



**ZOMBIE REC.**

**Pro Audio Equipment**

# **3043 (r2.1) Assembly Guide**

[www.zombierec.com](http://www.zombierec.com)

[info@zombierec.com](mailto:info@zombierec.com)

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# Disclaimer

Zombie REC. is not liable for any damage, harm or loss of any kind resulting from the assembly and/or use of this kit. Improper soldering and handling of electricity can cause serious injury and damage to your property. Also, keep all contents away from children. Follow the guide, build carefully and pay attention when using the necessary tools.

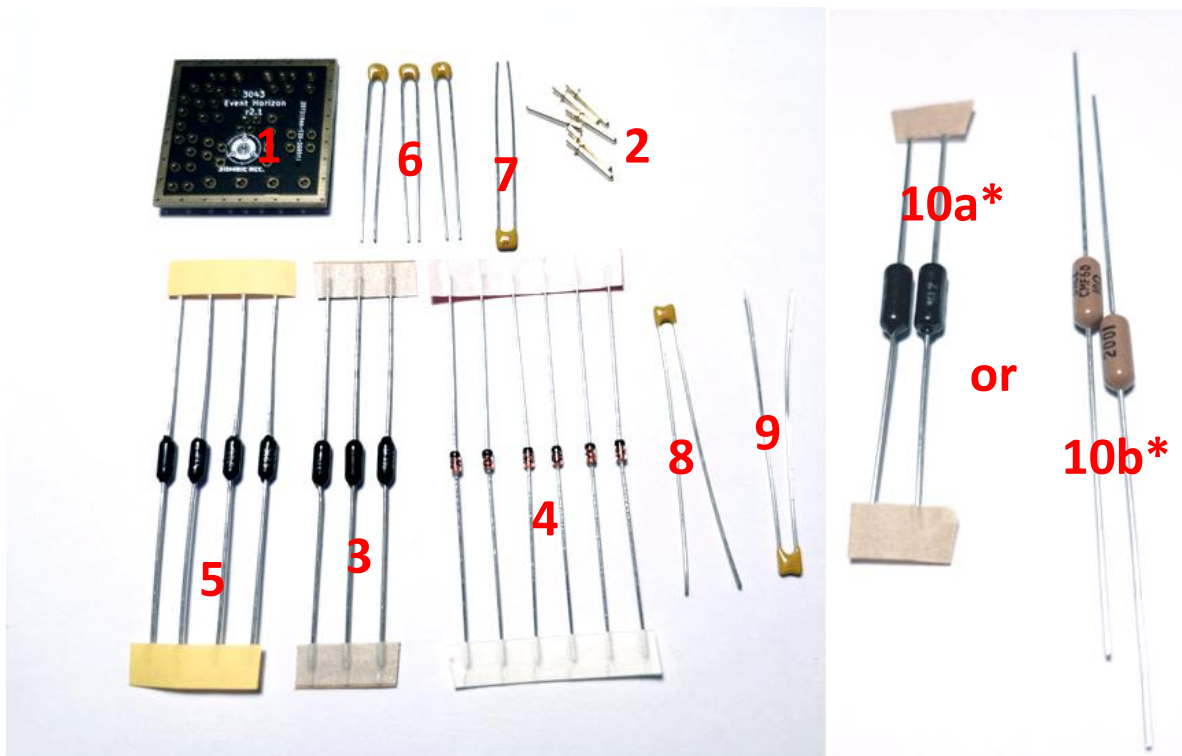
All pre-assembled PCBs are checked for proper functionality before shipping. If something is missing or damaged, contact us on [info@zombierec.com](mailto:info@zombierec.com). If the part shows signs of use beyond what was necessary to determine that it was damaged, Zombie REC. reserves the right not to replace the part. Make sure to interact with the parts only on a properly earthed working place, including the builder, in order to prevent damage to transistors.

# Tools

You will require:

- A good solder iron, with adjustable temperature recommended.
- Solder. You can use leaded or lead free solder. We used lead free solder for the SMD parts.
- Good wire cutters to clip the excess of leads.

# Kit Contents



1. 3043 Premounted PCB
2. 6x Mill Max Gold Pins
3. 3x 1.2k Resistor (R3, R4, R5)
4. 6x Diode (D1, D2, D3, D4, D5, D6)
5. 4x 12k Resistor (R1, R6, R7, R8)
6. 3x 47pF Ceramic Capacitor (C1, C2, C7, short leads)
7. 1x 22pF Ceramic Capacitor (C6, short leads)
8. 1x 27pF Ceramic Capacitor (C8, long leads)
9. 1x 150pF Ceramic Capacitor (C3, long leads)
10. **10a**: 2x 22ohm for the original version **OR 10b**: 2x 10ohm for the enhanced version (R13, R14)

Only these components that need to be assembled are marked on the silkscreen of the PCB.


