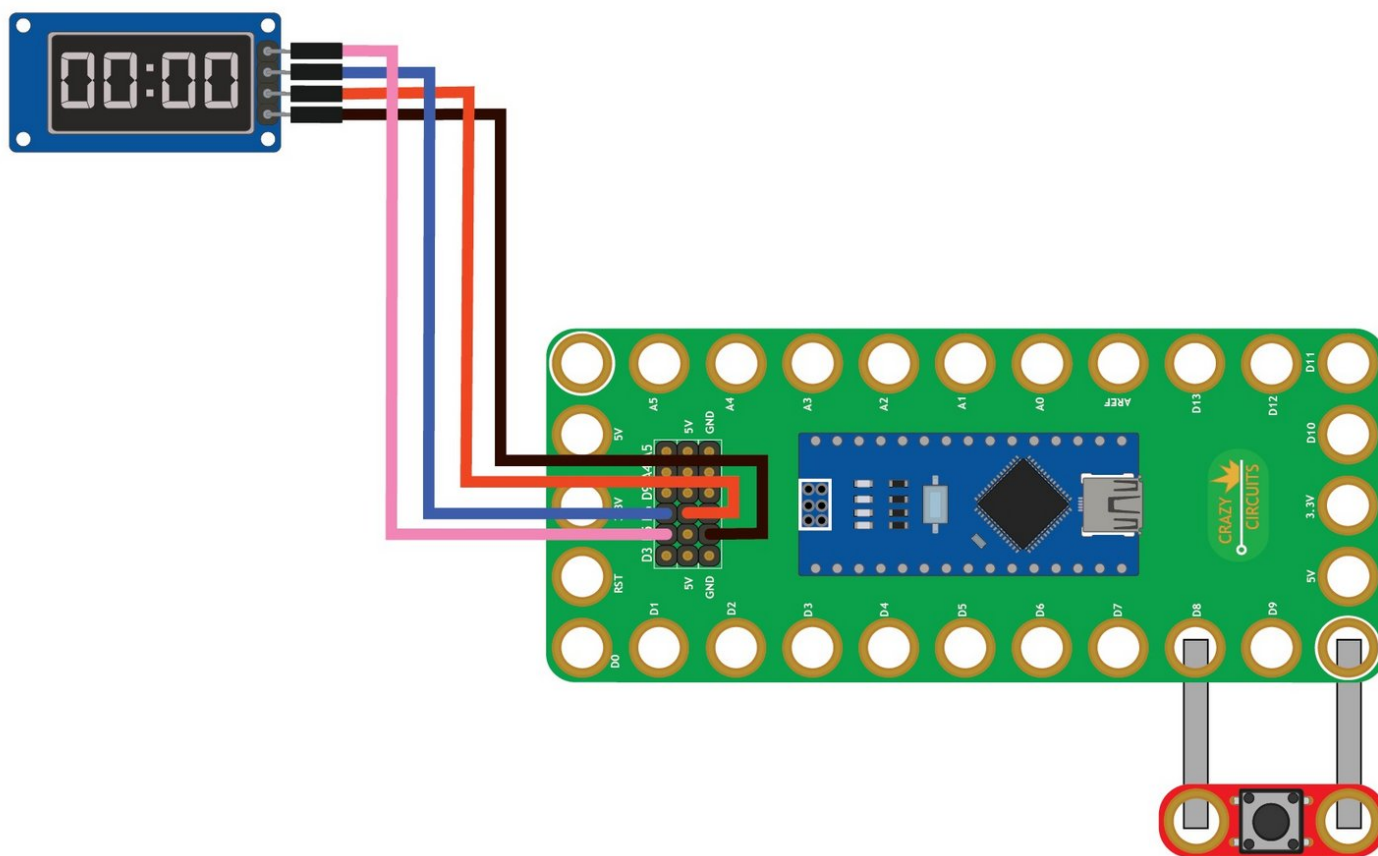




13 - Pushbutton with 7 Segment Display

Use our Programming 101 kit to control a 7 segment display with a pushbutton.

Written By: Pete Prodoehl



INTRODUCTION

Use our Robotics Board to control a 7 segment display with a pushbutton.



TOOLS:

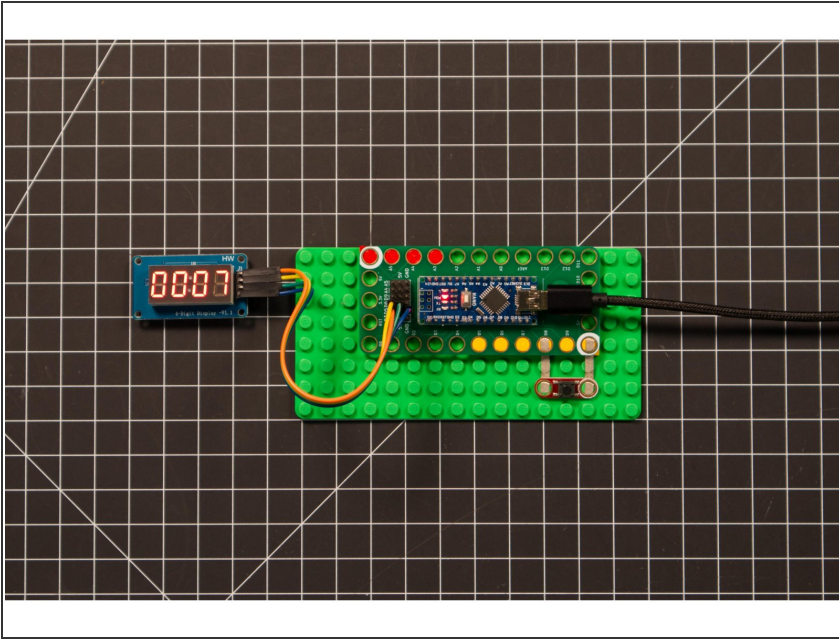
- [Scissors](#) (1)
- [Computer](#) (1)



