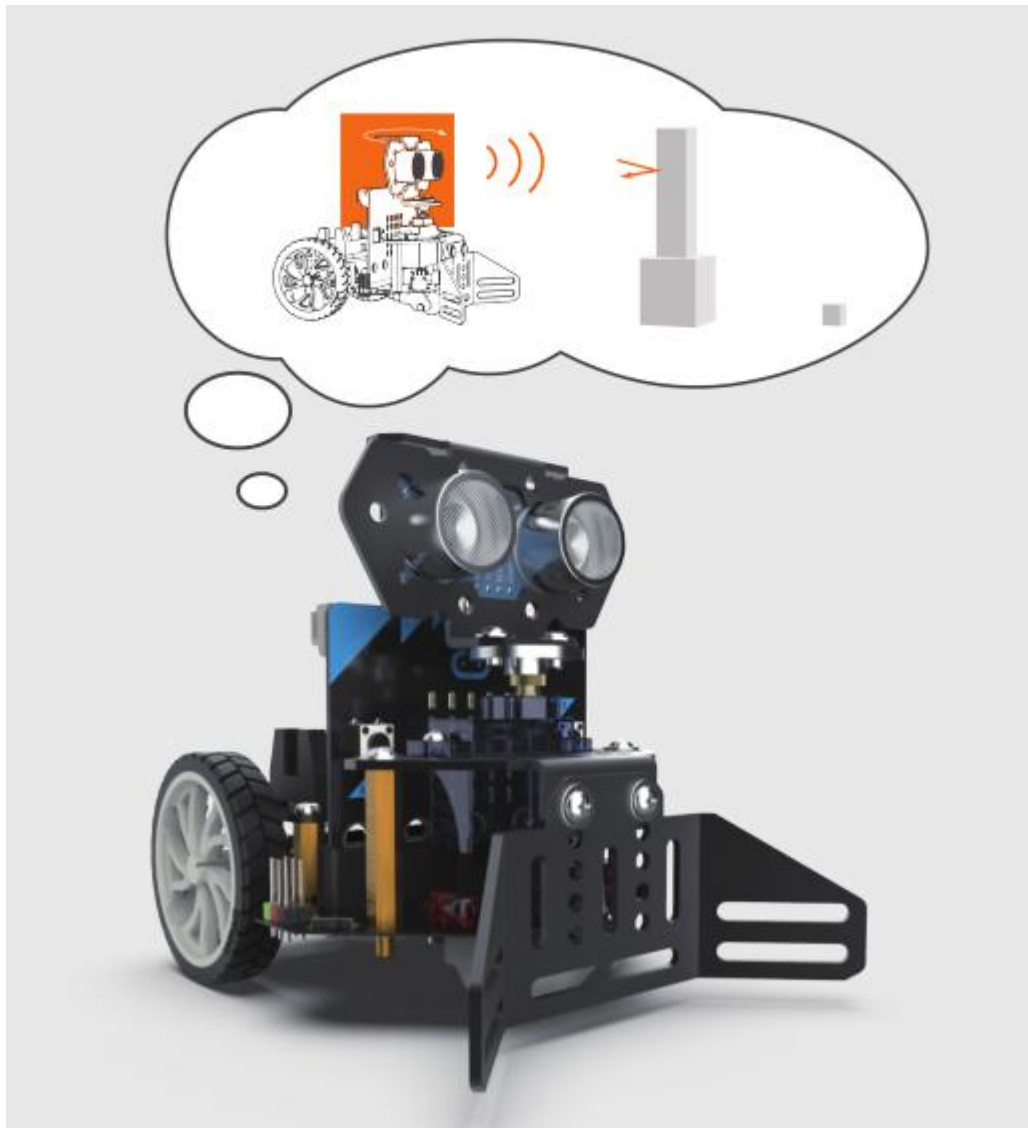


# Tutorial of Maqueen Mechanic-Push

[ROB0156-P]



# Installation Diagram

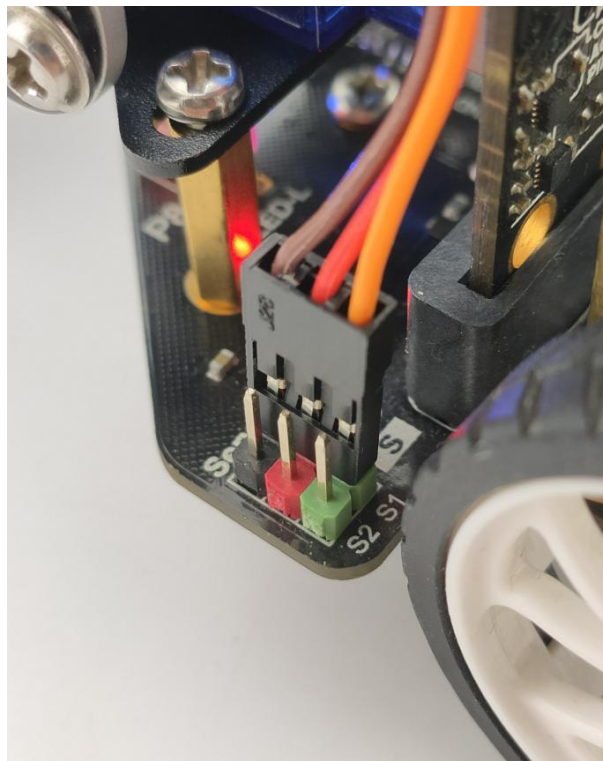


# Method to Control

## 1. wiring

Plug the 3pin servo wire into port S1 or S2 of Maqueen, shown as below:

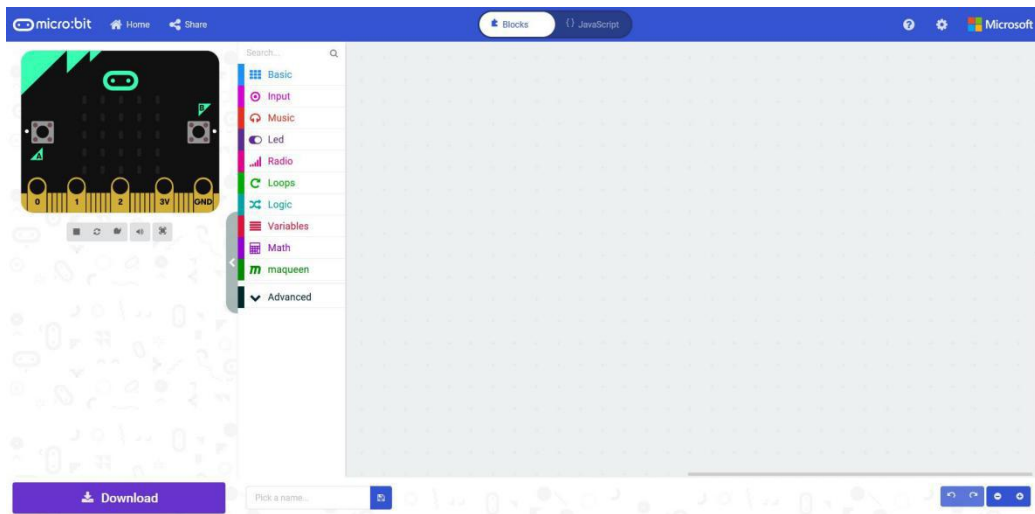
- Brown wire to Black pin
- Red wire to Red pin
- Orange wire to Green pin



## 2. Makecode Tutorial

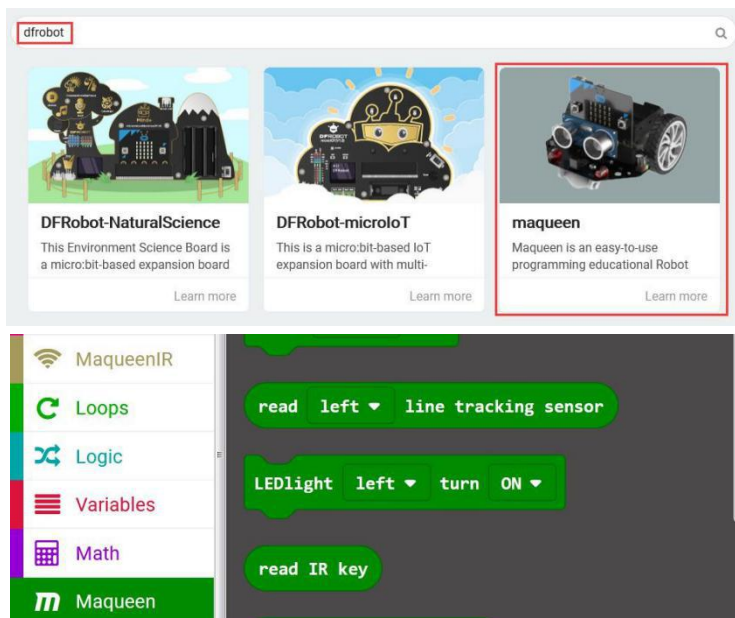
1. Click to open the Makecode programming web :

<https://makecode.microbit.org/#editor>



## 2. Import Extensions for Maqueen:

- 1) Click **More**
- 2) Click **Extensions**
- 3) Search **dfrobot**
- 4) Click to select **Maqueen**



## 3. Examples



Maqueen End Program: [https://makecode.microbit.org/\\_3fiYv2b8zc2y](https://makecode.microbit.org/_3fiYv2b8zc2y)

The screenshot shows two parts of the Microbit code. The left part is a 'When Powered On' block with a 'Wireless Setup Group 1' block. Below it is a 'When Wireless Data Received' block with three 'If receivedString = "LEDL"' and 'If receivedString = "LEDR"' conditions. Each condition has a corresponding 'LED Light Left/Right Turn On' block. Below these are 'Motor Stop All', 'LED Light Left Turn Off', and 'LED Light Right Turn Off' blocks. The right part is another 'When Wireless Data Received' block with four 'If name = "F"', 'If name = "B"', 'If name = "L"', and 'If name = "R"' conditions. Each condition has a 'Motor' block with specific direction, speed, and mapping settings. For example, 'F' sets all motors to forward with a speed of 255, while 'L' and 'R' set the left and right motors to forward with a speed of 20.

## 2. Ultrasonic Obstacle Avoidance Vehicle

In this sample program, the front ultrasonic sensors on Maqueen car will detect the distance between itself and obstacle ahead. If the distance is less than 30cm, the robot car will turn left or right randomly to avoid the obstacle.

**Program Link:** [https://makecode.microbit.org/\\_FxFPvxDzVR8P](https://makecode.microbit.org/_FxFPvxDzVR8P)

**Program Screenshot:**

```
无限循环
  如果为 超声波距离 cm < 30 与 超声波距离 cm ≠ 0 则
    将 strip 设为 随机选取 true 或 false
    如果为 strip = true 则
      电机 左侧 方向 正转 速度 255
      电机 右侧 方向 正转 速度 0
      暂停 (ms) 800
    如果为 strip = false 则
      电机 左侧 方向 正转 速度 0
      电机 右侧 方向 正转 速度 255
      暂停 (ms) 800
    否则
      电机 全部 方向 正转 速度 255
```