

# SAW Touch Screen User Manual

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by

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# PREFACE

Thank you for choosing our SAW touch screen products!

This guide is the hardware installation manual of Leadingtouch SAW touch screens. We hope it will help you to make better use of our touch screens.

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## Components of touch screen

According to the installation, there are the components and the accessories of Leadingtouch touchscreen.

### Components:

- ✓ Touch screen
- ✓ Control card
- ✓ Cables

### Accessories:

- ✓ Double-side adhesive foam tapes
- ✓ Dust-proof strips

### Tools:

- ✓ Cross screwdriver, Flat screwdriver
- ✓ Diagonal cutting pliers, Sharp-nose pliers
- ✓ Knife, Scissors, etc.

## Hardware Installation

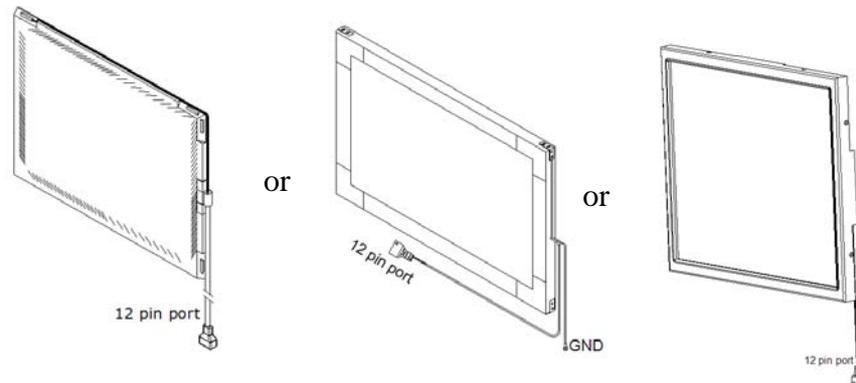
### Before Inastallation

Before your installation, please set the touch screen horizontally and test to confirm it's in good function.

### Cautions:

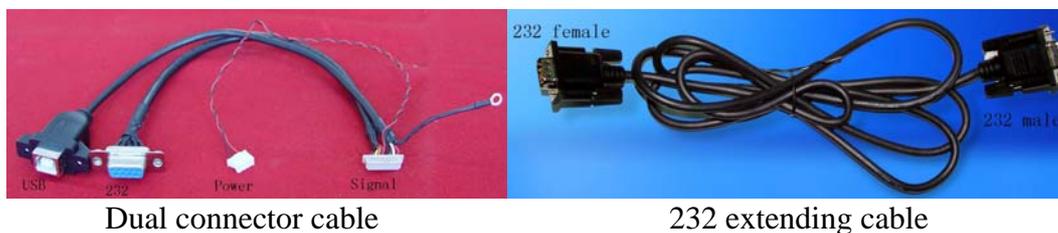
- For touch screen assembly inside monitor:
  - ✓ Make sure the front frame of monitor not contact with the sensor and reflective strips on touch screen.
  - ✓ Make sure reflective strips not expose in air.
  - ✓ Front frame of monitor should not press on touch screen too tightly to cause deformation and defection.

