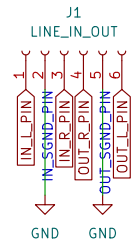
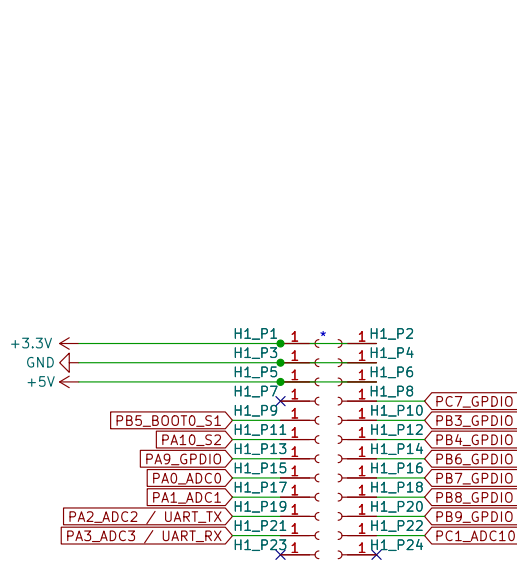


Ksoloti Core v0.4+ headers (top view)



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)

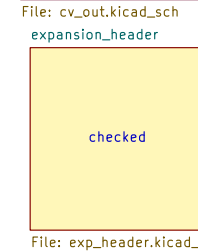
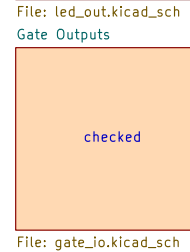
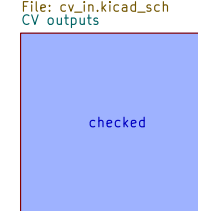
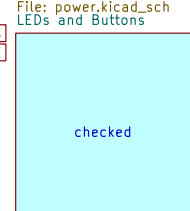
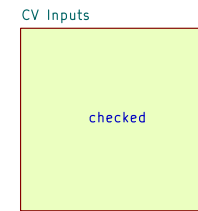
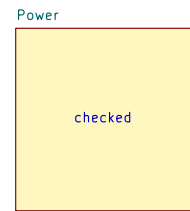
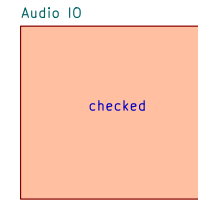
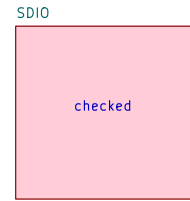
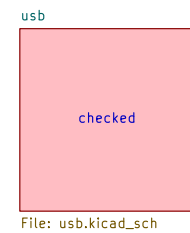
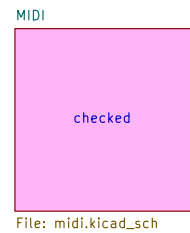
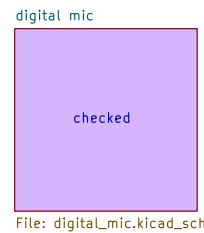
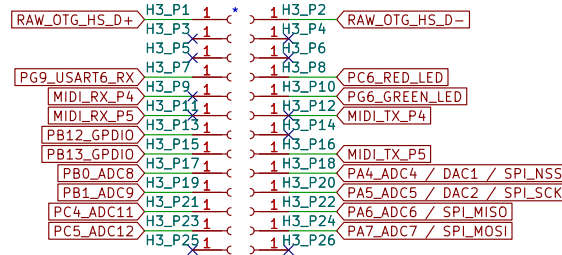
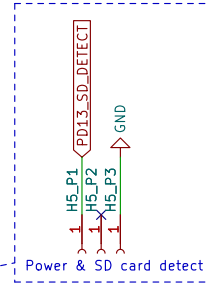
2 encoders with switch (E1, E2)
2 buttons (S3, S4)

