

THONK SYNTH τ06 BUF

BUFFERED MULTIPLE

Eurorack DIY Kit
Build Instructions



OVERVIEW

For the most recent version of this document please visit

<https://www.thonk.co.uk/shop/thonk-synth-t06-buf-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/I_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.

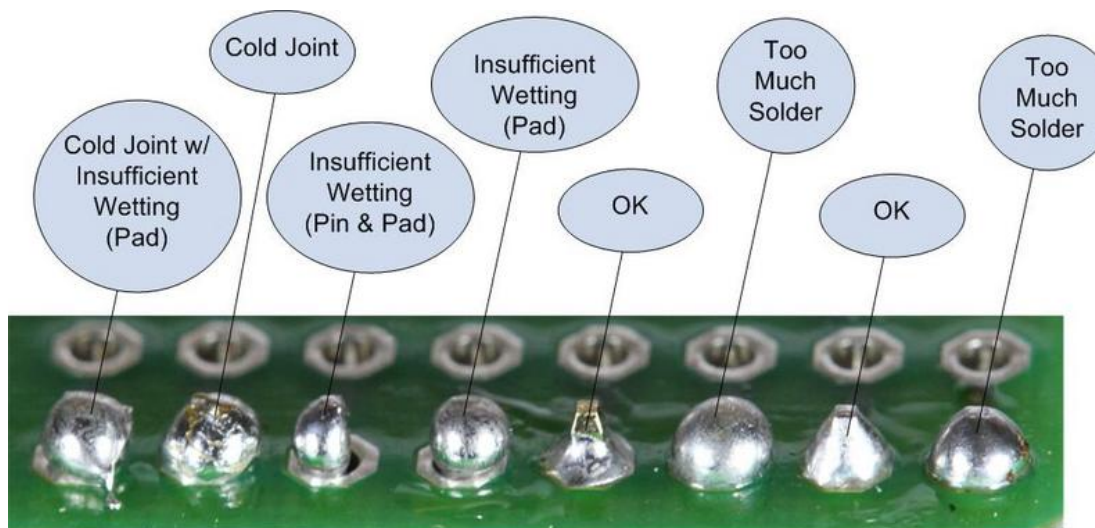
TOOLS REQUIRED

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.



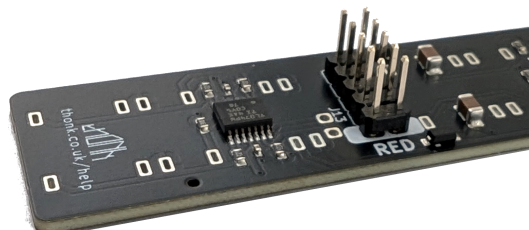
This photo is from the [Adafruit guide to excellent soldering](http://adafruit.com/guides/quickstart/soldering) and is reproduced under an Attribution-Sharealike creative commons license - <http://creativecommons.org/licenses/by-sa/3.0/>



BUILD INSTRUCTIONS

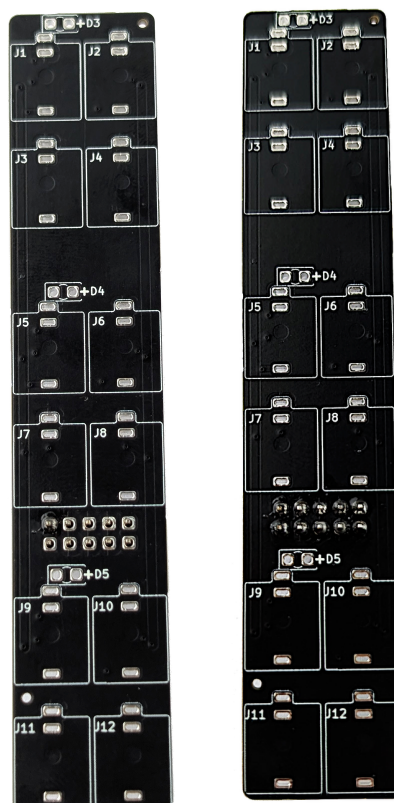
1.

