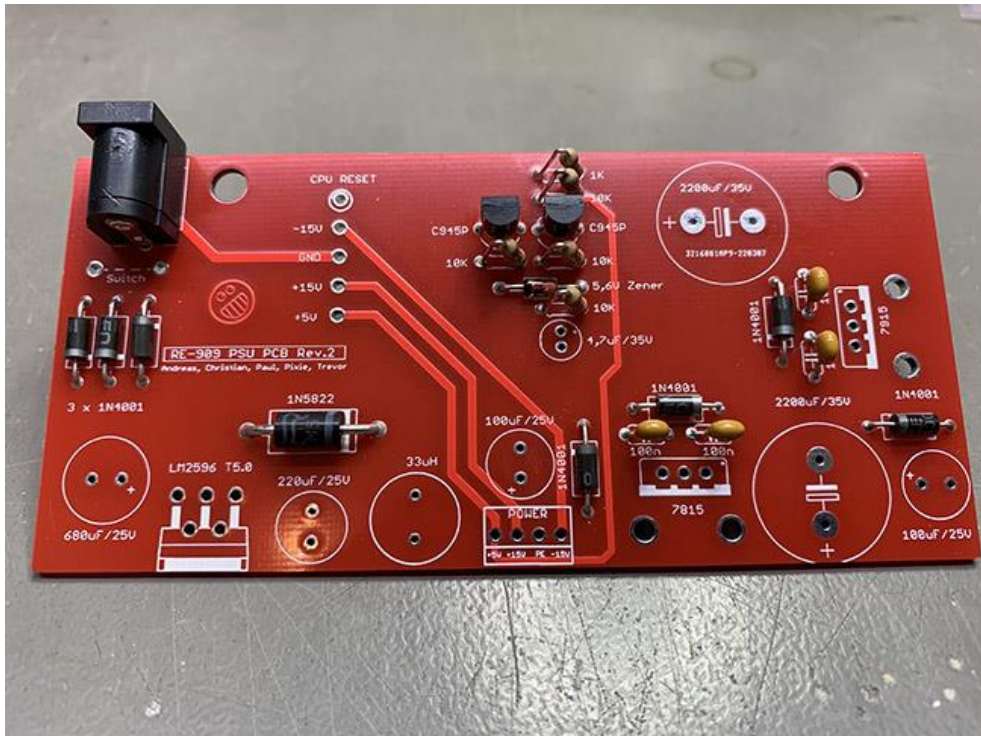
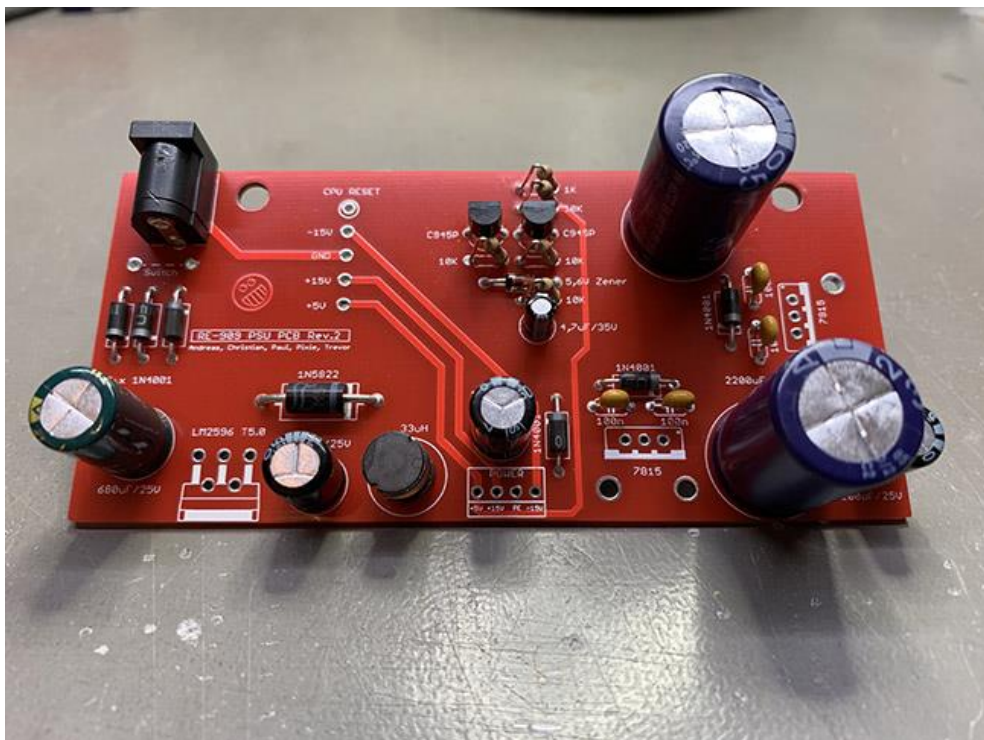




