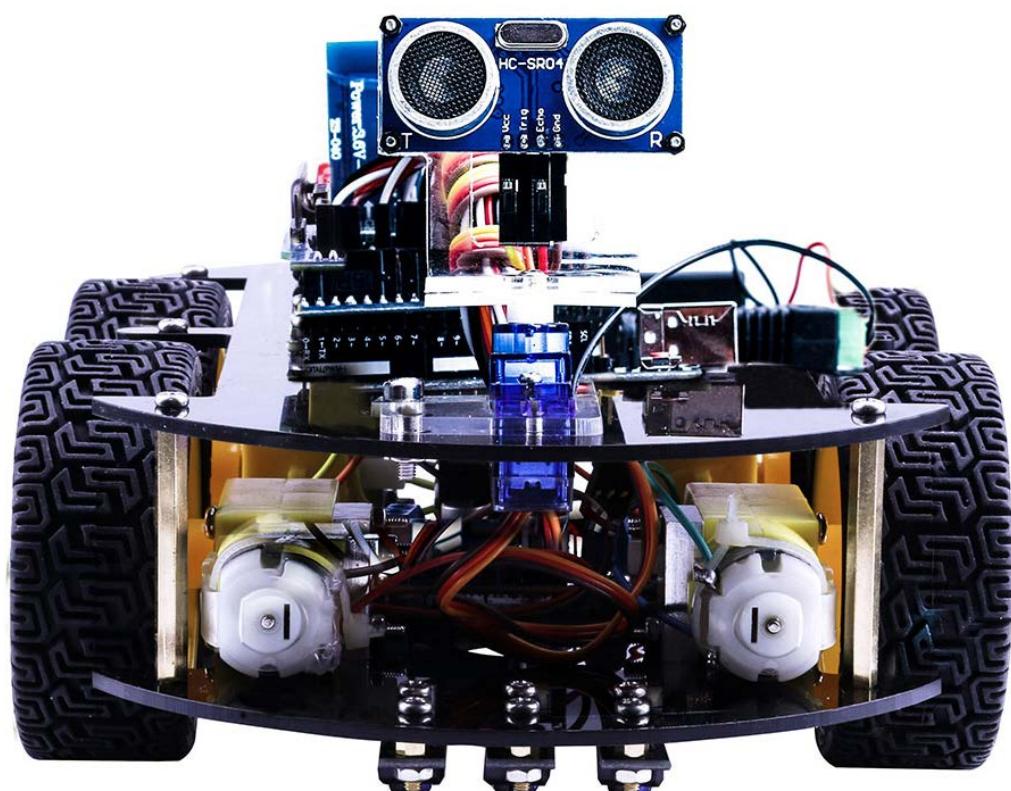


Play with Robot-Assemble The Car

(The Four-wheels car)



Preface

Our Company

Established in 2011, Elegoo Inc. is a professional manufacturer and exporter that is concerned with the design, development production and marketing of arduino, 3d printers, raspberry pi and STM32. We are located in Shenzhen which is known as Chinese Silicon Valley. All of our products comply with international quality standards and are greatly appreciated in a variety of different markets throughout the world.

Our official website is: [Http://www.elegoo.com](http://www.elegoo.com)

Our USA amazon shop is: [Http://www.amazon.com/shops/A2WWHQ25ENKVJ1](http://www.amazon.com/shops/A2WWHQ25ENKVJ1)

Our Tutorial

The tutorial is for beginners. In the tutorial, you can learn how to use arduino controller board, sensors and components. You can also learn the basic knowledge of all the parts. But if you want to study arduino systematically, we recommend you to buy the book "Arduino Cookbook" which is written by Michael Margolis.

This Tutorial

This tutorial will show you how to assemble the car and offer you the basic program to make all the function come true.

If you want to learn more than the tutorial, you can search the Google.

Our after-sales

If you have any question or suggestion about our company, product or tutorial. Please send us a email. Our email address is service@elegoo.com

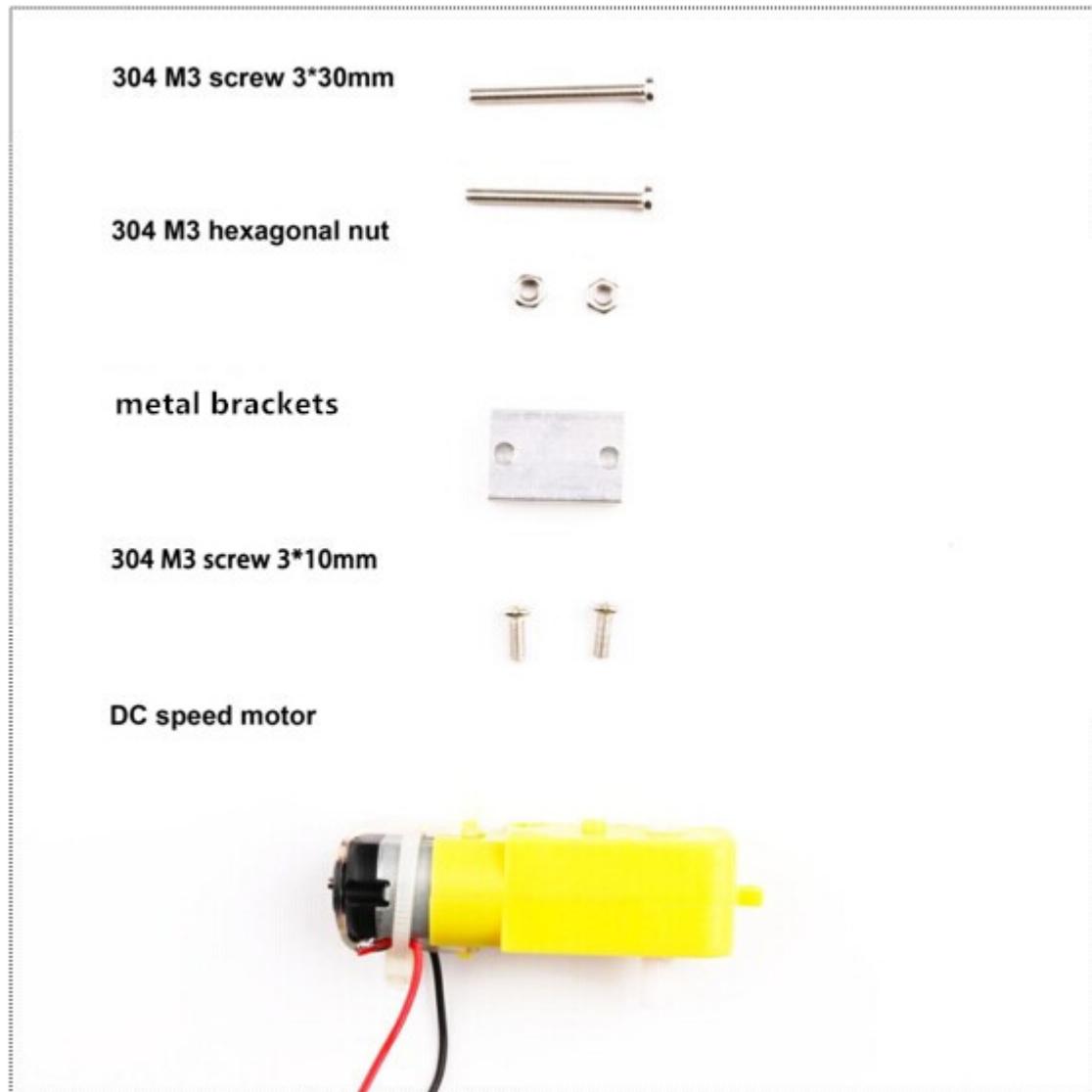
We will very appreciate and improve ourselves so that we can offer you a better service.

1. Assembly

This part will teach you to assemble every component step by step.

1.1、Assemble The Motor

Motor, screws, nuts and fixed parts needed



The assembly drawing

Fix the screw into the DC motor.

①



Attach the metal bracket to motor.

②



Twist the nut.

③



④

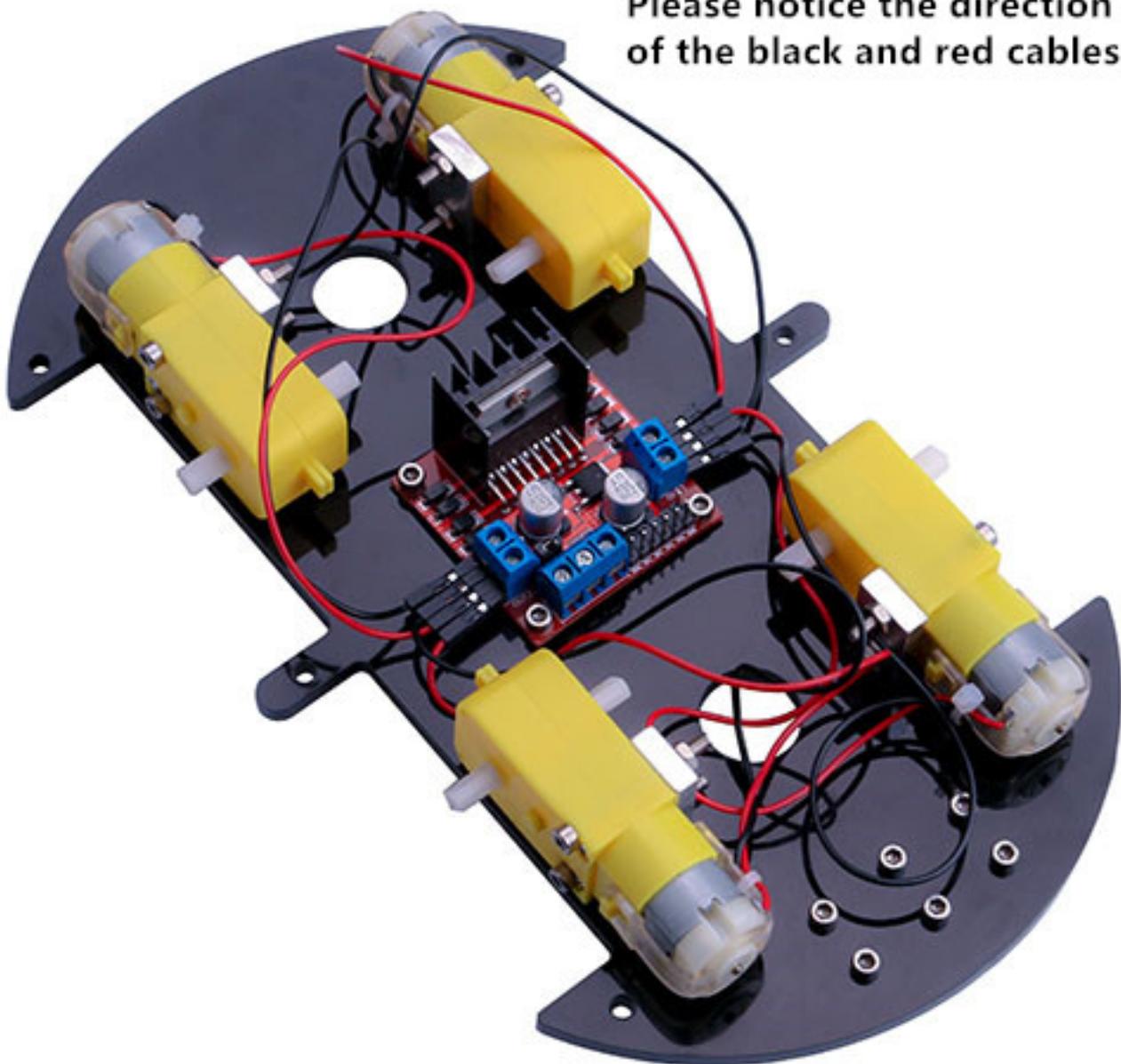


Attach the motor to the chassis like this.