## Connecting Touch screen Devices



**Touchscreen**

**Cable for control card 6020**



Dual connector cable

232 extending cable



Control card 6020

USB extending cable

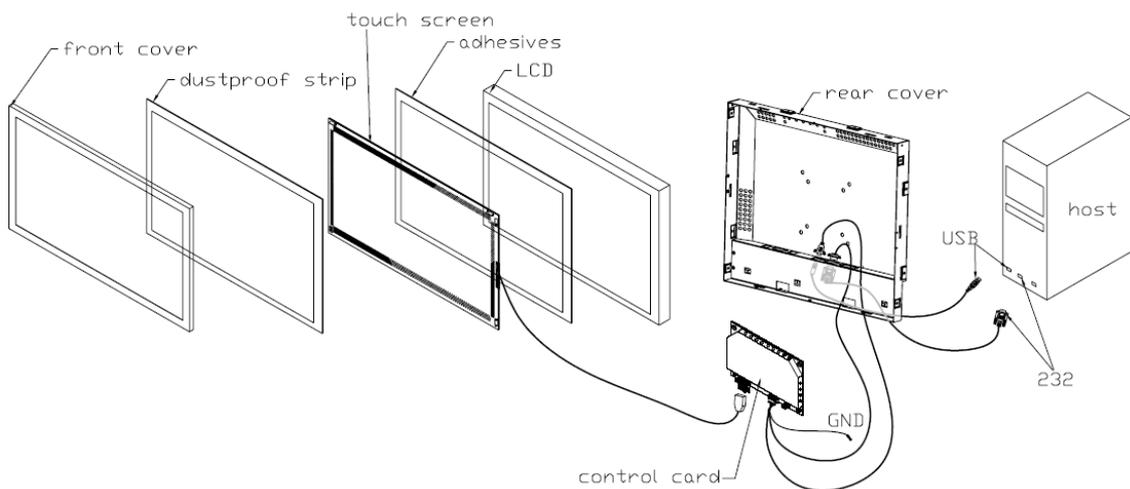
**For 6020 Serial cable connecting**

- 1 · Connect touch screen 12pin port to 12pin connector of control card.
- 2 · Connect dual connector cable signal connector to signal connector of control card.
- 3 · Connect serial extending cable DB9 male connector to DB9 female connector of dual connector cable.
- 4 · Connect serial extending cable DB9 male connector to PC DB9 female port.
- 5 · Connect dual connector cable power connector to 5V power supply
- 6 · Connect dual connector cable GND connector to ground

**For 6020 USB cable connecting**

- 1 · Connect touchscreen 12pin port to 12pin connector of control card.

- 2 · Connect dual connector cable signal connector to signal connector of control card.
- 3 · Connect USB extending cable male USB connector to female USB connector of dual connector cable.
- 4 · Connect USB extending cable USB connector to PC USB port.
- 5 · Connect dual connector cable power connector to 5V power supply
- 6 · Connect dual connector cable GND connector to ground



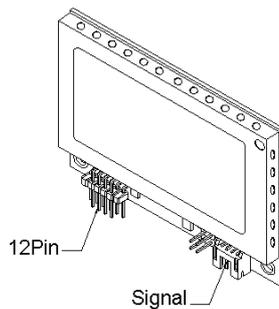
**Cable for control card 6000**



232 cable



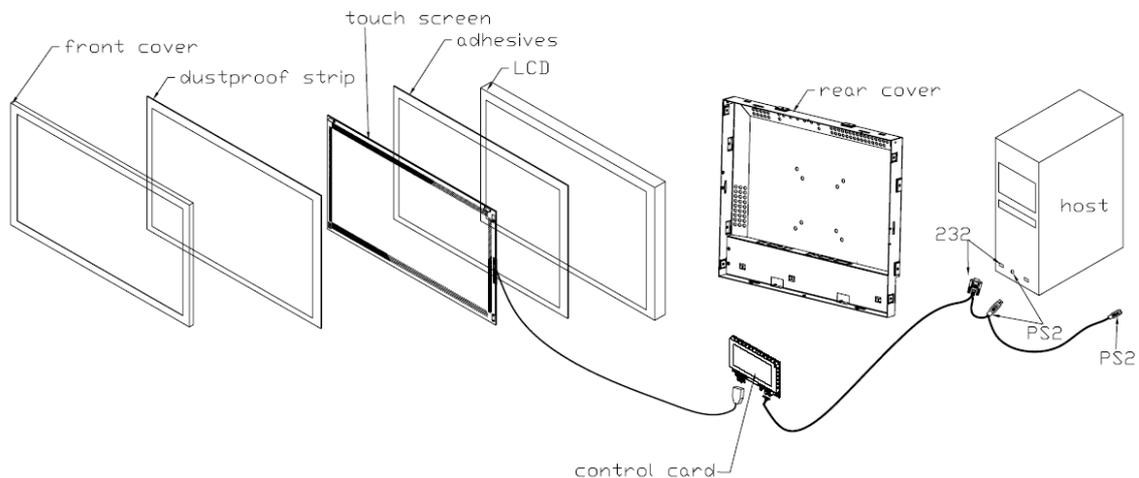
USB cable



Control card 6000

### For 6000 Serial cable connecting

- 1 · Connect touchscreen 12pin port to 12pin connector of control card.
- 2 · Connect 232 cable signal connector to signal connector of control card.
- 3 · Connect 232 cable DB9 port to PC DB9 port.
5. Connect 232 cable PS/2 male port to PC PS/2 female port.
6. If your mouse is PS/2 interface and there is no port on PC to connector your mouse, connect PC mouse PS/2 male port to 232 cable PS/2 female port.



