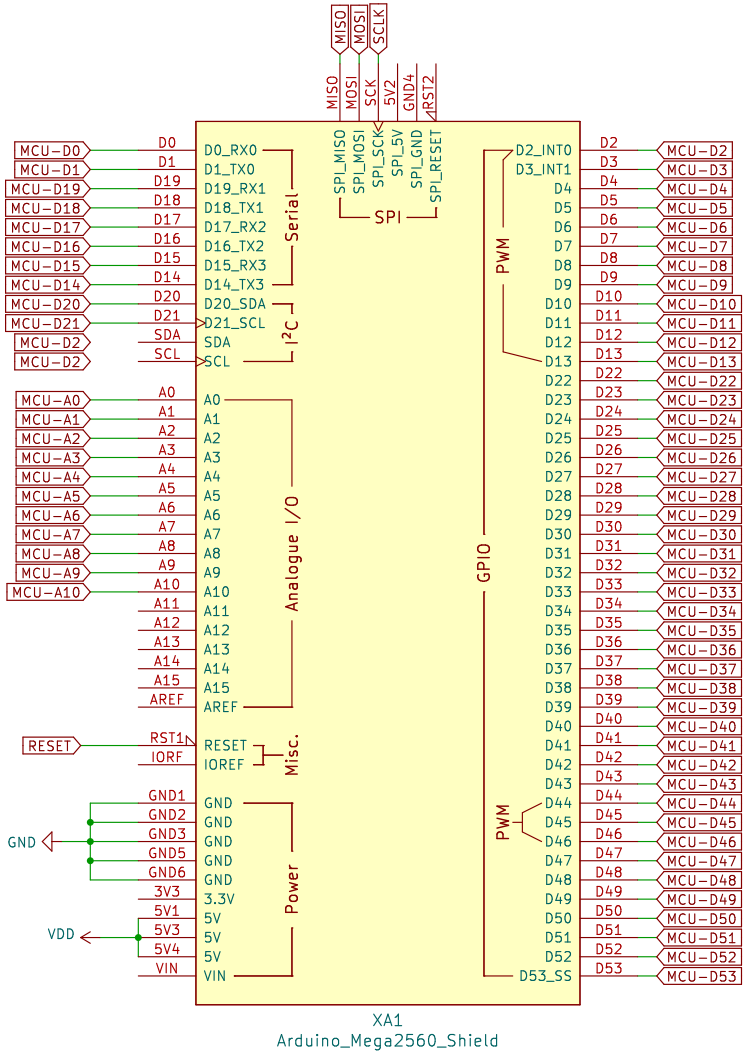



Fuel & Ignition

File: Fuel_Ignition.sch

Inputs

File: inputs.sch

Power

File: power.sch

Connector

File: connector.sch

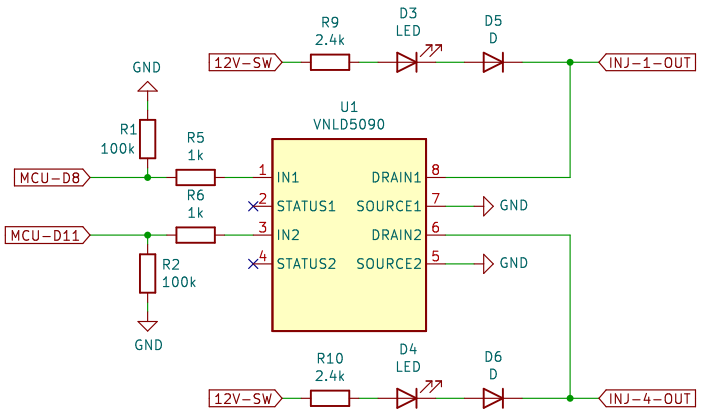
Outputs

File: outputs.sch

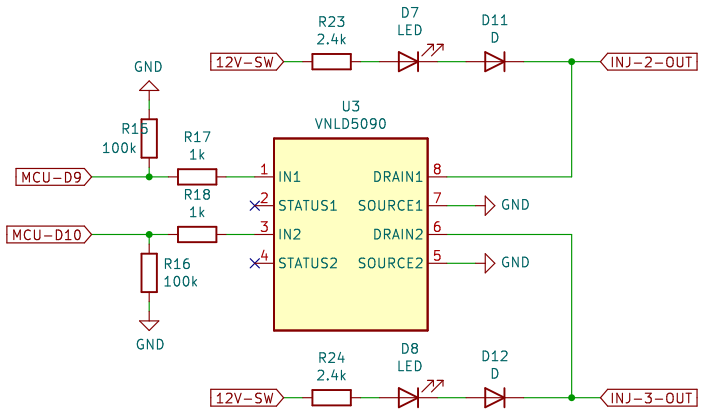
Proto Area

File: proto.sch

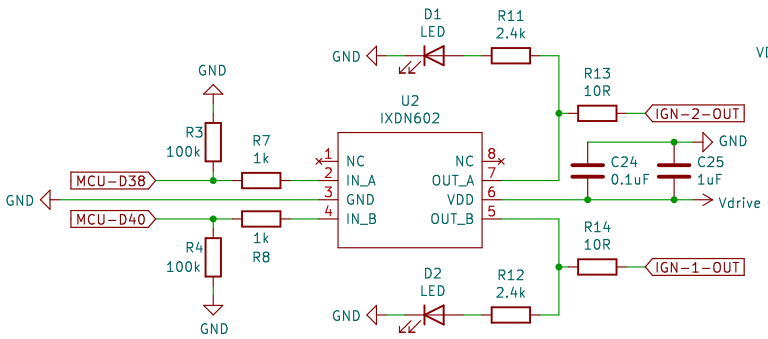
## Injector Driver 1

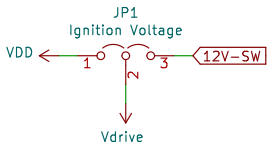



## Injector Driver 2

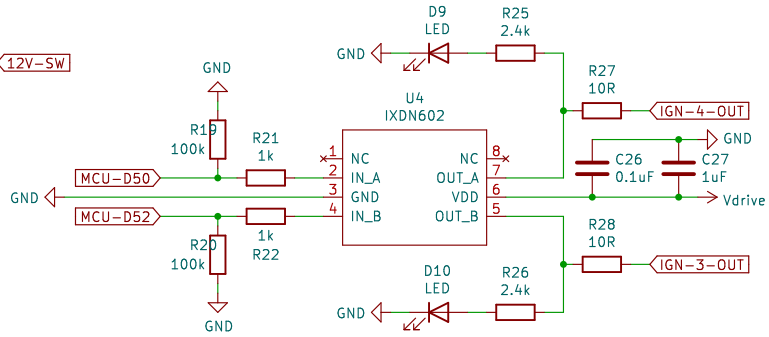


