



HEWLETT®
PACKARD



HP D8896

HP 55

15-inch Color Monitor
13.8-inch Viewable Image
User's Guide



Notice

The information contained in this document is subject to change without notice.

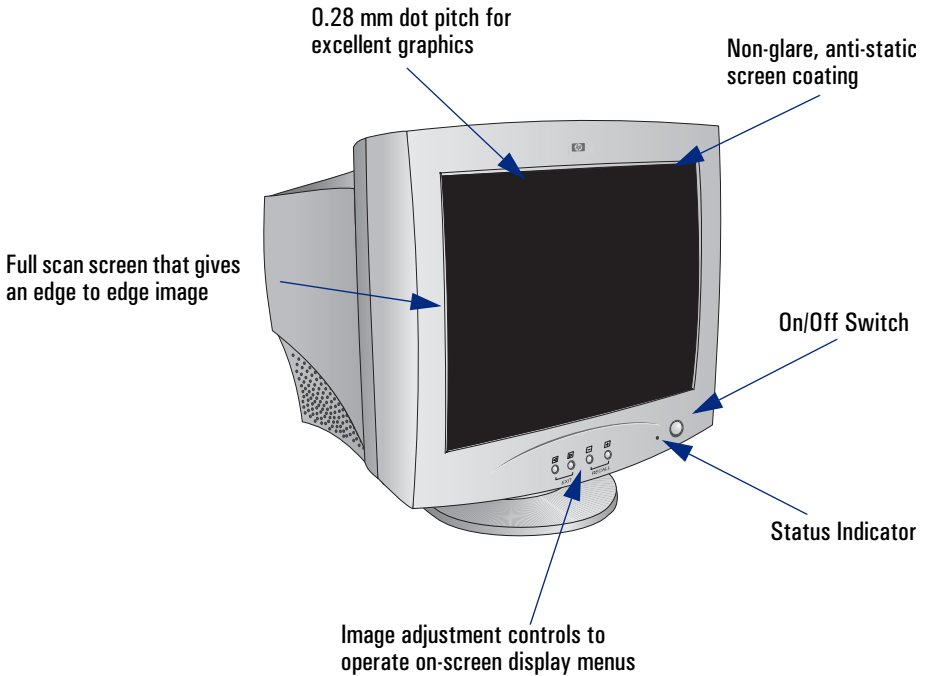
Hewlett-Packard makes no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

Hewlett-Packard shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this material.

Hewlett-Packard assumes no responsibility for the use or reliability of its software on equipment that is not furnished by Hewlett-Packard.

This document contains proprietary information that is protected by copyright. All rights are reserved. No part of this document may be photocopied, reproduced, or translated to another language without the prior written consent of Hewlett-Packard Company.

Hewlett-Packard France 38053 Grenoble Cedex 9 France © 2000 Hewlett-Packard Company



HP D8896 HP 55 15-inch Color Monitor 13.8-inch Viewable Image

User's Guide

Important Safety Instructions

WARNING

For your safety always connect equipment to a grounded wall outlet. Always use a power cord with a properly grounded plug, such as the one provided with the equipment, or one in compliance with your national safety standards. This equipment can be disconnected from the power by removing the power cord from the power outlet. This means the equipment must be located close to an easily accessible power outlet.

To avoid electrical shock, do not open the monitor's cover. There are no user-serviceable parts inside. Only qualified service personnel should service these parts.

Make sure your computer is powered off before connecting or disconnecting a display peripheral.

Working in Comfort

Thank you for selecting HP monitor equipment.

To optimize your comfort and productivity, it's important that you set up your work area correctly and use your HP equipment properly. With that in mind, we have developed some setup and use recommendations for you to follow based on established ergonomic principles.

You can consult the online version of Working in Comfort preloaded on the hard disk of HP computers, or visit HP's Working in Comfort web site at:

<http://www.hp.com/ergo/>

CAUTION

The monitor is quite heavy (the weight is shown in the technical specifications). We recommend you ask the assistance of a second person when lifting or moving it.



The lightning flash with arrowhead symbol, situated within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" which may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and servicing instructions in the literature accompanying the appliance.

What Your New Monitor Offers

Your HP monitor is a 15-inch (13.8-inch viewable image), high resolution, multi-synchronous color monitor. Multi-synchronous means that the monitor supports a range of video modes. It is optimized to be used with all Hewlett-Packard computers.

