HP 3000 Computer Systems

Installation and Configuration Guide

Series 920 Family

(920, 922, 922LX, 922RX, 932, 948, 958)

HEWLETT PACKARD

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Printing History

New editions are complete revisions of the manual. Update packages, which are issued between editions, contain additional and replacement pages to be merged into the manual by the customer. The dates on the title page change only when a new edition or a new update is published. No information is incorporated into a reprinting unless it appears as a prior update; the edition does not change when an update is incorporated.

Many product updates and fixes do not require manual changes and, conversely, manual corrections may be done without accompanying product changes. Therefore, do not expect a one-to-one correspondence between product updates and manual updates.

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List of Effective Pages

The List of Effective Pages gives the date of the current edition and of any pages changed in updates to that edition. Within the manual, any page changed since the last edition is indicated by printing the date the changes were made on the bottom of the page. No information is incorporated into a reprinting unless it appears as a prior update.

All ..... December 1990

Safety and Regulatory Information

For your protection this product has been tested to various national and international regulations and standards. The scope of this regulatory testing includes electrical/mechanical safety, radio frequency interference, ergonomics, acoustics, and hazardous materials. Where required, approvals obtained from third-party test agencies are shown on the product label. In addition, various regulatory bodies require some information under the following headings.

USA Radio Frequency Interference

The United States Federal Communications Commission (in Subpart J, of Part 15, Docket 20780) has specified that the following notice be brought to the attention of the 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 in 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.

Japanese Radio Frequency Interference

The following notice is for users of this product in Japan:

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，テレビジ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。

Japanese Radio Frequency Notice

HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

West German Radio Frequency Notice

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.

Funkentstörung Deutschland (German EMI Compliance) Herstellerbescheinigung

Hiermit wird bescheinigt, daß dieses System in Übereinstimmung mit den Bestimmungen von Postverfügung 1046/84 funkentstört ist.

Der Deutschen Bundespost wurde das Inverkehrbringen dieses Systems angezeigt und die Berechtigung zur Überprüfung der Serie auf Einhaltung der Bestimmungen eingeräumt.

United Kingdom Telecom Statement (For the United Kingdom Only)

Warning

Interconnection of ports marked "UNITED KINGDOM TELECOM WARNING. Connect only apparatus complying with BS 6301 to these ports", with ports not so marked may produce hazardous conditions on the network and advice should be obtained from a competent engineer before such a connection is made.

Connect only apparatus complying with BS 6301 to the ports marked with the above warning.

Safety Considerations

This product and related documentation must be reviewed for familiarization with safety markings and instructions before operation. The following figure shows some of the safety symbols used on the product to indicate various safety considerations.

Instruction manual symbol: the product will be marked with this symbol when it is necessary for the user to refer to the instruction manual in order to protect the product against damage.

Indicates hazardous voltages.

Indicates earth (ground) terminal (sometimes used in manual to indicate circuit common connected to grounded chassis).

Warning **The WARNING sign denotes a hazard. It calls attention to a procedure, practice, of the like, which if not done correctly or adhered to, could result in injury. Do not proceed beyond a WARNING sign until the indicated conditions are fully understood and met.**

Caution The CAUTION sign denotes a hazard. It calls attention to an operating procedure, practice, of the like, which if not done correctly or adhered to, could damage or destroy part or all of the product. Do not proceed beyond a CAUTION sign until the indicated conditions are fully understood and met.

Contents

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About This Manual

This manual contains the installation instructions for HP 3000 Series 920 Family Computer Systems. At the time of publication, this family included the following models:

Series 920
Series 922
Series 922LX
Series 922RX
Series 932
Series 942
Series 952

This manual also contains information for configuring the Distributed Terminal Subsystem and for configuring modems for remote support. This manual does not include instructions for installing networks.

The manual is organized as follows:

Chapter 1	**About This Manual.** Introduces the manual and describes its organization. This chapter also identifies special information that is not readily available in other documentation.
Chapter 2	**System Specifications.** This chapter provides the system specifications.
Chapter 3	**Receiving the System.** Since this is a customer responsibility, this chapter provides the customer with information for receiving the system, instructions for unpacking the system, and placing the system into position.
Chapter 4	**Installation.** This chapter contains installation procedures and configuration data.
Chapter 5	**Starting the Computer System.** This chapter provides instructions for turning on the equipment, booting MPE XL, configuring the Distributed Terminal Subsystem, and validating the system operation.
Appendix A	**Support Link Modem Configuration.** This appendix contains instructions for configuring the three modems used for remote support. These modems are the HP 35141A Support Link I modem, HP 35016A Support Link II modem, and the HP 37212B Support Link modem.
Appendix B	**Physical Path of Network Interface Cards.** Contains information for configuring terminal I/O, LAN, and point-to-point physical addresses.
Appendix C	**Default Configurations.** Contains default configuration information.

2

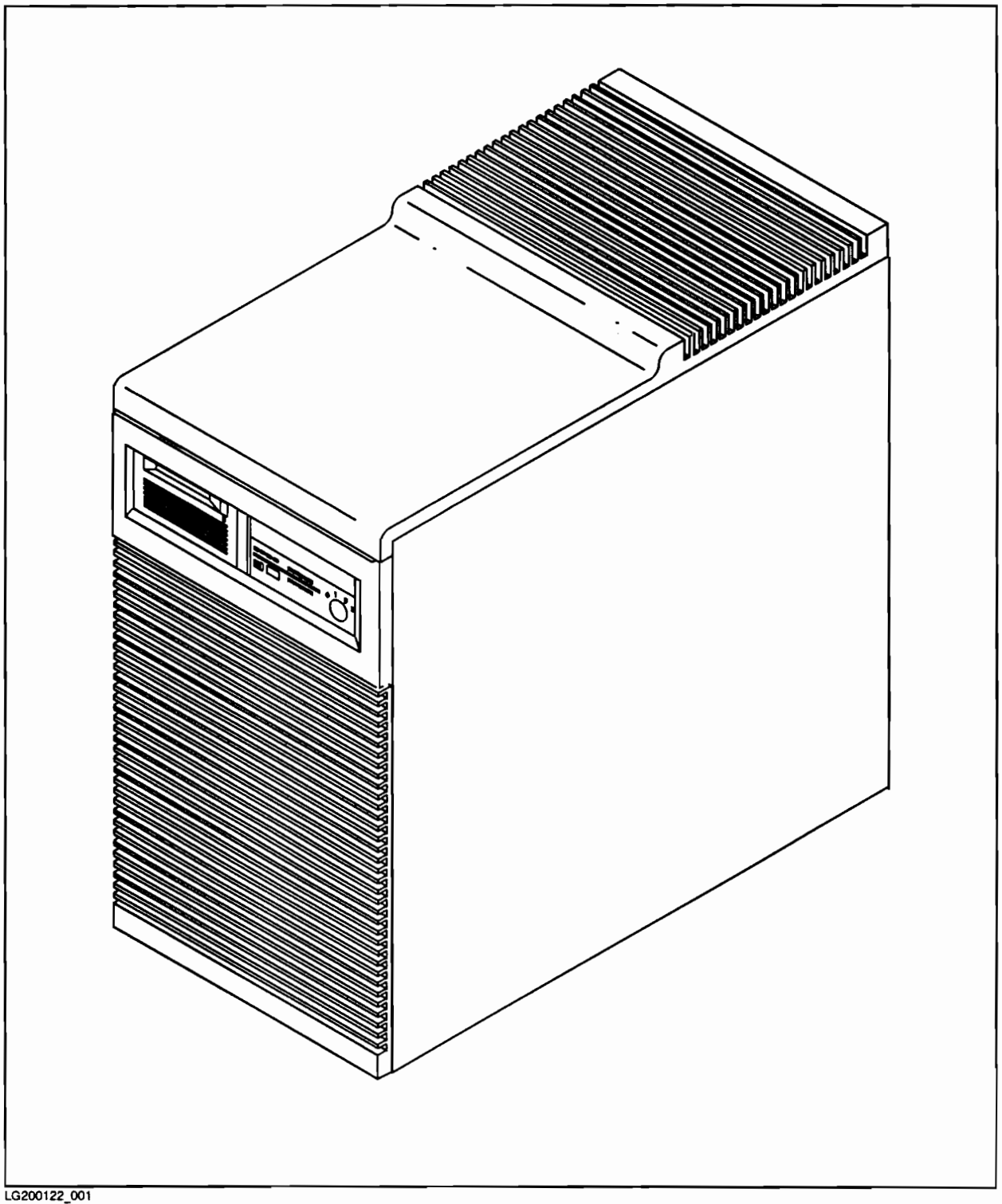
System Specifications

Introduction

This chapter provides the specifications for the models covered by this document.

The HP 3000 Series 920 Family Computers are fully integrated computers that include up to four embedded disk drives and one digital data storage (DDS) device. In addition to the embedded peripherals, each system supports external peripherals that are connected to the SPU through HP-IB or HP-FL interface PCAs. Terminals and serial printers are connected to the SPU via a Distributed Terminal Subsystem (DTS) connected to a Local Area Network (LAN). The system package is depicted in figure 2-1.

The Fundamental Operating System (MPE XL), ALLBASE/XL, and System Dictionary/XL are factory installed. Additional system software must be installed via the embedded DDS or an external tape drive.



