ViewSonic®

VG510b/VG510s LCD Display

- User Guide
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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 cables which are included with the equipment or specified. 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.

For Canada

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

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

For European Countries

CE Conformity



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."

User Information for all Countries

Notice: Use the cables which are included with the unit or specified.

Important Safety Instructions

- 1. Read these instructions completely before using the equipment.
- 2. Keep these instructions in a safe place.
- **3.** Heed all warnings.
- **4.** Follow all instructions.
- **5.** Do not use this equipment near water.
- **6.** Clean with a soft, dry cloth. If further cleaning is required, see "Cleaning the Display" in this guide for further instructions.
- 7. Do not block any ventilation openings. Install the equipment in accordance with the manufacturer's instructions.
- **8.** Do not install near any heat sources such as radiators, heat registers, stoves, or other devices (including amplifiers) that produce heat.
- **9.** Do not attempt to circumvent the safety provisions of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade and the third prong are provided for your safety. If the plug does not fit into your outlet, consult an electrician for replacement of the outlet.
- **10.** Protect the power cord from being tread upon or pinched, particularly at the plug, and the point where if emerges from the equipment. Be sure that the power outlet is located near the equipment so that it is easily accessible.
- 11. Only use attachments/accessories specified by the manufacturer.
- **12.** Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the equipment. When a cart is used, use caution when moving the cart/equipment combination to avoid injury from tipping over.
- 13. Unplug this equipment when it will be unused for long periods of time.
- **14.** Refer all servicing to qualified service personnel. Service is required when the unit has been damaged in any way, such as: if the power-supply cord or plug is damaged, if liquid is spilled onto or objects fall into the unit, if the unit is exposed to rain or moisture, or if the unit does not operate normally or has been dropped.

Copyright Information

Copyright © ViewSonic® Corporation, 2005. All rights reserved.

Macintosh and Power Macintosh are registered trademarks of Apple Computer, Inc.

Microsoft, Windows, Windows NT, and the Windows logo are registered trademarks of Microsoft Corporation in the United States and other countries.

ViewSonic, the three birds logo, OnView, ViewMatch, and ViewMeter are registered trademarks of ViewSonic Corporation.

VESA is a registered trademark of the Video Electronics Standards Association. DPMS and DDC are trademarks of VESA.

ENERGY STAR® is a registered trademark of the U.S. Environmental Protection Agency (EPA).

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

Disclaimer: ViewSonic Corporation shall not be liable for technical or editorial errors or omissions contained herein; nor for incidental or consequential damages resulting from furnishing this material, or the performance or use of this product.

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:	VG510b/s				
	ViewSonic 15" LCD Display				
Model Number:	VLCDS27955-1W/2W				
Document Number:	VG510b/s-1_UG_ENG Rev. 1B 04-08-05				
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. For TCO'03 recycling information, please refer to our website:

- 1. USA: www.viewsonic.com/pdf/recyclePlus.pdf
- **2.** Europe: www.viewsoniceurope.com
- 3. Taiwan: recycle.epa.gov.tw

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
- Power cord
- AC/DC power adapter
- Video cable (VGA)
- Aduio cable (stereo mini jack)
- ViewSonic Wizard CD-ROM
- · Quick Start Guide

NOTE: 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 the INF and ICM 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, an abnormal noise, or a 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.
- Do not rub or apply pressure to the LCD panel, as it may permanently damage the screen.

Quick Installation

- 1. Remove rear panel cover
- 2. Connect power cord (and AC/DC adapter if required)
- 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 computerTurn 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" on page 16.

• Wait for the CD-ROM to auto-start. **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**.

• 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).

