

IMU Calibration

This page describes how to calibrate the TRAX IMU in Linux.

Getting Started

*To calibrate the TRAX IMU, PNI Trax Studio must be used, which can be found [here](#). You will also need the user manual which details how various calibrations should be performed.

*Since PNI Trax Studio is a windows application you will also need Wine installed. <NOTE: Calibration must be performed on the sub!>

```
sudo aptitude install wine-stable winehq-stable
```

Installing PNI Trax Studio

*With Wine installed, install PNI Trax Studio using default/recommended setup.

```
unzip TRAX-Studio-1.0.2.zip  
wine msixexec /i TRAX-Studio-1.0.2.msi
```

or

```
wine start TRAX-Studio-1.0.2.msi
```

With TRAX Studio installed, we need to make sure TRAX Studio will recognize our IMU. To do this we need to link our virtual COM ports to our TRAX device. To do this we create a symbolic link between the two. With the latest versions of wine (wine 3.0.3 as of writing) we must edit our windows registry to connect these devices.

*Follow the steps according to the wine [wiki](#) using any COM and the value /dev/TRAX

*For earlier versions of wine (prior to 2.8) use

```
ln -s /dev/TRAX ~/.wine/dosdevices/com
```

replacing the com on the end with the com device you wish to connect.

Running TRAX Studio

*To run TRAX Studio after setup, simply start it as any other wine program

```
wine .wine/drive_c/{path to file}
```

*When launched, you will want to select the COM port you linked to the TRAX in the previous section and click connect.

*Follow the instructions detailed in the user manual under Section 5, User Calibration. (Typically Full-Range Calibration).

*Further information on operation of TRAX Studio can be found in the manual under Section 6, Operation With Trax Studio.

From:

<https://robosub.eecs.wsu.edu/wiki/> - **Palouse RoboSub Technical Documentation**

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https://robosub.eecs.wsu.edu/wiki/cs/imu_calibration?rev=1541441505



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