LG200122_001

Figure 2-1. HP 3000 Series 920 Family Computer System

System Specifications

The system specifications for the system are listed in the following tables:

Table 2-1. Physical Specifications

Width	375 mm (14.76 in.)
Height	750 mm (29.5 in.)
Depth	710 mm (27.95 in.)
Weight	110 kg (243 lbs)

Table 2-2. Environmental Specifications

Operating Temperature	5°C to 40°C (41°F to 104°F)
Nonoperating Temperature	-40°C to 65°C (-40°F to 149°F) (without embedded DDS) -40°C to 45 °C (-40°F to 113°F) (with embedded DDS - tape media limit)
Maximum Rate of Temperature Change	20°C (36°F)/hour (without tape media) 10°C (18°F)/hour (with tape media)
High Speed Fan (Activated)	30°C to 34°C (86°F to 93.2°F)
Overtemp Warning	34°C to 38°C (93.2°F to 100.4°F)
Overtemp Software Flag	40°C to 45°C (104°F to 113°F)
Overtemp Hardware Shutdown	44°C to 49°C (111.2°F to 120.2°F)
Operating Humidity	20% to 80% RH max wet bulb = 26°C, non-condensing
Nonoperating Humidity	5% to 80% RH, non-condensing, less than 30% RH/hr rate of change
Operating Altitude	0 to 3048 meters (10,000 ft)
Nonoperating Altitude	0 to 15,240 meters (50,000 ft)
Heat Dissipation (maximum load)	3410 BTU/hr
Operating Vibration (sine)	0.25g (peak), 5 to 500 Hz
Operating Vibration (random)	0.0001 g^2/Hz, 5 to 500 Hz
Nonoperating Vibration (sine)	0.5g (peak), 5 to 500 Hz
Shock (nonoperating)	One edge drop from 4 in. above floor

Table 2-3. Electromagnetic Immunity Specifications

Radiated	3V/m, 14 kHz to 1 GHz
Conducted	1V rms, 30 Hz to 50 kHz 0.7V rms, 50 kHz to 400 MHz
Radiated Magnetic Field Immunity	1 gauss p-p, 48 Hz to 198 kHz
Electrostatic Discharge	10 kV - no effect 20 kV - no hardware failure

Table 2-4. Power Specifications

Input Voltages	100 to 120 VAC 200 to 240 VAC
Input Voltage Range	90 to 132 VAC 180 to 264 VAC
Input Current (maximum)	13.2 amperes, 100 VAC 11.5 amperes, 120 VAC 7.0 amperes, 220 VAC 6.5 amperes, 240 VAC
Input Power (maximum load)	1000 watts
Input Line Frequency	47 to 63 Hz
Transient Tolerance: Low Energy High Energy	 3000 volts, 10μs, 500 ns rise/fall 1000 volts, 1.2μs rise
Powerfail Exclusion	20 ms @ 50 Hz (1 cycle) 16 ms @ 60 Hz (1 cycle)
Powerfail Recovery Duration	15 minutes

3

Receiving The System

Introduction

This chapter contains information for unpacking and inspecting the computer system, taking an inventory of shipped goods, filing claims, repacking, and storing the system. These tasks are the responsibility of the Customer.

Unpacking and Inspection

The computer and its accessories may be shipped in more than one container. When the shipment arrives, check to ensure that you received all containers as specified by the carrier's Bill of Lading. Inspect each container immediately upon receipt for any evidence of mishandling during transit. If any of the containers are damaged, request that the carrier's agent be present when the container is opened.

Unpack the shipping container(s) and inspect each item for external damage. Look for damage such as broken controls and connectors, dented corners, scratches, bent panels, and loose components. Check the rigid foam cushioning (if used) for signs of damage, which could be indicative of rough handling during transit.

Unpack the computer as follows:

1. Compare packing list with equipment received to ensure that all required equipment is available.
2. Position container so there is at least six feet of clearance from all obstacles.

Caution The packing and binding straps are under extreme tension and can cause personal injury when cut. Exercise caution when cutting packing straps.

3. Cut the packing straps (see ①, Figure 3-1).
4. Remove the cardboard cover, loading ramp, and top floater from the computer (see ②, Figure 3-1).
5. Cut the binding strap.
6. Remove the wing nuts and locking block from the lower front of the computer (see ②, Figure 3-1).
7. Check the top floater for accessory boxes (there may be two flat boxes contained in the floater).

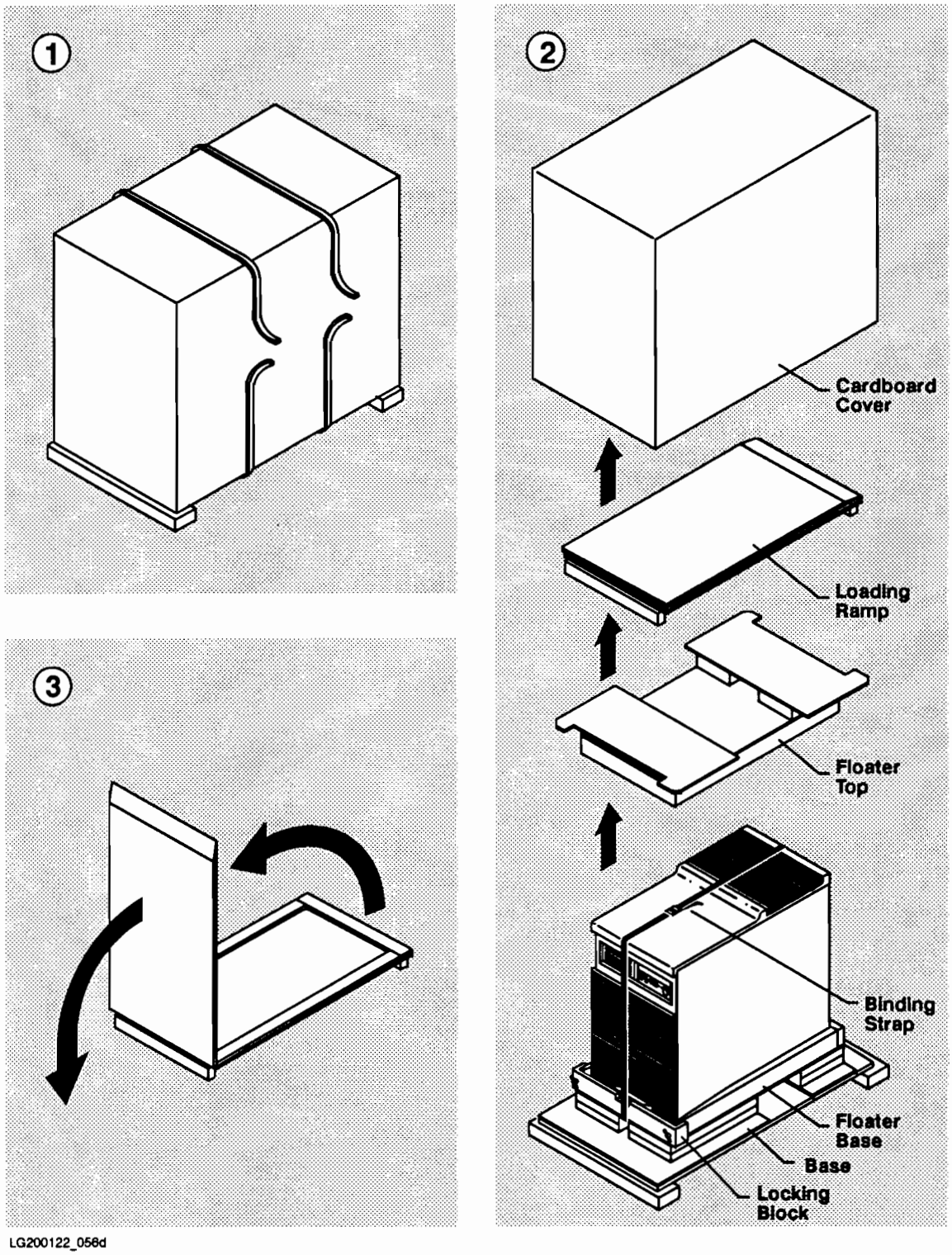


Figure 3-1. Unpacking Sequence (Sheet 1 of 2)

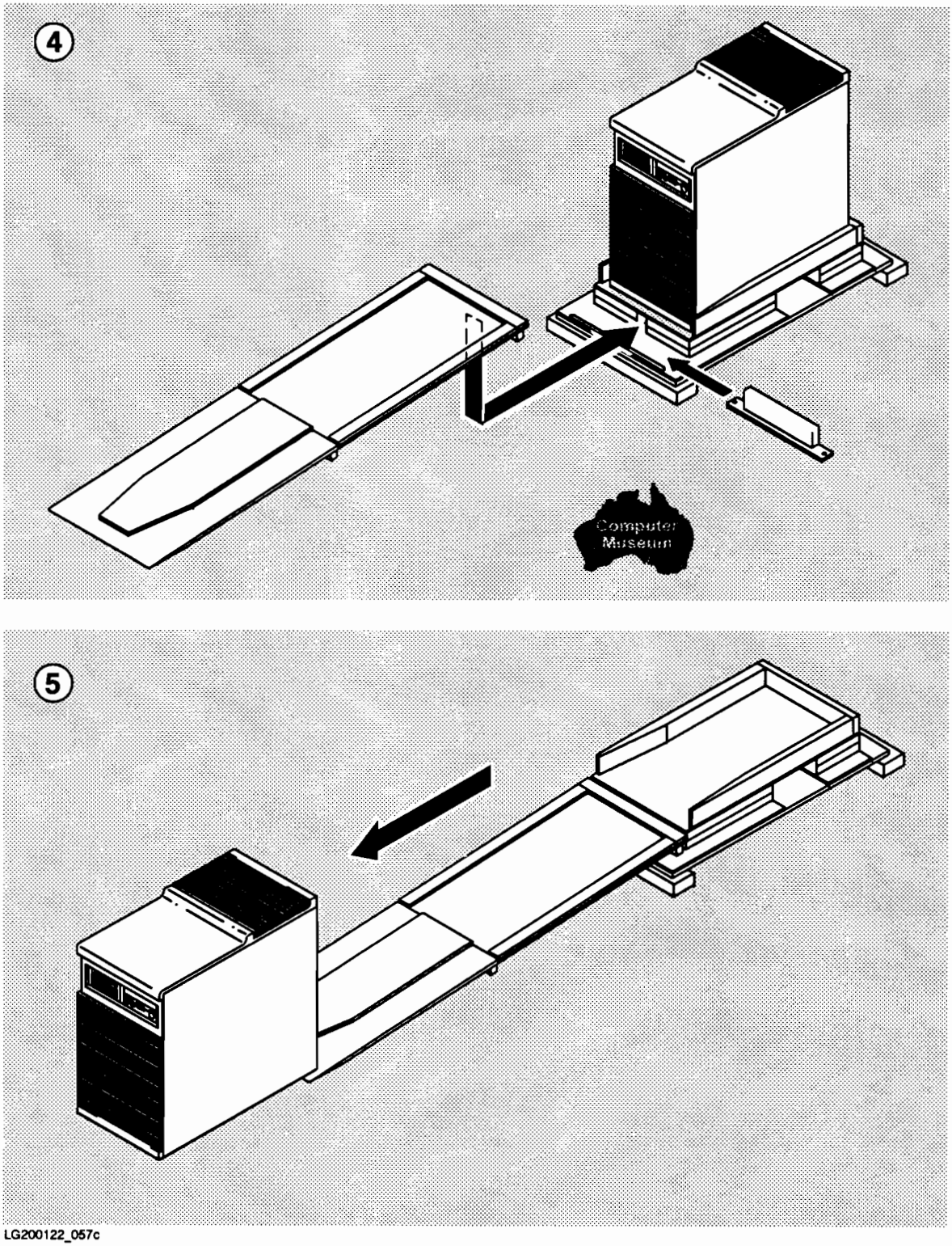


Figure 3-1. Unpacking Sequence (Sheet 2 of 2)

8. Open the ramp and insert it under lip of the floater base (see ③ and ④, Figure 3-1). Be sure the ramp is securely in place.
9. Place the locking block in front of the ramp to prevent it from slipping while moving the cabinet off the base.
10. Carefully move the cabinet onto the loading ramp and ensure that the cabinet can move freely down the ramp.
11. Guide the cabinet down the ramp and position it in the desired location (see ⑤, Figure 3-1).

