

**COMPAQ**

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# ***Color Monitors***

## ***User's Guide***

Compaq 1024 Color Monitor

*Manuel d'utilisation Moniteur Couleur 1024 Compaq*  
*Benutzerhandbuch Compaq 1024 Farbmonitor*  
*Guida all'utilizzo Monitor a Colori 1024 Compaq*  
*Guía del Usuario Monitor Color 1024 Compaq*

Compaq 151FS Color Monitor

*Manuel d'utilisation Moniteur Couleur Compaq 151FS*  
*Benutzerhandbuch Compaq 151FS Farbmonitor*  
*Guida all'utilizzo Monitor a Colori Compaq 151FS*  
*Guía del Usuario Monitor Color Compaq 151FS*



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## ***User's Guide***

### **Compaq 1024 and Compaq 151FS Color Monitors**

Third Edition (October 1994)  
First Edition (June 1992)  
Part Number 141781-003

**Compaq Computer Corporation**

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# Federal Communications Commission Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.

## Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Compaq Computer Corporation may void the user's authority to operate the equipment.

## Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

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## **CANADIAN NOTICE**

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## **AVIS CANADIEN**

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## **GERMAN NOTICE**

Compaq computers, when tested with the Compaq 441P, 443P, 444, 460P, 461P, and 462 Monitors, were evaluated and found compliant to the requirements of ZH1/618 in the Text Mode (720 x 400) using MS-DOS Version 3.31 (or higher) and BASICA as published by Compaq Computer Corporation.

## **European Notice**

Products with the CE Marking comply with both the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms:

- EN55022 (CISPR 22) - Radio Frequency Interference
- EN50082-1 (IEC801-2, IEC801-3, IEC801-4) - Electromagnetic Immunity
- EN60555-2 (IEC555-2) - Power Line Harmonics
- EN60950 (IEC950) - Product Safety

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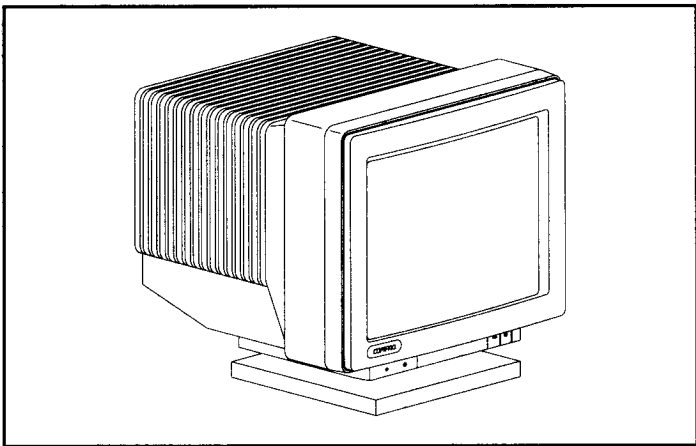
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# Introduction

This manual provides information necessary for you to install and operate the Compaq 1024 and the Compaq 151FS Color Monitors.

## About the Monitors

The Compaq 1024 and the Compaq 151FS Color Monitors are microprocessor-based, intelligent scanning color monitors that automatically lock in on the most common display modes.



*Compaq 1024 and 151FS Color Monitor*

These are some of both monitors' features:

- Supports VGA standards, Super VGA (800 x 600), 8514/A (1024 x 768 interlaced), and 1024 x 768 non-interlaced mode.
- Analog input allows the monitors to display an unlimited number of colors, depending on the controller used in the computer.
- Easy-to-access front panel controls.
- Tilt control (image rotation) functionality on the Compaq 151FS Color Monitor only.
- Automatically scans the horizontal frequency from 30 to 58 KHz and the vertical frequency from 50 to 100 Hz.

- Energy-saving feature that activates when the monitor is turned on but not in use.
- Equipped with an integrated asset management provision. This provision provides the computer with access to monitor registration information such as the serial number.
- Compliant with MPR 1990 Emissions Standards.

## **Installing the Monitor**

Many Compaq personal computers have integrated display adapters that work with the Compaq 1024 and Compaq 151FS Color Monitors. In addition, the QVision controller is available for both EISA-based and ISA-based computers. If you plan to use a controller other than QVision, be sure that it can support the frequencies used by these monitors.

