



Colour Monitor

USER GUIDE

BENUTZERHANDBUCH

MANUEL D'UTILISATION

GUIDA UTENTE

GUIA DEL USUARIO

Flatron 78FT



AGENCY REGULATORY NOTICE

FCC Compliance Statement

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 using one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the 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.

Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's (or your) authority to operate the equipment. Only peripherals (digital input/output devices, terminals, printers, etc.) certified to comply with the Class B limits may be attached to this monitor. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.

Only shielded Signal Cables may be used with this System.

**Canadian
D.O.C.
Notice**

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.

**TCO'95
Compliance**



This monitor complies with TCO'95 (The Swedish Confederation of Professional Employees) guidelines for low frequency electric fields, magnetic fields, static electricity, and visual ergonomic requirements. Furthermore, this model is produced with concern for the environment and contains no harmful substances in any of its components.

**CE
Conformity
Notice**



Products with the "CE" Marking comply with the EMC Directive(89/336/EEC) and LOW VOLTAGE Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms :

- EN 55022 ; Radio Frequency Interference
- EN 50082-1:1992 ; Electromagnetic Immunity
- EN 60555-2 ; Power Line Harmonics
- EN 60555-3 ; Voltage Fluctuations
- EN 60950 ; Product Safety

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Introduction

Thank you for purchasing a high resolution monitor. It will give you high resolution performance and convenient reliable operation in a variety of video operating modes.

Features

- The monitor is a 17 inches (16.0 inches viewable) intelligent, microprocessor based monitor compatible with most analog RGB (Red, Green, Blue) display standards, including IBM PC®, PS/2®, Apple®, Macintosh®, Centris®, Quadra®, and Macintosh II family.
- It can also be used with a Sun SPARC workstation as well as other sources using the 5 BNC connectors. The monitor provides crisp text and vivid color graphics with VGA, SVGA, XGA, and VESA Ergo modes (non-interlaced), and most Macintosh compatible color video cards when used with the appropriate adapter. The monitor's wide compatibility makes it possible to upgrade video cards or software without purchasing a new monitor.
- Digitally controlled auto-scanning is done with the micro-processor for horizontal scan frequencies between 30 and 85kHz, and vertical scan frequencies between 50 and 160Hz. The microprocessor-based intelligence allows the monitor to operate in each frequency mode with the precision of a fixed frequency monitor.
- The microprocessor-based digital controls allow you to adjust conveniently a variety of image controls by using the OSD (On Screen Display).
- The monitor has 32 memory locations for display modes, 8 of which are factory preset to popular video modes.
- This monitor is capable of producing a maximum horizontal resolution of 1280 dots and a maximum vertical resolution of 1024 lines. It is well suited for CAD work and sophisticated windowing environments.
- For greater user health and safety, this monitor complies with the stringent Swedish TCO'95 requirements for low radiation emissions.
- For low cost of monitor operation, this monitor is certified as meeting the EPA Energy Star requirements, and utilizes the VESA Display Power Management Signalling (DPMS) protocol for power saving during non-use periods.

Monitor Registration

The model and serial numbers are found on the rear of this unit. These numbers are unique to this unit and not available to others. You should record requested information here and retain this guide as a permanent record of your purchase. Staple your receipt here.

Date of Purchase : _____
Dealer Purchased From : _____
Dealer Address : _____
Dealer Phone No. : _____
Model No. : _____
Serial No. : _____

Notice

All rights reserved. Reproduction in any manner, in whole or in part, is strictly prohibited without the written permission of LG Electronics Inc.

Trademark Acknowledgments

LG is a trademark of **LG Electronics Inc.**

IBM is a registered trademark and **VGA** is a trademark of International Business Machines Corporation.

Warning : To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

Avertissement : Ne pas placer cet appareil dans un endroit humide. Cela peut entraîner un incendie ou une décharge électrique.

Important Precautions

This unit has been engineered and manufactured to assure your personal safety, but improper use can result in potential electrical shock or fire hazard. In order not to defeat the safeguards incorporated in this monitor, observe the following basic rules for its installation, use, and servicing. Also follow all warnings and instructions marked directly on your monitor.

