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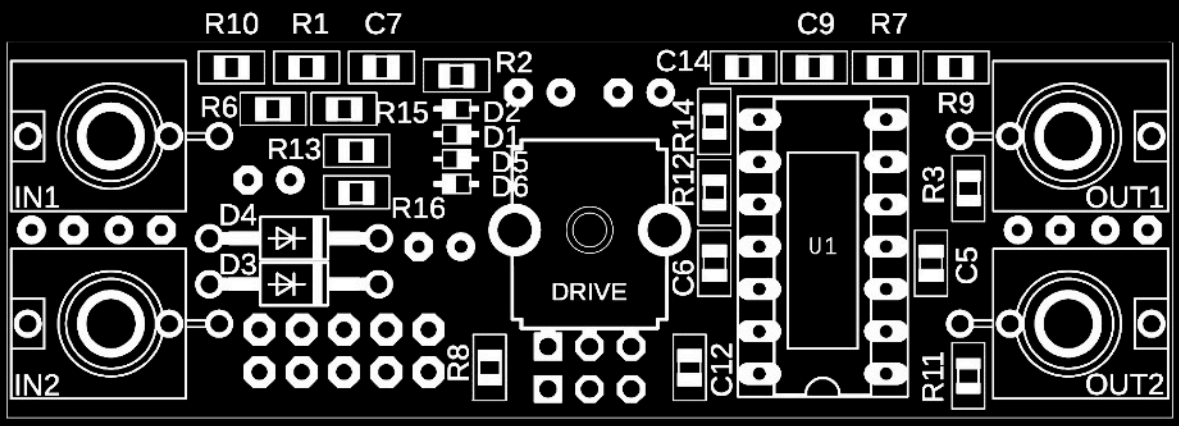
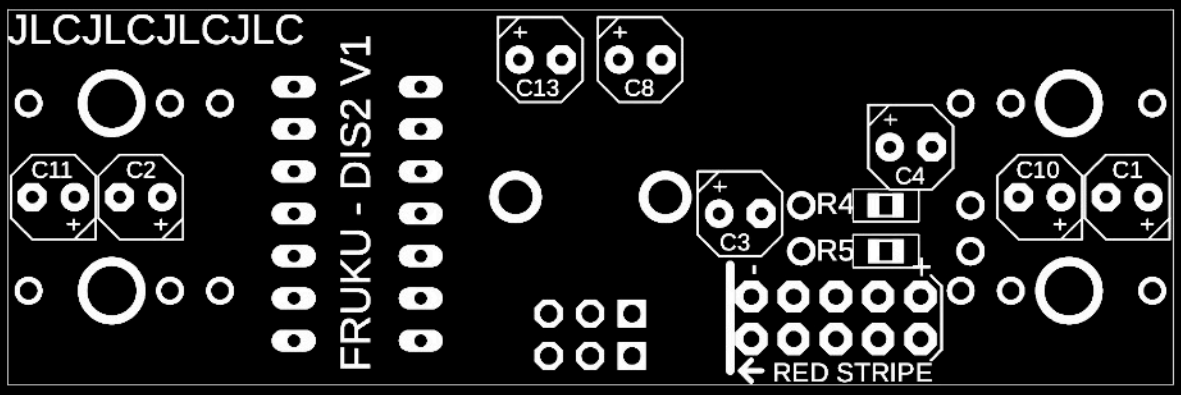
/// Dis2 Build Guide

Thank you for choosing one of my products! Please follow this build guide thoroughly, even if you are an experienced DIYer. The order in which components are placed on the PCB is meant to make the assembly process as easy as possible.

Disclaimer:
Assembly is done entirely at your own risk. Fruku cannot be held responsible for any damage, injury, or malfunction that may occur during the build process.

