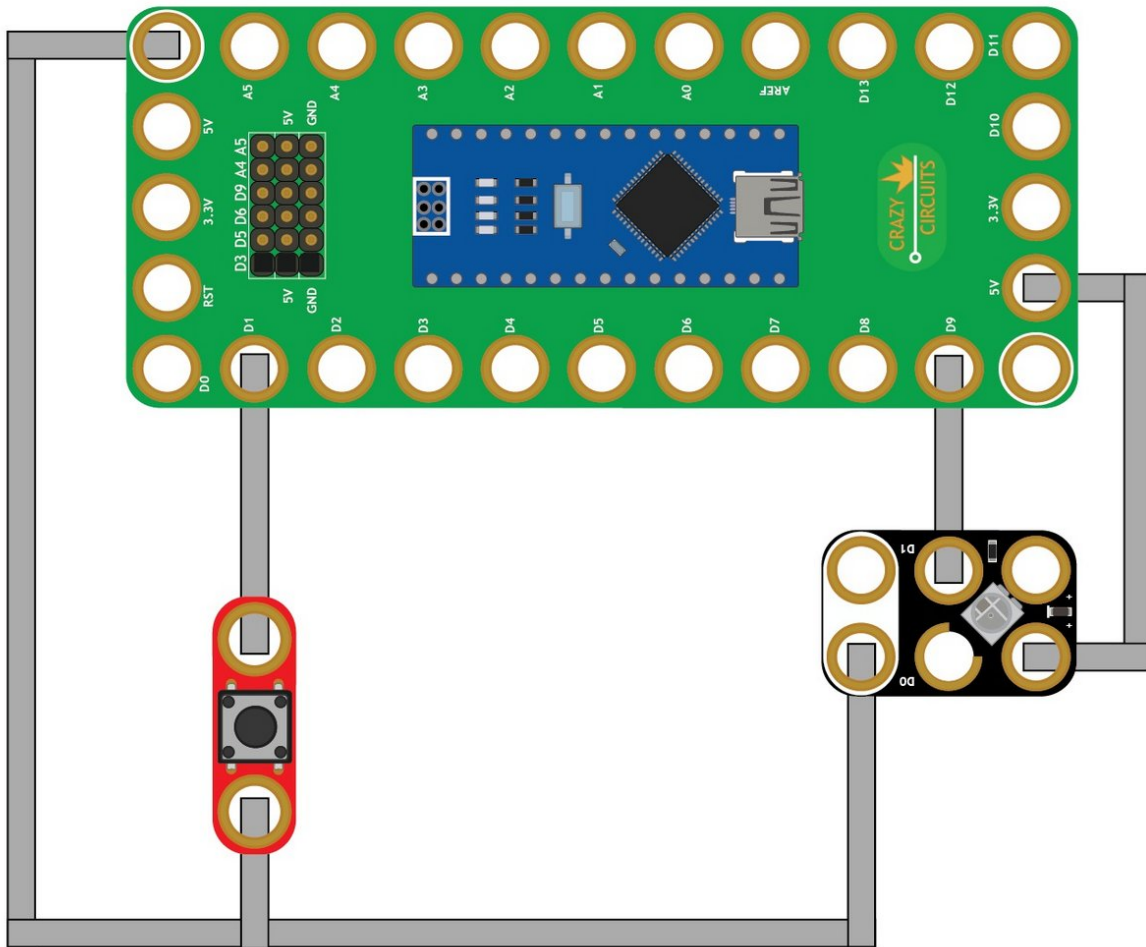




16 - Pushbutton with NeoPixel

Use our Programming 101 kit to control a NeoPixel with a pushbutton.

Written By: Pete Prodoehl



INTRODUCTION

Use our Robotics Board to control a NeoPixel with a pushbutton.



TOOLS:

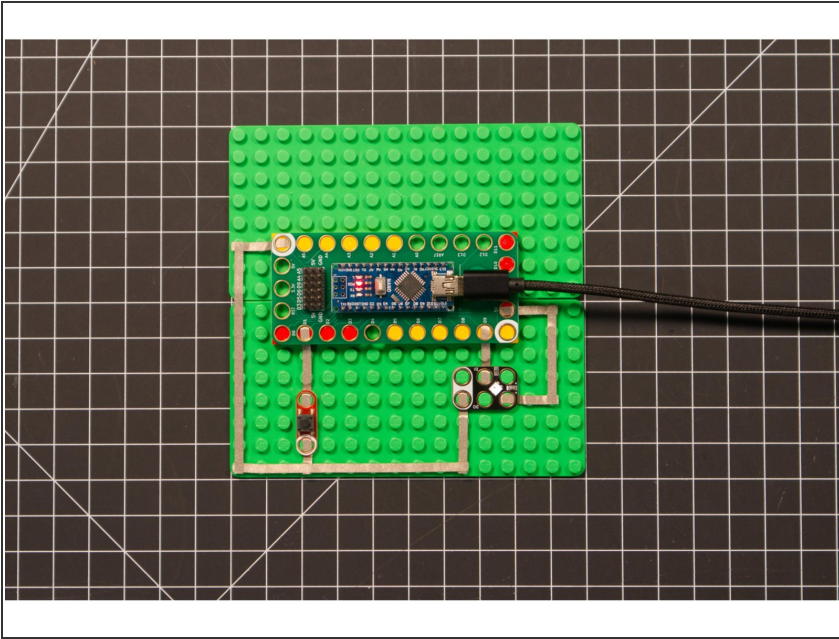
- [Scissors](#) (1)
- [Computer](#) (1)



PARTS:

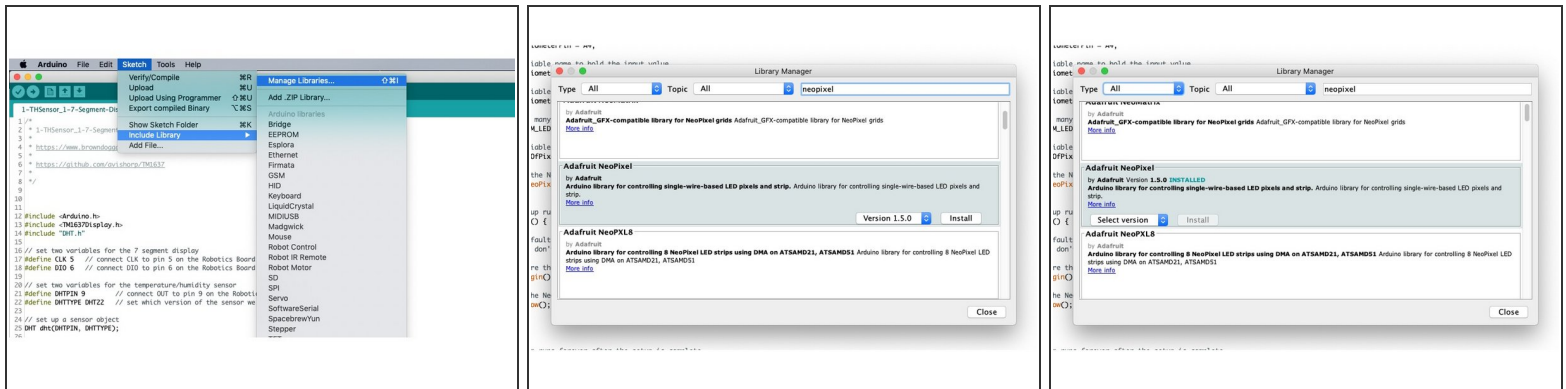
- [Crazy Circuits Robotics Board](#) (1)
 - [Standard Pushbutton Chip](#) (1)
 - [NeoPixel Chip](#) (1)
 - [Maker Tape](#) (1)
- 1/8" Wide

Step 1 — Build the Circuit



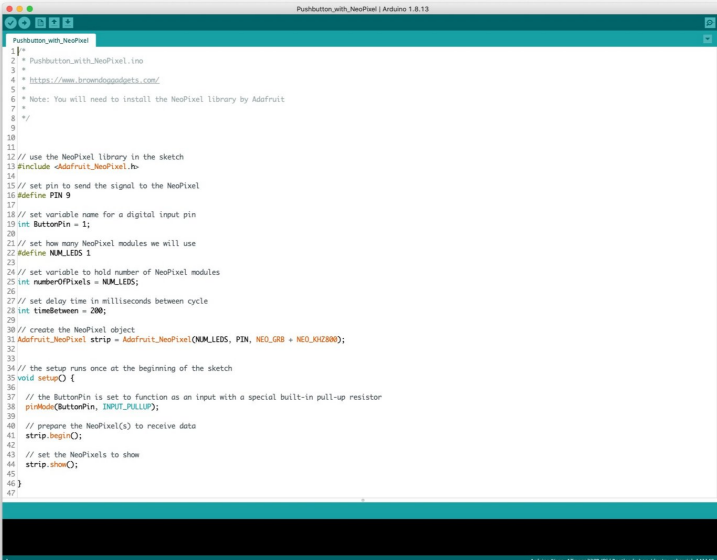
- Build the circuit as shown in the diagram using the components specified.

Step 2 — Install NeoPixel library



- Install and launch the Arduino software.
- Click on the **Sketch** menu, select **Include Library**, and then **Manage Libraries...**
- On the top right side type **NeoPixel** and it will show the results in the bottom of the window. We want the **Adafruit NeoPixel** library by **Adafruit**. Click the **Install** button.
- The library will be downloaded and **installed**, and then show the word **Installed** along with the version number.
- If you are done installing libraries click the **Close** button in the lower right corner.
- (These instructions can also be found in the PDF file **Installing-NeoPixel-Arduino-Library.pdf**)

Step 3 — Upload the Code

A screenshot of the Arduino IDE interface. The title bar reads 'Pushbutton_with_NeoPixel | Arduino 1.8.19'. The code editor shows the following code:

```
1 //
2 * Pushbutton_with_NeoPixel.ino
3 *
4 * https://www.browndoggadgets.com/
5 *
6 * Note: You will need to install the NeoPixel library by Adafruit
7 *
8 */
9
10
11
12 // use the NeoPixel library in the sketch
13 #include <Adafruit_NeoPixel.h>
14
15 // set pin to send the signal to the NeoPixel
16 #define PIN 9
17
18 // set variable name for a digital input pin
19 int ButtonPin = 1;
20
21 // set how many NeoPixel modules we will use
22 #define NUMLEDS 1
23
24 // set variable to hold number of NeoPixel modules
25 int numberOfPixels = NUMLEDS;
26
27 // set delay time in milliseconds between cycle
28 int timeBetween = 200;
29
30 // create the NeoPixel object
31 Adafruit_NeoPixel strip = Adafruit_NeoPixel(NUMLEDS, PIN, NEO_GRB + NEO_KOZ800);
32
33
34 // the setup runs once at the beginning of the sketch
35 void setup() {
36
37   // the ButtonPin is set to function as an input with a special built-in pull-up resistor
38   pinMode(ButtonPin, INPUT_PULLUP);
39
40   // prepare the NeoPixel(s) to receive data
41   strip.begin();
42
43   // set the NeoPixels to show
44   strip.show();
45
46 }
47
```

- Upload the Arduino sketch to the Robotics Board.
- You can find the code here:
<https://github.com/BrownDogGadgets/Progr...>