2 fadeable Axo status LEDs, 2 fadeable duo-color LEDs

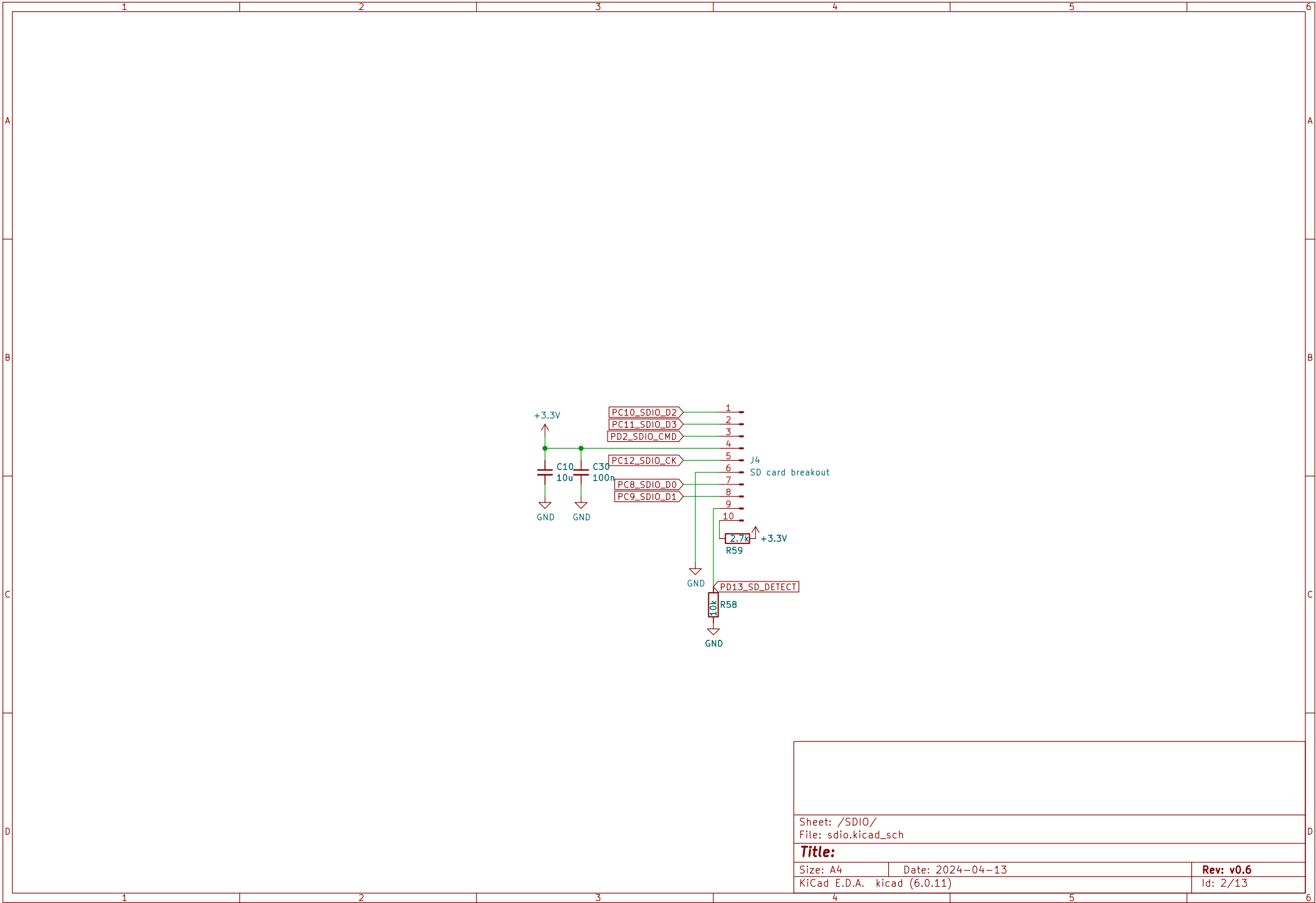
2 gate outputs, ca. 10.3V, optional gate indicator LEDs
2 CV outputs, trimmable offset and V/oct (+/–5V or 0..10V via jumper)

