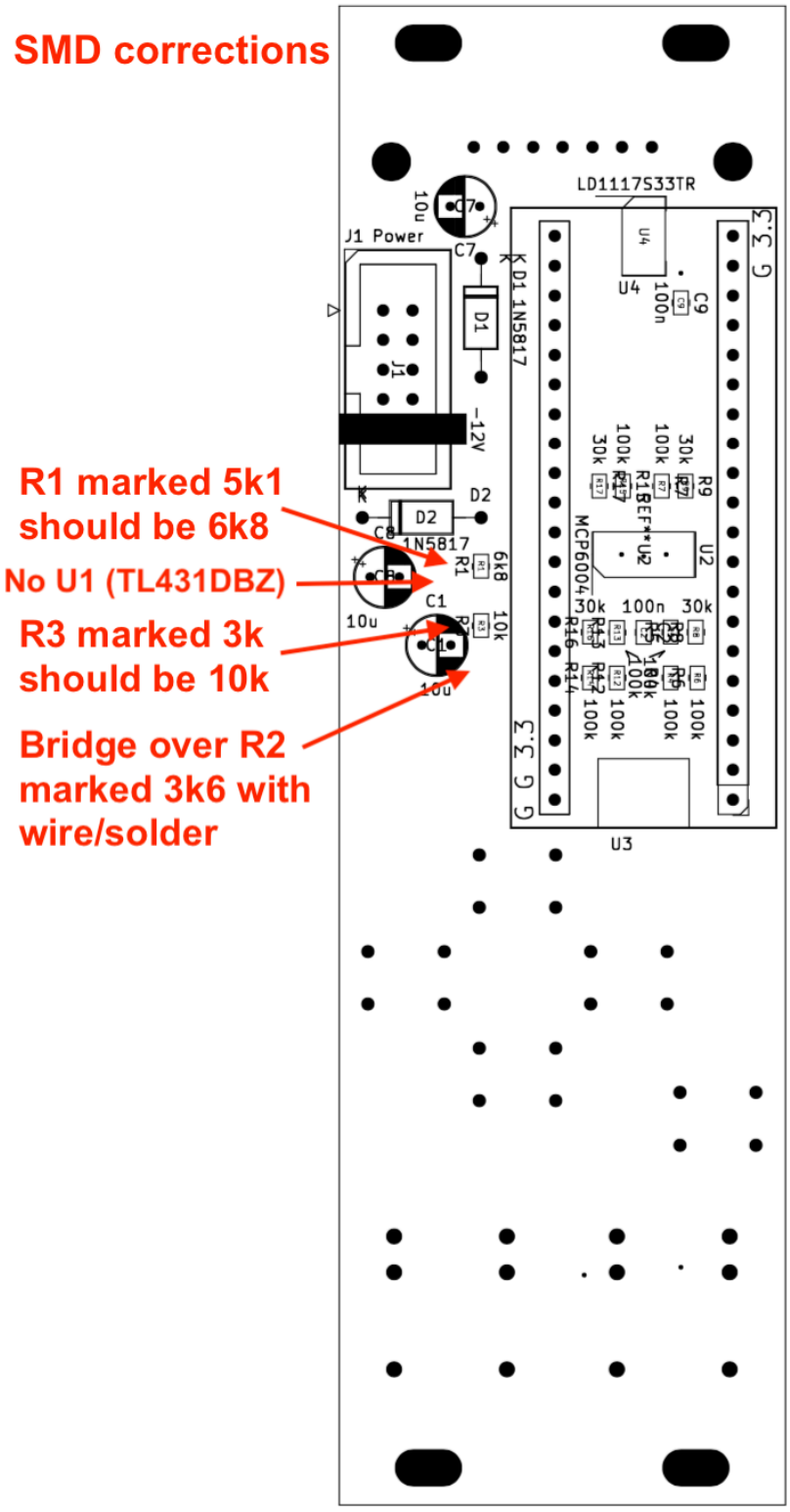
MicroScope III Build Document

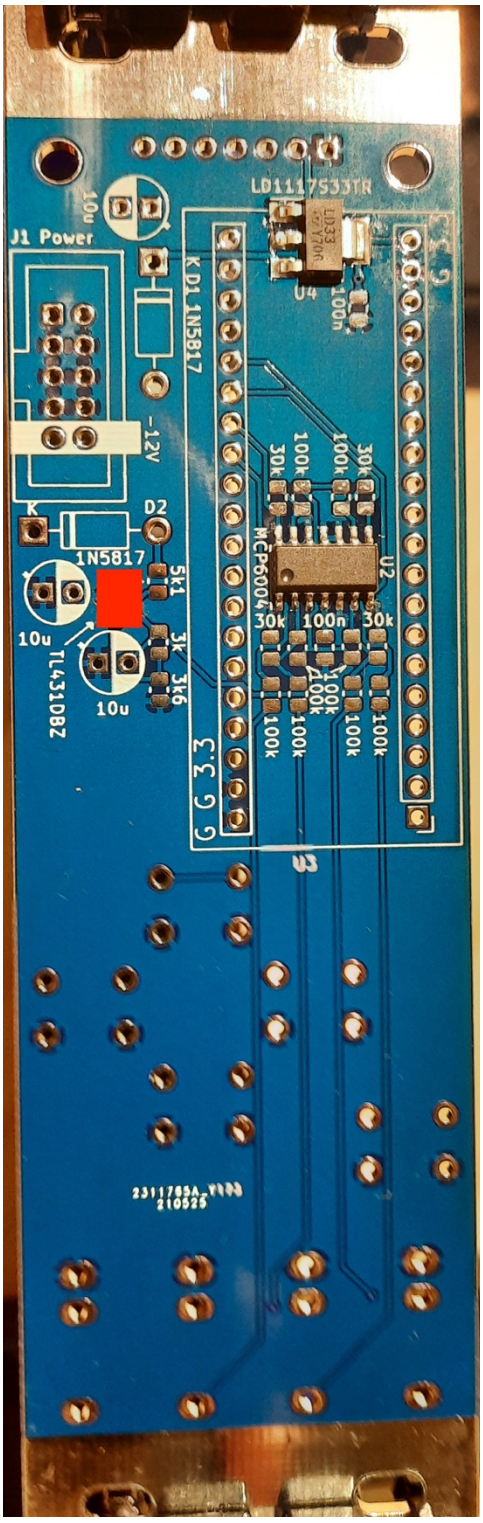
SMD Build Guide

(if your PCB has SMD components soldered, skip to the Through-hole Build Guide)

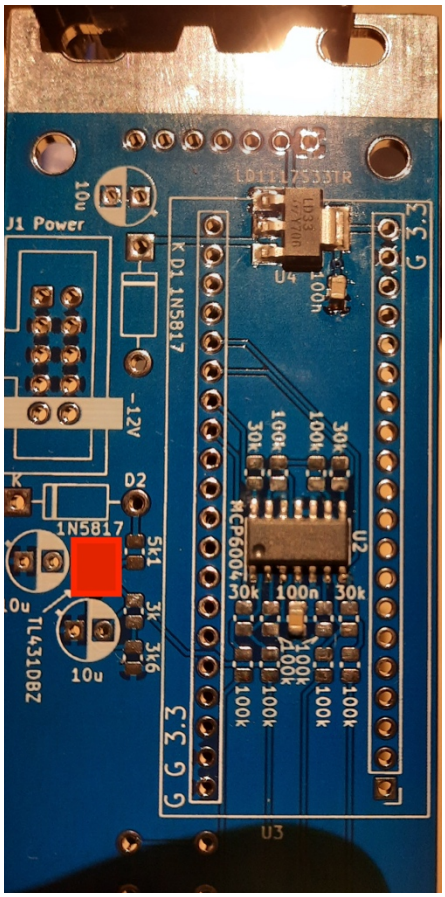
