Spark Gap x4

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Spark Gap x4 is an open-source, universal standalone engine management system designed for the budget-minded enthusiast seeking a comprehensive all-in-one solution.
It is compact and feature-rich, utilizing an off-the-shelf case and connector.

Board Selection in tuner studio for this ECU is "Speeduino v0.4"

OpenLogicEFI ECU's are designed for use with Speeduino firmware.
– https://github.com/noisymime/speeduino

Board Selection in tuner studio for this ECU is "Speeduino v0.4"

OpenLogicEFI GitHub – https://github.com/OpenLogicEFI

Speeduino Official GitHub – https://github.com/noisymime/speeduino

Please consider sponsoring Speeduino and Josh on github
so he can advance his efforts.
https://github.com/sponsors/noisymime

G1 G2

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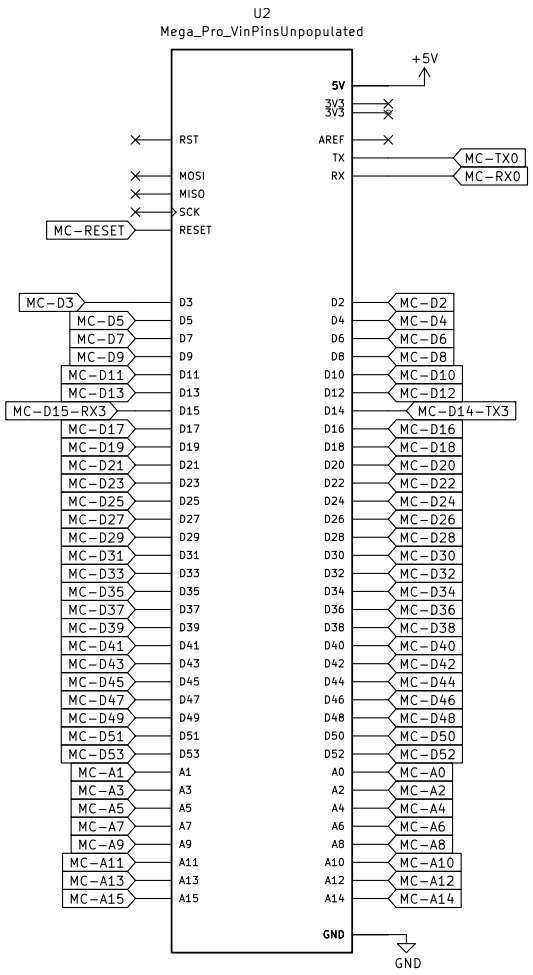
Sheet: /
File: Pre_Ignition.kicad_sch

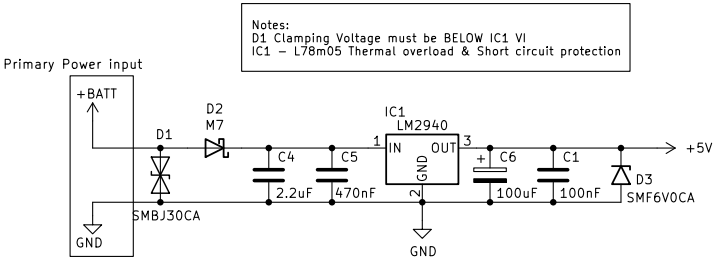
Title: Spark Gap x4

Size: USLetter	Date: 2024-07-16	**Rev: A**
KiCad E.D.A. 8.0.5-dirty		Id: 1/8

Mega2560 Pro Mini
(Robotdyn Footprint)



Power Supply



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Sheet: /MCU and Power/
File: MCU-Power.kicad_sch

