AGENCY REGULATORY NOTICE

FCC Compliance Statement

This equipment has been tested and found to comply within the limits of 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 on and off), 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.

NOTICE
The regulations are applied only to the products with the ID LABEL indicating specific requirements.

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.

NOTICE
The regulations are applied only to the products with the ID LABEL indicating specific requirements.

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

NOTICE
The regulations are applied only to the products with the ID LABEL indicating specific requirements.

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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. : _____

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.

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

1. 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.

2. 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.

3. 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.

4. **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.

5. 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.

6. 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

1. 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.
2. 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.
3. 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

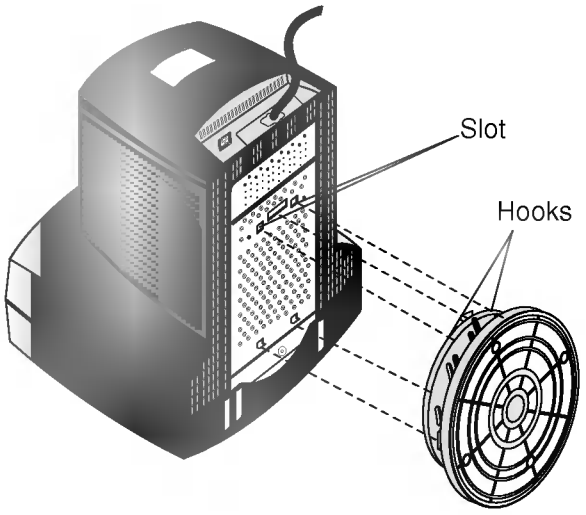
- Do not throw away the carton and packing materials. They make an ideal container in which to transport the unit. When shipping the unit to another location, repack it in its original material.

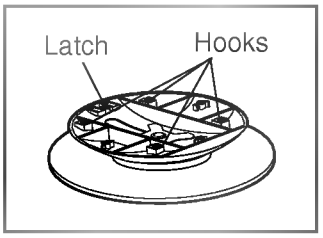
Tilt/Swivel Base

■ Turn off the equipment and all attached options.
■ Carefully set the monitor face-down with the underside facing you.

Installation

1. Align the hooks on the tilt/swivel stand with the matching slots in the base of the monitor.
2. Insert the hooks into slots.
3. Slide the tilt/swivel stand toward the front of the monitor until the latches click into the locked position.



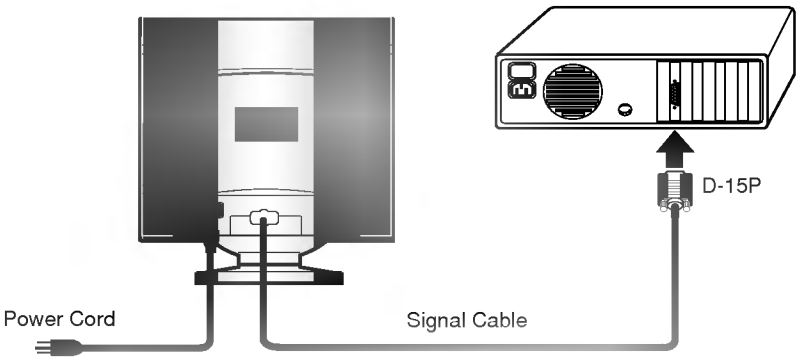


The supply voltage is marked on the ID label located on the rear panel of the monitor. If your local voltage is different, do not use the monitor and contact your supplier before using the display.

Connections

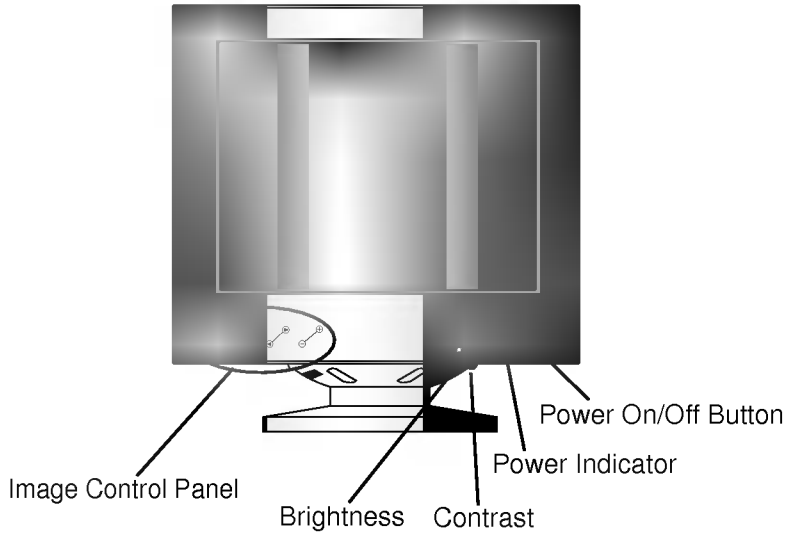
On the back of the monitor are two plug-in connections; one for the AC power cord, and the other for the signal cable from the video card.

