

SMART ROBOT CAR KIT 3.0 PLUS

Assembly Tutorial

SMART ROBOT CAR KIT 3.0 PLUS



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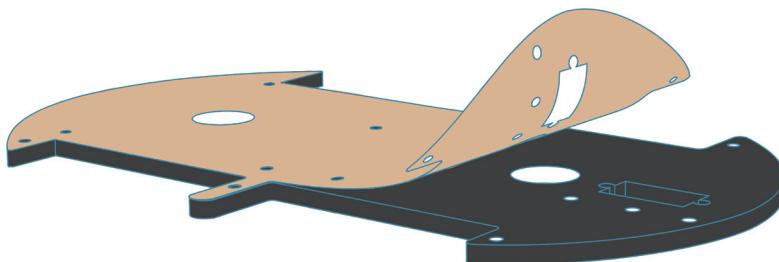


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Attention: Remove the protective film before assembling.

1

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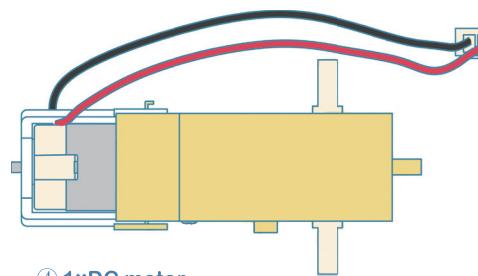
① 2×M3 nuts



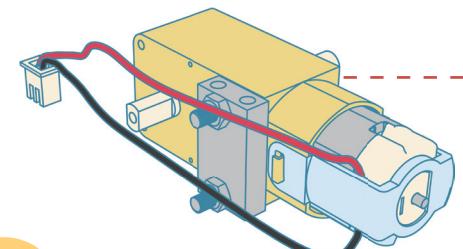
② 1×Aluminium Block



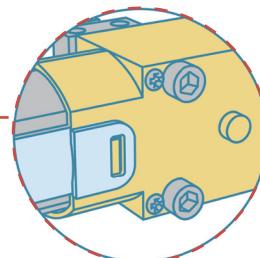
③ 2×M3*30 hexagon socket screws



④ 1×DC motor

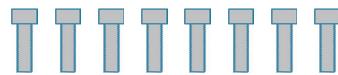
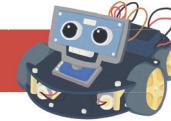


2

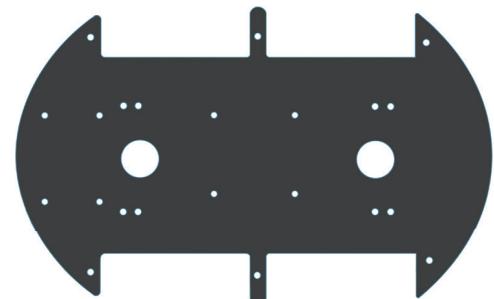


Take out ① ② ③ from the bag
with label "FOR MOTOR".

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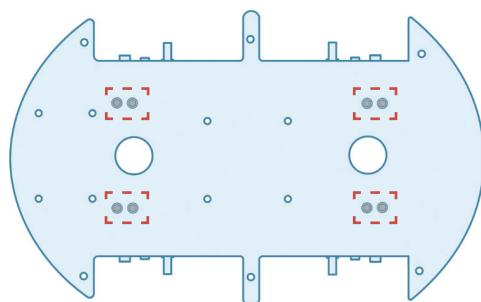
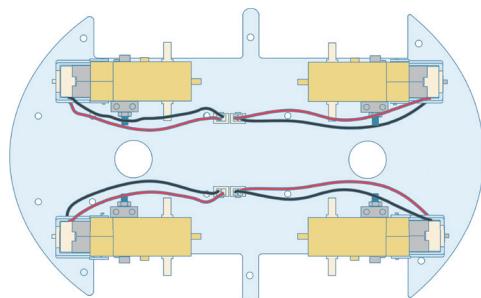


① 8×M3*10 hexagon socket screws



② 1×Acrylic Chassis

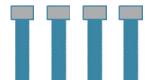
Take out ① from the bag with label "FOR MOTOR".



Back side

3

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① 4×M3*14 hexagon socket screws

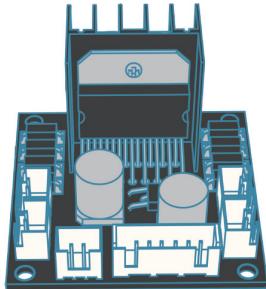


② 4×M3 nuts



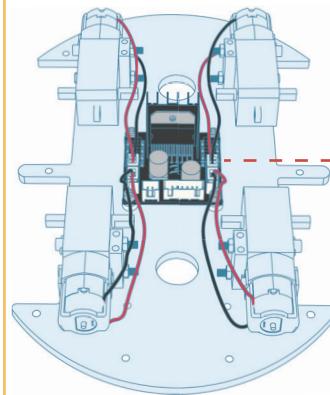
③ 4×separation shim

Take out ①②③ from the bag
with label "FOR UNO、L298N".

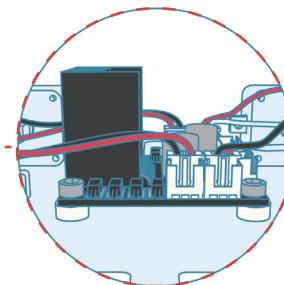


4

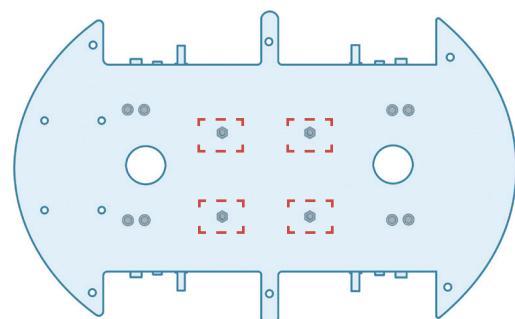
④ 1×L298N



Pay attention to the direction of L298N module.

