# COMPAQ

# User's Guide

Compaq P1100 Color  Monitor

COMPAQ

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## *User's Guide*

**Compaq P1100 Color Monitor**

**Compaq Computer Corporation**

# English

## Product Features

The Compaq P1100 Color Monitor is a microprocessor-based, high-resolution monitor with auto-scanning. The monitor features include the following:

■ 21-inch (19.8-in/50.3 cm viewable) FD Trinitron® CRT

■ 1920 × 1440 resolution, plus full-screen support for lower resolutions

■ On-Screen Display (OSD) adjustments in nine different languages: English, Dutch, French, German, Italian, Spanish, Russian, Swedish, and Japanese for ease of set-up and screen optimization

■ Plug and Play capability if supported by your system

■ Tilt and swivel functionality

■ Kodak Color Profile (included on CD-ROM)

■ CD-ROM includes an information file (INF), Image Color Matching file (ICM), and product documentation

■ Automatic scanning of all horizontal frequencies between 30 and 121 kHz, and vertical frequencies between 50 and 160 Hz

■ Asset Control

■ Energy Saver feature for Energy Star® compliance

■ Macintosh-compatible timing with optional connector*

■ USB Hub (1 upstream, 4 downstream)

■ Compliance with the following regulated specifications:
　❏ Swedish MPR II 1990
　❏ EPA ENERGY STAR®
　❏ European Union CE Directives
　❏ Swedish TCO 99 for all models

_____

* A Macintosh-compatible connector is not supplied with this monitor.

✎ Depending on the content of the screen, at times the shadows of two small horizontal lines may appear on the screen. This is not a defect and is normal for all aperture grille type displays. The shadows are two damper wires that reduce the monitor's susceptibility to vibration.

## Universal Driver Manager

This monitor may require a graphics driver (and/or .INF file) that is compatible with your computer's graphics adapter. A CD-ROM containing an .INF file is included with this monitor (see the section on *Information Files).* Compaq has also created a Universal Driver Manager (UDM) release that supports all graphics adapters found on Compaq Deskpro and Compaq Workstation products. The UDM eases graphics driver deployment across Compaq platforms ensuring cross-compatibility and backward-compatibility. The resulting solution enables customers to manage and control ongoing software maintenance costs. The UDM is available on the *Compaq Support Software CD* for Compaq Desktop, Portable, and Workstation Products and the Compaq web site (www.compaq.com).

## Information Files

This monitor includes a CD-ROM with two information files that should be installed onto your computer—an .INF file and an .ICM file. The .INF file defines monitor resources and provides specifications used by Microsoft Windows 95/98 to install support software for certain hardware devices. The .INF file ensures monitor compatibility and optimization with your computer's graphics adapter.

The .ICM file provides color matching consistency from monitor screen to printer and is activated from within the graphics programs that have this feature. To install these files on your computer, insert the Compaq CD-ROM into the computer's CD tray and follow the instructions from the menu that appears on the monitor screen. The CD-ROM is located in the Program License Agreement packet. INF file updates are downloadable by clicking on:
www.compaq.com/products/monitors/index.html

## Setting Up the Monitor

To set up the monitor, ensure that the power is turned off to the monitor, computer system, and other attached devices, then follow these steps:

1.  Place the monitor in a convenient, well-ventilated location near your computer.

2.  Connect the monitor signal cable ❸ to one of the two 15-pin connectors ❹ on the rear panel of the computer and tighten the screws.

