# **COMPAQ**

## **Reference Guide**

Compaq Color Monitors Series 5500, 7500, 7550, 9500

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**CAUTION:** Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.



Text set off in this manner indicates important information the user should make note of.

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# **Contents**

Introduction	
Kit Contents	1–1
Safety and Maintenance Guidelines	
Safety Guidelines	2_1
Power Requirements	
Important Safety Information	
Maintenance Guidelines	
Removing the Monitor Base	
Installation	
Monitor Base Installation	
Monitor Installation	
Speaker Installation	
Attaching the Speakers to the Monitor	
Speaker Security Lock	
Operation	
Information Files	4–1
Front Panel Controls	4–1
On-Screen Display	
On-Screen Display Functions	
Monitor Messages	
No Signal Message	
Out of Frequency Range Message	
Using the Energy Saver Mode	
Troubleshooting	
Solving Common Problems	A–1
Using the World Wide Web	
Preparing to Call Technical Support	
Technical Specifications	
Compaq 5500/15" Series Monitor	B–1
Compaq 7500/17" Series Monitor	
Compaq 7550/17" Flat CRT Monitor	
Compag 9500/19" Series Monitor	B–6

Reference Guide

#### **Agency Regulatory Notices Declaration of Conformity for Products TCO'99 Requirements**

ii Reference Guide

## Introduction

Your microprocessor-based, digitally controlled color monitor is a high-performance and easy-to-use product. It employs the latest on-screen menu technology.

### **Kit Contents**

Your monitor kit should contain:

- CRT monitor
- Monitor Base (pre-attached on selected models)
- AC power cord (selected models)
- Speakers (selected models)
- Speaker power adapter (selected models)
- Documentation kit

Reference Guide 1–1

# **Safety and Maintenance Guidelines**

### **Safety Guidelines**

#### **Power Requirements**

Refer to the "Power Cord Set Requirements" section in "Agency Regulatory Notice," for information on the correct power cord set for this device.

### **Important Safety Information**



**WARNING:** To reduce the risk of electric shock or damage to your equipment, do not disable the power cord grounding feature. This equipment is designed to be connected to a grounded (earthed) power outlet that is easily accessible to the operator. The grounding plug is an important safety feature.



**WARNING:** For your safety, be sure that the power outlet you plug the power cord into is easily accessible and located as close to the equipment as possible. When you need to disconnect the power to the equipment, unplug the power cord from the power outlet by grasping the plug firmly. Never pull on the cord.



**CAUTION:** For the protection of your monitor, as well as your computer, connect all power cords for your computer and its peripheral devices (such as a monitor, printer, scanner) to some form of surge protection device such as a power strip or Uninterruptible Power Supply (UPS). Not all power strips provide surge protection; the power strips must be specifically labeled as having this ability. Use a power strip whose manufacturer offers a Damage Replacement Policy so you can replace your equipment if surge protection fails.

### **Maintenance Guidelines**

To enhance the performance and extend the life of your monitor, follow these guidelines:

- Do not open your monitor cabinet or attempt to service this product yourself. If your monitor is not operating properly, or has been dropped or damaged, first unplug your monitor from the power outlet, then contact your Compaq authorized dealer, reseller, or service provider.
- Adjust only those controls that are discussed in the operating instructions.
- Place your monitor at least 3 inches (76 mm) away from walls or other enclosures.
- Use only a power source and connection appropriate for this monitor, as indicated on the label/back plate of the monitor.

Reference Guide 2–1

- Be 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 does not exceed the rating of the cord. Look on the power label to determine the ampere rating (AMPS or A) for each device.
- Install your monitor near an outlet that you can easily reach. Disconnect the monitor by grasping the plug firmly and pulling it from the outlet. Never disconnect the monitor by pulling the cord.
- Turn your monitor off when not in use. You can substantially increase the life of your monitor by using a screen saver program and turning off the monitor when not in use.
- Unplug your monitor from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning. If the screen requires additional cleaning, use an antistatic CRT screen cleaner.



**CAUTION:** Do not use benzene, thinner, ammonia, or any other volatile substances to clean your monitor or the screen. These chemicals may damage the cabinet finish as well as the screen.

- 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 place plants on top of your monitor. Water or dirt from the plant may get into the vents.
- Do not drop your monitor or place it on an unstable surface.
- Do not allow anything to rest on the power cord. Do not walk on the cord.
- Keep your monitor in a well-ventilated area, away from excessive light, heat or moisture. Keep your monitor away from high-capacity transformers, electric motors, and other devices with strong magnetic fields.
- In a two-monitor system, place your monitors as far apart from one another as possible to lessen interference between them.
- Do not place the monitor face down. Damage could result to the front panel controls or the monitor screen.



2–2 Reference Guide

### **Removing the Monitor Base**

In the event that you need to disassemble the base from the monitor, follow these instructions:

- 1. If you must remove the base attachment, release the catch and slide the base toward the back of your monitor.
- 2. Lift the base up and away from your monitor.

Reference Guide 2–3

# Installation

### **Monitor Base Installation**

On some monitors, the base must be attached prior to monitor installation. If you need to attach the base, follow these steps:

1. Align the hooks on the base with the sockets on the bottom of the monitor and attach the base.



2. Push the base toward the front of the monitor until it stops.



Reference Guide 3–1

#### **Monitor Installation**

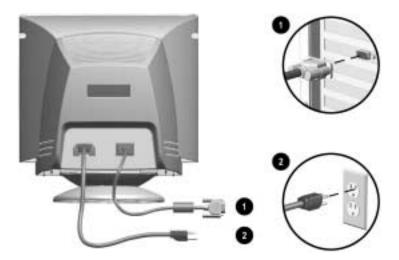
Before installing your monitor, place it in a convenient, well-ventilated location near your computer.

- 1. Turn off the power to your computer and other peripheral devices.
- 2. Connect the video cable (blue connector) from the back of the monitor to the blue 15-pin connector on the back of the computer. Tighten the cable screws to secure the cable to the connector.



**CAUTION:** To avoid damaging the video cable, ensure that the cable aligns with the 15-pin connector. Do not force the cable onto the connector.

3. Connect the power cord **②** to the back of the monitor, then connect the power cord to a power outlet.



4. Power on your computer and monitor.



If your monitor fails to function properly, refer to "Troubleshooting."

5. If necessary, adjust the front panel monitor controls according to your personal preference. See "Front Panel Controls" for detailed information.

Your monitor installation is now complete.

3–2 Reference Guide

### **Speaker Installation**

Selected monitors come with speakers which must be installed. If you need to install your speakers, follow these steps:

- 1. Place the control speaker and the other speaker on either side of your monitor.
- 2. Attach the speaker power cable 3 to the black connector on the back of the control speaker 1, then connect the AC adapter 4 into an electrical wall outlet.
- 3. Insert the white connector **5** from the other speaker **2** into the white port on the back of the control speaker **1**.
- 4. Attach the green connector **6** from the control speaker **1** to the green port on the back of your computer.



You can attach your speakers to your monitor or place them on an even surface next to your monitor. To attach the speakers, see the next section, "Attaching the Speakers to the Monitor."

