

Loops and Resistors

Ms. Bledsoe

Create a project in Soundtrap that uses only loops.

- Go to our Edmodo page and use the link for this new Soundtrap project that I posted. DO NOT start your own project. Use the link, please. It's called September 29, but you can rename it once you open it.
- You can record sounds and loop them or use the loops provided by Soundtrap.
- Work for about 15 minutes.



Minimalism

- ☐ Began in the U.S. in the 1960s
- ☐ Result of overcomplicated music
 - ☐ Influenced by John Cage (remember him?)
- ☐ Music in this style is repetitive, static, additive, consistent, but can be very difficult to perform
- ☐ Steve Reich and Philip Glass were leading figures in this movement

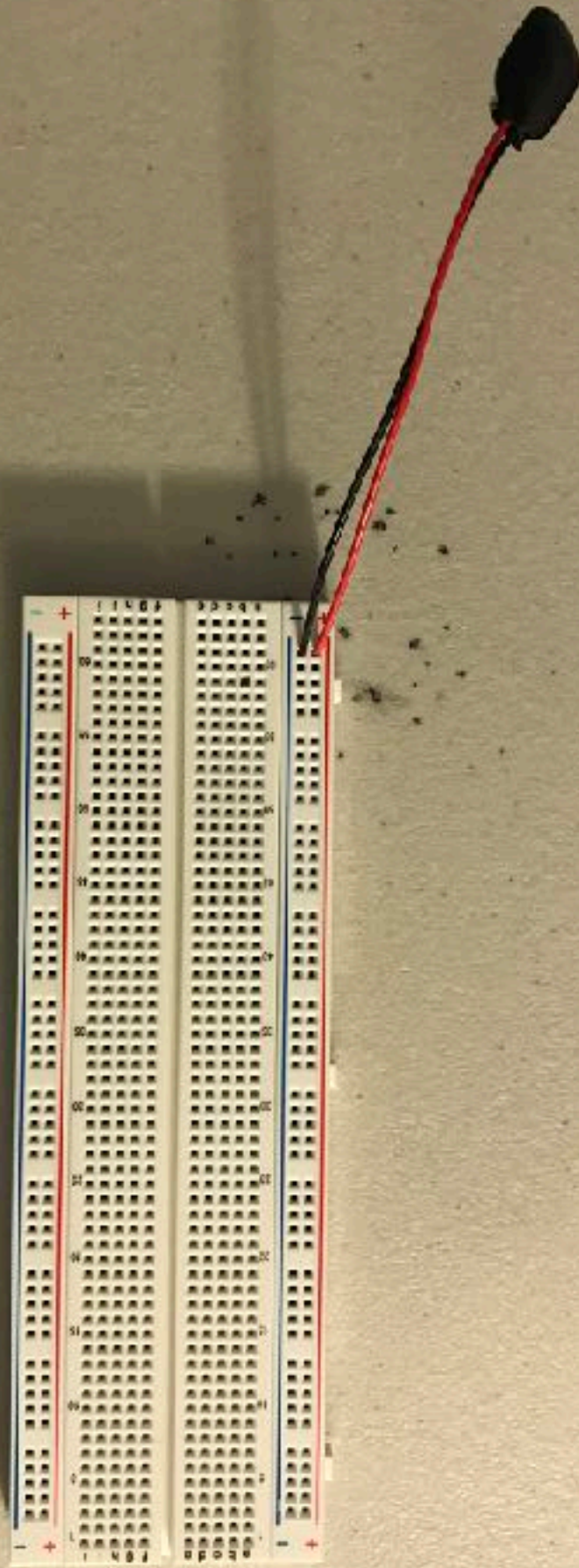
Phasing

- ☐ **Steve Reich technique**
- ☐ **It's Gonna Rain (1965), Come Out (1966), Melodica (1966): For tape machine**
- ☐ **Piano Phase (1967), Violin Phase (1967), Phase Patterns (1970), Clapping Music (1972)**

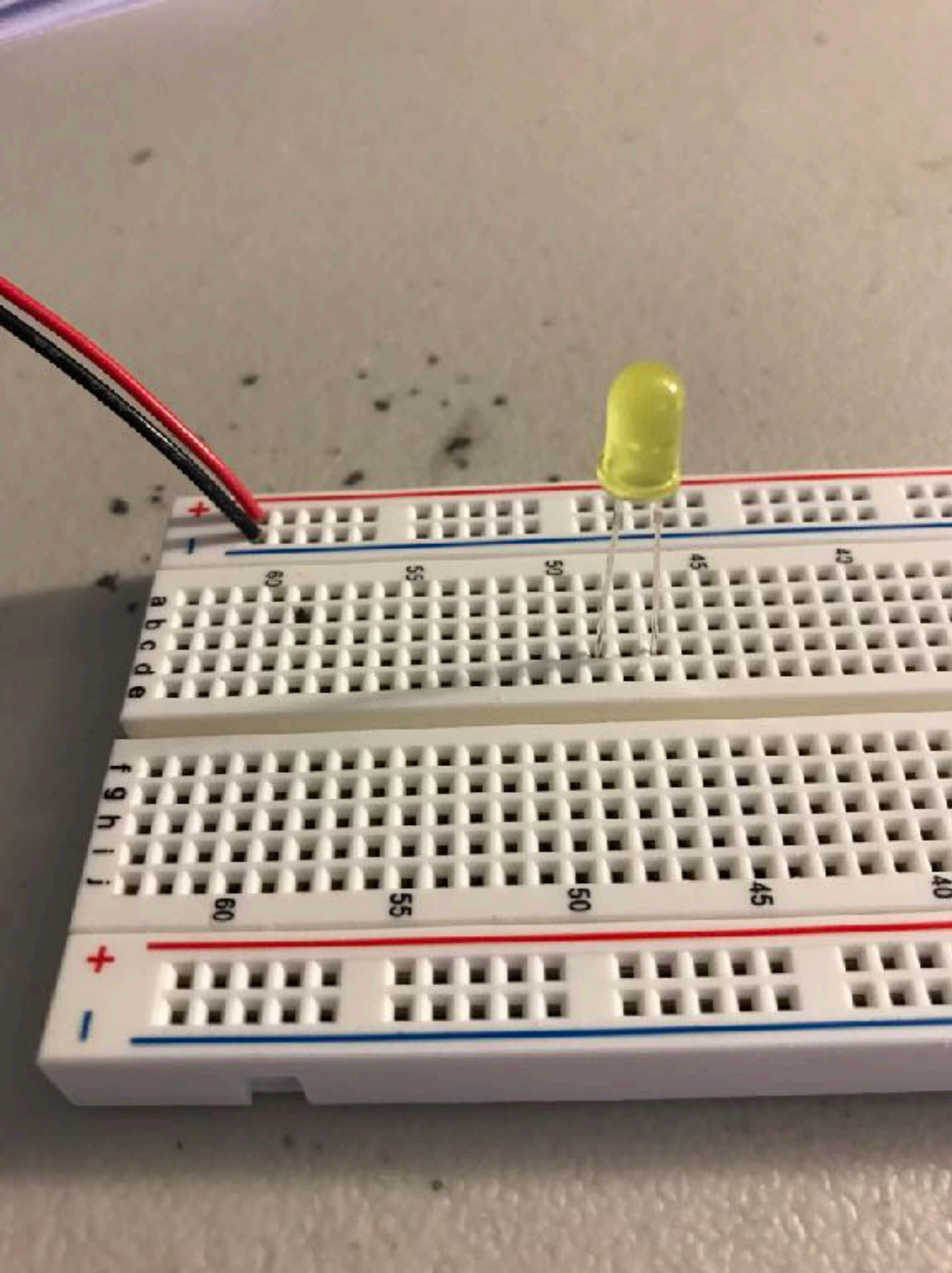
“On a spring day in 1964, police in Harlem’s 32nd precinct tried to beat a confession out of two black teenagers for a crime they did not commit. The young men, Wallace Baker and Daniel Hamm, were repeatedly bludgeoned with billy clubs while in custody, beaten with such force that they were taken to a nearby hospital for X-rays.

