Computer Museum

Owner's Guide to the
HP 9000 8X7S Family

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REGULATORY NOTICES

Safety and Regulatory Information.
For your protection, this product has been tested for conformance to various national and international regulations and standards. The scope of this regulatory testing includes electrical and mechanical safety, electromagnetic emissions, immunity, acoustics and hazardous materials.

When required, approvals are obtained from third party test agencies. Approval marks appear on the product label. In addition, various regulatory bodies require some information under the headings noted below.

FCC STATEMENT (USA Only)
The United States Federal Communications Commission (in 47 CFR 15.838) has specified that the following notice be brought to the attention of users of this product.

WARNING: This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested for compliance with the limits of Class A computing devices pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference.

Operation of this equipment is a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

DOC STATEMENT (Canada Only)
This equipment does not exceed the Class A limits for radio noise emissions as set out in the Radio Interference Regulations of the Canadian Department of Communications.

GERMANY EMI (Germany Only)
This is to certify that this product meets the Radio Frequency Interference Requirements of Directive 1046/84. The German Bundespost has been notified that this equipment has been put into circulation and has been granted the right to check the product type for compliance with these requirements.

FUNKENTSTOERUNG DEUTSCHLAND (German EMI Compliance)
HERSTELLERBESCHEINIGUNG

Hiermit wird bescheinigt, dass dieses System in Uebereinstimmung mit den Bestimmungen von Postverfuegung 1046/84 funkentstoert ist.

Der Deutschen Bundespost wurde das Inverkehrbringen dieses Systems angezeigt und die Berechtigung zur Ueberpruefung de Serie auf Einhaltung des Bestimmungen eingeraeumt.

JAPAN VCCI (Japan Only)

この装置は，第一種情報装置(商工業地域において使用されるべき情報装置

で商工業地域での電波障害防止を目的とした情報処理装置等電波障害自主規制

協議会（ＶＣＣＩ）基準に適合しております。

従って，住宅地域またはその隣接した地域で使用すると，ラジオ，テレビ：

ョン受信機等に受信障害を与えることがあります。

取扱説明書に従って正しい取り扱いをして下さい。

ACOUSTICS (Germany)
Laermangabe (Schalldruckpegel LpA) gemessen an Arbitsplatz bei normalem Betrieb nach DIN 45635, Teil 19:

Acoustic Noise (A-weighted Sound Pressure Level LpA) measured at operator's position, normal operation, to ISO7779:

HP 9000 807S, 817S, 837S:
57dB bis (up to) 37° C, 62dB ueber (above) 37° C

HP 9000 827S, 847S, 857S:
62dB bis (up to) 37° C, 64dB ueber (above) 37° C

UNITED KINGDOM (Only)
Pursuant to Section 22 of Telecommunications Act of 1984, this product is approved for indirect connection to Public Telecommunications systems within the United Kingdom under the General Approval number NS/G/1234/J/100003.

WARNING: UK Only!
The following notice is required by the British Approvals Board for Telecoms (BABT). Please contact your HP Sales Office if there are any questions.

"Interconnection directly, or by way of other apparatus, of ports marked with 'United Kingdom Safety Warning: Refer to users instructions' with ports marked or not so marked may produce hazardous conditions on the telecom network. Advice should be obtained from a competent engineer before such a connection is made."

To prevent an electric shock to the operator, disconnect this product from the BT network before the mains plug is removed. Do not hard-wire the BT network connection.

The United Kingdom Safety Warning applies to all ports.

BATTERY NOTICES
This product may contain a sealed Lead Acid and a Lithium battery. Replace only with the same type and part number! Recycle used battery or send to the following address for proper disposal:

Hewlett Packard Co.
Environmental Health and Safety Department
8000 Foothills Boulevard
Roseville, CA 95678
Att: Battery Disposal Coordinator

WARNING: Fire, explosion and severe burn hazard! Do not crush, disassemble, heat, incinerate or expose the battery to water.

SAFETY WARNINGS
This product has not been evaluated for connection to an "IT" power system (ac distribution system having no direct connection to earth according to IEC 950).

Locate the ac outlet near the computer! The ac power cordset is this product's main ac disconnect device and must be easily accessible at all times.

To reduce the possibility of an electric shock from the telephone network, plug the computer into the ac outlet prior to connecting to the network. Also, disconnect the network before unplugging the computer from the ac power outlet.

To reduce the risk of electric shock, ensure the front and rear bezels are installed at all times!

This product is designed to operate at the ac line voltages of 100, 120, 220, or 240 V +/- 10%. Contact your HP Sales Office if your line voltage is outside this range.

DECLARATION OF CONFORMITY
according to ISO/IEC Guide 22 & EN 45014

MANUFACTURER'S NAME: Hewlett-Packard

MANUFACTURER'S ADDRESS:
Herrengerger Strasse 130, 7030 Boeblingen, Germany
8000 Foothills Blvd., Roseville, CA 95679, U.S.A.

DECLARES, THAT THE PRODUCT

PRODUCT NAME: Computer System

MODEL NUMBER: HP 9000 8X7S

CONFORM TO THE FOLLOWING PRODUCT SPECIFICATION:

Safety: EN 60950 (IEC 950)

EMC: EN 550022 class A

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8. Backing Up the Operating System

9. Ending Your Work Session

10. Checking If Your Computer Is Working Properly

11. What To Do If You Have Problems

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How To Proceed

How To Proceed

The HP 9000 807S, 817S, 827S, 837S, 847S, and 857S are self-contained, floor-mounted, multi-user computers that use the HP-UX operating system.

While there are hardware and performance differences between each computer, the basic hardware installation, software configuration, and system administration tasks are the same for each of these computers.

These fully integrated computers contain a Digital Data Storage (DDS) tape drive, and integrated disk drives all mounted in a single cabinet. Figure 1-1 shows the HP 9000 807S, 817S, and 837S with the console terminal. Figure 1-2 shows the HP 9000 827S, 847S, and 857S with the console terminal.

With the exception of the HP 9000 807S, networking is standard. The installation procedures are the same for a computer with or without networking, except that you should disregard the references to networking and LAN in this manual if you did not order the networking option.

The networking option is available on the HP 9000 807S. Networking on this computer requires a minimum of 16 megabytes of main memory and 320 megabytes disk capacity.
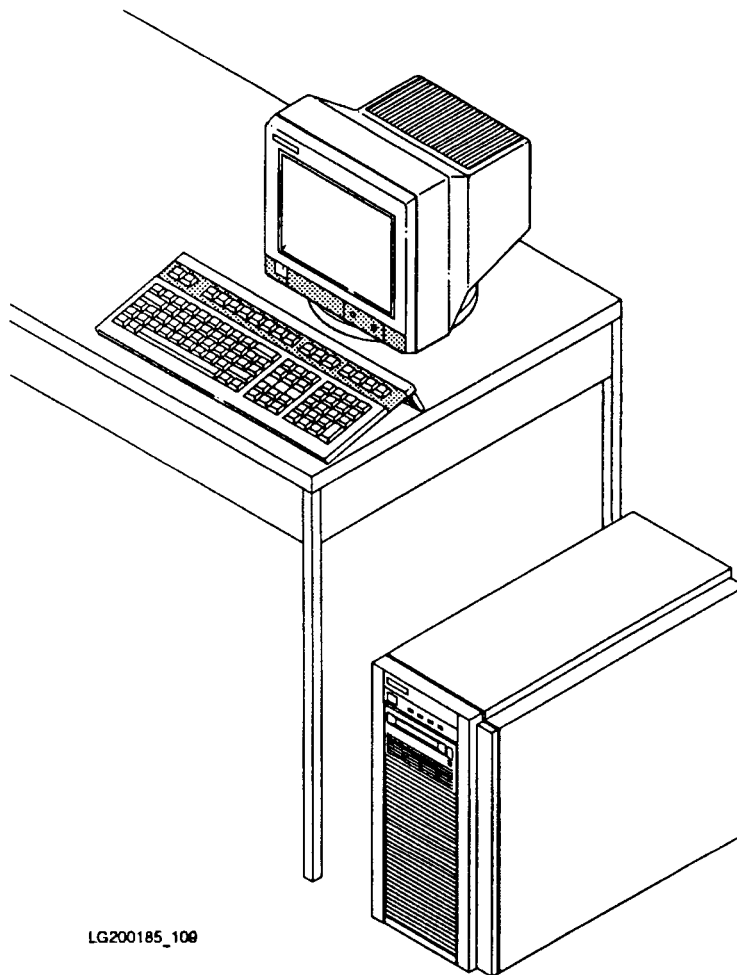
LG200185_109

Figure 1-1. HP 9000 807S, 817S, and 837S Overview
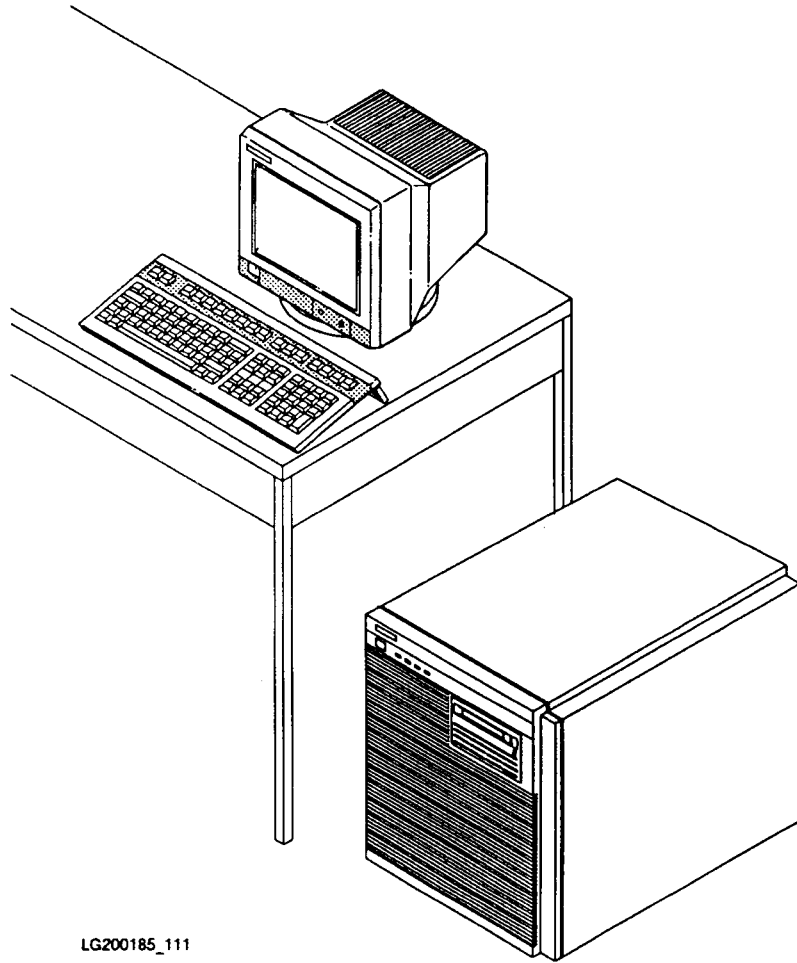
LG200185_111

Figure 1-2. HP 9000 827S, 847S, and 857S Overview

Follow these instructions in the order presented, and upon completion, you will have:

- Installed your hardware.

- Booted up your operating system.

- Added terminals and printers.

1-4

- Established accounts for groups and individual users.
- Backed up your operating system.

This manual will not repeat information found in other HP-UX manuals, but will refer you to the appropriate manuals to complete the installation and system administration tasks. You will need the System Administration Set of manuals to complete the tasks.

The System Administration Set includes the following manuals:

- *Installing and Updating HP-UX*
- *Installing Peripherals*
- *Solving HP-UX Problems*
- *System Administration Tasks*
- *How HP-UX Works: System Administration Concepts*

You will also need one set of operating system tapes, per site, in case your pre-loaded operating system becomes corrupted and you are unable to boot up (start) your operating system. If you do not already have the System Administration Set of manuals and the operating system tapes, you can order them from Hewlett-Packard.

Available HP Support and Classes

Hewlett-Packard provides optional support directly to you using a support modem which connects your computer to HP through the telephone line. Two available support programs are: HP ResponseLine and HP TeamLine.

Hewlett-Packard's support programs provide HP customer's with help in implementing and operating HP software solutions. They deliver different levels of assistance and problem-solving, and can be customized for your needs. For more information on the support services that are available to you, contact your local HP Sales and Service Office.

Hewlett-Packard's Customer Education services provide high-quality training solutions worldwide to help you maximize the value of your investment. HP training courses enable you to enhance your problem-solving abilities, use your hardware and software capabilities fully, and eliminate trial-and-error learning.

The following two courses provide the recommended training for application users or system administrators:

HP-UX Basics I (2 days—HP 51489B)
HP-UX Systems Administration Basics (3 days—HP 50722B)

The following two courses provide the recommended training for system administrators:

HP-UX Fundamentals (5 days—HP 51434B)
HP-UX System Administration for the HP 9000 Series 800 (5 days—HP 51482D)

As a requirement of the software support agreement, that allows access to the Response Center for telephone assistance, authorized callers must attend the appropriate training as outlined in one of the two sets of courses detailed above.

For detailed information on Hewlett-Packard's Customer Education courses and services, in the U.S. please call (800) HP-CLASS, in Canada please call (416) 678-9430, and elsewhere, please call your local Hewlett-Packard Customer Education Center.

What You Will Need

This manual will lead you step-by-step through the computer installation process. Follow the instructions carefully and in the sequence presented. It will take several hours to install your computer.

Table 1-1 lists the items you will need to install your computer. You will gather these items when you start to unpack your computer as described in the next chapter.

Table 1-1. Required Items Check Off

Required Items	Check Off
This Owner's Guide.	
The computer. (Fig. 1-3, or Fig. 1-4)	
The computer power cord(s). (Fig. 1-5)	
The active distribution panel (not HP 9000 807S). (Fig. 1-6)	
The active distribution panel cable (not HP 9000 807S). (Fig. 1-7)	
The direct distribution cable (HP 9000 807S only). Fig.1-8)	
The console terminal, keyboard, keyboard cable, and power cord. (Fig. 1-9)	
The console terminal data cable. (Fig. 1-10)	
SCSI terminator (not HP 9000 807S).	
LAN terminator (not HP 9000 807S).	
Optional active distribution panels and cables.	
Optional terminals with keyboards, keyboard cables, power cords and data cables.	
Optional printers with power cords, data cables, and paper.	
DDS tape for backing up the operating system.	
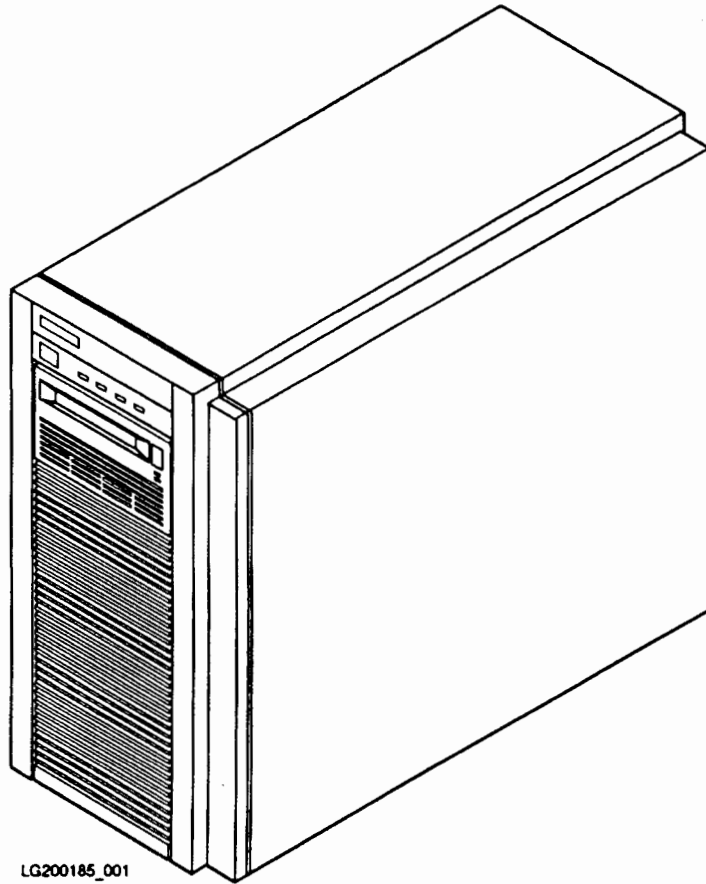
LG200185_001

Figure 1-3. HP 9000 807S, 817S, and 837S Computer
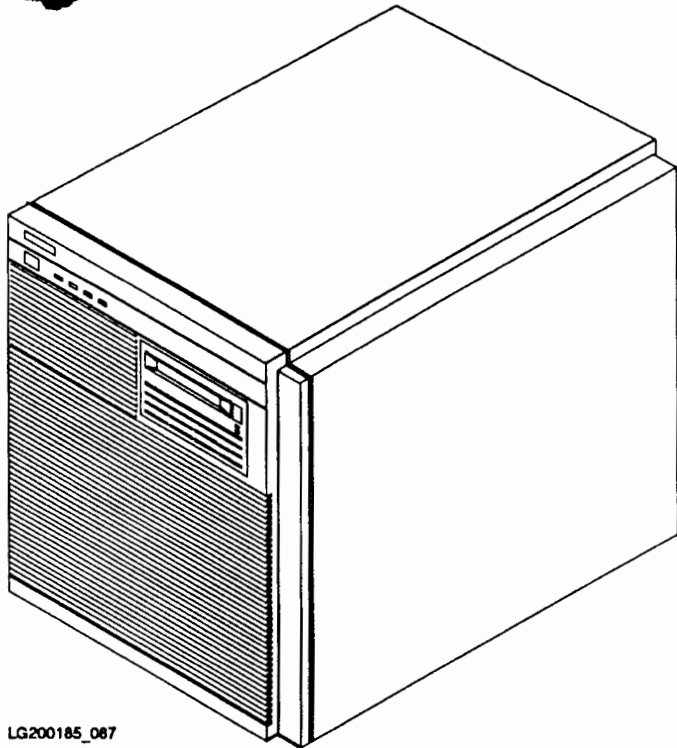
LG200185_067

Figure 1-4. HP 9000 827S, 847S, and 857S Computer
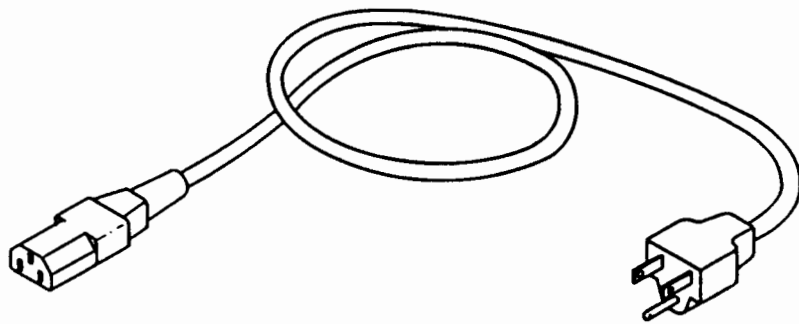
LG200148_012

Figure 1-5. Computer Power Cord
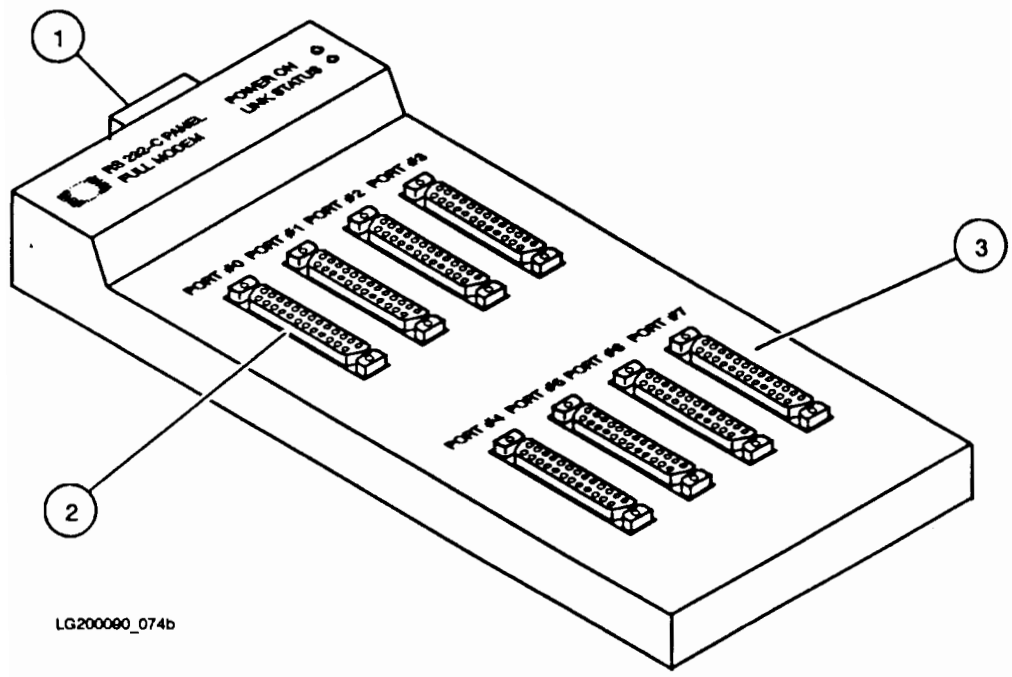
LG200090_074b

Figure 1-6. Active Distribution Panel (Not HP 9000 807S)

