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# Our Overview of Makeblock mBot

#### By Patrick Updated 14 March 2018

Looking for the best way to get into robotics? Checkout <u>Makeblock's mBot</u>. This all in one robot is the perfect introduction to basic robotics, with its simple yet robust design, mBot is built with education in mind. The <u>mBot</u> kits modular design encourages hands-on and practical learning bringing creativity to education. mBot is the perfect entry-level kit to start the adventure of robotics, and it includes implementing key sensor modules that are easy to use and will advance your robotic skills.

If you haven't heard of Makeblock, check out this article.

a quick look at the Makeblock mBot

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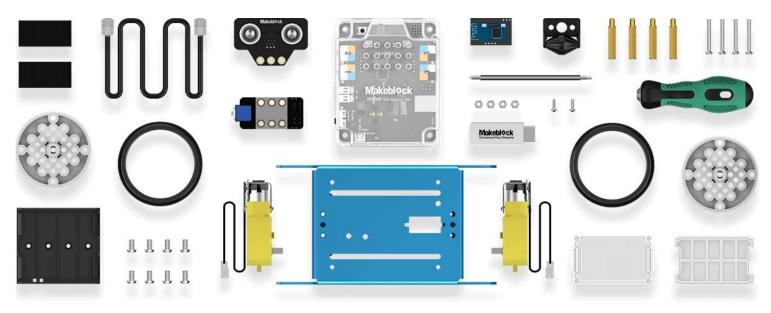


a quick look at the Makeblock mBot

#### mBot and its features!

mBot comes in two flavours, one **Bluetooth** connected, and one with a **2.4GHz transmitter** and receiver module. The Bluetooth module is designed for the individual user, allowing you program the mBot through the mBlock app (download **here**) on your tablet or computer, you can also control the mBot with your Bluetooth connected device. The 2.4GHz design of the mBot is most suitable for the classroom, supporting quick connect for your mBot to a computer wirelessly with no need to configure WIFI settings so getting started as easy as possible, and just like the Bluetooth version you can both program and control your mBot wirelessly from your computer.

Outcome bix, neso includes 2 sensor modules, an ultrasonic transceiver module for measuring short distances, and a dual light level detector commonly used for following a line. Interfacing with these modules is the mBot mCore, this is where the program runs. The mCore is based around an ATmega328 microcontroller that has an Arduino bootloader preloaded in it, ready for use with the Arduino IDE.



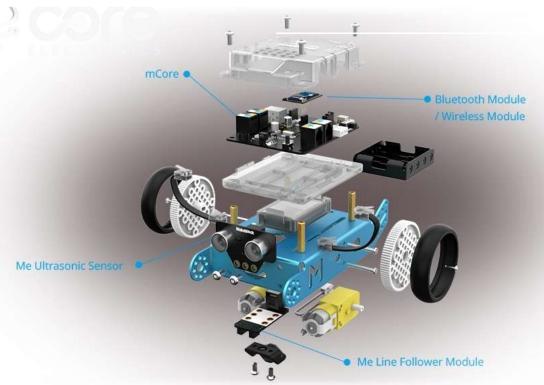
This is how your new mBot will come out of the box.

## Whats in the box (Above)?

Makeblock mCore with polycarbonate cover (Powered by Arduino).

- Bluetooth or 2.4GHz wireless module.
- 2x motor modules.
- Ultrasonic transceiver module.
- Line following sensor module.
- Anodised aluminium chassis.
- Various build hardware and wheels.

The Makeblock robotics kits are a great introduction to mechanical design. The mBot kit, in particular, is designed so that it can be assembled with the tools inside the box, making it easy to start learning about robotics while also maximizing the learning process during assembly. The mBot design allows for custom builds, just like Lego it is easy to expand the base kit and add functionality or simply be creative with the design of the kit. Out of the box, the mBot is run with 4 AA batteries in the included housing. One way to make a quick and easy upgrade to your kit is by adding this small <u>LiPo battery</u> fitting conveniently into the included LiPo battery housing, giving you quick and easy recharge functionality through the USB port on the robot.



an exploded view showing all its awesome features!

#### How easy is using the mBot?

Logic and coding of robotics is often the biggest learning curve for the whole experience and is rever made easy by the complicated syntax of programming languages like C++ or assembly code. Makeblock brings us a solution in the form of a SCRATCH based development environment called mBlock. With the mBlock graphical programming platform, you will intuitively gain an understanding of the logical flow of programs nursing you into in-depth programming languages that are necessary for more complicated projects. The mBlock IDE is also available on Google Play and the Apple App store for programming over Bluetooth.

## Final thoughts?

Whether you're looking to learn the basics of robotics yourself, you're looking for an interactive tool for your child to learn with or introducing your class to robotics, the Makeblock mBot is a great starting tool for anyone wanting to learn about robotics systems. for more information on **Makeblock**, and many project ideas take a look at our **tutorials page**, or chat with us on our **forum**.

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