Installation Manual for T Series Tank Chassis

Catalogue

Introduction

In this document, we just present the installation steps for the T300 Tank chassis with the following steps, and the connection motors to the doit version NodeMCU kit. Here, we just take T300 as an example to show the steps, but this manual is also used to the other type of tank chassis.

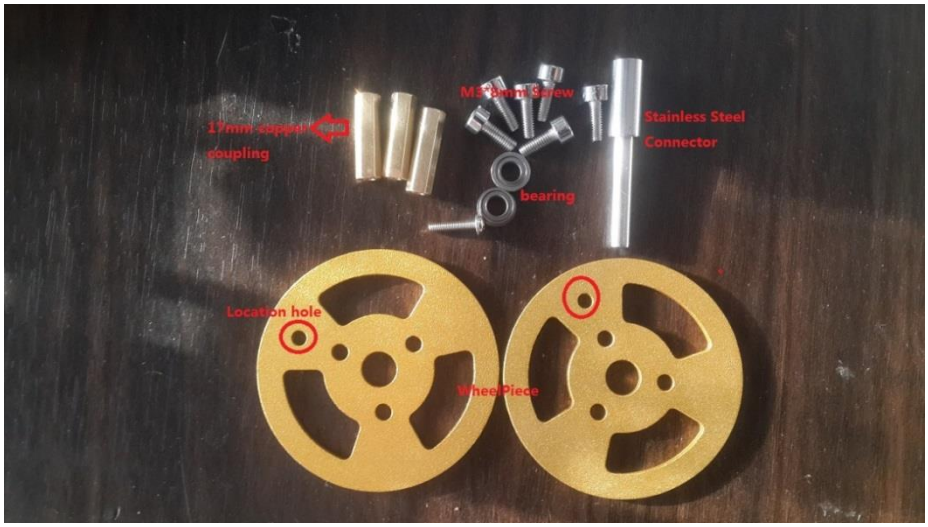
1. Install the bearing wheel

a) Materials

The bearing wheel includes the following materials.

1) 17mm copper coupling: 3pcs;
2) M3*8 screw: 6pcs;
3) Stainless steel connector: 1pcs;
4) M2 screw: 1pcs;
5) Bearing: 2pcs;
6) Wheel Piece: 2pcs. (Please align the location holes when installation).

Which are shown in the following Figure.



b) Install the copper coupling to connect the two wheelpiece.

At first, install the three copper couplings

c) Connecting another wheelpiece. But please align the location hole when you install another wheelpiece.

d) Install a bearing to the stainless steel connector

e) Finish the installation of the bearing wheel.

Two notes for the installation of bearing wheel.

1) Align the location holes for the two wheelpiece;

2) Don’t let M2 srew connect the stainless steel connector too lighten.

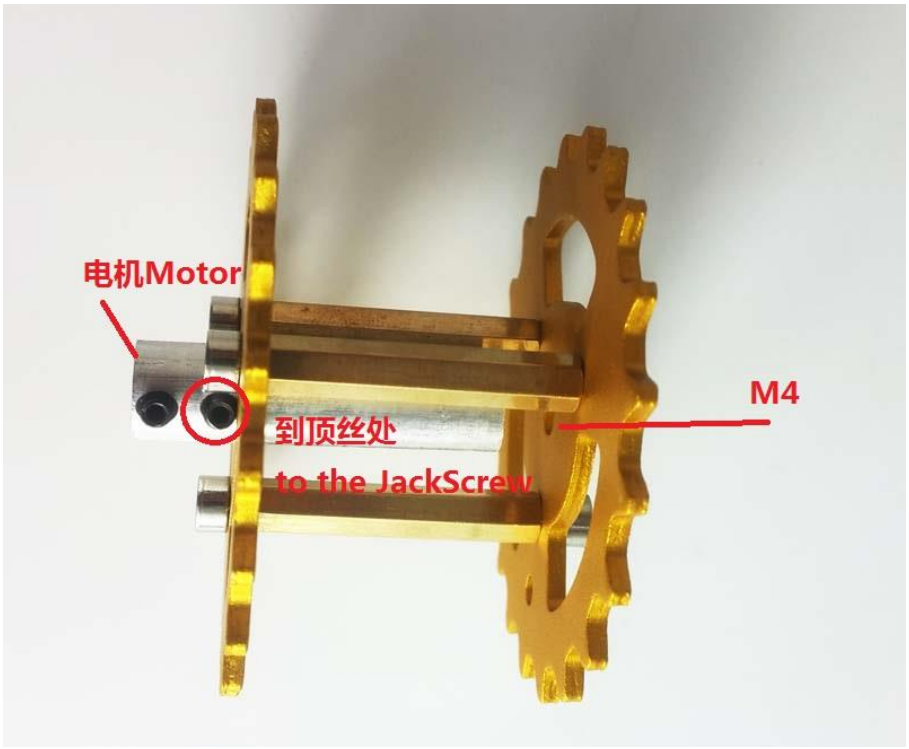
2. Install the driving wheel

a) Materials

1) WheelPiece: 2pcs
2) Aluminum alloy: 1pcs
3) 28mm copper coupling: 3pcs
4) M3*8 srew: 6pcs
5) M4*16 srew: 1pcs
6) Jackscrew: 2pcs

b) Install the Jackscrew to the aluminum alloy coupling firstly, and install to the copper coupling to the wheelpiece.

c) Install the first wheelpiece with the big hole one to the end of the aluminum alloy coupling.



