

AS-4WDA mobile robot platform

Installation manual v1.0











一、 the parts list

(一) the list of components (including scalable resource)

Name (number)	Code	Icon	Name (number)	Code	Icon
The platform plate (1)	PT0		Platform plate (1)		
Platform side (2)	PT2		Platform end plate (2)	PT3	
Toggle switch (1)	KG0		Charging interface (1)	CD0	
DC motor (4)	DJ0		Power supply box (1)	DY0	
Wheel (4)	CL0				

(二) connecting parts list

SN	Name	Code	Icon	Specification and description
1	Cruciform slot screw	SPM3×6		24 个 M3×6
2	Cruciform slot screw	SPM3×25		8 个 M3×25
3	Six corner	LM3		16 个 M3
4	Elastic washer	DQ1		1 for the M6 thread parts
5	Check washer	DQ2		1 for the M6 thread parts
6	Elastic washer	DQ3		1 for the M8 thread parts
7	Six corner	LM6		1 for the M6 thread parts
8	Six corner	LM8		1 for the M8 thread parts
9	Heat shrink tube			The joint insulation
10	Wireway			Connected component

(三) a controller and power supply equipment (number controller may choose one)



arduino Controller



arduino mega Controller



Dual H bridge DC motor driver board

On board to consider a variety of controller is compatible, so has a variety of control hole, the convenience of customers make

Use.

二、 The use of tools

- 1、 cross screwdriver (need to use 2 mm and 4 mm two specifications)
- 2 、 needle nose pliers

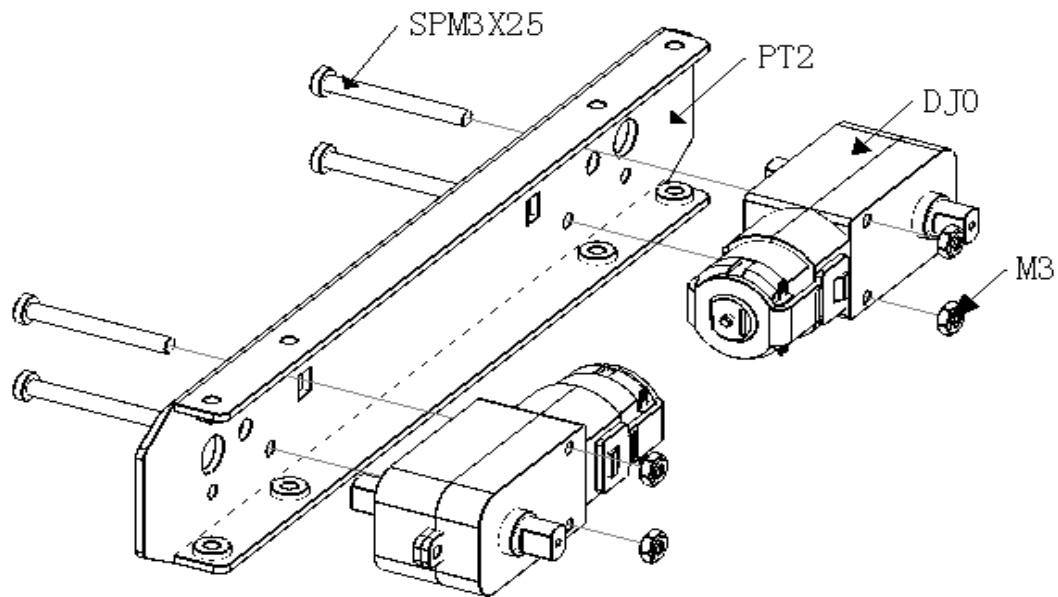


三、 The assembly steps

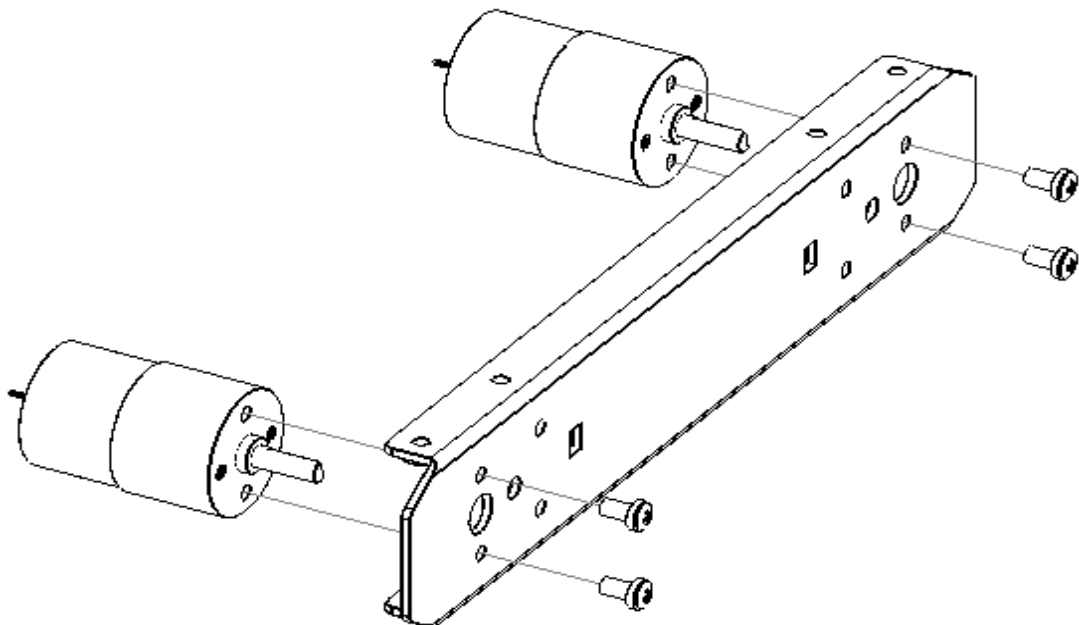
Matters needing attention:

- 1 、 carefully interpret the images and pay attention to installation order, in case of doubt can refer to the next installation diagram.
- 2、 please note that manual red font part, avoid the error caused by repeated disassembly and installation.
- 3、 please be careful to use tools and cell polarity.
- 4、is needed to keep the battery dry, do not use a long time should take out the battery.
- 5、 do not let children touch the products of aluminum alloy parts, assembly should be far away from children, avoid the installation process Accidentally caused harm to children.

