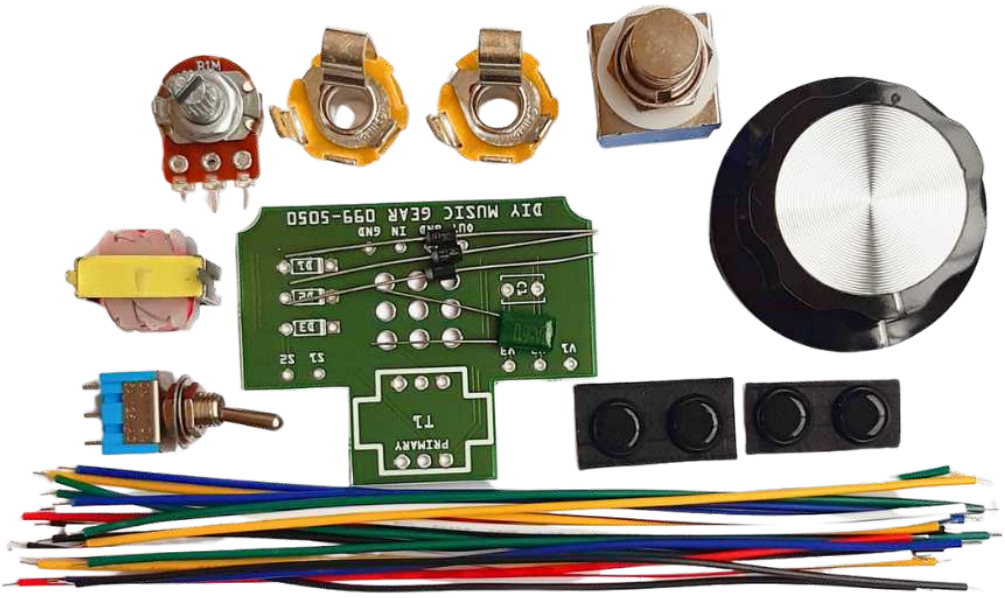
DIY MUSIC GEAR

How to build the

Green Passive Booster

Step-by-step

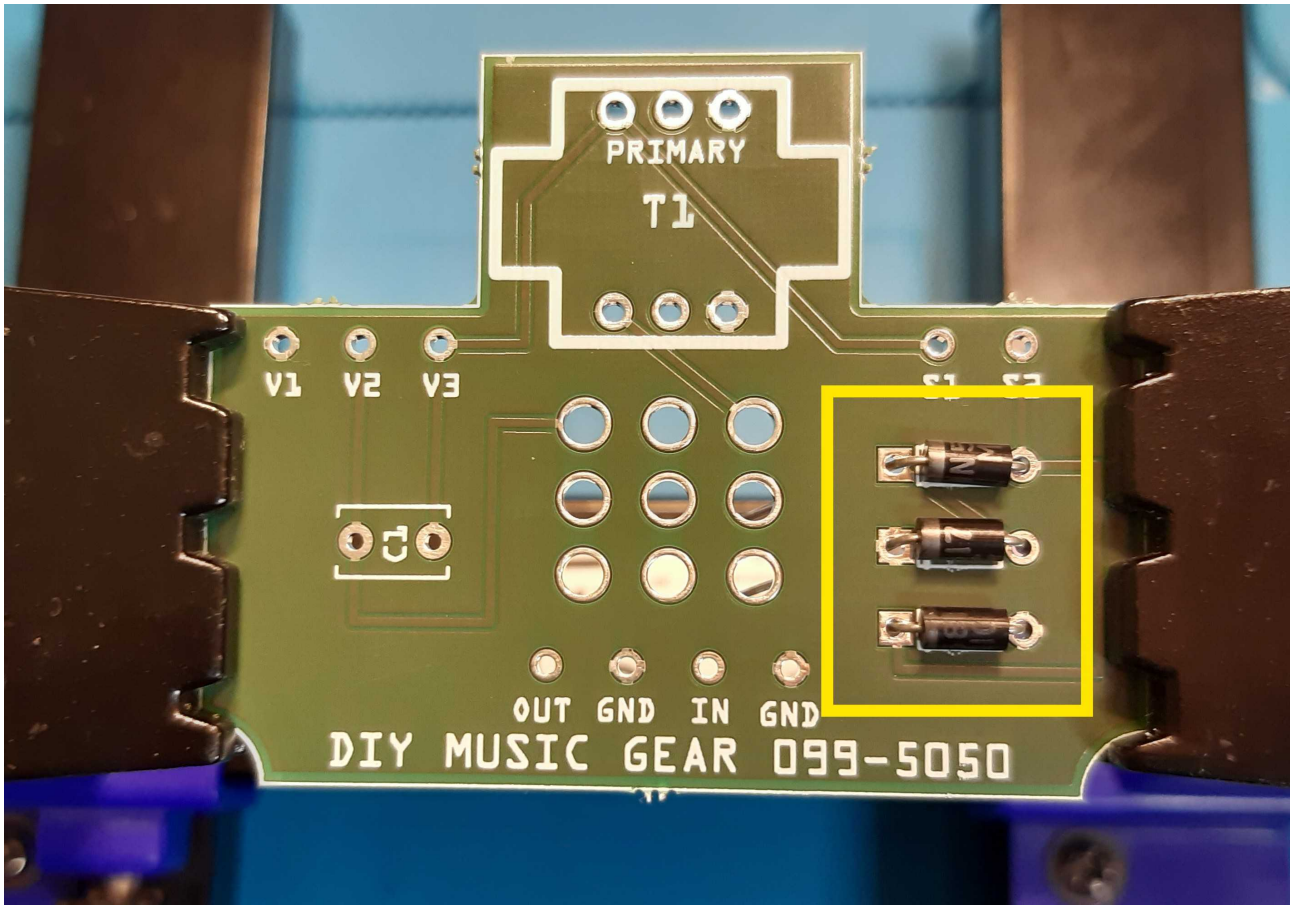


Step 1: Prepare for installation

Read the **Installation-Instructions-099-5050** document carefully. All nessesarry information can be found in this document.

