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.

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.

Compiance 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

Environmental Labelling of Personal Computers

Congratulations! You have just purchased a TCO'95 approved and labelled product! Your choice has provided you with a product developed for professional use. Your purchase has also contributed to reducing the burden on the environment and to the further development of environmentally-adapted electronic products.

Why do we have environmentally-labelled computers?

In many countries, environmental labelling has become an established method for encouraging the adaptation of goods and services to the environment. The main problem as far as computers and other electronic equipment are concerned is that environmentally harmful substances are used both in the products and during their manufacture. Since it has not been possible so far for the majority of electronic equipment to be recycled in a satisfactory way, most of these potentially damaging substances sooner or later enter Nature.

There are also other characteristics of a computer, such as energy consumption levels, that are important from both the working and natural environment viewpoints. Since all types of conventional electricity generation have a negative effect on the environment (acidic- and climatic-influencing emissions, radioactive waste, etc.), it is vital to conserve energy. Electronic equipment in offices consumes as enormous amount of energy, since it is often routinely left running continuously.

What does labelling involve?

This product meets the requirements for the TCO'95 scheme, which provides for international environmental labelling of personal computers. The labelling scheme was developed as a joint effort by the TCO (The Swedish Confederation of Professional Employees), Naturckyddsföreningen (The Swedish Society for Nature Conservation), and NUTEK (The National Board for Industrial and Technical Development in Sweden), and SEMKO AB (an international certification agency).

The requirements cover a wide range of issues: environment, ergonomics, usability, emission of electrical and magnetic fields, energy consumption and electrical and fire safety.

The environmental demands concern, among other things, restriction on the presence and use of heavy metals, brominated and chlorinated flame retardants, CFCs (freons), and chlorinated solvents. The product must be prepared for recycling, and the manufacturer is obliged to have an environmental plan, which must be adhered to in each country where the company implements its operational policy.

The energy requirements include a demand that the computer and/or display, after a certain period of inactivity, shall reduce its power consumption to a lower level, in one or more stages. The length of time to reactivate the computer shall be reasonable for the user.

Labelled products must meet strict environmental demands, for example, in respect of the reduction of electric and magnetic fields, along with physical and visual ergonomics and good usability.

The following is a brief summary of the environmental requirements met by this product. The complete environmental criteria document may be ordered from:

> TCO Development Unit
> Linnegatan 14, S-11494 Stockholm, Sweden
> FAX +46-8 782 92 07
> E-mail (Internet): development@tco.se

Current information regarding TCO'95 approved and labelled products may also be obtained on the Internet using the address:

> http://www.tco-info.com/

TCO'95 is a co-operative project between:

TCO	Naturskydds föreningen	NUTEK Närings- och teknikutvecklingsverket	SEMKO

TCO'95 Environmental Requirements

Brominated flame retardants are present in printed circuit boards, cabling, casings, and housings, and are added to delay the spread of fire. Up to 30% of the plastic in a computer casing can consist of flame-retardant substances. These are related to another group of environmental toxins, PCBs, and are suspected of giving rise to similar harm, including reproductive damage in fish-eating birds and mammals. Flame retardants have been found in human blood, and researchers fear that they can disturb fetus development.

Bio-accumulative[1] TCO'95 demands require that plastic components weighing more than 25 grams must not contain flame retardants with organically bound chlorine or bromine.

Lead can be found in picture tubes, display screens, solder, and capacitors. Lead damages the nervous system and in higher doses causes lead poisoning. The relevant bio-accumulative TCO'95 requirement permits the inclusion of lead, as no replacement has yet been developed.

Cadmium is present in rechargeable batteries and in the color-generating layers of certain computer displays. Cadmium damages the nervous system and is toxic in high doses. The relevant bio-accumulative TCO'95 requirement states that batteries may not contain more than 25 ppm (parts per million) of cadmium. The color-generating layers of display screens must not contain any cadmium.

Mercury is sometimes found in batteries, relays and switches. Mercury damages the nervous system and is toxic in high doses. The relevant bio-accumulative TCO'95 requirement states that batteries may not contain more than 25 ppm of mercury and that no mercury is present in any of the electrical or electronic components concerned with the display unit.

CFCs (freons) are sometimes used for washing printed circuit boards and in the manufacture of expanded foam for packaging. CFCs break down ozone and thereby damage the ozone layer in the atmosphere, causing increased reception on Earth of ultra-violet light with consequent increased risks of skin cancer (malignant melanoma). The relevant TCO'95 requirement: Neither CFCs nor HCFCs may be used during the manufacture of the product or its packaging.

