

PLANAR®

PLANAR LCD MONITOR PL180M MANUAL

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PL180M Monitor User Manual

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GETTING STARTED

WARNING: *Do not operate the LCD monitor with unspecified power supply. Usage of incorrect voltage will cause malfunction and may cause fire or electric shock.*

Introduction

Bright and sharp images of text and graphics are what you will find with the PL180M series LCD color monitor.

The PL180M Series LCD monitor features user-friendly On-Screen-Display (OSD) control.

The PL180M Series LCD monitors provides a maximum resolution of 1280x1024 pixels with a flicker-free display at up to 75Hz refresh rates, which offers ultimate comfort to your eyes. Best of all, the LCD monitor offers a bright, sharp and vibrant color display without the radiation emission and hazards of regular CRT monitors. Thus, it is optimal for Windows, CAD/CAM/CAE, desktop publishing, spreadsheets, multi-media, and any other application that requires a large screen size and high resolutions.

Features

- 18.0" TFT active matrix color crystal displays
- Support SXGA resolution of 1280x1024pixels with 16.7M colors
- Wide viewing angle :
 - Horizontal: 160 degrees
 - Vertical: 160 degrees
- Wide tilting angle : - 3 degrees to 20 degrees
- VESA DPMS-compliant power saving: automatically powers down the monitor after a defined period of inactivity.
- Digital Character Smoothing
- Automatic Set-Up
- Ergonomic Design: TCO '99 Approved
- Windows 95/98/2000 Plug & Play Compliant
- Versatile, functional & User friendly OSD

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Plug & Play: Conform to the VESA standards and support DDC1/2B spec.

Unpacking and Checking of the Package Contents

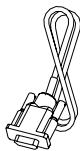
Before unpacking your LCD Monitor, prepare a suitable workspace for your LCD Monitor and computer. You need a stable, level, and clean surface near a wall outlet.

- 1) Set the LCD Monitor box in an upright position.
- 2) Open from the top of the box.
- 3) Remove Right/ Left cushions; put your monitor on a stable, level, and clean surface desk or table.
- 4) Place the monitor in an upright position and remove the back cover from your monitor (pull from the bottom of cover to open) to install your PC system.

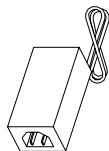
Accessories

When unpacking your LCD Monitor, make sure the following accessories are included in the package. If any of the accessories is missing or damaged, please contact your dealer or the nearest regional office.

- 1) 1pc 1.8M Monitor-to-PC VGA Cable
- 2) 1 pc AC/ DC Adaptor
- 3) 1 pc 1.8M Power cord
- 4) 1 pc Audio Cable
- 5) 1 pc User's Manual



VGA Cable



Adaptor



Power Cord



Audio Cable



User's Manual

Installing the monitor

WHERE TO INSTALL THE MONITOR

Install the LCD Monitor in a dry and clean area. Do not install the monitor where sudden temperature changes may occur, or in humid, dusty, or smoky areas as it may cause fire, electric shock or damage. Safe storage temperature of the LCD Monitor is in a range of minus 20 to plus 65° degrees.

MAINTAIN GOOD VENTILATION

Ventilation slots or holes are provided to keep the monitor from overheating. Covering these slots or holes may cause fire. To ensure adequate air circulation, place the monitor at least 4" (or 10cm) away from the walls.

DO NOT PLACE YOUR LCD MONITOR NEAR A WINDOW

The monitor may be severely damaged if exposed to rain, water, moisture, or sunlight.

Connecting Video

1. Turn off your PC and the LCD Monitor before connecting your LCD monitor to the PC.
2. Use the 1.8M detachable signal cable to connect your LCD Monitor with PC.
3. Connect the other end of the signal cable to the PC's VGA port. Make sure the signal cable head is securely connected to the PC's VGA port. Then tighten the connecting screws to ensure a secure connection.
4. Turn on your computer, and then turn on your LCD Monitor.

