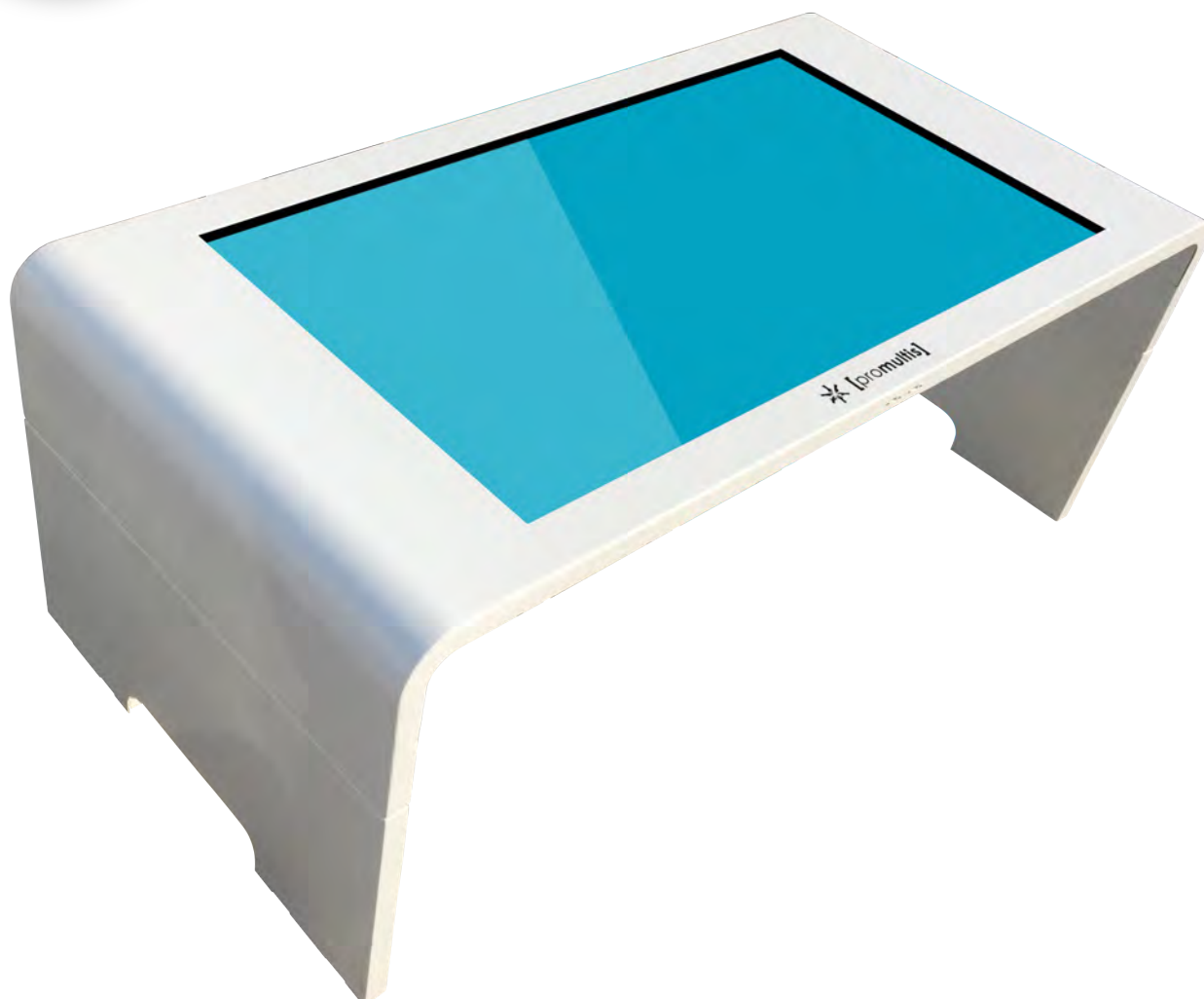




# [promultis]

## touchtable



## USER'S MANUAL

### CAUTION

- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- This User's Manual includes detailed usage instructions for your product.
- Please read this manual thoroughly.
- Figures and illustrations in this User Manual are provided for reference only and may differ from actual equipment appearance. Equipment design and specifications may be changed without notice.
- Due to the processes required for manufacturing a large format Projected Capacitive product Promultis will only accept warranty requests for units that have a blemish, mark or smear on the touch skin that is 5% or larger than the total interactive area.

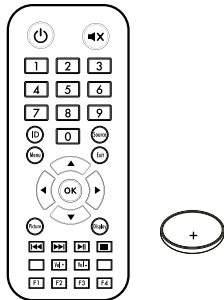


**[promultis]**  
MULTITOUCH SOLUTIONS

For more exciting multitouch products visit  
[www.promultis.info](http://www.promultis.info)  
or call +44 (0) 239 251 2794

## Getting started

The following items are included in your product box.



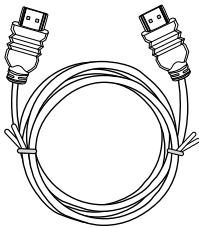
Remote Control



Promultis Manual



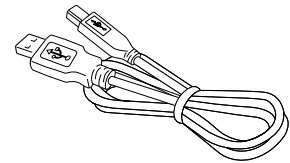
NUC PC (optional)



HDMI Cable



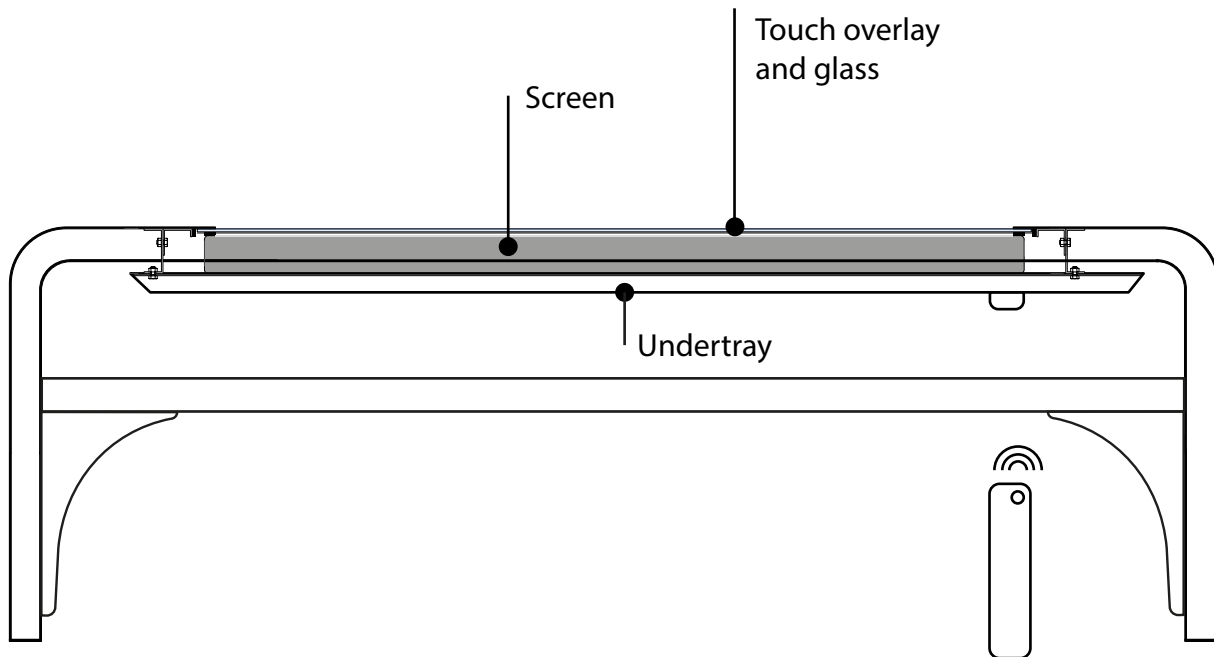
AC Power Supply



USB Cable

## Start the device

1. Check the plug is switched on at the wall socket.
2. When the power is turned on the screen should power up.
3. After a few seconds, if the screen is still blank, take the TV remote control, point under the table on the right hand side and press the power button.



