is used for line pairs 1 and 2. The bottom jack is for line pairs 3 and 4.

If the line pairs are run two per jack (RJ14C), use two standard, 4-conductor modular cables. If the line pairs are run individually (RJ11C), a type 884A adapter maybe used to consolidate the four individual fine pairs into two pairs (RJ14C) in each of two cables. (See Figure 2-5.)

⚠ WARNING:
There is a magnet on the back of the 884A adapter. Be sure that you do not place this near the hard disk drive or floppy diskettes.
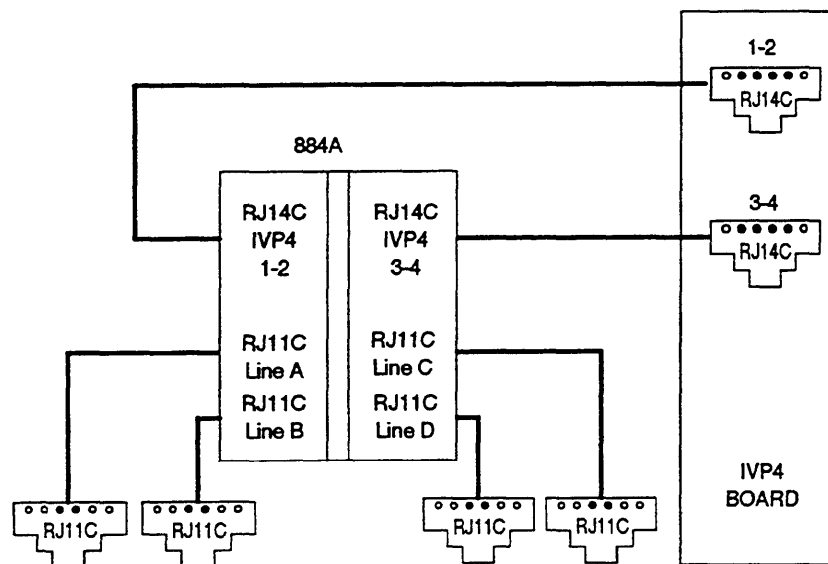
Figure 2-5. IVP4 Board with 884A Adapter for RJ11C

Supplying Power to the Master Controller II

⚠ CAUTION:
Before doing anything else, make sure that the voltage and the frequency of the wall power outlet are identical to those specified on the sticker affixed to the back panel of the system.

The standard power cord supplied with the system is detachable and plugs into the input power connector at the rear of the chassis. The input end terminates in a standard 3-prong plug for 115 VAC operation. Do not change the line voltage select switch that is set for 115 VAC.

⚠ DANGER:
You must use a 3-prong grounded plug to eliminate the danger of shock. If you use an extension cable, take the safety precaution to make sure it has a 3-prong grounded plug, and is no longer than 6 fret.

1. Be sure the power is OFF and the voltage select switch is preset for 115 VAC operation.

2. Connect the female end of the power cord to the connector at the rear of the system module.

3. Connect the male end to an AC power source.

Starting the System

1. Remove the drive protection card from the diskette drive.

2. If you have a color monitor, turn it on.

3. Press the system-module power switch to the ON position.

4. Adjust the video display to obtain a readable screen display. (Refer to the video display manual.)

Performing the Power On Self-Test (POST)

Each time the system is turned on or reset, POST runs automatically and checks the CPU, keyboard, video display, memory, and most built-in peripheral devices. Depending on the amount of extended memory installed, the memory test takes 3 to 15 seconds to complete. During a soft boot (pressing the [CTRL] — [ALT] — [DEL] keys at the same time), the system executes all POST tests except memory.

⚠ CAUTION:

Do not perform the [CTRL] — [ALT] — [DEL] *soft boot unless you are prompted to do so.*

When POST is completed, the system beeps once. A display similar to the following will appear. If the status of any item is FAIL , refer to the following documentation:

- Chapter 8 "Troubleshooting"

- *AT&T 6366/SX Work Group System User's Guide*

- *AT&T Applications Controller User's Guide* (for the Master Controller II+)

➡ NOTE:
The display for the Master Controller II+ offers a subset of the following display in a different format.

```
Phoenix 80386 ROM BIOS PLUS Version x.xx xx EOB
Copyright (c) 1985-1989
Phoenix Technologies Ltd. All rights Reserved

Resident  Diagnostics              PASS

CPU (i80386SX, 16 MHz)             PASS

CMOS RAM                           PASS

ROM  Checksum                      PASS

Memory Refresh                     PASS

DMA Controllers                    PASS

Interrupt  Controller              PASS

Keyboard                           PASS

Dedicated Memory                   384 Kbyte

Base Memory                        640  Kbyte

Extended Memory                    3072  Kbyte

Total  Memory                      4096  Kbyte

Clock/Calendar                     PASS

Floppy Disks                       1 Present

Hard Disks                         1 Present

Primary  Boot-strap
```

▷ **NOTE:**
Extended Memory will indicate 1024 Kbyte if you have a 40MB controller with
2MB of RAM.

The system will continue to boot displaying several messages. This process will take
2-6 minutes depending on the applications installed.

Logging Onto IS-II

1. At the Login: prompt type *maint* and then press [ENTER] .

2. At the Password: prompt, type the password and then press [ENTER] .

   — The Integrated Solution II Maintenance window is displayed showing all the applications that are installed.

```
        Integrated Solution II Maintenance

        AUDIX Voice Power (AVP)
        Call Accounting System (CAS)
        System Programming and Maintenance Utility (SPM)
        >Technician Maintenance
        Exit.
```

```
 HELP
```
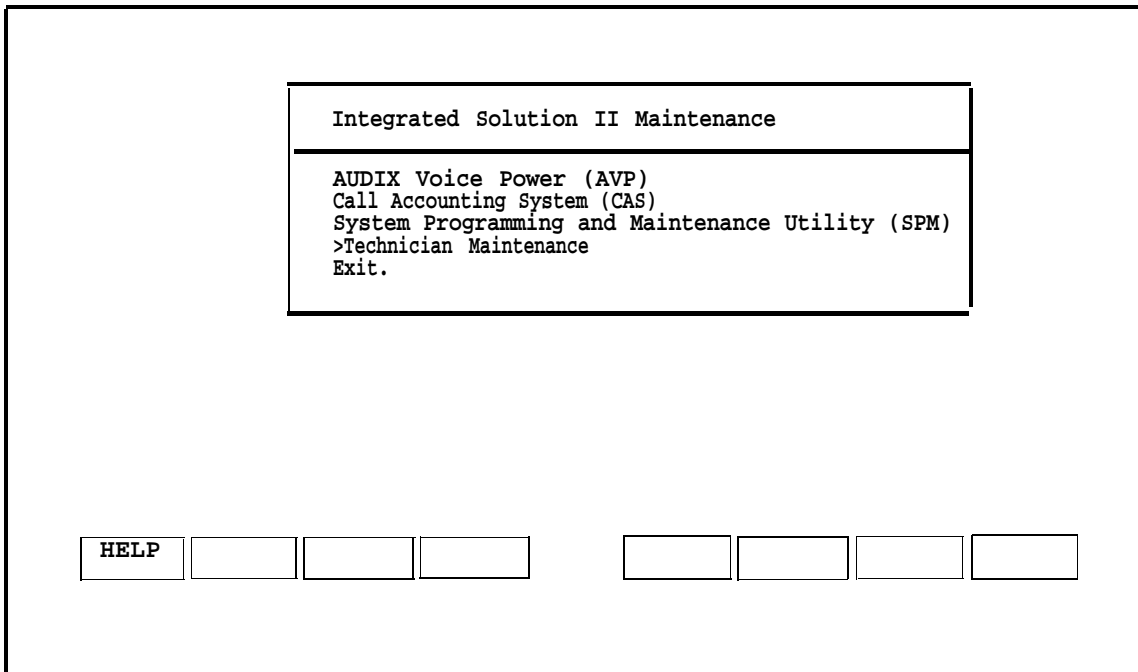
Screen 2-1. Integrated Solution II Maintenance

Checking Application Packages

1. After you have logged on and the Integrated Solution II Maintenance menu appears, move the cursor to `Technician  Maintenance` and then press [ENTER] .

> ➡ **NOTE:**
> To select any item in a menu, you can use the arrow keys to move the cursor or type the first few characters of the menu item until the cursor moves to it. For any additional information on screen navigation, see "Screen Navigation" in Chapter 2 of the *AT&T Integrated Solution II System Manager's Guide.*

— The Technician Maintenance window is displayed.

```
                  ┌─────────────────────────────────────┐
                  │      Technician  Maintenance        │
                  ├─────────────────────────────────────┤
                  │   >Administer  Integrated  Solution │
                  │    Backup Files                     │
                  │    Restore Files                    │
                  │    Maintenance Log                  │
                  │    Printer Setup                    │
                  │    Password Protection              │
                  │    Set Time and Date                │
                  │    System  Shutdown                 │
                  │    Full  Screen UNIX                │
                  │    Voice System Administration      │
                  └─────────────────────────────────────┘


    ┌──────┐                            ┌──────┐
    │ HELP │                            │CANCEL│
    └──────┘                            └──────┘
```
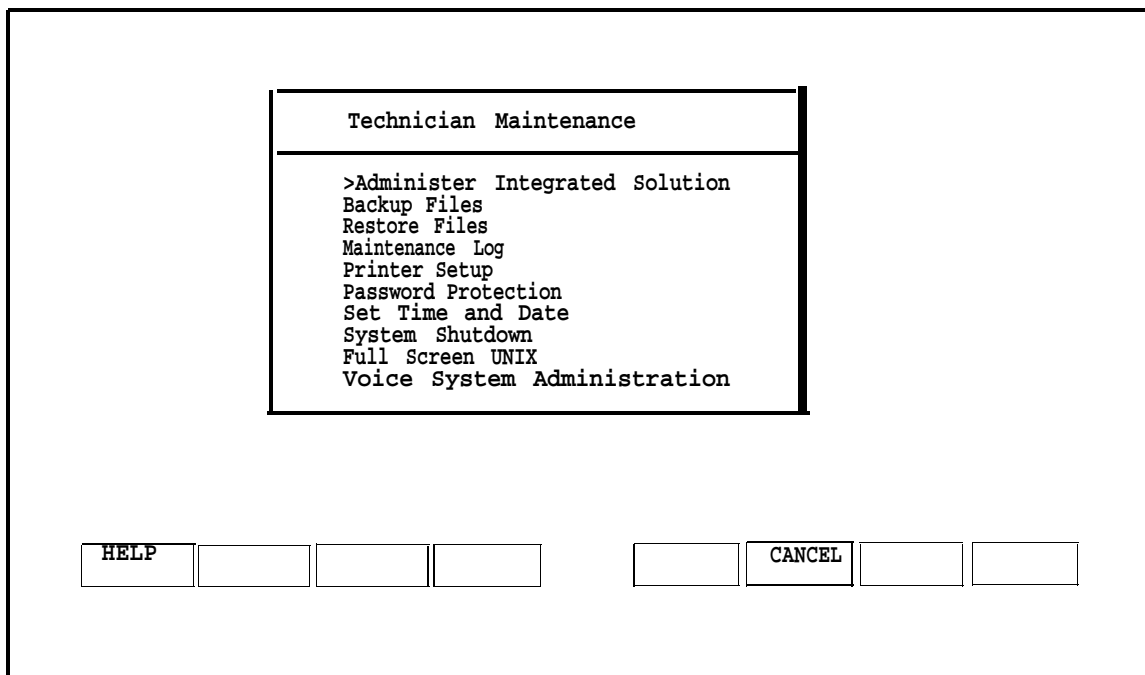
Screen 2-2. Technician Maintenance Menu

2. Move the cursor to `Maintenance  Log` and press [ENTER] .

— The Maintenance Log window is displayed.

3. Select Display Installed Applications.

— The list should include all installed application packages. If there are more applications than fit in the window, press [F3] (Next Page) to display the next window.

— If any of the essential software necessary to run Integrated Solution II (or the ordered applications) do not display on the screen, the software has not been installed properly.

Essential software consists of:

- MERLIN LEGEND Integrated Solution II Platform Software
- MERLIN LEGEND System Programming & Maintenance Utility
- Editing Package
- FACE HELP
- FACE
- FMLI

```
                 Display Installation Applications

    MERLIN LEGEND System Programming & Maintenance Utility Version x
    AUDIX Voice Power Applicaiton Software Rx
    MERLIN LEGEND Switch Integration Software Release x
    Integrated Voice Power System Software x
    Cartridge Tape Utilities- Version x
    Editing Package - Version x
    FACE HELP Version
    FACE Version x
    FMLI Version x
    MERLIN LEGEND Integrated Solution II Platform Software Release x
    MERLIN LEGEND Call Accounting System x
    MERLIN LEGEND Automated Attendant SoftwareRelease x
```

| | PREV PAGE | NEXT PAGE | | | | CANCEL | | |

Screen 2-3. Display Installed Applications

➡**NOTE:**

The "x" following the applications listed on the menu represents the release number of the software. Your display will contain the actual release number of the applications installed on the system.

4. To exit, back out of the menus by using the [F6] (CANCEL) function key.

Adding, Changing, or Deleting Passwords

Although you can add, change, or delete passwords for any application, it is absolutely essential that you do not do so unless the customer has requested it. (This does not affect the *maint* password.)

1. Select Password protection from the Technician Maintenance window and press [ENTER] .

— The Password Protection window is displayed.

➡**NOTE:**

This window will display all installed applications.

```
                         Password Protection

        >AUDIX Voice Power (AVP)
        Call Accounting Software (CAS)
        IS II User Login (is)
        System Programming & Maintenance Utility (SPM)




        ┌──────┐ ┌──┐ ┌──┐ ┌──┐      ┌──┐ ┌────────┐ ┌──┐
        │ HELP │ │  │ │  │ │  │      │  │ │ CANCEL │ │  │
        └──────┘ └──┘ └──┘ └──┘      └──┘ └────────┘ └──┘
```

Screen 2-4. Password Protection

2. Select the item you want and then press [ENTER] .

— The Change/Add or Delete Password window is displayed.

```
                    Change/Add or Delete Password

                    >Change/Add
                     Delete
```

```
 HELP                                    CANCEL
```
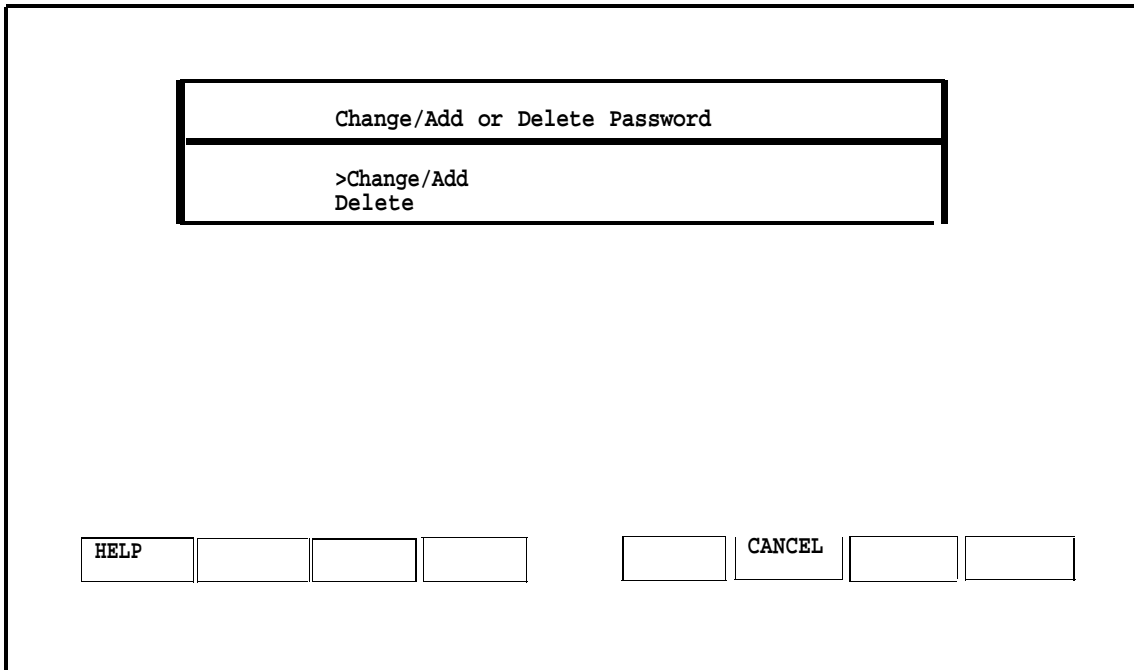
Screen 2-5. Change/Add or Delete Password

Changing the Password

1. To change the password, select Change/Add and then press [ENTER] .

2. When you see the first message below, enter the new password and press
   [ENTER] , then re-enter it at the next prompt and press [ENTER] again.

   ```
   New  Password:
   Re-enter  new  password:
   The password has been changed
   Strike  ENTER  when  ready.
   ```

   – When you have completed this, you are notified that the password has
     been changed.

3. Press [ENTER] to return to the Password Protection window.

4. If you are finished, press [F6] (CANCEL) to return to the Technician
   Maintenance window. Otherwise, you can continue to make changes.

   — The change will take effect when the user exits the Main menu and
     logs back in.

