

Birthday Cake

version 1.0

Build Instructions

F O U R
B I T
I N D U S T R I E S . C O M

Thank you for purchasing our Birthday Cake pin soldering kit. The instructions below will show you the proper placement of all parts into the PCB. Be sure to follow the directions closely as many parts are polarized and will not work if inserted backwards.

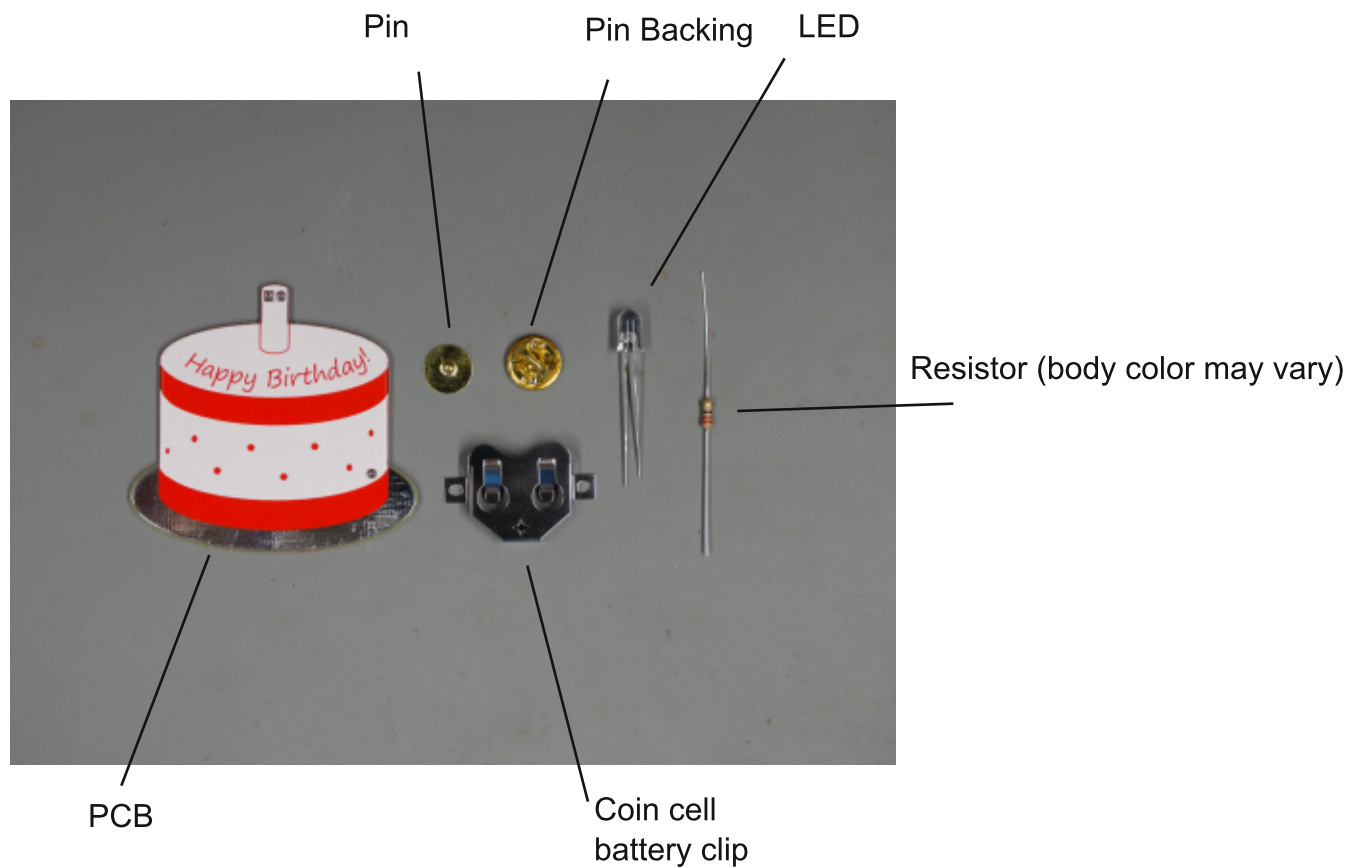
If you've never soldered before, consider taking a class at your local hackerspace! We have found a good introductory video from [curiousinventor.com](https://youtu.be/lpkfkK937mU) on youtube at <https://youtu.be/lpkfkK937mU> or by following the QR code at right.



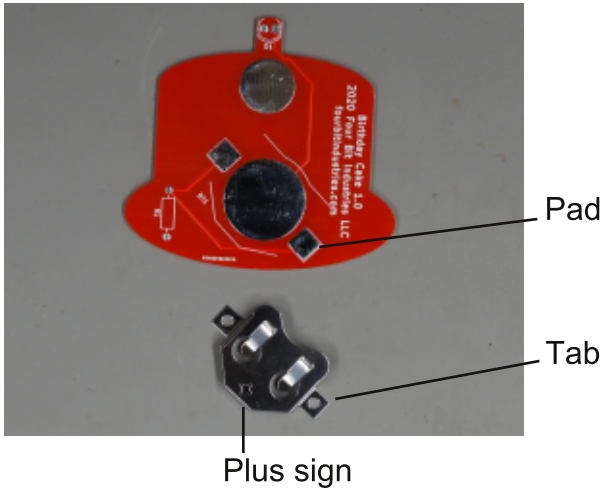
WARNINGS

Always follow best safety practices for soldering, including the wearing of eye protection and adequate fume extraction. This kit is not for children.

