



# Mini DIY obstacle avoidance car (ZYZ0055)



# 3WD MINI DIY ULTRASONIC ROBOT

BLACK ROBOT CHASSIS

1PC



NANO EXPANSION BOARD

1PC



L9110S MOTOR DRIVE BOARD

1PC



ZY TYPE-C NANO

1PC



# 3WD MINI DIY ULTRASONIC ROBOT

HC-SR04 ULTRASONIC  
SENSOR MODULE  
1PC



ULTRASONIC FIXED  
BRACKET SUITE  
1PC



TT MOTOR  
2PCS



66MM WHEEL  
2PCS



# 3WD MINI DIY ULTRASONIC ROBOT

TWO 18650 BATTERY  
HOLDER WITH DC  
1PC



UNIVERSAL CASTER  
1PC



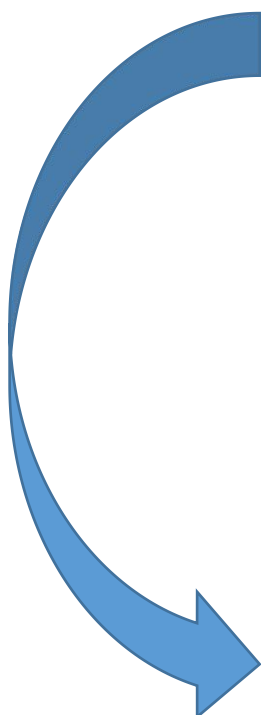
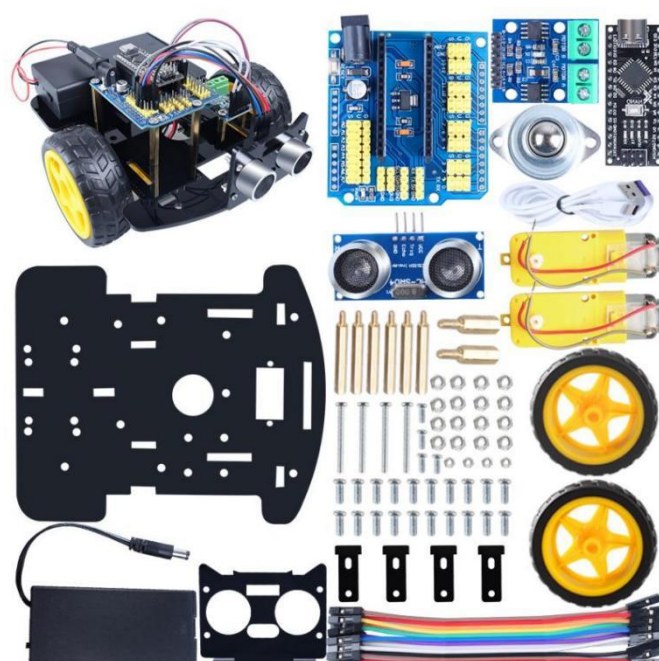
10CM FEMALE TO FEMALE  
JUMPER WIRE 12PIN  
1PC



SPARE PARTS  
1 KIT

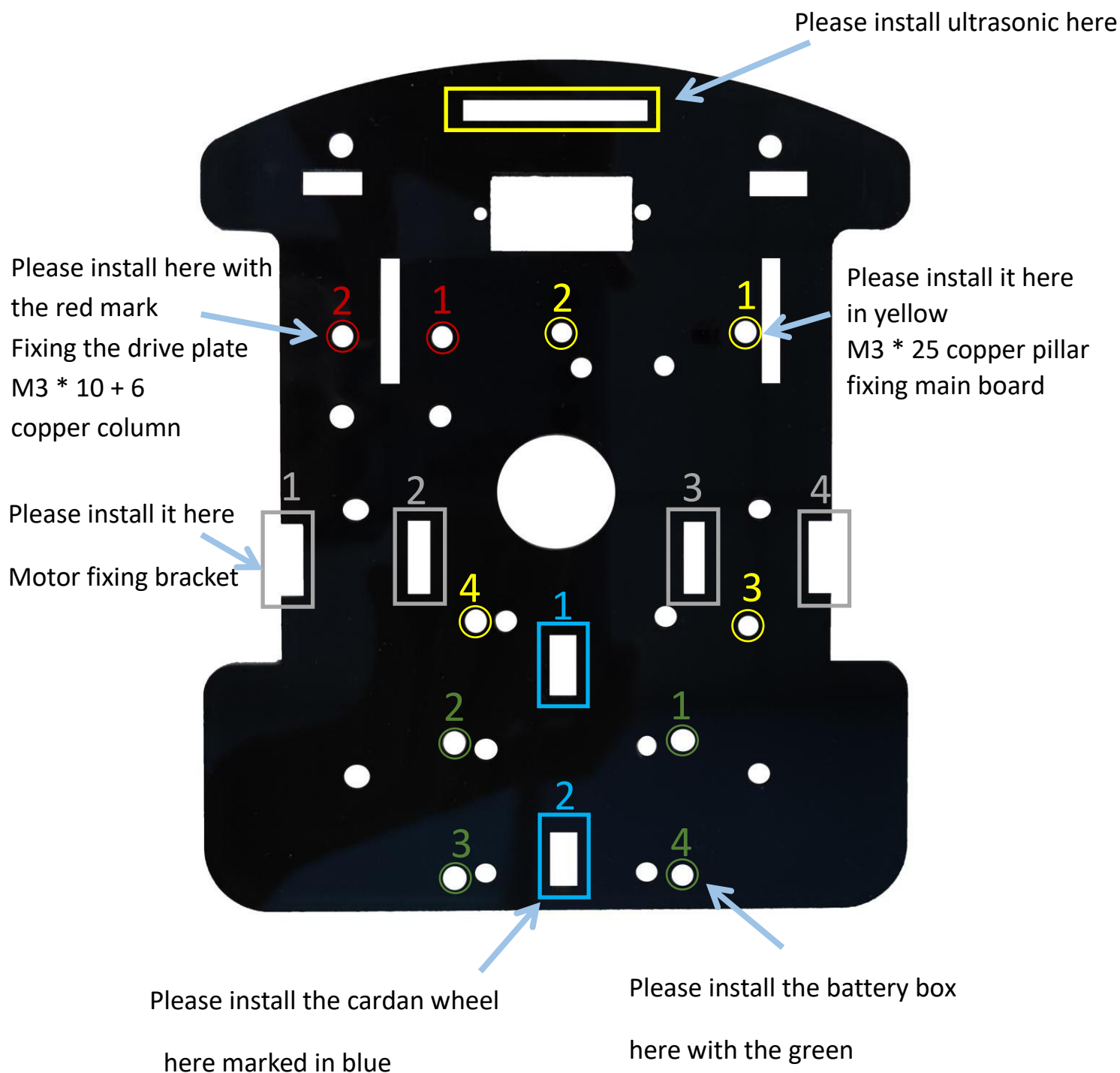


Thank you for purchasing Zhi Yi Technology product "mini DIY obstacle avoidance car". This tutorial will teach you how to assemble your obstacle avoidance car.



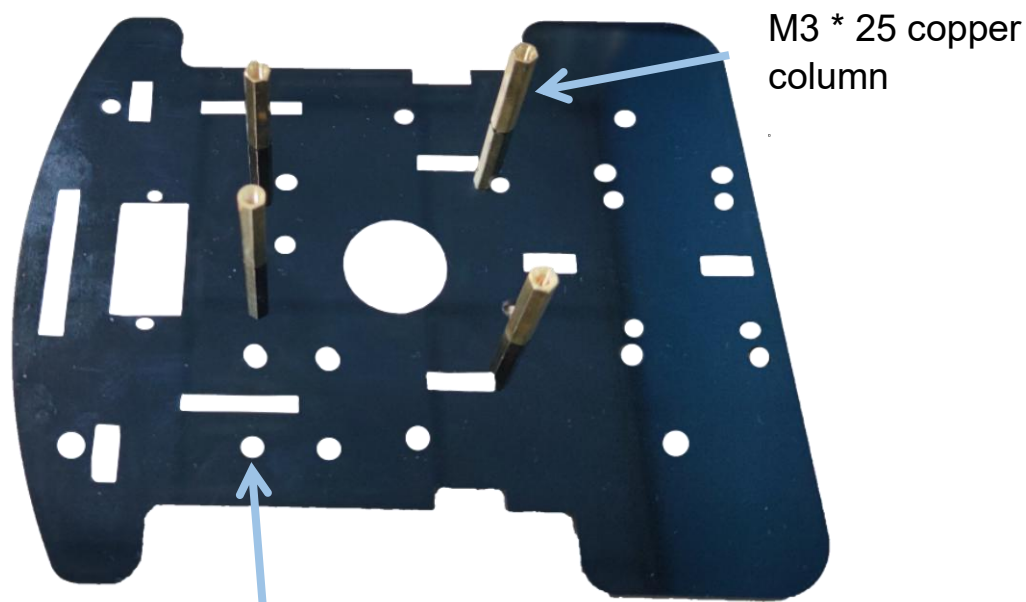
## The first part: the construction of the car

