LROBRUYA

Ultrasonic Obstacle Avoidance Small Car Kit

LROBRUYA

Content

Preface

Company Profile

Founded in 2014, Shenzhen Lonten Technology Co., Ltd. focuses on the design, research production of Electronics Module for robotics related products. Consisting of professional researchers and skilled engineers, our R&D team constantly strives for creative function and excellent user experience. The company's R&D investments on arduino kits raspberry pi kits, as well as 3D printer and robots that back up STEAM education.

Customer Service

Our self-owned factory is certificated with BSCI and SO, covering an area of 5,000 square meters, and achieving an annual production capacity of over 10,000 units. Our products are all certified to CE, FCC, and ROHS standards, have exported to more than 100 countries including, but not limited to France, the United States of America, Australia, Russia, the United Kingdom, Germany, Singapore, Egypt, and India, bringing technological innovation to all walks of life.

By the way, We also look forward to hearing from you and any of your

critical comment or suggestions. Pls email us by lonten3@qq.com or info@lontentech.com， if you have any questions or suggestions.

As a continuous and fast growing company. We keep striving our best to offer you excellent products and quality service.

Our Store

store: https://www.lontentech.com/

Brand: LONTEN

Product Catalog

https://www.lontentech.com/collections/steam-robot

LONTEN

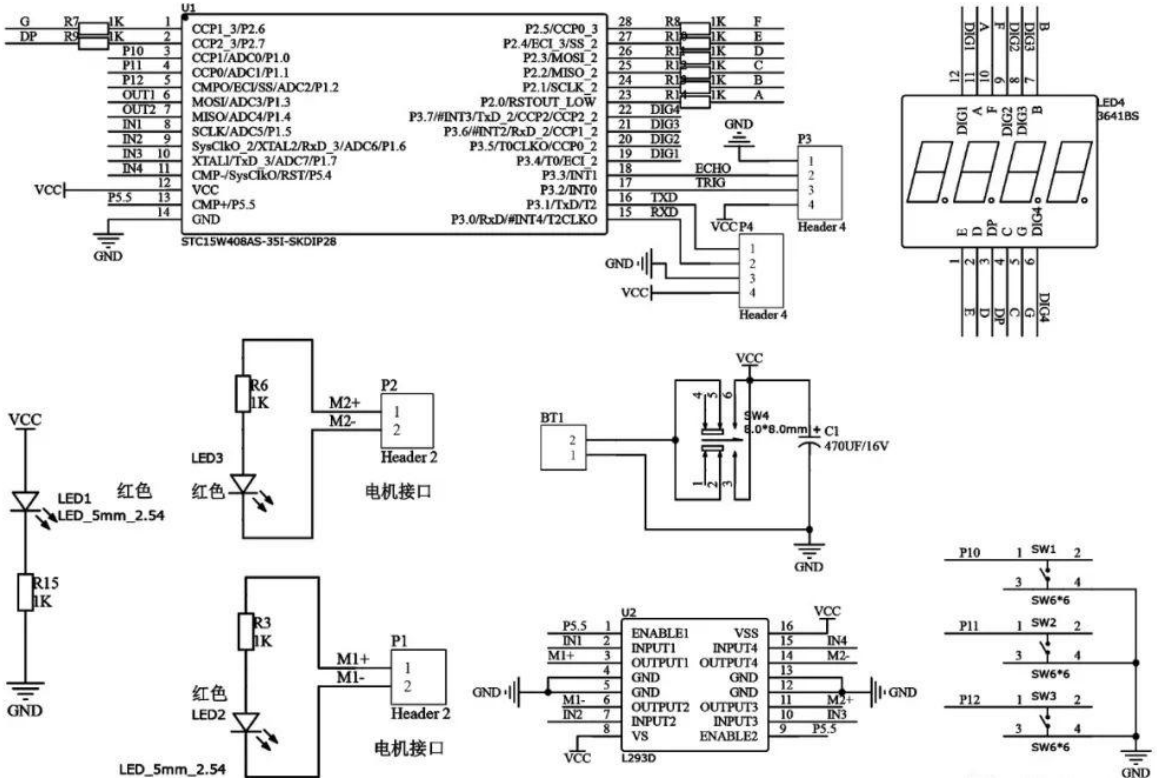
Packing list

Ultrasonic Obstacle Avoidance Small Car Kit https://www.lontentech.com

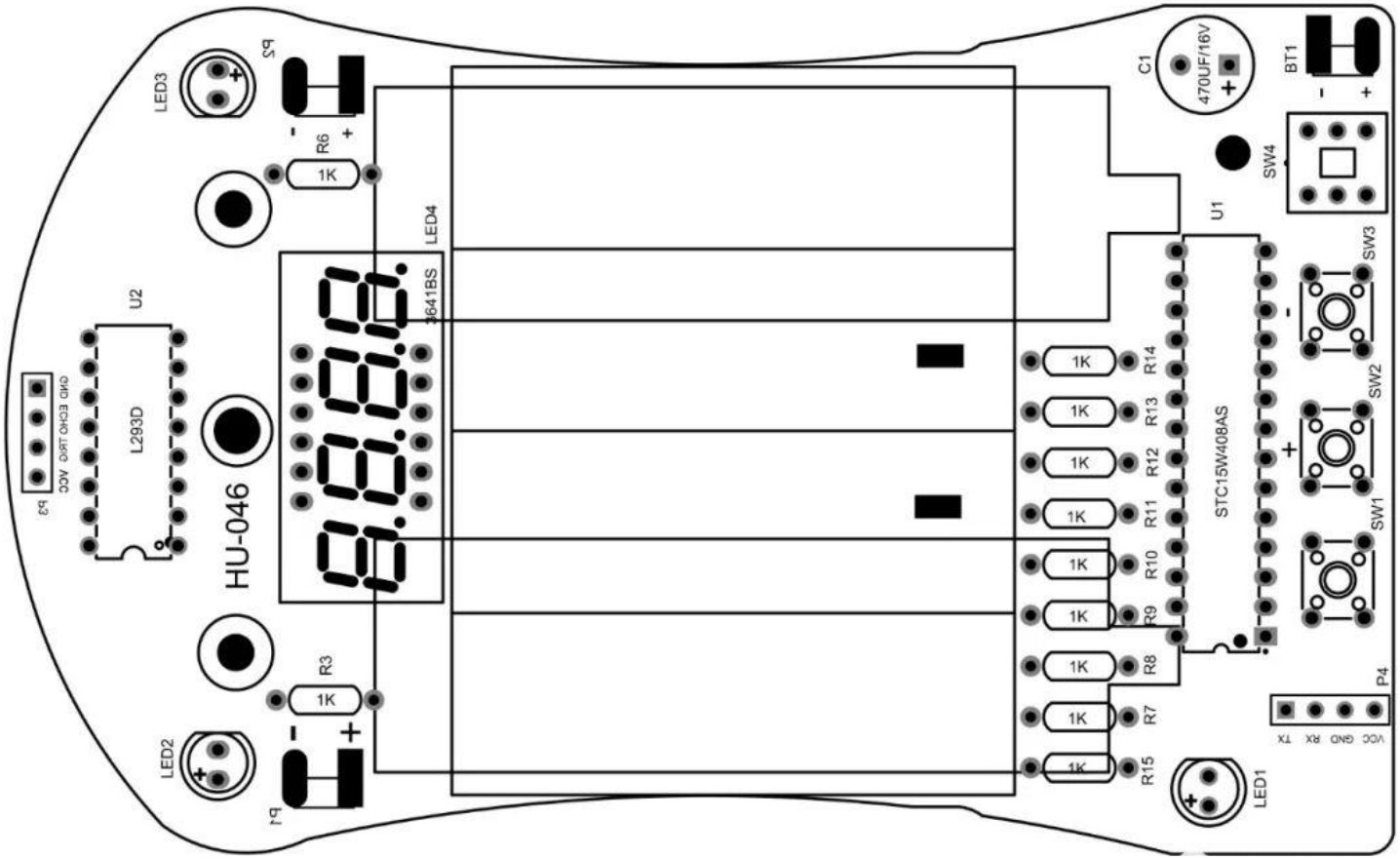
一、BOM

Serial Number	Name	Number	Label
1	Direct plug-in electrolytic capacitor 470uF	1	C1
2	In-line resistance 1K	12	R3, R6, R15
3	4-digit digital tube red	1	LED4
4	Vertical microswitch	3	SW1, SW2, SW3
5	5mm LED is red	3	LED1, LED2, LED3
6	Direct plug-in self-locking switch	1	SW4
7	Direct plug-in motor driver chip L293D	1	U2
8	Straight into the STC MCU	1	U1
9	16P IC seat	1	U2
10	28P (narrow body) IC seat	1	U1
11	Ultrasonic module HC-SR04	1	P3
12	410 Rubber wheel	2	/
13	PCB	1	/
14	4-cell AA battery box	1	/
15	1:48 Single-axis motor	2	/
16	Motor double-sided adhesive	2	/
17	Battery box double-sided adhesive	1	/
18	Self-tapping screw M2.5*8	2	/
19	Red and black parallel line 50mm	2	/
20	Nylon fastening strips	2	/
21	Diamond-shaped bull's eye universal wheel	1	/
22	Single-pass copper column M3 * 12 + 6mm	2	/
23	Screw 3*6mm	3	/
24	M3 nut	2	/

