

RasPiBox Zero Lite

Version 3.0

construction manual

Rev.	Date	Description
A	02.09.16	First release
B	03.03.18	Changed to pcb version 3.0

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:



3x
2pole terminal block
(K2, K6, K8)



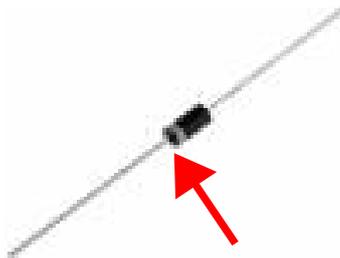
1x
2x20pole female header
(K1)



2x
din rail holders



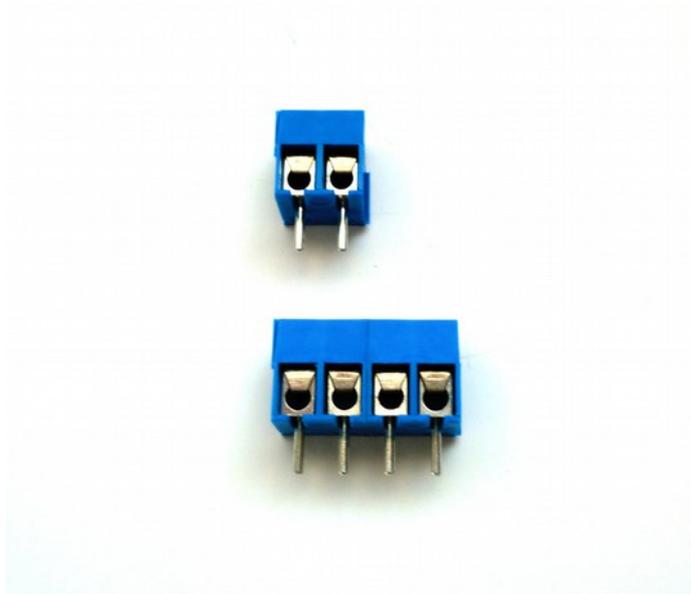
2x
self-tapping screws



1x
Schottky diode
SB260

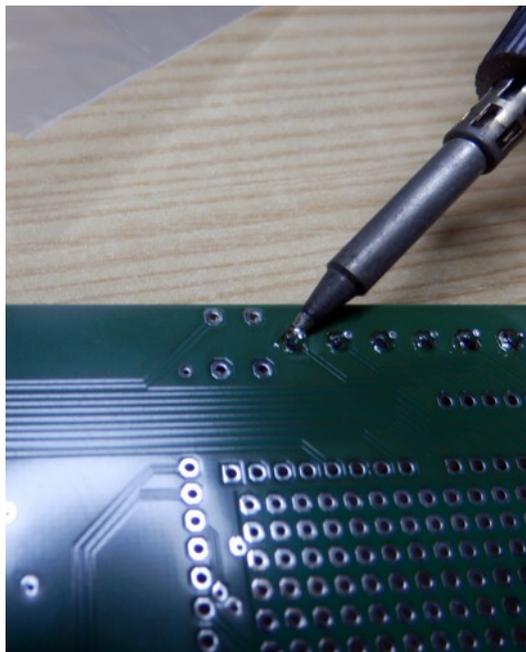
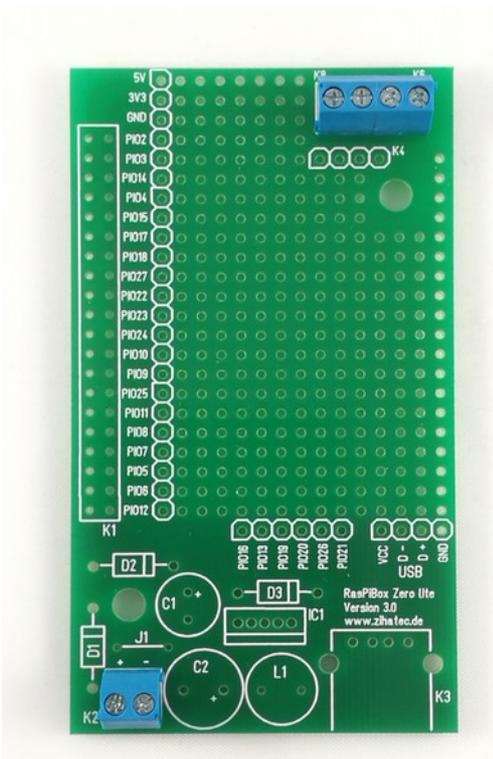
1.) Prepare the terminal blocks

