

USER'S GUIDE

FLATRON LCD 295LM Color Monitor

# Color Monitor

# FLATRON LCD 295LM

User's Guide  
Benutzerhandbuch  
Manuel d'utilisation  
Guida Utente  
Guia del Usuario  
Manual do proprietário  
Handleiding

Please read this manual carefully before operating your set.  
Retain it for future reference.

Record model number and serial number of the set.

See the label attached on the back cover and quote this information to your dealer when you require service.



**LG Electronics Inc.**

<http://www.lge.com>

P/NO : 3828TUL135A (S-0103)

Printed in Korea



# FCC Warning

## Class B Computing Device

### Information to the User

This equipment has been tested and found to comply with the limits for a class B digital device pursuant to part 15 of 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 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 and for additional suggestions.

The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock No. 004-000-00345-4.

### FCC Warning

The user is cautioned that changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

NOTE: In order for an installation of this product to maintain compliance with the limits for a Class B device, shielded cables must be used.

# Contents

## ENGLISH

Introduction.....	A1
Description of Controls.....	A2
Connecting the Monitor.....	A6
Making use of USB (Universal Serial Bus).....	A8
Connection of external equipment.....	A9
On Screen Display (OSD) Control Adjustment.....	A10
On Screen Display(OSD) Selection and Adjustment.....	A11
Video Memory Modes.....	A15
Troubleshooting.....	A16
Specifications.....	A17

## DEUTSCH

Einleitung.....	B1
Beschreibung der Steuerung.....	B2
Anschließen.....	B6
Verwendung des USB (Universal Serial Bus).....	B8
Anschließen der externen Geräte.....	B9
On Screen Display (OSD) Anpassung.....	B10
OSD Einstellung und Auswahlssymbole.....	B11
Videospeichermodi.....	B15
Störungen.....	B16
Produktbeschreibung.....	B17

## FRANÇAIS

Introduction.....	C1
Description des Commandes.....	C2
Branchement du Moniteur.....	C6
Utilisation du USB (Bus en série universel).....	C8
Connexion de l'équipement externe.....	C9
Réglage des Commandes Affichage Écran.....	C10
Options de sélection et de Réglage OSD (affichage écran).....	C11
Mise en Mémoire de Modes Vidéo.....	C15
Quelques Conseils en Cas D'incident.....	C16
Spécifications D'écran.....	C17

## ITALIANO

Introduzione.....	D1
Descrizione dei Comandi.....	D2
Collegamento del Monitor.....	D6
Utilizzo dell'USB (Universal Serial Bus).....	D8
Collegamento a un'apparecchiatura esterna.....	D9

Controllo Regolazione On Screen Display (OSD).....	D10
Elementi di Selezione e Regolazione dell'OSD.....	D11
Modalità di Memoria Video.....	D15
In Caso di Problemi.....	D16
Specifiche.....	D17

## ESPAÑOL

Introducción.....	E1
Descripción de controles.....	E2
Conectando del Monitor.....	E6
Utilización del USB (Bus de serie universal).....	E8
Conexión del equipo externo.....	E9
Ajuste del Control de Exhibición en Pantalla (OSD).....	E10
Ajuste del OSD y Selección de Elementos.....	E11
Modos de Memoria de Video.....	E15
Sugerencias para Localizar las Fallas.....	E16
Especificaciones.....	E17

## PORTUGUÉS

Introdução.....	F1
Descrição dos controles.....	F2
Conectando o Monitor.....	F6
Utilização de USB (Universal Serial Bus).....	F8
Ligar o equipamento externo.....	F9
Ajuste On Screen Display(OSD).....	F10
Ajustes OSD e Itens de Seleção.....	F11
Modos de Memória de Vídeo.....	F15
Resolvendo Problemas.....	F16
Especificações.....	F17

## NEDERLANDS

Inleiding.....	N1
Uitleg over bediening.....	N2
De Monitor Aansluiten.....	N6
Gebruikmaken van de USB (Universele Seriele Bus).....	N8
De externe apparatuur aansluiten.....	N9
Bediening via het beeldscherm OSD (On Screen Display).....	N10
Kiezen en instellen via het OSD-systeem.....	N11
Modi voor video geheugen.....	N15
Problemen oplossen.....	N16
Specificaties.....	N17

## Introduction

**The FLATRON LCD 295LM Flat Panel Monitor has an active matrix TFT (Thin-Film Transistor) LCD (Liquid Crystal Display).**

