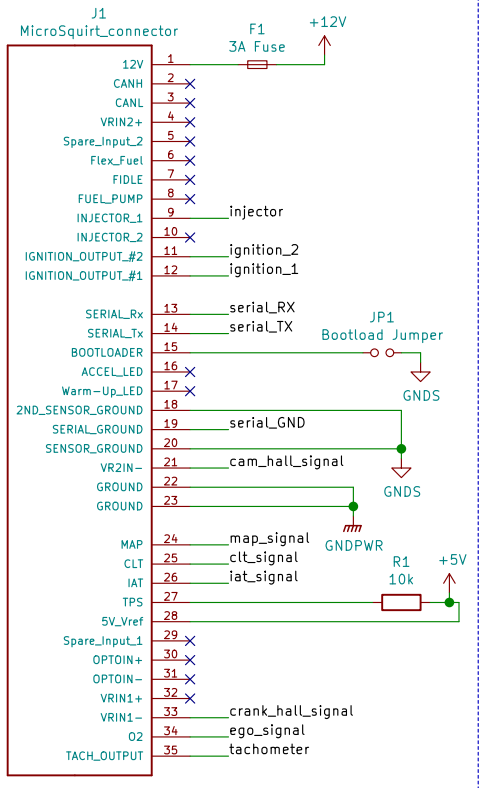
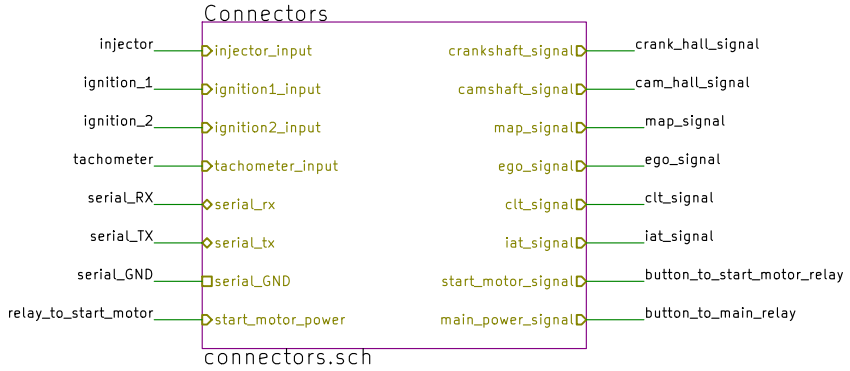
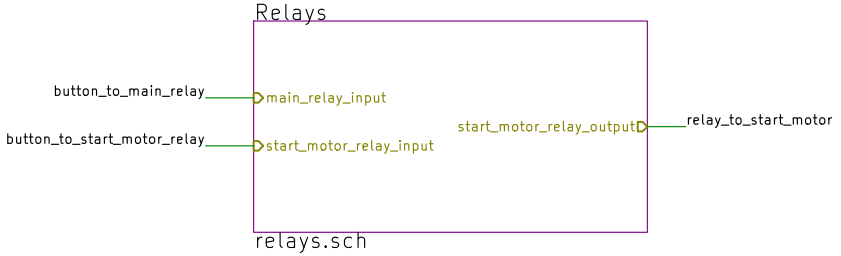
MicroSquirt

Connector to the MicroSquirt ECU. The Bootload jumper is to allow flashing new firmware. The connector must be wired with the same pinout as the MicroSquirt.







Designed by Erik Almbratt (erik.almbratt@gmail.com)
Chalmers Vera Team

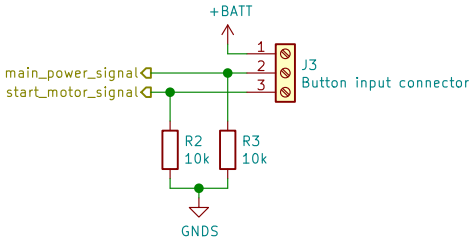
Sheet: /
File: ecu-board.sch

Title: Vera ECU Board

Size: A4	Date: 2019-02-04	**Rev: 0.1**
KiCad E.D.A. kicad 5.0.1		Id: 1/3

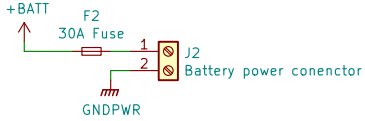
Button input

Button inputs for relay control of main power and starter motor.



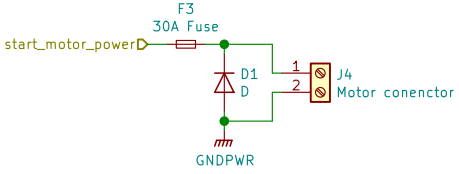
Battery

Battery power is only connected to the main power relay, as well as the normally open bistable power switch controlling said relay.



