MCU

File: mcu.kicad_sch

Sensors

File: sensors.kicad_sch

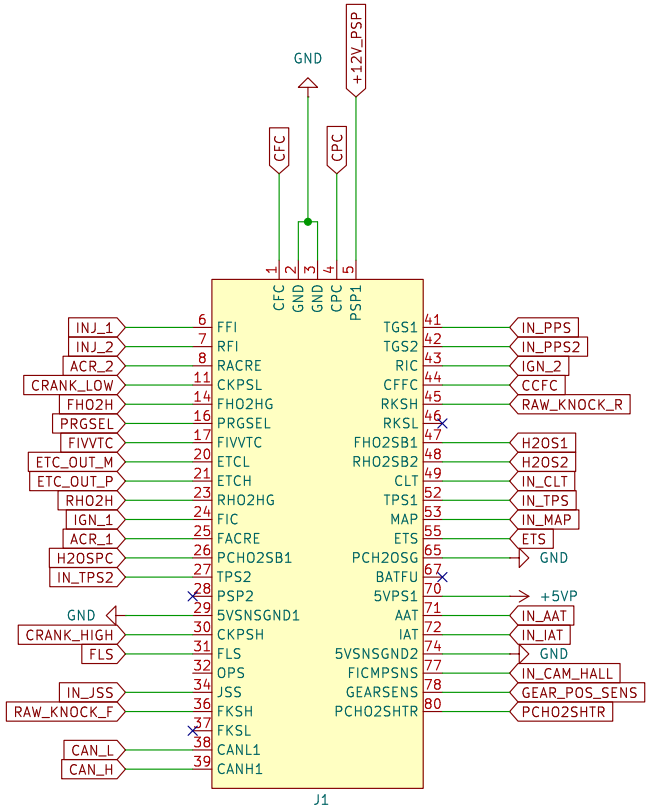
Bluetooth

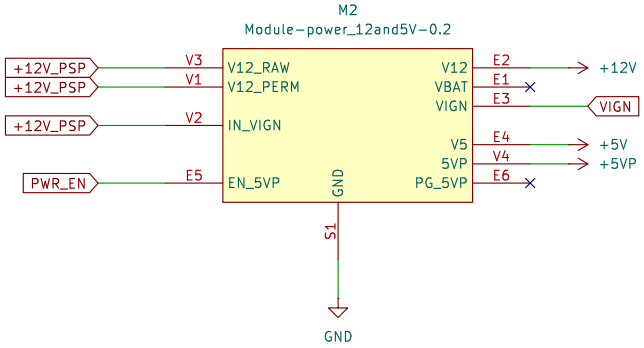
File: bluetooth.kicad_sch

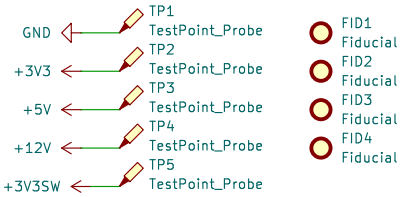
Outputs

File: outputs.kicad_sch

All the grounds can be the same shared ground
12V can be taken from PSP1 ignoring V12BAT and PSP2 completely.
Connect PSP1 TO V12 RAW PERM AND VIGN
5VP can be used for 5V sensor output