ENGLISH

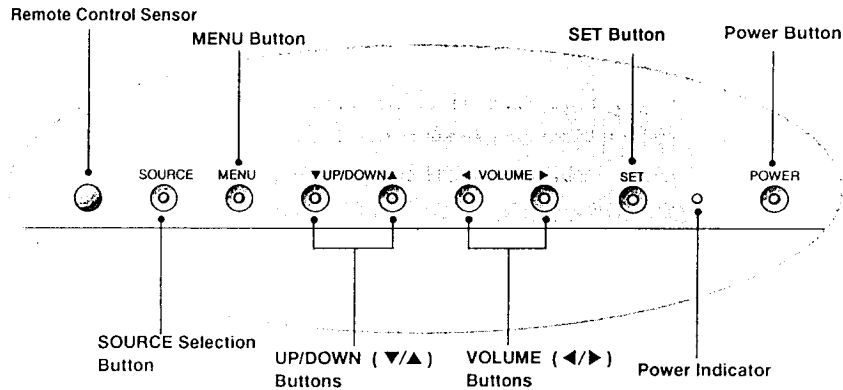
### Features


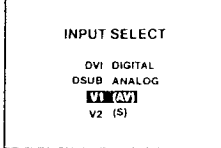
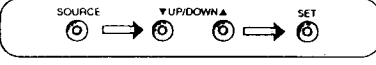






- The FLATRON LCD 295LM is a 22-inch (55.8cm viewable) intelligent micro-processor based monitor.
- This monitor can be connected to a VCR or DVD. The monitor has two signal connectors (D-sub and DVI-D) so that it can support both an existing analog input (D-sub) and an advanced standard digital input (DVI-D). Two computers can be simultaneously used while connected to this monitor.
- This monitor has a picture-in-picture function so that you can watch from VCR/DVD while using a computer.
- The aspect ratio of the monitor is 16:10 so that you can feel as if you are watching a film in a theater. You can also simultaneously display two pages of a document set to an A4 size on the monitor, so that working efficiency can be improved.
- This monitor provides an audio function. Speakers that are included are easily detachable and attachable. They can also be placed in desired positions.
- Digitally controlled auto-scanning is done with the micro-processor for horizontal scan frequencies between 30 and 94kHz, and vertical scan frequencies between 56 - 85Hz.
- USB (Universal Serial Bus) ports at the back of the monitor are prepared for the USB cable and hub. You can easily and flexibly connect USB-designed devices such as a mouse, keyboard or printer to the monitor for true Plug and Play function.
- We accomplished to adapt the advanced design and technology to the monitor. Soft touch buttons on the front panel are simple and allow you to conveniently adjust a variety of image controls.
- This monitor has DDC 2B function.\*
- Compliant with the following regulated specifications :\*
  - EPA ENERGY STAR
  - Swedish TCO' 95

\* For detailed information, please refer to the *Reference Guide* provided

# Description of Controls

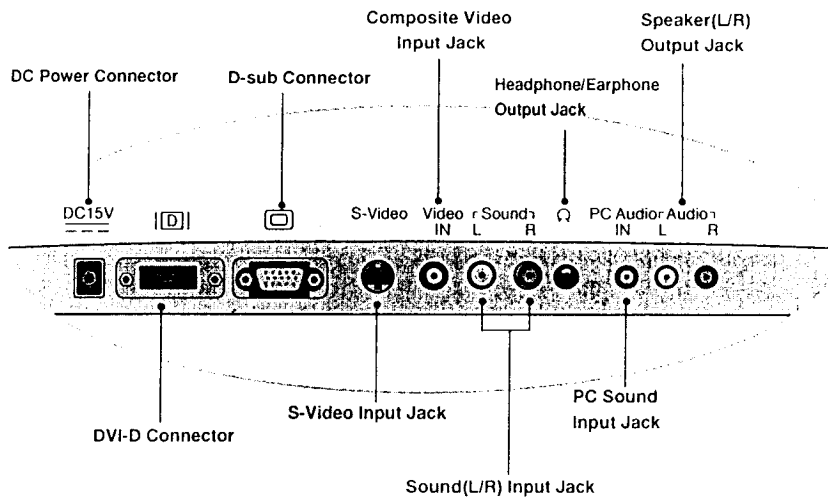
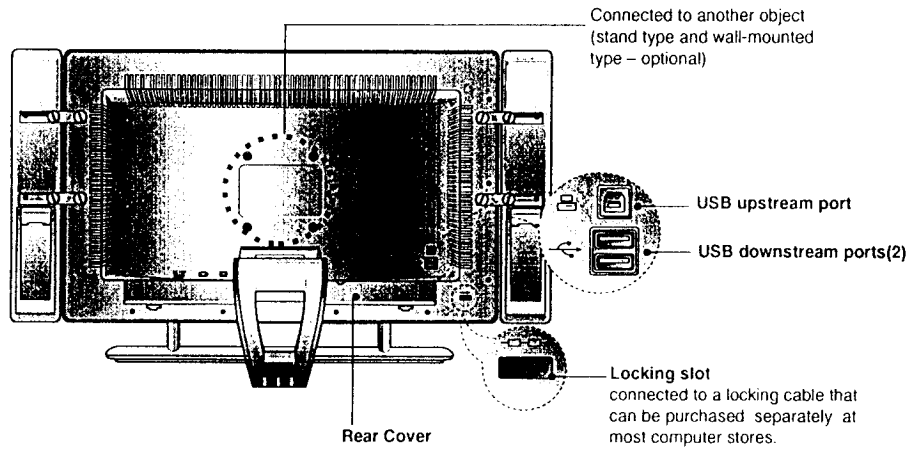
## Front Panel Controls