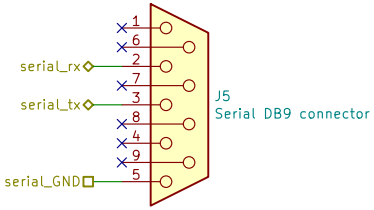
Start motor

The start motor power is switched by a normally open monostable switch.

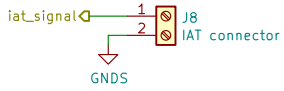


RS232 Serial Port

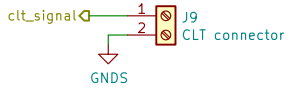
DB9 serial connector for mapping of MicroSquirt.



Intake Air Temperature

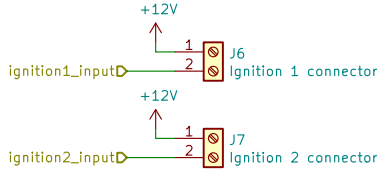


Motor Coolant Temperature



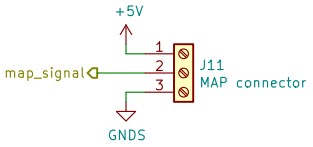
Ignition

The electrical system is designed to function with either one or two ignition coils. Currently it is not yet decided how the final implementation will be.

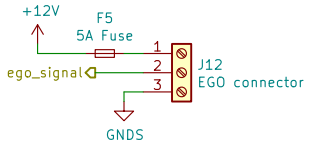


MAP sensor

MAP Sensor Model: NXP MPX4250AP

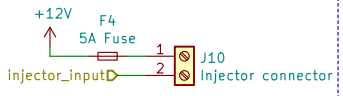


EGO Lambda sensor



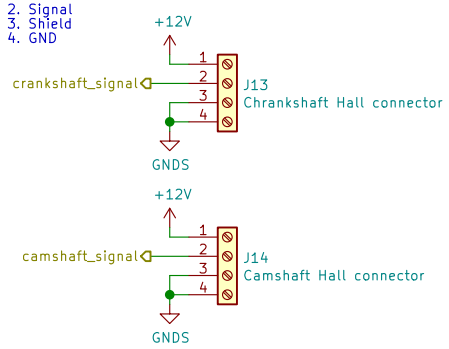
Injector

Injector input is switched by a normally open dead mans switch.



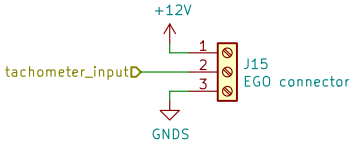
Hall sensors

Hall Sensor Model: Littlefuse 55110-3M-03-A
Crankshaft Sensor: xxxxx
Pinout:
1. 3.8-24V
2. Signal
3. Shield
4. GND



Human Machine-Interface

Connection to the Raspbery Pi based HMI.

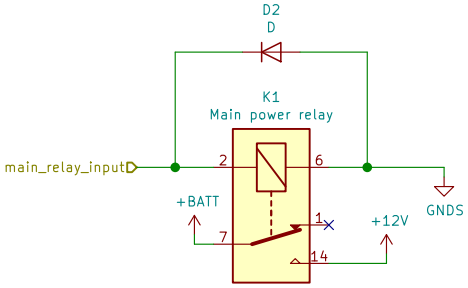


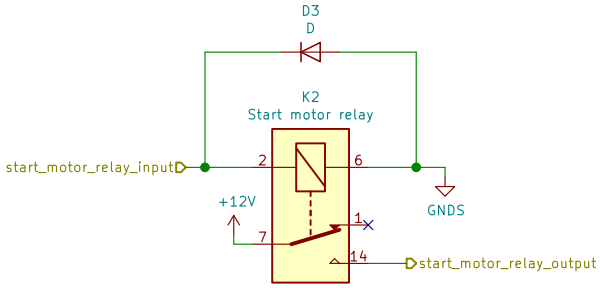
Designed by Erik Almbratt (erik.almbratt@gmail.com)
Chalmers Vera Team

Sheet: /Connectors/
File: connectors.sch

Title: Connectors

Size: A4	Date: 2019-02-04	**Rev: 0.1**
KiCad E.D.A. kicad 5.0.1		Id: 2/3





Designed by Erik Almbratt (erik.almbratt@gmail.com)
Chalmers Vera Team

Sheet: /Relays/
File: relays.sch

Title: Relays

Size: A4	Date: 2019-02-04	**Rev: 0.1**
KiCad E.D.A. kicad 5.0.1		Id: 3/3