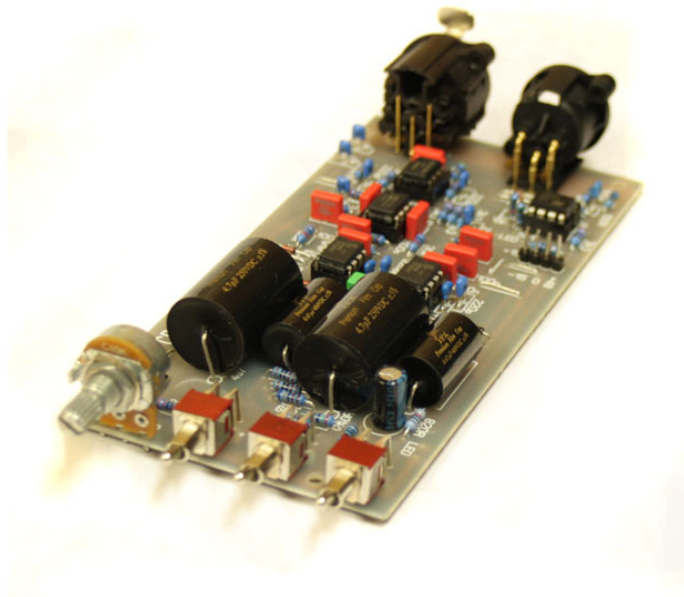


PITONE AD797 Mic Preamp PCB/DIY Kit

Warning

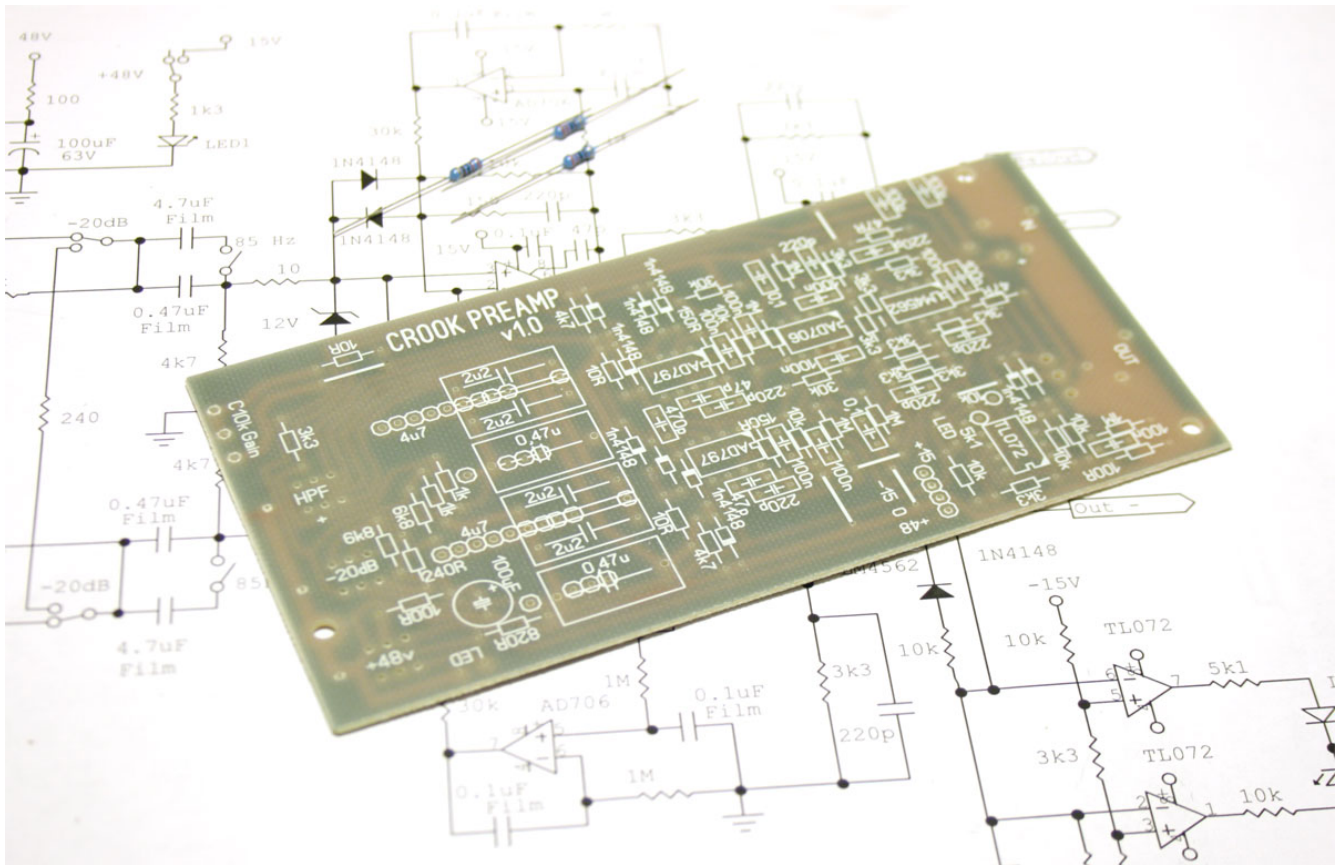
This document is distributed for educational purposes only. This equipment operates at **potentially lethal voltages**. Only trained, qualified personnel should operate, maintain, or service it.



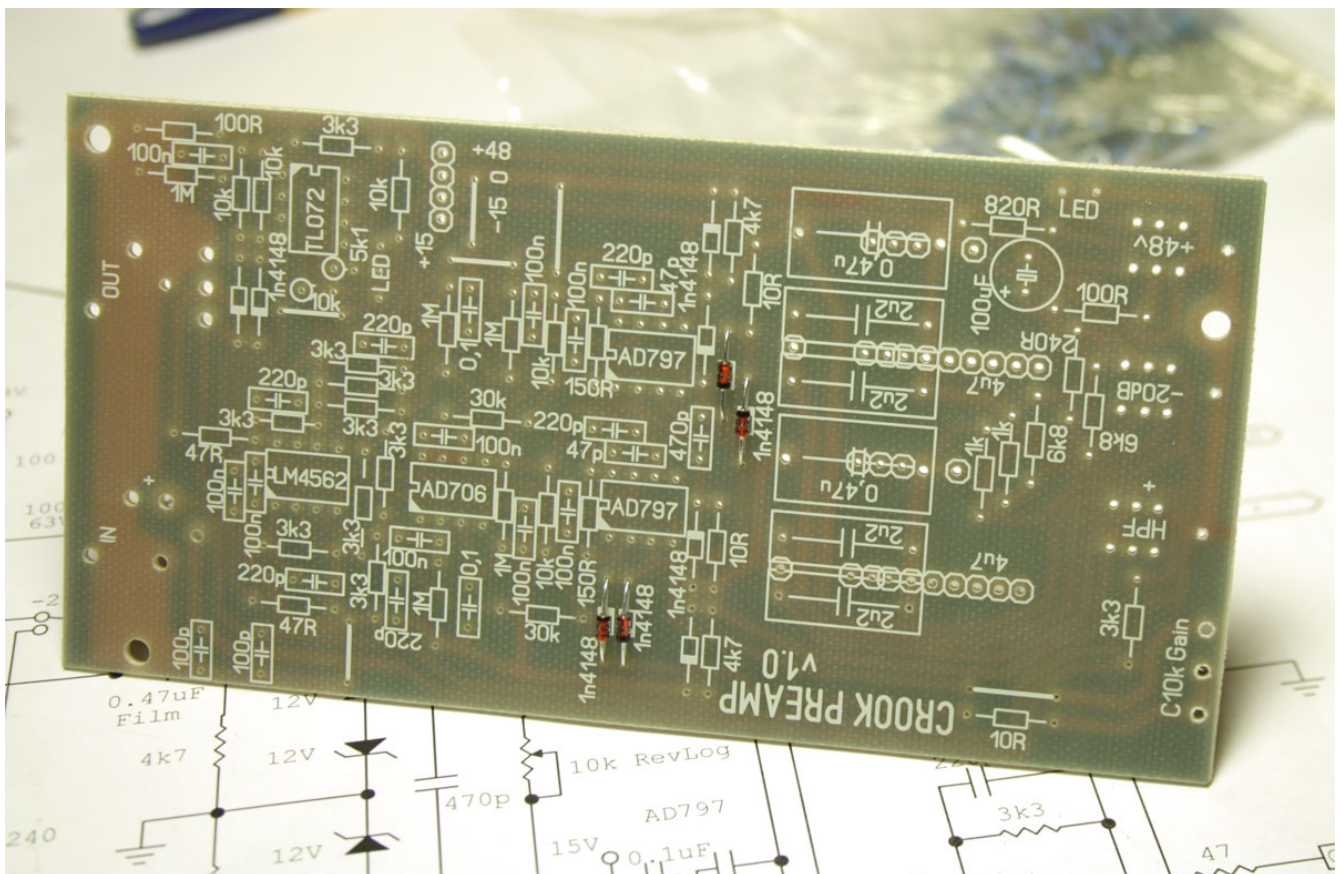
PiTone Systems AD797 Mic preamp PCB is a PCB for high quality mic preamplifier DIY project utilizing AD797.

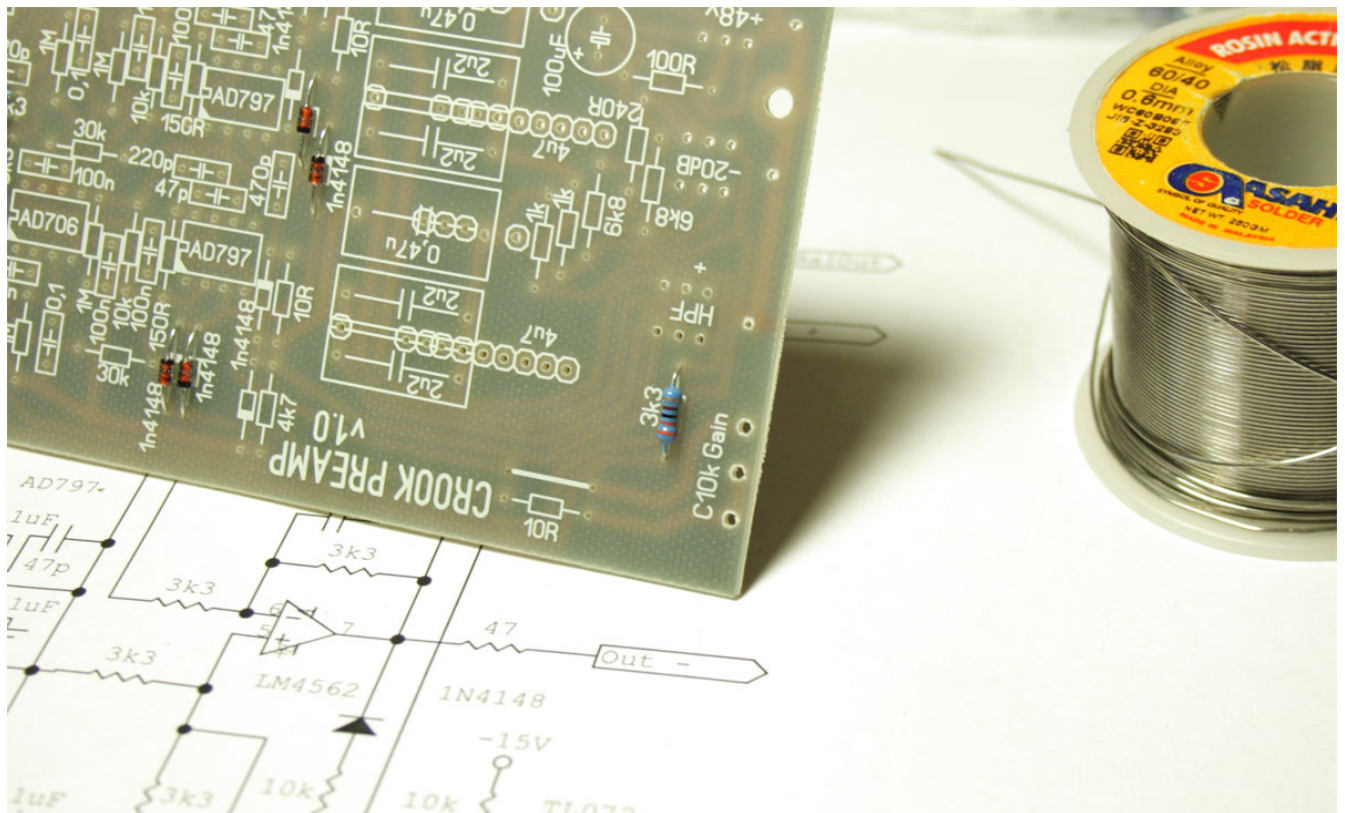
Features:

- Gain 6db-60db
- Hi pass filter 85Hz
- Pad -20db
- 48v with led
- Signal level indication -20dBu (green) +20dBu (red)
- Output buffer for long lines (LM4562)
- Integrator (AD706)
- Various interstage capacitor sizes (axial, radial, 4u7 or 2u2+2u2 combination)