The PCB comes premounted with all transistors.

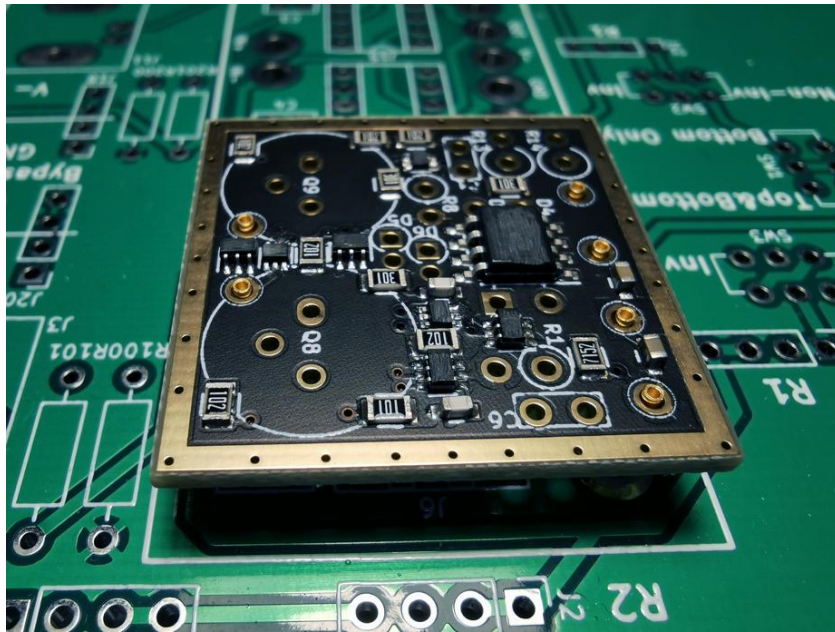
## Step 1 - Mill Max Pins

It's advisable to solder the pins first, as they are harder to solder later when the rest of the components are in place.

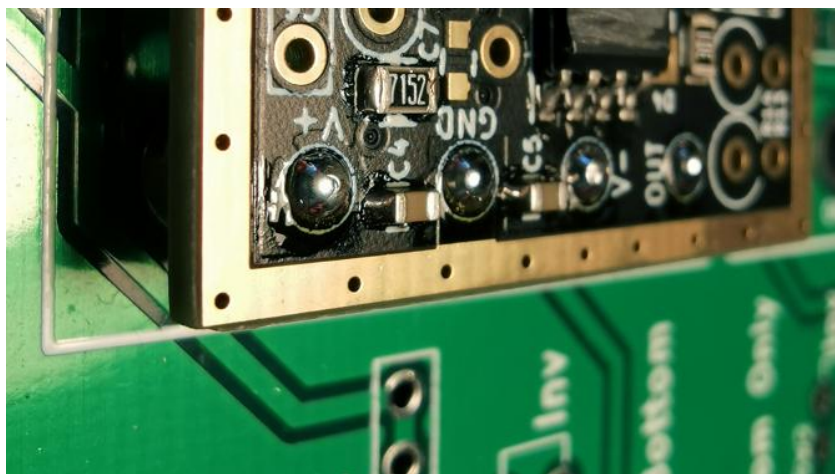
There are two ways to go about this:

- Either the pins can be put into an existing DOA socket and the PCB can be put on top according to its drill holes:

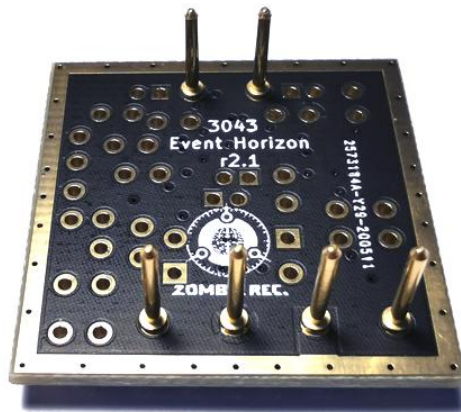
 **Warning:** Take care not to damage the device with the socket used for soldering. Stay well grounded.



Solder the pins from the top:



- In case you don't have an existing socket you can or want to use, you can flip the PCB on its back and due to the fact that the SMD transistors are already soldered on, it will rest enough above ground to be able to solder the pins from the bottom:



Make sure to heat the pins and the contact surface for a few seconds by gently pushing the soldering iron onto the pin edge and the contact surface on the PCB, then apply enough solder for it to flow to the other side of the PCB.

