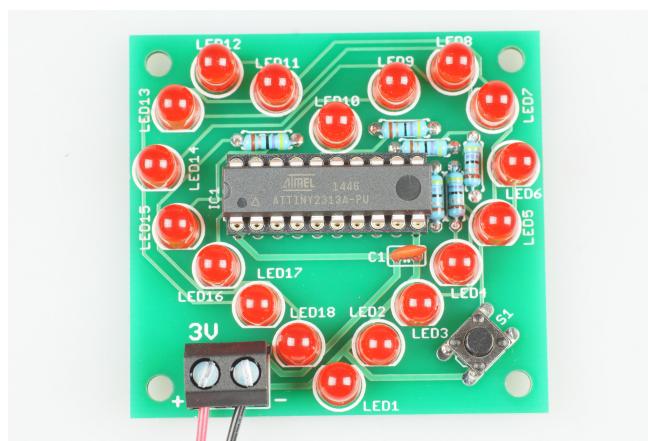


Heart (DIP)



Quantity	Name	Description	Labelling/Colour code
1	C1	Ceramic capacitor 100 nF	104
1	IC1	Microcontroller Atmel ATTiny 2313A	
18	LED1-LED18	LED 5 mm	
6	R1-R6	resistor 47 Ω	YE VI BK GO BR
1	S1	push-button	
1	X1	Terminal 2-pole	
1	IC socket 20-pole		
1	Battery holder		
2	Battery Mignon (AA)		
1	Printed circuit board		

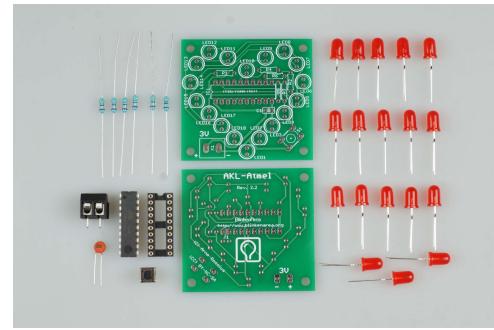
Difficulty: ●●○○○ Build Time: 1-2 hours

Description v2.2a CC BY-SA 4.0 Binary Kitchen e.V.
 Platine v2.2 CC BY-NC-SA Arne Rossius

Farblegende: SI = silber; GO = gold; BK = schwarz; BR = braun; RE = rot; OR = orange; YE = gelb; GR = grün; BL = blau;
 VI = violett; GR = grau; WH = weiß

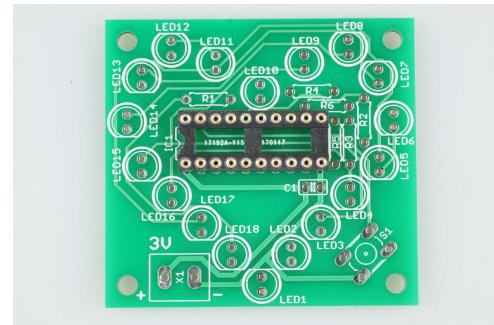
Step 1

- a) Hints:
- b) Resistor size can be determined via colour coding
- c) Orientation of the PCB so, that LED designation can be read normally (see picture)
- d) Orientation of resistors does not matter
- e) LEDs have a flat side and a shorter leg. Both indicate the negative side



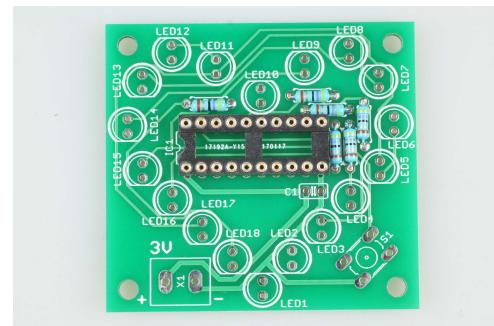
Step 2

- a) Solder IC1 socket with the nose to the left on the PCB



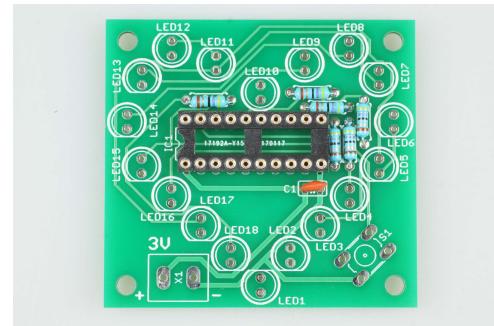
Step 3

- a) Solder resistors **YE VI BK GO BR**
- b) orientation doesn't matter



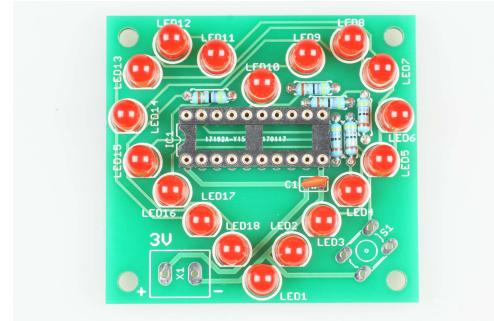
Step 4

- a) Solder capacitor [104]
- b) orientation does not matter



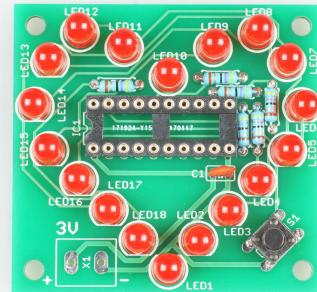
Step 5

- a) Solder LED1 to LED18
- b) Attention! Direction of LEDs is important. The Direction changes on the board
- c) LEDs have a flat side and a shorter leg. Both indicate the negative side
- d) On the PCB, the negative side is indicated by a flattening.



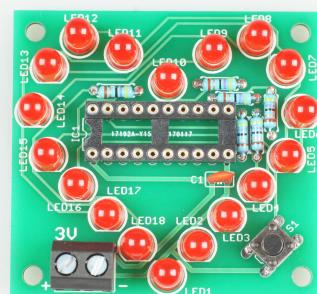
Step 6

- a) Solder switch S1
- b) Hint: Legs have different distances. Nothing has to be bent.
Switch fits exactly.



Step 7

- a) Solder the Power connector X1 with opening downwards
- b) The cables can also be soldered directly to the board.



Step 8

- a) Insert IC1 into the socket with the nose to the left
- b) Hint: The legs of the IC must be bent slightly, to fit into the socket
- c) Remove any insulation from the tips of the battery connection cables and tin them
- d) Screw on the battery (+ red, - black)
- e) Insert the batteries
- f) Done!

