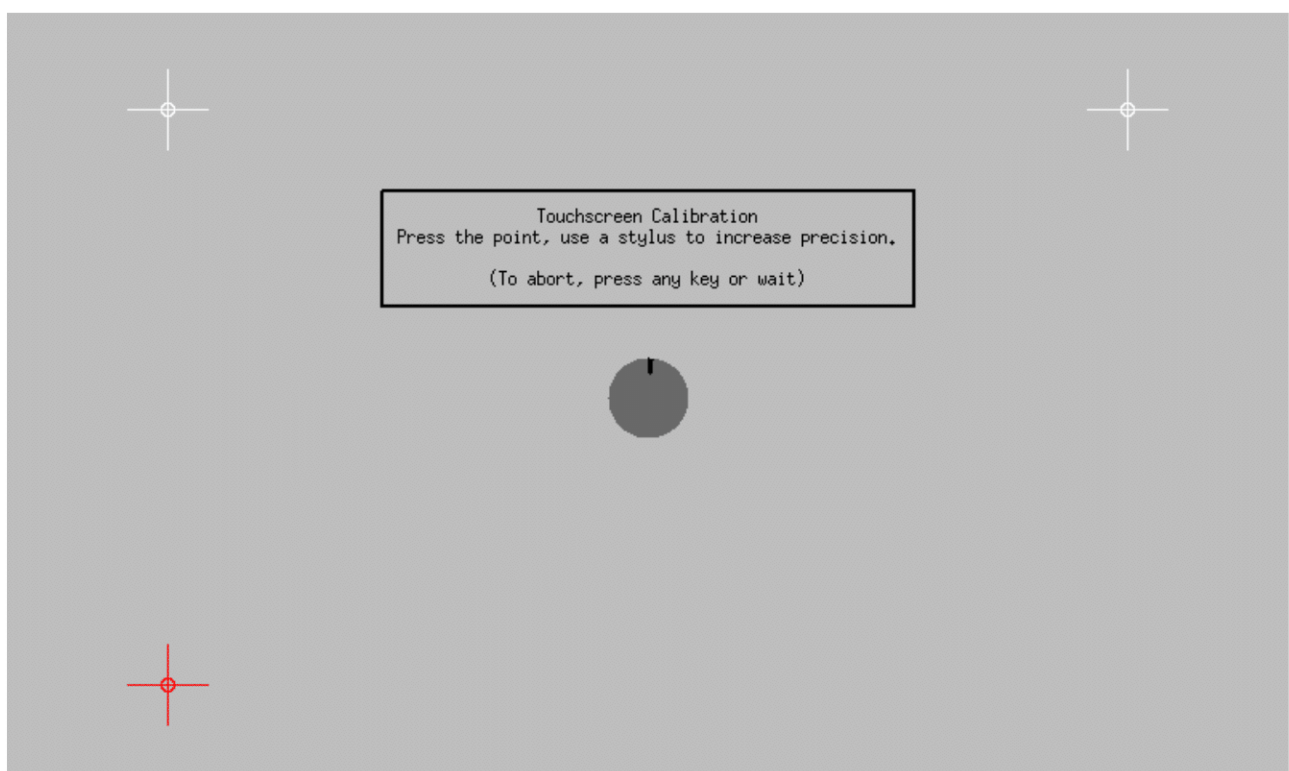# Documentation : calibration of a touch screen under Xorg