PCB for reference:



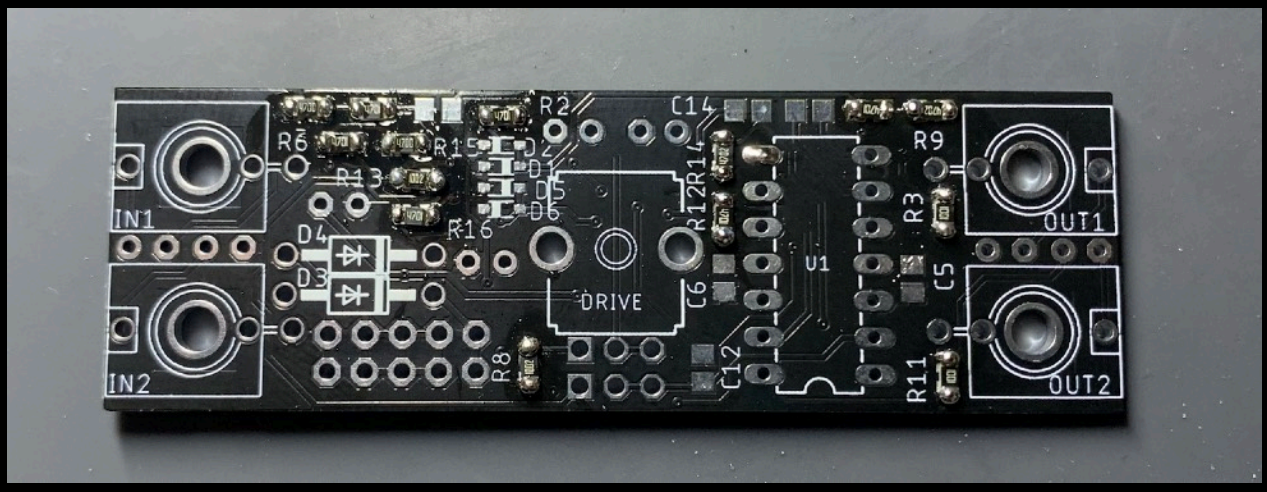


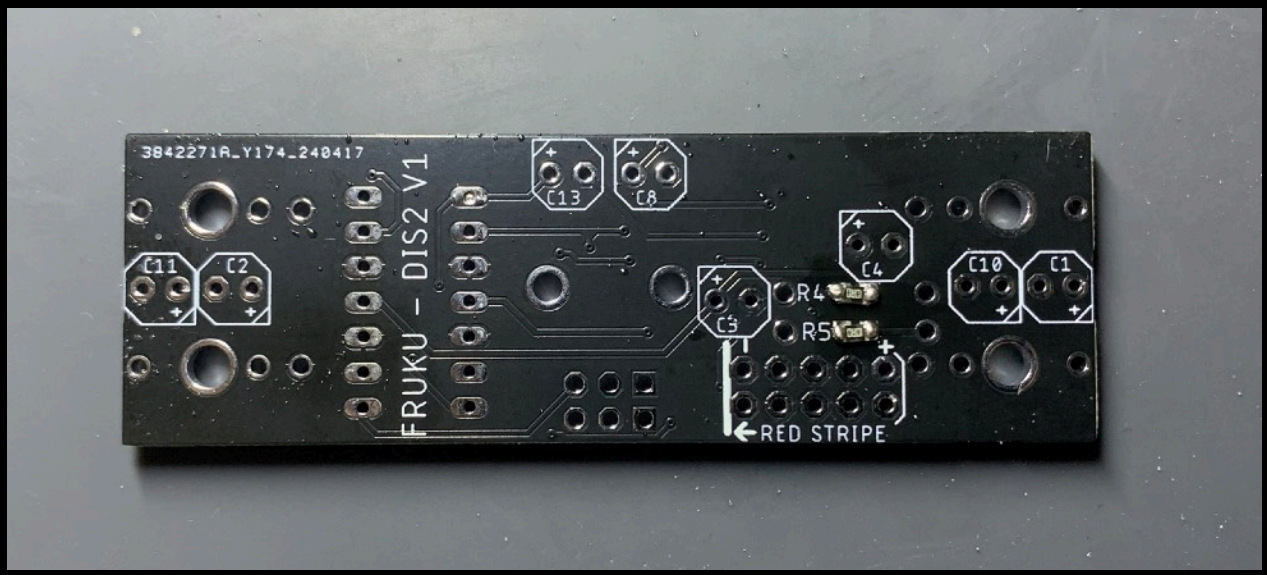
/// Resistors

Start with soldering the resistors, check the **BOM** file, there you will find which resistor values correspond to the part numbers written on the PCB.