Control	Function
 <p><b>SOURCE Selection Button</b></p> 	<p>Use this button to select an input signal.</p>  <ul style="list-style-type: none"> <li>• DVI DIGITAL : DVI digital signal</li> <li>• D-SUB ANALOG : 15-pin D-sub analog signal</li> <li>• V1(AV): Composite video</li> <li>• V2(S): S video</li> </ul>
 <p><b>MENU Button</b></p>	<p>Use this button to enter or exit the on screen display.</p>
 <p><b>UP/DOWN ( ▼/▲ ) Buttons</b></p>	<p>Use these buttons to choose or adjust items in the on screen display.</p>
 <p><b>VOLUME ( ◀/▶ ) Buttons</b></p>	<ul style="list-style-type: none"> <li>• Use these buttons to choose or adjust items in the on screen display.</li> <li>• Use these buttons to decrease or increase volume level.</li> </ul>
 <p><b>SET Button</b></p>	<p>Use this button to enter a selection in the on screen display.</p>
 <p><b>Power Indicator</b></p>	<p>The power indicator light is shown in the power button. This indicator lights up green when the monitor operates normally. If the monitor is in DPM (Energy Saving) mode (stand-by/ suspend/power off), this indicator color changes to amber.</p>
 <p><b>Power Button</b></p>	<p>Use this button to turn the monitor on or off.</p>

# Description of Controls

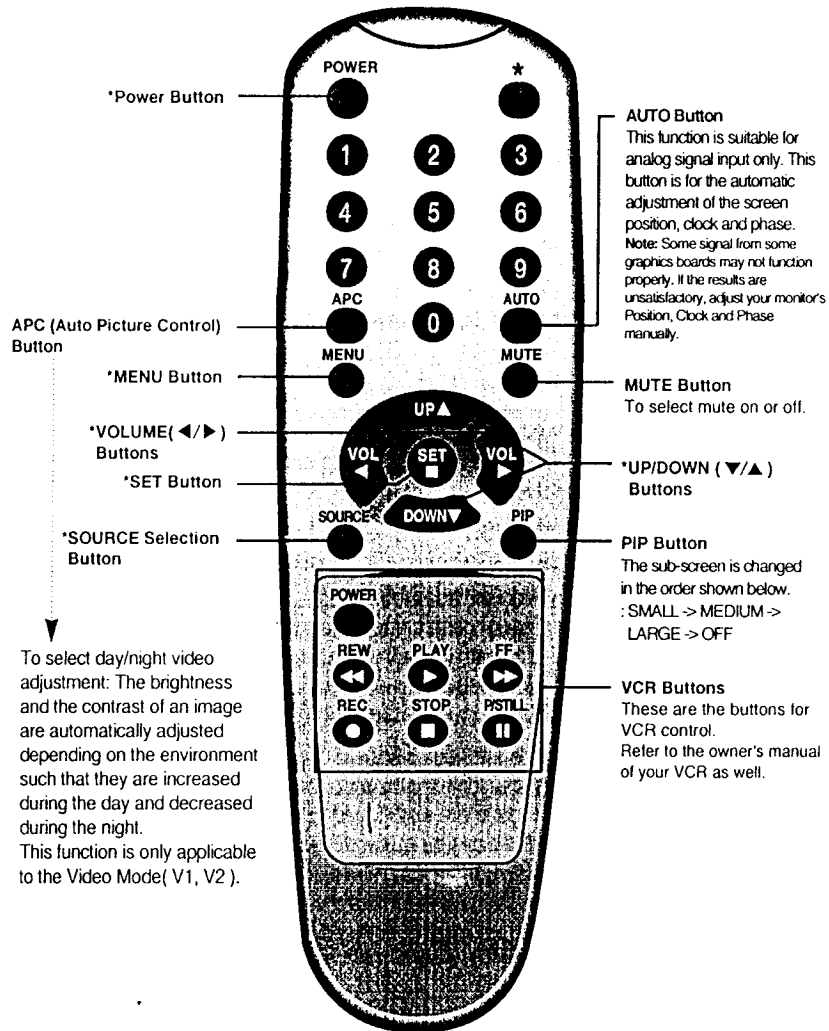
## Rear Panel Controls



## Description of Controls

For the detailed instruction for each button of the remote control, refer to the appropriate pages in this manual.

### Remote Control



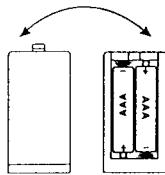
\* For more detailed functions of each button, refer to the descriptions in page A2 of this manual.

## Description of Controls

Insert the batteries into the remote control to operate the monitor.

### Preparing the Remote Control

1. Open the battery cover.
2. Insert batteries (AAA size).  
Make sure to match the + and - on the batteries to the marks inside the battery compartment.
3. Close the cover.



