

eGalaxTouchManager

Auto Tuning Quick Guide

For EXC80H/EXC82H Series



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1 Setup Hardware

eGalaxTouch solution needs to work with stable capacitance. In order to minimize the variation, all conductive mechanical parts must not be floating. Any floating part may cause abnormal touch function. Please make sure GND1, GND2, and GND3 (Figer 1-1) are all connected together before tuning.

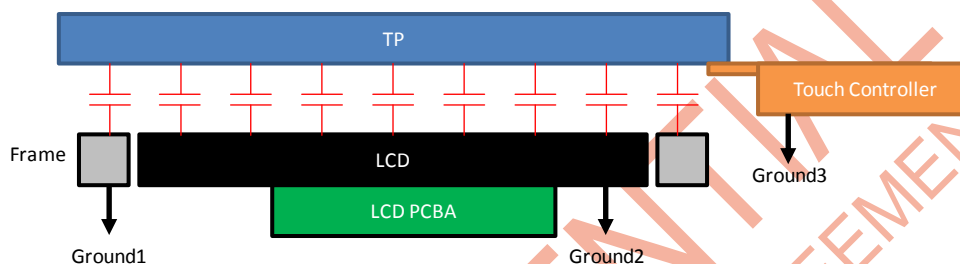


Figure 1-1. GND1, GND2 and GND3 should be connected together to have the same ground

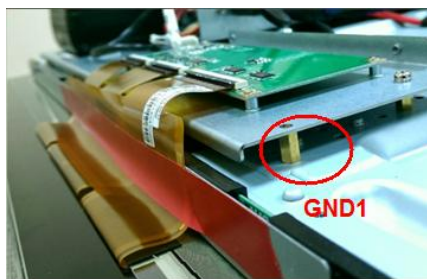


Figure 1-2. GND1 (GND of case)



Figure 1-3. GND2 (GND of LCD panel)

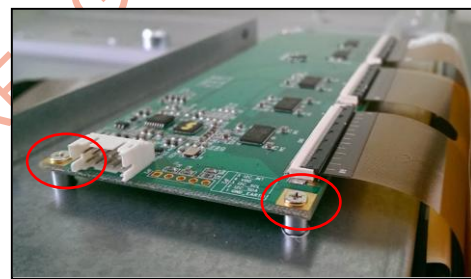


Figure 1-4. GND3 (GND of Touch Controller)

Below shows 4 way to connect all the GND, 1 is the best, 4 is the worst.

1. Screws.
2. Conductive Tape
3. By USB cable.
4. No connection.(not recommend)

Please make sure Tx/ Rx FPC tail have been properly fixed, the unstable FPC may cause unexpected signal interference.

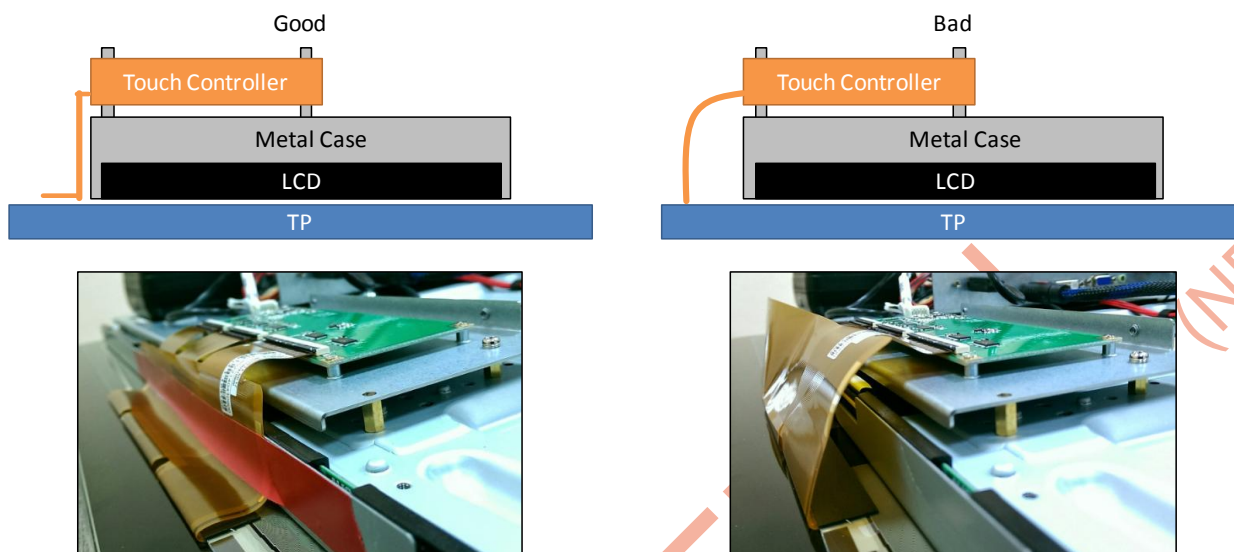


Figure 1-5. FPC Tail should be properly fixed.

Please arrange Tx/ Rx FPC tail tidy, if it is intended to overlap Tx/ Rx tail by some mechanical / interference purpose, please overlap them in a right angle, other angle may cause signal interference between Tx and Rx FPC tail.

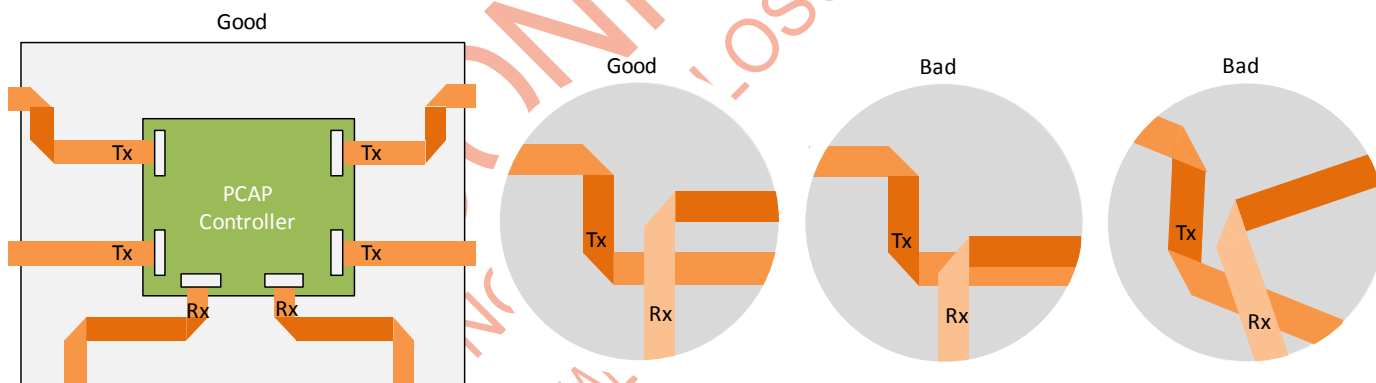


Figure 1-6. Tx/ Rx FPC tail overlap condition.

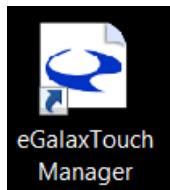
2 Auto Tuning Process

!!! Important !!!

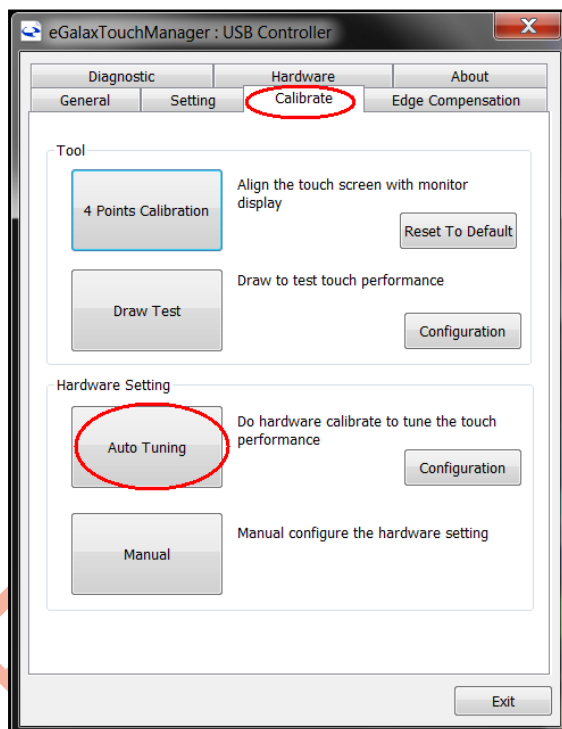
Please make sure the touch panel surface is **“Clean”**.

Any liquid or item on the surface is not allowed while tuning process.

