

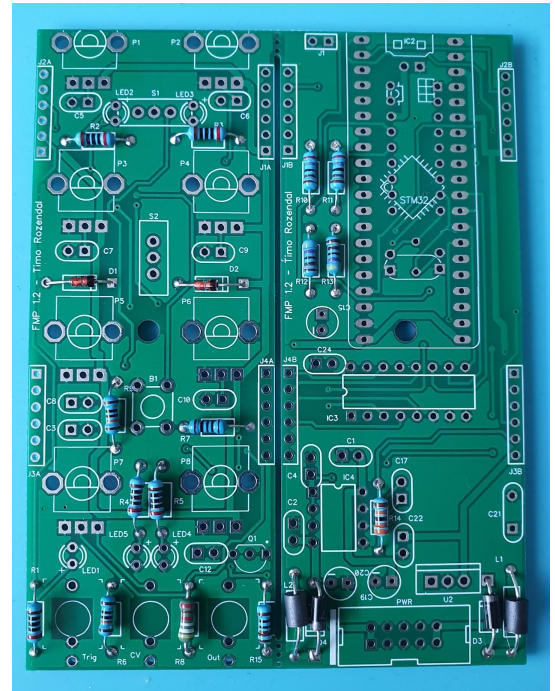
This is the Step by step build manual for the Timo Rozendal FMP

[[pre-order form](#), [user manual](#), [bill of materials](#)]

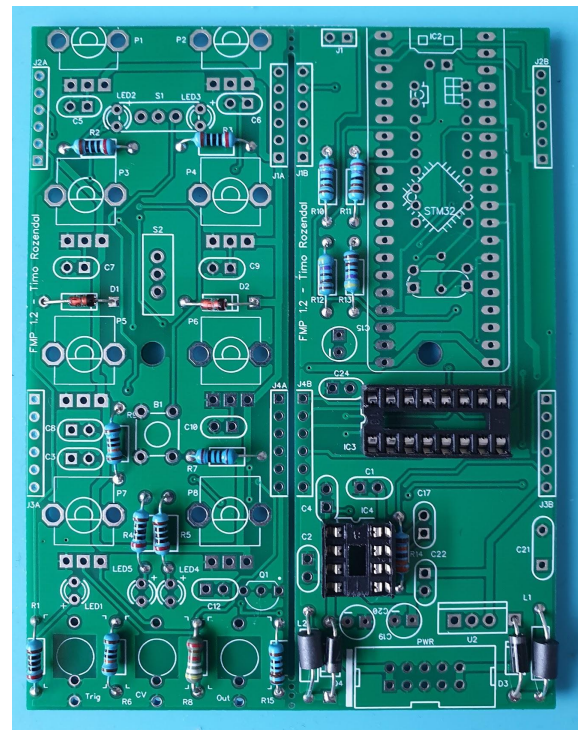
If you have the version with SMD already done, [check here](#)

Please contact timo.rozendal@gmail.com if you have any questions.

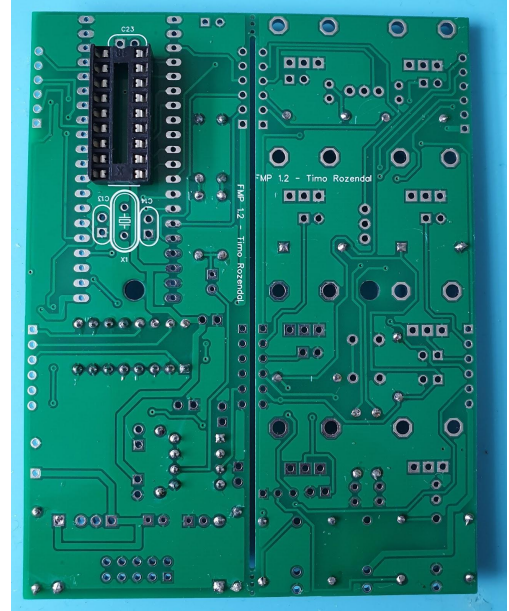
1. First start out with soldering all the resistors, diodes and the ferrite beads (be mindful of the orientation of the diodes)



