

HP 24wm LED Backlit Monitor

User Guide

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Chapter I. Introduction

1.1 Features

- Multilingual OSD adjustment
- Compatible with IBM VGA, extended VGA, VESA VGA, SVGA, XGA, and SXGA modes
- Wide range of applicable voltages (AC 100-240V 50/60Hz) enables direct use without any setting.
- Plug-and-play VESA DDC1/ 2B Standard. Compatible with Windows 9x / 2000 / XP / 7 / 8/Vista operation systems

1.2 Check list

Please make sure the following items are included with your LCD monitor;

- The monitor (and the pedestal)
- Stand
- Power cord
- VGA cable
- DVI cable (Optional)
- Documentation and software Disc
- Setup poster
- Warranty

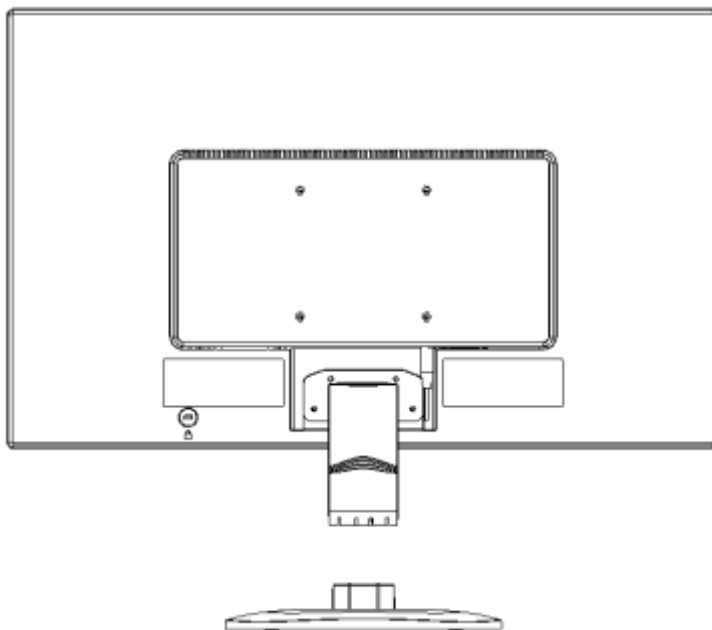
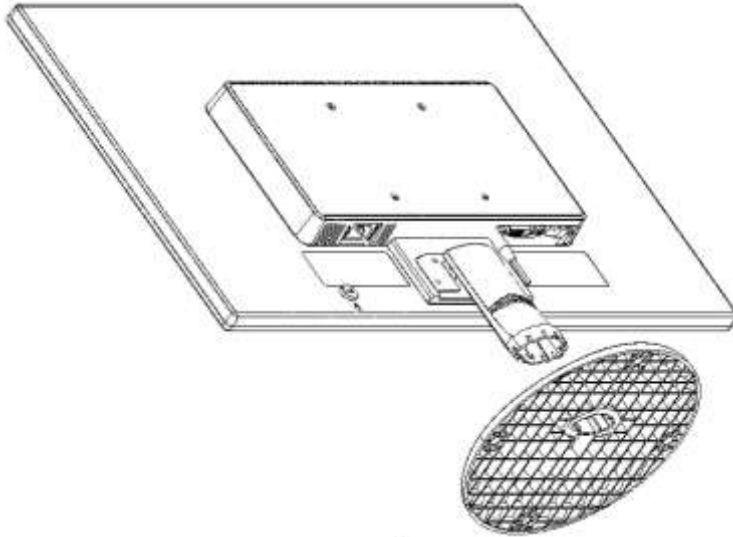
If any of these items are missing, please contact your dealer for technical support and custom service.

Note: Be sure to save original box and all packing materials for future transport.