Remove the protective film before use



## Acrylic installation of copper column

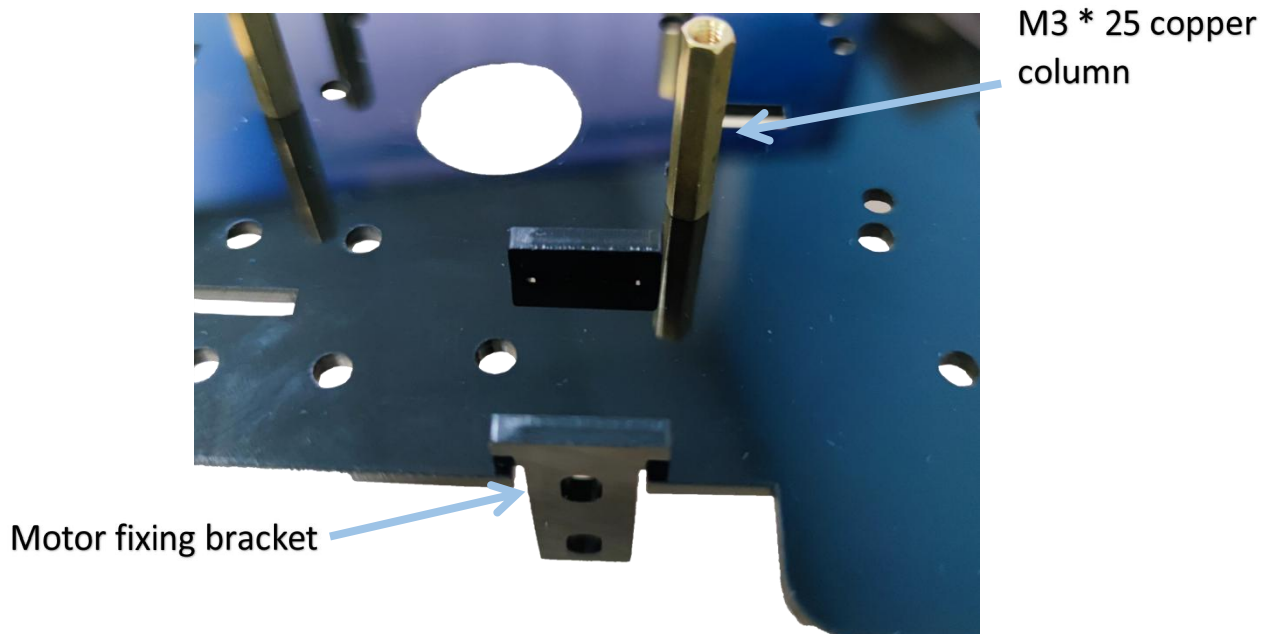
Fix m3 \* 25 copper column on acrylic base plate with M3 \* 8 flat head screw, pay attention to direction



On the left side of the acrylic base plate is the positioning hole for fixing the drive module

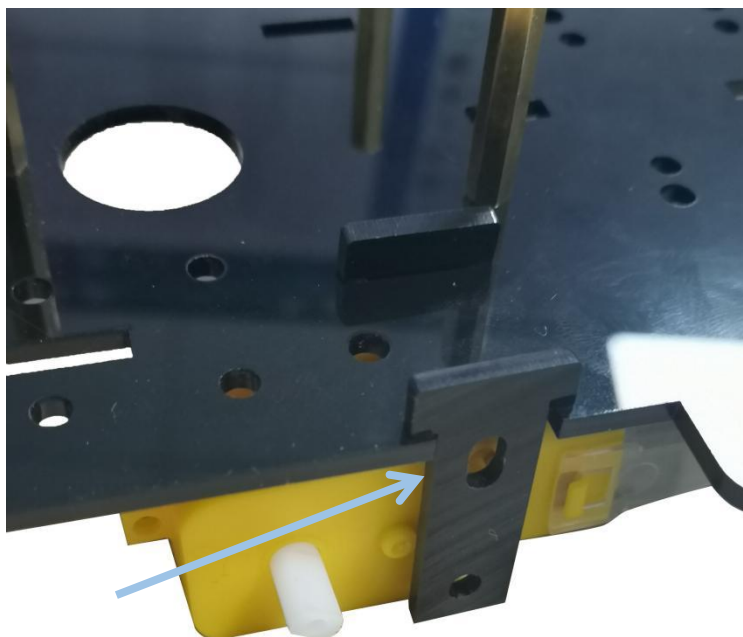
## Install the motor retaining bracket

Put the motor bracket into the hole corresponding to the acrylic base plate, and pay attention to the direction



### fix a motor

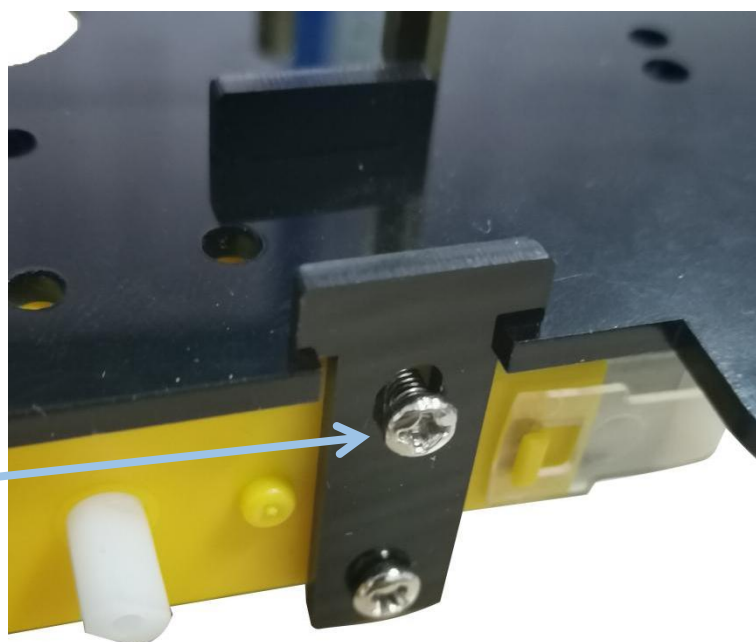
Match the screw hole of the motor with the hole of the motor bracket



Match the screw hole of the motor with  
the motor bracket

### fix a motor

Match the screw hole of the motor with the hole of the motor bracket



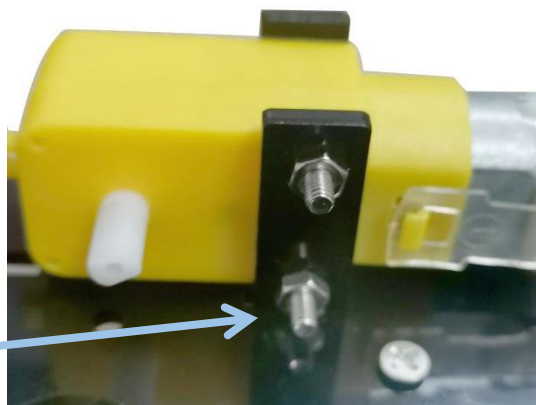
Use m3 \* 30 screw to  
insert into the hole