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 standards (UL/CSA or VDE) if not being provided by the supplier.

Operate the monitor only from a power source indicated in the specifications of this manual or listed on the monitor. 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 Monitor

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

To Avoid Personal Injury :

- Do not place the monitor 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 monitor OFF if you leave the room for more than a short period of time. Never leave the monitor ON when leaving the house.
- Keep children from dropping or pushing objects into the monitor's cabinet openings. Some internal parts carry hazardous voltages.

-
- Do not add accessories that have not been designed for this monitor.
 - During a lightning storm or when the monitor is to be left unattended for an extended period of time, unplug it from the wall outlet.
 - Do not bring magnetic devices such as magnets or motors near the picture tube.
-

On Installation

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

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

Monitors 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 monitor on a bed, sofa, rug, etc.
 - Place the monitor in a built-in enclosure unless proper ventilation is provided.
 - Cover the openings with cloth or other material.
 - Place the monitor near or over a radiator or heat source.
-

On Cleaning

- Unplug the monitor before cleaning the face of the picture tube.
 - Use a slightly damp (not wet) cloth. Do not use an aerosol directly on the picture tube because overspray 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.
-

Connecting the Monitor

On the back of the monitor are two plug-in connections; one for the AC power cord, and the others for the signal cable from the video card.

AC Power Connection

One end of the AC power cord is connected into the AC power connector on the back of the monitor. The other end is plugged into a properly grounded three-prong AC outlet. The monitor's auto-sensing power supply can automatically detect 100-120V AC or 200-240V AC, 50 or 60Hz.

Signal Cable Connection

The connector for the signal cable is located on the back of the monitor. The 15 pin VGA connectors on the back of the monitor allow for a wide variety of video controllers to be connected to the monitor. Examples of signals that might be sent to the monitor include signals from IBM PC and compatibles, Apple Macintosh, Centris and Quadra.

The supplied signal cable consists of 15 pin VGA connectors at both ends, suitable for connections to an IBM PC or compatible.

Other generic cables or adapters may be used for connections to your equipment, as long as they meet the compatible signal requirements to activate this monitor (see page A23 for input specifications). For Apple Macintosh use, a separate plug adapter is needed to change the 15 pin high density (3 row) D-sub VGA connector on the supplied cable to a 15 pin 2 row connector. Examples of typical connections are shown below. Select the connection example that fits your needs.

Connection to any IBM VGA PC compatible system

Figure 3 shows the signal cable connections from the monitor to the Video Graphics Array (VGA) port typical in an IBM PC or PC compatible. This also applies to any graphics video card for PC-CAD or workstation that has a 15 pin high density (3 row) D-Sub connector.

1. Power off both the monitor and PC.
2. Connect the 15 pin VGA connector of the supplied signal cable to the output VGA video connector on the PC and the matching input connector on the rear of the monitor. The connectors will mate only one way. If you cannot attach the cable easily, turn the connector upside down and try again. When mated, tighten the thumbscrews to secure the connection.
3. Power ON the PC, then the monitor.
4. If you see the **SELF DIAGNOSTICS** message, check the signal cable and connectors.
5. After using the system, power OFF the monitor, then the PC.

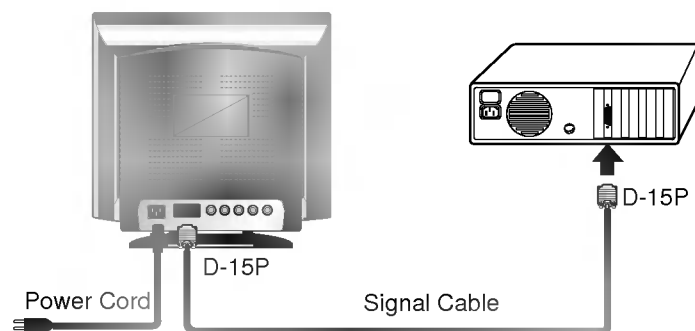


Figure 3.

Connecting to an Apple Macintosh PC

Figure 4 shows the connection to an Apple Macintosh, using a separately purchased adapter.