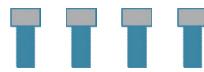


The wiring of the DC motor is shown in the image.

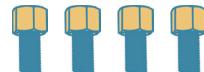


Back side

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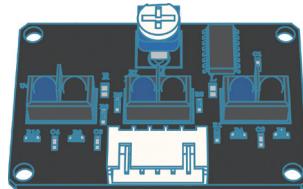
① 4×M3*7 hexagon socket screws



② 4×M3*4+6 single-pass copper cylinder



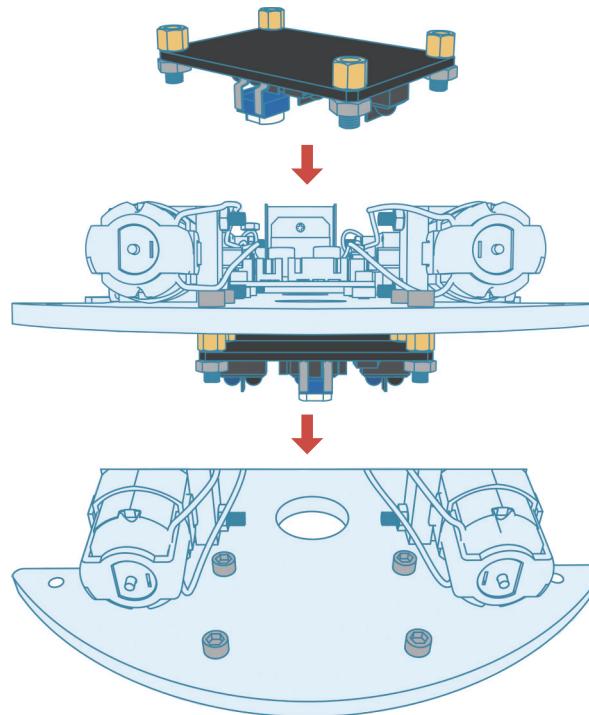
③ 4×M3 nuts



④ 1×Line tracking module

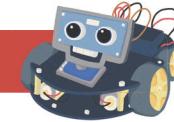
Take out ① ② ③ from the bag with label
" FOR LINE TRACING ".

Please pay attention to the direction of the line-tracking
module when installing.



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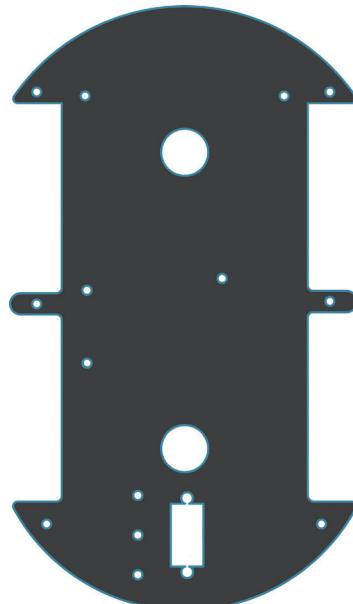
① 3× M3*14 hexagon socket screws



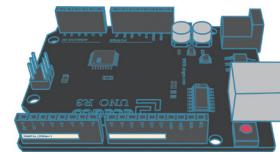
② 3×separation shim



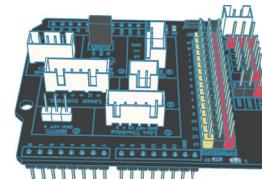
③ 3× M3 nuts



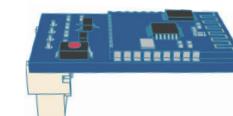
④ 1×Acrylic Chassis



⑤ 1×UNO R3 board



⑥ 1×IO expansion board

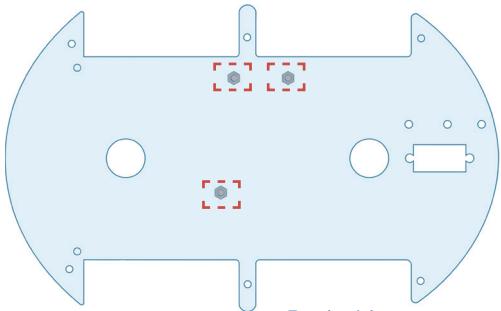
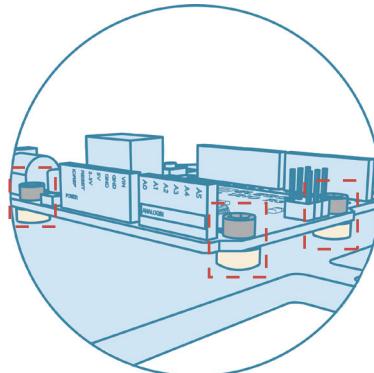
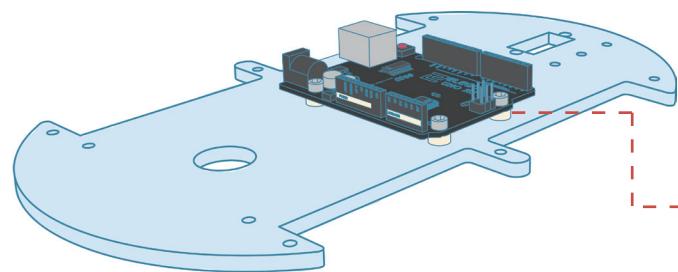