⑤

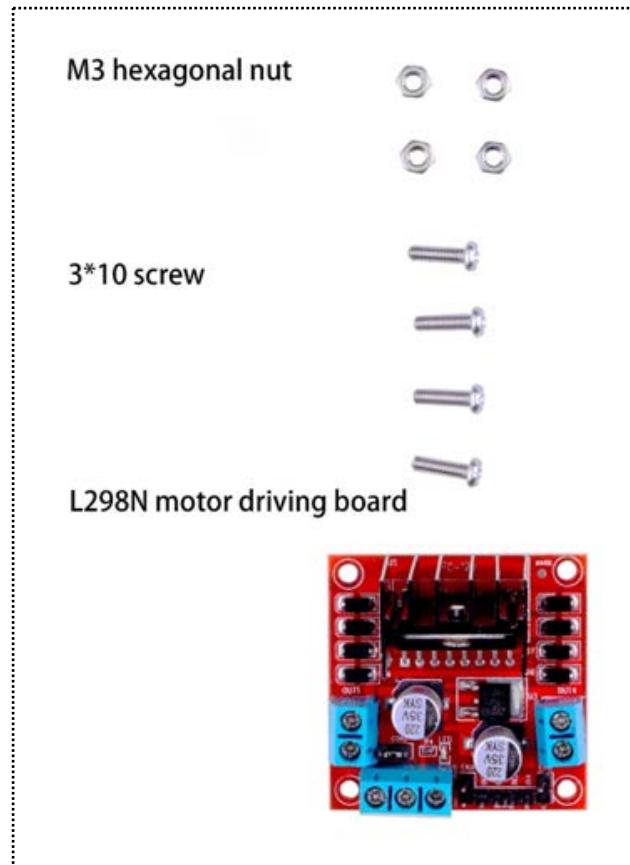


Please notice the direction
of the black and red cables.



2.2、Assemble The L298 Motor Driving Board

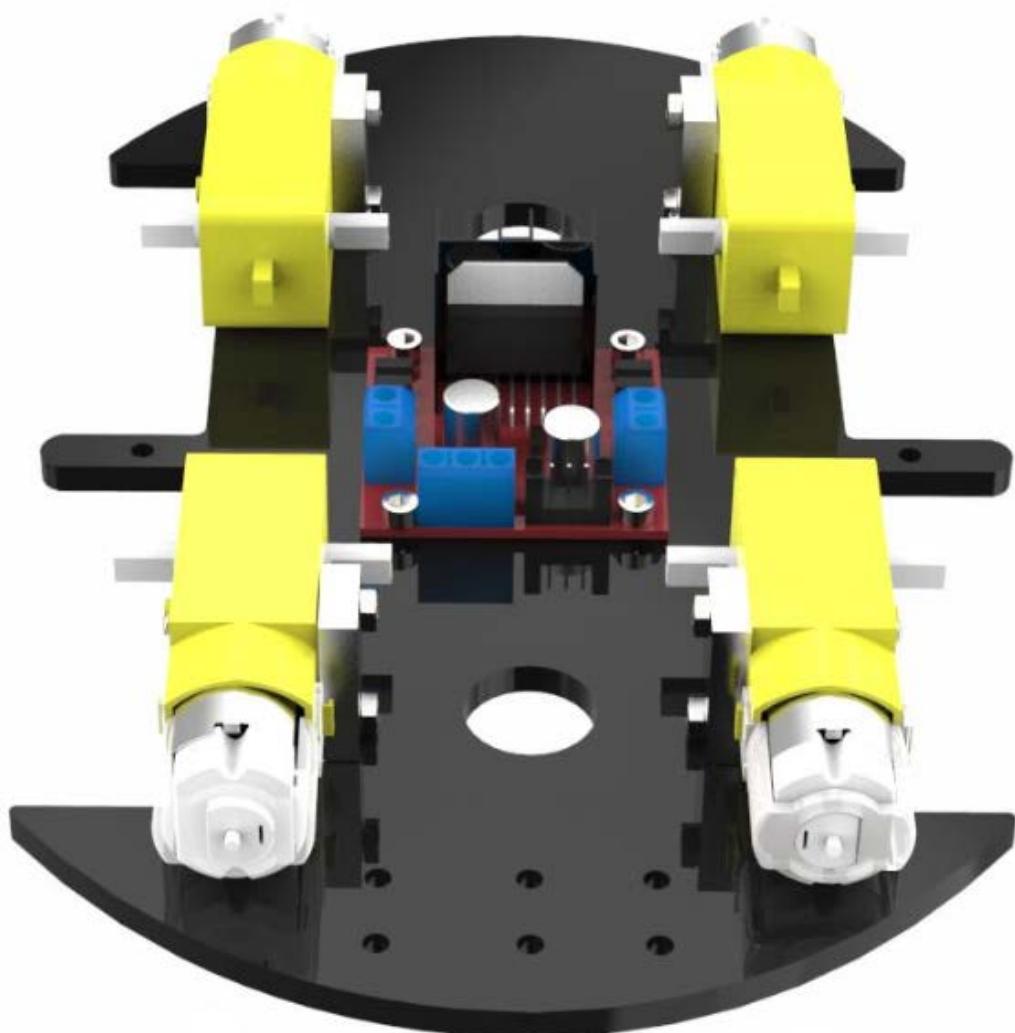
The motor driven board, screws and nuts needed



The assembly drawing

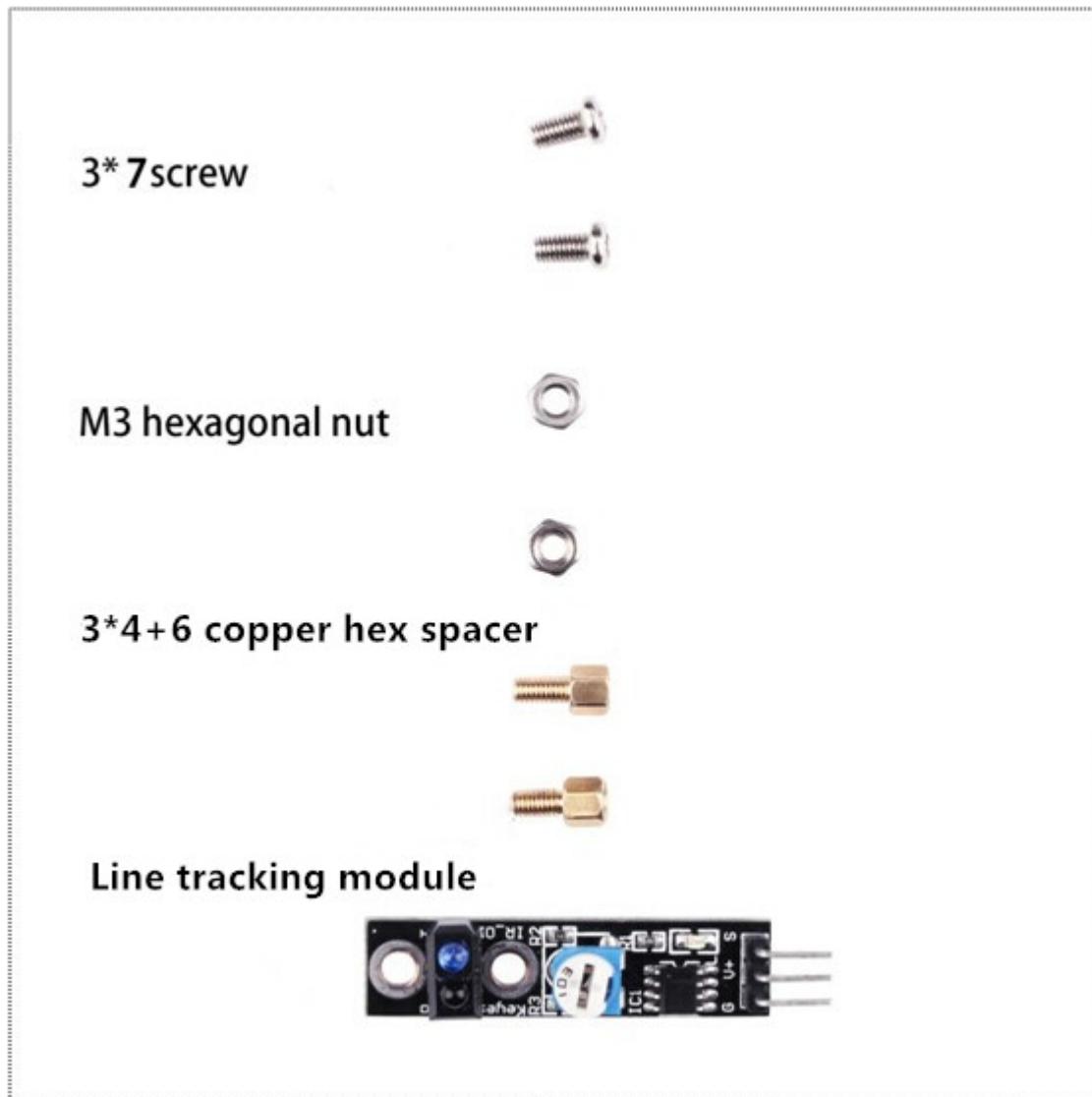
- ① Put the motor driven board
on the chassis. Then lock them
together.





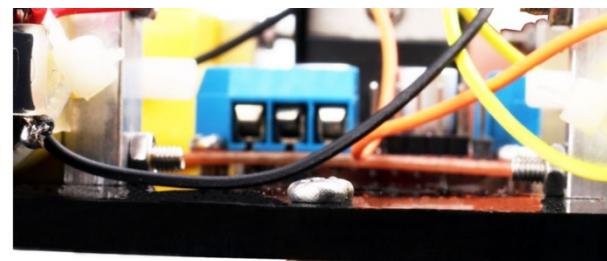
2.3、Assemble The Line Tracking Module

The tracking module, hex spacer, screws and nuts needed



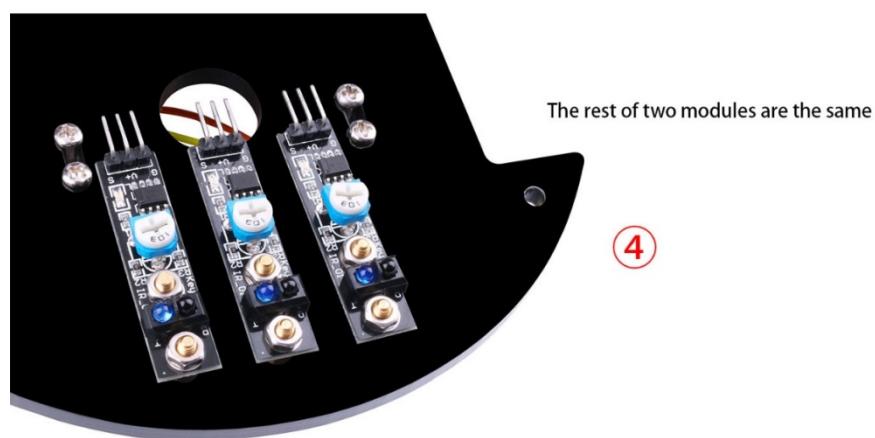
The assembly drawing

Put the hexagonal isolated double-screw bolt on the infrared tracing module



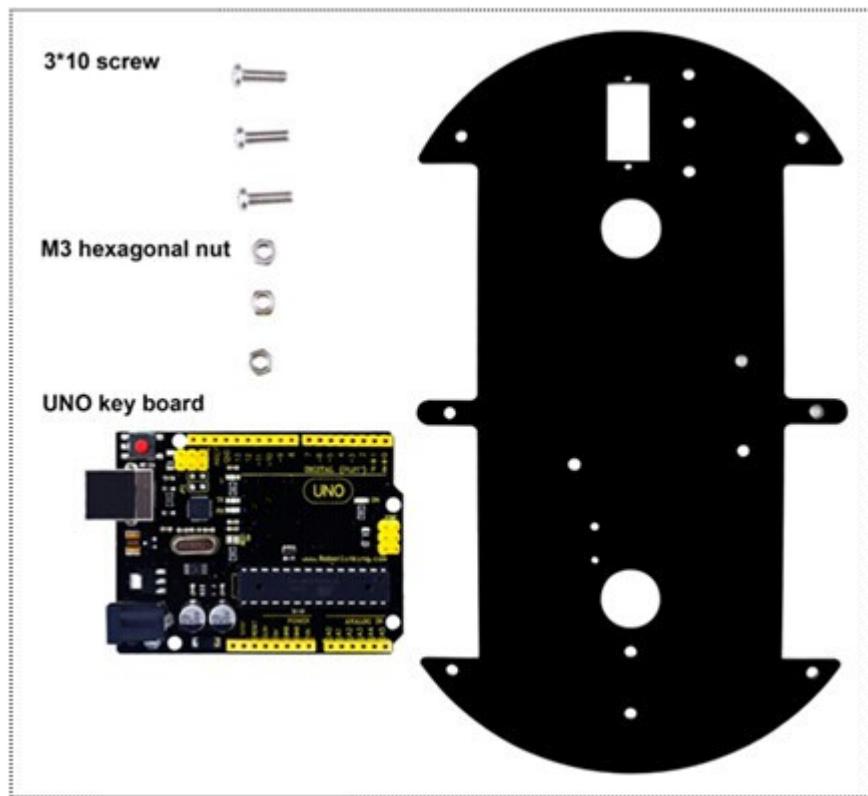
Put the tracing module assembled on the acrylic board

