

# Gateway

P/NO : 3828TUU0197A (0203-Rev00)  
Printed in Korea

## **FPD2200 Flat Panel Display User's Guide**



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## Introduction

**The FPD2200 Flat Panel Monitor has an active matrix TFT (Thin-Film Transistor) LCD (Liquid Crystal Display).**

### Features

- The **FPD2200** 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.
- Digitally controlled auto-scanning is done with the micro-processor for horizontal scan frequencies between 30 and 70kHz, and vertical scan frequencies between 56 - 61Hz.
- 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.

## Important Precautions

**This unit has been engineered and manufactured to ensure your personal safety, however improper use may result in potential e shock or fire hazards. In order to allow the proper operation of all safeguards incorporated in this display, observe the following basic rules for its installation, use, and servicing.**

### On Safety

Use only the power cord supplied with the unit. In case you use another power cord, make sure that it is certified by the applicable national standards if not being provided by the supplier. If the power cable is faulty in any way, please contact the manufacturer or the nearest authorized repair service provider for a replacement.

The power supply cord is used as the main disconnection device. Ensure that the socket-outlet is easily accessible after installation.

Operate the display only from a power source indicated in the specifications of this manual or listed on the display. If you are not sure what type of power supply you have in your home, consult with your dealer.

Overloaded AC outlets and extension cords are dangerous. So are frayed power cords and broken plugs. They may result in a shock or fire hazard. Call your service technician for replacement.

Do not Open the Display.

- There are no user serviceable components inside.
- There are Dangerous High Voltages inside, even when the power is OFF.
- Contact your dealer if the display is not operating properly.

To Avoid Personal Injury :

- Do not place the display on a sloping shelf unless properly secured.
- Use only a stand recommended by the manufacturer.
- Do not try to roll a stand with small casters across thresholds or deep pile carpets.

To Prevent Fire or Hazards:

- Always turn the display OFF if you leave the room for more than a short period of time. Never leave the display ON when leaving the house.
- Keep children from dropping or pushing objects into the display's cabinet openings. Some internal parts carry hazardous voltages.
- Do not add accessories that have not been designed for this display.
- During a lightning storm or when the display is to be left unattended for an extended period of time, unplug it from the wall outlet.

## Important Precautions

### On Installation

Do not allow anything to rest upon or roll over the power cord, and do not place the display where the power cord is subject to damage.

Do not use this display near water such as near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool.

Displays are provided with ventilation openings in the cabinet to allow the release of heat generated during operation. If these openings are blocked, built-up heat can cause failures which may result in a fire hazard. Therefore, NEVER:

- Block the bottom ventilation slots by placing the display on a bed, sofa, rug, etc.
- Place the display in a built-in enclosure unless proper ventilation is provided.
- Cover the openings with cloth or other material.
- Place the display near or over a radiator or heat source.

Do not rub or strike the Active Matrix LCD with anything hard as this may scratch, mar, or damage the Active Matrix LCD permanently.

Do not press the LCD screen with your finger for a long time as this may cause some afterimages.

Some dot defects may appear as Red, Green or Blue spots on the screen. However, this will have no impact or effect on the display performance.

If possible, use the recommended resolution to obtain the best image quality for your LCD display. If used under any mode except the recommended resolution, some scaled or processed images may appear on the screen. However, this is characteristic of the fixed-resolution LCD panel.