Parts Identification

Part Number	Part Name
1	Cable Connector
2	Console Terminal Connector (MUX 0)
3	Support Modem Connector (Optional, MUX 0)
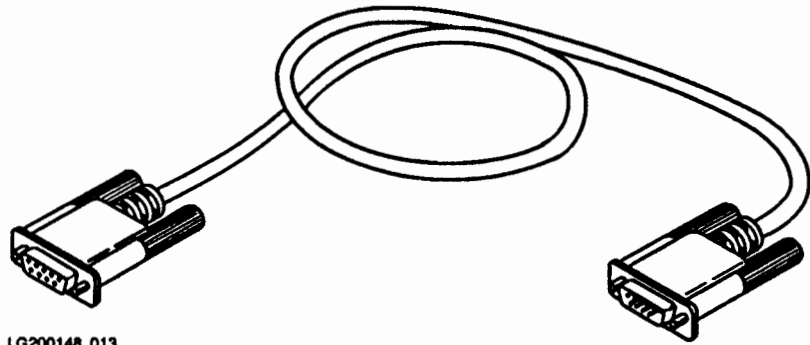
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Figure 1-7. Active Distribution Panel Cable (Not HP 9000 807S)
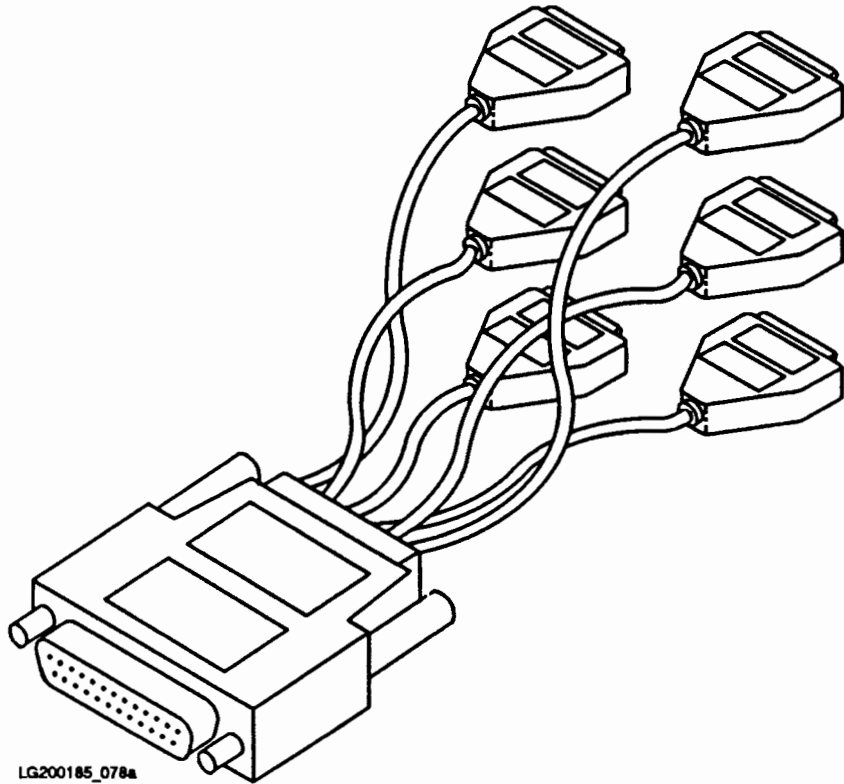
LG200185_078a

Figure 1-8. Direct Distribution Cable (HP 9000 807S Only)
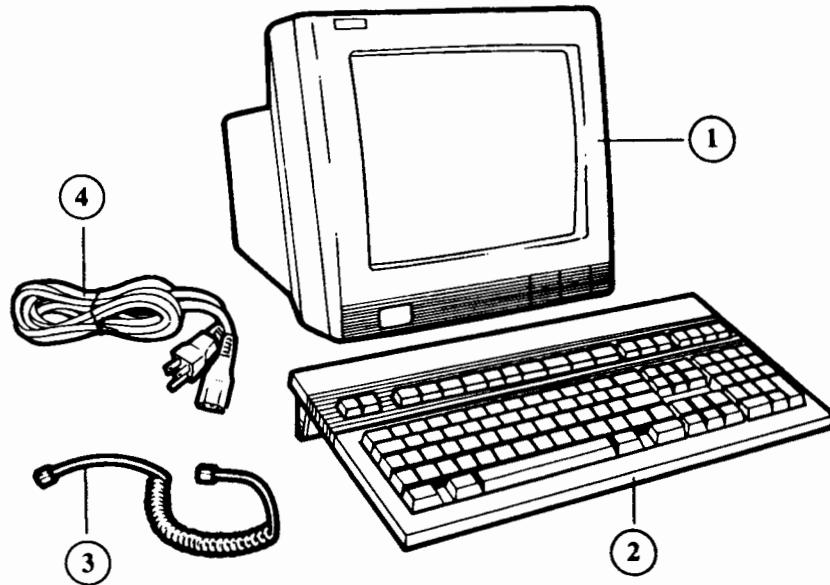
Figure 1-9. Console Terminal

Parts Identification

Part Number	Part Name
1	Monitor
2	Keyboard
3	Keyboard Cable
4	Power Cord
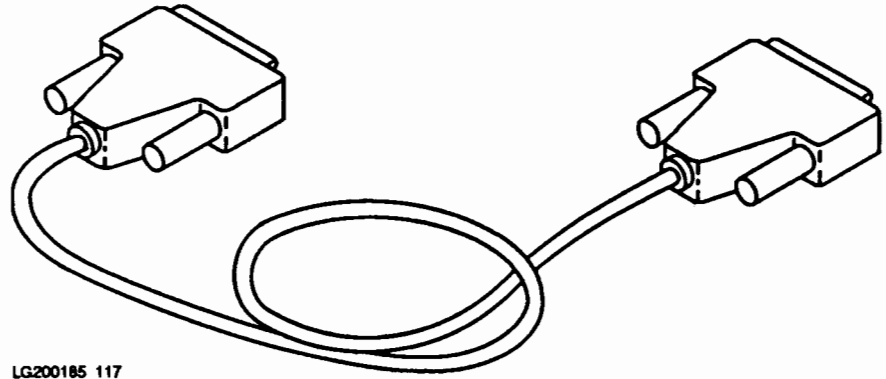
LG200165_117

Figure 1-10. Console Terminal Data Cable

Installation Steps

To successfully install your computer, complete the steps listed in table 1-2, in the order presented. You will find information on each step in the chapter indicated in the table.

Table 1-2. Installation Procedures

Installation Steps to Complete	Chapter
Site preparation.	2
Computer unpacking.	2
Computer cabling.	2
Console terminal unpacking	3
Console terminal cabling.	3
Console terminal configuring.	3
Computer powering up.	4
Time zone setting.	4
Time and date setting.	4
Language Selection.	4
Work Environment Selection.	4
Super-user log in.	4
Password setting.	4
Optional terminals connection and configuration.	5
Optional printers connection and configuration.	5
Users and groups addition.	6
Networking Configuration (if installed).	7
Operating system back up.	8

Start the installation process by following the instructions in chapter 2.

2

Setting Up the Hardware

Setting Up the Hardware

Before you begin unpacking your new computer, you will need to prepare your area for proper operation of your computer. This process is called site preparation.

Site Preparation

Site preparation might be required before you can set up your computer. The type and extent of site preparation depends on your individual needs. The three types of preparation required are: computer, peripheral, and networking.

Preparing the Computer Site

Site preparation for the HP 9000 807S, 817S, and 837S is straightforward. If your computer is used in an office environment, no special environmental conditions must be met. The HP 9000 847S, and 857S require that site preparation be provided by Hewlett-Packard. The HP 9000 827S requires HP site preparation if you are using it with external tape or disk drives. If you are not sure that your site meets the requirements of a typical office environment, check appendix A for detailed specifications.

Your computer is a sensitive piece of electronic equipment. Be sure to read and follow the suggestions listed below for optimum performance and reliability.

Make sure that you meet the following conditions:

- DO have enough electrical outlets for all of the equipment (one for the computer, one for the console terminal, and one for each external peripheral, such as printers or additional disk drives).

- DO locate the ac outlet near the computer. The ac cordset is this product's main ac disconnect device and must be easily accessible at all times.

- DO provided a dedicated electrical outlet for the HP 9000 827S, 847S, and 857S. Your computer must be the only thing connected to this outlet.

- DO allow at least 12 inches of ventilation space behind the computer.

- DO provide a storage cabinet for computer supplies (tapes, disks, printer supplies, etc.)

- DO provide dedicated telephone outlets close to the computer for possible data communication (modem) and voice communication (assistance use).

- DO make sure the computer site is well ventilated and adequate lighting is available.

- DO make sure to route peripheral cables so that they are not in traffic areas where they can cause injury or can be kicked loose.

- DO plan peripheral installation to account for length of cables involved.

- DO NOT use an extension cord, or multiple outlet power strip, to provide electrical power to the computer or computer equipment.

- DO NOT install the computer next to open windows, where the computer would be exposed to uncontrolled environmental conditions.

- DO NOT install the computer near doorways where heavy traffic is likely.

- DO NOT plug the computer, or peripherals, into outlets that are controlled by a switch.

- DO NOT plug non-office type equipment into the same outlet with the computer; this would include things such as coffee pots, heaters, fans, radios, or televisions.

- DO NOT use extension cords to supply power to the computer or peripherals.

- DO NOT use the computer cabinet as a plant stand, or as a resting place for anything.

CAUTION

If the electrical or environmental equipment (air conditioners, humidifiers, or heaters) for the office computer site stop functioning, and the temperature in the room exceeds 100° F (40° C), stop all computer applications and turn the computer off until the problem is corrected and normal operation is restored. By waiting, you may protect your data and computer.

Preparing the Peripheral Site

Peripheral devices (printers, terminals, etc.) can be located away from the computer, but only as far as the length of the cable will allow. To minimize inadvertent power or cable disconnection, locate all cables away from normal traffic patterns.

Your application might require connecting peripherals located throughout your site. This may necessitate special cabling of your facilities. Hewlett-Packard offers several services, that you can purchase, to help you with the cabling of your facilities. These include HP Cable Site. Contact your local HP Sales and Service Office for more information.

Preparing the Networking Site

Your network might require special cabling and equipment. This might necessitate modification of your facilities. Hewlett-Packard offers several services, that you can purchase, to help you with networking site preparation. These include HP Network Planing and Design. Contact your local HP Sales and Service Office for more information.

Several reference manuals are available from HP Direct Marketing (Telephone 800- 538-8787) to assist with network design and installation. These manuals are:

- *LAN Cable and Accessories Installation Manual (Coax)* (HP part number 5955-7680).

- *HP SiteWire Twisted-Pair Cabling Installation Manual* (HP part number 5959-2208).

- *HP LAN Configuration Guide for IEEE 802.3 and Ethernet Networks* (HP partnumber 5090-2607).

Refer to these manuals for assistance in preparing the networking site.

Setting Up Your Computer

Two steps are required to set up your computer. These are:

- Removing your computer from the shipping box.

- Cabling your computer.

Unpacking Your HP 9000 807S, 817S, 837S

Figure 2-1 shows your HP 9000 807S, 817S, 837S in its shipping box with the top of the box opened and this manual removed.
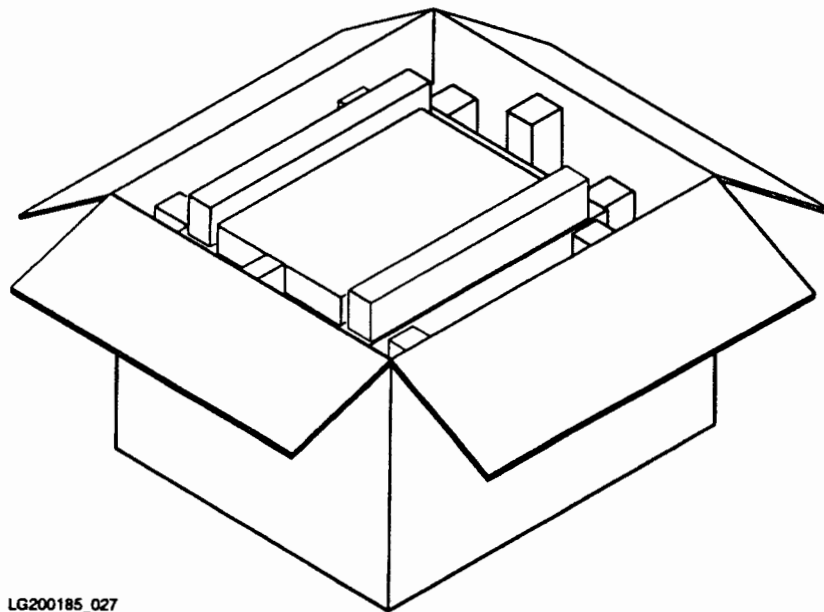
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Figure 2-1. Opening the Box

Complete the following steps to continue with unpacking your computer:

CAUTION

Do not lift your computer out of the box. It is heavy! Follow the instructions as shown on the shipping box for turning the shipping box onto its side and "walking" your computer out of the box.

1. Remove the parts box as shown in figure 2-2.
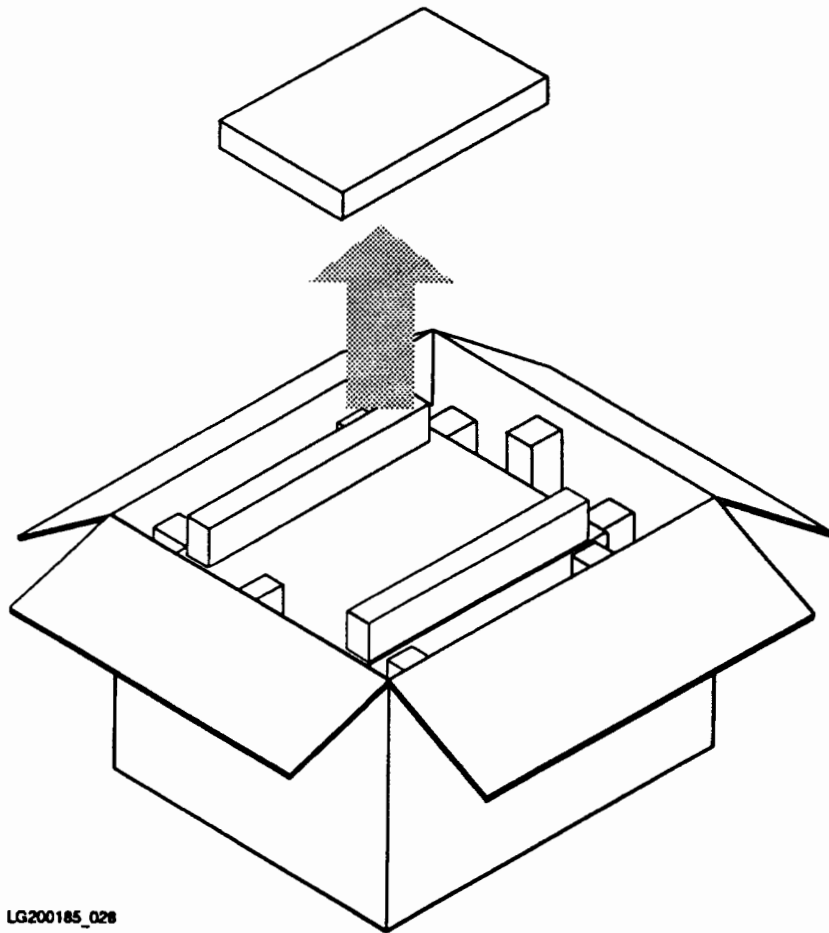
LG200185_026

Figure 2-2. Removing the Parts Box

2. Remove the packing material as shown in figure 2-3.
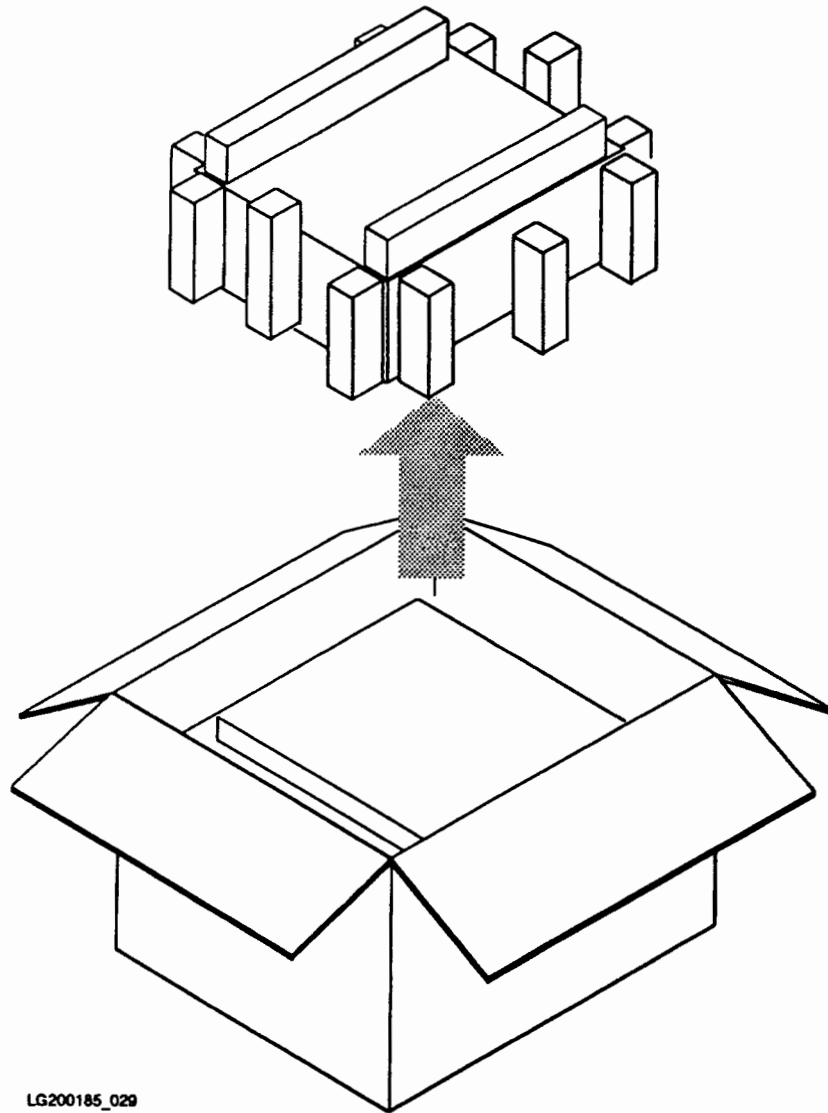
LG200185_029

Figure 2-3. Removing Packing Material

3. Position the shipping box so that the handle on the flap is away from you.

4. Turn the shipping box on its side, as shown in figure 2-4, so that your computer is standing upright. This is done by grasping the handle on the shipping box flap and pulling the box towards yourself.
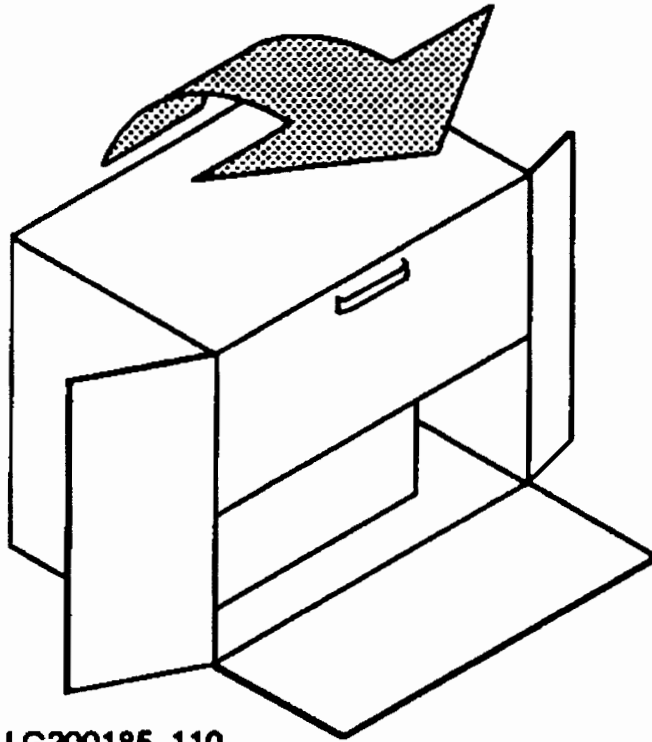
LG200185_110

Figure 2-4. Turning Box On Its Side

5. Remove your computer from the box by pulling it from side to side as shown in figure 2-5.
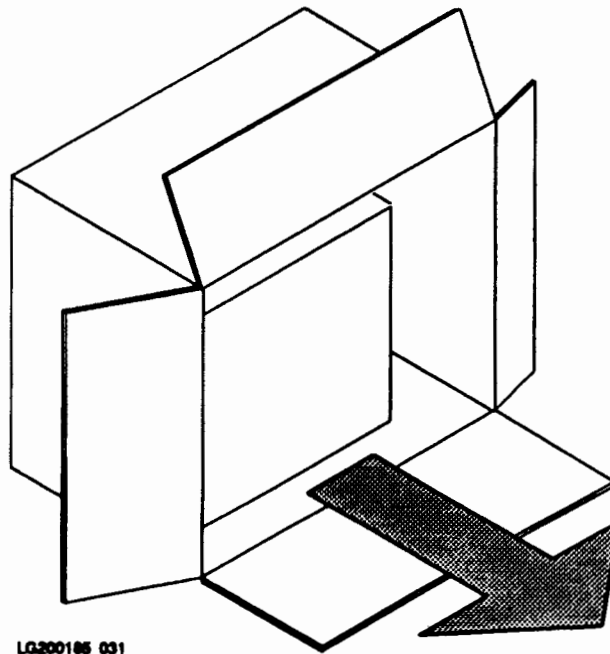
LG200185_031

Figure 2-5. Removing Computer From Box

You can now place your computer where you want to use it by sliding it along the floor. Do not try to lift your computer.

Unpacking Your HP 9000 827S, 847S, 857S

The HP 9000 827S, 847S, 857S is packed in a specially designed box where the bottom of the box serves as a ramp for unpacking your computer.

In order to unpack your computer:

1. Cut the straps holding the shipping carton to the pallet.

2. Gently slide the shipping carton off of the pallet and on to the floor.

3. Cut the tape holding the top of the shipping carton to its bottom section. This tape is located about about 6 inches up from the bottom of the shipping carton.

4. Remove the top section of the shipping carton, and the top cushions.

5. Locate one of the end flaps. This flap will later be pulled down to form an unloading ramp.

6. Tear a triangular section off of the foam blocks on one end of the shipping carton. These blocks are perforated to aid in tearing. These blocks will tear off to form a 45° angle to support the ramp.

7. Cut the corners holding this flap in place.

8. Pull down this flap to form a ramp between the bottom on your computer and the floor.

9. Slide your computer down this ramp and clear of the shipping carton.

10. Slide your computer into place where you want to use it.

Connecting the Power Cord(s)

The HP 9000 807S, 817S, and 837S each has one power cord. The HP 9000 827S, 847S, and 857S each has two power cords.

The power cord is shown in figure 2-6.

1. Remove the power cord(s) from the shipping carton.

2. Plug one power cord into the jack at the bottom left of the rear of your computer. The HP 9000 827S, 847S, and 857S each has two power cords. The second power cord is plugged into the jack at the bottom center of the rear of your computer.

3. Plug the other end of the power cord(s) into an appropriate electrical outlet.

4. Do not turn on your computer at this time.
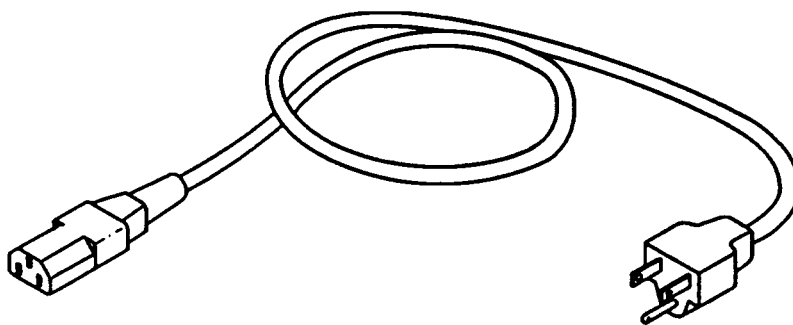
LG200148_012

Figure 2-6. Power Cord

Attaching the Direct Distribution Cable (HP 9000 807S Only)

If you have the HP 9000 807S, the serial terminals and printers are connected to your computer through the connectors provided by the direct distribution cable.