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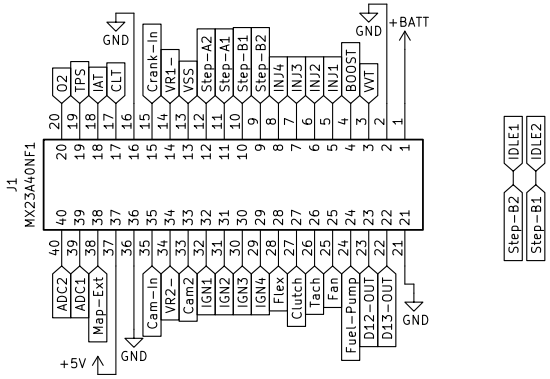
Main Connector



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File: Connector.kicad_sch

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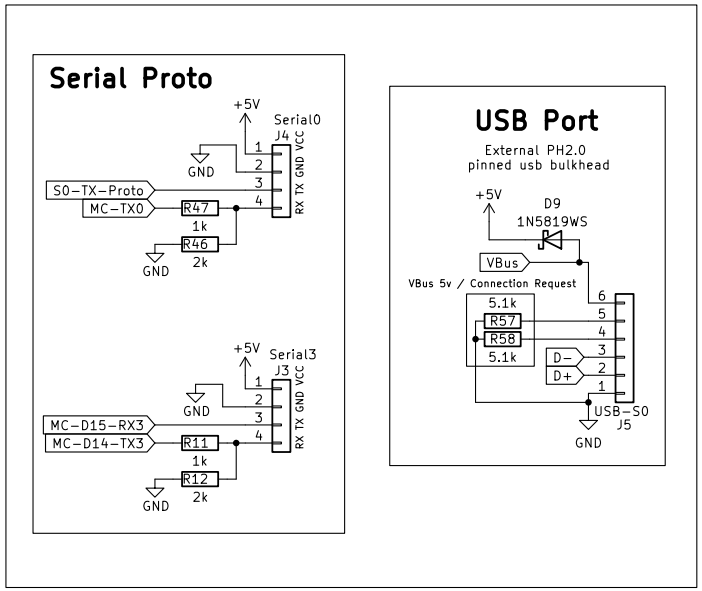