Point controller at underneath the front right of the table and press power button to start display

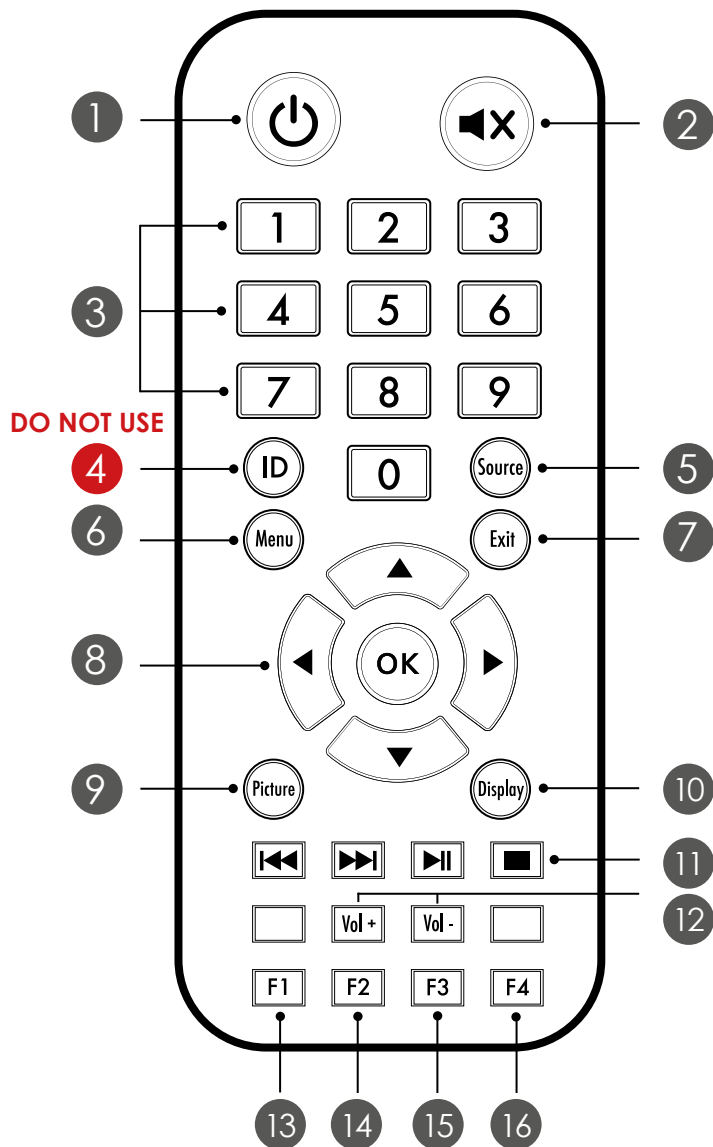
Within the Promultis Infrared touch table frame is a commercial-grade tv screen and a touch overlay bonded to tempered glass.

Infrared touch screens are based on light-beam interruption technology. Instead of an overlay on the surface, a frame surrounds the display. The frame has light sources, or light emitting diodes (LEDs) on one side and light detectors on the opposite side, creating an optical grid across the screen. When an object touches the screen, the invisible light beam is interrupted, causing a drop in the signal received by the photo sensors.

The overlay is powered via standard USB connected to a PC and does not require an external power source.

The Promultis table has 32 touch points which represents how many simultaneous fingers, on the screen, can be recognized by the touch overlay.

# Controller



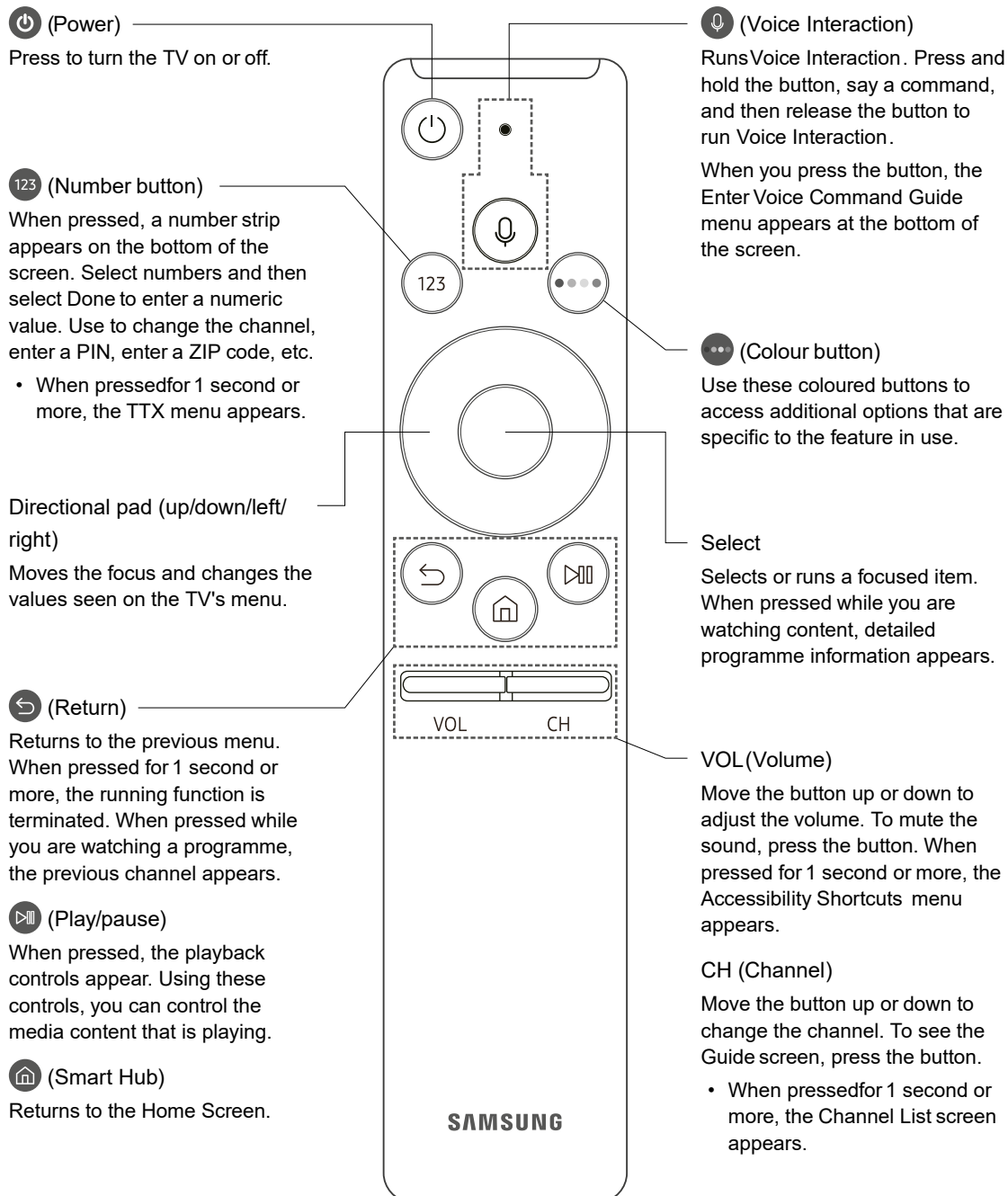
1	<b>Power</b> Press to turn the IU on and off
2	<b>MUTE</b> Press to temporarily switch the sound off
3	<b>CHANNELS</b> Change channel inputs
4	<b>ID (Screen Identification)</b> <b>DO NOT PRESS AS THIS WILL DISABLE ALL REMOTE FUNCTIONS*</b>
5	<b>SOURCE/ AV/ INPUT</b> Press all to display a menu of all available input sources
6	<b>MENU</b> Press to display the on-screen menu
7	<b>EXIT</b> Press to close current menu
8	<b>OK</b> Press to accept your selection or display the current mode  Press to select on-screen menu items or change menu values
9	<b>Picture</b> Change picture setting, user, high brightness, standard, sport, cinema
10	<b>Display</b> Model info on screen
11	<b>REWIND/FORWARD/PLAY/PAUSE/STOP</b> Able to rewind, forward, play, pause and stop the screen
12	<b>Vol+ / Vol -</b> Press to increase or decrease the volume
13	<b>F1</b>
14	<b>F2</b>
15	<b>F3</b>
16	<b>F4- FREEZE</b> Press to freeze the picture and doesn't pause PC

