Smart Tracking Car Instruction

The smart tracking car kit is designed with fashionable "cat" PCB board. It will help you to uderstand the basic priciples and technical components of automatic control. It is hoped that you can learn basic component knowledge, circuit knowledge and soldering skills by using this robot.

Installation Steps

一、Soldering components

1. Soldering resistance: The metal film resistance has no positive or negative, just need to solder the corresponding resistance according to the resistance value marked on the PCB board.
2. Soldering capacitor: The longer of the two pins of the capacitor is the positive pole and the shorter one is the negative pole. After distinguishing between positive and negative poles of capacitors, solder the capacitor to the position marked by the 100uf capacitor on the PCB.
3. Soldering potentiometer: The potentiometer can be welded directly on the PCB board without distinguishing positive from negative.
4. Soldering triode: The triode is semi-circular in plan view and can be soldered to the position of the semi-circular (8550) on the PCB board.
5. Soldering LED: The longer of the two pins of the LED is the positive pole and the shorter one is the negative pole. The blue LED (3 pcs) are soldered on the surface of the PCB, and the transparent LED (2 pcs) are soldered to the lower surface of the PCB (The position of the transparent LED head is about 2CM on the bottom surface of PCB board)
6. Soldering photoresistor: Solder the photoresistor to the position marked with PH on the lower surface of the PCB. (The photoresistor has no positive or negative, the position of the photoresistor head is about 2cm from the lower surface of the PCB.
7. Soldering switch: Observe the switch , we can find the four sides of the switch, one of which has a small black hole and the other has two small black holes. A raised icon and two raised icons are marked on the mounting position of the PCB board switch to identify the direction for soldering.
8. Soldering pins: Solder the pins to the corresponding jacks on the upper surface of the PCB.
9. Soldering LM393 chip: LM393 chip has a notch and a concave circle on the surface, which can be welded according to the circular depression and the notch of the welding position of the LM393 on the PCB.
10. Soldering motor wire: One motor is equipped with two wires, and the copper wire ends of the two wires are welded to the copper sheet of the motor. The welding method of the two motors is the same.

Note: After the soldering is completed, the excess component pins can be removed.

二、Assembly car

1. Place the silicone holster over the plastic wheel.
2. Fix the wheel on the shaft of the TT motor and install the fixing screw.
3. Paste the motor under the PCB according to the label on the lower surface of the PCB. Be careful to reserve space for wheel rotation.
4. Connect the motor from below the PCB board to above the PCB board and connect it to the previously welded pin. (No distinction between positive and negative motor wiring)
5. Paste the battery case to the battery installation location on the PCB board surface.The two wires led out by the battery case, the red wire is the positive pole and the black wire is the negative pole. Pass the two wires to the lower surface of the PCB and solder them to the position of the battery wiring(Note: Negative and positive poles should not be reversed).
6. Put the universal screw down from the PCB and tighten it with a nut. Install the universal nut under the screw. (The nut of the universal nut has a protruding circle on one side)

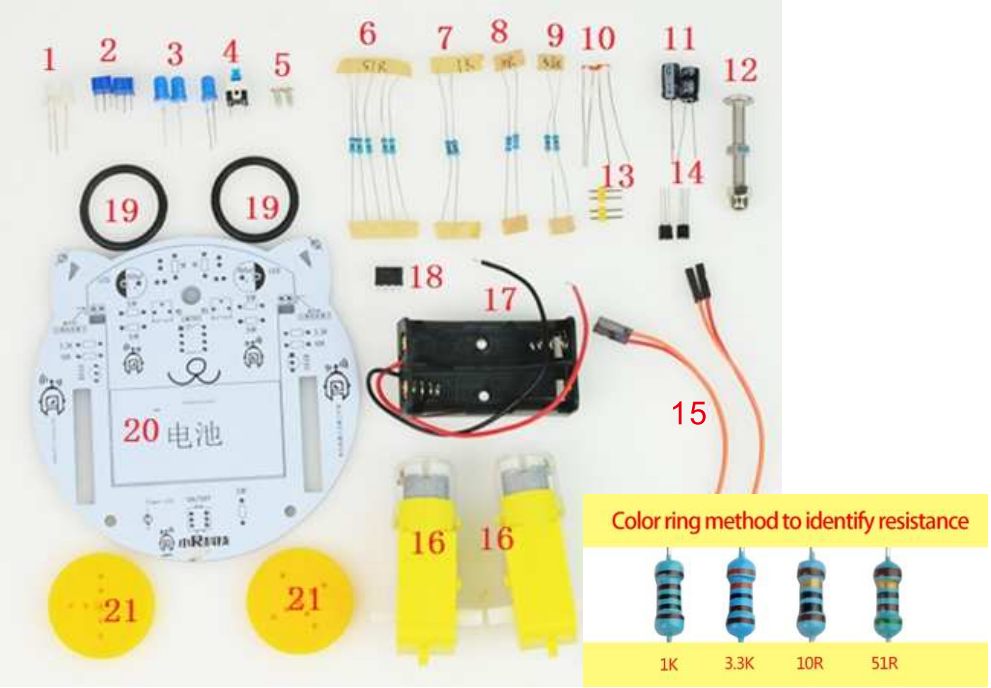
Note: Do not install batteries for the car during the assembly process.

