

材质：封面128g铜版纸过亚膜，内页80g书写纸  
尺寸：420\*142mm  
工艺：骑马装订

makeblock

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Codey Rocky & Neuron  
Education Kit



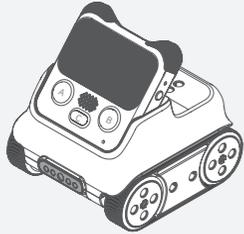
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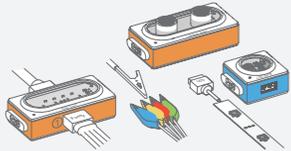
### Codey

It's a micro computer. By programming, you can add a variety of abilities to Codey. Moreover, you can use it to create LED animations, design games and create applications that make your life better.



### Rocky

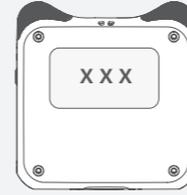
It's the chassis of the robot. Combine Rocky with Codey and then you get a Codey Rocky! It can walk, identify colors and items. You can program Codey Rocky to perform tasks, like walking to a pre-defined destination, dancing or more. Besides, Codey Rocky is able to sense the surrounding environments and react to what's happening in environments in real time.



The Neuron blocks in different kits may vary, so please refer to the parts list of each kit for specific details.

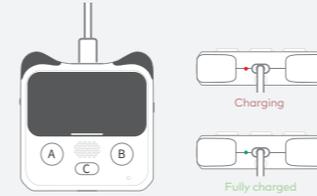
### Neuron

It's a team of programmable electronic blocks which come in many different forms. Using Neuron, you can empower Codey or Codey Rocky to do more things and create electronic projects that are engaging and unique.



### Name Stickers

Name stickers are included in the package. Attach the name stickers to blocks and write down names of yours or your group on the stickers. This is to prevent that you misidentify the devices of others as yours.



### Charge

Rechargeable battery is included in Codey. Please get Codey charged before getting started. Use the USB cable to connect Codey to a computer or a USB charger. When the indicator turns green, it means that Codey is fully charged. Codey will supply power to Rocky and Neuron so you don't need to charge them.

### Download

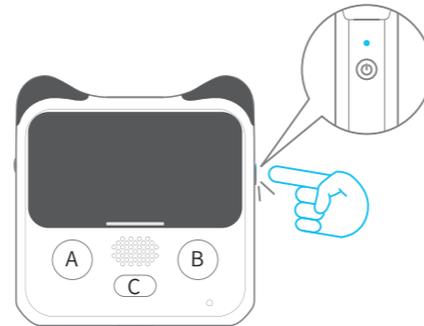
If you want to program Codey with Python or block-based programming language, you will need to use the software, mBlock 5. Download mBlock 5 at: <http://www.mblock.cc>



Search "mBlock" in application stores on your phone or tablet to download the mBlock app.

### Power on

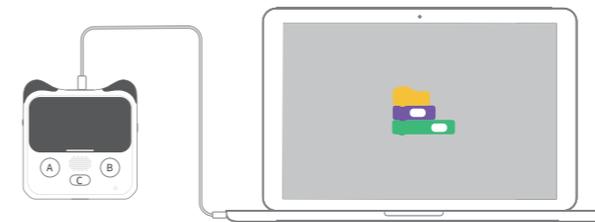
Press the power button to turn on Codey. Before connecting the device, you need to make sure Codey is powered on. When Codey is powered on, you'll see the power indicator lighted up.



Try charging Codey if you find out that Codey fails to be turned on.

### Connect Codey to the computer

Use the Micro USB cable to connect Codey to the computer.



Codey will get charged autonomously via the computer.

You can connect Codey to the computer wirelessly via the Bluetooth dongle. For instructions on how to use the Bluetooth dongle, refer to the Makeblock Bluetooth Dongle User Manual. The Bluetooth Dongle is not included in the kit.

