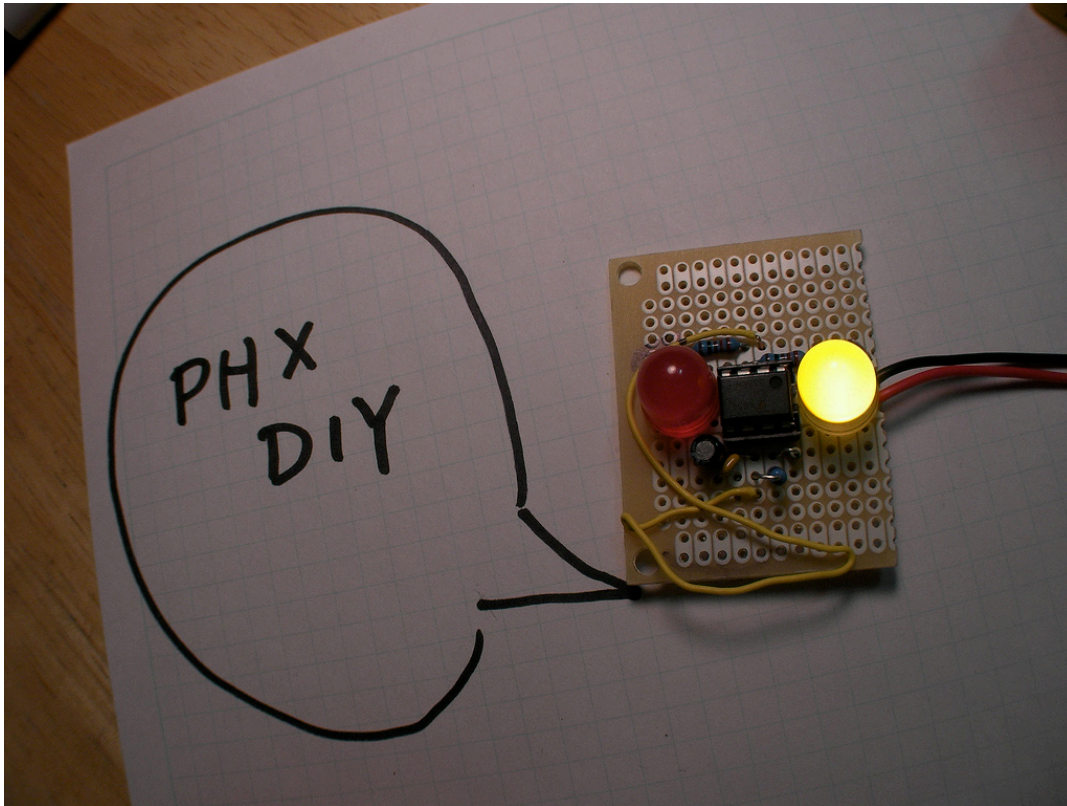


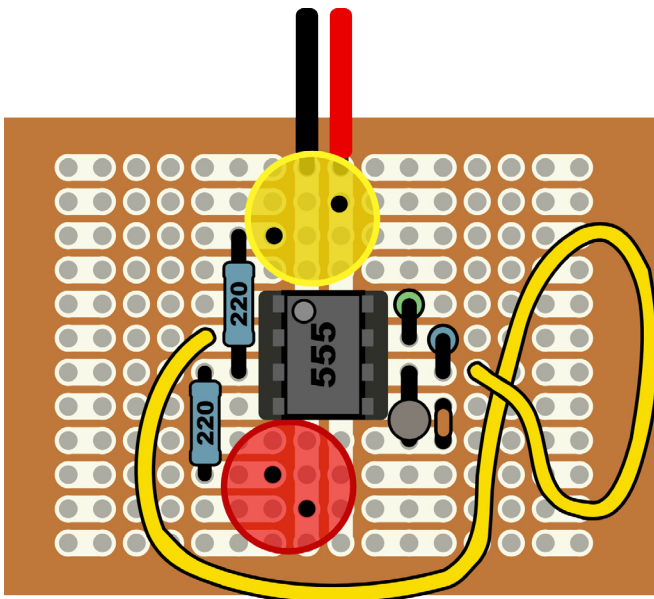
555 Timer Workshop

Phoenix DIY

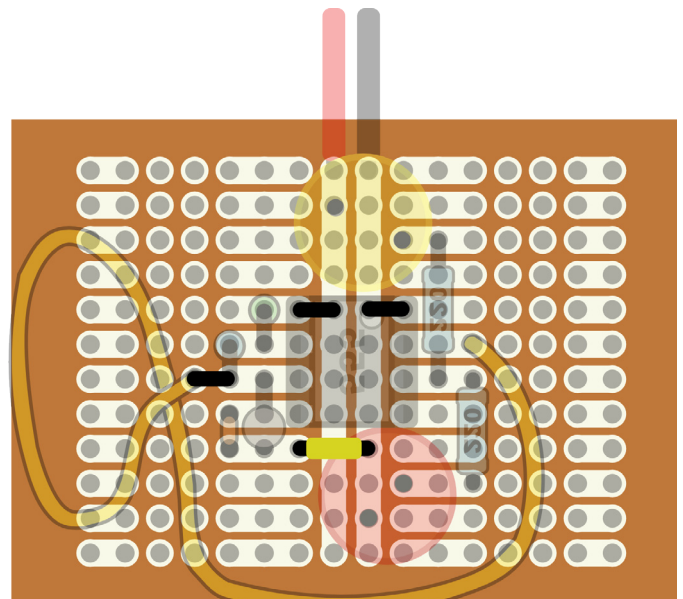


A 555 timer is a simple electronics component. We will learn to solder and assemble some simple parts to make two lights blink.

Board Top View

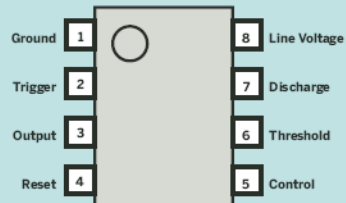


Board Bottom View



