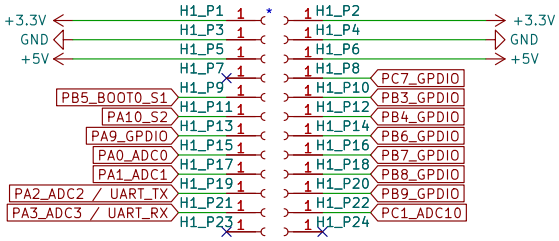
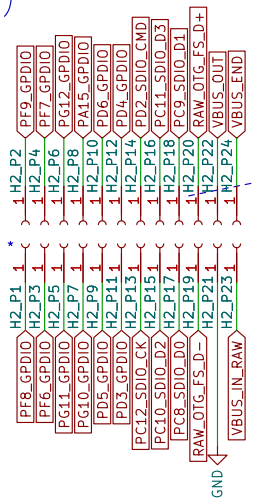
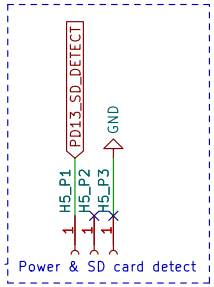
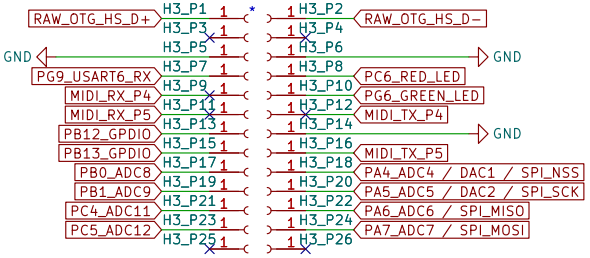
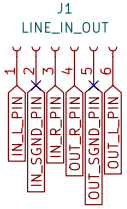
Ksoloti Core v0.4+ headers (top view)











SDIO

checked

File: sdio.kicad_sch

Audio IO

checked

File: audio_io.kicad_sch

Power

checked

File: power.kicad_sch

CV Inputs

checked

File: cv_in.kicad_sch

LEDs and Buttons

checked

File: led_out.kicad_sch

CV outputs

checked

File: cv_out.kicad_sch

digital mic

checked

File: digital_mic.kicad_sch

MIDI

checked

File: midi.kicad_sch

usb

checked

File: usb.kicad_sch

Gate Outputs

checked

File: gate_io.kicad_sch

expansion_header

checked

File: untitled.kicad_sch

2 audio inputs, 2 audio outputs, Eurorack level

8 pots
4 CV inputs (P1–P4) are summed with pots 1–4
4 independent CV inputs (A–D), non-trimmable (+/–5V)
2 independent CV inputs (X, Y), trimmable offset and V/oct (+/–5V or 0..10V via jumper)

2 encoders with switch (E1, E2)
2 buttons (S3, S4)

2 fade-able Axo status LEDs, 2 fade-able duo-color LEDs

2 gate outputs, ca. 10.3V, optional gate indicator LEDs
2 CV outputs, trimmable offset and V/oct (+/–5V or 0..10V via jumper)

1 OLED display, 128x64px

FID1 Fiducial

FID2 Fiducial

FID3 Fiducial

changelog

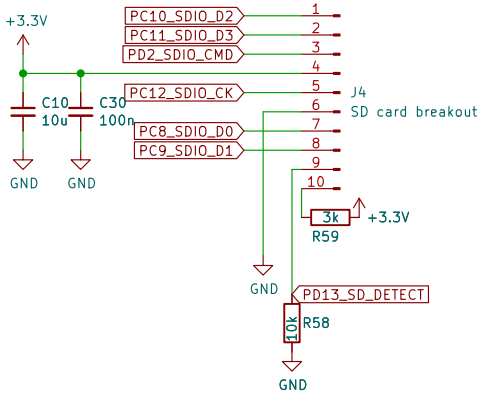
CHANGELOG

File: changelog.kicad_sch

Sheet: /
File: ksoloti_big_genes.kicad_sch

Title:

