HP w15e LCD Monitor
User Guide

About This Guide

This guide provides information on setting up the monitor, installing drivers, using the on-screen display menu, troubleshooting and technical specifications.

⚠ **WARNING!** Text set off in this manner indicates that failure to follow directions could result in bodily harm or loss of life.

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

✎ **NOTE:** Text set off in this manner provides important supplemental information.

Table of contents

Appendix C Agency Regulatory Notices

Appendix D LCD Monitor Quality and Pixel Policy

1   Product Features

HP w15e LCD Monitor

The LCD (liquid crystal display) monitor has an active matrix, thin-film transistor (TFT) panel. The monitor features include:

- Wide-screen 38.1 cm (15-inch) diagonal viewable area display with 1280 × 720 resolution, plus full-screen support for lower resolutions

- Tilt capability

- Removable base and pedestal for flexible monitor panel mounting solutions

- Video signal input to support VGA analog with VGA signal cable provided

- USB speakers (select models)

- Plug and play capability if supported by the system

- Cable management feature for placement of cables and cords

- On-Screen Display (OSD) adjustments in several languages for easy setup and screen optimization

- Software and documentation available on CD or downloaded from the HP support Web site

- Energy saver feature to meet requirements for reduced power consumption

- Compliant with the following regulated specifications:

  ◦ Swedish MPR II 1990

  ◦ Swedish TCO99 Requirements

  ◦ Energy Star

2   Safety and Maintenance Guidelines

Important Safety Information

A power cord is included with the monitor. If another cord is used, use only a power source and connection appropriate for this monitor. For information on the correct power cord set to use with the monitor, refer to the Power Cord Set Requirements on page 24 in Appendix C.

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

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

• Plug the power cord in a grounded (earthed) outlet that is easily accessible at all times.

• Disconnect power from the product by unplugging the power cord from the electrical outlet.

For your safety, 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.

To reduce the risk of serious injury, read the *Safety and Comfort Guide*. It describes proper workstation, setup, posture, and health and work habits for computer users, and provides important electrical and mechanical safety information. This guide is located on the Web at http://www.hp.com/ergo and/or on the documentation CD, if one is included with the monitor.

⚠ **CAUTION:**   For the protection of the monitor, as well as the computer, connect all power cords for the 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 the equipment, if surge protection fails.

Use the appropriate and correctly sized furniture designed to properly support your HP LCD monitor.

⚠ **WARNING!**   LCD monitors that are inappropriately situated on dressers, bookcases, shelves, desks, speakers, chests, or carts may fall over and cause personal injury.

Care should be taken to route all cords and cables connected to the LCD monitor so that they can not be pulled, grabbed, or tripped over.

Maintenance Guidelines

To enhance the performance and extend the life of the monitor:

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

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

- 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 the 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 the monitor off when not in use. You can substantially increase the life expectancy of the monitor by using a screen saver program and turning off the monitor when not in use.

- 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 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 or moisture.

- When removing the monitor base, you must lay the monitor face down on a soft area to prevent it from getting scratched, defaced, or broken.

Cleaning the Monitor

1. Turn off the monitor and the computer.

2. Unplug the monitor from the wall outlet.

3. Clean the monitor plastics with a clean cloth dampened with water.

4. Clean the monitor screen with an antistatic screen cleaner.

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

Shipping the Monitor

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

3 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 the instructions below.

Attaching the Monitor Base

1. Set the base on a flat surface such as a table top.

2. Using both hands, position the pedestal over the base and press down firmly to lock it in place. Be sure the base is securely locked in place and adjust the tilt angle to the desired position.

△ **CAUTION:** Do not touch the surface of the LCD panel. Pressure on the panel may cause non-uniformity of color or disorientation of the liquid crystals. If this occurs the screen will not recover to its normal condition.

