PLANAR™

LA1500R,
LA1500RTR
and LA1500RTC

USER'S GUIDE

www.planar.com

European Union 2002/95/EC Directive on the Restriction of Hazardous Substances (RoHS)

In February 2003, the European Union issued Directive 2002/95/EC on the Restriction of Hazardous Substances, commonly known as RoHS, in certain electrical and electronic equipment. It restricts the use of six hazardous substances, including lead (Pb).

The Directive states that all new products within its scope, placed on the European market after July 1, 2006 must be compliant with its requirements.

Planar Systems Inc. is fully in support of and compliant with EU Directive 2002/95/EC for applicable products within its scope.

A Planar part number will be modified with an "LF" suffix designation to indicate RoHS compliance, as shown on the part number label affixed to the display and on the box containing the display.

Important Recycle Instructions:

Lamp(s) inside this product contain mercury. This product may contain other electronic waste that can be hazardous if not disposed of properly. Recycle or dispose in accordance with local, state, or federal Laws. For more information, contact the Electronic Industries Alliance at WWW.EIAE.ORG. For lamp specific disposal information check WWW.LAMPRECYCLE.ORG.

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Contents

Usage Notice

⚠ WARNING – To prevent the risk of fire or shock hazards, do not expose this product to rain or moisture.

⚠ WARNING – Please do not open or disassemble the product as this may cause electric shock.

Precautions

Follow all warnings, precautions and maintenance as recommended in this user's guide to maximize the life of your unit.

Do:

❑ Turn off the product before cleaning.

❑ LCD front surface may be cleaned using a soft clean cloth moistened with mild window glass commercial cleaners or 50/50 mixture of water and isopropyl alcohol.

❑ Use only the high quality and safety approved AC/DC power adapter that comes with your monitor.

❑ Disconnect the power plug from AC outlet if the product is not used for an extended period of time.

Don't:

❑ Do not touch the LCD display screen surface with sharp or hard objects.

❑ Do not use abrasive cleaners, waxes or solvents for cleaning.

❑ Do not operate the product under the following conditions:
   - Extremely hot, cold or humid environment.
   - Areas susceptible to excessive dust and dirt.
   - Near any appliance generating a strong magnetic field.
   - In direct sunlight.

Introduction

About Planar's LA1500R / LA1500RTR / LA1500RTC

The LA15 products all have a 15" flat panel screen with an active matrix, thin-film transistor (TFT) liquid crystal display (LCD).

Features include:

- ❏ Direct analog graphics signal input
- ❏ Active matrix TFT LCD technology
- ❏ 1024 x 768 XGA resolution
- ❏ 15" viewable display area
- ❏ 31.5 ~ 60.2 kHz horizontal scan
- ❏ 56 ~ 75 Hz refresh rate
- ❏ 0.297mm x 0.297mm pixel pitch
- ❏ 250 cd/m^2(typ.) brightness
- ❏ 600:1(typ.) contrast ratio
- ❏ L/R=80°/80°,U/D=+80°/-80° viewing angle, CR=10
- ❏ Tr+Tf = 8ms (typ.) response time
- ❏ 2 Cold Cathode Flourescent Lamps (CCFL) with 50,000 hrs life
- ❏ Auto-adjustment function
- ❏ Multilingual OSD user controls
- ❏ VESA DPMS power saving
- ❏ Durable touch screen
- ❏ VESA rear mounting 75mm x 75mm standard
- ❏ Operating temperature = 5℃ to 35℃
- ❏ Storage temperature = -20℃ to 60℃

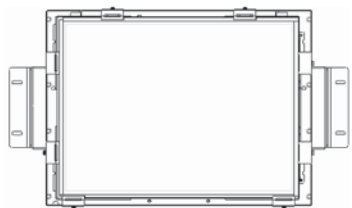# Touch Screen for LA1500RTR

Resistive for finger interface

- ❑ Surface: Anti-glare treatment
- ❑ Interface: Dual RS-232 Serial/USB controller
- ❑ Durability: 35 million touches at a single point
- ❑ Hardness: 2H MIN (As provided in JIS K5400)
- ❑ Operating force: Finger - < 50g (average)
- ❑ Transmittance: 79% (typ.)
- ❑ Driver: Windows® Vista, Windows® 7, Linux
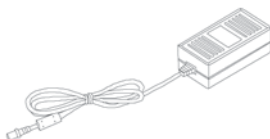
Touch Screen for LA1500RTC

Capacitive for finger interface

❑ Surface: Anti-glare treatment

❑ Interface: USB

❑ Durability: 225 million touches in a single location

❑ Hardness: Cannot be scratched using any stylus with Mohr's rating of less than 6.5

❑ Transmittance: up to 91.5% (+/- 1.5%) at 550 nm

❑ Driver: Windows® 95/98/Me/NT/2000/XP/Vista, Linux
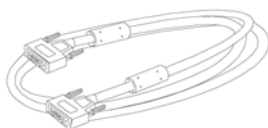
Package Overview

LCD Display

Power Adapter

Power Cord

VGA Signal Cable
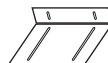

Landing Strip

Touch Screen Driver
Installation CD-ROM
(for LA1500RTR/
LA1500RTC)