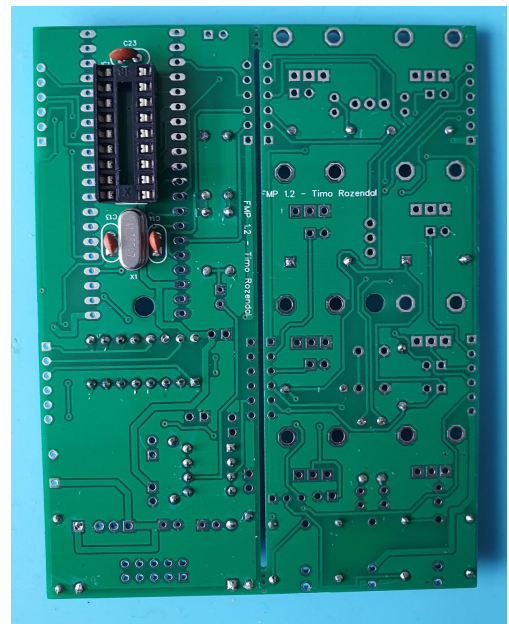
2. Solder the IC sockets for IC3 & IC4 (mind the orientation of the sockets)



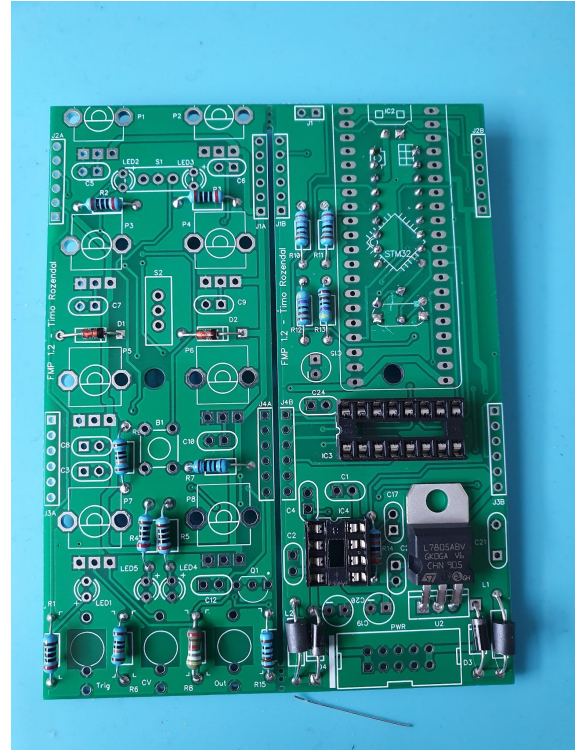
3. Flip the board and solder the socket for IC1 (mind the orientation)



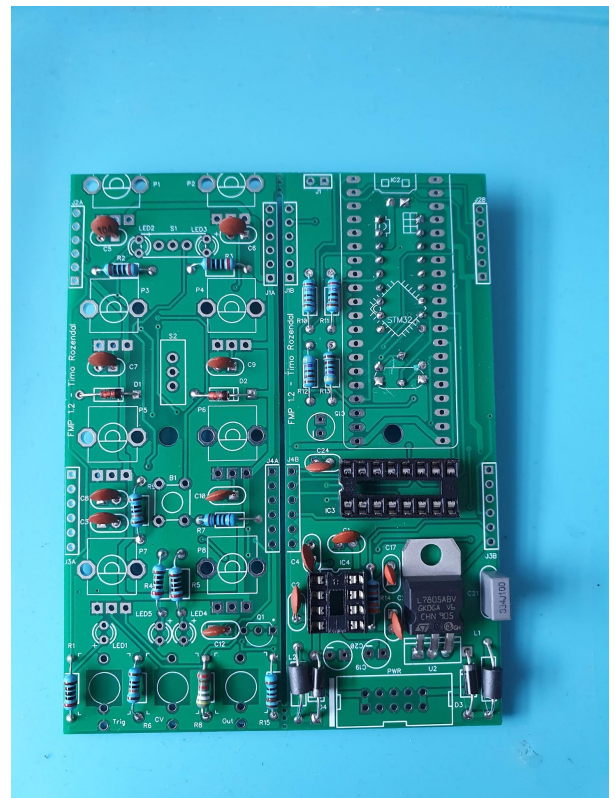
4. Solder the 3 capacitors (2x 18pF, 1x100nF) and the crystal on that side of the board.



