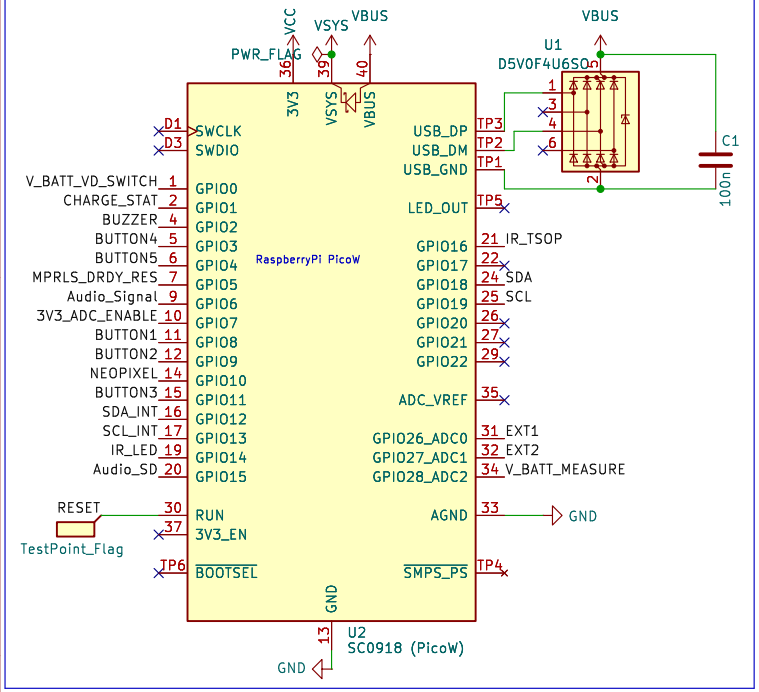
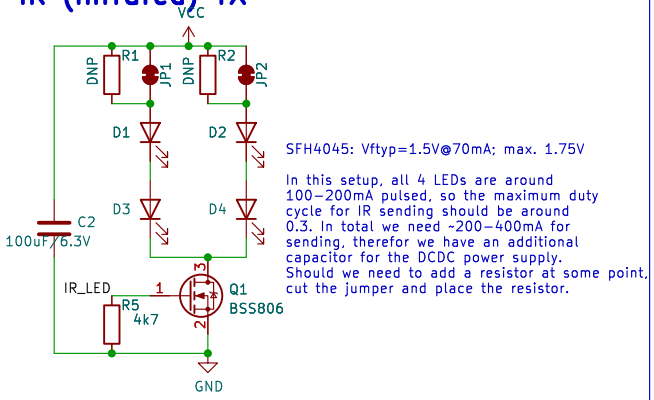
RaspberryPi Pico W



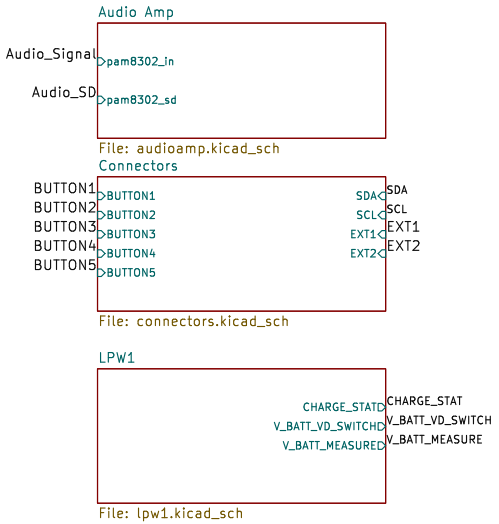
IR (infrared) TX



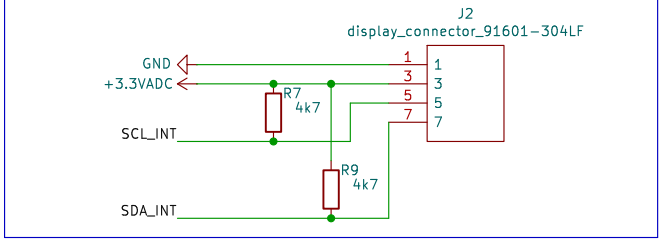
SFH4045: Vftyp=1.5V@70mA; max. 1.75V

In this setup, all 4 LEDs are around 100–200mA pulsed, so the maximum duty cycle for IR sending should be around 0.3. In total we need ~200–400mA for sending, therefor we have an additional capacitor for the DCDC power supply. Should we need to add a resistor at some point, cut the jumper and place the resistor.