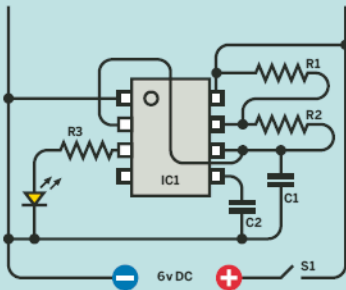
Illustrations by Matt Mets

FIGURE 1



Pin functions on a 555 timer chip.

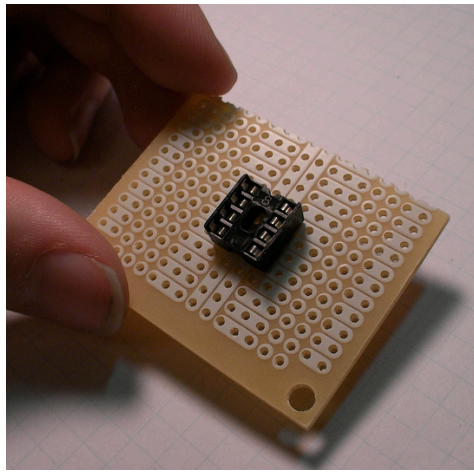
FIGURE 2



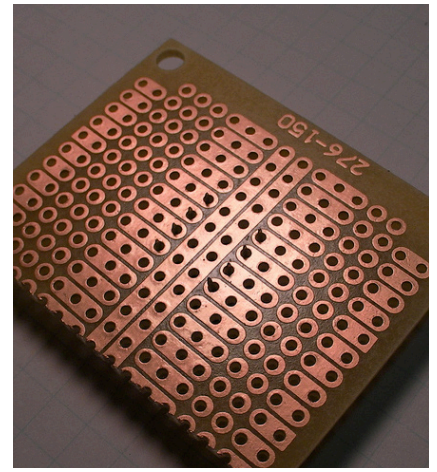
R1: 120kΩ
R2: 1MΩ
R3: 600Ω
C1: 0.1μF
C2: 0.01μF

IC1: 555 Timer
D1: Any LED
S1: Power Switch

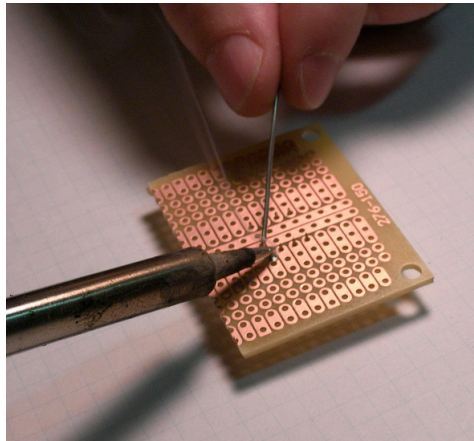
figures copyright Make Magazine issue 10, page 65



