Code Week Sculpture

Quantity	Description
10	RGB LED 5 mm (fast-blinking)
10	RGB LED 5 mm (slow-blinking)
1	Push-button switch
1	SMD fuse
1	2xAA battery holder
3	AA rechargeable or disposable battery (not included)
1	Mushroom-head circuit board (PCB)
1	Battery circuit board (PCB)
1	Red hashtag circuit board (PCB)
1	Yellow hashtag circuit board (PCB)

Difficulty: ●●●○○ Build-Time: 90 – 120 Minutes

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.

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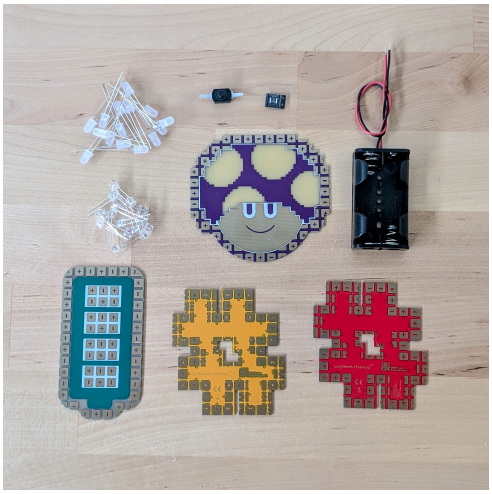
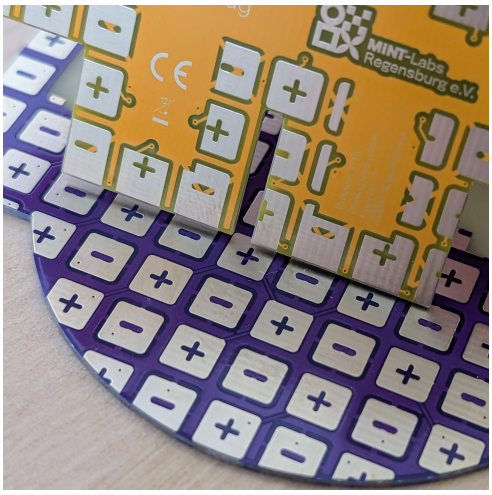
Step 1



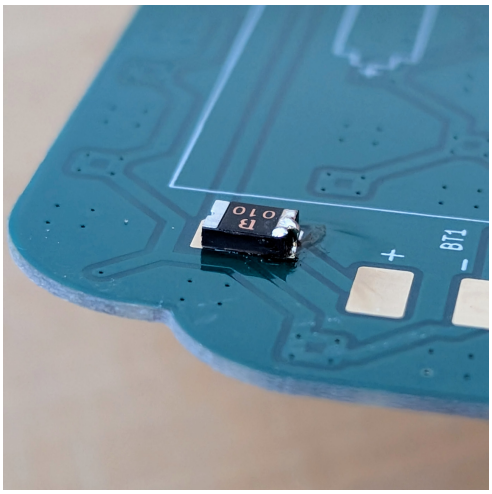
a) This kit is different from our usual kits. There's no single way to build it exactly as shown. Be creative!
b) Check your components.
c) Batteries are not included. You can buy them online or at larger electronics stores
d) Rechargeable batteries are ideal and are good for the environment.
e) Warning: Always wear safety goggles. When you cut wires, they can fly off in an uncontrolled manner.

Step 2



a) The circuit boards are covered with metal pads marked with a plus symbol (+) and a minus symbol (-).
b) If you can't tell whether it's positive or negative, look at the neighboring pad. The pads always alternate.
c) You can connect multiple circuit boards by soldering at least one positive pad from the first board to a positive pad on the second board and one negative pad from the first board to a negative pad on the second board.
d) It's okay to connect multiple identical pads to achieve greater stability.
e) Warning: Do not solder a plus pad to a minus pad or vice versa. This will cause a short circuit.
f) Warning: Do not connect two adjacent plus and minus pads with solder or a wire. This will cause a short circuit.

Step 3



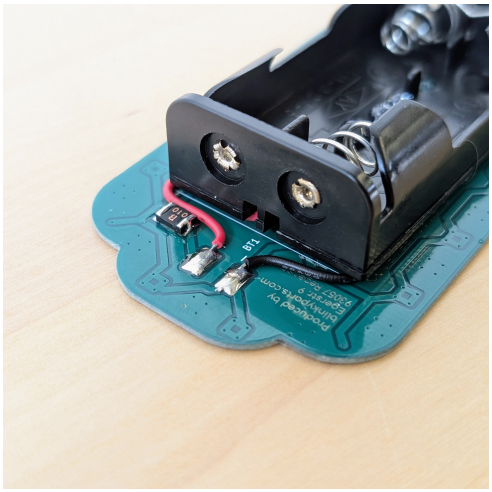
a) First, we'll solder the battery-shaped circuit board together.
b) Solder the fuse onto the circuit board—the fuse is non-polarized, so it does not matter which way you solder it on. To do this, first apply a small amount of solder to one of the two pads.
c) Set the solder aside and use tweezers to pick up the fuse.
d) Heat the solder on the pad again with the soldering iron and slide the component into position from the side so that the other side rests on the second pad.
e) Then solder the second pad in place.

Step 4

a) Now solder the switch in place using the same method. You'll first need to bend the switch's leads downward so that it can touch the pads.
b) Caution: Don't take too long here—the switch can't withstand too much heat from the soldering iron.
c) Solder both sides in place.

