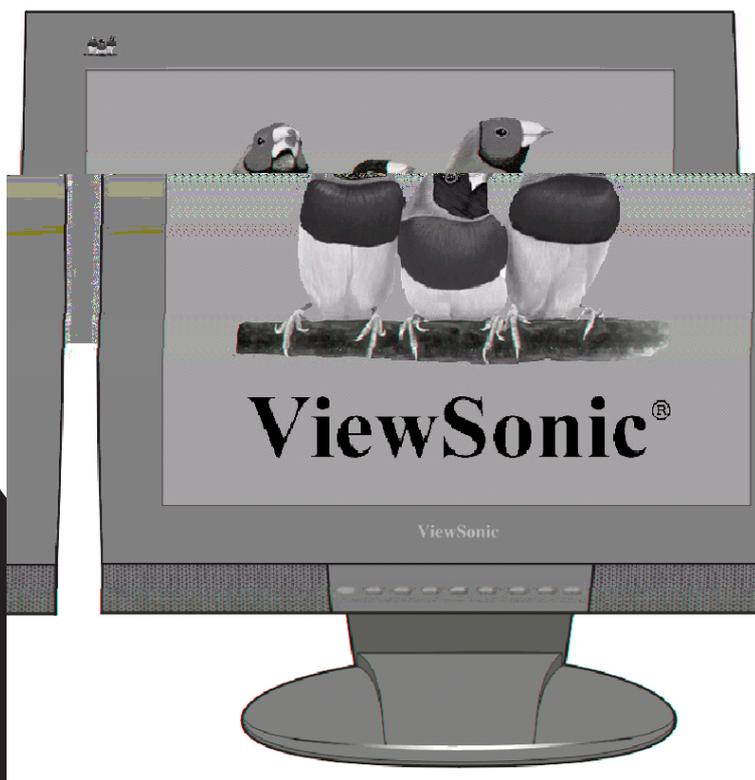


ViewSonic®

VG900b



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使用手冊

Full 19" Diagonal Viewable Screen

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As an ENERGY STAR® partner, ViewSonic Corporation has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

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In the interest of continuing product improvement, ViewSonic Corporation reserves the right to change product specifications without notice. Information in this document may change without notice.

No part of this document may be copied, reproduced, or transmitted by any means, for any purpose without prior written permission from ViewSonic Corporation.

Product Registration

To meet your future needs, and to receive any additional product information as it becomes available, please register your product on the Internet at: www.viewsonic.com. The ViewSonic® Wizard CD-ROM also provides an opportunity for you to print the registration form, which you may mail or fax to ViewSonic.

For Your Records

Product Name:	ViewSonic VG900b
Model Number:	VLCDS24020-2W
Document Number:	A-CD-VG900b-1
Serial Number:	_____
Purchase Date:	_____

Product disposal at end of product life

ViewSonic is concerned about the preservation of our environment. Please dispose of this product properly at the end of its useful life. Your local waste disposal company may provide information about proper disposal.

Getting Started

Congratulations on your purchase of a ViewSonic® LCD display. **Important!** *Save the original box and all packing material for future shipping needs.*

NOTE: The word “Windows” in this user guide refers to the following Microsoft operating systems: Windows ‘95, Windows NT, Windows ‘98, Windows 2000, Windows Me (Millennium), and Windows XP.

Package Contents

Your LCD display package includes:

- LCD display
- US power cord
- Schuko power cord
- 15 pin VGA Video cable
- Stereo mini cable
- AC/DC Power Adapter
- ViewSonic Wizard CD-ROM

NOTE: The CD jacket contains the Quick Start Guide, and the CD includes the User Guide PDF files and INF/ICM display optimization files. The INF file ensures compatibility with Windows operating systems, and the ICM file (Image Color Matching) ensures accurate on-screen colors. ViewSonic recommends that you install both files.

