11/17/2018 multiwingspan

# MultiWingSpan

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# BBC micro:bit Bit:Commander - The Buzzer

#### Introduction

The buzzer on the Bit:Commander is connected to pin 0. This is convenient because that is the default pin. The minor inconvenience is that the potentiometer shares the same pin. Although you can use both in the same project, you need to think carefully about what is happening at any point in the program for that to make sense.



If you are using the Bit:Commander as a controller for a micro:bit game, then you have the buzzer for the game sound effects. If you are using the Bit:Commander as a controller for a project, then it's good as an alert. You can also use it to play a different tone for each button press.

## **Programming**

There is no need for any special treatment for the buzzer, it's just there, connected up for you on pin 0. This program plays a different tone when the buttons are pressed.

#### **BBC Microbit**

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```
on pin P12 pulsed low play tone Middle C for 1 beat

on pin P15 pulsed low play tone Middle D for 1 beat

on pin P16 pulsed low play tone Middle E for 1 beat

on pin P14 pulsed low play tone Middle E for 1 beat
```

## **JavaScript**

```
pins.onPulsed(DigitalPin.P12, PulseValue.Low, () => {
    music.playTone(262, music.beat(BeatFraction.Whole))
})
pins.onPulsed(DigitalPin.P15, PulseValue.Low, () => {
    music.playTone(294, music.beat(BeatFraction.Whole))
})
pins.onPulsed(DigitalPin.P16, PulseValue.Low, () => {
    music.playTone(330, music.beat(BeatFraction.Whole))
})
pins.onPulsed(DigitalPin.P14, PulseValue.Low, () => {
    music.playTone(349, music.beat(BeatFraction.Whole))
})
```

There are a few nice events that you can use when a melody is playing. In the following program, a rainbow pattern is lit up on the Neopixels. Every time a note plays on one of the built-in tunes, the rainbow pattern is rotated b a pixel. This creates quite a nice musical light show.

```
on start

odigital write pin P0 v to 0

set pixels v to 0 NeoPixel at pin P13 v with 6 leds as RGB (GRB fornat) v

pixels v set brightness 32

pixels v show rainbow from 1 to 360

start nelody one entertainer v repeating forever in background

nustc on background nelody note played

pixels v show
```

#### **JavaScript**

```
let pixels: neopixel.Strip = null
music.onEvent(MusicEvent.BackgroundMelodyNotePlayed, () => {
    pixels.rotate(1)
    pixels.show()
})
pins.digitalWritePin(DigitalPin.P0, 0)
pixels = neopixel.create(DigitalPin.P13, 6, NeoPixelMode.RGB)
pixels.setBrightness(32)
pixels.showRainbow(1, 360)
music.beginMelody(music.builtInMelody(Melodies.Entertainer),
MelodyOptions.ForeverInBackground)
```

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