Figure 2-7 shows the direct distribution cable. This cable provides 6 serial connectors, numbered 1 through 6, as identified on the connectors.
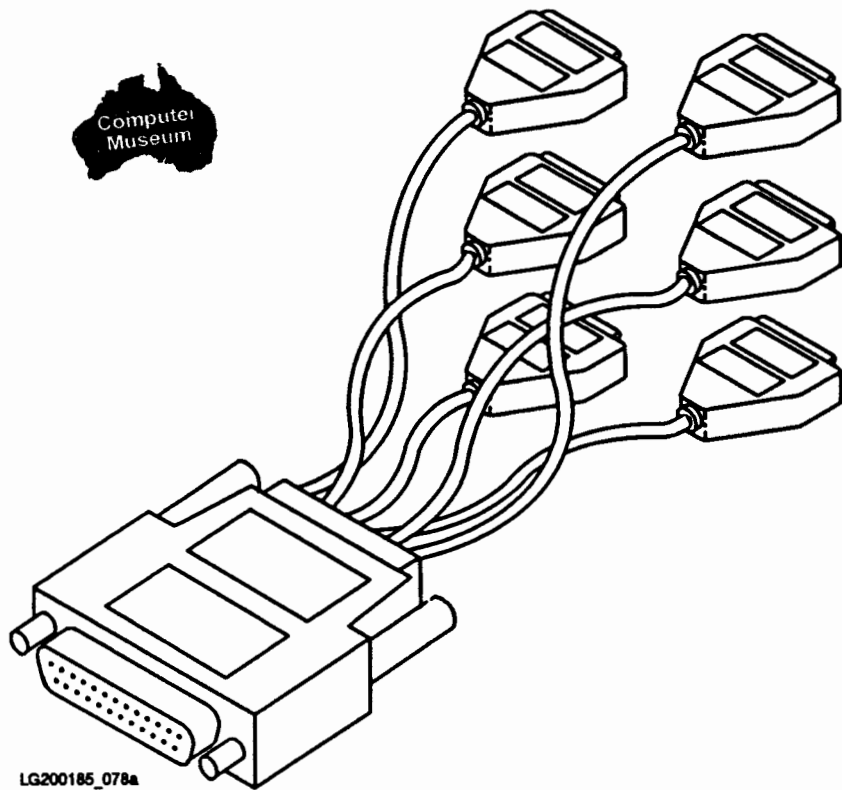
Figure 2-7. Direct Distribution Cable

Figure 2-8, number 3 shows the back of the HP 9000 807S with the connector for attaching the direct distribution cable. The connector is labeled DDC (ports 1 ... 6). Connect the cable here and tighten the connector. You will connect optional terminals and printers to each connector at the opposite end of this cable. A modem connection is available on the back of your computer. See figure 2-8, number 4.
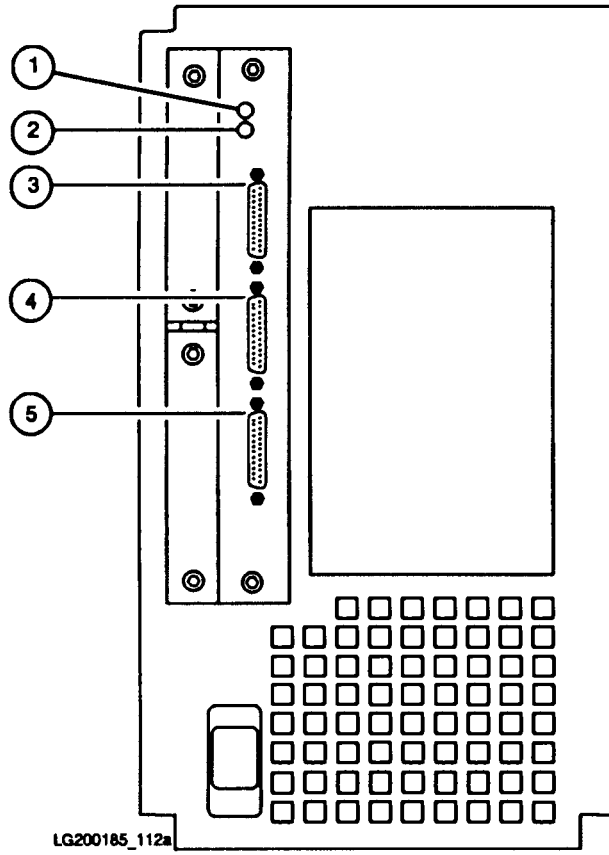
Figure 2-8. HP 9000 807S Rear Panel

Parts Identification

Part Number	Part Name
1	MUX Error Light
2	SCSI Error Light
3	Direct Distribution Cable Connector
4	Modem Connector
5	Console Terminal Connector

Attaching the Active Distribution Panel (Not for HP 9000 807S)

If you have a computer other than the HP 9000 807S, the serial terminals, modems, and printers are connected to your computer through the active distribution panel.

Figure 2-9 shows the active distribution panel. Each panel has eight serial connectors numbered 0 through 7.
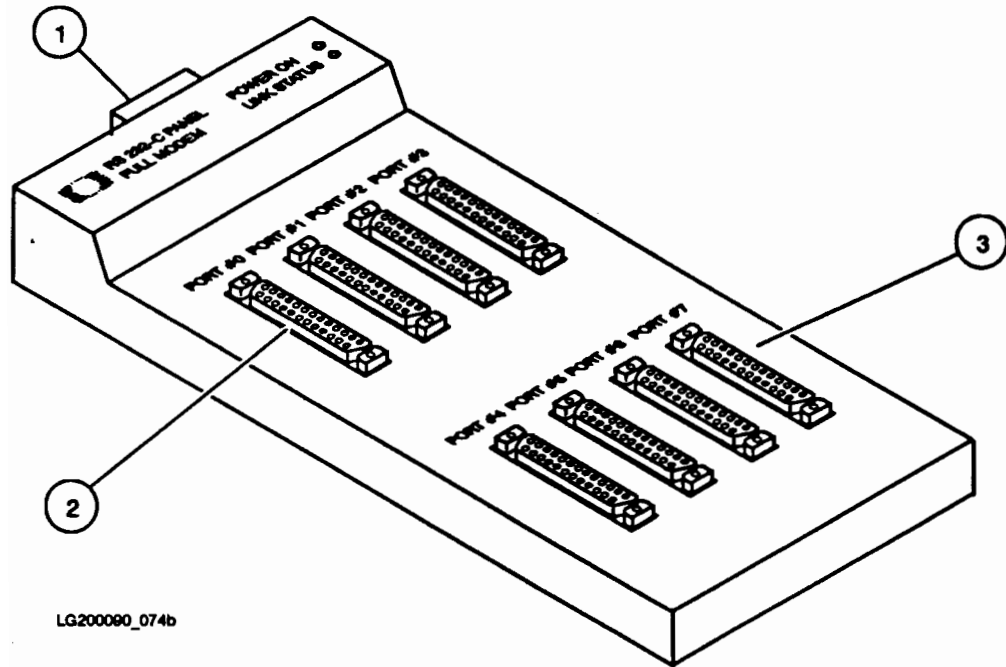
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Figure 2-9. Active Distribution Panel

Parts Identification

Part Number	Part Name
1	Cable Connector
2	Console Terminal Connector (MUX 0)
3	Support Modem Connector (Optional, MUX 0)

The active distribution panel is connected to the connector on the rear of your computer by a special cable. Figure 2-10 shows this cable. The active distribution panel cable has connectors that are smaller than the connectors on the data cable.
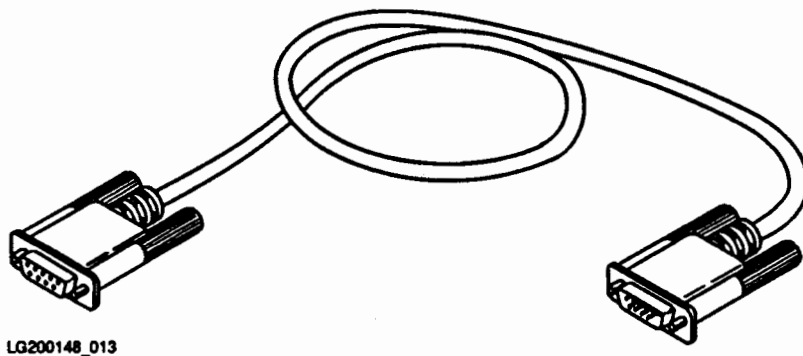
LG200148_013

Figure 2-10. Active Distribution Panel Cable

Figure 2-11 shows the back of the HP 9000 817S, and 837S. Number 7 shows the location of the connector where the active distribution panel cable will be connected. This connector is labeled To ADP.

LG200185_113a
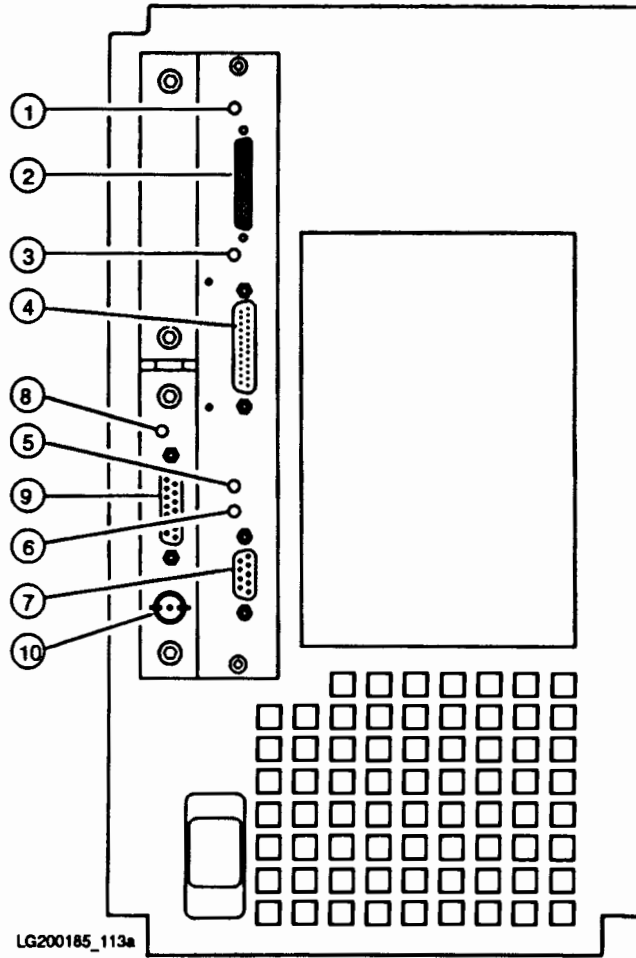
Figure 2-11. HP 9000 817S, and 837S Rear Panel

Parts Identification

Part Number	Part Name
1	SCSI Self Test Light
2	SCSI Connector
3	Term Power Light
4	Parallel Connector
5	MUX Status Light
6	Link Status Light
7	Active Distribution Panel Connector
8	Xcrv/Net Fail, Self Test Fail Light
9	AUI Connector
10	LAN Connector

Figure 2-12 shows the card cage layout of the HP 9000 827S, 847S, and 857S. Number 7 shows the location of the connector where the active distribution panel cable will be connected. This connector is labeled To ADP.connecting|

N O T E

The card cage layout of the HP 9000 857S is identical to the HP 9000 827S, and 847S, except that the HP 9000 857S has six additional I/O card slots.
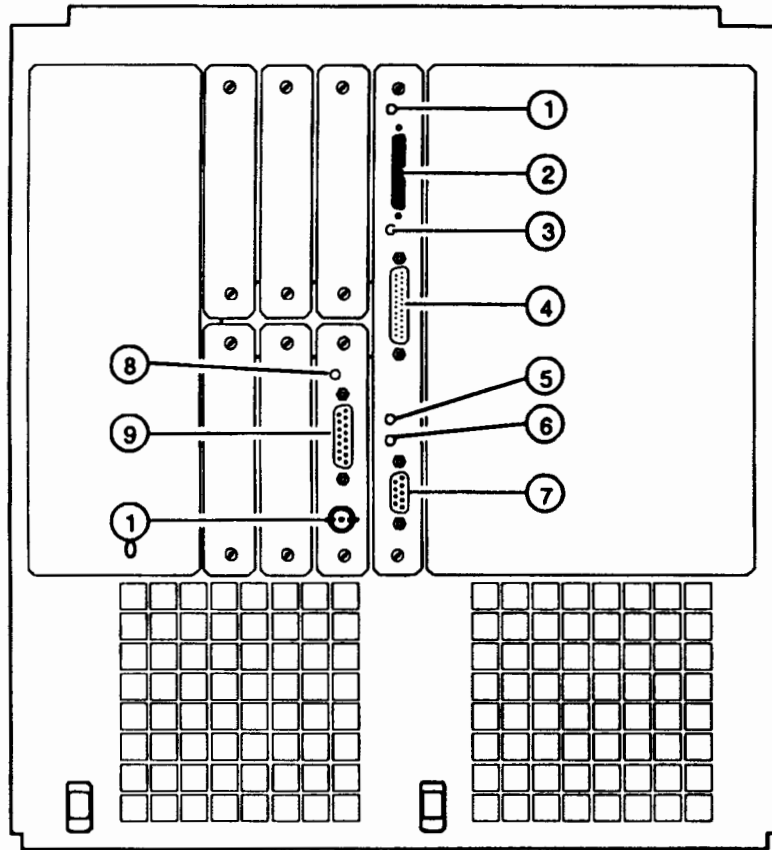
LG200185_116

Figure 2-12. HP 9000 837S, 847S, 857S Rear Panel

Parts Identification

Part Number	Part Name
1	SCSI Self Test Light
2	SCSI Connector
3	Term Power Light
4	Parallel Connector
5	MUX Status Light
6	Link Status Light
7	Active Distribution Panel Connector
8	Xcrv/Net Fail, Self Test Fail Light
9	AUI Connector
10	LAN Connector

Connect one end of the active distribution panel cable to the back of the active distribution panel (figure 2-9, number 1) and the other end to the connector on the back of your computer. This connector is labeled To **ADP**.

You will be connecting your serial peripherals, such as terminals and printers, to the active distribution panel. This will be described in chapter 5.

NOTE

The console terminal and optional support modem may only be connected to this active distribution panel. This panel is identified by your computer as MUX 0. The following section describes additional active distribution panels. These may be used to connect additional terminals and modems, but cannot be used to connect the console terminal or optional support modem.

The active distribution panel may be placed near your computer.

Connecting Additional Active Distribution Panels

You may have additional active distribution panels. These are connected to the MUX cards that were installed in the rear of your computer at the factory. Any additional active distribution panels are connected to your computer using the same type of cable that you used with the first active distribution panel.

1. Connect one end of each additional active distribution panel cable to the back of an active distribution panel.

2. Connect the other end of each additional active distribution panel cable to an available MUX connector on the back of your computer.

Connecting the SCSI Terminator (Not HP 9000 807S)

A SCSI terminator has been supplied with your computer. It is a small rectangular block the same size as the SCSI connector on the back of your computer. Figure 2-11, number 2, and figure 2-12 number 2 show where to connect this terminator.

If you do not have any external drives connected to your SCSI connector, you MUST connect this terminator to the SCSI connector on the back of your computer. If you have connected external drives to your computer, you MUST connect a terminator to the remaining SCSI connector on your last drive. The terminator required for your last drive may not be the same size as the one supplied with your computer.

Connecting the Network

If your have a network (LAN) card installed in your computer, you must connect your computer to your network before you can communicate with other computers. Figure 2-13, number 10 shows the LAN card with its connector. This card is located to the left of the card where you connected the active distribution panel.

LG200185_115a
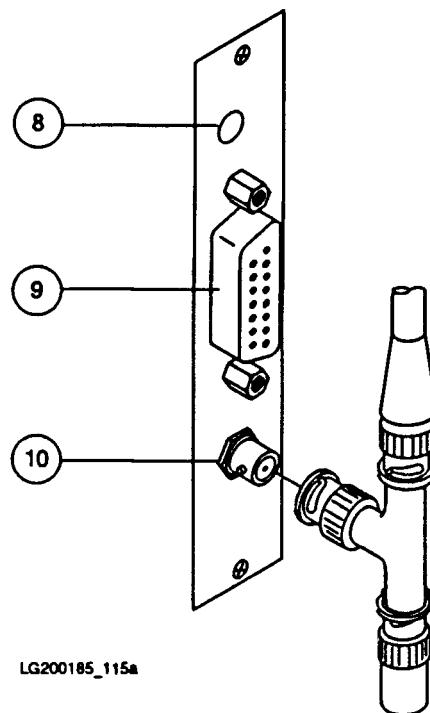
Figure 2-13. LAN Connectors

Parts Identification

Part Number	Part Name
8	Xcrv/Net Fail, Self Test Fail Light
9	AUI Connector
10	LAN Connector

Connect your network cable to the bottom connector on this card.

Your LAN card comes installed from the factory with the bottom connector (the BCN connector) configured. The top connector (AUI connector, figure 2-13, number 9) is also available. This connector can be used for networks such as ThickLAN and twisted-pair. Before you can use this connector, an internal jumper must be changed. Contact your HP Sales and Service Office for assistance in changing this hardware configuration.

NOTE

You cannot use the AUI connector without changing the hardware configuration. The Xcrv/Net Fail, Self Test Fail light will blink if you are attempting to use the AUI connector without changing the hardware configuration.

CAUTION

If you are not connecting your computer to the network at this time, be sure to connect the LAN terminator to your computer. The LAN terminator is provided with your computer and looks like the connector shown in figure 2-13. Attach this terminator to your LAN card in the same way as you would connect the network cable.terminator|

Connecting the Available Support Modem

Figure 2-14, number 4 shows the modem connector on the HP 9000 807S. This is where you would connect the available support modem if you purchase the support contract. This connector is labeled Modem (port 7).modem|
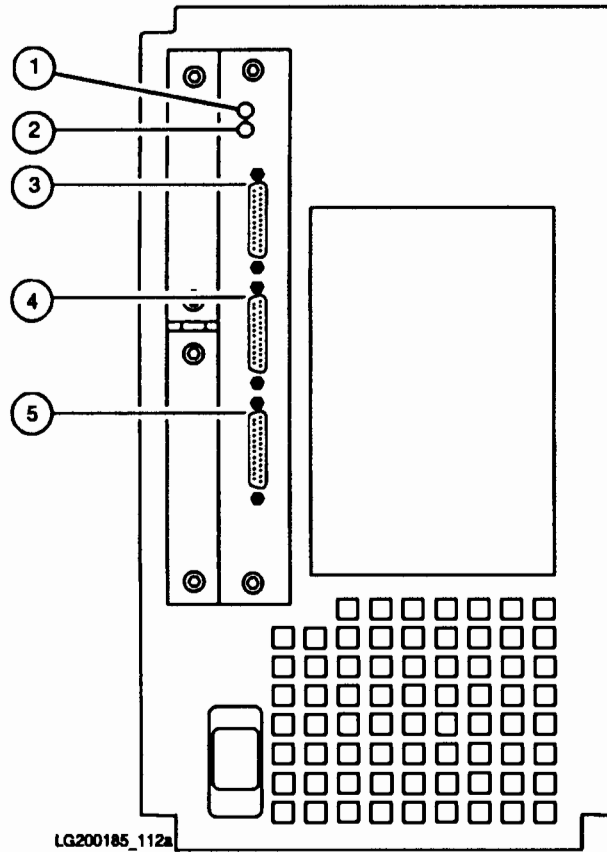
LG200185_112a

Figure 2-14. HP 9000 807S Support Modem Port

Parts Identification

Part Number	Part Name
1	MUX Error Light
2	SCSI Error Light
3	Direct Distribution Cable Connector
4	Modem Connector
5	Console Terminal Connector

Figure 2-15 shows the active distribution panel used on all computers with the exception of the HP 9000 807S. You would connect the available support modem to connector 7 of the active distribution panel if you purchase the support contract.

LG200090_074b
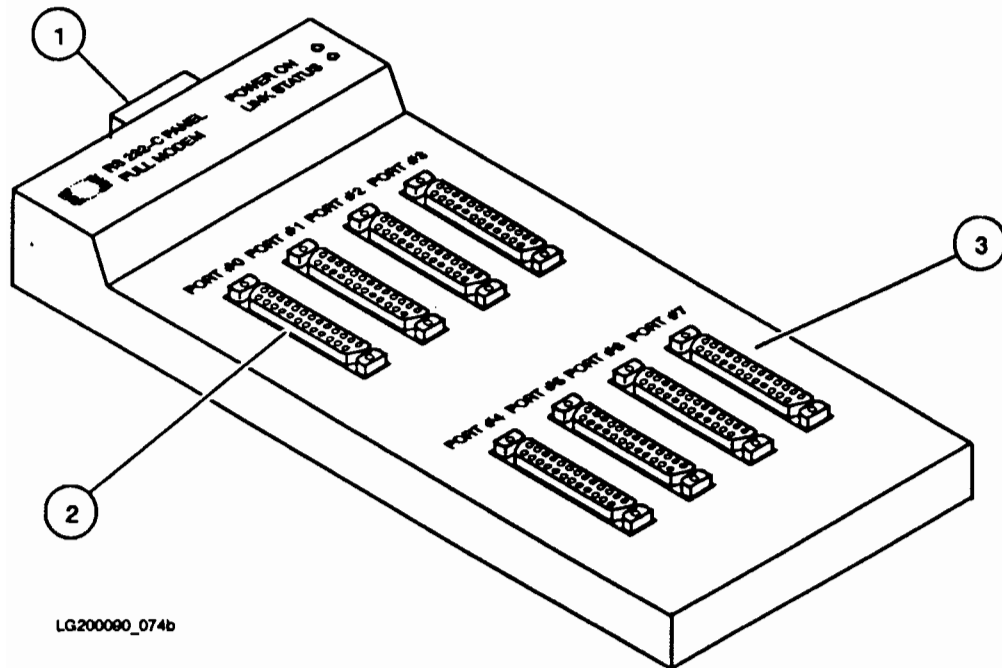
Figure 2-15. Active Distribution Panel

Parts Identification

Part Number	Part Name
1	Cable Connector
2	Console Terminal Connector (MUX 0)
3	Support Modem Connector (Optional, MUX 0)

NOTE

If you have more than one active distribution panel, the support modem must be connected to connector 7 of the active distribution panel attached to the connector marked **To ADP** (MUX 0).

