w19b / w19e / W19q LCD Monitor User's Guide

- Preface
- Safety and Maintenance Guidelines
- Setup
- Using the Monitor
- Installing Drivers and Using the Auto-Adjustment Feature
- Technical Support FAQs
- Specifications
- LCD Monitor Quality and Pixel Policy
- Agency Regulatory Notices

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Part number: 433010-002

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Preface

About This Guide • Notational Conventions

About This Guide

This guide is intended for anyone who uses the w19b / w19e / W19q LCD Monitor. It describes the monitor's features, setup, and operation.

The sections are as follows:

- Safety and Maintenance Guidelines
- Setup
- Using the Monitor
- Installing Drivers and Using the Auto-Adjustment Feature
- Technical Support FAQs
- Specifications
- LCD Monitor Quality and Pixel Policy
- Agency Regulatory Notices

Notational Conventions

The following subsections describe notational conventions used in this document.

Notes, Cautions, and Warnings

Throughout this guide, blocks of text may be accompanied by an icon and printed in bold type or in italic type. These blocks are notes, cautions, and warnings, and they are used as follows:

NOTE: A NOTE indicates important information that helps you make better use of your monitor.

CAUTION: A CAUTION indicates either potential damage to hardware or loss of data, and tells you how to avoid the problem.

WARNING: A WARNING indicates the potential for bodily harm and tells you how to avoid the problem.

Some warnings may appear in alternate formats and may be unaccompanied by an icon. In such cases, the specific presentation of the warning is mandated by regulatory authority.

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Safety and Maintenance Guidelines

Important Safety Information • Safety Precautions • Maintenance Guidelines • Cleaning the Monitor

Important Safety Information

The power cord is designed for use with your monitor. To use a different cord, use only a power source and connection compatible with this monitor. For information on the correct power cord set to use with your monitor, see Power Cord Set Requirements.

WARNING: To reduce the risk of electric shock or damage to your equipment, do not disable the power cord grounding feature. The grounding plug is an important safety feature. Connect the equipment to a grounded (earthed) power outlet.

WARNING: For your safety, 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. To disconnect power from the equipment, unplug the power cord from the power outlet by grasping the plug firmly. Never pull on the cord.

CAUTION: To protect your monitor, as well as your computer, connect all power cords for your computer and its peripheral devices (such as a monitor, printer, or scanner) to a surge protection device such as a power strip with surge protection 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 your equipment if surge protection fails.

Safety Precautions

CAUTION: Avoid applying pressure to the LCD screen; doing so can cause damage.

- 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 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 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.
- 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. If your monitor is not operating properly or has been dropped or damaged, contact your Hewlett-Packard authorized dealer, reseller, or service provider.
- Adjust only those controls that are described in the operating instructions.
- Turn your monitor off when not in use. You can substantially increase the life expectancy of your monitor by using a screen saver and turning off the monitor when not in use.
- Keep your monitor in a well-ventilated area, away from excessive light, heat, or moisture.
- 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.
- Unplug your monitor from the wall outlet before cleaning.
- Do not drop your monitor or place it on an unstable surface.
- When removing the monitor pedestal base, you must lay the monitor face down on a soft area to prevent it from getting scratched, defaced, or broken.

Cleaning the Monitor

The monitor is a high-quality optical device that requires special care when cleaning. To clean the monitor, follow these steps:

1. Turn off the computer and the monitor.
2. Unplug your monitor from the wall outlet before cleaning.

CAUTION: Do not use benzene, thinner, ammonia, or any volatile substances to clean the monitor screen or cabinet. These chemicals may damage the monitor. Do not use liquid cleaners or aerosol cleaners. Never use water to clean an LCD screen.

3. Wipe the screen with a dry, soft, clean cloth.
    - If the screen requires additional cleaning, use an antistatic screen cleaner.
4. Dust the monitor housing. Use a damp cloth to clean the cabinet.
    - If the cabinet requires additional cleaning, use a clean cloth dampened with isopropyl alcohol.
5. Plug in the monitor.
6. Turn on the monitor and the computer.

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Setup

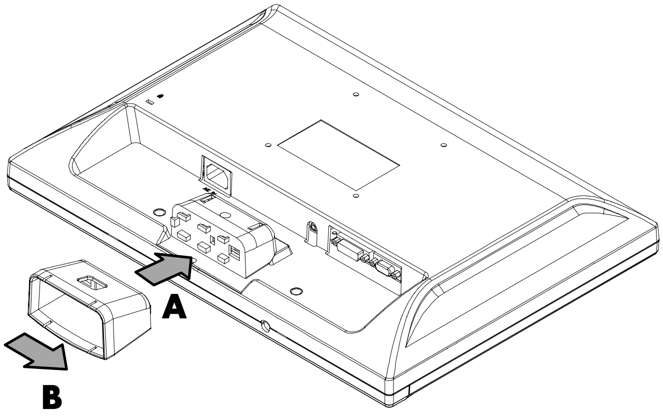
Base and Tilt • Cables • Wall Mounting Arm

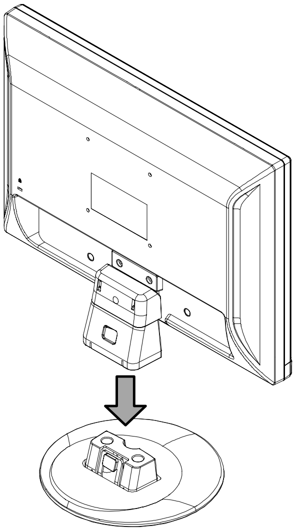
Base and Tilt

Attaching the Base • Removing the Base • Adjusting the Tilt

Attaching the Base

1. Set the panel face-down on a flat, protected surface.
2. Align the pedestal slots with the panel tabs and insert (**A**).
3. Slide the pedestal to the right to lock it into place (**B**).
4. Lift the panel and lower the pedestal onto the base until the push tab locks.



