

PD8500

Sunlight Readable
Industrial LCD Displays

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Packing List

The LCD monitor comes with the following standard parts shown as below. Check and make sure they are included and in good condition. If anything is missing or damaged, contact the dealer immediately.

1. Industrial Display Panel x 1 pc
2. Industrial Display Panel User's Manual CD-ROM x 1 pc
3. Power adapter x 1 pc
4. VGA Cable 1.8 M x 1 pc
5. Panel Mounting Kits
6. Screws beg
7. Adapter cable saddle

It is better for you to keep the carton and the packing materials in case you might need them for packing or moving in the future.

Safety & Warranty

1. Read these safety instructions carefully.
2. Keep this user's manual for later reference.
3. Disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.
4. For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. **DO NOT COVER THE OPENINGS.**
8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.
12. Never pour any liquid into an opening. This could cause fire or electrical shock.
13. Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.
14. If any of the following situations arises, get the equipment checked by service personnel:
 - a. The power cord or plug is damaged.
 - b. Liquid has penetrated into the equipment.
 - c. The equipment has been exposed to moisture.

- d. The equipment does not work well, or you cannot get it to work according to the users manual.
 - e. The equipment has been dropped and damaged.
 - f. The equipment has obvious signs of breakage.
15. DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THE STORAGE TEMPERATURE IS BELOW -20° C (-4°F) OR ABOVE 60° C (140° F). IT MAY DAMAGE THE EQUIPMENT.

FCC Safety

Warning!



This device complies with Part 15 FCC Rules.

Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

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Chapter

1

**General
Information**

Introduction

Congratulations on your purchase of the Industry Display Panel TFT LCD monitor - a marvelous contribution of cutting edge technology.

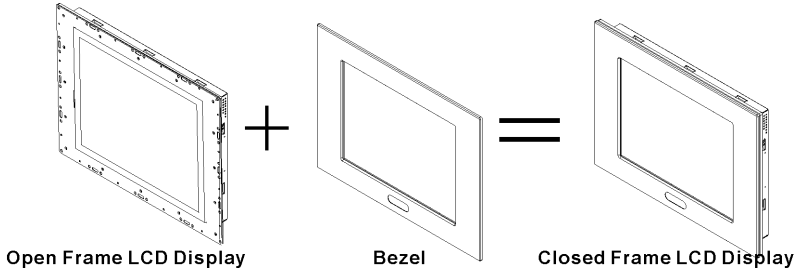
The LCD monitor has been designed with serious thoughts to present the best performance for most applications. Symbol of elegance, its compact and slim profile is well suited in working locations where space is at a premium.

The TFT LCD monitor displays sharper, more brilliant, crisper and flicker-free images. Complying with the power management regulations of VESA DPMS, the LCD monitor is extremely energy efficient and a power saver. Plus, the LCD monitor has extremely low radiation emissions and near zero electromagnetic fields which are supreme benefits.

Fully compatible with PC system, the LCD monitor provides full interface for all sorts of related standards. Supported by “Plug & Play” complying with DDC1/DDC2B, installing the LCD monitor is absolutely trouble free.

The On Screen Display menu provides user a convenient interface to make right adjustment for optimum display performance.

Open Frame Structure Illustration



Features of Display Panels

This menu provides full range of analog interface LCD panels, which are 15" (XGA) high-brightness, long lifetime TFT LCD monitors.

- Stainless steel open-frame architecture
- 15" XGA (1024x768 resolution)
- Input sources: RS-232 (optional for touch screen), DVI, VGA, S-video and composite video
- Automatic 8-level light sensor
- Sunlight readable brightness: 1000 Cd/m²
- OSD (On Screen Display) function for display adjustment
- Touch screen (Optional)
- AC-in /DC-out external power adapter
- Swivel ARM: VESA 75/100 Standard
- Aluminum front bezel (Optional)
- Auto detect NTSC, PAL

General Specifications

- **Construction:** Stainless steel open-frame architecture
- **Mounting:** Panel mount or Swivel ARM
- **Input signal:** RGB, DVI, Composite video, S-Video
- **Control:** OSD (On Screen Display) on the rear panel
- **Power Supply:** external power adapter
- **Dimension:**
 - PD8500:**
 - 428(W) x 320(H) x 64(D) mm
without bezel
 - 444(W) x 336(H) x 64(D) mm
with standard bezel
 - 483(W) x 354.80(H) x 64(D) mm
with rack mount bezel
- **OS support:** MS DOS, Windows 98, Windows NT, Windows 2000.
- **Net Weight:**
 - PD8500: 6.5Kg