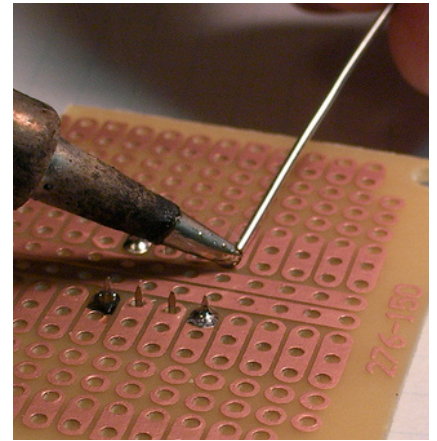
Step 1: Seating the chip carrier as shown, with the notch at that the top



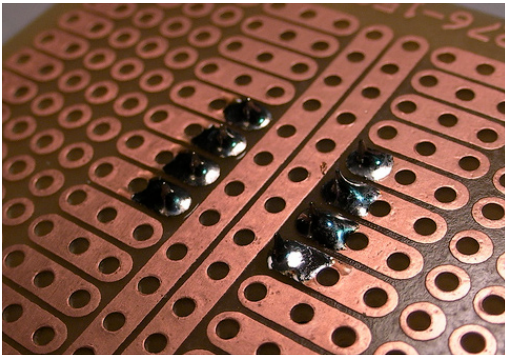
Step 2: Flip board over and rest board on carrier



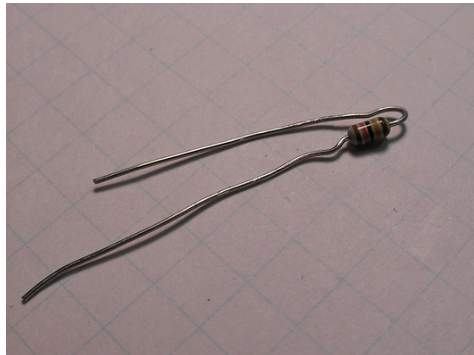
Step 3: Solder the first pin



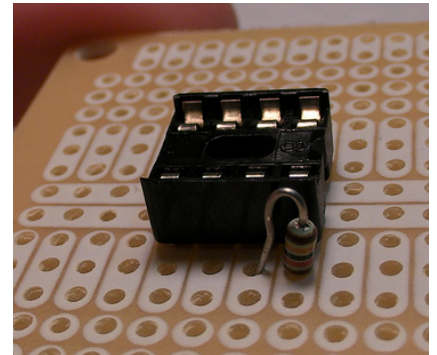
Step 4: Solder the rest of the pins, starting with the corners