In an interview at the nearby Friendship Baptist Church a few days after the incident, the 18-year-old Hamm recounted being brutalized in shifts by six to 12 officers over the course of the night, along with the fact that ‘they got so tired beating us they just came in and started spitting on us.’ But even after hours of abuse, the cops weren’t about to allow Hamm to be admitted for treatment, since he was not visibly bleeding. Thinking fast, Hamm reached down to one of the swollen knots on his legs where the blood had clotted beneath his skin: “I had to, like, open the bruise up, and let some of the bruise blood come out to show them.”

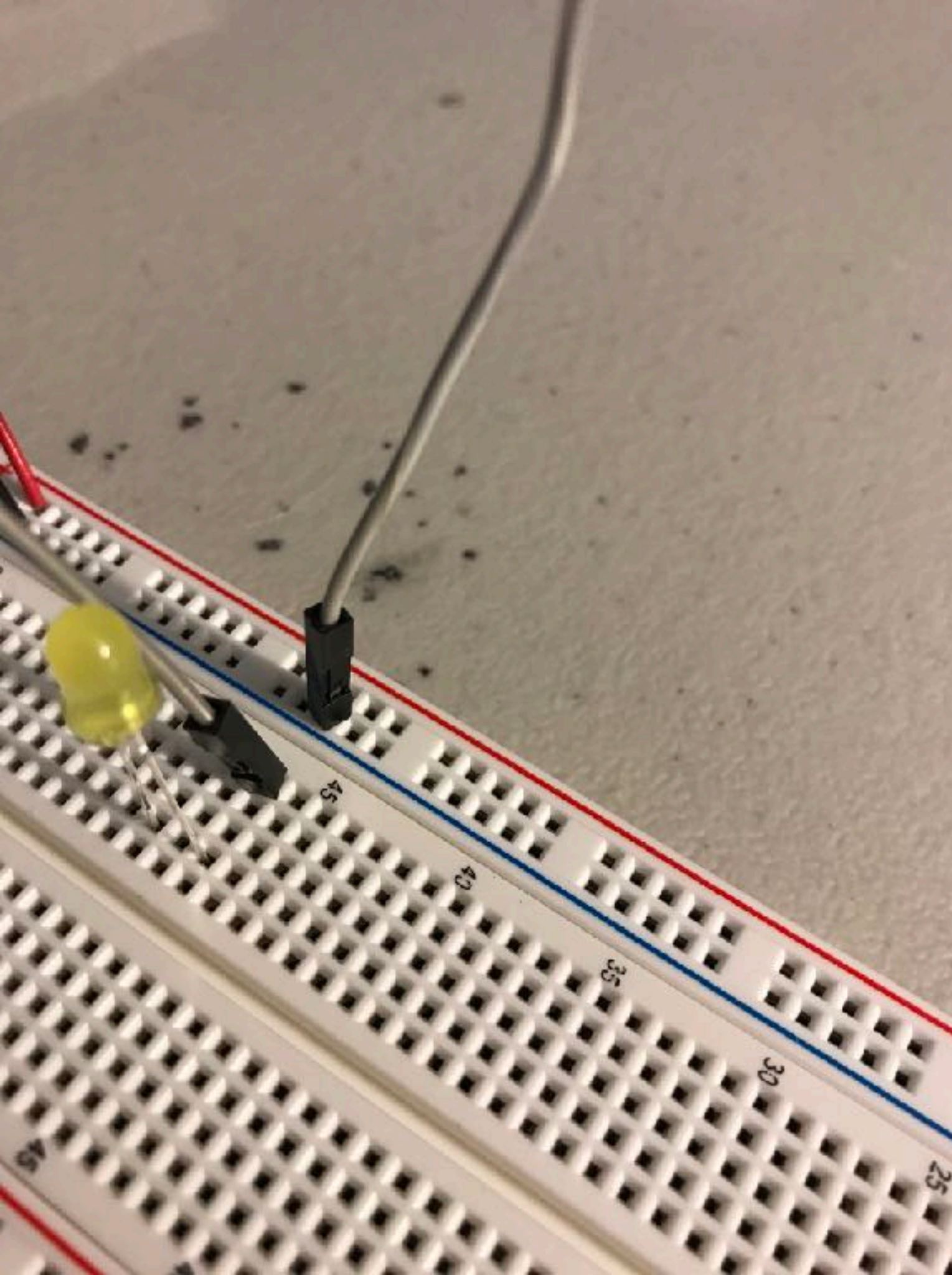
Those 20 words, spoken by a young man who would unjustly remain in prison for nine years, still land like a truncheon. And utilizing just that one sentence, composer Steve Reich made one of the most visceral pieces of music of the 20th century. This month marks the 50th anniversary of Come Out, which made its live debut on April 17, 1966.” - Andy Beta, Pitchfork, 2016



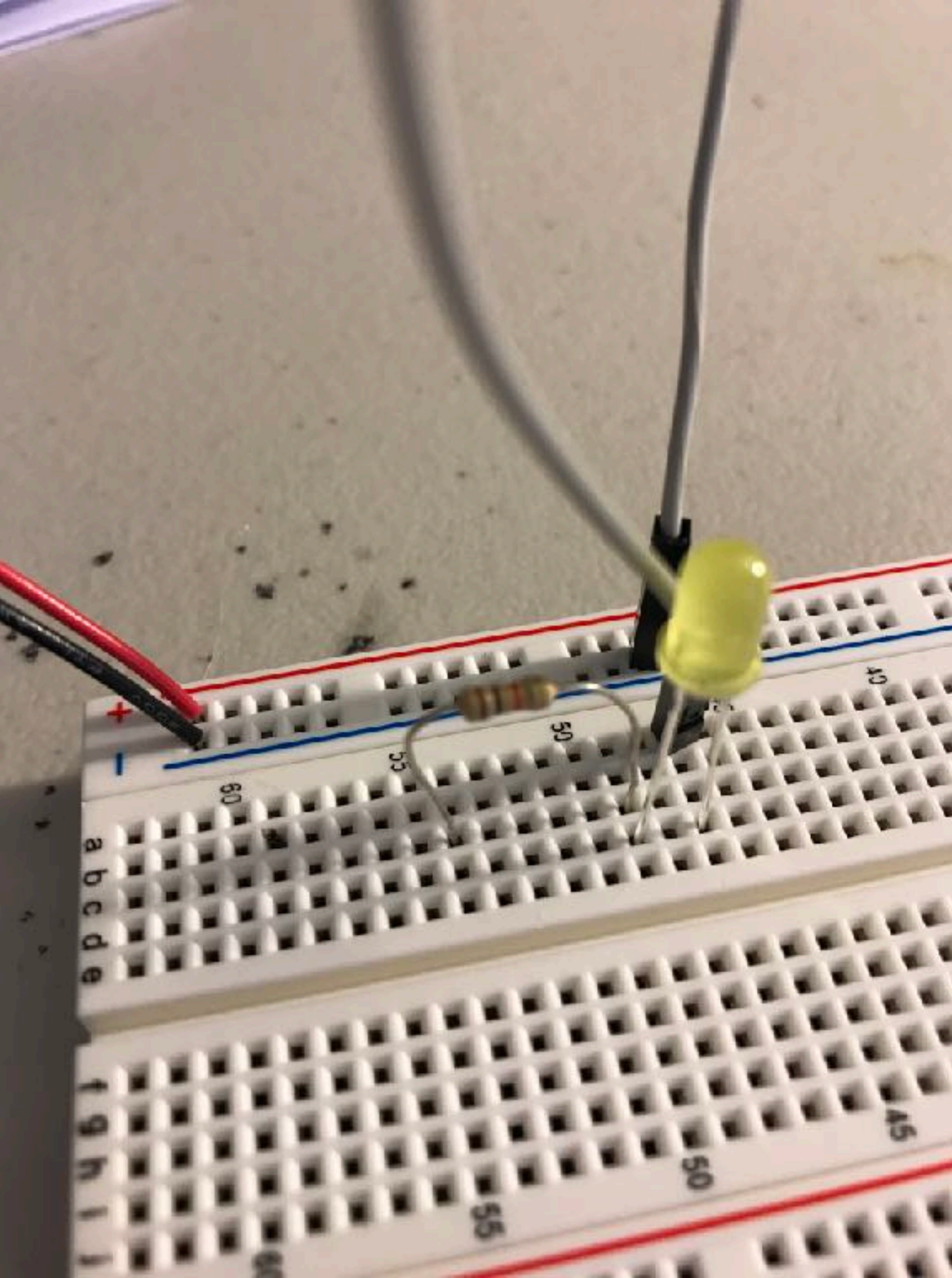
**Plug in the battery connector,
but NOT the battery.**



Plug in the LED. In this photo the positive (longer) leg is on the left.