Your HP color monitor has the following features:

- A 15-inch flat square tube with a 13.8-inch viewable image and 0.28mm dot pitch for excellent graphics.
- Anti-static and anti-glare coating to minimize reflection.
- Support for video modes up to SVGA 800 x 600 at 85 Hz refresh rates, giving flicker free image and reduced eye-strain.
- Support for Ultra VGA 1024 x 768 at 60 Hz refresh rate.
- Image adjustment using on-screen display menus. Includes color adjustment to optimize the quality of the image.
- Monitor power management system (VESA¹ standard) controlled from suitably equipped HP computers to automatically reduce the power consumption of the monitor. Complies with the Energy Star Computers Program initiated by US EPA². As an ENERGY partner, HP has determined that this product meets the ENERGY STAR guidelines for energy efficiency³.
- Monitor Plug and Play capability (VESA DDC1/2B standard) that enables the monitor to identify itself to suitably equipped HP computers.
- Compliance with ISO 9241-3, ISO 9241-3/-7/-8 ergonomic standards.
- Complies with MPRII guidelines for upper limits of electrostatic and magnetic field emissions from the Swedish National Board for Measurement and Testing.

1. VESA is the Video Electronics Standards Association

2) The US EPA is the United States Environmental Protection Agency

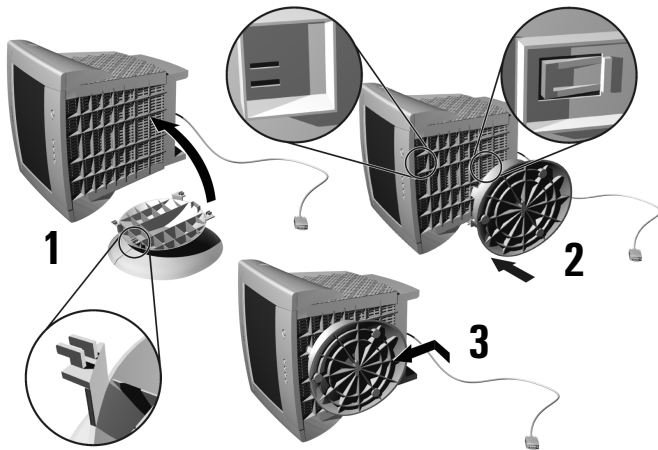
3) ENERGY STAR is a US-registered service mark of the USEPA.

Setting Up Your Monitor

Attaching the Tilt and Swivel Base

Your display has a tilt and swivel base. To fit the swivel base:

- 1 Turn the monitor on its side (never on the screen). Identify the front of the base.
- 2 Locate the slots in the underside of the monitor.
- 3 Slide the base towards the front of the monitor until the locking tab on the base clicks into place.



Where to Place the Monitor

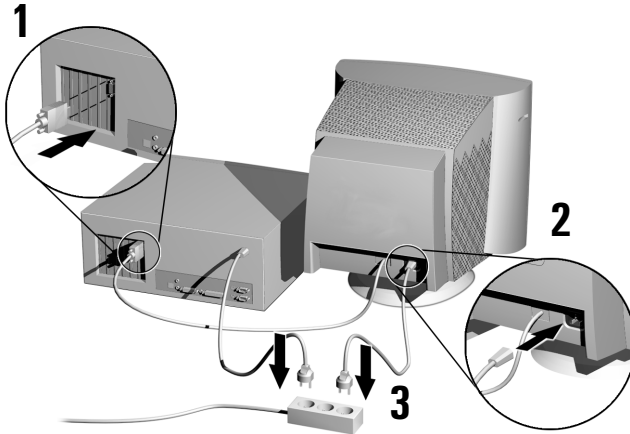
Place your monitor on a flat sturdy surface. To achieve best image quality ensure the screen is facing east.

Ensure the operating site is free from excessive heat, moisture, dust and sources of electromagnetic fields. Sources of electromagnetic fields include transformers, motors, and other monitors. Avoid exposing the monitor to direct sunlight.

Connecting the Cables

CAUTION

Before you connect any cables, or install your HP monitor, refer to the safety instructions at the beginning of this manual. Refer to the user manual which accompanies your computer and video adapter to ensure this equipment is correctly installed.

