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# Acrylic Topped Blinky Badge

## Instruction Guide

For the best outcome, follow each step in order.  
We recommend reading this guide entirely before you get started.



**Tools required:**

Soldering iron, solder, flush cutters, masking tape (optional).  
Guide v0002

## Identify all the parts...



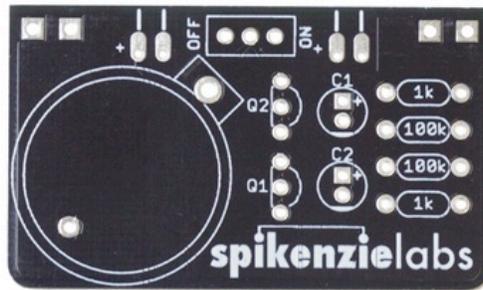
10mm LEDs



Battery Holder



Acrylic Badge Mounting Wire



Printed Circuit Board (PCB)

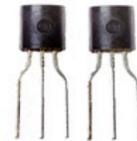


1k Resistors  
Brown - Black - Orange - Gold

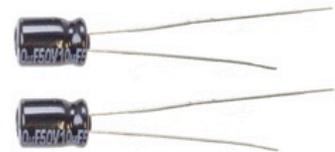


100k Resistors  
Brown - Black - Yellow - Gold

Switch - Switch is included with the Blinky Badges that indicate "With power Switch"



Transistors



Capacitors



CR2032 Battery



This is an easy beginner level soldering kit.

Please be sure to follow the usual safety precautions.

Remember to **protect your eyes with safety glasses** when snipping the excess legs from your soldering.



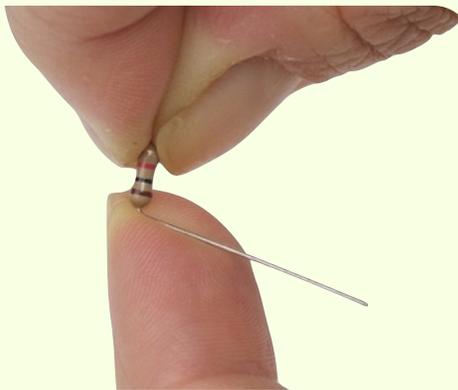
1k Resistors

100k Resistors

Take a look at the resistors. Each badge has two 1k Resistors (Brown - Black - Orange - Gold) and two 100k Resistors (Brown - Black - Yellow - Gold)

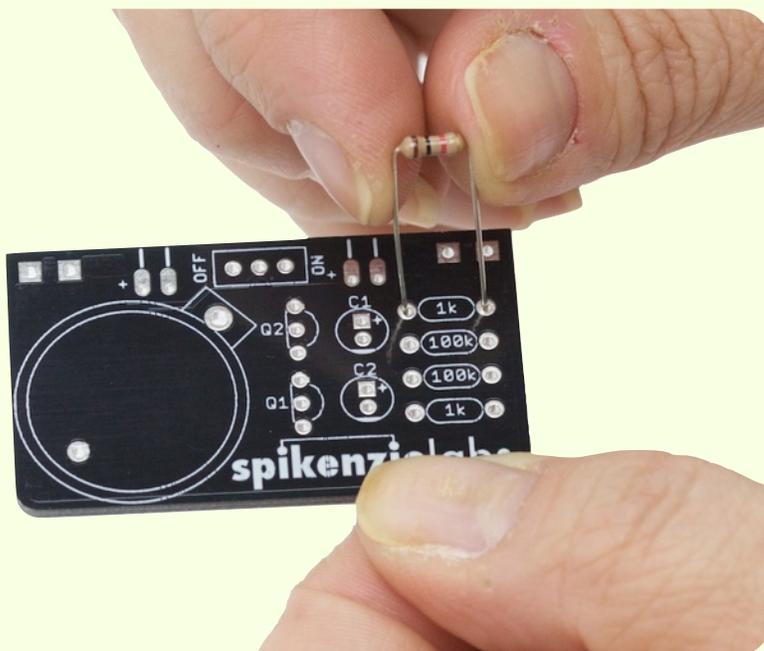
Be mindful not to **confuse them**.