✎ Be sure the signal cable aligns with the 15-pin connector. Do not force the cable onto the connector or you may damage the signal cable.
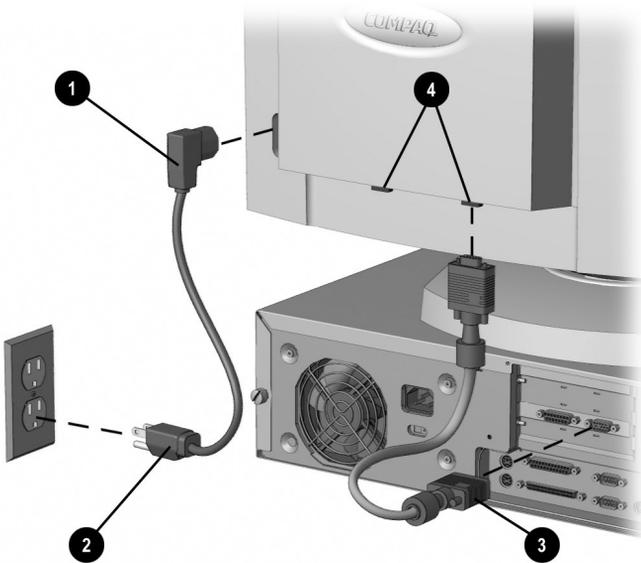


3.  Connect one end of the monitor power cord ❶ to the connector on the back of the monitor and the other end ❷ to an electrical outlet that is easily accessible and close to the monitor.

⚠️ **WARNING:** To reduce the risk of electric shock or damage to your equipment:

■ Do not disable the power cord grounding plug. The grounding plug is an important safety feature.

■ Plug the power cord into a grounded (earthed) electrical outlet that is easily accessible at all times.

■ Disconnect power from the monitor by unplugging the power cord from the electrical outlet.

■ Do not place anything on power cords or cables. Arrange them so that no one may accidentally step on or trip over them. Do not pull on a cord or cable. When unplugging from the electrical outlet, grasp the cord by the plug.

# Using USB Connectors
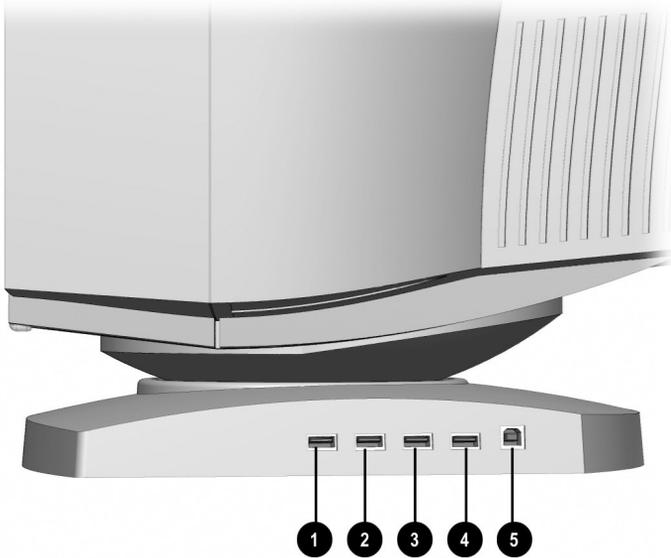


The base of the monitor has five Universal Serial Bus (USB) connectors. Four of these connectors, ❶,❷,❸,and ❹, are for connecting USB compatible devices such as a keyboard, mouse, or joystick to the hub. USB connector ❺ is used to connect the USB signal cable to the computer. The USB signal cable is included with the monitor.

The following are required to operate the USB hub:

■ Your computer must be fitted with a USB port.

■ Your computer must have Microsoft Windows 95 OSR2.1 or later, or Microsoft Windows 98 as the operating system.