## Step 2 - Diodes


There are 6 diodes to solder: D1-D6. Start with D5 and D6:

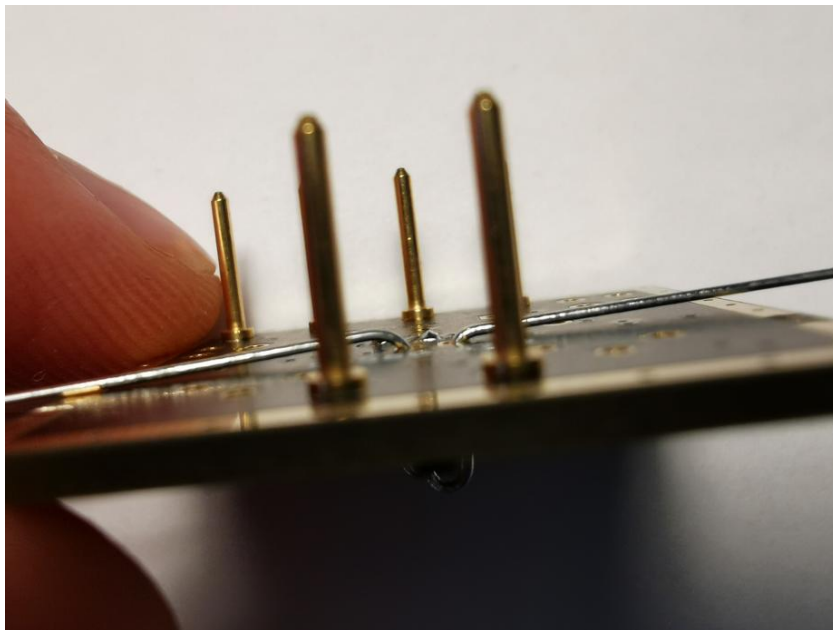
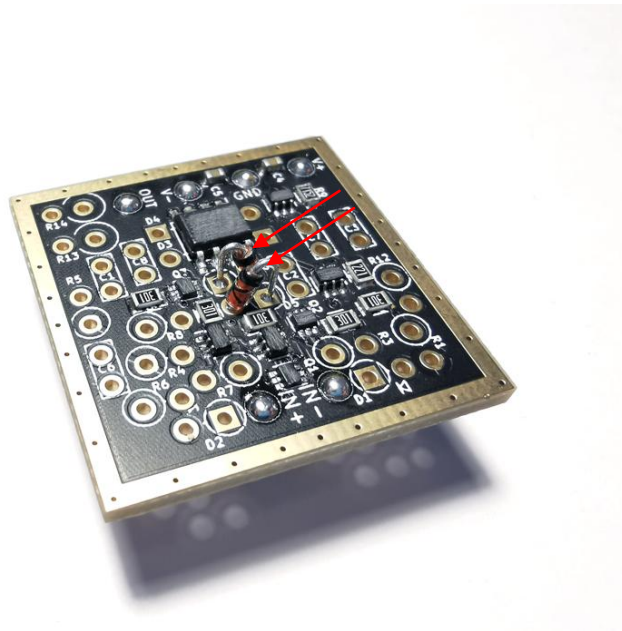
Take two diodes and bend the leads at the tip of the diode with the black band (cathode) like so



Insert the diodes into D5 and D6 as in the next picture. Then bend its leads as close to the underside of the PCB as possible, to get a tight fit.

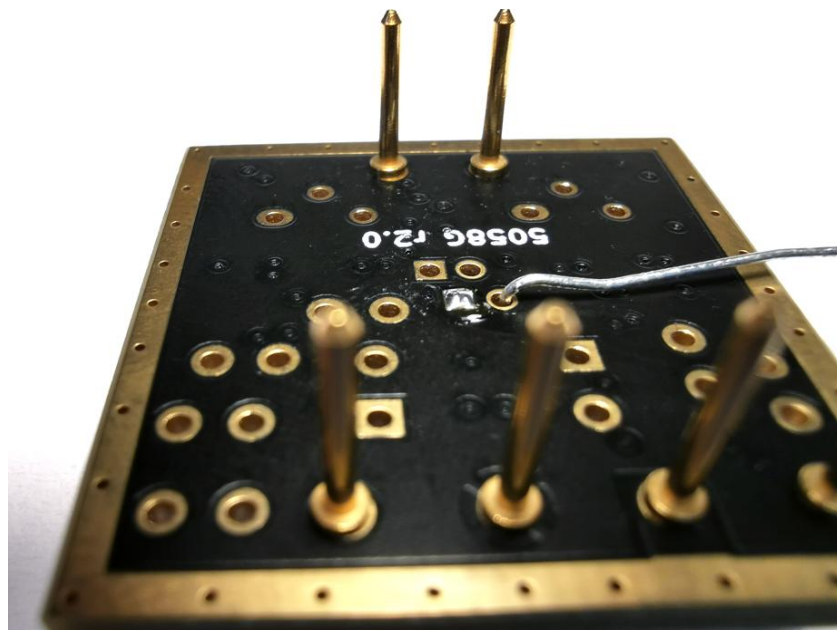
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 Warning: Make sure to make the black band of the diode face the white ring on the silkscreen (insert the diode exactly as in the picture)