USB Cable
(for LA1500RTR/
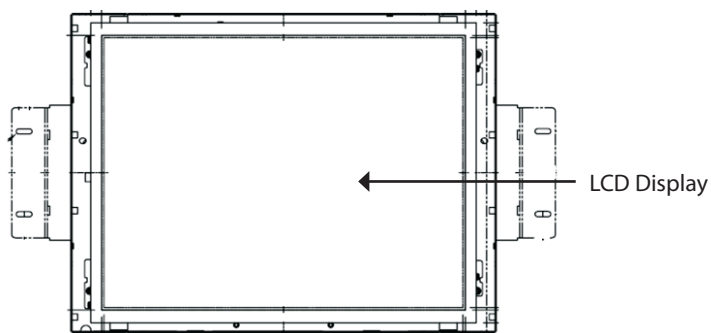LA1500RTC)

RS-232 Cable
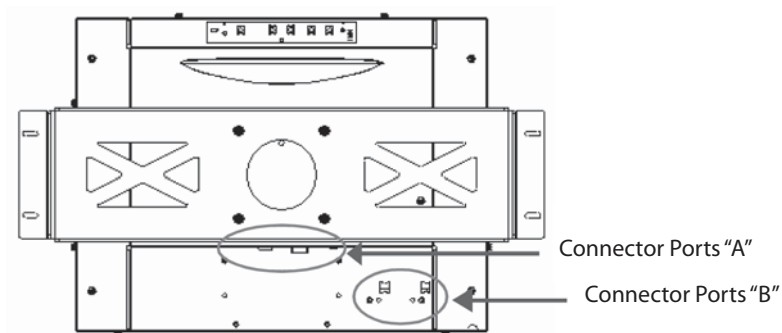(for LA1500RTR)

"L" Bracket, 2 pcs
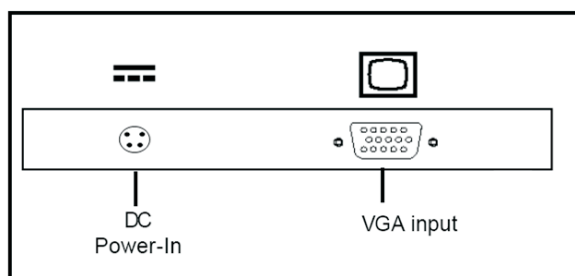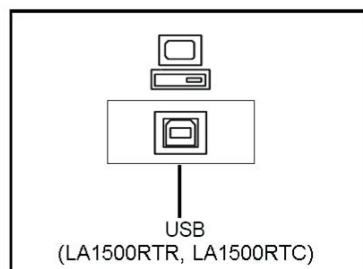
Installation

Product Overview

• Front View

LCD Display

• Rear View

Connector Ports "A"

Connector Ports "B"

• Connector Ports "A"

DC
Power-In

VGA input

• Connector Ports "B"

RS-232
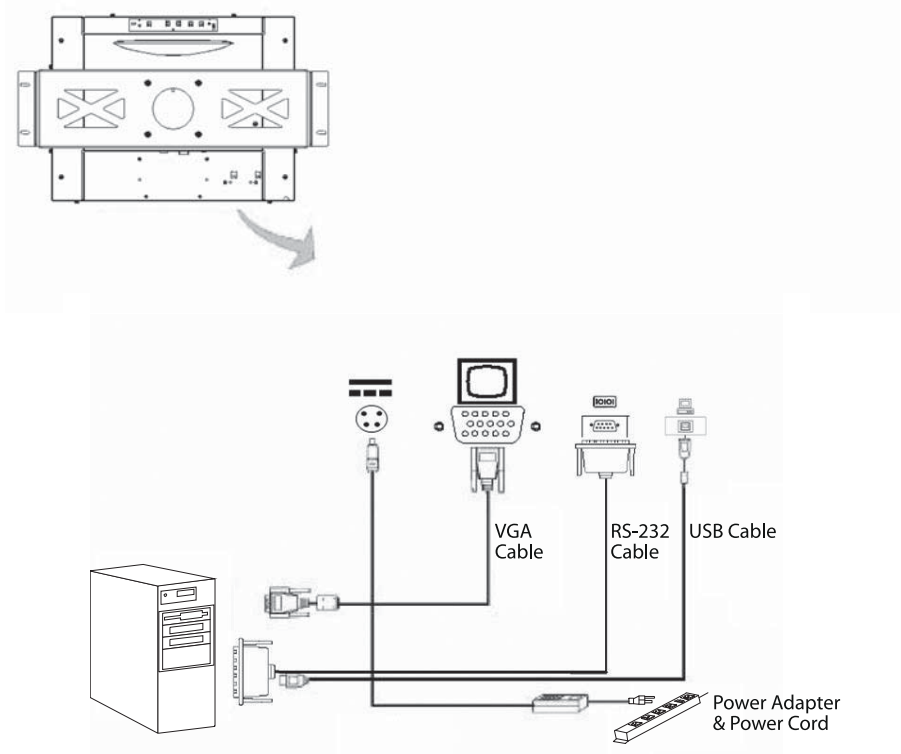(LA1500RTR)

USB
(LA1500RTR, LA1500RTC)
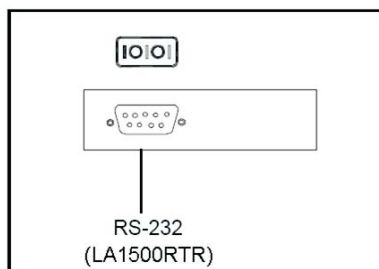
Connecting the display (Figure 1.1)

To set up this display, please refer to the following figure and procedures.