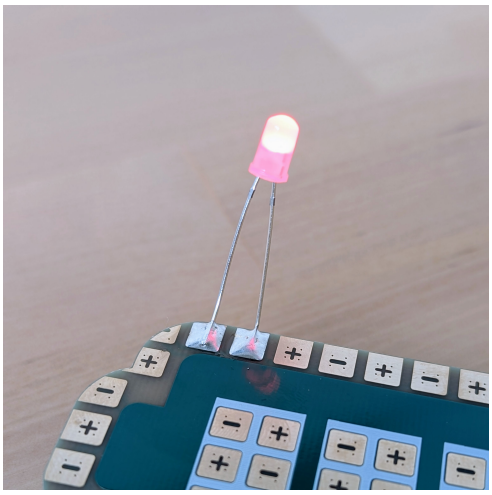
Step 5

a) Now take the battery holder.
b) Trim the wires of the battery holder to about 3 cm.
c) Strip about 5 mm of insulation from the wire and tin the ends of the two wires on the battery holder.
d) Solder the wires to the circuit board. Positive is red and negative is black.
e) Glue the battery holder to the circuit board with hot glue.



Step 6

a) Tip: Solder an LED onto each circuit board that you solder to your sculpture. This way, you can always check for a short circuit: If the LEDs light up, everything is fine. If no LED lights up, you've accidentally connected a positive and negative pad. Turn the circuit off again and start looking for the problem!
b) Tip: For the LEDs, the long leg is positive and the short leg is negative.
c) The LEDs with clear caps blink. The LEDs with milky caps change color very slowly.

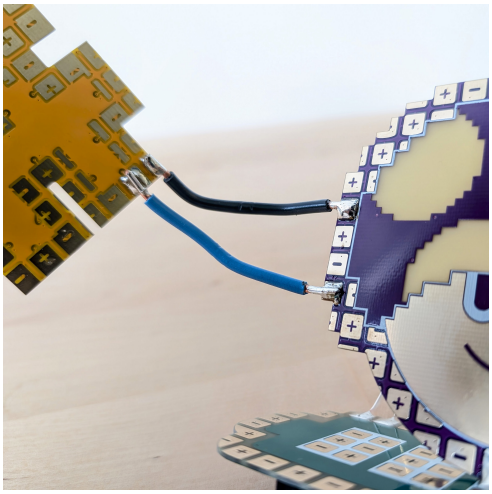


Step 7

a) If you want to connect two circuit boards together, first choose the right spot and the positive and negative pads you want to use.
b) Then apply a relatively generous amount of solder to the positive and negative pads on the first circuit board and to the positive and negative pads on the second circuit board. It's okay if a small mound of solder forms.
c) Set the solder aside.
d) Now take the circuit board and hold it against the other circuit board so that the positive pads on each board touch the positive pads on the other, and the negative pads touch the negative pads, with solder in between.
e) Take the soldering iron and heat both pads at the same time. The solder should melt and bond them together after a short time.
f) Repeat this for the second pad.

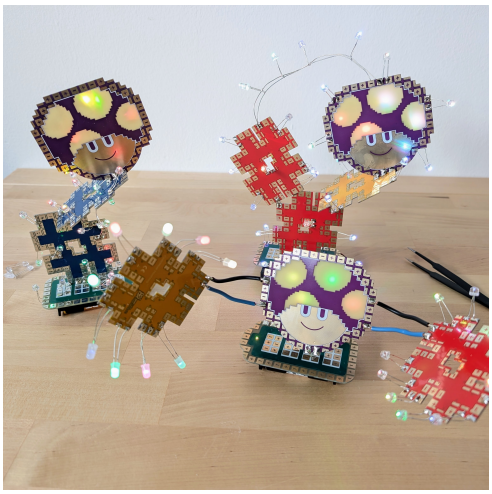
Step 8

a) You can also connect two circuit boards using stiff wire.
b) Just make sure the wires don't touch each other, because that will also cause a short circuit.



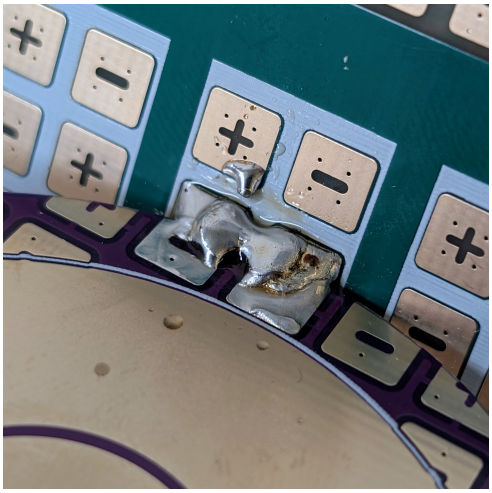
Step 9

a) Now get creative: Solder on as many LEDs as you want. Alternate between fast-blinking and slow-blinking LEDs. Build a rainbow.
b) Build a stick figure—or maybe a robot instead? Anything is possible!
c) But check after adding each new component to make sure your circuit is still working. That way, you can spot short circuits right away.



Step 10

a) Warning: Short circuit
b) This is what a short circuit between two pads looks like.
c) Be sure to turn off the circuit immediately.
d) Use the soldering iron to reheat the connection point and then remove the solder.



Step 11

a) If everything lights up, you've done everything right!
b) Feel free to send us a picture of your sculpture to workshop@blinkyparts.com! We're always happy to receive pictures and will create a gallery with them!