THONK SYNTH τ03 VCA

DUAL VCA & MIX CHAIN

Eurorack DIY Kit Build Instructions

OVERVIEW

For the most recent version of this document please visit

https://www.thonk.co.uk/shop/**thonk-synth-t03-vca-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.
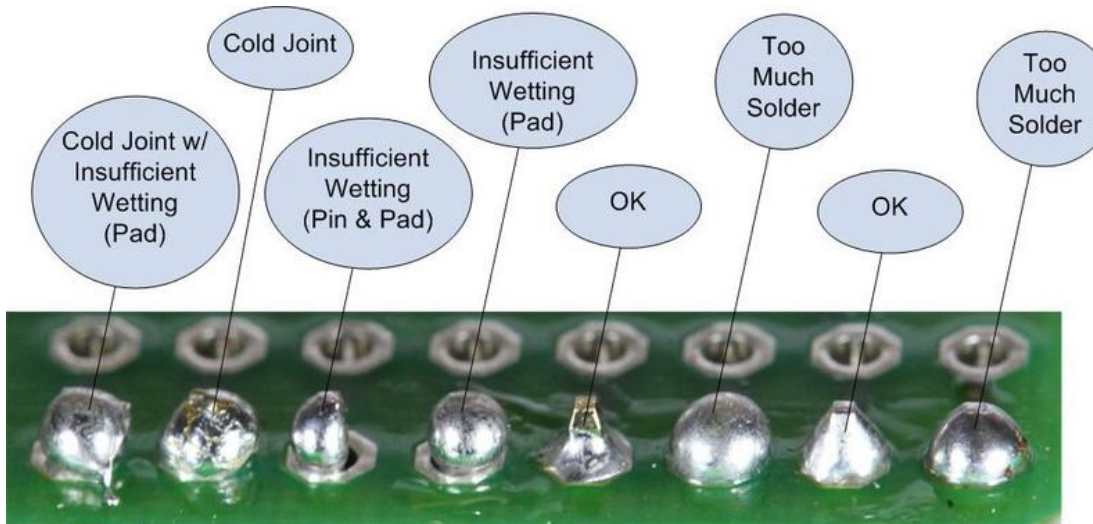
This photo is from the **Adafruit guide to excellent soldering** and is reproduced under an Attribution-Sharealike creative commons license - http://creativecommons.org/licenses/by-sa/3.0/
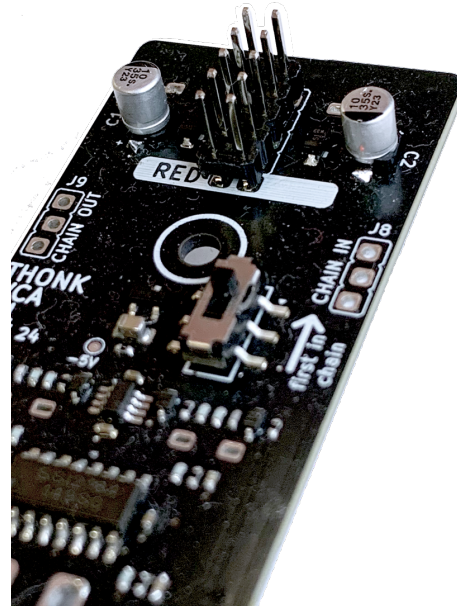
BUILD INSTRUCTIONS

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).
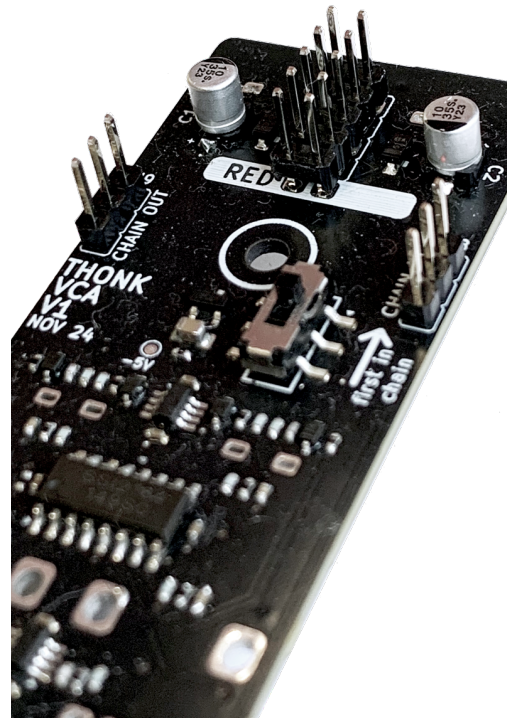
Check that this is soldered flush to the board by first soldering one joint and reflowing and adjusting where necessary.

