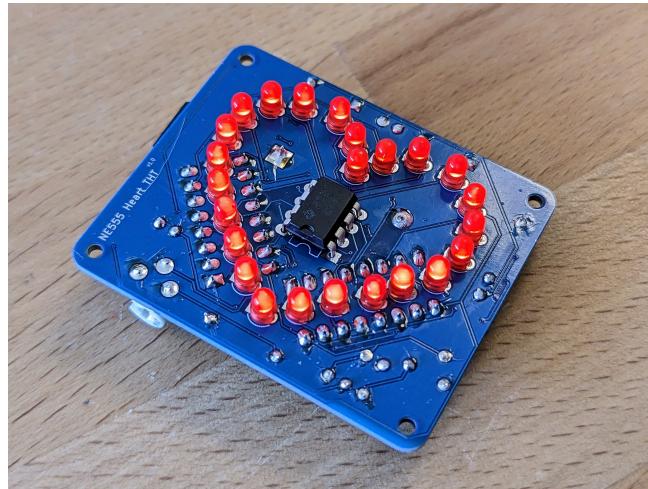


# NE555 Heart (DIP)



Quantity	Name	Description	Labelling/Colour code
2	U2,U3	CD4017 Counter	4017
1	U1	NE555 Timer	NE555
2	D1,D2	Diode	1N5817
1	RV1	200k Potentiometer	
1	C1	10 nF Ceramic Capacitor	103
2	C2,C3	100 nF Ceramic Capacitor	104
1	C4	1 µF Ceramic Capacitor	105
1	BT1	CR2032 Battery Holder	
24	D5-D28	LED red 3 mm	
1	R1	Resistor 1 kΩ	BR BK BK BR BR
1	R2	Resistor 100 kΩ	BR BK BK OR BR
1	R3	Resistor 47 Ω	BK YE VI BK BR
1	SW1	Push Button	
1	SW2	Switch	
1	Batterie CR2032 (optional)		
1	PCB		

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

Description v1.0 CC BY-SA 4.0 Binary Kitchen e.V.

Platine v1.1 CC BY-SA 4.0 Timo @ blinkyparts.com

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

## Safety Information

- ATTENTION: Not suitable for children under 3 years, choking hazard due to small parts that may be swallowed.
- We recommend: Supervision of the assembly and soldering process by an adult.
- Keep these operating instructions in a safe place for later use! It contains important information.
- If the battery is empty, replace it only with a new battery with the same values.
- When soldering, the soldering iron, the solder and also the components being soldered become very hot.
- Always wear safety glasses when soldering and assembling the kit.
- Always use a fire proof soldering pad when soldering! This prevents the components from slipping away.
- To keep the soldering iron safe during assembly, always use a suitable soldering stand.
- The kit is designed for battery operation only.
- CAUTION: Never connect the kit to 230 V mains voltage! There is an absolute danger to life!
- Please take the device to appropriately certified disposal companies at the end of its service life. This is good for the environment and ensures correct disposal.
- Subject to changes and errors.

## Disposal

This appliance is labelled in accordance with the European Directive 2012/19/EU on waste electrical and electronic equipment (WEEE). The directive provides the legal framework for the take-back and recycling of waste equipment throughout the EU.

- **packaging:** The packaging is made of environmentally friendly materials and is therefore recyclable. Dispose of packaging materials that are no longer needed accordingly.
- **waste equipment:** Old appliances often still contain valuable materials. Therefore, hand in your old appliance to your retailer or a recycling centre for reuse. Please ask your retailer or your local authority for the current disposal routes.

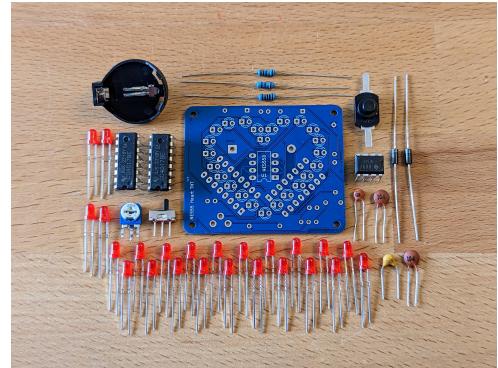
blinkyparts.com  
Egerstr. 9  
93057 Regensburg  
GERMANY



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### Step 1

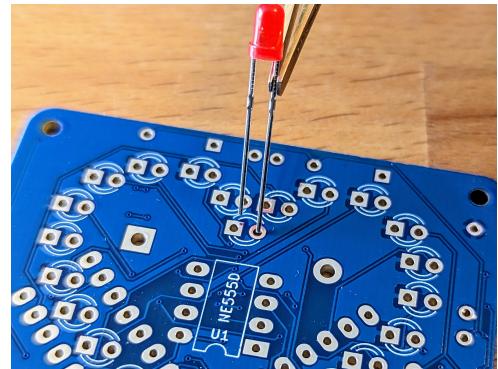
- a) Check your components.
- b) Tip: The resistor value can be determined by colour coding.
- c) Orientation of resistors does not matter.
- d) LEDs have a flat side and a shorter leg. Both indicate the negative side.