二、Schematic&Component map

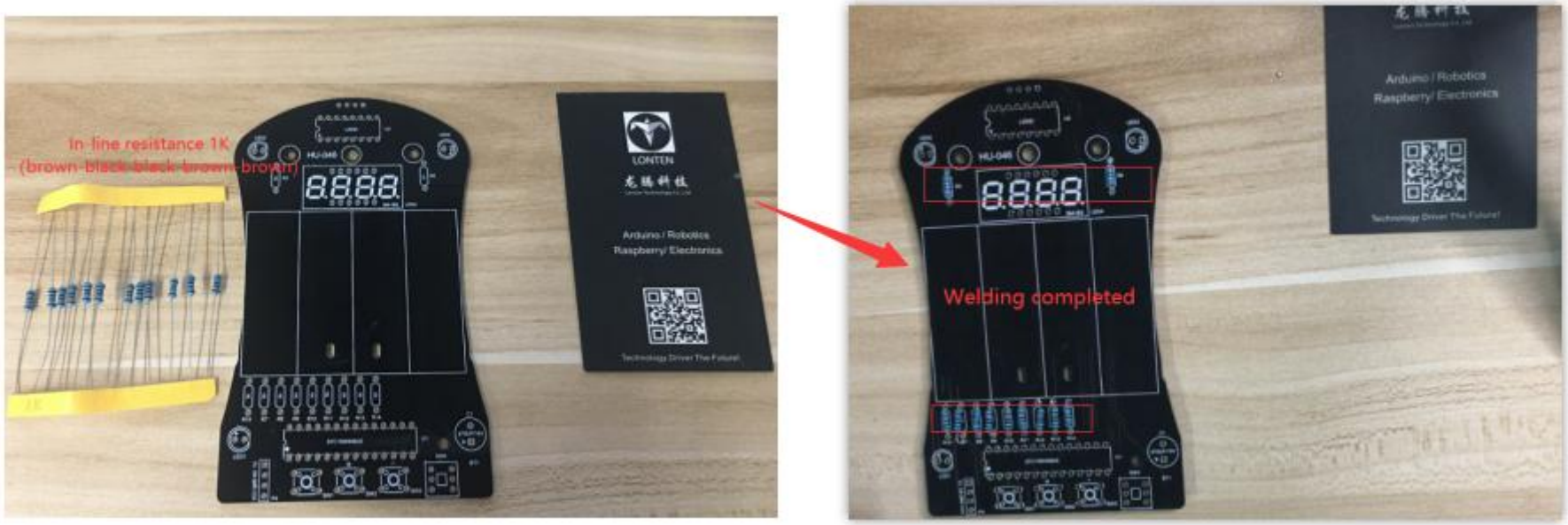


LROBRUYA


HU-046
LED3
LED2
LED1
LED4
3641BS
R6
R3
1K
U2
L293D
U1
STC15W408AS
C1
470UF/16V
BT1
SW4
SW3
SW2
SW1
P4
P3
P2
P1
R14
R13
R12
R11
R10
R9
R8
R7
R15

三、Welding and installation

1. Insert the resistance corresponding to the resistance value according to the screen printing for welding.



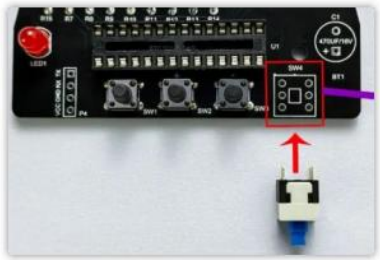
2. The base notch square and PCB screen printing correspond to welding 16P IC seat and 28P (narrow body) IC seat.

3.Corresponding to the positive and negative electrode welding red 5mm light emitting diode.

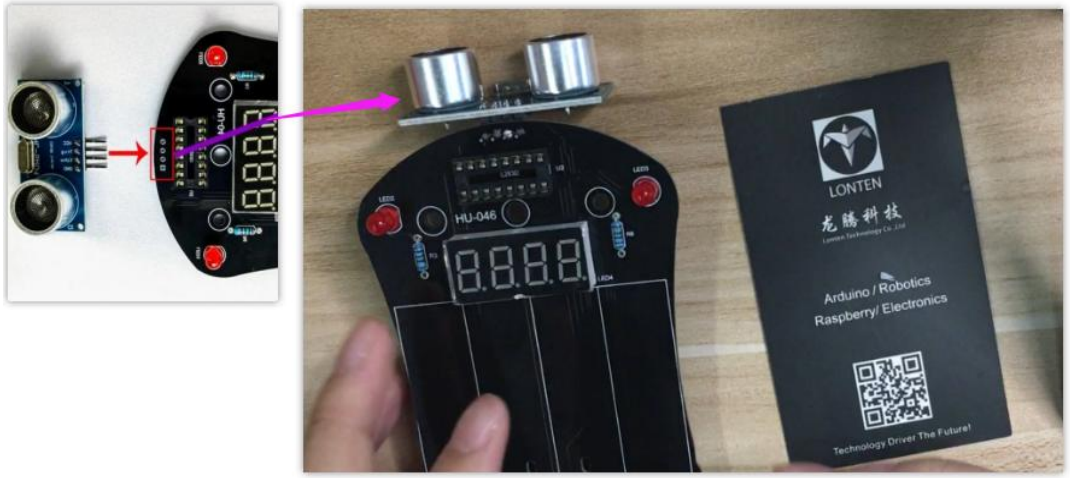
4.Welding vertical micro switch.

