HP 68.6 cm/27-inch Curved Monitors

User Guide

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About This Guide

This guide provides information on monitor features, setting up the monitor, using the software 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.

TIP: Text set off in this manner provides helpful hints.

HIGH-DEFINITION MULTIMEDIA INTERFACE

This product incorporates HDMI technology.

DTS certified premium audio solution.

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1 Product features

The monitor features include:

- 68.6 cm (27-inch) diagonal viewable area display with 1920 x 1080 resolution
- Curved monitor with wide viewing angle technology for a better field of view
- One HDMI and one MHL/HDMI video input
- VGA (analog) video input
- DisplayPort to HDMI adapter (select models)
- Integrated 4-Watt speakers with DTS audio technology for a premium audio experience
- Audio-out (headphone) jack
- On-Screen Display (OSD) adjustments in several languages for easy setup and screen optimization
- My Display software or HP Display Assistant software (depending on the model) included for adjusting monitor settings
- Tilt capability
- Software and documentation disc that includes monitor drivers and product documentation
- Plug and play capability if supported by your operating system
- HDCP (High-Bandwidth Digital Content Protection) copy protection on HDMI inputs
- Energy saver feature to meet requirements for reduced power consumption

NOTE: For safety and regulatory information, refer to the *Product Notices* provided on your media disc, if one is included, or in your documentation kit. To locate updates to the user guide for your product, go to http://www.hp.com/support, and select your country. Select **Drivers & Downloads**, and then follow the on-screen instructions.

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 *Product Notices* provided on your media disc, if one is included, or in your documentation kit.

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

- Plug the power cord into an AC outlet that is easily accessible at all times.
- Disconnect power from the monitor by unplugging the power cord from the AC outlet.
- If provided with a 3-pin attachment plug on the power cord, plug the cord into a grounded (earthed) 3-pin outlet. Do not disable the power cord grounding pin, for example, by attaching a 2-pin adapter. The grounding pin is an important safety feature.

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.

⚠ **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 cannot be pulled, grabbed, or tripped over.

NOTE: This product is suitable for entertainment purposes. Consider placing the monitor in a controlled luminous environment to avoid interference from surrounding light and bright surfaces that may cause disturbing reflections from the screen.

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.

NOTE: 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.
- 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 stand, 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 unplug the power cord from the back of the unit.
2. 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.

CAUTION: Spray the cleaner onto a cloth and use the damp cloth to gently wipe the screen surface. Never spray the cleaner directly on the screen surface. It may 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 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 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, and then follow the instructions below.

Use caution when setting up the monitor

⚠ **CAUTION:** To prevent damage to the monitor, 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.

CAUTION: Do not lay the monitor face down when installing the stand. Stress on the curvature of the display panel may damage the panel if the monitor is placed face down.

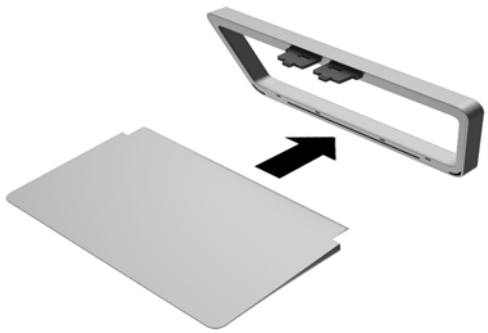
Installing the stand

TIP: Consider the placement of the monitor, because the bezel might cause interfering reflections from surrounding light and bright surfaces.

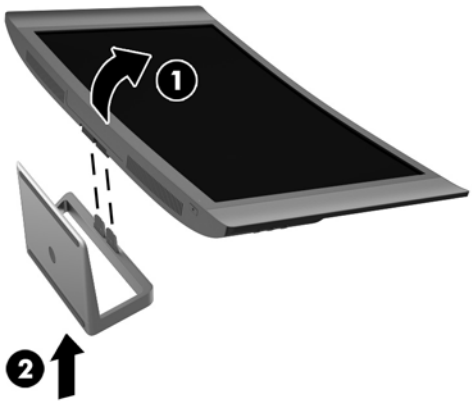
1. Lift the monitor from its box and place it *face up* on a flat surface covered by a clean, dry cloth.

   ⚠ **CAUTION:** Do not lay the monitor face down when installing the stand. Stress on the curvature of the display panel may damage the panel if the monitor is placed face down.

2. Slide the stand into the slots in the base until it locks in place.



3. Lift up the bottom of the display panel (1) and insert the stand into the slot on the back of the display panel until it clicks in place (2).



Rear and side components

Component		Function
1	Menu button	Press to open the OSD menu, select a menu item from the OSD, or close the OSD menu.
2	Menu Plus button	If the OSD menu is on, press to navigate forward through the OSD menu and increase adjustment levels. If the OSD menu is inactive, the function depends on the active video input and model (see Menu button functions on page 21 for details).
3	Menu Minus button	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 advance to the next active video input.
4	Audio Plus button	Increases volume level.
5	Audio Minus button	Decreases volume level.
6	Headphone jack	Connects the headphones to the monitor.
7	DC Power connector	Connects the DC power adapter to the monitor.
8	HDMI	Connects the HDMI cable from the source device to the monitor.
9	HDMI MHL	Connects the HDMI or MHL cable from the source device to the monitor.
10	VGA	Connects the VGA cable from the source device to the monitor.
11	Audio In	Connects the audio cable from the source device to the monitor.