⑦ 1×Bluetooth module

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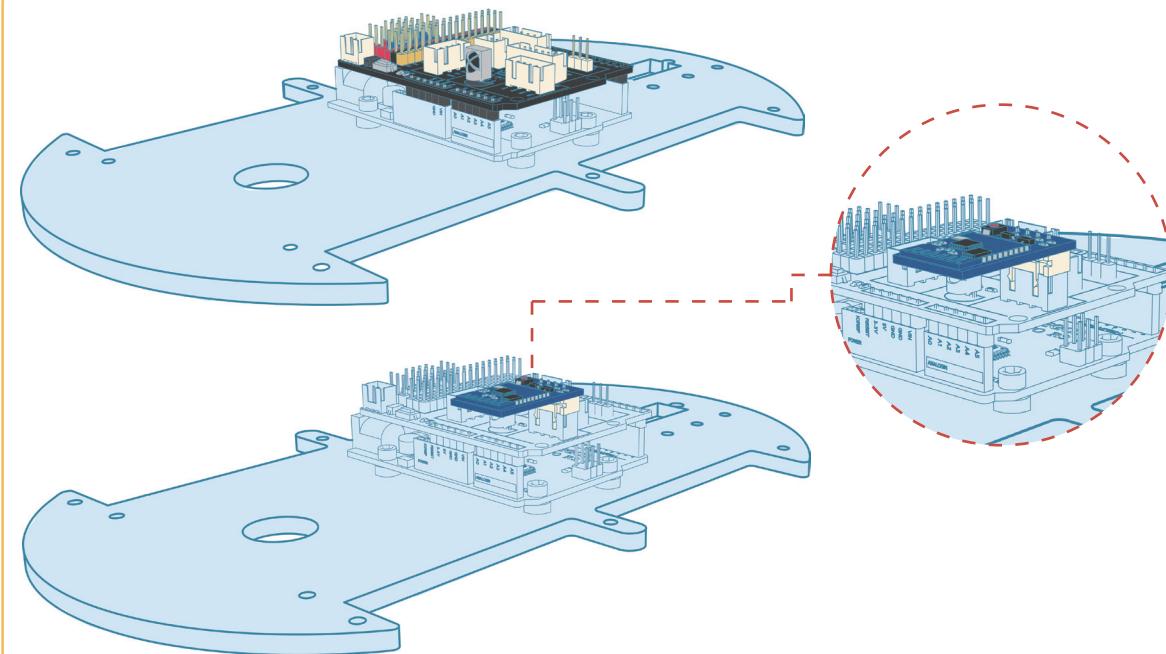
Take out ① ② ③ from the bag with label " FOR UNO、L298N "

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Pay attention to the front and back side of the acrylic chassis when assembling.

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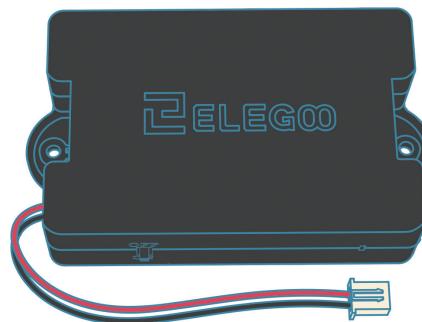
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① 2×M3*12 hexagon socket screws



② 2×M3 nuts



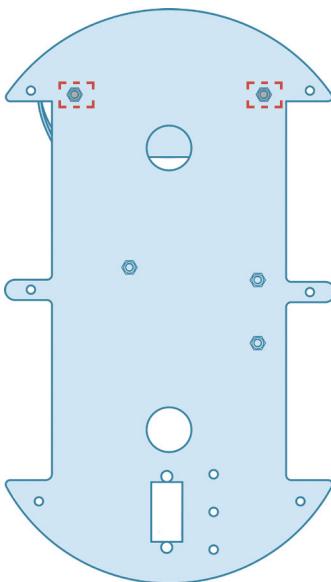
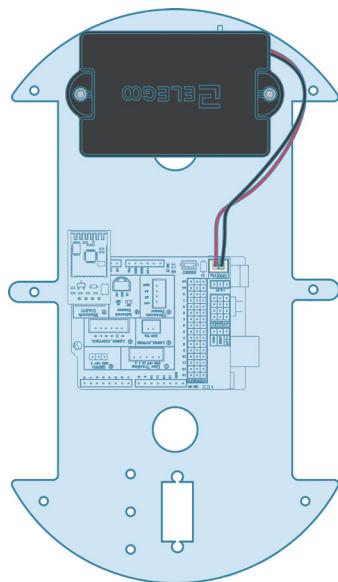
③ 1×Cell Box(Lithium Battery inside)

Take out ① ② from the bag with label "FOR CELL BOX、TIRES".

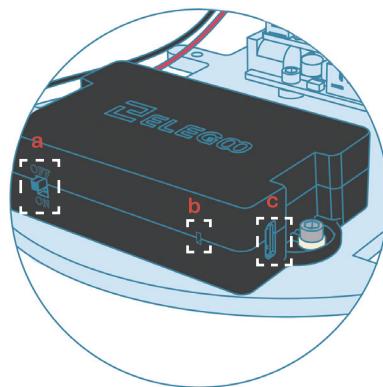
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The wiring of the battery box is shown in the image.