**Figure 3-1** Attaching the Base to the Monitor

Rear Components
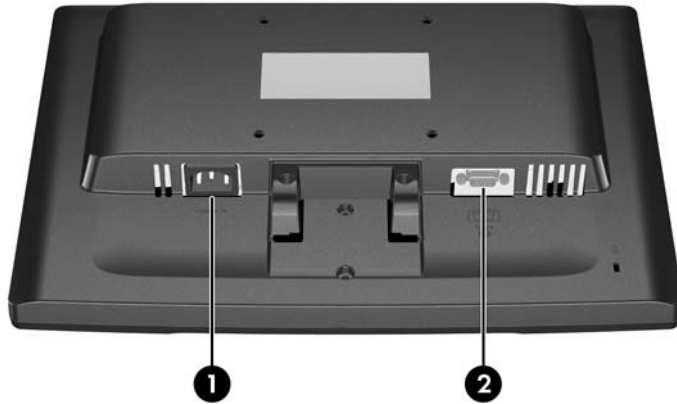
Component		Function
1	AC Power Connector	Connects the AC power cord to the monitor.
2	VGA	Connects the VGA cable to the monitor.

Connecting the Cables

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

2. Route the cables through the cable guide on the rear of the monitor pedestal.

3. Connect the VGA signal cable to the VGA connector on the rear of the monitor and the other end to the VGA connector on the computer.

4. Connect one end of the power cable to the AC power connector on the back of the monitor, and the other end to an electrical wall outlet.

    Figure 3-3 Connecting the Cables
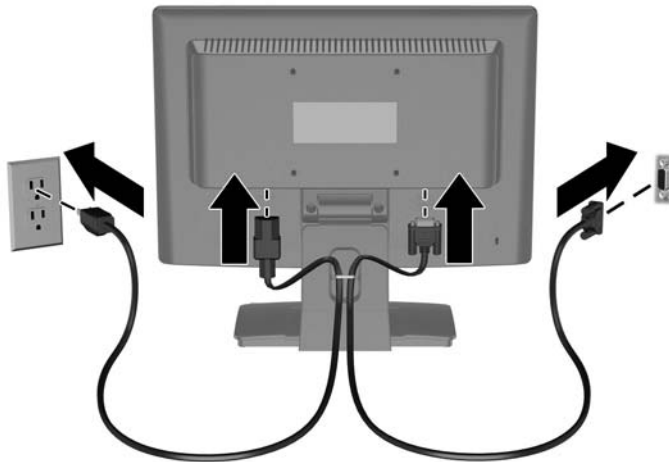
⚠ **WARNING!** To reduce the risk of electric shock or damage to the equipment:

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 equipment by unplugging the power cord from the electrical outlet.

For your safety, 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.

Connecting the Speakers (select models only)

1. Place the speaker set near the monitor so that the speaker with the controls is on the right side when viewing the monitor from the front.

2. Connect the USB cable on the control speaker to a USB connector on the computer.

3. Connect one end of the audio cable provided to the control speaker and the other end to the audio output connector on the computer.

Adjusting the Monitor

Tilt the monitor's panel forward or backward to set it to a comfortable eye level.

Figure 3-4 Tilting the Monitor

Turning on the Monitor

1. Press the power button on the computer to turn it on.

2. Press the power button on the front of the monitor to turn it on.

△ **CAUTION:** Burn-in image damage may occur on monitors that display the same static image on screen for a prolonged period of time.* To avoid burn-in image damage on the monitor screen, you should always activate a screen saver application or turn off the monitor when it is not in use for a prolonged period of time. Image retention is a condition that may occur on all LCD screens.

* A prolonged period of time is 12 consecutive hours of non-use.

Mounting the Monitor Panel

You can remove the monitor panel from the pedestal base to install the panel on a wall, a swing arm, or other mounting fixture.

△ **CAUTION:** Before beginning to disassemble the monitor, be sure the monitor is turned off and the power and signal cables are both disconnected. If the monitor has a connected audio cable, disconnect it.

1. Disconnect and remove the signal and power cables from the back of the monitor.

2. Lay the monitor face down on a flat surface.

3. Remove the two screws on the back of the monitor that connect the monitor panel to the pedestal base (1) and slide the pedestal base from the monitor panel (2).

