

# FINCH ROBOT 2.0 BLOCK DESCRIPTIONS

Snap!

## MOTION

Finch Move **Forward** 10 cm at 50 %

Moves the Finch forward or back for a given distance at a given speed (0-100%).

Finch Turn **Right** 90 ° at 50 %

Turns the Finch right or left a given angle at a given speed (0-100%).

Finch Wheels L 0 % R 0 %

Sets the rotation speeds of the left and right Finch wheels to values from -100 to 100%.

Finch Stop

Stops the Finch wheels.

## LOOKS

Finch Beak R 0 % G 0 % B 0 %

Sets the tri-color LED in the Finch beak to the color specified by red, green, and blue brightness values. The values range from 0% to 100%.

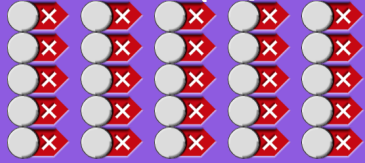
Finch Tail **all** R 0 % G 0 % B 0 %

Sets one or all of the tri-color LEDs in the Finch tail to the color specified by red, green, and blue brightness values. The values range from 0% to 100%.

micro:bit Print **Hello**

Prints letters and numbers on the micro:bit LED display.

micro:bit Display



Displays a pattern on the micro:bit LED display.

## SOUND

Finch Play Note 60 for 0.5 beats

Plays a MIDI note (32-135) for a given number of beats using the buzzer in the Finch.

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## SENSING

### Finch Distance (cm)

Returns the value of the Finch distance sensor in cm.

### Finch Right Light

Returns the value of the right or left Finch light sensor from 0-100.

### Finch Right Line

Returns the value of the right or left Finch line tracking sensor from 0-100.

### Finch Right Encoder (rotations)

Returns the number of rotations that the right or left wheel has turned.

### Finch Reset Encoders

Sets the value of the left and right encoders to zero.

### micro:bit Button A

Returns a Boolean value that indicates whether the selected micro:bit button (A, B, or Logo) is pressed. The Logo button is only available for the micro:bit V2.

### Finch Beak Up

Returns a Boolean value that indicates whether or not the Finch is in the selected position.

### Finch Accelerometer (m/s<sup>2</sup>) X

Returns the value of the Finch accelerometer or magnetometer in the x, y, or z direction.

### Finch Compass

Returns the value of the Finch compass. Before using this block, be sure to calibrate the compass in the BlueBird Connector.

### micro:bit V2 Sound

Returns the value of the micro:bit sound sensor from 0-100 or the value of the micro:bit temperature sensor in degrees Celsius. This block can only be used with a micro:bit V2.

You can access free Snap! programming tutorials at...

[birdbraintechnologies.com/finch2/snap/program](https://birdbraintechnologies.com/finch2/snap/program)