### On Cleaning

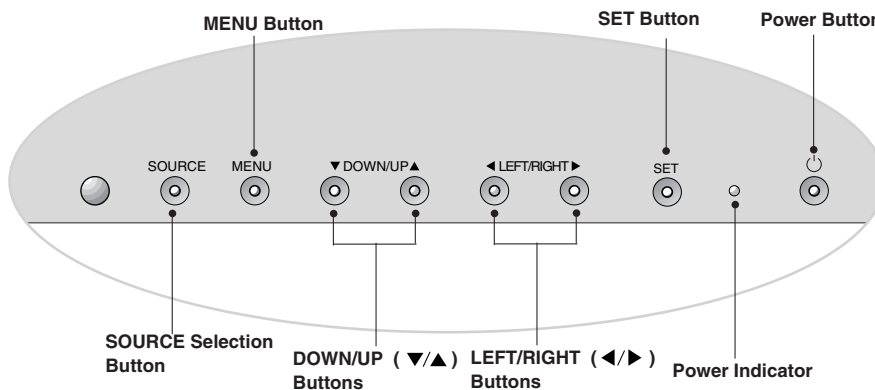
- Unplug the display before cleaning the face of the display screen.
- Use a slightly damp (not wet) cloth. Do not use an aerosol directly on the display screen because over-spraying may cause electrical shock.


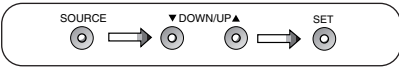

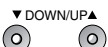




### On Repacking

- Do not throw away the carton and packing materials. They make an ideal container in which to transport the unit. When shipping the unit to another location, repack it in its original material.

# Description of Controls

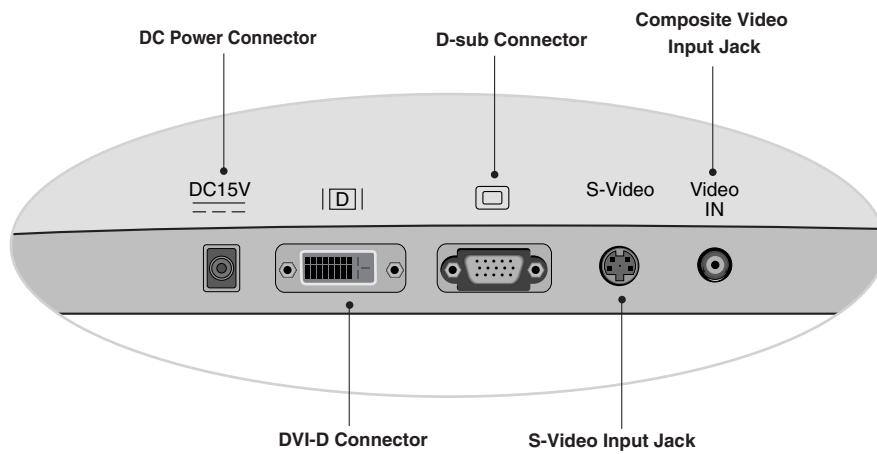
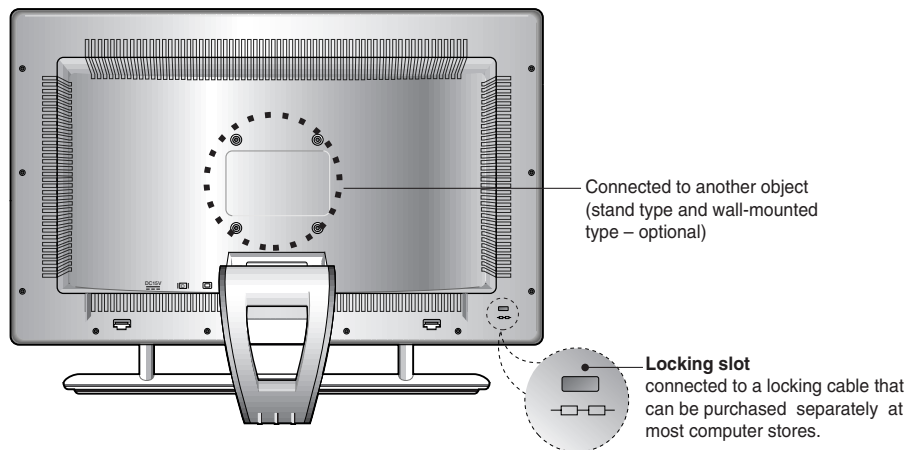
## Front Panel Controls