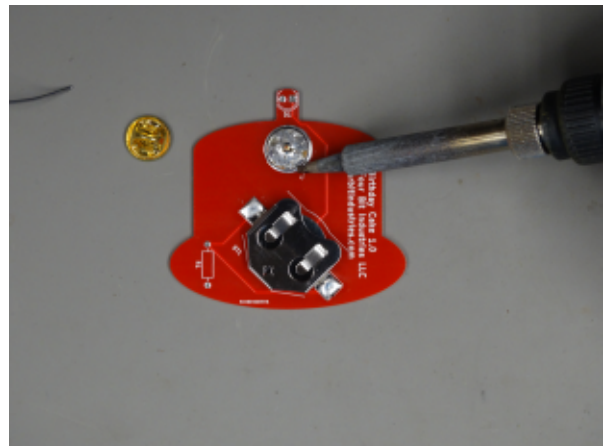
1. Verify the parts in your kit.



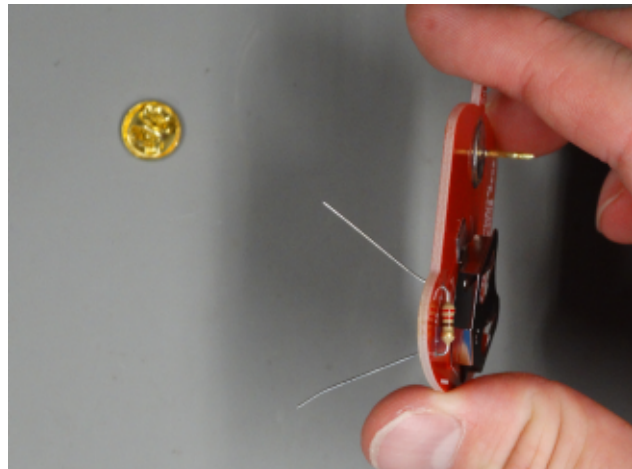
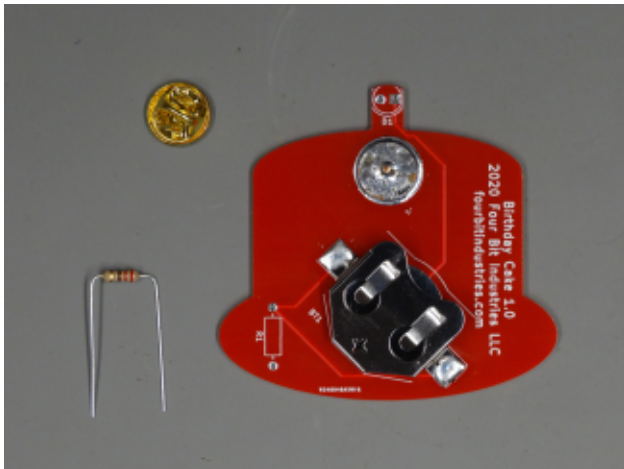
2. Start by placing the battery clip. This part is soldered to two rectangular pads on either side of a circular pad. It is important that the metal clip only makes contact with the two rectangular pads when soldered. Arrange the clip as shown and tape it down to make it easier to solder. Place your iron in the small hole in the middle of the tab so it makes contact with both the rectangular pad and the battery clip. Flow solder into the hole and around the edge so that the clip is well soldered to the pad.



3. Next we can solder the pin to the PCB. Try to get the iron on the pin and the edge of the pad at the same time and then flow solder into the joint. It is okay if the pin becomes covered in solder. If the pin starts moving around, try to center it on the pad by pushing it with the iron while the solder is still molten.



4. Next we can install the resistor. Begin by bending the leads down and then you can insert the resistor from the front or the back. Bend the leads outward to hold them in place for soldering. Resistors are not polarized so you can install them in either direction.



5. The LED is polarized and must be inserted the right way around. Notice that one lead of the LED is longer than the other. The longer lead must go through the hole with the round pad. The shorter lead will go through the hole with the square pad. Don't insert the LED all the way into the holes. Leave enough of the lead that you can bend the LED up like a candle flame at the end of the candle. You can tape the LED in place for soldering. Clip all excess leads after soldering.



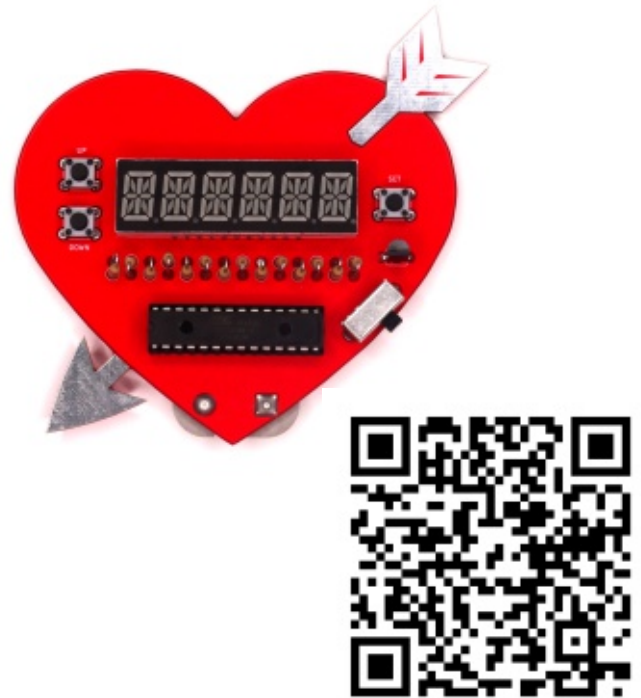
Long lead
Round pad



6. To use the pin, insert a CR2032 battery (not included) into the battery clip. Make sure the positive side of the battery, with the writing, is facing away from the PCB. The LED should light up immediately. Use the pin backing to pin to clothing.

WARNING: Lithium batteries are harmful or fatal if swallowed. Keep batteries away from children.

Visit fourbitindustries.com for more solder kits!



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