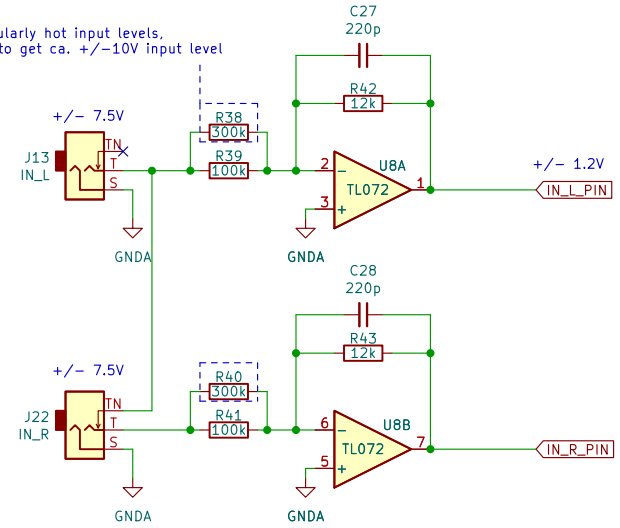
Size: A4	Date: 2024-02-06	**Rev: v0.5**
KiCad E.D.A. kicad (6.0.11)		Id: 1/13

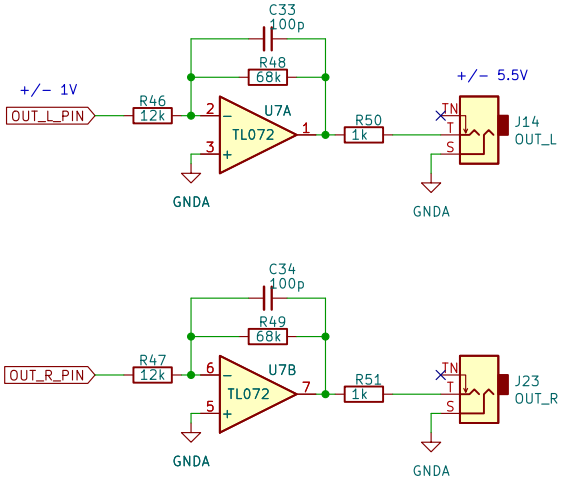


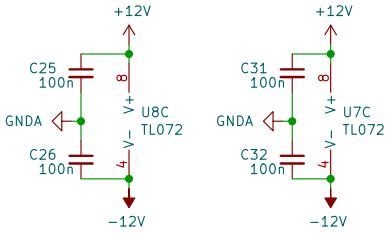
Sheet: /SDIO/		
File: sdio.kicad_sch		
Title:		
Size: A4	Date:	**Rev: v0.5**
KiCad E.D.A. kicad (6.0.11)		Id: 2/13

+/−7.5V input level (v0.1 had +/−5V but seemed to distort easily)

if you have particularly hot input levels,
remove R38, R40 to get ca. +/−10V input level







