

How to calibrate the Capacitive Touch Screen

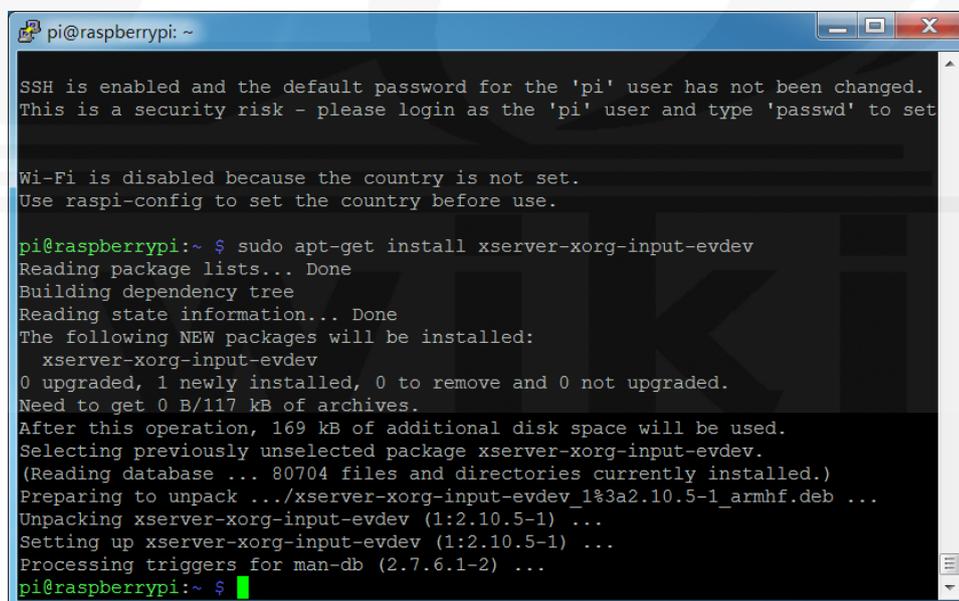
Normally capacitance screens do not need to be calibrated. This document is intended for special requirements only. It is only suitable for capacitive touch screen, but not resistive touch screen.

1、Install Calibrate Touchscreen

(Note: Raspberry Pi is required to connect to the network for this installation)

1.1 After landing the Raspberry Pi with PuTTY, execute the following command code

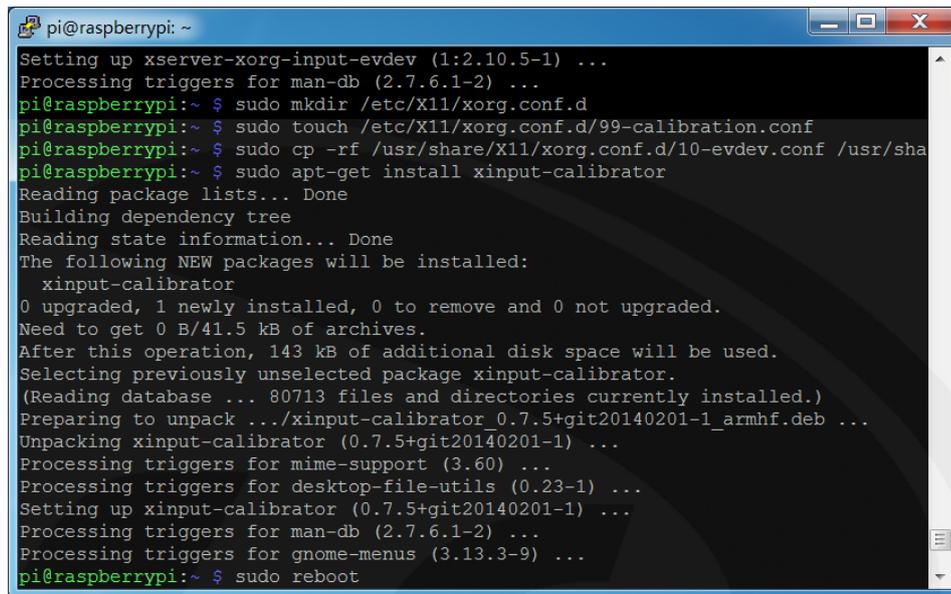
```
sudo apt-get install xserver-xorg-input-evdev
```



```
pi@raspberrypi: ~  
SSH is enabled and the default password for the 'pi' user has not been changed.  
This is a security risk - please login as the 'pi' user and type 'passwd' to set  
a password for the 'pi' user.  
  
Wi-Fi is disabled because the country is not set.  
Use raspi-config to set the country before use.  
  
pi@raspberrypi:~ $ sudo apt-get install xserver-xorg-input-evdev  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
The following NEW packages will be installed:  
  xserver-xorg-input-evdev  
0 upgraded, 1 newly installed, 0 to remove and 0 not upgraded.  
Need to get 0 B/117 kB of archives.  
After this operation, 169 kB of additional disk space will be used.  
Selecting previously unselected package xserver-xorg-input-evdev.  
(Reading database ... 80704 files and directories currently installed.)  
Preparing to unpack .../xserver-xorg-input-evdev_1%3a2.10.5-1_armhf.deb ...  
Unpacking xserver-xorg-input-evdev (1:2.10.5-1) ...  
Setting up xserver-xorg-input-evdev (1:2.10.5-1) ...  
Processing triggers for man-db (2.7.6.1-2) ...  
pi@raspberrypi:~ $
```

