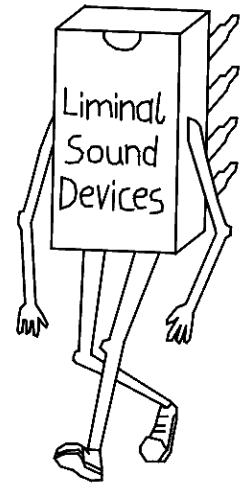


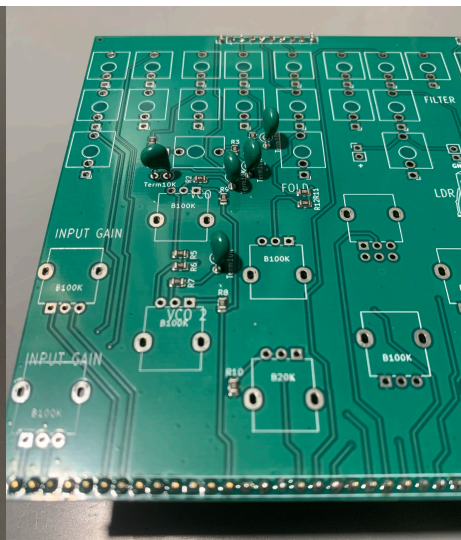
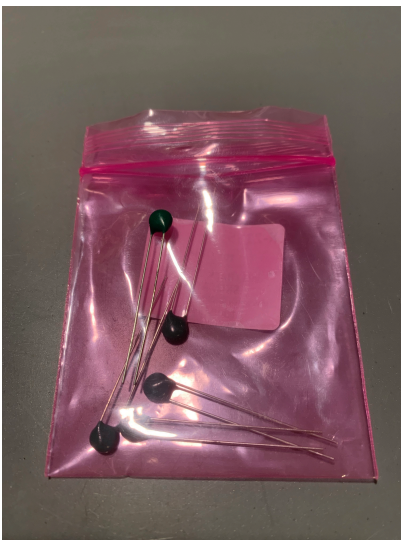
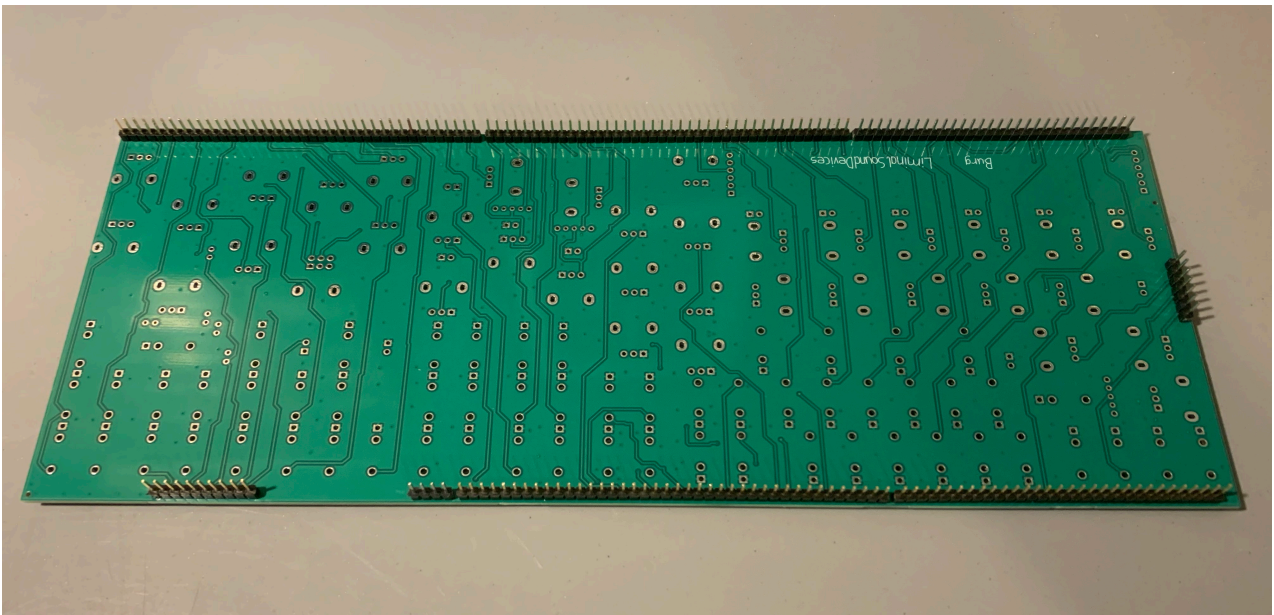
BURG DIY-KIT Instructions

It will take some time, but the assembling process will be easy. It takes about two afternoons of work by yourself but soldering together is much more fun. The process is beginner friendly. It will only require placing all the parts, cutting a few pieces and soldering of through hole components.