1) SMD corrections + helper diagram: please refer to this diagram - if you have version 1 of the PCB, you will need to solder 2 resistors with different values to those shown on the board, bridge over another with wire, and do not solder U1.



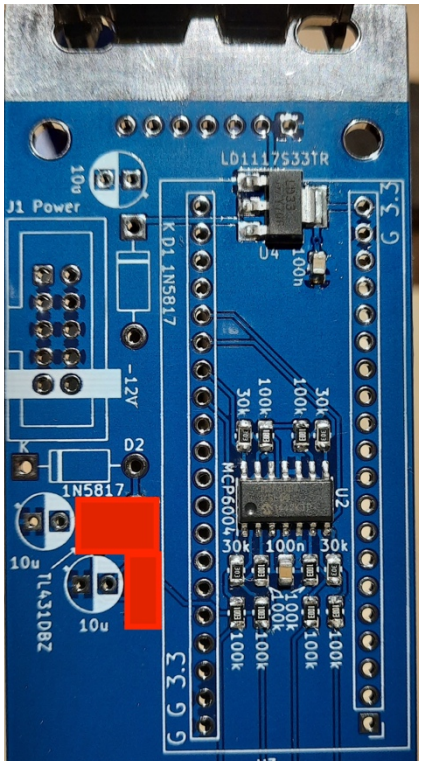
2) Solder ICs
(U1 TL431DBZ is no longer needed)