5. The 3641BS red 4-bit digital tube is welded in the corresponding direction.

6.Welding self-locking power switch and electrolytic capacito.



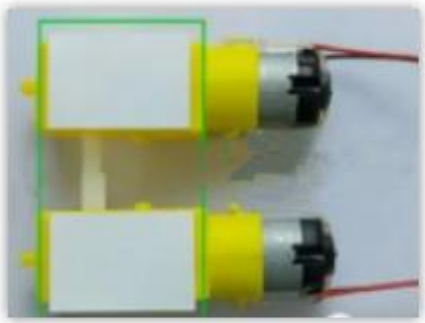
7. Welding HC-SR04 ultrasonic module.



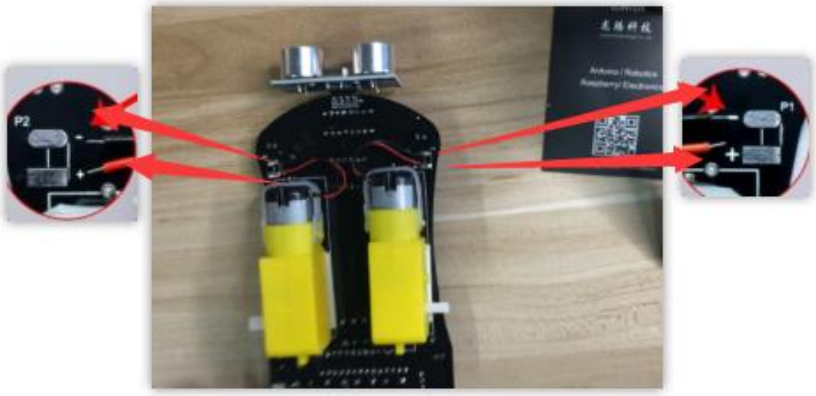
8. Weld the motor power cord and paste double-sided adhesive.

Note:The motor has no polarity, but the positive and negative poles of the left and right motors need to be welded in opposite directions.