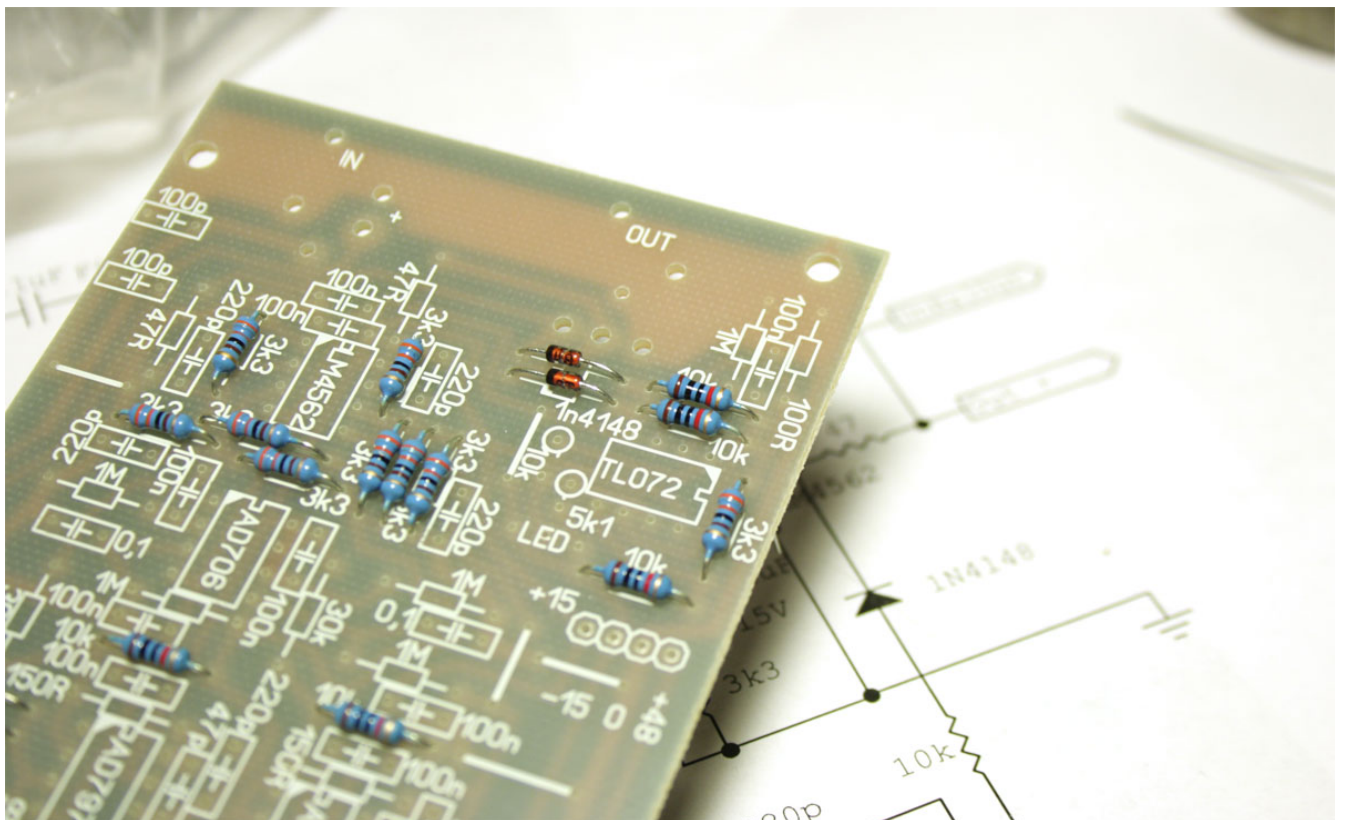


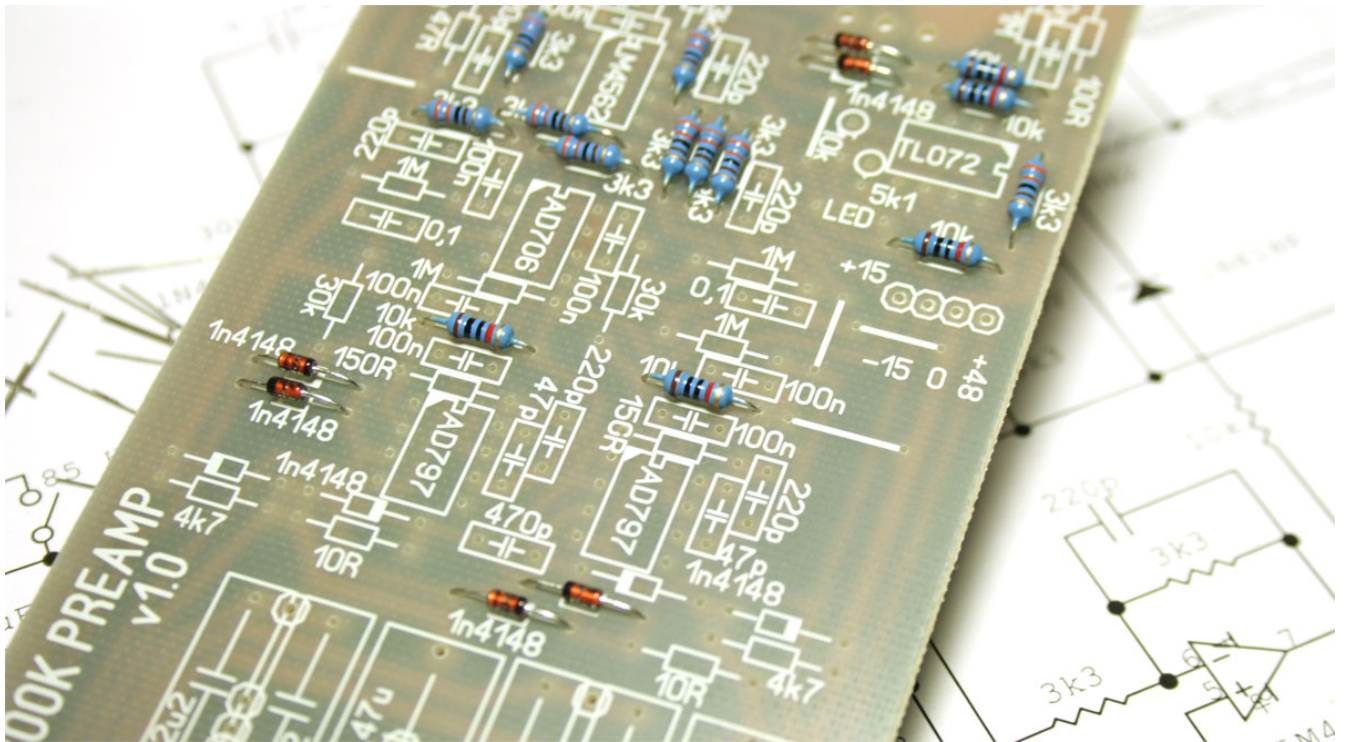
Let's start with soldering 1n4148 diodes. Please note that there's one minor mistake on component mask – zener diodes are marked as 1n4148. Please take a look at the pictures and solder 1n4148 diodes as shown below:



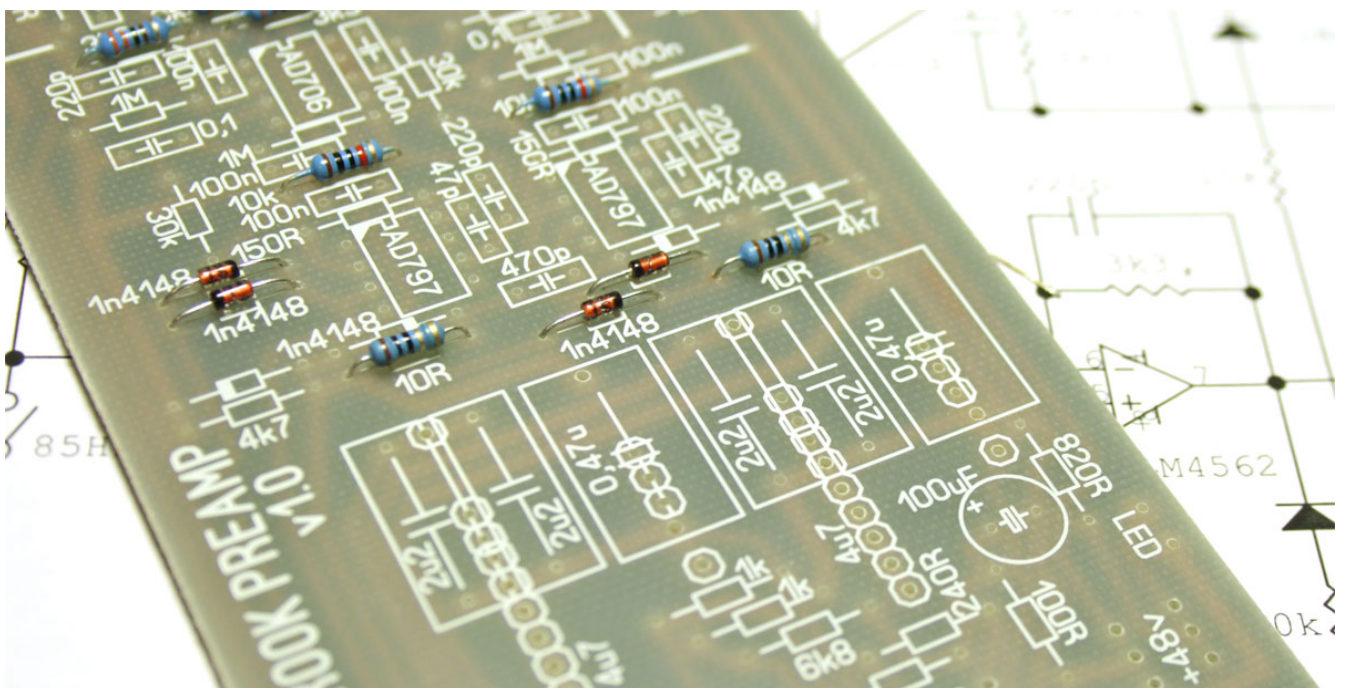


Solder 10k resistors.



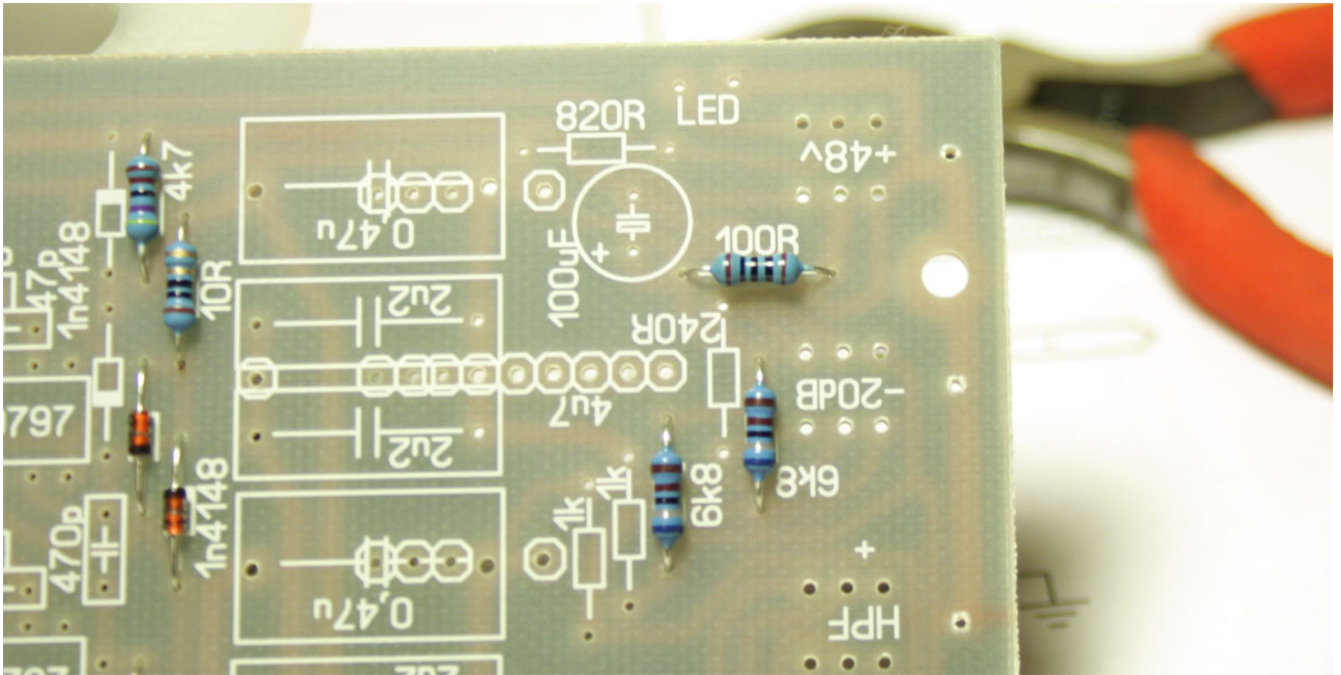


Now solder 10R resistors

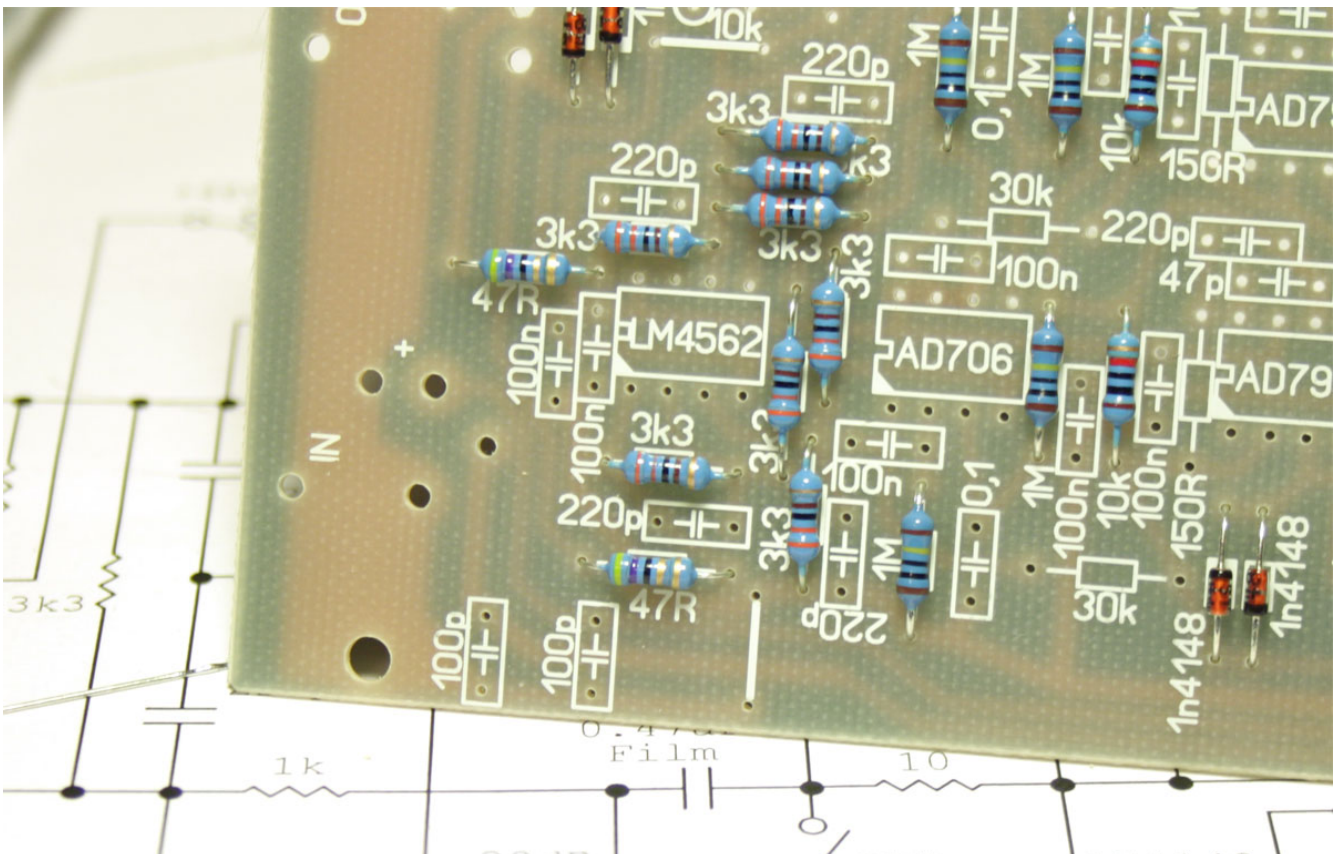


A photograph of a custom PCB populated with various electronic components. The board features a TL072 op-amp, several resistors (e.g., 10k, 100R, 3k3), capacitors (e.g., 100nF, 220pF), and two LEDs. Power supply rails are labeled +48V and -15V. An output pin is labeled OUT.