PARTS:

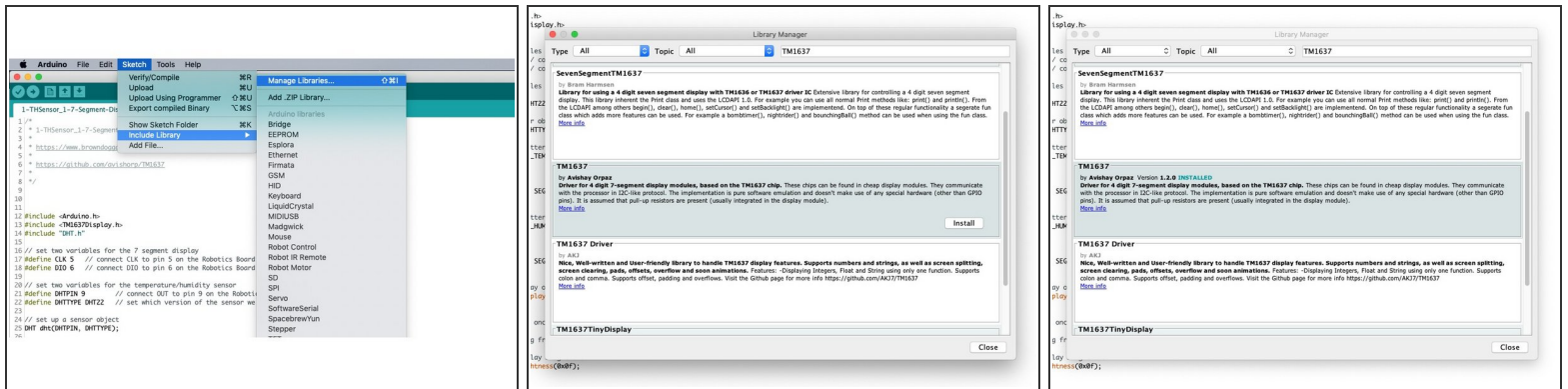
- [Crazy Circuits Robotics Board](#) (1)
- [Standard Pushbutton Chip](#) (1)
- [7 Segment Display](#) (1)
- [Jumper Wires](#) (4)
- [Maker Tape 1/8th inch](#) (1)

Step 1 — Build the Circuit



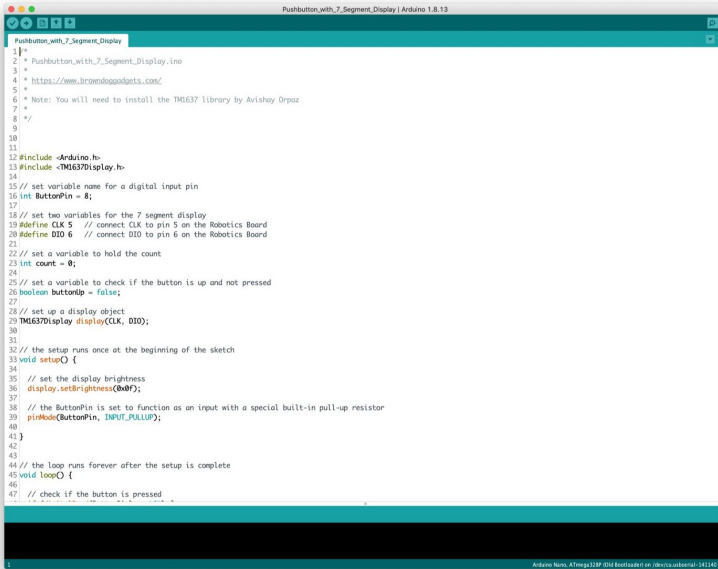
- Build the circuit as shown in the diagram using the components specified.
- You can use any color jumper wires for the 7 segment display, just make sure they are plugged into the right place.

Step 2 — Install TM1637 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 **TM1637** and it will show the results in the bottom of the window. We want the **TM1637** by **Avishay Orpaz**. Click the **Install** button.
- The library will be downloaded and **installed**, and then show the word **Installed** along with the version number. Click the **Close** button in the lower right corner. You are now ready to upload your Arduino sketch!
- (These instructions can also be found in the PDF file **Installing-TM1637-Library.pdf**)

Step 3 — Upload the Code



```
1 //
2 * Pushbutton_with_7_Segment_Display.ino
3 *
4 * https://www.browndoggadgets.com/
5 *
6 * Note: You will need to install the TM6370 library by Arishay Orpoz
7 *
8 */
9
10
11
12 #include <Arduino.h>
13 #include <TM6370Display.h>
14
15 // set variable name for a digital input pin
16 int ButtonPin = 8;
17
18 // set two variables for the 7 segment display
19 #define CLK 5 // connect CLK to pin 5 on the Robotics Board
20 #define DIO 6 // connect DIO to pin 6 on the Robotics Board
21
22 // set a variable to hold the count
23 int count = 0;
24
25 // set a variable to check if the button is up and not pressed
26 boolean buttonUp = false;
27
28 // set up a display object
29 TM6370Display display(CLK, DIO);
30
31
32 // the setup runs once at the beginning of the sketch
33 void setup() {
34   // set the display brightness
35   display.setBrightness(255);
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 }
41
42
43
44 // the loop runs forever after the setup is complete
45 void loop() {
46   // check if the button is pressed
47   if (digitalRead(ButtonPin) == LOW) {
```

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