Revision

Input Vs Output

Mouse

Keyboard

Light Sensor

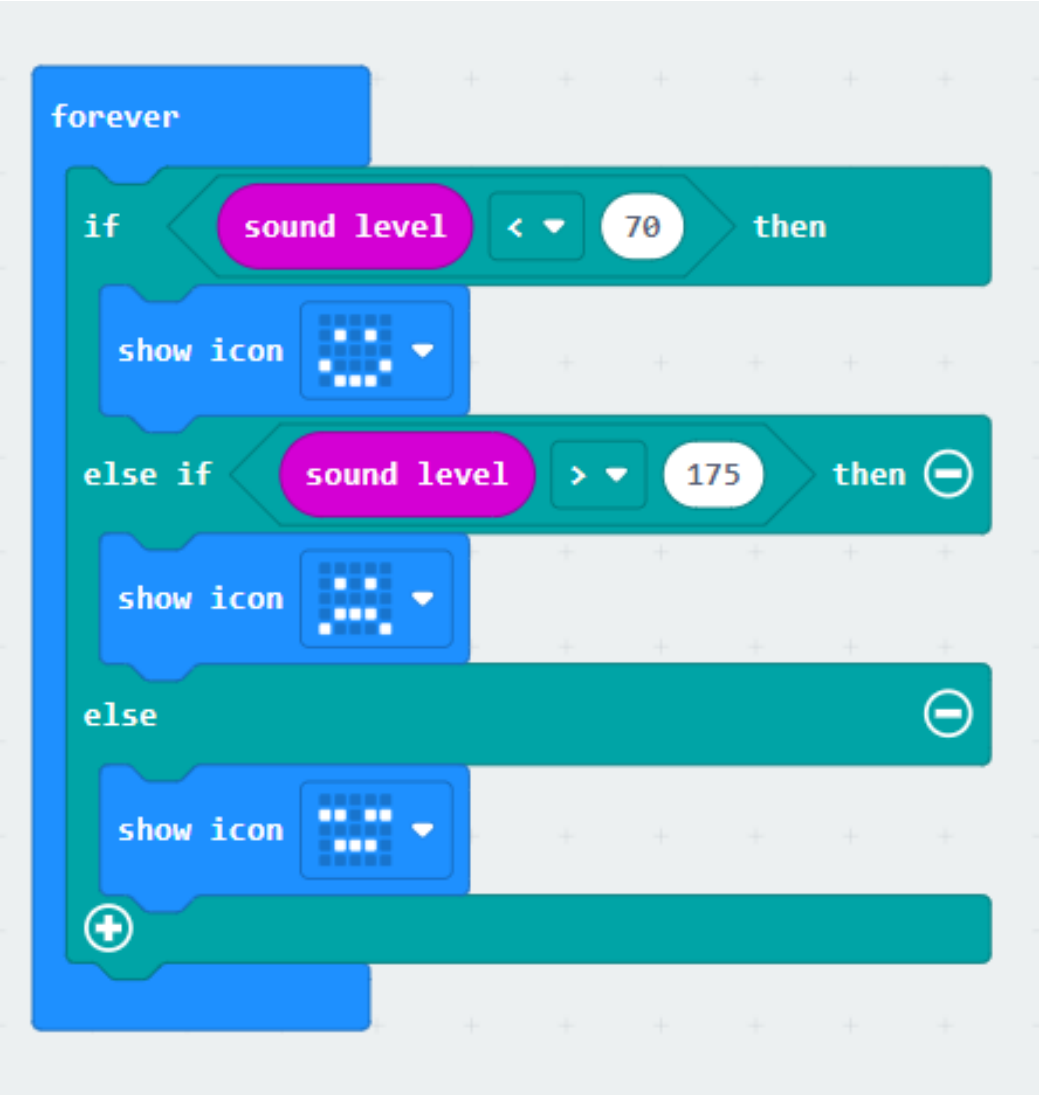
Screen

Touch-Screen

Buttons

Microphone

If Statements