\* If enabled turn off screen manually to reinitiate the remote control

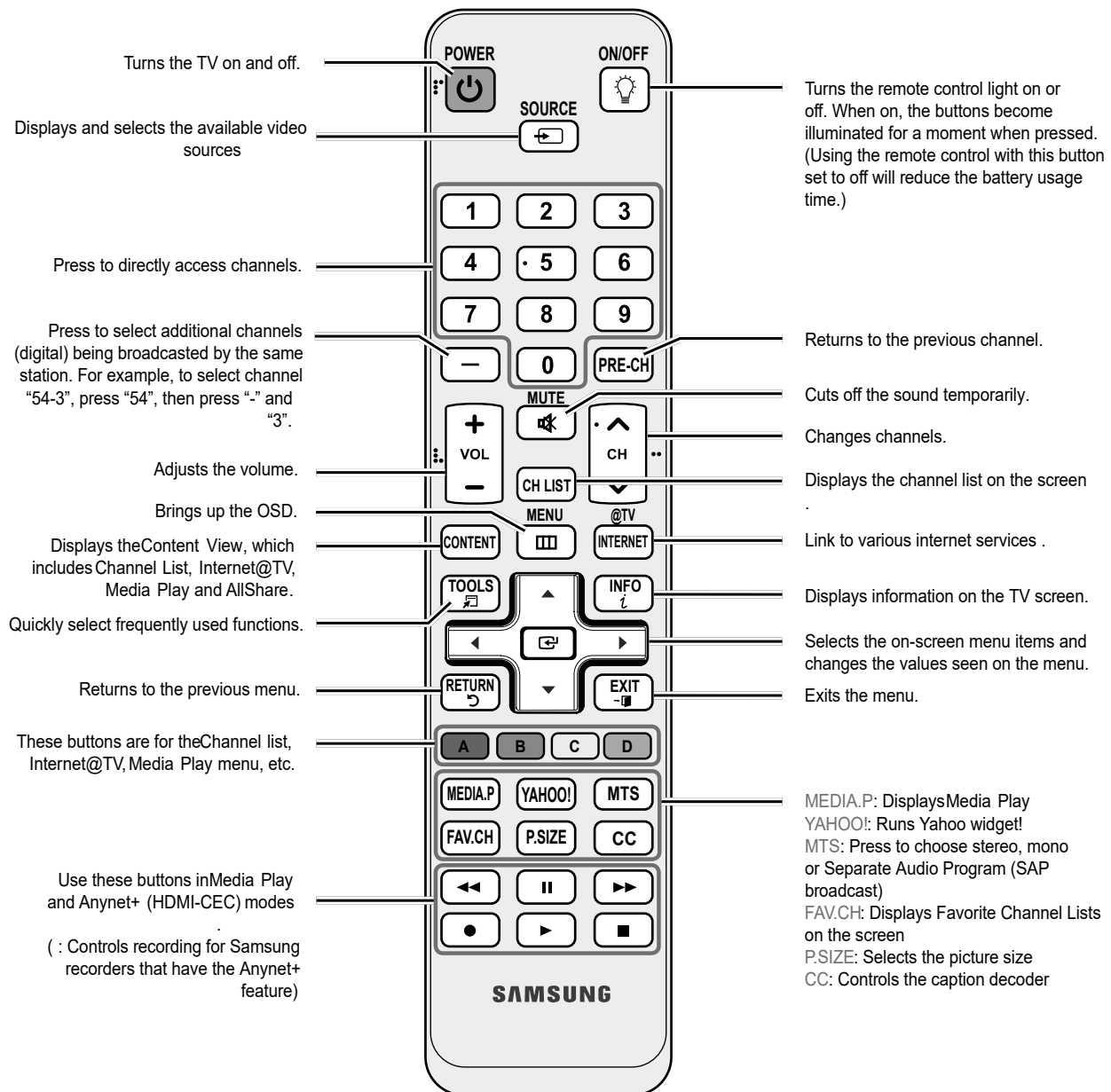
# Controller for Samsung

## About the Buttons on the Samsung Smart Remote

- The images, buttons, and functions of the Samsung Smart Remote may differ depending on the model.

