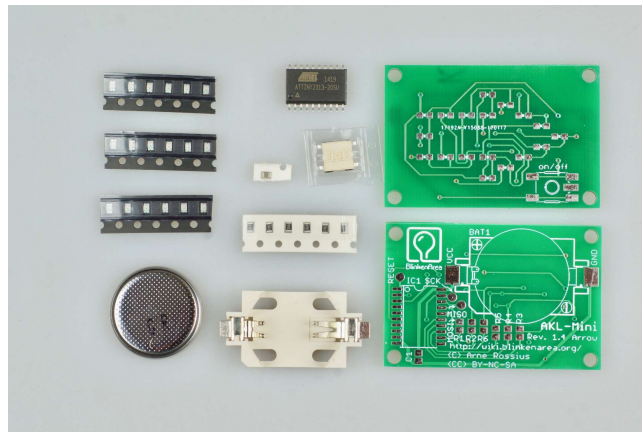


Arrow (SMD)



Quantity	Name	Description	Label/Color Code
1	C1	Ceramic Capacitor 100 nF	
1	IC1	Micro Controller Atmel ATtiny 2313A	
18	LED1-LED18	LED SMD 0805	
6	R1-R6	Resistor 47 Ω	470
1	SW1	Push Butotn	
1	BAT1	Battery Holder	
1	Battery CR2032		
1	PCB		

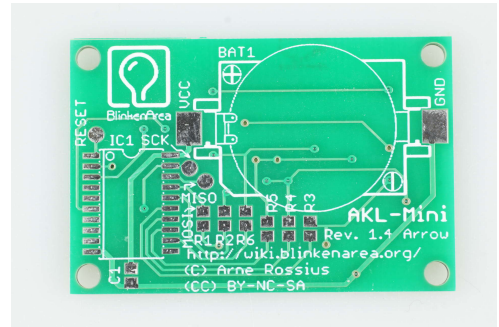
Difficulty: ●●●●○ Build Time: 1-2 hours

Manual v1.4a  CC BY-SA 4.0 Binary Kitchen e.V.

PCB v1.4  CC BY-NC-SA Arne Rossius

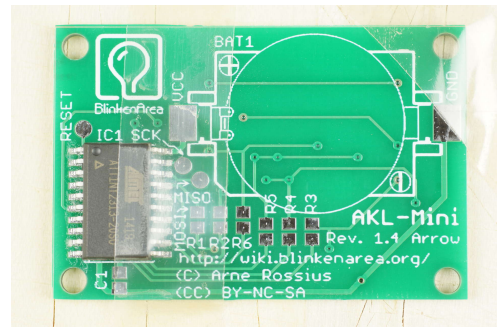
Step 1

- a) Fix the board to the base with adhesive tape



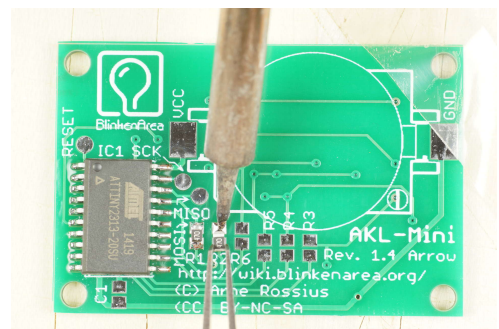
Step 2

- a) Pick up IC1 with adhesive tape. Adhesive tape should cover only half of the IC
- b) Then the IC can be aligned and fixed with adhesive tape
- c) Alignment important: Small point on IC must match with point on board at top left
- d) Solder all legs to the board with solder
- e) Then the tape can be removed and the other side can be fixed