Next we insert the **100nF** ceramic capacitors, the resistors and the two transistors and solder them cleanly. Do not solder the transistors too long, **too much heat can destroy the transistor!**

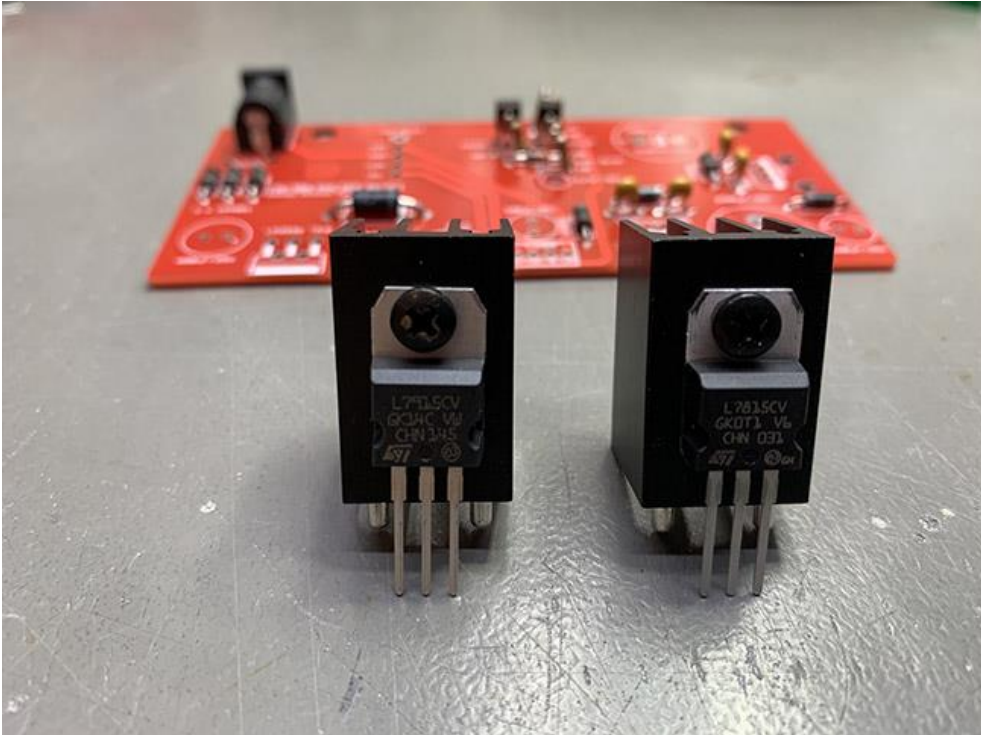


Now we can insert the electrolytic capacitors and solder them cleanly. When inserting the electrolytic capacitors always pay **attention to the correct polarity!** The **long leg** of the electrolytic capacitor is usually always the positive pole. But it is also written on the component itself where minus and plus are located. **When inserting the inductor there is no direction specification.**