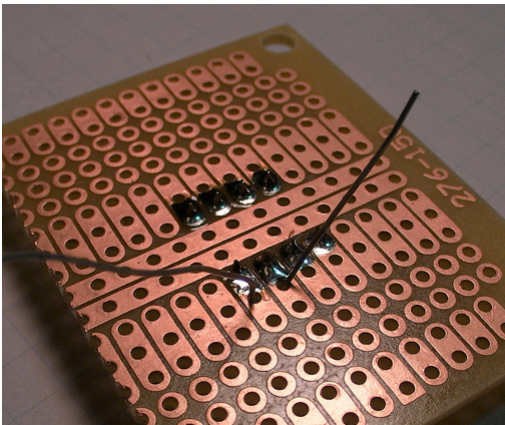
Step 5: check solder joints



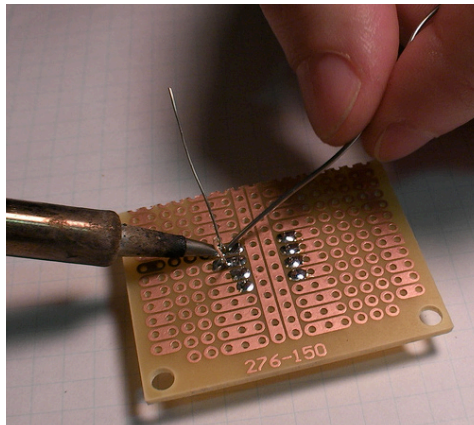
Step 6: bend resistor as shown



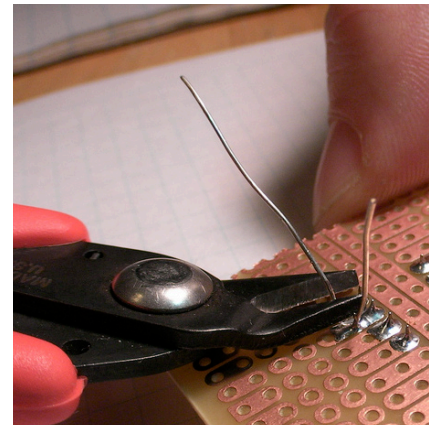
Step 7: Place resistor as shown between pins 7 and 8



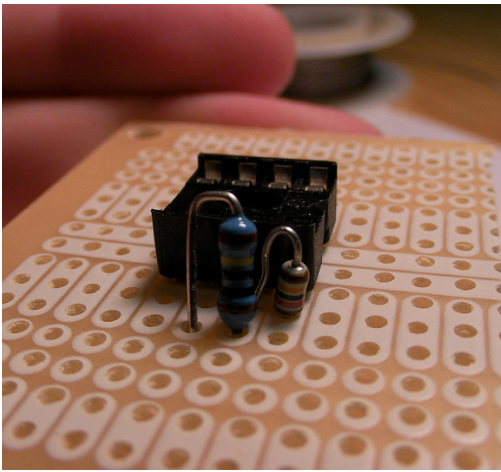
Step 8: Splay resistor leads to hold it in place



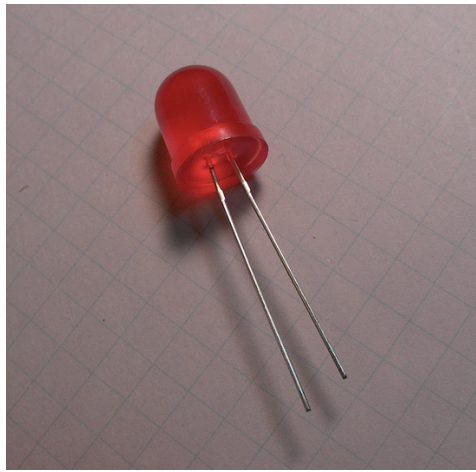
Step 9: Solder resistor leads



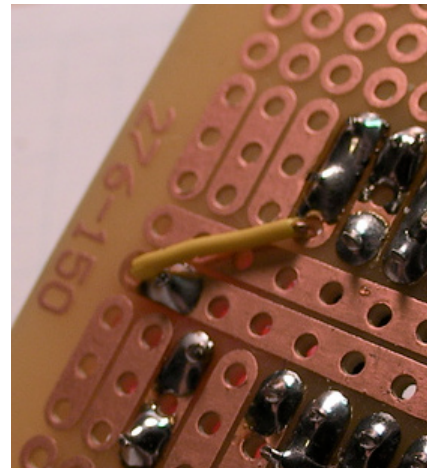
Step 10: Clip resistor leads close to board



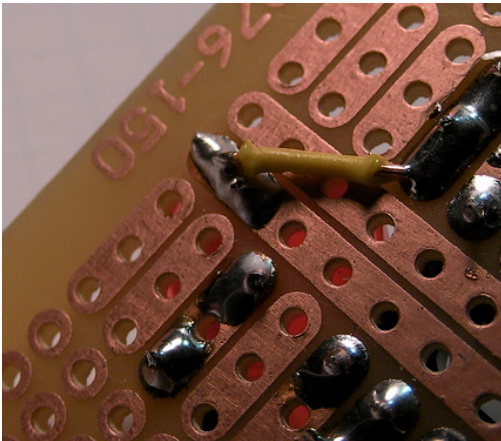
Step 11: Repeat steps 6 through 10 for other components, according to page 1