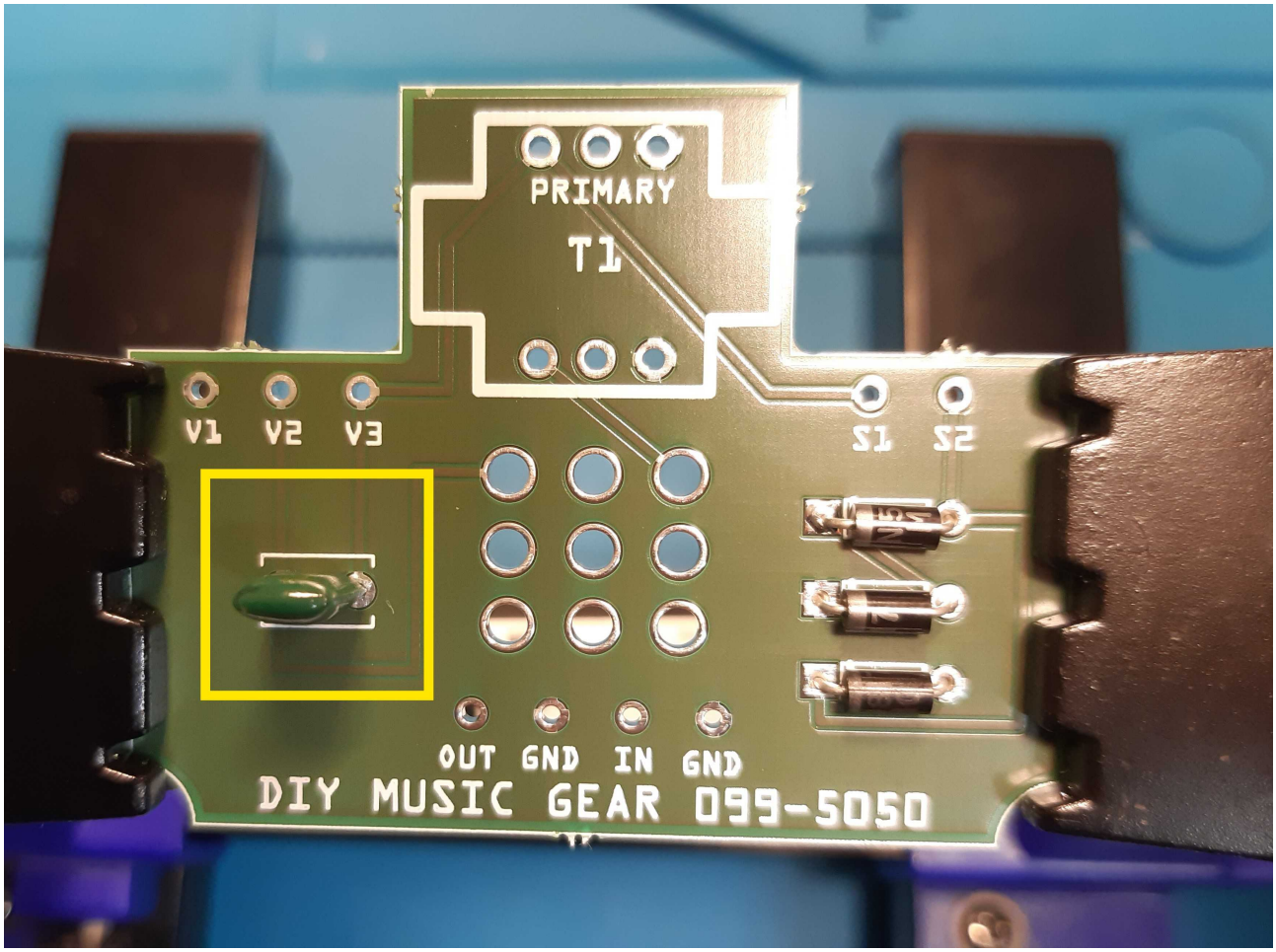
Step 2: Diodes

First step is to solder the diodes to the PCB. They are directional and will not work if they are facing opposite, so pay attention.