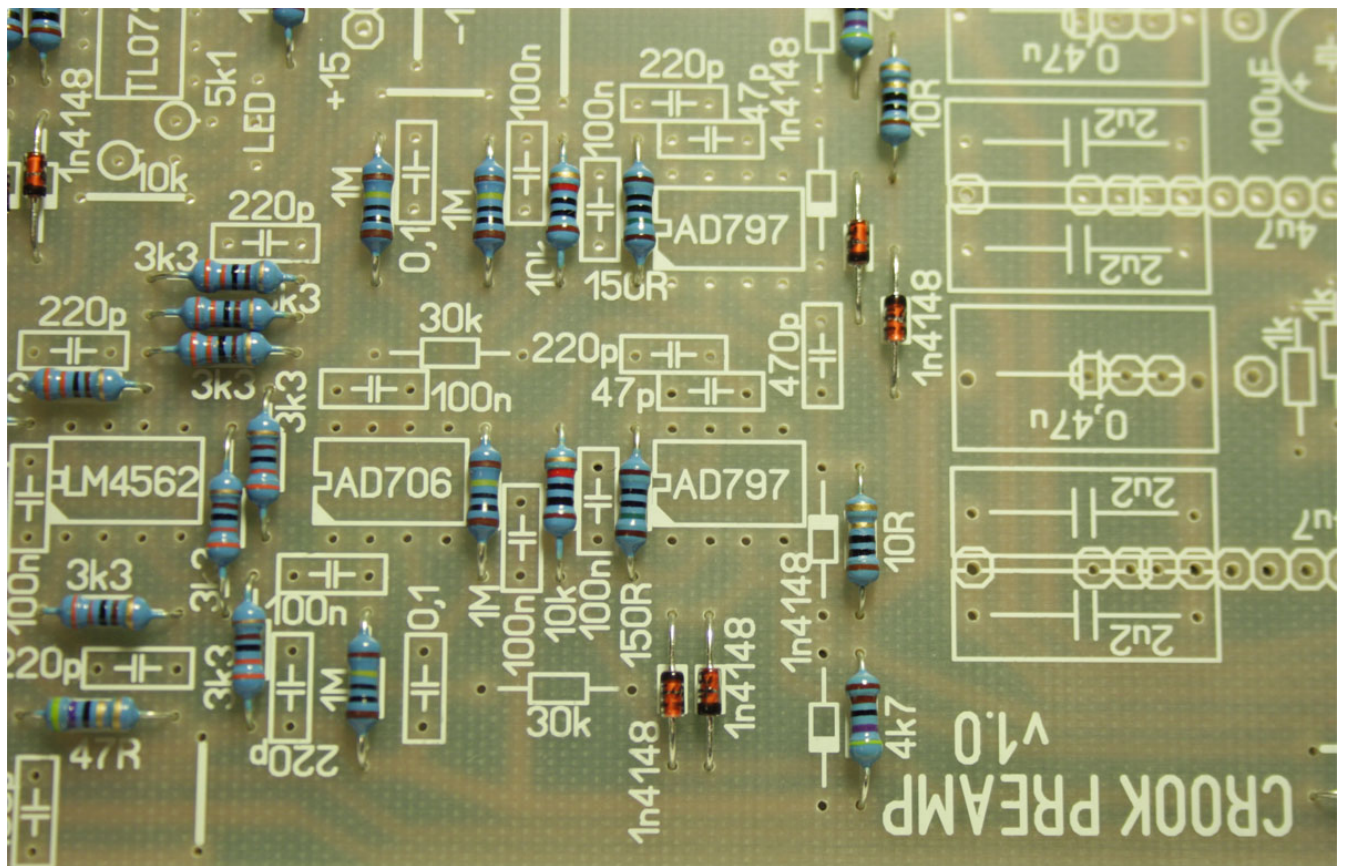
And another 100R



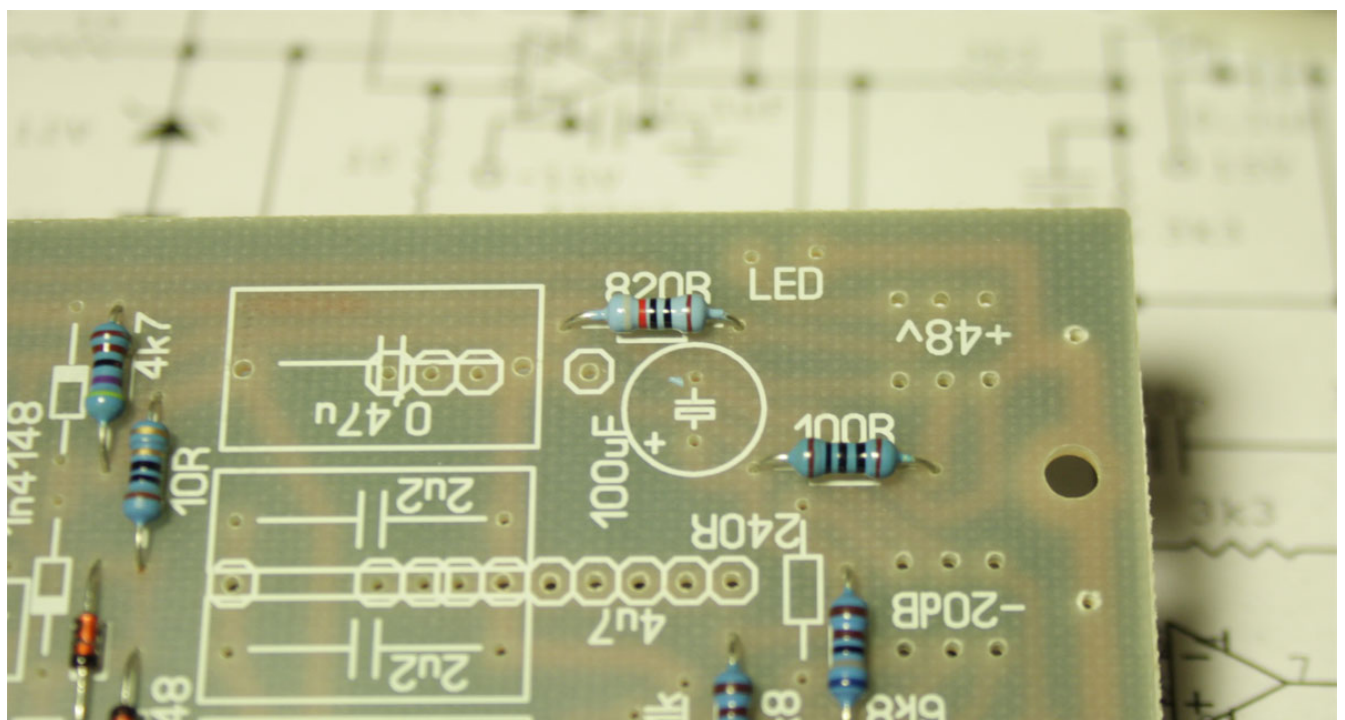
Two 47R resistors at output



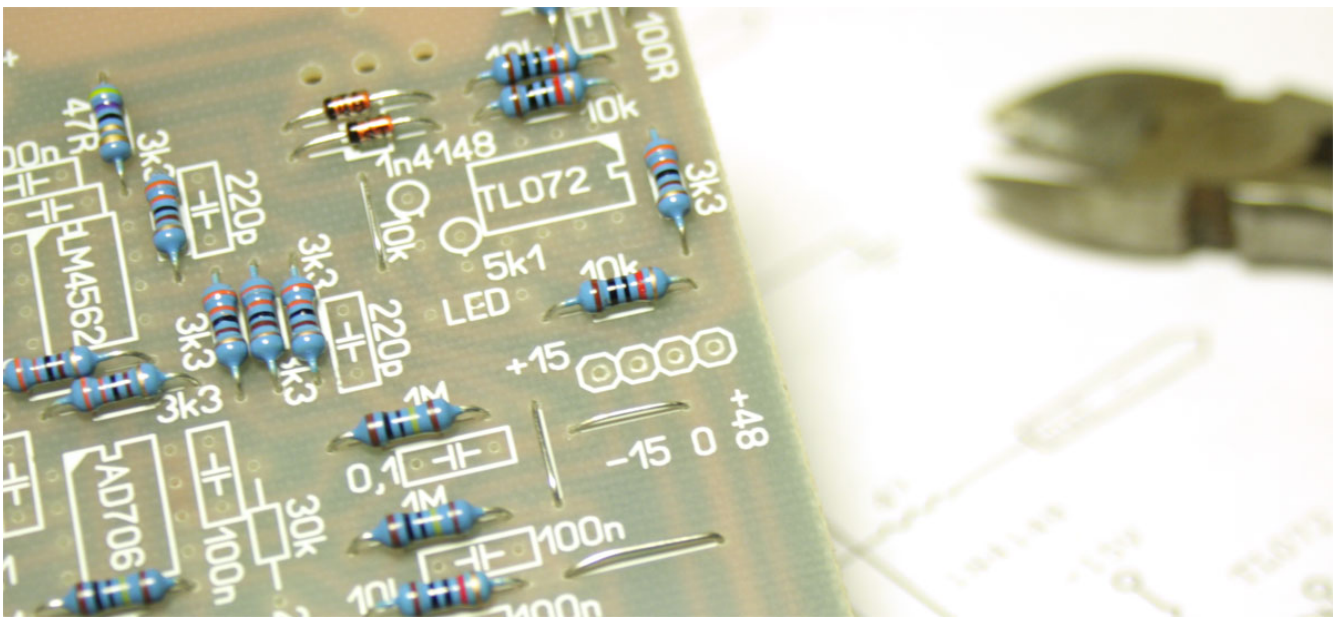
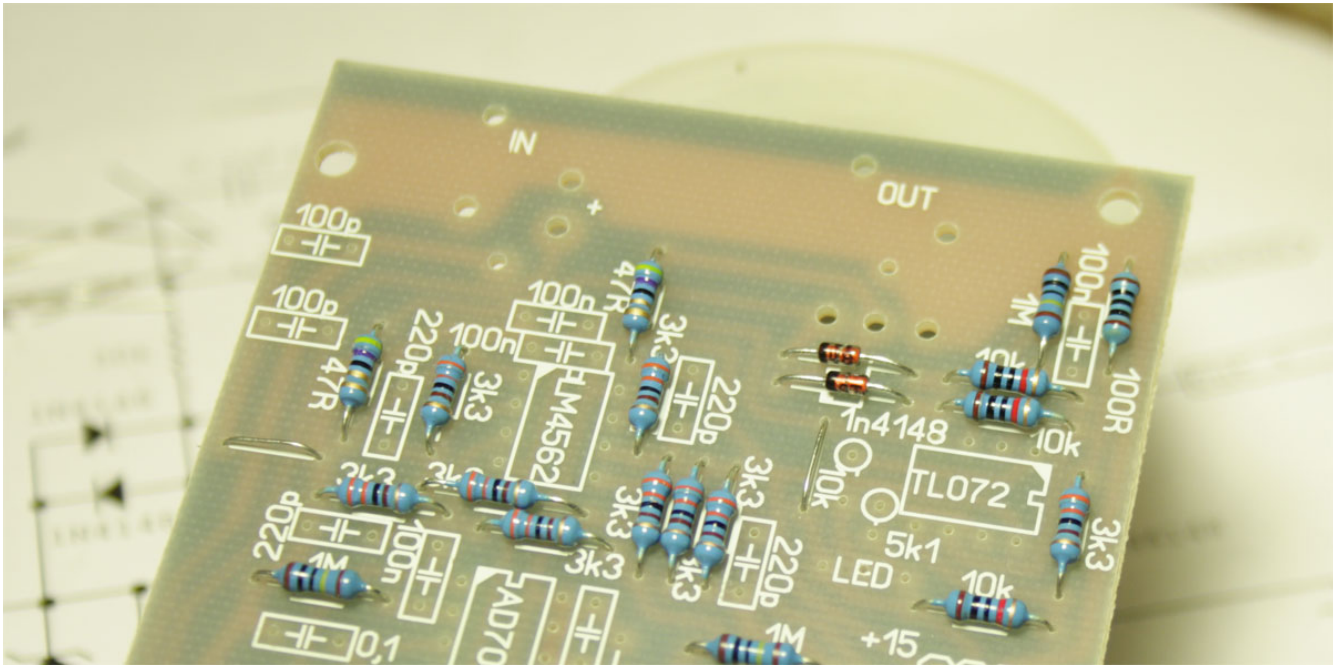
Solder 150R resistors near AD797 IC sockets