---

[1] Bio-accumulative means that the substance accumulates within living organisms.

Shipping Package

The packaging material can be recycled, or you can save it to return the monitor to a service center for repair or disposal.

CFC Compounds in Distribution Packaging

Cushioning material used for shipping finished monitors are not manufactured with nor do they contain any CFC compounds.

Design for Disassembly/Recycling

These monitors have been designed for easy end-of-life disassembly and recycling. Fasteners are generally of the same type for efficient disassembly. Components made of different materials can be easily separated and plastics have been identified using international symbols to aid in recycling.

Monitor Disposal

_____ WARNING _____

If you need to dispose of a monitor, ask a qualified service representative for the proper procedure. Improper disposal could result in personal injury from implosion.

Table of Contents

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 (15.9 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.

■ 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 adaptor. 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 70kHz, and vertical scan frequencies between 50-160Hz. 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 36 memory locations for display modes, 11 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.

A1

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

Trademark Acknowledgments

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.

A2

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.

If the power cable is faulty in any way, please contact the manufacturer or the nearest authorized repair service provider for a replacement.

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 A20 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.

A5

Connecting 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.

D-15P

Power Cord   Signal Cable

Figure 3.

A6
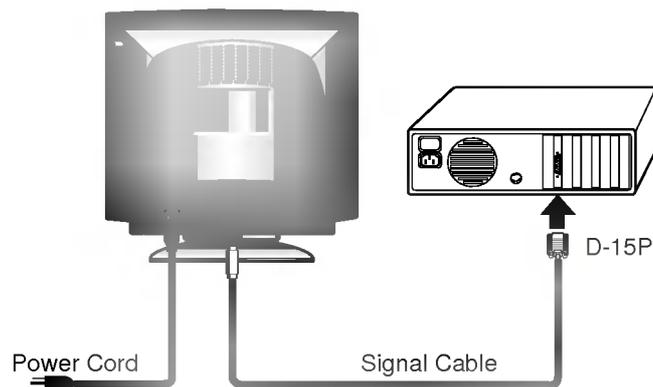
Connecting to an Apple Macintosh II, Centris and Quadra

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

1. Power OFF both the monitor and the PC.

2. 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.

3. Connect the attached adapter block/signal cable to the video output on your MAC.

4. Power ON the PC, then the monitor.

5. If you see the **SELF DIAGNOSTICS** message, check the signal cable and connectors.

6. After using the system, power OFF the monitor, then the PC.

Adapter 15P

D-15P

Power Cord   Signal Cable

Figure 4.