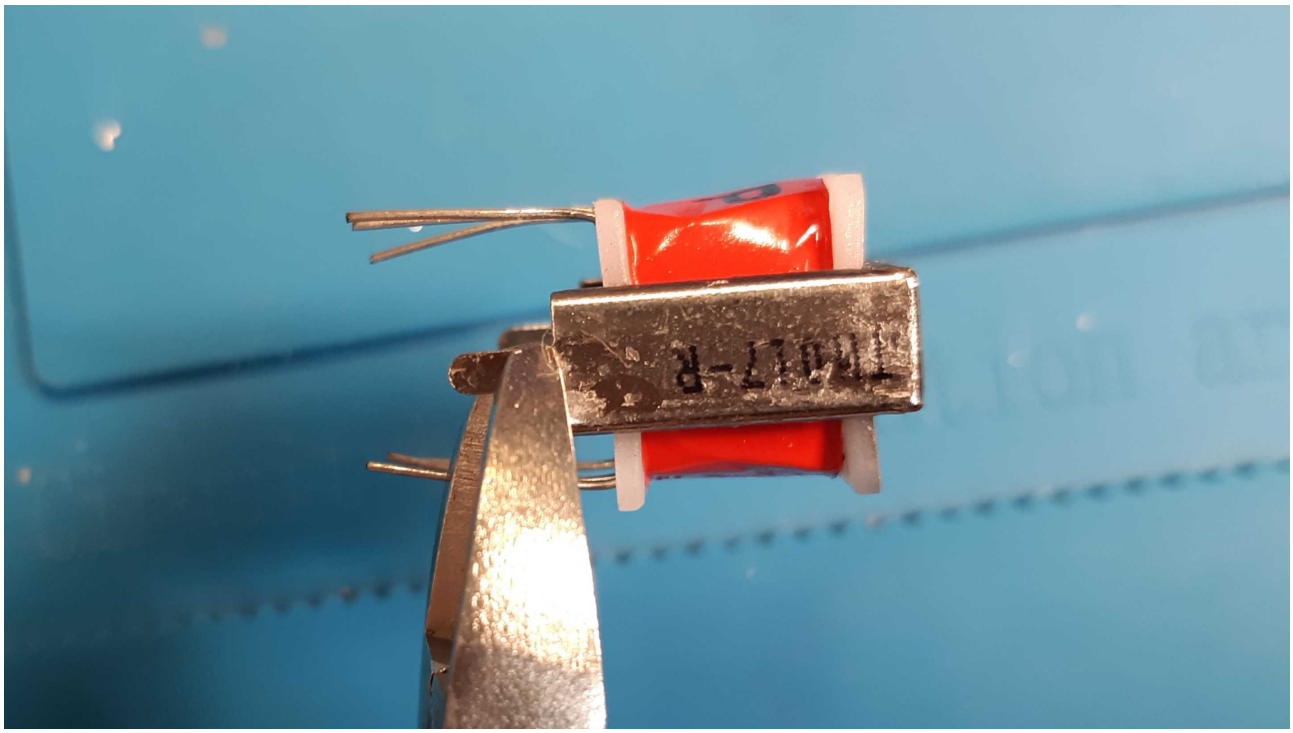
Step 3: Capacitors

Next step is to solder the capacitor. It is non-directional and can face in both directions. It should look like this:

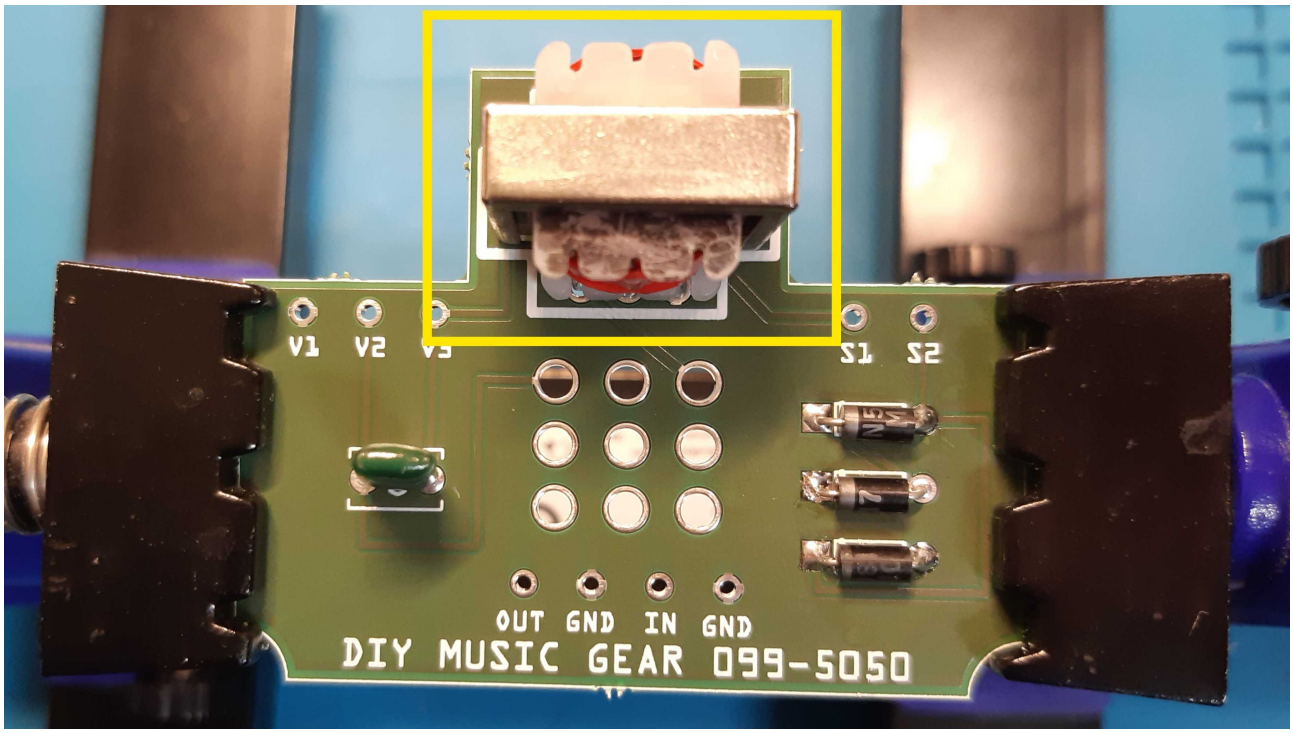


Step 4: Transformer

Now it is time to solder to transformer. You need to cut off the side brackets for it to fit onto the circuit board.