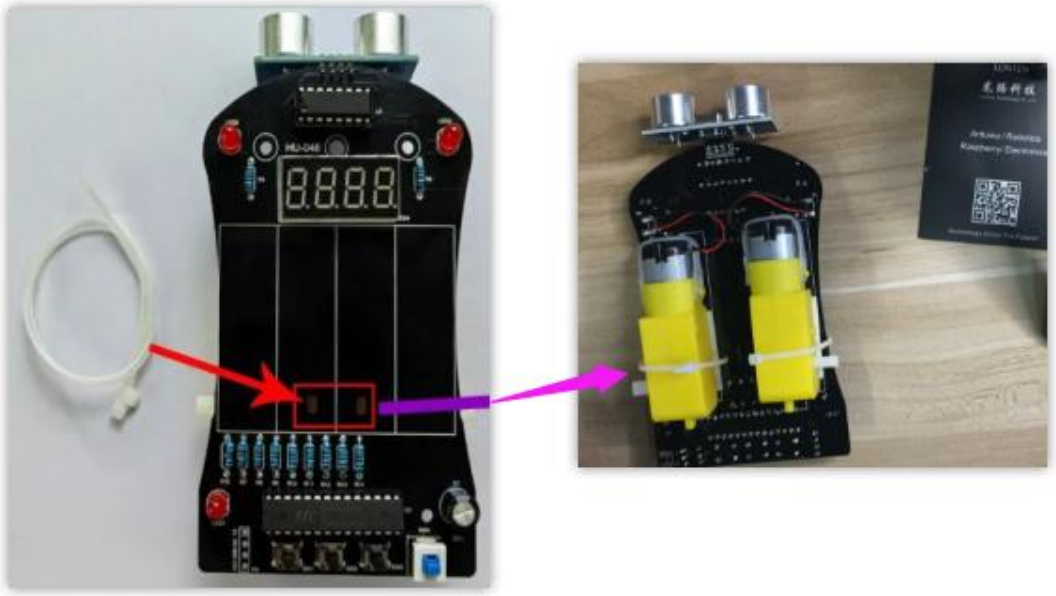


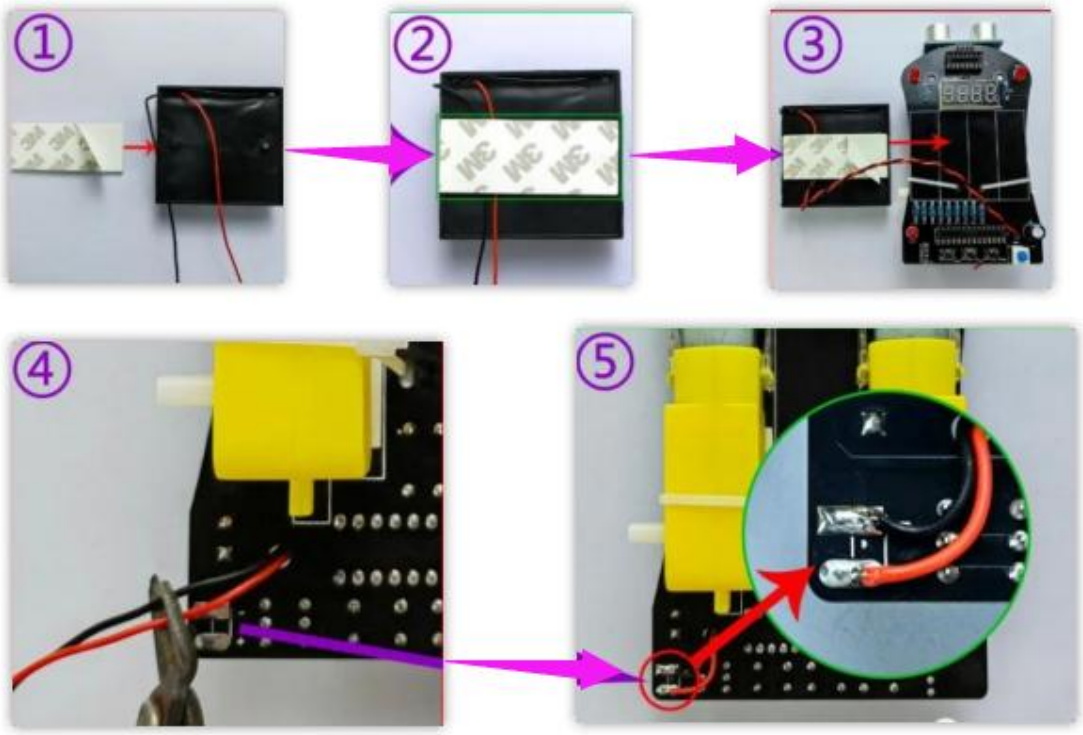
9. Paste the motor onto the PCB. The positive and negative electrodes of the motor power line are welded to the corresponding position of the PCB.



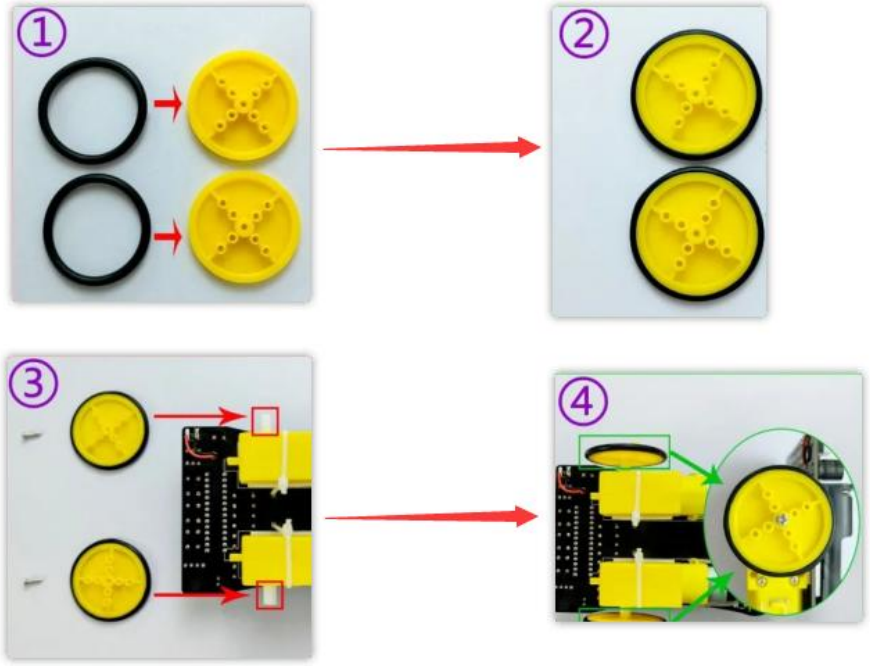
10.Nylon tie passes through PCB to fix the motor.