A7
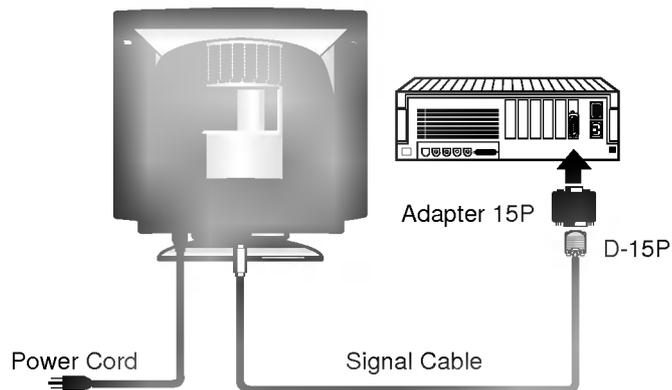
Location and Function of Controls

Front View

OSD Exit button

Power ON/OFF Button

OSD Enter button

Power (DPMS) Indicator

OSD Select/Adjustment Control

Contrast Adjustment Control

Brightness Adjustment Control

Rear View

ID Label

AC Power Socket

D-Sub Signal Cable
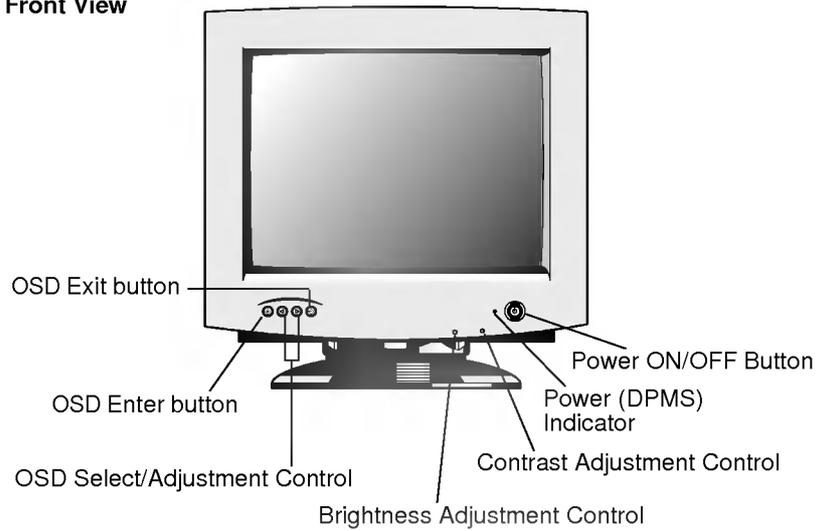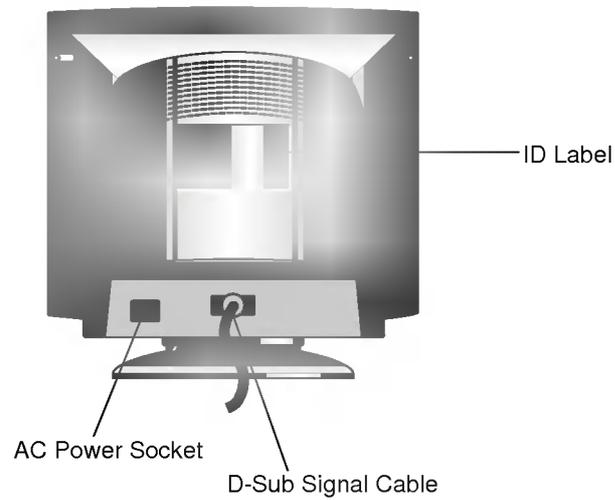
> **Note :** Turn on the monitor using the ON/OFF switch on the rear of the monitor. This switch cuts off the power supply to the monitor.

A8

Control Panel Function

Front Panel Controls

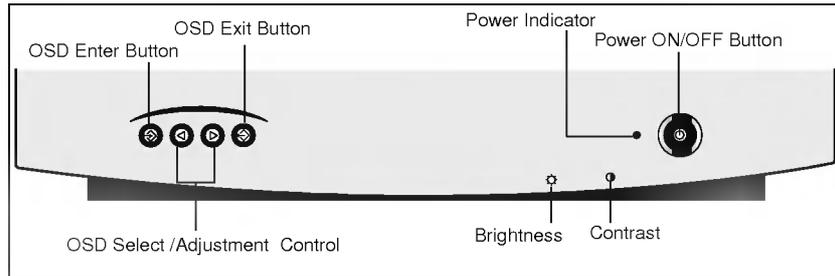| Control		Function
⊙	**Power ON/OFF button**	This button is used to turn the monitor ON and OFF.
●	**Power Indicator**	This Indicator lights up green when the monitor operates normally. If the monitor is in DPM (Energy Saving) mode (stand-by/suspend/ power off), this indicator color changes to amber.
◐	**Contrast control**	Adjust the display to the contrast desired. Move the thumbwheel located beneath this indicator to increase or decrease the display contrast.
☼	**Brightness control**	Used to adjust the brightness of the screen. Move the thumbwheel located beneath this indicator to increase or decrease the display brightness.
◈	**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 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 buttons for selecting (highlighting) an OSD icon to be adjusted. It is also used for selecting the level of the selected item to be adjusted.

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, 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.

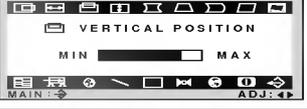3.You want to move the next icon, Adjust the next button (◀ ▶)control.
  The display will look like:

A10

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.

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.
Trapezoid 	To correct geometric distortion. ◀ Makes the screen image narrower at the top. ▶ Moves the screen image wider at the top.

▭ Side pincushion balance

PINCUSHION BALANCE
MIN   MAX

To correct the balance of both sides bowling.
◀ Curvature of the sides to the right.
▶ Curvature of the sides to the left.

▱ Parallelogram

PARALLELOGRAM
MIN   MAX

This control adjusts for a skewing of the screen image.
◀ Tilts the screen image rightward.
▶ Tilts the screen image leftward.

▱ Tilt

TILT
MIN   MAX

To correct image rotation.
◀ Tilts the screen image left.
▶ Tilts the screen image right.