Chapter II. Installation

2.1 Install the pedestal

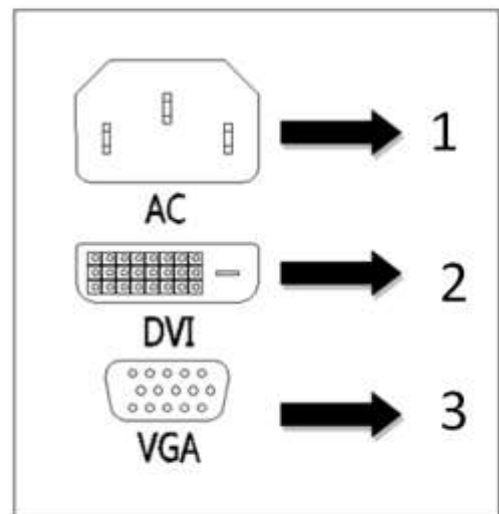
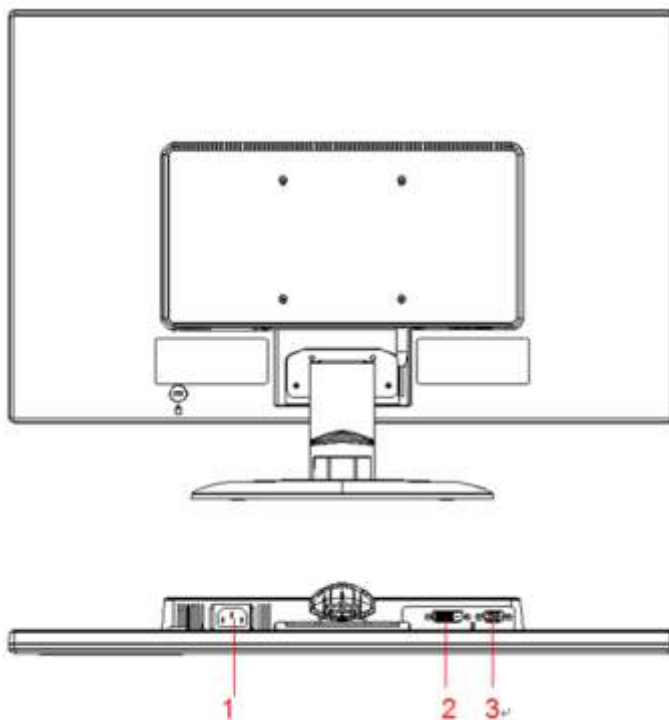
Please follow the steps illustrated below to install the pedestal.



2.2 Connect your monitor to your computer

1. Power off and unplug your computer.
2. Connect the 15-Pin ends of the signal cable to the VGA port of your monitor and the VGA OUT jack on the back of your computer. Secure the screws on both ends of the signal cable.
3. Connect one end of power cord to the monitor, then connect the other end of the power cords to the nearest electrical outlet.
4. Power on your computer and monitor. If your monitor displays an image, the installation has been successfully done. If the monitor does not display any image, check all the connections.

- Cautions:
1. For installation, please complete signal cord connection before plugging the power cord into the electrical outlet to avoid damaging the monitor.
 2. During installation, please support the front frame with your hand at its center of gravity to avoid dropping and damaging the monitor.

