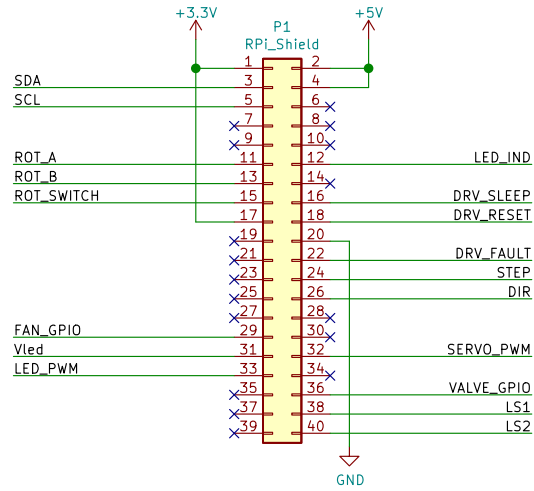


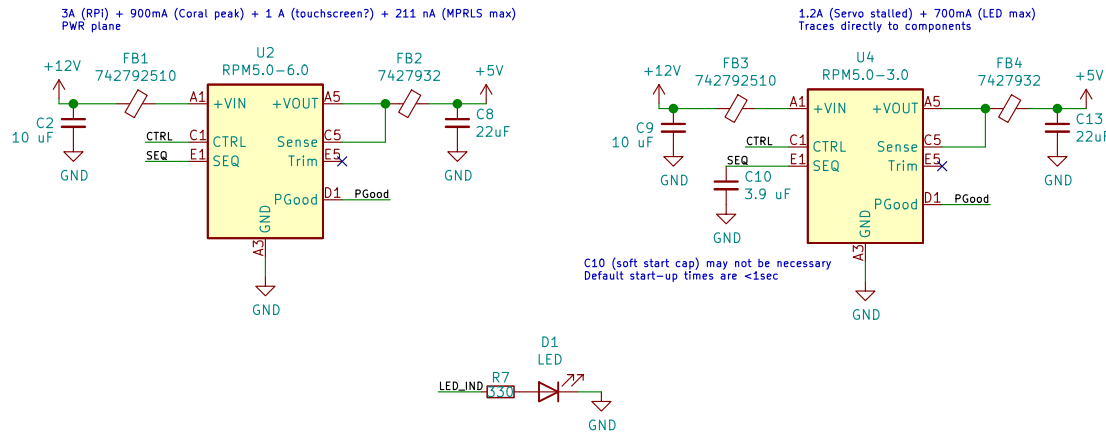
RPi GPIO

Use male-female headers, w/ male side up



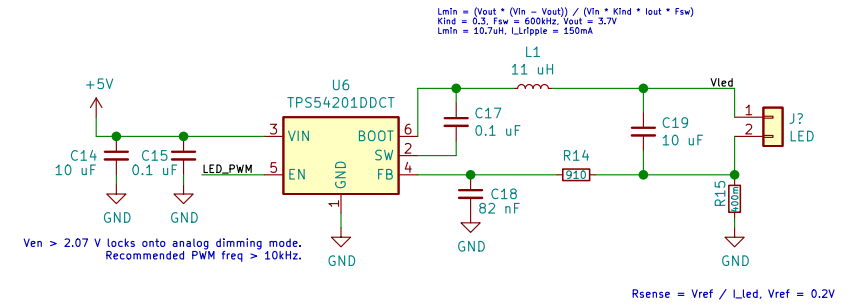
Power

Powered directly off 12V: 120mA (Fan), 0.4A (Motor)



LED Driver

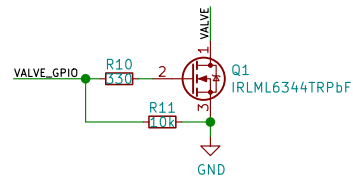
Vf,typ = 3.5V, If,typ = 500mA



Pneumatic Control

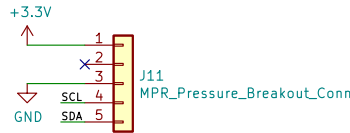
Pressure sensor breakout board will be mounted separately from the PCB.

