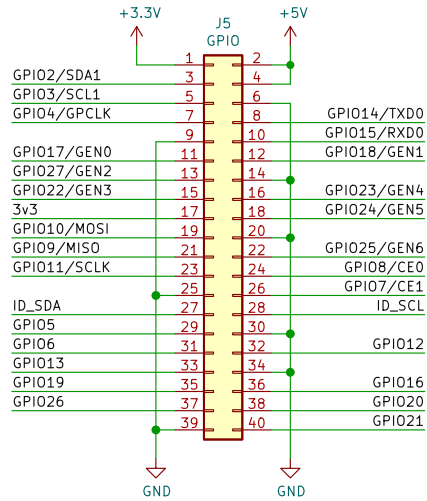
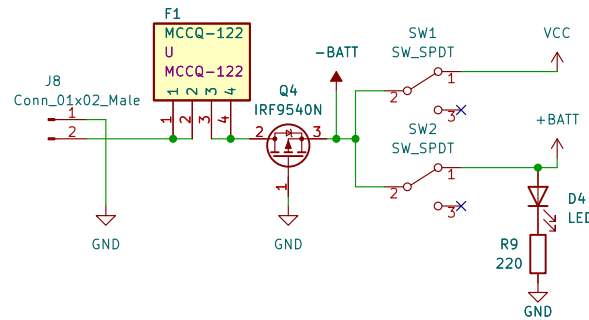


Raspberry Pi Header

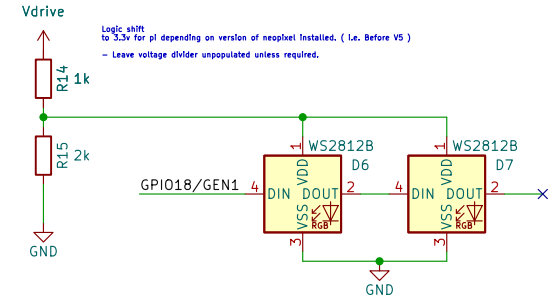


Power Supply

PMOS Reverse Polarity Protection (Hsieh, 2019)

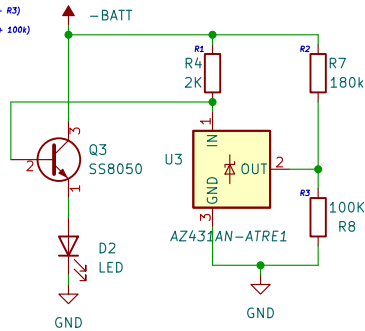


NEO-PIXELS



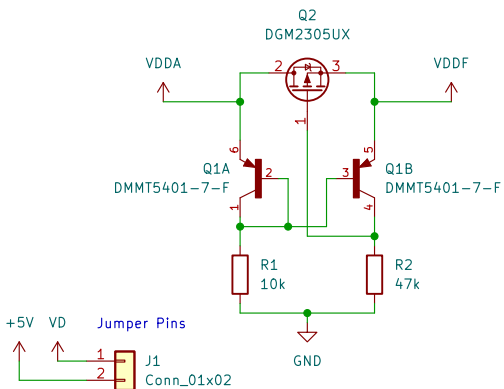
Battery Low Voltage Indicator

$V_{light} = 2.5/R3 * (R2 + R3)$
 $7v = 2.5/100k * (180k + 100k)$



REF: https://www.pcbway.com/project/shareproject/Lithium_battery_low_battery_indicator_module.html

Back Power Protection – 'Ideal Diode'

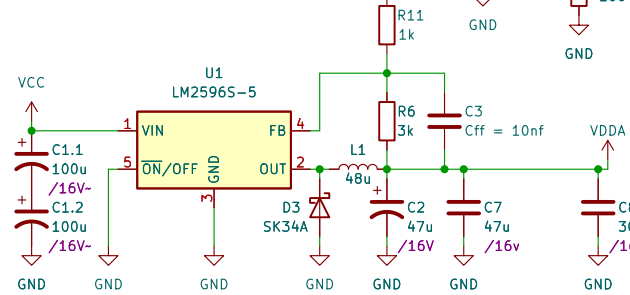


REF: <https://github.com/raspberrypi/hats/blob/master/designguide.md>

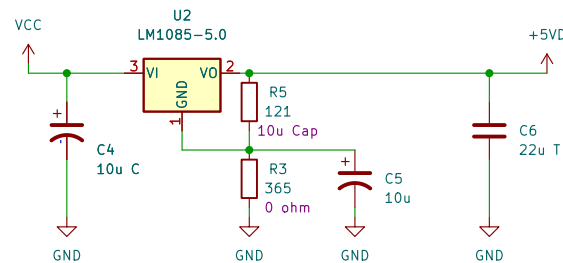
Voltage Regulators

Raspberry Pi Voltage Regulator (ST, 2018)

*2x 16V rated Caps Stacked for combined rating 32V (C1.1 & C1.2)

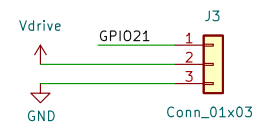


Servo Voltage Regulator (ST, 2018)

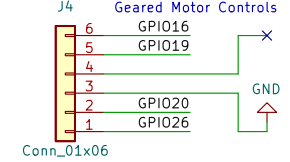


Pinouts

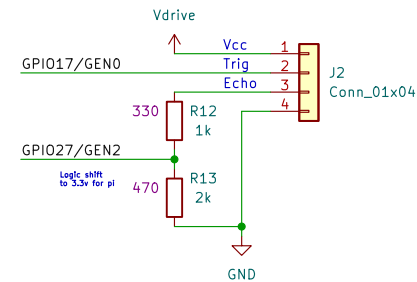
Servo Motor Output



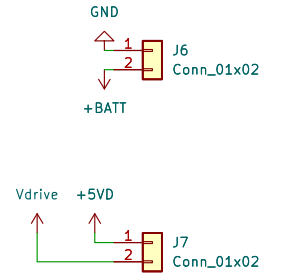
Motor Controller



Ultrasonic Sensor Output/Input



Jumper Pins



ROBOTS101 PI-HAT

By Phoenix Seybold & Stephen Wardle
QUT Robotics Club

Additional pin functions:
<https://pinout.xyz/>

Sheet: /
 File: RPI.kicad_sch

Title: Robots101 Pi-Hat

Size: A4 Date: 06 / 08 / 2023
 KiCad E.D.A. kicad (6.0.7)

Rev: 2.12
 Id: 1/1