Digital Vs Analog

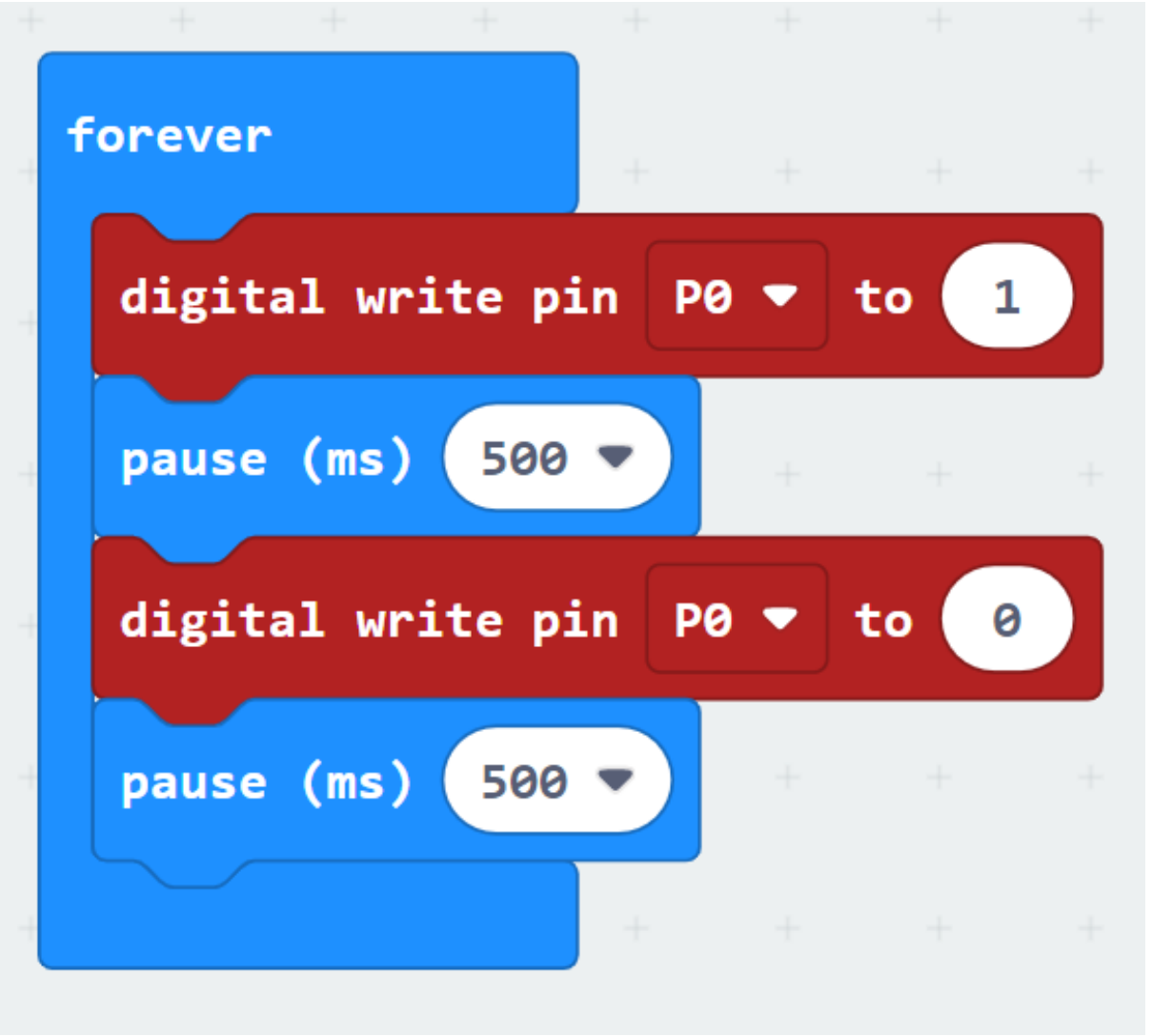
What is a component?

Digital Components

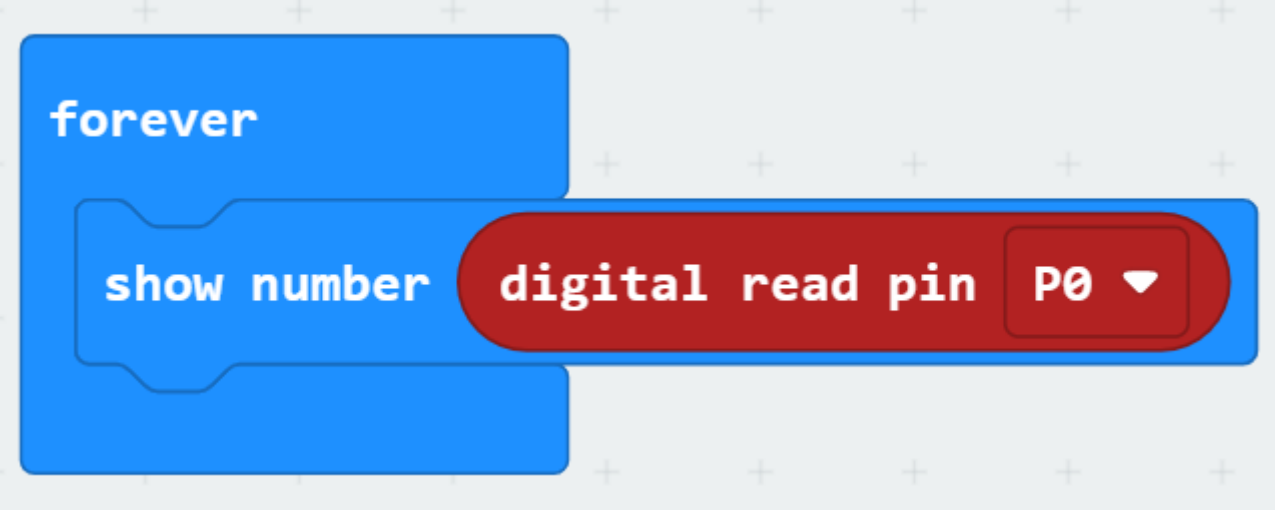
Two options: On and Off.