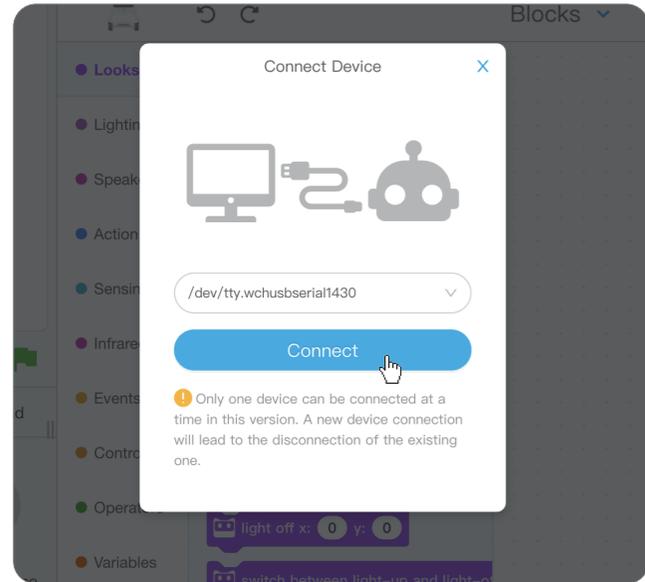
Or



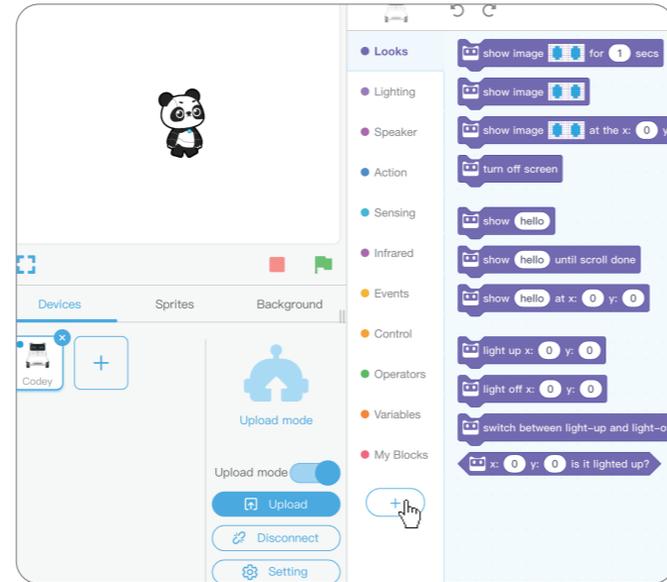
## Start coding!

Tips: The interface might be slightly different due to software updates. You can go to the Menu to access the latest guides.

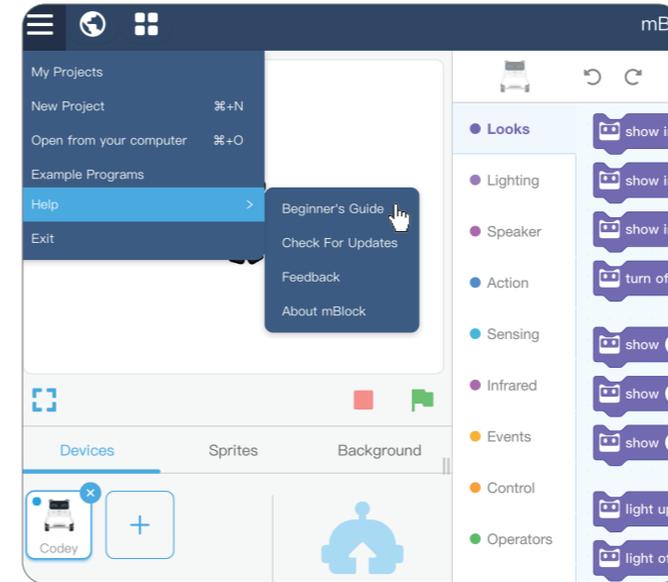
1. Open mBlock 5 and click "Connect" at the bottom left corner to connect your device.



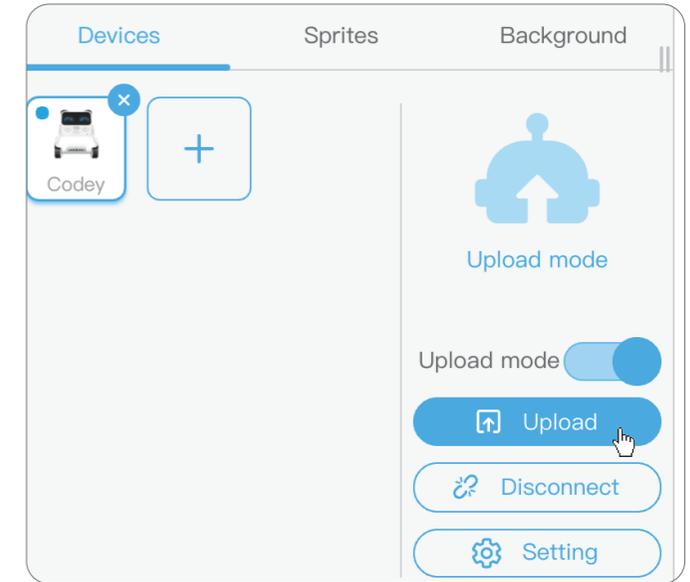
2. Click the icon "+" to add the **Neuron** extension.

