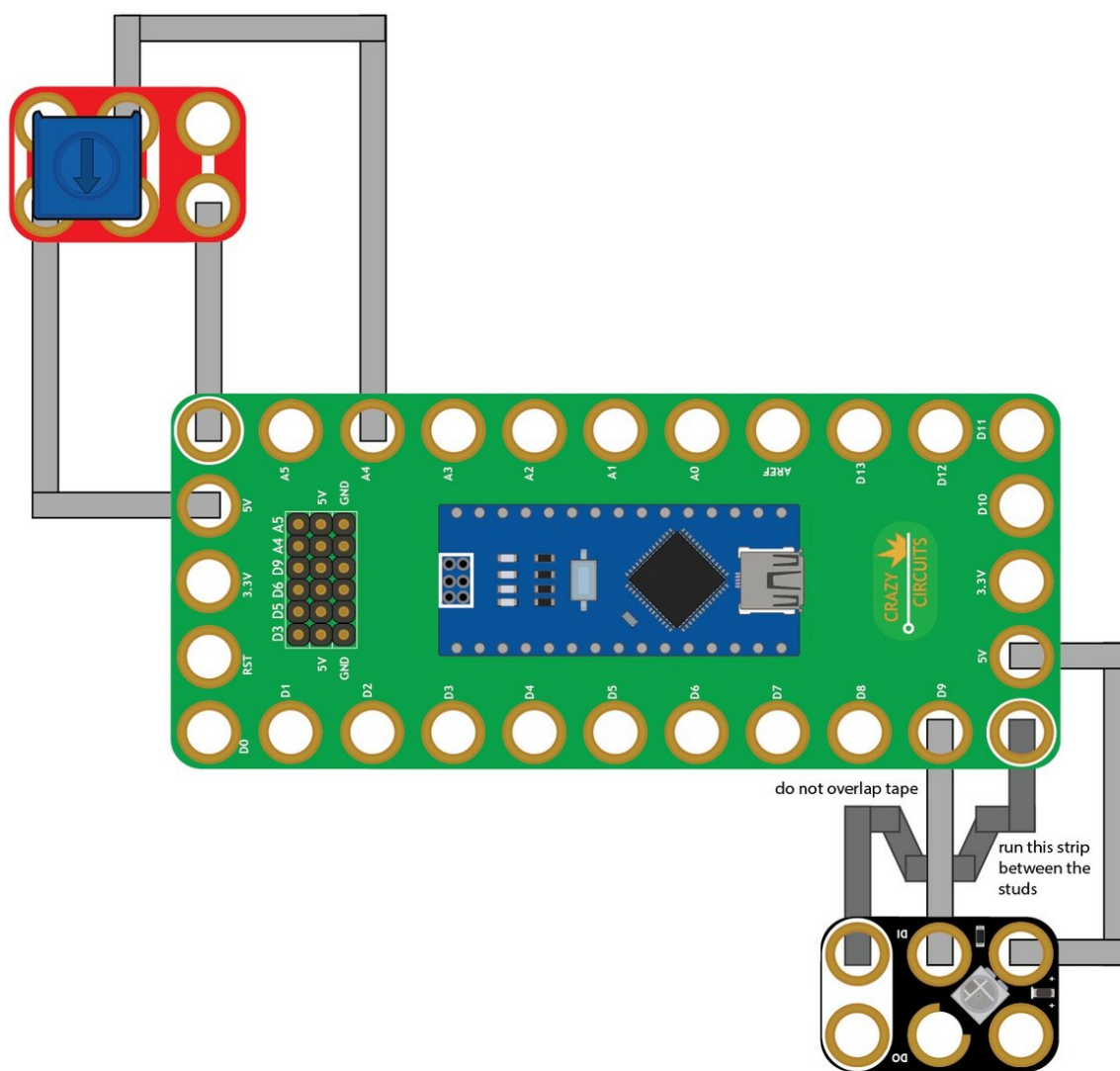




17 - Potentiometer with NeoPixel

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

Written By: Pete Prodoehl



INTRODUCTION

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



TOOLS:

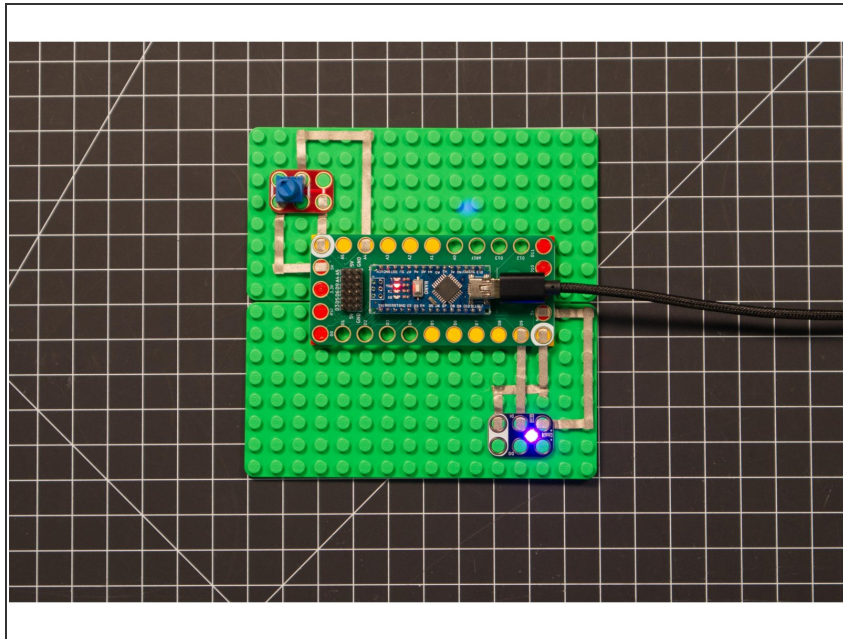
- [Scissors](#) (1)
- [Computer](#) (1)