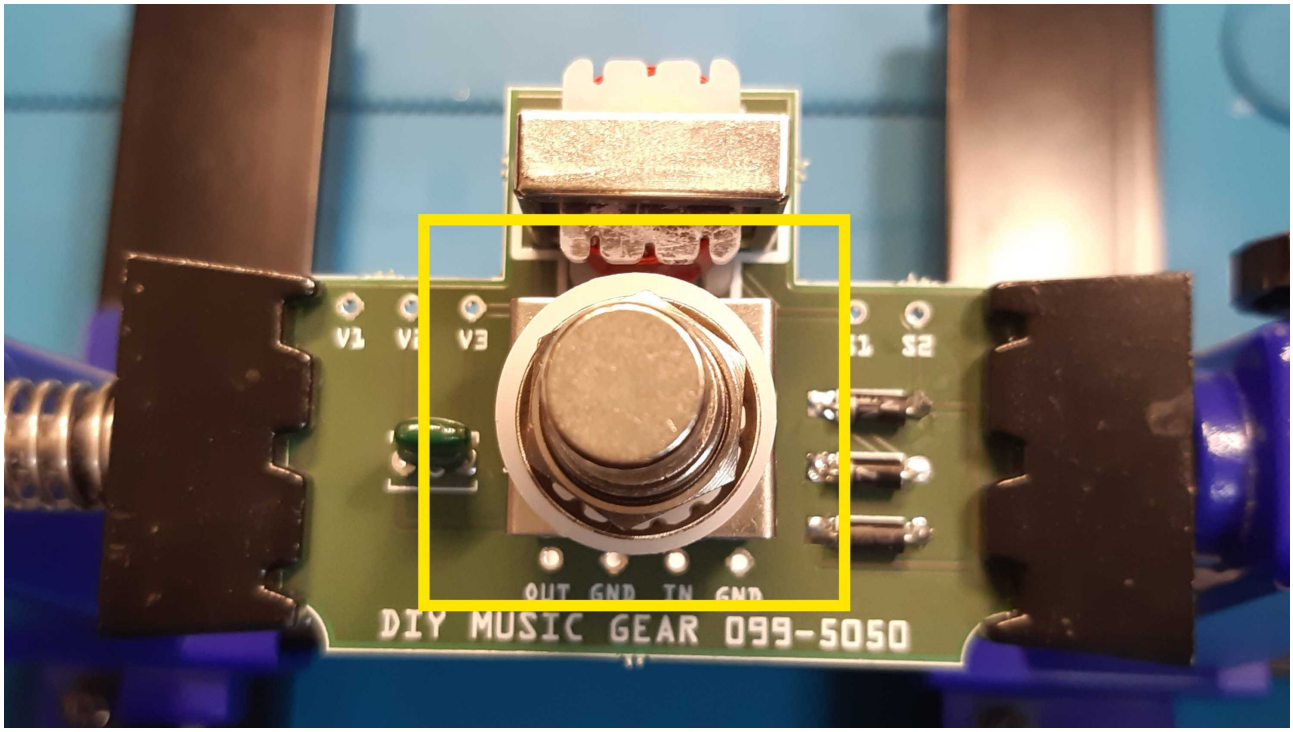


Make sure to orient it correctly before soldering it in place. The side marked "P" must face the primary side of the PCB.



Step 5: Footswitch

The final component on the circuit board is the footswitch. It only fits one way, so you can't go wrong. Take care to align the footswitch so that it sits straight and level. Otherwise, the circuit board will be crooked when mounted in the enclosure.

