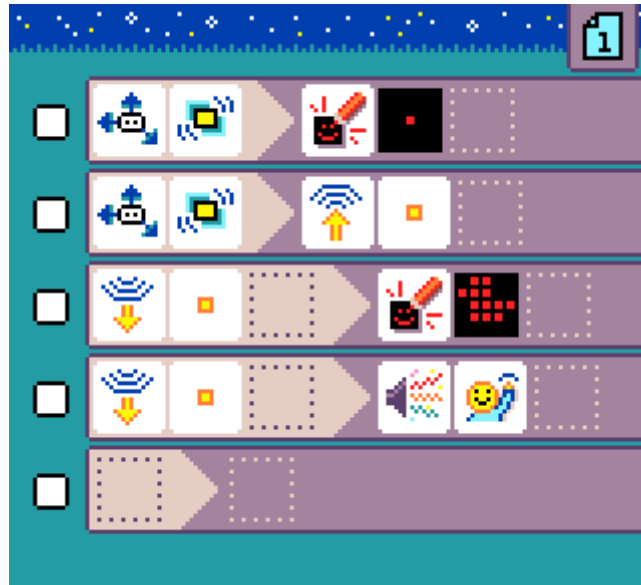




MicroCode for micro:bit

Created by Peli de Halleux



<https://learn.adafruit.com/microcode-for-microbit>

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Overview

[MicroCode](#) is a icon-based (text-free), keyboard friendly editor for the micro:bit V2. It is suitable for younger learners and users with variable accessibility needs.



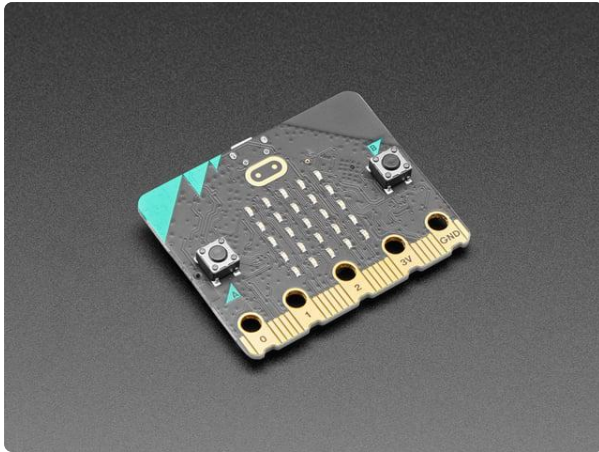
- Kid-friendly, icon-based, structured [web-based](#) code editor
- Live, the code is downloaded to the micro:bit on every edit
- Cursor based navigation with keyboard (switch access compatible), mouse, touch, screen reader support
- Accessories (LEDs, servos, ...) supported via [Jacdac](#)

MicroCode is open source at <https://github.com/microsoft/microcode>.

MicroCode requires micro:bit V2. The micro:bit V1 is **not** supported.

Parts

Please be sure the micro:bit is a V2 (Version 2). This project doesn't work with the original / V1 board.

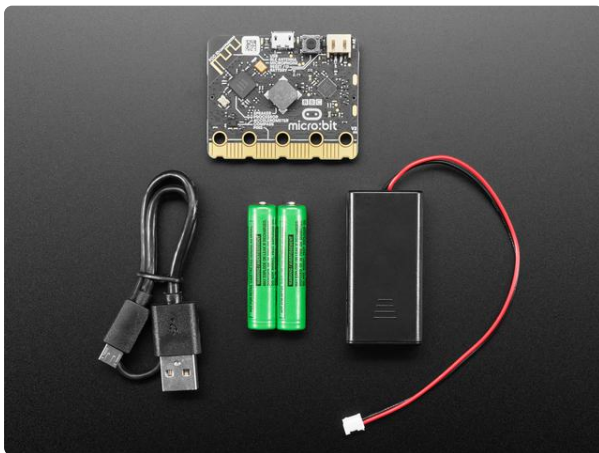


BBC micro:bit v2

Meet the new BBC micro:bit v2 - Upgraded with a powerful new processor that has tons more capability and also adds more sensing with a new speaker and...