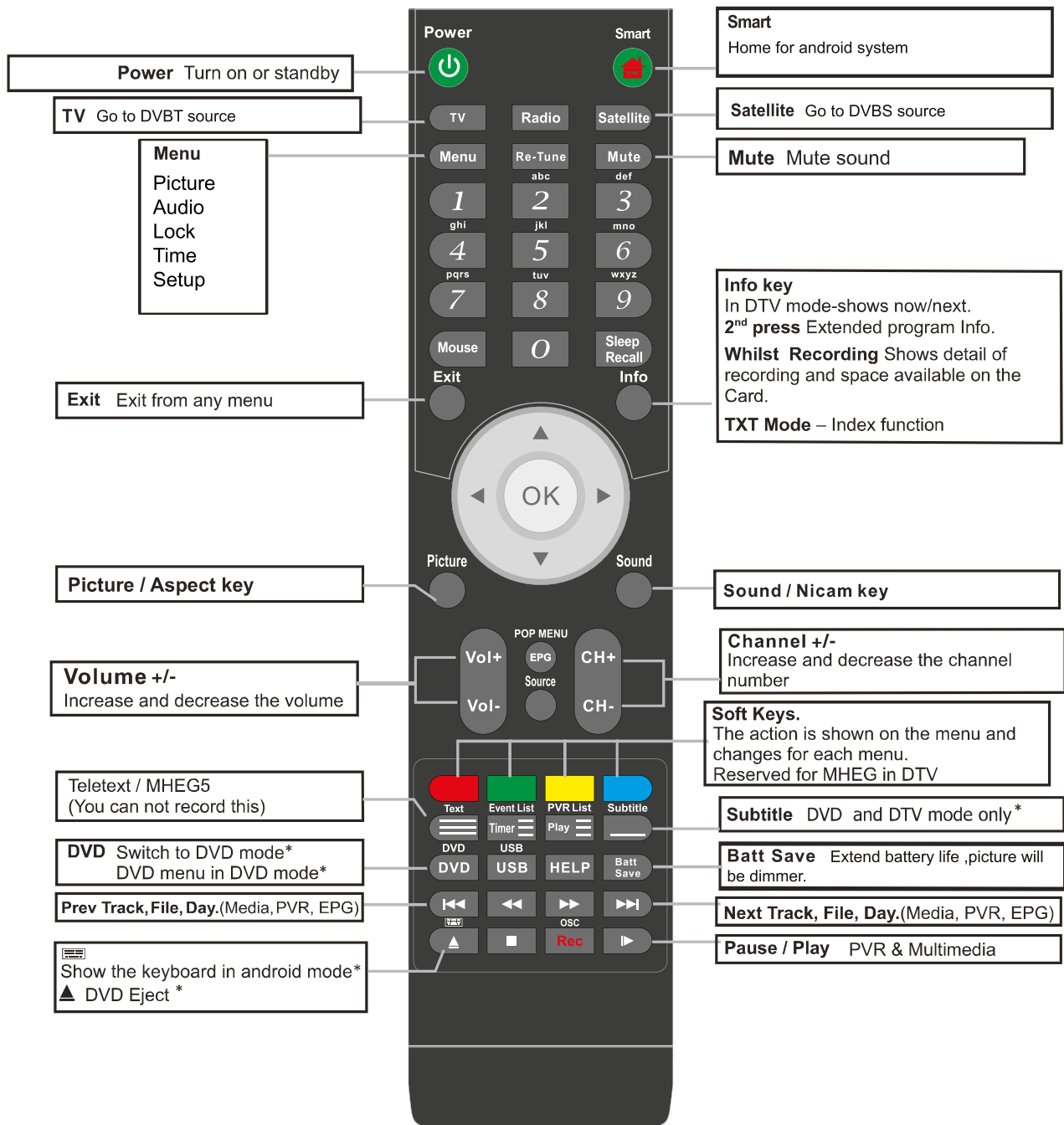


# Controller for Samsung

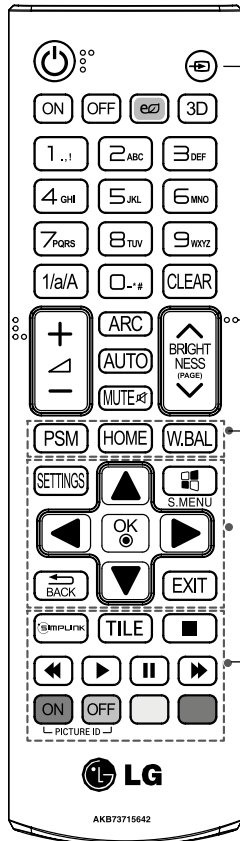


# Controller for Cello

Dependant on the Model of the TV some keys will have no function



# Controller for LG



- POWER** Turns the monitor on or off.

**MONITOR ON** Turns the monitor on.

**MONITOR OFF** Turns the monitor off.

**ENERGY SAVING** Reduces power consumption by adjusting peak screen brightness.

**INPUT** Selects the input mode.

**3D** Used for viewing 3D videos. (This model does not support this.)
- 1/a/A** Toggles between numerical and alphabetical. (Depending upon the model, this feature may not be supported.)

**Number and Alphabet buttons** Enters numerical or alphabetical characters depending upon the setting. (Depending upon the model, this feature may not be supported.)

**CLEAR** Deletes the entered numerical or alphabetical character. (Depending upon the model, this feature may not be supported.)
- Volume Up/Down Button** Adjusts the volume.

**ARC** Selects the Aspect Ratio mode.

**AUTO** Automatically adjusts picture position and minimizes image instability (available for RGB input only). (Depending upon the model, this feature may not be supported.)

**MUTE** Mutes all sounds.

**BRIGHTNESS** Adjusts the brightness of the display. PAGE Function is not supported in the this model. (Depending upon the model, this feature may not be supported.)
- PSM** Selects the Picture Mode.

**HOME** Activates the Launcher.

**W.BAL** Enters the White Balance menu.
- SETTINGS** Accesses the main menus or saves your input and exit menus.

**S.MENU** SuperSign menu key (Depending upon the model, this feature may not be supported.)

**Navigation Buttons** Scrolls through menus or options.

**OK** Selects menus or options and confirms your input.

**BACK** Allows you to move back one step in the user interaction function.

**EXIT** Quit all OSD tasks and applications.
- SIMPLINK** Allows you to control various multimedia devices to enjoy multimedia simply by using the remote control through the Simplink menu. (Depending upon the model, this feature may not be supported.)

**TILE** Selects the TILE Mode.

**PICTURE ID ON/OFF** When the Picture ID number matches the Set ID number, you can control whichever monitor you want in multi-display format.

**USB Menu Control Buttons** Controls media playback.

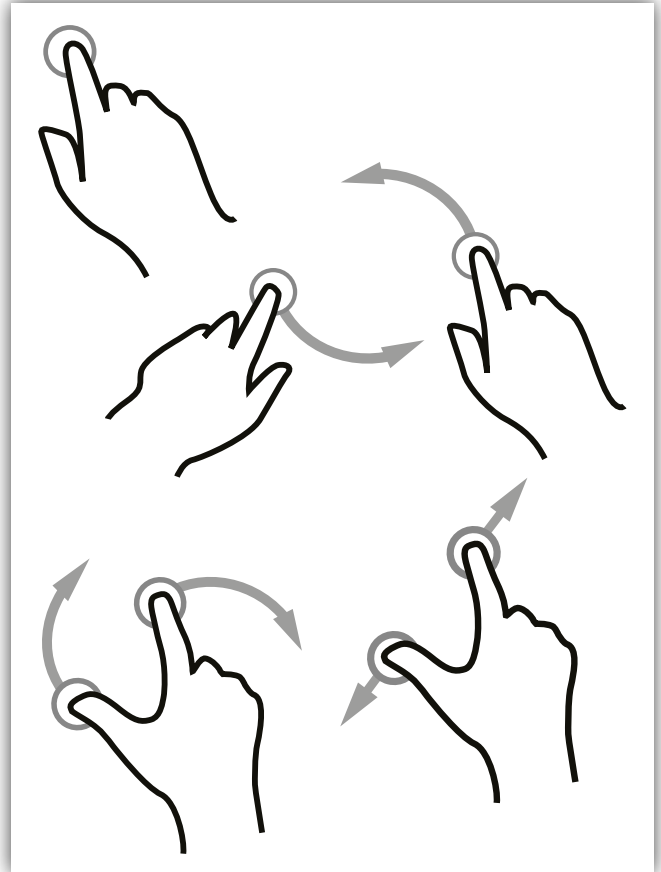


## Operation Guidance

When using the screen the gesture functions are similar to using your touch screen phone or tablet but on a much larger scale. What has to be born in mind when using a large scale interactive touch screen is how the technology works.