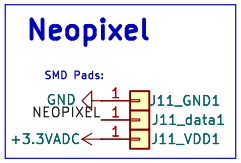
Sub–Sheets



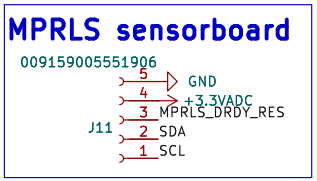
OLED Display + I2C internal pullups



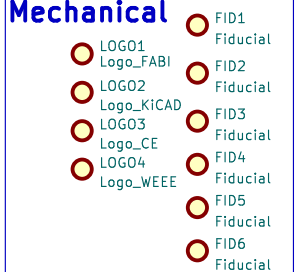
Neopixel



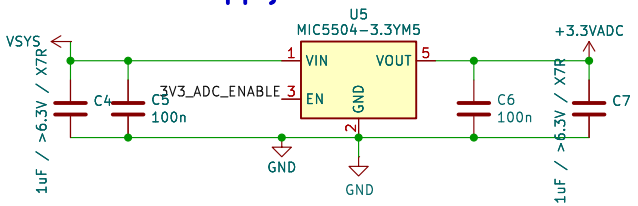
MPRLS sensorboard



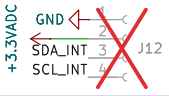
Mechanical



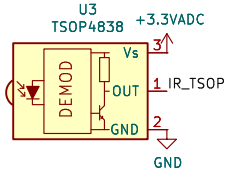
Addon PowerSupply



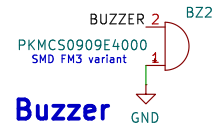
PN532 NFC



IR (infrared) RX



Buzzer



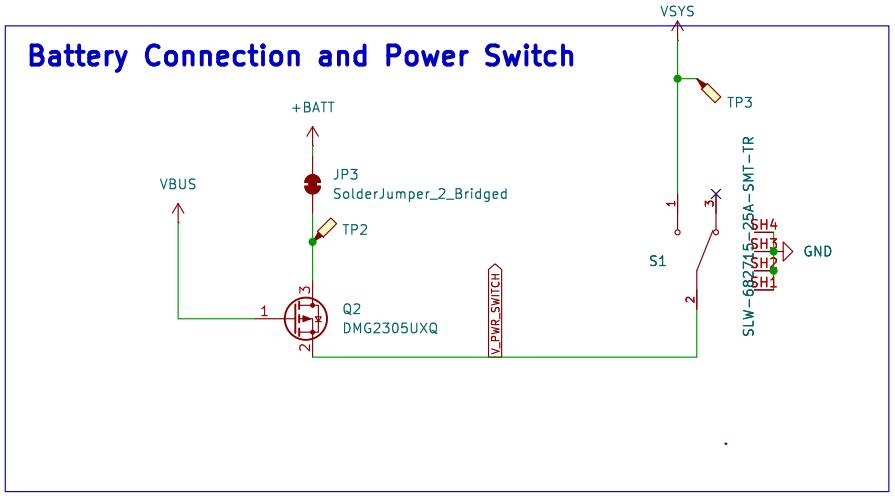
Benjamin Aigner
https://assistronik.info
https://www.asterics–foundation.org
AsTeRICS Foundation / Assistronik

Sheet: /
File: FABI_schematic.kicad_sch

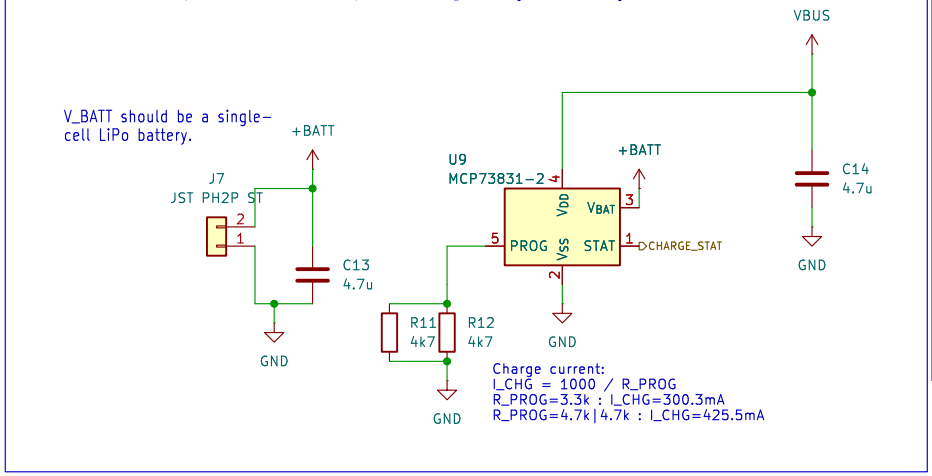
Title: FABI3 PCB (Pico2W) with 5 jack plugs