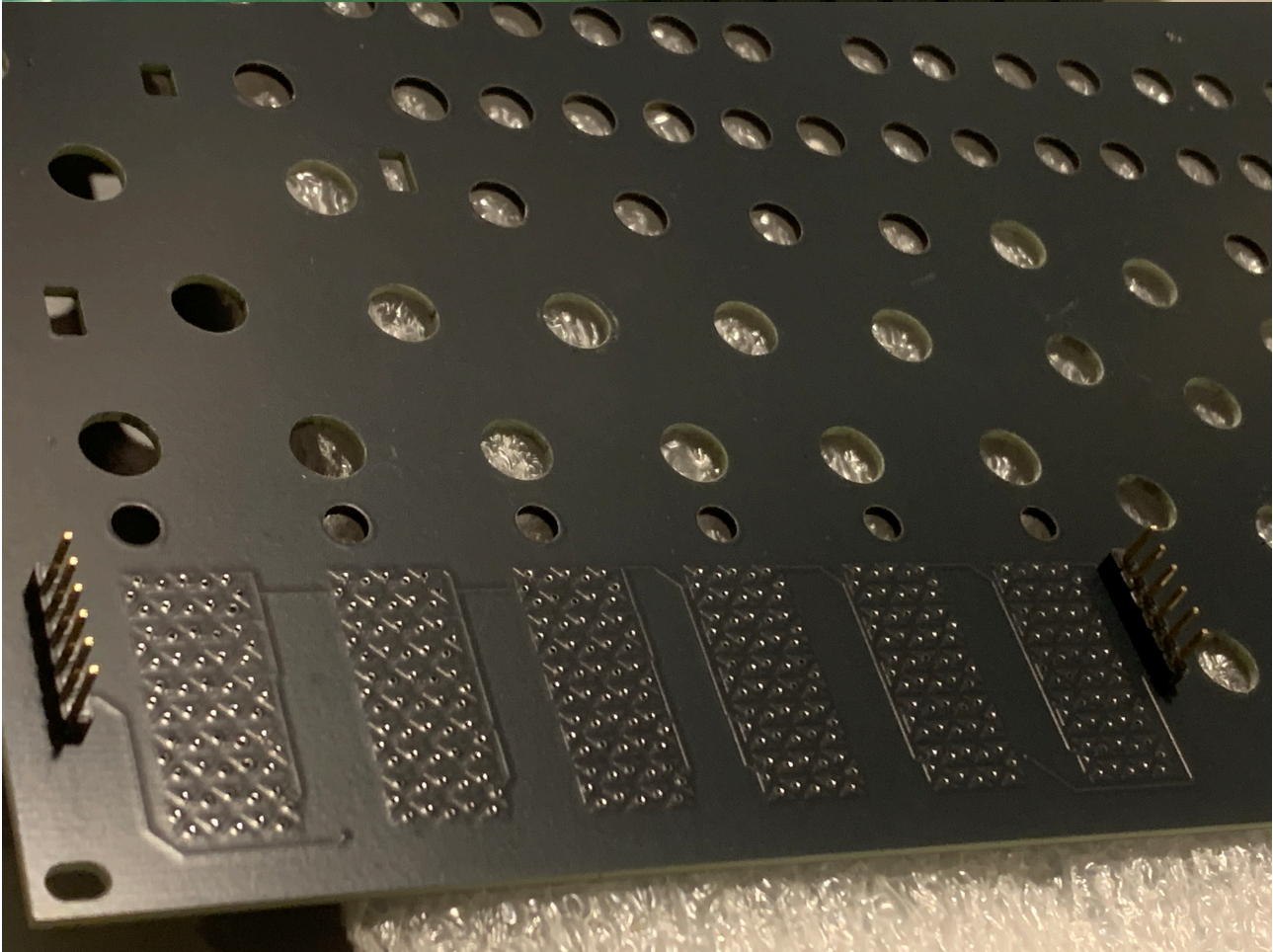
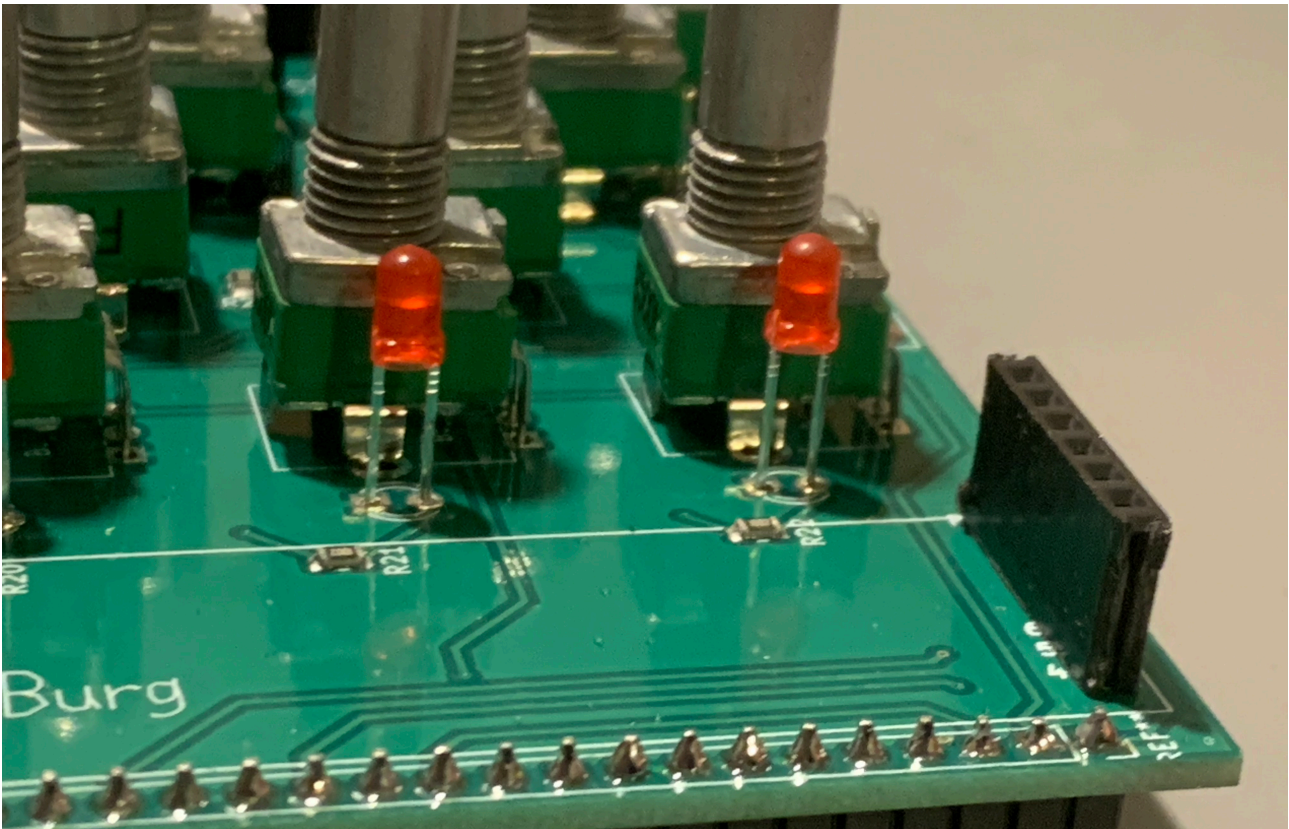
KNOBLAYER

For the Knoblayer we advise to start with the pin-header. Cut or break the pin-header in the needed sizes and solder them to the bottom side of the pcb like shown below



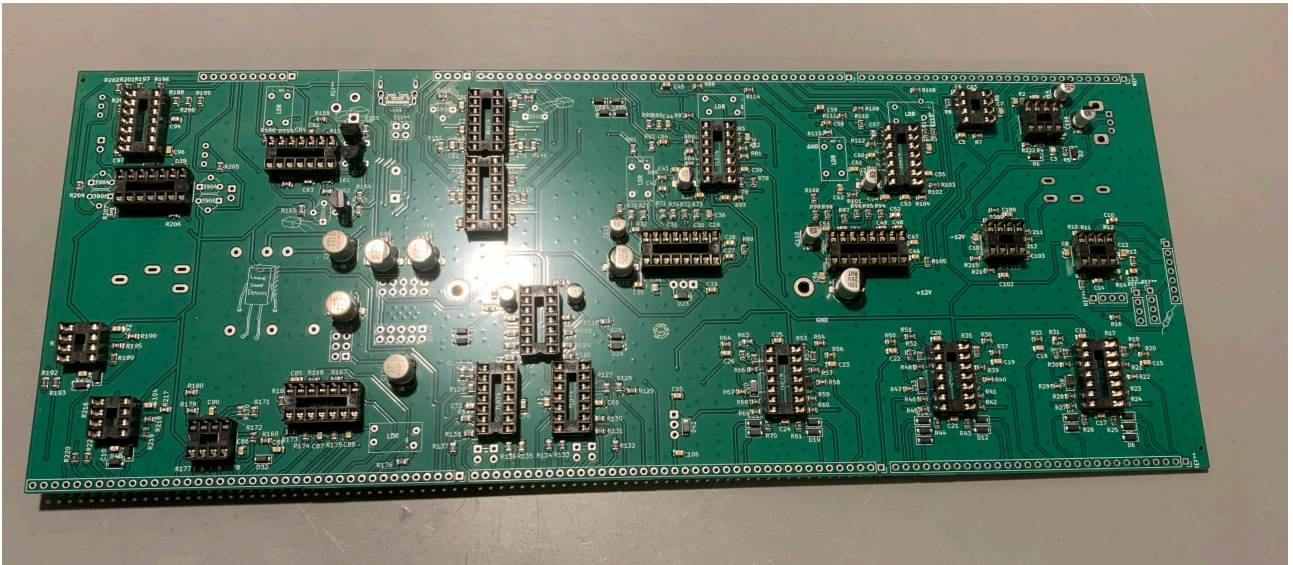
Find the five green thermistors and solder them to the front side of the knoblayer. They look quite like capacitors but they are not. You should find five of them separately packed like shown in the picture.