Precautions

-
- Sit at least 18" from your LCD display.
 - **Avoid touching the screen.** Skin oils are difficult to remove.
 - **Never remove the rear cover.** Your LCD display contains high-voltage parts. You may be seriously injured if you touch them.
 - Avoid exposing your LCD display to direct sunlight or another heat source. Orient your LCD display away from direct sunlight to reduce glare.
 - Always handle your LCD display with care when moving it.
 - Place your LCD display in a well-ventilated area. Do not place anything on your LCD display that prevents heat dissipation.
 - Ensure the area around the LCD display is clean and free of moisture.
 - Do not place heavy objects on the LCD display, video cable, or power cord.
 - If smoke, abnormal noise, or strange odor is present, immediately switch the LCD display off and call your dealer or ViewSonic. It is dangerous to continue using the LCD display.
-

Quick Installation

1 Remove back plate #1 then plate #2.

2 Connect AC/DC power cord to the adapter then to the display and to an AC outlet

3 Connect video cable

- Make sure both the LCD display and computer are turned OFF
- Connect the video cable from the LCD display to the computer

Macintosh users: Models older than G3 require a Macintosh adapter. Attach the adapter to the computer and plug the video cable into the adapter.

To order a ViewSonic® Macintosh adapter, contact ViewSonic Customer Support.

4 Turn ON LCD display and computer

Turn ON the LCD display, then turn ON the computer. This sequence (LCD display before computer) is important.

NOTE: Windows users may receive a message asking them to install the INF file. This is on the CD.

5 Insert the ViewSonic Wizard CD into the computer's CD drive.

Follow the on-screen instructions

If your computer does not have a CD-ROM drive, see "Customer Support."

(1) Wait for the CD-ROM to auto-start.

5 Wizard CD (continued)

NOTE: If the CD-ROM does not auto-start: double-click on the CD-ROM icon in the Windows Explorer, then double-click on **viewsonic.exe**.

(2) Follow the on-screen instructions.

6 Audio Installation (optional)

Speakers: Connect the audio cable (lime-colored) to the AUDIO OUT port of your computer's sound card, then to the LCD display's AUDIO IN port (see illustration below).

7 Windows users: Set the timing mode (resolution and refresh rate)

Example: 1280 x 1024 @ 60 Hz.

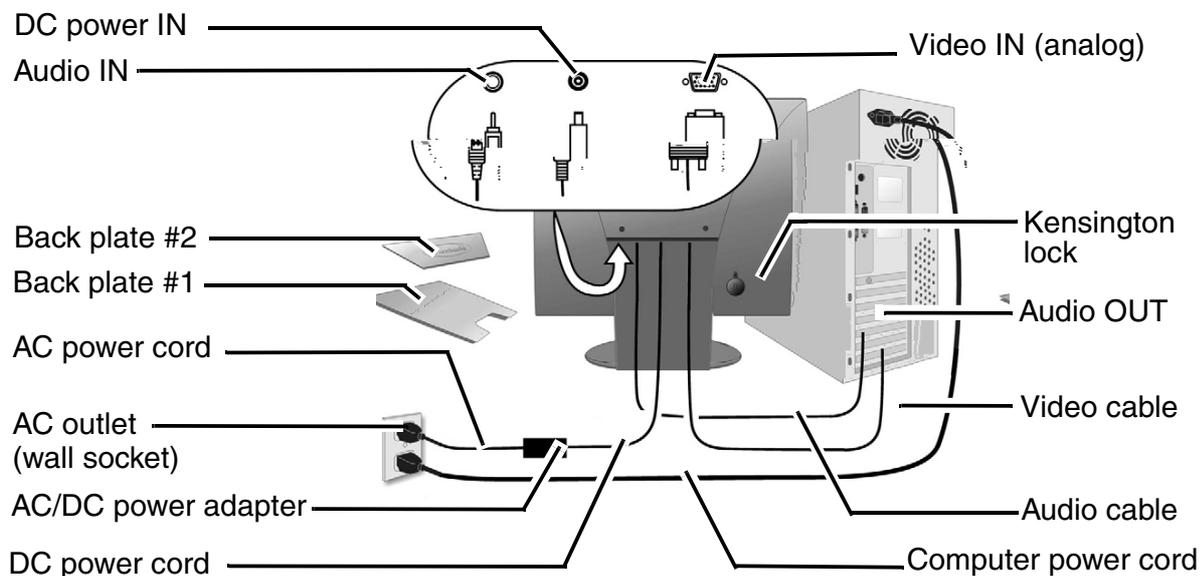
For instructions on changing the resolution and refresh rate, see the graphic card's user guide.