This completes the installation of the basic computer. Follow the instructions in chapter 3 to connect and configure the console terminal.

3

Connecting the Console Terminal

Connecting the Console Terminal

The console terminal is used to initialize and maintain operation of the computer. It is required for booting up the operating system, and it can also be used to add users, modify files, and perform all other system administration functions.

Several different models of HP terminals can be used for the console terminal. These instructions are limited to the installation of the HP 700/92 terminal, which is the HP-supported console terminal for your computer. While the required communications parameters are the same for any terminal, only HP terminals provide the function keys (softkeys) that are necessary for certain functions, such as using SAM, the system administrator.

Figure 3-1 shows the console terminal and its four parts:

- The monitor (1).
- The keyboard (2).
- The keyboard cable (3).
- The power cord (4).

You will also need a console terminal data cable as shown if figure 3-2.

The keyboard cable connects the monitor and the keyboard.
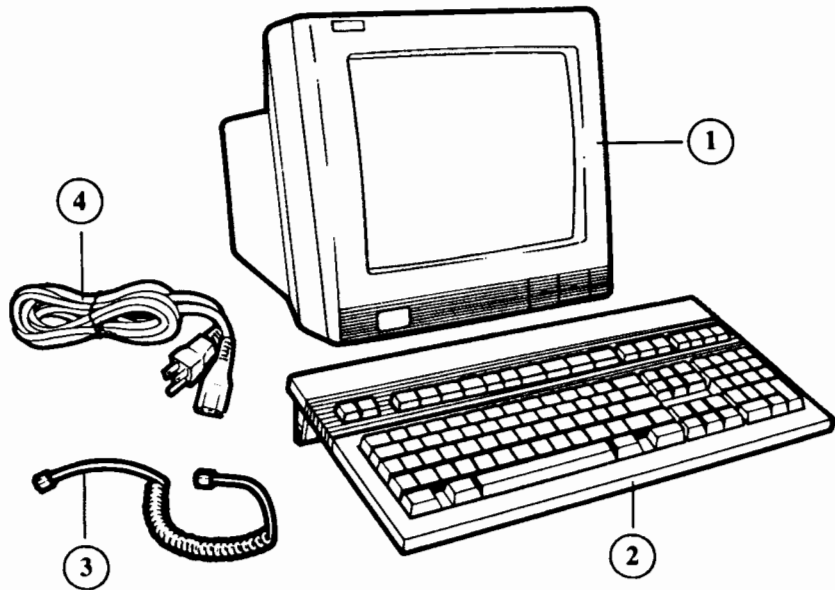
Figure 3-1. Console Terminal

Parts Identification

Part Number	Part Name
1	Monitor
2	Keyboard
3	Keyboard Cable
4	Power Cord

Unpacking the Console Terminal

The HP 700/92 terminal is packed in a separate carton from your computer; this carton contains the keyboard, keyboard cable, and power cord. The console terminal data cable is in the computer carton.

Figure 3-2 show the console terminal data cable.

The console terminal carton also contains the *User's Manual*, which you should refer to in setting up and configuring the console terminal. After the console terminal is unpacked, it is ready to connect to your computer.
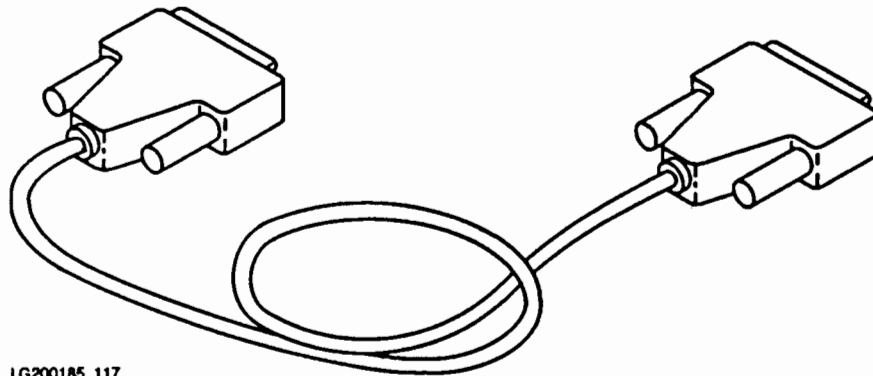
LG200185_117

Figure 3-2. Console Terminal Data Cable

Connecting the Console Terminal

Cable the console terminal by completing the following steps:

1. Connect the keyboard cable between the keyboard and the monitor. The cable is connected to the rear center of the keyboard and to the connector on the rear of the monitor. Figure 3-3 shows the rear of the keyboard, and how to tuck the flat portion of the cable under the cable channel protector. Figure 3-4 shows the monitor rear connections. The monitor connector is number 3.

2. Connect either end of the console terminal data cable to the Datacomm connector on the back of the monitor (see figure 3-4 number 1) and tighten the connector.

3. If you have the HP 9000 807S, connect the other end of the data cable to the console terminal connector at the rear of your computer. Figure 3-5, number 5, shows the location. This connector is labeled Console (port 0). If you have any other model of computer, connect the other end of the data cable to connector 0 of the active distribution panel. Figure 3-6, number 2 shows the active distribution panel.

4. Plug one end of the power cord into the back of the monitor (figure 3-4 number 4) and the other end into the power outlet.
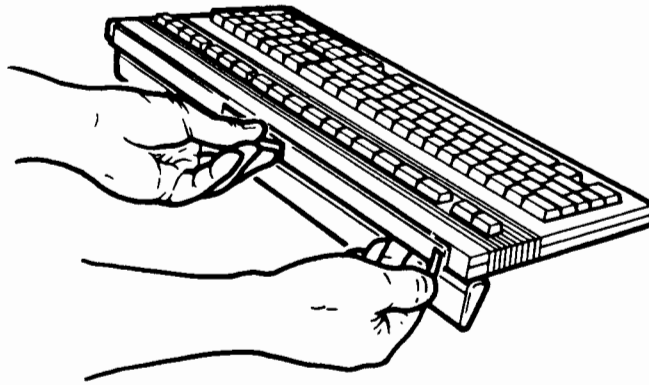
Figure 3-3. Keyboard
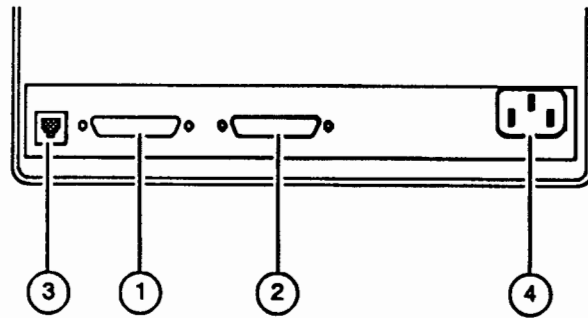
LG200185_120

Figure 3-4. Rear of Monitor

Parts Identification

Part Number	Part Name
1	Datacomm Connector
2	Printer Connector
3	Keyboard Connector
4	Power Connector

LG200185_112a
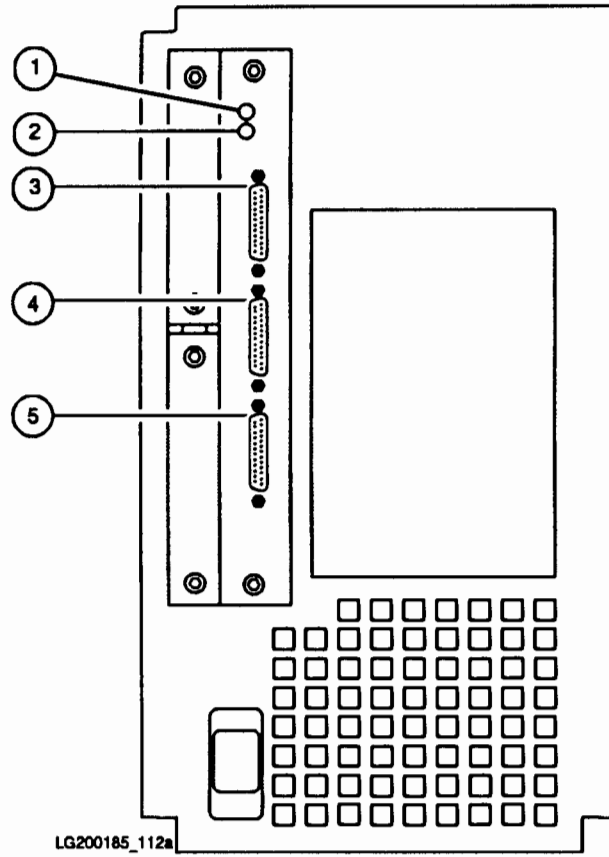
Figure 3-5. HP 9000 807S Console Terminal Connector

Connecting the Console Terminal

Parts Identification

Part Number	Part Name
1	MUX Error Light
2	SCSI Error Light
3	Direct Distribution Cable Connector
4	Modem Connector
5	Console Terminal Connector
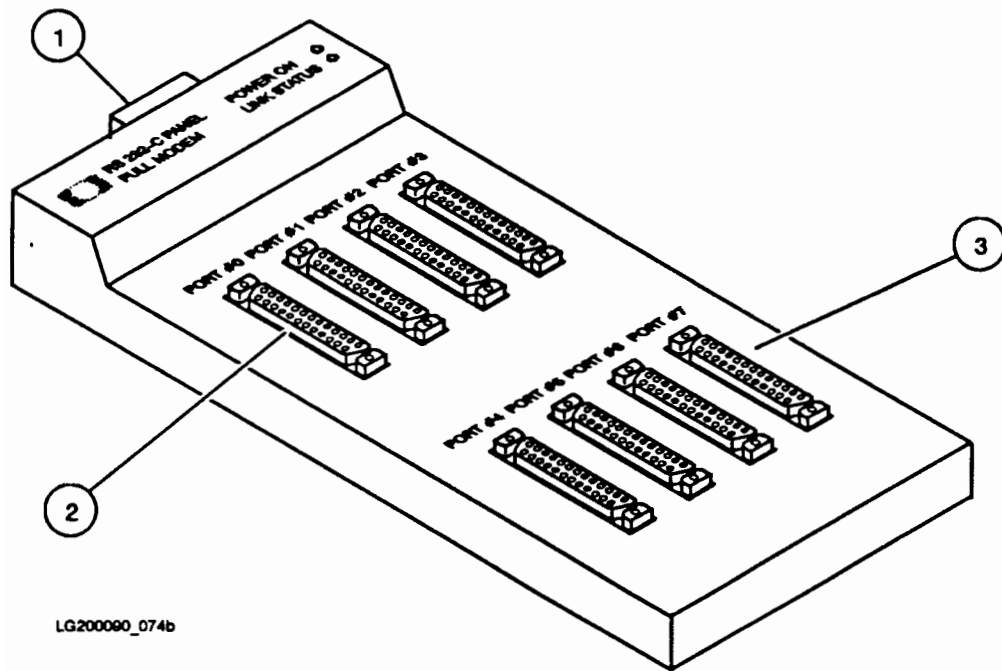
LG200090_074b

Figure 3-6. Active Distribution Panel

Parts Identification

Part Number	Part Name
1	Cable Connector
2	Console Terminal Connector (MUX 0)
3	Support Modem Connector (Optional, MUX 0)

This completes connecting of the console terminal.

Turning On the Console Terminal

Turn on the console terminal by pressing the (ON/OFF) button at the bottom left corner of the front of the monitor (figure 3-7, number 1). Adjust the (Brightness) control (figure 3-7, number 2) and (Contrast) control (figure 3-7, number 3). These two controls can be found below the bottom right corner of the front of the monitor.
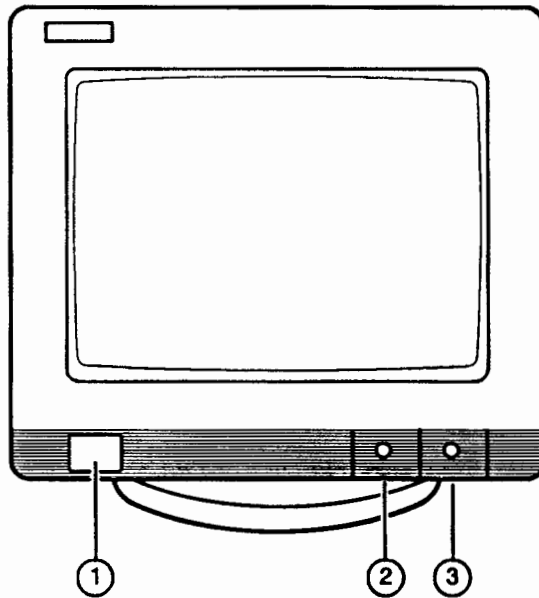
Figure 3-7. Console Terminal Controls

Parts Identification

Part Number	Part Name
1	ON/OFF Button
2	Brightness Control
3	Contrast Control

Configuring the Console Terminal

The operating characteristics of the console terminal must be set to match those required by your computer before your computer is turned on. If you are using the HP 700/92 terminal for the console terminal, the following steps outline the procedures to follow. If you are using a different terminal, follow the instructions in the user's manual for that terminal.

There are four console terminal set-up screens to check:

- Operating modes.

- Global configuration.

- Terminal configuration.

- Datacomm configuration.

The external device configuration does not have to be set unless you want to connect a printer to the console terminal.

Setting the Operating Modes

You will now ensure that the operating modes are set correctly.

Press the (User System) key at the top center of the keyboard. The bottom line of the monitor will display a menu that corresponds to the function keys on the top row of the keyboard. The function keys (F1)-(F8) are also called softkeys because their function, and name, changes as indicated by the menu on the monitor.

Press the function key (F4), that corresponds to the modes menu.

Eight operating modes will appear on the screen. You must check the setting of the following three operating modes:

- BLOCK MODE.

- REMOTE MODE.

- AUTO LF.

Each operating mode is enabled or disabled by pressing its corresponding function key [F1]-[F8]. A mode is enabled when an asterisk (*) appears next to the mode name. A mode is disabled when the asterisk does not appear next to the mode name.

Set the three key operating modes as follows:

- BLOCK MODE—Disabled (no asterisk).

- REMOTE MODE—Enabled (asterisk).

- AUTO LF—Disabled (no asterisk).

Setting the Global Configuration

You will now ensure that the global configurations are set correctly.

1. Press the [User System] key at the top center of the keyboard.

2. Press function key [F8], which corresponds to the `config keys` menu.

3. Press function key [F1], which corresponds to the `global config` menu.

4. The GLOBAL CONFIGURATION screen now appears on the monitor. Press function key [F4], that corresponds to `DEFAULT VALUES`.

5. Press function key [F1] to select `SAVE CONFIGURATION`.

Setting the Terminal Configuration

You will now ensure that the terminal configurations are set correctly.

1. Press the [User System] key at the top center of the keyboard.

2. Press function key [F8], which corresponds to the `config keys` menu.

3. Press function key (F5), which corresponds to the `terminal config` menu.

4. The TERMINAL CONFIGURATION screen now appears on the monitor. Press function key (F4), which corresponds to `DEFAULT VALUES`.

5. Press function key (F1) to `SAVE CONFIGURATION`.

Setting the Datacomm Configuration

You will now ensure that the datacomm configurations are set correctly.

1. Press the (User System) key at the top center of the keyboard.

2. Press function key (F8), which corresponds to the `config keys` menu.

3. Press function key (F3), which corresponds to the `datacomm config` menu.

4. Move the highlight around the DATACOMM CONFIGURATION screen by using the (Tab) key.

5. When the desired field is highlighted, set the appropriate datacomm values by pressing function key (F2), which corresponds to `NEXT CHOICE`, until the correct values appear on the screen.

   The correct datacomm values are:

   a. BaudRate = 9600.

   b. Parity/DataBits = 0'S/7.

   c. RecvPace = Xon/Xoff.

6. Press function key (F1) to select `SAVE CONFIGURATION`.

These values are required in order for your computer to properly start up. The other datacomm values will not affect how the console terminal operates.

Completing Console Installation

This completes the console installation.

The display on the console will automatically go blank after 15 minutes of inactivity. To reactivate the screen display without sending unintentional commands to the operating system, press the (Shift) key.

You have configured your console terminal so that it will work with your computer, but you have not yet configured your operating system to match your needs. This will be done following the instructions in chapter 4.

4

Turning On Your Computer

Turning On Your Computer

You are now ready to turn on your computer. This chapter describes how to power-up your computer and set the basic operating system information.

NOTE

This manual assumes that you have the operating system pre-installed on your internal hard disk drive. If your computer does not have the operating system pre-installed on the hard disk drive, see the *Installing and Updating HP-UX*, and appendix B of this manual, for additional installation instructions.

Applying Power

After you turn on your computer, you will be asked to provide information about your:

- System (Host) Name (if you have networking installed, this name will be used by other computers to identify your computer).

- Internet Protocol (IP) address (if you have networking installed, this address will be used by other computers to identify your computer).

- Time Zone.

Obtain this information before turning on your computer. You may have a system administrator or network administrator who can provide this information.

You will be asked if you have networking installed. If you respond that you do not have networking installed, you will not be asked for the IP address.

Figure 4-1 shows a detailed view of the front of your computer. At the top are: the (ON/OFF) button and four indicator lights. Underneath is the tape drive.
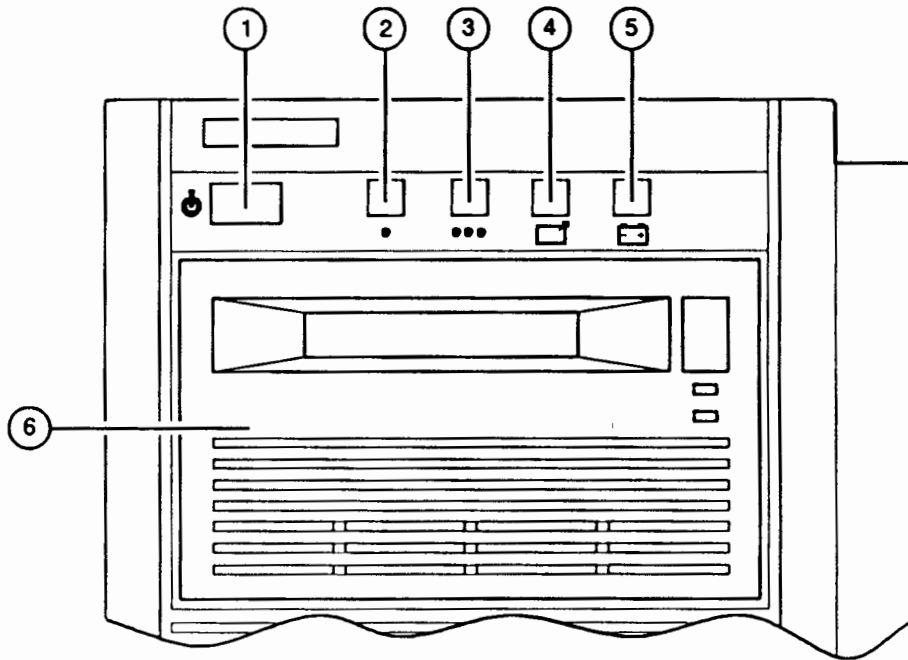
LG200185_056

Figure 4-1. Front Panel Detail

Parts Identification

Part Number	Part Name
1	ON/OFF Button
2	Left Operating Status Light
3	Right Operating Status Light
4	Remote Terminal Indicator
5	Battery Backup Indicator
6	Tape Drive

The (ON/OFF) button (figure 4-1, number 1) is located at the top left of the front of your computer. Next to the (ON/OFF) button are four indicator lights. The two left-hand lights (figure 4-1, numbers 2 and 3) indicate the operating status of your computer. Remote operation is indicated by the second light from the right (figure 4-1, number 4). The right-hand light (figure 4-1, number 5) shows operation of the optional battery backup feature. Chapter 10 provides additional information of these indicator lights.

NOTE

Turning off the (ON/OFF) button puts the computer in standby and does not remove the electrical power. Power is still applied when this button is in the off position. To remove AC power from the computer, remove the power cord.

Turn on the console terminal. If you have not already done so, configure the console terminal as described in chapter 3.

Turn on your computer by pressing the (ON/OFF) button at the top left front of your computer (figure 4-1, number 1).

It will take several minutes for the operating system to boot up. The operating status lights will flash during this time.

Setting Basic Operating System Information

During operating system boot-up, you will need to provide the system name, set the time zone, and confirm the date and time. If you have indicated that you have networking installed, you will be asked to provide the IP address. This information will only be requested the first time your turn on your computer.

Setting the System Name

You will see several pages of login information scroll past the screen on the console terminal. After that you will now enter your system name. This is the name other computers will use to identify your computer on a network. You may select the default name for now, but if you want to change it later, you will have to use the Networks/Communication menu in SAM, the system administration manager (see chapter 7).

Setting IP Address

If you have responded that you have networking installed, you will now be asked to provide your IP address. This is the address other computers will use to identify your computer on a network. You may select the default address for now, but if you want to change it later, you will have to use the Networks/Communication menu in SAM, the system administration manager (see chapter 7).

Setting Time Zone and Confirming Date and Time

You will now be asked to select your time zone and to confirm that the current date and time is correct. Follow the instructions on the screen and set these values.

The computer will now take a few minutes to process the information that you have just provided.

Completing Boot-Up

After the operating system completes boot-up, the console terminal will display the login window. This indicates that software boot-up was successful, and that you are ready to log in as the super-user and to set the super-user password.

If you do not receive the login window, see the chapter 11.

Selecting Your Language Environment

You may now select the language in which you want your on-line help screens and HP-UX reference (man) pages to appear. This will set the language environment of your operating system, but will not effect the language of your applications.

Select the Configuration Menu from the login window. A sub-menu will appear. From this menu, select the language in which you want to work.

Selecting Your Session Type

You may now select the session type, or shell, which you want to use. Some HP-UX commands work differently depending on the shell that you are using. *How HP-UX Works: Concepts for the System Administrator* presents information on shells.

Your computer comes configured to operate in the Bourne Shell. You may select other shells by selecting the Configuration Menu for the login window. From this menu select the session type (shell) that you want.

You may select the Bourne Shell, C Shell, Korn Shell, Keyshell, or TSM.

NOTE

If you computer has only 8 MB of memory, it is best to use a session type other than TSM. If more than two users select the TSM session, performance will be very slow.

NOTE

You will only see the login window, and be able to select the language environment and session type, from the console terminal. These features will not appear on individual user's terminals.

Setting the Super-User Login

After the operating system has booted-up, you will see the login window displayed on the console terminal. You now must log in as the super-user. The super-user has full system administrator privileges such as adding and removing users, and performing all system administration functions.

The standard name for the super-user login is root. HP-UX commands are case sensitive. They differentiate between letters typed in upper case and those typed in lower case. Be sure to type **root** in lower case.

Type **root** for Username.

Press (Return) after typing **root**.