1 OLED display, 128x64px, I2C, SH1106

FID1 Fiducial FID2 Fiducial FID3 Fiducial

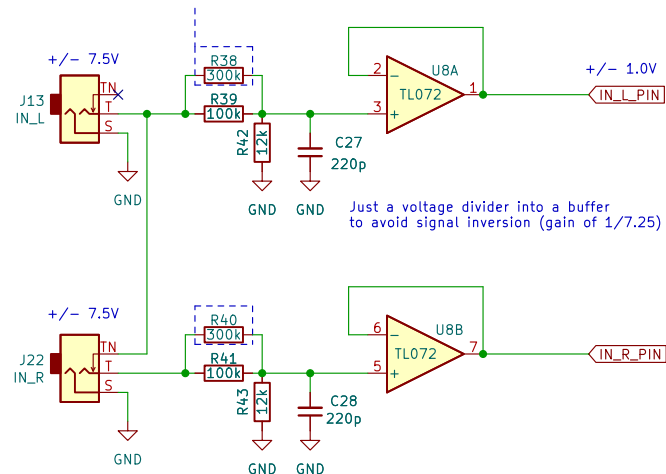


CHANGELOG		
changelog		
File: changelog.kicad_sch		
Sheet: /		
File: ksoloti_big_genes.kicad_sch		
Title:		
Size: A4	Date: 2024-04-13	Rev: v0.6
KiCad E.D.A. kicad (6.0.11)	Id: 1/13	

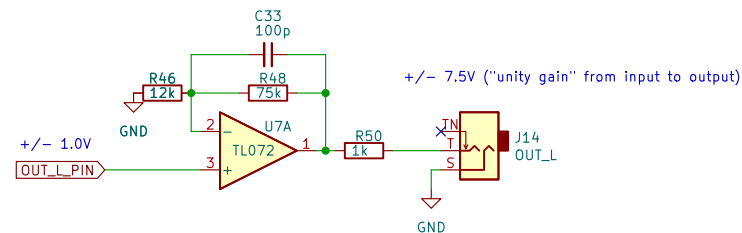


+/-7.5V input level (+/-5V seemed to distort easily)

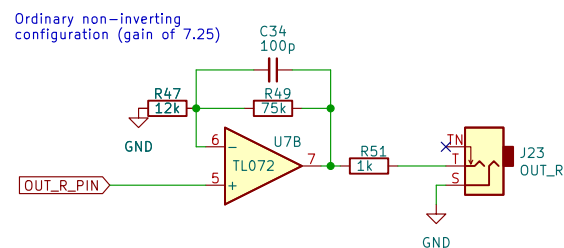
if you're feeding Big Genes particularly hot input levels,
remove R38, R40 to allow for ca. +/-10V headroom



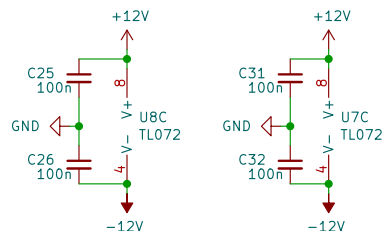
Just a voltage divider into a buffer
to avoid signal inversion (gain of 1/7.25)



+/- 7.5V ("unity gain" from input to output)



Ordinary non-inverting
configuration (gain of 7.25)



Sheet: /Audio IO/
File: audio_io.kicad_sch

Title:

Size: A4 Date: 2024-04-13

KiCad E.D.A. kicad (6.0.11)