# Operating the Monitor
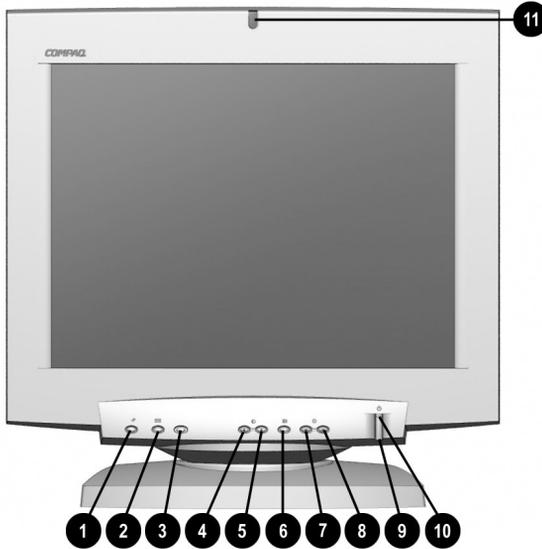


## Front Panel Controls

| No./Icon | | Control | Function |
|---|---|---|---|
| ❶ | // | Reset Button | Pressing this button resets the following items: Contrast, brightness, size/center, geometry, screen, zoom, and color. OSD Position, Color Mode, Control Lock, and Language can not be reset. |
| ❷ | ⊞ | Auto Adjust | Provides automatic horizontal and vertical centering and sizing. |
| ❸ | 1  2 | Input/Select Switch | Selects either video input 1 or 2. |
| ❹ | ↓ | Brightness Button | Down arrow decreases brightness or is used to select menu adjustment |
| ❺ | ↑ | Brightness Button | Up arrow Increases brightness or is used to select menu adjustment. |
| ❻ | ▤ | Menu Button | Launches on-screen menus and selects the functions. Also, exits menus and on-screen display. |
| ❼ | ← | Contrast Button | Left arrow decreases contrast or is used to adjust selected OSD adjustment item. |

**Continued**

| | | | |
|---|---|---|---|
| ❽ | ➡ | Contrast Button | Right arrow increases contrast or is used to adjust selected OSD adjustment item |
| ❾ | ⎗ | Power Button | Turns the monitor on and off. |
| ❿ | ▭ | LED | Indicates monitor mode.<br>1. Green LED indicates monitor is turned on.<br>2. Alternating Amber/Green LED indicates Standby/Suspend.<br><br>3. Amber LED indicates Sleep Mode. |
| ⓫ | ▮ | Light Sensor | Automatically adjusts the monitor contrast depending on the ambient light levels. |

## On-Screen Display Settings

To adjust screen settings, press the Menu button ❻ to launch the on-screen display (OSD). The OSD can be viewed in nine available languages. The following menu shows the functions at each level:

| Menu Level 1 | Menu Level 2 |
|---|---|
| Size/Center | Horizontal Centering<br>Vertical Centering<br>Horizontal Sizing<br>Vertical Sizing<br>Zoom |
| Geometry | Rotation<br>Pincushion<br>Pin Balance<br>Keystone<br>Key Balance |
| Convergence | Horizontal Convergence<br>Vertical Convergence<br>Vertical Convergence Top<br>Vertical Convergence Bottom |
| Screen | Landing Left Top<br>Landing Right Top<br>Landing Left Bottom<br>Landing Right Bottom<br>Moire Cancel |
| Color | Easy - 5000/6500/9300/adjustable<br>Expert - RGB Gain, RGB Bias<br>Color Return - optimizes screen brilliance as CRT ages. |
| Language | English<br>Francais<br>Deutsche<br>Espanol<br>Italiano<br>Nederlands<br>Svenska<br>Ðóññêèé (Russian)<br>日本語 (Japanese) |
| Option | Degauss<br>OSD Horizontal Position<br>OSD Vertical Position<br>Control Lock<br>Light Sensor |
| Information* | Model<br>Serial<br>Manufactured |

* To get this data, press the Menu button for 5 seconds while the monitor picture is stable,

## How to Adjust Screen Settings

To launch the on-screen display Main Menu:

1.  Press the Menu button ❸ on the monitor front panel. The Main Menu will display on the monitor screen.

2.  To select an item from the Main Menu, scroll down by pressing the down arrow button ❶ located on the monitor front panel. To reverse or back up, press the up arrow button ❷.

