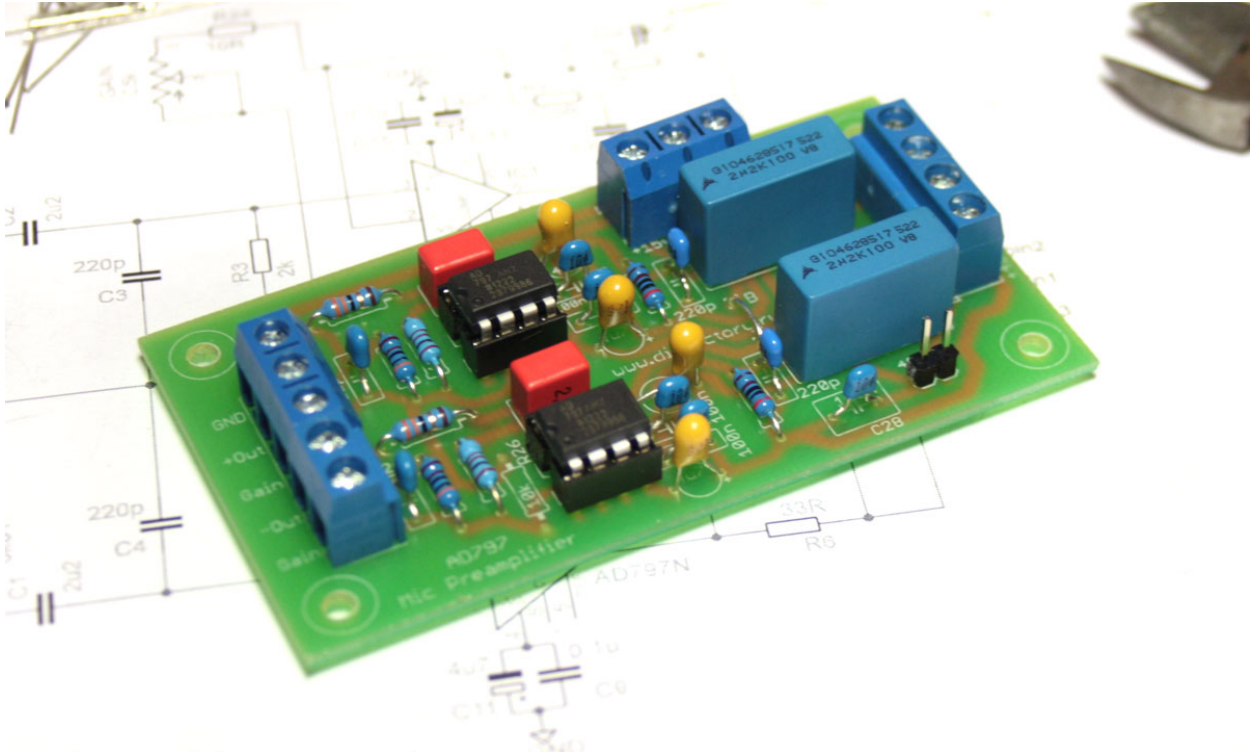


AD 797 Mic preamplifier DIY kit

Warning

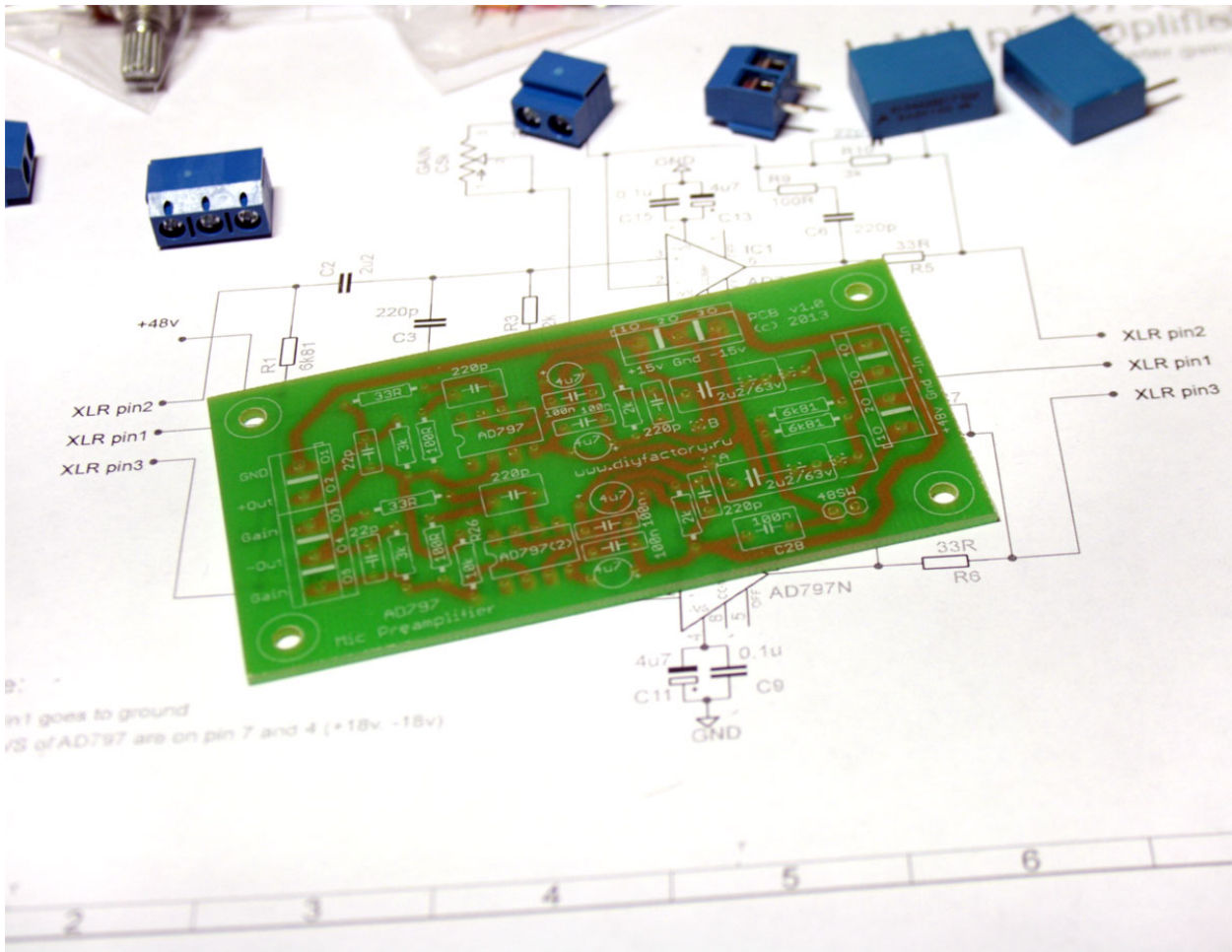
This document is distributed for educational purposes only. This equipment operates at **potentially lethal voltages**. Only trained, qualified personnel should operate, maintain, or service it.



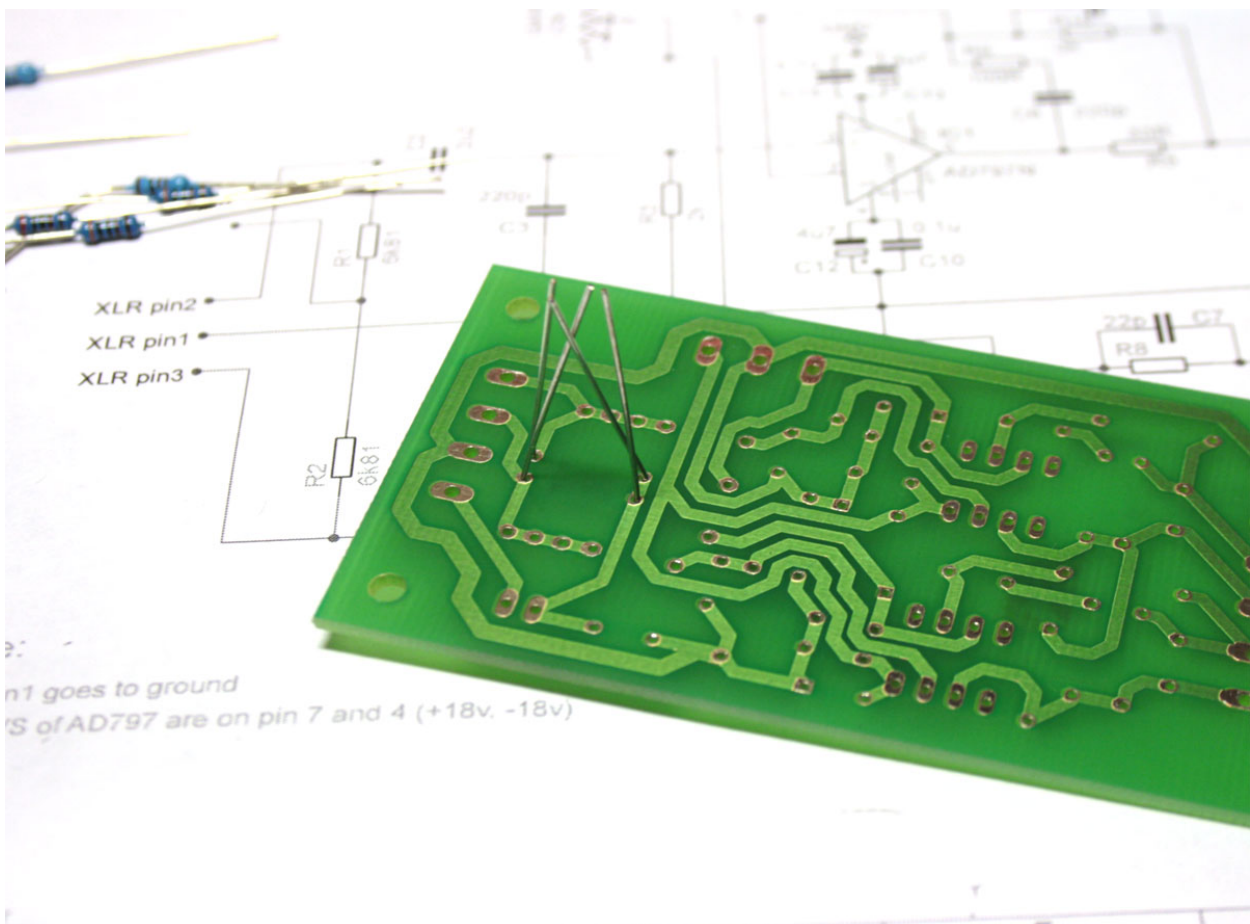
The kit includes:

- PCB
- OU AD797ANZ (dip8)
- Resistors
- Film Capacitors
- Multilayer Ceramic Capacitors
- Tantalum capacitors
- Gain potentiometer (C5k)
- Connectors