NOTE: Cables included with your monitor will vary depending on model and region.

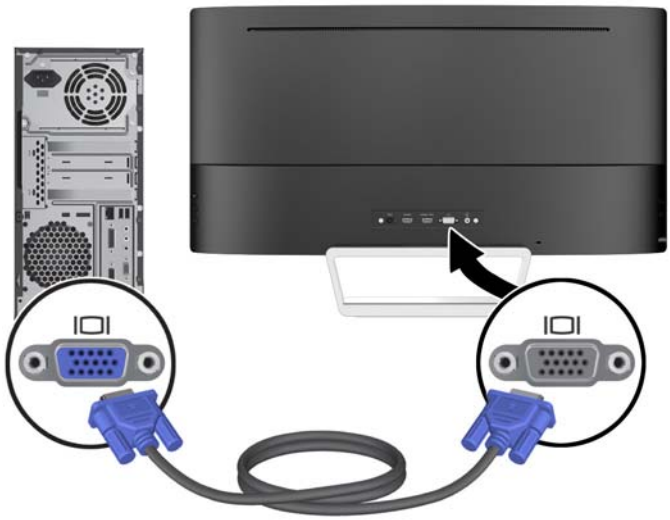
Connecting the cables

NOTE: The monitor ships with select cables. Not all cables shown in this section are included with the monitor.

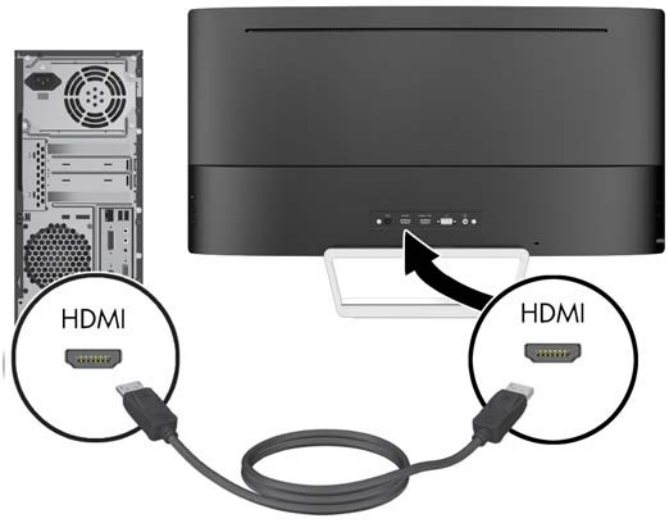
1. Place the monitor in a convenient, well-ventilated location near the computer.
2. Connect the video cable(s).

NOTE: The monitor will automatically determine which inputs have valid video signals. The inputs can be selected by pressing the **Next Active Input** button on the right side of the monitor or through the On-Screen Display (OSD) by pressing the **Menu** button and selecting **Input Control**.

- Connect a VGA cable to the VGA connector on the rear of the monitor and the other end to the VGA connector on the source device.



- Connect an HDMI cable to the HDMI port on the rear of the monitor and the other end to the HDMI port on the source device.

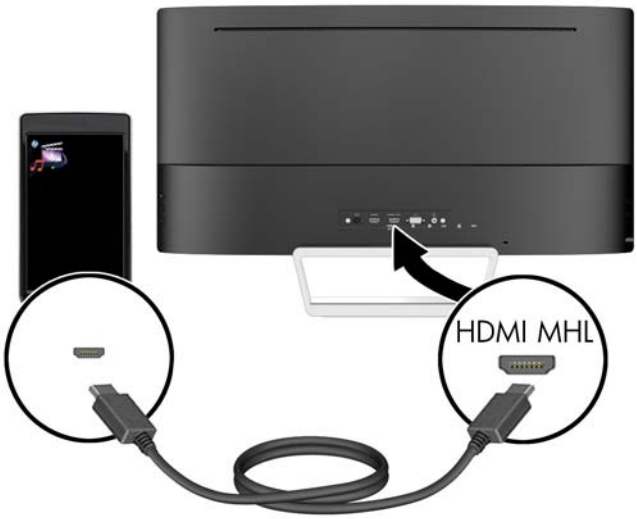


- Connect an MHL cable to the HDMI MHL port on the rear of the monitor and to the micro USB port on an MHL-enabled source device, such as a smart phone or tablet, to stream content from the mobile device to your monitor screen.

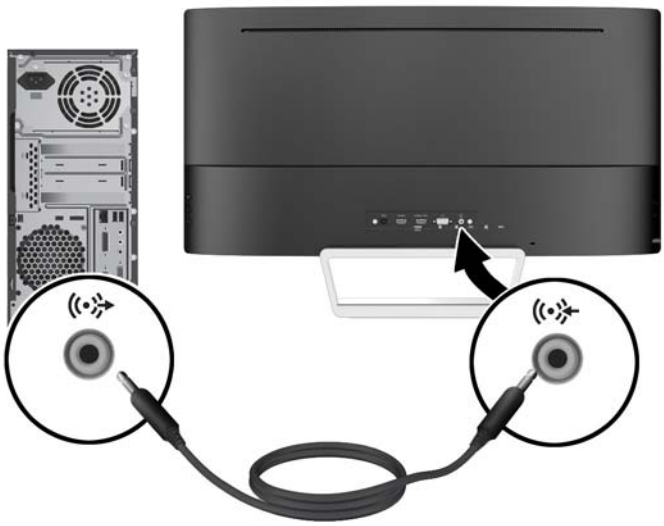
NOTE: The MHL video is limited to the mobile device output resolution.