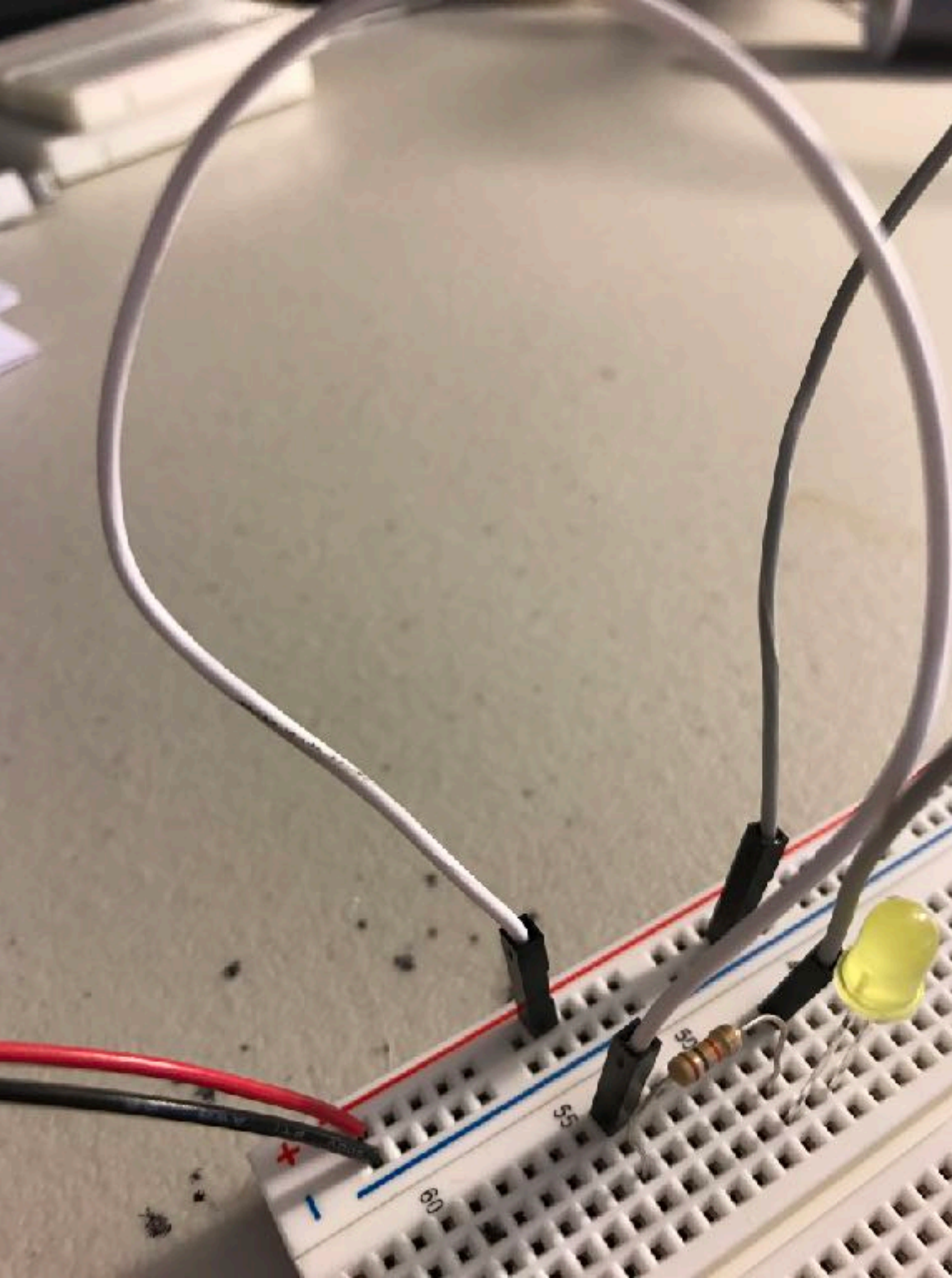


Connect the negative (shorter) leg of the LED to the negative rail on the breadboard with a jumper wire.

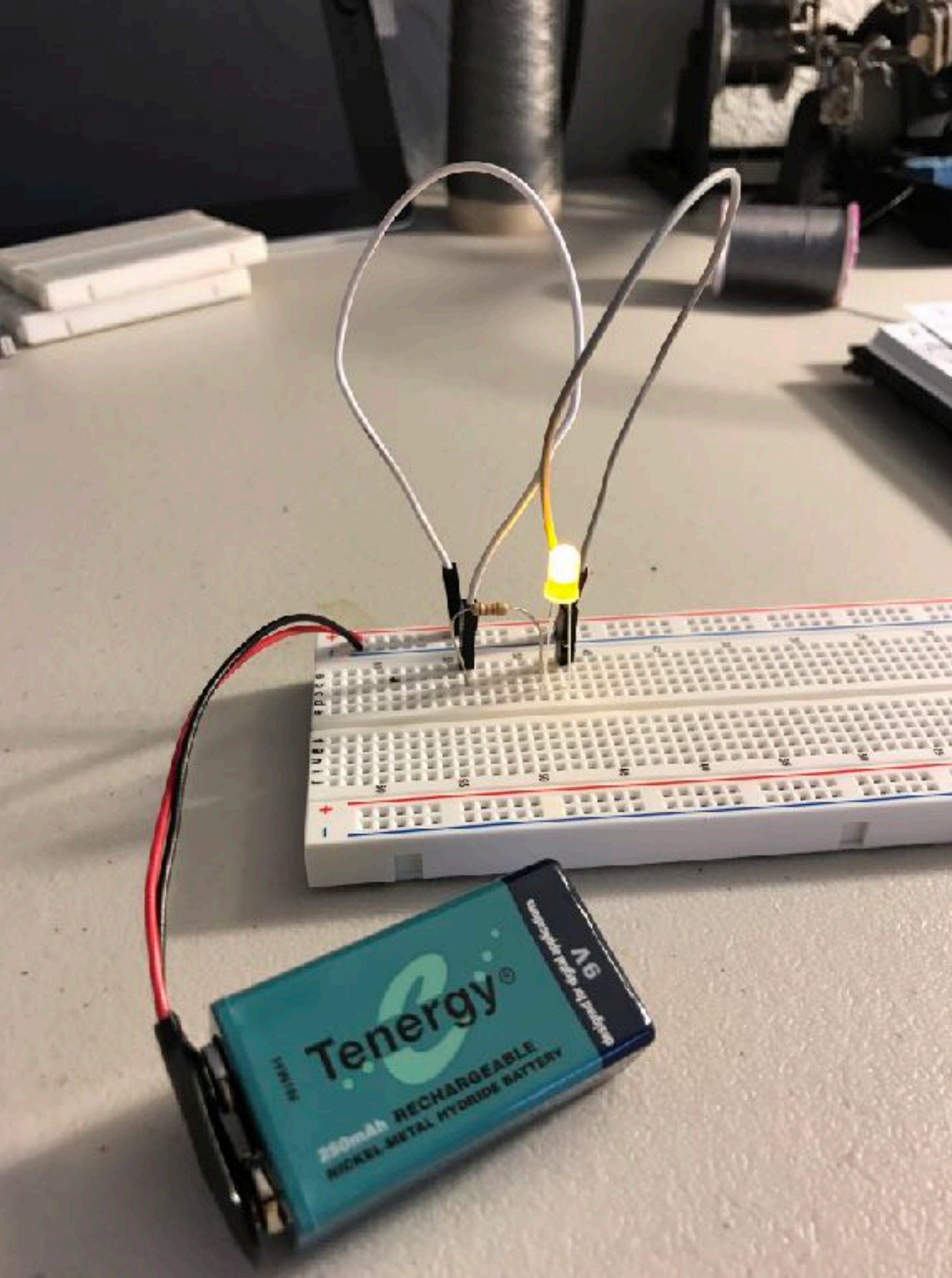


Connect one leg of the 1K Ohm resistor to the positive leg of the LED. This resistor has the following color bands:



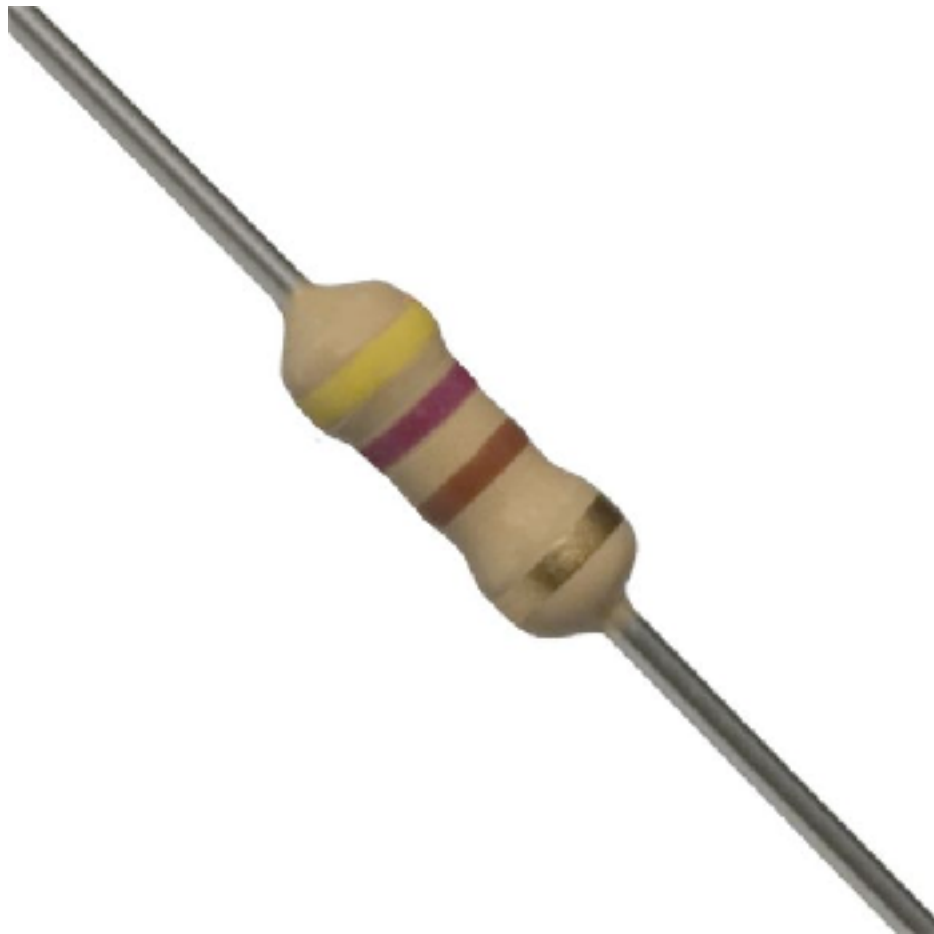


Connect the other leg of the resistor to the positive rail on the breadboard with a jumper wire.



Plug in the battery.

Experiment with changing the resistor. You have two other values in your kit:

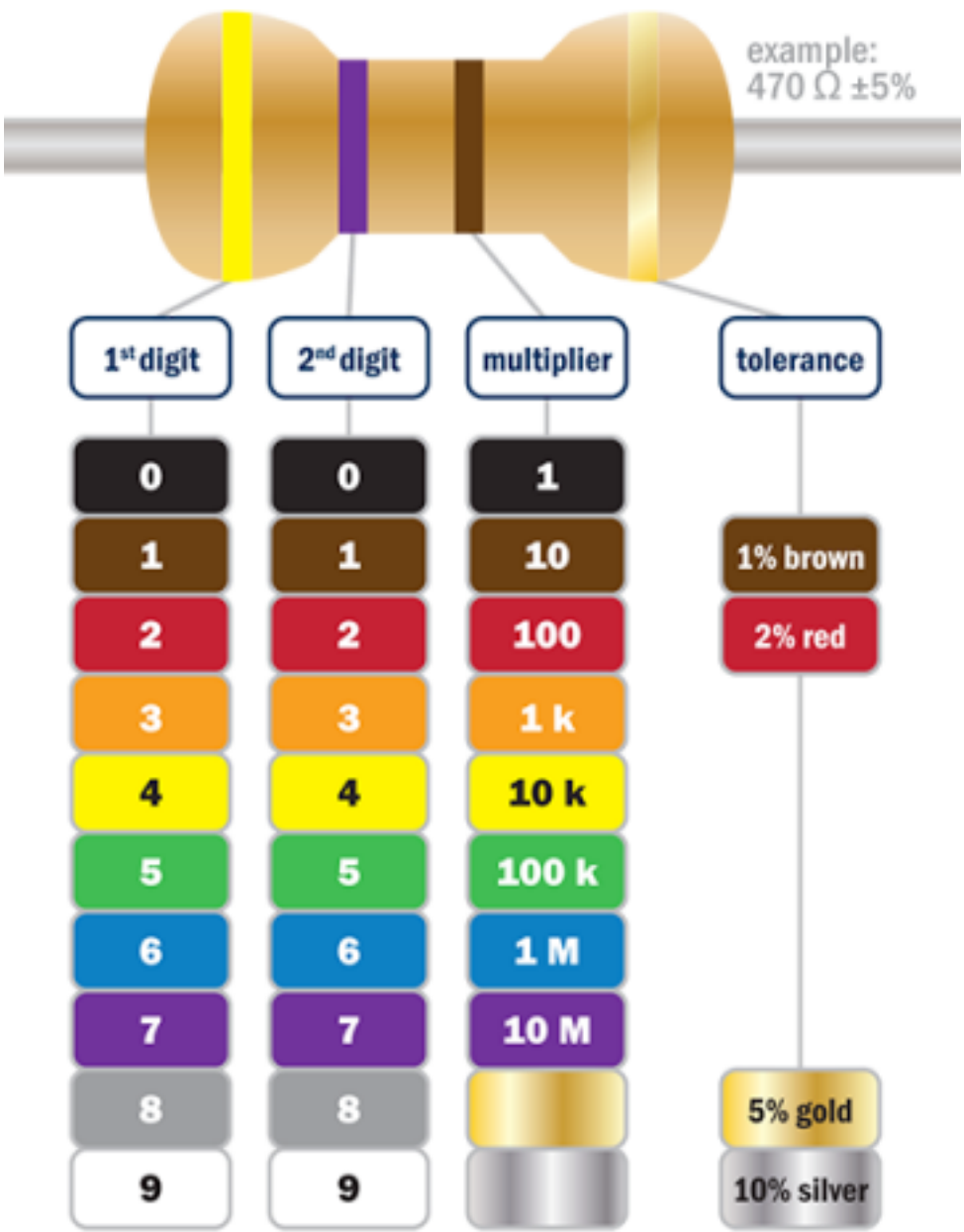


470 Ohm

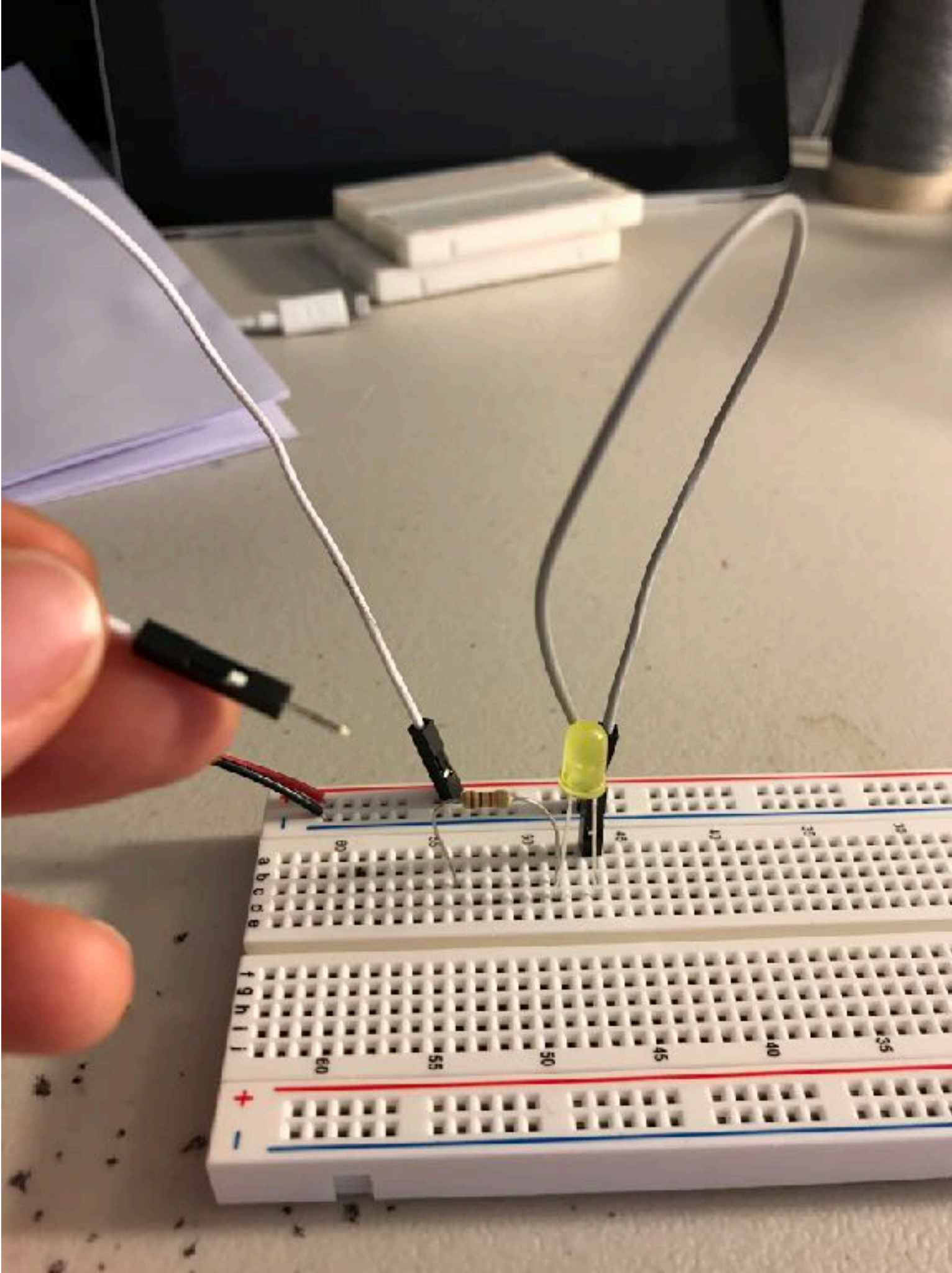


47 Ohm

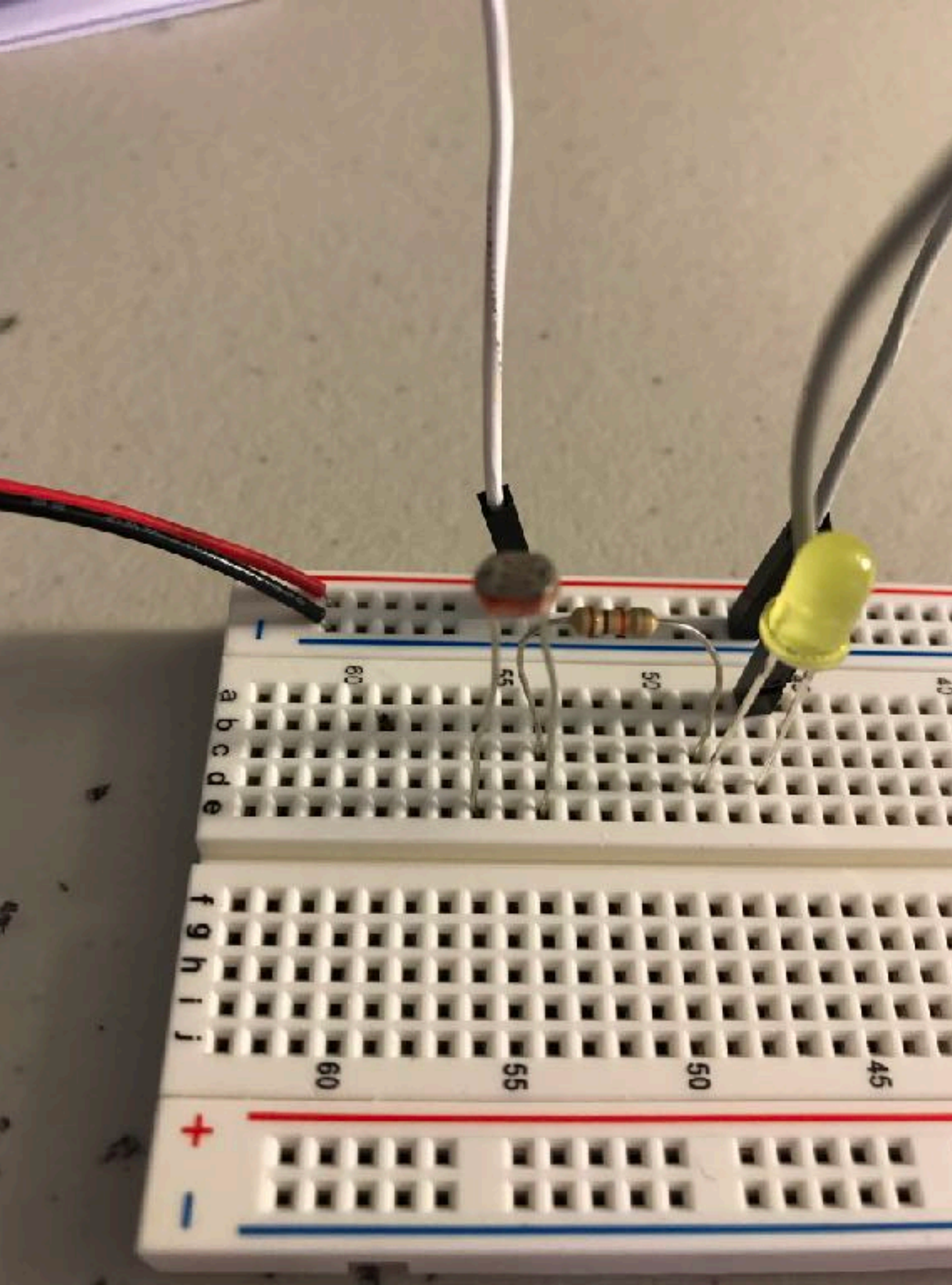
If you're interested, this graphic shows how to calculate resistor values using the color bands:



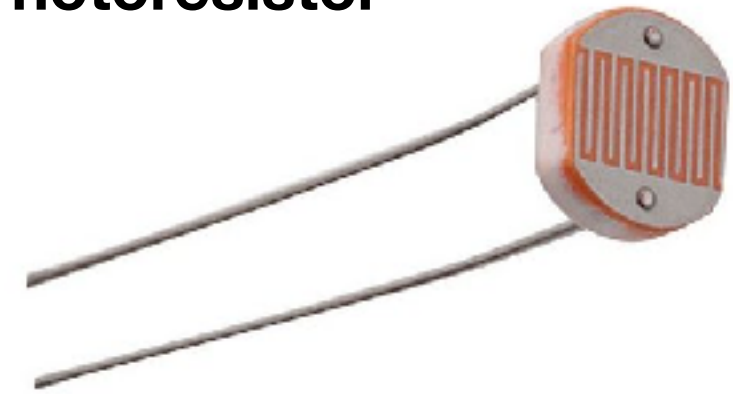
STOP. Don't go on yet.