Dont forget to solder the two six pin sockets for the touch keyboard on the front panels backside.Also on the front-panel.

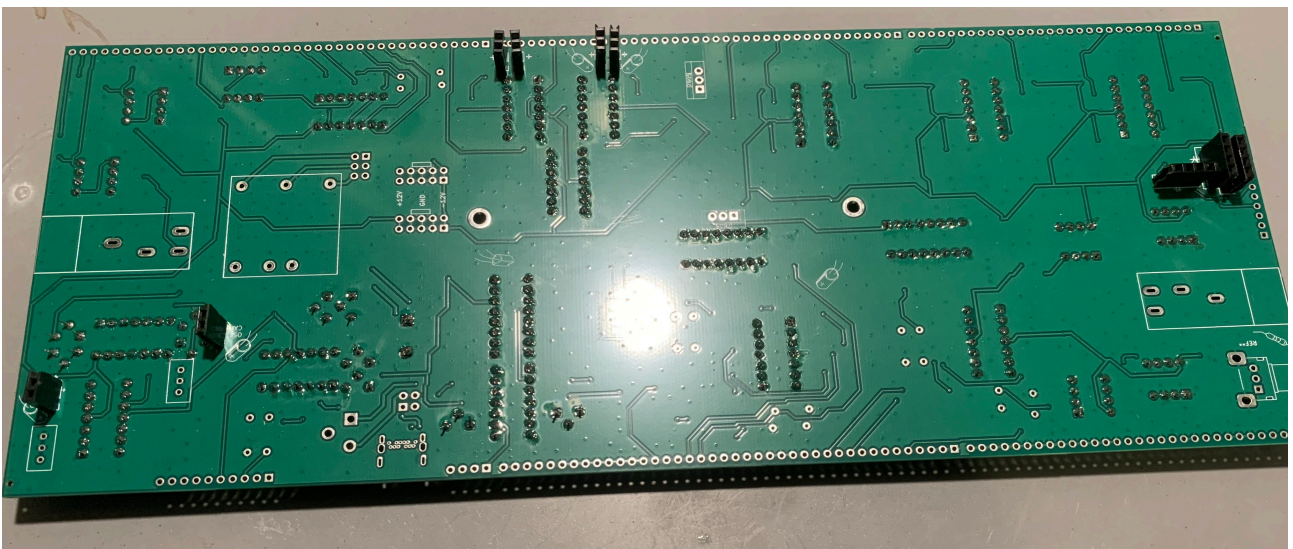


CHIPLAYER

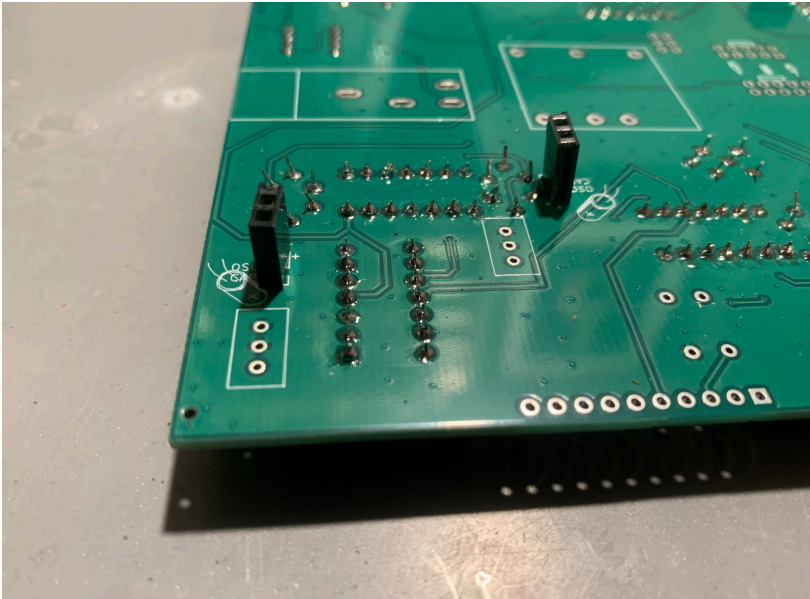
For the Chiplayer start placing the IC sockets and solder



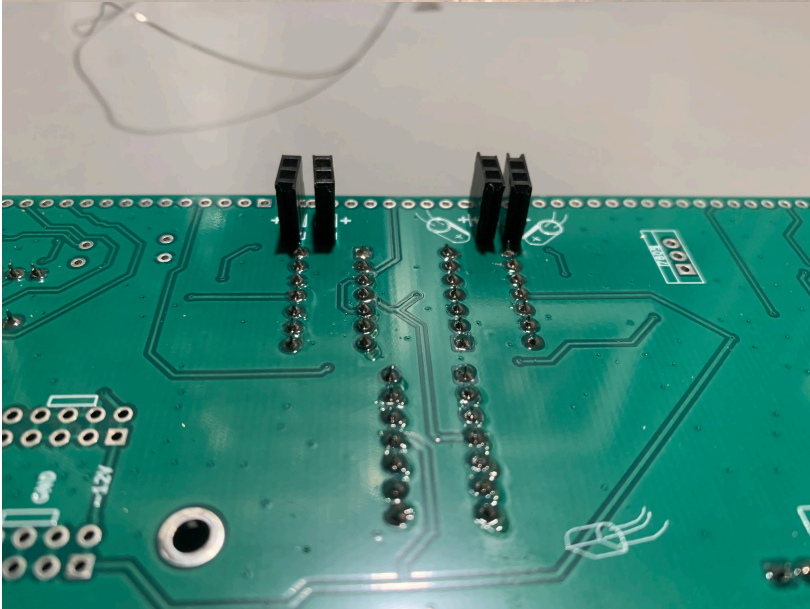
Find the right transistors and solder them, be careful not to confuse 2N3904 and 2N3906



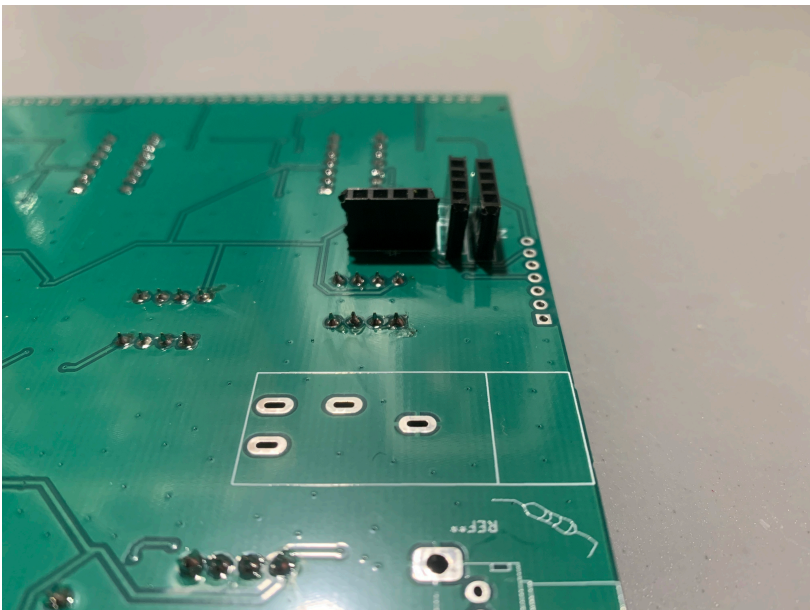
Cut some pin-headers like for the knoblayer and solder them to the correct places.