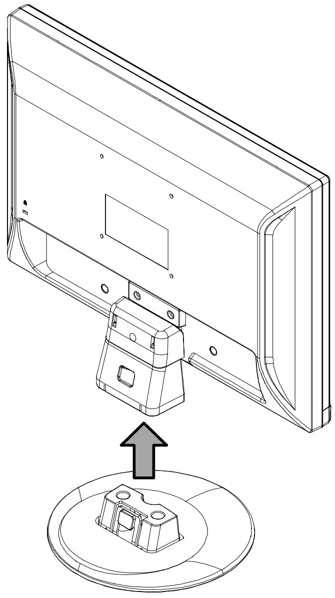


WARNING: Be careful to avoid pinching or scraping fingers when attaching the base.

CAUTION: To prevent damage, avoid applying pressure to the panel front.

Removing the Base

1 Push the release tab and raise the pedestal off the base.



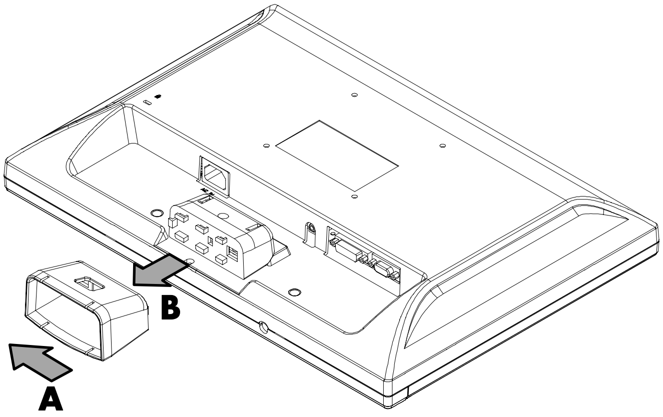
2 Set the panel face-down on a flat, protected surface.

3 Slide the pedestal to the left to unlock it from the base (**A**).

4 Remove the pedestal from the panel (**B**).

WARNING: Be careful to avoid pinching or scraping fingers when attaching the base.

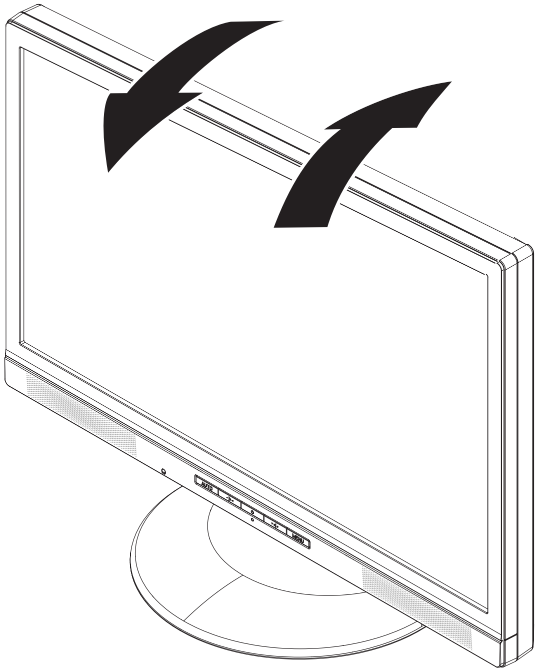
CAUTION: To prevent damage, avoid applying pressure to the panel front.



Adjusting the Tilt

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

1. Face the front of the monitor and hold the stand so that you do not topple the monitor while changing the tilt.
2. Adjust the tilt by moving the monitor's top edge toward or away from you.



CAUTION: To avoid breakage or other damage, do not touch the LCD screen while changing the tilt.

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Cables

Attaching the Cables

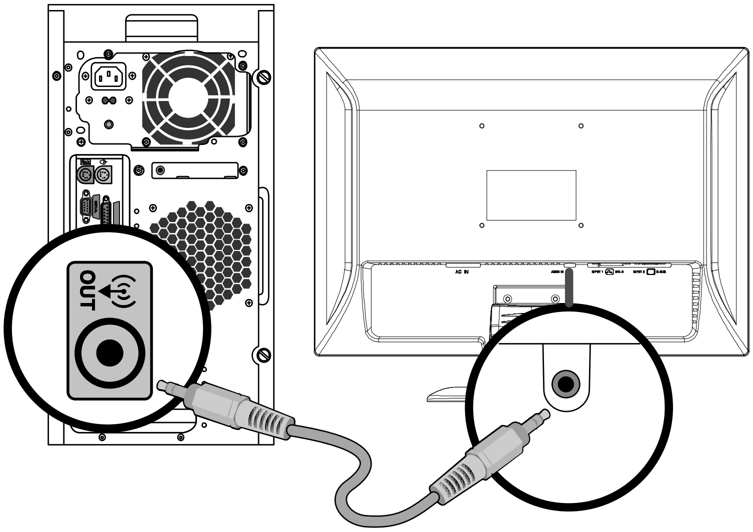
Attaching the Cables

You can attach a VGA cable (provided), a DVI-D cable (select models only), or both to this monitor. To use DVI, your computer must have a DVI-compliant graphics card. Connectors are found on the back of the monitor.

