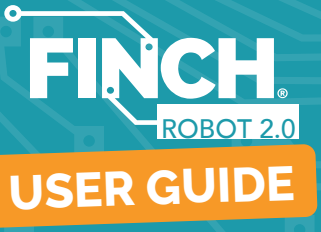

BIRDBRAIN TECHNOLOGIES LLC®

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BIRDBRAIN LLC TECHNOLOGIES®

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E-mail: info@birdbraintechnologies.com

Finch Robot, user manual, and packaging made in China.

This product is manufactured under license from Carnegie Mellon University.

SAFETY INSTRUCTIONS

- The Finch Robot 2.0 is an educational robot intended for use by anyone 5 years of age and older.
- Adult supervision recommended when used by children 13 and younger.
- Always turn off the Finch when you are done using it. Do not leave the robot powered and unattended.
- Do not insert fingers or other body parts into the marker mounting hole.
- Keep fingers, hair, and other body parts away from the Finch's wheels.
- The Finch contains a rechargeable battery. The internal battery should not be swapped or removed for any reason.
- The Finch is designed for indoor use only. Use on outdoor surfaces will wear out the wheels.
- Keep the Finch away from water or other liquids.
- The Finch should only be operated or charged when temperature is between 0° C and 40° C (32° F to 104° F).
- The Finch contains small parts that may present a choking hazard. Keep away from children 0 to 36 months of age.
- Do not attempt to service the Finch yourself. Refer all non-routine servicing to BirdBrain Technologies.

SAFETY INSTRUCTIONS

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

This Class B digital apparatus complies with Canadian ICES-003. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.
L'utilisation de ce dispositif est autorisée seulement aux conditions suivantes : (1) il ne doit pas produire de brouillage et (2) l'utilisateur du dispositif doit être prêt à accepter tout brouillage radioélectrique reçu, même si ce brouillage est susceptible de compromettre le fonctionnement du dispositif.

A LETTER FROM OUR TEAM

In 2005, a team at Carnegie Mellon University's CREATE Lab began working with kids and teachers to reimagine robotics as a tool for learning. One result of this work is the Finch Robot, which has empowered hundreds of thousands of students, from kindergarten to college, to bring their coding to life.

The Finch 2.0 was designed from the ground up to continue this work, allowing students of all ages and backgrounds to see the algorithms they program expressed in the real world, through movement, light, sound, and sensing.

We're thrilled to bring you this tool for computer science learning and engagement, and cannot wait to see what you and your students learn with the Finch Robot!

Sincerely,

The BirdBrain Team

PREPARE TO TEACH

Go to birdbraintechnologies.com. In the header, hover to **Teach**, then **Finch Robot 2.0**, and click **Start Teaching**. You'll find steps that will prepare you to teach with the Finch Robot.

1. Get to know your robot.
2. Pick a programming language.
3. Start coding or plan for instruction with lesson plans and free a teacher course.
4. Build your toolbox with free resources.

Get started on our website...

birdbraintechnologies.com/finch-start-teaching/

SCAN »

BATTERY

The Finch contains a rechargeable battery with a 7+ hour battery life. The battery will fully charge from a completely empty state in 7 hours.

To charge your battery:

Plug the USB cable into the battery charging port located in the rear of the robot. The Finch will charge from any USB port.

A yellow indicator light will turn on and stay on as long as power is provided to the charging circuit.

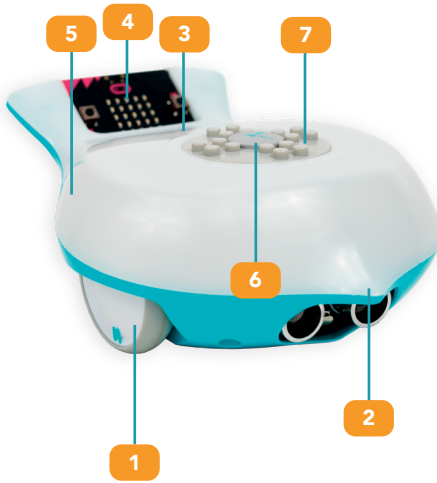
Battery Status:

When the Finch is turned on, the tail lights will flash the battery status for 2 seconds. The battery status is as follows:

- **4 green lights:** Battery is 75% or more full
- **3 green lights:** Battery is 40-75% full
- **2 yellow lights:** Battery is 10-40% full
- **1 red light:** Battery is 0-10% full

When the battery level is low, the Finch will also flash its tail lights red once per minute during operation to indicate that the robot must be charged as soon as possible.

OUTPUTS



1. Wheels
2. Beak LED
3. Tail LEDs
4. LED Array
5. Buzzer
6. Marker Holder
7. Plastic Brick Adapter

INPUTS

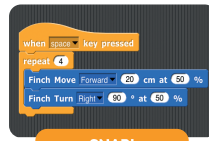
1. Wheel Encoders
2. Line Tracking Sensors
3. Distance Sensor
4. Light Sensors
5. Compass
6. Accelerometer
7. Buttons

PROGRAMMING

With the Finch, you will write computer programs to control the inputs and outputs of your robot.

We support a range of programming languages, including icon-, block-, and text-based options.

FINCHBLOX



SNAP!

```
def blinkAll(red, green, blue):
        bird.setBeak(red,green,blue)
        bird.setTail("all",red,green,blue)
        sleep(0.1)
        bird.stopAll()
        sleep(0.1)
```

PYTHON

MAKECODE

For more details and getting started tutorials, go to...

learn.birdbraintechnologies.com/finch/program/

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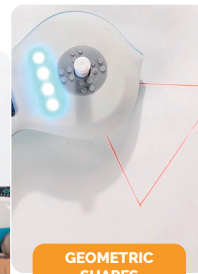
ACTIVITIES

We have dozens of assignments to challenge you and your students. Program the Finch to dance, draw shapes, follow a line, create a Simon Says game, and much more!

LINE FOLLOWING FINCH

FINCH DANCE PARTY



GEOMETRIC SHAPES

For more activities, visit...

learn.birdbraintechnologies.com/finch/activities/

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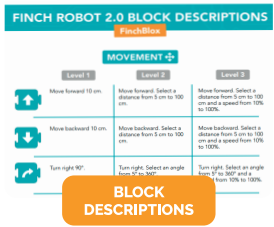
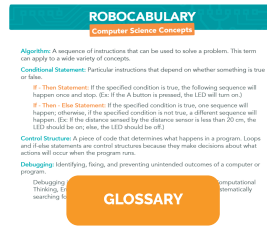
PRINTABLES

We want to make sure you have the tools you need to get started in your classroom. Our Printables page has resources to help you integrate the Finch into your curriculum.





Don't forget to explore our many resources listed under the **Teach** header at the top of the site.

For other printable instructional resources, visit...

learn.birdbraintechnologies.com/finch/resources/

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FOLLOW

Follow us on social media or sign up for our newsletter for more robot inspiration!

@birdbraintech

For more curriculum ideas and creative inspiration please sign up for our mailing list here:

birdbraintechnologies.com/mailing-list-sign-up

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SHOP

To add more Finches to your flock and check out the Hummingbird Robotics Kit or Owlet Math Tools visit...

store.birdbraintechnologies.com

« SCAN

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