
MAX:BOT

Installation Manual



DFROBOT
DRIVE THE FUTURE

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Say Hello

Hello, my name's Max:Bot. I'm made of a car body, two wheels, a main board, a Micro:bit, a ultrasonic sensor, a 3-channel line-tracking sensor and two crash sensors (see Figure 1). I was disassembled into many small parts for the convenience of transportation. Can you reassemble me into a car according to this manual?

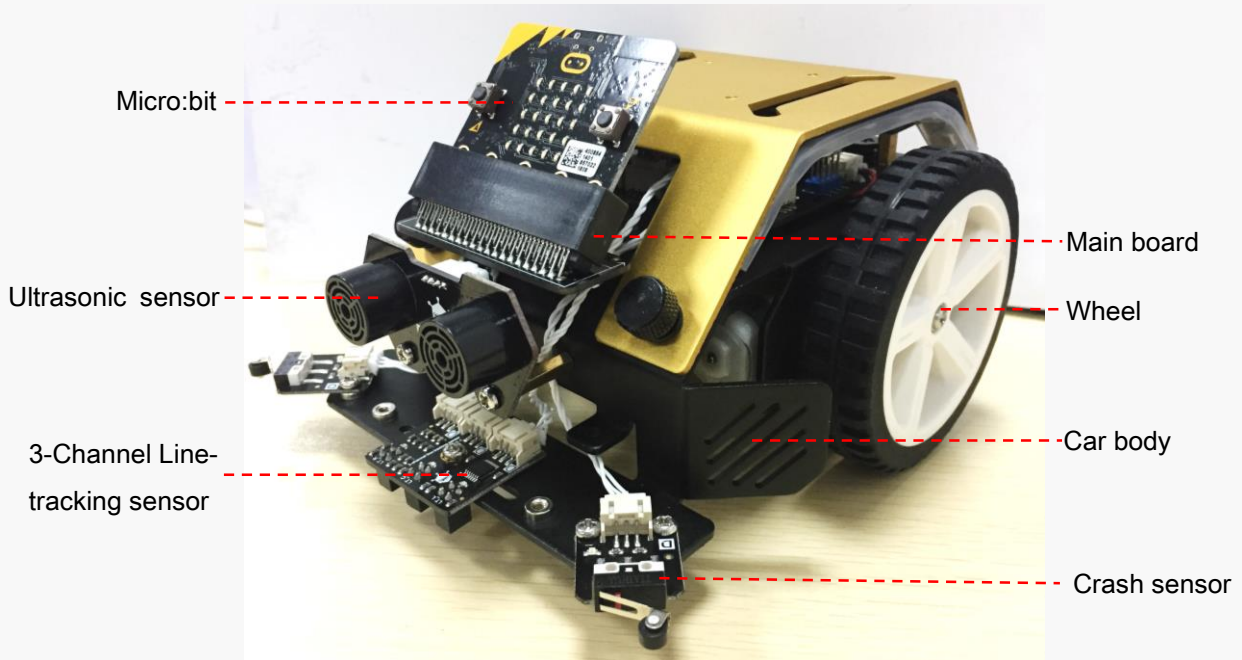

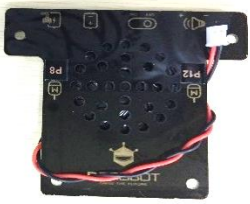
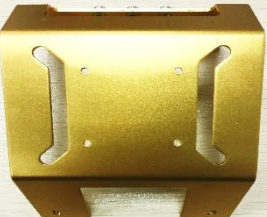
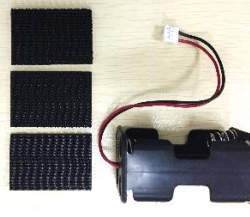




Figure 1. A selfie of Max:bot

Before we start, please check your equipment first according to the following list.

Parts List			
Car Body ×1		Speaker ×1	
Car Roof ×1		Battery Case ×1	
Micro:bit ×1		Supporting Wheel ×1	

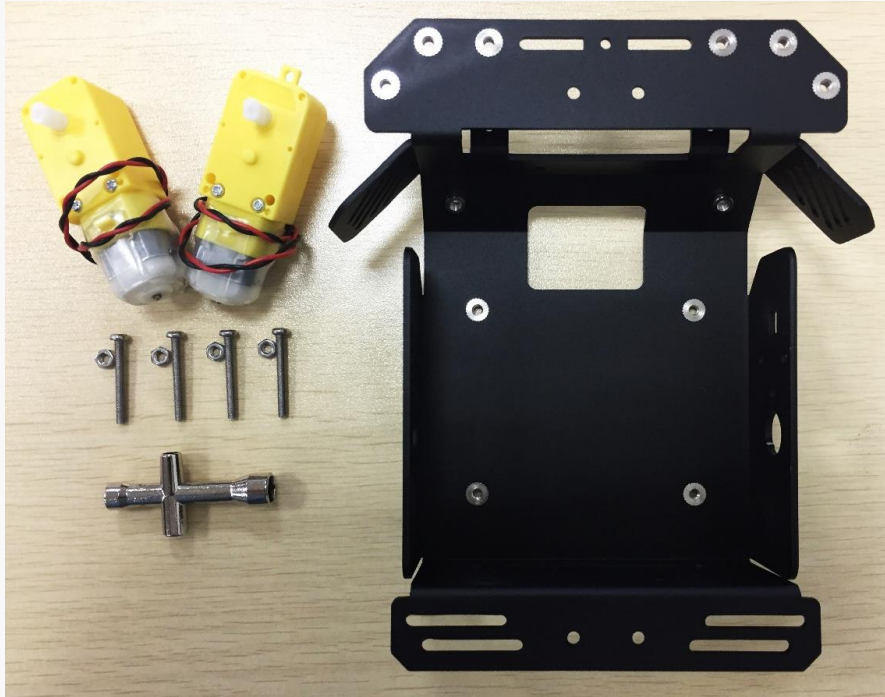
Wheel ×2		Main Board ×1	
Crash Sensor ×2		Wire ×7	
3-Channel Line-tracking sensor ×1		DC Motor ×2	
Ultrasonic Sensor ×1		Lighting String ×2	
MicroUSB ×1		Tools	

Once you have the equipment ready, let's start assembling the Max:Bot!