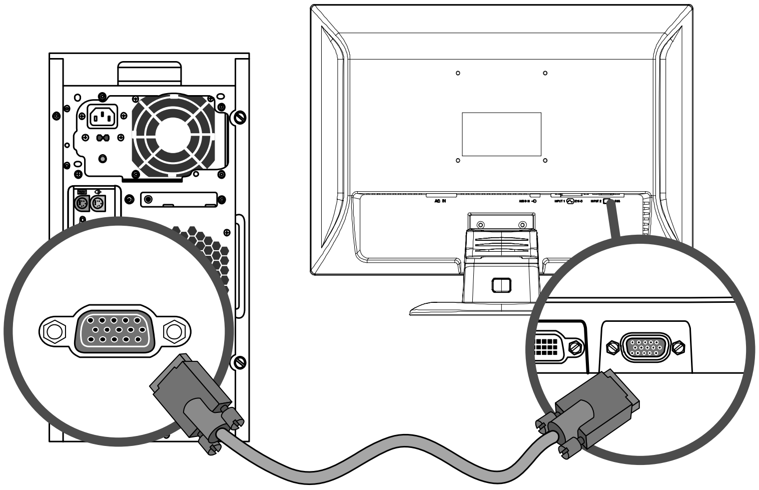
If both cables are installed, the source of input can be selected using the **Input Select** option in the OSD menu. Please refer to the OSD Menu section.

1 Turn off your computer.

2 Connect the built-in monitor speakers to the computer, using the audio cable (green connector).

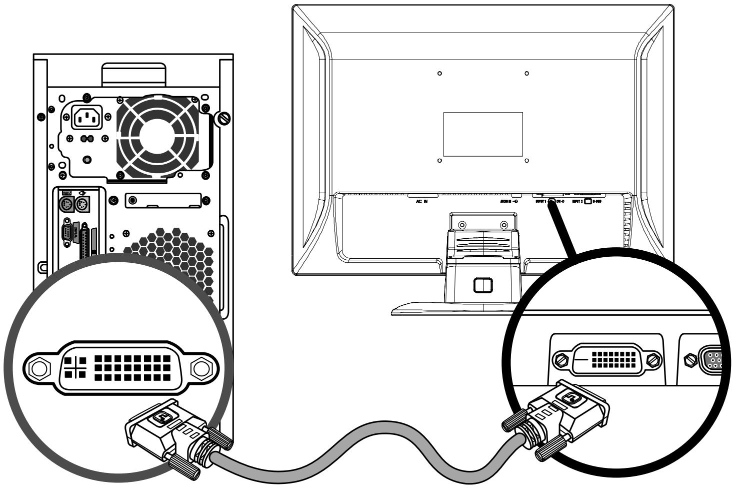


3 If you are attaching a VGA cable, connect one end of the 15-pin D-Sub VGA cable (blue connector) to the back of the monitor and connect the other end to the computer VGA port.



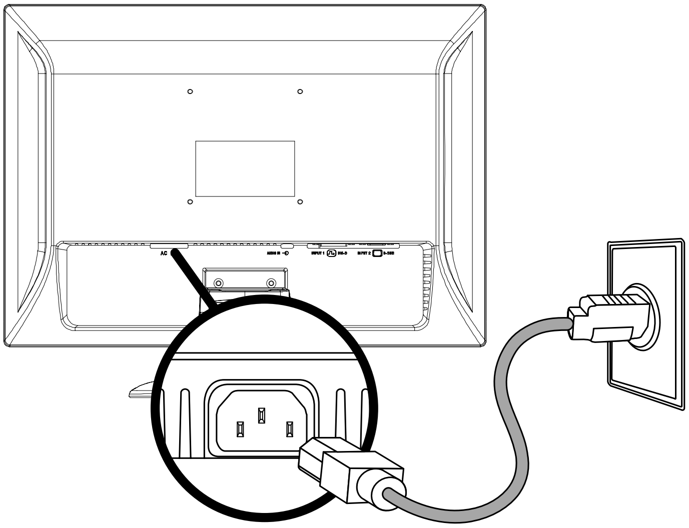
VGA

4 If you are attaching a DVI cable, connect one end of the 24-pin DVI cable (white connector) to the back of the monitor (select models only) and connect the other end to the computer DVI port.