Note If it is necessary to reload the cabinet back onto the pallet, be sure to position the back of the cabinet towards the back of the pallet. The packing materials are formed for the front and rear of the cabinet and mate to the cabinet accordingly.

In Case of Damage

If damage is observed, refer to the Claims Procedures section later in this chapter.

Physical Inventory

Open the shipping container and locate the picklist which contains a list of equipment supplied. Compare the product and option numbers on the picklist with the purchase order to verify that the shipment is correct (ignore the detailed part breakdown).

Manuals

Ensure that all of the listed manuals have been received. If any manuals are damaged or missing, refer to the Claims Procedure section.

Update the documentation as required before installing the computer. Updating instructions are provided in a supplement supplied with each respective document.

Equipment

Ensure that all of the equipment on the list has been received. If any equipment is damaged or missing, refer to the Claims Procedure section. To verify PCA installation, refer to the equipment installation paragraphs.

Computer

Ensure that the model and serial numbers are identical to those specified on the picklist. The model and serial numbers are printed on the General Information label, located on the lower rear of the system cabinet (see Figure 3-2).

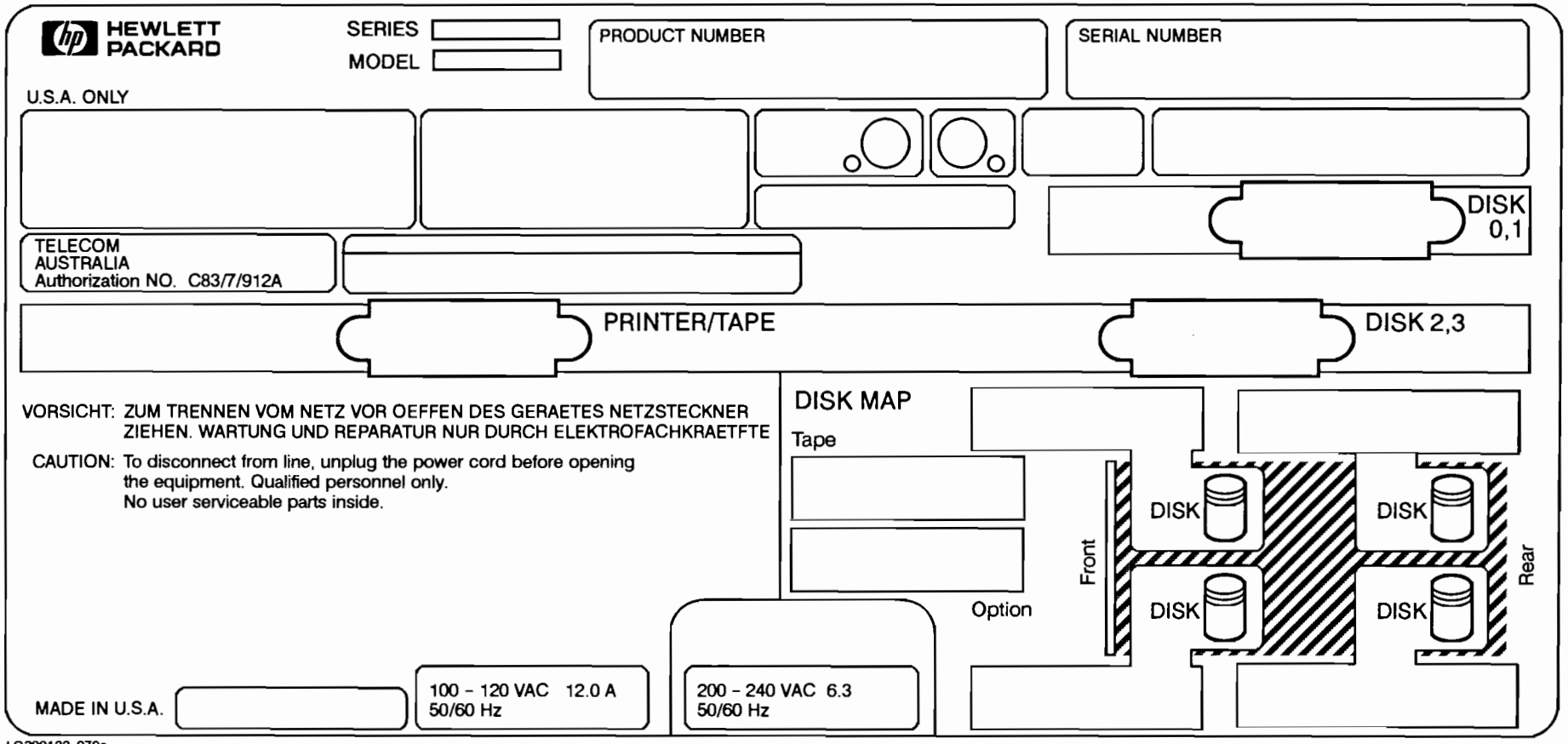


Figure 3-2. General Information Label

You will receive the computer with some peripherals embedded in the cabinet. Check that these peripherals are integrated and that they match the equipment list. The general information label contains the serial numbers of embedded disk drives and any other internal peripherals, along with regulatory approvals and electrical ratings.

Claims Procedures

Notify the nearest Hewlett-Packard Sales and Service Office if the shipment is incomplete, damaged, or fails to meet specifications. If damage occurred in transit, notify the carrier as well.

Hewlett-Packard will arrange for replacement or repair without waiting for settlement of claims against the carrier. In the event of damage in transit, retain the packing container and packaging materials for inspection.

Repacking

When computers must be reshipped, contact the local Hewlett-Packard Sales and Service Office for repacking information and materials.

Storage Requirements

Hewlett-Packard computer equipment can be stored or shipped in environments that fall within the following limits:

- Storage Temperature (Tape Media): -40° to 45° C (-40° to 113° F)
- Storage Temperature: -40° to 65° C (-40° to 149° F)
- Rate of change (without tape media): less than 20° C/hr.
- Rate of change (with tape media): less than 10°C/hr.
- Non-operating Humidity: 5 to 80 percent, non-condensing
- Humidity rate of change: <30% RH/hr.

Caution The computer should be protected from environmental extremes that can cause condensation within the equipment. When installing the equipment, allow time for the temperature of the equipment to stabilize to the site environment.

4

Installation

Introduction

This chapter contains information for installing the HP 3000 Series 920 Family Computer systems. All installation tasks are to be performed by qualified personnel only. The installation tasks are as follows:

- SPU Installation
- External Peripherals Installation
- System Console Installation
- Distributed Terminal Controller (DTC) Installation

SPU Installation

Tools Required: One No. 10 TORX head screwdriver

To install the SPU, proceed as follows:

Warning **Before applying power or connecting AC power, follow the procedure below to verify that the power supply is strapped for the correct power setting (110/220).**

To avoid the possibility of shock, do not connect the SPU to AC power with the front bezels removed.

1. Remove front panel as follows:
   a. Remove the top cover by lifting it up from the rear and then sliding it forward and off the chassis (see Figure 4-1).
   b. Remove the top front plastic bezel (see Figure 4-2).
   c. Slide the front plastic bezel upward to release it from the chassis.

