RasPiBox Open Plus

Version 1.2

construction manual

Rev.	Date	Description
A	2015-02-06	English translation of German version
B	2015-05-04	Small bugfixes
C	2016-04-26	Changes for new RasPiBox version 1.2

Tools:

agregulated soldering iron (25..40W) with small tip

a wet sponge to clean the tip

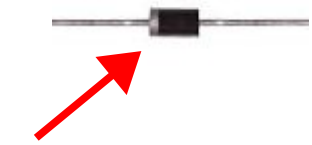
thin solder wire

Side cutting pliers

Needle nose pliers

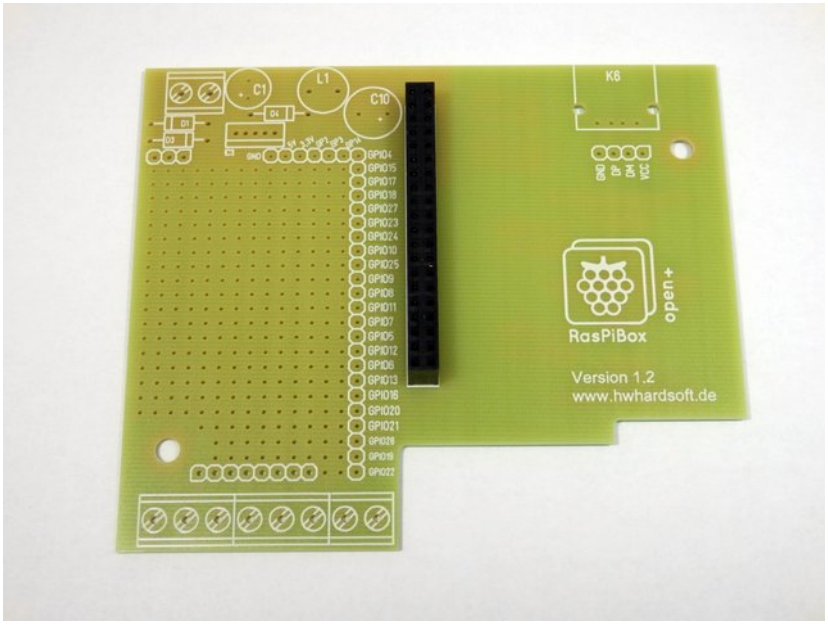
Medium cross slot screwdriver

Parts Basic Version:

 2x 2pole terminal block	 2x 3pole terminal block	 1x 40pole female header
 2x self-tapping screws	 cathode 1x Schottky diode SB260 (D3)	

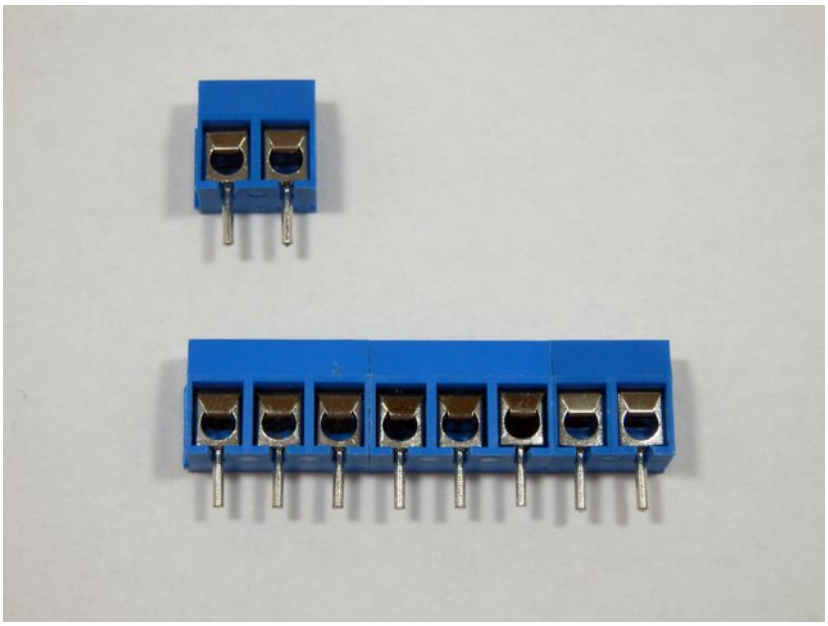
1.) Assemble and solder the 40 pole socket