STEP1 Install the DC motors

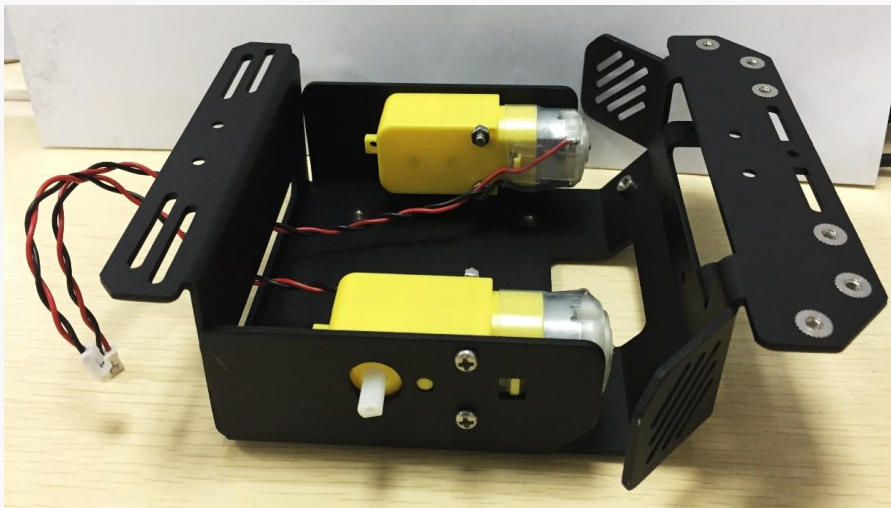
Parts List

DC Motor ×2, Car Body ×1, Small Cross Sleeve ×1



Assembly Guide

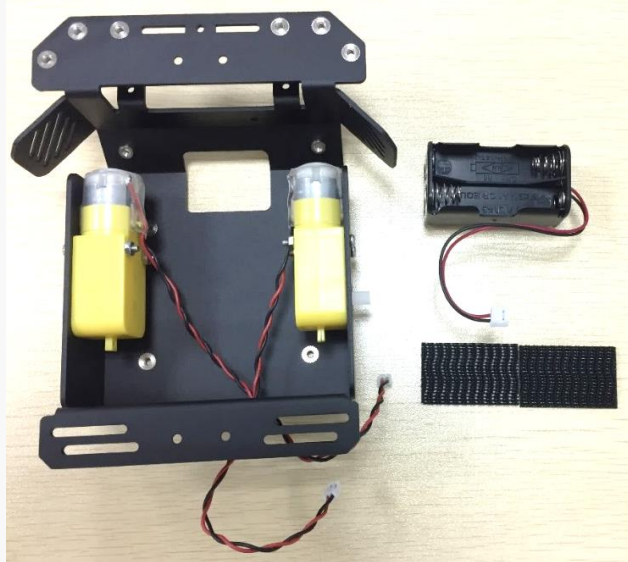
- (1) Fix the two DC motors to the bottom of the car body.
- (2) Pass the two motor wires through the back of the car body.



STEP2 Install the battery case

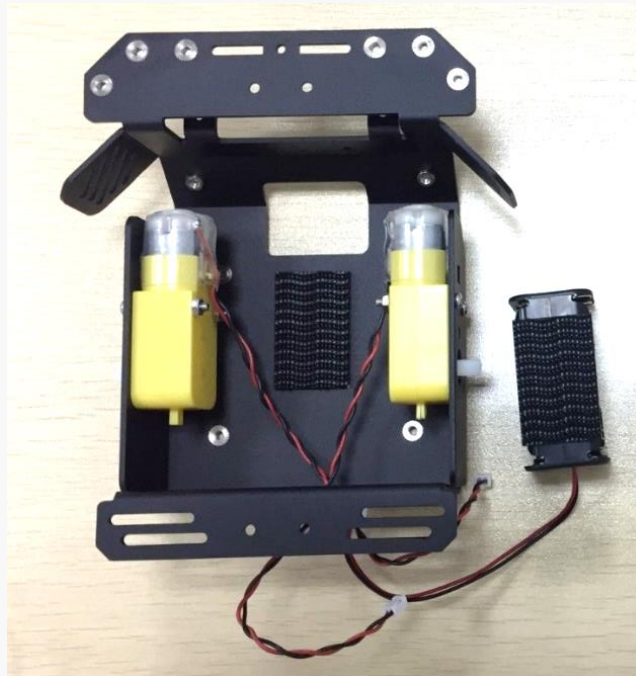
Parts List

Battery Case ×1, Car Body ×1



Assembly Guide

(1) Attach a Velcro to the bottom of the car body and the bottom of the battery case respectively.