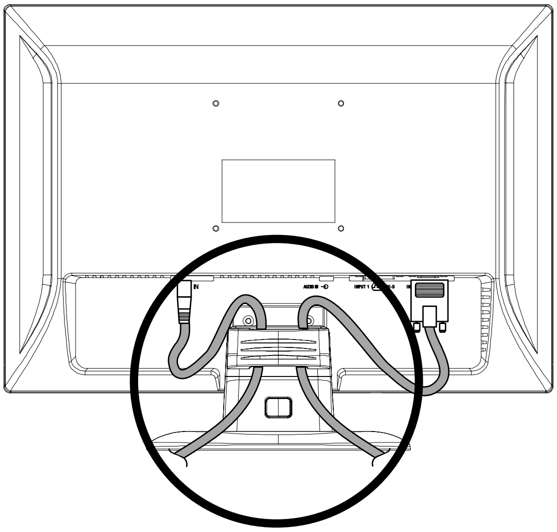


DVI-D

5 Connect one end of the power cord to the back of the monitor and plug the other end into a grounded outlet.


AC
AUDIO IN
INPUT 1
DVI-D
INPUT 2
D-SUB

6 Secure the cables by routing them through the clasp.


IN
AUDIO IN
INPUT 1

7 Turn on your monitor and computer.

If your monitor displays an image, installation is complete. If it does not display an image, see Technical Support FAQs and Using the Monitor.

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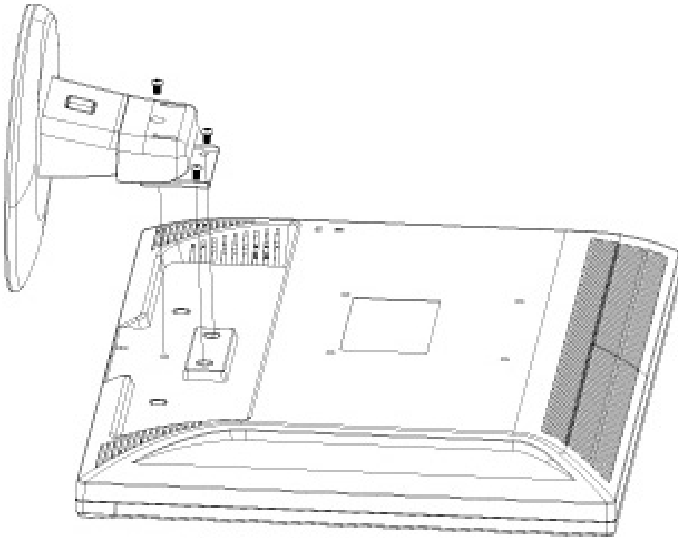
Wall Mounting Arm

Preparing to Install An Optional Wall Mounting Arm (Not supplied) • Installing a Wall Mounting Arm

Preparing to Install a Wall Mounting Arm (Not supplied)



This monitor can be attached to a wall mounting arm that you purchase separately.

CAUTION: Before disassembling the monitor, turn off the monitor power, and disconnect all power, video, and audio cables.

1 Disconnect the cables from the monitor.

2 With the panel face-down on a protected surface, remove the screws and the pedestal attachment.

3 Follow the manufacturer's instructions to assemble the wall mounting arm.

See Installing a Wall Mounting Arm for further installation instructions.

Installing a Wall Mounting Arm

1 Set the monitor screen down on a flat, soft, protected surface.

2 Place the wall mounting arm onto the back of the monitor. Line up the holes of the arm with the mounting holes in the back of the monitor.

3 Insert four screws into the mounting holes and tighten.

4 Reconnect the cables. Refer to the user's manual that came with the wall mounting arm (purchased separately) for instructions on attaching it to the wall.

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Using the Monitor

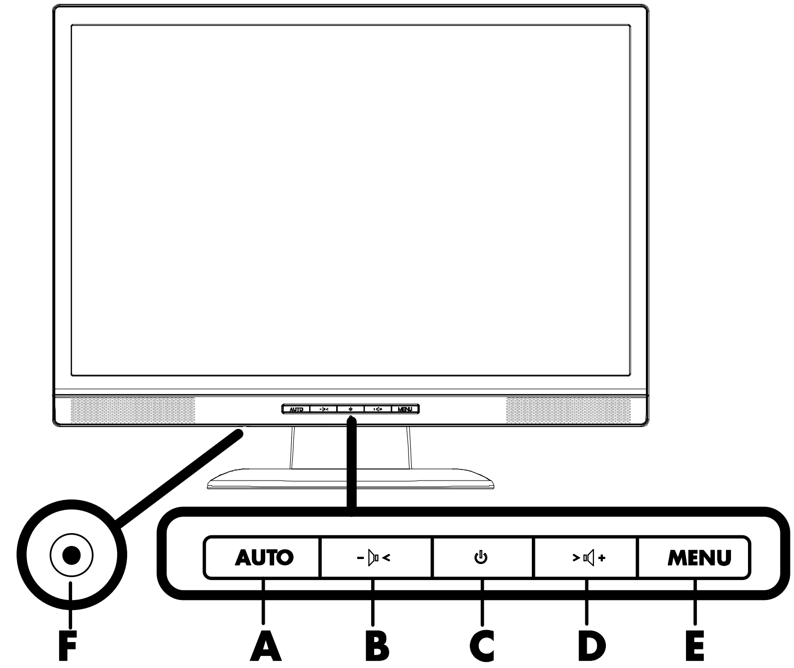
Operating Instructions • External Controls • LED Indicators •
Settings •Setting the Optimal Resolution • Adjusting the Volume • Using Headphones •
Locking the OSD • Adjusting OSD Settings • OSD Menu

Operating Instructions

Control buttons are located on the front of the panel, as shown below. Use the MENU button to adjust the display settings to your personal preferences:

- Set up the monitor, attach the cables, and adjust the tilt as described in the Setup section above.
- Press the power button (**C**) to turn the monitor on and off. The power indicator lights up when the monitor is on.
- The monitor must be turned on for the other control buttons to work.
- Set the resolution (Setting the Optimal Resolution), adjust the volume (Adjusting the Volume), and connect headphones if desired (Using Headphones).
- Adjust the onscreen display (OSD) settings (Adjusting OSD Settings).