## fix a motor

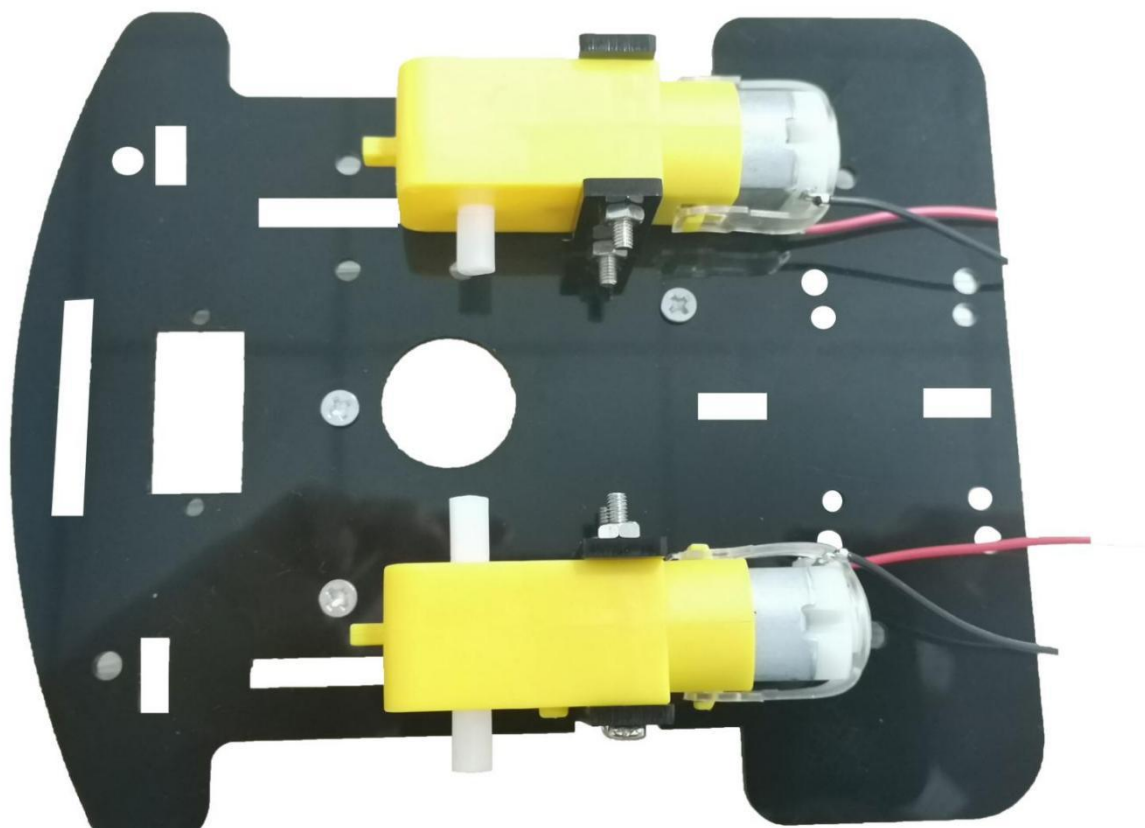
Lock motor with M3 nut

Lock the inserted m3 \* 30  
screw with M3 nut



## fix a motor

Figure after motor installation



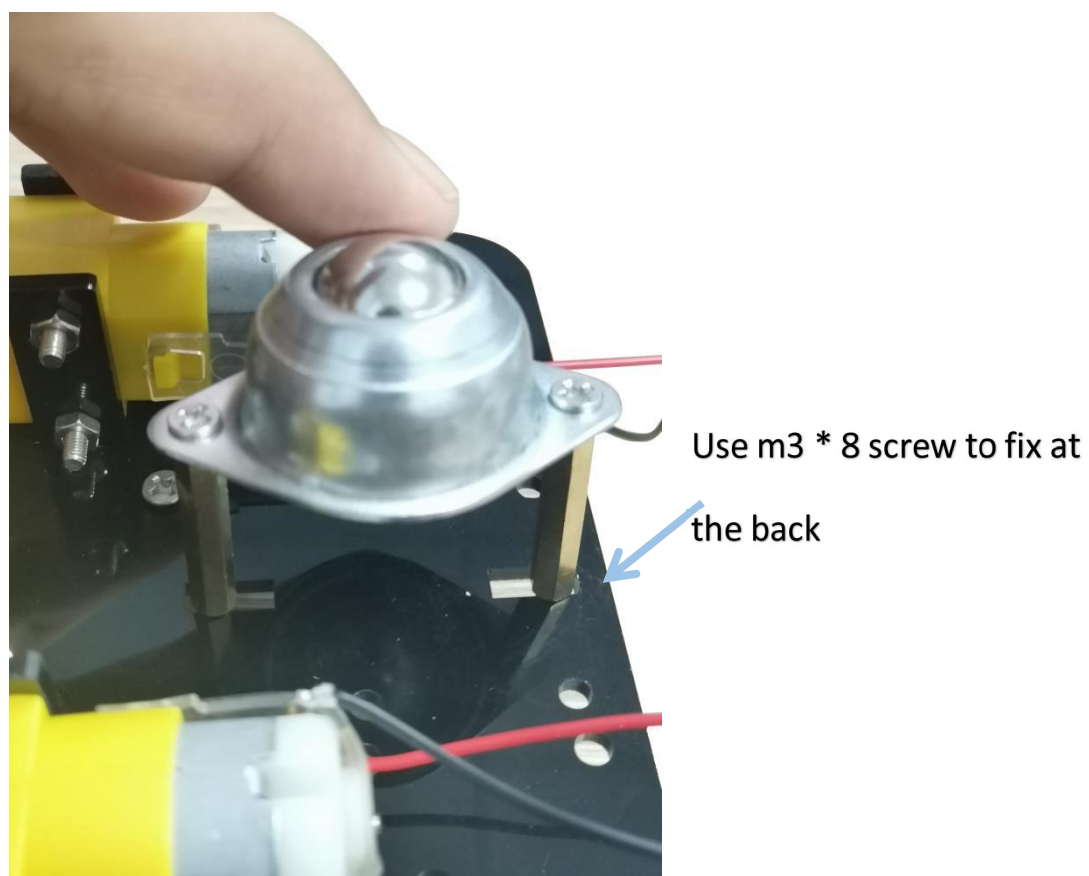
## Install Cardan wheel

Use m3 \* 8 screw to fix m3 \* 25 copper column on Cardan wheel



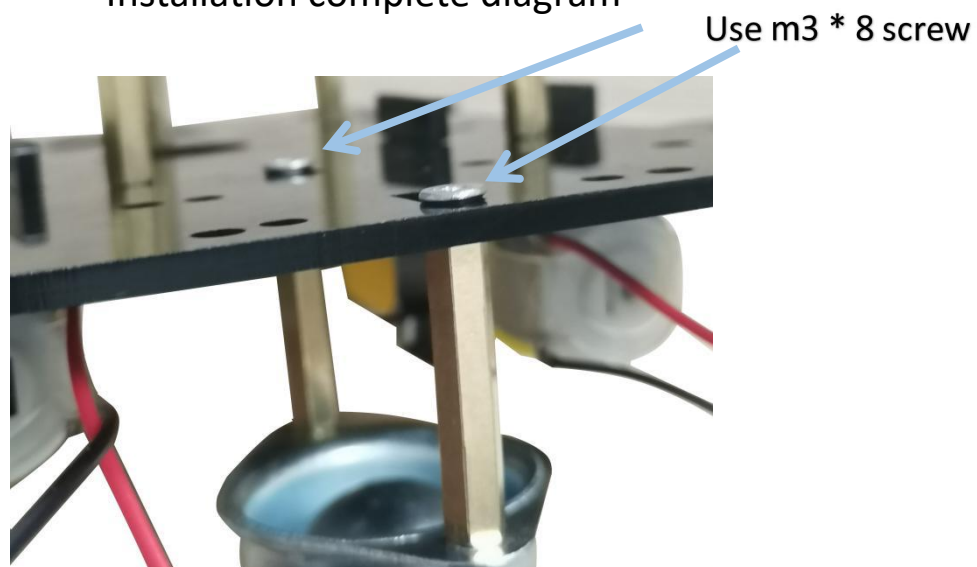
## Install Cardan wheel

Use m3 \* 8 screws to fix the universal wheel on the bottom plate of the car



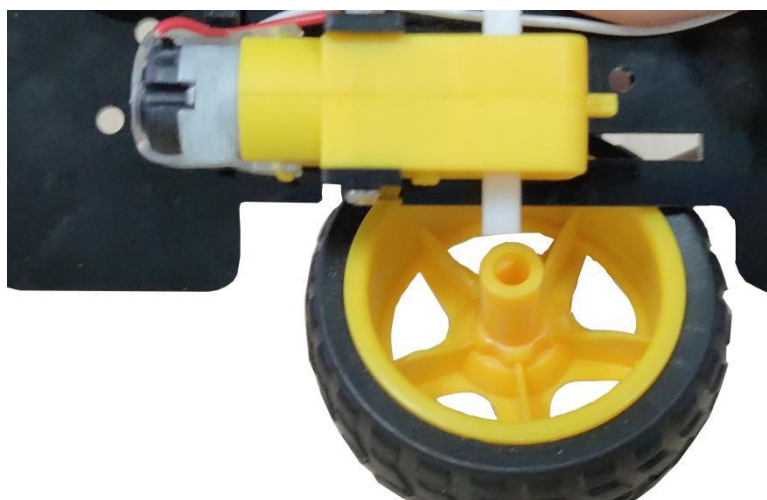
## Install Cardan wheel

Installation complete diagram



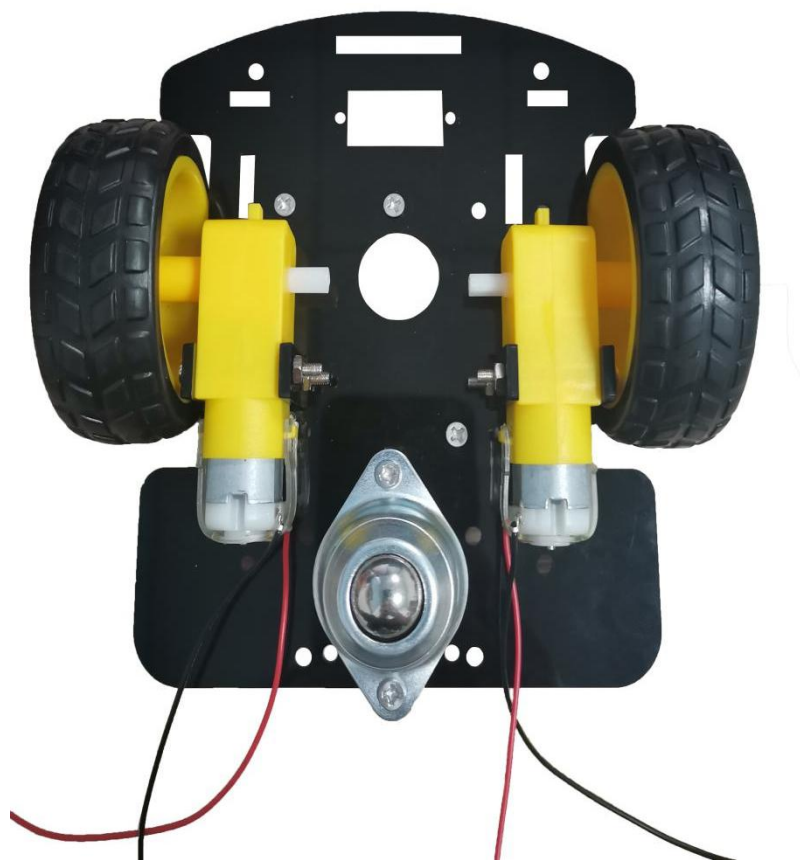
## Install the wheel

Install the trolley wheel on the TT motor shaft



## Install the wheel

Installation complete diagram