Figure 3-5 Removing the Pedestal Base
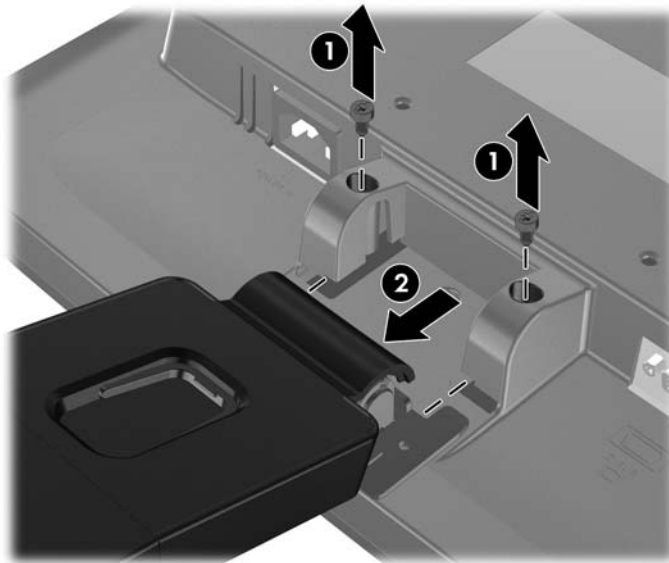
4. Insert four 10mm screws through the holes on the swing arm plate and into the mounting holes on the monitor.

Figure 3-6 Installing the Monitor on a Swing Arm

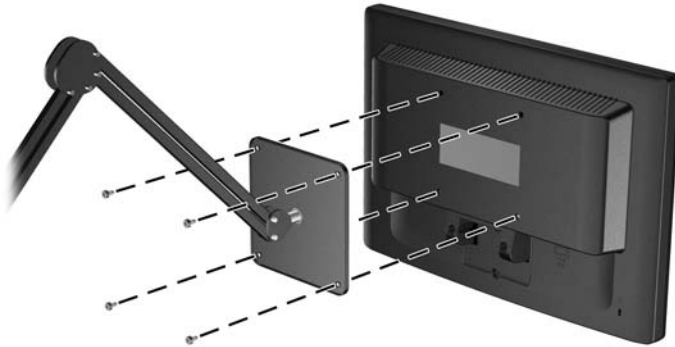△ **CAUTION:** This monitor supports the VESA industry standard 100 mm mounting holes. To attach a third-party mounting solution to the monitor, four 4 mm, 0.7 pitch, and 10 mm long screws are required (not provided with the monitor). Longer screws should not be used because they may damage the monitor. It is important to verify that the manufacturer's mounting solution is compliant with the VESA standard and is rated to support the weight of the monitor display panel. For best performance, it is important to use the power and video cables provided with the monitor.

5. Reconnect the cables to the monitor panel.

Locating the Rating Labels

The rating labels on the monitor provide the spare part number, product number, and serial number. You may need these numbers when contacting HP about the monitor model. The rating labels are located on the rear panel of the monitor display head.

Figure 3-7 Locating the Rating Labels
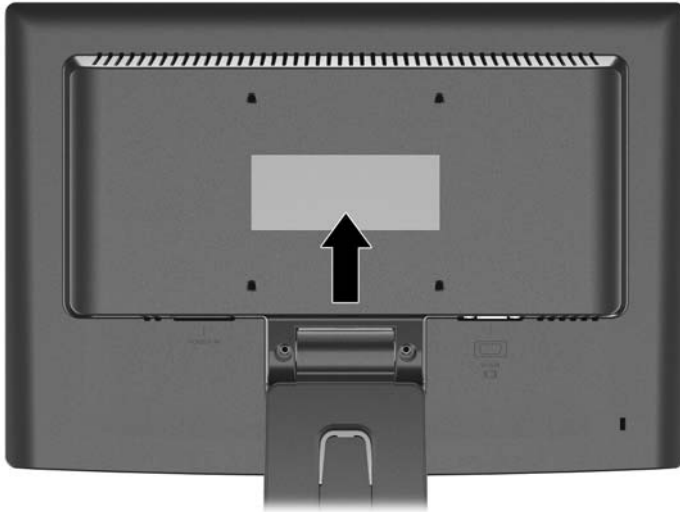
4   Operating the Monitor

Software and Utilities

Install the drivers and software from the CD provided with the monitor or download the latest version of the files from the HP support Web site.

Installing from the CD (with select models)

To install the drivers and software files on the computer from the CD:

1.   Insert the CD in the computer CD-ROM drive. The CD menu is displayed.

2.   View the **Monitor Driver Software Readme** file.

3.   Select **Install Monitor Driver Software**.

4.   Follow the on-screen instructions.

5.   Ensure that the proper resolution and refresh rates appear in the Windows Display control panel.

NOTE: You may need to install the digitally signed monitor .INF and .ICM files manually from the CD in the event of an installation error. Refer to the Monitor Driver Software Readme file on the CD.

