

Touchmonitor User Manual

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by

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CHAPTER

1

INTRODUCTION

Product Description

Congratulations on your purchase of a Leadingtouch touchmonitor. Your new touchmonitor combines the reliable performance of Leadingtouch touch technology with the latest advances in LCD display design. This combination of features creates a natural flow of information between a user and your touchmonitor.

Precautions

Follow all warnings, precautions and maintenance as recommended in this user's manual to maximize the life of your unit. See Appendix B for more information on touchmonitor safety.

About the Product

Your Touchmonitor is a TFT color display with the following features:

- Direct analog RGB or Digital RGB input
- 16.2M color
- XGA/SVGA/VGA/VESA compatible
- Auto adjustment capability
- High quality full screen re-scaling
- Multilingual OSD menus in both languages: English,Chinese.
- Serial, USB or Comb touch interface
- Superior touch technology of Leadingtouch TouchSystems
- VESA flat panel monitor physical mounting interface
- Cable strain reliefs for all cables

For full Product Specifications refer to Appendix

2

INSTALLATION AND SETUP

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

Unpacking Your Touchmonitor

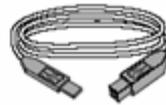
Check that the following 10 items are present and in good condition:



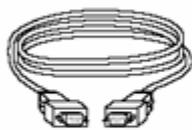
LCD monitor



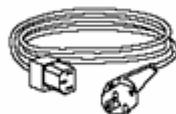
Video cable



USB cable

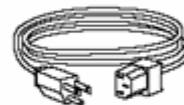


Serial cable

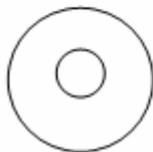


European power cable

or



Power cable US/Canada

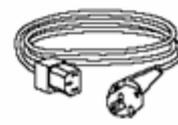


CD and Quick Install Guide



Brick power supply

or

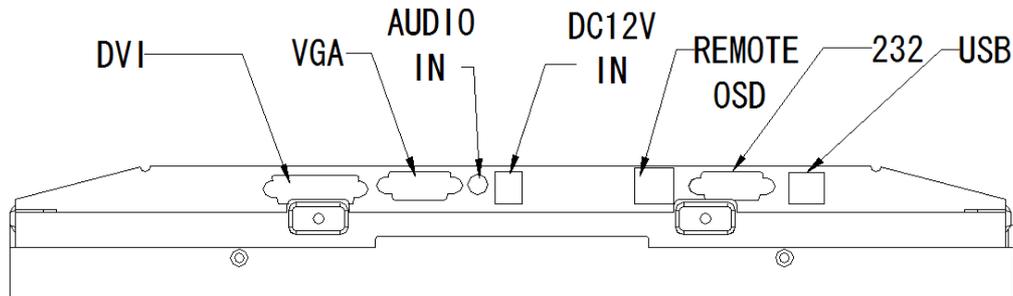


Power cable

Touch Interface Connection

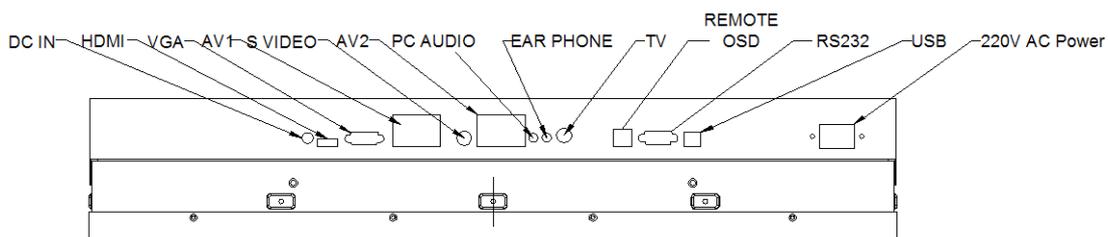
Note: Before connecting the cables to your touchmonitor and PC, be sure that the computer and touchmonitor are turned off.

For size lower than 22" touchmonitor(including 22")



1. Connect one end of the **power adapter** to the monitor and the other end to the connector of the power cord.
2. Connect one end of either the **touchscreen serial (RS232) cable** or the touchscreen USB cable (but not both) to the rear side of the computer and the other end to the LCD monitor. Tighten by turning the two thumb screws clockwise to ensure proper grounding (optional module USB cable does not have thumb screws).
3. Connect one end of the **video cable(VGA or DVI but not both)** to the rear side of computer and the other to the LCD monitor. Tighten by turning the two thumb screws clockwise to ensure proper grounding.
4. Press the **power button** on OSD to turn the monitor power on.

For size larger than 26" touchmonitor(including 26")



1. Connect one end of the **power cable** to the monitor and the other end to the connector of the power cord.
2. Connect one end of either the **touchscreen serial (RS232) cable** or the touchscreen USB cable (but not both) to the rear side of the computer and the other end to the LCD monitor. Tighten by turning the two thumb screws clockwise to ensure proper grounding (optional module USB cable does not have thumb screws).
3. Connect one end of the **video cable(VGA or DVI but not both)** to the rear side of computer and the other to the LCD monitor.