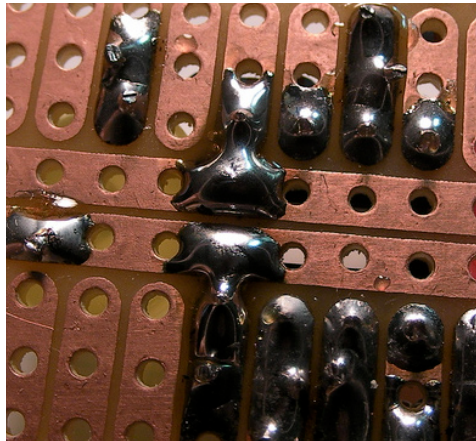
On polar components like LEDs and capacitors, the long lead is positive



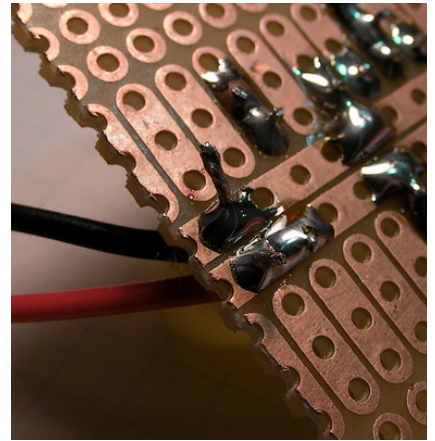
Step 12: Complete wire bridge on underside



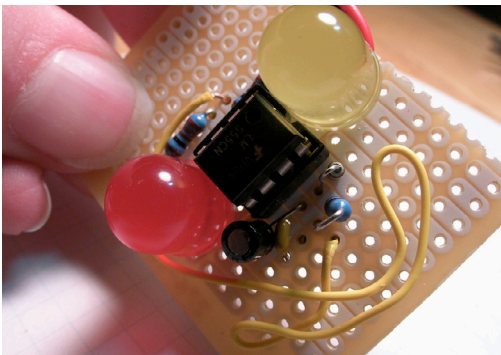
This is what it will look like soldered. Watch out for shorts!



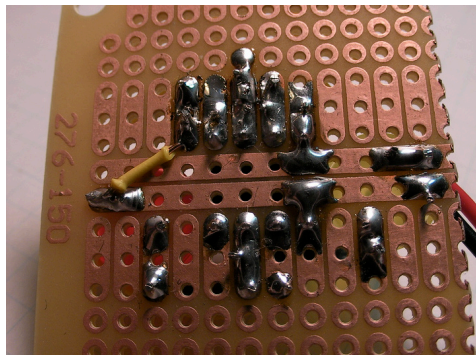
Step 13: Bridge pin 8 to power and bridge pin 1 to ground



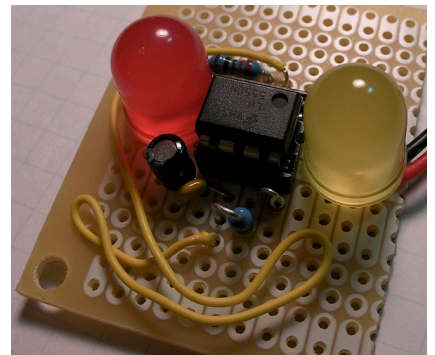
Step 14: Attach battery leads. red is power, black is ground



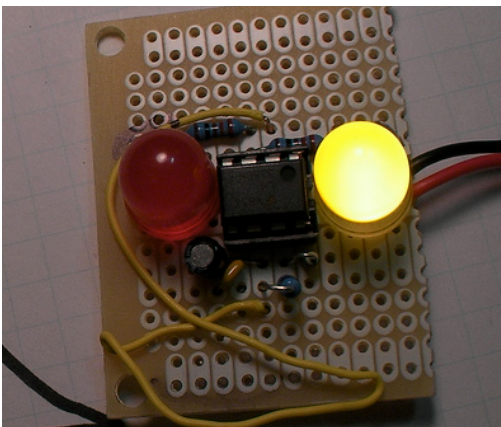
Step 15: Install wire from pins 2 to 6. We used a long one so we could make a face.



This is how the bottom should look.



Step 16: Install the chip in the carrier. The small dot goes up.



Step 17: Plug in the battery and watch it blink!

Tutorial by Becky Stern and Matt Mets, based on a simple 555 circuit (an example of which can be found in issue 10 of Make Magazine).

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Photos by Becky Stern, more here: <http://flickr.com/photos/bekathwia/sets/72157603784003392/>

Illustrations by Matt Mets: cibomahto.com