Downloading from the Worldwide Web

To download the latest version of driver and software files from the HP monitors support Web site:

1.   Refer to http://www.hp.com/support and select the country region.

2.   Follow the links for the monitor to the support page and download page.

3.   Ensure the system meets the requirements.

4.   Download the software by following the instructions.

Using the Auto-Adjustment Function

You can optimize the screen performance for the VGA (analog) input by using the Auto button on the monitor or the auto-adjustment pattern software utility on the CD provided.

Auto-adjustment can correct the following image quality conditions:

●   Fuzzy or unclear focus

●   Ghosting, streaking or shadowing effects

- Faint vertical bars

- Thin, horizontal scrolling lines

- An off-center picture

To use the auto-adjustment feature:

1. Allow the monitor to warm up for 20 minutes before adjusting.

2. Press the Auto button on the monitor front panel to produce a stable, centered image.

Front Panel Controls
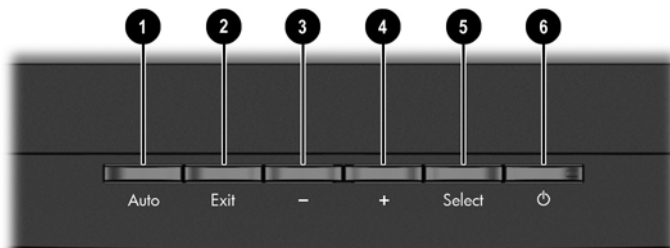
Table 4-1 Monitor Front Panel Controls

Control		Function
1	Auto	Activates the auto-adjustment feature.
2	Exit	Exits the OSD menu and saves the adjusted settings.
3	– (minus)	- If the OSD menu is on, press to navigate backward through the OSD menu and decrease adjustment levels. - If the OSD menu is inactive, press to adjust the contrast feature.
4	+ (plus)	- Navigates forward through the OSD menu and increases adjustment levels. - When the OSD menu is inactive, press to adjust the brightness feature.
5	Select	Opens and selects the OSD menu.
6	Power	Turns the monitor on or off.

Adjusting the Monitor Settings

The monitor settings can be adjusted from the On-Screen Display (OSD) menu.

Using the On-Screen Display Menu

Use the On-Screen Display (OSD) to adjust 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.

2. To access the OSD Menu, press the Select button on the monitor's front panel.

3. To navigate through the OSD Menu, press the + (plus) button on the monitor's front panel to scroll up, or the – (minus) button to scroll in reverse.

4. To select an item from the OSD Menu, use the + (plus) or – (minus) buttons to scroll to and highlight your selection, then press the Select button to select that function.

5. Adjust the item using the + (plus) or – (minus) buttons on the front panel to adjust the scale.

6. After adjusting the function, press the Exit button on the front panel to leave the menu. The settings will automatically be saved after adjustments are made.

OSD Menu Selections

The following table lists the On-Screen Display (OSD) menu selections and their functional descriptions. Settings will be saved automatically after adjustments are made.

Table 4-2 OSD Menu

Icon	Main Menu	Submenu	Description
	Auto Adjust		Automatically adjusts the screen image.
	Luminance		Adjusts the brightness and contrast levels of the screen.
		Brightness	Adjusts the brightness level of the screen. The factory default range is 90.
		Contrast	Adjusts the contrast level of the screen. The factory default range is 80.
	Geometry		Adjusts the screen image.
		H. Position	Adjusts the position of the screen image left and right.
		V. Position	Adjusts the position of the screen image up and down.
		Pixel Clock	Minimizes any vertical bars or strips visible on the screen background. Adjusting the Pixel Clock will also change the horizontal screen image.
		Phase	Adjusts the focus of the display. This adjustment allows you to remove any horizontal noise and clear or sharpen the image of characters.
	Color		Selects the screen color temperature or sets up a user preset.
		9300 K	Changes to slightly blueish white.
		7500 K	Changes to slightly greenish white.
		6500 K	Changes to slightly reddish white.
		User Preset	Selects and adjusts your own color scales: ● Red - sets your own red color levels ● Green - sets your own green color levels ● Blue - sets your own blue color levels
	OSD		Adjusts the position and duration of the OSD menu screen.
		H. Position	Horizontal OSD Position-Changes the viewing position of the OSD menu to the left or right area of the screen. The factory default range is 50.
		V. Position	Vertical OSD Position-Changes the viewing position of the OSD menu to the top or bottom area of the screen. The factory default range is 50.
		OSD Time	Sets the time duration in seconds that the OSD is visible after the last button is pressed. The factory default is 30 seconds.