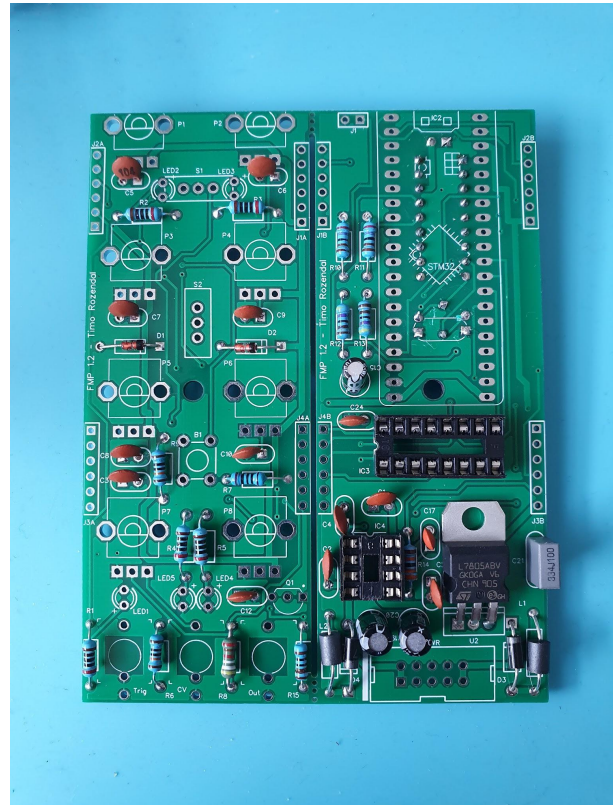
5. Solder the voltage regular as indicated in the picture (bend so that it lies flat on the pcb)



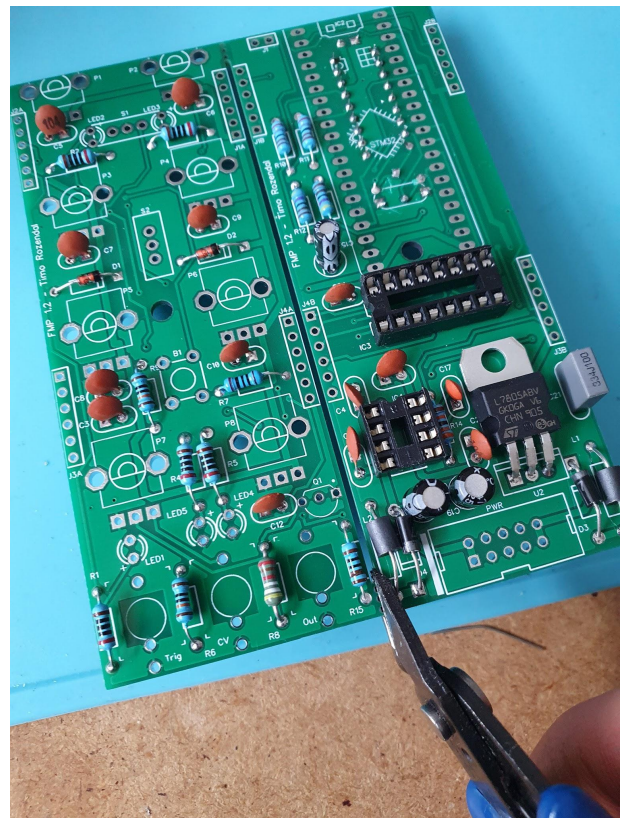
6. Solder the remaining ceramic capacitors (100pF, 100nF and 330nF)



