Touchmonitor User Guide

1729L 17" LCD Desktop Touchmonitor
(Optional Magnetic Stripe Reader, Customer Display, Barcode Scanner and Fingerprint Reader available)
Elo TouchSystems Touchmonitor
User Guide

17" LCD Desktop

1729L

Revision C

P/N E488297

Elo TouchSystems.

1-800-557-1458
www.elotouch.com
# Table of Contents

## Chapter 1
**Introduction** .................................................. 1
  - Product Description ................................................. 1
  - Detailed LCD Display Performance Requirements ................. 2
    - Customer Display .................................................. 3
    - USB Version ................................................... 3
    - Fingerprint Reader ............................................... 3
    - Magnetic Stripe Reader .......................................... 4
    - Speaker Bar ...................................................... 4
    - Barcode Scanner .................................................. 4
    - One-Dimensional scanner specifications .................... 4
    - Omni-Dimensional scanner specifications .................. 5
    - USB-SSI converter board specifications ................. 5
  - Six Port USB Hub ................................................... 5

## Chapter 2
**Installation and Setup** ............................................ 7
  - Unpacking Your Touchmonitor .................................... 7
  - Product Overview .................................................... 8
    - Main Unit ................................................................ 8
    - Rear View .................................................................. 8
    - Side View ................................................................ 9
    - Base Bottom View ..................................................... 9
    - Kensington™ Lock ..................................................... 10
  - USB Interference Connection .................................. 13
    - Remove the back cover ............................................. 13
    - Replace the cable cover .......................................... 19
  - Optimizing the LCD Display ..................................... 20
  - Installing the Peripheral Device Drivers ................... 20
    - Finger Print Reader .................................................. 20
    - Driver Installation .................................................. 20
    - Testing Applications .............................................. 20
    - Magnetic Stripe Reader .......................................... 21
    - Testing the USB MSR Keyboard Emulation .................. 21
    - Testing the USB-HID Class MSR .............................. 21
    - Convert MSR from HID to Keyboard emulation ............ 21
    - Convert MSR from Keyboard emulation to HID .......... 21
    - Barcode Scanner .................................................... 22
    - Driver Installation .................................................. 22
    - Testing Applications .............................................. 22

## Chapter 3
**Operation** ............................................................. 27
  - About Touchmonitor Adjustments .................................. 27
  - 17" LCD Function Key ................................................. 28
  - Controls and Adjustment .......................................... 29
    - OSD Lock/Unlock .................................................. 29
    - Power Lock/Unlock ................................................. 29
    - OSD Menu Functions ............................................... 29
    - OSD Control Options .............................................. 30
      - Brightness ....................................................... 30
      - Contrast .......................................................... 30
      - V-Position ....................................................... 30
      - H-Position ....................................................... 30
      - Recall Defaults .................................................. 30
      - Color Temperature ............................................. 30
      - Volume .......................................................... 30
      - Sharpness ........................................................ 30
      - Phase ............................................................. 30
      - Clock ............................................................. 30
      - OSD Position .................................................... 30
      - OSD Timeout ..................................................... 30
      - Auto Adjust ....................................................... 30
      - Language ........................................................ 30
      - Information ....................................................... 30
    - Power-Save (No Input) ............................................ 31
      - Power LED Display & Power Saving ......................... 31
      - General Power Saving Mode ................................... 31
    - Display Angle ....................................................... 31

## Chapter 4
**Troubleshooting** .................................................. 33
  - Solutions to Common Problems ................................... 34

## Appendix A
**Native Resolution** ............................................... 35
CHAPTER 1

INTRODUCTION

Product Description

The 1729L consists of a 17.0” LCD main display with a touchscreen and the following optional peripherals: customer display, vacuum fluorescent display (VFD), fingerprint reader, barcode scanner, magnetic stripe reader (MSR), speaker bar and a 6 port USB (USB version only) Hub. The main display element is a 17.0 inch diagonal SXGA resolution (1280 x 1024) LCD display. Three types of touchscreens can be selected in the 1729L as options. They are AccuTouch, IntelliTouch, CarrollTouch, Surface Capacitive and Acoustic Pulse Recognition. The 1729L also features an unique stand featuring spring loaded movement and a dual hinge.
## Detailed LCD Display Performance Requirements

**17 inch TFT LCD Display Panel**

<table>
<thead>
<tr>
<th>Display Format</th>
<th>1280 x 1024</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display area 17”</td>
<td>337.92mm(H) x 270.336mm(V)</td>
</tr>
<tr>
<td>Pixel Pitch 17”</td>
<td>0.264mm(H) x 0.264mm(V)</td>
</tr>
<tr>
<td>Contrast Ratio</td>
<td>800:1 typical</td>
</tr>
</tbody>
</table>

**Brightness**

<table>
<thead>
<tr>
<th>Touchscreen Type</th>
<th>Brightness (Typical)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Touchscreen</td>
<td>300 cd/m²</td>
</tr>
<tr>
<td>AccuTouch</td>
<td>240 cd/m²</td>
</tr>
<tr>
<td>IntelliTouch</td>
<td>270 cd/m²</td>
</tr>
<tr>
<td>CarrollTouch</td>
<td>270 cd/m²</td>
</tr>
<tr>
<td>Surface Capacitive</td>
<td>249 cd/m²</td>
</tr>
<tr>
<td>Acoustic Pulse Recognition</td>
<td>270 cd/m²</td>
</tr>
</tbody>
</table>

**Response Time**

- Tr=3.5 msec
- Tf=3.7 msec typical

**Display Color**

16.7 million colors

**Vertical Viewing Angle**

Typical Vertical Viewing Angle: 80deg(looking down)/80 deg(looking up) @ CR>=10

**Horizontal Viewing Angle**

Typical Vertical Viewing Angle: 80deg(looking left)/80 deg(looking right) @ CR>=10
Customer Display

The Customer Display is a twenty character two line vacuum fluorescent display (VFD). It consists of a VFD and VFD controller.

USB Version

**Optional Parameters**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characters per row</td>
<td>20</td>
</tr>
<tr>
<td>Number of rows</td>
<td>2</td>
</tr>
<tr>
<td>Character configuration</td>
<td>5x7 dot matrix</td>
</tr>
<tr>
<td>Character Height</td>
<td>9.5mm</td>
</tr>
<tr>
<td>Character width</td>
<td>6.2mm</td>
</tr>
<tr>
<td>Character configuration</td>
<td>ASCII</td>
</tr>
<tr>
<td>Character color</td>
<td>Blue green</td>
</tr>
<tr>
<td>MTBF</td>
<td>300,000 hours</td>
</tr>
</tbody>
</table>

Fingerprint Reader

The fingerprint reader will be ELO part number E728123 (DigitalPersona U.are.U 4000B). The fingerprint reader is powered by the USB bus. The reader optically scans the fingerprint when the user touches the glowing window. Optical technology gives the highest quality fingerprint scans and reliability.