2x 2 pin-header for VCOs

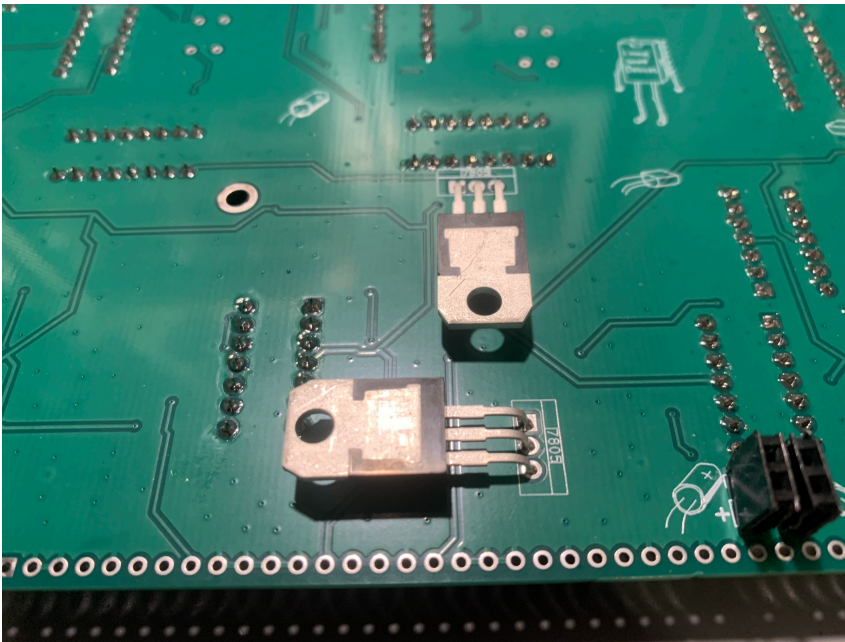


4x 2 pin-header for LFOs



3x 4 pin-header for Distortion

Place the power regulators



on the backside of the chip layer and bend carefully after soldering

Cut the pin header for the euro rack bus board connector, onboard dc converter and usb-c connector

Place for euro rack power only:

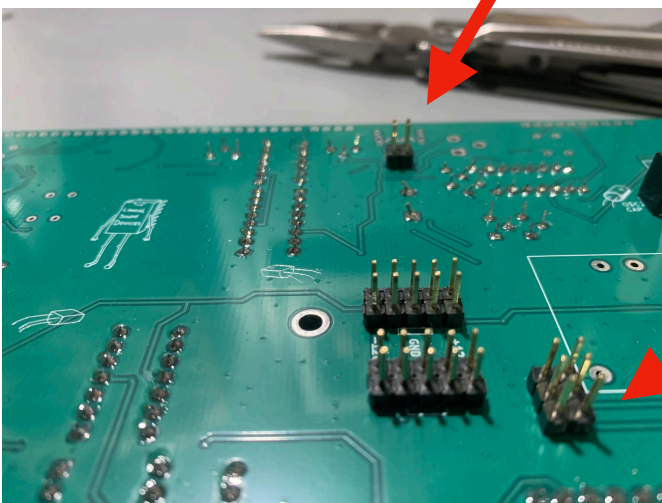
4x 5 pin header (for euro rack bus board)

Place for standalone power supply version:

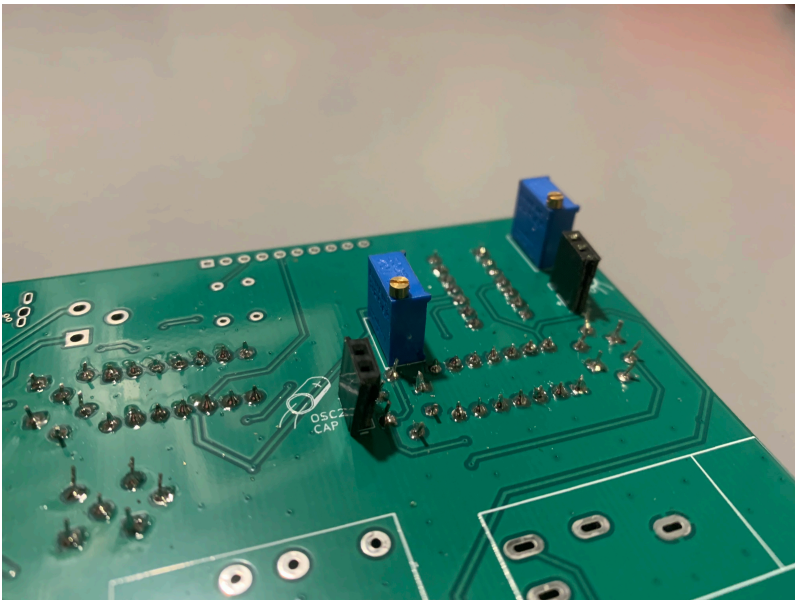
2x 3 pin header (for dc converter if ordered)

2x 2 pin header (for usb-c connector)