First take the main board and solder the 2x5 power header to the rear of the board (the side with the SMD components).



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

When you are happy with the position of the header solder the remaining joints.





3.

Next flip the board over and locate the three LED's from your kit.

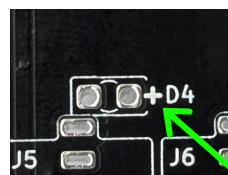
Place the three LED's as pictured into positions marked D3, D4, D5.

DON'T SOLDER YET

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

Follow the remaining steps before resuming soldering at step 9.



4.

Locate the 12 jacks, remove the nuts and place on the board as pictured.

Make sure all the jack legs are placed securely in the into the pads - you may have to squeeze some legs slightly or use tweezers to help position them correctly.

DON'T SOLDER YET

Follow the remaining steps before resuming soldering at step 9.



5.

Place the panel over the top of the PCB as pictured, ensuring that all jacks and LED are inserted into the panel holes.

DON'T SOLDER YET

Follow the remaining steps before resuming soldering at step 9.



6.

Place the nuts back on the jacks to secure the panel.

Be careful not to overtighten else you will pull the jacks off the board.

DON'T SOLDER YET

Follow the remaining steps before resuming soldering at step 9.



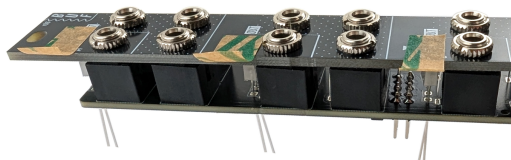
7.

Carefully flip the board over keeping all jacks in place before applying a small amount of masking tape onto the panel covering each LED hole.

Gently push each LED into the tape so that when soldering it stays flush to the panel.

DON'T SOLDER YET

Follow the remaining steps before resuming soldering at step 9.



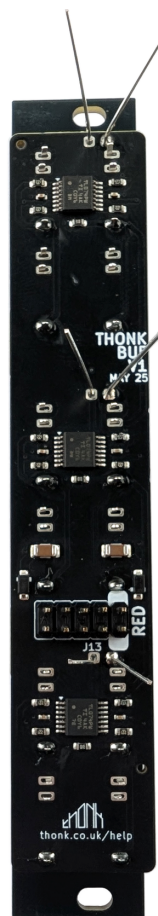


8.

Carefully flip the board over keeping all jacks in place before soldering one point on each component as pictured.

Ensure all jacks are sitting flush to the board and LED's are flush against the panel.

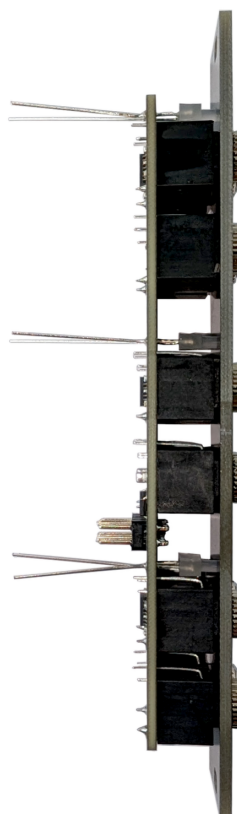
Reflow and adjust any joints if necessary before proceeding.



9.

If you are happy with the alignment of the components on the panel then solder the remaining joints on the back of the board.

There should be 27 joints remaining to solder





10.

Trim the LED legs using a pair of side cutters so that the points become small peaks.

These joints shouldn't be made flat but small peaks similar to the 'OK' examples on page 3 of this doc.

Wear safety goggles when using side cutters.



11.

Check all points are soldered before flipping the panel back over and attaching the power cable as pictured.

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 calibrate your new Thonk Synth BUF.

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

<https://www.thonk.co.uk/shop/thonk-synth-t06-buf-kit/>

