



# Single User touchfoil™

## Software Installation & Product Setup



For the latest and comprehensive pre and post-sales support  
please visit [support.visualplanet.biz](http://support.visualplanet.biz) or call +44(0) 1223 202949

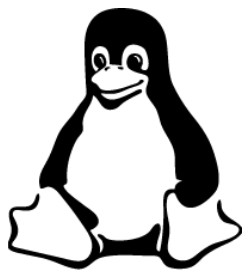


## Installation instructions

Windows



Linux



# Installing Single User touchfoil Configuration Software

The Single User touchfoil Configuration Software is used to set the operating parameters of the touch sensor product. Once the product is setup, the software can be closed, and only needs to be re-invoked if the product configuration needs to change.

The software is available as a downloadable file available from <http://www.visualplanet.biz/support/#drivers>

## Installation Instructions for Microsoft Windows

### Step 1

---

If you have downloaded the software from our web site or have a USB flash key, navigate to the directory and click the executable **touchfoil\_Configuration\_Setup\_xXX.exe**. Follow the instructions on screen, and then proceed to “Set up” section of this guide.

During installation, the installer will check for the presence of dependencies on your computer and try to install these if possible. The current dependencies are:

- Microsoft Visual C++ Redistributable 2013 (32bit or 64bit, dependent on computer architecture)

#### Supported system platforms:

Windows 7 (32bit/64bit)  
Windows 8 (32bit/64bit)  
Windows 8.1 (32bit/64bit)  
Windows 10 (32bit/64bit)

# Installation Instructions for Linux

Linux systems vary greatly and so we have tried to keep the distribution of our software as agnostic as possible. In all cases there is some work to do before the application runs, outlined below.

## Step 1

Please make sure that your system meets the following dependency requirements:

- libhidapi-hidraw0

### Installing libhidapi-hidraw0

Ubuntu 14.04, Ubuntu 14.10, Debian 8.1:

```
$ sudo apt-get install libhidapi-hidraw0
```

Note: the 'universe' repository has to be active in the Ubuntu case.

Fedora 22:

```
$ dnf install hidapi
```

Ubuntu 12.04:

Ubuntu 12.04 'Precise Pangolin' lacks any 'hidapi' package. It also lacks 'libudev1', but a workaround is given:

1. Install libudev0:

```
$ sudo apt-get install libudev0
```

2. Now issue the following command on 64 bit processor:

```
$ sudo ln -sf /lib/x86_64-linux-gnu/libudev.so.0 /lib/x86_64-linux-gnu/libudev.so.1
```

Or the following on 32 bit (x86) processor:

```
$ sudo ln -sf /lib/i386-linux-gnu/libudev.so.0 /lib/i386-linux-gnu/libudev.so.1
```

An included version of hidapi-hidraw0 is provided, and preloaded by a specific launch script for 12.04 (See 'Step 4' below).

## Step 2

If you have downloaded the software or have a USB flash key, navigate to the directory and extract the zipped tarball to your desired location:

```
$ tar -zxvf touchfoil_Configuration_XXX.tar.gz
```

You will see a file structure similar to the following:

```
$ ls
generic          libQt5DBus.so.5      libQt5Widgets.so
iconengines      libQt5DBus.so.5.5    libQt5Widgets.so.5
imageformats     libQt5DBus.so.5.5.0  libQt5Widgets.so.5.5
lib              libQt5Gui.so         libQt5Widgets.so.5.5.0
libicudata.so.54 libQt5Gui.so.5       libQt5XcbQpa.so
libicudata.so.54.1 libQt5Gui.so.5.5     libQt5XcbQpa.so.5
libicui18n.so.54 libQt5Gui.so.5.5.0   libQt5XcbQpa.so.5.5
libicui18n.so.54.1 libQt5Network.so     libQt5XcbQpa.so.5.5.0
libicuuc.so.54   libQt5Network.so.5   platforms
libicuuc.so.54.1 libQt5Network.so.5.5 readme.txt
libQt5Core.so    libQt5Network.so.5.5.0 rules
libQt5Core.so.5  libQt5OpenGL.so      touchfoilConfigSoftware
libQt5Core.so.5.5 libQt5OpenGL.so.5    touchfoilConfigSoftware-precise.sh
libQt5Core.so.5.5.0 libQt5OpenGL.so.5.5 touchfoilConfigSoftware.sh
libQt5DBus.so    libQt5OpenGL.so.5.5.0 xcbglinTEGRATIONS
```