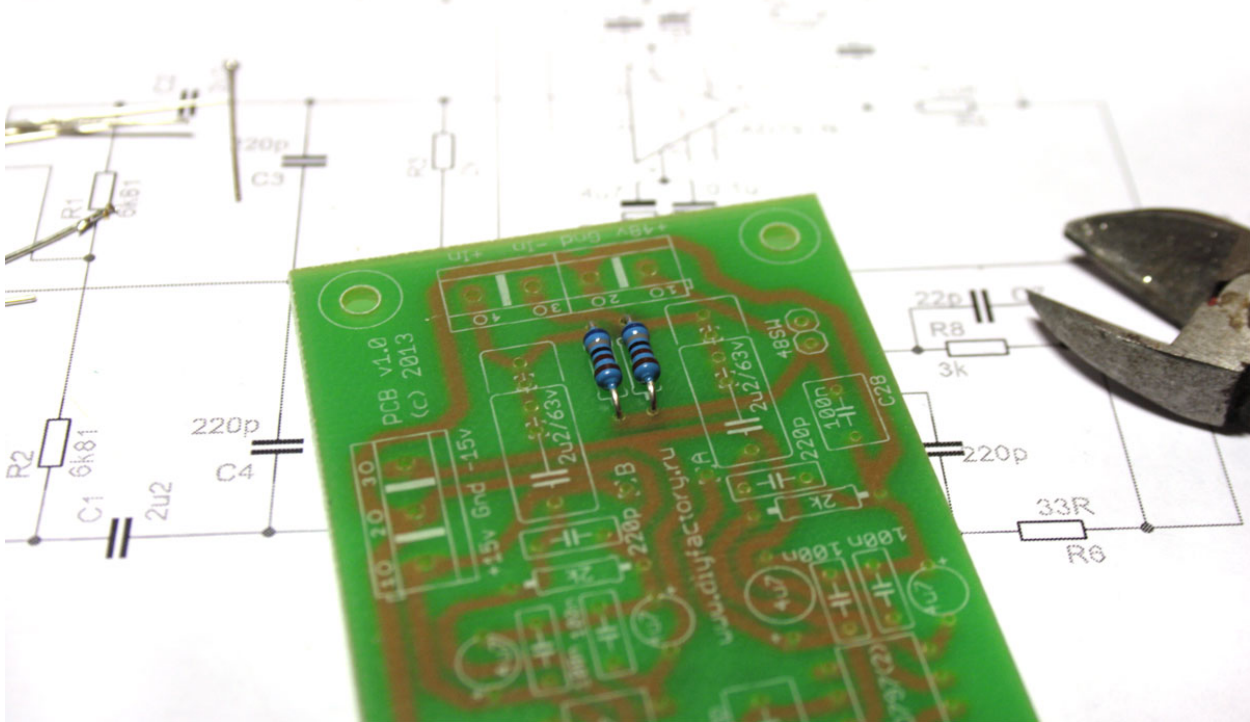
As a bonus - stands for a PCB



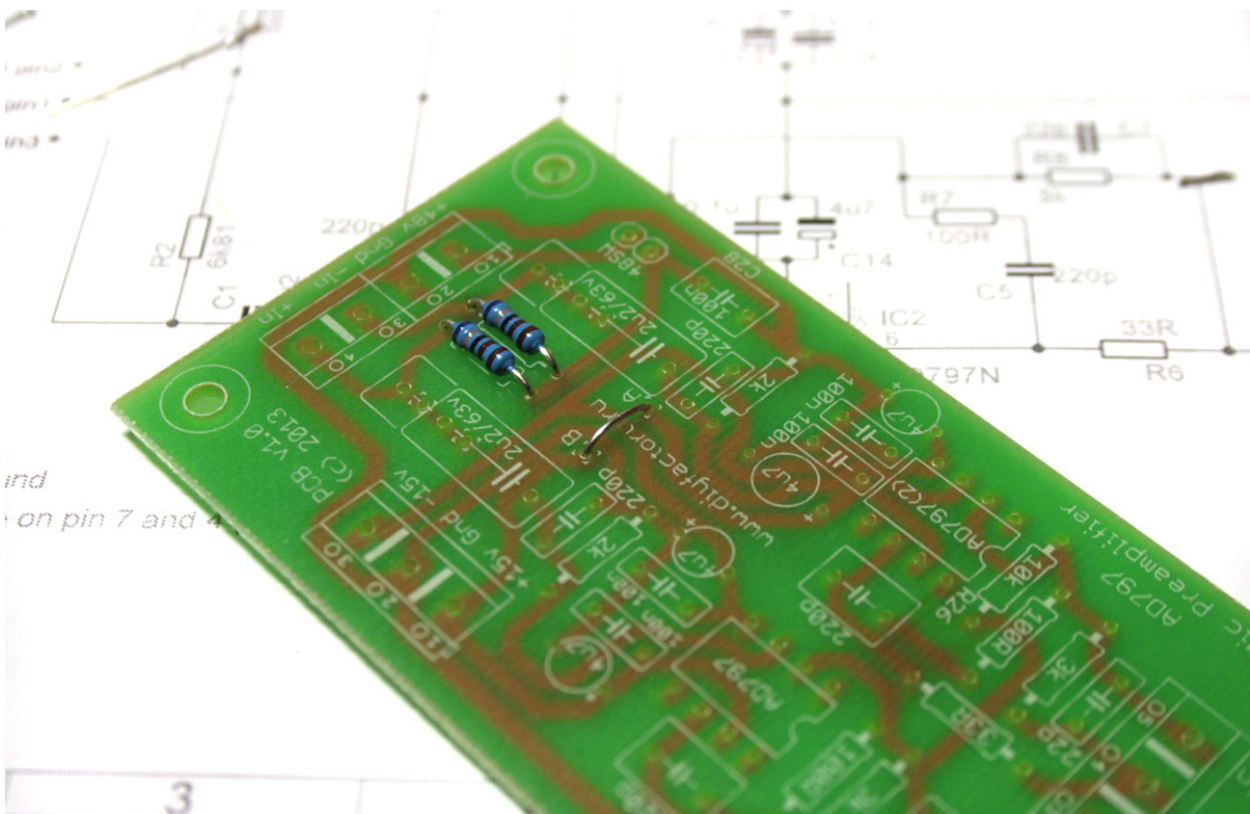
Installation of components on the board starts with resistors and jumpers.



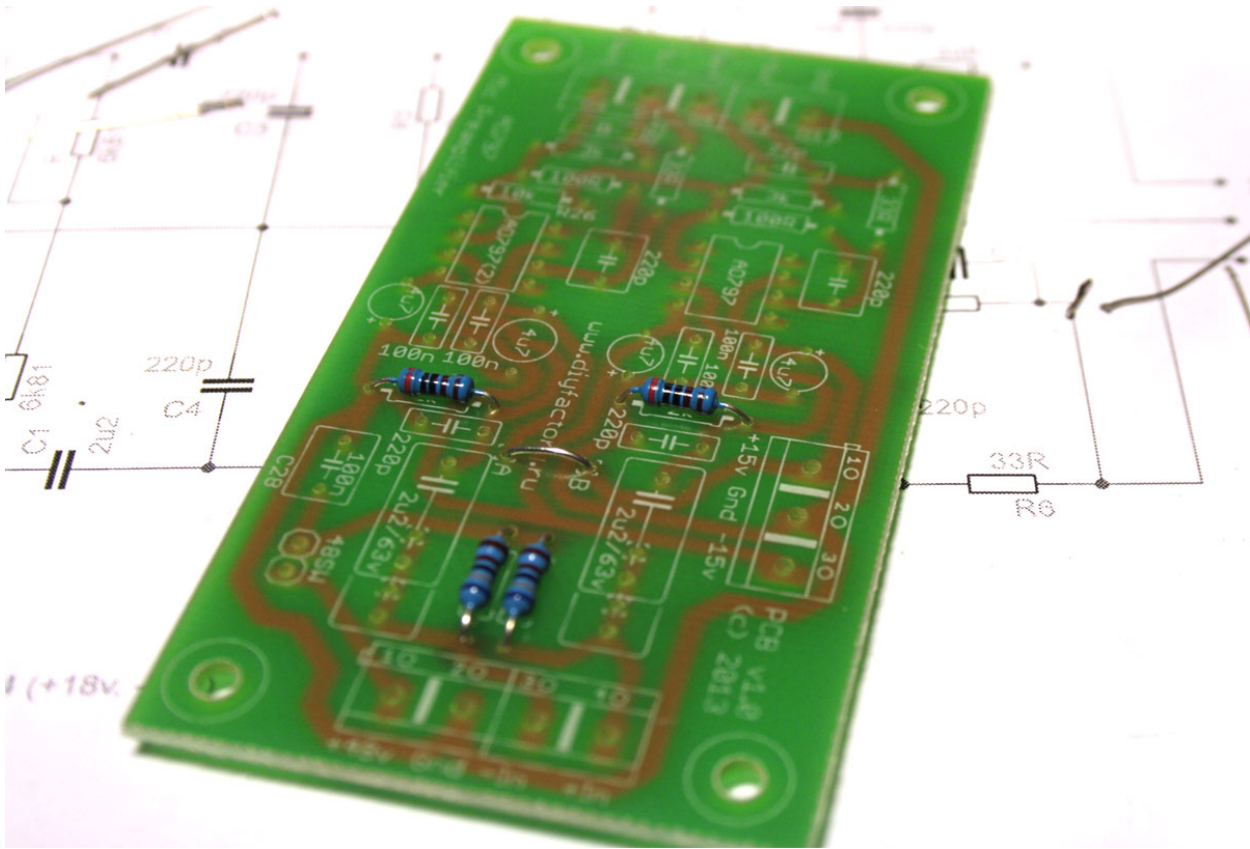
Solder a pair of matched resistors 6k8 (R1, R2)



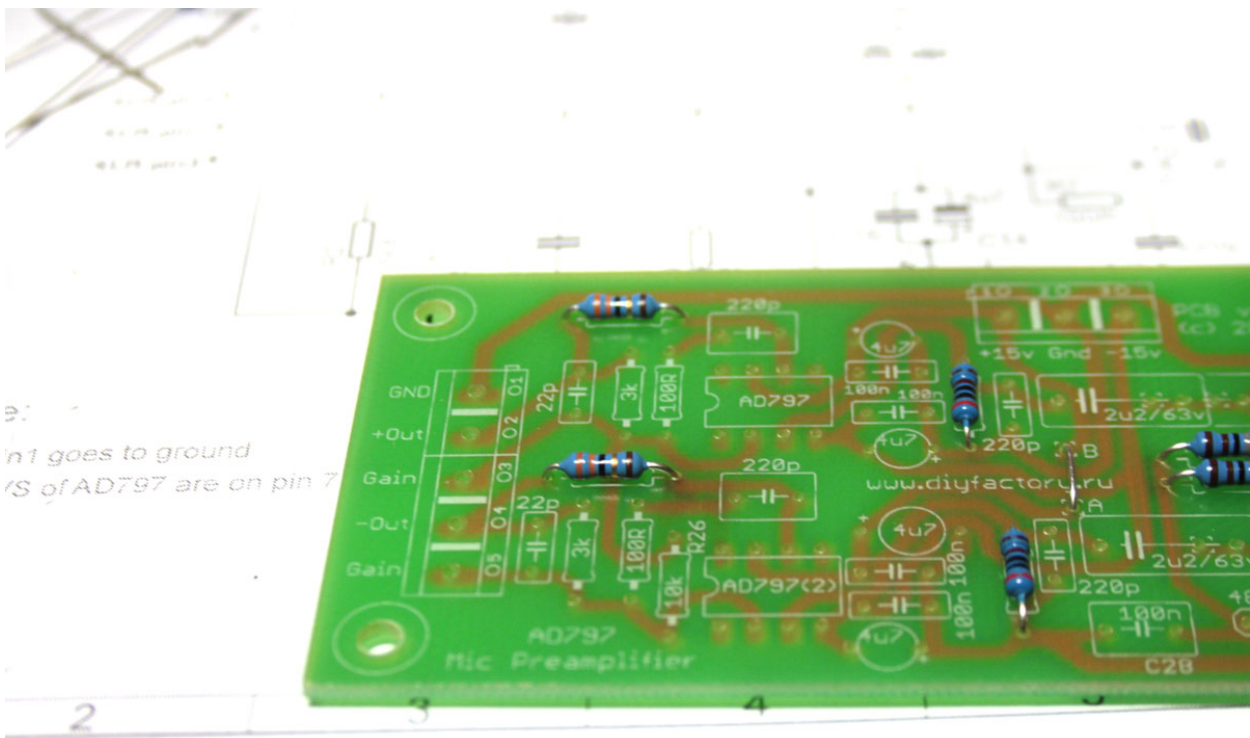
The following jumper is connecting points A and B on the circuit board.



Two resistor 2k (R3, R4). The kit includes a matched pair.

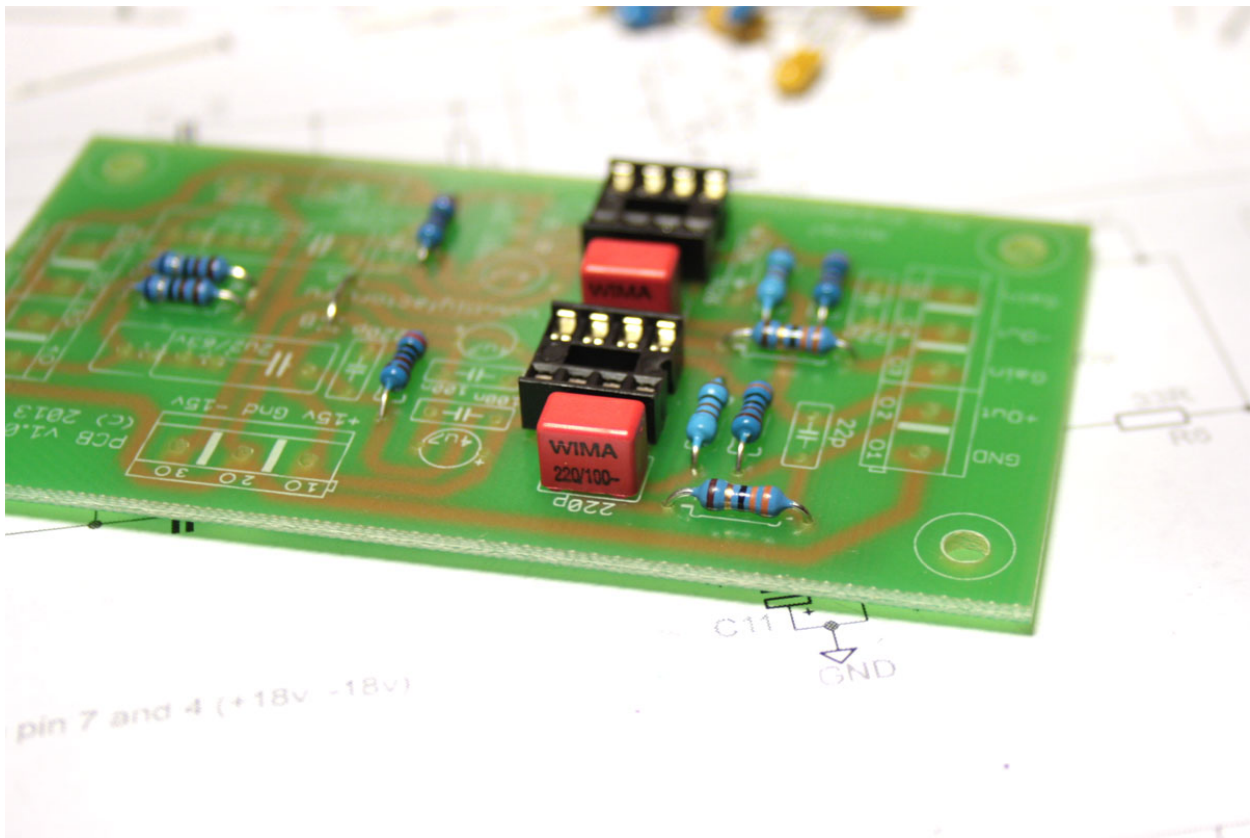


Solder two resistors 33R (R5, R6)