In programs we use 1 (on) and 0 (off).

Digital Output



Digital Input



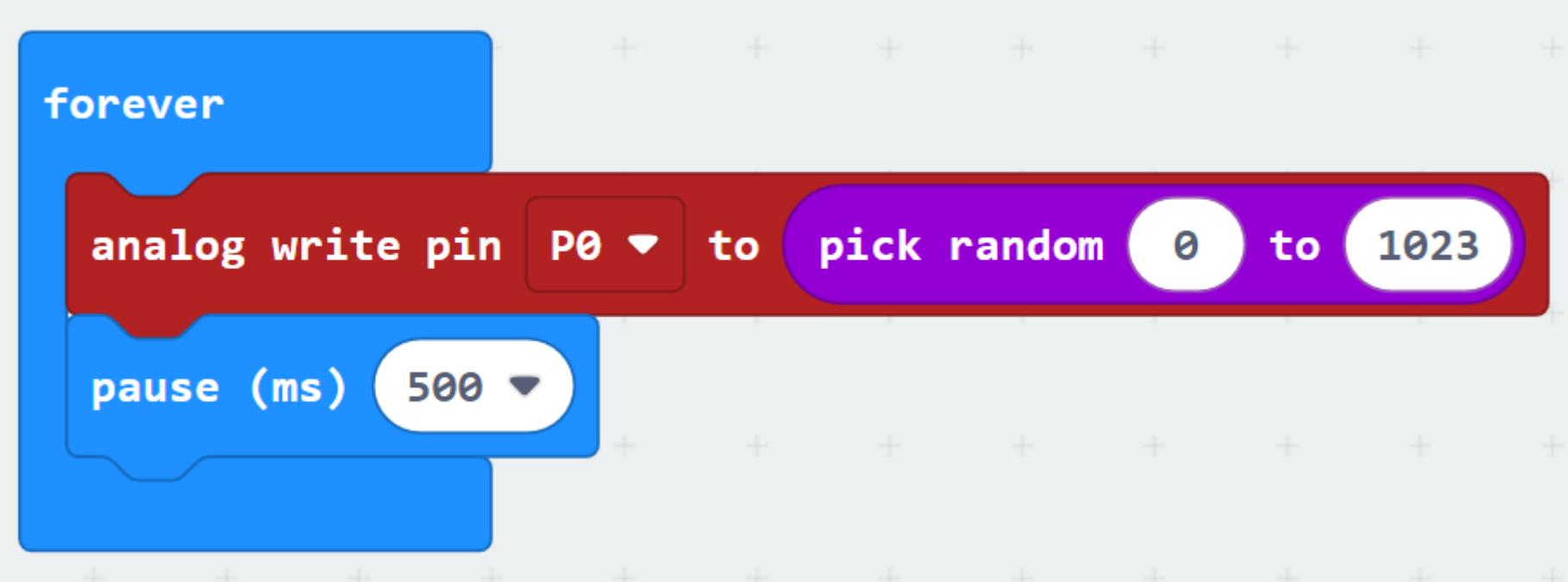
Analog Components

A range of options available

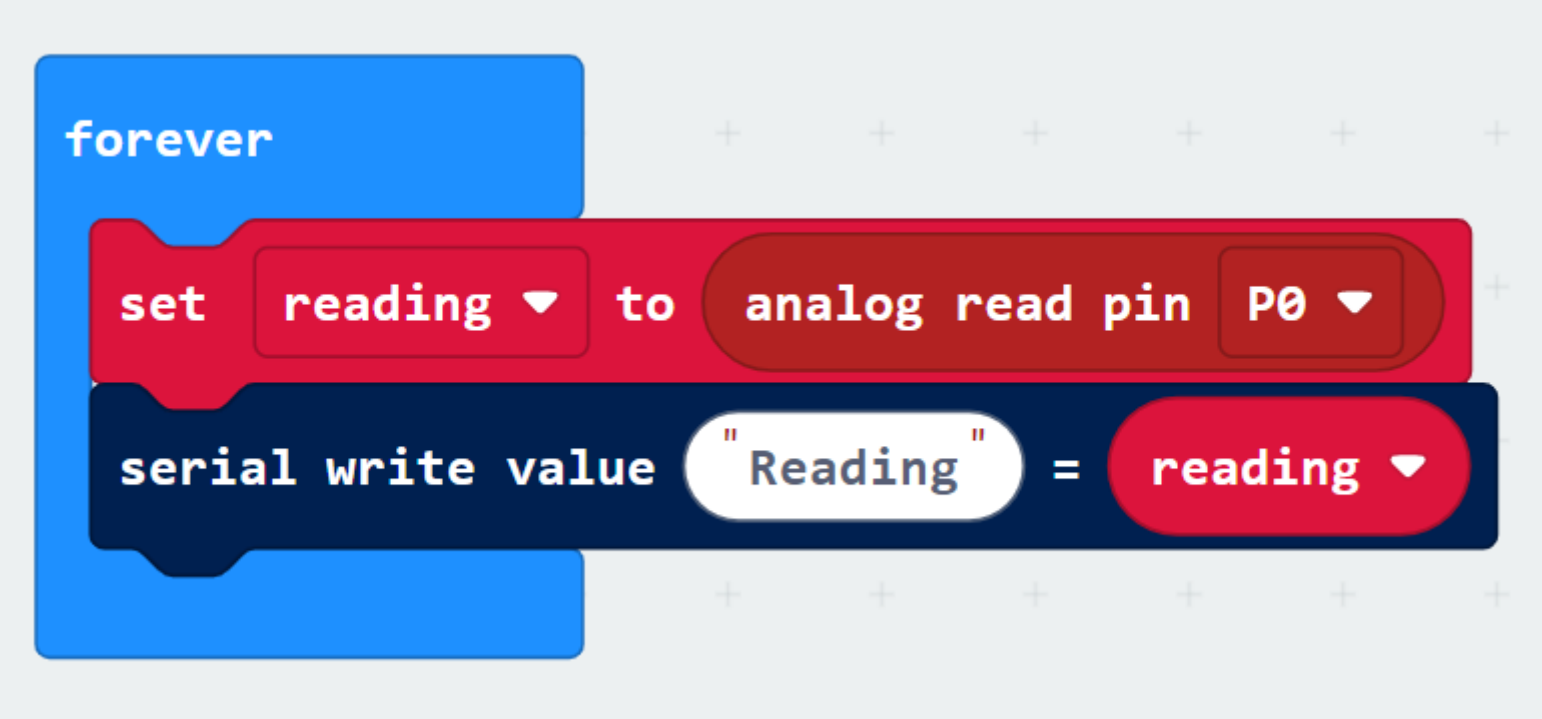
Examples:

- measurements
- movements

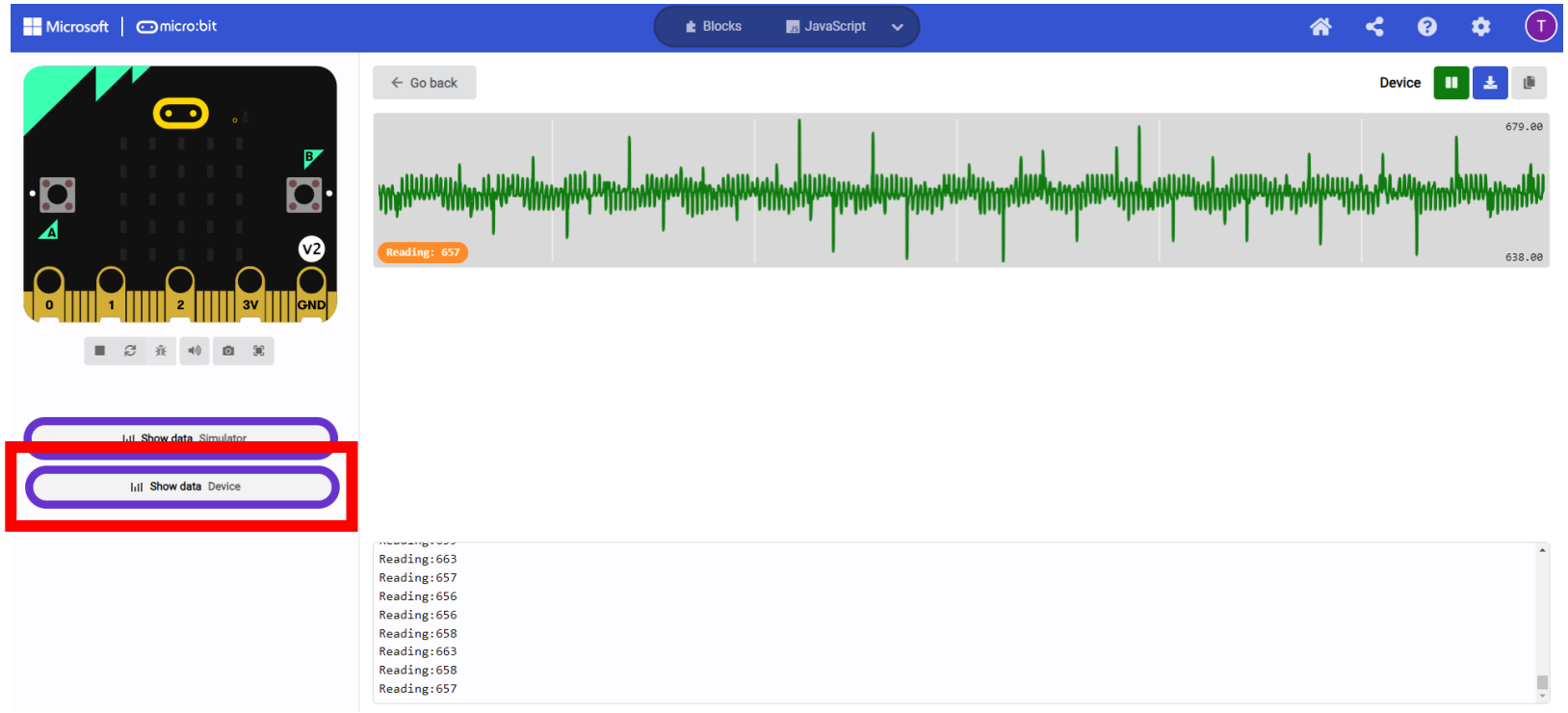
Analog Output



Analog Input



Analog Input

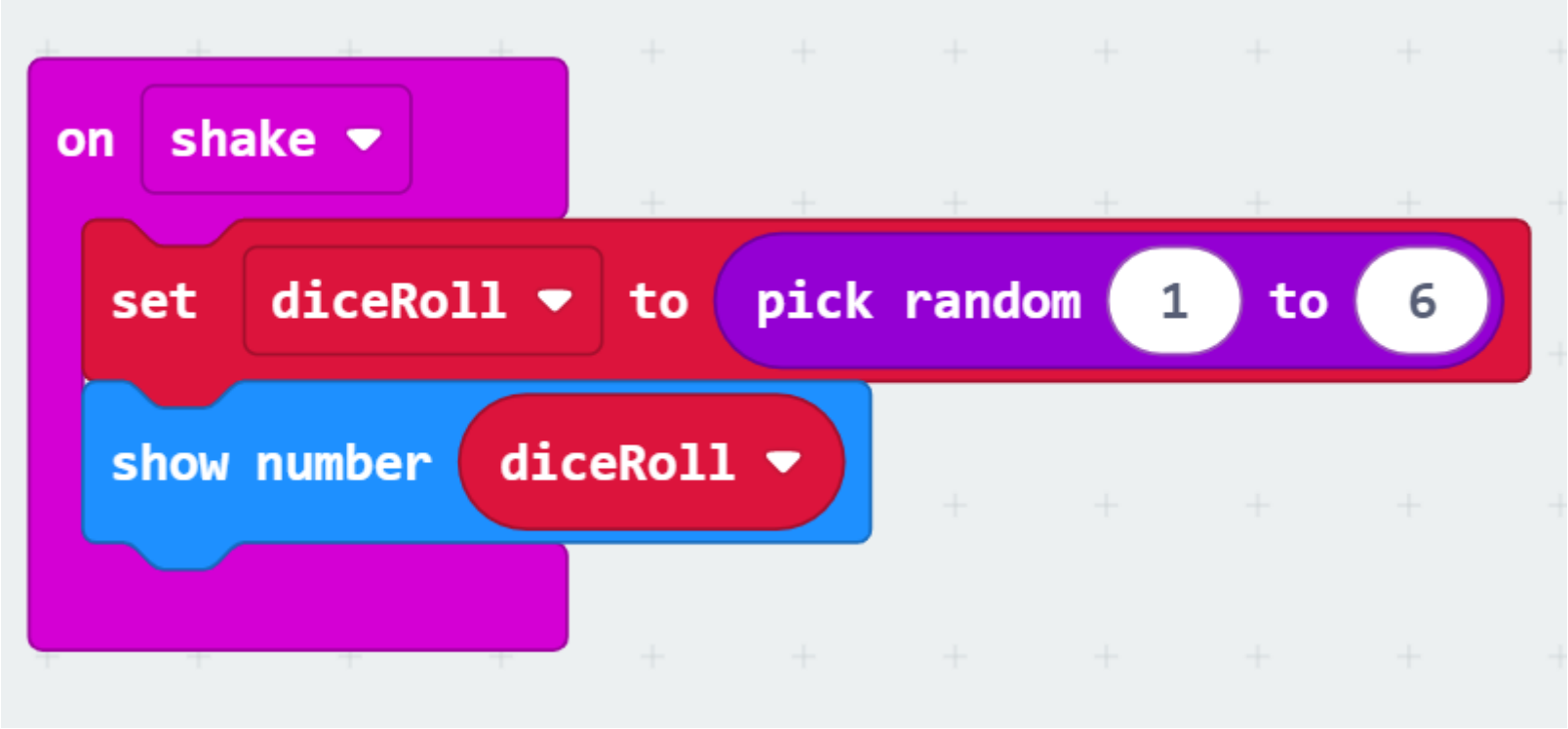


Using Variables

Variables

We can create variables in Makecode to save/store information in.

Variables


on
shake
set
diceRoll
to
pick random
1
to
6
show number
diceRoll

Electronics Activity

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Breakout Board

This allows us to connect lots of different things to the Micro:Bit

Results Table

No.	Name	Input or Output?	Analog or Digital?	What does it do?
1				
2				
3				
4				
5				
6				
7				

Results Table

No.	Name	Input or Output?	Analog or Digital?	What does it do?
1	Step Sensor	I	D	Knows when you take a step
2	Speaker	O	A	Plays music
3				
4				
5				
6				
7				