Reference Guide 3–3

#### **Attaching the Speakers to the Monitor**

To attach the speakers to the sides of your monitor, follow these steps:

- 1. Rotate the thumbwheel, located on the side of the speaker, up to extend the speaker hook mechanism
- 2. Align the hooks with the slots in the monitor.
- 3. Gently insert the hooks into the slots and slide down into place.



4. Turn the power/volume button • on the front of the speaker clockwise to power on the speakers and adjust the speaker volume.



5. To use an MP3 or CD audio device with your speakers, connect the audio device cable to the audio input jack ② on the speaker. You must use a mini-stereo cable (3.5 mm/3.5mm plug) to connect the audio device to the speaker.

3–4 Reference Guide

#### **Speaker Security Lock**

If your monitor has speakers, the speakers can be locked to the sides of the monitor. To use the Speaker Security Lock, follow these steps:

- 1. Grasp the front cloth-covered grill firmly at the sides and remove from the speaker, then locate the security lock screw, which can be found in the top inner corner of the speaker.
- 2. Attach the speaker to the side of the monitor as described in the "Speaker Installation section."
- 3. Using a Phillips screwdriver, loosen the security lock screw, but do not remove it.
- 4. Slide the security lock out from the speaker until it engages the slot in the side of the monitor.



- 5. Once the lock is in place in the side of the monitor, tighten the security lock screw to secure the speaker to the monitor.
- 6. Reattach the grill to the speaker.
- 7. Repeat this process for the other speaker.

Reference Guide 3–5

# **Operation**

#### Information Files

The CD-ROM included with this monitor contains two data files that must be installed onto your computer: an .INF file and an .ICM file.

The .INF file designates software and defines monitor resources used by Microsoft Windows to ensure monitor compatibility with the graphics adapter in your computer.

The .ICM file provides color matching consistency between your monitor screen and your printer. Once installed, this file is activated by graphics programs that have this color-matching feature.

To install these files on your computer:

- 1. Insert the Software and Reference Guide CD-ROM in your computer's optical drive.
- 2. When the CD-ROM menu launches, select Install **INF and ICM Files**.
- 3. To get the latest .INF and .ICM files, download them from the Compaq Web site. Access http://www.compaq.com/support/files/monitors/index.html and select your monitor model to download the appropriate files.

### **Front Panel Controls**



Reference Guide 4–1

Front F	Front Panel Controls					
Item	Icon	Name	Function			
0		Select	Launches on-screen displays, selects functions and adjustments, and exits menus and On-Screen Display.			
2	-	Left Adjustment	Moves backward through menu options or decreases adjustment levels.			
8	+	Right Adjustment	Moves forward through menu options or increases adjustment levels.			
4	Φ	Power/LED	Controls power to the monitor. The LED on the power button indicates the state of the monitor.			

### **On-Screen Display**

The On-Screen Display (OSD) adjusts the screen image based on your viewing preferences. To access the OSD, do the following:

- 1. If the monitor is not already on, press the **Power** button to turn on the monitor.
- Press the Select button to display the On-Screen Display menu. A screen similar to this one appears. For a description of the icons that appear on the screen, see "On-Screen Display Functions" later in this chapter.





Not all OSD features are available on all models. The OSD for your monitor may be different. See "On-Screen Display Functions" for a features list for your model.

4–2 Reference Guide

- 3. To move to a function, press the Right-Adjustment or Left-Adjustment button on the front panel of your monitor until the function is highlighted.
- 4. Press the **Select** button on the monitor choose the function.
- 5. The adjustment window displays. Press the Right-Adjustment or Left-Adjustment buttons to increase (Right) or decrease (Left) the level of adjustment.
- 6. Press **Select** to save the new adjustment.
- 7. To exit the On-Screen Display, select the **Exit** icon and press the Select button once.

### **On-Screen Display Functions**

Use the Right-Adjustment and Left-Adjustment buttons found on the front control panel of your monitor to adjust these functions.



The shaded area indicates that this function is available in the model indicated.

#### **On-Screen Display Icons and Functions**

lcon	Function	Description	5500	7500 & 7550	9500
•	Contrast	Right-Adjustment increases the contrast and Left-Adjustment decreases the contrast.			
Ö	Brightness	Right-Adjustment increases the brightness and Left-Adjustment decreases the brightness.			
	Horizontal Position	Right-Adjustment moves the image to the right and Left-Adjustment moves the image to the left.			
<b>+</b>	Horizontal Size	Right-Adjustment increases the horizontal size and Left-Adjustment decreases the horizontal size.			
	Vertical Position	Right-Adjustment moves the image up and Left-Adjustment moves the image down.			
1	Vertical Size	Right-Adjustment increases the vertical size and Left-Adjustment decreases the vertical size.			
$\sum$	Pincushion	Right-Adjustment makes the image sides convex and Left-Adjustment makes the image concave.			
	Trapezoid	Right-Adjustment adjusts the image so the top is larger and Left-Adjustment adjusts the image so that the bottom is larger.			

Reference Guide 4–3

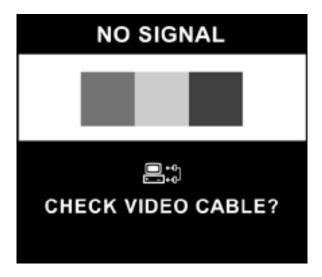
#### On-Screen Display Icons and Functions (Continued)

Icon	Function	Description	5500	7500 & 7550	9500
$\Box$	Pin Balance	Right-Adjustment moves the top and bottom of the image to the right and Left-Adjustment moves the top and bottom of the image to the left.			
$\Box$	Parallelo- gram	Right-Adjustment tilts the sides of the image to the right and Left-Adjustment tilts the sides of the image to the left.			
<u>⊊</u> 5	Tilt (Rotation)	Right-Adjustment tilts the sides of the image to the right and Left-Adjustment tilts the sides of the image to the left.			
()	Moire	Right-Adjustment increases the Moire correction and Left-Adjustment decreases the Moire correction.			
R	Degauss	This control demagnetizes the screen to reduce color impurities.  Compaq suggests you not degauss more than once within a 30-minute period of time.			
₿ĸ	Color Temp	Right-Adjustment selects the color temperature to the right and Left-Adjustment selects the color temperature to the left.			
�	Reset	This control resets the monitor to factory default values.			
EXIT	Exit	This control exits the OSD menu.			

4–4 Reference Guide

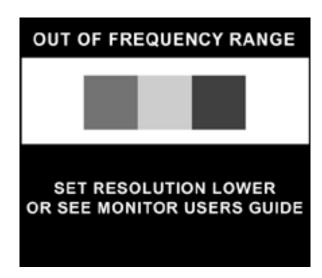
### **Monitor Messages**

#### **No Signal Message**



If a No Signal message displays on your monitor, check to be sure your video cable is properly connected and ensure that your computer is powered on.

#### **Out of Frequency Range Message**



If an Out of Frequency Range message displays on your monitor, your video resolution and/or refresh rate are set higher than the levels your monitor supports.