Installation is complete. Enjoy your new ViewSonic, LCD display.

To be best prepared for any future customer service needs: print this user guide and write the serial number in "For Your Records" on page 2. (See back of LCD display.)

You can register your product online at the website for your region. See the Customer Support table in this guide.

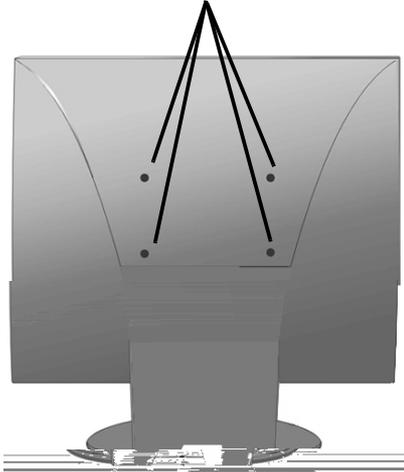
The ViewSonic Wizard CD-ROM also provides an opportunity for you to print the registration form which you may mail or fax to ViewSonic.



Installation of Wall Mount (Optional)

To obtain a wall-mounting kit, contact ViewSonic or your local dealer. Refer to the instructions that come with the base mounting kit. To convert your LCD display from a desk-mounted to a wall-mounted display, do the following:

Four screw holes for wall mount



- 1** Disconnect Power.
- 2** Lay the LCD display face down on a towel or blanket. Notice the four screw holes for the wall mount on the back as shown on the left.
- 3** Attach the mounting bracket from the VESA compatible wall-mounting kit (100 mm x 100 mm distance).
- 4** Attach the LCD display to the wall, following the instructions in the wall-mounting kit.

Using the LCD Display

Setting the Timing Mode

Setting the timing mode is important for maximizing the quality of the screen image and minimizing eye strain. The **timing mode** consists of the **resolution** (example 1280 x 1024) and **refresh rate** (or vertical frequency; example 75 Hz). After setting the timing mode, use the OnView® controls to adjust the screen image.

For the best picture quality set your LCD display timing mode to:
VESA 1280 x 1024 @ 60Hz.

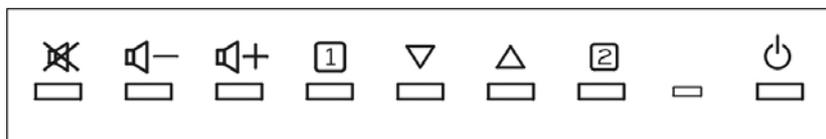
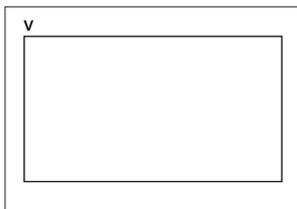
To set the Timing Mode:

- 1 Set the resolution: Right-click on the Windows desktop > **Properties** > **Settings** > set the resolution.
- 2 Set the refresh rate: See your graphic card's user guide for instructions.

WARNING: Do not set the graphics card in your computer to exceed the maximum refresh rate of 75Hz; doing so may result in permanent damage to your LCD display

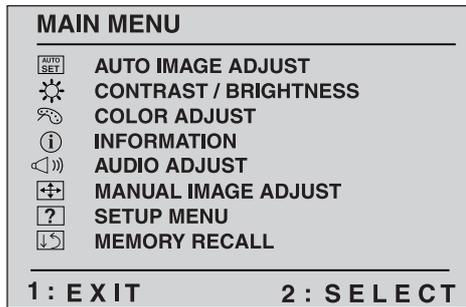
Adjusting the Screen Image

Use the buttons on the front control panel to display and adjust the OnView® controls which display on the screen. The OnView controls are explained at the top of the next page and are defined in “Main Menu Controls” on page 9.



