



Integrated Solution III

For MERLIN LEGEND™ Communications System

Installation and Maintenance

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Introduction

1

Overview of the System

This manual is designed to assist AT&T field technicians and AT&T-Authorized Dealers in installing and maintaining Integrated Solution III (IS-III). It provides procedures for connecting major system components, adding application packages, customizing applications, recovering from catastrophic failure, and troubleshooting.

The MERLIN LEGEND® Communications System, Integrated Solution III consists of a Master Controller II+ or Master Controller III processor that is delivered to the customer with the UNIX® System V/386 Release 3.2.2 operating system, the IS-III 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+ or Master Controller III.

⇒ **NOTE:**

Throughout this guide, references to the Master Controller apply to the Master Controller II+ (desktop model) or the Master Controller III (tower model). Any information that differs between the two processors will be noted specifically.

⇒ **NOTE:**

The Master Controller II+ is also known as the Applications Controller in some documentation.

⇒ **NOTE:**

At initial release, AT&T FAX Attendant System™ will not be supported on the Master Controller II+.

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

- System Programming & Maintenance Utility (SPM)
- Integrated Solution Call Accounting System (CAS)
- AT&T AUDIX Voice Power™ (AVP)
- AT&T FAX Attendant System™ (FA)

The IS-III Platform Software is designed to do the following:

- Assist with the installation, upgrade, and customization of IS-III 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.
- Provide integrated administration of the MERLIN LEGEND Communications System so that administration of the switch is done simultaneously and automatically when the applications are administered. (Available for AUDIX Voice Power and FAX Attendant systems only.)

After you make the physical connections from the Master Controller to the customer's MERLIN LEGEND Communications System, the customer simply logs into IS-III and the switch and applications are ready to be administered.

System Configuration

The Master Controller's main components are the system unit, the video display, and the keyboard.

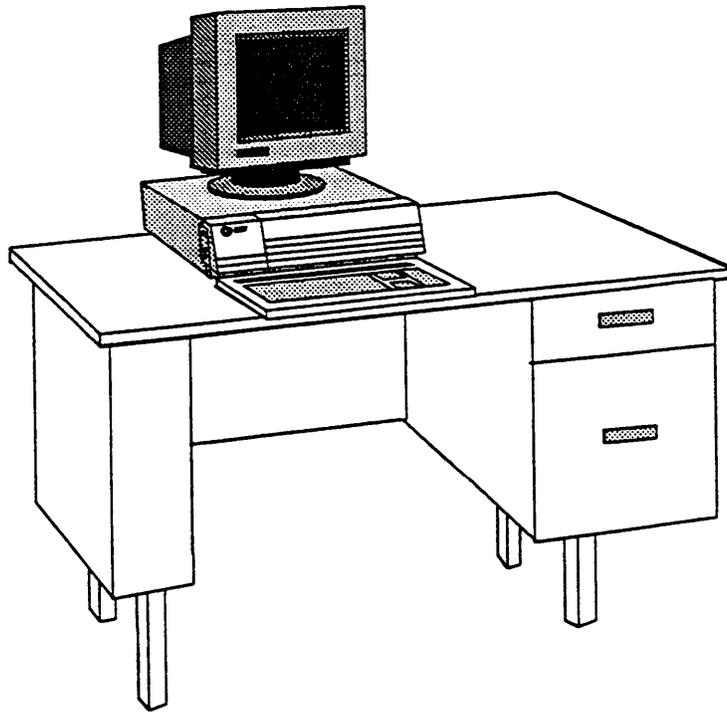


Figure 1-1. The Master Controller II+

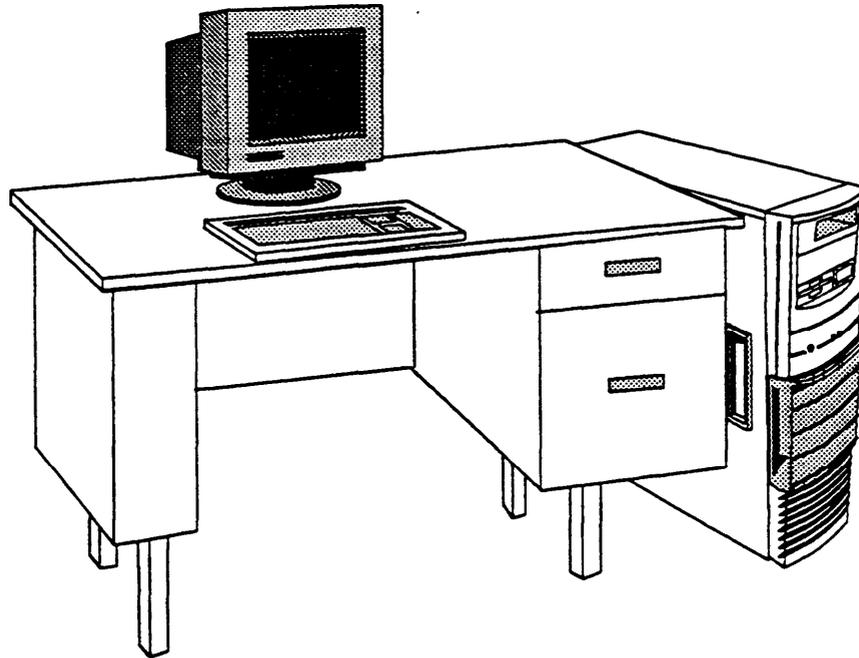


Figure 1-2. The Master Controller III

The system unit contains the main board, internal peripherals, the power supply, and slots for expansion boards. Features of the Master Controller configured for use with IS-III include:

- A 20 MHz 80386SX CPU (Master controller II+) or 20 MHz 80486SX CPU (Master Controller II+)
- A 100 MB hard disk (existing Master Controller II+), or 200 MB hard disk (Master Controller II+ or III), or 500 MB hard disk (Master Controller III)
- A 1.44 MB diskette drive
- 8 MB of onboard system Random Access Memory (RAM)
- A video graphics adapter (VGA) controller
- A built-in hard disk controller
- A real-time clock/calendar with battery backup
- Three available expansion slots (Master Controller II+) or six available expansion slots (Master Controller III)

- 128-Kbyte ROM (read-only memory) BIOS
- Two built-in serial ports and one printer (parallel) port
- A 125 MB tape drive (Master Controller II+) or 250 MB tape drive (Master Controller III)

The Master Controller can run System Programming and Maintenance (SPM), Call Accounting System (CAS), AUDIX Voice Power (AVP), and FAX Attendant (FA) at the same time. The size of the hard disk drive (200 MB or 500 MB) and the number of voice (4 to 12) and fax (up to 12) interface ports may limit the number of subscribers to the Voice and Fax Mail Services.

The Master Controller III standard configuration contains enough memory (8 MB RAM) and a large enough hard disk (200 MB, or 500 MB) to operate with IS-III in all configurations.

An existing Master Controller II+ may require upgrading to increase memory or to install a larger hard disk before it can be used with IS-III. Eight MB of memory and at least a 100 MB hard disk are required for AUDIX Voice Power. A 200 MB hard disk is recommended. Eight MB of memory and at least a 200 MB hard disk are required for FAX Attendant. Chapter 3 contains procedures for upgrading an existing Master Controller II+.

Voice Port Requirements

The Voice Power ports must be connected to tip/ring ports on a Basic Telephone Unit (BTM-012). The MERLIN LEGEND Communications System must contain a ring generator for ringing the BTM ports on *each carrier* has a BTM board. The MERLIN LEGEND Communications System can support a maximum of four Voice Power ports connected to one BTM. As a general rule, use a separate BTM for every four ports. Unused BTM ports maybe used for fax machines, modems, and phantom stations for Attendant Overflow or Night Service purposes. However, eight AUDIX Voice Power ports can be connected to a single BTM if Touch-Tone receivers are provided [for example if a 400 LS/TT or 400 LS-GS/TT is already configured with the system for Central Office (CO) lines]. Similarly, a twelve port system can be alternatively configured with two BTMs (six ports each) and a 400 LS/TT or 400 LS-GS/TT board (needed for CO lines).

Using This Guide

The information in this guide is organized into nine chapters:

Chapter 1, Introduction: This chapter offers an overview of Integrated Solution III (IS-III) including basic components and software applications supported.

Chapter 2, Installing the Hardware: This chapter provides all information necessary to install the hardware platform for IS-III.

Chapter 3, Upgrading the Hardware: This chapter provides all information necessary to upgrade the hardware platform for IS-III.

Chapter 4, Installing IS-III Applications: This chapter explains how to install each application package. It also explains how to remove applications.

Chapter 5, Completing CAS Implementation: This chapter describes how to customize Call Accounting System.

Chapter 6, Recovering from Catastrophic Failures: This chapter categorizes possible failure conditions and describes recovery procedures.

Chapter 7, Upgrading the Software: This chapter describes how to upgrade software to the latest release.

Chapter 8, Maintaining IS-III: This chapter describes technician-level maintenance procedures that may be needed occasionally.

Chapter 9, Troubleshooting: This chapter describes common problems that may be encountered and how to rectify them.

Appendix A: CAS Alarm Notification: This appendix describes the parameters required to set the CAS alarms.

Conventions Used in This Guide

The following conventions are used in this guide:

- Commands and text that you should type appear as follows: *Type this.*
- Values, instructions, and prompts that display on the screen appear as follows; Read this.
- Key that are always located in the same place on the PC keyboard appear in key-shaped 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 plain rectangular boxes, as in [**SAVE**].
- IS-III and application software function keys (keys that start with an F, followed by a number) appear in boxes with the current meaning following in parentheses, such as [**F3**] (SAVE).

The current meanings of the function keys are shown by labels at the bottom of the screen. On the actual screen, one of two sets of labels will appear:

- The first label is the meaning of the function key when the screen first appears. These meanings have been selected to be the most useful for that screen.
- The second set of labels appears after the [**F8**] (CHG-KEYS) key has been pressed. Pressing [**F8**] (CHG-KEYS) again restores the first set of labels.

Related Documents

You need to be familiar with the following documents:

- AT&T Integrated Solution III for MERLIN LEGEND® Communications System System Manager's Guide
(Document No. 555-601-010)
- AT&T AUDIX Voice Power™/FAX Attendant System™ Planning and Implementation for MERLIN LEGEND™ Communications System
(Document No. 555-601-202)
- AT&T AUDIX Voice Power™ Release 2.1.1 User's Guide
(Document No. 555-601-201)
- AT&T AUDIX Voice Power™ Release 2.1.1 System Manager's Guide
(Document No. 555-601-200)
- AT&T FAX Attendant System™ Release 2.1.1 User's Guide
(Document No. 555-601-101)
- AT&T FAX Attendant System™ Release 2.1.1 System Manager's Guide
(Document No. 555-601-100)

- AT&T Diagnostic Program User's Guide
(Document No. 560-407-151)
- AT&T Application Controller User's Guide
(Document No. 585-249-710)
- AT&T Master Controller III User's Guide
(Document No. 560-407-150)

- AT&T Call Accounting System (CAS) Integrated Solution II Planning Guide and Forms
(Document No. 585-247-050)
- AT&T Call Accounting System (CAS) Integrated Solution User's Guide
(Document No. 585-247-120)
- AT&T Call Accounting System (CAS) Integrated Solution II Site Installation and Implementation Guide
(Document No. 585-247-010)
- AT&T Call Accounting System (CAS) Integrated Solution Quick Reference Card
(Document No. 585-247-121)
- HackerTracker™ for Integrated Solution Call Accounting System
(Document No. 585-247-122)

- AT&T MERLIN LEGEND™ Communications System Release 2.0
System Programming
(Document No. 555-620-111)
- AT&T MERLIN LEGEND™ Communications System Release 2.0
Installation, Programming, and Maintenance Binder
(Document No. 555-820-140)
- AT&T MERLIN LEGEND™ Communications System Release 2.0
System Planning
(Document No. 555-820-112)
- AT&T MERLIN LEGEND™ Communications System Release 2.0
System Planning Forms
(Document No. 555-820-113)
- AT&T MERLIN LEGEND™ Communications System Release 2.1 Notes
(Document No. 555-820-003)

Getting Help

If you have questions or problems with AUDIX Voice Power or FAX Attendant that are not resolved by this document and the other AUDIX Voice Power/FAX Attendant documents, you should call the National Service Assistance Center (NSAC) at 1-800-628-2888 for assistance.

Installing the Hardware

2

This chapter provides information for setting up a new installation. For upgrade procedures, see Chapter 3, "Upgrading the Hardware," and Chapter 7, "Upgrading the Software."

The Master Controller comes loaded with IS-III and all of the ordered 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

Preparing for Installation

Before you begin installing the hardware, you should complete the following tasks that are detailed in this section:

- Select an appropriate site for the system.
- Collect the necessary tools.
- Verify that all ordered equipment is on-site.

In addition, you should have access to the planning forms B and BF that were filled out using the instructions contained in *AT&T AUDIX Voice Power™/FAX Attendant System™ Planning and Implementation* document. These forms identify the ports to be used during installation.

Selecting a Site for the System

The Master Controller can be used in a variety of environments.

⇒ **NOTE:**

References to the Master Controller apply to either the Master Controller II+ or the Master Controller III. Any information that differs between the two processors will be noted specifically. The Master Controller II+ is also described as the Applications Controller in other documentation.

Certain factors must be considered before installing the Master Controller 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. The Master Controller needs to be located in an area that meets all of the following requirements:

- The Master Controller must be connected to a grounded power outlet. Ungrounded machines may be 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.
- The area must be clean and dust free. Airborne dust, dirt, and smoke can cause excessive wear on the disks and read/write errors.
- The installation site must be 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.
- The Master Controller must be 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).
- The Master Controller must be installed away from water and excessive humidity.
- The Master Controller must be within 50 feet (15 meters) of the telephone switch (control unit) sharing the same green wire ground.
 - Use two Asynchronous Data Units (ADUs) to connect the Master Controller to the MERLIN LEGEND Communications System if they are more than 50 feet apart or if they are not connected to the same circuit.
- The Master Controller must be close to a phone if AUDIX Voice Power/FAX Attendant is used so that the connections through to the voice and fax ports can be tested, and so that AUDIX Voice Power and FAX Attendant can be administered.

Required Tools

Make sure you have the proper tools ready

- 3/16" flat-blade screwdriver
- #1 Phillips® head screwdriver
- 3/16" nut driver
- an antistatic grounded wrist strap
- an antistatic grounded work mat

DANGER:

The system unit power supply contains AC voltage at levels that can cause injury or death on contact. Before removing any system unit covers, turn off the system and unplug the power cord from the AC outlet.

CAUTION:

Electronic equipment can be damaged by electrostatic discharge. Do not touch any electronic component unless you are properly grounded. Grounding can be established by placing the equipment on a properly grounded work mat and by wearing a properly grounded wrist strap. The wrist strap must have intimate contact with the bare skin and must never be worn over clothing. Do not work on equipment unless you are familiar with the necessary procedures for preventing damage caused by electrostatic discharge.

Equipment Inventory

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

- Master Controller system unit
 - Master Controller II+ (desktop)
 - Master Controller III (tower)
- Two keys for system unit chassis lock
- System unit power cord
- Video display and cables
- Keyboard and cable
- Diagnostic and utility diskettes
- Master Controller User's Guide and Diagnostic Program User's Guide
- Equipment Log form

Check the system unit, video display, and keyboard. Make sure all associated cables and power cords are present. If voice port [Integrated Voice Power™ (IVP4 or IVP6)] boards are included, verify that the correct number have been installed. If fax port [Integrated Fax Processing (IFP2 or IFP4)] boards are included, verify that the correct number have been installed. A set of matching keys is provided with the system unit to operate the mechanical chassis lock. (Tell the customer to keep the keys in a secure place.)

Maintaining the Equipment Log

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.

Installation Activity Checklist

The system should be set up in the following order:

1. Configure and install any additional voice port (IVP) boards.
2. Configure and install any additional fax port (IFP) boards.
3. Connect the video display to the system unit.
4. Connect the keyboard to the system unit.
5. Install the printer (if one is being used).
6. Connect the voice port boards to analog ports.
7. Connect the fax port boards to analog ports (if applicable).
8. Connect the administration ports on the Master Controller and the switch.
9. Connect the CAS (SMDR) ports on the Master Controller and the switch if CAS is included.
10. Supply power to the Master Controller and video display
11. Turn on the system.
12. Observe the Power On Self Test (POST).
13. Log onto IS-III.
14. Make sure that the proper software packages are installed.
15. Check administration and SMDR port connections.
16. Initialize printer setup (if applicable).
17. Test the optional printer.
18. Run voice port board (IVP) diagnostics.
19. Run fax port board (IFP) diagnostics (if applicable).
20. Perform additional switch administration or application customization (as applicable).
21. Make a complete backup of the system on tape.

Interconnection Overview

An overview of the equipment interconnection cabling is shown in Figure 2-1. Separate step-by-step procedures follow for making each connection.

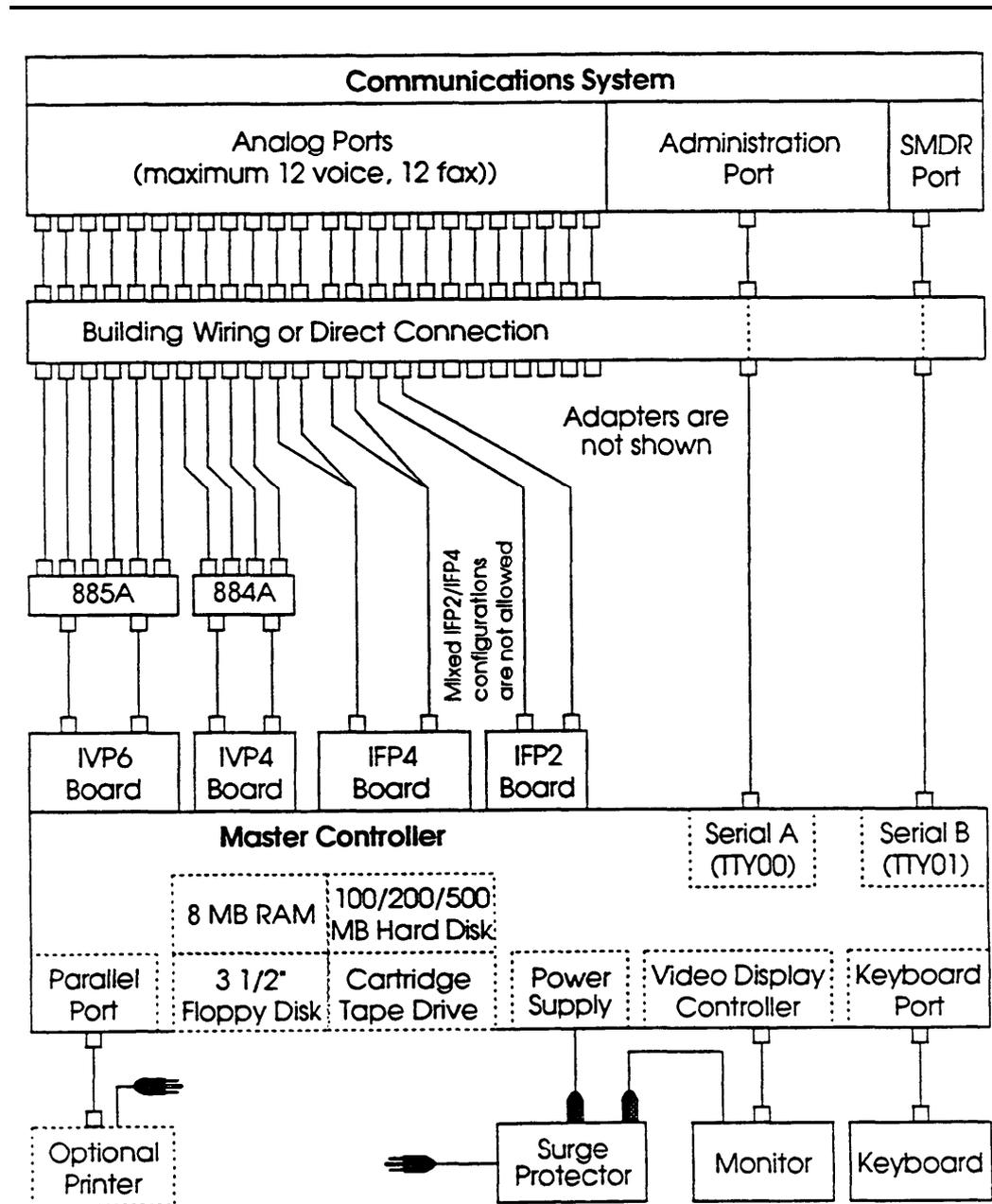


Figure 2-1. Equipment Interconnection Overview

Location of Connectors

Refer to these figures as you connect the components together. The connectors the Master Controller II+ are on the rear and left side. The connectors are shown in Figure 2-2:

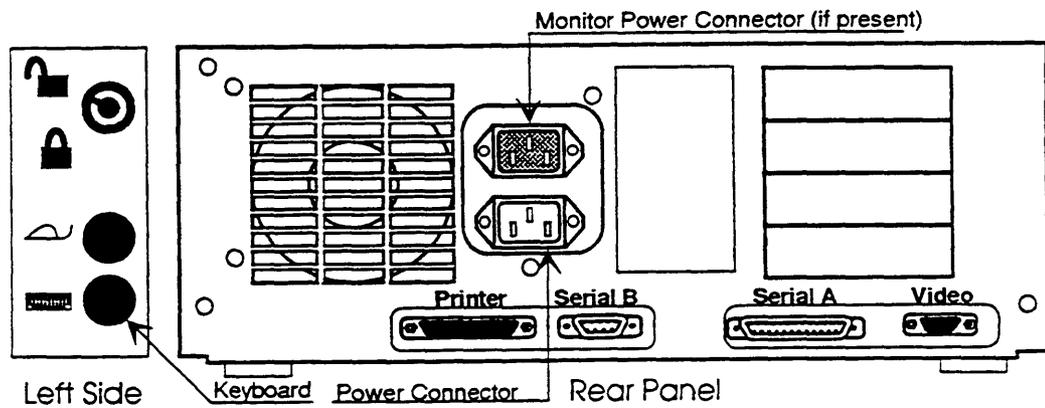


Figure 2-2. Master Controller II+ Connector Locations

The connectors for the Master Controller III are on the rear. The connectors are shown in Figure 2-3:

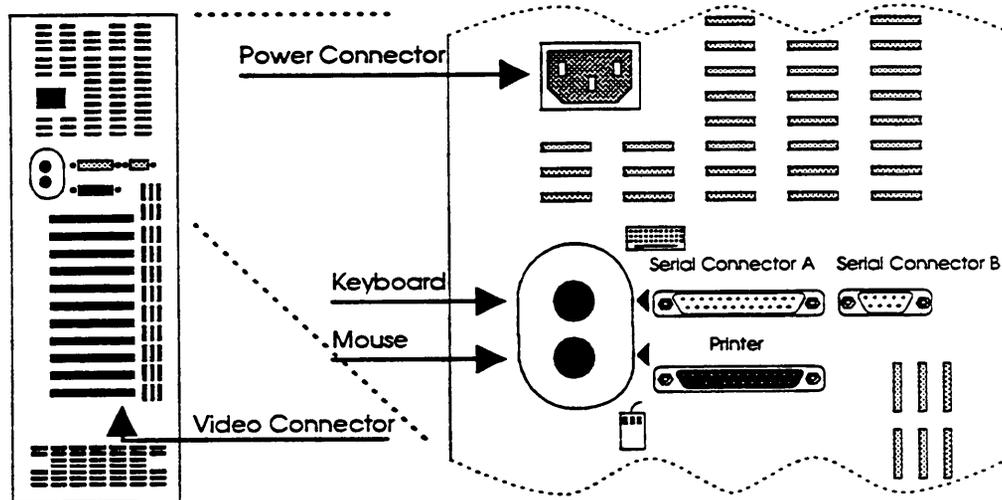


Figure 2-3. Master Controller III Connector Locations

Setting up the Hardware

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

Procedures for upgrading hardware are given later in this Chapter 3, "Upgrading the Hardware."

Installing Additional Boards

Procedure 2-1: Install Voice Port (IVP) Boards

All systems are shipped preconfigured with the necessary circuit boards installed. It is necessary to install additional circuit boards only when:

- the customer has existing IVP4 boards from an earlier version of the Master Controller
- additional IVP4 or IVP6 boards have been added to the configuration after shipping

The procedures for opening and closing the Master Controller system unit, and for identifying and installing IVP4 and IVP6 boards are given in Chapter 3, "Upgrading the Hardware."

Procedure 2-2: Install Fax Port (IFP) Boards

All systems are shipped preconfigured with the necessary circuit boards installed. It is necessary to install additional circuit boards only when additional IFP2 or IFP4 boards have been added to the configuration after shipping. The procedures for opening and closing the Master Controller system unit, and for identifying and installing IFP2 and IFP4 boards are given in Chapter 3, "Upgrading the Hardware."

Connecting Components

Procedure 2-3: Connect the Video Display

To connect the video display, follow these steps:

1. Connect the video display cable to the connector on the system unit with the same size shell and the same number of pins. The connector is a DD-15 with three rows totaling 15 pins. The other, similarly sized connector on the system unit has two rows totaling 9 pins. Connector locations are shown in Figure 2-2 and Figure 2-3.
2. Tighten the screws that hold the connector in place.
3. Attach the video-display power cord to the power socket on the back of the video display.
4. Connect the other end of the power cord to the surge protector or to the Master Controller (see note).

⇒ **NOTE:**

Some Master Controller II+ system units have a power connector for the monitor immediately above the power connector for the system unit. In this case, the monitor is shipped with a cord that connects to the monitor power outlet and will not fit an external power outlet. The monitor power outlet on the Master Controller II+ (when present) is controlled by the system unit power switch, which allows you to power up the system unit and video display from a single switch.

⇒ **NOTE:**

If you turn on the monitor at this time the power indicator will light but the screen will remain blank.

Procedure 2-4: Connect the Keyboard

Connect the keyboard by inserting the keyboard cable connector into the socket on the system unit.

- The socket for the keyboard connector is located on the left side of the Master Controller II+ at the bottom. Refer to Figure 2-2.
- The socket for the keyboard connector is located on the rear of the Master Controller III It is the upper of two similar connectors. Refer to Figure 2-3.

In both cases, the keyboard connector is identified by a picture of a miniature keyboard ().

Be sure that the connector is properly aligned:

- If the connector *does not* have a triangle molded into the connector cover, the keyway (an indentation on the metal shell) should face up on the Master Controller II+ or toward the triangle printed near the socket on the Master Controller III.
- If the triangle is present it should face up on the Master Controller II+ or toward the matching triangle printed near the socket on the Master Controller III.

Procedure 2-5: Install the Optional Printer

For installations that require fax printing, IS III supports any printer fully compatible with the HP® LaserJet® Series II. For installations that require printed reports, but not fax printing, IS III supports the AT&T Applications Printer (dot matrix, wide carriage) and the AT&T Call Accounting System Printer (dot matrix, narrow carriage). All printers must use a Centronics®-type parallel interface.

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

1. Unpack the printer and install the ribbon or toner cartridge according to instructions in the printer documentation.
2. Load the printer with paper according to the instructions in the printer documentation.
3. Connect the power cable from the back of the printer to an AC outlet.
4. Turn on the printer power switch.
5. Follow the testing procedures in the printer documentation.
6. Set any options indicated in the printer documentation.
7. Turn off the printer power switch.

You are now ready to connect the printer to the Master Controller. The printer uses a standard 36-contact Centronics-type connector on one end and a 25-pin DB-25P connector on the other. Connect the interface cable as follows:

1. Plug the 36-contact Centronics-type connector on one end of the cable into the matching connector on the printer and push the two spring clips into position to hold the connector in place.
2. Plug the other end of the cable into the parallel port socket on the Master Controller. Refer to Figure 2-2 and Figure 2-3.
3. Tighten the screws that hold the connector in place.

Connecting the IVP Board Voice Lines

Voice lines must be connected to the IVP 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.

Use Procedure 2-6 for connecting IVP4 boards.

- Each IVP6 board has two 6-position modular jacks. Each of these modular jacks is used to connect three voice lines on the three wire pairs. The top jack is used for line pairs 1, 2 and 3. The bottom jack is for line pairs 4, 5 and 6.

If an 885A adapter is available, use Procedure 2-7a for connecting IVP6 boards. If an 885A adapter is not available, use Procedure 2-7b for connecting IVP6 boards.

Procedure 2-6: Connect IVP4 (4-Port) Boards

Connect IVP4 (4-port) boards as follows:

- 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 may be used to consolidate the four individual line pairs into two pairs (RJ14C) in each of two cables. (See Figure 2-4.)

**WARNING:**

There is a magnet on the back of the 884A adapter. Be sure that you do not place this near the floppy diskettes.

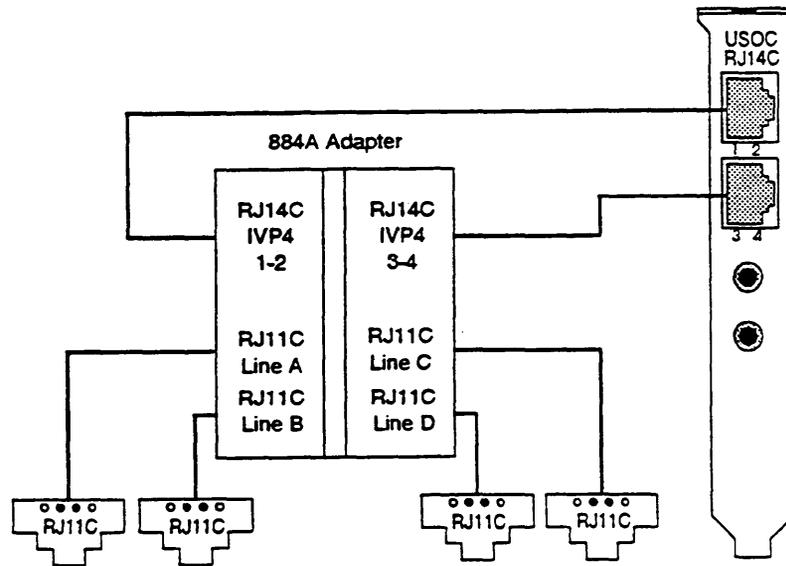


Figure 2-4. IVP4 Board with 884A Adapter for RJ11C

**Procedure 2-7a: Connect IVP6 (6-Port) Boards
Using 885A Adapter:**

Connect IVP6 (6-port) boards as follows:

1. Make sure that the line pairs were run individually (RJ11C).
2. Use a type 885A adapter to consolidate the six individual line pairs into three pairs in each of two cables. (See Figure 2-5.)
3. There is an adhesive strip on the back of the 885A adapter. Remove the protective coating paper and attach the 885A adapter in a convenient place.

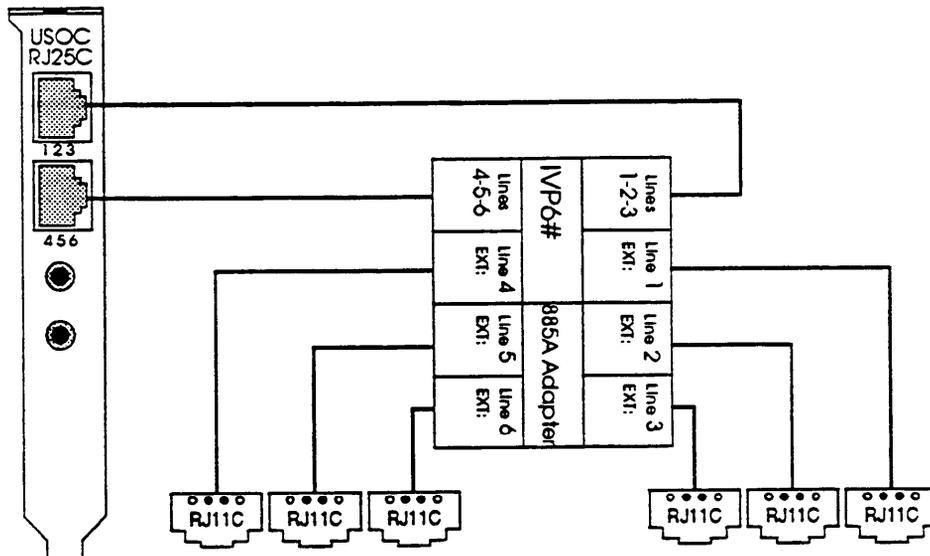


Figure 2-5. IVP6 Board with 885A Adapter for RJ11C

4. Use the supplied 6-conductor modular cables between the IVP6 board and the adapter.
5. Use the supplied 2- or 4- conductor modular cables between the adapter and the RJ11C modular jacks.
6. Label the connections in the space provided on the 885A adapter.

**Procedure 2-7b: Connect IVP6 (6-Port) Boards
Without 885A Adapter:**

Connect IVP6 (6-port) boards as follows:

1. Make sure that the line pairs were run together to type 108B connecting blocks or equivalent. (See Figure 2-6.)

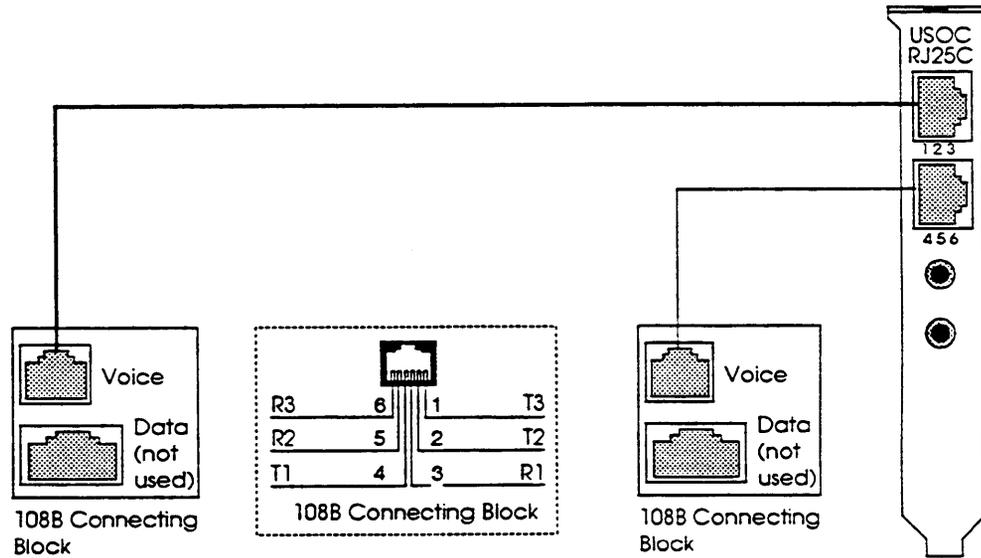


Figure 2-6. IVP6 Board with Direct Connection to 108B Connecting Block

2. Use the supplied D6AM 6-conductor modular cables between the IVP6 board and the type 108B connecting blocks.

Connecting the IFP Board Fax Lines

Voice lines must be connected to the IFP boards.

- Each IFP2 board has two 6-position modular jacks. Each of these modular jacks is used to connect one voice line. The top jack is used for line pair 1. The bottom jack is for line pair 2.
- Each IFP4 board has two 8-position modular jacks. Each of these modular jacks is used to connect two voice lines. The top jack is used for line pairs 1 and 2. The bottom jack is for line pairs 3 and 4.

Procedure 2-8: Connect IFP2 (2-Port) Boards

Each IFP2 board is supplied with two 2- or 4-conductor modular cables having modular plugs wired as RJ11C at both ends. Connect IFP2 (2-port) boards by following these steps:

1. Plug one end of a modular cable into the line 1 modular jack on the IFP2 board.
2. Plug the other end of the modular cable into a RJ11C modular jack for line 1.
3. Repeat the above steps for the second line (line 2).

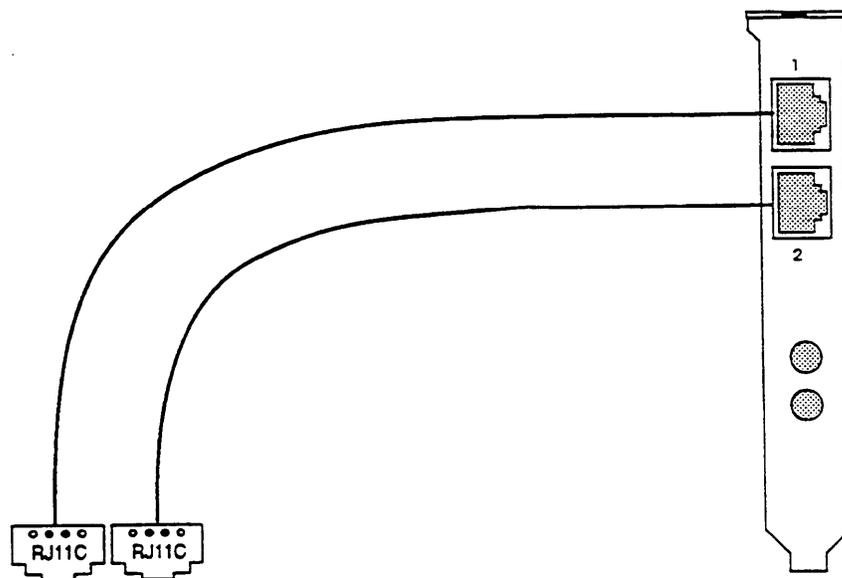


Figure 2-7. IFP2 Board Connections for RJ11C

Procedure 2-9: Connect IFP4 (4-Port) Boards

Each IFP4 board is supplied with two special "Y" cables having an 8-position modular plug on one end and having 6-position, 2-conductor modular plugs wired as RJ11C on the other two ends. Connect IFP4 (4-port) boards by following these steps:

1. Plug one 8-position modular plug into the matching modular jack on the top of the IFP4 board.
2. Plug the 6-position modular plugs into separate RJ11C modular jacks for each line.
3. Plug the second 8-position modular plug into the matching modular jack on the bottom of the IFP4 board.
4. Plug the 6-position modular plugs into separate RJ11C modular jacks for each line.

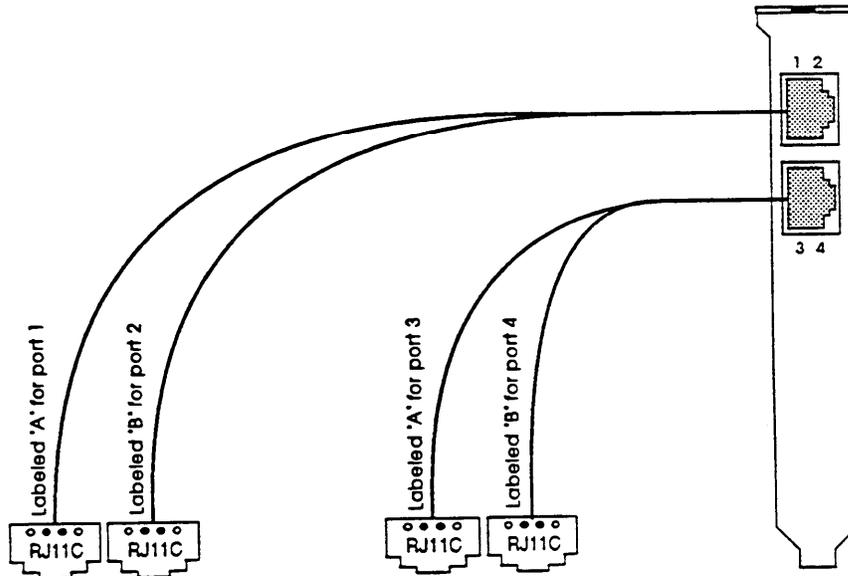


Figure 2-8. IFP4 Board with Two "Y" Cord Adapters for RJ11C

Connecting Administration and SMDR (TTY) Ports

The Master Controller communicates with the MERLIN LEGEND Communications System call processor through the system unit TTY ports.

- Serial Connector A (TTY00) is used for administering the MERLIN LEGEND Communications System.
- Serial Connector B (TTY01) is used for the Call Accounting System.

⇒ **NOTE:**

- If the MERLIN LEGEND Communications System is within 50 feet (15 meters) of the Master Controller, and the MERLIN LEGEND Communications System and the Master Controller share the same power outlet, a direct connection can be made between the MERLIN LEGEND Communications System ports and the Master Controller ports. This method of connection is detailed in Procedure 2-10a.
- If the MERLIN LEGEND Communications System is farther than 50 feet (15 meters) from the Master Controller, or the MERLIN LEGEND Communications System and the Master Controller do not share the same power outlet, data cables from the MERLIN LEGEND Communications System ports to the Master Controller ports will have to be extended with Z3A2 ADU cable drivers. Two Z3A2 ADU interface units are required for each cable, one at each end. This method of connection is detailed in Procedure 2-10b.

**Procedure 2-10a: Connect TTY Ports
Within 50 feet, Same Power Outlet**

This method is used only when the MERLIN LEGEND Communications System and the Master Controller are within 50 feet and share the same power outlet.

The following parts are supplied with the Master Controller:

- ❑ DB-9S to DB-25P Adapter
- ❑ 355AF Adapter
- ❑ D8W-87 Modular Cord

The following parts are supplied with MERLIN LEGEND IS III systems that include Call Accounting System:

- ❑ 355AF Adapter
- ❑ D8W-87 Modular Cord

Connect the MERLIN LEGEND Communications System Admin port and the Master Controller serial port A by following these steps (refer to Figure 2-9):

1. Connect one end of a D8W-87 modular cord to the Admin (lower) jack of the MERLIN LEGEND Communications System.
2. Connect the other end of the D8W-87 modular cord to a 355AF adapter.
3. Connect the 355AF adapter to the Serial Connector A (TTY00) of the Master Controller.

If Call Accounting System is included in the configuration, connect the MERLIN LEGEND Communications System SMDR port and the Master Controller serial port B by following these steps (refer to Figure 2-9):

4. Connect one end of a D8W-87 modular cord to the SMDR (upper) jack of the MERLIN LEGEND Communications System.
5. Connect the other end of the D8W-87 modular cord to a 355AF adapter.
6. Connect the 355AF adapter to the matching connector of a 9-pin-to-25-pin adapter.
7. Connect the other end of the 9-pin-to-25-pin adapter to the Serial Connector B (TTY01) of the Master Controller.

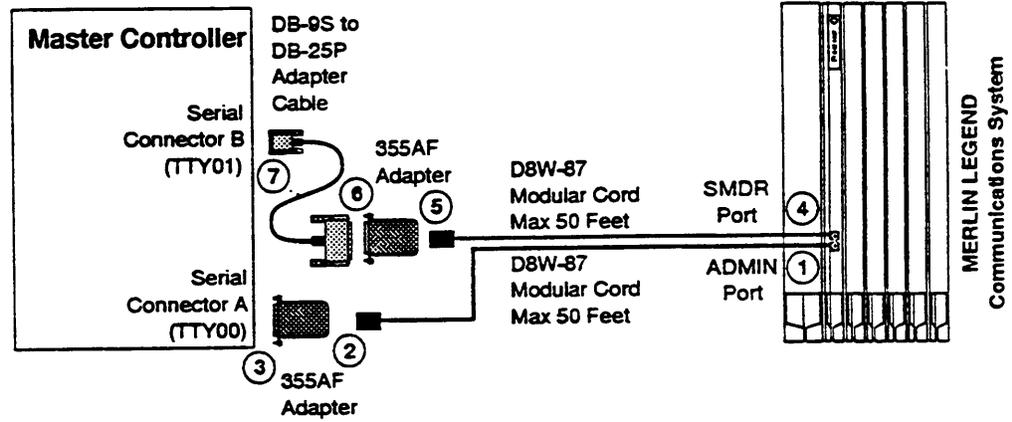


Figure 2-9. Administration and SMDR Port Connections
(Within 50 Feet, Same Power Outlet)

**Procedure 2-10b: Connect TTY Ports
More Than 50 feet/Different Power Outlet**

This method is used only when the MERLIN LEGEND Communications System and the Master Controller are more than 50 feet apart or do not share the same power outlet.



CAUTION:

If the Master Controller is in a building outside the main building (where the Communications System is located), an ADU and an additional protector must be installed in each building. The ADUs and protectors provide both the Master Controller and the Communications System additional protection against exposure to lightning, inadvertent contact with power lines, and power currents induced by nearby power lines. See the installation notes packed with the ADU for more information.

Connecting the Admin Ports

The following parts are supplied with the Master Controller:

- DB-9S to DB-25P Adapter
- 355AF Adapter
- D8W-87 Modular Cord

The following additional parts are required for Admin port connection:

- Two (2) 355AF Adapters
- M7-U87 Crossover Cable
- Two (2) Z3A2 ADUs
- M8AJ-87 Cable
- Three (3) D8W-87 Modular Cords
- D8AM-87 Modular Crossover Cable
- Two (2) 400B2 Adapters
- Two (2) D6AP-87 Modular Cords
- Two (2) 248B Adapters
- Two (2) 2012D Power Transformers



NOTE:

The combination of a Z3A2 ADU and a M8AJ-87 cable is equivalent to a Z3A4 ADU. You must order both pieces (one of each for Admin port, another of each for SMDR port).

⇒ **NOTE:**

Inside wire must be 4-pair, suitable for data; type 3 UTP data cable or equivalent.

Connect the MERLIN LEGEND Communications System Admin port and the Master Controller serial port B by following these steps (refer to Figure 2-10 and Figure 2-11):

1. Connect one end of a D8W-87 modular cord to the Admin (lower) modular jack on the MERLIN LEGEND Communications System.
2. Connect the other end of the D8W-87 modular cord to a 355AF adapter.
3. Connect the 355AF adapter to one end of an M7-U87 crossover cable.
4. Connect the other end of the M7-U87 crossover cable to the matching end of a M8AJ-87 cable.
5. Connect the other end of the M8AJ-87 cable to the matching connector on a Z3A2 ADU.
6. Connect one end of a D8W-87 modular cord to the modular jack marked "WALL" on the Z3A2 ADU.
7. Connect the other end of the D8W-87 modular cord to the modular jack end of a D8AM-87 crossover cord.
8. Connect the modular plug end of the D8AM-87 crossover cord to the matching modular jack on a 400B2 adapter.
9. Plug the 400B2 adapter into the wall jack leading to the Master Controller site.
10. Connect one end of a D6AP-87 modular cord to the 400B2 adapter.
11. Mount a 248B adapter to a 2012D power transformer.
12. Connect the other end of the D6AP-87 modular cord to the 248B adapter.
13. Plug the 2012D power transformer into an AC power outlet.

Go to the Master Controller site to continue the connection.

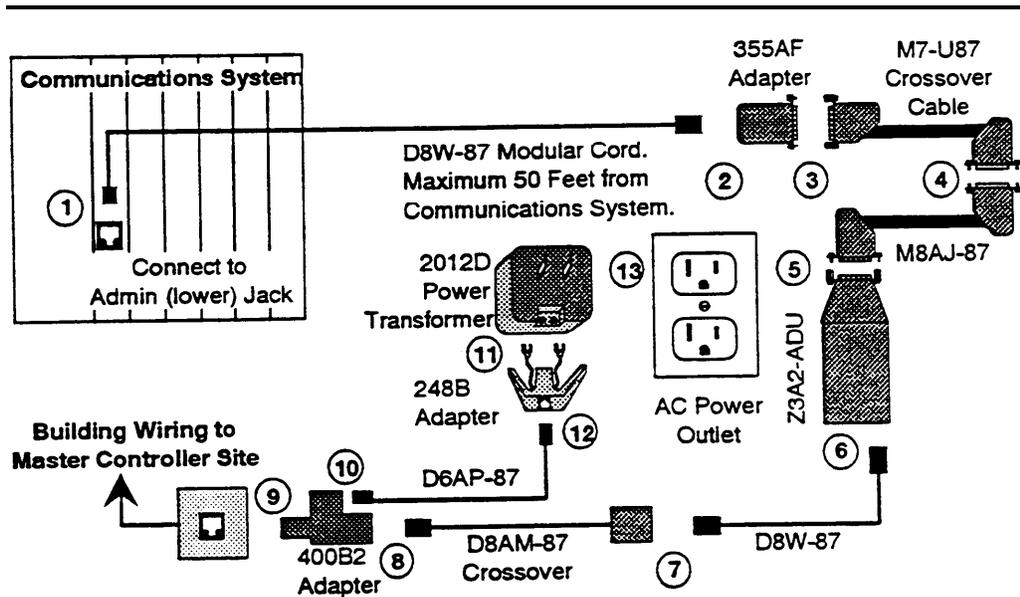


Figure 2-10. Communications System End of Administration Port Connection (More Than 50 Feet or Different Power Outlet)

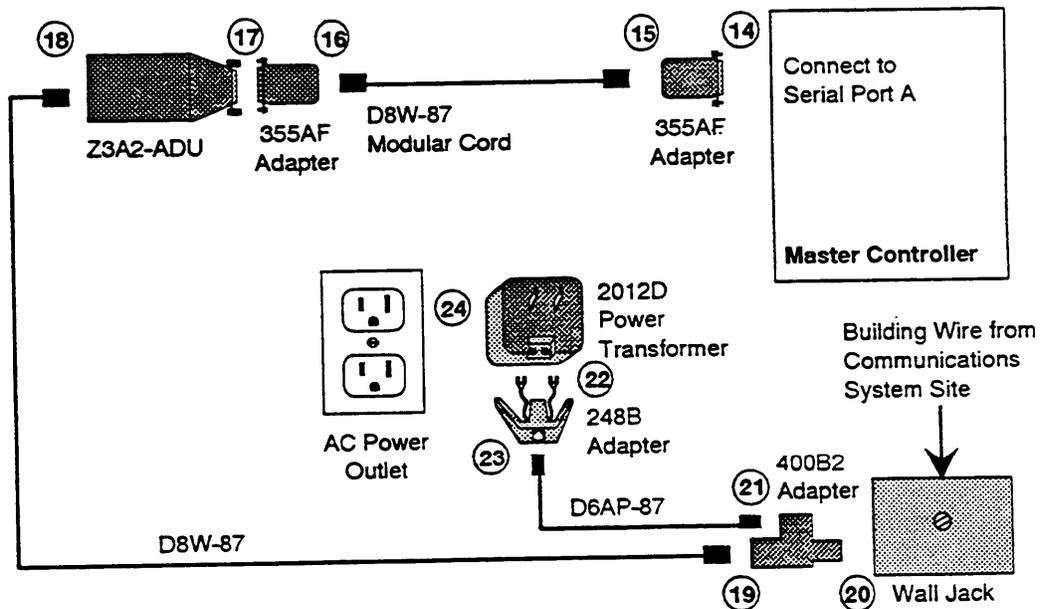


Figure 2-11. Master Controller End of Administration Port Connection (More Than 50 Feet or Different Power Outlet)

14. Connect a 355AF adapter to Serial Connector A on the Master Controller.
15. Connect one end of a D8W-87 modular cord to the 355AF adapter.
16. Connect the other end of the D8W-87 modular cord to another 355AF adapter.
17. Connect the 355AF adapter to the Z3A2 ADU.
18. Connect one end of a D8W-87 modular cord to the modular jack marked "WALL" on a Z3A2 ADU.
19. Connect the other end of the D8W-87 modular cord to a 400B2 adapter.
20. Plug the 400B2 adapter into the wall jack from the Communications System site.
21. Connect one end of a D6AP-87 cord to the 400B2 adapter.
22. Mount a 248B adapter on a 2012D power transformer.
23. Connect the other end of the D6AP47 cord to the 248B adapter.
24. Plug the 2012D power transformer into an AC outlet.