<https://www.adafruit.com/product/4781>

or



micro:bit v2 Go Bundle - Batteries and USB Cable Included

Meet the new BBC micro:bit v2 - Upgraded with a powerful new processor that has tons more capability and also adds more sensing with a new speaker and...

<https://www.adafruit.com/product/4834>

First Program

Here is a screenshot of one the first examples in MicroCode: smiley buttons.



- **]** or **Page Up** to go to the next page, **[** or **Page Down** to go to the previous page
- Copy the URL to share your program.

Automatic download to micro:bit V2

When the editor does not detect a micro:bit connected to the computer, it will automatically prompt you with instructions on how to connect (requires WebUSB).

Once your micro:bit V2 is paired, the web editor will be able to download your MicroCode program to your micro:bit. This happens on every edit, so your program is always up-to-date (and running)!

If your micro:bit disconnects, you will see a micro:bit icon show up on the upper left corner of the editor. Click on that button to reconnect again.

Accessibility

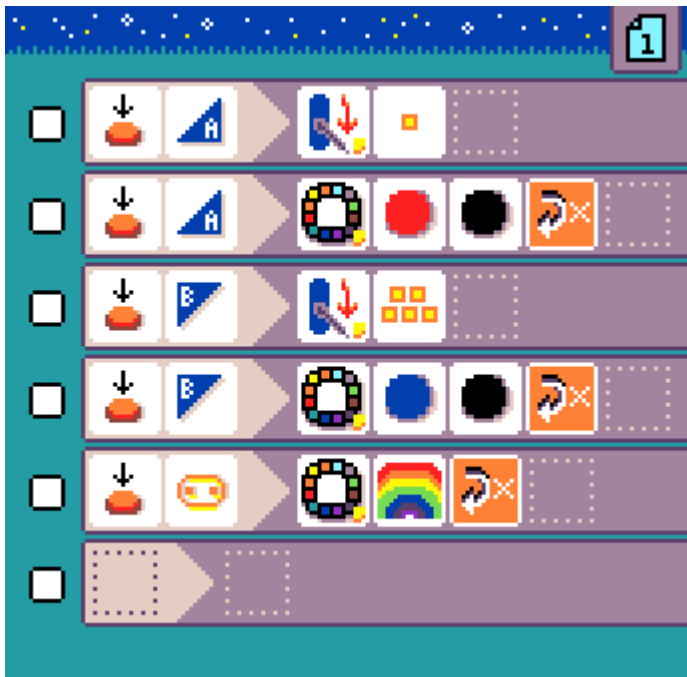
MicroCode has a lot of accessibility goodness:



- fully keyboard enabled, and switch panel friendly. Only 3 keys are need to use MicroCode.
- tooltip read aloud and screen reader support
- game console support (XBox, ...)

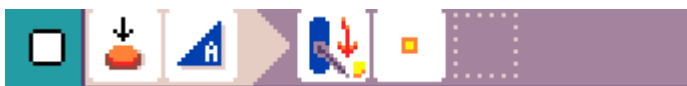
Accessories




Additional sensors and actuators can be add as [Jacdac](#) modules. MicroCode automatically detect additional hardware and will show the additional tiles if supported.

The [railroad crossing sample](#) shows a program using a servo and a LED ring Jacdac module.



The  servo uses a [servo motor](#) move to move an physical arm. The  servo arm orientation is mapped to the wall clock hours: **0** (or **12**) is on rotated 90 degree from the resting position to the left, **6** is rotated 90 degree right from the rest position. There is also a secret animation mode when you press the micro:bit logo button.



- when  press  button A, do  servo set arm to 1 o'clock.

The  LED uses a [programmable LED ring](#) module to display blue and red colors.



- when  press  button A, do  LED set all color to  red, black and repeat.