3) Solder 100n capacitors

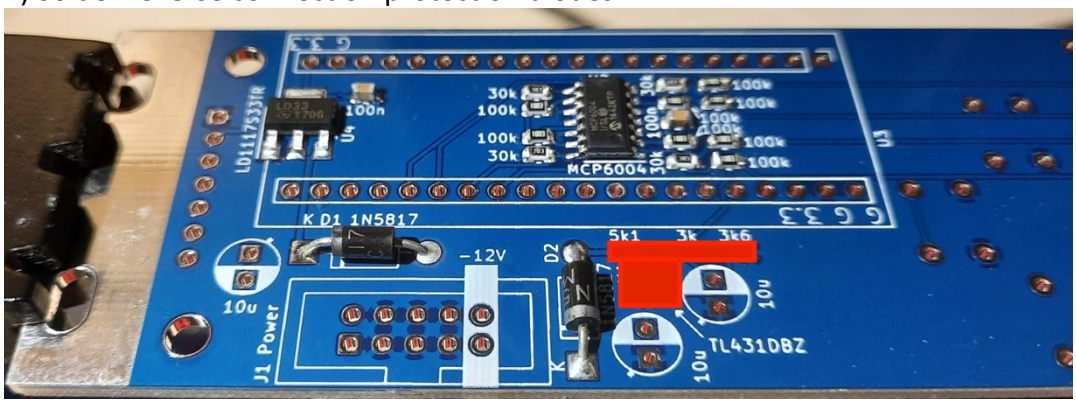


4) Solder resistors (see corrections above for updated values to those on the left side)

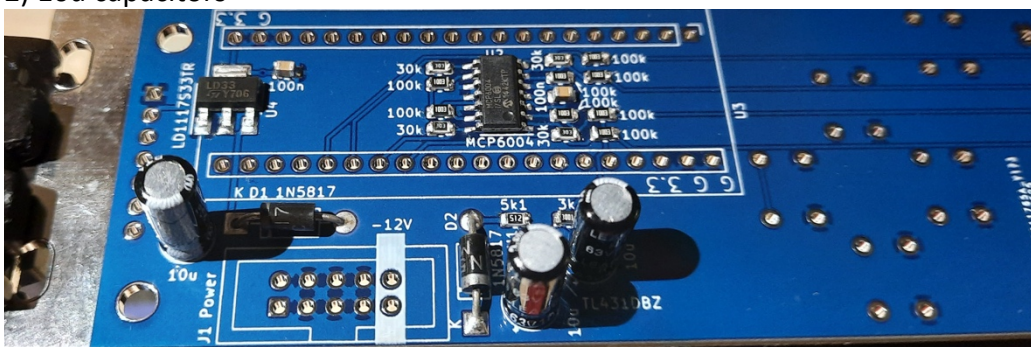


Through-hole Build Guide

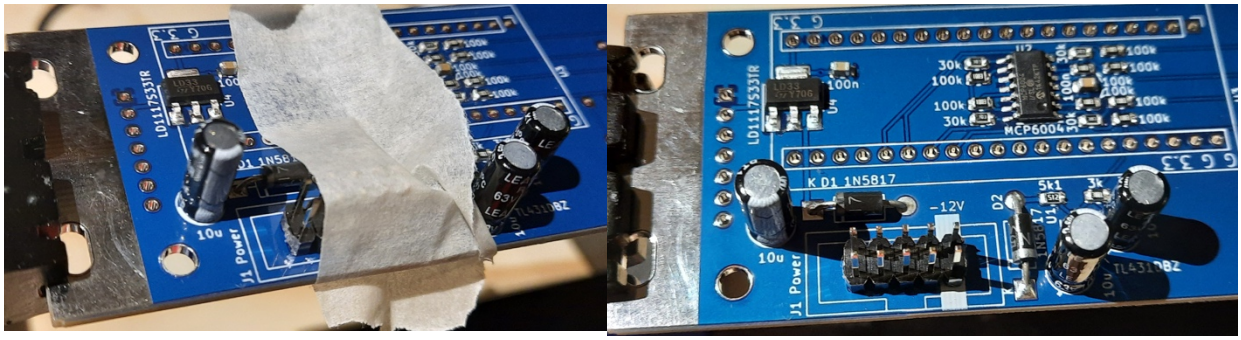
1) Solder reverse connection protection diodes