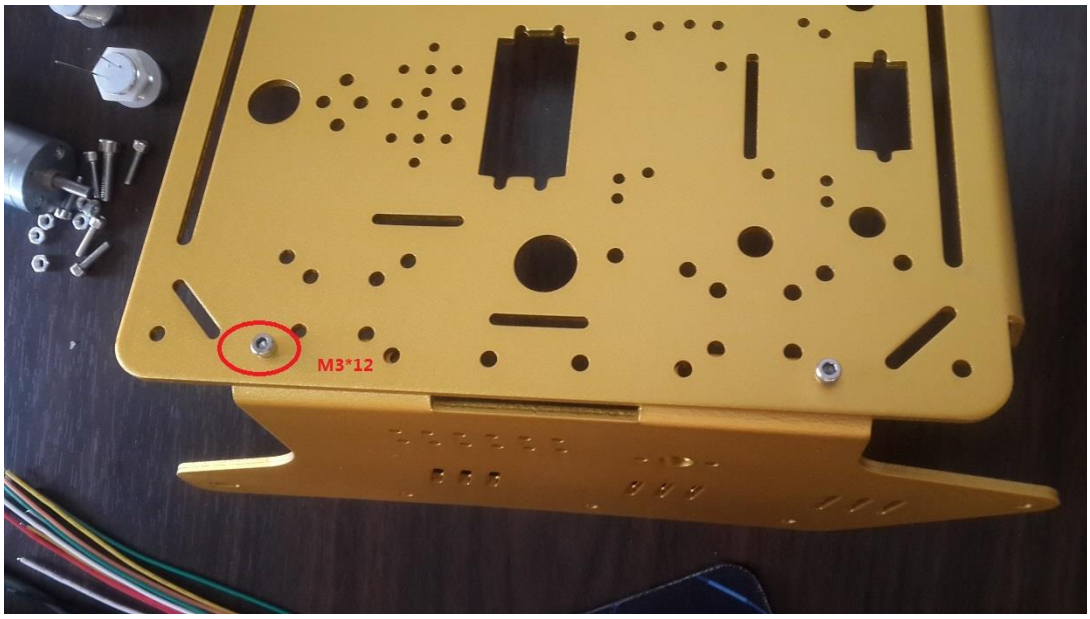
d) Install the tree copper couplings, and install the M3*8 screws and M4*16 screw lastly.

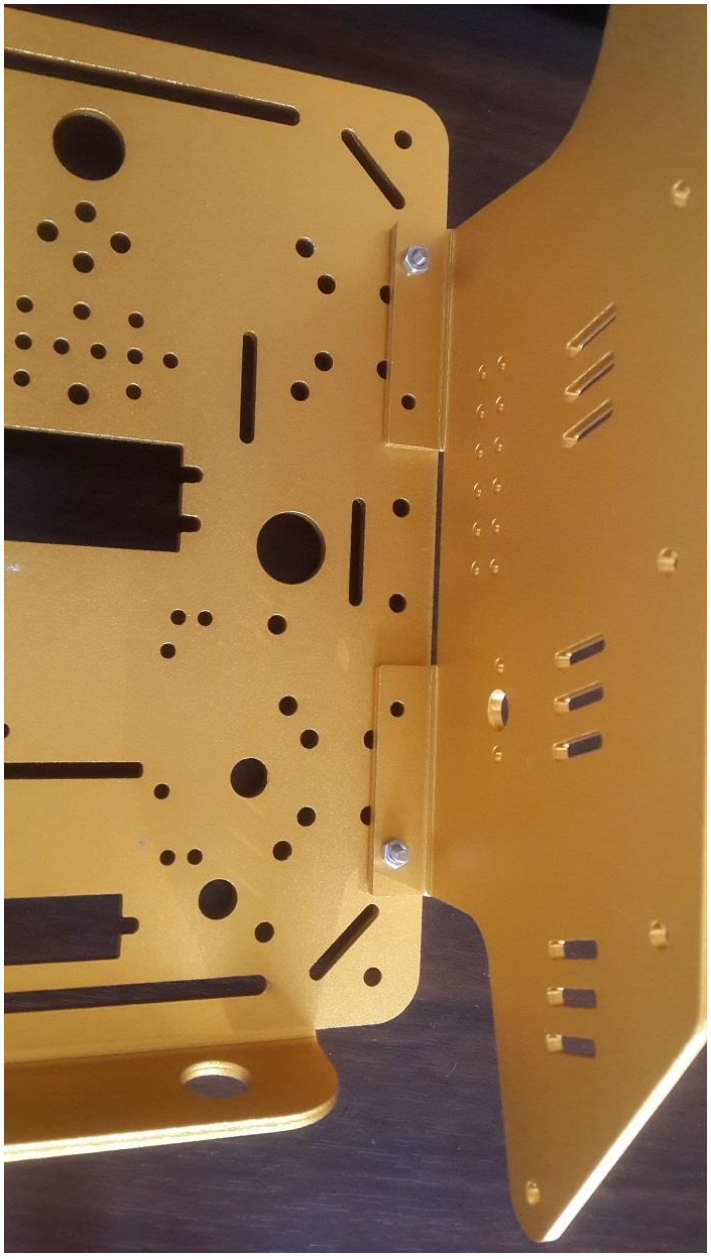
3. Install the T300 Tank chassis.

