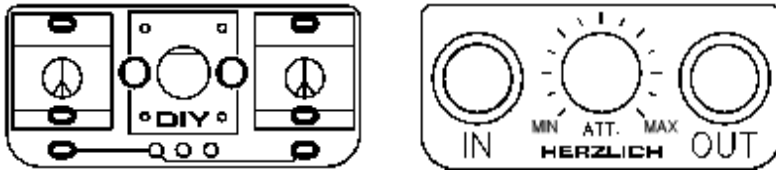# HERZLICH
DIY Flatliner Build Guide

Safety first!

Building your own electronics and musical instruments is a safe and enjoyable hobby, but safety always comes first. When working on this project, please take adequate precautions when soldering and using hand tools. This includes:

- Wearing eye protection when soldering and using side cutters.
- Soldering in a well-ventilated area.
- Placing your soldering iron in secure position when not in use.
- Washing your hands after handling leaded solder.

You will need:

A soldering iron, solder, side cutters, eye protection.

Left: bottom PCB, component side
Right: top PCB

Step 1: 3,5mm jacks

Identify the two 3,5mm jacks – these will go on the bottom circuit board placed so that the pins align with the silkscreen diagram, one in each side. Insert them, and carefully flip the PCB over, so the board rests on the two jacks. Now, solder one pin on each jack, while applying gentle pressure to the circuit board. Inspect the board: the two jacks should be flush and level with the board. If they are not, reflow the joint of the jack in question again, applying gentle pressure. Once they are both in the right position, solder the rest of the joints.

Step 2: Potentiometer

Place the remaining component – the potentiometer – in the holes as indicated by the silkscreen diagram on the PCB. You may need to bend the legs on the side inwards slightly, and sometimes the ones on the front must be gently adjusted, too. It may take gentle force to press into place, but be careful not to push anything in while misaligned, or you will simply bend the legs. If you do bend the legs, don't worry, just try to bend them back in shape and try again more carefully.

Once it is securely in place, inspect it to make sure it is sitting flatly and evenly on the board. Using your environment, a helping hand, a pair of pliers or whatever else you have nearby, balance the board upside down again, and solder the pins. If you accidentally join the pins with solder, clean your soldering iron and heat the pins again, most of the time the solder will flow right into place.

Step 3: Assembly and finish

Unscrew the nuts on the jacks, and place the top board over your assembly, ensuring that it is correctly aligned. Once in place, put the nuts back on and tighten – tightening with your fingers is fine, be careful if using pliers, as you may scratch your board. Finally, use your side cutters to snip the pins on the underside of the bottom board, as close to the board as you can. If you would like, you can flow a bit of solder over the cut pins to smooth out the joints, making the module pleasant to handle. Don't forget to clean the board according to the instructions on your solder.

All that remains now is to enjoy your new attenuator! If something doesn't work, double check your solder joints and reflow them if necessary.

Happy patching!

If *everything* has gone wrong, contact me at *support@herzlich.technology*