▤ Moire Reduction

MOIRE REDUCTION
OFF

MOIRE REDUCTION
OFF   H

MOIRE REDUCTION
ON

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.
When you are done, Press the Enter button once to return to More Reduction menu to make another selection.
If you have finished using the OSD after you have returned to Moire Reduction menu, you can use the Enter button to EXIT the OSD.

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.

▤ Video Input Level

VIDEO INPUT LEVEL
1.0V

This item is used to select the monitor's input signal level. The normal level used for most PC's is 0.7V. After highlighting this icon, press the enter button. Select the desired level with the adjustment control to highlight the desired level. Press the enter way when done.

Color Select

```
COLOR CONTROL
9300K      6550K
           CURVE
```

```
COLOR CONTROL
R ▶
G
B
```

```
COLOR CONTROL
6000K          9950K
```

```
COLOR CONTROL
SELECT: ⇥        NEXT: ◀▶
```
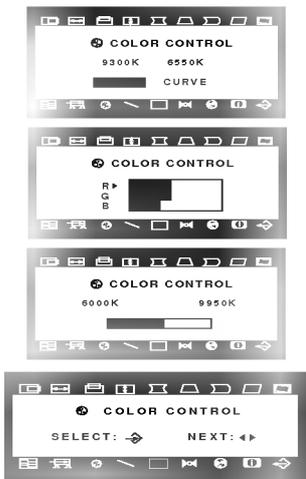
To select color temperature, 9300K/ 6550K/ USER and CURVE.
Select the desired color temperature or select user to set your own color levels.
Allow for specific adjustments to Red, Green and Blue(R/G/B).
This consists of the Decreases and Increases function.

◀ Decreases the amount of color in the image.

▶ Increases the amount of color in the image.

Curve color setting is adjusters at the factory to the display's color temperature. Temperature range is from 6000K to 9950K. So, user easily color set whitout adjustments Red, Green and Blue(R/G/B).

Degauss

```
DEGAUSS
DEGAUSS: ⇥       NEXT: ◀▶
```

Used to demagnetize the picture to give a move accurate image and color.

OSD control

```
OSD CONTROL
        ◀▶
VERT.   ◀▶
SELECT: ⇥        ADJ: ◀▶
```

```
OSD CONTROL
HORI.   ◀▶
SELECT: ⇥        ADJ: ◀▶
```

This item gives access to 2 elements : Horizontal position and Vertical position. Press the select button to select the desired item to change.

To correct OSD image's Horizontal position and Vertical position.

Horizontal position : To move image right and left.
Vertical position : To move image up and down.

A13

▶○◀ **Recall**

```
RECALL
SELECT: ➡     NEXT: ◀▶
```

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.

Language Select

```
LANGUAGE
                    DEUTSCH
FRANÇAIS    ESPAÑOL
ITALIANO
```

To choose the language in which the control names are displayed.
OSD Menus are available in five language :
English, German, French, Spanish and Italian.

Mode Information

```
INFORMATION
             DDC     ABSENCE
```
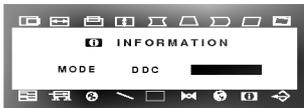
This item gives access to 3 elements :
Mode, DDC and Absence function.
The message does not disappear until you click the select key again.

```
H FREQ :  53 . 6KHZ
V FREQ :  85HZ

USER :  0
PRESET :  11
```

MODE
To inform users of preset and user mode data.

```
1  37 . 50 KHZ / 75 HZ
2  53 . 67 KHZ / 85 HZ
3  63 . 44 KHZ / 100 HZ
4  68 . 68 KHZ / 85 HZ
5  60 . 02 KHZ / 75 HZ
6  31 . 47 KHZ / 60 HZ
7  31 . 47 KHZ / 70 HZ
```

DDC(Display Data Channel)
To selection the DDC function(ON/OFF).

```
INFORMATION
MODE              ABSENCE
```

ABSENCE
This message indicates the monitor is **ON PROCESSING** even through you are away for some time due to another matter.

```
INFORMATION
MODE      DDC
```

Exit

```
EXIT
EXIT: ➡       NEXT: ◀▶
```

To disappear of the OSD on the screen.

Video Memory Modes

Display Modes
The monitor has 36 memory locations for display modes, 11 of which are factory preset to popular video modes.