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. 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.
4. Power ON the PC, then the monitor.
5. After using the system, power OFF the monitor, then the PC.



Control Layout and Descriptions

Front View



Rear View

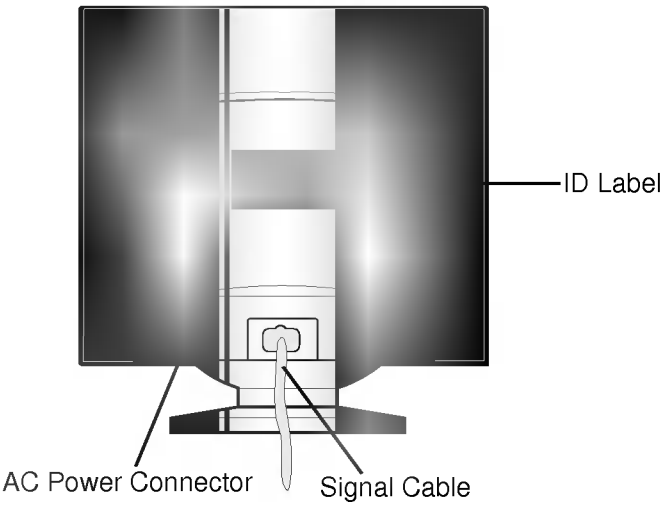
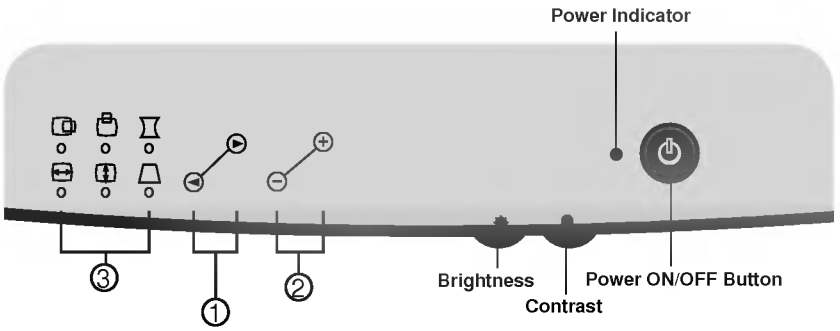
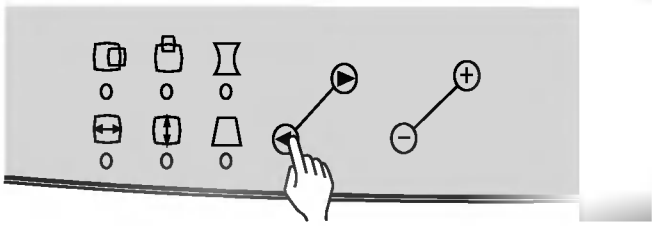


Image Control Panel



Control	Function
Power ON/OFF Button	This Button is used to turn the power On or Off.
Power Indicator	The power indicator lights when the power is On, and indicates the operating status of the display.
Contrast	Adjust the display to the contrast desired. Move the thumbwheel located beneath this indicator to increase or decrease the display contrast.
Brightness	Used to adjust the brightness of the screen. Move the thumbwheel located beneath this indicator to increase or decrease the display brightness.
Buttons	Use either the ◀ or ▶ button to select the icons which you wish to adjust and display.
Buttons	Used to set digital values for each of the select on screen control item by pressing ⊕ button for increment or ⊖ button for decrement.

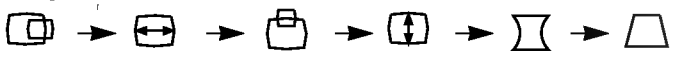
1



■ When you press the ◀ or ▶ button (Image selection and Adjustment buttons) Image control icon is highlighted and screen control feature is enabled. The screen control feature includes **Basic Control** and **Selective Control**.