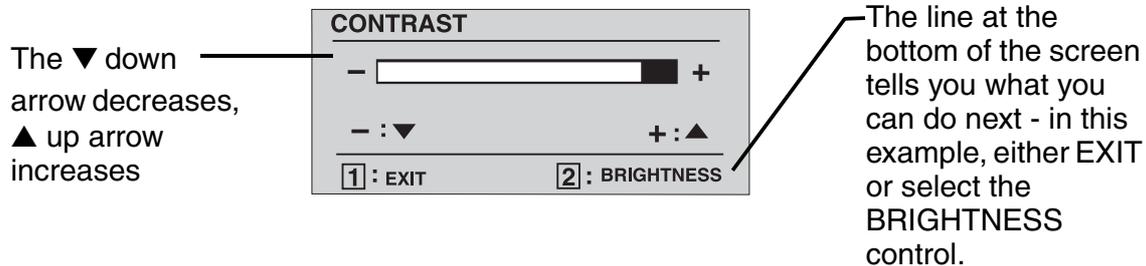
Do the following to adjust the screen image:

- 1 To display the Main Menu, press button [1].



NOTE: All OnView menus and adjustment screens disappear automatically after about 30 seconds. This time period is adjustable through the Setup menu and the OSD timeout control described on page 11.

- 2 To highlight a control you want to adjust, press ▲ or ▼ to scroll up or down the Main Menu.
- 3 To select the highlighted control, press button [2]. A control screen appears like the example shown below.



- 4 To adjust the control, press the up ▲ or down ▼ buttons.
- 5 To save the adjustments and exit the menu, press button [1] *twice*.

The following tips may help you optimize your display:

- Adjust your computer's graphic card so that it outputs a video signal 1280 x 1024 @ 60 Hz to the LCD display. (Look for instructions on "changing the refresh rate" in your graphic card's user guide.)
- If necessary, make small adjustments using H POSITION and V POSITION until the screen image is completely visible. (The black border around the edge of the screen should barely touch the illuminated "active area" of the LCD display.)

Main Menu Controls

Adjust the menu items shown below by using the up ▲ and down ▼ buttons.

Control Explanation



Auto Image Adjust automatically sizes, centers, and fine tunes the video signal to eliminate waviness and distortion.

Press the [2] button to obtain a sharper image.

NOTE: Auto Image Adjust works with most common video cards. If this function does not work on your LCD display, then lower the video refresh rate to 60 Hz and set the resolution to its pre-set value.



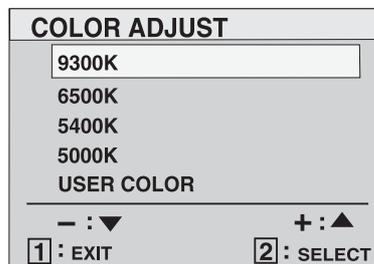
Contrast adjusts the difference between the image background (black level) and the foreground (white level).



Brightness adjusts background black level of the screen image.



Color Adjust provides several color options: preset color temperatures and User which allows you to adjust red (R), green (G), and blue (B). The factory setting for this product is 6500K (6500 Kelvin).



9300K — Adds blue to the screen image for cooler white (used in most office settings with fluorescent lighting).

6500K — Adds red to the screen image for warmer white and richer red. Default setting.

5400K — Adds green to the screen image for a darker color.

5000K — Adds blue and green to the screen image for a darker color.

User Color — Individual adjustments for red, green, and blue.

