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Second Edition (November 2012)

Document Part Number: 701324-002

### **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.



Text set off in this manner provides important supplemental information.

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# 1 Product Features

### **HP ENVY 27 27-inch IPS Monitor**

Figure 1-1 HP ENVY 27 27-inch IPS Monitor



The HP ENVY 27 27-inch IPS Monitor has an active matrix, thin-film transistor (TFT) screen with an LED backlight and the following features:

- Large 27-inch/68.6 cm diagonal display with 1920 x 1080 at 60Hz, plus full-screen support for lower resolutions
- IPS technology provides wide viewing angles with colors that maintain their integrity
- VGA analog input signal
- DisplayPort digital signal input
- High-definition multimedia interface (HDMI) signal input with cable provided
- Beats Audio for optimized sound quality
- Ultra fast response time with OverDrive
- Easy viewing from sitting or standing position, or while moving from one side of the monitor to the other
- Dynamic Contrast Ratio
- Tilt adjustment

- Plug and Play capability, if supported by your operating system
- On-screen display (OSD) adjustments for easy setup and screen optimization (available in English, Simplified Chinese, Traditional Chinese, French, German, Italian, Spanish, Dutch, Japanese, and Portuguese)
- Power Saver to reduce energy consumption
- HDCP (High Bandwidth Digital Content Protection) on DisplayPort and HDMI inputs
- Documentation and Software CD containing drivers and documents

### **Accessories**

- Power adapter
- Power cord
- HDMI cable
- Audio cable
- Cable management clip
- Documentation and Software CD

### **Optional Accessories**

- VGA cable
- DisplayPort cable

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# 2 Safety and Maintenance Guidelines

# **Important Safety Information**

For displays with glossy bezels, consider the placement of the display, because the bezel might cause distracting reflections from surrounding light and bright surfaces.

For information on the correct power cord set to use with the monitor, see <u>Power Cord Set Requirements on page 30</u>.



**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 might 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, see the HP Safety and Comfort Guide on the HP website at <a href="http://www.hp.com/ergo">http://www.hp.com/ergo</a> or on the documentation CD. The guide describes proper workstation, setup, posture, and health and work habits for computer users, and provides important electrical and mechanical safety information.



**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 its 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 might fall over and cause personal injury. Care must be taken to route all cords and cables connected to the LCD monitor so that they cannot be pulled, grabbed, or tripped over.

# **Safety Precautions**

- Use only a power source and connection compatible with this monitor, as indicated on the label of the power adapter.
- 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 power cord does not exceed the rating of the power cord. To determine the ampere rating
  (Ampsor A) for each device, see the power label.
- Install your monitor near a power 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.
- Do not allow anything to rest on the power cord.
- Do not walk on the cord.

### **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.
- Turn the monitor off when not in use. You can substantially increase the life expectancy of them on it or by using a screen saver program and turning off the monitor when not in use.



**NOTES:** Monitors with a "burned-in-image" are not covered under the HP warranty.

- 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.
- Keep the monitor in a well-ventilated area, away from excessive light, heat or moisture.

### **Cleaning the Monitor**

- 1. Turn off the monitor and unplug the power cord from the back of the unit.
- Dust the monitor by wiping the screen and the cabinet with a soft, clean antistatic cloth.
- 3. For more difficult cleaning situations, use a 50/50 mix of water and Isopropyl alcohol. Spray the cleaner onto a cloth and use the damp cloth to gently wipe the screen surface.



**CAUTION:** Do not spray the cleaner directly on the screen surface. The cleaner might run behind the bezel and damage the electronics.



**CAUTION:** Do not use cleaners that contain any petroleum based materials such as benzene, thinner, or any volatile substance to clean the monitor screen or cabinet. These chemicals might damage the monitor.

### **Shipping the Monitor**

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

To prepare the monitor for shipping:

- 1. Disconnect the power and video cables from the monitor.
- Lay the monitor on a flat and even surface with the bottom side of the monitor extending over the edge of the surface.
- 3. Slide the base latches outwards to release the base lock.

Figure 2-1 Releasing the Base Latches



- 4. Remove the base from the monitor.
- **5.** Place the monitor and the base in the original packaging box.

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# 3 Setting Up the Monitor

# **Unpacking the Monitor**

- 1. Make sure all contents are included. Store the packing box.
- 2. Turn off the computer and other attached devices.
- 3. Prepare a flat area to assemble the monitor.



**NOTE:** Use only the power cord and adapter provided with this monitor.

# **Installing the Base Stand**

- 1. Place the monitor on a flat and even surface with the bottom side of the monitor extending over the edge of the surface.
- 2. Slide the base to the stand. The latches automatically locks in place.