FID1 Fiducial
FID2 Fiducial
FID3 Fiducial
FID4 Fiducial

Hellen-Bremen

Sheet: /
File: hellenbremen.kicad_sch

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Size: A4	Date:	**Rev:** A
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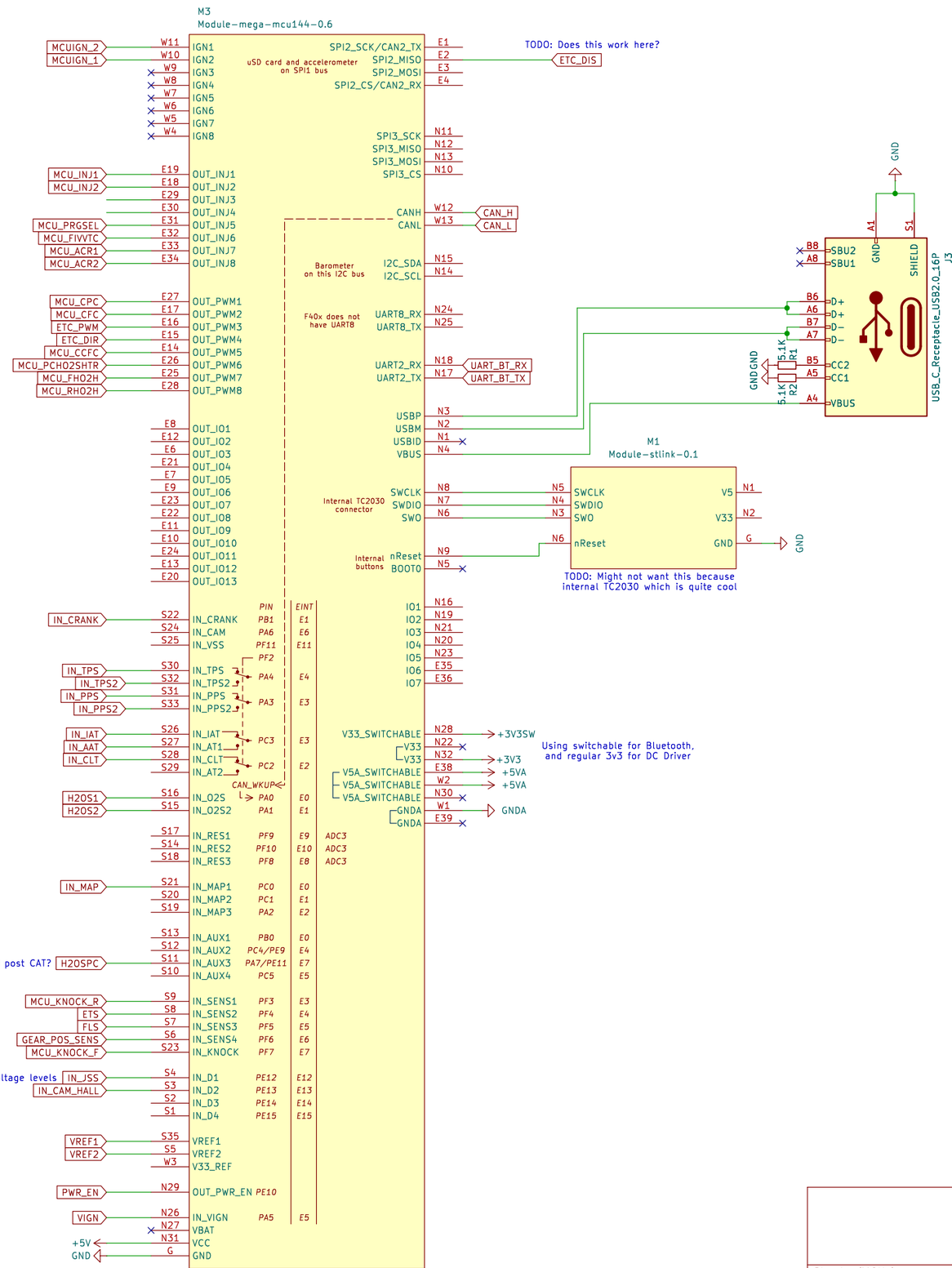