Screw on the screws

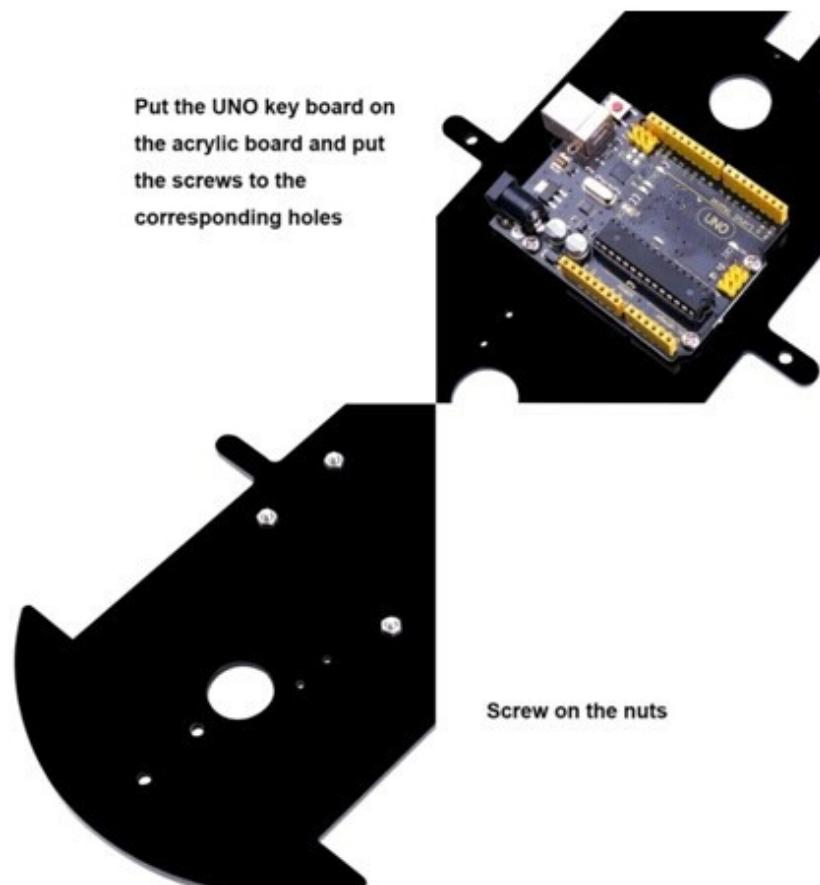


2.4、Assemble The UNO Controller Board

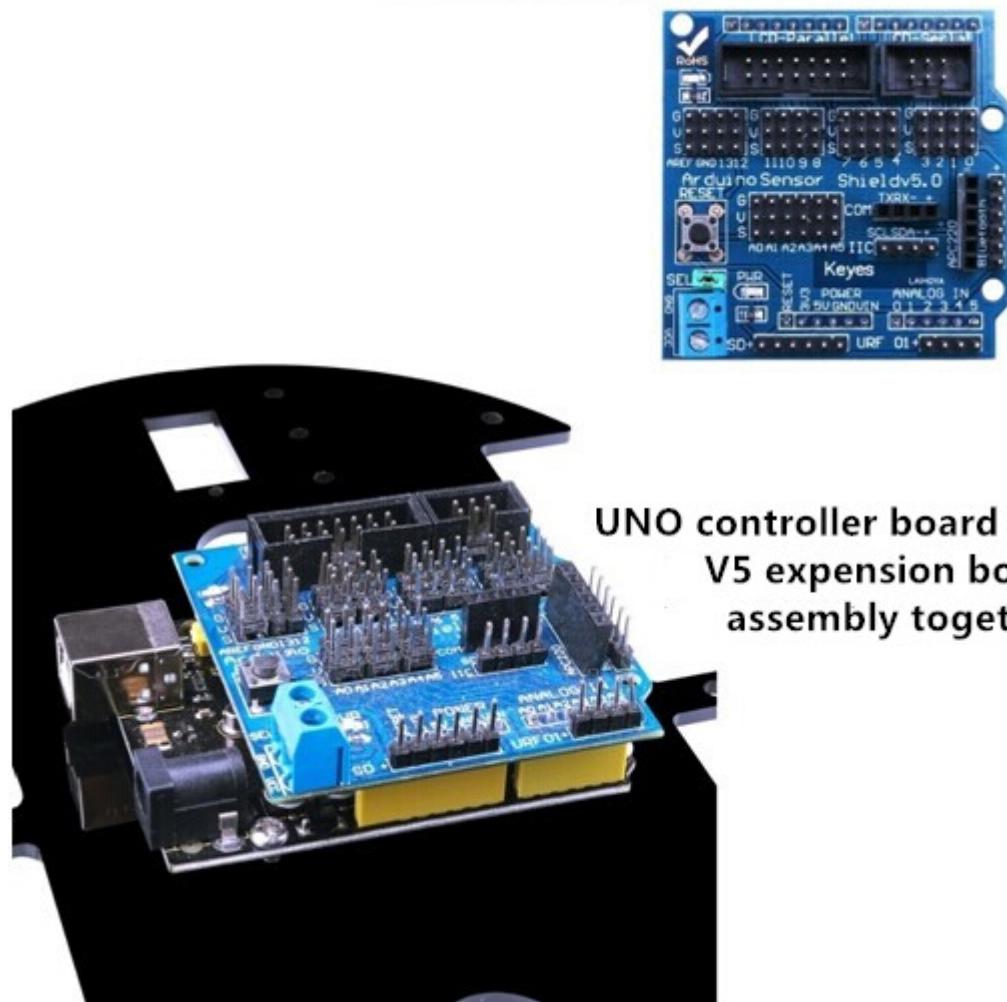
UNO controller board, screws, nuts and acrylic plate needed