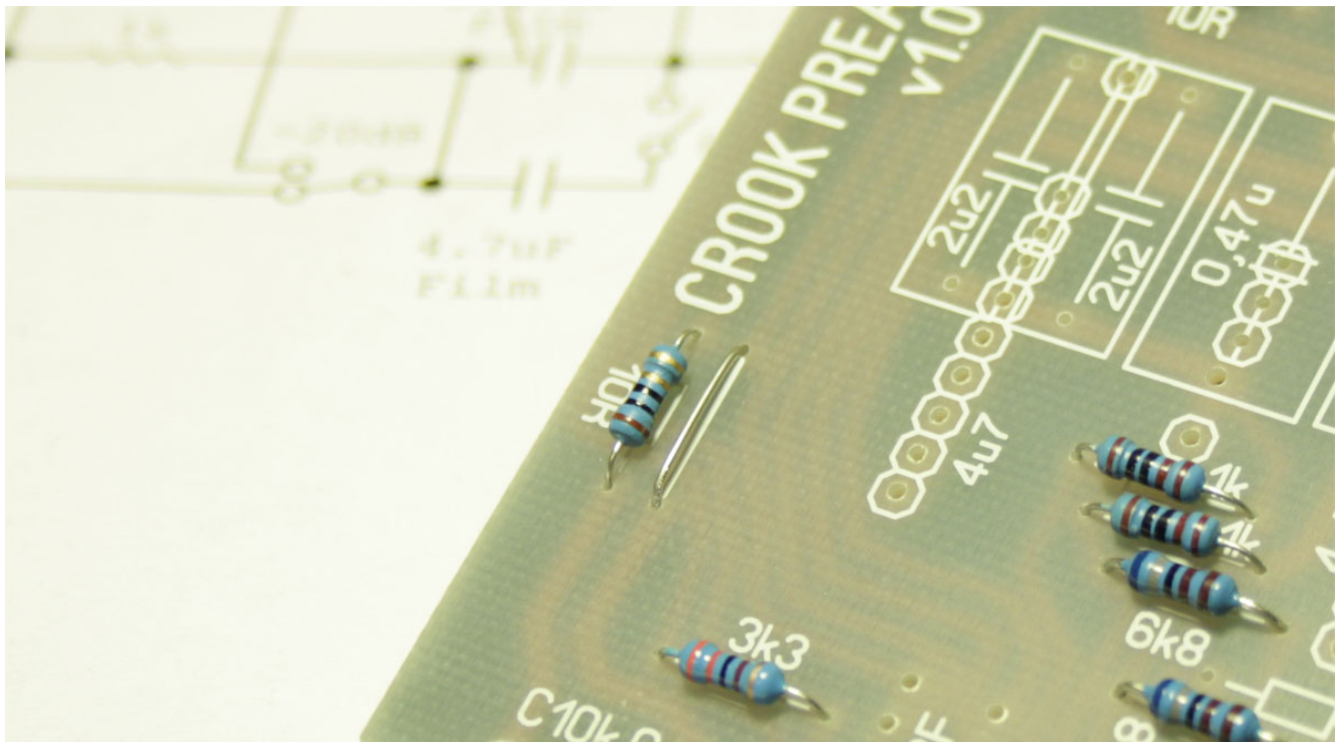


Phantom indication circuit resistor – 1k3 on schematics and 820R on component mask.
Solder 1k3 if your led is 10mA, powered with +15v. Just choose it to your taste.

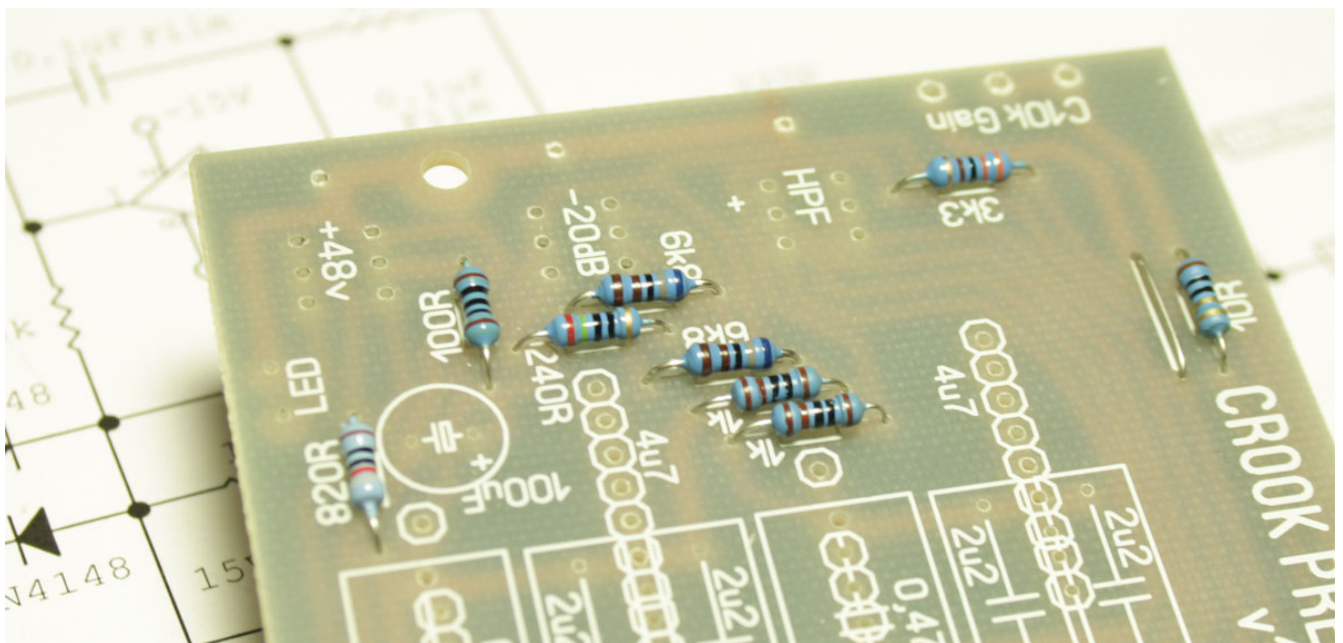


Now we have some cutted resistor leads. Let's use them as jumpers. Solder jumpers.