Connecting the SMDR Ports

The following parts are supplied with MERLIN LEGEND IS III systems that include Call Accounting System:

- 355AF Adapter
- D8W-87 Modular Cord

The following additional parts are required for SMDR port connection:

- Two (2) 355AF Adapters
- M7-U87 Crossover Cable
- Two (2) Z3A2 ADUs
- M8AJ-87 Cable
- Three (3) D8W-87 Modular Cords
- D8AM-87 Modular Crossover Cable
- Two (2) 400B2 Adapters
- Two (2) D6AP-87 Modular Cords
- Two (2) 248B Adapters
- Two (2) 2012D Power Transformed



NOTE:

The combination of a Z3A2 ADU and a M8AJ-87 cable is equivalent to a Z3A4 ADU. You must order both pieces (one of each for Admin port, another of each for SMDR port).



NOTE:

Inside wire must be 4-pair, suitable for data; type 3 UTP data cable or equivalent.

Connect the MERLIN LEGEND Communications System SMDR port and the Master Controller serial port B by following these steps (refer to Figure 2-12 and Figure 2-13):

1. Connect one end of a D8W-87 modular cord to the SMDR (upper) modular jack on the MERLIN LEGEND Communications System.
2. Connect the other end of the D8W-87 modular cord to a 355AF adapter.
3. Connect the 355AF adapter to one end of an M7-U87 crossover cable.
4. Connect the other end of the M7-U87 crossover cable to the matching end of a M8AJ-87 cable.
5. Connect the other end of the M8AJ-87 cable to the matching connector on a Z3A2 ADU.
6. Connect one end of a D8W-87 modular cord to the modular jack marked "WALL" on the Z3A2 ADU.
7. Connect the other end of the D8W-87 modular cord to the modular jack end of a D8AM-87 crossover cord.
8. Connect the modular plug end of the D8AM-87 crossover cord to the matching modular jack on a 400B2 adapter.
9. Plug the 400B2 adapter into the wall jack leading to the Master Controller site.
10. Connect one end of a D6AP-87 modular cord to the 400B2 adapter.
11. Mount a 248B adapter to a 2012D power transformer.
12. Connect the other end of the D6AP-87 modular cord to the 248B adapter.
13. Plug the 2012D power transformer into an AC power outlet.

Go to the Master Controller site to continue the connection.

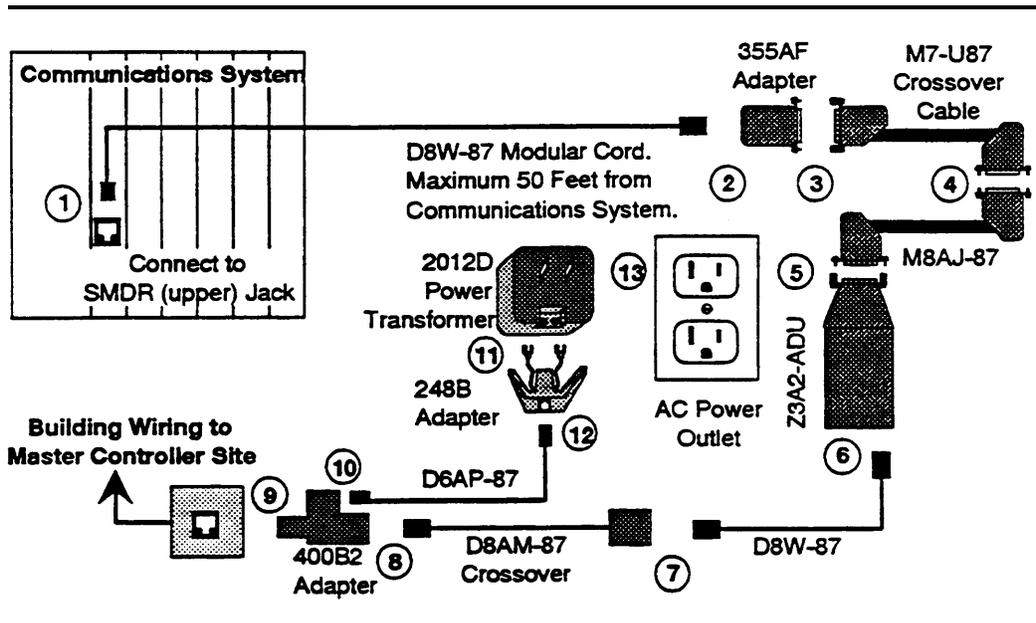


Figure 2-12. Communications System End of SMDR Port Connections
(More Than 50 Feet or Different Power Outlet)

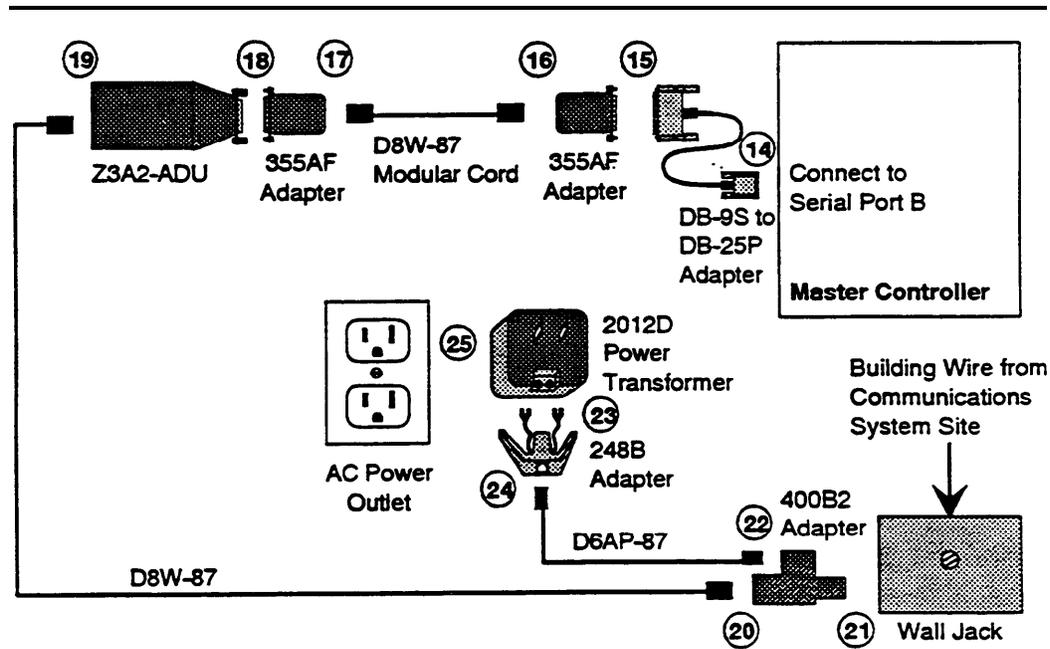


Figure 2-13. Master Controller End of SMDR Port Connections
(More Than 50 Feet or Different Power Outlet)

14. Connect the matching end of the 9-pin-to-25-pin adapter to Serial Connector B on the Master Controller.
15. Connect a 355AF adapter to the matching connector on a 9-pin-to-25-pin adapter.
16. Connect one end of a D8W-87 modular cord to the 355AF adapter.
17. Connect the other end of the D8W-87 modular cord to another 355AF adapter.
18. Connect the 355AF adapter to the Z3A2 ADU.
19. Connect one end of a D8W-87 modular cord to the modular jack marked "WALL" on a Z3A2 ADU.
20. Connect the other end of the D8W-87 modular cord to a 400B2 adapter.
21. Plug the 400B2 adapter into the wall jack from the Communications System site.
22. Connect one end of a D6AP-87 cord to the 400B2 adapter.
23. Mount a 248B adapter on a 2012D power transformer.
24. Connect the other end of the D6AP-87 cord to the 248B adapter.
25. Plug the 2012D power transformer into an AC outlet.

Starting the Master Controller



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.

Procedure 2-11: Supply Power to the Master Controller

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 outlet to eliminate the danger of shock.

1. Be sure the system unit power is OFF and that the voltage select switch located near the power connector on the rear of the system unit is preset for 115 VAC operation.
2. Connect the female end of the power cord to the connector at the rear of the system unit.
3. Connect the male end of the power cord to the surge protector.
4. Connect the surge protector power cord to an AC power source.

Procedure 2-12: Start the System

1. Remove the shipping insert from the tape drive by pushing it into the tape drive until it clicks and then releasing it.
2. Turn on the monitor.
3. Make sure that there is paper in the printer. Then turn on the printer.
4. Press the system-unit power switch to the ON position.
5. Adjust the video display to obtain a readable screen display. (Refer to the video display manual.)

Procedure 2-13: Perform 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. 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 the memory test.



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.

```
xxxxxxxxxxx BIOS Vx.xRx.x  
  
008192 KB Memory Good  
128 KB Shadow RAM Good (MC III only)  
  
1 Diskette Drive(s)  
1 Fixed Disk(s)  
1 Parallel Port(s)  
2 Serial Port(s)  
  
Memory Cache On (MC III only)  
RAM BIOS Disable  
Video ROM BIOS
```

Individual component tests are not reported unless the test fails. If the status of any item is FAIL or if the floppy disk, hard disk, or tape drive is not shown, refer to the following documentation:

- Chapter 9, "Troubleshooting," in this document.
- *AT&T Master Controller III User's Guide*
- *AT&T Applications Controller User's Guide* (for the Master Controller II+)

⇒ NOTE:

The display you see may differ. Any problems will be indicated by easily recognizable messages. Error messages will remain displayed and will not disappear before you can see them.

⇒ **NOTE:**

On an existing Master Controller II+, if the BIOS version displayed is lower than v1.1R2.5, you must return the Master Controller II+ and request a replacement.

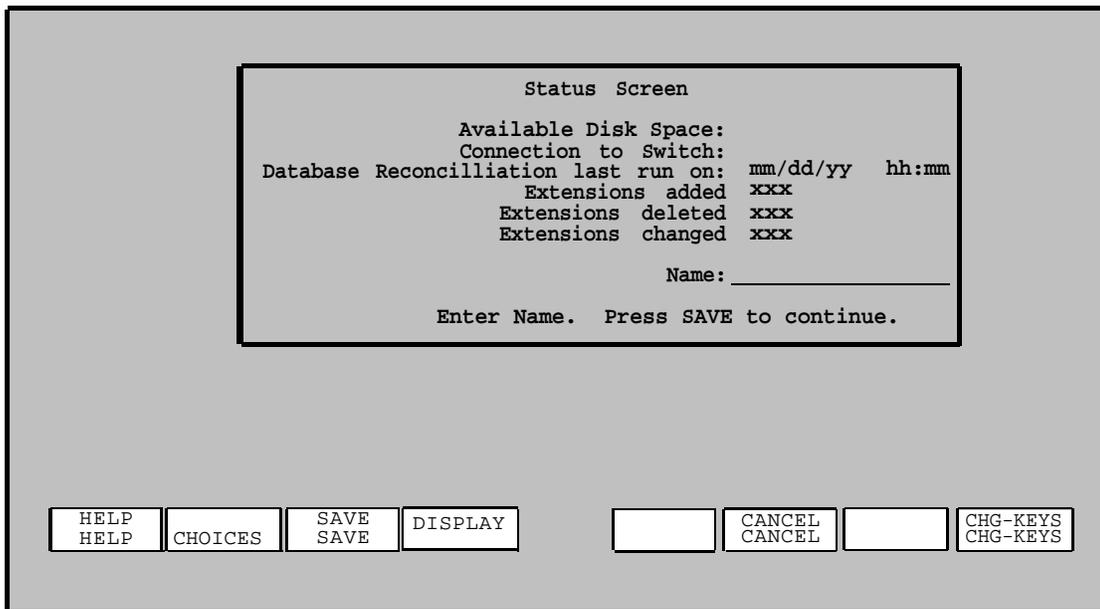
On an existing Master Controller III, if the BIOS version displayed is lower than v1.2R1.2, you must return the Master Controller III and request a replacement.

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

Procedure 2-14: Log onto IS-III

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

The Status Screen is displayed showing the system status and requesting that you enter your name.



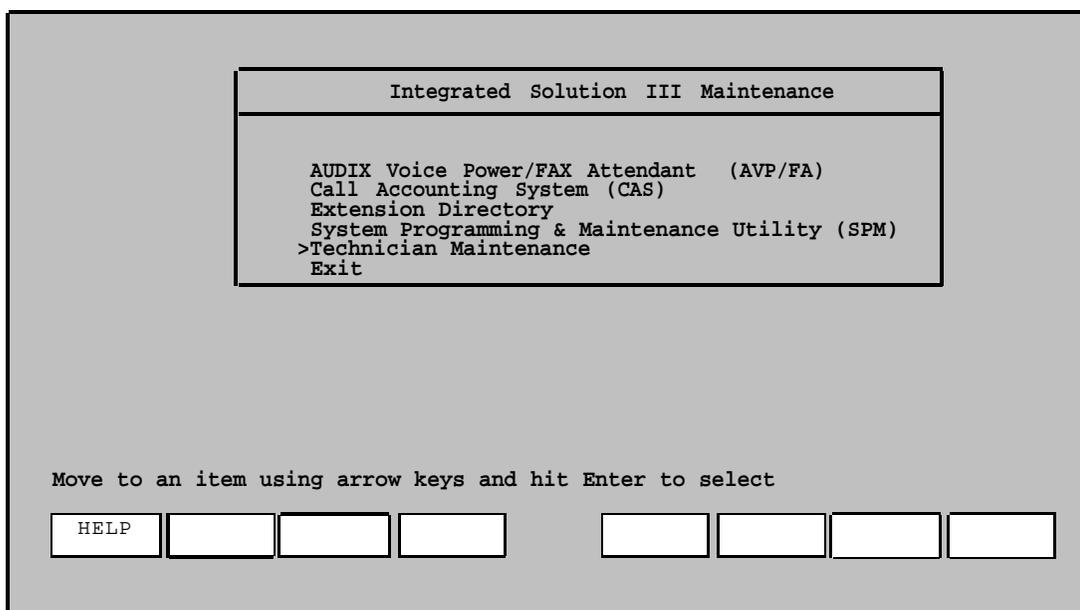
Screen 2-1. Integrated Solution Status Screen

3. Enter your name and press [F3] (SAVE) to continue.

The Integrated Solution Maintenance menu is displayed showing all the applications that are installed.

⇒ **NOTE:**

Only the applications installed are displayed. If AUDIX Voice Power and FAX Attendant are both installed, they will appear as one option. AUDIX Voice Power can be present without FAX Attendant, but FAX Attendant cannot be present without AUDIX Voice Power.



Screen 2-2. Integrated Solution Maintenance Menu

Testing and Adjusting the Installation

Procedure 2-15: Check Application Packages

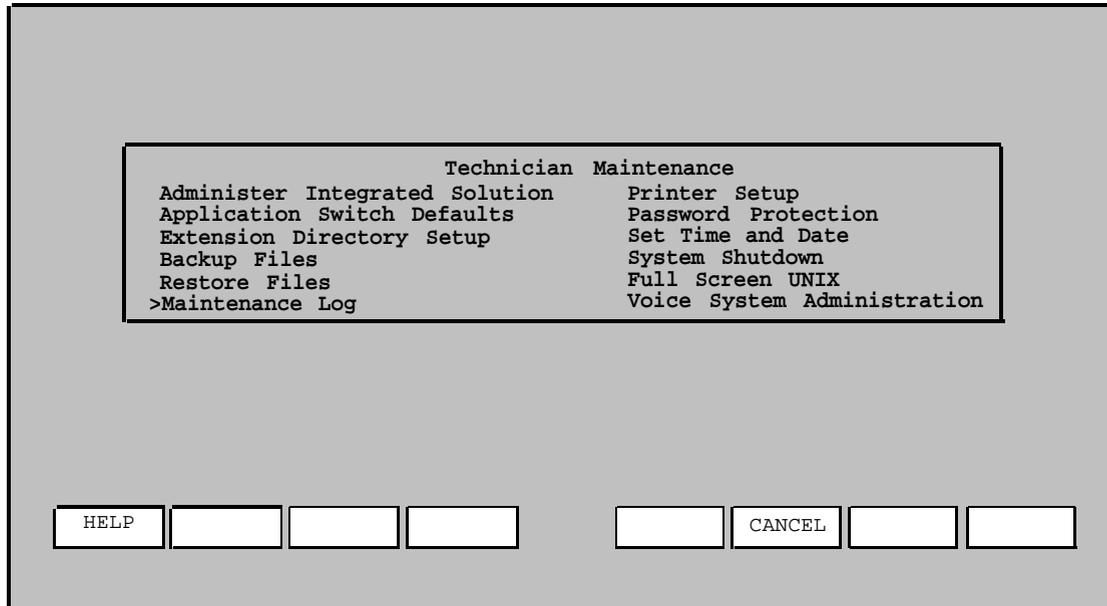
1. After you have logged on and the Integrated Solution Maintenance menu appears, move the cursor to `Technician Maintenance` and then press [`ENTER ↵`].



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 Appendix A of the *AT&T Integrated Solution III System Manager's Guide*.

The Technician Maintenance window is displayed.

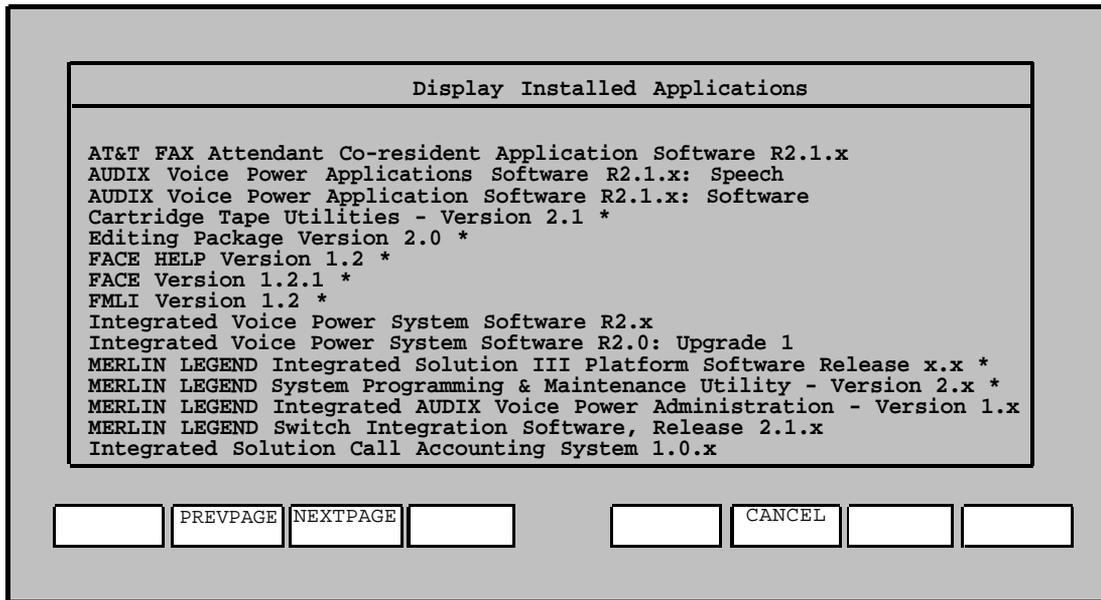


Screen 2-3. Technician Maintenance Menu

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 any of the essential software necessary to run Integrated Solution III, shown on Screen 2-4 by asterisks, (or the ordered applications) do not display on the screen, the software has not been installed properly.



Screen 2-4. 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.

Procedure 2-16: Test the Administration and SMDR (TTY) Ports

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

1. From the Integrated Solution 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.

Procedure 2-17: Initialize the Printer Setup (If Applicable)

To initialize the printer setup, follow these steps:

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

Strike the CHOICES function key. Strike SAVE whe you complete the form.

[HELP] [CHOICES] [SAVE] [ ] [CANCEL] [ ] [ ]
```

Screen 2-5. Parallel Printer Port Setup

2. Press the [**F2**] (CHOICES) function key to display the list of available printers.
 - The AT&T Applications Printer (wide carriage model) requires that the value be set to `AT&T570`.
 - The AT&T Call Accounting System Printer (narrow carriage model) requires that the value be set to `AT&T571`.
 - An HP LaserJet Series II or equivalent requires that the value be set to `HPLASERJET`.

3. Use the arrow keys to make your selection, then press [**ENTER** ↓].
4. Change the `Should Filter be used:` field to `Yes`.

⇒ **NOTE:**
No other fields can be changed.

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

The screen displays your selection and asks for confirmation.
6. Press [**F3**] (CONT) if it is correct or [**F6**] (CANCEL) if not.
7. Press [**F3**] (CONT) to return to the Technician Maintenance window.

Procedure 2-18: Test the Optional Printer

This test 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, on-line, and has paper. Also check that any configuration jumpers or switches described in the printer documentation are properly set. 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.

Procedure 2-19: Run Voice (IP) Board Diagnostics

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

1. Select `Maintenance Log` from the Technician Maintenance menu and press [**ENTER** ↓].
2. Select `IVP Board Diagnostics` from the Maintenance Log window and then press [**ENTER** ↓].

⇒ **NOTE:**

The diagnostic may take a long time to display results. If dial tone is not found on a channel, the diagnostic tries two more times (with three time-out delays) before going to the next channel.

The system searches for loop current and dial tones on the administered boards and then informs you if the IVP board passes the test. Use [**F3**] (NEXTPAGE) and [**F2**] (PREVPAGE) as necessary to view the *final* message for each channel.

- If the channel passes, its state is set to `INSERV`.
- If the channel fails, its state is set to `FOOS`.

If dial tone is not found, use an analog, single-line telephone to check for dial tone on the analog ports and check the analog connections. Also check the positions of the switches on the board against those shown in "IVP Board Configuration and Installation" in Chapter 3. Insure that the IVP board is properly seated in the main board connector.

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

⇒ **NOTE:**

If there is no IVP board present, or if the switches are set improperly so that the board cannot be found, the system responds:

```
Option 'immed' in effect
Invalid request to diagnose TipRing board 0.
Current status NONEX.
```

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

Procedure 2-20: Run Fax Board (IP) Diagnostics

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

1. Select `Maintenance Log` from the Technician Maintenance menu and press [`ENTER` ↵].
2. Select `Fax Board Diagnostics` from the Maintenance Log window and press [`ENTER` ↵].

The system searches for loop current and dial tones on the administered boards and then informs you if each fax channel passed or failed the test.

If dial tone is not found, check the analog connections with an analog, single-line telephone set. Also check the positions of the switches on the board against those shown in "IFP2 Board Configuration and Installation" or "IFP4 Board Configuration and Installation" in Chapter 3. Insure that the fax board is properly seated in the main board connector.

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

⇒ **NOTE:**

If no IFP board is present, or if the IFP board is not working or has improperly set switches, the system responds:

Fax Board Diagnostic FAILED

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

Completing the Installation

Customizing the System

When you have completed all of the preceding procedures, and all ordered application packages are installed, proceed to Chapter 5 if CAS is installed.

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.

Making a Backup

After all other work is completed, make a backup of the system to be used in the event of a catastrophic failure. Follow the instructions for backing up the system to tape given in Chapter 4 of the *AT&T Integrated Solution III System Manager's Guide*.

Upgrading the Hardware

3

This chapter provides procedures for upgrading Master Controller II+ and Master Controller III hardware.

When the customer uses existing hardware for a new IS III installation, and when the Master Controller is upgraded to provide more capacity, it is necessary to upgrade the hardware on-site. The following upgrades are possible:

- System units other than the Master Controller II+ or Master Controller III
 - Upgrade to Master Controller III.
 - Save any IVP boards for installation in the new Master Controller. No other components from earlier models can be reused.
- Master Controller II+
 - Add memory.
 - Upgrade hard disk size to 200 MB.
- Master Controller III
 - Upgrade hard disk size to 500 MB.
- General
 - Add voice port (IVP) cards.
 - Add fax port (IFP) cards.

All of these upgrades require that the Master Controller system unit be opened.

Preparing for Upgrade

Tools Required

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

- 3/16" flat-blade screwdriver
- #1 Phillips head screwdriver
- 3/16" nut driver
- an antistatic grounded wrist strap
- an antistatic grounded work mat
- a chip puller



DANGER:

The system unit power supply contains AC voltage at levels that can cause injury or death on contact. Before removing any system unit covers, turn off the system and unplug the power cord from the AC outlet.



CAUTION:

Electronic equipment can be damaged by electrostatic discharge. Do not touch any electronic component unless you are properly grounded. Grounding can be established by placing the equipment on a properly grounded work mat and by wearing a properly grounded wrist strap. The wrist strap must have direct contact with the bare skin and must never be worn over clothing. Do not work on equipment unless you are familiar with the necessary procedures for preventing damage caused by electrostatic discharge. When you remove expansion boards, place them on the antistatic grounded work mat until you replace them in the equipment.



NOTE:

When reusing IVP boards from systems other than the Master Controller II+ or Master Controller III, refer to the manuals provided with the system for instructions on opening the case and removing boards. Instructions for opening the case and removing boards from the Master Controller II+ and Master Controller III are included in this document.

Procedure 3-1: Shut Down the UNIX System



CAUTION:

The UNIX system must be shut down before shutting off power or the UNIX file system will be damaged.

To shut down the UNIX system on any Integrated Solution system, follow these steps:

1. Log in as *maint*.
2. At the Status Screen, type your name and press [**F3**] (SAVE).
3. At the Integrated Solution Maintenance menu, select `Technician Maintenance` and press [**ENTER** ↵].
4. At the Technician Maintenance menu, select `System Shutdown` and press [**ENTER** ↵].

A confirm window appears.

5. Press [**F3**] (CONT) to confirm and continue.

The system shuts down. Many messages display. The last messages are:

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

6. Shut off power. *Do not* reboot the system.

Upgrading the Master Controller II+

The basic procedures for upgrading the Master Controller II+ are given in this section. If it is necessary to add voice or fax port cards, see the separate instructions later in this chapter.

Procedure 3-2: Open the Master Controller II+

Follow these steps to remove the cover:

1. Be sure the system power is turned OFF. If any cables have been connected to the system unit, disconnect them.
2. If necessary, unlock the cover lock (A set of keys is packed in a plastic bag in the carton with the system unit.)
3. Loosen the two main cover-securing screws (A and B) on the back panel as shown in Figure 3-1.

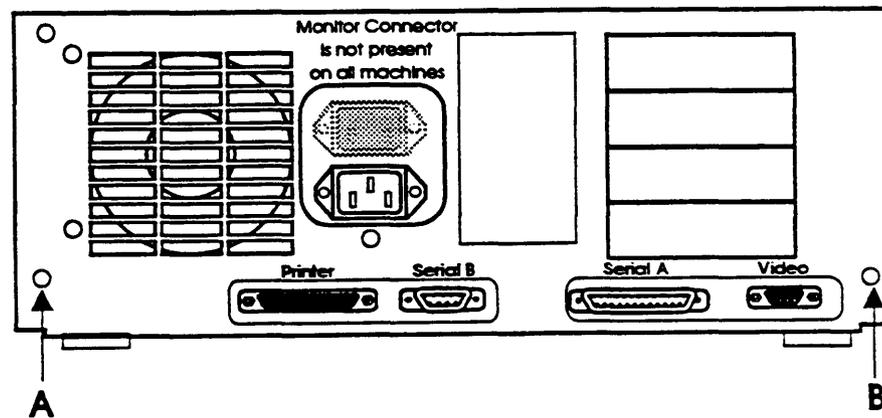


Figure 3-1. Master Controller II+ Cover Screws

4. Slide the cover off the system unit by pulling it completely forward until it clears the front of the chassis as shown in Figure 3-2. Then tilt the back of the cover up and remove it. Take care not to catch the cover on any internal cables or wires.

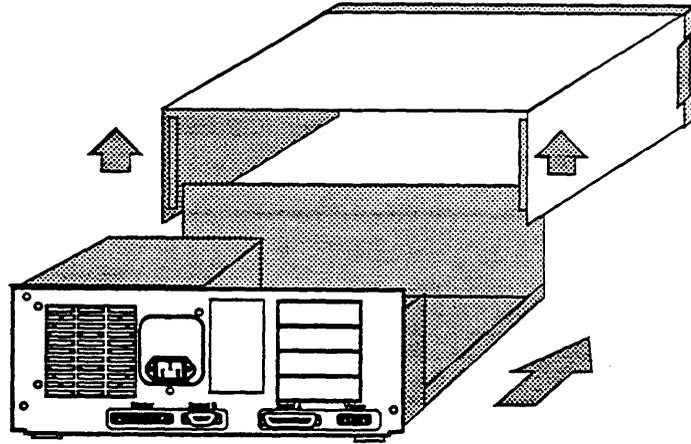


Figure 3-2. Master Controller II+ Cover Removal

Procedure 3-3: Remove the Card Securing Bracket

⇒ **NOTE:**

The card securing bracket may not be present on some systems. If the bracket is not present, skip this section.

Follow these steps to remove the card securing bracket

1. Remove the screw holding the Card Securing Bracket to the Slot Connector Card Mounting Bracket.

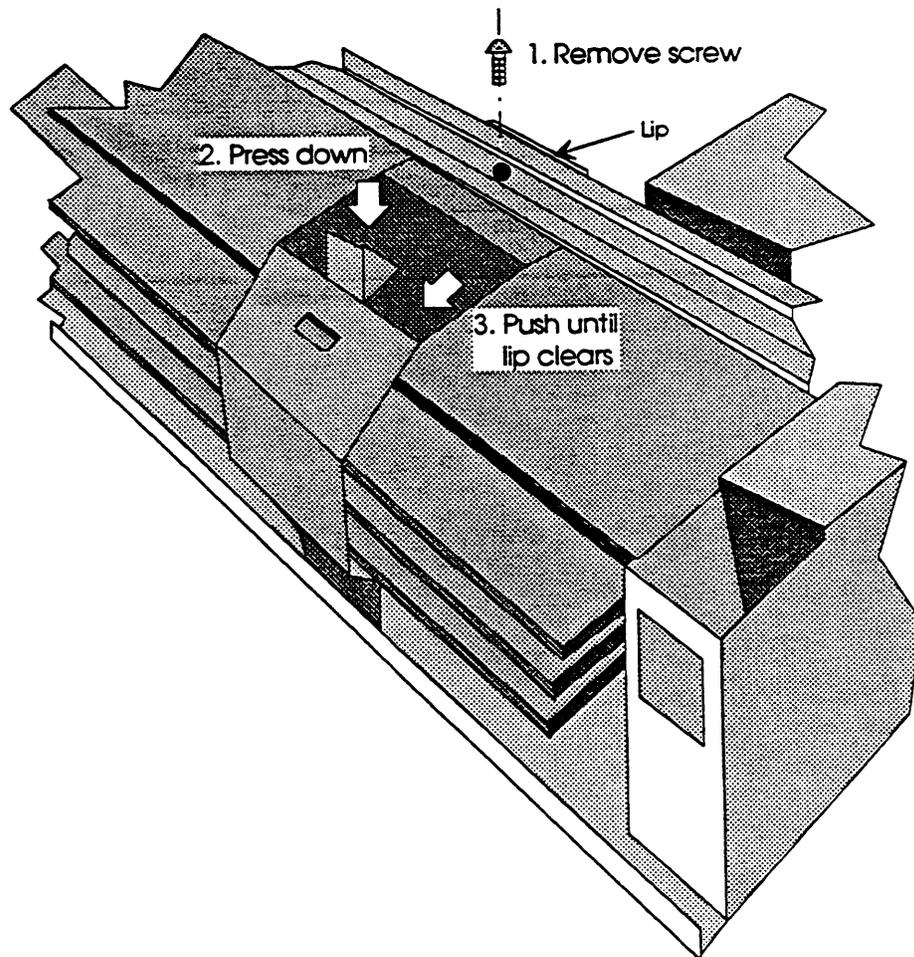


Figure 3-3. Removing Card Securing Bracket

2. Press down on the Card Securing Bracket so that the lip will clear the Slot Connector Card Mounting Bracket.
3. Slide the lip of the Card Securing Bracket out from under the Slot Connector Card Mounting Bracket.
4. Tilt the Card Securing Bracket outward and lift it off the stud.
5. When replacing the Card Securing Bracket, carefully line up and insert the expansion boards into the bracket as shown in Figure 3-4.

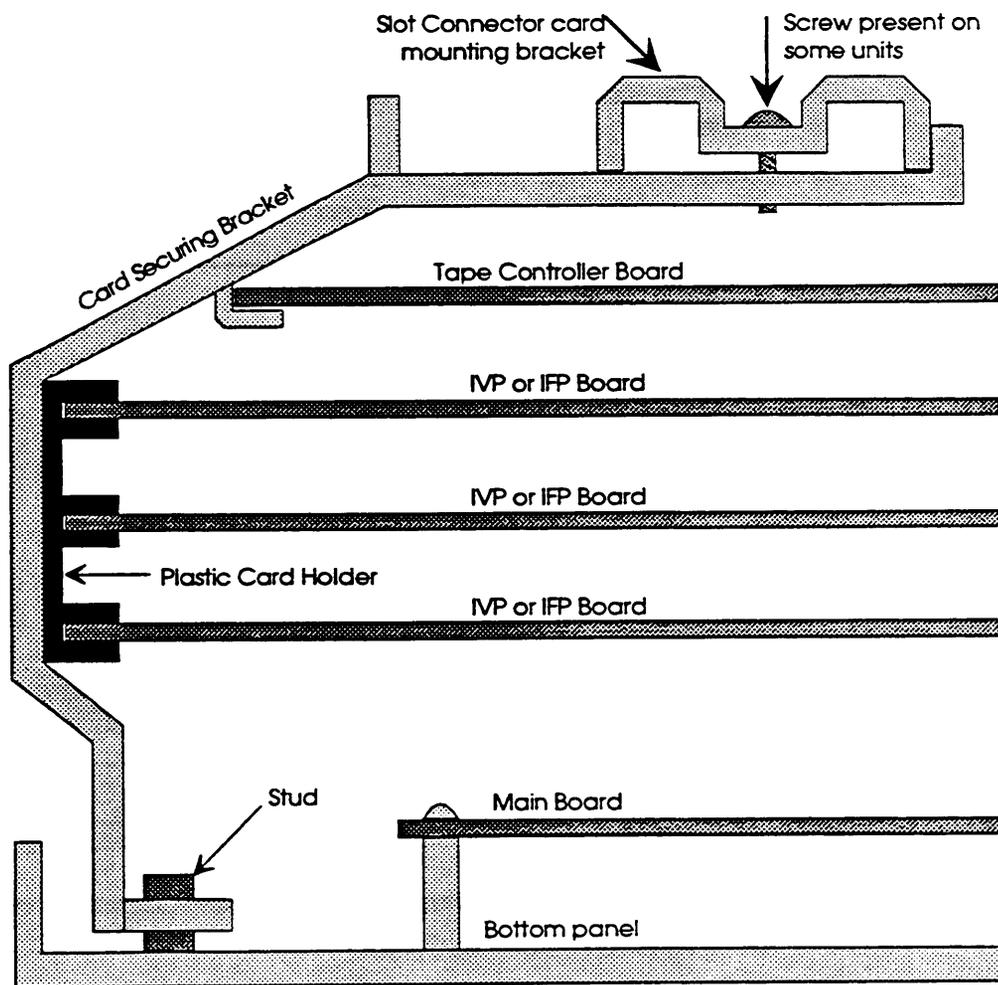


Figure 3-4. Replacing Card Securing Bracket

Installing Additional Memory in the Master Controller II+

If an existing Master Controller II+ is equipped with less than 8 MB of memory, it must be upgraded. To install additional memory, follow these steps:

1. If the UNIX system is running, shut it down using Procedure 3-1 given earlier in this chapter.
2. Turn off power to the system and remove the power cord from the system unit.
3. Disconnect all cables connected to the system unit, labeling them as you disconnect them so that they can be replaced later.
4. Open the Master Controller II+ using Procedure 3-2 given earlier in this chapter.
5. Locate the SIMM sockets. They are underneath any expansion boards that have been installed as shown in Figure 3-5.

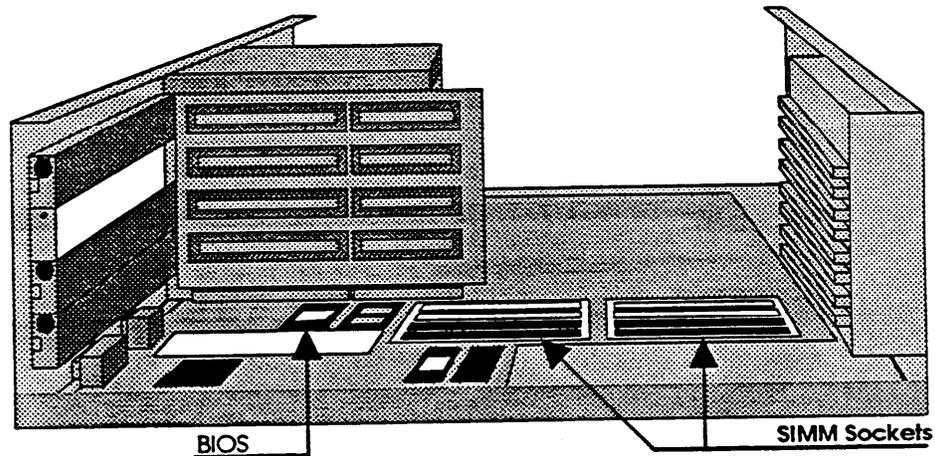


Figure 3-5. Location of SIMM Sockets Underneath Expansion Boards

6. Use Procedure 3-4 to remove (and later, reinstall) expansion boards.
7. Use Procedure 3-5 to insert SIMMs.
8. Continue with the instructions given in the section "Completing Memory Installation" that follows Procedure 3-5.

Procedure 3-4: Remove Expansion Boards:

Remove all expansion boards located in expansion slots using the following procedure:

1. Take precautions against electrostatic discharge as indicated earlier in this chapter.
2. Remove the Card Securing Bracket using Procedure 3-3 given earlier in this chapter.
3. Start with the tape controller board in the top-most slot.
 - a. Disconnect the internal cables. Note which end of the internal cables has the tracer wire.
 - b. Remove the screw holding the board mounting bracket
 - c. Slide the card out of the slot and put it aside on the antistatic mat.
4. Remove each remaining board working from the top down.
 - a. Make sure that all external cables are removed from the board.
 - b. Remove the screw holding the board mounting bracket
 - c. Slide the card out of the slot and put it aside on the antistatic mat.

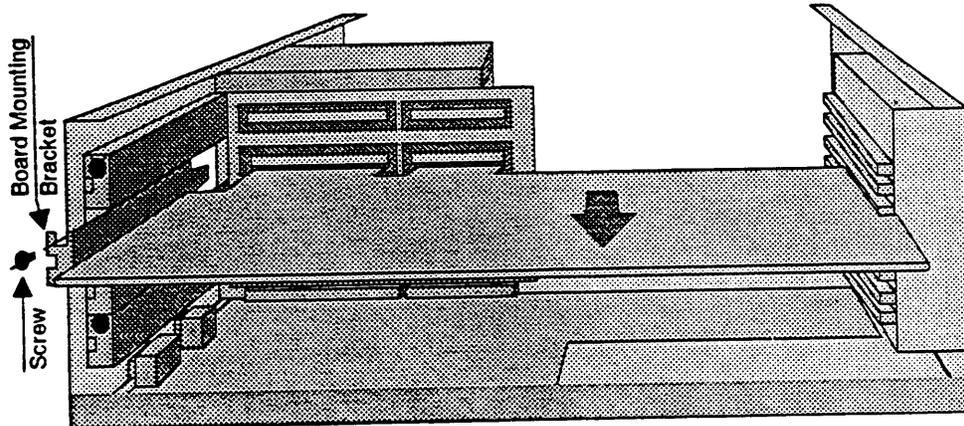


Figure 3-6. Removing Expansion Boards from Master Controller II+

Procedure 3-5: Install Memory SIMMs

To upgrade from 4 MB to 8 MB of memory, install four additional 1 by 9, 80-nanosecond SIMMs by following these steps:

⇒ **NOTE:**
Most 3-chip SIMMs and some 9-chip SIMMs do not perform properly in the Master Controller. Use only SIMMs obtained from AT&T to avoid this problem.

1. Start with the sockets nearest to you on each side (the third socket back on each side).
2. To insert a SIMM, hold it upright with the components facing away from you and the cutout notch on the right as shown in Figure 3-7.

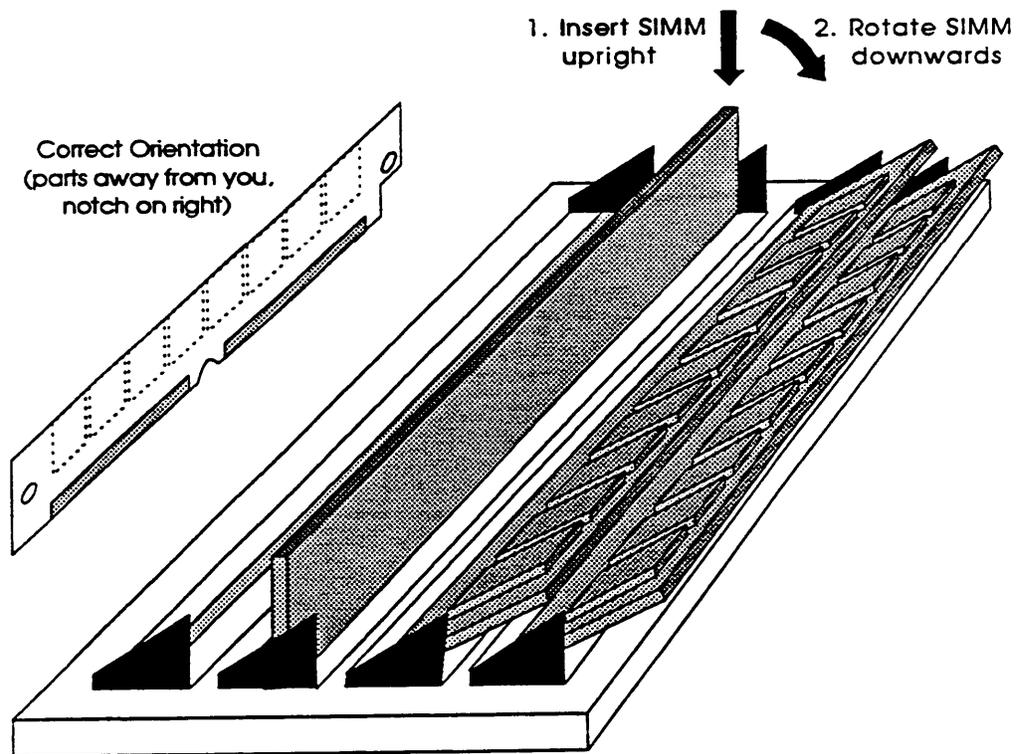


Figure 3-7. Inserting SIMMs in Socket

3. Insert it straight down into the center of the socket.
4. Holding it firmly in place, rotate it toward you until it clicks into place.
5. Be sure the SIMM is seated correctly in its socket and that both ends are held by the retainer clips. If the SIMM is not seated correctly, gently spread the retainers, one end at a time, to allow the SIMM to be pulled away from the clips. Then reseat the SIMM and complete the installation.

Completing Memory Installation

To complete the memory installation, follow these steps:

1. Reinstall any expansion boards that were removed by reversing the removal procedure (Procedure 3-4).
2. When all boards have been reinstalled, reinstall the Card Securing Bracket. See Procedure 3-3.
3. Close the system unit by reversing the opening procedure (Procedure 3-2) and reconnect the power cord.

⇒ **NOTE:**

When you reboot the machine, the following message displays:

```
Memory size mismatch
Memory Cache On [appears for MC III only]
RAM BIOS Disable
Video RAM BIOS
Press F1 key to continue or Ctrl_Alt_Esc for setup...
```

- a. Press [**CTRL**]—[**ALT**]—[**ESC**] to get into the SETUP utility.

The BIOS Setup Utility menu displays.

- b. Press [**ESC**] twice to reboot.

The memory size is automatically adjusted.

For additional information, see Chapter 3, "Configuration Setup" in the *AT&T Applications Controller User's Guide*.

Procedure 3-6: Removing SIMMs

If it becomes necessary to remove SIMMs, follow these steps:

1. Start with the sockets farthest away from you and work forwards.
2. Gently spread the retainers to release the top edge of the SIMM. Refer to Figure 3-8.



CAUTION:

Apply only enough pressure on the retainers to release the unit. Too much pressure may break the retainers and damage the socket.

3. Rotate the SIMM upward until it is upright.

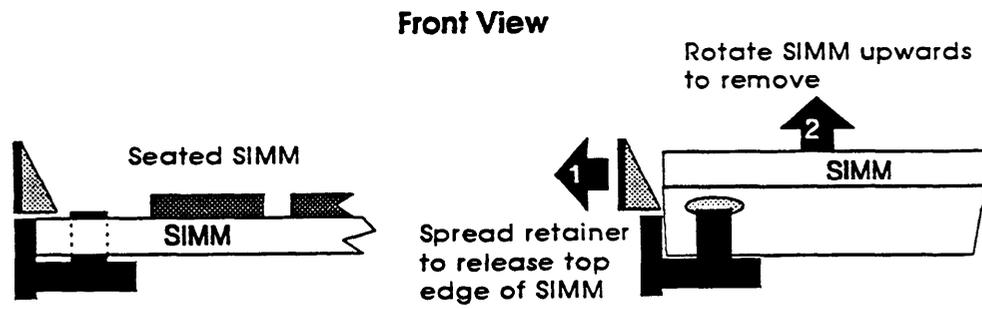


Figure 3-8. Removing SIMMs

4. Carefully lift the SIMM away from the socket.
5. Store the unit in a suitable static-free protective wrapper.

Procedure 3-7: Upgrade the Hard Disk in the Master Controller II+

To upgrade the disk to 200 MB on the Master Controller II+, follow these steps:

1. Back up the system to tape. See Chapter 4 of the *AT&T Integrated Solution III for MERLIN LEGEND® Communications System System Manager's Guide* for instructions.
2. If the UNIX system is running, shut it down using Procedure 3-1 given earlier in this chapter.
3. Take precautions against electrostatic discharge as indicated at the beginning of this chapter.
4. Turn off power to the system and remove the power cord from the system unit.
5. Disconnect all cables connected to the system unit, labeling them as you disconnect them so that they can be replaced later.
6. Open the Master Controller II+ using Procedure 3-2 given earlier in this chapter.
7. Locate the hard disk as shown in Figure 3-9.

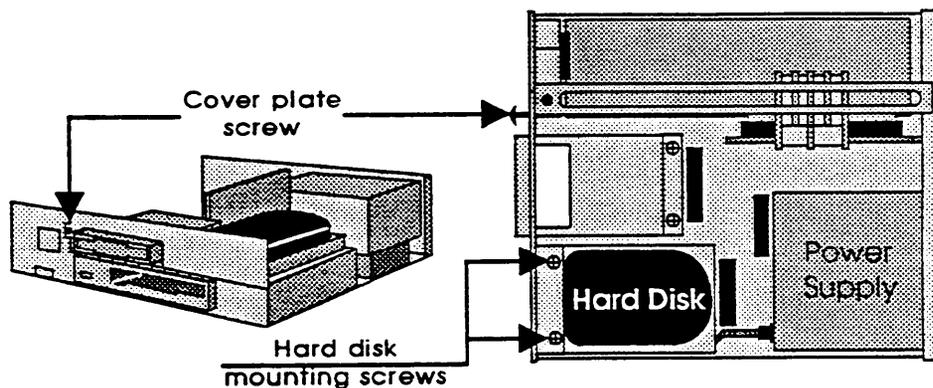


Figure 3-9. Master Controller II+ Internal Components

8. Remove the two screws near the disk drive and one screw from the front as shown in Figure 3-9. Lift off the cover plate.
9. Disconnect the cables from the back of the hard disk.
10. Slide the hard disk drive forward and remove it.

11. Refer to Figure 3-10. Remove the metal mounting bracket from the old hard disk drive by removing the four screws.

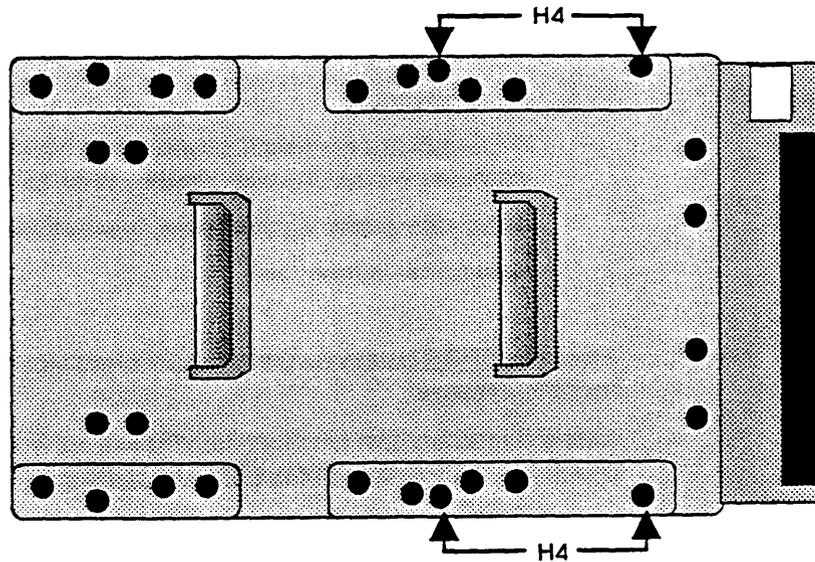


Figure 3-10. Hard Disk Drive Bracket

12. Attach the metal mounting bracket to the new hard disk drive using the same screws in the holes marked "H4."
13. Slide the hard disk drive into place so that the tabs on the metal mounting bracket attached to the hard disk drive are in the slots of the drive frame. You should not be able to lift the hard disk drive straight up if it is installed properly.
14. Connect the hard disk control cable to the matching connector on the hard disk drive.



NOTE:

The hard disk cable connector is keyed. If it does not fit, turn it over.

15. Connect the power supply cable to the matching connector on the hard disk drive. Match the curved sides of the cable connector and the hard disk drive connector.
16. Put the cover plate back in place. Line up the front screw hole and secure the front screw.
17. Line up the two screw holes near the hard disk as shown in Figure 3-9 and secure the hard disk drive in place with the screws removed earlier.

18. Close the system unit by reversing Procedure 3-2 and reconnect the power cord.
19. Run the SETUP utility to reconfigure the system.
 - a. If the UNIX system is running, shut down the UNIX system.



CAUTION:

The UNIX system must be shut down before rebooting the machine or the UNIX file system will be damaged.

When the system is shut down, you will receive the message:

Reboot the system now.

- b. Press the [**Reset**] button on the Master Controller or turn power on to boot the system.
- c. After the memory test is complete, and while the Power-On Self Test (POST) is still running, press [**CTRL**]—[**ALT**]—[**ESC**].

⇒ **NOTE:**

If you wait too long and the UNIX system starts to come up, allow it to finish coming up. Then shut the UNIX system down and retry the procedure.

The BIOS Setup Utility menu appears:

- d. Select System Configuration Setup and press [**ENTER** ↓].
- e. Move the highlight bar to Fixed Disk 0.
- f. Examine the new hard disk to determine the model number, then proceed as follows:
 - For disk model CP3204F, enter *46* as the disk type. All other information will change automatically.
 - For disk model CP30254, enter *255* as the disk type. This will unlock the other fields. Enter the following data

Field	Value
Cylinders	895
Heads	10
Sectors	55
Landing Zone	0
Precomp	0

- g. Press [**ESC**] to return to the BIOS Setup Utility menu.

- h. Press [**ESC**] to reboot the system.

For additional information, see Chapter 3, "Configuration Setup," in the *AT&T Applications Controller User's Guide*.

20. Restore the tape backups made in step 1 or rebuild the IS III system. See Chapter 6 for instructions.

Adding Expansion Boards to the Master Controller II+

The Master Controller II+ has four expansion slots. The top slot is always used for the tape controller. The remaining three slots may be filled with voice port (IVP) and fax port (IFP) boards. We recommend that the voice port boards be installed from the bottom slot up and that the fax port boards be installed from the second slot downwards. Refer to Figure 3-4.

Procedure 3-8: Install Expansion Boards

To install expansion boards in the Master Controller II+, follow these steps:

1. If the UNIX system is running, shut it down using Procedure 3-1 given earlier in this chapter.
2. Take precautions against electrostatic discharge as indicated at the beginning of this chapter.
3. Turn off power to the system and remove the power cord from the system unit.
4. Open the Master Controller II+ using Procedure 3-2 given earlier in this chapter.
5. Remove the Card Securing Bracket using Procedure 3-3 given earlier in this chapter.

6. Remove the slot cover from the expansion slot. Save the card bracket screw to install the new card. Store the slot cover for future use.

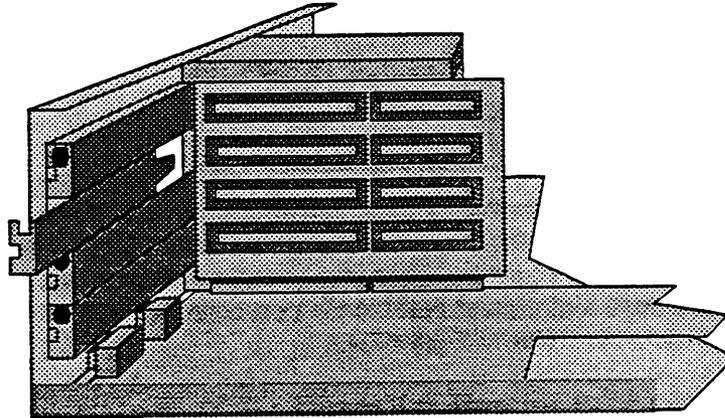


Figure 3-11. Removing the Slot Cover

7. Configure any jumpers and switches on the board being installed.
8. With the component side of the board facing up, align the expansion board bracket with the guides on the front and back panels.

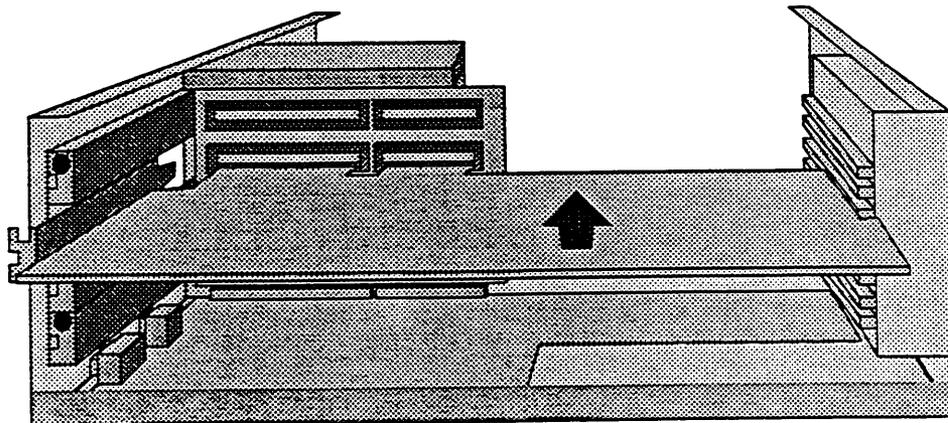


Figure 3-12. Installing a Board

9. While inserting the board into the slot, guide the foot of the board bracket into the slot on the back panel. You may need to bend the foot toward the back panel (away from the connector) so that the foot fits into the slot.

10. When the foot is properly aligned, you will be able to push the expansion board gently into the connector on the slot board. If necessary, rock it slowly into place.
11. Secure the board with the bracket screw.



CAUTION:

Do not neglect to secure the board; some expansion boards use the bracket as a frame ground.

12. If there was a Card Securing Bracket, reinstall it by reversing Procedure 3-3, given earlier in this chapter.
13. Replace the system unit cover by reversing Procedure 3-2 given earlier in this chapter and reconnect the power cord.

Upgrading the Master Controller III

The basic procedures for upgrading the Master Controller III are given in this section. If it is necessary to add voice or fax port cards, see the separate instructions later in this chapter.

Procedure 3-9: Open the Master Controller III

To remove the side panel, follow these steps:

1. Unlock the system unit by inserting the key in the lock and turning it to the unlocked () position.
2. Remove the three side panel retaining screws as shown in Figure 3-13.

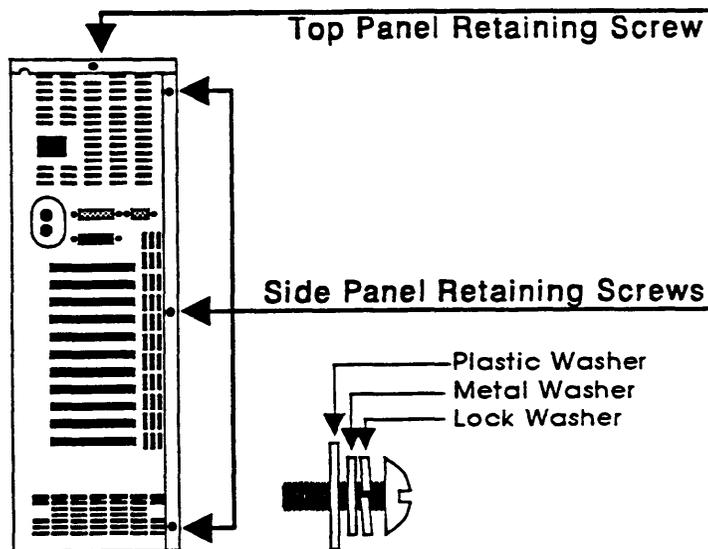


Figure 3-13. Side and Top Panel Retaining Screw Locations

⇒ **NOTE:**

If the washers come off of the retaining screws, they should be replaced as shown in Figure 3-13 with the lock washer first, then the metal washer, and finally the plastic washer.

3. Slide the side panel back (toward the rear of the system unit) about one-half inch (2 cm).

4. Tilt the side panel outward and lift upward as shown in Figure 3-14.
-

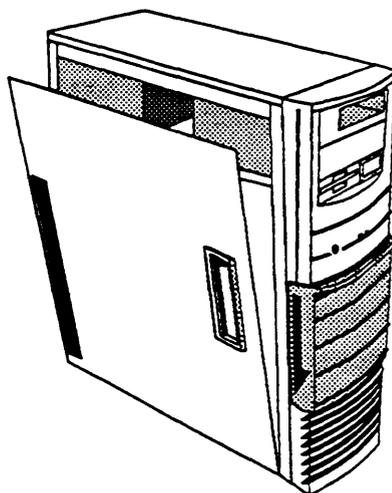


Figure 3-14. Removing the Side Panel

To replace the side panel, reverse the above instructions.

Procedure 3-10: Upgrade the Hard Disk in the Master Controller III

If an existing Master Controller III is to be upgraded to a 500 MB hard disk, follow these steps:

1. Back up the system to tape. See Chapter 4 in the *AT&T Integrated Solution III for MERLIN LEGEND® Communications System System Manager's Guide* for instructions.
2. If the UNIX system is running, shut it down using Procedure 3-1 given earlier in this chapter.
3. Take precautions against electrostatic discharge as indicated at the beginning of this chapter.
4. Turn off power to the system and remove the power cord from the system unit.
5. Remove the side panel from the system unit using Procedure 3-9 given earlier in this chapter.
6. The hard disk drive is mounted in one of the bays at the bottom of the system unit as shown in Figure 3-15.

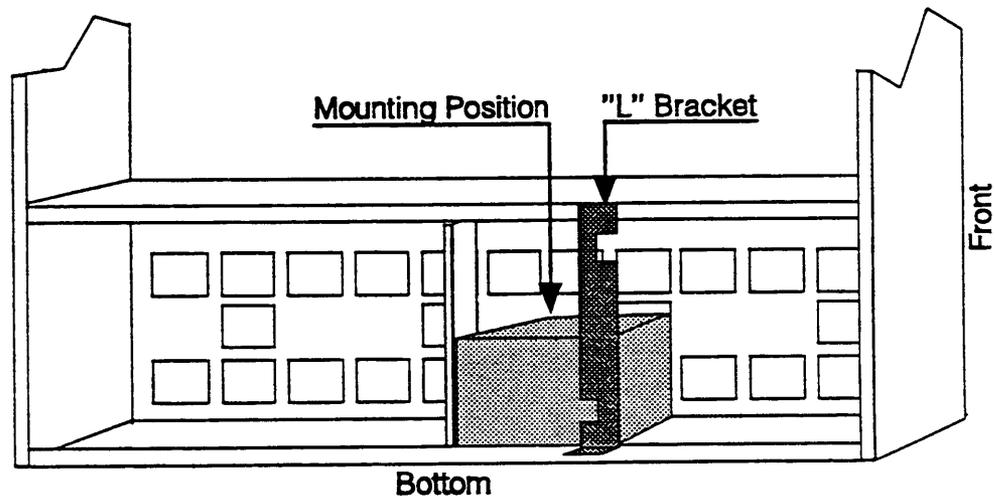


Figure 3-15. Location of Hard Disk Drive

7. Disconnect the power and control cables from the hard disk drive.
8. Remove the screw holding the "L" bracket and remove the bracket by pulling the top end forward.

9. Slide the hard disk drive out of the bay. It may be necessary to lift the hard disk drive slightly as you pull because there is tight clearance on the heads of the screws that hold the mounting rails to the bottom of the hard disk drive.
10. Remove the rails from the bottom of the hard disk drive and reattach them to the bottom of a new hard disk drive as shown in Figure 3-16.

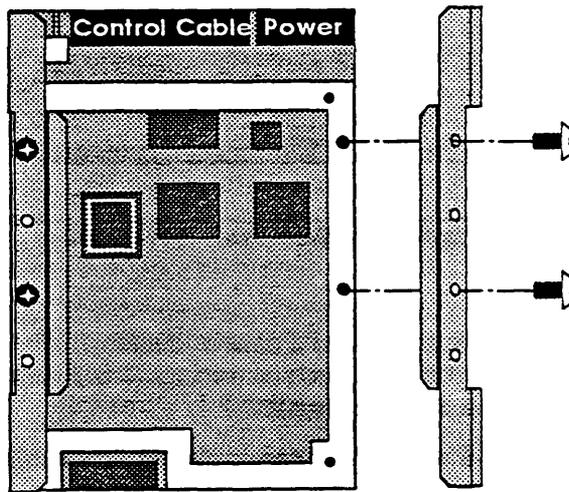


Figure 3-16. Hard Disk Drive Mounting Rails

11. Slide the new hard disk drive into the same bay as shown in Figure 3-15. It may be necessary to lift the hard disk drive slightly as you slide it in because there is tight clearance on the screw heads holding the mounting rails.
12. Attach the "L" bracket carefully, **exactly** as shown in Figure 3-15 and Figure 3-17.



CAUTION:

The "L" bracket must fit between the power connector and the mounting rail or the hard disk drive may come loose.



NOTE:

It is much easier to install the "L" bracket if the system unit is upright.

To attach the "L" bracket slip the front edge of the bracket into the slot provided and push the bracket back so that the screw hole at the top lines up with the threaded hole in the chassis. Then insert the retaining screw and tighten it.

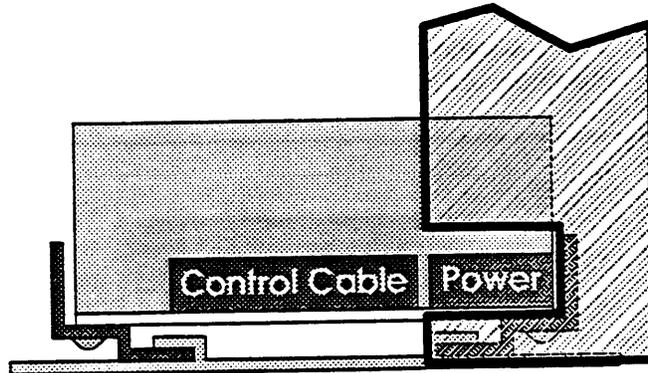


Figure 3-17. Attaching Hard Disk Drive "L" Bracket

13. Reconnect the power and control cables. The connectors are keyed so that they cannot be connected incorrectly. The tracer stripe on the control cable should be towards the right.
14. Replace the system unit side panel by reversing Procedure 3-9 and reconnect the power cord.
15. Run the SETUP utility to reconfigure the system.
 - a. If the UNIX system is running, shut down the UNIX system.



CAUTION:

The UNIX system must be shut down before rebooting the machine or the UNIX file system will be damaged.

When the system is shut down you will receive the message:

Reboot the system now.

- b. Press the [**Reset**] button on the Master Controller or turn power onto boot the system.
- c. While the Power-On Self Test (POST) is still running, press [**CTRL**]—[**ALT**]—[**ESC**].



NOTE:

If you wait too long and the UNIX system starts to come up, allow it to finish coming up. Then shut the UNIX system down and retry the procedure.

The BIOS Setup Utility menu appears.

- d. Select `System Configuration Setup` and press [ENTER ↵].
- e. Move the highlight bar to `Fixed Disk 0`.
- f. Enter `49` as the disk type for the 500 MB disk. (`46` is the disk type for the 200 MB hard disk.)
- g. Press [ESC] to return to the BIOS Setup Utility menu.
- h. Press [ESC] to reboot the system.

For additional information, see Chapter 3, "Configuration Setup," in the *AT&T Applications Controller User's Guide*.

- 16. Restore the tape backups made in step 1 or rebuild the IS III system. See Chapter 6 for instructions.

Adding Expansion Boards to the Master Controller III

The Master Controller III has eight expansion slots. The top slot is always used for the tape controller. The bottom slot is always used for the video controller. The remaining six slots may be filled with voice port (IVP) and fax port (IFP) boards. We recommend that the voice port boards be installed from the lowest available slot upwards and that the fax port boards be installed highest available slot downwards.

Procedure 3-11: Add Expansion Boards to the Master Controller III

To install an expansion board, follow these steps:

1. If the UNIX system is running, shut it down using Procedure 3-1 given earlier in this chapter.
2. Take precautions against electrostatic discharge as indicated at the beginning of this chapter.
3. Turn off power to the system and remove the power cord from the system unit.
4. Remove the side panel from the system unit using Procedure 3-9 given earlier in this chapter.

5. Select the slot to be used for installing the expansion board. The slots are numbered from the bottom of the system unit toward the top as shown in Figure 3-18. IVP boards should be installed from the lowest available slot upwards. Fax boards should be installed from the highest available slot downwards.
-

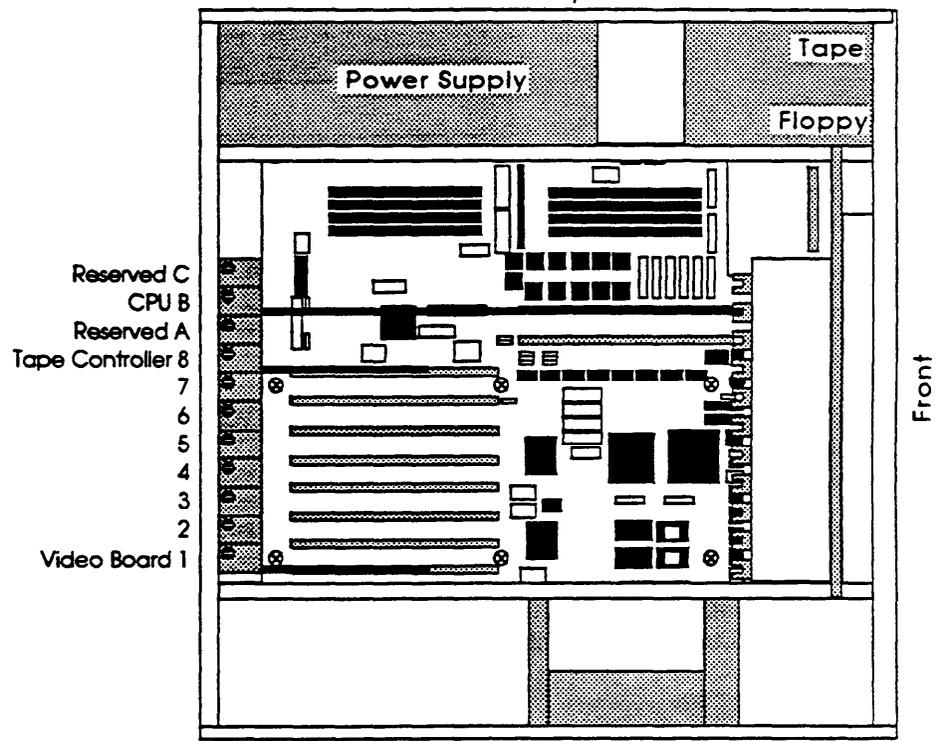


Figure 3-18. Location of Expansion Board Slots

6. Remove the card bracket screw holding the slot cover in place and remove the slot cover as shown in Figure 3-19. (Save the slot cover for use if the board is removed.)

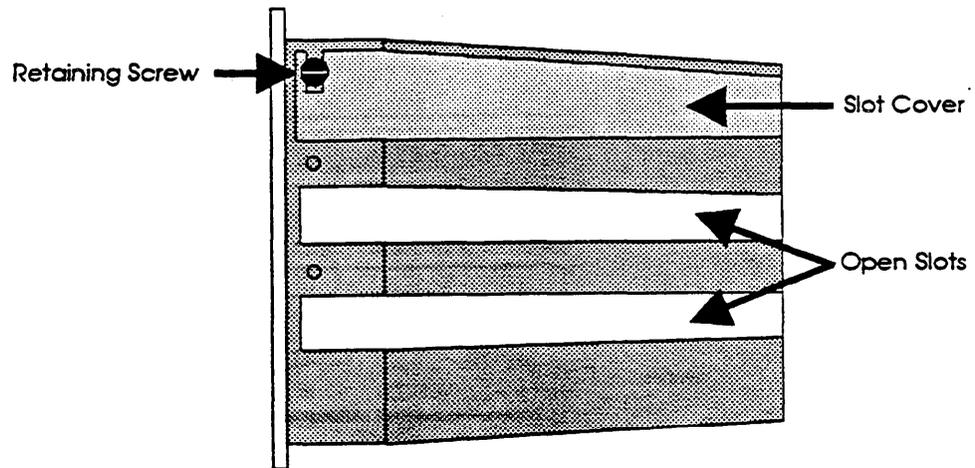


Figure 3-19. Removing the Slot Cover / Securing the Board

7. Slide the expansion board into the slot. Use the plastic guide on the right and the slot opening on the left to align the board with the connector.
8. Press the board firmly into the connector. The mounting bracket should seat completely so that the screw can be inserted easily.

⇒ **NOTE:**

On some boards, the mounting bracket will not fit perfectly when the board is fully seated in the connector. It may be necessary to adjust the mounting bracket or to allow one end of the board to be less than fully seated.

9. Secure the board in place by using the same card bracket screw in the mounting bracket that was removed from the slot cover as shown in Figure 3-19.
10. Replace the system unit side panel by reversing Procedure 3-9 and reconnect the power cord.

Adding Voice and Fax Port Boards

The procedures for adding voice and fax port boards are similar for both the Master Controller II+ and the Master Controller III:

1. Configure the boards.
2. Open the system unit case.
3. Install the boards.
4. Close the case.

The procedures in this section cover only board configuration. Refer to the preceding sections for information on opening and closing the system unit case and installing expansion boards.

Voice and Fax Port Configuration

A different number of voice and fax port boards can be installed in the available slots on the Master Controller II+ and Master Controller III to meet the requirements of the customer. The configurations are:

- Master Controller II+
 - one IVP4 or IVP6 board with one or two IFP2 boards
 - one IVP4 or IVP6 board with one IFP4 and one empty slot
 - two IVP4, IVP6, or one of each with one IFP2 or one IFP4 boards
- Master Controller III
 - any combination with up to 12 voice ports and 12 or fewer fax ports.

⇒ **NOTE:**
Mixing IFP2 and IFP4 boards is not supported.

IVP Board Configuration

If you need to add IVP boards to the system, the IVP board(s) must be configured before they are installed. There are four variations of IVP4 boards and two variations of IVP6 boards:

- All old layout boards have two banks of switches and a jumper. There are three old layout variations of IVP4 boards and one old layout variation of IVP6 boards.
- All new layout boards have one bank of switches and no jumpers. There is one variation each of new layout IVP4 and IVP6 boards.

The location of the switches and jumper are shown in Figure 3-20 for the old layout IVP4 board and in Figure 3-21 for the old layout IVP6 board. The locations of the switches are shown in Figure 3-22 for the new layout IVP4 board and in Figure 3-23 for the new layout IVP6 board.

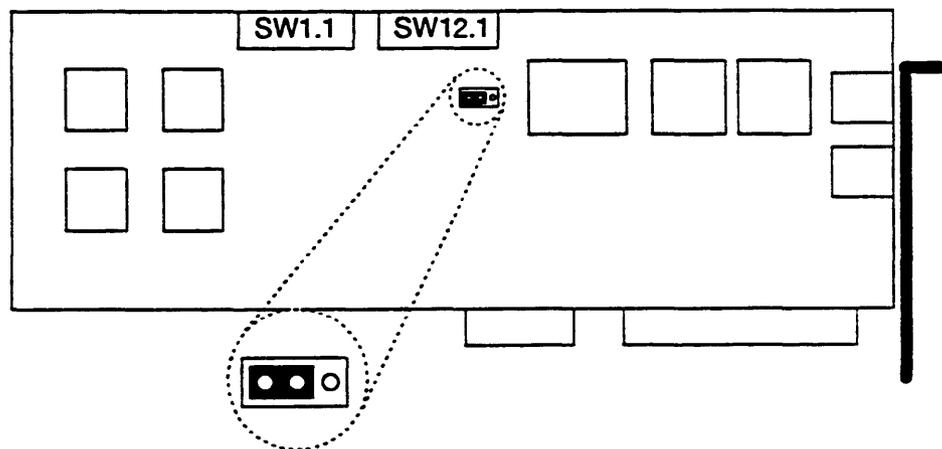


Figure 3-20. Location of Jumper and Switches on Old Layout IVP4 Board

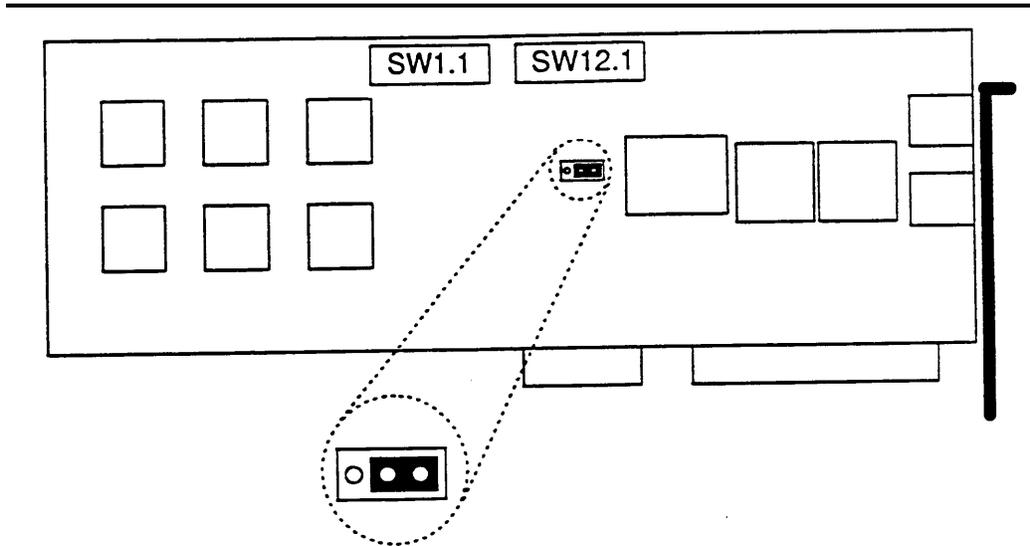


Figure 3-21. Location of Jumper and Switches on Old Layout IVP6 Board

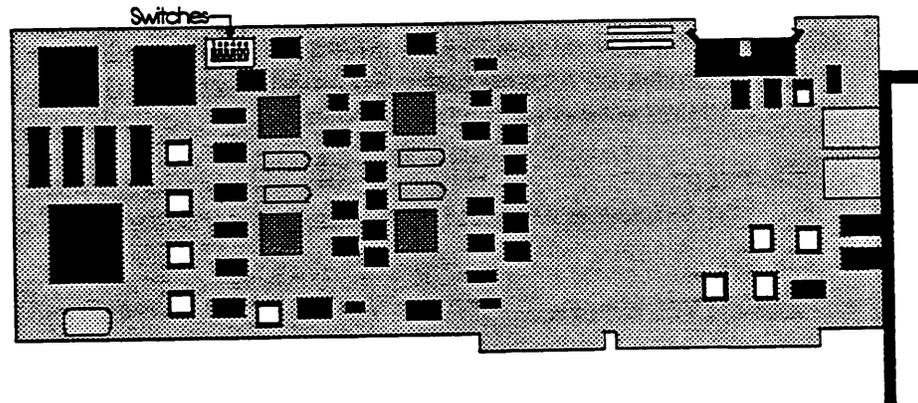


Figure 3-22. Location of Switches on New Layout IVP4 Board

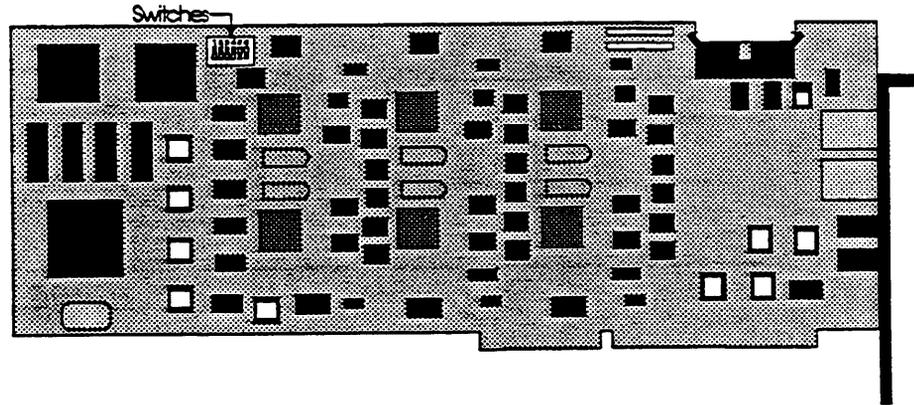


Figure 3-23. Location of Switches on New Layout IVP6 Board

IVP Board Jumper Settings

The jumpers on old layout boards are set at the factory and should not be changed. The jumpers are set differently for the IVP4 and IVP6 boards. Refer to Figure 3-20 for the old layout IVP4 board and to Figure 3-21 for the old layout IVP6 board. Verify that the jumper is set as shown in the figure.

⇒ **NOTE:**
The new layout IVP4 and IVP6 boards do not have jumpers.

Mixing IVP4 and IVP6 Boards

IVP4 and IVP6 boards can be mixed in any combination to a maximum of 12 voice channels. Regardless of the board type, set the address switches based on the board number.

⇒ **NOTE:**
Even if more than 12 channels are installed, only a maximum of 12 can be used.

Changing IVP Board Type

If you replace an IVP4 board with an IVP6 board, or vice versa, or whenever the relationship between channel numbers and board numbers changes, you should renumber the voice channels. Use Procedure 3-13, given later in this chapter.

Configuration of Previously Installed Boards

All new layout boards (both IVP4 and IVP6) are style D. (See Figure 3-24.)

All old layout IVP6 boards are style C. (See Figure 3-24.)

For old layout IVP4 boards, examine the second bank of switches (SW12.1, on the right, see Figure 3-24):

- If the board has rocker switches, the style 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 style 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 3-24. Use the style letter at the top of the column in which the match is found.
- If you are unable to determine the correct style by examining the switch settings, you will have to test the board as described later in this section to determine the correct style.

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

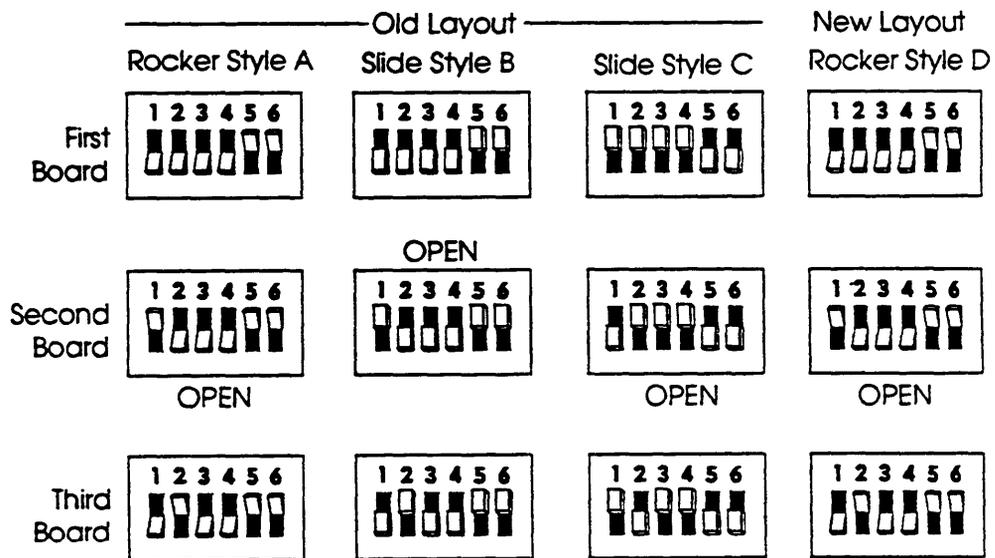


Figure 3-24. Address Switch Settings

Setting Line Impedance Switch

On old layout boards, the first switch bank (SW1.1) controls the line impedance. The settings should all be set to the "OPEN" position initially (as shown in Figure 3-25 for each style). If problems are encountered with Touch-Tone recognition on any channel, change the switch for the affected channel on the first bank (SW1.1) to the opposite (closed) position.

Table III-1. Line Impedance Switch Settings

<u>Channel</u>	<u>Switch</u>
first	1
second	2
third	4
fourth	5

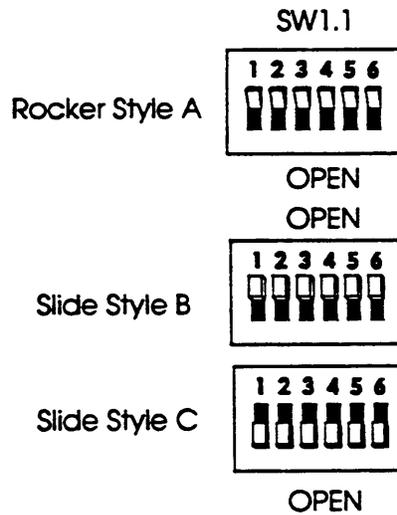


Figure 3-25. Settings for SW1.1 (Old Layout Boards Only)

⇒ **NOTE:**
 All new layout boards have software controlled line equalization and switch SW1.1 is not present

Setting Address Switch

On new layout boards, the single switch bank sets the board address.

On old layout boards, the second switch bank (SW12.1) sets the board address.

Figure 3-26 shows the correct settings for each of the four styles.

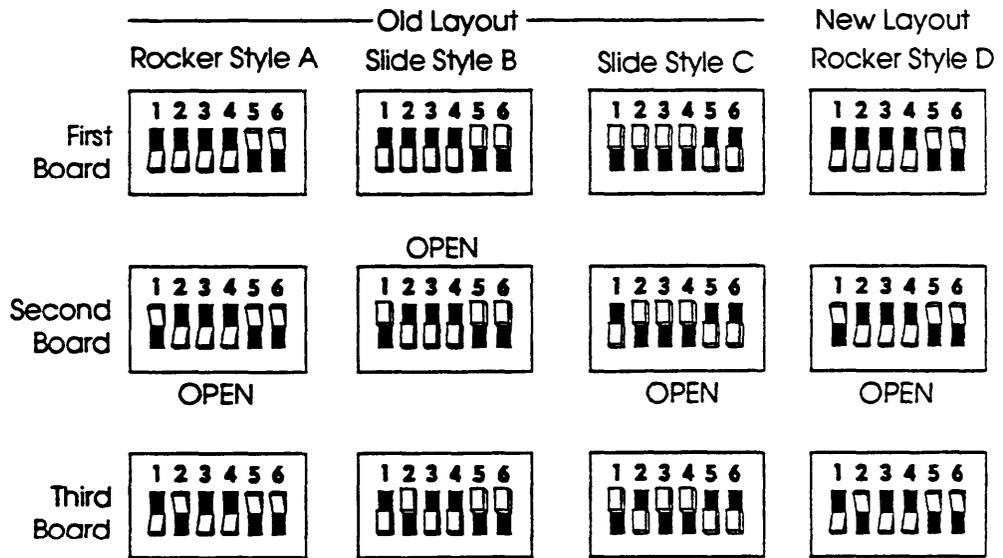


Figure 3-26. Address Switch Settings

➡ **NOTE:**
 The address settings are based on the board position (first second, or third).
 They are the same for either an IVP4 or IVP6 board in the same position.

Procedure 3-12: Test the IVP Switch Settings

If you know the board style, set the switches on each board and then perform this test to verify the correctness of the switch settings. If the board has slide switches, you can also use this test determine whether it has style B or C.

1. Set the switches for each board according to its style and board position. See Figure 3-25 and Figure 3-26. If you are testing to determine board style, set the switches for style C the first time as most boards with slide switches are style C.
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 document.
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 it should have another style.

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



NOTE:

If any board is improperly configured during this test, do the following:

- a. Shut the system down.
- b. Reconfigure the board.
- c. Renumber the channels using Procedure 3-13 before rerunning the test.

For additional information about the System Monitor see Chapter 5 of the *AT&T AUDIX™ Voice Power Release 2.1.1 System Manager's Guide*.



NOTE:

Each properly configured IVP4 board will provide 4 of the maximum 12 channels. Each properly configured IVP6 board will provide 6 of the maximum 12 channels.

Procedure 3-13: Renumber Voice Channels

You must renumber the voice channels in the following situations:

- If you replace an IVP4 board with an IVP6 board, or vice versa, the relationship between board ports and channel numbers changes.

⇒ **NOTE:**

Cabling between the IVP boards and the analog station ports must also be changed.

If you bring the voice system with address switches incorrectly set on any IVP board, the relationship between board ports and channel numbers is incorrect.

Before renumbering the voice channels, AUDIX Voice Power/Fax Attendant must be installed.

To renumber the voice channels, follow these steps:

1. Log in as *maint*.
2. At the Integrated Solution III Maintenance menu, move the cursor to Technician Maintenance and press [**ENTER** ↓].
3. At the Technician Maintenance menu, move the cursor to Voice System Administration and press [**ENTER** ↓].
4. At the Voice System Administration menu, move the cursor to Configuration Management and press [**ENTER** ↓].
5. At the Configuration Management menu, move the cursor to System Control and press [**ENTER** ↓].
6. At the System Control menu, move the cursor to Renumber Voice Channels and press [**ENTER** ↓].

The voice channels are renumbered.

7. Repeatedly press [**F6**] (CANCEL) and respond to prompts as necessary to exit the system.

IFP2 Board Configuration and Installation

If you need to add fax (IFP) boards to the system, the IFP board(s) must be configured before they are installed. Each IFP2 board has three banks of jumpers and a bank of switches. The locations of the jumpers and switches are shown in Figure 3-27.

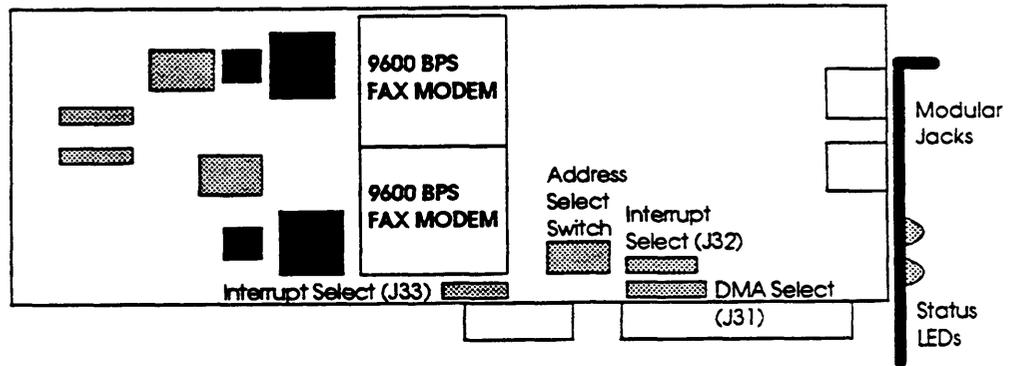


Figure 3-27. IFP2 Switch and Jumper Locations

Set the jumpers and switches as shown in Figure 3-28. If necessary, move the jumper from position 5 on jumper block J32 to position 10 on jumper block J33.

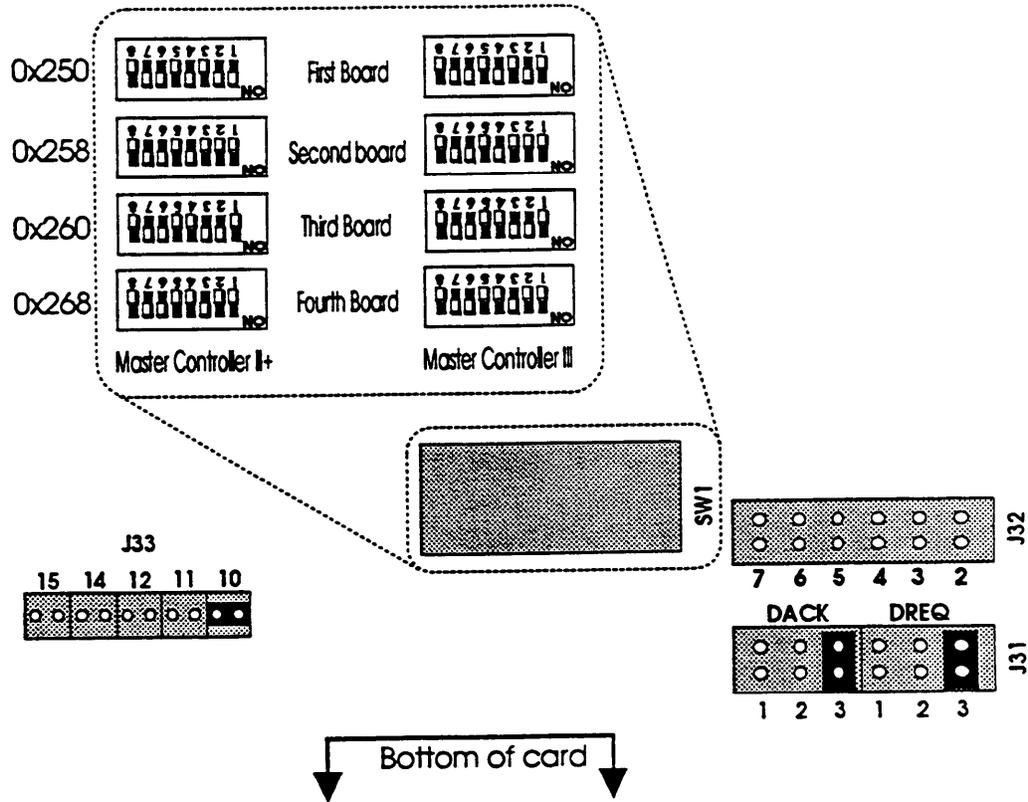


Figure 3-28. IFP2 Switch and Jumper Settings

⇒ **NOTE:**
 Switch 1 is ON for first card in the Master Controller II+ and OFF for all other cards. In the Master Controller III, switch 1 is OFF for all cards.

IFP4 Board Configuration and Installation

If you need to add fax (IFP) boards to the system, the IFP board(s) must be configured before they are installed. Each IFP4 board has two banks of jumpers and a bank of switches. The locations of the jumpers and switches are shown in Figure 3-29.

⇒ **NOTE:**

Switches 1, 3, 7, and 8 are set the same way on all boards. Only switches 2, 4, 5, and 6 may be set differently on each board.

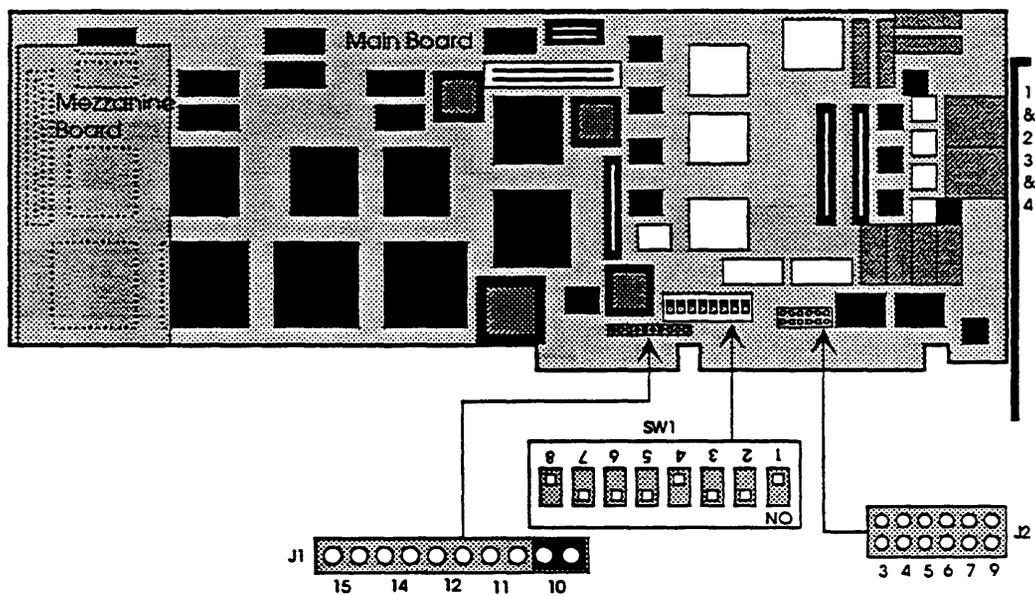


Figure 3-29. IFP4 Switch and Jumper Locations

Set the jumpers and switches as shown in Figure 3-30. If necessary, move the jumper from position 5 on jumper block J2 to position 10 on jumper block J1.

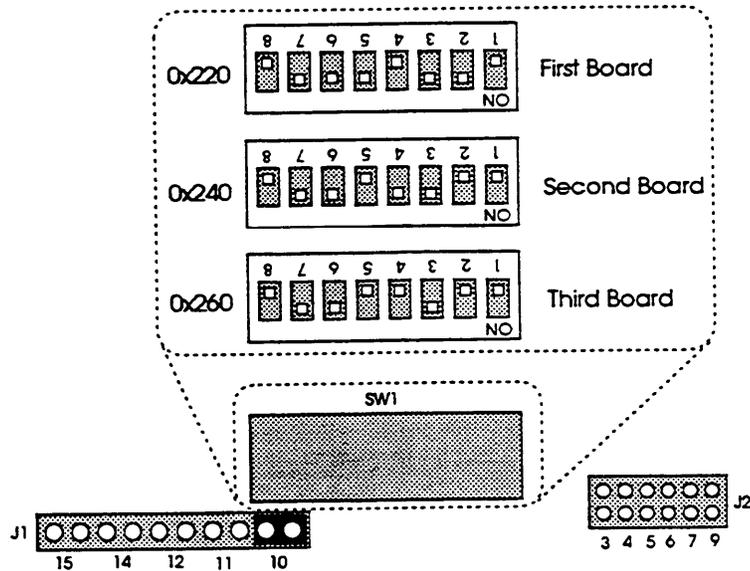


Figure 3-30. IFP4 Switch and Jumper Settings

⇒ **NOTE:**
 Switch 1 is always OFF. Switch 2 is ON for the first card and OFF for all other boards. Switches 3 through 8 should be set as shown for the first through third boards.

Mixed IFP2 and IFP4 Board Configuration.

Mixed configurations are not allowed.

Installing and Removing IS-III Applications

4

This chapter provides procedures for installing and removing IS-III applications. There are two instances in which you will need to install IS-III 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 Chapter 7. You will need to remove IS-III application software only if the customer has chosen to discontinue using an application.

Installing IS-III Applications

This section describes how to perform the following procedures:

- Install AUDIX Voice Power (standalone).
- Install AUDIX Voice Power/FAX Attendant (co-resident).
- Add FAX Attendant to a system already using AUDIX Voice Power.
- Install Call Accounting System.

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

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

Installing AUDIX Voice Power

To install AUDIX Voice Power, you must first have the IS-III Platform Software installed. You install AUDIX Voice Power using the IS-III Installation Tape.

⇒ **NOTE:**

If you are simultaneously installing AUDIX Voice Power as a co-resident application with FAX Attendant via the IS-III Installation Tape, follow the instructions provided in the next section.

Activity Checklist

Installation via the IS-III Installation Tape consists of the following procedures:

1. Install the software.
2. Reboot the system (when prompted) for the changes to take effect.
3. Confirm that the installation was successful.

Software Required

To install AUDIX Voice Power, you need the IS-III Installation Tape.

Procedure 4-1: Install the Software

To install AUDIX Voice Power, perform the following steps:

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

The Password: prompt appears.

2. At the Password: prompt, enter the password and then press [**ENTER** ↵].

The Status Screen appears.

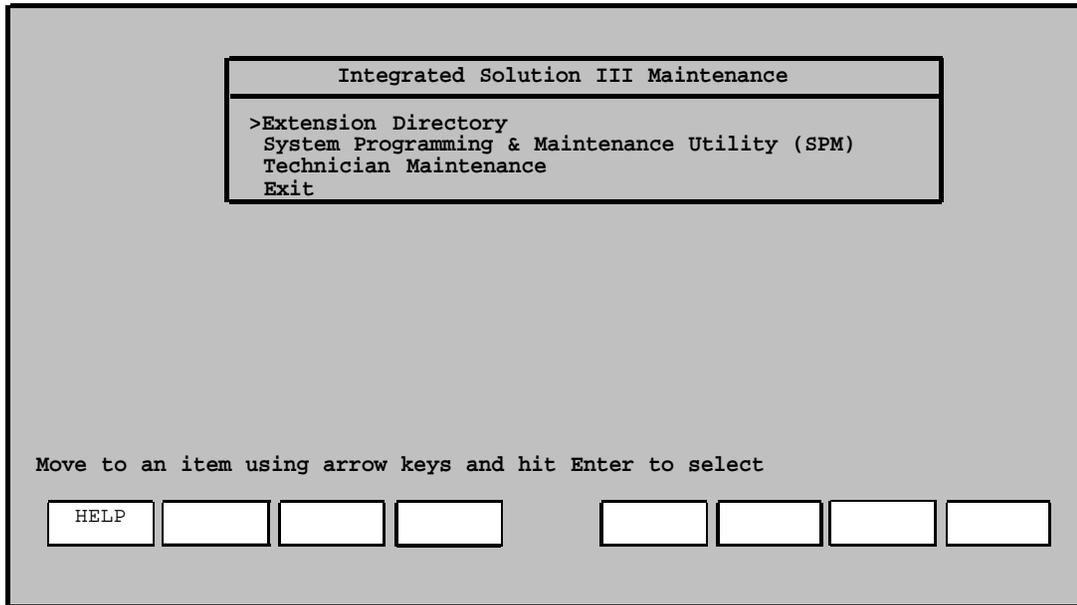
3. Enter your name and press [**F3**] (SAVE).

The Integrated Solution III Maintenance Menu appears.



NOTE:

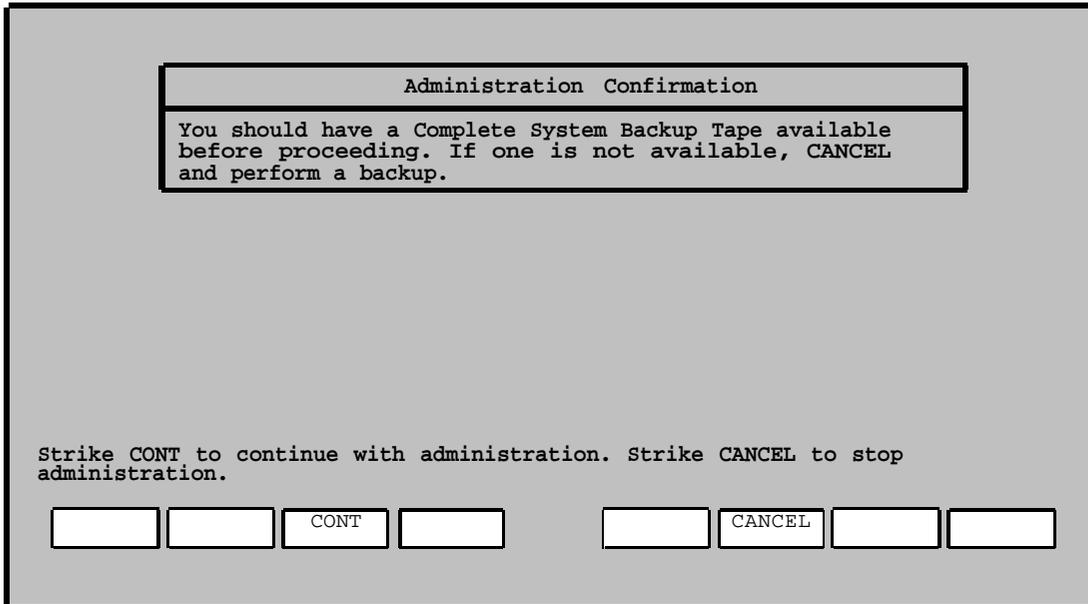
If any applications are already installed, their names appear on this screen.



Screen 4-1. Integrated Solution III Maintenance Menu

5. At the Technician Maintenance Menu, select Administer Integrated Solution and press [ENTER ↓].

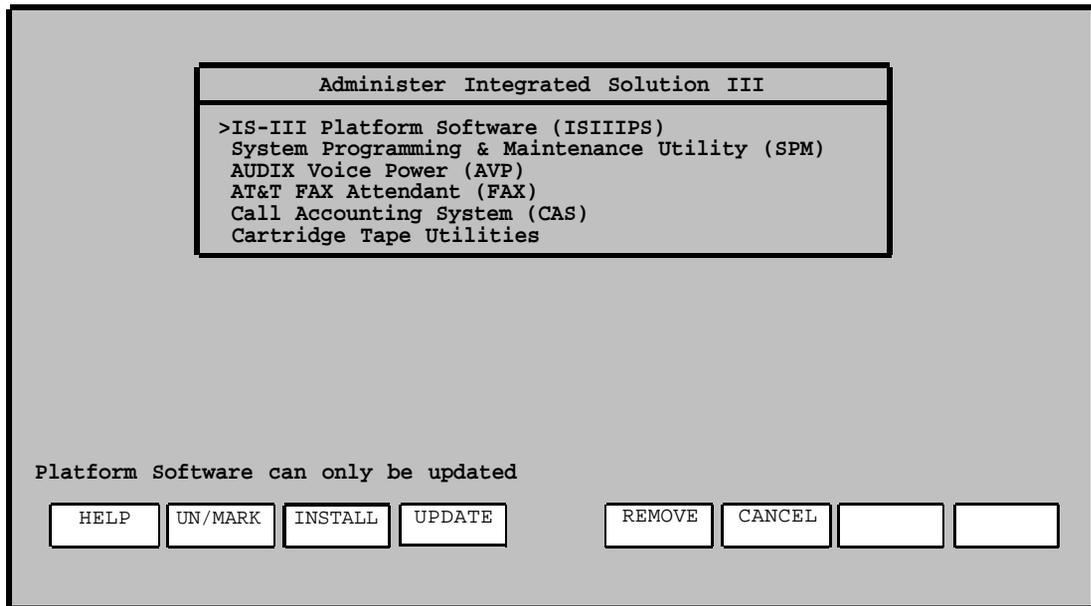
The Administration Confirmation screen appears.



Screen 4-3. Administration Confirmation Screen

6. Press [F3] (CONT) to continue.

The Administer Integrated Solution III Menu appears.



Screen 4-4. Administer Integrated Solution III Menu

7. At the Administer Integrated Solution III Menu, select AUDIX Voice Power (AVP) and press [F2] (UN/MARK).

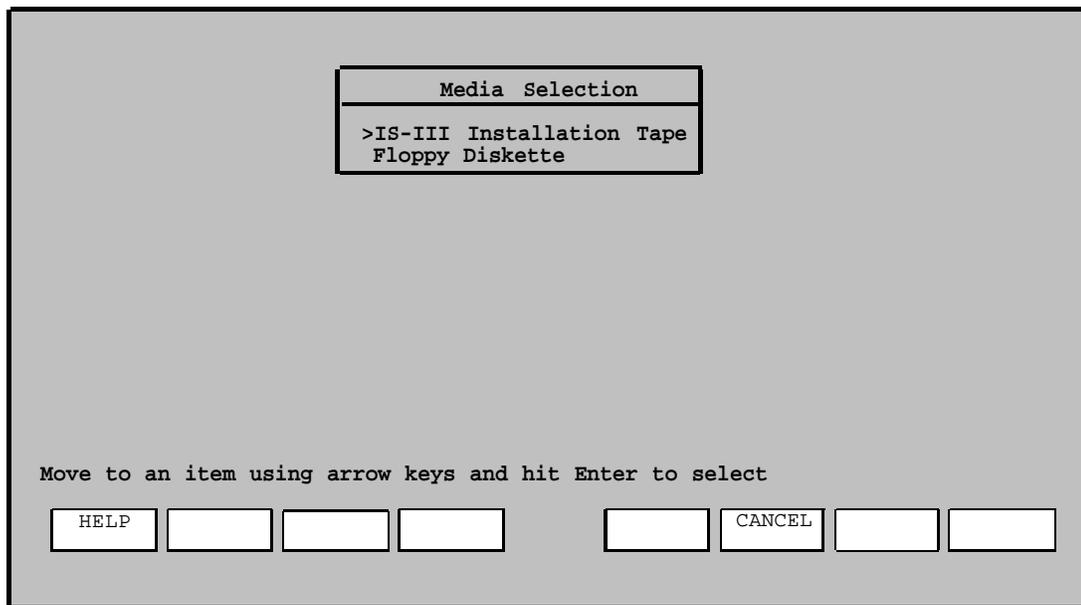
An asterisk (*) appears in front of AUDIX Voice Power (AVP).

⇒ **NOTE:**

If you marked an application by mistake, move the cursor back to that application and press [F2] (UN/MARK) again to "undo" the selection.

8. Press [F3] (INSTALL) to begin the installation procedure.

The Media Selection Menu appears.



Screen 4-5. Media Selection Menu

9. From the Media Selection Menu, select IS-III Installation Tape and press [ENTER ↓].

The system responds:

Confirm

Please insert the IS-III Installation tape into the tape drive.

Strike ENTER when ready
or ESC to stop.

10. Insert the IS-III Installation Tape and press [**ENTER** ↵].

The system responds:

```
Verifying IS-III Installation Tape
Positioning Tape.....Please Wait....
```

The system then installs AUDIX Voice Power. After the software is installed, the system responds:

```
Resetting Tape Drive
The system will now be rebooted to install new kernel
```

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.
```

11. After the tape drive indicator turns off, remove the IS-III Installation Tape and press [**ENTER** ↵].

The system shuts down, and then displays the following message:

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

You must now reboot the system.

Procedure 4-2: Reboot the System

To reboot the system, press the Reset button.

The system gives diagnostic information and notifies you that it is booting the UNIX system. The system then displays the `Console Login:` prompt. Now, confirm that AUDIX Voice Power is installed on the Master Controller.

Procedure 4-3: Confirm AUDIX Voice Power Installation

After rebooting the system, you must confirm that AUDIX Voice Power is installed on the Master Controller.

To confirm that AUDIX Voice Power is installed, perform the following steps:

1. Log into the system using the `maint` login and access the Integrated Solution III Maintenance Menu.

The Integrated Solution III Maintenance Menu should include `AUDIX Voice Power (AVP)` as an item.

2. Select Technician Maintenance from the Integrated Solution III Maintenance menu and press [ENTER ↵].

The Technician Maintenance Menu appears.

3. Select Maintenance Log and press [ENTER ↵].

The Maintenance Log Menu appears.

4. Select Display Installed Applications and press [ENTER ↵].

The III should include the following applications:

```
AUDIX Voice Power Application Software R2.1.1: Speech
AUDIX Voice Power Application Software R2.1.1: Software
AUDIX Voice Power R2.1.1 MERLIN LEGEND Switch Integration Software
Integrated Voice Power System Software R2.0
Integrated Voice Power System Software R2.0: Update 2
MERLIN LEGEND Integrated Solution III Platform Software, Release 1.x
MERLIN LEGEND System Programing & Maintenance Utility - Version 2.xx
MERLIN LEGEND Integrated AUDIX Voice Power Administration - Version 1.x
```

5. Press [F6] (CANCEL) three times to return to the Integrated Solution III Maintenance Menu.

Installing AUDIX Voice Power/FAX Attendant

To install AUDIX Voice Power/FAX Attendant, you must first have the IS-III Platform Software installed. You install AUDIX Voice Power/FAX Attendant using the IS-III Installation Tape.

- ⇒ **NOTE:**
If you are installing AUDIX Voice Power as a standalone application without FAX Attendant, follow the instructions provided in the previous section.

Activity Checklist

Installation via the IS-III Installation Tape consists of the following procedures:

1. Install the software.
2. Reboot the system (when prompted) for the changes to take effect.
3. Confirm that the installation was successful.

- ⇒ **NOTE:**
Before installing FAX Attendant, you must know whether the system contains IFP2 boards or IFP4 boards.

Software Required

To install AUDIX Voice Power/FAX Attendant, you need the IS-III Installation Tape.

Procedure 4-4: Install the Software

To install AUDIX Voice Power/FAX Attendant perform the following steps:

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

The Password: prompt appears.

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

The Status Screen appears.

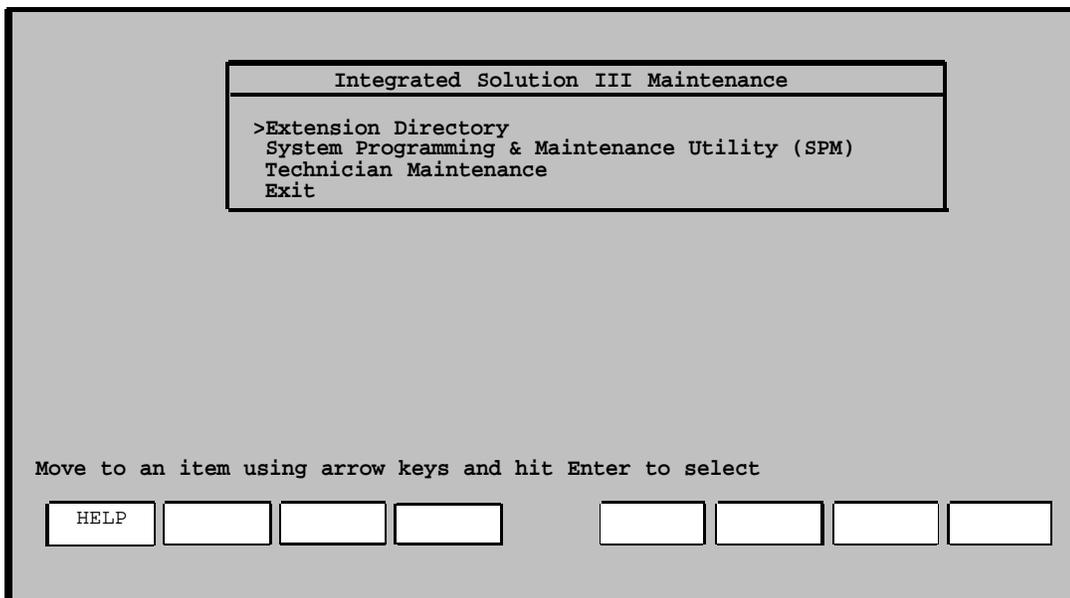
3. Enter your name and press [F3] (SAVE).

The Integrated Solution III Maintenance Menu appears.



NOTE:

If any applications are already installed, their names appear on this screen.



Screen 4-6. Integrated Solution III Maintenance Menu

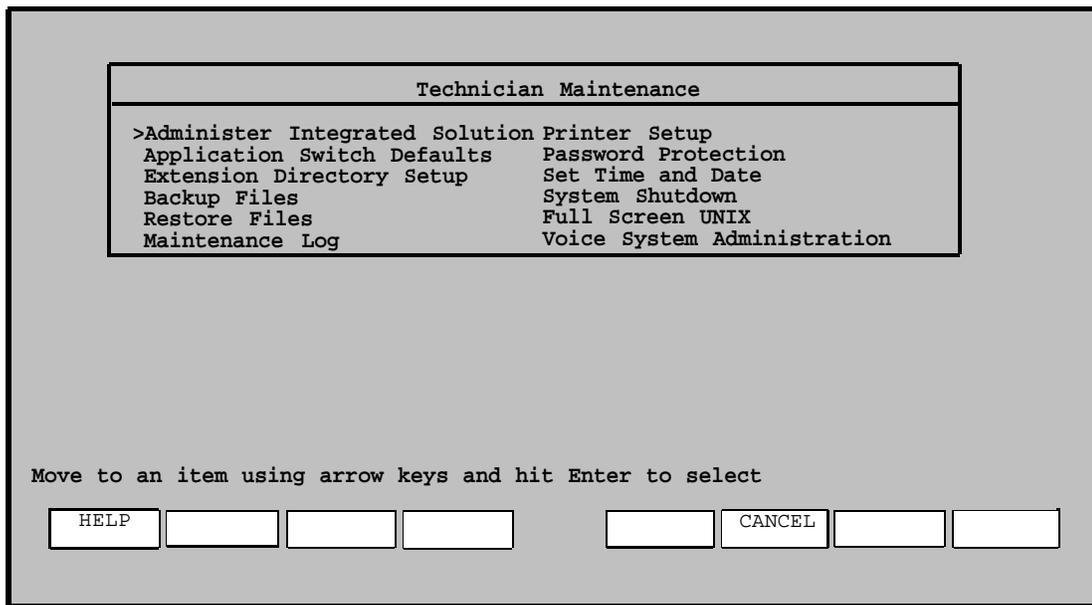
4. At the Integrated Solution III Maintenance Menu, select Technician Maintenance and press [ENTER].

The Technician Maintenance Menu appears. Depending on the applications installed, the Technician Maintenance Menu may consist of one or two columns.



NOTE:

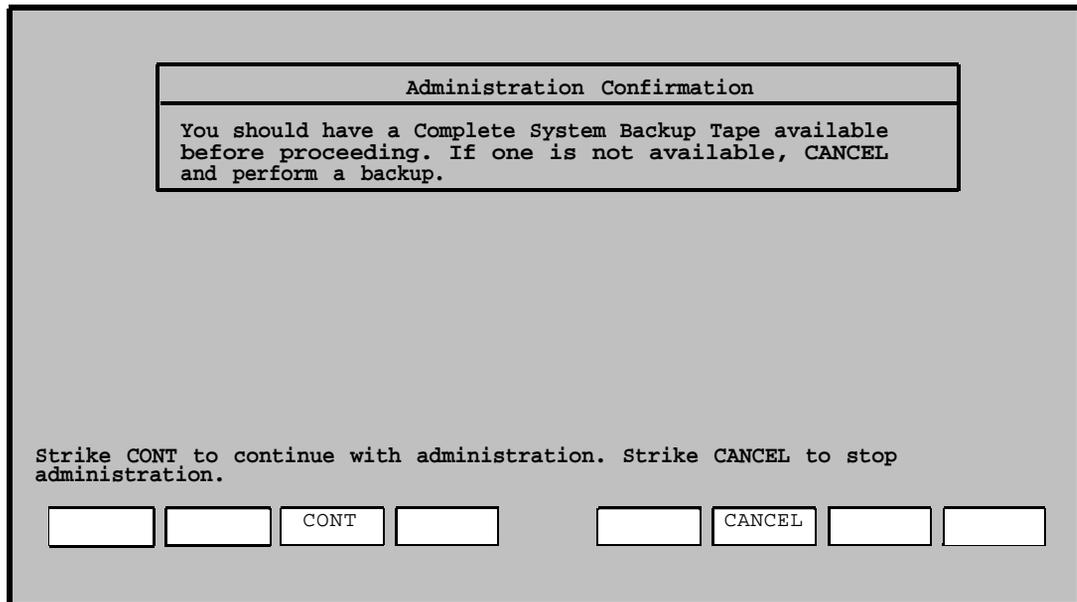
Voice System Administration and Application Switch Defaults appear if AUDIX Voice Power is installed.



Screen 4-7. Technician Maintenance Menu

5. At the Technician Maintenance Menu, select Administer Integrated Solution and press [ENTER ↓].

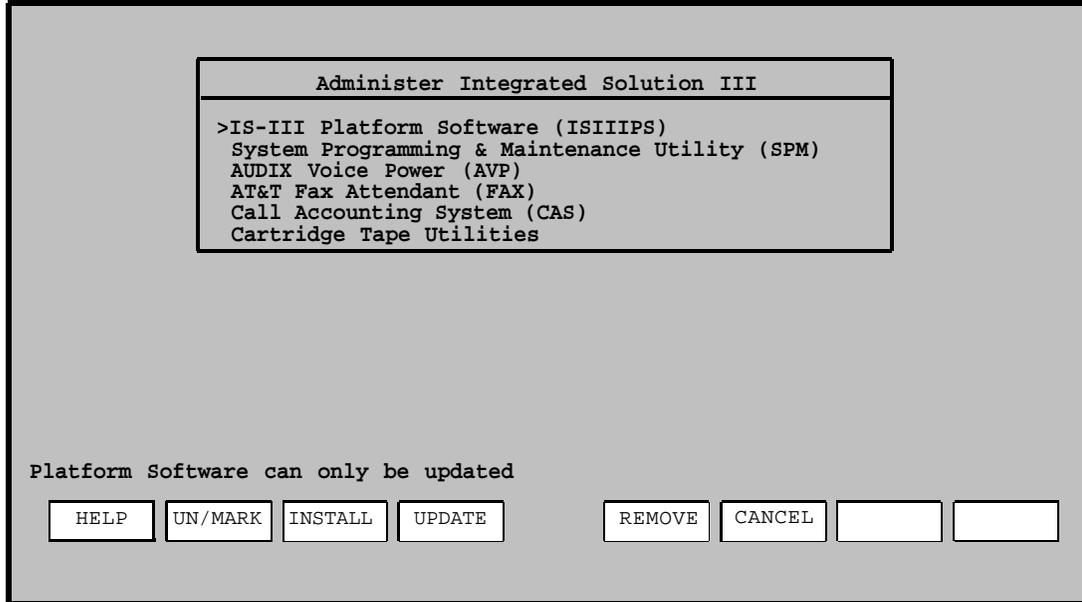
The Administration Confirmation screen appears.



Screen 4-8. Administration Confirmation Screen

6. Press [F3] (CONT) to continue.

The Administer Integrated Solution III Menu appears.



Screen 4-9. Administer Integrated Solution III Menu

7. At the Administer Integrated Solution III Menu, select AUDIX Voice Power (AVP) and press [F2] (UN/MARK).

An asterisk (*) appears in front of AUDIX Voice Power (AVP).



NOTE:

If you marked an application by mistake, move the cursor back to that application and press [F2] (UN/MARK) again to "undo" the selection.

8. At the Administer Integration Solution III Menu, select AT&T FAX Attendant (Fax) and press [F2] (UN/MARK).

An asterisk (*) appears in front of AT&T FAX Attendant (FAX).

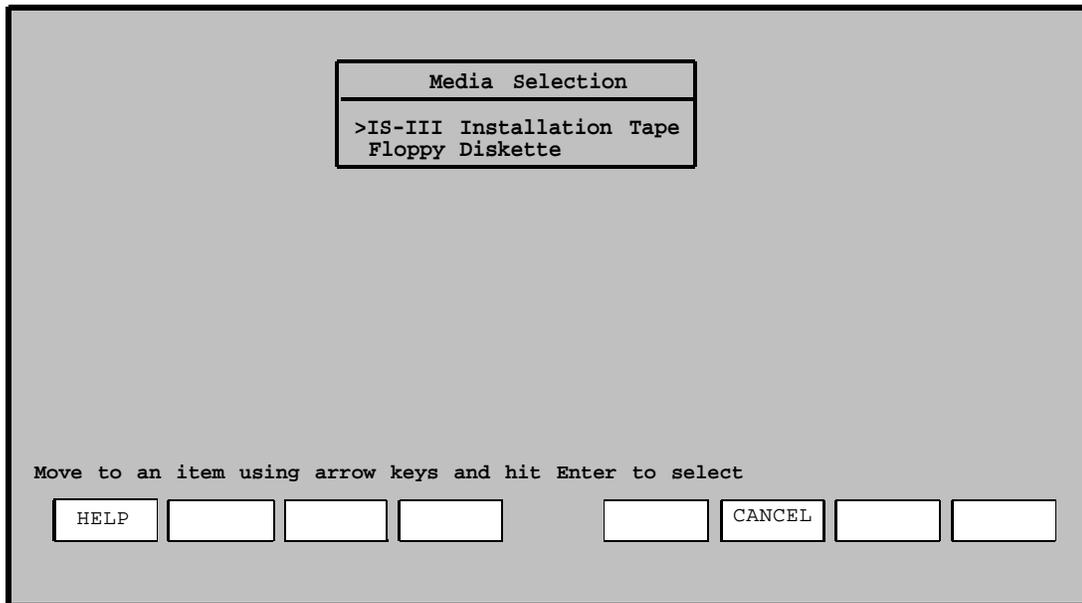


NOTE:

If you marked an application by mistake, move the cursor back to that application and press [F2] (UN/MARK) again to "undo" the selection.

9. Press [**F3**] (INSTALL) to begin the installation procedure.

The Media Selection Menu appears



Screen 4-10. Media Selection Menu

10. From the Media Selection Menu, select IS-III Installation Tape and press [**ENTER** ↵].

The system responds:

Confirm

Please insert the IS-III Installation tape into the tape drive.

Strike ENTER when ready
or ESC to stop.

11. Insert the IS-III Installation Tape and press [**ENTER** ↵].

The system responds:

Verifying IS-III Installation Tape

Positioning Tape.....Please Wait....

The system then installs AUDIX Voice Power/FAX Attendant After AUDIX Voice Power/FAX Attendant are installed, the system responds:

Confirm

Do you wish to install AT&T FAX Attendant MC III with IFP 2 card Update.

This package should only be installed on a MC-III with IFP2 boards.

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

If the system contains IFP 2 boards, press [**ENTER** ↵].

If the system does not contain IFP 2 boards, press [**ESC**], and then press [**ENTER** ↵].

The system responds:

Resetting Tape Drive

The system will now be rebooted to install new kernel

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.

12. After the tape drive indicator turns off, remove the IS-III Installation Tape and press [**ENTER** ↵].

The system shuts down, and then displays the following message:

The system is down.
Reboot the system now.

You must now reboot the system.

Procedure 4-5: Reboot the System

To reboot the system, press the Reset button.

The system gives diagnostic information and notifies you that it is booting the UNIX system. The system then displays the `Console Login:` prompt. Now, confirm that AUDIX Voice Power/FAX Attendant is installed on the Master Controller.

**Procedure 4-6: Confirm AUDIX Voice Power/
FAX Attendant Installation**

After rebooting the system, you must confirm that AUDIX Voice Power/FAX Attendant is installed on the Master Controller.

To confirm that AUDIX Voice Power/FAX Attendant is installed, perform the following steps:

1. Log into the system using the *maint* login and access the Integrated Solution III Maintenance Menu.

The Integrated Solution III Maintenance Menu should include `AUDIX Voice Power/FAX ATTENDANT (AVP/FA)` as an item.

2. Selected `Technician Maintenance` from the Integrated Solution III Maintenance menu and press [ENTER ↓].

The Technician Maintenance Menu appears.

3. Select `Maintenance Log` and press [ENTER ↓].

The Maintenance Log Menu appears.

4. Select `Display Installed Applications` and press [ENTER ↓].

The list should include the following applications:

```
AT&T FAX Attendant Co-resident Application Software R2.1.1
AT&T FAX Attendant MC III with IFP 2 Card Update
AUDIX Voice Power Application Software R2.1.1: Speech
AUDIX Voice Power Application Software R2.1.1: Software
AUDIX Voice Power R2.1.1 MERLIN LEGEND Switch Integration Software
Integrated Voice Power System Software R2.0
Integrated Voice Power System Software R2.0: Update 2
MERLIN LEGEND Integrated Solution III Platform Software, Release 1.x
MERLIN LEGEND System Programming & Maintenance Utility - Version 2.xx
MERLIN LEGEND Integrated AUDIX Voice Power Administration - Version 1.xx
```

⇒ **NOTE:**

AT&T FAX Attendant MC III with IFP 2 Card Update must be installed if the system contains IFP2 boards.

5. Press [F6] (CANCEL) three times to return to the Integrated Solution III Maintenance Menu.

Adding FAX Attendant to AUDIX Voice Power

To install FAX Attendant on an existing AUDIX Voice Power system, you must first have the IS-III Platform Software and the AUDIX Voice Power software installed.

⇒ **NOTE:**

FAX Attendant installation stops the customer's voice system. During this installation, none of the AUDIX Voice Power services will operate. As a result, you should install FAX Attendant when there is little or no traffic on the telephone switch (for example, at night).

Before you can install FAX Attendant, you must upgrade the Master Controller. The procedures for upgrading the Master Controller depend on which of the following configurations the customer has:

- Master Controller II+
- Master Controller III running IS-III Platform Software R1.0
- Master Controller III running IS-III Platform Software R1.1 or later

If the customer has a Master Controller II+, you must perform the following procedures:

1. Back up the administrative files to diskette. Refer to "Backing Up Administrative Files to Diskettes" in Chapter 4 of the *Integrated Solution III System Manager's Guide*.

⇒ **NOTE:**

While backing up the administrative files to diskette, press [ESC] when prompted to backup the Voice System.

2. Back up the complete system to tape. Refer to "Backing Up the Entire System to Tape" in Chapter 4 of the *Integrated Solution III System Manager's Guide*.
3. Back up CAS (if installed). Refer to "Procedure 7-4: Backup CAS Data" in Chapter 7.
4. Remove the IVP boards from the MC II+ and install them in the MC III. Refer to Chapter 3.
5. Install the new IFP boards into the MC III. Refer to Chapter 3.

6. Restore the administrative files from diskette on the MC III. Refer to "Restoring the Administrative Files from Diskette" in Chapter 6.



WARNING:

*You must press [**ESC**] when prompted to restore the Voice System while restoring the administrative files. Otherwise, you will be unable to restore the customer voice files.*

7. Restore the complete voice system from tape. Refer to "Restoring the Complete Voice System from Tape" in Chapter 6.
8. Restore CAS data (if installed). Refer to "Procedure 4-10: Restore CAS Data" later in this chapter.
9. Proceed to "Activity Checklist" on this page to install FAX Attendant

If the customer has a Master Controller III running IS-III Platform Software R1.0 perform the following steps:

1. Update the IS-III Platform Software to Release 1.1 via floppy diskette. Refer to "Upgrading the IS-III Platform Software" in Chapter 7.
2. Install the IFP boards in the MC III. Refer to Chapter 3.
3. Proceed to "Activity Checklist" on this page to install FAX Attendant.

If the customer has a Master Controller III running IS-III Platform Software R1.1, perform the following steps:

1. Install the IFP boards in the MC III. Refer to Chapter 3.
2. Proceed to "Activity Checklist" on this page to install FAX Attendant.

Activity Checklist

Installation via the IS-III Installation Tape consists of the following procedures:

1. Install the software.
2. Reboot the system (when prompted) for the changes to take effect.
3. Confirm that the installation was successful.

⇒ **NOTE:**

Before installing FAX Attendant, you must know whether the system contains IFP2 boards or IFP4 boards.

Software Required

To install FAX Attendant you need the IS-III Installation Tape.

Procedure 4-7: Install the Software

To install FAX Attendant, perform the following steps:

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

The Password: prompt appears.

2. At the Password: prompt, enter the password and then press [**Enter** ↵].

The Status Screen appears.

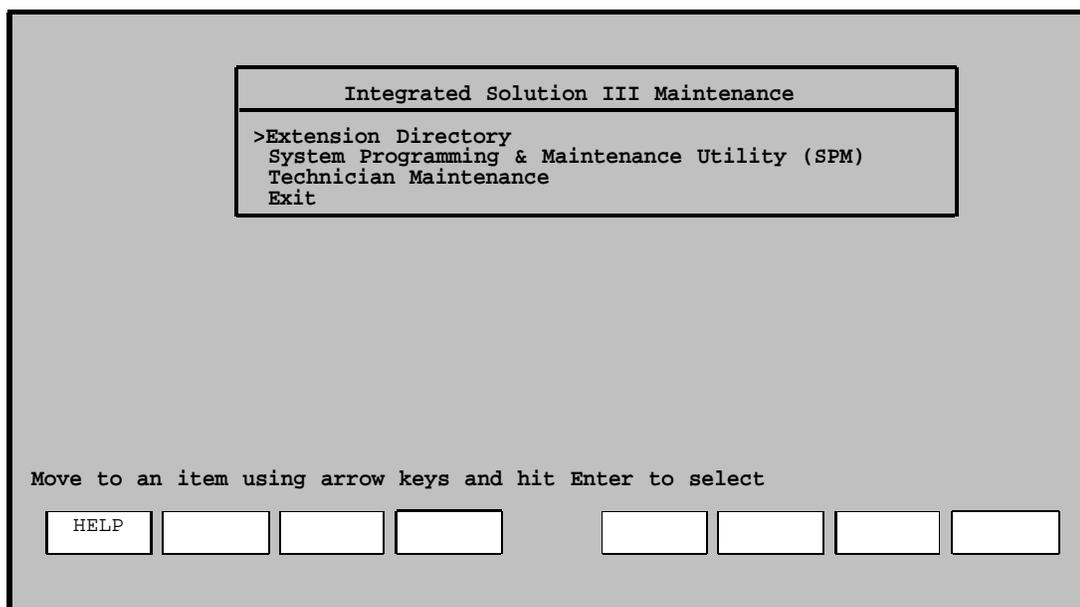
3. Enter your name and press [**F3**] (SAVE).

The Integrated Solution III Maintenance Menu appears.



NOTE:

If any applications are already installed, their names appear on this screen.



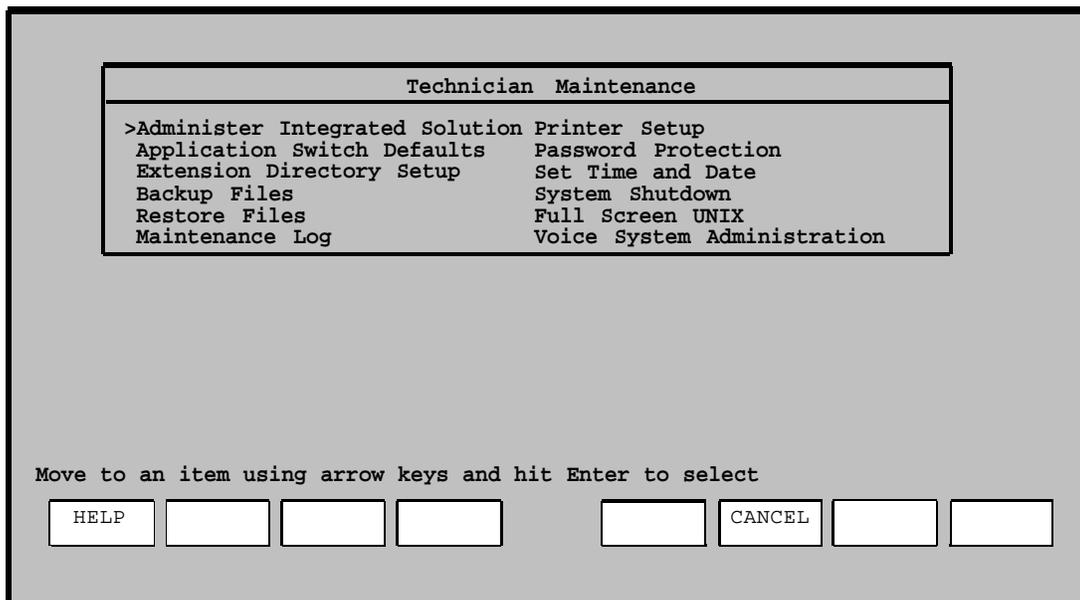
Screen 4-11. Integrated Solution III Maintenance Menu

4. At the Integrated Solution III Maintenance Menu, select Technician Maintenance and press [**ENTER** ↓].

The Technician Maintenance Menu appears. Depending on the applications installed, the Technician Maintenance Menu may consist of one or two columns.

⇒ **NOTE:**

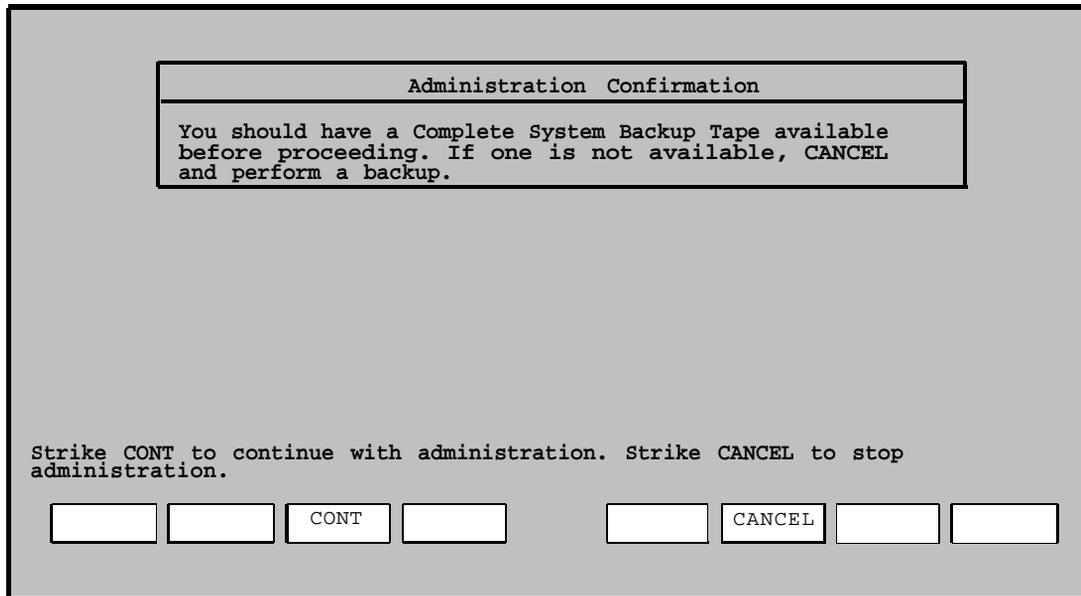
Voice System Administration and Application Switch Defaults appear if AUDIX Voice Power is installed.



Screen 4-12. Technician Maintenance Menu

5. At the Technician Maintenance Menu, select Administer Integrated Solution and press [**ENTER** ↓].

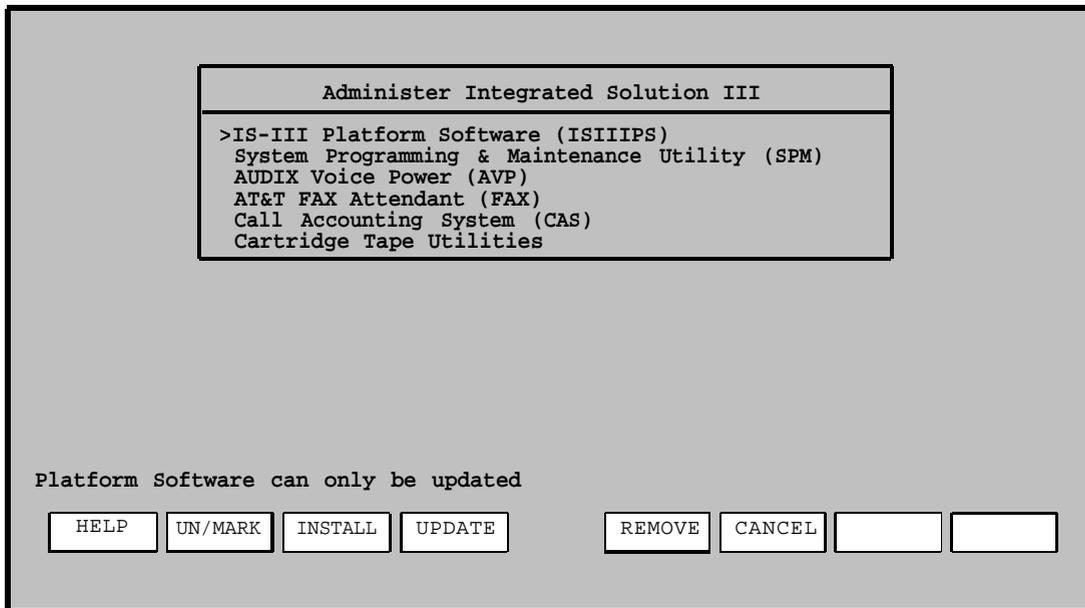
The Administration Confirmation screen appears.



Screen 4-13. Administration Confirmation Screen

6. Press [F3] (CONT) to continue.

The Administer Integrated Solution III Menu appears.



Screen 4-14. Administer Integrated Solution III Menu

7. At the Administer Integration Solution III Menu, select AT&T FAX Attendant (FAX) and press [F2] (UN/MARK).

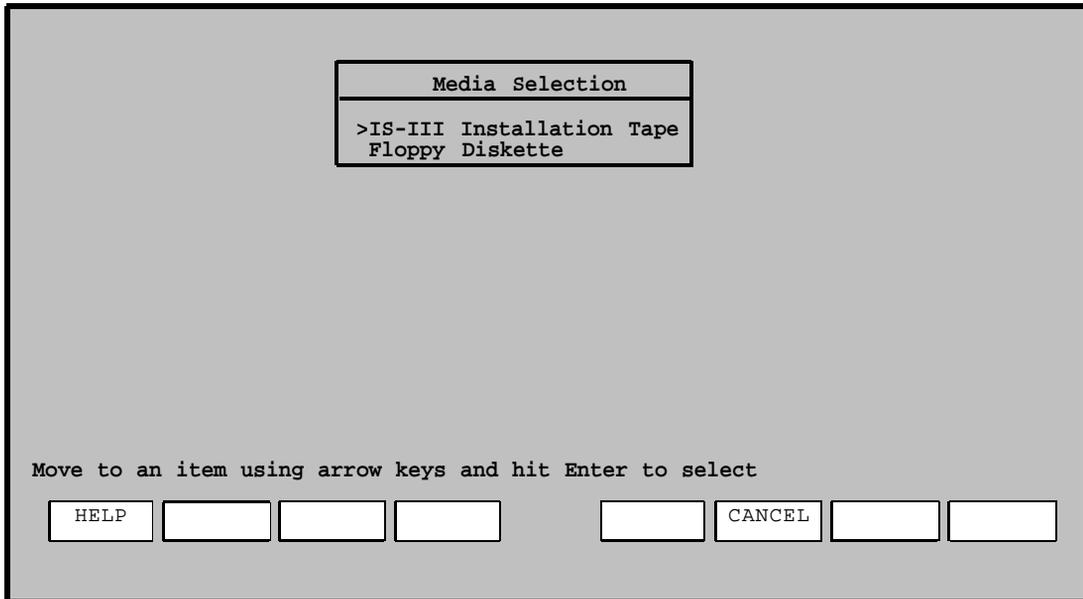
An asterisk (*) appears in front of AT&T FAX Attendant (FAX).

⇒ **NOTE:**

If you marked an application by mistake, move the cursor back to that application and press [F2] (UN/MARK) again to "undo" the selection.

8. Press [**F3**] (INSTALL) to begin the installation procedure.

The Media Selection Menu appears.



Screen 4-15. Media Selection Menu

9. From the Media Selection Menu, select IS-III Installation Tape and press [**ENTER** ↵].

The system responds:

Confirm

Please insert the IS-III Installation tape into the tape drive.

Strike ENTER when ready
or ESC to stop.

10. Insert the IS-III Installation Tape and press [**ENTER** ↓].

The system responds:

Verifying IS-III Installation Tape
Positioning Tape.....Please Wait....

After a few minutes, the system responds:

Confirm

Installing AT&T FAX Attendant Co-resident Application Software.

NOTE: This procedure requires the updating of MERLIN LEGEND Switch Integration Software. It will be automatically installed following AT&T FAX Attendant Co-resident Application Software.

Strike ENTER when ready
or ESC to stop.

11. Press [**ENTER** ↓].

The system installs FAX Attendant. After FAX Attendant is installed, the system responds:

Positioning Tape.....Please Wait....

Confirm

Do you wish to install AT&T FAX Attendant MC III with IFP 2 Card Update.

This package should only be installed on a MC-III with IFP2 boards.

Strike ENTER when ready
or ESC to stop.

If the system contains IFP 2 boards, press [**ENTER** ↓].

If the system does not contain IFP 2 boards, press [**ESC**], and then press [**ENTER** ↓].

The system responds:

Resetting Tape Drive
The system will now be rebooted to install new kernel

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.

12. After the tape drive indicator turns off, remove the IS-III Installation Tape and press [**ENTER** ↓].

The system shuts down, and then displays the following message:

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

You must now reboot the system.

Procedure 4-8: Reboot the System

To reboot the system, press the Reset button.

The system gives diagnostic information and notifies you that it is booting the UNIX system. The system then displays the `Console Login:` prompt. Now, you must confirm that FAX Attendant is installed on the Master Controller.

Procedure 4-9: Confirm FAX Attendant Installation

After rebooting the system, you must confirm that FAX Attendant is installed on the Master Controller.

To confirm that FAX Attendant is installed, perform the following steps:

1. Log into the system using the `maint` login and access the Integrated Solution III Maintenance Menu.

The Integrated Solution III Maintenance Menu should include `Audix Voice Power/FAX ATTENDANT (AVP/FA)` as an item.

2. Select `Technician Maintenance` from the Integrated Solution III Maintenance menu and press [**ENTER** ↓].

The Technician Maintenance Menu appears.

3. Select `Maintenance Log` and press [**ENTER** ↓].

The Maintenance Log Menu appears.

4. Select `Display Installed Applications` and press [**ENTER** ↓].

The list should include the following applications:

```
AT&T FAX Attendant Co-resident Application Software R2.1.1  
AT&T FAX Attendant MC III with IFP 2 Card Update  
AUDIX Voice Power Application Software R2.1.1: Speech  
AUDIX Voice Power Application Software R2.1.1: Software  
AUDIX Voice Power R2.1.1 MERLIN LEGEND Switch Integration Software  
Integrated Voice Power System Software R2.0  
Integrated Voice Power System Software R2.0: Update 2  
MERLIN LEGEND Integrated Solution III Platform Software, Release 1.x  
MERLIN LEGEND System Programming & Maintenance Utility - Version 2.xx  
MERLIN LEGEND Integrated AUDIX Voice Power Administration - Version 1.x
```



NOTE:

A&T FAX Attendant MC III with IFP 2 Card Update must be installed if the system contains IFP2 boards.

5. Press [**F6**] (CANCEL) three times to return to the Integrated Solution III Maintenance Menu.

Procedure 4-10: Restore CAS Data

To restore CAS data, perform the following steps:



NOTE:

Restoring CAS data will not copy the Call Accounting PBX/KTS Interface. CAS requires this interface to be installed separately from diskette. The customer should have received this diskette upon ordering CAS.

1. Press [**F6**] (CANCEL) to return to the Integrated Solution III Maintenance Menu.
2. Select Call Accounting System (CAS) and press [**ENTER** ↓].