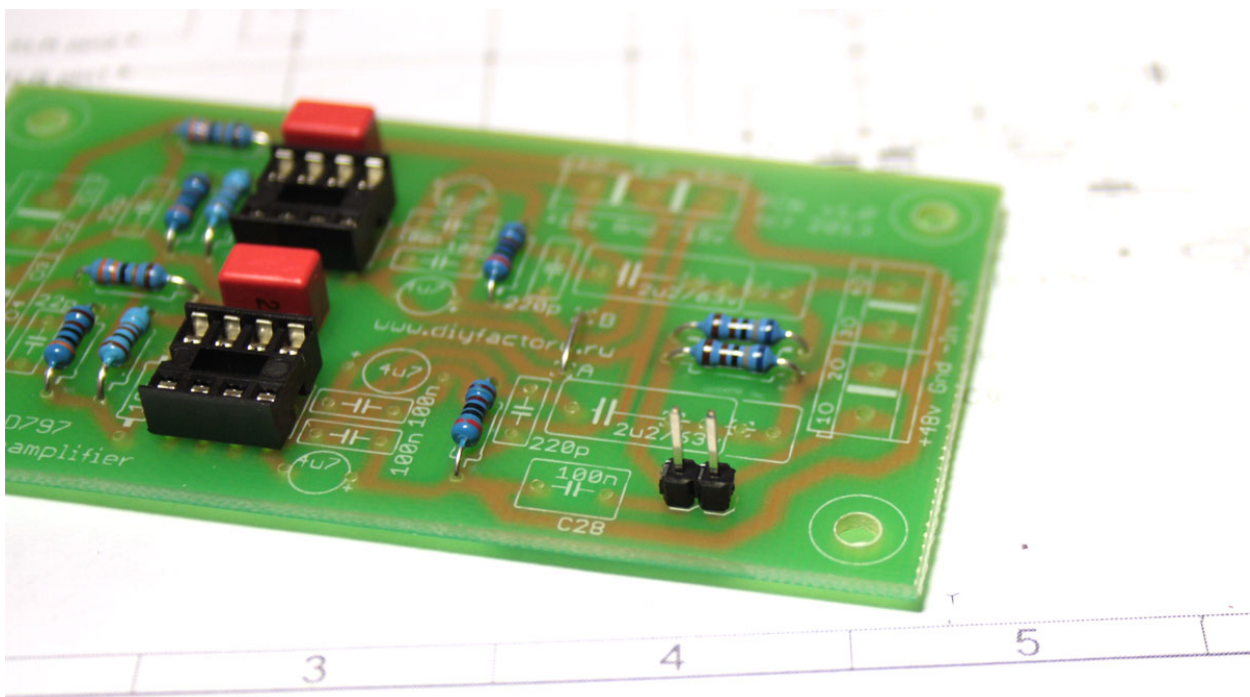


pin 1 goes to ground
pins 5 of AD797 are on pin 7

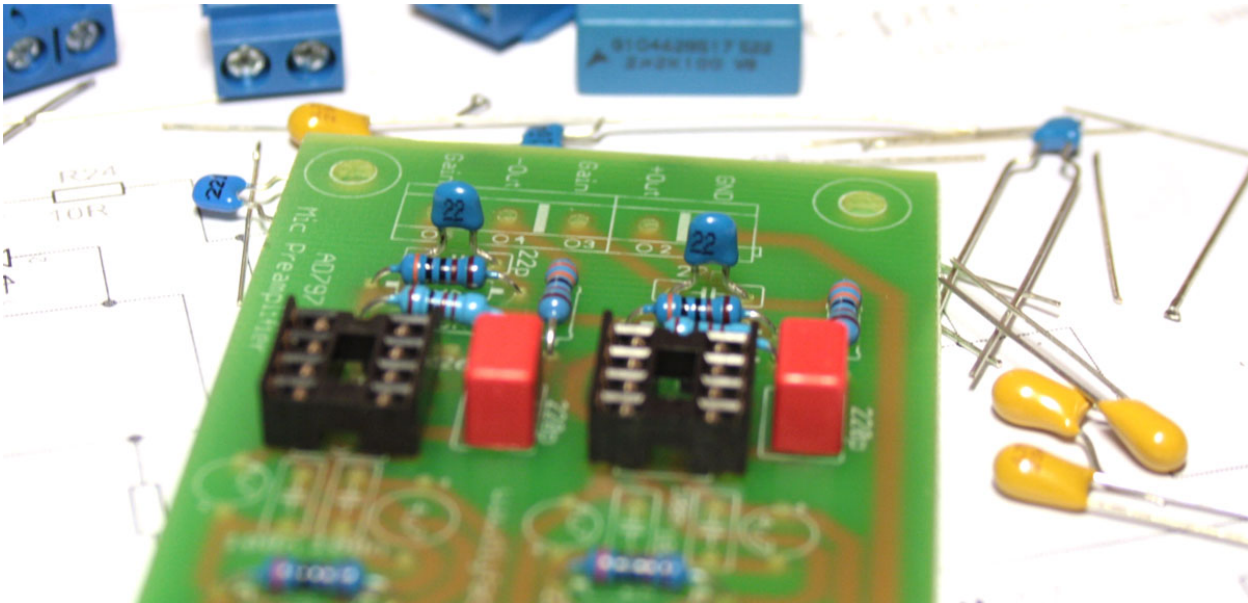
We now move on to a couple of 220p film capacitors in the feedback op-amp circuit - C5 and C6. Please note: The kit includes another two 220p capacitors (multilayer ceramic), do not confuse their place of soldering.



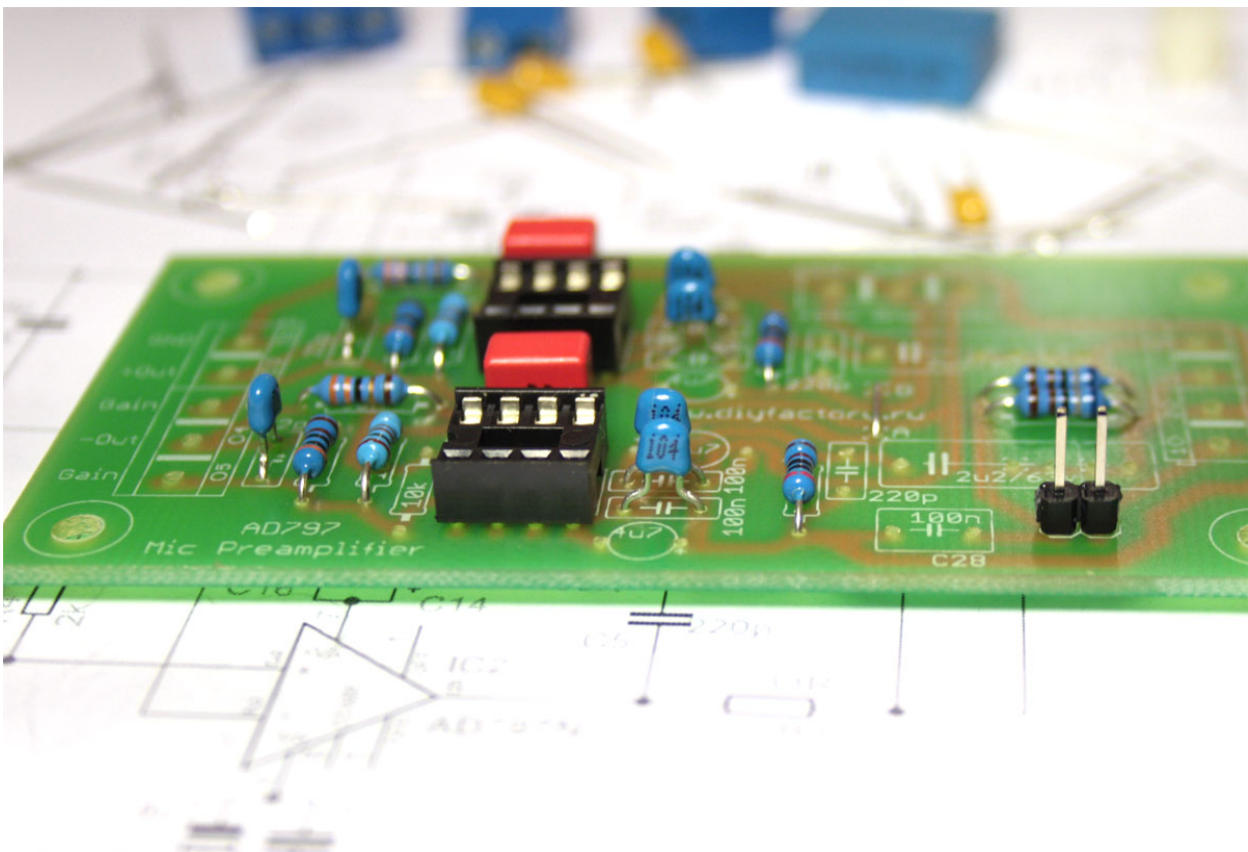
Optionally, you can use the connector for phantom power switch connection (toggle switch is not included in the kit).

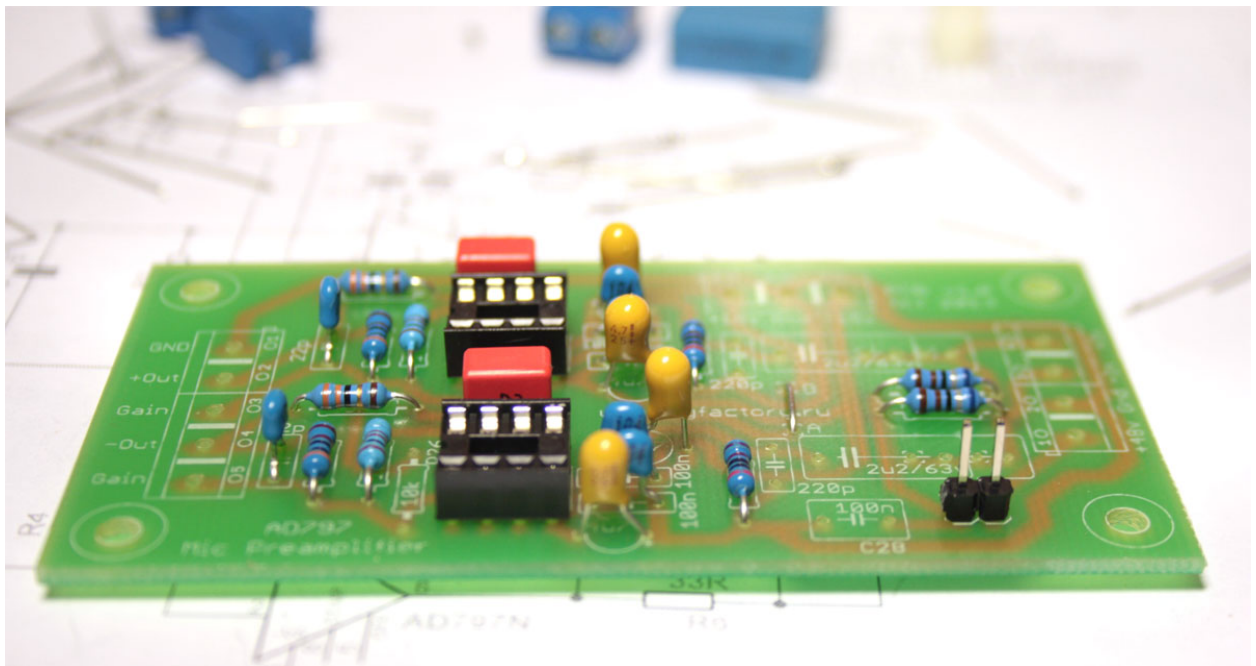
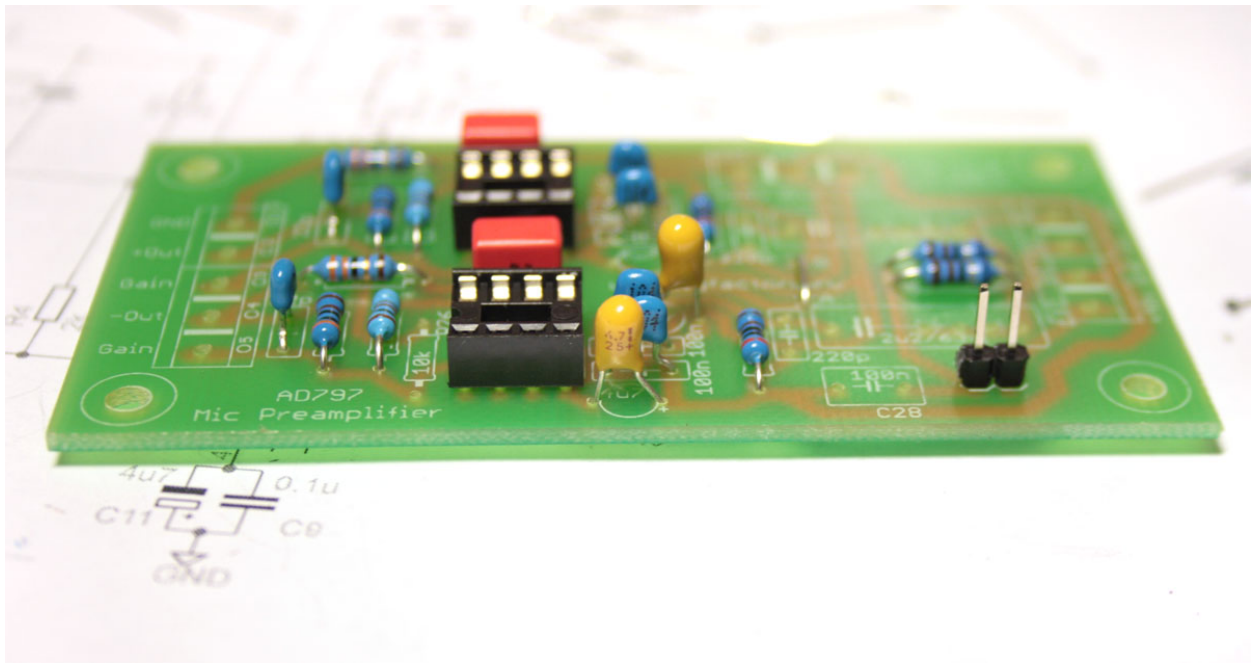