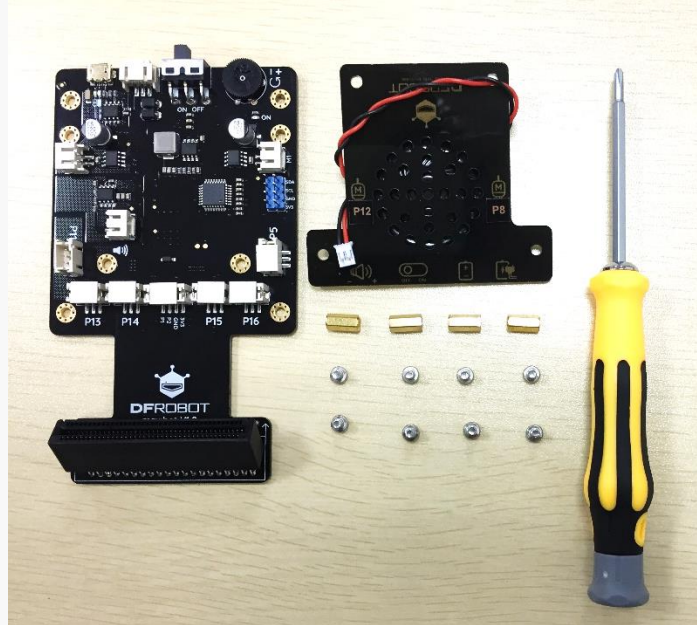
(2) Fix the battery base to the bottom of the car body and pass the wire of the battery case through the back of the car body.



STEP3 Install the speaker

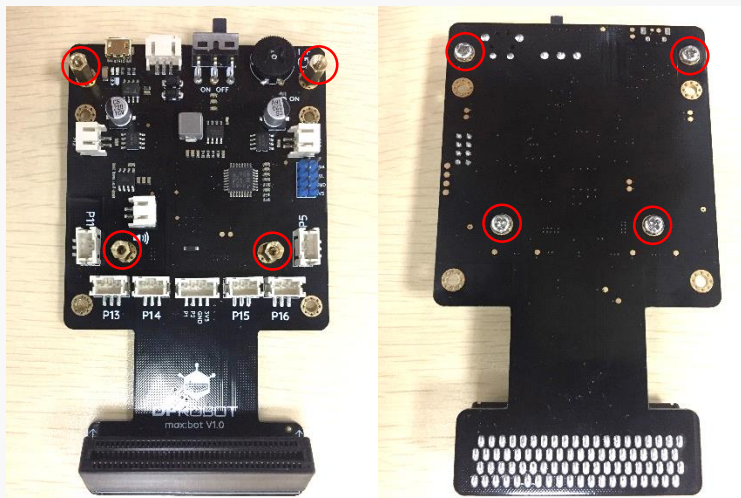
Parts List

Speaker ×1, Main Board ×1, Phillips Pan Head Screw ×8, Locknut ×4, Screwdriver ×1

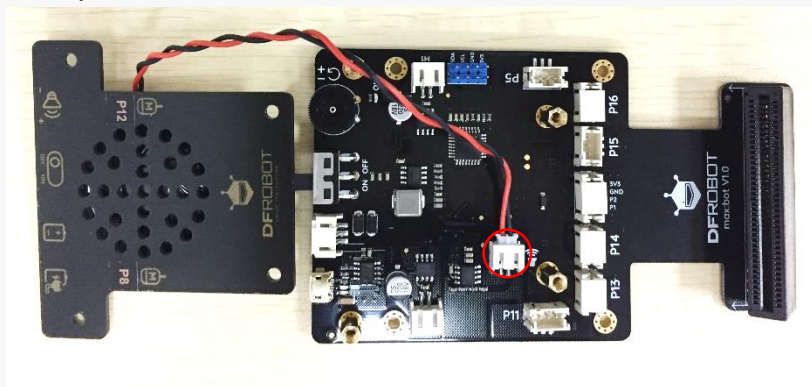


Assembly Guide

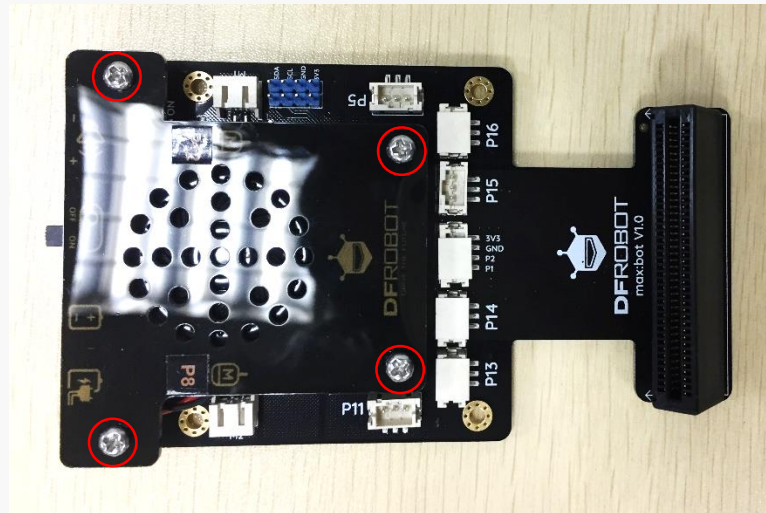
(1) Fix the four locknuts to the main board with four screws.



(2) Connect the speaker to the main board.



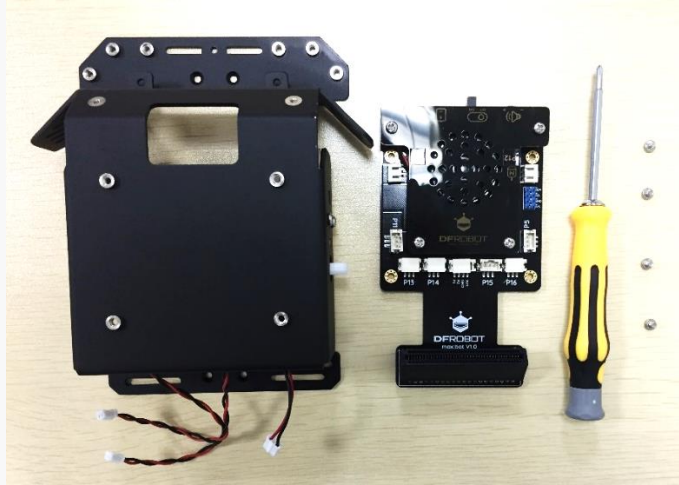
(3) Fix the speaker to the main board with four screws (Note: The speaker wire is hidden in the gap between the speaker and the main board).