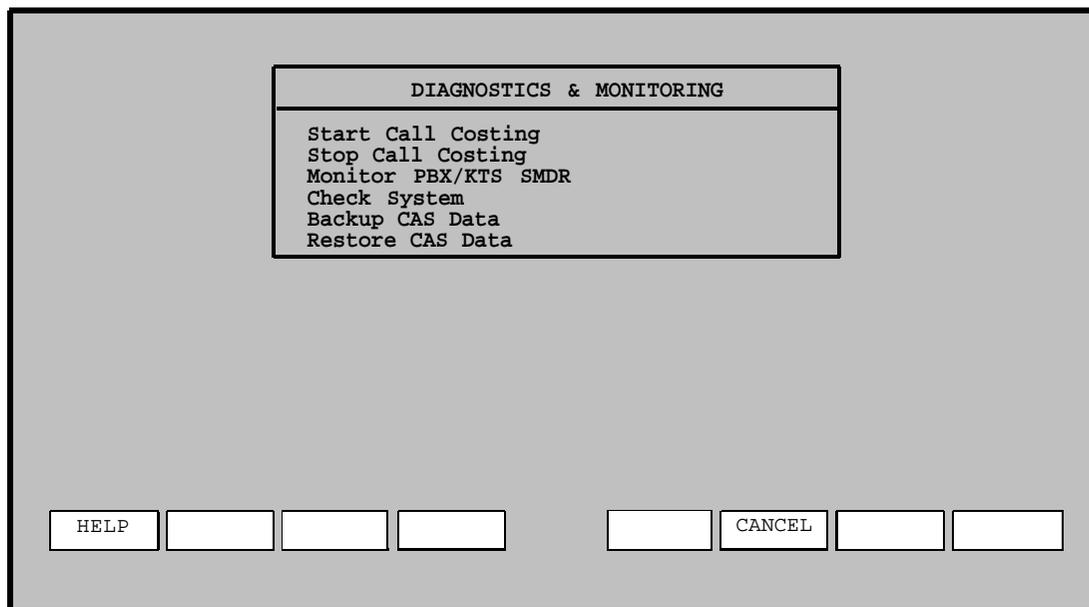
The Call Accounting System Menu appears.

3. Select System Configuration Menu and press [**ENTER** ↓].

The System Configuration Menu appears.

4. Select `Diagnostics & Monitoring` and press [`ENTER` ↓].

The `Diagnostics and Monitoring Menu` appears.



Screen 4-16. `Diagnostics & Monitoring Menu`

5. Select `Restore CAS Data` and press [`ENTER` ↓].

The system responds:

```
-----
RESTORE CAS DATA - STOP COSTING
-----
```

```
Call costing is running.
stopping call costing...
Call costing stopped.
Press <RETURN> to continue.
```

6. Press [**ENTER** ↵].

The system responds:

```
-----  
RESTORE CAS DATA  
-----
```

Confirm

The Call Accounting System Data Base Restore

Strike ENTER when ready
or ESC to stop.

7. Press [**ENTER** ↵].

The system responds:

Perform The Call Accounting System Data Base restore from tape? (y/n)

8. Type *y* and press [**ENTER** ↵].

The system responds:

System Message

Insert cartridge tape to restore from.

Strike ENTER when ready.

9. Insert the CAS data tape and press [**ENTER** ↵].

The system responds:

Restore in progress

After the data is restored, the system responds:

```
-----  
RESTORE CAS DATA - START COSTING  
-----
```

Call costing is not running.

Starting call costing...

Call costing started.

Press <RETURN> to continue.

10. Remove the tape and press [**ENTER** ↵].

The Diagnostics & Monitoring Menu appears.

11. Press [**F6**] (CANCEL) to return to the System Configuration Menu.

12. From the System Configuration Menu, select `Install PBX/KTS Interfaces` and press [**ENTER** ↵].

The system responds:

```
-----  
INSTALL PBX/KTS INTERFACES  
-----
```

Ready to read PBX/KTS Interfaces from media.

Please enter the root password when prompted below.
Password:

13. Type `system25` and press [**ENTER** ↵].

The system responds:

Confirm

Please indicate the installation medium you intend to use.

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

Strike ESC to stop.

14. Type `f`.

The system responds:

If the program installation requires more than one floppy disk, be sure to insert the disks in 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.

15. Insert the CAS PBX/KTS Interface diskette and press [**ENTER** ↵].

The system responds:

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

After the program is installed, the system responds:

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

16. Remove the diskette from the drive and press [**ENTER** ↵].

The system responds:

```
-----  
INSTALL PBX/KTS INTERFACES  
-----
```

Please wait

Press <RETURN> to continue.

17. Press [**ENTER** ↓].

The System Configuration Menu appears.

18. Press [**F6**] (CANCEL) to return to the Call Accounting System Menu.
19. Select `Exit` and press [**ENTER** ↓] to return to the Integrated Solution III Maintenance Menu.

Installing Call Accounting System (CAS)

To install the Call Accounting System application, you must first have the IS-III Platform Software installed. You may install CAS using either the IS-III Installation Tape or diskette.

Activity Checklist

Installation via the IS-III Installation Tape or diskette consists of the following procedures:

1. Install the software.
2. Confirm that the installation was successful.

Software Required

If you are installing CAS via the IS-III Installation Tape, you need the IS-III Installation Tape. If you wish to install the optional HackerTracker, you will need the HackerTracker diskette.

If you are installing CAS via diskette, you need the following software:

- Call Accounting System Software (four base diskettes)
- CAS Setup Software (four diskettes, to be used later)
- optional HackerTracker (one diskette to be used later)

⇒ NOTE:

The four additional diskettes (that is the CAS Setup Software) and the optional HackerTracker diskette used for completing the CAS application package are designed to be used by an implementor. (Instructions for these diskettes are in Chapter 5.)

To install CAS, perform the following steps:

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

The Password: prompt appears.

2. At the Password: prompt, enter the password and then press [**ENTER** ↵].

The Status Screen appears.

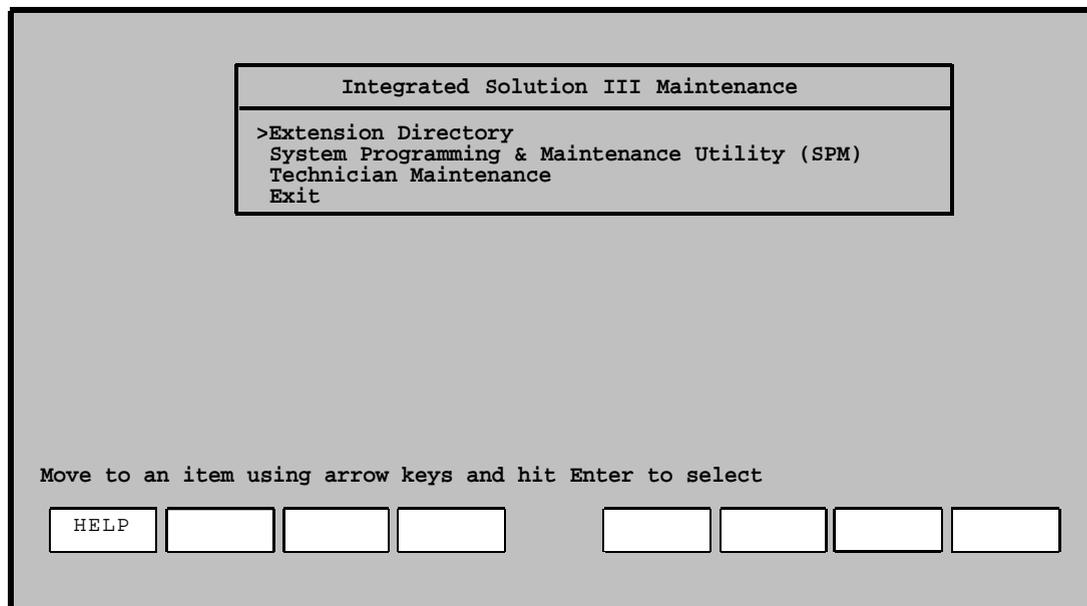
3. Enter your name and press [**F3**] (SAVE).

The Integrated Solution III Maintenance Menu appears.



NOTE:

If any applications are already installed, their names appear on this screen.



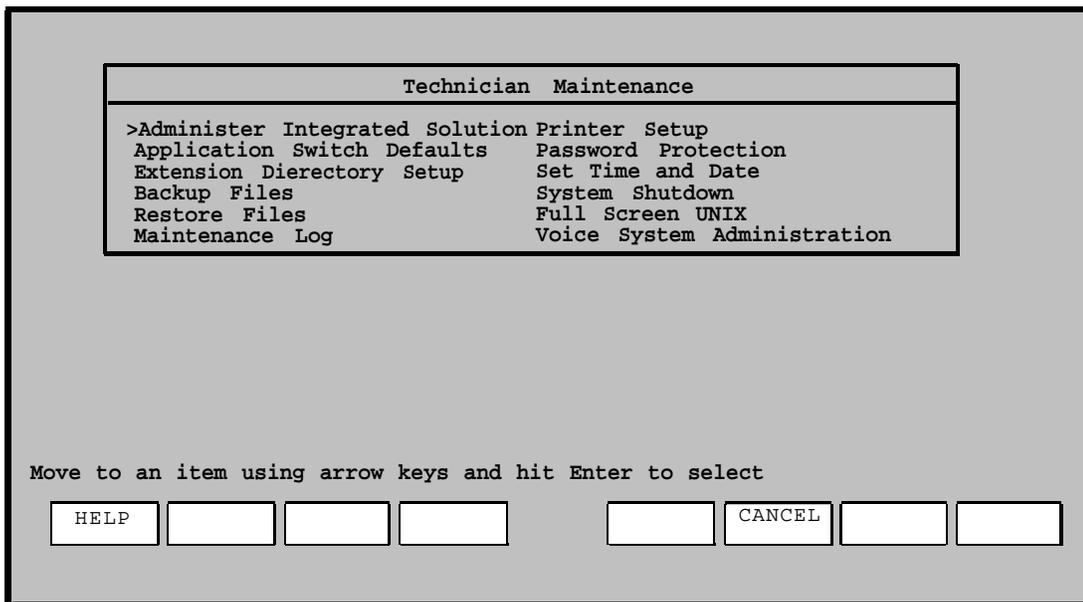
Screen 4-17. Integrated Solution III Maintenance Menu

4. At the Integrated Solution III Maintenance Menu, select Technician Maintenance and press [ENTER ↵].

The Technician Maintenance Menu appears. Depending on the applications installed, the Technician Maintenance Menu may consist of one or two columns.

⇒ **NOTE:**

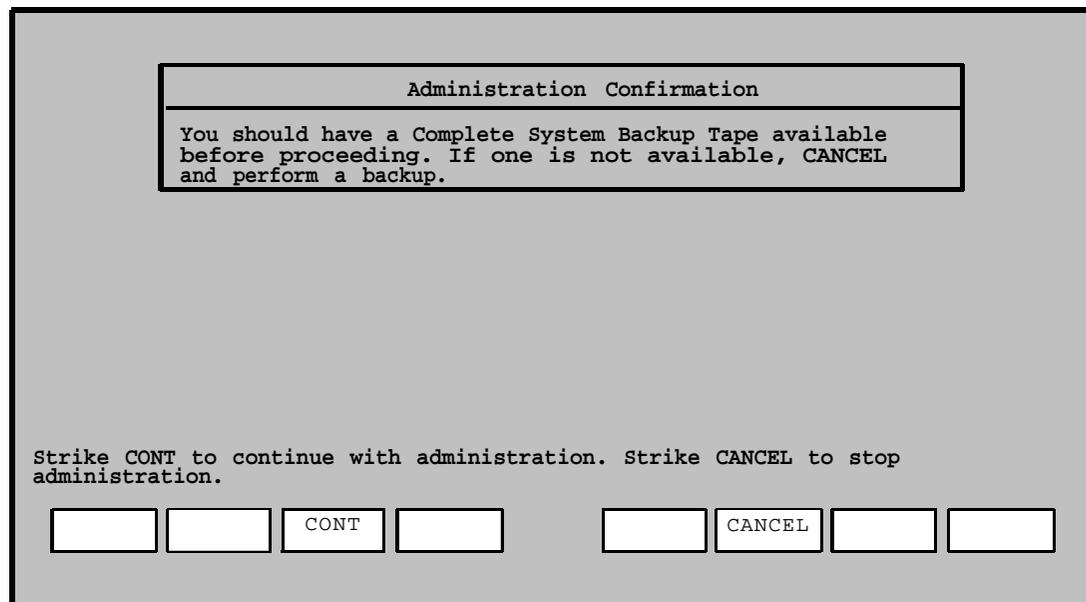
Voice System Administration and Application Switch Defaults appear if AUDIX Voice Power is installed.



Screen 4-18. Technician Maintenance Menu

5. At the Technician Maintenance Menu, select Administer Integrated Solution and press [ENTER ↵].

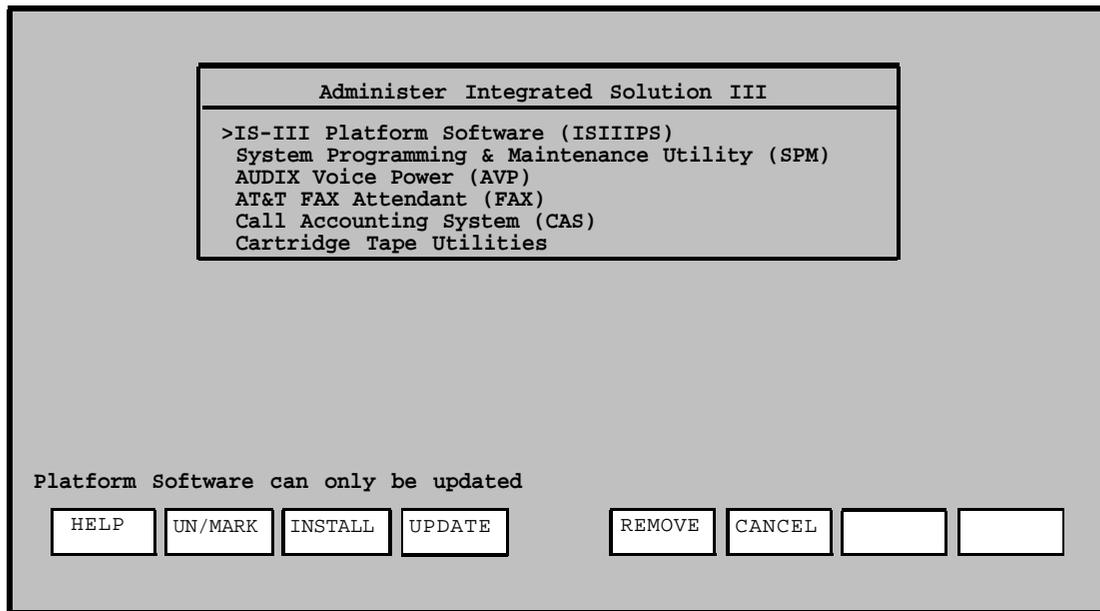
The Administration Confirmation screen appears.



Screen 4-19. Administration Confirmation Screen

6. Press [F3] (CONT) to continue.

The Administer Integrated Solution III Menu appears.



Screen 4-20. Administer Integrated Solution III Menu

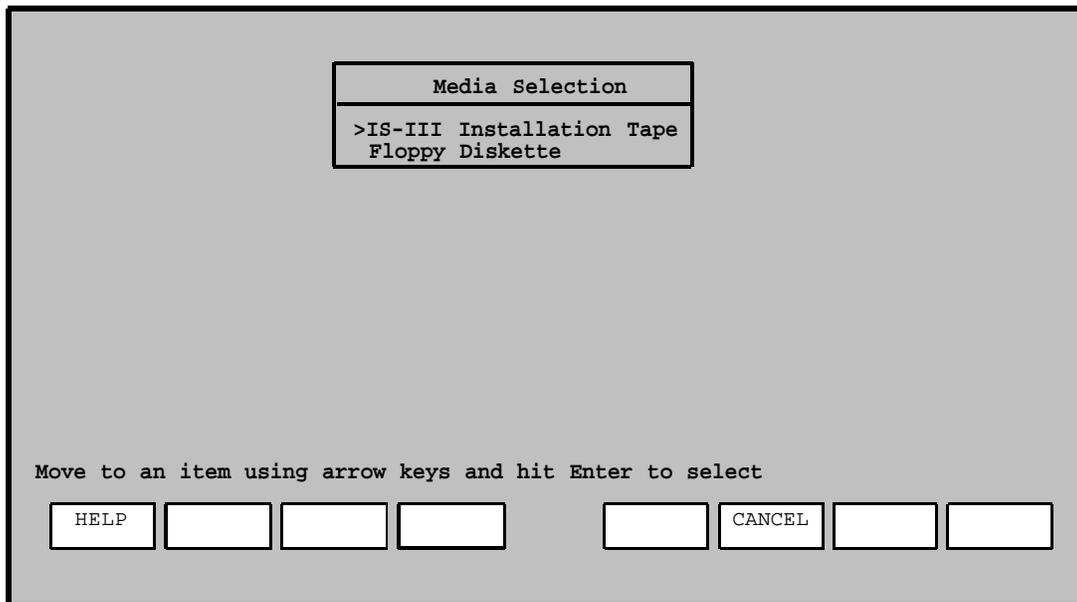
7. At the Administer Integration Solution III Menu, select Call Accounting System (CAS) and press [F2] (UN/MARK).

An asterisk (*) appears in front of Call Accounting System (CAS).

If you marked an application by mistake, move the cursor back to that application and press [F2] (UN/MARK) again to "undo" the selection.

8. Press [**F3**] (INSTALL) to begin the installation procedure.

The Media Selection Menu appears.



Screen 4-21. Media Selection Menu

You may now install CAS via the IS-III Installation Tape or diskette.

Installing CAS Via Tape

To install CAS via the IS-III Installation Tape, perform the following procedures:

1. Install the software.
2. Confirm that the installation was successful.

For this installation, you need the IS-III Installation Tape. If you wish to install the optional HackerTracker, you will need the HackerTracker diskette. Instructions for installing HackerTracker are in Chapter 5.

Procedure 4-11: Install CAS

To install CAS via the IS-III Installation tape, perform the following steps:

1. From the Media Selection Menu, select IS-III Installation Tape and press [**ENTER** ↓].

The system responds:

Confirm

Please insert the IS-III Installation tape into the tape drive.

Strike ENTER when ready or ESC to stop.

2. Insert the IS-III Installation Tape and press [**ENTER** ↓].

The system responds:

Verifying IS-III Installation Tape

Positioning Tape.....Please Wait....

The system then installs CAS. After CAS is installed, the Menu Update Reminder screen appears.

3. Press [**F3**] (CONT).

The Technician Maintenance Menu appears. You must now confirm that CAS is installed on the Master Controller.

Procedure 4-12: Confirm CAS Installation

To confirm the CAS installation, perform the following steps:

1. Log out and then log back in using the *maint* login.

The Integrated Solution III Maintenance Menu should include Call Accounting System (CAS) as an item.

2. Select Technician Maintenance from the Integrated Solution III Maintenance menu and press [**ENTER** ↓].

The Technician Maintenance Menu appears.

3. Select `Maintenance Log` and press [**ENTER** ↵].

The Maintenance Log Menu appears.

4. Select `Display Installed Applications` and press [**ENTER** ↵].

The list should include the following applications:

```
MERLIN LEGEND Integrated Solution III Platform Software, Release 1.x  
MERLIN LEGEND System Programming & Maintenance Utility - Version 2.xx  
Integrated Solution Call Accounting System 1.0.x
```

5. Press [**F6**] (CANCEL) three times to return to the Integrated Solution III Maintenance Menu.

Four CAS setup diskettes must be configured before the application can be used. Information on configuring these diskettes is in Chapter 5.

Installing CAS Via Diskette

Installation via diskette consists of the following procedures:

1. Install the CAS Software.
2. Confirm that the installation was successful.

For this installation, you need the following software:

- Call Accounting System Software (four base diskettes)
- CAS Setup Software (four diskettes, to be used later)
- optional HackerTracker (one diskette to be used later)

⇒ **NOTE:**

The four additional diskettes (that is, the CAS Setup Software) and the optional HackerTracker diskette used for completing the CAS application package are designed to be used by an implementor. (Instructions for these diskettes are in Chapter 5.)

Procedure 4-13: Install the CAS Software

To install CAS via diskette, perform the following steps:

1. From the Media selection Menu, select `Floppy Diskette` and press [**ENTER** ↓].

The system responds:

```
Confirm
Insert first diskette of Call Accounting System.
Strike ENTER when ready
or ESC to stop.
```

2. Insert diskette #1 of the CAS software and then press [**ENTER** ↓].

The system responds:

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

The system then responds:

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

When the process is complete, the system responds:

```
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 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 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.

6. Remove the diskette from the drive.

You must now confirm that CAS is installed on the Master Controller.

Procedure 4-14: Confirm CAS Installation

To confirm the CAS installation, perform these steps:

1. Log out and then log back in using the *maint* login.

The Integrated Solution III Maintenance Menu should include Call Accounting System (CAS) as an item.

2. Select *Technician Maintenance* from the Integrated Solution III Maintenance menu and press [**ENTER** ↵].

The Technician Maintenance Menu appears.

3. Select *Maintenance Log* and press [**ENTER** ↵].

The Maintenance Log Menu appears.

4. Select Display Installed Applications and press [ENTER ↓].

The list should include the following applications:

```
MERLIN LEGEND Integrated Solution III Platform Software, Release 1.x
MERLIN LEGEND System Programming & Maintenance Utility - Version 2.xx
Integrated Solution Call Accounting System 1.0.x
```

5. Press [F6] (CANCEL) three times to return to the Integrated Solution III Maintenance Menu.

Four CAS setup diskettes must be configured before the application can be used. Information on configuring these diskettes is in Chapter 5.

If you wish to install the optional HackerTracker, you will need the HackerTracker diskette. Instructions for installing HackerTracker are in Chapter 5.

Removing IS-III Applications

Use this function only if the customer has chosen to discontinue using an application.



CAUTION:

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

To remove an application, perform the following steps:

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

The `Password:` prompt appears.

2. At the `Password:` prompt, enter the password and press [**ENTER**].

The Status Screen appears.

3. Enter your name and press [**F3**] (SAVE).

The Integrated Solution III Maintenance Menu appears.

4. At the Integrated Solution III Maintenance Menu, select `Technician Maintenance` and press [**ENTER**].

The Technician Maintenance Menu appears.

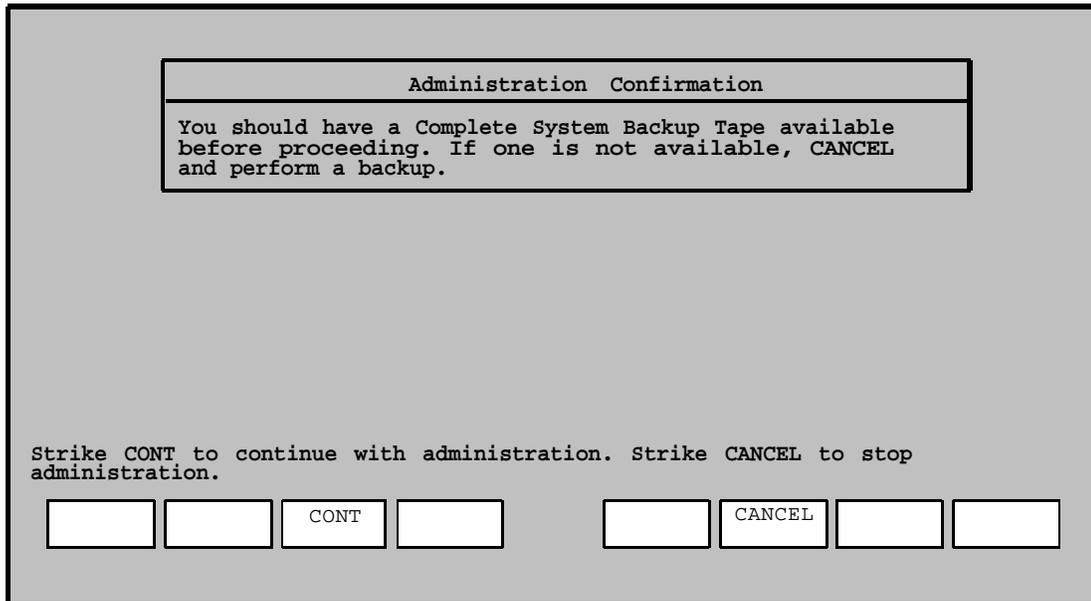


NOTE:

`Voice System Administration` and `Application Switch Defaults` appear if AUDIX Voice Power is installed.

5. At the Technician Maintenance Menu, select Administer Integrated Solution and press [ENTER ↓].

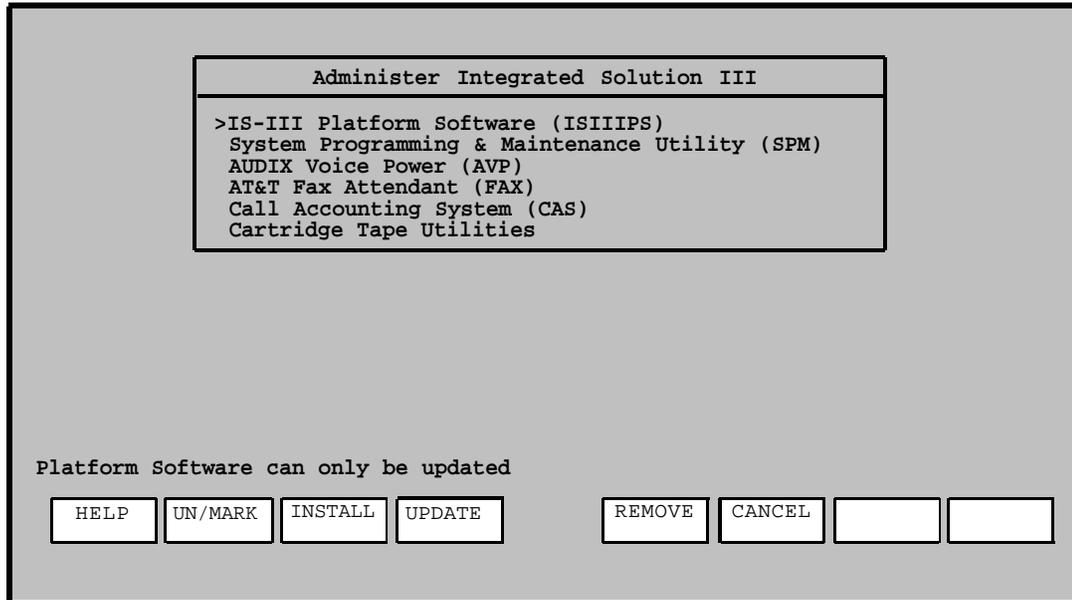
The Administration Confirmation screen appears.



Screen 4-22. Administration Confirmation Screen

6. Press [F3] (CONT) to continue.

The Administer Integrated Solution III Menu appears.



Screen 4-23. Administer Integrated Solution III Menu

7. At the Administer Integration Solution III Menu, select the application(s) you want to remove and press [F2] (UN/MARK).

An asterisk (*) appears in front of the applications you want to remove.

⇒ **NOTE:**

If you want to remove AUDIX Voice Power or FAX Attendant, refer to the appropriate section appearing later in this chapter.

8. Press [F5] (REMOVE) to remove the application(s).

The system prompts you to confirm that you want to remove the application(s) selected.

9. Press [ENTER ↓].

The system removes the application(s) and displays the Menu Update Reminder screen.

10. Press [F3] (CONT).

The Technician Maintenance Menu appears.

11. Press [F6] (CANCEL) to return to the Integrated Solution III Maintenance Menu.
12. Log out of the system for the changes to take effect

Removing AUDIX Voice Power

To remove AUDIX Voice Power, perform the following steps:

1. At the Administer Integration Solution III Menu, select AUDIX Voice Power (AVP) and press [F2] (UN/MARK).

An asterisk (*) appears in front of AUDIX Voice Power (AVP).

⇒ **NOTE:**

If you marked an application by mistake, move the cursor back to that application and press [F2] (UN/MARK) again to "undo" the selection.

2. Press [F5] (REMOVE) to remove the application.

The system responds:

Removing AUDIX Voice Power will remove the program files as well as any administrative and voice files.

Confirm

Do you really want to remove AUDIX Voice Power?

Strike ENTER when ready
or ESC to stop.

3. Press [ENTER ↵].

The system starts removing AUDIX Voice Power. After the software is removed, the system responds:

The Integrated Voice Power System Software R2.0 is now removed.

The system will now be rebooted to install new kernel

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.

4. Press [ENTER ↵].

The system shuts down, and then displays the following message:

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

5. Press the Reset button.

The system reboots and then displays the Console Login: prompt.

Removing FAX Attendant

When removing FAX Attendant, you must reinstall AUDIX Voice Power using the IS-III Installation Tape. If you are reinstalling AUDIX Voice Power, you only need the IS-III Installation Tape.

To remove FAX Attendant, perform the following steps:

1. At the Administer Integration Solution III Menu, select AT&T Fax Attendant (FAX) and press [F2] (UN/MARK).

An asterisk (*) appears in front of AT&T FAX Attendant (FAX).

⇒ **NOTE:**

If you marked an application by mistake, move the cursor back to that application and press [F2] (UN/MARK) again to "undo" the selection.

2. Press [F5] (REMOVE) to remove the application.

The system responds:

```
Removing AT&T FAX Attendant Co-resident Application
Software will remove the program files as well as any
administrative and voice files.
```

Confirm

```
Do you really want to remove AT&T FAX Attendant Co-resident
Application Software?
```

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

3. Press [ENTER ↵].

The system responds:

Confirm

```
Removing AT&T FAX Attendant Co-resident Application
Software.
```

NOTE: This procedure requires the updating of AUDIX Voice Power Application Software R2.1.1: Be sure you have the following floppy disks packages ready:

- Integrated Voice Power System Software R2.0
 - AUDIX Voice Power Application Software R2.1.1: Speech
 - AUDIX Voice Power Application Software R2.1.1: Software
 - Integrated AUDIX Voice Power Administration
 - MERLIN LEGEND Switch Integration Software
- ***OR***
- The IS-III Installation Tape.

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

4. Press [**ENTER** ↵].

The system responds:

Confirm

Please indicate the installation medium you intend to use.

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

Strike ESC to stop.

5. Type *c*.

The system responds:

Confirm

Please insert the IS-III Installation tape into the tape drive.

Strike ENTER when ready
or ESC to stop.

6. Insert the IS-III Installation Tape and press [**ENTER** ↵].

The system reinstalls AUDIX Voice Power.

7. Remove the IS-III Installation Tape and press [**ENTER** ↵].

You must now reboot the system.

8. Refer to Procedures 4-2 and 4-3 in the "Installing AUDIX Voice Power" section provided earlier in this chapter.

Completing CAS Installation

5

**NOTE:**

This chapter is for the AT&T Implementor working with the System Manager. It is not intended for the AT&T Technician who installs the hardware or software. (Job titles may vary.)

Completing CAS implementation requires customization from floppy diskette, and, if voice mail notification of alarms is desired, administration of AUDIX Voice Power subscribers and group lists. For additional information on AUDIX Voice Power administration, see the *AT&T AUDIX™ Voice Power Release 2.1.1 System Manager's Guide*.

The following description leads you through the steps necessary to complete the CAS implementation process. For more detailed information, see the *AT&T Call Accounting System (CAS) Integrated Solution II Site Installation and Implementation Guide*. There are four required and one optional setup diskette sets to be configured before the application can be used.

The CAS User Setup process consists of the following steps:

1. Enter the Company Name exactly as it will appear in report headings
2. Install the PBX/KTS Interfaces
3. Verify the CDR port
4. Install the City/State diskette
5. Verify the Call Record Collection Information Form and the Telephone System Configuration Form.
6. Install the Custom Rates (Sitegen) diskette
7. Edit the Organization Screens
8. Install the AUDIX Send Phrase Utility diskette
9. Install the optional HackerTracker diskette
10. Set CAS Alarm Notification
11. Enable the CDR port
12. Test the PBX Interface
13. Administer AUDIX Voice Power subscribers and group lists
14. Test HackerTracker alarms (if HackerTracker is installed)

Procedure 5-1A: Initial Installation

For the initial installation, perform these steps:

1. Select Call Accounting System (CAS) from the Integrated Solution III Maintenance Menu and press [**ENTER** ↵].

⇒ **NOTE:**

The first time that this selection is made, special processing leads you through the steps necessary to enter the company name, install the PBX/KTS interfaces, and verify the port to be used. After these initial tasks have been completed, the Integrated Solution Call Accounting System menu appears. Additional steps are run from the Integrated Solution Call Accounting System menu. The steps that run differently the first time can also be repeated if necessary from the Integrated Solution Call Accounting System menu.

If this procedure fails, go to Procedure 5-1B.

The INSTALLATION screen appears.

```
-----  
                                INSTALLATION  
-----
```

The Integrated Solution Call Accounting System has been installed.
Now it is necessary to perform a variety of set-up operations.

You will be asked to:

- o Enter your company's name
- o Install PBX/KTS Interfaces
- o Enter the port(s) to be used

You must perform this configuration before you can access the menu system.

Press <RETURN> to continue.

2. Press [**ENTER** ↵].

The system responds:

```
COMMANDS: Update Exit  
           Update the displayed record
```

```
-----  
                                EDIT COMPANY INFORMATION  
-----
```

Company Name: YOUR COMPANY NAME

Notes:

The Company Name appears in report headings exactly as entered here.

3. Press [**ENTER**] to move the cursor to the Company Name field.

Line 2 of the display changes to read:
Update - <ESC> to save, ^C to cancel

4. Type the company name.
5. Press [**ESC**].

Line 25 of the display changes to read:
Updated

6. Press [**E**] to exit.

The system responds:

```
-----  
                                INSTALLATION  
-----
```

To process calls from sites, you install PBX/KTS Interfaces.
Please insert media for required PBX/KTS Interfaces.
Press <RETURN> to continue.

7. Press [**ENTER**].

The system responds:

```
-----  
                                INSTALL PBX/KTS INTERFACES  
-----
```

Ready to read PBX/KTS Interfaces from media
Please enter the root password when prompted below:
Password:

8. Enter the root password and press [**ENTER**]. If you do not have this password, get it from your next tier of support.

The system responds:

Confirm
Please indicate the installation medium you intend to use.
Strike "C" to install from CARTRIDGE TAPE
or "F" to install from FLOPPY DISKETTE.
Strike ESC to stop.

⇒ **NOTE:**

If you mistype the root password, you will receive the following messages:

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

- a. Remove the diskette and press [**ENTER** ↓].

The system responds:

```
-----
                                INSTALL PBX/KTS INTERFACES
-----
```

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

- b. Press [**ENTER** ↓] to continue.

The system returns you to the System Configuration Menu.

- c. At this point, use the Alternate Procedure 5-1B to install the PBX/KTS interfaces.

9. Press [**E**] for floppy.

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.
```

10. Insert the PBX/KTS Interfaces diskette and press [**ENTER** ↓].

The system responds:

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

```
Installing Integrated Solution Call Accounting System PBX/KTS Interfaces
```

```
Copyright (C) 1990,1992 AT&T
Copyright (C) 1987,1988,1989,1990,1992 MOSCOM Corporation
All Rights Reserved
91 blocks
Please remove disk from disk drive.
Press <RETURN> to continue.
```

11. Remove the diskette and press [ENTER ↓].

The system responds:

```
-----  
                          INSTALL PBX/KTS INTERFACES  
-----
```

Please wait
Press <RETURN> to continue.

12. Press [ENTER ↓] to continue.

The system responds:

```
-----  
                          INSTALLATION  
-----
```

To configure sites, you must establish Communication Types.
Please enter all ports to be used for Call Record Collection.
Press <RETURN> to continue.

13. Press [ENTER ↓] continue.

The system responds:

```
COMMANDS: Query Next Previous Add Remove Exit  
          Query for record  
-----  
                          EDIT CDR PORT INFORMATION  
-----
```

```
          Port Name: tty01  
Communication Type: 1  
          Port Enabled? N  
          Description: Comm Port 2
```

14. Verify that the Port Name is tty01 and that Port Enabled is N. Then press [E] for exit.

The system responds:

```
-----  
                          INSTALLATION  
-----
```

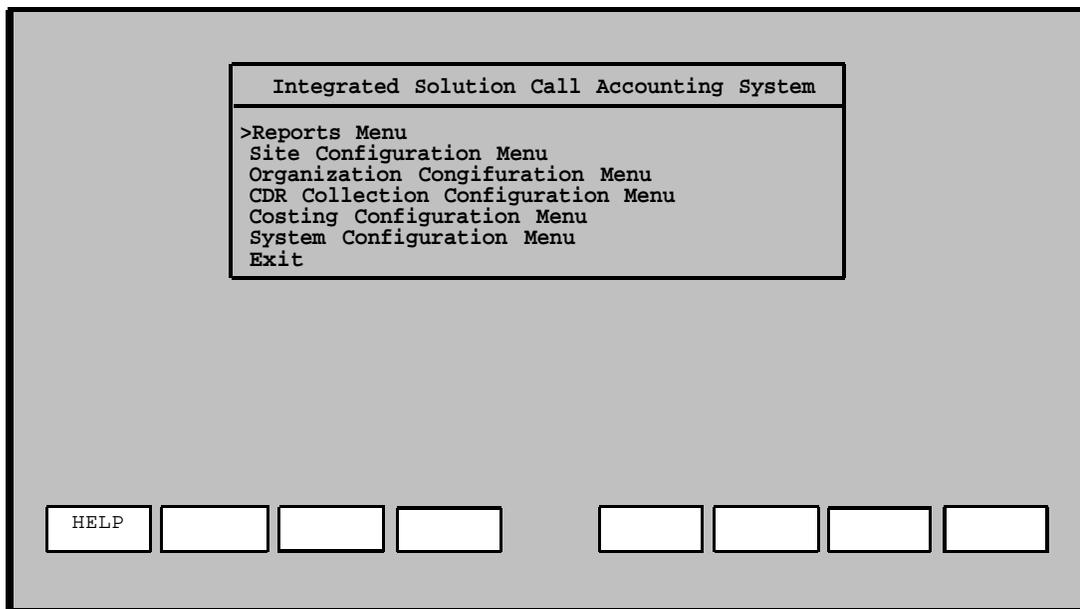
Initial configuration of the Integrated Solution Call Accounting System is complete.

You may now add the City/State disk using the "Install Update" menu selection.

Press <RETURN> to continue.

15. Press [**ENTER**] to continue.

The Integrated Solution Call Accounting System menu appears.



Screen 5-1. Integrated Solution Call Accounting System Menu

Alternate Procedure 5-1B: Install the PBX/KTS Interfaces

⇒ **NOTE:**
Procedure 5-1A is automatically invoked the first time the Call Accounting System is run. Procedure 5-1A can fail because of incorrect entry of the root password. Use this procedure (5-1B) to install the PBX/KTS Interfaces only if Procedure 5-1A fails or if it is necessary to install the PBX/KTS Interfaces after the first time that the Call Accounting System is run.

To install the PBX/KTS Interfaces, follow these steps:

1. Select System Configuration Menu from the Integrated Solution Call Accounting System menu.

The System Configuration Menu displays.

2. Select Install PBX/KTS Interfaces from the System Configuration menu.

The system responds:

```
-----  
                          INSTALL PBX/KTS INTERFACES  
-----  
Ready to read PBX/KTS Interfaces from media  
Please enter the root password when prompted below:  
Password:
```

3. Enter the root password and press [**ENTER** ↵]. If you do not have this password, get it from your next tier of support.

The system responds:

```
Confirm  
Please indicate the installation medium you intend to use.  
Strike "C" to install from CARTRIDGE TAPE  
or "F" to install from FLOPPY DISKETTE.  
Strike ESC to stop.
```

⇒ **NOTE:**

If you mistype the root password, you will receive the following messages:

```
su: Sorry
Please remove disk from disk drive.
<RETURN> to continue.
```

- a . Remove the diskette and press [**ENTER** ↵].

The system responds:

```
-----
                                           INSTALL PBX/KTS INTERFACES
-----
```

Please wait

Press <RETURN> to continue.

- b . Press [**ENTER** ↵] to continue.

The system returns you to the System Configuration Menu.

- c . At this point, return to step 1 of this procedure.

4. Press [**E**] for floppy.

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.

5. Insert the PBX/KTS Interfaces diskette and press [**ENTER** ↵].

The system responds:

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

Installing Integrated Solution Call Accounting System PBX/KTS Interfaces

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All Rights Reserved
91 blocks
Please remove disk from disk drive.
Press <RETURN> to continue.

6. Remove the diskette and press [**ENTER** ↵].

The system responds:

```
-----  
                         INSTALL PBX/KTS INTERFACES  
-----
```

Please wait

Press <RETURN> to continue.

7. Press [**ENTER** ↵] to continue.

The system returns you to the System Configuration Menu.

8. Press [**F6**] (CANCEL) to return to the Integrated Solution Call Accounting System menu.

Procedure 5-2: Install the City/State Diskette

To install the City/State diskette, perform the following steps:

1. Select `System Configuration Menu` from the `Integrated Solution Call Accounting System` menu.

The `System Configuration Menu` displays.

2. Select `Install Update` from the `System Configuration Menu` and press [**ENTER** ↓].

The system responds:

```
-----  
                          INSTALL UPDATE  
-----
```

Ready to read in software from media

Please enter the root password when prompted below:
Password:

3. Enter the root password and press [**ENTER** ↓]. If you do not have this password, get it from your next tier of support

The system responds:

Confirm

Please indicate the installation medium you intend to use.

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

Strike ESC to stop.



NOTE:

If you mistype the root password, you will receive the following messages:

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

- a. Remove the diskette and press [**ENTER** ↓].

The system responds:

```
-----  
                          INSTALL UPDATE  
-----
```

Please wait

Press <RETURN> to continue.

- b. Press [ENTER ↵] to continue.

The system returns you to the System Configuration Menu.

- c. At this point, return to step 1 of this procedure.
4. Press [E] for floppy.

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.

5. 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 hh:mm:ss on mm/dd/yy.

Installing City/States Tables.

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Setting mode and owner of City/State Tables.
End City/State Tables Installation at hh:mm:ss on mm/dd/yy.

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

6. Remove the City/State diskette and press [ENTER ↵].

The system responds:

Press <RETURN> to continue.

7. Press [ENTER ↵].

The system returns you to the System Configuration Menu.

Procedure 5-3: Verify the SMDR Settings

The parameters that tell the Call Accounting System how to read and interpret the Call Detail Records (CDR) must match the parameters that tell the communications system how to format and write the Call Detail Records. The necessary parameters should be provided on the Call Record Collection Information Form. Obtain a completed copy of this form from the System Manager.

To verify the communications system Call Detail Record parameter settings, you can use the system programming console. Request permission from the System Manager, and then follow these steps:

1. Press [Menu].

The Main menu displays.

2. Select Sys Program.

The System Programming menu displays.

3. Select Options.

The Options menu displays.

4. Select SMDR.

The SMDR menu displays.

5. Select Format.

The Format choices display:

- Basic SMDR
- ISDN SMDR

The format that is currently selected is highlighted.

6. If the currently selected format is correct, skip steps 7 and 8, and continue with step 9.
7. If the other (not highlighted) format is desired, select it by pressing the button next to the format
8. Press [Enter] to save the selection.
9. Press [Exit] to return to the System Programming menu.
10. Press [Home] to leave system programming mode.

Procedure 5-4: Install the Custom Rates (Sitegen) Diskette



NOTE:

The Custom Rates (Sitegen) diskette replaces the Major Metro diskettes used in previous versions of CAS and must be installed.

Before you begin this procedure, you will need the information contained on the CAS Site Information Form, the Telephone System Configuration Form, and the Call Record Collection Information Form. Obtain these completed forms from the System Manager.

To install the Custom Rates (Sitegen) Diskette, perform the following steps:

1. From the System Configuration Menu, press [**F6**] (CANCEL) to return to the Integrated Solution Call Accounting System menu.
2. Select Site Configuration Menu and press [**ENTER** ↓].

The Site Configuration Menu appears.

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

The INSTALL SITE - STOP COSTING screen appears along with a series of system messages.

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

The system responds:

```
-----  
                                INSTALL SITE  
-----
```

Ready to read in site software from media.

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

Please enter the root password when prompted below:
Password:

5. Enter the root password and press [**ENTER** ↓]. If you do not have this password, get it from your next tier of support.

The system responds:

Confirm

Please indicate the installation medium you intend to use.

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

Strike ESC to stop.



NOTE:

If you mistype the root password, you will receive the following messages:

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

- a. Remove the diskette and press [**ENTER** ↵].

The system responds:

```
-----
                                     INSTALL SITE
-----
```

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

- b. Press [**ENTER** ↵] to continue.

The system returns you to the System Configuration Menu.

- c. At this point, return to step 1 of this procedure.

6. Press [**E**] for floppy.

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.
```

7. Insert the Custom Rates (Sitegen) diskette and press [**ENTER** ↵].

The system responds:

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

Installing Integrated Solution Call Accounting System Sitegen

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All rights reserved
279 blocks
Please remove disk from disk drive.
Press <RETURN> to continue.
```

8. Remove the Custom Rates (Sitegen) diskette and press [ENTER].

After a series of informational messages, the system prompts:

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

9. Press [ENTER].

The system responds:

Please wait - Updating system tables.

A series of dots displays indicating that the data is being installed.

The EDIT SITE INFORMATION screen appears automatically.

10. Press [U] for Update.
11. Fill in the Edit Site information screen using data from the CAS Site Information Form. Use the [ENTER] key to move through the fields.
12. Press [ESC] to save the screen.
13. Press [E] to exit this screen.

The system displays the EDIT TELEPHONE SYSTEM CONFIGURATION - TRUNK GROUP screen.

14. Edit the SYSTEM CONFIGURATION screens using data from the Telephone System Configuration Form.
 - a. Press [A] to add.
 - b. Fill in the information.
 - c. Press [ESC] to save the information.
 - d. Press [D] for detail to go to the next screen (EDIT TELEPHONE SYSTEM CONFIGURATION DIAL ACCESS CODE).
 - e. Fill in the information (if any).
 - f. Press [ESC] to save the information. (If no data was entered, [ESC] has no effect. Go to the next step.)
 - g. Repeat steps a through f for each trunk group.
 - h. Press [E] to exit

The system displays the EDIT DIALED DIGIT PROCESSING screen.

15. Press [E] to exit.

The EDIT CDR COLLECTION INFORMATION screen appears.

16. Edit the EDIT CDR COLLECTION INFORMATION screen:
 - a. Press [u] for update.
 - b. Fill in the information using data from the Call Record Collection Information Form.
 - Use the Call Record Format code appropriate to the way that the call record is set up on the switch. Only the following codes can be used:

Table 5-1. Call Record Format Codes

<u>Code</u>	<u>Format</u>
<u>legendbase</u>	<u>AT&T MERLIN LEGEND Standard</u>
<u>legendisdn</u>	<u>AT&T MERLIN LEGEND ISDN</u>

You can also press [CTRL]—[w] line table showing these codes, but you cannot select from the table – you must type the code.

- The `Communication Type` must be changed to `1`.
 - The `Time Zone` can be specified as `4` (Atlantic), `5` (Eastern), `6` (Central), `7` (Mountain), `8` (Pacific), `10` (Alaska), or `11` (Hawaii).
 - `Daylight Savings` should be specified as `y` (yes) if used; otherwise as `n` (no).
- c. Press [ESC] to save the information.

The EDIT CDR COLLECTION INFORMATION screen reappears with the Direct PBX Interface Parameter values appropriate for the MERLIN LEGEND Communications System. They don't need to be changed.

17. Press [**E**] to exit this screen.

The system responds:

```
-----  
-----INSTALL SITE-----  
-----
```

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

18. Press [**ENTER** ↵].

The system responds:

```
-----  
-----INSTALL SITE - START COSTING-----  
-----
```

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

19. Press [**ENTER** ↵].

The Site Configuration menu reappears.

20. Press [**F6**] (CANCEL) to return to the Integrated Solution Call Accounting System menu.

Procedure 5-5: Edit Organization Screens

Before you begin this procedure, you will need the information contained on the Company Organization planning forms. Obtain these completed forms from the System Manager.

To edit the Organization screens, perform these steps:

1. Select Organization Configuration Menu from the Integrated Solution Call Accounting System menu and then select Edit Organization Table.

The system responds:

```
-----  
EDIT ORGANIZATION TABLE - SITE  
-----
```

with some additional messages.

2. Press [D] for detail.
3. Press [A] to add information.
4. Enter the information for these screens using data from the Company Organization planning forms.
5. Press [ESC] to save information.
6. Repeat steps 3 through 5 as necessary until all information has been entered.
7. Press [E] to exit the screen.
8. Press [F6] (CANCEL) to return to the Integrated Solution Call Accounting System menu.

Procedure 5-6: Install the AUDIX Send Phrase Utility Diskette

To install the AUDIX Send Phrase Utility diskette, perform the following steps:

1. Select `System Configuration Menu` from the `Integrated Solution Call Accounting System` menu.

The `System Configuration Menu` displays.

2. Select `Install Update` from the `System Configuration Menu` and press [`ENTER` ↓].

The system responds:

```
-----  
-----INSTALL UPDATE-----  
-----
```

Ready to read in software from media

Please enter the root password when prompted below:
Password:

3. Enter the root password and press [`ENTER` ↓]. If you do not have this password, get it from your next tier of support.

The system responds:

Confirm

Please indicate the installation medium you intend to use.

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

Strike `ESC` to stop.



NOTE:

If you mistype the root password, you will receive the following messages:

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

- a. Remove the diskette and press [`ENTER` ↓].

