Brief instructions building Nunchuk64
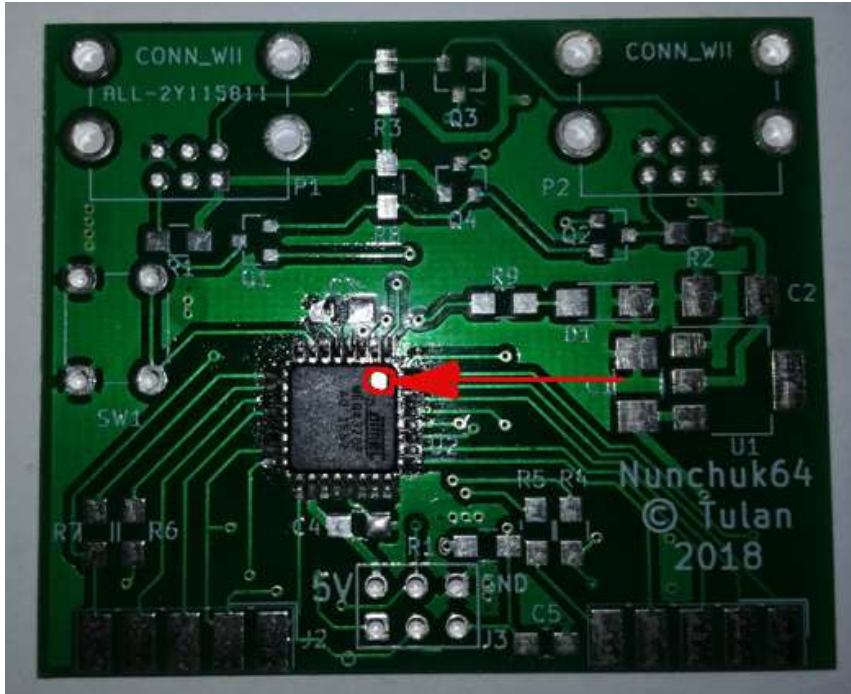

Abbildung 1

First, the Atmega 328 is soldered. Pay attention to the position of the marking. The next step is the programming of the Atmega 328. Since flashing is done through ISP, no further wiring is necessary. At the same time, it is possible to check whether all pins are in proper contact.
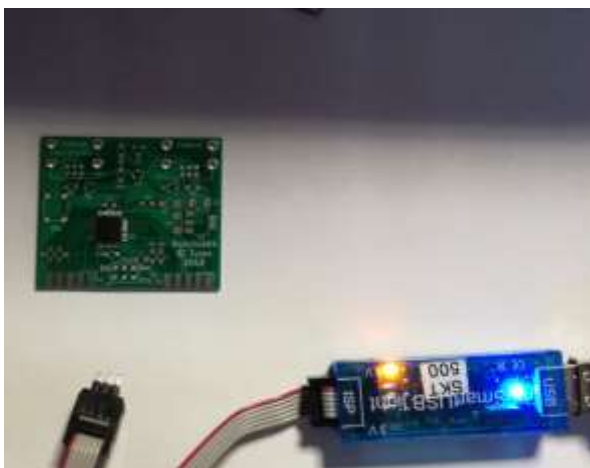

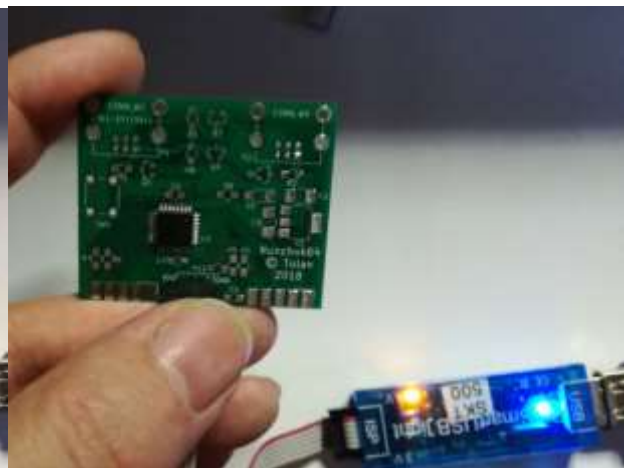*Abbildung 2*   *Abbildung 3*

I use the ISP cable without soldering the ISP post plugs, because they interfere with further assembly. The position of the ISP cable is shown in Figure 2, as it is held in Figure 3.