3.  The item to be selected will be highlighted in yellow. Press the Menu button ❸ again.
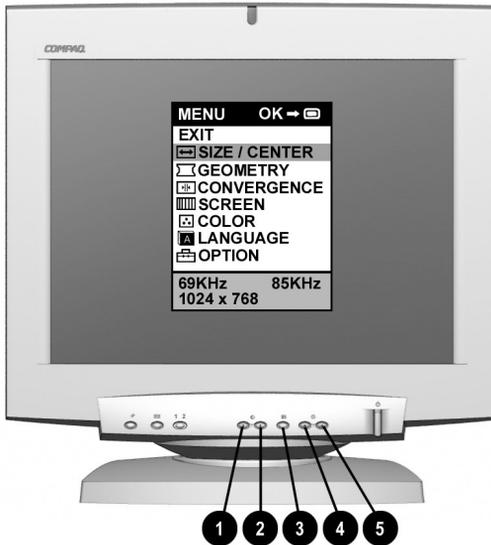


*Monitor with On-Screen Display*

✎    The bar on the bottom of the OSD menu shows the current operating frequency (and resolution if VESA standard).

4. A second-level menu displays and adjustment scale. Use the arrow keys ❹ or ❺ to select a value on the adjustment scale.

5. Press the Menu button ❸ to exit from that adjustment.

6. To exit from the on-screen menu, press the Menu button again.

Press **Reset** to return the adjustments to their original settings.

## Troubleshooting

### Special OSD Messages

Special OSD messages will appear on the monitor screen when identifying the following monitor conditions:

■ **Monitor is Working out of Scan Range, Change Signal Timing**
Indicates the monitor is unable to operate with the selected input signal. Readjust your video setting to a lower resolution.

■ **No Input Signal, *Activate Using the PC**
*Check Input selector.

■ **Monitor is Working, Check Signal Cable**
Indicates the video cable may not be plugged into the computer.

### Self Diagnosis

If the screen goes blank and the LED is green, remove any video connections from video connector 1 or 2. You can also turn off the PC. Press the power switch twice to turn the monitor OFF then ON again. Press the right arrow button ➡ (contrast increase) before the monitor enters power saving mode. If a color bar pattern appears then it is likely the problem is not the monitor. Please check the condition of your computer. If the color bar pattern does not appear, please inform your service representative of the monitor's condition. If the power LED is flashing orange, please make note of the frequency of flashing and inform your service representative of this frequency.

# Adjusting Screen Quality

The optimum screen settings are factory preset. However, to change the settings to your personal preference, allow the monitor to warm up for 30 minutes before performing the following procedures. The screen image stabilizes after a warm-up period.

## Optimizing Contrast

For best results, set your screen to a light background (such as the Windows Desktop) before adjusting the following settings:

1. Set the brightness control to its maximum setting, then reduce the brightness to your preference.

2. Adjust the contrast setting 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 brightness and contrast levels that provide satisfactory results in your viewing environment.

✎ Settings that maximize contrast may not offer optimum focus, and settings that maximize focus may not offer optimum contrast.

## Display Resolutions

The display resolutions listed below are the most commonly used modes and are set as factory defaults. This monitor automatically recognizes these preset modes and they will appear properly sized and centered on the screen.

| Display Resolutions | |
|---|---|
| **Preset Modes** | **Resolutions** |
| 1. Industry Standard | 640 × 480 at 60 Hz/31.5 kHz |
| 2. VESA | 640 × 480 at 85 Hz/43.3 kHz |
| 3. Industry Standard | 720 × 400 at 70 Hz/31.5 kHz |
| 4. VESA | 800 × 600 at 75 Hz/46.9 kHz |
| 5. VESA | 800 × 600 at 85 Hz/53.7 kHz |
| 6. Macintosh-compatible | 832 × 624 at 75 Hz/49.7 kHz |
| 7. VESA | 1024 × 768 at 75 Hz/60 kHz |
| 8. VESA | 1024 × 768 at 85 Hz/68.7 kHz |
| 9. Macintosh-compatible | 1152 × 870 at 75 Hz/68.7 kHz |
| 10. VESA | 1280 × 1024 at 60 Hz/63.9 kHz |
| 11. VESA | 1280 × 1024 at 75 Hz/79.9 kHz |
| 12. VESA | 1280 × 1024 at 85 Hz/91.1 kHz |
| 13. VESA | 1600 × 1200 at 70 Hz/87.5 kHz |
| 14. VESA | 1600 × 1200 at 85 Hz/106.3 kHz |
| 15. VESA | 1792 × 1344 at 60 Hz/83.7 kHz |
| 16. VESA | 1792 × 1344 at 75 Hz/106.3 kHz |
| 17. VESA | 1920 × 1440 at 60 Hz/90.0 kHz |
| 18. VESA | 1920 × 1440 at 75 Hz/112.5 kHz |