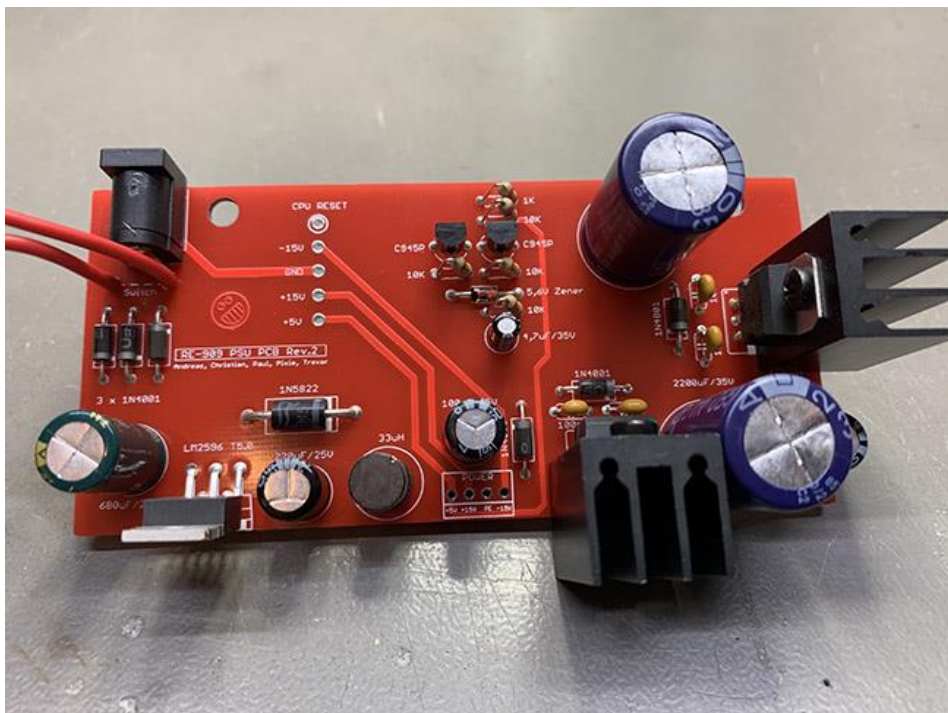


Now you can mount your voltage regulators to the heat sinks. Use two M3 screws for this.

If you happen to have some thermal paste at hand, you can use it. **However, it is not absolutely necessary!**



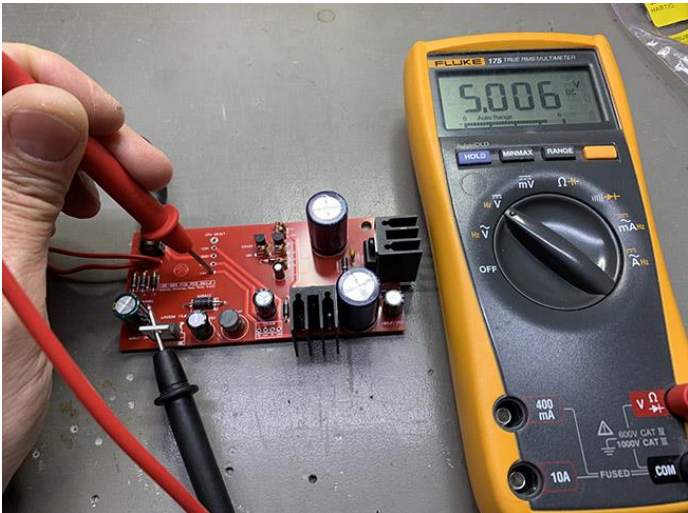
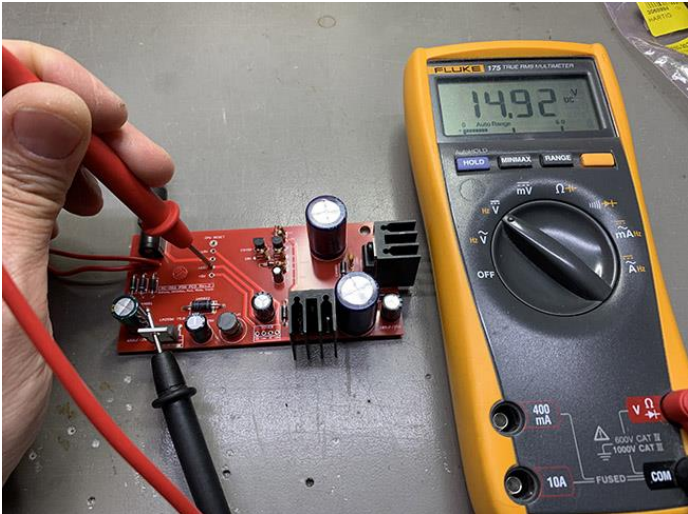
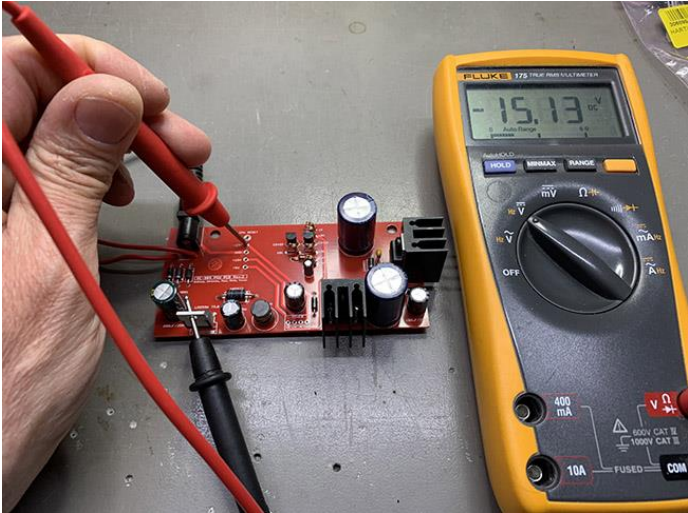
Now insert the voltage regulators with the heat sinks and solder them cleanly. **Always solder only ONE pin**, wait a short time and then solder the next pin. So you **avoid an overheating** of the voltage regulator! By the way, the LM2596 T5.0 regulator doesn't need a heat sink, but don't add too much heat when soldering! The pins of the two heat sinks **CAN** be soldered, but **not necessarily!**