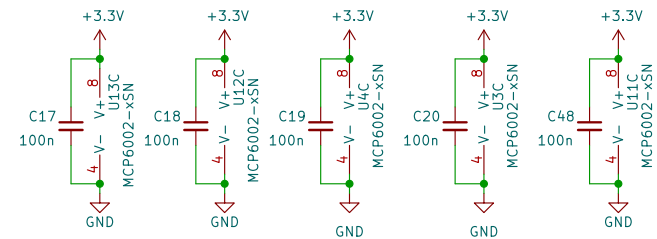
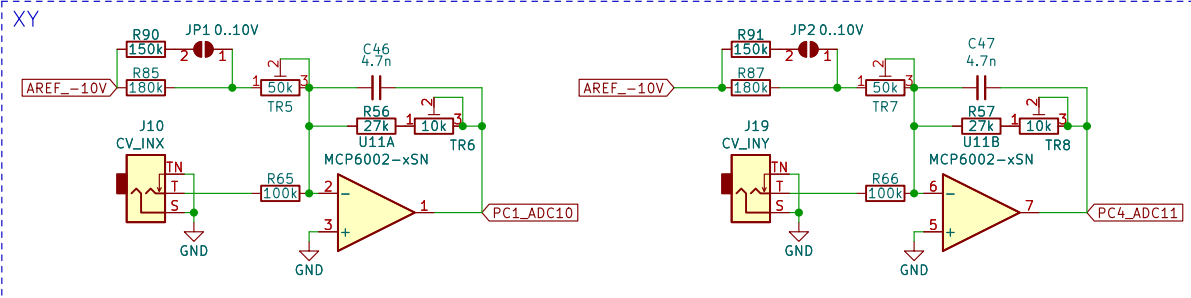
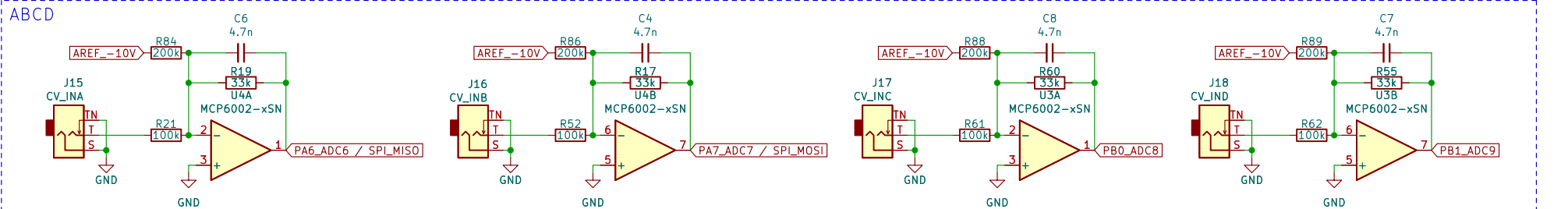
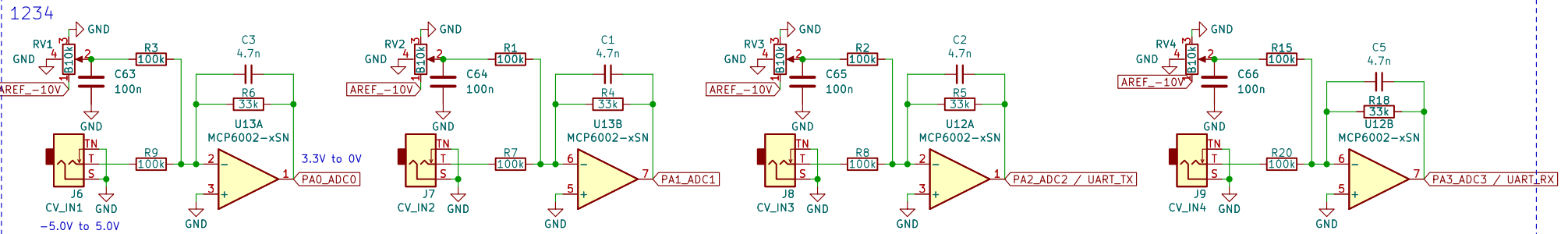
Rev: v0.6