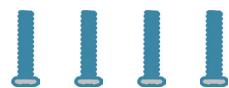
Back side



- a Power switch
- b Status indicator(lights in green when charging and it will be turned off once fully charged.)
- c USB charging interface

Please fully charge the lithium batteries before using them.

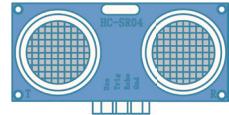
SMART ROBOT CAR KIT 3.0 PLUS



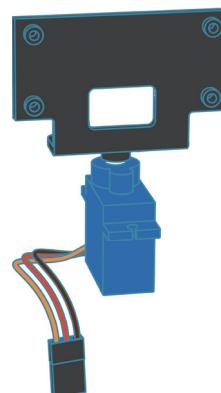
① 4×M1.6*8 Cross screw



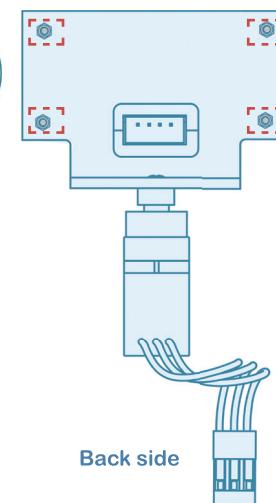
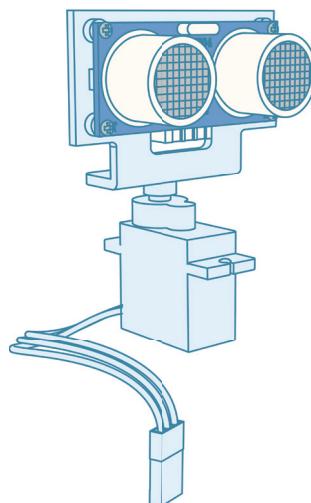
② 4×M1.6 nuts



③ 1×Ultrasonic sensor module



④ 1×Ultrasonic sensor module holder and SG90



Back side

Take out ①② from the bag with label " FOR ULTRASONIC "

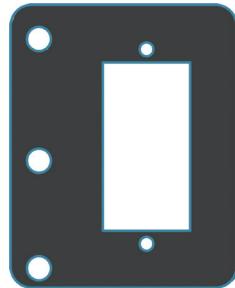
SMART ROBOT CAR KIT 3.0 PLUS



① 2×M2*10 Cross screw



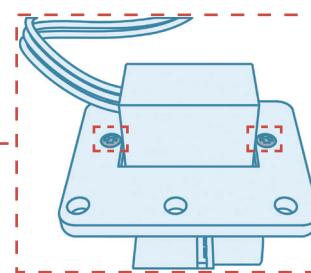
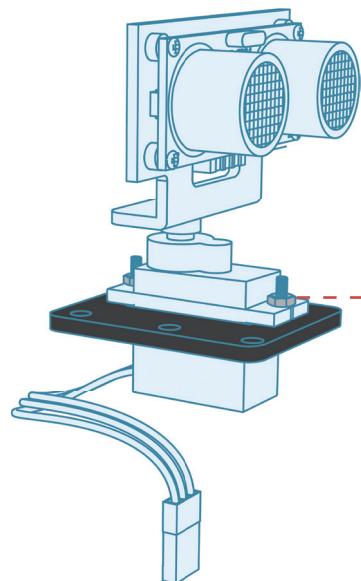
② 2×M2 nuts



③ 1×Dead plate

Take out ① ② from the bag with label "FOR ULTRASONIC".

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Back side

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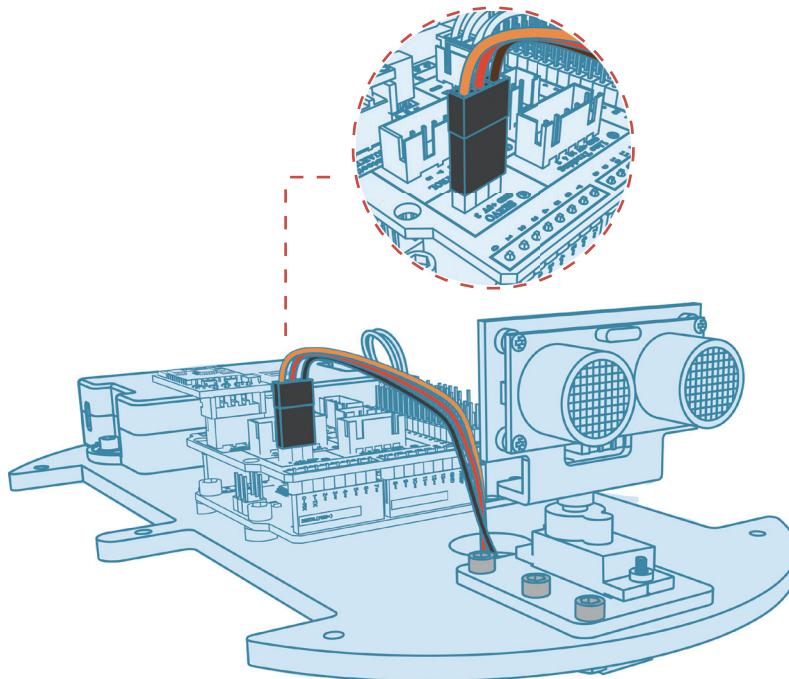
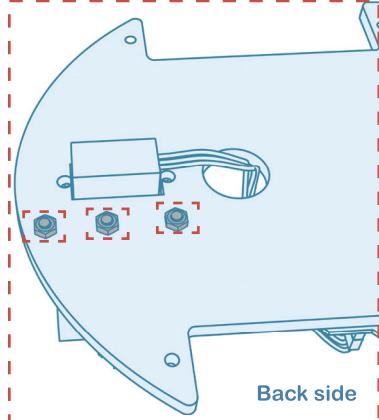


① 3×M3*10 hexagon socket screws



② 3× M3 nuts

Take out ① ② from the bag with label "FOR ULTRASONIC".