Tighten by turning the two thumb screws clockwise to ensure proper grounding.

4. Press the **power button** on OSD to turn the monitor power on.

Installing the Driver Software

Leadingtouch 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

Additional drivers and driver information for other operating systems are available on the Leadingtouch web site at www.Leaningtouch.com.

Your Leadingtouch touchmonitor is plug-and-play compliant. Information on the video capabilities of yourtouchmonitor 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.

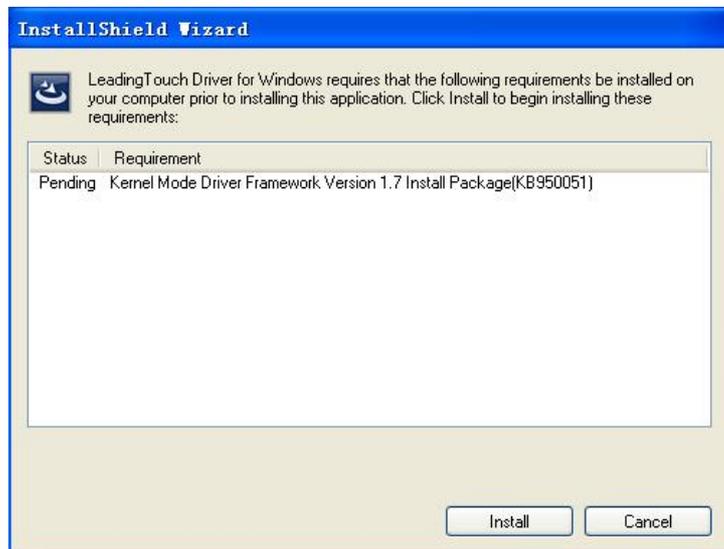
Refer to the appropriate section for driver installation instructions.

Depending upon whether you connected the serial communication cable or the USB communication cable, you should install only the serial driver or the USB driver.

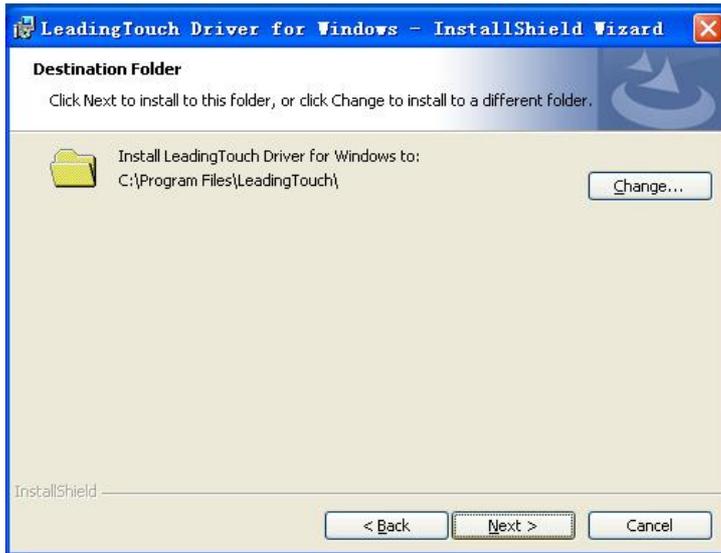
Start installation

Double click setup.exe file to start installation.

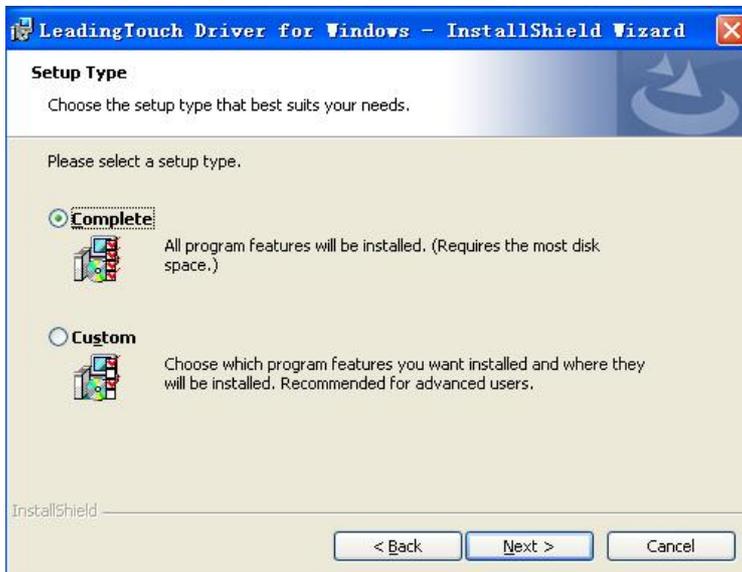
Firstly install resource kit for driver



Choose a installation path, the default path is C:\Program files\Leadingtouch.



There are two setup type: complete and Custom. The default one is complete type.