Sheet: /Audio IO/
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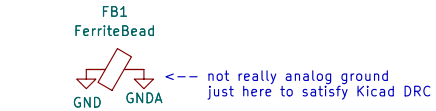
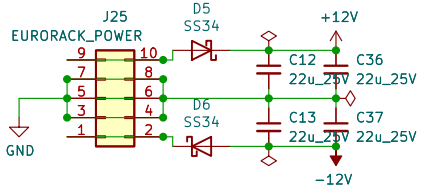
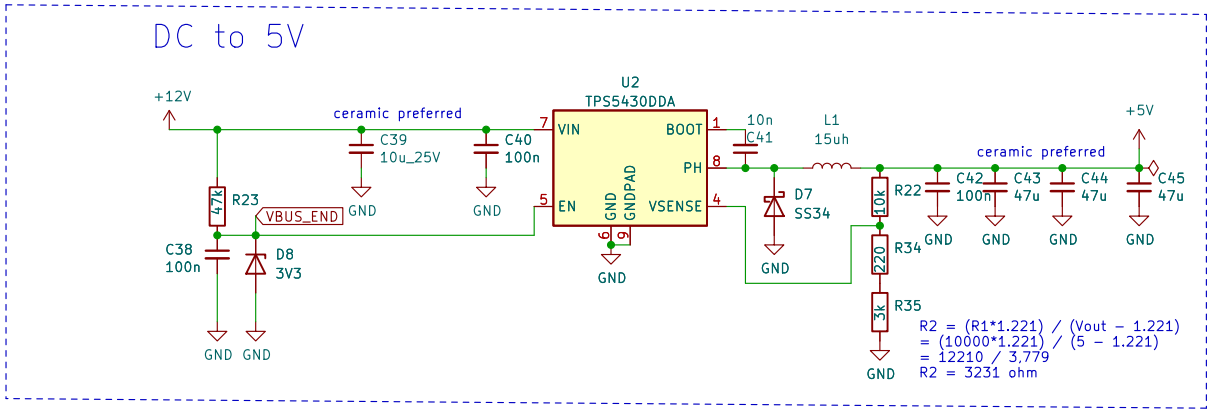
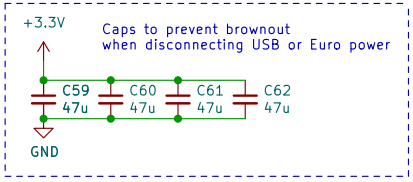
Title:

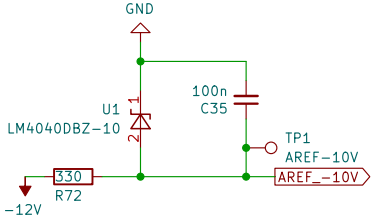
Size: A4 | Date: 2024-03-05 | **Rev: v0.5**
KiCad E.D.A. kicad (6.0.11) | Id: 3/13

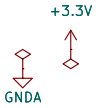












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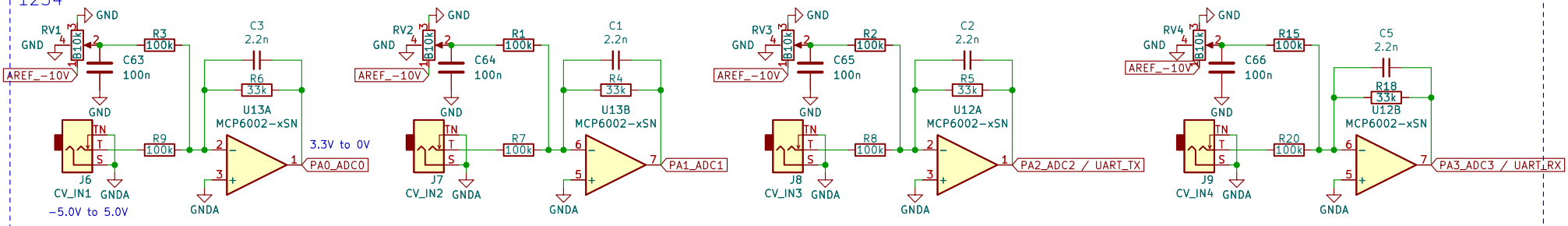
File: power.kicad_sch		
Title:		
Size: A4	Date:	**Rev: v0.5**
KiCad E.D.A. kicad (6.0.11)		Id: 4/13

