

# **APPENDIX D:**

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# **USER'S MANUAL**

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# Gateway FPD1500

**TFT LCD Monitor**

**USER GUIDE**

*Please read this manual carefully before operating your set.  
Retain it for future reference.  
Record model number and serial number of the set.  
See the label attached on the back cover and quote this  
information to your dealer when you require service.*

## 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 LG Electronics Inc. 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 :

<i>f</i> EN 55022	Radio Frequency Interference
<i>f</i> EN 50082-1:1992	Electromagnetic Immunity
<i>f</i> EN 60555-2	Power Line Harmonics
<i>f</i> EN 60555-3	Voltage Fluctuations
<i>f</i> EN 60950	Product Safety

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## Introduction

The Gateway **FPD1500** Flat Panel Monitor has an active matrix TFT (Thin-Film Transistor) LCD (Liquid Crystal Display).

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


It supports resolutions up to 1024x768, and has a wide viewing angle of  $\pm 60$  degrees horizontal and  $\pm 45$  degrees vertical.

For greater user health and safety, this monitor complies with the stringent Swedish TCO '95 requirements for low radiation emissions.

## 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 standards (UL/CSA or VDE) if not being provided by the supplier. Power cord must meet the requirements of the country where you use the monitor. For more information on power cord requirements, contact your authorized dealer, reseller, or service provider.
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 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 or office.
  - 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.

## Important Precautions

### 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.
4. Do not rub or strike the Active Matrix LCD with anything hard as this may scratch, mar, or damage the Active Matrix LCD permanently.
5. Do not press the LCD screen with your finger for a long time as this may incur some afterimages.
6. Some dot defects may appear on the screen, like Red, Green or Blue spots on the screen. However, this will have no impact or effect on the monitor performance.

### On Cleaning

- Unplug the monitor before cleaning the face of the LCD Screen.
- Dust the monitor by wiping the screen and the cabinet with a soft, clean cloth. If the screen requires additional cleaning, use a clean, damp cloth.
- Do not use liquid cleaners or aerosol cleaners.

### 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.

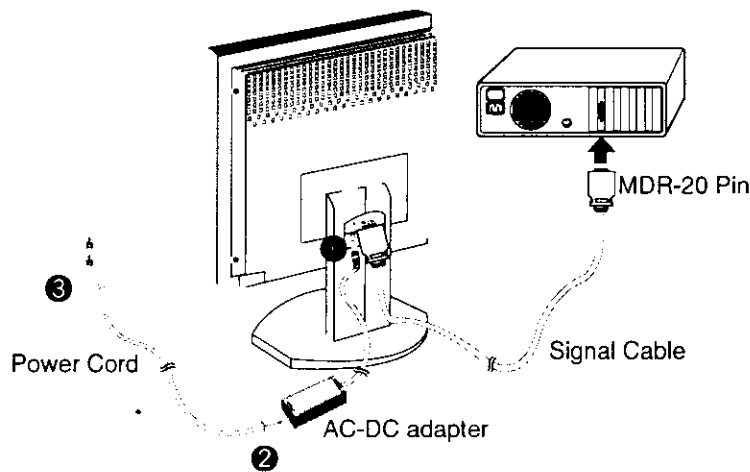


## Connecting the Monitor

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

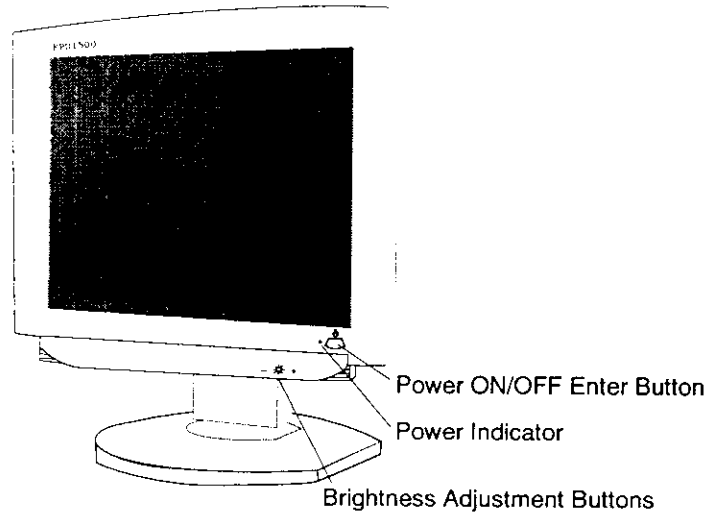
### Connect to IBM PC

- 1** Power off both the monitor and PC.
- 2** Connect the DFP(Digital Flat Panel) 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.
- 3** Connect the plug from the AC-DC adapter into the connector on the display unit. **1** Connect one end of the AC power cord into the AC-DC adapter. **2** Plug the other end into a properly grounded three-prong AC outlet. **3**
- 4** Power ON the PC, then the monitor.
- 5** After using the system, power OFF the monitor, then the PC.