Deleting a Password

1. To delete a password, select Delete and press [ENTER] .

    — The system responds:

        The password has been deleted
        Strike ENTER when ready

2. Press [ENTER] to return to the Password Protection window.

3. Press [F6] (CANCEL) to return to the Technician Maintenance window.

Changing the Monitor Type

The system is already set up (defaulted) to be used with a monochrome monitor.
Use this feature if a color monitor has been connected to the system.

1. Select Maintenance Log from the Technician Maintenance menu and then
    press [ENTER] .

    — The Maintenance Log window is displayed.

```
        Maintenance Log

        >Change Monitor Type
        Display Installed Applications
        IVP Board Diagnostics
        TTY Check
        Printer Test
        Disk Usage Report



  HELP                                CANCEL
```
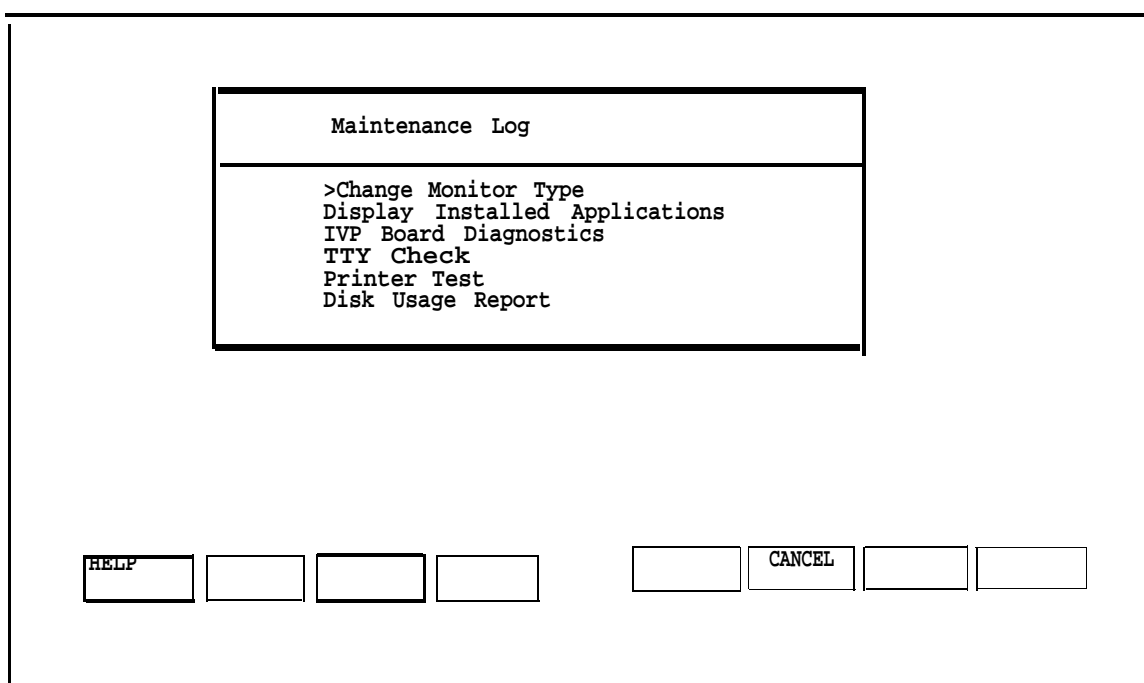
Screen 2-6. Maintenance Log

➡ **NOTE:**

IVP Board Diagnostics will only appear if AUDIX Voice Power or the Automated Attendant is installed.

2.   Select Change Monitor Type, and then press [ENTER]

  — The window allows you to select etiher color or monochrome.

3.   Select Color, and then press [ENTER].

  — The system displays confirmation messages.

4.   Press [ENTER] to return to the Maintenance Log window.

5.   Log out and log back in again for the change to take effect

Connecting TTY Ports

The Master Controller II communicates with the MERLIN LEGEND Communications System call processor through the system module TTY ports. Serial Connector A (TTY00) is used for administering the MERLIN LEGEND Communications System while Serial Connector B (TTY01) is used for the Call Accounting System. This procedure describes how to interconnect the Master Controller II and the MERLIN LEGEND Communications System.

Connecting the IS-II Hardware

Connect the system module and the MERLIN LEGEND Communications System as follows:

1. Attach a 355AF adapter to Serial Connector A (TTY00) of the Master Controller II.

2. Attach a 9-pin-to-25-pin converter to Serial Connector B (TTY 01) of the Master Controller II.

3. Attach a 355AF adapter to the 9-pin-to-25-pin converter on Serial Connector B.

4. Connect a D8W-87 cord between the 355AF adapter and SMDR port of the MERLIN LEGEND Communications System call processor. (If the distance exceeds 50 feet or if the Master Controller II and the MERLIN LEGEND Communications System do not share the same outlet, refer to the Note following these instructions.)

➡ **NOTE:**
If the MERLIN LEGEND Communications System is located at a distance greater than 50 feet from the Master Controller II, DB25 cables from the MERLIN LEGEND Communications System Admin port and the SMDR port will have to be extended with Z3A2 ADU cable drivers. Two Z3A2 ADU interface units are required for each cable, one at each end. Refer to Chapter 3 of the *AT&T MERLIN LEGEND™ Communications System Installation, Programming, and Maintenance* for installation instructions.
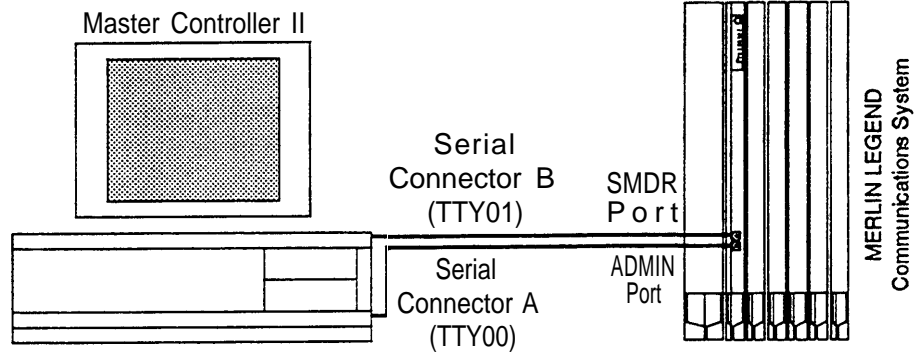
Figure 2-6. IS-II Hardware Connection

Testing TTY Ports

To determine whether the TTY ports are connected, follow this procedure.

1. From the Integrated Solution II Maintenance Menu, select `Technician Maintenance` and press [ENTER].

    — The Technician Maintenance window appears.

2. Select `Maintenance Log` and press [ENTER].

    — The Maintenance Log window appears.

3. Select `TTY Check` and press [ENTER] .

    — If a message appears that the ports are not connected, check the physical connections, cables, and connectors.

Changing the Printer Setup

NOTE:

Skip this section if the system is using the AT&T 570 printer.

This option allows you to change the default printer type from ATT570 and indicate whether a filter should be used. Refer to the "Printer Operation" section of the *UNIX 3.2.2 System Operations Guide* for information on when you should not use the fitter. In any case, we recommend that you keep the setting for this as yes.

1. Select `Printer Setup` from the Technician Maintenance menu, and then press [ENTER].

    — The Parallel Printer Port Setup window appears.

```
┌─────────────────────────────────────────────────────────────────────┐
│                                                                       │
│         ┌───────────────────────────────────────────┐                │
│         │       Parallel Printer Port Setup          │                │
│         │ ───────────────────────────────────────    │                │
│         │                                             │                │
│         │   Port Number: 01 (/dev/lp)                 │                │
│         │   Device Currently on Port: Printer         │                │
│         │   Printer Type: AT&T570                      │                │
│         │   Printer Name: islpr                        │                │
│         │   Should Filter be used:   No               │                │
│         │                                             │                │
│         └───────────────────────────────────────────┘                │
│                                                                       │
│                                                                       │
│                                                                       │
│   ┌──────┐ ┌────────┐ ┌──────┐ ┌──────┐     ┌──────┐ ┌────────┐ ┌──────┐ ┌──────┐
│   │ HELP │ │ CHOICE │ │ SAVE │ │      │     │      │ │ CANCEL │ │      │ │      │
│   └──────┘ └────────┘ └──────┘ └──────┘     └──────┘ └────────┘ └──────┘ └──────┘
│                                                                       │
└─────────────────────────────────────────────────────────────────────┘
```

Screen 2-7. Parallel Printer Port Setup

2. Press the [F2] (CHOICES) function key to display the list of available printers.

3. Use the arrow keys to make your selection; then press [ENTER] .

4. Press [F3] (SAVE) to save the information you entered.

    — The screen displays your selection and asks for confirmation.

5. Press [F3] (CONT) if it is correct or [F6] (CANCEL) if not

6. Press [F3] (CONT) to return to the Technician Maintenance window.

Testing the Printer

This option submits a job to the printer so that you can verify the connections.

➡ NOTE:
Do not perform this operation if you are not using a printer.

To run the Printer Test, do the following from the Maintenance Log:

1. Select `Printer Test` from the Maintenance Log window and press [ENTER] .

   — The Confirm Printer Test window is displayed.

   — The system informs you that the current printer configuration defaults are being written to the printer.

   — If the printer test fails, first check to see that the printer is powered, ready, and has paper. Next check the printer cable for proper connections. Should the fault persist, substitute the cable and printer with known good units to determine the faulty component.

2. Press [F3] (CONT) to get the job output

3. Press [F6] (CANCEL) to return to the Maintenance Log window.

Running IVP Diagnostics

Diagnostics for the IVP4 boards should be run during and after initial setup to determine whether everything is connected properly and there is dial tone. To diagnose the IVP board, do the following:

1. Select `IVP Board Diagnostics` from the Maintenance Log window and then press [ENTER] .

   — The system searches for loop current and dial tones on the administered boards and then informs you if the IVP board passes the test. If dial tone is not found, check the Tip/Ring connections. Also check the positions of the SW1.1 and SW12.1 switches on the board against those shown in "IVP4 Board Configuration and Installation" in this chapter. Insure that the IVP4 board is properly seated in the motherboard connector.

   If the failure persists, you will have to replace the board.

   ⇒ **NOTE:**
   If the IVP board is not present, the system responds:

   ```
   Can't Diagnose Card x, It is not present.
   ```

   (The "x" indicates the board location number, which will be 0, 1, or 2.)

2. Press [F6] (CANCEL) to return to the Maintenance Log window.

Customizing the System

When you have completed all of the procedures in this chapter, and all ordered application packages are included, some of the software applications must be customized before they can be administered on the system. This information is contained in Chapter 5, "Customizing Applications".

It may be necessary for you to add software applications to the system if they were ordered after the system was already configured. If this is the case, refer to Chapter 4, "Maintaining IS-II Applications."

Maintaining IS-II

3

Technician Maintenance Menu

The Technician Maintenance menu allows you to perform maintenance functions for IS-II Platform Software and applications.

To access the Technician Maintenance window, select `Technician Maintenance` from the Integrated Solution II Maintenance window and press [ENTER] .

A screen similar to the following appears:

```
┌─────────────────────────────────────────────────────────────────┐
│                                                                   │
│         ┌───────────────────────────────────────────┐            │
│         │                                            │            │
│         │        Technician  Maintenance             │            │
│         │                                            │            │
│         │ ─────────────────────────────────────────  │            │
│         │     >Administer Integrated Solution II      │            │
│         │      Backup Files                           │            │
│         │      Restore Files                          │            │
│         │      Maintenance Log                        │            │
│         │      Printer Setup                          │            │
│         │      Password Protection                    │            │
│         │      Set Time and Date                      │            │
│         │      System Shutdown                        │            │
│         │      Full Screen UNIX                       │            │
│         │      Voice System Administration            │            │
│         │                                            │            │
│         └───────────────────────────────────────────┘            │
│                                                                   │
│   ┌──────┐ ┌─────┐ ┌─────┐ ┌─────┐    ┌─────┐ ┌────────┐ ┌───┐ ┌──┐ │
│   │ HELP │ │     │ │     │ │     │    │     │ │ CANCEL │ │   │ │  │ │
│   └──────┘ └─────┘ └─────┘ └─────┘    └─────┘ └────────┘ └───┘ └──┘ │
│                                                                   │
└─────────────────────────────────────────────────────────────────┘
```
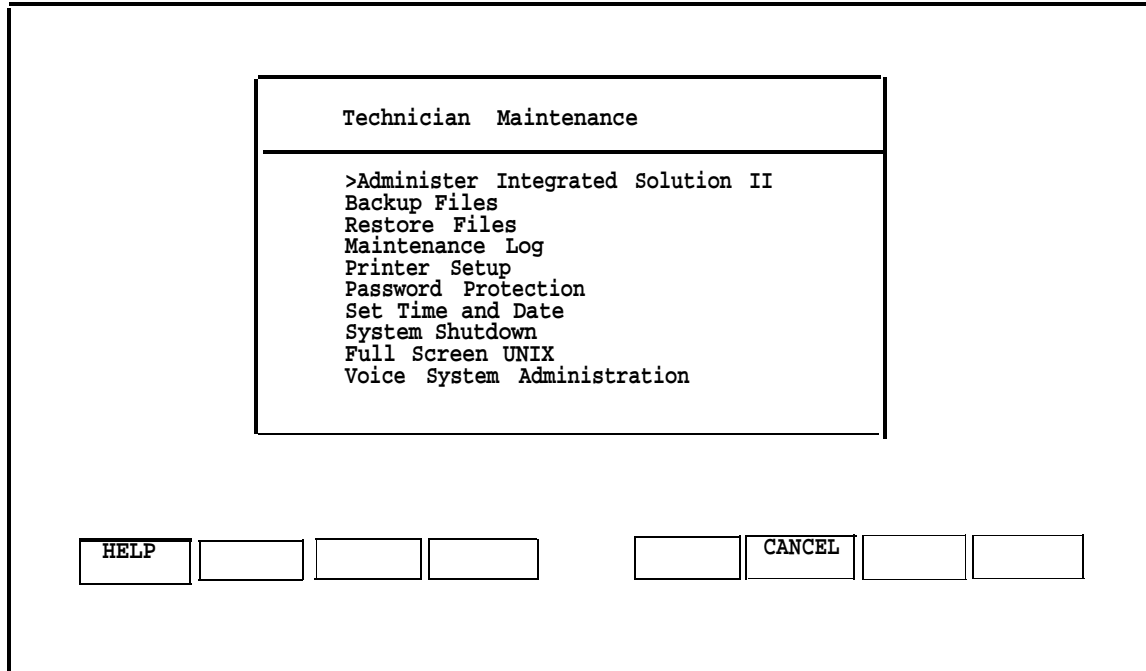
Screen 3-1. Technician Maintenance Menu

Each of these options is briefly described under the sections in this chapter with references to more detailed explanations.

➡️ NOTE:

Voice System Administration will appear only if a voice system is installed.

Administering Integrated Solution II

This option allows you to administer (i.e., add, remove, or update) IS-II Platform Software and application software packages. Refer to Chapter 4, "Maintaining IS-II Applications" and Chapter 7,"Upgrading to a New IS-II Release," for additional information.

Backing Up Files

File backups should be conducted regularly by the IS-II system manager. Refer to
the *AT&T Integrated Solution II System Manager's Guide,* Chapter 5, for procedures
on how to back up the system.

> ⇒ **NOTE:**
> It is suggested that prior to backing up IS-II files, the system manager
> back up the telephone switch system programming information to the
> hard disk via SPM. If this is done, IS-II will back up the system
> programming information contained in the SPM directories along with
> the IS-II file information. See Chapter 2 of the *AT&T MERLIN
> LEGEND™ Communications System: System Programming Guide* for
> SPM backup procedures.

Restoring Files

Refer to Chapter 6, "Recovering from Catastrophic Failure," for procedures on how
to restore the system from catastrophic failure (hard disk or motherboard failure) and
what to do if your data has been corrupted.

Maintenance Log

The following functions are available through the Maintenance Log.