Table 4-2 OSD Menu (continued)

Icon	Main Menu	Submenu	Description
	Language		Selects the language in which the OSD menu is displayed. The factory default is English.
	Recall		Returns all OSD menu settings and DDC/CI controls to the factory default settings, except the Language.
	Miscellaneous		Selects Sharpness, DDC/CI, and Display Information features of the monitor.
		Sharpness	Adjusts the screen image to look sharper or softer.
		DDC/CI Support	Allows the computer to control some OSD menu features such as brightness, contrast and color temperature. Set to: ● On ● Off The factory default is On.
		Display Information	Selects and displays important information about the monitor.

Optimizing Digital Conversion

Two controls in the on-screen display can be adjusted to improve image performance: Pixel Clock and Phase.

NOTE: The Pixel Clock and Phase controls are adjustable only when using an analog input. These controls are not adjustable for digital inputs.

The Pixel Clock must first be set correctly since the Phase settings are dependent on the main Pixel Clock setting. Use these controls only when the auto-adjustment function does not provide a satisfactory image.

- **Pixel Clock**—Increases/decreases the value to minimize any vertical bars or stripes visible on the screen background.

- **Phase**—Increases/decreases the value to minimize video distortion or video jitter.

NOTE: When using the controls, you will obtain the best results by using the auto-adjustment feature.

When adjusting the Pixel Clock and Phase values, if the monitor images become distorted, continue adjusting the values until the distortion disappears. To restore the factory settings, select Yes from the Recall menu in the on-screen display.

Identifying Monitor Conditions

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

- **Out of Range!**—Indicates the monitor does not support the input signal because the resolution and/or refresh rate are set higher than the monitor supports.

- **No Signal Detected!**—Indicates the monitor is not receiving a video signal from the PC on the monitor video input connector. Check to determine if the PC or input signal source is off or in the power saving mode.

- **Auto Adjusting...**—Indicates the auto-adjustment function is active.

- **Signal Cable Not Connected!**—Indicates the video cable is not properly connected to the computer.

- **Nonpreset Mode!**—Indicates a non-preset timing is being used.

A   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 button on front panel of the monitor is turned off.	Press the front panel power button.
	Video cable is improperly connected.	Connect the video cable properly. Refer to Chapter 3, Setting Up the Monitor on page 4 for more information.
	Screen blanking is active.	Press any key on the keyboard or move the mouse to inactivate the screen blanking utility.
Screen image appears distorted; text is fuzzy or blurred; image quality is degraded.	The computer's graphics card resolution is set lower or higher than the monitor's native resolution.	Set the computer's display resolution to the same mode as the monitor's recommended native screen resolution to provide the best picture quality.
Image appears blurred, indistinct, or too dark.	Brightness and contrast are too low.	Press the Auto button on the front panel. If this does not correct the image, press the Select button to open the OSD Menu, and select Luminance to adjust the brightness and contrast scales as needed.
Image is not centered	Position may need adjustment.	Press the Select button to access the OSD menu. Select Geometry/H. Position or V. Position to adjust the horizontal or vertical position of the image.
Signal Cable Not Connected! is displayed on screen.	Monitor video cable is disconnected.	Connect the VGA cable to the VGA connector on the computer. Be sure that the computer power is off while connecting the video cable.
Out of Range! is displayed on screen.	Video resolution and/or refresh rate are set higher than what the monitor supports.	Restart the computer and enter Safe Mode. Change the settings to a supported setting (see Recognizing Preset Display Resolutions on page 20). Restart the computer so that the new settings take effect.