STEP4 Install the main board

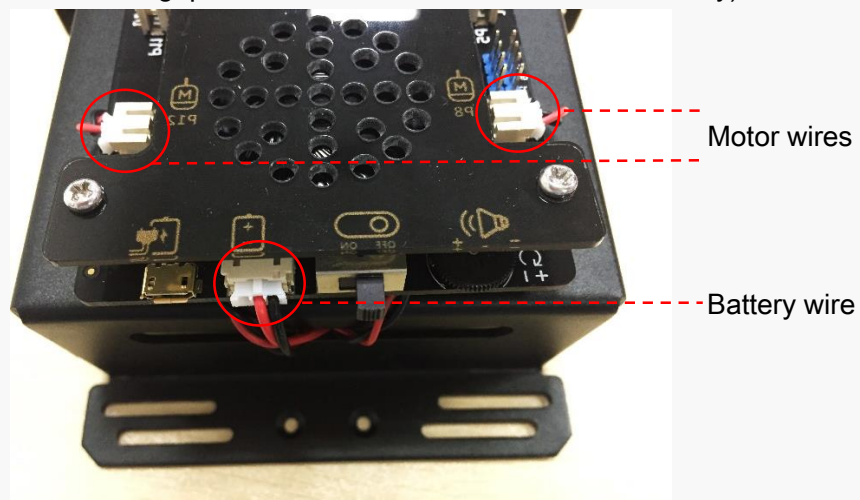
Parts List

Main Board ×1, Car Body ×1, Phillips Pan Head Screw ×4, Screwdriver ×1



Assembly Guide

(1) Connect the two motor wires and the battery wire to the main board (Note: The two motor wires are hidden in the gap between the main board and the car body).



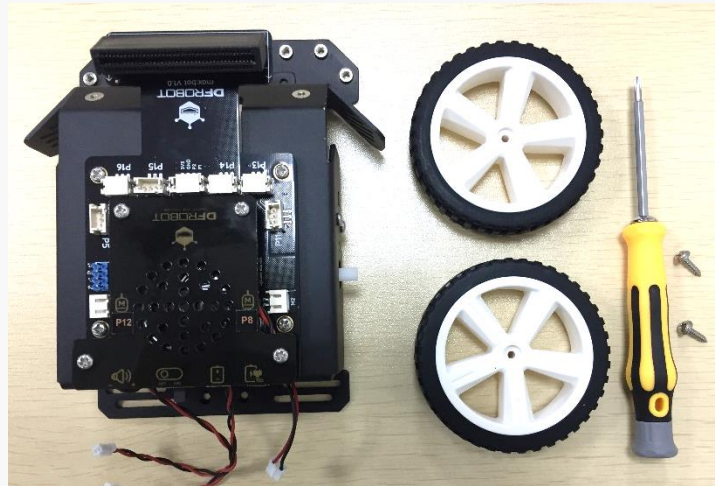
(2) Fix the main board to the car body with four screws.



STEP5 Install the wheels

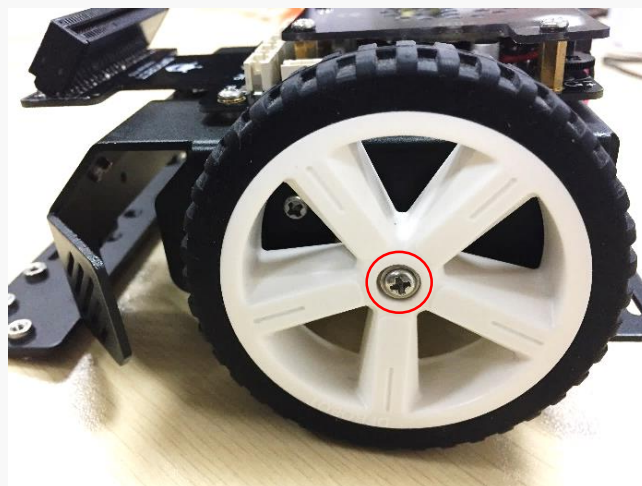
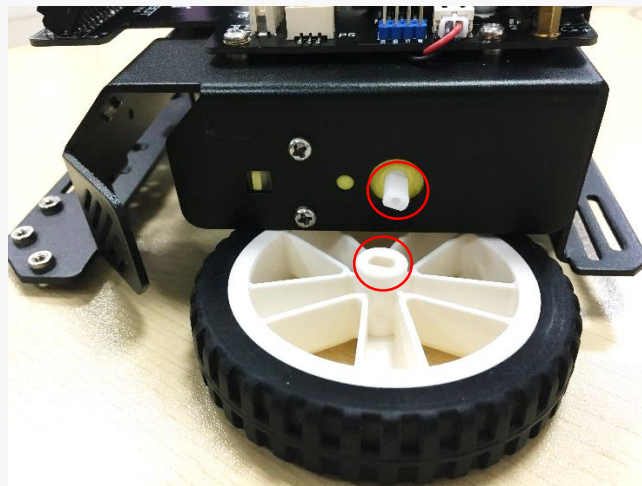
Parts List