NOTE: The MHL connector also charges your MHL mobile device while connected and streaming.

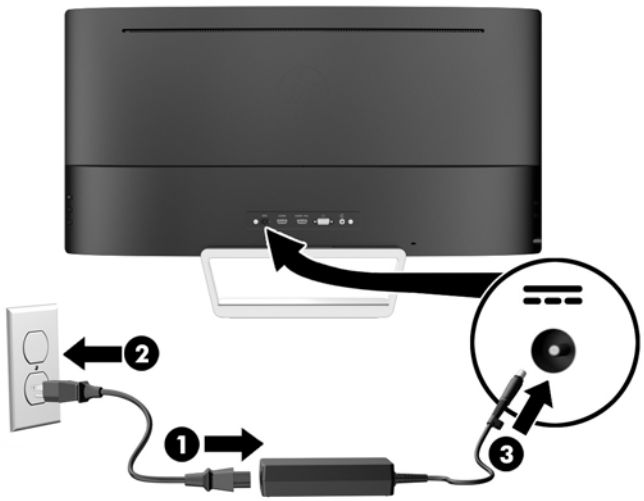
NOTE: You can also connect an HDMI cable between the HDMI MHL port on the monitor and an HDMI source device.



3. Connect an audio cable to the Audio-in jack on the rear of the monitor and the other end to the Audio-out jack on the source device.



4. Connect one end of the power cord to the power supply (1) and the other end to a grounded electrical outlet (2), and then connect the round end of the power supply cord to the monitor (3).



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

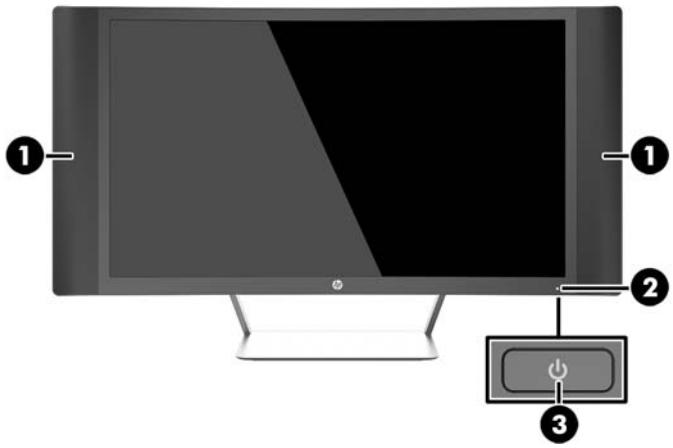
Do not disable the power cord grounding plug. The grounding plug is an important safety feature.

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.

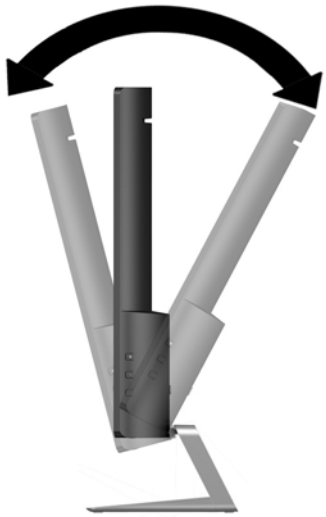
Front panel controls



Control		Function
1	Speakers	Provide premium audio sound.
2	Power LED	System on = white System off = off Sleep mode = amber Sleep timer mode = blinking amber
3	Power	Turns the monitor on or off.

Adjusting the tilt

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



Mounting the monitor (select models)

A VESA mounting bracket is available for select models only. The mounting bracket can be used to attach the monitor to any standard mounting system with a standard VESA 100mm x 100mm mount pattern.

NOTE: This apparatus is intended to be supported by UL or CSA Listed wall mount bracket.

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. 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.

Removing the monitor stand

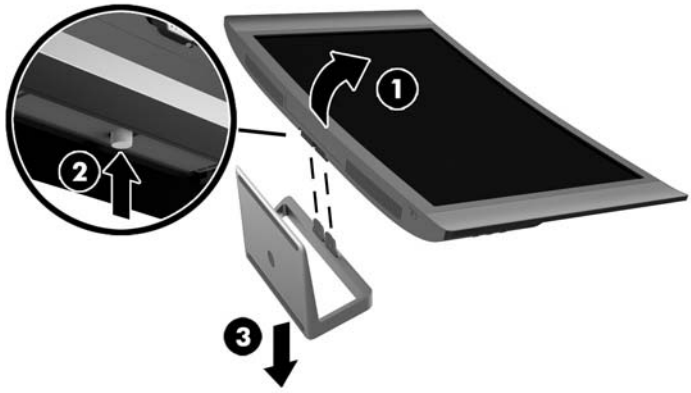
You can remove the monitor panel from the stand to install the panel on a wall, a swing arm, or other mounting fixture.

CAUTION: Before beginning to disassemble the monitor, be sure the monitor is turned off and all cables are disconnected.