a) Material list

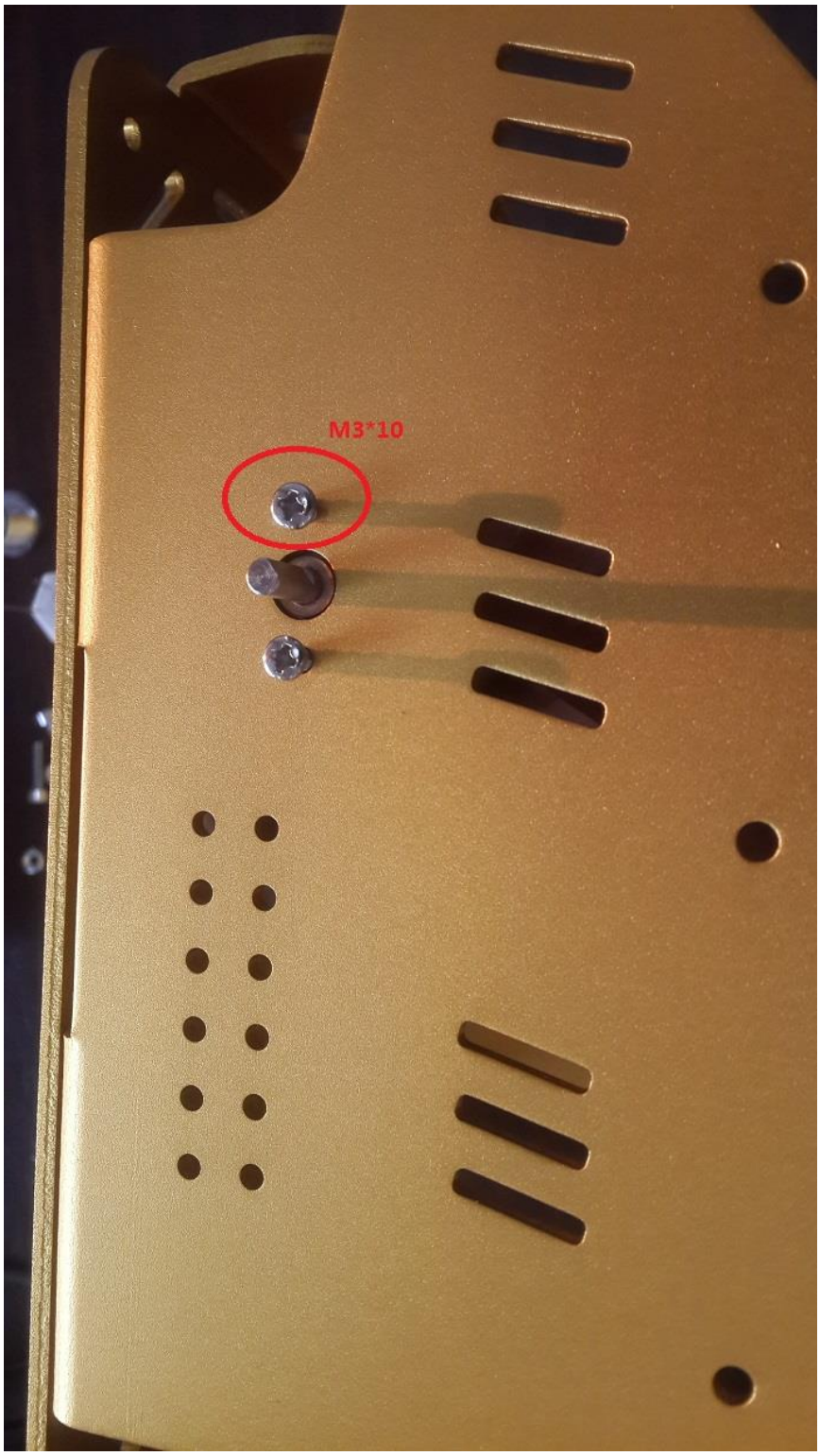
1) Motor: 2pcs
2) LED light: 2pcs
3) Track: 2pcs
4) Panel: 3pcs
5) Power cable: 2pcs
6) M3*14 srew: 8pcs
7) M3 nut: 8pcs
8) M3*12 screw: 4pcs