1 To select color (R, G or B) press button [2].

2 To adjust selected color, press ▲ or ▼.

3 When you are finished making all color adjustments, press button [1] *twice*.

Control Explanation

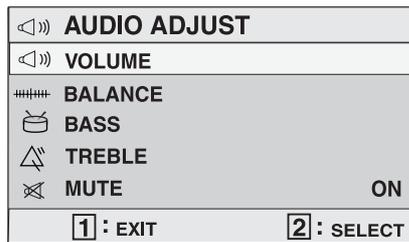


Information displays the timing mode (video signal input) coming from the graphics card in your computer. See your graphic card’s user guide for instructions on changing the resolution and refresh rate (vertical frequency).

VESA 1280 x 1024 @ 60 Hz (recommended) means that the resolution is 1280 x 1024 and the refresh rate is 60 Hertz.



Audio Adjust



Volume increases the volume, decreases the volume, and mutes the audio.



Balance adjusts the proportion of sound coming from each speaker.



Bass adjusts the low (bass) frequency audio output.



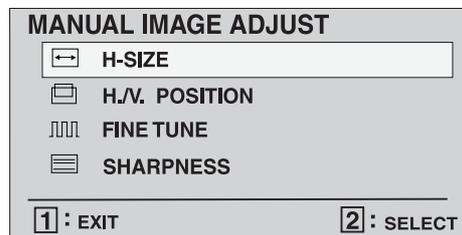
Treble adjusts the high (treble) frequency audio output.



Mute temporarily silences audio output.



Manual Image Adjust



The Manual Image Adjust controls are explained below:



H. Size (Horizontal Size) adjusts the width of the screen image.

NOTE: Vertical size is automatic with your LCD display.

Control Explanation



H./V. Position adjusts horizontal and vertical position of the screen image. You can toggle between Horizontal and Vertical by pressing button [2]. Horizontal moves the screen image to the left or to the right. Vertical moves the screen image up and down.



Fine Tune sharpens focus by aligning the illuminated text and/or graphic characters.

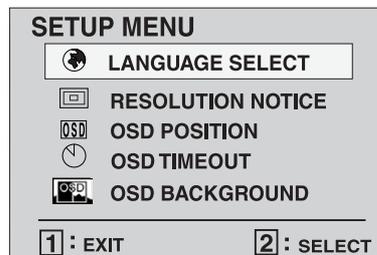
NOTE: Try the **Auto Image Adjust** (see page 9) before using the **Fine Tune** control.



Sharpness adjusts the clarity and focus of the screen image.



Setup Menu displays the menu shown below.



The Setup Menu controls are explained below.



Language allows you to choose the language used in the menus and control screens.



Resolution Notice advises the optimal resolution to use. After selecting Resolution Notice, a sub menu appears asking if you want to Disable or Enable the notice. If you want the Resolution Notice to appear on-screen, select Enable.



OSD Position allows you to move the on-screen display menus and control screens.



OSD Timeout sets the length of time an on-screen display screen is displayed. For example, with a “15 second” setting, if a control is not pushed within 15 seconds, the display screen disappears.



OSD Background allows you to turn the On-Screen display background on or off. This means that while making adjustments from the OSD control screens you can also view open software applications, or the Windows desktop.

Control	Explanation
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Memory Recall returns adjustments to the original factory settings if the display is operating in a factory Preset Timing Mode listed in this user guide.

Exception: This control does not affect changes made with the User Color control.