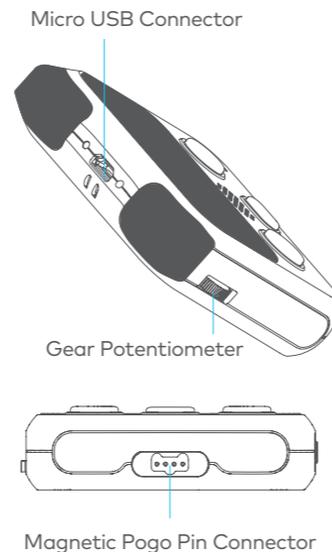
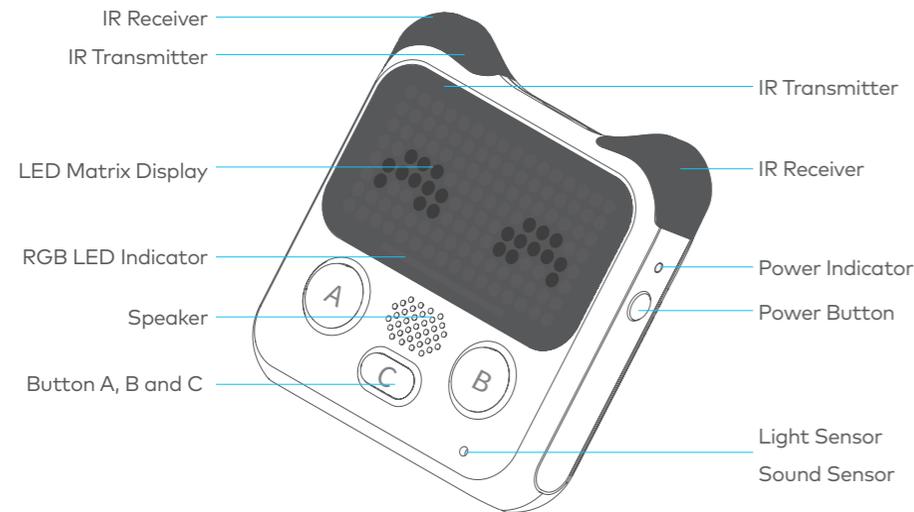


3. Start coding. Go to the Menu->Help to access Beginner's Guide and there are Example Programs available for inspirations.



4. Click "Upload" to upload your program to Codey. Get ready to have some fun with Codey Rocky and Neuron!





### Magnetic Pogo Pin Connector

With the magnetic Pogo Pin connector, Codey is able to communicate with Rocky and Neuron blocks. So you can use Codey to control Rocky and access the data sent from sensors.

### LED Matrix Display

Codey has a display screen that is made of 128 LEDs (short for light-emitting diode), which enables itself to show letters, numbers and images.

### RGB LED Indicator

Below the screen of Codey there is a RGB LED indicator. The RGB LED indicator consists of three LEDs, one red, one green and one blue. By controlling the brightness of each LED, you can mix pretty much any color you want.

### Speaker

A speaker is an output device that is used to make different sounds, You might find them in many electronic devices. With a speaker, Codey has the power to make sounds so you can program Codey to play music and prompt recordings.

### Buttons

Codey includes three programmable buttons(ABC). It can detect whether the three buttons are pressed or not. The Buttons can be programmed to trigger a piece of code or stop a loop.

### Gear Potentiometer

A gear potentiometer is an input device that you can toggle to control values. Using the gear potentiometer, you can easily control the volume of Codey, the brightness of indicators and more.

## Bluetooth

Codey can be connected to Bluetooth devices (phone or tablet). So you can control Codey and upload programs via Bluetooth. To wirelessly connect Codey to a computer, you need to use the Makeblock Bluetooth dongle.

## Wi-Fi Block

The built-in Wi-Fi block enables Codey to connect to wireless network, which gives Codey the ability to receive data like weather reports. You can also upload the data to the Internet.