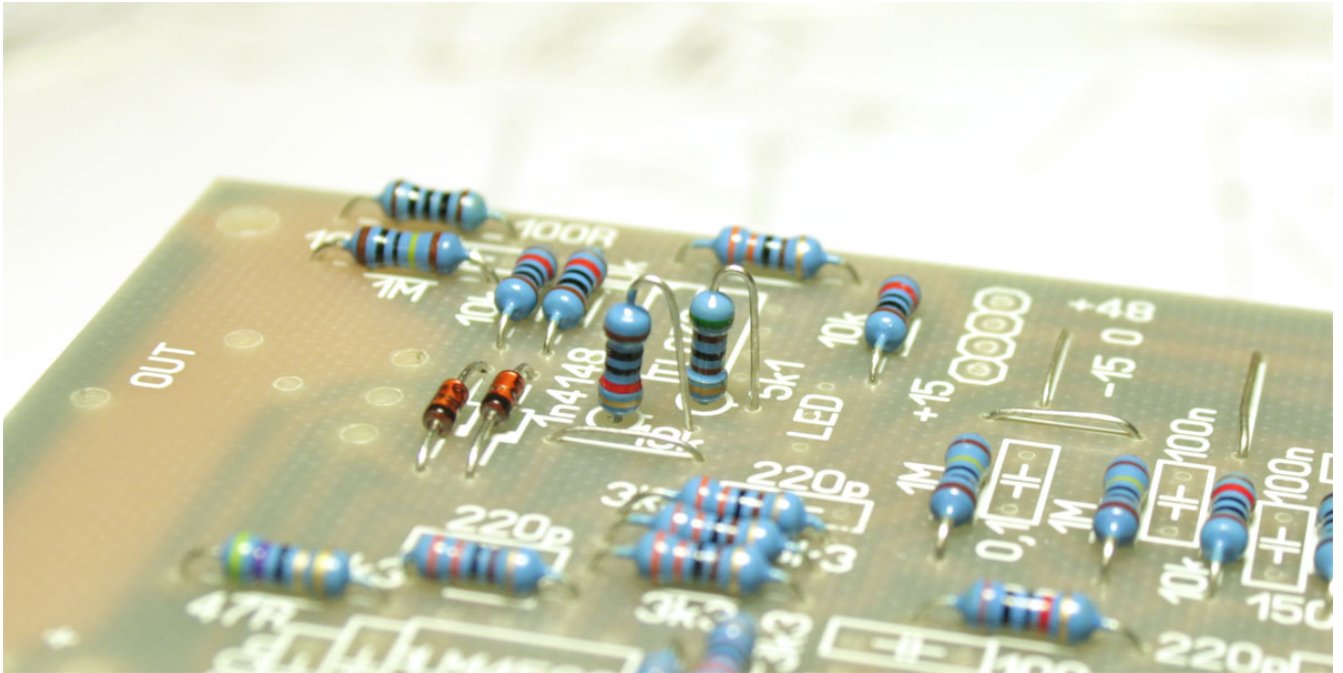




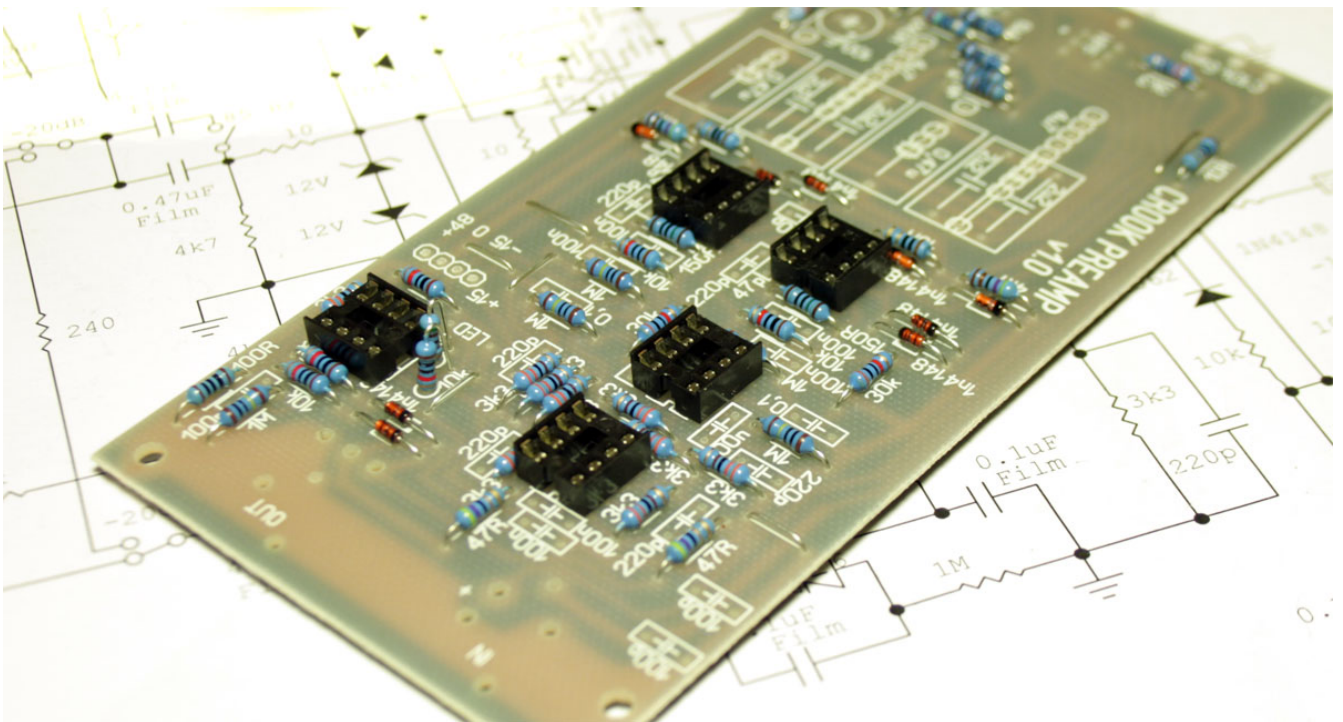
Solder 240R from the pad circuit



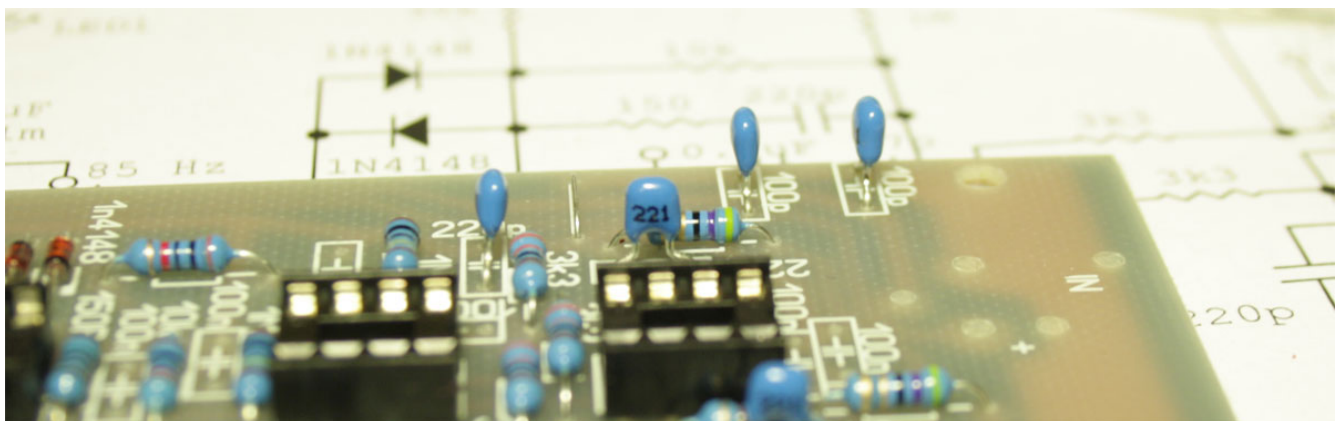
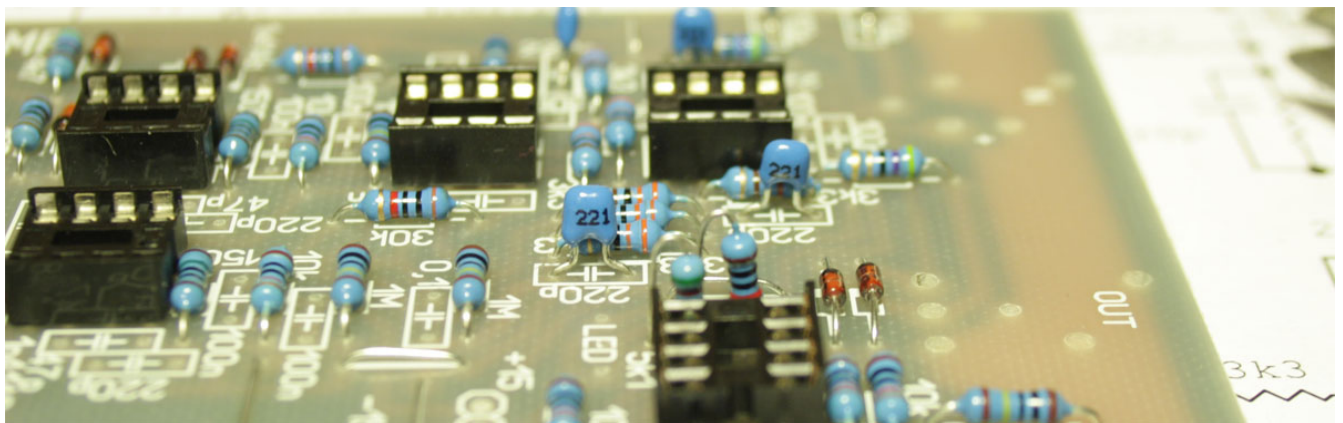
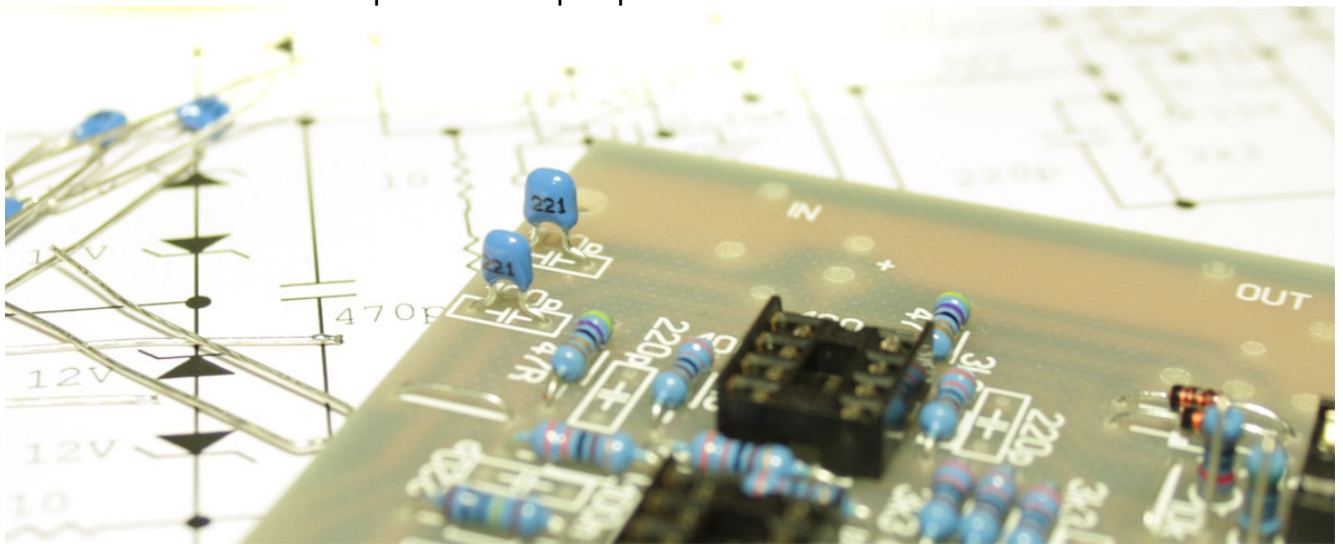
Now signal level indication circuit. Solder 10k and 5k1 resistors. All resistors are soldered now.

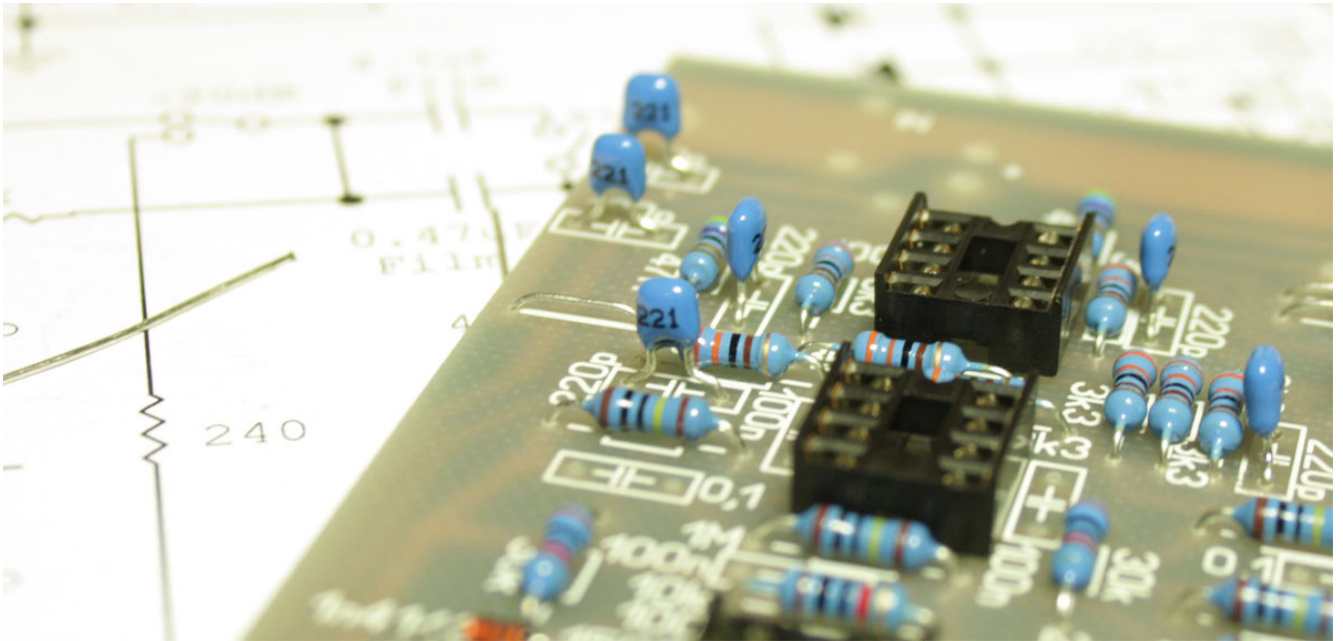


Mount IC sockets. Pay attention to how sockets are oriented on PCB.

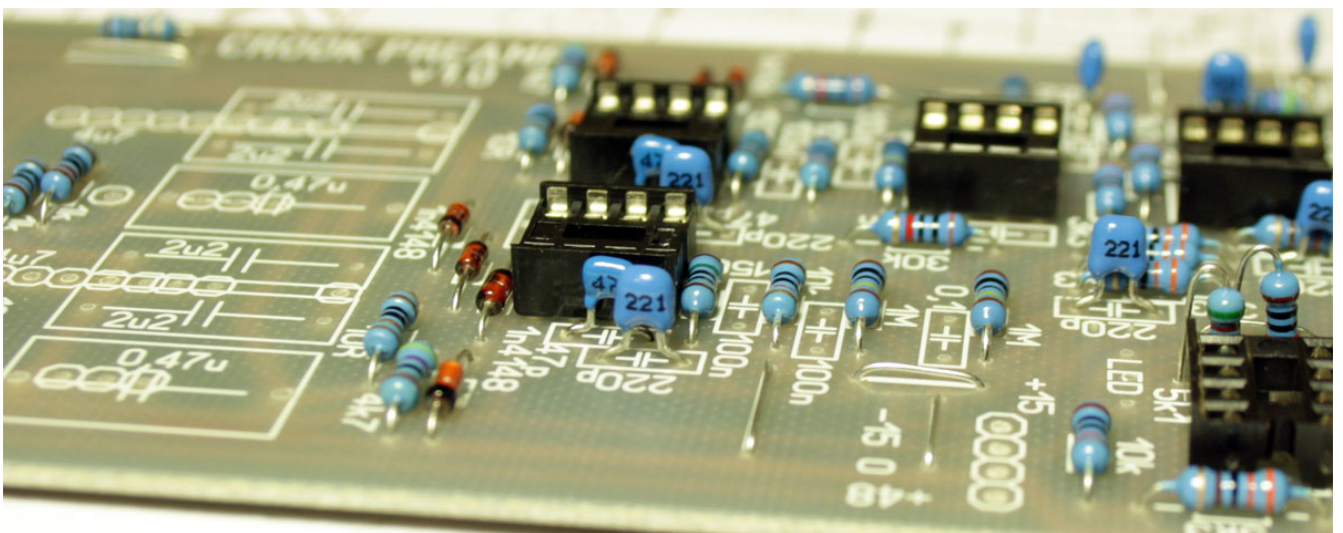


Let's start with ceramic capacitors. 220p capacitors.

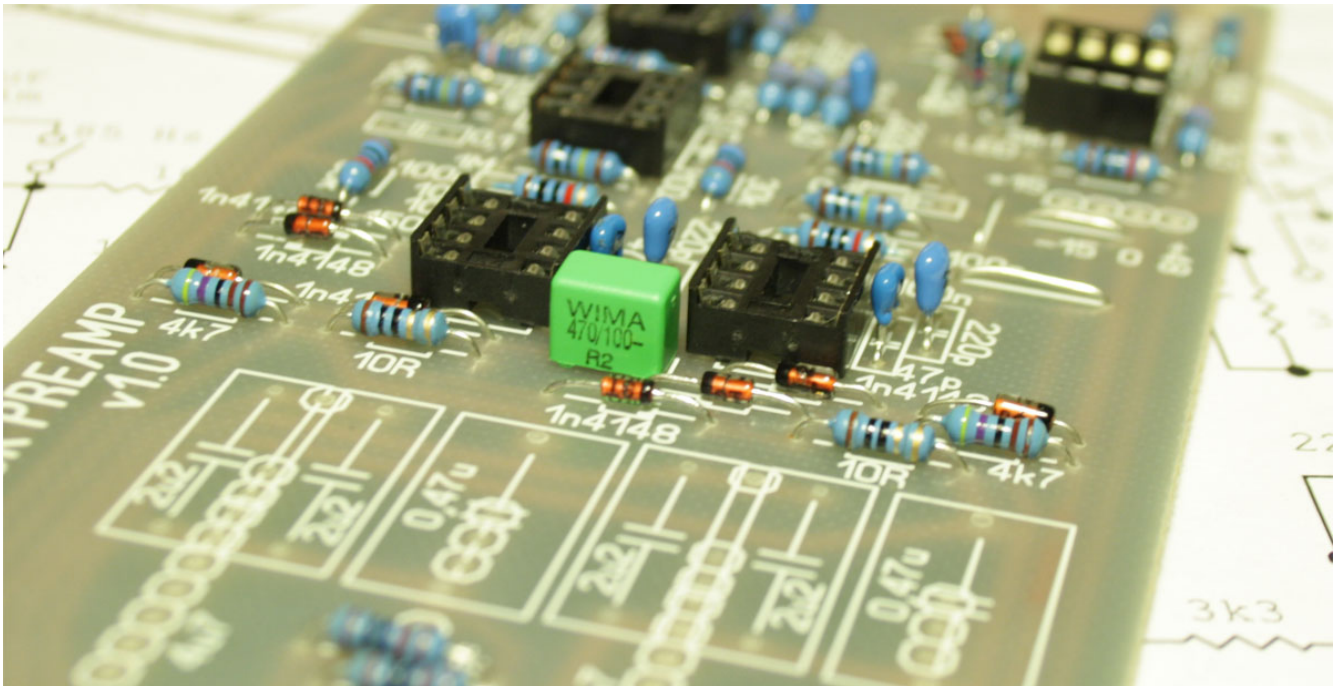




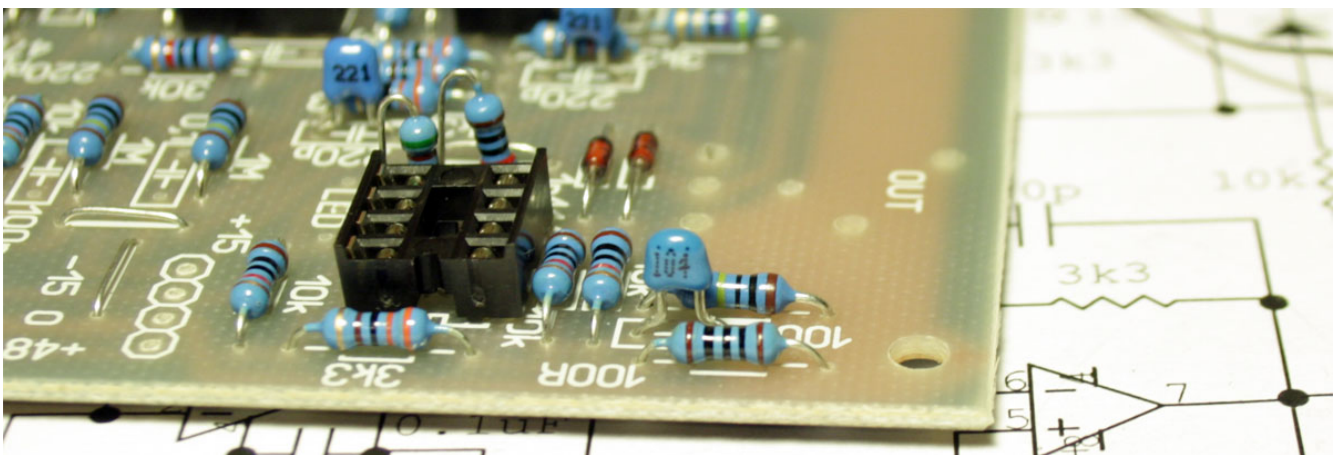
And 47p capacitors.