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



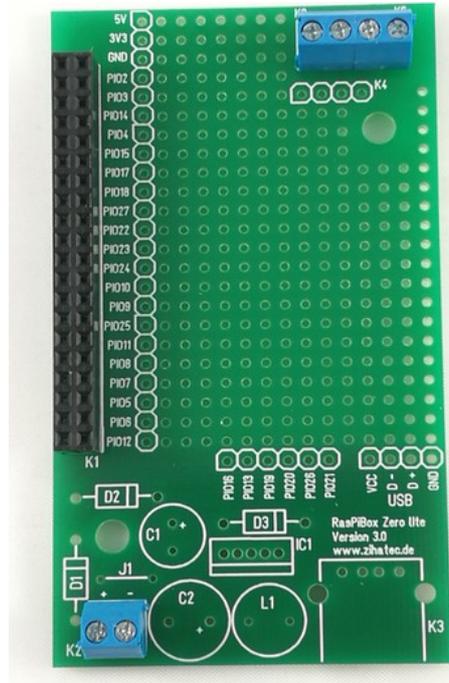
2.) Place and solder terminal blocks

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:

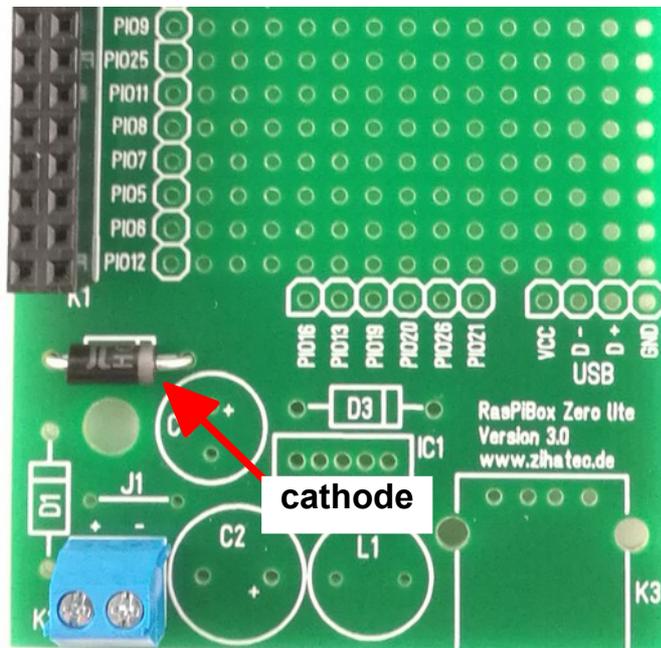


3.) Assemble and solder the 40 pole socket

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

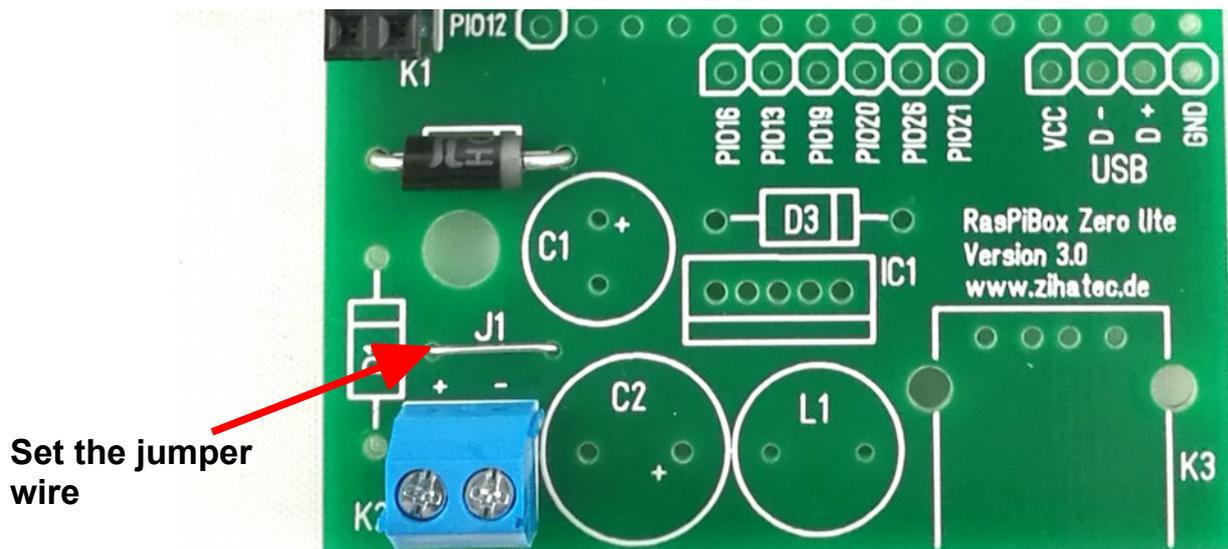


4.) Place and solder the schottky diode D2



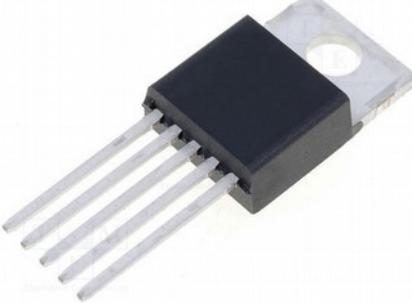
5.) Set the jumper wire (basic kit only)

Attention: Please set this jumper in the basic version only! You can supply the PiZero with 5V DC directly from the terminal K2 now.