To change the video resolution or refresh rate on your monitor, follow these steps:

- 1. Restart your computer.
- 2. Enter Safe Mode on your computer. Refer to your computer's operating system Help for instructions on entering Safe Mode.

Reference Guide 4–5

- 3. Change your display settings to a supported setting (see "Technical Specifications").
- 4. Restart your computer so that the new settings take effect.

### **Using the Energy Saver Mode**

Your monitor is designed to meet strict Environmental Protection Agency (EPA) Energy Star requirements for reduced power consumption. Using a combination of hardware and software functions, this energy-saving feature allows your computer to control your monitor's power consumption and reduce your monitor's power state when not in use.

# Power Management Status for 5500/15" Series Monitors (CV, MV, S)

State	LED Color	Power Consumption	Description
On	Green	< 80 watts	Normal Operation
Sleep	Amber	< 5 watts	Monitor screen is blank. High voltage is off. Heater voltage is off. There is a brief warm-up period before returning to full power mode.

# Power Management Status for 7500 and 7550/17" Series Monitors (CV, MV, S, FS, V)

State	LED Color	Power Consumption	Description
On	Green	< 100 watts	Normal Operation
Sleep	Amber	< 5 watts	Monitor screen is blank. High voltage is off. Heater voltage is off. There is a brief warm-up period before returning to full power mode.

# Power Management Status for 9500/19" Series Monitors (MV, S)

State	LED Color	Power Consumption	Description
On	Green	< 130 watts	Normal Operation
Sleep	Amber	< 5 watts	Monitor screen is blank. High voltage is off. Heater voltage is off. There is a brief warm-up period before returning to full power mode.

4–6 Reference Guide



Your monitor's energy saver feature works only when your monitor is connected to a computer that also has energy saver features.

The Energy Saver utility, with its energy saving features, is available with all Microsoft Windows operating systems. Some features are also available in DOS. Refer to your computer's user guide for instructions on setting energy saver features (also referred to as power management features).

Reference Guide 4–7

# **Troubleshooting**

### **Solving Common Problems**

The following table lists possible problems, the possible cause of each problem, and the recommended solutions.

Problem	Possible Cause	Solution
Screen is blank.	Power cord is disconnected.	Connect the power cord.
	Power switch is off.	Turn on power.
	Video cable is improperly connected.	Connect video cable properly.
	Screen blanking utility is active.	Depress any key on the keyboard or move the mouse.
Image appears blurred, indistinct, or too dark.	Brightness and contrast are too low.	Press the <b>SELECT</b> button to access the On-Screen Display. Select the Brightness and/or Contrast icons to adjust as needed.
Color is abnormal.	A magnetic object may be nearby.	Move the object farther away.
	Monitor may have been moved or inadvertently bumped.	Press the <b>SELECT</b> button to access the On-Screen Display. Select Degauss to activate.
		Compaq suggests you not degauss more than once within a 30-minute period of time.
Image is too large or too small.	Horizontal width may need adjustment.	Press the <b>SELECT</b> button to access the On-Screen Display. Select H. Size to adjust as needed.
	Vertical height may need adjustment.	Press the <b>SELECT</b> button to access the On-Screen Display. Select V. Size to adjust as needed.
Image is not centered.	Horizontal position may need adjustment.	Press the <b>SELECT</b> button to access the On-Screen Display. Select H. Position to adjust as needed.

Reference Guide A–1

Problem	Possible Cause	Solution
	Vertical position may need adjustment.	Press the <b>SELECT</b> button to access the On-Screen Display. Select V. Position to adjust as needed.
"No Signal" is displayed on screen.	Monitor video cable is disconnected.	Connect the 15-pin monitor video cable to the computer. Be sure that the computer power is on.
"Out of Frequency" is displayed on screen.	Video resolution and/or refresh rate are set higher than what your monitor supports.	Restart your computer and enter Safe Mode. Change your settings to a supported setting (see "Technical Specifications"). Restart your computer so that the new settings take effect.
No speaker power.	Speaker power cord is disconnected.	Check all speaker power connections and make sure they are properly connected.
	Power button on right-side speaker may be off.	Turn the power button clockwise on the front of the right-side speaker. Speaker LED should illuminate.
No sound from speakers.	Speaker audio plug may be disconnected from the back of the computer.	Make sure your audio input jack (green connector) is plugged into the back of your computer.
	Mute button may be activated.	Select the <b>Speaker</b> icon on your computer screen and deselect <b>Mute</b> .
	Volume may be too low.	Increase volume by using keyboard volume control or clicking on the Speaker icon on your computer screen and increasing the volume level. Volume may also be adjusted on the speaker.

A–2 Reference Guide

Problem	Possible Cause	Solution
No sound from left speaker.	Speaker audio cable is disconnected.	Make sure the speaker connection from the left-side speaker is connected to the rear of the right-side speaker.
	Left speaker balance may need to be adjusted.	Select the <b>Speaker</b> icon located on your Windows desktop and adjust the left-right balance accordingly.
Monitor is overheating.	There is not enough air space to allow proper ventilation.	Leave at least 3 inches (76 mm) of ventilation space around the monitor, and do not place objects on top of the monitor.

### **Using the World Wide Web**

Support services are available on the Internet through the Compaq Support Forum. You can either browse the postings as a guest, or register as a user and submit your own questions. Compaq responds to questions within one business day.

To access the Compaq Support Forum, go to the Compaq Web site at: http://www.compaq.com

### **Preparing to Call Technical Support**

If you cannot solve a problem using the troubleshooting tips in this section, you may need to call technical support. Have the following information available when you call:

- The monitor
- Monitor model number
- Serial number for the monitor
- Purchase date on invoice
- Conditions under which the problem occurred
- Error messages received
- Hardware configuration
- Hardware and software you are using

Reference Guide A-3

# **Technical Specifications**

# Compaq 5500/15" Series Monitor

5500 CV, MV, S		
	Screen Size	15" (38 cm) visual diagonal Viewable screen size 13.8" (35 cm
	Dot Pitch	0.28 mm (Diagonal)
	Display Area Default	199 x 265 (mm) typical
	Display Colors	Infinite
	Display Resolutions	Refresh Rates
	640 x 480	60 Hz
	640 x 480	75 Hz
	640 x 480	85 Hz
	720 x 400	70 Hz
	800 x 600	75 Hz
	800 x 600	85 Hz (preferred resolution)
	1024 x 768	60 Hz (maximum resolution)
	Synchronization (Horizontal)	30 to 54 KHz
	Synchronization (Vertical)	50 to 120 Hz
	Max Pixel Clock	70 MHz Max.
	Input Signal	Video RGB Analog Sync. TTL Separate
	Video Cable	15-pin D-sub connector
	Power Input Voltage Frequency	100 to 240V AC
		50 <u>+</u> 3 to 60 <u>+</u> 3 Hz
	Inrush Current	30 amps @ 120V
		60 amps @ 220V
	Power Consumption	80 W (Max.)
	Dimension (W x H x D) Unpacked	14.4 x 15.7 x 16.5 inches
	w/attached base	(maximum)
		365 x 400 x 418 mm (maximum)
	Weight	29 lb Max.
	-	13 kg Max.
	Operating Temperature	50° F to 95° F
		10° C to 35° C