We've to place and solder the 2x20 pin socket for the Raspberry Pi first:



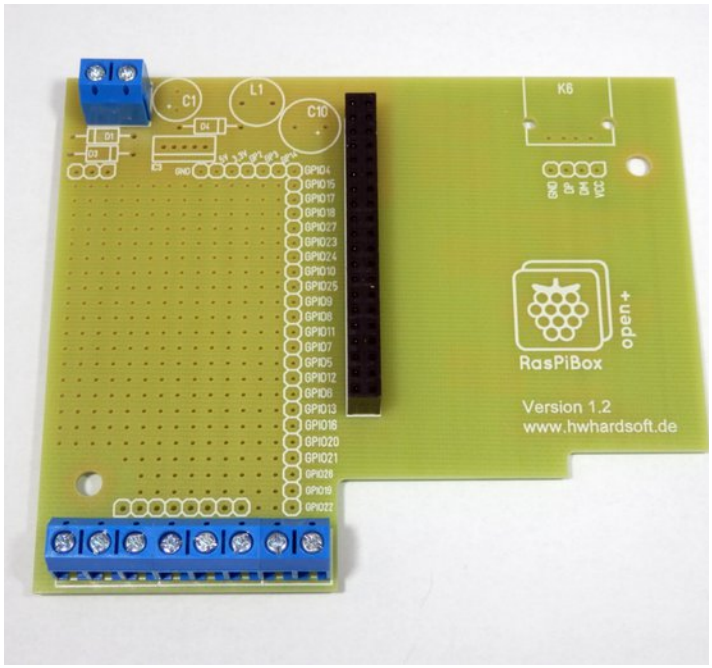
2.) Prepare the terminal blocks

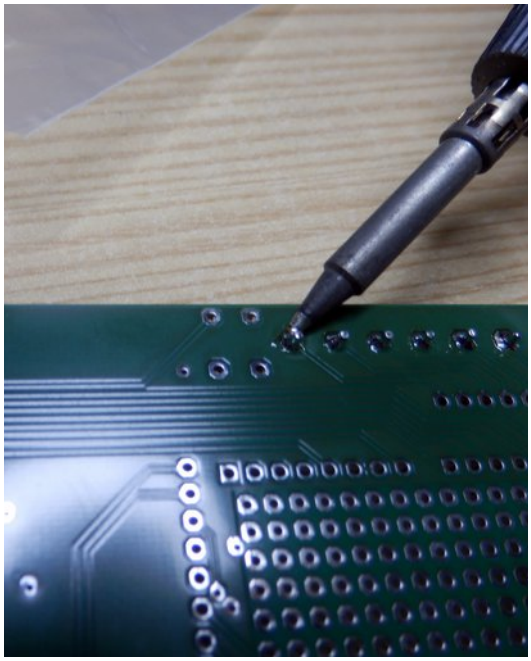
Find the terminal blocks, they're grey or blue and come in 3-pin and 2-pin shapes. We'll need to slide two 3-pin and one 2-pin blocks together:



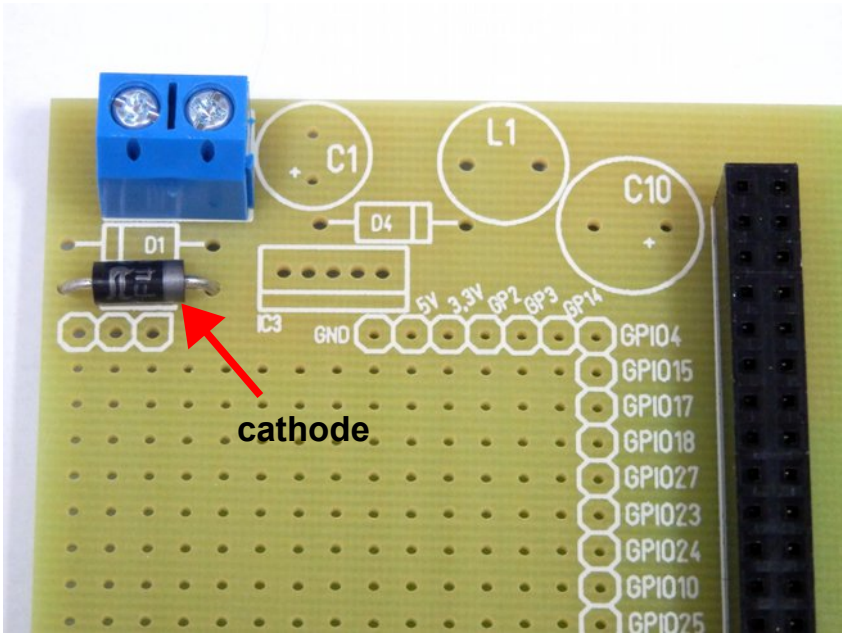
3.) Place and solder terminal blocks

We've to put the blocks into the proto plate. Make sure you place them so that the open ends are facing out as shown:

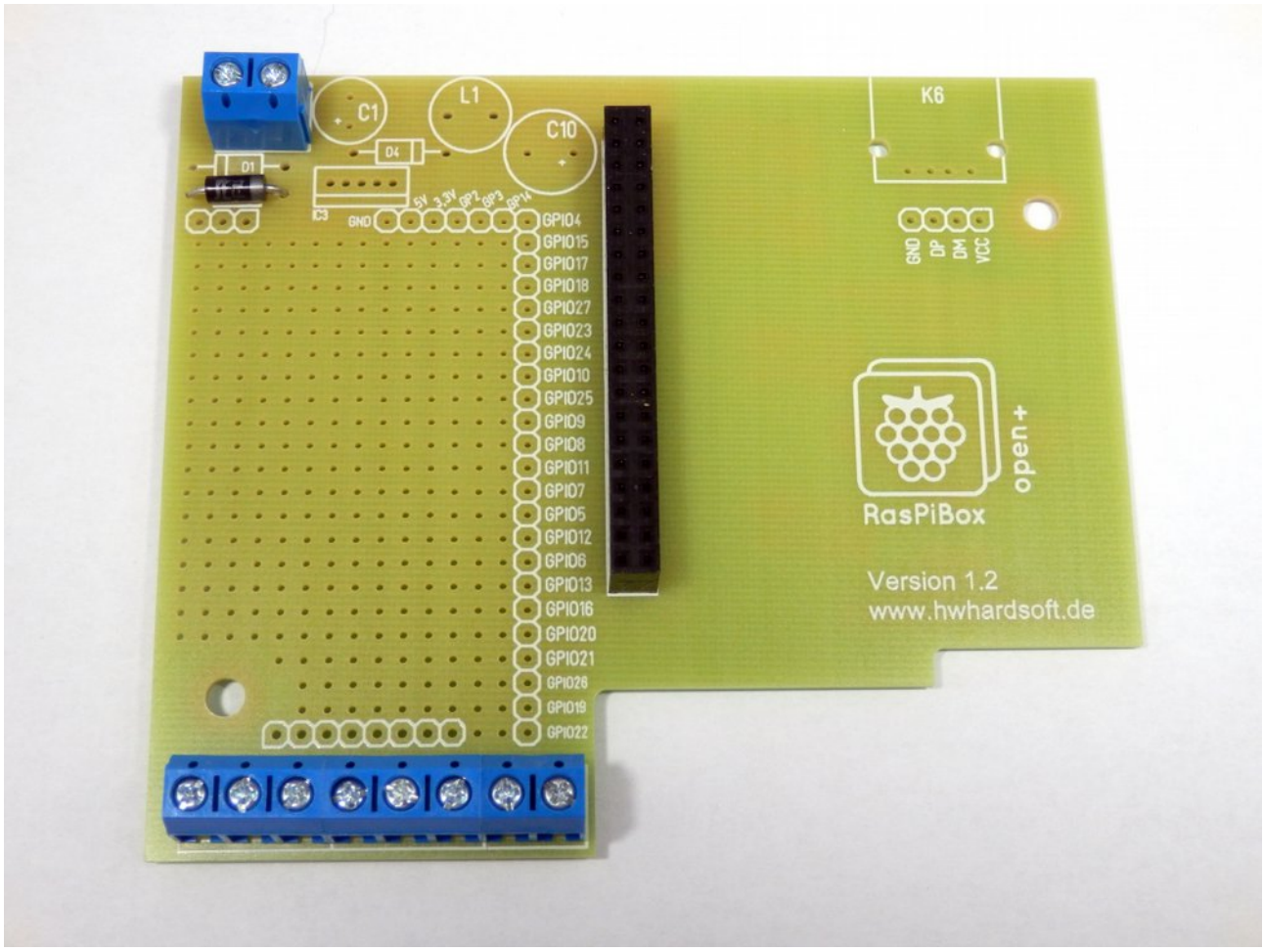




4.) Place and solder the schottky diode D3

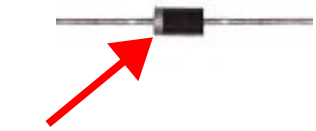
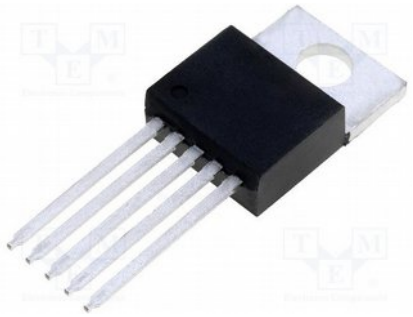


Now your pcb looks like in this picture:

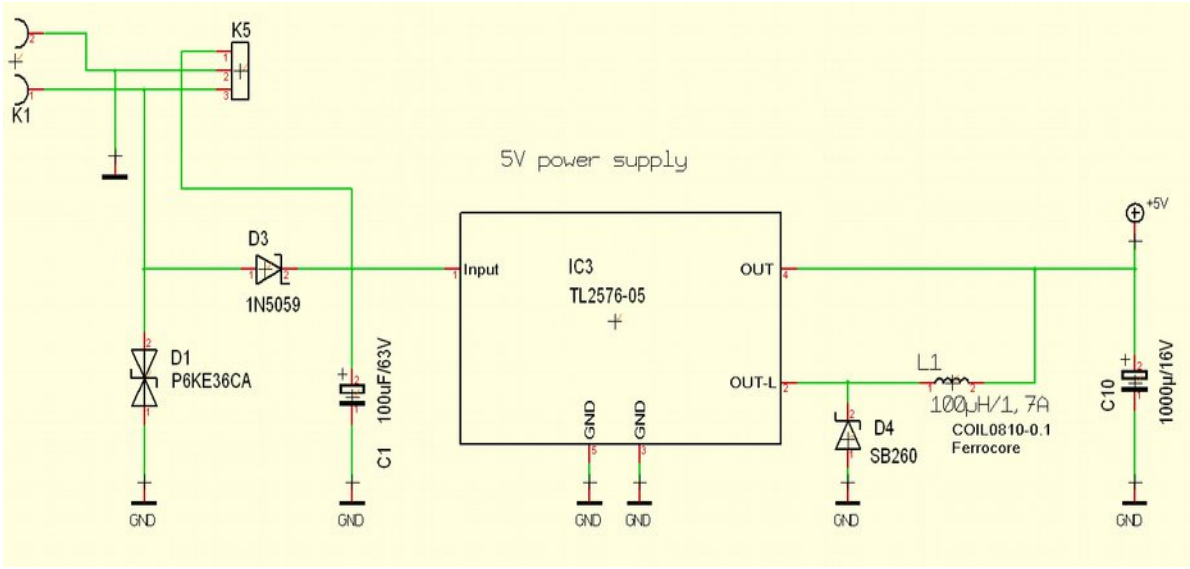


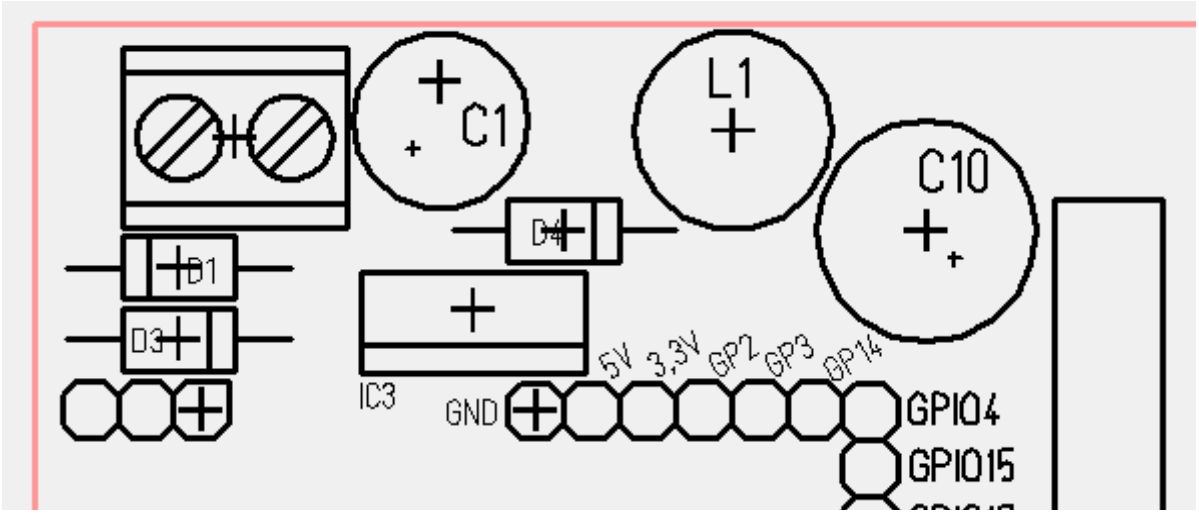
Perform the next steps only if you have the standard kit (includes the parts of the voltage regulator). Otherwise continue with step 10.

Additional parts of Standard Version:

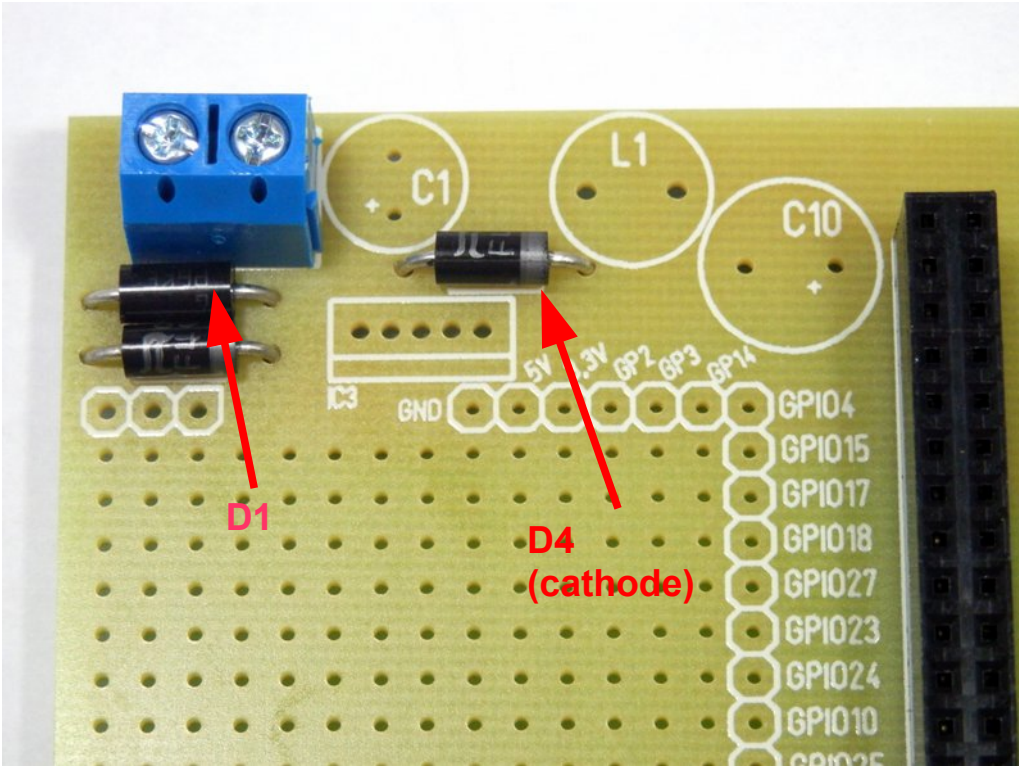
		
1x inductor 100uH/1.7A (L1)	1x Schottky diode SB260 (D4)	1x overvoltage limiting diode P6KE36CA (D1)
		
