BIKE REAR

See Sheet 4 Stripboard Layout A

R2 1k

R3 1k

T-Tap Wire Splice

Wheel Speed DC Motor

To DAQ

R1 1k

T-Tap Wire Splice

T-Tap Wire Splice

To DAQ

NiCd Batt.

7.2V

T-Tap Wire Splice

BIKE FRONT

To Throttle Relay Coil (See Sheet 3)

See sheet 2 for cable break downs

15 Pin Molex Connector

Inputs | x3 Cable Outputs

16x2 LCD

Momentary Push Buttons

Hall Effect Sensor

Micro SD Card Module

VCC MOSI GND MISO SCK CS

5V MOSI GND MISO SCK RST

Arduino Nano

VIN GND RESET +5V A7 A6 A5 A4 A3 A2 A1 A0 AREF 3V3 D13

Digital (PWM ~)

D1/TX D0/RX RESET GND D2 ~D3 D4 ~D5 ~D6 D7 D8 ~D9 ~D10 ~D11 D12

To Motor Controller (See Sheet 3)

BIKE DRIVE SIDE

NOTE: Gray wires shown here indicate white wires on the bike

TITLE: Cruise Control System Wiring Diagram		REV: 1.0
EasyEDA	Company: Mechmotum Lab	Sheet: 1/1
	Date: 2019-10-14 Drawn By: tzmetz	

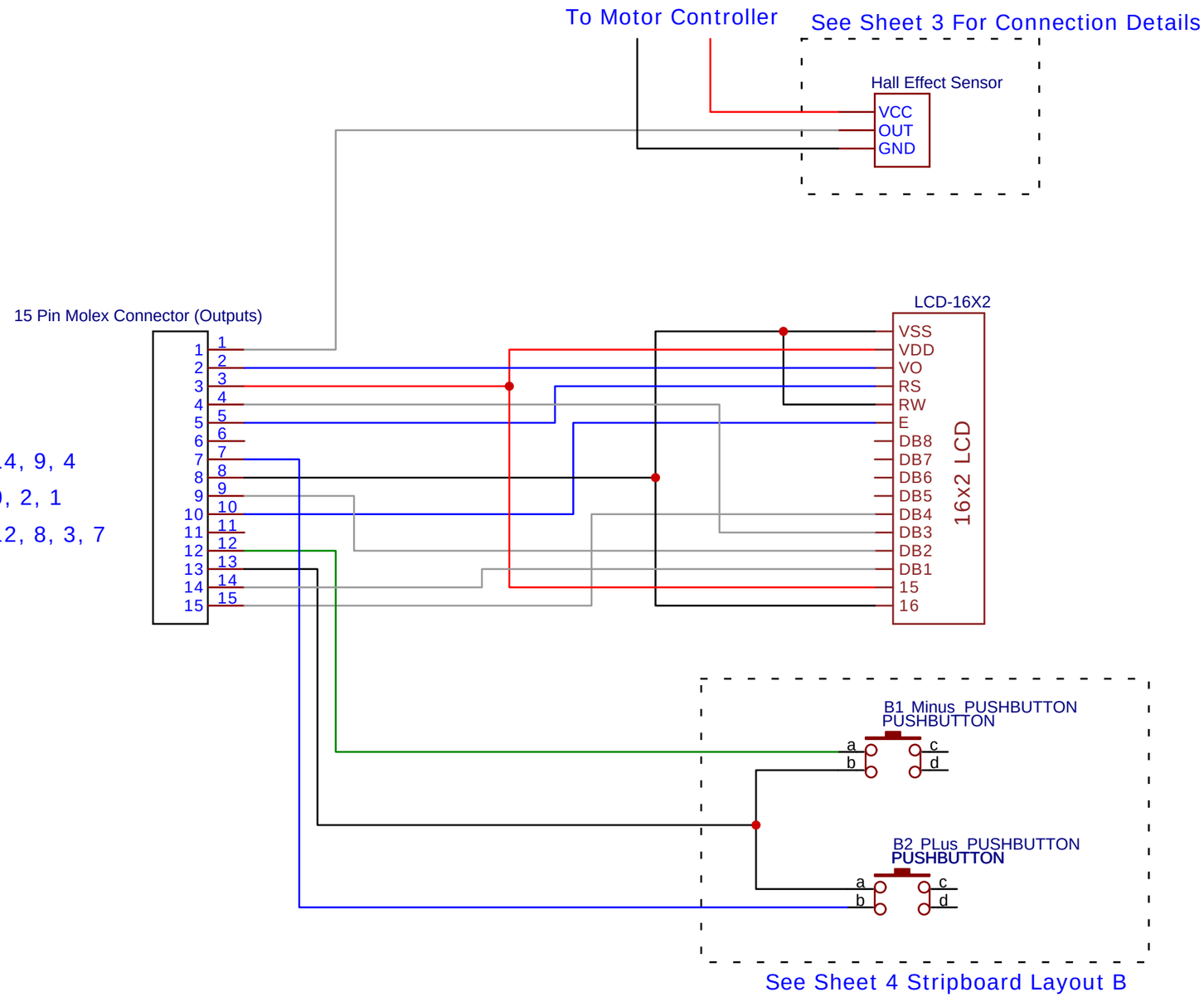
15 Pin Molex Connector Pinout

(View Facing Front of Bike)