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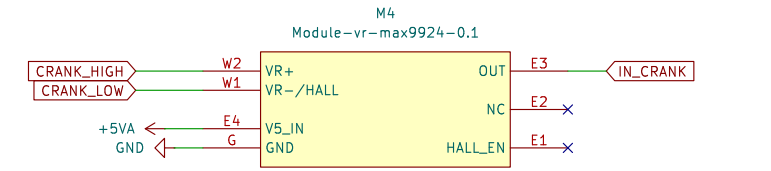
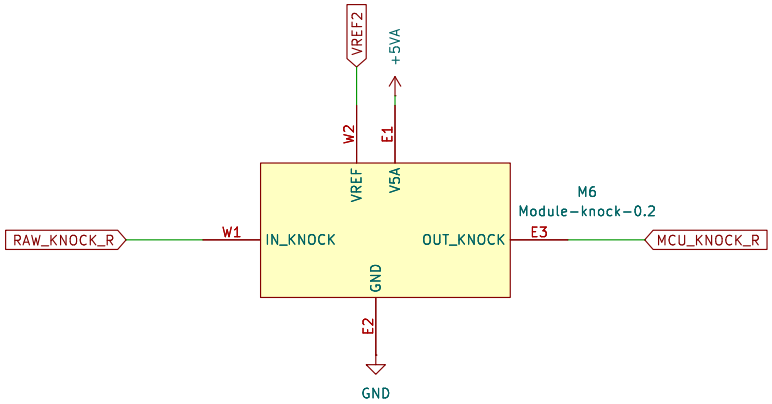
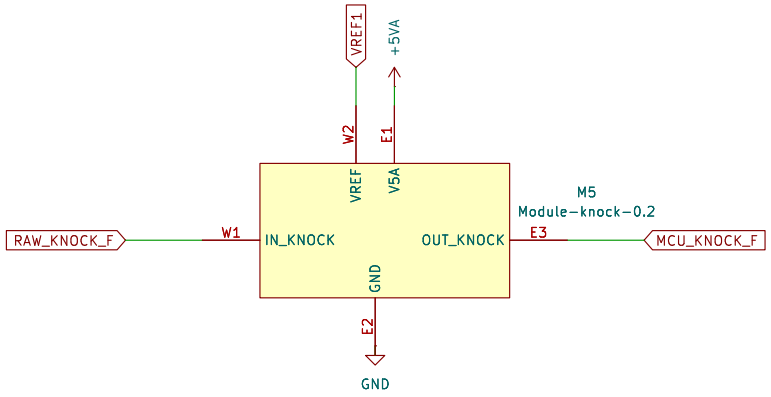
	Rev:







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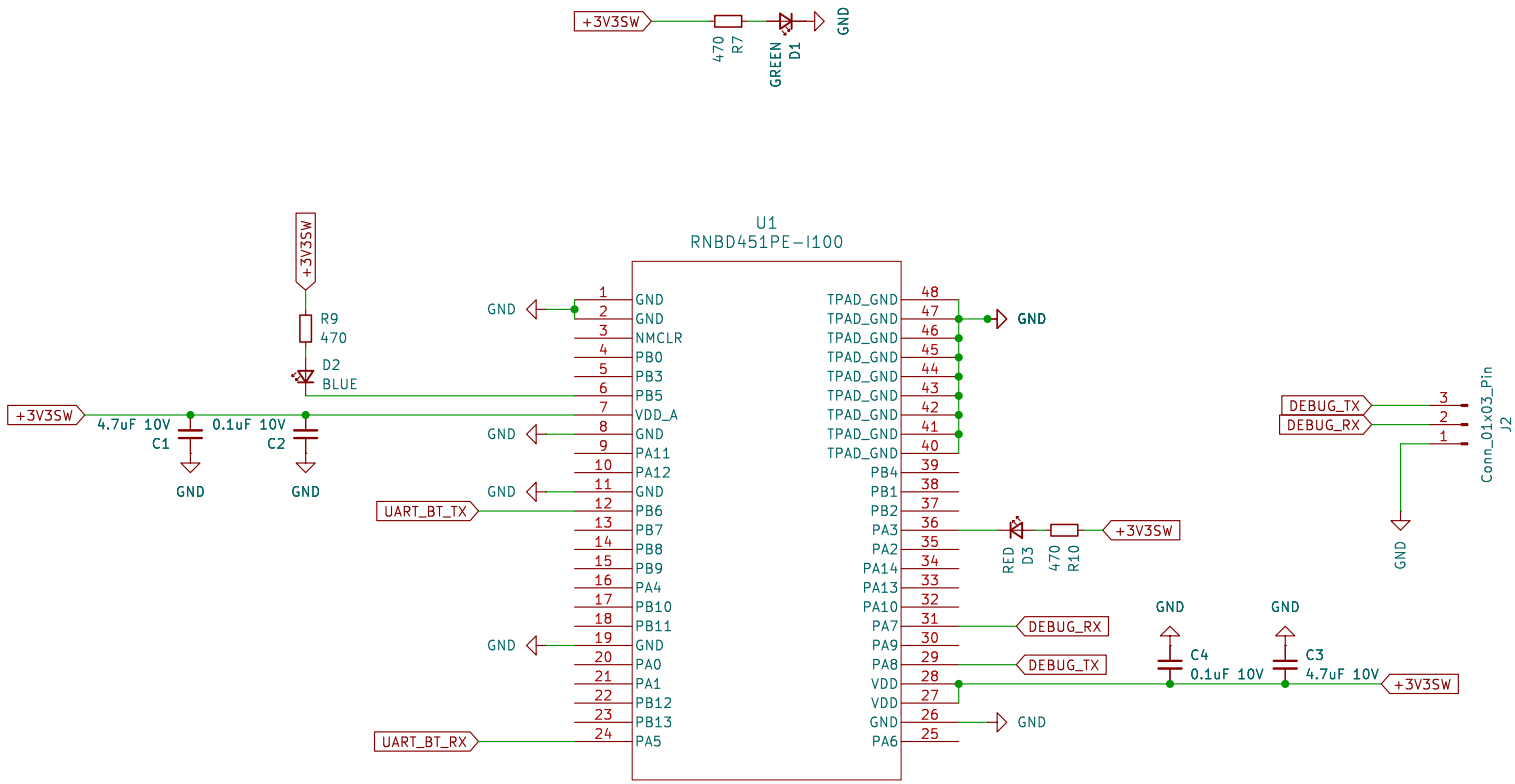
KiCad E.D.A. 8.0.6		Id: 4/5



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File: bluetooth.kicad_sch

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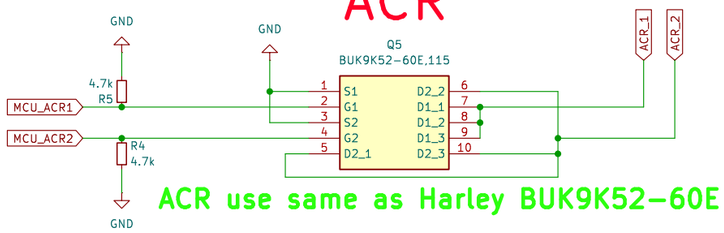
Size: A4	Date:	**Rev:**
KiCad E.D.A. 8.0.6		Id: 5/5

INJECTORS

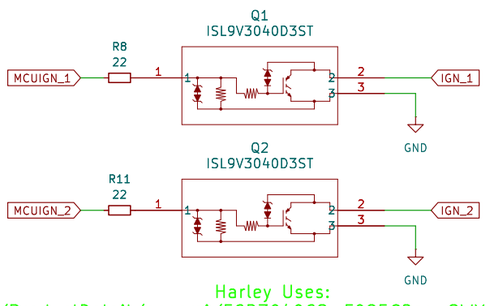
INJECTORS MEASURED TO TAKE MAX 1A EACH WHEN OPEN
VNLD5160TR-E should be fine
HARLEY uses 2N06L35