If your computer requires a separate display adapter, install it before proceeding with these instructions.

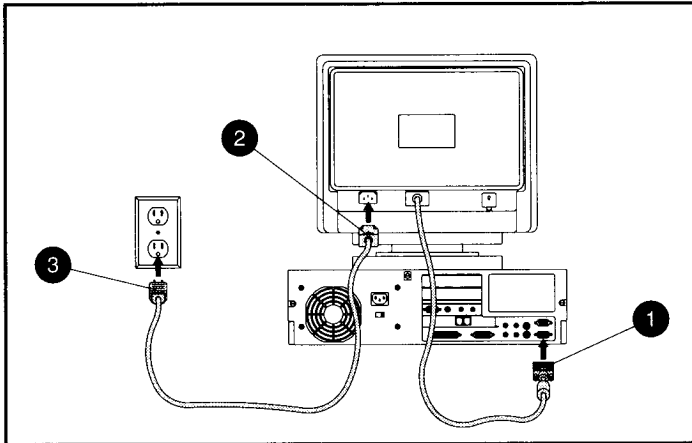


To install the monitor, ensure that power to the monitor, computer system, and other attached devices is off and complete the following steps:

1. Connect the video cable ❶ on the monitor to the 15-pin video graphics connector on your computer and tighten the fastening screws.

**IMPORTANT:** Make sure the video cable aligns with the video graphics connector on your computer. Do not force the cable onto the connector, or you may damage the video cable.

2. Connect one end of the monitor power cord ❷ to the connector on the rear panel of the monitor and the other end ❸ to a properly grounded electrical outlet that is easily accessible and located as near to the monitor as possible. Depending on your location, the power cord for your monitor could be different from the one in the illustration.



Rear Panel Connectors



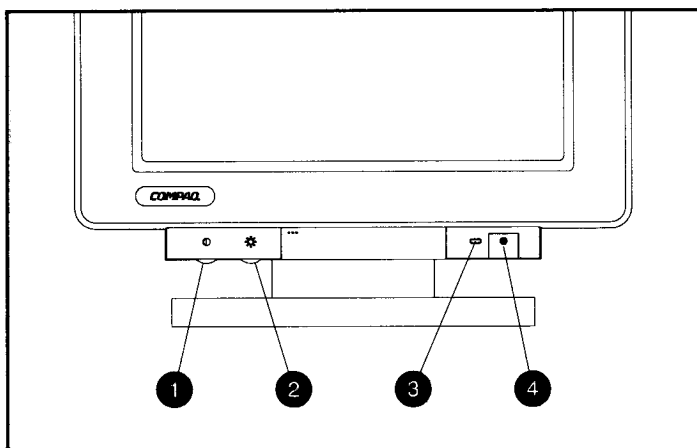
**WARNING:** This equipment is designed for connection to a grounded (earthed) outlet. The grounding type plug is an important safety feature. To avoid risk of electric shock or damage to your equipment, do not disable this feature.

# Using the Monitor

This chapter describes how to use the controls and indicators on the Compaq 1024 and Compaq 151FS Color Monitors.

## Front Panel Controls

The following illustration shows the front panel controls used to power-on the monitor and adjust the contrast and brightness.



*Front Panel Controls*

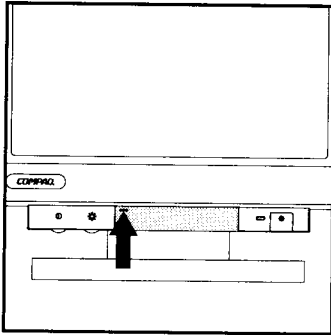
- |                      |                  |
|----------------------|------------------|
| ❶ Contrast Control   | ❸ Power-on Light |
| ❷ Brightness Control | ❹ Power Switch   |



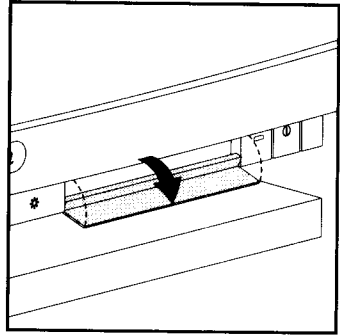
**CAUTION:** To prevent damage to the monitor, wait at least three seconds after turning off the monitor before you turn it back on.