b) Install the chassis

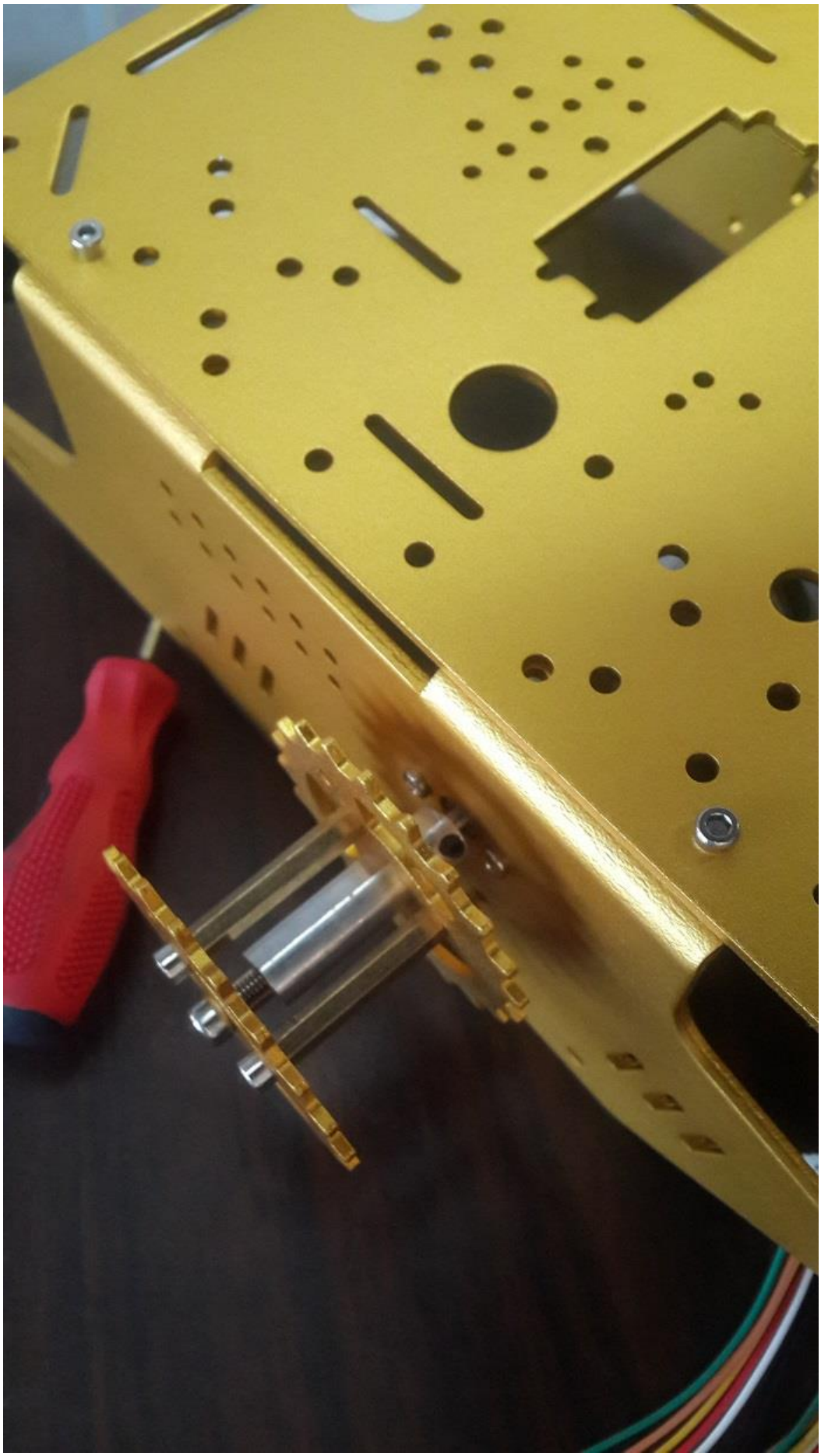

M3*12



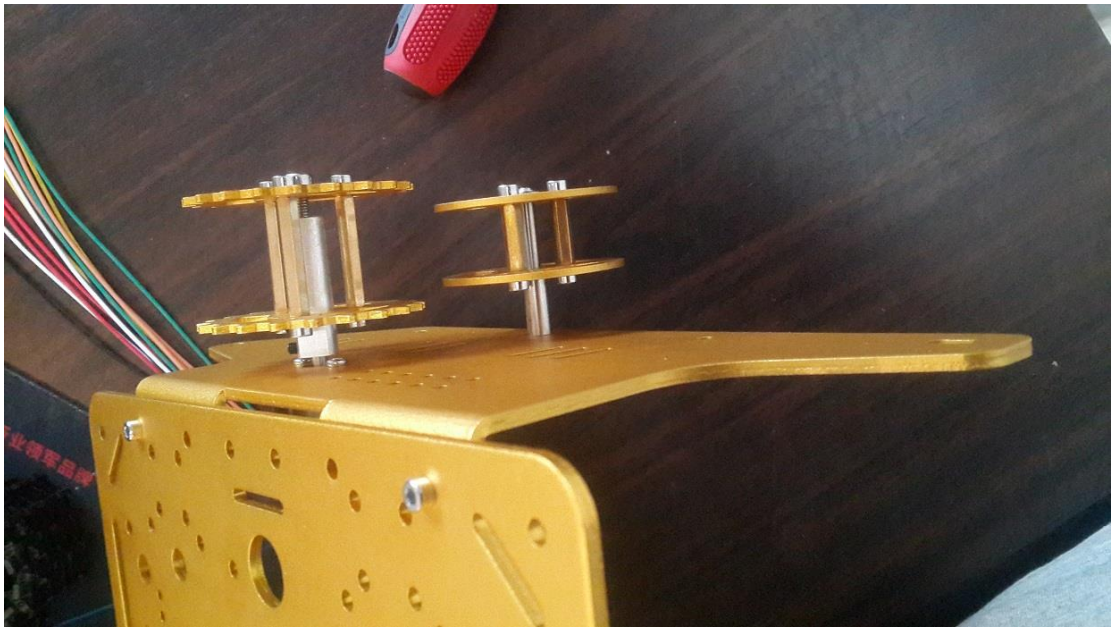
c) Install the motor



d) Install the driving wheel

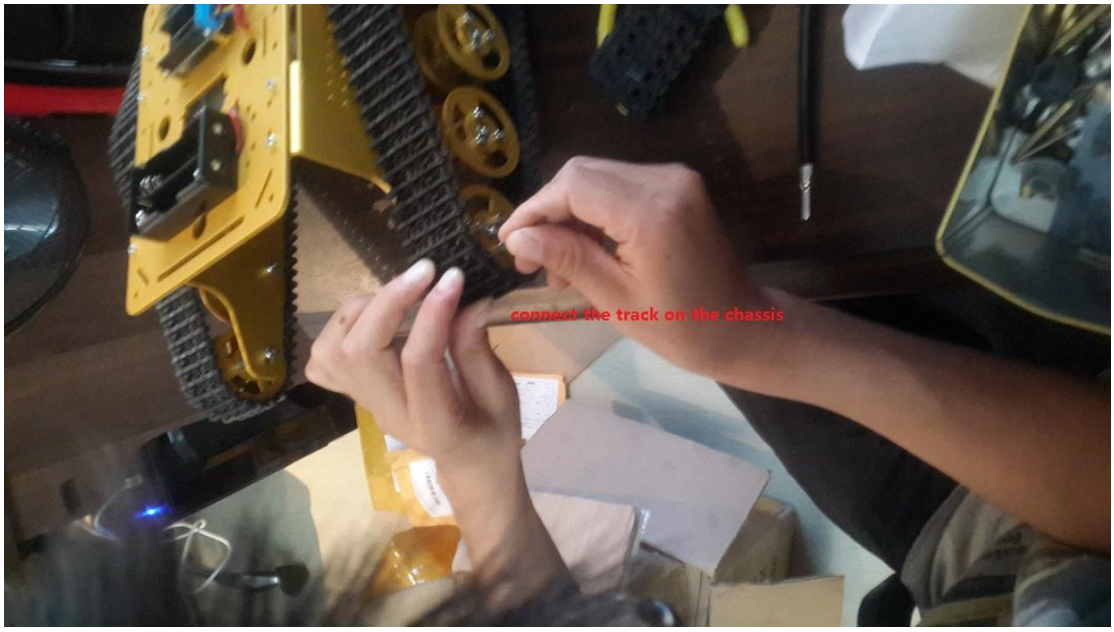


e) Install the bearing wheel

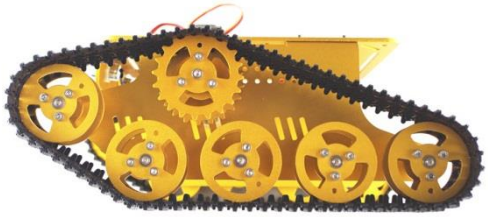


f) Adjust the suitable length of track. Note that, the track is connected one by one, which can be any length. **Note that, the track can be connected with any length, which can be shown in the following picture. The track is out by a needle with easy.**

g) Connect the track on the wheel



h) Then finish the installation of chassis.



