

Code A Christmas Tree

This is a tutorial to code a micro:bit Christmas Tree from PocketMoneyTronic.

What You Will Need

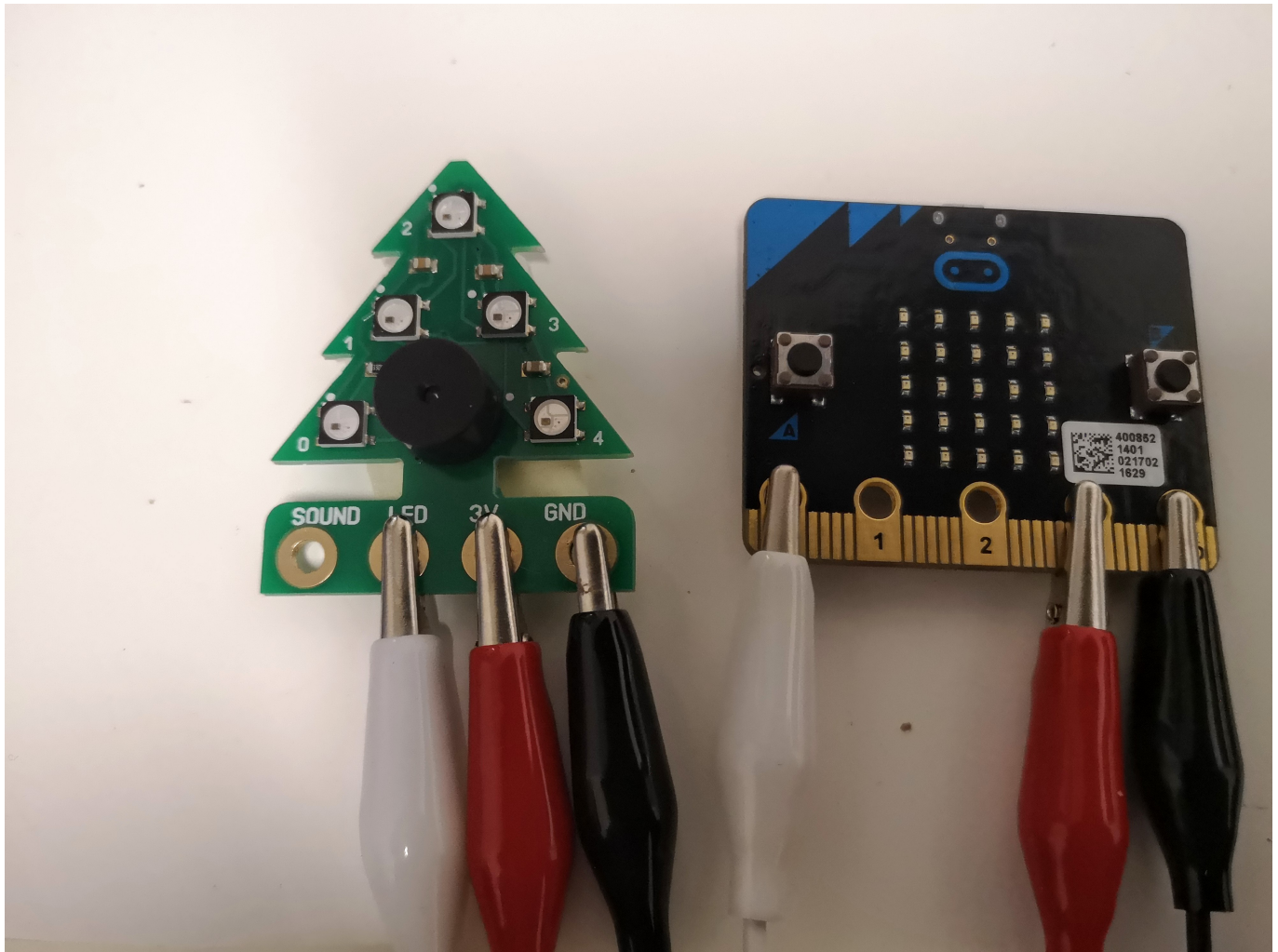
- 1 x micro:bit
- 1 x micro USB cable
- 1 x PocketMoneyTronic Christmas Tree
- 3 x Crocodile / Alligator Clips
- MakeCode Coding editor

Connecting The Christmas Tree To The micro:bit

Using the three crocodile/alligator clips we need to connect the Christmas tree to the micro:bit.

1. Take one crocodile/alligator clip and attach it to the circle marked **LED** on the Christmas tree. Take the other end of the crocodile/alligator clip and attach it to the circle marked **0** on the micro:bit.
2. Take another crocodile/alligator clip and attach it to where it says **3v** on the Christmas tree. Take the other end of the crocodile/alligator clip and attach it to **3v** on the micro:bit
3. Take the last crocodile/alligator clip and attach it to **GND** on the Christmas tree. Take the other end of the crocodile/alligator clip and attach it to **GND** on the micro:bit.

Once all the wires are connected between the micro:bit and Christmas tree it should look something like this:



Coding The Christmas Tree

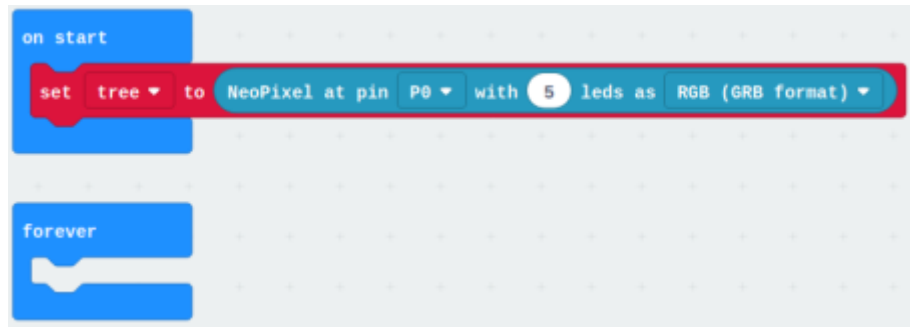
To code your Christmas tree we first need to open the MakeCode editor. You can do this by typing www.makecode.microbit.org

Importing The Neopixel Extension

1. Click on Advanced.
2. Click on Extensions
3. click on **neopixel**

Setting Up The Neopixels

1. Click on **Variables**
2. Click on **Make a Variable...**
3. Type **tree** and press enter
4. Click on **Neopixel**
5. Click and drag a **set strip to NeoPixel at pin P0 with 24 leds as RGB (RGBformat)** to the coding area and attach it within the **on start** Code block.
6. Click on the arrow next to **strip** and click on **tree**
7. Click on **24** and type **5**. This is how many neopixels are on the Christmas Tree.



Your Code should now look like this:

We now have the Neopixels configured in MakeCode. We can now code our Christmas tree!

Lighting Up Our Tree

1. Click on Neopixel
2. Click and drag a **strip show rainbow from 1 to 360** to the coding area and attach it within the **forever** block
3. Click on the small arrow next to **strip** and click on **tree**

Your code should now look like this:



Downloading your code to the micro:bit

1. Click on **Download** and save your code file in the downloads folder
2. Navigate to the Downloads folder on your computer
3. Copy your code file
4. Click on **MICROBIT** in the file manager and paste your cod file.

You will now see the light on the back of your micro:bit. Once this has finished. you should see your Christmas tree light up.