Reference Guide B–1

#### 5500 CV, MV, S (Continued)

Storage Temperature	-22° F to 140° F -30° C to 60° C
Humidity	20% to 80% (non-condensing)
Altitude	Up to 10,000 ft./3048 meters
TCO'99	Some models meet TCO'99
MPRII	Some models meet MPRII
Plug and Play	Yes

B–2 Reference Guide

# Compaq 7500/17" Series Monitor

7500	CV	R/1\/	C
7000	CV.	IVI V.	3

Screen Size		
Display Area Default         234 x 312 (mm) typical           Display Colors         Infinite           Display Resolutions         Refresh Rates           640 x 480         60 Hz           640 x 480         85 Hz           720 x 400         70 Hz           800 x 600         85 Hz           800 x 600         85 Hz           1024 x 768         75 Hz           1024 x 768         85 Hz (preferred user resolution)           1280 x 1024         60 Hz (maximum resolution)           Synchronization (Horizontal)         30 to 70 KHz           Synchronization (Vertical)         50 to 140 Hz           Max Pixel Clock         110 MHz Max.           Input Signal         Video RGB Analog Sync. TTL Separate           Video Cable         15-pin D-sub connector           Power Input Voltage Frequency         100 to 240V AC           50 ±3 to 60 ±3 Hz           Inrush Current         30 amps @ 120V           60 amps @ 220V           Power Consumption         100 W (Max.)           Dimension (W x H x D) Unpacked w/attached base         16.6 x 17 x 17 x 17.5 inches (maximum)           410 x 432 x 445 mm (maximum)         410 x 432 x 445 mm (maximum)           Weight         38 lb Max.           17 kg	Screen Size	
Display Resolutions         Refresh Rates           640 x 480         60 Hz           640 x 480         75 Hz           640 x 480         85 Hz           720 x 400         70 Hz           800 x 600         75 Hz           800 x 600         85 Hz           1024 x 768         75 Hz           1024 x 768         85 Hz (preferred user resolution)           1280 x 1024         60 Hz (maximum resolution)           Synchronization (Vertical)         30 to 70 KHz           Synchronization (Vertical)         50 to 140 Hz           Max Pixel Clock         110 MHz Max.           Input Signal         Video RGB Analog Sync. TTL Separate           Video Cable         15-pin D-sub connector           Power Input Voltage Frequency         100 to 240V AC           50 ±3 to 60 ±3 Hz           Inrush Current         30 amps @ 120V           60 amps @ 220V           Power Consumption         100 W (Max.)           Dimension (W x H x D) Unpacked w/attached base         16.6 x 17 x 17 x 17.5 inches (maximum)           410 x 432 x 4445 mm (maximum)         410 x 432 x 4445 mm (maximum)           Weight         38 lb Max.           17 kg Max.           Operating Temperature         50° F to 95° F	Dot Pitch	0.28 mm (Diagonal)
Display Resolutions         Refresh Rates           640 x 480         60 Hz           640 x 480         75 Hz           640 x 480         85 Hz           720 x 400         70 Hz           800 x 600         85 Hz           800 x 600         85 Hz           1024 x 768         75 Hz           1024 x 768         85 Hz (preferred user resolution)           1280 x 1024         60 Hz (maximum resolution)           Synchronization (Horizontal)         30 to 70 KHz           Synchronization (Vertical)         50 to 140 Hz           Max Pixel Clock         110 MHz Max.           Input Signal         Video RGB Analog Sync. TTL Separate           Video Cable         15-pin D-sub connector           Power Input Voltage Frequency         100 to 240V AC 50 ±3 Hz           Inrush Current         30 amps @ 120V 60 amps @ 220V           Power Consumption         100 W (Max.)           Dimension (W x H x D) Unpacked Wattached base         416.6 x 17 x 17.5 inches (maximum) 410 x 432 x 445 mm (maximum) 410 x 43	Display Area Default	234 x 312 (mm) typical
640 x 480 640 x 480 75 Hz 640 x 480 75 Hz 640 x 480 75 Hz 85 Hz 720 x 400 76 Hz 800 x 600 75 Hz 800 x 600 85 Hz 1024 x 768 1024 x 768 1024 x 768 1280 x 1024 80 Hz (maximum resolution)  Synchronization (Horizontal) Synchronization (Vertical)  Max Pixel Clock 110 MHz Max.  Input Signal Video RGB Analog Sync. TTL Separate  Video Cable 15-pin D-sub connector  Power Input Voltage Frequency 100 to 240V AC 50 ±3 to 60 ±3 Hz  Inrush Current 30 amps @ 120V 60 amps @ 220V  Power Consumption 100 W (Max.)  Dimension (W x H x D) Unpacked W/attached base 416.6 x 17 x 17.5 inches (maximum) 410 x 432 x 445 mm (maximum)  Weight 38 lb Max. 17 kg Max.  Operating Temperature 50° F to 95° F 10° C to 35° C  Storage Temperature -22° F to 140° F -30° C to 60° C  Humidity 20% to 80% (non-condensing)  Altitude Up to 10,000 ft./3048 meters TCO'99  MPRII Some models meet MPRII	Display Colors	Infinite
640 x 480       75 Hz         640 x 480       85 Hz         720 x 400       70 Hz         800 x 600       75 Hz         800 x 600       85 Hz         1024 x 768       75 Hz         1024 x 768       85 Hz (preferred user resolution)         1280 x 1024       60 Hz (maximum resolution)         Synchronization (Horizontal)       30 to 70 KHz         Synchronization (Vertical)       50 to 140 Hz         Max Pixel Clock       110 MHz Max.         Input Signal       Video RGB Analog Sync. TTL Separate         Video Cable       15-pin D-sub connector         Power Input Voltage Frequency       100 to 240V AC 50 ±3 Hz         Inrush Current       30 amps @ 120V 60 amps @ 220V         Power Consumption       100 W (Max.)         Dimension (W x H x D) Unpacked w/attached base       16.6 x 17 x 17.5 inches (maximum) 410 x 432 x 445 mm (maximum)         Weight       38 lb Max. 17 kg Max.         Operating Temperature       50° F to 95° F 10° C to 35° C         Storage Temperature       -22° F to 140° F -30° C to 60° C         Humidity       20% to 80% (non-condensing)         Altitude       Up to 10,000 ft./3048 meters         TCO'99       Some models meet MPRII	Display Resolutions	Refresh Rates
640 x 480       85 Hz         720 x 400       70 Hz         800 x 600       85 Hz         1024 x 768       75 Hz         1024 x 768       85 Hz (preferred user resolution)         1280 x 1024       60 Hz (maximum resolution)         Synchronization (Horizontal)       30 to 70 KHz         Synchronization (Vertical)       50 to 140 Hz         Max Pixel Clock       110 MHz Max.         Input Signal       Video RGB Analog Sync. TTL Separate         Video Cable       15-pin D-sub connector         Power Input Voltage Frequency       100 to 240V AC 50 ±3 to 60 ±3 Hz         Inrush Current       30 amps @ 120V 60 amps @ 220V         Power Consumption       100 W (Max.)         Dimension (W x H x D) Unpacked w/attached base       16.6 x 17 x 17.5 inches (maximum) 410 x 432 x 445 mm (maximum)         Weight       38 lb Max. 17 kg Max.         Operating Temperature       50° F to 95° F 10° C to 35° C         Storage Temperature       -22° F to 140° F -30° C to 60° C         Humidity       20% to 80% (non-condensing)         Altitude       Up to 10,000 ft./3048 meters         TCO'99       Some models meet TCO'99         MPRII	640 x 480	60 Hz