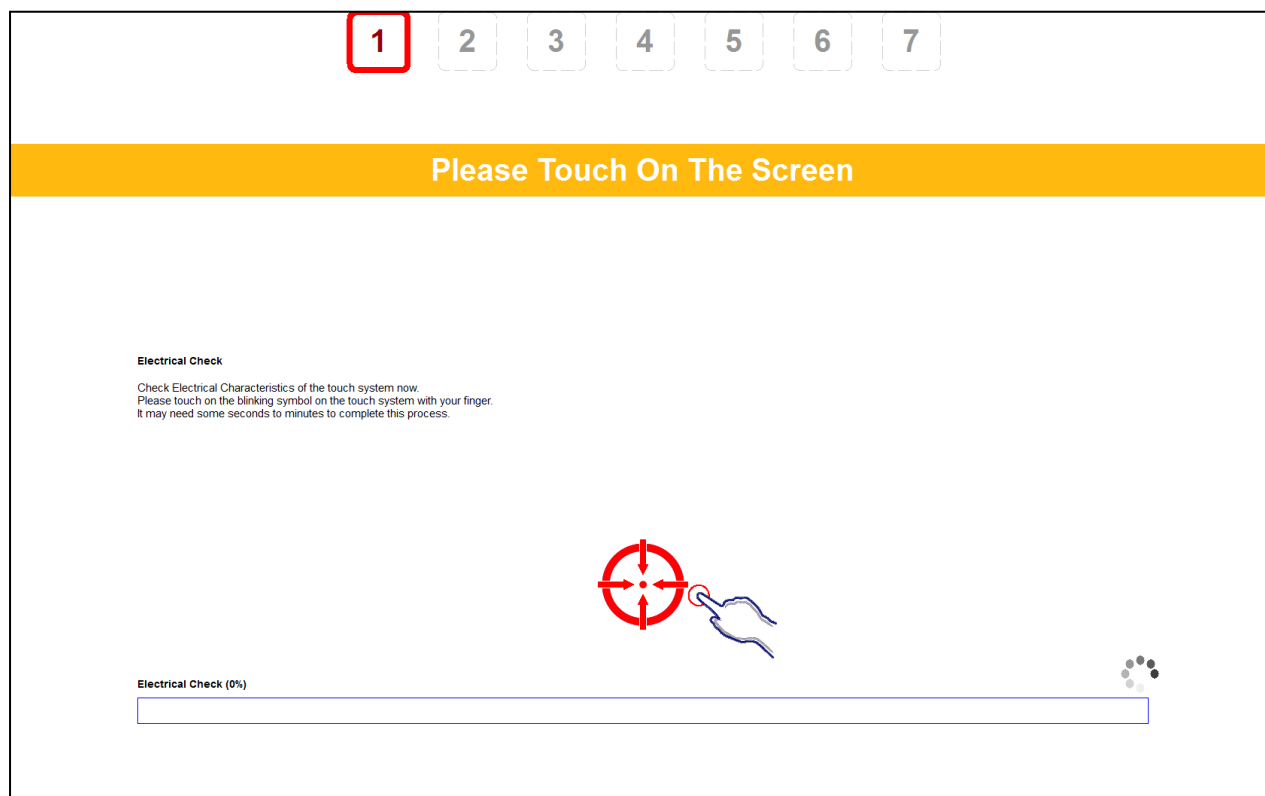
Execute eGalaxTouchManager.



Select “Calibrate” Page >> Click “Auto Tuning” button.



In default setting, there are total 8 steps while auto tuning.

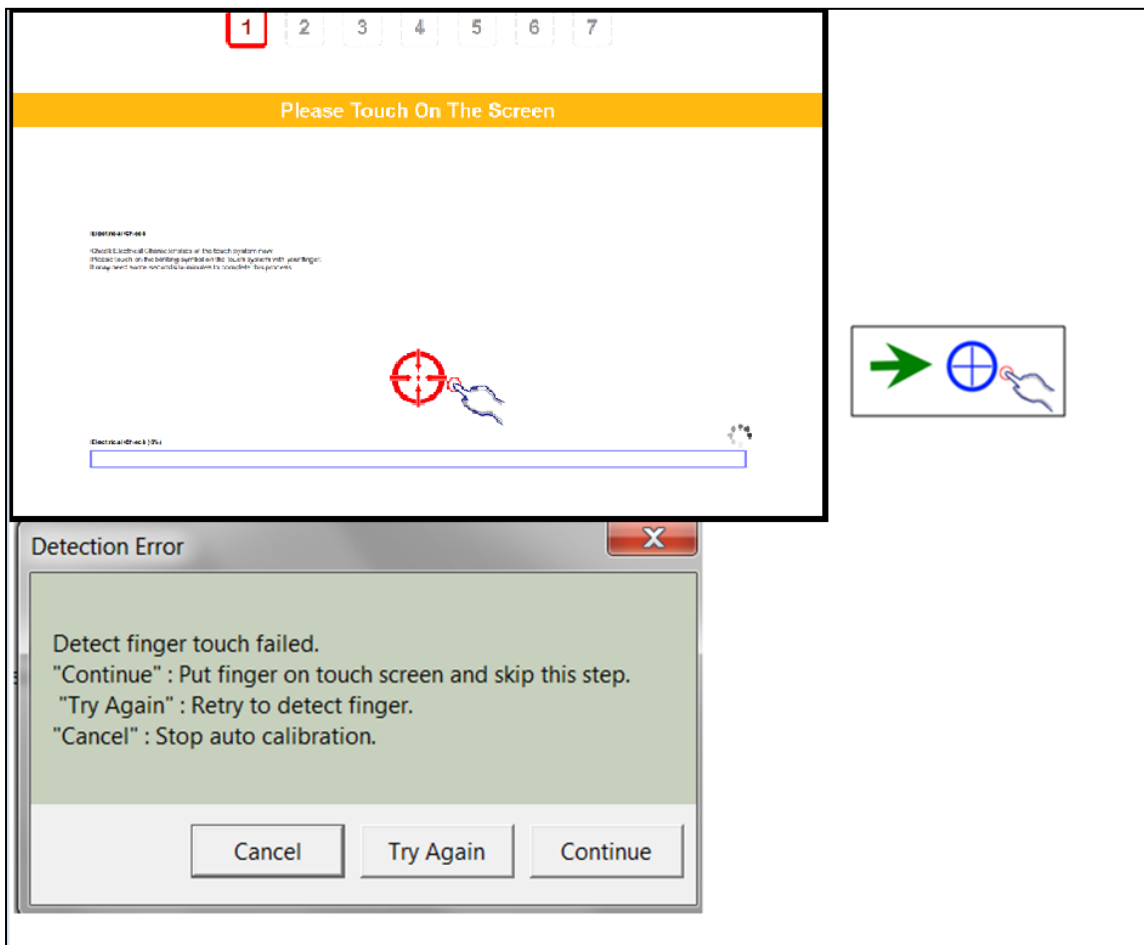


When starting process, TouchManager will check the FW kernel. If the kernel in the controller is old, TouchManager will automatically update the F/W kernel to the latest version.

2.1 System Environment Analysis

Please touch the target till 100%

(If check failed, click "Try Again" or "Continue" then keep touching the screen.)



2.2 Touchscreen I/O Check

Check the Tx/Rx channel setting, click "Correct" if it is correct.

1234567

Please select "Correct" or "Fail"

Check IO Map

Check IO map informations , and click on the "Correct" or "Fail".