Id: 3/13



Rev: v0.6
Id: 4/13

Pots / CV inputs



Sheet: /CV Inputs/
File: cv_in.kicad_sch

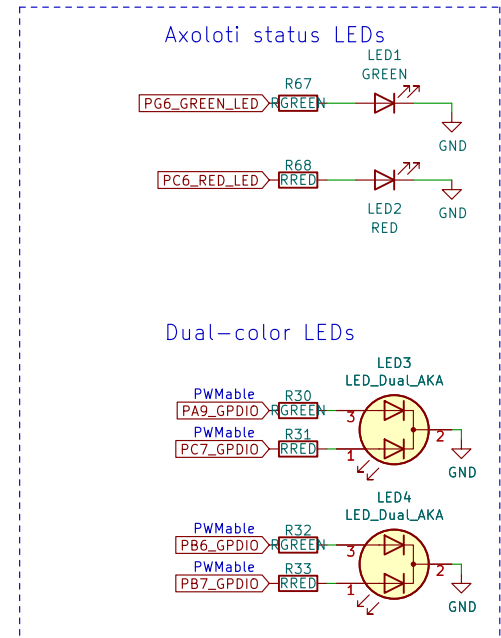
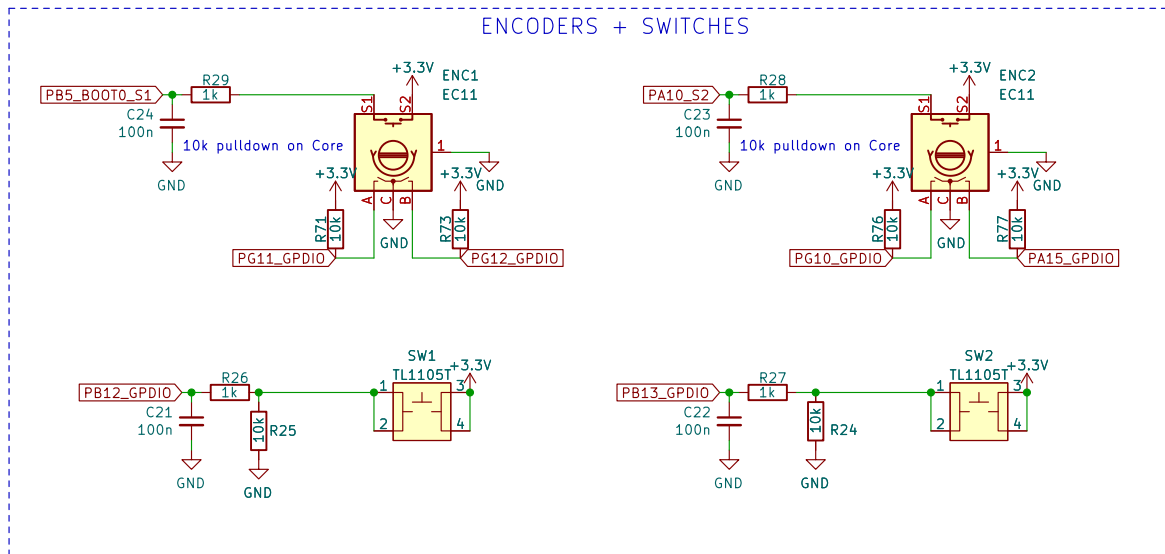
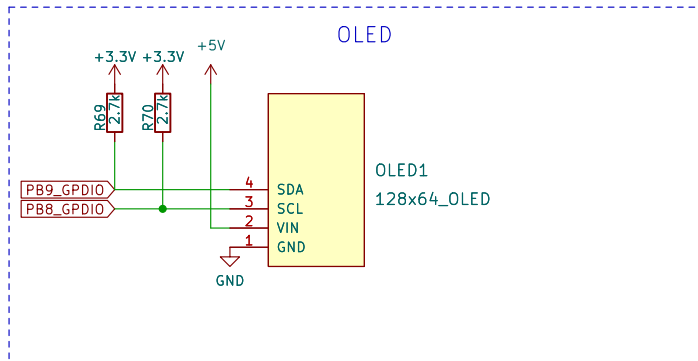
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Size: A4 Date: 2024-04-13

KiCad E.D.A. kicad (6.0.11)