Valve Switch



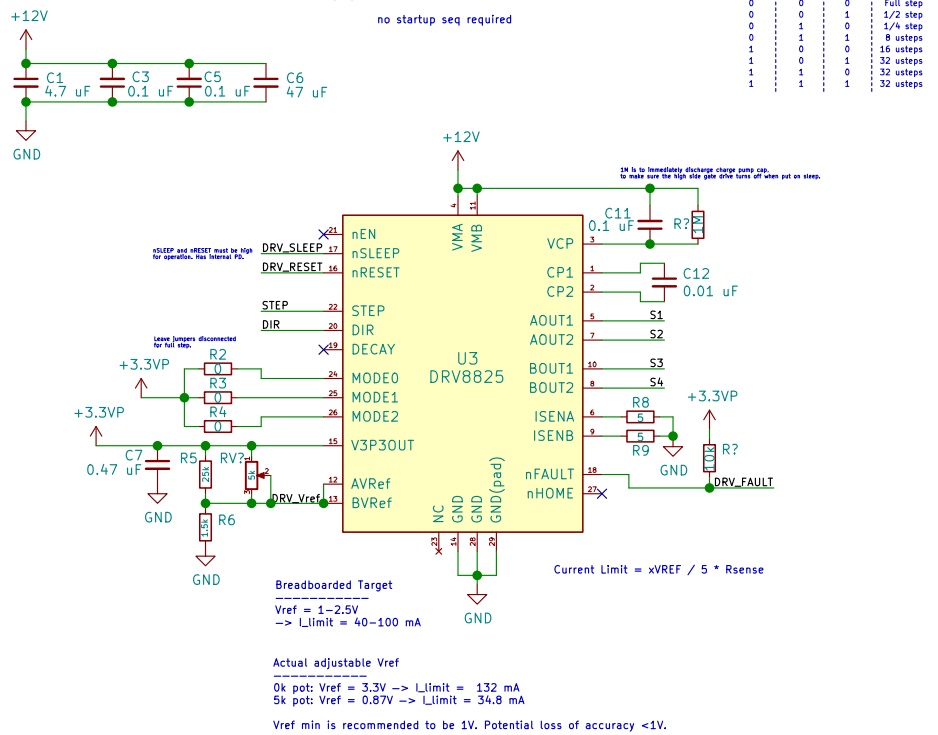
Pressure Sensor Breakout Board

I2C addr = 0x18 (unchangeable)