Tx Channels : 45

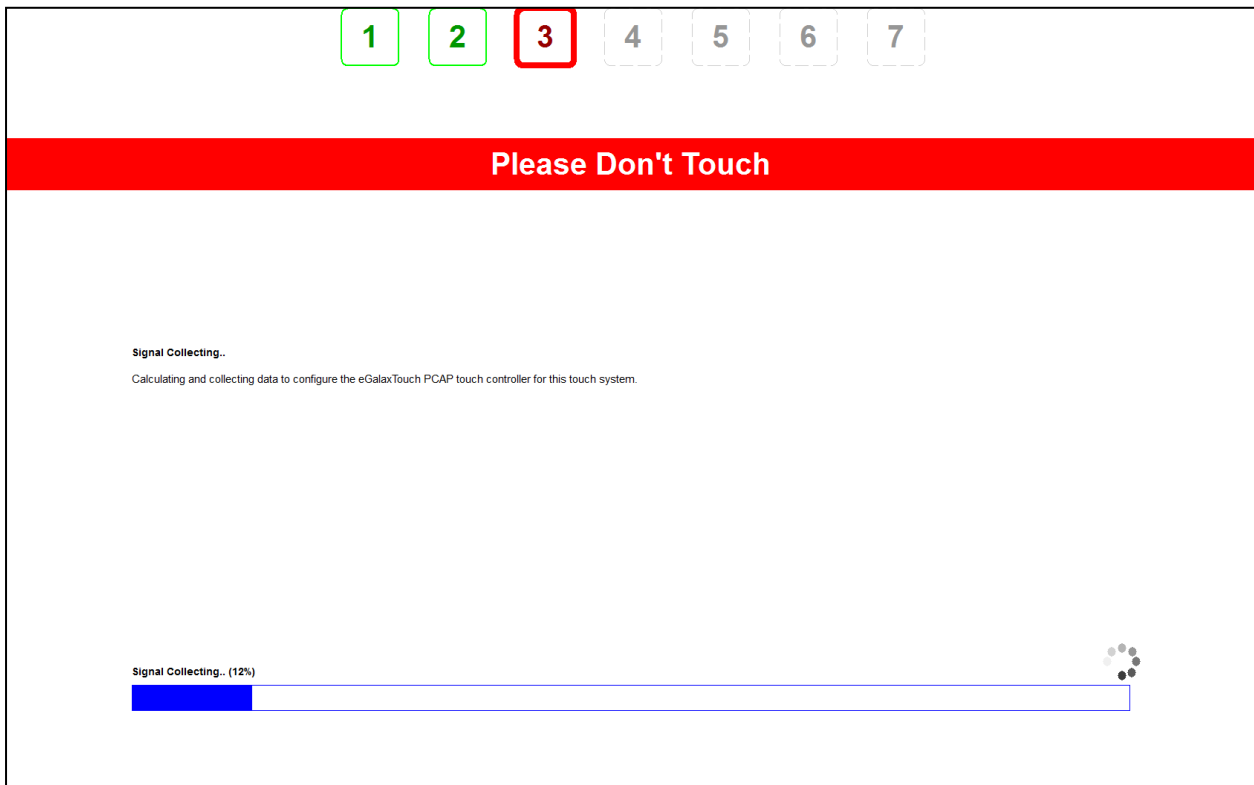
Rx Channels : 61

Fail

Correct

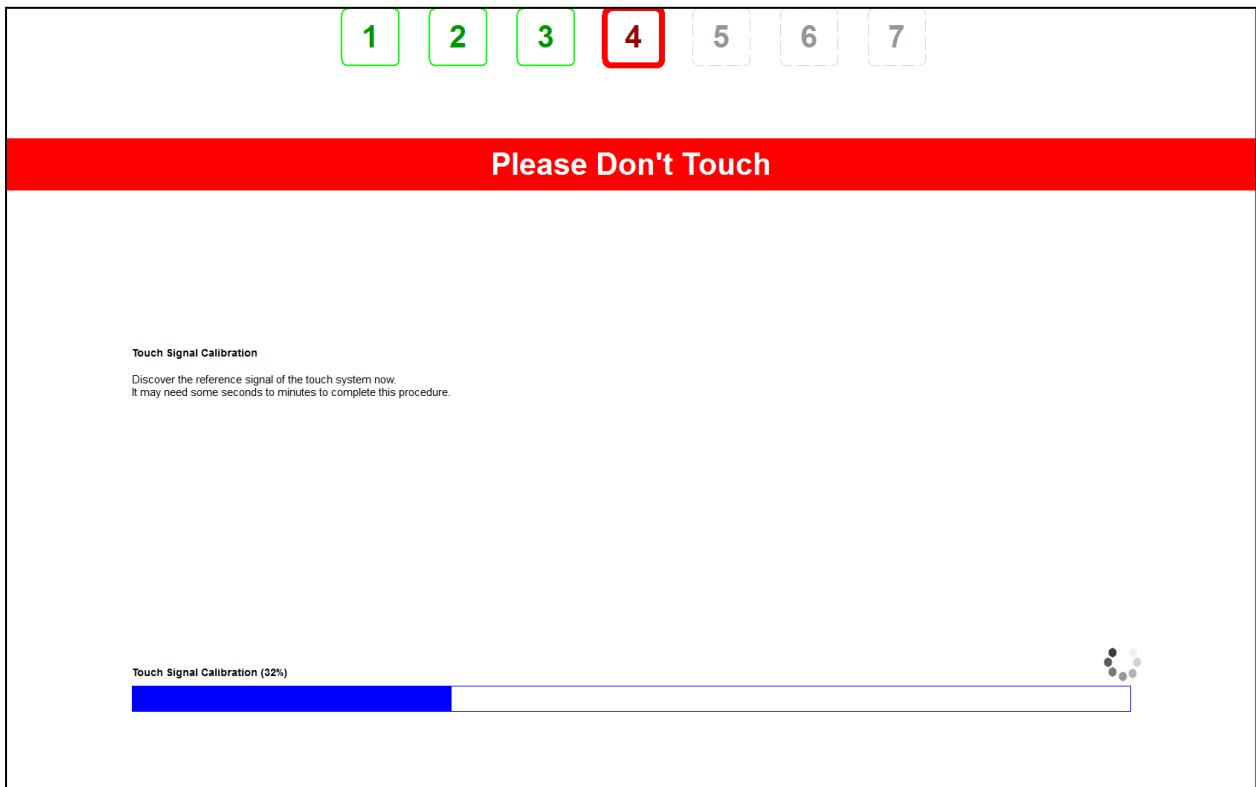
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2.3 Touchscreen Signal Analysis (Signal Collecting)



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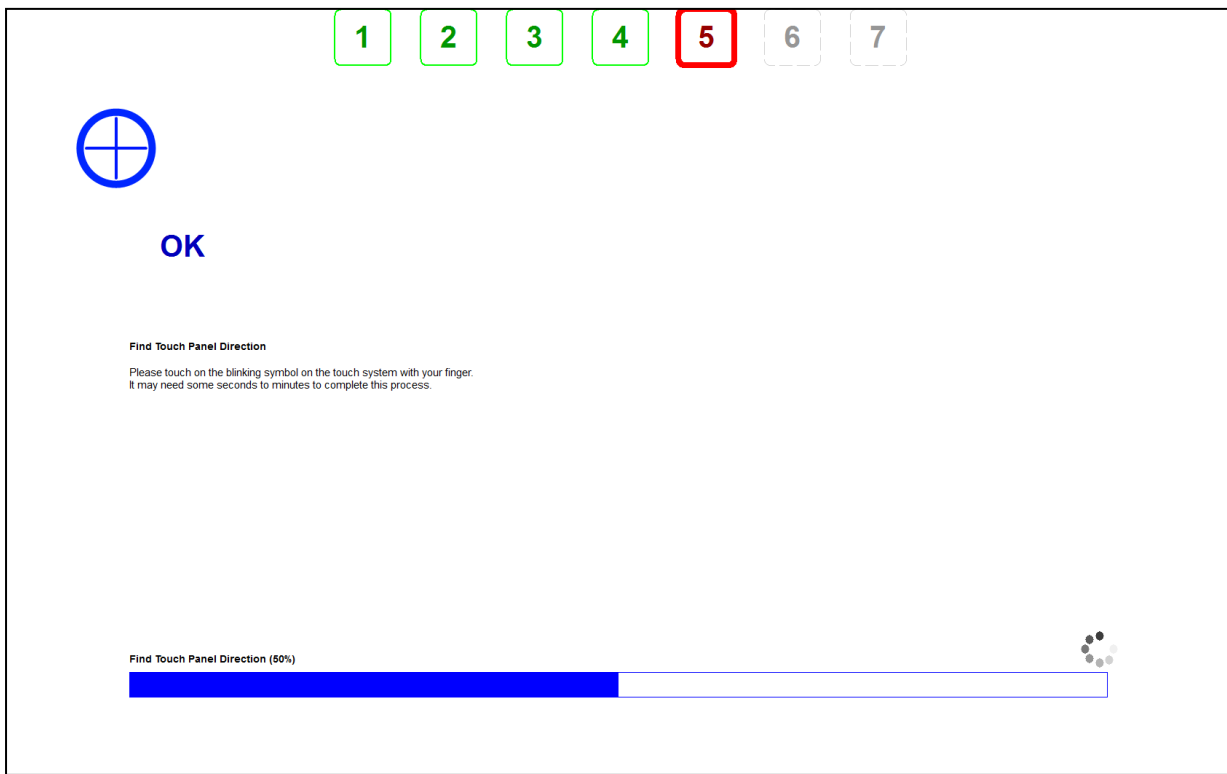
2.4 Touchscreen Signal Analysis (Touch Signal Calibration)



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2.5 Touchscreen Direction Correction