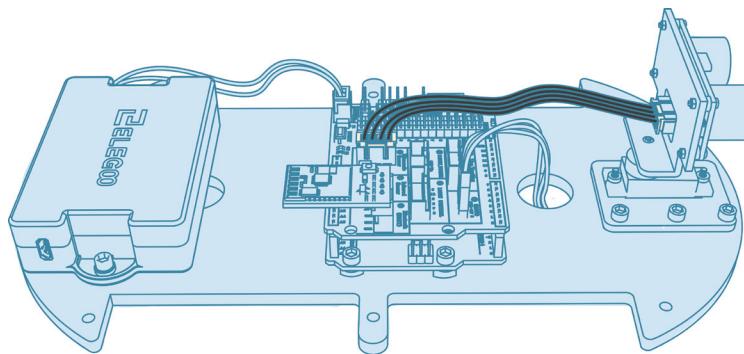


The wiring of the servo is shown in the image.

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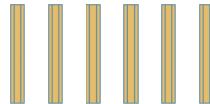
① 1 x4P cables



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The wiring of the ultrasonic sensor is shown in the image.

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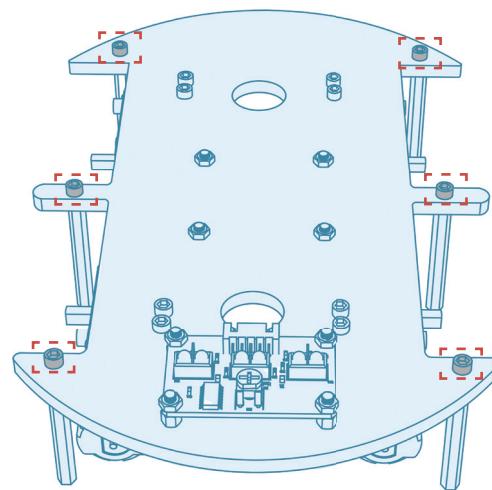
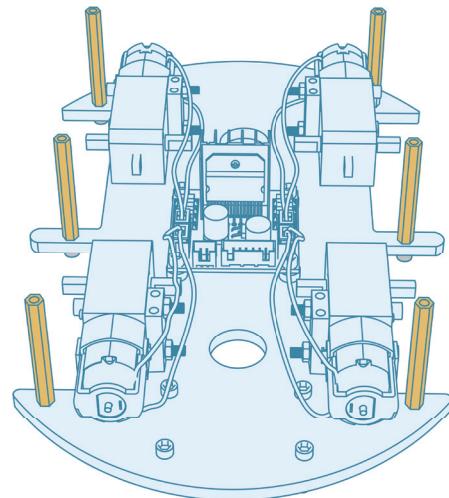


① 6×M3*40 double-pass copper cylinder



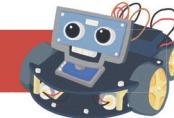
② 6×M3*10 hexagon socket screws

Take out ① ② from the bag with label "FOR ACRYLIC BASEPLATE".

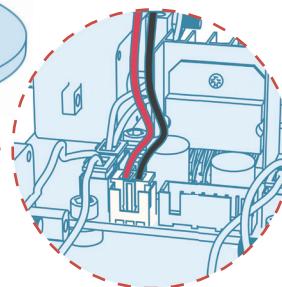
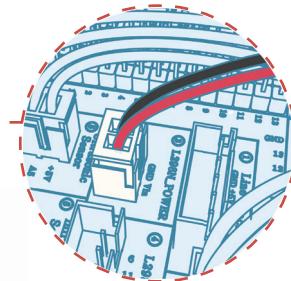
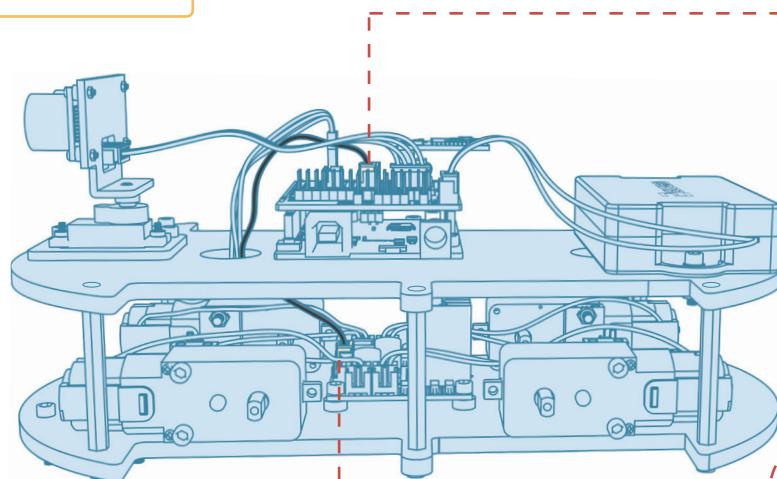


Back side

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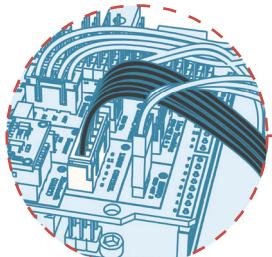
① 1 x2P cables