Now clip the first lead in such a way, that the remaining lead overhangs and acts like an anchor for the part and keeps it nice in place, then solder it:



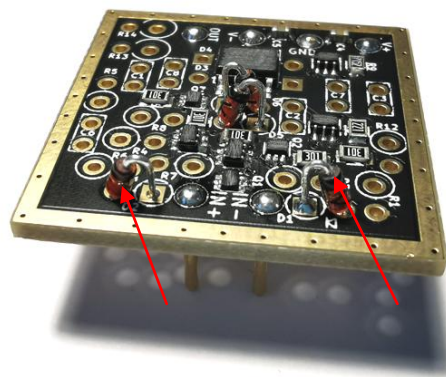
Make sure not to use too much solder.

Now clip the other side the same way and solder it. Use this approach for All following parts as well.



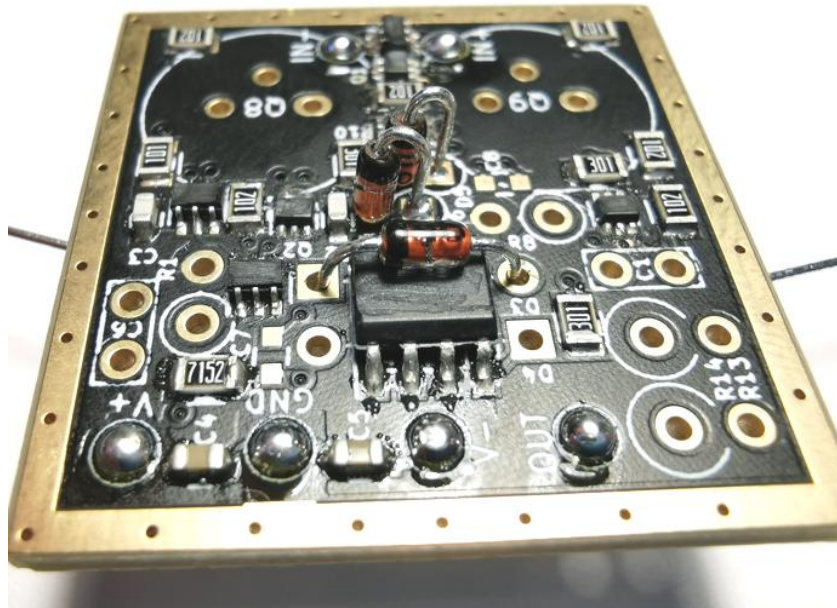


Now the next two diodes for soldering D1 and D2 at the front. Check the image below on how to insert them (black band towards the white silkscreen ring). They are located at the edge of the PCB. Solder them the same way as described before.



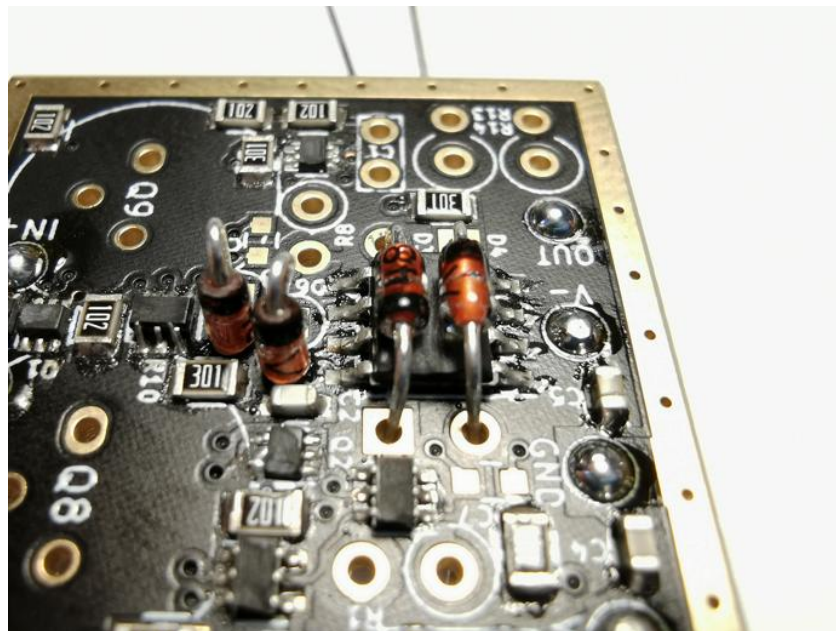
Now take the last two diodes for D3 and D4. They will be strapped across the large SOIC chip. To do this, bend both leads of the first diode so that it will fit into the D3 marking, across the chip. Make the black band of the diode face towards the next chip above. Make also sure, that the diode is strapped across one half of the chip and making contact with it. Solder it in the same manner as before and make sure the position and contact remains.

