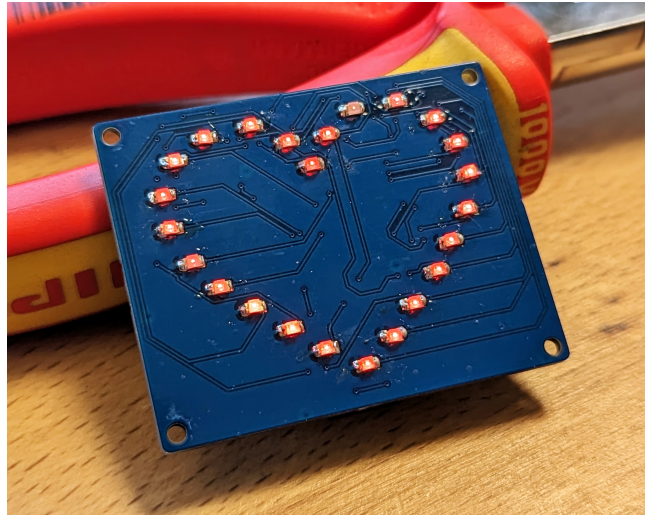


# NE555 Heart (SMD)



Quantity	Name	Description	Label/Color Code
2	U2,U3	CD4017 counter	4017
1	U1	NE555 timer	NE555
2	D1,D2	1N4007 diode	A7
1	RV1	Potentiometer	
1	C1	10 nF ceramic capacitor	green
2	C2,C3	100 nF ceramic capacitor	red
1	C4	1 $\mu$ F ceramic capacitor	blue
1	BT1	CR2032 Battery holder	
24	D5-D28	LED SMD 0805 red	
1	R2	Resistor 1 k $\Omega$	102
1	R3	Resistor 100 k $\Omega$	104
1	R4	Resistor 47 $\Omega$	47
1	SW1	Push Button	
1	SW2	Slider Switch	
1	Batterie CR2032 (optional)		
1	PCB		

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

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

PCB v2.2  CC BY-SA 4.0 Timo Schindler @ blinkyparts.com

## 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.

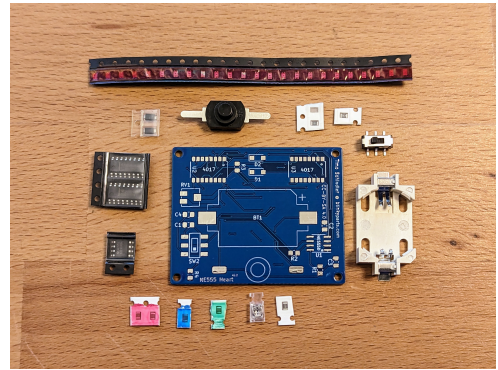
blinkyparts.com  
Egerstr. 9  
93057 Regensburg  
GERMANY



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### Step 1

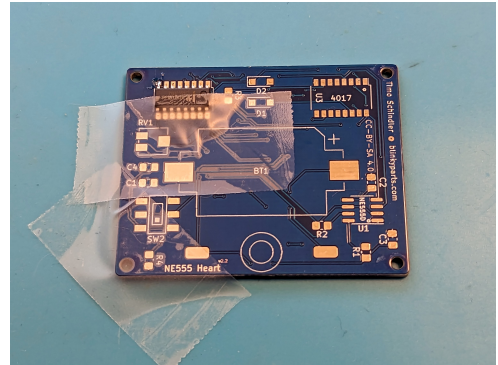
- a) Check your components
- b) Leave the resistors and capacitors still in the strip packaging.



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### Step 2

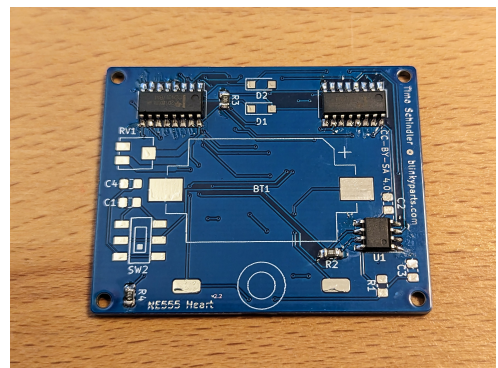
- a) Fix the board to the base with adhesive tape.
- b) Take up U1 with an adhesive tape. The tape should only cover half of the IC.
- c) Then the IC can be aligned and fixed with tape.
- d) Alignment is important: The notch on the IC must match the notch on the board.
- e) Now solder all the legs of the IC.
- f) Then remove the tape and fix the other side.
- g) Then solder U2 and U3 on.



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### Step 3

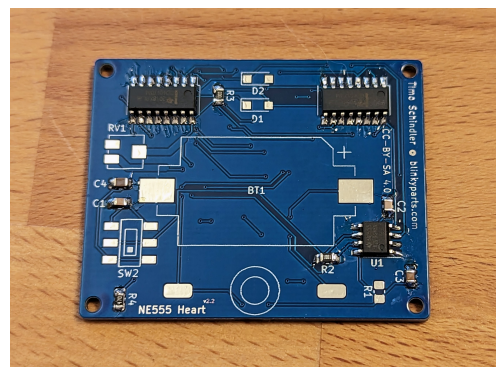
- a) Solder the resistors R2 to R4.
- b) First tin only one pad of a resistor on the PCB.
- c) Pick up the resistor with tweezers and heat the solder on the pad again.
- d) Then insert the resistor sideways into the hot pad, until the resistor is in the right position.
- e) Then solder the second side.