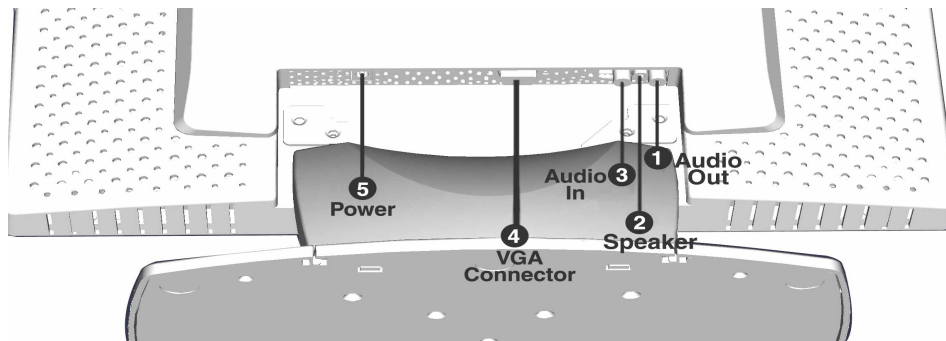
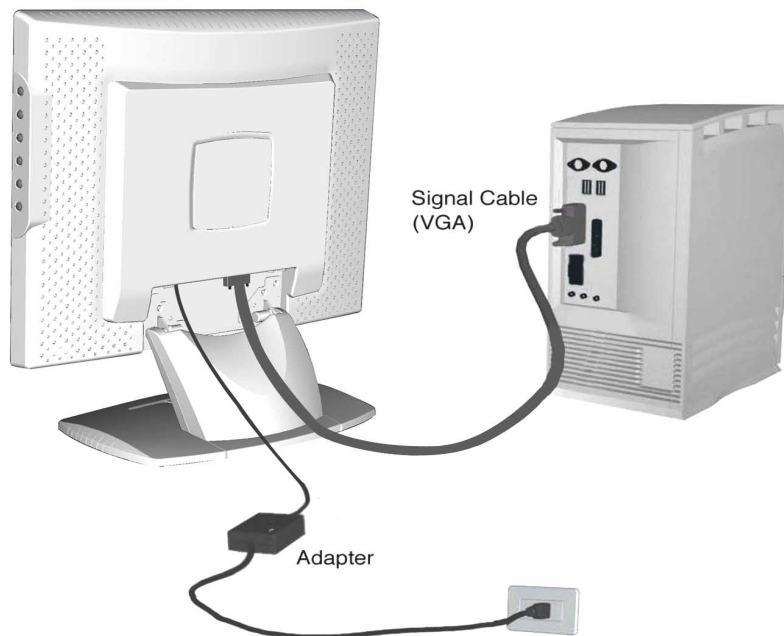
Connecting Audio

1. Connect the video cable to sound card's "audio out" jack
2. Connect the other end to monitor's "audio in" jack

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Connecting AC Power

1. Plug the female end of the 1.8m power cord into the AC –adaptor
2. Plug the DC connector of the adaptor to your monitor's DC jack. (DC jack is located at the rear side of your monitor)
3. Connect the male end of the power cord into a wall socket.



① Audio out	Connect with earphone or external speaker.
② Speaker	Connect with speakers built-in monitor base.
③ Audio in	Connect with PC sound card.
④ VGA connector	Connect with detachable VGA cable.
⑤ Power	Plug into the AC power adaptor.

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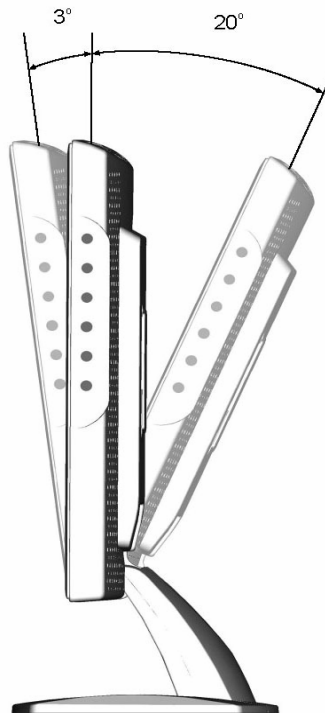
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NOTE

For added protection, it is recommended to use a Surge Protection device plugged between the AC Adapter and the electrical wall outlet to prevent the effects of sudden current variations from reaching the LCD Monitor. Sudden peaks of electricity may cause damage to the Monitor.

Adjusting the Viewing Angle

Your LCD Monitor is designed to allow you to adjust it to an optimal viewing angle. You can adjust the monitor upward to 20 degrees and downward to -3 degrees.



NOTE

Do not touch the screen while changing the viewing angle. It may damage the screen. Make sure not to catch your fingers while changing the viewing angle.

OPERATING THE MONITOR

The LCD monitor has been preset at the factory with the Timing shown in Appendix to create optimal picture. Users are also able to adjust the picture to the desired brightness and sharpness by following the instructions. Before operating the monitor, please read the instructions and definitions of each function/control key carefully.