## Display Adjustment Controls

The display adjustments on the Compaq 1024 and Compaq 151FS Color Monitors are preset. Normally you do not need to make any adjustments. However, if adjustments are required, press the left side of the panel cover located on the front of the monitor. This opens the panel cover to the display adjustment controls.

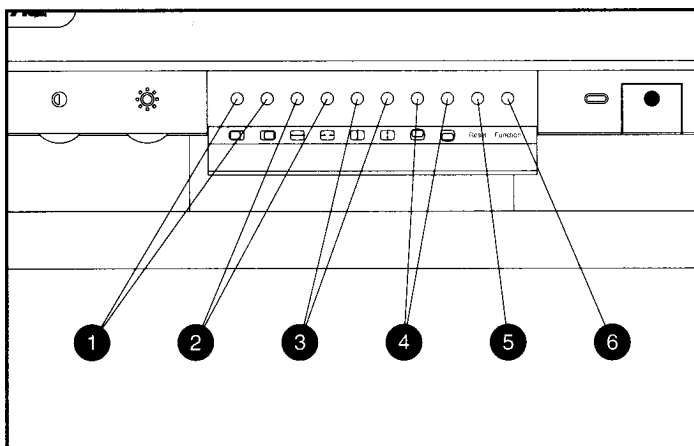


*Opening the Panel Cover*



You can use the push buttons behind the panel to change the settings shown on the following page. The settings are automatically saved and recalled each time you change the monitor's mode.

**NOTE:** The Reset button and Function control are recessed to prevent accidental activation. The Function control, when enabled, allows the primary controls to be used as advanced functions. When advanced functions are being accessed, the Power-on light flashes to indicate the level being used. For information on using advanced functions, see Appendix A, "Advanced Functions."



*Display Adjustment Controls*

The following table lists the primary function of each control.

<b>Function Control Table</b>			
<b>Icon</b>	<b>Control</b>	<b>Control</b>	<b>Function</b>
①		Horizontal Position	Centers the image horizontally.
②		Horizontal Width	Sizes the image horizontally.
③		Vertical Height	Sizes the image vertically.
④		Vertical Position	Centers the image vertically.
⑤		Reset Button	Recalls the factory installed settings for centering and size when operating in a preset mode.
⑥		Function Control	Provides access to advanced functions.

**NOTE:** If adjustments are not made within 10 seconds of enabling the Function Control, the Function Control will automatically disengage itself, and the monitor will revert to its primary controls.

## Recommended Use

For the best results when using the monitor, observe the following suggestions:

- To avoid glare, position the monitor facing away from direct sunlight.
- For the best viewing angle, place the monitor just below eye level (10° to 15°).
- For optimum focus, adjust the brightness control to the point where the background just disappears.
- To minimize eye strain, adjust the contrast to a comfortable level.

## Display Modes

Software applications use drivers to tell the video controller installed in your computer which mode to use for any application. The video controller, in turn, sends the appropriate signals to the monitor. The monitor automatically changes modes if your application changes modes.

## Preset Modes

The factory default or preset modes are the most commonly used modes. The monitor automatically recognizes these modes when they are requested. Refer to Appendix B, "Specifications," for a list of preset modes.

## User Modes

The video controller signal may occasionally call for a mode that is not preset. This may happen for one of the following reasons:

- You are not using a Compaq standard graphics adapter.
- You are not using a preset mode.

In these cases, you may need to readjust the size and centering of the monitor. It will automatically store the new setting as a user mode and the monitor automatically recognizes the new user mode just as it would a preset mode. Up to four user mode settings can be stored.

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## Asset Management Provision

The monitor has an integrated asset management provision that provides monitor type and serial number information to the computer. The amount of information supplied to the computer is determined by the capabilities of the computer. This information is useful for inventory purposes, particularly when used on network installations.

**NOTE:** The asset management provision only works when connected to computers that have asset management provision capabilities.

## Energy Saver Feature

The Compaq 1024 and 151FS Color Monitors have an energy saver feature that allows the computer to control the power consumption of the monitor. The energy saver feature combines hardware and software components and puts the monitor into a reduced power state when it is not in use.