**Unplug the jumper wire
attached to the resistor.**

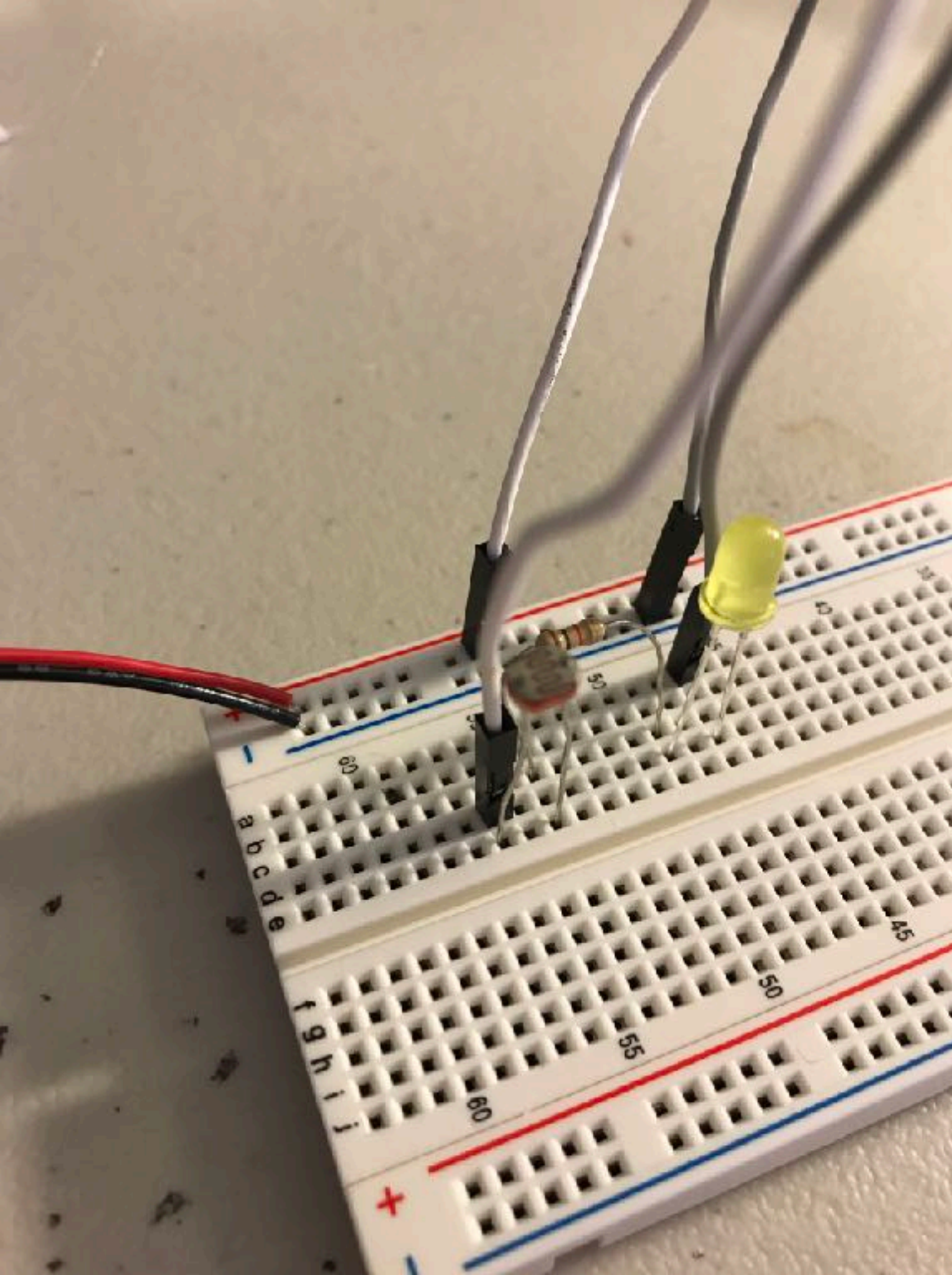


Photoresistor

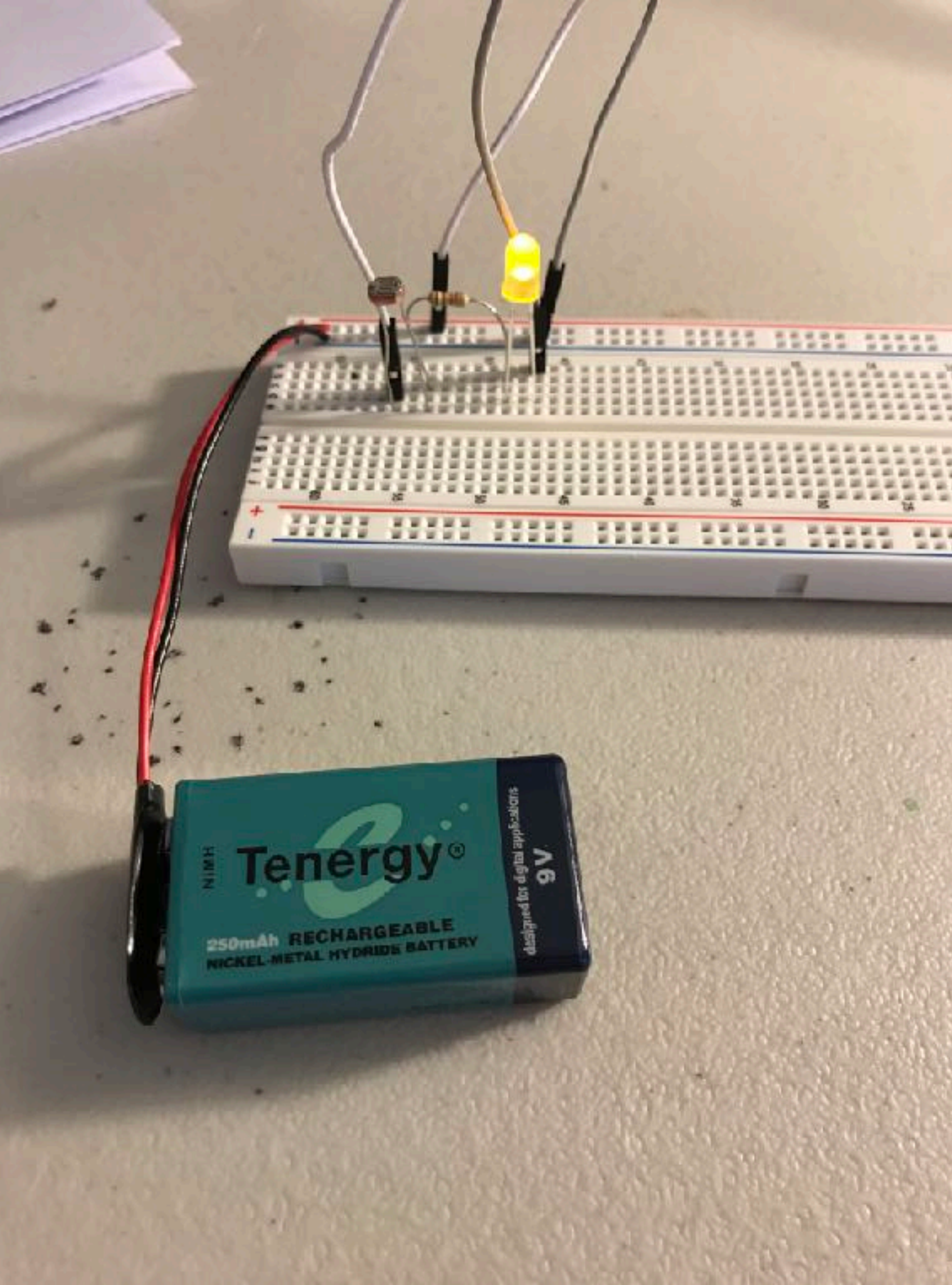


Plug one leg of the photoresistor into the resistor (use the 1K Ohm resistor again) and the other leg into a different row on the breadboard.