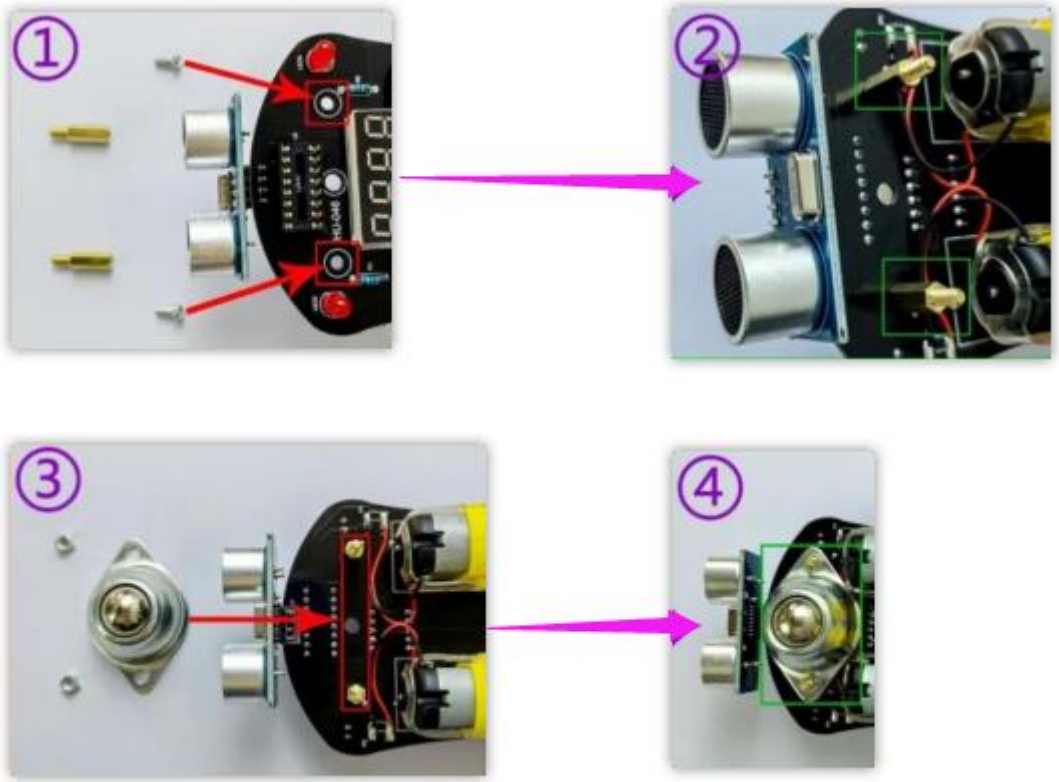
11. The battery box is pasted with double-sided adhesive, the power cord passes through the PCB, cuts



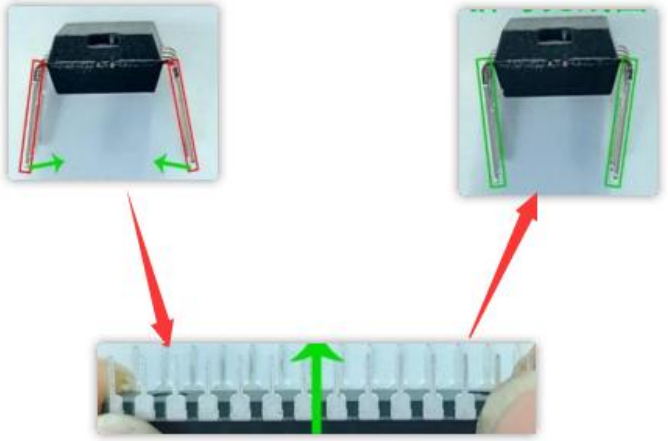
12. The rubber ring is installed on the wheel, and then the wheel is fixed to the motor with screws.



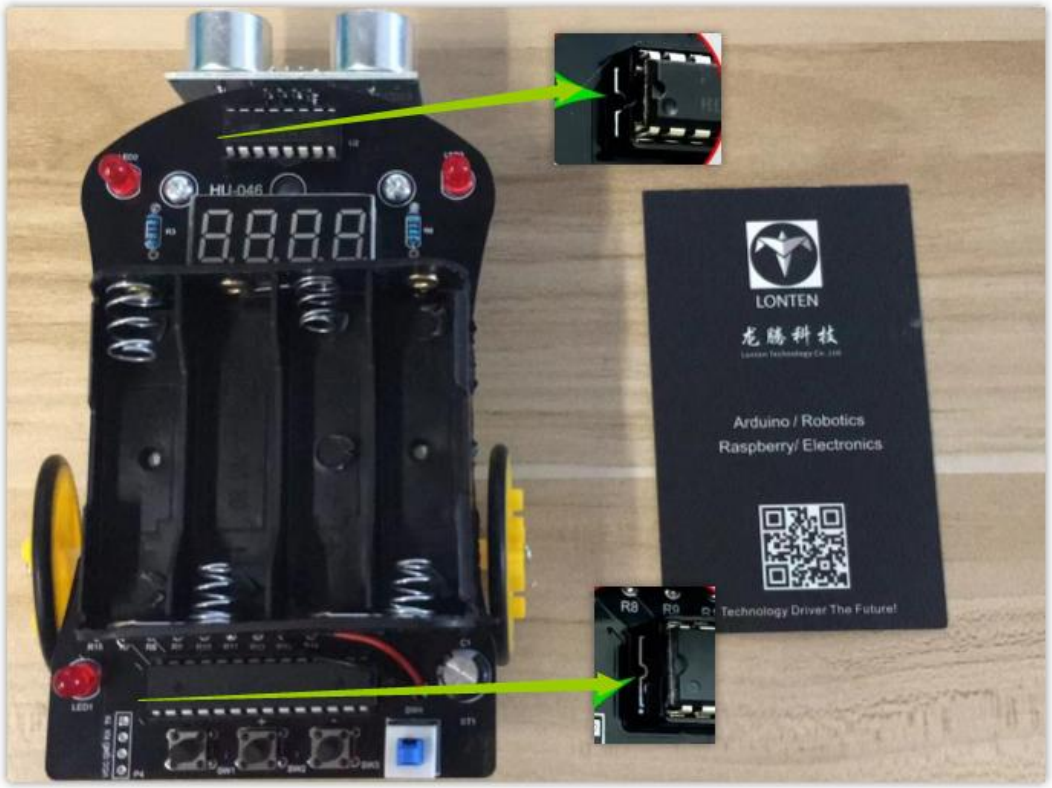
13. Penetrate the M3 screw from the front, and then screw the copper column from the bottom, install the bulleye universal wheel and fix it with a nut.