External Controls



A	AUTO-configuration / Exit
B	Volume decrease / Left navigation
C	Power
D	Volume increase / Right navigation
E	MENU / Enter
F	Headphone jack

LED Indicators

Status	**LED Color**
Full Power Mode	Green
Active-off Mode	Orange

See Technical Support FAQs for more information.

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Settings

Setting the Optimal Resolution • Adjusting the Volume • Using Headphones •
Locking the OSD • Adjusting OSD Settings • OSD Menu

Setting the Optimal Resolution

The recommended resolution for this monitor is 1440 by 900. To configure the monitor to this resolution, complete the setup procedure and make sure that the monitor is connected to the computer. Turn the monitor on and do the following:

1. Click **Start**.
2. Click **Settings**.
3. Click **Control Panel**.
4. Double-click **Display**.
5. Click **Settings**.
6. Set the resolution **slide bar** to 1440 by 900.

NOTE: If 1440 by 900 is not shown, download the monitor driver from the Web. See Using the Monitor for instructions.

Adjusting the Volume

Press the volume increase and decrease buttons to adjust volume to the desired level. Volume can range from 0 (mute) to 100. The preset value is 50.

Using Headphones

Headphones can be attached to the jack. When headphones are attached, external sound is muted.

Locking the OSD

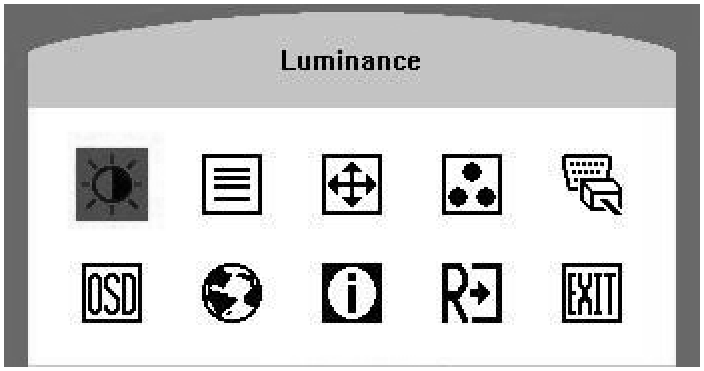
To lock the OSD (onscreen display), press and hold the MENU button while the monitor is off, then press the power button to turn the monitor on. To unlock the OSD, repeat the locking procedure. When the OSD is locked, settings cannot be changed in the OSD menu.

Adjusting OSD Settings

1. Press the MENU button to activate the OSD menu.
2. Press -🔈< or >🔈+ to navigate through the functions. Once the desired function is highlighted, press the MENU button again to activate it. If the selected function has a sub-menu, it will be displayed. Press -🔈< or >🔈+ again to navigate through the sub-menu functions. Once the desired sub-function is highlighted, press the MENU button to activate it.
3. Press -🔈< or >🔈+ to change the settings of the selected function.
4. To exit and save, select the Exit function. If you want to adjust another function, repeat steps 2–3.

OSD Menu

The figure below shows the OSD menu that appears when you first press the MENU button. In this figure, the Luminance icon has been selected, so it is highlighted and its title is displayed. Pressing MENU again will display the sub-menu for this function.



Main Menu and Sub-Menu Items for Adjusting the OSD

Main Menu Item	Main Menu Icon	Sub-Menu Item	Sub-Menu Icon	Description
Luminance	☀	Contrast	◐	Contrast from digital-register
		Brightness	☼	Backlight adjustment
Image Setup	▤	Focus	▤	Adjust picture phase to reduce horizontal-line noise
		Clock	▥	Adjust picture clock to reduce vertical-line noise

Main Menu Item	**Main Menu Icon**	**Sub-Menu Item**	**Sub-Menu Icon**	**Description**
Image Position	✥	H. Position	◫	Adjust the horizontal position of the picture
		V. Position	⊟	Adjust the vertical position of the picture
Color Temp.	⁂	Warm	N/A	Recall warm color temperature from EEPROM
		Cool	N/A	Recall cool color temperature from EEPROM
		sRGB	N/A	Recall sRGB temperature from EEPROM
		User / Red	R	Red gain from digital-register
		User / Green	G	Green gain from digital-register
		User / Blue	B	Blue gain from digital-register
Input Select		Analog	N/A	Select input signal from analog source (VGA)
		Digital	N/A	Select input signal from digital source (DVI)
OSD Setup	OSD	H. Position	↔	Adjust the horizontal position of the OSD
		V. Position	↕	Adjust the vertical position of the OSD
		OSD Timeout	🕒	Adjust the OSD timeout
Language	🌐	Language	N/A	Select the language you like
Information	ⓘ	Information	N/A	Show the resolution, H/V frequency and input port of current input timing
Reset	R→	Yes	N/A	Clear each old status of auto-configuration
		No	N/A	Do not execute reset, return to main menu
Exit	EXIT	N/A	N/A	Exit OSD

See Specifications for the horizontal and vertical scan ranges addressable by this monitor.