Figure 3-1 Installing the Base Stand



# **Connecting Video Source Cables**



**CAUTION:** Before connecting the cables to the monitor, ensure that the computer and the monitor are powered off.

The video source is determined by the video cable used. The monitor automatically determines which inputs have valid video signals. The inputs can be selected by pressing the source button on the front of the monitor.

### **Connecting the DisplayPort Cable**

Connect one end of the DisplayPort video cable to the back of the monitor and the other end to the DisplayPort video connector on the computer. You can use this cable only if your computer has a DisplayPort-compliant graphics card that is either integrated or installed. DisplayPort cable is not provided.

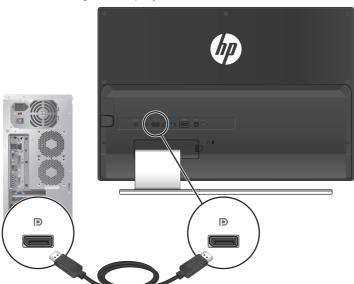


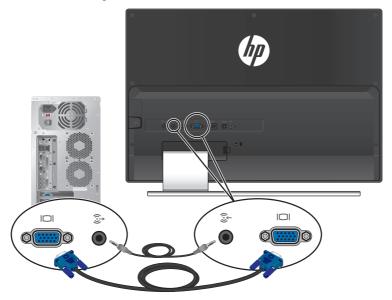
Figure 3-2 Connecting the DisplayPort Cable

### **Connecting the VGA Cable**

Connect one end of the VGA cable to the back of the monitor and the other end of the cable to the input device. The VGA cable is not provided.

VGA connection only carries video input signal. To output audio from a VGA source through the monitor, you must connect one end of the audio cable to the back of the monitor and the other end of the cable to the input device. An audio cable is provided.

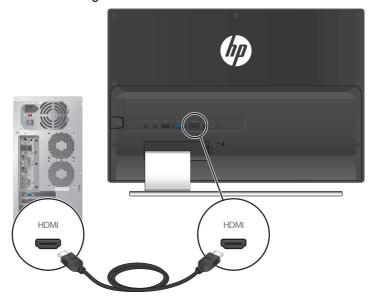
Figure 3-3 Connecting the VGA video and audio cables



## **Connecting the HDMI Cable**

Connect one end of the HDMI cable to the back of the monitor and the other end of the cable to the input device. The HDMI cable is provided.

Figure 3-4 Connecting the HDMI Cable

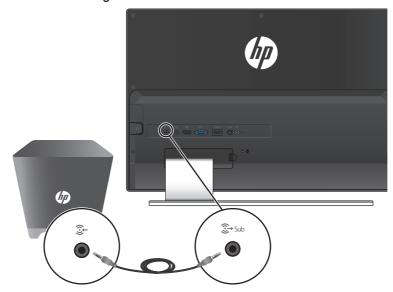


# **Connecting Audio Output Devices**

### **Connecting a Subwoofer**

Connect one end of the audio cable to the back of the monitor and the other end of the cable to the audio output device.

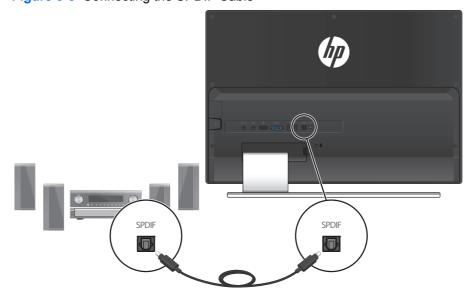
Figure 3-5 Connecting a Subwoofer



### **Connecting a Digital Audio Device**

Connect one end of the SPDIF cable to the back of the monitor and the other end of the cable to the audio output device. The SPDIF cable is not provided.

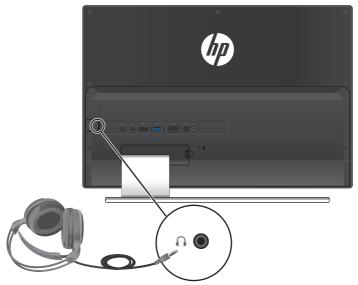
Figure 3-6 Connecting the SPDIF Cable



### **Connecting a Headphone**

Connect the headphone cable to the right side of the monitor.