720 x 400         70 Hz           800 x 600         75 Hz           800 x 600         85 Hz           1024 x 768         75 Hz           1024 x 768         85 Hz (preferred user resolution)           1280 x 1024         60 Hz (maximum resolution)           Synchronization (Horizontal)         30 to 70 KHz           Synchronization (Vertical)         50 to 140 Hz           Max Pixel Clock         110 MHz Max.           Input Signal         Video RGB Analog Sync. TTL Separate           Video Cable         15-pin D-sub connector           Power Input Voltage Frequency         100 to 240V AC 50 ±3 to 60 ±3 Hz           Inrush Current         30 amps @ 120V 60 amps @ 220V           Power Consumption         100 W (Max.)           Dimension (W x H x D) Unpacked w/attached base         16.6 x 17 x 17.5 inches (maximum) 410 x 432 x 445 mm (maximum) 410 x 432 x 445 mm (maximum) 410 x 432 x 445 mm (maximum) 410 x 60 c to 35° C           Storage Temperature         50° F to 95° F 10° C to 35° C           Storage Temperature         -22° F to 140° F -30° C to 60° C           Humidity         20% to 80% (non-condensing)           Altitude         Up to 10,000 ft./3048 meters           TCO'99         Some models meet MPRII	640 x 480	75 Hz
800 x 600       75 Hz         800 x 600       85 Hz         1024 x 768       75 Hz         1024 x 768       85 Hz (preferred user resolution)         1280 x 1024       60 Hz (maximum resolution)         Synchronization (Horizontal)       30 to 70 KHz         Synchronization (Vertical)       50 to 140 Hz         Max Pixel Clock       110 MHz Max.         Input Signal       Video RGB Analog Sync. TTL Separate         Video Cable       15-pin D-sub connector         Power Input Voltage Frequency       100 to 240V AC 50 ±3 to 60 ±3 Hz         Inrush Current       30 amps @ 120V 60 amps @ 220V         Power Consumption       100 W (Max.)         Dimension (W x H x D) Unpacked W/attached base       16.6 x 17 x 17.5 inches (maximum) 410 x 432 x 445 mm (maximum)         Weight       38 lb Max. 17 kg Max.         Operating Temperature       50° F to 95° F 10° C         Storage Temperature       -22° F to 140° F -30° C to 60° C         Humidity       20% to 80% (non-condensing)         Altitude       Up to 10,000 ft./3048 meters         TCO'99       Some models meet TCO'99         MPRII	640 x 480	85 Hz
800 x 600       85 Hz         1024 x 768       75 Hz         1024 x 768       85 Hz (preferred user resolution)         1280 x 1024       60 Hz (maximum resolution)         Synchronization (Horizontal)       30 to 70 KHz         Synchronization (Vertical)       50 to 140 Hz         Max Pixel Clock       110 MHz Max.         Input Signal       Video RGB Analog Sync. TTL Separate         Video Cable       15-pin D-sub connector         Power Input Voltage Frequency       100 to 240V AC 50 ±3 to 60 ±3 Hz         Inrush Current       30 amps @ 120V 60 amps @ 220V         Power Consumption       100 W (Max.)         Dimension (W x H x D) Unpacked W/attached base       16.6 x 17 x 17.5 inches (maximum) 410 x 432 x 445 mm (maximum)         Weight       38 lb Max. 17 kg Max.         Operating Temperature       50° F to 95° F 10° C to 35° C         Storage Temperature       -22° F to 140° F -30° C to 60° C         Humidity       20% to 80% (non-condensing)         Altitude       Up to 10,000 ft./3048 meters         TCO'99       Some models meet TCO'99         MPRII       Some models meet MPRII	720 x 400	70 Hz
1024 x 768         75 Hz           1024 x 768         85 Hz (preferred user resolution)           1280 x 1024         60 Hz (maximum resolution)           Synchronization (Horizontal)         30 to 70 KHz           Synchronization (Vertical)         50 to 140 Hz           Max Pixel Clock         110 MHz Max.           Input Signal         Video RGB Analog Sync. TTL Separate           Video Cable         15-pin D-sub connector           Power Input Voltage Frequency         100 to 240V AC 50 ±3 to 60 ±3 Hz           Inrush Current         30 amps @ 120V 60 amps @ 220V           Power Consumption         100 W (Max.)           Dimension (W x H x D) Unpacked W/attached base         16.6 x 17 x 17.5 inches (maximum) 410 x 432 x 445 mm (maximum)           Weight         38 lb Max. 17 kg Max.           Operating Temperature         50° F to 95° F 10° C to 35° C           Storage Temperature         -22° F to 140° F -30° C to 60° C           Humidity         20% to 80% (non-condensing)           Altitude         Up to 10,000 ft./3048 meters           TCO'99         Some models meet TCO'99           MPRII         Some models meet MPRII	800 x 600	75 Hz
1024 x 768         85 Hz (preferred user resolution)           1280 x 1024         60 Hz (maximum resolution)           Synchronization (Horizontal)         30 to 70 KHz           Synchronization (Vertical)         50 to 140 Hz           Max Pixel Clock         110 MHz Max.           Input Signal         Video RGB Analog Sync. TTL Separate           Video Cable         15-pin D-sub connector           Power Input Voltage Frequency         100 to 240V AC 50 ±3 to 60 ±3 Hz           Inrush Current         30 amps @ 120V 60 amps @ 220V           Power Consumption         100 W (Max.)           Dimension (W x H x D) Unpacked W/attached base         16.6 x 17 x 17.5 inches (maximum) 410 x 432 x 445 mm (maximum)           Weight         38 lb Max. 17 kg Max.           Operating Temperature         50° F to 95° F 10° C to 35° C           Storage Temperature         50° F to 140° F -30° C to 60° C           Humidity         20% to 80% (non-condensing)           Altitude         Up to 10,000 ft./3048 meters           TCO'99         Some models meet MPRII	800 x 600	
1280 x 1024         60 Hz (maximum resolution)           Synchronization (Horizontal)         30 to 70 KHz           Synchronization (Vertical)         50 to 140 Hz           Max Pixel Clock         110 MHz Max.           Input Signal         Video RGB Analog Sync. TTL Separate           Video Cable         15-pin D-sub connector           Power Input Voltage Frequency         100 to 240V AC 50 ±3 to 60 ±3 Hz           Inrush Current         30 amps @ 120V 60 amps @ 220V           Power Consumption         100 W (Max.)           Dimension (W x H x D) Unpacked W/attached base         16.6 x 17 x 17.5 inches (maximum) 410 x 432 x 445 mm (maximum)           Weight         38 lb Max. 17 kg Max.           Operating Temperature         50° F to 95° F 10° C to 35° C           Storage Temperature         -22° F to 140° F -30° C to 60° C           Humidity         20% to 80% (non-condensing)           Altitude         Up to 10,000 ft./3048 meters           TCO'99         Some models meet TCO'99           MPRII         Some models meet MPRII		