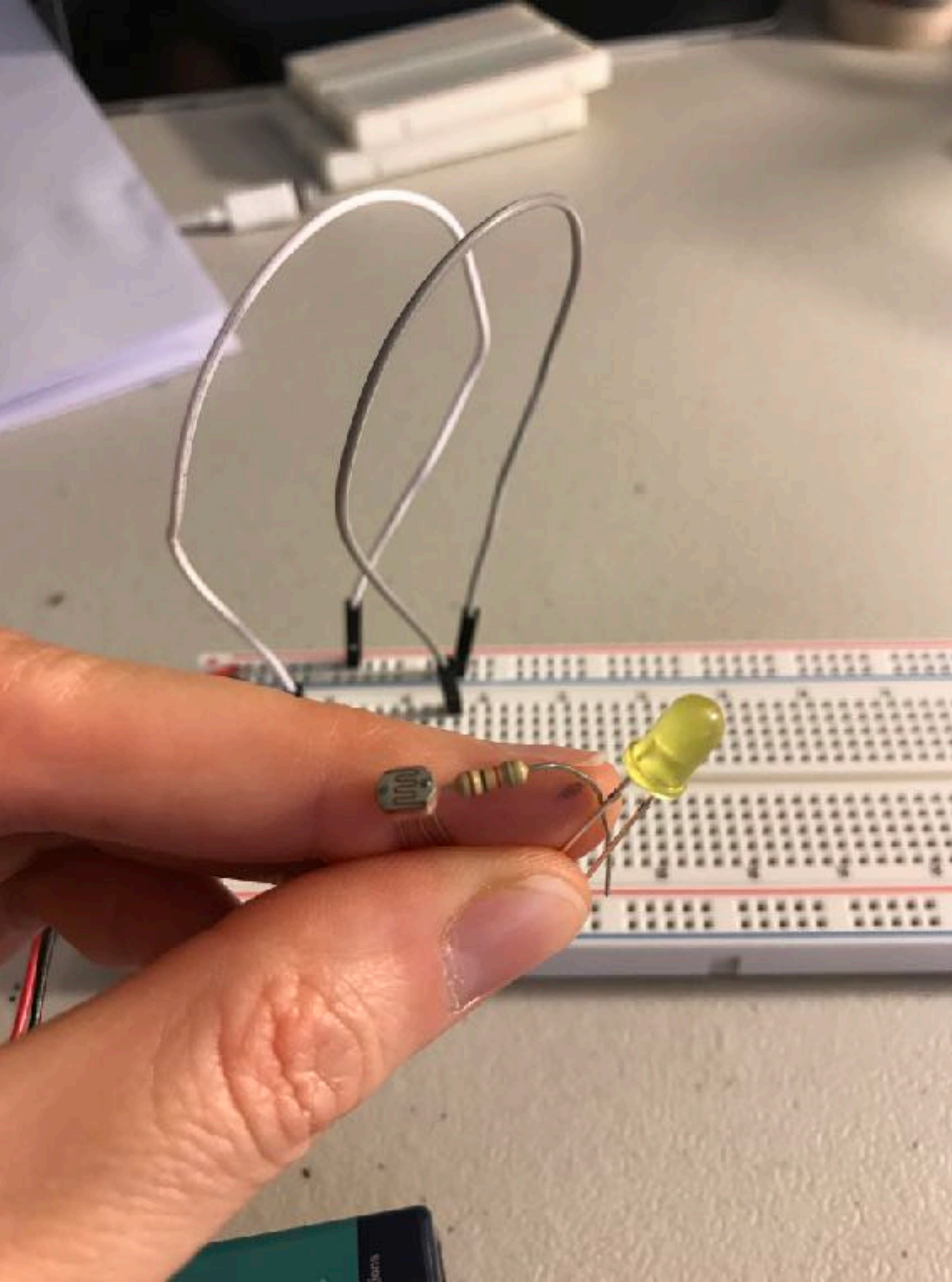


Plug the jumper wire attached to the positive rail on the breadboard to the other leg of the photoresistor.

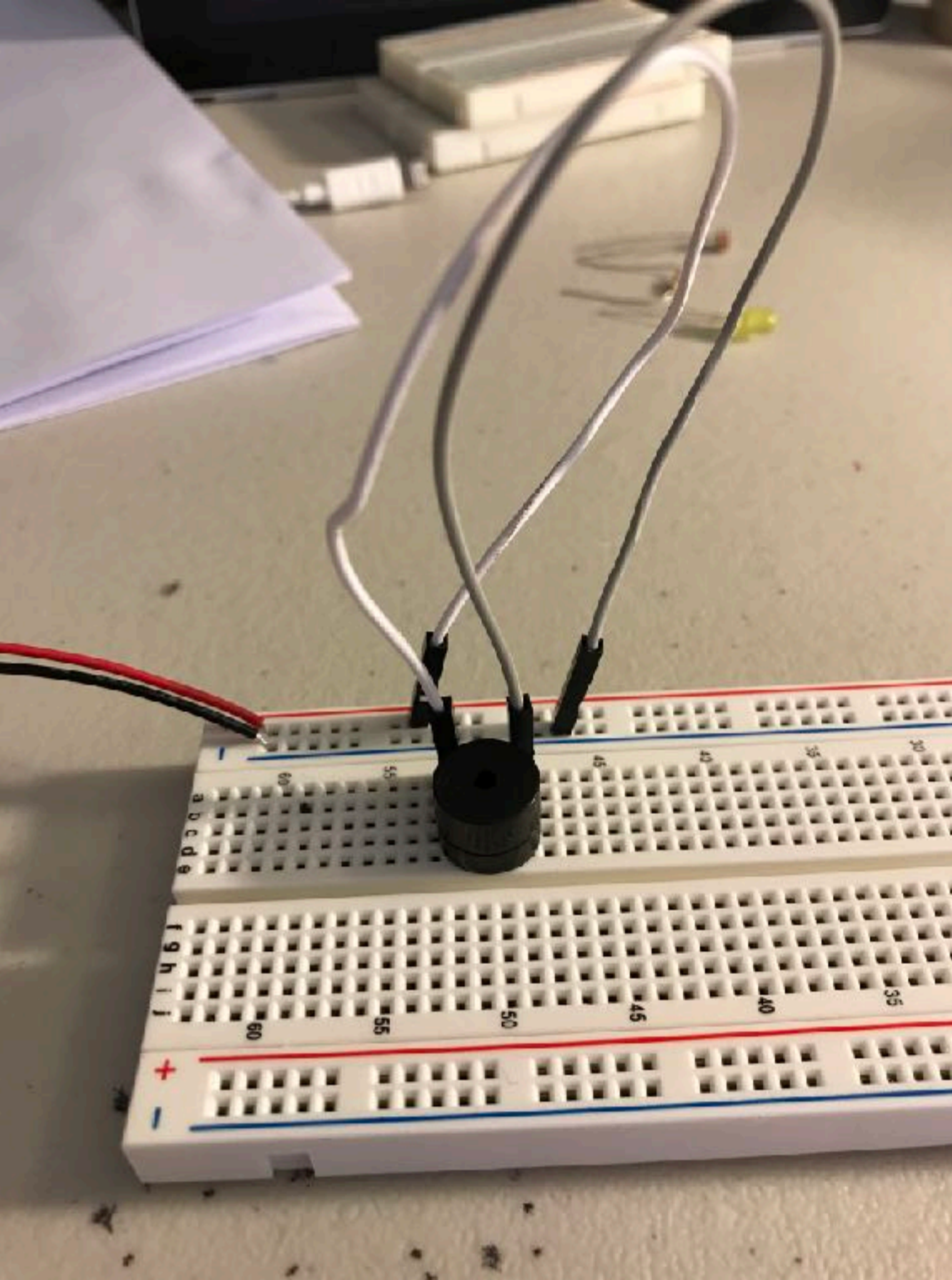


Connect the battery and play with the light that enters the photoresistor. Most resistors are fixed, but the photoresistor is a variable resistor (the resistance value changes).

STOP. Don't go on yet.

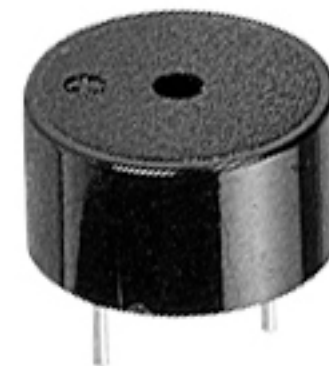


Remove the LED, resistor, and photoresistor from the breadboard and put them away. It's time to make sound.



Plug the buzzer into the breadboard and attach the wires coming from the positive and negative rails on the breadboard.