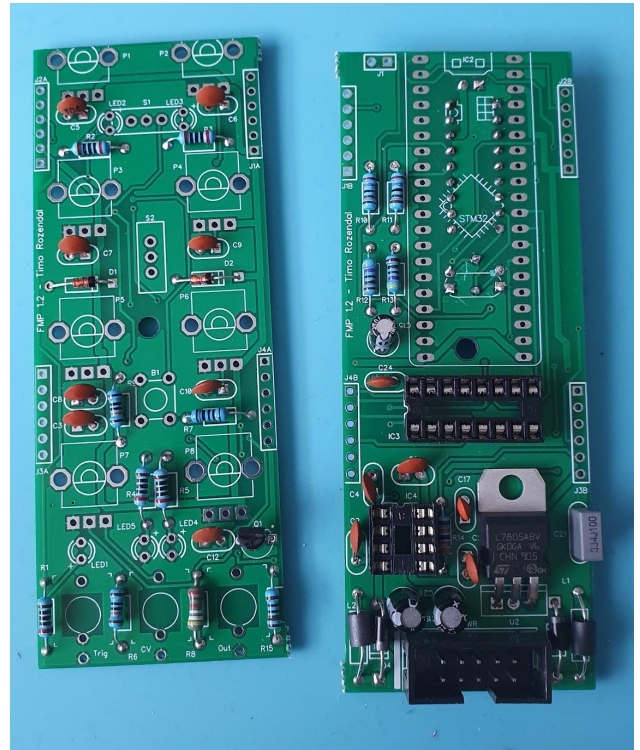
7. Solder the 3 electrolytic capacitors. Mind the orientation. The Minus is indicated with the footprint



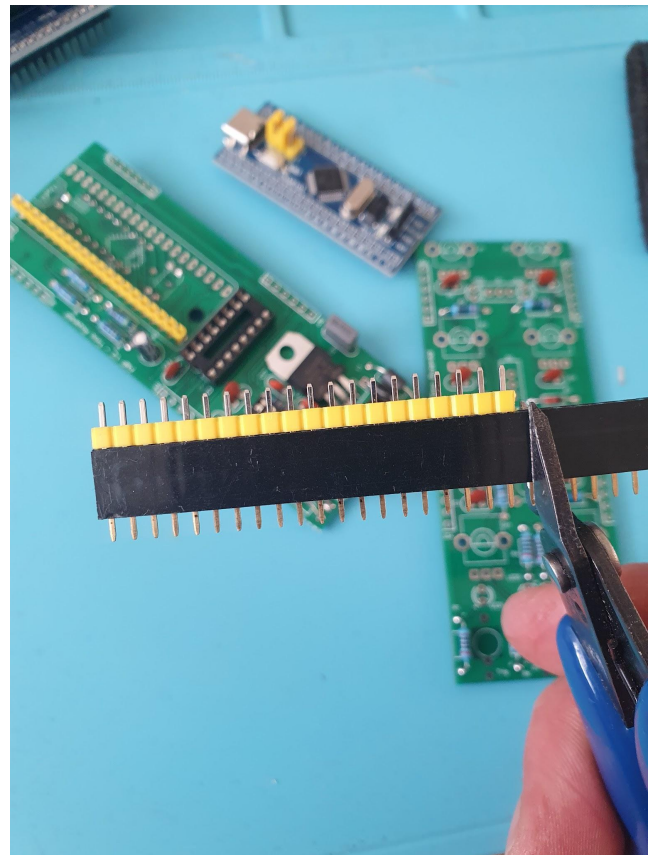
7. Now it is time to gently snip the pcb in 2