Some warm tips

1) when install the bearing wheel and the driving wheel, please note that the location holes must be aligned.

2) The track is connected one by one, so it can be connected to any length.

3) Since there are many types of screws, so, please note the usage of screws.

4) When install the bearing, it may be tight, you can install it by some tools.

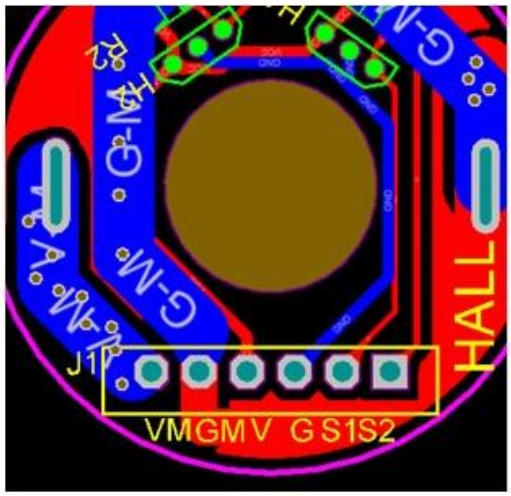
5) The completed document can be download from www.smartarduino.com.

6) Many other tank chassis and accessories can be visit the http://www.smartarduino.com/robotics_d005.html

4. Illustration for motor connection

When you get the T series tank chassis, it has motors. The parameters can be seen at http://www.smartarduino.com/25mm-9v-dc-reduced-gear-motor-for-robot_p94537.html

This motor has Hall sensor, which can measure the velocity, and give out a feedback. If let the interface (or plug) face to our face, from left to right, the interface meanings are VM (power for motor), GM (grand for motor), V (power for Hall sensor), G (grand for Hall sensor), S1 (the output signal for the 1st Hall sensor), S2 (the output signal for the 2nd Hall sensor)



where, VM and GM are connected to motor, V and G is the power for sensor, S1 and S2 are the output signal.