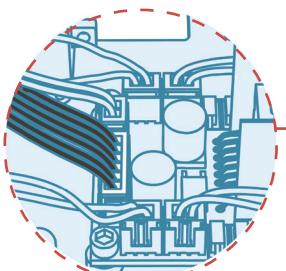
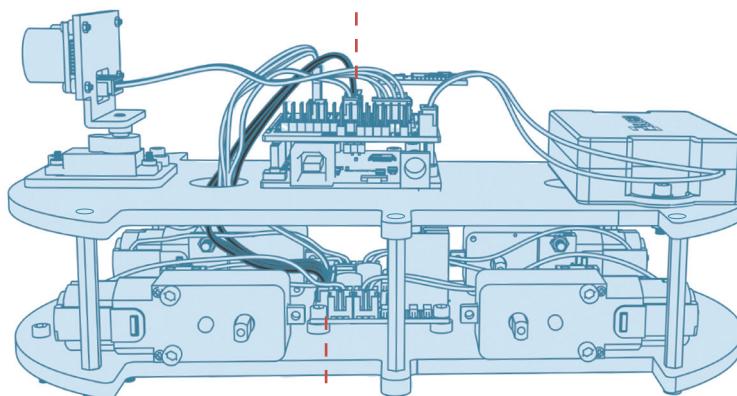
16

Connect the L298N to the expansion board.

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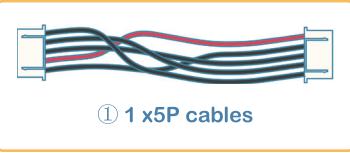
① 1 x6P cables



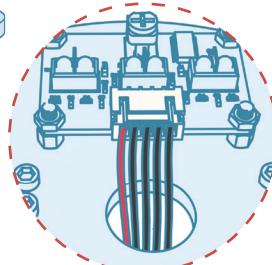
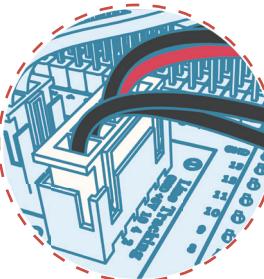
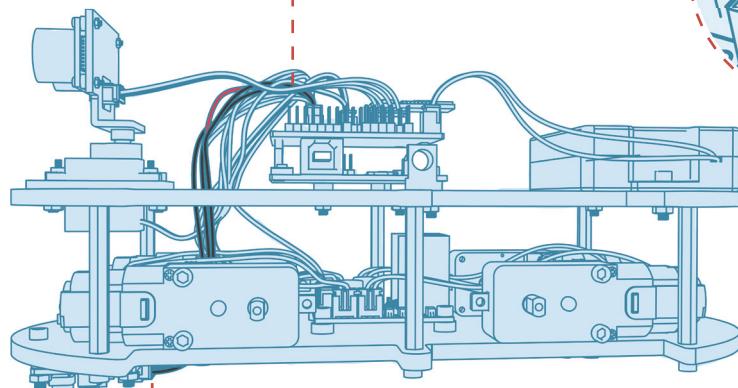
Connect the L298N to the expansion board.

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SMART ROBOT CAR KIT 3.0 PLUS

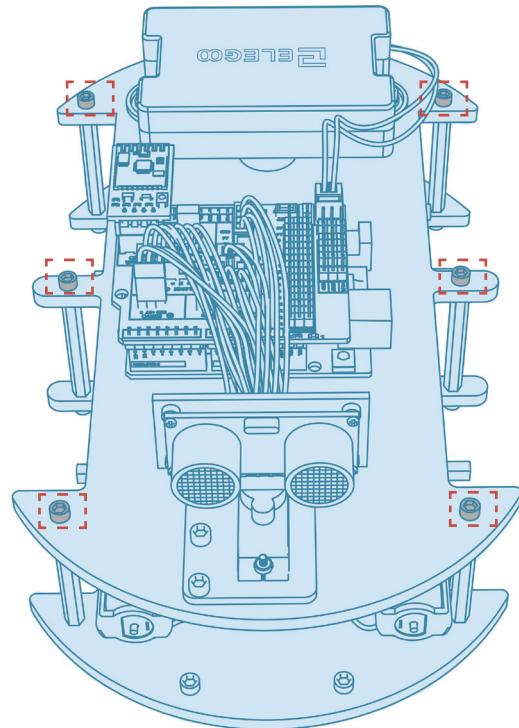


① 1 x5P cables



Connect the line tracking to the expansion board.

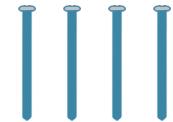
SMART ROBOT CAR KIT 3.0 PLUS



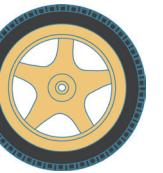
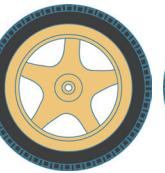
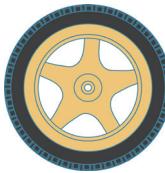
① 6×M3*10 hexagon socket screws

Take out ① from the bag with label
"FOR ACRYLIC BASEPLATE".