Wheel ×2, Car Body ×1, Phillips Pan Head Screw ×2, Screwdriver ×1



Assembly Guide

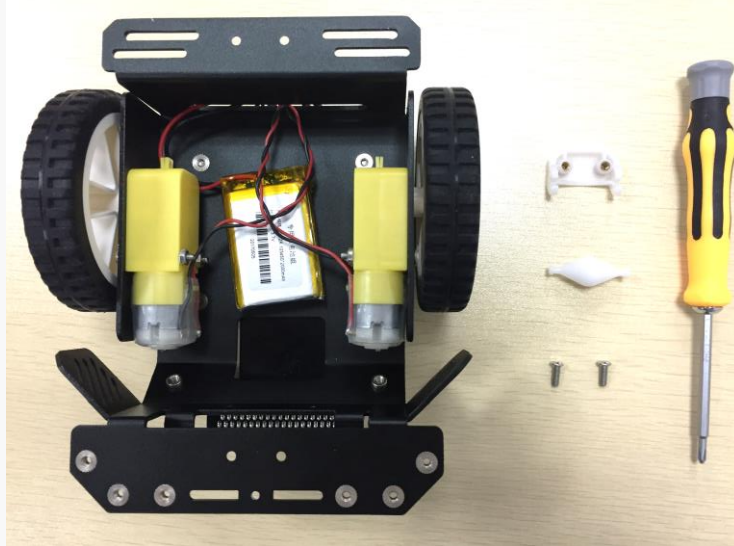
Fix the two wheels to the two sides of the car body with two screws.



STEP6 Install the supporting wheel

Parts List

Supporting Wheel ×1, Car Body ×1, Phillips Pan Head Screw ×2, Screwdriver ×1

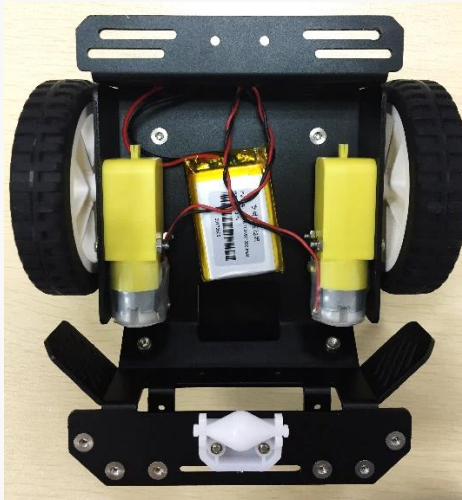


Assembly Guide

(1) Assemble the supporting wheel.



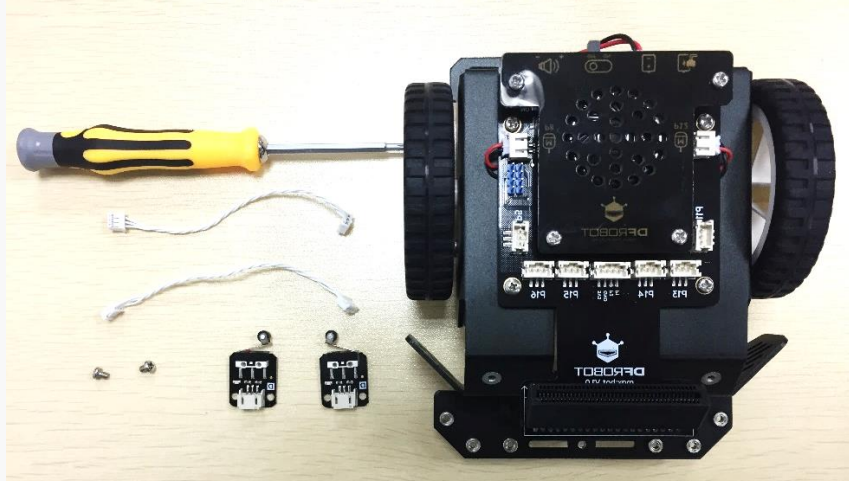
(2) Fix the supporting wheel to the bottom of the car body with two screws.



STEP7 Install the crash sensors

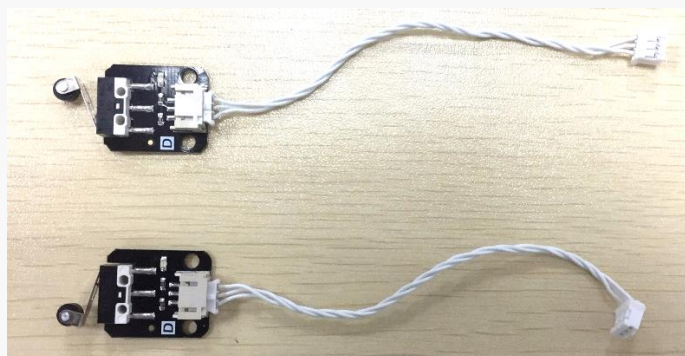
Parts List

Crash sensor ×2, Car Body ×1, Wire ×2, Phillips Pan Head Screw ×2, Screwdriver ×1

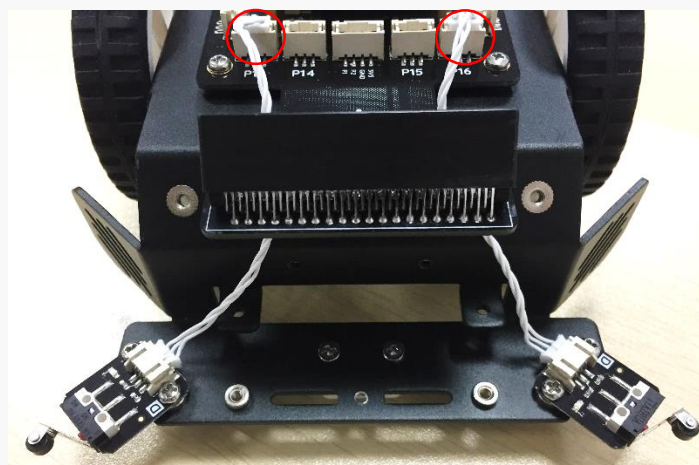


Assembly Guide

(1) Plug one end of the wire into the crash sensor.