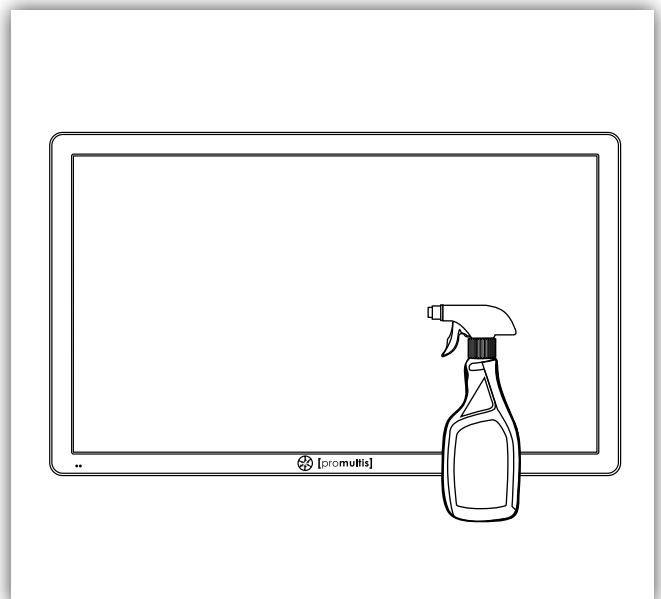
If you could imagine a matrix of horizontal and vertical infrared beams crossing close to the surface of the screen so that when you place a finger close to the screen you are breaking the beams to let the computer input the coordinate to the software for its subsequent action.

The points you need to note are unintentional breakings of the beams giving erroneous response; these include loose fitting arm sleeves which may dangle onto the screen or other items of clothing or jewellery, objects can also be left on the screen which will cause irrational response.



## Screen Cleaning

Over time and use the screen will become tarnished with finger prints; to clean a mist spray class cleaner / degreaser should be used when the screen is at a 45 degree angle. Should any liquid be dropped on the screen when it is in the horizontal position this should be mopped up with a liquid absorbent cloth prior to cleaning.



## Touch calibration

Promultis touch screens are calibrated with the pre-installed Windows Touch Pack and should be working automatically. The settings should not require any further adjustment.

### If there is no touch response

Please check the power connections to the overlay are pushed in fully. Also check the USB cable is connected into the overlay and the PC, try disconnecting and re-connecting both.

After checking all cables are fully connected please try shutting down or restarting the PC.

### If the touch is not precise

Go through calibration setup below.

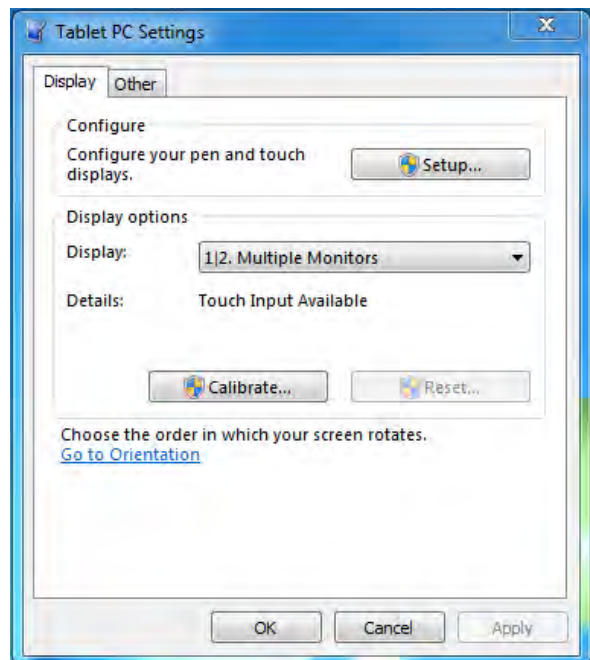
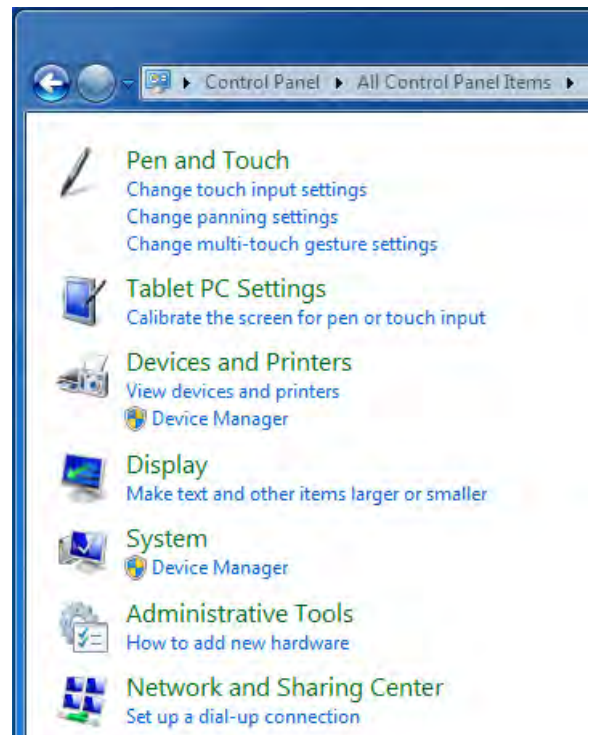
If there are any further faults or issues, please contact Promultis technician.

## Touch calibration settings

If you need to calibrate your touch screen in Windows use the following steps: Click Start and then Control Panel. Under Tablet PC Settings, tap Calibrate the screen for pen or touch input. On the Display tab, under Display options, tap Calibrate and then Yes to allow the program to make changes.

The PC settings are only available when the touch screen is properly detected. If the option is not visible, ensure that the USB cable is connected to the PC.

If calibration does not resolve your problem, tap Reset Calibration data under Display options on the Display tab. This will remove all previous calibration data and reset your monitor display back to default settings.



## 1. Definition of words

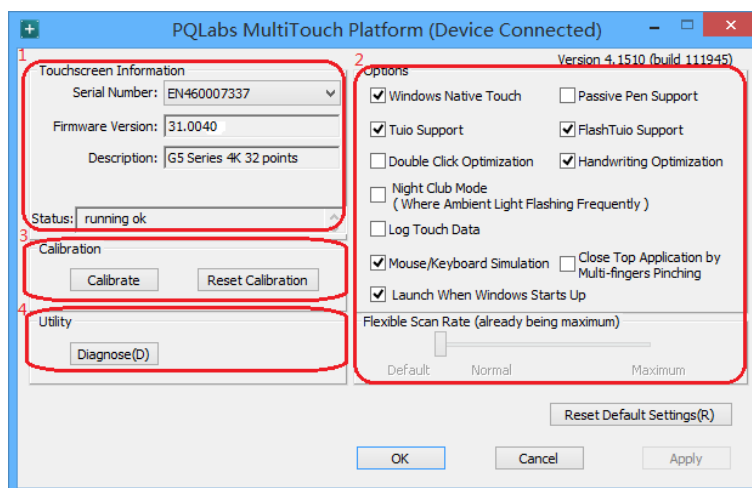
- PQ Labs Multi-Touch Platform  
Released software after PQ driver installed
- Multi-Touch Doctor  
A debug tool integrated into Platform
- TUIO (Table-Top User Interfaces Objects)  
A third party protocol supporting multi-touch feature
- Ambient lights  
In some working condition, it may have infrared lights from some kinds of lamps, or from directly casting or reflecting sunlight.