I **Step 1: DC motor mounting**

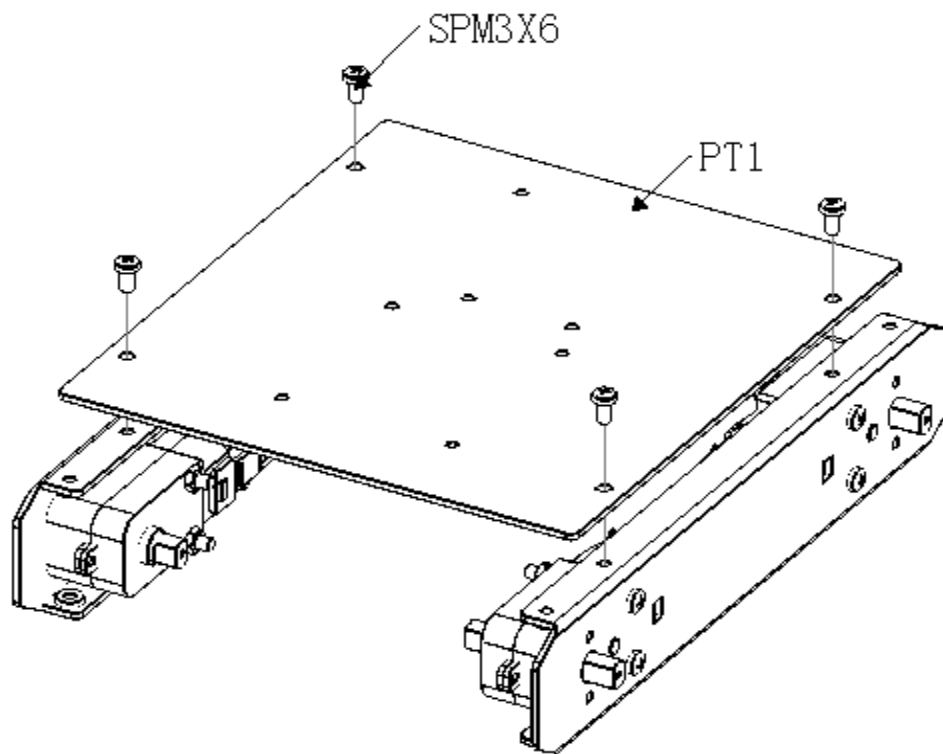


Two sides of the same motor installation, **Pay attention to installation before the motor wiring electric soldering iron, a heat-shrinkable tube heating plastic**