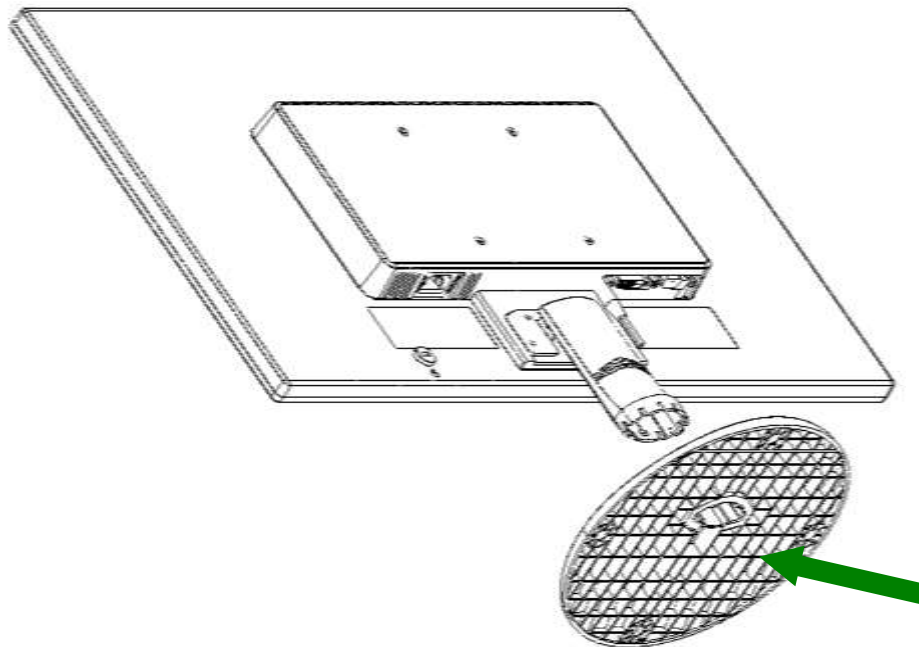


Overview of the ports on the monitor:

1. AC power supply input
2. DVI signal input
3. VGA signal input

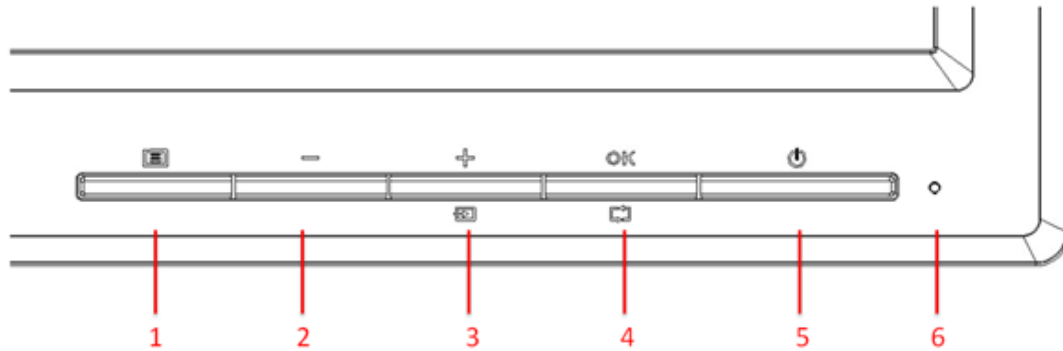
2.3 Disconnect the pedestal for shipping






Press the clip button on the pedestal and remove the pedestal from the stand.



Chapter III. Monitor overview

Overview of front panel controls



Control	Function
1 	Menu Opens, select or exits the OSD menu
2 	Minus If the OSD menu is on, press to navigate backward through the OSD menu and decrease adjustment levels.
3 	Plus/Source If the OSD menu is on, press to navigate forward through the OSD menu and increase adjustment levels. If the OSD menu is inactive, press to activate the source button that chooses the video signal input (VGA or DVI)
4 	Auto/OK If the OSD menu is on, press to select the highlighted menu items. If the OSD menu is inactive, press to activate the auto adjustment feature to optimize the screen image.
5 	Power Turns the monitor on or off
6	Power LED Blue=Fully powered. Amber=Sleep mode. Flashing Amber=Sleep Timer mode.

Chapter IV. Operational Instruction

4.1 Power ON/OFF Switch

Press this button to power on/off your monitor. Note: The ON/OFF switch does not disconnect your monitor from the main voltage. To completely disconnect the main voltage, please remove the power plug from the socket.

4.2 Power indicator

The power LED is blue when the monitor operates normally. If the monitor runs in power-saving mode, this indicator changes to amber. When the monitor is turned off, this indicator is unlit.

4.3 Menu features







All the following features of your monitor can be accessed and adjusted by using the on screen display (menu) system.









1. If your monitor is not powered on, press the "Power" button to turn it on.
2. Press the "Menu" button to activate the OSD menu. The OSD main menu will be displayed.
3. To view the main menu or submenu, press the "+" on the front panel of your monitor to scroll up or the "-" to scroll down. Then press the "OK" button to select a highlighted function.










When the highlight scrolls down to the bottom of the menu, it returns to top of the menu. When the highlight scrolls up to the top of the menu, it returns to bottom of the menu."