The assembly drawing

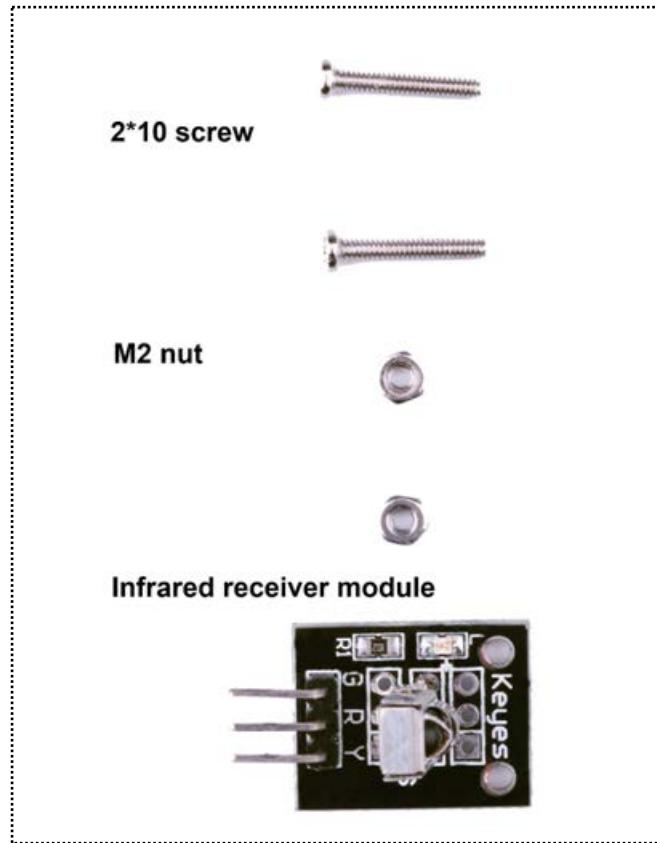


2.5、Assemble the V5.0 Expansion Board

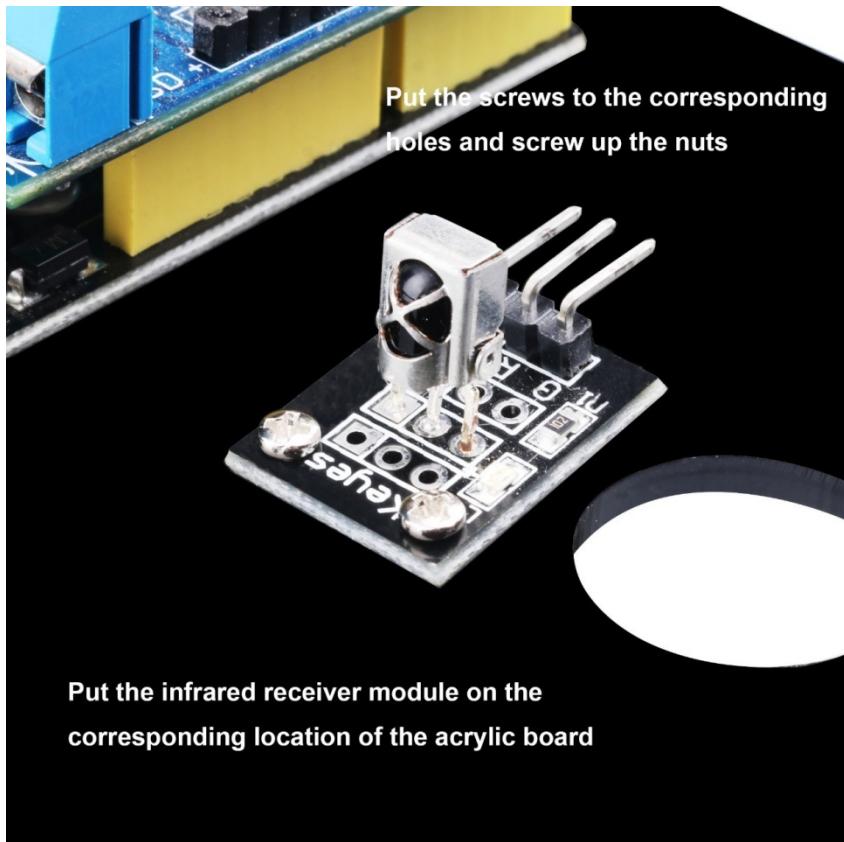


2.6、Assemble The IR Receiving module

The infrared receiving module, screws and nuts needed

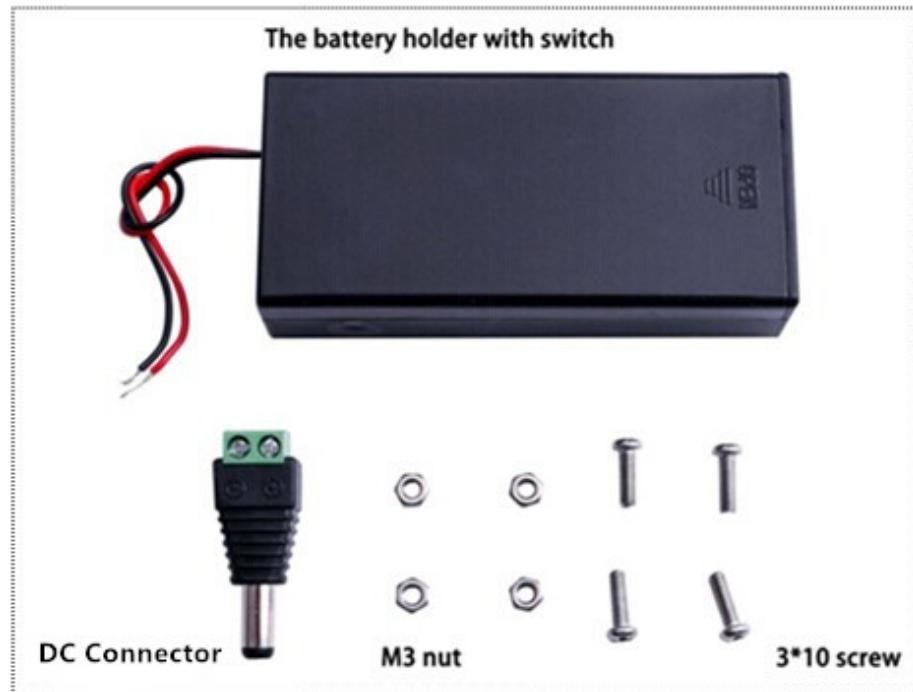


The assembly drawing

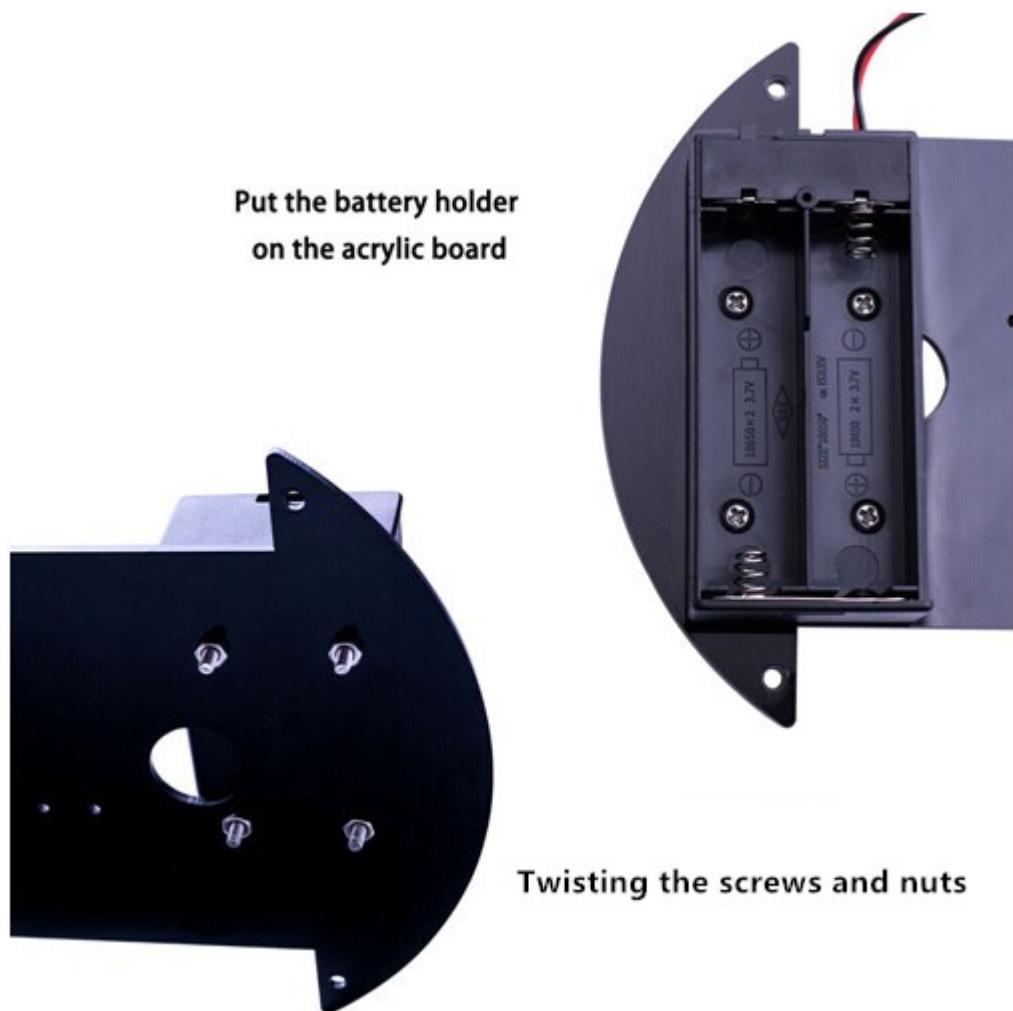


2.7、The assembly of battery box

The battery box, DC Connector and etc. (TIPS: Here the screws is phillips screws)



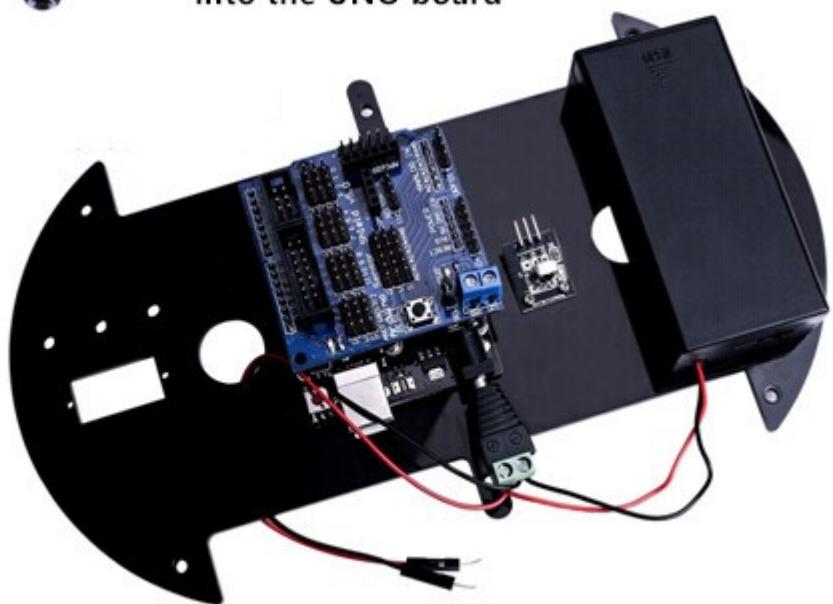
The assembly drawing





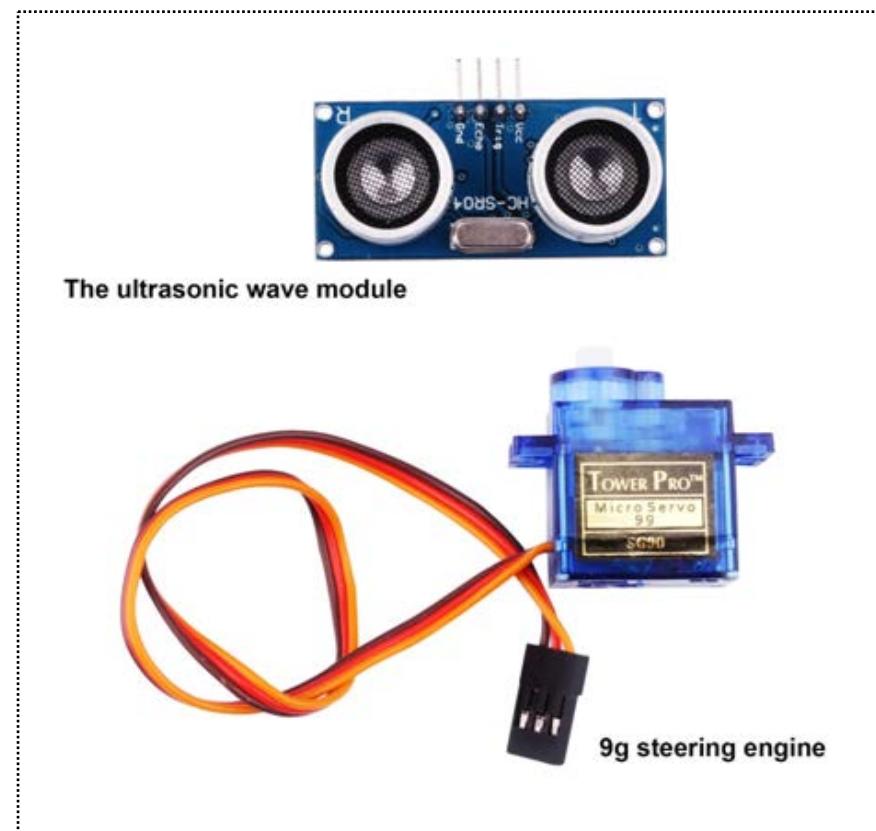
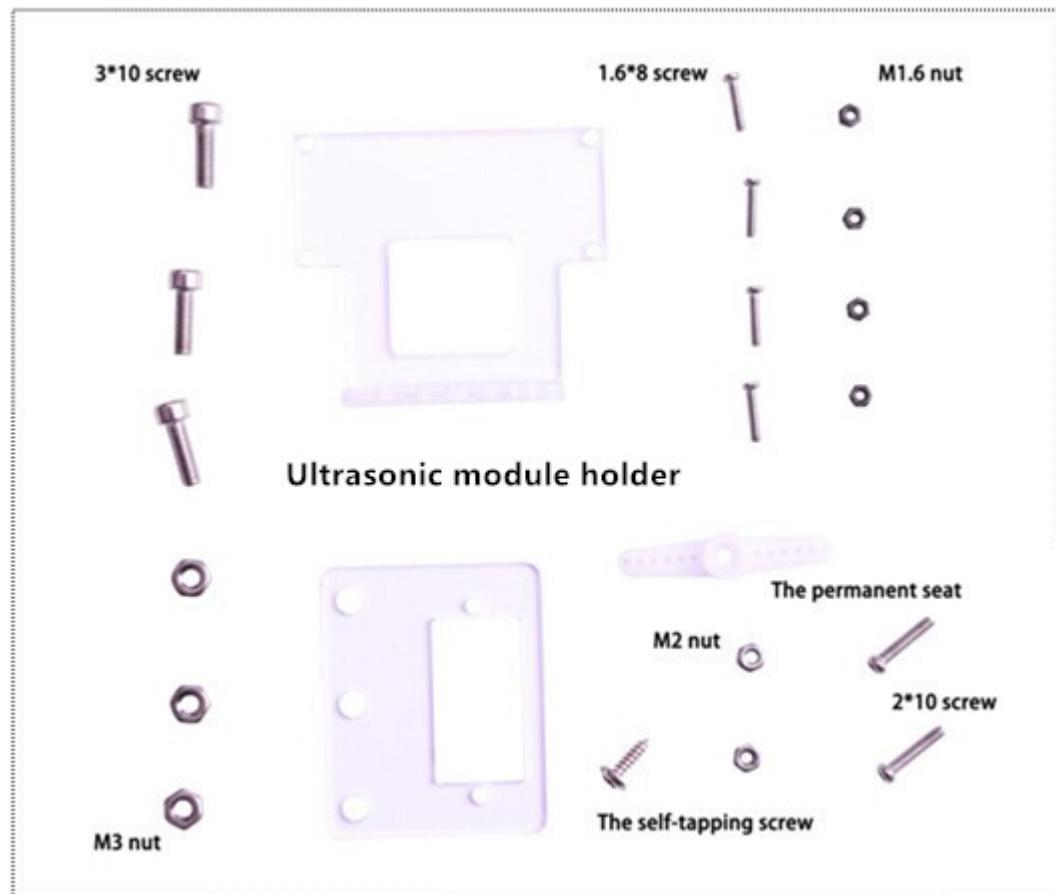
Connect the black and red lines to the DC connector