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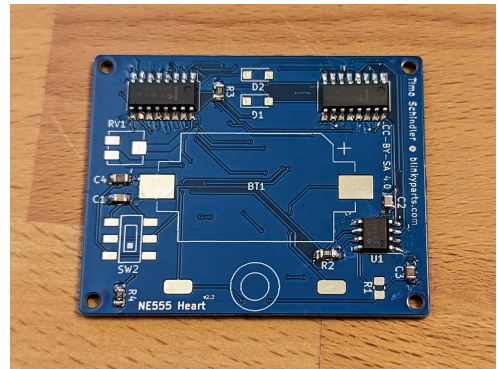
### Step 4

- a) Solder the capacitors C1-C4 onto the pad using the same technique as before
- b) Note that the packages are colour coded. The capacitors have no printed numbering.



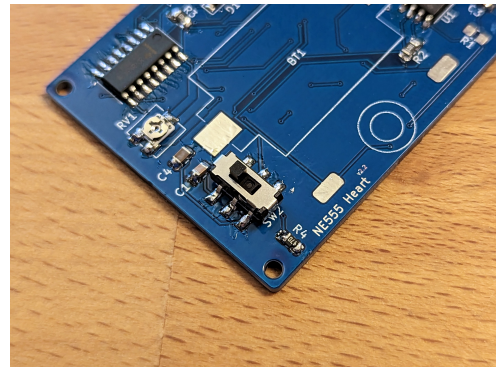
### Step 5

- a) Solder the diodes D1 and D2 with the same technique. Attention: Diodes have one direction. The diode is marked with a line. This line is also printed on the board (left). Then solder the potentiometer RV1 onto the board.



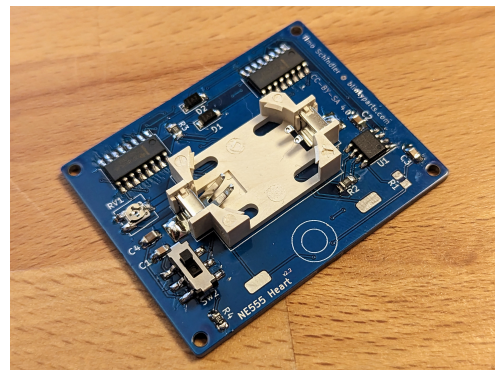
### Step 6

- a) Now solder the switch SW2.



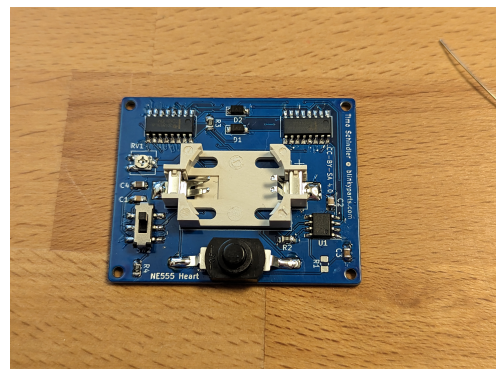
### Step 7

- a) Now the battery holder comes on the board. Attention, this one has one direction again. This direction is marked with a cut edge on the component as well as on the board.



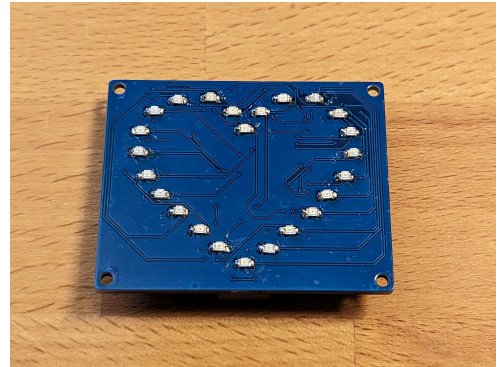
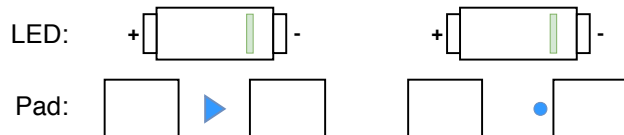
### Step 8

- a) Finally, only the black switch is soldered on the back. To do this, first bend down the solder flags.
- b) Then solder the solder flags onto the board
- c) The back of the board is now finished.



### Step 9

- Attention! The alignment of the LEDs is important! First read all steps.
- LEDs are soldered on using the same technique as the resistors.
- To do this, turn the board over.
- The LEDs have a small green line on one edge on the top.
- There are small arrows or small dots printed on the board. The arrows or dots on the board indicate the side to which the small green line must be placed.
- Tip: If the arrows or dots on the board are difficult to see, refer to the layout drawing on the last page of the instructions



### Step 10

- Now only the battery has to be inserted
- A metal collector (in the picture on the right) has to grip on top of the battery!
- Switch on. Ready!
- The switch SW2 can be used to switch between permanent lights and chaser LEDs
- The potentiometer influences the speed of the LEDs.