| Control   | Function  |
|---|---|
|  <b>SOURCE Selection Button</b>     | Use this button to select an input signal. <div style="border: 1px solid black; padding: 5px; margin: 10px 0;">  </div> <ul style="list-style-type: none"> <li>• DVI DIGITAL : DVI digital signal</li> <li>• DSUB ANALOG : 15-pin D-sub analog signal</li> <li>• V1(AV): Composite video</li> <li>• V2(S): S video</li> </ul> |
|  <b>MENU Button</b>                | Use this button to enter or exit the On Screen Display.   |
|  <b>DOWN/UP ( ▼/▲ ) Buttons</b>    | Use these buttons to choose or adjust items in the On Screen Display.   |
|  <b>LEFT/RIGHT ( ◀/▶ ) Buttons</b> | Use these buttons to choose or adjust items in the On Screen Display.   |
|  <b>SET Button</b>                 | Use this button to enter a selection in the On Screen Display.  |
|  <b>Power Indicator</b>            | 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.  |
|  <b>Power Button</b>               | Use this button to turn the monitor on or off.  |

## Description of Controls

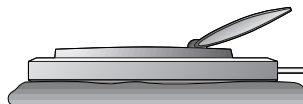
### Rear Panel Controls



## Connecting the Monitor

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

Follow these steps:



### Using the Computer

#### 1. Connect the signal cable.

##### ■ When connecting the DVI-D signal cable .....Figure 1

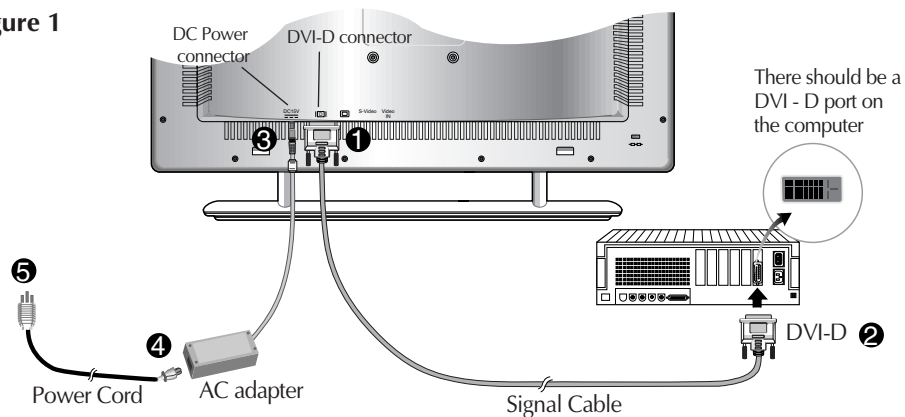
Connect one end of the monitor signal cable to the input connector on the rear panel of the monitor. ❶ Connect the other end to the DVI-D connector on the rear panel of the computer and tighten the screws. ❷ Be sure the signal cable aligns with the DVI-D connector.

##### ■ 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.

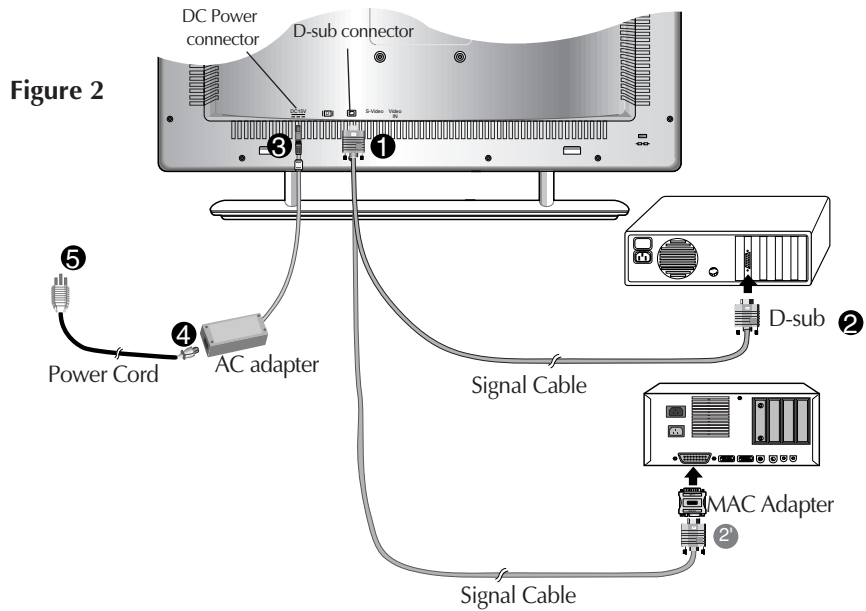
**MAC** Connect one end of the monitor signal cable to the input connector on the rear panel of the monitor. ❶ Connect the other end of the monitor signal cable to the rear panel of Macintosh computer through a Macintosh adapter and then tighten screws. ❷