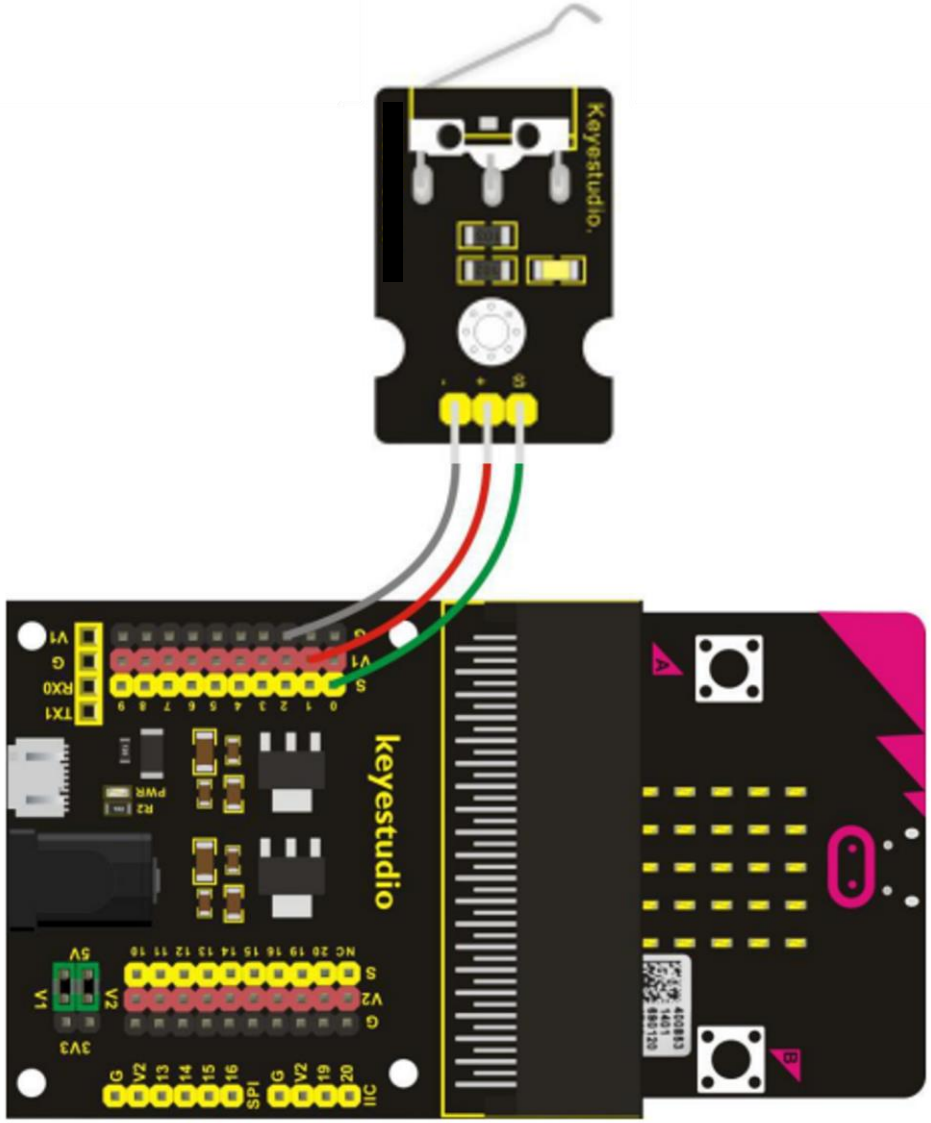
3, 4, or 5 Pin Components

3-pins have one programmable pin

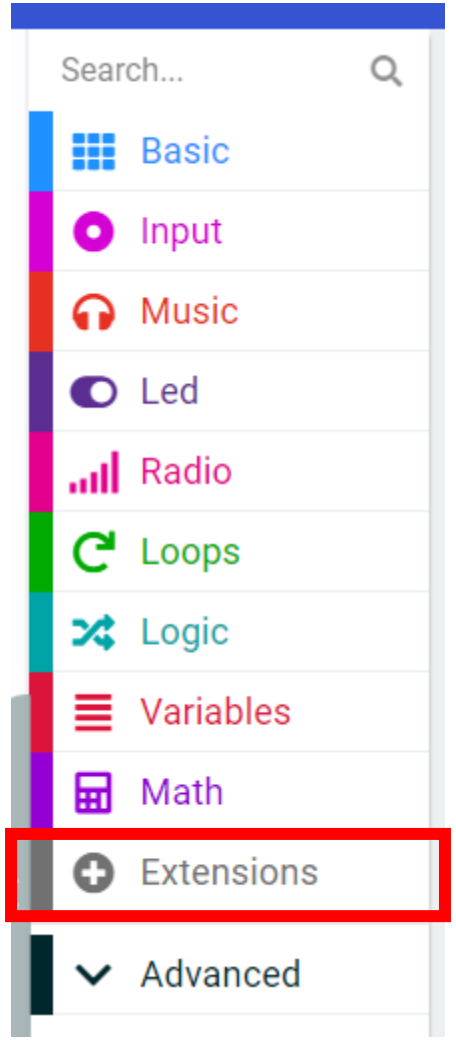
4-pins can have two programmable pins

5-pins can have three programmable pins

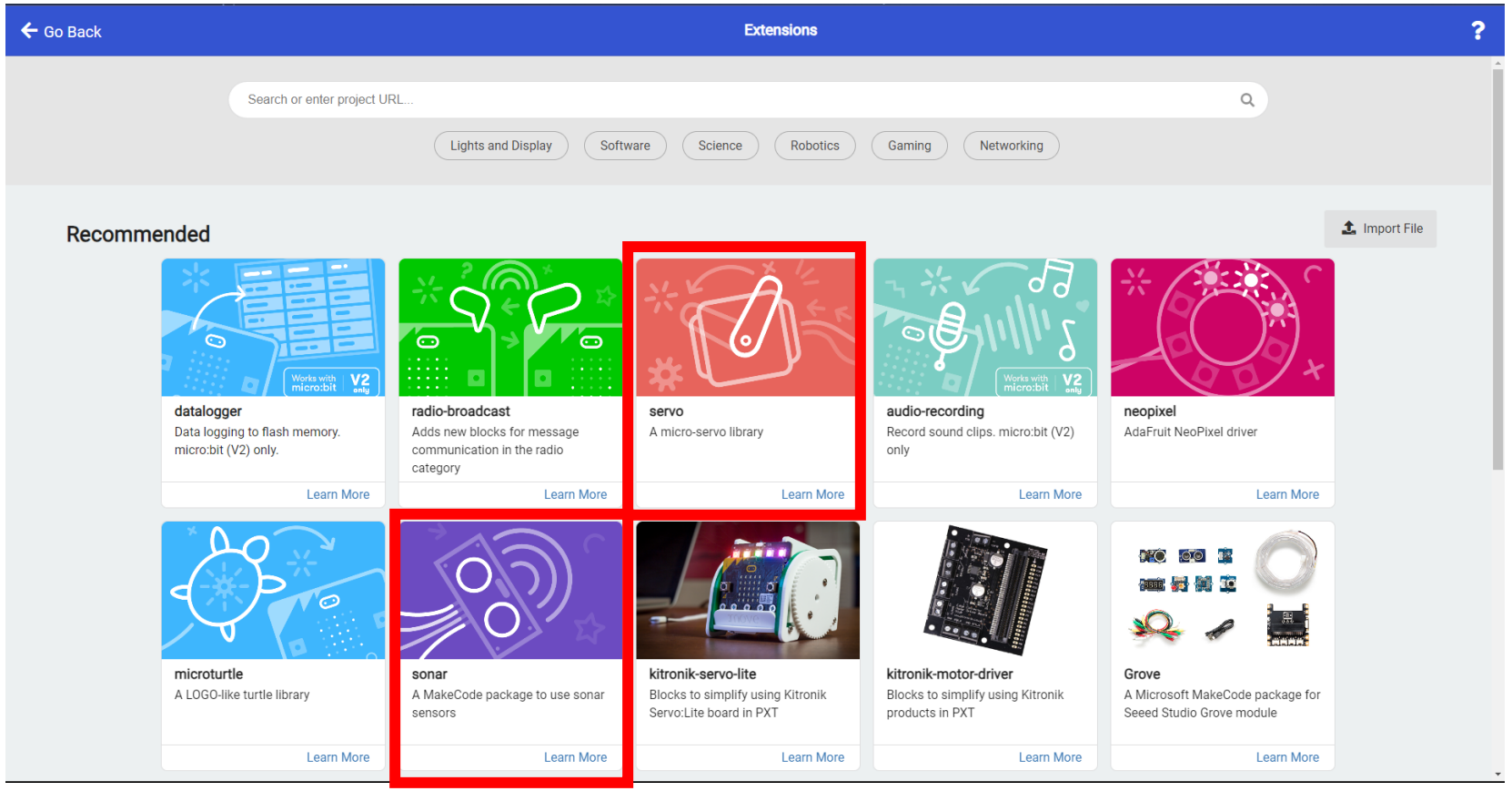
Wiring



Extensions


Search...
Basic
Input
Music
Led
Radio
Loops
Logic
Variables
Math
Extensions
Advanced

Extensions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Lights and Display
Software
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Robotics
Gaming
Networking
Recommended
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datalogger
Data logging to flash memory. micro:bit (V2) only.