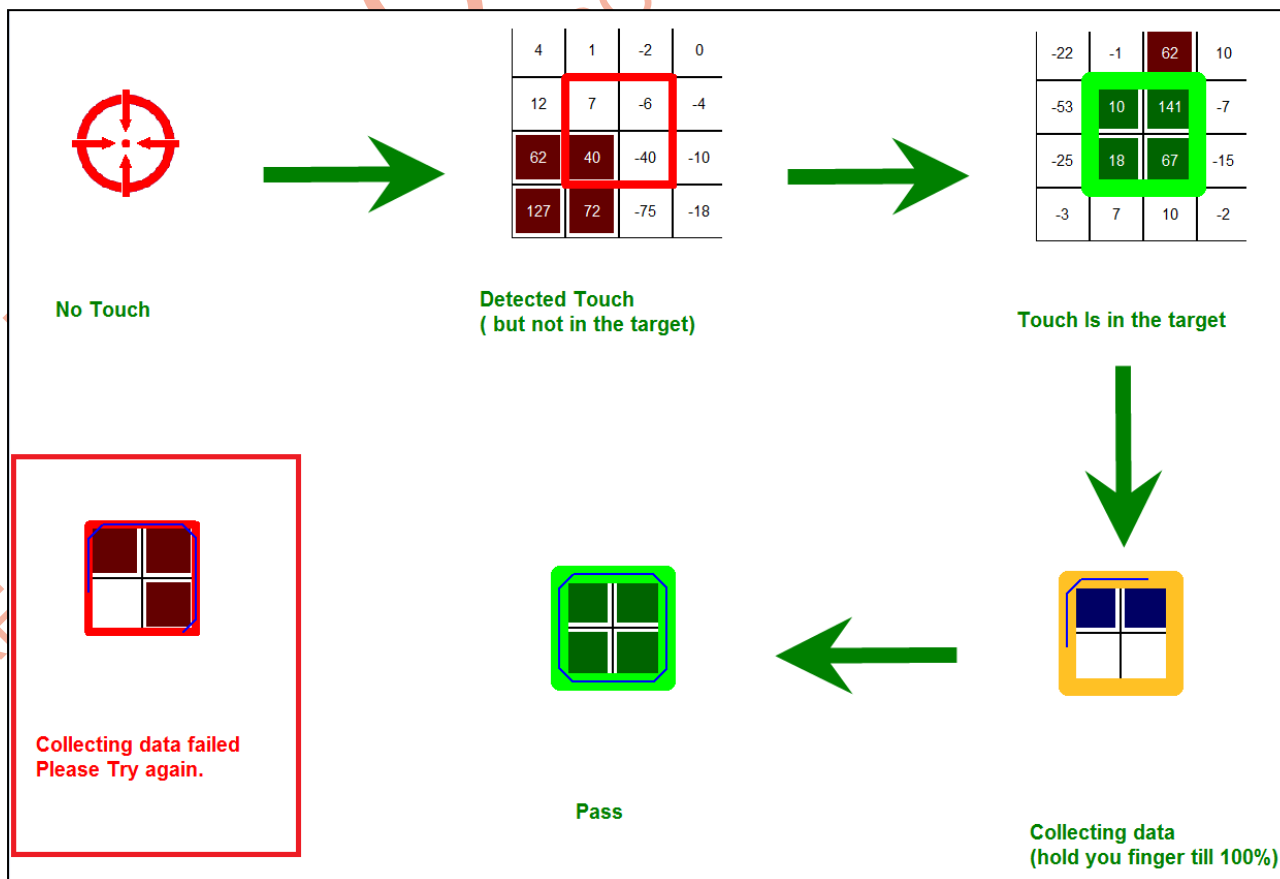
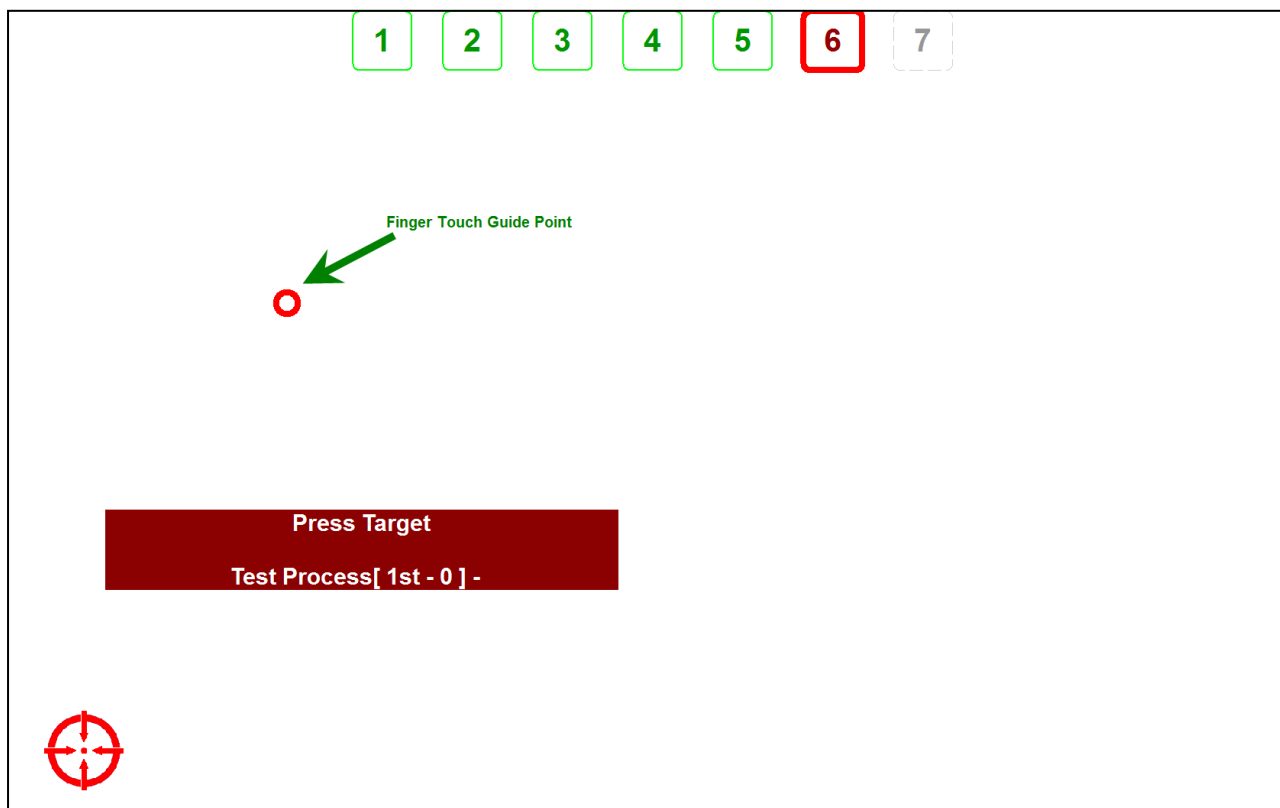
- a. (Upper-Left) Touch the Target till it shows "OK".
- b. (Upper-Right) Touch the Target till it shows "OK".