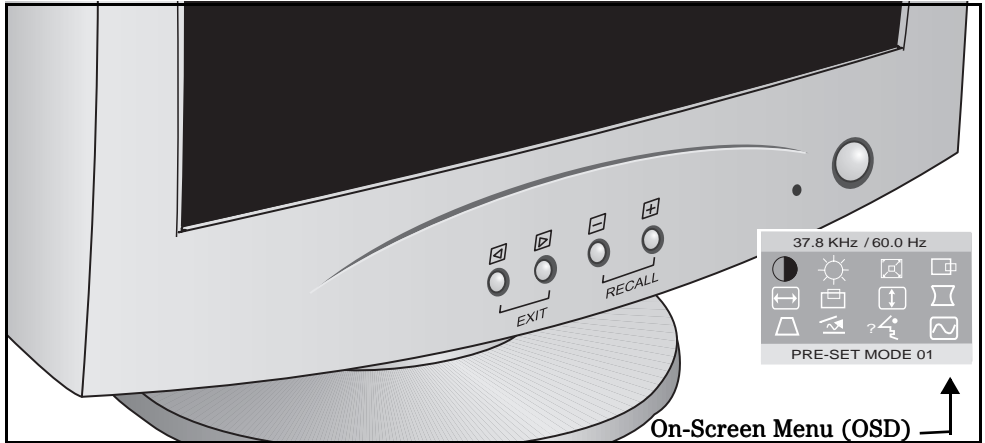


- 1 Before you connect any cables, refer to the safety instructions at the beginning of this manual. Make sure your computer and monitor are switched off.
- 2 Connect the video cable (it has a 15-pin plug) to the video outlet on your computer. Tighten the thumbscrews on the plug.
- 3 Connect the power cord to the monitor.
- 4 Plug the power cord into the power outlet.

NOTE

The location of your computer's video cable connector may be different to the one shown. Refer to the manual that came with your computer, if necessary.

Using Your Monitor



- 1 Press these ◀ ▶ buttons to activate the on screen menu (OSD).

Use these buttons to scroll to the menu item you require. (For menu items refer to the table on the next page).














- 2 Press these buttons — + to make your adjustments as required.
- 3 Press these buttons simultaneously ◀ ▶ to exit the on-screen menu.

Press these buttons simultaneously — + to return to the settings preset at the factory.

NOTE

Your monitor is automatically demagnetized each time it is switched ON. This ensures color purity. To maintain color purity, we recommend that each week you switch the monitor off for at least 30 minutes before switching it on again.

Use the table below to determine which menu item you require:

Menu Item	Use to Adjust...
 Brightness	the brightness (image black level).
 Contrast	the contrast (image white level).
 H-Center	the horizontal position of the displayed image.
 H-Size	the horizontal size of the displayed image.
 V-Center	the vertical position of the displayed image.
 V-Size	the vertical size of the displayed image.
 Zoom	and uniformly increase the size of the displayed image.
 Pincushion	the vertical edges if they appear to curl inwards or outwards.
 Trapezoid	the vertical edges if they do not appear to be parallel.
 Recall	the recall geometry settings preset at factory by pressing  .
 Model Display	the current setting for horizontal frequency, displays the refresh rate and resolution when highlighted.
 Language	the language setting of the OSD.

Setting the Amount of Displayed Information

It is recommended that you use a resolution of 800 x 600 at 85 Hz. This gives easy-to-read characters, a large amount of displayed information and a flicker-free image.

You can make adjustments to the displayed image which are automatically saved for the resolution you are using. For example, if you adjust your monitor when working in SVGA, those settings are saved for SVGA. If you then work in VGA and change the image settings, they are saved for VGA. The next time you switch back to SVGA your previous settings are used automatically.

To find out which resolutions are supported by your monitor, refer to "What Video Modes are Supported" on page 8. To change the screen resolution, please refer to the manual that came with your computer or your operating system documentation.

Your monitor has a Plug and Play capability (VESA DDC1/2B standard) which enables it to identify itself to suitably equipped HP computers. This will automatically give you the best refresh rate for the resolution that you have set. Also, by using the appropriate software (when available) you can adjust the monitor settings directly from your computer

Supported Video Modes

Your monitor supports the video modes shown in the table below.