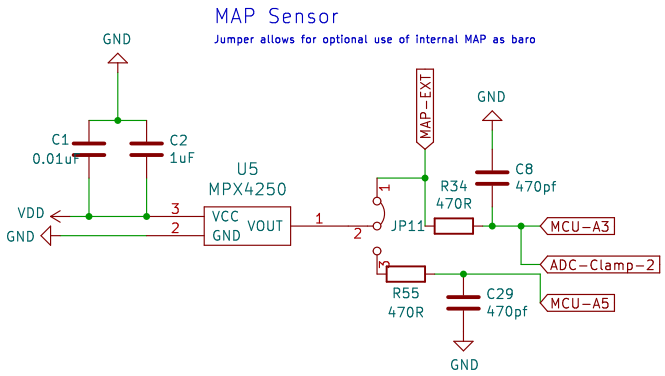

## Ignition Driver 1

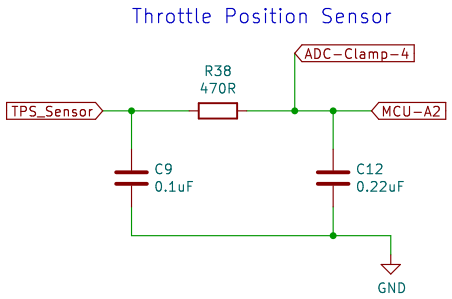


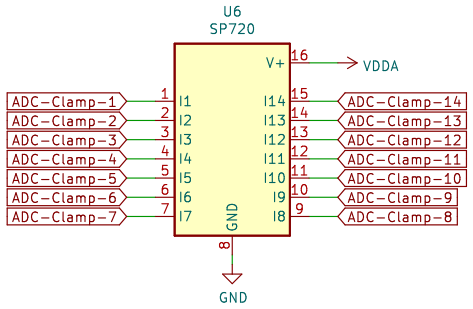



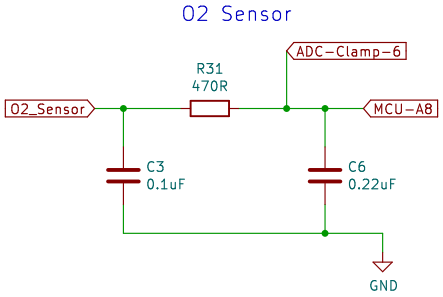

## Ignition Driver 2

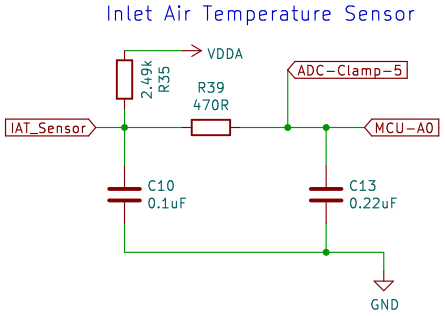


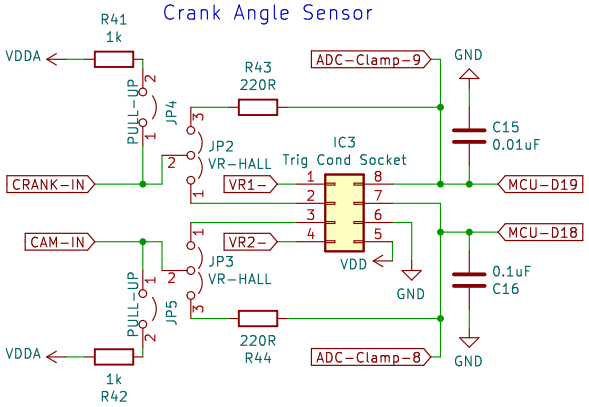

MAP Sensor
Jumper allows for optional use of internal MAP as baro
GND
C1
0.01uF
C2
1uF
U5
MPX4250
VDD
GND
VCC
GND
