Materi 8
Setup dan Kalibrasi Drone Menggunakan Ardupilot

MOOC UNAIR

Merakit dan Mengaplikasikan Robot Terbang/ Drone untuk Pemula dengan Menggunakan Platform Open Source

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UNIVERSITAS AIRLANGGA
Excellence with morality

Install Mission Planner

Feature of Mission Planner

- Point-and-click waypoint/fence/rally point entry, using Google Maps/Bing/Open street maps/Custom WMS.
- Select mission commands from drop-down menus
- Download mission log files and analyze them
- Configure autopilot settings for your vehicle
- Interface with a PC flight simulator to create a full software-in-the-loop (SITL) UAV simulator.
- Run its own SITL simulation of many frames types for all the ArduPilot vehicles.

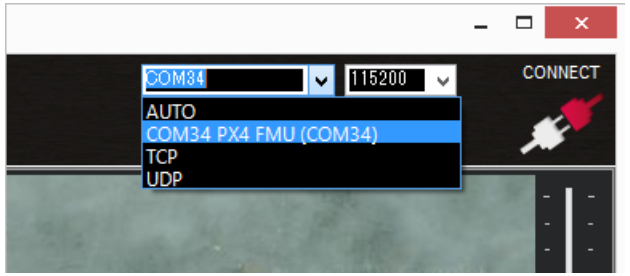
Link Download Mission Planner (latest)

https://firmware.ardupilot.org/Tools/MissionPlanner/MissionPlanner-latest.msi

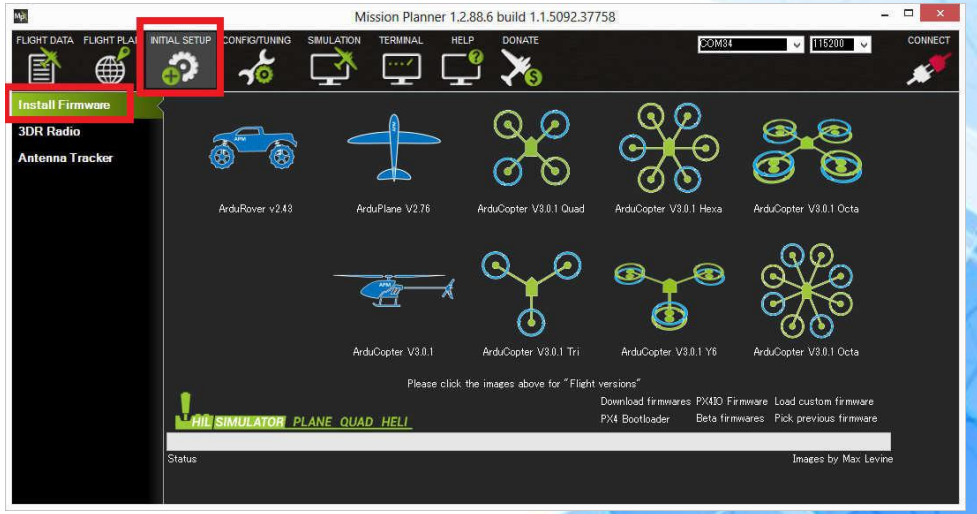
First time setup Ardupilot Drone Platform

