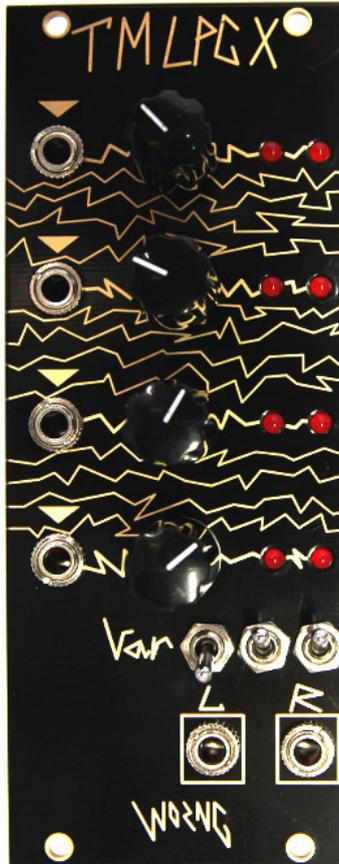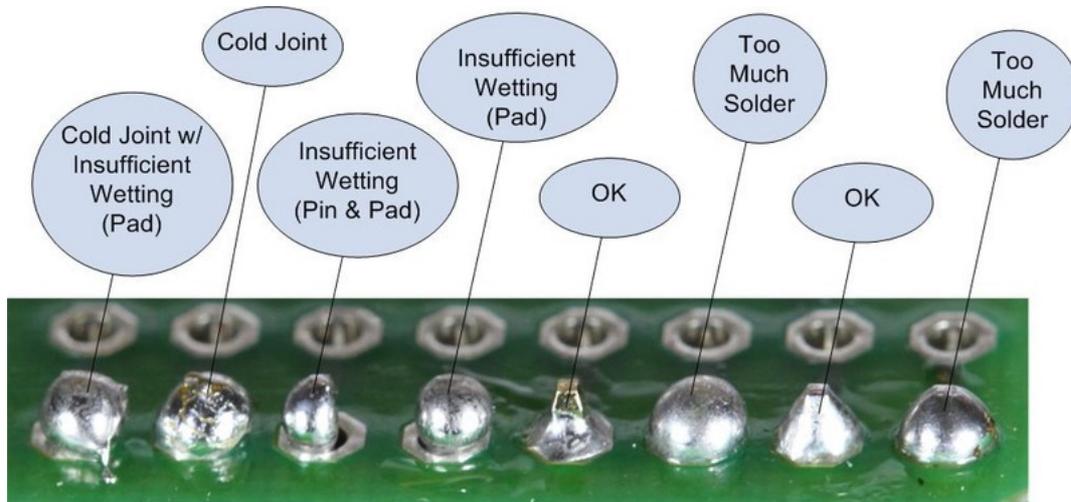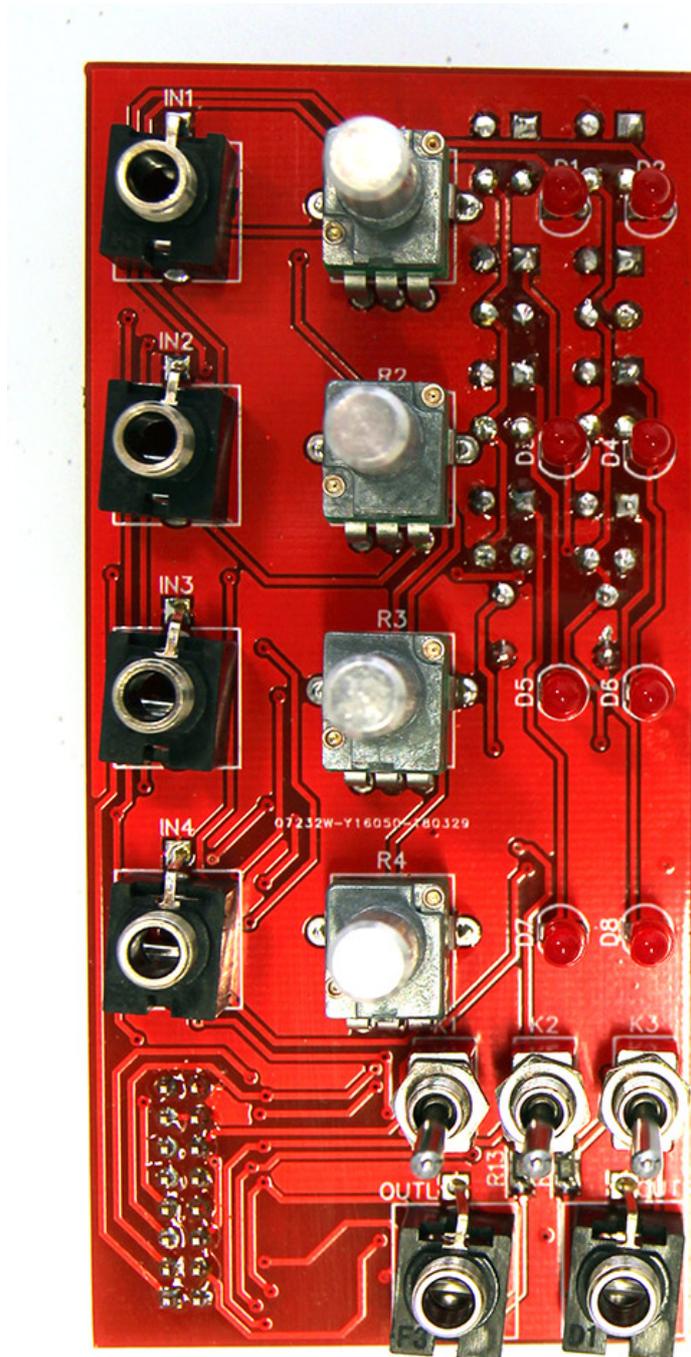## Build Document V1