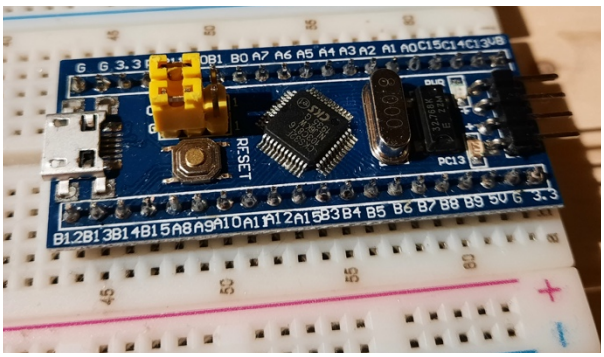
2) 10u capacitors



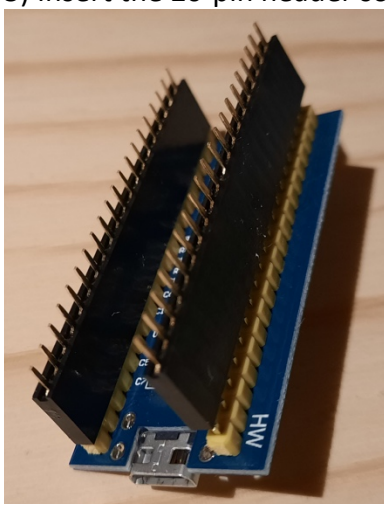
3) Power header - a strip of masking tape can help hold this in place while you solder



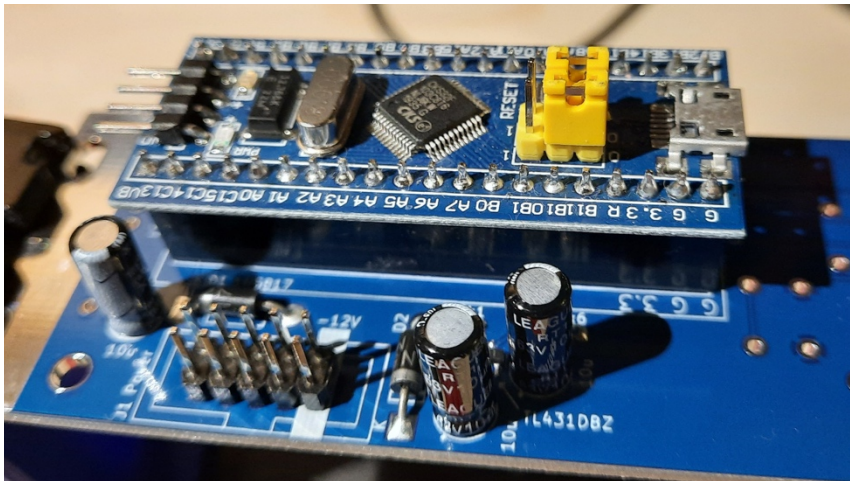
4) Solder the 20-pin header strips under the Blue Pill. A breadboard can help keep them vertical