Connect autopilot to computer

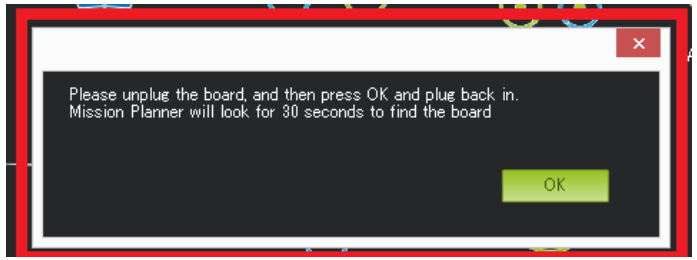
Select the COM port



Install Firmware Based on Drone Platform

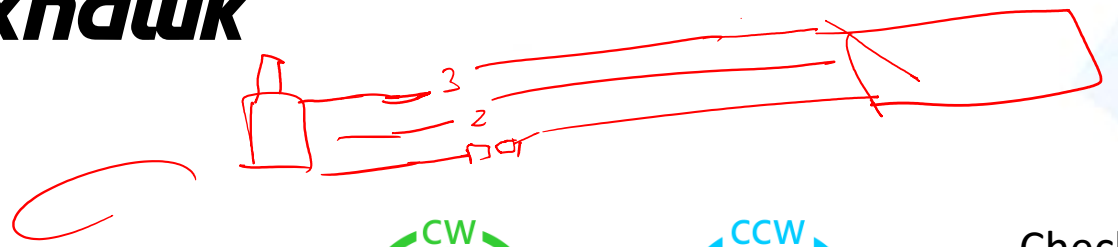


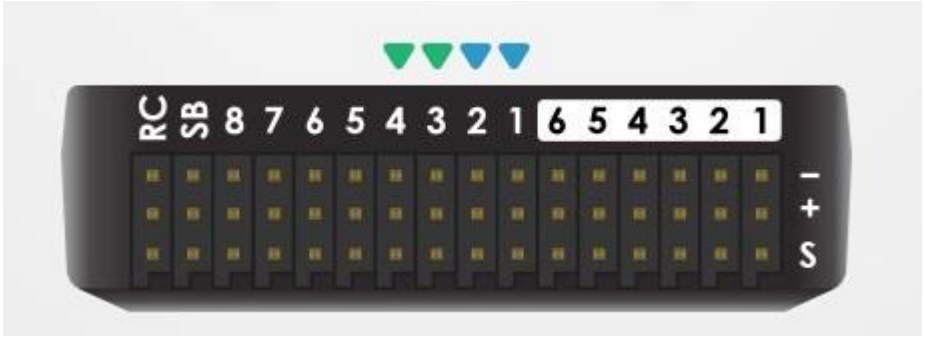
If all goes well, you will see a status appear on the bottom right including the words: **“erase…”, “program…”, “verify..”, and “Upload Done”.** The firmware has been successfully uploaded to the board.

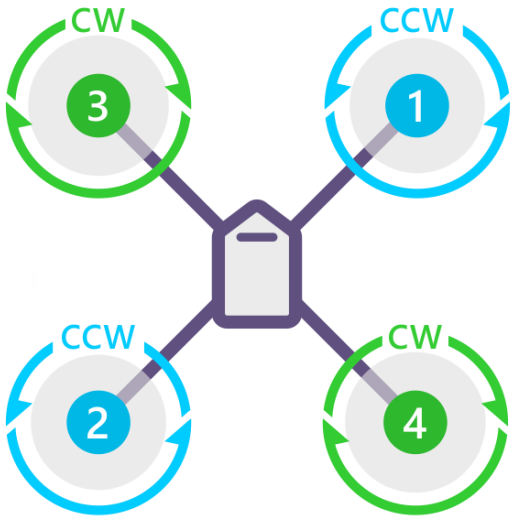


Done !!