Figure 1





## Connecting the Monitor



**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.

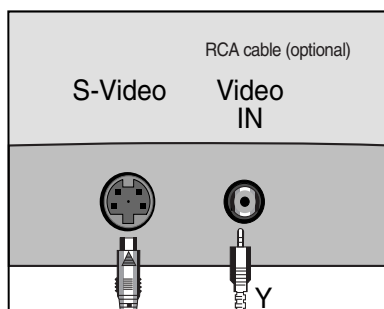
2. Connect the plug from the AC adapter into the back of the monitor. 3
3. Connect one end of the AC power cord to the AC adapter 4 and the other end to a properly grounded AC outlet that is easily accessible and close to the monitor 5 .

## Connection of external equipment

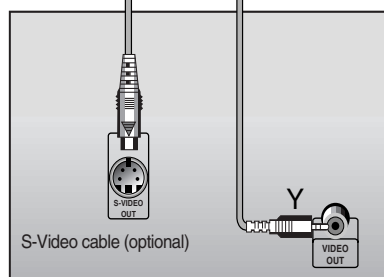
### Connecting the VCR/DVD

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.

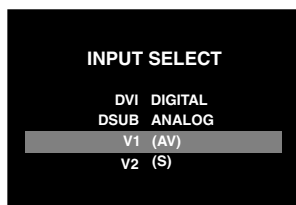
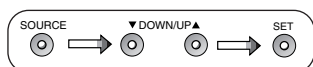
- **Monitor**



- **VCR/DVD**



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

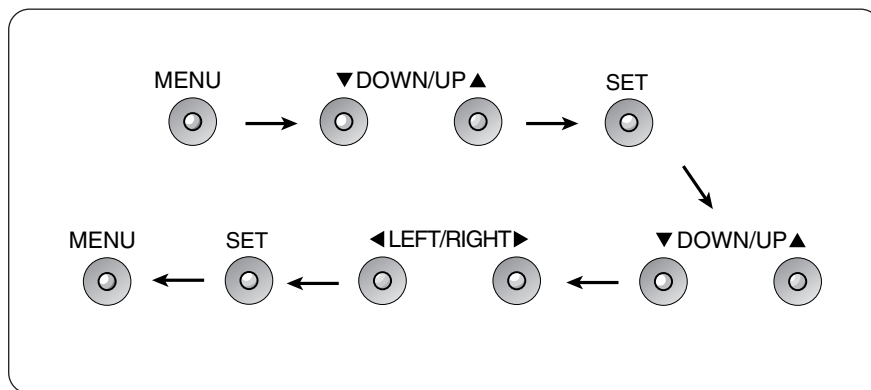
## On Screen Display (OSD) Control Adjustment

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 **DOWN/UP (▼/▲)** Buttons. When the desired control icon is highlighted, press the **SET** Button.
- 3 Press the **DOWN/UP (▼/▲)** Buttons to select the desired item.
- 4 Use the **LEFT/RIGHT (◀/▶)** 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.