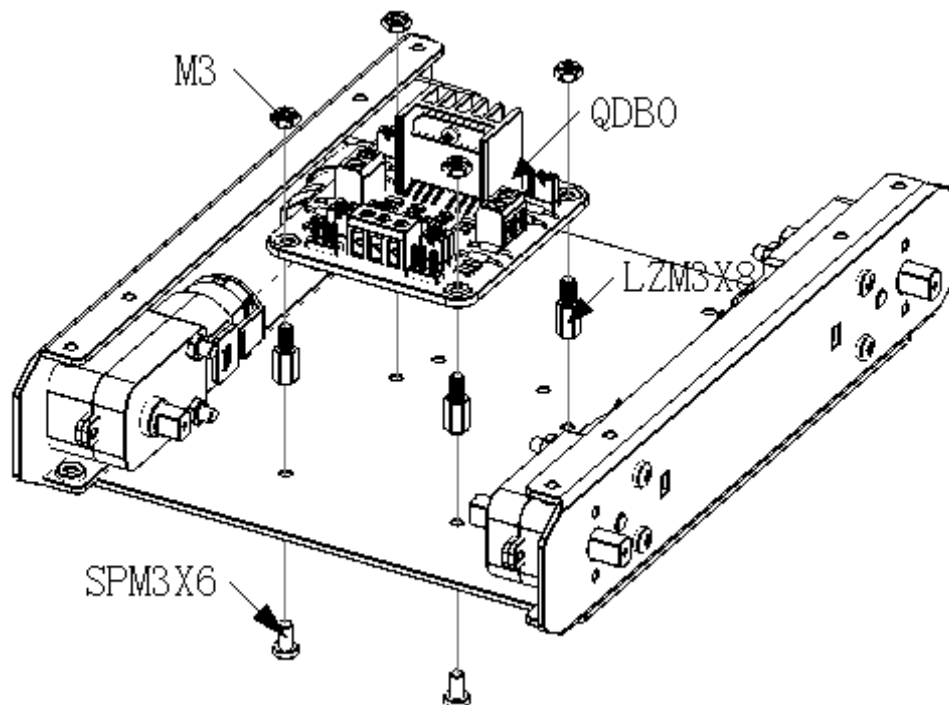


Side plate can also be arranged models of standard DC gear motor

I **Step 2** Side and the lower plate installation

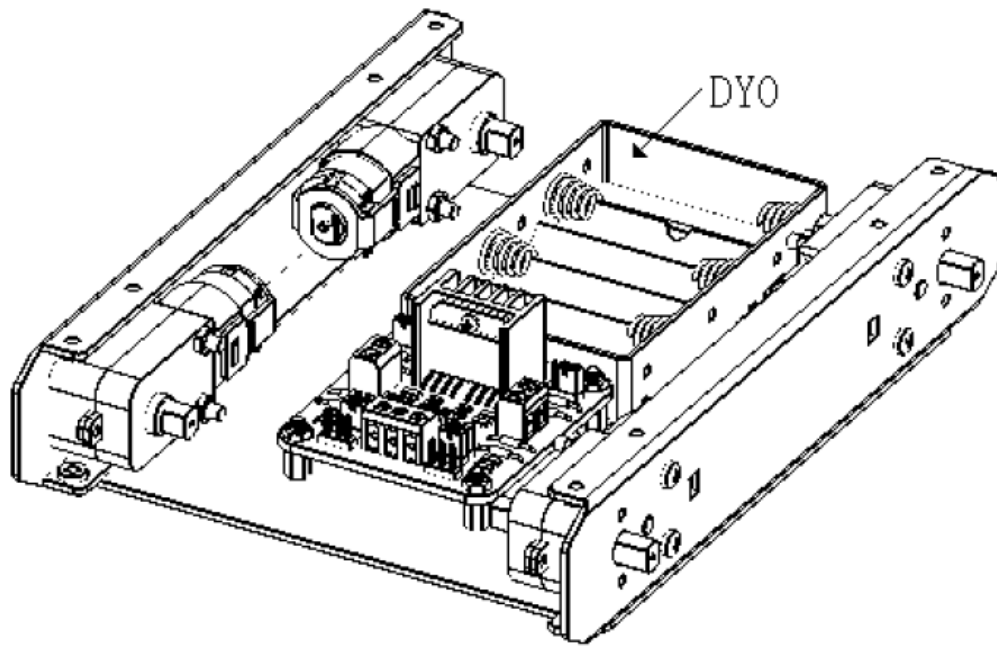


I **Step 2.1** drive plate installation



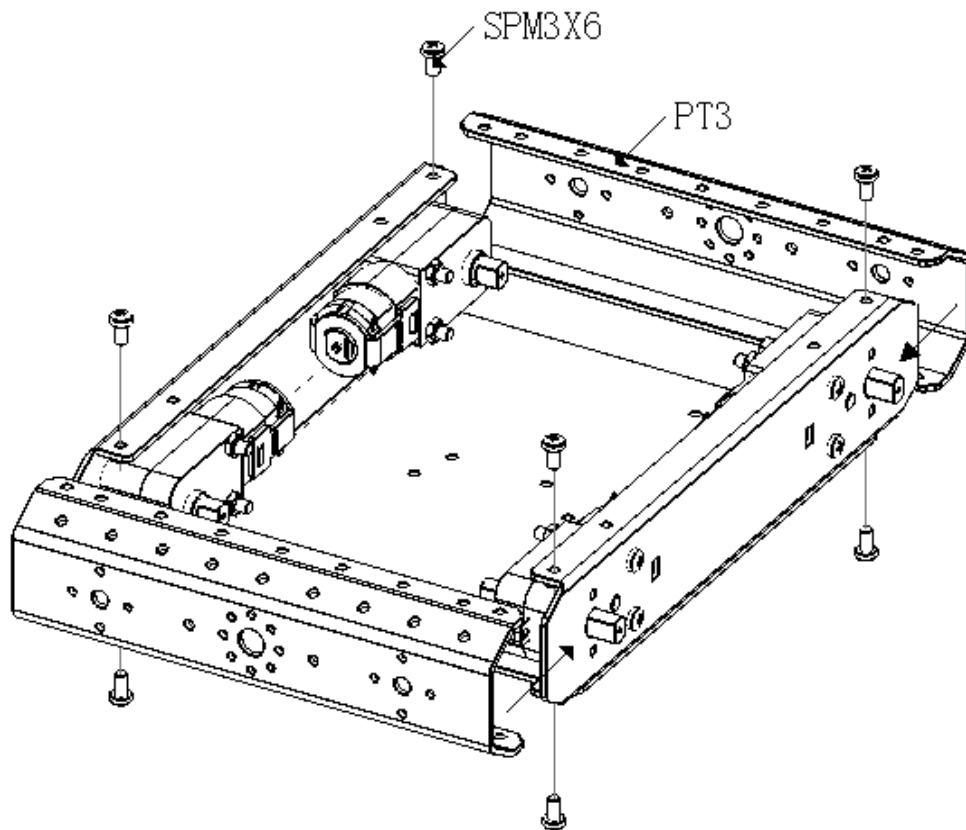
Drive board mounting direction freely, pay attention to the ipsilateral motor wiring direction sequence

I **Step 2.2** are arranged in the battery box

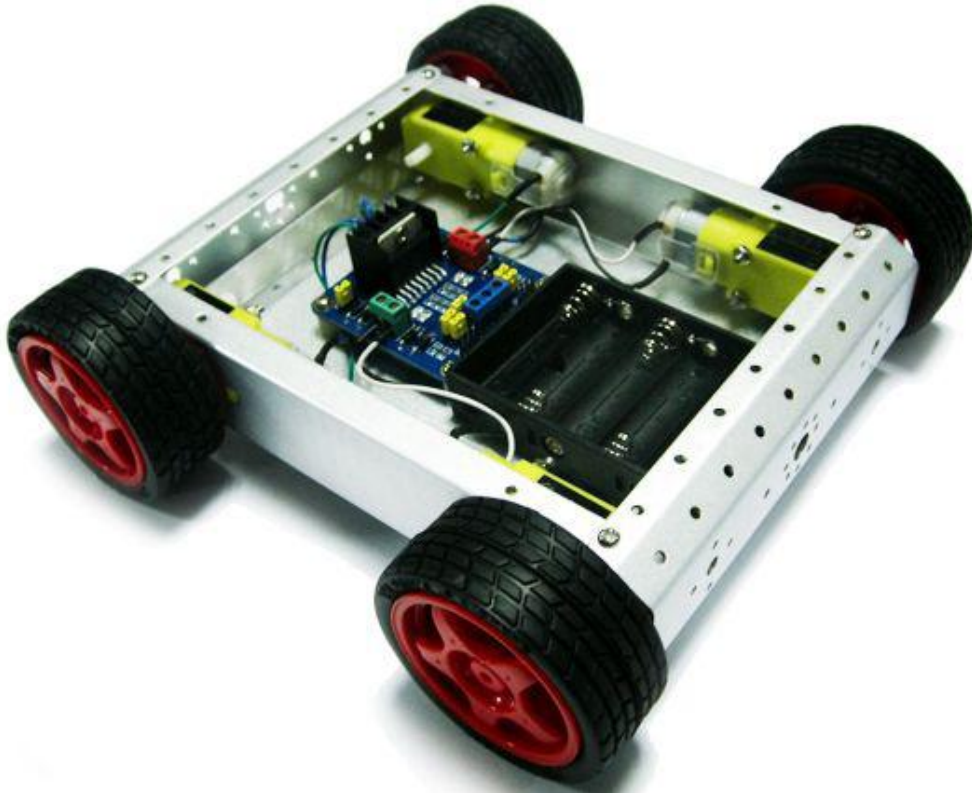


The battery box can be double-sided glue fixed, rear wheel motor wiring need to insert the DuPont line cap, access interface of the stepping motor

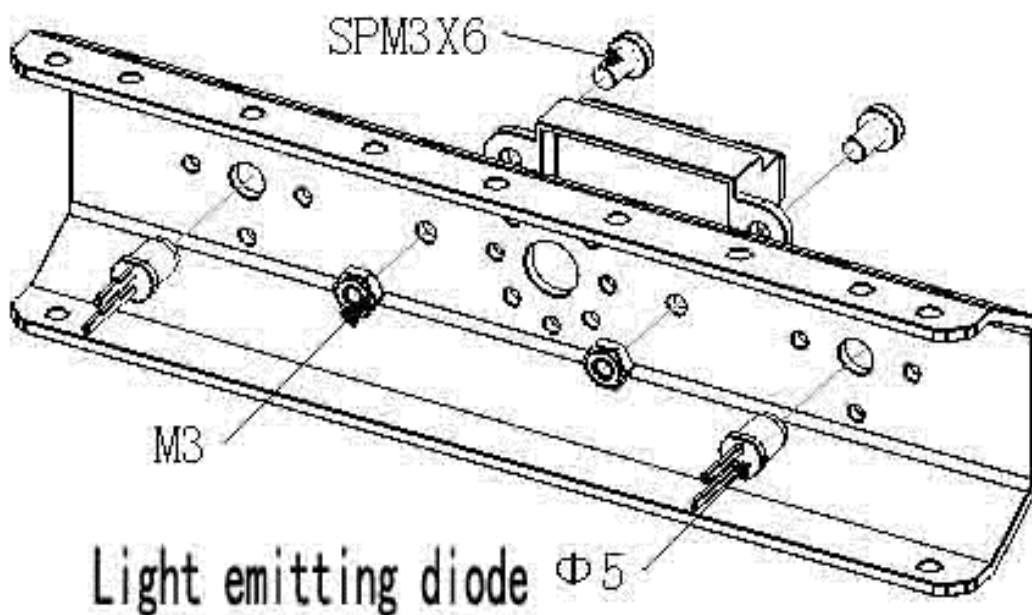
I **Step 3** end plate installation



This section after the installation is complete, the reference below, if there is any difference in modified

