THONK SYNTH τ04 CAS

CASCADING UTILITY MIXER

Eurorack DIY Kit
Build Instructions

OVERVIEW

For the most recent version of this document please visit

https://www.thonk.co.uk/shop/**thonk-synth-t04-cas-kit**/

This document should be used in conjunction with the relevant user manual.

All Thonk kits are sold under our standard Terms and Conditions - http://www.thonk.co.uk/faq/

DIY INSTRUCTIONS

This document gives detailed instructions that assume you have purchased a complete kit from www.thonk.co.uk. It also assumes no previous knowledge of electronics. To learn to solder try http://youtu.be/l_NU2ruzyc4 and the **Adafruit guide to excellent soldering** – http://bit.ly/1l77tF4

Watch and understand that whole YouTube video! If you're not achieving the results shown in the video then you need to buy new tools or seek advice. **You will not end up with a working module otherwise.**
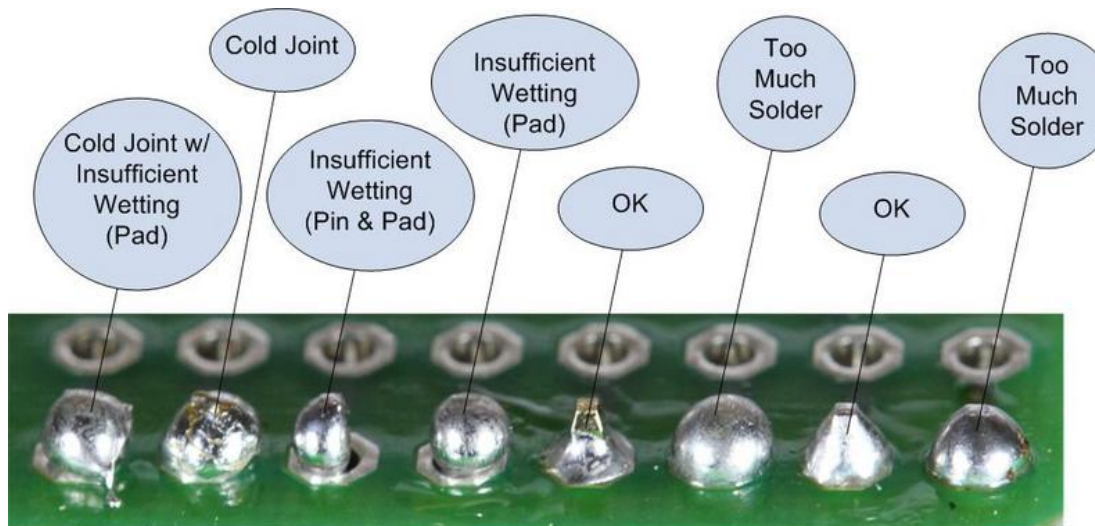
TOOLS REQUIRED

Soldering iron diagonal cutters AKA snips AKA side-cutters. A Digital Multimeter is always helpful for checking for bad solder joints and continuity. Thonk sell a range of inexpensive tools here - http://bit.ly/1jxqF3n

SOLDER JOINTS

Your solder joints should look like those shown as 'OK' below, they should have that neat conical shape on BOTH sides of the PCB. If they don't look the same on both sides then stop! Work out why from the soldering guides linked and don't continue until you are getting those results.

This isn't just OCD talking, you are very likely to end up with a destroyed, damaged or defective unit if you're not hitting that standard.

This photo is from the **Adafruit guide to excellent soldering** and is reproduced under an Attribution-Sharealike creative commons license - http://creativecommons.org/licenses/by-sa/3.0/
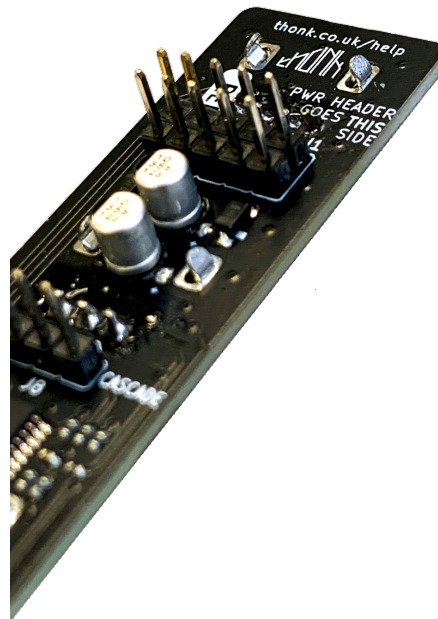
BUILD INSTRUCTIONS

1.

First take the PCB and solder the 2x5 power header to the rear of the board (the side with the SMD components that are already pre soldered to the PCB).
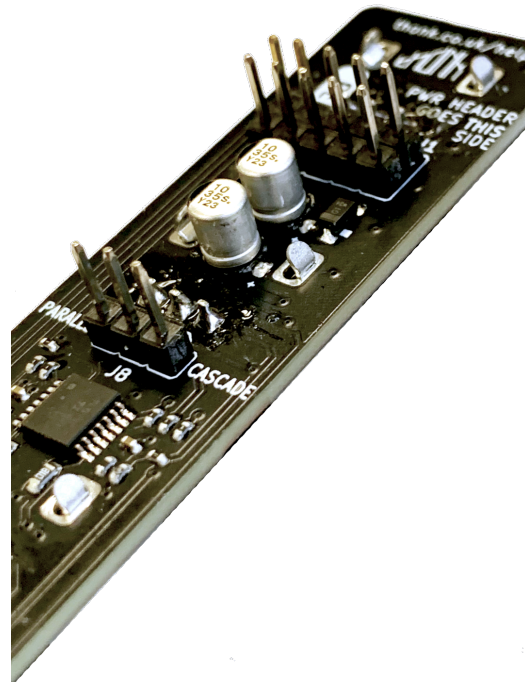
Check that this is soldered flush to the board by first soldering one joint and reflowing and adjusting where necessary.