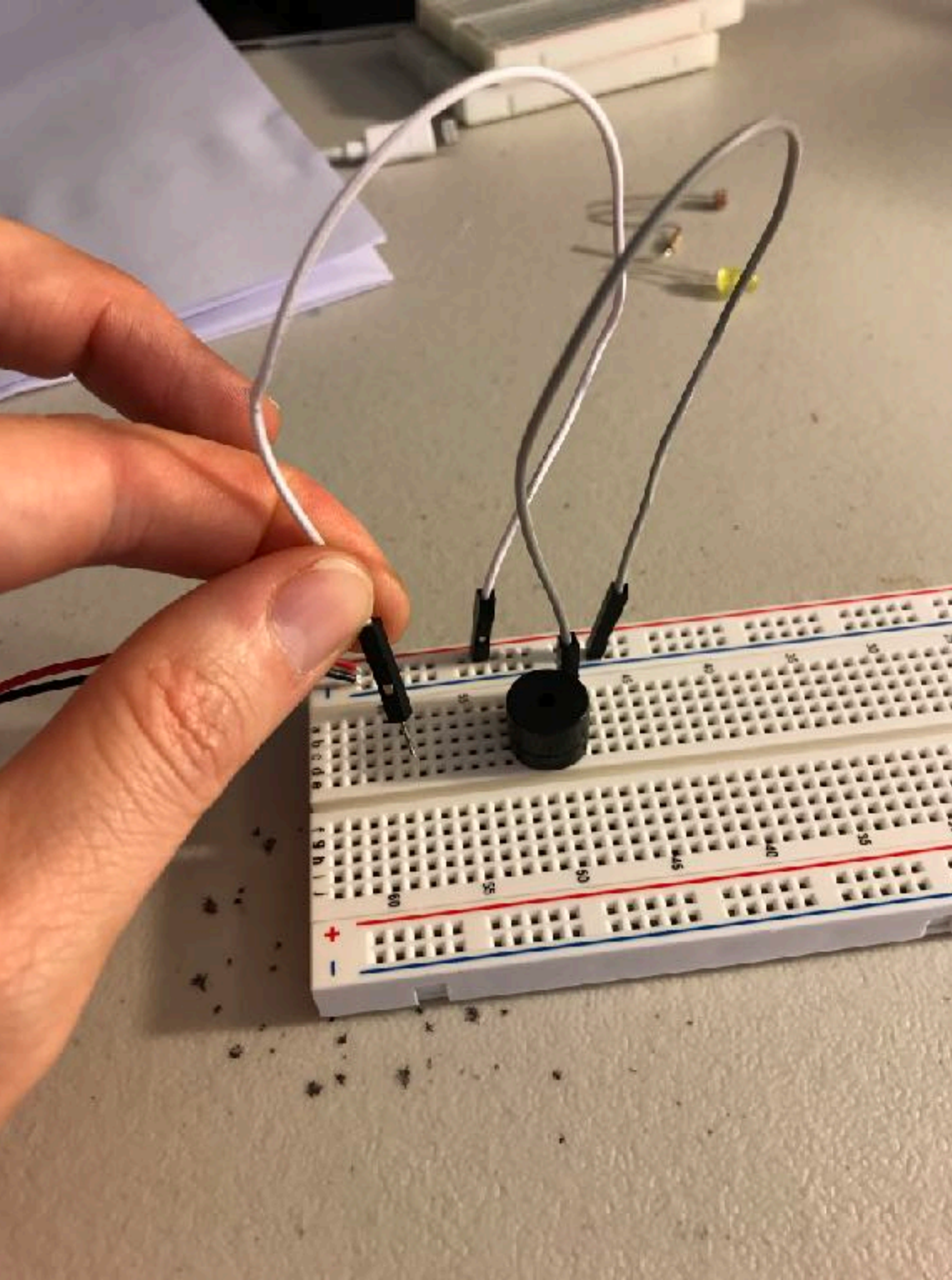
Buzzer



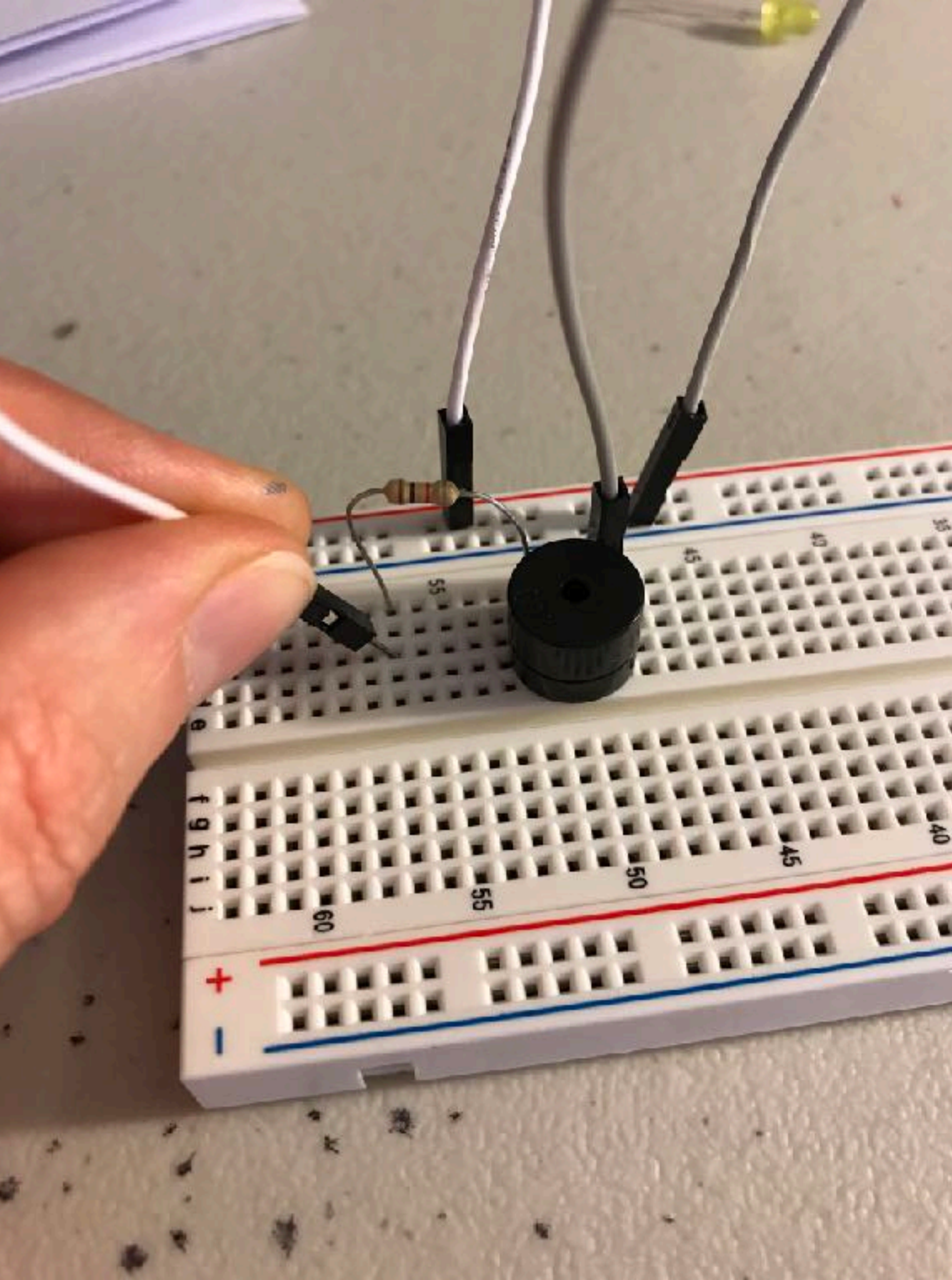
Positive

**Negative
(shorter)**

Connect your battery and you should hear a sound.



**Move the jumper wire
connected to the positive
rail to a different row on the
breadboard.**

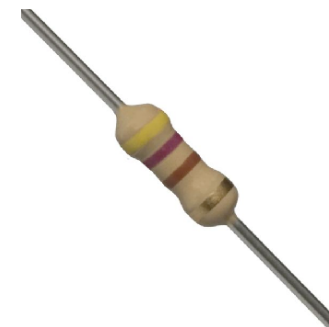


Plug one leg of a resistor into the positive side of the buzzer. Connect the jumper wire coming from the positive rail to the other leg of the resistor. What happened to the sound?

Repeat with all the resistors in the kit.



1K Ohm



470 Ohm



47 Ohm