Block Editor Documentation

> hint
>
> **Spotty internet? No problem!** (1) When online, go to **https://www.microbit.co.uk/app/ (https://www.microbit.co.uk/app/)** and bookmark this URL; (2) use the bookmark to reload the web app, even without the internet.
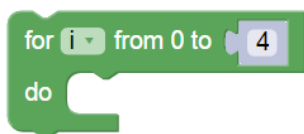
Find the list of programming and BBC micro:bit blocks below. If you want to understand the difference between Block Editor and Touch Develop programs, **read more... (https://www.microbit.co.uk/blocks/to-td)**

- **Block Editor lessons (https://www.microbit.co.uk/blocks/lessons)**
- **Block Editor book (https://www.microbit.co.uk/blocks/book)**
- **offline support (https://www.microbit.co.uk/offline)**

Programming blocks

Loops

for (https://www.microbit.co.uk/blocks/for)

repeat (https://www.microbit.co.uk/blocks/repeat)

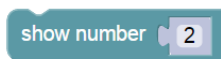**while (https://www.microbit.c**

BBC micro:bit blocks

Basic

show number (https://www.microbit.co.uk/functions/show-number)

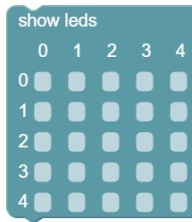**show string (https://www.microbit.co.uk/functions/show-string)**

show LEDs (https://www.microbit.co.uk/functions/show-

Authoring

- **the Block Editor (https://www.microbit.co.uk/blocks/editor)**
- **convert a Block script to TouchDevelop (https://www.microbit.co.uk/blocks/convert)**
- **publish a script (https://www.microbit.co.uk/td/publishing)**

Running

- **run scripts in the browser (https://www.microbit.co.uk/td/simulator)**
- **run scripts on your BBC micro:bit (https://www.microbit.co.uk/device/usb)**

o.uk/blocks/while)

leds)

forever (https://www.microbit.co.uk/functions/forever)

Logic

if (https://www.microbit.co.uk/blocks/if)
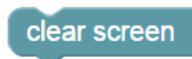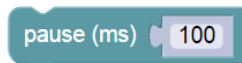
Boolean (https://www.microbit.co.uk/blocks/boolean)
values: *true*; *false*
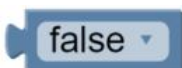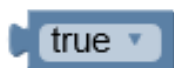
Boolean binary operators: *and* (conjunction); *or* (disjunction)

clear screen (https://www.microbit.co.uk/functions/clear-screen)

forever (https://www.microbit.co.uk/functions/forever)

pause (https://www.microbit.co.uk/functions/pause)

LED

plot (https://www.microbit.co.uk/functions/plot)

unplot (https://www.microbit.co.uk/functions/unplot)
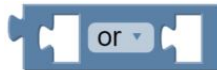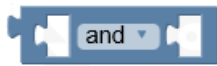
Boolean negation operator

Comparison operators (=, !=, <, >, <=, >=)

Maths

Numeric (https://www.microbit.co.uk/blocks/number)
values: 0, 1, 2, ...

Arithmetic binary operation (+, -, *, /)

point (https://www.microbit.co.uk/functions/point)

brightness (https://www.microbit.co.uk/functions/brightness)

set brightness (https://www.microbit.co.uk/functions/set-brightness)

stop animation (https://www.microbit.co.uk/functions/stop-animation)

plot bar graph (https://www.microbit.co.uk/functions/plot-bar-graph)

Images

show image (https://www.microbit.c

Absolute value

Minimum/maximum of two values

Random value

Variables

[Assign (https://www.microbit.co.uk/blocks/assign)](https://www.microbit.co.uk/blocks/assign)
(set) a variable's value

Get a variable's value
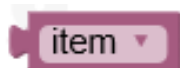
[Change (https://www.microbit.co.uk/blocks/change-value)](https://www.microbit.co.uk/blocks/change-value) a variable's value

Game

[create sprite (https://www.microbit.co.uk/functions/create-](https://www.microbit.co.uk/functions/create-)

[o.uk/functions/show-image)](https://www.microbit.co.uk/functions/show-image)

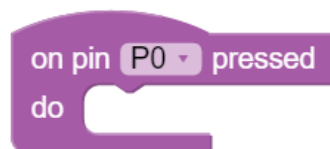## [scroll image (https://www.microbit.co.uk/functions/scroll-image)](https://www.microbit.co.uk/functions/scroll-image)

[create image (https://www.microbit.co.uk/functions/create-image)](https://www.microbit.co.uk/functions/create-image)