The easiest way to solder SMD parts is by first adding a small amount of solder to one pad of the footprint on the PCB. After doing so you can bring the part in place (with a pair of tweezers) and lightly press down on the part and touch the junction between the part and pad with a clean iron tip. You should feel the part slide into place. Ideally it would lay completely flat, but this isn't an absolute requirement. Now you can solder the second junction between the part and PCB.

After soldering the resistors your board should look like this:

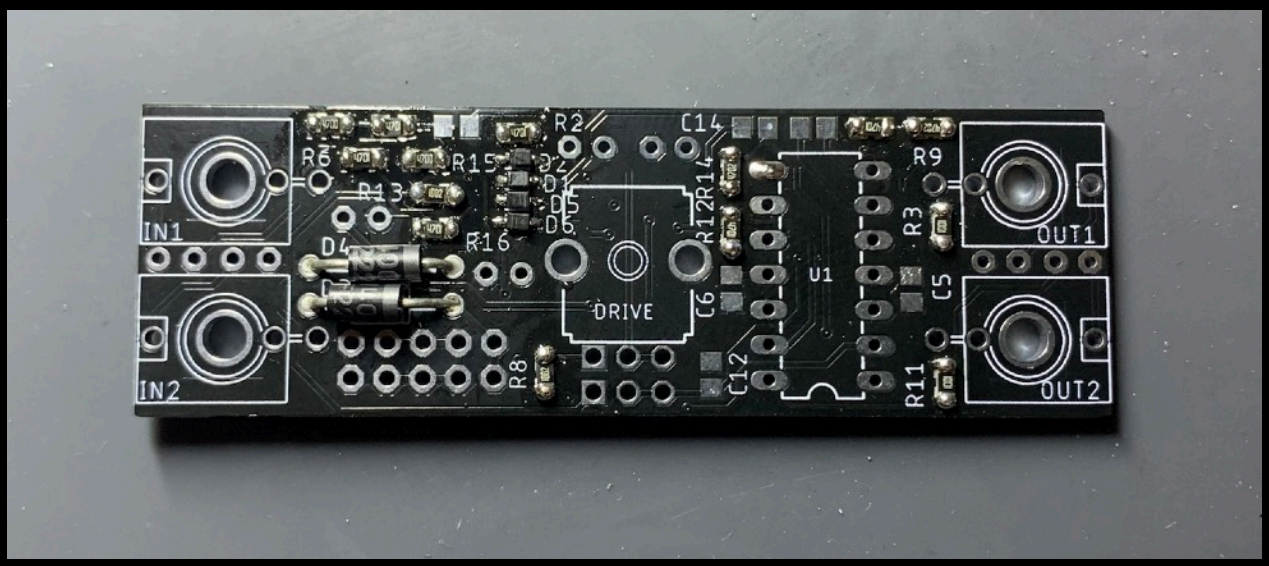




/// Diodes

Now solder the diodes, look at the **BOM** for the values and placements. Diodes are **polarized** so please take notice of the **positive** and **negative** side.