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Installing Drivers and Using the Auto-Adjustment Feature

Downloading Drivers and Software

To download the latest version of drivers and software files from the HP Support Web site:

1. Refer to: http://www.hp.com/support
2. Select your country/region.
3. Select **Download Drivers and Software**.
4. Enter the model number of your monitor. The software download pages for your monitor will be displayed.
5. Download and install the driver and software files using the instructions in the download pages.

Using the Auto-Adjustment Function

Press the AUTO button to optimize the screen performance for VGA (analog).

Do not use this procedure if your monitor is using DVI input. If your monitor is using VGA (analog) input, auto-adjustment can correct the following image quality conditions:

- Fuzzy or unclear focus
- Ghosting, streaking, or shadowing effects
- Faint vertical bars
- Thin, horizontal scrolling lines
- An off-center picture

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Technical Support FAQs

Technical Support FAQs (Frequently Asked Questions)

Problem & Question	**Possible Solutions**
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.
No Plug & Play	• In order for the Plug & Play feature of the monitor to work, you need a Plug & Play compatible computer and video card. Check with your computer manufacturer. • Check the monitor's video cable and make sure none of the pins are bent. • Make sure the HP monitor drivers are installed (HP monitor drivers are available at: http://www.hp.com/support).
Picture is fuzzy and has ghosting shadowing problem	• Adjust the contrast and brightness controls. • Make sure you are not using an extension cable or switch box. We recommend plugging the monitor directly into the video card output connector on the back of your computer. • For VGA input, the auto-adjustment function may fix this problem.
Picture bounces, flickers or wave pattern is present in the picture	• Move electrical devices that may cause electrical interference as far away from the monitor as possible. • Use the maximum refresh rate your monitor is capable of at the resolution your are using.
Monitor is stuck in "Active Off-Mode"	• The computer power switch should be in the on position. • The computer video card should be snugly seated in its slot. • Make sure the monitor's video cable is properly connected to the computer. • Inspect the monitor's video cable and make sure none of the pins are bent. • Make sure your computer is operational by hitting the Caps Lock key on the keyboard while observing the Caps Lock LED. The LED should either turn on or off after hitting the Caps Lock key.

Problem & Question	**Possible Solutions**
Missing one of the primary colors (red, green, or blue)	• Inspect the monitor's video cable and make sure that none of the pins are bent. • Make sure the monitor's video cable is properly connected to the computer.
Screen image is not centered or sized properly	• Adjust horizontal and vertical screen position. • For VGA input, the auto-adjustment function may fix this problem.
Picture has color defects (white does not look white)	• Adjust RGB color or select color temperature.
Unable to set the monitor to the optimal resolution	• Make sure that the graphics card supports the optimal resolution (1440 x 900). • Make sure that 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: http://www.hp.com/support For other systems, refer to the Web site for your graphics card.

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Specifications

General • LCD Panel (19") • Resolution • Preset Display Modes • Physical Characteristics • Environmental • Power Cord Set Requirements • Pin Assignments • Plug and Play DDC2B Feature

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

General

Model number	w19b /w19e / W19q

LCD Panel (19")

Driving system	TFT Active Matrix Color LCD
Size	481.4 mm (19")
Video	R, G, B Analog Interface & Digital Interface
Separate sync.	H/V TTL & TMDS
Display color	16.2 million Colors
Dot clock	135 MHz
Face treatment	Antiglare polarizer with hard coating (select models only)

Resolution

Horizontal scan range	30 kHz to 83 kHz
Horizontal scan size (Maximum)	410mm
Vertical scan range	55 Hz to 75 Hz
Vertical scan size (Maximum)	256 mm
Optimal preset resolution	1440 x 900 at 60 Hz
Highest preset resolution	1440 x 900 at 75 Hz
Highest addressable resolution	1440 x 900 at 75 Hz
Plug & Play	VESA DDC2B
Input Connectors	D-Sub VGA 15pin, DVI-D, audio jack
Input Video Signal	Analog: 0.7Vp-p(standard), 75 OHM, Positive & DVI-D Digital Interface (TMDS)
Power Source	100~240V∿, 47~63Hz

Preset Display Modes

Standard	Resolution	Horizontal Frequency (kHz)	Vertical Frequency (Hz)
Dos-mode	720 x 400	31.47	70.0
VGA	640 x 480	31.47	60.0
VGA	640 x 480	37.50	75.0
SVGA	800 x 600	37.879	60.0
SVGA	800 x 600	46.875	75.0
XGA	1024 x 768	48.363	60.0
XGA	1024 x 768	56.476	70.0
XGA	1024 x 768	60.02	75.0
SXGA	1280 x 1024	64.00	60.0
SXGA	1280 x 1024	80.00	75.0
WXGA+	1440 x 900	55.935	59.8
WXGA+	1440 x 900	70.635	74.984