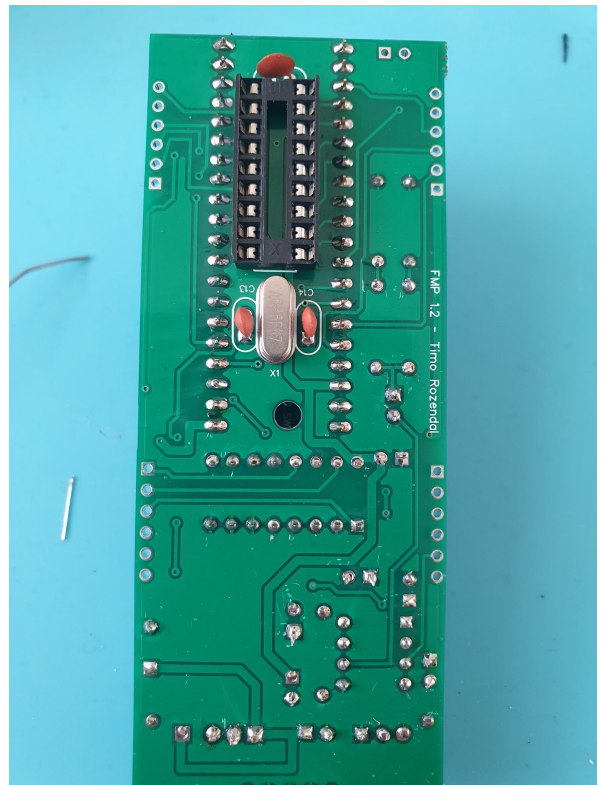
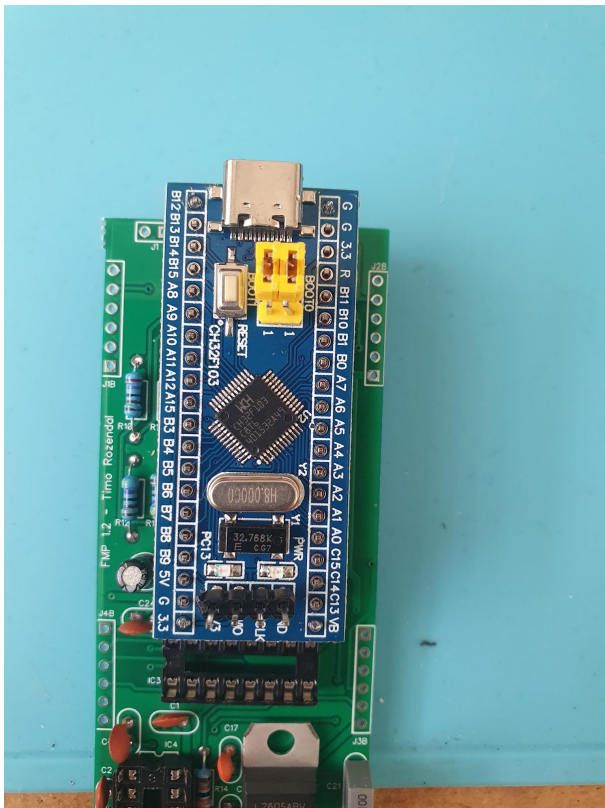
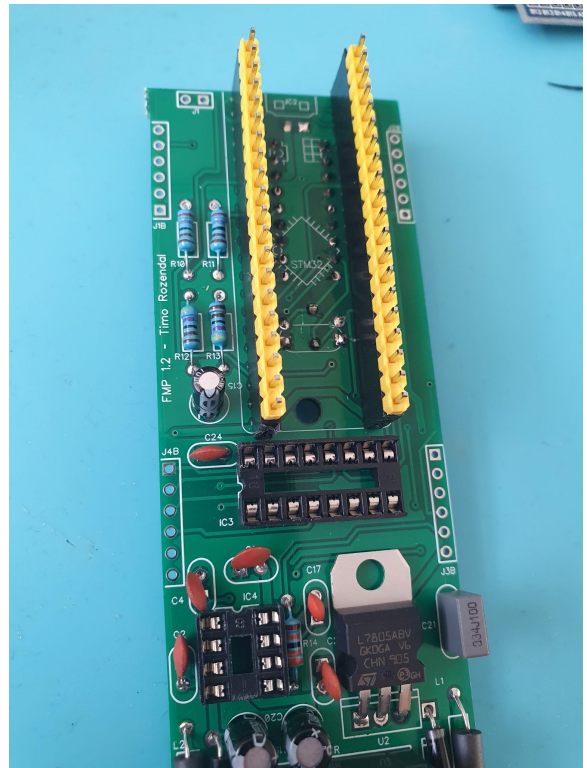
8. Solder the power header and the transistor (mind the direction with both)