Synchronization (Horizontal)  Synchronization (Vertical)  Max Pixel Clock  Input Signal  Video RGB Analog Sync. TTL Separate  Video Cable  Power Input Voltage Frequency  Inrush Current  Some models meet MPRII  Synchronization (Vertical)  50 to 140 Hz  50 to 140 Hz  100 MHz Max.  110 MHz Max.  Video RGB Analog Sync. TTL Separate  Video Cable  15-pin D-sub connector  100 to 240V AC 50 ±3 to 60 ±3 Hz  100 W (Max.)  100 W		-
Synchronization (Vertical)  Max Pixel Clock  Input Signal  Video RGB Analog Sync. TTL Separate  Video Cable  15-pin D-sub connector  Power Input Voltage Frequency  100 to 240V AC 50 ±3 to 60 ±3 Hz  Inrush Current  30 amps @ 120V 60 amps @ 220V  Power Consumption  100 W (Max.)  Dimension (W x H x D) Unpacked w/attached base  16.6 x 17 x 17.5 inches (maximum) 410 x 432 x 445 mm (maximum)  Weight  38 lb Max. 17 kg Max.  Operating Temperature  50° F to 95° F 10° C to 35° C  Storage Temperature  -22° F to 140° F -30° C to 60° C  Humidity  Altitude  Up to 10,000 ft./3048 meters  TCO'99  Some models meet TCO'99  MPRII  Some models meet MPRII	1280 x 1024	60 Hz (maximum resolution)
Max Pixel Clock110 MHz Max.Input SignalVideo RGB Analog Sync. TTL SeparateVideo Cable15-pin D-sub connectorPower Input Voltage Frequency100 to 240V AC 50 ±3 to 60 ±3 HzInrush Current30 amps @ 120V 60 amps @ 220VPower Consumption100 W (Max.)Dimension (W x H x D) Unpacked w/attached base16.6 x 17 x 17.5 inches (maximum) 410 x 432 x 445 mm (maximum)Weight38 lb Max. 17 kg Max.Operating Temperature50° F to 95° F 10° C to 35° CStorage Temperature-22° F to 140° F -30° C to 60° CHumidity20% to 80% (non-condensing)AltitudeUp to 10,000 ft./3048 metersTCO'99Some models meet TCO'99MPRIISome models meet MPRII	Synchronization (Horizontal)	30 to 70 KHz
Input Signal  Video RGB Analog Sync. TTL Separate  Video Cable  15-pin D-sub connector  Power Input Voltage Frequency  100 to 240V AC 50 ±3 to 60 ±3 Hz  Inrush Current  30 amps @ 120V 60 amps @ 220V  Power Consumption  100 W (Max.)  Dimension (W x H x D) Unpacked w/attached base  410 x 432 x 445 mm (maximum)  Weight  38 lb Max. 17 kg Max.  Operating Temperature  50° F to 95° F 10° C to 35° C  Storage Temperature  -22° F to 140° F -30° C to 60° C  Humidity  20% to 80% (non-condensing)  Altitude  Up to 10,000 ft./3048 meters  TCO'99  Some models meet MPRII	Synchronization (Vertical)	50 to 140 Hz
Video Cable    To-pin D-sub connector	Max Pixel Clock	110 MHz Max.
Power Input Voltage Frequency  100 to 240V AC 50 ±3 to 60 ±3 Hz  Inrush Current  30 amps @ 120V 60 amps @ 220V  Power Consumption  100 W (Max.)  Dimension (W x H x D) Unpacked w/attached base  16.6 x 17 x 17.5 inches (maximum) 410 x 432 x 445 mm (maximum)  Weight  38 lb Max. 17 kg Max.  Operating Temperature  50° F to 95° F 10° C to 35° C  Storage Temperature  -22° F to 140° F -30° C to 60° C  Humidity  20% to 80% (non-condensing)  Altitude  Up to 10,000 ft./3048 meters  TCO'99  Some models meet MPRII	Input Signal	
So ±3 to 60 ±3 Hz	Video Cable	15-pin D-sub connector
Inrush Current  30 amps @ 120V 60 amps @ 220V  Power Consumption  100 W (Max.)  Dimension (W x H x D) Unpacked w/attached base  410 x 432 x 445 mm (maximum)  Weight  38 lb Max. 17 kg Max.  Operating Temperature  50° F to 95° F 10° C to 35° C  Storage Temperature  -22° F to 140° F -30° C to 60° C  Humidity  20% to 80% (non-condensing)  Altitude  Up to 10,000 ft./3048 meters  TCO'99  MPRII  Some models meet MPRII	Power Input Voltage Frequency	100 to 240V AC
Power Consumption 100 W (Max.)  Dimension (W x H x D) Unpacked 410 x 432 x 445 mm (maximum) Weight 38 lb Max. 17 kg Max.  Operating Temperature 50° F to 95° F 10° C to 35° C  Storage Temperature -22° F to 140° F -30° C to 60° C  Humidity 20% to 80% (non-condensing)  Altitude Up to 10,000 ft./3048 meters  TCO'99 Some models meet TCO'99  MPRII Some models meet MPRII		50 <u>+</u> 3 to 60 <u>+</u> 3 Hz
Power Consumption100 W (Max.)Dimension (W x H x D) Unpacked W/attached base16.6 x 17 x 17.5 inches (maximum) 410 x 432 x 445 mm (maximum)Weight38 lb Max. 17 kg Max.Operating Temperature50° F to 95° F 10° C to 35° CStorage Temperature-22° F to 140° F -30° C to 60° CHumidity20% to 80% (non-condensing)AltitudeUp to 10,000 ft./3048 metersTCO'99Some models meet TCO'99MPRIISome models meet MPRII	Inrush Current	30 amps @ 120V
Dimension (W x H x D) Unpacked w/attached base  16.6 x 17 x 17.5 inches (maximum) 410 x 432 x 445 mm (maximum)  Weight  38 lb Max. 17 kg Max.  Operating Temperature  50° F to 95° F 10° C to 35° C  Storage Temperature  -22° F to 140° F -30° C to 60° C  Humidity  20% to 80% (non-condensing)  Altitude  Up to 10,000 ft./3048 meters  TCO'99  MPRII  Some models meet MPRII		60 amps @ 220V
w/attached base410 x 432 x 445 mm (maximum)Weight38 lb Max. 17 kg Max.Operating Temperature50° F to 95° F 10° C to 35° CStorage Temperature-22° F to 140° F -30° C to 60° CHumidity20% to 80% (non-condensing)AltitudeUp to 10,000 ft./3048 metersTCO'99Some models meet TCO'99MPRIISome models meet MPRII	Power Consumption	100 W (Max.)
Weight  38 lb Max.  17 kg Max.  Operating Temperature  50° F to 95° F  10° C to 35° C  Storage Temperature  -22° F to 140° F  -30° C to 60° C  Humidity  20% to 80% (non-condensing)  Altitude  Up to 10,000 ft./3048 meters  TCO'99  MPRII  Some models meet MPRII	Dimension (W x H x D) Unpacked	16.6 x 17 x 17.5 inches (maximum)
17 kg Max.  Operating Temperature  50° F to 95° F 10° C to 35° C  Storage Temperature  -22° F to 140° F -30° C to 60° C  Humidity  20% to 80% (non-condensing)  Altitude  Up to 10,000 ft./3048 meters  TCO'99  MPRII  Some models meet TCO'99	w/attached base	410 x 432 x 445 mm (maximum)
Operating Temperature  50° F to 95° F 10° C to 35° C  Storage Temperature  -22° F to 140° F -30° C to 60° C  Humidity  20% to 80% (non-condensing)  Altitude  Up to 10,000 ft./3048 meters  TCO'99  Some models meet TCO'99  MPRII  Some models meet MPRII	Weight	38 lb Max.
10° C to 35° C  Storage Temperature  -22° F to 140° F -30° C to 60° C  Humidity  20% to 80% (non-condensing)  Altitude  Up to 10,000 ft./3048 meters  TCO'99  Some models meet TCO'99  MPRII  Some models meet MPRII		17 kg Max.
10° C to 35° C  Storage Temperature  -22° F to 140° F -30° C to 60° C  Humidity  20% to 80% (non-condensing)  Altitude  Up to 10,000 ft./3048 meters  TCO'99  Some models meet TCO'99  MPRII  Some models meet MPRII	Operating Temperature	50° F to 95° F
Storage Temperature  -22° F to 140° F -30° C to 60° C  Humidity  20% to 80% (non-condensing)  Altitude  Up to 10,000 ft./3048 meters  TCO'99  Some models meet TCO'99  MPRII  Some models meet MPRII	operating remperature	
-30° C to 60° C  Humidity 20% to 80% (non-condensing)  Altitude Up to 10,000 ft./3048 meters  TCO'99 Some models meet TCO'99  MPRII Some models meet MPRII	Storago Tomporaturo	220 E to 1400 E
Humidity 20% to 80% (non-condensing)  Altitude Up to 10,000 ft./3048 meters  TCO'99 Some models meet TCO'99  MPRII Some models meet MPRII	Storage remperature	
Altitude Up to 10,000 ft./3048 meters  TCO'99 Some models meet TCO'99  MPRII Some models meet MPRII		
TCO'99 Some models meet TCO'99  MPRII Some models meet MPRII		
MPRII Some models meet MPRII		
	TCO'99	Some models meet TCO'99
Plug and Play Yes	MPRII	Some models meet MPRII
	Plug and Play	Yes