1. Power OFF both the monitor and the PC.
2. Connect the 15 pin VGA connector of the supplied signal cable to the matching input on the back of the monitor. Tighten the thumbscrews to secure the connection.
3. Locate the appropriate MAC to VGA adapter block at your local computer store. This adapter changes the high density 3 row 15 pin VGA connector to the correct 15 pin 2 row connection to mate with your MAC. Attach the other end of the signal cable to the side of the adapter block with 3 rows.
4. Connect the attached adapter block/signal cable to the video output on your MAC.
5. Power ON the PC, then the monitor.
6. If you see the **SELF DIAGNOSTICS** message, check the signal cable and connectors.
7. After using the system, power OFF the monitor, then the PC.

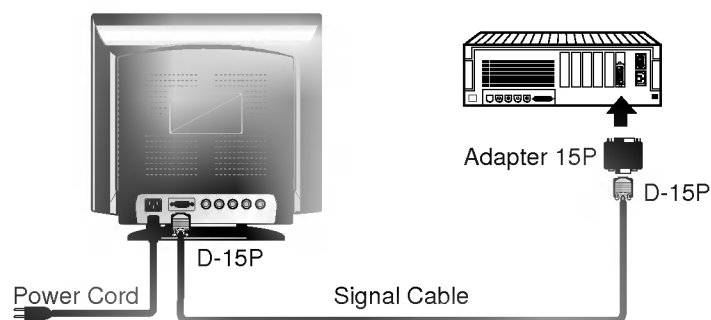
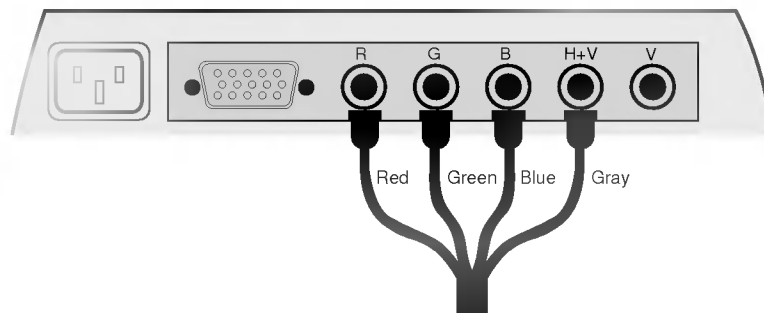


Figure 4.

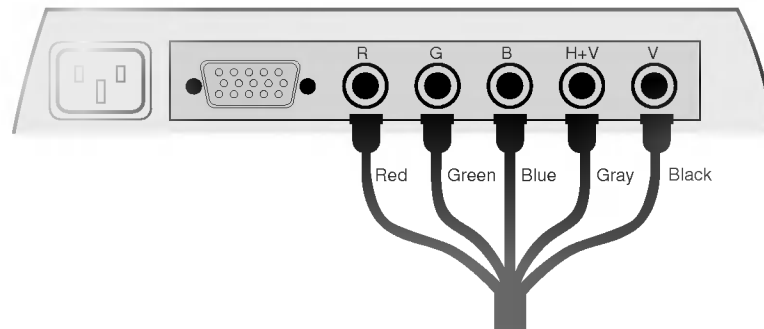
A7

Notes on using the BNC connectors with other types of video cards. Follow the example that fits your needs.

- 1. In case of external composite sync signal:**
Connect R, G and B video signals and Composite sync signal to BNC receptacles on rear panel, respectively.

