

Introduction

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

This monitor is designed for use in small working areas or for those who need more working space on the desk.

ENGLISH

Features

- The monitor is a 18.1-inch (18.1 inches viewable) intelligent micro-processor based monitor.
- 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 - to the monitor for true Plug and Play function.
- The monitor has two signal connectors (D-sub and DVI) so that it can support both an existing analog input (D-sub) and an advanced standard digital input (DVI). Two computers can be simultaneously used while connected to this monitor.
- Digitally controlled auto-scanning is done with the micro-processor for horizontal scan frequencies between 30 and 80kHz, and vertical scan frequencies between 56 - 85Hz. The microprocessor-based intelligence allows the monitor to operate in each frequency mode with the precision of a fixed frequency monitor.
- Plug and play capability if supported by your system.
- This monitor has E-DDC function.*
- Compliant with the following regulated specifications :*
 - EPA ENERGY STAR
 - Swedish TCO'99

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

To set up the monitor, ensure that the power is turned off to the monitor, computer system, and other attached devices, then follow these steps:

- Place the monitor in a convenient, well-ventilated location near your computer.
- To adjust height of your monitor, unlock the stand lock on top of the stand. Push the stand lock at arrows shown. ●
- Removed the stand cover of the monitor to connect the cables.
- Connect the signal cable.

■ **When connecting the DVI signal cableFigure 1**

Connect the end of monitor signal cable to the port on the rear panel of the monitor through the slot and cable holder on Stand. ● Connect the other end to the DVI port on the rear panel of the computer and tighten the screws. ●

■ **When connecting the Dsub signal cable**

PC Figure 2

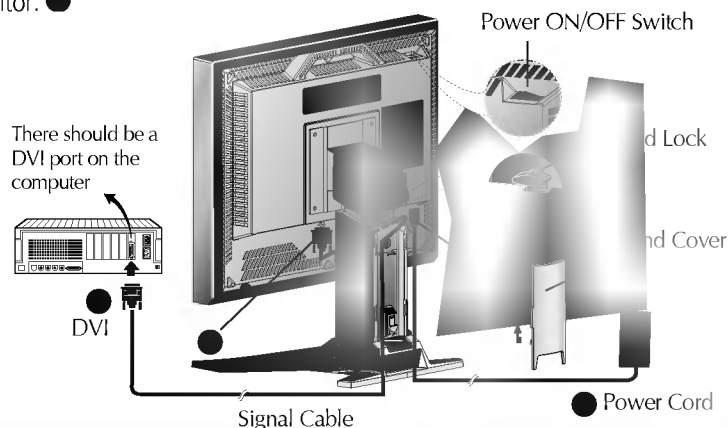
Connect one end of the monitor signal cable to either of the connectors ● on the rear panel of the monitor. Connect the other end to the Dsub port on the rear panel of the computer and tighten the screws. ●

MAC Figure 3

Connect one end of the monitor signal cable to either of the connectors ● on the rear panel of the monitor. Connect the other end of the monitor signal cable to the rear panel of Macintosh computer through a Macintosh adapter and then tighten screws. ●

- One end of the power cord is connected into the power connector on the back of the monitor. ●

Figure 1



Note : If you see the **INPUT SIGNAL OUT OF RANGE** message, check to make sure your system is set to one of the factory preset modes (see page A12), or is set to a resolution and refresh rate within the specification limits of this monitor.

When connecting the DVI Analog, using a separately purchased adapter. For more information on adapter requirements, contact your authorized dealer, reseller, or service provider.