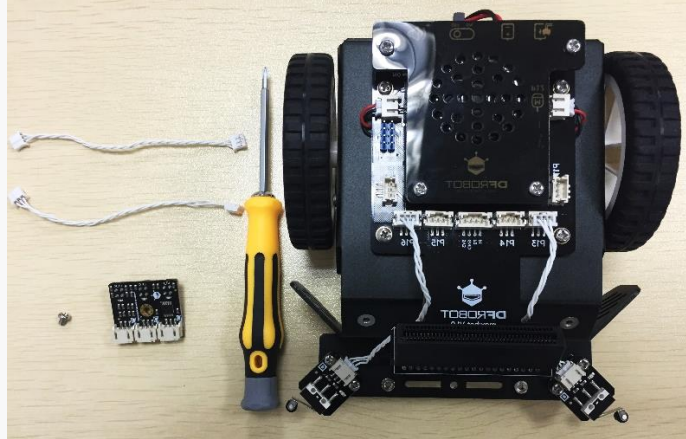
(2) Fix the two crash sensors to the car body with two screws and plug the other ends of the two wires into P13 and P16 on the main board.



STEP8 Install the 3-channel line-tracking sensor

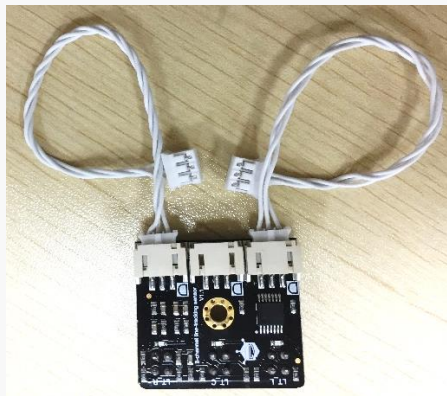
Parts List

3-Channel Line-tracking Sensor ×2, Car Body ×1, Wire ×2, Phillips Pan Head Screw ×1, Screwdriver ×1

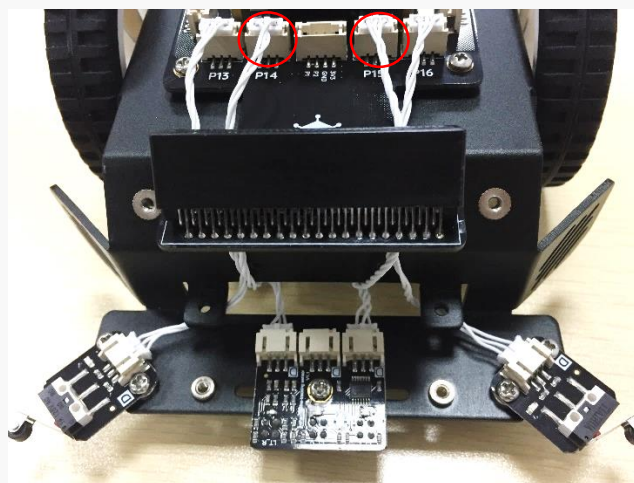


Assembly Guide

(1) Plug one end of the wire into the line-tracking sensor.



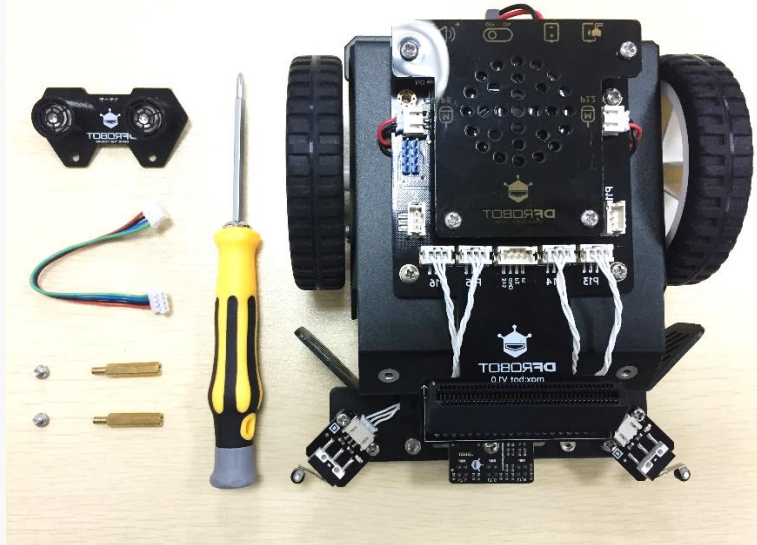
(2) Fix the line-tracking sensor to the car body with one screw and plug the other ends of the two wires into P14 and P15 on the main board.



STEP9 Install the ultrasonic sensor

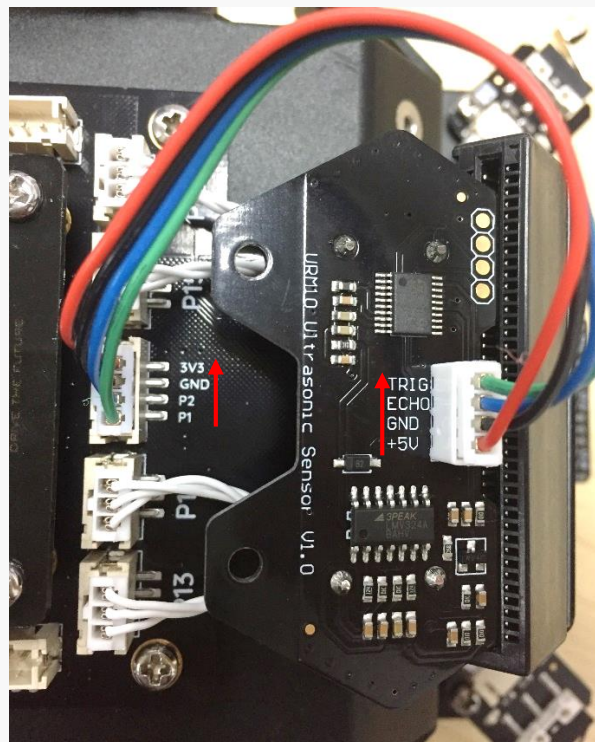
Parts List

Ultrasonic Sensor × 1, Car Body × 1, Phillips Pan Head Screw × 2, Locknut × 2, Screwdriver × 1