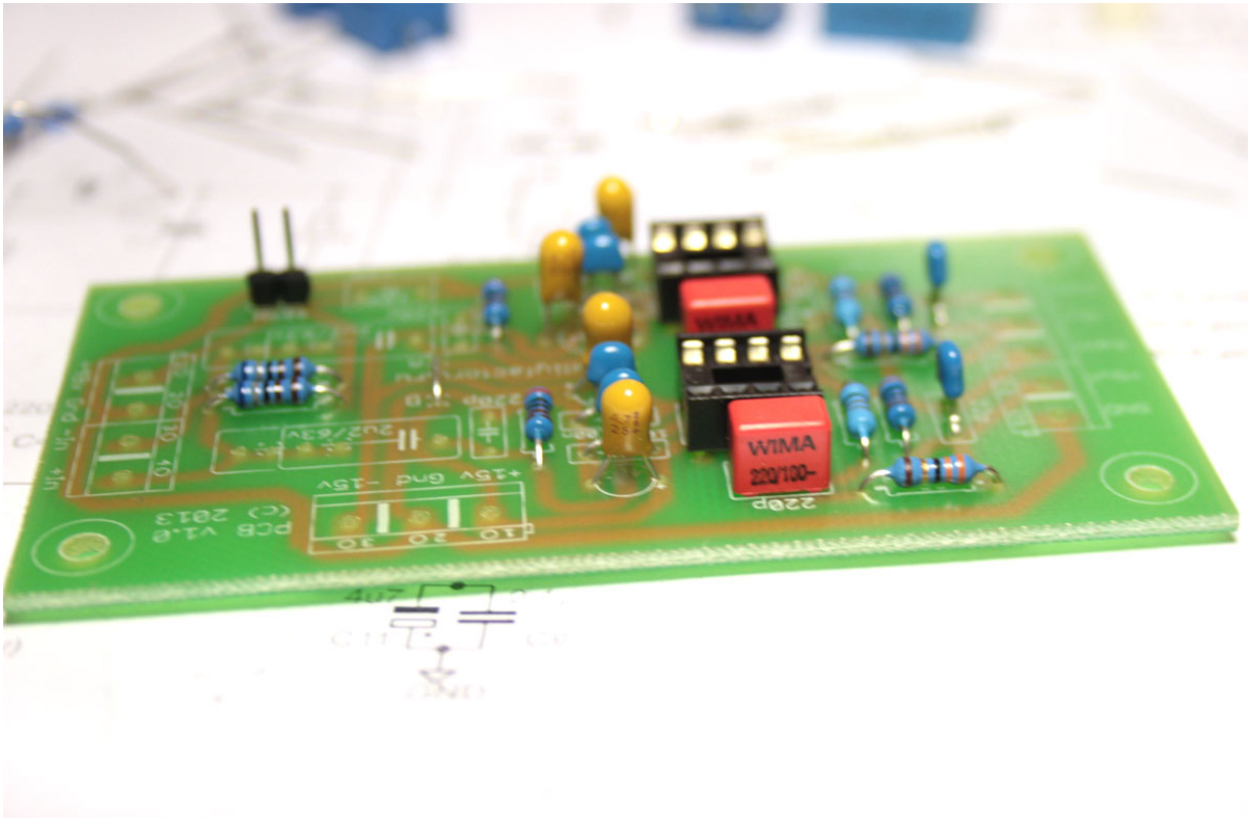
Solder two 22p capacitors (C3, C4).



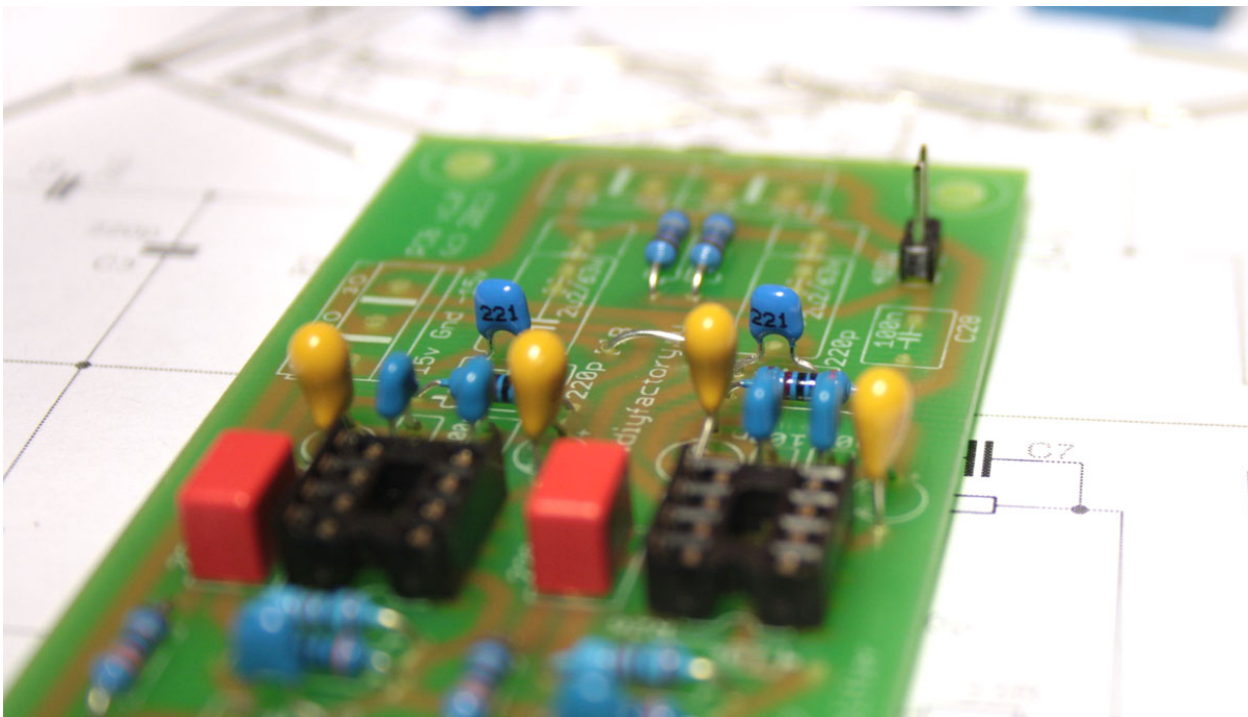
Next, install 4pcs 100n (0.1u) capacitors: C9, C10, C15, C16.



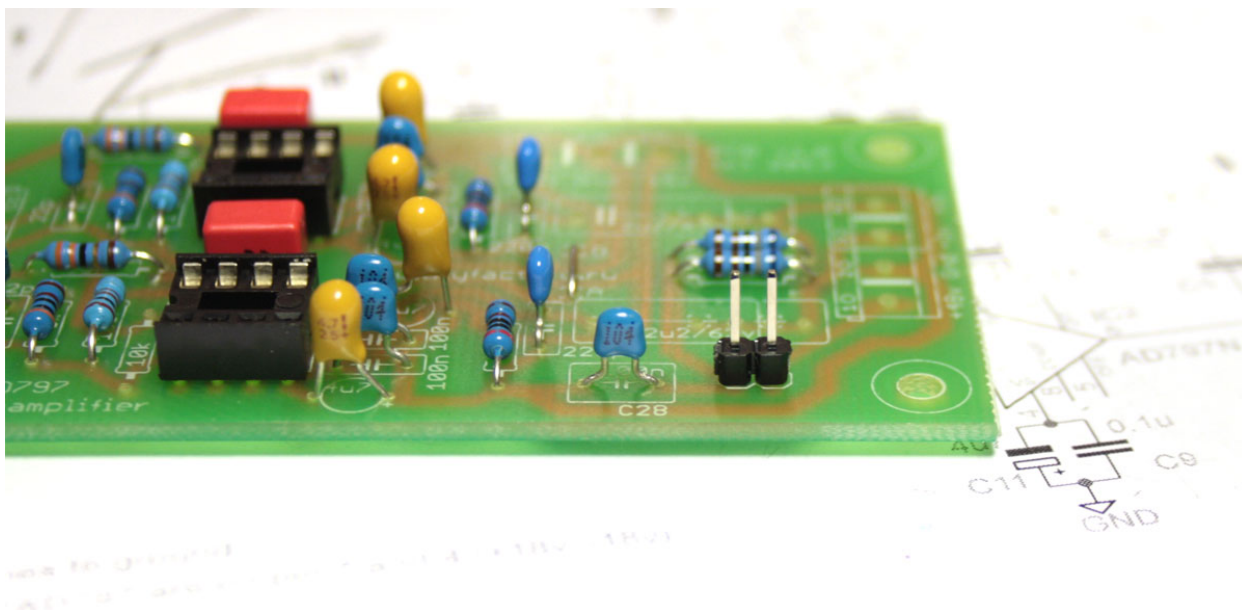




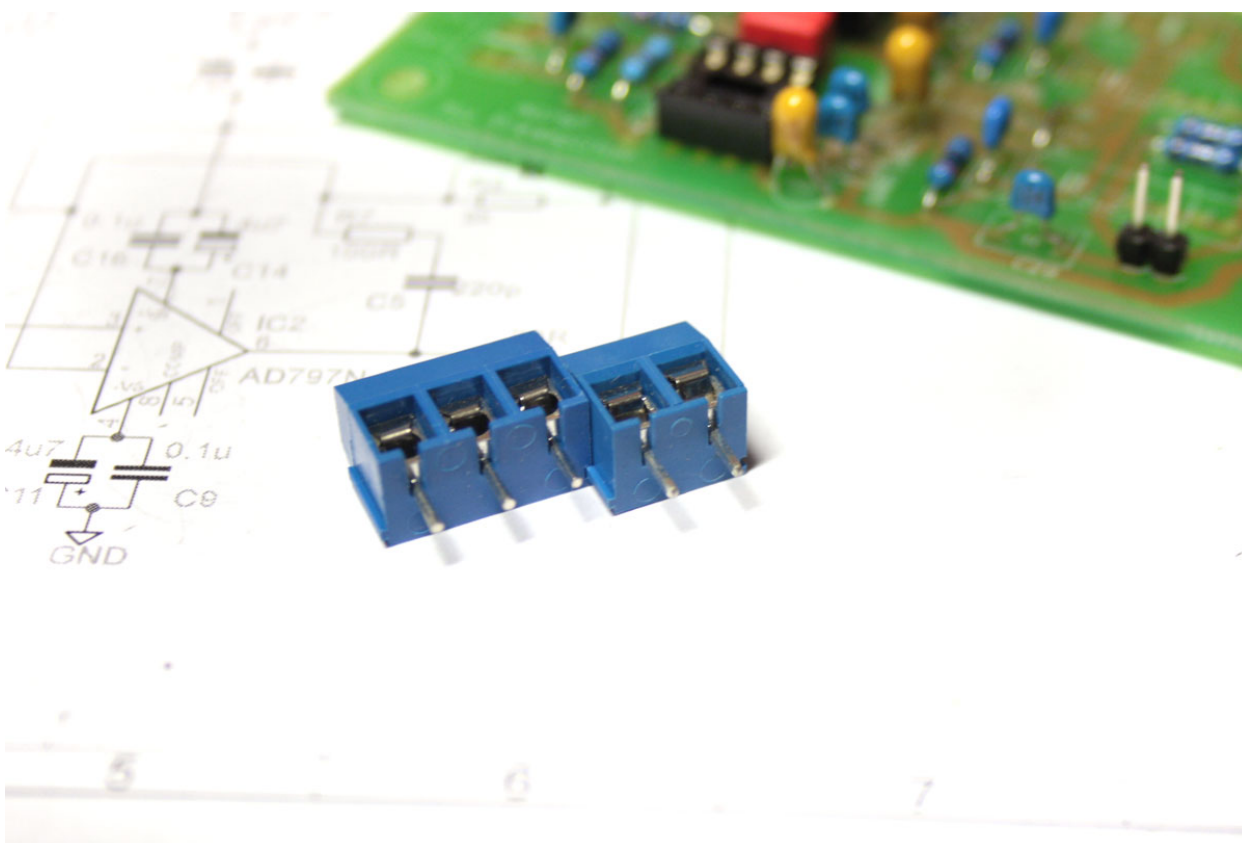
Now solder 220p ceramic capacitors (C3, C4)