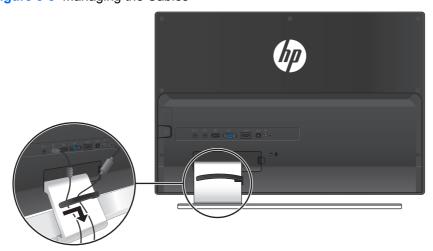
Figure 3-7 Connecting the Headphone



# **Managing the Cables**

A cable management comes with the package. Install the cable management clip on the stand, then insert the cables into the clip.

Figure 3-8 Managing the Cables



# **Connecting the Power Cord**

Follow all electrical and power warnings.

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.

Be sure that the grounded power outlet you plug the power cord into is easily accessible to the operator and located as close to the equipment as possible. A power cord must be routed so that it is not likely to be walked on or pinched by items that are placed upon it or against it.

Do not place anything on power cords or cables. Arrange them so that no one might accidentally step on or trip over them. Do not pull on a cord or cable.

For additional information, see Technical Specifications on page 25.

Connect the round end of the power cord to the monitor, and then connect one end of the power cord to the power supply and the other end to a grounded electrical outlet.



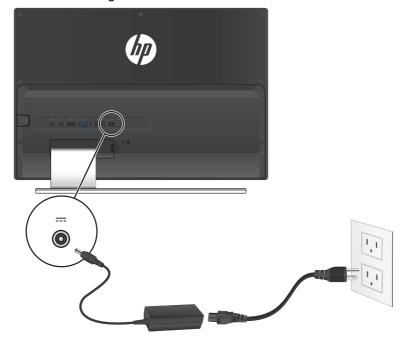
**WARNING:** To prevent injury from electrical shock, you must do one of the following if a properly grounded electrical outlet is not available.

Use an electrical outlet adapter that provides proper grounding.

Have a properly grounded electrical outlet installed.

Use only the following power supply for this monitor model: Manufacturer: Delta Electronics, Inc., Model PPP009D

Figure 3-9 Connecting the Power Cord



# **High-Bandwidth Digital Content Protection (HDCP)**

Your monitor supports HDCP and can receive high-definition content. High-definition content is available in many sources, such as Blu-ray Disc devices or HDTV air or cable broadcasts. If you do not have an HDCP-enabled monitor, a blank screen or a lower resolution picture appears when playing high-definition protected content. Your computer graphics card and monitor must both support HDCP to display protected content.

## **Turning on the Monitor**

- Press the power button on the computer.
- 2. Press the power button on the monitor.



**CAUTION:** Burn-in image damage might occur on monitors that display the same static image on screen for a prolonged period of time (at least 12 consecutive hours of non-use). To avoid burn-in image damage on the monitor screen, 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 might occur on all LCD screens. Monitors with a burned-in image are not covered under HP warranty.

When the monitor is powered on, a Monitor Status message appears for 5 seconds. The message shows which input is the current active signal, the status of the auto-switch source setting (On or Off), the default source signal, the current preset display resolution, and the recommended preset display resolution.

# **HP Watermark and Image Retention Policy**

This monitor model is designed with IPS (In-Plane Switching) display technology which provides ultra-wide viewing angles and advanced image quality. IPS monitors are suitable for a wide variety of advanced image quality applications. This panel technology, however, is not suitable for applications that exhibit static, stationary or fixed images for long periods of time without the use of screen savers. These types of applications may include camera surveillance, video games, marketing logos, and templates that are displayed on the screen for a prolonged period of time. Static images may cause image retention damage that could look like stains or watermarks on the monitor's screen.

Monitors in use for 24 hours per day that result in image retention damage are not covered under the HP warranty. To avoid image retention damage, always turn off the monitor when it is not in use or use the power management setting, if supported on your system, to turn off the display when the system is idle.

# **Selecting Video Input Connectors**

The input connectors are:

- VGA (analog)
- DisplayPort connector (digital)
- HDMI connector (digital)

The monitor automatically scans the signal inputs for an active input and uses that input for the display. If two inputs are active, the monitor will display the default input source. If the default source is not an active input, then the monitor displays the other input if it is active. You can change the default source in the OSD by pressing the Menu button and selecting Source Control > Default Source.

# **Activating Beats Audio**

Activate the Beats Audio function to enjoy optimized stereo-sound quality. To enable Beats Audio, press Beats Audio control button on the base of the monitor. Alternatively, you can enable Beats Audio in the OSD by pressing the Menu button and selecting Audio > Beats Audio > On (see page 19).

# **Adjusting the Tilt**

For optimal viewing, adjust the screen tilt to your own preference, as follows:

- Face the front of the monitor and hold the base so that you do not topple the monitor while changing the tilt.
- Adjust the tilt by moving the top edge of the monitor either toward or away from you.





