Testing ESC Response

Overview

The three phase motor controllers (esc's) are typically designed for hobby applications other than quad rotors (like RC cars). These other applications involve motors being geared down, so the firmware gradually ramps up motor speeds to avoid stripping the gears. This spin up time is detrimental to quad rotor function.
Some of the ESCs we have may already be configured for quad rotor use, test the different ESC's using the arm setup to confirm which ESCs work best (correct fastest).

Electrical

The inertial measurement unit will need to be secured tightly to the arm facing towards the motor. Each ESC will need to be soldered to the 11.1V connection. Other components can be more flexibly mounted with 5V and Ground connections.

Software

Software for these tests is completed and ready in the esctest folder under testing in the the software folder, the y and h keys can be used to change the numerator of the gyro correction and u and j for the denominator. Do not divide by zero.