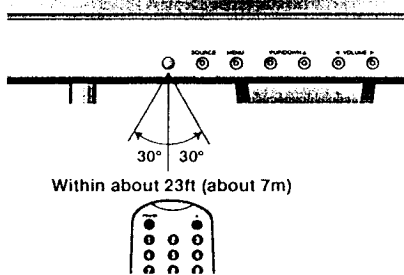
#### Note

- Do not insert the batteries into the remote control in the wrong direction.
- Do not charge, heat, open, or short-circuit the batteries. Also do not throw the batteries into the fire.
- Do not use different types of batteries together, nor mix old and new batteries.

This section shows you how to use the remote control.

### Operating with the Remote Control

Point the remote control at the remote sensor and press the buttons.



Distance : About 23 ft (7 m) from the front of the remote sensor.  
Angle : About 30° in each direction of the front of the remote sensor.

Do not expose the sensor of remote control in the monitor to a strong light source such as direct sunlight or illumination. If so, may not be able to operate the monitor with the remote control.

#### Note

- Do not drop the remote control or handle it roughly.
- Do not leave the remote control in extremely hot or humid conditions.
- Do not expose the remote control to water or anything wet.



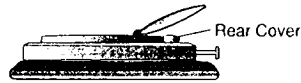
## Connecting the Monitor

To set up the monitor, ensure that the power is turned off to the monitor, computer system, and other attached devices. Remove the rear cover of the monitor to connect the cables and connect the cables to the monitor with it lying on a cushion or a cloth.

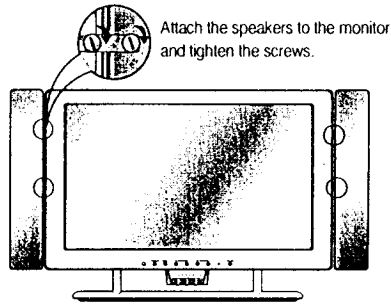
Follow these steps:

### Connecting the Speakers

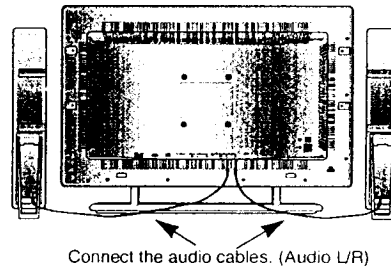
Attach the speakers to the monitor as shown in the picture or install them at desired positions.



■ When attaching the speakers to the monitor



■ When installing the speakers beside the monitor



### Using the Computer

1. Connect the signal cable.

■ When connecting the DVI-D signal cable

.....Figure 1

Connect one end of the monitor signal cable to the input connector on the rear panel of the monitor. ❶ Connect the other end to the DVI-D connector on the rear panel of the computer and tighten the screws. ❷ Be sure the signal cable aligns with the DVI-D connector.

■ When connecting the D-Sub signal cable

.....Figure 2

Connect one end of the monitor signal cable to the input connector on the rear panel of the monitor. ❶ Connect the other end to the D-Sub connector on the rear panel of the computer and tighten the screws. ❷ Be sure the signal cable aligns with the D-Sub connector.

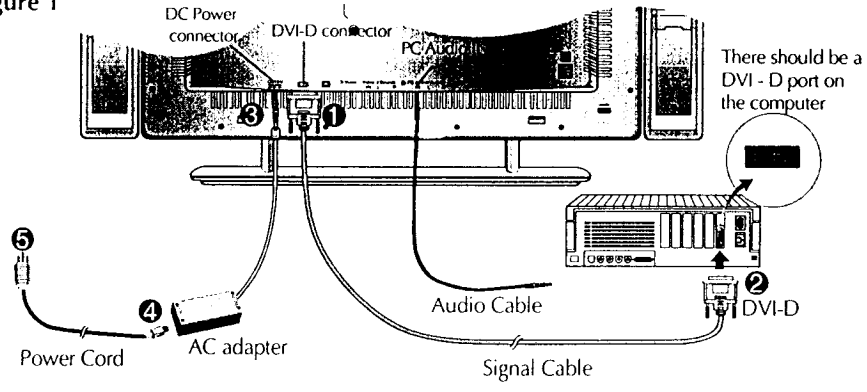
**MAC** Connect one end of the monitor signal cable to the input connector on the rear panel of the monitor. ❶ Connect the other end of the monitor signal cable to the rear panel of Macintosh computer through a Macintosh adapter and then tighten screws. ❷

2. Connect the plug from the AC adapter into the back of the monitor. ❸

3. Connect one end of the AC power cord to the AC adapter ❹ and the other end to a properly grounded AC outlet that is easily accessible and close to the monitor ❺.