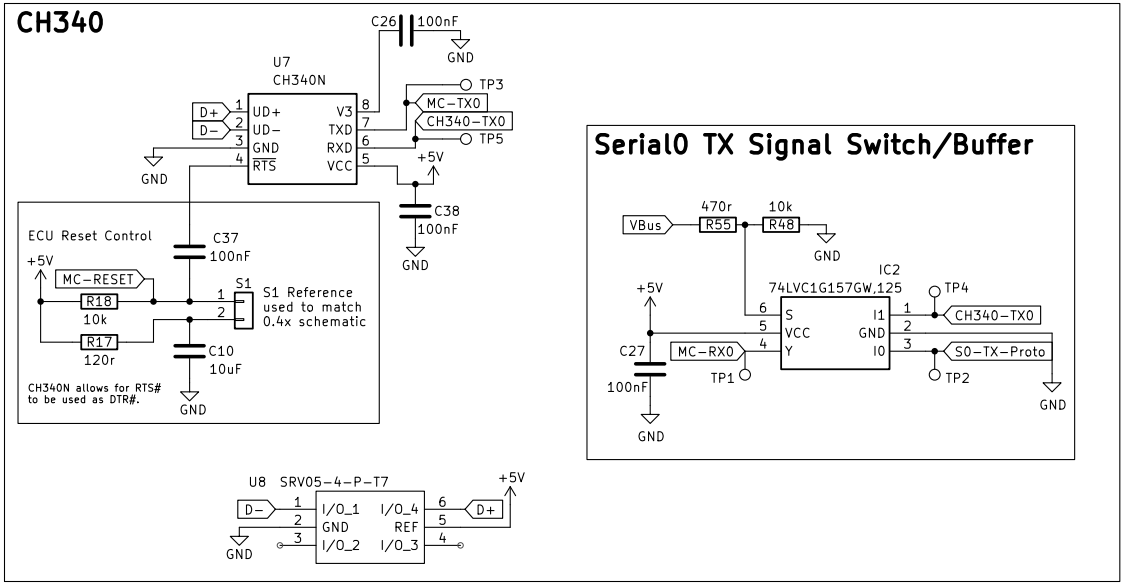

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Sheet: /USB-Serial/

File: serial.kicad_sch

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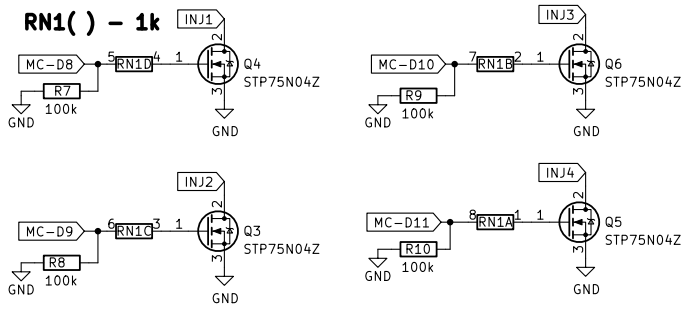
Fuel Injector Output

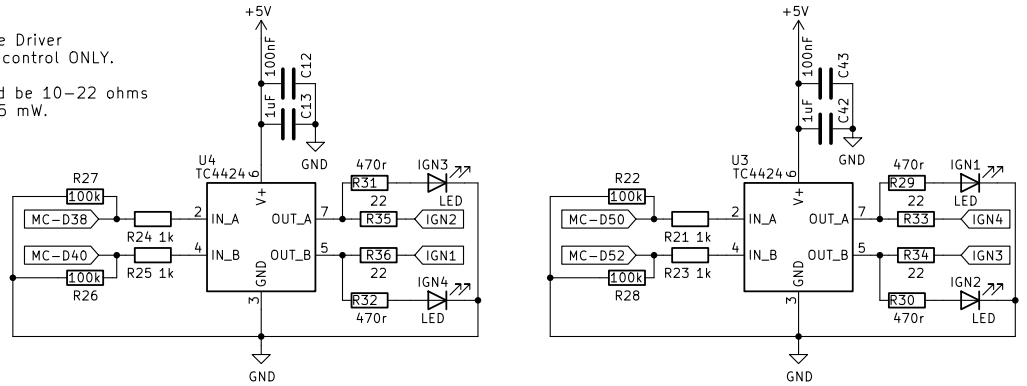
NMOS Must be internally clamped no less than 33v



Ignition Output

Ignition is Non-Inverting Gate Driver
for use with logic level gate control ONLY.

Series output resistors should be 10-22 ohms
with a minimum rating of 125 mW.