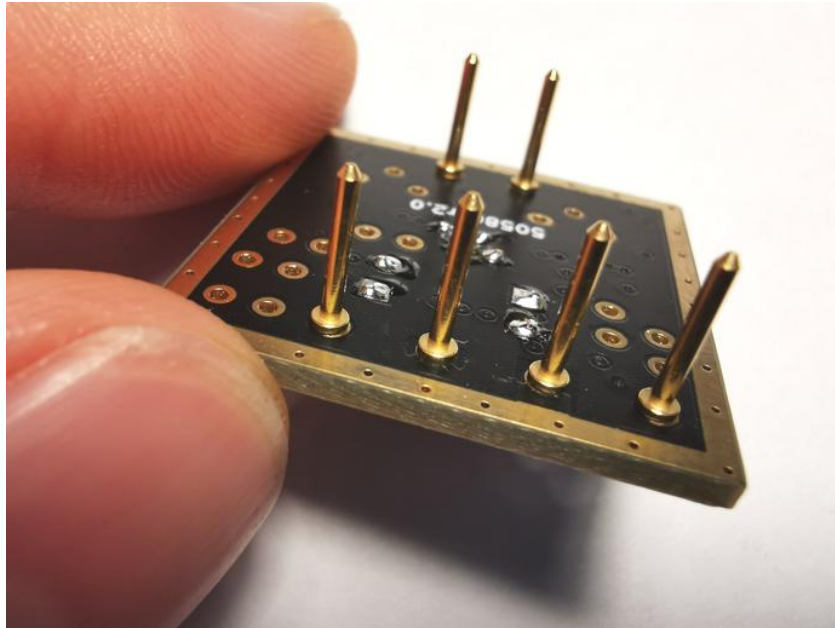
Note: The following pictures show the PCB for the 5058G OpAmp. These pictures are for reference for soldering the above mentioned diodes only (D3 and D4).



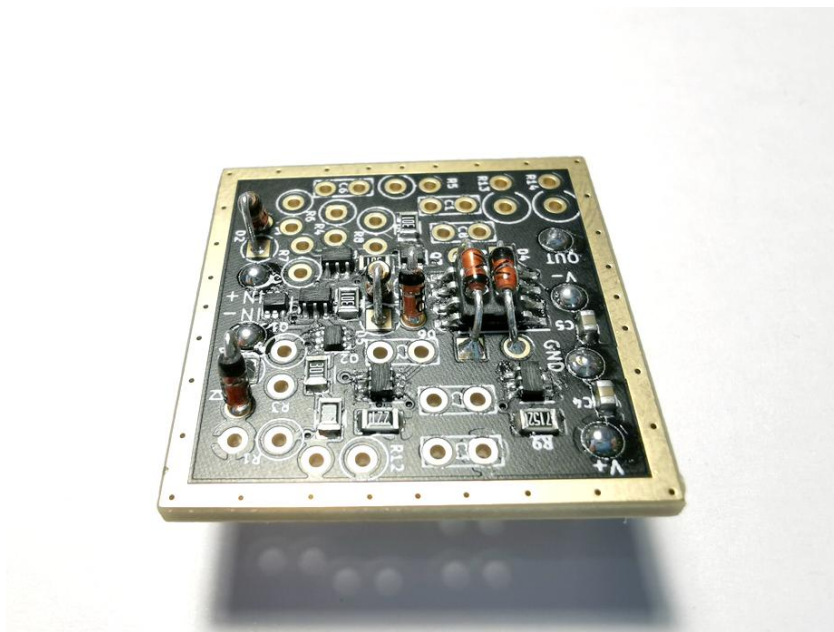
Now do the same thing for the last diode D4. **Make it face the other direction than D3 does!**

Place the second diode properly above the other half of the chip and make sure it has contact.