Input
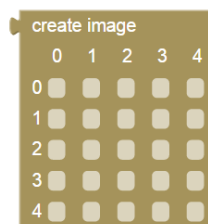
[on button pressed (https://www.microbit.co.uk/functions/on-button-pressed)](https://www.microbit.co.uk/functions/on-button-pressed)
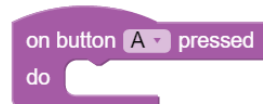
[on pin pressed (https://www.microbit.co.uk/functions/on-pin-pressed)](https://www.microbit.co.uk/functions/on-pin-pressed)

sprite)

move
(https://www.microbit.c
o.uk/functions/move)

turn
(https://www.microbit.c
o.uk/functions/turn)

change
(https://www.microbit.c
o.uk/functions/change)

set
(https://www.microbit.c
o.uk/functions/set)

reports
(https://www.microbit.c
o.uk/functions/reports)

touching
(https://www.microbit.c
o.uk/functions/touchin
g)

on shake
(https://www.microbit.c
o.uk/functions/on-
shake)

on logo up
(https://www.microbit.c
o.uk/functions/on-
logo-up)

on logo down
(https://www.microbit.c
o.uk/functions/on-
logo-down)

on screen up
(https://www.microbit.c
o.uk/functions/on-
screen-up)

on screen down
(https://www.microbit.c
o.uk/functions/on-
screen-down)

touching edge (https://www.microbit.co.uk/functions/touching-edge)
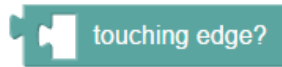
if on edge, bounce (https://www.microbit.co.uk/functions/if-on-edge-bounce)

change score by (https://www.microbit.co.uk/functions/change-score-by)

score (https://www.microbit.co.uk/functions/score)
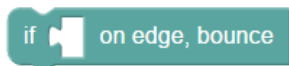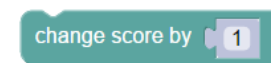
start countdown (https://www.microbit.co.uk/functions/start-countdown)

game over (https://www.microbit.co.uk/functions/game-over)
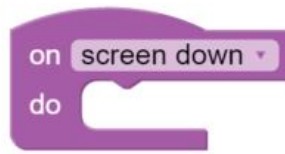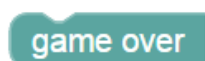
button is pressed (https://www.microbit.co.uk/functions/button-is-pressed)

compass heading (https://www.microbit.co.uk/functions/compass-heading)
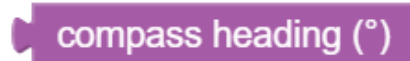
temperature (https://www.microbit.co.uk/functions/temperature)

acceleration (https://www.microbit.co.uk/functions/acceleration)

light level (https://www.microbit.co.uk/functions/light-level)
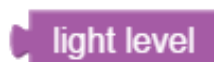
rotation

Music

play tone (https://www.microbit.co.uk/functions/play-tone)

ring tone (https://www.microbit.co.uk/functions/ring-tone)

rest (https://www.microbit.co.uk/functions/rest)

tempo (https://www.microbit.co.uk/functions/tempo)

set tempo (https://www.microbit.co.uk/functions/set-tempo)

change tempo (https://www.microbit.co.uk/functions/set-tempo)

(https://www.microbit.co.uk/functions/rotation)
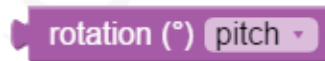
magnetic force (https://www.microbit.co.uk/functions/magnetic-force)

running time (https://www.microbit.co.uk/functions/running-time)

Pins
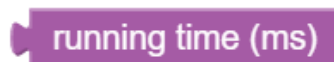
digital read pin (https://www.microbit.co.uk/functions/digital-read-pin)

digital write pin (https://www.microbit.co.uk/functions/digital-write-pin)

analog read pin (https://www.microbit.co.uk/functions/analog-read-pin)

change tempo by (bpm) [20]

analog read pin [P0]

Comments

comment (https://www.microbit.co.uk/blocks/comment)

analog write pin (https://www.microbit.co.uk/functions/analog-write-pin)

analog write [1024] to pin [P0]

analog set period (https://www.microbit.co.uk/functions/analog-set-period)

analog set period [20000] (micros) to pin [P0]

servo write pin (https://www.microbit.co.uk/functions/servo-write-pin)

servo write [180] to pin [P0]

servo set pulse (https://www.microbit.co.uk/functions/servo-set-pulse)

servo set pulse [1500] (micros) to pin [P0]

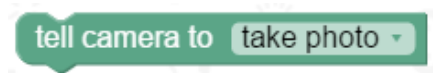## map (https://www.microbit.co.uk/functions/map)

map [500]
from low [0]
from high [1023]
to low [0]
to high [4]

Devices

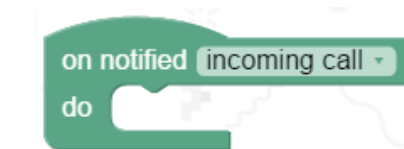Functions in this category require to be connected to a remote device.

tell camera to (https://www.microbit.co.uk/functions/tell-camera-to)

tell remote control to (https://www.microbit.co.uk/functions/tell-remote-control-to)

raise alert to (https://www.microbit.co.uk/functions/raise-alert-to)

on notified (https://www.microbit.co.uk/functions/on-notified)

on gamepad button (https://www.microbit.co.uk/functions/on-gamepad-button)
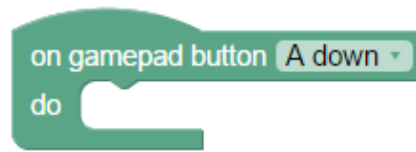
[on notified (https://www.microbit.co.uk/functions/on-notified)](https://www.microbit.co.uk/functions/on-notified)

[signal strength (https://www.microbit.co.uk/functions/signal-strength)](https://www.microbit.co.uk/functions/signal-strength)

[on signal strength changed (https://www.microbit.co.uk/functions/on-signal-strength-changed)](https://www.microbit.co.uk/functions/on-signal-strength-changed)