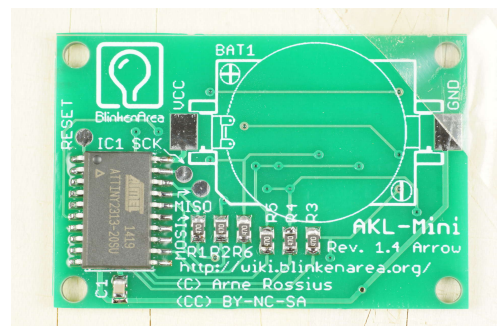
Step 3

- a) Solder resistors R1 to R6
- b) To do this, add solder to one pad
- c) Then heat the solder and feed the resistor to the side with tweezers
- d) Then solder the second pad



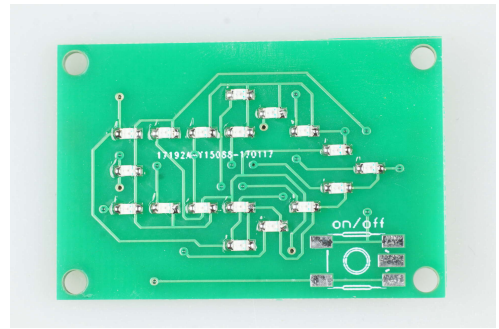
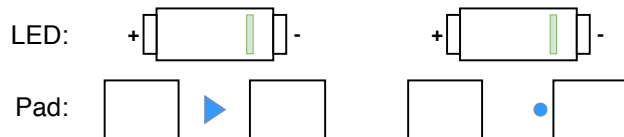
Step 4

- a) Solder capacitor C1 with the technique presented before



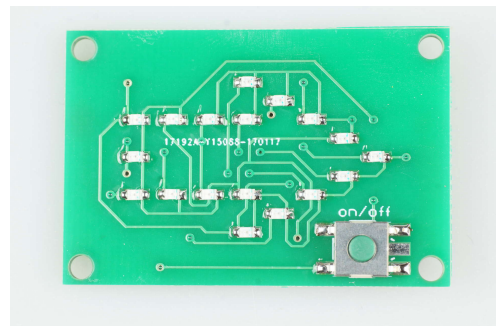
Step 5

- Attention! Alignment of the LEDs is important! First read all steps
- Solder the LEDs the same way as the resistors
- Turn the board over
- The LEDs have a small green line on the top side
- There are small arrows or small dots printed on the board
- The arrows or dots on the board show the side, where the small green line has to be
- Tip: If the arrows or dots on the board are hard to see, refer to the layout drawing on the last page of the manual



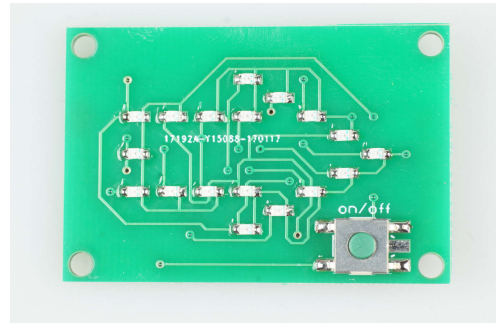
Step 6

- Schalter mit üblicher Technik auflöten
- Ausrichtung ist egal



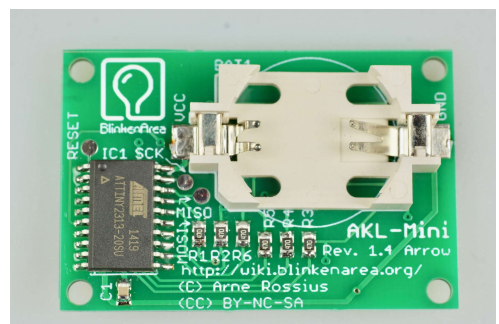
Step 7

- Solder on the switch with usual technique
- orientation does not matter



Step 8

- Solder the battery holder
- Turn over PCB
- Battery holder and PCB have plus and minus symbol printed on them. This must match



Step 9

- Attention: Insert battery correctly! A metal pickup (see picture: left metal pickup) must grip on top of the battery
- Switch on
- Done!