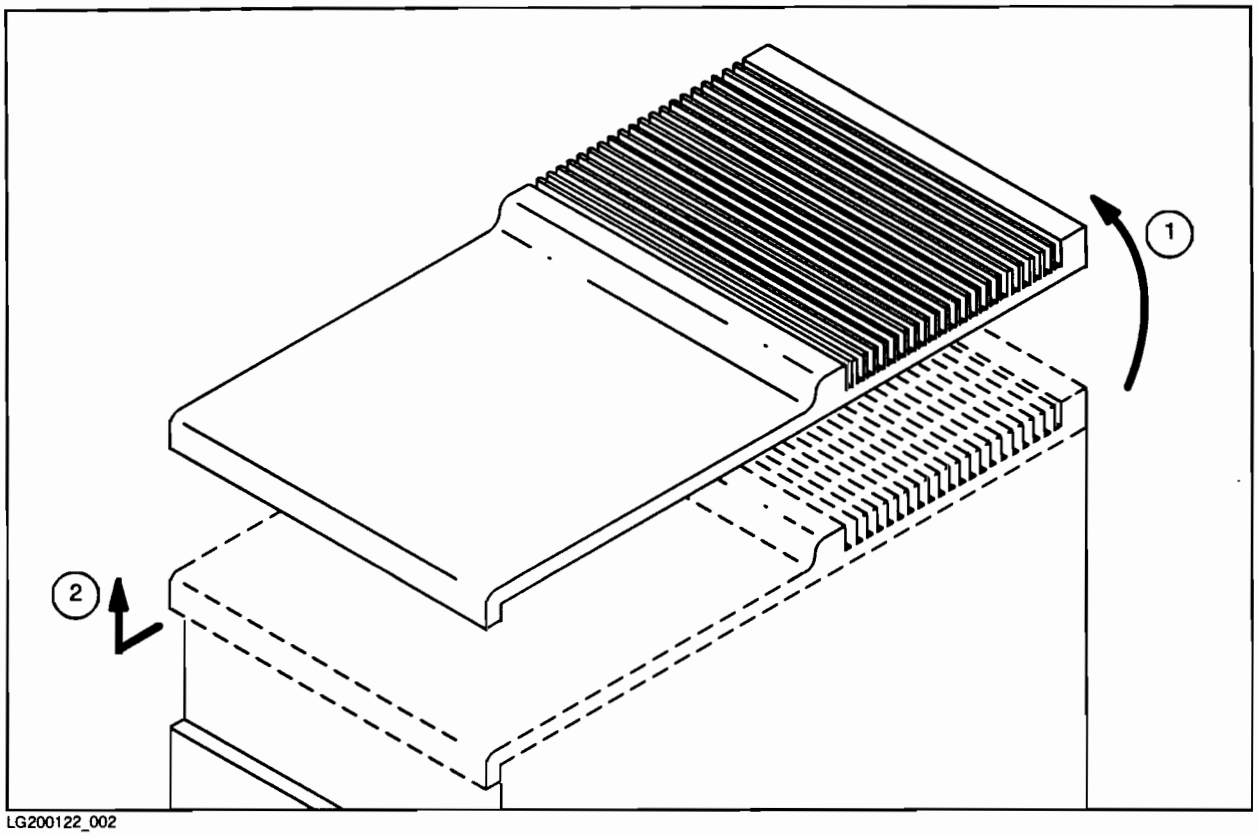


Figure 4-1. Top Cover Removal

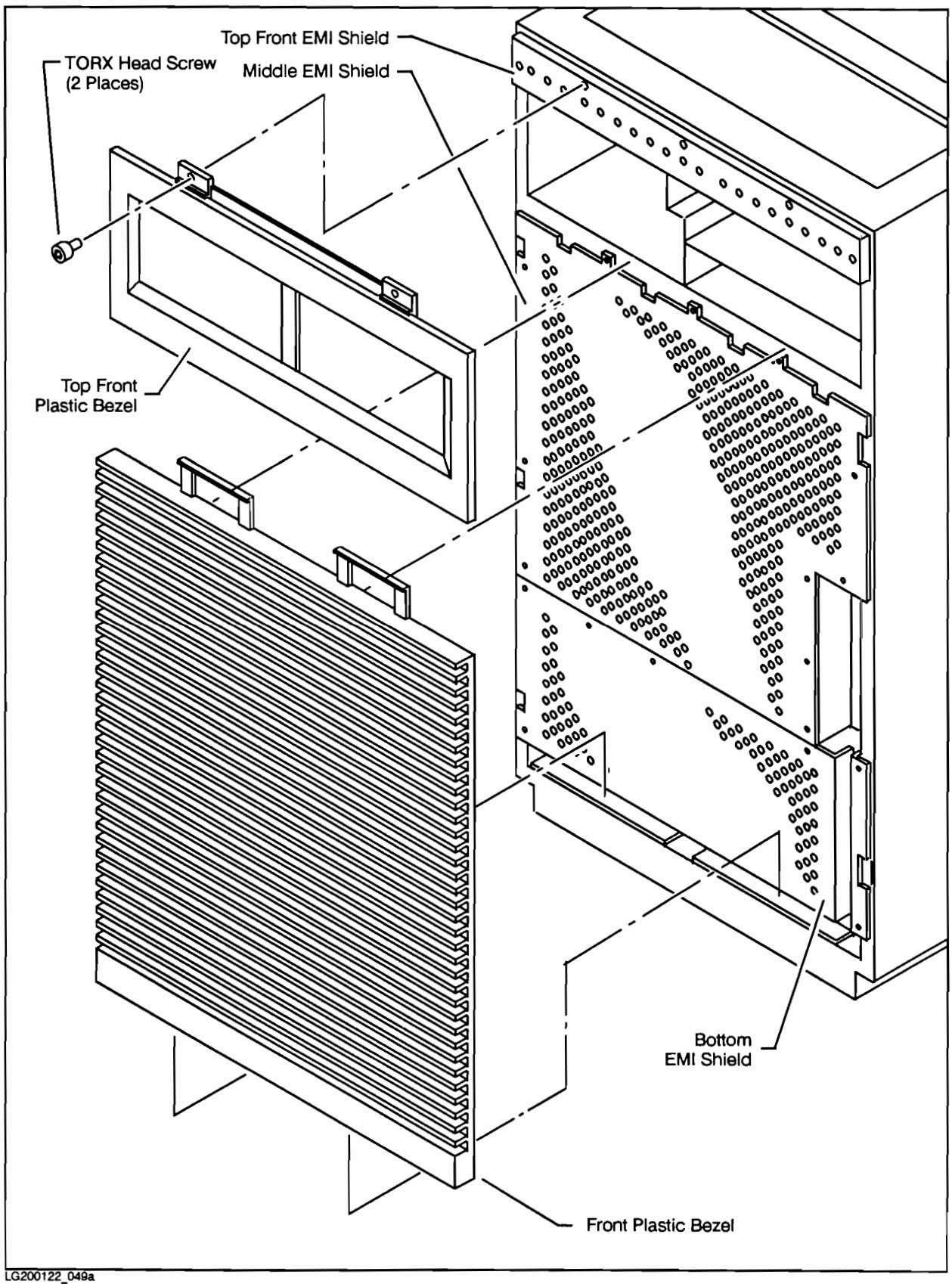


Figure 4-2. Front Panel Removal

2. Verify that the Power Configuration Selection switch is set to the same voltage as the electrical rating given on the General Information Label (see Figure 3-2 and Figure 4-3).

Caution Do not connect the Power Distribution Cord to the system cabinet if the position of the Power Configuration Selection switch must be changed.

3. Ensure that the Power Distribution Cord is securely connected.
4. Remove the rear panel by pulling on the top part of the rear panel at slot, then lift up and out (see Figure 4-4).