Rev: v0.6

Id: 5/13



Sheet: /LEDs and Buttons/
File: led_out.kicad_sch

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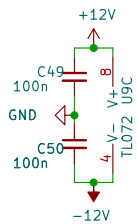
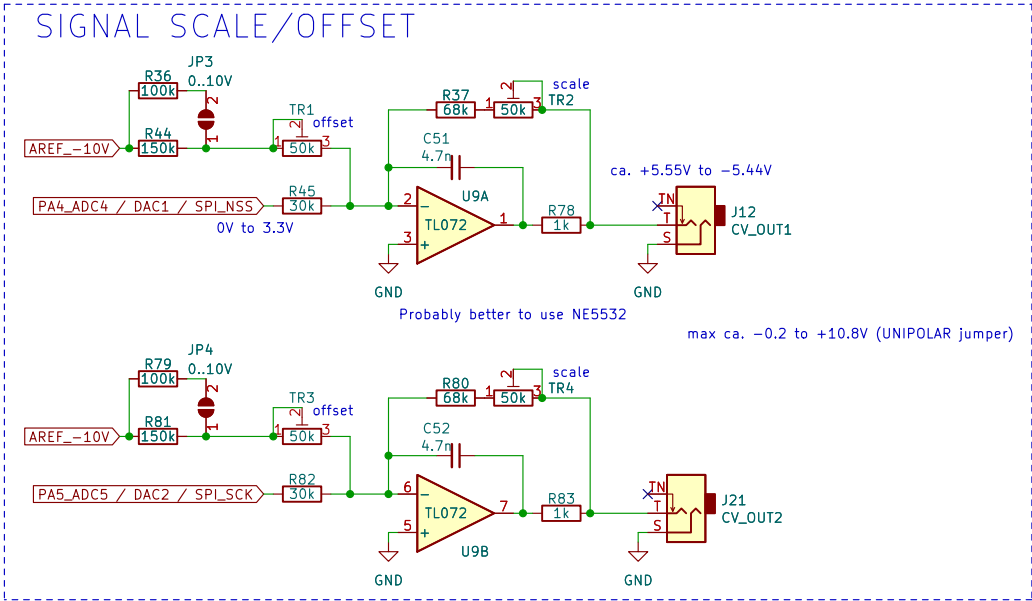
Size: A4 Date: 2024-04-13

KiCad E.D.A. kicad (6.0.11)