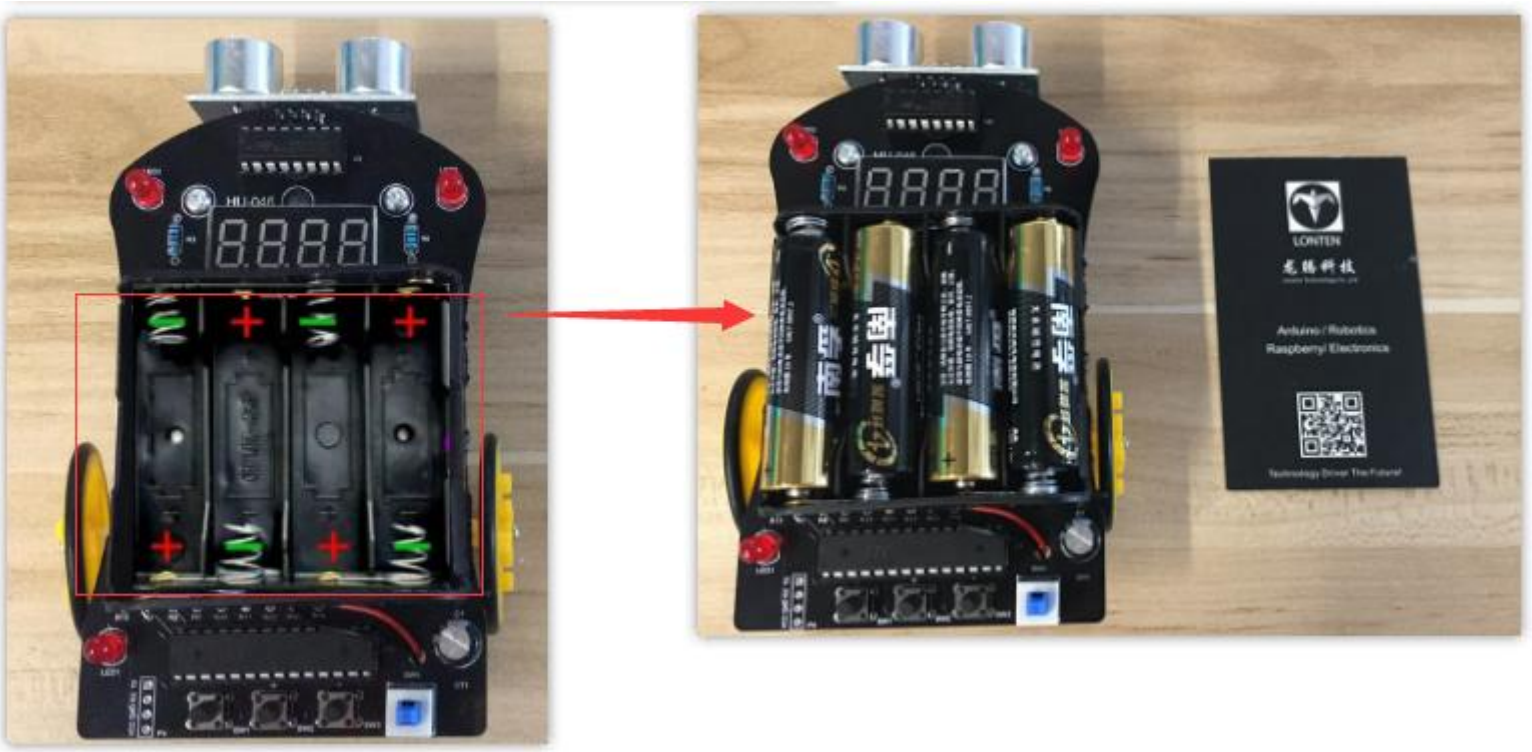
14. Place the two chips on a flat desktop, glass or ceramic tile and press forward so that the chip pins are 90 degrees perpendicular to the chip or slightly tilted inward.