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### Step 2

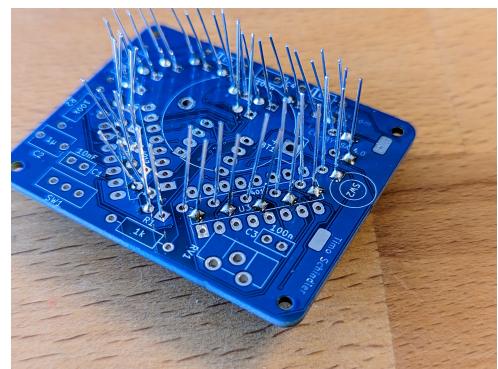
- a) LEDs have a direction. The long leg is the anode (+). On the PCB, the anode is marked by a round solder pad
- b) insert all LEDs from the PCB front (in the middle you can read NE555D) into the holes marked with a circle. Attention: The long leg belongs into the hole with the round pad!



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### Step 3

- a) Take a business card or a piece of cardboard and hold the LEDs with it. Turn the board upside down and place the board on the LED heads.
- b) Now solder only one leg of each LED.



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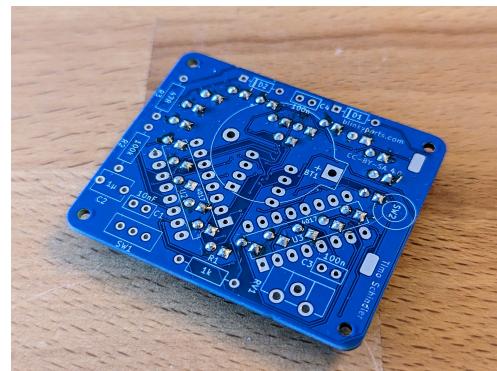
### Step 4

- a) Correct any misaligned LEDs.
- b) You can warm up the soldering point again and use your finger to correct the position of the LEDs.



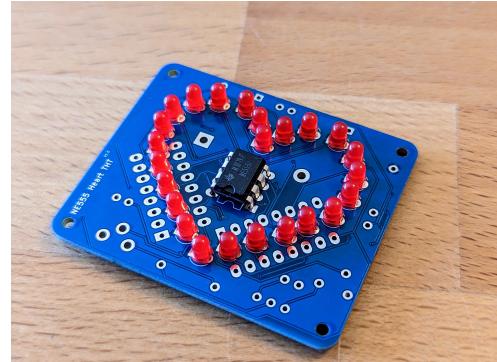
## Step 5

- Now solder the remaining legs of each LED and cut off the excess wire.
- Make sure, that you cut off the excess wire relatively close to the PCB.



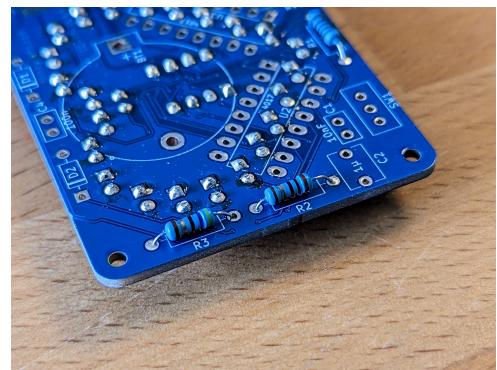
## Step 6

- Push the NE555 through the board from the front. Attention! The NE555 has a orientation, which is marked by a nose on one side. The nose is also printed on the board.
- Now solder all the legs of the NE555 to the back.
- Tip: You can solder only one leg and correct the position afterwards.
- Cut off the excess wires very close to the PCB.



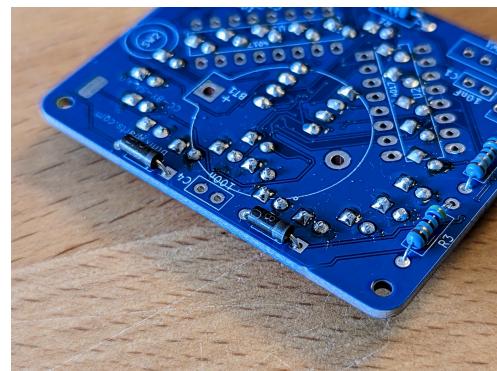
## Step 7

- Now solder the resistors R1 ( BR BK BK BR BR ), R2 ( BR BK BK OR BR ) and R3 ( BK YE VI BK BR ). The resistors have different resistance values marked by coloured rings. Make sure, that you solder the right resistor to the right place
- cut off the excess wires.



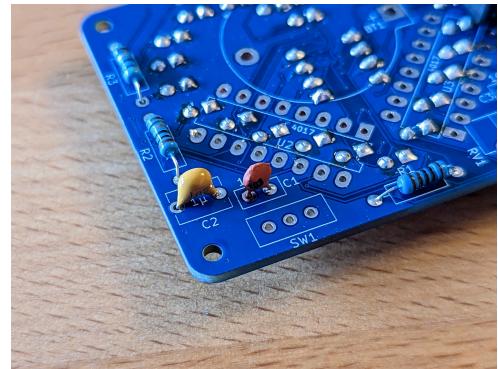
## Step 8

- Now solder the diodes D1 and D2
- Diodes have a direction which is marked with a line. Make sure, that the line on the diode matches the line on the board.