Touchscreen (Optional)

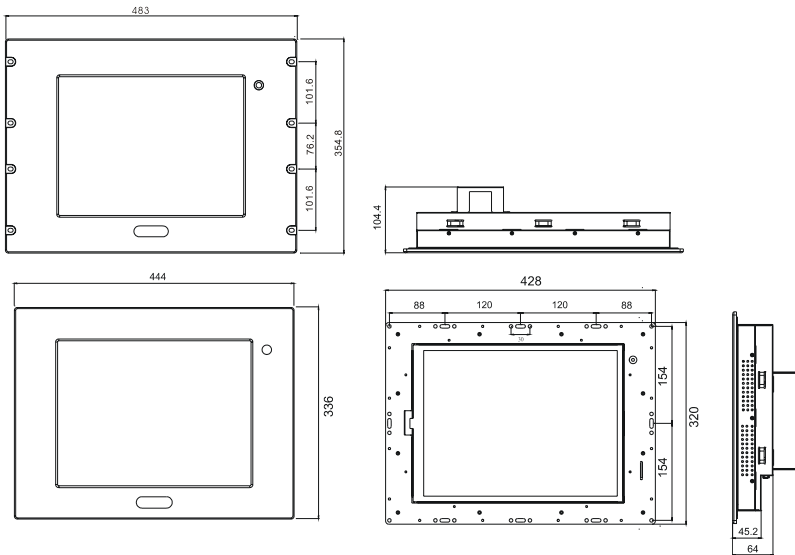
- **Type:** 5-wire. Analog resistive
- **Controller resolution:** 4096 x 4096
- **Light transmission:** 80% or higher
- **Activation force:** When activated by a standard finger, the activation force is typically less than 4 ounces (113grams).
- **Controller:** RS-232 interface

Environmental Specifications

- **Operating temperature:** 0°C to 45°C (32~113°F)
- **Vibration:** 5~150Hz, 1G acceleration.
- **Shock:** 15G peak acceleration (11 msec. Duration)
- **EMC:** FCC / CE Class A

Dimensions

PD8500



Chapter

2

**Hardware
Installation**

Before Unpacking

It is very important to locate the LCD monitor in a suitable environment.

- The surface for placing the LCD monitor should be stable and level.
- Make sure the place has good ventilation, and out of direct sunlight; away from sources of excessive dust, dirt, heat, water, moisture and vibration.
- Convenience for connecting the LCD monitor to the related facilities should be well considered too.

Connecting Power

To power up the LCD monitor, use the provided AC-DC adapter and the power cord to connect to the power in jack of the display. The following shows how to tighten the power connector on the display

PD8500

Step 1: clips the power connector into the fixing hook.



Step 2: push the power connector into the power jack.

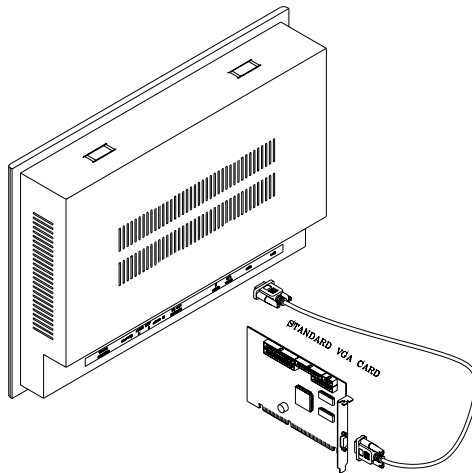


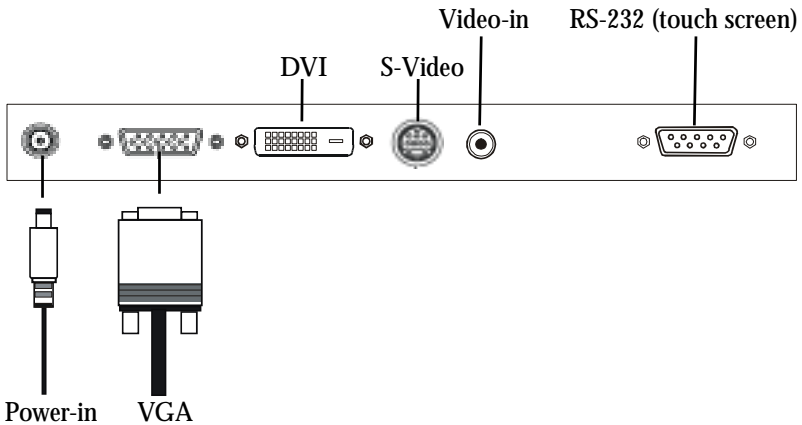
Important!