Mode	Display Mode	Horizontal Frequency	Vertical Frequency	Polarity	
				Horiz sync	Verti sync
1	VESA 640 x 480	37.50 kHz	75 Hz	-	-
2	VESA 800 x 600	53.67 kHz	85 Hz	+	+
3	VESA 800 x 600	63.44 kHz	100 Hz	+	+
4	VESA 1024 x 768	68.68 kHz	85 Hz	+	+
5	VESA 1024 x 768	60.02 kHz	75 Hz	+	+
6	VESA 640 x 480	31.47 kHz	60 Hz	-	-
7	DOS 720 x 400	31.47 kHz	70 Hz	-	+
8	VESA 640 x 480	43.27 kHz	85 Hz	-	-
9	VESA 800 x 600	37.88 kHz	60 Hz	+	+
10	VESA 800 x 600	46.88 kHz	75 Hz	+	+
11	VESA 1280 x 1024	63.98 kHz	60 Hz	+	+

These 6 modes are user modes roughly aligned within the screen.

User Modes
Modes 1-25 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 25 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 11 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.

A15

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 1280x1024or the frequency refresh rates of 30-70kHz 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 then 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

	Hori.	Verti.		Power	
Normal(Max.)	On	On	Normal	$\leq$ 105W	Green
Stand-by	Off	On	Off	$\leq$ 15W	Amber
Suspend	On	Off	Off	$\leq$ 15W	Amber
Off	Off	Off	Off	$\leq$ 5W	Amber

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.

Self Diagnostics

This monitor can sense when there is a possible problem present, and informs you of this condition by presenting you with a **SELF DIAGNOSTICS** OSD. This OSD may pop up when it is On but no signal is detected. In this case the message **CHECK SIGNAL CABLE** will be high lighted, alerting you to check the signal cable 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 DDC function; DDC2B. 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.

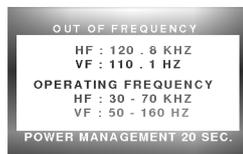If your monitor is displaying a mono chrome image or the wrong resolution, select the DDC OFF function.

A17

Troubleshooting

Self diagnostics message.
■ The signal cable is not connected.

OUT OF FREQUENCY message appears.
■ The frequency of the sync input is outside the operating range of the monitor.

<table>
<tr><td>OUT OF FREQUENCY</td></tr>
<tr><td>HF : 120 . 8 KHZ
VF : 110 . 1 HZ</td></tr>
<tr><td>OPERATING FREQUENCY
HF : 30 - 70 KHZ
VF : 50 - 160 HZ</td></tr>
<tr><td>POWER MANAGEMENT 20 SEC.</td></tr>
</table>

*Horizontal Frequency: 30-70kHz
*Vertical Frequency: 50-160Hz

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

The power LED is illuminated amber.
■ Display power management mode.
■ There is no sync signal.
■ The signal cable is not fastened securely.
■ Check the computer power and graphics adapter configuration.

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.

Note : If the power indicator(LED) light is blinking amber, may result in abnomal condition of the monitor.

Then press a power ON/OFF button on the front panel control and call your service technician for more information.

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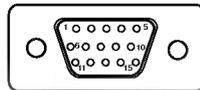
Do not attempt to service the monitor yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Specifications

Sync Signal Types

Type	H. Sync	V. Sync
Separate Sync	H. Sync	V. Sync

Signal Connector Pin Assignment

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	Hori.Sync
14	Vert.Sync
15	SCL

Note :No. 5 Pin have to ground on the PC side.

Specifications

Picture tube
17 inch (15.9 inches viewable) FST, Non-glare, 90 degree deflection, Darkface, 0.28 mm dot pitch

Sync Input
Horizontal Freq.: 30KHz - 70kHz (Automatic)
Vertical Freq.   : 50Hz - 160Hz (Automatic)
Input Form   : Separate, Positive/Negative
Signal input   : 15 pin D-Sub connector

Video Input
Display Area   : 12.2" x 9.06" / 310 x 230mm (H x V)
Input Form   : Separate, RGB Analog, 0.7 Vp-p/75 ohm, positive
Resolution   : 1280 x 1024, 60Hz

Power Consumption: 105 Watts max
                       15 Watts suspend mode, stand-by mode
                        5 Watts DPMS-Off mode

Power input
100-240VAC 50/60Hz 2.0A

Dimensions (W x H x D)
416 x 430 x 440mm/16.4 x 16.9 x 17.3 inches

Weight (net)
17.0kg/37.5lbs

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