Setting the Super-User Password

Next enter the password that you want as super-user. The password should be at least six characters and may contain numeric (0-9) and alphabetic (a-z, A-Z) characters. Upper and lower case DOES make a difference. The password should contain at least one number. When you type the password, it will not show on the screen. This is a security measure to ensure that other people will not see your password.

You will be asked to re-enter the password to make sure that it is correct.

NOTE

Remember and protect the password! It is your key to the system administrator super-user privileges.

After logging in, your console terminal will show the super-user prompt, which is a number sign (#). You will type commands after this prompt. After you type a command, press the (Return) key.

5

Adding Peripherals

Adding Peripherals

There are two steps required to add peripherals:

- Connecting the peripheral to your computer.
- Configuring your operating system to recognize the peripheral.

Where to Connect Peripherals

The HP 9000 807S provides eight serial connectors, six through the direct distribution cable (ports 1-6), one console terminal connector (port 0), and one modem connector (port 7). Figure 5-1 shows the direct distribution cable.

LG200185_078a
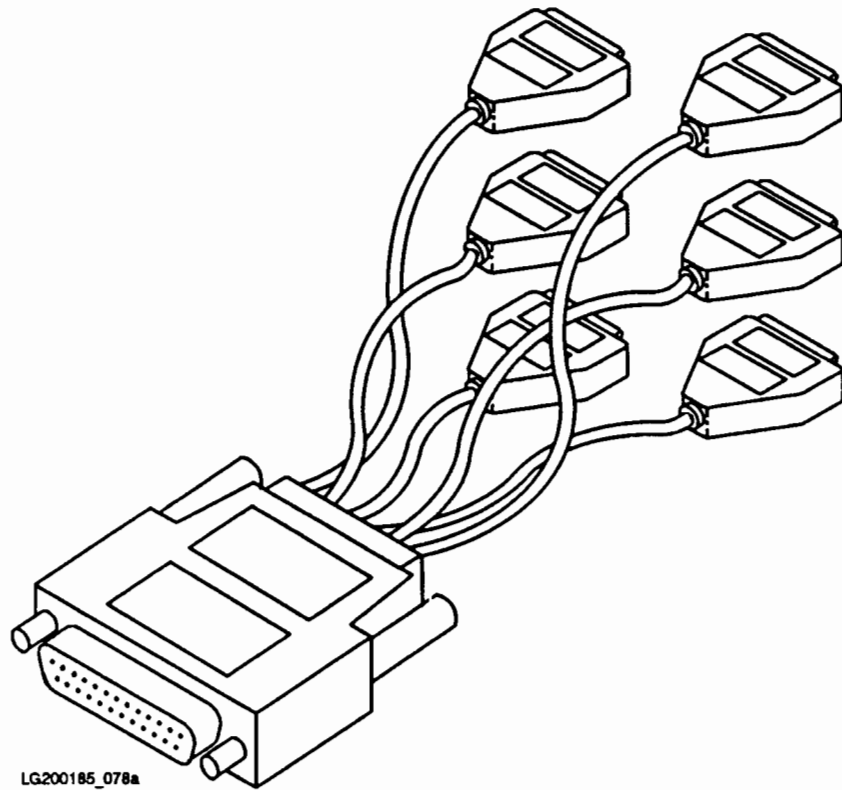
Figure 5-1. Direct Distribution Cable

With the exception of the HP 9000 807S, serial connectors are available through the active distribution panel connected to your computer.

The connectors are numbered port0 through port7.

Each connector can be used to connect a terminal, printer, modem, or other serial device.

Figure 5-2 shows the active distribution panel. You will notice that the panel has eight connectors (numbered 0 through 7) for connecting serial devices such as terminals and printers.

Connector 0, on the first active distribution panel (MUX 0), is reserved for the console terminal. Connector 7, on the first active distribution panel, is the only connector that can be used for the support modem.
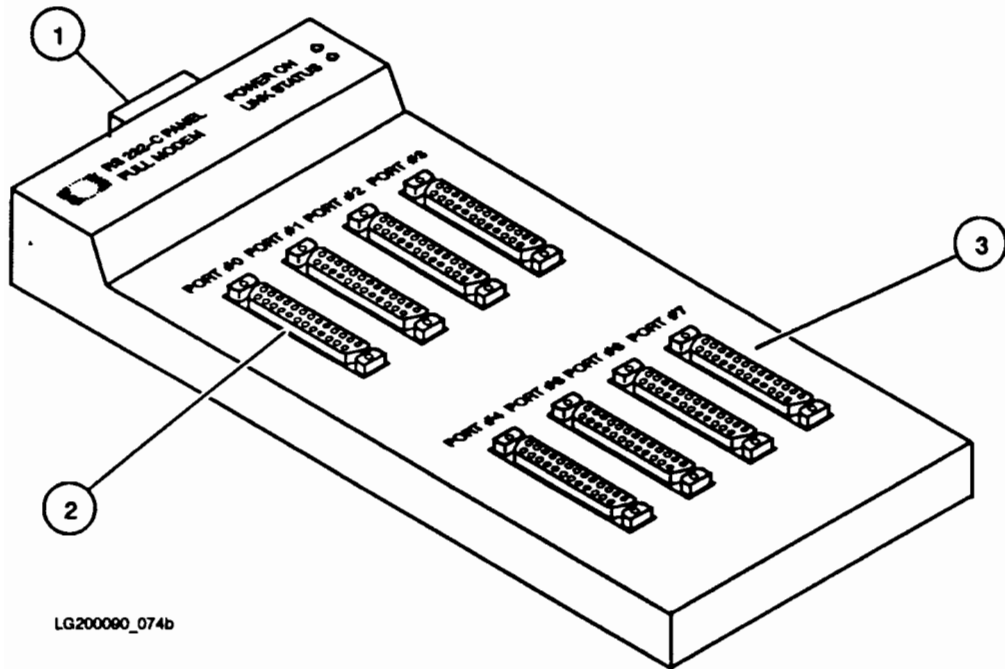
LG200090_074b

Figure 5-2. Active Distribution Panel

Parts Identification

Part Number	Part Name
1	Cable Connector
2	Console Terminal Connector (MUX 0)
3	Support Modem Connector (Optional, MUX 0)

You will plug the serial data cable (see figure 5-3) from your terminal or printer into one of the connectors on the active distribution panel. You can connect the data cable to the active distribution panel with the computer turned on.
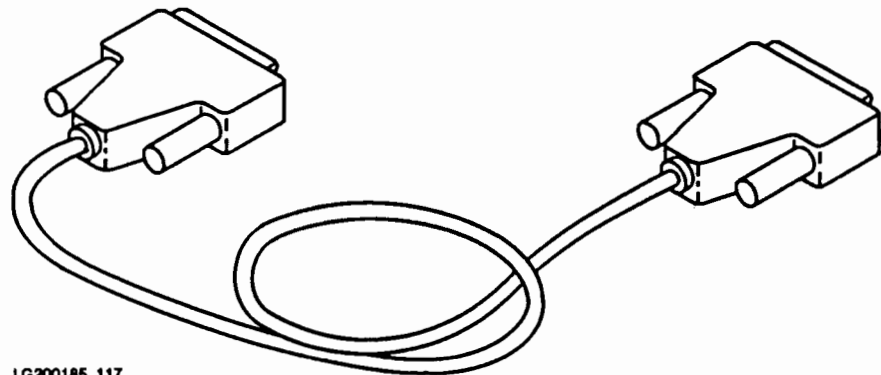
LG200185_117

Figure 5-3. Data Cable

Adding Terminals

To add a terminal to your computer:

1. Physically connect the terminal to your computer.

2. Configure the operating system to recognize the terminal.

Connecting a Terminal

You connect terminals to your computer differently depending on the model of the terminal. However, you must complete the following three steps for all terminals:

- Connect the monitor and keyboard together with the appropriate cable.

- Connect the data cable from the monitor to an available connector on the active distribution panel. On the HP 9000 807S, connect the cable to one of the connectors on the direct distribution cable.

- Connect the power cord from the monitor to the power outlet.

You must set the default operating parameters on each terminal to match the requirements of your computer before you can use it. Chapter 3 describes the steps in configuring a HP 700/92 terminal. See the section "Configuring the Console Terminal" for instructions. For a different model terminal, see its user's manual.

In order to support non-English characters, the parity is usually set to "none".

Configuring the Operating System for the Terminal

After connecting the terminal to your computer, use SAM to add your terminal to the operating system. For additional information, see the *Installing Peripherals* and *System Administration Tasks* manuals.

To assist you with system administration tasks, HP-UX provides a system administration manager utility called SAM. SAM is a menu-driven tool designed to help you perform many operations such as adding users or peripherals to your computer.

How To Use the System Administration Manager

SAM is executed by typing **sam** (in lower case) at the super-user prompt. Information on SAM is available by moving the arrow keys to **How to Use SAM** on the opening screen and pressing the (Return) key.

- You can move the cursor by using the arrow keys, or by pressing the (Tab) key.

- To execute a SAM command, press the (Return) key, the (Space Bar), or one of the function keys, depending on where you are in the program.

- Help on any task is available by pressing function key (F1).

- You can exit SAM by pressing function key (F8), which returns you to the previous screen, until you have completely backed out of the program. The program will then ask if you really want to quit. Type y to quit.

Configuring Your Operating System With SAM

While in SAM:

1. Move the cursor to **Peripheral Devices** and press the (Return) key.

2. Move the cursor to **Add a Terminal or Modem** and press the (Return) key.

A list of the MUX cards installed in you computer will appear. Select the one to which you have attached the terminal. The first MUX is listed as **mux0**.

The configuration screen will again appear. Complete the screen as follows, pressing the (Return) key after each step:

1. Mark **Usage** with an x before **terminal**. This is the default.

2. Enter the number (0 through 7) that corresponds to the connector you are using.

3. Enter the speed (baud rate) of your terminal. A speed of 9600 baud is the most common, and is the default.

Press function key (F4) `Perform Task` to complete adding the terminal.

Repeat the above procedures to add additional terminals, and then exit SAM.

See chapter 6 for information on adding new users and groups to your computer.

Adding Printers

To add a printer to your computer:

- Physically connect the printer to the computer.
- Configure the operating system to recognize the printer.

Connecting a Serial Printer

You connect printers to your computer differently depending on the model of your printer. Refer the the instruction manual for your printer. You must complete the following steps for all models:

- Connect the data cable from the printer to a connector on the active distribution panel on your computer.
- Connect the power cord from the printer to the power outlet.
- Load paper into the printers.
- Turn on the printer.
- Put the printer on-line.

Configuring the Operating System for the Serial Printer

After connecting the printer to your computer, use SAM to add your printer to the operating system. For additional information, see the *Installing Peripherals* and the *System Administration Tasks manuals*.

To assist you with system administration tasks, HP-UX provides a system administration manager utility called SAM. SAM is a menu-driven tool

designed to help you perform many operations such as adding users or peripherals to your computer.

How To Use the System
Administration Manager

SAM is executed by typing **sam** (in lower case) at the super-user prompt. Information on SAM is available by moving the arrow keys to **How to Use SAM** on the opening screen and pressing the (Return) key.

• You can move the cursor by using the arrow keys, or by pressing the (Tab) key.

• To execute a SAM command, press the (Return) key, the (Space Bar), or one of the function keys, depending on where you are in the program.

• Help on any task is available by pressing function key (F1).

• You can exit SAM by pressing function key (F8), which takes you to the previous menu, until you have completely backed out of the program. The program will then ask if you really want to quit. Type **y** to quit.

Configuring Your Operating
System With SAM

While in SAM:

1. Move the cursor to **Peripheral Devices** and press the (Return) key.

2. Move the cursor to **Printers and Plotters** and press the (Return) key.

3. Move the cursor to **Add a Local Printer and Plotter** (one not connected to a network) and press the (Return) key.

4. Move the cursor to **Add a Serial (RS-232) Printer** and press the (Return) key.

A list of MUX cards installed in your computer will appear. Select the MUX card to which your printer is connected. The first MUX card is identified as mux0.

The configuration screen will again appear. Complete the screen as follows, pressing the (Return) key after each step:

1. Enter a name for the printer. You should use a name which can be easily identified by the users. The name must be one word long.

2. Enter the number (0 through 7) that corresponds to the connector you are using on the active distribution panel or direct distribution cable (0 through 5).

3. Select a printer model, or interface, from the list that appears when the function key (F1) **Help** is pressed while the cursor is on **Printer model/interface** . Press the down arrow key [▼] to see additional selections. Select the printer model, by moving the highlight to the selection that matches the one you are installing and pressing (Return).

   If your printer model is not listed, select one of the interfaces from the top of the list. **HPGL1** should be selected for a graphics printer, and **PCL** should be selected for a text printer. If you don't know which interface option is best for your printer, select one and see if it works correctly when the printer test, which is part of this installation process, is run. If needed, try another interface option until you find the one that works best with your printer.

4. Set the printer priority level. The default printer should have the highest priority (7).

5. Indicate if this printer is the default printer. The default printer is the one active used when the line printer command is given and no printer name is provided.

6. You can supply a name for the printer class. This is optional.

Press function key (F4) **Perform Task** to complete adding the printer.

Run the printer test as indicated by following the instructions on the console terminal. A successful test will print the word root, and a brief test message on the page.

Repeat the above procedures to add additional printers, and then exit SAM.

Adding Modems

Modems can be easily added to the active distribution panel, or for the HP 9000 807S, port 7, using SAM. Follow the procedures under "Connecting Terminals" in this chapter, and mark modem rather than terminal under Usage on the first screen under Add a Terminal or Modem.

For additional information see the *Installing Peripherals* manual.

Chapter 6 provides instructions on adding users, groups, and applications to your computer.

6

Adding Users, Groups, and Applications

Adding Users, Groups, and Applications

Before individuals can be given access to the computer, they must be identified to the operating system as users. Each user begins a session on the computer in a specific home directory. This home directory is established when the user is first added to the computer. Users are organized into groups along with other users who have similar requirements for operating system resources, or who regularly share programs or files.

How To Use the System Administration Manager

To assist you with system administration tasks, HP-UX provides a system administration manager called SAM. SAM is a menu-driven tool designed to help you perform many operations, such as adding users or groups to your computer.

SAM is executed by typing **sam** (in lower case) at the super-user prompt. Information on SAM is available by moving the cursor, using the arrow keys, to `How to Use SAM` on the opening screen and pressing the (Return) key.

- You can move the cursor by using the arrow keys, or by pressing the (Tab) key.

- To execute a SAM command press the (Return) key, the (Space Bar), or one of the function keys depending on where you are in the program.

- Help on any task is available by pressing function key (F1).

- You can exit SAM by pressing function key (F8) until you have completely backed out of the program. The program will then ask if you really want to quit. Press y to quit.

Adding Users

Use SAM to assist in adding users to the computer:

1. Move the cursor to **Users** and press the (Return) key.

2. Select **Add a New User Account to the System** and press the (Return) key.

Complete the screen as follows, pressing the (Return) key after each step:

1. Type in the login name of the user. All names are limited to a single word.

2. Type the group name of the user. If you identify a group for the user at this time, you do not have to add the user to a group later using the **Groups** feature of SAM.

3. Type in the user's home directory. You can use the default home directory that is: /users/, or type in a different directory name.

4. Type in the name of the user's start-up program. You can use the default start-up program /bin/sh, or type in a different start-up program.

5. The optional user information may be completed, or ignored.

6. Go to **Specify Additional Information for This User?**, using the arrow keys, and type **y**.

7. You do not have to change the User Identity number given on the screen.

8. If your user will be using the optional X-Windows program, enter **y** for **Login with X11 windows?**.

9. If you want your user to use TSM, the Terminal Session Manager, as the work area, enter **y** for **Login with TSM?**.

Press function key (F4), **Perform Task**, and SAM will add the new user.

SAM will now ask you to enter the user password. Type in the password. All passwords should be at least six characters long and should contain at least one number.

You will be asked to re-enter the password to make sure that it is correct.

Repeat these steps if you wish to add more users.

You can also use SAM to remove a user account from your computer, view or modify a user's account information, or reactivate a user account. When you have completed adding users, you can exit SAM.

Adding Groups

It is good practice to organize the users of a multi-user computer into groups. This not only makes system administration much easier, but allows for the allocation and accounting of resources and the ability of group members to more easily share files and to be assigned common levels of access to the computer. A group is simply a list of users who share common computer resources. A group may include the members of a department, or a project.

Use SAM to assist in adding groups to the computer:

1. Move the cursor to **Groups** and press the (Return) key.

2. Select **Add a New Group to the System** and press the (Return) key.

Complete the screen as follows:

1. Type in the group name and the login names of the users to be included in the group. All names are limited to a single word.

2. Press the function key (F4), **Perform Task**, and SAM will add the new group.

Repeat these steps if you want to add more groups.

You can also use SAM to remove a group from the computer, or to view or modify group membership. When you have completed adding groups, you can exit SAM.

Adding Applications

The procedures for adding applications to your computer is different for each application. Follow the instructions which come with each new application. For assistance, refer to the following manuals:

- *System Administration Tasks*
- *Installing and Updating HP-UX*
- *How HP-UX Works: Concepts for the System Administrator*
- *HP-UX Reference.*

These manuals are part of the System Administration Set.

Adding Applications

7

Configuring Your Network Software

Configuring Your Network Software

Configuring your network consists of entering information about the following network software:

- LAN (Local Area Network).

- ARPA (Advanced Research Project Agency).

- NFS (Network File System).

If your have purchased the optional X.25 networking product, see the two included X.25 manuals for information on configuring this product.

You enter the configuration information using SAM (System Administration Manager), a tool that automates the configuration process. You must log in as the super-user (root) to use SAM.

For additional information on these networking products, order the following manuals:

- *Installing and Administering LAN/9000* (part number 98194-60526).

- *Installing and Administering ARPA Services* (part number B1014-90007).

- *Installing and Administering NFS Services* (part number B1013-90009).

The following is an overview of the steps required to configure your network software:

- *Complete the configuration worksheets shown on the following pages.*
  This step is very important. Don't continue until you've gathered all the information you need to be successful configuring your network. If there is a network administrator in your company, check with that person for help in completing the worksheets.

- *Configure your computer's LAN card and "subnetwork" information* (Configuring LAN/9000 software).

- *Configure your computer to communicate with other computers* (Configuring ARPA Services software). The computer you use (called the "local host" computer) can send information to, and receive information from, other computers (called "remote host"). Set this up by configuring ARPA.

- *Configure your computer to transfer files between computers* (Configuring NFS software). This step may not apply to you; check with your network administrator. If necessary for your needs, you may configure your local computer to access files on remote computers as if they were on your local computer, and give remote computers access to your local files.

- *Reboot the operating system.* Rebooting the operating system will put into effect all the configuration changes you've made.

NOTE

Before starting the configuration process, complete the configuration worksheets on the following pages. You can get this information from your network administrator.

Table 7-1. Local, Remote, and Gateway Worksheet

Category of Information	SAM Screen To Use	Type of Information	Your Configuration Information
Local Host Computer	Note: This info. is requested when starting the computer	IP Address	
		Hostname	
	View/Modify a LAN Card's Configuration	Is this LAN card to be placed on a subnetwork?	[] yes [] no
		Subnet Mask	
Remote Host Computer	Add/Modify Connectivity Information Remote System	Remote Hostnames	
		Remote Host IP Address	
Gateway Computer	Specify the Default Gateway	Default Gateway Hostname	
		Default Gateway IP Address	

Table 7-2. NFS Client and Server Worksheet

Category of Information	SAM Screen To Use	Type of Information	Your Configuration Information
NFS Client	Allow This System to Access Remote File Systems via NFS	Will you allow this computer to access remote file systems using NFS (become an NFS client)?	[] yes [] no
	Add (Mount) an NFS File System	Remote System Name	
		Remote Mount Directory	
		Local Mount Directory	
		When would you like the directory mounted?	[] now [] on boot
		Write Protection	[] read [] read/write
		Set user ID execution allowed?	[] yes [] no
NFS Server	Allow Remote Systems to Access Local File Systems via NFS	Will you allow remote computers to access local file systems using NFS (become an NFS server)?	[] yes [] no
	View/Modify Which Systems Can Access Local File Systems	Which remote computers can access your file system?	
	View/Modify RPC Services' Security	Which RPC (Remote Procedure Call) services should have additional network security?	
		Which remote computers may have access to these RPC services?	

How To Use the System Administration Manager

Use SAM, the system administration manager, to configure your network software. Start SAM by typing **sam** (in lower case) at the super-user prompt. Information on SAM is available by moving the cursor, using the arrow keys, to `How to Use SAM` on the opening screen and pressing the (Return) key. The SAM main menu is shown below.

- Move the cursor by using the arrow keys, or by pressing the (Tab) key.

- To execute a SAM command, press the (Return) key, the (Space Bar), or one of the function keys depending on where you are in the program.

- If you get to a screen you don't want to be, press the (f8) Exit Task or Previous Menu key to back out.

- If you type something into a screen but decide to exit before making the change, press **Exit Task**. SAM will ask if you want to exit the screen and cancel changes.

- After you press (Perform Task), a flashing `-- working --` sign will appear at the bottom of the screen. Wait until that stops flashing before pressing another key.

- Get help on any task by pressing function key (F1).

- Exit SAM by pressing function key (F8) until you have completely backed out of the program. The program will then ask if you really want to quit. Press **y** to quit.
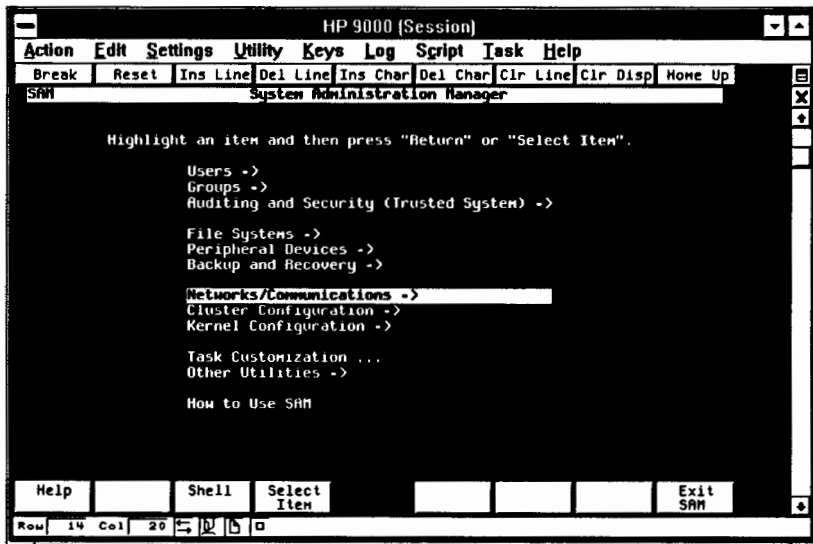
Figure 7-1. System Administration Manager Main Menu

Identifying LAN Card and Subnetwork Information (Configuring LAN/9000)

The first step in configuring your network is to define LAN card and subnetwork information. *If you don't read anything else in this section, read and perform the following task.*

The LAN hardware card is already installed on your computer as *lan0*. The LAN/9000 software has also been preinstalled. LAN/9000 provides network connections for the ARPA and NFS network services you'll configure later in this chapter.