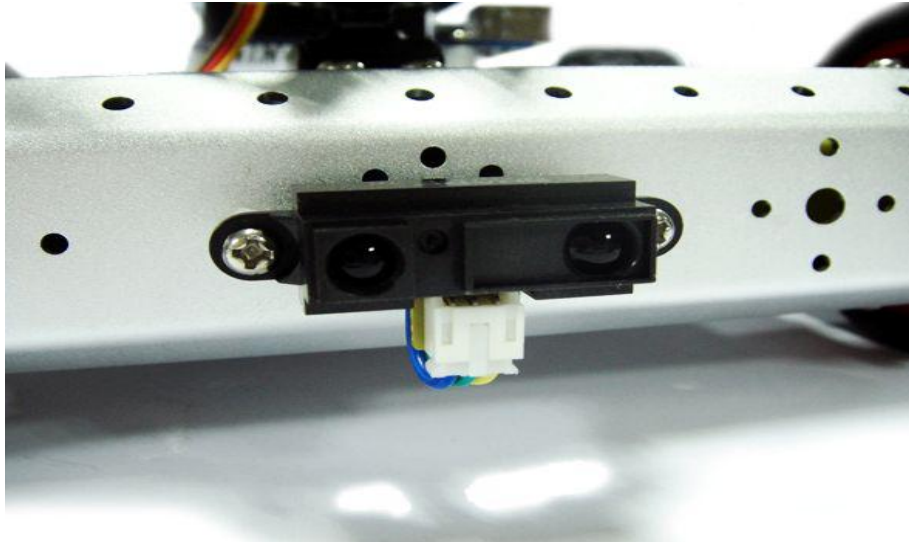


**I Step3.1 infrared sensors and the headlight mounting
(Extended)**

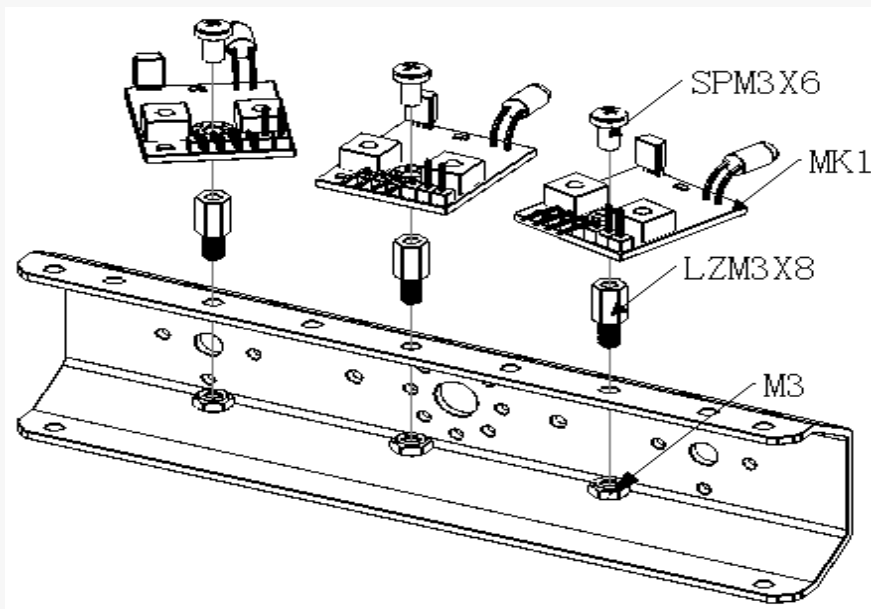


If mounted headlights, in step 3 before completion, installation sharp infrared distance sensor before, must first pass

Sensor cable is inserted into the front baffle port, the other end is inserted into the sensor interface, in order to prevent the sensor circuit board and the front Baffle too close to cause a short circuit, can be mounted white nylon string transition, after the completion of the installation reference below.

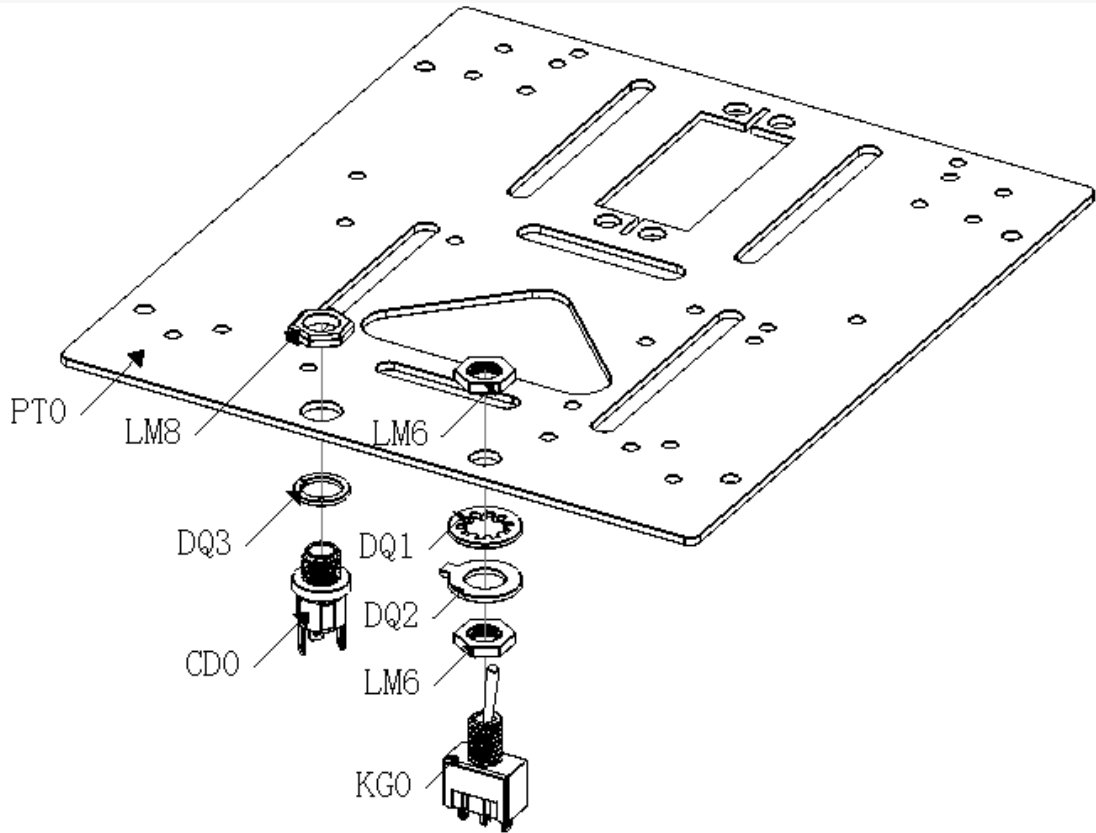


I Step 3.2 infrared obstacle avoidance sensor installation (Extended)