To perform any of these functions, select `Maintenance Log` from the Technician Maintenance menu, and press `[ENTER]`. The Maintenance Log window is displayed.

```
                    Maintenance Log

                    >Change Monitor Type
                    Display Installed Applications
                    IVP Board Diagnostics
                    TTY Check
                    Printer Test
                    Disk Usage Report




  ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐   ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐
  │ HELP │ │      │ │      │ │      │   │      │ │CANCEL│ │      │ │      │
  └──────┘ └──────┘ └──────┘ └──────┘   └──────┘ └──────┘ └──────┘ └──────┘
```
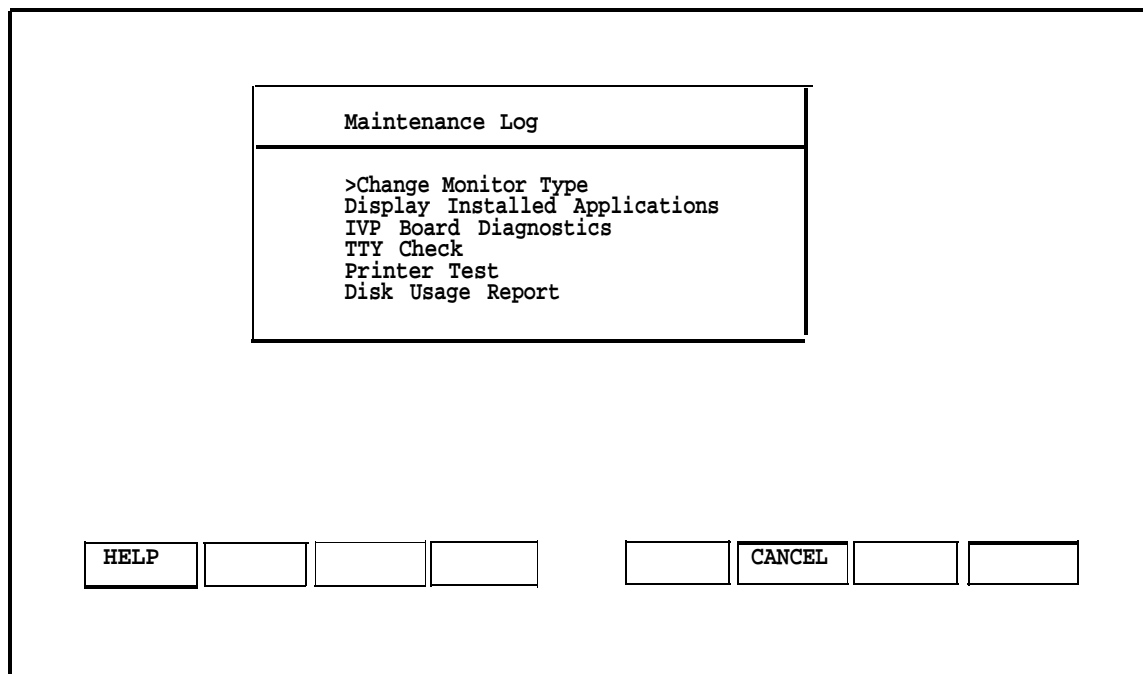
Screen 3-2. Maintenance Log Menu

Changing Monitor Type

The system is already setup (defaulted) to be used with a monochrome monitor. Use this feature if a color monitor has been connected to the system. See Chapter 2, "Hardware Setup," for more information.

Displaying Installed Applications

This option allows you to check release numbers after an install, remove, or update, and to verify that the software you loaded is installed. Refer to the section "Checking Application Packages" in Chapter 2, "Hardware Setup," for additional information.

Diagnosing the IVP Board

Diagnostics for the IVP4 boards should be run after the installation of each additional IVP4 board, and whenever problems indicate any possible malfunction of the IVP4 board(s). Refer to Chapter 2, "Hardware Setup," for more information.

> ➡ **NOTE:**
> `IVP Board Diagnostics` appears on the Maintenance Log only if AUDIX Voice Power or Automated Attendant is installed.

Checking TTY Connections

This option allows you to confirm that all TTY ports are connected to the system. See Chapter 2, "Hardware Setup," for information on TTY connections.

Testing the Printer

You can test for proper printer functions by using this option. However, if you are installing the printer, see the information on testing the printer in Chapter 2 under "Testing the Printer."

Displaying the Disk Usage Report

The Disk Usage Report provides information on the available disk space for System and Voice partitions. Refer to Chapter 8, 'Troubleshooting," for information on how to display and interpret this report.

Setting Up the Printer

You can specify the printer type being used and indicate Whether a filter should be used. Information on setting up the printer can be found in Chapter 2 under "Changing the Printer Setup."

Adding, Changing, or Deleting Passwords

You can add, change, or delete passwords for the installed applications. For details, see Chapter 2, "Hardware Setup."

Setting the Time and Date

The time and date set for IS-II must be synchronized with the time and date set for MERLIN LEGEND Communications System. Refer to Chapter 3 in the *AT&T Integrated Solution II System Manager's Guide* for information on how to set this option.

Shutting Down the System

To protect the data stored on the hard disk, this procedure must always be performed before turning off power to the system and before moving the hardware. Refer to Chapter 5 in the *AT&T Integrated Solution II System Manager's Guide* for information on this option.

Accessing Full Screen UNIX

You will only need to access UNIX in troubleshooting situations under the direction of a tier 3 engineer.

Administering the Voice System

This option allows you to customize your AVP and AA applications once they have been installed. The customer should have completed the planning forms prior to starting this procedure. Refer to Chapter 5, "Customizing Applications," for information on this option.

Maintaining IS-II Applications

4

Preparing to Install Applications

There are two instances in which you wiIl need to install IS-II application software: in the event of a catastrophic failure and when the customer adds an application after initial system purchase. If you are installing an upgraded release of an application that the customer already has, see "Updating IS-II and Applications" in Chapter 7 of this guide.

If you are installing application software after a catastrophic failure, all basic IS-II software must have been reinstalled before you can install any application package. (See Chapter 6.)

If you are simply adding a software application package to an existing system, continue with the instructions in this chapter.

➡ NOTE:
If you attempt to install a package that already exists on the system, an Error Message Screen appears.

1. At the `Login:` prompt, type *maint* and then press [ENTER].

2. At the `password:` prompt, type the password and then press [ENTER] .

— The Integrated Solution II Maintenance window is displayed.

➡ **NOTE:**
If any applications are already installed, their names will appear on this screen.

```
┌──────────────────────────────────────────────────────────────────────┐
│                                                                        │
│                                                                        │
│          ┌────────────────────────────────────────────────┐           │
│          │         Integrated Solution II Maintenance       │           │
│          ├────────────────────────────────────────────────┤           │
│          │                                                  │           │
│          │  System Programming and Maintenance Utility (SPM)│           │
│          │  >Technician  Maintenance                         │           │
│          │  Exit                                             │           │
│          │                                                  │           │
│          └────────────────────────────────────────────────┘           │
│                                                                        │
│                                                                        │
│                                                                        │
│                                                                        │
│  ┌──────┐ ┌────┐ ┌────┐ ┌────┐    ┌────┐ ┌────┐ ┌────┐ ┌────┐          │
│  │ HELP │ │    │ │    │ │    │    │    │ │    │ │    │ │    │          │
│  └──────┘ └────┘ └────┘ └────┘    └────┘ └────┘ └────┘ └────┘          │
│                                                                        │
└──────────────────────────────────────────────────────────────────────┘
```

Screen 4-1. Integrated Solution II Maintenance

3. Select Technician Maintenance and then press [ENTER] .

— The Technician Maintenance Window is displayed.

➡ **NOTE:**
"Voice System Administration" will appear only if a voice system is installed.

```
┌─────────────────────────────────────────────┐
│   Technician Maintenance                      │
├─────────────────────────────────────────────┤
│      >Administer Integrated Solution II        │
│       Backup Files                             │
│       Restore Files                            │
│       Maintenance Log                          │
│       Printer Setup                            │
│       Password  Protection                     │
│       Set Time and Date                        │
│       System Shutdown                          │
│       Full Screen UNIX                         │
│       Voice  System  Administration            │
└─────────────────────────────────────────────┘

┌──────┬──────┬──────┬──────┐   ┌──────┬────────┬──────┬──────┐
│ HELP │      │      │      │   │      │ CANCEL │      │      │
└──────┴──────┴──────┴──────┘   └──────┴────────┴──────┴──────┘
```
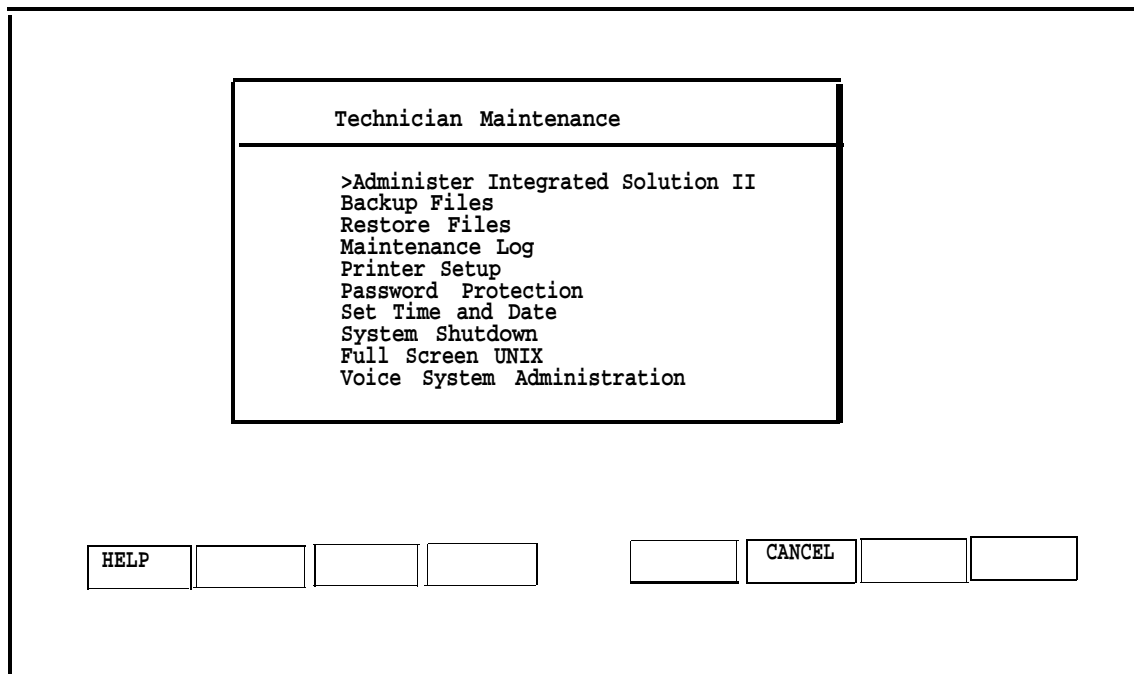
Screen 4-2. Technician Maintenance

4. Select `Administer Integrated Solution II` and then press [ENTER].

  – The Administer Integrated Solution II window appears.

```
              Administer Integrated Solution II

        IS-II Platform Software (ISIIPS)
        >System Programming & Maintenance Utility (SPM)
        AUDIX Voice Power (AVP)
        Cartridge Tape Utilities
        Call Accounting System (CAS)
        Automated Attendant (AA)




    ┌──────┐ ┌───────┐┌───────┐┌──────┐   ┌──────┐ ┌──────┐ ┌──────┐ ┌──────┐
    │ HELP │ │UN/MARK││INSTALL││UPDATE│   │REMOVE│ │CANCEL│ │      │ │      │
    └──────┘ └───────┘└───────┘└──────┘   └──────┘ └──────┘ └──────┘ └──────┘
```
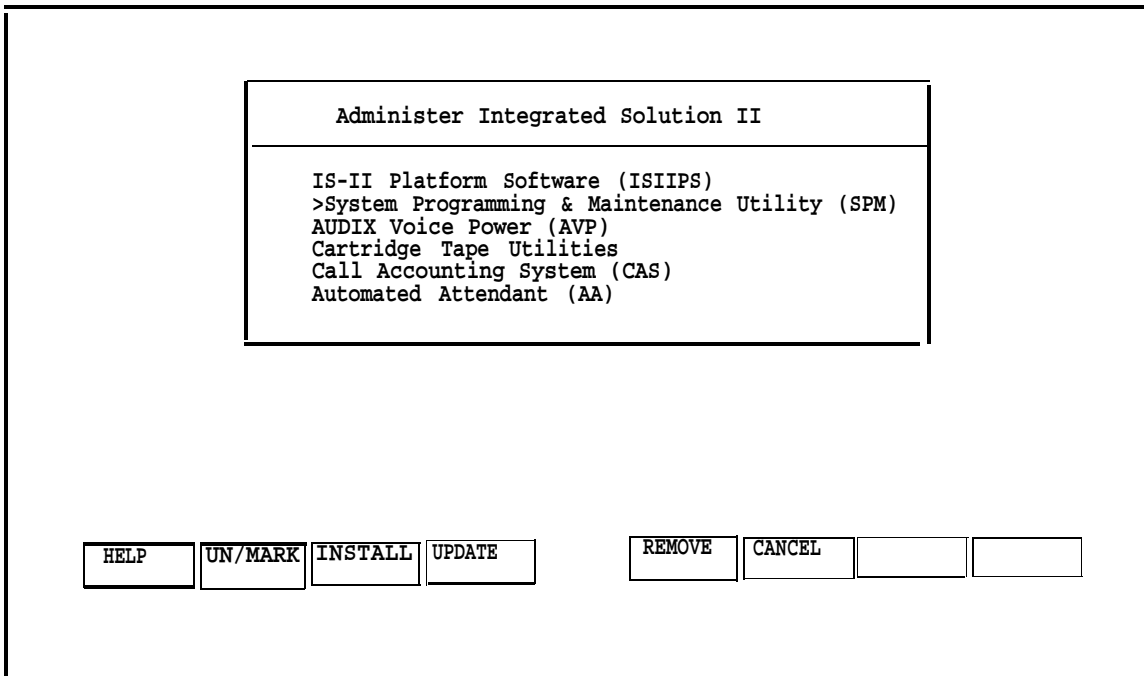
Screen 4-3. Administer Integrated Solution Menu

5. Move the cursor to each application package you are going to install or update (such as SPM or ISIIPS), and press [F2] to mark each application as you select it

   NOTE:
   SPM and ISIIPS can only be updated; they cannot be installed or removed.

   NOTE:
   You can select either AVP or AA, but not both. If you already have one and have selected the other, a note will appear on your screen indicating that one of the packages is already present

   If you marked an application by error, move the cursor back to that application and press [F2] again to undo the selection.

6. When you have finished making your selection(s), press [F3] to begin the installation procedure.

You can now proceed to the proper section in this chapter for the application package(s) that you are installing.

Installing AUDIX Voice Power

In order to install AUDIX Voice Power, you must first have the IS-II Platform Software installed, which is already installed unless a catastrophic failure has occurred (see Chapter 6, if necessary). Installation consists of five steps, which must be completed in the following order:

1. Install the Integrated Voice Power (IVP) System software.

2. Install the AUDIX Voice Power (AVP) application software.

3. Install the MERLIN LEGEND Switch Integration software.

4. Reboot the system (by pressing [ENTER] when prompted) for the changes to take effect.

5. Confirm that the installation was successful.

The software you need for installing this application consists of the following:

■ Integrated Voice Power System software (four diskettes)

■ AUDIX Voice Power application software (five diskettes)

■ MERLIN LEGEND Switch Integration software (one diskette)

When you have logged onto the system and marked the AVP application (as described in "Preparing to Install Applications" at the beginning of this chapter), the following messages appear:

```
Insert first diskette of Integrated Voice Power System
Software

Strike ENTER when ready.
```

You are now ready to install this application.

Step 1: Install IVP System Software

1. Insert diskette #1 and press [ENTER] .

    — The screen shows:

    ```
    Verifying Integrated Voice Power System Software diskette
    ```

    – If you insert the wrong diskette or forget to put the diskette in, the system responds:

    ```
    Confirm

    Incorrect, missing, or damaged diskette. Please
    correct.

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

— When you have the correct diskette inserted, the system responds:

```
Copying Integrated Voice Power System Software to
hard disk
do not remove diskette.

Reached end of medium on input.
You may remove this diskette.
Insert diskette number 2 and strike the <ENTER>
key.
```

2. Remove diskette #1, insert diskette #2, and press [ENTER] .

— When the process is complete, the system responds:

```
Reached end of medium on input.
You may remove this diskette.
Insert diskette number 3 and strike the <ENTER>
key.
```

3. Remove diskette #2, insert diskette #3, and press [ENTER] .

— When the process incomplete, the system responds:

```
Reached end of medium on input.
You may remove this diskette.
Insert diskette number 4 and strike the <ENTER>
key.
```

4. Remove diskette #3, insert diskette #4, and press [ENTER] .

— When the process is complete, the screen shows the following:

```
You may now remove the diskette from the drive.

Installing Integrated Voice Power System Software.
...........................................
```

– A series of dots prints indicating that the files are being moved from a temporary to a permanent area.

5. Remove the diskette from the drive.

➡ NOTE:
Do not quit at this point.

Step 2: Install AVP Application Software

When the IVP System Software has been completely loaded, you will be prompted to install the AVP application software.

1. Insert the first AVP application software diskette when you see the following message:

```
Insert first diskette of AUDIX Voice Power
Application Software.

Strike ENTER when ready.
```

2. Press [ENTER] .

— The following messages display:

```
Verifying AUDIX Voice Power Application Software
diskette.
Copying AUDIX Voice Power Application Software to
hard disk do not remove diskette.

Reached end of medium on input.
You may remove this diskette.
Insert diskette number 2 and strike the <ENTER>
key.
```

3. Remove diskette #1, insert diskette #2, and then press [ENTER] .

— When the process is complete, the system responds:

```
Reached end of medium on input.
You may remove this diskette.
Insert diskette number 3 and strike the <ENTER>
key.
```

4. Remove diskette #2, insert diskette #3, and then press [ENTER] .

—When the process is complete, the system responds:

```
Reached end of medium on input.
You may remove this diskette.
Insert diskette number 4 and strike the <ENTER>
key.
```

5. Remove diskette #3, insert diskette #4, and then press [ENTER] .

—When the process is complete, the system responds:

```
Reached end of medium on input.
You may remove this diskette.
Insert diskette number 5 and strike the <ENTER>
key.
```

6. Remove diskette #4, insert diskette #5, and then press [ENTER] .

— When the process is complete, the system responds:

```
You may now remove the diskette from the drive.

Installing AUDIX Voice Power Application Software.
..................................................
```

— A series of dots prints indicating that the files are being moved from a
temporary to a permanent area.