VOUT
MAP-EXT
JP11
R34
470R
C8
470pf
MCU-A3
ADC-Clamp-2
R55
470R
C29
470pf
MCU-A5

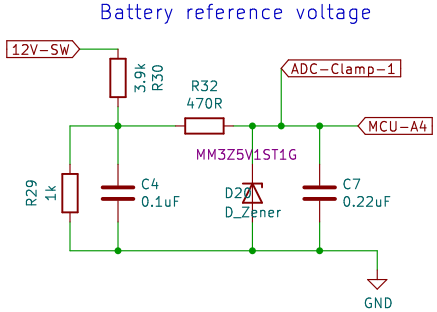

Throttle Position Sensor
TPS_Sensor
R38
470R
ADC-Clamp-4
MCU-A2
C9
0.1uF
C12
0.22uF
GND

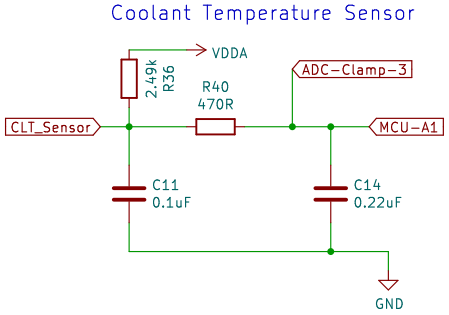

U6
SP720
V+
VDDA
ADC-Clamp-1
ADC-Clamp-2
ADC-Clamp-3
ADC-Clamp-4
ADC-Clamp-5
ADC-Clamp-6
ADC-Clamp-7
GND
ADC-Clamp-14
ADC-Clamp-13
ADC-Clamp-12
ADC-Clamp-11
ADC-Clamp-10
ADC-Clamp-9
ADC-Clamp-8

