Great tool for beginners to learn graphical programming, electronics and robotics.
mBot is an educational robot kit for beginners to get hands-on experience about graphical programming, electronics, and robotics. It is an all-in-one solution for robotics learning and designed for STEM education.

WARNING: CHOKING HAZARD - Small parts. Not for children under 3 years old.
Part List

mCore

- Motor L
- Wheel
- Screw M3×25
- Roller Ball
- Me Line Follower
- Screw M2.2×9
- Brass Stud M4×25
- Screw M3×25
- Battery Holder (4 x AA batteries, not included)
- Screw M4×8
- Velcro
- Bluetooth/2.4G module
- USB cable
- 6P6C RJ25 Cable
- Screwdriver
- Motor R
- Chassis
- Screw M4×8
- Me Ultrasonic Sensor
- Screw M4×8
- Motor Port
- RJ25 Port
- Buzzer
- IR Receiver
- IR Emitter
- Button
- Light Sensor
- RGB LED
- Power switch
- Reset
- RJ25 Port
- USB Type-B Connector
- 2-pin connector for lithium battery
- DC Power Jack
- USB Type-B Connector
- Motor Port
- RJ25 Port
- RGB LED
- Button
- Light Sensor
- RGB LED
- Power switch
- Reset
- RJ25 Port
- USB Type-B Connector
- 2-pin connector for lithium battery
- DC Power Jack
You may need to switch the order of two wires (M1, M2) to correct the rotation direction.
**Batteries Suggestion**

mCore’s power supply: 3.7V DC — 6V DC

**Option 1:**
4 × AA batteries (Not included)

**Option 2:**
3.7V lithium battery (Not included) with a standard 2-pin JST-PH connector. Support on-board charge via USB cable.

**Notice:**
CR2025 button cell battery for remote control is not included.

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**Remote Control**

- **Mode 1: Remote manual control**
  Users can use buttons to control the direction and speed of mBot.

- **Mode 2: Wall avoidance robot**
  A robot that can avoid walls and obstacles while moving.

- **Mode 3: Line follower robot**
  Line follower is a robot that can follow a path. The path can be visible like a black line on a white surface (or vice-versa)

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**Notice:**
2025 button cell battery for remote control is not included.
**Graphical Programming-mBlock**

**Introduction**

mBlock is a free modified version of Scratch 2.0 developed by MIT Media Lab. Added some hardware-related blocks based on the original Scratch, mBlock enables users to read sensors, control motors and even the whole robot with ease.

**Download:** http://mblock.cc/download/

Get started with mBlock to program the mBot: http://learn.makeblock.cc/mbot/

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**Wireless Communication**

1. **Introduction of Bluetooth module**

   This Bluetooth module is designed specially for mCore with the support of Bluetooth 2.0 and 4.0. It’s suitable for both individual users and family. Users can use their smart phones or computers to control the mBots wirelessly with this module.

   More detailed tutorials: http://learn.makeblock.cc/mbot/

2. **Introduction of 2.4G wireless serial**

   The 2.4G wireless serial includes two parts: 2.4G wireless serial-USB for computer; 2.4G wireless serial-module for mCore. It uses the same technology as wireless mouse and is very suitable for classroom. No driver and pairing needed.

   More detailed tutorials: http://learn.makeblock.cc/mbot/
Arduino Programming (C language)

Arduino is an open-source electronics prototyping platform based on flexible, easy-to-use hardware and software. The Arduino software consists of a development environment (IDE) and the core libraries. The IDE is written in Java and based on the Processing development environment.

More detailed tutorials:
http://learn.makeblock.cc/mbot/

Electronic Modules on Makeblock—Further Exploration

- Me 3-Axis Accelerometer and Gyro Sensor is used to measure the angular rate and the acceleration information of your robot or other devices. It is useful for sumo robots to detect bumps.
- Me Sound Sensor can measure the volume. It can be used in some sound interactive projects, such as an voice operated switch.
- Me Temperature Sensor is a stainless steel tube sensor which is used for measuring temperature.
- Me PIR Motion Sensor can detect infrared ray which derives from animals/humans within 19.7 feet (6 meters).
- Me Potentiometer can convert rotary motion to an analog input which can be used to control the speed of a mobile robot, the brightness of RGB LEDs, or others.
- Me 7-Segment Display is a display module with four digits tube which can show some data...some data, such as speed, time, score, and etc.
- Me 7-Segment Display with four digits tube which can show some data...some data, such as speed, time, score, and etc.
- Me Joystick is normally used to control the moving direction of object.

See More on Makeblock Platform