 $\triangle$ 

**CAUTION:** The ability of the monitor to be tilted forward beyond the maximum normal tilt of 5° is for packing purposes only. The monitor may fall if tilted forward for more than 5°.

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# 4 Operating the Monitor

### **Documentation and Software CD**

The CD that is included with this monitor contains drivers and software that you can install on your computer.

### **Installing Drivers**

If you determine that you have to update the drivers, you can install the monitor driver INF and ICM files from the CD or download them from the HP product support website.

#### Installing the monitor driver software from the CD

- 1. Insert the CD in your computer CD drive. The CD menu appears.
- Select the language.
- Click Install Monitor Driver Software.
- Follow the on-screen instructions.
- 5. Ensure that the proper resolutions and refresh rates appear in the Display Control Panel settings. For more information, see the Windows® operating system documentation.



**NOTE:** You might have to install the digitally signed monitor drivers (INF or ICM files) manually from the CD, in case of an installation error. See the "HP Monitor Software Information" file on the CD for instructions (in English only).

#### **Downloading updated drivers from the Internet**

- 1. Go to the HP Technical Support website at http://www.hp.com/support.
- Select your country/region.
- 3. Select Support & Drivers.
- Enter the model number of your monitor. The software download pages for your monitor appear.
- Download and install the driver and software files by following the instructions on the download pages.
- Ensure that your system meets the requirements.

# **Control Buttons**

Control buttons are located on the base of the monitor.

Button	lcon	Description
Beats Audio	0	Enables Beats Audio technology.
Menu		Opens the OSD menu.
Auto Adjust	Ф	Press to activate the auto adjustment feature to optimize the screen image. Available only in VGA source.
Audio	◀ / -	Opens the Audio menu where you can adjust the volume.
		In the OSD menu, press to select a submenu or an option.
Source Control	<b>4</b> /+	Chooses the video input source from the computer.
		In the OSD menu, press to select a submenu or an option.
OK	OK	Enters the selected option in the OSD.
Power	ψ	Turns the monitor on or puts it in standby or sleep mode. The Power button is located on the bottom-right of the monitor.
		NOTE: Pressing the Power button for 10 seconds will disable operation of the Power button. Pressing it again for 10 seconds will re-enable functionality.

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# **Using the On-Screen Display (OSD)**

Use the On-Screen Display (OSD) to adjust the screen image based on your viewing preferences. To access the OSD:

- Make sure the monitor is on.
- 2. To access the OSD menu, press the Menu button. The OSD Main Menu appears.



**NOTE:** The menu moves to the top if you scroll down at the bottom of the selections. The menu moves to the bottom if you scroll up at the top of the selections.

- 4. To adjust the scale of a selected item, press the ♠/+ or ◀ / button.
- Select Save and Return. If you do not want to save the setting, select Cancel from the sub-menu or Exit from the Main Menu.



**NOTE:** When a menu appears, if the buttons are untouched for 30 seconds (factory default), adjustments and settings are saved and the menu closes.

#### **OSD Menu Selections**

The following table lists the on-screen display (OSD) menu selections and their functional descriptions. After changing an OSD menu item, and if the menu screen has these options, you might choose to:

- Cancel To return to the previous menu level.
- Save and Return To save all changes and return to the OSD Main Menu screen. This
  options active only if you change a menu item.
- Reset To change back to the default setting.

Icon	Main Menu Options	Sub-menu Options	Description
<del>.</del> ģ <del>.</del>	Brightness		Adjusts the brightness level of the screen.
•	Contrast		Adjusts the contrast level of the screen.
6:	Color		Selects the screen color. The factory default is 6500 K.
		Warm (5000 K)	Changes to slightly reddish white.
		Standard (6500 K)	Sets your screen color to adapt to the color standards used in the image technology industry.
		Cool (9300 K)	Changes to slightly bluish white.