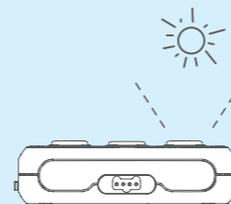
## IR Receiver and IR Transmitter

The IR transmitter should work with the IR receiver. The IR transmitter sends signals and the IR receiver detects those signals. By programming, you are able to facilitate the communications between two Codeys. In the ears of Codey, you can find the IR receivers. There is one IR transmitter in the ear and one IR transmitter in the screen.



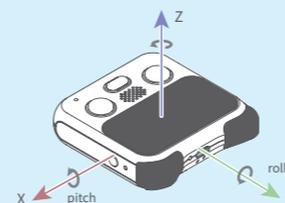
## Sound Sensor

The sound sensor is used to measure the volume of sounds in surrounding environments. Apart from sounds, blowing and vibration can also lead to the changes in values.



## Light Sensor

The light sensor is used to measure the intensity of lights in surrounding environments. The detection range is as shown in the picture on the left hand side.

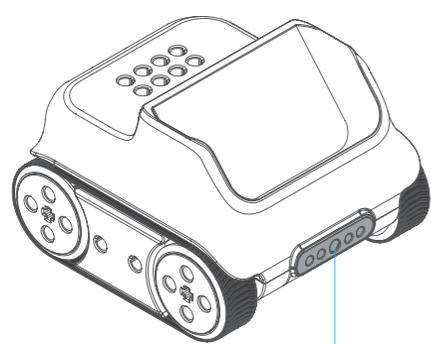


## Gyroscope and Acceleration meter

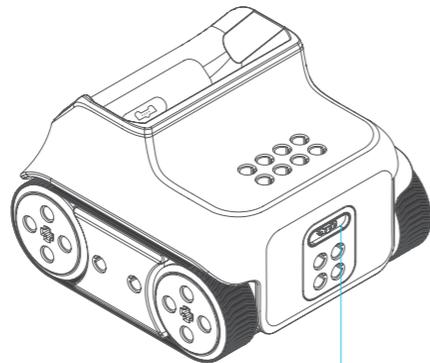
The gyroscope and the acceleration meter are used to detect the motions and gestures of Codey (E.g. tilt and shaking). By working with Rocky, they can also control the robot to make turns by specific degrees.

## Features of Rocky

By working together with Rocky, Codey will be able to walk! You can control the robot to move forward, move backward and circle around. Or you can make Codey Rocky move as you would like by changing the speed of the caterpillars. Besides, the gyroscope enables Codey Rocky to make turns by specific degrees and keep straight forward when moving.



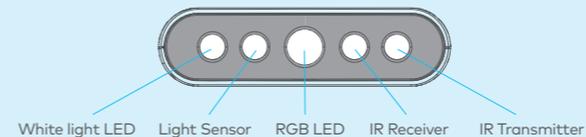
IR Color Sensor



Magnetic Pogo Pin Connector

## IR Color Sensor

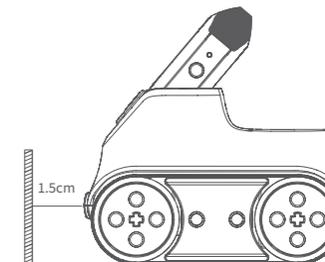
The IR color sensor is versatile. It can be used to detect colors, items and measure the intensity of reflected lights, IR reflected lights, lights and grayscale.



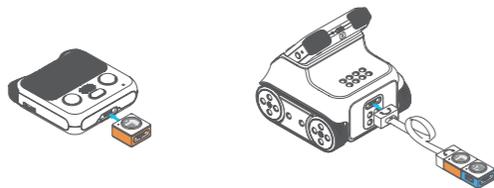
You can toggle the color sensor. To make the robot detect obstacles or colors of the items in its view, you should make sure the color sensor faces forward. And when the color sensor faces downward, the robot is given the power to detect black lines, cliffs or colors of the items under itself. So it's important to toggle the color sensor to a proper position each time.



The accuracy of color detection can be affected by the lights and the distance. The accuracy will be higher when the color sensor is sensing an item that's about 1.5 cm away.

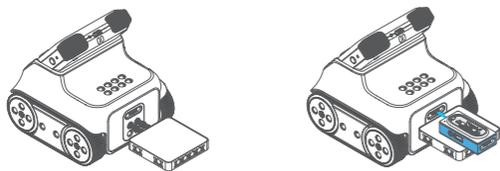


Thanks to the magnetic Pogo Pin connectors, you can easily connect Neuron to Codey or Rocky.