1. Be sure all equipment is off.

2. Connect the DC power cord to the power connector. Plug one end of the AC power cord into the power adapter, and the other end into an electrical outlet(1).

3. For the PC with Analog graphics output: connect the VGA signal cable from display VGA input connector to the 15-pin VGA connector of your host computer and tighten the screws(2).

4. For the LA1500RTR or the LA1500RTC touch screen models configure the touch screen. Refer to the "Touch Screen Driver Installation" section on page 25.
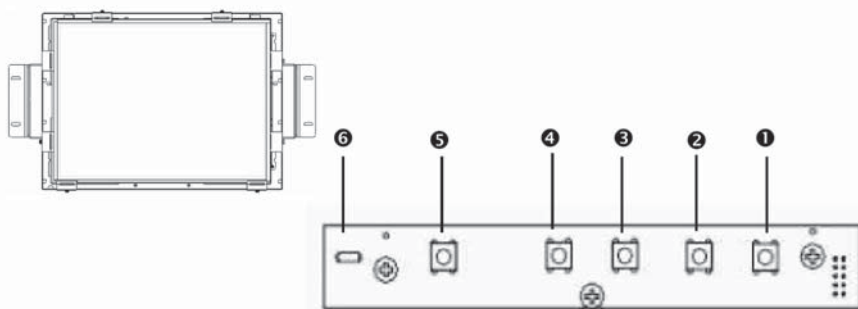
5. Turn on your computer, display and video source.

Notice: To ensure the LCD display works well with your computer, configure the display mode of your graphic card to less than or equal to 1024 x 768 resolution and make sure timing of the display mode is compatible with the LCD panel. "Video Modes" of this LCD panel are listed in the appendices for your reference.

Figure 1.1

VGA
Cable

RS-232
Cable

USB Cable

Power Adapter
& Power Cord

User Controls

Front Panel Controls

No./ Icon		Control	Function
❶	⬜	Menu button	Displays the OSD menus.
❷	⬜	Select / Auto	Select- To select the adjustment items from OSD menus. Auto- To activate the "Auto Adjustment" function to obtain an optimum image.
❸	⬜	Brightness Minus / Minus	1. Decreases the brightness of the display image. 2. Decreases value of the adjustment items.
❹	⬜	Brightness Plus / Plus	1. Increases the brightness of the dis play image. 2. Increases value of the adjustment items.
❺	⬜	Power Switch	Switches on/off the power of the LCD display.
❻	▭	Power LED	1. Green indicates the display is turned on. 2. Amber indicates the display is in power-saving mode.

On-Screen Display Menus

Main OSD Menu:

Main Menu	Sub Menu	Function Description
Auto-Adjustment	No/Yes	Choose this function to obtain an optimum image.
Contrast	0-100	Adjust the contrast of the display image.
Brightness	0-100	Adjusts the brightness of the image.
Horizontal Position	0-100	Changes the horizontal position of the image.
Vertical Position	0-100	Changes the vertical position of the image.
Clock	0-100	Changes the display data frequency to match the frequency of your graphic card. When you are experiencing vertical flickering bar, use this function to make an adjustment.
Phase	0-63	Minimizes any horizontal distortion. Adjusts the character sharpness.
Display Mode	ADJ	Select this function to view the display resolution, vertical refresh, and horizontal scan of the current mode.
OSD Time Out	5-60	Adjusts the time period for OSD menu to disappear.
Language	English / Francais Deutsch / Espanol Italiano / 日本語	Choose the language you need.

On-Screen Display Menus

Main OSD Menu:

Main Menu	Sub Menu	Function Description
Sharpness	1-4	Adjust the sharpness of the image.
Reset	No/Yes	Returns the display parameters of the current mode to its factory default settings.
Color Setting	SRGB / 9300K 7200K / 6500K 5000K / User defined	Adjusts the color temperature.
Color Adjustment-Red	0-100	It allows you to adjust the red color of the display.
Color Adjustment-Green	0-100	It allows you to adjust the green color of the display.
Color Adjustment-Blue	0-100	It allows you to adjust the blue color of the display.

Appendix

Troubleshooting

If you are experiencing trouble with the LCD display, refer to the following. If the problem persists, please contact your local dealer or visit Planar Support at www.planar.com/support. See support contact information on rear cover.

Problem: No image appears on screen.
◆ Check that all the I/O and power connectors are installed correctly and well connected as described in the "Installation" section.
◆ Make sure the pins of the connectors are not crooked or broken.
◆ Reconfigure the resolution of your computer to make it less than or equal to 1024 x 768.

Problem: Partial image or incorrectly displayed image.
◆ Check to see if the resolution of your computer is higher than that of the LCD display.
◆ Reconfigure the resolution of your computer to make it less than or equal to 1024 x 768.

Problem: Image has flickering vertical line bars.
◆ Use "Clock" to make an adjustment.
◆ Check and reconfigure the display mode of the vertical refresh rate of your graphic card to make it compatible with the LCD display.

Problem: Image is unstable and flickering
◆ Use "Phase" to make an adjustment.