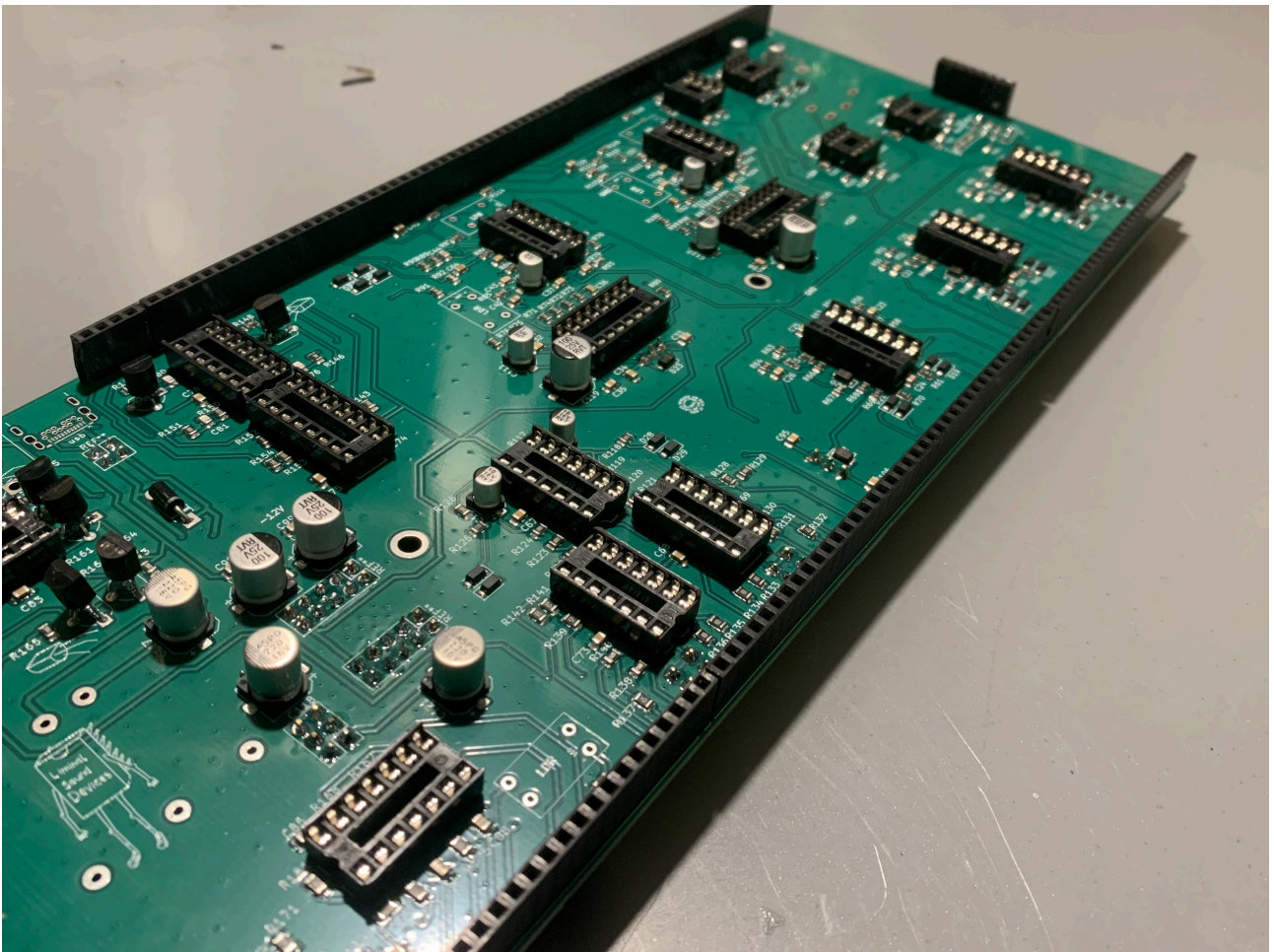
Place bridge between these pins to make the usb-c power input



Place Bridge between these pins to connect the dc-converter for standalone use

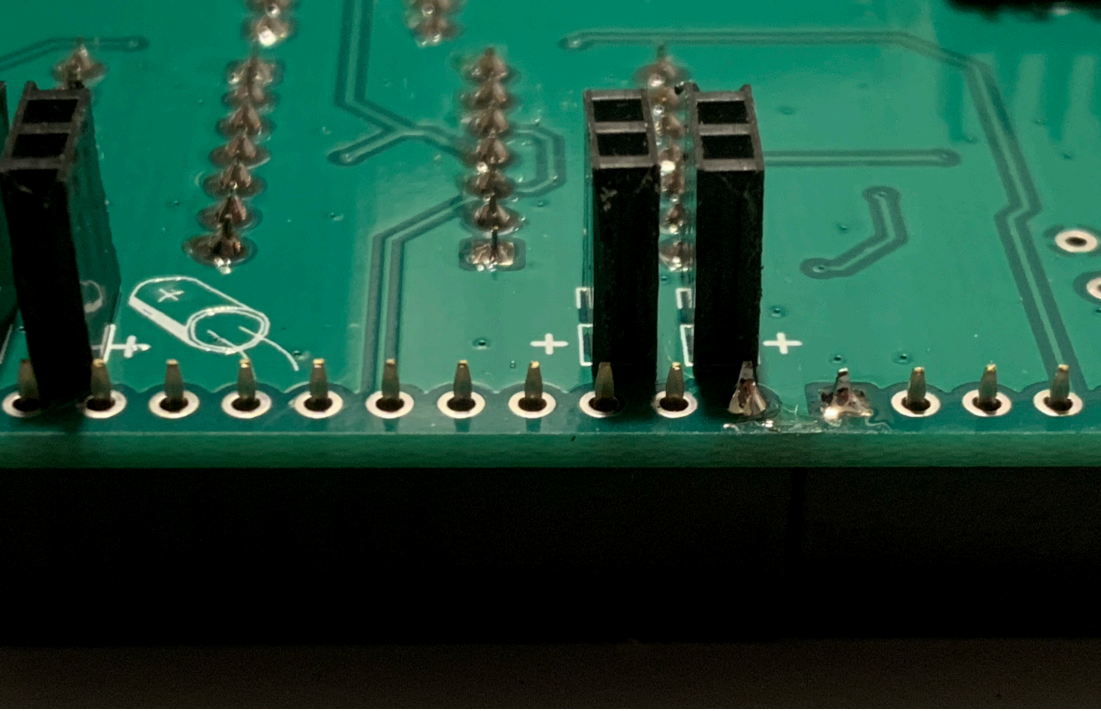
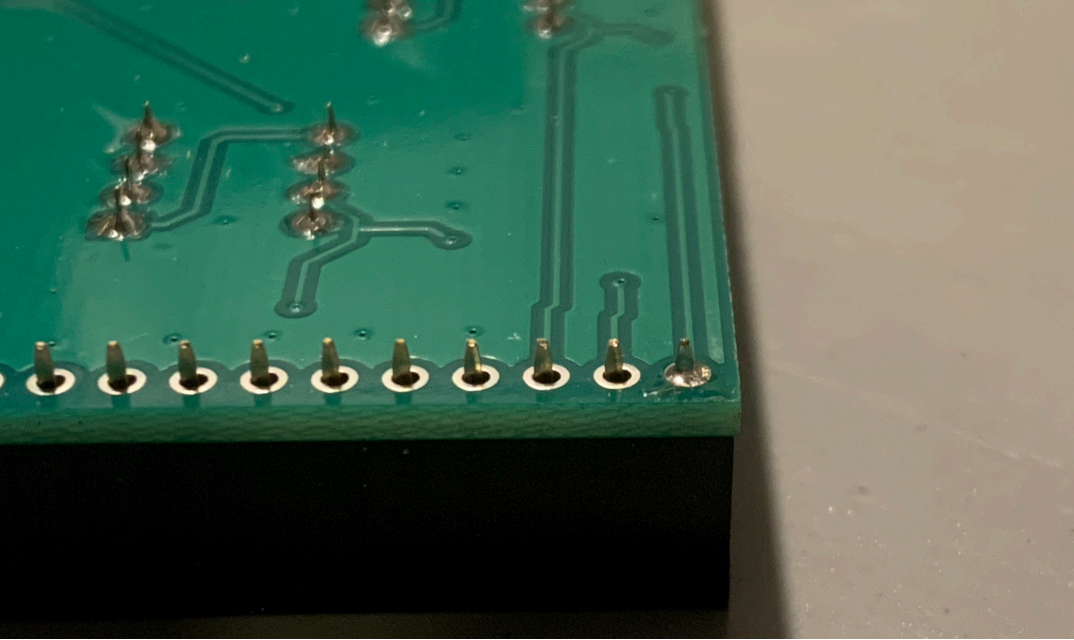


Solder the two trim potentiometer for the VCO fine tune. The screws facing inwards the pcb like in the picture



Cut the pin sockets for the connection to the knoblayer.