Table of Partial Fingerprint Reader Specifications:

<table>
<thead>
<tr>
<th>Fingerprint Reader</th>
<th>DigitalPersona U.are.U 4000B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Supply</td>
<td>5.0Vdc +/- 0.25V</td>
</tr>
<tr>
<td>Current Draw – scanning mode</td>
<td>190 mA (typical)</td>
</tr>
<tr>
<td>Current Draw – idle mode</td>
<td>140 mA (typical)</td>
</tr>
<tr>
<td>Current Draw – suspend mode</td>
<td>1.5 mA (typical)</td>
</tr>
<tr>
<td>Image Resolution</td>
<td>512 dpi</td>
</tr>
<tr>
<td>Image Color</td>
<td>8-bit gray level</td>
</tr>
<tr>
<td>Scan capture size</td>
<td>14.6mm (nominal width) x 18.1mm (nominal length)</td>
</tr>
<tr>
<td>Image capture speed</td>
<td>100 ms</td>
</tr>
<tr>
<td>USB type</td>
<td>1.0, 1.1, or 2.0</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0°C to 40°C</td>
</tr>
<tr>
<td>ESD (Electrostatic Discharge)</td>
<td>up to 15kV mounted in case</td>
</tr>
</tbody>
</table>
Magnetic Stripe Reader

The MSR is a USB 1.1 device which reads all three data stripes on standard credit cards or driver’s licenses conforming to ISO/ANSI standards. The MSR will have foreign language capability. The credit card is read by sliding the credit card through the MSR, stripe side toward the display, forward or backward. The MSR is powered from the USB port; no external power is needed. Here are its specifications:

- ELO part number: E579977
- Power source: from USB port
- Message format: ASCII
- Card speed: 3 to 50 IPS
- Electronics MTBF: 125,000 hours
- Mechanical MTBF: 1,000,000 passes
- Operating current: 30 mA maximum
- Non-operating current: 300 µA maximum

Speaker Bar

The speaker bar will contain two speakers and an audio amplifier. The speakers in the speaker bar will provide improved sound quality and higher volumes over the internal speakers. The circuitry will be designed such that when the speaker bar is connected to the POST, the 2 internal speakers will be disconnected.

The optional speaker bar may also come with two optional USB barcode scanners (1-D or omni-directional). The barcode scanner is only an option if the speaker bar is present. When a scanner is chosen, a USB-SSI (Simple Serial Interface) converter board is included. Both barcode scanners are powered with the USB interface.

1. One-Dimensional scanner specifications:
   a. Ability to generate 1-D scanning pattern
   b. Low cost solution
   c. USB powered
   d. Easy communication between host and scanner
   e. Visible laser diode operating at 650nm
   f. 100+ scans/sec
   g. RoHS-compliant
2. Omni-Directional scanner (Elo P/N E787026) specifications.
   a. Ability to generate omni-directional scanning pattern
   b. Maximum performance
   c. 2-D scanning ability (PDF417, MicroPDF)
   d. USB powered
   e. Easy communication between host and scanner
   f. Visible laser diode operating at 650nm
   g. 600+ scans/sec
   h. RoHS-compliant

3. USB-SSI converter board (Elo P/N E580321) specifications
   a. Ability to convert from serial interface to USB interface and vice versa.
   b. Compact size
   c. Input Voltage: 5V
   d. Buzzer

Six Port USB Hub
The Hub provides 4 internal USB ports that can be shared between the MSR, the fingerprint reader, the barcode scanner, the touchscreen, and the customer display. The hub also supplies two USB ports to the outside of the back of the 1729L for external use. The hub is only used by the USB version of the 1729L. The hub meets the following specifications:

1) Full compliance with USB specification 1.0, 1.1 and HID Class Definition Rev 1.0.
2) Shall be self powered
3) Should provide 2 external and 4 internal downstream ports with individual port over current detection, protection and recovery.
4) Support both Open Host Controller Interface (OHCI) and Universal Host Controller Interface (UHCI).
5) Support Suspend and Resume operation.
6) Support bus fault detection and recovery.

External Power Supply
The 1729L shall be powered by a universal AC power source or 12 VDC from external power source. The power supply shall provide the following capability:
1) AC power: Input voltage 90 to 264 vac
2) Input frequency 47 to 63hz
3) DC power: Input voltage 12 vdc
4) Input line and load regulation +/-5%
CHAPTER 2

INSTALLATION AND SETUP

This chapter discusses how to install your LCD touchmonitor and how to install Elo TouchSystems driver software.

Unpacking Your Touchmonitor

Check that the following items are present and in good condition:

- Touchmonitor
- USB Cable
- European power cable
- Power cable US/Canadian
- Video cable
- DVI cable
- Speaker
- CD and Quick Install Guide
Product Overview

Main Unit

Note: Shown with optional peripherals

Rear View
The Kensington™ lock is a security device that prevents theft. To find out more about this security device, go to http://www.kensington.com.
USB Interface Connection

Your touchmonitor comes with only one touchscreen connector cables: **USB** cable. (For Windows 2000, Me and XP systems only.)

To set up the display, please refer to the following figures and procedures:

**Remove the Cable Cover**

The cables are connected at the back of the monitor.

To remove the cover, grasp the lip of the cover and pull towards you until it snaps.
CAUTION  Before connecting the cables to your touchmonitor and PC, be sure that the computer and touchmonitor are turned off.

NOTE  Before connecting the cables to the touchmonitor, route all the cables through the hole in the second as shown in the picture above.
Connect one end of the **power cord** to the monitor and the other end to wall.
Connect the power cable to the power port in the monitor.
Connect one end of the **video cable** to the rear side of computer and the other to the LCD. Tighten by turning the two thumb screws clockwise to ensure proper grounding. You can select DVI video cable or D-SUB15 video cable.
Connect one end of the **speaker cable** to the speaker port in the computer and the other end to the port in the monitor.
Connect one end of the **USB cable** to the rear side of the computer and the other to the LCD monitor.
The USB cable is for optional touch, MSR, CD and Finger Print Reader. Only one USB cable is needed because the device contains a self powered USB 1.1 Hub. Two self powered ports are available for running other USB devices. For touch only, no USB Hub is present.
Replace the Cable Cover

Then you have attached all the cables to the monitor, gently bring all the cables toward the standard so they fit under the cover lip.
Snap the Cable cover in place over the connections.
Optimizing the LCD Display

To ensure the LCD display works well with your computer, configure the display mode of your graphic card to make it less than or equal to 1280 x 1024 resolution, and make sure the timing of the display mode is compatible with the LCD display. Refer to Appendix A for more information about resolution. Compatible video modes for your touchmonitor are listed in Appendix C.

Installing the Peripheral Device Drivers

Finger Print Reader

Driver Installation:

1. Insert your Elo TouchTools CD
2. On the CD, browse to Touch Monitor Peripherals\Fingerprint Reader\Fingerprint Reader 1729 17A2\Drivers
3. Once in this folder, click on the executable file named Setup and follow the necessary prompts to complete the driver installation.

Test Applications:

1. Insert your Elo TouchTools CD
2. On the CD, browse to Touch Monitor Peripherals\Fingerprint Reader\Fingerprint Reader 1729 17A2\Test Applications
3. Open up the application named dpFTConnect
4. To test basic functionality, place a finger on the fingerprint reader and you will see an image of the fingerprint appear in the program window.
Magnetic Stripe Reader

No device are needed.

**Testing the USB MSR Keyboard Emulation**
1. Plug in the device.
2. Open MS Word.
3. Slide the card through the MSR to view the data.

**Testing the USB-HID Class MSR**
1. On the CD, browse to Touch Monitor Peripherals\Magnetic Stripe Card Reader (MSR)\Demo.
2. Open the Readme.txt and follow instructions to test the unit.

**Converting MSR from HID to Keyboard Emulation**
1. On the CD, browse to Touch Monitor Peripherals\Magnetic Stripe Card Reader (MSR)\HID to KB Converter.
2. Open up the program named MSR Change Mode
3. The dim box will indicate the current setting. Click on Keyboard Mode to switch to Keyboard Emulation mode.
4. Click Quit to close the window.