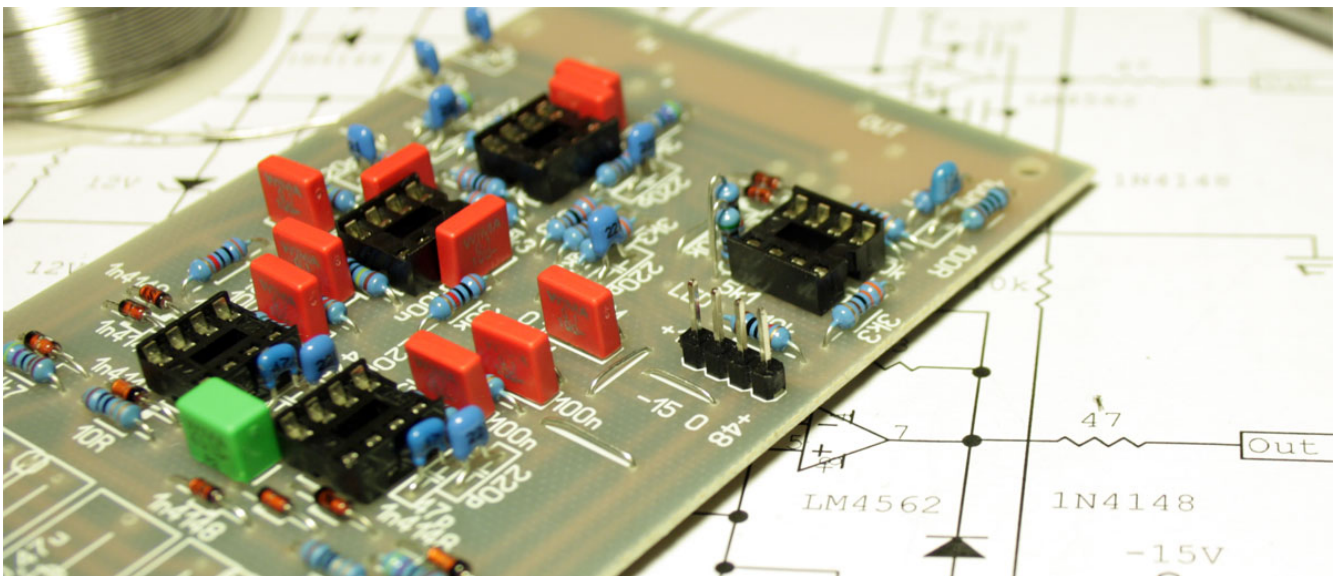
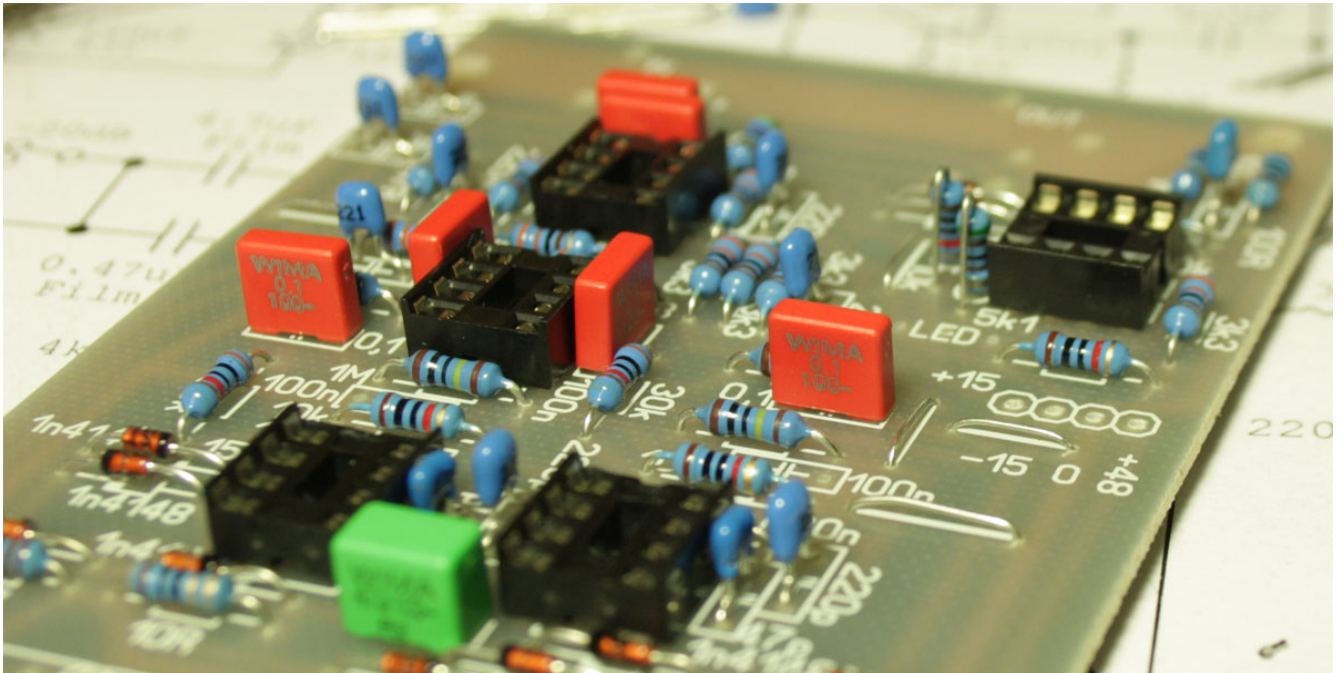
470p capacitor. I used film capacitor, but it can be ceramic.



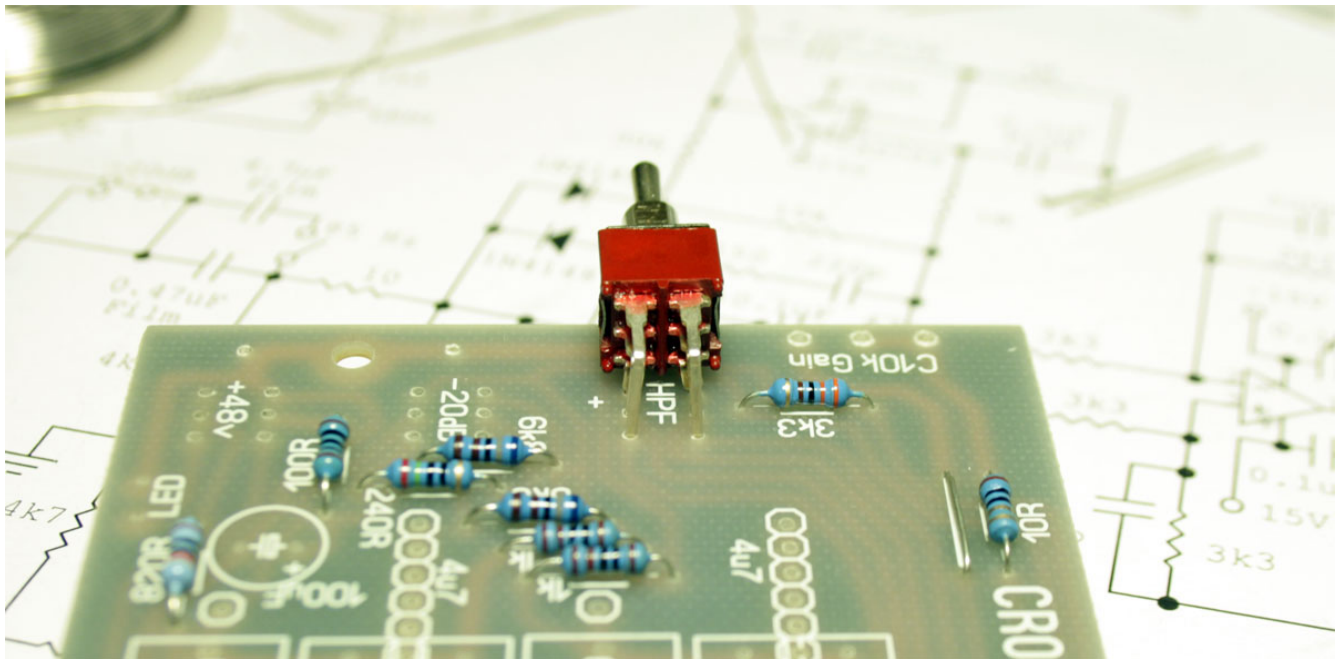
100n in signal indication circuit – ceramic. No need to use film one.



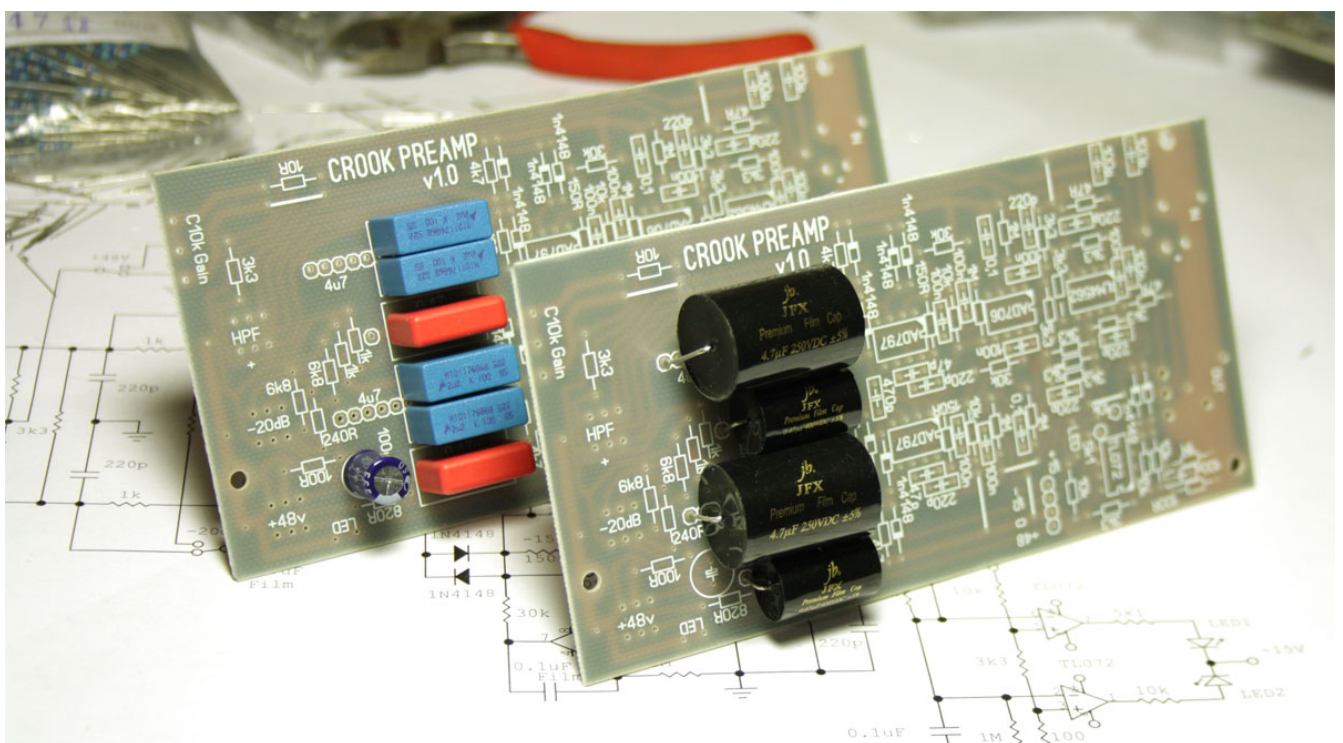
All the rest 100n (or 0,1u in other words) capacitors are film capacitors. You can use any type – boxed wima MKS, cheap china boxed film capacitors, mini polyester capacitors with 5mm pitch etc.



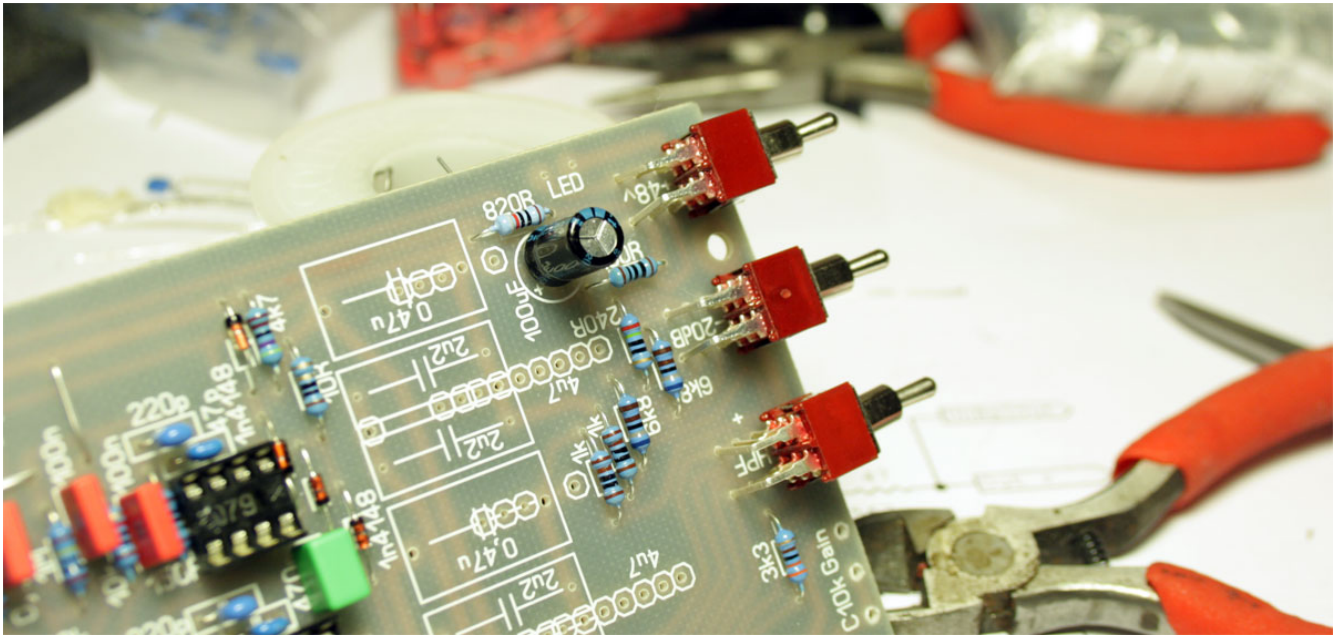
Now we are ready to mount switches. Bend SMTS toggle switch leads a bit to the sides and mount it. Mount all three switches.