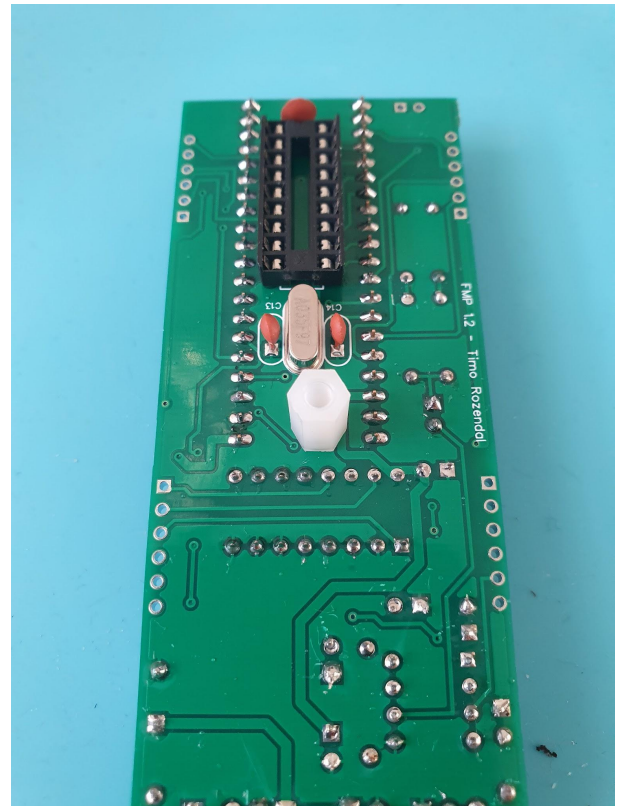
9. Cut the female headers to size (if they aren't already)



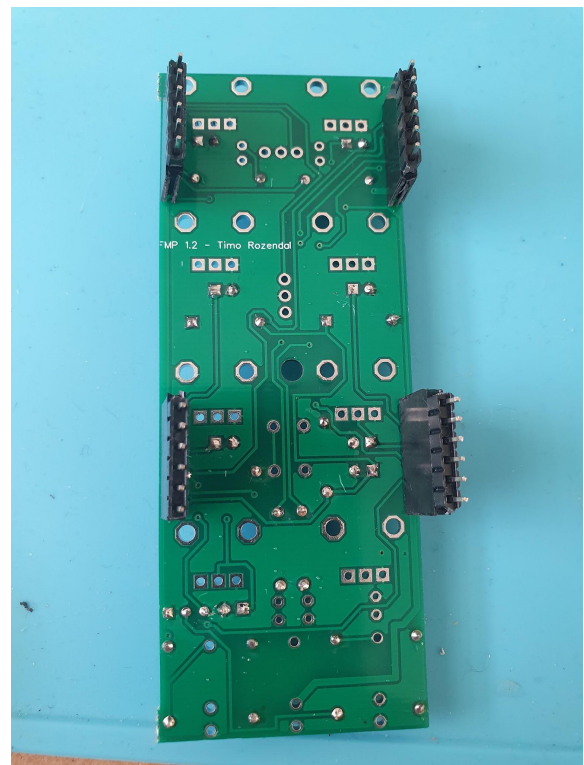
10. Put the headers in the pcb, add the microcontroller, solder 4 corners on the microcontroller, flip the board, solder the headers on the board, flip the board back and solder the rest of the pins on the microcontroller (the microcontroller might already have soldered headers)