When *"Factory Reset"* is selected by pressing the reset button. The factory reset values will replace user changes that were made for only the current operating mode.

✎ If the video input signal meets the Generalized Timing Formula (GTF) the monitor will automatically provide an optimal screen image.

**Maximum Refresh Rates**

This monitor is capable of the maximum refresh rates listed in the following table. However, the video adapter installed in your computer must also be capable of supporting these refresh rates in order for them to operate. Most of the new video adapters being shipped and sold in computers today are capable of supporting these calculated refresh rates. Certain video adapters may provide different timing parameters which could result in slightly different maximum refresh rates.

| Maximum Refresh Resolutions |
| :---: |
| 640 × 480 at 160 Hz |
| 800 × 600 at 160 Hz |
| 1024 × 768 at 140 Hz |
| 1280 × 1024 at 110 Hz |
| 1600 × 1200 at 95 Hz |

**User Modes**

The video controller signal may occasionally call for a mode that is not preset if:

■   You are not using a Compaq standard graphics adapter.

■   You are not using a preset mode.

If this occurs, you may need to readjust the parameters of the monitor screen by using the on-screen display. User changes can be made to any or all of these modes and saved in memory. The monitor automatically stores the new setting, then recognizes the new mode just as it does a preset mode. In addition to the 18 factory preset modes, there are fifteen user modes that can be entered and stored.

# Energy Saver Feature

The energy saver feature has three different modes of operation:

- Full Power
- Standby/Suspend
- Sleep

By selecting settings in the computer's Energy Saver utility, you are able to determine the length of the inactivity period before the monitor goes into sleep mode.

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

| Energy Saver Levels* | | |
|---|---|---|
| **Mode** | **Power Usage** | **Description** |
| Full Power | Less than 145 Watts | ON = Normal operation Power LED is green. |
| Standby/Suspend | Less than 15 Watts | Monitor screen is blank. LED blinks amber and green. There is a brief warm-up period before returning to full power mode. |
| Sleep | Approximately 1 Watt | Monitor screen is blank. LED turns amber. There is a brief warm-up period before returning to full power mode. |
| Off | 0 Watts | Monitor screen is blank. LED is OFF. There is a brief warm-up period before returning to full power mode. |

Refer to your computer manual for instructions on setting energy saver features (sometimes referred to as power management features).

✎ The energy saver features for monitors only work when connected to computers that have energy saver features.

# Care and Maintenance

This section explains how to care for and maintain your Compaq monitor during normal everyday use.

## Protecting the Monitor

To protect your monitor from overheating and other types of damage, follow these suggestions:

- Use only a power source and connection appropriate for this monitor, as indicated on the marking label/back plate.

- If an extension cord or power strip is used, make sure that the cord or strip is rated for the product and that the total ampere ratings of all products plugged into the extension cord or power strip do not exceed 80% of the extension cord or strip ampere ratings limit.

- Do not overload an electrical outlet, power strip, or convenience receptacle. The overall system load must not exceed 80% of the branch circuit rating. If power strips are used, the load should not exceed 80% of the power strip input rating.

- Install the monitor near an outlet that you can easily reach. 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.