Physical Characteristics

Connector Types	15-pin Mini D-Sub VGA, DVI-D, headphone-out
Signal Cable Type	Detachable
Dimensions & Weight:	
Height (with base)	14.0 inches (356.5 mm)
Width	17.3 inches (438.5 mm)
Depth	8.3 inches (211 mm)
Weight (monitor only)	12.61 (4.85 kg)
Weight (with packaging)	17.00 lb (6.54 kg)

Environmental

Temperature:	
Operating	5°C to +35°C
Non-Operating	–20°C to +60°C
Humidity:	
Operating	15% to 90% (non-condensing)
Non-Operating	15% to 90% (non-condensing)
Altitude:	
Operating	0~3,658m (0~12,000 ft)
Non-Operating	0~12,192m (0~40,000 ft)

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 in the range of 100–240V∿, 50/60 Hz, 1.5A.

The power cord set (flexible cord or wall plug) received with the monitor meets the requirements for use in the country/region where the equipment was purchased.

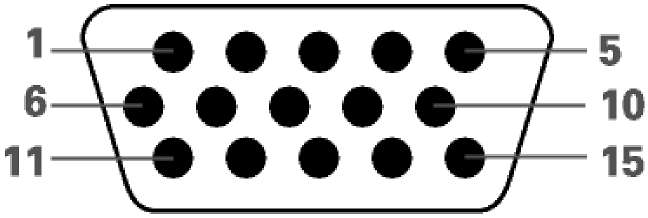
If you need to obtain a power cord for a different country/region, you should purchase a power cord that is approved for use in that country/region.

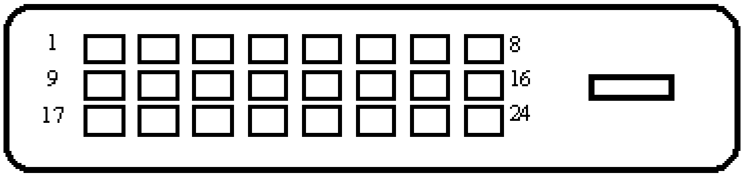
The power cord must be rated for the product and for the voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cord should be greater than the voltage and current rating marked on the product. In addition, the cross-sectional area of the wire must be a minimum of 0.75 mm^2 or 18AWG, and the length of the cord must be between 4.94 ft (1.5 m) and 12 ft (3.6 m). If you have questions about the type of power cord to use, contact your HP-authorized service provider.

A power cord should be routed so that it is not likely to be walked on or pinched by items placed upon it or against it. Particular attention should be paid to the plug, electrical outlet, and the point where the cord exits from the product.

Pin Assignments

Pin Number	**15-Pin Side of the Signal Cable**
1	Video-Red
2	Video-Green
3	Video-Blue
4	Ground
5	Detect Cable
6	GND-R
7	GND-G
8	GND-B
9	+5V
10	Ground
11	Ground
12	DDC-Serial data
13	H-sync
14	V-sync
15	DDC-Serial clock





Pin No.	Signal Name	Pin No.	Signal Name	Pin No.	Signal Name
1	TMDS Data 2–	9	TMDS Data 1–	17	TMDS Data 0–
2	TMDS Data 2+	10	TMDS Data 1+	18	TMDS Data 0+
3	TMDS Data 2/4 Shield	11	TMDS Data 1/3 Shield	19	TMDS Data 0/5 Shield
4	TMDS Data 4–	12	TMDS Data 3–	20	TMDS Data 5–
5	TMDS Data 4+	13	TMDS Data 3+	21	TMDS Data 5+
6	DDC Clock	14	+5V Power	22	TMDS Clock Shield
7	DDC Data	15	Ground (for +5V)	23	TMDS Clock+
8	N.C.	16	Hot Plug Detect	24	TMDS Clock–

Plug and Play DDC2B Feature

This monitor is equipped with VESA DDC2B capabilities according to the VESA DDC STANDARD. It allows the monitor to inform the host system of its identity and, depending on the level of DDC used, communicate additional information about its display capabilities.

The DDC2B is a bi-directional data channel based on the I^{2}C protocol. The host can request EDID information over the DDC2B channel.

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LCD Monitor Quality and Pixel Policy

The HP LCD Monitor uses high-precision technology, manufactured according to high standards, to help guarantee trouble-free performance. Nevertheless, the display may have cosmetic imperfections that appear as small bright or dark spots. This is common to all LCD displays used in products supplied by all vendors and is not specific to the HP LCD 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 should be viewed under normal operating conditions and in normal operating mode at a supported resolution and response rate, from a distance of approximately 50 cm (16 in).

We expect that, over time, the industry will continue to improve its ability to produce displays with fewer cosmetic imperfections, and we will adjust guidelines as improvements are made.

For more information about your w19b / w19e / W19q LCD Monitor, refer to the HP Web site at:
http://www.hp.com/support

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Agency Regulatory Notices

Federal Communications Commission Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Hewlett-Packard Company may void the user's authority to operate the equipment.

Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC rules and regulations.