Screen Resolution	Image Refresh Rate	Video Solution
640×400	70 Hz	VGA
640×480	60 Hz	VGA
640×480	75 Hz	Ergonomic VGA
640×480	85 Hz	Ergonomic VGA
800×600	75 Hz,	Ergonomic Super VGA
800×600	85 Hz	Ergonomic Super VGA
1024×768	60 Hz	Ultra VGA 1024

CAUTION

Selecting a video mode on your computer with a screen resolution/image refresh rate combination higher than 1024×768 at 60 Hz can damage your monitor. Selecting a video mode not supported by your monitor will cause your monitor screen to blank.

Minimizing Eye Strain

To avoid screen flicker and minimize eye strain, use the highest supported image refresh rate for the chosen resolution. **It is recommended that you use a refresh rate of 85 Hz.** The image refresh rate is the number of times per second that the image is refreshed.

Minimizing Energy Consumption

If your computer supports VESA monitor power management (available on many HP computers), you can minimize the power consumed by the monitor. There are two power saving modes:

- Suspend mode¹ (uses less than 15W). In this mode, the monitor's front panel indicator light is amber.
- Active off mode² (uses less than 8W). In this mode, the monitor's front panel indicator light is amber.

To set these power saving modes, refer to the manual that came with your computer. If your screen is not displaying an image, check the front panel indicator light first as your monitor may be in a power saving mode.

1. Suspend mode is activated when vertical sync is cut by the video controller.
2. Active off mode is activated when both vertical and horizontal sync are cut by the video controller.

Troubleshooting

Before calling Hewlett-Packard check the following items:

No picture and LED is off.

- Check if monitor is switched ON.
- Check if power cord is properly connected.
- Check if electrical outlet is connected.
- Test if monitor works on another computer previously set to monitor's supported resolution.

No picture and LED is on.

- Check if monitor is not in power saving mode.
- Adjust contrast and brightness through the On-Screen Menu (OSD) using the control buttons.
- Check if computer is switched on.
- Check if video cable has no bent pins.

Colors are not pure.

- Shut down your monitor and switch it on after 30 minutes.

Picture is not centered.

- Adjust picture through the On-Screen Menu (OSD) using the control buttons.

Picture is fuzzy.

- Use the Recall function.
- Reduce contrast through the On-Screen Menu (OSD) using the control buttons.

Technical Specifications

PICTURE TUBE	Size	15-inch flat square tube 13.8-inch viewable image (353mm)
	Phosphorous	Red, Green, Blue P22 (medium short persistence)
	Dot pitch	0.28 mm (0,28mm)
	Face Plate	Anti-glare, anti-static, screen coating
INPUT SIGNAL	Video	0.7V p p analog RGB
	Synchronization	TTL level separate synchronization (negative/positive)
INTERFACE	Input Connector	15-pin mini D-SUB
SCANNING FREQUENCY	Horizontal	31 to 54kHz
	Vertical	50 to 120 Hz
DISPLAY SIZE	283 x 214mm ± 1mm maximum viewable size	
WARM-UP TIME	30 minutes to reach optimum performance level	
PIXEL CLOCK	65 MHz	
POWER SOURCE	AC 100 to 240 V, 50 to 60Hz Current 1.5 A (1,5A)	
OPERATING ENVIRONMENT	Temperature	0°C to 40°C
	Humidity	10% RH through 80% RH (without condensation)
CABINET DIMENSIONS	352(H) × 354(W) × 385(D) mm (including pedestal)	
WEIGHT	(12,5) Kg (27.5lbs)	
TILT/SWIVEL STAND	Tilt Angle	- 5° to +10°
	Swivel Angle	± 45°

Care and Cleaning

Do not place anything on top of the monitor. Doing so may block the monitor vents and cause damage to the monitor due to overheating. Do not let liquid get on or into the monitor. To maximize screen life and prevent damage to the picture tube (such as burned phosphor due to leaving the same image on the screen for a long time), it is recommended that you:

- Use the monitor power management system (on HP computers) or a screen saver program.
- Avoid setting contrast and brightness to their maximum levels for prolonged periods.
- If you do not have a power management system or a screen saver program, switch the monitor off or reduce the brightness and contrast to minimum levels when the monitor is not in use.

Your monitor has an anti-glare, anti-static screen coating. To prevent damage to the monitor screen's coating, use a regular household glass cleaner when cleaning the screen. To clean the screen:

- 1 Switch the monitor off and remove the power plug (pull the plug, not the cable).
- 2 Wet a soft cotton cloth with the cleaning solution and gently wipe the screen. Do not spray cleaner onto the screen because the cleaner may drip inside the monitor.
- 3 Dry with a clean, soft cotton cloth. Do not use cleaning solutions containing fluoride, acids, or alkalis.