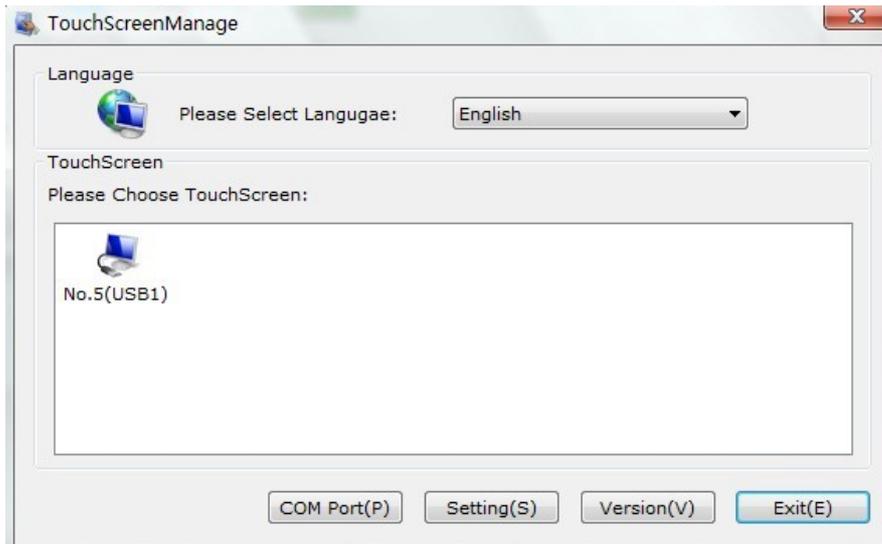


After installation, double click LeadingTouchSetup on desktop to enter calibration program.



Introduction to driver setup and function

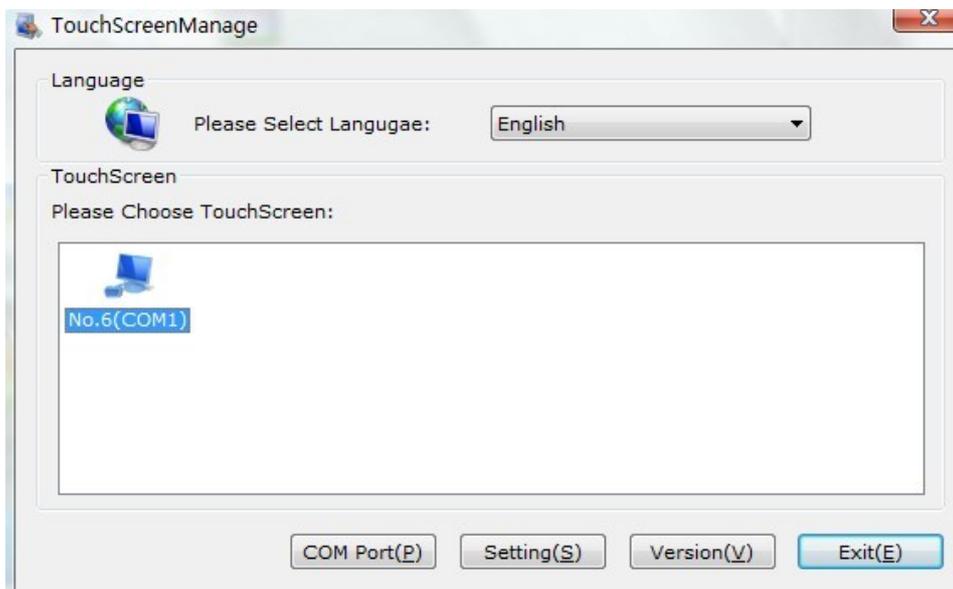
2.1 Touchscreen administration interface



Language: can choose interface language, now has two choice Chinese and English language.

Touchscreen: All touchscreen can be recognized is shown in the box, choose the right one calibrate and click Setting(S) to continue your setting.

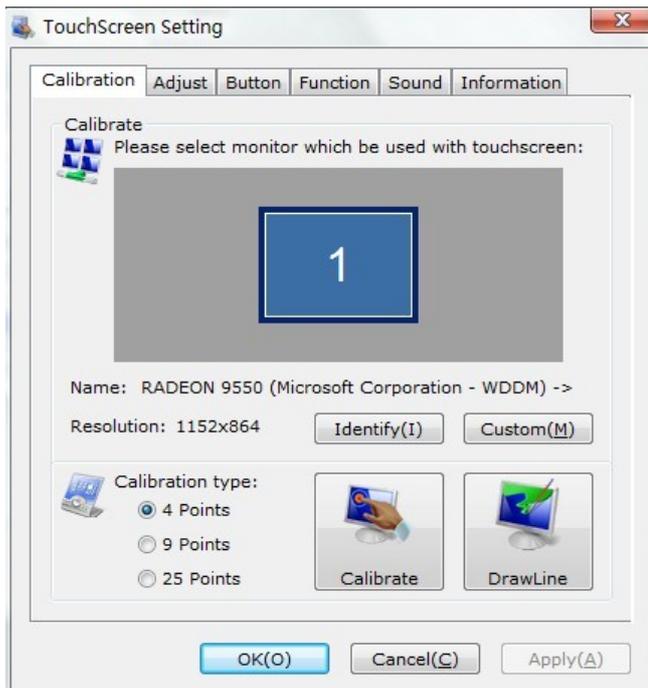
COM Port(P): For serial interface touchscreen, please select the right COM port for your touchscreen to continue setting(Note: COM interface touchscreen can't not be recognized autoly, user need to select COM port manually and click Add to add touchscreen into computer as following picture shows).