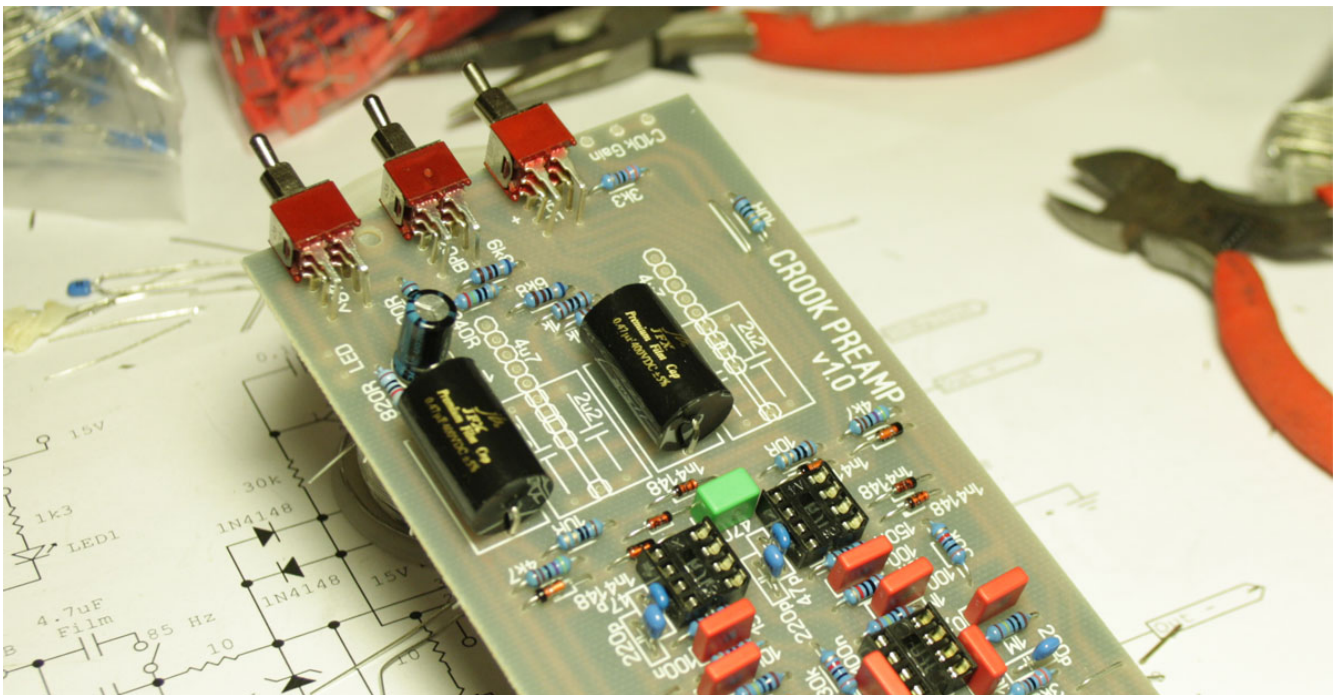
Now interstage capacitors. PCB design allows to mount various capacitor types – radial, axial, with pitch from 7,5mm to 28mm. Instead of one 4u7 film capacitor you can use two 2u2 film capacitors in parallel.



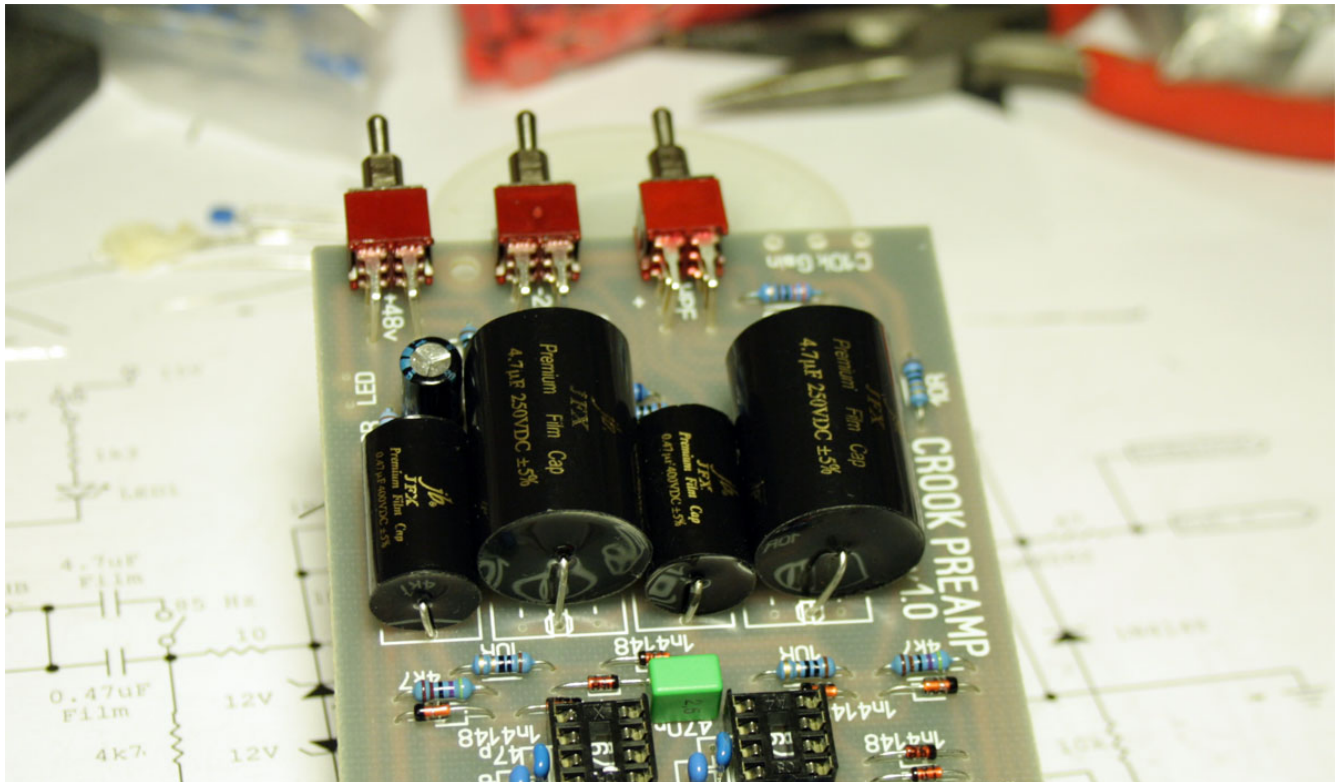
If you use massive axial interstage capacitors, you can solder 47u/63 electrolytic capacitor in phantom power circuit instead of 100u/63v to save some place. Mount it a bit aside.



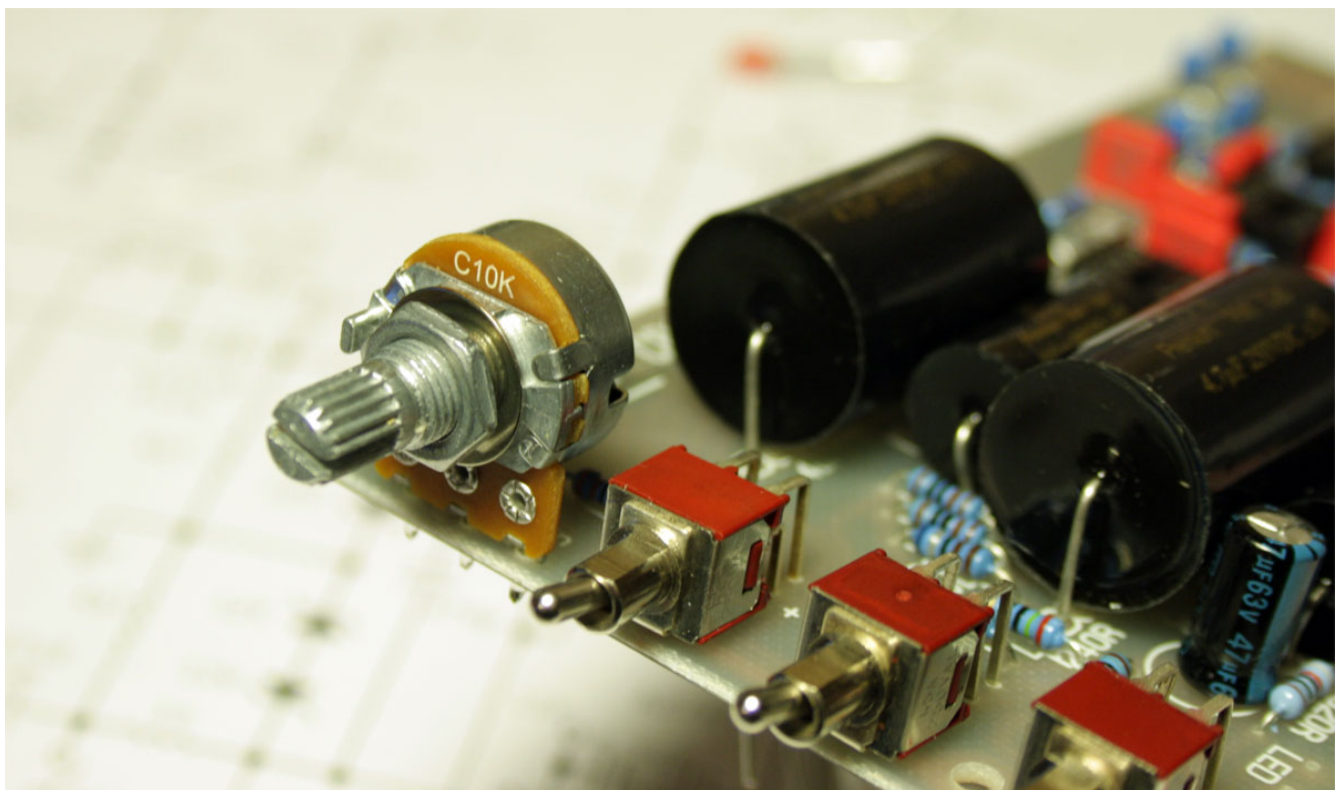
Solder 0,47u film capacitors.



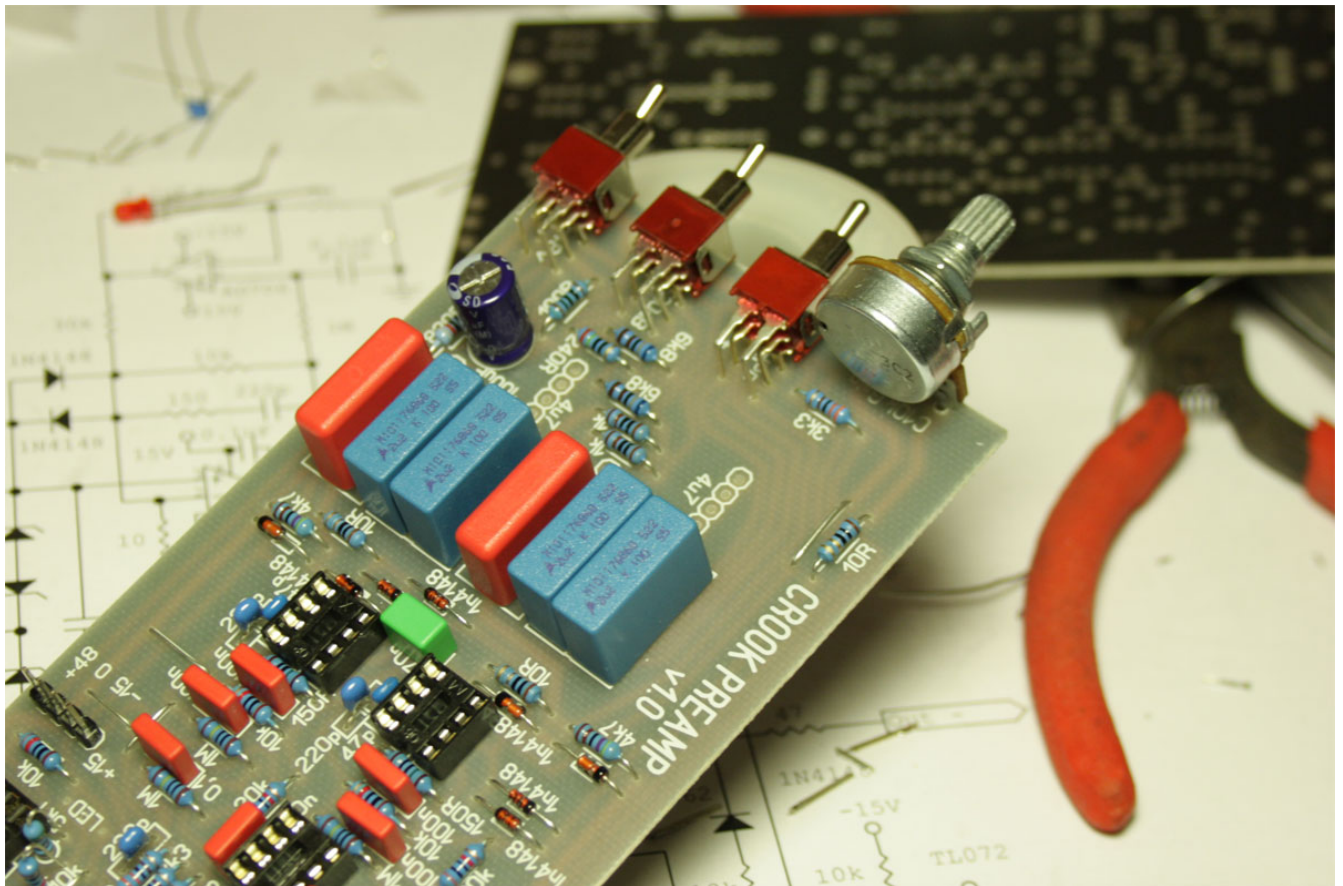
And 4u7 good quality film capacitors.