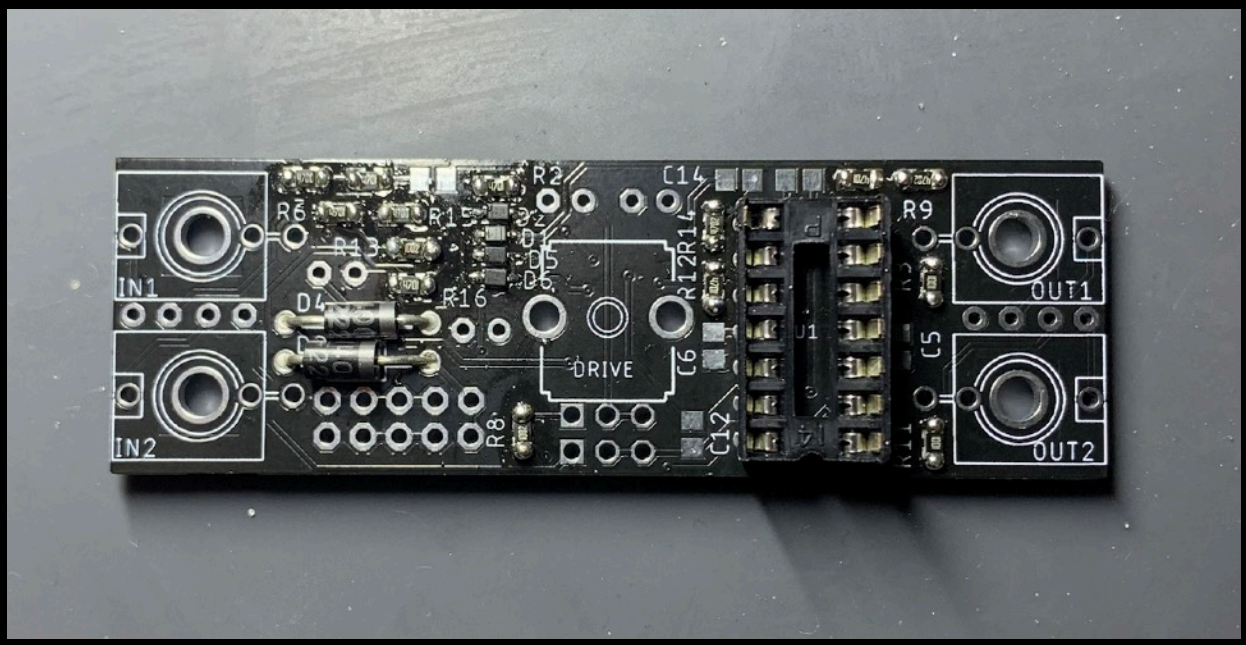
After soldering the diodes your board should look like this:



/// IC Socket

Solder the 14 pin IC socket to **U1**. Take care to orientate it properly. The **notch** on one end should match the silkscreen on the PCB. First solder just 2 opposite pins and check if the socket is aligned flat to the PCB. If not, slightly press down on the socket and reheat the pins, the socket should slide into place. Now solder all remaining pins. Leave the IC **out** for now.

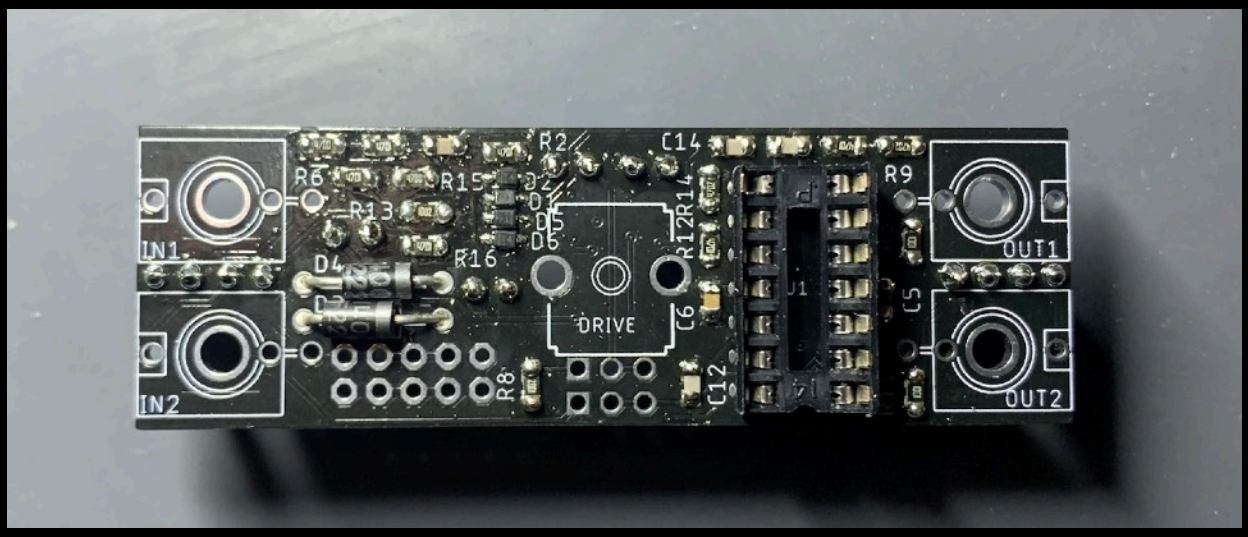
After soldering the IC socket your board should look like this:

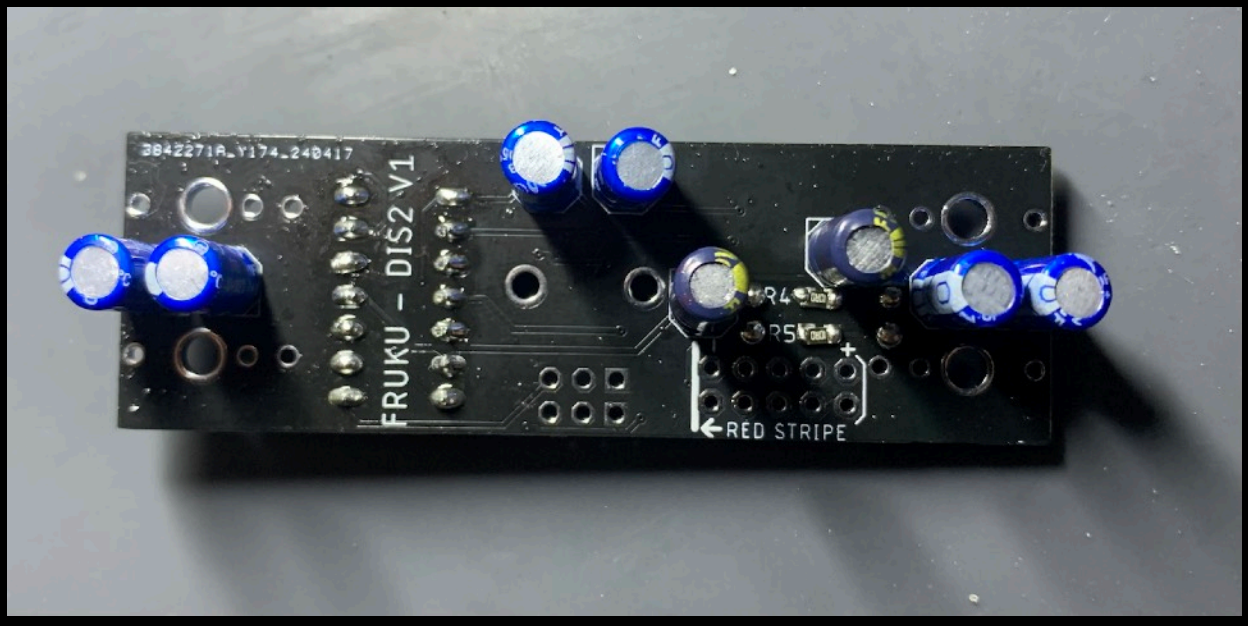


/// Capacitors

Now solder the capacitors, look at the **BOM** for the values and placements. Please take notice of the **positive** and **negative** side with the **electrolytic** capacitors. The electrolytic capacitors need to be placed on the **bottom** side of the PCB.