When you started your computer (in chapter 4, *Turning on Your Computer*), you were asked to enter the computer's IP address and node name (host name). The operating system should already be aware of that information (see *Setting Basic Operating System Information* earlier in this manual).

If you are connecting this LAN card to a subnetwork, you need to enter the "subnet mask," an address that allows you to communicate with computers on other LANs.

N O T E

Check with your network administrator to see if you need to perform this task. If not, skip to the next section, *Communicating with Other Computers*.

In order to define your subnetwork mask, do the following:

1. At the main menu, select the **Networks/Communications** menu item.

2. Select the **LAN Hardware and Software** menu item.

3. Select the **View/Modify a LAN Card's Configuration** menu item.

4. Press the **Choices** softkey. You'll see a "Choices" screen with one or more LAN card codes. With the arrow keys, select lan0 and press (Return). The **View/Modify** screen will return, with additional fields.

---

5. Fill in the form using the information in the *Local Host Computer* section of the configuration worksheet. View the help screens for information about filling in the form.

6. Press the `Perform Task` softkey.

7. Press the `Exit Task`, `Previous Menu` or `Main Menu` softkeys when you are finished.

By performing the steps above, you have selected the card number (lan0) and identified which subnetwork this card is connected to. After completing this task, continue to *Communicating with Other Computers*.

Figure 7-2. View/Modify a LAN Card's Configuration

Communicating with Other Computers (Configuring ARPA)

If you don't read anything else in this section, read and perform the following tasks, in order:

- Adding information about other computers.

- Specifying the default gateway.

The next step in configuring your network is to tell your computer about other computers you wish to communicate with. ARPA Services lets your computer communicate on a LAN with other computers. When you configure ARPA, you identify the "remote" computers with which your computer will communicate.

Adding Information About Other Computers

1. At the main menu, select the `Networks/Communications` menu item.

2. Select the `LAN Hardware and Software` menu item.

3. Select the `ARPA Services Configuration` menu item.

4. Select the `Add/Modify Connectivity Information About a Remote Syste` menu item.

5. Fill in the form using the information in the *Remote Host Computer* section of the configuration worksheet. View the help screens for information about filling in the form.

6. Press the `Perform Task` softkey.

7. Repeat steps 5 and 6 to add information about more computers.

8. Press the `Exit Task`, `Previous Menu`, and `Main Menu` softkeys when you are finished.

By performing the steps above, you have identified another computer or computers you want to communicate with. This might include a "corporate" computer you wish to share data with, or other computers in your building.
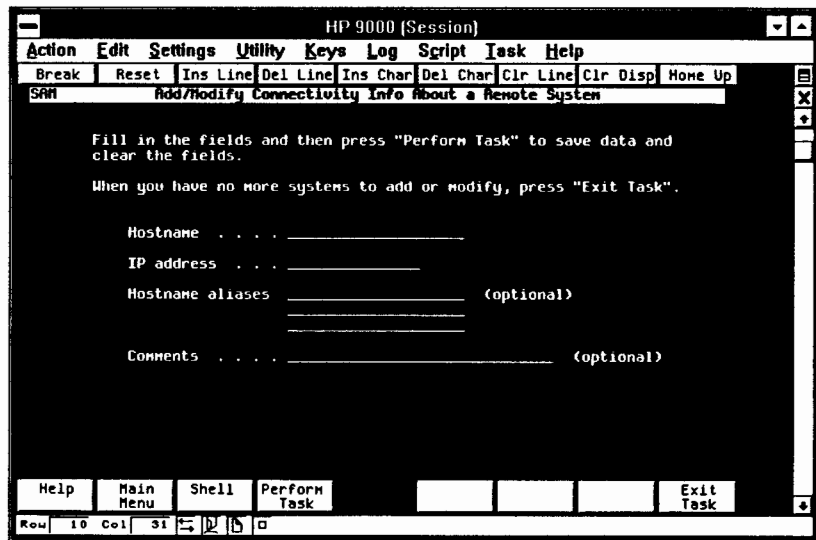
Figure 7-3. Add/Modify Connectivity Information About a Remote System

Specifying the Default Gateway

1. At the main menu, select the `Networks/Communications` menu item.

2. Select the `LAN Hardware and Software` menu item.

3. Select the `ARPA Services Configuration` menu item.

4. Select `Specify the Default Gateway`.

5. Fill in the form using the information from the *Gateway Computer* section of the configuration worksheet. View the help screens for information about filling in the form.

6. Press **Perform Task** .

7. Press the **Exit Task** , **Previous Menu** , and **Main Menu** softkeys when you are finished.

By performing the steps above, you have set up the default gateway. A gateway connects two or more networks together and routes information among the networks to which it is connected. The information about the gateway computer must already have been added in a previous step.

If there is just one gateway you use to reach all computers on other parts of the network, use the **Specify the Default Gateway** form in SAM to avoid having to enter the same gateway information every time SAM prompts you for it.

N O T E

The next step in configuring your network software is to configure NFS; however, you may not need to perform this step. Check with your network administrator. If you don't wish to configure NFS, skip to the section, *Rebooting Your Computer*. Once you've completed that section, you're done configuring your network.

```
┌─┬──────────────────────────────────────────── HP 9000 [Session] ──────────────────── ▼ ▲ ┐
│ Action  Edit  Settings  Utility  Keys  Log  Script  Task  Help                             │
│ ┌──────┬───────┬──────────┬──────────┬──────────┬──────────┬──────────┬──────────┬───────┐│ ▣
│ │ Break│ Reset │ Ins Line │ Del Line │ Ins Char │ Del Char │ Clr Line │ Clr Disp │Home Up││ ☒
│ ├SAM───┴───────┴────────── Specify the Default Gateway ──────────────────────────────────┤│ ◆
│ │                                                                                          │ ▢
│ │     Edit the "hostname" field and then press "Perform Task" if you                       │
│ │     want to change the default gateway.                                                  │
│ │                                                                                          │
│ │     Default gateway hostname:                                                            │
│ │                                                                                          │
│ │     Default gateway IP address:                                                          │
│ │                                                                                          │
│ │                                                                                          │
│ │                                                                                          │
│ │                                                                                          │
│ │                                                                                          │
│ │                                                                                          │
│ │                                                                                          │
│ │                                                                                          │
│ │ ┌──────┬───────┬───────┬─────────┬─────────┬─────────┬─────────┬─────────┬────────┐     │
│ │ │ Help │ Main  │ Shell │ Perform │         │         │         │         │  Exit  │     │
│ │ │      │ Menu  │       │  Task   │         │         │         │         │  Task  │     │
│ │ └──────┴───────┴───────┴─────────┴─────────┴─────────┴─────────┴─────────┴────────┘     │ ◆
│ │ Row   10 Col   39                                                                        │
└─┴───────────────────────────────────────────────────────────────────────────────────────┘
```

Figure 7-4. Specify the Default Gateway

Transferring Files Between Computers (Configuring NFS)

If you don't read anything else in this section, read and perform the following tasks, in order:

- Allowing this computer access to remote file systems via NFS.

- Adding (mounting) an NFS file system.

- Allowing remote computers access to local file systems via NFS.

- Viewing or modifying which remote computers can access local file systems.

- Viewing or modifying remote procedure call (RPC) services' security.

This section will help you configure your computer to be able to transfer files between your computer and other computers. This is called "creating an NFS client and server."

When you access files on a remote computer, your local computer is called the "client" and the remote computer which supplies the files is called the "server." When a remote computer accesses files on your local computer, the remote computer is the "client" and the local computer is the "server." In this way, your local computer can be defined as both a client and a server at the same time.

By identifying your local computer as a client, you are telling the operating system that you wish to have access to files on remote computers. By identifying your local computer as a server, you are telling the operating system that you wish to make files on your computer available to remote computers.

Go to the SAM NFS Configuration menu using the following steps. The remaining configuration tasks will begin from that menu.

1. At the main menu, select the `Networks/Communications` menu item.

2. Select the `LAN Hardware and Software` menu item.

   NFS is not supported over the X.25 link product, so do not choose the X.25 selection.

3. Select `NFS (Network File System) Configuration`.

Now you are ready to create an NFS client and an NFS server by configuring local and remote access to files.

Allowing Your Computer Access to Remote File Systems via NFS

1. From the `NFS Configuration` menu, select the

   `Allow This System to Access Remote File Systems via NFS`
   menu item.

   If the NFS configuration menu reads
   `Prevent This Computer from Accessing Remote File Systems via`
   then your operating system is already set up to be a client. Skip to the next task you wish to perform.

2. Answer "y" (yes) to the question in the pop-up window to allow your computer to be an NFS client. Press the space bar to continue to the next task.

By answering "yes" to the question above, you have allowed access to remote computers from your computer. Go to the next section to identify the specific remote file systems you wish to access.

```
┌──────────────────────────────────────────────────────────────┐
│ ▬                         HP 9000 (Session)               ▼ ▲ │
│ Action  Edit  Settings  Utility  Keys  Log  Script  Task  Help│
│ Break │ Reset │Ins Line│Del Line│Ins Char│Del Char│Clr Line│Clr Disp│Home Up│ ▤ │
│ SAM              NFS (Network File System) Configuration          ▥ │
│                                                                   ▮ │
│      Highlight an item and then press "Return" or "Select Item".  ▯ │
│                                                                     │
│      Add/Modify Connectivity Info About a Remote System ...         │
│      View/Remove Connectivity Info About a Remote System ...        │
│      Specify the Default Gateway ...                                │
│                                                                     │
│    • Allow This System to Access Remote File Systems via NFS        │
│                                                                     │
│      ┌──────────────────────────────────────────────────────┐      │
│      │ Do you want this system to become an NFS client? (y or n) │      │
│      └──────────────────────────────────────────────────────┘      │
│                                                                     │
│      View/Modify Which Systems Can Access Local File Systems ...    │
│                                                                     │
│      View/Modify RPC (Remote Procedure Call) Services' Security ... │
│                                                                     │
│    • Details: Become an NFS client - set NFS_CLIENT=1 in "/etc/netnfsrc" and │
│               start 4 "/etc/biod" daemons.                          │
│                                                                     │
│  ┌────┐ ┌────┐ ┌────────┐    ┌──────┐ ┌────┐ ┌────┐          ▼ │
│  └────┘ └────┘ └────────┘    └──────┘ └────┘ └────┘            │
│ Row   10  Col   11  ⇆ ▣ ▤ □                                     │
└──────────────────────────────────────────────────────────────┘
```

Figure 7-5. Allow This Computer to Access Remote File Systems via NFS

Adding (Mounting) an NFS File System

1. From the NFS Configuration menu, select the Add (Mount) an NFS File System menu item.

2. Fill in the form using the information in the *NFS Client* section of the configuration worksheet. View the help screens for information about filling in the form.

3. Press Perform Task to add your information, then Exit Task to get back to the NFS Configuration menu.

By performing these steps, you have identified which file systems you wish to access on remote computers.
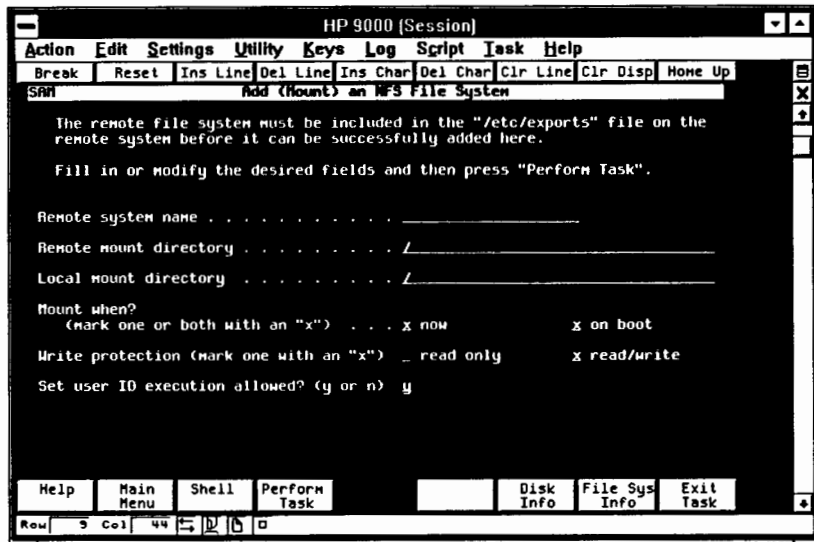
Figure 7-6. Add (Mount) an NFS File System

Allowing Remote Computers Access to Your File System via NFS

1. From the NFS Configuration menu, select the

   Allow Remote Systems to Access Local File Systems via NFS
   menu item.

   If the NFS configuration menu reads
   Prevent Remote Computers from Accessing Local File Systems v
   then your computer is already set up to be a server. Skip to the next task
   you wish to perform.

2. Answer "y" (yes) to the question in the pop-up window to allow your
   computer to be an NFS server.

By answering "yes" to the above question, you have identified which local file
systems may be accessed by remote computers.
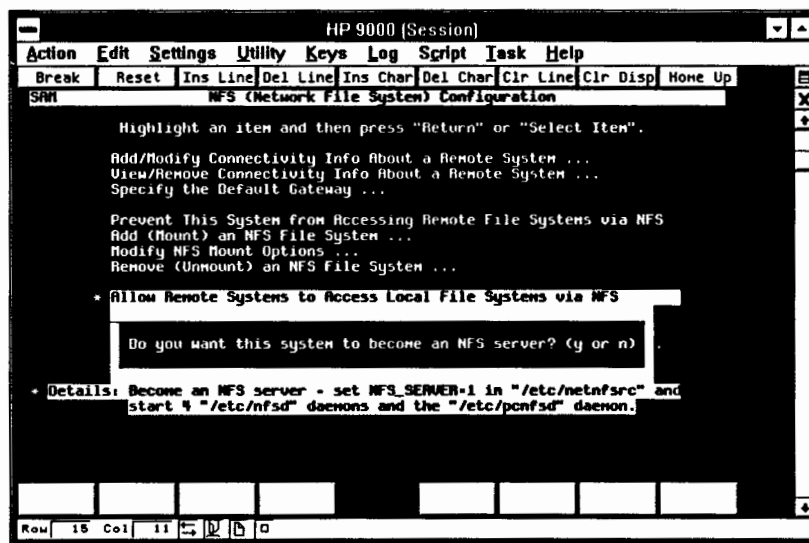
Figure 7-7. Allow Remote Systems to Access Local File Systems via NFS

Viewing or Modifying Which Computers Can Access Your File System

1. From the NFS Configuration } menu, select
   View/Modify Which Systems Can Access Local File Systems.

   A window appears that tells you which remote computers, if any,
   are currently allowed to access local file systems. This is a "for your
   information" screen. Press the space bar to continue.

2. Fill in the form using the information in the *NFS Server* section of the configuration worksheet. View the help screens for information about filling in the form.

3. Press **Perform Task**.

By performing the steps above, you have identified which remote computers may access local file systems.

```
 ─                          HP 9000 (Session)                    ▼ ▲
 Action  Edit  Settings  Utility  Keys  Log  Script  Task  Help
  Break  │  Reset │Ins Line│Del Line│Ins Char│Del Char│Clr Line│Clr Disp│ Home Up │  ▤
 SAM            View/Modify Which Systems Can Access Local File Systems           ▤

         Fill in the fields and then press "Perform Task" to save data and clear
         the fields.

         File system to which NFS access is allowed or denied:  /

         Current status or choice:  x Allow all remote systems access
         (mark one with an "x")     _ Allow only specific remote systems access
                                    _ Deny all remote systems access

         Allow asynchronous writes?  (y or n)  n




  Help   │  Main  │  Shell │ Perform │        │        │        │       │  Exit   │ ▾
         │  Menu  │        │  Task   │        │        │        │       │  Task   │
 Row    6  Col   61
```

Figure 7-8. View/Modify Which Systems Can Access Local File Systems

Viewing or Modifying Remote Procedure Call (RPC) Service Security

1. From the **NFS Configuration** menu, select
View/Modify RPC (Remote Procedure Call) Services' Security.

2. Select the Choices function key for a list of RPC services. Use the arrow keys to highlight your choice, then press (Return).

3. Fill in the form using the information from the *NFS Server* section of the configuration worksheet. View the help screens for information about filling in the form.

4. Press Perform Task.

5. Press Exit Task, Previous Menu, or Main Menu when you are finished.

By performing the steps above, you have identified which RPC services may be accessed by remote computers, and which remote computers may access them.

This completes the NFS configuration portion. To implement the changes into the operating system, go to the "Rebooting Your Computer" section.
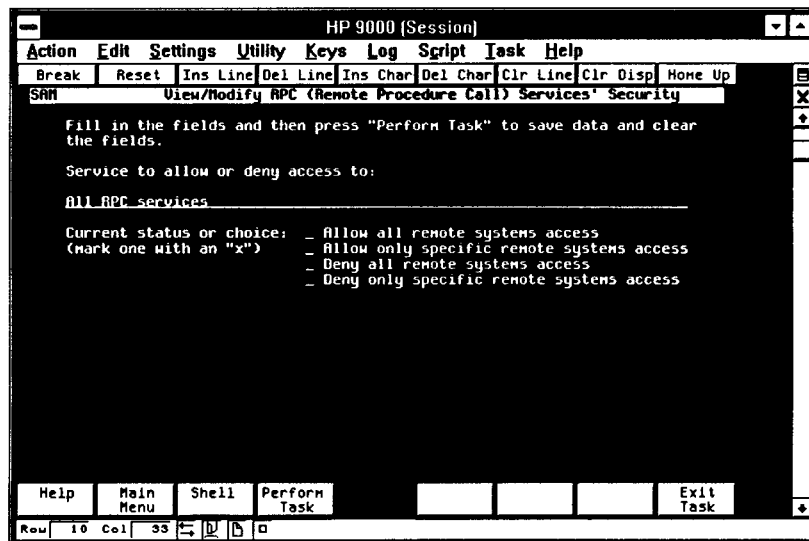
Figure 7-9. View/Modify RPC (Remote Procedure Call) Services' Security

Rebooting Your Computer

After you've configured LAN, ARPA, or NFS, you need to reboot the computer to make those changes effective. A message appears to let you know that a kernel regeneration and reboot are necessary. When this happens:

1. Finish all your NFS configuration tasks.

2. Press **Main Menu** and **Exit SAM** to exit SAM.

3. When the kernel regeneration and reboot message appears, select kernel regeneration.

4. When the kernel regeneration is complete and the reboot message appears, reboot your computer.

After rebooting, you've completed configuring your network.

CAUTION

Before rebooting, be sure no one is logged onto your computer. If you *do not* reboot the operating system when you exit SAM, NFS Services will not run with the configurations you just made.

8

Backing Up the Operating System

Backing Up the Operating System

You have put a lot of time and effort into installing and customizing your operating system. This work can easily be lost by a hardware failure, a operating system crash, or if you accidentally remove or corrupt a file. It is critically important that you do a full backup of all files before the computer is first put on line, and that you establish and maintain a periodic backup schedule.

It is essential that you purchase one set of HP-UX operating system tapes per site. You will not be able to boot up your computer from your backup tape. This backup tape, however, will allow you to restore the customization that you have done, such as restoring the users you have added.

Your operating system has been pre-configured in the factory to provide features that make it easier to use. If you install the standard HP-UX operating system, these features will not be present. See appendix B for information on adding these features to the standard HP-UX operating system.

Backing up all of your files will take about one and one-half hour.

Load a blank tape into the tape drive. Figure 8-1 shows the DDS tape drive.
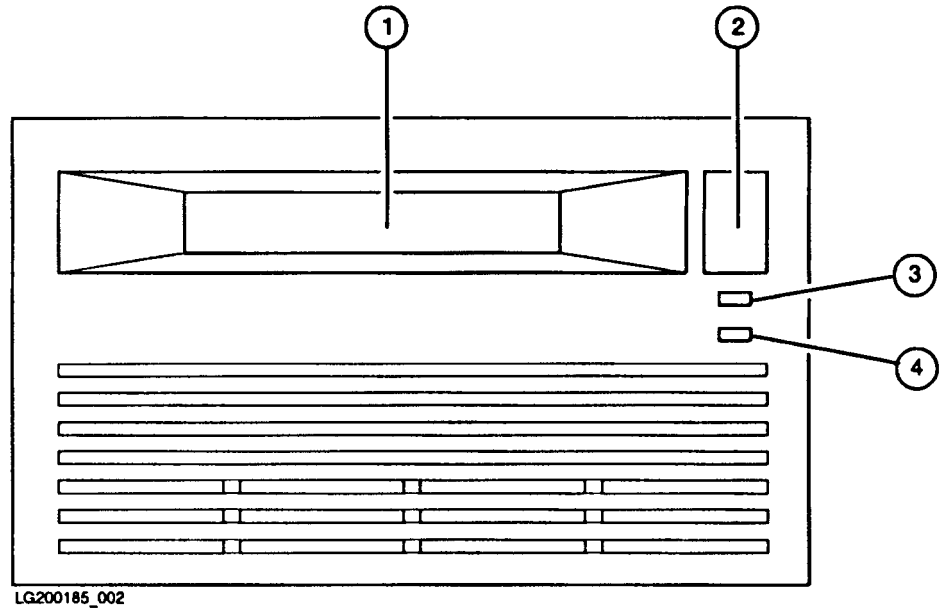
LG200185_002

Figure 8-1. Tape Drive

Parts Identification

Part Number	Part Name
1	Cassette Door
2	Unload Button
3	Upper (cassette) Status Light
4	Lower (drive) Status Light

SAM provides a utility for you to backup and recover your files. Perform the following steps:

- Type sam.

- Select Backup and Recovery.

- Select **Backup Files Interactively** .

- In the table provided, under "Files to be Included", a / will appear the beginning of the first line. This indicates that all files will be included.

- Go down to the **Device File** line and press the function key (F1) which selects **Help** .

- Several device file names will be listed. Press the function key (F4) which selects **Select Item** to select the first device file name: **/dev/rmt/0h**.

- Press function key (F4) which selects **Perform Task** .

- After your files are backed up, exit SAM.

9

Ending Your Work Session

Ending Your Work Session

When you are finished working on your computer, DO NOT turn your computer off. You computer is a multi-user system, and other people may be using it. If you turn it off, you will deny them access to the computer, and may cause them to loose some of their work.

If you have to turn off your computer, see *System Administration Tasks* for information on shutting down your computer.

When you are finished working on your computer, end your work session by following these steps:

1. Exit your application software.

2. Type **exit** to return to the login prompt. If you have several work sessions (shells) opened, you may have to type **exit** several times before you return to the login prompt.

This leaves you at the login prompt, and the computer is ready for the next user to log in.