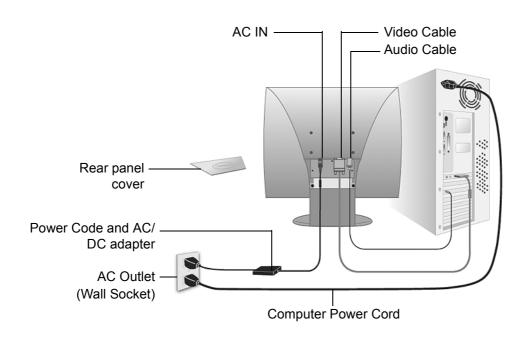
7. Windows users: Set the timing mode (resolution and refresh rate)

Example: 1024 x 768 @ 60 Hz. For instructions on changing the resolution and refresh rate, see the graphics card's user guide.

Installation is complete. Enjoy your new ViewSonic LCD display.

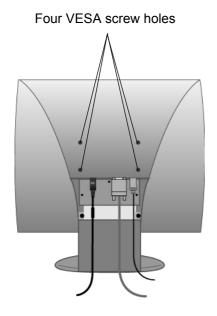
To be best prepared for any future customer service needs: print this user guide and write the serial number in "For Your Records" on page 3. (See back of LCD display.)

You can register your product online at the ViewSonic 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.



Wall Mounting (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:



- **1.** Verify that the Power button is turned Off, then disconnect the power cord.
- 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 (75 mm x 75 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 1024 x 768) and **refresh rate** (or vertical frequency; example 60 Hz). After setting the timing mode, use the OSD (On Screen Display) controls to adjust the screen image.

For the best picture quality set your LCD display timing mode to:

VESA 1024 x 768 @ 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.

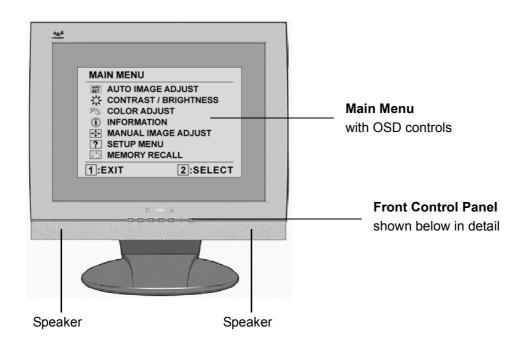
WARNING: Do not set the graphics card in your computer to exceed the maximum refresh rate of 75Hz; doing so may result in permanent damage to your LCD display.

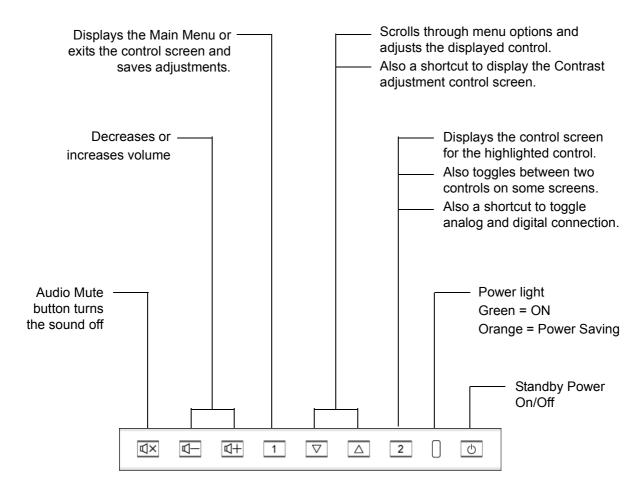
OSD and Power Lock Settings

- **OSD Lock:** Press and hold [1] and the up arrow ▲ for 10 seconds. If any buttons are pressed the message *OSD Locked* will display for a few seconds.
- **OSD Unlock:** Press and hold [1] and the up arrow ▲ again for 10 seconds.
- **Power Button Lock:** Press and hold [1] and the down arrow ▼ for 10 seconds. If the power button is pressed the message *Power Button Locked* will display for few seconds. With or without this setting, after a power failure, your LCD display's power will automatically turn ON when power is restored.
- **Power Button Unlock:** Press and hold [1] and the down arrow ▼again for 10 seconds.