There are three different modes of operation:

- Full power
- Suspend
- Monitor energy saver

Full power mode is your normal mode of operation. The monitor goes into the suspend mode after a user-selectable period of keyboard and mouse inactivity. Monitor energy saver mode, which results in a power savings of about 90 percent, activates after a second period of keyboard and mouse inactivity. The length of the inactivity period required before the monitor goes into suspend or monitor energy saver mode is determined by you and by settings in the Energy Saver utility.

The following table describes the monitor energy saver levels during the different modes of operation.

Energy Saver Levels		
Mode	Power Usage	Description
Full Power	70+ watts	ON = Normal operation
Suspend	Less than 30 watts	Monitor screen is blanked. High voltage is off. Heater voltage is on. Full power mode returns quickly.
Monitor Energy Saver	Less than 8 watts	Monitor screen is blanked. High voltage is off. Heater voltage is off. There is a brief warm-up period before returning to full power mode.

**NOTE:** The energy saver feature for monitors only works when connected to computers that have energy saver features.

To use the Energy Saver utility, select the Power Management and Hibernation icon located in the Compaq Control Center and follow the directions on the screen. Some features are also available under the DOS environment.

## Care and Maintenance

- Use only a power source and connection appropriate for the monitor as indicated on the marking label/back plate.
- When you connect the monitor to an outlet or extension cord, make sure the total ampere rating of the products connected to the outlet does not exceed the current rating of the electrical outlet, and the total ampere rating of the products connected to the cord do not exceed the rating of the cord.
- Install the monitor near an outlet that you can reach easily. Disconnect the product by grasping the plug firmly and pulling it from the outlet. Never disconnect it by pulling the cord.
- Unplug the monitor from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- Do not drop the monitor or place it on an unstable surface.
- Slots and openings in the cabinet are provided for ventilation; these openings must not be blocked or covered. Never push objects of any kind into cabinet slots or other openings.
- Do not allow anything to rest on the power cord. Do not walk on the cord.
- Keep the monitor in a well-ventilated area, away from excessive light, heat, and moisture. Keep the monitor away from high capacity transformers, electric motors, and other strong magnetic fields.
- Do not open the monitor cabinet or attempt to service this product yourself. Adjust only those controls that are discussed in the operating instructions. If the monitor is not operating properly, or has been dropped or damaged, contact your Authorized Compaq Reseller or Service Provider.



# Advanced Functions

This appendix describes the advanced parameter setting features of the Compaq 1024 and Compaq 151FS Color Monitors.

## Optimizing Picture Quality

**NOTE:** Picture image stabilizes after a warm-up period of 30 minutes. Allow monitor to warm up prior to performing the following procedures.

## Optimizing Contrast

For best results, set your screen to a dark background (such as the system prompt) before adjusting the settings.

- Set the brightness and contrast controls to their highest levels.
- Reduce brightness until the background portions of the screen are completely dark.
- Adjust contrast control to your preference.

## Optimizing Focus

The default image size is preset at the factory. The front panel controls can be used to increase the screen size beyond the default setting. However, expanding the screen image beyond the default settings may degrade the focus at the outer edge of the screen.

To enhance focus, use the lowest contrast level that gives satisfactory results in your viewing environment.

**NOTE:** Settings that maximize contrast may not offer optimum focus, and settings that maximize focus may not offer optimum contrast.

The following table provides instructions on how to make advanced adjustments to the monitor screen.

### Advanced Display Adjustments Table

Desired Adjustment	Press First	Press Second	To Make Adjustment*
Adjust the straightness of the outer edge of the screen.	Function Control; the power-on light begins flashing.	Horizontal Position left button	Press the Horizontal Position left button again to make the vertical border more convex. Press the Horizontal Position right button to make the vertical border more concave.
Adjust the trapezoid of the screen.	Function Control; the power-on light begins flashing.	Horizontal Position left button	Press the Horizontal Width left button to move the lines outward. Press the Horizontal Width right button to bring the lines inward.
Adjust the image rotation or tilt adjust (151FS only).	Function Control; the power-on light begins flashing.	Horizontal Position left button	Press the Vertical Height left or right buttons to adjust the image rotation.

\* After each adjustment is made, press the Function Control to end the adjustment and return the monitor to normal operation, or wait 30 seconds for the monitor to return to normal operation.