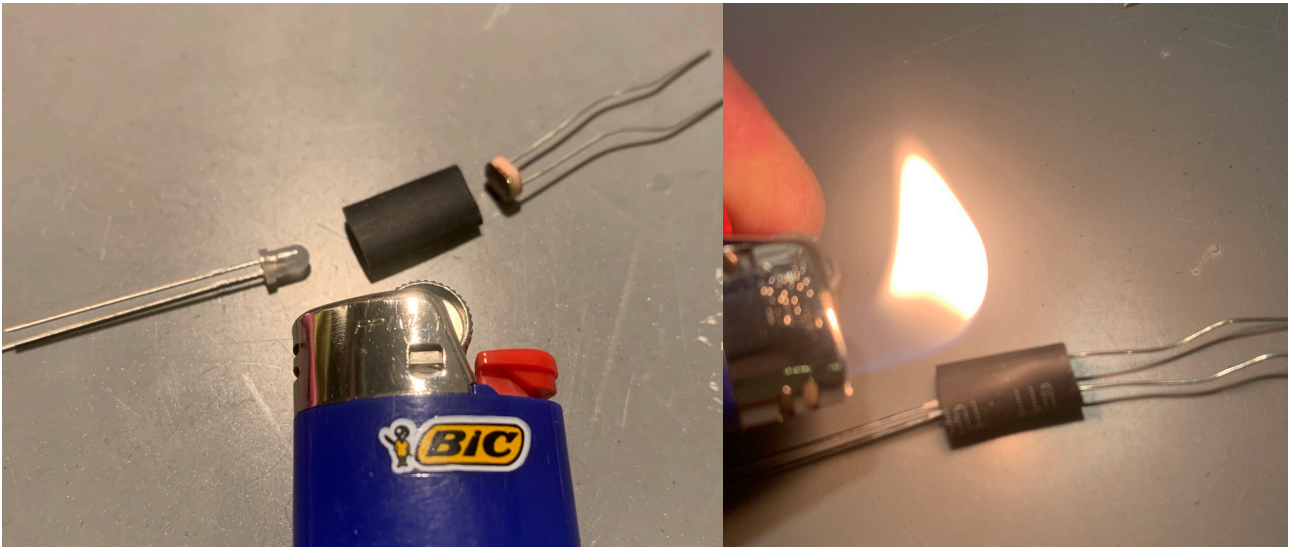
First solder the most outward pins and make sure that the sockets align with each other and are straight



After all sockets are mounted and aligned, check again and solder them.

Vactrols

The chip layer needs six vactrols, you can easily do them by yourself.
Take a shrinking tube and put LED and LDR inside so they touch each other.



Heat the shrinking tube and make sure both sides close really well. Also do another layer to make sure no light reaches the LDRs and LEDs.

There are two types of vactrols



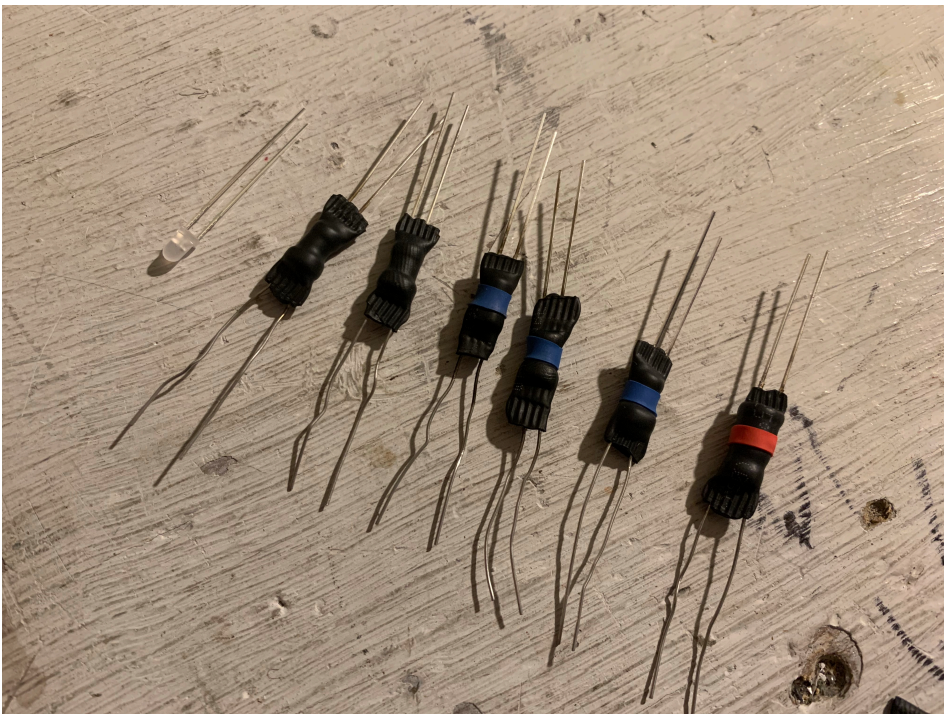
3x bicolor LED Vactrols

3x white LED Vactrols

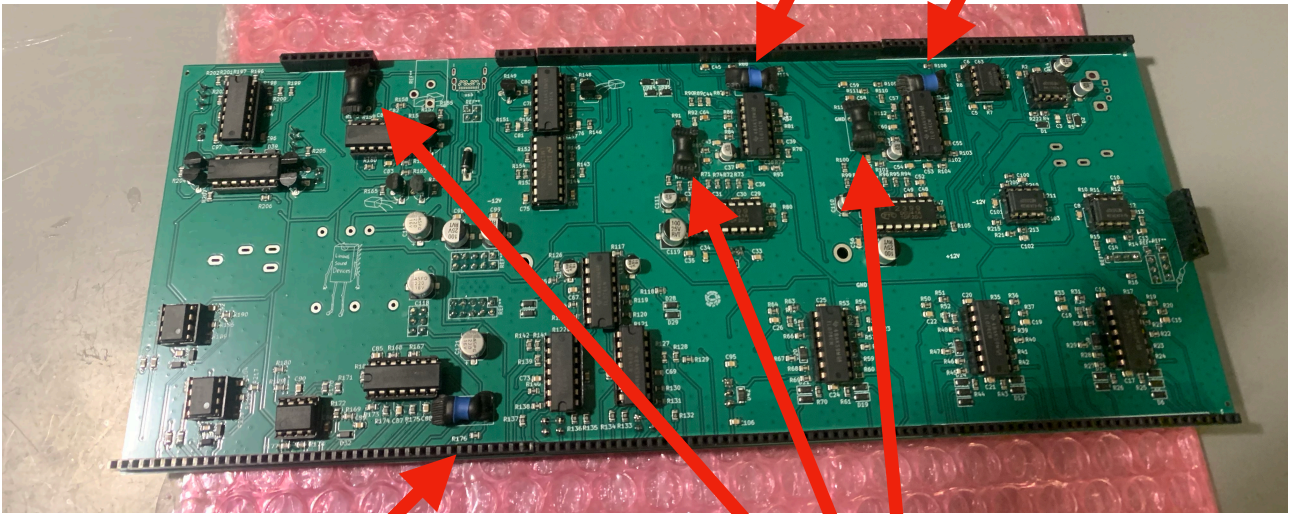
Mark them in some kind so you will remember later



You recognize the positive side of the LED by the longer leg. When soldering the vactrols to the chip layer watch out for the polarity of the LED.