SMART ROBOT CAR KIT 3.0 PLUS

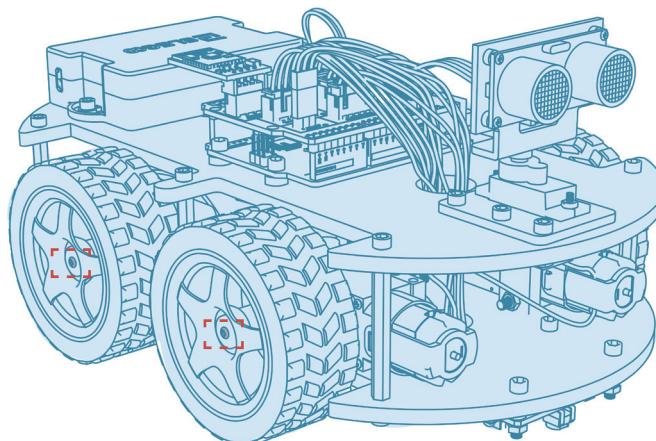
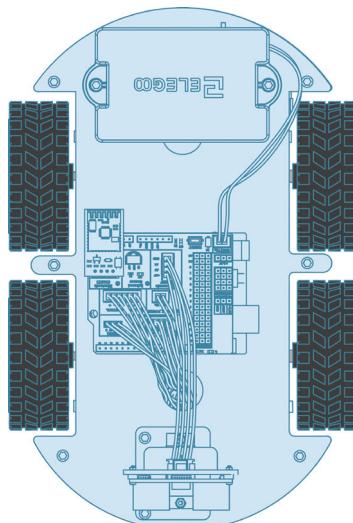


① 4×M2*25 Cross screw

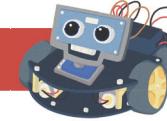


② 4×Tires

Take out ① from the bag with label "FOR CELL BOX、TIRES".



SMART ROBOT CAR KIT 3.0 PLUS



Upload program

We have already uploaded programs onto the smart robot car so you can skip this step.

If you want to modify the codes and upload it to the car again please refer to the tutorial from <http://www.elegoo.com/download/>.

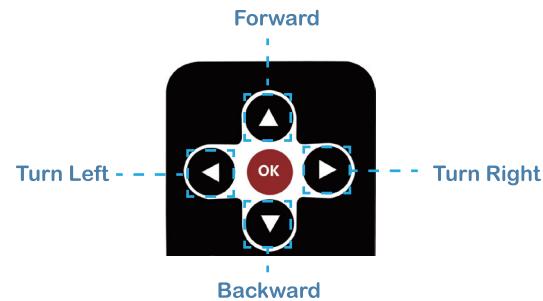
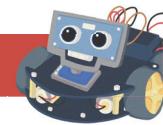
When uploading codes, please remove the Bluetooth module from the IO expansion board (because the serial port for uploading codes and Bluetooth communication is the same one and there will be conflicts). You can mount the Bluetooth module again after the upload.

Functions:

There are 4 modes of ELEGOO smart robot car, which are:

1. Bluetooth Mode
2. IR-Remote Control Mode
3. Obstacle-avoidance Mode
4. Line-tracking Mode

Control the smart robot car using the IR Remote



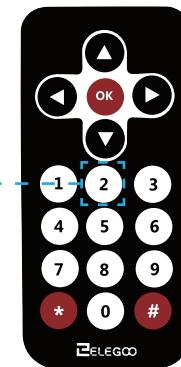
IR-Remote Control Mode

By pressing forward, backward, left or right keys of the remote controller, you can control the robot car to react accordingly.

Obstacle-avoidance Mode

Obstacle-avoidance Mode

By pressing key#2, ELEGOO smart robot car will be in obstacle-avoidance mode and start moving forwards automatically. If there are any obstacles in front it will make a turn and continue moving forwards to a direction where there is no obstacle ahead. To make it stop please press OK button.



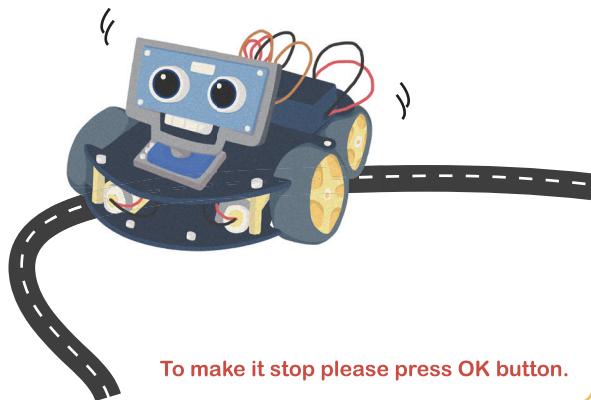
When you are using the remote control
please remove the insulating sheet.

Control the smart robot car using the IR Remote



Line-tracking Mode

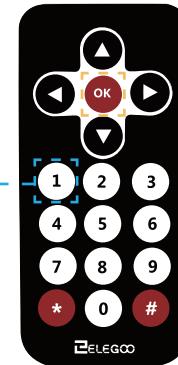
Affix the tape on the ground and make a line track and then put the car on the track. By pressing Key#1 the robot car will be in line-tracking mode and start moving along the track underneath.



Line-tracking Mode



Insulation Tape

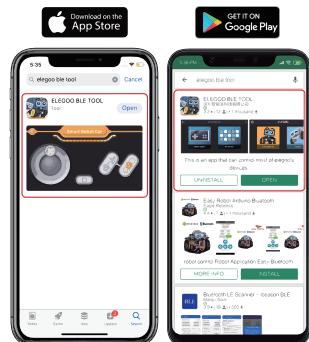


Control the smart robot car with the Bluetooth APP



STEP1: Install the application

You can download the latest version of the "ELEGOO BLE TOOL" app on the App Store and Google Play.