1. Disconnect and remove all cables from the monitor.
2. Lay the monitor *face up* on a flat surface covered by a clean, dry cloth.

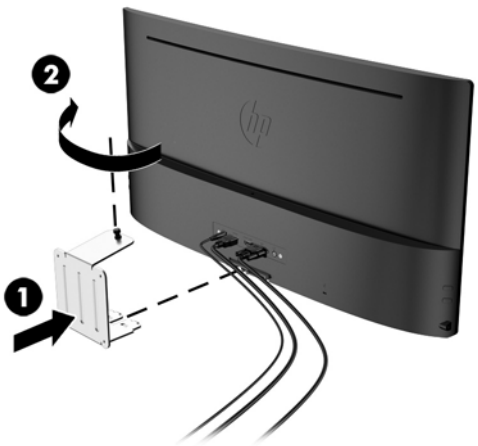
   CAUTION: Do not lay the monitor face down when installing the stand. Stress on the curvature of the display panel may damage the panel if the monitor is placed face down.

3. Lift up the bottom of the display panel (1), and then press the release latch (2) and slide the stand out of the slot on the display panel (3).

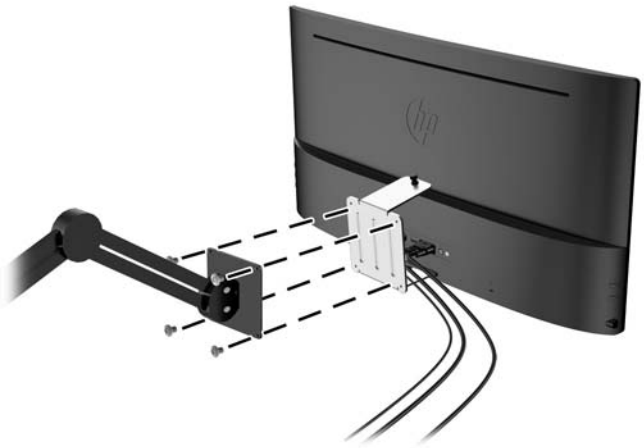


Attaching the VESA mounting bracket (select models)

1. Remove the monitor stand. Refer to Removing the monitor stand on page 11.
2. Before attaching the VESA mounting bracket, connect the required cables to the rear of the monitor. Connect the other ends of the cables to the source devices after the monitor has been mounted.
3. Insert the tab at the bottom of the VESA bracket into the slot on the back of the display panel until the bracket clicks in place (1), and then secure the screw on top of the bracket to the display panel (2).

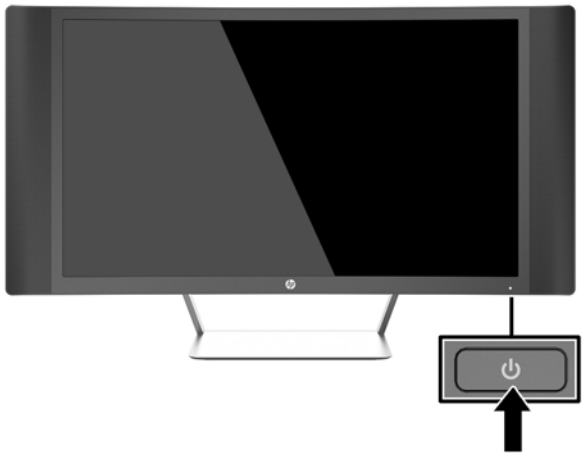


4. To attach the monitor to a swing arm or other mounting device, insert four mounting screws through the holes on the mounting device and into the screw holes on the VESA mounting bracket.



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. Monitors with a “burned-in image” are not covered under the HP warranty.

* A prolonged period of time is 2 consecutive hours of a static image.

NOTE: If pressing the power button has no effect, the Power Button Lockout feature may be enabled. To disable this feature, press and hold the monitor power button for 10 seconds.

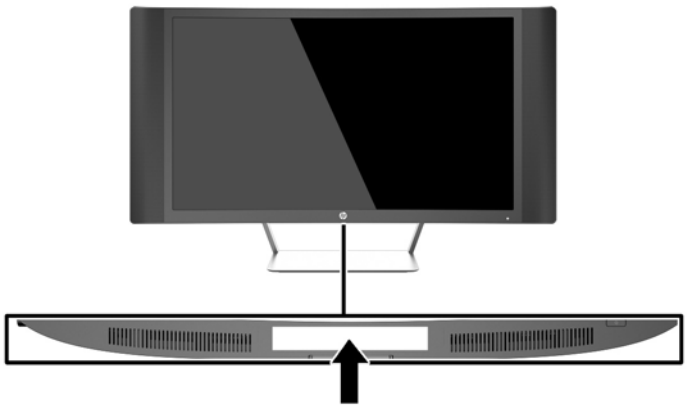
NOTE: You can disable the power LED in the OSD menu. Press the **Menu** button on the right side of the monitor, and then select **Power Control** > **Power LED** > **Off**.

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

The monitor automatically scans the signal inputs for an active input and uses that input for the display.