Beneath where the resistors sit on the PCB, the value of the required resistor is indicated



Bend the resistors like in the photo above, this method works best.

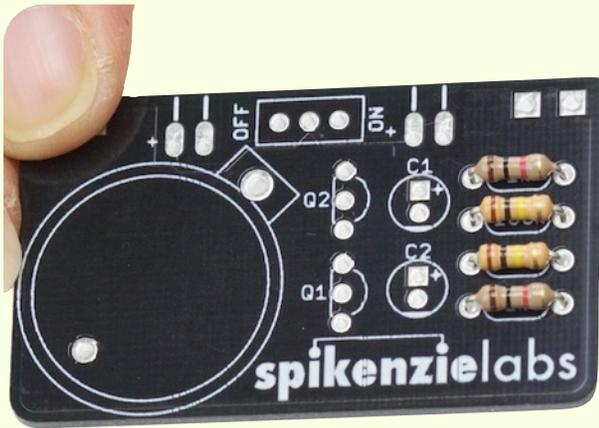
Do this for all four resistors.



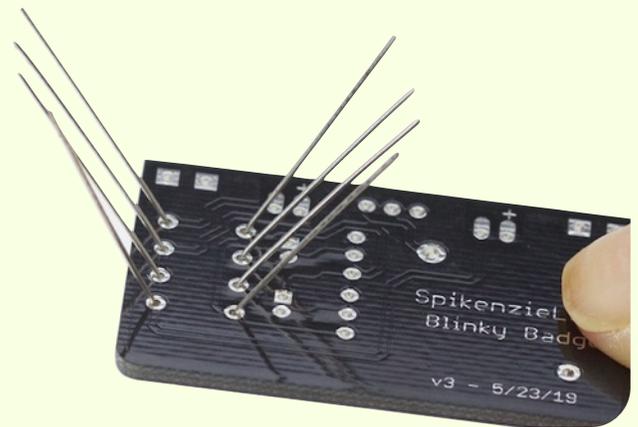
Insert the resistors in their places on the PCB.

They can be installed in either orientation. Polarity does not matter for these components.

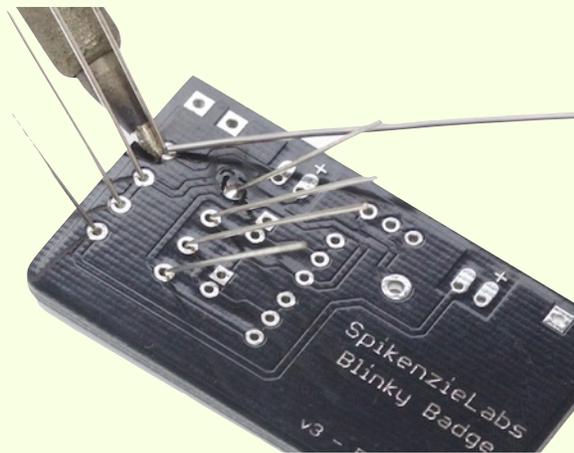
Once they are all in inserted...



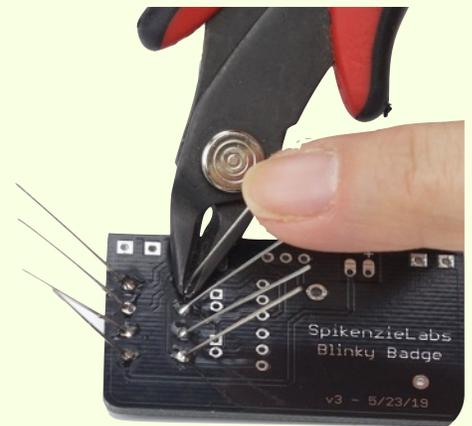
Flare out the legs to hold the resistors in place.