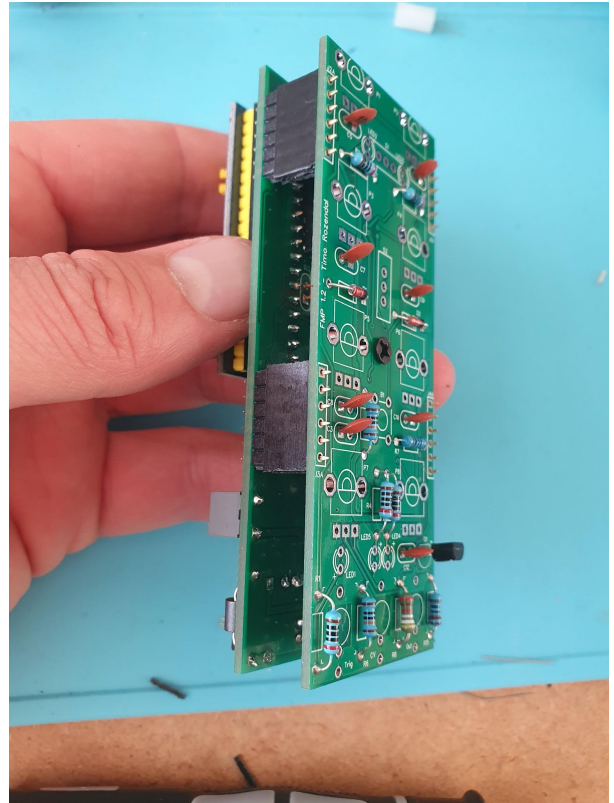
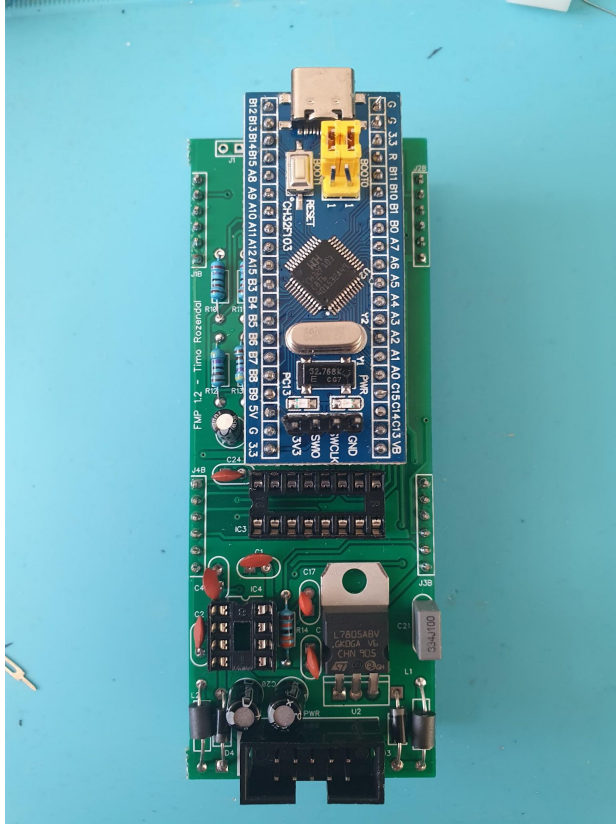
11. attach the Nylon spacer with one screw to the board as shown



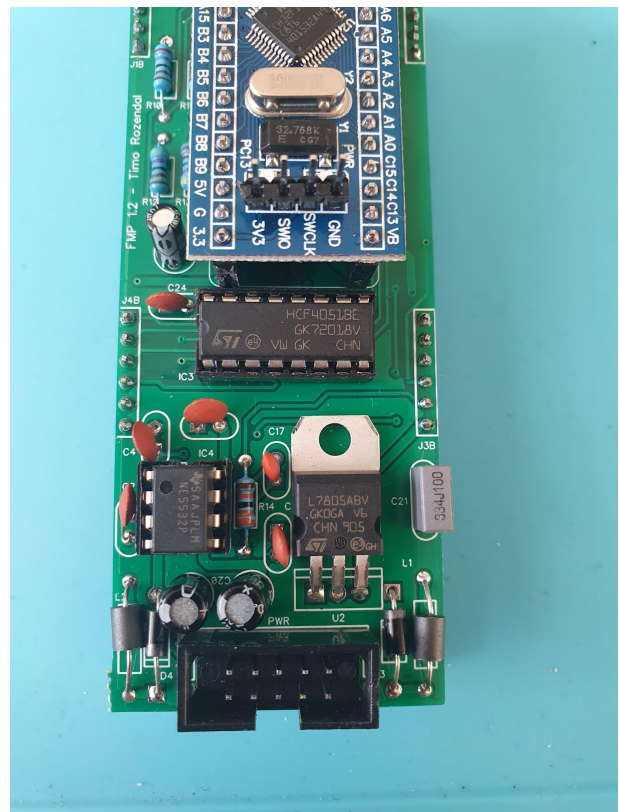
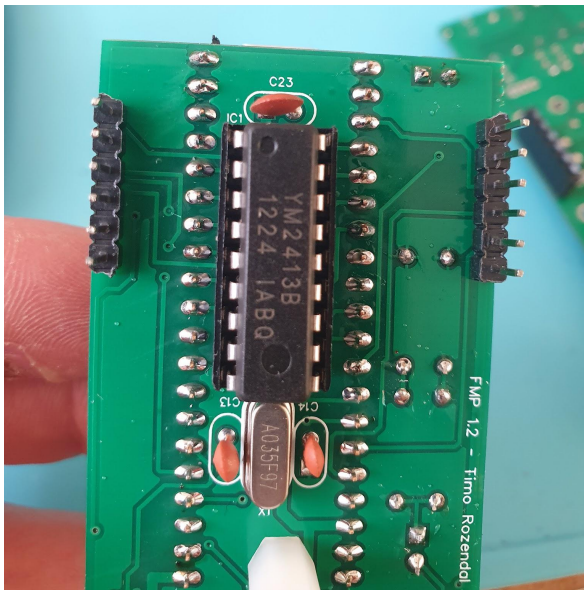
12. Cut the other headers to size (if they aren't already) and place them as shown.