## Install the ultrasonic fixing bracket

Figure when ultrasonic bracket and ultrasonic module are not spliced

Ultrasonic fixing  
bracket



Ultrasonic module



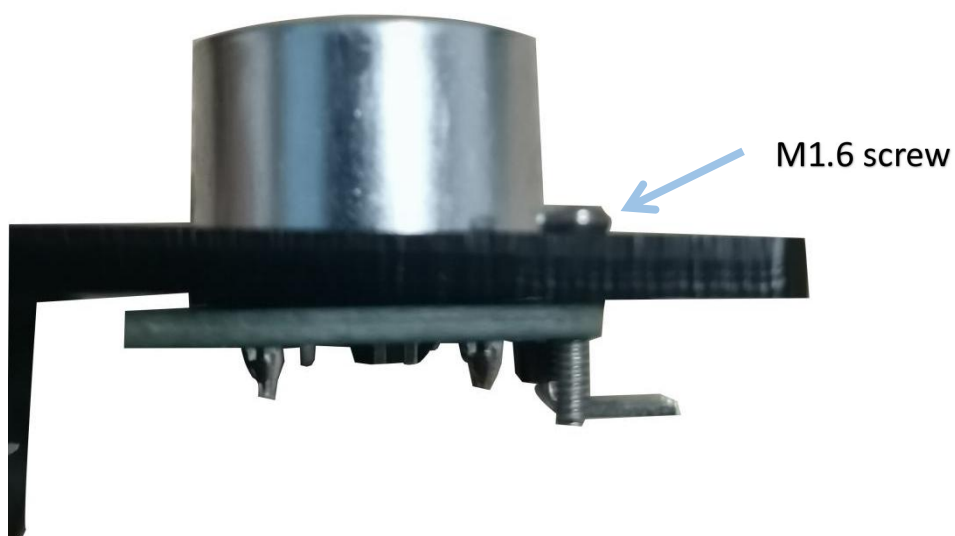
## Install the ultrasonic fixing bracket

Install the ultrasonic module into the bracket as shown in the figure below



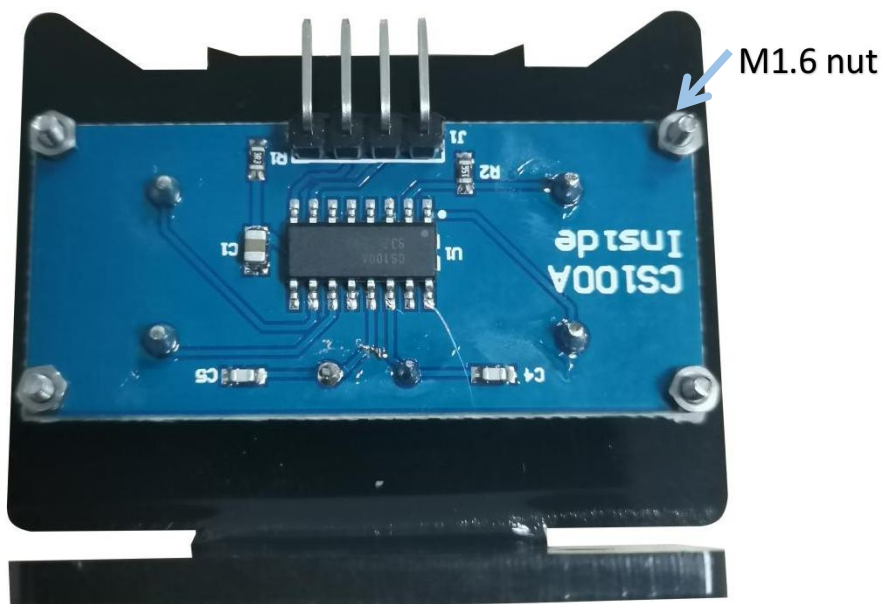
## Install the ultrasonic fixing bracket

Fix the ultrasonic module and bracket with m1.6 screws and nuts



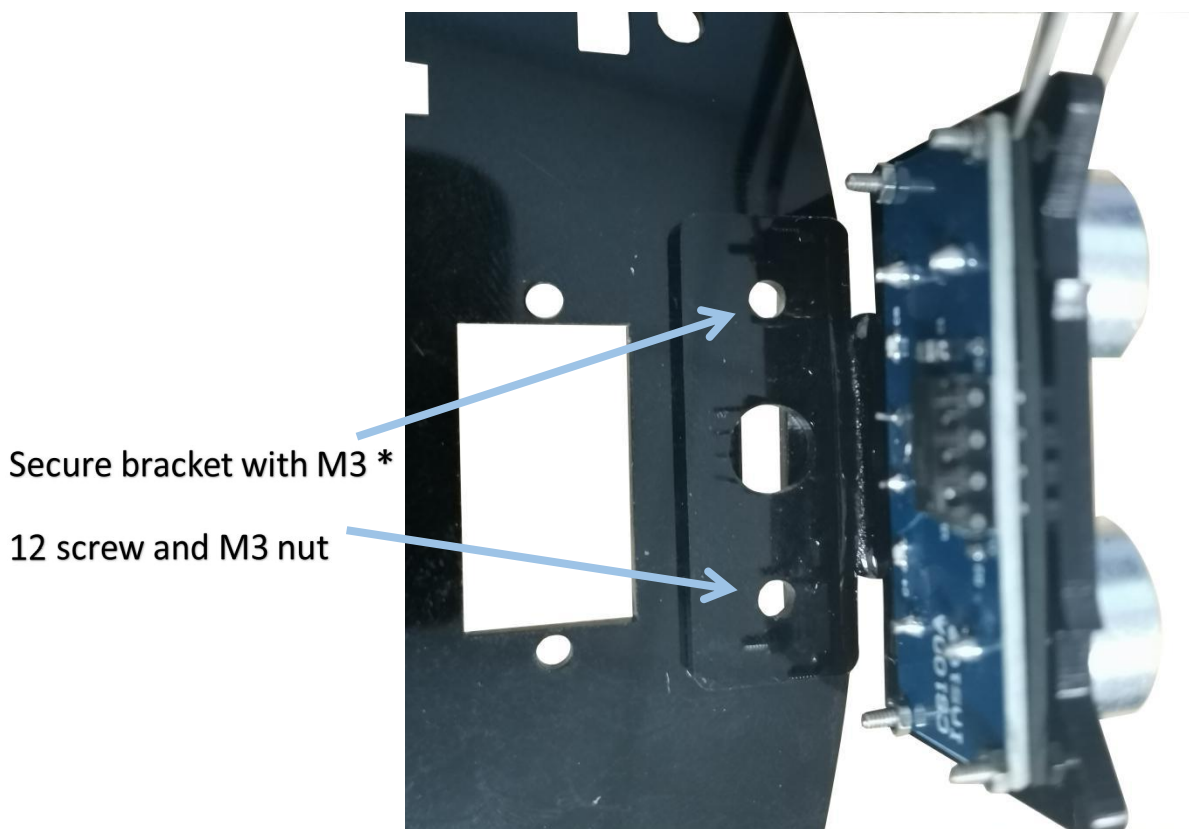
### Install the ultrasonic fixing bracket

Figure of fixation completion



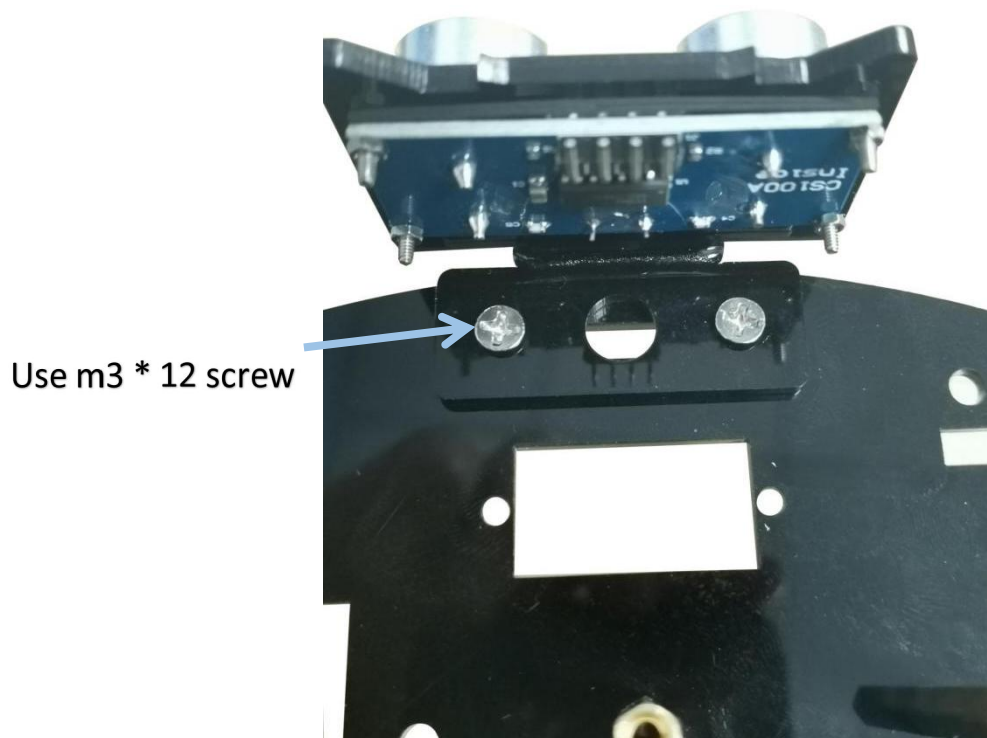
### Install the ultrasonic fixing bracket