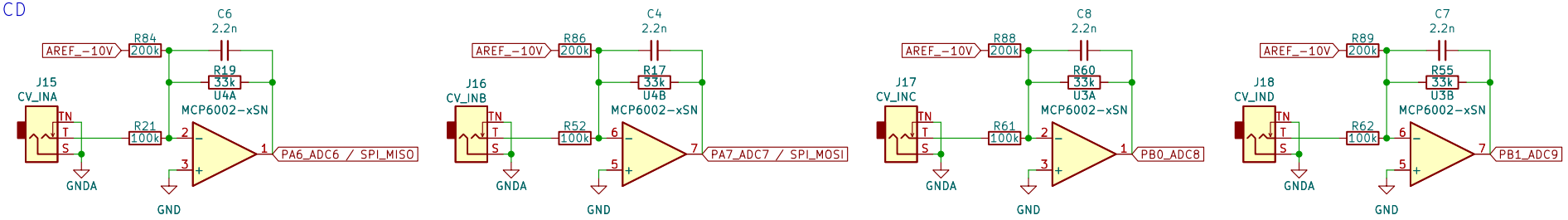
Pots / CV inputs

1234

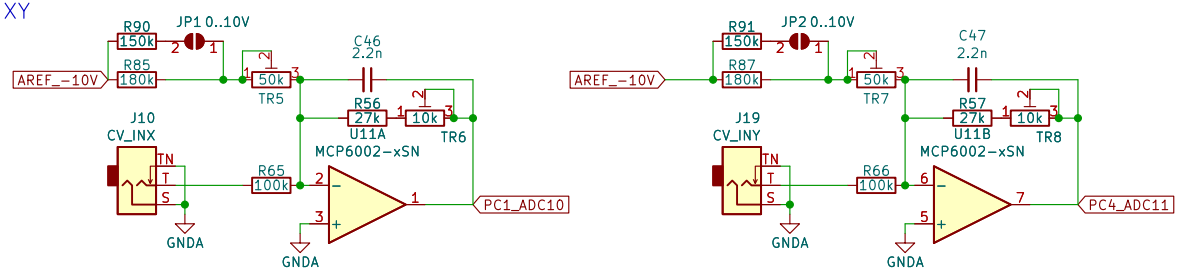


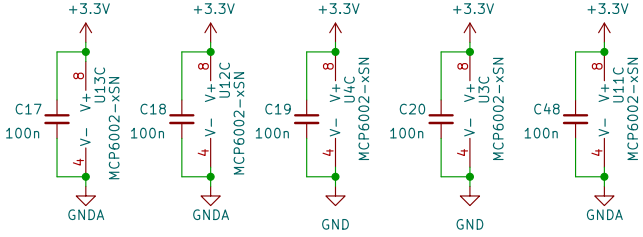
5678

ABCD



XY

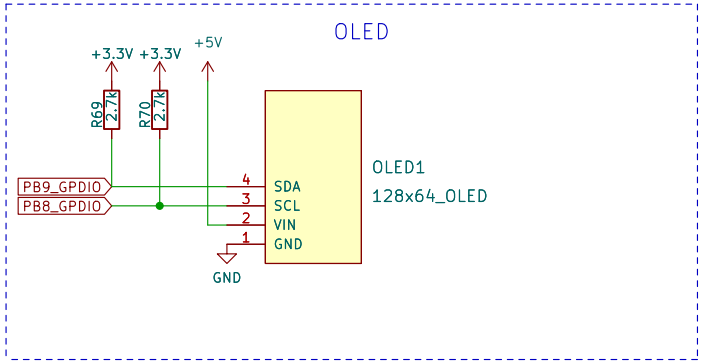


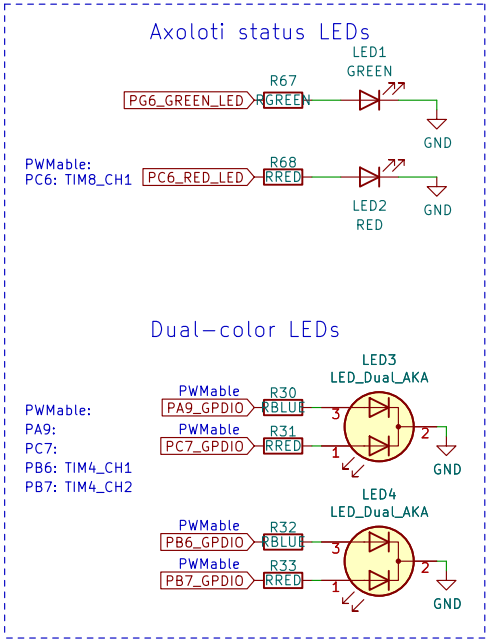


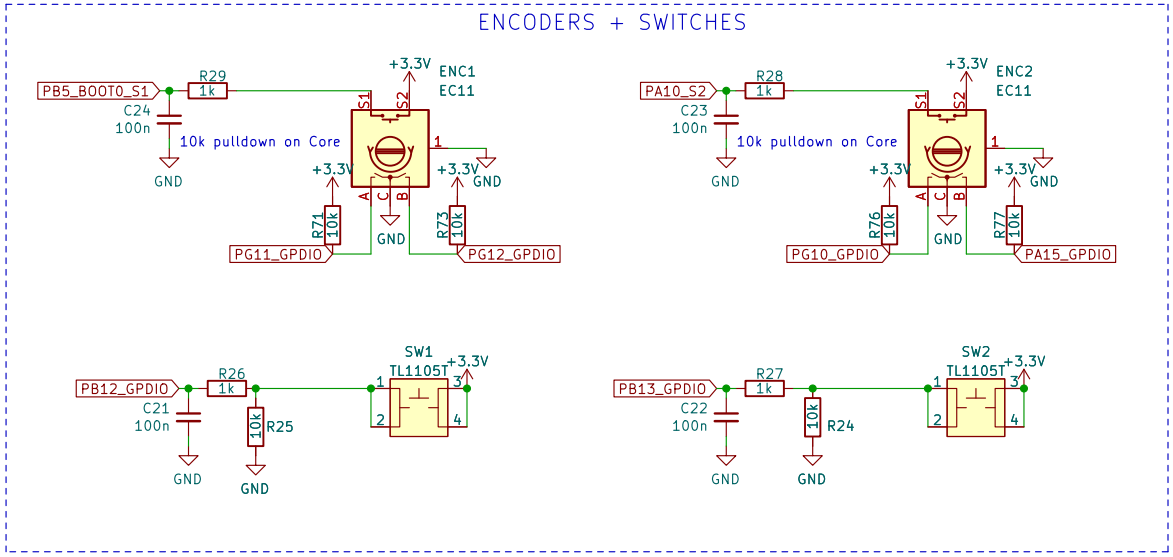
Sheet: /CV Inputs/
