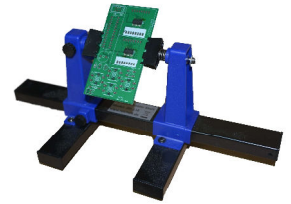


- All components will be inserted on the printed (top) side and soldered on the bottom side (not printed).
- **For soldering**, hold the tip of the soldering iron approximately 5s on the solder pad on the PCB, supply **some solder** by holding the tip of the solder wire on the pad until it melts. If so, remove the soldering iron and the wire immediately, and allow the solder to cool for a while.

If the soldering iron is held too long onto a component, it will get too hot, and might be damaged. After soldering, pinch off any protruding legs with the Knipex cutter.

Be careful: Hold down the PCB while doing so, such that the legs fly onto the table and not into the environment. **Always wear the safety goggles!**

0. Tight the PCB into the holder, so you have free hands.



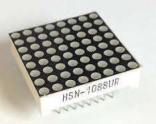
1. Start with the diode. Take care of polarity, the direction of insertion. The silver strip should point to the same direction as printed on the PCB.



2. Next, solder the small button. No polarity to note.



3. Insert the big buttons. Also, no polarity to note.



4. Now, solder the matrices. Its highly important to consider their orientation: The label printed on the side should match to the big white rectangle on the PCB.



5. If both matrices are built in, you insert the **Microcontroller (ATMEGA 328)**. Again, its important to consider the orientation: The semi-circular notch on the top of its, needs to match with the printed notch on the PCB.

6. Next, sold the voltage regulator, the black, semi-circular shaped component with 3 legs. **Attention:** The curved side should match the printed marker on the PCB.



7. Solder the cylindrical capacitor, note the polarity: The longer leg is plus and will go into the circular (not the rectangular) solder pad. *This hole is signed with a small plus as well.*



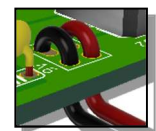
8. Solder the yellow capacitor. No need to care about polarity this time.



9. Now you can build in the box connector. Consider that the unsparing of the part need to match with the printed marking on the PCB.



10. The **cables** of the battery clip will be inserted from **below** first, bend in an arc and put through the next holes back to the bottom of the PCB where they are soldered as usual. The red cable corresponds to positive voltage and should be mounted at the small plus.



11. Last, you can put on the plastic covers to the Buttons. You can choose the color of its.



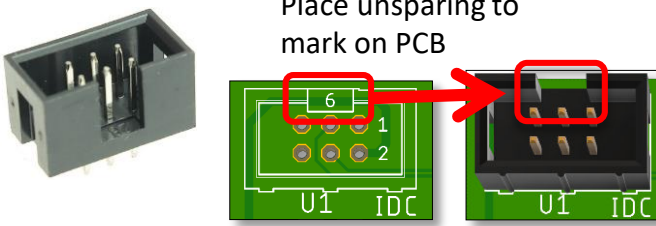
Building Instructions Matrix-Game-Console

Attention: During work you have to wear safety goggles!

In case of doubt: Ask us! Mistakes are difficult to repair!

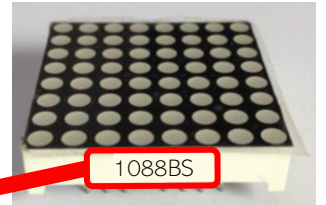
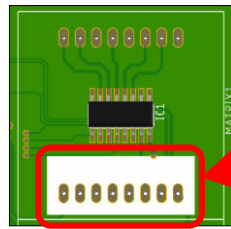
If you don't observe the instructions, we won't provide spare parts!

9. Programming Socket (IDC)



Place unsparing to mark on PCB

4. LED Matrices (M1,M2)

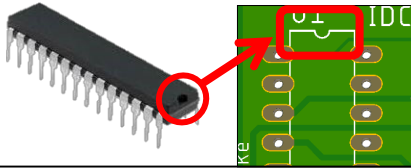


1088BS

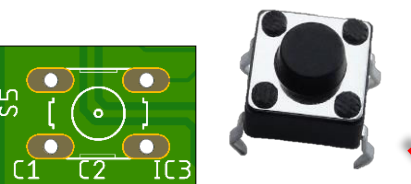
Label on the side above the white mark

5. ATMEGA 328 (U1)

The semi-circular notch should match to the marking on the PCB



2. Stop-Button (S5)



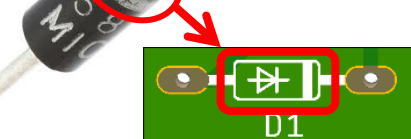
10. Battery clip (9V)

red : +
black: -

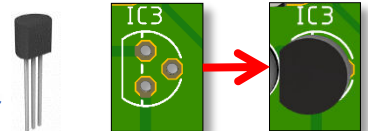


1. Diode (D1)

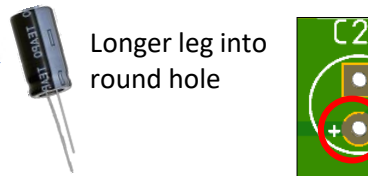
Silver strip onto the white on PCB



6. Voltage-Regulator (IC2)



7. Capacitor (C2)

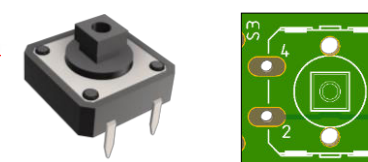


Longer leg into round hole

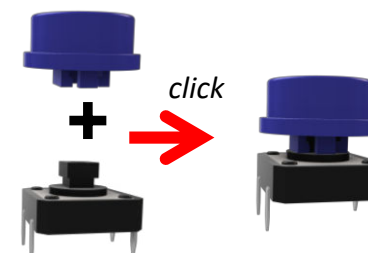
8. Capacitor (C1)



3. 4x Button (S1 – S4)



11. 4x Button-Covers



click