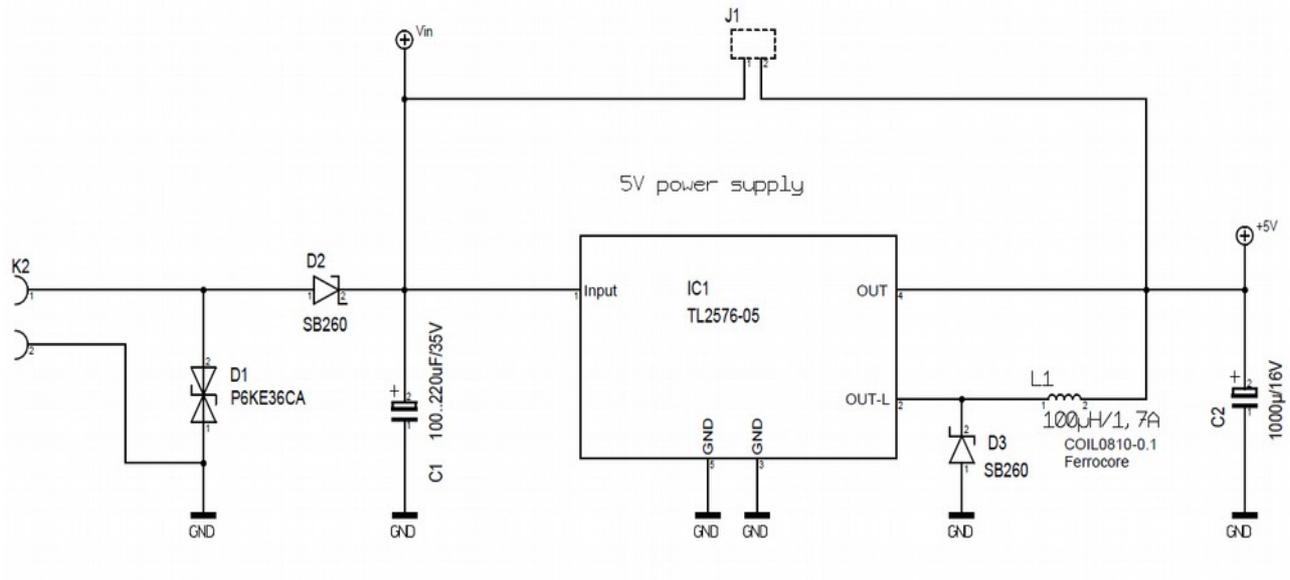


Perform the next steps only if you have the standard kit (includes the parts of the voltage regulator and USB socket). Otherwise continue with step 13.

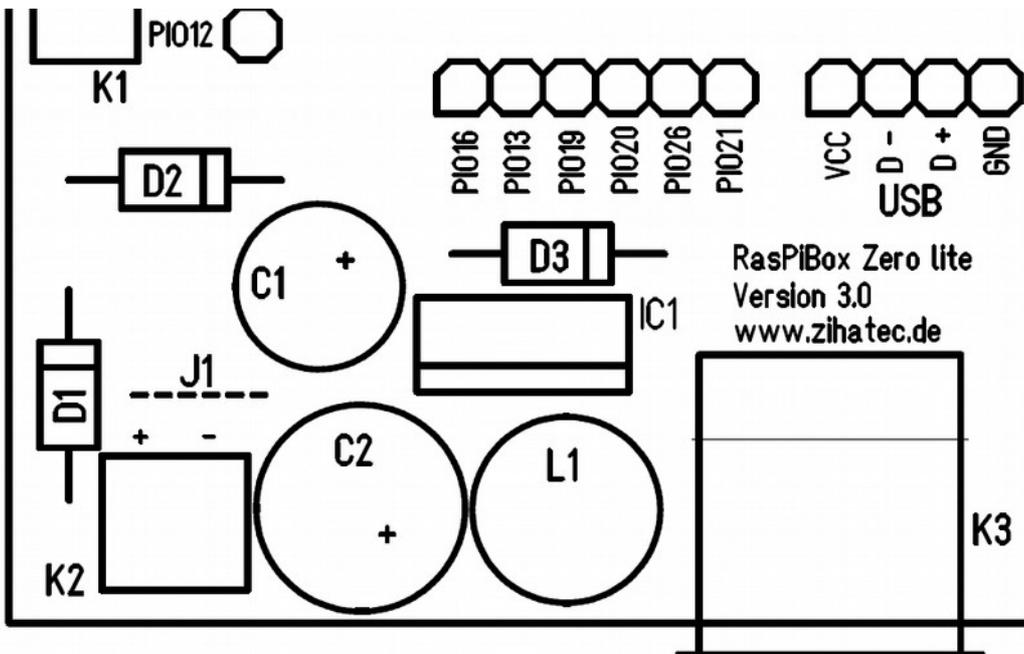
Additional parts of Standard Version:

 <p>1x inductor 100uH/1.4A (L1)</p>	 <p>cathode</p> <p>1x Schottky diode SB260 (D3)</p>	 <p>No polarity</p> <p>1x overvoltage limiting diode P6KE36CA (D1)</p>
 <p>1x voltage regulator TL2576-5 (IC1)</p>	 <p>1x electrolytic capacitor 100...220uF/35V (C1)</p>	 <p>1x electrolytic capacitor 1000uF/16V (C2)</p>