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 about perfectionism, 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://bit.ly/1I77tF4 and is reproduced under an Attribution-Sharealike creative commons license - http://creativecommons.org/licenses/by-sa/3.0/

Build Document V1

First place but DON'T SOLDER YET all the front side components onto the PCB (Pots, switches, jacks, LEDs). **NOTE:** The shorter leg of each LED must go towards the flat edge of the circle on the PCB silkscreen.
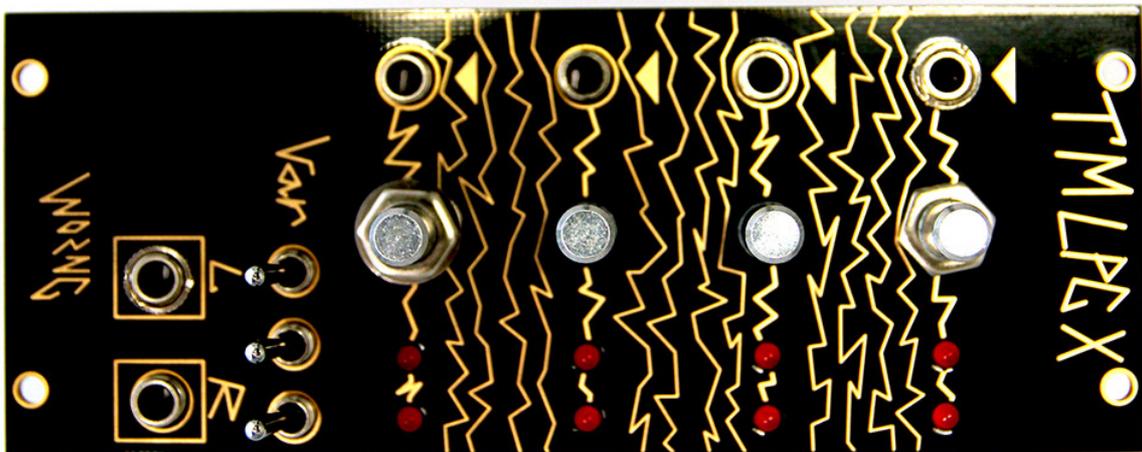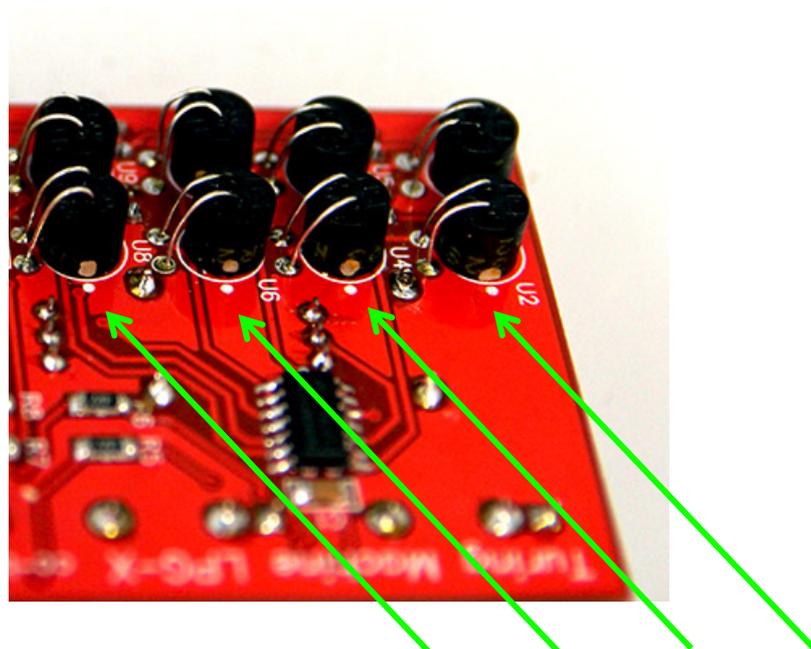
Build Document V1

Next place on the front panel and line everything up by placing on a few nuts and washers. Then take some masking tape and use it to hold the LEDs so they are flush with the front of the panel.