Driver version information

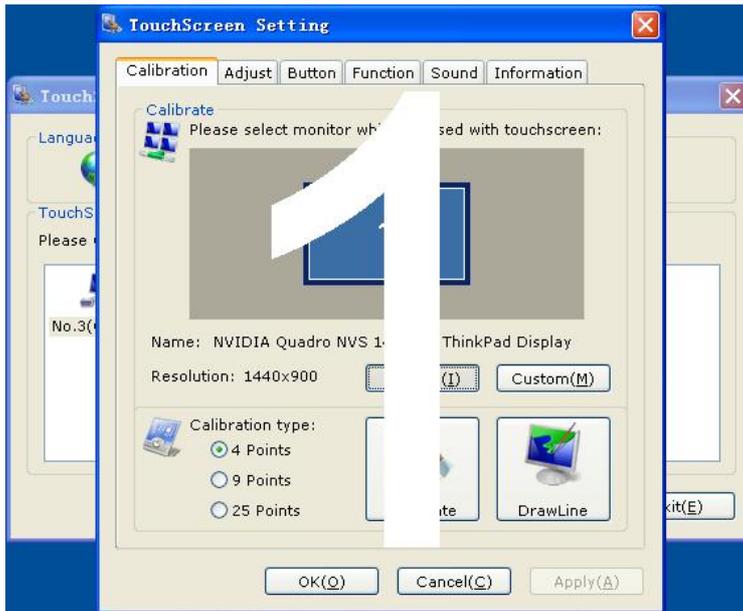


2.2 Touchscreen setting

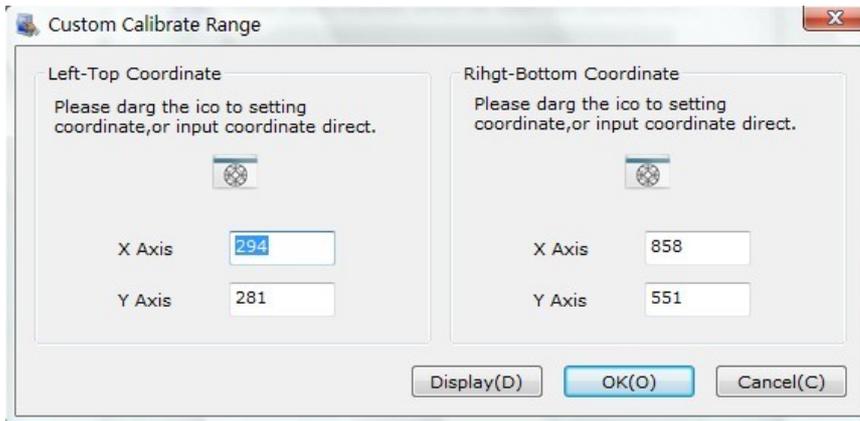


Calibrate: show monitor and resolution information recognized by system

Identify: show monitor information to current touchscreen.



Custom: to define custom calibration area by changing drag Left-Top and Right-Bottom coordinate to set calibration area.

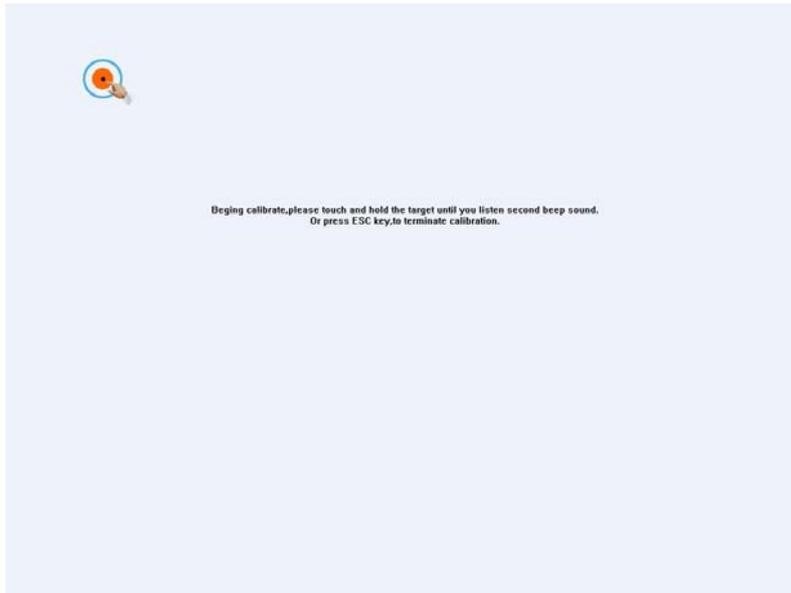


4 points calibration: calibrate by 4 points, for SAW and Infrared touchscreens.