**Converting MSR from Keyboard Emulation to HID**
1. On the CD, browse to Touch Monitor Peripherals\Magnetic Stripe Card Reader (MSR)\HID to KB Converter.
2. Open up the program named MSR Change Mode
3. The dim box will indicate the current setting. Click on HID Mode to switch to HID mode.
4. Click Quit to close the window.
Barcode Scanner

Driver Installation:

1. Insert your Elo TouchTools CD.
2. On the CD, browse to Touch Monitor Peripherals\Barcode Scanner Startup\Drivers.
3. Double-click on USB7210.msi and follow the prompts given by the setup file.
4. Once you have finished installing the above: Right click on My Computer and click on Properties. Click on the Hardware tab and then click Device Manager.
5. Double click on USB7210 Converter Module, which should be located in the Other Devices section. Next click on Reinstall Driver.
6. Now your Windows operating system should guide you through the rest of the installation process. If any files are requested, please provide the following pathname in your Elo TouchTools CD: Touch Monitor Peripherals\Barcode Scanner Startup\Drivers.

Test Applications:

1. Insert your Elo TouchTools CD.
2. On the CD, browse to Touch Monitor Peripherals\Barcode Scanner Startup\Test Applications.
3. Double click on Scanner Test Application Readme. This document will explain how to test your scanner for basic functionality.

Hall Effect Switch:

The scanner module also adds a Hall Effect Switch (HE Switch) that enables the unit to automatically set the Trigger mode of the Scan Engine depending on the location of an external magnet (included in scanner cradle).

The output of the HE Switch switches low (turns ON) when a magnetic field (south polarity) perpendicular to the Hall sensor exceeds the operate point threshold, BOP (typically 100 G magnetic field). When the magnetic field is reduced below the release point, BRP, (typically 45 G magnetic field) the HE Switch output goes high (turns OFF). The Hall Effect Switch goes to the USB Controller’s DSR input. As the HE Switch opens or closes, it causes the USB Controller to initiate a USB Interrupt message to the host. When the Host Application software detects the DSR input active LOW via the USB Interrupt and a CDC message (HE Switch is ON), it sends a ‘Continuous Trigger’ SSI command.
The Scan Engine turns on the laser and is able to scan and decode barcodes continuously without the user having to press the trigger (momentary switch). When the Host Application software detects the DSR input HIGH (HE Switch is OFF), it sends a ‘LevelTrigger’ SSI command to the Symbol Scan Engine. The Scan Engine turns off the laser and will scan and decode barcodes only when the trigger is activated.

**Enable 2-D Scanning:**

Your scanner default settings do not enable 2-D barcode reading ability. In order to enable this option, follow these steps:

1) Scan the barcodes below to enable PDF417 and MicroPDF417. These are both types of 2-D barcodes.

![Enable PDF417](image1)

![Enable MicroPDF417](image2)

2) Now scan the barcode below to change your scanning pattern. Using this scanning pattern will allow you to read 2-D barcodes (you can still read 1-D barcodes also).

![Always Raster](image3)

*Note: These barcodes (higher resolution) can also be found in the integration guide for the barcode scanner, which is located in the TouchTools CD.*
Customer Display

Driver Installation:

1. Insert your Elo TouchTools CD.
2. On the CD, browse to Touch Monitor Peripherals\Rear Facing Customer Display\Drivers\USB Drivers. Click on the folder that has the name of your operating system for the necessary drivers.
3. Once in this folder, open up the zip file and open the install text file for further driver installation instructions.

* Note: If your software requires OPOS Drivers, it is available in the following location: Touch Monitor Peripherals\Rear Facing Customer Display\Drivers\OPOS Drivers.

Test Applications:

1. Insert your Elo TouchTools CD.
2. On the CD, browse to Touch Monitor Peripherals\Rear Facing Customer Display\Testing\USB.
3. Open up the text file named USB Test and follow the instructions. This testing procedure assumes you have already installed the necessary USB drivers.
Installing the Touch Driver Software

Elo TouchSystems provides driver software that allows your touchmonitor to work with your computer. Drivers are located on the enclosed CD-ROM for the following operating systems:

- Windows XP
- Windows 2000
- Windows Me
- Windows 98
- Windows 95
- Windows NT 4.0
- CE 2.x, 3.0, 4x
- Windows XP Embedded
- Windows 3.x
- MS DOS
- OS/2

Additional drivers and driver information for other operating systems (including Macintosh and Linux) are available on the Elo TouchSystems web site at www.elotouch.com.

Your Elo USB touchmonitor is plug-and-play compliant. Information on the video capabilities of your touchmonitor is sent to your video display adapter when Windows starts. If Windows detects your touchmonitor, follow the instructions on the screen to install a generic plug-and-play monitor.

Refer to the appropriate following section for driver installation instructions.
Installing the USB Touch Driver

Installing the USB Touch Driver for Windows XP, Windows 2000, Me and 98

1 Insert the Elo CD-ROM in your computer’s CD-ROM drive.
   If Windows XP, Windows 2000, Windows 98, or Windows Me starts the Add New Hardware Wizard:

2 Choose Next. Select “Search for the best driver for your device (Recommended)” and choose Next.

3 When a list of search locations is displayed, place a checkmark on “Specify a location” and use Browse to select the \EloUSB directory on the Elo CD-ROM.

4 Choose Next. Once the Elo TouchSystems USB touchscreen driver has been detected, choose Next again.

5 You will see several files being copied. Insert your Windows 98 CD if prompted. Choose Finish.

If Windows XP, Windows 2000, Windows 98, or Windows Me does not start the Add New Hardware Wizard:

NOTE: For Windows XP and Windows 2000 you must have administrator access rights to install the driver.

1 Insert the Elo CD-ROM in your computer’s CD-ROM drive. If the AutoStart feature for your CD-ROM drive is active, the system automatically detects the CD and starts the setup program.

2 Follow the directions on the screen to complete the driver setup for your version of Windows. If the AutoStart feature is not active:
   1 Click Start > Run.
   2 Click the Browse button to locate the EloCd.exe program on the CD-ROM.
   3 Click Open, then OK to run EloCd.exe.
   4 Follow the directions on the screen to complete the driver setup for your version of Windows.
About Touchmonitor Adjustments

Your touchmonitor will unlikely require adjustment. Variations in video output and application may require adjustments to your touchmonitor to optimize the quality of the display.

For best performance, your touchmonitor should be operating in native resolution, that is 1280 x 1024 at 60-75 Hz. Use the Display control panel in Windows to choose 1280 x 1024 resolution.

Operating in other resolutions will degrade video performance. For further information, please refer to Appendix A.

All adjustments you make to the controls are automatically memorized. This feature saves you from having to reset your choices every time you unplug or power your touchmonitor off and on. If there is a power failure your touchmonitor settings will not default to the factory specifications.

To restore factory set up, choose it from the OSD.
### 17” LCD Function Key

<table>
<thead>
<tr>
<th>Controls</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Power Switch</td>
<td>Turns the display system power on or off.</td>
</tr>
<tr>
<td>2 Select</td>
<td>Displays the OSD menus on the screen and used to select (“Clockwise” and “Counter-clockwise” direction) the OSD control options on the screen.</td>
</tr>
<tr>
<td>3 ▼</td>
<td>Adjusts the decreasing value of the selected OSD control option.</td>
</tr>
<tr>
<td>4 ▲</td>
<td>Adjusts the increasing value of the selected OSD control option.</td>
</tr>
<tr>
<td>5 Menu</td>
<td>Menu display and menu exit.</td>
</tr>
</tbody>
</table>
Controls and Adjustment

**OSD Lock/Unlock**

You are able to lock and unlock the OSD feature. The monitor is shipped in the unlocked position.