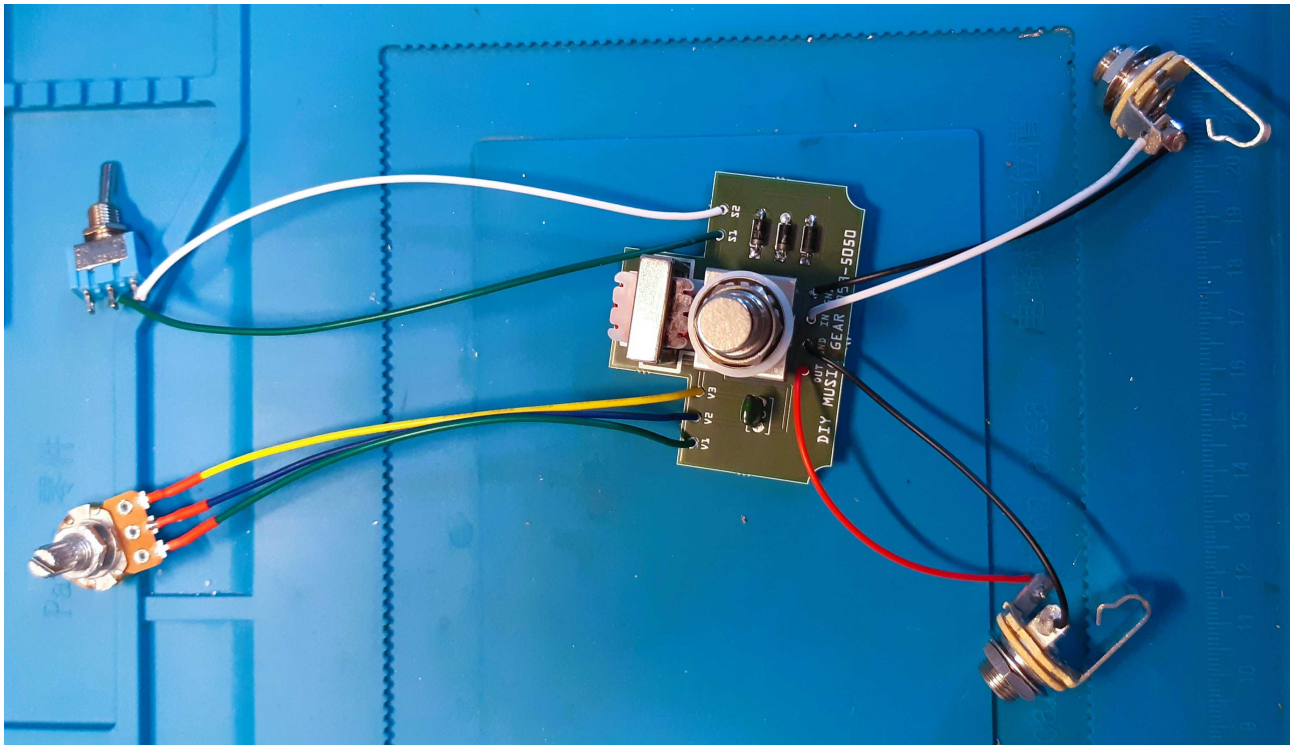


Step 6: Wiring

Next is the wiring between hardware parts and PCB. It should be staight forward, if you follow the **Installation-Instructions-099-5050** document.

We highly remommed to use heat shring tubing on every connection points to awoid any short circuits.

Here is a picture of all the wire connections:



Step 7: Quick test

Before you mount everything in the enclosure, do a quick test by connecting the circuit into an amp, to se if it works as expected. The signal chain should be something like this:

> Instrument --> Buffer/Buffered Pedal --> **Green Passive Booster** --> Amp

If anything needs adjusting, do it now. It is much easier than doing it after installation in the enclosure.