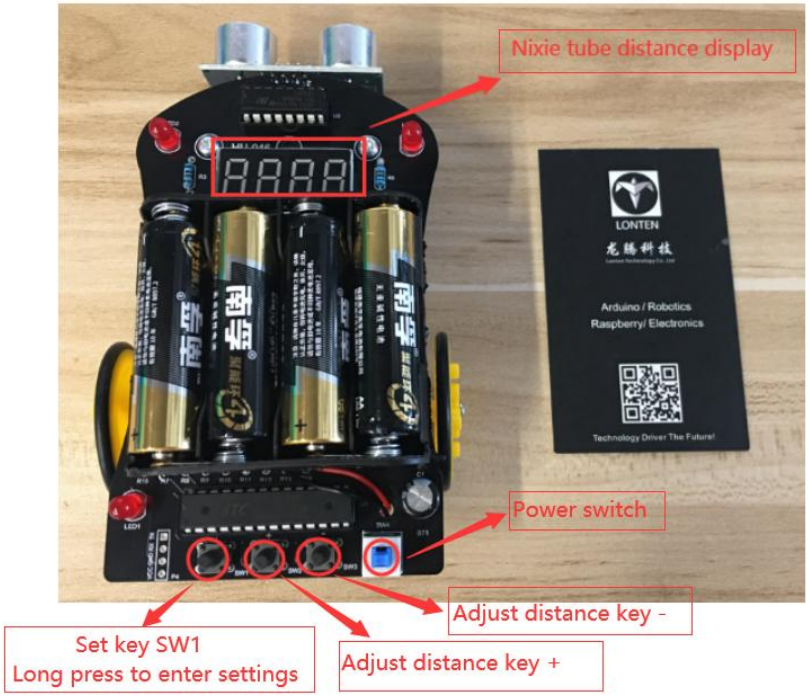
15. The "U" notch marks of the two chips are consistent with the PCB screen printing and the direction of the chip base, and are vertically inserted into the chip base and pressed to the end.



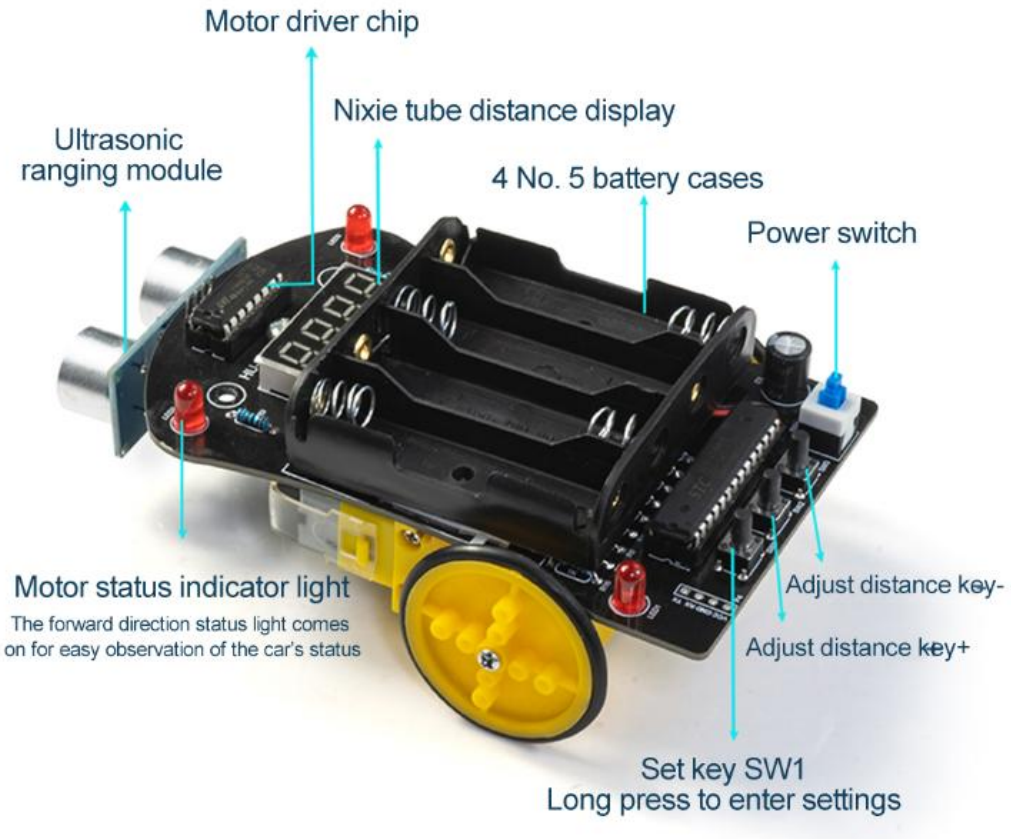
16. Install the battery on the positive and negative electrodes of the corresponding battery box.



17. Turn on the power switch, set the required obstacle avoidance distance for debugging, and complete the installation.



四、Function setting instructions



1. Use ultrasonic ranging and display the distance on the digital tube.Up to 5 meters.

2. Set the obstacle avoidance distance by pressing the button. The obstacle avoidance setting range: 0~2.55 meters, the best obstacle avoidance setting range is 0~0.5 meters, the default obstacle avoidance distance: 0~0.2 meters, and 0 indicates that the obstacle avoidance function is prohibited.

3. Automatically rotate or retreat when encountering obstacles to avoid obstacles.

4. Press SW1 for a long time, and the digital tube shows the obstacle avoidance distance and flashes.

5. Adjust the distance through the "+" or "-" button, and then press SW1 to save and exit.