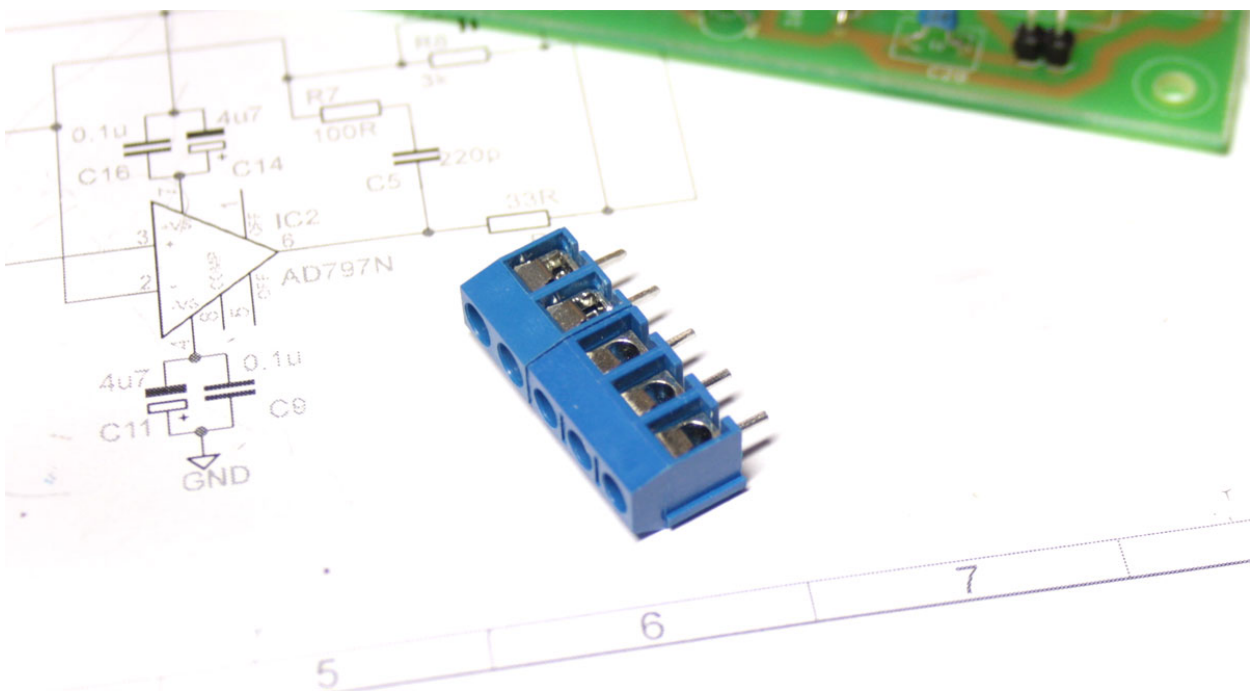
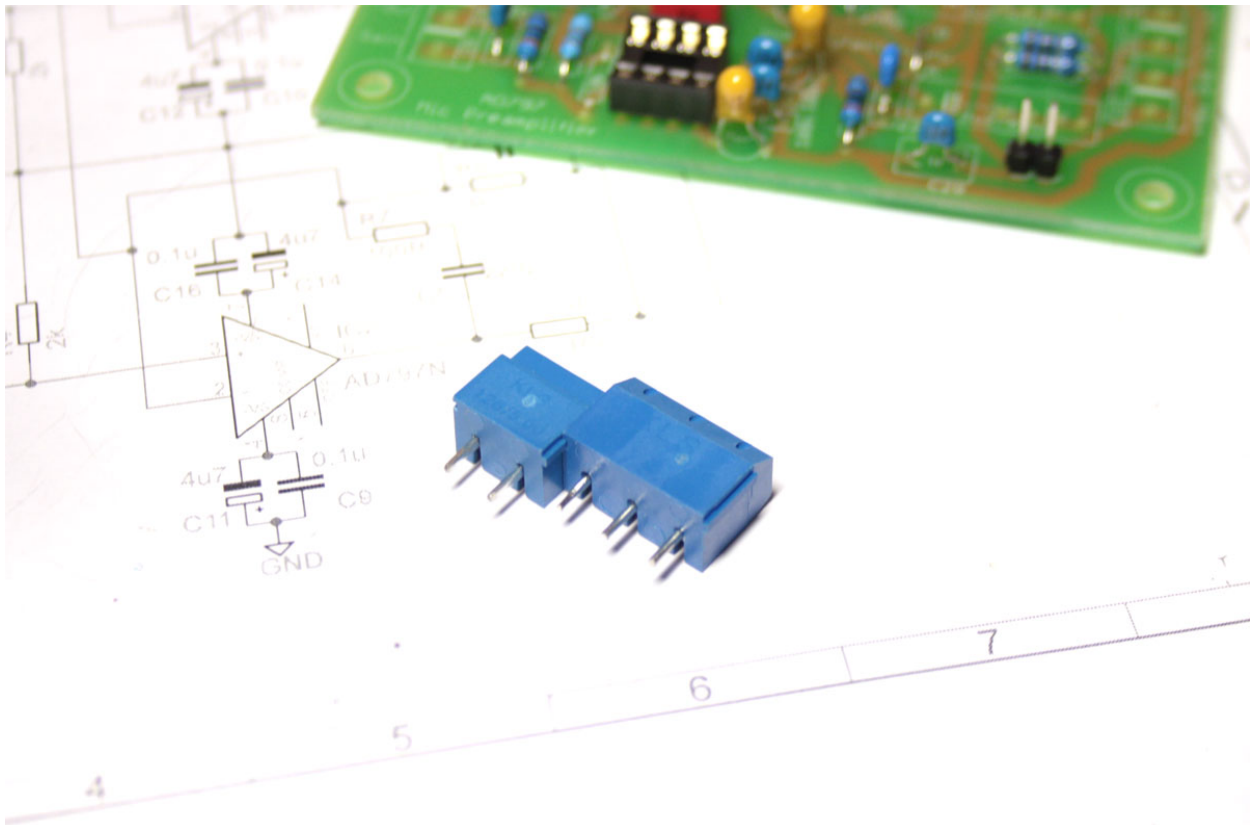


And the capacitor in the phantom power circuit 100n (0.1u) - C28 (not indicated in the circuit).

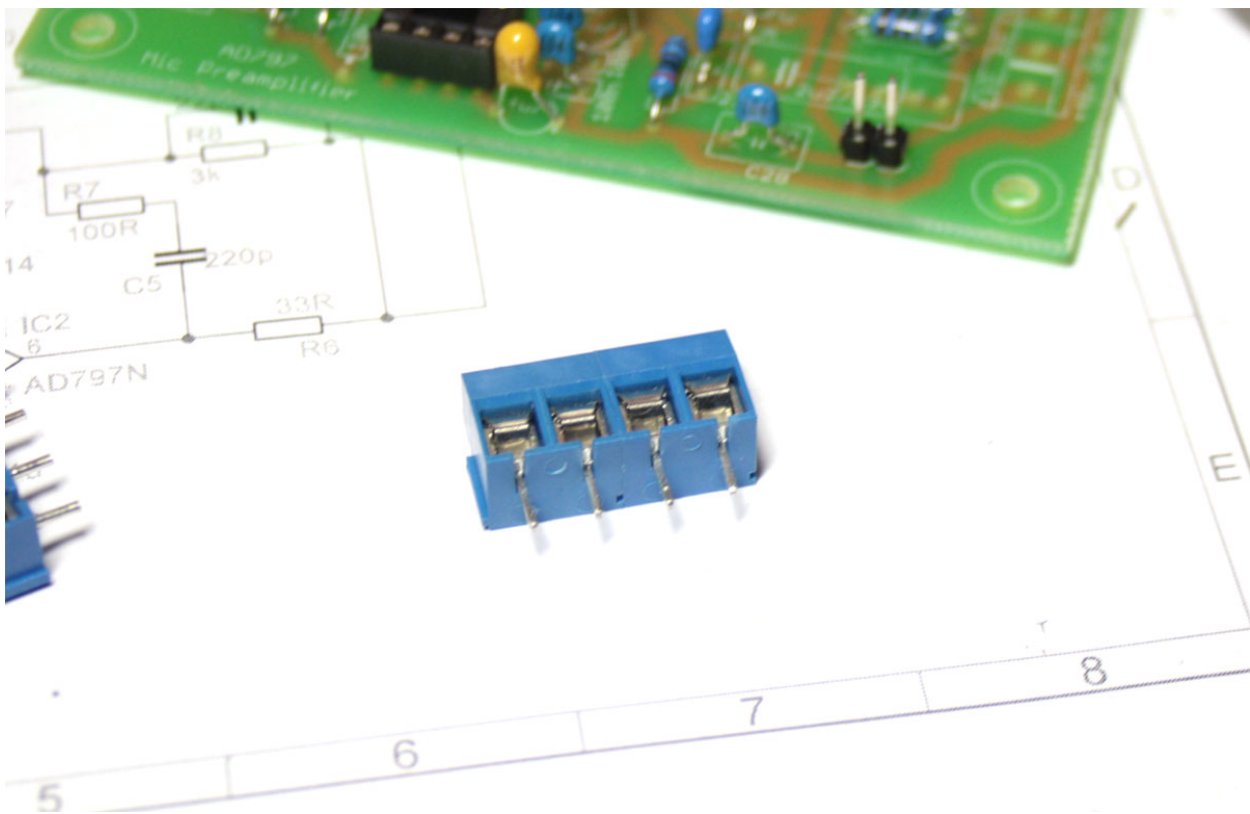
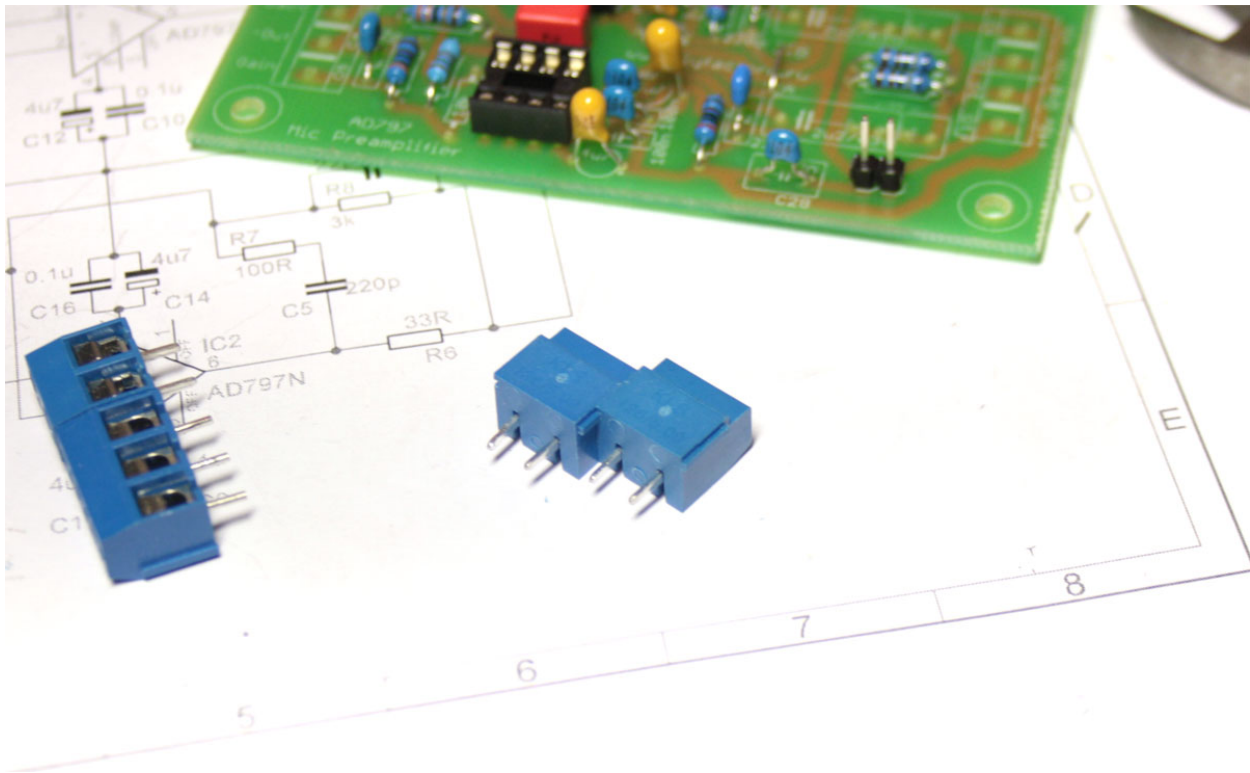


Prepare connectors. Combine connector - groove and comb let us get a single 5-pin block.