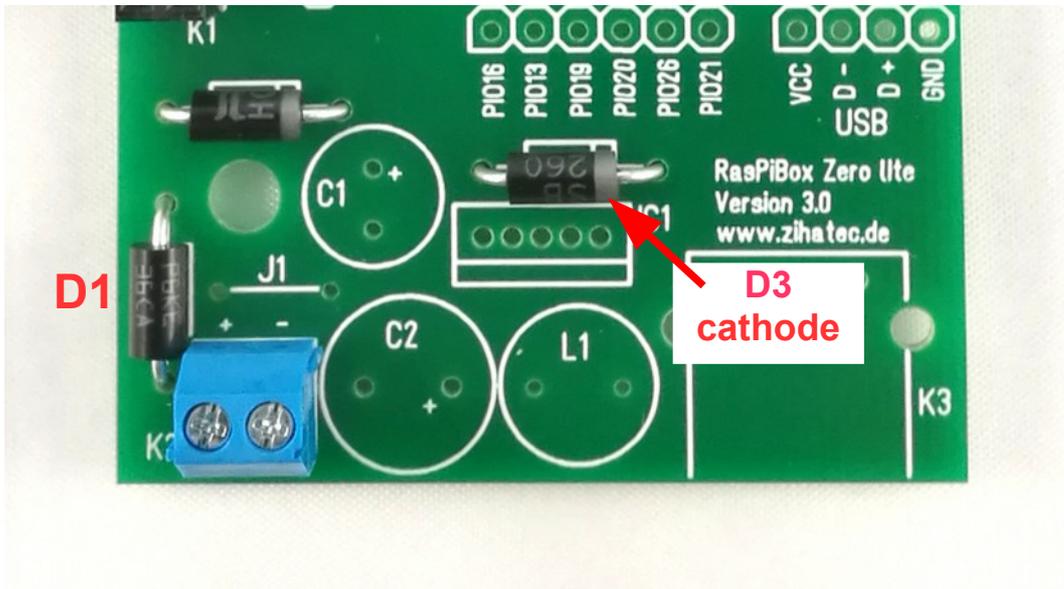
Power supply circuit:



Placement:

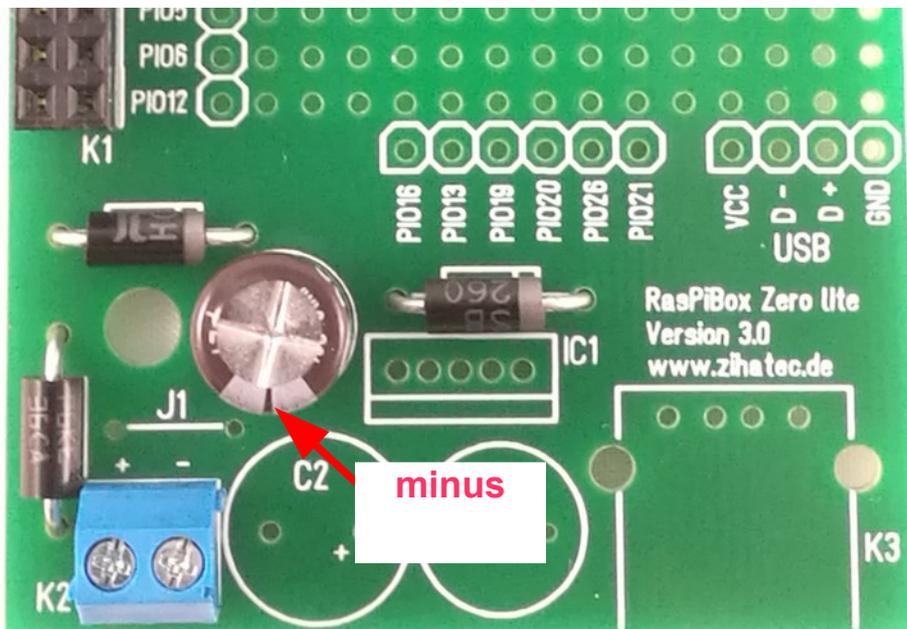


6.) Assemble Diode D1 and D3

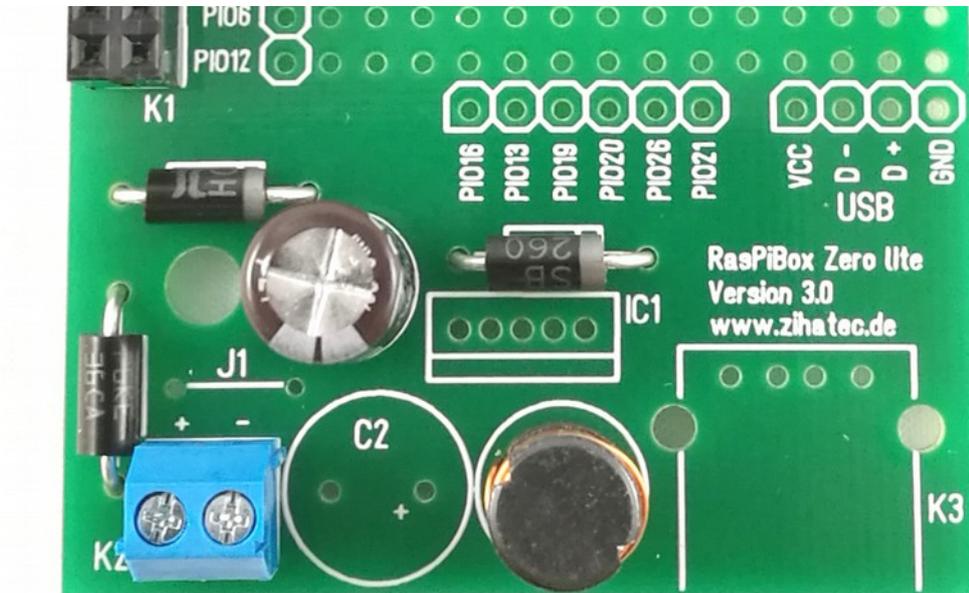


Pls Note: D1 has no polarity!