Problem: Image is scrolling
◆ Check and make sure the VGA signal cable (or adapter) is well connected.
◆ Check and reconfigure the display mode of the vertical refresh rate of your graphic card to make it compatible with the LCD display.

Problem: Ghosting image (characters and graphics)
◆ Use "Clock" to make an adjustment. If the problem persists, use "Phase" to make an adjustment.

Warning Signal

If you see warning messages on your LCD screen, this means that the LCD display cannot receive a clean signal from the computer graphics card.

There may be three sources for this problem. Please check the cable connections or contact Planar for more information.

◆ **No Signal**
This message means that the LCD display has been powered on but it cannot receive any signal from the computer graphic card. Check all the power switches, power cables, and VGA signal cable.

◆ **Going to Sleep**
This message means that the LCD display is under the power saving mode. In addition, the LCD display will enter the sleep mode when experiencing a sudden signal disconnecting problem.

◆ **Out of Range**
This message means that the signal of the computer graphic card is not compatible with the LCD display. When the signal is not included in the "Video Modes" list we have listed in the Appendices of this manual, the LCD display will display this message.
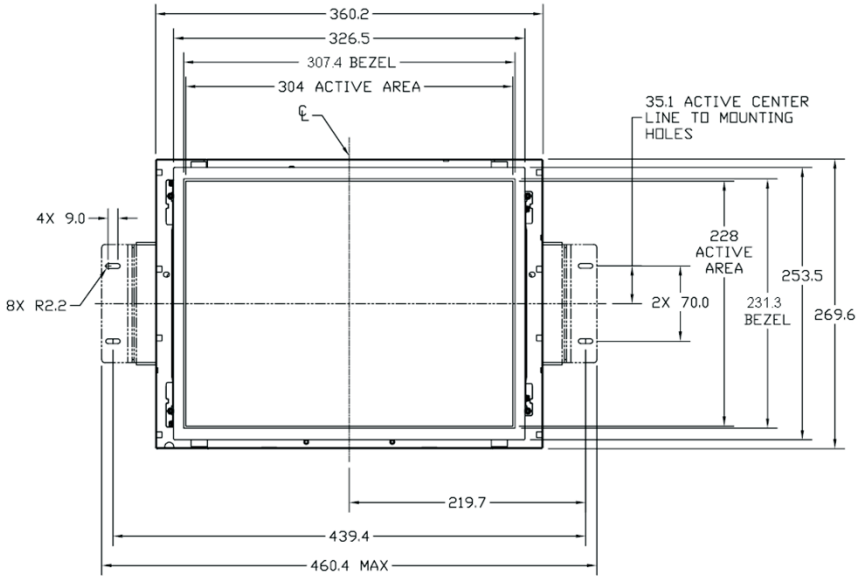
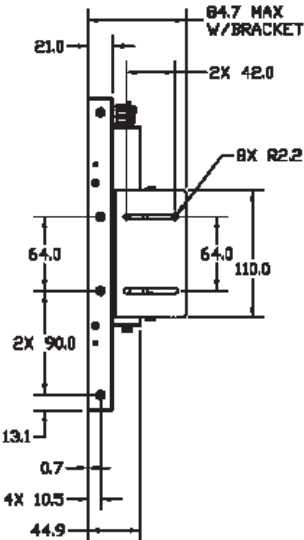# Product Dimensions