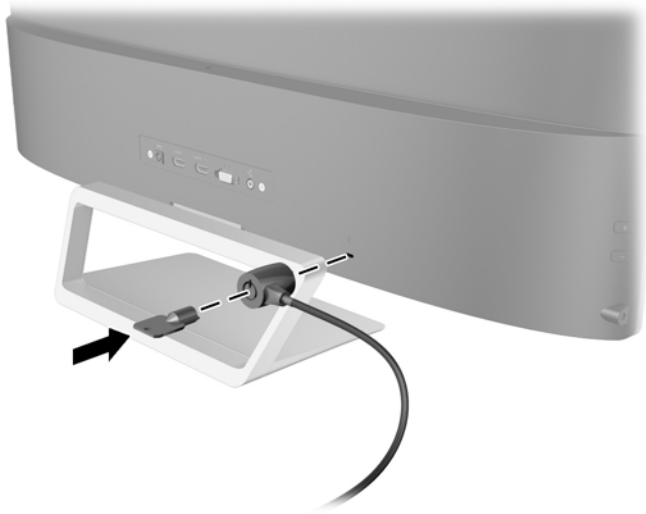
Locating the rating label

The rating label on the monitor provides the product number and serial number. You may need these numbers when contacting HP about the monitor model. The rating label is located on the bottom of the monitor.



Installing a cable lock

You can secure the monitor to a fixed object with an optional cable lock available from HP.



4 Operating the monitor

Software and utilities

The disc that comes with the monitor contains files you can install on the computer:

- an .INF (Information) file
- ICM (Image Color Matching) files (one for each calibrated color space) (select models)
- *My Display* software (select models)
- *HP Display Assistant* software (select models)

The Information file

The .INF file defines monitor resources used by Microsoft Windows operating systems to ensure monitor compatibility with the computer's graphics adapter.

This monitor is Microsoft Windows Plug and Play compatible and the monitor will work correctly without installing the .INF file. Monitor Plug and Play compatibility requires that the computer's graphic card is VESA DDC2–compliant and that the monitor connects directly to the graphics card. Plug and Play does not work through separate BNC type connectors or through distribution buffers/ boxes.

The Image Color Matching file (select models)

The .ICM files are data files that are used in conjunction with graphics programs to provide consistent color matching from monitor screen to printer, or from scanner to monitor screen. This file is activated from within graphics programs that support this feature.

NOTE: The ICM color profile is written in accordance with the International Color Consortium (ICC) Profile Format specification.

Installing the .INF and .ICM files

NOTE: The .ICM files are available for select models only.

After you determine that you need to update, you can install the .INF and .ICM files from the disc or download them.

Installing from the disc

To install the .INF and .ICM files on the computer from the disc:

1. Insert the disc in the computer optical drive. The disc menu is displayed.
2. View the **HP Monitor Software Information** 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 disc in the event of an installation error. Refer to the HP Monitor Software Information file on the disc.

Downloading from the Internet

To download the latest version of .INF and .ICM files from the HP monitors support Web site:

1. Go to http://www.hp.com/support and select the appropriate country and language.
2. Select **Drivers & Downloads**, type your monitor model in the **Find by product** search field, and click **Go**.
3. If necessary, select your monitor from the list.
4. Select your operating system, and then click **Next**.
5. Click **Driver - Display/Monitor** to open the list of drivers.
6. Click on the driver.
7. Click the **System Requirements** tab, and then verify that your system meets the program minimum requirements.
8. Click **Download** and follow the on-screen instructions to download the software.

Using *My Display* software (select models)

Use *My Display* software to choose preferences for optimum viewing. You can select settings for gaming, movies, photo editing or just working on documents and spreadsheets. You can also easily adjust settings such as brightness, color, and contrast using *My Display* software.

Installing the software

To install the software:

1. Insert the disc in your computer disc drive. The disc menu is displayed.
2. Select the language.

NOTE: This choice selects the language you will see while installing the software. The language of the software itself will be determined by the operating system language.

3. Click **Install My Display Software**.
4. Follow the on-screen instructions.
5. Restart the computer.

Using the software

To open the *My Display* software:

- Click the **HP My Display** icon on the taskbar.

  Or

- Click **Windows Start** ™ on the taskbar and select **All Programs** > **HP My Display** > **HP My Display**.

For additional information, refer to the on-screen **Help** within the software.

Downloading the software

If you prefer to download the *My Display* software, follow the instructions below.

1. Go to http://www.hp.com/support and select the appropriate country and language.
2. Select **Drivers & Downloads**, type your monitor model in the **Find by product** search field, and click **Go**.
3. If necessary, select your monitor from the list.
4. Select your operating system.
5. Click **Utility - Tools** to open the list of utilities and tools.
6. Click **HP My Display**.
7. Click the **System Requirements** tab, and then verify that your system meets the program minimum requirements.
8. Click **Download** and follow the on-screen instructions to download *My Display*.

Using *HP Display Assistant* software (select models)

HP Display Assistant is a software utility that guides you through the image tuning process with easy to understand instructions and background patterns designed for each monitor control. You can configure display settings that can be saved for each user, providing an easy way to select display characteristics in a multi-user environment, or a single user can have multiple defined presets based on content and ambient lighting.

Installing the software

To install the software:

1. Insert the disc in your computer disc drive. The disc menu is displayed.
2. Select the language.

   NOTE: This choice selects the language you will see while installing the software. The language of the software itself will be determined by the operating system language.