Motor Signal setup Ardupilot Drone Platform with pixhawk



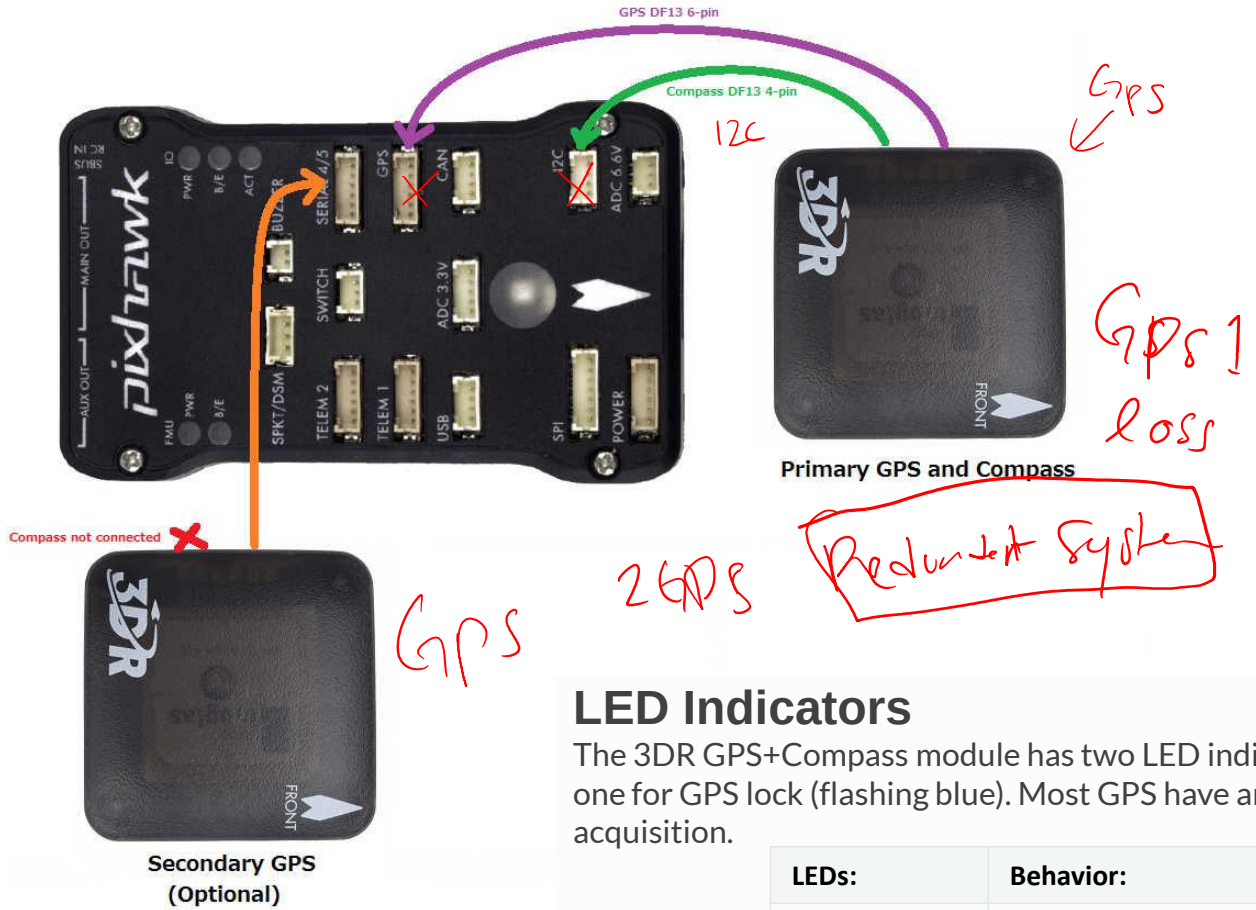


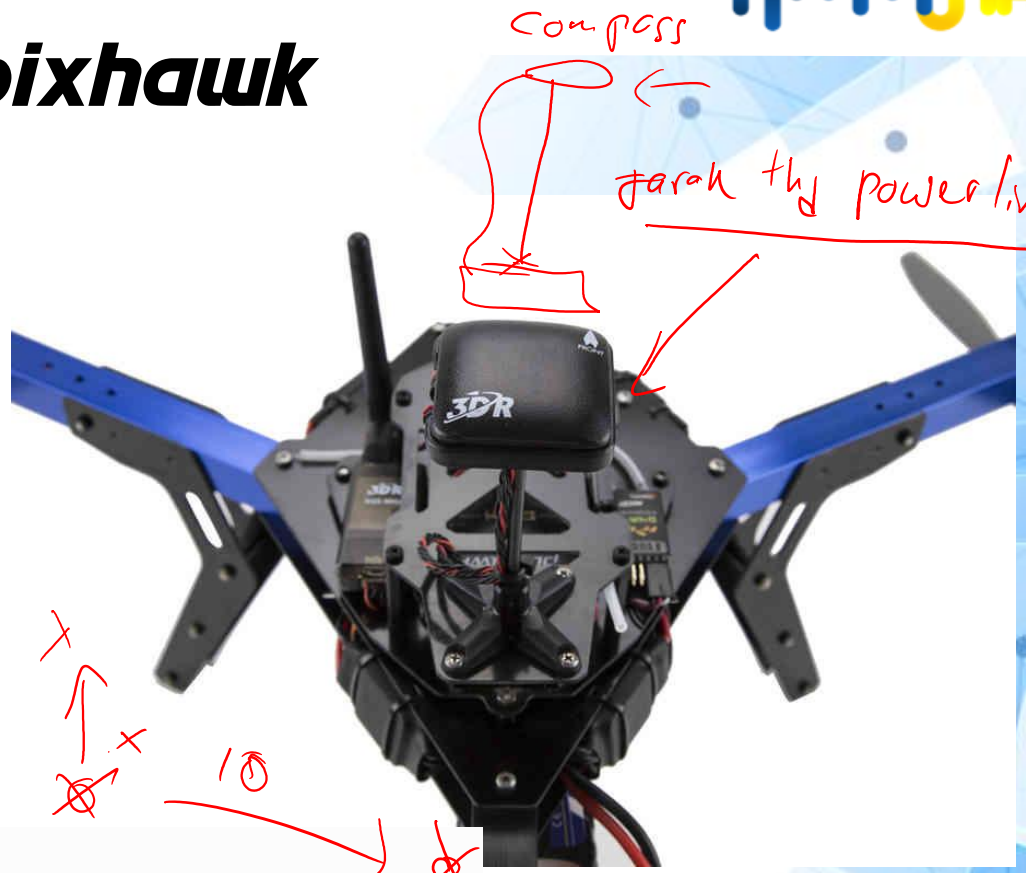


QUAD X

Checking the motor numbering with the Mission Planner Motor test

GPS Compass Hardware setup Ardupilot Drone Platform with pixhawk



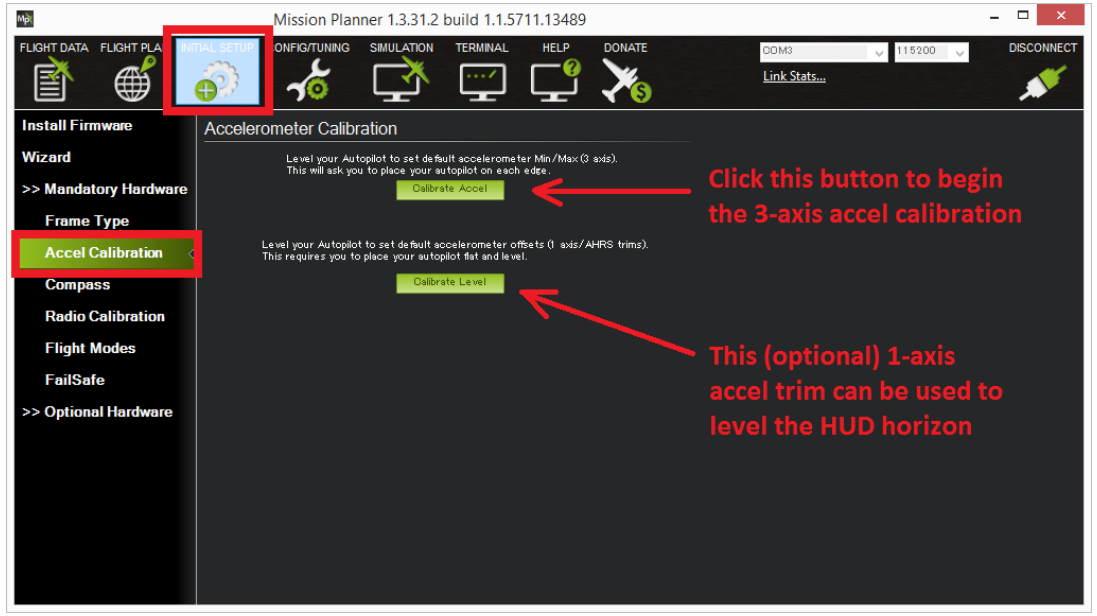


LED Indicators

The 3DR GPS+Compass module has two LED indicators: one for power (solid red) and one for GPS lock (flashing blue). Most GPS have an led indicator for 3D GPS lock acquisition.

LEDs:	Behavior:
Power	Solid **red** when powered
GPS lock	Flashing **blue** when 3D GPS lock acquired

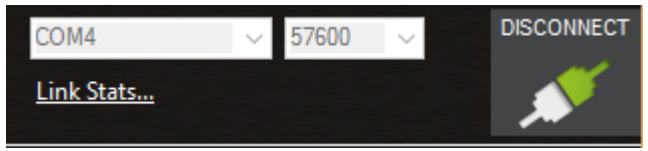
Accelerometer Calibration



The calibration positions are: level, on right side, left side, nose down, nose up and on its back.

Connecting Ardupilot Drone Platform with SIK Radio (Telemetry Module)

Select the desired port and data rate and then press the **Connect** button to connect to the autopilot. After connecting **Mission Planner** will download parameters from the autopilot and the button will change to **Disconnect** as shown:



Green Indicator (Done!!)