4. To adjust the selected option, press the "+" or "-" button.
5. Select "Save" and return. If you do not want to save the setting, select "Cancel" from the submenu or "Exit" from the main menu.
6. Press the "Menu" button to exit from the OSD menu.

4.4 OSD operational instructions

Icon	Main menu option	Submenu option	Note
	Brightness		To adjust the brightness level of the screen. The factory default range is 90.
	Contrast		To adjust the contrast level of the screen. The factory default range is 80.
	Color		Selects the screen color. The factory is 6500K or Custom color, depending on the mode.
		Warm- 5000K	Changes color to slightly reddish white.
		Standard- 6500K	Uses standard colors (default).
		Cool- 9300K	Change color to slightly blueish white.
		Custom (RGB)	Selects and adjusts your own color scales: Red Color – sets your own red color levels. Green Color – sets your own green color levels. Blue Color – sets your own blue color levels.
	Image control		To adjust the image on the screen. The ambient brightness sensor can also be enabled or disabled (only applicable to some models)
		Auto-adjustment	To automatically adjust the image on the screen (only applicable to VGA input).
		Clock and Phase	To adjust the clock phase of the screen. This adjustment eliminates all horizontal noises to enable clearer and more lifelike images and

			characters (only applicable to VGA input)
		Horizontal position	To adjust the horizontal position of an image (only applicable to VGA input).
		Vertical position	To adjust the vertical position of an image (only applicable to VGA input).
		Custom Scaling	<p>Selects the method on how displayed information on the monitor will be formatted. Select</p> <p>Fill to Screen – image fills the entire screen and may look distorted or elongated because of non-proportional scaling of height and width.</p> <p>Fill to Aspect Ratio – image is sized to fit the screen and maintains proportional image.</p>
A		Sharpness	Adjusts the screen image to look sharper or soft. (range:1~6)
		Dynamic Contrast	Turns Dynamic Contrast Ratio On or Off. The factory default is Off.
	OSD Control		Provides a menu for adjusting the on-screen display(OSD)control.
		Mode Display	The resolution, refresh rate and frequency information will be displayed when the OSD main menu is accessed. Please select “On” or “Off” as the factory default on-off setting.
		Monitor Status	<p>The operational status of your monitor will be displayed when you power on your monitor. To select the positions where the status information is displayed:</p> <p>Top Middle Bottom Off</p> <p>The factory default setting is “Top”</p>
		OSD position	To adjust OSD position for your monitor.

		Horizontal OSD Position	To adjust the visual position of the OSD menu to the right or left of the screen. The factory default horizontal position value is 96.
		Vertical OSD Position	To adjust the visual position of the OSD menu up or down the screen. The factory default vertical position value is 14.
		OSD Transparency	To adjust the transparency to enable transparent background information under the OSD. (range:0~7)
		OSD Timeout	To set the OSD display time (in seconds) after the last pressing the button. The factory default setting is “30 seconds”.
	Management		To select the function of power management for your monitor.
		Auto-Sleep Mode	To enable the energy-saving function, Select On off The factory default setting is On.
		Power-On Recall	Restores power to the monitor following an unexpected removal of power. Select: On Off The factory default is On.
		DDC/CI support	Controlling some OSD menu functions, such as brightness, contrast and color temperature, on your computer is allowed. This feature can be set as “On” or “Off”. The factory default setting is On.
		Bezel Power LED	Power on/off the indicator (LED) on the power button. If the indicator is set as “Off”, it will be off all the time.
		Sleep timer	The following timer adjustment menu options are available:

			<p>Set current time – to set the current time in hours and minutes.</p> <p>Set sleep time – to set the desired time when your monitor works under the sleeping mode.</p> <p>Set On time – to set the desired time when your monitor is awakened from the sleeping mode.</p> <p>Timer - Set “On’ or “Off” status for the Sleep Timer. The default setting is “Off”.</p> <p>Sleep Now – to activate the sleep mode for your monitor</p>
	Language		Selects the language in which the OSD menu is displayed. The factory default is English.
	Information		To select and display important information about your monitor.
	Factory Reset		The factory default settings will be reset
	Input Control		When the monitor is connected to two active and valid video sources, switching between the video input source is available. Switching the video input signal sources may take you several seconds.
	EXIT		Exits the OSD menu screen.