⇒ NOTE:

If you are not successful in installing the application software, the
system responds:

```
AUDIX Voice Power Application Software
installation failed
Strike ENTER when ready.
```

7. When the software has been loaded successfully, the system will indicate that it is ready for the MERLIN LEGEND Switch Integration Software diskette.

➡️ **NOTE:**
Do not quit at this point.

Step 3: Install MERLIN LEGEND Switch Integration Software

1. Wait for the following message to appear:

    ```
    Insert first diskette of MERLIN LEGEND Switch
    Integration Software.

    Strike ENTER when ready.
    ```

2. Insert the MERLIN LEGEND Switch Integration software diskette and then press [ENTER] .

    — The system displays other messages and then copies the switch integration software.

Step 4: Reboot the System

1. Wait until the following message appears.

    ```
    Confirm
    To complete the install/remove process a shutdown
    is now being initiated automatically.
    Make sure your diskette drive is empty. If you are
    installing or removing controller boards, you may
    power down the system after the shutdown has
    completed.
    Strike ENTER when ready
    or ESC to stop.
    ```

2. Be certain the drive is empty then press [ENTER] .

3. The system continues to send messages; when you see the following message,

    ```
    The system is down.
    Reboot the system now.
    ```

    press [CTRL] —[ALT] — [DEL] or the RESET button. The system gives diagnostic information and notifies you that it is booting the UNIX system.

Step 5: Confirm AVP Installation

When the login prompt appears, you are ready to confirm that the AVP application software has been installed on the Master Controller II.

1. Log into the system using the `maint` login and the password.

   — The IS-II Main Menu should include `AUDIX Voice Power` as an item.

2. Select `Technician Maintenance` from the Integrated Solution II Maintenance window.

3. Select `Maintenance Log` from this menu.

   — The Maintenance Log window is displayed.

4. Select `Display Installed Applications`.

   — The list should include

   ```
   Integrated Voice Power System Software Release x
   AUDIX Voice Power Application Software Rx
   MERLIN LEGEND Switch Integration Software Rx
   ```

5. To exit, back out of the menus by pressing [F6] (CANCEL).

Installing the Automated Attendant (AA)

To install the Automated Attendant application software, you must first have the IS-II Platform Software installed, which is already installed unless a catastrophic failure has occurred. (See Chapter 6, if necessary.) Installation consists of four steps, which must be followed in this order:

1. Install the Integrated Voice Power (IVP) System software.

2. Install the MERLIN LEGEND Automated Attendant (AA) software.

3. Reboot the system (by pressing [ENTER] when prompted) for the changes to take effect.

4. Confirm that the installation was successful.

The software you need for installing this application consists of the following:

■ Integrated Voice Power System software (four diskettes)

■ MERLIN LEGEND Automated Attendant application software (four diskettes)

When you have logged onto the system and marked the Automated Attendant application (as described in "Preparing to Install Applications" at the beginning of this chapter), the screen shows the following:

```
Insert first diskette of Integrated Voice Power
System Software.
Strike ENTER when ready.
```

You are now ready to install this application.

Step 1: Install IVP Software

1. Insert diskette #1 and then press [ENTER] .

    — The screen eventually shows the following:

    ```
    Copying Integrated Voice Power System Software to
    hard disk
    do not remove diskette.

    Reached end of diskette on input.
    You may remove this diskette.
    Insert diskette number 2 and strike the <ENTER>
    key.
    ```

2. Remove diskette #1, insert diskette #2, and then press [ENTER].

3. When prompted, remove diskette #2, insert diskette #3, and then
    press [ENTER] .

4. When diskette #3 has completed its input, remove it, insert diskette #4, and
    then press [ENTER] .

    — When this diskette is completely loaded, the screen shows
    the following:

    ```
    You may now remove the diskette from the drive

    Installing Integrated Voice Power System Software
    ...................................................
    ```

    — A series of dots prints indicating that the files are being moved from a
    temporary to a permanent area.

Step 2: Install AA Software

You are ready to install the Automated Attendant (AA) application software when the
screen displays

```
Insert first diskette of Voice Power Automated
Attendant.

Strike ENTER when ready.
```

1. Insert diskette #1, and then press [ENTER] .

    — The system responds:

    ```
    Verifying Voice Power Automated Attendant
    diskette.

    Copying Voice Power Automated Attendant to hard
    disk
    do not remove diskette.
    ```

2. When the system prompts you to remove diskette #1 and insert diskette #2,
    place the second diskette into the drive and then press [ENTER] .

3. When the system prompts you to remove diskette #2 and insert diskette #3, place the third diskette into the drive and then press [ENTER] .

4. When the system prompts you to remove diskette #3 and insert diskette #4, place the third diskette into the drive and then press [ENTER] .

5. When the system prompts you to do so, remove the diskette from the drive.

   — You will see the following message:

   ```
   Installing Voice Power Automated Attendant.
   ...............................................
   ```

   − A series of dots prints indicating that the files are being moved from a temporary to a permanent area.

Step *3:* Reboot the System

1. Wait until you see this message.

   ```
   Confirm

   To complete the install/remove process a shutdown
   is now being initiated automatically.

   Make sure your diskette drive is empty. If you are
   installing or removing controller boards, you may
   power down the system after the shutdown has
   completed.

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

2. Be certain that the drive is empty; then press [ENTER] .

3. The system continues to send messages, and when you see the message,

   ```
   The system is down.
   Reboot the system now.
   ```

   press [CTRL] — [ALT] — [DEL] or the RESET button. The system gives diagnostic information and notifies you that it is booting the UNIX system.

Step 4 Confirm AA Installation

When the login prompt appears, you are ready to confirm that the AA application software has been installed on the Master Controller II.

1. Log into the system using the maint login and the password.

    — The IS-II Main Menu should include `Automated Attendant` as an item.

2. Selected `Technician Maintenance` from the Integrated Solution II Maintenance window.

3. Select `Maintenance Log` from this menu.

    — The Maintenance Log window is displayed.

4. Select `Display Installed Applications`.

    — The list should include

```
Integrated Voice Power System Software Release x
MERLIN LEGEND Automated Attendant Rel x.x
```

Installing Call Accounting System (CAS)

In order to install the Call Accounting System application, you must first have the IS-II Platform Software installed, which is already installed unless a catastrophic failure has occurred. (See Chapter 6, if necessary.) Installation consists of two steps:

1. Install the Call Accounting System (CAS) software diskettes.

2. Confirm that the installation was successful.

The software you need for installing this application consists of the following:

■ Call Accounting System software (four base diskettes)

■ CAS Setup software (three diskettes, to be used later) .

⇒ NOTE:

The three additional diskettes used for completing the CAS application package are designed to be used by an implementor. (Instructions for these diskettes are in Chapter 5 under "CAS Customization".)

When you have logged onto the system and marked the CAS application (as described in "Preparing to Install Applications" at the beginning of this chapter), the following message appears:

```
Insert first diskette of Call Accounting System

Strike ENTER when ready.
```

You are now ready to install this application.

Step 1: I Install CAS Software

1. Insert diskette #1 and then press [ENTER] .

    — The screen shows:

    ```
    Verifying Call Accounting System Software diskette
    ```

    — If you insert the wrong diskette or forget to put the diskette in, the
       system responds:

    ```
    Confirm

    Incorrect, missing, or damaged diskette. Please
    correct.

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

    — When you have the correct diskette inserted, the system responds:

    ```
    Copying Call Accounting System Software to hard
    disk
    do not remove diskette.

    Reached end of medium on input.
    You may remove this diskette.
    Insert diskette number 2 and strike the <ENTER>
    key.
    ```

2. Remove diskette #1, insert diskette #2, and then press [ENTER] .

    ### ➡ NOTE:
    Wait until the floppy indicator light goes out before removing diskettes.

    When the process is complete, the system responds:

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

    Insert diskette number 3 and strike the <ENTER>
    key.
    ```

3. Remove diskette #2, insert diskette #3, and press [ENTER] .

    — When the process is complete, the system responds:

    ```
    Reached end of medium on input.
    You may remove this diskette.
    Insert diskette number 4 and strike the <ENTER>
    key.
    ```

4. Remove diskette #3, insert diskette #4, and then press [ENTER].

— When the process is complete, the screen shows the following:

```
You may now remove the diskette from the drive.

Installing Call Accounting System Software.
.................................................
```

— A series of dots prints indicating that the files are being moved from a temporary to a permanent area.

5. Remove the diskette from the drive.

Step 2: Confirm CAS Installation

1. Log out and then log back into verify that the main menu includes `Call Accounting System` as an item.

2. Select `Maintenance Log` from the Technician Maintenance window.

— The Maintenance Log window is displayed.

3. Select `Display Installed Applications`.

– The list should now include

```
MERLIN LEGEND Call Accounting System x
```

4. To exit, back out of the menus by pressing [F6] (CANCEL).

There are three CAS setup diskettes to be configured before the application can be used. Information on configuring these diskettes is in Chapter 5 under "CAS Customization."

Removing IS-II Applications

Use this function only if the customer has chosen not to continue using an application or if the customer has had Automated Attendant and is moving to AUDIX Voice Power (in which case, you remove Automated Attendant and install AUDIX Voice Power).

⚠ CAUTION:
This procedure destroys all administrative files (and voice files, if any exist) that pertain to the marked application.

⇒ NOTE:
To update an application, refer to Chapter 7 under the heading of "Updating IS-II Applications."

Mark the application to be removed then press [F5] (REMOVE) and follow
the instructions.

For AUDIX Voice Power, Automated Attendant, and Cartridge Tape Utilities, a
system shutdown is initiated automatically at the end of the removal process. When
you are prompted, reboot the system using [CTRL] — [ALT] — [DEL] .

➡ **NOTE:**
>   If you attempt to remove a package that is not on the system, an Error
>   Message Screen appears.

Customizing Applications

5

CAS Customization

The following description leads you through the CAS user customization process. For more detailed information, see the *AT&T Call Accounting System (CAS) Integrated Solution II Site Installation and Implementation Guide.* There are three setup diskettes to be configured before the application can be used.

The CAS User Setup process consists of the following steps:

1. Installing the PBX/KTS Interface
2. Installing the City/State diskette
3. Installing the Major Metro (East or West) or Customized Rate/Tariff diskette
4. Editing the CAS Screens
5. Testing the PBX Interface

Displaying the System Configuration Menu

1. Select `Call Accounting System` from the Integrated Solution II Maintenance window and press [ENTER] .

    — The Call Accounting System menu is displayed.

2. Select `System Configuration` and press [ENTER] .

    — The System Configuration menu is displayed.

Installing the PBX/KTS Interface

1. Select `Install PBX/KTS Interface` and press [ENTER] .

    — The Install PBX/KTS Interface screen is displayed and the
        system responds:

        ```
        Ready to read PBX/KTS Interfaces from media.
        ```

2. Insert the PBX/KTS Interface diskette and press [ENTER] . If you have a
    Streaming Tape Unit, you will be prompted for the type of media you are
    using. Type `f` for diskette. The remainder of these instructions describe the
    diskette method.

    — The system responds:

        ```
        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.
        ```

3. Press [ENTER] .

    — The system responds:

        ```
        Installation is in progress -- do not remove the
        floppy disk.
        Installing MERLIN LEGEND Call Accounting System PBX/KTS
        Interfaces.
        Copyright (C) 1990 AT&T
        Copyright (C) 1987, 1988, 1989, 1990 MOSCOM Corporation
        All rights reserved
        xxx blocks
        Please remove disk from disk drive.
        Press <RETURN> to continue.
        ```

4. Wait until the floppy drive indicator light turns off; then remove the PBX/KTS
    diskette and press [ENTER] .

    — The system responds:

        ```
        Please wait . . . . Press <RETURN> to continue.
        ```

5. Press [ENTER] .

    — The system returns you to the System Configuration menu.

Installing the City/State Diskettes

1. Select `Install Update` from the System configuration menu and press
    [ENTER] .

    — The Install Update screen is displayed and the system responds:

    ```
    Ready to read in software from media

    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 City/State diskette and press [ENTER] .

    — The system responds:

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

    Start City/State Tables Installation at 23:19:05
    on 04/01/91.
    Installing City/States Tables.
    Copyright (C) 1990 AT&T
    Copyright (C) 1987, 1988, 1989, 1990 MOSCOM Corporation
    All rights reserved
    ```

    and then

    ```
    Setting mode and owner of City/State Tables.
    End City/State Tables Installation at 23:19:35 on
    04/01/91.

    Please remove disk from disk drive.
    Press <RETURN> to continue.
    ```

3. Wait until the floppy drive indicator light turns off; then remove the City/State
    diskette and press [ENTER] .

4. When the message `Press <RETURN> to continue` appears, press
    [ENTER] to return to the System Configuration menu.

Installing the Major Metro or Customized Rate/Tariff Diskette

➡ **NOTE:**
If you have the Customized Rate/Tariff diskette, use it in place of the Major Metro diskette.

The procedures are the same for the Major Metro or Customized Rate/Tariff diskette.

1. From the System Configuration menu, press [F6] (CANCEL) to return to the Call Accounting System main menu.

2. Select Site Configuration Menu and press [ENTER] .

    – The Site Configuration menu is displayed.

3. Select Install a Site and press [ENTER] .

    — The Install Site - Stop Costing screen is displayed along with a series of system messages.

4. Press [ENTER] when you are prompted to do so.

5. Insert the appropriate Major Metro diskette (East or West) and press [ENTER] .

    — The system responds:

            Ready to read in site software from media.

            Note: Only one site can be installed at a time.

            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.

6. After a series of messages, choose a site on the Install Site screen and press [ENTER] .

    — The system responds with the number of blocks and the following:

            Please remove disk from disk drive. Press <RETURN>
            to continue.

7. Wait until the floppy drive indicator light turns of then remove the diskette and press [ENTER] .

    — After a series of informational messages, you will see:

            Press <RETURN> to install this site, or <E>xit
            <RETURN> to quit.

8.   Press [ENTER] .

   — The system responds:

       `Please wait -- Updating system tables.`

   — A series of dots prints indicating that the data is being written from a temporary area to a permanent area, and the Edit Site Information screen appears automatically.

9.   Type *u* to select Update.

10.   Fill in the Edit Site Information screen using data from the CAS Site Information Form; use the [ENTER] key to move through the fields.

11.   Press [ESC] to save the screen.

12.   Type *e* to exit this screen.

13.   Edit the three Telephone System Configuration screens using data from the Telephone System Configuration Form.

    a.   Type *a* to add.

    b.   Fill in the information.

    c.   Press [ESC] to save the information.

    d.   Type *d* to go to the next screen.

    e.   Repeat the process for the third screen.

    f.   Repeat this process for each trunk group.

14.   Type *e* to exit.

15.   Edit the Dialed Digit Processing screen using data from the Dialed Digit Processing Form:

    a.   Type *u* to update.

    b.   Fill in the screen.

    c.   Press [ESC] to save the information.

    d. Type *e* to exit.

16.   Edit the Call Record Collection Information screen as shown in the sample form that follows.

    a.   Type *u* to update.

    b.   Fill in the information using data from the Call Record Collection Information Form.

c.   Press [ESC] to save the information.

— The Edit CDR Collection Information screen appears.

The Direct PBX Interface Parameters are defaults for the
MERLIN LEGEND Communications System and don't need to
be changed.

CALL RECORD COLLECTION INFORMATION	
Collection Device: DIRECT	
Call Record Format	❑ **legedbase (MERLIN LEGEND), basic SMDR Recoord)** ❑ **legendisdn (MERLIN LEGEND, ISDN format with ANI)**
Communication Type: 1	

Tie Zone (Hours from Greenwich Mean Time)	❑ **4 hours (Atlantic)** ❑ **5 hours (Eastern)** ❑ **6 hours (Central)** ❑ **7 hours (Mountain)** ❑ **8 hours Pacific** ❑ **10 hourse (Alaska)** ❑ **11 hours (Hawaii)**	**Daylight savings time observed?** ❑ **Yes** ❑ **N o**

Direct PBX Interface Parameters: PBX Port Baud Rate: 1200
PBX Port Data Bits: 8
PBX Port Stop Bits: 1
PBX Port Parity: None

Screen 5-1. Call Record Collection Information Screen

17.   Press [E] to exit these screens.

— The system responds:

```
This site has been installed.
Press <RETURN> to continue.
```

18.   Press [ENTER] .

— The system responds:

```
Call costing is not running.
Starting call costing. . . Call costing started.
Press <RETURN> to continue.
```

19.   Press [ENTER] .

    — The Site Configuration menu appears automatically.

20.   Press [E] to return to the Call Accounting System menu.

Editing CAS Screens

1. Select Organization Configuration from this menu and then select Edit Organization Table.

2. Press [D] .

3. Press [A] to add information.

4. Edit these screens using data from the Company Organization planning forms.

5. Press [ESC] to save information.

6. Press [E] to exit the screen.

Editing CDR Port Information

1. From the CAS main menu, select CDR Collection Configuration Menu.

2. Select Edit CDR Port Information.

3. Press [U] to update.

4. Change the port enabled? field to *y*.

5. Press [ESC] to save the information.

6. Press [E] to exit.

7. Press [F6] (CANCEL) to return to the CAS Main Menu.

Testing the PBX Interface

Testing the PBX Interface should be performed when the switch is busy processing call traffic.

Select System Configuration from the CAS Main menu.

1. Select Diagnostics and Monitoring from the System Configuration menu to begin testing the PBX interface.

2. Select Monitor PBX/KTS SMDR from the Diagnostics and Monitoring menu.

    — The Monitor PBX/KTS SMDR screen appears.

3. Press [S] to start monitoring the site.

4. Wait approximately 10 minutes; then type *f* to finish the monitoring.

5. Press [E] to exit this screen and return to the CAS main menu.

6. You can then view the logs and run reports as described in the *AT&T Call Accounting System (CAS) Integrated Solution II User's Guide.*

Administering the Voice System

This option allows you to customize your AVP and AA applications once they have been installed. The customer should have completed the planning forms prior to starting this procedure.

To access the Voice System Administration, do the following:

1. Select `Voice System Administration` from the Technician Maintenance menu.

    — The Voice System Administration window is displayed.