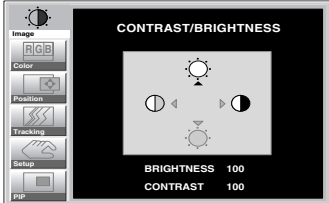




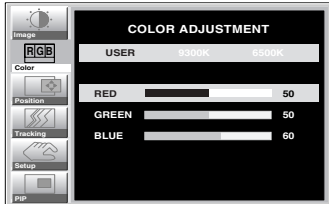
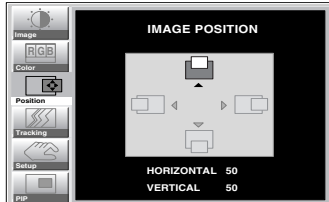




## On Screen Display(OSD) Selection and Adjustment

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

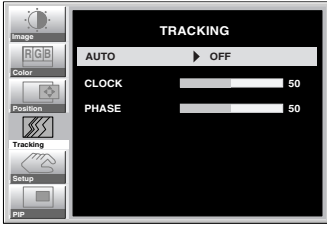
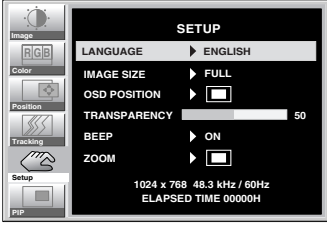
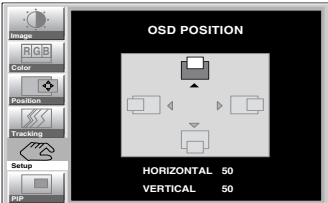
Listed below are the icons, icon names, and icon descriptions of the items that are shown on the Menu.

### Adjusting the Screen when Using a Computer

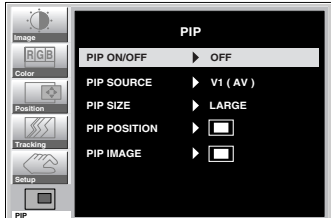
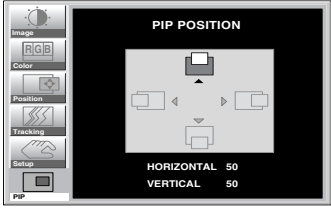
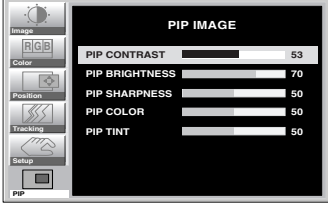
**Note :** When input is set as a digital signal, only the BRIGHTNESS, SETUP, and PIP items can be adjusted. You do not need to adjust the other items.

| OSD Adjust  | Description  |
|---|--|
|   | <p>  <b>Brightness</b><br/>Used to adjust the brightness of the screen.</p> <p>  <b>Contrast</b><br/>Adjust the display to the contrast desired.</p> |
|  | <p><b>USER</b>    <b>RED / GREEN / BLUE</b><br/>To set your own color levels.</p> <p><b>9300K</b>    To appear the displays color temperature.<br/><b>6500K</b></p> <ul style="list-style-type: none"> <li>• 9300K:Slightly bluish white.</li> <li>• 6500K:Slightly reddish white.</li> </ul>  |
|  | <p>  <b>Horizontal Position</b><br/>To move picture image left and right.</p> <p>  <b>Vertical Position</b><br/>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.</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. Press the SET button to display the submenu for OSD POSITION.</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. However, if the monitor turns off when zooming in and out the screen, the monitor will be returned to original screen.</p> <p><b>ELAPSED TIME</b> It show how long the monitor has been used.</p>   |

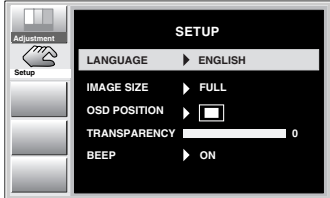
## On Screen Display(OSD) Selection and Adjustment