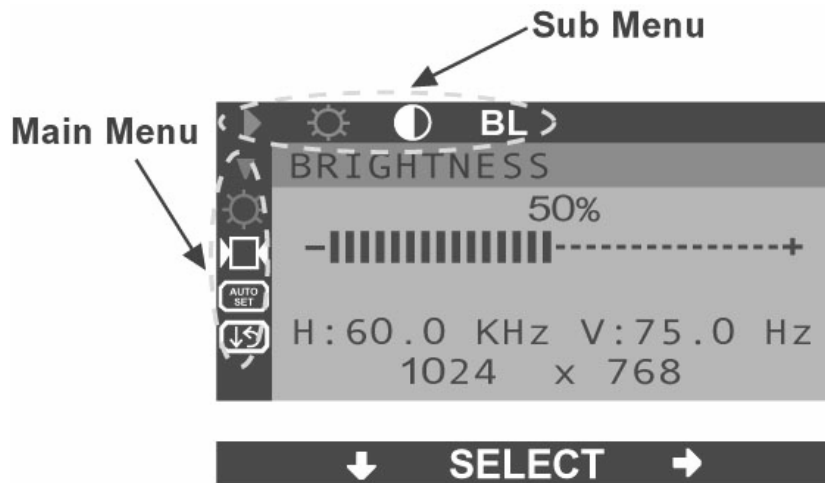


<i>Buttons</i>		<i>Functions</i>
①	<i>OSD OUT Button</i>	<i>Exit OSD Menu</i>
②	<i>Select ▼ Arrow key</i>	<i>Indicating the cursor movement</i>
③	<i>Select ► Arrow key</i>	<i>Indicating the cursor movement</i>
④	<i>“-“ Minus Key</i>	<i>Indicating OSD manual selection in decremental values</i>
⑤	<i>“+“ Plus Key</i>	<i>Indicating OSD manual selection in incremental values</i>
⑥	<i>Power Switch</i>	<i>Power ON/OFF the monitor</i>

How to Use the OSD (On Screen Display)

OSD function allows the user to easily adjust the display to the desired quality. The OSD menu includes a main menu and a sub-menu.

Structure of OSD Menus


















Operating Procedure


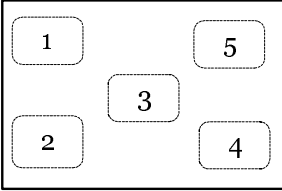


Use the buttons on the right side control panel to adjust the display on the screen.

1. Power on the LCD monitor.
2. Press "▼" or "▶" buttons to pop up the OSD menu.
3. Press "▼" button to select main menu item.
4. Press "▶" button to select sub menu item.
5. Press "+" and "-" buttons to adjust.
6. Press the EXIT button when finished adjusting.

Menu Table

Main Menu	Sub Menu	Function Name	Situation/Option
		BRIGHTNESS	Press + when too dark, press – when too bright
		CONTRAST	Press + when too dull, press – when too intense
	BL	BLACK LEVEL	Press + to “brighten” the black level, press – to reduce the black level
		SOURCE	Options: Digital /Analog Manual selection of Digital/Analog input signal
		AUTO SOURCE	Options: ON/ OFF Enabling/disabling auto-select input signals.
		CLOCK	Press + and - to correct flickering text or lines.
		PHASE	Press + and - to correct flickering text or lines.
		HORIZONTAL POSITION	Press + when position too left, press – when position too right
		VERTICAL POSITION	Press + when position too far low, press – when position too high
		AUTO SETUP	Automatically adjust image CLOCK, PHASE, H-POSITION, V-POSITION settings
		AUTO ADJUST	If ON is selected, AUTO-SETUP will be performed when changing mode. If OFF is selected, all values will return to factory default when changing mode.
		VOLUME	Press + to increase volume, press – to decrease volume-
		MUTE	Options: ON/ OFF Choose ON to enable MUTE, choose OFF to disable MUTE.
		ALL RESET	Automatically return the BRIGHTNESS, CONTRAST, R.G.B default gain back to factory default. Press + to proceed.