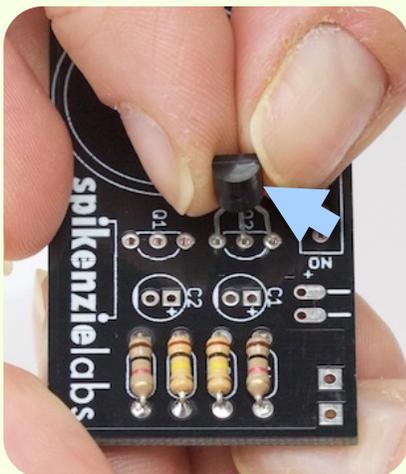
Solder the 8 resistor legs.



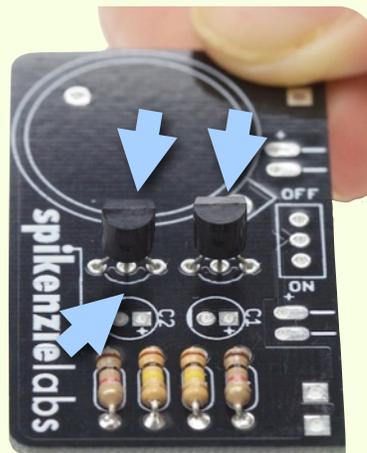
Use your flush cutters to trim the excess.



Insert the transistors into their spots.



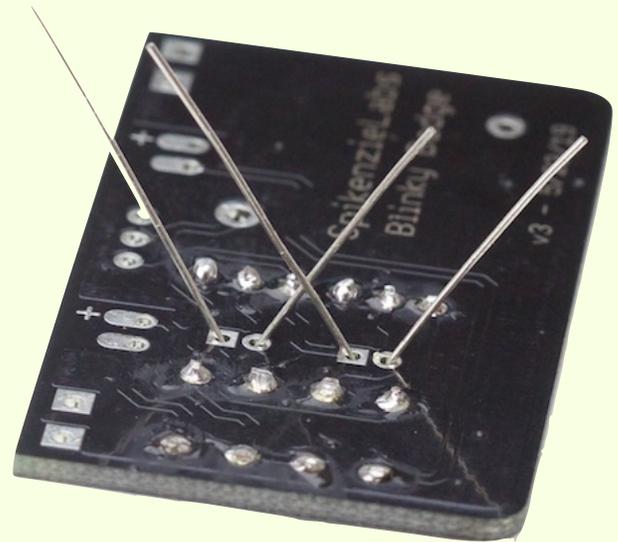
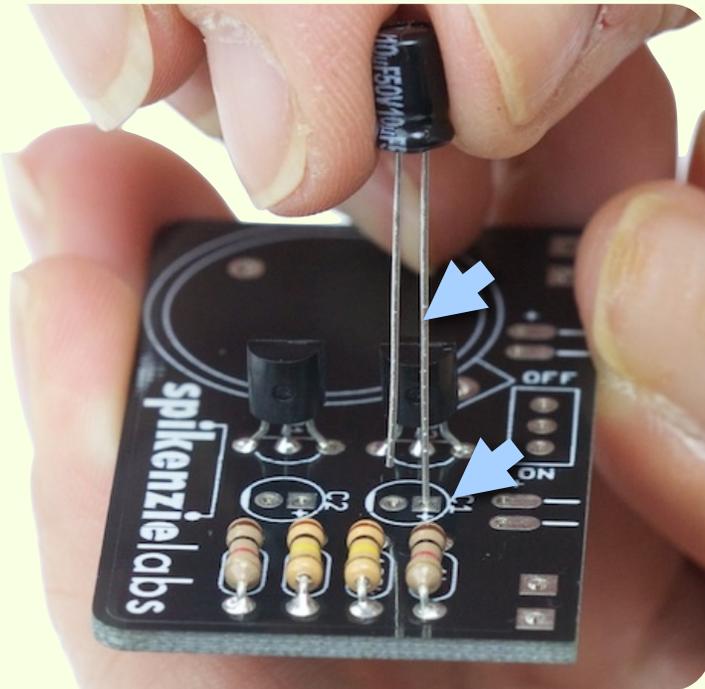
Note the curved side / flat side. Match them appropriately



Insert the capacitors. Their polarity matters.  
The longer leg goes through the hole marked +

Insert both capacitors in this way.