**NOTE:** Pressing the Reset button while in this mode returns the screen to the default setting.

**IMPORTANT:** Wait 10 seconds before powering off to ensure the adjustment is saved in memory.

# Specifications

## Technical Specifications

The following table provides the technical specifications for the Compaq 1024 and Compaq 151FS Color Monitors.

<b>Specifications</b>		
<b>CRT Size</b>		
Compaq 1024	14-inch diagonal	
Compaq 151FS	15-inch diagonal	
<b>Phosphor/Dot Pitch</b>	P22, 0.28 mm	
<b>Radius of Curvature</b>		
Compaq 1024	575 mm	
Compaq 151FS	1200 mm	
<b>Display Controls</b>	Power, Contrast, Brightness, H-Position, H-Width, V-Position, V-Size, Reset, Function	
<b>Colors Displayed</b>	Unlimited	
<b>Compaq 1024 Default Setting</b>		
Horizontal	9.6 in	240 mm
Vertical	7.2 in	180 mm
<b>Compaq 151FS Default Setting</b>		
Horizontal	10.40 in	260 mm
Vertical	7.80 in	195 mm
<b>Scan Frequencies</b>		
Horizontal	31.5 kHz - 57.5 kHz	
Vertical	50.0 Hz - 100.0 Hz	
<b>Deflection</b>		
Horizontal	31.5 - 57.5 kHz	
Vertical	50 Hz - 100 Hz	

*Continued*

**Specifications** *Continued*

<b>Face Treatment</b>	Tinted glass, antireflection/ antistatic coating
<b>Power Source</b>	AC 100-240 VAC, 50-60 Hz, <100 watts
<b>Power Consumption</b>	
Compaq 1024	<100 watts
Compaq 151FS	<110 watts
<b>Inrush Current</b>	30A Max at 120 VAC 40A Max at 220 VAC
<b>Input Terminal</b>	15-pin D-type connector with cable

**Preset Modes**

<b>Resolution (dots x lines)</b>	<b>Horizontal Sync Rate</b>	<b>Vertical Sync Rate</b>
1024 x 768	60.0 kHz	75 Hz
1024 x 768	56.5 kHz	70 Hz
1024 x 768	48.4 kHz	60 Hz
1024 x 768	35.5 kHz	87i Hz
800 x 600	48.0 kHz	72 Hz
800 x 600	37.8 kHz	60 Hz
720 x 400	31.5 kHz	70 Hz
640 x 480	37.8 kHz	72 Hz
640 x 480	31.5 kHz	60 Hz
640 x 350	31.5 kHz	70 Hz

<b>Operating Temperature</b>	32°F to 104°F	0°C to 40°C
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<b>Relative Humidity (noncondensing)</b>	10% to 90%
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<b>Weight</b>	<b>Unpacked</b>	<b>Packaged</b>
Compaq 1024	33 lbs (15 kgs net)	40 lbs (18.17 kgs gr)
Compaq 151FS	33 lbs (15 kgs net)	40 lbs (18.17 kgs gr)

*Continued*

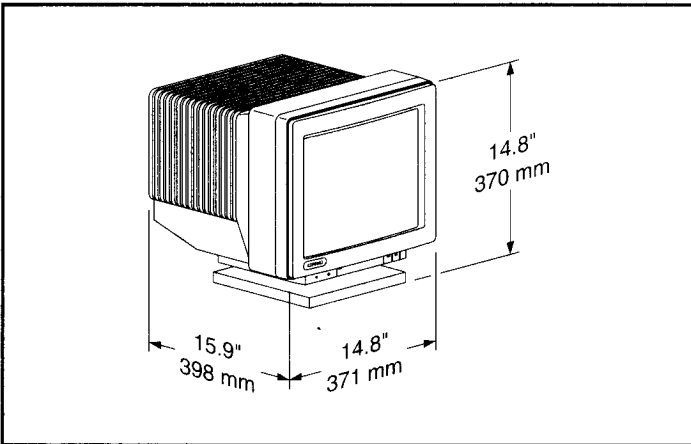
**Specifications** *Continued*

**Input Signal Level**

Video	0.7 Vp-p Analog Level Positive
Sync	TTL Level

**Dimensions for  
Compaq 1024 and  
Compaq 151FS:**

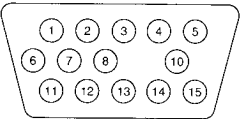
Width	14.8 in	371 mm
Height	14.8 in	370 mm
Depth	15.9 in	398 mm