Once the LEDs are held nicely level with the front of the panel you can then solder everything in

NOTE! Do not use regular tape as it will leave a sticky residue on the panel – only use masking or non-stick tape to hold the LEDs in place.
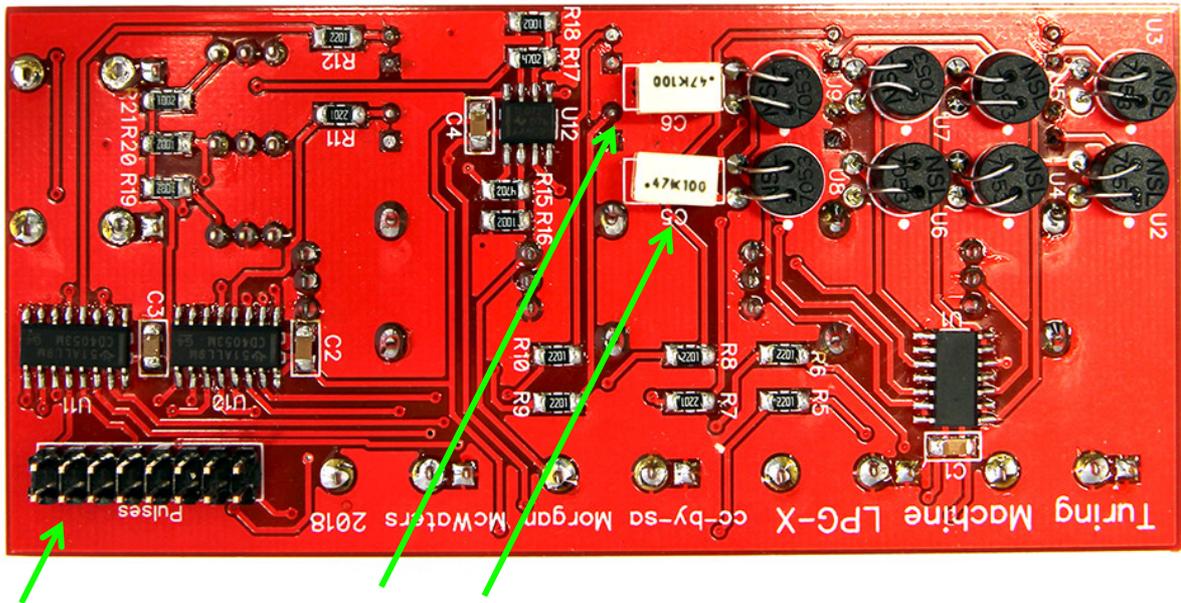

Next remove the panel and solder the eight vactrols. **NOTE:** orientation is vital. The dot on the vactrol must line up with the dot on the PCB.
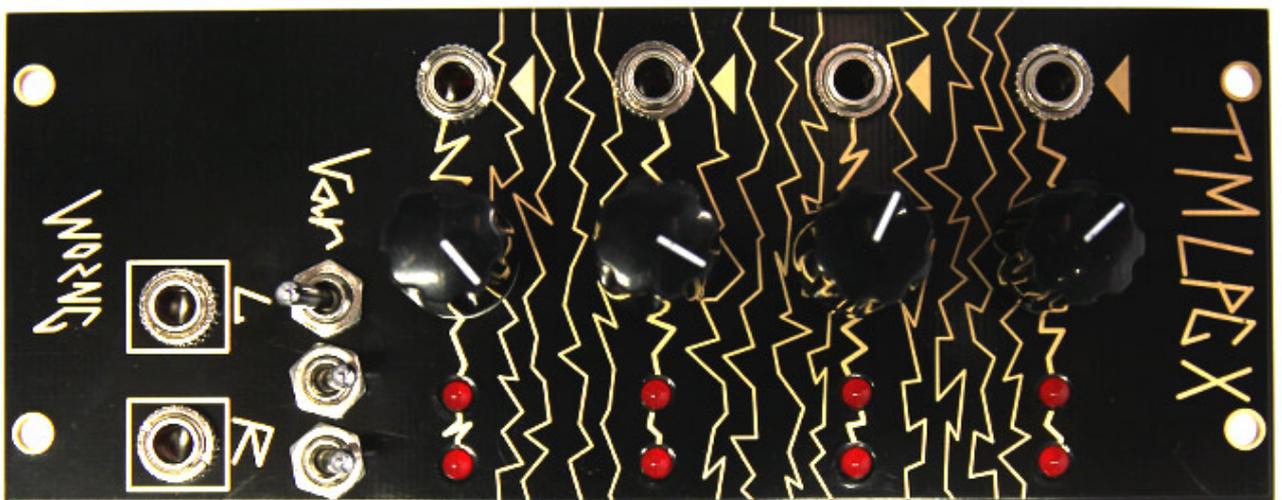
Build Document V1

Next place and solder the two capacitors and the 2x8 male header (Capacitors included in Thonk kits may look different to those in the photo).

Then place on the front panel again, insert all nuts and washers and place on the knobs

Build Document V1

Finally place the 16-pin ribbon cable as shown – with the red stripe facing towards the bottom of the module. The module attaches to the pulse expander header on the main Turing Machine module.