Using the Worldwide Web

For the online access to technical support information, self-solve tools, online assistance, community forums of IT experts, broad mutlivendor knowledge base, monitoring and diagnostic tools, go to http://www.hp.com/support

Preparing to Call Technical Support

If you cannot solve a problem using the trouble shooting 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

B   Technical Specifications

NOTE: All performance specifications are provided by the component manufacturers. Performance specifications represent the highest specification of all HP's component manufacturers' typical level specifications for performance and actual performance may vary either higher or lower.

w15e Model

Table B-1 w15e Specifications

Display	38.1 cm wide screen	15 inches wide screen
Type	TFT LCD	
Viewable Image Size	38.1 cm diagonal	15 inch diagonal
Tilt	-5 to 20°	
Maximum Weight (Unpacked)	4 kg	8.8 lbs.
Dimensions (include base)		
Height	33.9 cm	13.34 inches
Depth	13.7 cm	5.39 inches
Width	37.7 cm	14.57 inches
Maximum Graphic Resolution	1280 × 720 (60Hz) analog input	
Optimum Graphic Resolution	1280 x 720 (60Hz) analog input	
Text Mode	720 × 400	
Dot Pitch	0.2595 (H) × 0.2595 (V) mm	
Horizontal Frequency	31 to 64 kHz	
Vertical Refresh Rate	59 to 75 Hz	
Environmental Requirements Temperature		
Operating Temperature	0 to 40° C	32 to 104° F
Storage Temperature	-20 to 60° C	-4 to 140° F
Relative Humidity	10 to 90%	
Power Source	100 — 240 VAC, 50/60 Hz	
Altitude:		
Operating	0 to 3657.6 m	0 to 12,000 feet

Storage	0 to 12192 m	0 to 40,000 feet
Power Consumption (maximum)	21 watts / standby <2 watts	
Input Terminal	One VGA connector with cable included	

Recognizing Preset Display Resolutions

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

w15e Model

Table B-2 Factory Preset Modes

Preset	Pixel Format	Horz Freq (kHz)	Vert Freq (Hz)
1	640 × 480	31.47	59.94
2	640 × 480	37.5	75.0
3	640 × 480	37.86	72.81
4	720 × 400	31.47	70.08
5	800 × 600	37.88	60.32
6	800 × 600	46.88	75.0
7	800 × 600	48.08	72.19
8	832 × 624	49.71	74.53
9	1280 × 720	44.77	59.86

NOTE: 1280 x 720 is the recommended preset mode. Use this resolution for optimum picture quality.

Entering User Modes

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

● You are not using a standard graphics adapter.

● You are not using a preset mode.

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

Energy Saver Feature

When the monitor is in its normal operating mode, the monitor uses less than 21 watts and the Power light is green.

The monitor also supports a reduced power state. The reduced power state will be entered into if the monitor detects the absence of either the horizontal sync signal and/or the vertical sync signal. Upon detecting the absence of these signals, the monitor screen is blanked, the backlight is turned off, and the power light is turned amber. When the monitor is in the reduced power state, the monitor will utilize less than 2 watts of power. There is a brief warm up period before the monitor will return to its normal operating mode.

Refer to the computer manual for instructions on setting energy saver features (sometimes called power management features).

NOTE: The above power saver feature only works when connected to computers that have energy saver features.

By selecting the settings in the monitor's Energy Saver utility, you can also program the monitor to enter into the reduced poser state at a predetermined time. When the monitor's Energy Saver utility causes the monitor to enter the reduced power state, the power light blinks amber.

C   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 Hewlett Packard Company 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.

2. This device must accept any interference received, including interference that may cause undesired operation.

For questions regarding the product, contact:

Hewlett Packard Company

P. O. Box 692000, Mail Stop 530113

Houston, Texas 77269-2000

Or, call 1-800-HP-INVENT (1-800 474-6836)

For questions regarding this FCC declaration, contact:

Hewlett Packard Company

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.
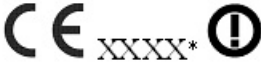
European Union Regulatory Notice

This product complies with the following EU Directives:

● Low Voltage Directive 2006/95/EC

● EMC Directive 2004/108/EC

Compliance with these directives implies conformity to applicable harmonized European standards (European Norms) which are listed on the EU Declaration of Conformity issued by Hewlett-Packard for this product or product family.

This compliance is indicated by the following conformity marking placed on the product:

This marking is valid for non-Telecom products and EU harmonized Telecom products (e.g. Bluetooth)

This marking is valid for EU non-harmonized Telecom products.

*Notified body number (used only if applicable — refer to the product label).

Hewlett-Packard GmbH, HQ-TRE, Herrenberger Strasse 140, 71034 Boeblingen, Germany

German Ergonomics Notice

HP products which bear the "GS" approval mark, when forming part of a system comprising HP brand computers, keyboards and monitors that bear the "GS" approval mark, meet the applicable ergonomic requirements. The installation guides included with the products provide configuration information.