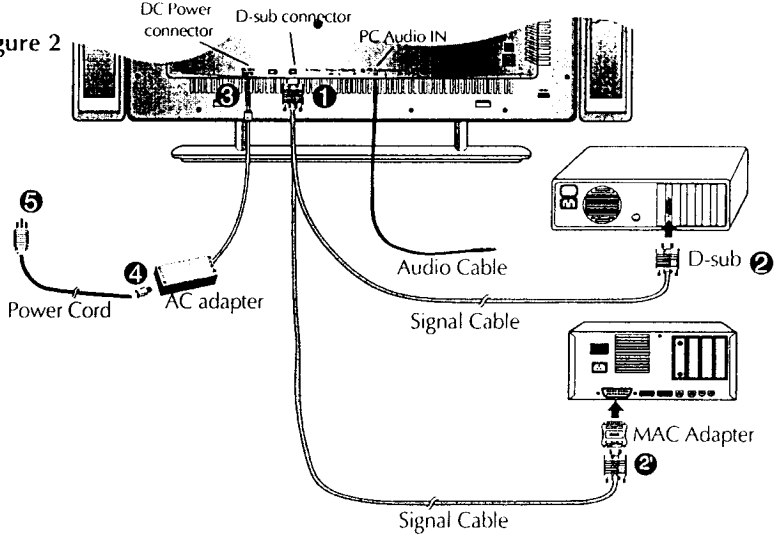
# Connecting the Monitor

Figure 1



There should be a DVI - D port on the computer

Figure 2



4. Connect the audio cable from the PC AUDIO IN port to the audio output port on your computer's sound card.
5. After connecting cables, put the rear cover correctly into the holes.

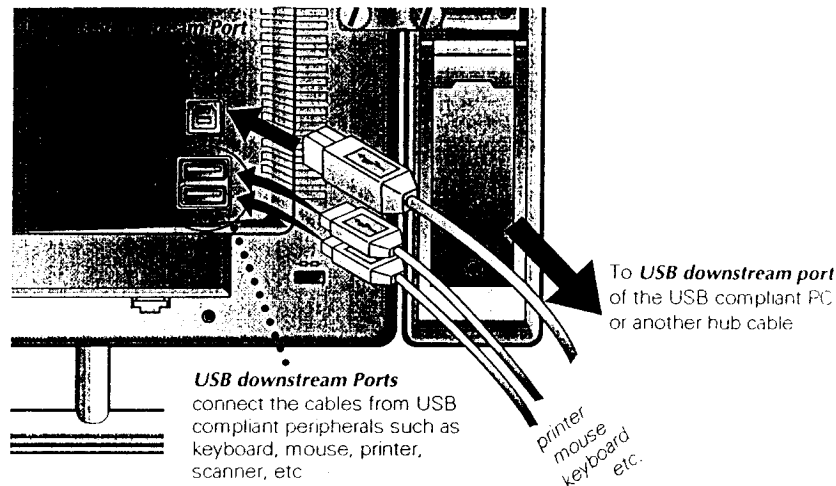
Note : The figure 2 shows the connection to an Apple Macintosh, using a separately purchased adapter. For more information on adapter requirements, contact your authorized dealer, reseller, or service provider.

## Making use of USB (Universal Serial Bus)

USB (Universal Serial Bus) is an innovation in connecting your different desktop peripherals conveniently to your computer. By using the USB, you will be able to connect your mouse, keyboard, printer, and other peripherals to your monitor instead of having to connect them to your computer. This will give you greater flexibility in setting up your system. USB allows you to connect chain up to 120 devices on a single USB port, and you can “hot” plug (attach them while the computer is running) or unplug them while maintaining Plug and Play auto detection and configuration.

### USB connection

1. Connect the upstream port of the monitor to the downstream port of the USB compliant PC or another hub using the USB cable (Computer must have a USB port).
2. Connect the USB compliant peripherals to the downstream ports of the monitor.



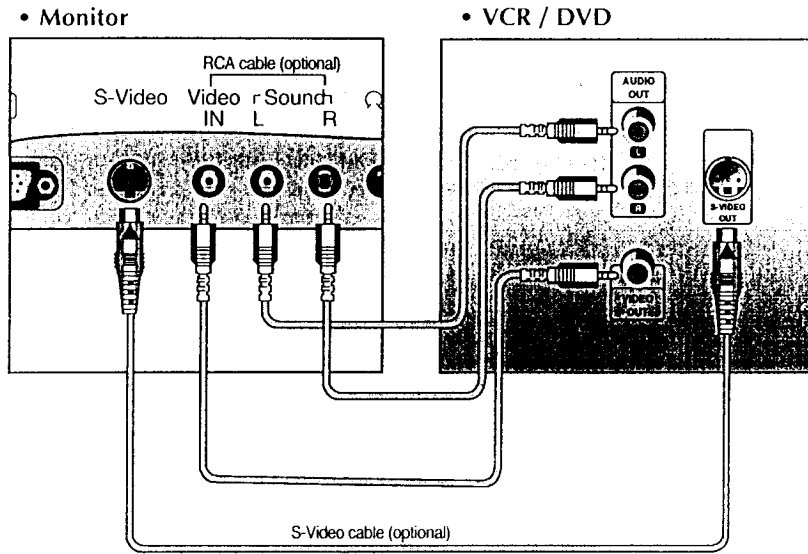
#### NOTE

- To activate the USB hub function, the monitor must be connected to a USB compliant PC(OS) or another hub with the USB cable(enclosed)
- When connecting the USB cable, check that the shape of the connector at the cable side matches the shape at the connecting side.
- When the monitor is not plugged into an electric socket, the peripherals connected to the downstream ports will not operate.
- Even if the monitor is in a power saving mode, USB compliant devices will function when they are connected the USB ports(both the upstream and downstream) of the monitor.