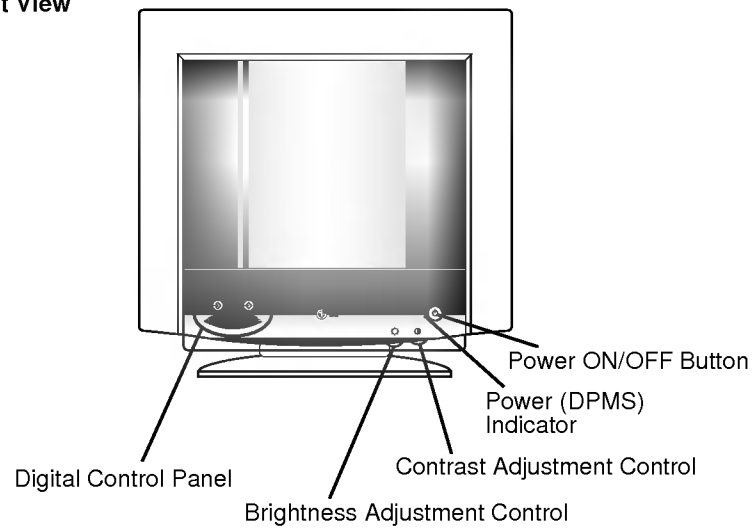


- 2. In case of separate horizontal and vertical sync signals:**
Connect R, G and B video signals and horizontal and vertical sync signals to BNC receptacles on rear panel respectively.

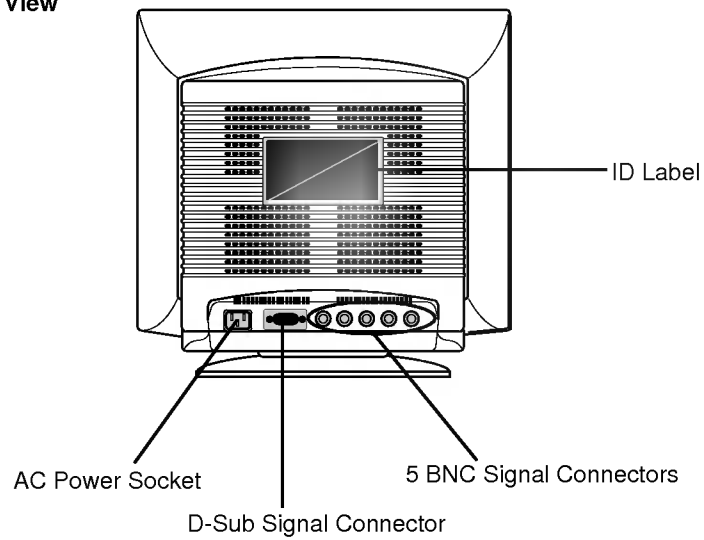


Location and Function of Controls

Front View

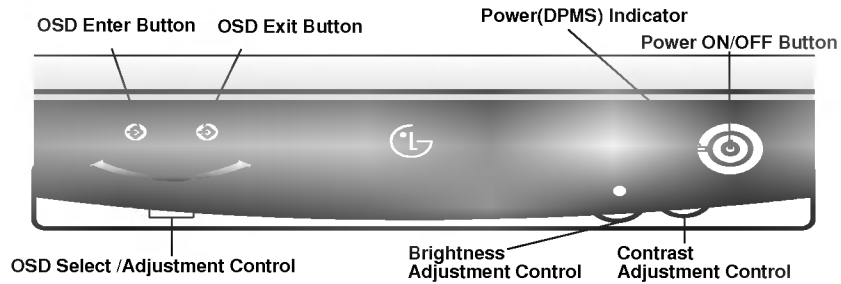









Rear View



Control Panel Function


Digital Controls Panel





Control	Function
 OSD Enter Button	Use this button to start/enter and exit from the On Screen Display (OSD). If there is no OSD on the screen, One click (press) of this button will show the Main Menu.
 OSD Exit Button	To disappear of the OSD on the screen.
 OSD Select/ Adjustment Control	Use this knob for selecting (highlighting) an OSD icon to be adjusted. It is also used for selecting the level of the selected item to be adjusted.
 Brightness Adjustment Control	Used to adjust the brightness of the screen.
 Contrast Adjustment Control	Adjust the display to the contrast desired.
 Power (DPMS) 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.
 Power ON/OFF Button	Use this button to turn the monitor on or off.

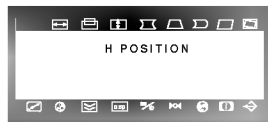
On Screen Display (OSD) Control Adjustment


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

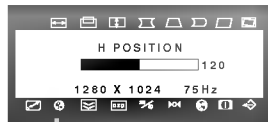
Note : (Monitor and PC should be ON, with an image or prompt on the screen). A single press of the ENTER button will present you with the Main Menu of the on screen display system with the first () highlighted.


The main picture area will also show the select icon () and next icon ().