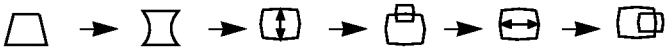
■ Use either the ◀ or ▶ button to select the icons which you wish to adjust and display.

When you press the ▶ button the icon is selected in the following order.



Horizontal Position | Horizontal Size | Vertical Position | Vertical Size | Side Pincushion | Trapezoid

When you press the ◀ button the icon is selected in the following order.

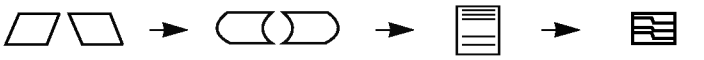


Trapezoid | Side Pincushion | Vertical Size | Vertical Position | Horizontal Size | Horizontal Position

■ Press ◀ and ⊖ button at the same time for 3 seconds, icon is highlighted and selective control is enabled. Repeat the above procedure in order to return to the **Basic Control.**

■ Use either the ◀ or ▶ button to select the icons which you wish to adjust and display.

When you press the ▶ button the icon is selected in the following order.



Parallelogram → **Pincushion Balance** → **Vertical length** → **Vertical Moire**

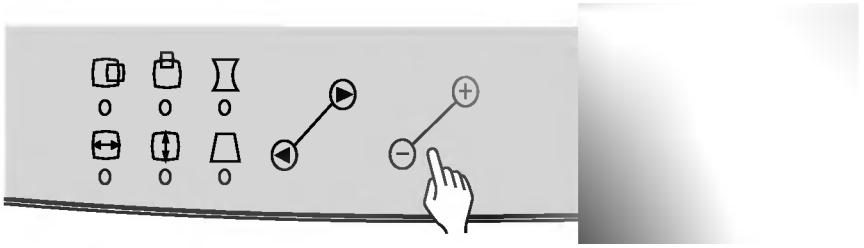
When you press the ◀ button the icon is selected in the following order.



Vertical Moire → **Vertical length** → **Pincushion Balance** → **Parallelogram**

But, when in the selective control, selecting one menu item mades two icons (LEDs) highlighted. (For details, refer to page A11.)

2



■ When the selected icon is highlighted, press the ⊖ button (Decrease) or the ⊕ button(Increase) to adjust the selected item to the desired state. (For details, refer to page A10~11.)

●:LED ON ○:LED OFF

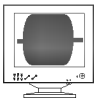
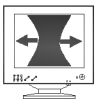
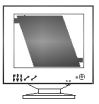
Icon	LED	Description	
		⊖ (Decrease)	⊕ (Increase)
Horizontal Position To move picture image left and right.	● ○ ○ ○ ○ ○	 Moves the screen image left.	 Moves the screen image right.
Horizontal Size To adjust image width.	○ ○ ○ ● ○ ○	 Decreases the size of the screen image.	 Increases the size of the screen image.
Vertical Position To move image up and down.	○ ● ○ ○ ○ ○	 Moves the screen image down.	 Moves the screen image up.
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.

Image Control Panel

●:LED ON ○:LED OFF

Icon	LED	Description	
		⊖ (Decrease)	⊕ (Increase)
Trapezoid To correct geometric distortion.	○ ○ ○ ○ ○ ●	 Makes the screen image narrower at the top.	 Moves the screen image wider at the top.
Parallelogram This control adjusts for a skewing of the screen image.	● ● ○ ○ ○ ○	 Tilts the screen image rightward.	 Tilts the screen image leftward.
Pincushion Balance To correct the balance of both sides bowling.	○ ○ ○ ● ● ○	 Curvature of the sides to the right.	 Curvature of the sides to the left.
Vertical length Controls the vertical length of the screen.	○ ● ● ○ ○ ○	 Narrows the bottom length of the screen.	 Narrow the upper length of the screen.
Vertical Moire To reduce vertical moire.	○ ○ ○ ○ ● ●	 Display the vertical Moire.	 Remove the vertical Moire.

1. Recall

This feature is used to cancel the current screen adjustment and return to the initial screen setting.
This feature can be used in basic control feature. Current screen mode can be identified by the number of LEDs on.(For preset mode, refer to page A14 of the user's guide.)