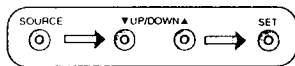
# Connection of external equipment

## Connecting the VCR/DVD

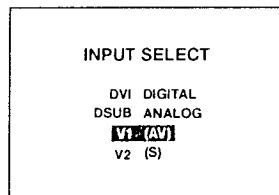
1. Connect the audio/video output jacks of the VCR/DVD to the corresponding input ports of the set.  
If you connect the S-Video input port to external equipment, you can enjoy high definition display.



2. Select an input signal.



Press the SOURCE button on the front panel of the monitor to select an input.



V1(AV): Composite video,  
V2(S): S-video

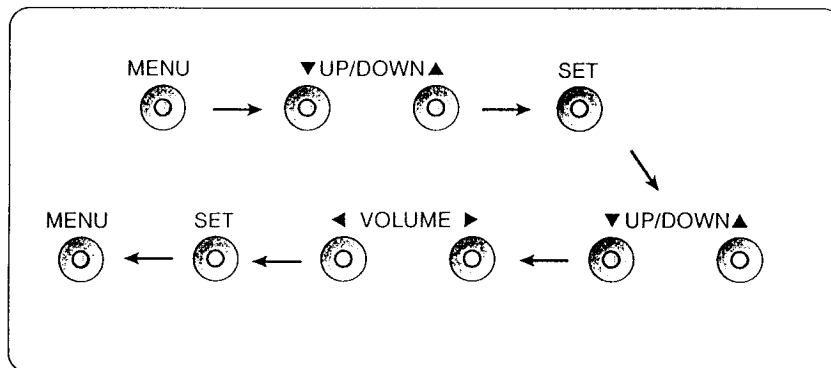
## On Screen Display (OSD) Control Adjustment

Making adjustments to the image size, position and operating parameters of the monitor are quick and easy with the On Screen Display Control system. A quick example is given below to familiarize you with the use of the controls. Following section is an outline of the available adjustments and selections you can make using the OSD.

### NOTE

- Allow the monitor to stabilize for at least 30 minutes before making image adjustment.

To make adjustments in the On Screen Display, follow these steps:



- 1 Press the **MENU** Button, the main menu of the OSD will appear.
- 2 To access a control, use the **UP/DOWN (▼/▲)** Buttons. When the desired control icon is highlighted, press the **SET** Button.
- 3 Press the **UP/DOWN (▼/▲)** Buttons to select the desired item.
- 4 Use the **VOLUME (◀/▶)** Buttons to adjust the item to the desired level.
- 5 Accept the changes by pressing the **SET** Button.
- 6 Exit the OSD by Pressing the **MENU** Button.

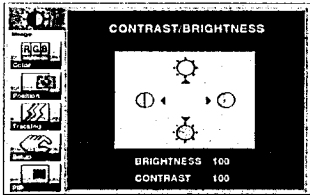


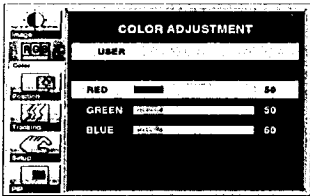
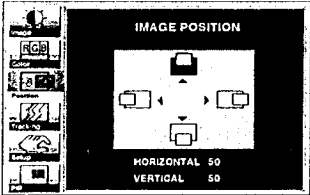


## On Screen Display(OSD) Selection and Adjustment

You were introduced to the procedure of selection and adjusting an item using the OSD system.

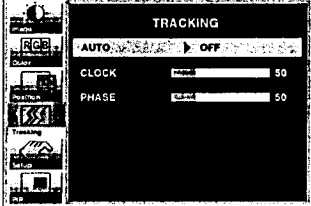
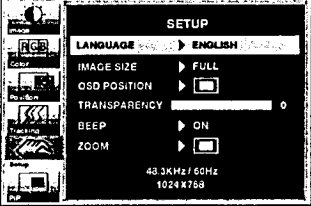
Listed below are the icons, icon names, and icon descriptions of the items that are shown on the Menu.

### Adjusting the Screen when Using a Computer

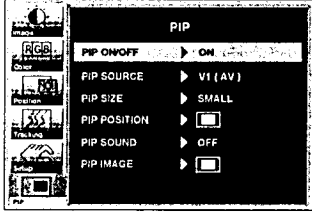
Note : When a digital signal is set as an input, only the SETUP item can be adjusted. You do not need to adjust the other items.

