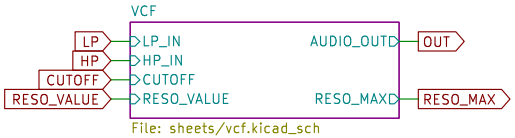
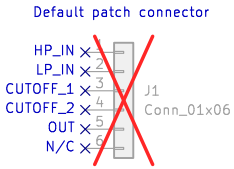
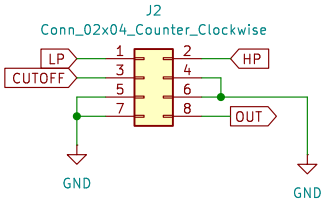
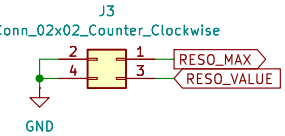
Filter



I/O

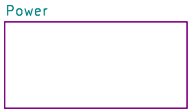






Shielding pairs
DO NOT GROUND ON UI BOARD!

Power



Shmøergh

Sheet: /
File: vcf-core.kicad_sch

Title: Moduleur VCF

Size: A4	Date: 2026-02-21	**Rev: v1.0**
KiCad E.D.A. 9.0.6		Id: 1/3

I never really needed RV_BALANCE1.
What if R13 and R22 are 2k and we don't use the trimmer at all (ie. 1,2,3 legs are all connected)?
Once tested, R13 and R22 can be SMDs.

-> result: WORKS but better to doublecheck again on another test

The value of this cap balances between these:
1. The time the output needs to settle around 0V. If it's too big then it's going to take longer time which results in the signal going too much in the extremes (around +/-10V) that can lead to distortion.
2. The lower the value of this cap the more it's going to skew the original signal (square horizontals start falling/skewing).

Experiments show that 10u is a good compromise.

Usually around 10k

Diode network is prone to picking up hum.
Must be shielded.

You can mix multiple CVs at the "Cutoff" input. All CVs must have a 100k resistor before connected to "Cutoff".

This is on the UI board

R3 and R4 only if necessary.

If you need you can solder a shield around the diodes which is the most noise-prone part of the circuit.

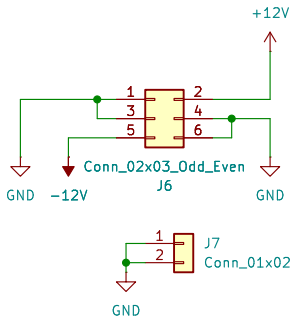
ALL OPAMP POLARITY DOUBLECHECKED

H = Hand soldered

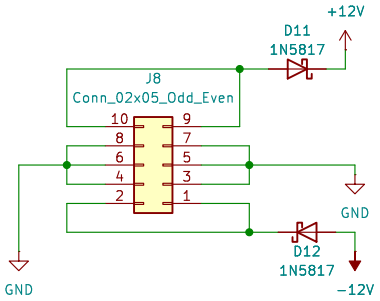
Shmøergh

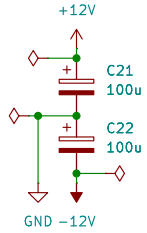
Sheet: /VCF/		
File: vcf.kicad_sch		
Title: Moduleur VCF		
Size: User	Date: 2026-02-21	**Rev: v1.0**
KiCad E.D.A. 9.0.6		Id: 3/3

UI power connection



Eurorack PSU connection





Shmøergh		
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Title: Moduleur VCF		
Size: A4	Date: 2026-02-21	**Rev: v1.0**
KiCad E.D.A. 9.0.6		Id: 4/3