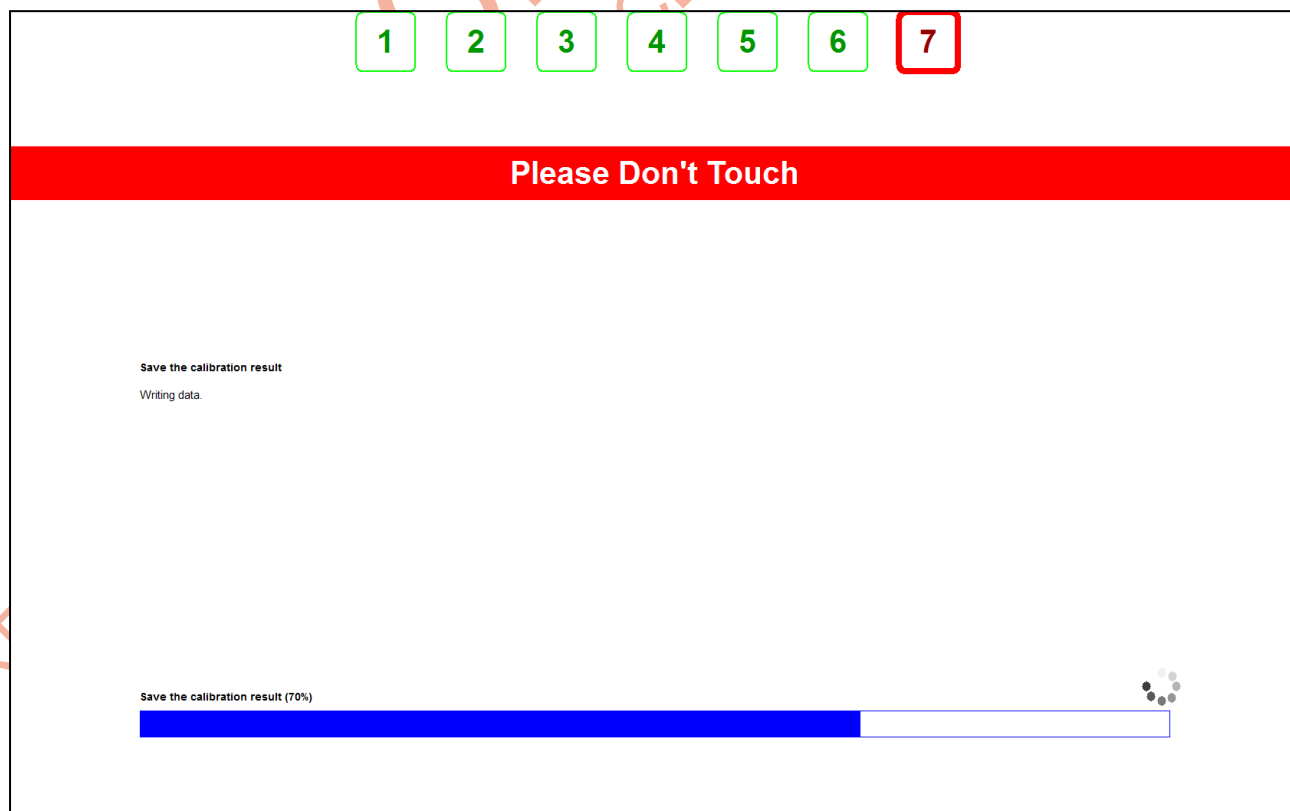
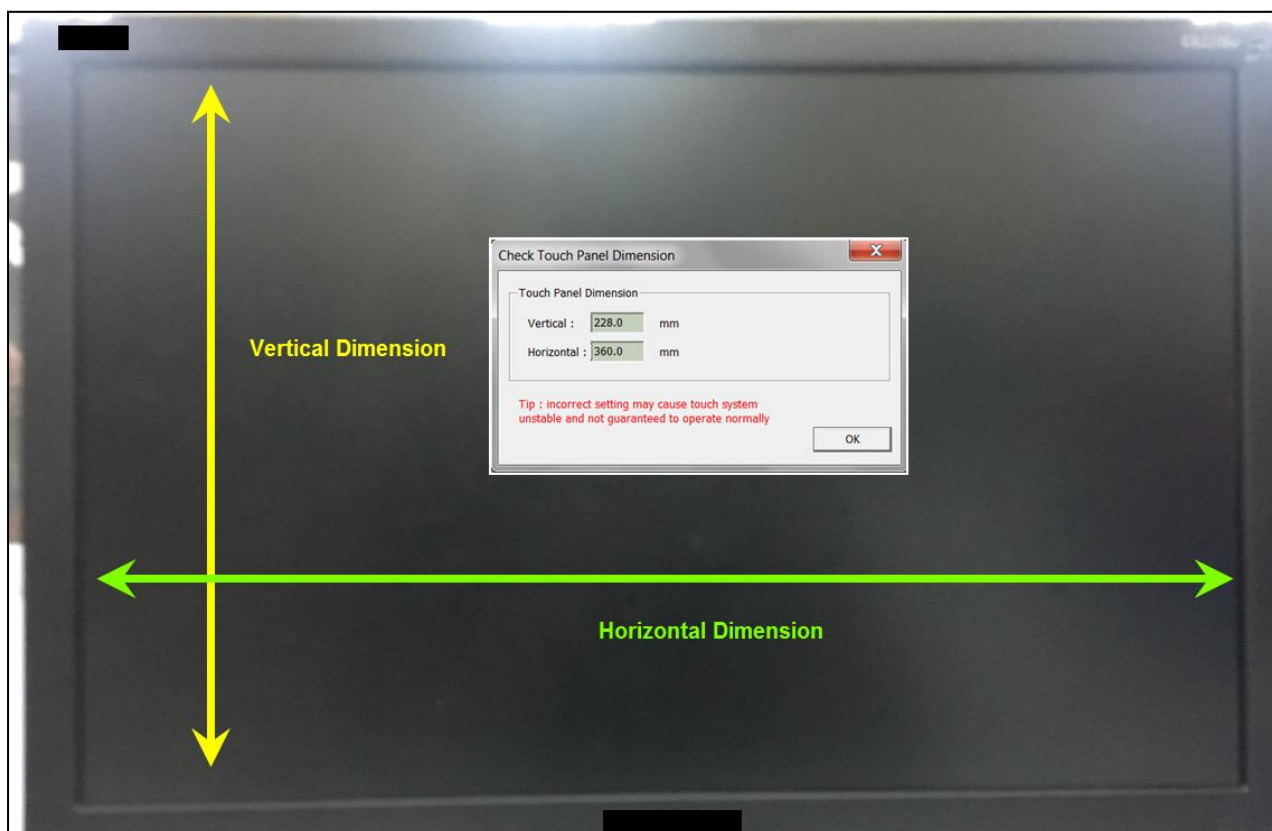
2.6 Touchscreen Sensitivity Adjustment

Touch the Target till 100%.

(if touch panel is not on the screen, follow the "Finger Touch Point " to the Target.)



2.7 Touchscreen Dimension Check



2.8 Touch Performance Validation

“Keep Changes”: Keep the tuning result

“Revert”: Ignore tuning result and revert back to the previous parameters.

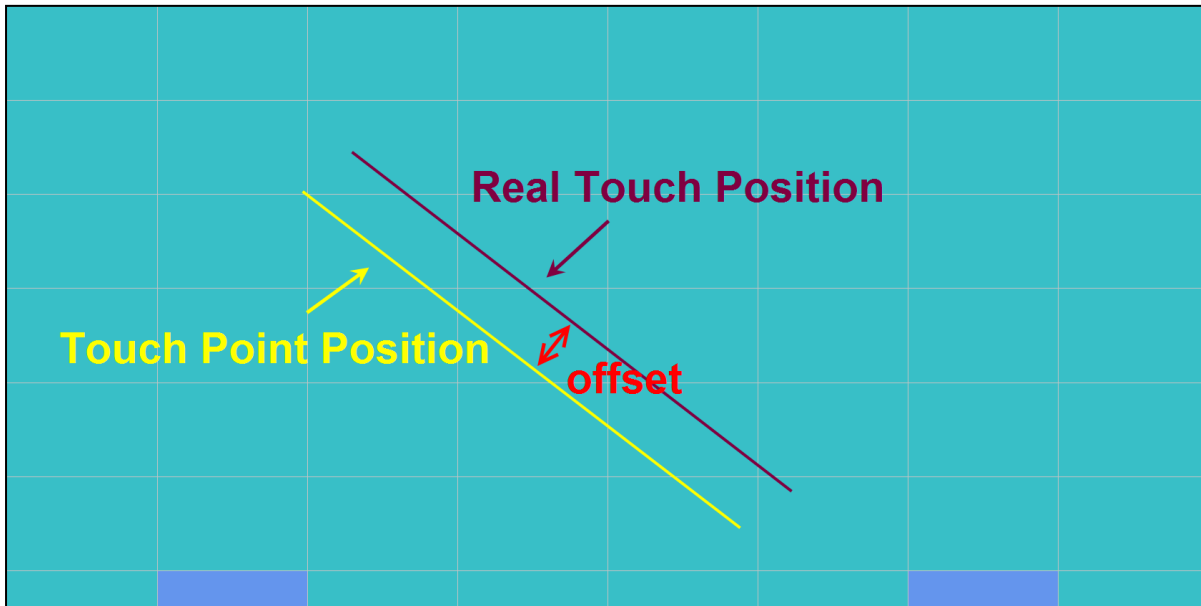
(Warning) If “Keep Changes” button is not clicked in 40 sec, TouchManager will automatically “Revert”.



3 Troubleshooting

3.1 Touch Accuracy Issue

Accuracy problem means there's always an offset between Real Touch Position and Touch Point Position.



After AutoTune the touch panel will use the default accuracy parameter if it has accuracy problem, please follow below steps to calibrate accuracy.

1-1. Click "4 Points Calibration" button.

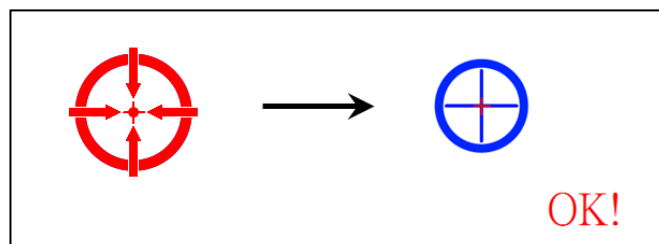
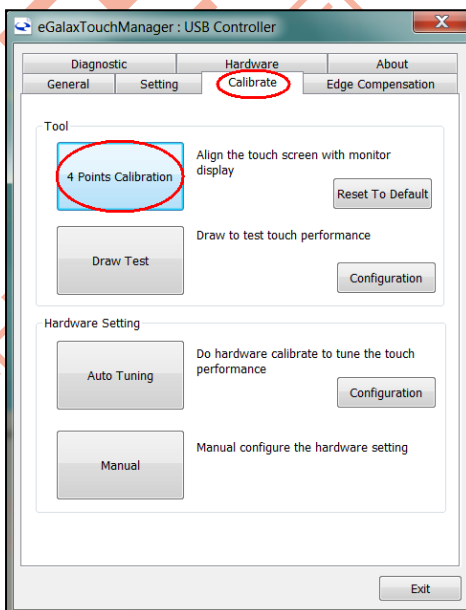
1-2. Touch the target till 100% than release.