Insert the DC connector into the UNO board

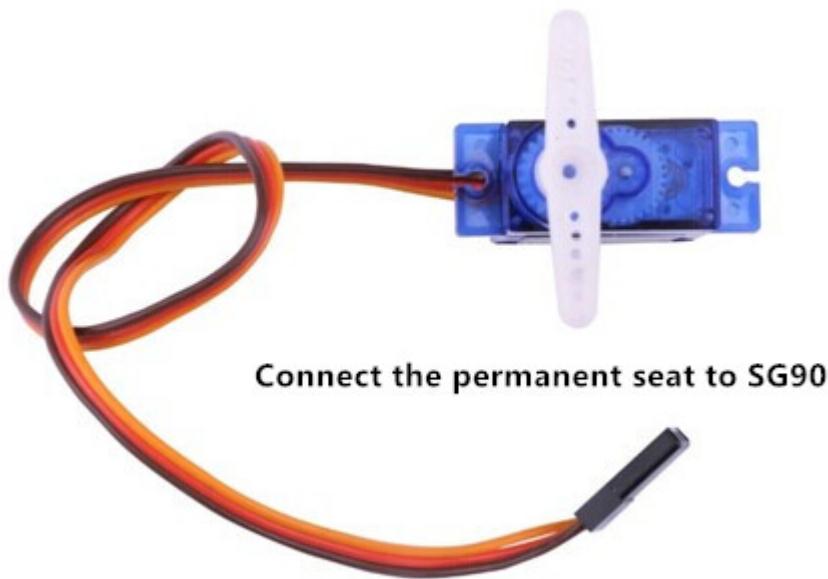


2.8、The assembly of ultrasonic wave pan-tilt

The ultrasonic module, sg90 servo, holder, screws and nuts needed



The assembly drawing



Put the holder on the permanent seat and twist the self-tapping screw



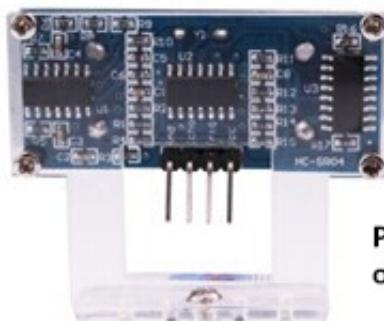


The ultrasonic wave module

1.6*8 screws

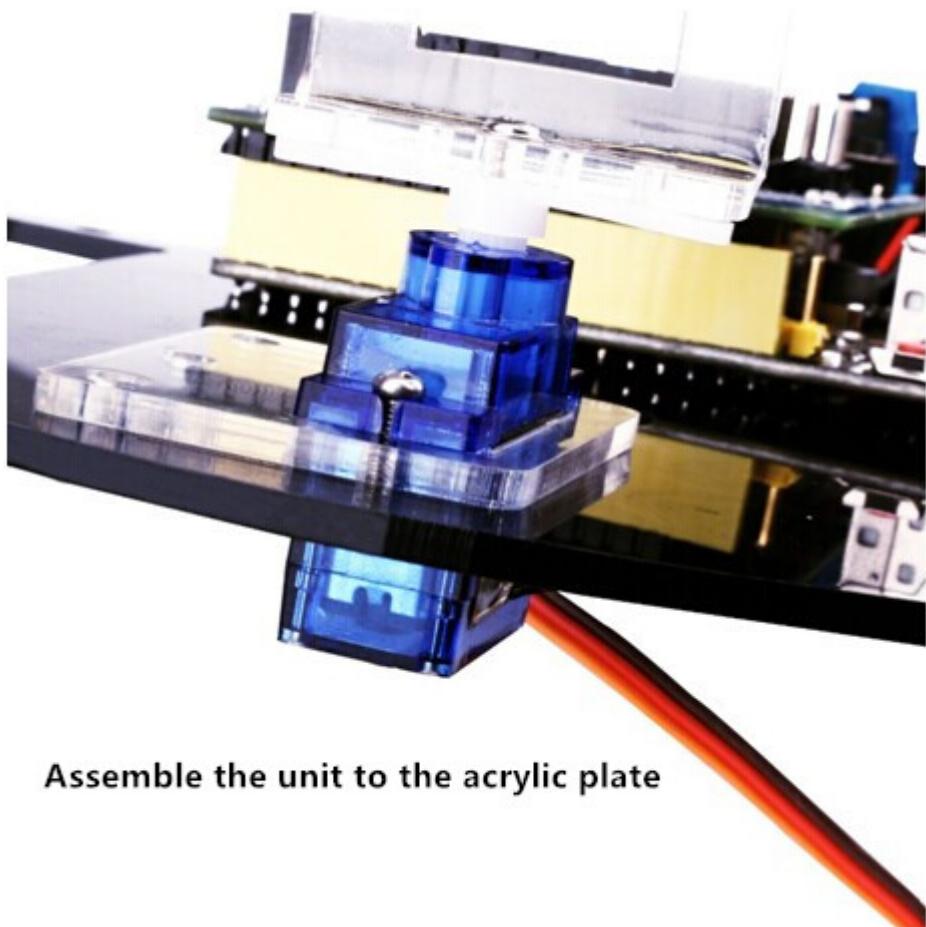
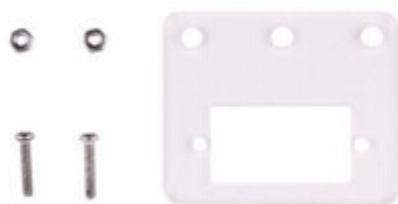


M1.6 nut



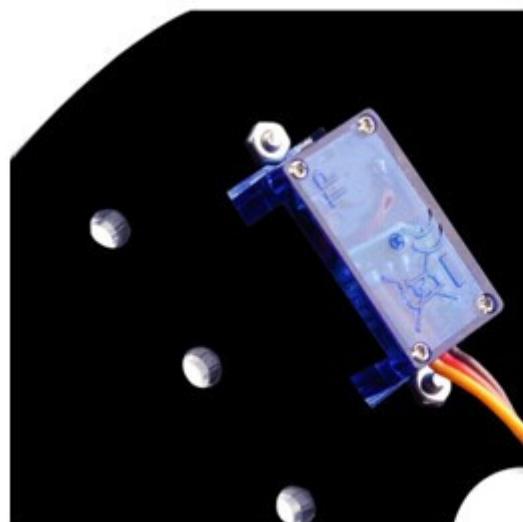
Put the ultrasonic sensor module
on the holder and twist the screws





Assemble the unit to the acrylic plate

Assemble with M2*10
screws and M2 nuts

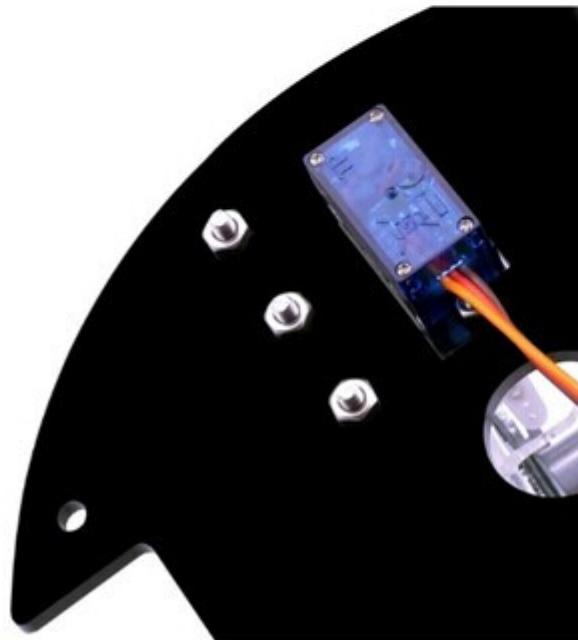


3*10 screws

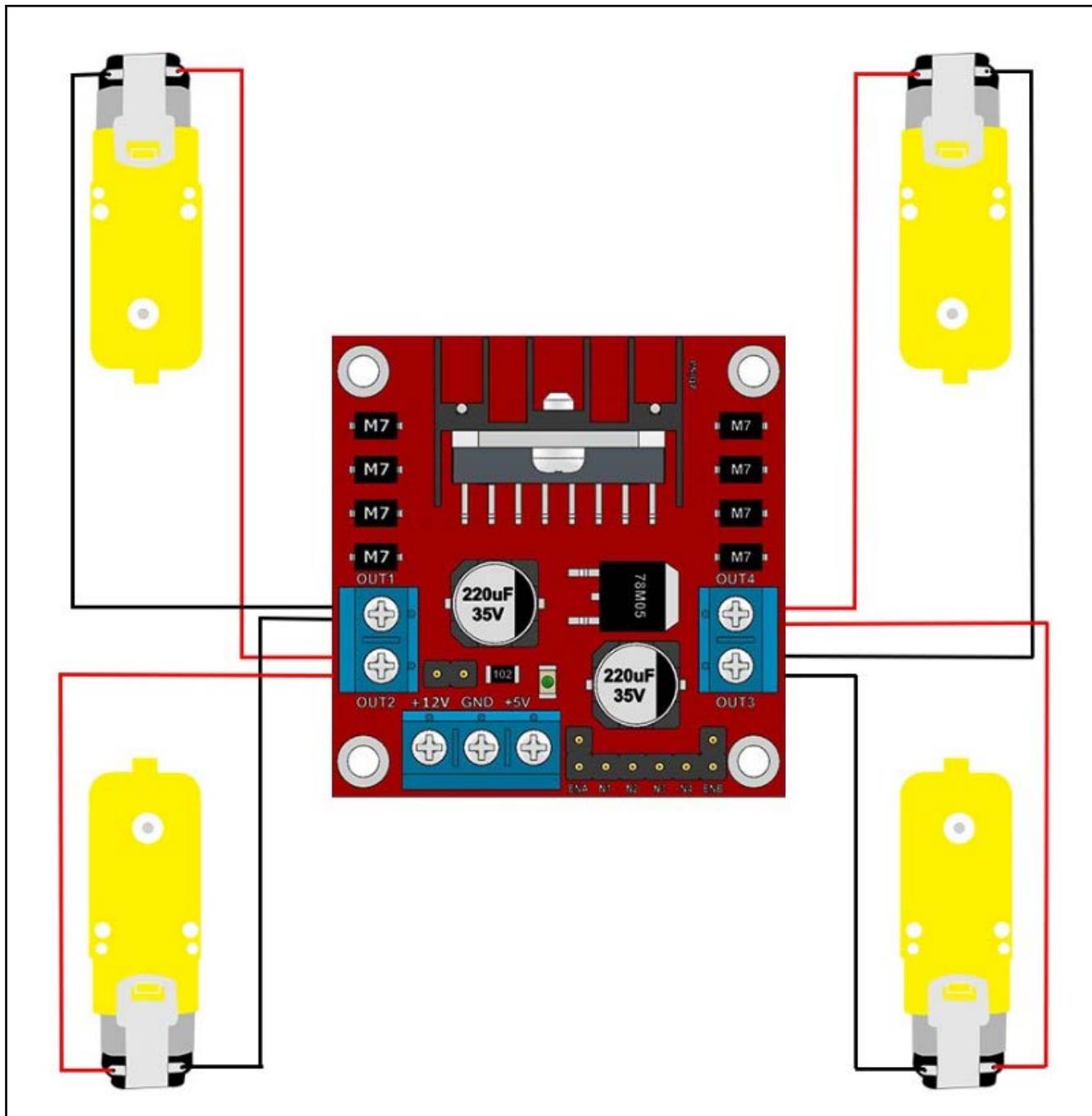


M3 hexagonal nut

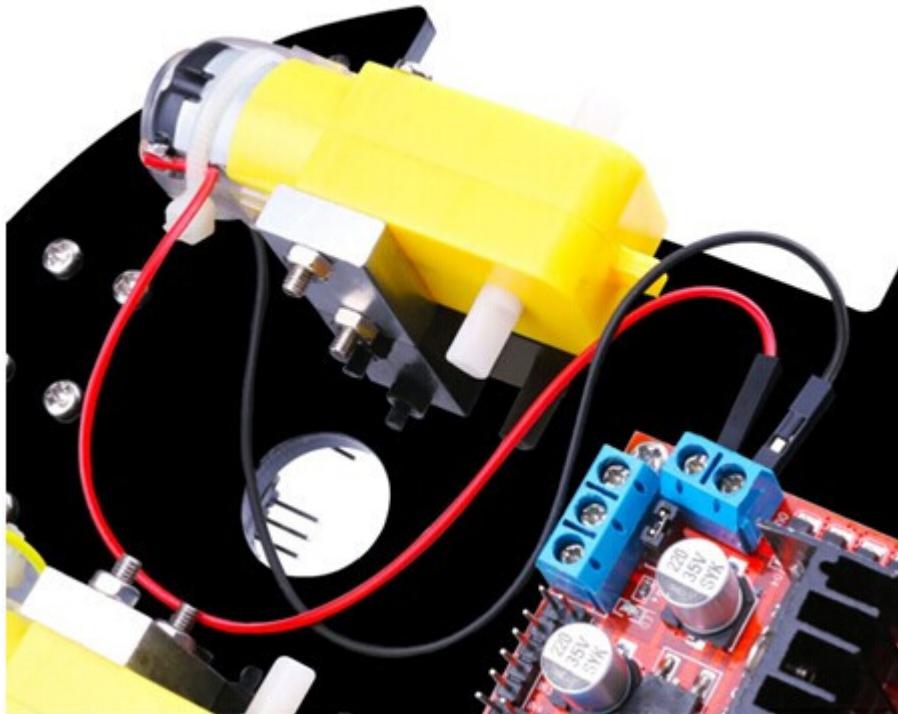
Put the 3*10 screws in the corresponding holes on the acrylic board and twist the screws