If use doit version NodeMCU kit, which can be get from

http://www.smartarduino.com/view.php?id=94867

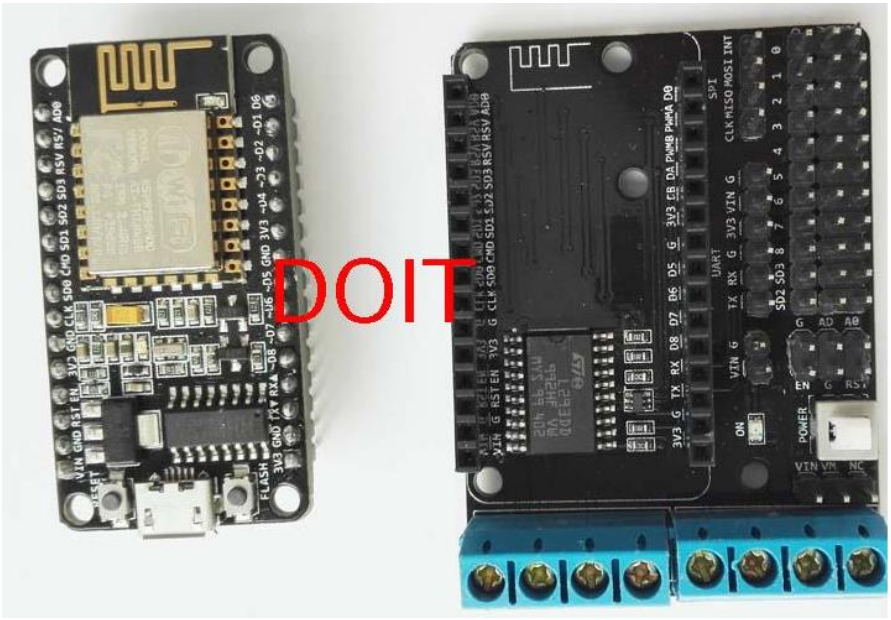


Figure doit version NodeMCU kit

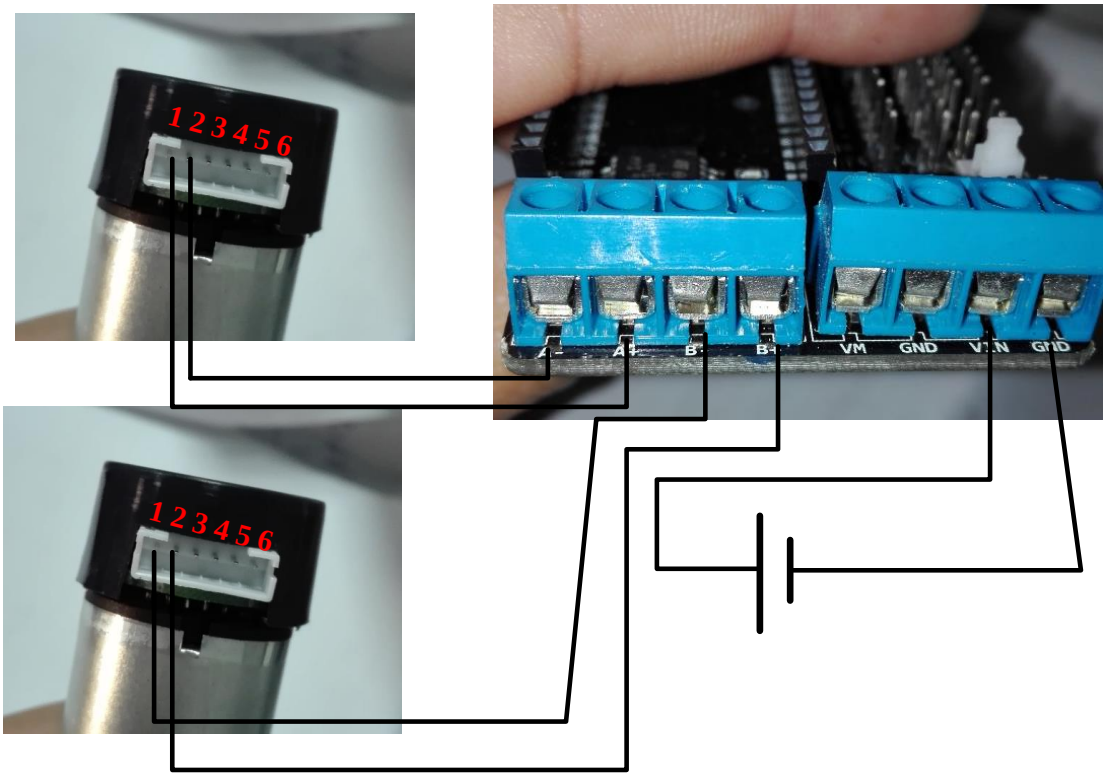


Figure 2WD connection motor to the driven board