Fix the ultrasonic module on the bottom plate of the car



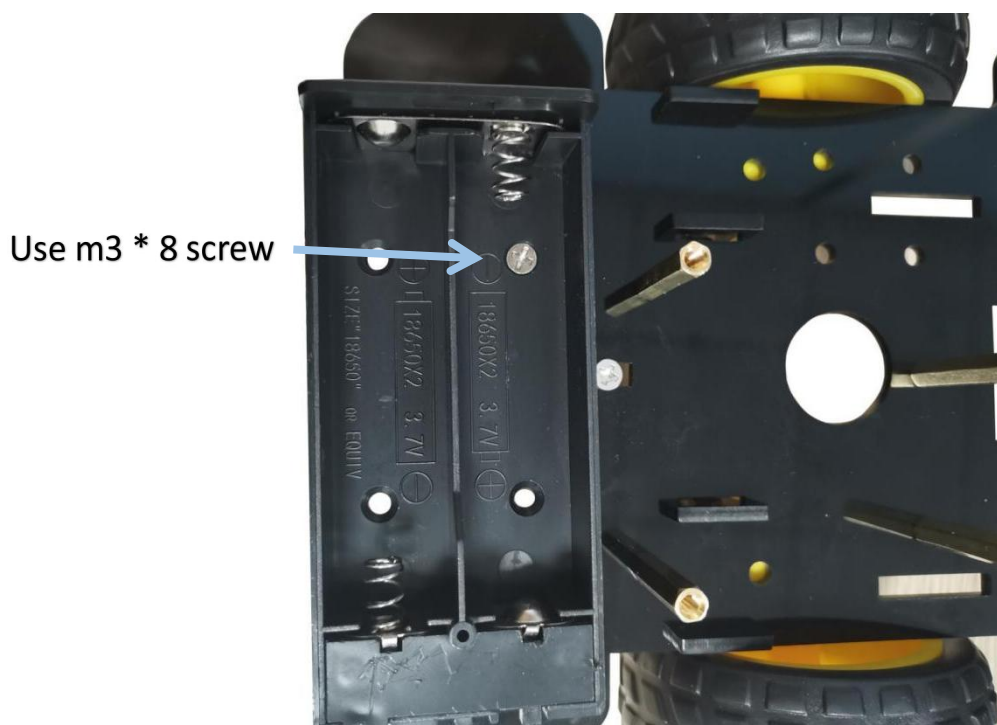
## Install the ultrasonic fixing bracket

Installation complete diagram



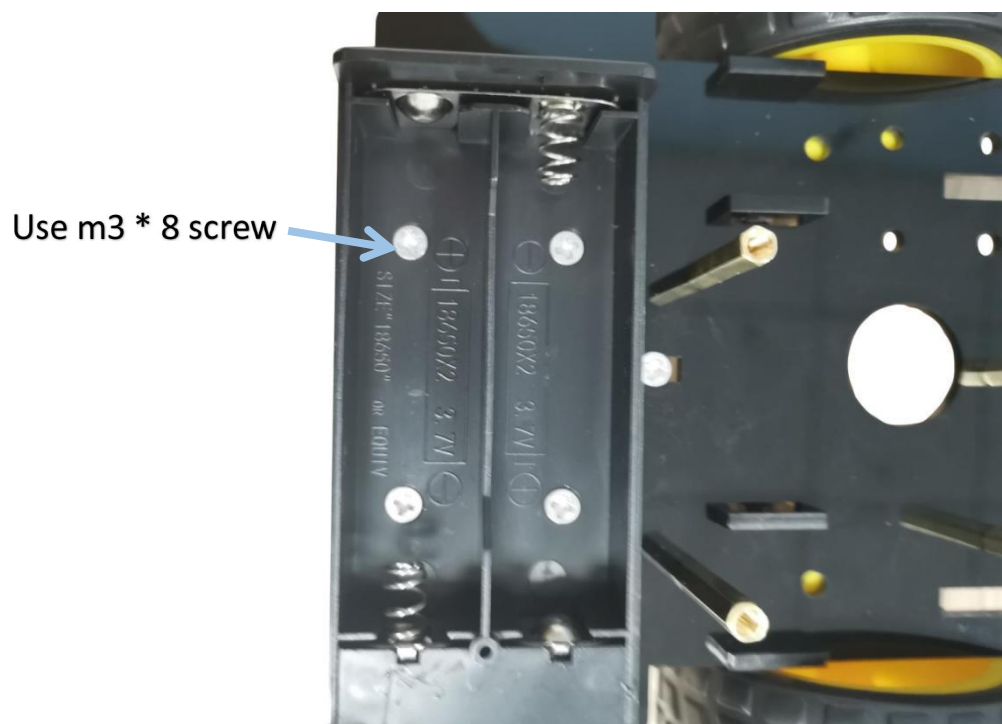
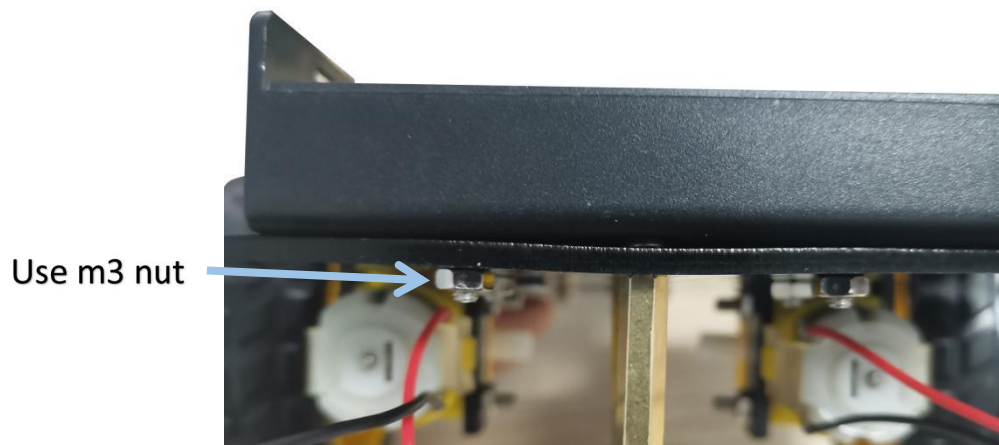
## Install the battery box