A "Surge Protection" device plugged between the AC-DC adapter and the wall outlet is recommended to prevent the effects of sudden current variations from reaching the LCD monitor. The sudden peaks of electricity may harm the LCD monitor.

Connecting to the Computer

- Turn off the computer and the LCD monitor before connecting them.
- Use the Monitor-to-PC VGA cable to connect the LCD monitor to your computer. The cable heads are the same on either side.
- Fasten the connections securely.



Source input diagram


Important! Select <Input Source> Before You Start the System

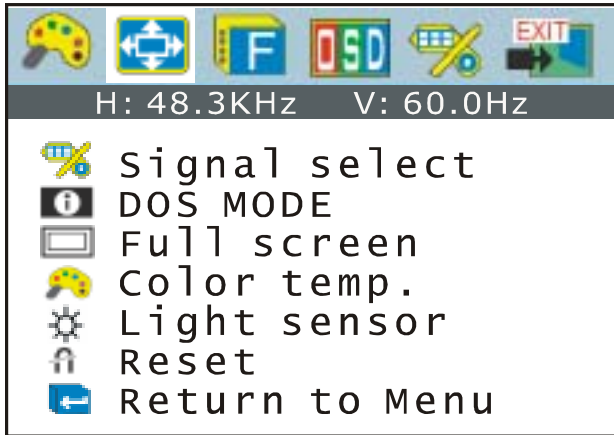
After connecting the display to the system unit, make sure that appropriate signal input source is selected before you starting computer system.

Follows the steps below:

Step 1: Power on the display.

Step 2: Press the Menu button to pop-up main menu.

Step 3: Use the ▼ button to select  icon and press Menu button to enter **Signal select** function.



Step 4: Press the Menu button again to display input source.

Step 5: Use the Press ▲ or ▼ button to select input source from VGA, DVI, AV or S-Video.

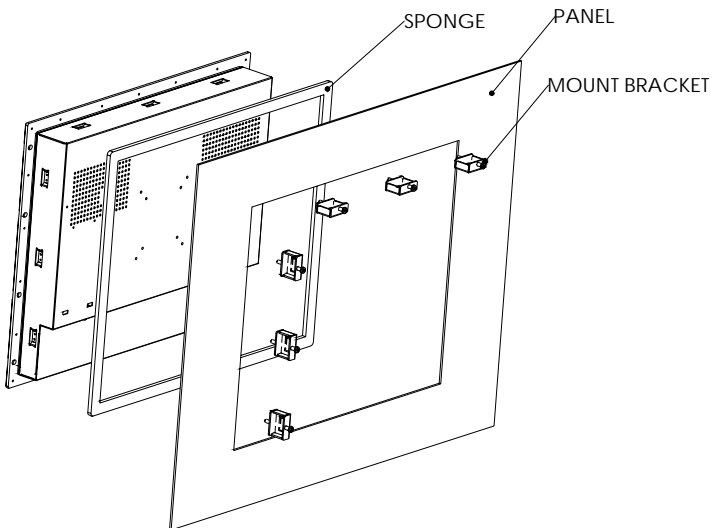
Step 6: Press Menu button to exit. And now you can start up the system.

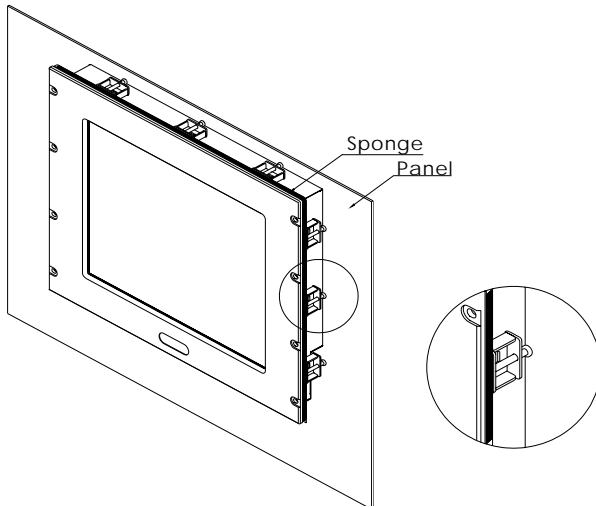
The backlights of sunlight readable display will graduate reach the maximum brightness after power on 10 minutes.