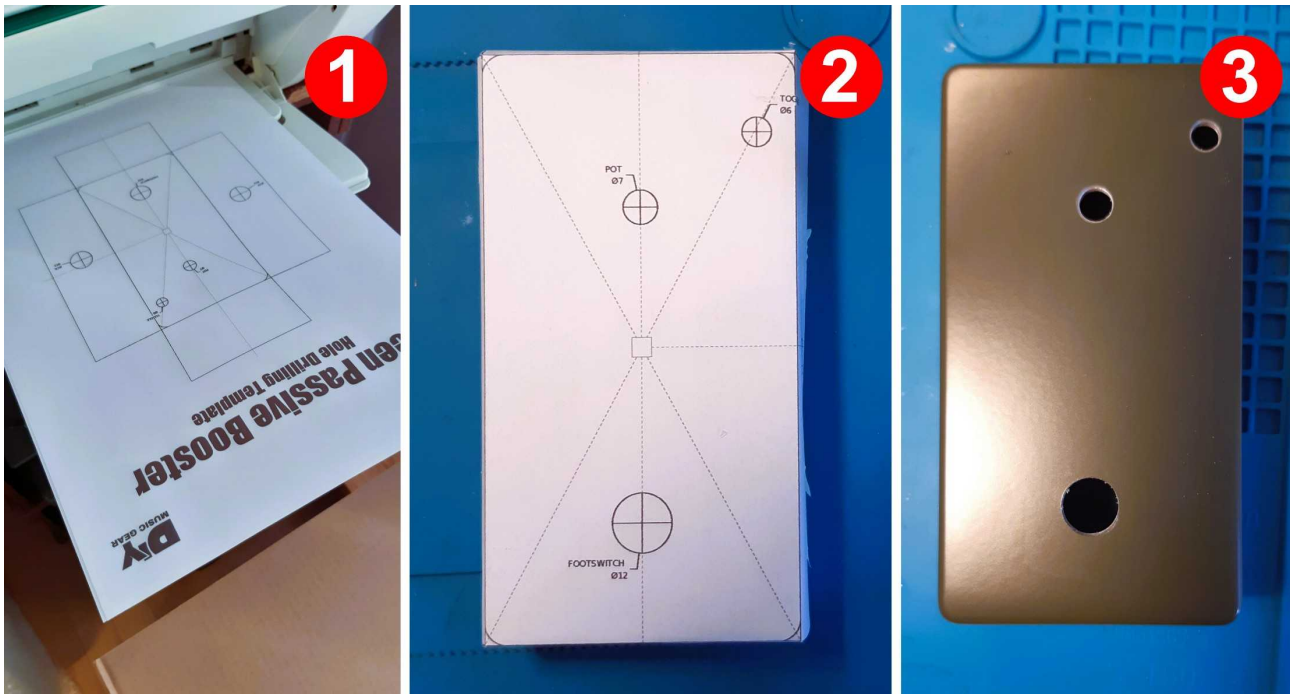
Complete the build

If you test out your pedal and everything works, congratulations!
It's rare for a DIY pedal to work perfectly on the very first attempt, so well done if you actually get a signal and the effect works as it should. You can finish your pedal off by mounting alle the parts, tightening all of the nuts, attaching the backplate, put on the rubber feets, then add the big black knob.