Figure 2

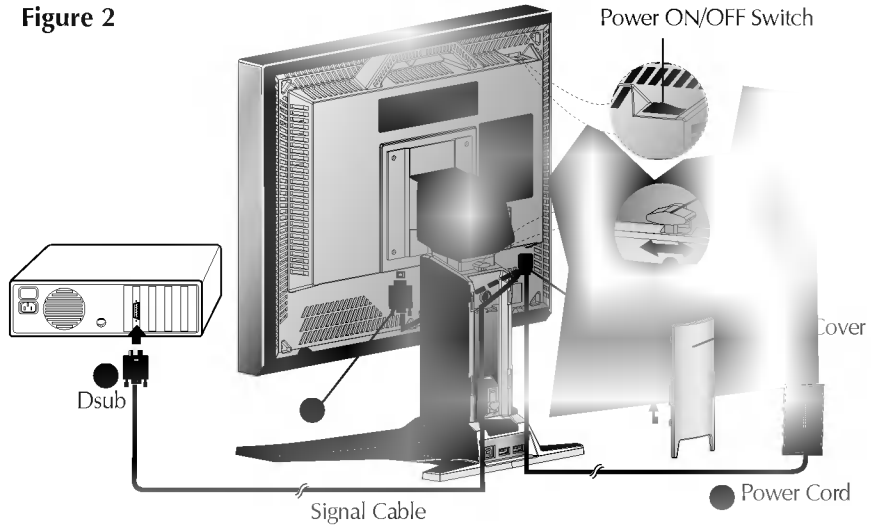
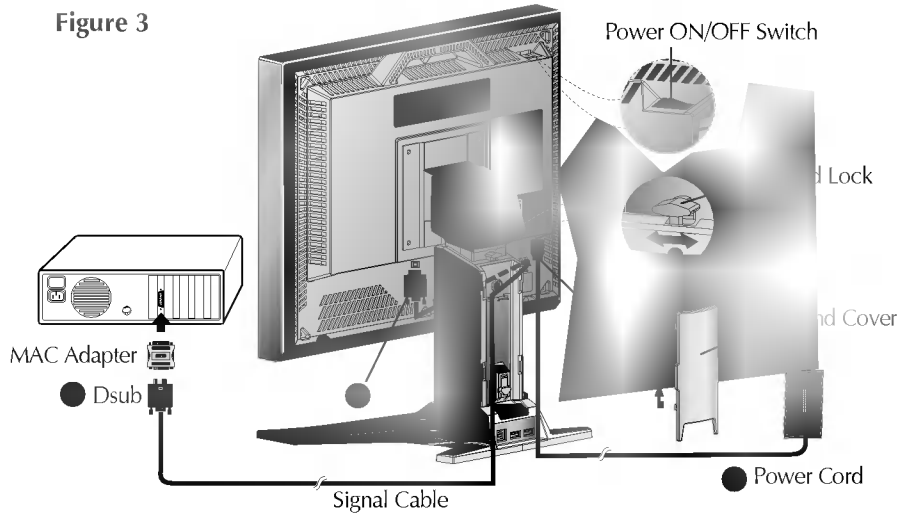


Figure 3



- Connect one end to a properly grounded AC outlet that is easily accessible and close to the monitor. ●
- After connecting cables, put stand cover correctly into the holes under stand. If securely connected, you can hear click sound from the latch.
- Power ON the PC, then the monitor.
- If you see the **NO SIGNAL** message, check the signal cable and connectors.
- After using the system, power OFF the monitor, then the PC.

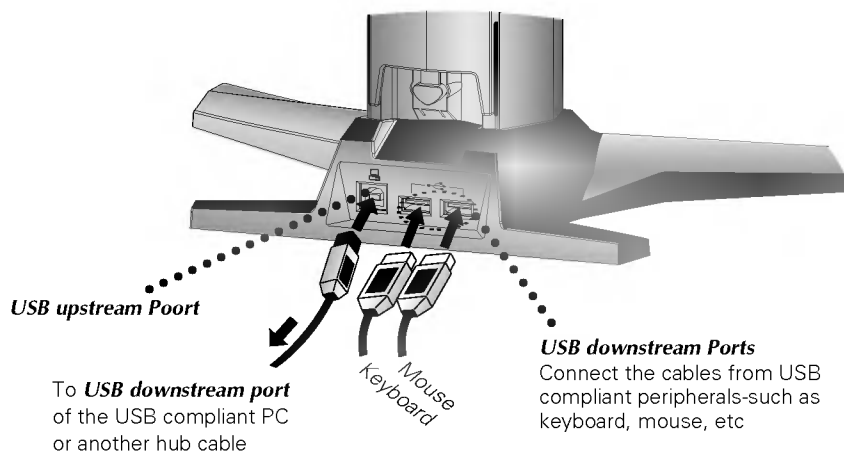
NOTE : The figure3 shows the connection to an Apple Macintosh, using a separately purchased adapter. For more information on adapter requirements, contact your authorized dealer, reseller, or service provider.