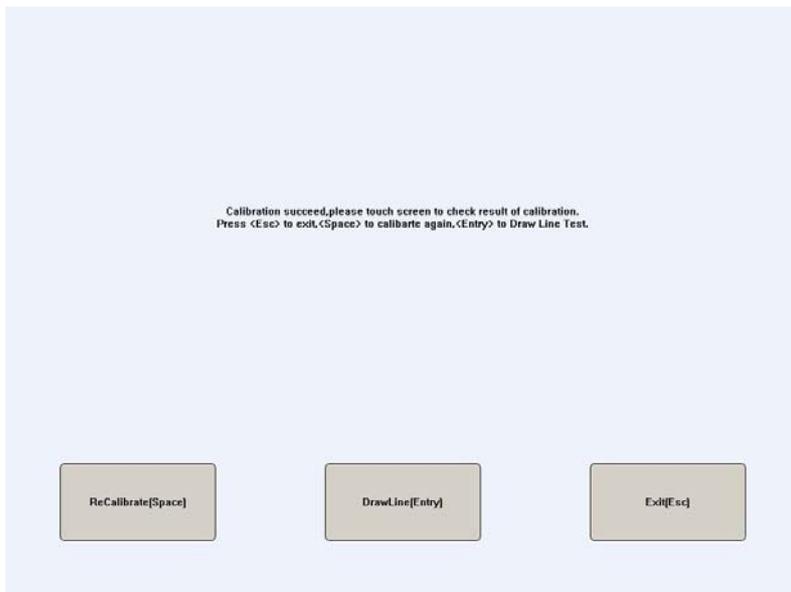
9 points calibration: calibrate by 9 points, for 4W, 5W and capacitive touchscreen.

25 points calibration: calibrate by 25 points, for 4W, 5W and capacitive touchscreen.

Select 4 points, 9 points, 25 points or custom and click calibrate to start calibration.



Press the center of red point for about 2-3 seconds. Don't release your finger until the red point shaft to next position or hearing beep sound. Repeat for all red point to finish calibration.



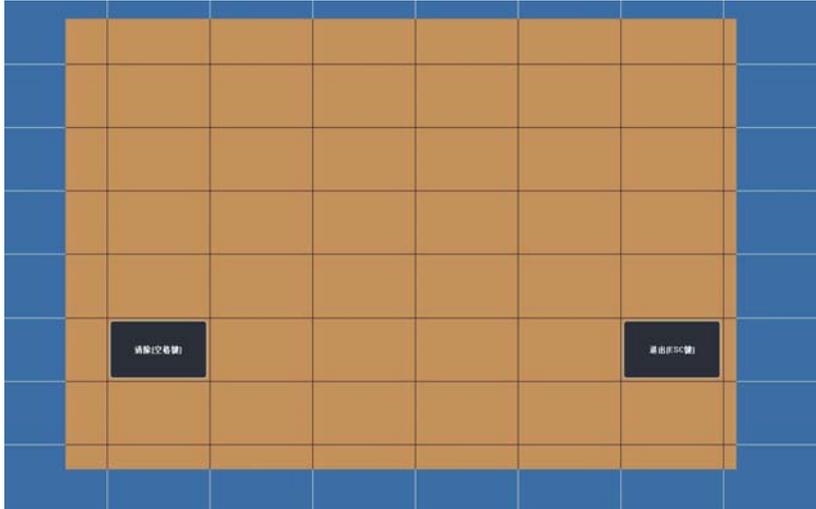
After calibration, you can choose:

Recalibrate: If mouse cursor can't overlap with your touch finger, please select this item to calibrate touchscreen again.

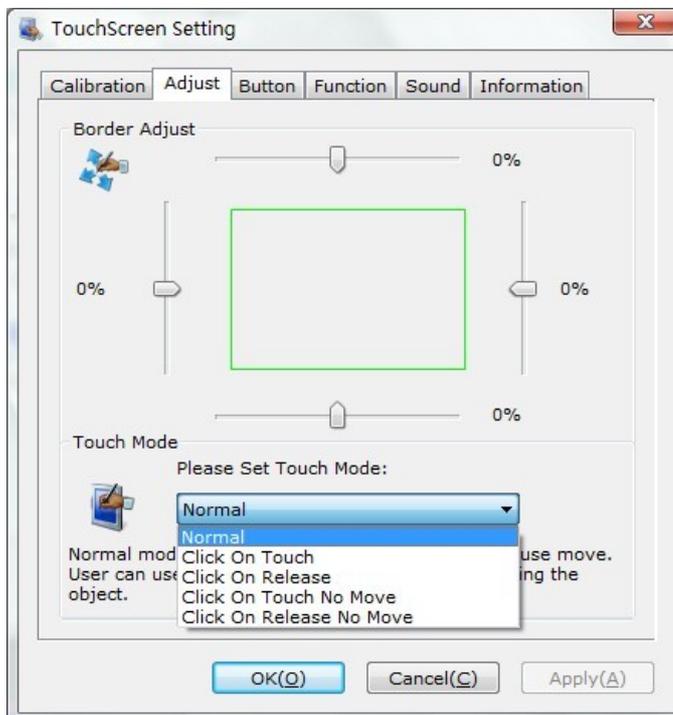
DrawLine: Select to enter draw-line test, for more details refer to next chapter

Multi-touch Function

Touchscreen that support multi-touch can test multi-touch function after calibration. Touch screen by two fingers at different point synchronously, a solid rectangle appears in screen and indicate the current touchscreen can support multi-touch.