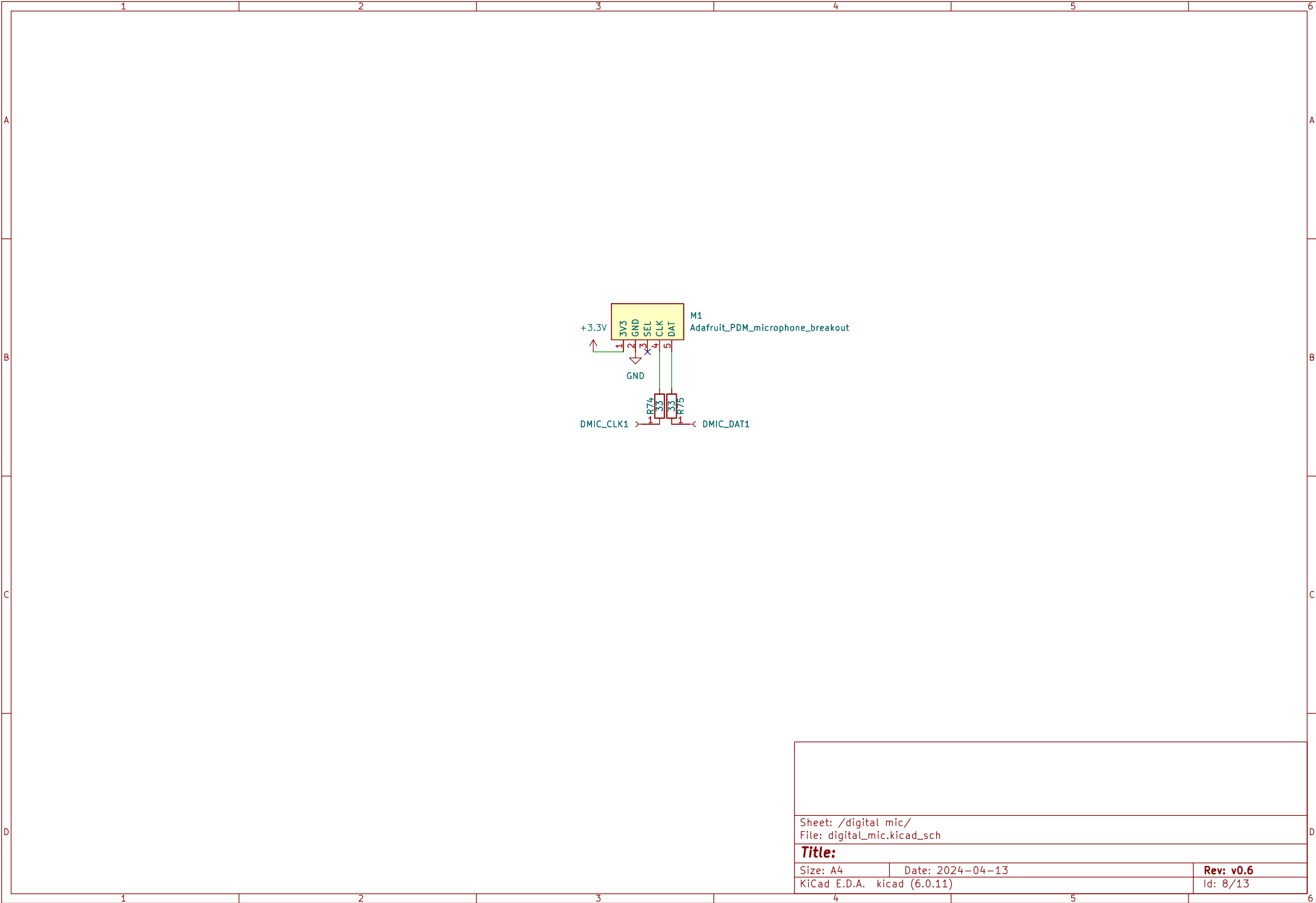
Rev: v0.6

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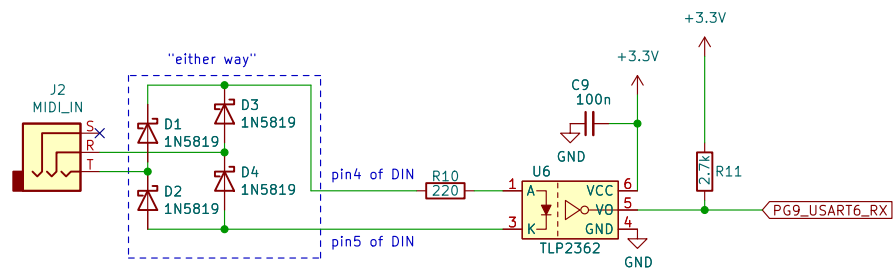
CV outputs



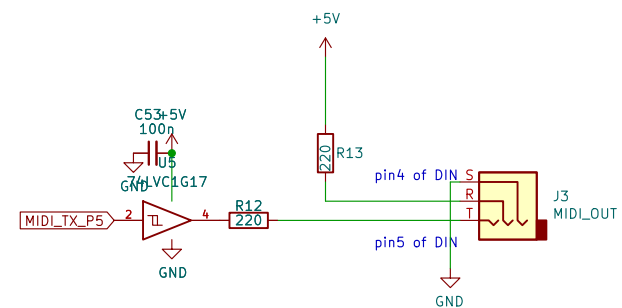
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Title:		
Size: A4	Date: 2024-04-13	Rev: v0.6
KiCad E.D.A. kicad (6.0.11)		Id: 7/13