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, 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. This monitor has an integrated BUS-powered USB hub, allowing up to 2 other USB devices to be attached it.

USB connection

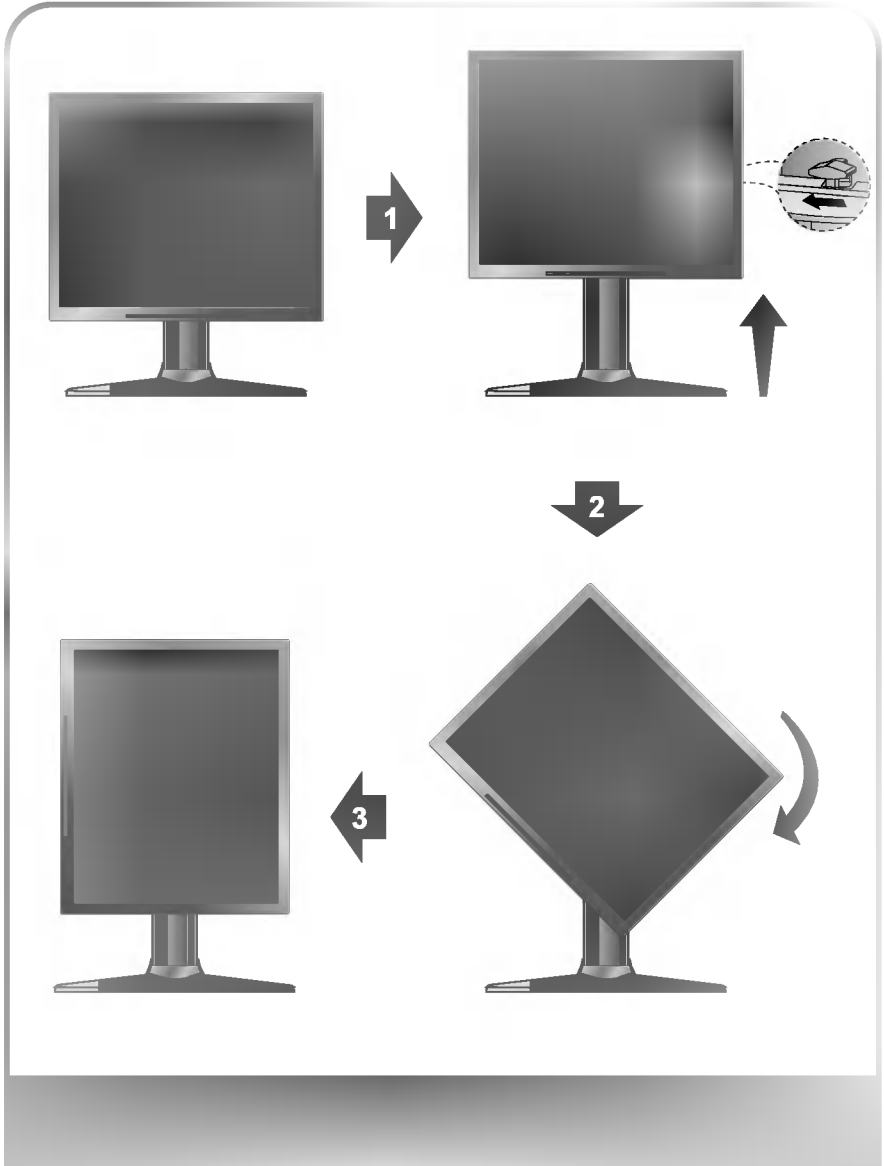
1. Connect the upstream port of the monitor to the downstream port of the USB compliant PC or another hub using the USB cable. (Computer must have a USB port)
2. Connect the USB compliant peripherals to the downstream ports of the monitor.