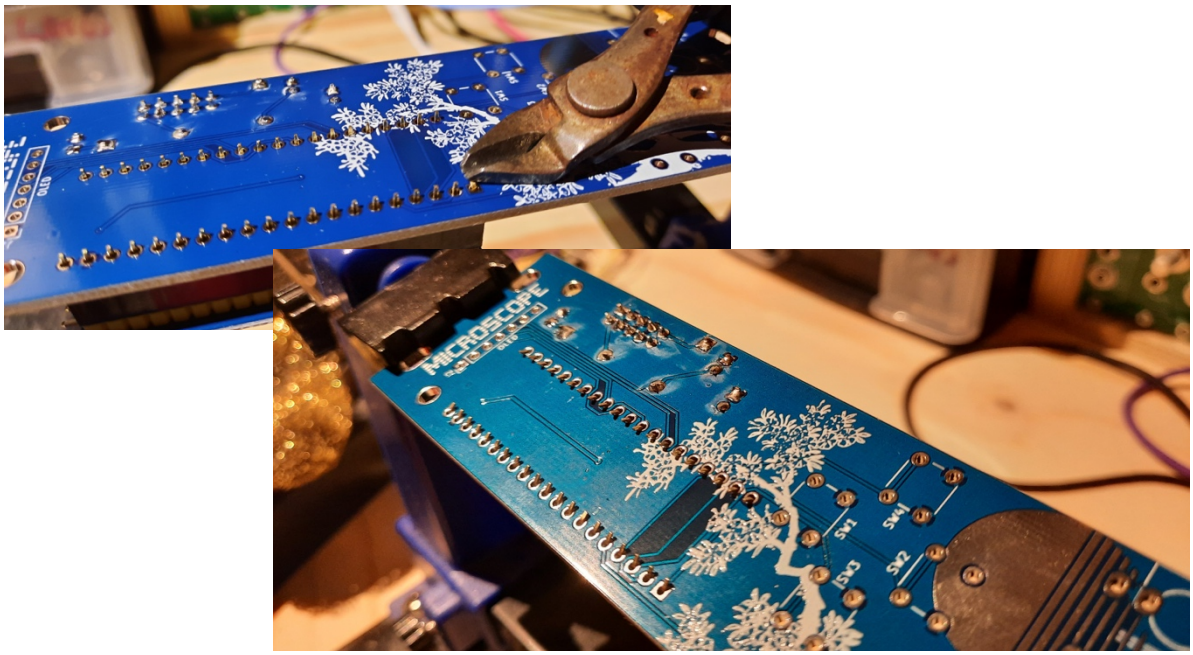
5) Insert the 20-pin header sockets onto the Blue Pill pin headers



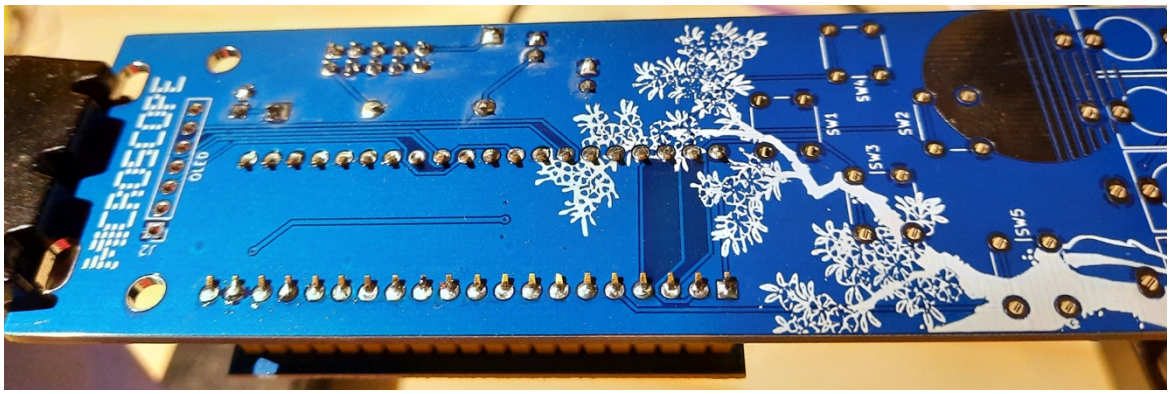
6) Insert the pins under the header sockets into the rear of the PCB, with the USB socket of the Blue Pill facing the bottom of the module



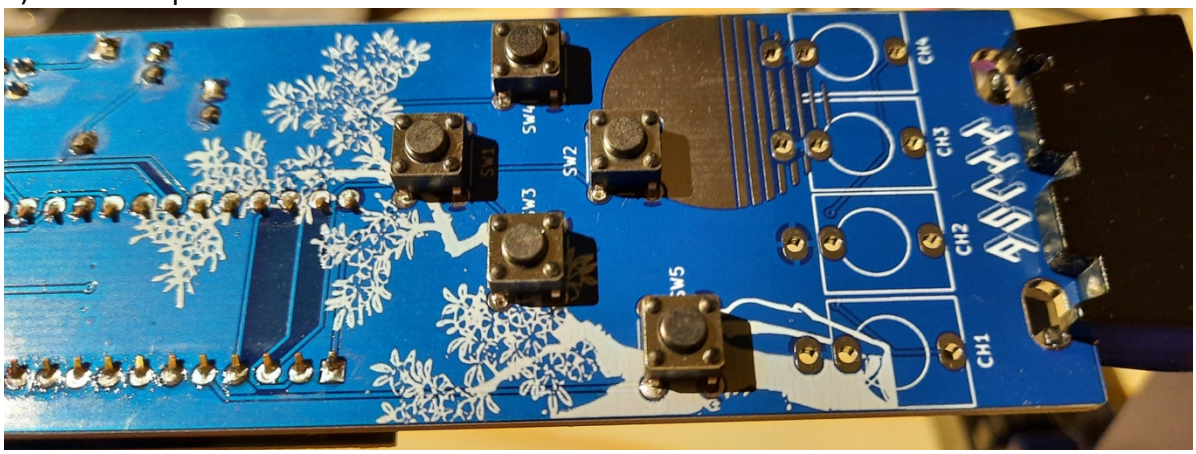
7) Bend the socket pins over. This is important to avoid them touching the rear of the screen