To lock the OSD:

1. Press the Menu button and ▲ button simultaneously for 2 seconds. A window will appear displaying “OSD Unlock”. Continue to hold the buttons down for another 2 seconds and the window toggles to “OSD Lock”.

**Power Lock/Unlock**

You are able to lock/unlock the Power feature. The monitor is shipped in the unlocked position. To lock the power:

1. Press the Menu button and the ▼ simultaneously for 2 seconds. A window for another 2 seconds and the window toggles to —Power Lock—.

**OSD Menu Functions**

To display the OSD Menu press the Menu button.

1. Press the ▲ button or ▼ button to select the different OSD control option.
2. When the function you want to change is displayed, press the Select button.

To adjust the Value of the function:

1. Pressing the ▲ button increases the value of the selected OSD control option.
2. Pressing the ▼ button decreases the value of the selected OSD control option.

After adjusting the values, the monitor will automatically save the changes.

**NOTE:** The OSD screen will disappear if no input activities are detected for 45 seconds.
OSD Control Options

Brightness
• Background Luminance of the LCD panel is adjusted.

Contrast
• Adjusts the contrast or the values of color gain (RED, GREEN or BLUE).

V-Position
• Moves the screen up or down.

H-Position
• Moves the screen left or right.

Recall Defaults
• All data copy from factory shipment data.

Color Temperature
• Press ▲ or ▼ to select 9300, 6500, 5500, 7500 and user. Only when selecting user
you can make adjustments to the R/G/B content.

Volume
• To increase or decrease the sound level.

Sharpness
• The sharpness can be adjustable.

Phase
• Adjusts the phase of the dot clock.

Clock
• Adjusts the ratio of dividing frequency of the dot clock.

OSD Position
• Allows the OSD indication position to be selected.

OSD Timeout
• Adjust time for OSD to disappear.

Auto Adjust
• Clock system auto adjustment (under 5 seconds).

Language
• Select the language used for the OSD menu from among English, France, Deutsch,
Spanish and Japanese.

Input Select
• Selection of the input signal: DSUB analog or DVI digital.
Power-Save (No Input)

- The LCD panel background is cut when there is no signal input (AC line power consumption of 4w or less).

Power LED Display & Power Saving

General Power Saving Mode

When the power switch are switch on, this LED lights in green. The LED indicates the different power status with altered LED colors when monitor operates in different modes (see following table).

<table>
<thead>
<tr>
<th>Mode</th>
<th>Power Consumption</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>On</td>
<td>45w max.</td>
<td>Green</td>
</tr>
<tr>
<td>Sleep</td>
<td>4w max.</td>
<td>Orange</td>
</tr>
<tr>
<td>Off</td>
<td>2w</td>
<td>NO</td>
</tr>
</tbody>
</table>

Tested with the USB cable unplugged.
We recommend switching the monitor off when it is not in use for a long period of time.

Display Angle

For viewing clarity, you can tilt the LCD forward up 67 to 90 degrees.
CAUTION

In order to protect the LCD, be sure to hold the base when adjusting the LCD, and take care not to touch the screen.
If you are experiencing trouble with your touchmonitor, refer to the following table. If the problem persists, please contact your local dealer or our service center. Elo Technical Support numbers are listed on the last page of this manual.

## Solutions to Common Problems

<table>
<thead>
<tr>
<th>Problem</th>
<th>Suggestion(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The monitor does not respond after you turn on the system.</td>
<td>Check that the monitor’s Power Switch is on. Turn off the power and check the monitor’s power cord and signal cable for proper connection.</td>
</tr>
<tr>
<td>Characters on the screen are dim</td>
<td>Refer to the <em>Controls and Adjustments</em> section to adjust the brightness.</td>
</tr>
<tr>
<td>The screen is blank</td>
<td>During operation, the monitor screen may automatically turn off as a result of the Power Saving feature. Press any key to see if the screen reappears. Refer to the <em>Controls and Adjustments</em> section to adjust the brightness.</td>
</tr>
<tr>
<td>OSD or power buttons don’t work</td>
<td>Check to see that they are not locked out. See page 3-33.</td>
</tr>
<tr>
<td>“Out of Range” display</td>
<td>Check to see if the resolution or vertical frequency of your computer is higher than that of the LCD display.</td>
</tr>
</tbody>
</table>
The native resolution of a monitor is the resolution level at which the LCD panel is designed to perform best. For the Elo LCD touchmonitor, the native resolution is 1280 x 1024 for the SXGA-17 inch size. In almost all cases, screen images look best when viewed at their native resolution. You can lower the resolution setting of a monitor but not increase it.

<table>
<thead>
<tr>
<th>Input Video</th>
<th>17&quot; LCD</th>
</tr>
</thead>
<tbody>
<tr>
<td>640 x 480 (VGA)</td>
<td>Transforms input format to 1280 x 1024</td>
</tr>
<tr>
<td>800 x 600 (SVGA)</td>
<td>Transforms input format to 1280 x 1024</td>
</tr>
<tr>
<td>1024 x 768 (XGA)</td>
<td>Transforms input format to 1280 x 1024</td>
</tr>
<tr>
<td>1280 x 1024 (SXGA)</td>
<td>Displays in Native Resolution</td>
</tr>
</tbody>
</table>

The native resolution of an LCD is the actual number of pixels horizontally in the LCD by the number of pixels vertically in the LCD. LCD resolution is usually represented by the following symbols:

<table>
<thead>
<tr>
<th>VGA</th>
<th>640 x 480</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVGA</td>
<td>800 x 600</td>
</tr>
<tr>
<td>XGA</td>
<td>1024 x 768</td>
</tr>
<tr>
<td>SXGA</td>
<td>1280 x 1024</td>
</tr>
<tr>
<td>UXGA</td>
<td>1600 x 1200</td>
</tr>
</tbody>
</table>
As an example, a SVGA resolution LCD panel has 800 pixels horizontally by 600 pixels vertically. Input video is also represented by the same terms. XGA input video has a format of 1024 pixels horizontally by 768 pixels vertically. When the input pixels contained in the video input format match the native resolution of the panel, there is a one to one correspondence of mapping of input video pixels to LCD pixels. As an example, the pixel in column 45 and row 26 of the input video is in column 45 and row 26 of the LCD. For the case when the input video is at a lower resolution than the native resolution of the LCD, the direct correspondence between the video pixels and the LCD pixels is lost. The LCD controller can compute the correspondence between video pixels and LCD pixels using algorithms contained on its controller. The accuracy of the algorithms determines the fidelity of conversion of video pixels to LCD pixels. Poor fidelity conversion can result in artifacts in the LCD displayed image such as varying width characters.
This manual contains information that is important for the proper setup and maintenance of your touchmonitor. Before setting up and powering on your new touchmonitor, read through this manual, especially Chapter 2 (Installation), and Chapter 3 (Operation).

1. To reduce the risk of electric shock, follow all safety notices and never open the touchmonitor case.

2. Turn off the product before cleaning.

3. Your new touchmonitor is equipped with a 3-wire, grounding power cord. The power cord plug will only fit into a grounded outlet. Do not attempt to fit the plug into an outlet that has not been configured for this purpose. Do not use a damaged power cord. Use only the power cord that comes with your Elo TouchSystems Touchmonitor. Use of an unauthorized power cord may invalidate your warranty.

4. The slots located on the sides and top of the touchmonitor case are for ventilation. Do not block or insert anything inside the ventilation slots.

5. It is important that your touchmonitor remains dry. Do not pour liquid into or onto your touchmonitor. If your touchmonitor becomes wet do not attempt to repair it yourself.
Care and Handling of Your Touchmonitor

The following tips will help keep your Elo touchmonitor functioning at the optimal level.