LA1500RTR - Front View:
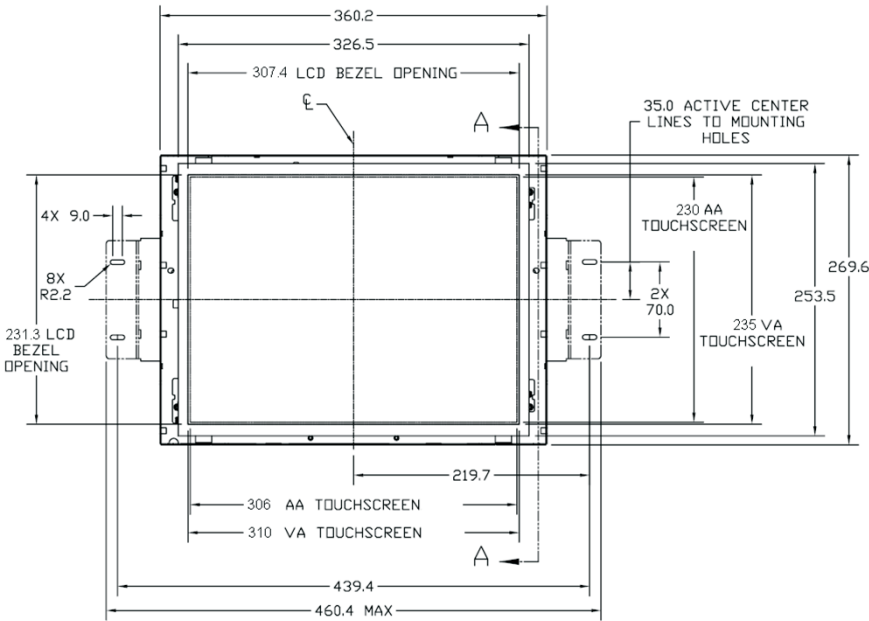
LA1500RTR Front View
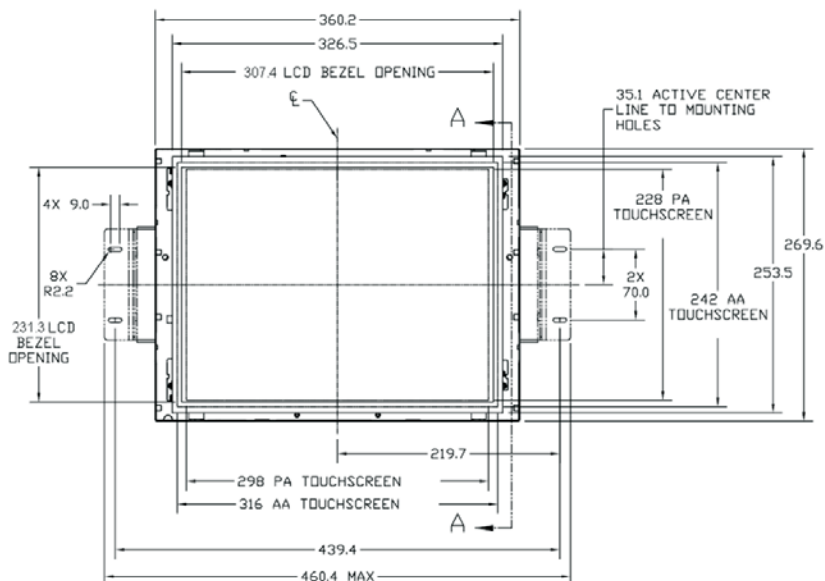
LA1500R - Front and Side View:
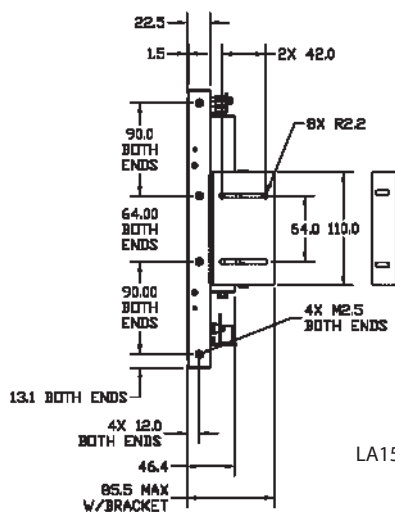

LA1500R Front View
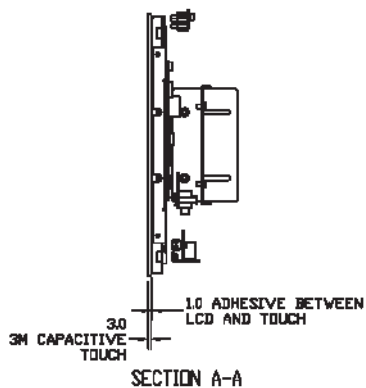

LA1500R Side View

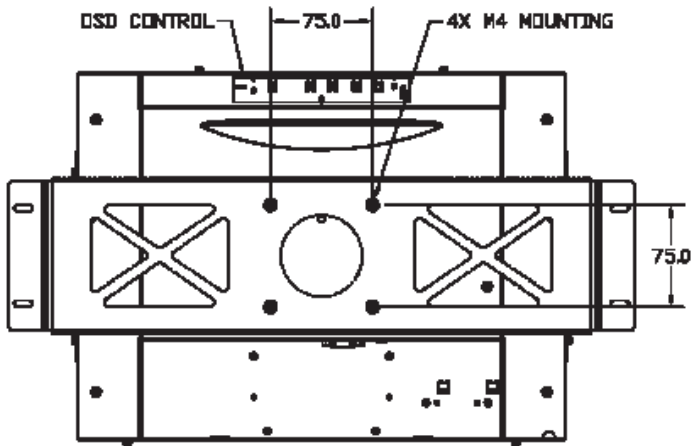## LA1500RTC - Front and Side View:

LA1500RTC Front View

LA1500RTC Side View

LA1500R/RTR/RTC - Rear View:

LA1500R/RTR/RTC Rear View

Compatibility Modes

The monitor supports the following industry-standard combinations of screen resolution and refresh rates. Other combinations are possible, but may require adjustments to the image.

For the optimal performance, set your computer to a screen resolution of 1024 x 768 at a 60 Hz refresh rate.

Mode	Resolution	V. Frequency (Hz)	H. Frequency (kHz)
IBM VGA	640 x 350	70	31.5
IBM VGA	640 x 400	70	31.5
IBM VGA	720 x 400	70	31.5
IBM VGA	640 x 480	60	31.5
VESA VGA	640 x 480	72	37.9
VESA VGA	640 x 480	75	37.5
VESA SVGA	800 x 600	56	35.2
VESA SVGA	800 x 600	60	37.9
VESA SVGA	800 x 600	72	48.1
VESA SVGA	800 x 600	75	46.9
VESA XGA	1024 x 768	60	48.4
VESA XGA	1024 x 768	70	56.5
VESA XGA	1024 x 768	75	60.0

Touch Screen Driver Installation

Driver Installation for LA1500RTR:

**Resistive Touch Screen with Dual RS-232 Serial/USB Connections**

The touch driver is located on the enclosed CD-ROM for these operating systems: **Windows® XP, Vista, and Windows® 7.**

Driver Installation Process:

1. Before you start to install the touch driver, please be sure the USB or the RS-232 Serial cable is disconnected from the PC or the monitor.
2. Before you start to install the touch driver, please be sure and power down your monitor. After 3 seconds turn it back on.
3. Un-install any touch screen driver (excluding Gunze) that may be on your system.
4. Open the CD-ROM.
5. "Monitor Size" drop-down menu - select the appropriate size.
6. "Model Number" drop-down menu - select the appropriate model.
7. "Operating System" drop-down menu - select the appropriate operating system.
8. Follow the step-by-step instructions.
9. After installation is complete, click "**Finish**" and restart your computer to complete installation.