lcon	Main Menu Options	Sub-menu Options	Description
		Custom Color	Selects and adjusts your own color scales:
			<ul> <li>R — Sets your own red color levels.</li> </ul>
			<ul> <li>G — Sets your own green color levels.</li> </ul>
			<ul> <li>B — Sets your own blue color levels.</li> </ul>
		Quick View	Select from the following modes:
			<ul><li>Movie</li></ul>
			• Photo
			Gaming
			<ul><li>Text</li></ul>
			<ul> <li>Custom (settings saved when you adjust the Brightness, Contrast, or Color in one of the other Quick View options)</li> </ul>
		Gamma	Strengthens the dark details of the screen. Select to adjust the gamma level:
			• Off
			• Low
			Medium (Default)
			High
$\leftarrow$	Image Control		Adjusts the screen image.
$\Box$		Auto Adjustment	Automatically adjusts the screen image.
((((		Clock	Minimizes any vertical bars or strips visible on the screen background.
			Adjusting the Clock will also change the horizontal screen image.
		Clock Phase	Adjusts the focus of the display. This adjustment allows you to remove any horizontal noise and clear or sharpen the image of the characters.
<b>⊕</b>		Horizontal Position	Adjusts the position of the screen image left and right.
		Vertical Position	Adjusts the position of the screen image up and down.
		Custom Scaling	Selects the method on how displayed information on the monitor will be formatted. Select:
			<ul> <li>Fill to Screen—image fills the entire screen and might look distorted or elongated because of nonproportional scaling of height and width.</li> </ul>
			<ul> <li>Fill to Aspect Ratio—image is sized to fit the screen and maintains proportional image.</li> </ul>
			<ul> <li>Overscan—supports over-scanning of the image for HDMI inputs. This option can be set to:</li> </ul>
			• Off
			• On

Icon	Main Menu Options	Sub-menu Options	Description
A		Sharpness	Adjusts the screen image to look sharper or soft.
OD		Video OverDrive	Turns Video Overdrive on or off. The factory default is off.
OCR		Dynamic Contrast Ratio	Sets the Dynamic Contrast Ratio (DCR) setting on or off. The factory default setting is off. DCR automatically adjusts the balance between white and black levels to provide you with an optimal image.
	OSD Control		Adjusts the position of the OSD menu on the screen.
₩.		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 94.
<u></u>		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 17.
		OSD Transparency	Adjust to view the background information through the OSD.
III (T.)		OSD Timeout	Sets the time in seconds that the OSD is visible after the last button is pressed. The factory default is 30 seconds.
ospj		Rotate OSD	Rotates the viewing position of the OSD menu.
	Management		Selects the power-management features of the monitor.
<b>*</b>		Power Saver	Enables the power saving feature (see Power-Saver Feature on page 21). Select:
			• On
			• Off
			The factory default is On.
		Power-On Recall	Restores power to the monitor following an unexpected removal of power. Select:
			• On
			• Off
			The factory default is On.
H≅		Mode Display	Displays the resolution, refresh rate, and frequency information on the screen each time the OSD Main menu is accessed. Select:
			• On
			• Off
			The factory default is On.

Icon	Main Menu Options	Sub-menu Options	Description
		Monitor Status	Displays the operating status of the monitor each time the monitor is powered on. Select the location at which to display the status:
			<ul> <li>Top</li> </ul>
			Middle
			• Bottom
			• Off
			The factory default is Top.
DDC		DDC/CI Support	Allows the computer to control some OSD menu features such as Brightness, Contrast, and Color Temperature. Select:
			• On
			• Off
			The factory default is On.
- <u>)</u> jeó:		Bezel Power LED	Turns the light (LED) in the Power button on and off. When set to off, the light will remain off at all times.
1		Audio	Adjusts the audio volume.
7			Selects the audio source signal.
			Enables the Beats Audio technology which reduces noise interference and amplifies sound. Select:
			• On
			• Off
			The factory default is Off.
$\boxtimes$		Sleep Timer	Provides the timer-adjustment menu options:
			<ul> <li>Set Current Time — Sets the current time in hours and minutes.</li> </ul>
			<ul> <li>Set Sleep Time — Sets the time you want to place the monitor in sleep mode.</li> </ul>
			<ul> <li>Set On Time — Sets the time you want the monitor to wake up from sleep mode.</li> </ul>
			<ul> <li>Timer — Sets the Sleep Timer feature on or off; the default setting is Off.</li> </ul>
			<ul> <li>Sleep Now — Immediately sets the monitor to enter sleep mode.</li> </ul>
ΧA		Ambient Light Sensor	Automatically adjusts the screen brightness according to the ambient light. Select:
			• On
			• Off
			The factory default is On.
<b>3</b> ?	Language		Selects the language in which the OSD menu is displayed. The factory default is English.
(i <b>+</b> )	Information		Selects and displays important information about the monitor.
		Current Settings	Provides the current input video mode.
		Recommended Settings	Provides the recommended resolution mode and refresh rate for the monitor.