### Supported system platforms:

Ubuntu 12.04 (32/64bit)  
Ubuntu 14.04 (32/64bit)  
Ubuntu 14.10 (32/64bit)  
Debian 8.1 (32/64bit)  
Fedora 22 (32/64bit)

Use "x64" for 64bit Operating Systems.  
Use "x86" for 32bit Operating Systems.

## Step 3

---

In most modern Linux distributions, the creation of `/dev` entries for USB devices is done on the fly by UDEV. By default the entries are owned by the user `root` in the group `root`, so they are inaccessible to normal users. This behaviour can be changed by giving some rules to UDEV, which we have provided for you.

Execute the `usb-rules.sh` shell script which will install the UDEV rules necessary to allow read/write permissions to the device for a non-root user:

```
$ cd touchfoilConfig/rules
touchfoilConfig# sh install-rule.sh
touchfoilConfig$ cd ..
```

Note that the script uses `sudo` commands so you will need to have `sudo` or root permission to successfully execute the script.

Currently the ownership of the device is granted to a group called `VPTOUCH` and the access is defined as `660`. Don't forget to add the users that will use the touchfoil to that group:

```
# groupadd VPTOUCH
# usermod -G VPTOUCH username
```

The security can be relaxed by changing the group to `users` and access to `666` in the file `'99-usb_su2.rules'` before installation (after installation that file is located at `/etc/udev/rules.d` – you may need to restart UDEV).

If you decide not to install the rules, then you will need to change the access of the `/dev/hidraw*` file created **after** the device is plugged in. This can be done by issuing the following command:

```
# chmod 666 /dev/hidraw*
```

Note that this command grants access to all of the `hidraw` devices to all users and is strongly discouraged for production use.

## Step 4

---

You are now ready to run the touchfoil Configuration Software. Make sure the `touchfoilConfigSoftware` binary has execute permissions:

```
$ chmod u+x touchfoilConfigSoftware
```

To run the software, double click the executable `touchfoilConfigSoftware` or execute the `touchfoilConfig.sh` shell script provided:

```
$ sh touchfoilConfigSoftware.sh
```

Note: for Ubuntu 12.04 Precise Pangolin, please execute the alternative version:

```
$ sh touchfoilConfigSoftware-precise.sh
```



