

Code A Christmas Tree

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

What You Will Need

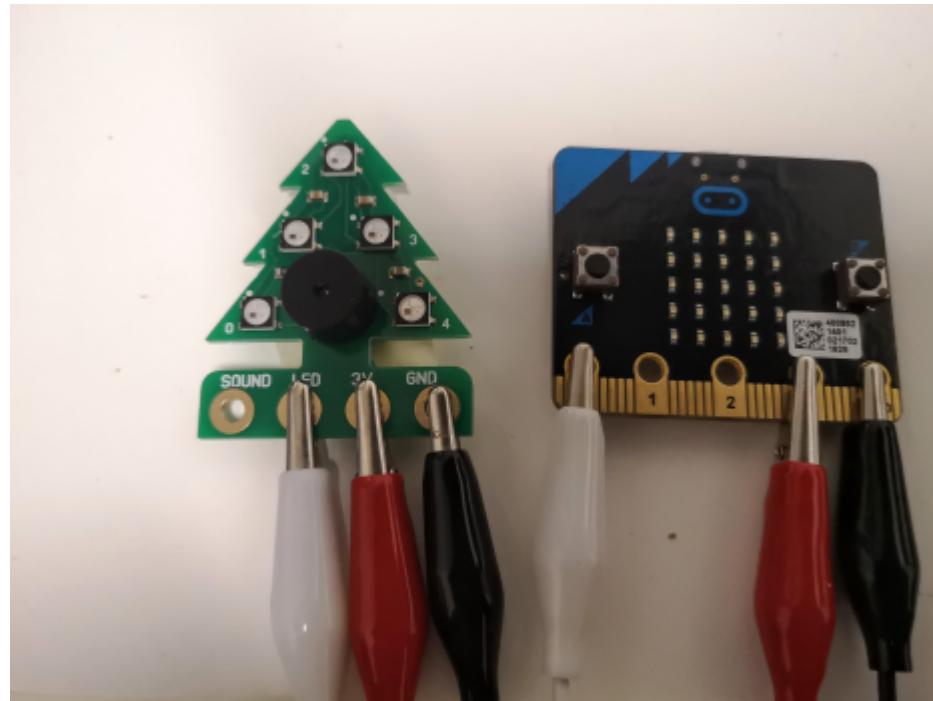
- 1 x micro:bit
- 1 x micro USB cable
- 1 x PocketMoneyTronic Christmas Tree
- 3 x Crocodile / Alligator Clips
- MakeCode Coding editor

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. Select Extensions
2. Type **neopixel** into the search bar
3. Select **neopixel**

Setting Up The Neopixels

1. Select **Variables**
2. Select **Make a Variable...**
3. Type **tree** and press enter
4. Select **Neopixel**
5. Select 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. Select the arrow next to **strip** and click on **tree**
7. Select **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. Select **Neopixel**
2. Select and drag a **strip show rainbow from 1 to 360** to the coding area and attach it within the **forever** block
3. Select the small arrow next to **strip** and select **tree**

Your code should now look like this:



Downloading your code to the micro:bit

1. Pair the micro:bit to your computer
2. Select Download

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.

Rotating Colours