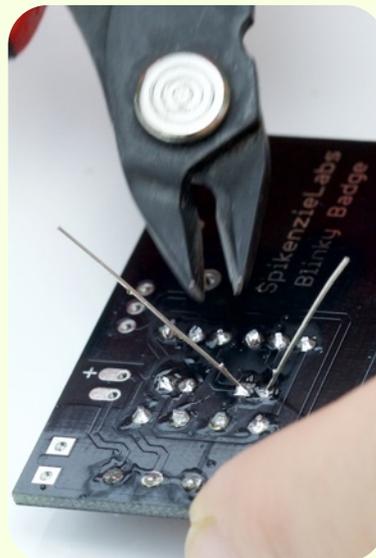
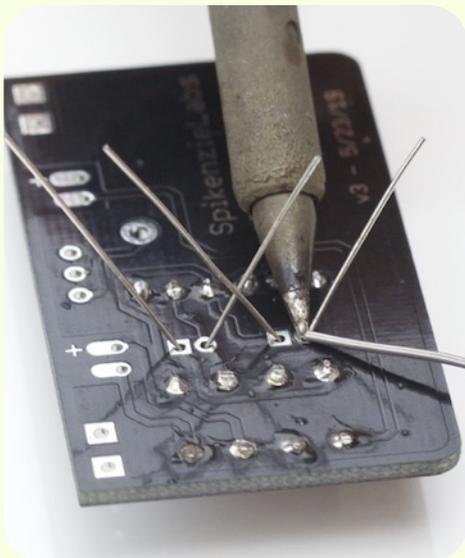
Flare the legs out to hold the capacitors in place.



