

Instructions:

RELAY

FOR MICRO:BIT

v1E



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WARNING

This relay must NOT be used to switch high voltage AC. The maximum voltage for this product is 16V!

INTRODUCTION

The MonkMakes Relay for micro:bit is a solid-state (no moving parts) relay that allows an output of a micro:bit to turn things on and off.

A micro:bit can turn an LED on and off directly, but anything more powerful requires something like a relay or a transistor. Using a transistor to switch something on and off requires a shared ground connection with the micro:bit and a knowledge of electronics that you or your students may not be ready for. The MonkMakes Relay for micro:bit is much easier to use, acting like a simple micro:bit controlled switch.

This relay can be used to switch low voltage devices such as light bulbs, a motor, a small heating element or even a string of 12V LED lighting. The voltage needs to be kept under 16V, but the relay will automatically protect itself against too much current.

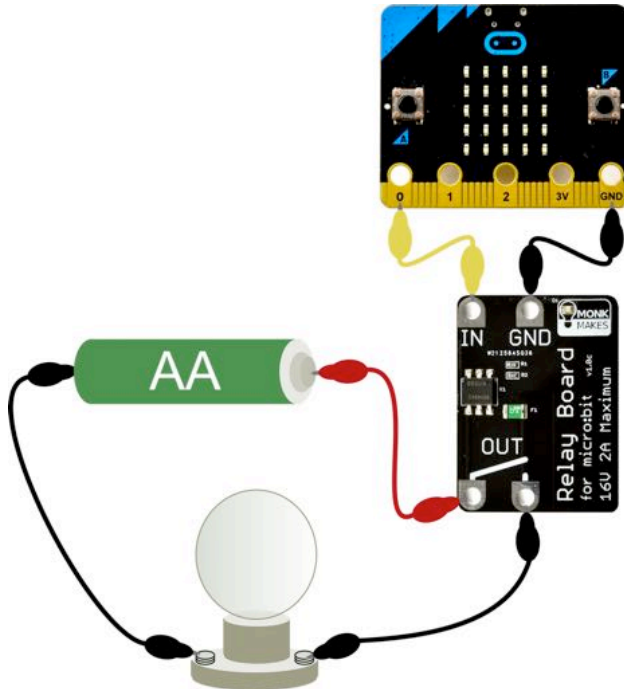
- Solid-state relay (up to 1 Amp continuous, 2A for short periods less than a minute)
- Active LED indicator
- Resettable 'polyfuse' to protect against over-current

CONNECTING YOUR MICRO:BIT

The Relay requires just two connections to the micro:bit. One to GND (ground) and one to whatever pin is to be used to control the relay's switching action.

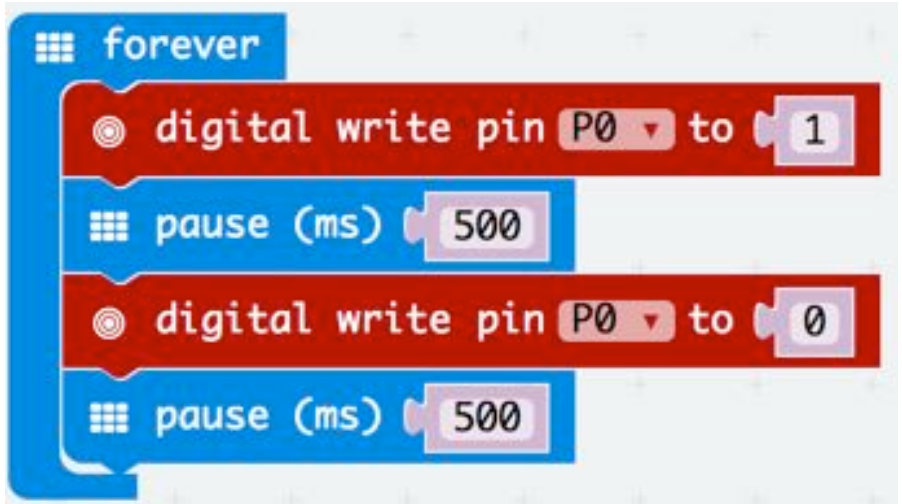
When attaching the alligator clips to the micro:bit, make sure that the clips are perpendicular to the board so that they are not touching any of the neighbouring connectors on the micro:Bit edge connector.

Here's an example of how you could wire up a MonkMakes Relay for micro:bit to turn an old fashioned light bulb on and off.



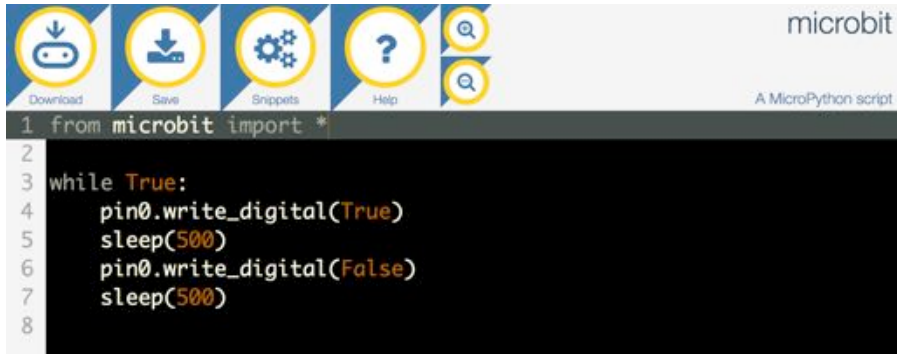
BLOCKS EXAMPLE

To control things with the Relay for micro:bit you need to turn the GPIO pin of the micro:bit using code like this. This example turns the relay on for half a second, off for half a second and then repeats.



MICROPYTHON EXAMPLE

Here's how you would do the same thing in MicroPython.



The screenshot shows the MicroPython IDE interface. At the top, there is a navigation bar with icons for Download, Save, Snippets, Help, and a search function. The text "microbit" and "A MicroPython script" is visible in the top right corner. The main area is a code editor with a black background and white text, containing the following Python code:

```
1 from microbit import *
2
3 while True:
4     pin0.write_digital(True)
5     sleep(500)
6     pin0.write_digital(False)
7     sleep(500)
8
```

SUPPORT

You can find the Product's information page here: https://monkmakes.com/mb_relay and if you need further support, please email support@monkmakes.com.

MONKMAKES

For more information on this kit, the product's home page is here:
https://monkmakes.com/mb_charger

As well as this kit, MonkMakes makes all sorts of kits and gadgets to help with your micro:bit and Raspberry Pi projects. Find out more, as well as where to buy here:
<https://monkmakes.com> you can also follow MonkMakes on Twitter @monkmakes.