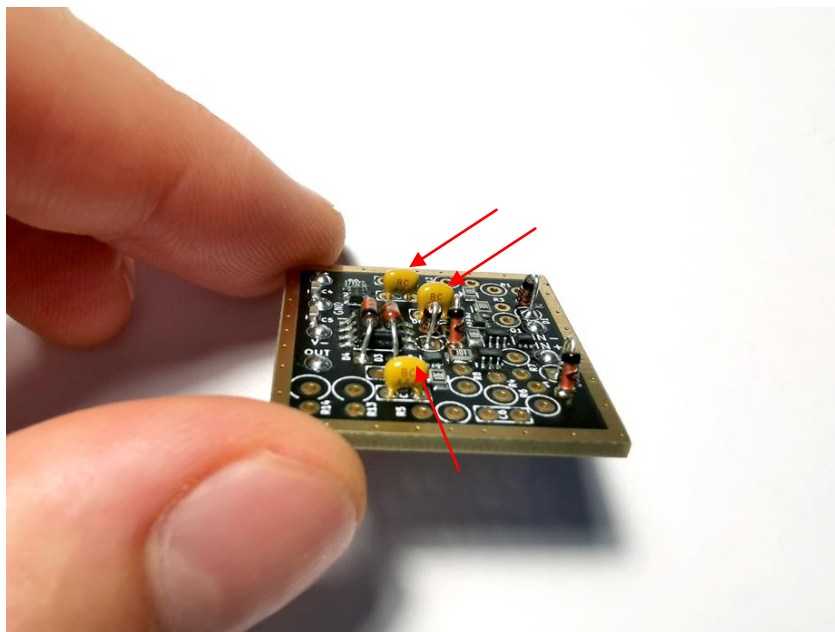


And this is how it should look now on the 3043 PCB:



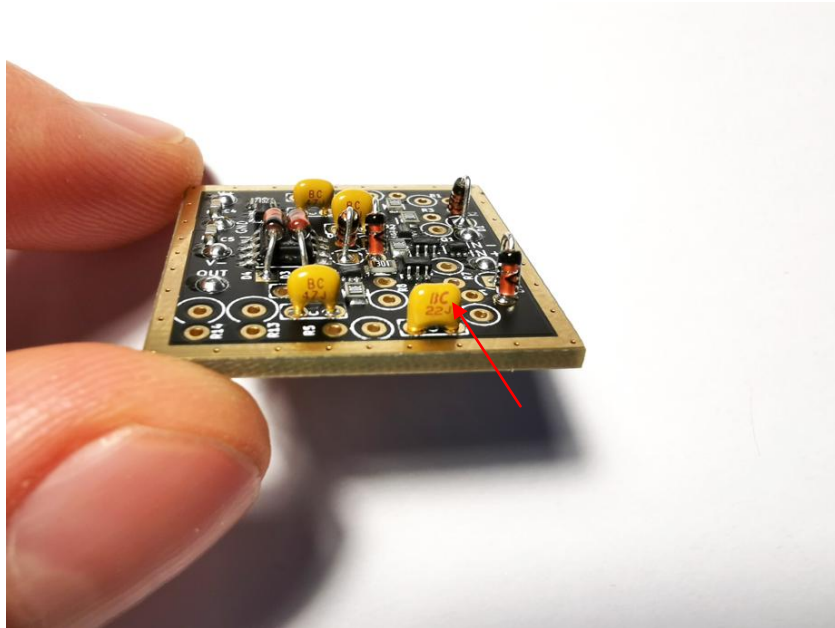
## Step 3 - Capacitors

First solder all the 47pF capacitors (C1, C2, C7, short leads). They are marked with 47J. On the PCB, the capacitors are all located around the diodes D3, D4, D5 and D6. Their orientation does not matter.