NOTE

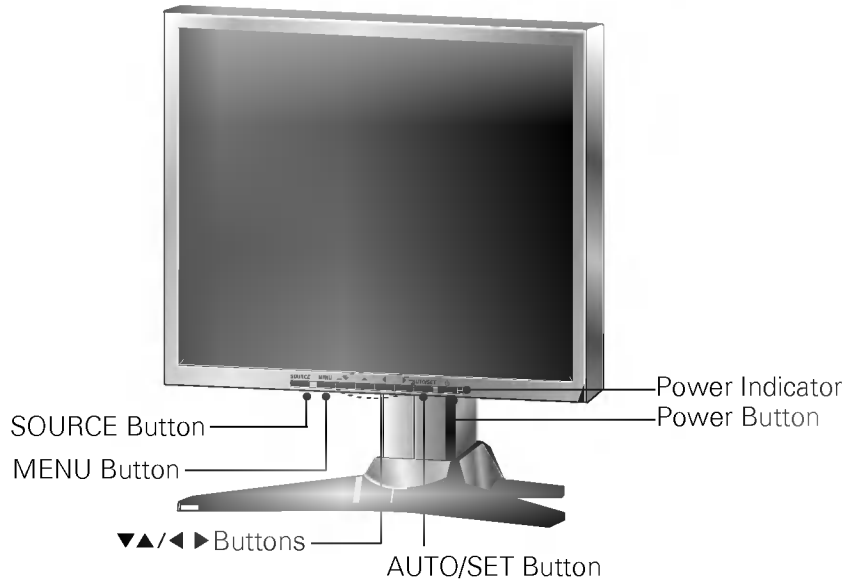
- To activate the USB hub function, the monitor must be connected to a USB compliant PC(OS) or another hub with the USB cable(enclosed).
- When connecting the USB cable, check that the shape of the connector at the cable side matches the shape at the connecting side.
- Even if the monitor is in a power saving mode, USB compliant devices will function when they are connected the USB ports(both the upstream and downstream) of the monitor.

IMPORTANT: These USB connectors are not designed for use with high-power USB devices such as a video camera, scanner, etc. LGE recommends connecting high-power USB devices directly to the computer

