Breadboard setup #4 - Addressable LEDs

To LED tube

There are three wires coming from the LED tube. The red and white connect to the power bus. Red to red, white to blue. The green wire is for data. It connects to pin 8

Potentiometers
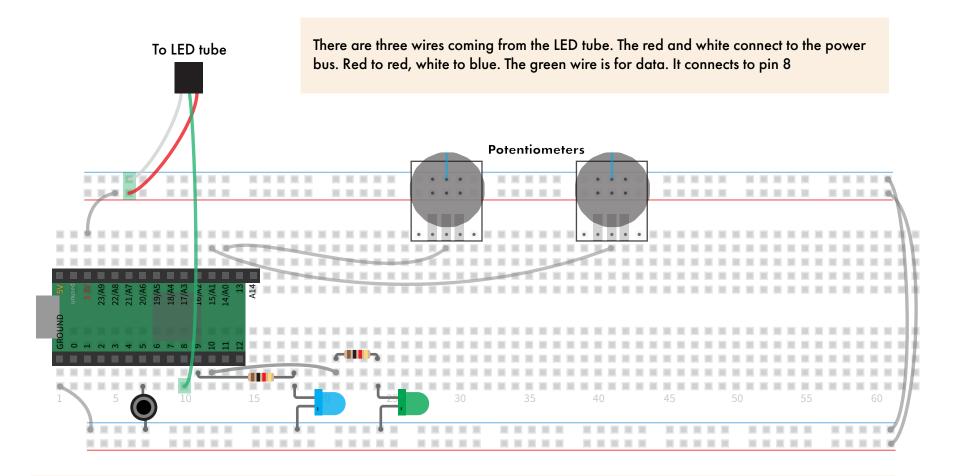
There are 20 "ws2812" LEDs in the tube. Each one is it's own little microcontroller. The first on gets the data from the Teensy and says "oh I must be the first LED and this is what I should do" and adds a little bit extra to the data and sends it along to the next one. That light says "oh I guess I'm second and this is my data" and so on. In this way you can use just a single output pin to send data to literally thousands of LEDs.