

ArduiTouch MKR

Rev A

construction manual

Rev.	Date	Description
A	2019-03-19	First Release

Tools:

*ageregulated soldering iron
(25..40W) with small tip*



*a wet sponge to clean the
tip*



thin solder wire



Side cutting pliers









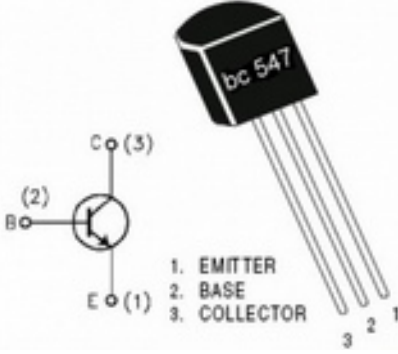
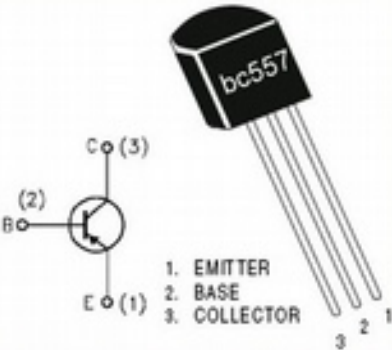

Needle nose pliers



Medium cross slot screwdriver



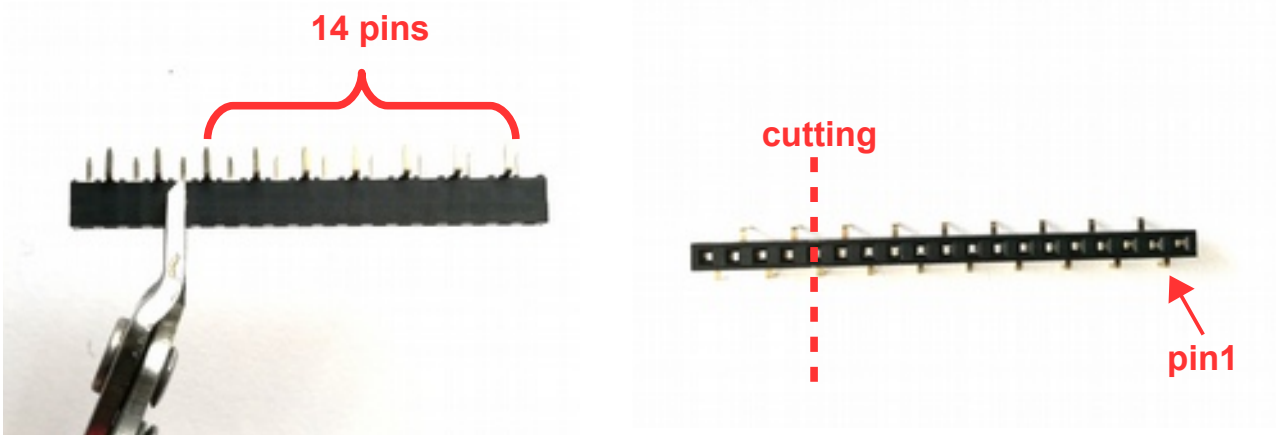
Part list:

 <p>1x 6pole terminal block (K1)</p>	 <p>1x 6pole terminal header (K1)</p>	 <p>1x 14pole female header (K4)</p>
 <p>4x 19pole centipede female header</p>	 <p>(brown, black, red)</p> <p>2x Resistor 1k (R1, R2)</p>	 <p>(brown, black, orange)</p> <p>1x Resistor 10k (R3)</p>
 <p>1x NPN Transistor BC547B (T2)</p>	 <p>1x PNP Transistor BC557B (T1)</p>	 <p>1x voltage regulator TL2576-5 (IC4)</p>

 <p>1x inductor 100uH/1.2A (L1)</p>	 <p>cathode</p> <p>2x Schottky diode SB260 (D2, D3)</p>	 <p>1x overvoltage limiting diode P6KE36CA (D1)</p>
 <p>1x electrolytic capacitor 1000uF/16V (C2)</p>	 <p>1x electrolytic capacitor 100uF/63V (C1)</p>	 <p>1x Piezo Beeper (LS1)</p>
 <p>1x 3pole male header (JP1)</p>	 <p>7x Screw M3 4mm</p>	 <p>4x Spacer M3 11mm</p>

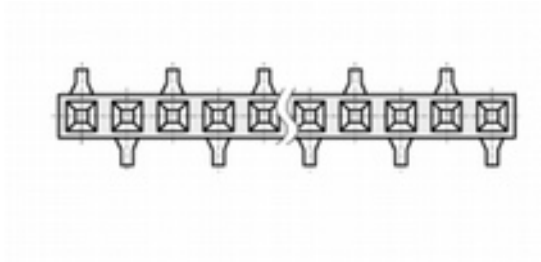
1.) Preparation of the female centipede headers

Depending from the situation on the market you will find female centipede header with different length in your kit. You have to cut these headers to 14 pins:

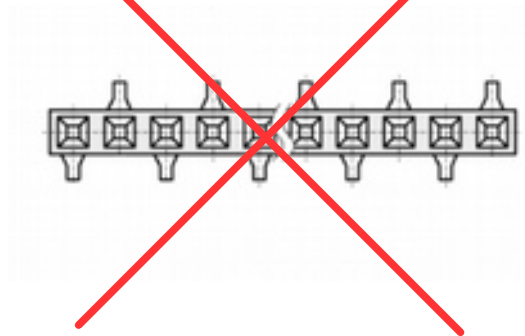


Its very important to cut the header in the right way – see below:

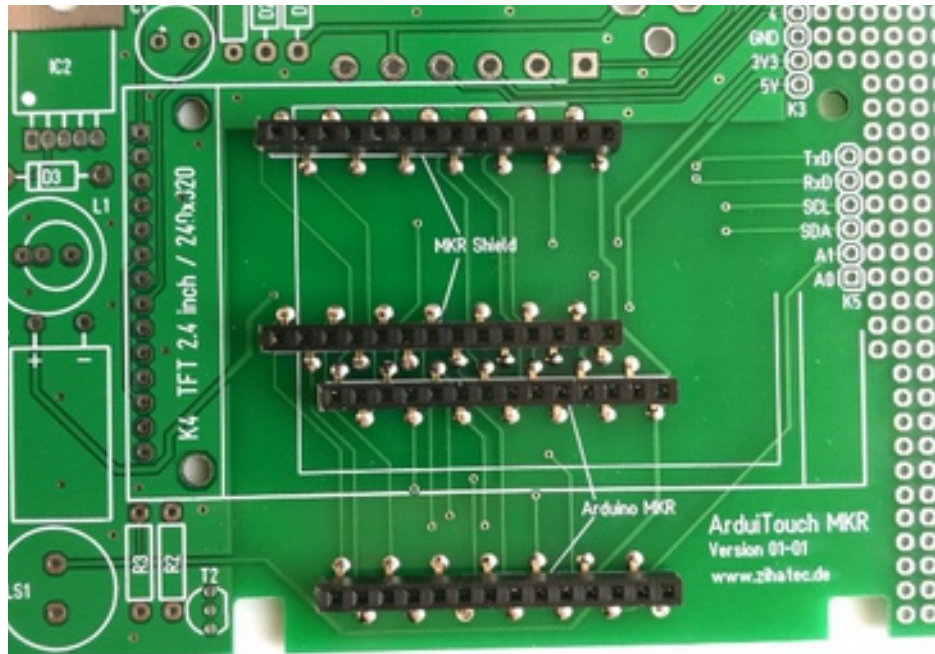
Right result!



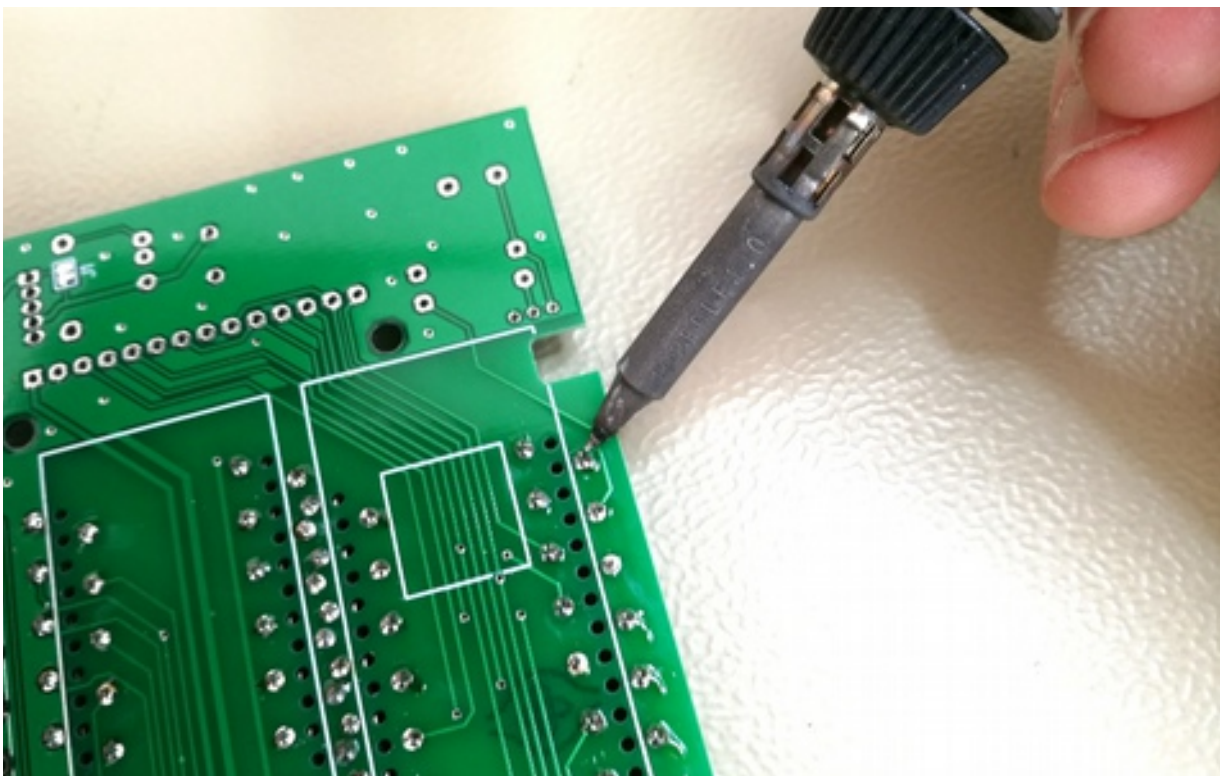
Wrong result!