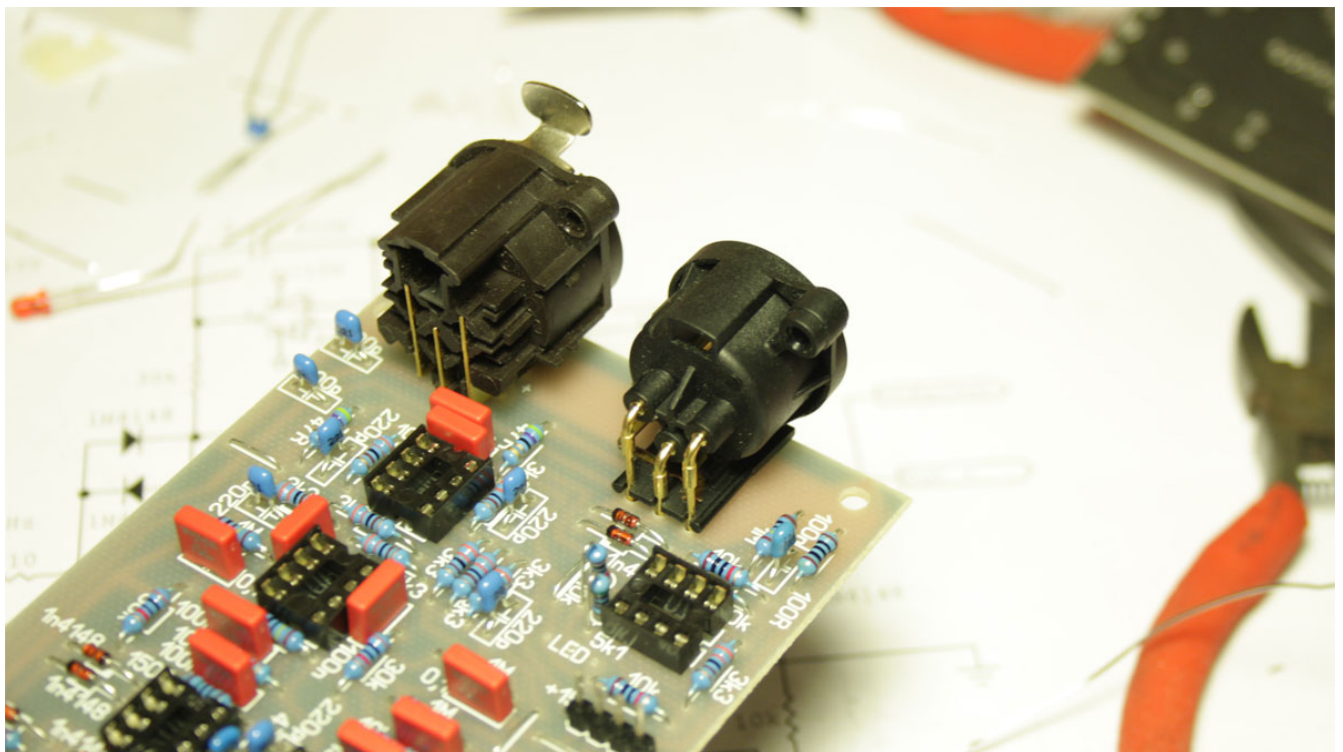
Now mount C10k gain potentiometer. Please note all switches and gain potentiometer can be mounted offboard if you want more freedom in enclosure you have.

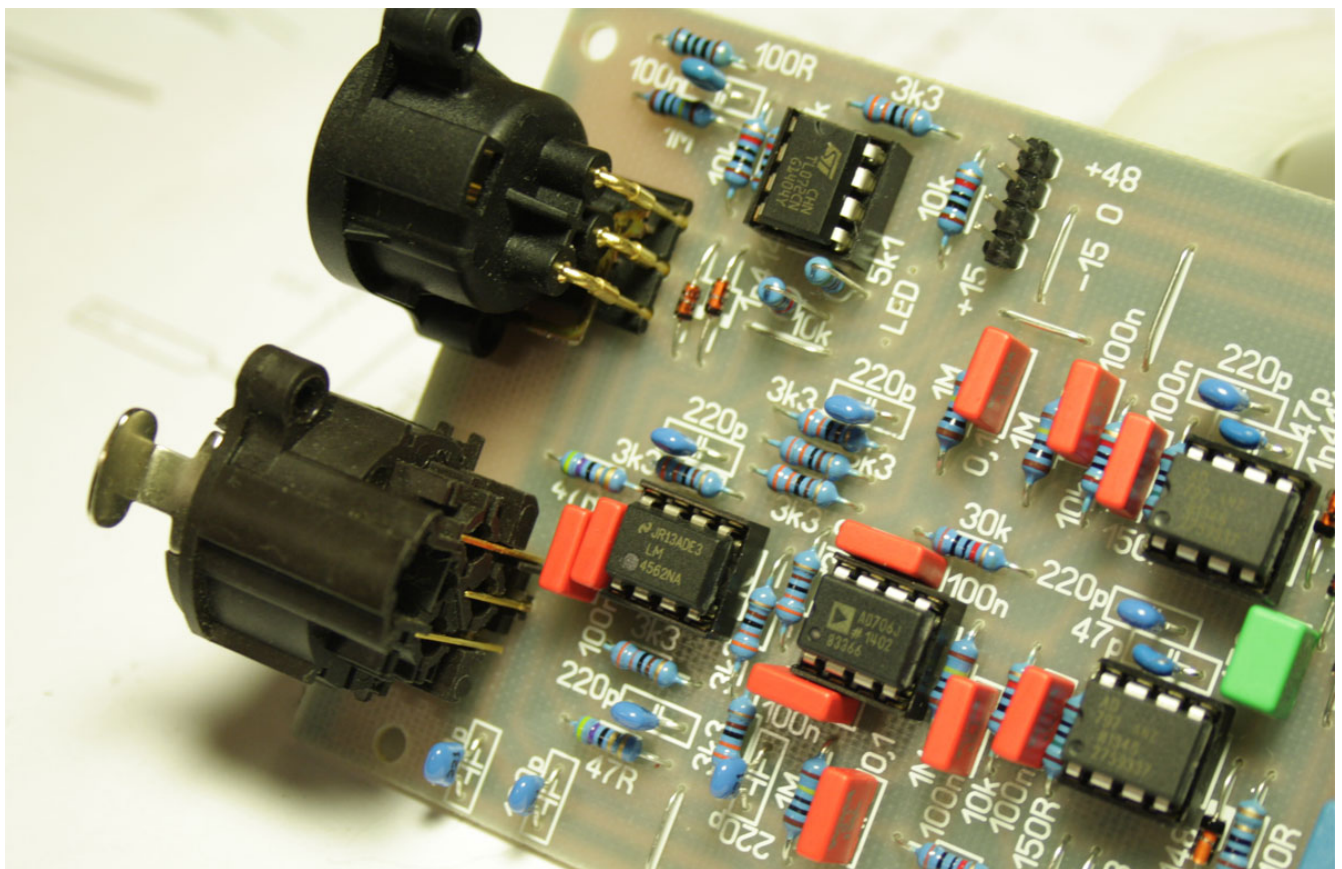


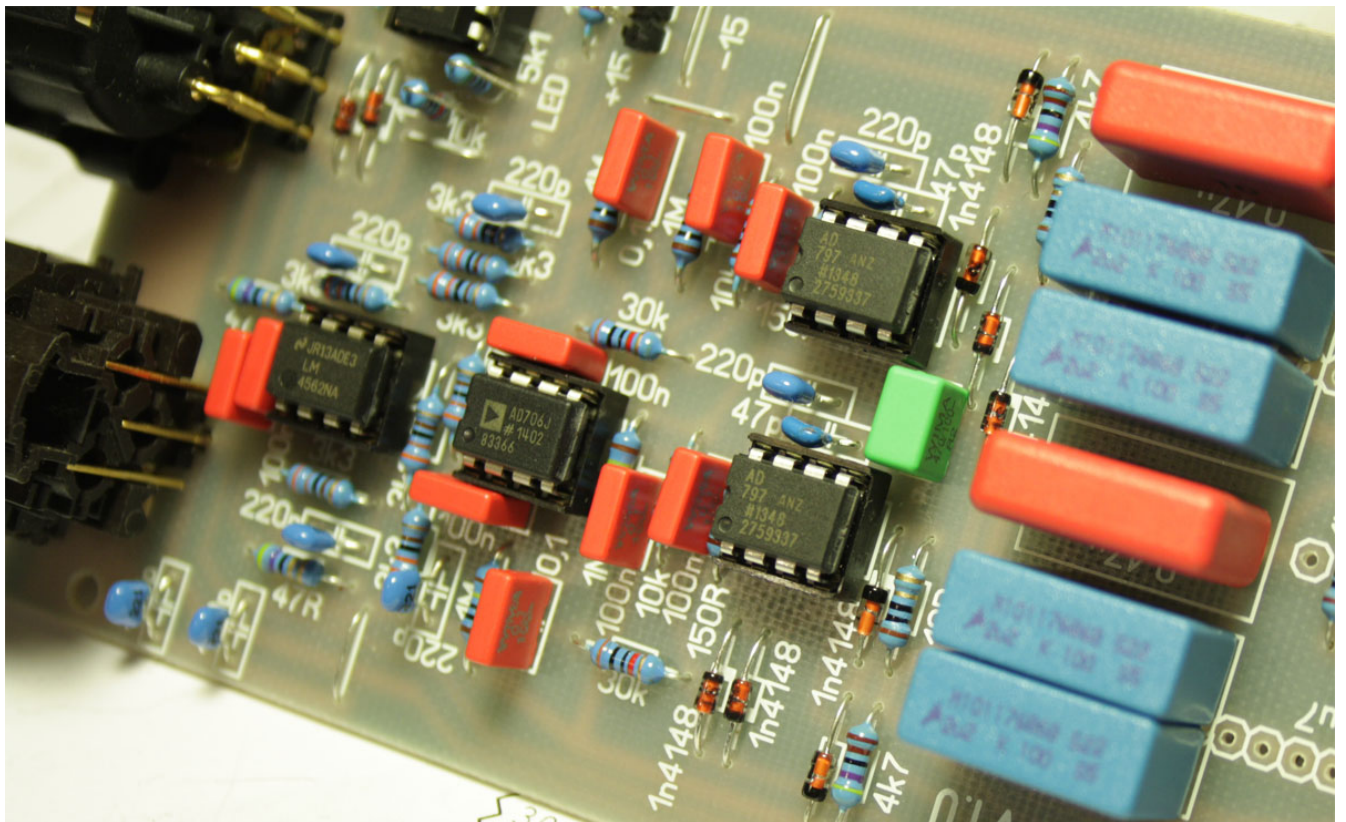
On the next picture version with two parallel 2u2 capacitors is shown. 100u/63v electrolytic capacitor and Epcos, Wima PCB mount capacitors.



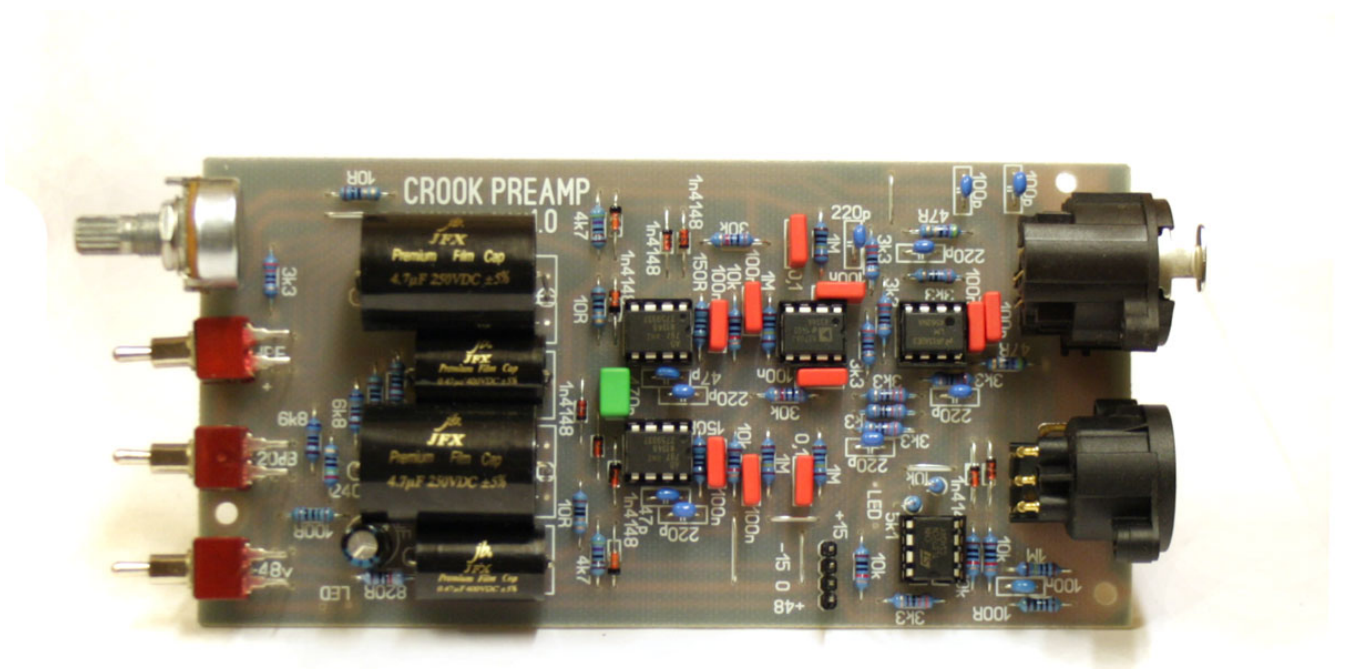
Solder XLR sockets. Female at input and male at output.







PCB stuffed. Solder LEDs and It's done.



PITONE AD797 Mic Preamp PCB
Dimensions: 70mm x 139mm