3. Click **Install HP Display Assistant Utility**.
4. Follow the on-screen instructions.
5. Restart the computer.

Using the software

To open the *HP Display Assistant* software:

- Click the **HP Display Assistant** icon on the taskbar or desktop.

  Or

- Click **Windows Start** ™ on the taskbar and select **All Programs** > **HP Display Assistant** > **HP Display Assistant**.

  Or

- Right-click on the desktop and select **Tune Display**.

For additional information, refer to the *HP Display Assistant User Guide* included on the disc with your monitor.

Downloading the software

If you prefer to download the *HP Display Assistant* software, follow the instructions below.

1. Go to http://www.hp.com/support and select the appropriate country and language.
2. Select **Drivers & Downloads**, type your monitor model in the **Find by product** search field, and click **Go**.
3. If necessary, select your monitor from the list.
4. Select your operating system.
5. Click **Utility - Tools** to open the list of utilities and tools.
6. Click **HP Display Assistant Utility**.
7. Click the **System Requirements** tab, and then verify that your system meets the program minimum requirements.
8. Click **Download** and follow the on-screen instructions to download *HP Display Assistant*.

Using Auto-Sleep Mode

The monitor supports an OSD (On-Screen Display) option called **Auto-Sleep Mode** that allows you to enable or disable a reduced power state for the monitor. When Auto-Sleep Mode is enabled (enabled by default), the monitor will enter a reduced power state when the host PC signals low power mode (absence of either horizontal or vertical sync signal).

Upon entering this reduced power state sleep mode, the monitor screen is blanked, the backlight is turned off and the power LED indicator turns amber. The monitor draws less than 0.5W of power when in this reduced power mode. The monitor will wake from the sleep mode when the host PC sends an active signal to the monitor (for example, if you activate the mouse or keyboard).

You can disable the Auto-Sleep Mode in the OSD. Press one of the three buttons on the right side of the monitor to activate the button, and then press the **Menu** button on the right side of the monitor to open the OSD. In the OSD select **Power Control** > **Auto-Sleep Mode** > **Off**.

NOTE: You can also program the monitor to enter into the reduced power state at a predetermined time in the monitor's Sleep Timer utility. Open the OSD and select **Power Control** > **Sleep Timer** > **On**, and use the adjustable clock to set the sleep time. When the monitor's Sleep Timer utility causes the monitor to enter the reduced power state, the power light blinks amber.

Using the On-Screen Display (OSD) menu

Use the On-Screen Display (OSD) to adjust the screen image based on your viewing preferences. You can access and make adjustments in the OSD using the buttons on the right side of the monitor.

To access the OSD and make adjustments, do the following:

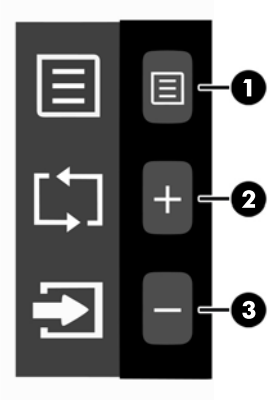
1. If the monitor is not already on, press the power button to turn on the monitor.
2. Press one of the three buttons on the right side of the monitor to activate the buttons.
3. To access the OSD menu, press the **Menu** button on the right side of the monitor.
4. To navigate through the OSD menu, press the **+** (Plus) button or the **–** (Minus) button on the right side of the monitor to scroll up or scroll down.
5. To select an item from the OSD menu, use the **+** or **–** buttons to scroll to and highlight your selection, and then press the **Menu** button to select that function.
6. Adjust the item using the **+** or **–** buttons to adjust the scale.
7. After adjusting the function, select **Save and Return**, or **Cancel** if you don't want to save the setting, then select **Exit** from the Main menu.

Main Menu	Description
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.
Input Control	Selects the video input signal.
Color Control	Selects and adjusts the screen color.
Image Control	Adjusts the screen image.
Power Control	Adjusts the power settings.
OSD Control	Adjusts the on-screen display (OSD) controls.
Management	Adjusts the audio settings and returns all OSD menu settings to the factory default settings.
Language	Selects the language in which the OSD menu is displayed. The factory default is English.
Information	Selects and displays important information about the monitor.
Exit	Exits the OSD menu screen.

Menu button functions

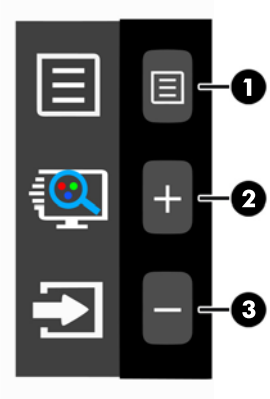
Pressing one of the three Menu buttons on the right side of the monitor activates the buttons and displays the icons next to the buttons. The function of the buttons depends on the active video input and the model.

On all models, if the active video input is an analog signal (VGA input), the buttons have the following functions.



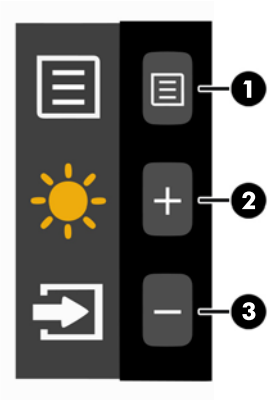
Button		Function
1	Menu	Opens the OSD (On-Screen Display) main menu, selects a menu item from the OSD, or closes the OSD menu.
2	Auto-Adjust	Activates the auto-adjustment feature to optimize the screen.
3	Next Active Input	Switches the monitor's input source to the next active input.