## 2. Platform Interface and Function

The platform application includes two sections: platform and doctor.

### 2.1 Platform

Platform main interface

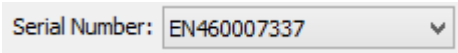
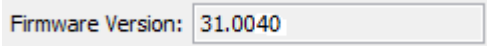
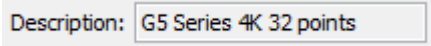
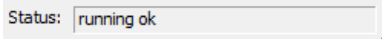
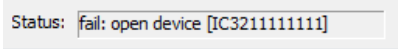
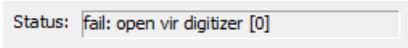
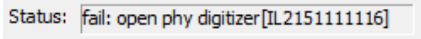


Platform main function:

- TUIO protocol support  
Any application developed by TUIO protocol can get touch messages from PQ Labs platform

- Windows Native Touch support  
Support for applications developed based on Windows native touch
- PQ Labs SDK support  
PQ Labs provides SDK for customers, presently it supports C/C++、C# (WPF 4.0)、Flash (Flash Player v10.1 or above)、AIR 2.0 environment.
- Mouse/Keyboard mode support  
PQ Labs supports for other operating system which does not support touch feature. Under this circumstance, PQ hardware works as a mouse/keyboard to support your applications.

## 2.11 Touchscreen Information

- Serial Number  
Unique ID of a touchscreen  

- Firmware Version  
Internal firmware version of a touchscreen  

- Description  
Maximum touch points that a physical touch screen supports  

- Status  
Show current status of a touch screen.  
It may be:
  - a. Working normal  

  - b. Open bulk device failed  

  - c. Open virtual digitizer failed  

  - d. Open physic digitizer failed  

- Platform version:  
Version of the driver

## 2.12 Option

- Windows Native Touch

Enable/Disable Windows Native Touch, enabled by default

☒ Windows Native Touch

- Tuio Support

Enable/Disable TUIO UDP support, enabled by default

☒ Tuio Support

- Passive Pen Support

Enable/Disable Passive Pen Support, disabled by default

☐ Passive Pen Support

- Flash Tuio Support

Enable/Disable TUIO TCP support, enabled by default

☒ FlashTuio Support

- Double Click Optimization

Make you easier to double click to open an item, disabled by default

☐ Double Click Optimization

- Handwriting Optimization

When you draw a line to the end and release your finger, it may cause a "joggle", this feature enabled will reduce that "joggle", enabled by default

☒ Handwriting Optimization

- Night Club Mode

This feature can enhance anti-jamming performance of PQ Labs hardware. When there is some lights interface, this feature will let touch screen work normal. Disabled by default.

☐ Night Club Mode  
( Where Ambient Light Flashing Frequently )

- Log Touch Data

This feature can log touch data, end customer can enable it to make a log for PQ Labs support team. Disabled by default.

☐ Log Touch Data

- Mouse/Keyboard Simulation

PQ Labs supports for other operating system which does not support touch feature.

Under this circumstance, PQ hardware works as a mouse/keyboard to support your applications. Enabled by default.

☒ Mouse/Keyboard Simulation

- Close Top Application by Multi-fingers Pinching

Close Top Application by Multi-fingers Pinching. Disabled by default.

☐ Close Top Application by Multi-fingers Pinching

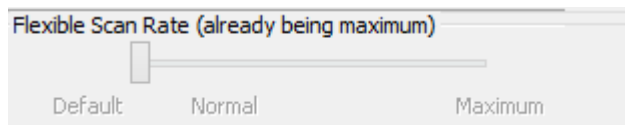
- Launch when Windows Start up

Strongly recommended to enable it. Enabled by default.

☒ Launch When Windows Starts Up

- Flexible Scan Rate

Allow end customer to adjust scan rate of hardware, you may get a higher FPS of hardware.



- Reset Default Settings(R)

Reset to these feature settings in factory.

Reset Default Settings(R)

## 2.13 Calibration

- Calibration

Allow end customer to call calibration utility

Calibrate

- Reset Calibration

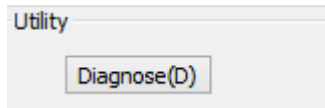
Discard stored calibration data, and reset to default data in theory  
(For large and customized hardware, this function is recommended if hardware mounts precisely)

Reset Calibration

## 2.14 Utility

- Diagnose

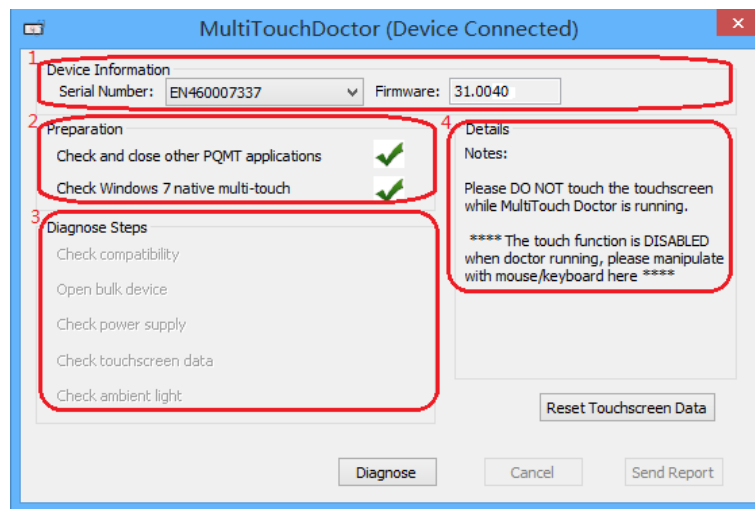
Allow end customer to call the MultiTouch Doctor tool for troubleshooting.



## 2.2 Multi-Touch Doctor

Multi-Touch Doctor is used for troubleshooting when end customer encounters a problem.

Multi-Touch Doctor interface:



### 2.21 Device Information

This area show basic information of PQ Labs hardware, including Serial Number, and Firmware.

- Serial Number  
the unique identification of hardware
- Firmware

### 2.22 Preparation

- Check and close other PQMT applications  
Stop other application which may occupy PQ hardware and prepare for doctor running.  
  - ✓ PQ hardware is disconnected from all other application connection
  - ✗ Running environment doesn't prepare
- Check Windows 7 native multi-touch  
Check if current Windows OS supports native touch, or if native touch disabled

disabled.

- ✓ Windows native touch and multi-touch feature are supported Windows
- ✗ native touch not supported, or multi-touch feature is disabled.

