"Merry Christmas" Light-Up Shirt from Stranger Things

This popular "Stranger Things" shirt comes to life with custom messages you can code yourself.

Written By: Natasha Dzurny



INTRODUCTION

This popular "Stranger Things" shirt comes to life with custom messages you can code yourself.

© 2024

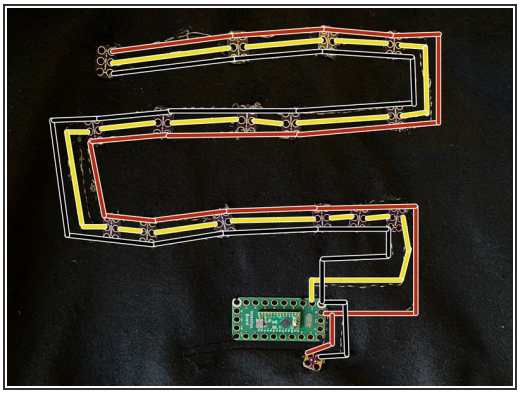
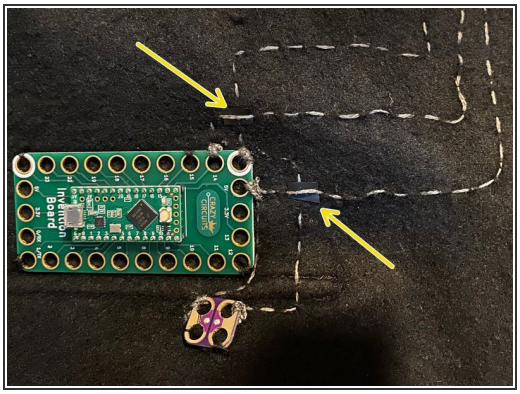
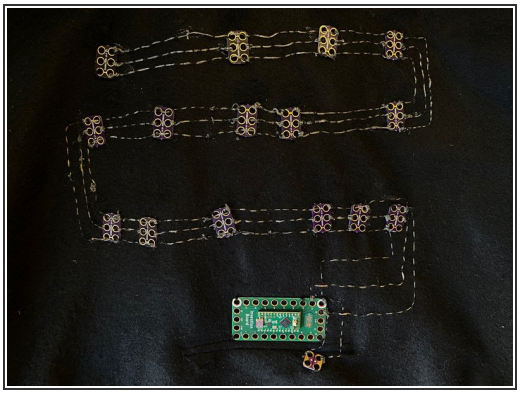
Step 1 — Get to know the Circuit





- Get a sweatshirt with screen print. [We found ours on Amazon.]
- First, cut a very small hole in the silk screen of each light that will get an LED.
- Turn the sweatshirt inside out.

Step 2 — Sew the Circuit

- Lay out your pixels according to the holes. Note that the circuit will run like a snake, so the negative holes in the Neopixels on the first row are on the bottom, but the second row on the top, and the third row on the bottom again.
- First, sew the components in place with regular black thread. Tip: Don't sew all the way through the fabric! Only sew through the fleecy backside so that the stitches don't show on the front.
  - Sew each Neopixel in place through at least two of the holes. Align the LED with the hole you made in the shirt.
  - Sew the Crazy Circuits Board just above the sweatshirt pocket.
  - Sew the power connector with the connection facing toward the inside of the pocket. Cut a hole in the shirt so that it fits through.
- Then, make all connections with conductive thread as shown.
  - The threads need to cross near the Crazy Circuits board. Use a piece of electrical tape to make a small barrier between these threads to prevent a short circuit. *Photo #2
  - You can use one long piece of thread to connect the power and ground holes. BUT, you need to finish and start a new piece of thread for each of the data holes (in yellow). This way each pixel will be individually addressable.

Step 3 — Connect the Battery Pack





- Turn the sweatshirt inside out.
- Insert the battery pack wires into the power connector with a small screw driver.
- Tuck the battery pack into the pocket. While wearing, you can turn the sweatshirt on/off with the switch on the battery pack.

Step 4 — Make the LEDs visible



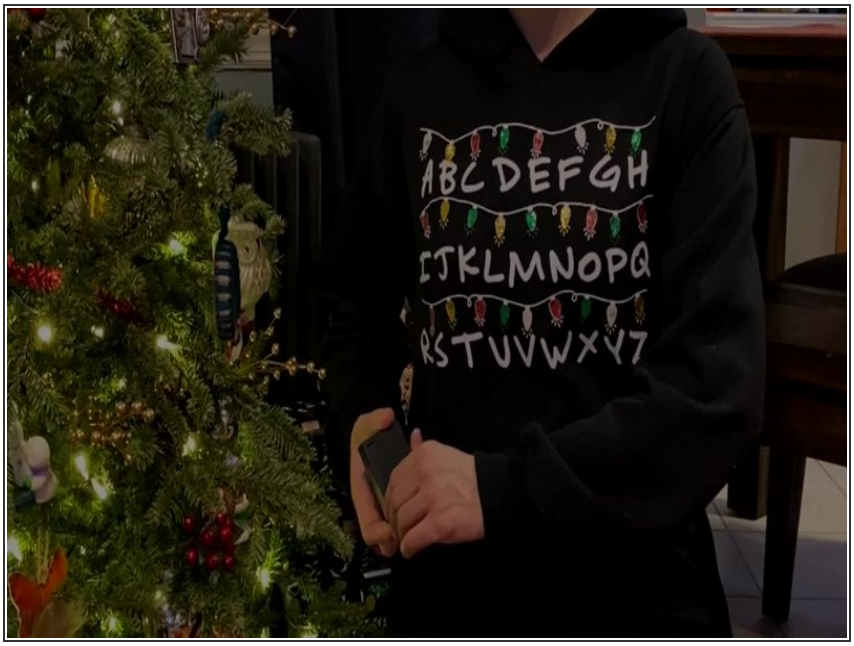
- Use small scissors to trim back more of the sweatshirt so that the entire pixel is showing.

Step 5 — Paint the LEDs



- Add glittery fabric paint in colors matching the lights. This will conceal the LEDs when they are off and diffuse the light when they are on.

Step 6 — Upload the Code



- Download or copy and paste the Code from this link into the Arduino IDE.
- Upload the code to your Crazy Circuits board.
- Disconnect the USB cable and put on your shirt. Turn on the battery pack and you're ready for your next Christmas Party!