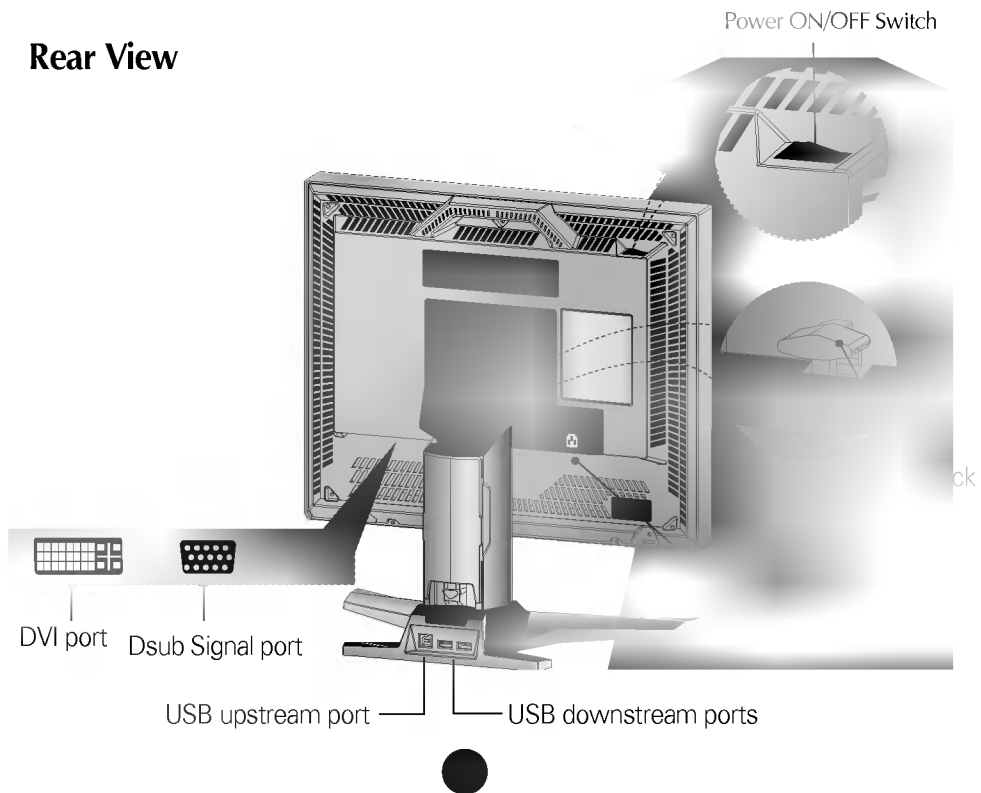




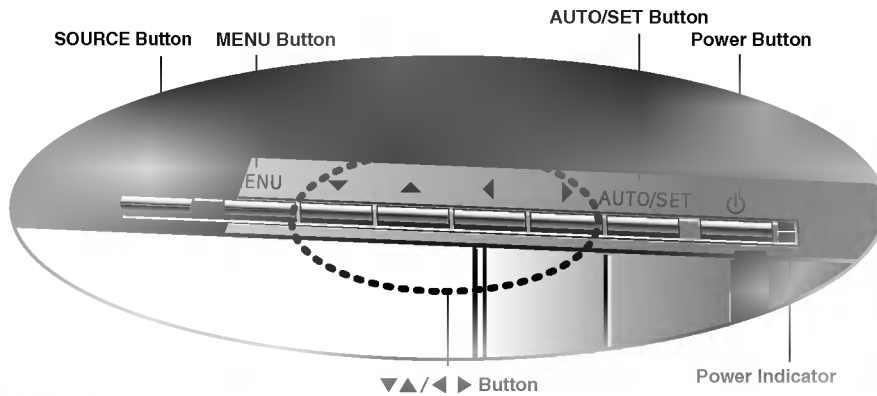
Front View



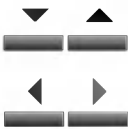





Rear View



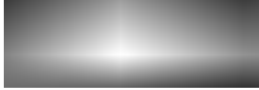



Front Panel Controls



Control	Function
 SOURCE Button	Use this button to make Dsub or DVI connector active. This feature is used when two computers are connected to the monitor. The default setting is Dsub.
 MENU Button	Use this button to enter or exit the on screen display.
 ▼▲/◀▶ Button	Use these buttons to choose or adjust items in the on screen display. <Shortcut Keys> <ul style="list-style-type: none"> Brightness and Contrast can be adjusted directly without entering the On Screen Display (OSD) system. Touch the ▼▲/◀▶ buttons to adjust the settings and then the MENU button to save all changes. The Brightness and Contrast functions are also available in the On Screen Display (OSD) menu.
 AUTO/SET Button	Use this button to enter a selection in the on screen display. * AUTO adjustment function TO the AUTO/SET button before using OSD menu. This button is for the automatic adjustment of the screen position, clock and phase. Note: Some signal from some graphics boards may not function properly. If the results are unsatisfactory , adjust your monitor's Position, Clock and Phase manually.
 Power Button	Use this button to turn the monitor on or off.
 Power Indicator	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.

Front Panel Controls

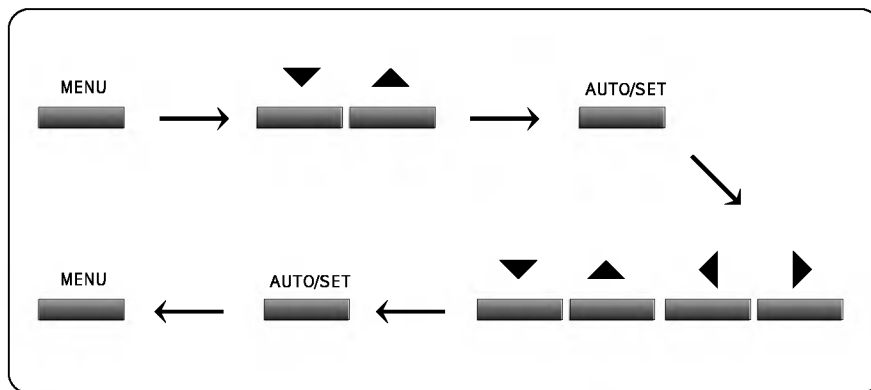
Control	Function
  MENU, ► Button	<p>Press the hold the MENU button and ► button for 3 seconds: the message "CONTROLS LOCKED" appears.</p>  <p>You can unlock the OSD controls at any time by pushing the MENU, ► button for 3 seconds: the message "CONTROLS UNLOCKED" will appear.</p> 