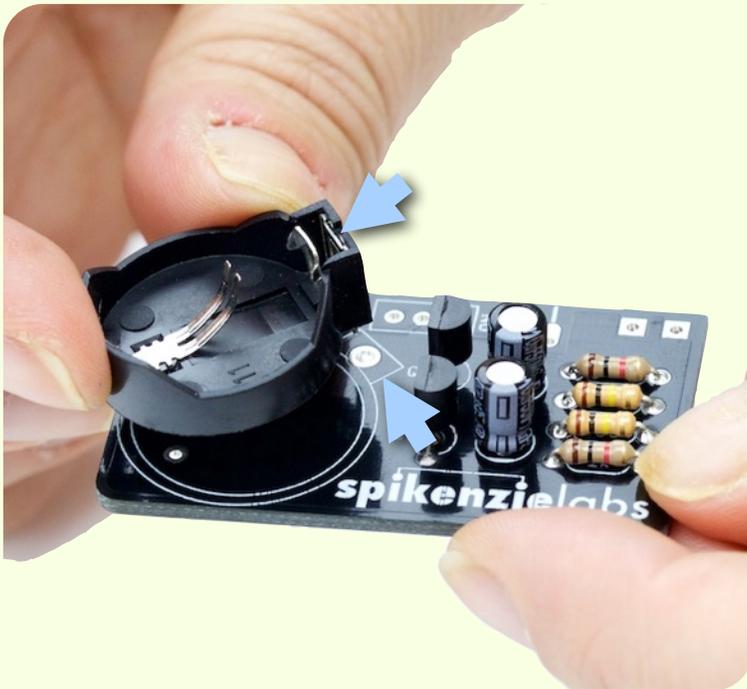
Solder the four legs

Trim the excess

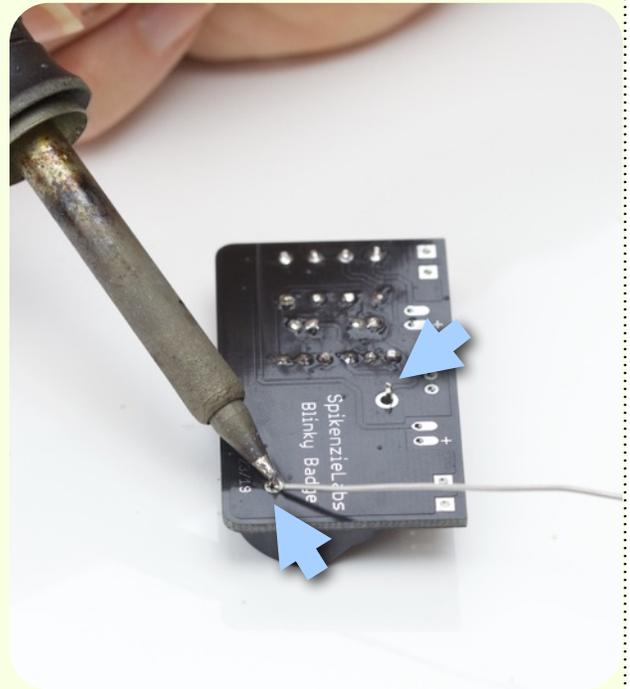
Your board should look like this:



Place the battery holder over the PCB so that the printed notch matches the notch on the battery holder.



Use a piece of masking tape to hold the battery holder in place, and solder the two battery pins. Trim the sharp points carefully.



LEDs are polarity sensitive. Insert the longer leg through the hole marked +



Slide them both almost all the way down, and then bend the LED so it sits flat on the edge of the PCB

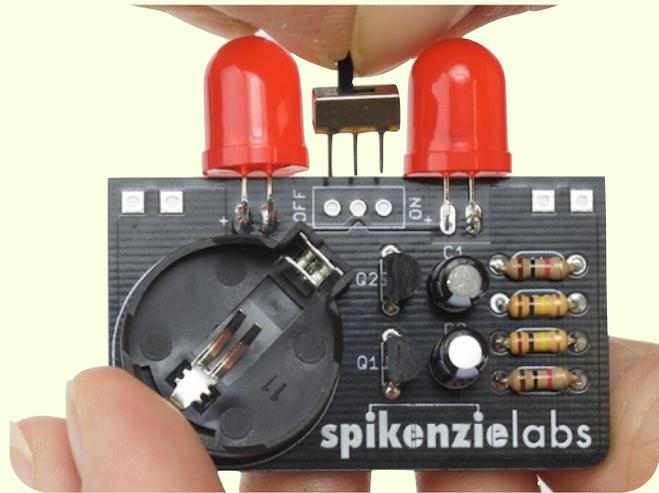


Your board should look like this:

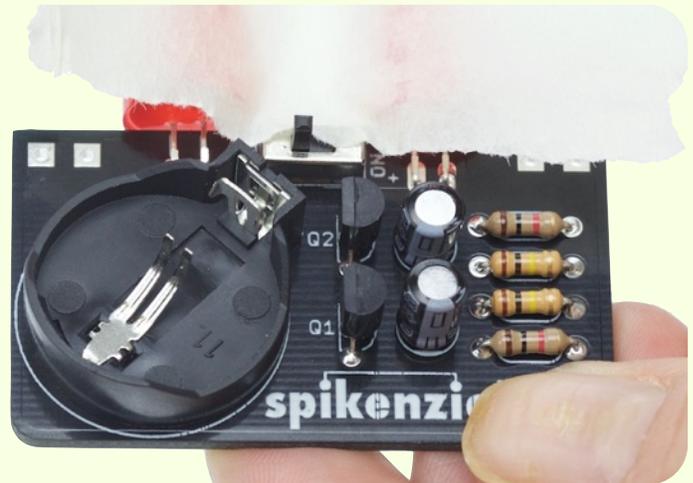


If you have the switch option in your kit, follow the steps on this page. Otherwise continue to the next page.