(top-left / top-right / bottom-left / bottom-right)

Note:

- Touch panel with screen is required, there's no way to calibrate accuracy without the display.
- Please touch the target with great precision, if not, the accuracy may get worse.

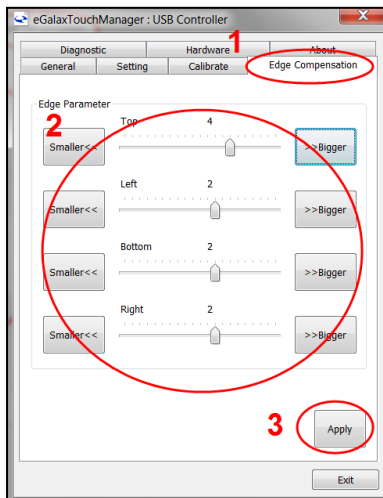
(you can also click "Reset To Default" to recover the default parameter.)



3.2 Can't Draw to Edge

If touch point can't draw to the edge, follow below steps:

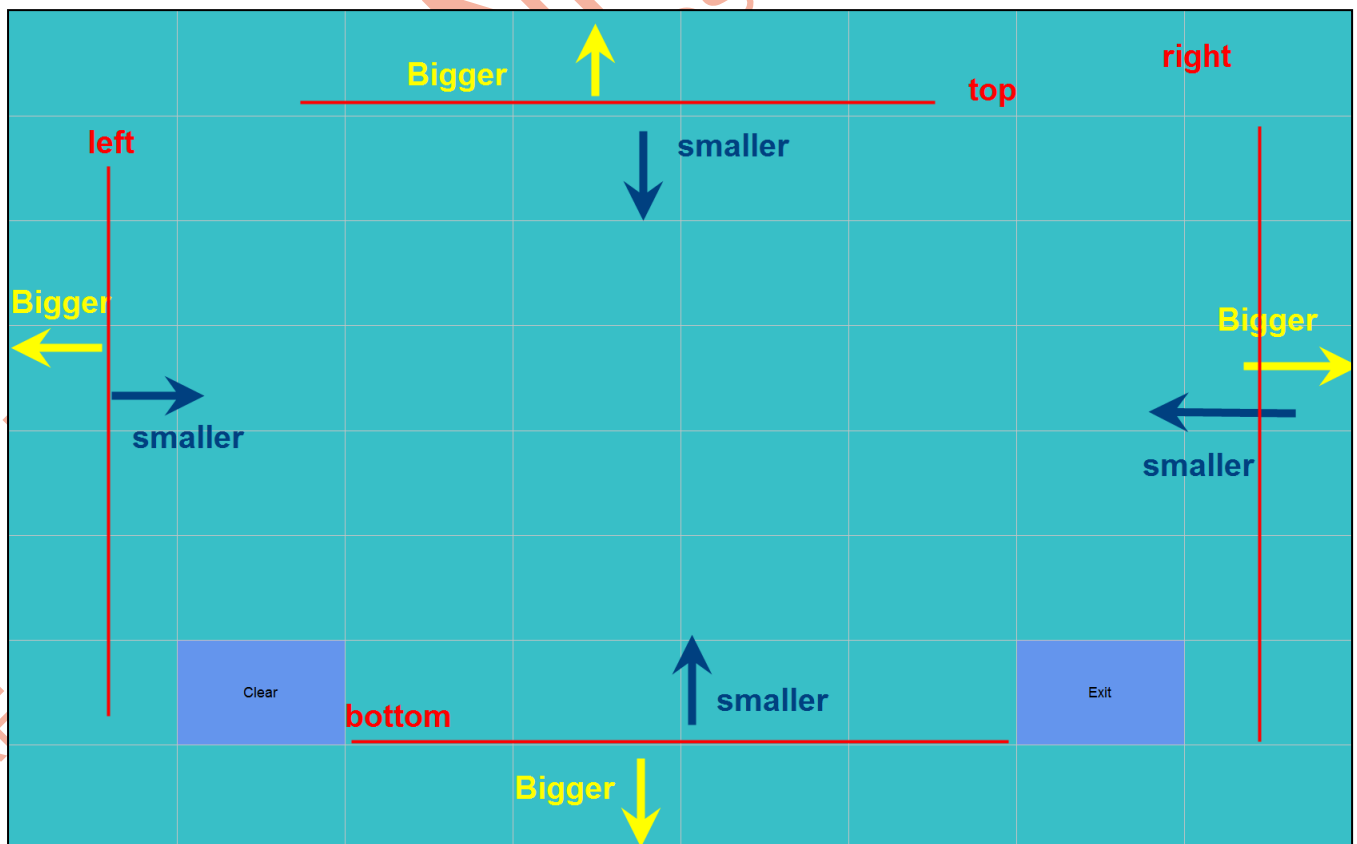
"Edge compensation" page >> Adjust "slidebar" >> click "Apply"



Below picture shows how to adjust. The bigger the compensation is, touch point will close to the edge more.

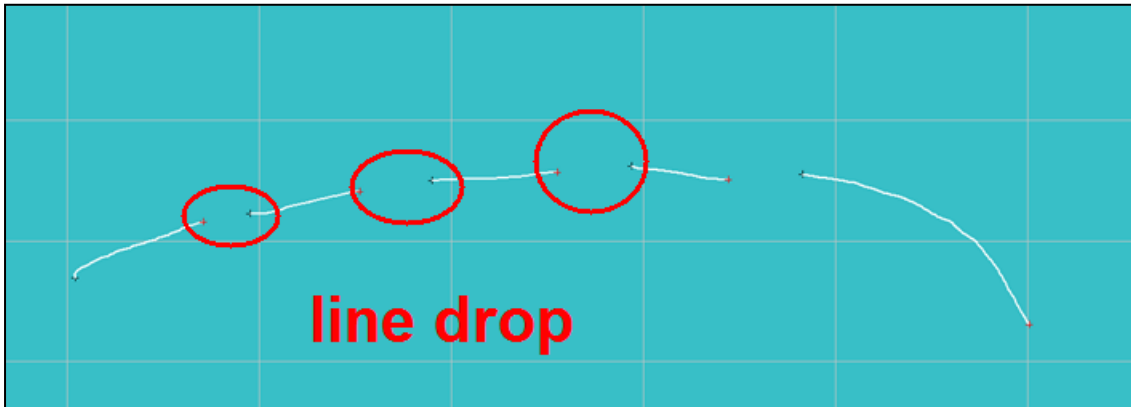
Note:

Over compensation may cause edge accuracy problem.



3.3 Touch Sensitivity Adjustment

Touch panel doesn't response well to the real touch. (ex: line drop / touch no response)

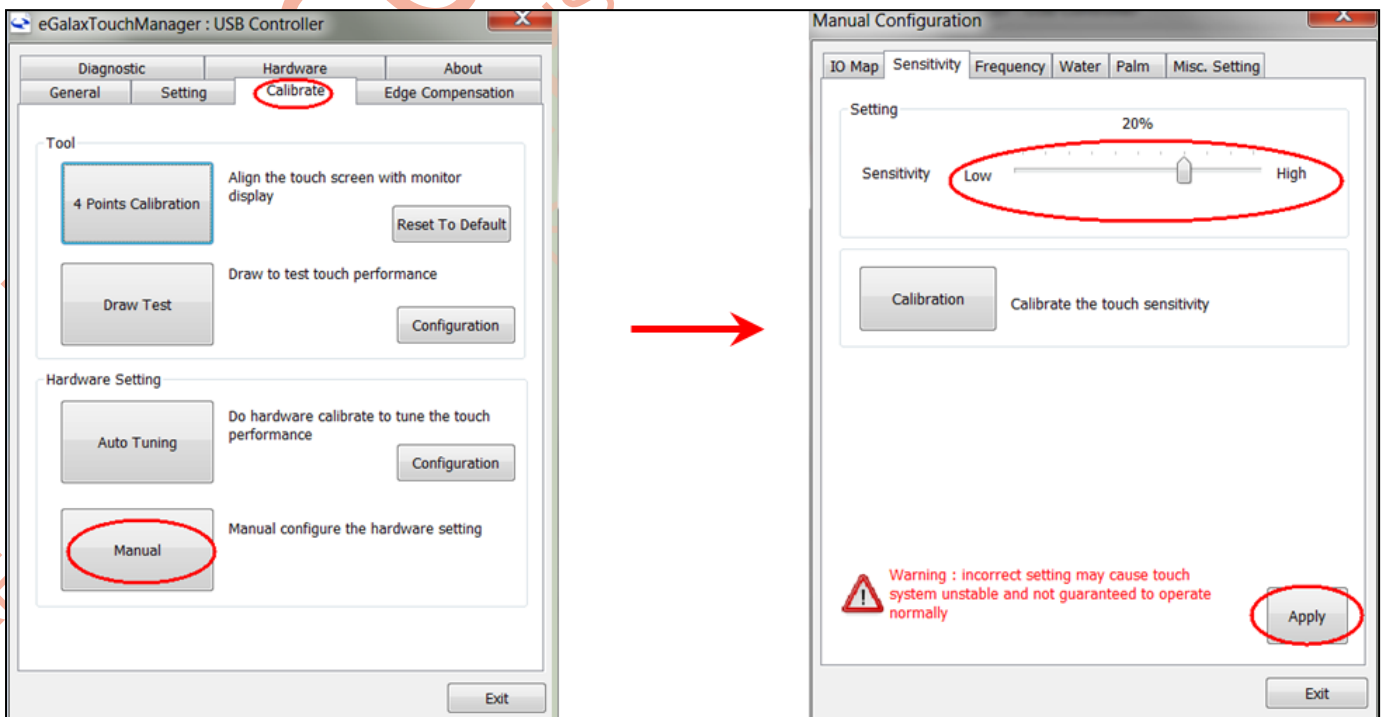


3.3-A. To adjust touch sensitivity, follow below steps:

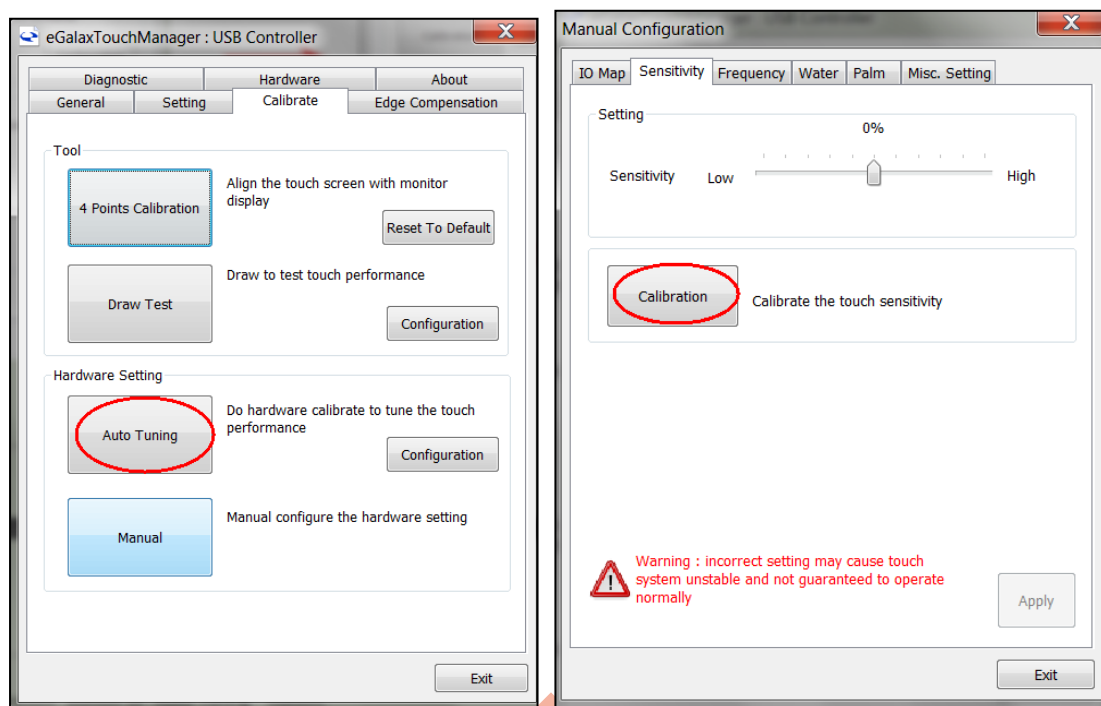
- 3.3-A-1. Click "Manual" button.
- 3.3-A-2. Adjust "Sensitivity SlideBar".
 - High: increase sensitivity
 - Low: decrease sensitivity.
- 3.3-A-3. Click "Apply".

Note:

If the sensitivity is too high, may cause ghost point or can't quick click problem.



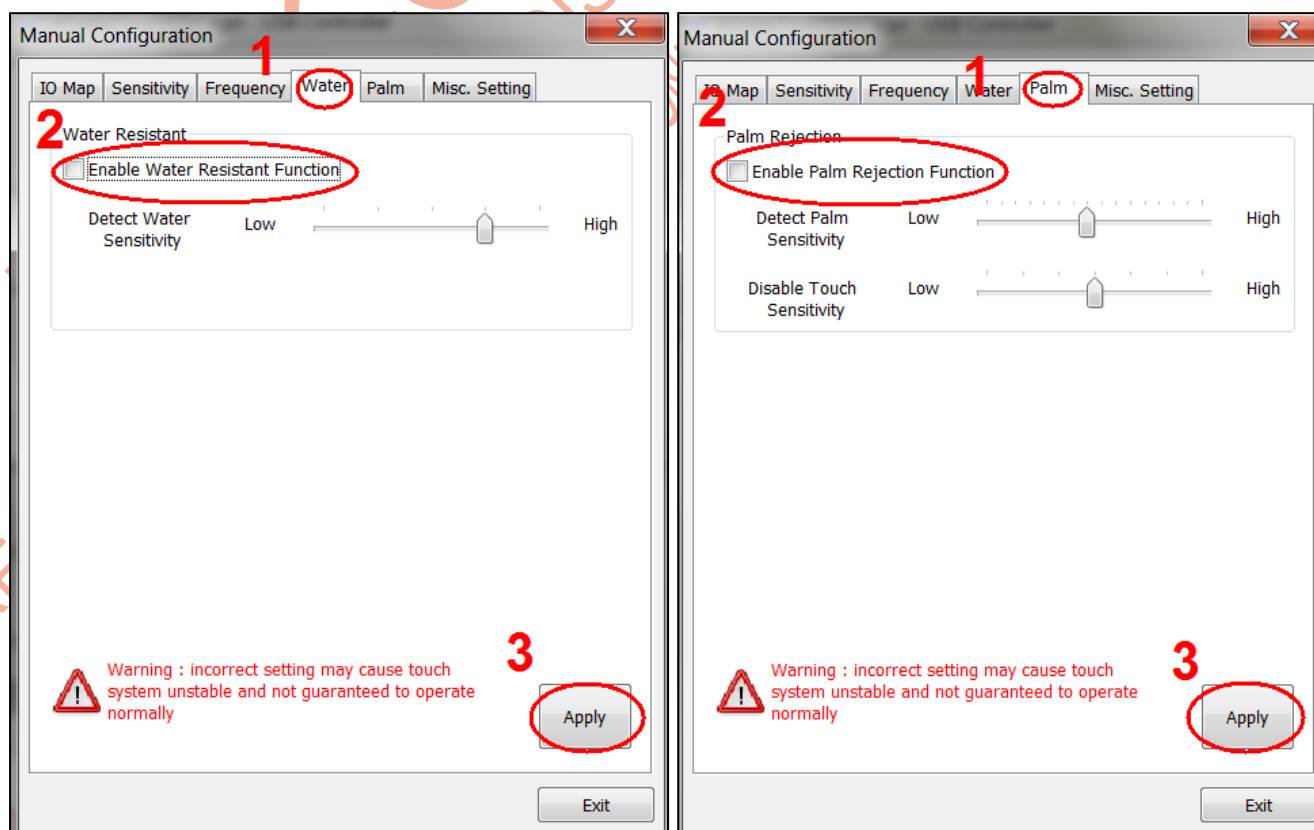
3.3-B. If A doesn't help, try "calibration" button or "Auto Tuning" button



3.3-C. If B still not works, try to disable palm & water function

Disable water function: Unselect "enable water resistant Func" then click "Apply".

Disable palm function: Unselect "Enable Palm Rejection Function" then click "Apply".