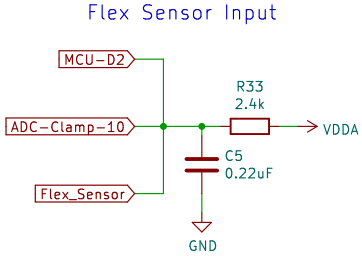

O2 Sensor
O2_Sensor
R31
470R
ADC-Clamp-6
MCU-A8
C3
0.1uF
C6
0.22uF
GND

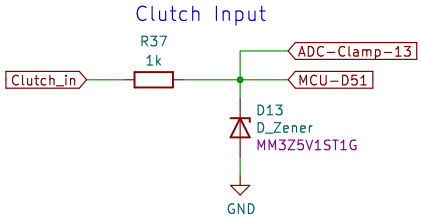

Inlet Air Temperature Sensor
VDDA
2.49k
R35
IAT_Sensor
R39
470R
ADC-Clamp-5
MCU-A0
C10
0.1uF
C13
0.22uF
GND


Crank Angle Sensor
R41
1k
VDDA
PULL-UP
JP4
R43
220R
ADC-Clamp-9
GND
C15
0.01uF
JP2
VR-HALL
IC3
Trig Cond Socket
CRANK-IN
VR1-
MCU-D19
CAM-IN
VR2-
MCU-D18
JP3
VR-HALL
VDD
GND
C16
0.1uF
JP5
220R
R44
ADC-Clamp-8
1k
R42

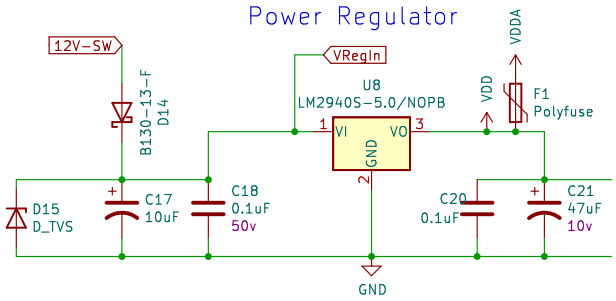

Battery reference voltage
12V-SW
3.9k
R30
R32
470R
ADC-Clamp-1
MCU-A4
MM3Z5V1ST1G
R29
1k
C4
0.1uF
D2
D_Zener
C7
0.22uF
GND


Coolant Temperature Sensor
VDDA
2.49k
R36
R40
470R
ADC-Clamp-3
CLT_Sensor
MCU-A1
C11
0.1uF
C14
0.22uF
GND