Icon	Main Menu Options	Sub-menu Options	Description
		Serial Number	Reports the serial number of the monitor. The serial number is needed if contacting HP technical support.
		FW Version	Reports the firmware version of the monitor.
		Backlight Hours	Reports the total hours of backlight operation.
		Service Support	For service support, see the HP Technical Support website at <a href="http://www.hp.com/support">http://www.hp.com/support</a> .
[mm]	Factory Reset		Returns settings to factory defaults.
(†)	Source Control		Selects the video input signal. The factory default by priority is DisplayPort, HDMI, and then VGA.
		DisplayPort	Selects DisplayPort as the video input signal.
		HDMI	Selects HDMI as the video input signal.
		VGA	Selects VGA as the video input signal.
12		Default Source	Selects the default or primary video input signal when the monitor is connected to two active and valid video sources. The monitor automatically determines the video format.
ON'OFF		Auto Switch Source	Turns the system's automatic video signal input to On or Off. The factory default is On.
?		Source Detection	This option is displayed in the OSD when a DisplayPort input is selected. You can set Source Detection to :
			Always Active
			Low Power
			The factory default is Low Power.
	Exit		Exits the OSD menu screen.

# **Identifying Monitor Conditions**

Special messages appear on the monitor screen for the following monitor conditions:

- Monitor Status When the monitor is powered on or when the input source signal is changed, a Monitor Status message appears for 5 seconds. The message shows which input is the current active signal, the status of the auto-switch source setting (On or Off), the default source signal, the current preset display resolution, and the recommended preset display resolution.
- Input Signal Out of Range Indicates the monitor does not support the video card's input signal because its resolution or refresh rate are set higher than the monitor supports. Change your video card settings to a lower resolution or refresh rate. Restart your computer for the new settings to take effect.
- Power Button Lockout Indicates the power button is locked. If the power button is locked, the warning message Power Button Lockout appears. If the power button is locked, press and hold the power button for 10 seconds to unlock the power button function. If the power button is unlocked, press and hold the power button for 10 seconds to lock out the power button function.

- Monitor Going to Sleep Indicates the screen display is entering a sleep mode.
- Check Video Cable Indicates a video input cable is not properly connected to the computer
  or monitor.
- OSD Lockout The OSD can be enabled or disabled by pressing and holding the Menu button on the front panel for 10 seconds. If the OSD is locked, the warning message OSD Lockout appears for 10 seconds. If the OSD is locked, press and hold the Menu button for 10 seconds to unlock the OSD. If the OSD is unlocked, press and hold the Menu button for 10 seconds to lock the OSD.
- Dynamic Contrast Ratio ON Indicates that DCR is turned on.
- Dynamic Contrast Ratio OFF Indicates that DCR has been turned off in the OSD or was automatically turned off after changes were made to Brightness, Contrast, or Quick View in the OSD.
- No Input Signal Indicates the monitor is not receiving a video signal from the computer on the monitor video input connector. Verify if the computer or input signal source is off or in the power-saver mode.

### **Power-Saver Feature**

When the monitor is in normal operating mode, the Power light is white and the monitor uses the normal watts of power. For power usage, see <u>Technical Specifications on page 25</u>.

The monitor also supports a power-saver mode that is controlled by the computer. When the monitor is in the reduced-power state, the monitor screen is blank, the backlight is off, the Power light is amber, and the monitor uses minimum power. When the monitor is "awakened," a brief warm-up period occurs before the monitor returns to normal operating mode. The energy-saving reduced power state activates if the monitor does not detect either the horizontal sync signal or the vertical sync signal. The power-saver feature must be activated on your computer for this feature to work.

For instructions on setting energy-saver features (sometimes called power-management features), see your computer documentation.



**NOTE:** The energy-saver feature works only when the monitor is connected to computers that have energy-saver features.

ENWW Power-Saver Feature 21

# **A** Troubleshooting

# **Resolving Common Issues**

Issue	Solution
Power LED is not on.	Make sure the Power button is on, and the power cord is properly connected to a grounded power outlet and to the monitor.
	Select <b>Management</b> in the OSD menu, and then select Bezel Power LED. Verify that the Bezel Power LED option is set to Off and, if so, set to <b>On</b> mode.
Screen is blank.	Connect the power cord.
	Turn on the power. Connect the video cable properly. For more information, see <u>Setting</u> <u>Up the Monitor on page 6</u> .
Image appears blurred, indistinct, or too dark.	Press the Menu button to open the OSD menu, and adjust the brightness and contrast scales.
Check Video Cable appears on screen.	Connect the appropriate video cable (VGA, DisplayPort, or HDMI) between the computer and monitor. Be sure that the computer power is off while connecting the video cable.
Input Signal Out of Range appears on screen.	Restart your computer and enter Safe Mode.
	Change your settings to a supported setting (see the table in <u>Preset Video Modes on page 26</u> ).
	Restart your computer so that the new settings take effect.
Picture is fuzzy and has ghosting, shadowing issue.	Adjust the contrast and brightness controls.
	Make sure that you are not using an extension cable or switch box. HP recommends plugging the monitor directly into the graphic card output connector on the back of your computer.
Unable to set the monitor to the optimal resolution.	Make sure the graphics card supports the optimal resolution.
the optimal resolution.	Make sure the latest supported driver is installed for the graphics card. For HP and Compaq systems, you can download the latest graphics driver for your system from the HP website at <a href="http://www.hp.com.support">http://www.hp.com.support</a> . For other systems, see the website for your graphics card.
Screen is black or displaying at a lower resolution while displaying high-definition (HD) content.	Verify that your monitor and computer support HDCP. For more information, see the High-Bandwidth Digital Content Protection (HDCP) on page 12 or HP wesbite at <a href="http://www.hp.com.support">http://www.hp.com.support</a> .