Chapter V. Technical Information

5.1 Factory preset display mode

Criteria	Resolution	Horizontal frequency	Vertical frequency
1	640X480 @60 Hz	31.469	59.94
2	800X600 @60 Hz	37.879	60.317
3	1024X768 @60 Hz	48.363	60.004
4	1280X720 @60 Hz	45.00	59.94
5	1280X1024 @ 60 Hz	63.981	60.02
6	1440X900 @60 Hz	55.935	59.89
7	1600X900 @60 Hz	60.00	60.00
8	1920X1080@ 60Hz	67.50	60.00

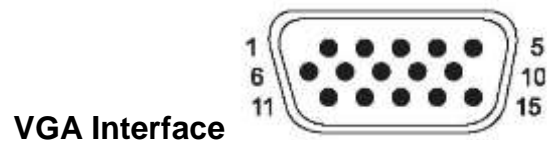
Note: The factory preset display mode is subject to change without notice.

5.2 Product specifications

Size	23.6" wide screen
Max. resolution	1920 x 1080 @ 60 Hz
Recommended resolution	1920 x 1080 @ 60 Hz
Horizontal frequency	24-80 kHz
Vertical frequency	50-60 Hz
Viewable size	521.28x 293.22 mm
Viewable angle	178 (H) 178 (V)
Pitching angle	-5° to 20°
Pixel frequency	170 MHz
OSD functions	Brightness, Contrast, Image Control, OSD control, Languages, Color, Management, Information, Factory Reset, Input Control, Exit,
Size (Packing)	634 (L) x 125(W) x 475 (H) mm
Net weight/ Gross weight	3.85 KG / 5.6 KG
Power supply	100-240VAC,50/60Hz
Altitude (under operational condition)	0 ~ 5000 m (0 ~ 16400 feet)
Altitude (under storing condition)	0 ~ 12192 m (0 ~ 40,000 feet)
Input signal	VGA,DVI
Contrast	3000: 1
Brightness	250 cd/m ²
Response time	8 ms
Color displayed	16.7 M
Power (max)	26W
Operational environment	Temperature: 5-35°C; humidity: 20% ~ 80%
Storing environment	Temperature: -20-60°C; humidity: 5% ~ 95%

5.3 Signal cable connector

PIN	Signal
1	Red Signal
2	Green Signal
3	Blue Signal
4	Ground
5	Cable testing
6	Red Signal Ground
7	Green Signal Ground
8	Blue Signal Ground
9	5 VDC
10	Null
11	Ground
12	SDA (for DDC)
13	Horizontal synchronization
14	Vertical synchronization
15	SCL (for DDC)



5.4 Panel testing

The ratio of valid pixels on each LCD screen reaches 99.99% or higher. However, less than 0.01% of the pixels may cause dark dots displayed on the screen.

A 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:

- Do not disable the power cord grounding feature. The grounding plug is an important safety feature.
- Plug the power cord into an easily accessible grounded outlet.
- Disconnect the 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.

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

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

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

WARNING! LCD monitors that are inappropriately situated on dressers, bookcases, shelves, desks, speakers, chests, or carts may fall over and cause personal injury. Care should be taken to route all cords and cables connected to the LCD monitor so that they can not be pulled, grabbed, or tripped over.

Safety Precautions

- Use only a power source and connection compatible with 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 power cord does not exceed the rating of the power cord. Look on the power label to determine the ampere rating (Amps or A) for each device.
- 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 your monitor:

- Do not open your monitor cabinet or attempt to service this product yourself. Adjust only those controls that are covered in the operating instructions. If your monitor is not operating properly or has been dropped or damaged, contact your HP authorized 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. Check the power label to determine the ampere rating (AMPS or A) for each device.
- Install your monitor near an outlet that you can easily reach. Disconnect the monitor by grasping the plug firmly and pulling it from the outlet. Never disconnect the monitor by pulling the cord.
- Turn your monitor off when not in use. You can substantially increase the life expectancy of your monitor by using a screen saver program and turning off the monitor when not in use.
Note: The HP Warranty does not cover monitors with a burned-in image.
- 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 your monitor or place it on an unstable surface.
- Do not allow anything to rest on the power cord. Do not walk on the cord.
- Keep your monitor in a well-ventilated area, away from excessive light, heat or moisture.
- When removing the monitor base, you must lay the monitor face down on a soft area to prevent it from being scratched, defaced, or broken.