On some models, if the active video input is a digital signal (HDMI or MHL input), the buttons have the following functions.



Button		Function
1	Menu	Opens the OSD (On-Screen Display) main menu, select a menu item from the OSD, or closes the OSD menu.
2	Quick View	Opens the Quick View menu where you can select a color setting for your application.
3	Next Active Input	Switches the monitor's input source to the next active input.

On some models, if the active video input is a digital signal (HDMI or MHL input), the buttons have the following functions.



Button		Function
1	Menu	Opens the OSD (On-Screen Display) main menu, select a menu item from the OSD, or closes the OSD menu.
2	Brightness	Opens the Brightness adjustment scale.
3	Next Active Input	Switches the monitor's input source to the next active input.

A Technical specifications

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

For the latest specifications or additional specifications on this product, go to http://www.hp.com/go/quickspecs/ and search for your specific monitor model to find the model-specific QuickSpecs.

Display	68.6 cm wide screen	27 inches wide screen
Type	LCD	
Viewable Image Size	68.6 cm diagonal	27-inch diagonal
Wide Viewing Angle	178 degrees horizontal and vertical	
Improved Contrast Ratio	3000:1 CR Typical	
Tilt Range	-2 to +25 degrees	
Maximum Weight (Unpacked)	6.7 kg	14.77 lbs
Dimensions (includes base)		
Height	45.33 cm	17.85 inches
Depth	16.51 cm	6.51 inches
Width	74.47 cm	29.32 inches
Maximum Graphic Resolution	1920 x 1080 (60 Hz)	
Optimum Graphic Resolution	1920 x 1080 (60 Hz)	
Environmental Requirements Temperature		
Operating Temperature	5 to 35° C	41 to 95° F
Storage Temperature	-20 to 60° C	-4 to 140° F
Power Source	100 – 240 VAC 50/60 Hz	
Input Terminal	One HDMI connector, one HDMI/MHL connector, one VGA connector (cable inclusion varies by model and region)	

Recognizing preset 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.

Preset	Pixel format	Horz freq (kHz)	Vert freq (Hz)
1	640 × 480	31.469	59.940
2	800 × 600	37.879	60.317
3	1024 × 768	48.363	60.004
4	1280 × 720	45.000	59.940
5	1280 × 1024	63.981	60.020
6	1366 × 768	47.712	59.790
7	1440 × 900	55.469	59.901
8	1600 × 900	60.000	60.000
9	1680 × 1050	65.290	59.954
10	1920 × 1080	67.500	60.000

Preset	Timing name	Pixel format	Horz freq (kHz)	Vert freq (Hz)
1	480p	720 × 480	31.469	59.940
2	576p	720 × 576	31.250	50.000
3	720p50	1280 × 720	37.500	50.000
4	720p60	1280 × 720	45.000	60.000
5	1080p50	1920 × 1080	56.250	50.000
6	1080p60	1920 × 1080	67.500	60.000

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.

If 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, and then recognizes the new mode just as it does a preset mode. In addition to the factory preset modes, there are at least 10 user modes that can be entered and stored.

Power adapter

Manufacturer	Model number	Power supply rating
Delta Electronic(S) Pte Ltd	ADP 65-HB HCB	65W/19V

B Support and 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 or video is flashing.	Power cord is disconnected.	Connect the power cord.
	Power button is turned off.	Press the front panel power button. **NOTE:** If pressing the power button has no effect, press and hold the power button for 10 seconds to disable the power button lockout feature.
	Video cable is improperly connected.	Connect the video cable properly. See Connecting the cables on page 7 for more information.
	System is in sleep mode.	Press any key on the keyboard or move the mouse to inactivate the screen blanking utility.
	Video card compatibility.	Open the OSD menu and select the **Input Control** menu. Set **Auto-Switch Input** to **Off** and manually select the input.
Image appears too dark.	Brightness is too low.	Open the OSD menu and select **Brightness** to adjust the brightness scale as needed.
Check Video Cable is displayed on screen.	Monitor video cable is disconnected.	Connect the appropriate video signal cable between the computer and monitor. Be sure that the computer power is off while connecting the video cable.
Input Signal Out of Range is displayed on screen.	Video resolution and/or refresh rate are set higher than what the monitor supports.	Change the settings to a supported setting (see Recognizing preset display resolutions on page 24).
The monitor is off but it did not seem to enter into a low-power sleep mode.	The monitor's power saving control is disabled.	Open the OSD menu and select **Power Control** > **Auto-Sleep Mode** and set auto-sleep to **On**.
OSD Lockout is displayed.	The monitor's OSD Lockout function is enabled.	Press and hold the **Menu** button on the on the right side of the monitor for 10 seconds to disable the OSD Lockout function.
Power Button Lockout is displayed.	The monitor's Power Button Lockout function is enabled.	Press and hold the power button for 10 seconds to unlock the power button function.

Button lockouts

Holding down the **Power** button or **Menu** button for ten seconds will lock out the functionality of that button. You can restore the functionality by holding the button down again for ten seconds. This functionality is only available when the monitor is powered on, displaying an active signal, and the OSD is not active.