三、Test

1. Check whether the components of the car are soldered correctly.
2. Check whether the components of the car are soldered firmly.
3. Check whether the LED, electrolytic capacitor, switch, LM393, 8550 triode and other components are installed in the correct direction.
4. Install two AA batteries. The end of the battery box with the spring corresponds to the negative pole of the battery. (Note: Negative and positive poles should not be reversed)
5. Press the switch to check if the power light is on. If it is normally lit, you can perform the following steps. If it is not lit, immediately turn off the switch, unplug the battery and check if the welding is correct.
6. Place the car on the black line of the tracking map to check if it can be line tracking. If the motor rotates backwards, it is only necessary to change the two power lines of the motor that rotates backwards.
7. If the car cannot achieve the line-tracking function, you can turn the potentiometer to adjust the sensitivity of the photoresistor or fine-tune the position of photoresistors and light emitting diodes under the PCB board. (May need to adjust multiple times)

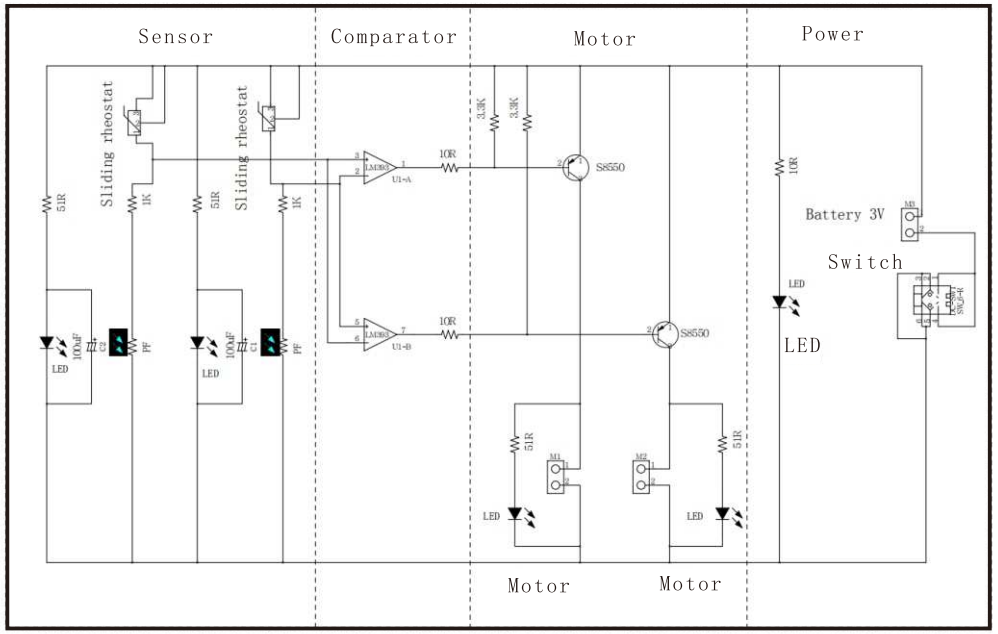
Note: If you cannot achieve the function after the above steps, please contact us by email.
Email: service@wifi-robots.com