Cleaning your monitor

1. Turn off the monitor and the computer.
2. Unplug the monitor from the wall outlet.
3. Clean the monitor plastics with a clean cloth dampened with water.
4. Clean the monitor screen with an antistatic screen cleaner.

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

Shipping the monitor

Keep the original packing box in a storage area. You may need it later if you move or ship your monitor. To prepare the monitor for shipping, refer to Chapter 2, "Disconnect the Pedestal for Shipping."

B Troubleshooting

Solving common problems

Shown below are possible problems, reasons, and recommended solutions:

Problems	Solutions
The LED power indicator is not lit	Ensure the Power button is switched on and the power cord is properly connected to the grounded power outlet and the monitor. Select Management in the OSD menu before selecting the power indicator on the panel. Check if the Panel Power Indicator is set as Off. If so, set it as On.
Nothing displayed on the screen	Connect the power cord. Power on the device. Connect the video cable correctly. For more information, see "Installation" chapter. Press any key on your keyboard or move your mouse to disable the screensaver.
Blurred or dark image Image is not centered.	Press the Menu button to activate the OSD menu. Select Image Control. Then select Horizontal Position or Vertical Position to adjust the position of the image.
The screen display input signal is out of the valid scope.	Connect the monitor VGA signal cable to the VGA connector on the computer. Be sure that the computer power is off while connecting the video cable. Enter Safe Mode after your computer is restarted. Apply the setting supported by your monitor (See table 5.1 in Chapter 5. B: Factory Preset Display Mode). Restart your computer to activate the new setting.
Blurred and ghost image.	Adjust the contrast and brightness controls. Make sure no extension cord or switch box is used. HP suggests you to connect your monitor to the graphic card output port on the back of your computer. For VGA input, Auto-adjustment will solve problems of this kind.
The optimum resolution of the monitor is not available	Make sure the graphic card supports optimum resolution. Make sure latest applicable driver for graphic card is installed. For HP and Compaq systems, you may download the latest applicable graphic card drivers at: www.hp.com/support . For other systems, visit the websites for your graphic card.
Plug-and-play is not available	To enable the plug-and-play feature for your monitor, you should have plug-and-play-ready computer and graphic card. Please contact the manufacturer of your computer. Check the video cable of your monitor. Make sure there are no bent PINs. Make sure the HP monitor driver is installed. You may download the HP monitor driver at: www.hp.com/support

Problems	Solutions (Continued)
Withering, flicker or moiré effect	<p>Keep the monitor away from electric devices that may cause possible electrical interference.</p> <p>Use the maximum refresh rate of the monitor under current resolution.</p> <p>Make sure your monitor is powered on.</p> <p>The graphic card of your computer should be secured in the slot.</p> <p>Make sure the video cable of your monitor is correctly connected to your computer.</p>
The “Sleep Mode” is always enabled for the monitor (yellow LED).	<p>Check the video cable of your monitor. Make sure there are no bent PINs.</p> <p>Make sure your computer is working normally. Press the Caps Lock key on your keyboard and have a look at the Caps Lock LED (available on most keyboards). The LED will light or fade out.</p>

Contacting Support

You may contact the customer service department by visiting HP technical support website at: www.hp.com/support

Select the country / territory where you are. Follow the link to visit pages applicable to your monitor.

Preparing to Call Technical Support

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

Have the following information available when you call:

- Monitor model number (located on label on back of monitor)
- Monitor serial number (located on label on back of 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 may need these numbers when contacting HP about your monitor model.

The rating label is on the back of the monitor.