This completes the tasks needed to get your computer up and running. If you have problems, see the next chapter.

Checking If Your Computer Is Working Properly

Checking If Your Computer Is Working Properly

It is important that you verify proper operation of your computer. Proper boot up of the operating system does not indicate that all of the hardware is working properly. Only by checking the lights and displays can you be confident that your computer is working properly.

Most of the lights and displays are on the front of the cabinet, but to check some of the lights, you will have to look at the back of the cabinet. You will not be exposed to any safety hazards, such as high voltages, when you check these lights.

Front Panel

The front panel, mounted at the top of the front of the cabinet, contains the following displays:

- Operating Status (two lights) See figure 10-1, numbers 2 and 3.

- Remote Console. See figure 10-1, number 4.

- Battery Backup. See figure 10-1, number 5.
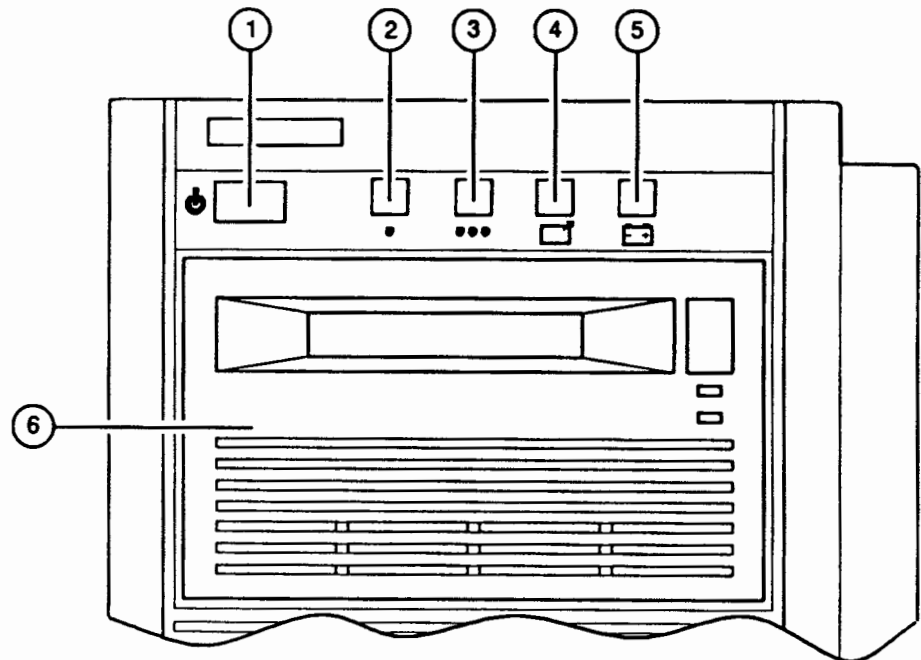
LG200185_056

Figure 10-1. Front Panel Detail

Parts Identification

Part Number	Part Name
1	ON/OFF Button
2	Left Operating Status Light
3	Right Operating Status Light
4	Remote Terminal Indicator
5	Battery Backup Indicator
6	Tape Drive

Operating State

The operating status of your computer is indicated by two lights on the extreme left of the control panel. The **Run** light is green, and the **Fault** light is orange. Table 10-1 gives the status for each combination of lights.

Table 10-1. Operating State Lights

Run Light	Fault Light	Operating Status
Off	Off	The computer is shut down and power is off.
Off	On	The computer is in a fault state and halted.
On	Off	This is the normal run state for the computer.
On	On	The computer is in the test, or warning mode.

Normal operation is indicated when the **Run** light is lit and the **Fault** light is not lit.

Remote Console

The remote console light will be on when the remote console has been enabled. This light should typically be off. The remote console is used by Hewlett-Packard to provide support for your computer. It is connected to your computer through telephone lines connected to the support modem connected to your modem connector. If you have purchased a support contract, you will receive information on using this feature.

Battery Backup

The battery backup light will be on when the AC power has failed and the computer is in battery backup mode. If this light is on and any other lights are also on, the batteries are being charges. This light should normally be off.

Tape Drive

The tape drive is located on the front of your computer. Figure 10-2 shows the tape drive. The cassette door is indicated by number 1. Number 2 is the (Unload) button. Number 3 is the upper (cassette) light, and number 4 is the lower (drive) light.
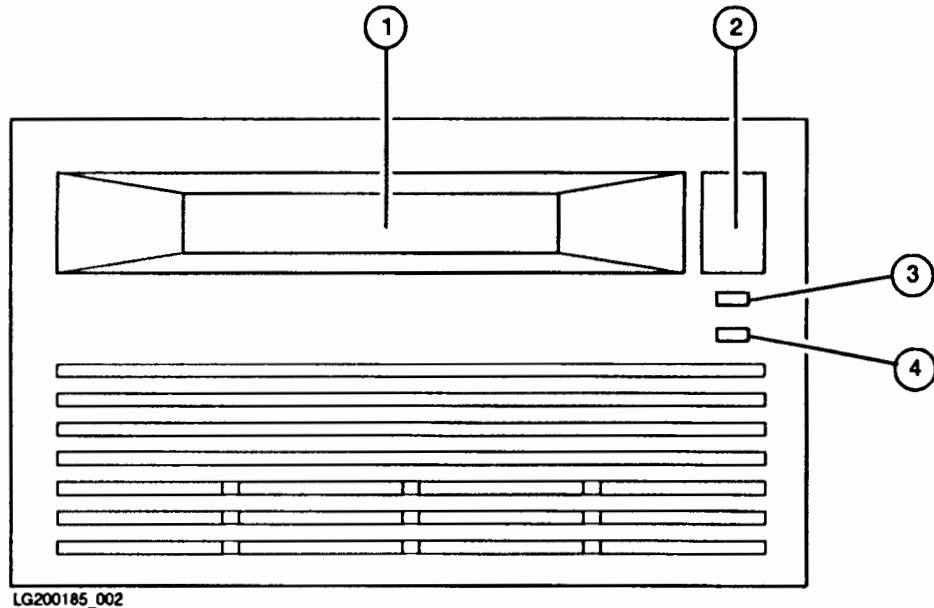

LG200185_002

Figure 10-2. Tape Drive

11

What To Do If You Have
Problems

What To Do If You Have Problems

There are several things that you should check if your computer does not boot up to the login prompt, or if the displays and indicator lights do not appear as described in the preceding chapter. These include:

- Make sure that your computer is cabled properly.

  □ Check that the power cord is connected and plugged into an operating outlet (two power cords on the HP 9000 827S, 847S, 857S).

  □ Check that an active distribution panel is connected to correct connector on the back of your computer (not required for the HP 9000 807S).

  □ Check that your console terminal is connected to port 0 of the first active distribution panel (MUX 0) (not on the HP 9000 807S).

  □ Check that your console terminal is connected to the console connector on the back of the HP 9000 807S.

  □ Check that your LAN, if installed, is properly connected to your computer.

- Make sure that your console terminal is configured properly. Chapter 3 of this manual contains instructions on terminal configuration.

- Make sure that your console terminal is turned on.

If you still have problems, write down the condition of the displays and indicator lights on your computer as described in the preceding chapter. Also write down the last few lines, if any, that appear on the console terminal.

This information will be helpful when you contact Hewlett-Packard.

This is as far as you should go in troubleshooting your computer.

Hewlett-Packard provides an Installation Assistance Line to help you with installation problems. The telephone number is only available in the United States. The number is:

(404)-850-2698

Warranty service is available by contacting your local HP Sales and Service Office.

Parts Identification

Part Number	Part Name
1	Cassette Door
2	Unload Button
3	Upper (cassette) Status Light
4	Lower (drive) Status Light

There are two indicator lights on the front of the tape drive. The upper light is the cassette light, and it indicates the status of the tape cassette. The lower light is the drive light, and it indicates the status of the tape drive. Each light is capable of displaying two colors: yellow or green. Table 10-2 shows the combination of the tape drive's status lights for normal operation.

Table 10-2. Tape Drive: Normal Operation

Cassette Light (Upper)	Drive Light (Lower)	Condition
Off	Off	No cassette loaded or power off.
Off	Pulsing Green	No cassette loaded; drive is active.
Pulsing Green	Pulsing Green	Cassette is loading or unloading.
On Green	Off	Cassette is loaded; drive is inactive.
On Green	Pulsing Green	Cassette is loaded; drive is active.

Table 10-2 shows the combination of the tape drive's status lights for operation with a write-protected tape.

Table 10-3. Tape Drive: Tape Write-Protected

Cassette Light (Upper)	Drive Light (Lower)	Condition
Pulsing Yellow	Pulsing Green	Cassette is loading or unloading; cassette is write-protected.
On Yellow	Off	Cassette is loaded and write-protected; drive is inactive.
On Yellow	Pulsing Green	Cassette is loaded and write-protected; drive is active.

Table 10-4 shows the combination of the tape drive's status lights indicating caution states.

Table 10-4. Tape Drive: Caution States

Cassette Light (Upper)	Drive Light (Lower)	Condition
On Green 0.5 sec.; Off 2 sec.	Off	Caution Signal.
N/A	On Yellow	High humidity.

Write-Protected Tapes

If the cassette is write-protected, the cassette light is yellow during normal operations.

Caution Signal

The caution signal is indicated by the cassette light alternating green for 4.5 seconds and off for 0.5 seconds, whenever it would normally be a steady green. If this occurs, it means that the tape drive is having to correct an

excessive number of errors when using the cassette. This can mean that the tape heads need cleaning, or that the tape is nearing the end of its useful life.

When you see a caution signal, first clean the tape heads. If the signal occurs again, you should copy the data from the tape onto a new tape as follows:

1. Copy the data from the tape onto the hard disk.

2. Copy the data from the hard disk onto a new tape.

3. Discard the old tape.

Handling and Storing Cassettes

Environmental conditions can affect the reliability of data stored on cassette tapes. It is recommended that you use only cassettes marketed by Hewlett-Packard, which meet high standards.

To ensure data integrity for your cassettes, follow these guidelines:

- Do not touch the tape, nor attempt to clean the tape path or tape guides inside the cassette.

- Do not leave cassette tapes in excessively dry or humid conditions.

- Do not leave cassette tapes in direct sunlight or in places where magnetic fields are present (for example, under telephones or near transformers).

- Do not drop cassettes, nor handle them roughly.

- Do not stick more than one label onto cassettes; extra labels could cause the cassettes to jam in the tape drive.

- Store cassettes in their plastic cases when not in use.

- Always store the cassettes in a clean environment.

- Do not use cassettes when the caution signal is displayed by the cassette (upper) light, located on the front panel. The light shows a repeating pattern of: green for 4.5 seconds, then off for 0.5 seconds. If the light pattern appears, it means that the tape heads need cleaning or that the tape is nearing the end of its useful life.

Temperature Considerations

The cassettes should only be used at temperatures between 5°C (40°F) and 40°C (113°F). You can, however, store them at temperatures down to -40°C (-40°F).

If you expose cassettes to temperatures outside the operating limits, stabilize them before you use them. To do this, leave the cassettes in the operating temperature for a minimum of two hours.

To avoid temperature problems, observe these guidelines:

• Ensure that the tape drive is located where the temperature is relatively stable, for example, away from open windows, fans, heaters, and doors.

• Avoid leaving cassettes in severe temperature conditions, for example in a car standing in bright sunlight.

• Avoid transferring data (reading from, and writing to, cassettes) when the temperature is changing by more than 10°C per hour.

High Humidity

If the humidity rises too high, both front panel indicators will show a steady yellow. The tape drive will not perform any operations until the humidity has dropped to within specifications.

CAUTION

To prevent damage, do not insert a cassette into the tape drive for two hours after moving the computer from a cold to a warm environment. This applies if the temperature change is greater than 10°C (18°F).

Moving the computer from a cold to a warm environment causes condensation to develop within the tape drive. This causes the tape to stick to the drive's head, which can create permanent damage to both the tape and the tape drive.

Tape Drive Operation and Tape Head Cleaning

The tape head requires cleaning every 25 hours of use. For information on tape head cleaning, refer to the instructions that come with the cleaning cassette.
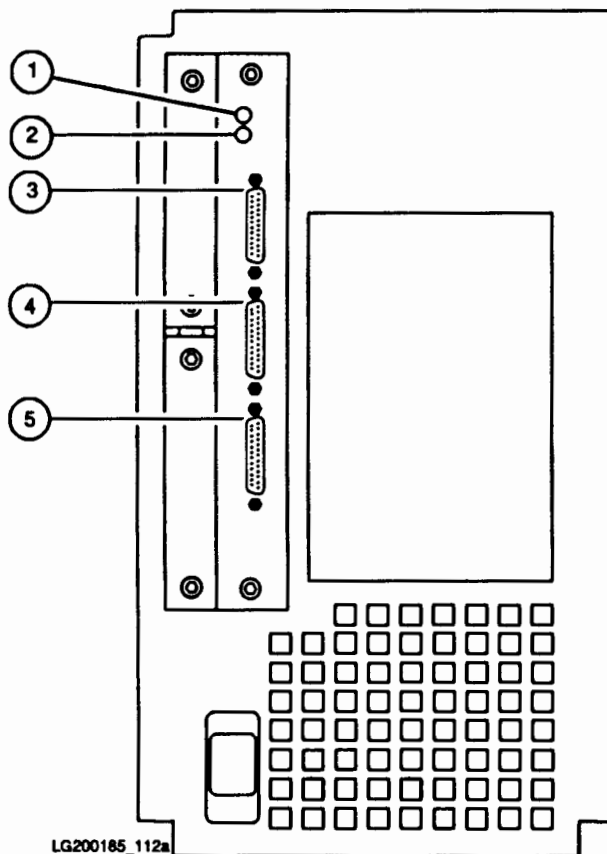
Rear Connectors and Indicator Lights

Several connectors and indicator lights are mounted in the rear of your computer. Their proper operation should be verified after the operating system has successfully booted up. Look at the rear of your computer and identify the location of each card. The following figures show the rear of your computer and identify the location of the connectors and lights. Take a few minutes and become familiar with their placement. Figure 10-3 shows the HP 9000 807S. Figure 10-4 shows the HP 9000 817S, and 837S. Figure 10-5 shows the HP 9000 827S, 847S, and 857S.

> **NOTE**
>
> The rear connectors on the HP 9000 827S, 847S, and 857S are identical, except that the HP 9000 857S has six additional I/O card slots.

LG200185_112a

Figure 10-3. HP 9000 807S Rear Panel

Parts Identification

Part Number	Part Name
1	MUX Error Light
2	SCSI Error Light
3	Direct Distribution Cable Connector
4	Modem Connector
5	Console Terminal Connector

For the HP 9000 807S, figure 10-3, number 1 is the MUX Error light. This light should normally by off. Number 2 is the SCSI Error light. This light should normally be off. Number 3 is the direct distribution cable connector. The cable provides ports 1-6. Number 4 is the connection for the available support modem (port 7). Number 5 is where the console terminal is connected (port 0).

LG200185_113a
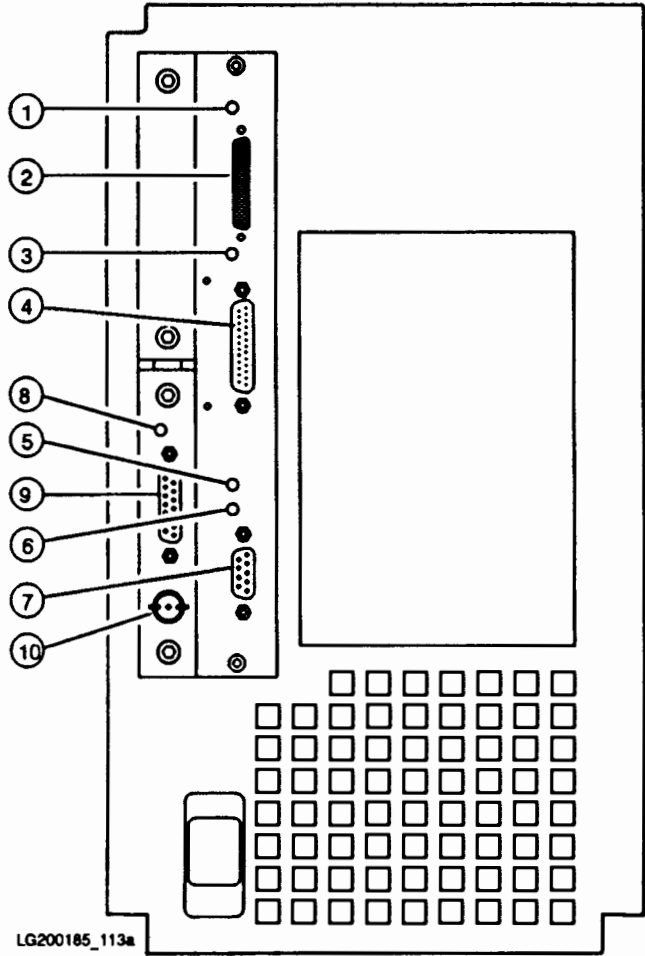
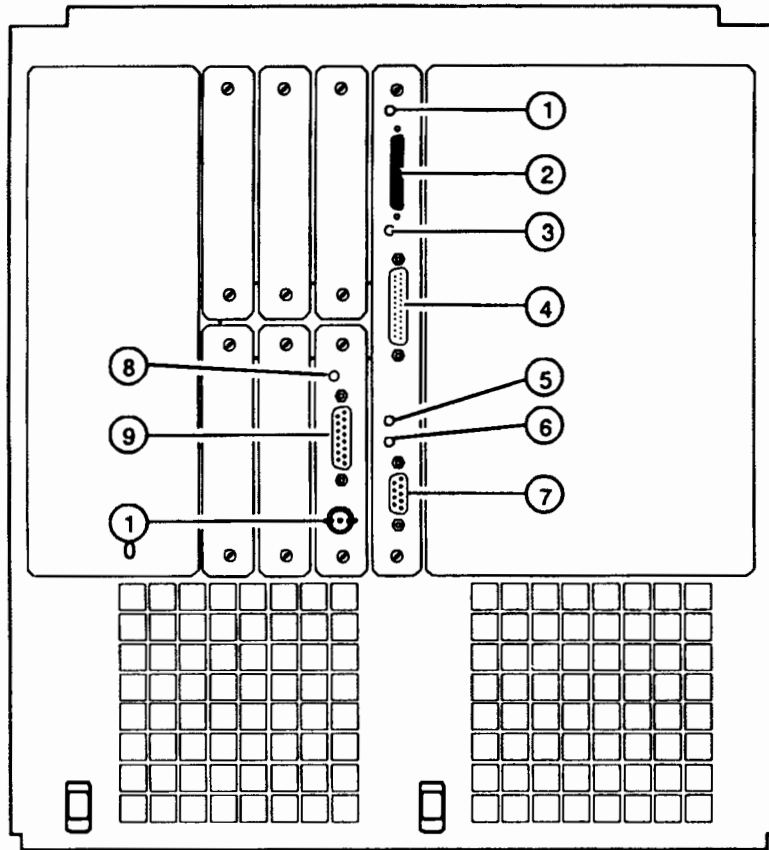**Figure 10-4. HP 9000 817S, and 837S Rear Panel**

Parts Identification

Part Number	Part Name
1	SCSI Self Test Light
2	SCSI Connector
3	Term Power Light
4	Parallel Connector
5	MUX Status Light
6	Link Status Light
7	Active Distribution Panel Connector
8	Xcrv/Net Fail, Self Test Fail Light
9	AUI Connector
10	LAN Connector

Figure 10-4 shows the HP 9000 817S, and 837S, while figure 10-5 shows the HP 9000 827S, 847S, and 857S. The connectors and lights are the same for these computers. Number 1 is the SCSI Self Test light. This light should normally be off. Number 2 is the external SCSI connector. Number 3 is the Term Power light. This light should normally be on. Number 4 is the parallel connector. Number 5 is the MUX Status light. This light should normally be off. Number 6 is the Link Status light. This light should normally be off. Number 7 is the connector to the active distribution panel.

LG200185_116

Figure 10-5. HP 9000 827S, 847S, and 857S Rear Panel

Parts Identification

Part Number	Part Name
1	SCSI Self Test Light
2	SCSI Connector
3	Term Power Light
4	Parallel Connector
5	MUX Status Light
6	Link Status Light
7	Active Distribution Panel Connector
8	Xcrv/Net Fail, Self Test Fail Light
9	AUI Connector
10	LAN Connector

SCSI

A SCSI connector is available at the rear of each computer, with the exception of the HP 9000 807S. You can also mount optional SCSI cards in your computer.

The total length of the cable connecting the SCSI controller and all SCSI drives (disk, tape, CD-ROM) must not exceed 6 meters. If this length is exceeded, data corruption could result. This includes the total length of the external cable, plus the length of cable internal to all drives, plus the length of cable internal to the SCSI card.

The HP 9000 807S has an internal connection for its integrated drives, and does not have an external SCSI connector. You do not have to be concerned about this internal cable.

The HP 9000 817S, and 837S each adds 1.25 meters of internal cable to the total length of SCSI cable.

The HP 9000 827S, 847S, and 857S each adds 2.26 meters of internal cable to the total length of SCSI cable.

Use this figure when computing the total SCSI cable length. If you connect external driver to the SCSI connector on an HP 9000 817S, the total length of external cable, plus the length of cable internal to your drives, must not exceed 4.75 meters (6 m - 1.25 m = 4.75 m).

CAUTION

A SCSI terminator has been supplied with your computer. If you do not have any external drives connected to your SCSI connector, you MUST connect this terminator to the SCSI connector on the back of your computer. If you have connected external drives to your computer, you MUST connect a terminator to the remaining SCSI connector on your last drive. The terminator required for your last drive may not be the same size as the one supplied with your computer.