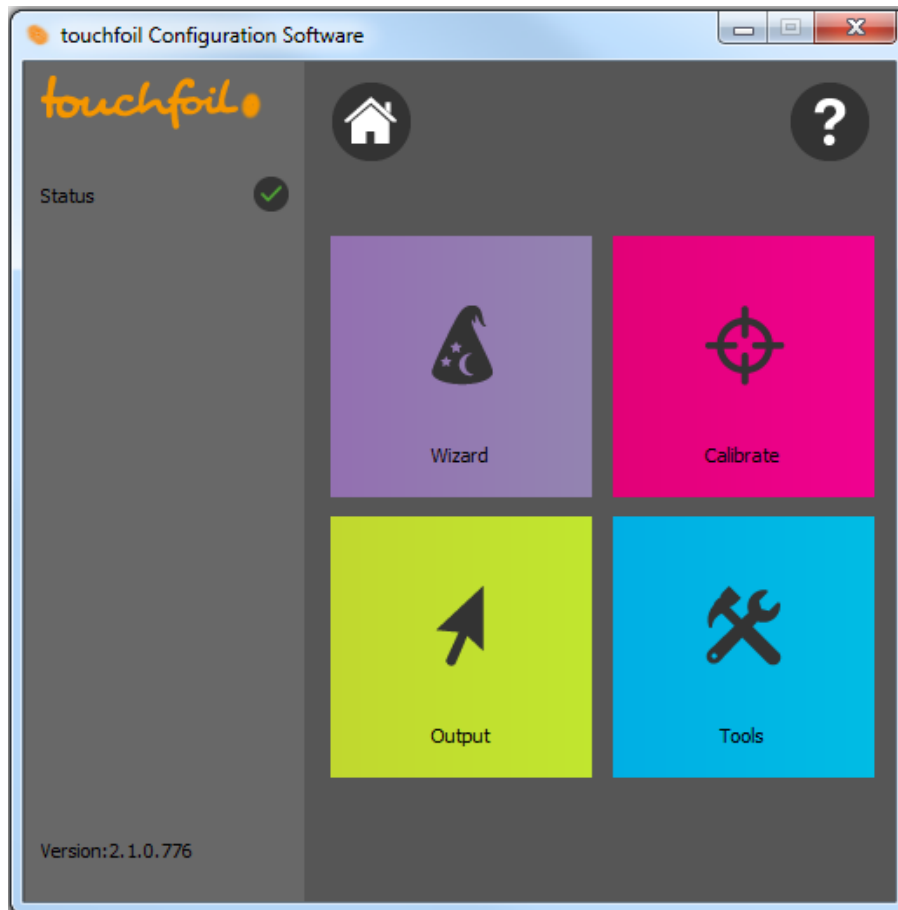
## Overview

touchfoil Configuration Software

# Step 1

## Starting the Configuration Software

If you selected the software to automatically start after the install then the Configuration Software main window will appear:



If you do not see this window, then it is likely that your touchfoil is not connected to the computer. See **Step 2 – Communication** below

If you do not see the main window, go to **Step 2 - Communication** section below.

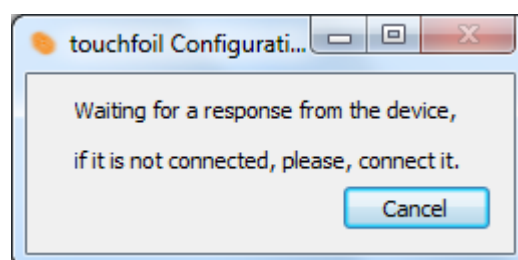
For manual start, click on the **Desktop or Start Menu shortcut** to start the software.

## Step 2

### Communication

The Configuration Software will only work once you have plugged in the touchfoil controller to the computer using the USB cable.

Once the touchfoil controller is connected, the Software will recognise the device and display the main window.



If the touchfoil is not connected, the Software will show a window prompting you to **connect the device**

## Step 3

---

### Configuration Wizard

The Configuration Wizard should allow you to setup the touchfoil semi-automatically. The wizard will guide you through the following steps:

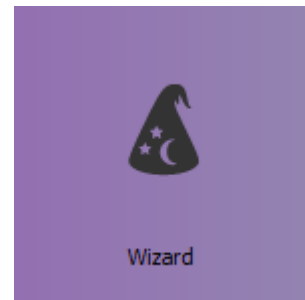
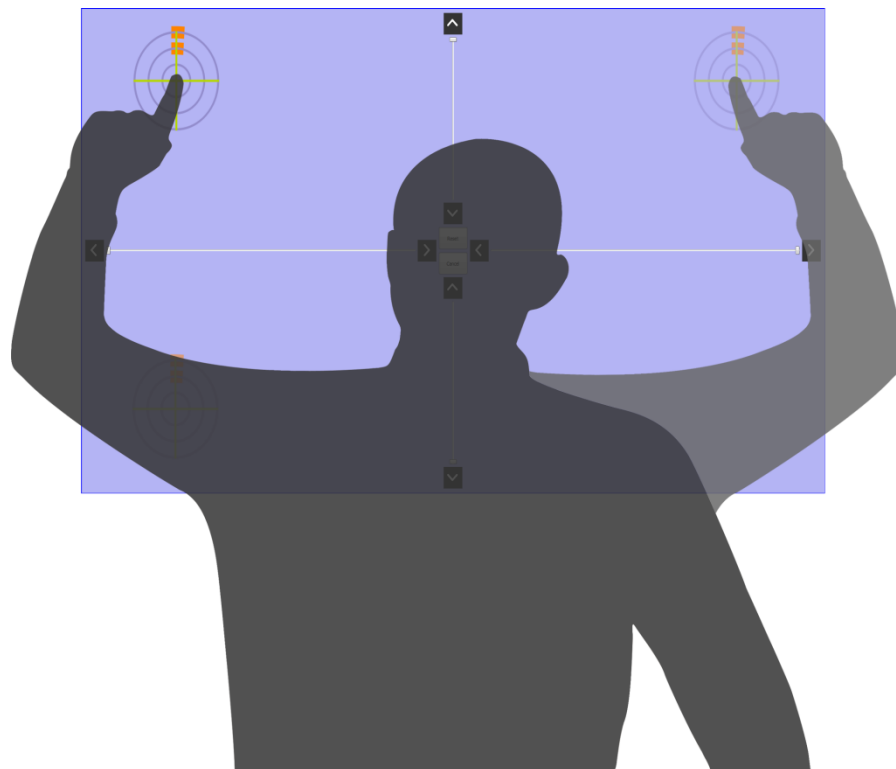
1. Geometric Calibration
2. Output Selection

### Geometric Calibration

Standing in the middle of the screen, place and hold your first (index) finger over the centre of each target displayed whilst the orange progress circle is completing. Once the target has finished, a green "tick" will be displayed and the calibration will move to the next target.

Press each target in turn until the process has completed.

If the calibration has been successful, the wizard will move to the next stage.

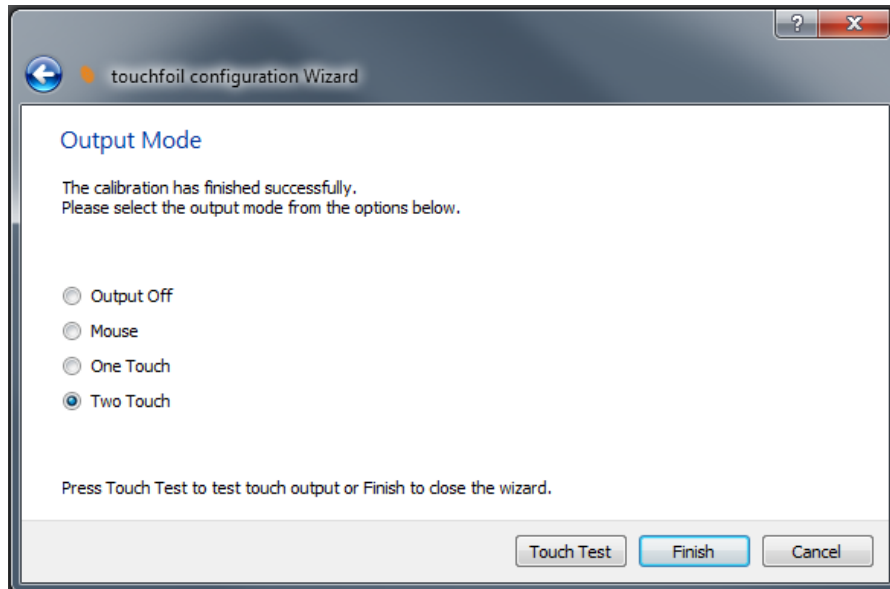


Use your left hand for the targets on the left, and your right hand for the targets on the right side of the display



## Output Selection

Select the type of output that you would like the device to report. The single user product can output mouse, one touch, and two touch response. One and two touch response will work on computers running compatible versions of Windows 7, 8, 8.1, and Linux (min requirements apply- contact Visualplanet support for more information).