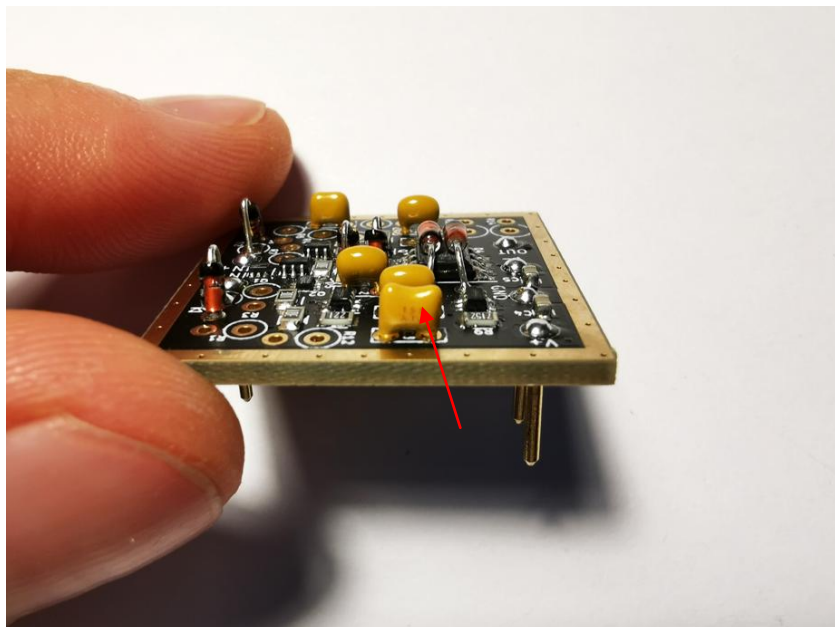


Then solder the 22pF (C6, short leads) capacitor. It's marked with 22J and it is located right next to the 47pF C1. Again, orientation does not matter for all the capacitors.

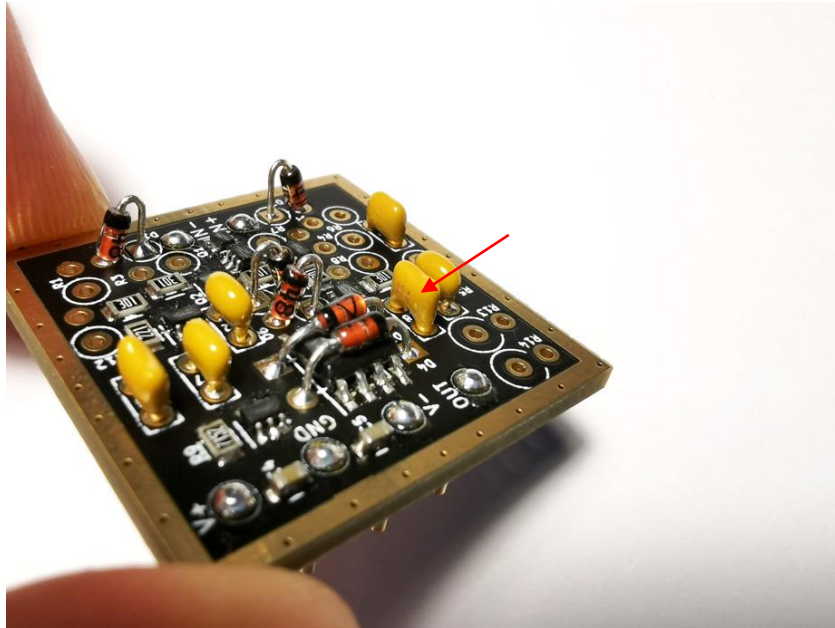




Follow up with the 150pF (C3) capacitor. It's marked with 151 and is located across the board from where the last 22pF was soldered.



Now solder the last capacitor, it's the 27pF (C8), marked with 270. The location is right behind the 47pF C1 again.

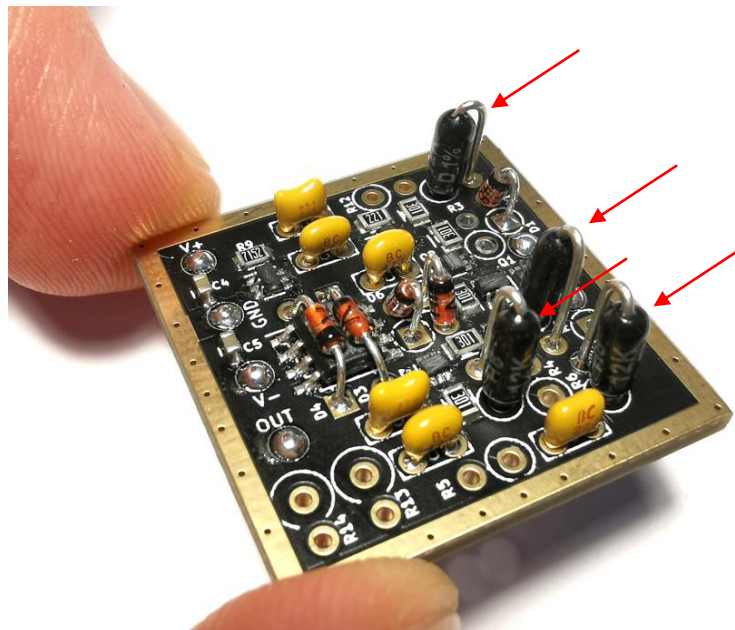


## Step 4 - Resistors

Prepare the 4 black 12k resistors (R1, R6, R7, R8) by bending one of the leads the same way as before with the diodes. The values are written on the resistors themselves. Make sure not to confuse the 12k and 1k2 writing!