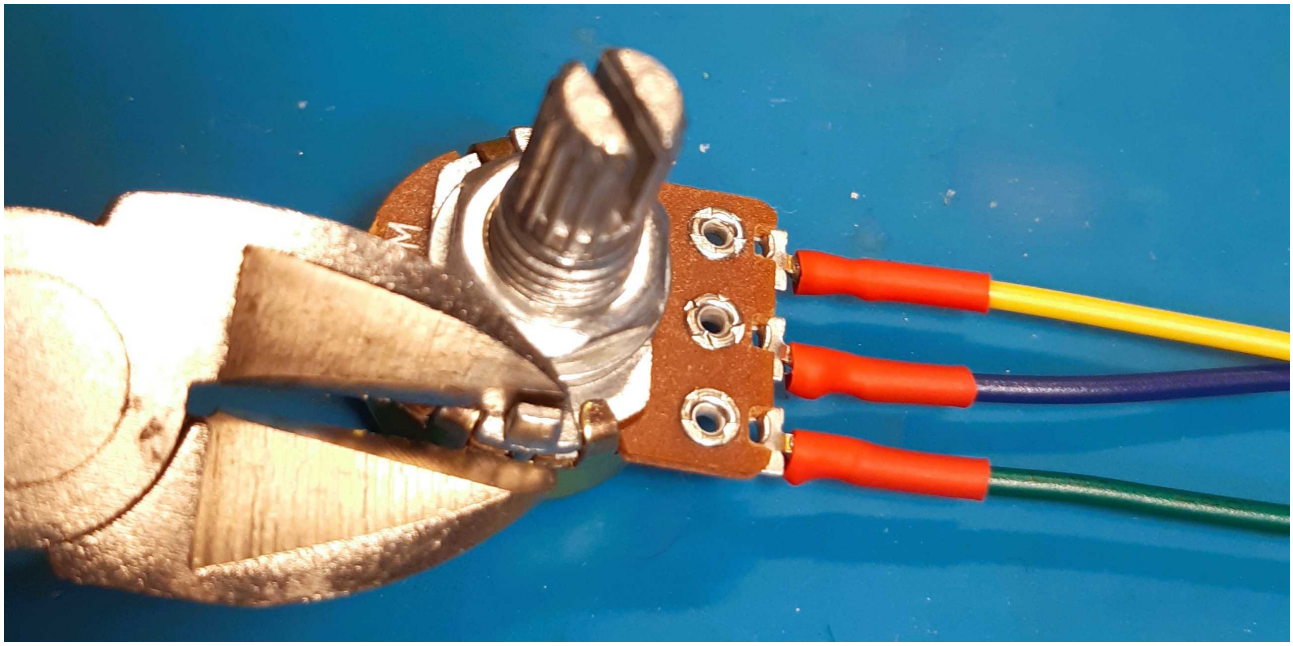
Step 8: Installation in the enclosure

Its time for the final installation in the enclosure. But first you need to drill holes.

1. Print the **Hole-Drilling-Template-099-5050** document. Be sure that it is in 100% size during printing.
2. Cut out the template and tape it onto the 125B-style enclosure. It should fit perfectly.
3. First, drill the holes using a small-diameter bit. Be as precise as you can. This will help guide the larger bit. Then drill the holes. We strongly recommend using a spiral drill bit. It produces clean, round holes without splintering.



Before you mount your potentiometer, there’s a little positioning nub you need to cut off. These nubs prevent the potentiometers from sitting flush against the pedal enclosure. So if you don’t file them off, you’ll end up with crooked knobs.



Now mount all the hardware in the enclosure, attach the knob to the potentiometer, screw on the lid, and apply the rubber feet. It should look the this:





Congratulations, you're done.

Troubleshooting Problems With Your Kit

If you followed the instructions in this guide perfectly, you should have avoided a lot of issues other people experienced due to incorrect wiring. It can be really frustrating to plug in a DIY pedal and it not work properly (or at all). So if your pedal doesn't work straight away, don't panic or get frustrated. You will solve the issues. It will just take some time to locate the problem.

Here is a step-by-step list of what we recommend to try and find problems with your pedal:

1. Make sure the cables are plugged in the correct way and your amp and guitar are properly connected with appropriate volume levels (this might seem obvious, but this is often the cause of problems)
2. Check the pedal's power is turned on (or battery connected)
3. Look through your pedal's wiring and compare them to the diagrams in this guide
4. Look for any possible shorts or bridges between solder joints
5. Check voltage and continuity throughout your circuit using a multimeter
6. Build an audio probe and use it to test your entire circuit one component at a time

Here are some things you can check with your multimeter to try and find any problems:

- Voltage level of battery used
- Voltage throughout your circuit
- Continuity between all ground connections

Here are some other tips based on the type of problem you're having:

- If you get no signal at all, check the wiring on your input and output jacks. The signal isn't reaching the output jack, so find where the connection fails
- If you're getting a loud humming sound but no signal (pedal on or off), the wiring on the input/output jack may be reversed (this was the problem I encountered)

Almost all issues in general with building pedals comes down to problems with wiring something incorrectly or bad solder joints. Focus on those areas to identify the problem.