• To avoid risk of electric shock, do not disassemble the brick supply or display unit cabinet. The unit is not user serviceable. Remember to unplug the display unit from the power outlet before cleaning.
• Do not use alcohol (methyl, ethyl or isopropyl) or any strong dissolvent. Do not use thinner or benzene, abrasive cleaners or compressed air.
• To clean the display unit cabinet, use a cloth lightly dampened with a mild detergent.
• Avoid getting liquids inside your touchmonitor. If liquid does get inside, have a qualified service technician check it before you power it on again.
• Do not wipe the screen with a cloth or sponge that could scratch the surface.
• To clean the touchscreen, use window or glass cleaner. Put the cleaner on the rag and wipe the touchscreen. *Never* apply the cleaner directly on the touchscreen.

**Warning**

This product consists of devices that may contain mercury, which must be recycled or disposed of in accordance with local, state, or federal laws. (Within this system, the backlight lamps in the monitor display contain mercury.)

**Waste Electrical and Electronic Equipment (WEEE) Directive**

In the European Union, this label indicates that this product should not be disposed of with household waste. It should be deposited at an appropriate facility to enable recovery and recycling.
## Technical Specifications

### Display Modes

Your Elo touchmonitor is compatible with the following standard video modes:

<table>
<thead>
<tr>
<th>Item</th>
<th>Resolution</th>
<th>Type</th>
<th>H. Scan(KHz)</th>
<th>V. Scan(Hz)</th>
<th>Pol.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>640 x 350</td>
<td>VGA 70Hz</td>
<td>31.47</td>
<td>28.322</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>720 x 400</td>
<td>VGA 70Hz</td>
<td>31.47</td>
<td>28.322</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>640 x 480</td>
<td>VGA 60Hz</td>
<td>31.47</td>
<td>25.175</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>640 x 480</td>
<td>MAC 66Hz</td>
<td>35</td>
<td>32.24</td>
<td>+/-</td>
</tr>
<tr>
<td>5</td>
<td>640 x 480</td>
<td>VESA 72Hz</td>
<td>37.86</td>
<td>31.5</td>
<td>+/-</td>
</tr>
<tr>
<td>6</td>
<td>640 x 480</td>
<td>VESA 75Hz</td>
<td>37.5</td>
<td>31.5</td>
<td>+/-</td>
</tr>
<tr>
<td>7</td>
<td>800 x 600</td>
<td>VESA 56Hz</td>
<td>35.16</td>
<td>36</td>
<td>+/-</td>
</tr>
<tr>
<td>8</td>
<td>800 x 600</td>
<td>VESA 60Hz</td>
<td>37.88</td>
<td>40</td>
<td>+/-</td>
</tr>
<tr>
<td>9</td>
<td>800 x 600</td>
<td>VESA 75Hz</td>
<td>46.88</td>
<td>49.5</td>
<td>+/-</td>
</tr>
<tr>
<td>10</td>
<td>800 x 600</td>
<td>VESA 72Hz</td>
<td>48.08</td>
<td>50</td>
<td>+/-</td>
</tr>
<tr>
<td>11</td>
<td>832 x 624</td>
<td>MAC 75Hz</td>
<td>49.72</td>
<td>57.283</td>
<td>+/-</td>
</tr>
<tr>
<td>12</td>
<td>1024 x 768</td>
<td>VESA 60Hz</td>
<td>48.38</td>
<td>65</td>
<td>+/-</td>
</tr>
<tr>
<td>13</td>
<td>1024 x 768</td>
<td>SUN 65Hz</td>
<td>52.45</td>
<td>70.49</td>
<td>+/-</td>
</tr>
<tr>
<td>14</td>
<td>1024 x 768</td>
<td>VESA 70Hz</td>
<td>56.48</td>
<td>75</td>
<td>+/-</td>
</tr>
<tr>
<td>15</td>
<td>1024 x 768</td>
<td>VESA 75Hz</td>
<td>60.02</td>
<td>78.75</td>
<td>+/-</td>
</tr>
<tr>
<td>16</td>
<td>1280 x 1024</td>
<td>SXGA 60Hz</td>
<td>64</td>
<td>108</td>
<td>+/-</td>
</tr>
<tr>
<td>17</td>
<td>1280 x 1024</td>
<td>SXGA 75Hz</td>
<td>80</td>
<td>135</td>
<td>+/-</td>
</tr>
<tr>
<td>18</td>
<td>1152 x 864</td>
<td>SXGA 75Hz</td>
<td>67.5</td>
<td>108</td>
<td>+/-</td>
</tr>
<tr>
<td>19</td>
<td>1280 x 960</td>
<td>SXGA 60Hz</td>
<td>60</td>
<td>108</td>
<td>+/-</td>
</tr>
</tbody>
</table>
## Touchmonitor Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>1729L</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCD Display</td>
<td>17.0” TFT Active Matrix Panel</td>
</tr>
<tr>
<td>Display Size</td>
<td>337.92(H) x 270.336(V) mm</td>
</tr>
<tr>
<td>Pixel Pitch</td>
<td>0.264(H) x 0.2647(V) mm</td>
</tr>
<tr>
<td>Display Mode</td>
<td>VGA 640 x 350 (70 Hz)</td>
</tr>
<tr>
<td></td>
<td>VGA 720 x 400 (70 Hz)</td>
</tr>
<tr>
<td></td>
<td>VGA 640 x 480 (60 / 72 / 75 Hz)</td>
</tr>
<tr>
<td></td>
<td>SVG 800 x 600 (56 / 60 / 72 / 75Hz)</td>
</tr>
<tr>
<td></td>
<td>XGA 1024 x 768 (60 / 70 / 75Hz)</td>
</tr>
<tr>
<td></td>
<td>SXGA 1280 x 1024 (60 / 70 / 75Hz)</td>
</tr>
<tr>
<td>Native</td>
<td>XGA 1024 x 768</td>
</tr>
<tr>
<td>Contrast Ratio</td>
<td>800 : 1 (typical)</td>
</tr>
<tr>
<td>Brightness</td>
<td>No Touchscreen 300 cd/m² (Typical)</td>
</tr>
<tr>
<td></td>
<td>AccuTouch 240 cd/m² (Typical)</td>
</tr>
<tr>
<td></td>
<td>IntelliTouch 270 cd/m² (Typical)</td>
</tr>
<tr>
<td></td>
<td>CarrollTouch 270 cd/m² (Typical)</td>
</tr>
<tr>
<td></td>
<td>Surface Capacitive 249 cd/m² (Typical)</td>
</tr>
<tr>
<td></td>
<td>Acoustic Pulse Recognition 270 cd/m² ( Typical)</td>
</tr>
<tr>
<td>Response Time</td>
<td>Tr= 3.5 msec, Tf= 3.7 msec typical</td>
</tr>
<tr>
<td>Display Color</td>
<td>16.7 million color</td>
</tr>
<tr>
<td>Viewing Angle</td>
<td>(L/R)= -80°/+80° (typical), (U/D) -80°/+80° (typical)</td>
</tr>
<tr>
<td>Input Signal</td>
<td>VGA Analog Video R.G.B. Analog 0.7V peak to peak</td>
</tr>
<tr>
<td></td>
<td>Sync TTL Positive or Negative, Composite Sync, Sync on green</td>
</tr>
<tr>
<td></td>
<td>DVI Video Digital TMDS Input</td>
</tr>
<tr>
<td>Signal Connector</td>
<td>15 Pin D-Sub, DVI-D(optional)</td>
</tr>
<tr>
<td>Front Control</td>
<td>Power on / off , Menu, ▲ , ◀ , Select</td>
</tr>
<tr>
<td>OSD</td>
<td>Brightness, Contrast, H/V-Position, Recall default,</td>
</tr>
<tr>
<td></td>
<td>Color Temperature, Volume, Sharpness, Phase, Clock,</td>
</tr>
<tr>
<td></td>
<td>OSD position, OSD Timeout, Auto Adjust,</td>
</tr>
<tr>
<td></td>
<td>Language, Information</td>
</tr>
<tr>
<td>Plug &amp; Play</td>
<td>DDC1 / 2B</td>
</tr>
<tr>
<td>Touch Panel (optional)</td>
<td>AccuTouch, IntelliTouch and CarrollTouch, Surface Capacitive,</td>
</tr>
<tr>
<td></td>
<td>Acoustic Pulse Recognition</td>
</tr>
<tr>
<td>Power</td>
<td>Input: AC 90-264V, 47-63Hz, or DC 12V/5A (max.)</td>
</tr>
<tr>
<td>Operating Conditions</td>
<td>Temp 0°C ~ 40°C (32°F ~ 104°F)</td>
</tr>
<tr>
<td></td>
<td>Humidity 20% ~ 80% (No Condensation)</td>
</tr>
<tr>
<td></td>
<td>Altitude To 12,000 Feet</td>
</tr>
<tr>
<td>Dimensions (HxWxD)</td>
<td>391 x 329 x 285mm</td>
</tr>
<tr>
<td>Weight (Net)</td>
<td>21.4lbs., monitor weight 19.4 lbs.</td>
</tr>
<tr>
<td>Certifications</td>
<td>UL, C-UL, FCC, CE, TUV, VCCI, MPRII, C-TICK</td>
</tr>
</tbody>
</table>
Power Supply Specification