1. The OSD system should look like:



2. To adjust H Position (), Press the enter button once.
The display will look like:



When you are done, Press the main button () once to return to main menu to make another selection.


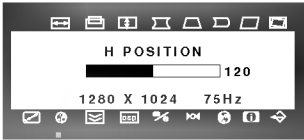

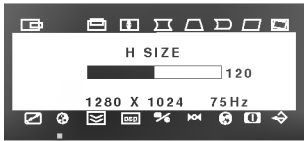

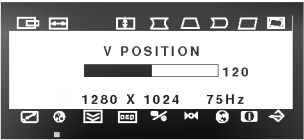

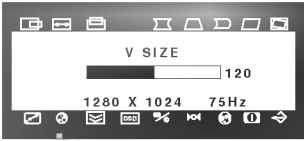

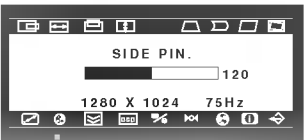
3. You want to move the next icon, Adjust the next button () control.
The display will look like:


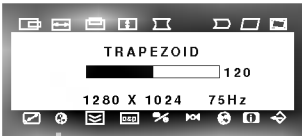

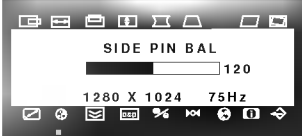



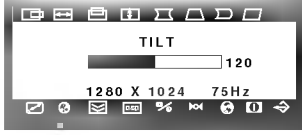






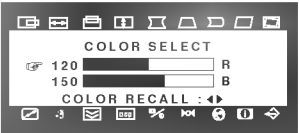





OSD Adjustment and Selection Items






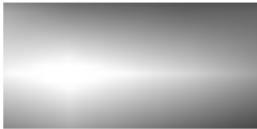

You were introduced to the procedure of selection and adjusting an item using the OSD system.

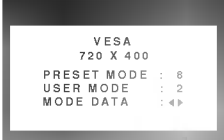
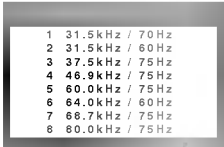
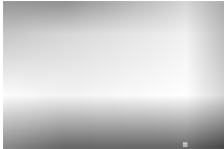

Listed below are the icons, icon names, and icon descriptions of the items that are shown on the Menu.

OSD Adjust	Description
 Horizontal Position 	To move picture image left and right. ◀ Moves the screen image left. ▶ Moves the screen image right.
 Horizontal Size 	To adjust image width. ◀ Decreases the size of the screen image. ▶ Increases the size of the screen image.
 Vertical Position 	To move image up and down. ◀ Moves the screen image up. ▶ Moves the screen image down.
 Vertical Size 	To adjust image height. ◀ Decreases the size of the screen image. ▶ Increases the size of the screen image.
 Side Pincushion 	To correct the bowing in and out of the image. ◀ Curves the image's edges inwards. ▶ Curves the image's edges outwards.

OSD Adjust	Description
<p> Trapezoid</p> 	<p>To correct geometric distortion.</p> <ul style="list-style-type: none"> ◀ Makes the screen image narrower at the top. ▶ Moves the screen image wider at the top.
<p> Side Pincushion Balance</p> 	<p>To correct the balance of both sides bowling.</p> <ul style="list-style-type: none"> ◀ Curvature of the sides to the right. ▶ Curvature of the sides to the left.
<p> Parallelogram</p> 	<p>This control adjusts for a skewing of the screen image.</p> <ul style="list-style-type: none"> ◀ Tilts the screen image rightward. ▶ Tilts the screen image leftward.
<p> Tilt</p> 	<p>To correct image rotation.</p> <ul style="list-style-type: none"> ◀ Tilts the screen image left. ▶ Tilts the screen image right.
<p> Zoom Adjust</p> 	<p>To adjust Horizontal and Vertical image size simultaneously.</p> <ul style="list-style-type: none"> ◀ Smaller the image size. ▶ Bigger the image size.