After soldering the capacitors your board should look like this:



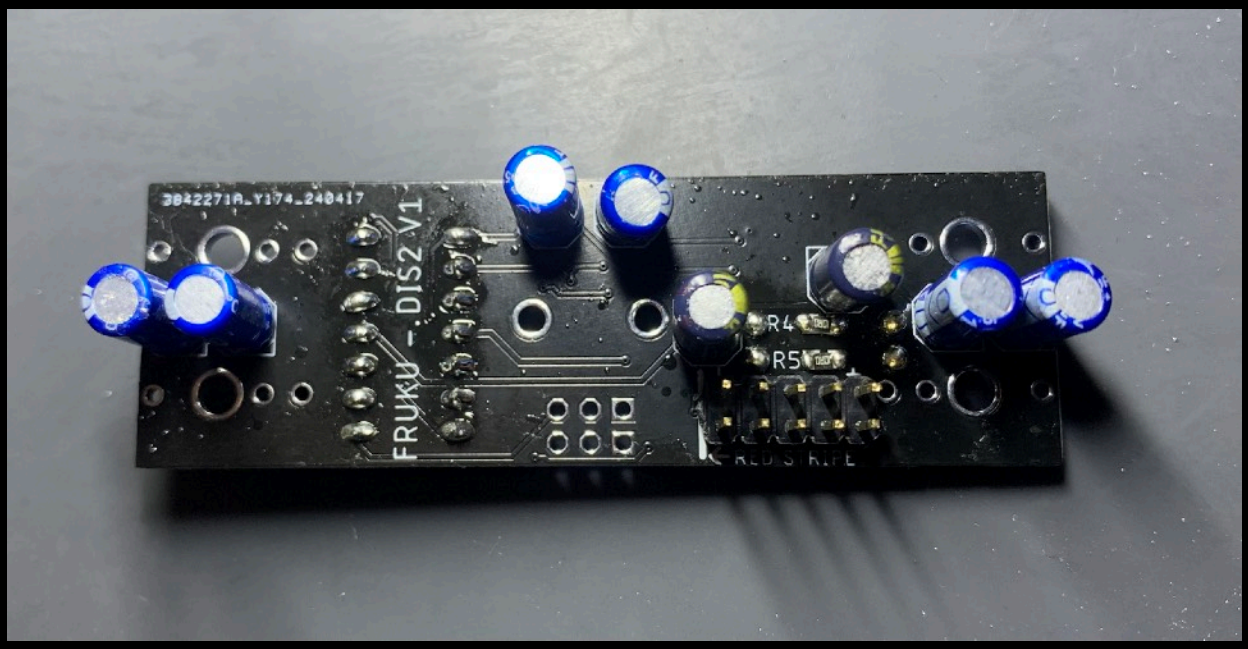


/// Power Header

Insert the 10 pin power header into place.

Solder one pin and check if the header is aligned flat to the PCB. If not, slightly press down on the header and reheat the pin, it should slide into place. Now solder all remaining pins.

After soldering the power header your board should look like this:

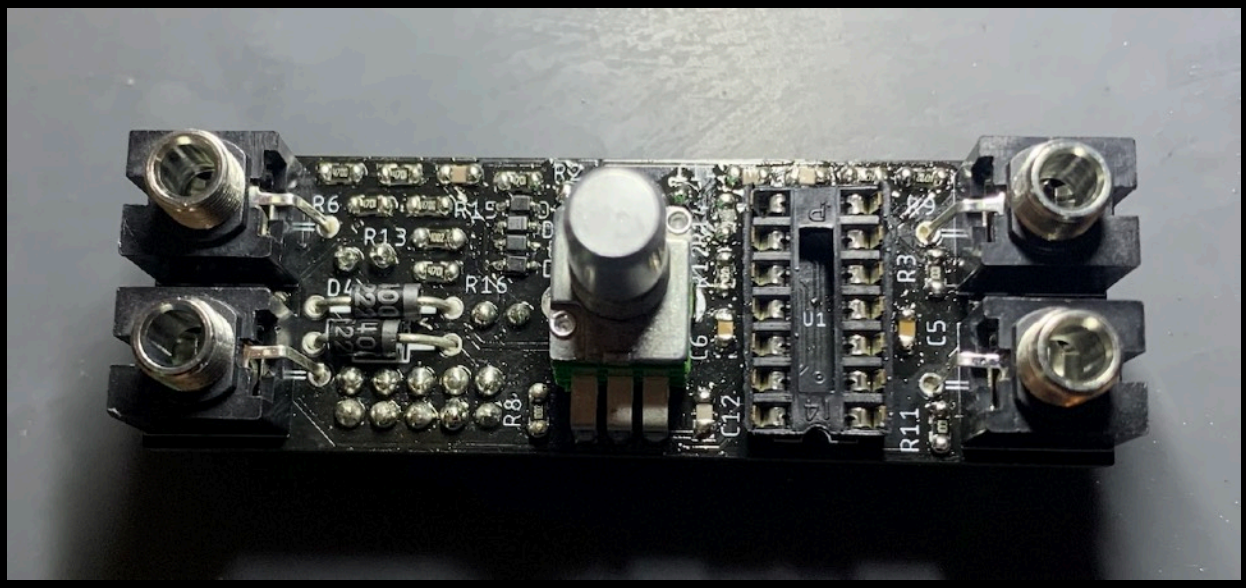


/// Jack Sockets & Potentiometer

Insert the jack sockets and the potentiometer on the top side of the PCB. **DON'T** solder yet! Now place the front panel over the jack sockets and potentiometer, use the two nuts from the jack sockets to hold the front panel in place.

Now solder the jack sockets and potentiometer.

After soldering the jack sockets and potentiometer your board should look like this: (front panel removed)



/// IC

Take the IC out of the foam. Usually the IC doesn't have its legs bend far enough to fit in the socket, so bend the legs to **90** degrees using a **flat** surface.

Then insert it while taking care that the **notch** matches the IC **socket** and **silkscreen** on the PCB. Press the IC firmly into the socket.

/// Front panel

Now place the front panel over the jack sockets and potentiometer and use the nuts from the jack sockets to hold the front panel permanently in place.

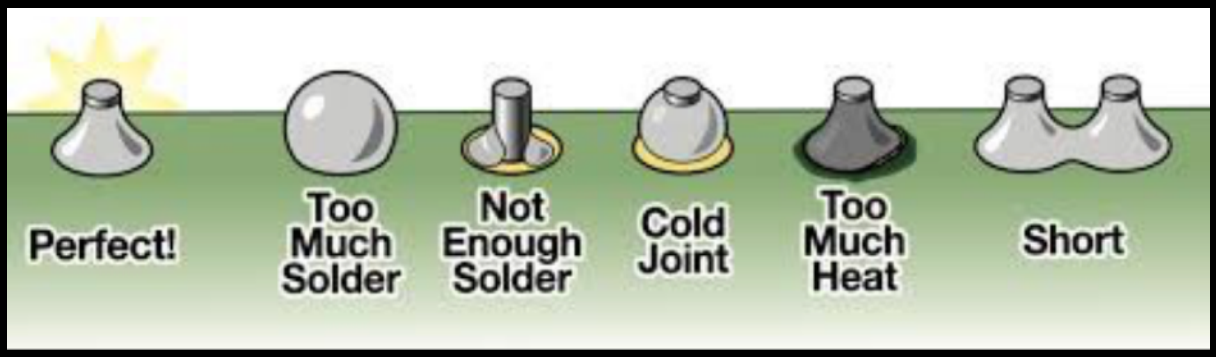
/// Testing

As a last check, look over the PCB and check the soldering, check for shorts and polarity.

Insert the power cable (red stripe **down**) and connect it to your modular system. Turn on the power. Check if nothing blows! If all is well, proceed: **Patch** :)

/// Troubleshooting

If the module does not work, check the **orientation** of the IC, electrolytic capacitors and diodes. Check your **soldering**. It should be perfect, like in this picture:



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