1x voltage regulator TL2576-5 (IC1)	1x electrolytic capacitor 100uF/63V (C1)	1x electrolytic capacitor 1000uF/16V (C2)

Power supply circuit:



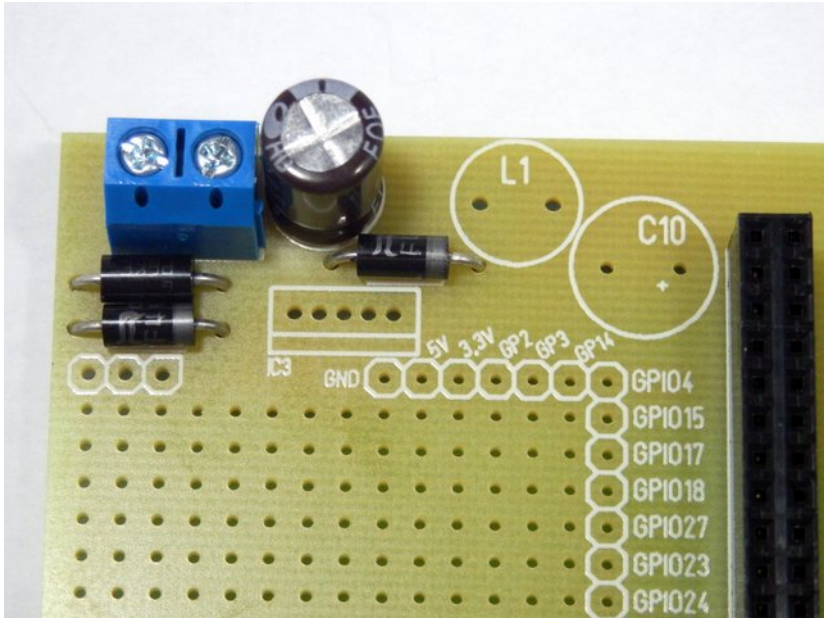


5.) Assemble Diode D1 and D4

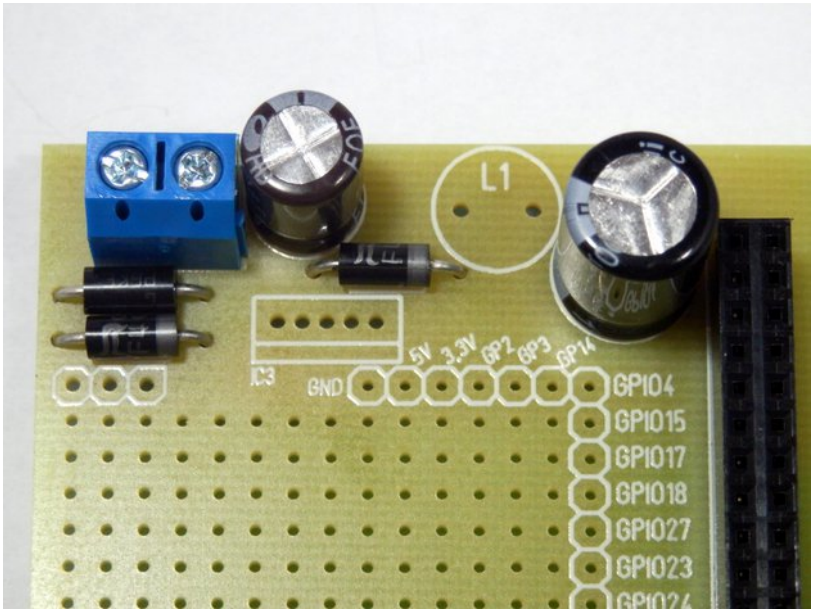


Pls Note: D1 has no polarity!