2.

Follow the same method to solder the single 1x3 pin header.

This header is soldered to the same side of the PCB as the power header, as pictured.

3.

Next flip the PCB over. Find the following parts and place onto the board as pictured.

3x B100k Pots
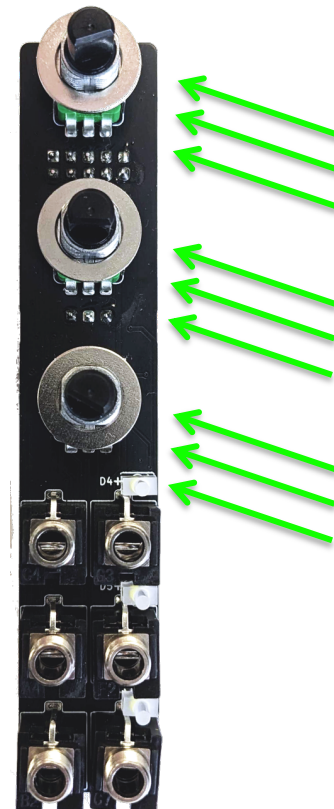6x Thonkiconn Jacks

DON'T SOLDER YET

4.

Place three of the provided silver washers onto each of the green pots.

These will help keep the components level between the panel and PCB.
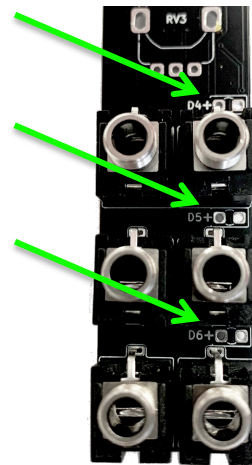
DON'T SOLDER YET

5.

Place the three LED's into the positions marked D4, D5, D6 above each row of jacks.

Clear bi-colour LED (D4, D5, D6)

CHECK ORIENTATION – these components are polarized and must be placed as pictured with the long leg inserted into the pad marked with '+'.

DON'T SOLDER YET

6.

Place the panel over the components as pictured.

First secure the panel with the 3x pot nuts.

Apply the 6x jack nuts firmly but be careful not to overtighten.

DON'T SOLDER YET

7.

Use masking tape or similar placed over the LED holes to keep them flush against the panel whilst soldering.
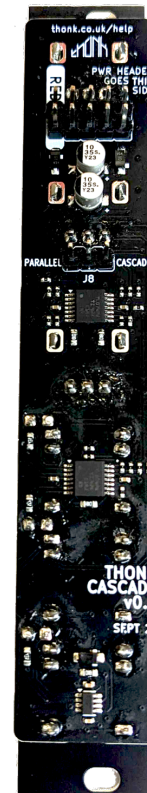
DON'T SOLDER YET

8.

Solder all 39 joints on the pots, jacks and LED's.

Ensure all components stay lined up between the panel and PCB during the process.

Be careful with your soldering iron around the pre-soldered SMD components already on the PCB.

Once all joints are soldered, remove the tape and clip the six legs of the LED's so they are level with surrounding joints.
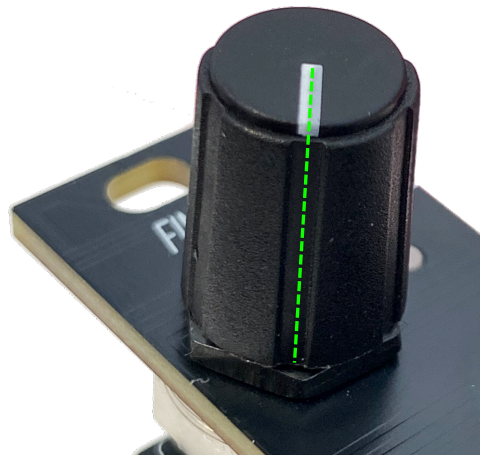
9.

For the next step find the knobs and knob caps which come as separate pieces.

First place each knob onto the pot, with the pot turned fully counterclockwise.

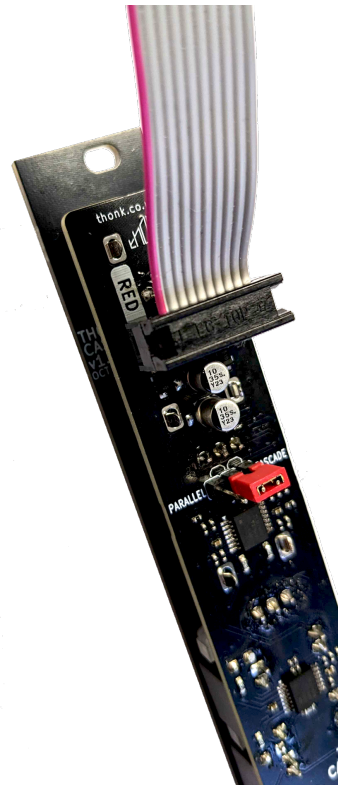This is your 'zero' point for the knob.

From here you can clip on the cap – lining up the pointer and indent on the knob at the zero point.

10.

Flip the module over and finally attach the power cable.

Be sure to follow the polarity by lining the red stripe on the cable up with the text on the PCB. Picture shown for reference.

11.

The module is now complete – follow the steps detailed in the user manual to learn how to use your CAS, and for information on using the supplied jumper block to change between the two different modes.

Find the manual and other product info on the Thonk website.

https://www.thonk.co.uk/shop/**thonk-synth-t04-cas-kit**/