Flex Sensor Input
MCU-D2
R33
2.4k
ADC-Clamp-10
VDDA
C5
0.22uF
Flex_Sensor
GND

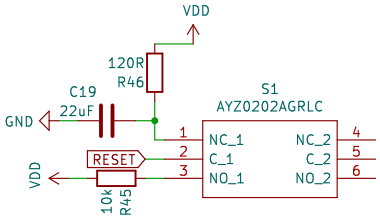

Clutch Input
R37
1k
Clutch_in
ADC-Clamp-13
MCU-D51
D13
D_Zener
MM3Z5V1ST1G
GND

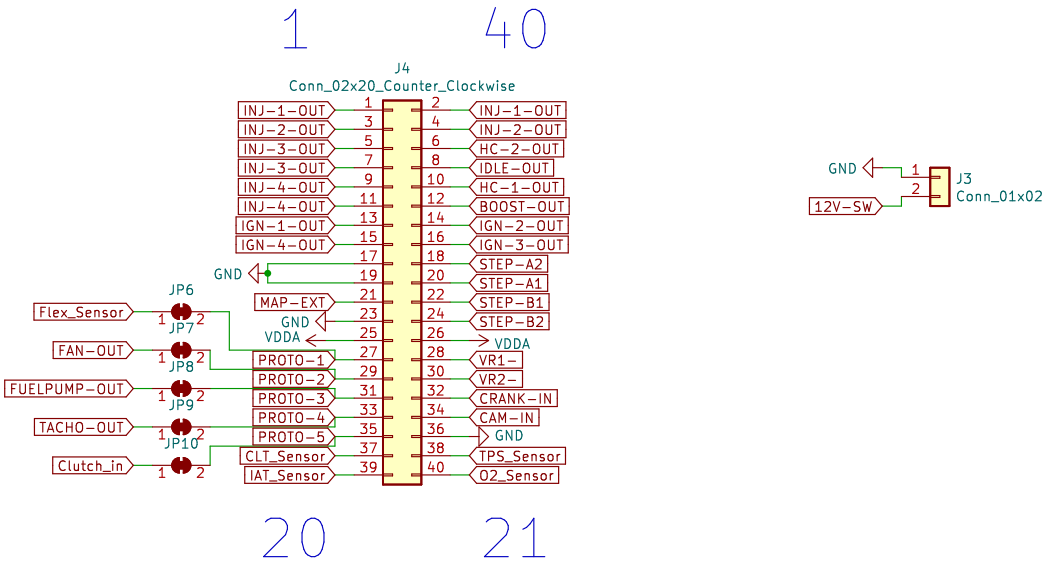
## Power Regulator



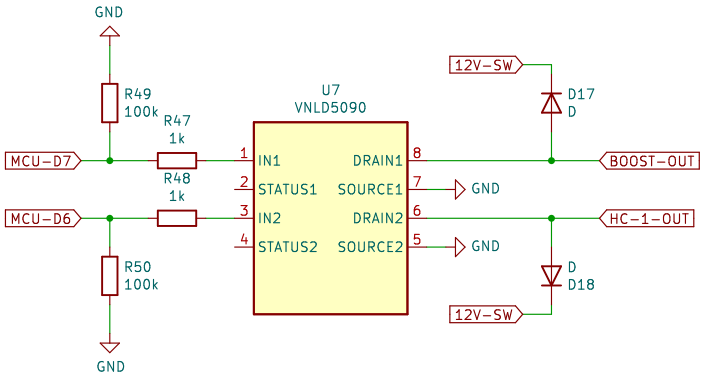

## Reset Protection

Refer AVR040 Application Note

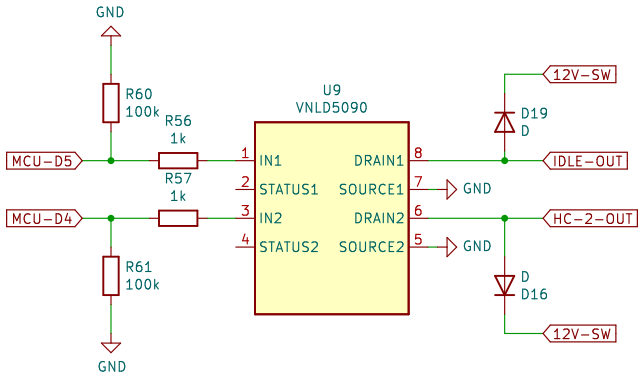



1
40
J4
Conn_02x20_Counter_Clockwise
INJ-1-OUT
INJ-2-OUT
INJ-3-OUT
INJ-3-OUT
INJ-4-OUT
INJ-4-OUT
IGN-1-OUT
IGN-4-OUT
GND
MAP-EXT
GND
VDDA
PROTO-1
PROTO-2
PROTO-3
PROTO-4
PROTO-5
CLT_Sensor
IAT_Sensor
INJ-1-OUT
INJ-2-OUT
HC-2-OUT
IDLE-OUT
HC-1-OUT
BOOST-OUT
IGN-2-OUT
IGN-3-OUT
STEP-A2
STEP-A1
STEP-B1
STEP-B2
VDDA
VR1-
VR2-
CRANK-IN
CAM-IN
GND
TPS_Sensor
O2_Sensor
JP6
Flex_Sensor
JP7
FAN-OUT
JP8
FUELPUMP-OUT
JP9
TACHO-OUT
JP10
Clutch_in
20
21
GND
12V-SW
J3
Conn_01x02