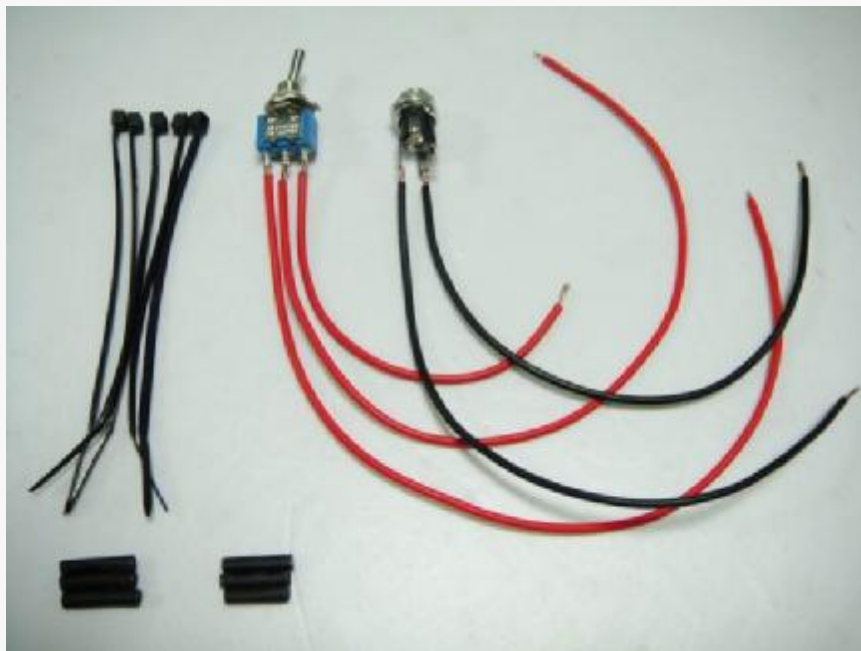


In the step 3 before installation, pay attention to the direction and spacing, spacing can be set to adjust, If the infrared obstacle avoidance sensor line, need to install the front baffle side.