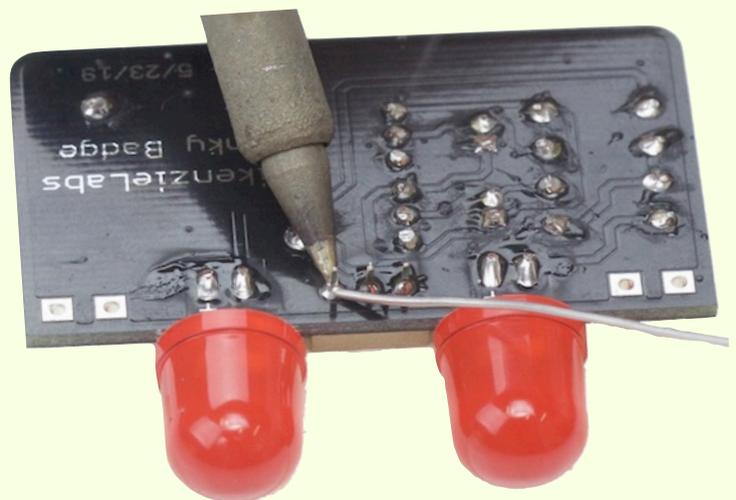
Insert the switch on the top of the PCB.  
Either direction is okay for this component.



Hold the switch in place with a small piece of masking tape.



Solder and snip the switch legs.



The badge acrylic toppers are etched on the backside of the acrylic.

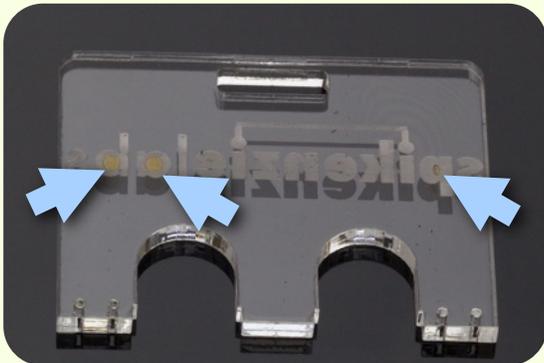
Start by peeling from one side, and try to get as much of the sticky protector paper removed as you can.

Depending on your logo / design, you will end up with some pieces that detach, and will remain stuck.

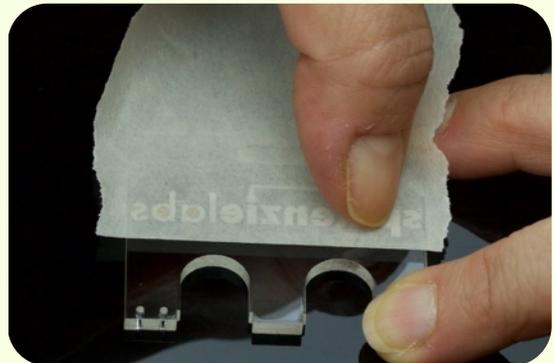
We have a method of getting those pieces off without too much fussing.



Here are a few orphaned pieces of paper.



Press some masking tape hard on the surface

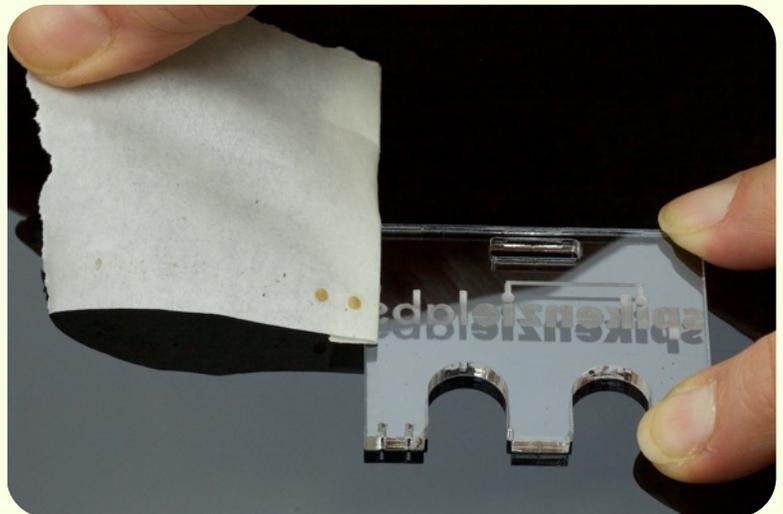


Slowly peel away the tape.

If some pieces remain, repeat the process once again, and they will come off.

Other types of tape should work, the key is using a tape that does not leave a residue.