OSD Adjust	Description
<p> Color Select</p>  	<p>To select color temperature 9300K/ 7200K/ USER. Select the desired color temperature or select user to set your own color levels.</p> <p>Allow for specific adjustments to Red and Blue(R/B).</p> <ul style="list-style-type: none"> ◀ Decreases the amount of color in the image. ▶ Increases the amount of color in the image.
<p> Moire Reduction</p>  	<p>This item allows you to reduce the moire. It is normally OFF. If you want to adjust it, select ON using the adjustment control and push the Enter Button.</p> <p>NOTE : The screen image may shake slightly while the moire reduction function is ON. Switching the OFF will improve image stability and clarity at the expense of slightly greater moire.</p>
<p> OSD Adjust</p> 	<p>This item lets you adjust the OSD position. After selecting the OSD icon using the Adjustment Control, push the Enter button. The OSD will be displayed as shown left. Select an icon using the Enter button. Rotate the Adjustment Control to modify existing position.</p>

OSD Adjust	Description
<p data-bbox="387 584 598 611">Option Select</p> 	<p data-bbox="743 600 1203 712">This item gives access 4 elements; Manual Degaussing, Beep ON/OFF, Signal Input, Video Level. Press the Enter Button to select the desired item to change.</p> <ul style="list-style-type: none"> <li data-bbox="743 725 1203 808">■  : Used to demagnetize the picture to give a more accurate image and color. <li data-bbox="743 822 1203 853">■  : To select Beep ON or Beep OFF. <li data-bbox="743 866 1203 898">■  : To select D-sub or 5 BNC. <li data-bbox="743 911 1203 965">■  : To select input signal level(0.7V or 1.0V).
<p data-bbox="387 994 587 1021">Mode Recall</p> 	<p data-bbox="743 1016 1203 1160">If the monitor is operating in a factory preset mode, this control will reset the image to the factory preset mode. If the monitor is operating in a user mode, this control has no effect.</p>
<p data-bbox="387 1187 635 1214">Language Select</p> 	<p data-bbox="743 1211 1203 1355">To choose the language in which the control names are displayed. OSD Menus are available in five language : English, German, French, Spanish and Italian.</p>

OSD Adjust	Description
<p>i Mode Information</p>   	<p>To inform users of preset and user mode data.</p> <p>This item provides information about the stored video modes. After highlighting (red color) the mode information icon, press Enter. Rotate the Adjustment Control to see the desired video mode information. The mode information screens give you some information regarding industry resolution terminology, resolution, and memory mode number.</p>
<p>↔ Exit</p> 	<p>To disappear of the OSD on the screen.</p>

Self Diagnostics



The monitor has a **SELF DIAGNOSTICS** OSD feature that pops up when there may be possible causes of non-operation. The OSD would highlight a possible reason the display is not showing an image. An example of this may be when you turn on the monitor with no signal cable attached. The monitor will display the **SELF DIAGNOSTICS** OSD with the **NO SIGNAL DETECTED**. This would be a clue for you to check the signal connections.

DDC (Display Data Channel)

DDC is a communication channel over which the monitor automatically informs the host system (PC) about its capabilities. This monitor has two DDC function; DDC1 and DDC2B. DDC1 and DDC2B carry out uni-directional communication between the PC and the monitor. Under these situations, the PC sends display data to the monitor but not commands to control the monitor settings.

Note : PC must support DDC functions to do this.

If you using the 5 BNC connectors with other types of video cards, this monitor has not support DDC function.

Some older computer systems are not compatible with the DDC standard. If your monitor is displaying a monochrome image or the wrong resolution, need to change with a DDC compatible VGA card.

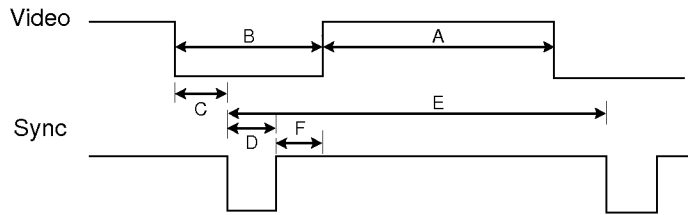
Low Radiation Compliance (MPR II)

This monitor meets one of the strictest guidelines available today for low radiation emissions, offering the user extra shielding and an antistatic screen coating. These guidelines, set forth by a government agency in Sweden, limit the amount of emission allowed in the Extremely Low Frequency (ELF) and Very Low Frequency (VLF) electromagnetic range.