I Step 4 with a charging interface switch installation

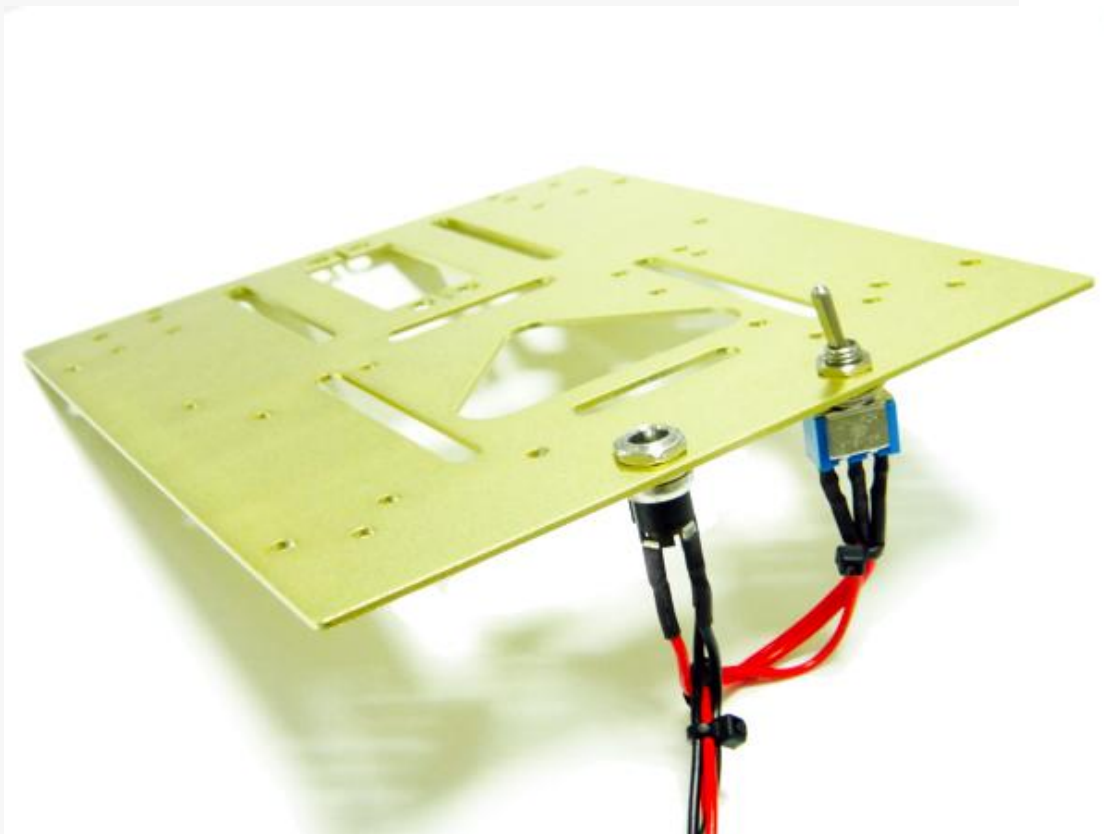


(1) Charging switch kit production

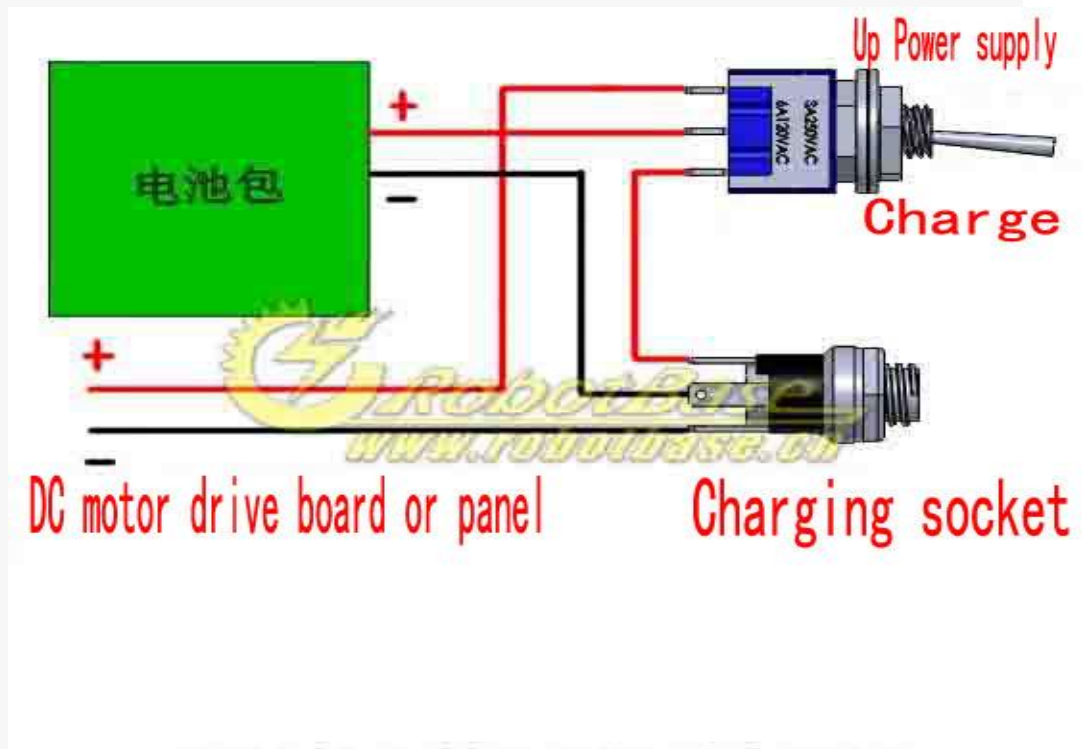




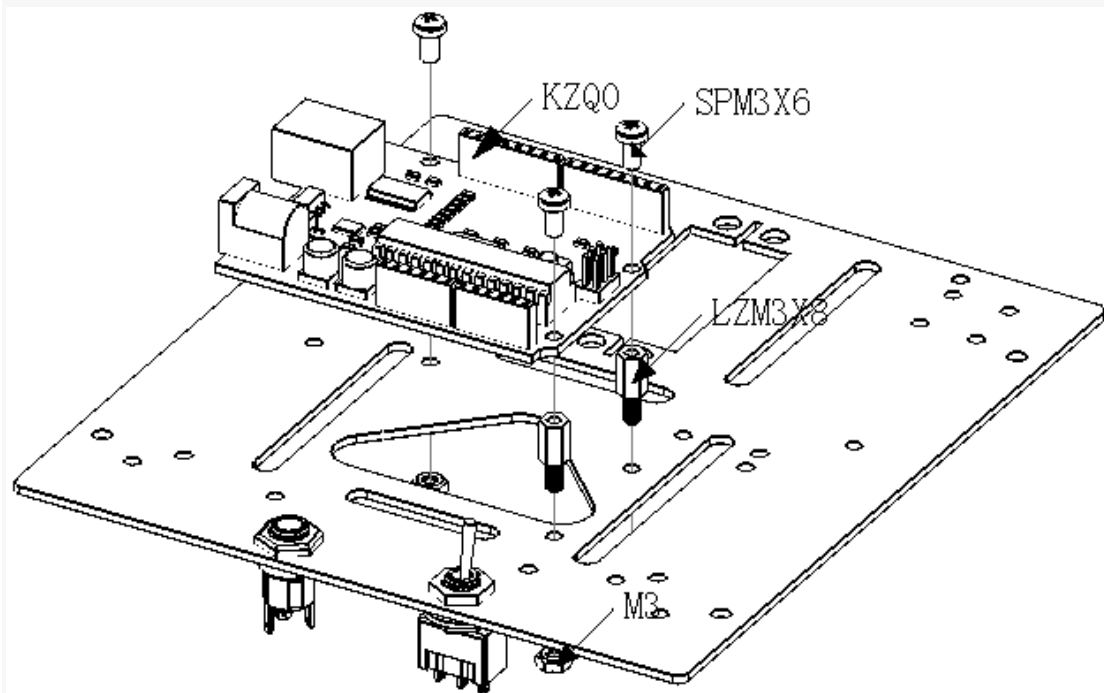
(2) After the installation is complete, should be as below



(4) power switch and a charging connection diagram

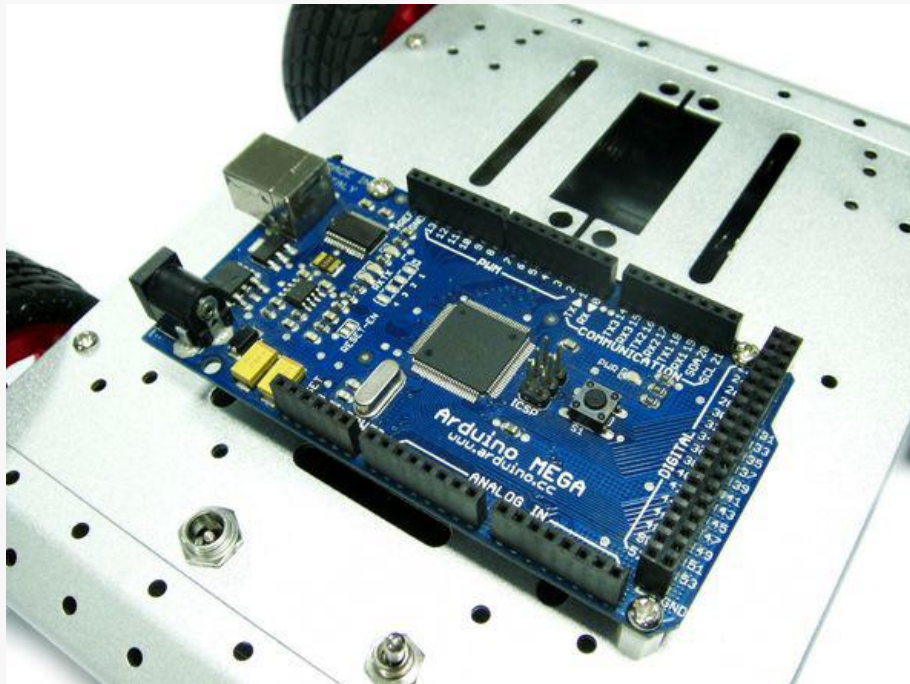


I Step 4.1 controller installation

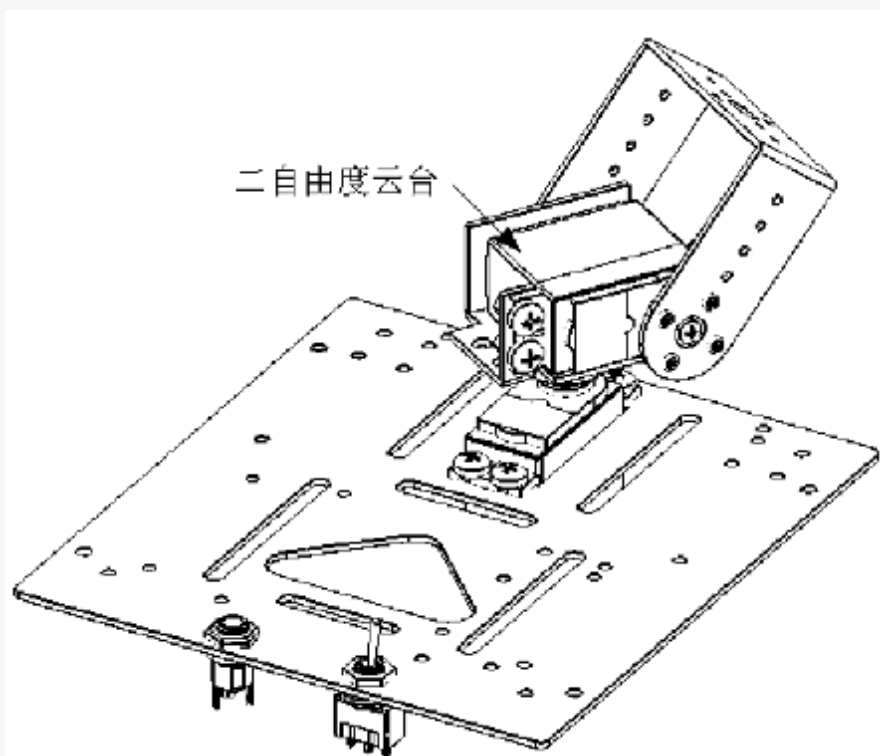


This platform is provided with a variety of controller mounting hole, install Arduino Mega168/328 controller, Arduino Mega1280/2560, Arduino UNO,