Use m3 \* 8 screws and nuts to fix the battery box on the car bottom plate



## Install the battery box

Installation complete diagram

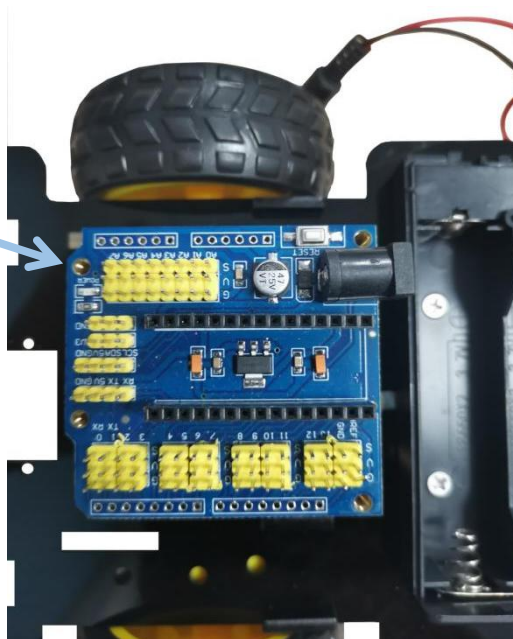




## Installing the expansion board

Fix the expansion board on the M3 \* 25 copper column with M3 \* 8 screws

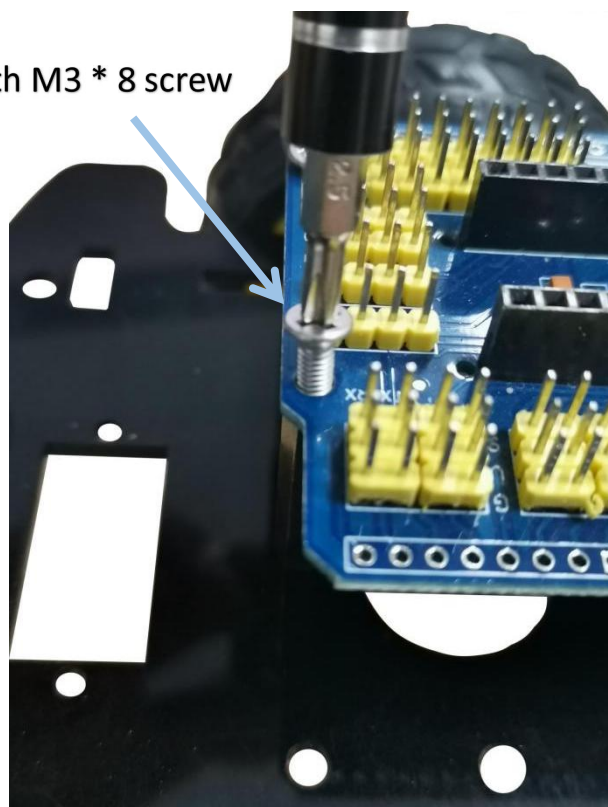
Fix with M3 \* 8 screw



## Installing the expansion board

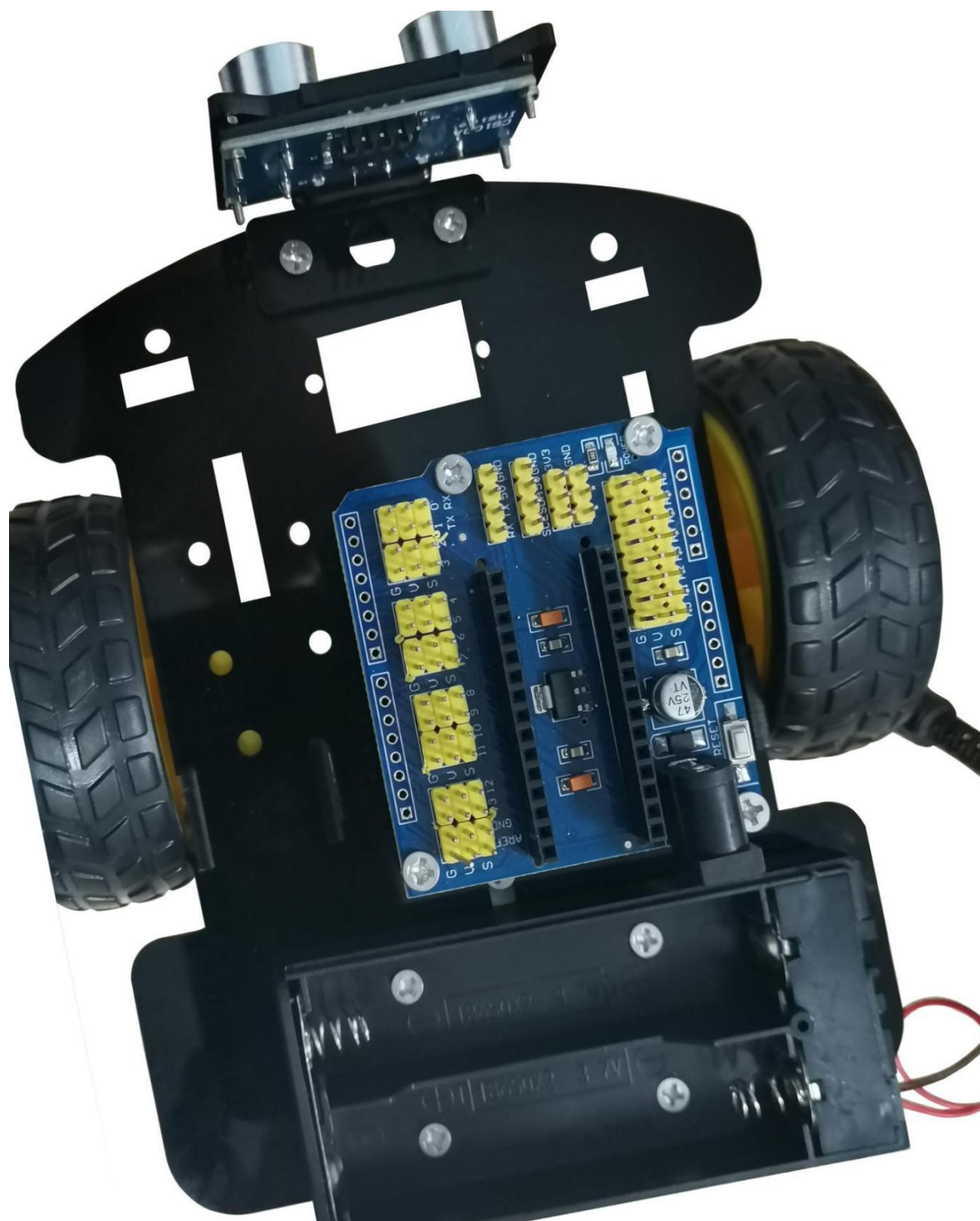
Fix the expansion board on the M3 \* 25 copper column with M3 \* 8 screws