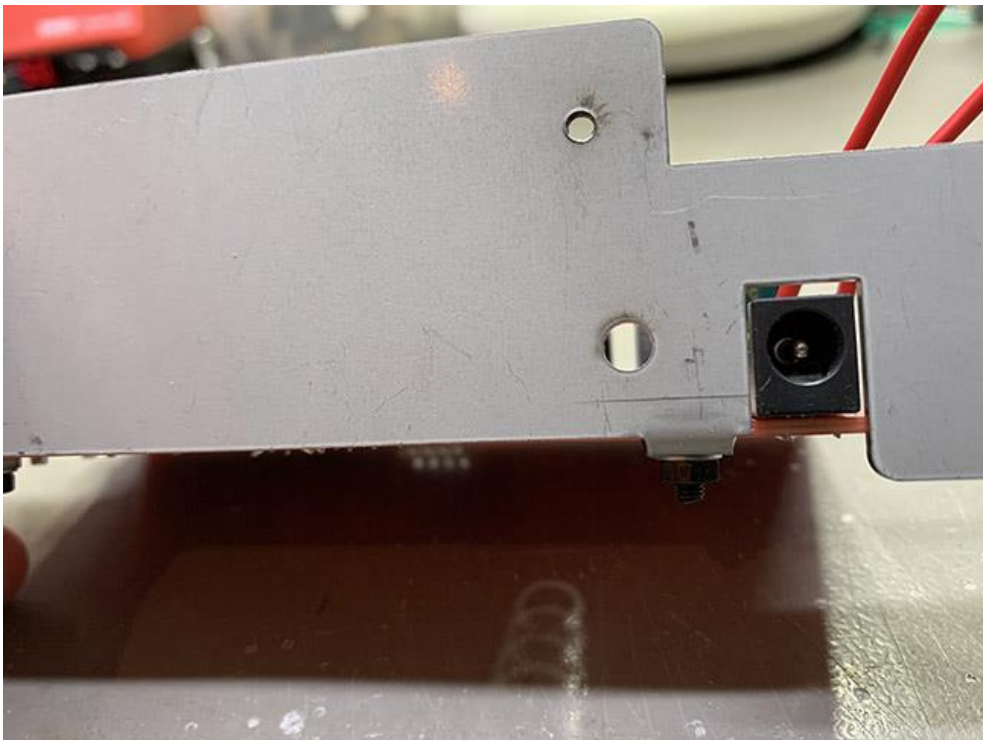
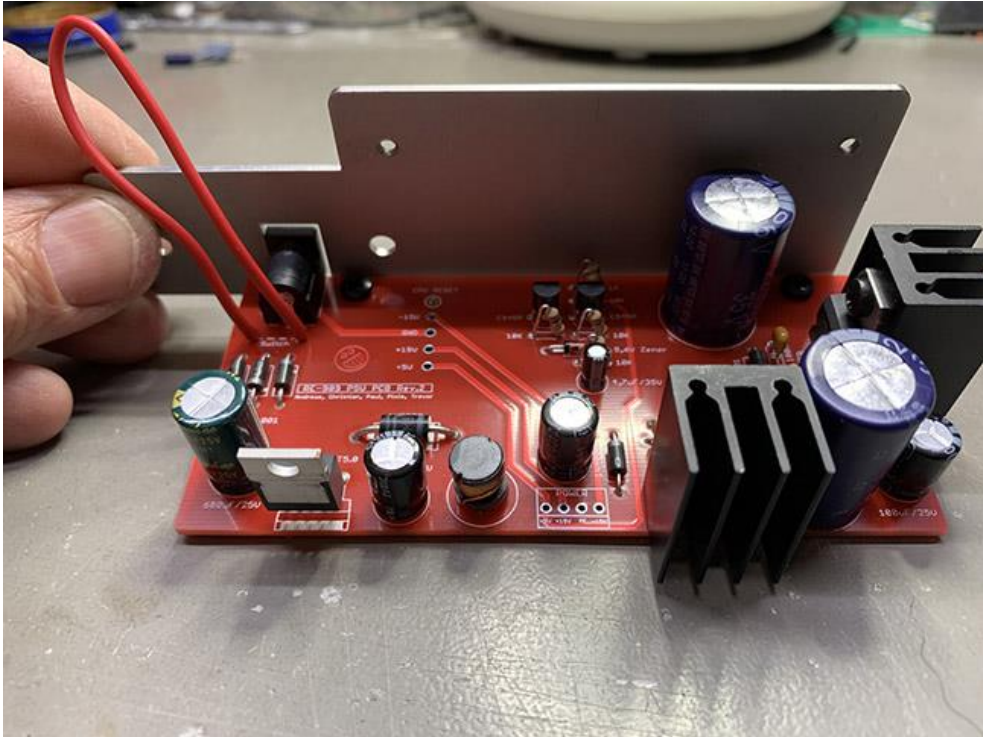
Use a piece of cable (approx. 12cm) and solder it to the bridge for the **on-off switch**. (Switch)  
So you can test your power supply at the end. Later you can simply cut this cable in the middle and solder it to the on-off switch.