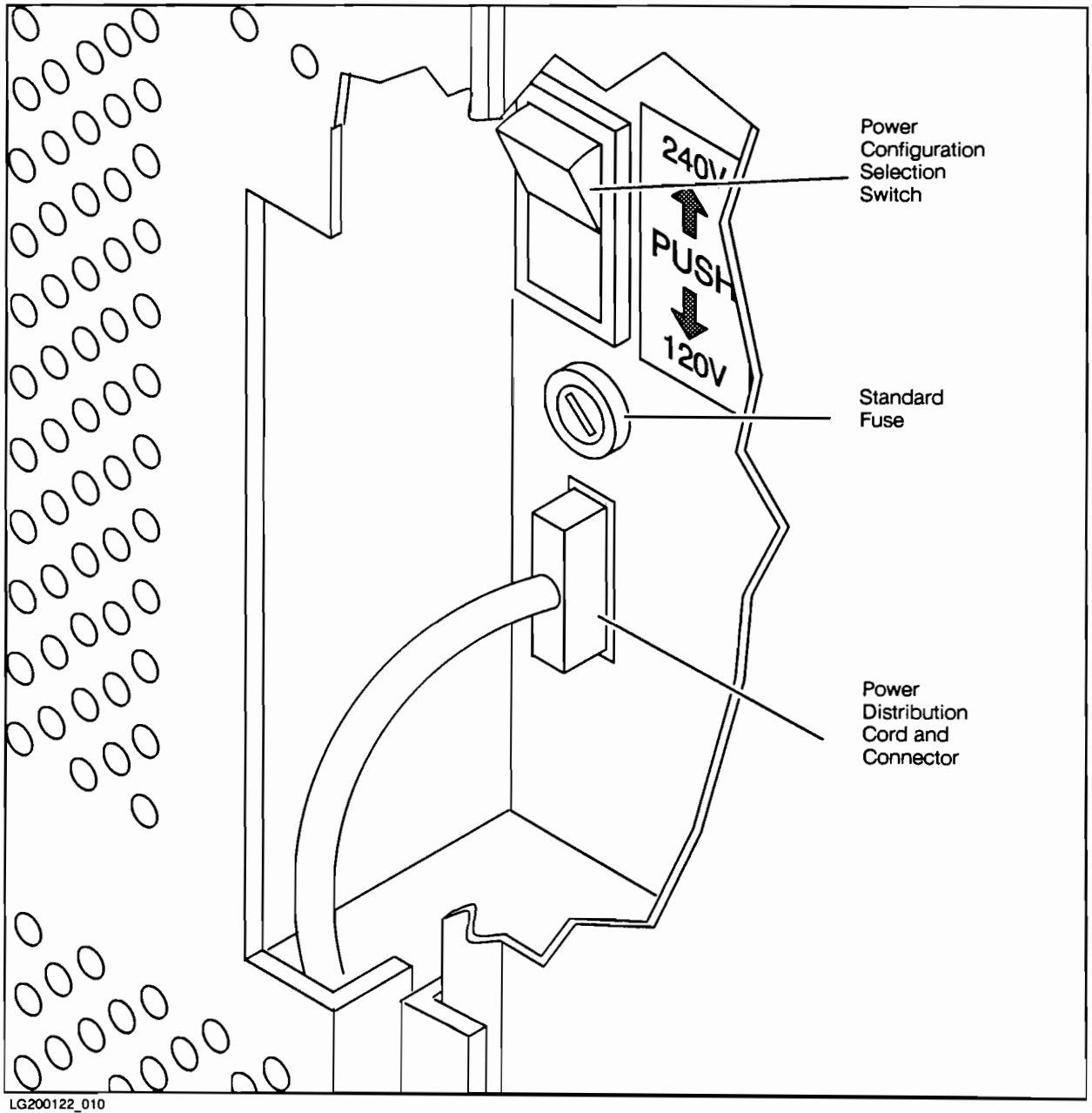


Figure 4-3. Power Distribution Box

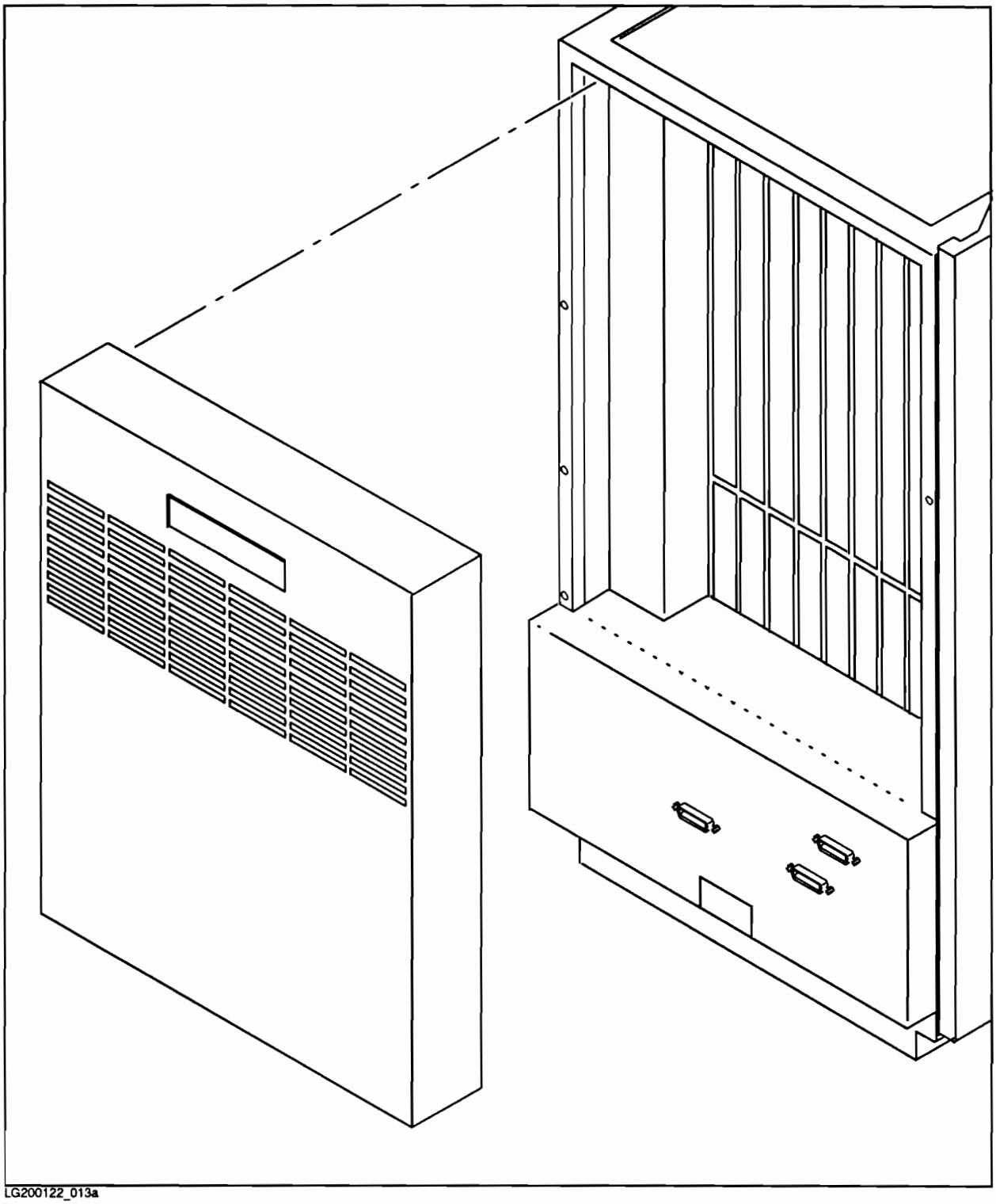


Figure 4-4. Back Panel Removal

5. Verify that all PCAs that were ordered are included in this shipment. Some of the PCAs are located in the front card cage.
6. Replace front bezels and top cover.
7. Replace rear panel.
8. On the bottom of the SPU cabinet, Hewlett-Packard recommends lowering the four leveler pads to relieve the tension on the casters and to level the cabinet.

External Peripherals Installation

Install all external peripherals as described in the associated installation manuals (see Figure 4-5 for internal I/O connection locations).

Caution Do not place any peripheral on top of the system cabinet or block any of the ventilation openings on the top, front, or rear of the cabinet.

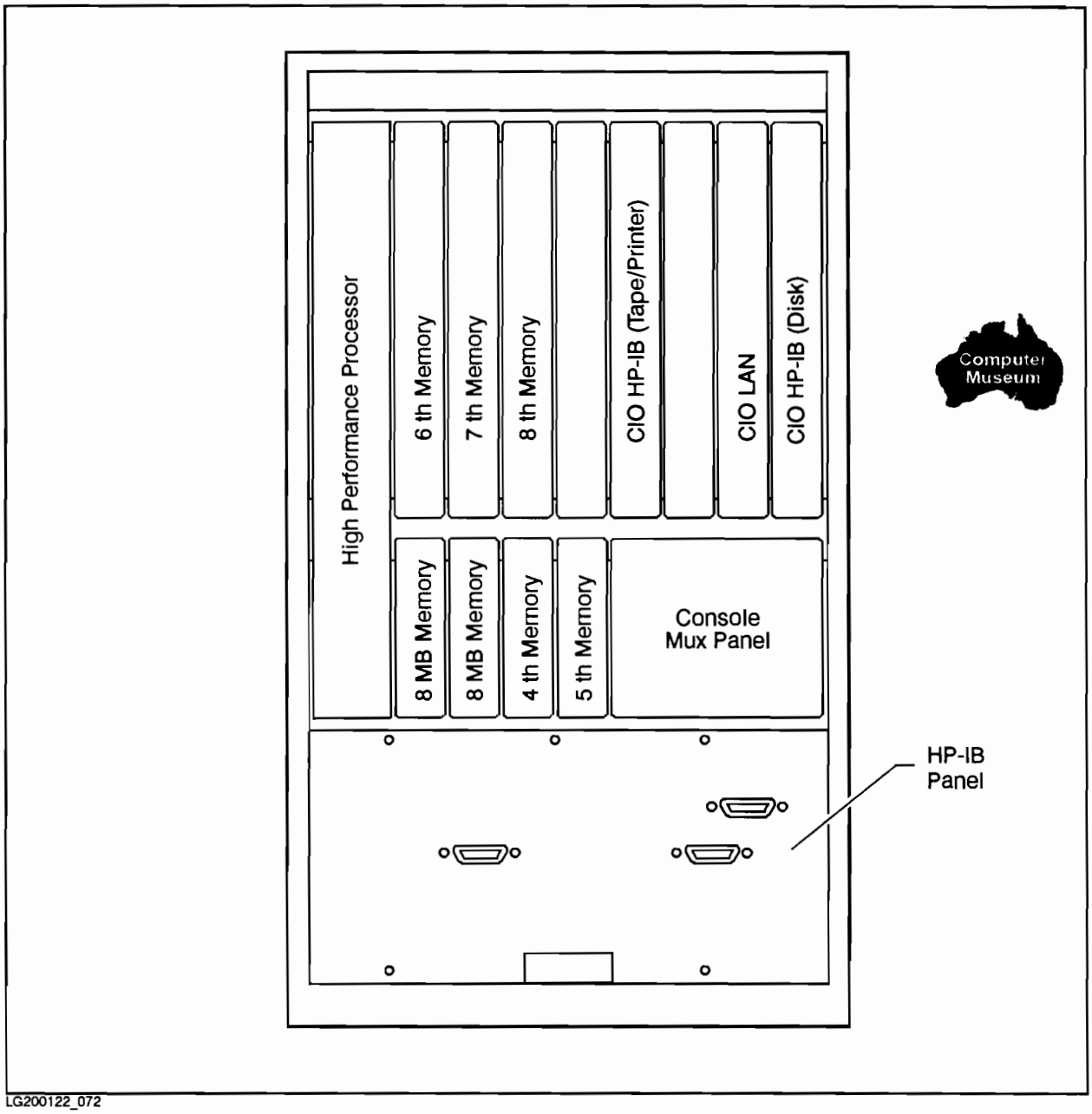


Figure 4-5. I/O Cable Connection Locations

System Console Installation

1. Connect the system console cable to Port T0 of the console mux panel (see Figure 4-6).
2. Connect the DTC PORT 0 cable to port S1 of the console mux panel.
3. If using a remote console, connect modem cable to port T1 of the console mux panel.

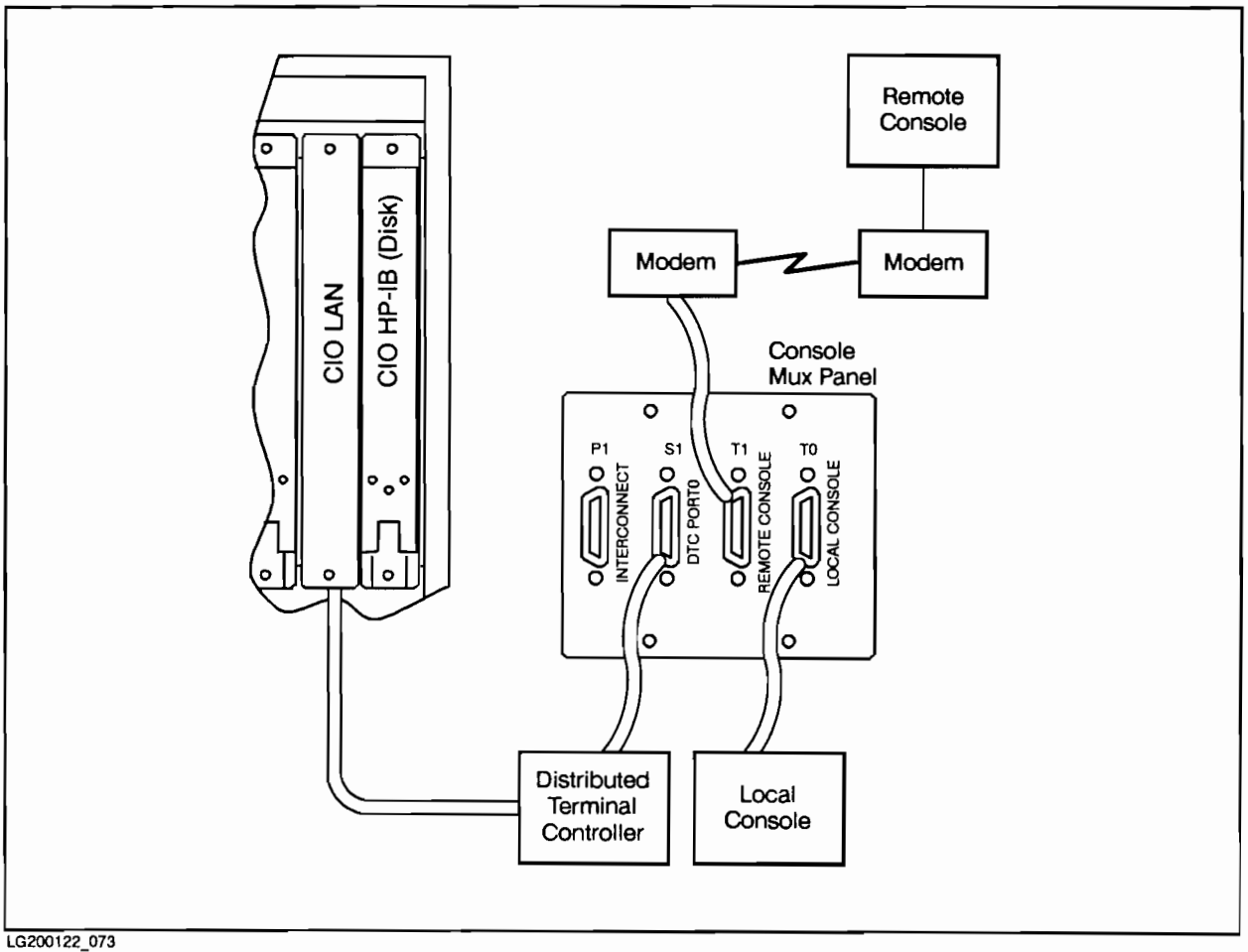


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Figure 4-6. Console Mux Panel