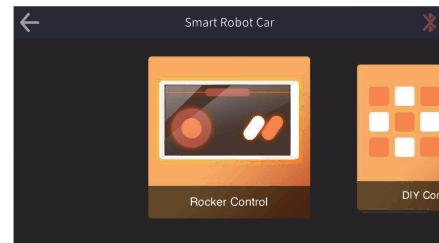


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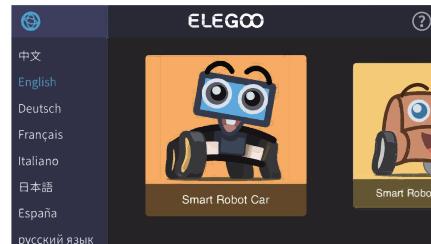
STEP2: Application Settings



Open the "Elegoo BLE Tool" App.



Click Smart Robot Car to enter the control page. Then tap the "X" icon to enter the Bluetooth searching interface.

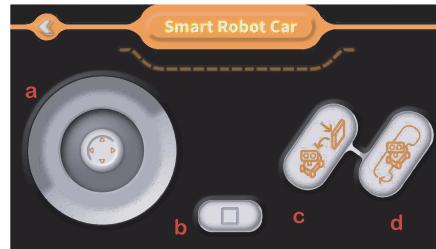
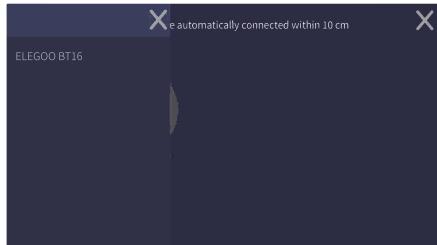


Click the icon in the top left corner to enter the language list.



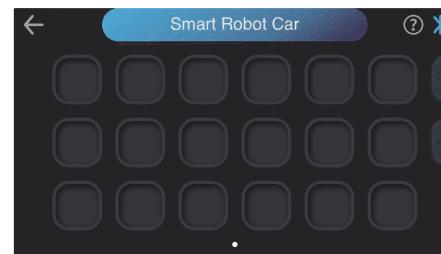
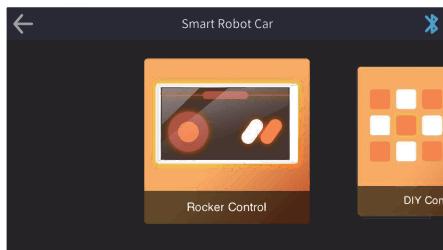
Put your phone close to the Smart Robot Car (within 10cm), the app will connect to the Smart Robot Car automatically.

Control the smart robot car with the Bluetooth APP



The Rocker Control panel of the "Elegoo BLE Tool" App.

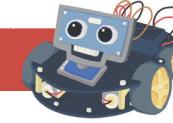
a Rocker Control c Obstacle-avoidance mode
b Standby mode d Line-tracking mode



The Bluetooth status icon will turn blue when the Smart Robot Car is connected.

If you want to customization the buttons, you can click "DIY control" to enter in the custom page.

Control the smart robot car with the Bluetooth APP



Press and hold any button to pop up the “Button editor”. Then you can choose color and edit name of the button as you like. But please notice that, the “message” is corresponding to below definition (refer to next page), you can enter the “message” field according to your own needs.



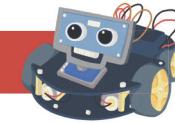
The following is the message sent for each function:

- f** - Forward
- b** - Backward
- l** - Turn Left
- r** - Turn Right
- s** - Standby Mode
- 1** - Line-tracking mode
- 2** - Obstacle Avoidance Mode

For example, I want to customize the button of obstacle avoidance mode:

First, click DIY control and enter in customization page. Then press and hold any button to pop up the “Button editor”. I like orange so I choose orange as the button color and name it as “avoidance”. And according to the information left side, the message for “Obstacle Avoidance Mode” is 2, so I enter “2” in message field and click “√”. Then it’s done. Likewise, you can customize the buttons for any function of Smart Robot Car.

SMART ROBOT CAR KIT 3.0 PLUS



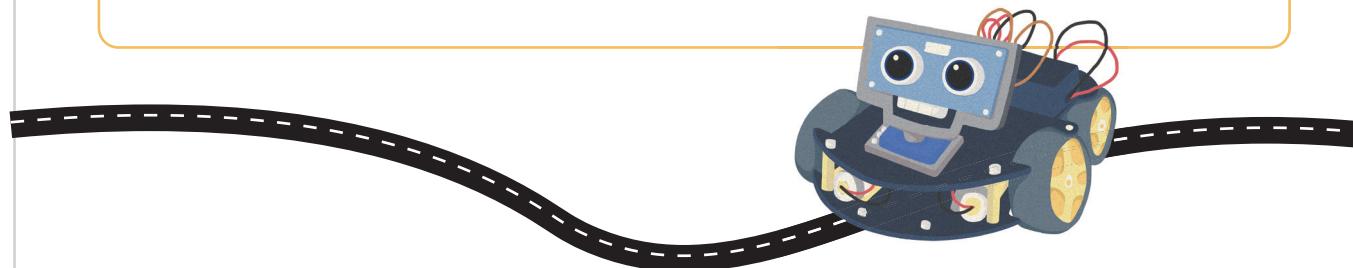
If you feel it is difficult to assemble the Smart Robot Car, please check the assembling tutorial video from www.elegoo.com.

Please download the tutorial from our website elegoo.com/download.

If you have any questions during assembling or testing please feel free to contact us at service@elegoo.com or euservice@elegoo.com (European and Asian customers)

Elegoo Team

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