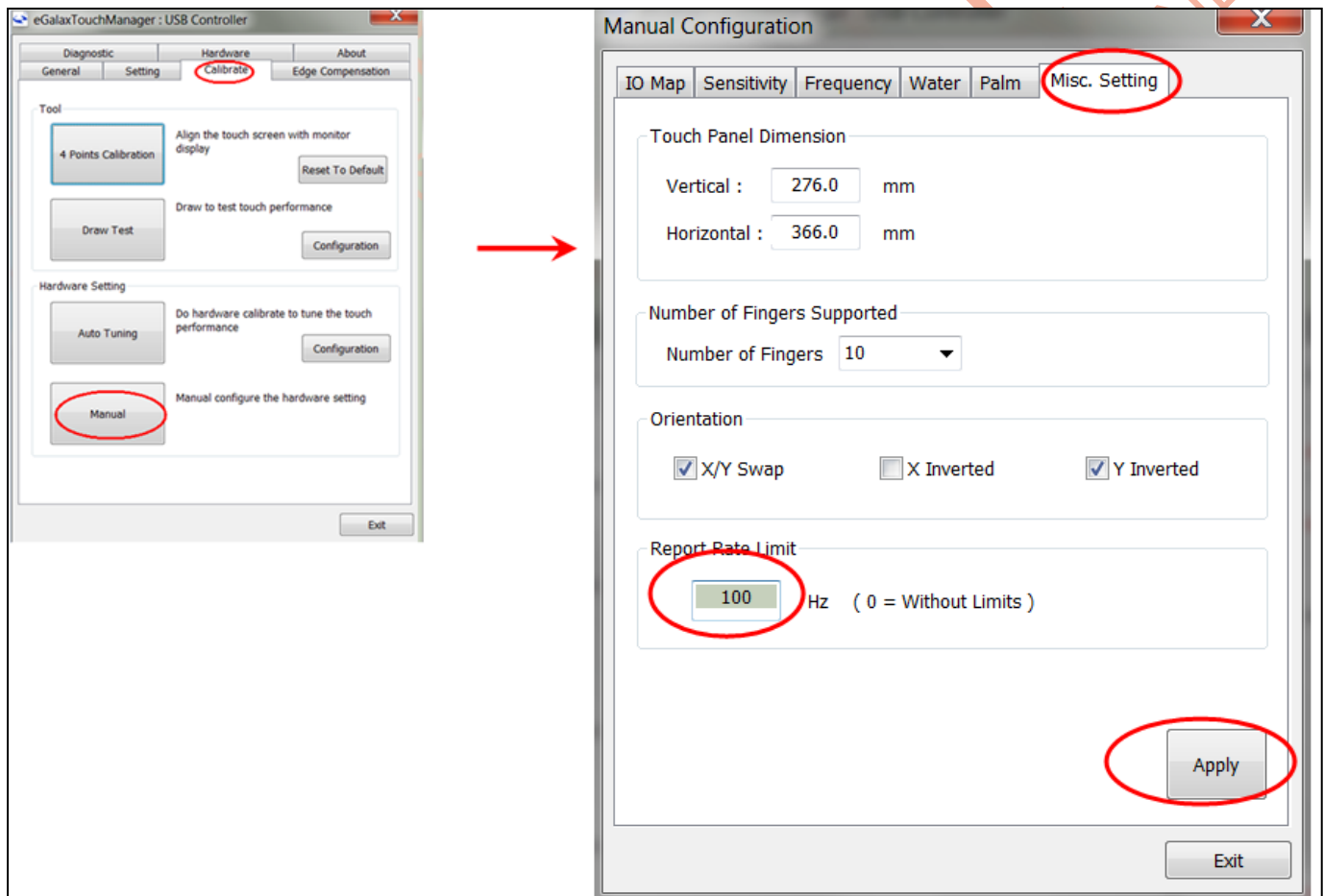


3.4 System Response Is Slow

Some system may be response slowly while the touch point report rate is too high, decrease the report rate will be help.
(Suggest range: 150~60Hz)

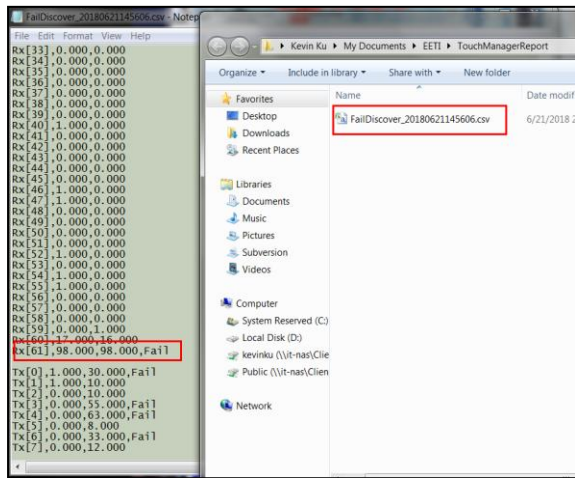
Note:

Decrease the report rate will also decrease the touch performance.



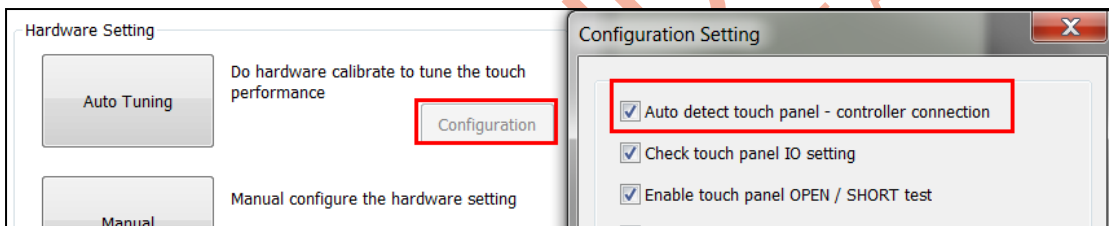
3.5 Touchscreen I/O Check Fail

Touchscreen I/O check fail will cause autotuning process fail and an FailDiscover report will show up automatically, this may caused by below issues:

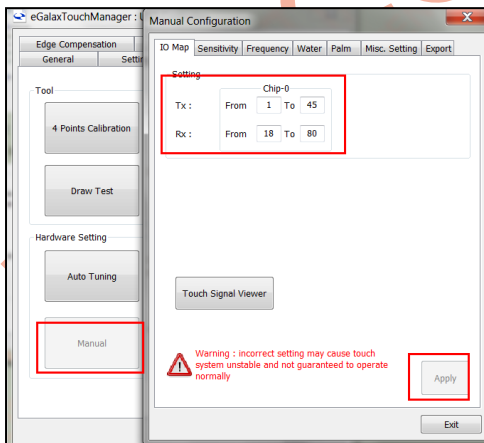


3.5.1 Incorrect I/O Map setting

a. Use auto setting (Enable below config)



b. If a is not workable, try manual setting.



3.5.2 Touch Panel Hardware Defect

If the I/O map setting is correct and shows open/short failure, it may caused by touch panel hardware defect.

Please try another touch panel or contact TP maker for further analysis.

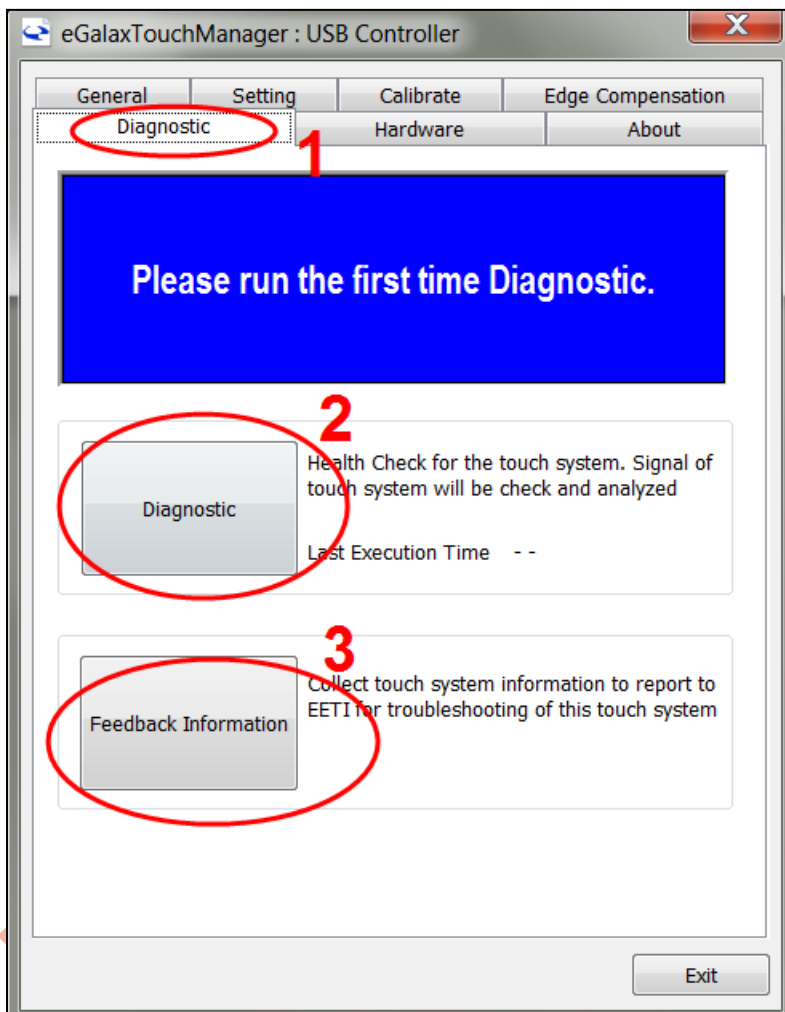
3.6 Others

If the problem is not on this guide, please follow below steps to contact EETI for further support.

3.6-1 Describe the problem as detail as possible.

3.6-2 Take pictures / video.

3.6-3 Diagnostic & Feedback Information.





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