File: cv_in.kicad_sch

Title:

Size: A4	Date:	**Rev: v0.5**
KiCad E.D.A. kicad (6.0.11)		Id: 5/13



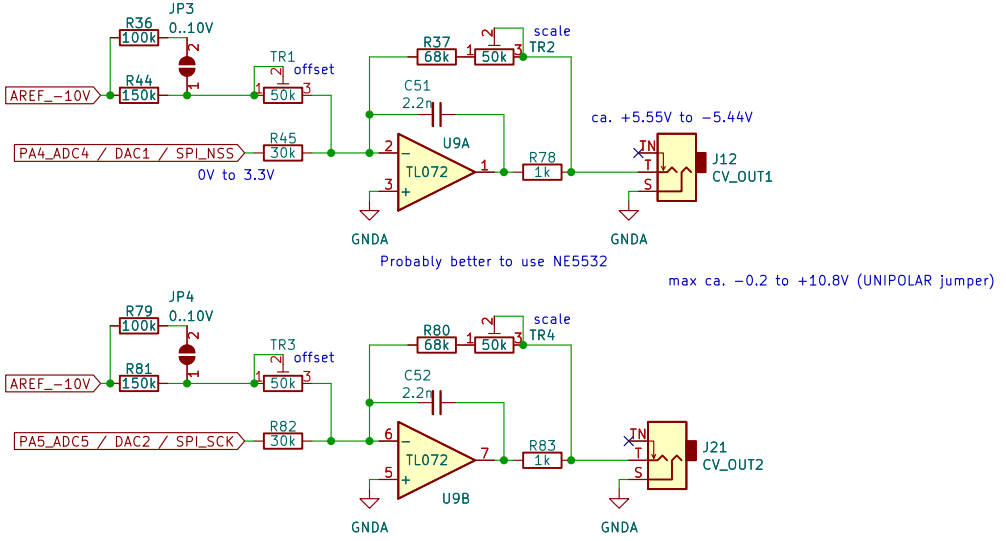


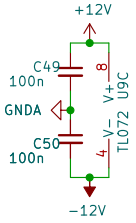


Sheet: /LEDs and Buttons/		
File: led_out.kicad_sch		
Title:		
Size: A4	Date:	**Rev: v0.5**
KiCad E.D.A. kicad (6.0.11)		Id: 6/13