2.3 Touchscreen setting- Adjust



Border adjust: adjust screen border scale border to fit current touchscreen, as touchscreen may have abnormal action caused by installation or non-linear problem.

Touch mode:

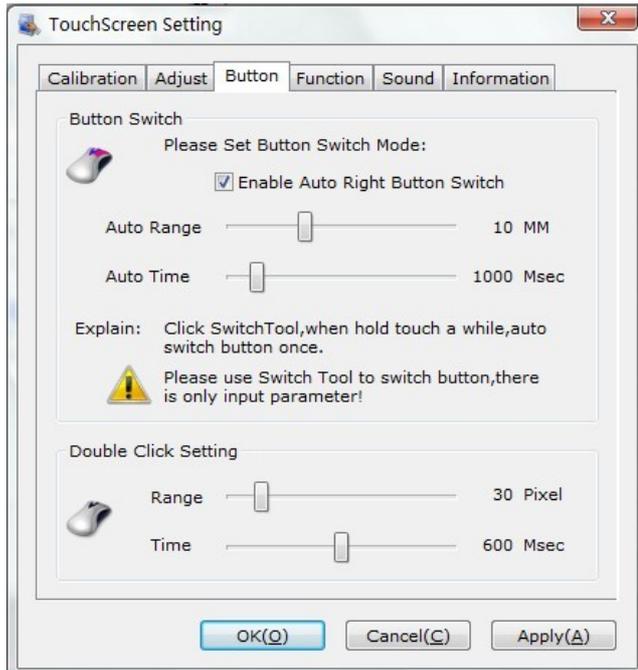
Click On Touch: indicates the response when your finger touches on the panel

Click On Release: indicates the response when your finger leaves the touchs panel

Click On Touch No Move: indicates the response when your finger touches on the panel, can't draw line and drag

Click On Release No Move: indicates the response when your finger leaves the panel, can't draw line and drag

2.4 Touchscreen setting-Buttom



[Button Switch]: Enable Auto Right Button Switch

Auto range: Click effectual in 10mm area

Auto time: Click effectual in 1000mMsec

Auto right button effects only when above two items effectual.

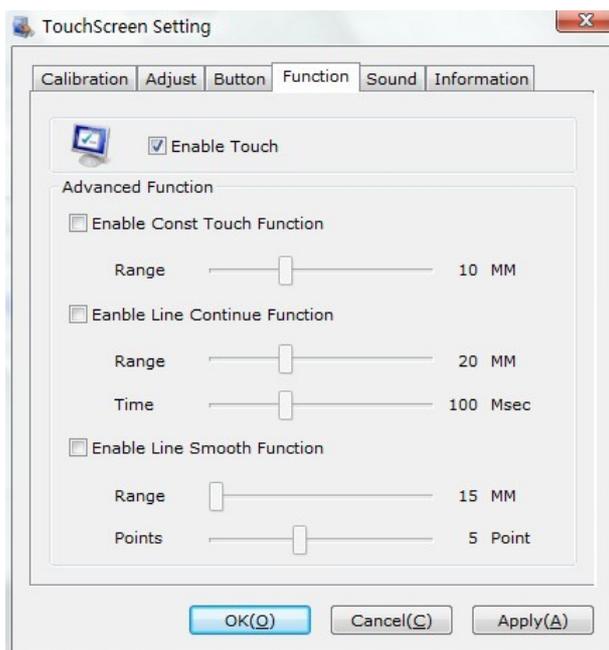
[Double Click Setting]:

Range: Clicks in range of 10 mm are determined to be a touch point

Time: Clicks in 500 msec are determined to be a touch point

If any icon or program can't open normally, please drag the two rules above to right side a little.

2.5 Touchscreen setting-Advanced



[Enable Touch]: Enable or disable touch function of touch panel

[Advanced Function]:

Enable Const Touch Function: The range of 10 mm are determined to be a touch point

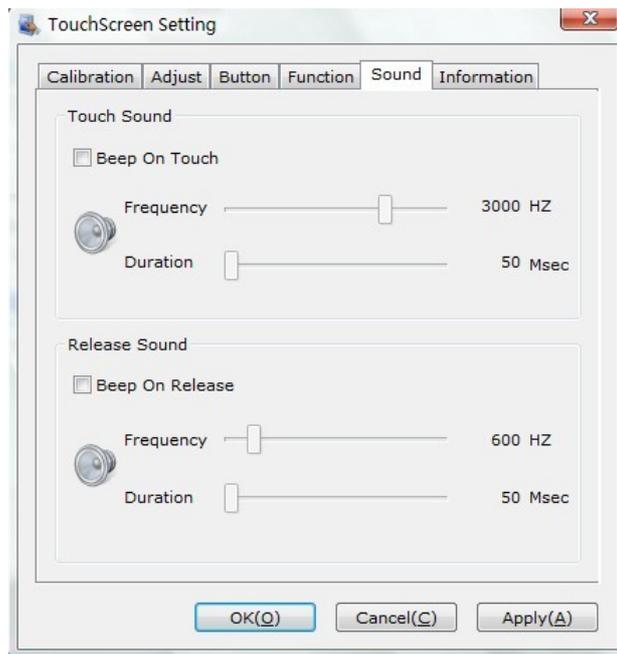
Enable Line Continue Function: Settings for handwriting input or drawing.