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:

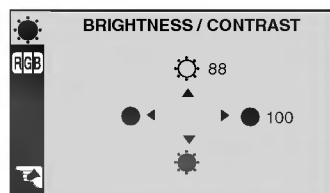




- 1** Press the **MENU Button**, then the main menu of the OSD appears.
- 2** To access a control, use the **▼** or **▲** Buttons. When the icon you want becomes highlighted, press the **AUTO/SET Button**.
- 3** Use the **▼▲/◀▶** Buttons to adjust the item to the desired level.
- 4** Accept the changes by pressing the **AUTO/SET Button**.
- 5** Exit the OSD by Pressing the **MENU Button**.



On Screen Display(OSD) Selection and Adjustment

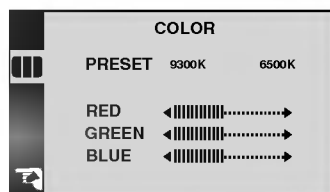
You were introduced to the procedure of selection and adjusting an item using the OSD system. Listed below are the icons, icon names, and icon descriptions of the items that are shown on the Menu.

Note : When a digital signal is set as an input, only the BRIGHTNESS, CONTRAST, COLOR and SETUP properties can be adjusted. you do not need to adjust the other properties.



  **Brightness**
Used to adjust the brightness of the screen.

  **Contrast**
Adjust the display to the contrast desired.



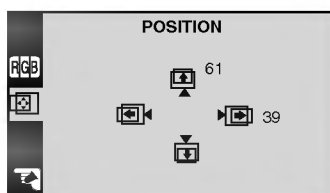
PRESET 9300K/ 6500K
To appear the displays color temperature.

- 9300K: Slightly bluish white.
- 6500K: Slightly reddish white.

RED To set your own color levels.

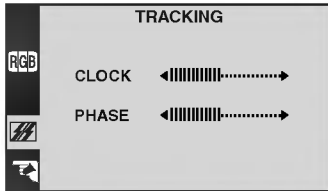
GREEN To set your own color levels.

BLUE To set your own color levels.



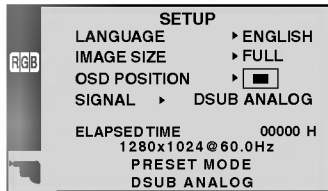
  **Vertical Position**
To move picture image up and down.

  **Horizontal Position**
To move picture image left and right.



CLOCK To minimize any vertical bars or stripes visible on the screen background. The horizontal screen size will also change.

PHASE To adjust the focus of the display. This item allows you to remove any horizontal noise and clear or sharpen the image of characters.



LANGUAGE To choose the language in which the control names are displayed.

IMAGE SIZE This function displays the image in its original size or enlarged size so as to fit in the full screen of the LCD panel.

OSD POSITION To adjust position of the OSD window on the screen.

SIGNAL To select DSUB ANALOG or DVI ANALOG / DIGITAL as the active input. This feature is used when two computers are connected to the display. The display automatically detects the proper input when only one video source is connected.

ELAPSED TIME To display the use time of monitor

Video Memory Modes

The monitor has 26 memory locations for display modes, 16 of which are factory preset to popular video modes.