Distributed Terminal Controller (DTC) Installation

The DTC is part of the Distributed Terminal Subsystem (DTS), which includes a LAN link, the DTC, and terminals and printers. To be able to fully implement a system with a DTC, the components of this subsystem must be installed, the subsystem configured, validated, and cross-validated. It is more efficient to perform these steps at the time of initial installation, rather than perform them as a separate process.

To install the DTC and associated components, proceed as follows:

1. Connect the IEEE 802.3 LAN cable to the LAN card installed in the SPU.
2. Connect the DTC to the LAN cable.
3. Connect terminals and printers to the DTC in accordance with the installation instructions provided in the associated peripheral documentation.
4. Connect the DTC and peripherals to sources of AC power.

5

Starting The Computer System

Introduction

This chapter provides information for starting HP 3000 Series 920 Family Computer Systems, which use MPE XL for the operating system. The tasks include:

- Verifying the Hardware Configuration
- Starting the System
- Configuring the Distributed Terminal Subsystem
- Validating the Configuration
- Cross-Validating the Configuration
- Activating the DTS Configuration

Verifying the Hardware Configuration

To verify the hardware configuration, proceed as follows:

1. Remove the label from the drive cassette slot.

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

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

2. Using the power cord supplied with the system, connect one end to the SPU and the other end to the designated outlet for the product.

Caution There is no power on-off switch. To disconnect AC power from the system cabinet, set the keyswitch to position 0 and then disconnect the power cord from the AC source. This prevents the SPU from going into the battery backup mode.

3. Ensure that AC power is applied to all external peripherals.
4. On the SPU, turn the front keyswitch to position 1 (see Figure 5-1).

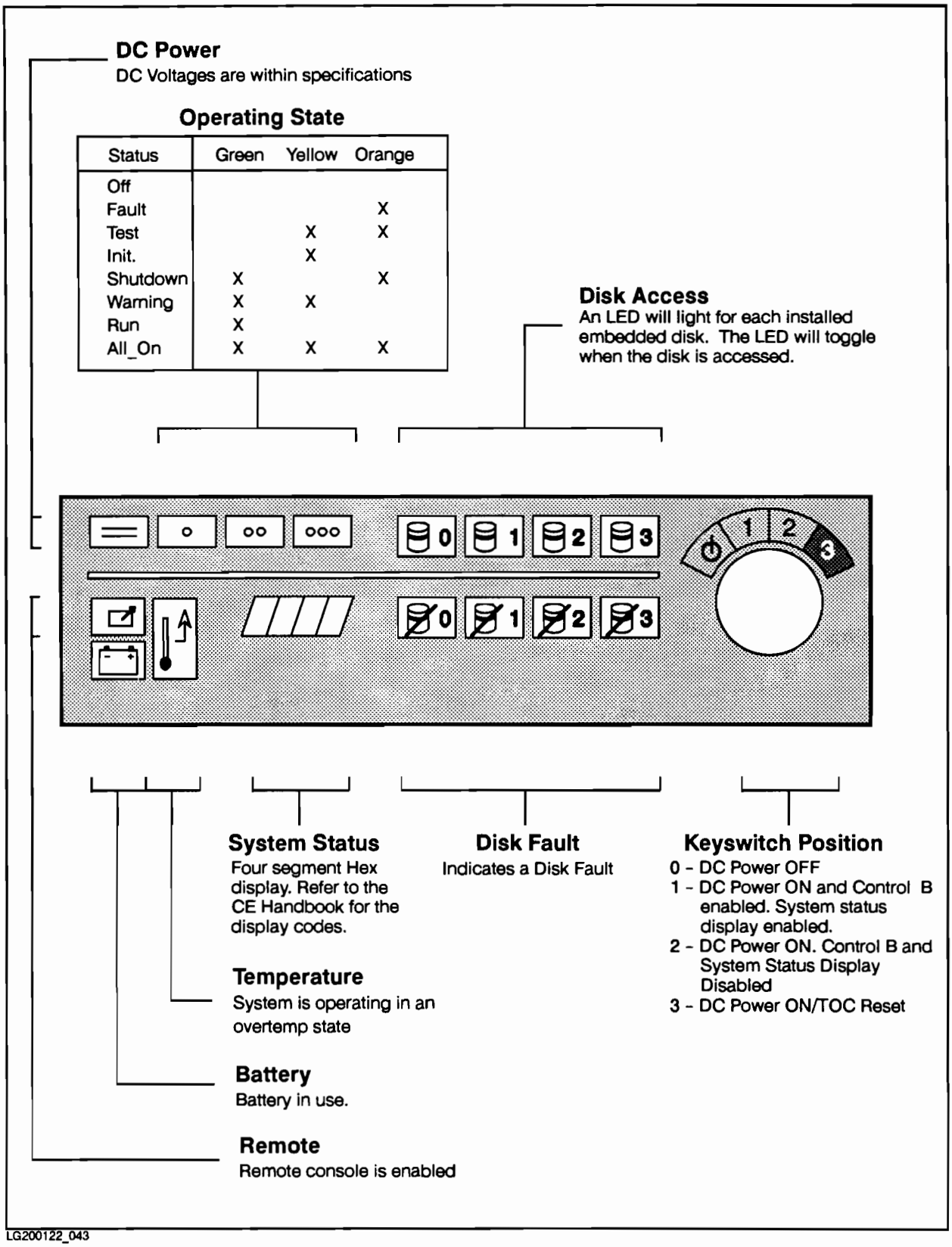

Figure 5-1. Front Panel Control and Indicators

5. The system will begin selftest. Upon completion, verify that the disk access LEDs for each embedded disk is on. Ensure that the disk fault LEDs are off.

6. Ensure that one of the following pairs of dialogs appears on the system console. If not, refer to the troubleshooting flow charts in the CE Handbook or to the Stable Storage Errors section below (Series 920 only). The dialogs for the Series 920 appear in the "Series 920 Only" section.

   The boot paths shown are for Series 922/932 systems; the boot paths for Series 948/958 are `32.0.0` for the primary boot path and `4.4.3` or `4.6.3` for the alternate boot path.

   Message 1

```
Processor Dependent Code (PDC) Revision x.x

Console Path = dec 4.2.0.0.0.0.0
             = hex 4.2.0.0.0.0.0
Primary Boot Path = dec 4.1.0.0.0.0
                  =hex 4.1.0.0.0.0
Alternate Boot Path = dec 4.5.3.0.0.0.0
                    = hex 4.5.3.0.0.0.0

Enter Boot Path, Command, or ?>
```

   Message 2

```
Processor Dependent Code (PDC) Revision x.x

Console Path = dec 4.2.0.0.0.0.0
             = hex 4.2.0.0.0.0.0
Primary Boot Path = dec 4.1.0.0.0.0.0
                  = hex 4.1.0.0.0.0.0
Alternate Boot Path = dec 4.5.3.0.0.0.0
                    = hex 4.5.3.0.0.0.0


Autoboot from primary path enabled.

To override, press any key within 10 seconds.
```

7. If message 1 appears on the screen,the first condition appears on the screen, at the `Enter Boot Path, Command, or ?>` prompt, type in the boot path to be used. This will normally be the Primary Boot Path number.

8. If autoboot is enabled (message 2), allow the booting process to begin unless it is necessary to boot from a path other than the Primary Path.

9. After the system has booted, the `ISL>` prompt appears. Type `IOMAP`. The hardware configuration will be displayed, which will include the hardware paths for the peripherals.

Series 920 Only

One of the following two dialogs should be displayed when selftest completes execution.

Message 1

```
Processor Dependent Code (PDC) Revision x.x

Console Path =  4.2.0.0.0.0
Primary Boot Path = 4.1.0.0.0.0
Alternate Boot Path = 4.1.3.0.0.0.0

Enter Boot Path, Command, or ?>
```

Message 2

```
Processor Dependent Code (PDC) Revision x.x

Console Path =  4.2.0.0.0.0
Primary Boot Path =  4.1.0.0.0.0
Alternate Boot Path =  4.1.3.0.0.0.0


Autoboot from primary path enabled.

To override, press any key within 10 seconds.
```

Stable Storage Errors (Series 920 Only)

This procedure applies only to the HP 3000 Series 920.

If the following messages are displayed on the console at power-on, a Transfer of Control (TOC) was performed at an inappropriate time, such as at ISL or while the system was being booted.

```
Processor Dependent Code (PDC) Revision x.x
ERROR Reading Stable Storage, Status = 5

Console Path        = ???  (STABLE STORAGE ERROR)
Primary boot path   = ???  (STABLE STORAGE ERROR)
Alternate boot path = ???  (STABLE STORAGE ERROR)
```

1. When the `Boot from primary boot path (Y or N)?>` message is displayed, type **N**.
2. When the `Boot from alternate boot path (y or N)?>` message is displayed, type **N**.
3. When the `Enter boot path, command or ?>` message is displayed, type the **Unlock** command.