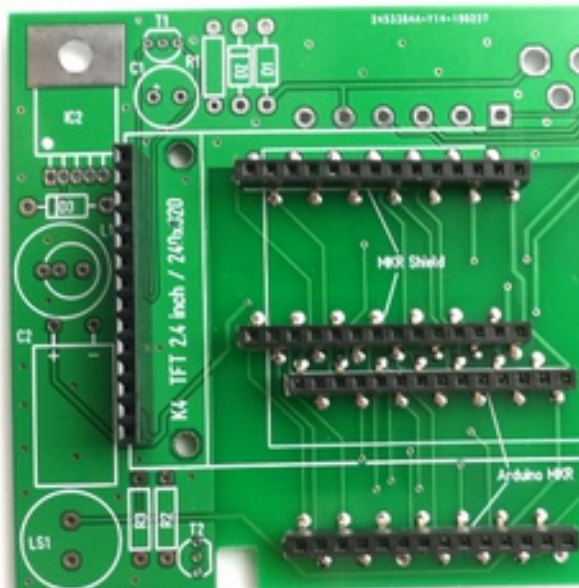
2.) *Place and solder the centipede headers*



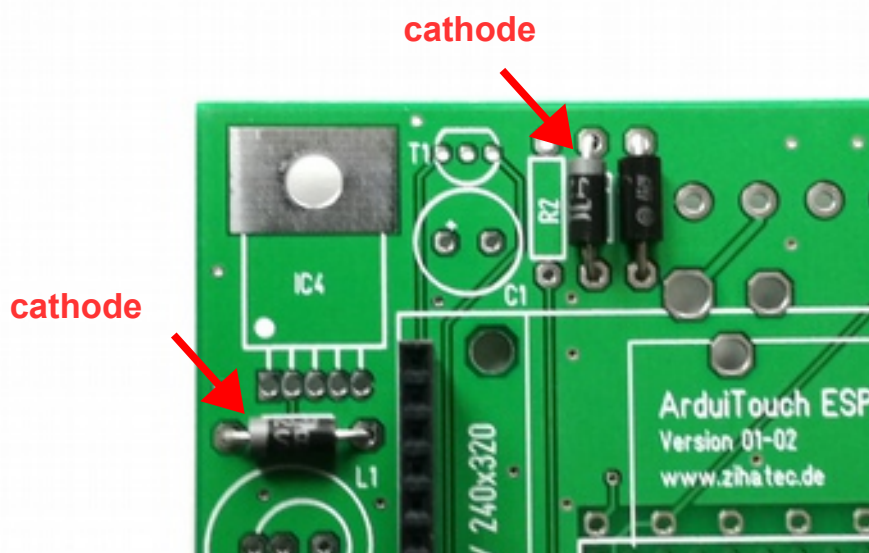
Now you can solder the centipede headers from the opposite side. Please take care that the headers placed tight as possible to the pcb:



3.) Place and solder the header K4

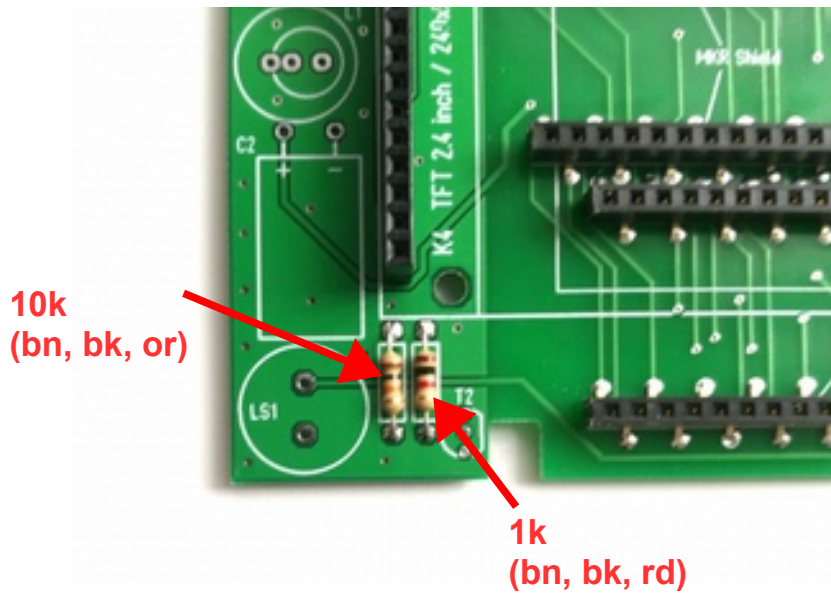


4.) Place and solder the schottky diodes D1, D2 & D3

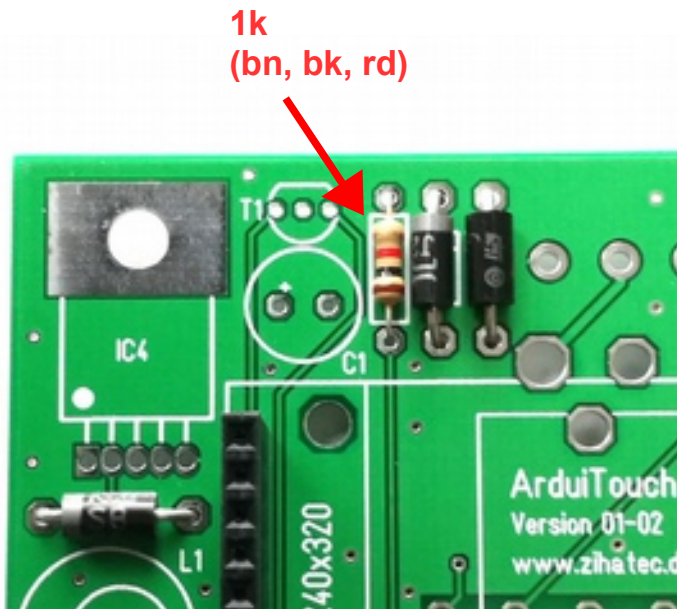


Please Note: D1 has no polarity!