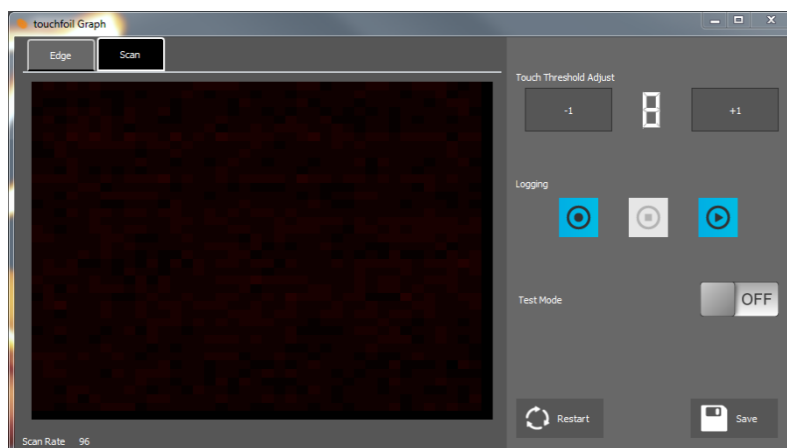
## Step 4

### Fine Tuning TouchThreshold

At this point the product is ready to use, and you should see touch response when touching the sensor. If necessary, you can slightly adjust the touch threshold to change the level at which the product returns a touch event.

To change the threshold, click the **Graph** button in the **Tools** section. If touch is registered before touching the glass the threshold needs to be increased ( **+1** button) while if the touch drops or is not responsive enough the threshold needs to be dropped ( **-1** button). After each change, test the product by touching the sensor to check if the touch response is as desired. Increasing the threshold will make the touch “less sensitive”, while decreasing the threshold will make the touch “more sensitive”.

If you are having problems with the setting of the threshold, see the **Tools** section of this document



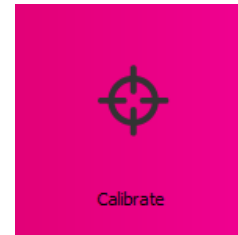
Note: The **Scan** tab provides a matrix representation of the sensor while the **Edge** tab offers an axis view per channel. Green colour on both tabs represent signal to potential touches so it should only appear when a finger is in contact with the sensor otherwise it could be an indication of interference.

## Step 5

---

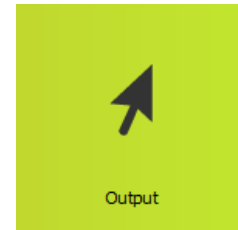
### Re-calibration

If you need to perform the geometric calibration again at some point, you can press the **Calibrate** button on the main window.



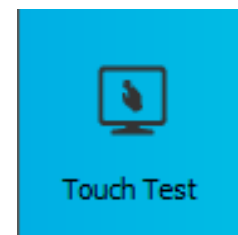
### Re-setting output

If you need to change the output mode of the device at some point, you can press the **Output** button on the main window.



### Testing Touch

To test touch output and basic functionality from within the Configuration Software, you can press the **Touch Test** button in the Tools section



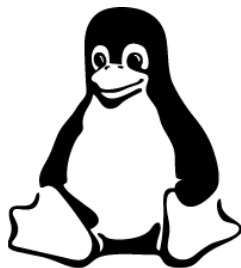


## Uninstall instructions

Windows



Linux



# Uninstall procedure

## Uninstall Instructions for Windows

The Configuration Software can be uninstalled by running the uninstaller:

1. Run **uninst.exe** in "C:\Program Files\Visualplanet\touchfoil Configuration Software"

## Uninstall Instructions for Linux

1. The Configuration Software can be uninstalled by deleting the installation directory:

```
$ rm -r ~/touchfoilConfig
```

Note: the above command assumes that you have installed the software in your user's "home" directory (~). Use the correct path for your installation.