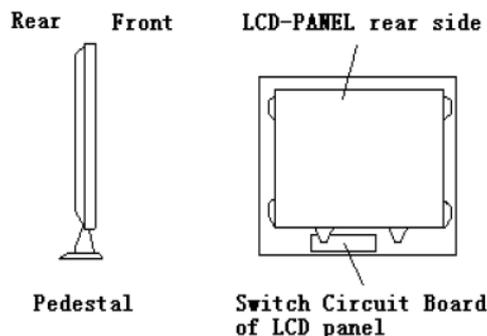
### For 6000 USB cable connecting

- 1 · Connect touchscreen 12pin port to 12pin connector of control card.
- 2 · Connect USB cable USB port to PC USB port.

## Install touch screen in LCD monitor

### Disassemble LCD monitor

Before you install touch screen in your LCD monitor, you have to disassemble monitor. Open the front and rear cover of the monitor by turning the screws on the rear cover, the switch circuit board and the LCD panel. The positions of the parts of the monitor are showed as below drawing.

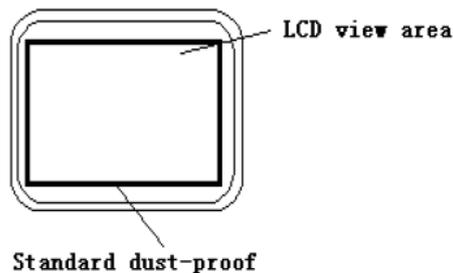


Commonly, some reinforces are made inside the front cover, If they hinder the touch screen from putting in or damage the reflective strips or connecting wires on the side of the touch screen. You should cut them away with pliers. (After cutting, be sure to make the cut smooth by abrading, because the sharp cut may damage the connecting wires on the side of the touch screen. If the space permits, the cut can be bonded with adhesive foam tape.)

Stick dust-proof strips inside the front cover of the monitor two purposes:

To avoid crushing transducers. Some monitor's front cover is not high enough to crush transducers. By sticking dust-proof strips, more space is made for the transducers

To keep the reflection strips out dust. Too much dust accumulating on the reflection strips of the touch screen will result in slow response of touch, partial touch function lost. To stick the dust-proof strips can solve such problems effectively. The position for sticking the dust-proof strips is as below:



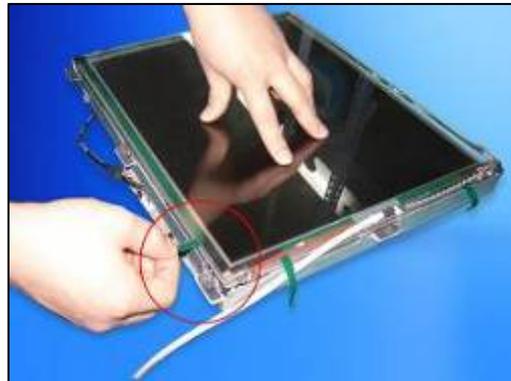
Stick double-side adhesive foam tapes around LCD panel



Tear off the outer layers of dust-proof strips for about 3 or 4mm



Thoroughly clean the two surfaces of the touch screen as well as the display area with the glass detergent. After cleaning, collimate and tear off all dust-proof strips outer layers to stick the touch screen onto the display carefully

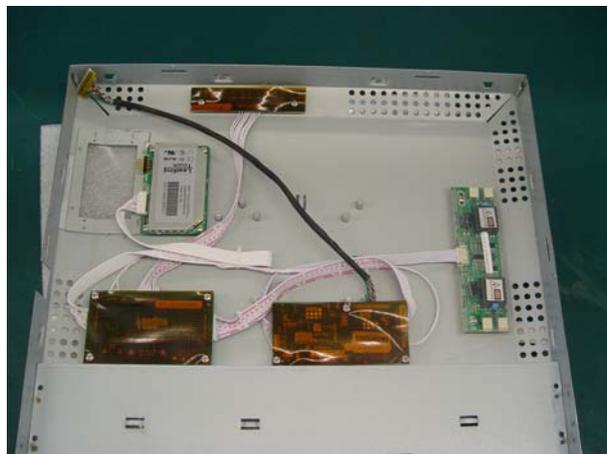


Notes:

When sticking the touch panel, try to keep equal distance between the inner side of reflective strips and four sides of the view area of the LCD.