PARTS:

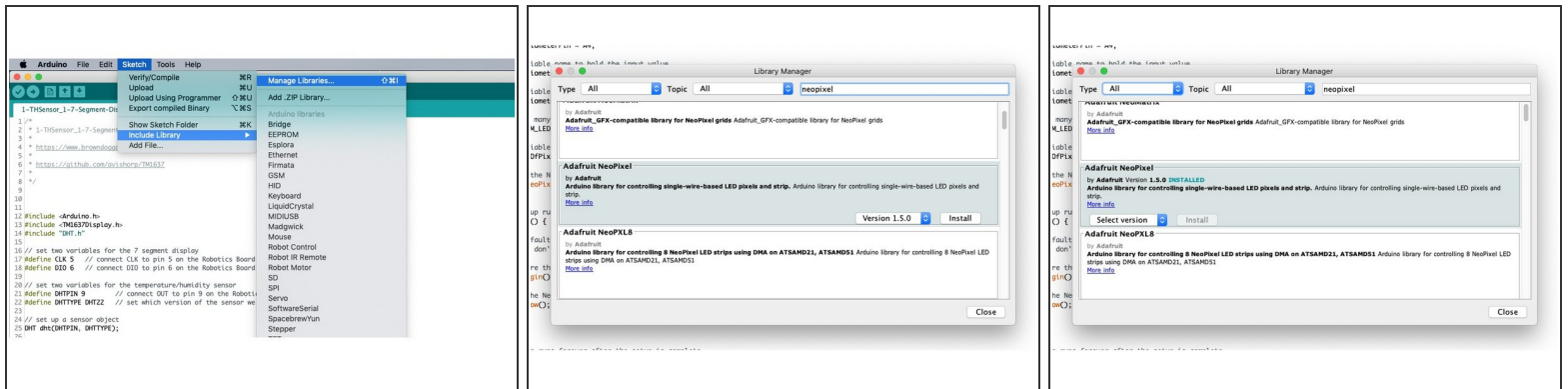
- [Crazy Circuits Robotics Board](#) (1)
- [Crazy Circuits Potentiometer Chip](#) (1)
- [NeoPixel Chip](#) (1)
- [Maker Tape 1/8th inch](#) (1)

Step 1 — Build the Circuit



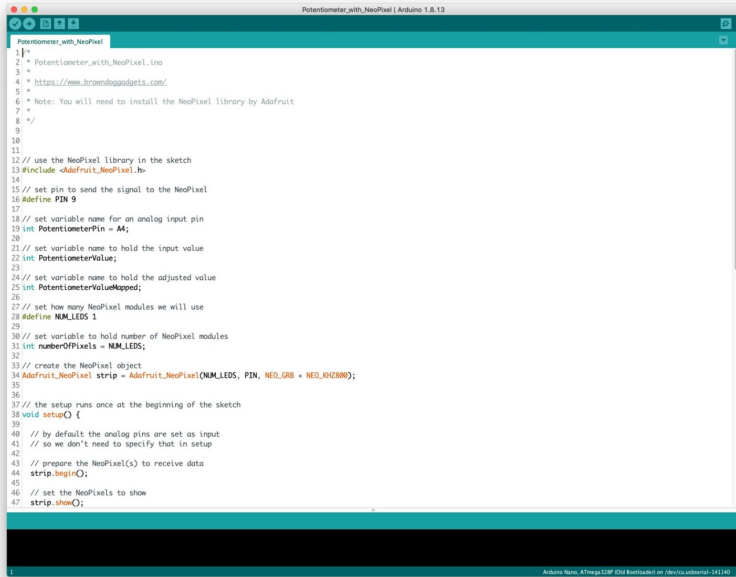
- Build the circuit as shown in the diagram using the components specified.

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



```
1 |  
2 * Potentiometer_with_NeoPixel.ino  
3 |  
4 * https://www.browndoggadgets.com/  
5 |  
6 * Note: You will need to install the NeoPixel library by Adefruit  
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 an analog input pin  
19 int PotentiometerPin = A4;  
20 |  
21 // set variable name to hold the input value  
22 int PotentiometerValue;  
23 |  
24 // set variable name to hold the adjusted value  
25 int PotentiometerValueMapped;  
26 |  
27 // set how many NeoPixel modules we will use  
28 #define NUM_LEDS 1  
29 |  
30 // set variable to hold number of NeoPixel modules  
31 int numberOFpixels = NUM_LEDS;  
32 |  
33 // create the NeoPixel object  
34 Adafruit_NeoPixel strip = Adafruit_NeoPixel(NUM_LEDS, PIN, NEO_GRB + NEO_KHZ800);  
35 |  
36 |  
37 // the setup runs once at the beginning of the sketch  
38 void setup() {  
39 |  
40 // by default the analog pins are set as input  
41 // so we don't need to specify that in setup  
42 |  
43 // prepare the NeoPixel(s) to receive data  
44 strip.begin();  
45 |  
46 // set the NeoPixels to show  
47 strip.show();  
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```

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