■ To recall the last modified mode in basic control feature, press the ⊖ / ⊕ buttons at the same time.
- 6 LEDs on = Currently using the Preset Mode.
- 3 LEDs on = Currently using the User Mode.

■ To recall the last modified mode in selective control feature, press the ▶ / ⊕ buttons at the same time.
- 6 LEDs on = Current mode is recalled.

2. Degauss

This feature is used to clear the inconsistent color change (spot) on the screen, caused by the magnetic field from a nearby object. Press the ◀ and ▶ bottom at the same time. Then the screen is restored to its uniform and clean state after about 3 seconds of shivering.

Power Management System

When used in conjunction with a PC having power saving circuitry, or a PC running screen blanking software this monitor automatically reduces its power consumption when the computer is not in use.The monitor has power-saving states, indicated by the light-emitting diode (LED) on the front panel.These power-saving states exceed the Environmental Protection Agency (EPA) Energy Star requirements using the methodology for Display Power Management Signals(DPMS). Developed by the Video Electronics Standards Association(VESA).

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 anti-static screen coating. These guidelines, set forth by a government agency in Sweden, limits the amount of emission allowed in the Extremely Low Frequency (ELF) and Very Low Frequency (VLF) electromagnetic range.

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 three DDC function; DDC2B carry out uni-directional communication between PC and monitor. Under these situations, the PC sends display data to the monitor but not commands to control the monitor servings.

NOTE : ■ PC must support DDC functions to do this.
■ 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.

Video Memory Modes

The monitor has 32 memory locations for display modes, 7 of which are factory preset to popular video modes.

Display Modes (Resolution)

Display Modes (Resolution)		Horizontal Frequency (kHz)	Vertical Frequency (kHz)
VESA	640 x 480	31.469	60
VESA	640 x 480	37.50	75
VESA	640 x 480	43.269	85
VESA	720 x 400	31.470	70
VESA	800 X 600	46.880	75
VESA	800 X 600	53.674	85
VESA	1024 X 768	60.020	75

User Modes
Modes 8-32 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 8.

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 8.

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 7 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 1024x768 or the frequency refresh rates of 30-61kHz horizontal or 50-120Hz 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	On	On	Normal	≤ 74W	Green
Stand-by	Off	On	Off	≤ 15W	Amber
Suspend	On	Off	Off	≤ 15W	Amber
Off	Off	Off	Off	≤ 5W	Amber

Troubleshooting

Symptom: The power LED is amber.

Possible causes:

- 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 adapters configuration.
- The frequency of the sync input is outside the operating range of the monitor.

HORZ: 30kHz-61kHz
VERT: 50Hz-120Hz

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

Possible Causes: Image adjustment not been done yet in the current operating mode. Use the ◀/▶ and +/- buttons to set the image to your liking.

Symptom: The monitor doesn't enter the power saving off mode (Amber led).

Possible Causes: Computer video signal is not VESA DPMS standard. Enter the PC or the video controller card is not using the VESA DPMS power management function.

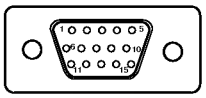
1. Unplug the monitor from the wall outlet and refer servicing to alified service personnel when :
   - The power cord or plug is damaged or frayed.
   - Liquid has been spilled into the monitor.
   - The monitor has been exposed to rain or water.
   - The monitor does not operate normally following 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 switching video modes.

2. 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.

Sync Signal type

Type	H. sync	V. sync
Separate sync	H. sync	V. sync

Signal Connector Pin Assignment



Pin	Separate Sync
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	Horiz.Sync
14	Vert.Sync
15	SCL

Picture tube	: 15 inch (13.8 inches viewable), Tinted, 90 degree deflection 0.28 mm, Non-Glare screen
Horizontal Frequency	: 30 ~ 61 kHz
Vertical Frequency	: 50 ~ 120 Hz
Video Bandwidth	: 78 MHz
Resolution	: 1024 x 768 Non Interlace, 75Hz Refresh Rate
Signal input	: 15 pin D-Sub type
Power input	: 100-240VAC, 50/60Hz, 1.5A
Dimensions (WXDXH)	: 360 x 385 x 388.6 mm (With Tilt/Swivel Stand) 14.2 x 15.2 x 15.3 inch
Weight (net)	: 12.7 kg (28 lbs)

Information in this document is subject to change without notice.