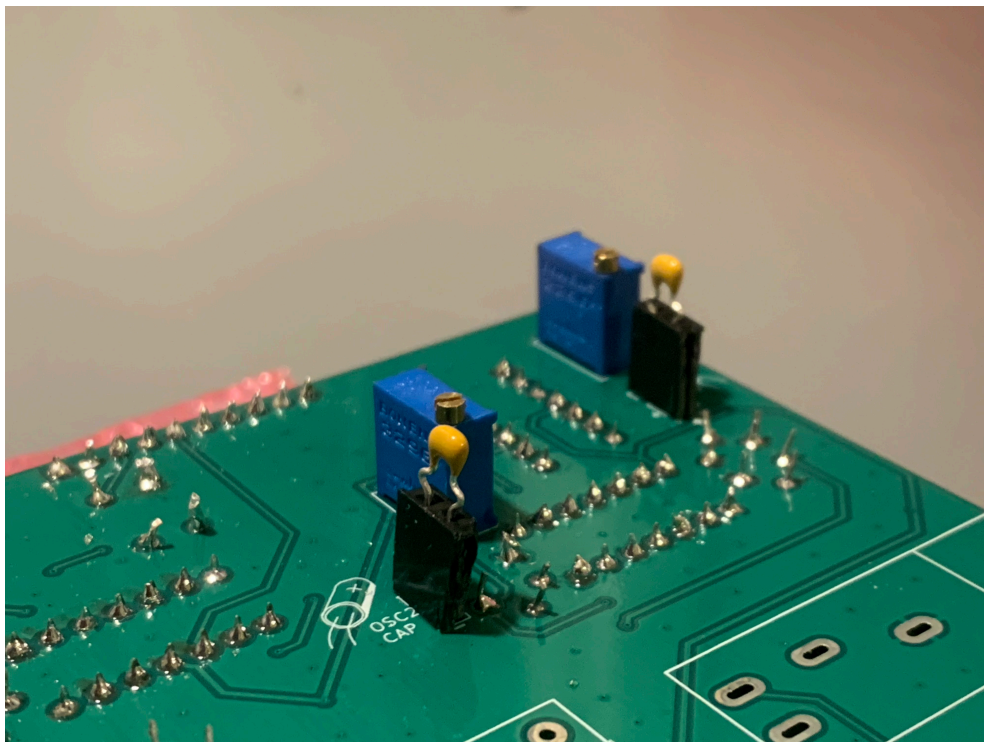


two bicolor LED Vactrols

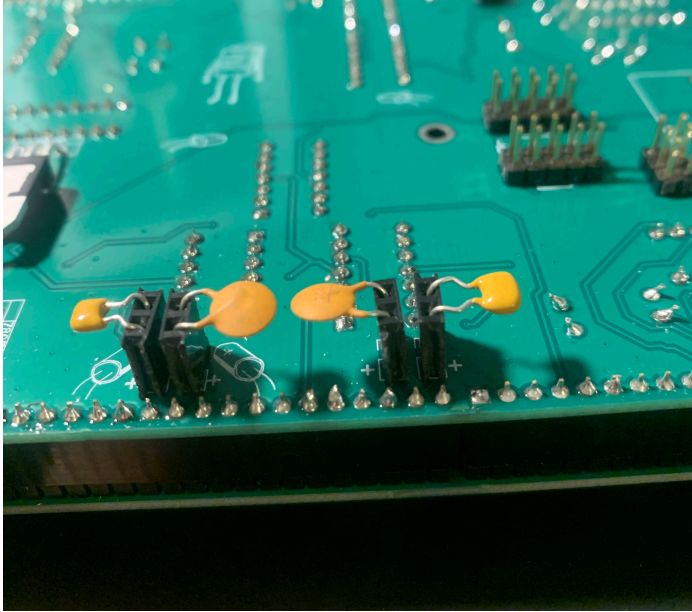


one bicolor LED Vactrols

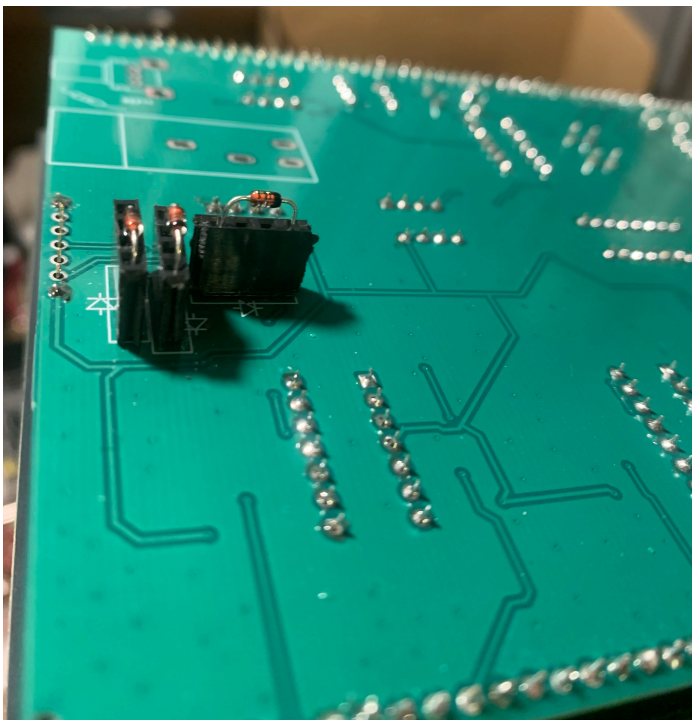
three white LED Vactrols



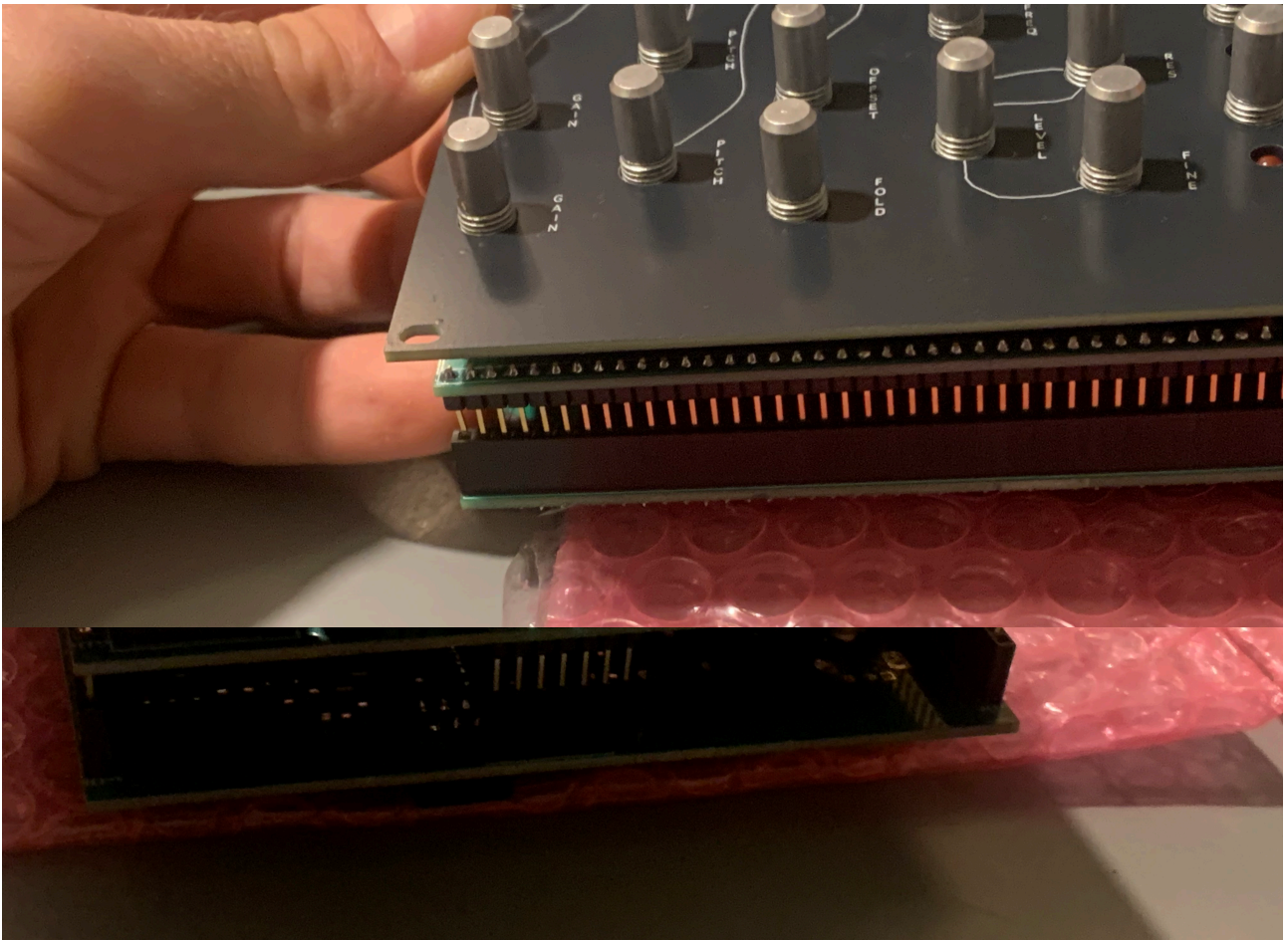
Finally choose your capacitor for the oscillator frequency range. 2200pf for 1V/Oct response.



Choose Capacitor Values for different LFO frequency ranges for example 47nF, 100nF, 1 uF. If you use polarized caps look out for the + and - marks on the board



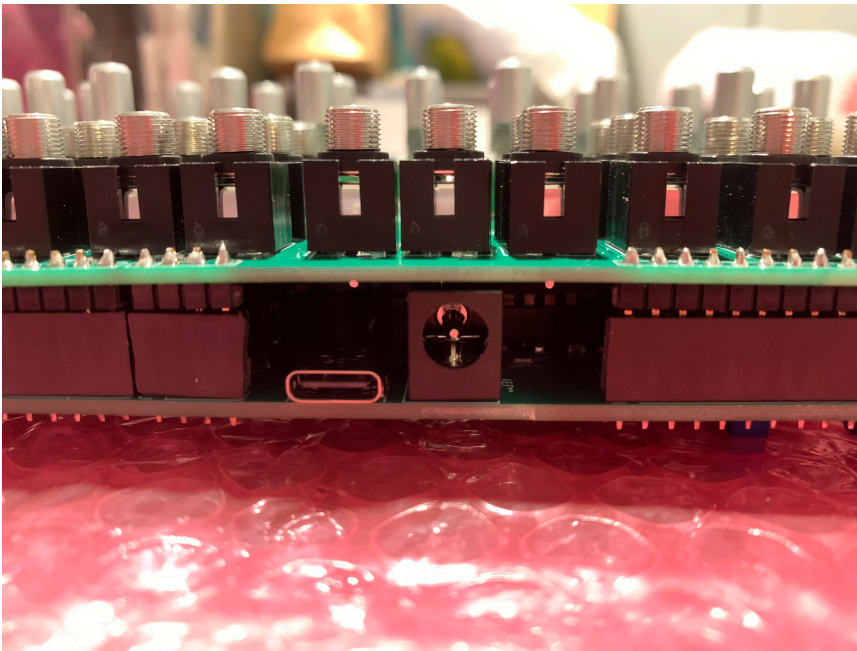
Choose Clipping Diodes for the Distortion or leave them away for op-amp clipping. Also look for the right direction of the diodes. The direction is indicated by the standard diode symbol.