The system responds:

```
-----  
-----INSTALL UPDATE-----  
-----
```

Please wait

Press <RETURN> to continue.

- b. Press [ENTER ↵] to continue.

The system returns you to the System Configuration Menu.

- c. At this point, return to step 1 of this procedure.

- 4. Press [E] for floppy.

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.

- 5. Insert the AUDIX Voice Power Send Phrase Utility R2.1.1 diskette and press [ENTER ↵].

The system responds:

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

Searching for the size file

Install in progress

Installing AUDIX Voice Power Send Phrase Utility R2.1.1
Stopping voice system now

. (each file installed is listed)
:
.

The AUDIX Voice Power Send Phrase Utility R2.1.1 has been installed.
Please read the README2.1 file to help you in using this utility.

Do you want to start the voice system now [y/n]?

- 6. Type [Y] and press [ENTER ↵].

The system responds:

Speech Database Audit starting

Auditing message files...
Audit successful. No errors found.
Auditing prompt files...
Audit successful. No errors found.
ddd mmm dd hh:mm:ss yyyy

. (various other messages)

.
.

Voice system is starting

INIT: New run level: 4

Startup of the voice system is complete.

The installation of the AUDIX Voice Power Send Phrase
Utility R2.1.1 is now complete.

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

7. Remove the AUDIX Send Phrase Utility diskette and press [**ENTER** ↵].

The system responds:

Press <RETURN> to continue.

8. Press [**ENTER** ↵].

The system returns you to the System Configuration Menu.

Procedure 5-7: Install the Optional HackerTracker Diskette

To install the HackerTracker diskette, perform the following steps:

1. Select System Configuration Menu from the Integrated Solution Call Accounting System menu and press [**ENTER** ↵].
2. Select Install Update from the System Configuration menu and press [**ENTER** ↵].

The system responds:

```
-----  
                          INSTALL UPDATE  
-----  
  
Ready to read in software from media  
  
Please enter the root password when prompted below:  
Password:
```

3. Enter the root password and press [**ENTER** ↵]. If you do not have this password, get it from your next tier of support.

The system responds:

```
Confirm  
  
Please indicate the installation medium you intend to use.  
Strike "C" to install from CARTRIDGE TAPE  
or "F" to install from FLOPPY DISKETTE.  
  
Strike Esc to stop.
```



NOTE:

If you mistype the root password, you will receive the following messages:

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

- a. Remove the diskette and press [**ENTER** ↵].

The system responds:

```
-----  
                          INSTALL UPDATE  
-----  
  
Please wait  
Press <RETURN> to continue.
```

- b. Press [ENTER] to continue.

The system returns you to the System Configuration Menu.

- c. At this point, return to step 1 of this procedure.

- 4. Press [E] for floppy.

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.

- 5. Insert the HackerTracker diskette and press [ENTER].

The system responds:

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

INSTALL HACKERTRACKER UPGRADE - STOP COSTING

Call costing is running.

stopping call costing...

Call costing stopped.

Press <RETURN> to continue.

- 6. Press [ENTER] to continue.

The system responds:

Notice - You must exit this application from the main menu and reenter before the HackerTracker selection will appear on the main menu.

End HACKERTRACKER UPGRADE Procedure at hh:mm:ss on mm/dd/yy

Press <RETURN> to continue.

7. Press [**ENTER** ↵].

The system responds:

```
-----  
INSTALL HACKERTRACKER UPGRADE - START COSTING  
-----
```

Call costing is not running.

Starting call costing...

Call costing started.

Press <RETURN> to continue.

8. Press [**ENTER** ↵].

The system responds:

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

9. Remove the HackerTracker diskette and press [**ENTER** ↵] to continue.

The system responds:

Press <RETURN> to continue.

10. Press [**ENTER** ↵].

The system returns you to the System Configuration menu.

11. Press [**F6**] (CANCEL) to return to the Integrated Solution Call Accounting System menu.

12. Select Exit and press [**ENTER** ↵].

The system returns you to the Integrated Solution III Maintenance menu.

Procedure 5-8: Setting CAS Alarm Notification

Before you begin this procedure, you will need the information contained on the CAS Alarm Notification Form which is described in Appendix A. Obtain this completed form from the System Manager.

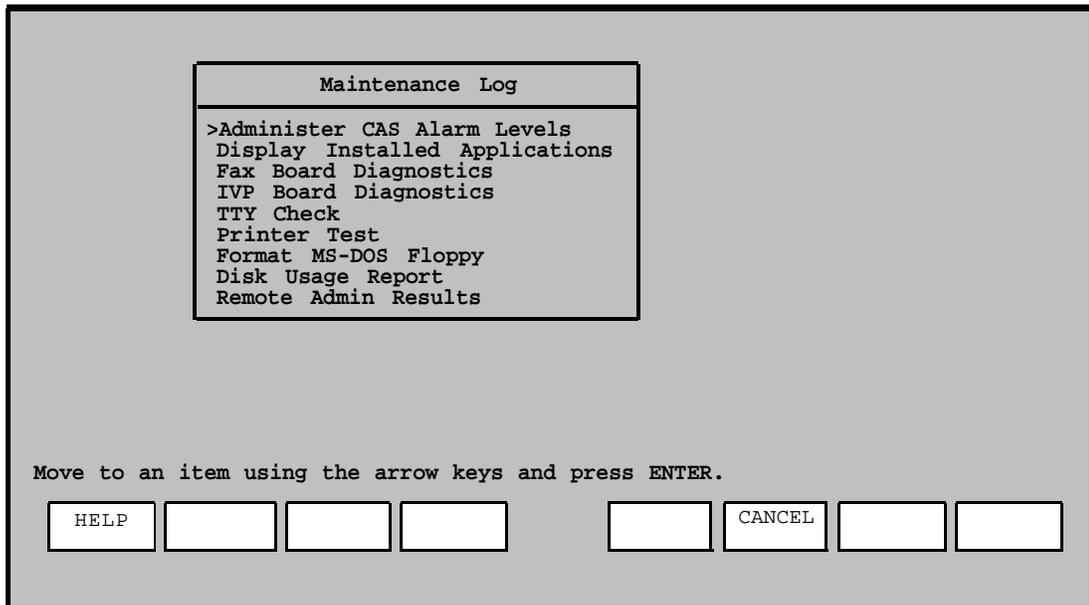
⇒ **NOTE:**
If voice mail alarms are not set, alarm notification will appear on the printer.

⇒ **NOTE:**
Voice mail alarm notification is only possible if AUDIX Voice Power is installed and administered. If AUDIX Voice Power is not installed, the `Administer CAS Alarm Levels` item will not appear on the Maintenance Log menu.

To set up the group list for voice mail alarm notification, follow these steps:

1. Select `Technician Maintenance` from the Integrated Solution III Maintenance menu.
2. Select `Maintenance Log` from the Technician Maintenance menu.

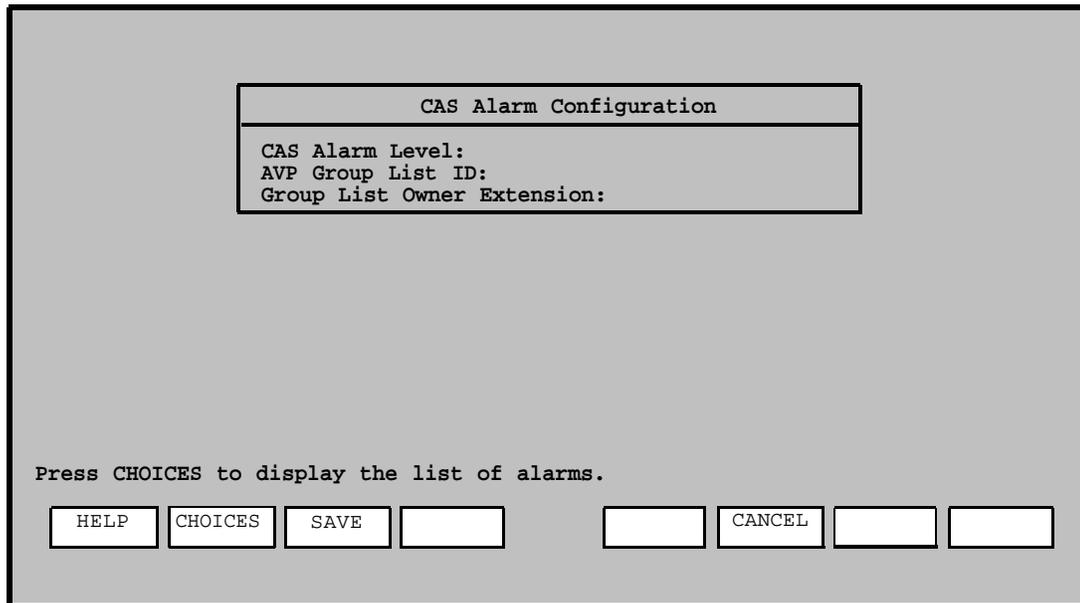
The Maintenance Log Menu appears.



Screen 5-2. Maintenance Log

3. At the Maintenance Log Menu, move the cursor to Administer CAS Alarm Levels and press [ENTER ↓].

The CAS Alarm Configuration screen appears.



CAS Alarm Configuration

CAS Alarm Level:
AVP Group List ID:
Group List Owner Extension:

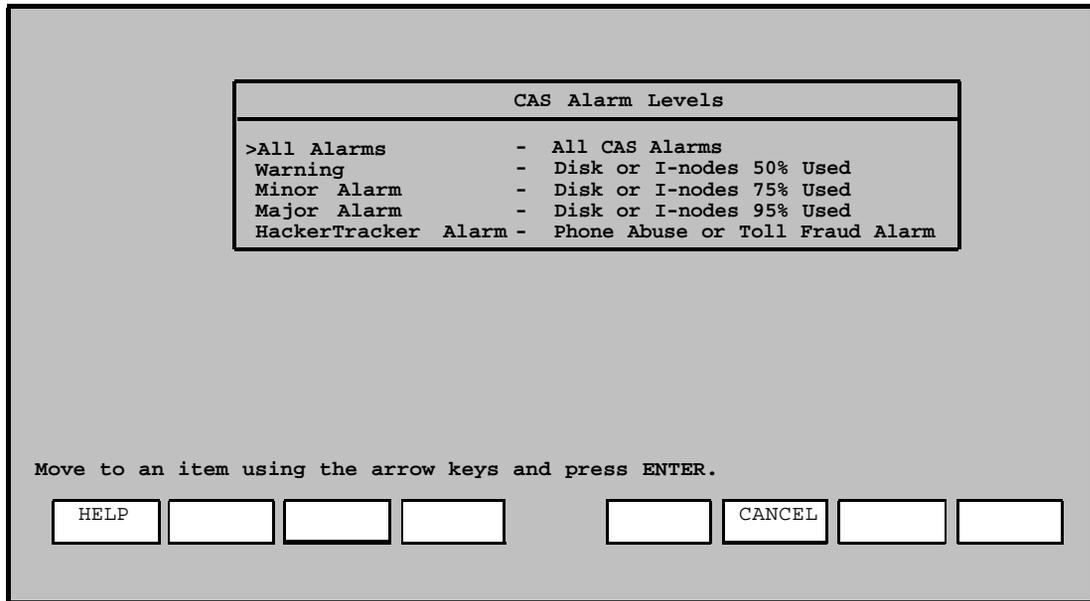
Press CHOICES to display the list of alarms.

HELP CHOICES SAVE CANCEL

Screen 5-3. CAS Alarm Configuration Screen

4. Make sure that the cursor is in the CAS Alarm Level field, and then press [F2] (CHOICES).

The CAS Alarm Levels screen appears.



Screen 5-4. CAS Alarm Levels Screen

5. Move the cursor to the alarm you want to set from the CAS Alarm Notification Form and press [ENTER ↓].

The CAS Alarm Configuration screen returns, and the CAS Alarm Level field contains your selection. The following screen shows the HackerTracker Alarm selection.

The screenshot shows a terminal window titled "CAS Alarm Configuration". Inside the window, there is a smaller box containing the following text:

```
CAS Alarm Configuration
-----
CAS Alarm Level:           HackerTracker Alarm
AVP Group List ID:
Group List Owner Extension:
```

Below this box, the terminal displays the instruction: "Enter the Group List ID for the selected CAS alarm level (use only 0-9)." At the bottom of the screen, there are several interactive elements: a row of buttons labeled "HELP", "CHOICES", "SAVE", and "CANCEL", followed by four empty input boxes for entering a Group List ID.

Screen 5-5. Sample CAS Alarm Configuration Screen

6. Move the cursor to the `Group List ID` field, type the new group list ID from the CAS Alarm Notification Form, and press [**ENTER** ↓].
7. Move the cursor to the `Group List Owner Extension` field, type the group list owner's extension from the CAS Alarm Notification Form, and press [**ENTER** ↓].
8. After you have entered the correct information, press [**F3**] (SAVE) to save the information and return to the Maintenance Log menu.
9. Configure additional CAS alarms as necessary by repeating steps 2 through 7.
10. When the Maintenance Log menu appears after your final change, press [**F6**] (CANCEL) twice to return to the Integrated Solution III Maintenance Menu.



NOTE:

The group lists must be administered through the touch-tone interface to AUDIX Voice Power before alarms will be received. See Chapter 4 of the *AT&T Integrated Solution III, for MERLIN LEGEND Communications System, System Manager's Guide* for the procedure.

Procedure 5-9: Enable the CDR Port

To enable the CDR port, perform these steps:

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

The Integrated Solution Call Accounting System menu appears.

2. Select `CDR Collection Configuration Menu` and press [ENTER].
3. Select `Edit CDR Port Information` and press [ENTER].
4. Press [U] for update.
5. Press [▼] twice to move to the `Port Enabled?` field.
6. Press [Y] to enable the port.
7. Press [ESC] to save the setting.
8. Press [E] to exit.
9. Press [F6] (CANCEL) to return to the Integrated Solution Call Accounting System menu.
10. Select `Exit` and press [ENTER] to return to the Integrated Solution III Maintenance menu.

Procedure 5-10: Test the PBX Interface

Test the PBX Interface when the switch is busy processing call traffic. Perform the test by following these steps:

1. Select `Call Accounting System` from the `Integrated Solution III Maintenance` menu.
2. Select `System Configuration Menu` from the `Integrated Solution Call Accounting System` menu and press [**ENTER**].
3. Select `Diagnostics and Monitoring Menu` from the `System Configuration` menu and press [**ENTER**] to begin testing the PBX interface.
4. Select `Monitor PBX/KTS SMDR` from the `Diagnostics and Monitoring` menu and press [**ENTER**].

The `MONITOR PBX/KTS SMDR` screen appears.

5. Press [**s**] to start monitoring the site.

The system responds:

Please wait...<RETURN> for more

6. Press [**ENTER**] to continue.
7. Press [**E**] exit.
8. Press [**F6**] (`CANCEL`) to return to the `System Configuration` menu.
9. Make several test calls.
10. Wait approximately 10 minutes.
11. Select `View Logs` from the `System Configuration` menu and press [**ENTER**].
12. Type the number for `SMDR_1` from the `View Logs` menu and press [**ENTER**] to look at records.

⇒ **NOTE:**

The `SMDR_1` log doesn't exist until the first record is written. Records are buffered by the `Call Accounting System` for about 5 minutes before being sent to the `CAS` database, so it is possible that `SMDR_1` may not appear on the `View Logs` menu if you do not wait for 10 minutes after making the test calls. In this case, go back to the `System Configuration` menu and wait.

If you do not see call detail records, check that a `PBX/KTS` interface was selected, and that the `CDR` port was enabled.

You can then view the logs and run reports as described in the *AT&T Call Accounting System (CAS) Integrated Solution User's Guide*. After looking at the records, press [**Q**] and then [**ENTER**] to quit.

13. Press [E] and then [ENTER ↵] to exit this screen and return to the System Configuration menu.
14. When you are finished monitoring reports, select `Diagnostics` and `Monitoring Menu` from the System Configuration menu and press [ENTER ↵].
15. Select `MONITOR PBX/KTS SMDR` from the Diagnostics and Monitoring menu and press [ENTER ↵].

The Monitor PBX/KTS SMDR screen appears.

16. Press [E] to finish monitoring.

The system responds:

Please wait...<RETURN> for more

17. Press [ENTER ↵].
18. Press [E] to exit.
19. Press [F6] (CANCEL) twice to return to the Integrated Solution Call Accounting System menu.
20. Select `Exit` and press [ENTER ↵] to return to the Integrated Solution III Maintenance menu.

Procedure 5-11: Test HackerTracker Alarms

HackerTracker may operate with or without AUDIX Voice Power. In either case, alarms will be sent to the printer following a banner (large type heading). If AUDIX Voice Power is installed, HackerTracker can also send alarm notification by voice mail.

⇒ **NOTE:**

For the purpose of this test it is assumed that if AUDIX Voice Power is installed, the HackerTracker alarm notification has already been set using Procedure 5-8.

To complete this test some additional procedures will be required that are detailed in the following documents:

- *AT&T AUDIX Voice Power™ Release 2.1.1 System Manager's Guide*
- *AT&T AUDIX Voice Power™/FAX Attendant System™ Planning and Implementation*
- *AT&T AUDIX Voice Power™ Release 2.1.1 User's Guide*
- *AT&T Integrated Solution III, for MERLIN LEGEND® Communications System, System Manager's Guide*
- *HackerTracker™ for Integrated Solution Call Accounting System.*

To test HackerTracker alarm notification, perform these steps:

1. If voice mail notification will be tested, create the group list that was assigned for the HackerTracker alarm in Procedure 5-8. For details on creating group lists, refer to the *AT&T Integrated Solution III, for MERLIN LEGEND® Communications System, System Manager's Guide* or to the *AT&T AUDIX Voice Power™ Release 2.1.1 User's Guide*.

⇒ **NOTE:**

It may also be necessary to administer voice mail subscribers and other aspects of AUDIX Voice Power. For additional information, refer to the *AT&T AUDIX Voice Power™ Release 2.1.1 System Manager's Guide* and the *AT&T AUDIX Voice Power™/FAX Attendant System™ Planning and Implementation* document.

2. Administer HackerTracker to provide an alarm notification for calls to a nearby area code. For details on administering HackerTracker, refer to the *HackerTracker™ for Integrated Solution Call Accounting System* document.

3. Make a call to a number in the area code that was administered to cause a HackerTracker alarm.



NOTE:

If necessary, call the AT&T Technical Support group and remain on the call for at least one minute.

4. Wait at least 10 minutes for the Call Detail Record to be processed.
5. A banner (large type) indicating an alarm will print followed by the alarm message.
6. If AUDIX Voice Power is being used for voice mail notification, log in to one of the mailboxes assigned to the HackerTracker group list and listen to the message.
7. After completing this test, readminister HackerTracker to eliminate the alarm on the nearby area code and delete the voice mail alarm notification from all mailboxes in the group list assigned to HackerTracker alarms.

Recovering from Catastrophic Failures

6

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 and a cartridge tape, you may be responsible for recovering the system from the IS-III Installation Tape after a catastrophic failure at the customer site.

The procedures for recovering the Integrated Solution III software are outlined on the following pages. Most of the messages that appear on the Master Controller are shown in this section. There may be some system messages that appear on the screen that are not shown here.

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
- main board failure
- data corruption

Refer to Chapter 9, "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 or after data has become corrupt.

Recovering from Hard Disk Failure

If the customer has complete system backup tapes, you will load UNIX and the IS-III Platform Software from the IS-III Boot Diskette and IS-III Installation Tape, and then restore the system from the backup tapes. If the customer does not have complete system backup tapes, you will load the entire system (that is, UNIX, the IS-III Platform Software and the IS-III applications) from the IS-III Boot Diskette and IS-III Installation Tape. (If the customer has administrative files backed up on diskette, you can restore the administrative files after loading the entire system from the IS-III Boot Diskette and IS-III Installation Tape.)

Activity Checklist

If the customer has complete system backup tapes, perform the following procedures to recover the system from a hard disk crash:

1. Replace the hard disk.
2. Reboot the system with the IS-III Boot Diskette.
3. Reboot the system with the IS-III Installation Tape.
4. Restore the IS-III applications and associated files from the complete system backup tapes.

If the customer does not have complete system backup tapes, perform the following procedures to recover the system from a hard disk crash:

1. Replace the hard disk.
2. Reboot the system with the IS-III Boot Diskette.
3. Reboot the system with the IS-III Installation Tape.
4. Install the optional IS-III applications from the IS-III Installation Tape.

Materials Required

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

- Master Controller II+ or III
- IS-III Boot Diskette
- IS-III Installation Tape
- complete system backup tapes (if the customer has performed a complete system backup)

Procedure 6-1: Replace the Hard Disk

For this information, see Chapter 3, "Upgrading the Hardware," or the documentation supplied with the Master Controller.

Procedure 6-2: Install UNIX and IS-III Platform Software

To install UNIX and the IS-III Platform Software, perform the following steps:

1. With the Master Controller turned off, insert the IS-III Boot diskette and power up the Master Controller.

The boot disk reformats the entire hard disk on the Master Controller, destroying all of the data on the hard disk. This process takes approximately 10-15 minutes. Once the hard disk is reformatted, the following prompt appears:

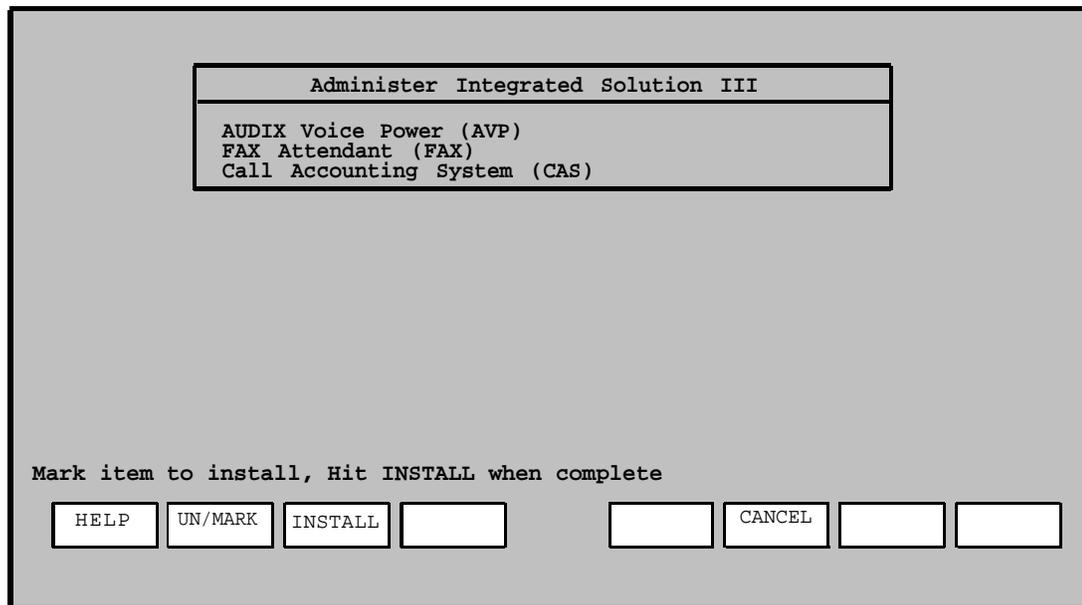
```
When you are prompted to reboot your system,  
remove the floppy disk from the diskette drive, insert the Integrated  
Solution III Installation cartridge tape in the tape drive,  
and strike CTRL-ALT-DEL.  
Please wait for the prompt.
```

Reboot the system now.

2. Remove the IS-III Boot diskette and insert the IS-III Installation Tape.

3. Press the Reset button.

The system reboots and automatically loads the UNIX files and the IS-III Platform software from the tape onto the hard disk of the Master Controller. When the system finishes loading the tape, the Administer Integrated Solution III Menu appears.



Screen 6-1. Administer Integrated Solution III Menu

You may now restore the complete system from tape backup or reinstall the IS-III applications via the IS-III Installation tape.

Restoring the Complete System from Tape Backup

If the customer has a tape backup of the system, perform the following steps:

1. At the Administer Integrated Solution III Menu, press [F6] (CANCEL).

The system rewinds the tape and then reboots. The `Console Login:` prompt appears.

2. Remove the IS-III Installation Tape.
3. Log in as *maint* and press [ENTER].

The `Password:` prompt appears.

4. Enter the password and press [ENTER ↓].

The Status Screen appears.

5. Enter your name and press [F3] (SAVE).

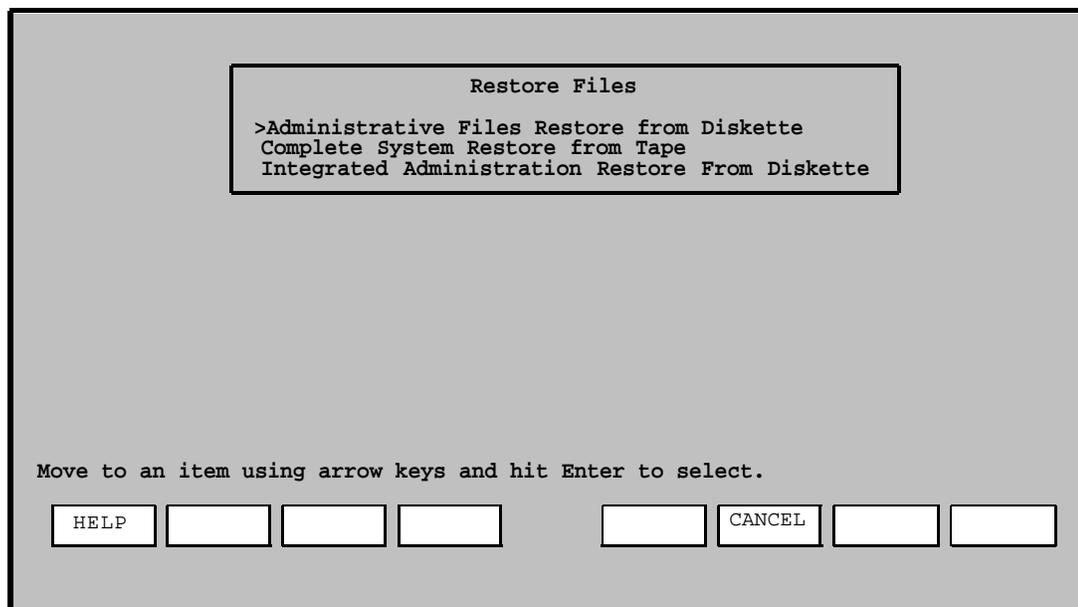
The Integrated Solution III Maintenance Menu appears.

6. Select `Technician Maintenance` and press [ENTER ↓].

The Technician Maintenance Menu appears.

7. Select `Restore Files` from the Technician Maintenance Menu and press [ENTER ↓].

The Restore Files Menu appears.



Screen 6-2. Restore Files Menu

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

The system responds with a message telling you how many tapes you will need, and then displays the following message:

Confirm

A Complete System Restore will restore all application files and system files. This will usually take one cartridge tape. The restore will take less than a half hour to complete.

Strike ENTER when ready
or ESC to stop.

9. Press [ENTER].

The system responds:

Please insert the System Files cartridge tape and press ENTER

10. 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. After the light on the tape drive goes out, remove the tape.

Strike ENTER when ready.

11. When the light on the tape drive goes out, remove the tape and press [ENTER].

The Restore Files Menu appears.

12. Press [F6] (CANCEL).

The Technician Maintenance Menu appears.

13. Select Full Screen UNIX and press [ENTER].

The system responds:

To return, type 'exit' or control-d
You are in /usr/maint
#

14. Type *is2init* and press [ENTER].

The system responds:

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

The system shuts down and displays the following prompt:

The system is down.
Reboot the system now.

15. Press the Reset button.

The system reboots and performs an audit.



NOTE:

The system will find errors during the audit. However, these errors will be fixed after you restore the voice files.

After the system reboots, the `Console Login:` prompt appears.

16. Log in as `maint` and access the Integrated Solution III Maintenance Menu.

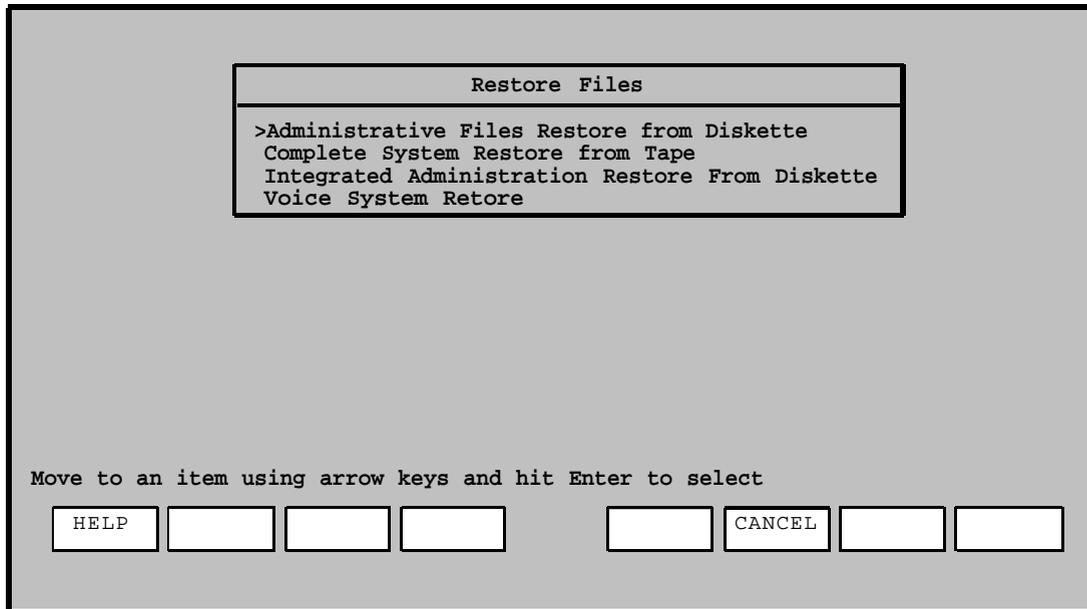
The Integrated Solution III Maintenance Menu appears.

17. Select `Technician Maintenance` and press [ENTER ↓].

The Technician Maintenance Menu appears.

18. At the Technician Maintenance Menu, select `Restore Files` and press [`ENTER` ↓].

The Restore Files Menu appears.

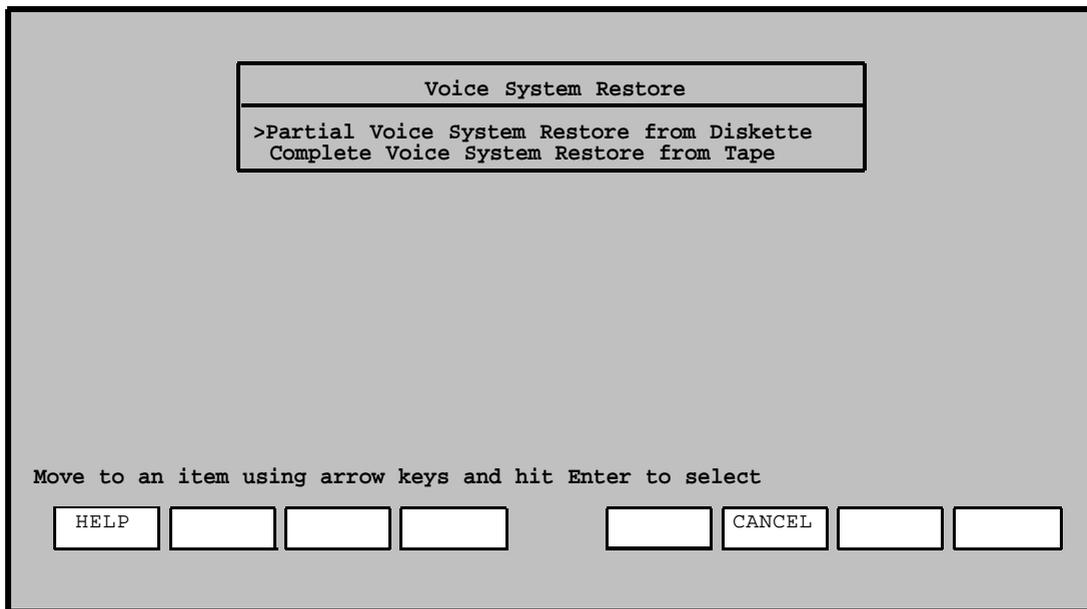


Screen 6-3. Restore Files Menu

⇒ **NOTE:**
If AUDIX Voice Power has been installed, Voice System Restore appears in the Restore Files Menu.

19. Select `Voice System Restore` and press [ENTER ↓].

The `Voice System Restore` Menu appears.



Screen 6-4. `Voice System Restore` Menu

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

The system responds:

Confirm

The `Voice System Restore from Tape` will recover all the voice files that were previously saved with the "Complete System Backup to Tape" command.

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

21. Press [ENTER ↓].

The system responds:

WORKING.....

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

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

22. Insert the tape labeled "Voice Files" and press [**ENTER** ↵].

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

```
The Voice System Files have been successfully restored.  
After the light on the tape drive goes out, remove the  
tape.
```

Strike **ENTER** when ready.

23. When the light on the tape drive goes out, 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.

24. Press [**ENTER** ↵].

System and informational status messages are displayed as the voice system is stopped and restarted. You are automatically returned to the Voice System Restore Menu.

25. Press [**F6**] (**CANCEL**) three times to return to the Integrated Solution III Maintenance Menu.

At this point, the system is restored.

⇒ **NOTE:**

Access the Voice System Audit and check for any errors. To access the Voice System Audit, perform the following steps:

- a. From the Technician Maintenance Menu, select `Voice System Administration` and press [**ENTER** ↵].

The Voice System Administration Menu appears.

- b. From the Voice System Administration Menu, select `Reports` and press [**ENTER** ↵].

The Reports Administration Menu appears.

- c. From the Reports Administration Menu, select `AUDIX Voice Power/Fax Attendant` and press [**ENTER** ↵].

The AUDIX Voice Power/FAX Attendant Reports Menu appears.

- d. From the AUDIX Voice Power/FAX Attendant Reports Menu, select Most Recent Audit and press [**ENTER** ↵].

The Audit Report Screen appears, presenting the results from the most recent AUDIX Voice Power Data Base Audit Report.

- e. Use [**F2**] (PREVPAGE) and [**F3**] (NEXTPAGE) to move through the report
- f. When finished, press [**F6**] (CANCEL) to return to the AUDIX Voice Power/Fax Attendant Reports Menu.
- g. Press [**F6**] (CANCEL) three times to return to the Technician Maintenance Menu.

Installing IS-III Applications

If the customer does not have complete system backup tapes, perform the following steps:

1. At the Administer Integrated Solution III Menu, select the application(s) you want to install and press [**F2**] (UN/MARK).

An asterisk (*) appears in front of the application(s) you want to install.

⇒ **NOTE:**

If you marked an application by mistake, move the cursor back to that application and press [**F2**] (UN/MARK) again to "undo" the selection.

2. Press [**F3**] (INSTALL) to begin the installation procedure.

The Media Selection Menu appears.

3. Refer to Chapter 4 for the procedures to install the specific IS-III applications via the IS-III Installation Tape.

Recovering from Data Corruption

IS-III allows you to perform the following restore procedures:

- Complete System Restore from Tape
- Administrative Files Restore from Diskette
- Integrated Administration Restore from Diskette
- Complete Voice System Restore from Tape

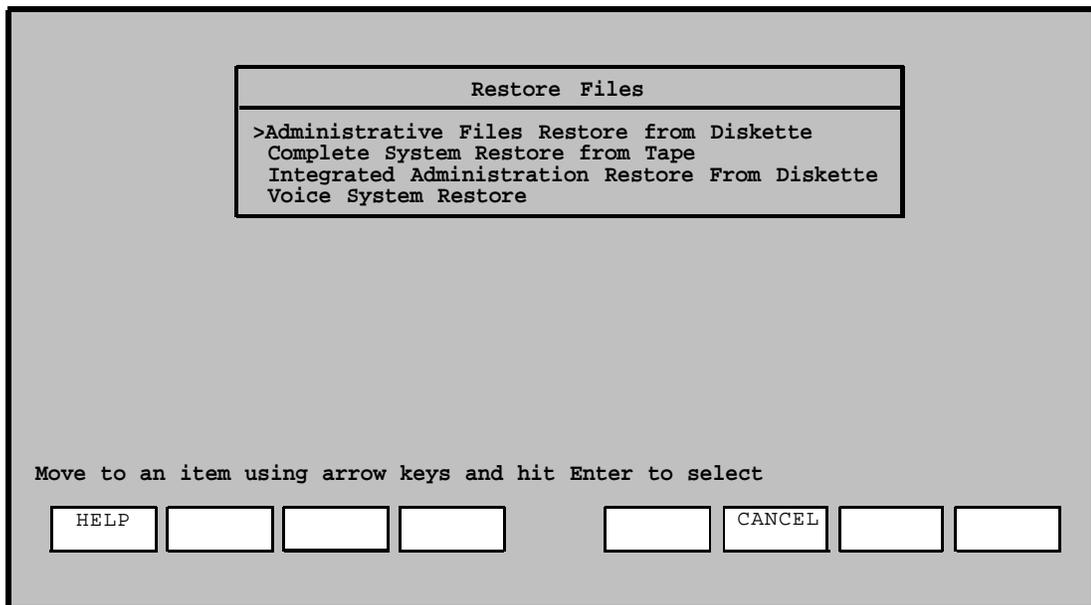
Restoring the Complete System from Tape

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 if backup tapes are available. If backup tapes are not available, you must restore from diskettes and readminister all applications.

To recover from data corruption, follow these steps:

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

The Restore Files Menu appears.



Screen 6-5. Restore Files Menu

⇒ **NOTE:**

`Voice System Restore` appears if AUDIX Voice Power is installed.

2. Select `Complete System Restore from Tape` and press [`ENTER` ↓]. The system responds with a message telling you how many tapes you will need, and then displays the following message:

Confirm

A Complete System Restore will restore all application files, system files and all voice files. This will usually take two cartridge tapes. Each tape will take less than a half hour to complete.

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

3. Press [ENTER ↵].

The system responds:

Please insert the System Files cartridge tape and press Enter

4. Insert the backup 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. After the light on the tape drive goes out, remove the tape.

Strike ENTER when ready.

5. When the light on the tape drive goes out, remove the tape and press [ENTER ↵].

The system responds:

Confirm

The Voice System Restore from Tape will recover all the voice files that were previously saved with the "Complete System Backup to Tape" command.

Strike ENTER when ready
or ESC to stop.

⇒ **NOTE:**

If AUDIX Voice Power is not installed, the system prompts you to press [ENTER ↵], which returns you to the Restore Files Menu.

6. Press [ENTER ↵].

The system responds:

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

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

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

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

The Voice System Files have been successfully restored. After the light on the tape drive goes out, remove the tape.

Strike ENTER when ready.

8. When the light on the tape drive goes out, 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 voice system is stopped and restarted. You are automatically returned to the Restore Files menu.

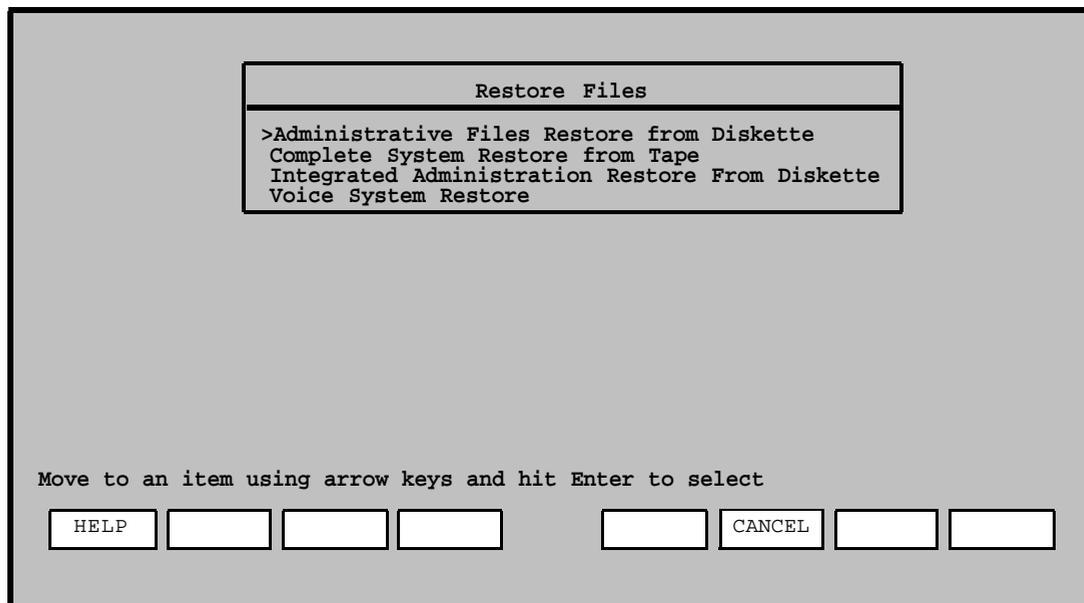
Restoring the Administrative Files from Diskette

The Administrative Files Restore from Diskette procedure allows you to restore administrative files for each application and custom voice prompts for AUDIX Voice Power that were lost when your data was corrupted. These voice files do not include personal greetings, system greetings, or voice mailbox messages. You can use this procedure only if backup diskettes are available. If backup diskettes are not available or complete system backup tapes are not available, you must readminister all applications.

To recover from data corruption, follow these steps:

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

The Restore Files Menu appears.



Screen 6-6. Restore Files Menu



NOTE:

Voice System Restore appears if AUDIX Voice Power is installed.

2. Select Administrative Files Restore from Diskette and press [**ENTER** ↵].

The system responds with a message telling you how many diskettes you will need, and then displays the following message:

Confirm

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

Strike ENTER when ready or ESC to stop.

3. Press [**ENTER** ↵].

The system responds:

Insert System Files Backup diskette # 1 to restore from.

Strike Enter when ready.

4. Insert the diskette #1 and press [**ENTER** ↵].

The system responds:

Restore in progress

The system then responds:

The IS III Application Administrative Files restore from diskette 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.

5. Press [**ESC**].

You are automatically returned to the Restore Files menu.

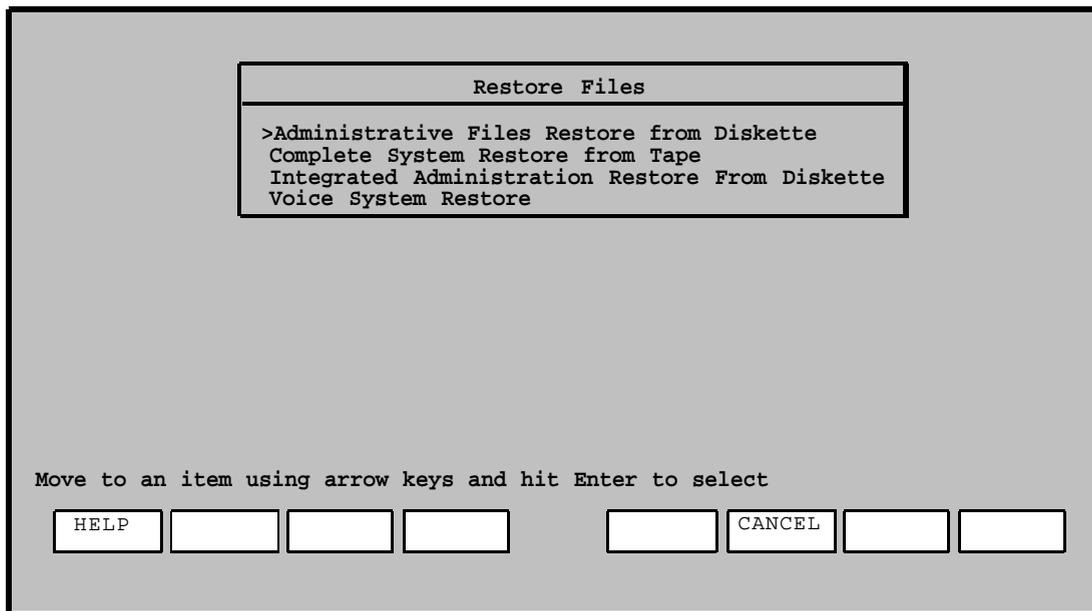
Restoring the Integrated Administration Files from Diskette

The Integrated Administration Restore from Diskette procedure allows you to restore the files associated with the Extension Directory that were lost when your data was corrupted. You can use this procedure only if backup diskettes are available. If a backup diskette or a complete system backup tape is not available, you must readminister all applications.

To recover from data corruption, follow these steps:

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

The Restore Files Menu appears.



Screen 6-7. Restore Files Menu

⇒ **NOTE:**
Voice System Restore appears if AUDIX Voice Power is installed.

2. Select Integrated Administration Restore from Diskette and press [**ENTER** ↵].

The system responds:

Confirm

Integrated Administration Restore will restore the files associated with the Extension Directory from diskette.

Strike ENTER when ready or ESC to stop.

3. Press [**ENTER** ↵].

The system responds:

Please insert the Integrated Administration Files Backup diskette #1 to restore from.

Press Enter when ready.

4. Insert diskette #1 and press [**ENTER** ↵].

The system responds:

Restore in progress

The system then responds:

The Integrated Administration files have been successfully restored. Remove the diskette from the drive.

Strike ENTER when ready.

5. Remove the diskette and press [**ENTER** ↵].

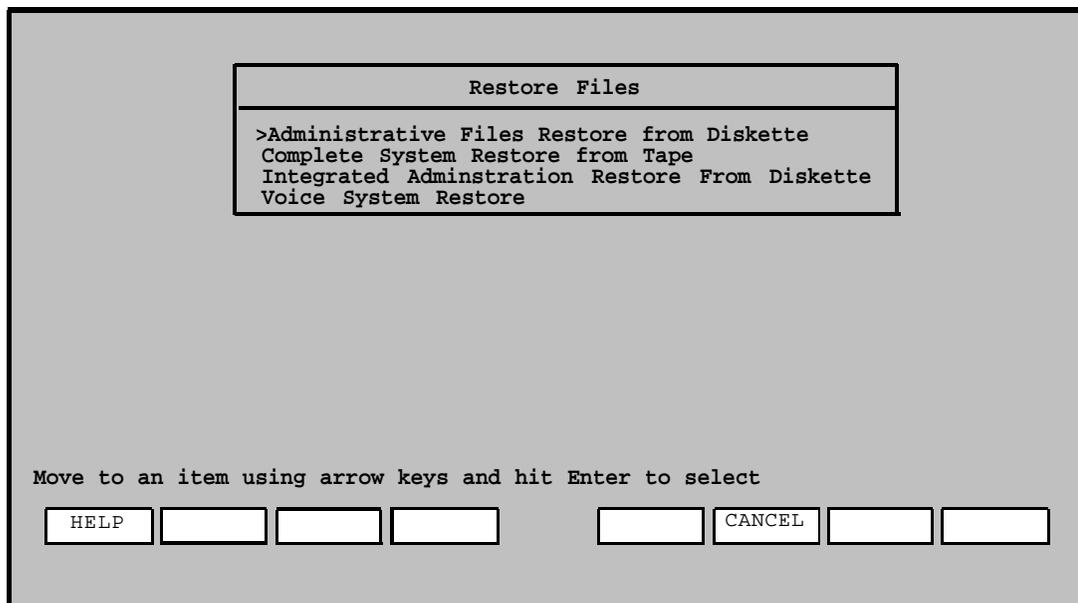
You are automatically returned to the Restore Files Menu.

Restoring the Complete Voice System from Tape

To restore the complete voice system from tape backup, perform the following steps:

1. Select `Restore Files` from the Technician Maintenance Menu and press [**ENTER** ↓].

The Restore Files Menu appears.

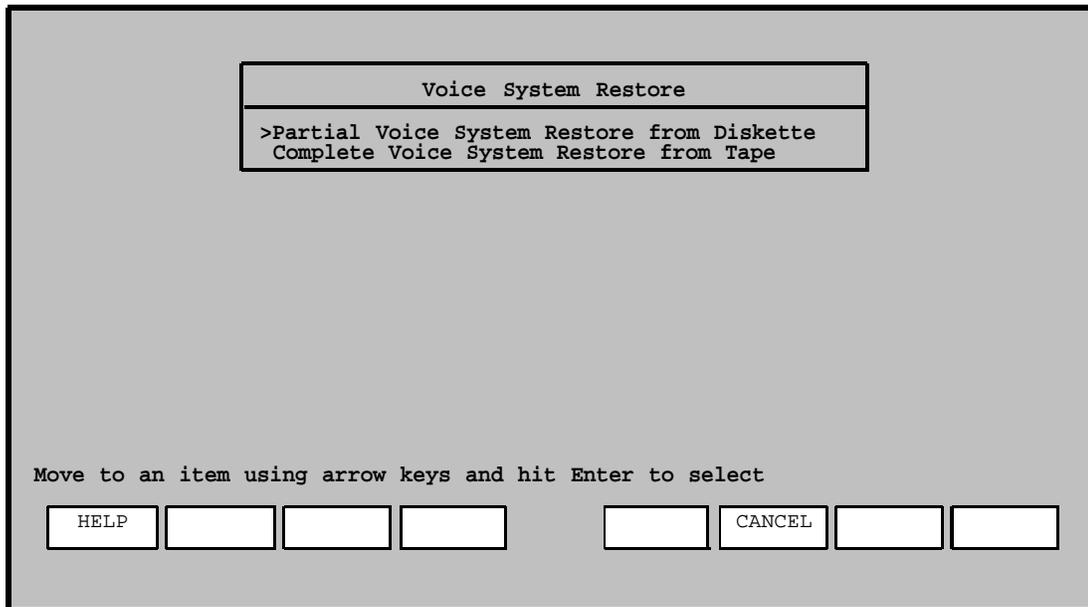


Screen 6-8. Restore Files Menu

⇒ **NOTE:**
Voice System Restore appears in the Restore Files Menu if AUDIX Voice Power is installed.