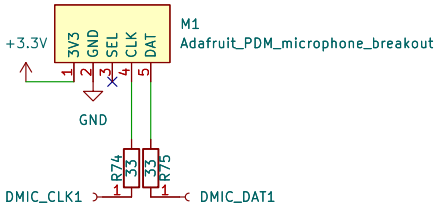
CV outputs

SIGNAL SCALE/OFFSET





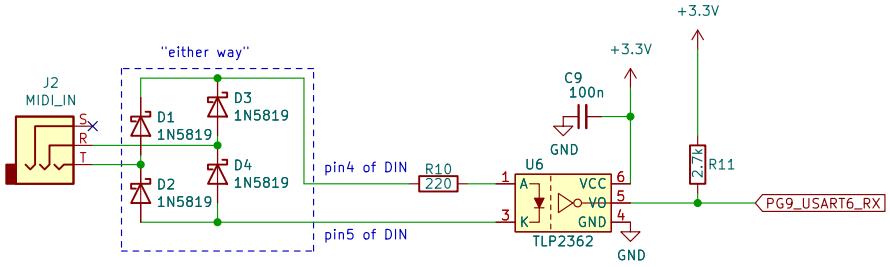
Sheet: /CV outputs/	
File: cv_out.kicad_sch	
Title:	
Size: A4	Date:
KiCad E.D.A. kicad (6.0.11)	**Rev: v0.5**
	Id: 7/13



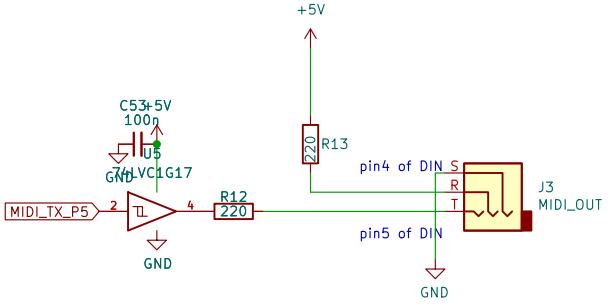
Sheet: /digital mic/
File: digital_mic.kicad_sch

Title:

Size: A4	Date:	**Rev: v0.5**
KiCad E.D.A. kicad (6.0.11)		Id: 8/13



conforming to TRS MIDI specs
https://www.midi.org/midi-articles/trs-specification-adopted-and-released



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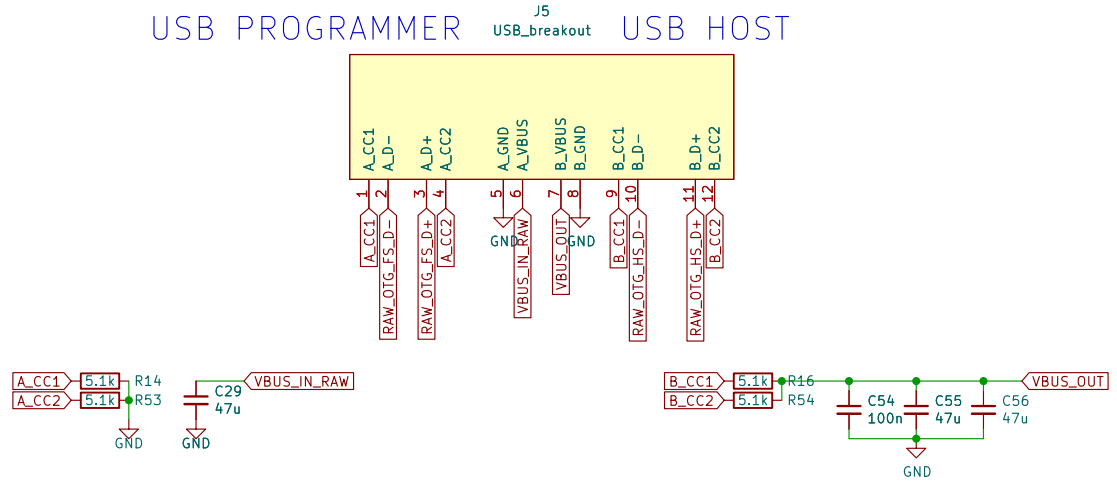
Size: A4	Date:	**Rev: v0.5**
KiCad E.D.A. kicad (6.0.11)		Id: 9/13