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		<p>OSD POSITION</p>	<p>Options: 1/ 2/ 3/ 4/ 5</p> <div data-bbox="760 373 1040 562" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;">  </div> <p>You can move the OSD display area to any one of the following 5 positions within the display area.</p> <p>Press the + Button to move the OSD in numerical order. Press the “-” button to move the OSD in reverse numerical order.</p>
		<p>DISPLAY MODE</p>	<p>Options: Graphic / Text</p> <p>Choose, “Graphic” for general use, Choose “Text” for sharper text display</p>
		<p>COLOR</p>	<p>Options: CUSTOM/ 6500K/ 7500K/ 9300K</p> <p>Press “-” to enter “CUSTOM” RGB configuration, press “+” to choose from the three preset values.</p>

FOR YOUR SAFETY

Safety Precautions

Warning

ALWAYS OPERATE UNDER SPECIFIED POWER SUPPLY

Do not operate the monitor with unspecified power supply. Usage of incorrect voltage will cause malfunction and may cause fire or electric shock.

PROTECT and CORRECTLY USE THE CABLE

Do not pull or bend the power cable and signal cable or place the monitor or any heavy objects on the cables. If the cables are damaged, they may cause fire or electric shock.

IMMEDIATELY STOP OPERATING THE MONITOR WHEN YOU DETECT ANY ABNORMAL OCCURENCE

If you notice any abnormal phenomenon such as strange noise, smoke or smells, unplug the monitor and contact your dealer or the nearest service center immediately. Further use of this device may be hazardous and may cause fire or electric shock.

DO NOT REMOVE THE CABINET

The monitor contains high voltage circuits inside. Removing the cabinet may expose you to the danger of fire or electric shock.

DO NOT PUT ANY FOREIGN OBJECT INSIDE THE MONITOR

Do not put any solid object or liquid inside the monitor. Unplug the monitor and contact your dealer or the nearest service center in case of an accident. It may cause fire, electric shock or damage when operating the monitor with foreign objects inside.

DO NOT USE THE MONITOR NEAR WATER

It is hazardous to operate the monitor in close proximity to water where the water may be spilt or splashed onto the monitor. This may cause fire or electric shock.

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BAD WEATHER CONDITIONS

It is advisable not to operate the monitor during heavy thunderstorms as intermittent breaks in power may cause malfunction. Users are also advised not to touch the plug under these circumstances as it may cause electric shock.

CAUTION

DISCONNECT CABLES WHEN MOVING THE MONITOR

When moving the monitor, always turn off the switch, unplug the monitor, and be sure the signal cable is disconnected. If the cables are not properly disconnected when moving the monitor, it may cause fire or electric shock.

DO NOT TOUCH THE PLUG WITH WET HANDS

Pulling or inserting the plug with wet hands may cause electric shock.

HOLD THE PLUG WHEN DISCONNECTING

To disconnect the power cable or signal cable, always pull the cable by the plug. Never pull on the cable as this may cause fire or electric shock.

OTHERS

ERGONOMICS RECOMMENDATIONS

Do not operate the monitor in a dark room or against a bright background. For optimal viewing comfort, the monitor should be just below eye level and 30-60 cm (16-24 inches) away from your eyes. When using the monitor over a prolonged period of time, a ten-minute-break per hour is recommended. Viewing of the screen during an extended period of time can cause strains to the eyes.

Special Notes on LCD Monitors

The following are normal with LCD monitors and do not indicate a problem.

NOTE

- When first turning on the LCD monitor, if the picture does not fit in the display area, it is because of the type of computer that is used. In such case, adjust the picture position to its correct position. (See Operating the Monitor)
- The screen may flicker during initial use. Turn off the power switch and then turn it on again the flickering should disappear.
- Users may notice a little uneven brightness on the screen depending on the desktop pattern they use. It is normal for LCD monitors to show such uneven brightness.
- Due to the nature of the LCD screen, switching of images after a prolonged period of time of displaying the same image, the image from the previous screen may remain. In such case, the screen is recovered slowly by changing the image or turning off the power switch for hours.
- If the screen becomes dark, flickers, or does not light-up, contact your dealer or the nearest service center for a backlight replacement. Do not attempt to replace it yourself.

Customer Service

NOTE

- If you need to return your unit for service and the original packaging was discarded, please contact your dealer or the nearest service center for advice or replacement of packaging.

Cleaning

WARNING

- If you dropped any material or liquid such as water onto the monitor when cleaning, unplug the power cable immediately and contact your dealer or the nearest service center. Always make sure your hands are dry when unplugging the power cable.

CAUTION

- For safety reasons, turn-off the power switch and unplug the monitor before cleaning.

NOTE

- Do not scratch or rub the screen with a hard object.
- Never use any of the following solvents on the LCD monitor. Such harsh chemicals may cause damage to the cabinet and the LCD screen.