Other Information

Specifications

LCD	Type	19.0" (full 19.0" viewable diagonal area), TFT (Thin Film Transistor), Active Matrix SXGA LCD, 0.294 mm pixel pitch	
	Color Filter Glass surface	RGB vertical stripe Anti-Glare	
Input signal	Video Sync	RGB analog (0.7/1.0 Vp-p, 75 ohms) H/V Separated (TTL), f _h :30-82 kHz, f _v :50-75 Hz	
Audio input	Speaker Connector	2 x 3 watts Stereo mini audio line IN	
Compatibility	PC Macintosh*	Up to VGA 1280 x 1024 Non-interlaced (NI) Power Macintosh up to VGA 1280 x 1024	
Resolution	Recommended and supported	1280 x 1024 @ 60, 75 Hz (NI) 1152 x 870 @ 75 Hz (NI) 1024 x 768 @ 60 Hz (NI) 832 x 624 @ 75 Hz (NI) 800 x 600 @ 60, 75 Hz (NI) 640 x 480 @ 70 Hz (NI) 720 x 400 @ 70 Hz (NI)	
Power	Voltage	100-240 VAC, 50/60 Hz (auto switch)	
Display area	Full Scan	376.32 mm (H) x 301.05 mm (V) 14.82" (H) x 11.85" (V)	
Operating conditions	Temperature Humidity Altitude	32° F to + 104° F (0° C to + 40° C) 10% to 90% (no condensation) To 10,000 feet	
Storage conditions	Temperature Humidity Altitude	-4° F to + 140° F (-20° C to + 60° C) 10% to 90% (no condensation) To 40,000 feet	
Dimensions	Physical (LCD display only)	439.0 mm (W) x 180.5 mm (D) x 465.8 mm (H) 17.3" (W) x 7.1" (D) x 18.3" (H)	
Weight	Net	7.5 kg (16.54 lbs) LCD display only	
Regulations		UL, FCC-B, CB Report, CE, IC-B (Doc-B), ENERGY STAR [®] , NOM, TUV/GS, TUV-S, VCCI, BSMI, PSB, C-Tick, GOST-R, PCT-BZO2, NEMKO, SEMKO, DEMKO, FIMKO, TCO'99, CCEE, c-UL, TUV/Ergo, ISO13406-2, PCBC	
Power saving modes	On Active Off	48 W (typical) <3 W	(green LED) (orange LED)

Preset Timing Mode (pre-adjusted to VESA[®] 1280 x 1024@ 60 Hz)

Warning: Do not set the graphics card in your computer to exceed these refresh rates; doing so may result in permanent damage to the LCD display.

* Macintosh computers older than G3 require a ViewSonic[®], Macintosh adapter. To order an adapter, contact ViewSonic.

Troubleshooting

No power

- Make sure power button (or switch) is ON.
- Make sure A/C power cord is securely connected to the DC power supply and the power supply is firmly connected to the LCD display.
- Plug another electrical device (like a radio) into the power outlet to verify that the outlet is supplying proper voltage.

Power is ON but no screen image

- Make sure the video cable supplied with the LCD display is tightly secured to the video output port on the back of the computer. If the other end of the video cable is not attached permanently to the LCD display, tightly secure it to the LCD display.
- Adjust brightness and contrast.
- If you are using an Macintosh older than G3, you need a Macintosh adapter.

Wrong or abnormal colors

- If any colors (red, green, or blue) are missing, check the video cable to make sure it is securely connected. Loose or broken pins in the cable connector could cause an improper connection.
- Connect the LCD display to another computer.
- If you have an older graphics card, contact ViewSonic for a non-DDC adapter.

Control buttons do not work

- Press only one button at a time.

Customer Support

For technical support or product service, see the table below or contact your reseller.

NOTE: You will need the product serial number.

Country/ Region	Web site	T = Telephone F = FAX	Email
United States	viewsonic.com/ support	T: (800) 688-6688 F: (909) 468-1202	service.us@ viewsonic.com
Canada	viewsonic.com/ support	T: (800) 688-6688 F: (909) 468-1202	service.ca@ viewsonic.com

Cleaning the LCD Display

- MAKE SURE THE LCD DISPLAY IS TURNED OFF.
- NEVER SPRAY OR POUR ANY LIQUID DIRECTLY ONTO THE SCREEN OR CASE.

To clean the screen:

- 1 Wipe the screen with a clean, soft, lint-free cloth. This removes dust and other particles.
- 2 If still not clean, apply a small amount of non-ammonia, non-alcohol based glass cleaner onto a clean, soft, lint-free cloth, and wipe the screen.

To clean the case:

- 1 Use a soft, dry cloth.
- 2 If still not clean, apply a small amount of a non-ammonia, non-alcohol based, mild non-abrasive detergent onto a clean, soft, lint-free cloth, then wipe the surface.