Video Memory Modes

The monitor has 32 memory locations for display modes, 8 of which are factory preset to popular video modes.

Factory Preset Timing Signal Chart



		Mode1	Mode2	Mode3	Mode4	Mode5	Mode6	Mode7	Mode8		
H O R I Z O N T A L	Polarity	-	-	-	+	+	+	-	+		
	Frequency	kHz	31.467	31.467	37.500	46.875	60.023	63.981	68.981	79.976	
	Total Period	uS	31.778	31.778	26.667	21.333	16.660	15.630	14.560	12.504	A
	Data Period	uS	25.422	25.422	20.317	16.162	13.003	11.852	11.520	9.481	B
	Blanking	uS	6.356	6.356	6.350	5.171	3.657	3.778	3.040	3.023	C
	Front Porch	uS	0.636	0.636	0.508	0.323	0.203	0.444	0.320	0.119	D
	Pulse Width	uS	3.813	3.813	2.032	1.616	1.219	1.037	1.280	1.067	E
	Back Porch	uS	1.907	1.907	3.810	3.232	2.235	2.296	1.440	1.837	F
V E R T I C A L	Polarity	+	-	-	+	+	+	-	+		
	Frequency	Hz	70.077	59.941	75.000	75.000	75.029	60.020	75.062	75.025	
	Total Period	mS	14.270	16.683	13.333	13.333	13.328	16.661	13.322	13.329	A
	Data Period	mS	12.711	15.253	12.800	12.800	12.795	16.005	12.667	12.804	B
	Blanking	mS	1.559	1.430	0.533	0.533	0.533	0.656	0.655	0.525	C
	Front Porch	mS	0.415	0.318	0.026	0.021	0.017	0.016	0.043	0.012	D
	Pulse Width	mS	0.064	0.063	0.080	0.064	0.050	0.047	0.044	0.038	E
	Back Porch	mS	1.080	1.049	0.427	0.448	0.466	0.594	0.568	0.475	F
Resolution		720 × 400	640 × 480	640 × 480	800 × 600	1024 × 768	1280 × 1024	1152 × 870	1280 × 1024		
Recall		YES	YES	YES	YES	YES	YES	YES	YES		

User Modes

Modes 1-24 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 1.

If you use up the 24 blank modes and still have more new video modes, the monitor replaces the information in the user modes starting with mode 1.

Recalling Display Modes

When your monitor detects a mode it has seen before, it automatically recalls the image settings you may have made the last time you used that mode.

You may, however, manually force a recall of each of the eight preset modes by pressing the Recall button. All preset modes are automatically recalled as the monitor senses the incoming signal.

The ability to recall the preset modes is dependent on the signal coming from your PC's video card or system. If this signal does not match any of the factory modes, the monitor automatically sets itself to display the image.

Energy Saving Design

This monitor complies with the EPA's Energy Star program, which is a program designed to have manufacturers of computer equipment build circuitry into their products to reduce power consumption during time of non-use.

This monitor also goes into its energy saving mode if you exceed the monitor's operating limits, such as the maximum resolution of 1280x 1024 or the frequency refresh rates of 30-85kHz horizontal or 50-160Hz vertical. When this monitor is used with a Green or EPA Energy Star PC, or a PC with a screen blanking software following the VESA Display Power Management Signalling (DPMS) protocol, this monitor can conserve significant energy by reducing power consumption during periods of non-use. When the PC goes into the energy saving mode, the monitor will go into a suspended operation state, indicated by the Power LED light changing from a green color to an amber color. After an extended period in the suspended mode, the monitor will enter a semi-OFF mode to conserve more energy. In the semi-OFF mode or DPMS OFF mode as we call it in our specifications, the Power LED will still show an amber color. When you awaken your PC by hitting a key or moving the mouse, the monitor will also awaken to its normal operating mode, indicated by the green Power LED light. By following these conventions, the power consumption can be reduced to the following levels:

Power Consumption

Mode	Hori.	Verti.	Power	LED Color
Normal (Max.)	On	On	≤ 120W	Green
Stand-by	Off	On	≤ 15W	Amber
Suspend	On	Off	≤ 15W	Amber
Off	Off	Off	≤ 8W	Amber

Troubleshooting

Self diagnostics message.