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radio-broadcast
Adds new blocks for message communication in the radio category
Learn More
servo
A micro-servo library
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Record sound clips. micro:bit (V2) only
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neopixel
AdaFruit NeoPixel driver
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A LOGO-like turtle library
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sonar
A MakeCode package to use sonar sensors
Learn More
kitronik-servo-lite
Blocks to simplify using Kitronik Servo:Lite board in PXT
Learn More
kitronik-motor-driver
Blocks to simplify using Kitronik products in PXT
Learn More
Grove
A Microsoft MakeCode package for Seeed Studio Grove module
Learn More

Safety Warnings

UV Torch – Do not shine anywhere other than on the sensors.

Safety Warnings

Magnets – Do not put the magnets on any computers/Micro:Bits or component boards.

Safety Warnings

Bright Lights – One of the LEDs is VERY bright do not look directly at.

Safety Warnings

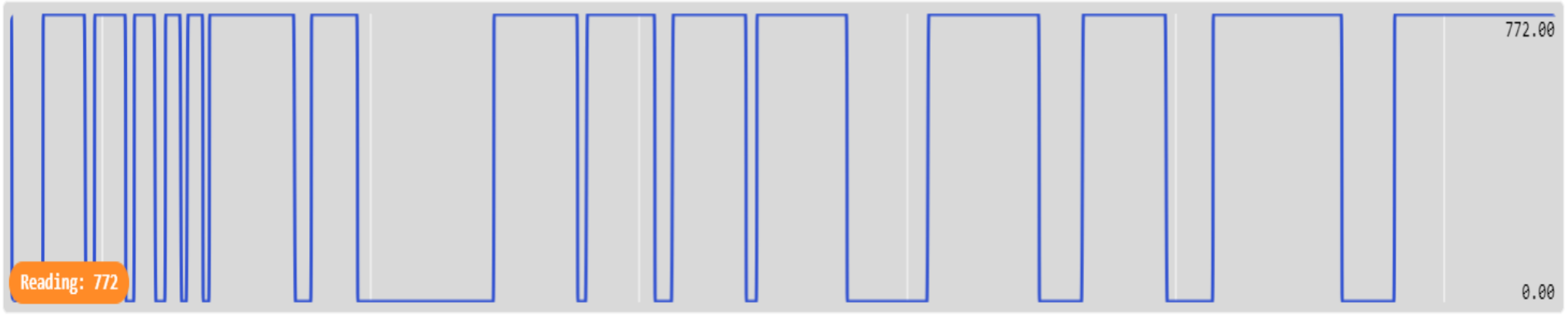
Loud Sounds – There is a VERY loud buzzer.

Website:

Makecode.microbit.org

Debugging

Digital Input Graph



Thanks

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