



leaving the middle wire where it is on the pot. If you wire your pot so that the middle pin is at the bottom when following this diagram then you should be ok.

The blue connection boxes represent the 2 connector strips that I used on the outside of my plastic box.

Drawn by MarksSupplies.com, based on wiring from seriouslygoodlooking.com

## Self Balancing Scooter Wiring Diagram V2 By MarksSupplies.com

Arduino Uno 5 DOF AREF 3.3V 3.3V A0 X Axis ACC GND Reset A2 Y Axis Gyro (x4.5) switch D13 330 R Ready LED RESET V in GND GND GND D1 A12 A3 D7 A4 Debug Switch S1 Engage Switch Sabertooth Steering Gain 2x25 Motor Controller 24V B+ GND B-Meter switch M2B M1A Μ M<sub>2</sub>A Volt meter Fuse 1 Fuse 30 Amp Amp Motor Motor Motor 12V Ground 24V Motor 1B 2B 24 1Δ + + Left Right Motor 1 Motor 2

2 Battery Layout

The thicker lines represent thicker wire, use 3.5mm minimum (8AWG) multistranded copper.

The rest of the wiring can be done in 1.6mm (14AWG) multistranded copper wire.

When wiring the LED, the long LED leg is the positive leg connecting to the resistor.

The resistor used for the LED can be between 330 – 150 ohms.

Keep the D1 wire to the sabertooth short & away from other wires to avoid serial communication problems. Alternatively use shielded wire. Remember to connect the Arduino 3.3v to the Arduino AREF.

The blue connection boxes represent the 2 connector strips that I used on the outside of my plastic box.

Things to look out for when testing, do both your motors rotate the correct way, if not then simply transpose the 2 motor wires.

Things to look out for when testing, check the steering pot will steer the correct way, if not then simply transpose the outside 2 wires leaving the middle wire where it is on the pot. If you wire your pot so that the middle pin is at the bottom when following this diagram then you should be ok. Drawn by MarksSupplies.com, based on wiring from seriouslygoodlooking.com