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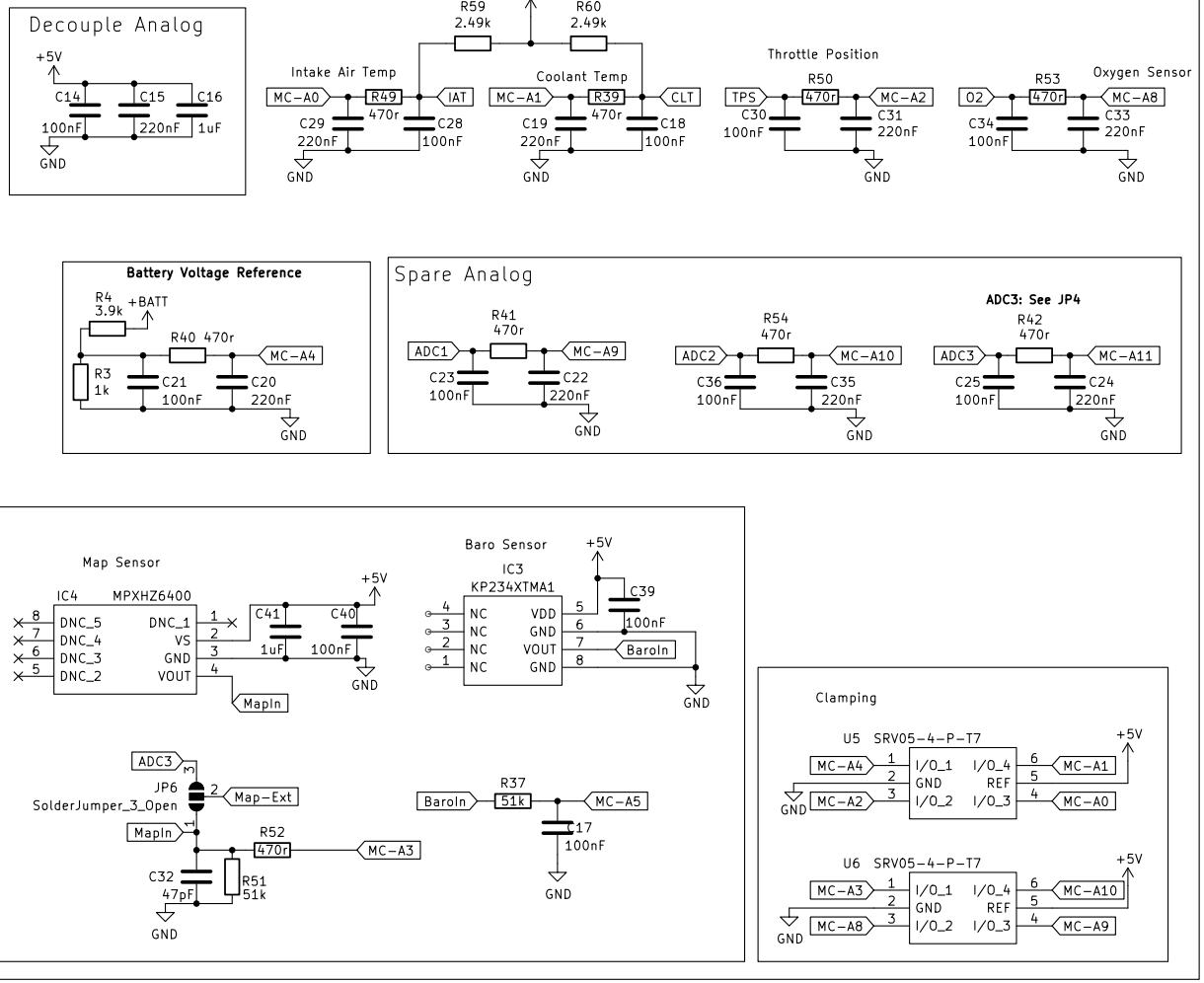
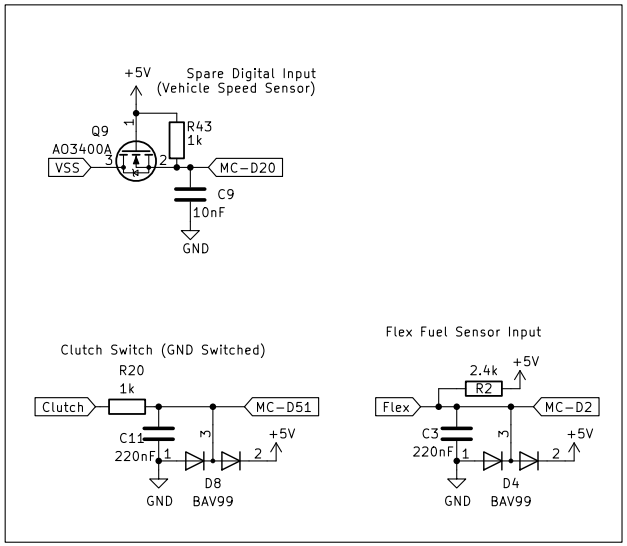
Analog Inputs



Digital Inputs (Crank/Cam on Page 7)



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Sheet: /Inputs/
File: input.kicad_sch