The Touchcomputer shall be powered by 12VDC from a universal type power supply brick with the following characteristics:

- Input voltage 100 to 240 V~
- Input frequency 50/60 Hz
- Output voltage 12 V
- Output line and load regulation +/- 5%
- Output current=10 Amps maf
# AccuTouch Touchscreen Specifications

## MECHANICAL

**Construction**
- Top: Polyester with outside hard-surface coating with clear or antiglare finish.
- Inside: Transparent conductive coating.
- Bottom: Glass substrate with uniform resistive coating. Top and bottom layers separated by Elo-patented separator dots.

**Positional Accuracy**
- Standard deviation of error is less than 0.080 in. (2.03 mm). This equates to less than ±1%.

**Touchpoint Density**
- More than 100,000 touchpoints/in² (15,500 touchpoints/cm²).

**Touch Activation Force**
- Typically less than 4 ounces (113 grams).

**Surface Durability**
- Meets Taber Abrasion Test (ASTM D1044), CS-10F wheel, 500 g.
- Meets pencil hardness 3H.

**Expected Life**
- AccuTouch technology has been operationally tested to greater than 35 million touches in one location without failure, using a stylus similar to a finger.

## OPTICAL

**Light Transmission (per ASTM D1003)**
- Typically 85% at 550-nm wavelength (visible light spectrum).

**Visual Resolution**
- All measurements made using USAF 1951 Resolution Chart, under 30 X magnification, with test unit located approximately 1.5 in. (38 mm) from surface of resolution chart.
- Antiglare surface: 6:1 minimum.

**Haze (per ASTM D1003)**
- Antiglare surface: Less than 15%.

**Gloss (per ASTM D2457)**
- Antiglare surface: 90 ± 20 gloss units tested on a hard-coated front surface.
# IntelliTouch Touchscreen Specifications

<table>
<thead>
<tr>
<th>MECHANICAL</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positional Accuracy</strong></td>
<td>Standard deviation of error is less than 0.080 in. (2.03 mm). Equates to less than ±1%.</td>
</tr>
<tr>
<td><strong>Touchpoint Density</strong></td>
<td>More than 100,000 touchpoints/in² (15,500 touchpoints/cm²).</td>
</tr>
<tr>
<td><strong>Touch Activation Force</strong></td>
<td>Typically less than 3 ounces (85 grams).</td>
</tr>
<tr>
<td><strong>Surface Durability</strong></td>
<td>Surface durability is that of glass, Mohs’ hardness rating of 7.</td>
</tr>
<tr>
<td><strong>Expected Life Performance</strong></td>
<td>No known wear-out mechanism, as there are no layers, coatings, or moving parts. IntelliTouch technology has been operationally tested to more than 50 million touches in one location without failure, using a stylus similar to a finger.</td>
</tr>
<tr>
<td><strong>Sealing</strong></td>
<td>Unit is sealed to protect against splashed liquids, dirt, and dust.</td>
</tr>
<tr>
<td><strong>Optical</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Light Transmission (per ASTM D1003)</strong></td>
<td>90%</td>
</tr>
<tr>
<td><strong>Visual Resolution</strong></td>
<td>All measurements made using USAF 1951 Resolution Chart, under 30X magnification, with test unit located approximately 1.5 in (38 mm) from surface of resolution chart. Clear surface: Excellent, with no noticeable degradation. Antiglare surface: 6:1 minimum.</td>
</tr>
<tr>
<td><strong>Gloss (per ASTM D2457 using a 60-degree gloss meter)</strong></td>
<td>Antiglare surface: Curved: 60 ± 20 gloss units or 75 ± 15 gloss units.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ENVIRONMENT</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chemical Resistance</strong></td>
<td>The active area of the touchscreen is resistant to all chemicals that do not affect glass, such as: Acetone Toluene Methyl ethyl ketone Isopropyl alcohol Methyl alcohol Ethyl acetate Ammonia-based glass cleaners Gasoline Kerosene Vinegar</td>
</tr>
<tr>
<td><strong>Electrostatic Protection (per EN 61 000-4-2, 1995)</strong></td>
<td>Meets Levels 4 (15kV air/8 kV contact discharge)</td>
</tr>
</tbody>
</table>
# Infrared Touchscreen Specifications

<table>
<thead>
<tr>
<th>MECHANICAL</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Method</td>
<td>Input Method Finger or gloved hand activation</td>
</tr>
<tr>
<td><strong>Electrical</strong></td>
<td></td>
</tr>
<tr>
<td>Positional Accuracy</td>
<td>Typical centroid accuracy: 2 mm with 1 mm STD error</td>
</tr>
<tr>
<td>Resolution</td>
<td>Touchpoint density is based on controller resolution of 4096 x 4096</td>
</tr>
<tr>
<td>Touch Activation Force</td>
<td>No minimum touch activation force is required</td>
</tr>
<tr>
<td>Controller</td>
<td>Board: USB 1.1</td>
</tr>
<tr>
<td><strong>OPTICAL</strong></td>
<td></td>
</tr>
<tr>
<td>Light Transmission</td>
<td>Glass overlay: 90% per ASTM D1003-92</td>
</tr>
<tr>
<td>Environmental</td>
<td></td>
</tr>
<tr>
<td>Chemical Resistance</td>
<td>Glass overlays: The touch active area of the touchscreen is resistant to chemicals that do not affect glass, such as: acetone, toluene, methyl ethyl ketone, isopropyl alcohol, methyl alcohol, ethyl acetate, ammonia-based glass cleaners, gasoline, kerosene, vinegar. Polycarbonate bezel: around perimeter of display has some sensitivity to hydrocarbons.</td>
</tr>
<tr>
<td>Durability</td>
<td></td>
</tr>
<tr>
<td>Surface Durability</td>
<td>Glass filter option: Surface durability is that of glass, Mohs’ hardness rating of 7.</td>
</tr>
</tbody>
</table>
### Acoustic Pulse Recognition Specification