I am flashing the whole thing with mySmartUSB light. In the tool, click on the question mark. If everything is soldered correctly, the recognized controller appears in the info box. Click on the controller the ATmega328 to take it for programming. In the program menu, select the hex file. Disable the burning of the fuses. (Factory settings are retained)

Similarly, the whole thing works with the TL866 in ISP mode.
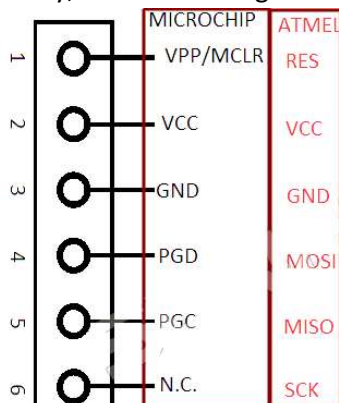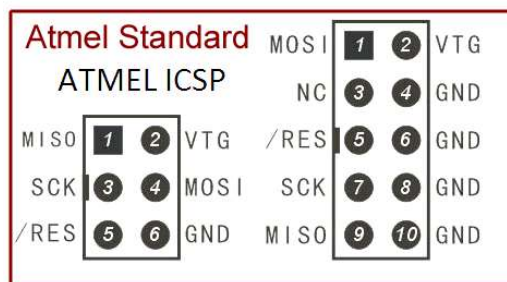
If you work with avr-dude:
avrdude.exe -c usbasp -p m328p -u -U flash:w:nunchuk64.hex

Please note that the ATMega has to be supplied with power during burning (Jumper "VTarget").

For all who flash their ATMEGA with USBasp, please set the jumper for "Slow SCK", otherwise avrdude does not find the chip. In my case that was JP3.
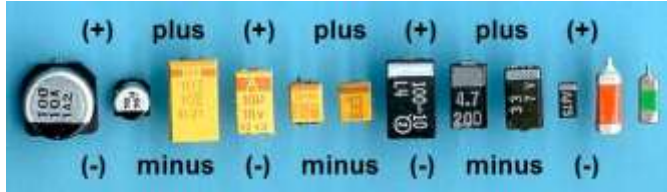
After flashing, the **resistors** are assembled:

R1, R2, R3, R8	2,2 Kohm
R4, R5, R6, R7, R10	10 Kohm
R9 (dropping resistor LED)	220 Ohm

Then the **capacitors**:

C1, C2	22 µF - Pay attention to polarity!

Polarity of SMD-capacitors

C3, C4, C5	100 nF

Now the **LED** follows:
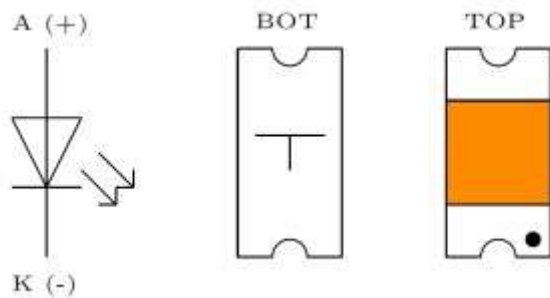
The tiny point (cathode = - pole) can only be seen before soldering! If you are not sure, you should find the polarity with a 5V source and a 220 ohm resistor.

Then the **3.3V regulator** and the **4 transistors** are soldered. Finally, the **WII sockets**, **the 9-pin-sockets**, the **ISP header** and the **4 buttons** are soldered in place.

Note on the Sub9 sockets: Solder the first socket at two points. Attach the second one without soldering and connect the board to the C64 with both connectors to achieve the correct distance. Solder the second jack as well. Now the adapter can be removed to solder the remaining pins.

Here you can see the polarity of the capacitors at U1