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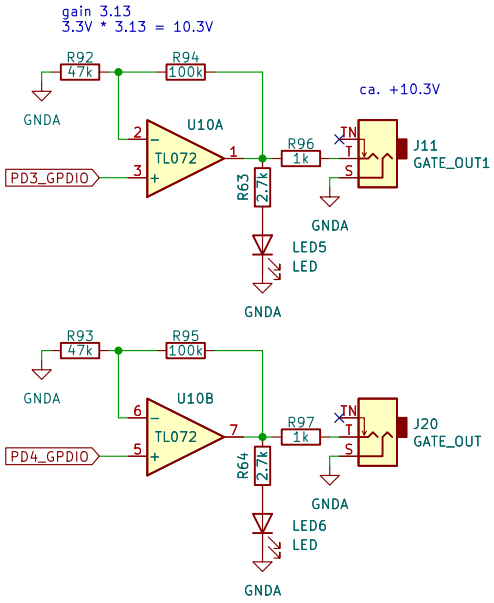
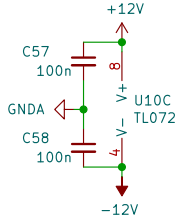
Title:

Size: A4	Date:	**Rev: v0.5**
KiCad E.D.A. kicad (6.0.11)		Id: 10/13

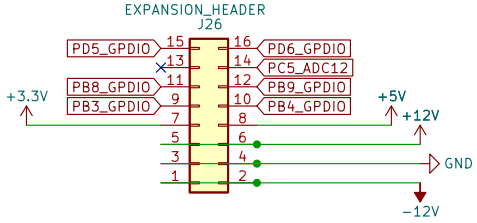




Sheet: /Gate Outputs/
File: gate_io.kicad_sch

Title:

Size: A4 | Date: | **Rev: v0.5**
KiCad E.D.A. kicad (6.0.11) | Id: 11/13



Sheet: /expansion_header/		
File: untitled.kicad_sch		
Title:		
Size: A4	Date:	**Rev: v0.5**
KiCad E.D.A. kicad (6.0.11)		Id: 12/13

Changelog

v0.3 done – prototype ordered 2024-02-07

v0.4 done – prototype ordered 2024-03-06

- swap pins PD5 and PD6 on expansion header (consistency)
- rework USB connector and SD card connector footprints, panel holes
- Use pseudo-SMD pin socket for J1 line in/out to Core
- Use LM4040-10 instead of CJ431 for stabler VREF
- Add extra caps on 3.3V rail
- Use "thin" OLED footprint (slightly different dimensions)
- Adjust Thonkiconn stereo jacks footprint size, position
- Fix encoder pins not connecting to any MCU pin

v0.5 done – production

- Add filter caps to pots 1-4
- Rework USB connectors: design breakout board holding two horizontal connectors and pin headers
- Revert OLED to "non-thin" version (same like Gills), run on 5V instead of 3.3V
- Reduce series resistors for optional Gate LEDs to 2.7k

Sheet: /changelog/		
File: changelog.kicad_sch		
Title:		
Size: A4	Date:	**Rev: v0.5**
KiCad E.D.A. kicad (6.0.11)		Id: 13/13