<table>
<thead>
<tr>
<th>Category</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>MECHANICAL</td>
<td></td>
</tr>
<tr>
<td>Input method</td>
<td>Finger, finger nail, gloved hand, or stylus activation</td>
</tr>
<tr>
<td>ELECTRICAL</td>
<td></td>
</tr>
<tr>
<td>Position accuracy</td>
<td>1% max. error</td>
</tr>
<tr>
<td>Resolution accuracy</td>
<td>Touchpoint density is based on controller resolution of 4096 x 4096</td>
</tr>
<tr>
<td>Touch activation force</td>
<td>Typically 2 to 3 ounces (55 to 85 grams)</td>
</tr>
<tr>
<td>Controller</td>
<td>Board: USB 1.1</td>
</tr>
<tr>
<td>OPTICAL</td>
<td></td>
</tr>
<tr>
<td>Light transmission</td>
<td>90% +/- 5%</td>
</tr>
<tr>
<td>ENVIRONMENTAL</td>
<td></td>
</tr>
<tr>
<td>Chemical resistance</td>
<td>The touch activation area of the touchscreen is resistant to chemicals that</td>
</tr>
<tr>
<td></td>
<td>do not affect glass such as: acetone, toluene, methyl ethyl ketone,</td>
</tr>
<tr>
<td></td>
<td>isopropyl alcohol, methyl alcohol, ethyl acetate, ammonia-based glass</td>
</tr>
<tr>
<td></td>
<td>cleaners, gasoline, kerosene, vinegar</td>
</tr>
<tr>
<td>DURABILITY</td>
<td></td>
</tr>
<tr>
<td>Surface durability</td>
<td>Surface durability is that of glass, Mohs’ hardness rating of 7</td>
</tr>
<tr>
<td>Expected life</td>
<td>No known wear-out mechanism, as there are no layers, coatings, or moving</td>
</tr>
<tr>
<td></td>
<td>parts. APR technology has been operationally tested to more than 50 million</td>
</tr>
<tr>
<td></td>
<td>touches in one location without failure, using a stylus similar finger.</td>
</tr>
</tbody>
</table>
REGULATORY INFORMATION

I. Electrical Safety Information:
   A) Compliance is required with respect to the voltage, frequency, and current requirements indicated on the manufacturer’s label. Connection to a different power source than those specified herein will likely result in improper operation, damage to the equipment or pose a fire hazard if the limitations are not followed.
   B) There are no operator serviceable parts inside this equipment. There are hazardous voltages generated by this equipment which constitute a safety hazard. Service should be provided only by a qualified service technician.
   C) This equipment is provided with a detachable power cord which has an integral safety ground wire intended for connection to a grounded safety outlet.
      1) Do not substitute the cord with other than the provided approved type. Under no circumstances use an adapter plug to connect to a 2-wire outlet as this will defeat the continuity of the grounding wire.
      2) The equipment requires the use of the ground wire as a part of the safety certification, modification or misuse can provide a shock hazard that can result in serious injury or death.
      3) Contact a qualified electrician or the manufacturer if there are questions about the installation prior to connecting the equipment to mains power.

II. Emissions and Immunity Information
   A) Notice to Users in the United States: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of 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.
   B) Notice to Users in Canada: This equipment complies with the Class B limits for radio noise emissions from digital apparatus as established by the Radio Interference Regulations of Industrie Canada.
   C) Notice to Users in the European Union: Use only the provided power cords and interconnecting cabling provided with the equipment. Substitution of provided cords and cabling may compromise electrical safety or CE Mark Certification for emissions or immunity as required by the following standards:
This Information Technology Equipment (ITE) is required to have a CE Mark on the manufacturer’s label which means that the equipment has been tested to the following Directives and Standards:

This equipment has been tested to the requirements for the CE Mark as required by EMC Directive 89/336/EEC indicated in European Standard EN 55 022 Class B and the Low Voltage Directive 73/23/EEC as indicated in European Standard EN 60 950.

D) General Information to all Users: This equipment generates, uses and can radiate radio frequency energy. If not installed and used according to this manual the equipment may cause interference with radio and television communications. There is, however, no guarantee that interference will not occur in any particular installation due to site-specific factors.

1) In order to meet emission and immunity requirements, the user must observe the following:
   a) Use only the provided I/O cables to connect this digital device with any computer.
   b) To ensure compliance, use only the provided manufacturer’s approved line cord.
   c) The user is cautioned that changes or modifications to the equipment not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

2) If this equipment appears to cause interference with radio or television reception, or any other device:
   a) Verify as an emission source by turning the equipment off and on.
   b) If you determine that this equipment is causing the interference, try to correct the interference by using one or more of the following measures:
      i) Move the digital device away from the affected receiver.
      ii) Reposition (turn) the digital device with respect to the affected receiver.
      iii) Reorient the affected receiver’s antenna.
      iv) Plug the digital device into a different AC outlet so the digital device and the receiver are on different branch circuits.
      v) Disconnect and remove any I/O cables that the digital device does not use. (Unterminated I/O cables are a potential source of high RF emission levels.)
      vi) Plug the digital device into only a grounded outlet receptacle. Do not use AC adapter plugs. (Removing or cutting the line cord ground may increase RF emission levels and may also present a lethal shock hazard to the user.)

If you need additional help, consult your dealer, manufacturer, or an experienced radio or television technician.

48  Elo Touchmonitor User Guide
"The application of this monitor is restricted to special controlled luminous environments. The screen surface trend to reflect annoying light of lamps and sunlight. To avoid these reflections the monitor should not be positioned in front of a window or directed to luminaries. The monitor is in compliance with Reflection Class III according to ISO 13406-2."


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.

This device complies with Part 15 of the 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.

**CAUTION:**
Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer’s instructions.

**VORSICHT:**
WARRANTY

Except as otherwise stated herein or in an order acknowledgment delivered to Buyer, Seller warrants to Buyer that the Product shall be free of defects in materials and workmanship. With the exception of the negotiated warranty periods; the warranty for the touchmonitor and components of the product is 2 years.

Seller makes no warranty regarding the model life of components. Seller’s suppliers may at any time and from time to time make changes in the components delivered as Products or components.

Buyer shall notify Seller in writing promptly (and in no case later than thirty (30) days after discovery) of the failure of any Product to conform to the warranty set forth above; shall describe in commercially reasonable detail in such notice the symptoms associated with such failure; and shall provide to Seller the opportunity to inspect such Products as installed, if possible. The notice must be received by Seller during the Warranty Period for such product, unless otherwise directed in writing by the Seller.

Within thirty (30) days after submitting such notice, Buyer shall package the allegedly defective Product in its original shipping carton(s) or a functional equivalent and shall ship to Seller at Buyer’s expense and risk.