Don't use "Duct Tape" It is designed to stick permanently.



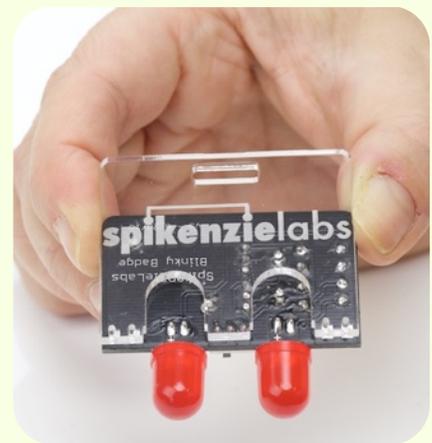
Now you will mount and connect the acrylic badge.  
Bend the acrylic badge mounting wires as you see here.  
Follow the next steps precisely for the easiest outcome.



Hold the badge topper on top.  
Looking at it from the front.  
If the acrylic is reversed, flip it over.

Tip the acrylic back  
as below.

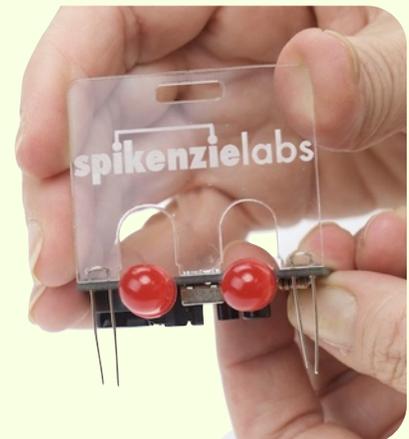
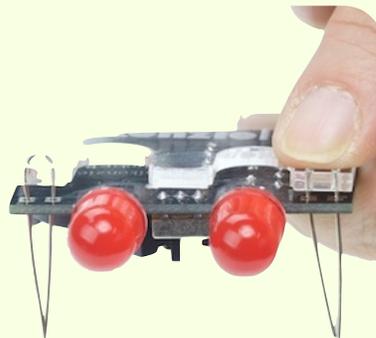
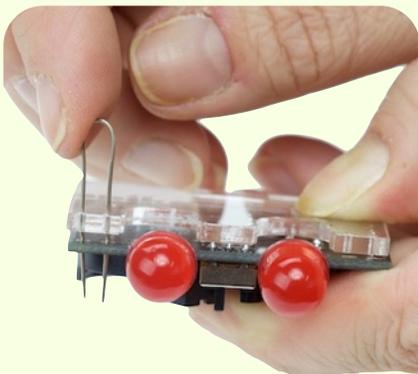
Keep tipping until it is flat on the  
back. Line up the acrylic mounting  
holes with the holes in the PCB.



Slip the mounting wires through  
the holes

Press lightly to minimize the  
loop of wire on top of the acrylic

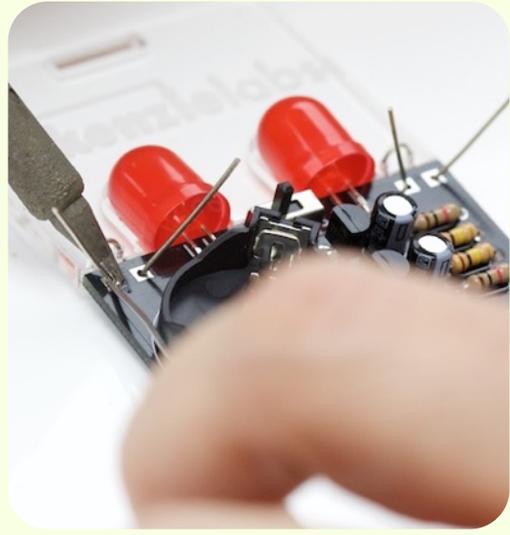
Bend the acrylic back upright,  
so that it is vertical on top  
of the PCB.



Spread the wires to hold them in place



Solder the four points, and snip the excess.



Attach the clip, and snap it secure



Install the battery



The badge will start blinking once the battery is installed.

If your badge has a switch, turn it on.