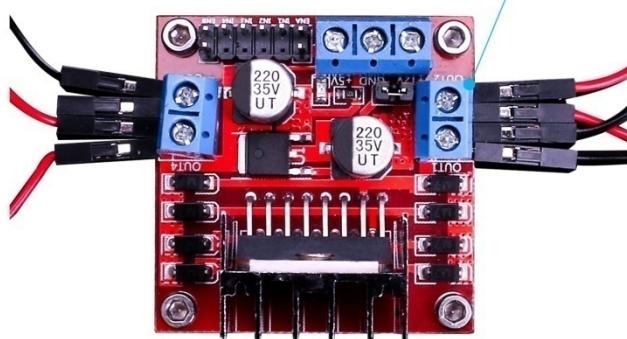
2.9、Connect The Motors to L298N Board



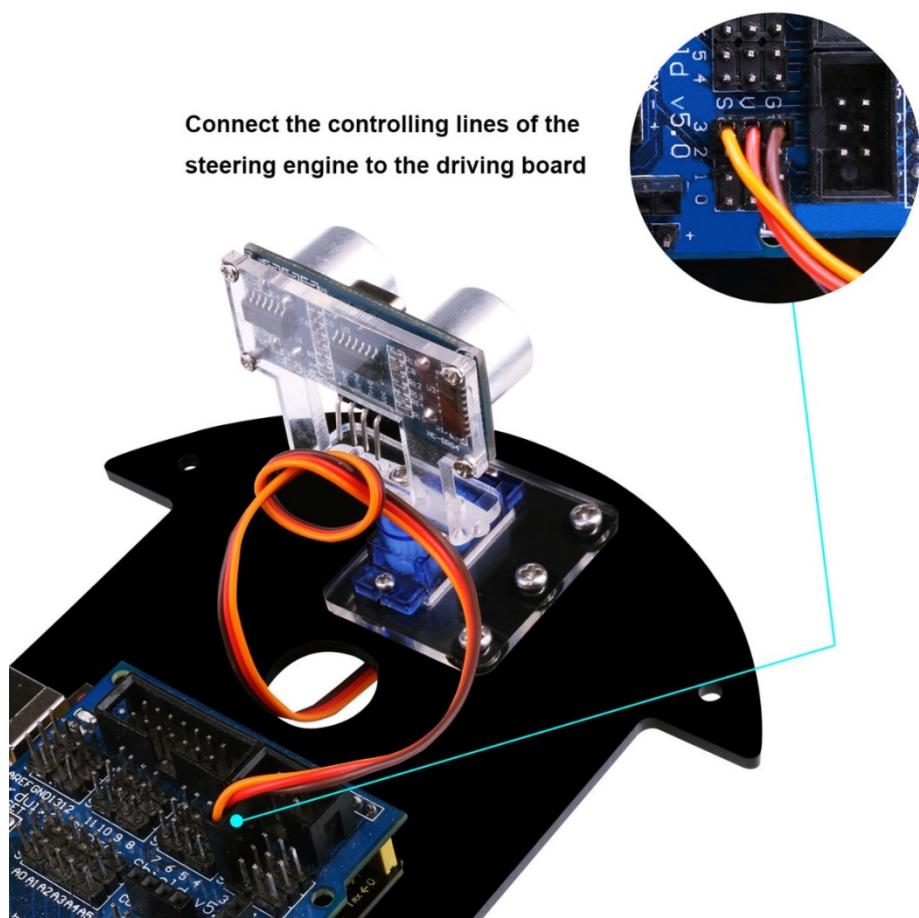
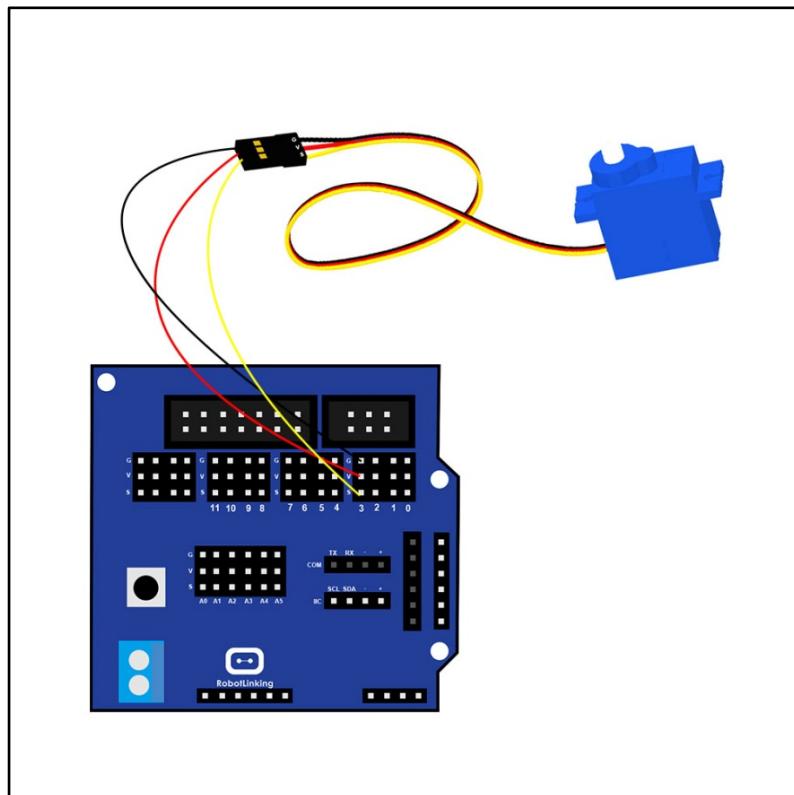
Connect the servos to the L298N driving board



Connect the power line of all four motors to the driving board.

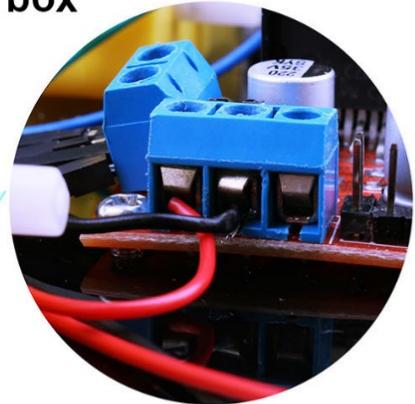
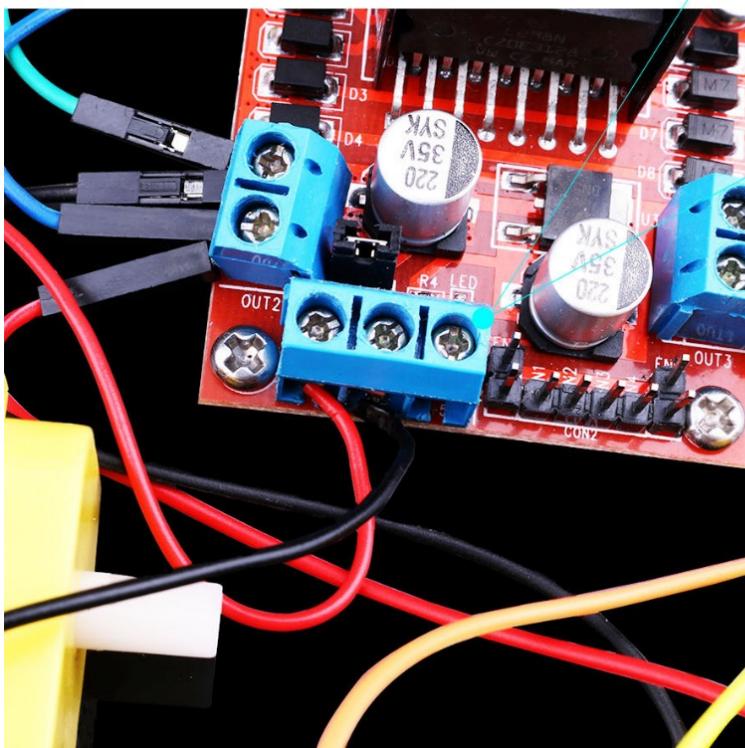


2.10、Connect The SG90 to V5 board

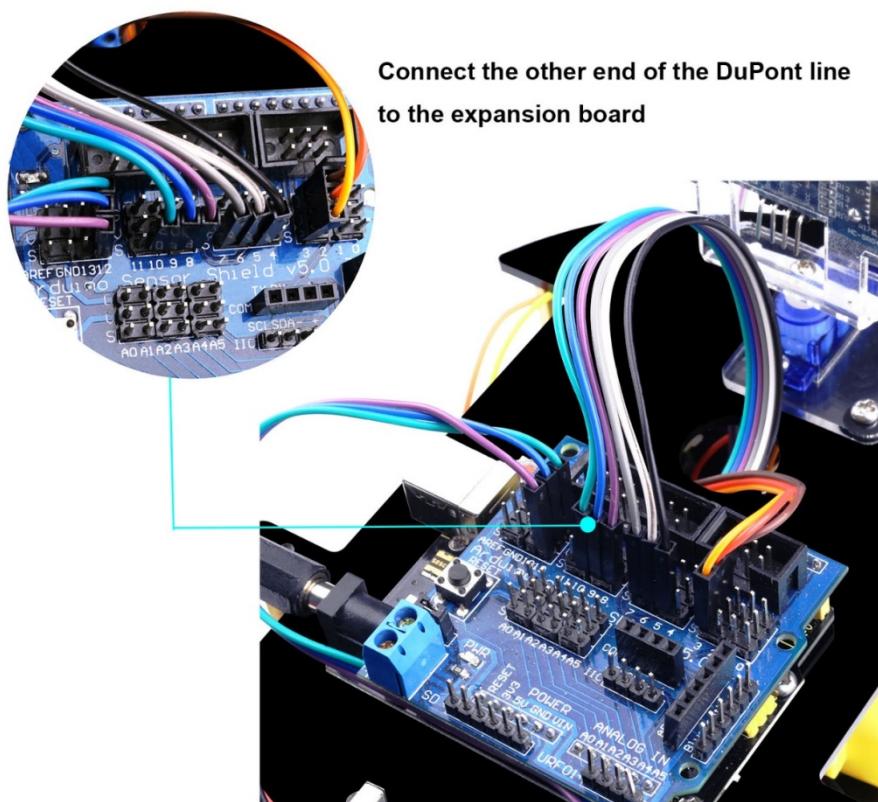
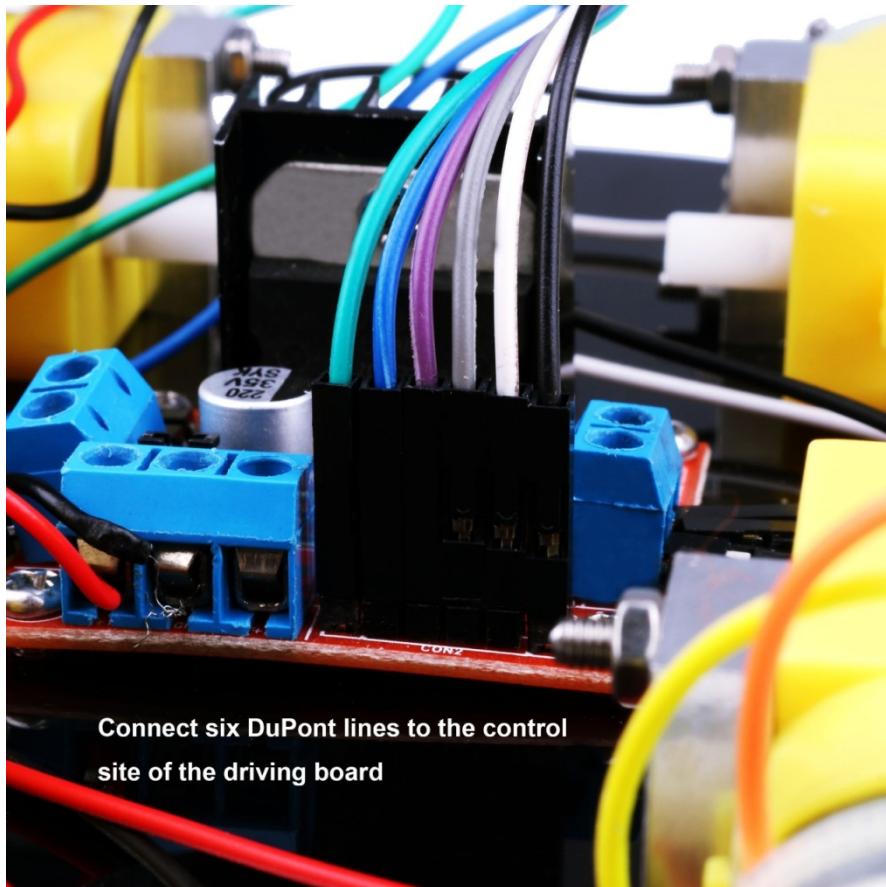