Reference Guide B–3

7550 FS, V

# Compaq 7550/17" Flat CRT Monitor

Screen Size	17" (43 cm) visual diagonal Viewable screen size 16" (40.6 cn Anti-Glare Coating
Dot Pitch	0.25 to 0.28 mm (variable)
Display Area Default	234 x 312 (mm) typical
Display Colors	Infinite
Display Resolutions	Refresh Rates
640 x 480	60 Hz
640 x 480	75 Hz
640 x 480	85 Hz
720 x 400	70 Hz
800 x 600	75 Hz
800 x 600	85 Hz
1024 x 768	75 Hz
1024 x 768	85 Hz (preferred user resolution)
1280 x 1024	75 Hz
1600 x 1200	65 Hz (maximum resolution)
Synchronization (Horizontal)	30 to 86 KHz
Synchronization (Vertical)	50 to 140 Hz
Max Pixel Clock	180 MHz Max.
Input Signal	Video RGB Analog Sync. TTL Separate
Video Cable	15-pin D-sub connector
Power Input Voltage Frequency	100 to 240V AC
	50 <u>+</u> 3 to 60 <u>+</u> 3 Hz
Inrush Current	30 amps @ 120V
	60 amps @ 220V
Power Consumption	100 W (Max.)
Dimension (W x H x D) Unpacked	16.1 x 17 x 17.4 inches (maximum
w/attached base	410 x 432 x 442 mm (maximum)
Weight	42 lb Max.
-	19 kg Max.
Operating Temperature	50° F to 95° F
operating remperature	10° C to 35° C
Storage Temperature	-22° F to 140° F
otorage remperature	-30° C to 60° C
Humidity	20% to 80% (non-condensing)
Altitude	Up to 10,000 ft./3048 meters

B–4 Reference Guide

### 7550 FS, V (Continued)

TCO'99	Some models meet TCO'99
MPRII	Some models meet MPRII
Plug and Play	Yes

Reference Guide B–5

9500 MV, S

# Compaq 9500/19" Series Monitor

Screen Size	19" (48 cm) visual diagonal Viewable screen size 18" (46 cm) Anti-Glare Coating
Dot Pitch	0.26 mm (Diagonal) 0.22 mm (Horizontal)
Display Area Default	264 x 352 (mm) typical
Display Colors	Infinite
Display Resolutions	Refresh Rates
640 x 480	60 Hz
640 x 480	85 Hz
720 x 400	70 Hz
800 x 600	75 Hz
800 x 600	85 Hz
1024 x 768	75 Hz
1024 x 768	85 Hz
1280 x 1024	75 Hz
1280 x 1024	85 Hz (preferred user resolution)
1600 x 1200	75 Hz (maximum resolution)
Synchronization (Horizontal)	30 to 96 KHz
Synchronization (Vertical)	50 to 160 Hz
Max Pixel Clock	210 MHz Max.
Input Signal	Video RGB Analog Sync. TTL Separate
Video Cable	15-pin D-sub connector
Power Input Voltage Frequency	European Models: 200 to 240V A0 Other Models: 100 to 240V AC 50 <u>+</u> 3 to 60 <u>+</u> 3 Hz
Inrush Current	30 amps @ 120V 60 amps @ 220V
Power Consumption	130 W (Max.)
Dimension (W x H x D) Unpacked w/attached base	17.9 x 18.5 x 18.7 inches (maximum) 455 x 470 x 475 mm (maximum)
Weight	44 lb Max. 20 kg Max.
Operating Temperature	50° F to 95° F 10° C to 35° C
Storage Temperature	-22° F to 140° F -30° C to 60° C

B–6 Reference Guide

#### 9500 MV, S (Continued)

Humidity	20% to 80% (non-condensing)
Altitude	Up to 10,000 ft./3048 meters
TCO'99	Some models meet TCO'99
MPRII	Some models meet MPRII
Plug and Play	Yes

Reference Guide B–7

# **Agency Regulatory Notices**

#### **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.

# Declaration of Conformity for Products Marked with FCC Logo, United States Only

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For questions regarding your product, contact:

Compaq Computer Corporation P. O. Box 692000, Mail Stop 530113 Houston, Texas 77269-2000

Or, call - 1-800- 652-6672 (1-800-OK COMPAO)

For questions regarding this FCC declaration, contact:

Reference Guide C–1

Compaq Computer Corporation P. O. Box 692000, Mail Stop 510101 Houston, Texas 77269-2000

Or, call - (281) 514-3333

To identify this product, refer to the Part, Series, or Model number found on the product.