Environmental Information

HP has a strong commitment toward the environment. Your HP monitor has been designed to respect the environment as much as possible.

HP can also take back your old monitor for recycling when it reaches the end of its useful life. In fact, HP has a product take-back program in several countries. The collected equipment is sent to one of HP's recycling facilities in Europe or the USA. As many parts as possible are reused. The remainder is recycled. Special care is taken for batteries and other potentially toxic substances, which are reduced to non-harmful components through a special chemical process. If you require more details about HP's product take-back program, contact your dealer or your nearest HP Sales Office.

Hardware Warranty

PART I - HP General Hardware Warranty

General

This HP Monitor Hardware Warranty Statement gives you, the customer, express warranty rights from HP, the manufacturer.

FOR CONSUMER TRANSACTIONS IN AUSTRALIA AND NEW ZEALAND: THE WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT OR MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

THE LAWS OF YOUR COUNTRY MAY PROVIDE FOR DIFFERENT WARRANTY RIGHTS. IF SO, YOUR AUTHORIZED HP DEALER OR HP SALES AND SERVICE OFFICE CAN PROVIDE YOU WITH DETAILS.

Warranty repair or replacement.

Model	Warranty Period	Service Provided
D8896	1 year-unless original end-user customer has otherwise agreed to a shorter period of warranty at the time of purchase.	On-site service.

Hewlett-Packard (HP) warrants this monitor hardware product, or accessory against defects in materials and workmanship for the applicable warranty period stated above, commencing from the date of delivery of the product to the end-user customer.

HP does not warrant that the HP hardware will operate uninterrupted or error free.

If, during the product warranty period, HP is unable, within a reasonable time, to repair or replace your product to the condition as warranted, you will be entitled to a refund (in the amount of the product purchase price) upon prompt return of the product to your authorized HP dealer or other HP designate. Unless otherwise stated or agreed upon in writing with HP, all hardware components must be returned for refund with the entire system process unit. HP software is covered by the HP Software Product Limited Warranty located in your HP product manual. Unless otherwise stated, and to the extent permitted by local law, hardware products may contain remanufactured parts (equivalent to new in performance) or parts which may have been subject to prior incidental use. HP may repair or replace hardware products (i) with products which are equivalent in performance to the products being repaired or replaced but which may have been subject to prior use, or (ii) with products which may contain remanufactured parts equivalent to new in performance or parts which may have been subject to prior incidental use.

Proof of Purchase and Warranty Period

In order to receive service or support for your hardware product for the warranty period, proof of the original purchase date of the product may be required in order to establish the delivery date of your product. If the delivery date is not available, either the purchase date or the manufacturer's date (located on the product) becomes the beginning of the warranty period.

Limitation of Warranty

Warranty does not apply to defects resulting from: (a) improper or inadequate maintenance or calibration; (b) software, interfacing, parts or supplies not supplied by HP; (c) unauthorized repair, maintenance, modification or misuse; (d) operation outside of the published operating specifications for the product; (e) improper site preparation or maintenance; or (f) such other exclusions as may be expressly set forth in this Warranty Statement.

HP MAKES NO OTHER EXPRESS WARRANTY, WHETHER WRITTEN OR ORAL, WITH RESPECT TO THIS PRODUCT.

TO THE EXTENT ALLOWED BY APPLICABLE LOCAL LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IS LIMITED TO THE DURATION OF THE EXPRESS WARRANTY SET FORTH ABOVE.

Limitation of Liability and Remedies

TO THE EXTENT ALLOWED BY APPLICABLE LOCAL LAW, THE REMEDIES IN THIS WARRANTY STATEMENT ARE YOUR SOLE AND EXCLUSIVE REMEDIES. IN NO EVENT SHALL HP BE LIABLE FOR LOSS OF DATA OR FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGE, WHETHER BASED ON WARRANTY CONTRACT, TORT, OR ANY OTHER LEGAL THEORY.

The foregoing limitation of liability shall not apply in the event that any HP product sold hereunder is determined by a court of competent jurisdiction to be defective and to have directly caused bodily injury, death, or property damage. To the extent allowed by applicable local law, HP's liability for property damage does not exceed the greater of \$50,000 or the purchase price of the specific product that caused such damage.