Range: Disconnected line in range of 20mm will be amended by algorithm

Time: Disconnected line in range of 100msec will be amended by algorithm

Enable Line Smooth Function: Line can be smoothed by algorithm to insert 5points in 15mm range

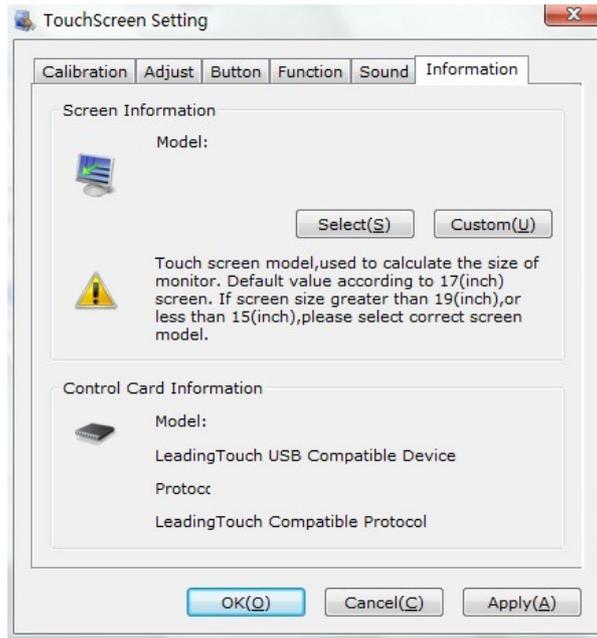
2.6 Touchscreen setting-Sound



Beep on touch the speaker on the computer will generate voice when touch on the touchscreen

Beep on release the speaker on the computer will generate voice when leave off the touchscreen

2.7 Touchscreen setting-Information



[Screen information]

Select: Click to select current touch panel size and model to amending function if mouse cursor not overlap with your finger after calibration. Default size is from 3.5inch to 42 inch

Custom: Click to input a custom touch panel size

[Control Card information]

Indicate Control Card information

Uninstall Leadingtouch drivers

Enter Touchscreen Uninstall program through the following programmer

1 Click “Start” ---- “programmer” ---- “Leadingtouch” ---- “Uninstall”



2 Open control panel and select “Leadingtouch Driver for Window” ---- “delete”



3. Run setup program and select “uninstall” .

CHAPTER

3

OPERATION

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.

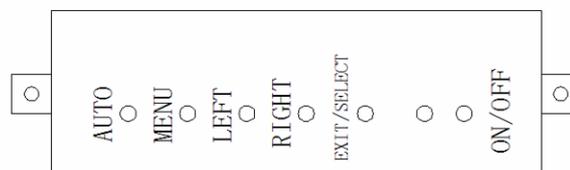
For best performance, your touchmonitor should be operating in native resolution, that is 1024x768.

Use the Display control panel in Windows to choose 1024x768 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.

OSD Controls



Using the On-Screen Display (OSD) Menus

All adjustments are made by using the on-screen display (OSD) menus. All menu items can be selected by using the buttons LEFT or RIGHT

NOTE: OSD menu default is enabled.

Control	Function
1 Menu/Exit	Display/exits the OSD menus.
2 LEFT	1. Enter contrast of the OSD. 2. Increase value of the adjustment item. 3. Select item counter-clockwise.
3 RIGHT	1. Enter brightness adjustment. 2. Decrease value of the adjustment item. 3. Select item counter-clockwise.
4 Select	Selects the adjustment items from the OSD menus.
5 Power Switch	Switches the power of the monitor.

OSD Menu Function

To Display and Select the OSD Functions:

- 1 Press the Menu key to activate the OSD menu.
- 2 Use LEFT or RIGHT to move counter-clockwise through the menu. Press the Enter key, the parameter will be highlighted when selected.
- 3 To quit the OSD screen at any time during the operation, press the Menu key. If no keys are pressed for a short time period, the OSD automatically disappears.

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

Control Description

	Contrast	Increases or decreases contrast
	Brightness	Increases or decreases brightness
	Color):	RGB color adjustment
	Auto color)	Automatically adjust RGB color.
	sRGB:	Select sRGB standard color
	Color Temperature	In this menu you can select one of the default color temperatures (9300°K, 7500°K, 6500°K, 5000°K, 4200°K)
	User	Press the OSD button Up and Down or set color values individually using the "USER" option. To define the color values individually, select the "USER" option. You can switch between the setting options for

R/G/B (red, green and blue foreground) using the OSD direction button. Select and specify the desired value by using the OSD button.