## 2.23 Diagnose Steps

- Check compatibility

Check if current plugged hardware is supported by the Platform

- ✓ Current hardware is supported
- ✗ Current driver is too old to support the hardware

- Open bulk device

Check if current plugged hardware data can be read correctly

- ✓ PQ hardware is disconnected from all other application
- ✗ connection Running environment doesn't prepare

- Check power supply

This option is only meaningful for part series product which is powered by USB cable. This option will report if current got from PC is enough

- ✓ Power enough or function not available for power adapter
- ✗ Power from USB cable is not enough

- Check touchscreen data

It will give out a score after finishing this option check.

- ✓ Hardware check is ok;
- ✗ Hardware may be not in a good status, please click on 'send report' and contact PQ Labs support team

- Check ambient light

Check if surrounding lights condition is good

- ✓ No lights interference, or within normal range
- ✗ Surrounding lights is too strong, the hardware may not be disturbed



## 3. How to install/uninstall


### 3.1 Preinstallation

a. Support OS:  
Windows XP/Vista/7/8/10

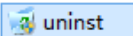
b. PQ Labs website downloading link:

[http://www.pqlabs.com/download/mt\\_driver\\_kit.exe](http://www.pqlabs.com/download/mt_driver_kit.exe)

### 3.2 Install

✓ Steps: double click " " → Click on "Yes" → Click on "Next" → Select a different install path if you need → Click on "Install" → Click on "Finish" to reboot

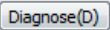

### 3.3 Uninstall

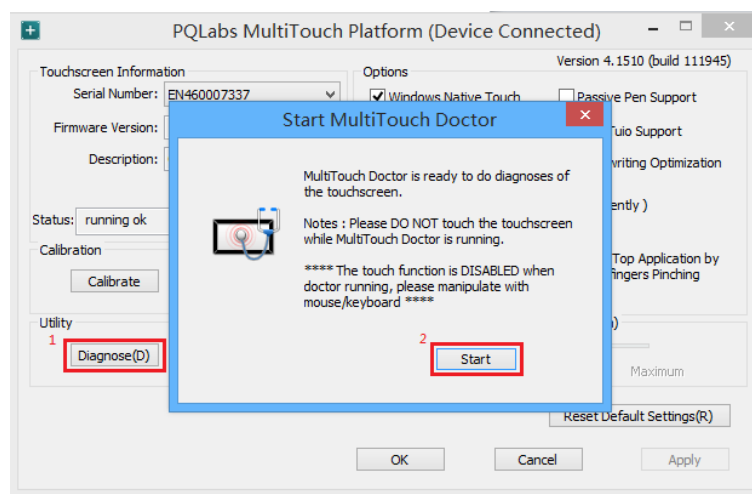
✓ Step: Open install path "C:\Program Files (x86)\PQLabs\MultiTouchPlatform" → Click on " " → Click on "Yes" on the new popup.

## 4. What can I do when touch overlay fails to work

### 4.1 Build a diagnosis session

Start the Doctor:

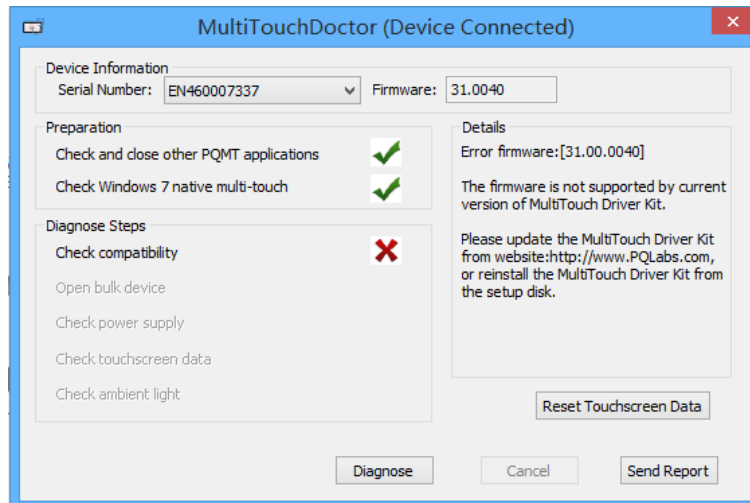
✓Steps: Click on " " → Click on " "



## 4.2 Diagnosis result analysis

If you find a red error in test result, please refer these below options to find a solution.

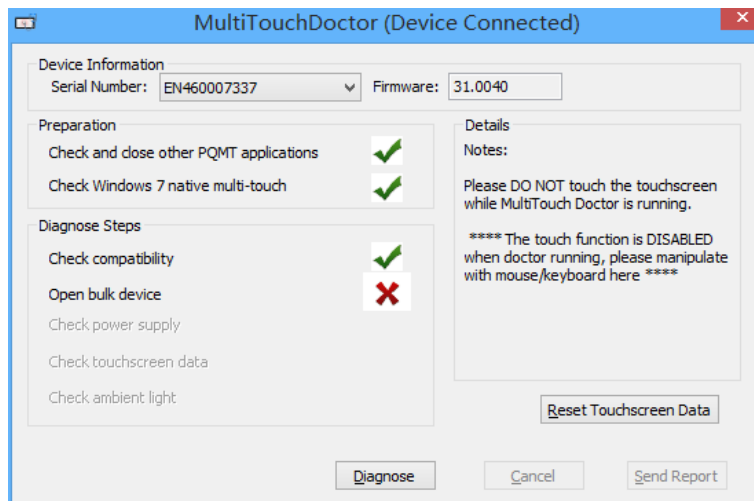
- Check compatibility



### ◎ Solution:

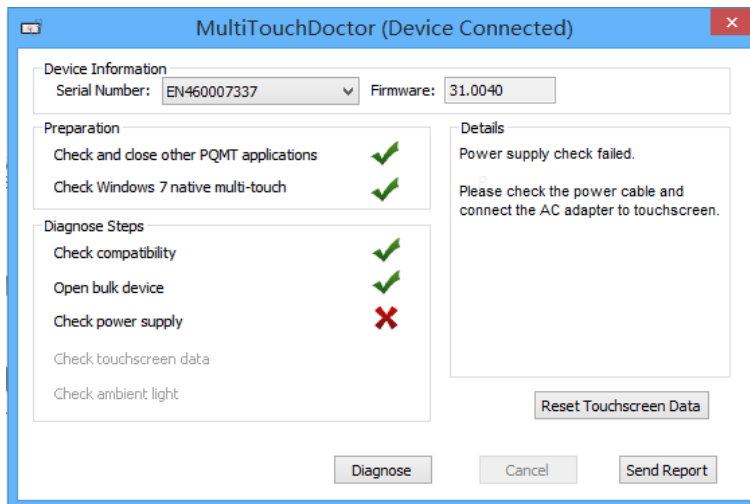
- ✓ Upgrade to latest driver from PQ Labs official website:  
<http://www.pqlabs.com/support.html>