OSD Adjust	Description
	<p> <b>Brightness</b> Used to adjust the brightness of the screen.</p> <p> <b>Contrast</b> Adjust the display to the contrast desired.</p>
	<p><b>USER</b> <b>RED / GREEN / BLUE</b> To set your own color levels.</p> <p><b>9300K</b> To appear the displays color temperature.  <ul style="list-style-type: none"> <li>• 9300K:Slightly bluish white.</li> <li>• 6500K:Slightly reddish white.</li> </ul> </p>
	<p> <b>Horizontal Position</b> To move picture image left and right.</p> <p> <b>Vertical Position</b> To move image up and down.</p>

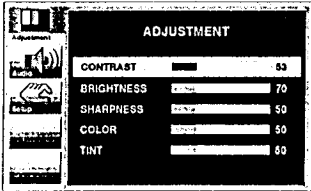
## On Screen Display(OSD) Selection and Adjustment

OSD Adjust	Description
	<p><b>AUTO</b> This function is suitable for analog signal input only. This button is for the automatic adjustment of the screen position, clock and phase.  <b>Note:</b> Some signal from some graphics boards may not function properly. If the results are unsatisfactory, adjust your monitor's Position, Clock and Phase manually.</p> <p><b>CLOCK</b> To minimize any vertical bars or stripes visible on the screen background. The horizontal screen size will also change.</p> <p><b>PHASE</b> To adjust the focus of the display. This item allows you to remove any horizontal noise and clear or sharpen the image of characters.  <b>Phase</b> adjustment should be done after adjusting the <b>Clock</b>.</p>
	<p><b>LANGUAGE</b> To choose the language in which the control names are displayed.</p> <p><b>IMAGE SIZE</b> This function displays the image in its original size or enlarged size so as to fit in the full screen of the LCD panel.</p> <p><b>OSD POSITION</b> To adjust position of the OSD window on the screen.</p> <p><b>TRANSPARENCY</b> To adjust the transparency of the OSD menu screen.</p> <p><b>BEEP</b> To select beep on or off.</p> <p><b>ZOOM</b> To adjust horizontal and vertical image size simultaneously.          If you want to move the zooming point, use the H/V POSITION function in the sub-menu.</p>

## On Screen Display(OSD) Selection and Adjustment

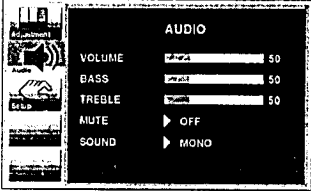
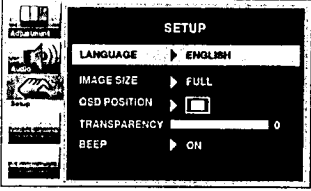
OSD Adjust	Description
	<p>This PIP (Picture-in-Picture) function allows the image from the VCR or DVD to be displayed on a sub-screen while you are using a computer.</p> <p><b>PIP ON/OFF</b> To select the sub-screen on/off.</p> <p><b>PIP SOURCE</b> To select an input signal for PIP. V1 (AV) / V2 (S)</p> <p><b>PIP SIZE</b> To adjust the size of the PIP screen. :SMALL/MEDIUM/LARGE</p> <p><b>PIP POSITION</b> To adjust the position of PIP screen.</p> <p><b>PIP SOUND</b> To turn the PIP sound on/off.</p> <p><b>PIP IMAGE</b> To adjust the image of the sub-screen.</p> <p><b>PIP CONTRAST</b> Adjust the display to the contrast desired.</p> <p><b>PIP BRIGHTNESS</b> Used to adjust the brightness of the screen.</p> <p><b>PIP SHARPNESS</b> To adjust the clearness of the screen.</p> <p><b>PIP COLOR</b> To adjust the color to desired level.</p>

## Adjusting the Screen when Using VCR/DVD ( V1 / V2 )

OSD Adjust	Description
	<p><b>CONTRAST</b> Adjust the display to the contrast desired.</p> <p><b>BRIGHTNESS</b> Used to adjust the brightness of the screen.</p> <p><b>SHARPNESS</b> To adjust the clearness of the screen.</p> <p><b>COLOR</b> To adjust the color to desired level.</p> <p><b>TINT</b> To adjust the tint to desired level.</p>



## On Screen Display(OSD) Selection and Adjustment

OSD Adjust	Description
	<p><b>VOLUME</b> Raises or lowers audio level.</p> <p><b>BASS</b> Raises or lowers Bass level.</p> <p><b>TREBLE</b> Raises or lowers treble level.</p> <p><b>MUTE</b> Used to select mute on (means sound off) and mute off (means sound on).</p> <p><b>SOUND</b> To select the audio mode. : MONO/STEREO</p>
	<p><b>LANGUAGE</b> To choose the language in which the control names are displayed.</p> <p><b>IMAGE SIZE</b> This function displays the image in its original size or enlarged size so as to fit in the full screen of the LCD panel.</p> <p><b>OSD POSITION</b> To adjust position of the OSD window on the screen.</p> <p><b>TRANSPARENCY</b> To adjust the transparency of the OSD menu screen.</p> <p><b>BEEP</b> To select beep on or off.</p>

## Video Memory Modes

The display modes listed below are the most commonly used modes and are set as factory defaults. This monitor automatically recognizes these preset modes and they will appear properly sized and centered on the screen.