1.2 Execute the following command code

```
sudo mkdir /etc/X11/xorg.conf.d
sudo touch /etc/X11/xorg.conf.d/99-calibration.conf
sudo cp -rf /usr/share/X11/xorg.conf.d/10-evdev.conf /usr/share/X11/xorg.conf.d/45-evdev.conf
sudo apt-get install xinput-calibrator
```



```
pi@raspberrypi: ~
Setting up xserver-xorg-input-evdev (1:2.10.5-1) ...
Processing triggers for man-db (2.7.6.1-2) ...
pi@raspberrypi:~ $ sudo mkdir /etc/X11/xorg.conf.d
pi@raspberrypi:~ $ sudo touch /etc/X11/xorg.conf.d/99-calibration.conf
pi@raspberrypi:~ $ sudo cp -rf /usr/share/X11/xorg.conf.d/10-evdev.conf /usr/sha
pi@raspberrypi:~ $ sudo apt-get install xinput-calibrator
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following NEW packages will be installed:
  xinput-calibrator
0 upgraded, 1 newly installed, 0 to remove and 0 not upgraded.
Need to get 0 B/41.5 kB of archives.
After this operation, 143 kB of additional disk space will be used.
Selecting previously unselected package xinput-calibrator.
(Reading database ... 80713 files and directories currently installed.)
Preparing to unpack ../xinput-calibrator_0.7.5+git20140201-1_armhf.deb ...
Unpacking xinput-calibrator (0.7.5+git20140201-1) ...
Processing triggers for mime-support (3.60) ...
Processing triggers for desktop-file-utils (0.23-1) ...
Setting up xinput-calibrator (0.7.5+git20140201-1) ...
Processing triggers for man-db (2.7.6.1-2) ...
Processing triggers for gnome-menus (3.13.3-9) ...
pi@raspberrypi:~ $ sudo reboot
```