Panel Mounting

These display panels can be placed on a shelf or table, or mounted onto the wall. To mount them onto the wall, you need the mounting brackets, which you will find in the accessory box. Follow the steps described below:

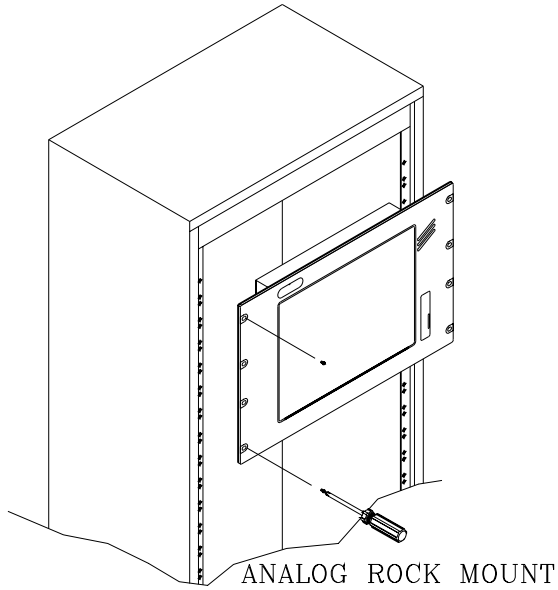
- Slide the display panel into cutout on the wall.
- Tighten the brackets until the display panel is firmly secured to the wall.





Rack Mounting (Optional)

Optional 19" rack mount frame is also available for all models.



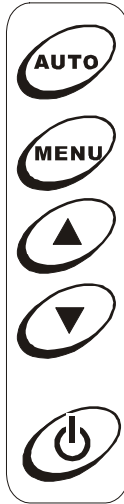
Chapter

3

**On Screen
Display Control**

On Screen Display (OSD) Controller

The LCD monitor is very easy and simple to operate. There are five controls below on the rear panel. You can see their respective indicators.



AUTO

To auto adjust image position, pixel clock and phase. Whenever there is flicker happens, always press the AUTO button first.

The setting value will be automatically adjusted and saved.

MENU

Menu

To activate the OSD Menu, press the Button. When locating an item you like to adjust in the OSD Menu, press to bring up the corresponding sub-menu for options.

**Increase / Moving UP Button**

To move the locating cursor forward in the OSD Menu, press UP button. To increase the value while adjusting a parameter, press the ▲ button.

**Decrease / Moving DOWN Button**

To move the locating cursor backward in the OSD Menu, press the ▼ button. To decrease the value while adjusting a parameter, press ▼ button.

**Power Switch**

Push up the Power Switch to turn on/off the LCD backlight.

OSD Control Menu

There are six options in the OSD Menu. Press the Menu button to display the main menu.

<Main Menu>



Image



Brightness: To adjust the brightness level of the image.

- Press the Menu button again to enter select **Brightness**.
- Press the Menu button once again to set up value.
- Press ▲ or ▼ button, you can adjust brightness. (Scale from 0~100)



Contrast: To adjust the difference between the light and dark areas, using up and down arrows button.

- Under **Image** menu, press ▼ button to select **Contrast**
- Press the Menu button again to set up **Contrast** value
- Press ▲ or ▼ button, you can adjust brightness. (Scale from 0~100)



GAMMA: To adjust screen luminance of the display.

- Under **Image** menu, press ▼ button to select **GAMMA** setting. Press Menu button to enter.
- Press ▲ or ▼ button to select **GAMMA** level. (Level from off to 2)



Color: (Composite video or S-video mode only) To adjust video Color saturation (Red, Green, Blue) of the display.

- Press ▼ button and move to **Color** setting. Press Menu button to enter.
- Press ▲ or ▼ button to adjust **Color** level. (Level from 0 to 100)

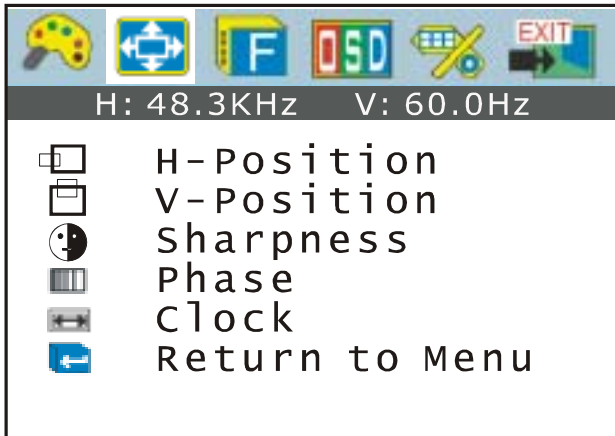


Hue: (Composite video or S-video mode only) To adjust chroma of the display.