Mount and shield controller

In order to observe the working state of the controller, we suggest the controller is installed outside the monitor. However, for the sake of the beauty, the controller can be fix inside the monitor with screws or double-side adhesive tapes.



Connect cable

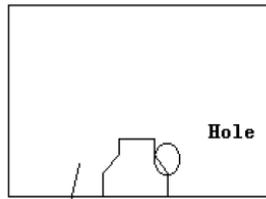
Connect and compliance all cables following instructions in previous part “Connecting Touch screen Devices”

Signal cable need to put through rear cover, you have to find a suitable hole or cut a hole on the rear cover with cant plier.

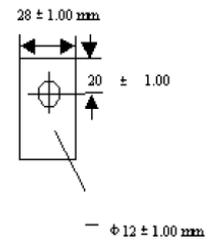
LCD-PANEL reinforcement



LCD-PANEL (Rear)



The back of the monitor's back cover



Reassembly your LCD monitor



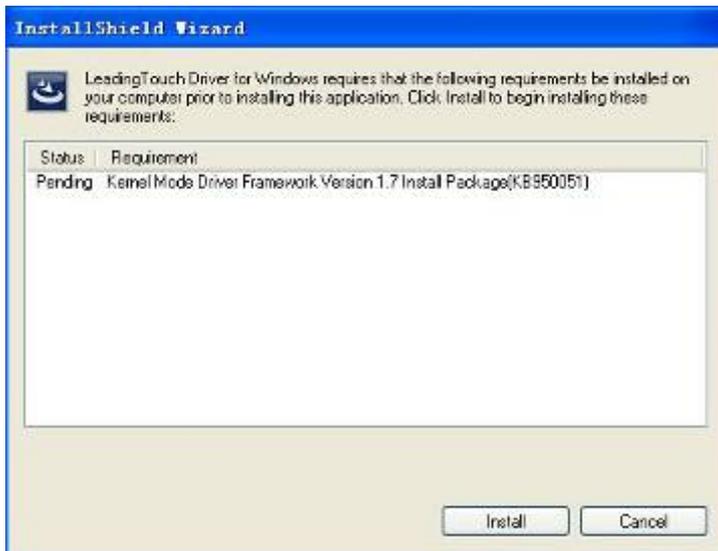
**Remarks:**

Because the touch screen and the double-side adhesive foam tape are added between the display and the front cover, Some rubber washers should be added when installing the LCD, and then put the LCD into the front cover.

# Installing Driver

## Start installation

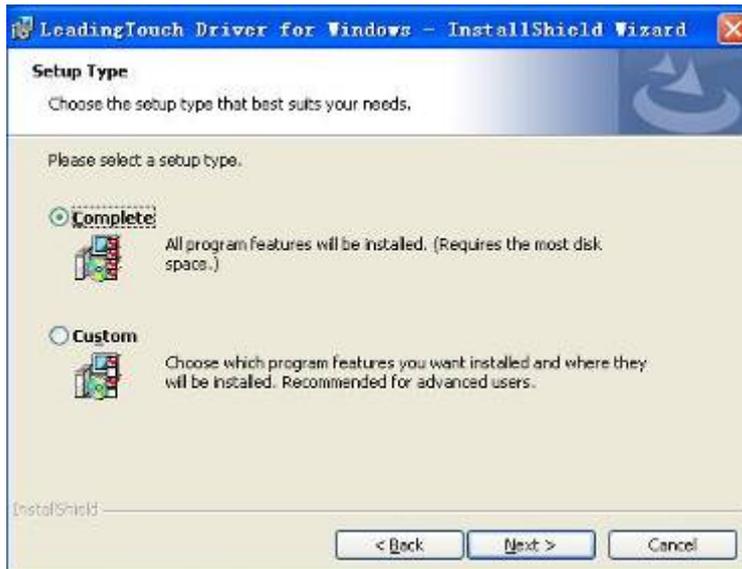
Double click setup.exe file to start installation.  
Firstly install resource kit for driver



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.