Thinner	Spray-type cleaner
Benzene	Wax
Abrasive cleaner	Acid or Alkaline solvent
- Rubbing the cabinet with products made of rubber or plastic for a long period of time may cause degeneration or loss of paint on the cabinet.

CABINET

- Dirt can be removed with a lightly moistened cloth and a mild solvent detergent. Then wipe the cabinet with a soft dry cloth.

LCD

- Periodic cleaning with a soft dry cloth is recommended.
- Do not use tissue to clean the screen. It may damage the LCD screen.

CONFORMITY AND COMPLIANCE

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 when the equipment is operated in a residential installation. This device 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 device does cause harmful interference to radio or television reception (this can be determined by turning, the device off and on), you are encouraged to try to correct the interference by 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:

To comply with the limits for an FCC Class B computing device, you should use the shielded signal cord and shielded power cord supplied with this unit. The Federal Communication Commission warns that changes or modifications of the unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Radio Frequency Interference Statement

Warning:

This is a Class B product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Canadian Doc Notice

For Class B Computing Devices

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the Radio Interference Regulation of the Canadian Department of Communications.

CE MARKING DECLARATION OF CONFORMITY

The LCD monitor complies with the requirements of related European standards, which include:

- Emission: EN 55022, EN 61000-3-2, EN-61000-3-3
- Immunity: EN 50082-1
- Safety: EN 60950 [Low-Voltage Directive (73/23/EEC)]



Energy Star

This product meets the Energy Star guidelines for energy efficiency.



TCO'99

Congratulations! You have just purchased a TCO'99 approved and labeled products. 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 also to the further development of environmentally adapted electronics products. (Optional for white color only)