4. When the **Enter boot path, command or ?>** message is displayed, type the **Path** command. The following path information will be displayed:

```
Console path          = 4.2.0.0.0.0.0
                        04.00000002.0.0.0.0.0  (hex)

Primary boot path     = 4.1.0.0.0.0.0
                        04.00000001.0.0.0.0.0  (hex)

Alternate boot path   = 4.1.3.0.0.0.0
                        04.00000001.00000003.0.0.0.0  (hex)

Keyboard path         = 0.0.0.0.0.0.0
                        0.0.0.0.0.0.0  (hex)
```

5. When the **Enter boot path, command or ?>** message is displayed, type the **Reset** command.

At this point, the system should boot normally. If it does not, contact your local sales office.

Starting the Operating System

The Fundamental Operating Software has been installed onto the system disk. To complete the installation, the following tasks must be performed:

- Boot the system from the system disk (i.e., primary boot path)
- Use the ISL>CLKUTIL to verify that the hardware clock is set to Greenwich Mean Time.
- Start the system
- Change the configuration (if required).
- Install the SUBSYS ADD-on tape.

System Start

Before the SYSGEN I/O configuration can be altered to match a customized hardware I/O configuration, a default configuration group must be used to initially start the system. To start the system, proceed as follows:

1. At the ISL prompt, type `START NORECOVERY GROUP=[configname]`

   where [configname] is one of the following default configurations:

```
CONFG920   (If system has one HP-IB PCA)
CONFG922   (If system has one HP-IB PCA)
CONFG932   (If system has one or more HP-IB PCAs)
CONFG948   (If system has one or more HP-IB PCAs)
CONFG958   (If system has one or more HP-IB PCAs)
ALINK932   (If system has an HP-FL)
ALINK948   (If system has an HP-FL)
ALINK958   (If system has an HP-FL)
```

2. Customize SYSGEN to conform to the specific hardware I/O configuration.

Note During the system I/O configuration of the system START, one or more occurrences of the following message could appear:

```
The path x.x.x was configured but is not available.
```

This means one of the following:

a. The device does not physically exist. Ignore this message.

b. The hardware in the device path is not functioning. For example, there is an HP-IB PCA, cable, or device malfunction.

Customizing the Configuration

Customize the configuration as follows:

1. Start the system
2. At the colon (:) prompt, type

```
SYSGEN
```

3. Activate the default the configuration that most closely matches the existing system by typing one of the following options:

```
SYSGEN>BA CONFG920     (For one HP-IB PCA)
SYSGEN>BA CONFG922     (For one HP-IB PCA)
SYSGEN>BA CONFG932     (For two or more HP-IB PCAs)
SYSGEN>BA CONFG948     (For two or more HP-IB PCAs)
SYSGEN>BA CONFG958     (For two or more HP-IB PCAs)
SYSGEN>BA ALINK932     (For an HP-FL)
SYSGEN>BA ALINK948     (For an HP-FL)
SYSGEN>BA ALINK958     (For an HP-FL)
```

4. Update the configuration to exactly match the system. (Refer to the *System Startup, Configuration, and Shutdown Manual, part no. 32650-90042.*)
5. At the SYSGEN prompt, type:

```
SYSGEN>KEEP CONFIG

SYSGEN>EXIT
```

6. Activate the new configuration by typing:

   CTRL A SHUTDOWN

   ISL>START NORECOVERY

7. Install the customized SUBSYS ADD-ON tape, using the instructions provided in the accompanying add-on manual.

Configuring the Distributed Terminal Subsystem (DTS)

This section includes a short-form method of configuring the DTS. These configuration procedures must be done each time a terminal, printer, or plotter is added to the DTS. Save this information fo future use.

Note For more detailed configuration information, refer to the *Configuring Systems for Terminals, Printers, and Other Serial Devices, part no. 32022-90001.*

Configuring the DTS consists of three steps that are performed as a single, continuous procedure. These steps are:

- Configuring the LAN Link
- Configuring the Device Profile
- Configuring the DTC and DTC Ports

Information required for network configurationis contained in the file NMCONFIG.PUB.SYS>. When building a new configuration file, it is unnecessary to define every field. A sample configuration is contained the file NMSAMP1.PUB.SYS. Use this file as a template for initial configuration.

Caution Use the sample file for new configurations only. Information previously configured and stored in NMCONFIG.PUB.SYS will be overwritten if the sample file is copied into NMCONFIG.PUB.SYS.

To configure the DTS, proceed as follows:

1. For your new installation, copy the sample configuration files as follows:

```
:HELLO MGR.SYS,PUB
:FILE CONFIG=NMCONFIG.PUB.SYS;DEV=1
:FCOPY FROM=NMSAMP1.PUB.SYS;TO=*CONFIG;NEW
```

2. When the files are copied, type `RUN NMMGR.PUB.SYS`. The first screen will appear.
3. At the `OPEN CONFIGURATION/DIRECTORY FILE` screen, the configuration filename field will display `NMCONFIG.PUB.SYS`.
4. Press (f1), `Open Config`. This takes you to the `MAIN` screen.
5. `Go To`
   Press (f1), `HP-HP` to go to the `HP-HP CONFIGURATION` screen.
6. `Go To`
   Press (f4), `NODENAME` to go to the `NODE NAME CONFIGURATION` screen.
7. `Update`
   Type in the node name information, press (f6), `Data` .
8. Press (f8), `Prior Screen` to return to the `HP-HP CONFIGURATION` screen.

9. Go To
   Press (f1), LINK to go to the LINK SELECTION screen.

10. Enter IEEE8023 in the Type field and then press (f6), Update. This takes you to the IEEE 802.3 LINK CONFIGURATION screen.

11. In the Physical Path field, check the physical path of the Device Adapter. It should be 4.3.

12. Prior
    Press (f8), Screen twice to return to the HP-HP CONFIGURATION screen.

13. Go To
    Press (f4), DTS to go to the DISTRIBUTED TERMINAL SUBSYSTEM (DTS) screen. *Enter HOST in the Device Configuration: Host-based (HOST) or PC-based (PC) field.

14. Update
    Press (f6), Data.

15. Go To
    Press (f1), Profile.

16. At the DISTRIBUTED TERMINAL SUBSYSTEM PROFILE SELECTION screen, define your printer and terminal profiles. Sample profiles are shown in the fields that can be used as guidelines, modified for use, or used as is, depending on your system hardware.

17. Using (f3) - (f6), delete, rename, add, or update the profiles as necessary.

18. Press (f8), Prior Screen to return toDISTRIBUTED TERMINAL SUBSYSTEM (DTS) screen.

19. Go To
    Press (f1), PROFILE to go to the DTS TERMINAL PROFILE screen.

20. Update
    Set the terminal profiles for each type of terminal in the system. Press (f6), Data for each terminal profile configured.

21. Go To
    Press (f1), Classes to configure additional device class names if required.

22. Press (f8) twice to return the DISTRIBUTED TERMINAL SUBSYSTEM (DTS) PROFILE SELECTION screen.

23. Enter PRINTER in the Type field and proceed to define the printer profiles for type of printer in the system. Press (f6), Update for each type of printer configured.

24. Prior
    Press (f8), Screen.

25. Go To
    Press (f2), DTC. Enter DTSLINK in the Link Name field.

26. Go To
    Press (f1), Select.

27. Enter the DTC name and press press (f5) Add .

28. At the DTC NODE NAME screen, enter the DTC node name and press (f6), Update Data .

29. Add the DTC Station Address to match the DTC station address on the label of the DTC, then press (Enter) or (f5) Update Data .

30. Press (f1) or (f2) to configure the DTC ports.

31. At the INTERFACE CARD screen, add or update Ldev and Device Profile Names.

32. Press (f8) until you return to the MAIN screen, or enter the Validate command at the command line. You are now ready to validate and cross-validate your configuration.

Note Be sure to validate before exiting to ensure the proper configuration.

Validating the DTS Configuration

To validate your DTS/Link configuration, proceed as follows:

1. At the MAIN screen, press (f2), Go To UTILITY . The UTILITY screen is then displayed.

2. Press (f3), Go To VALIDATE . The VALIDATE CONFIGURATION FILE screen is displayed.

3. Press (f2), Validate DTS/LINK . The validation process begins. The screen will show activities.

4. When validation is complete, press (Enter). The validation process is complete.

5. Exit from NMMGR.

Cross-Validating the Configuration

To cross-validate, proceed as follows:

1. At the MPE XL prompt, enter `RUN SYSGEN.PUB.SYS`
2. At the prompts, enter commands as follows:

```
sysgen> io
    io> ld
    io> exit
sysgen> keep
sysgen> exit
```

Activating the DTS Configuration

To activate the DTS Configuration, you must reboot the computer as follow: (You may also shut the system down and start it up again.)

```
:[CTRL] A
=SHUTDOWN
=[CTRL] B
=RS
```

After rebooting, reset the DTC. Either turn the power off then turn power on, or use TERMDSM Reset.

A

Support Link Modem Configuration

This appendix contains instructions for configuring the HP 35141A Support Link I, HP 35016A Support Link II, and HP 37212B Support Link modems to HP 3000 Series 920 Family computers. The instructions apply to the Remote Console and Session Modes of Operation.

This modem configuration data appears only in this document and the CE Handbook. Be sure this information is available for reference when a remote console is to be used, or when remote support is required.

Note The following instructions assume that HP 92219Q cables are attached to Port S1 of the Console MUX on the SPU.

HP 35141A Support Link I Modem Configuration

To configure the HP 35141A Support Link I modem, proceed as follows:

1. On the modem, press (OPTION). `OPTION` will be displayed on the LCD display.
2. Press (1), then (Enter). `OP 1* ?` will be displayed. (? means that the number to displayed is unknown.)
3. Press (3), then (Enter). `OPTION` is displayed. (This initializes the modem to the default settings.)
4. Press (1), then (Enter). `OP 1* 3` is displayed.
5. Press (2), the (Enter). `OPTION` is displayed. This disables the standar d default settings.
6. Press (15), then (Enter). `OP 15* 3` is displayed.
7. Press (2), then (Enter). `OPTION` is displayed. This sets OPTION 15 to 2 (DSR OFF IN TEST).
8. Press (RESET). `IDLE` is displayed. The modem is now ready for operation.