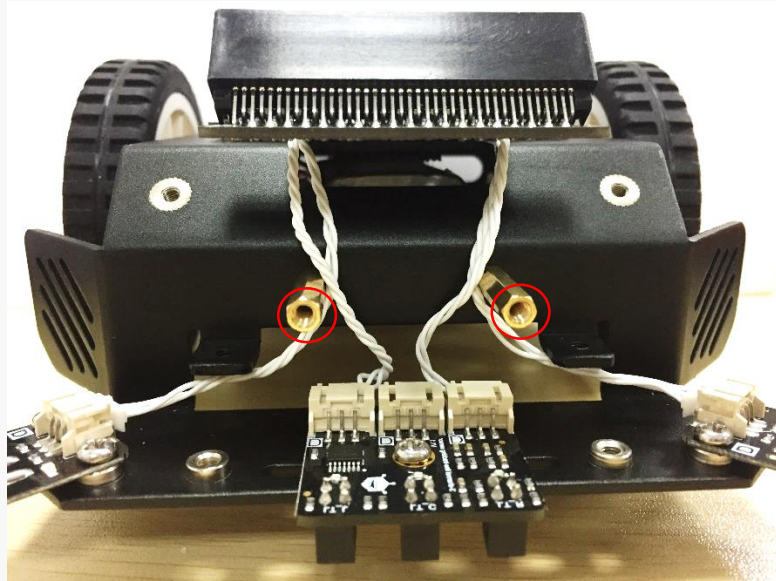


Assembly Guide

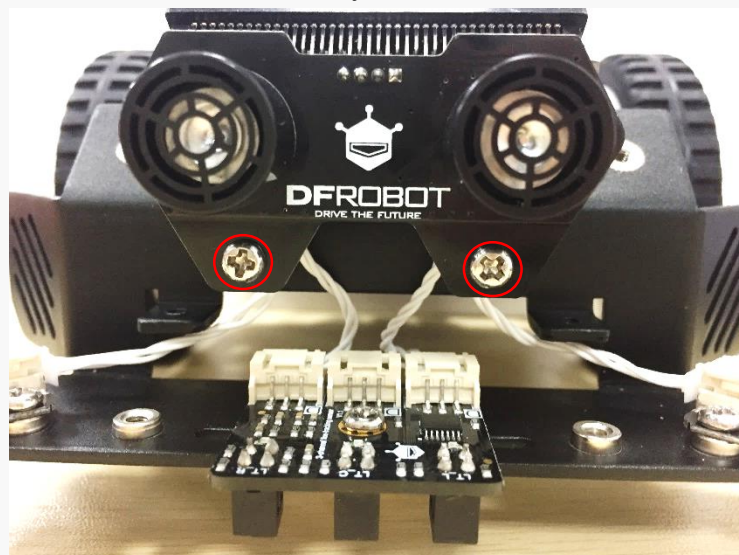
(1) Wire the ultrasonic sensor and main board.



(2) Screw the two locknuts into the front of the car body.



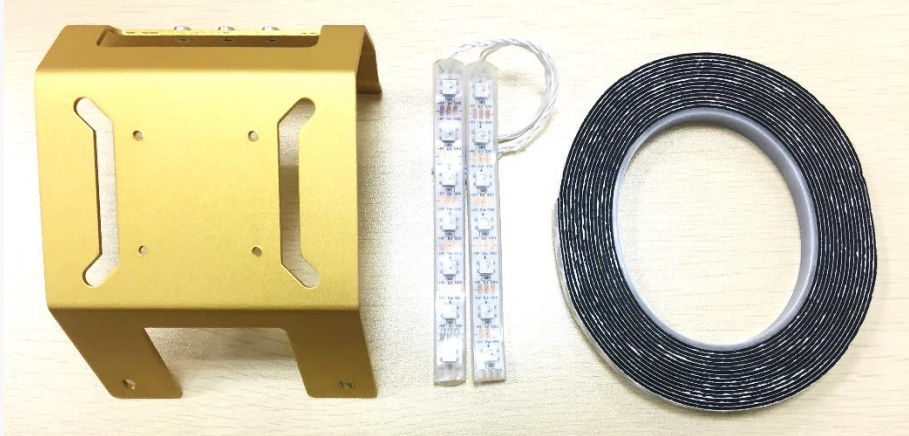
(3) Fix the ultrasonic sensor to the car body with two screws.



STEP10 Install the lighting strings

Parts List

Lighting String ×2, Car Roof ×1, Double-sided Tape ×1

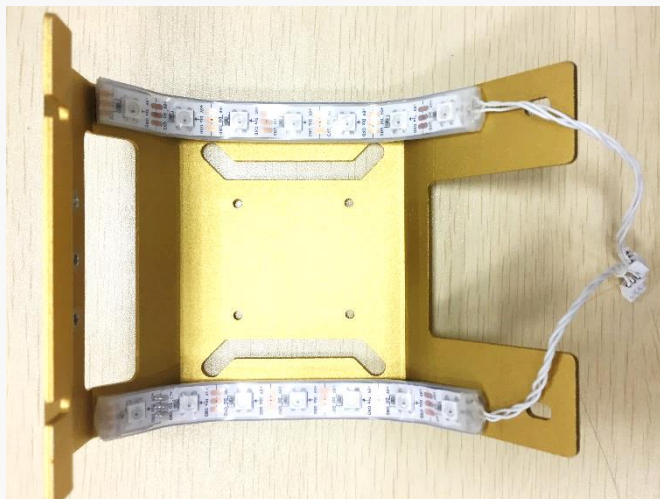


Assembly Guide

(1) Stick two pieces of double-sided tape to the car roof.