Size: A4	Date: 2025–08–12	**Rev: v3.5**
KiCad E.D.A. 9.0.2		Id: 1/4

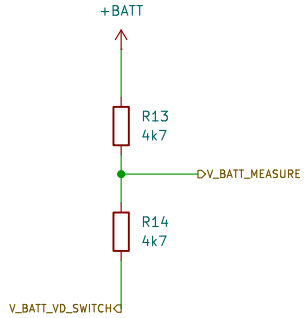
Battery Connection and Power Switch



Lithium-Polymer Battery Charger (1-cell)



Battery Charge Level Measurement



Inspired by Vanessa Prankl's https://github.com/vanessaPrankl/HeadMouse

Christoph Veigl & Jimmi Bacher

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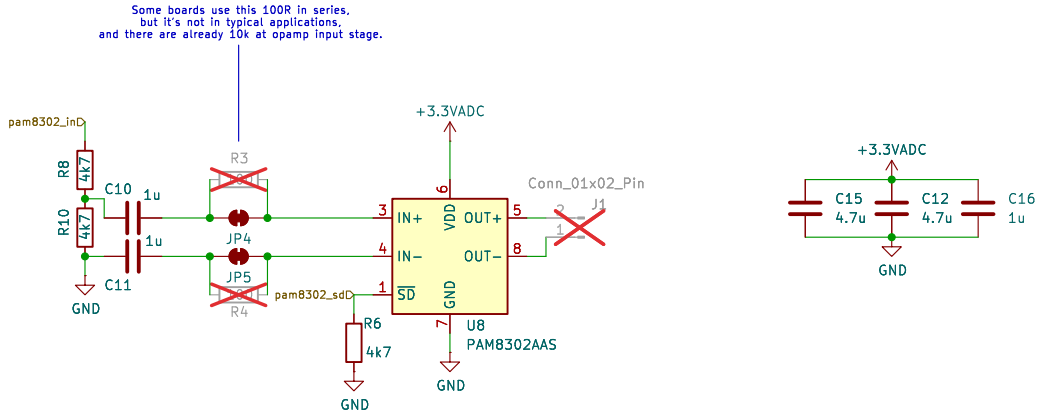
File: lpw1.kicad_sch

Title: LPW

Size: A4	Date: 2025-01-03	**Rev:**
KiCad E.D.A. 9.0.2		Id: 2/4



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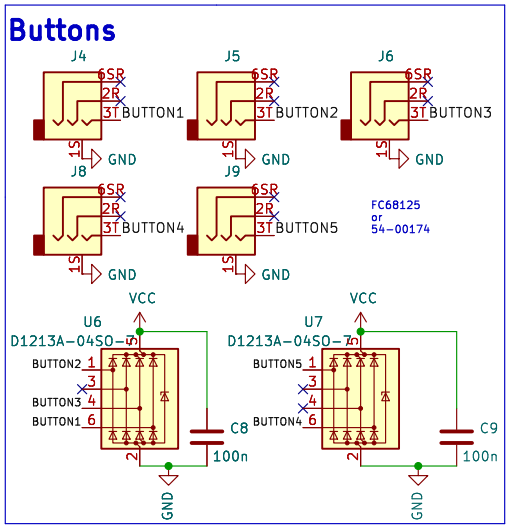
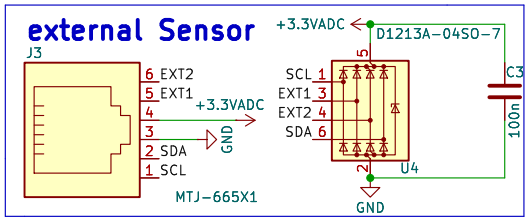
Size: A4	Date:	**Rev:**
KiCad E.D.A. 9.0.2		Id: 3/4





BUTTON1D BUTTON1
BUTTON2D BUTTON2
BUTTON3D BUTTON3
BUTTON4D BUTTON4
BUTTON5D BUTTON5

EXT1D EXT1
EXT2D EXT2
SDAD SDA
SCLD SCL

Sheet: /Connectors/		
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Title:		
Size: A4	Date:	**Rev:**
KiCad E.D.A. 9.0.2		Id: 4/4