



What is Hummingbird Duo?

The Hummingbird Robotics Kit is a spin-off product of Carnegie Mellon's CREATE Lab. Hummingbird is designed to enable engineering and robotics activities for ages 13 and up (age 8+ with adult supervision) that involves the making of robots, kinetic sculptures, and animatronics built out of a combination of kit parts and crafting materials.

Combined with very easy-to-use software environments like Scratch, Snap!, the CREATE Lab Visual Programmer and Ardublock, Hummingbird provides a great way to introduce kids to robotics and engineering with construction materials that they are already familiar with. At the same time, Hummingbird continues to provide new challenges by allowing programming in the Arduino environment, Python, Java, and Processing and by supporting Raspberry Pi.

Getting started with Hummingbird

Not sure where to start? We recommend building and wiring a simple robot. (There are tutorials online to follow). Once your robot is built, we recommend programming it via the CREATE Lab Visual Programmer. Or for those with a bit of programming experience, take a look at some of Hummingbird's programming tutorials for Scratch, Snap!, BlocklyDuo, Arduino, or more!

Teachers have created curriculum resources for using Hummingbird in language arts, science, art, math, history, and technology classes.

Key benefits of Hummingbird:

- Hummingbird provides a progressive robotics learning experience – starting at level one, users build and program their own homemade robot using the Hummingbird board. At level two, users can program their robots using computer programs Scratch 2.0 or Snap! Makers can also use the very same kit to run Arduino Leonardo (which comes installed on the backside of the board) to create a standalone robot, capable of doing anything really, since it's open source and can run on Mac, Windows, or Linux.
- Fun and educational for primary and secondary students alike.
- Switch between tethered and standalone modes.
- Integrates with Arduino shields and many third-party electronics.
- Program with the story-boarding software, Scratch, Arduino and more.
- Dozens of tutorials and classroom examples available online.



Hummingbird Duo Classroom Kits

Kit Contents

The Hummingbird Duo comes in three different sizes: The Classroom Kit is appropriate for 8 to 12 students and has parts for up to 4 simultaneous robotics projects. The Premium Kit has enough parts to build a large robot, and the Base Kit has sufficient parts for a small robot. Check out the table for details on what is included in each kit.

Components	Base Kit	Premium Kit	Classroom Kit
Duo Controller	x1	x1	x4
5V/2A Power Cable	x1	x1	x4
USB Cable	x1	x1	x4
Terminal Tool	x1	x1	x4
Standoff	x4	x4	x16
Single Color LED	x4	x4	x12
Tri-Color LED	x2	x2	x8
Servo	x2	x4	x10
Servo Extension Cable	x1	x2	x6
Gear Motor		x2	x4
Wheel Adapter		x2	x4
Plastic Block Adapter		x2	x4
Vibration Motor		x2	x4
Light Sensor	x1	x1	x4
Temperature Sensor	x1	x1	x4
Distance Sensor		x1	x2
Sound Sensor		x1	x2
Rotary Sensor		x1	x2

Available Kits



Hummingbird Duo Base Kit

The Hummingbird Duo Base Kit contains everything you need to build a fun robot with moving parts and lots of LED lights. Sensors in the base kit allow your robot to sense light levels or temperature.

EACH

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HUMMBASE



Hummingbird Duo Premium Kit

The Hummingbird Duo Premium Kit contains everything you need to build an intricate, complex robot with tons of moving parts and flashing lights. Sensors in the premium kit allow your robot to sense nearby objects or humans, sounds, light levels, or temperature.

EACH

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HUMMPRO



Hummingbird Duo Classroom Kit

A set of 4 Hummingbird controllers and many components, this kit also includes a printed teacher guide and a copy of the book Invent-To-Learn. One classroom kit is sufficient for a small class or group of 8-12 students; a regular classroom will probably require two kits.

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HUMMCLASS

Designed for the classroom!

Craft Materials

Use these craft materials with your Hummingbird Robotics Kit to create the perfect robot!



UHU Kids PVA
49403 250ml
Each \$web

1001 Piece Craft Box
150251
Each \$web



Matchsticks
102311
Pack of 4000 \$web



Bostik Craft Hot Glue Gun
110-240v
259179
Each \$web



Bostik Hot Melt Glue Sticks
259993
Pack of 10 \$web

EC Adhesive Eyes
AEC2000 Roll of 2000 \$web



Cardboard Rolls
119821
Pack of 36 \$web



EC Moving Joggle Eyes
JOGYE300
Asst. sizes Jar of 300 \$web



View more craft materials on our website at www.kookaburra.com.au

Please visit our website www.kookaburra.com.au for the latest pricing