5.) Place and solder the resistors R2 and R3

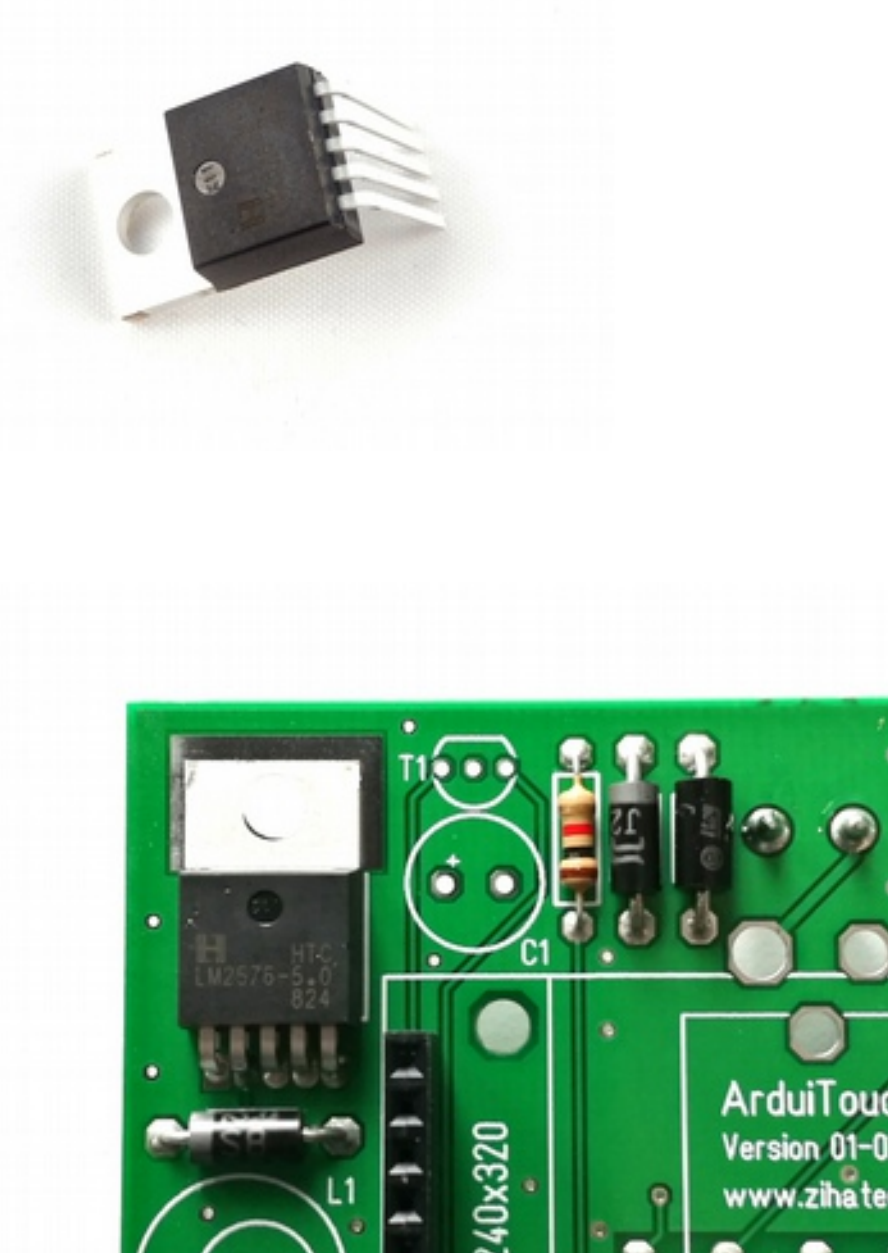


6.) Place and solder the resistor R1

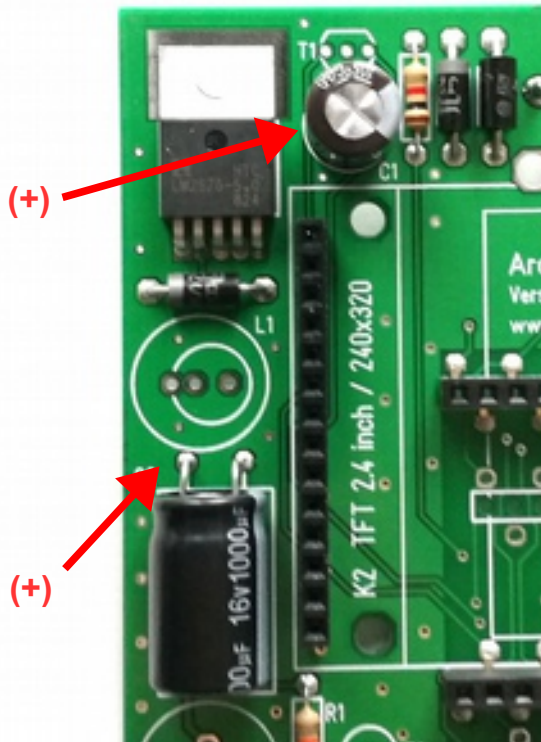


7.) Preparation and Assembly of IC4

Bend the straight pins of the voltage regulator IC4 2mm beside the regulator in a 90 degree angle first:



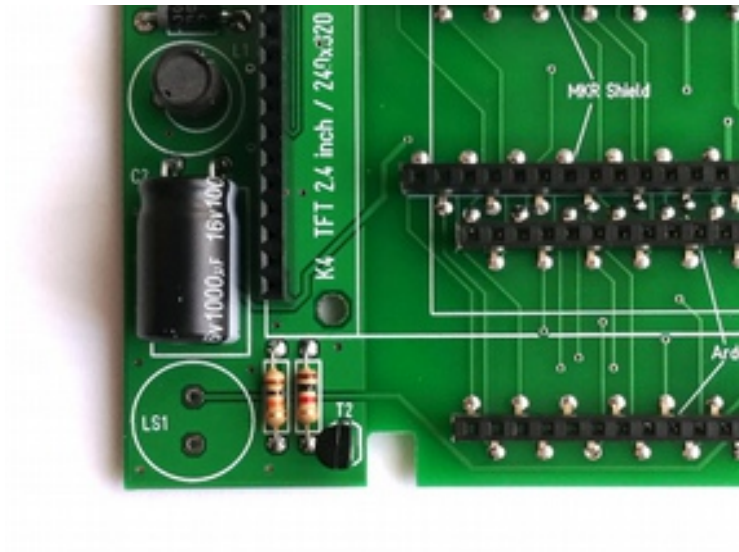
8.) Place and solder the capacitors C1 and C2



9.) Place and solder the inductor L1

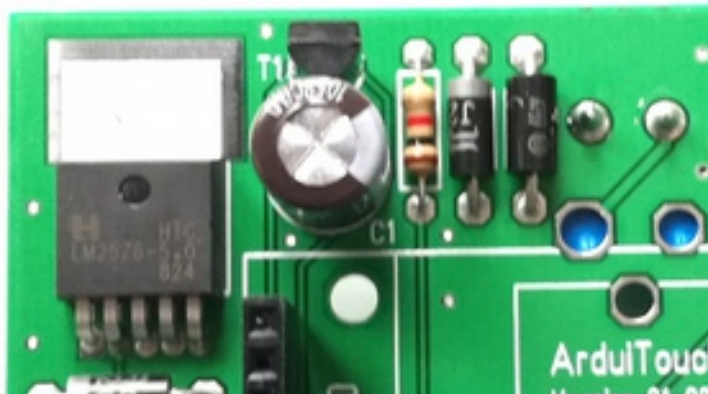


10.) *Place and solder the transistor T2 (BC547)*



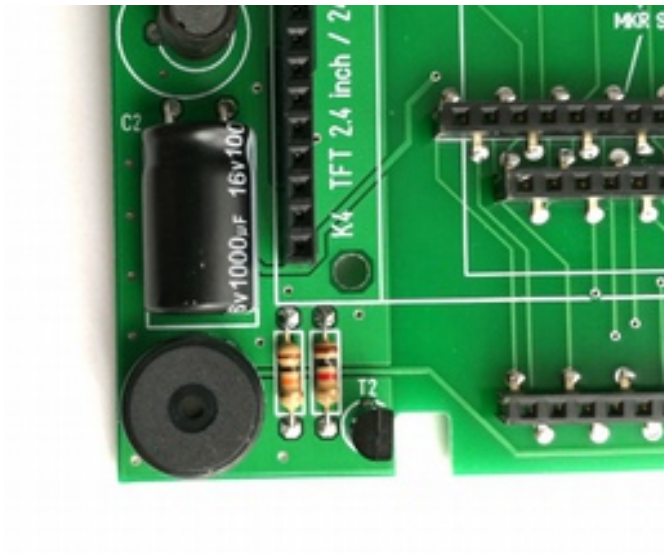
NPN Transistor BC547!!!