Display Modes (Resolution)

1	VGA	640 x 350	31.469	70
2	VGA	720 x 400	31.468	70
3	VGA	640 x 480	31.469	60
4	VESA	640 x 480	37.500	75
5	VESA	640 x 480	43.269	85
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	60.123	75
12	VESA	1024 x 768	68.677	85
13	MAC	1152 x 870	68.681	75
14	VESA	1152 x 900	61.805	65
15	VESA	1280 x 1024	63.981	60
16	VESA	1280 x 1024	79.976	75

User Modes

- Modes 17-26 are empty and can accept new video data. If the monitor detects a new video mode that has not been present before or is not one of the preset modes, it stores the new mode automatically in one of the empty modes starting with mode 17.

If you use up the 10 blank modes and still have more new video modes, the monitor replaces the information in the user modes starting with mode 17.

Troubleshooting

Check the following before calling for service.

Display Position is incorrect.

- Push the **AUTO/SET** Button.
- If the results are unsatisfactory, adjust the image position using the H position and V position icon in the on screen display.

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

- Push the **AUTO/SET** Button.
- 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.

- Push the **AUTO/SET** Button.
- 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.

INPUT SIGNAL 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 - 80kHz

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).

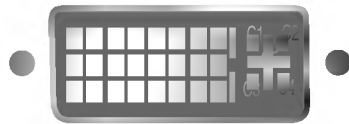
The power LED is illuminated amber.

- 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.

Signal Connector Pin Assignment



■ DVI Connector

1	T. M. D. S. Data2-	16	Hot Plug Detect
2	T. M. D. S. Data2+	17	T. M. D. S. Data0-
3	T. M. D. S. Data2/4 Shield	18	T. M. D. S. Data0+
4	T. M. D. S. Data4-	19	T. M. D. S. Data0/5 Shield
5	T. M. D. S. Data4+	20	T. M. D. S. Data5-
6	DDC Clock	21	T. M. D. S. Data5+
7	DDC Data	22	T. M. D. S. Clock Shield
8	Analog Vertical Sync.	23	T. M. D. S. Clock+
9	T. M. D. S. Data1-	24	T. M. D. S. Clock-
10	T. M. D. S. Data1+	C1	Analog Red
11	T. M. D. S. Data1/3 Shield	C2	Analog Green
12	T. M. D. S. Data3-	C3	Analog Blue
13	T. M. D. S. Data3+	C4	Analog H. Sync.
14	+5V Power	C5	Analog Ground
15	Ground (return for +5V, H. Sync. and V. Sync.)		

T. M. D. S. (Transition Minimized Differential Signaling)

Display	Type	18.1inch (45.97cm) Flat Panel Active matrix-TFT LCD Anti-Glare coating
	Viewable Size	18.1inch (45.97cm)
	Pixel pitch	0.28 x 0.28mm
Sync Input	Horizontal Freq.	30kHz - 80kHz (Automatic)
	Vertical Freq.	56Hz - 85Hz (Automatic)
	Input form	Separate TTL (Positive/Negative) Composite TTL (Positive/Negative) SOG (Sync On Green) Digital
Video Input	Signal input	15 pin D-Sub connector / DVI - I connector (Digital/Analog)
	Input Form	RGB Analog (0.7Vp-p/75ohm) Digital
	Resolution	Dsub - VESA 1280 x 1024@75Hz DVI - VESA 1280 x 1024@60Hz (Digital/Analog) Recommend VESA 1280 x 1024@60Hz
USB specifications	USB standard	Rev. 1.0 complied BUS-powered hub
	Downstream power supply	100mA for each (MAX)
	Communication speed	12 Mbps (full), 1.5 Mbps (low)
	USB port	1 Upstream port 2 Downstream ports
Power consumption	Normal(Max.)	≤ 55W
	Stand-by/Suspend	≤ 3W
	Power Off	≤ 3W
Dimensions	Width	39.7cm / 15.6 inches
	Height	42.8cm / 16.85 inches (Min) 50.8cm / 20.0 inches (Max)
	Depth	23.7cm / 9.3 inches
		AC 100-240V 50/60Hz 1.0A
	Net	8.5kg / 18.73lbs
	Tilt	5° (Down) / 30° (Up)
	Swivel	45° (Left) / 45° (Right)
		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