Note The next step requires that the modem be disassembled. Inside, jumper W1 has two positions; Positions AA (Clear To Send) and BB (Request To Send). This jumper must be correctly set for proper operation.

9. Set jumper W1 to Position AA.

HP 35016A Support Link II Modem Configuration

To configure the HP 35016A Support Link II Modem, proceed as follows:

1. To configure the modem, be sure the terminal is configured as follows:

Baud Rate	1200
Parity/Data Bits	0's/7
Check Parity	NO

2. Connect the terminal to the modem using a 25-pin straight through cable. The HP 13242 M/N or HP 40242 C/M cables can be used to connect most terminals to the modem.
3. On the modem, ensure that the HS LED is lit. If not, press (SPEED).
4. Pressing (Return) will signal the modem to answer. The modem will respond with a * prompt. At the * prompt, type HELP for a list of possible commands.
5. At the * prompt, type T for a listing of the modem's current option settings. Check OPTIONS for the following settings:

Option	Setting	Option	Setting	Option	Setting
1	2	11	2	20	1
2	1	12	2	21	1
3	2	13	1	22	1
4	2	14	1	23	9
5	3	15	2	24	1
6	2	16	1	25	2
7	2	17	1	26	1
8	2	18	5	27	2
9	2	19	1	28	2
10	1				

6. If any options on the modem are different than the above settings, type O (for OPTION) at the * prompt. The modem will ask for `OPTION NUMBER`. Enter the option number. A list of possible options will be displayed on the screen. Enter the desired option.
7. When all options are set correctly, type IDLE at the * prompt. This places the modem in an operational state.
8. Set jumper W1 to Position AA.

HP 37212B Support Link Modem Configuration

To configure the HP 37212B Support Link Modem, proceed as follows:

1. On the modem, set the DIP switch as follows (1 = up, 0 = down):

S1	S2	S3	
0	0	1	Computer mode operation (HP command set). Used when modem is attached to a computer port.
S4			
0			Primary channel
S5	S6		
0	0		10 bits - 1 srat, 8 data, 1 stop
S7			
0			Disable error correction
S8	S9		
0	0		ENQ/ACK flow control enabled
S10	S11		
0	1		DSR/CTS/CD conforms to RS -232-C definitions
S12			
1			DTR conforms to RS-232-C definitions

2. Press (AUTO ANS) to ensure that the auto answer feature is enabled.
3. Register 3 (an internal modem register) must be set to 0 to allow for the standard default settings to be used when the modem is on. To accomplish this:
   a. Connect a terminal to the modem with a straight-through cable, such as an HP 40242 C/M or HP 13242 M/N cable.
   b. Set all DIP switches on the modem to the down position.
   c. Cycle power on the modem, the type R3=0.
   d. Again cycle power on the modem. Disconnect the terminal and attach the modem to the computer port using an HP 92221Q cable.

B

Physical Path of Network Interface Cards

LANIC Physical Path

The following table provides physical path data for a node's local area network interface controller (LANIC) card. The path consists of a channel number (ccc) and a subchannel number (sss) in the form of ccc.sss.

Physical Paths of LANICS

SPU	DTS LANIC	NS LANIC
All 922, 932	4.3 (see note below)	4.3 (see note below)
All 948, 958	4.1 (see note below)	4.1 (see note below)

Note In all models, a single LANIC card provides interfaces to both the DTC and the LAN.

PSI Physical Path

The physical path is four times the slot number of the PSI. The following table provides the slot number and physical path number for each of the HP 3000 Series 922 Family computer systems.

Physical Paths for PSI Cards in HP 3000 Series 920 Family Computer Systems

HP 3000 Model	PB Slot No.	Path
922, 922LX, 922RX	11	44
932	8	32
	10	40
948, 958	14	56

C

Default Configurations

The following sections show portions of the default Input/Output (I/O) configurations carried by:

- CONFG922 (Series 922, Series 922RX, or Series 922LX using HP-IB cards).
- CONFG932 (Series 932 using HP-IB cards).
- CONFG948 (Series 948 using HP-IB cards).
- CONFG958 (Series 958 using HP-IB cards).
- ALINK932 (Series 932 using both HP-FL and HP-IB cards).
- ALINK948 (Series 948 using both HP-FL and HP-IB cards).
- ALINK958 (Series 958 using both HP-FL and HP-IB cards).

Note For specific information on how to start the system with the default configuration files, as well as possible additional default configuration files, refer to *HP 3000 MPE XL Installation and Update Manual* (36123-90001) and *HP 3000 MPE XL System Startup, Configuration, and Shutdown Reference Manual* (32650-90042). If you are working on a Series 922, Series 922RX, Series 922LX, or Series 932 system, you must modify the configuration group using SYSGEN so that device entries match the system configuration.

Series 922/922RX/922LX Default Configuration (HP-IB Only)

The default configuration for the Series 922, Series 922RX, or Series 922LX (using HP-IB cards only) carries six devices including two disk drives, one printer, two tape drives, and one terminal (console). Table C-1 lists the configured devices.

Table C-1. Series 922/922RX/922LX Default Configuration (HP-IB Only)

LDEV	I/O Path	Type	ID	Class
1	4.1.0	DISC	HPC2203A	DISC, SPOOL (System Disk)
2	4.1.1	DISC	HPC2203A	DISC, SPOOL
3	4.1.2	DISC	HPC2203A	DISC, SPOOL
6	4.1.4	LP	HP2567B	LP (System Printer)
7	4.1.3	TAPE	HPC1501A	TAPE, DDUMP (Primary)
10	4.1.7	TAPE	HPC1501A	JOBTAPE (Streams)
20	4.2.0	TERM	HP700/92A	CONSOLE

Series 932 Default Configuration (HP-IB Only)

The default configuration for the Series 932 (using HP-IB cards only) carries ten devices including four disk drives, three printers, two tape drives, and one terminal (console).

Table C-2 lists the configured devices.

Table C-2. Series 932 Default Configuration (HP-IB Only)

LDEV	I/O Path	Type	ID	Class
1	4.1.0	DISC	HPC2203A	DISC, SPOOL (System Disk)
2	4.1.1	DISC	HPC2203A	DISC, SPOOL
3	4.1.2	DISC	HPC2203A	DISC, SPOOL
4	4.1.3	DISC	HPC2203A	DISC, SPOOL
6	4.1.4	LP	HP2567B	LP (System Printer)
7	4.5.3	TAPE	HPC1501A	TAPE, DDUMP (Primary)
10	4.5.0	TAPE	HPC1501A	JOBTAPE (Streams)
19	36.5.5	PP	HP2680A	EPOC
20	4.2.0	TERM	HP700/92	CONSOLE
29	4.5.6	PP	HP2688A	BONSAI

Series 932 Default Configuration (HP-IB and HP-FL)

The default configuration for the Series 932 (using HP-IB and HP-FL cards) carries twelve devices including five disk drives, four printers, two tape drives, and one terminal (console). Table C-3 lists the configured devices.

Table C-3. Series 932 Default Configuration (HP-IB and HP-FL)

LDEV	I/O Path	Type	ID	Class
1	4.1.0	DISC	HPC2203A	DISC, SPOOL (System Disk)
2	4.1.1	DISC	HPC2203A	DISC, SPOOL
6	4.4.4	LP	HP2567A	LP (System Printer)
7	4.4.3	TAPE	HPC1501A	TAPE, DDUMP (Primary)
10	4.4.0	TAPE	HPC1501A	JOBTAPE (Streams)
19	4.4.5	PP	HP2680A	EPOC
20	4.2.0	TERM	HP700/92	CONSOLE
21	4.5.0	DISC	HP7937FL	DISC, SPOOL
22	4.5.1	DISC	HP7937FL	DISC, SPOOL
23	4.5.2	DISC	HP7937FL	DISC, SPOOL
28	4.4.6	PP	HP2688A	BONSAI
29	4.4.7	PP	HP2688A	BONSAI

Series 948/958 Default Configuration (HP-IB Only)

The default configuration for Series 948/958 systems, using HP-IB cards only, carries 13 devices including six disk drives, four printers, two tape drives, and one terminal (console).

Table C-4 lists the configured devices.

Table C-4. Series 948/958 Default Configuration (HP-IB and HP-FL)

LDEV	I/O Path	Type	ID	Class
1	32.0.0	DISC	HPC2203A	DISC
2	32.0.1	DISC	HPC2203A	DISC
3	32.0.2	DISC	HPC2203A	DISC
4	32.0.3	DISC	HPC2203A	DISC
6	4.6.4	LP	HP2667B	LP
7	4.6.3	TAPE	HPC1501A	TAPE, DDUMP
10	4.6.0	TAPE	HPC1501A	JOBTAPE
19	4.6.5	PP	HP2680A	EPOC
20	4.2.0	TERM	HPC1001G	CONSOLE
21	4.5.0	DISC	HPC2203A	DISC
22	4.5.1	DISC	HPC2203A	DISC
28	4.6.6	PP	HP2688A	BONSAI
29	4.6.7	PP	HP2688A	BONSAI

Series 948/958 Default Configuration (HP-IB and HP-FL)

The default configuration for Series 948/958 systems, using HP-IB and HP-FL cards, carries 14 devices including seven disk drives, four printers, two tape drives, and one terminal (console).

Table C-5 lists the configured devices.

Table C-5. Series 948/958 Default Configuration (HP-IB and HP-FL)

LDEV	I/O Path	Type	ID	Class
1	32.0.0	DISC	HPC2203A	DISC
2	32.0.1	DISC	HPC2203A	DISC
3	32.0.2	DISC	HPC2203A	DISC
4	32.0.3	DISC	HPC2203A	DISC
6	4.4.4	LP	HP2667B	LP
7	4.4.3	TAPE	HPC1501A	TAPE, DDUMP
10	4.4.0	TAPE	HPC1501A	JOBTAPE
19	4.4.5	PP	HP2680A	EPOC
20	4.2.0	TERM	HPC1001G	CONSOLE
21	4.5.0	DISC	HP7937FL	DISC
22	4.5.1	DISC	HP7937FL	DISC
23	4.5.2	DISC	HP7937FL	DISC
28	4.4.6	PP	HP2688A	BONSAI
29	4.4.7	PP	HP2688A	BONSAI