Touch Panel Setting and Calibration:

1. After restarting your Windows, click "**Start**" on the Windows toolbar.
2. Select "**All Programs**" and select "**Gunze TPDD**".
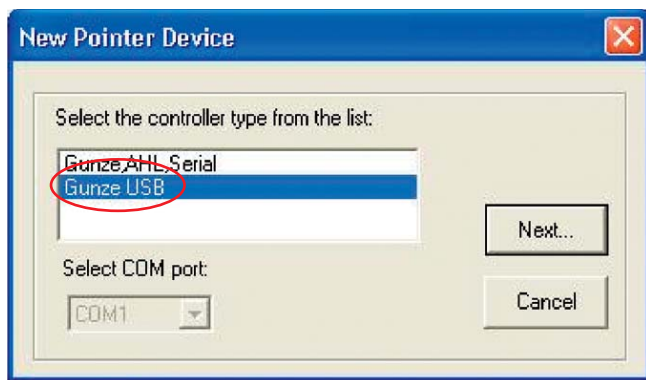3. Select "**Adjust Settings**".
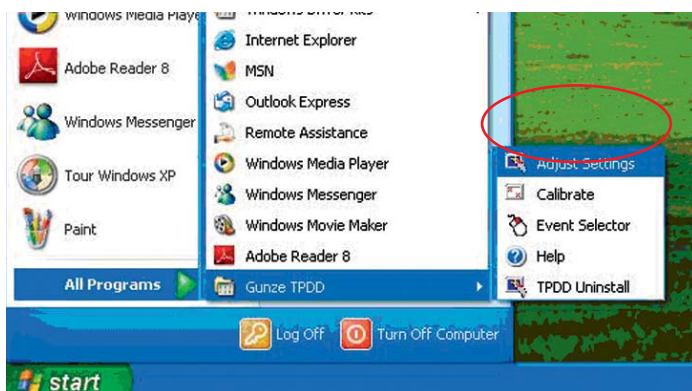
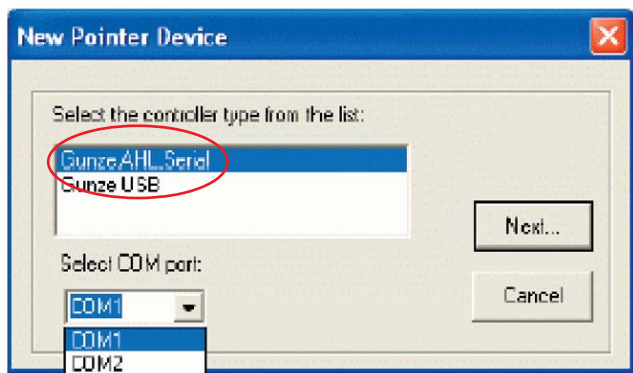4. Select "Devices" tab and click "**Add**".
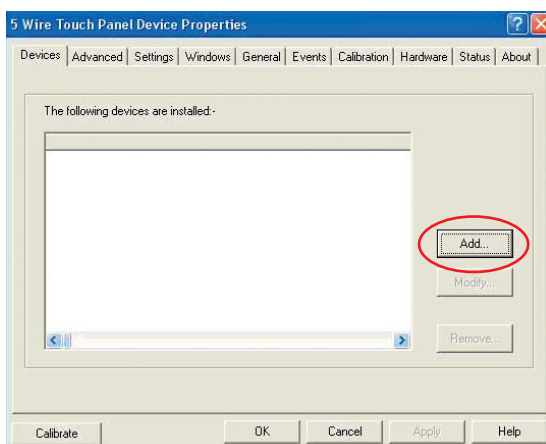
5. Select "**Gunze USB**" if using a USB cable to connect between the monitor and PC from the **New Pointer Device** menu. See Figure 1.
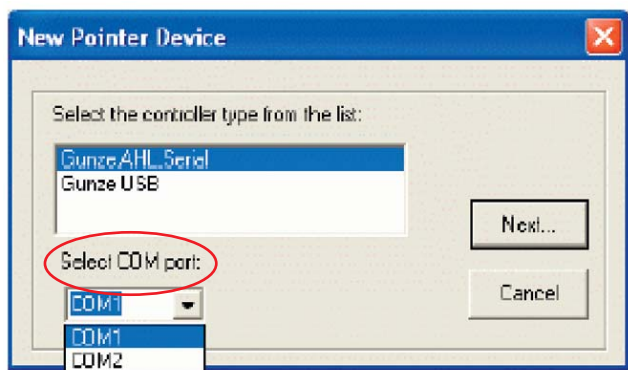
Figure 1