- 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 the monitor. Water or dirt from the plant may fall into the vents.

- Do not drop the 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 the monitor in a well-ventilated area, away from excessive light, heat, and moisture.

- In a two-monitor system, place the monitors as far apart from each other as possible to lessen interference between them.

- Do not open the monitor cabinet or attempt to service this product yourself. Adjust only those controls that are covered by the operating instructions. If the monitor is not operating properly or has been dropped or damaged, contact your Compaq authorized dealer, reseller, or service provider.

## Cleaning the Monitor

To clean the monitor, follow these steps:

1. Turn off the monitor and the computer.

2. Dust the monitor by wiping the screen and the cabinet with a soft, clean cloth.

If the screen requires additional cleaning, use any antistatic CRT screen cleaner.

> ⚠ **CAUTION:** Do not use benzene, thinner, ammonia, or any volatile substance to clean the monitor screen or cabinet. These chemicals may damage the monitor.

## Shipping the Monitor

Keep the original packing box in a storage area. You may need it later if you move or ship your monitor.

*Appendix*

# 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 the circuit that 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 if any changes or modifications are made to this device, not expressly approved by Compaq Computer Corporation, this 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 the 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 COMPAQ)

For questions regarding this FCC declaration, contact:

> 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 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

- EN61000-4-2, EN61000-4-3, EN61000-4-4 - Electromagnetic Immunity

- EN60950 (IEC950) - Product Safety

- EN61000-3-2 - Power Line Harmonics

## Japanese Notice

　この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準
に基づくクラスB情報技術装置です。この装置は、家庭環境で使用すること
を目的としていますが、この装置がラジオやテレビジョン受信機に近接して
使用されると、受信障害を引き起こすことがあります。
　取扱説明書に従って正しい取り扱いをして下さい。

## 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.

# Specifications

## Compaq P1100 Color Monitor

| | | |
|---|---|---|
| **Display** | 21-in | 53.3-cm |
| Type | Color, FD Trinitron® | |
| **Viewable Image Size (diagonal)** | 19.8-in | 50.2-cm |
| **Face Treatment** | Antireflective and antistatic coating compliant with TCO 1999 requirements | |
| **Maximum Weight (Unpacked)** | 70.4-lb | 32.0-kg |
| **Maximum Dimensions** | | |
| Height | 19.9-in | 50.6-cm |
| Depth | 19.4-in | 49.3-cm |
| Width | 19.8-in | 50.4-cm |
| **Maximum Graphics Resolution** | 1920 × 1440 at 75Hz Refresh Rate | |
| **Aperture Grille Pitch** | P22, 0.24 mm | |
| **Text Mode** | 720 × 400 | |
| **Horizontal Frequency** | 30 to 121 kHz | |
| **Vertical Frequency** | 50 to 160 Hz | |
| **Environmental Requirements Temperature** | | |
| Operating Temperature | 50 to 95°F | 5 to 35°C |
| Storage Temperature | -22 to 140°F | -20 to 60°C |
| **Humidity (Noncondensing)** | | |
| Operating | 20 to 80% | |
| Nonoperating | 10 to 90% | |
| **Power Source** | 90 - 132/195 - 255 VAC, 50-60 Hz | |
| **Power Consumption** | < 160 Watts | |
| **Input Terminal** | Two 15-pin D-type connectors | |

## Color Display Values

### CIE* Chromaticity Coordinates

| | x (+/- 0.030) | y (+/- 0.030) |
|---|---|---|
| Red | 0.625 | 0.340 |
| Blue | 0.155 | 0.070 |
| Green | 0.280 | 0.605 |
| White Point (9300 K) | 0.281 | 0.311 |
| Gamma: 2.6 | | |

*Commission International d'Eclairage, 1931 Standard.

## Power Cord

If you were not provided with a power cord for your computer, you should purchase a power cord that is approved for use in your country.

The power cord 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 diameter of the wire must be a minimum of ).75 mm² 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.

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.