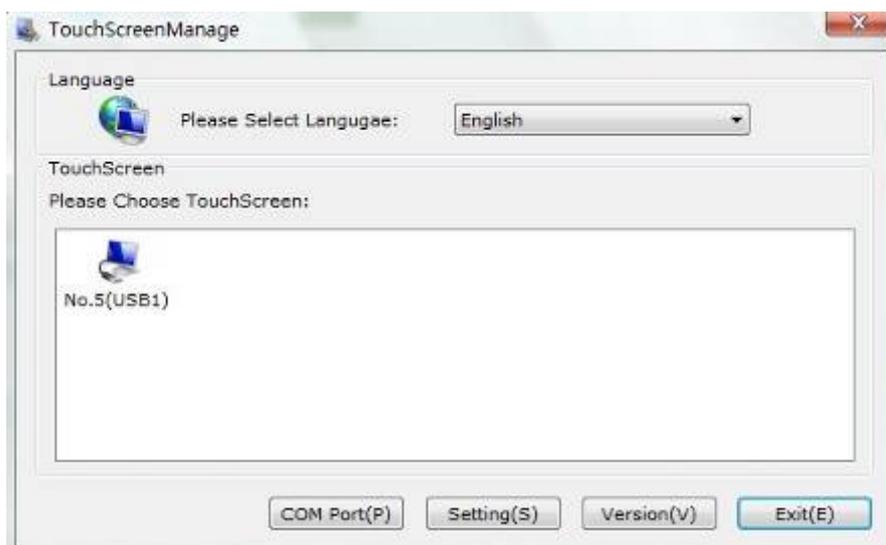


After installation, double click LeadingTouchSetup on desktop to enter calibration program.



## Introduction to driver setup and function

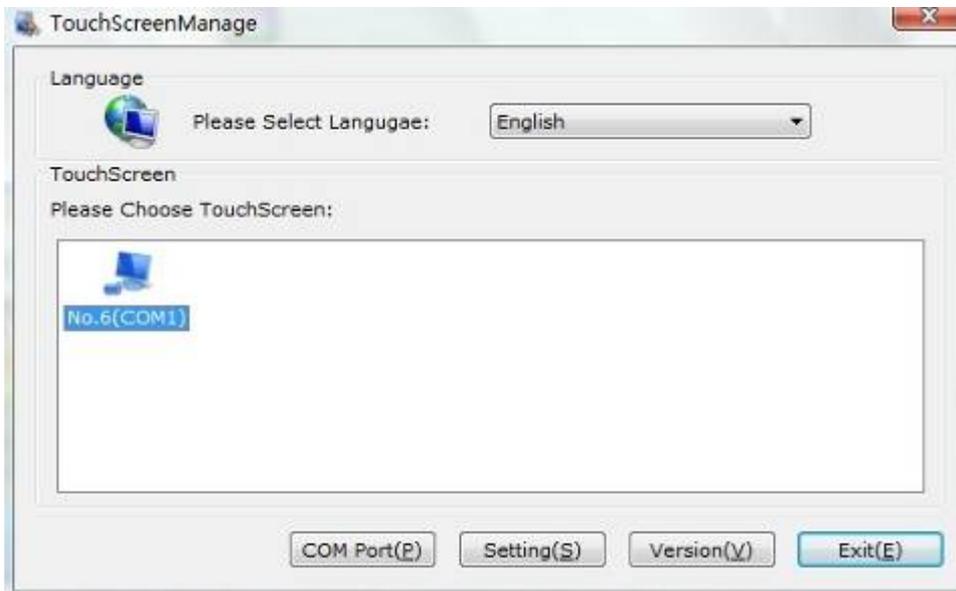
### Touchscreen administration interface



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).