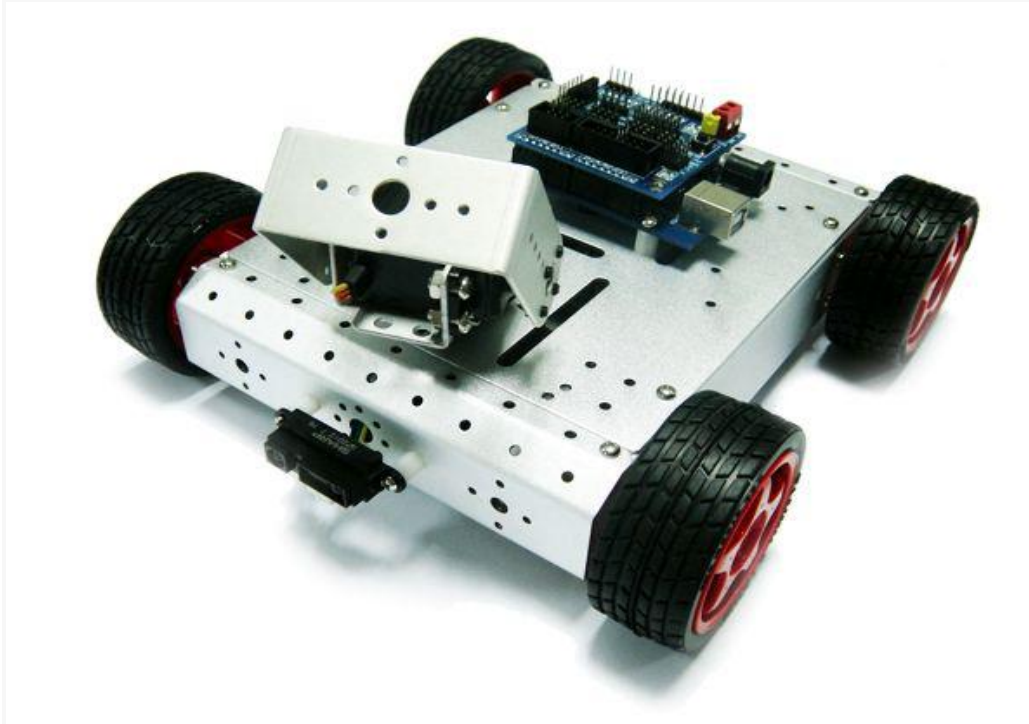
Seeeduino controller controller controller controller series,, 32 servo controller,
the installation of Arduino Mega1280 controller effect diagram:



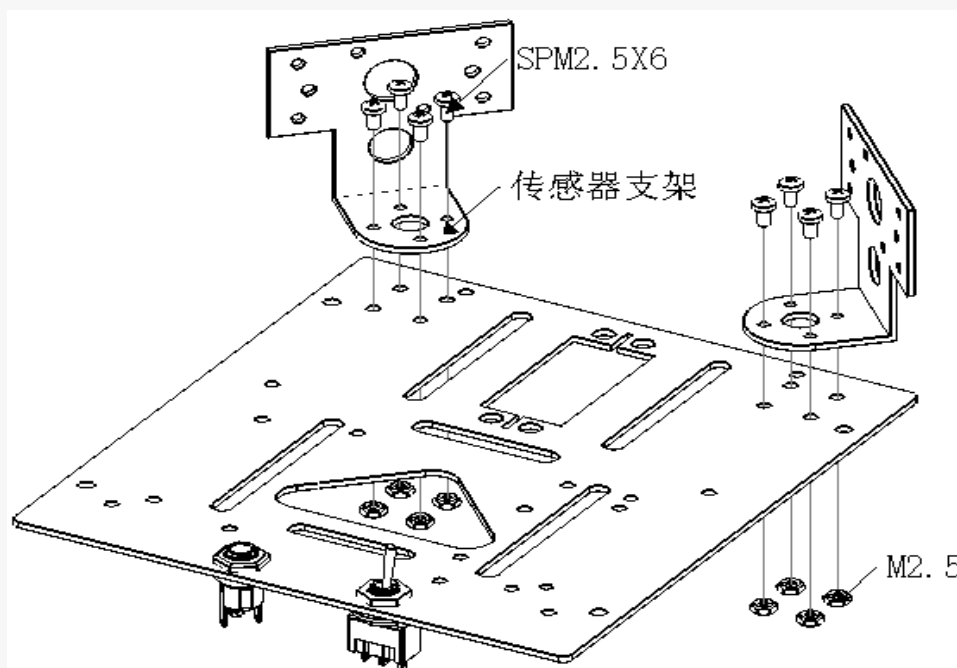
I **Step 4.2** two degrees of freedom servo platform
installation (Extended)



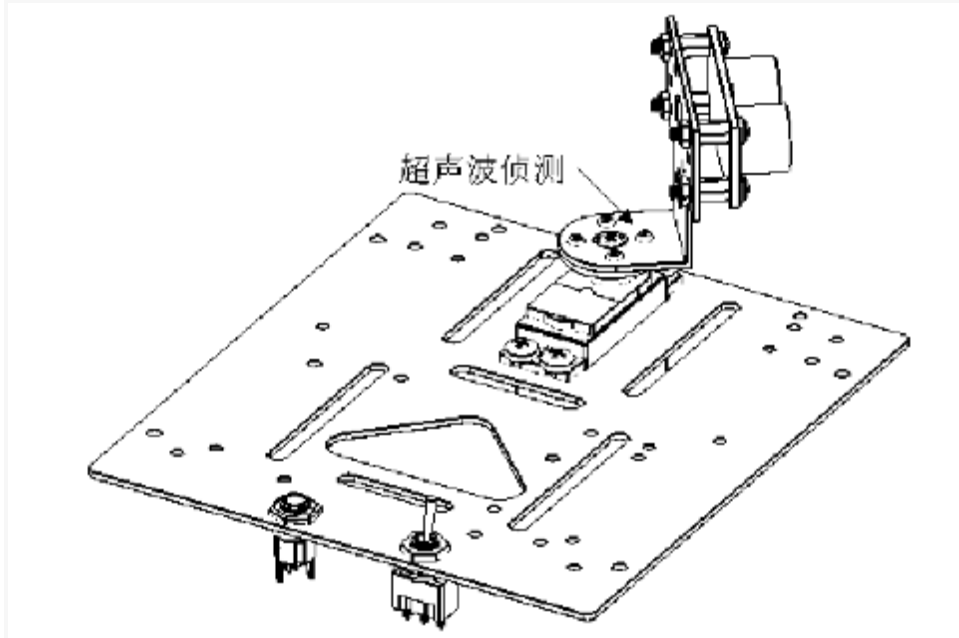
It not only can be installed models of two degree of freedom servo platform, also can be provided with a plurality of degrees of freedom mechanical arm, extended the application of stronger, the installation of two degree of freedom RB-421 steering head after effect chart:



I **Step 4.3** ultrasonic and infrared distance sensor mounting bracket (Extended)