2.

Follow the same method to solder the two 1x3 pin headers.

These are soldered to the same side of the PCB as the power header, as pictured.
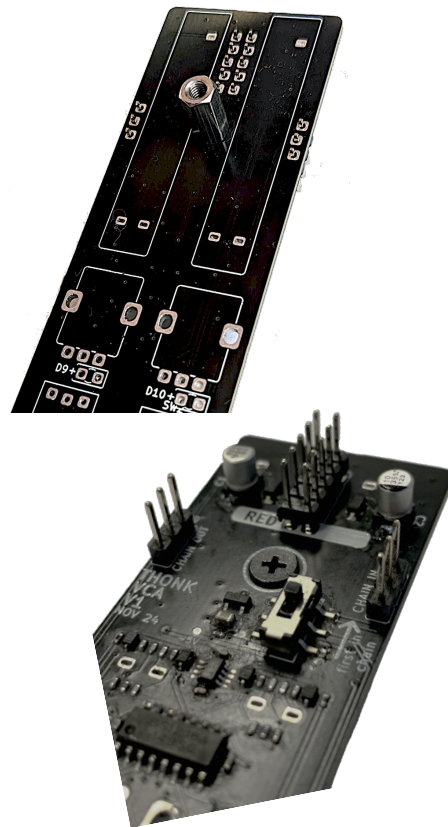
3.

Next find the metal standoff and one of the flat top screws.

Secure the standoff to the board as pictured screwing it on from the same side of the PCB the headers are soldered onto.

This standoff is used to keep the panel secure and level above the sliders.

4.

Find the following parts and place onto the board as pictured.

2x Sliders
2x Tall Trimmers
6x Thonkiconn Jacks
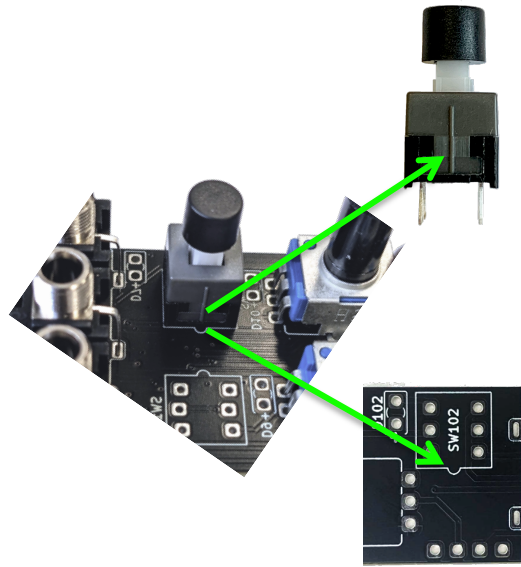
DON'T SOLDER YET

5.

Push the black button caps firmly onto each of white latching buttons before placing onto the PCB, this will help the buttons sit in the panel correctly.

CHECK ORIENTATION – This component is polarized and must be placed as pictured with the notch on the switch body lining up with the PCB footprint.
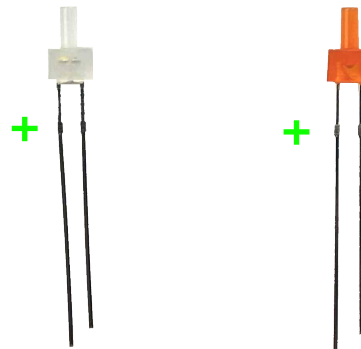
DON'T SOLDER YET

6.