Using the Auto-Adjustment feature (VGA analog input)

When first setting up the monitor, when conducting a Factory Reset of the computer, or whenever you change the resolution of the monitor, the Auto-Adjustment feature will automatically engage, and attempt to optimize your screen for you.

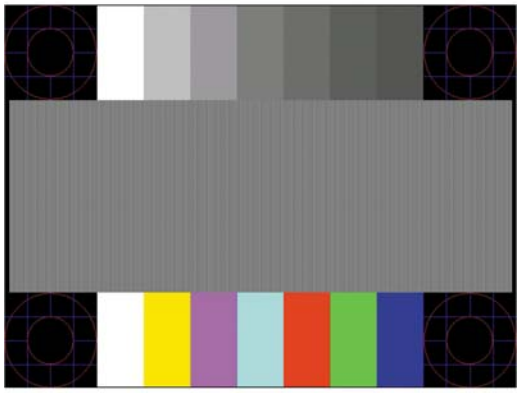
You may also optimize the screen performance for the VGA (analog) input at any time by using the **+** (Plus) button on the right side of the monitor.

Do not use this procedure if the monitor is using an input other than VGA. If the monitor is using a VGA (analog) input, this procedure 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 one of the three buttons on the right side of the monitor to activate the buttons.
3. Press the **Auto-Adjust** button on the right side of the monitor.
    - You can also press the **Menu** button, and then select **Image Control > Auto-Adjustment** from the OSD.
    - If the result is not satisfactory, continue with the procedure.
4. Insert the disc included with the monitor into the disc drive. The disc menu is displayed.
5. Select **Open Auto-Adjustment Software**. The setup test pattern is displayed.



6. Press one of the three buttons on the right side of the monitor to activate the buttons.
7. Press the **Auto-Adjust** button on the right side of the monitor to produce a stable, centered image.
8. Press the ESC key or any other key on the keyboard to exit the test pattern.

NOTE: The auto-adjustment test pattern utility can be downloaded from http://www.hp.com/support.

Optimizing image performance (VGA analog input)

Two controls in the on-screen display can be adjusted to improve image performance: Clock and Phase (available in the OSD menu).

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

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

- **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 flickering or blurring.

NOTE: When using the controls, you will obtain the best results by using the auto-adjustment pattern software utility provided on the disc.

When adjusting the Clock and Phase values, if the monitor images become distorted, continue adjusting the values until the distortion disappears. To restore the factory settings, press the **Menu** button and select **Management** > **Factory Reset** > **Yes** in the OSD.

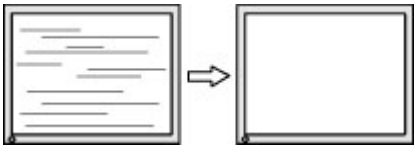
To eliminate vertical bars (Clock):

1. Press one of the three buttons on the right side of the monitor to activate the buttons.
2. Press the **Menu** button on the right side of the monitor to open the OSD, and then select **Image Control** > **Clock and Phase** > **Clock**.
3. Press the **+** (Plus) or **–** (Minus) buttons on the right side of the monitor to eliminate vertical bars. Press the buttons slowly so that you do not miss the optimum adjustment point.

4. After adjusting the Clock, if blurring, flickering, or bars appear on the screen, proceed to adjust the Phase.

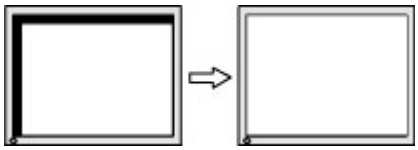
To remove flickering or blurring (Phase):

1. Press one of the three buttons on the right side of the monitor to activate the buttons.
2. Press the **Menu** button on the right side of the monitor to open the OSD, and then select **Image Control** > **Clock and Phase** > **Phase**.
3. Press the **+** (Plus) or **–** (Minus) buttons on the right side of the monitor to eliminate flickering or blurring. Flicking or blurring may not be eliminated depending on your computer or graphics controller card installed.



To correct screen position (Horizontal Position or Vertical Position):

1. Press one of the three buttons on the right side of the monitor to activate the buttons.
2. Press the **Menu** button on the right side of the monitor to open the OSD, and then select **Image Control** > **Image Position** > **Horizontal Position** and/or **Vertical Position**.
3. Press the **+** (Plus) or **–** (Minus) buttons on the right side of the monitor to properly adjust the position of the image in the display area of the monitor. The Horizontal Position shifts the image left or right; the Vertical Position shifts the image up and down.



Product support

For additional information on using your monitor, go to http://www.hp.com/support. Select your country or region, select **Troubleshooting**, and then enter your model in the search window and click the **Go** button.

NOTE: The monitor user guide, reference material, and drivers are available at http://www.hp.com/support.

If the information provided in the guide does not address your questions, you can contact support. For U.S. support, go to http://www.hp.com/go/contactHP. For worldwide support, go to http://welcome.hp.com/country/us/en/wwcontact_us.html.

Here you can:

- Chat online with an HP technician

  NOTE: When support chat is not available in a particular language, it is available in English.

- Find support telephone numbers
- Locate an HP service center

Preparing to call technical support

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

- Monitor model number
- Monitor serial number
- Purchase date on invoice
- Conditions under which the problem occurred
- Error messages received
- Hardware configuration
- Name and version of the hardware and software you are using

C 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 monitors 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.