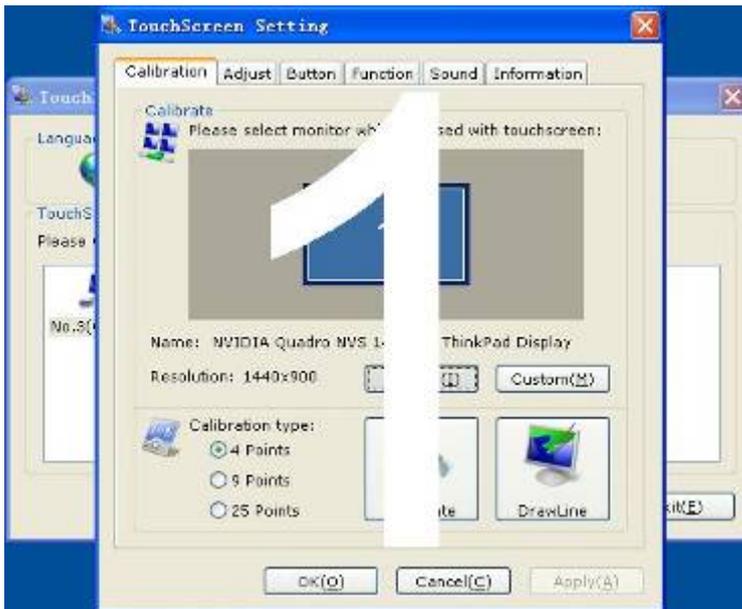
### Driver version information



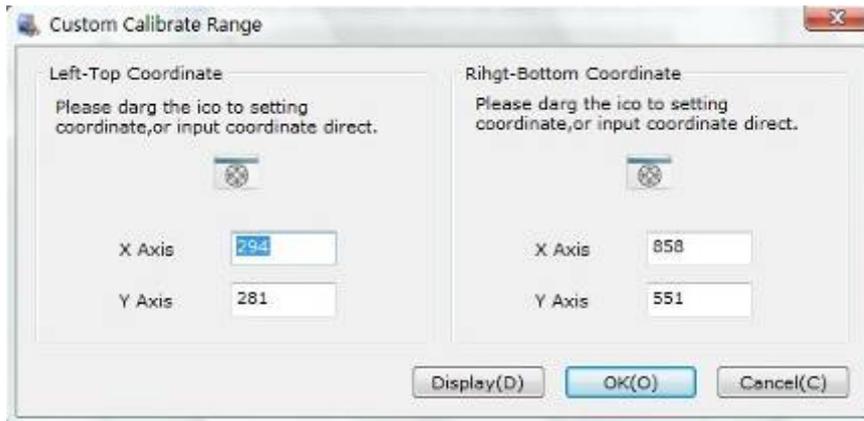
### Touchscreen setting



**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 SAW 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.

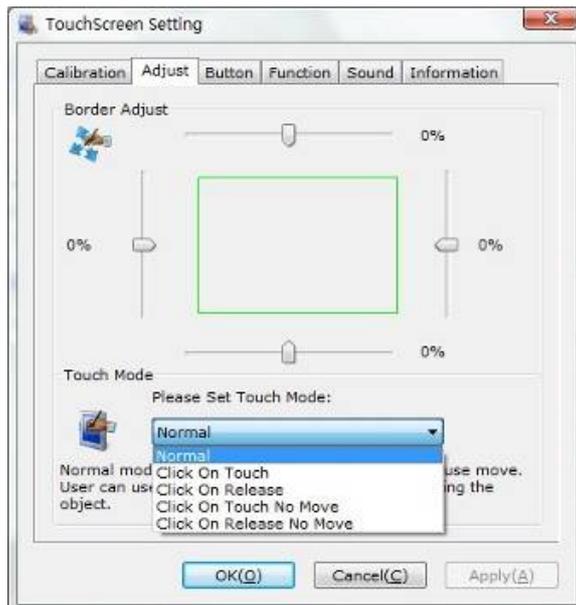


After calibration, you can choose:

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

### **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:

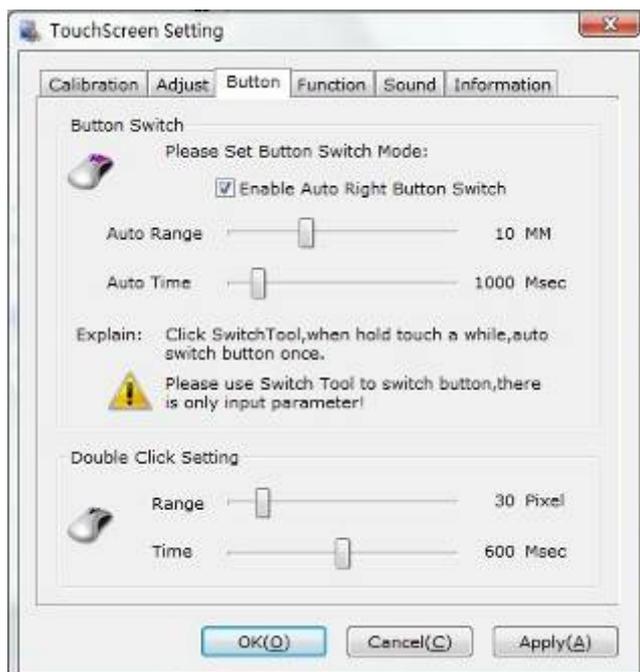
Click On Touch: indicates the response when your finger touches on the panel

