## Using the Flame Gizmo with Playground for micro:bit

**Requirements:**

- Playground for micro:bit, with micro:bit and batteries installed
- 2 x Flame Gizmos
- 2 x Connection cable

**Connections:**

1. Switch Playground OFF
2. Plug connection cable from Pin 0 on Playground to Input on 1$^{st}$ Gizmo
3. Plug another cable from Output of 1$^{st}$ Gizmo into Input on 2$^{nd}$ Gizmo
4. Switch Playground ON
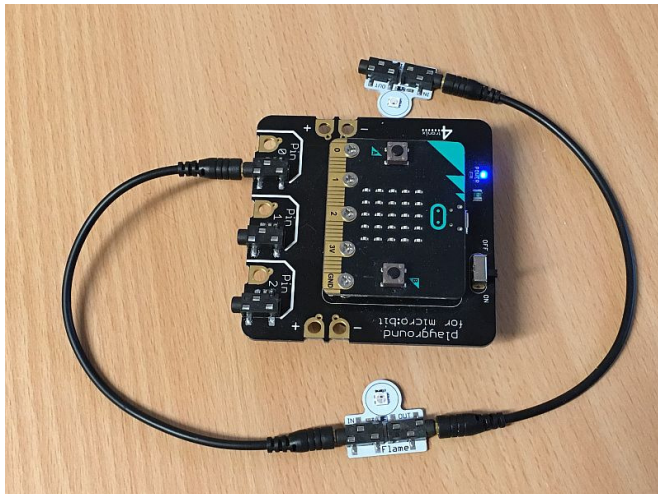


**PXT Software Demo:**

This software will flash the two Gizmos separately and in different colours. First we need to add the neopixel package to the PXT by clicking on the cogwheel icon at the top and selecting "Add package" and the click on neopixel. The we define which pin the Gizmos are connected to (pin 0) and how many there are in the chain (2).

Also, after we have set the colours we need on pixels 0 and 1, we then must do a "show", which copies the new data to the neopixels in the Flame Gizmos. The variable name (in this case myPixels) can be anything you want – just make it clear that it refers to the neopixels that you have attached.

Micropython Example
When running micropython, we do almost exactly the same as for NXT. First include the neopixel library, then declare a variable giving details of the pin the pixels are attached to and how many pixels are used. Then set the colours and explicitly "show" them.

```
from microbit import *
import neopixel
myPixels = neopixel.NeoPixel(pin0, 2)
while True:
    myPixels[0] = (40,0,0)
    myPixels[1] = (0,40,0)
    myPixels.show()
    sleep(500)
    myPixels[0] = (40,40,0)
    myPixels[1] = (40,0,40)
    myPixels.show()
    sleep(500)
```

You can see that each pixel is defined by a triple, eg (40,0,0) which gives the value of each element (Red,Green,Blue), where the values can be from 0 to 255. Maximum brightness is very bright indeed, so try to keep the brightness levels below 40.