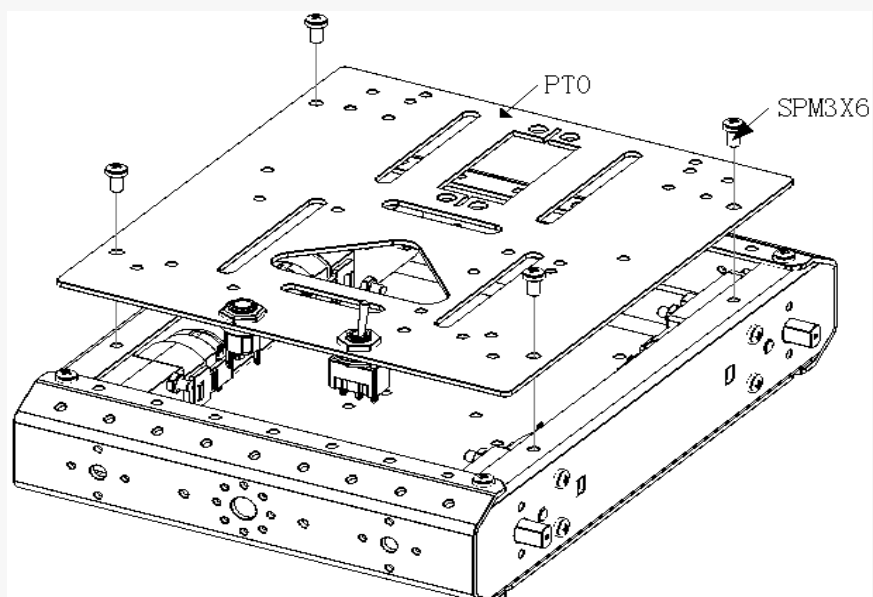


I **Step 4.4** rotary ultrasonic detection installation (Extended)

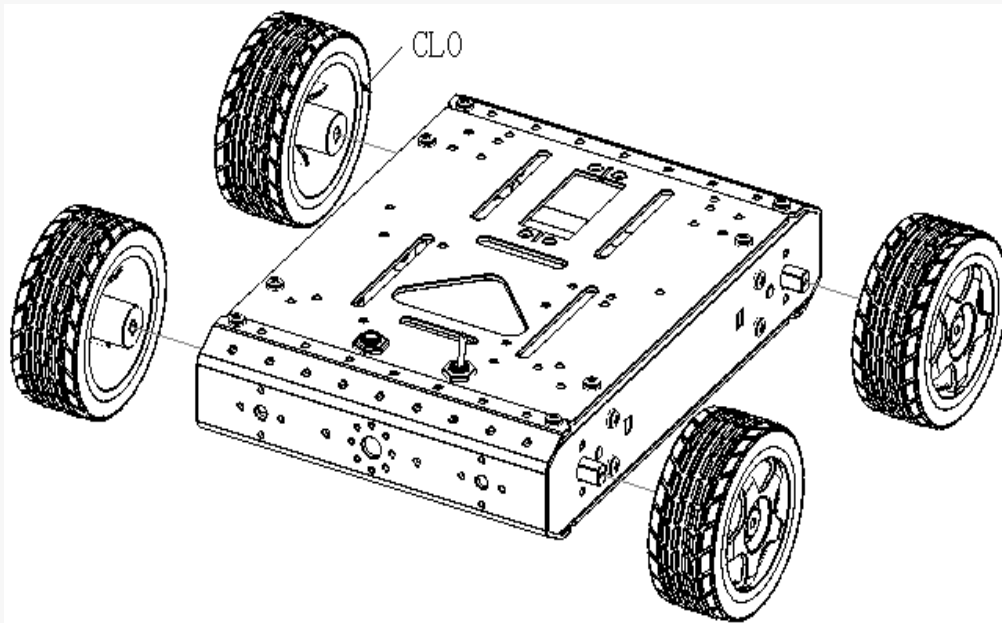


Note: before installing the servo steering gear, through the servo controller, Arduino controller to the median (0 degree position)

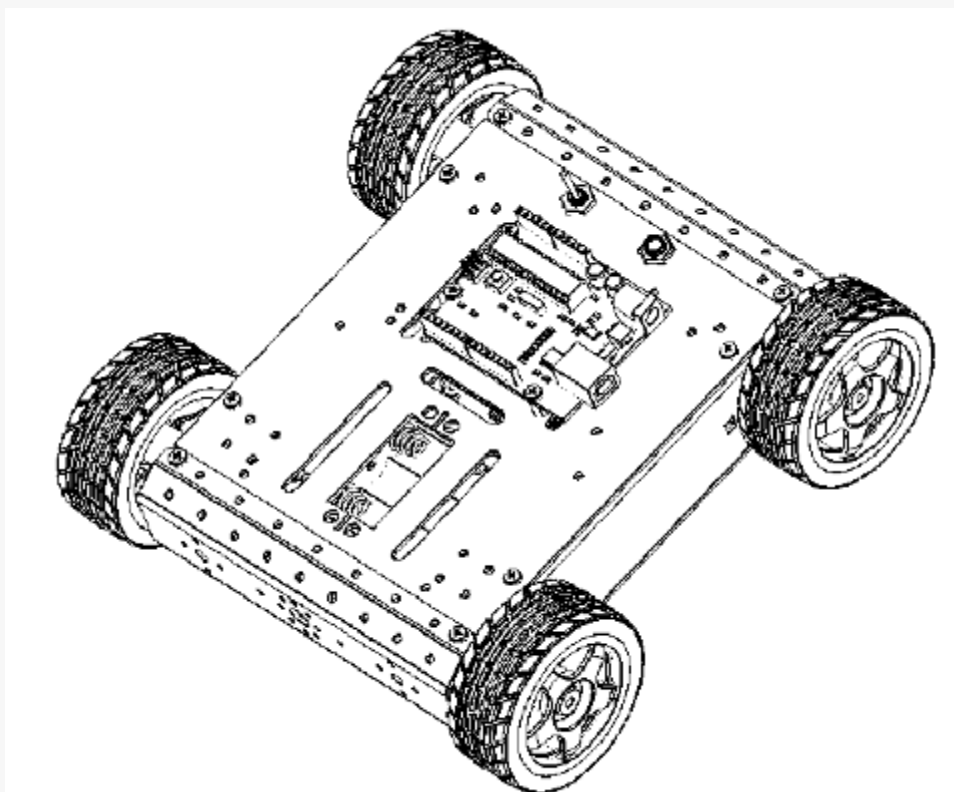
Step 5 on board mounting



I **Step 6** wheel mounting



I **Step 7** basic configuration mobile platform installation completion effect



Specifications and parameters:

- 1、 driving motor gearbox ratio: 1:48**
- 2 、 driving motor no-load speed: 220rpm**
- 3 、 wheel diameter: 65mm**
- 4 、 wheel width: 26mm**
- 5 、 platform length: 206mm**
- 6 、 platform width: 200mm**
- 7 、 platform height: 65mm**
- 8 、 Platform weight: 620g**
- 9 、 chassis ground distance: 13mm**