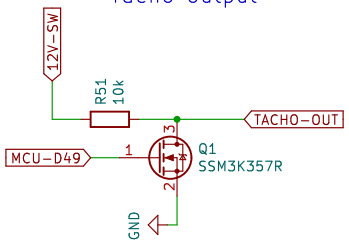
## PWM Idle and Boost outputs



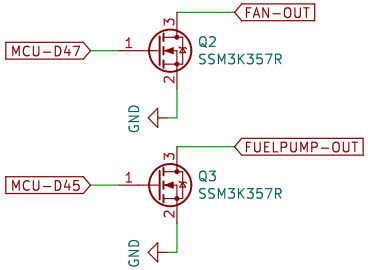

## Spare High Current outputs



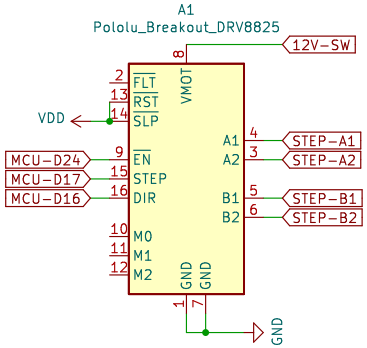

## Tacho output



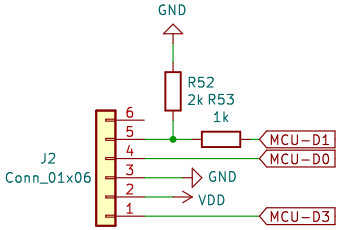

## Fan and Fuel Pump outputs

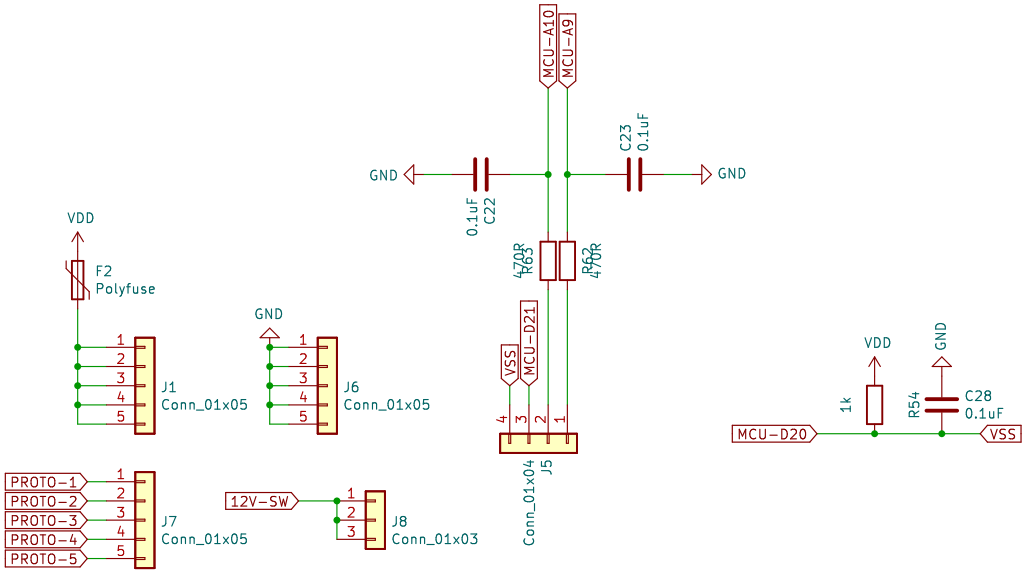



## Stepper Idle




## HC-05 Bluetooth Connector




MCU-A10
MCU-A9
C23
0.1uF
GND
GND
0.1uF
C22
VDD
F2
Polyfuse
GND
R63
470R
R62
470R
VSS
MCU-D21
J1
Conn_01x05
J6
Conn_01x05
J5
Conn_01x04
VDD
GND
1k
R54
C28
0.1uF
MCU-D20
VSS
PROTO-1
PROTO-2
PROTO-3
PROTO-4
PROTO-5
J7
Conn_01x05
12V-SW
J8
Conn_01x03