- Press ▼ button and move to **Hue** setting. Press Menu button to enter.
- Press ▲ or ▼ button to adjust **Hue** level. (Level from 0 to 100)



Return to Menu: Return to main menu selection.



Geometry



H-Position: (VGA mode only) To adjust horizontal position of display.

- Press the Menu button again to enter select **H-Position** setting.
- Press ▲ or ▼ button to adjust.



V-Position: (VGA mode only) To adjust vertical position of the display.

- Press ▼ button to select **V-Position** setting. Press the Menu button again to enter.
- Press ▲ or ▼ button to adjust.



Sharpness: To adjust the clarity and focus of the screen image.

- Press ▼ button to select **Sharpness** setting. Press the Menu button again to enter.
- Press ▲ or ▼ button, you can adjust sharpness. (Level from 1 to 5).

- PD8500 : only workable for Display Modes 640x480, 800x600.



Phase: To adjust the phase of pixel frequency and minimizes the video distortion.

- Press ▼ button to select **Phase** setting. Press the Menu button again to enter.
- Press ▲ or ▼ button, you can adjust phase. (Range to 25).



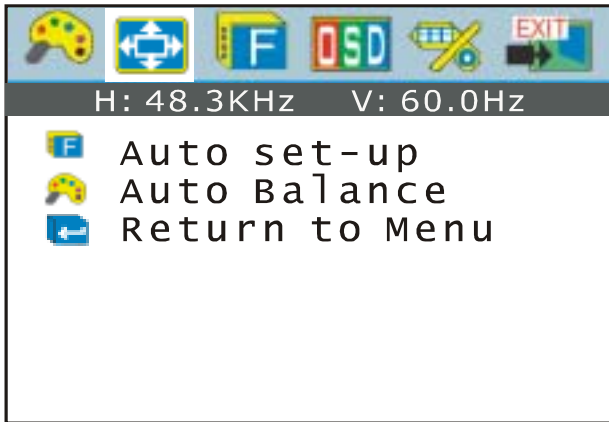
Clock: To adjust the pixel frequency.

- Press ▼ button to select **Clock** setting. Press the Menu button again to enter.
- Press ▲ or ▼ button, you can adjust phase. (Range to 49).

If the display appears abnormal noisy or cross-talks stretching lines, adjust **Phase** or **Clock** to clear up noise.



Return to Menu: Return to main menu selection.



Function Setting



Auto set-up: (VGA mode only) Automatically scanning and adjust **Clock, Phase, H-position** and **V-position** to the best performance.

- Press ▼ button to select **Auto set-up**. Press the Menu button again to enter.
- Press ▲ or ▼ button to choose “Yes” or “No” to set up.



Auto Balance: (VGA mode only) Automatically adjust R (red), G (green), B (blue) color value.

- Press ▼ button to select **Auto Balance**. Press the Menu button again to enter.
- Press ▲ or ▼ button to choose “Yes” or “No” to set up.



Return to Menu: Return to main menu selection.



OSD Setting



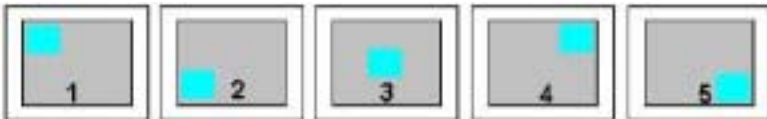
Language: Set the language of OSD menu.

- Press the Menu button again to select **Language**.
- Press ▲ or ▼ button to choose languages from English, Deutsch, Français, Nederlands, Svenska, and Japanese.