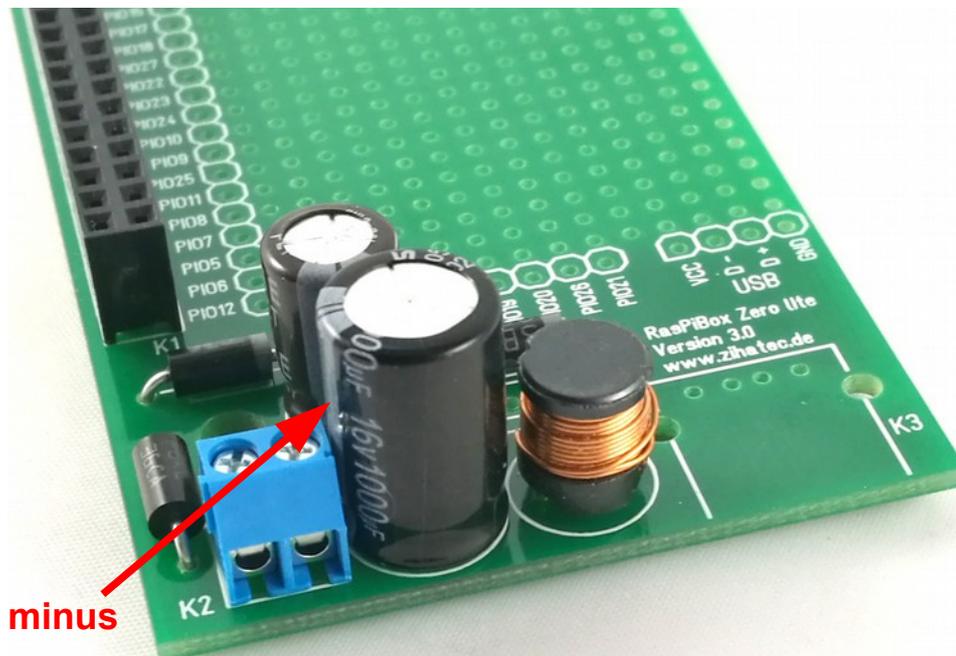
7.) Assemble the capacitor C1



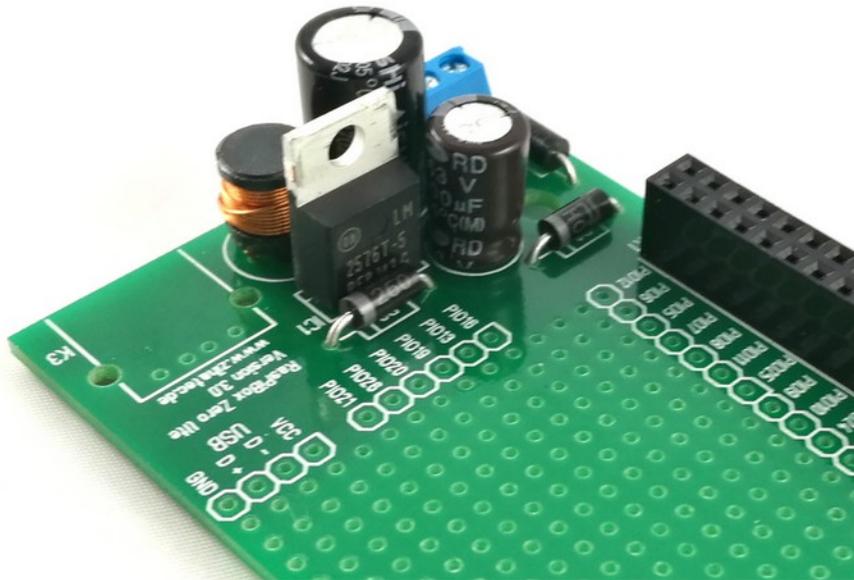
8.) Assemble the inductance L1



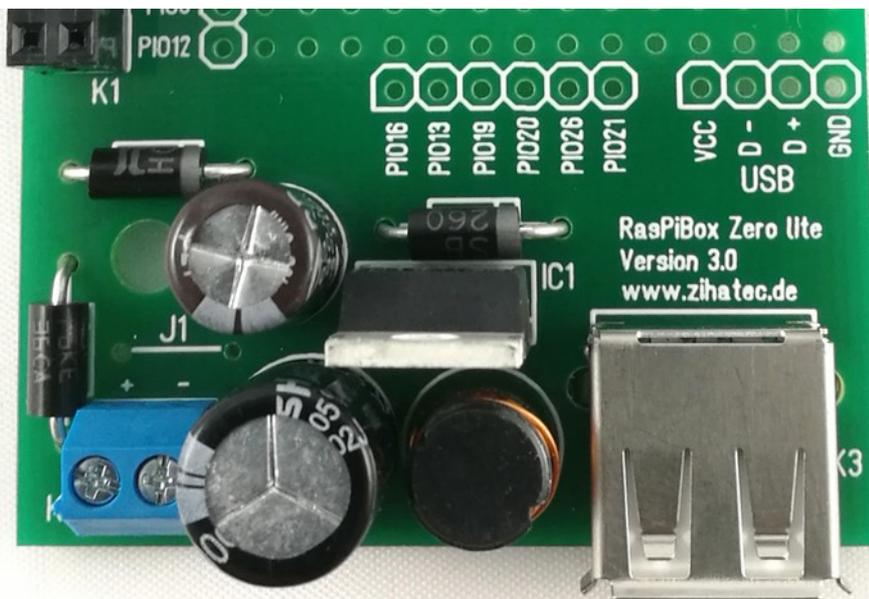
9.) Assemble the capacitor C2



10.) Assemble the voltage regulator IC1