2.11、Connect The Battery Box to The L298 Board

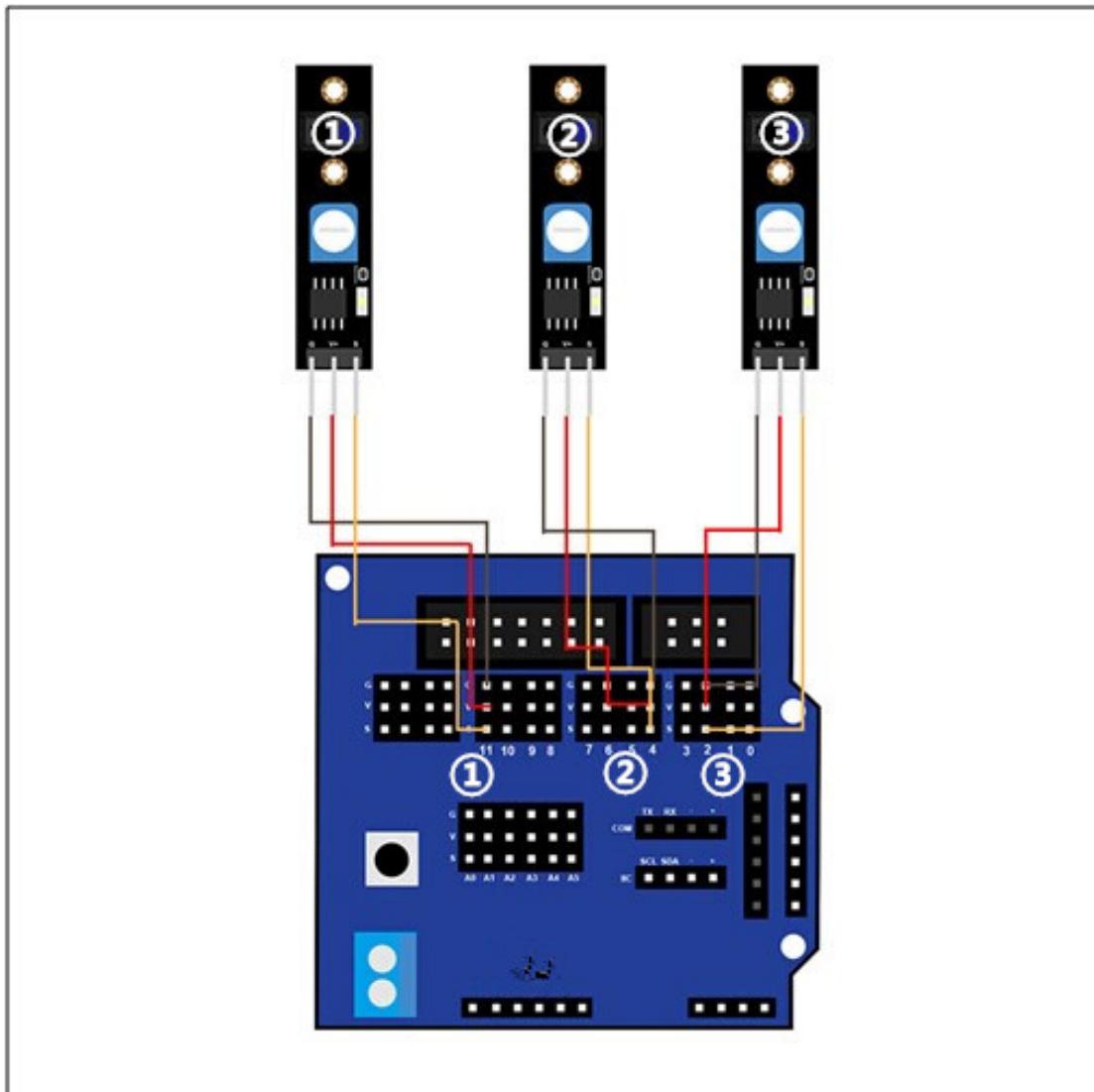
**Connect the power lines of the battery box
to the output of the driving board**

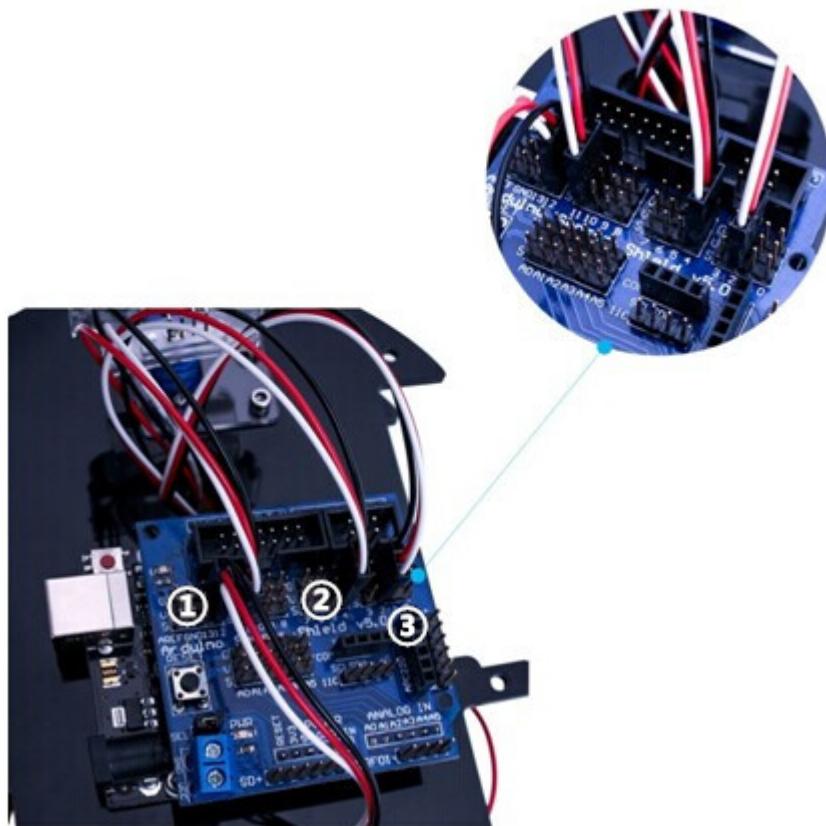
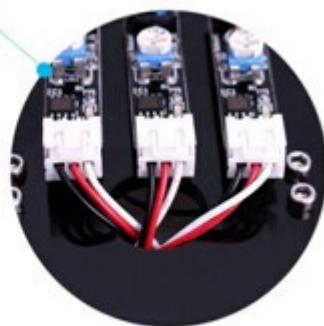
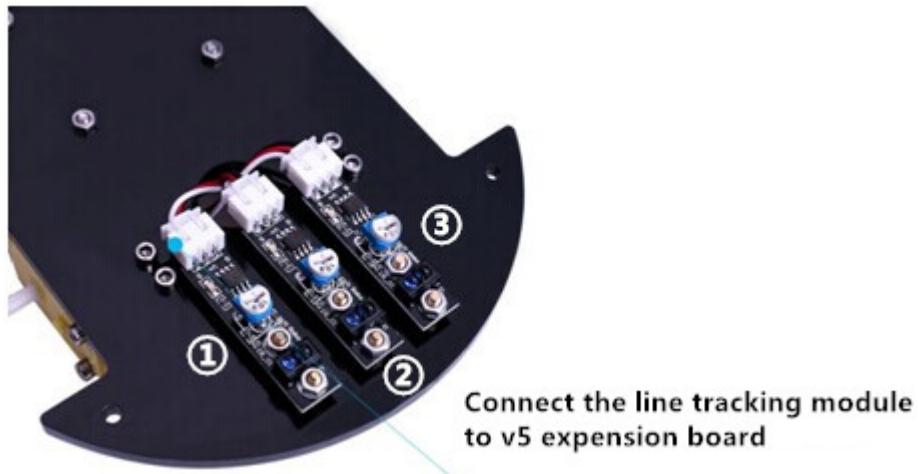


2.12、Connect The L298N Board to V5 Board

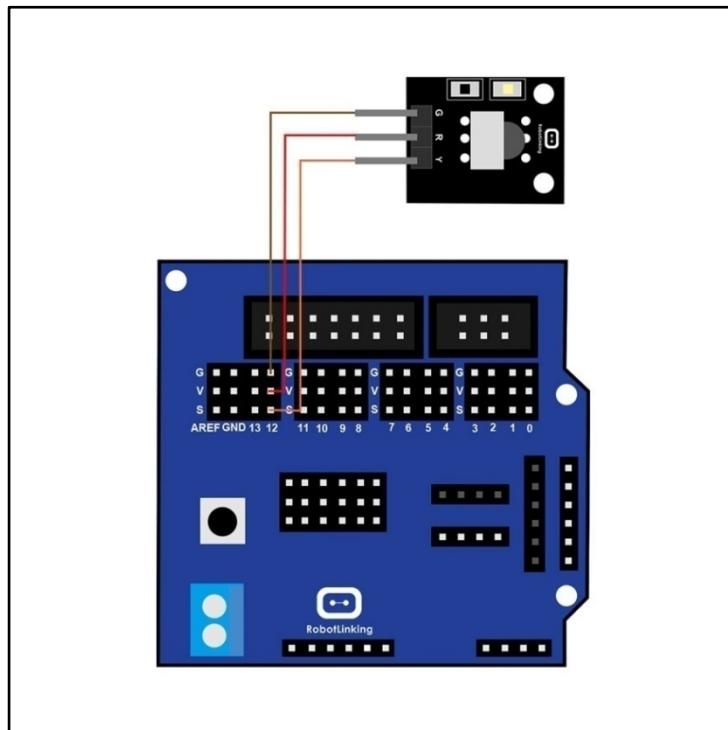


2.13、Connect The Line Tracking Modules to V5 Board

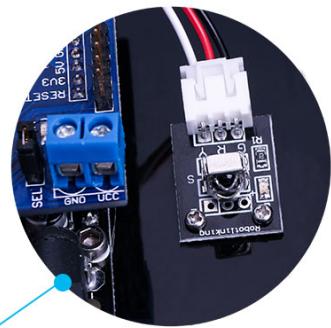
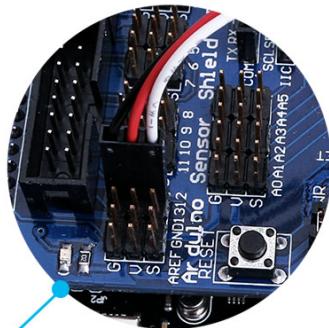
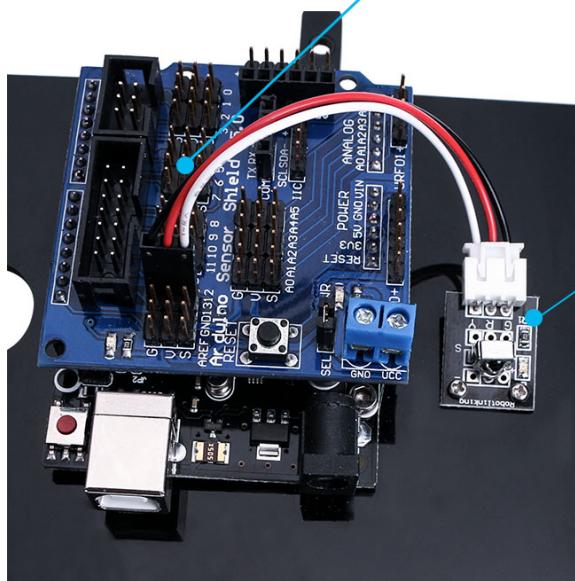