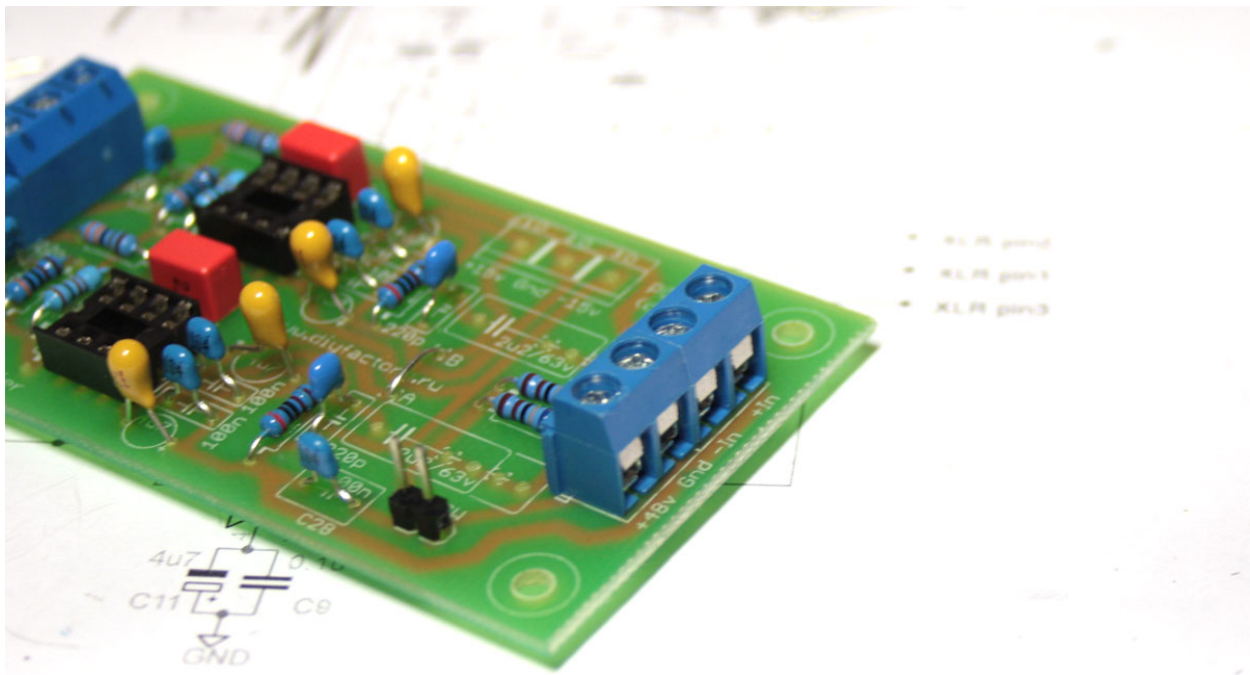
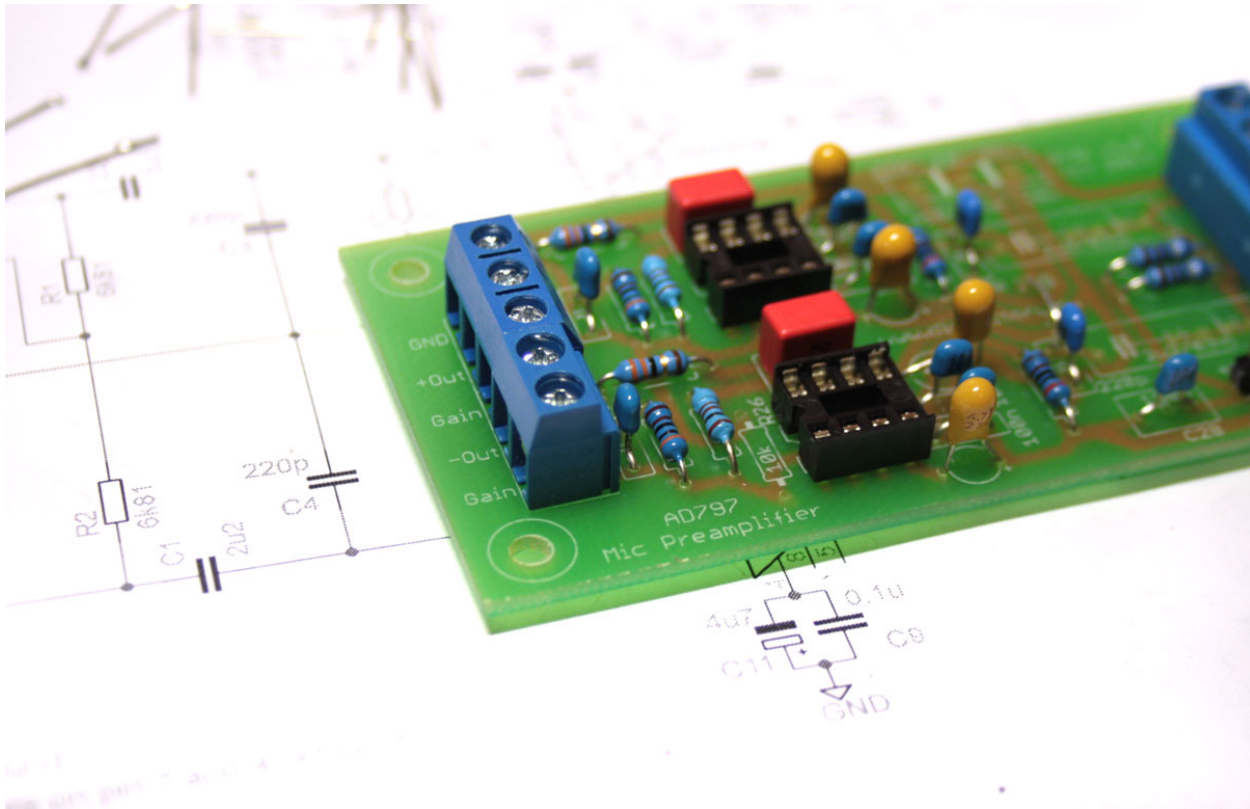




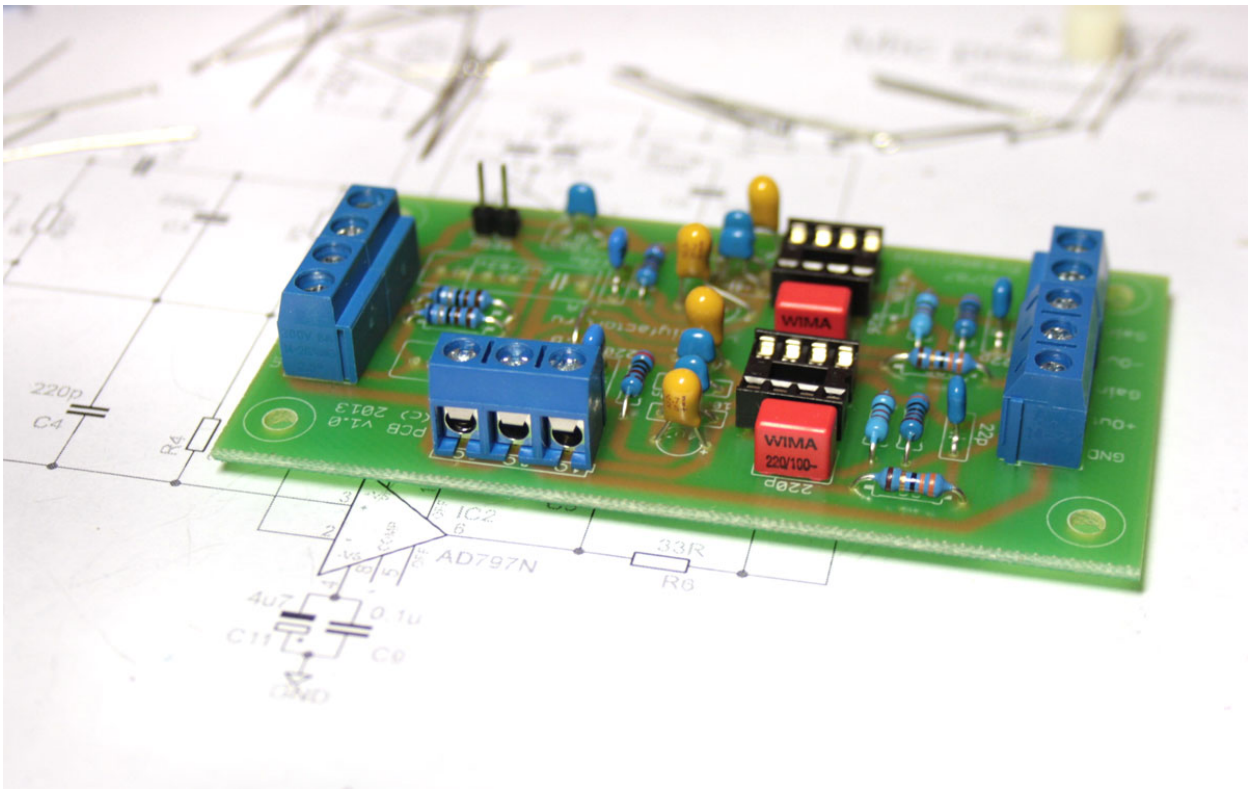
Similarly, we obtain a block of 4 pins.



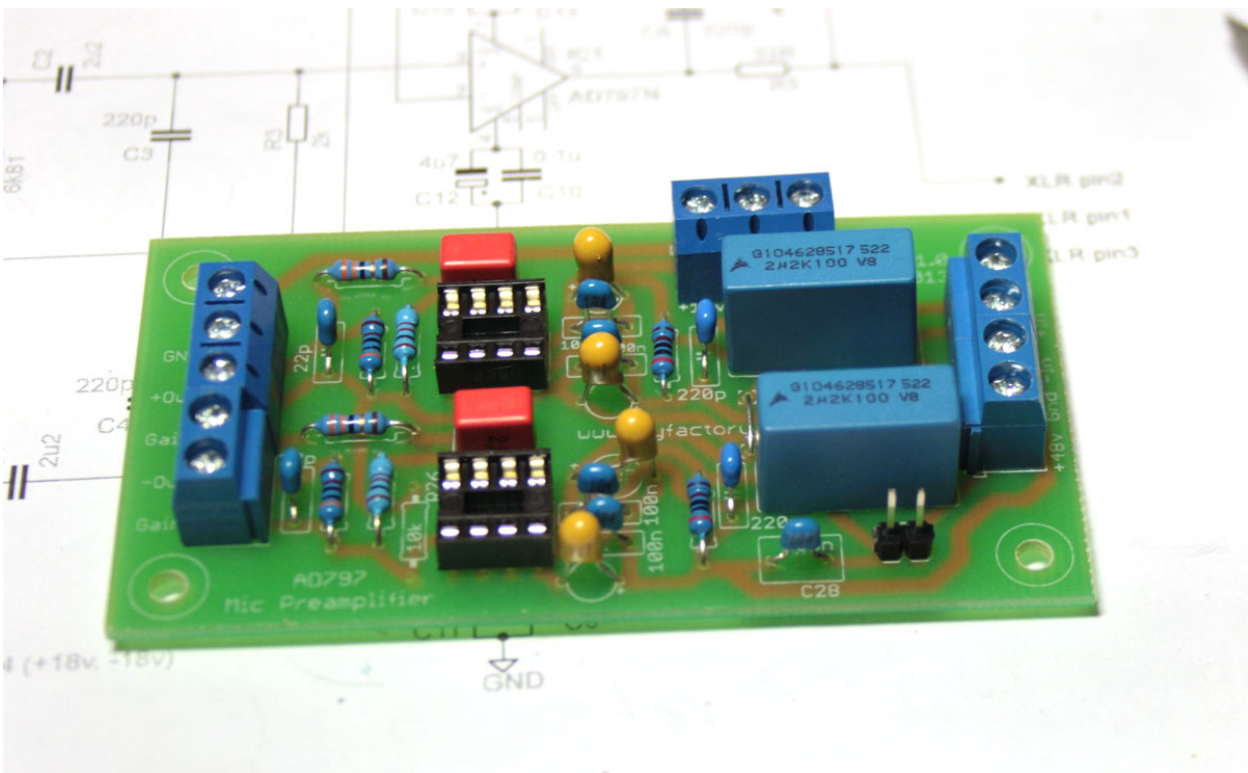
Mount on the board.



The remaining three-pin connector is for power supply use.

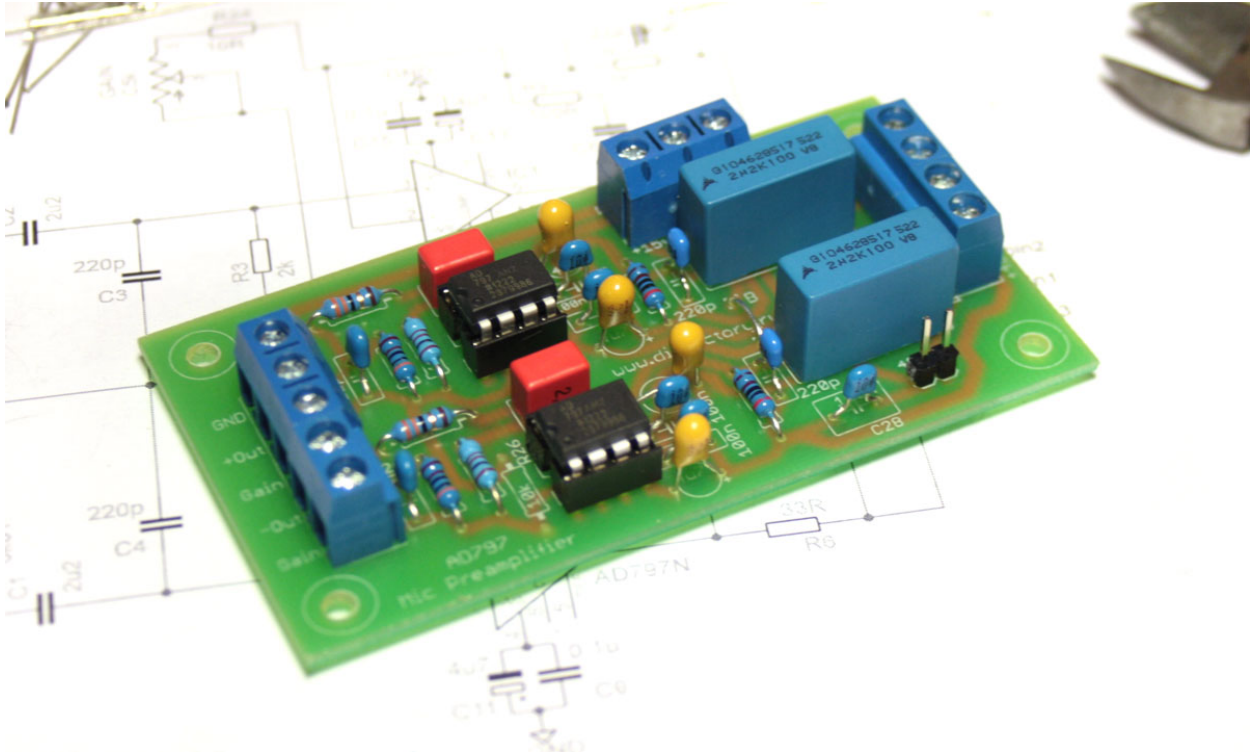


Mount two polypropylene 2u2 capacitors (C1, C2). The board allows to use capacitors with lead spacing of 7.5 mm to 15 mm.



Insert the ICs. Pay attention to how the ICs oriented on the board, the location of a "key".