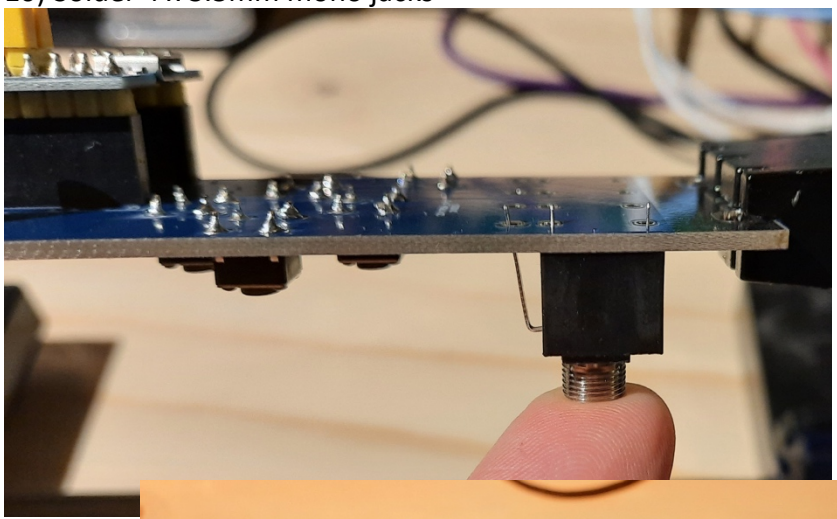
8) Solder the pin header sockets



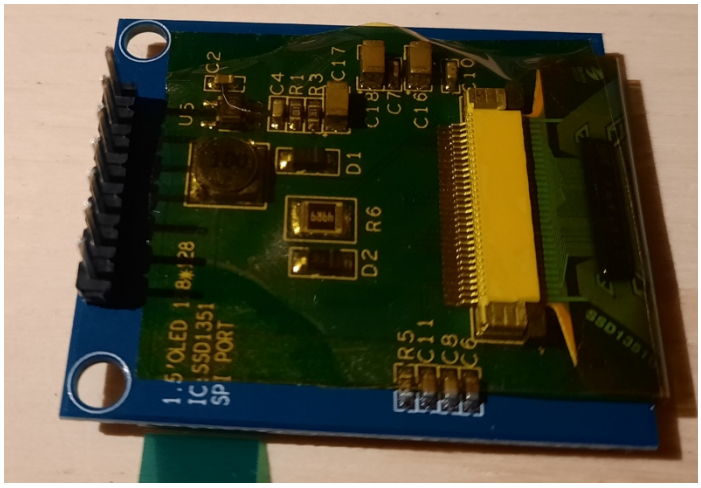
9) Solder 5 x push buttons



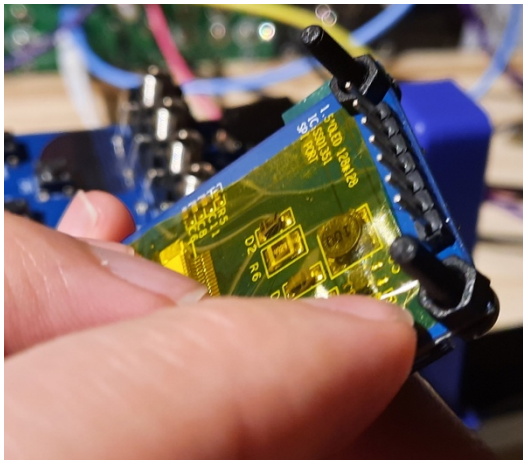
10) Solder 4 x 3.5mm mono jacks



11) Stick 30mm wide kapton tape to rear of OLED. This will help prevent shorts with the PCB



12) Insert M3x12mm bolts through front of OLED and screw on nuts



13) Insert bolts and OLED headers into PCB, screw on nuts on rear of PCB, and solder OLED headers