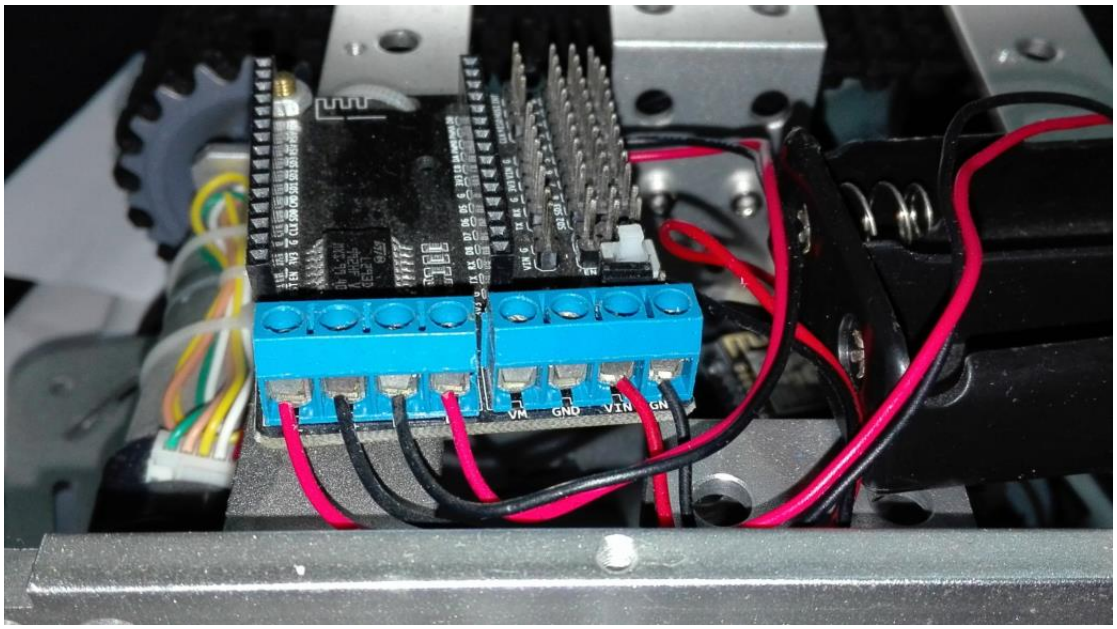


Figure the real connection from motor to driver board

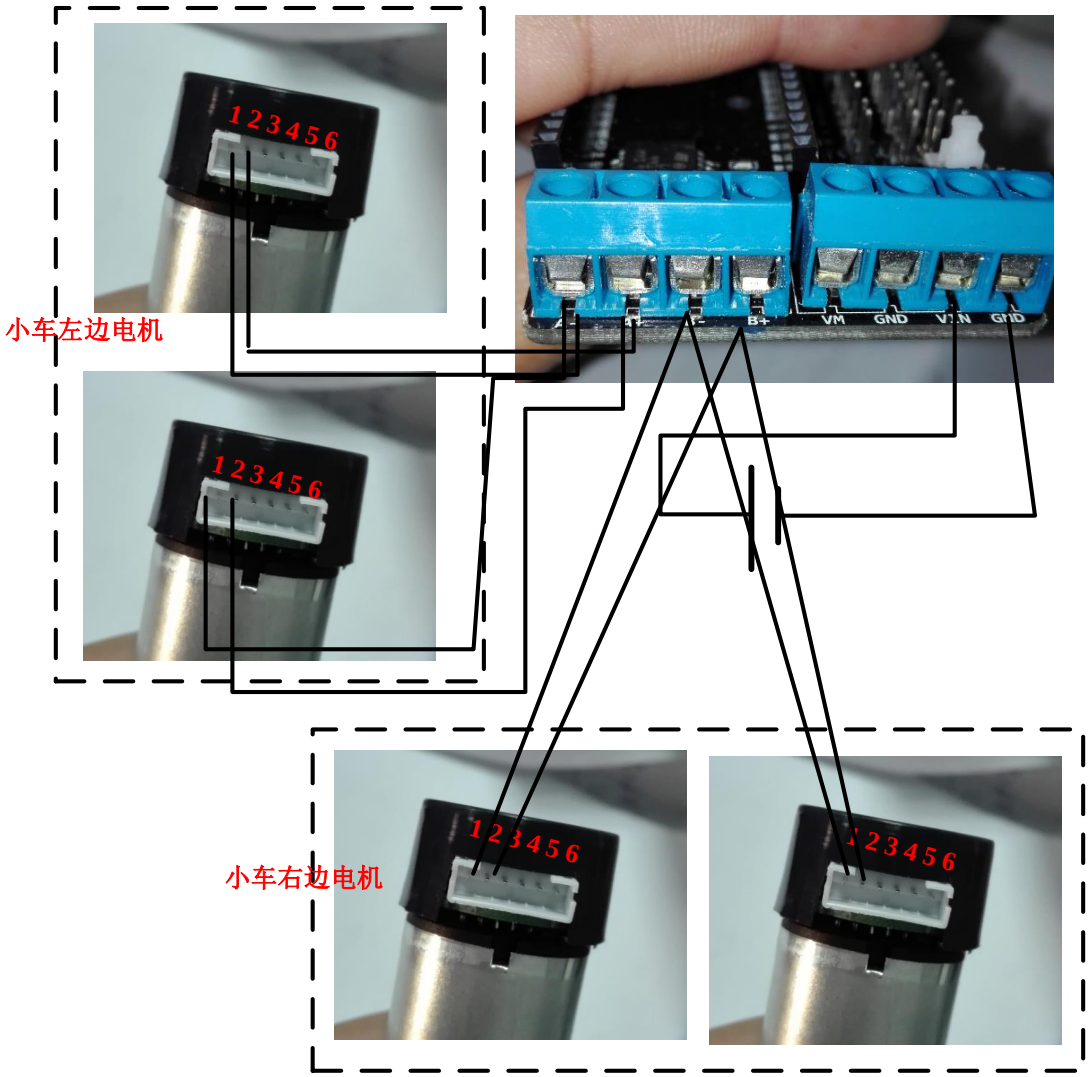


Figure 4WD connection from motor to driven board

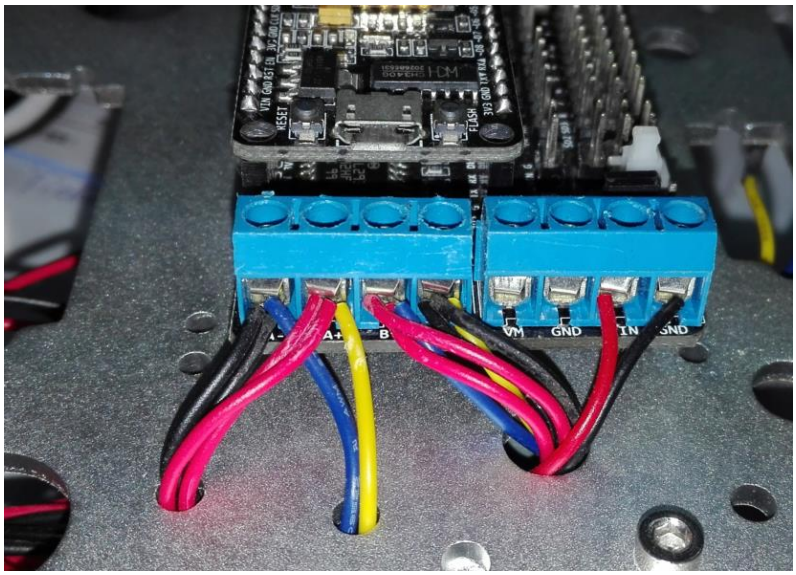


Figure the real connection from motors to driven board