Issue	Solution	
No Plug and Play.	In order for the Plug and Play feature of the monitor to work, you must have a computer and graphic card that are compatible with Plug and Play. Check with your computer manufacturer.	
	Inspect the monitor video cable, and make sure that none of the pins are bent.	
	Make sure that the monitor drivers are installed. For more information, see <a href="Installing Drivers on page 14">Installing Drivers on page 14</a> . Monitor drivers are also available at the HP website at <a href="http://www.hp.com/support">http://www.hp.com/support</a> .	
Picture bounces, flickers, or wave patter is present in the picture.	Move electrical devices that might cause electrical interference as far away from the monitor as possible.	
p.o.o.	Use the maximum refresh rate that your monitor is capable of at the resolution that you are using.	
Using HDMI connection, unable to hear audio.	The monitor must be connected directly to external speakers or to an audio receiver.	
Monitor is always in sleep mode (amber LED).	Power to the computer must be turned on.	
mode (amber LLD).	The computer graphic card must be snugly seated in the slot.	
	Verify that the monitor video cable is properly connected to the computer.	
	Inspect the monitor video cable, and make sure that none of the pins are bent.	
	Verify that your computer is operational: Press the Caps Lock key and observe the Caps Lock LED found on most keyboards. The LED must either turn on or off after hitting the Caps Lock key.	

# **Getting Support from the HP website**

Before you contact customer service, see the HP Technical Support website at <a href="http://www.hp.com/support">http://www.hp.com/support</a>. Select your country/region, and then follow the links to the support page for your monitor.

# **Preparing to Call Technical Support**

If you cannot solve an issue by using the troubleshooting tips in this section, you might have to call technical support. For technical support contact information, see the printed documentation included with the monitor.

Have the following information available when you call:

- Monitor model number (located on the label at the bottom of the monitor)
- Monitor serial number (located on the label at the bottom of the monitor or in the OSD display in the Information menu)
- Purchase date on invoice
- Conditions under which the problem occurred
- Error messages received
- Hardware configuration
- Name and version of hardware and software you are using

# **Locating the Rating Label**

The rating label on the monitor provides the product number and serial number. You might need these numbers when contacting HP about your monitor model.

The rating label is on the bottom of the monitor.

# **B** Technical Specifications

All specifications represent the typical specifications provided by HP's component manufacturers; actual performance might vary either higher or lower.

## **ENVY 27 27-inch IPS Monitor**

Table B-1: ENVY 27 Specifications

Display Type:	TFT LCD active matrix
Viewable Image Size:	68.6 cm (27.0 in.) diagonal
Video Input Terminals:	VGA, DisplayPort, HDMI
Tilt:	-5° to 15°
Maximum Weight (unpacked):	7.2 kg (15.87 lb)
Dimension (W x H x D):	622.0 x 453.8 x 140.3 mm (24.49 x 17.83 x 5.52 in)
Maximum Graphics Resolution:	1920 x 1080 @ 60 Hz
Optimum Graphics Resolution:	1920 x 1080 @ 60 Hz
Text Mode:	720 x 400
Pixel Pitch:	0.3114 x 0.3114 mm
Horizontal Frequency:	24 to 94 kHz
Vertical Frequency:	50 to 76 kHz
Operating Temperature:	5° to 35° C (41° to 95° F)
Non-Operating Temperature:	-20° to 60° C (-4° to 140° F)
Operating Humidity	20% to 80%
Non-Operating Humidity	5% to 95%
Operating Altitude:	0 to 5000 meters (0 to 16,400 feet)
Storage Altitude	0 to 12,192 meters (0 to 40,000 feet)
Power Source:	100 ~ 240 VAC
Maximum Power Consumption:	54 watts (W)
Typical Power Consumption:	35 watts (W)
Standby Power Consumption:	0.5 watts (W)

### **Preset Video Modes**

The monitor automatically recognizes many preset video input modes that will appear properly sized and centered on the screen.