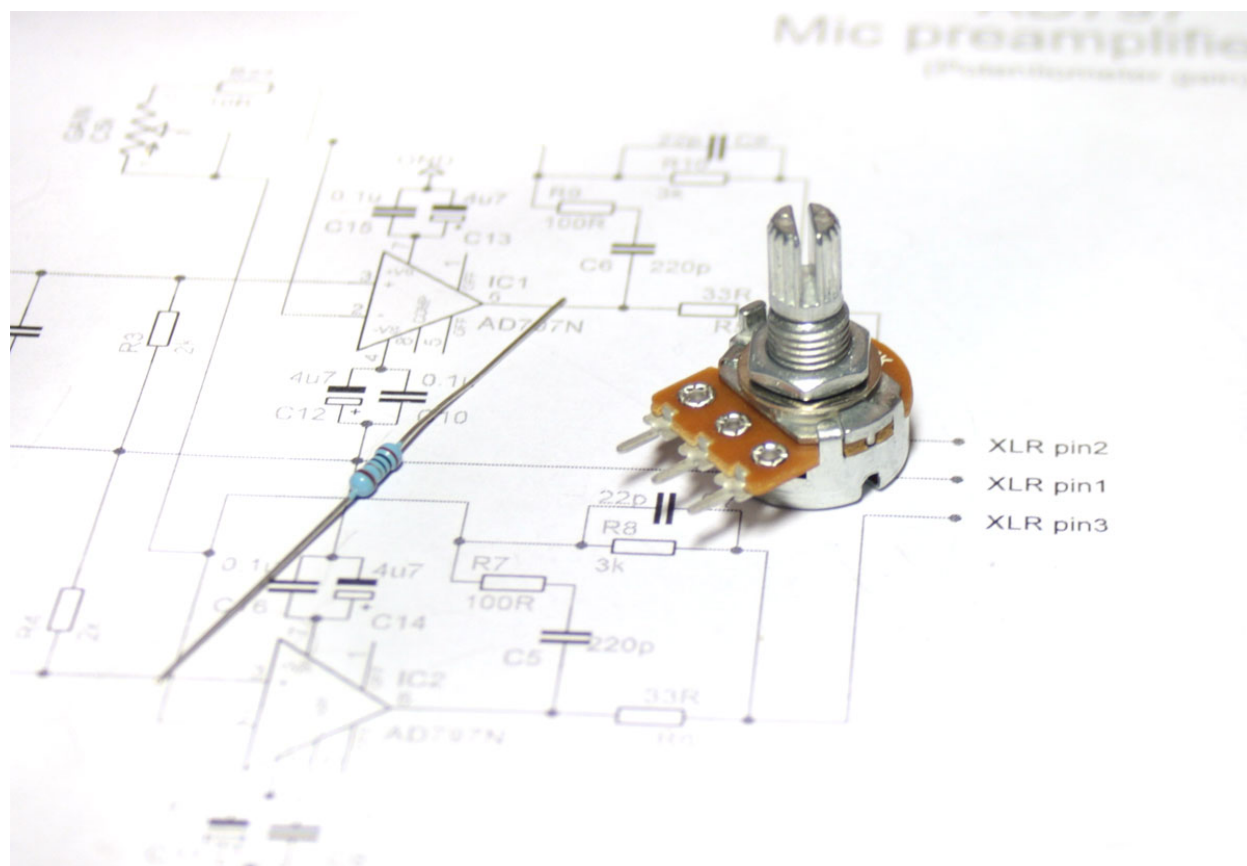
Optionally, before installing the ICs you can test the correct installation of the elements on the PCB, bring to the board power supply (+15 V,-15V), and measure the voltage at the terminals 7 and 4 of the sockets. After that, insert the chip.



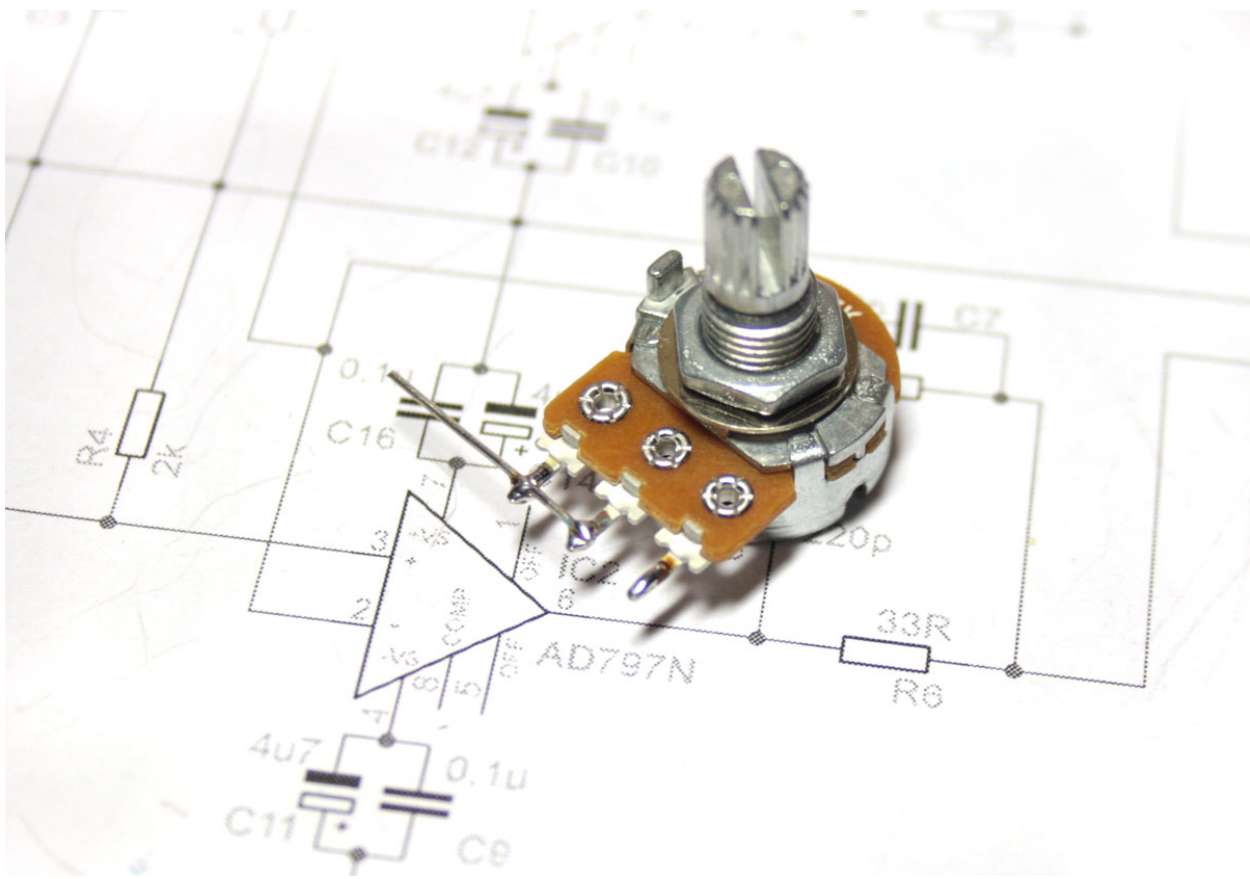
Installation of the main board is finished. It remains to instal the gain pot.

The gain control can be organized in two ways - using the potentiometer (the most simple and cost-effective) and rotary switch (more difficult for beginners, and therefore not used in the kit).

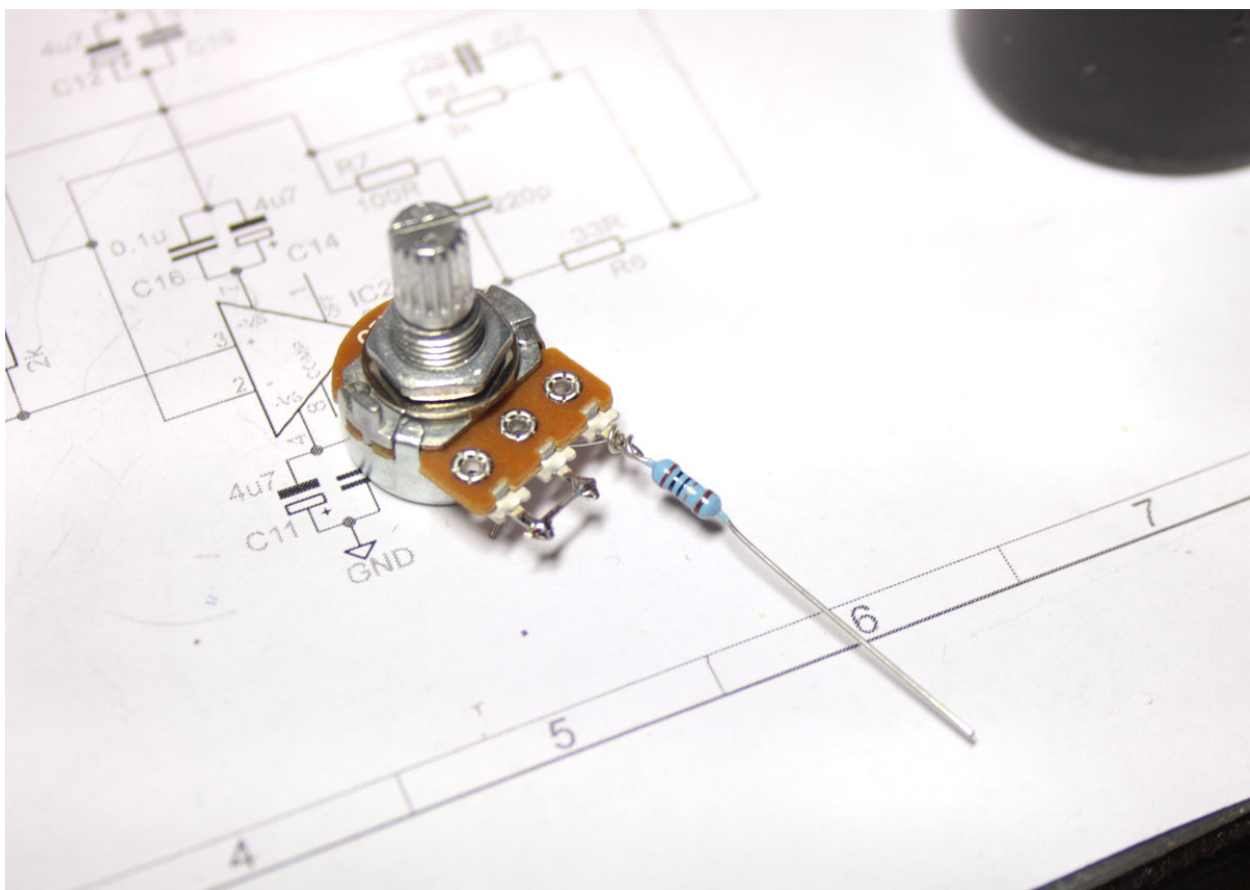
For installation we use a C5k potentiometer and a 10R resistor.



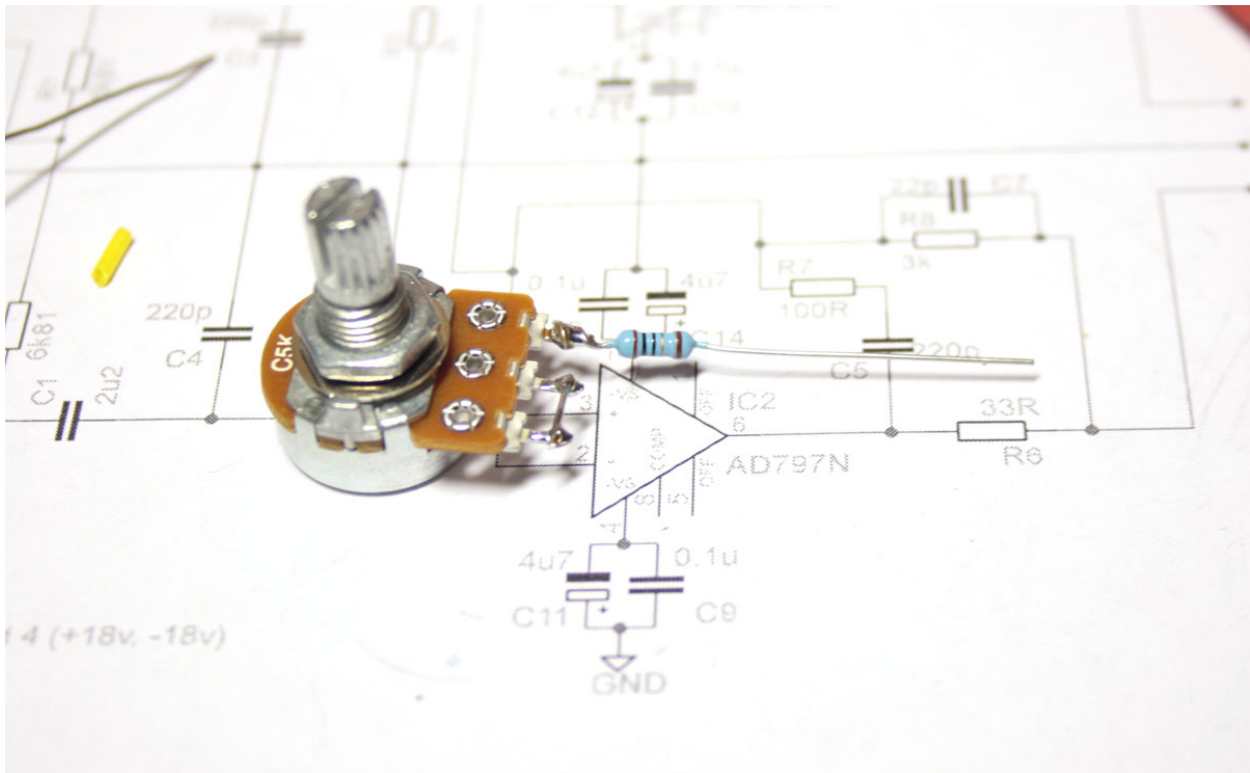
Soldered jumper between the center tap and the left tap of the potentiometer.