Within a reasonable time after receipt of the allegedly defective Product and verification by Seller that the Product fails to meet the warranty set forth above, Seller shall correct such failure by, at Seller’s options, either (i) modifying or repairing the Product or (ii) replacing the Product. Such modification, repair, or replacement and the return shipment of the Product with minimum insurance to Buyer shall be at Seller’s expense. Buyer shall bear the risk of loss or damage in transit, and may insure the Product. Buyer shall reimburse Seller for transportation cost incurred for Product returned but not found by Seller to be defective. Modification or repair, of Products may, at Seller’s option, take place either at Seller’s facilities or at Buyer’s premises. If Seller is unable to modify, repair, or replace a Product to conform to the warranty set forth above, then Seller shall, at Seller’s option, either refund to Buyer or credit to Buyer’s account the purchase price of the Product less depreciation calculated on a straight-line basis over Seller’s stated Warranty Period.
THESE REMEDIES SHALL BE THE BUYER’S EXCLUSIVE REMEDIES FOR BREACH OF WARRANTY. EXCEPT FOR THE EXPRESS WARRANTY SET FORTH ABOVE, SELLER GRANTS NO OTHER WARRANTIES, EXPRESS OR IMPLIED BY STATUTE OR OTHERWISE, REGARDING THE PRODUCTS, THEIR FITNESS FOR ANY PURPOSE, THEIR QUALITY, THEIR MERCHANTABILITY, THEIR NONINFRINGEMENT, OR OTHERWISE. NO EMPLOYEE OF SELLER OR ANY OTHER PARTY IS AUTHORIZED TO MAKE ANY WARRANTY FOR THE GOODS OTHER THAN THE WARRANTY SET FORTH HEREIN. SELLER’S LIABILITY UNDER THE WARRANTY SHALL BE LIMITED TO A REFUND OF THE PURCHASE PRICE OF THE PRODUCT. IN NO EVENT SHALL SELLER BE LIABLE FOR THE COST OF PROCUREMENT OR INSTALLATION OF SUBSTITUTE GOODS BY BUYER OR FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT, OR INCIDENTAL DAMAGES.

Buyer assumes the risk and agrees to indemnify Seller against and hold Seller harmless from all liability relating to (i) assessing the suitability for Buyer’s intended use of the Products and of any system design or drawing and (ii) determining the compliance of Buyer’s use of the Products with applicable laws, regulations, codes, and standards. Buyer retains and accepts full responsibility for all warranty and other claims relating to or arising from Buyer’s products, which include or incorporate Products or components manufactured or supplied by Seller. Buyer is solely responsible for any and all representations and warranties regarding the Products made or authorized by Buyer. Buyer will indemnify Seller and hold Seller harmless from any liability, claims, loss, cost, or expenses (including reasonable attorney’s fees) attributable to Buyer’s products or representations or warranties concerning same.
INDEX

Numerics
17.0" LCD Touchmonitor (1729L-XXWA-1-XX-G)
Dimensions, 45

A
About Touchmonitor Adjustments, 27
AccuTouch Touchscreen Specifications, 41
Acoustic Pulse Recognition Specification, 44
Auto Adjust, 30

B
Barcode Scanner, 4, 24
Base Bottom View, 9
Brightness, 30

C
Care and Handling of Your Touchmonitor, 38
Chemical Resistance, IntelliTouch, 42
Chemical Resistance, IR, 43
Cleaning Your Touchmonitor, 38
Clock, 30
Color Temperature, 30
Construction, AccuTouch, 35
Contrast, 30
Controller, IR, 43
Controls and Adjustment, 29
Current Input, 30
Customer Display, 3, 24

D
Detailed LCD Display Performance Requirements, 2
Display Angle, 31
Display Modes, 39
Durability, IR, 43

E
Electrical Safety Information, 47
Electrical, IR, 43
Electrostatic Protection, IntelliTouch, 42
Emissions and Immunity Information, 47
Environmental, 42
Environmental, IR, 43
Expected Life Performance, AccuTouch, 41
Expected Life Performance, IntelliTouch, 42
External Power Supply, 5

F
Finger Print Reader, 3, 20

G
General Power Saving Mode, 31
Gloss, AccuTouch, 41
Gloss, IntelliTouch, 42
Mechanical, AccuTouch, 41
Mechanical, IntelliTouch, 42

H
Haze, AccuTouch, 41
H-Position, 30

I
Information, 30
Infrared Touchscreen Specifications, 43
Input Method, 43
Installation and Setup, 7
Installing the Peripheral Device Drivers, 20
Installing the Touch Driver Software, 26
Installing the USB Touch Driver, 26
Installing the USB Touch Driver for Windows XP,
Windows 2000, Me and 98, 26
IntelliTouch Touchscreen Specifications, 42

K
Kensington™ Lock, 10

L
Language, 30
Light Transmission, AccuTouch, 41
Light Transmission, IntelliTouch, 42
Light Transmission, IR, 43

M
Magnetic Stripe Reader, 4, 21
Main Unit, 8
Mechanical, 41, 42, 43, 44

N
Native Resolution, 35

INDEX - 53
O
One-Dimensional scanner specifications, 4
Omni-Dimensional scanner specifications, 4
Optical, AccuTouch, 41
Optical, IntelliTouch, 42
Optical, IR, 43
Optimizing the LCD Display, 20
OSD Control Options, 30, 34
OSD Lock/Unlock, 29
OSD Menu Functions, 29
OSD Position, 30
OSD Timeout, 30

P
Phase, 30
Positional Accuracy, AccuTouch, 41
Positional Accuracy, IntelliTouch, 42
Positional Accuracy, IR, 43
Power LED Display & Power Saving, 31
Power Lock/Unlock, 29, 33
Power-Save (No Input), 31
Product Description, 1
Product Overview, 8

R
Rear View, 8
Recall defaults, 30
Regulatory Information, 47
Remove the Back Cover, 13
Replace the Back Cover, 19
Resolution, IR, 43

S
Sealing, IntelliTouch, 42
Sensor Specifications, 5
Sharpness, 30
Side View, 9
Six Port USB Hub, 6
Solutions to Common Problems, 33
Surface Durability, AccuTouch, 41
Surface Durability, IntelliTouch, 42
Surface Durability, IR, 43
SVGA, 35

T
Technical Specifications, 39
Testing Applications, 24
Testing the USB MSR Keyboard Emulation, 21
Testing the USB-HID Class MSR, 21
Theory of Operation, 4
Touch Activation Force, AccuTouch, 41
Touch Activation Force, IntelliTouch, 42
Touch not working, 33
Touchmonitor Safety, 37
Touchmonitor Specifications, 40
Touchpoint Density, AccuTouch, 41
Touchpoint Density, IntelliTouch, 42
Troubleshooting, 33

U
Unpacking Your Touchmonitor, 7
USB-SSI converter board specifications, 5
USB Interface Connection, 11

V
VGA, 33
Visual Resolution, AccuTouch, 41
Visual Resolution, IntelliTouch, 42
Volume, 30
V-Position, 30

W
Warranty, 51

X
XGA, 35

INDEX - 54
Check out Elo’s Web site!

www.elotouch.com

Get the latest...

• Product information
• Specifications
• News on upcoming events
• Press release
• Software drivers
• Touchmonitor Newsletter

Getting in Touch with Elo

To find out more about Elo’s extensive range of touch solutions, visit our Web site at www.elotouch.com or simply call the office nearest you:

North America
Elo TouchSystems
301 Constitution Drive,
Menlo Park, CA 94025
USA
(800) ELO-TOUCH
(800-356-8682)
Tel 650-361-4800
Fax 650-361-4722
eloinfo@elotouch.com

Germany
Tyco Electronics Raychem GmbH
(Elo TouchSystems Division)
Finsinger Feld 1
D-85521 Ottobrunn
Germany
Tel +49(0)(89)60822-0
Fax +49(0)(89)60822-180
elosales@elotouch.com

Belgium
Tyco Electronics Raychem GmbH
(Elo TouchSystems Division)
Diestesteadweg 692
B-3010 Kessel-Lo
Belgium
Tel +32(0)(16)35-2100
Fax +32(0)(16)35-2101
elosales@elotouch.com

Asian-Pacific
Sun Homada Bldg. 2F
1-19-20 Shin-Yokohama
Kanagawa 222-0033
Japan
Tel +81(45)478-2161
Fax +81(45)478-2180
www.tps.co.jp