```
                    Voice System Administration

              >Application Package  Administration
               Confiuration  Management
               Reports Administration
               Switch Interface Administration
               System Monitor
```

| HELP | | | PREV-FRM | | NEXT-FRM | CANCEL | CMD-MEND / FRM-MGMT | CHG-KEYS / CHG-KEYS |
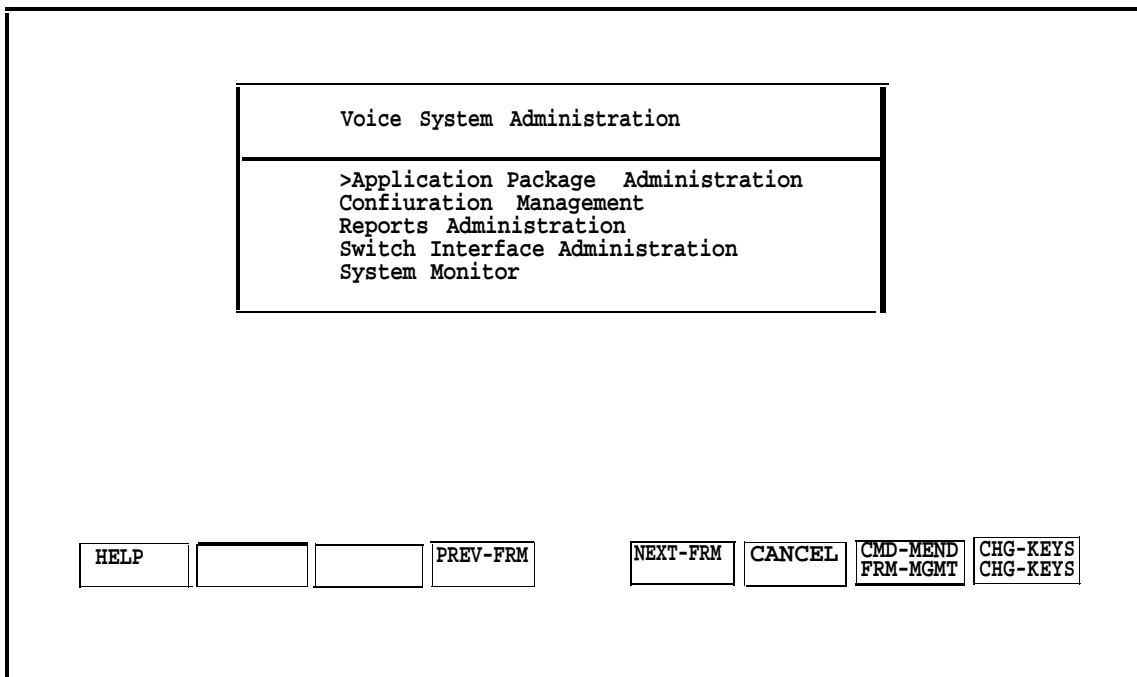
Screen 5-2. Voice System Administration Menu

2. Select the item you want to administer and press [ENTER] .

3. Move to the items you want to select by using the arrow keys, and press [ENTER] to select.

For information on how to administer either AVP or AA, use the *System Manager's Guide* that was provided with the system.

Recovering From Catastrophic Failures

6

Recovery Procedures

Although the initial installation of the UNIX Base System Package and customer-ordered applications is done at the Staging Center using a Streaming Tape Unit (STU) and a cartridge tape, you maybe responsible for recovering the system from cartridge tapes and/or diskettes after a catastrophic failure at the customer site.

The procedures for recovering the Integrated Solution II software are outlined on the following pages. Most of what you will see on the Master Controller II (as you install the diskettes) appears in this section. There maybe some system messages that appear on the screen that are not shown here. This depends on what version of the software you have installed on your computer.

Before you can recover the system after a crash, you must first determine what caused the crash to occur and then try to fix it.

There are three possible problems that might have occurred:

- Hard disk failure
- Motherboard failure
- Data corruption

Refer to Chapter 8, "Troubleshooting", to determine what the problem is and how to resolve it. The remainder of this chapter explains how to recover after a hard disk failure from disk and tape and how to recover from data corruption.

Recovering from Hard Disk Failure

There are two methods used for recovering from hard disk failure: diskette and tape. Customers without a tape unit and tape backup use the diskette method. All applications, administrative files, and voice system files are recovered from diskette.

Customers having tape drives and backup tapes can be recovered more quickly from hard disk failure than those using diskettes alone. With the tape method, UNIX and Cartridge Tape Utilities are installed from diskette. All applications, administrative files, and voice system files are recovered from tape.

Materials Required

Recovering Using Diskette

You will need the following materials to recover and reinstall the system after a hard disk crash.

- The Master Controller II
- UNIX SYSTEM V (Release 3.22) 366 Foundation Set Base System Package Diskettes 1-7
- IS-II Platform Software -1 diskette
- MERLIN LEGEND System Programming and Maintenance Utility -1 diskette
- UNIX System V 366 FMLI 1.2 Software Package -1 diskette
- FACE HELP 12 Software Package -1 diskette
- FACE 12 Software Package -2 diskettes
- Foundation Set Editing Package V2.0, Rel. 3.2.2-1 diskette

■ Appropriate Application Diskettes:

   — AVP (AUDIX Voice Power)

      — IVP System Software Release 1.2 diskettes (four)

      — AVP Application software Release 2.1 diskettes (five)

      — MERLIN LEGEND Switch Integration Software
        Release 1.1 diskette

   — CAS (Call Accounting System) - CAS diskettes (four) and setup
     diskettes (four)

   ➥ **NOTE:**
      Only three of the four setup diskettes are to be used, because
      you will use either the East or West Major Metro diskette,
      not both.

   — AA (Automated Attendant)

      — IVP system software Release 1.2 diskettes (four)

      — MERLIN LEGEND Automated Attendant application software
        Release 1.1 diskettes (four)

   — Voice files backup diskette(s)

   — System files backup diskette(s)

Recovering Using Tape

In addition to the above, you will need the following materials to recover the system
from tape if the hard disk fails:

   ■ Streaming Tape Unit (STU)

   ■ Cartridge Tape Utilities diskette, Version 2.1

   ■ Voice files backup tape

   ■ System files backup tape

Using the Diskette Method

> ⇒ **NOTE:**
> You will follow this procedure only if the customer does not have a tape drive and backup tapes.

If you are recovering the system from a hard disk crash, do the following:

1. Replace the hard disk.

   — For this information, see the *PC 6386 WGS Service Manual,* or the *AT&T Applications Controller User's Guide* for the Master Controller II+.

2. Install UNIX System V Release 3.2.2386 Foundation Set Base System software (all 7 diskettes).

3. Install the IS-II Platform Software and other UNIX software.

4. Install applications from diskettes.

5. Restore administrative and voice system files from backup (if available).

These procedures are described in detail in the following sections.

Installing UNIX System Files

You will need the seven diskettes for the UNIX System V Release 3.2.2386 Foundation Set Base System to install the UNIX System V Base System Package.

The installation procedure is as follows:

1. With the Master Controller II power off, insert diskette 1 of 7 into the disk drive on the front of the Master Controller II.

2. Press the power button.

   — You should see the resident diagnostics on the screen and the following message:

   ```
   xxxK of unshadowed memory added to extended memory
   and removed from dedicated memory.

   Booting the UNIX System. . . (additional messages
   will also appear here)
   Strike ENTER to install the UNIX System on your
   hard disk.
   ```

   > ⇒ **NOTE:**
   > You may receive the following message while UNIX is booting up.

   ```
   Enter the name of the kernel to boot:
   ```

   If the message should appear, type */unix* and press [ENTER] .

3. Press [ENTER] .

— The system responds:

```
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. Type y and press [ENTER] .

— The system responds:

```
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. Type n and press [ENTER] .

— The system responds by showing you the size (in cylinders) of your hard disk. It will be one of the following values.

Table 6-1. Disk Size in Cylinders

Disk Size	Cylinders
40 MB	977
60 MB	965
100 MB	761
200 MB	684

```
Total hard disk size is _____ Cylinders

Parti -                   Cylinders
tion   Status   Type   Start   End   Length %


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:
```

6. Type *1* at the `Enter Selection:` prompt and press [ENTER] .

    — The system responds:

    ```
    Indicate the type of partition you want to create

    (1 - UNIX System, 2 = DOS only, 3 = Other, x =
    Exit) .
    ```

7. Type *1* for UNIX and press [ENTER] .

    — The system responds:

    ```
    The UNIX system partition must use at least 25% of
    the hard disk.
    Indicate the percentage (25-100) of the hard disk
    you want this partition to use (or enter c to
    specify in cylinders):
    ```

8. Type *100* and press [ENTER] .

    ⇒ **NOTE:**
    Only a 100% UNIX partition will be supported with IS-II.

    The system responds:

    ```
    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".
    ```

9. Type *y* and press [ENTER] .

    — The system responds by showing you the number of cylinders
      (cylinders length) and their ending position (cylinders end).
      The values you see depend on the size of your hard disk, as follows:

Table 6-2. Disk Cylinders End and Length

Disk Size	Cylinder End	Cylinder Length
40 MB	976	977
80 MB	964	965
100 MB	760	761
200 MB	683	684

```
Parti -               Cylinders
tion   Status  Type   Start   End    Length %
--------------------------------------------------
1      Active UNIX Sys   0    ____    ____    100

Partition 1 is now the Active partition
```

10. Select [4] and press [ENTER] at the `Enter Selection:` prompt.

    — The system responds:

    ```
    If you created a UNIX system or DOS partition, you
    must format the partition to reflect the new disk
    configuration. Changing only the active partition
    does not require a format.

    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.
    ```

11. Press [ENTER] to continue.

    — The system checks for bad sectors and then recommends space allocation based on the size of your hard disk

    ```
    Checking for bad sectors in the UNIX System
    partition. . . Checking cylinder: ____
    ```

    (Goes through all cylinder numbers)

    ```
    The UNIX System partition has_____cylinders
    assigned to it. 1 cylinder will be used for
    alternate sectors. This leaves_____cylinders
    ( _____ bytes) available.

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

    A root filesystem of ____ cylinders ( _____
    bytes), a user (/usr) filesystem of_____cylinders
    ( _____ bytes), and a swap/paging area of ____
    cylinders ( _____ bytes ).
    ```

    ⚠ CAUTION:
    Be very careful how you answer the next
    question. Your answer must be 'n' for no.

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

12. Type `n` and press [ENTER] ;you need two/usr file systems: one for applications and the other for speech file systems. (If you accidentally type `y,` you will have to restart the installation procedures.)

13. Answer the following questions appropriately:

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

14. Type `n` and press [ENTER] .

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

15.   Type *y* and press [ENTER] .

— The system responds:

```
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)?
```

16.   Type [N] and Press [ENTER] .

— The system responds:

```
You will now be given the opportunity to specify
the size, in cylinders, of each filesystem. (One
megabyte of disk space is approximately _
cylinders.)
```

➡ **NOTE:**
Respond to the following questions in accordance with the
information contained in the following table for the size of hard
disk in your system.

Table 6-3. Cylinders for Filesystems

Responses	40MB	80MB	100MB	200MB
Cylinders for Swapping (SP)	100	60	40	30
Cylinders for Root/usr (RU)	764	494	331	304
Cylinders for /usr2 (UR2)	100	410	390	348

```
How many cylinders would you like for swap/paging
(l-xxx)? SP <ENTER>
```

17.   Type the number of cylinders you want and press [ENTER] .

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

18.   Type the number of cylinders you want and press [ENTER] .

```
The remaining UR2 cylinders will be assigned to
/usr2.

You have specified the following disk allocation:
A combined root/usr filesystem of RU cylinders
(_____ bytes), an extra user filesystem
(/usr2) of UR2 cylinders (_____ bytes), and a
swap/paging area of SP cylinders (_____
bytes).
```

19. Answer the next set of questions appropriately:

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

20. Type `y` and press [ENTER] .

    ```
    UNIX System file system(s) will now be created on
    your hard disk. . .

    UNIX System file system(s) have been created in
    your active UNIX system partition. A UNIX System
    will now be installed on your hard disk. . . .
    ```

    – You will wait approximately five minutes as the UNIX system is installed, and will then see these additional messages.

    ```
    Please standby.
    When you are prompted to reboot your system,
    remove the disk from the diskette drive and strike
    CTRL-ALT-DEL. Please wait for the prompt.

    Reboot the system now.
    ```

21. Make sure you have removed the diskette and pressed [CTRL] — [ALT] — [DEL] before continuing.

    – The resident diagnostics information is displayed and then other system messages appear.

    ```
    total real mem = 4059136
    total available mem = 3153920
    ```

    (memory space will be different from machine to machine)

    ```
    UNIX System V/386 Release 3.2.2

    Copyright (c) 1984, 1986, 1987, 1988, 1989 AT&T
    Copyright (c) 1987, 1988 Microsoft Corp.
        All rights reserved
    ```

    – The system eventually shows the following:

    ```
    Confirm

    Please indicate the installation medium you intend
    to use.

    Strike "C" to install from CARTRIDGE TAPE or "F"
    to install from FLOPPY DISKETTE (or) STRIKE ESC to
    stop .
    ```

22. Type `f`.

    — The system responds:

    ```
    Please insert the UNIX System "Base System
    Package" Floppy Disk 2 of 7 and then strike ENTER.
    ```

23. Insert diskette #2 and press [ENTER] .

    — The system responds:

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

24. When you hear the beep indicating the installation incomplete, remove the diskette.

    — You will receive this message:

    ```
    Please insert the UNIX System "Base System
    Package" Floppy Disk 3 of 7 and then strike ENTER.
    ```

25. Repeat this process for diskettes #3 - #7.

    — The lights will flash, and upon completion you will see the following message.

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

    System time is: _____
    Enter a password for the 'root' or super user.

    (NOTE: This password must be kept EXTREMELY
    secure):
    ```

26. Type *system25* and press [ENTER] . (The password will not appear on the screen.)

27. Type *system25* and press [ENTER] again.

28. When the system responds,

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

    Type system25 at the New password: prompt and press [ENTER] , even though the system tells you to make it different from the "root" password.

29.   Type *system25* at the `Re-enter new password:` prompt and
       press [ENTER] .

> The UNIX Operating System will now be rebuilt.
> This will take approximately 2 minutes. Please
> wait.
>
> The UNIX kernel has been rebuilt.
>
> NOTE: Your system is equipped with two built-in
> serial ports.
>
> Support for both of these ports has automatically
> been provided in the UNIX System being installed.
>
> The second serial port is using interrupt 3 and
> address range 2F8 -> 2FF.
>
> If you do not want to use the second port, and
> would like to reclaim the interrupt line and
> address range that this port uses, it can be
> disabled with the "Enable/Disable Second Serial
> port" option of the "Peripherals Setup" menu in
> FACE .
>
> The UNIX System installation process is now
> complete.
>
> To install the Foundation Set Add-On packages, use
> the "installpkg" command from the UNIX system
> prompt.
>
> Be sure the floppy drive is empty and strike CTRL
> ALT DEL to reboot your newly configured UNIX
> system. Reboot the system now.

30.   Remove the diskette from the drive.

31.   Press [CTRL] — [ALT] — [DEL] to reboot the system.

➡ NOTE:

If you are recovering using the tape method, go to the section titled "Using the
Tape Method" in this chapter.

Installing IS-II Platform and Other UNIX Software

To install the IS-II Platform and UNIX software you will need the following diskettes:

- The IS-II Platform Software -1 diskette

- MERLIN LEGEND System Programming and Maintenance Utility - 1 diskette

- FMLI 1.2 Software Package -User Interface Utilities, Release 3.2.2 -1
  diskette

- FACE Help 1.2 Software Package-Release 3.2.2 -1 diskette

- FACE 1.2 Software Package-Release 3.2.2 -2 diskettes

- Foundation Set Editing Pkg.-Release 3.2.2-1 diskette

The installation procedure is as follows:

1.   When you see the following prompt,

     ```
     Welcome to the AT&T 386 UNIX System.
     Console login:
     ```

     type *root* and press [ENTER] .

2.   Type *system25* at the password: prompt and press [ENTER] .

3.   Type *installpkg* at the UNIX prompt and press [ENTER] .

     — The system responds:

     ```
     Confirm.
     Please insert the floppy disk.
     ```

     – Additional messages appear.

4.   Install the IS-II platform software diskette and press [ENTER] when ready or [ESC] to stop as shown on the screen.

     ```
     Installation in progress - do not remove the floppy disk
     Searching for the size file.
     Install in progress. Installation of MERLIN LEGEND IS-II
     platform software X.X software in progress.
     Setting environment variables
     Checking for necessary Foundation Set packages
     Missing FMLI package
     Confirm. Please insert FMLI diskette.
     Strike ENTER when ready or ESC to stop.
     ```

5.   Remove the IS-II platform diskette and insert the FMLI diskette and then press [ENTER] .

     System messages continue.

     ```
     Verifying FMLI diskette.
     Copying FMLI to hard disk - do not remove diskette
     You may now remove the diskette from the drive
     Installing FMLI
     FMLI installation completed
     Missing FACE package
     Confirm
     Please insert FACE package
     Strike ENTER when ready or ESC to stop.
     ```

6. Remove the FMLI diskette and insert the first FACE diskette and then press [ENTER] .

    — System messages continue.

    ```
    You may remove this diskette.

    Insert diskette number 2 and strike the <ENTER>
    key
    ```

7. Remove diskette #1, insert diskette #2, and then press [ENTER] .

    — A series of dots prints indicating that the files are being moved from a temporary to a permanent area.

    ```
    You may now remove the diskette from the drive.

    Installing FACE

    FACE  installation completed

    Missing FACE HELP package

    Confirm

    Please insert FACE HELP diskette

    Strike ENTER when ready or ESC to stop
    ```

8. Remove the FACE diskette and insert the FACE HELP diskette and then press [ENTER] .

    — System messages continue.

    ```
    Verifying FACE HELP diskette

    Copying FACE HELP to hard disk - do not remove
    the diskette

    You may now remove the diskette from the drive.

    Installing FACE HELP

    FACE HELP installation completed.

    Missing Editing Package

    Confirm

    Please insert Editing diskette

    Strike ENTER when ready or ESC to stop
    ```

9. Remove the FACE HELP diskette, insert the editing diskette, and then press [ENTER] .

    — System messages continue.

    ```
    Verifying Editing diskette

    copying editing to hard disk ˉdo not remove
    diskette

    You may now remove the diskette from the drive

    Installing Editing

    Editing installation completed.

    Checking for Application Logins
    CREATING LOGIN FOR is
    CREATING LOGIN FOR maint
    CREATING LOGIN FOR vpx
    CREATING LOGIN FOR spm
    CREATING LOGIN FOR cas
    CREATING LOGIN FOR remote
    Configuring serial ports
    Configuring parallel printer port

    Confirm

    Insert the first diskette of the MERLIN LEGEND System
    Programming and Maintenance Utility
    ```

Installing the System Programming & Maintenance Utility (SPM) and Other Applications

Step 1: Install SPM Application

1. Insert the SPM diskette and then press [ENTER] to install SPM.

    — The system responds:

    ```
    Verifying MERLIN LEGEND System Programming & Maintenance
    Utility diskette

    Copying System Programming & Maintenance Utility to hard disk

    do not remove diskette
    ```

2. When the system prompts you to do so, remove the diskette from the drive.

    — You will see the following message:

    ```
    Installing System Programming & Maintenance Utility
    ...........................................
    ```

    — A series of dots prints indicating that the files are being moved from a temporary to a permanent area; then the following message appears:

    ```
    Remove any floppy diskette from drive.

    Strike ENTER when ready.
    ```

3.   When you have removed the diskette, press [ENTER] .

— The Administer Integrated Solution II window appears.