2. Select Voice System Restore and press [ENTER ↓].

The Voice System Restore Menu appears.



Screen 6-9. Voice System Restore Menu

3. Select Complete Voice System Restore from Tape and press [ENTER ↓].

The system responds:

Confirm

The Voice System Restore from Tape will recover all the voice files that were previously saved with the "Complete System Backup to Tape" command.

Strike ENTER when ready
or ESC to stop.

4. Press [ENTER ↓].

The system responds:

WORKING....

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

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

5. Insert the tape labeled "Voice Files" and press [**ENTER** ↵].

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

```
The Voice System Files have been successfully restored.  
After the light on the tape drive goes out, remove the  
tape.
```

Strike **ENTER** when ready.

6. When the light on the tape drive goes out, 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.

7. Press [**ENTER** ↵].

System and informational status messages are displayed as the voice system is stopped and restarted. You are automatically returned to the Voice System Restore Menu.

8. Press [**F6**] (**CANCEL**) three times to return to the Integrated Solution III Maintenance Menu.

Upgrading the Software

7

Upgrading from one release to another may include the installation of software, hardware, or both. This section describes how to perform software upgrades. Each procedure is complete and may be performed independently of the others. For information about hardware upgrades, see Chapter 3.

Upgrading from IS-II to IS-III

This section provides the procedures for upgrading an IS-II System to an IS-III System.

⇒ **NOTE:**
IS-II will work with MERLIN LEGEND Release 1.0 and Release 2.0. However, IS-III will work only with MERLIN LEGEND Release 2.0 or later.

Activity Checklist

Upgrading an IS-II System to an IS-III System consists of the following procedures:

1. Print out the MERLIN LEGEND switch translations.
2. Upgrade MERLIN LEGEND Communications System R1.0 to R2.0 or later.
3. Back up the existing IS-II System.
4. Back up CAS data (if CAS is installed).
5. Print all CAS reports (if CAS is installed).
6. Shut down the system.
7. Upgrade the hardware.
8. Install the new IS-III software.

9. Restore selected administrative and voice system IS-II files to the new IS-III system.
10. Shut down the system.
11. Install FAX Attendant (optional).
12. Update IS-III Integrated Administration files.
13. Verify the custom voice prompts.
14. Complete CAS installation
15. Back up MERLIN LEGEND Communications System
16. Back up the new IS-III system.
17. Refresh the IS-III Boot Diskette.

Materials Required

To upgrade an IS-II system to IS-III, you will need the following materials:

- IS-III Installation Tape
- IS-III Boot Diskette
- Master Controller with 8 MB of SIMMs and a hard disk of at least 100 MB
- three blank cartridge tapes (only two if CAS is not present)
- CAS PBX/KTS Interface diskette (if CAS is present)
- UNIX SPM V2.xx or DOS SPM V2.xx (if you are using a laptop PC)

Procedure 7-1: Print Out the MERLIN LEGEND Switch Translations

You must determine how the MERLIN LEGEND telephone system is programmed for AUDIX Voice Power by obtaining the customer's MERLIN LEGEND and AUDIX Voice Power planning forms and printing MERLIN LEGEND System Programming Reports. If no printer is available, use the Browse utility in SPM 2.xx. Access the following reports via SPM or the MERLIN LEGEND Programming Console:

- Ext Direct - Extension Directory
- Grp Coverage - Group Coverage
- Grp Calling - Group Calling
- NightService - Night Service
- General (found under Trunk Info)

To program Integrated Administration properly for AUDIX Voice Power on IS-III, determine the following items:

- The MERLIN LEGEND extensions that are connected to each AUDIX Voice Power port and the AUDIX Voice Power services that are assigned to those AUDIX Voice Power ports (for example, Automated Attendant, Message Drop, Call Answer, Information Service, and Voice Mail)
- The Coverage Group(s) used for AUDIX Voice Power services.
- The Calling Group(s) for AUDIX Voice Power services.
- The lines/pools (if any) that are assigned to AUDIX Voice Power services.

⇒ **NOTE:**

Depending on how it receives calls from the MERLIN LEGEND telephone system, the Automated Attendant service may have three variants: delayed, immediate, and night service.

Procedure 7-2: Upgrade MERLIN LEGEND Communications System from R1.0 to R2.0 or Later

You must upgrade MERLIN LEGEND Communications System R1.0 to R2.0 or later. The following steps must be performed using SPM 2.xx. You may use SPM on your laptop PC or upgrade the UNIX SPM on IS-II. If you upgrade the UNIX SPM, IS-II reboots.

⇒ **NOTE:**
IS-II will work with MERLIN LEGEND Release 1.0 and Release 2.0. However, IS-III will work only with MERLIN LEGEND Release 2.0 or later.

For this upgrade, you must perform the following steps:

1. Back up the old switch translation via SPM 2.xx.
2. Install the MERLIN LEGEND Communications System R2.0 feature module.
3. Perform a System Erase (frigid start).
4. Run the "Conversion Program."
5. Restore the converted file.
6. Verify that MERLIN LEGEND Communications System is operating properly.
7. Back up the MERLIN LEGEND Communications System to floppy or hard disk.

To perform these steps, refer to "Upgrading the Communications System" in the *AT&T MERLIN LEGEND™ Communications System Release 2.0 System Programming and Maintenance (SPM) (555-620-142)* document.

Procedure 7-3: Backup the Existing IS-II System

To backup the existing system, perform the following steps:

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

The `Password:` prompt appears.

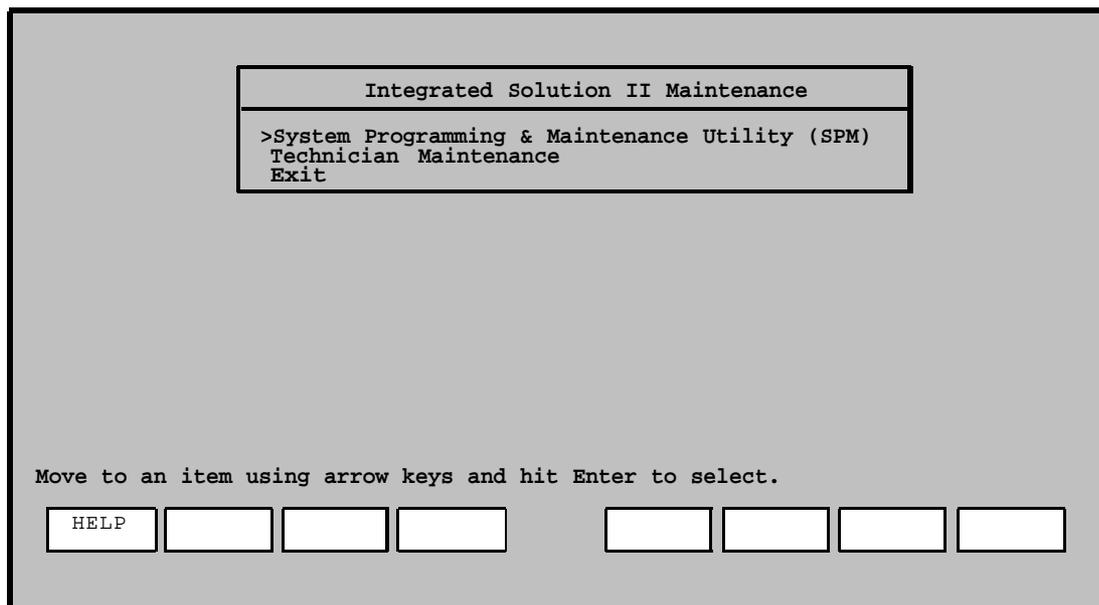
2. At the `Password:` prompt, type the password and then press [**ENTER** ↵].

The Integrated Solution II Maintenance Menu appears.



NOTE:

If any applications are already installed, their names appear on this screen.

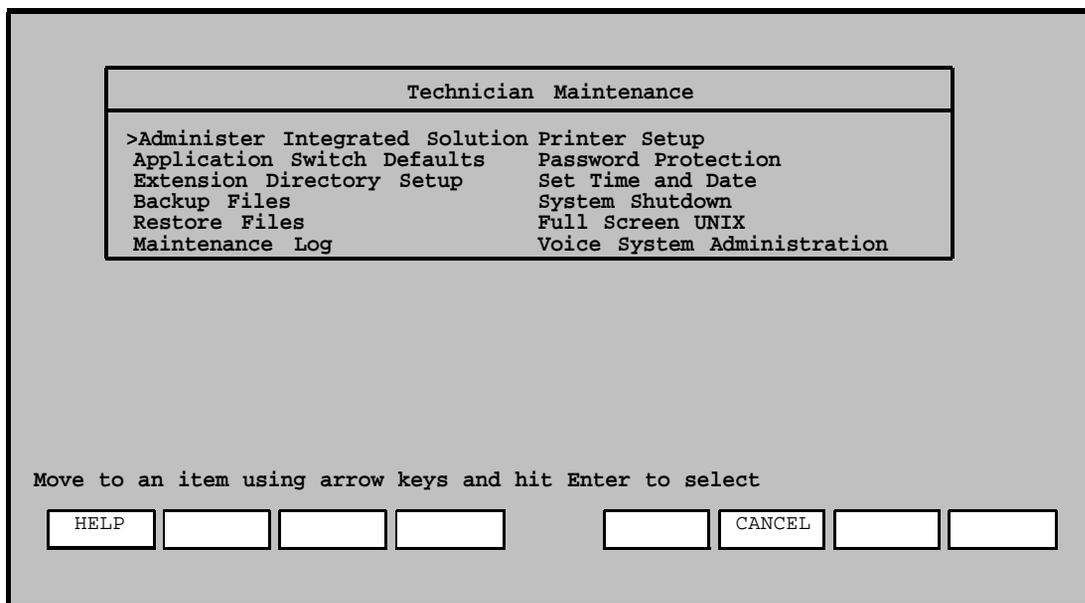


Screen 7-1. Integrated Solution II Maintenance

3. At the Integrated Solution II Maintenance Menu, select `Technician Maintenance` and then press [`ENTER`].

The Technician Maintenance Menu appears.

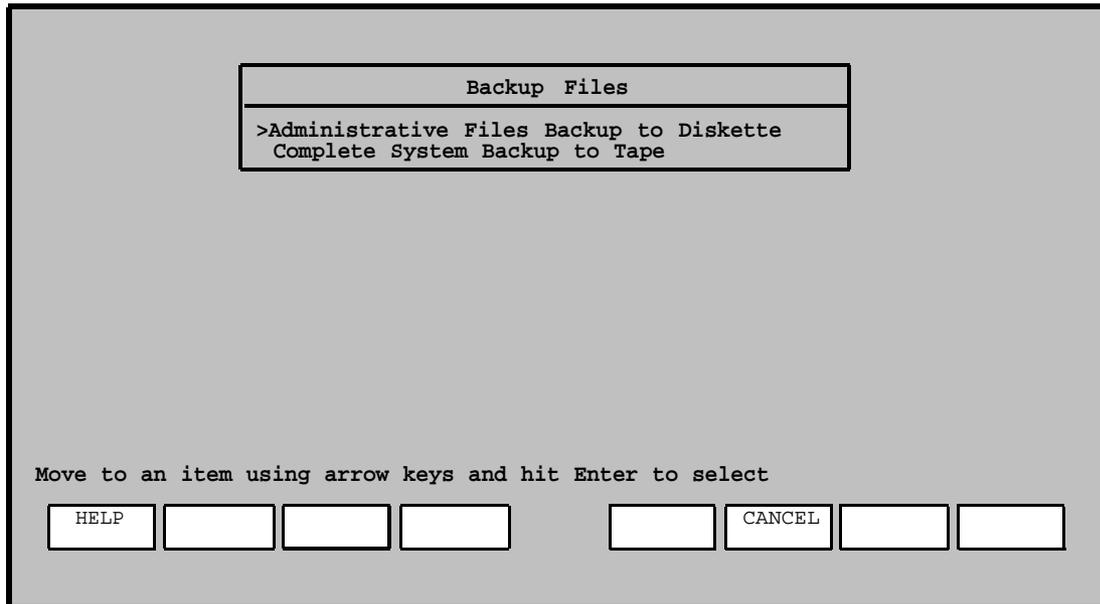
⇒ **NOTE:**
Voice System Administration appears if a voice system is installed.



Screen 7-2. Technician Maintenance

4. At the Technician Maintenance Menu, select `Backup Files` and then press [`ENTER ↵`].

The Backup Files Menu appears.



Screen 7-3. Backup Files Menu

5. At the Backup Files Menu, select `Complete System Backup to Tape` and press [`ENTER ↵`].

The system responds by telling you how many tapes are required and displaying the following prompt:

Confirm

A Complete System Backup will backup all application files, system files and all voice files. This will usually take two cartridge tapes. Each tape will take less than a half hour to complete.

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

6. Press [`ENTER ↵`].

The following prompt appears:

Please insert the first cartridge tape and press `ENTER`

7. Insert the tape you will use to back up the System Files and press [ENTER ↓].
The system responds:

```
WORKING.....  
The application files and system files backup will need  
approximately 1 cartridge tape(s). Please wait  
while the files are saved.
```

After the files are backed up, the system lists the number of blocks and displays:

```
The application files and system files have been  
successfully backed up. After the light on the tape drive  
goes out, remove the tape and label it "System Files".
```

Strike ENTER when ready.

8. When you see the light on the tape drive go out, remove the tape, and label it "System Files."
9. Press [ENTER ↓].

If you do not have AUDIX Voice Power, you are returned to the Backup Files Menu. Proceed to step 14.

If you have AUDIX Voice Power, the following message appears:

Confirm

```
A Complete Voice System Backup to Tape will backup all  
system voice files. This will usually take one cartridge  
tape. This tape will take less than one half hour to  
complete.
```

Strike ENTER when ready
or ESC to stop.

10. Press [ENTER ↓].

The following message appears:

```
Please insert the second cartridge tape and press ENTER
```

11. Insert the tape you will use to back up the voice files and press [ENTER ↓].

After the voice files are backed up, the system responds:

```
The Voice System files have been successfully backed up.  
After the light on the tape drive goes out, remove the tape  
and label it "Voice Files".
```

Strike ENTER when ready.

12. After the light on the tape drive goes out, remove and label the tape.
13. Press [ENTER ↓] to return to the Backup Files Menu.

14. Press [F6] (CANCEL) to return to the Technician Maintenance Menu.

⇒ **NOTE:**

If the customer has the Call Accounting System (CAS) installed, perform "Procedure 7-4: Back up CAS Data." Otherwise, proceed to "Procedure 7-6: Shut down the System."

Procedure 7-4: Back up CAS Data

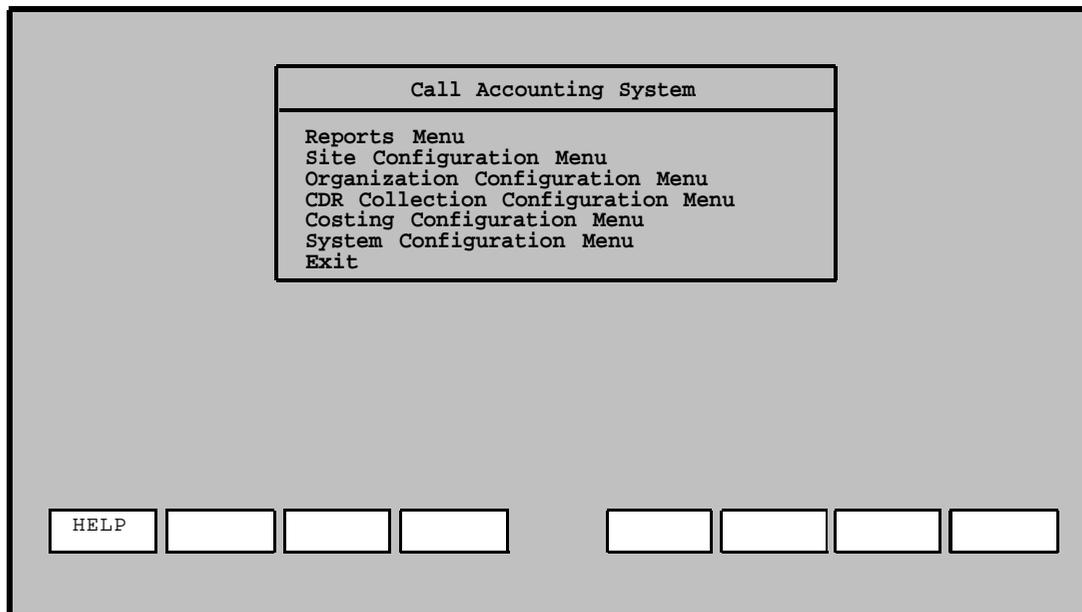
⇒ **NOTE:**

Back up the CAS data in case you need to refer to it at some later time. The MERLIN LEGEND CAS data cannot be restored to an IS-III system running Integrated Solution Call Accounting System.

To back up CAS data, perform the following steps:

1. Press [F6] (CANCEL) to return to the Integrated Solution II Maintenance Menu.
2. Select Call Accounting System (CAS) and press [ENTER ↵].

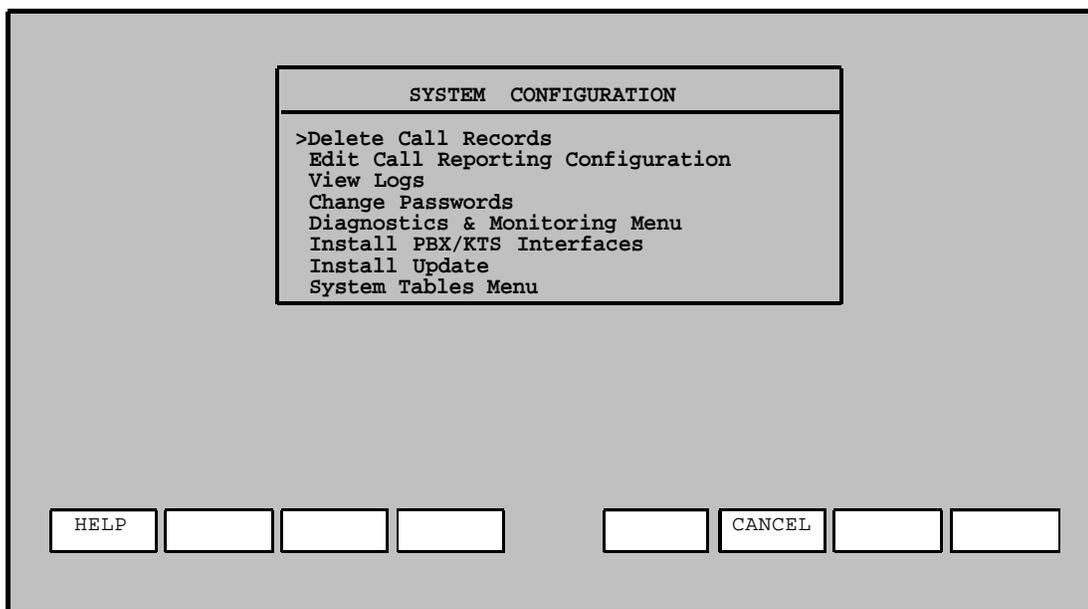
The Call Accounting System Menu appears.



Screen 7-4. Call Accounting System Menu

3. Select System Configuration Menu and press [ENTER ↓].

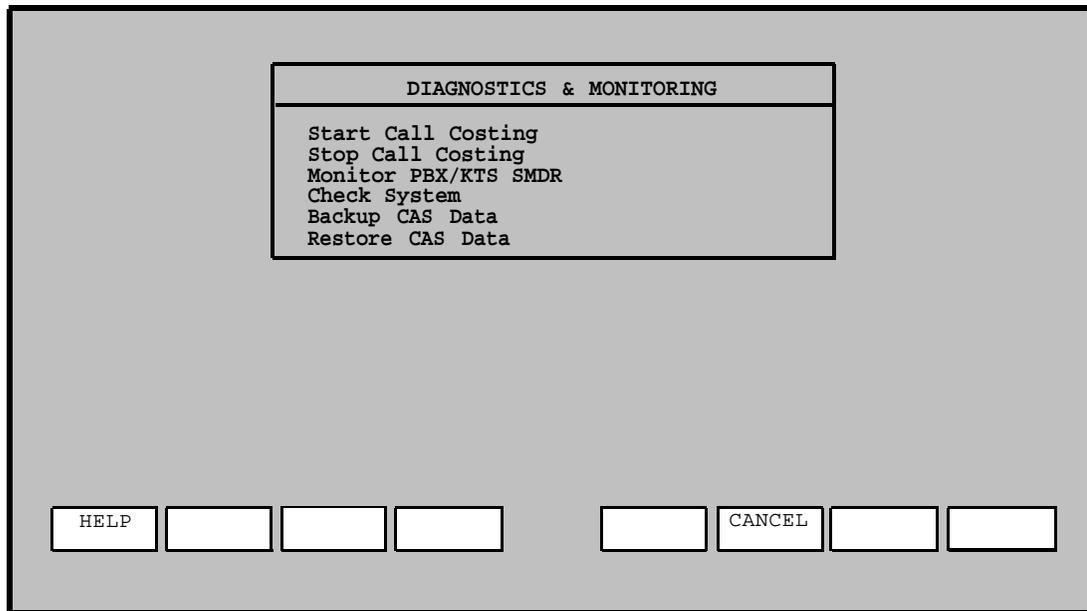
The System Configuration Menu appears.



Screen 7-5. System Configuration Menu

4. Select `Diagnostics & Monitoring` and press [`ENTER` ↓].

The `Diagnostics and Monitoring Menu` appears.



Screen 7-6. `Diagnostics & Monitoring Menu`

5. Select `Backup CAS Data` and press [`ENTER` ↓].

The system responds:

```
-----  
      BACKUP CAS DATA - STOP COSTING  
-----
```

```
Call costing is running.  
stopping call costing...  
Call costing stopped.  
Press <RETURN> to continue.
```

6. Press [ENTER ↵].

The system responds:

```
-----  
                        BACKUP CAS DATA  
-----
```

Confirm

The call Accounting System Data Base Backup will save the entire Call Accounting System Data Base to diskette or cartridge tape (if available)

Strike ENTER when ready
or ESC to stop.

7. Press [ENTER ↵].

The system responds:

Do you want to backup to Diskette or Cartridge Tape?
Enter D for Diskette or T for Cartridge Tape.

8. Type *t* and press [ENTER ↵].

The system calculates the approximate number of cartridge tapes required and the amount of time the backup will take. The system then responds:

Please insert the first cartridge tape. Be sure to number the cartridge tape (s) consecutively in the order they will be inserted.

Strike ENTER when ready.

9. Insert the tape and press [ENTER ↵].

The system responds:

The Call Accounting System Data Base backup in progress

After the data is backed up, the system lists the number of blocks and responds:

The Call Accounting System Data Base back up to cartridge tape was successful. Remove the cartridge tape from the drive. Please label cartridge tape(s) "System Files Backup #n" where "n" is the cartridge tape number.

Strike ENTER when ready.

10. Remove the cartridge tape, label it, and write protect it.

11. Press [**ENTER** ↵].

The system responds:

```
-----  
                BACKUP CAS DATA - START COSTING  
-----
```

Call costing is not running.

Start call costing...

Call costing started.

Press <RETURN> to continue.

12. Press [**ENTER** ↵].

The Diagnostics & Monitoring Menu appears.

13. Press [**F6**] (CANCEL) to return to the System Configuration Menu.
14. Press [**F6**] (CANCEL) to return to the Call Accounting System Menu.
15. Select `Exit` and press [**ENTER** ↵] to return to the Integrated Solution II Maintenance Menu.
16. Select `Technician Maintenance` and press [**ENTER** ↵].

The Technician Maintenance Menu appears.

Procedure 7-5: Print All CAS Reports

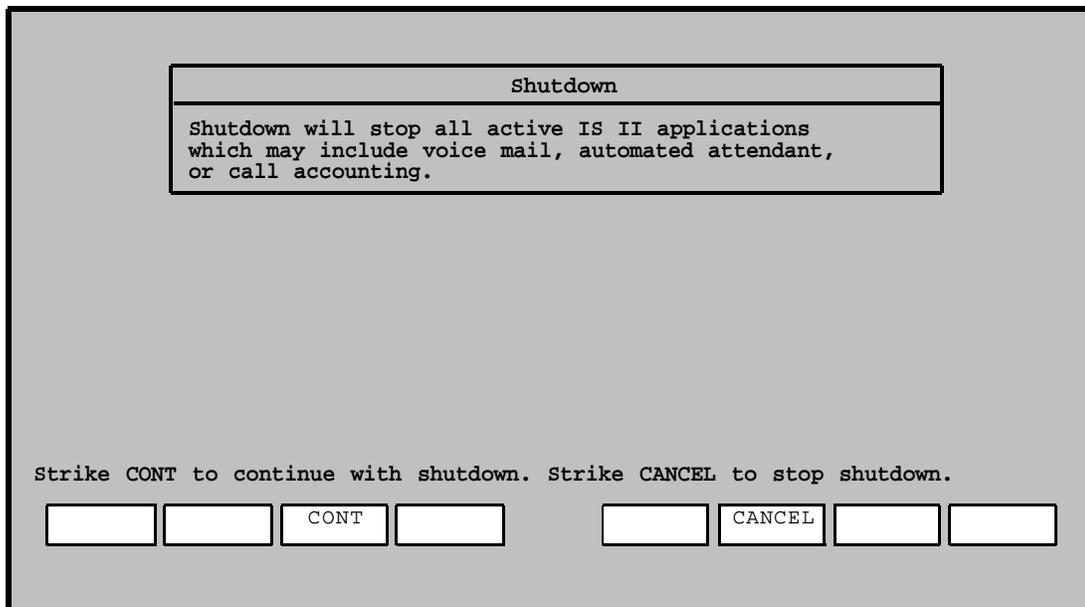
For reference purposes, print out all CAS reports using the instructions provided in the *AT&T Call Accounting System (CAS) Integrated Solution II User's Guide*.

Procedure 7-6: Shut down the System

To shut down the system, perform the following steps:

1. At the Technician Maintenance Menu, select `System Shutdown` and press [`ENTER ↵`].

The Shutdown Screen appears.



Screen 7-7. Shutdown Screen

2. Press [`F3`] (`CONT`) to shut down the system.

The system shuts down and then a reboot prompt appears. The system responds:

The system is down.
Reboot the system now.

3. Shut off the power on the Master Controller and perform any hardware upgrades.

Procedure 7-7: Upgrade the Hardware

To support IS-III, the Master Controller requires the following materials:

- 8 MB of SIMMS of memory
- a 100 MB or greater hard disk

To install the additional 4 MB of SIMMS and a hard disk of at least 100 MB, consult Chapter 3.

Procedure 7-8: Install IS-III

To install the IS-III software, perform the following steps:

1. When the Master Controller is turned off, insert the IS-III Boot diskette and power up the Master Controller.

The system reboots, displays copyright information, and then responds:

```
Installing the UNIX System on your hard disk.
```

```
WARNING: A new installation of the UNIX System will destroy  
all files currently on the system.  
The hard disk will now be partitioned for 100% UNIX.
```

```
Hard disk partitioning complete.  
Hard disk size is xxx MB
```

```
A surface analysis will now be done.  
This will destroy all data on the hard disk.
```

The boot disk reformats the entire hard disk on the Master Controller, destroying all of the data on the hard disk. This process takes approximately 15 to 20 minutes.

⇒ **NOTE:**

If the boot disk fails, perform "Procedure 7-17: Refresh the IS-III Boot Diskette," and then repeat "Procedure 7-8: Install IS-III."

Once the hard disk is reformatted, the following prompt appears:

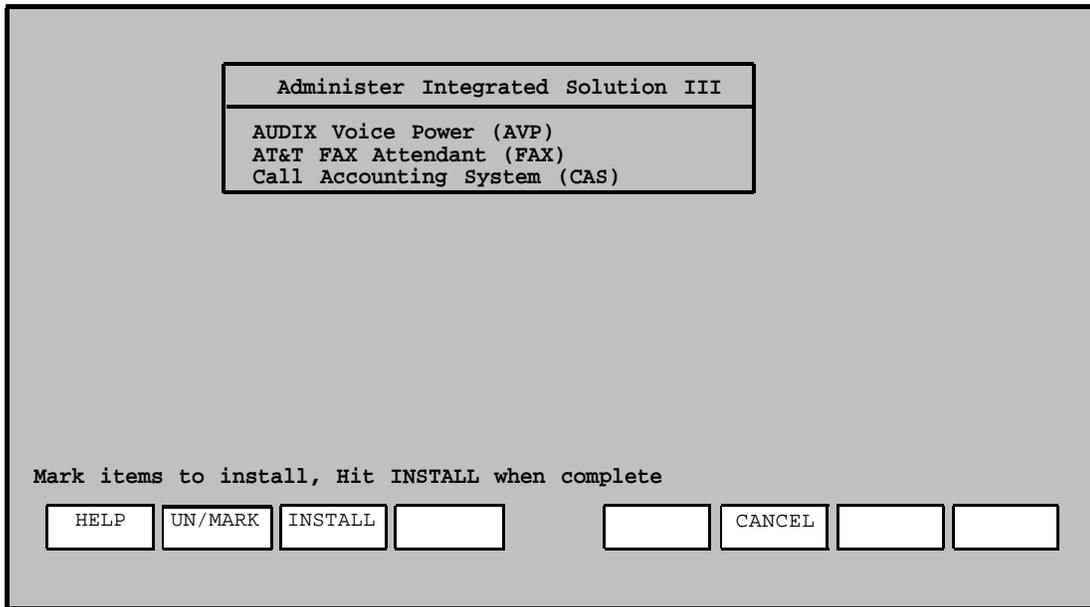
```
When you are prompted to reboot your system,  
remove the floppy disk from the diskette drive, insert the Integrated  
Solution III Installation cartridge tape in the tape drive,  
and strike CTRL-ALT-DEL.  
Please wait for the prompt.
```

```
Reboot the system now.
```

2. Remove the IS-III Boot diskette and insert the IS-III Installation Tape.

3. Press the Reset button.

The system reboots and automatically loads the information from the tape onto the hard disk of the Master Controller. This takes approximately 15-20 minutes. When the system finishes loading the tape, the Administer Integrated Solution III Menu appears.



Screen 7-8. Administer Integrated Solution III Menu

4. At the Administer Integrated Solution III Menu, move the cursor to each application that you want to install and press [**F2**] (UN/MARK).

An asterisk appears before each application that you selected.



WARNING:

Do not select AT&T FAX Attendant. FAX Attendant must be installed later in this upgrade procedure.

- When you are finished selecting the applications that you want to install, press [**F3**] (INSTALL).

The system loads the applications that you selected. This takes approximately 30 to 35 minutes. When the system is finished loading the applications, it rewinds the tape and then automatically reboots itself. You will then see the Console Login: prompt.

- Remove the IS-III Installation Tape.

Procedure 7-9: Restore Selected IS-II Files to IS-III

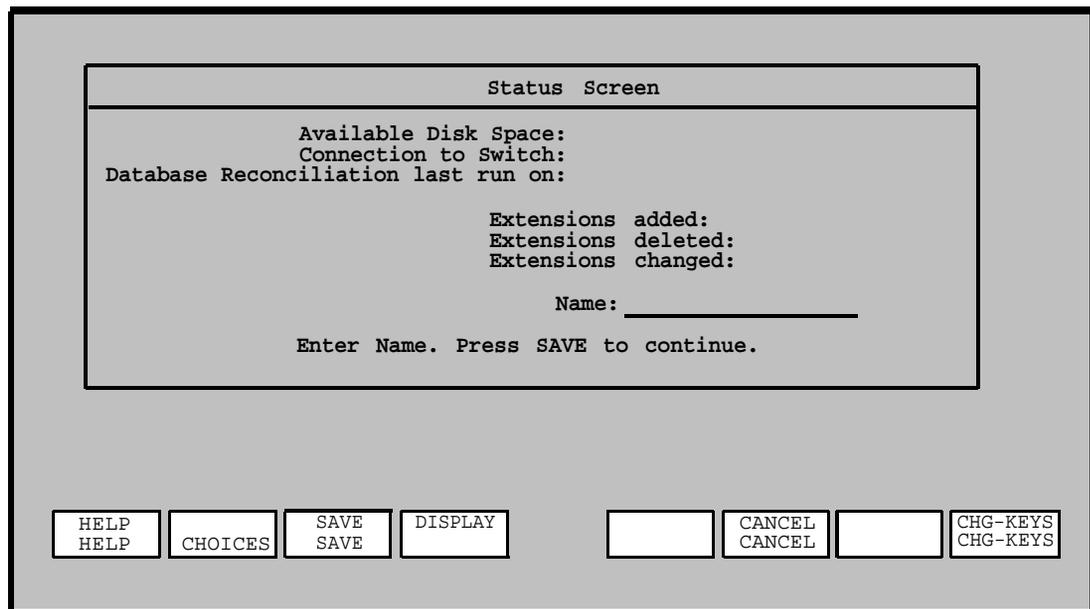
To restore administrative and voice system files from IS-II to IS-III, perform these steps:

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

The Password: prompt appears.

- At the Password: prompt, enter the password and then press [**ENTER** ↓].

The Status Screen appears.



Screen 7-9. Status Screen

The Status Screen appears every time you successfully log into IS-III and provides the following information on the status of your system:

- the amount of space (in megabytes) available on the hard disk of your Master Controller
- the status of the connection between the Master Controller and the switch (that is, LINK UP, LINK DOWN, or LINK BUSY)
- the date and time the reconciliation program was last run (this information is unavailable the first time you access IS-III)
- the number of extensions that were either added, deleted, or changed. (An extension is considered "changed" when its status goes from either "regular to special" or "special to regular.") This information is blank the first time you access IS-III.



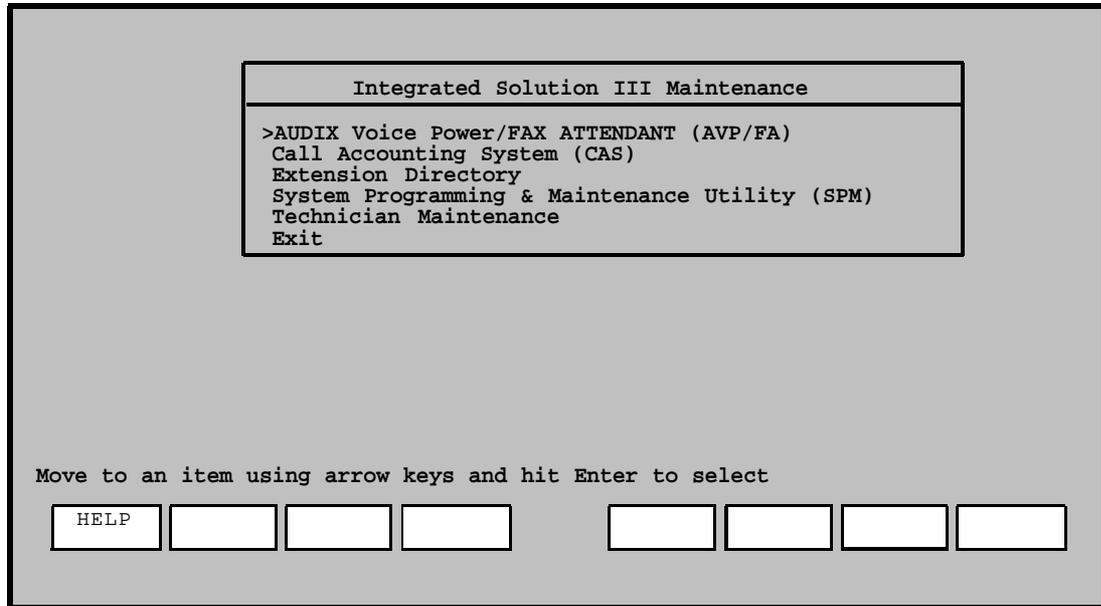
NOTE:

Make sure that the link between the Master Controller and the MERLIN LEGEND telephone system is "LINK UP." If the link is not "UP," make sure that serial connector A on the Master Controller is connected to the Administration Port on the telephone switch.

To exit the Status Screen and access the Integrated Solution III Maintenance Menu, you must enter your name.

3. At the Status Screen, type your name and press [F3] (SAVE).

The system records your name in the Status Screen Access Log. The Integrated Solution III Maintenance Menu appears.



Screen 7-10. Integrated Solution III Maintenance Menu

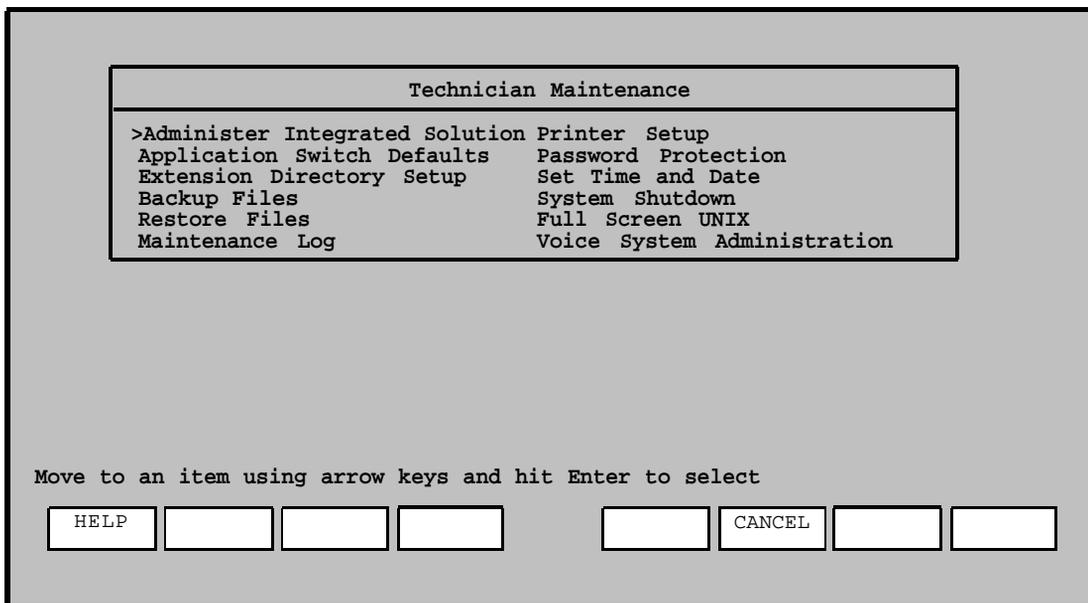
⇒ **NOTE:**
The applications that appear in the Integrated Solution III Maintenance Menu depend on which applications you installed.

4. At the Integrated Solution III Maintenance Menu, select `Technician Maintenance` and then press [ENTER ↓].

The Technician Maintenance Menu appears.

⇒ **NOTE:**

`Voice System Administration` and `Application Switch Defaults` appear only if `AUDIX Voice Power` is installed.



Screen 7-11. Technician Maintenance Menu

5. At the Technician Maintenance Menu, select `Extension Directory Setup` and press [ENTER ↓].

The Extension Directory Initialization Screen appears.

⇒ **NOTE:**

The Extension Directory Initialization Screen only appears the first time you set up the system.

6. Press [F3] (SAVE).

The system retrieves the system numbering plan from the switch and then prompts you to press [ENTER ↓] to continue.

7. Press [**ENTER** ↵].

The Technician Maintenance Menu appears.

8. At the Technician Maintenance Menu, select Full Screen UNIX and press [**ENTER** ↵].

The following message appears:

```
To return, type 'exit' or control-d
You are in /usr/maint
#
```

9. Type `/usr/aimis/is3upgrade` and then press [**ENTER** ↵].

The system responds:

This procedure will selectively restore the MERLIN LEGEND Integrated Solution II (ISII) configuration and (optional) AVP voice files to a MERLIN LEGEND IS III system. You should have the following media from the ISII system:

- Cartridge tape with the ISII System Files that was created with the Complete System Backup To Tape procedure.
- (optional) Cartridge tape with the ISII AVP Voice Files that was created with the Complete System Backup To Tape procedure.

The following items must be completed before continuing:

- The Extension Directory Setup procedure has been done.
- The upgraded applications (SPM, CAS, or AVP) have been installed.

You may elect to stop this procedure now to gather the necessary media, or complete the necessary procedures.

Confirm

Do you wish to continue?

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

10. Press [**ENTER** ↵].

The system responds (depending on what applications are installed):

AUDIX Voice Power (AVP) is installed

Call Accounting System (CAS) is installed

System Programming and Maintenance (SPM) is installed

Confirm

Do you wish to continue?

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

11. Press [ENTER ↵].

The system responds:

Shutting down CAS. Please wait...

This procedure will selectively recover the ISII Files that were previously saved with the "Complete System Backup to Tape" command.

```
*****  
Make sure the tape 'write protect' is OFF  
*****
```

Please insert the System Files cartridge tape and press ENTER

12. Insert the System Files tape and press [ENTER ↵].

The light on the tape drive turns on, and the system loads the data. When the information on the tape is restored, the system responds:

The application files and system files have been successfully restored. After the light on the tape drive goes out, remove the tape.

Strike ENTER when ready.

13. When the light on the tape drive goes out, remove the tape and press [ENTER ↵].

The system responds:

Confirm

The Voice System Restore from Tape will recover all the voice files that were previously saved with the "Complete System Backup to Tape" command.

Strike ENTER when ready
or ESC to stop.

14. 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

15. Insert the Voice Files tape and press [ENTER ↵].

The system lists the voice files that are restored. After restoring all of the voice files, the system responds:

The Voice System files have been successfully restored. After the light on the tape drive goes out, remove the tape.

Strike ENTER when ready.

16. 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.

17. Press [**ENTER** ↵].

The system responds:

The Voice System is now stopping

Begin orderly idling of the system
Timeout interval for orderly idling of the system is 30 seconds
orderly idling of system succeeded

The Voice System has stopped

Use the "Start Voice System" choice from the System Control menu to restart the Voice System

Wed Jun 24 16:08:54 1992

Checking files in /vs/data/fslist

Checking file /dev/rdsk/0s4

Checking Super Block
Super Block passes checks

File system Partition contains 2562 blocks with 1937(75%) unused

speech Database Audit starting

Auditing message files ...
Audit successful. No errors found.
Auditing prompt files ...
Audit successful. No errors found.

The Voice System is starting

Startup of the Voice System is complete

This procedure will now update the ISIII Extension Directory Database from the ISII AVP Subscriber Database

Upgrading Extension Directory Database with AVP Info
xx AVP Subscriber Records were scanned
x Extension Directory records were updated
Look at file /usr/iam/log/iam_upgrade for a complete audit report
Upgrade is complete.

#

18. At the # prompt, type *exit* and then press [**ENTER** ↵].

The system responds:

Press RETURN to continue

19. Press [**ENTER** ↵].

The Technician Maintenance Menu appears.

Procedure 7-10: Shut down the System

To shut down the system, perform the following steps:

1. At the Technician Maintenance Menu, select `System Shutdown` and press [**ENTER** ↵].

Shutting down the system insures that the IS-III applications are properly initialized. The Shutdown screen appears.

2. Press [**F3**] (CONT) to shut down the system.

The system shuts down, and the system responds:

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

3. Press the Reset button to reboot the system.

The system reboots, and then displays the `Console Login:` prompt

Procedure 7-11: Install FAX Attendant (optional)

If you are installing FAX Attendant, refer to "Adding FAX Attendant to AUDIX Voice Power" in Chapter 4.

Procedure 7-12: Update the IS-III Integrated Administration Files

To update the IS-III Integrated Administration files, perform the following steps:

1. Access the Technician Maintenance Menu, select `Application Switch Defaults`, and then press [**ENTER** ↵].

The system reads the switch defaults and then responds:

```
Press ENTER to continue.
```

2. Press [**ENTER** ↵].

The Application Switch Defaults Screen appears.

3. Using the MERLIN LEGEND switch translations that you printed out before beginning the upgrade procedures, change the defaults for Calling Groups and Coverage Groups to the groups currently implemented on your switch.

4. When you are finished, press [**F3**] (SAVE).

The system updates the information and responds:

Press ENTER to continue.

5. Press [**ENTER** ↓].

The Technician Maintenance Menu appears.

6. Press [**F6**] (CANCEL) to return to the Integrated Solution III Maintenance Menu.

The Integrated Solution III Maintenance Menu appears.

7. From the Integrated Solution III Maintenance Menu, select `AUDIX Voice Power/FAX Attendant (AVP/FA)` and press [**ENTER** ↓].

The AUDIX Voice Power/FAX Attendant Menu appears.

8. From the AUDIX Voice Power/FAX Attendant Menu, select `System Programming/Switch Administration` and press [**ENTER** ↓].

The system reads the switch information and then responds:

Press ENTER to continue.

9. Press [**ENTER** ↓].

The System Programming/Switch Admin Menu appears.

10. From the System Programming/Switch Admin Menu, select `System Programming/Switch Admin Form` and press [**ENTER** ↓].

The System Programming/Switch Admin Form appears.

11. Enter the extensions and assign services to channels.

⇒ **NOTE:**

For more information, refer to the *AT&T AUDIX Voice Power™/FAX Attendant System™ Planning and Implementation* manual. The extensions and services assigned should appear on planning Form B.

12. When you are finished entering extensions and assigning services to channels, press [**F3**] (SAVE).

The system saves your changes and displays the System Programming/Switch Admin Menu.

13. Press [**F6**] (CANCEL) twice to return to the Integrated Solution III Maintenance Menu.

Procedure 7-13: Verify the Custom Voice Prompts

To verify that the custom voice prompts were restored from IS-II, call into AUDIX Voice Power as the service administrator and listen to the custom voice prompts. For more information, refer to the *AT&T AUDIX Voice Power™ Release 2.1.1 System Manager's Guide*. If the custom voice prompts were not restored, they must be re-recorded.

Procedure 7-14: Complete CAS Installation

If Integrated Solution Call Accounting System is installed, perform the procedures provided in Chapter 5, "Completing CAS Installation."

Procedure 7-15: Back up MERLIN LEGEND Communications System

After installing and verifying the IS-III system, perform a backup of the MERLIN LEGEND Communications System. To back up the complete system, refer to the *AT&T MERLIN LEGEND™ Communications System Release 2.0 System Programming and Maintenance (SPM) (555-620-142)* document.

Procedure 7-16: Back up the Entire IS-III System

After backing up the MERLIN LEGEND Communications System, perform a complete system backup to tape of IS-III. To back up the complete system to tape, refer to Chapter 4 of the *AT&T Integrated Solution III System Manager's Guide*.

Procedure 7-17: Refresh the IS-III Boot Diskette

The IS-III Boot diskette must be refreshed after it is used. Otherwise, it may fail during the next IS-III installation. Booting from a UNIX diskette and shutting down (which is done during the IS-III installation) leaves an unreferenced file on the boot diskette. Eventually the space on the boot diskette is depleted. Refreshing the diskette removes unreferenced files and enables you to use the diskette again. Refresh the diskette before an upgrade, or after the diskette has already failed.

To refresh the boot diskette, perform these steps:

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

The Technician Maintenance Menu appears.

2. Select `Full Screen UNIX` and press [`ENTER` ↓].

The system responds:

```
To return, type 'exit' or control-d
You are in /usr/maint
#
```

3. Insert the boot diskette into the diskette drive, and type `fscck /dev/dsk/f0` and press [**ENTER** ↵].

The system responds:

RECONNECT?

4. Type `n` and press [**ENTER** ↵].

The system responds:

CLEAR?

5. Type `y` and press [**ENTER** ↵].

The system responds:

FIX?

6. Type `y` and press [**ENTER** ↵].

The system responds:

SALVAGE?

7. Type `y` and press [**ENTER** ↵].

8. When the light on the diskette drive turns off, remove the diskette.

The boot diskette is now ready for use.

9. Type `exit` at the UNIX prompt

The Technician Maintenance Menu appears.

Upgrading the IS-III Platform Software

To upgrade to a new release of IS-III, you must upgrade the IS-III Platform Software and 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 and then install the new applications according to instructions in Chapter 4.

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

⇒ **NOTE:**

After updating the platform software or any applications, perform a complete system backup to tape so that the customer has the most recent copy of the system.

