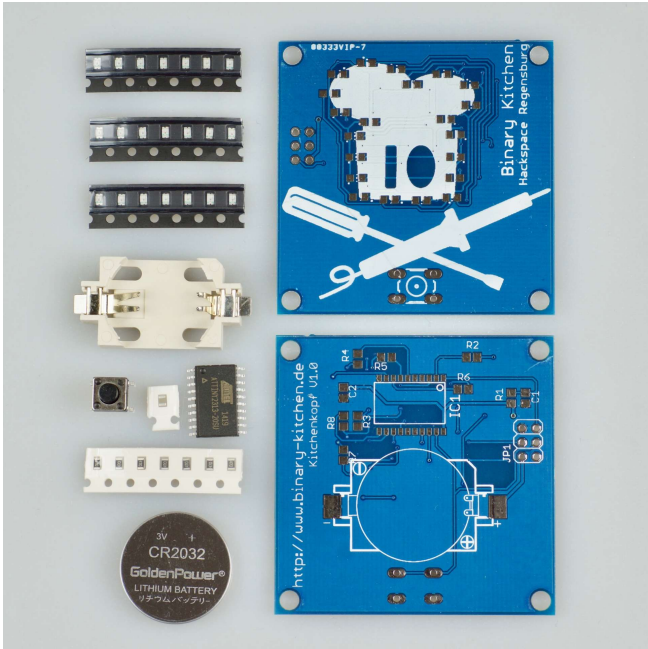
# Kitchen Head (SMD)

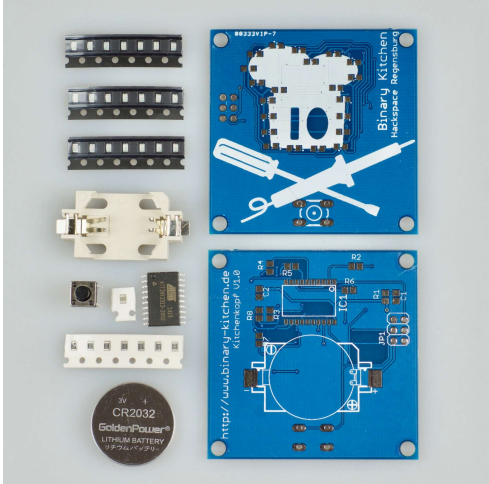



| Quantity | Name | Description | Signing/Colorcode |
|---|---|---|---|
| 1 | C2 | Ceramic Capacitor 100 nF | |
| 1 | IC1 | Micro controller Atmel ATTiny 2313A | |
| 21 | LED1–LED21 | LED SMD 0805 | |
| 7 | R2–R8 | Resistor 47 Ω | 470 |
| 1 | SW1 | Button | |
| 1 | BAT1 | Battery holder | |
| 1 | Battery CR2032 | | |
| 1 | Board | | |

Difficutly: ●●●●○

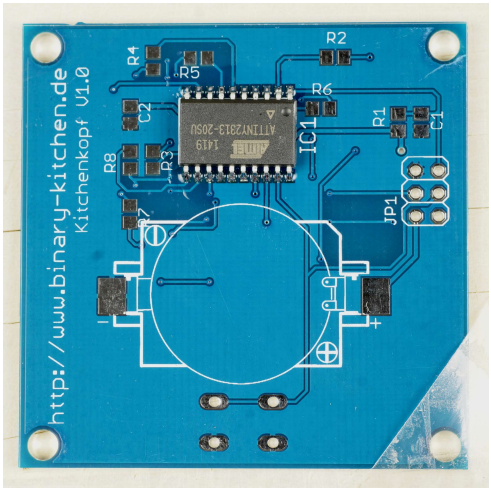
Step 1

a) Tape the board onto the soldering mat



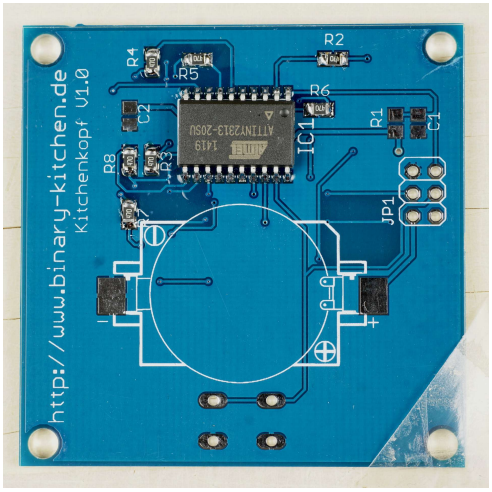

Step 2

a) Take IC1 up with a piece of tape. The tape should cover only half of the chip
b) Arrange and fix the IC to the correct position on the board
c) Careful - Direction is important: The small dot on the IC has to match with the dot on the board
d) Solder all pins of the IC to the Board
e) Take away the tape and fix the pins on the other side