5	10	15
4	9	14
3	8	13
2	7	12
1	6	11

CABLES

Cable	Description
A	Wires Exiting Molex Connector Pins: 15, 14, 9, 4
B	Wires Exiting Molex Connector Pins: 5, 10, 2, 1
C	Wires Exiting Molex Connector Pins: 13, 12, 8, 3, 7

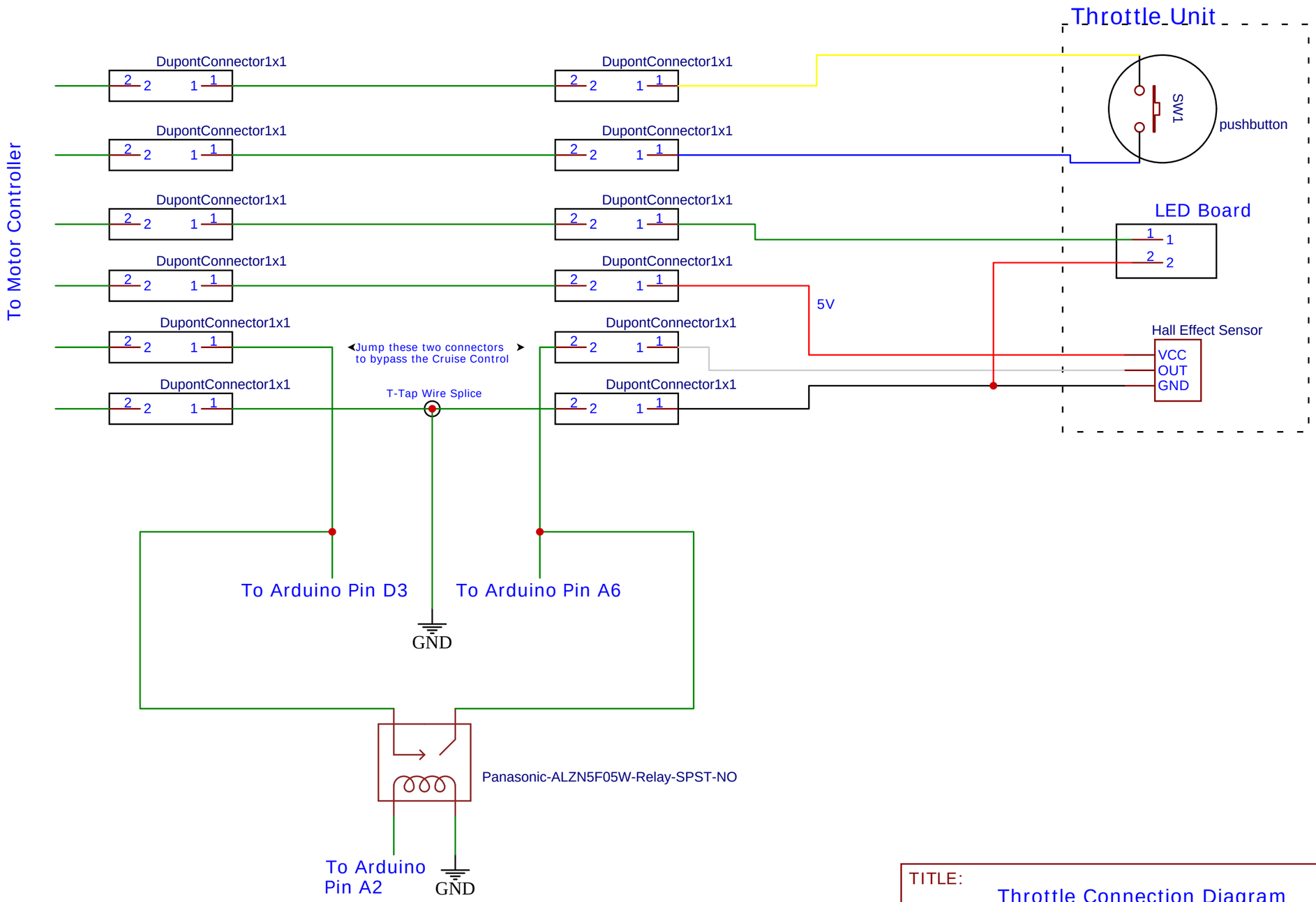


NOTE: Gray wires shown here indicate white wires on the bike

TITLE: Molex Connector Output Details		REV: 1.0
EasyEDA	Company: Mechmotum Lab	Sheet: 1/1
	Date: 2019-10-16 Drawn By: tzmetz	

This sheet is to help you understand the route the hall effect output wire takes to the Molex Connector

Also detailed here is how the throttle unit is connected to the both the cruise control and powertrain systems and how to bypass the cruise control system and revert the bike back to its original powertrain



