

Get Started

Snap to make a line following robot

Battery
(Rechargeable)

Main Board BLE

Color Line
Follower



Chassis

Grove Zero

Module Introduction

Main Board BLE

Reset Button

Hold down the button for 5s to restore firmware

Power

Turn on when power on.

TxRx

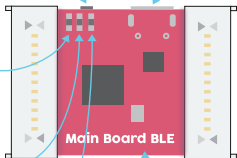
Light flashes during data transfer.

Status

Keep ON in default. Flash slowly in user mode.

USB Port

For uploading code or supply power to the circuit (except for motors)



Antenna

For uploading code or short-range wireless communication

Module Introduction

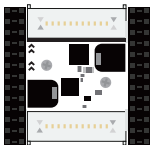
Chassis

Bottom



Dual motors

Top



Forward

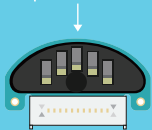


Forward

Module Introduction

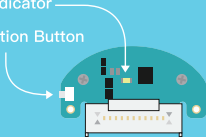
Color Line Follower

5 Optical Sensors



LED Indicator

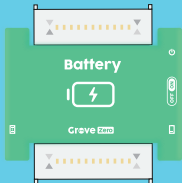
Calibration Button



Battery

USB Port

Charging the battery
with 5V USB cable.



Switch

Assembly

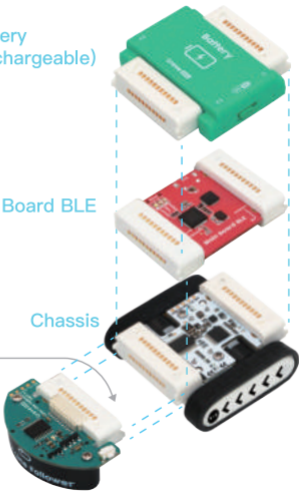
Battery
(Rechargeable)

Main Board BLE

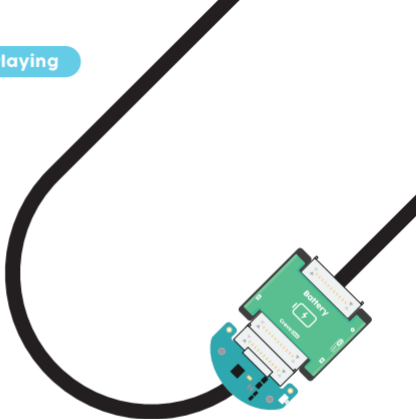
Chassis

Make sure the Color Line Follower is connected to the front of Chassis.

Color Line Follower



Get Started Playing



Turn it on and try it on
the track included in
the kit

Get Started Playing

Draw lines with markers to make your track

Draw lines and color codes with markers, make sure the lines and color codes you drew are wide enough to be detected

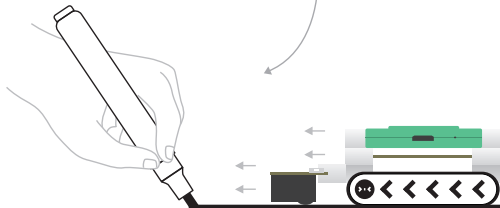


 Line following

 Turn left

 Turn right

 Stop

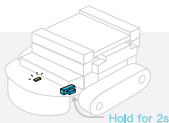


Calibration

Calibration of Color Line Follower

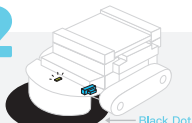
Use this for consistent behaviour at different line following conditions

1



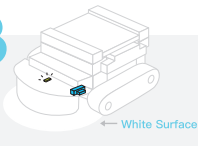
Remove the Main Board BLE, keep the power on, hold down the button for **2s**, until the LED turns ON then enters the Calibration Mode, then release the button.

2



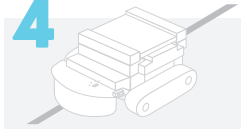
Set the sensor in the middle of the black dot (as a reference to the black line), **single-click** the button, then the LED **blinks rapidly** and the sensor starts calibrating. Once finished, the LED will go back to normal.

3



Now set the sensor in the white surface that the car will be running on. **Double-click** the button, then the LED **blinks slowly** and the sensor starts calibrating. Once finished, the LED will go back to normal.

4



The Color Line Follower is now calibrated. Reconnect the module and start playing.

Program your car

Go to chmakered.com/grovezero



1

2



Download and install **Codecraft**



Creating your script in the coding editor

3

4



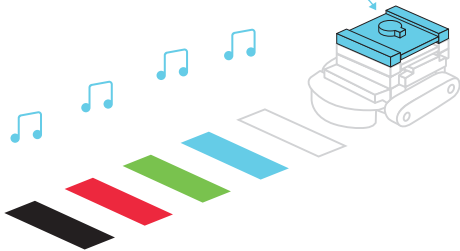
Main Board BLE

Once finished connect your Main Board BLE to your computer with a micro USB cable or through Bluetooth and download the code.

IDEA 1

Rainbow Singer

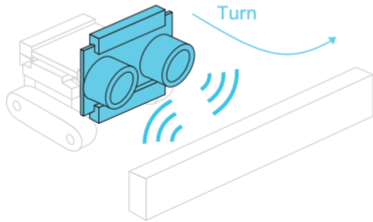
Add a buzzer to the top to make a 'Rainbow Singer'



IDEA 2

Obstacle Avoiding Car

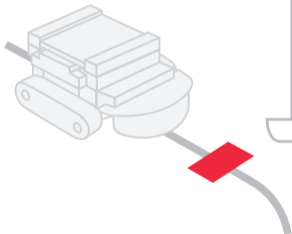
Use an Ultrasonic Sensor to make an obstacle avoiding car.



IDEA 3

Customize Color Codes

Customize your
Color Codes in
CodeCraft



Download CodeCraft at: chmakered.com/grovezero

Grove Zero

car kit



Find more cool ideas at
chmaked.com/grovezero/carkit