— Package List —



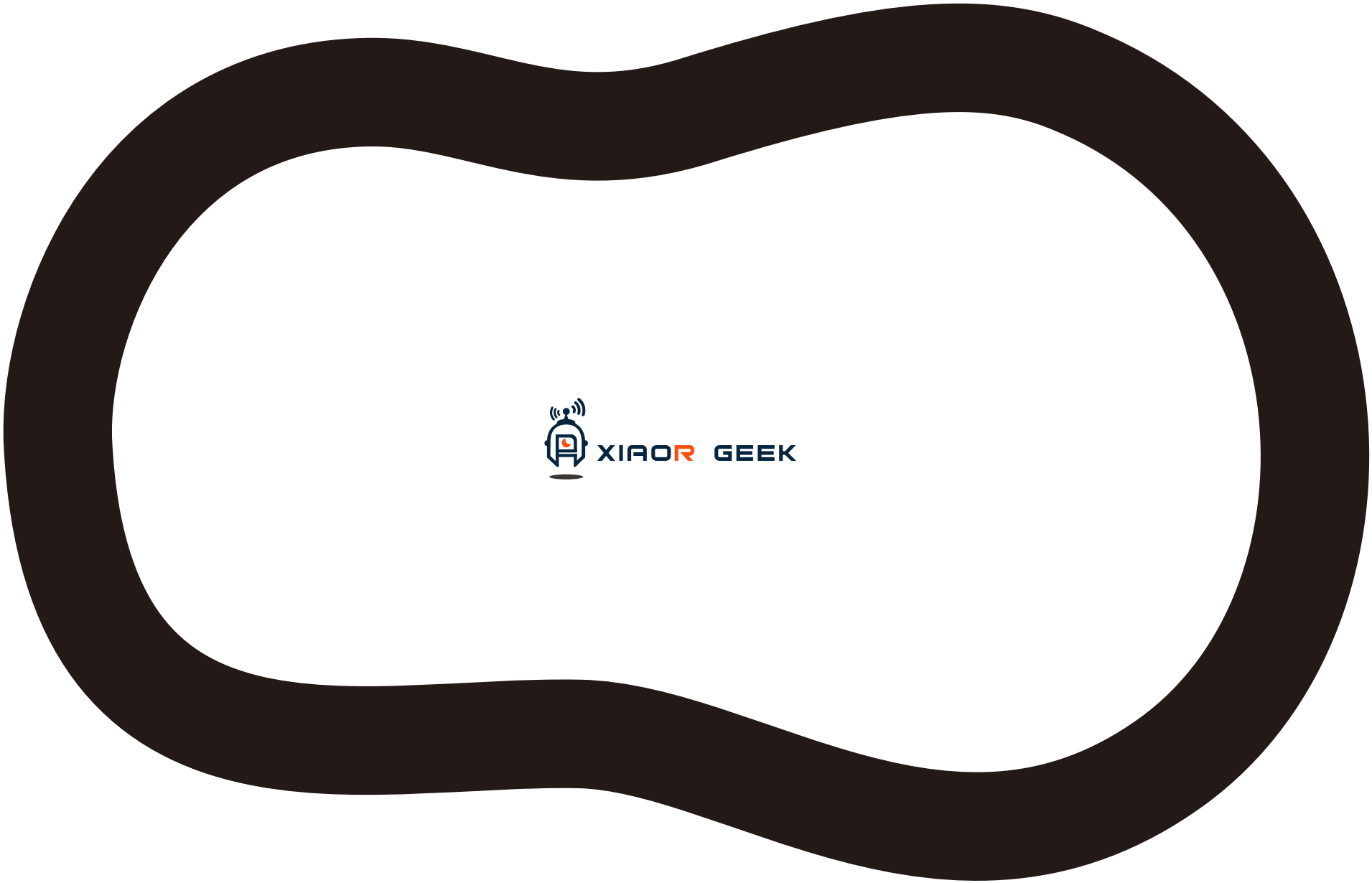
No.	Part Name	Quantity	No.	Part Name	Quantity
1	Transparent LED	2	13	Pin	2
2	Potentiometer	2	14	8550 triode	2
3	Blue LED	3	15	Motor wire	4
4	Self-locking switch	1	16	TT motor	2
5	Wheel fixed screw	2	17	Battery box	1
6	51ohm metal film resistance	5	18	LM393 chip	1
7	1K metal film resistance	2	19	Silicone holster for wheel	2
8	10R metal film resistance	2	20	PCB chassis	1
9	3.3K metal film resistance	2	21	Wheel	2
10	Photoresistor	2	22	Introduction	1
11	100uf electrolytic capacitor	2	23	Tracking map	1
12	universal screw	1			

— Schematic —



We provide English electronic assmbly tutorial. You can scan the QR code to get the assmbly tutorial.


XIAOR GEEK


XIAOR GEEK