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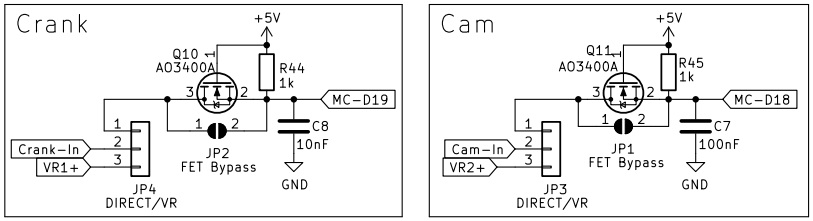
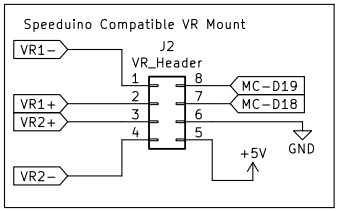
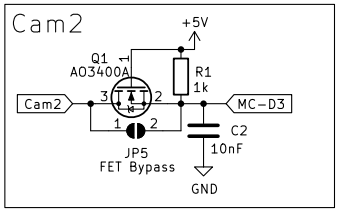
Crank/Cam Sensor Input

Circuit Reference: Phillips AN97055







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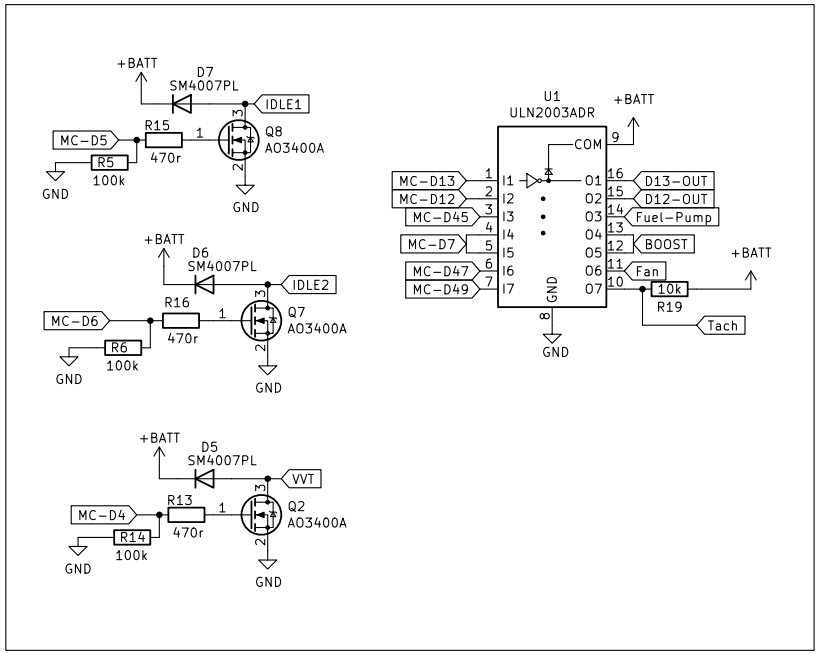

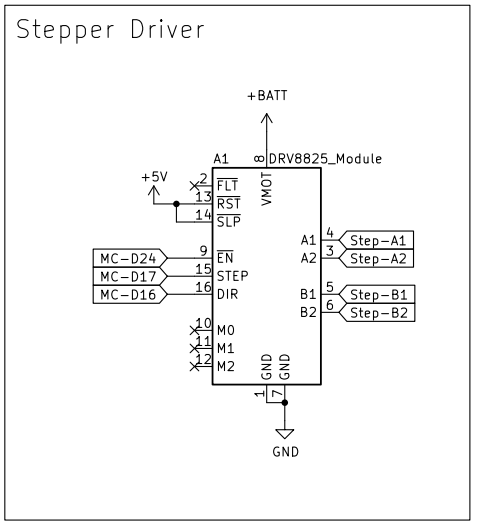

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Sheet: /Output/

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