Fix with M3 \* 8 screw



## Installing the expansion board

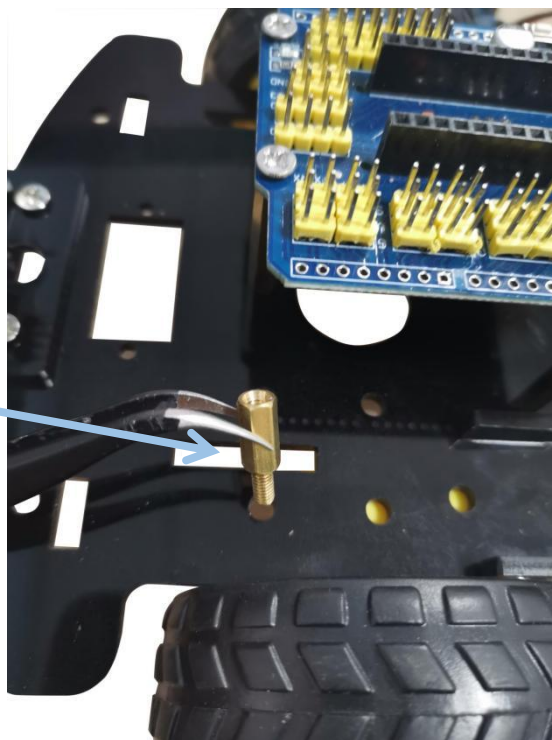
Installation complete diagram



### Install the motor drive board

Fix m3 \* 10 + 6 copper pillar to the trolley bottom plate with M3 nut

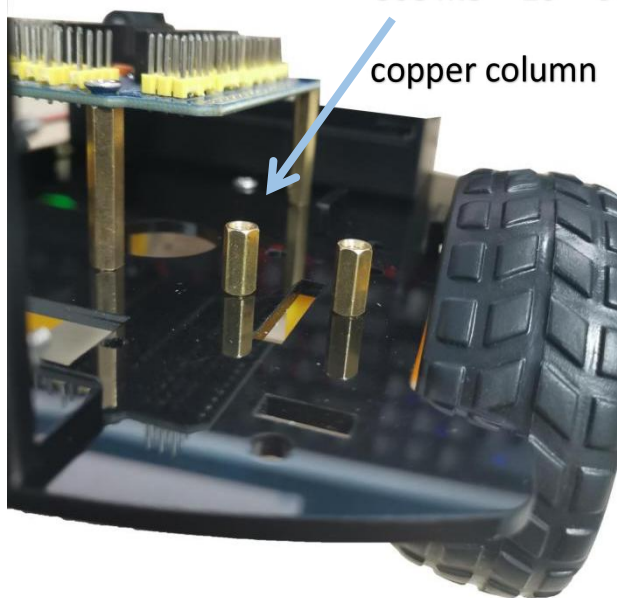
Use m3 \* 10 + 6  
copper column



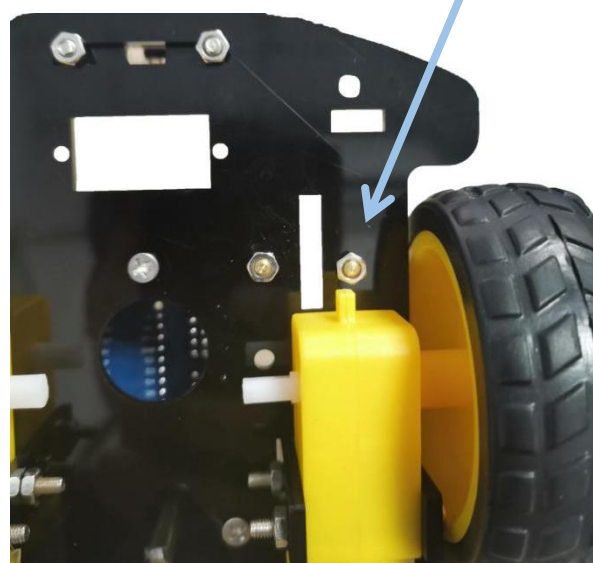
### Install the motor drive board

Installation drawing of copper column

Use m3 \* 10 + 6  
copper column

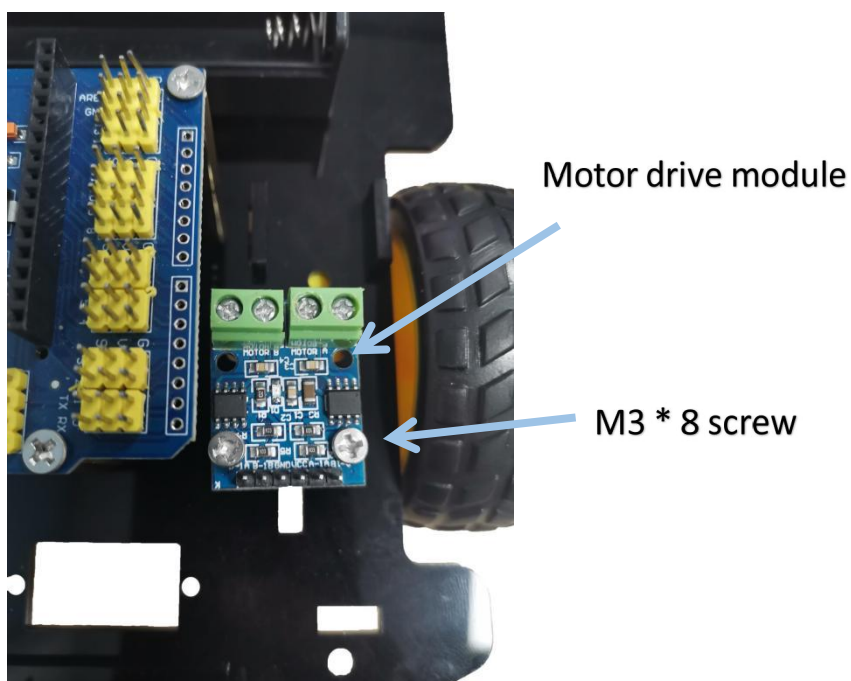


Use m3 nut



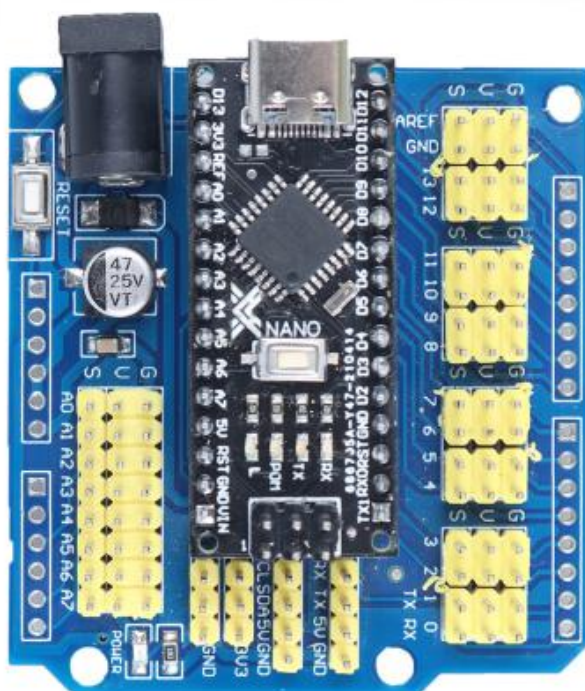
## Install the motor drive board

Fix the motor drive module on the M3 \* 10 + 6 copper column with M3 \* 8 screws



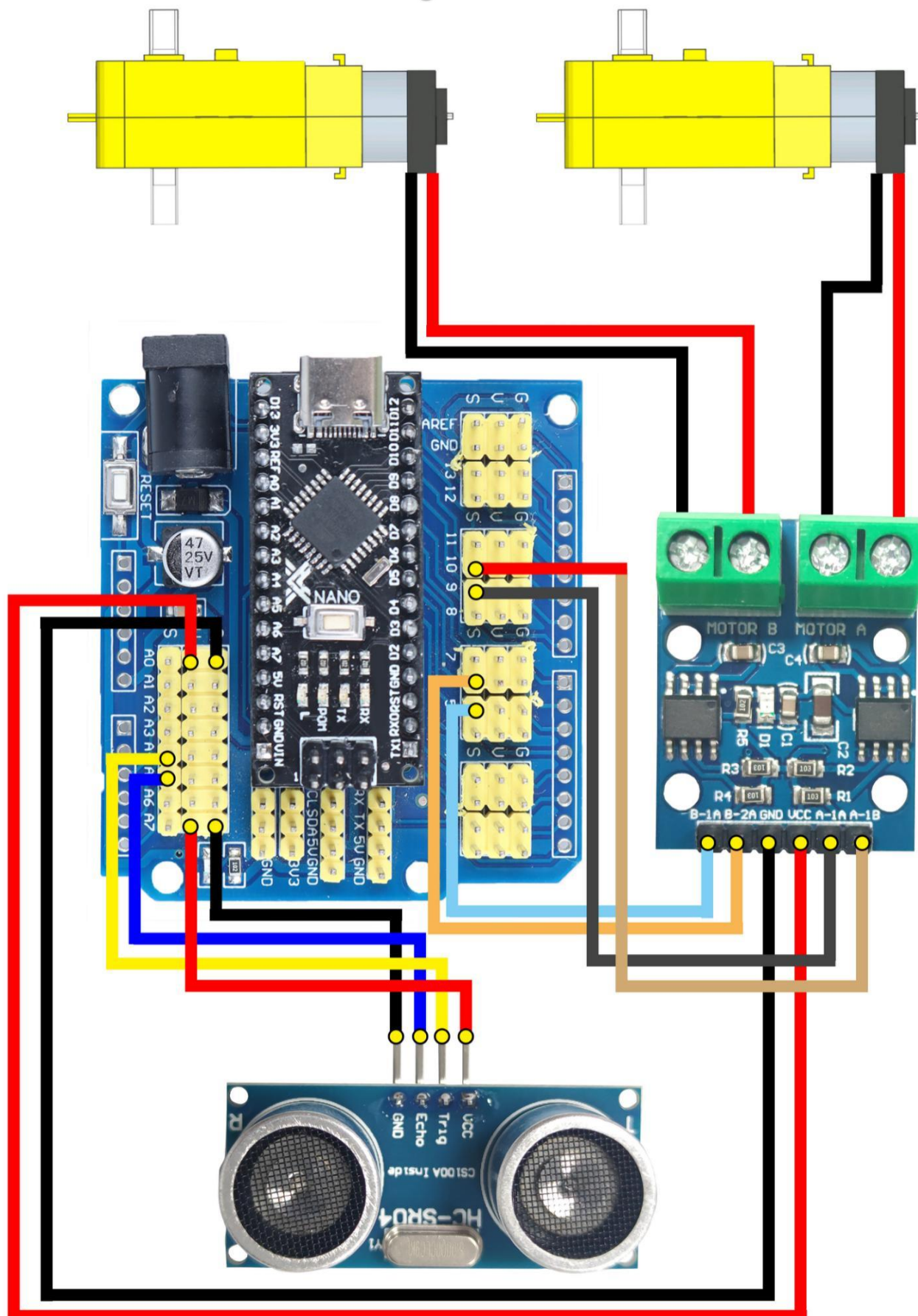
## Install the motherboard

Will ZY\_ Insert the nano motherboard into the expansion board as shown in the figure