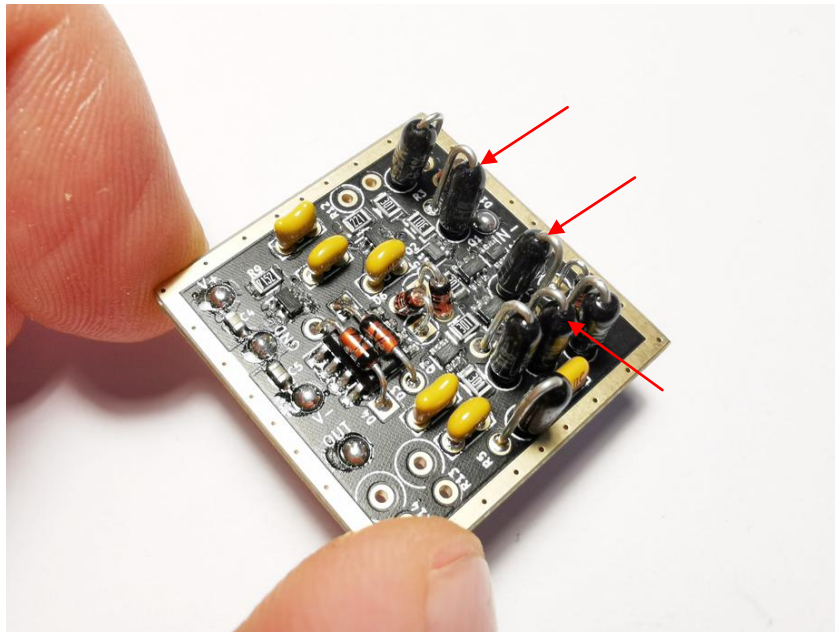


You can solder them in whatever order you like. Just make sure to solder them with the same technique for the leads as used with the diodes and capacitors. The build should look like this now:

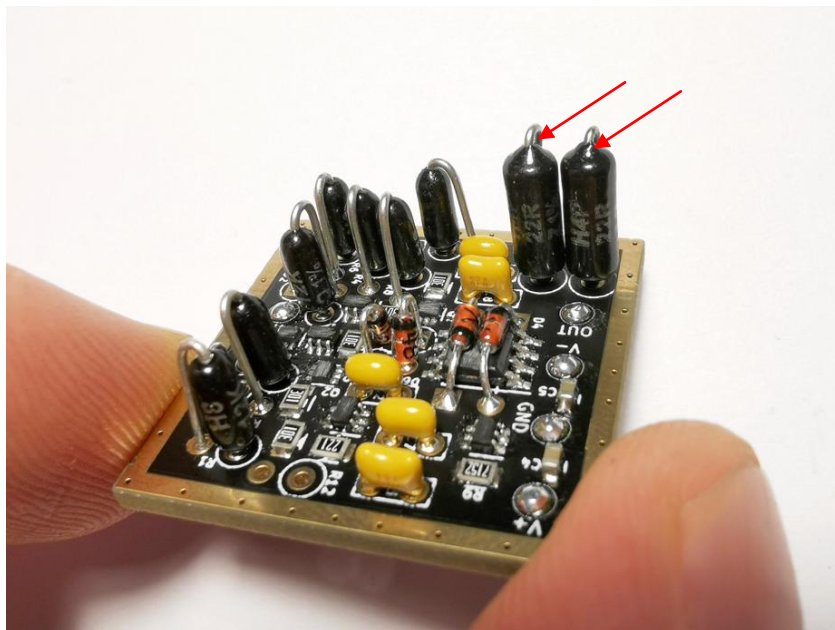




Continue with the 3 black 1.2k resistors (R3, R4, R5).



And finally, solder the remaining two big resistors (R13, R14). They are either black 22ohm in the original version or brown 10ohm in the enhanced version.



Note: Ignore the unsoldered R12 in the bottom left of the picture. You will not find this in your version you are building.



## Step 6 - Final check

There is not much to mess up in this build:

Most attention needs to be paid on the orientation of the diodes, are they soldered in correctly?

Are the resistor and capacitor values placed correctly on the board?

Are the solder joints well soldered? Is there any excess of solder? Are there any solder bridges?

## Step 7 - Cleaning

After everything is done, give the back of the board a good scrub with isopropyl alcohol and a brush (or toothbrush).