Place the LED's with the clear bi-colour LED's into the positions marked D7 and D8 (above each row of jacks) and the orange LED's into positions marked D9 and D10 (above the buttons).
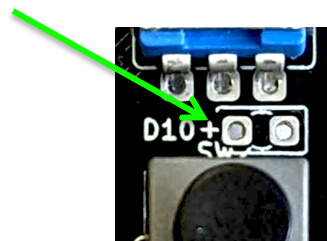
CHECK ORIENTATION- these components are polarized and must be placed as pictured with the long leg inserted into the pad marked with '+'.

DON'T SOLDER YET

Clear bi-colour LED
(D7, D8)

Orange LED
(D9, D10)

7.

Place the panel over the components as pictured.

First take the remaining flat top screw and secure it through the panel into the other side of the metal standoff.

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

DON'T SOLDER YET

8.

Use masking tape or similar placed over the LED holes to keep them flush against the panel whilst soldering.

DON'T SOLDER YET

9.

Solder all 54 joints on the sliders, switches, jacks and LED's.

Note: When flipping the module over to solder it can be easy for the sliders and buttons to become unseated from the PCB. Ensure these parts stay flush to the PCB during soldering.
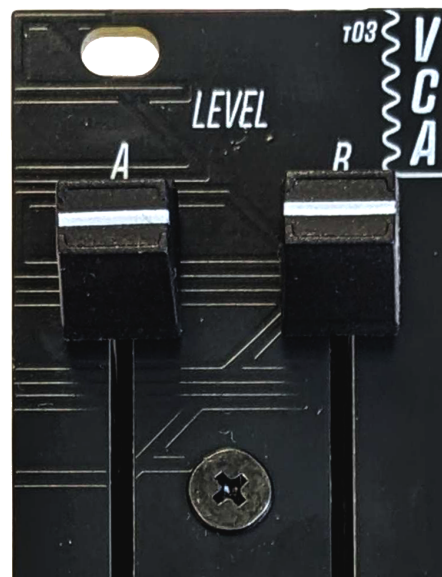
Be careful with your soldering iron around the pre-soldered SMD components already on the PCB.

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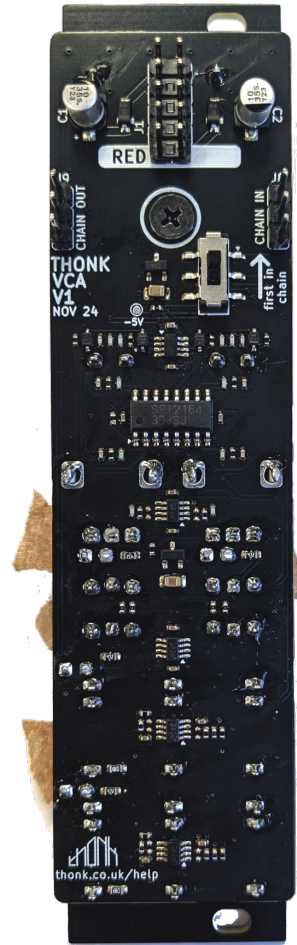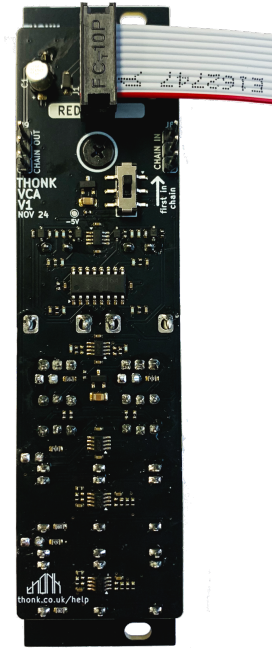

10.

Next take the two fader caps and press firmly onto the faders.

11.

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.

12.

The module is now complete – follow the steps detailed in the user manual to learn how to use your VCA, and for information on using the supplied 3 pin ribbon cable for chaining multiple modules.

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

https://www.thonk.co.uk/shop/**thonk-synth-t03-vca-kit**/