MultiWingSpan

BBC micro:bit
Bit:Commander

Introduction

The Bit:Commander is a breakout board for the micro:bit made by 4tronix, who also make the Bit:Bot and Bit:2:Pi. Breakout board with micro:bit edge connector based on a game controller. The board is powered by 3xAA batteries mounted on the underside. This also powers the micro:bit. There is a main power on/off switch. The board components are,

- 4 push buttons with coloured square caps (Red, Blue, Green, Yellow)
- Potentiometer
- 2 Axis Joystick and switch
- Piezo Buzzer
- 6 Neopixels

The components connect to different micro:bit GPIO pins. All parts work without the need for connections or soldering. The design clearly favours end use as a controller for a game, robot or some other circuit. The variety of inputs lend themselves well to a range of applications. The buzzer and lights, as well as the LED matrix on the micro:bit can be used as indicators or to provide feedback/alerts. The portability makes it useful in projects where the memory or circuit means that you are using 2 micro:bits. It's nice not to have to poke your fingers through a nest of jumper wires to activate a circuit.

Since the board uses analog and digital inputs and outputs, it's a good platform on which to learn the basic principles of programming for components. The board also nicely extends the micro:bit's functionality making a portable unit that can be disconnected from the USB.

Pinout

Component	Pin
Buzzer	0
Potentiometer	0
Joystick X	1
Joystick Y	2
Joystick Button	8
Red Pushbutton	12
Blue Pushbutton	15
Green Pushbutton	14

BBC Microbit

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Yellow Pushbutton	16
Neopixels	13

The buzzer and potentiometer share pin 0. You can use the components separately. When reading the potentiometer after the buzzer has been used, you may need to digital_write a 0 to pin 0 to reset the pin after it has been used for playing tones or when you use some of the libraries.