```
        Administer Integrated Solution II


        AUDIX Voice Power (AVP)
        Cartridge Tape Utilities
        Call Accounting System (CAS)
        Automated Attendant (AA)




 ┌──────┐ ┌────────┐┌────────┐ ┌──────┐    ┌──────┐ ┌────────┐┌──────┐┌──────┐
 │ HELP │ │UN/MARK ││INSTALL │ │      │    │      │ │ CANCEL ││      ││      │
 └──────┘ └────────┘└────────┘ └──────┘    └──────┘ └────────┘└──────┘└──────┘
```
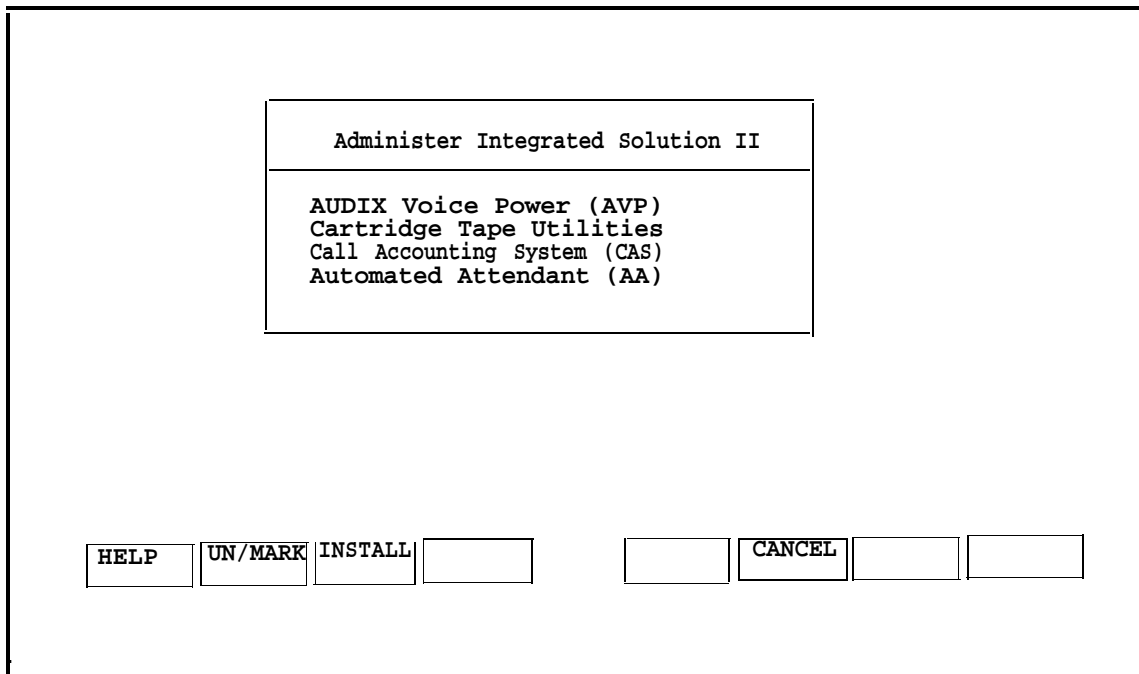
Screen 6-1. Administer Integrated Solution II

4.   Move the cursor to each application package that you are going to install (making sure that you mark each application with the [F2] key as you select it).

If you marked an application by mistake, move the cursor back to that application and press [F2] again to unmark it.

NOTE:
You *must* install each application that the customer had prior to the failure.

5.   When you have finished making your selection(s), press [F3] to begin the installation procedure.

Installing Applications

Having completed installation of SPM, you can proceed to the appropriate section in Chapter 4, "Maintaining IS-II Applications," for instructions on how to install the application package(s) that you have selected.

If the customer has backed up administrative and/or voice system files as described in Chapter 5 of the *AT&T Integrated Solution II System Manager's Guide,* you will also have to restore these files *after* installation.

Restoring Administrative Files

After you have confirmed that each application is installed, restore any administrative files that were backed up.

If you have AUDIX Voice Power or Automated Attendant, this procedure will include a process for restoring your voice files.

1. Select `Administrative Files Restore from Floppy` from the Restore Files menu and press [ENTER] .

    — The system responds:

    ```
    Confirm

    IS-II Application Administrative Files Restore
    will restore from diskette the administrative
    files associated with all installed applications.

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

2. Press [ENTER] .

    — You will see the following message.

    ```
    Insert System Files Backup diskette #1 to restore
    from.

    Strike ENTER when ready.
    ```

3. Insert the diskette you labeled "System Files Backup" and press [ENTER] .

    — The system responds:

        Restore in progress

    — The screen displays the number of blocks and then the
      following messages:

        The IS- II Application Administrative Files restore
        from floppy disk was successful. Remove the
        diskette from the drive.

        It is advisable to do a voice system restore now,
        this will be done automatically.

        Strike ENTER when ready.

    ⇒ **NOTE:**
    Messages referring to voice system files only appear if AVP or AA
    is installed.

4. Remove the System Files diskette and press [ENTER] .

    — The system responds:

        The voice system Restore from floppy diskette will
        recover the custom voice prompts for AUDIX voice
        Power services that were previously saved with the
        "Voice System Backup to Floppy" command.

        Strike ENTER when ready or ESC to stop.

5. Press [ENTER] .

    — The system prompts you to insert the Voice System Backup diskette:

        Please insert disk #1 then type<enter> to continue

6. Insert the Voice System Backup diskette and press [ENTER] .

7. When you see the following message,

        The voice system files have been successfully recovered. Please
        remove the diskette.

        Strike ENTER when ready.

    remove the diskette and press [ENTER] .

    — The system responds:

        The voice system will now be stopped and
        re-started for changes to take effect.

        Strike ENTER when ready.

8. Press [ENTER] .

    — System and informational status using messages will appear as the system is
      stopped and restarted. You will automatically return to the Restore
      Files menu.

Using the Tape Method

If you are recovering from a hard disk crash, follow the procedures outlined below. You will need two tape cartridges (made with a previous system backup) before you begin these procedures.

1. Replace the hard disk. For this information, see the *PC 6386 WGS Service Manual* or the *AT&T Applications Contnoller User's Guide* for the Master Controller II+.

2. Install the UNIX Base System Package.

3. Install Cartridge Tape Utilities.

4. Restore the System files.

5. Restore the voice system files.

You should have the following materials available before you begin these procedures:

■ Cartridge Tape Utilities diskette

■ Voice files backup tape and system files backup tape (made in a previous backup procedure)

Installing UNIX Base System Package

Refer to the section "Installing UNIX System Files" documented earlier in this chapter.

Installing Cartridge Tape Utilities

To install Cartridge Tape Utilities, do the following:

1. Type `root` at the `Welcome to the AT&T 386 UNIX System login:` prompt and press [ENTER] .

2. Type `system25` at the `Password:` prompt and press [ENTER] .

3. Type `installpkg` at the UNIX prompt (#) and press [ENTER] .

    — The system responds:

        Confirm.

        Please insert the floppy disk.

    – Additional messages also appear.

4. Insert the Cartridge Tape Utilities diskette and press [ENTER] .

    — The system responds:

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

    Searching for the size file.
    Install in progress.

    Installing Cartridge Tape Utilities - Version
    x.x...

    Available interrupts for the Cartridge Tape
    Utilities Version x.x IRQ2 IRQ5

    Type the interrupt number and strike the ENTER key
    or type Q to cancel installation.
    ```

5. Type 5 and press [ENTER] .

    — The system responds:

    ```
    Confirm

    You are installing the Cartridge Tape Utilities -
    Version 2.1 using hardware interrupt number 5 and
    addresses 288 through 289. Be sure that these
    values are not in use by another add-on board.

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

6. Press [ENTER] to install the Cartridge Tape Utilities.

    — The system responds:

    ```
    .....Complete.  The UNIX Operating System will now
    be rebuilt. This will take approximately 2
    minutes. Please wait.

    The UNIX Kernel has been rebuilt.

    Confirm
    To complete the install/remove process a shutdown
    is now being initiated automatically.

    Make sure your floppy drive is empty. If you are
    installing or removing controller boards, you may
    power down the system after the shutdown has
    completed.
    Strike ENTER when ready or ESC to stop.
    ```

7. Press [ENTER] to shut down the system.

    — The standard shutdown messages are displayed.

8. Press [CTRL] — [ALT] — [DEL] at the `Reboot the system now` prompt to bring up the system.

Restoring System Files

To restore the system files (includes application programs and IS-II Platform software) after a hard disk crash, do the following:

1. Type `root` at the `Welcome to AT&T 386 UNIX System Console Login:` prompt and press [ENTER].

2. Type `system25` at the `Password:` prompt.

3. Type `restore -c -o -t -d /dev/rmt/c0s0` and press [ENTER].

   — The system responds:

   ```
   Insert Cartridge Tape to restore from.
   Strike ENTER when ready.
   ```

4. Insert the System Files tape from the previous backup.

   — The system responds:

   ```
   Restore in progress
   ```

   — The system displays a list of all the files that are being restored from the hard disk to the cartridge tape and finally responds:

   ```
   Restore is now finished.
   ```

5. Wait for the light on the Streaming Tape Unit to turn of' then remove the System files tape from the drive.

Shutting Down and Rebooting the System

To shut down the system, do the following:

1. Type `is2init` at the UNIX prompt (#) and press [ENTER].

   — The standard shutdown messages appear.

2. To reboot the system, press [CTRL] – [ALT] – [DEL].

   — The standard resident diagnostics check begins.

Restoring Voice System Files

To restore voice system files from tape, do the following:

1. Type `maint` at the `Welcome to the Integrated Solution II Console Login:` prompt.

2. Type the password when prompted to do so.

3. Select `Technician Maintenance` from the `Integrated Solution II` Maintenance menu and press [ENTER].

4. Select `Restore Files` from the Technician Maintenance menu and press [ENTER].

5. Select `Voice System Restore` from the Restore Files menu and
    press [ENTER] .

6. Select `Complete Voice System Restore from Tape` and
    press [ENTER] .

7. Insert the tape you labeled "Voice Files" and press [ENTER] .

    —   The system responds:

        ```
        Restoring speech saved on (gives date of backup
        here and other messages appear)
        ```

    —   The system then lists all the files that are being restored from tape.
        When this process is over the system responds:

        ```
        The Voice System Files have been successfully
        restored
        When the light on the tape drive turns off, remove
        the tape.

        Strike ENTER when ready.
        ```

8. When the light on the tape drive turns off, remove the tape and
    press [ENTER] .

    —   The system responds:

        ```
        The voice system will now be stopped and
        re-started for changes to take effect.

        Strike ENTER when ready.
        ```

9. Press [ENTER] .

    —   System and informational status messages are displayed as the system
        is stopped and restarted.You are automatically returned to the Restore
        Files menu.
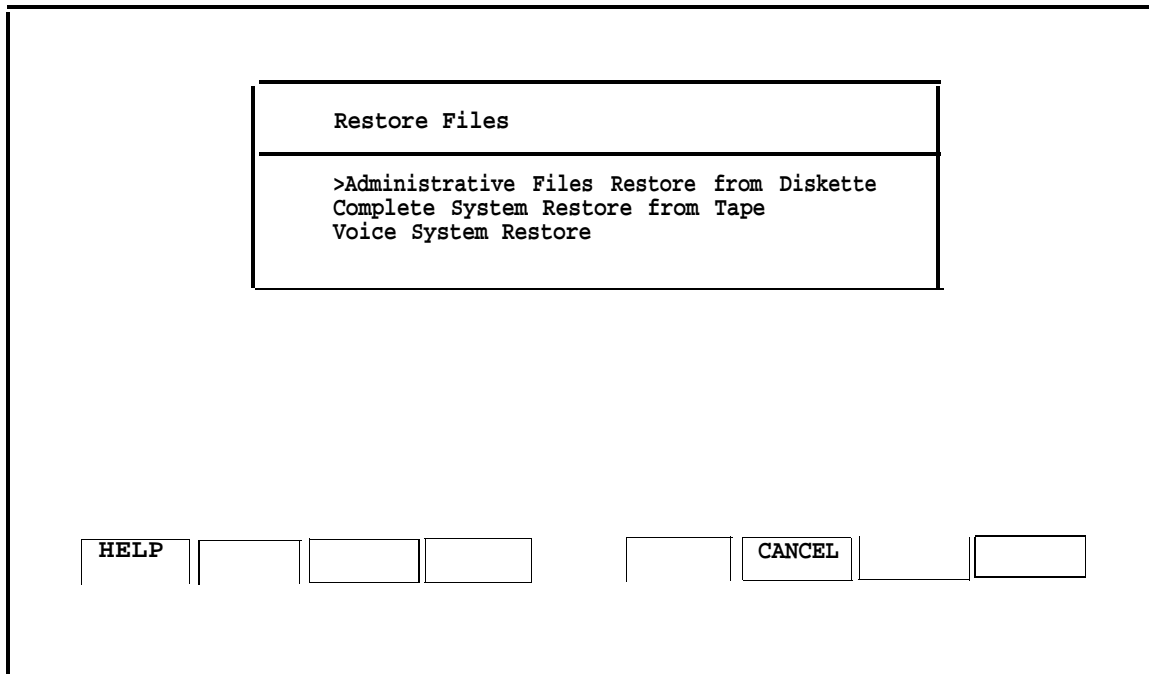
Restoring from Data Corruption

The Complete System Restore from Tape procedure allows you to restore files that
were lost when your data was corrupted. You can use this procedure only to restore
from data corruption if you have previously backed up your system to tape. If you
used the diskette method to back up your system you will only have backed up your
administrative files and some voice files. It is critical that you back up your system to
tape or else you will have to reinstall the entire system.

Customers without a tape drive and tape backup must use the diskette method to
restore from data corruption. Follow the procedure outlined in this Chapter under
"Recovering from Hard Disk Failure."

If you have a tape drive, do the following to restore from data corruption.

1. Select `Restore Files` from the Technician Maintenance menu and press [ENTER] .

    — The Restore Files window is displayed:

```
┌─────────────────────────────────────────────────┐
│                                                 │
│      ┌──────────────────────────────────┐       │
│      │  Restore Files                   │       │
│      ├──────────────────────────────────┤       │
│      │  >Administrative Files Restore from Diskette │
│      │  Complete System Restore from Tape │       │
│      │  Voice System Restore            │       │
│      │                                  │       │
│      └──────────────────────────────────┘       │
│                                                 │
│                                                 │
│                                                 │
│  ┌──────┐  ┌────┬────┬────┐   ┌────┬────────┬────┬────┐ │
│  │ HELP │  │    │    │    │   │    │ CANCEL │    │    │ │
│  └──────┘  └────┴────┴────┘   └────┴────────┴────┴────┘ │
│                                                 │
└─────────────────────────────────────────────────┘
```

Screen 6-2. Restore Files Menu

2. Select `Complete System Restore from Tape` and press [ENTER] .

    –   The system responds with a message telling you how many tapes you will need.

3. When you see the message

    `Strike ENTER when ready or ESC to stop.`

    press [ENTER] .

    — The system responds:

    `Please insert the System Files tape cartridge and`
    `press Enter .`

4. Insert the tape labeled System Files and press [ENTER] .

— The system displays a long list of files that are being restored from
   tape. When this process is over the system responds:

   ```
   The application files and system files have been
   successfully restored. When the light on the tape
   drive turns off, remove the tape.