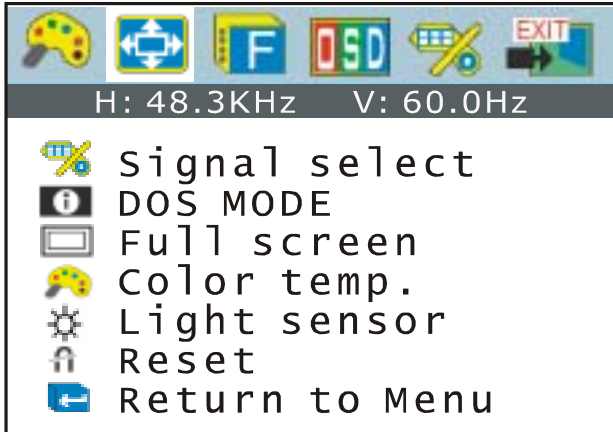
OSD Position: To adjust the Horizontal & Vertical position of the OSD pop-up windows position.

- Press ▼ button to select **OSD Position**. Press the Menu button again to enter.
- Press ▲ or ▼ button to choose positions from 1 to 5 as below.





Return to Menu: Return to main menu selection.



Other Settings



Signal select: Select the display input source.

- Press the Menu button again to select **Signal select**.
- Press ▲ or ▼ button to select input source from VGA, DVI, AV or S-Video mode.



DOS Mode: Select the DOS mode resolution.

- Press ▼ button to select **DOS Mode**. Press the Menu button again to enter.
- Press ▲ or ▼ button to select resolution mode. (720 x 350, 720 x 400(default), 640 x 350, 640 x 400)



Full screen: To expand the display area size.

- Press ▼ button to select **Full screen**. Press the Menu button again to enter.
- Press ▲ or ▼ button to choose size 1 or 2, or to turn off full screen function.



Color temp.: To adjust the color temperature.

- Press ▼ button to select Press the Menu button again to select **Color temp.**
- Press ▲ or ▼ button to set color temperature to 6500K or 9300K.



Light sensor: To turn the light sensor on or off. When the sensor is on, the display will automatically detect environment light change and adjust the brightness accordingly after 5 seconds.

- Press ▼ button to select **Light sensor**. Press the Menu button again to enter.
- Press ▲ or ▼ button to turn the light sensor on or off.
- As the light sensor is turned on, brightness and contrast is adjusted automatically and manual control is not allowed.



Reset: To reset all setting to factory default.

- Press ▼ button to select **Reset**. Press the Menu button again to enter.
- Press ▲ or ▼ button to yes or no reset.



Return to Menu: Return to main menu selection.

**Exit**

To exit OSD main menu, press ▲ or ▼ button to select **EXIT**.
Press **Menu** button again to exit.

Brightness Hotkey Control (with Light sensor off)

The Hot key control allows you to instant activate frequent use brightness without browsing OSD menu.



Press the upward arrow that allows to select different brightness for PC game, TV

Chapter

4

Drivers Installation

The PD8500 comply with DDC1/DDCB2 standard, therefore the system will automatically detect the display. No drivers' installation is needed.

Touchscreen Driver Installation (Optional)

The Touchscreen driver is included in the supporting CD-ROM. Look for the **Combo Toolkit** drivers' folder and click on set up function install.

Specifications

PD8500

Panel	
Type	Color TFT
Size	Diagonal 15"
Brightness	1,000 cd/m ²
Back light Life-time	26,000 hrs
Contrast Ratio	400:1
Pixel Pitch	0.297(H) x 0.297(V) mm
Viewing Angle (Horizontal)	150°
Viewing Angle (Vertical)	120°
Resolution	1024x768
Display Modes	Full Screen in 640x480, 800x600, 1024x768 Mode
Color	16.7M
Power Consumption	
On- Working	60Watts (Max.)
Input Voltage	AC 100-240V~1.8A, 50~60Hz

Output

DC 12V / 5A(Max)

Troubleshooting

1. **Problem:** Unclear or Unsteady Display

Actions:

1. Activate the **AUTO** button. You might need to repeat to find balanced values for a good quality.
2. If you still have problem to fine-tune the image, call your local technical support for assistance.

2. **Problem:** No Display is shown on the LCD monitor.

Actions:

1. Make sure the LCD monitor is powered on by checking if the Power LED is lit. Check if all the connections are secure and the system is running correctly.
2. If the power LED lights up green, but there is still nothing displayed; connect your PC with another external monitor. If your PC works properly with that monitor, then it is possible that the VGA card timing of the system may be outside the LCD monitor's synchronous range. You may need a qualified technician for help.

3. **Problem:** "No signal" is shown on the display after you connect to the system.

Action:

This could be a mistake you made in the OSD menu while choosing the INPUT SOURCE: VGA, DVI, AV or S-Video.