	Phase	Controls the vertical and horizontal fine tuning.
	Width	
	H-Position	Moves the screen left or right
	V-Position	Moves the screen up or down.
	Auto Adjust	Automatically selects the optional settings for image parameters (brightness, contrast, image position, phase etc).Display the current graphic mode.
	Tools	Enter to adjust OSD, Reset, sharpness, dos or language
	OSD	OSD parameter adjustment
	OSD Time	Determines how long (in seconds) the OSD menu waits before closing automatically after no action has been performed.
	OSD H-Position	Moves the OSD position horizontally on the screen. When the button is pressed, the OSD control menu will move to the right side of the screen. Likewise, when the button is pressed, the OSD control menu will move to the left side.
	OSD V-Position	Moves the OSD position vertically on the screen. When the button is pressed, the OSD control menu will move to the top side of the screen. Likewise, when the button is pressed, the OSD control menu will move to the lower side.
	Reset	Reset factory settings of the image parameters.
	Sharpness	The sharpness can be adjustable.
	DOS	Adjusts screen position under dos
	Language	Selection of the OSD menu language: English, Chinese

	Chinese	Selection of the OSD menu language as Chinese
	Audio	Selection of speaker mode
	Volume	Selection of speaker volume
	Mute	Selection of speaker mute mode
	Exit	Exit the menu.
	OK/Yes	Confirmation of a right operation
	Error/No	Reminder of a wrong setting

Preset Modes

To reduce the need for adjustment for different modes, the monitor has default setting modes that are most commonly used as given in the table below. If any of these display modes are detected, the monitor automatically adjusts the picture size and centering. When none of the mode is matched, the user can store their preferred modes in the user modes. The monitor is capable of storing up to 7 user modes. The only condition to store as a user mode is the new display information must have 1 KHz difference for horizontal frequency or 1 Hz for vertical frequency or the sync signal polarities are different from the default modes.

Default modes is as following:

VGA

640 x 480 -- 60 Hz

640 x 480 -- 72 Hz

640 x 480 -- 75 Hz

640 x 350 -- 70 Hz

720 x 400 -- 70 Hz

SVGA

800 x 600 -- 56 Hz

800 x 600 -- 60 Hz

800 x 600 -- 72 Hz

800 x 600 -- 75 Hz

XGA

1024 x 768 -- 60 Hz

1024 x 768 -- 70 Hz

1024 x 768 -- 75 Hz

1024 x 768 -- 72 Hz

Power Management System

The monitor is equipped with the power management function which automatically reduces the power

consumption when not in use.

Mode	PowerConsumption
On	<30W
Sleep	<4W
Off	<2W

We recommend switching the monitor off when it is not in use for a long time.

NOTE: The monitor automatically goes through the Power Management System (PMS) steps when it is idle. To activate the monitor, press any key on the keyboard or move the mouse.

CHAPTER

4

TROUBLESHOOTING

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.

Solutions to Common Problems

Problem Suggestion(s)

No image appears on screen.

Check that all the I/O and power connectors are properly connected as described in Chapter 2. Make sure the pins of the connectors are not crooked or broken. Test power supply by trying different cables, a different wall outlet or plug another appliance into the outlet. Make certain the video cable is properly connected and that it is not damaged. Check for bent pins on the cable connectors. Ensure that your computer and video card are properly configured. (Consult video card documentation.) “Out of Range” display 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 1024x768. See Appendix A for more information on resolution.

OSD/Power buttons don't respond

See page 3-21 for OSD enable/disable.

Image has vertical flickering line bars.

Use “Phase” 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.

Image is unstable and flickering

Use “CLOCK” to make an adjustment.

Image is scrolling

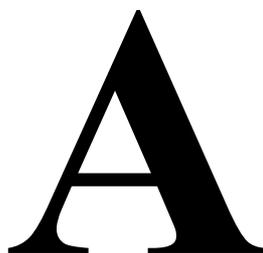
Make sure the VGA signal cable (or adapter) is well connected.

Check and reconfigure the display mode of the vertical refresh rate of your graphic card to make it compatible with the LCD display.

Touch doesn't work

Make sure cable is securely attached at both ends.

A P P E N D I X



NATIVE RESOLUTION

The native resolution of a monitor is the resolution level at which the LCD panel is designed to perform best. For the Leadingtouch LCD touchmonitor, the native resolution is 1024 x 768 for the 15 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.

Input

640 x 480 (VGA)

800 x 600 (SVGA)

1024 x 768 (XGA)

Video 15" LCD

Transforms input format to 1024 x 768

Transforms input format to 1024 x 768

Displays in Native Resolution

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:

VGA

640 x 480 -- 60 Hz

640 x 480 -- 72 Hz

640 x 480 -- 75 Hz

640 x 350 -- 70 Hz

720 x 400 -- 70 Hz

SVGA

800 x 600 -- 56 Hz

800 x 600 -- 60 Hz

800 x 600 -- 72 Hz

800 x 600 -- 75 Hz

XGA

1024 x 768 -- 60 Hz

1024 x 768 -- 70 Hz

1024 x 768 -- 75 Hz

1024 x 768 -- 72 Hz

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.

APPENDIX

B

TOUCHMONITOR SAFETY

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 Leadingtouch 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 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