2. Linux also keeps software settings in a file, usually located in your user's "config" directory (which is hidden). You can delete this file:

```
$ rm -r ~/.config/Visualplanet
```



## Advanced set up

Single User touchfoil

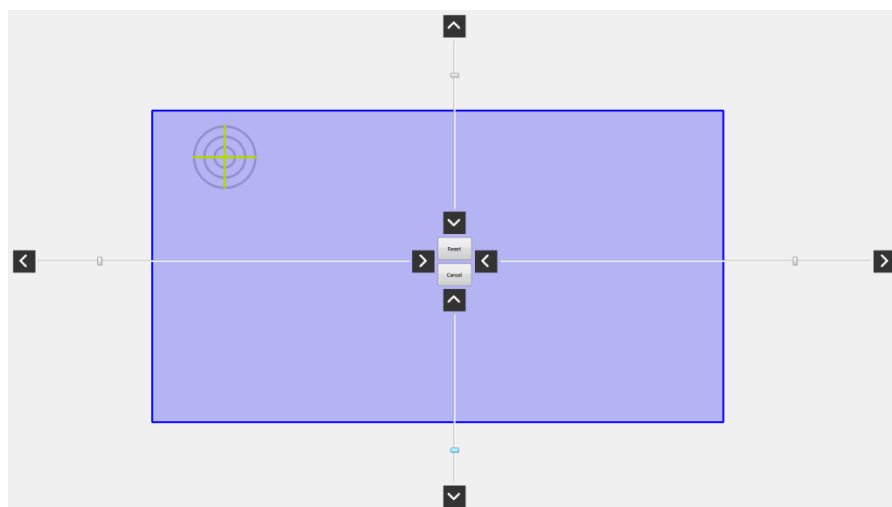
# Touch zone calibration

## Introduction

To configure the touchfoil in custom installations, the calibration can be altered to account for differences between display size and touch active area.

## Touch Zone Calibration

Click on the “Calibration” button in the Configuration Software main window to launch the geometric calibration screen.



If the touchfoil is the same size or larger than the display area, you can define a touch zone that is not full screen to exclude a display area from touch response. Use the sliders to define the size and ratio of the calibration box. The touchfoil will still sense touch activity in the excluded area but will not produce touch events (clicks, taps, drags etc.) beyond the boundaries of the touch zone.

If the touchfoil is smaller than the display area, then you can adjust the calibration box using the sliders so that the boundary of the touch zone on screen matches the touchfoil active area. This will ensure that the touch response is correctly calibrated for the region of the display to which you have mounted your touchfoil.

# Logging

## Introduction

---

To help diagnose any driver setup issues you may encounter, you can record a log of the touchfoil's response. Visualplanet support staff may ask you to send this log via email so that we can resolve these issues

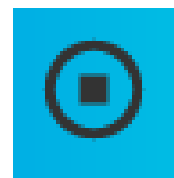
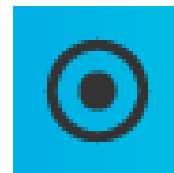
## Recording a Log

---

To record a log, click the "record" button in the Graph window (you can get to the Graph window by clicking the button in the tools section).

You should now run your finger from left to right across the touchfoil's area, and then from top to bottom. You can see the touch response on the graph window.

When you have finished recording the log, click the "Stop" button.



## Sending a Log

---

The log file by default is created in the program's installation folder (C:/Program Files/Visualplanet/touchfoil Configuration Software). It is an ascii text file and will be less than 1mb in size for ease of emailing.

Visualplanet's support team may also ask you to share your screen using a remote support tool. Our support engineers will provide you with the details

## Installation tips

When installing the touchfoil with an LCD display an air gap is required between the back of the touchfoil and the LCD display. The recommended air gaps below can be affected by the quality of the LCD display, we would always recommend that industrial displays intended for digital signage are used.