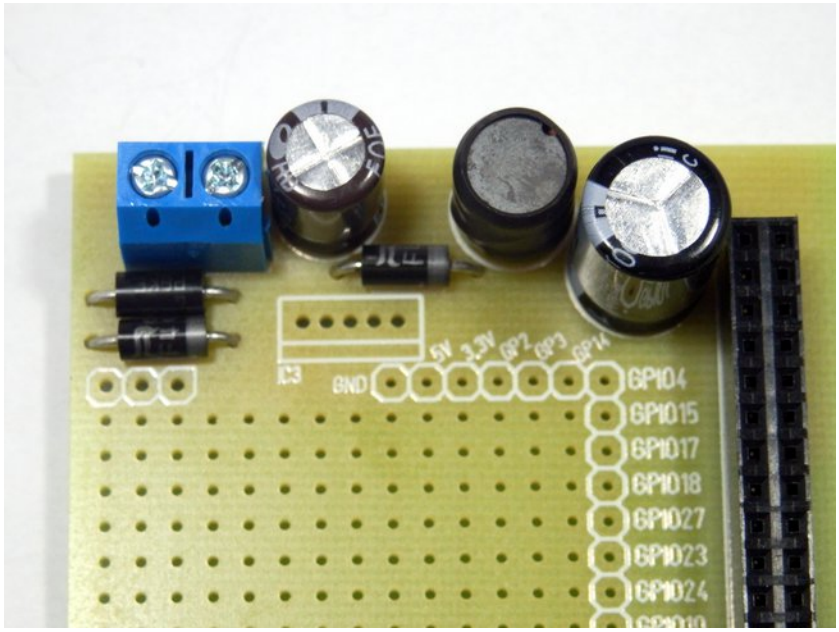
6.) Assemble electrolytic capacitor C1



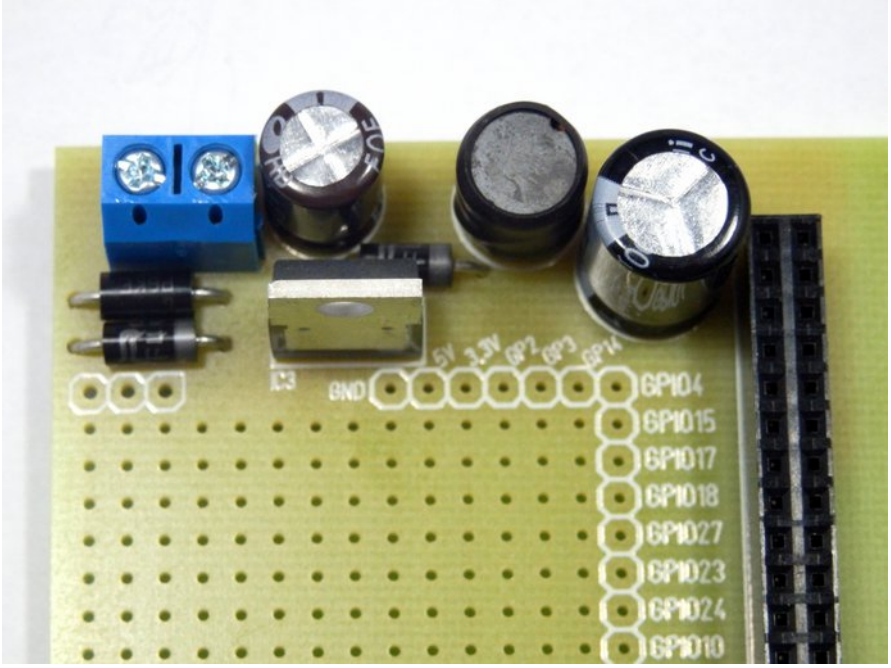
7.) Assemble electrolytic capacitor C2



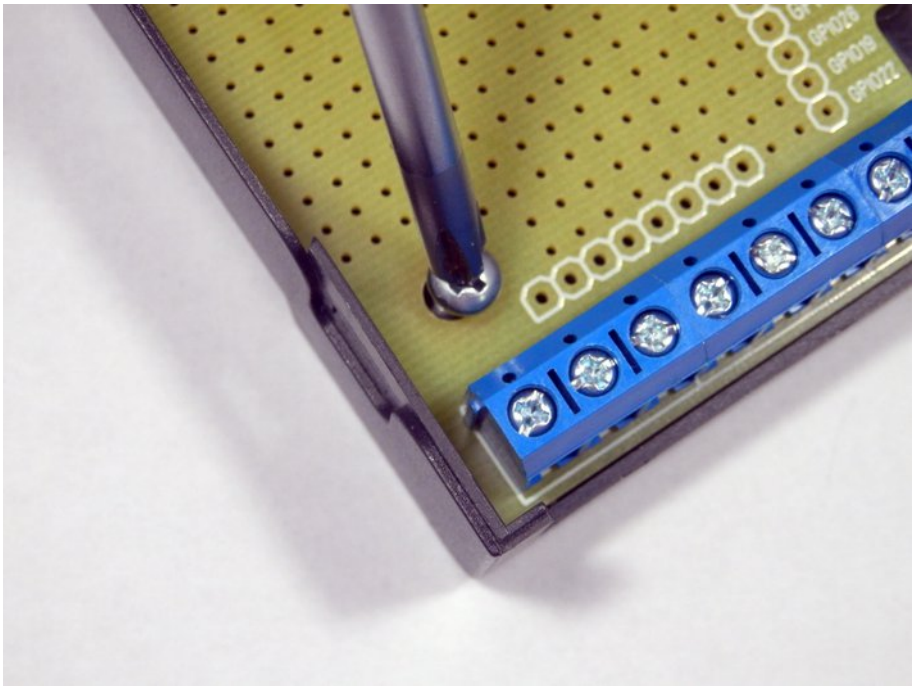
8.) Assemble inductor L1



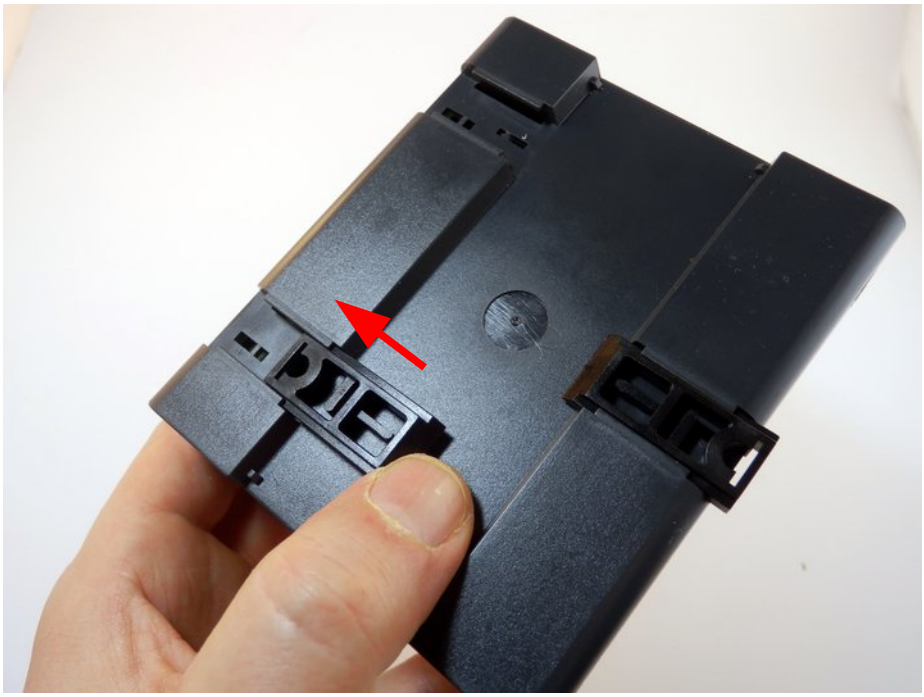
9.) Assemble voltage regulator IC1



10.) Mount the pcb into the bottom shell



11.) Mount the 3 holders for the din rail



Please take care to mount the holder from the inner channel to the outside!

12.) Mount the top shell!

Finish!