#### **Canadian Notice**

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

#### **Avis Canadien**

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

# **European Union Notice**

Products bearing the CE marking comply with the EMC Directive (89/336/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community, and if this product has telecommunication functionality, the R&TTE Directive (1999/5/EC).

Compliance with these directives implies conformity to the following European Norms (in parentheses are the equivalent international standards and regulations):

- EN 55022 (CISPR 22)—Electromagnetic Interference
- EN55024 (IEC61000 4-2,3,4,5,6,8,11) —Electromagnetic Immunity

CE

- EN61000-3-2 (IEC61000-3-2)—Power Line Harmonics
- EN61000-3-3 (IEC61000-3-3)—Power Line Flicker
- EN 60950 (IEC60950)—Product Safety

### **EPA Energy Star Compliance**

Monitors that are marked with the Energy Star Logo meet the requirements of the EPA Energy Star program. As an Energy Star Partner, Compaq Computer Corporation has determined that this product meets the Energy Star guidelines for energy efficiency. Specific details on using the Energy Saving features can be found in the energy saver or power management section of the computer manual.

### **Power Cord Set Requirements**

The power cord used with your monitor must be rated for the product and for the voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cord should be greater than the voltage and current rating marked on the product. In addition, the cross section of the wire must be a minimum of 0.75 mm<sup>2</sup> or 18AWG, and the length of the cord must be between 6 feet (1.8 m) and 12 feet (3.6 m). If you have questions about the type of power cord to use, contact your Compaq authorized service provider.

C-2 Reference Guide

A power cord should be routed so that it is not likely to be walked on or pinched by items placed upon it or against it. Particular attention should be paid to the plug, electrical outlet, and the point where the cord exits from the product. The monitor power supply is provided with Automatic Line Switching (ALS). This feature allows the monitor to operate on input voltages between 100-120V or 220-240V.

The power cord set (flexible cord or wall plug) received with the monitor meets the requirements for use in the country where you purchased the equipment. For more information on power cord set requirements, contact your Compaq authorized dealer, reseller or service provider.

Reference Guide C-3

# **TCO'99 Requirements**



You have just purchased a TCO'99 approved and labelled product. Your choice has provided you with a product developed for professional use. Your purchase has also contributed to reducing the burden on the environment and also to the further development of environmentally adapted electronics products.

#### Why do we have environmentally labelled computers?

In many countries, environmental labelling has become an established method for encouraging the adaptation of goods and services to the environment. The main problem, as far as computers and other electronics equipment are concerned, is that environmentally harmful substances are used both in the products and during their manufacture. Since it is not so far possible to satisfactorily recycle the majority of electronics equipment, most of these potentially damaging substances sooner or later enter nature.

There are also other characteristics of a computer, such as energy consumption levels, that are important from the viewpoints of both the work (internal) and natural (external) environments. Since all methods of electricity generation have a negative effect on the environment (for example, acidic and climate-influencing emissions, radioactive waste), it is vital to save energy. Electronics equipment in offices is often left running continuously and thereby consumes a lot of energy.

#### What does labelling involve?

This product meets the requirements for the TCO'99 scheme which provides for international and environmental labelling of personal computers. The labelling scheme was developed as a joint effort by the TCO (The Swedish Confederation of Professional Employees), Svenska Naturskyddsforeningen (The Swedish Society for Nature Conservation) and Statens Energimyndighet (The Swedish National Energy Administration).

Approval requirements cover a wide range of issues: environment, ergonomics, usability, emission of electric and magnetic fields, energy consumption and electrical and fire safety.

The environmental demands impose restrictions on the presence and use of heavy metals, brominated and chlorinated flame retardants, CFCs (freons) and chlorinated solvents, among other things. The product must be prepared for recycling and the manufacturer is obligated to have an environmental policy which must be adhered to in each country where the company implements its operational policy.

Reference Guide D–1

The energy requirements include a demand that the computer and/or display, after a certain period of inactivity, shall reduce its power consumption to a lower level in one or more stages. The length of time to reactivate the computer shall be reasonable for the user.

Labelled products must meet strict environmental demands, for example, in respect of the reduction of electric and magnetic fields, physical and visual ergonomics and good usability.

Below you will find a brief summary of the environmental requirements met by this product. The complete environmental criteria document may be ordered from:

TCO Development

SE-114 94 Stockholm, Sweden

Fax: +46 8 782 92 07

Email (Internet): development@tco.se

Current information regarding TCO'99 approved and labelled products may also be obtained via the Internet, using the address: http://www.tco-info.com

### **Environmental Requirements**

#### Flame Retardants

Flame retardants are present in printed circuit boards, cables, wires, casings and housings. Their purpose is to prevent, or at least to delay the spread of fire. Up to 30% of the plastic in a computer casing can consist of flame retardant substances. Most flame retardants contain bromine or chloride, and those flame retardants are chemically related to another group of environmental toxins, PCBs. Both the flame retardants containing bromine or chloride and the PCBs are suspected of giving rise to severe health effects, including reproductive damage in fish-eating birds and mammals, due to the bioaccumulative processes. Flame retardants have been found in human blood and researchers fear that disturbances in foetus development may occur.

The relevant TCO'99 demand requires that plastic components weighing more than 25 grams must not contain flame retardants with organically bound bromine or chlorine. Flame retardants are allowed in the printed circuit boards since no substitutes are available.



*Bioaccumulative* is defined as substances which accumulate within living organisms.

#### Cadmium

Cadmium is present in rechargeable batteries and in the color-generating layers of certain computer displays. Cadmium damages the nervous system and is toxic in high doses. The relevant TCO'99 requirement states that batteries, the color-generating layers of display screens and the electrical or electronics components must not contain any cadmium.



Cadmium is a heavy metal that is Bioaccumulative.

D-2 Reference Guide

#### **Mercury**

Mercury is sometimes found in batteries, relays and switches. It damages the nervous system and is toxic in high doses. The relevant TCO'99 requirement states that batteries may not contain any mercury. It also demands that mercury is not present in any of the electrical or electronics components associated with the labelled unit. There is however one exception. Mercury is, for the time being, permitted in the back light system of flat panel monitors as there today is no commercially available alternative. TCO aims on removing this exception when a mercury free alternative is available.



Mercury is a heavy metal that is Bioaccumulative.

#### **CFCs (Freons)**

The relevant TCO'99 requirement states that neither CFCs nor HCFCs may be used during the manufacture and assembly of the product. CFCs (freons) are sometimes used for washing printed circuit boards. CFCs break down ozone and thereby damage the ozone layer in the stratosphere, causing increased reception on earth of ultraviolet light with e.g. increased risks of skin cancer (malignant melanoma) as a consequence.

#### Lead

Lead can be found in picture tubes, display screens, solders and capacitors. Lead damages the nervous system and in higher doses, causes lead poisoning. The relevant TCO'99 requirement permits the inclusion of lead since no replacement has yet been developed.



Lead is a heavy metal that is Bioaccumulative.

Reference Guide D-3