Table B-2: Factory Preset Video Input Modes

Preset	Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
1	640 x 480	31.469	59.94
2	720 x 400	31.469	70.087
3	800 x 600	37.879	60.317
4	1024 x 768	48.363	60.004
5	1280 x 720	45.00	60.00
6	1280 x 1024	63.98	60.02
7	1440 x 900	55.94	59.89
8	1600 x 900	60.00	60.00
9	1680 x 1050	65.29	60.00
10	1920 x 1080	67.50	60.00

Table B-3: HDMI High Definition Factory Preset Video Modes

Preset	HD Video Display Resolution	Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	
1	480p	720 x 480	31.469	60	
2	720p60	1280 x 720	45	60	
3	576p	720 x 576	31.25	50	
4	720p50	1280 x 720	37.5	50	
5	1080p60	1920 x 1080	67.5	60	
6	1080p50	1920 x 1080	56.25	50	

# **Entering User Modes**

The video controller signal might 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 have 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 recognizes the new mode just as it does a preset mode. In addition to the factory preset modes, there are at least ten user modes that can be entered and stored.

# **LCD Monitor Quality and Pixel Policy**

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

A pixel consists of one red, one green, and one blue subpixel. 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 subpixel (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 must be viewed under normal operating conditions and in normal operating mode at a supported resolution and refresh rate, from a distance of approximately 50 cm (16 inches).

For more information about your LCD Monitor and pixel policy, see the HP website at <a href="http://www.hp.com/support">http://www.hp.com/support</a>. To find pixel policy information on the HP website, type in "HP Pixel Policy" in the search box and press Enter.

# **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, might 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 might 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:

- This device might not cause harmful interference.
- This device must accept any interference received, including interference that might cause undesired operation.

For questions regarding the product, contact:

**Hewlett Packard Company** 

P. O. Box 692000, Mail Stop 530113

Houston, Texas 77269-2000

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

(281) 514-3333

To identify this product, see 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 materielbrouilleur du Canada.

# **Japanese Notice**

この装置は、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。

VCCI-B

## **Korean Notice**

B급 기기 (가정용 방송통신기기) 이 기기는 가정용(B급)으로 전자파적합등록을 한 기기로서 주 로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사 용할 수 있습니다.

ENWW Canadian Notice 29

# **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 must obtain a power cord for a different country, 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 electrical ratings label of the product. The voltage and current rating of the cord must 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 ft (1.8 m) and 12 ft (3.6 m). If you have questions about the type of power cord to use, contact an authorized HP service provider.

A power cord must be routed so that it is not likely to be walked on or pinched by items placed upon it or against it. Particular attention must 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**

# 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.

#### **Chemical Substances**

HP is committed to providing our customers with information about the chemical substances in our products as needed to comply with legal requirements such as REACH (Regulation EC No1907/2006 of the European Parliament and Council). A chemical information report for this product can be found at the EU REACH Declarations page in the HP website at <a href="http://www.hp.com/go/reach">http://www.hp.com/go/reach</a>.

### **HP Recycling Program**

HP encourages customers to recycle used electronic hardware, HP original print cartridges, and rechargeable batteries. For more information about recycling programs, go to the HP Planet Partners Recycling Program website at <a href="http://www.hp.com/recycle">http://www.hp.com/recycle</a>.

### **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 the HP website at <a href="http://www.hp.com/go/jisc0950">http://www.hp.com/go/jisc0950</a>.

2008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、www.hp.com/qo/jisc0950を参照してください。

#### 产品中有毒有害物质或元素的名称及含量

根据中国 《电子信息产品污染控制管理办法》

#### LCD 显示器

	有粤有苦杂质标元素						
形件名称	\$() (Pb)	录 (Hg)	18 (Cd)	六价格 (Cr(VI))	多例以来 (PBB)	多度二苯醚 (PBDE)	
液晶显示屏 - CCFL	Х	х	0	0	0	0	
液晶显示屏 - WLED	Х	0	0	0	0	0	
机箱/其他	Х	0	0	0	0	0	

O:表示该有霉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的某一均质材料中的含量超出 SI/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, 即 "欧洲议会和欧洲理事会 2003 年 1 月 27 日关于在电子电气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。

### **Turkey EEE Regulation**

In Conformity with the EEE Regulation

EEE Yönetmeliğine Uygundur