The distance of the air gap is dependent on the size and quality of the LCD display. As a guide, a 40" touchfoil requires a 4-10mm gap and a 55" touchfoil requires a 6-10mm gap. The earth lead on the USB cable **must** be connected to a clean metal point on the LCD metal casing. This will reduce the interference that is caused by the LCD unit

Route the touchfoil USB cable away from all mains, VGA and power supply cables and external power supplies

If you are integrating the touchfoil as part of an OEM solution such as a kiosk or totem, please contact your account manager for a copy of our **OEM Integration Guide**

### Tips for successful calibration:

Ensure that the controller PCB is securely fixed



Ensure that the controller PCB is grounded using the black cable



A gap is required between the touchfoil™ and the display panel. Please refer to the user guide



Minimize noise from the display panel by ensuring that the chassis is connected to a reliable ground





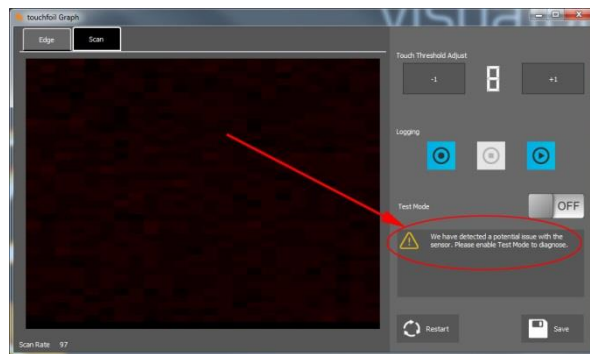
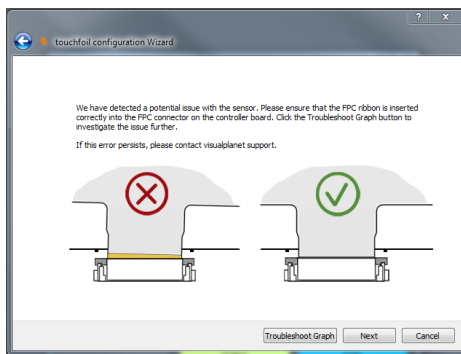
# Troubleshooting

## Cannot complete calibration

If you are finding it hard to complete the calibration because the target animations are failing to complete, then you require a better Signal to Noise Ratio (SNR). You need to ensure that you have followed the Installation Tips in this guide to minimise electronic noise issues.

## Potential issue with the sensor detected

If you see this message during the wizard setup or in the Graph window as showed below, the firmware has identified an area of the sensor that is less responsive than the rest. Please remove the orange FPC ribbon from the controller board, clean the gold contacts with a soft cloth and isopropyl alcohol (IPA) if available. Refit the FPC ribbon in the FPC connectors on the controller board. Ensure that the ribbon is aligned and the locking bar is in place to provide correct connectivity between the sensor and controller board. If the error persists, please contact Visualplanet support.



## Random touches or touch activates too far from the display

Increase threshold levels in small increments only. You should see no flickering on the X/Y touch indicators when you are not touching the display (green bars in the graph window). Only adjust the threshold level if the touchfoil is either too sensitive or non-responsive to your touch.

## Application does not respond to (multi) touch

Check that your application has been developed to work with touch events (Windows Touch).

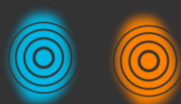
If the Windows desktop does not respond to single touch tap and drag, it is likely that Windows Touch is not functioning properly. Check that you have the required components for touch response in Windows.

## Touch not tracking the finger correctly

Check geometric calibration, re-calibrate if required.

If threshold level is incorrect, change threshold levels as required. Alternatively, click the "Restart" button to perform a soft restart of the controller, and to reset the background sensing levels of the product.

DOCUMENT VERSION INFORMATION			
VERSION	DATE	AUTHOR	COMMENTS
2.2.0	2016-09-22	AM	Updating for v2.2.0 release
2.1.0	2015-12-07	AM	Added Troubleshooting information
2.0.0	2015-09-11	DS	Added Linux Install instructions
1.0.0	2014-12-10	DS	First Release



# Enjoy the world of touch



## Visualplanet

Camboro Business Park  
Oakington Road  
Girton  
Cambridgeshire  
CB3 0QH, UK

**sales@visualplanet.biz**  
**+44(0)1223 202949**