After all components are soldered, check your work and apply voltage. **Use only external AC power bricks with 16V AC output and a 5.5 x 2.1mm barrel plug!** A power supply with DC output will not work! If your external power supply has a resting output voltage of about **17-18V AC** everything is OK. Connect the power and check the output voltages of your Safety PSU.

You should get about **+5V**, about **+15V** and about **-15V** displayed. The reset voltage should show the **same value as the +5V connection**, the reset signal is only delayed at power on to start the CPU on the sequencer board.



If all voltages are correct, only the bracket remains. Fasten the plate with two M3 screws and M3 nuts to the board in such a way, that the board is practically on top.



Position the board so that the power supply jack is centered in the opening of the bracket. Now your Safety PSU is ready for use in your RE-909!

**When using the Safety PSU** you have to take care that you do **NOT connect** the two ground connections **27** and **28** at the **connector F3** from the sequencer board to the voiceboard!!! **Otherwise there will be a ground loop and your RE-909 will hum!**

**Once again: Working with electricity can be dangerous! Never work hastily or inattentively! Incorrectly installed components can be damaged, overheat or even burst and pose a safety risk! Therefore, check everything very carefully before you apply power.**

#### **Parts list for the RE-909 Safety PSU**

2x Wakefield-Vette heat sink 25mm (Mouser 567-634-10ABPE)  
2x 2200uF/35V Electrolytic, RM 7.5mm (Generic)  
1x 680uF/25V Electrolytic, RM 5.0mm (Generic)  
1x 220uF/25V Electrolytic, RM 5.0mm (Generic)  
2x 100uF/25V Electrolytic, RM 2.0mm (Generic)  
1x 4.7uF/35V Electrolytic, RM 2.0mm (Generic)  
4x 100nF Ceramic capacitor RM 5,9mm (Generic)  
7x 1N4001 Rectifier diode (Generic)  
1x 33μH Fixed inductor (Mouser 652-RLB0712-330KL, Generic)  
1x 1N5822 Schottky Diode (Generic)  
1x 7915 Negative voltage regulator, 1.5A, TO220 (Generic)  
1x 7815 Positive Voltage Regulator, 1.5A, TO220 (Generic)  
1x LM2596 T5.0 step-down regulator 5V, 1.0A, TO220 (Generic)  
2x SC945P NPN transistor (Reichelt, Ebay etc)  
1x Zener diode, 5.6V, 0.5W or 1.3W, ZF-5.6 (Reichelt, Generic)  
1x 1K Resistor 1/4W (Generic)  
4x 10K Resistor 1/4W (Generic)  
2x M3 Screws for the voltage regulators  
2x M3 Screws and M3 nuts for the bracket