1.3 After executing the following command code, the system will restart to complete the installation.

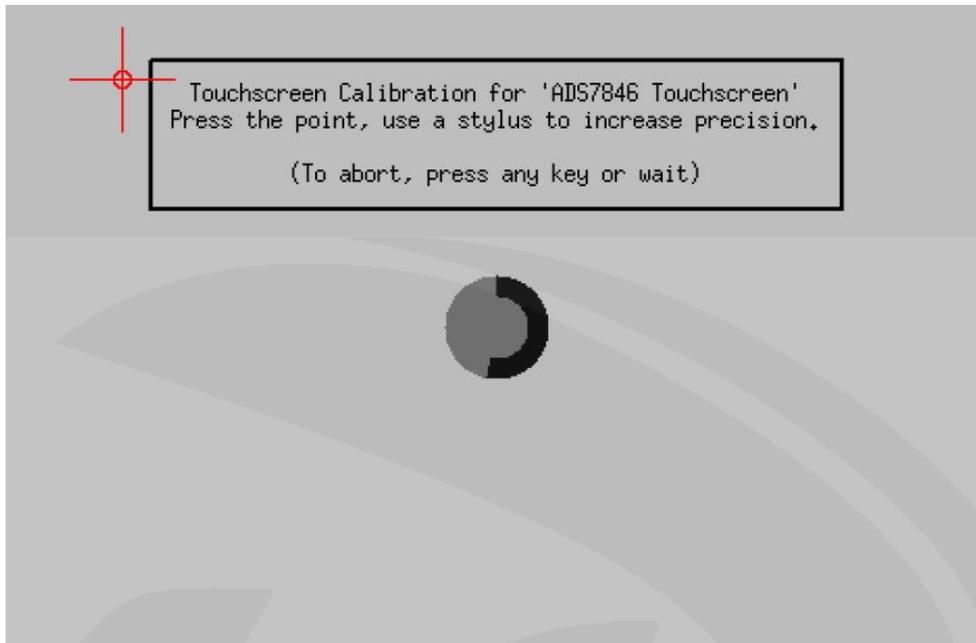
```
sudo reboot
```

2、 Running Calibrate Touchscreen

2.1 After landing Raspberry Pi with PuTTY, execute touch calibration command to open **Calibrate Touchscreen**

```
DISPLAY=:0.0 xinput_calibrator
```

2.2 The screen will pop up the touch calibration interface and click four calibration points in turn to complete the calibration.



2.3 New touch parameters will be displayed after calibration, and the selected code will be copied by **Ctrl + C**.

(Different LCD models, different calibration times, parameters will also be different)

```
pi@raspberrypi: ~
pi@raspberrypi:~ $
pi@raspberrypi:~ $
pi@raspberrypi:~ $
pi@raspberrypi:~ $
pi@raspberrypi:~ $
pi@raspberrypi:~ $
pi@raspberrypi:~ $ DISPLAY=:0.0 xinput_calibrator
Calibrating EVDEV driver for "深圳市全动电子技术有限公司 ByQDtech 触控USB鼠标" id=6
current calibration values (from XInput): min_x=1, max_x=792 and min_y=1, max_y=471
Doing dynamic recalibration:
Setting calibration data: 0, 789, 14, 465
--> Making the calibration permanent <--
copy the snippet below into '/etc/X11/xorg.conf.d/99-calibration.conf' (/usr/share/X11/xorg.conf.d/ in some distro's)
Section "InputClass"
    Identifier      "calibration"
    MatchProduct    "深圳市全动电子技术有限公司 ByQDtech 触控USB鼠标"
    Option "Calibration"    "0 789 14 465"
    Option "SwapAxes"      "0"
EndSection
pi@raspberrypi:~ $
```

2.4 Press Ctrl + V to paste the selected code into the new text document

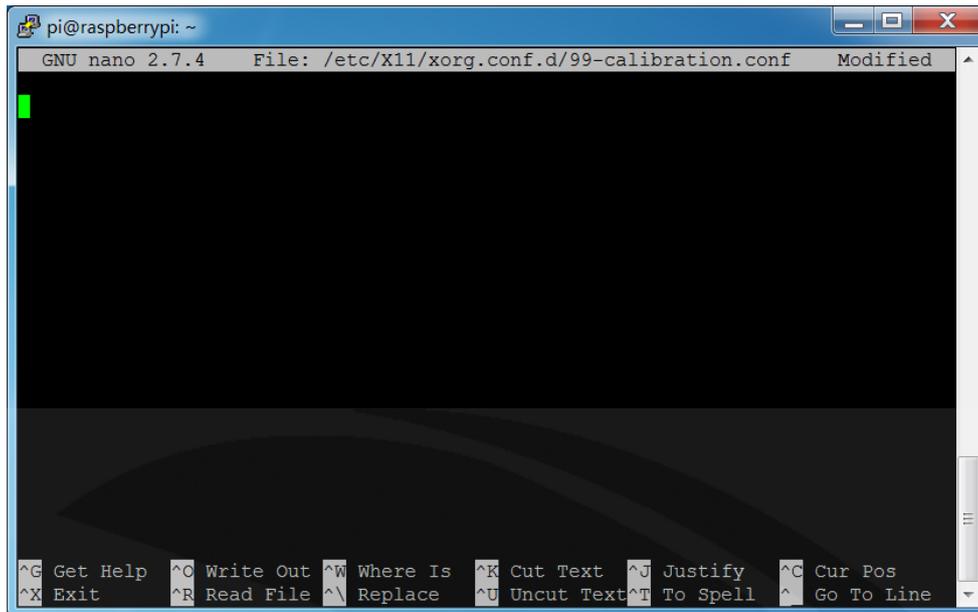
A screenshot of a Windows Notepad window titled 'a1.txt - 记事本'. The window contains the following text:

```
Section "InputClass"
    Identifier      "calibration"
    MatchProduct    "深圳市全动信息技术有限公司 ByQDtech 触控USB鼠标"
    Option "Calibration"    "0 789 14 465"
    Option "SwapAxes"      "0"
EndSection
```