   Strike ENTER when ready.
   ```

5. When the light on the tape drive turns off, remove the tape and
   press [ENTER] .

— The system responds:

   ```
   When prompted for "tape # 1" please insert the
   "Voice Files" tape.

   Please insert tape #1 . . then type <enter> to
   continue
   ```

6. Insert the tape you labeled "Voice Files" and press [ENTER] .

— The system responds:

   ```
   Restoring speech saved on (gives date of backup
   here and other messages appear)
   ```

— The system then lists all the files that are being restored from tape.
   When this process is over the system responds:

   ```
   The Voice System Files have been successfully
   restored
   When the light on the tape drive turns off, remove
   the tape.
   Strike ENTER when ready.
   ```

7. When the light on the tape drive turns off, remove the tape and
   press [ENTER] .

— The system responds:

   ```
   The voice system will now be stopped and
   re-started for changes to take effect.

   Strike ENTER when ready.
   ```

8. Press [ENTER] .

— System and informational status messages are displayed as the system
   is stopped and restarted. You are automatically returned to the Restore
   Files menu.

Upgrading to a New IS-II Release

7

Introduction

Upgrading from one release to another may include the installation of software, hardware, or both. This section describes how to perform these upgrades. Each procedure is complete and maybe performed independently of the others.
Perform the appropriate procedures in the following order (all of which are described in this chapter):

The following procedures are described in this chapter.

1. Installing the streaming tape drive

2. Installing the optional 100MB or 200MB disk drive

Hardware Upgrades

Installing the Optional
Streaming Tape Drive

The streaming tape drive is installed in the Master Controller II system module. The installation consists of installing the required driver software, removing the system module cover, installing the streaming tape controller board into the system module and then mounting and connecting the streaming tape drive.

> **NOTE:**
> Do not use this procedure for replacing a streaming tape drive already installed. If you are replacing an existing streaming tape drive, refer to the *6386/SX Work Group System User's Guide* for instructions.

If you are using the Master Controller II+, see the *AT&T Applications Controller User's Guide.*

Use the following procedures to install the streaming tape drive:

1. At the Login: prompt, type *maint* and then press [ENTER] .

2. At the Password: prompt, type the password and then press [ENTER] .

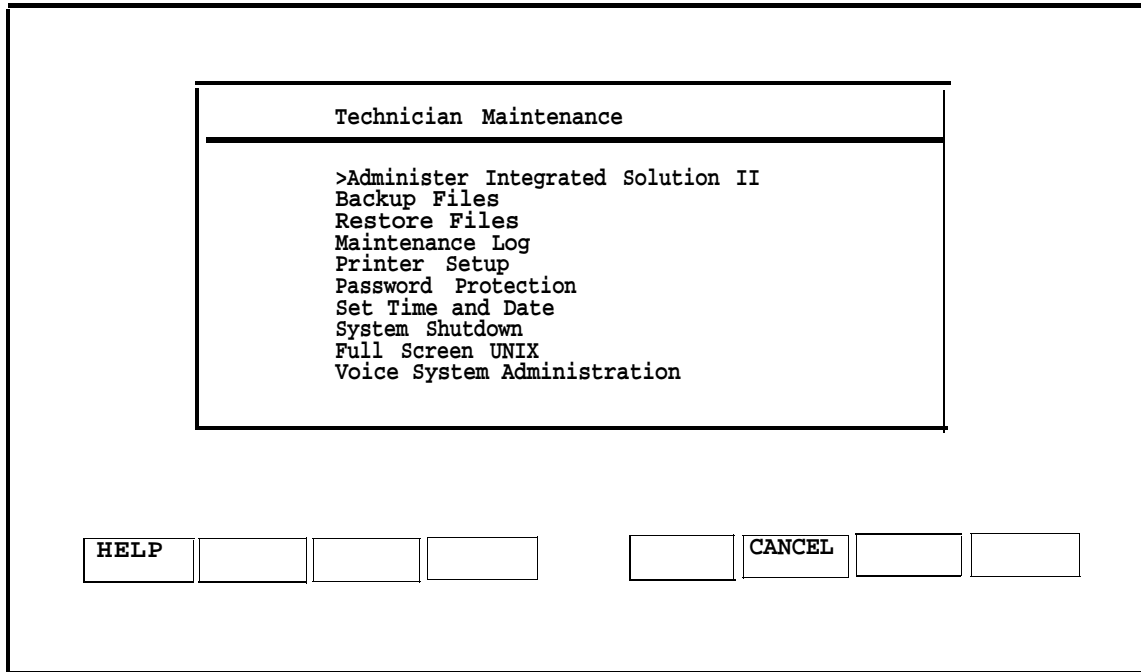   — The Integrated Solution II Maintenance window is displayed.

```
        Integrated Solution II Maintenance

System Programming and Maintenance Utility (SPM)
>Technician  Maintenance
Exit
```

```
HELP
```

Screen 7-1. MERLIN LEGEND Integrated Solution II Maintenance Menu
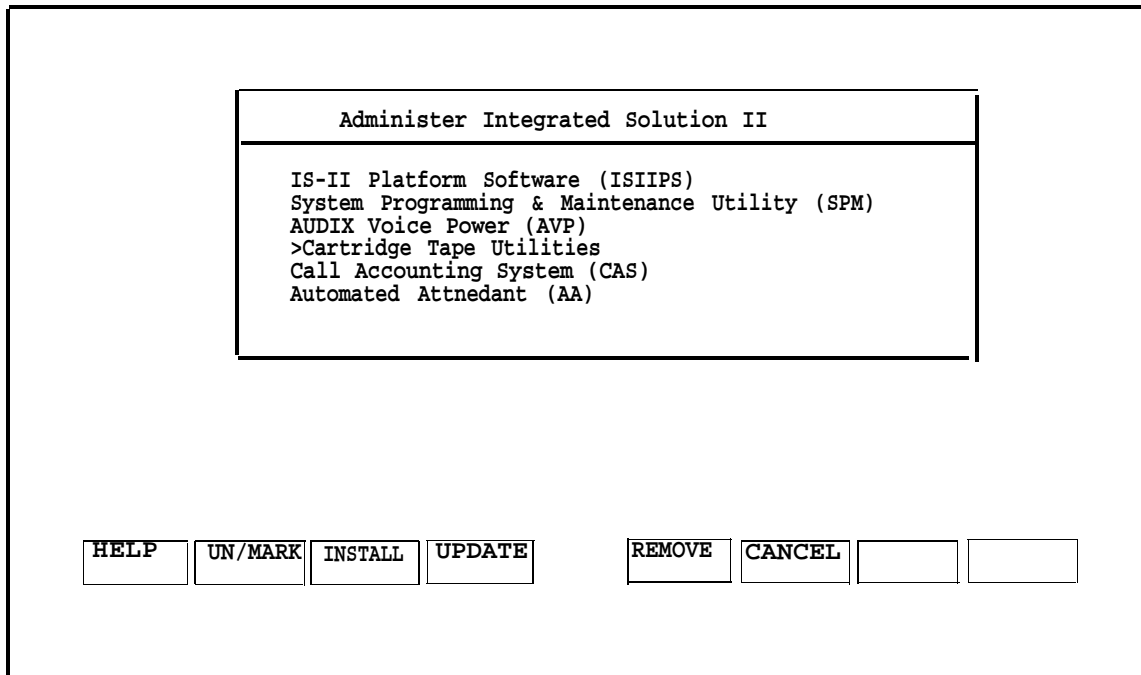
3. Select Technician Maintenance and then press [ENTER].

— The Technician Maintenance window is displayed.

```
                    Technician Maintenance

              >Administer Integrated Solution II
               Backup Files
               Restore Files
               Maintenance Log
               Printer  Setup
               Password  Protection
               Set Time and Date
               System  Shutdown
               Full  Screen UNIX
               Voice System Administration
```

| HELP | | | | | CANCEL | | |

Screen 7-2. Technician Maintenance Menu

4.   Select `Administer Integrated Solution II` and then press [ENTER].

— The Administer Integrated Solution window is displayed.

```
        Administer Integrated Solution II

   IS-II Platform Software (ISIIPS)
   System Programming & Maintenance Utility (SPM)
   AUDIX Voice Power (AVP)
   >Cartridge Tape Utilities
   Call Accounting System (CAS)
   Automated Attnedant (AA)
```

| HELP | UN/MARK | INSTALL | UPDATE | | REMOVE | CANCEL | | |

Screen 7-3. Administer Integrated Solution Menu

5.   Select Cartridge Tape Utilities and then press [F2] to mark it.

➡ NOTE:
If you marked something by mistake, move the cursor back to it and press
[F2] again to undo the selection.

6.   When you have finished making your selection, press [F3] to begin the
     installation procedure.

➡ NOTE:
During the installation process, the light on the diskette drive will turn
on every time you press [ENTER] to let you know the process
has begun.

7.   Follow the prompts on the screen and install the Cartridge Tape Utilities.
     Strike [ENTER] when prompted by the system:

     Strike ENTER when ready or ESC to stop.

8.   Shut off the power to the Master Controller II and disconnect the power cord
     when the following system prompt appears on the screen.

     The system is down. Reboot the system now.

9. Refer to Appendix C "System Expansion" of the *AT&T 6386/SX Work Group System User's Guide,* which was supplied with the Master Controller II, for instructions on installing expansion hardware. Read the section "Installing Expansion Kits" for general information and safety precautions.

If you are using the Master Controller II+, see the *AT&T Applications Controller User's Guide.*

Use the procedures to perform the following tasks:

   a. Removing the system module cover

   b. Installing the streaming tape controller board (Use expansion slot 4.)

   c. Installing the streaming tape unit

   d. Replacing the system module cover (If you are going to replace the fixed-disk drive do not install the system module cover at this time.)

10. Power the Master Controller II by connecting the line cord to the AC power source and pressing the power switch on the front of the system module. Turn the monitor's power switch on.

Installing the Optional 100 MB or 200MB Disk Drive

The 100MB disk drive is for the Master Controller II+ only.

The procedure for installing the 100MB disk drive into the Master Controller II+ is similar to the procedure for installing the 200MB disk drive, which can be installed in the Master Controller II+ as well as the Master Controller II. Any differences are noted in this section.

The 100MB or 200MB disk drive is to be installed in the system module where the existing 40MB, 80MB, or 100MB disk drive is currently located. You will have to remove the existing disk drive and then replace it with the 100MB or 200MB disk drive.

Refer to the *AT&T 6386/SX Work Group System User's Guide,* which was supplied with the 6386/SX WGS, for instructions on installing expansion hardware. Read the section "Installing Expansion Kits" for general information and safety precautions.

If you are using the Master Controller II+, see the *AT&T Applications Controller User's Guide.*

Perform the following steps to replace the existing disk drive:

1. Perform "Complete System Backup to Tape" as described in Chapter 5 of the *AT&T Integrated Solution II System Manager's Guide.*

2. Perform System Shutdown as described in Chapter 5 of the *AT&T Integrated Solution II System Manager's Guide* under "Shutting Down the System." Shut off the power to the Master Controller II and disconnect the power cord when the following system prompt appears on the screen.

    ```
    The system is down. Reboot the system now.
    ```

3. Remove the existing disk drive:

    ■ For the Master Controller 11, reverse the procedure described in the section, "Installing a Fixed-disk Drive," in Appendix C of the *AT&T 6386/SX Work Group System User's Guide*

    ■ For the Master Controller II+, see the *AT&T Applications Controller User's Guide.*

4. To install the 200MB disk drive, follow the procedure described in the *Customer Installation Booklet* supplied with the disk drive.

    To install the 100MB disk drive into the Master Controller II+, see the *AT&T Applications Controller User's Guide.*

5. Replace the System Module cover as described in one of the following locations:

    ■ For the Master Controller II, Appendix C of the *AT&T 6386/SX Work Group System User's Guide*

    ■ For the Master Controller II+, the *AT&T Applications Controller User's Guide.*

6. Power the Master Controller II by connecting the line cord to the AC power source and pressing the power switch on the front of the system module. Turn the monitor's power switch on.

7. Set the fixed-disk BIOS parameters as described in Appendix B of the *AT&T 6386/SX Work Group System User's Guide* under "Setting Fixed-disk Drive Types."

⮕ **NOTE:**
    Read sections "What Does the SETUP Program Do?" and "How to Run the SETUP Program" in Appendix B for information on how to use the SETUP Program.

If you are using the Master Controller II+, see the *AT&T Applications Controller User's Guide.*

Enter the following parameters using the SETUP program.

⮕**NOTE:**
    The following values are valid for the 200MB hard disk in the Master Controller II.

```
Hard Disk 1: Type 48
Cyl Hd Pre LZ    Sec   Size(MBs)
683 16 -1    685  38    202
```

For the Master Controller II+, the value for `Hard Disk 1: Type` should be `46` for the 200MB disk drive (`40` for the 100MB disk drive).

8. Install UNIX and restore all files from the backup tape using the procedure described in Chapter 6 of this guide under "Using the Tape Method."

Updating IS-II and Applications

To upgrade to a new release of IS-II, first upgrade the Platform Software; then upgrade any applications that the customer has.

⮕ **NOTE:**
    If you are installing new applications (ones the customer didn't have in the previous release) upgrade the Platform Software first; then install the new applications according to instructions in Chapter 4, "Maintaining IS-II Applications."
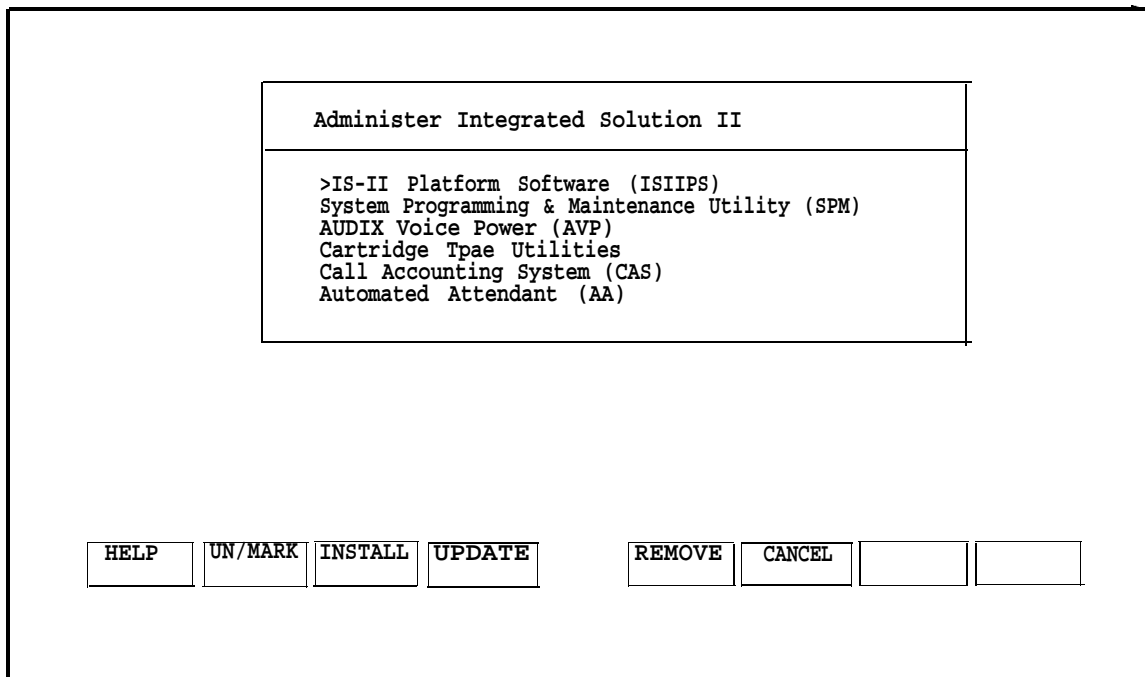
Updating Platform Software

The IS-II Platform Software update process preserves all administrative files (including voice files, if appropriate).

From the Technician Maintenance window, select `Administer Integrated Solution II` and press [ENTER] .

— The following screen appears:

```
        Administer Integrated Solution II

        >IS-II Platform Software (ISIIPS)
        System Programming & Maintenance Utility (SPM)
        AUDIX Voice Power (AVP)
        Cartridge Tpae Utilities
        Call Accounting System (CAS)
        Automated Attendant (AA)




   HELP     UN/MARK   INSTALL   UPDATE        REMOVE    CANCEL
```

Screen 7-4. Administer IS-II Menu

1. Begin the update process by moving the cursor to IS-II Platform Software (ISIIPS), pressing [F2] (MARK), and then [F4] (UPDATE).

    — After messages, you will be asked to confirm the update.

2. Press [ENTER] .

3. Insert the IS-II Platform Software diskette and press [ENTER] .

4. When the installation process is complete, you will see the message:

        IS-II Platform Software installation successful.
        Strike enter when ready.

5. Press [ENTER] .
    You will be returned to the Technician Maintenance window.

Updating IS-II Applications

Use this function to upgrade a customer to a new release of an application (i.e. AUDIX Voice Power) the customer is currently using. This procedure automatically removes the current version while retaining all administrative files (and voice files, if any exist). It will then prompt you for the installation of the new version.

At the Administer Integrated Solution II window, mark the application to be updated; then press [F4] (UPDATE) and follow the instructions. Refer to installation instructions described in Chapter 4, "Maintaining IS-II Applications," for the application package(s) you are updating.

The Menu Update Reminder window will appear at the end of the process.

⇒ NOTE:

If you attempt to update a package that is not on the system, an Error Message Screen appears.

Troubleshooting

8

Power On Self Test

When the Power On Self Test (POST) is initiated on booting the system, two columns of information appear on the screen. The left-hand column identifies the item being tested; the right-hand column indicates "PASS," "FAIL," or the amount of memory allocated.

The following table shows the item being checked and indicates possible causes for failure. If there is more than one cause listed, try to resolve it starting with the first item listed.

Table 8-1. Power On Self-Test Failures

Screen Item	Cause of Failure
CPU (80386SX, 20 Mhz)	Motherboard problem
CPU (80366, 16 Mhz)	Motherboard problem
CMOS RAM	a) Battery backup problem b) Motherboard problem
ROM Checksum	a) ROM failure — replace ROM b) Motherboard problem
Memory Refresh	Motherboard problem
DMA Controllers	Motherboard problem
Interrupt Controller	Motherboard problem

Screen Item	Cause of Failure
Keyboard	a) Pressed key while booting — reboot system b) Keyboard bad — replace keyboard c) Motherboard problem
Dedicated Memory	If not 0384 Kbyte: a) Configuration error — check ROM BIOS settings b) Memory problem — replace memory c) Motherboard problem
Base Memory	If not 0640 Kbyte: a) Configuration error — check ROM BIOS settings b) Memory problem — replace memory c) Motherboard problem
Extended Memory	If not 1024 Kbyte or 3072 Kbyte: a) Configuration error — check ROM BIOS settings b) Memory problem — replace memory c) Motherboard problem
Total Memory	a) Memory problem — replace memory b) Motherboard problem
Clock/Calendar	Motherboard problem
Floppy Diskettes	a) Poor connection b) Bad Drive c) Motherboard problem
Hard Disks	a) Poor connection b) Bad Drive c) Motherboard problem

Use the appropriate diagnostic diskette to fully diagnose any problems.

For additional information, refer to the following documents:

- *AT&T 6386/SX Work Group System Service Manual,* especially Chapters 5-7.

- *AT&T 6386/SX Work Group System User's Guide,* especially Chapter 5.

- *AT&T Application Controller User's Guide.*

Hard Disk Failure

If the hard disk fails, do the following:

1. Check all connections.

2. Reboot the system.

3. Run diagnostic tests on the hard disk using the appropriate diagnostic diskette.

4. Replace the hard disk (if it still fails) and recover the system from disk or tape. (Refer to the appropriate sections on recovering from a hard disk failure in Chapter 6, "Recovering from Catastrophic Failure.")

Motherboard Failure

If the motherboard fails, do the following:

1. Insert the appropriate diagnostic diskette.

2. Run tests for each item whose status is "FAIL" Refer to the Problem Solving chapter in the *AT&T 6386/SX Work Group System User's Guide.*

    If you are using the Master Controller II+, see the *AT&T Applications Controller User's Guide.*

3. Replace motherboard (if bad). Refer to the *AT&T 6386/SX Work Group System Service Manual.*

    If you are using the Master Controller II+, see the *AT&T Applications Controller User's Guide.*

4. Reboot the system and run the ROM-based SETUP Program as described in Appendix B of *AT&T 6386/SX Work Group System User's Guide* to set the system configurations listed below.

    ### ➡ NOTE:
    Refer to section, "How to Run the SETUP Program" for instructions on how to access the SETUP program after booting up.

    If you are using the Master Controller II+, see the *AT&T Applications Controller User's Guide.*

    a. Set up fixed-disk drive type and parameters for your hard disk size, according to the following table, using SETUP screen 1.
    Set up "monitor type" to VGA Display using SETUP screen 2.

Table 8-2. Disk Drive Parameters

Size	Type	Cyl	Hd	Pre	Lz	Sec	Size (MB)
40MB	48	965	5	-1	965	17	40
80MB	48	965	10	-1	965	17	80
100MB	40	761	8	None	762	39	115
200MB	48	684	16	-1	685	38	203

    b.   Disable shadow BIOS ROM, using SETUP screen 3, for all systems. Set option to Disabled.

    c.   Exit the SETUP program by following the instructions on the screen.

    d.   Press [ESC] (Escape) to reboot the system so that the changes will take effect.

➡ **NOTE:**

You do not need to perform the catastrophic failure recovery procedure when replacing the motherboard.

IVP Board Diagnostics

If the customer is experiencing trouble with calls not being answered in AVP or AA, perform the IVP board diagnostics described in Chapter 2, "Hardware Setup".

Data Corruption

If the screen is garbled and/or the system is running, but error messages are displayed from the UNIX system or one of the installed applications, it may mean that there is corrupt data. If this is the case, you must restore the entire system. Refer to the section titled "Restoring from Data Corruption" in Chapter 6, "Recovering from Catastrophic Failure."

Displaying the Disk Usage Report

The Disk Usage Report provides information on the available disk space for System and Voice Partitions. If you are experiencing problems with AUDIX Voice Power or Call Accounting System, there may be a shortage of available disk space for voice messages or call records. The Disk Usage Report provides the current status of the hard disk for these applications.

1.   From the Technician Maintenance window, select `Maintenance Log` and press [ENTER] .

— The Maintenance Log is displayed.

```
                 Maintenance Log

            Change Monitor Type
            Display Installed Applications
            IVP Board Diagnostics
            TTY Check
            Printer Test
           >Disk Usage Report




  HELP                              CANCEL
```
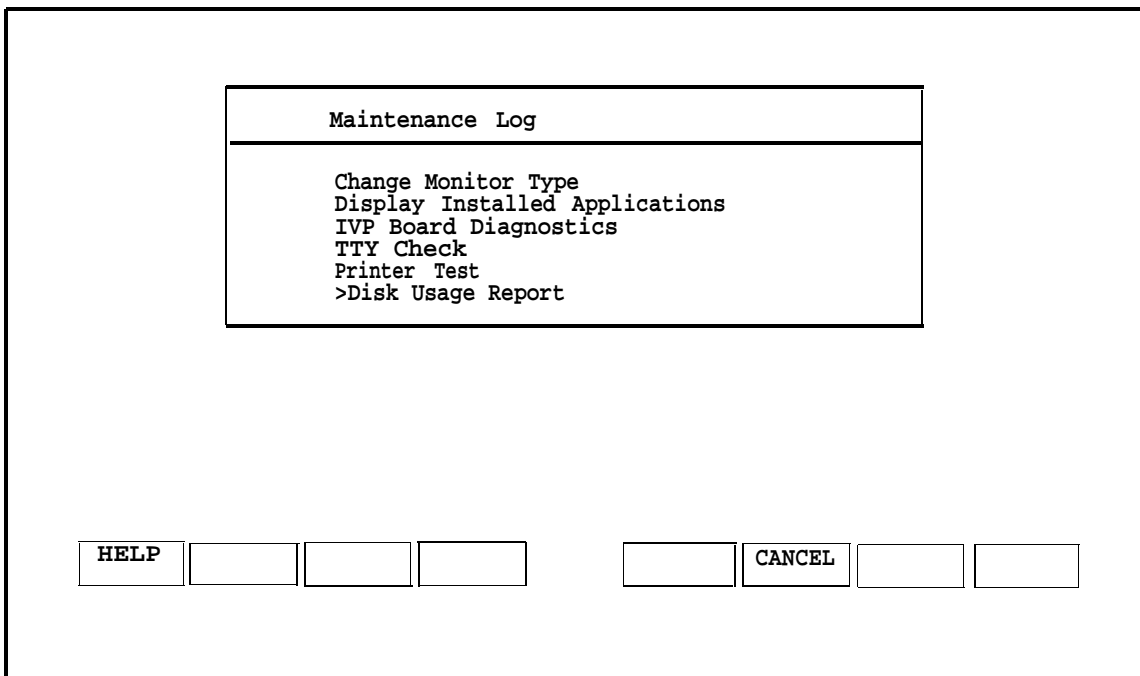
Screen 8-1. Maintenance Log

2.   Select `Disk Usage Report` and press [ENTER] .

— The Disk Usage Report is displayed. Warning messages for low partition space are displayed if available disk space is less than the system thresholds. Voice Partition information will be displayed only if you are using AUDIX Voice Power (AVP) or Automated Attendant (AA).

If the System Partition Warning is displayed, the disk contains too many CAS call records. Refer to the documentation supplied with your Call Accounting System for instructions on how to remove old call records.

If the Voice Partition Warning is displayed, the disk contains too many voice mail messages. Ask AUDIX Voice Power subscribers to remove old messages from their mail boxes.

```
              Disk Usage Report

     HARD DISK SIZE:                 80.00 Mbyte
       System Partition Size:        41.00 Mbyte
       System Partition Remaining: 3.54 Mbyte
     ****Warning: System Partition Space is Low
       Voice Partition Size:        4 Hours 50 Minutes
       Voice Partition Remaining:  0 Hours 25 Minutes
     ****Warning: Voice Partition Space is Low
```

| HELP | | | | | CANCEL | | |
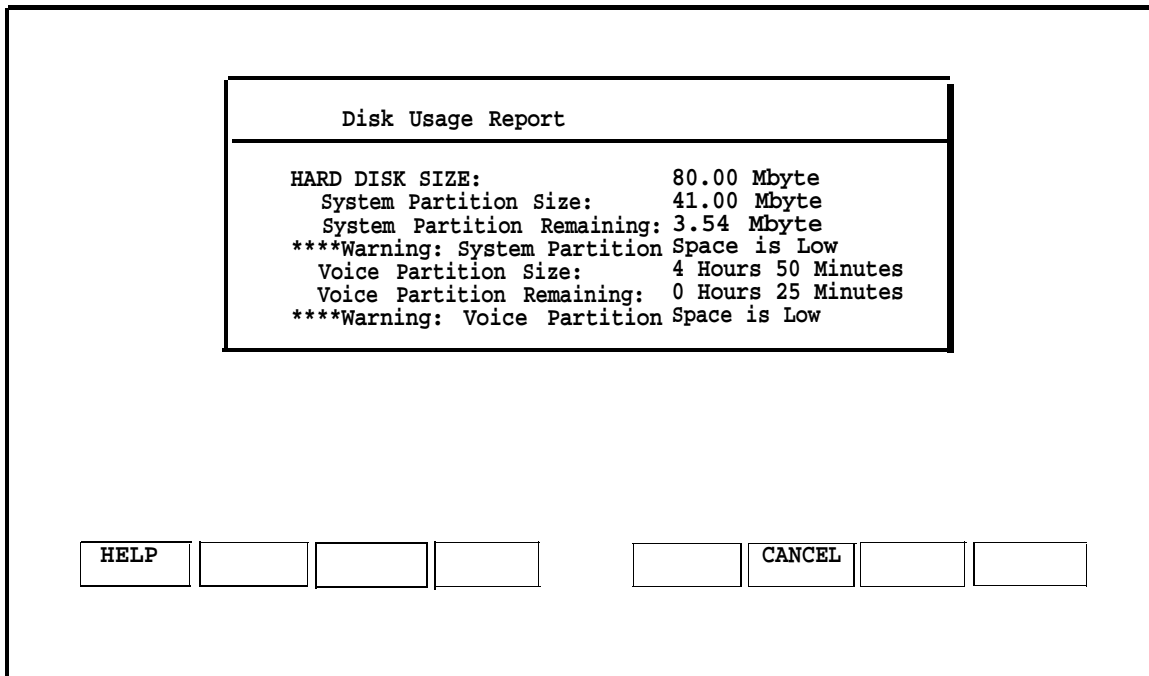
Screen 8-2. Disk Usage Report

3.   Press [F6] (CANCEL) to return to the Maintenance Log window.

UNIX Diagnostic Message

During start-up booting (when you power up) you may receive the following UNIX message on the screen.

```
Enter the name of the kernel to boot:
```

This message will occur if you inadvertently press a key while the UNIX system is booting up or if certain files have been corrupted.

If the message should appear, type */unix* and press [ENTER] .

If the system is operating properly, the UNIX booting procedure will restart and the login prompt will appear on the screen after booting is complete. If the login prompt does not appear, contact your next level of support at 1-800-628-2888.

Appendix A: Ordering Information

A

Manuals

In addition to the Integrated Solution II documents, there are other manuals required for detailed information on the MERLIN LEGEND Communications System, each IS-II supported application package, your processor, and associated peripherals. To order copies of the documents listed below, contact your AT&T sales representative, AT&T authorized dealer, or call 1-800-432-6600 (U.S.A.) or 1-800-255-1242 (Canada).

- *AT&T MERLIN LEGEN™ Communications System: System Reference*
  Doc. # 555-610-110

- *AT&T MERLIN LEGEND™ Communications System Installation, Programming, and Maintenance*
  Dec. # 555-610-140

- *AT&T MERLIN LEGEND™ Communications System: System Programming Guide*
  Doc. # 555-610-111

- *AT&T MERLIN LEGEND™ Communications System Key System Planning Guide and Key System Forms*
  Doc. # 555-610-112

- *AT&T MERLIN LEGEND™ Communications System PBX System Planning Guide and PBX System Forms*
  Doc. # 555-610-113

- *AT&T Call Accounting System (CAS) Integrated Solution II Planning Guide and Forms*
  Doc. # 585-247-050

- *AT&T Call Accounting System (CAS) Integrated Solution II User's Guide*
  Doc. # 585-247-070

■ *AT&T Call Accounting System (CAS) integrated Solution II Site Installation and Implementation Guide*
Doc. # 585-247-010

■ *AT&T AUDIX Voice Power User's Guide*
Doc. # 555-600-724

■ *AT&T AUDIX Voice Power Installation and Maintenance Guide*
Doc. # 555-600-722

■ *AT&T AUDIX Voice Power System Manager's Guide*
Doc. # 555-600-723

■ *AT&T AUDIX Voice Power Planning Guide and Forms*
Doc. #555-600-721

■ *AT&T Integrated Voice Power Automated Attendant System Manager's Guide*
Doc. # 555-600-728

■ *AT&T Integrated Voice Power Automated Attendant Installation and Maintenance Guide*
Doc. # 555-600-729

■ *AT&T Integrated Voice Power Automated Attendant Planning Guide and Forms*
Doc. # 555-600-727

■ *AT&T PC 6386 WGS Service Manual*
Doc. 562-200-102

■ *AT&T 6386/SX Work Group System User's Guide*
Doc. 562-200-100

■ *AT&T Applications Controller User's Guide*
Doc. 585-249-710

Parts

To order any of the parts listed below, call 1-800-222-7278.

Table A-1. Ordering Information for Cables and Parts

Item	PEC	Comcode	Comments
9-25 pin adapter	N/A	406139394	
Printer Cable	2724-89G	524305000	Required if any printer used
D8W-87 Cord	2725-07X	104160148	2.5 Feet
D8W-87 Cord	2725-07G	103786786	7.0 Feet
D8W-87 Cord	2725-07N	103786802	14.0 Feet
D8W-87 Cord	2725-07S	103786828	25.0 Feet
DB4U-29	2725-40B	102903317	2.0 Feet
DB4U-29	2725-02G	102479904	7.0 Feet
DB4U-29	2725-02N	102479896	14.0 Feet
DB4U-29	2725-02S	102479888	25.0 Feet
355AF	2709-A25	105012645	Adapter
355A	2750-A24	105012645	Adapter
Z3A2 ADU	2169-004	103964185	Z3A2 with cable
Z3A2 ADU Kit	62515	N/A	Includes crossover cables, power
IVP4	8306-100	106248651	Four channels per board

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