TITLE: Throttle Connection Diagram		REV: 1.0
EasyEDA	Company: Mechmotum Lab	Sheet: 1/1
	Date: 2019-10-25 Drawn By: tzmetz	

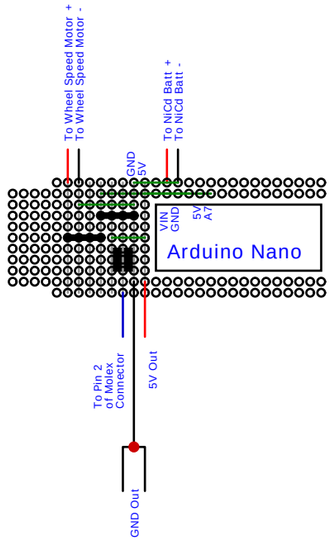
This sheet is a guide to help you understand the layout of components on the Arduino and button protoboards

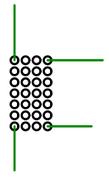
Best if used while referencing the actual implementation

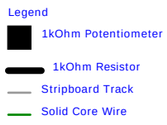
You'll need to zoom in to see these. As of 10/28/19, EasyEDA does not support component scaling

Stripboard Layout A: Arduino Board

Note: stripboard tracks are vertical
Unless otherwise noted,
assume tracks to be uninterrupted

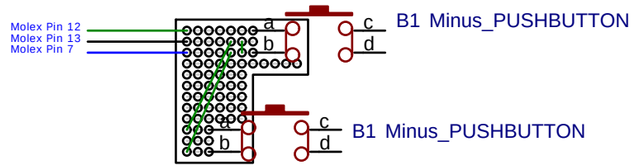






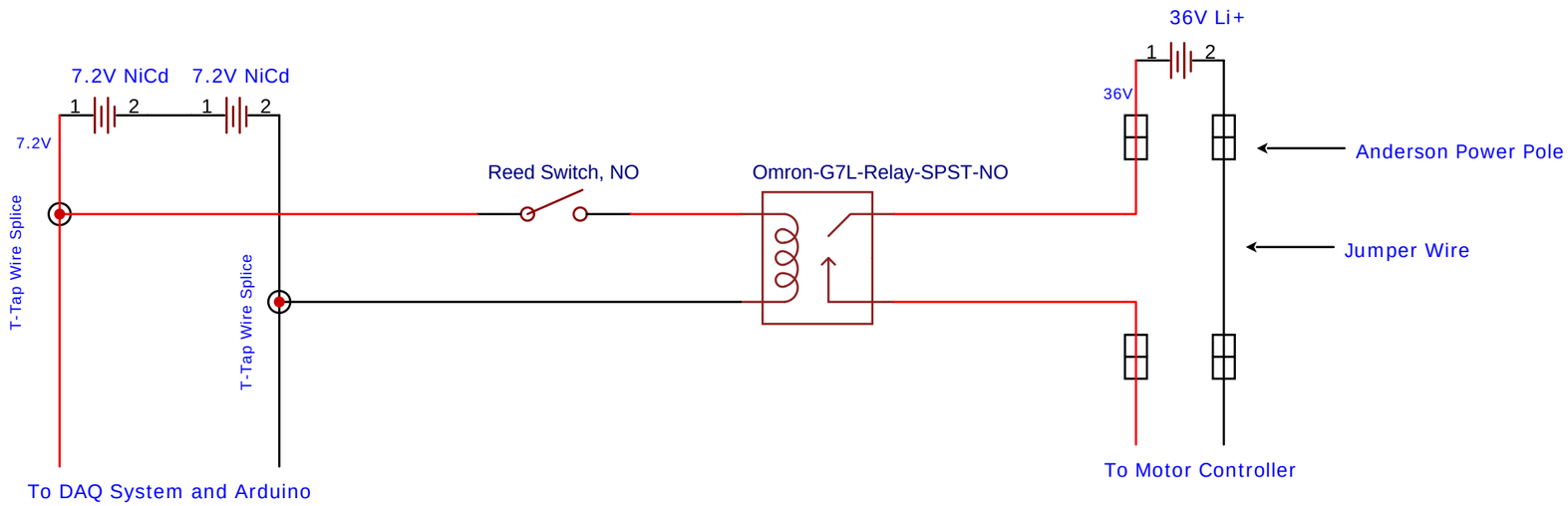
Stripboard Layout B: Button Board

Note: stripboard tracks are horizontal
Unless otherwise noted,
assume tracks to be uninterrupted



TITLE: Stripboard Layouts		REV: 1.0
EasyEDA	Company: Mechmotum Lab	Sheet: 1/1
	Date: 2019-10-28 Drawn By: tzmetz	

NOTE: Dead man's switch can be bypassed by connecting the Li+ battery directly to the motor controller using the Anderson Power Poles



TITLE: Dead Man's Switch Wiring Schematic		REV: 1.0
EasyEDA	Company: Mechmotum Lab	Sheet: 1/1
	Date: 2019-11-04 Drawn By: tzmetz	