Serial Connectors

Six serial connectors are provided on the HP 9000 807S by the direct distribution cable, (ports 1-6) (see figure 10-6) and no active distribution panel is needed. Additional connections are provided for the console terminal and support modem.
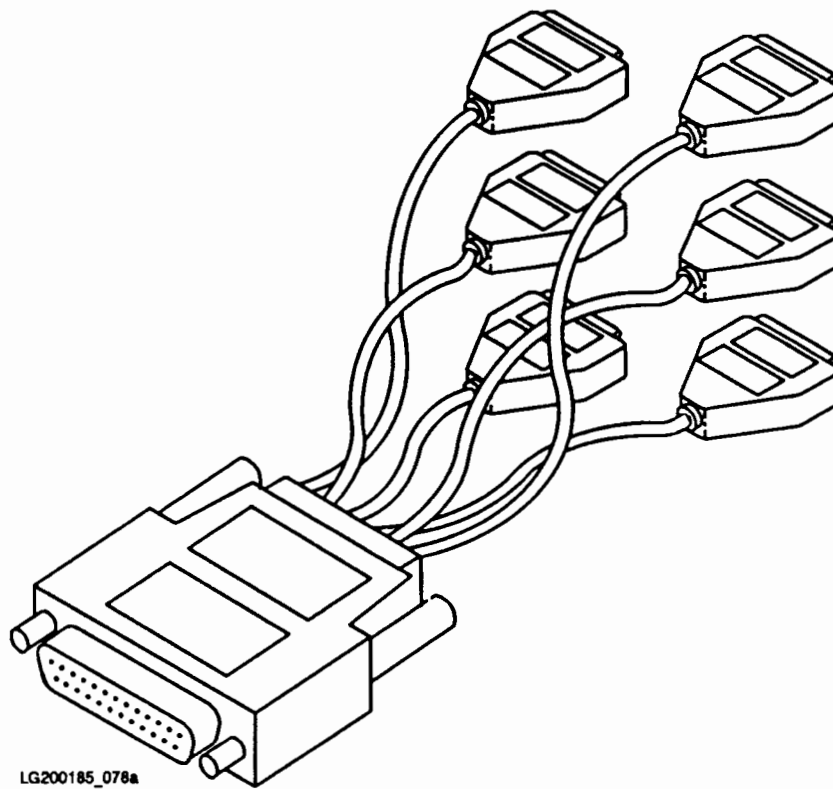
Figure 10-6. Direct Distribution Cable

With the exception of the HP 9000 807S, the 8 serial connector are provided by an active distribution panel connected to the computer by a short cable (see figure 10-7).

LG200090_074b
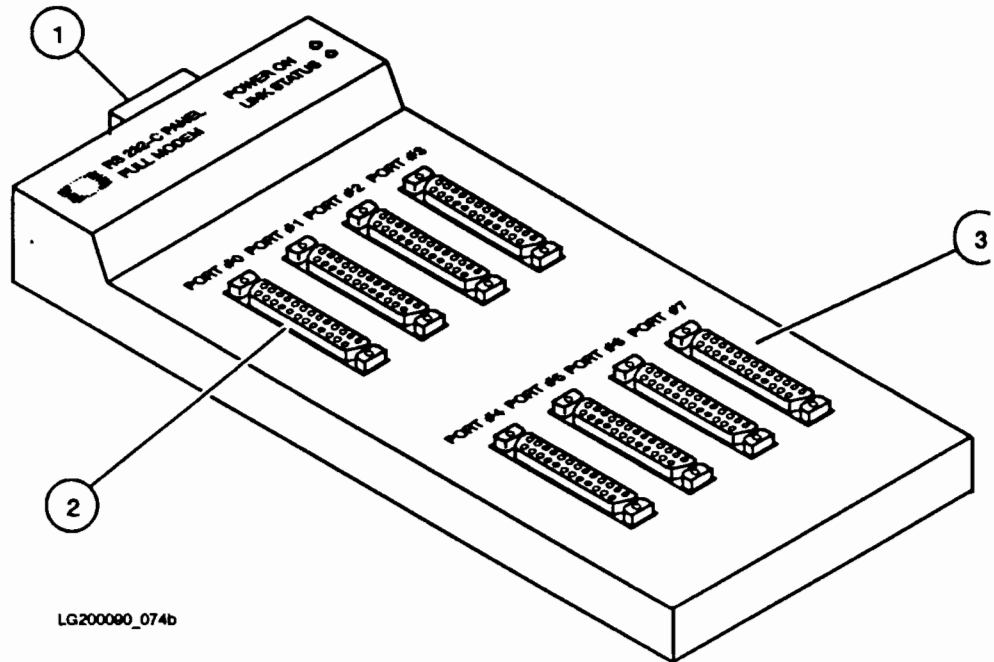
Figure 10-7. Active Distribution Panel

Parts Identification

Part Number	Part Name
1	Cable Connector
2	Console Terminal Connector (MUX 0)
3	Support Modem Connector (Optional, MUX 0)

The active distribution panel performs a self-test after power is applied to the computer. This self-test requires about one minute. After the self-test is completed, check the lights on the computer, and on the distribution panel:

- The MUX Status and Link Status lights on the computer, should NOT be lit.

- The Power On light on the active distribution panel should be lit.

- The Link Status light on the active distribution panel should NOT be lit.

The console terminal must be connected to connector 0 of the first active distribution panel (MUX 0). The optional remote support terminal must be connected to connector 7 of the first active distribution panel (MUX 0).

LAN Card

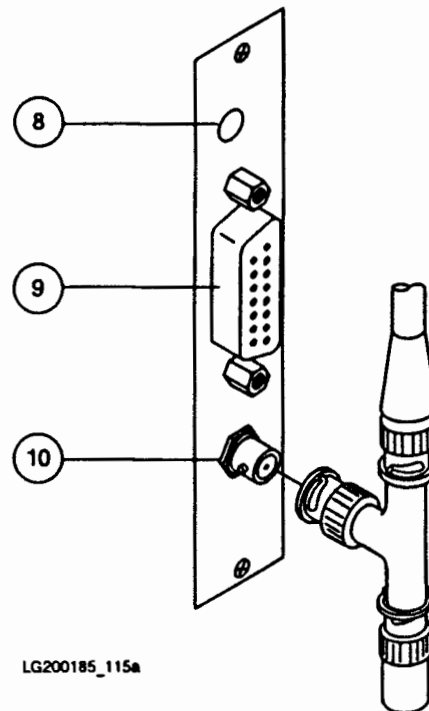LAN (Network) is optional on the HP 9000 807S, and is standard on the other computers. Figure 10-8 shows the LAN card.

LG200185_115a

Figure 10-8. LAN Card

Parts Identification

Part Number	Part Name
8	Xcrv/Net Fail, Selftest Fail Light
9	AUI Connector
10	LAN Connector

Correct operation of the LAN card is indicated when the **Xcrv/Net Fail,** Selftest Fail light (figure 10-8, number 8) is NOT lit. If the light is on, or is blinking, check the following:

- Is the LAN cable properly connected?

- Is the LAN cable properly terminated? Coaxial cable LANs must be terminated with a 50 ohm terminator.

- If you are using the AUI connector, has the internal jumper been changed from the factory setting?

- Is your networking working properly?

- Has your software been configured properly?

CAUTION If you are not connecting the network cable to your LAN card at this time, be sure to connect the LAN terminator to the back of your computer in place of the network cable. The LAN terminator is shipped with your computer, and looks like the network cable connector shown in figure 10-8.

Computer High Temperature

The operating temperature of your computer is constantly monitored, and your computer will automatically shut down if the temperature exceeds a pre-set level.

When the temperature exceeds the warning level (OVERTEMP_LOW), the following message will appear on your console:

OVERTEMP_LOW warning: exceeded the normal operating threshold. Correct over-temperature condition.

When the temperature exceeds the automatic shut down level (OVERTEMP_MID), the following message will appear on your console:

OVERTEMP_MID warning: exceeded the OVERTEMP_LOW threshold. Correct over-temperature condition immediately. NOTE: Shutdown is necessary to preserve the data.

When the temperature returns back to normal, the following message will appear on your console:

Temperature is back to normal machine operating range.

You can customize the high temperature warning features. See the information on the **overtempd** command in the *HP-UX Reference* manual.

If your computer does not boot up properly, or if there is a hardware problem, see the next chapter "What To Do If You Have Problems".

A

Site Preparation

Site Preparation

This appendix details site preparation requirements for installing your computer. Your computer is designed to operate under environmental conditions suitable for an office environment. The operating specifications listed in the following tables are within the normal range of an office environment.

If you are unsure of the electrical and environmental conditions in the area that the computer is to be installed, here are some suggestions for verification:

- Contact the building maintenance department to verify the specifications.

- Hire a licensed electrical contractor familiar with the local electrical codes to verify the specifications.

- Contact your local HP sales representative to hire an HP field engineer to verify the specifications.

NOTE

Make sure that the electrical installation complies with all local and national electrical codes and regulations.

Table A-1.
System Processor Unit Specifications
HP 9000 807S, 817S, 837S

PARAMETER	SPECIFICATION
Temperature Operating: Non-Operating:	+5 to +40° C (+41 to +104° F) -40 to +65° C (-40 to 149° F) Change in temperature cannot exceed 10° C per Hour.
Humidity Operating: Non-Operating:	20% to 80% RH non-condensing 5% to 80% RH non-condensing Maximum wet-bulb temperature is 26° C.
Acoustics Below +37° C: Above +37° C:	6.2 Bells, (A) Sound Power 6.5 Bells, (A) Sound Power
AC Power Voltage: Current: Frequency:	100-120 VAC or 220-240 VAC +/- 10% 6.5 A @ 100 V or 3.5 A @ 220 V 50/60 Hz or 50/60 Hz
Dimensions Width: Height: Depth: Weight:	222 mm (8.7 inches) 430 mm (16.9 inches) 533 mm (21.0 inches) 31.8 kg (70 lbs)

Table A-2.
System Processor Unit Specifications
HP 9000 827S, 847S, 857S

PARAMETER	SPECIFICATION
Temperature Operating: Non-Operating:	+5 to +40° C (+41 to +104° F) -40 to +65° C (-40 to 149° F) Change in temperature cannot exceed 10° C per hour.
Humidity Operating: Non-Operating:	20% to 80% RH non-condensing 5% to 80% RH non-condensing Maximum wet-bulb temperature is 26° C.
Acoustics Below +37° C: Above +37° C:	6.5 Bells, (A) Sound Power 6.8 Bells, (A) Sound Power
AC Power Voltage: Current: Frequency:	100-120 VAC or 220-240 VAC +/- 10% 12 A @ 100 V or 6 A @ 220 V 50/60 Hz or 50/60 Hz
Dimensions Width: Height: Depth: Weight:	444 mm (17.4 inches) 430 mm (16.9 inches) 533 mm (21.0 inches) 50 kg (110 lbs)

CAUTION   Failure to ensure that the computer site complies with the listed specifications could cause possible data loss, equipment damage, and void the HP warranty for the computer.

B

OS Pre-Configuration

OS Pre-Configuration

Your operating system has been pre-configured in the factory to provide
several features which make your computer easier to use. If you install
the standard HP-UX operating system from tape, these features will not be
present. This section describes what has been done to pre-configure your
operating system. If you install the standard HP-UX operating system, you
will have to make these changes before your new operating system has the
same features as the pre-configured operating system. Information is also
provided describing how your internal disk drives were configured.

/etc/inittab File

The **/etc/inittab** file was modified in order to permit the login window to automatically appear when the operating system is booted up.

In order to enable this feature, make the following changes to the **/etc/inittab** file:

1. Find the line which begins: **cons:0:respawn**

2. Change this line to read: **cons:2:respawn:/bin/cuegetty console console**

3. Add the following line: **con2:013456:respawn:/etc/getty console console**

/etc/passwd File

The **/etc/passwd** file has been modified to enable password aging. This modification consists of setting the super-user (root) password to ,. in order to require that the super-user password be set the first time the operating system is booted up. You will be asked to change the password. You may change the password to any password, including just pressing (Return) for no password.

Default Disk Configurations

The following explains the disk layouts for each nova system. Keep in mind that the numbers given are approximate.

Furthermore, if the customer has purchased larger memory for the system, HP suggests that the customer also purchase more disk space. In order to enable swapping on the customer system, it is necessary that swap space be slightly larger than memory. Additionally, in order to have access to all of memory, the swap space must be at least as large as memory.

There are cases where the default disk layout scheme may not be appropriate for the memory option selected. This is noted. HP suggests that in these cases, the customer must either add more swap space to the file system (see the *System Administration Tasks* manual for instructions), or purchase more disks in order to add more swap space.

The default layout scheme can be modified. See the *System Administration Tasks* manual and read the chapters "Managing the File System" and "Managing Swap Space". Furthermore, as the system gets more use, it also may be necessary to add additional swap space. See the *System Administration Tasks* manual for this information.

The disk information is arranged in the following manner:

1. Computer model number.

2. Range of available internal memory (minimum to maximum).

3. Disk partition information.

4. Swap space information.

5. Any applicable restrictions.

This information is provided for the standard configuration, and then is repeated for each orderable option. For example, the first table describes the HP 9000 807S in its basic configuration (230 MB), followed by information of options 001 (320 MB), 002 (420 MB), and 003 (660 MB).

HP 9000 807S

A1751A Model 807S Business Server

8 -> 32 MB of memory

default: 230 MB

```
   partition  size  fs
   ----------  ----  --
8  186  /
0  24   swap
1  16   /mnt
```

TOTAL SWAP: 24 MB

RESTRICTION: If the user purchases 24 MB of memory,
or more, HP suggests that the user purchase more disk
space for more swap, or add additional swap space to
the file system.

Option 001 320 MB

```
   partition  size  fs
   ----------  ----  --
8  277  /
0  24   swap
1  16   /mnt
```

TOTAL SWAP: 24 MB

RESTRICTION: If the user purchases 24 MB of memory,
or more, HP suggests that the user purchase more disk
space for more swap, or add additional swap space to
the file system.

Option 002 420 MB

```
   partition  size  fs
   ----------  ----  --
10  129  /
 8  207  /usr
 1   48  swap
 0   24  /mnt
```

TOTAL SWAP: 48 MB

Option 003 660MB

```
   partition  size  fs
   ----------  ----  --
10  129  /
 8  456  /usr
 1   48  swap
 0   24  /mnt
```

TOTAL SWAP: 48 MB

HP 9000 817S

A1703A Model 817S Business Server

16MB -> 64 MB of memory

default: 320 MB

```
   partition  size  fs
   ----------  ----  --
 8  277  /
 0   24  swap
 1   16  /mnt
```

TOTAL SWAP: 24 MB

RESTRICTION: If the user purchases 24 MB of memory, or more, HP suggests that the user purchase more disk space for more swap, or add additional swap space to the file system.

Option 003 660MB

```
   partition  size  fs
   ----------  ----  --
 10   129   /
  8   456   /usr
  1    48   swap
  0    24   /mnt
```

TOTAL SWAP: 48 MB

RESTRICTION: If the user purchases 48 MB of memory, or more, HP suggests that the user purchase more disk space for more swap, or add additional swap space to the file system.

Option 005   840 MB   (2X420 MB)

```
   partition  size  fs
   ----------  ----  --
```

disk 1:

```
 10   129   /
  8   207   /usr
  1    48   swap
  0    24   /mnt1
```

disk 2:

```
 11   337   /mnt2
  7    75   swap2
```

TOTAL SWAP: 123 MB

```
007 1.35 GB

   partition  size  fs
   ----------  ----  --
10  129   /
4   107              swap
5   981   /usr
0   24    /mnt1
1   48    /mnt2
3   29    /mnt3

TOTAL SWAP: 107 MB
```

HP 9000 827S

```
A1765A Model 827S Business Server


16 -> 128 MB memory

default:  320 MB

   partition  size  fs
   ----------  ----  --
8   277   /
0   24    swap
1   16    /mnt1

TOTAL SWAP: 24 MB
```

RESTRICTION: If the user purchases 24 MB of memory,
or more, HP suggests that the user purchase more disk
space for more swap, or add additional swap space to
the file system.

Option 003 660MB

```
   partition  size  fs
   ----------  ----  --
10  129            /
1   48    swap
8   456   /usr
0   24           /mnt
```

TOTAL SWAP: 48 MB

RESTRICTION: If the user purchases 48 MB of memory,
or more, HP suggests that the user purchase more disk
space for more swap, or add additional swap space
to the file system.

Option 005 840 MB   (2X420 MB)

```
   partition  size  fs
   ----------  ----  --
```

disk 1:

```
10   129  /
8    207  /usr
1    48   swap
0    24   /mnt1
```

disk 2:

```
11   337  /mnt2
 7              75  swap
```

TOTAL SWAP: 123 MB

RESTRICTION: If the user purchases 112 MB of memory,
or more, HP suggests that the user purchase more disk
space for more swap, or add additional swap space to
the file system.

Option 007 1.35 GB

```
   partition  size  fs
   ----------  ----  --

10  129  /
 4  107  swap
 5  981  /usr
 0   24  /mnt1
 1   48  /mnt2
 3   29  /mnt3
```

TOTAL SWAP: 107 MB

RESTRICTION: If the user purchases 96 MB of memory,
or more, HP suggests that the user purchase more disk
space for more swap, or add additional swap space to
the file system.

Option 008 2 GB   (2X320 MB 1X1.35 GB)

```
   partition  size  fs
   ----------  ----  --
disk 1:
 8  277  /
 0   24  swap
 1   16  /mnt1

disk 2:

 7   42  swap
 8  277  /mnt2


disk 3:
 8  1,119  /mnt3
10   129  swap
 7   75  /mnt4
```

TOTAL SWAP: 195 MB

Option 009   2.7 GB   (2 X 1.35 GB)

        partition   size   fs
        ----------   ----   --
   disk 1 :

           10   129   /
           4   107   swap
           5   981   /usr
           0   24   /mnt1
           1   48   /mnt2
           3   29   /mnt3

   disk 2:
           8   1,119   /mnt4
           10   129   swap
           7   75   /mnt5

   TOTAL SWAP: 236 MB

   Option 010   4 GB   (3 X 1.35 GB)

      partition   size   fs
      ----------   ----   --

   disk 1:

    10   129   /
    8   1,119   /usr
    1   48   swap
    0   24   /mnt1

   disk 2:
    8   1,119   /mnt4
    10   129   swap
    7   75   /mnt5

   disk 3:

```
8  1,119  /mnt6
10  129  swap
7  75  /mnt7
```

Total swap space: 306 MB

HP 9000 837S

A1704A Model 837S Business Server

16MB -> 64 MB of memory

default: 320 MB

```
   partition  size  fs
   ----------  ----  --
8  277  /
0  24   swap
1  16   /mnt
```

TOTAL SWAP: 24 MB

RESTRICTION: If the user purchases 24 MB of memory,
or more, HP suggests that the user purchase more disk
space for more swap, or add additional swap space to
the file system.

Option 003 660MB

```
   partition  size  fs
   ----------  ----  --
10  129  /
8   456  /usr
1   48   swap
```

```
 0  24  /mnt

TOTAL SWAP: 48 MB
```

RESTRICTION: If the user purchases 48 MB of memory,
or more, HP suggests that the user purchase more disk
space for more swap, or add additional swap space to
the file system.

Option 005 840 MB   (2X420 MB)

```
   partition  size  fs
   ----------  ----  --
```

disk 1:

```
 10  129  /
 8   207  /usr
 1   48   swap
 0   24   /mnt1
```

disk 2:

```
 11  337  /mnt2
 7   75   swap2

TOTAL SWAP: 123 MB
```

Option 007 1.35 GB

```
   partition  size  fs
   ----------  ----  --
 10  129  /
 4   107           swap
 5   981  /usr
 0   24   /mnt1
 1   48   /mnt2
 3   29   /mnt3

TOTAL SWAP: 107 MB
```

HP 9000 847S

A1766A Model 847S Business Server

32 -> 128 MB memory

default: 660 MB

```
   partition  size  fs
   ----------  ----  --
10  129         /
 8  456   /usr
 1   48   swap
 0   24        /mnt
```

TOTAL SWAP: 48 MB

RESTRICTION: If the user purchases 48 MB of memory,
or more, HP suggests that the user purchase more disk
space for more swap, or add additional swap space to
the file system.

Option 007 1.35 GB

```
   partition  size  fs
   ----------  ----  --

10  129   /
 4  107   swap
 5  981   /usr
 0   24   /mnt1
 1   48   /mnt2
 3   29   /mnt3
```

TOTAL SWAP: 107 MB

RESTRICTION: If the user purchases 96 MB of memory,
or more, HP suggests that the user purchase more disk

space for more swap, or add additional swap space to
the file system.

Option 008 2GB   (2X320 MB   1X1.35 GB)

```
   partition   size   fs
   ----------  ----   --
disk 1:
 8   277   /
 0   24    swap
 1   16    /mnt1

disk 2:

 7   42    swap
 8   277   /mnt2


disk 3:
 8   1,119  /mnt3
 10  129   swap
 7   75    /mnt4


TOTAL SWAP:   195 MB
```

Option 009   2.7 GB   (2 X 1.35 MB)

```
   partition            size            fs
   ----------           ----            --
disk 1:

        10               129             /
 4   107  swap
         5               981            /usr
         0               24             /mnt1
 1   48   /mnt2
 3   29   /mnt3

disk 2:
```

```
              8                  1,119           /mnt4
              10                 129             swap
              7                  75              /mnt5


TOTAL SWAP: 236 MB

Option 010   4 GB    (3 X 1.36 GB)

   partition  size  fs
   ---------- ----  --


disk 1:

 10  129  /
 8  1,119   /usr
 1  48  swap
 0  24  /mnt1

disk 2:
 8  1,119  /mnt2
 10  129  swap
 7  75  /mnt3

disk 3:

 8  1,119  /mnt4
 10  129  swap
 7  75  /mnt5

Total swap space:  306 MB
```

HP 9000 857S

A1770A Model 857S Business Server

```
64 -> 128 MB memory

default:  660 MB

   partition  size  fs
   ---------  ----  --
10   129          /
 4   107   swap
 5   319          /usr
 0   24           /mnt1
 1   48   /mnt2
 3   29   /mnt3

TOTAL SWAP: 107 MB
```

RESTRICTION: If the user purchases 96 MB of memory,
or more, HP suggests that the user purchase more disk
space for more swap, or add additional swap space to
the file system.

```
Option 007 1.35 GB

   partition  size  fs
   ---------  ----  --

10   129  /
 4   107  swap
 5   981  /usr
 0   24   /mnt1
 1   48   /mnt2
 3   29   /mnt3

TOTAL SWAP: 107 MB
```

RESTRICTION: If the user purchases 96 MB of memory,
or more, HP suggests that the user purchase more disk
space for more swap, or add additional swap space to
the file system.

```
Option 008 2 GB   (2X320 MB   1X1.36 GB)

   partition  size  fs
   ---------- ----  --
disk 1:
 8  277  /
 0  24  swap
 1  16  /mnt1

disk 2:

 7  42  swap
 8  277  /mnt2


disk 3:
 8  1,119  /mnt3
 10  129  swap
 7  75  /mnt4


TOTAL SWAP:  195 MB

Option 009    2.7 GB   (2 X 1.35 GB)


   partition          size            fs
   ----------         ----            --

disk 1:
         10           129             /
         4            107             swap
         5            981             /usr
         0            24              /mnt1
         1            48              /mnt2
         3            29              /mnt3

disk2:
         8            1,119           /mnt4
         10           129             swap
         7            75              /mnt5
```

```
TOTAL SWAP: 236 MB

Option 010  4 GB   (3 X 1.35 GB)

   partition          size           fs
   ----------         ----           --


disk 1:

        10             129            /
        8              1,119           /usr
 1  48  swap
        0              24             /mnt1

disk 2:
        8              1,119          /mnt4
        10             129            swap
        7              75             /mnt5

disk 3:

        8              1,119          /mnt6
        10             129            swap
        7              75             /mnt7


Total swap space:  306 MB
```

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