Some of our touch tables were not calibrated, which makes them more complicated to use because the buttons are not where the user expects them.
The calibration process is made very simple by t h e use of `xinput-calibrator` an application developed mainly by Tias Guns. The advantage of this program is that it does not depend on a particular (generic) driver. However, it is necessary to use the Xorg windowing system since the program will calibrate the XInput values directly.
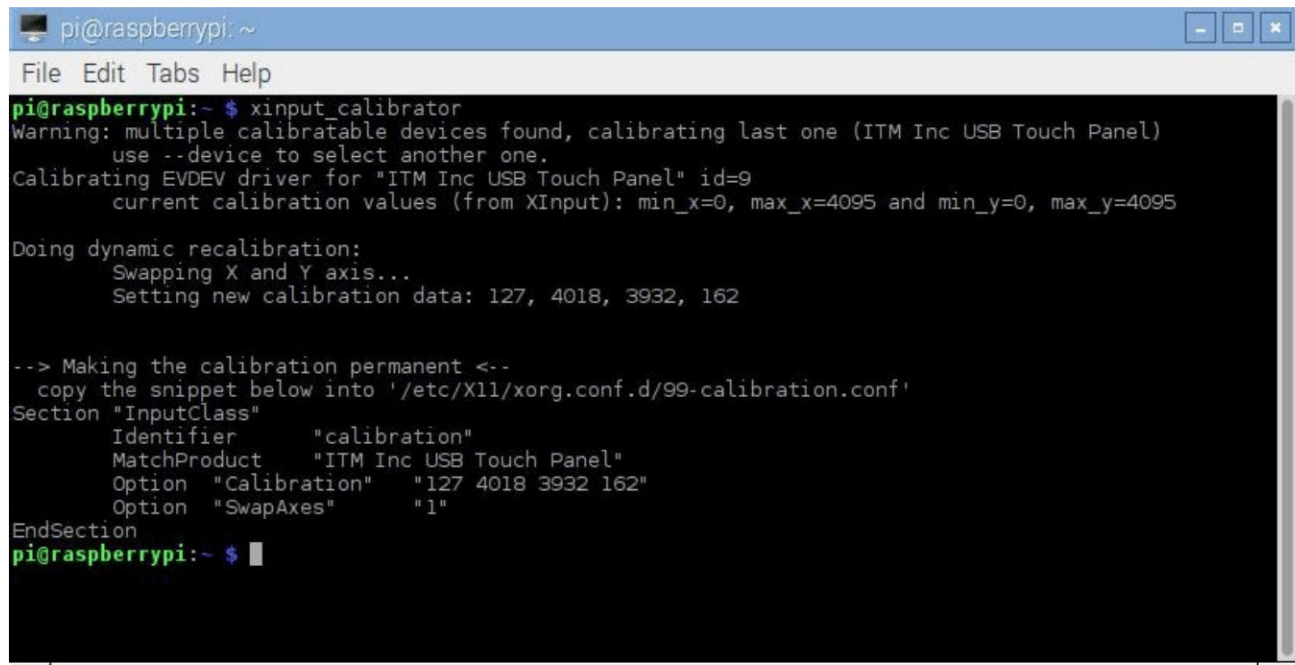
Installation and use

1. Run `sudo apt install xinput-calibrator` .

2. Check in the "About" page that the windowing system used is Xorg. On Ubuntu 22.04 (the version used for our tables), if this is not the case, it is possible to switch from Wayland to Xorg at startup:

   ◦ Go to the settings, user section and check that `Auto Login` is disabled

   ◦ Now log out

   ◦ On the login page, you will find a parameter button at the bottom right allowing you to change the windowing system used

3. To calibrate the screen, simply type `xinput_calibrator` in a terminal and follow the instructions on the screen:

Save settings

4. Once the calibration is finished, check that it works properly. You will find in the console some text to save in a file `sudo gedit /usr/share/X11/xorg.conf.d/99- calibration.conf` to memorize the settings made and load them at each startup.

```
pi@raspberrypi:~ $ xinput_calibrator
Warning: multiple calibratable devices found, calibrating last one (ITM Inc USB Touch Panel)
        use --device to select another one.
Calibrating EVDEV driver for "ITM Inc USB Touch Panel" id=9
        current calibration values (from XInput): min_x=0, max_x=4095 and min_y=0, max_y=4095

Doing dynamic recalibration:
        Swapping X and Y axis...
        Setting new calibration data: 127, 4018, 3932, 162


--> Making the calibration permanent <--
  copy the snippet below into '/etc/X11/xorg.conf.d/99-calibration.conf'
Section "InputClass"
        Identifier      "calibration"
        MatchProduct    "ITM Inc USB Touch Panel"
        Option  "Calibration"   "127 4018 3932 162"
        Option  "SwapAxes"      "1"
EndSection
pi@raspberrypi:~ $ 
```