Japanese Notice

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取扱説明書に従って正しい取り扱いをして下さい。

Korean Notice

B급 기기 (가정용 정보통신기기)

이 기기는 가정용으로 전자파적합등록을 한 기기로서
주거지역에서는 물론 모든지역에서 사용할 수 있습니다.

Power Cord Set Requirements

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 200–240V.

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.

If you need to obtain a power cord for a different country, you should purchase a power cord that is approved for use in that 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 cross-sectional area of the wire must be a minimum of 0.75 mm² or 18 AWG, 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 an authorized HP 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.

Japanese Power Cord Requirements

For use in Japan, use only the power cord received with this product.

△ **CAUTION:** Do not use the power cord received with this product on any other products.

Product Environmental Notices

Energy Star Compliance

Monitors that are marked with the ENERGY STAR Logo meet the requirements of the U.S. Environmental Protection Agency (EPA) ENERGY STAR program. As an ENERGY STAR Partner, Hewlett Packard Company 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.

Materials Disposal

This HP product contains mercury in the fluorescent lamp in the display LCD that might require special handling at end-of-life.

Disposal of this material can be regulated because of environmental considerations. For disposal or recycling information, contact the local authorities or the Electronic Industries Alliance (EIA) http://www.eiae.org.

Disposal of Waste Equipment by Users in Private Household in the European Union

This symbol on the product or on its packaging indicates that this product must not be disposed of with your household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling or waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact the local city office, the household waste disposal service or the shop where you purchased the product.

Restriction of Hazardous Substances (RoHS)

A Japanese regulatory requirement, defined by specification JIS C 0950, 2005, mandates that manufacturers provide Material Content Declarations for certain categories of electronic products offered for sale after July 1, 2006. To view the JIS C 0950 material declaration for this product, visit http://www.hp.com/go/jisc0950.

2005年、日本における製品含有表示方法、JISC0950が公示されました。製造事業者は、2006年7月1日以降に販売される電気・電子機器の特定化学物質の含有につきまして情報提供を義務付けられました。製品の部材表示につきましては、*http://www.hp.com/go/jisc0950*を参照してください。

有毒有害物质/元素的名称及含量表

根据中国
《电子信息产品污染控制管理办法》

液晶显示器

部件名称	有毒有害物质和元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
液晶显示器显示面板	X	X	O	O	O	O
机箱/其它	X	O	O	O	O	O

CRT 显示器

部件名称	有毒有害物质和元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
阴极射线管	X	O	O	O	O	O
机箱/其它	X	O	O	O	O	O

O：表示该有毒或有害物质在该部件所有均质材料中的含量均在 SJ/T11363-2006标准规定的限量要求以下。

X：表示该有毒或有害物质至少在该部件所用的某一均质材料中的含量超出 SJ/T11363-2006标准规定的限量要求。

表中标有"X"的所有部件都符合欧盟 RoHS 法规 — "欧洲议会和欧盟理事会 2003 年 1 月 27 日关于电子电器设备中限制使用某些有害物质的 2002/95/EC 号指令"。

注：环保使用期限的参考标识取决于产品正常工作的温度和湿度等条件。

D LCD Monitor Quality and Pixel Policy

The TFT monitor uses high-precision technology, manufactured according to HP standards, to guarantee trouble-free performance. Nevertheless, the display may have cosmetic imperfections that appear as small bright or dark spots. This is common to all LCD displays used in products supplied by all vendors and is not specific to the HP LCD. These imperfections are caused by one or more defective pixels or sub-pixels.

- A pixel consists of one red, one green, and one blue sub-pixel.

- A defective whole pixel is always turned on (a bright spot on a dark background), or it is always off (a dark spot on a bright background). The first is the more visible of the two.

- A defective sub-pixel (dot defect) is less visible than a defective whole pixel and is small and only visible on a specific background.

To locate defective pixels, the monitor should be viewed under normal operating conditions, in normal operating mode at a supported resolution and refresh rate, from a distance of approximately 50 cm (20 in).

HP expects that, over time, the industry will continue to improve its ability to produce LCDs with fewer cosmetic imperfections and HP will adjust guidelines as improvements are made. For more information about your HP LCD Monitor, refer to the HP Web site at: http://www.hp.com/support.