ACR



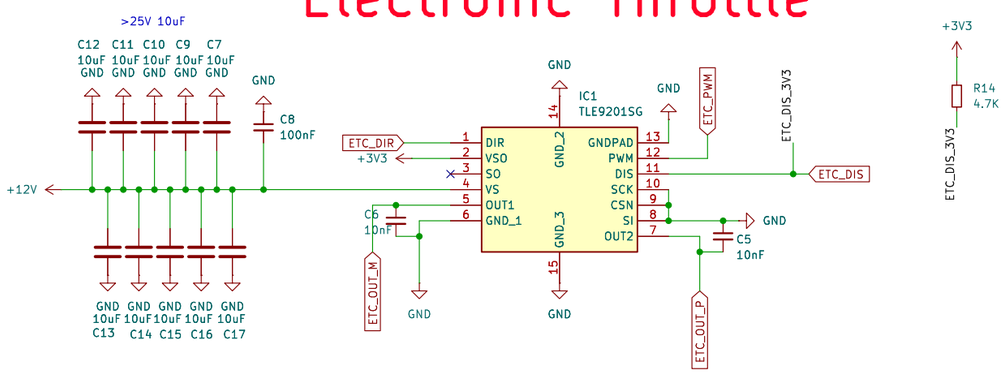
ACR use same as Harley BUK9K52-60E

IGNITION



Harley Uses:
https://www.mouser.de/ProductDetail/onsemi/FGB3040G2-F085C?qs=2WXlatMagcHzMRj1hscbYQ%3D%3D
ISL9V3040D3ST should work though

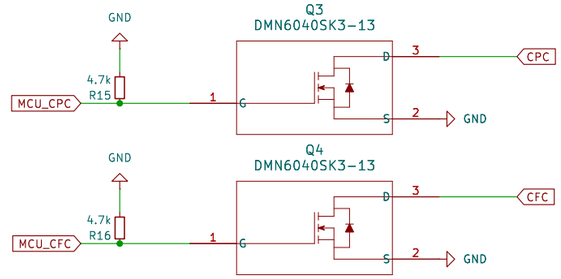
Electronic Throttle



PURGE & VVT SOLENOIDS

TODO: PURGE AND VVT SOLENOIDS NOT MEASURED YET AT ALL

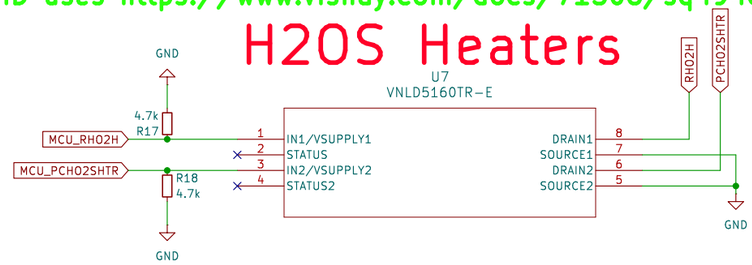
COOLANT FAN & PUMP



COOLANT FAN PULLS AROUND 4A WHEN CONSTANT 100%,
INITIALLY PULLING UP TO 8A FOR GETTING SPINNING
HARLEY USES: HUFA76429D3
POSSIBLE: https://www.digikey.de/de/products/detail/onsemi/HUF76629D3ST/4553106
AND: https://www.digikey.de/de/products/detail/diodes-incorporated/DMN6040SK3-13/8545933
Weytronik: https://www.digikey.de/de/products/detail/vishay-siliconix/SISS54DN-T1-GE3/14004251?s=N4IgTCBcDaIMoEk5wKwBYAiA5EBdAvkA

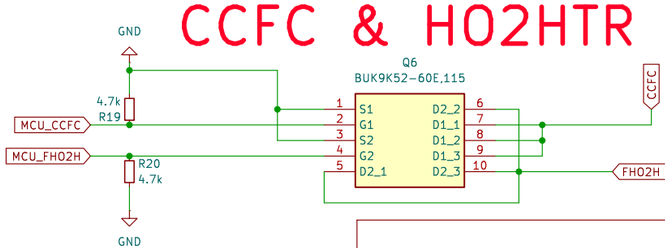
H2OS Heaters are PWM Controlled and max out at about 0.9 Amps
at room temperature, then reducing with heat coming.
VNLD5160TR-E should work. Will test
HD uses https://www.vishay.com/docs/71506/sq4946aey.pdf

H2OS Heaters



CCFC: Harley uses 2N06L35
TODO: Does this part really make sense?

CCFC & HO2HTR



Sheet: /Outputs/
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