Disclaimer

ViewSonic does not recommend the use of any ammonia or alcohol-based cleaners on the LCD display screen or case. Some chemical cleaners have been reported to damage the screen and/or case of the LCD display. ViewSonic will not be liable for damage resulting from use of any ammonia or alcohol-based cleaners.

Limited Warranty

VIEWSONIC LCD DISPLAY

What the warranty covers:

ViewSonic warrants its products to be free from defects in material and workmanship during the warranty period. If a product proves to be defective in material or workmanship during the warranty period, **ViewSonic** will, at its sole option, repair or replace the product with a like product. Replacement product or parts may include remanufactured or refurbished parts or components.

How long the warranty is effective:

ViewSonic® LCD displays are warranted for three (3) years for all parts including the light source and three (3) years for all labor from the date of the first consumer purchase.

Who the warranty protects:

This warranty is valid only for the first consumer purchaser.

What the warranty does not cover:

1. Any product on which the serial number has been defaced, modified or removed.
2. Damage, deterioration or malfunction resulting from:
 - a. Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
 - b. Repair or attempted repair by anyone not authorized by **ViewSonic**.
 - c. Any damage of the product due to shipment.
 - d. Removal or installation of the product.
 - e. Causes external to the product, such as electrical power fluctuations or failure.
 - f. Use of supplies or parts not meeting **ViewSonic**'s specifications.
 - g. Normal wear and tear.
 - h. Any other cause which does not relate to a product defect.
3. Removal, installation, and set-up service charges.

How to get service:

1. For information about receiving service under warranty, contact **ViewSonic Customer Support**. You will need to provide your product's serial number.
2. To obtain service under warranty, you will be required to provide (a) the original dated sales slip, (b) your name, (c) your address, (d) a description of the problem, and (e) the serial number of the product.
3. Take or ship the product freight prepaid in the original container to an authorized **ViewSonic** service center or **ViewSonic**.
4. For additional information or the name of the nearest **ViewSonic** service center, contact **ViewSonic**.

Limitation of implied warranties:

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION CONTAINED HEREIN INCLUDING THE IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Exclusion of damages:

VIEWSONIC'S LIABILITY IS LIMITED TO THE COST OF REPAIR OR REPLACEMENT OF THE PRODUCT. VIEWSONIC SHALL NOT BE LIABLE FOR:

1. DAMAGE TO OTHER PROPERTY CAUSED BY ANY DEFECTS IN THE PRODUCT, DAMAGES BASED UPON INCONVENIENCE, LOSS OF USE OF THE PRODUCT, LOSS OF TIME, LOSS OF PROFITS, LOSS OF BUSINESS OPPORTUNITY, LOSS OF GOODWILL, INTERFERENCE WITH BUSINESS RELATIONSHIPS, OR OTHER COMMERCIAL LOSS, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.
2. ANY OTHER DAMAGES, WHETHER INCIDENTAL, CONSEQUENTIAL OR OTHERWISE.
3. ANY CLAIM AGAINST THE CUSTOMER BY ANY OTHER PARTY.

Effect of state law:

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow limitations on implied warranties and/or do not allow the exclusion of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

Sales outside the U.S.A. and Canada:

For warranty information and service on **ViewSonic** products sold outside of the U.S.A. and Canada, contact **ViewSonic** or your local **ViewSonic** dealer.

ViewSonic LCD Display Warranty (V3.0)

Release Date: 01-29-2002

Compliance Information for U.S.A.

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 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/TV technician for help.

FCC Warning

To assure continued FCC compliance, the user must use grounded power supply cord and the provided shielded video interface cable with bonded ferrite cores. If a BNC cable is going to be used, use only a shielded BNC(5) cable. Also, any unauthorized changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device.

CE Conformity for Europe



The device complies with the requirements of the EEC directive 89/336/EEC as amended by 92/31/EEC and 93/68/EEC Art.5 with regard to "Electromagnetic compatibility, and 73/23/EEC as amended by 93/68/EEC Art.13 with regard to "Safety."

ViewSonic® Corporation