

# NAVROBO usage precautions and battery safety

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## [FAQ]

1. After the vehicle is started, no data is displayed when building the map  
A: Enter the command in the terminal: `sudo supervisorctl restart all` to restart the chassis service
2. There is no device number when using OpenCV  
A: For the outdoor version, enter the command in the terminal: `sudo supervisorctl ChassisServer`; for the indoor version, enter the command in the terminal: `sudo supervisorctl ChassisServer`, and start the camera pull streaming service
3. Wukong Voice Assistant cannot answer questions  
A: It may be that the free voice service times have been used up. You can apply for and register your own voice service robot according to the "Voice Control" chapter of the experimental guide
4. When following the target, the program is interrupted and stops following  
A: After starting the program, you need to move slowly and try to stay within the camera's field of view. If you leave the camera range for too long, it will cause the target ID to be lost and the following will fail.
5. During navigation, the route has been planned and there is a speed command, but the vehicle does not move  
A: Check whether the remote control is turned on. If it is turned on, please turn the remote control SWB button to the bottom
6. During navigation, the initialization point is sent, but it has not been matched successfully for a long time  
A: There may be fewer feature points at the location of the vehicle. Move the vehicle to a place with more feature points and re-send the initialization point.
7. The vehicle emits intermittent alarm sounds  
A: Check whether the vehicle battery is too low, and then recharge the vehicle.
8. Abnormal tire noise when rotating  
A: It may be that the friction between the vehicle tire and the ground is too large, resulting in excessive vibration between the tire skin and the ground. It is recommended to drive outdoors or in places with some layers of soil. Or slow down the speed when rotating, which can also effectively reduce the abnormal tire noise.

Tips: Our company provides detailed user manuals, operation guides and related technical documents, covering the installation, operation, teaching and other contents of NAVROBO, providing users with official reference materials for reference at any time. Equipped with a professional technical support engineer team, we provide users with technical consultation and fault reporting services through multiple channels such as email and Whatsapp instant messaging. Engineers have deep professional knowledge and rich experience, can respond quickly and accurately diagnose problems, and provide effective solutions

## Battery considerations

1. The battery of NAVROBO is not fully charged when it leaves the factory. The specific battery power can be read through the voltage display at the rear of the chassis or the CAN bus communication interface. The green indicator light of the charger indicates that the charging is complete, but after the green light is on, the battery will still charge slowly at a current of 0.1A, and can be charged for about 30 minutes;
2. Please do not charge the battery after it is used up. Please charge it in time when the chassis prompts that the battery is low;
3. Static storage conditions: The best storage temperature is -10°C~45°C. The battery must be stored at a full voltage state after being charged and discharged once every 2 months when not in use. Do not put the battery in fire or heat the battery. Do not store the battery at high temperature;
4. Charging: You must use the matching lithium battery charger for charging. Do not charge the battery below 0°C. Do not use non-original standard batteries, power supplies, and chargers.

## After-sales service

The right to amend and interpret these after-sales service terms belongs to our company within the scope permitted by law.

### I. Repair service

1.1 Within 1 year after the product is sold (or shipped and signed for), if there is a product performance failure [as shown in the third item of this after-sales service clause, which is not within the warranty scope], our company will perform after-sales repair/maintenance on the product according to the actual situation. If the product has been sold for more than 1 year, users can enjoy paid repair/maintenance services without iteration of the original product.

1.2 The customer needs to bear the shipping costs in the following cases

1.2.1 Cases not covered by the warranty

1.2.2 Return of products for after-sales service

1.2.3 Product inspection does not meet the return/exchange conditions

### II. Warranty Scope

2.1 If the product encounters the following situations after it is sold, you can enjoy free repair service:

2.1.1 It cannot be used normally when the package is opened for the first time;

2.1.2 During the warranty period, under normal use and storage (non-human damage), the product has performance failures;

2.1.3 If the failure occurs within 90 days from the date of acceptance of the goods (non-human damage), free repair or replacement of accessories of the same specification;

2.1.4 If the internal structure of the robot is modified without permission, the warranty will no longer be provided;

### III. Non-warranty Scope

If the product is damaged due to accidents, improper use, unauthorized repairs, etc., and is not used in accordance with the official user manual, the user will not be able to enjoy the warranty service, including but not limited to:

3.1 Failure to operate in accordance with the official manual or damage caused by improper use, storage, or maintenance, such as product immersion, corrosion, oxidation, burns, falling, squeezing, or exposure to abnormal temperature and humidity.

3.2 Failure or damage caused by natural disasters or external environmental factors, such as floods, earthquakes, lightning strikes, abnormal voltage in external power supply lines, and other environmental factors;

3.3 Failure or damage caused by disassembly, modification, or replacement of non-original parts by yourself or by unauthorized maintenance personnel;

3.4 The content recorded in the sales voucher and product purchase voucher of the sales unit does not match the warranty product;

3.5 Other human factors, placing the product in an environment that exceeds the product's own use environment parameter index, causing failure or damage;

3.6 Failure or damage caused by other force majeure.

**Special note: Product packaging, instructions, and consumables for normal use are not covered by the warranty.**

#### **IV. In the following cases, our company will provide paid repair services:**

4.1 The situation listed in "non-warranty scope" occurs, and the user agrees to submit the product to our company for repair/maintenance;

4.2 The product/parts, accessories, etc. have exceeded the warranty period listed in this repair clause;

4.3 Other paid repair items confirmed by both parties.

#### **V. Notes on paid repair services**

5.1 The paid repair fee for the product includes: parts fee, repair service fee, and logistics fee;

5.2 Our company will inform the user of the possible repair costs and repair time limit before the repair, and confirm with the user whether to agree to the relevant fees;

5.3 If our company determines that the product needs to be paid for repair, but the user gives up the repair, our company will send the user's repaired product back to the user's designated delivery address and will not bear the relevant logistics costs.