6. Select "**Gunze AHL Serial**" if using a serial RS-232 cable to connect between the monitor and PC from the **New Pointer Device** menu. See Figure 2.
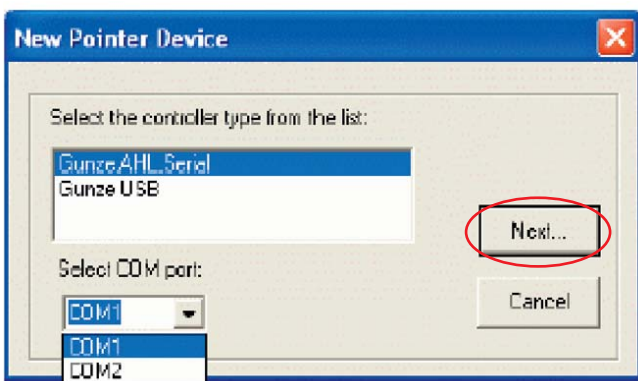
Figure 2

7. For RS-232 Serial connection an available "**COM port**" to connect to the touch panel. See Figure 3.

Figure 3

8. Then click "**Next**". See Figure 4.

Figure 4

9. The operation area of the touchscreen can be assigned by the "Logical desktop segment" function. Select your preference. Most common choice will be "Whole Desktop" or "Primary Monitor" if you have multiple monitors. See Figures 5 and 6 for USB and Serial selections.
10. Then click "**OK**".

Figure 5 - USB

Figure 6 - Serial

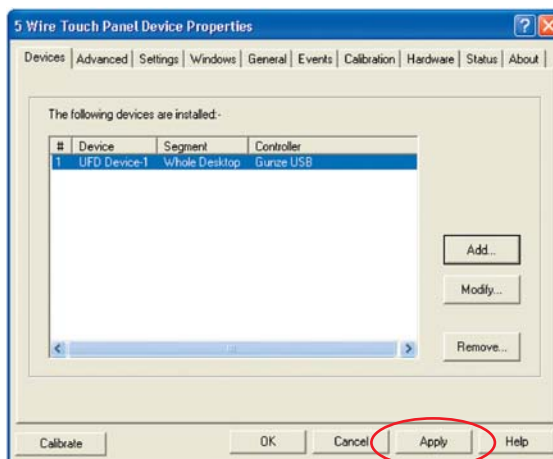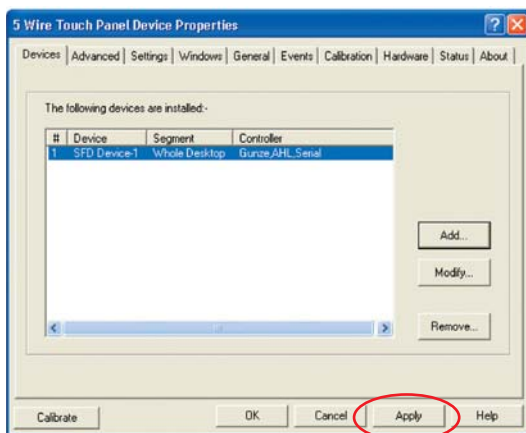11. Click "**Apply**". See Figures 7 and 8.

Figure 7 - USB

Figure 8 - Serial

12. The "**Apply**" button will now be grayed out. See Figures 9 and 10.
13. After clicking "Apply" connect your USB or RS-232 cable from your monitor to your PC.
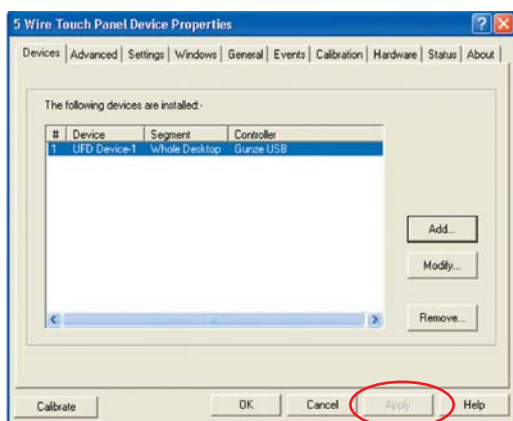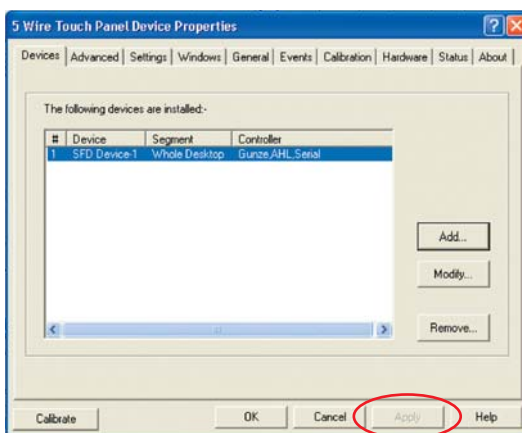
Figure 9 - USB