11.) *Place and solder the transistor T1 (BC557)*



PNP Transistor BC557!!!

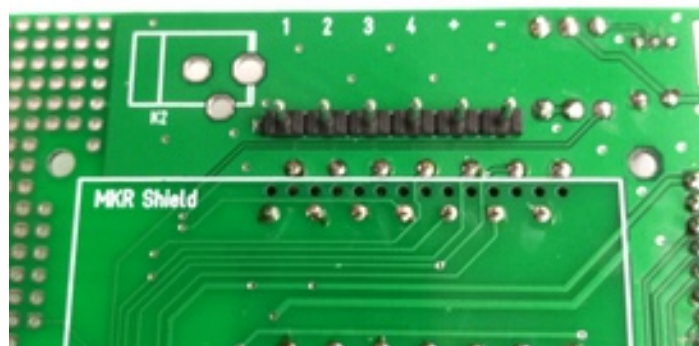
12.) Place and solder the piezo loudspeaker LS1



13.) Place and solder the header K1

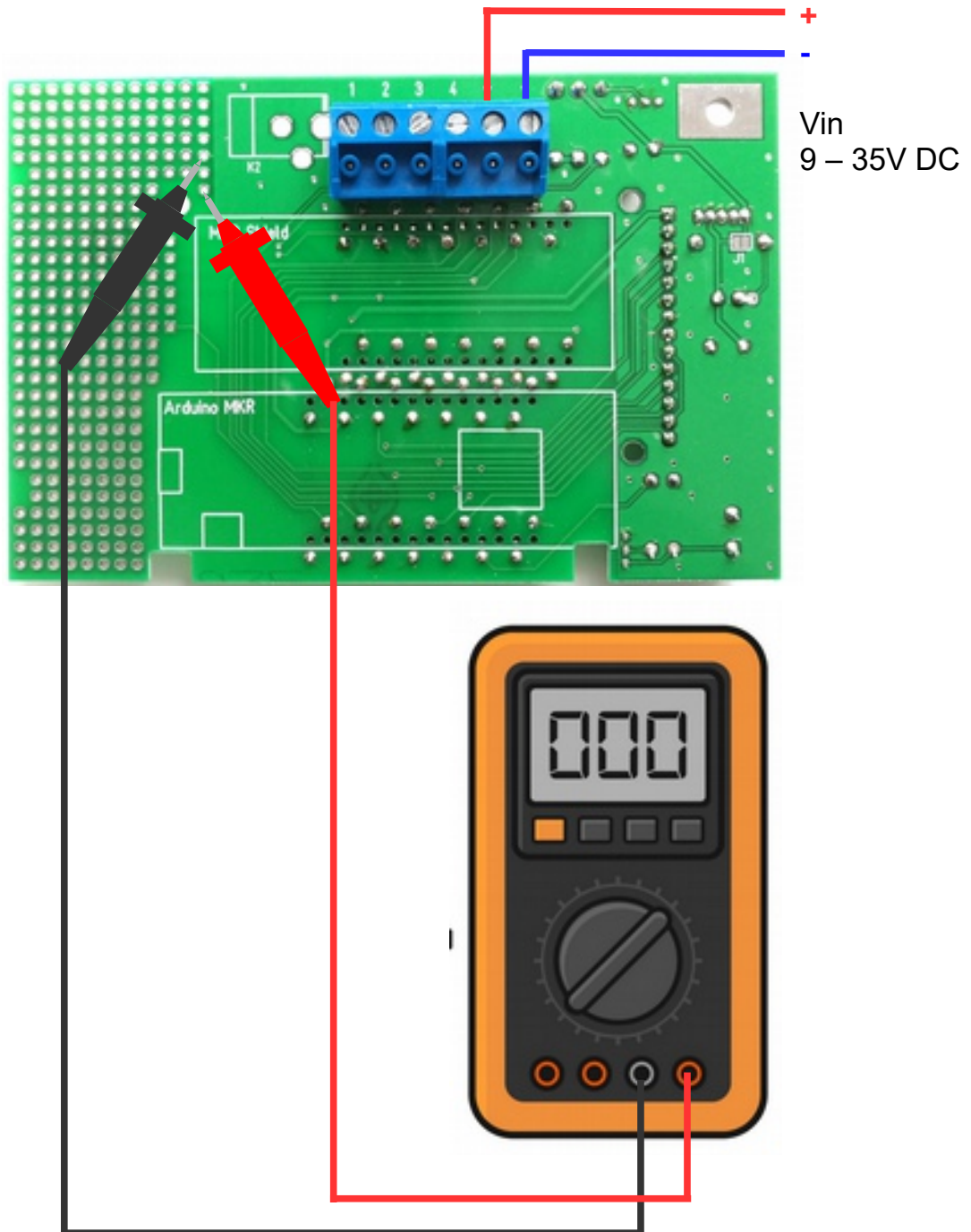


Attention!
K1 is placed on the
pcb backside



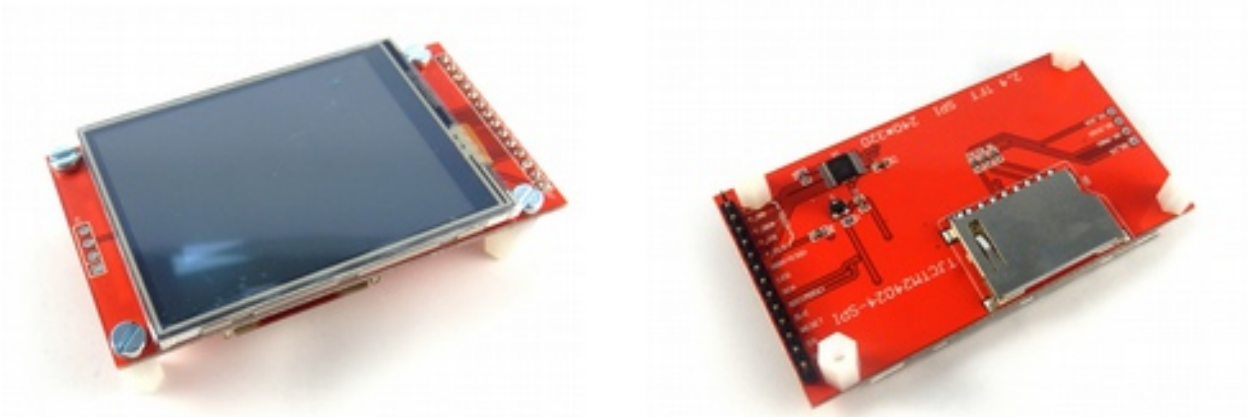
15.) Check the power supply

Its time to check the function of the power supply before the final assembly of the unit.



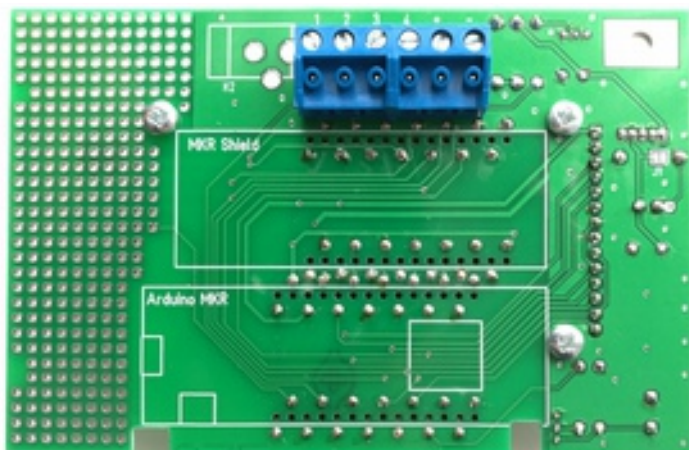
You have to measure a voltage between 4.9 – 5.1V!