Adjusting the Screen Image

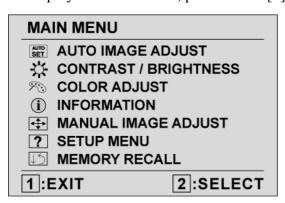
Use the buttons on the front control panel to display and adjust the OSD controls which display on the screen. The OSD controls are explained at the top of the next page and are defined in "Main Menu Controls" on page 9.





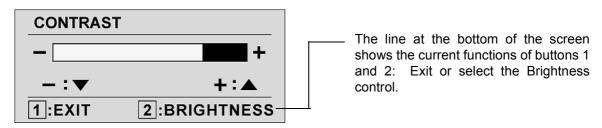
Do the following to adjust the display setting:

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



NOTE: All OSD menus and adjustment screens disappear automatically after about 30 seconds. This is adjustable through the OSD timeout setting in the setup menu.

- 2. To select a control to adjust, press▲or ▼to scroll up or down in the Main Menu.
- **3.** After the desired control is selected, press button [2]. A control screen like the one shown below appears.



- **4.** To adjust the setting, 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 the computer's graphics card so that it outputs a 1024 x 768 @ 60Hz video signal to the LCD display. (Look for instructions on "changing the refresh rate" in the graphics card's user guide.)
- If necessary, make small adjustments using H. POSITION and V. POSITION until the screen image is <u>completely visible</u>. (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).

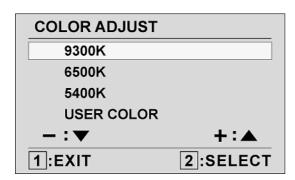
Brightness adjusts background black level of the screen image.



Input Select toggles between inputs if you have more than one computer connected to the VG510b/VG510s.



Color Adjust provides several color adjustment modes, including preset color temperatures and a User Color mode which allows independent adjustment of 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.

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

User Color Individual adjustments for red (R), green (G), and blue (B).

- 1. To select color (R, G or B) press button [2].
- **2.** To adjust selected color, press \triangle or ∇ .

Important: If you select RECALL from the Main Menu when the product is set to a Preset Timing Mode, colors return to the 6500K factory preset.

Control Explanation

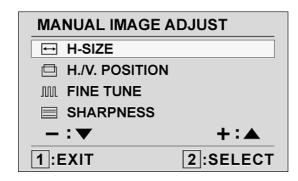


Information displays the timing mode (video signal input) coming from the graphics card in the computer, the LCD model number, the serial number, and the ViewSonic® website URL. See your graphics card's user guide for instructions on changing the resolution and refresh rate (vertical frequency).

NOTE: VESA 1024 x 768 @ 60Hz (recommended) means that the resolution is 1024 x 768 and the refresh rate is 60 Hertz.



Manual Image Adjust displays the Manual Image Adjust menu.



The **Manual Image Adjust** controls are explained below:



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



H./V. Position (Horizontal/Vertical Position) moves the screen image left or right and up or down.



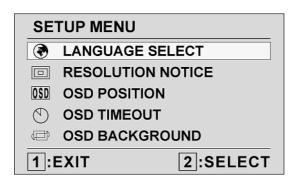
Fine Tune sharpens the focus by aligning the text and/or graphic characters with pixel boundaries.



Sharpness adjusts the clarity and focus of the screen image.



Setup menu displays the menu shown below:



The **Setup Menu** controls are explained below:

Control Explanation



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



Resolution Notice advises the optimal resolution to use.



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



OSD Timeout sets the length of time the 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 the user to turn the On-Screen Display background On or Off.



Memory Recall returns the adjustments back to factory settings if the display is operating in a factory Preset Timing Mode listed in the Specifications of this manual.

Exception: This control does not affect changes made with the User Color control, Language or Power Lock setting.