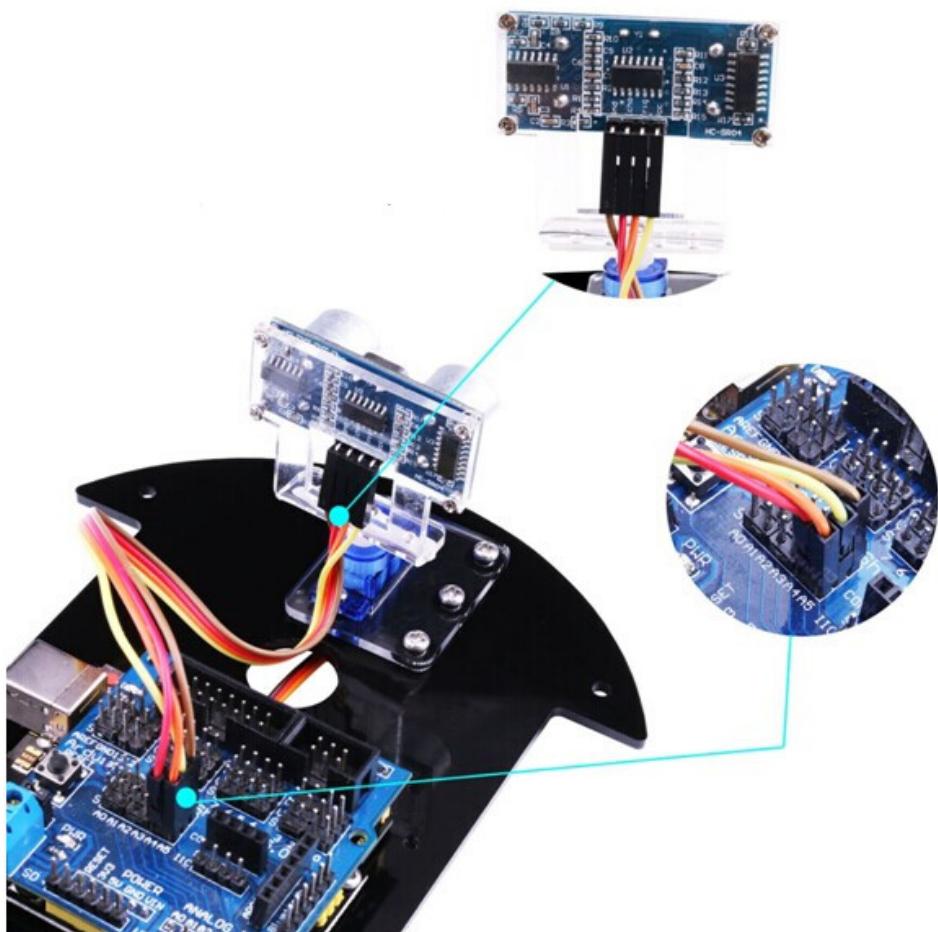
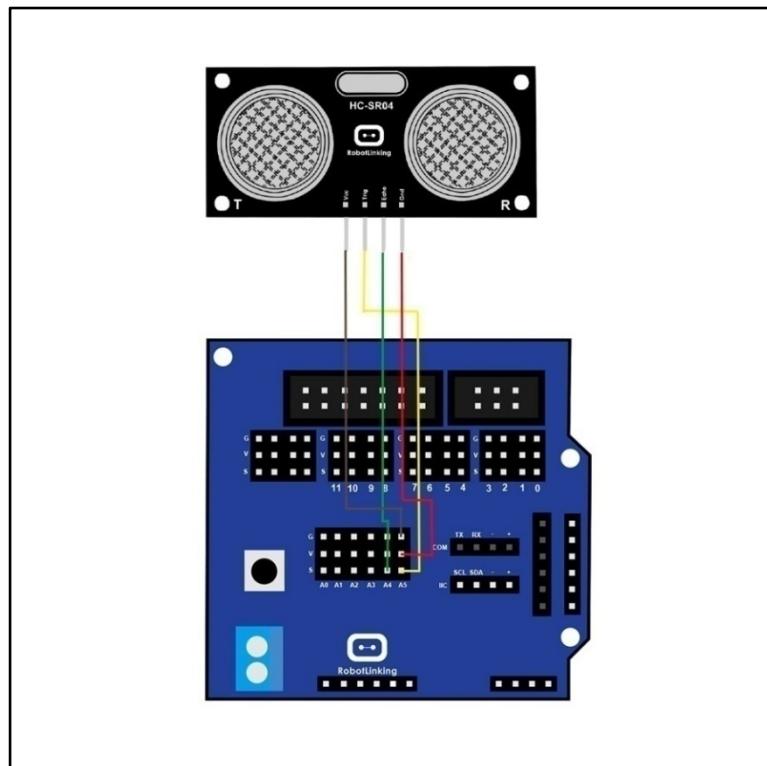
2.14、Connect The IR Module to V5 Board



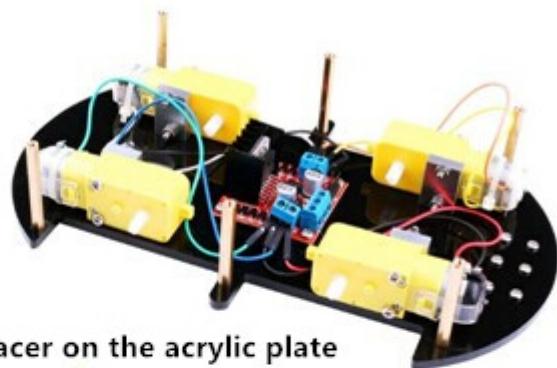
Connect the infrared receiver module to the expansion board with the DuPont lines



2.15、Connect The Ultrasonic Sensor Module to V5 Board



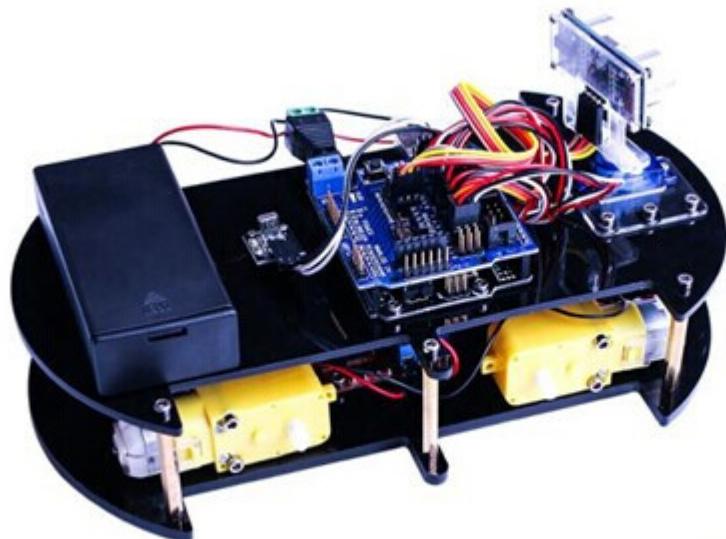
2.16、Assembly The Car



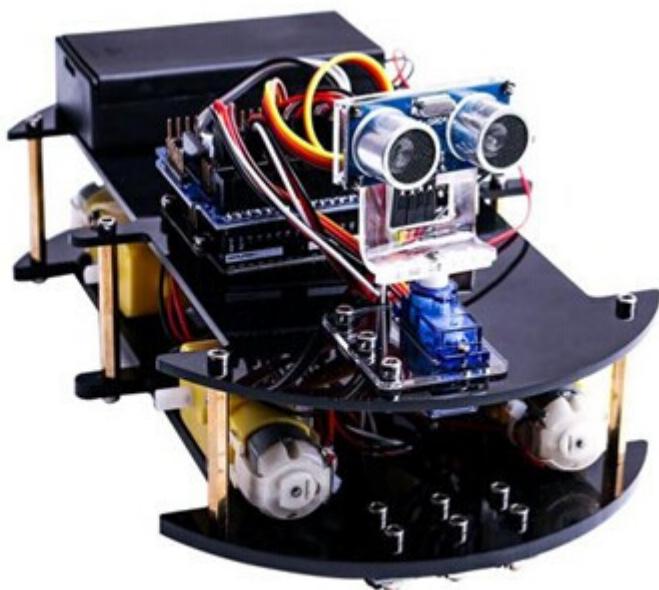
Put the 3*40 hex spacer on the acrylic plate



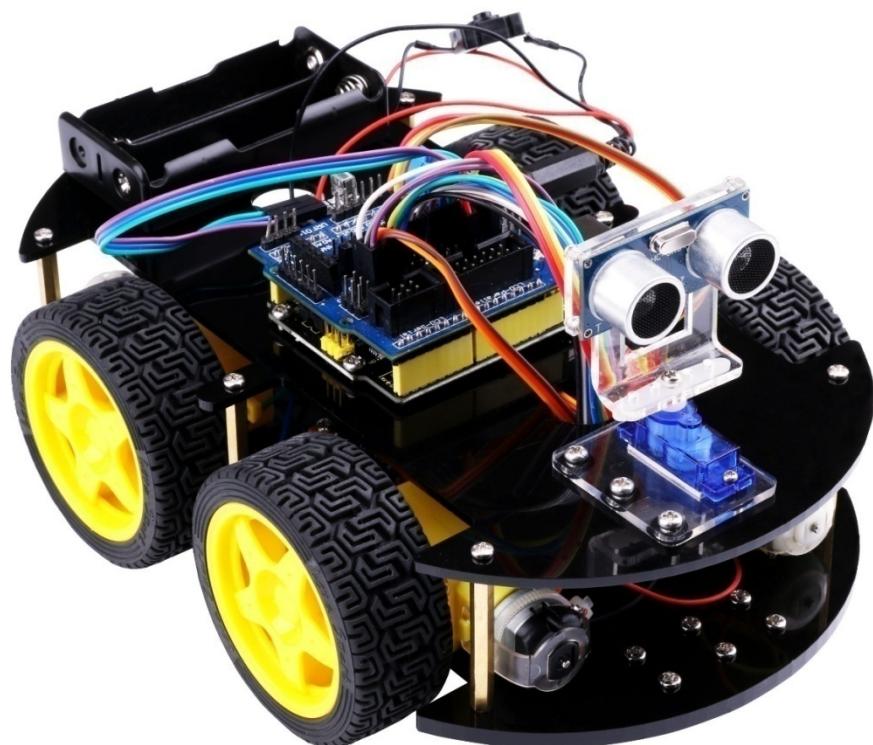
Twist the screws



Twist the screws



2.17、Assemble The Tires



Being loaded up four tires

3、Summary

Our company is trying to make the car more easily assembling, so if you find any problem or have any suggestion for the tutorial or the robot, please email us at service@elegoo.com.

After assembling and connecting all the units. We need to debug the car by some basic program. We will learn in the next lesson.