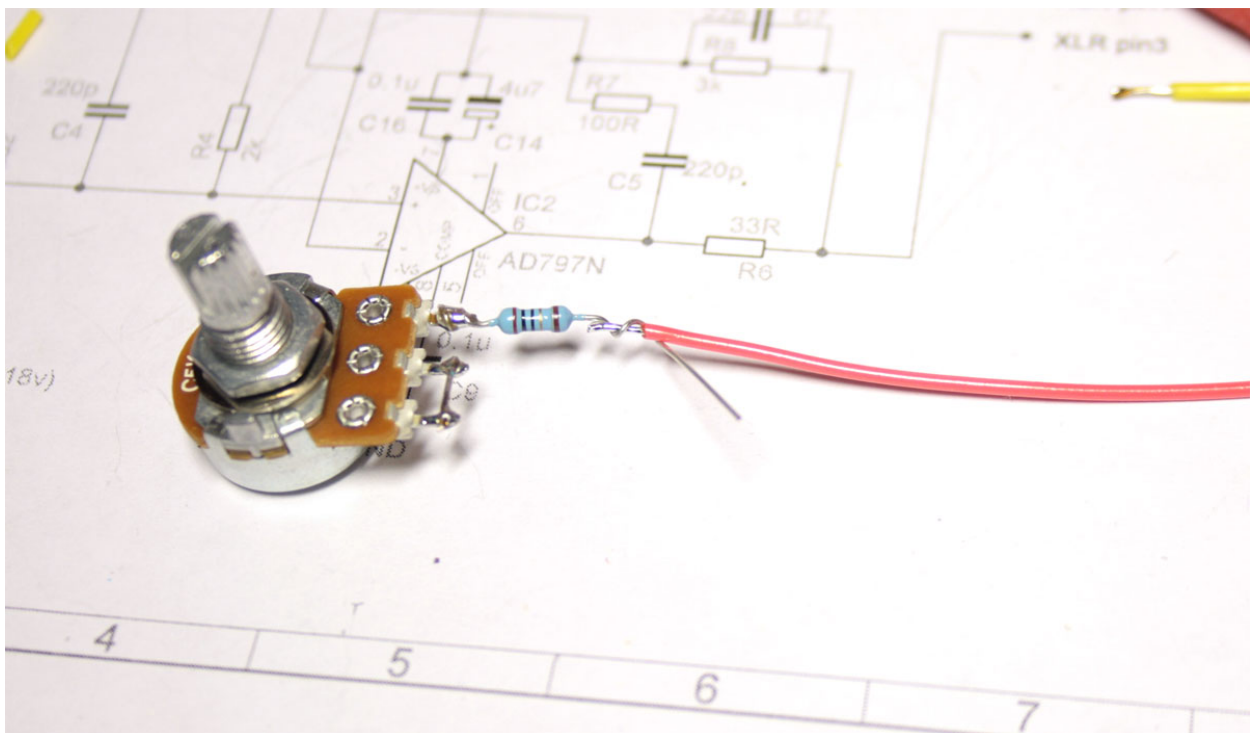
Bind a resistor at the right tap of the potentiometer.



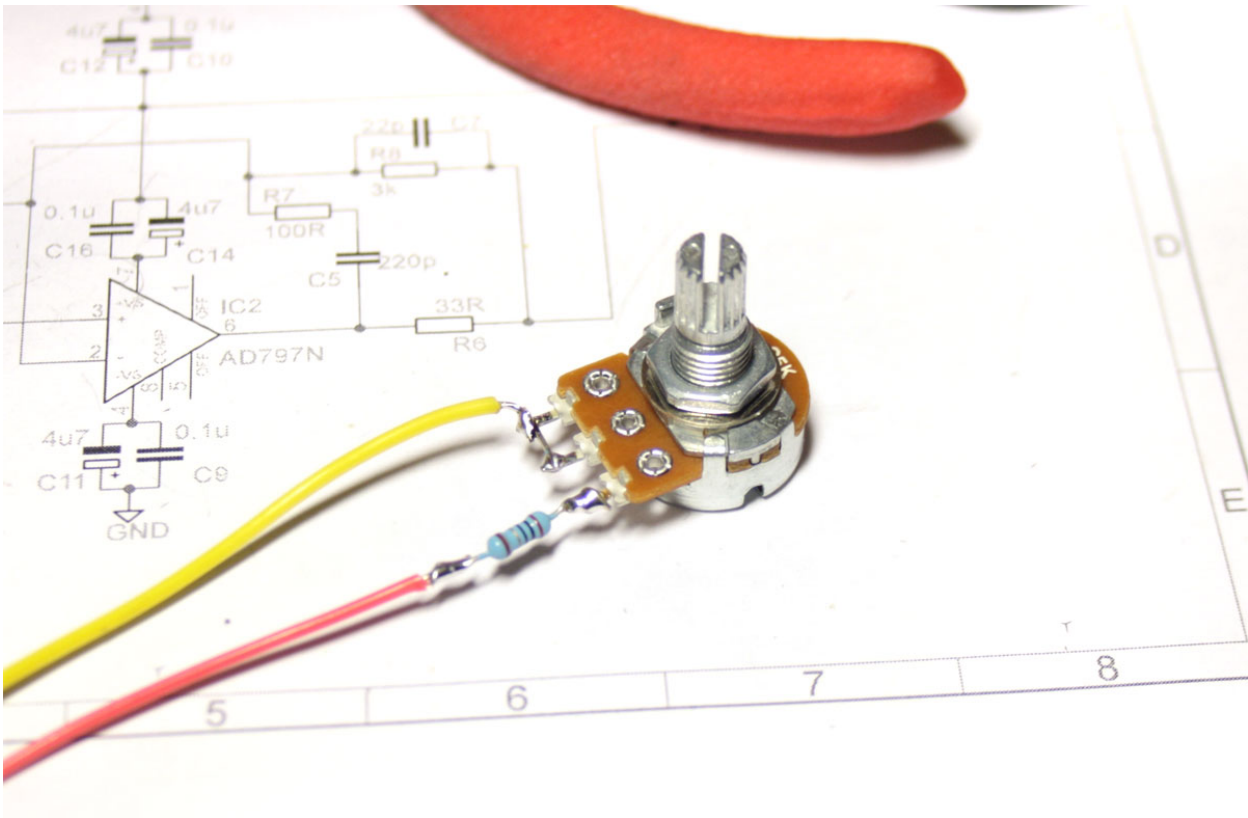
Solder.



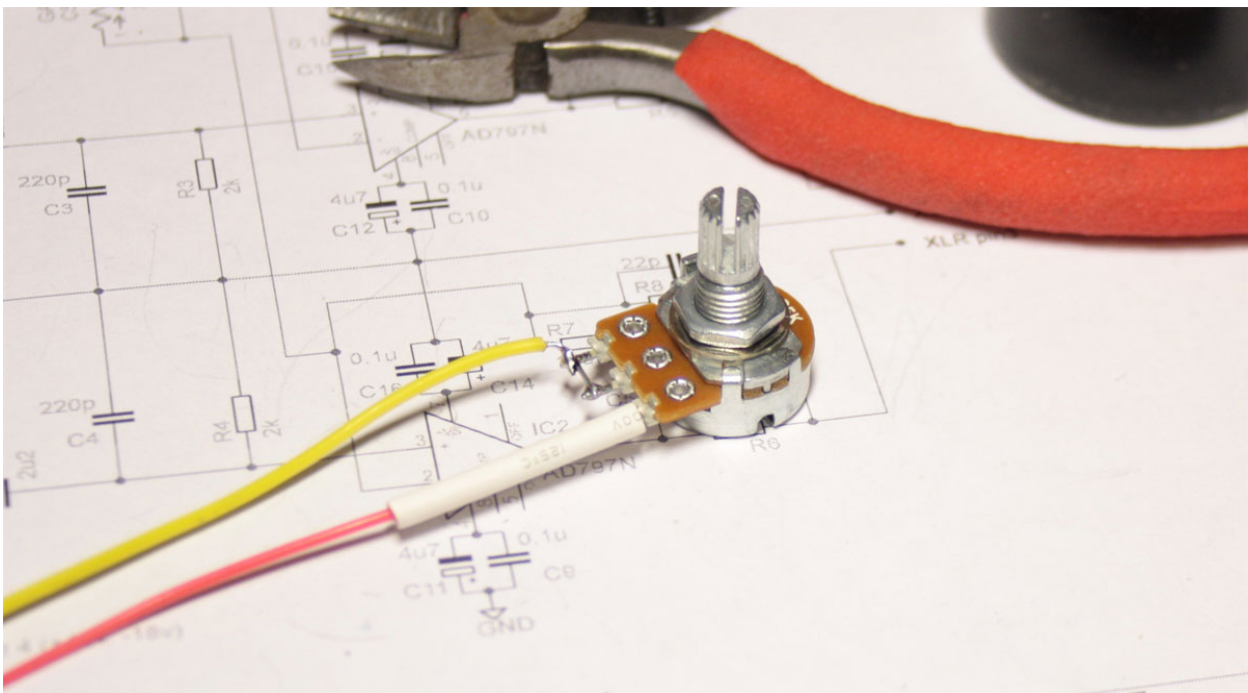
Solder the wire in similar manner.



Solder the second wire to the left tap of the potentiometer.



Isolate resistor with heat-shrinkable tubing.



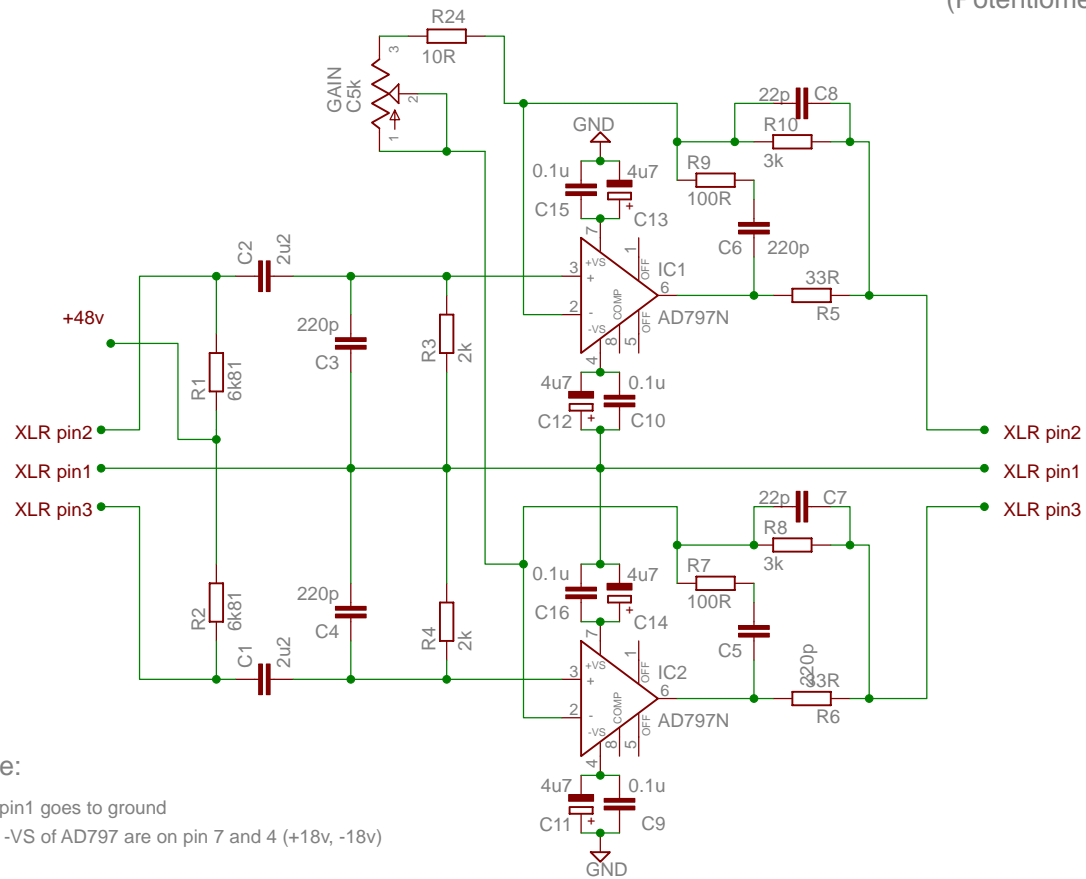
After we finished the installation, it is necessary to connect the power (to power the circuit requires power supply wich provides DC voltage +15v –15v), connect gain pot and input and output XLR. After assembly, adjustment scheme is not required.

Note that the scheme is fully balanced. Verify the source and the signal receiver are connected with a symmetrical line.

Typical wiring diagrams are shown in the diagrams below.

AD797 Mic preamplifier

(Potentiometer gain)



Note:

XLR pin1 goes to ground
 +VS, -VS of AD797 are on pin 7 and 4 (+18v, -18v)

AD797 Mic preamplifier

(Rotary switch gain)

- R12 - 2k7
- R13 - 910R
- R14 - 330R
- R15 - 180R
- R16 - 91R
- R17 - 43R
- R18 - 27R
- R19 - 16R
- R20 - 8R2
- R21 - 6R2
- R22 - 4R2
- R23 - 10R

Note:
 XLR pin1 goes to ground
 +VS, -VS of AD797 are on pin 7 and 4 (+18v, -18v)