*Compaq 1024 and Compaq 151FS Monitor Dimensions*

## Pin Assignments

The pin assignments are as follows:

Connector	Pin	Signal
	1	Red Video
	2	Green Video
	3	Blue Video
	4	Sense 2 (Open)
	5	Open
	6	Red Gnd
	7	Green Gnd
	8	Blue Gnd
	9	Reserved (No Pin)
	10	Logic Gnd
	11	Sense 0 (Tie to Logic Gnd)
	12	Bi-directional Data (SDA)
	13	H-Sync
	14	V-Sync
	15	Data Clock (SCL)

## Power Cord Set Requirements

The power cord set used with the monitor must meet the requirements of the country where you use the monitor, whether it is 100-120 or 220-240 VAC.

The following information explains the requirements for power cord set selection.

- The cord set must be approved for the country in which it is used.
- The appliance coupler (that is, the connector to the device itself, not the wall plug) must have a configuration for mating with a EN60320/IEC 320 appliance inlet (Standard Sheet C14).

### U.S. and Canada

1. The cord set must be UL Listed and CSA Certified.
2. The minimum specifications for the flexible cord are:
  - No. 18 AWG
  - Type SJT
  - 3-Conductor
3. The cord set must have a rated current capacity of at least 7 amperes.
4. The attachment plug must be an earth-grounding type with a NEMA 5-15P (15A, 125V) or NEMA 6-15P (15A, 250V) configuration.

### Japan

1. All components of the cord set (cord, receptacle, and plug) must bear a "T" mark and registration number in accordance with the Japanese Dentori Law.
2. The minimum specifications for the flexible cord are:
  - 0.75mm<sup>2</sup> conductors
  - Type VCT or VCTF
  - 3-Conductor

- 3. The cord set must have a minimum rated current capacity of 7 amperes.
- 4. The attachment plug must be a two-pole, earth-grounding type with a Japanese Industrial Standard C8303 (15A, 125V) configuration.

### **Other Countries**

- 1. The cord set fittings must bear the certification mark of the agency responsible for evaluation in a specific country. Acceptable agencies include:

BSI (United Kingdom)	MITI (Japan)
CEBEC (Belgium)	NEMKO (Norway)
DEMKO (Denmark)	OVE (Austria)
EANSW (Australia)	SEMKO (Sweden)
SETI (Finland)	SEV (Switzerland)
IMQ (Italy)	UTE (France)
KEMA (The Netherlands)	VDE (Germany)
- 2. The flexible cord must be of a HAR (harmonized) type HO5VV-F 3-conductor cord with a minimum conductor size of 0.03 square inches (1.0 square millimeter).
- 3. The cord set must have a current capacity of at least 10 amperes and a nominal voltage rating of 125 or 250 VAC, as required by each country's power system.

For more information about power cord set requirements, contact your Authorized Compaq Reseller or Service Provider.



# Electrostatic Discharge

A discharge of static electricity from a finger or other conductor may damage system boards or other static-sensitive devices. This type of damage may reduce the life expectancy of the device.

## Preventing Electrostatic Damage

To prevent electrostatic damage, observe the following procedures:

- Avoid touching pins, leads, or circuitry.
- Be properly grounded when touching a sensitive component or assembly.

## Methods of Grounding

Use one or more of the following measures when handling or installing electrostatic-sensitive parts:

- Use a wrist strap connected by a ground cord to a grounded workstation or to the computer chassis. Wrist straps are flexible straps with a minimum of 1 megohm +/- 10 percent resistance in the ground cords. To provide a proper ground, wear the strap snug against the skin.
- Use heelstraps, toestraps, or bootstraps at standing workstations. Wear the straps on both feet when standing on conductive floors or dissipating floor mats.
- Use conductive field service mats.
- Use a portable field service kit with a folding static-dissipating work mat.

**IMPORTANT:** For additional information on static electricity or assistance with the installation of this product, contact your Authorized Compaq Reseller or Service Provider.