APPENDIX

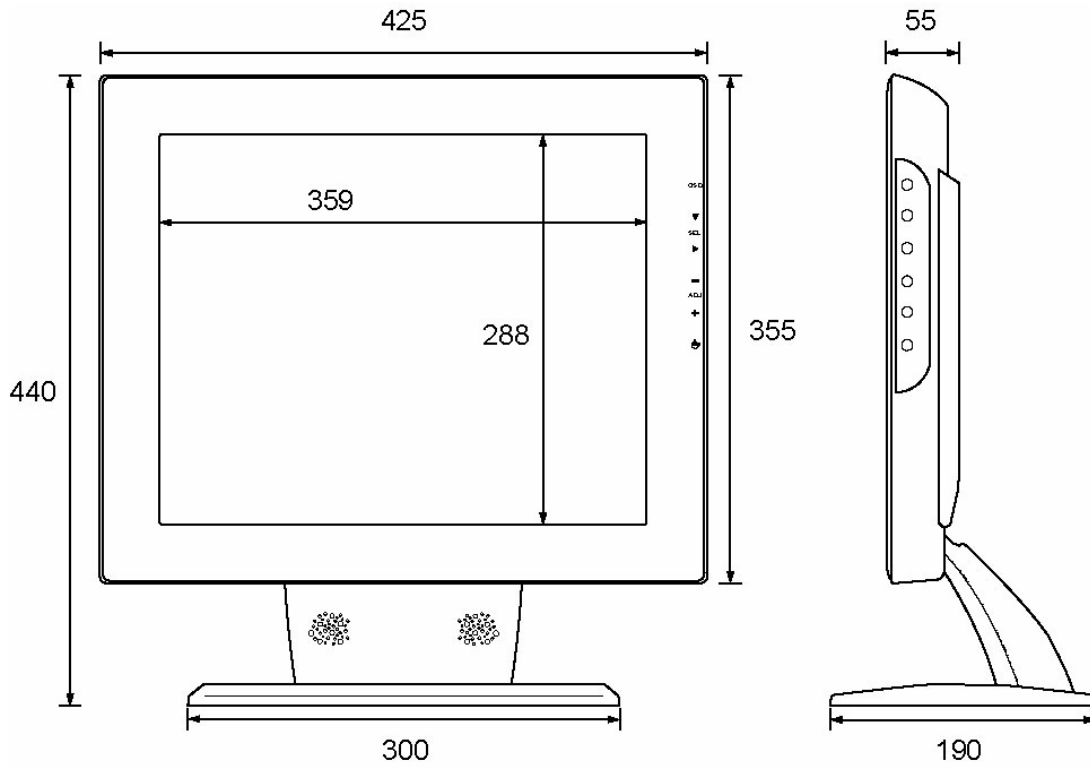
PL180M TFT LCD Monitor Specifications

LCD panel	Driving system	Active matrix TFT
	Display area	357.12 (H) x 285.696 (V) (18.0" diagonal)
	Pixel pitch	0.279 (H) x 0.279 (V)
	Resolution	1280 x R.G.B. x 1024
	Viewing angle (R+L)	160 °(min.)
	Viewing angle(U+D)	160 °(min.)
	Response time(Rising)	20 ms (Typ.)
	Response time(Falling)	10 ms (Typ.)
	Contrast Ratio	400 (Typ.)
	Average Luminance of White	220 cd/m ²
	Input signal	RGB analog
Graphic (VGA)	Separate sync.	TTL level
	Horizontal sync.	Positive/Negative
	Vertical sync.	Positive/Negative
	Input connector	D-Sub mini 15 pins
Plug & Play (EDID data only)	DDC1/2B compliance	
Power Source	Input	100-240V47/63Hz
	Output	19V, 3.16A
Power Consumption	Operation Mode	< 60W
	Power Saving Mode	< 5W
Tilt Angle	Upward	20 degrees

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	Downward	-3 degrees
Approval	TCO '99, CE, FCC B, UL 1950	
Environmental Conditions	Operate/Storage Temp.	5-35/-10-60° C
	Operate/Storage Humidity	<80% / <85%

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Note: Dimensions



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Supported Timing

Display Mode			Analog	
			Horizontal Frequency	Vertical Frequency
VESA	VGA	640 x 480	31.5 KHz	60 Hz
			37.5 KHz	75 Hz
		720 x 400	31.5 KHz	70.1 Hz
	SVGA	800 x 600	35.2 KHz	56.3 Hz
			37.9 KHz	60.3 Hz
			46.9 KHz	75.0 Hz
			48.1 KHz	72.0 Hz
	XGA	1024 x 768	48.4 KHz	60.0 Hz
			56.5 KHz	70.1 Hz
			58.1 KHz	72.0 Hz
			60.0 KHz	75.0 Hz
	SXGA	1280 x 1024	63.98 KHz	60.02 Hz
			79.97 KHz	75.02 Hz
	Macintosh	VGA	640 x 480	35.0 KHz
832 x 624			49.7 KHz	74.6 Hz
MS-DOS		640 x 350	31.5 KHz	70.1 Hz

Troubleshooting Procedures

If the LCD monitor fails to function correctly, please follow the following steps for a possible solution.

1. Perform the adjustments according to **Operating the Monitor**.
2. Refer to the following items if you cannot find a proper item listed in the **Operating the Monitor** or if the problem remains.
3. If the problem you have experienced is not described below or you cannot correct the problem, stop using the monitor and contact your dealer or the nearest service center for further assistance.

PROBLEM	CHECK TO SEE
No Display.	
a) Power indicator does not light up.	If the power cord is firmly plugged in the socket.
	If the power switch is turned on.
	If the AC socket is OK. Please check using another piece of equipment.
b) Power indicator is green.	If the blank screen saver is active, touch the keyboard or mouse.
	Increase the CONTRAST and/or BRIGHTNESS.
	If the computer is ON.
	If the signal cable is properly connected.
c) Power indicator is amber.	If the signal timing of the computer is within the spec of the monitor.
	If the monitor is on power management mode, touch the keyboard or the mouse.
	If the computer is ON.
	If the signal cable is properly connected.
Display is too dark or too bright.	If the signal timing of the computer is within the spec.
	If the video output level of the computer is within the spec.
Display is not in the center.	If the signal timing of the computer is within the spec.
Display is shaking.	If the power voltage is within the spec.
	If the signal timing of the computer is within the spec.
Display is not synchronized.	If the signal cable is properly connected.
	If the signal timing of the computer is within the spec.
	If the video output level of the computer is within the spec.

Power Management

The LCD Monitor complies with the VESA DPMS (version 1.0p) power management proposal. The VESA DPMS proposal provides four phases of power saving modes by detecting the horizontal or vertical sync signal.

Item	DPMS Mode	Display	Power LED	Power Consumption	Recovery Time	H-sync	V-sync
1	On	Normal	Green	Normal	---	On	On
2	Stand By	No Display	Amber	□ 5W	3 sec	< 10 KHz	On
3	Suspend	No Display	Amber	□ 5W	3 sec	On	< 10 Hz
4	Off	No Display	Amber	□ 5W	3 sec	<10KHz	<10Hz-

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Customer Service

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