Stepper Motor Control

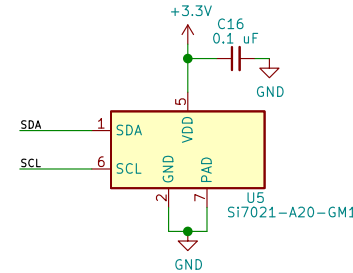
no startup seq required



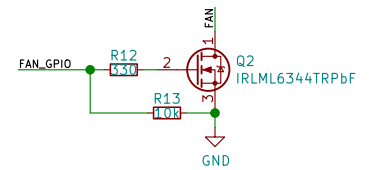
Peripherals

Temp/Humidity Sensor

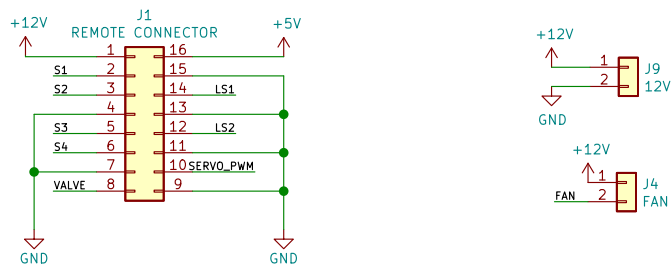
I2C addr = 0x40



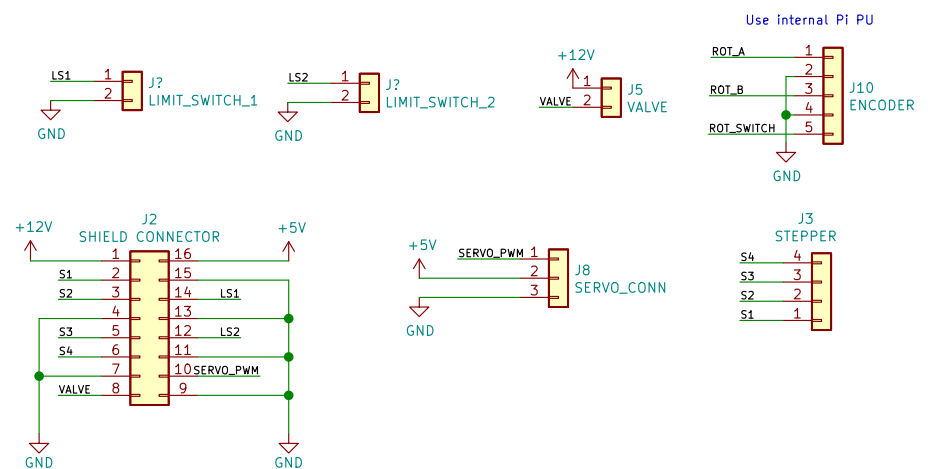
Fan



Shield Connectors



Remote Board



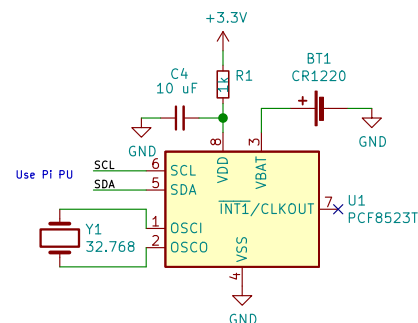
Off Board Components

Sheet: Off_Board_Components

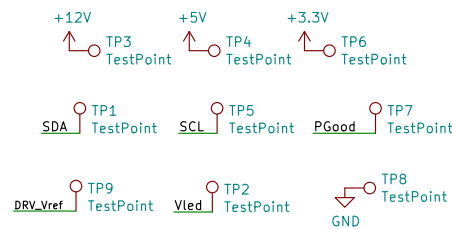
File: off_board_components.sch

Real Time Clock

I2C addr = 0x68



Test Points



Mounting Holes



PN: 5-005
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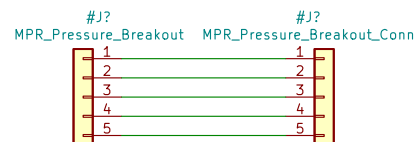
Sheet: /
File: ulc-mm.sch

Title: ULC Malaria Scope

Size: A3 Date: 2021-09-14
KiCad E.D.A. kicad (5.1.10-1-10_14)

Rev: A
Id: 1/2

Main Board Components

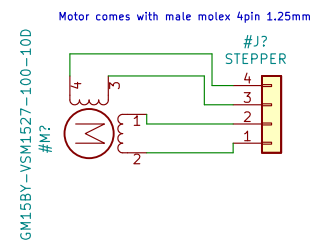


Use regular P2.54mm male pins

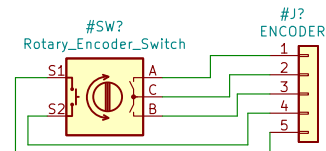
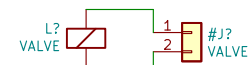
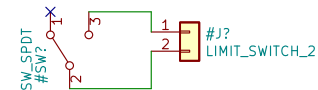
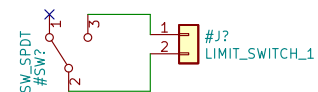
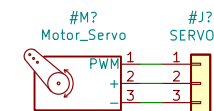
Board to board cable assembly. Female-female IDC headers on a ribbon cable.



Remote Board Components



Servo comes with female headers, but we may need to replace it w/ the proper mating component for the male headers so that there is a good friction lock.



PN: 5-005

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Sheet: /Off Board Components/

File: off_board_components.sch

Title: Off Board Components

Size: A4

Date: 2021-09-21

Rev: A

KiCad E.D.A. kicad (5.1.10-1-10_14)

Id: 2/2