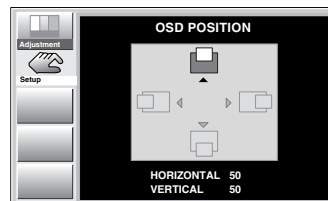
| OSD Adjust   | Description  |
|--|--|
|     | <p>This PIP (Picture-in-Picture) function allows the image from the VCR or DVD to be displayed on a sub-screen while you are using a computer.</p> <p><b>PIP ON/OFF</b> To select the sub-screen on/off.</p> <p><b>PIP SOURCE</b> To select an input signal for PIP.<br/>:V1 (AV) / V2 (S)</p> <p><b>PIP SIZE</b> To adjust the size of the PIP screen.<br/>:SMALL/MEDIUM/LARGE</p> <p><b>PIP POSITION</b> To adjust the position of PIP screen. Press the SET button to display the submenu for PIP POSITION.</p> |
|  |   |
| <p><b>PIP IMAGE</b></p>  | <p>To adjust the image of the PIP screen; Press the SET button to display the submenu for PIP IMAGE. Use the LEFT/RIGHT (◀/▶) buttons to adjust the item to the desired level.</p>   |
|  | <p><b>PIP CONTRAST</b><br/>Adjust the display to the contrast desired.</p> <p><b>PIP BRIGHTNESS</b><br/>Used to adjust the brightness of the screen.</p> <p><b>PIP SHARPNESS</b><br/>To adjust the clearness of the screen.</p> <p><b>PIP COLOR</b><br/>To adjust the color to desired level.</p> <p><b>PIP TINT</b><br/>To adjust the tint to desired level. This function is available only in NTSC broadcasting mode.</p>   |

## On Screen Display(OSD) Selection and Adjustment

### 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. This function is available only in NTSC broadcasting mode.</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. Press the SET button to display the submenu for OSD POSITION.</p> |
|--|--|



|                     |  |
|---------------------|--|
| <b>TRANSPARENCY</b> | To adjust the transparency of the OSD menu screen. |
| <b>BEEP</b>         | To select beep on or off.                          |

## Video Memory Modes

The display modes listed below are the most commonly used modes and are set as factory defaults. The monitor automatically recognizes most input data modes, and displays centered images with the proper sizing.

If the screen size is inappropriately set or the display is not centered, you need to readjust the parameters of the monitor using the OSD (on-screen display).

### Display Modes (Resolution)

|   | Display Modes (Resolution) | Horizontal Freq.(kHz) | Vertical Freq.(Hz) |
|---|----------------------------|-----------------------|--------------------|
| 1 | VESA 640 x 480             | 31.469                | 60                 |
| 2 | VESA 800 x 600             | 35.156                | 56                 |
| 3 | VESA 800 x 600             | 37.879                | 60                 |
| 4 | VESA 1024 x 768            | 48.363                | 60                 |
| 5 | VESA 1280 x 960            | 60.000                | 60                 |
| 6 | VESA 1280 x 1024           | 63.981                | 60                 |
| 7 | 1600 x 1024                | 64.350                | 60                 |



## 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 portraided.

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

#### Check signal Cable 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-70kHz

Vertical Frequency: 56Hz-61Hz

\*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<br>Anti-Glare coating  |
|                               | Viewable Size            | 22inch (55.8cm)  |
|                               | Viewing Angle(max.)      | 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 - 70kHz (Automatic)  |
|                               | Vertical Freq.           | 56Hz - 61Hz (Automatic)  |
|                               | Input form               | Separate, TTL, Positive/Negative<br>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<br>Digital   |
|                               | Resolution (max.)        | Analog : 1600 x 1024 @ 60Hz<br>Digital : 1600 x 1024 @ 60Hz  |
| <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 5.0A              |  |
| <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>             | 10° ~ 30°                |  |
| <b>Environment Conditions</b> | Operating condition      |  |
|                               | Temperature              | 10°C to 35°C   |
|                               | Humidity                 | 20% to 80% non-condensing  |
|                               | Storage condition        |  |
|                               | Temperature              | -20°C to 60°C  |
| Humidity                      | 5% to 90% non-condensing |  |

### NOTE

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