- “Open bulk device” fails



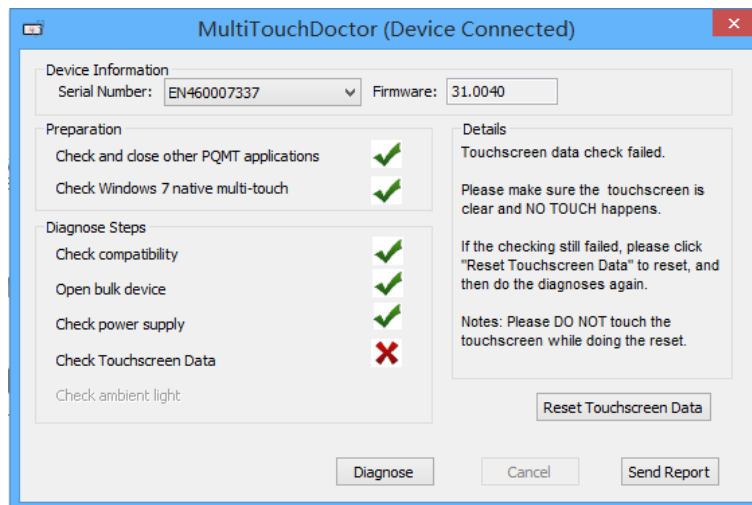
### ◎ Solution:

- ✓ Reinstall PQ labs driver
- Check power supply



🕒 **Solution:**

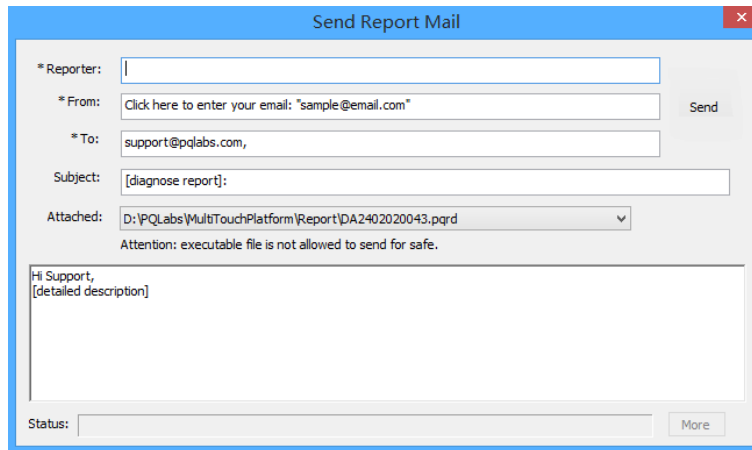
- ✓ Check if the end with two USB heads are plugged into computer, and try to exchange another USB cable if you have
- Check touchscreen data



🕒 **Solution:**

- ✓ Make sure touch surface is clear and without anything might block Signal.
- ✓ In this case, you have to send this report to PQ Labs support team:  
Steps: Click on "Send Report"





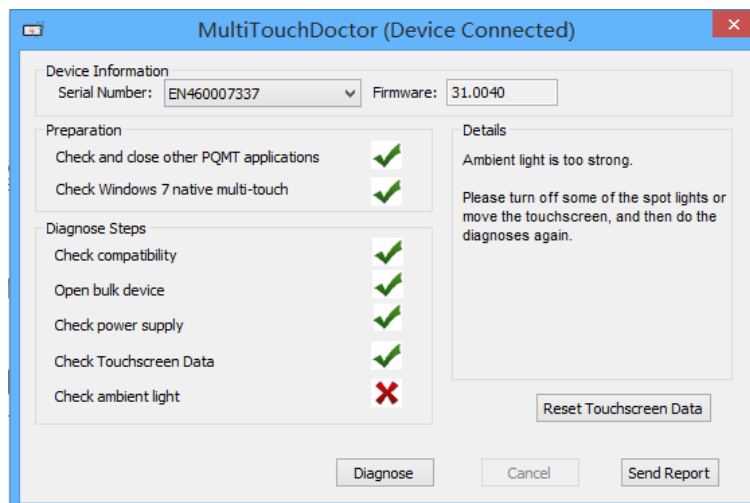
The "Send Report Mail" dialog box contains the following fields and controls:

- \* Reporter:** A text input field.
- \* From:** A text input field with the placeholder text "Click here to enter your email: 'sample@email.com'". A "Send" button is located to the right of this field.
- \* To:** A text input field with the value "support@pqlabs.com".
- Subject:** A text input field with the value "[diagnose report]".
- Attached:** A dropdown menu showing "D:\PQLabs\MultiTouchPlatform\Report\DA2402020043.pqrd". Below this, a warning message states: "Attention: executable file is not allowed to send for safe."
- Body:** A large text area containing the text "Hi Support, [detailed description]".
- Status:** A text input field at the bottom left.
- More:** A button at the bottom right.

→ Fill out the new popup windows with your information and issue description, just click "Send" button if the PC has an internet access.

→ If it is without internet connection, please package the report folder located at "C:\Program Files (x86)\PQLabs\MultiTouchPlatform" by default and send to Support Team (Email: support@pqlabs.com)

- Check ambient light



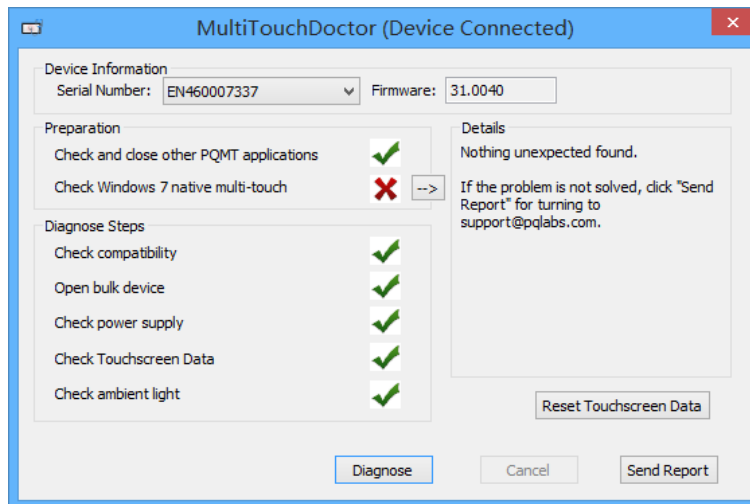
The "MultiTouchDoctor (Device Connected)" window displays the following information and controls:

- Device Information:**
  - Serial Number: EN460007337
  - Firmware: 31.0040
- Preparation:**
  - Check and close other PQMT applications: ✓
  - Check Windows 7 native multi-touch: ✓
- Diagnose Steps:**
  - Check compatibility: ✓
  - Open bulk device: ✓
  - Check power supply: ✓
  - Check Touchscreen Data: ✓
  - Check ambient light: ✗
- Details:**
  - Ambient light is too strong.
  - Please turn off some of the spot lights or move the touchscreen, and then do the diagnoses again.
- Buttons:**
  - Reset Touchscreen Data
  - Diagnose
  - Cancel
  - Send Report

© **Solution:**

- ✓ Generally PQ Labs IR touch screen may be disturbed by Sunlights or Halogen lamps. Please try to remove or decrease any strong lights directly casting to touch screen.
- ✓ If the problem persists, please click on "Send Report" to contact PQ Labs Support Team. For more information, please refer to last option.

- Check Windows 7 native multi-touch



### ◎ Solution:

- ✓ Go to "Control Panel" → "Hardware and Sound" → "Pen and Touch" → Click on tab "Touch" → Make sure both "Use your finger.." and "Enable multi-touch.." options are checked → "OK"