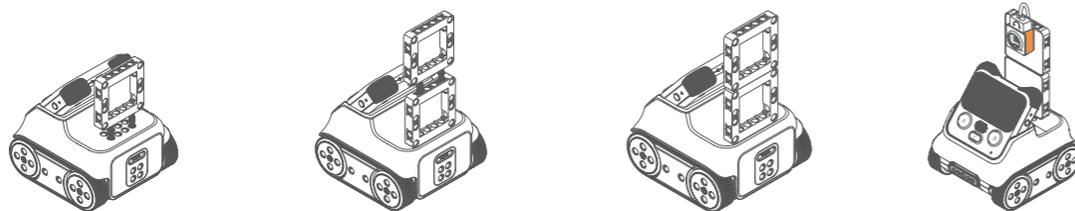


Use magnetic boards (included in the Neuron package) to hold them together.

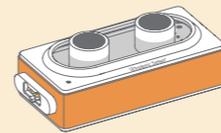
Scene 1



Scene 2



## Ultrasonic Sensor



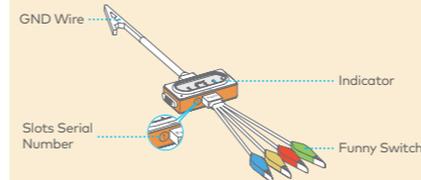
The ultrasonic sensor is used to measure the distance of an item in its view.  
Detection range: 3~300cm

## LED Strip



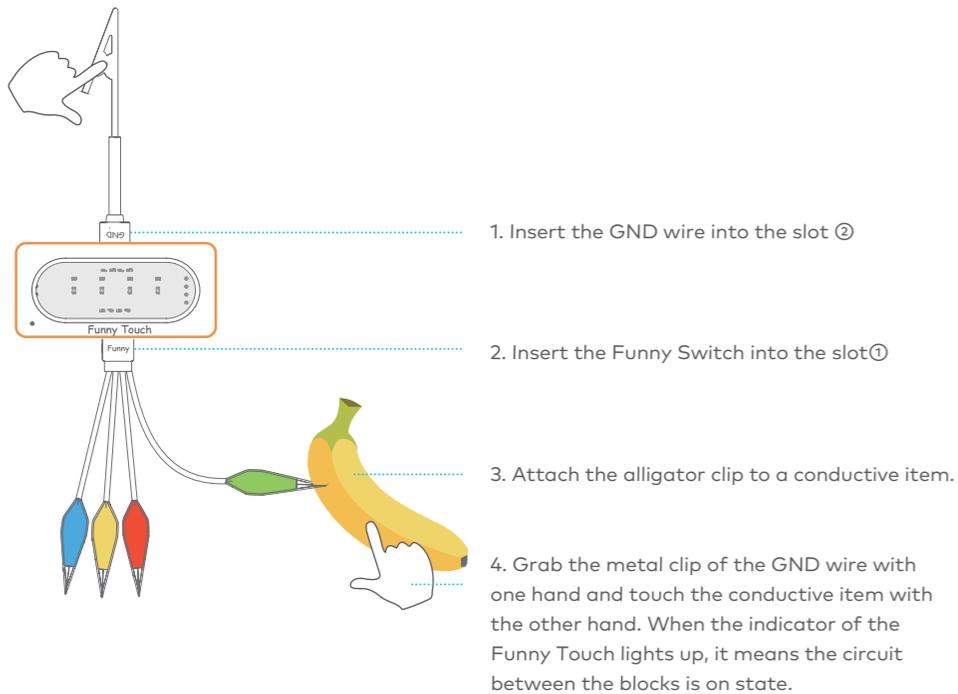
The LED strip includes 15 RGB LEDs which can light up in different colors. By programming, you can control the color and brightness of each RGB LED.  
Remember, the LED strip needs to work with the LED strip driver to function.

## Funny Touch



By connecting the Funny Touch to conductive items (like banana and water), you can turn those items into touch switches. When detecting there are electrical currents between the Funny Switch and the GND wire, the Funny Touch will then gain the ability to interact with you.

## How to get started?



Please do not attach the Funny Switch or the GND wire clip to yourself or other people because this will cause hurt or damage.



## Links

For more help information, please visit: <https://www.makeblock.com/steam-kits/codey-rocky>

For more educational materials, please visit: <http://education.makeblock.com/>

### Warning:

CHOKING HAZARD - Small parts.  
Not for children under 3 years old.  
Children to use only under  
adult's supervision.