Sheet: /digital mic/ File: digital_mic.kicad_sch		
Title:		
Size: A4	Date: 2024-04-13	Rev: v0.6
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>



Sheet: /MIDI/
 File: midi.kicad_sch

Title:

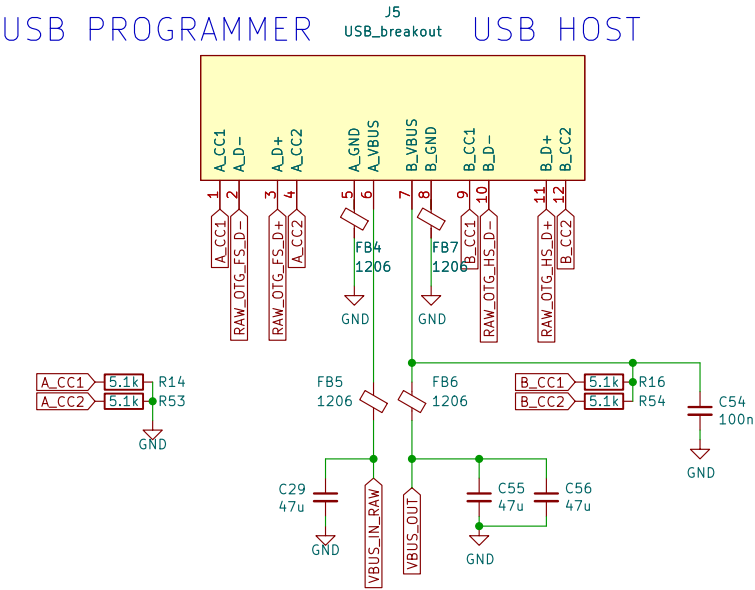
Size: A4 Date: 2024-04-13

KiCad E.D.A. kicad (6.0.11)

Rev: v0.6

Id: 9/13

USB PROGRAMMER USB HOST



Sheet: /usb/
File: usb.kicad_sch

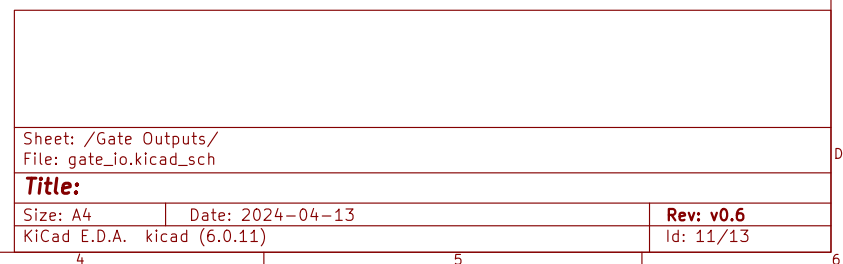
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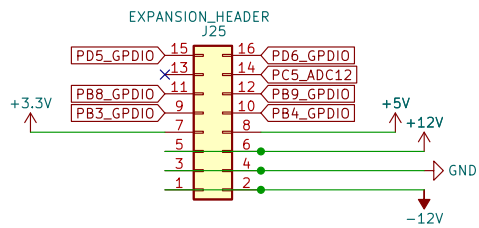
Size: A4 Date: 2024-04-13

KiCad E.D.A. kicad (6.0.11)

Rev: v0.6

Id: 10/13





Sheet: /expansion_header/
File: exp_header.kicad_sch

Title:

Size: A4 Date: 2024-04-13

KiCad E.D.A. kicad (6.0.11)

Rev: v0.6

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

v0.6 done – production

- Improve SD card and USB breakouts: use 2.0 mm pin headers instead of 1.27 mm ones (a pain to solder)
- Improve Thonkiconn mono and stereo footprints
- Change audio in/out amplification to non–inverted
- Rework power and grounding, add ferrite beads etc.

Sheet: /changelog/ File: changelog.kicad_sch		
Title:		
Size: A4	Date: 2024–04–13	Rev: v0.6
KiCad E.D.A. kicad (6.0.11)		Id: 13/13