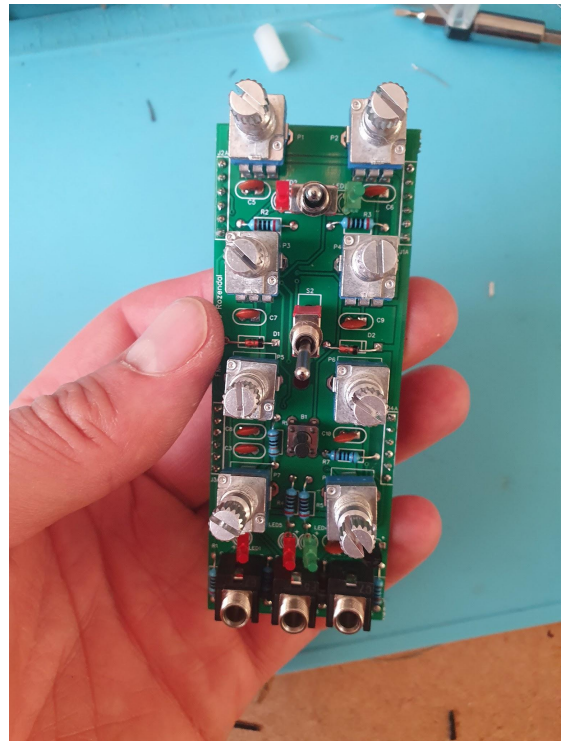
13. Put the other screw in, tighten and solder the headers



14. Place IC1, IC 3 and IC 4 (mind the orientation)



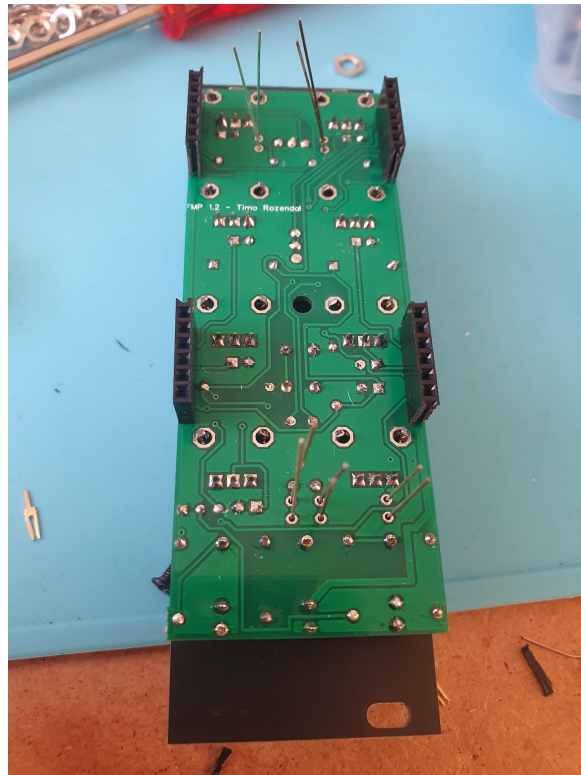
15. Unscrew the two pcbs and cut the tabs from the potentiometers (if they have it) and place all the interface elements: potentiometers, jacks, switches (be mindful, there are 2 different ones), push button and the leds (mind the orientation, the longer leg should be in the hole marked with the plus sign).
Tip: if you leave the screw and spacer attached to the interface board you don't have to unscrew the panel again after step 18.



16. Place the panel and screw the potentiometers, switch and jacks (and ignore the leds for now). Make sure the push button is properly clickable before you start soldering (I don't use washers on the potentiometers)



17. Solder everything but the leds



18. Put a small tape on the panel to fix the leds temporarily and solder them.



19. Screw the pcbs together again (which might involve removing the panel again if you didn't use the tip in step 15) . And put the knobs on, and it's done!