PART II - Year 2000 Warranty

Subject to all of the terms and limitations of the HP Limited Warranty Statement provided with this HP Product, HP warrants that this HP Product will be able to accurately process date data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000, including leap year calculations, when used in accordance with the Product documentation provided by HP (including any instructions for installing patches or upgrades), provided that all other products (e.g. hardware, software, firmware) used in combination with such HP Product(s) properly exchange date data with it. The duration of the Year 2000 warranty extends through January 31, 2001.

Regulatory Information

DECLARATION OF CONFORMITY

according to ISO/IEC Guide 22 and CEN/CENELEC EN 45014

Manufacturer's Name: HEWLETT-PACKARD France
Manufacturer's Address: 5, Avenue Raymond Chanas - EYBENS
38053 GRENOBLE CEDEX 09 - FRANCE

Declares, that the products:

Product Name: 15-inch Color Monitor
Model Number: D8896**

Conform(s) to the following Product Specifications:

SAFETY -International: IEC 60950:1991 + A1 + A2 + A3 + A4 /GB4943-1995
-Europe: EN 60950:1992 + A1 + A2 + A3 + A4

ELECTRO MAGNETIC COMPATIBILITY

-CISPR 22:1993+A1+A2 / EN 55022:1994 +A1+A2 Class B¹⁾
-EN 50082-1:1992
IEC 801-2:1991 / prEN 55024-2:1992 - 4kV CD, 8 kV AD
IEC 801-3:1984 /prEN 55024-3:1991 - 3V/m
IEC 801-4:1988 / prEN 55024-4:1993 - 0.5 kV Signal Lines
1 kV Power Lines

- IEC 555-2:1982 + A1:1985 / EN 60555-2:1987
-EC 61000-3-3:1994 / EN 61000-3-3:1995

-GB9254-1998
- FCC Title 47 CFR, Part 15 class B²⁾
- ICES-003, Issue 3
-VCCI-B
-AS/NZ 3548:1995

Supplementary information: The product herewith complies with the requirements of the following Directives and carries the CE mark accordingly:
the EMC Directive 89/336/EEC and Low Voltage Directive 73/23/EEC both amended by the Directive 93/68/EEC.

¹⁾ The product was tested in a typical configuration with Hewlett-Packard Personal Computer systems.

²⁾ 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.

Grenoble, June 2000

For Compliance Information ONLY, contact:

USA contact: Hewlett-Packard Company, Corporate Product Regulations Manager, 3000 Hanover Street, Palo Alto, CA 94304. (phone (650)857-1501).


Jean-Charles MIARD
Quality Manager

Notice for the USA: FCC Class B Statement

Federal Communications Commission Radio Frequency Interference Statement Warning:

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 correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the distance between the equipment and the receiver.
- Connect the equipment to an outlet on a different circuit to the one the receiver is connected to.
- Consult your dealer or an experienced radio/TV technician for help.

Hewlett-Packard's FCC Compliance Tests were conducted using HP-supported peripheral devices and HP shielded cables, such as those you receive with your system. Changes or modifications not expressly approved by Hewlett-Packard could void the user's authority to operate the equipment.

Safety Warning for USA

If the power cord is not supplied with your monitor, select the proper power cord according to your national electric specifications.

- USA: use a UL listed SVT detachable power cord.

Hewlett-Packard's system certification tests were conducted with HP-supported peripheral devices and HP shielded cables, such as those you received with your system. Cables used with this computer must be properly shielded to comply with the requirements of the FCC.

Changes or modifications not expressly approved by Hewlett-Packard could void the user's authority to operate the equipment.

Notice for MPR

Your HP 15.0-inch Color Monitor has been tested according to MPR 1990:8 for Emission properties and meets the guidelines as given by MPR 1990:10 (2.01 - 2.04).

Notice for Canada

This Class "B" digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la Classe B est conforme a la norme NMB-003 du Canada.

Notice for Japan

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づいたクラス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。
取り扱い説明書に従って正しい取り扱いをして下さい。

Notice for Korea

사용자 안내문 (B급기기)
이 기기는 비업무용으로 전자파장애 검정을 받은 기기로서, 주거지역에서는 물론 모든 지역에서 사용할 수 있습니다.