Declaration of Conformity for Products Marked with FCC Logo, United States Only

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For questions regarding your product, contact:

Hewlett-Packard Company
P. O. Box 692000, Mail Stop 530113
Houston, Texas 77269-2000
Or
call: 1-(800)-474-6836

For questions regarding this FCC declaration, contact:

Hewlett-Packard Company
P. O. Box 692000, Mail Stop 510101
Houston, Texas 77269-2000
Or
call: 1-(281)-514-3333

To identify this product, refer to the part, series, or model number found on the product.

Canadian Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Avis Canadien

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

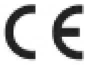
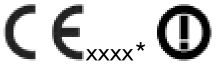
European Union Regulatory Notice

This product complies with the following EU directives:

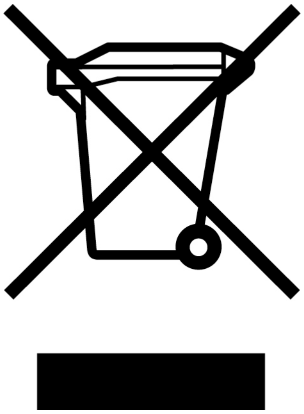
- Low Voltage Directive 73/23/EEC
- EMC Directive 89/336/EEC

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

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

 This marking is valid for non-Telecom products and EU harmonized Telecom products (e.g., Bluetooth).	 This marking is valid for EU non-harmonized Telecom products. *Notified body number (used only if applicable — refer to the product label).

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



This symbol on the product or on its packaging indicates that this product must not be disposed of with your other 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 of 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 your local city office, your household waste disposal service or the shop where you purchased the product.

Japanese Notice

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

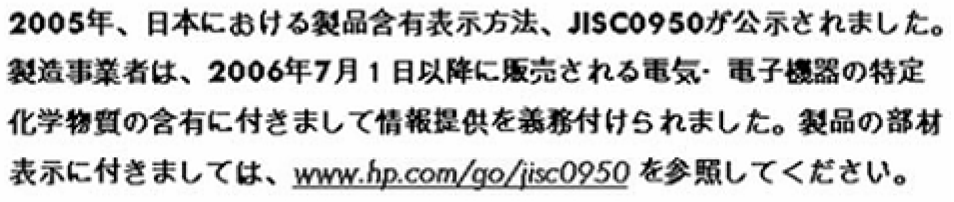
取扱説明書に従って正しい取り扱いをして下さい。

Japanese Power Cord Notice

製品には、同梱された電源コードをお使い下さい。
同梱された電源コードは、他の製品では使用出来ません。

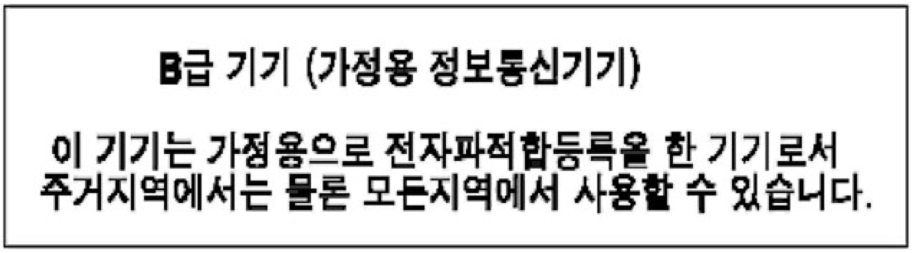
Japanese Material Content Declaration

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 www.hp.com/go/jisc0950



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

Korean Notice



B급 기기 (가정용 정보통신기기)

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

Materials Disposal

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

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

HP Recycling Program

HP offers product end-of-life return programs for HP and other manufacturers' hardware in several geographic areas.

The terms and availability of these programs vary by geography because of differences in regulatory requirements and local customer demand. For information on the HP recycling program, refer to the HP Web site at: http://www.hp.com/recycle

EPA Energy Star Compliance

Products marked with the ENERGY STAR® logo on the packaging box qualify with the U.S. Environmental Protection Agency's ENERGY STAR® guidelines for energy efficiency.

Products with the ENERGY STAR® label are designed to use less energy, help you save money on utility bills, and help protect the environment.

ENERGY STAR® is a registered trademark owned by the U.S. government.

Congratulations!

The display you have just purchased carries the TCO’03 Display label. This means that your display is designed, manufactured and tested according to some of the strictest quality and environmental requirements in the world. This makes for a high performance product, designed with the user in focus and also minimizes the impact on our natural environment.

Some of the features of the TCO’03 Display requirements:

Ergonomics

- Good visual ergonomics and image quality in order to improve the working environment for the user and to reduce sight and strain problems. Important parameters are luminance, contrast, resolution, reflectance, color rendition and image stability.

Energy

- Energy-saving mode after a certain time — beneficial both for the user and the environment.
- Electrical safety

Emissions

- Electromagnetic fields
- Noise emissions

Ecology

- The product is prepared for recycling and the manufacturer must have a certified environmental management system such as EMAS or ISO 14 001.
- Restrictions on:
  - chlorinated and brominated flame retardants and polymers
  - heavy metals such as cadmium, mercury and lead.

The requirements included in this label have been developed by TCO Development in co-operation with scientists, experts, and users as well as manufacturers all over the world. Since the end of the 1980s TCO has been involved in influencing the development of IT equipment in a more friendly direction. Our labeling system started with displays in 1992 and is now requested by users and IT-manufacturers all over the world.

For more information, please visit
www.tcodevelopment.com