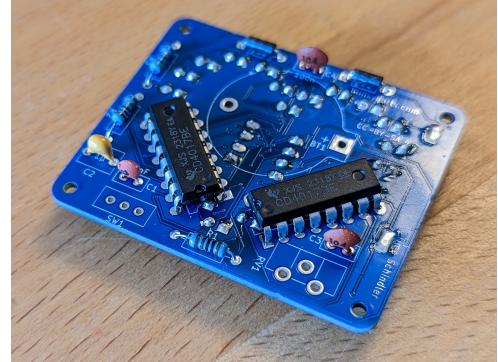
### Step 9

- a) Capacitors have different values. These can be seen on the PCB and with a number code on the capacitors. The orientation of the capacitors does not matter.
- b) Now solder on the capacitors C1 (10nF, 103), C2 (1uF, 105), C3 (100nF, 104) and C4 (100nF, 104)
- c) Cut off excess wires.



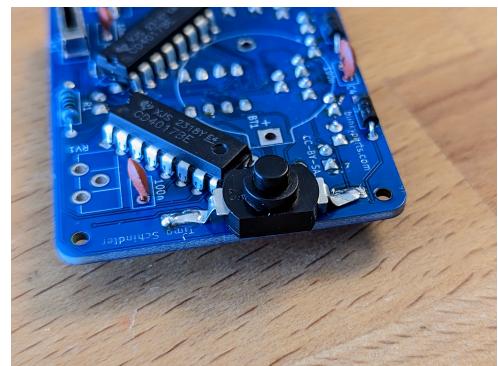
### Step 10

- a) Now solder the two CD4017
- b) Again, make sure that the noses on the chip match the noses on the board (sometimes the noses on the board are hard to see. They are both near R1).



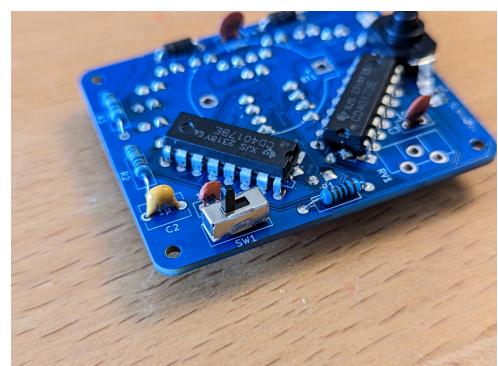
### Step 11

- a) Now solder the switch SW2
- b) The switch has no direction. This time the switch is soldered on and not put through the PCB.
- c) Bend the solder tags a little bit downwards, so that the solder tags reach the PCB.
- d) You may have to bend the solder tags a little bit crooked, so that the switch lies cleanly (there is not much space).



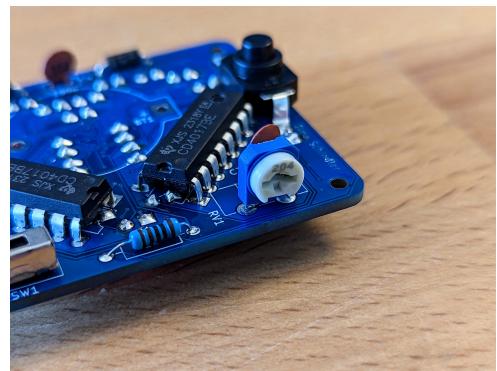
### Step 12

- a) Solder switch SW1. This one has no direction
- b) Tip: Solder only one leg at first. This way you can correct the position as usual.



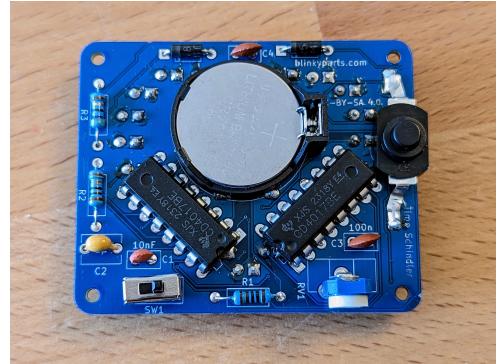
### Step 13

- a) Now solder the potentiometer RV1
- b) Tip: Solder only one leg at first. This way you can correct the position as usual.



### Step 14

- a) Finally solder on the battery holder. This again has one direction. The outlines are printed on the board. Make sure, that the outline matches the battery holder
- b) Tip: First solder only one leg. This way you can correct the position as usual
- c) then insert a CR2032 battery.



### Step 15

- a) You are done!
- b) With the push button you can switch on your heart.
- c) With the slide switch you can switch between running light and permanent light.
- d) With a screwdriver you can adjust the speed of the running light  
(Attention: At the maximum setting the running light does not work anymore. Stay a little below that).