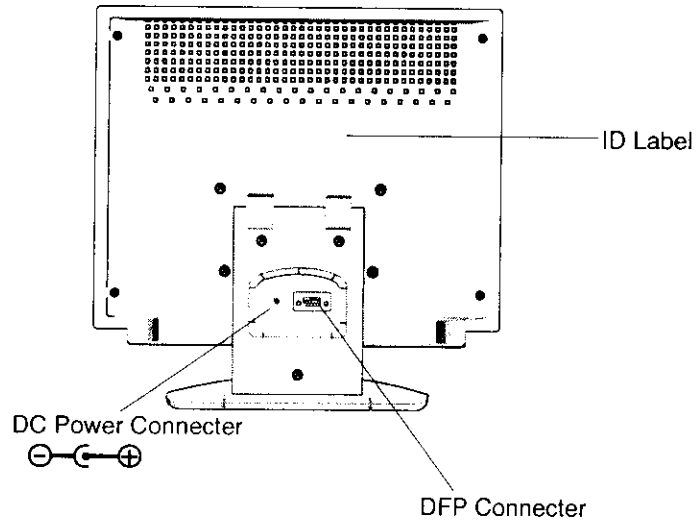


# Location and Function of Controls

## Front View



## Rear View



 **Power ON/OFF Enter 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.

 **Brightness Adjustment Buttons**

Use these buttons for adjusting the brightness of screen.

## Power Management System

This monitor incorporates new circuitry for lowering energy usage during idle time, following the Display Power Management Signalling (DPMS) guide lines of the Video Electronics Standards Association (VESA), and is certified as exceeding the EPA's Energy Star program for reduced power usage.

For the power savings feature to operate, the monitor must be used with a PC having power saving circuitry. The monitor has three power-saving states, and the power saving operation is indicated by the power indicator on the front panel. When the power indicator is green, operation is normal. When the power indicator is amber, the monitor is in a power saving mode.

If the power indicator is amber, press the power button to turn on the monitor. If the power indicator is amber and you wish to use the PC again, move your mouse pointer or touch a keyboard button. When the monitor is not in use, save energy by turning it off.

### Power Consumption

Mode	H.Sync	V.Sync	Video	Power Consumption	LED Color
Normal(Max.)	On	On	Active	≤ 30W	Green
Stand-by	Off	On	Off	≤ 5W	Amber
Suspend	On	Off	Off	≤ 5W	Amber
Power off	Off	Off	Off	≤ 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 anti-static 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.

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

## Troubleshooting

**Symptom :** The power LED is illuminated amber.

**Possible causes :**

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

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

**Possible Causes :**

- 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

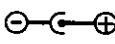
1. Unplug the monitor from the wall outlet and refer servicing to qualified service personnel when:
  - The power cord or plug is damaged or frayed.
  - Liquid has been spilled into the monitor.
  - The monitor has been exposed to rain or water.
  - The monitor does not operate normally following the 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.
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.
3. 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.
4. 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.
5. 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

## Signal Connector Pin Assignment

Pin	Signal name	Pin	Signal name
1	TX1+	11	TX2+
2	TX1-	12	TX2-
3	TX1 Shield	13	TX2 Shield
4	TXC+	14	TX0 Shield
5	TXC-	15	TX0+
6	TXC Shield	16	TX0-
7	DDC GND	17	V Sync
8	DDC +5V	18	H Sync
9	H/V Shield	19	SDA
10	NC	20	SCL

## AC-DC Adapter

Input	AC 100-240V 50-60Hz 81-120VA 1.2A
Out put	DC 24V 1.9A 
<b>Manufacturer : AMBIT Microsystems Corporation</b>	
<b>Model : APA-45AA</b>	

Use only the AC-DC adapter supplied with the monitor.



## Specifications

<b>Display</b>		
Type	15.1inch (38.35cm) Flat Panel Active matrix-TFT LCD, Anti-Glare coating	
Viewable Size	15.1inch (38.35cm)	
Pixel pitch	0.3 x 0.3mm	
True color	16.5million	
Viewing angle	60°(H) / 45°(V)	
<b>Sync Input</b>		
Input form	Panel Link	
Signal input	DFP 20 pin connector	
<b>Video Input</b>		
Display Area	307 x 230mm	
Input Form	DFP 20 pin connector	
<b>Resolution</b>	<b>XGA 1024 x 768</b>	
<b>Power Input</b>	DC 24V 1.2A	
<b>Dimensions</b> (WxDxH)	15.3 x 7.18 x 14.2inch / 389.2 x 182.4 x 361.6mm	
<b>Weight ( net )</b>	5.2kg / 11.46lbs	
<b>Tilt Range</b>		
Down	5°	
Up	30°	
<b>Environment</b>		
Operating condition		
	Temperature	10°C to 35°C
	Humidity	10% to 80% non-condensing
Storage condition		
	Temperature	-20°C to 60°C
	Humidity	5% to 95% non-condensing