In addition to the 19 factory modes, there are 36 pre-loaded modes that you may need to readjust the parameters of the monitor screen by using the on screen display.

### Display Modes (Resolution)

*Micron 1000 06*

Display Modes (Resolution)	Horizontal Freq.(kHz)	Vertical Freq.(Hz)
1 VESA, IBM 640 x 350	31.469	70
2 VESA 640 x 480	31.469	60
3 VESA 640 x 480	37.500	75
4 VESA 640 x 480	43.269	85
5 VESA 720 x 400	31.468	70
6 VESA 800 x 600	37.879	60
7 VESA 800 x 600	46.875	75
8 VESA 800 x 600	53.674	85
9 MAC 832 x 624	49.725	75
10 VESA 1024 x 768	48.363	60
11 VESA 1024 x 768	60.020	75
12 VESA 1024 x 768	68.677	85
13 MAC 1152 x 870	68.681	75
14 SUN 1152 x 900	61.805	65
15 VESA 1280 x 1024	63.981	60
*16 VESA 1280 x 1024	79.976	75
*17 1600 x 1024	62.110	60
*18 VESA 1600 x 1200	75.000	60
*19 VESA 1600 x 1200	93.750	75

\* Analog only

## Troubleshooting

**Check the following before calling for service.**

**Display Position is incorrect.**

- Select **AUTO** in the OSD menu.
- If the results are unsatisfactory, adjust the image position using the position icon in the on screen display.

**On the screen background, vertical bars or stripes are visible.**

- Select **AUTO** in the OSD menu.
- If the results are unsatisfactory, decrease the vertical bars or stripes using the **CLOCK** icon in the on screen display.

**Any horizontal noise appearing in any image or characters are not clearly portraid.**

- Select **AUTO** in the OSD menu.
- If the results are unsatisfactory, decrease the horizontal bars using the **PHASE** icon in the on screen display.

**NO SIGNAL message.**

- The signal cable is not connected, or is loose. Check and secure the connection.

**OUT OF RANGE message appears.**

**Picture is blank.**

- The frequency of the signal from the video card is outside the operating range of the monitor.

Horizontal Frequency: 30kHz-94kHz

Vertical Frequency: 56Hz-85Hz

\*Use the graphics board's utility software to change the frequency setting (Refer to the manual for graphics board).

\*You can change the setup to the supported resolution using the **Safe Mode** (Press the F8 key during booting the system).

**The power LED is illuminated amber.**

- The monitor is in its display power management mode.
- There is no active signal coming from the PC.
- The signal cable is not fastened securely.
- Check the computer power and graphics adapter configuration.

**The monitor doesn't enter the power saving off mode (Amber).**

- Computer video signal is not VESA DPMS standard. Either the PC or the video controller card is not using the VESA DPMS power management function.

### NOTE

- If the power indicator(LED) light is blinking amber, may result in abnormal condition of the monitor.\*
- Then press a power ON/OFF button on the front panel control and call your service technician for more information.

## Specifications

<b>Display</b>	Type	22inch (55.8cm) Wide SXGA TFT LCD Anti-Glare coating
	Viewable Size	22inch (55.8cm)
	Viewing Angle(typical)	70° (Left/Right/Up/Down)
	Pixel pitch	0.294 x 0.294mm
	True color	16.7 million color
<b>Sync Input</b>	Horizontal Freq.	30kHz - 94kHz (Automatic)
	Vertical Freq.	56Hz - 85Hz (Automatic)
	Input form	Separate, TTL, Positive/Negative Digital
<b>Video Input</b>	Signal input	15 pin D-Sub connector/DVI-D connector
	Input Form	Separate, RGB Analog, 0.7Vp-p/75ohm, Positive Digital
	Resolution (max.)	Analog : 1600 x 1200 @ 75Hz Digital : 1280 x 1024 @ 60Hz
<b>Audio Signal</b>	Input	PC : 700mVrms, Video : 400mVrms
	Audio output and its ratio	PC : 1.5W + 1.5W (left+right)/3% VCR : 2W + 2W (left+right)/3%
	Speaker Impedance	8Ω
<b>Power Consumption</b>	Normal	≤ 80W
	Stand-by/Suspend	≤ 8W
	Power Off	≤ 8W
<b>Dimensions</b>	Width	58.2 cm / 22.9 inches
	Height	46.75 cm / 18.4 inches
	Depth	7.3 cm / 2.87 inches
<b>Power Input</b>	DC 15V 5.33A	
<b>AC Adapter</b>	Input	AC 100-240V, 50 /60Hz, ~1.5A
	Output	DC 15V --- 5.33A ⊖ ⊕
<b>Weight</b>	Net	14.8 kg / 32.6 lbs
<b>Tilt Range</b>	Down	30°
	Up	10°
<b>Environment Conditions</b>	Operating condition	
	Temperature	10°C to 35°C
	Humidity	10% to 80% non-condensing
	Storage condition	
Temperature	-20°C to 60°C	
Humidity	5% to 95% non-condensing	

### NOTE

- Information in this document is subject to change without notice.