3、 Modify the calibrated touch parameters and save them

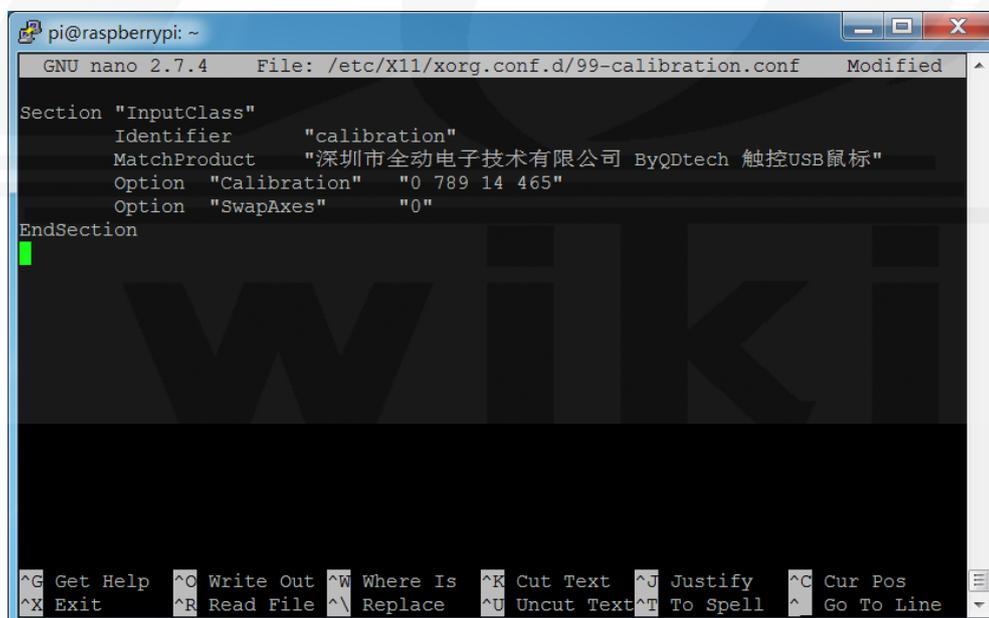
3.1 Execute the following command code and open the 99-calibration.conf file

```
sudo nano /etc/X11/xorg.conf.d/99-calibration.conf
```



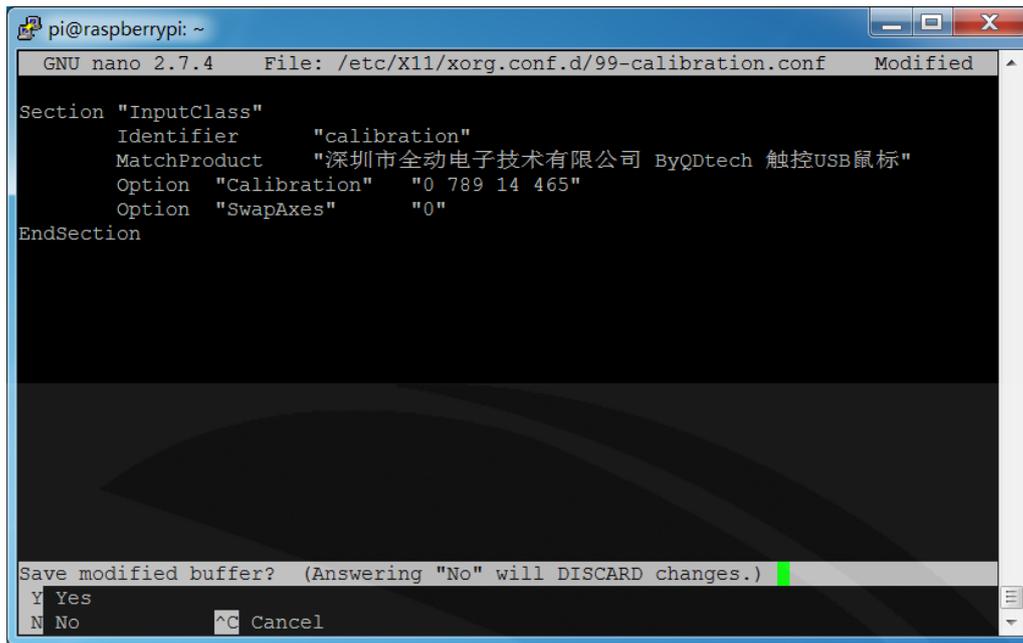
```
pi@raspberrypi: ~
GNU nano 2.7.4 File: /etc/X11/xorg.conf.d/99-calibration.conf Modified
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell ^_ Go To Line
```