Other Information

Specifications

LCD	Туре	15" (full 15" viewable diagonal area), TFT (Thin Film Transistor), Active Matrix XGA LCD, 0.297 mm pixel pitch		
	Color Filter	RGB vertical stripe		
	Glass Surface	Anti-Glare		
Input Signal	Analog	RGB analog (0.7/1.0 Vp-p, 75 ohms) Separate Sync		
	Digital	TMDS (100 Ohm)		
		f _h :30-62 kHz, f _v :50-75 Hz		
Compatibility	PC	Up to 1024 x 768 Non-interlaced		
	Macintosh ¹	Power Macintosh up to 1024 x 768		
Resolution	Recommended	1024 x 768 @ 60 Hz		
	and supported	1024 x 768 @ 60, 70, 72, 75 Hz		
		800 x 600 @ 56, 60, 72, 75 Hz		
		640 x 480 @ 60, 75 Hz		
		720 x 400 @ 70 Hz		
Power	Voltage	100-240 VAC, 50/60 Hz (auto switch), 12VDC, 3A		
Display area	Full Scan	304.1 mm (H) x 118.1 mm (V)		
		12.0" (H) x 9.0" (V)		
Operating	Temperature	32° F to + 104° F (0° C to + 40° C)		
conditions	Humidity	10% to 90% (non-condensing)		
	Altitude	To 10,000 feet		
Storage	Temperature	-4° F to + 140° F (-20° C to + 60° C)		
conditions	Humidity	10% to 90% (non-condensing)		
	Altitude	To 40,000 feet		
Dimensions	Physical	346 mm (W) x 355 mm (H) x 156 mm (D)		
		13.6" (W) x 14.0" (H) x 6.1" (D)		
	LCD display only	346 mm (W) x 305 mm (H) x 43 mm (D)		
		13.6" (W) x 12.0" (H) x 1.7" (D)		
Weight	Net	13.6 lb (3.4 kg)		
	LCD display only	6.0 lb (2.7 kg)		
Regulations		BSMI, VCCI, CCC, PSB, C-Tick, PCBC, Green Mark,		
		CE, GS, Ergo, Gost-R/Hygienic, SASO, TCO'99, Energy,		
		UL/cUL, FCC-B, ICES-B, NOM, TUV-S, ENERGY STAR®		
Power saving	On	Normal (green LED)		
modes	Off	<1W (orange LED)		

Preset Timing Mode (pre-adjusted to VESA[®] 1024 x 768 @ 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.

¹ 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 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	Website	T = Telephone F = FAX	Email
United States	www.viewsonic.com/support	T= (800) 688 6688 F= (909) 468 1202	service.us@viewsonic.com
Canada	www.viewsonic.com/support	T= (886) 463 4775 F= (909) 468 1202	service.ca@viewsonic.com
United Kingdom	www.viewsoniceurope.com	T= (0800) 833 648 F= +44 (0) 1293 643 910	service.eu@viewsoniceurope.com
Europe, Middle East, Baltic countries, and North Africa	www.viewsoniceurope.com	(Contact your reseller)	service.eu@viewsoniceurope.com
Australia and New Zealand	www.viewsonic.com.au	AUS= 1800 880 818 NZ= 0800 008 822	service@au.viewsonic.com
Singapore, Southeast Asia, and India	www.viewsonic.com.sg	T=+ 65 273 4018 F=+ 65 273 1566	service@sg.viewsonic.com
South Africa and other countries	www.viewsonic.com	T=+886 (2) 2246 3456 F=+886 (2) 8242 3668	service@sd.viewsonic.com
Hong Kong	www.hk.viewsonic.com	T= +852 2268 6878 F= +852 2268 6778 Toll Free= +852 310 22 900	service@hk.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 further cleaning is required, apply a small amount of <u>non-ammonia</u>, <u>non-alcohol</u> 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 further cleaning is required, apply a small amount of a <u>non-ammonia</u>, <u>non-alcohol</u> 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. Any product exhibiting a condition commonly known as "image burn-in" which results when a static image is displayed on the product for an extended period of time.
- 4. 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 Limited Warranty (V3.5)