Figure 10 - Serial

14. Select the "**Calibration**" tab, and initiate the calibration process. See Figures 11 and 12.
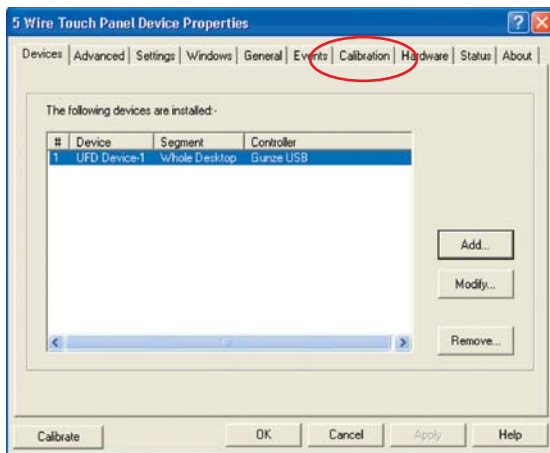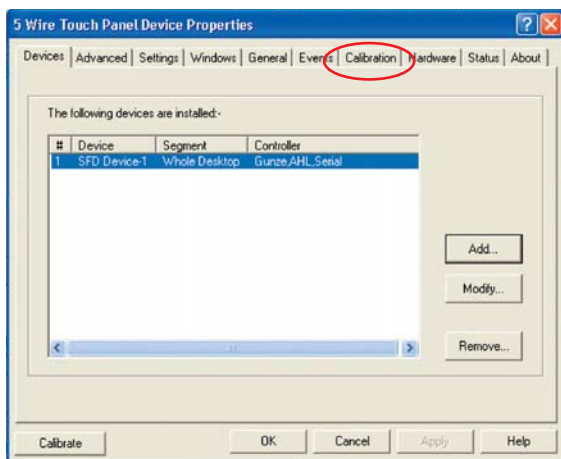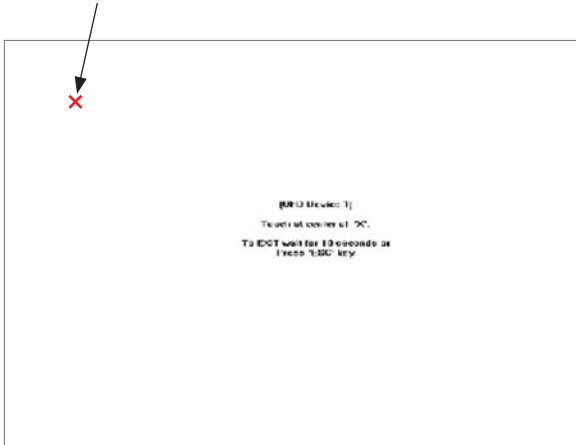
Figure 11 - USB

Figure 12 - Serial

15. Make contact with the "X" markings on the screen. Be sure your stylus or finger is centered on each "X" point. Follow the highlight "X" marking until calibration is complete. See Figure 13.

Figure 13 - Calibration Screen

Uninstall Instructions

1. Click "**Start**" in the Windows toolbar.
2. Select "**Gunze TPDD**" and select "**TPDD Uninstall**".
3. Follow instructions.
4. Alternate method of uninstall is to use Windows "Control Panel".
5. Select "**Add or Remove Programs**".
6. Select "**Gunze TPDD**" and click "**Change/Remove**".
7. Follow instructions.

Driver Installation for LA1500RTC: Capacitive Touch Screen with USB Connection

Touch driver information is located on the enclosed CD-ROM for the following operating systems: **Microsoft Windows® Vista, XP, Windows 2000, Windows NT 4.0, Windows Me, and Windows 9X.**

1. Be sure that the USB cable is not connected to the PC.
2. Open the CD-Rom.
3. Click the "LA1500RTC, LA1710RTC, LA1910RTC Win 9x, ME, NT, 2000, XP, Vista" link.
4. Click "I accept" when the software license screen appears.
5. Follow the step-by-step instructions
6. Reconnect the USB cable to the computer prior to use.
7. If the touch screen driver does not automatically load, restart the computer   operating system.

Please read "Readme.txt" located in the unzipped file folder for additional information and assistance.

Linux Driver Installation for LA1500RTC: Capacitive Touch Screen with USB Connection

Release 5.64sr1

Touch driver information is located on the enclosed CD-ROM. Supported platforms include: **Red Hat® Linus 8.0, Red Hat® Linux 9.0, and SuSE® Linux 8.2 and SuSE® Linux 9.0 on Pentium®-compatible CPUs. The following Xfree86 versions are supported: 4.0.3, 4.1.0, 4.2.0 and 4.3.0.**

1. Open the CD-Rom.
2. Click the "LA1500RTC, LA1710RTC, LA1910RTC Linux" link.
3. Click "I accept" when the software license screen appears.
4. Follow the step-by-step instructions
5. If the touch screen driver does not automatically load, restart the computer   operating system.

Please read "Readme.txt" located in the unzipped file folder for additional information and assistance.

Support and Service

Planar is a US company based in Beaverton, Oregon and Espoo, Finland with a worldwide sales distribution network.

Visit Planar at http://www.planar.com/support for product registration, operations manuals, line drawings, touch screen drivers, warranty information, online chat and access to Planar's Technical Library for online troubleshooting.

To speak with Planar Customer Support please have your model and serial number available and dial:

Planar Systems, Inc.

Customer Service
1195 NW Compton Drive
Beaverton, OR 97006-1992
Tel: 1-866-PLANAR1 (866-752-6271) or
      +1 503-748-5799 outside the United States
Hours: 24 hours a day, 7 days a week

Toll or long distance charges may apply.

Planar Systems, Inc.

Customer Service
24x7 Online Technical Support:
http://www.planar.com/support
1195 NW Compton Drive
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      +1 503-748-5799 outside the United States
Hours: 24 hours a day, 7 days a week

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