14.) Mounting of Spacers

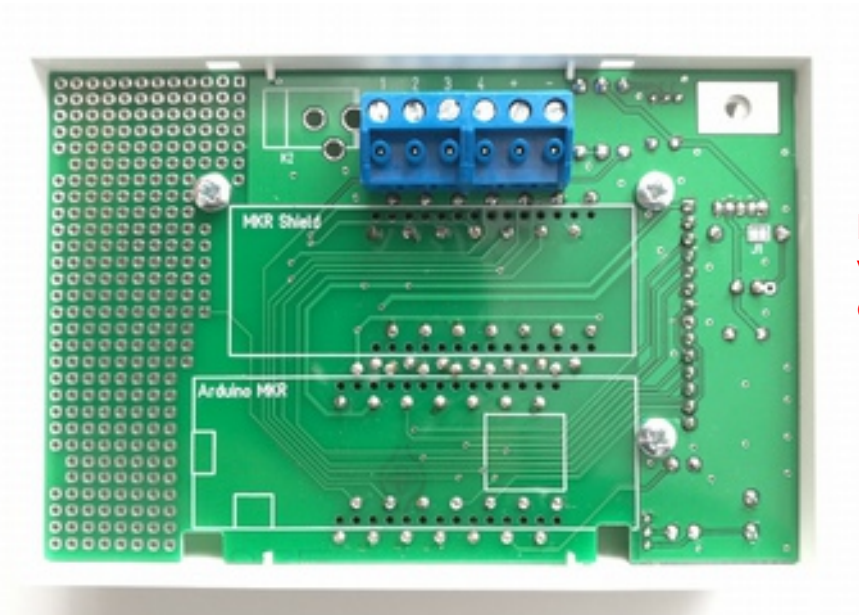
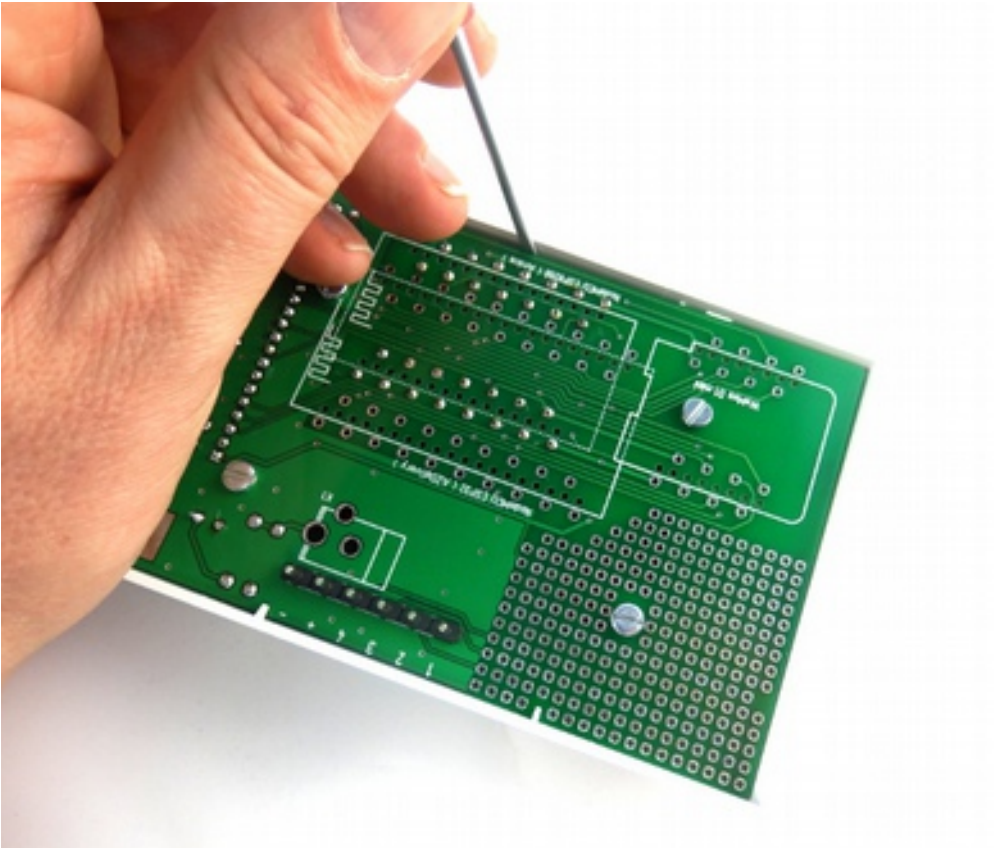


15.) Mounting of Touchscreen

Plug the touchscreen into K4 and fix it with 3 M3 screws on the pcb backside.

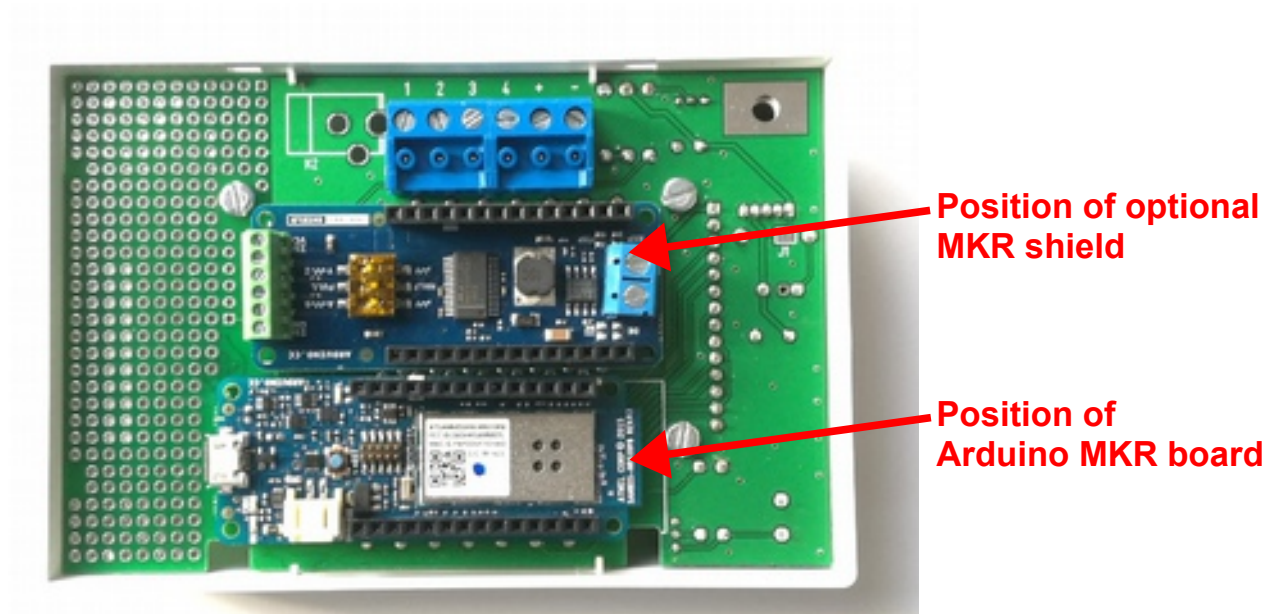


16.) Mounting of pcb in the top shell



Position of ventilation slots on this side!

17.) Mounting of ESP module and terminal



Finish!