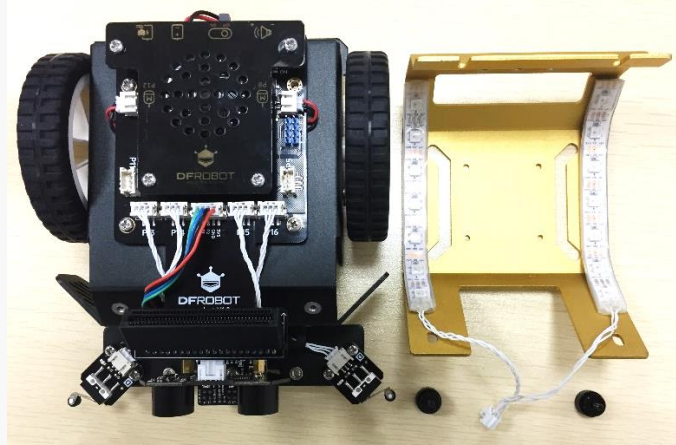
(2) Attach the two lighting strings to the double-sided tape on the car roof (Note: Make sure the lighting string faces the correct direction).



STEP11 Install the car roof

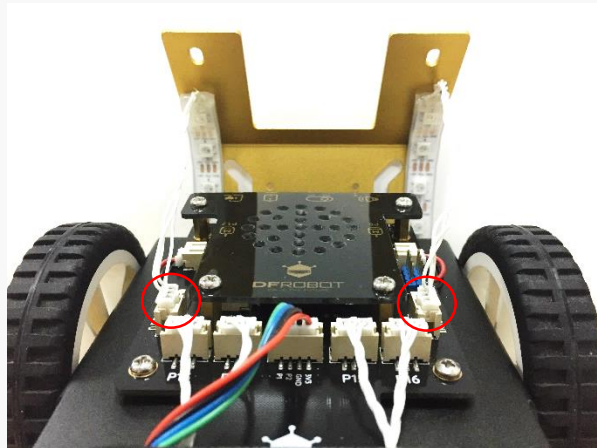
Parts List

Car Roof ×1, Car Body ×1, Screw ×2

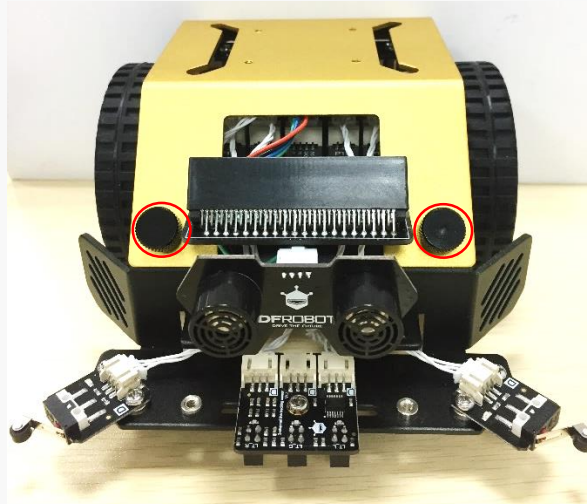


Assembly Guide

(1) Plug the two wires of the lighting strings into P5 and P11 on the main board.



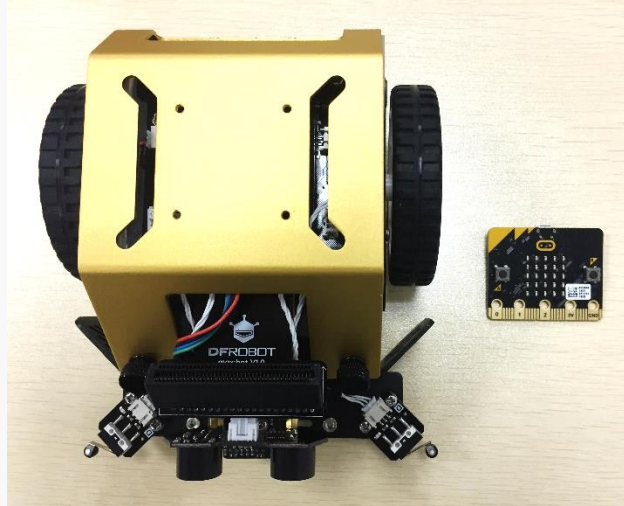
(2) Fix the car roof to the car body with two screws.



STEP12 Install the Micro:bit

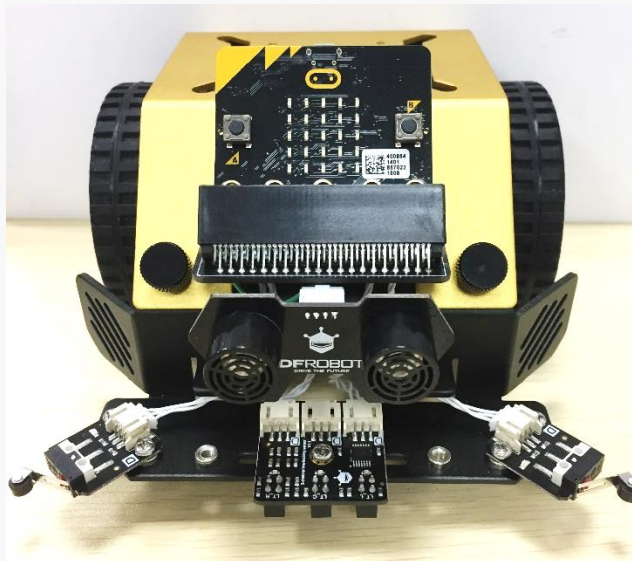
Parts List

Car Body ×1, Micro:bit ×1



Assembly Guide

Plug the Micro:bit into the main board (Note: Make sure the Micro:bit faces the correct direction).



Congratulations! You have successfully assembled the Max:Bot!