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

### Touchscreen setting-Button



[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.

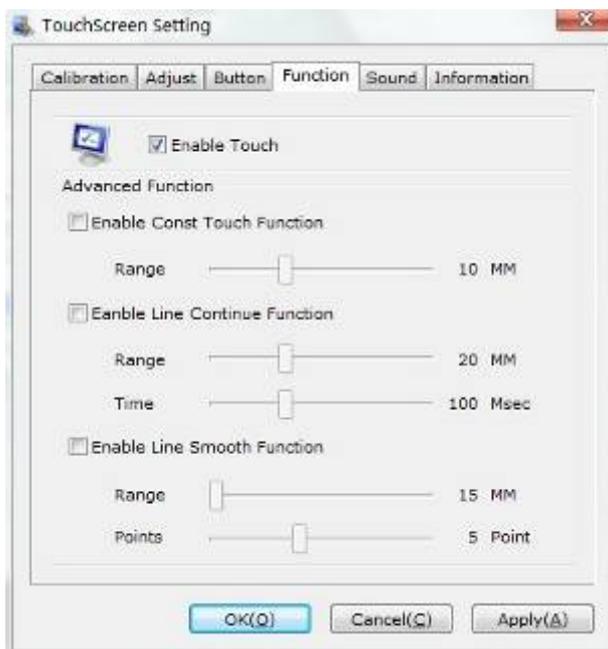
[Double Click Setting]:

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.

## 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

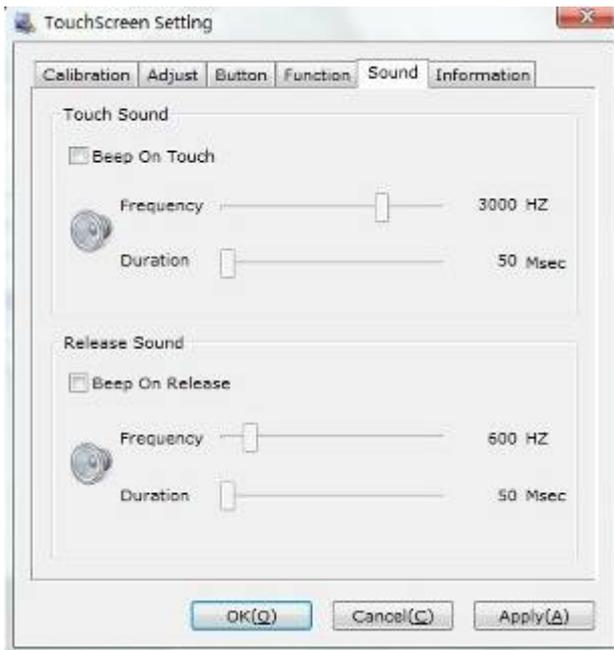
Enable Line Continue Function: Settings for handwriting input or drawing.

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

## 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

### 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”.

## FAQ

Q: Touchscreen no reaction. LED on control card is constantly on for 3 seconds, then snuff out and be constantly on during touch.

A: Phenomenon below indicates touchscreen and control card are in good condition, you can find out problem as below method.

- 1: if right driver is installed.
- 2 : If COM port selected in program is the right one in use.
- 3 : If Jumper on control card meet current driver.
- 4 : If COM port of computer can work normally.

5 : If computer COM port is in use by other device.

6 : If there is any mistake information from operating system.

Solution:

1: Install a right driver

2 : Set program COM port as the one in use. 3 : Install a right driver. For jumpers and driver corresponding relationship please refer to Jumper setting description.