3.2 Click the right mouse button, copy the touch parameters saved in the new text document to the **99-calibration.conf** file, press **Ctrl + X** to exit.



```
pi@raspberrypi: ~
GNU nano 2.7.4 File: /etc/X11/xorg.conf.d/99-calibration.conf Modified
Section "InputClass"
    Identifier      "calibration"
    MatchProduct   "深圳市全劲电子技术有限公司 ByQDtech 触控USB鼠标"
    Option "Calibration" "0 789 14 465"
    Option "SwapAxes" "0"
EndSection
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos
^X Exit ^R Read File ^\ Replace ^U Uncut Text ^T To Spell ^_ Go To Line
```

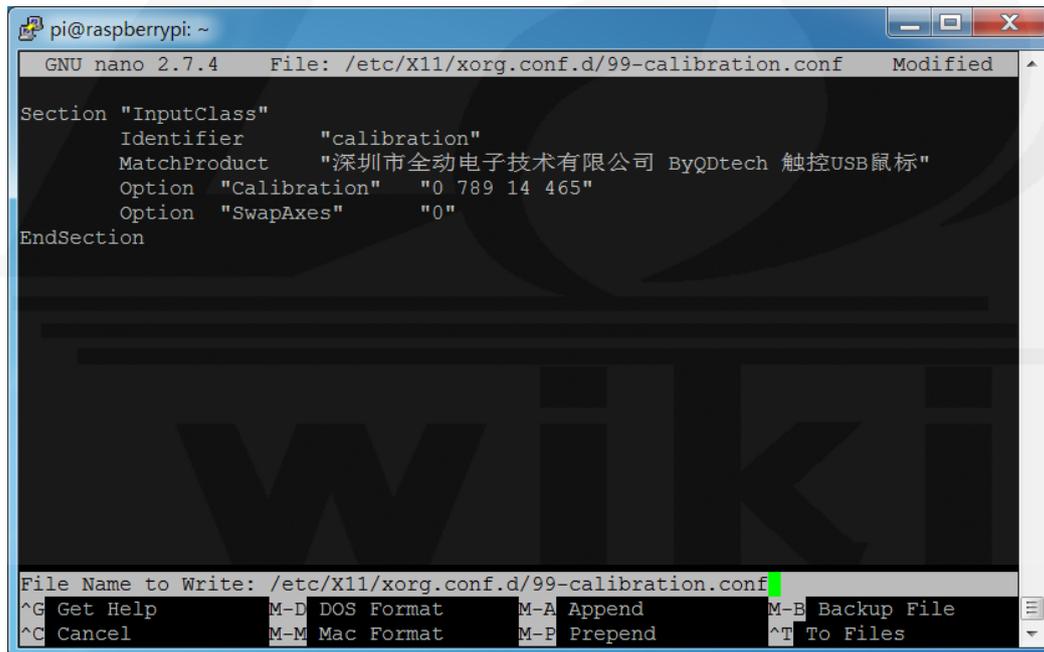
3.3 Press **Y** to confirm saving



```
pi@raspberrypi: ~
GNU nano 2.7.4 File: /etc/X11/xorg.conf.d/99-calibration.conf Modified
Section "InputClass"
    Identifier      "calibration"
    MatchProduct    "深圳市全动电子技术有限公司 ByQDtech 触控USB鼠标"
    Option "Calibration" "0 789 14 465"
    Option "SwapAxes" "0"
EndSection

Save modified buffer? (Answering "No" will DISCARD changes.)
Y Yes
N No      ^C Cancel
```

3.4 Press Enter key to confirm saving file name



```
pi@raspberrypi: ~
GNU nano 2.7.4 File: /etc/X11/xorg.conf.d/99-calibration.conf Modified
Section "InputClass"
    Identifier      "calibration"
    MatchProduct    "深圳市全动电子技术有限公司 ByQDtech 触控USB鼠标"
    Option "Calibration" "0 789 14 465"
    Option "SwapAxes" "0"
EndSection

File Name to Write: /etc/X11/xorg.conf.d/99-calibration.conf
^G Get Help      M-D DOS Format   M-A Append      M-B Backup File
^C Cancel        M-M Mac Format   M-P Prepend     ^T To Files
```

3.5 Restart the Raspberry Pi to complete the operation

```
sudo reboot
```