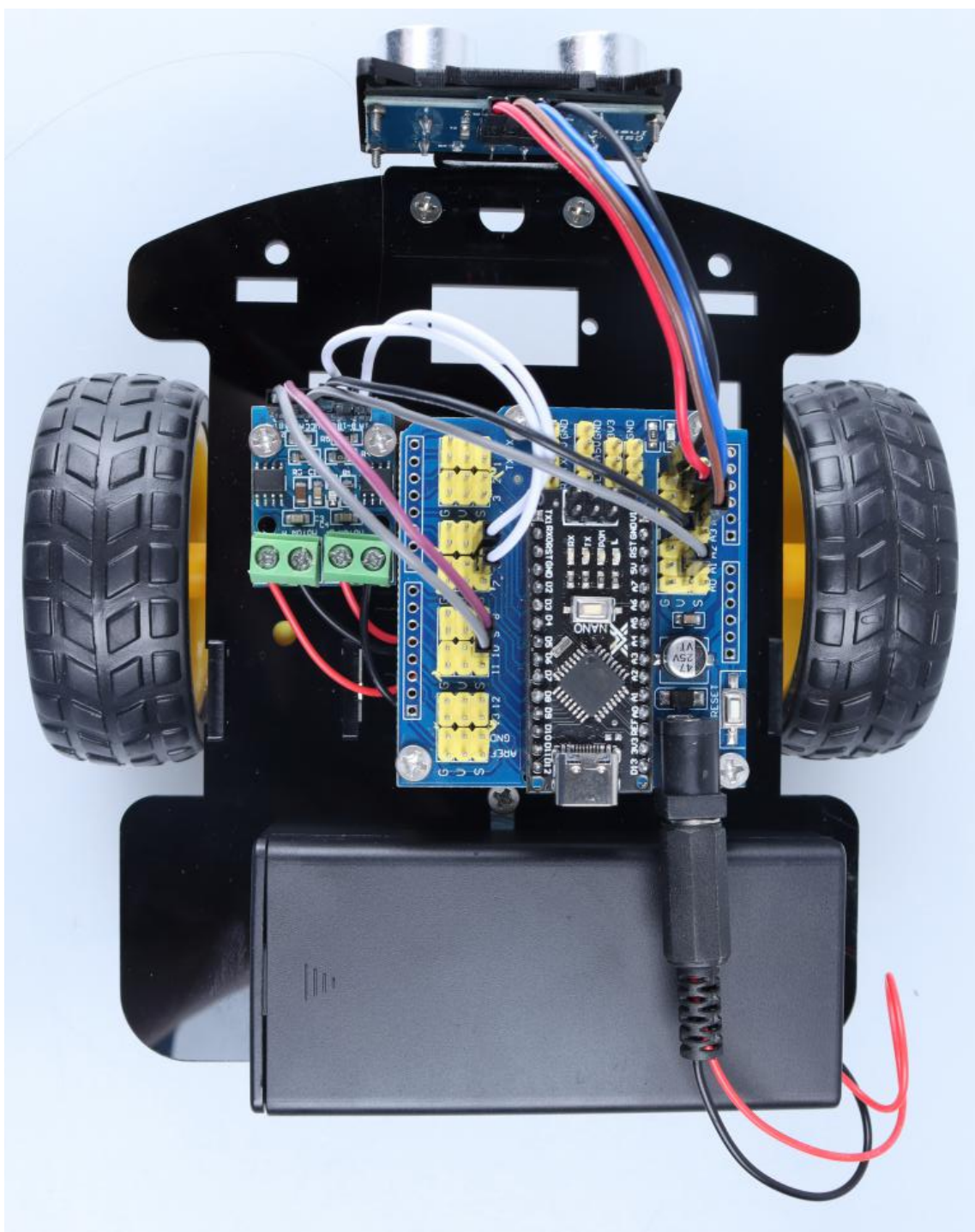


## The second part: the connection of trolley line

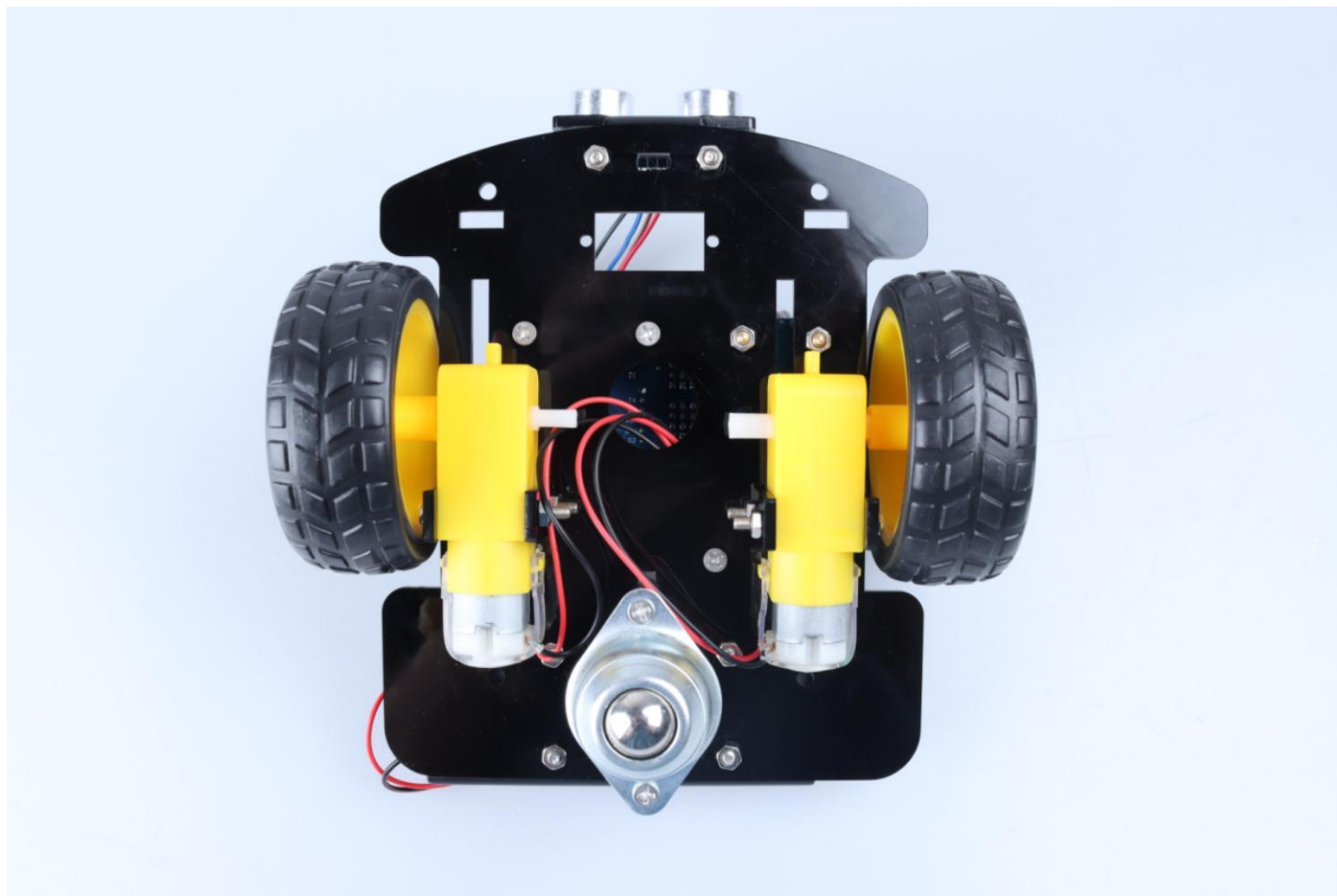
Schematic diagram of line connection



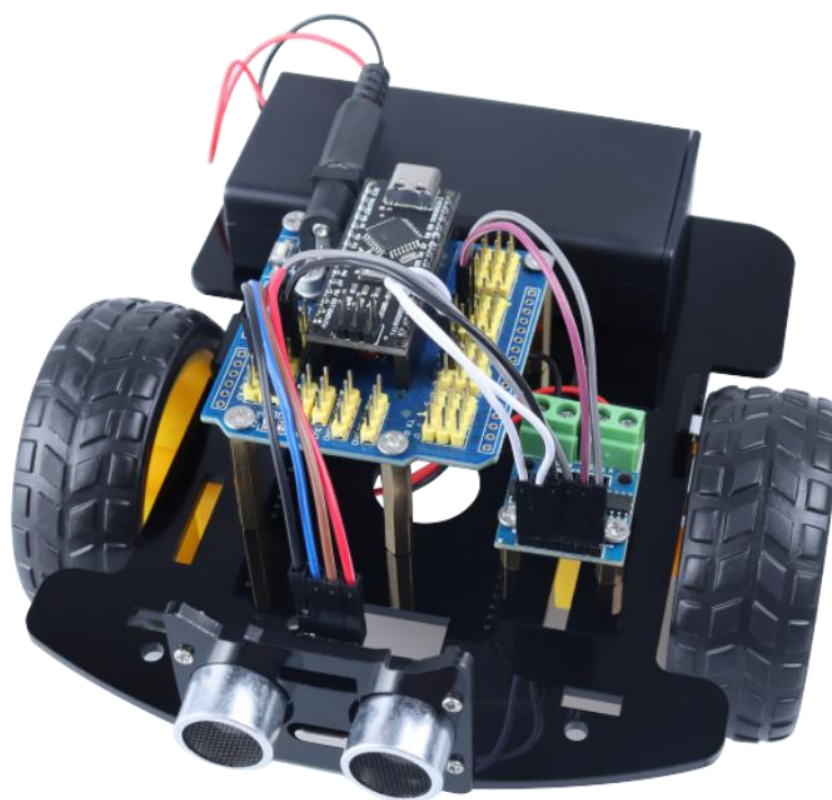
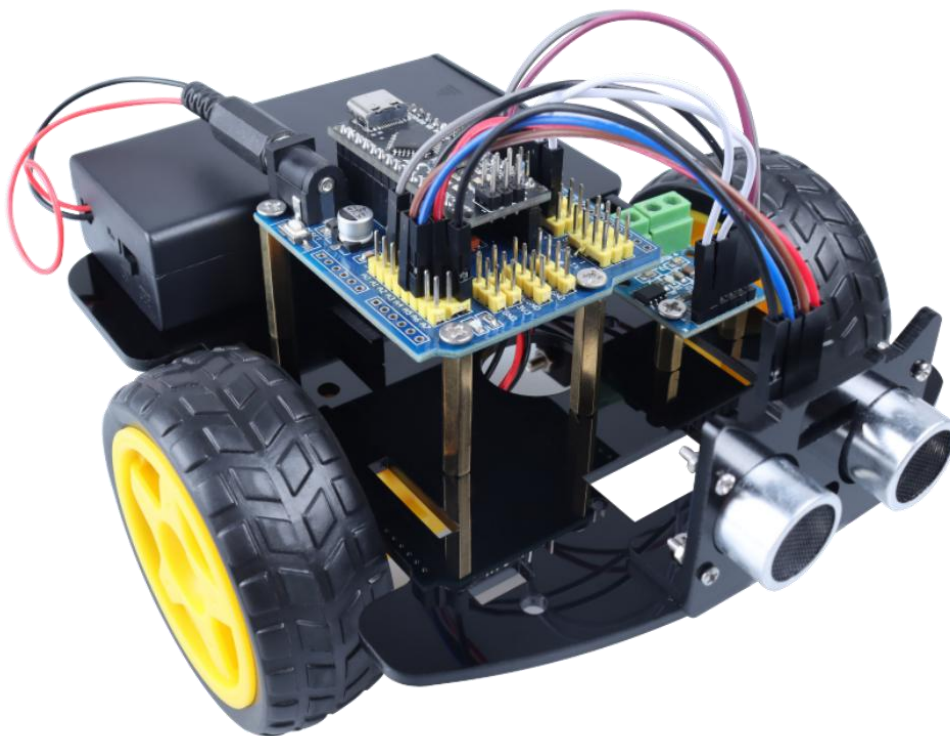
## Physical diagram of line connection (top view)



## Physical drawing of line connection (bottom drawing)



**The third part: refer to the drawing after the car is assembled**







**thank you !**