- The signal cable is not connected.
-

The power LED is illuminated amber.

- Display power management mode(Move mouse to awaken PC).
- Check the computer power and graphics adapters configuration.
- The frequency of the sync input is outside the operating range of the monitor.

Monitor Input Limits
Horizontal : 30 - 85kHz
Vertical : 50 - 160Hz

- The signal cable is incorrectly configured or connected refer to the page *Signal Connector Pin Assignment*, for reference.
 - Try power code OFF and ON.
-

The image on the SCREEN is not centered, or too small, or not a rectangle shape.

- Image adjustment not been done yet in the current operating mode. Use the SELECT and ◀ or ▶ buttons to set the image to your liking.
-

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.
-

Service

Unplug the monitor from the wall outlet and refer servicing to qualified service personnel when :

- The power cord or plug is damaged or frayed.
- Liquid has been spilled into the monitor.
- The monitor has been exposed to rain or water.
- The monitor does not operate normally following the operating instructions. Adjust only those controls that are covered in the operating instructions. An improper adjustment of other controls may result in damage and often requires extensive work by a qualified technician to restore the monitor to normal operation.
- The monitor has been dropped or the cabinet has been damaged.
- The monitor exhibits a distinct change in performance.
- Snapping or popping from the monitor is continuous or frequent while the monitor is operating. It is normal for some monitors to make occasional sounds when being turned on or off, or when changing video modes.

Do not attempt to service the monitor yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

When replacement parts are required, have the service technician verify in writing that the replacements used have the same safety characteristics as the original parts. Use of manufacturer specified replacements can prevent fire, shock, and other hazards.

Upon completion of any service or repairs to the monitor, ask the service technician to perform the safety check described in the manufacturer's service manual.

When a video monitor reaches the end of its useful life, improper disposal could result in a picture tube implosion. Ask a qualified service technician to dispose of the monitor.

Specifications

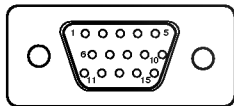
Sync Signal Types

Priority	Type	H. Sync	V. Sync
1	Separate Sync	H. Sync	V. Sync
2	Composite Sync	H/V. Sync	N.C
3	Sync On Green	N.C	N.C

(N.C : No Connection)

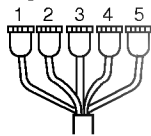
Signal Connector Pin Assignment

15Pin D-Sub Signal Connector



Pin	Signal (D-Sub)
1	Red
2	Green
3	Blue
4	Ground
5	Self-Test
6	Red Ground
7	Green ground
8	Blue Ground
9	NC
10	Ground
11	Ground
12	SDA
13	H. Sync
14	V. Sync
15	SCL

5 BNC Signal Connector



Pin	Signal (5 BNC)	Color
1	Red	Red
2	Green	Green
3	Blue	Blue
4	H. Sync (H or H+V)	Gray
5	V. Sync	Black

Specification

Picture Tube

- 17 inch (16.0 inches viewable)
- 90 degree deflection, Dark face
- 0.24mm strip pitch High contrast
- W-ARAS(Wide-Anti-Reflective Anti-Static Coating)

Sync Input

- Horizontal Frequency : 30-85kHz (Automatic)
- Vertical Frequency : 50-160Hz (Automatic)
- Input Form : Separate TTL, Positive/Negative
Composite TTL, Positive/Negative
SOG(Sync On Green)
- Signal input : 15pin D-Sub Connector/5 BNC Connector

Video Input

- Display Area : 32.51 x 24.38 cm (H x V)
- Input Form : Separate, RGB Analog, 0.7Vp-p/75 ohm,
Positive

Power Input

- AC 100-240V 50/60Hz 2.0A

Dimensions (with tilt/swivel stand)

- Width : 43.55 cm
- Height : 45.55 cm
- Depth : 46.60 cm

Weight

- Net : 21.0 kg

Information in this document is subject to change without notice and does not represent a commitment on the part of LG Electronics Inc.