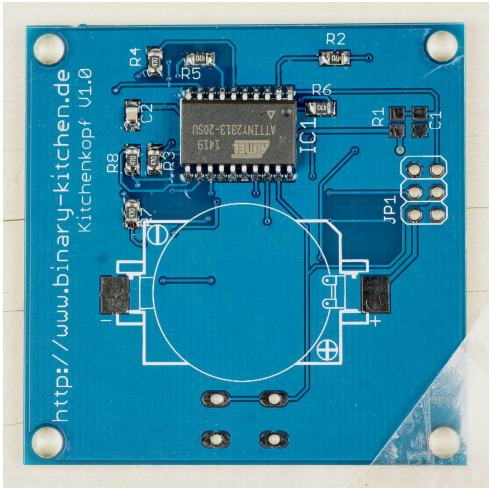

Step 3

a) Solder the resistors R2 to R8 on the board
b) To do so, put some solder on ONE pad
c) Heat up the solder again and slip the resistor onto the pad with the solder
d) Solder the other side after that



Step 4

a) Solder capacitor C2 with the technique showed before

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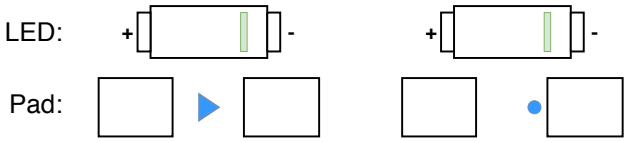
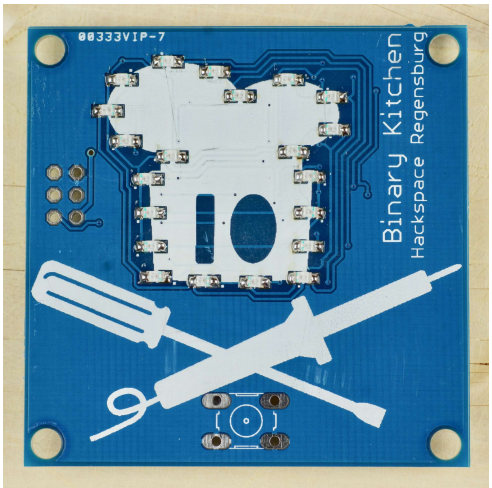
Step 5

a) *Be carefull!* The direction of the LEDs is important
b) Read everything first.
c) Solder the LED with the technique showed before
d) On the board are marking points or arrows printed on
e) The LED has a green marking on top
f) The dot/arrow shows the direction where the green marking has to be directed while soldering
g) Hint: If you can not identify the arror or dot on the board look at the drawing at the end of this manual

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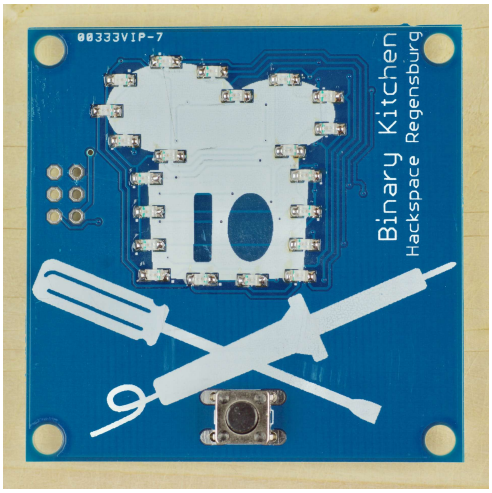
Step 6

a) Solder switch S1 to the board

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Step 7

a) Solder the battery holder to the board
b) For this, turn around the board
c) Battery holder and board have a + printed on. They have to match
d) Note: Start with the plus pole
e) Now insert battery and push the switch
f) Be careful: One metal arm of the battery holder has to reach on the top side (see picture)