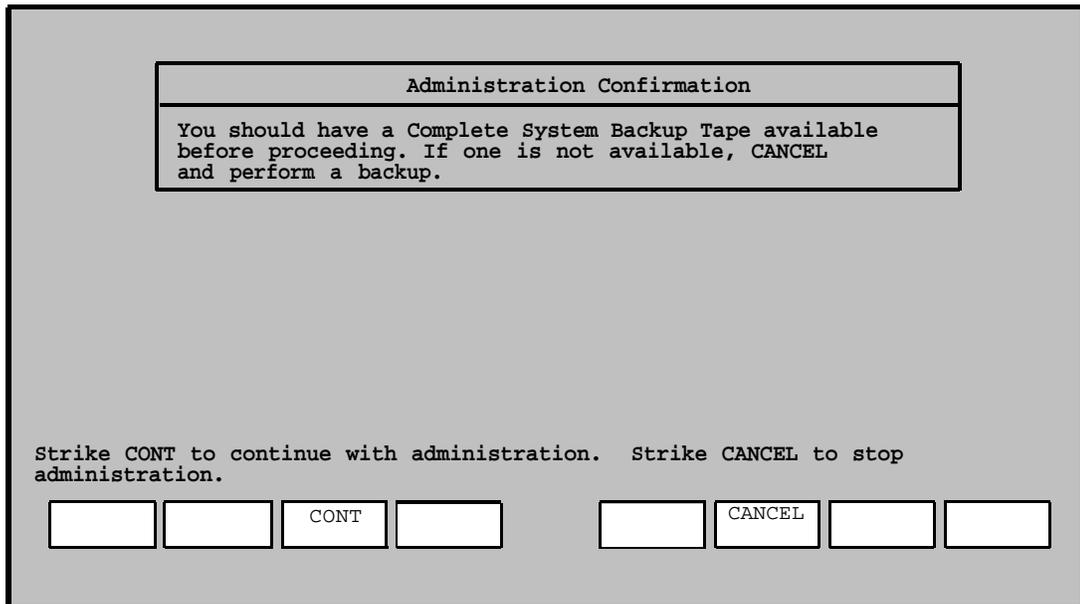
To update the IS-III Platform Software, perform the following steps:

1. Log in as `maint` and access the Integrated Solution III Maintenance Menu.
2. From the Integrated Solution III Maintenance Menu, select `Technician Maintenance` and press [**ENTER** ↓].

The Technician Maintenance Menu appears.

3. At the Technician Maintenance Menu, select `Administer Integrated Solution` and press [`ENTER ↵`].

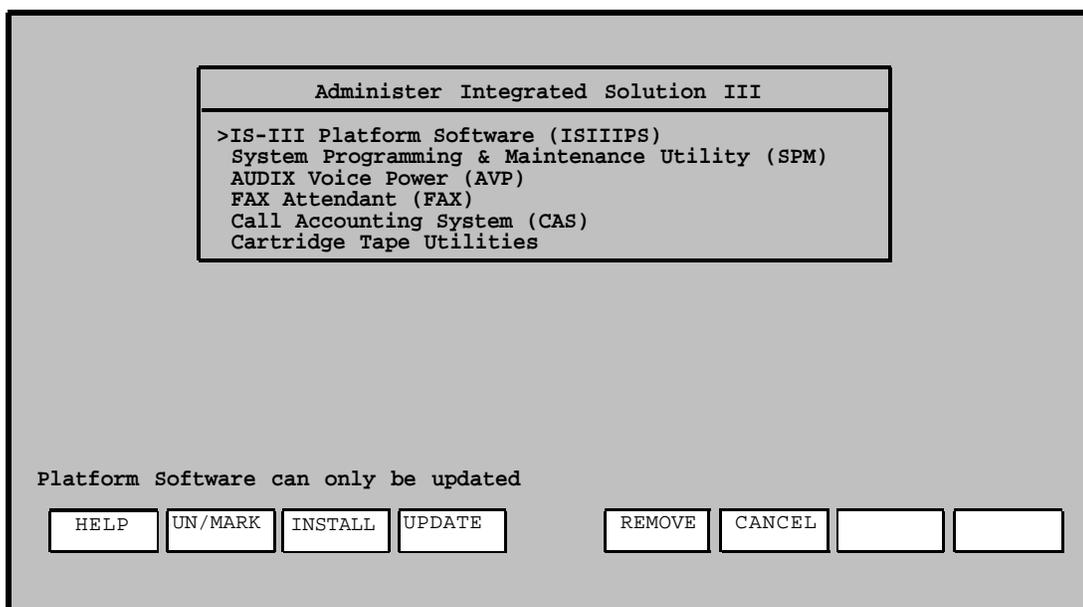
The Administration Confirmation screen appears.



Screen 7-12. Administration Confirmation Screen

4. Press [**F3**] (CONT) to continue.

The Administer Integrated Solution III Menu appears.



Screen 7-13. Administer Integrated Solution III Menu

5. Select IS-III Platform Software (ISIIIIPS) and press [**F2**] (UN/MARK).

An asterisk appears in front of IS-III Platform Software (ISIIIIPS).

6. Press [**F4**] (UPDATE).

The Media Selection Menu appears.

7. From the Media Selection Menu, select IS-III Installation Tape and press [**ENTER** ↵].

The system responds:

Confirm

Please insert the IS-III Installation tape into the tape drive.

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

8. Insert the IS-III Installation Tape and press [**ENTER** ↵].

Verifying IS-III Installation Tape

Positioning Tape.....Please Wait....

The system responds:

Updating MERLIN LEGEND Integrated Solution III Platform
Software will remove the current version and install
another. Any administrative files (including voice files,
if appropriate) are preserved.

Confirm

Do you really want to update MERLIN LEGEND Integrated
Solution III Platform Software?

Strike ENTER when ready
or ESC to stop

9. Press [**ENTER** ↵].

The system then updates the IS-III Platform Software. When the update is finished, the system automatically starts shutting down. After approximately 30 seconds, the system responds:

The system is down.
Reboot the system now.

10. Press the Reset button.

The system reboots and then displays the Console Login: prompt.

Upgrading IS-III Applications

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



NOTE:

If you are upgrading from MERLIN LEGEND CAS to Integrated Solution CAS, do not perform this procedure. Proceed to "Upgrading MERLIN LEGEND CAS to Integrated Solution CAS" at the end of this chapter.

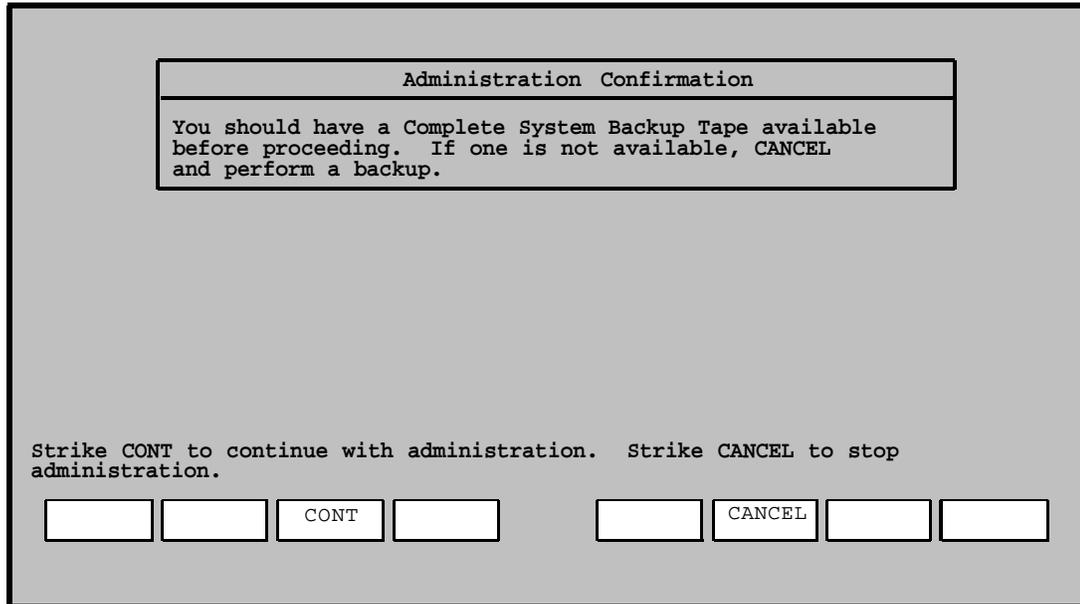
To upgrade IS-III applications, perform the following steps:

1. Log in as `maint` and access the Integrated Solution III Maintenance Menu.
2. At the Integrated Solution III Maintenance Menu, select `Technician Maintenance` and press [ENTER ↓].

The Technician Maintenance Menu appears.

3. At the Technician Maintenance Menu, select Administer Integrated Solution and press [ENTER ↓].

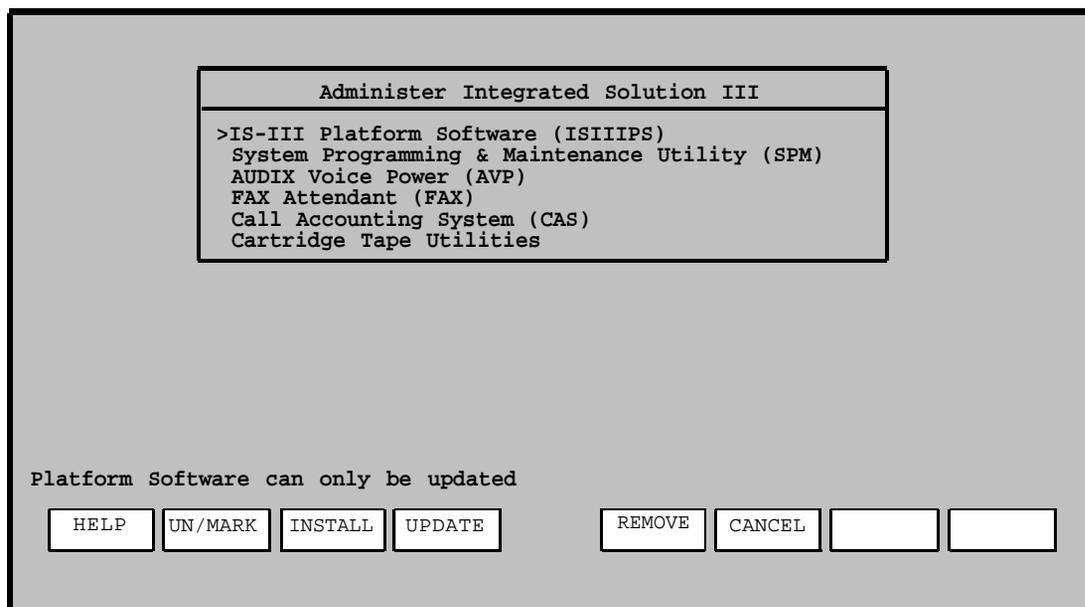
The Administration Confirmation screen appears.



Screen 7-14. Administration Confirmation Screen

4. Press [**F3**] (CONT) to continue.

The Administer Integrated Solution III Menu appears.



Screen 7-15. Administer Integrated Solution III Menu

5. At the Administer Integration Solution Menu, select the application(s) you want to upgrade and press [**F2**] (UN/MARK).

An asterisk (*) appears in front of the application(s) you selected.

⇒ **NOTE:**

If you marked an application by mistake, move the cursor back to that application and press [**F2**] (UN/MARK) again to "undo" the selection.

6. Press [**F4**] (UPDATE).

The Media Selection Menu appears. You may now upgrade the application(s) via the IS-III Installation tape or diskette.

7. Refer to the installation instructions in Chapter 4 for the application(s) you are upgrading.



NOTE:

For System Programming & Maintenance Utility (SPM), select the Media you want to use and then follow the system prompts. Cartridge Tape Utilities can only be updated via diskette.

8. After updating any applications, perform a complete system backup to tape so that the customer has the most recent copy of the system.

Upgrading MERLIN LEGEND CAS to Integrated Solution CAS

To upgrade from MERLIN LEGEND CAS to Integrated Solution CAS, perform the following steps:

1. Print out all of the CAS reports using the instructions provided in the *AT&T Call Accounting System (CAS) Integrated Solution II User's Guide*.
2. Upgrade the IS-III Platform Software to release 12. Refer to "Upgrading the IS-III Platform Software" in this chapter.
3. Remove MERLIN LEGEND CAS. Refer to "Removing IS-III Applications" in Chapter 4.
4. Log into the system and install Integrated Solution CAS. Refer to "Installing Call Accounting System (CAS)" in Chapter 4.

This chapter describes how to perform the following procedures:

- Administer passwords (that is, add, change, and delete) for the `is` login and the applications that are installed on the system.
- Display the applications that are installed on the system.
- Test the printer.
- Change the setup of the printer.
- Access the System Boot/Shutdown Log.
- Refresh the Boot Diskette.

Administering Passwords

IS-III enables you to add, change, or delete passwords for the `is` login and the applications that are installed on the system.

Adding or Changing a Password

IS-III enables you to add and change passwords for the `is` login and the applications that are installed on the system. After you add or change a password, the System Manager must enter the new password when he or she attempts to log into the system (if you added or changed the `is` login password) or access an application (if you added or changed the application password).

To add or change a password, perform the following steps:

1. Log into the system using the `maint` login and access the Integrated Solution III Maintenance Menu.

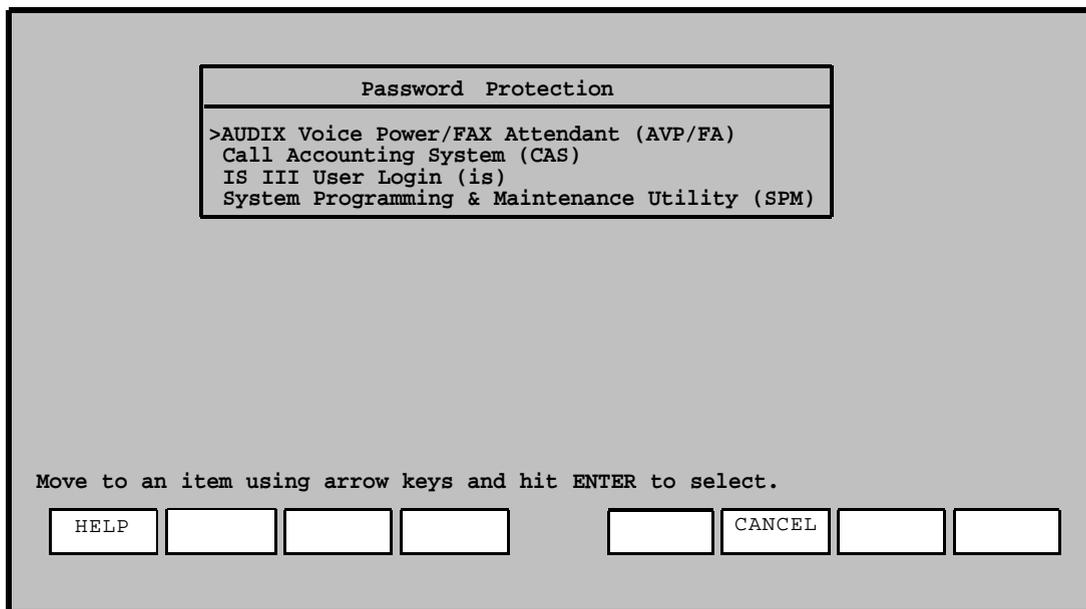
The Integrated Solution III Maintenance Menu appears.

2. At the Integrated Solution III Maintenance Menu, select `Technician Maintenance` and press [**ENTER** ↵].

The Technician Maintenance Menu appears.

3. At the Technician Maintenance Menu, select Password Protection and press [ENTER].

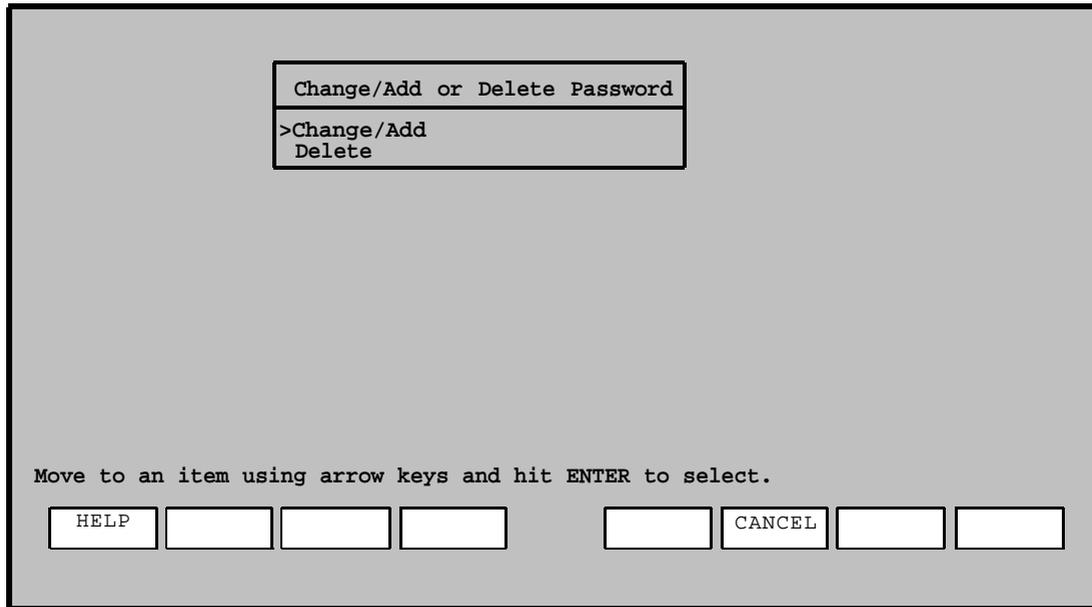
The Password Protection Menu appears.



Screen 8-1. Password Protection Menu

4. At the Password Protection Menu, select the item whose password you want to add or change and press [ENTER ↓].

The Change/Add or Delete Password Menu appears.



Screen 8-2. Change/Add or Delete Password Menu

5. At the Change/Add or Delete Password Menu, select Change/Add and press [ENTER ↓].

The system responds:

New password:

6. Enter the new password and press [ENTER ↓].

The system responds:

Re-enter new password:

7. Re-enter the new password and press [ENTER ↓].

The system responds:

Password has been changed.

Strike ENTER when ready.

8. Press [**ENTER** ↵].

The Password Protection Menu appears.

9. Press [**F6**] (CANCEL) twice to return to the Integrated Solution III Maintenance Menu.

Deleting a Password

IS-III enables you to delete passwords for the *is* login and the applications that are installed on the system.

To delete a password, perform the following steps:

1. Log into the system using the *maint* login and access the Integrated Solution III Maintenance Menu.

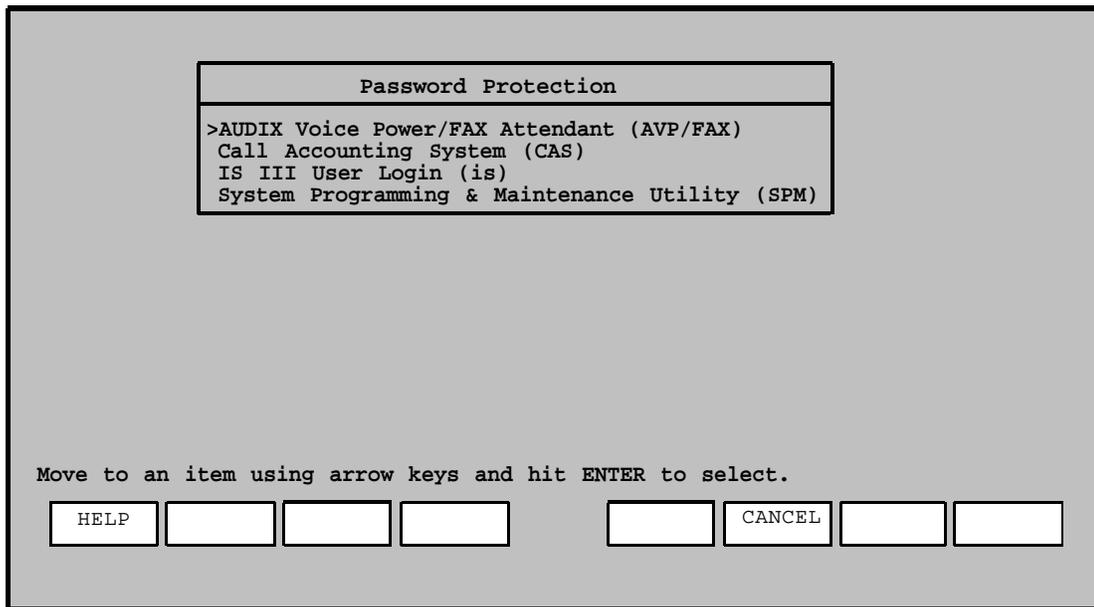
The Integrated Solution III Maintenance Menu appears.

2. At the Integrated Solution III Maintenance Menu, select *Technician Maintenance* and press [**ENTER** ↵].

The Technician Maintenance Menu appears.

3. At the Technician Maintenance Menu, select Password Protection and press [ENTER ↵].

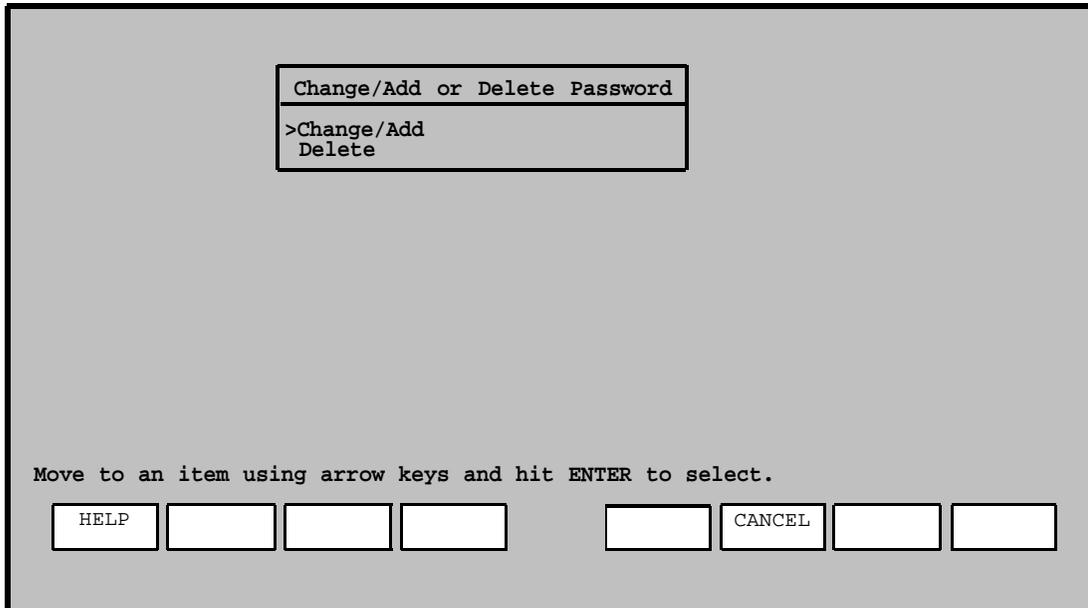
The Password Protection Menu appears.



Screen 8-3. Password Protection Menu

4. At the Password Protection Menu, select the item whose password you want to delete and press [**ENTER** ↓].

The Change/Add or Delete Password Menu appears.



Screen 8-4. Change/Add or Delete Password Menu

5. At the Change/Add or Delete Password Menu, select `Delete` and press [**ENTER** ↓].

The system responds:

The password has been deleted.

Strike `ENTER` when ready.

6. Press [**ENTER** ↓].

The Password Protection Menu appears.

7. Press [**F6**] (`CANCEL`) twice to return to the Integrated Solution III Maintenance Menu.

Displaying the Applications Installed on the IS-III System

IS-III enables you to view a list of the applications that are installed on the system. To view this list, perform the following steps:

1. Log into the system using the *maint* login and access the Integrated Solution III Maintenance Menu.

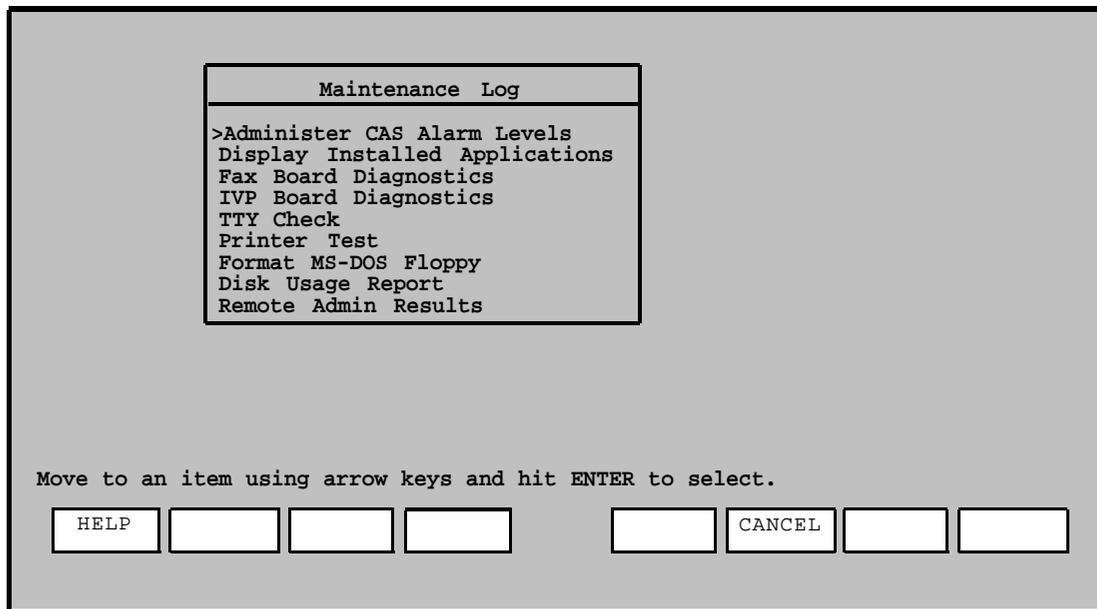
The Integrated Solution III Maintenance Menu appears.

2. At the Integrated Solution III Maintenance Menu, select *Technician Maintenance* and press [**ENTER** ↵].

The Technician Maintenance Menu appears.

3. At the Technician Maintenance Menu, select *Maintenance Log* and press [**ENTER** ↵].

The Maintenance Log Menu appears.



Screen 8-5. Maintenance Log Menu

⇒ **NOTE:**

The *Administer CAS Alarm Levels* item appears only if both CAS and AUDIX Voice Power are installed.

4. At the Maintenance Log Menu, select `Display Installed Applications` and press [ENTER ↵].

The Display Installed Applications screen appears. This screen lists the applications that are currently installed on the system. Press [F3] (NEXTPAGE) to view the next page of information.

5. When you are finished, press [F6] (CANCEL).

The Maintenance Log Menu appears.

6. Press [F6] (CANCEL) twice to return to the Integrated Solution III Maintenance Menu.

Testing the Printer

IS-III enables you to submit a job to the printer so that you can verify the connections. To test the printer, perform the following steps:

1. Log into the system using the *maint* login and access the Integrated Solution III Maintenance Menu.

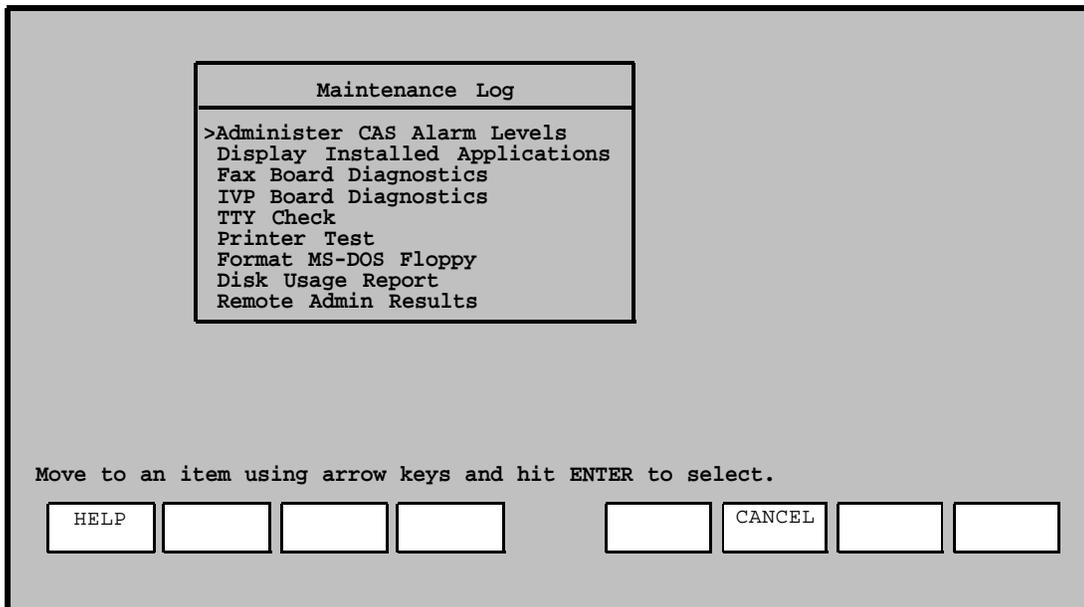
The Integrated Solution III Maintenance Menu appears.

2. At the Integrated Solution III Maintenance Menu, select *Technician Maintenance* and press [**ENTER** ↓].

The Technician Maintenance Menu appears.

3. At the Technician Maintenance Menu, select *Maintenance Log* and press [**ENTER** ↓].

The Maintenance Log Menu appears.



Screen 8-6. Maintenance Log Menu

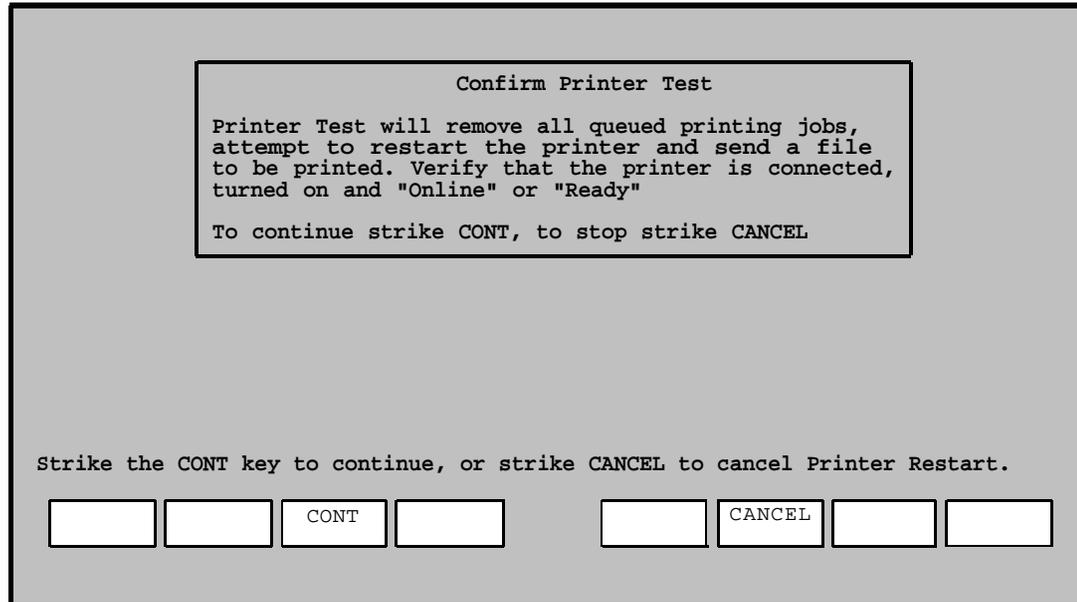


NOTE:

The *Administer CAS Alarm Levels* item appears only if both CAS and AUDIX Voice Power are installed.

4. At the Maintenance Log Menu, select `Printer Test` and press [**ENTER**].

The Confirm Printer Test screen appears.



Screen 8-7. Confirm Printer Test Screen

5. Press [**F3**] (CONT).

The Printer Test screen appears, displaying the current printer configuration. Press [**F3**] (NEXTPAGE) to view the next page of information. (This information is also printed on your 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. If the fault persists, substitute the cable and printer with known good units to determine the faulty component.

6. When you are finished, press [**F6**] (CANCEL).

The Maintenance Log Menu appears.

7. Press [**F6**] (CANCEL) twice to return to the Integrated Solution III Maintenance Menu.

Changing the Printer Setup

If the customer acquires a new printer, you may need to change the printer setup. When changing the printer setup, you can only set the following options:

- the printer type
- whether the fitter is used

To change the printer setup, perform the following steps:

1. Log into the system using the *maint* login and access the Integrated Solution III Maintenance Menu.

The Integrated Solution III Maintenance Menu appears.

2. At the Integrated Solution III Maintenance Menu, select *Technician Maintenance* and press [**ENTER** ↵].

The Technician Maintenance Menu appears.

3. At the Technician Maintenance Menu, select `Printer Setup` and press [ENTER ↓].

The Parallel Printer Port Setup screen 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

Strike the CHOICES function key. Strike SAVE when you complete the form.

HELP

CHOICES

SAVE

CANCEL

Screen 8-8. Parallel Printer Port Setup Screen

4. Press [F2] (CHOICES) to display the list of available printers.
A screen appears displaying the available printers.
5. Select the appropriate printer and press [ENTER ↓].
The screen displaying the list of available printers disappears.
6. Press [F3] (SAVE) to save the information that you entered.
The screen displays your selection and prompts you for confirmation.
7. Press [F3] (CONT).
8. Press [F3] (CONT) to return to the Technician Maintenance Menu.
9. Press [F6] (CANCEL) to return to the Integrated Solution III Maintenance Menu.

Refreshing the IS-III Boot Diskette

If the IS-III Boot Diskette fails during an installation, you must refresh the diskette. Booting from a UNIX diskette and shutting down (which is done during the IS-III installation) leaves an unreferenced file on the boot diskette. Eventually the space on the boot diskette is depleted. Refreshing the diskette removes unreferenced files and enables you to use the diskette again. Refresh the diskette before an upgrade or after the diskette has already failed.

To refresh the boot diskette, perform these steps:

1. At the Integrated Solution III Maintenance Menu, select `Technician Maintenance` and press [ENTER ↓].

The Technician Maintenance Menu appears.

2. At the Technician Maintenance Menu, select `Full Screen UNIX` and press [ENTER ↓].

The system responds:

```
To return, type 'exit' or control-d
You are in /usr/maint
#
```

3. Insert the boot diskette into the diskette drive, and type `fsck /dev/dsk/f0` and press [ENTER ↓].

The system responds:

```
RECONNECT?
```

4. Type `n` and press [ENTER ↓].

The system responds:

```
CLEAR?
```

5. Type `y` and press [ENTER ↓].

The system responds:

```
FIX?
```

6. Type `y` and press [ENTER ↓].

The system responds:

```
SALVAGE?
```

7. Type *y* and press [**ENTER** ↵].
8. When the light on the diskette drive turns off, remove the diskette.

The boot diskette is now ready for use.

9. Type *exit* at the UNIX prompt

The Technician Maintenance Menu appears.

Power On Self Test

When the Power On Self Test (POST) is initiated on booting the system, each internal component and peripheral device is checked. The peripheral devices are listed, but neither individual components nor tests are listed unless there is a failure.

The following table shows the items 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 9-1. Power On Self-Test Failures

<u>Screen Item</u>	<u>Cause of Failure</u>
CPU (80386SX, 20 Mhz)	Main board problem
CPU (80486SX, 20 Mhz)	Main board problem
CMOS RAM	a) Battery backup problem b) Main board problem
ROM Checksum	a) ROM failure — replace ROM b) Main board Problem
Memory Refresh	Main board problem
DMA Controllers	Main board problem
Interrupt Controller	Main board problem
Keyboard	a) Pressed key while booting — reboot system b) Keyboard bad — replace keyboard c) Main board problem

Screen Item	Cause of Failure
Dedicated Memory	If not 0384 KB: a) Configuration error — check ROM BIOS settings b) Memory problem — replace memory c) Main board problem
Base Memory	If not 0640 KB: a) Configuration error — check ROM BIOS settings b) Memory problem — replace memory c) Main board problem
Extended Memory	If not 7168 KB: a) Configuration error — check ROM BIOS settings b) Memory problem — replace memory c) Main board problem
Total Memory	a) Memory problem — replace memory b) Main board problem
Clock/Calendar	Main board problem
Floppy Diskette Drive	a) Poor connection b) Bad Drive c) Main board problem
Hard Disk Drive	a) Poor connection b) Bad Drive c) Main board problem
Tape Drive	a) Poor connection b) Bad Drive c) Main board problem

AT&T Diagnostic Program

Use the AT&T Diagnostic Program located on a diskette shipped with the Master Controller to fully diagnose any problems. For additional information, see the *AT&T Diagnostic Program 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 Failures*.

Main board Failure

If the main board fails, do the following

1. Insert the appropriate diagnostic diskette.
2. Run tests for each item whose status is "FAIL" Refer to the Troubleshooting chapter in the *AT&T Applications Controller User's Guide* or the *AT&T Master Controller III User's Guide*.
3. Replace main board (if bad). Refer to the *AT&T Applications Controller User's Guide* or the *AT&T Master Controller III User's Guide*.
4. Reboot the system and run the SETUP utility as described in Chapter 3 of the *AT&T Applications Controller User's Guide* or the *AT&T Master Controller III User's Guide*.

IVP Board Diagnostics

If the customer is experiencing trouble with calls not being answered in AUDIX Voice Power or FAX Attendant, perform the IVP board diagnostics described in Chapter 2, *Installing the Hardware*.

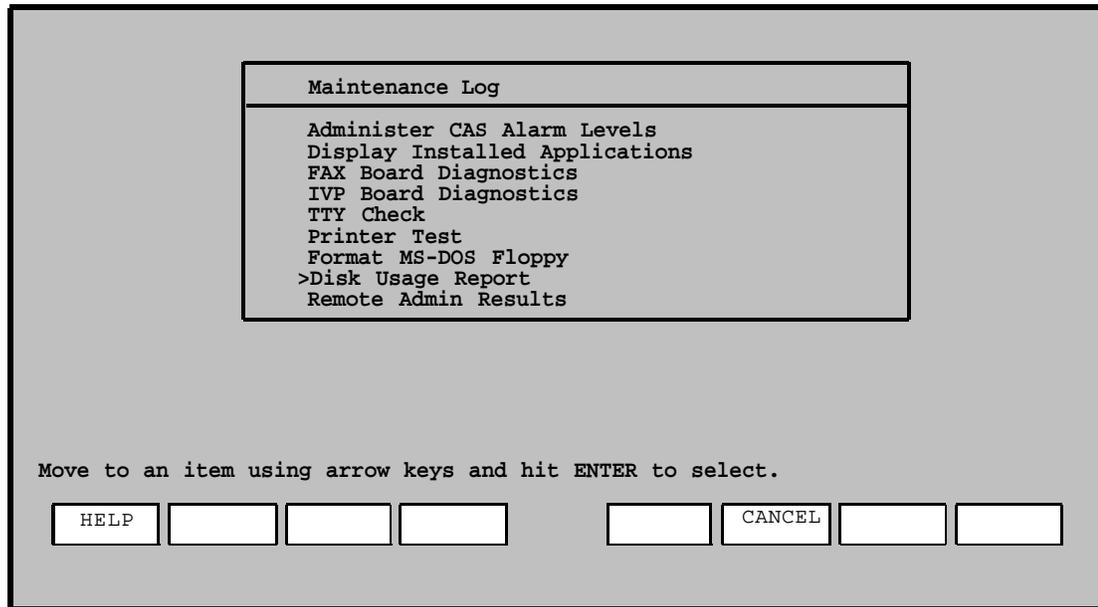
Data Corruption

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 *Recovering from Data Corruption* in Chapter 6, *Recovering from Catastrophic Failures*.

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/FAX Attendant 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.



Screen 9-1. Maintenance Log

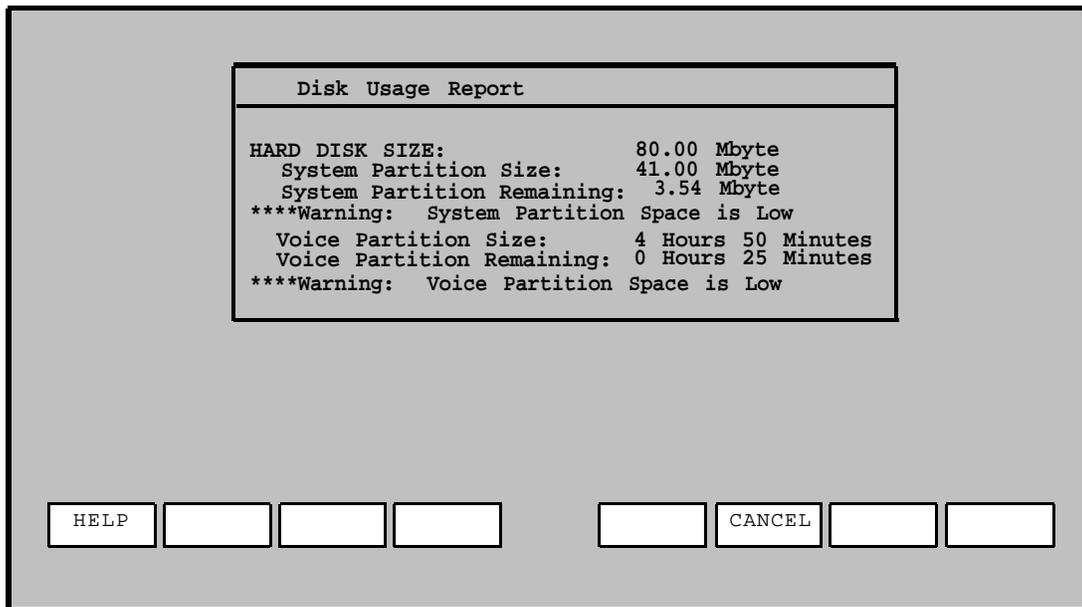
- ⇒ **NOTE:**
 The Administer CAS Alarm Levels item appears only if both CAS and AUDIX Voice Power are installed.

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 FAX Attendant (FA).

If the System Partition Warning is displayed, the disk may contain too many CAS call records, faxes, or too many spooled print jobs (with the printer turned off). Refer to the documentation supplied with the Call Accounting System for instructions on how to remove old call records. Refer to the documentation supplied with FAX Attendant for instructions on how to remove old faxes.

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.



Screen 9-2. 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.

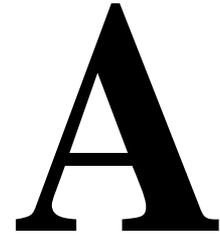
Enter the name of the kernel to boot:

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: CAS Alarm Notification



CAS and HackerTracker Alarms

The Call Accounting System sends alarms to the printer and, if AUDIX Voice Power is installed, also sends voice mail alarms to all members of the group list specified for the alarm type. Alarms are sent when hard disk usage exceeds 50%, 75%, and 95% so that previously collected call detail records can be processed and removed to make room for new call detail records, fax messages, and voice messages.

⇒ **NOTE:**

If the disk usage exceeds 95%, CAS will stop collecting call detail records so that the remaining space can be used for fax and voice messages.

The optional HackerTracker also sends printer alarms and, if AUDIX Voice Power is installed, voice mail alarms whenever it detects possible phone abuse or toll fraud as defined by the System Manager. For additional information, see the *HackerTracker™ for Integrated Solution Call Accounting System* document.

Alarms sent to the printer do not require administration. The remainder of this appendix provides information on the administration of voice mail group lists used for voice mail alarm notification. The procedures used to implement the alarm notification are provided in Chapter 5.

To allow generality in how these voice mail alarms are processed, each alarm is sent to a voice mail group list. For each of the three levels of hard disk space alarms and for the HackerTracker alarm, the System Manager should specify the voice mail group list owner's extension, the voice mail group list identification, and the extensions of the members of the voice mail group who will receive the alarm messages. The group owner extension and the group list identification should be provided by completing the first column of the CAS Alarm Notification Form provided later in this Appendix. Each group list ID can have a maximum of six digits.

The second column of the form should contain the extensions of the AUDIX Voice Power subscribers who will receive the corresponding alarm messages. These extensions are entered when the group list is created via the AUDIX Voice Power touch-tone interface. The group list member extensions are not used during software installation.

⇒ **NOTE:**

The group lists must exist before voice mail alarm notification can occur. In addition, subscriber and other administration may be required for the operation of AUDIX Voice Power.

Alarm Strategy

The alarm strategy depends upon the size and nature of the business. In general, for a smaller business, use the "All Alarms" option to send all alarms to the same group of persons. For a larger business, use the individual alarm options to send different alarms to different groups of people.

- Use the "All Alarms" option at the top of the CAS Alarm Notification Form to specify the single group list ID and group list owner extension where all alarms will be sent. Do not use the remainder of the form.
- Use the individual alarm specifications at the bottom of the CAS Alarm Notification Form to send each alarm to a different group of people. Do not use the top of the form.
 - Send the initial "Warning" (50% used) disk space alarm to whoever will be responsible for processing and deleting the collected call records.
 - Send the next "Minor Alarm" (75% used) message to the same people, and also to whoever may be "covering" for them if they are out sick or on vacation.
 - Send the final "Major Alarm" (95% used) message to all of these people and to their supervisor as well, so that coverage can be provided even in unusual situations.
 - Send the HackerTracker alarm directly to whoever is responsible for taking action about phone abuse or toll fraud.

Suggested Defaults

For convenience in testing, you may want to set the group owner extension to 9999 (the general mailbox) and the group list ID to 999999. For testing, be sure to administer extension 9999 as a member of group list 999999 via the touch-tone interface to AUDIX Voice Power. These values can be reassigned later for actual system operation.

Voice Mail Messages

The following voice mail messages are sent by the Call Accounting System and HackerTracker:

■ **HackerTracker Alarm**

"This is an alarm message from the HackerTracker. One of the criteria for detecting phone fraud or abuse has been exceeded. Please retrieve the HackerTracker alarm report immediately from the CAS application and determine the specific conditions that generated the alarm. Toll fraud or phone abuse may have occurred. Please act on this information immediately to prevent further fraud or abuse."

■ **Warning—50% Disk Usage**

"This is an urgent message from the Call Accounting System. The call record storage has reached 50% of the allowed capacity. Please back up the CAS system and then delete old call records. Please be sure to restart call processing."

■ **Warning—50% Inodes Used**

"This is an urgent message from the Call Accounting System. Call costing may not be running. If you stopped call processing on purpose, please restart it immediately. Otherwise, call the AT&T Help Line immediately to report a potential problem. Ignoring this warning will lead to a system problem."

■ **Minor Alarm—75% Disk Usage**

"This is a warning message from the Call Accounting System. CAS call record storage has reached 75% of the allowed capacity. Please back up the CAS system and then delete old call records. Please be sure to restart call processing. CAS will continue to store call records until 95% of the allowed capacity is reached. At 95% capacity, the call record collection process will be stopped resulting in permanent loss of call records from your PBX."

■ **Minor Alarm—75% Inodes Used**

"This is a warning message from the Call Accounting System. Call costing may not be running. If you stopped it on purpose, please restart it immediately. Otherwise, call the AT&T Help Line immediately to report the problem. Ignoring this warning can lead to a system lock-up and loss of voice mail. To avoid lock-up, call collection and processing will automatically be halted, resulting in irrecoverable loss of call record data from your PBX."

■ **Major Alarm—95% Disk Usage**

"This is an urgent warning from the Call Accounting System. Too many call records are stored on the CAS system hard disk. CAS call record collection has been stopped to prevent system lock-up. New call records are being permanently lost until some old call records are deleted. This action is being taken to prevent system lock-up. Please back up the CAS system and then delete old call records. Please be sure to restart call processing."

■ Major Alarm—95% Inodes Used

"This is an urgent warning from the Call Accounting System. Call accounting has used up more system resources than allocated to it. Call collection and processing has been halted to avoid a system lock-up. You are incurring irrecoverable loss of call records data from your PBX. Please call the AT&T Help Line immediately to report the problem."

CAS Alarm Notification Form

CAS Alarms	AUDIX Voice Power Group Member Extensions
Use this section of the form to send all alarms to the same group list.	
<p>All Alarms</p> <p>Group List ID: _____</p> <p>Group Owner _____</p> <p>Extension: _____</p>	
Use this section of the form to send individual alarms to different group lists.	
<p>Warning (50% disk/file usage)</p> <p>Group List ID: _____</p> <p>Group Owner _____</p> <p>Extension: _____</p>	
<p>Minor Alarm (75% disk/file usage)</p> <p>Group List ID: _____</p> <p>Group Owner _____</p> <p>Extension: _____</p>	
<p>Major Alarm (95% disk/file usage)</p> <p>Group List ID: _____</p> <p>Group Owner _____</p> <p>Extension: _____</p>	
<p>HackerTracker Alarms</p> <p>Group list ID: _____</p> <p>Group Owner _____</p> <p>Extension: _____</p>	

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