4 : Inspect if Serial or USB port is open in mainboard bios file, if there is any hardware problem(can inspect by serial or USB interface mouth).

5 : Change to another serial port or uninstall other device.

6 : Change another host or re-install operating system.

Q Touch no action and LED constantly on.

A This indicate touchscreen and control card are not in good preparation, please check following below steps

1 : If space in monitor or cabinet for touchscreen is enough, transducers on touchscreen may be crushed.

2 : If protected film is tear off

3 : If reflection texture in touchscreen is dirty.

4 : If adopts wrong dust-proof strips or assemble it too tight.

5 : If Control card temperature is too high.

6 : If 12pin cable, signal cable on touchscreen, or control card is broken.

Solution

1 : Change another monitor, cabinet or touchscreen.

2 : Tear off protected film

3 : Clean touchscreen

4 : Adopts right dust-proof strips and assemble them not too tight.

5 : Remove control card to ventilated environment

6 : Change another touchscreen or control card.

Q Touch no reaction, LED flickers.

A That indicate a communication mistake between touchscreen and control card. Please settle it as following steps

1 : Check if power supply for control card is unstable.

2 : Check if there is water or other dirty on touchscreen.

3 : Check if cable connected to touchscreen and control card is loosing.

4 : Check if touchscreen and control card is broken.

Solution :

1 : Change another host or adopt a stable power.

2 : Clean touchscreen and restart computer.

3 : Re-connect touchscreen and control card.

4 : Change another touchscreen or control card

Q Touch no reaction, LED is off constantly.

A That indicate there is no current through control card. Please check as following steps.

1 : Check if 232 or USB cable is not in good condition or connection.

2 : Check if power cable is not in good condition.

3 : Check if control card is not in good condition.

Solution

1 : Re-connect cable or change another cable

2 : Change another power cable

3 : Change another control card

Q Cursor not move with finger, has deviation.

A This is caused by inaccurate calibration, please check according to following directions.

1 : Check if calibrate touchscreen uncorrectly.

2 : Check if changed resolution without re-calibration

3 : Check if jumper setting on control card meets current driver

4 : Check if touchscreen is dirty

5 : Check if control card temperature is too high to work normal, and if there is influence from other high frequency device.

6 : Check if touchscreen and control card is in good condition

Solution

1 : Redo calibration test, be sure let your finger overlap with red circle center in calibration

2 : Redo calibration test

3 : Setup right jumper and driver and redo calibration

4 : Clean touchscreen

5 : Remove control card to low temperature and influence place

6 : Change another touchscreen or control card

Q: Cursor jump all around during touch, LED flickerss

A: The phenomenon seldom happen, you can follow below steps to solve it.

1 : Check if use unqualified dust-proof strips to crush touchscreen reflection texture too tightly

2 : Check if there is water or other contamination on touchscreen surface.

3 : Check if control card temperature is too high to work normal, and if there is influence from other high frequency device.

4 : Check if control card power supply is unstable

5 : Check if touchscreen or control card is defective

#### Solution

1 : Use qualified dust-proof strips and don't assemble it too tight

2 : Clean touchscreen

3 : Remove control card to low temperature and influence place

4 : Change another host or provide a stable power supply

5 : Change another touchscreen or control card

Q: Cursor can't move, LED flickers

A: This usually caused by software mistakes, please solve it as following instructions

1 : Check if calibrate incorrectly

2 : Check if jumper setting on control card meets current driver

3 : Check if there is water or other contamination on touchscreen surface, or host is hang over

4 : Check if adopt unqualified dust-proof strips or assemble touchscreen incorrectly.

#### Solution:

1 : Redo calibration

2 : Make certain driver is correct installed and redo calibration

3 : Clean touchscreen and restart computer

4 : Adopt qualified dust-proof strips and assemble it not too tight

Q: A band area in screen is no touch action or must touch with great stress.

A: That is a signal attenuation phenomenon in that area, may caused by improper assembly or dust.

1 Check if touchscreen and monitor front frame is separated by our dust-proof strips

2 Check if there is dust accumulated on touchscreen reflection texture

3 Check if touchscreen assembly is too tight to transmit signal

Solution

1 Adopt our dust-proof strips to separate touchscreen and monitor front frame

2 Clean touchscreen reflection texture

3 Loosing touchscreen and monitor front frame