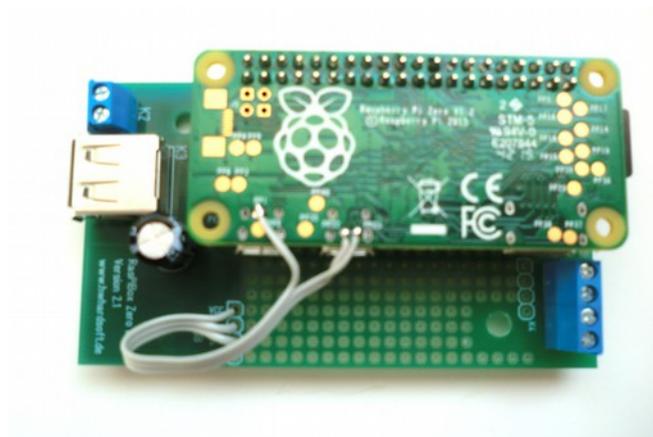


11.) Assemble the USB socket K3 (option)



12.) Connect the USB port (option)

It's very important that the wires for D+ and D- have exactly the same length. The optimal length for the cables is 6-7 cm.



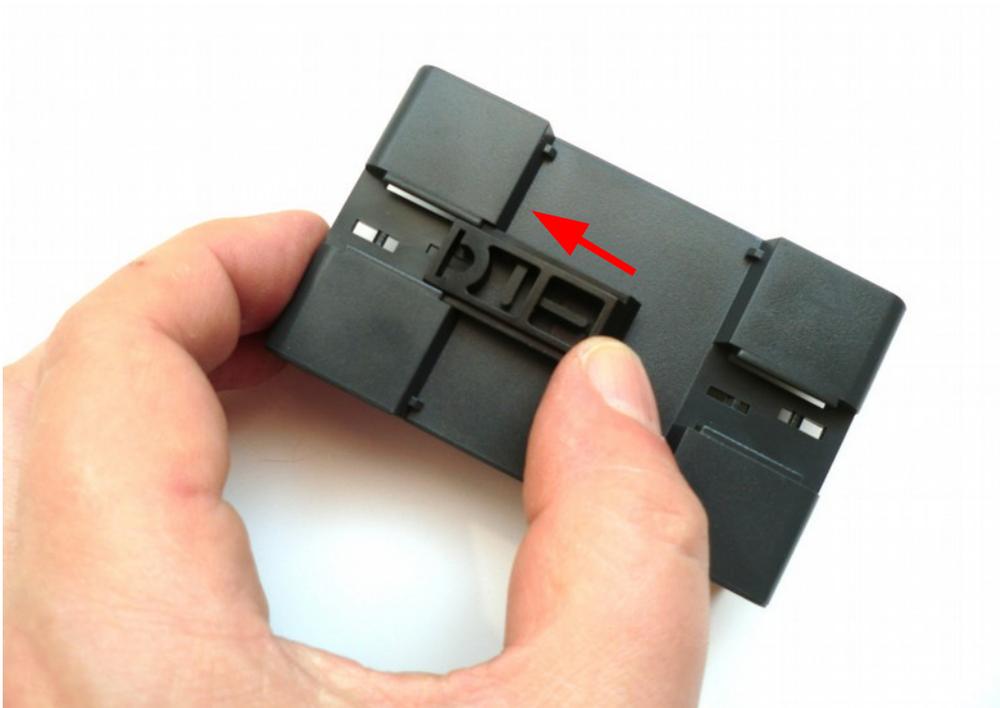
pcb	PiZero
Vcc	PP1
D-	PP23
D+	PP22

A ground connection is not needed!

13.) *Mount the pcb into the bottom shell*



14.) *Mount the 2 holders for the din rail*



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

15.) Mount the top shell!



Finish!