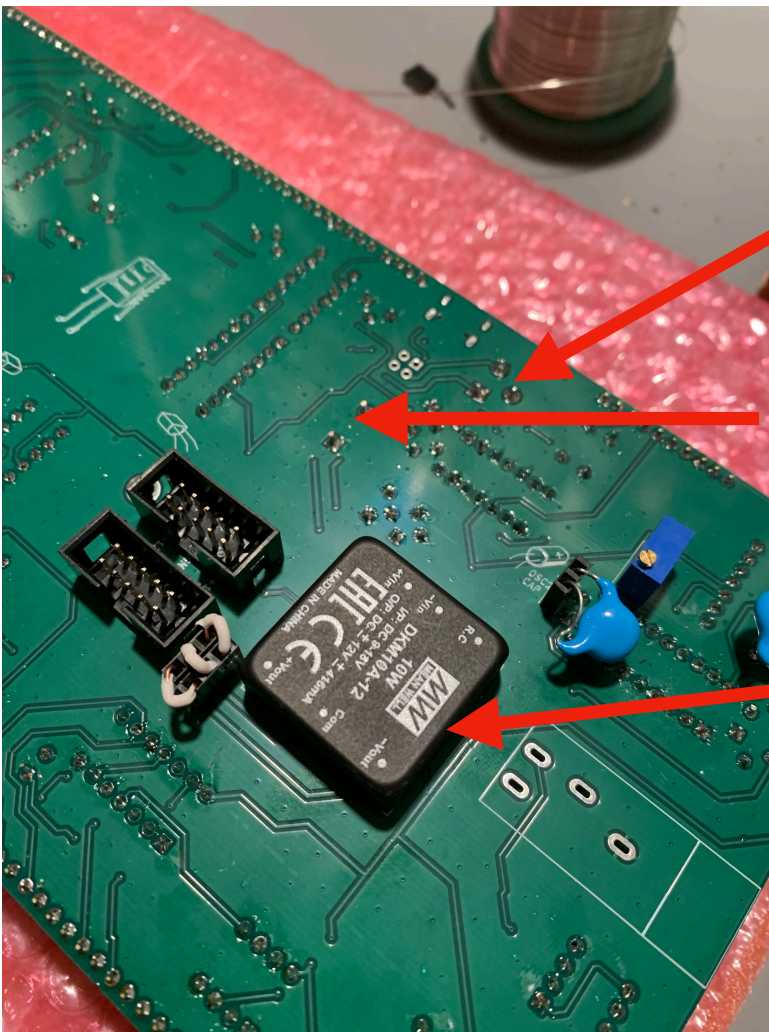
Finally connect the pinheader of the chiplayer with the sockets on the knoblayer. Watch out that every pin goes straight into the socket and does not bend. Slowly push both sides together.



If you choose the standalone version get your standoffs and screws and mount front and back panel together. Get your nuts for the jacks and potentiometer and finally put on your knobs.



For the standalone version is also a barrel Jack input to solder. A Diode is recommended for wrong polarity protection.



Barrel Jack

Protection Diode

The DC Converter has to be places on the backside of the PCB.