

X7

Remote controlled tracked photovoltaic cleaning robot
Instruction manual



Global Service Hotline: +86 400-001-0111

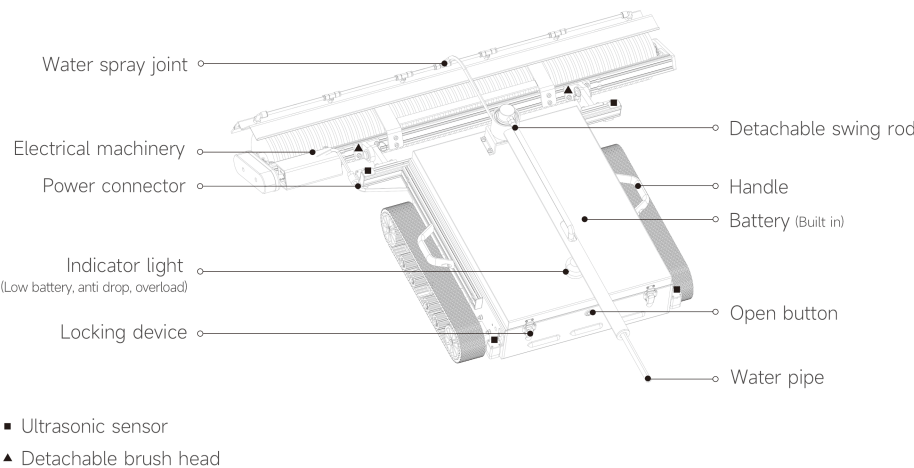


Installation video

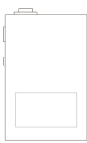
Product Introduction

Please read this manual carefully and keep it properly.

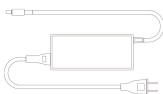
X7 Remote control tracked photovoltaic cleaning robot is a specialized cleaning equipment designed, developed, and manufactured based on the special environment of photovoltaic power plants. It focuses on solving environments that are inaccessible to humans or cannot be cleaned by telescopic rods. It can be used for remote control cleaning, which is more efficient and saves labor costs compared to traditional rod cleaning equipment.



Remote control



Lithium battery



Charger



Toolkit



Backpack

Reminder: The illustrations of products, accessories, etc. in the manual are only schematic diagrams for reference. Due to product updates and upgrades, there may be slight differences between the actual product and the schematic diagram. Please refer to the actual product for accuracy.

Product parameters

Working voltage: 24V

How to power: Battery

Usage time: Regular version 4-5h

Long endurance version 8-10h

Charging time: 6-7h

Cleaning width: 1200mm

Working angle: $\leq 20^\circ$

Drive motor power: 40W * 2

Brush head motor power: 150W

Work temperature: $-20\sim 50^\circ\text{C}$

Landing speed: 230-250r/min

Travel speed: 20m/min ($\pm 2\text{m}$)

Equipment weight: 23kg (No battery)

Brush head weight: 7.5kg

Battery weight: 7kg(Ternary lithium)

Equipment material: Aviation aluminum

Brush material: Nylon wire

Track material: Imported rubber

Size: 1300 * 1000 * 350mm
Roller brush length: 1200mm, diameter 140mm
Brush bristle length: 45mm
Brush bristle diameter: 0.3mm

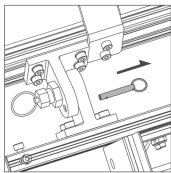
Natural lifespan of bristles: 2 years
Cleaning and wear life: 40-50MW
Remote control single battery voltage: 1.5V
Remote control single battery capacity: 2800mA

Installation

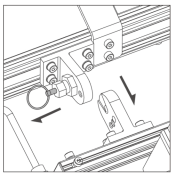
- 1 Connect the power supply device (① Open the chassis cover and connect the internal lithium battery to the power supply connector. ② Connect the external motor power supply connector);
- 2 Connect the water supply system (connect the water pipe to the top joint, connect the water pipe to the water pump at the other end).

Brush head disassembly method

- 1 Unplug the water pipe and waterproof joint
- 2 Pull out the positioning fast pin (Figure 1)
- 3 Pull out the pull tab pin brush head and separate it from the body (Figure 2)

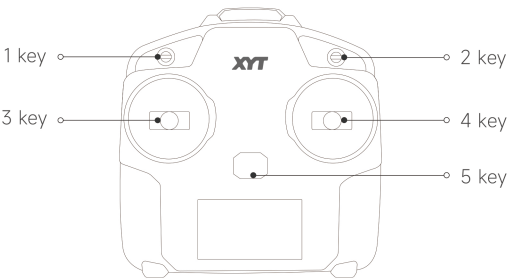


(Figure 1)



(Figure 2)

How to use the remote control



- 1 key : Anti fall switch, spanning distance function: When there is a visual distance of less than 15cm between photovoltaic panel arrays, push up with one button to turn off the anti fall sensor, and then operate the joystick to make the cleaning car pass through this distance (release with one button, automatically reset, and turn on the anti fall sensor);
- 2 key : Roll brush toggle switch, working up or down, center not working;
- 3 key : Walking joystick, push forward, pull backward, release to stop walking;
- 4 key : steering joystick, left push for left turn, right push for right turn, release to stop turning;
- 5 key : Remote control switch button, long press to turn on, long press to turn off again;
- Note: Other buttons do not require operation and have been adjusted at the factory.

Precautions and Warnings

- Anti fall alarm: When the red warning light is constantly on, it reminds that it has reached the edge. At this time, it can only be returned to a safe area in the opposite direction to restore the forward state.
- Low battery alarm: When the battery level is below 15%, the red warning light starts to flash slowly (about once every 1 second), and the battery should be replaced in a timely manner.
- Overload alarm of walking motor: The red warning light will flash rapidly synchronously (about 1 second 5 times), and it will return to normal after 3 seconds. If this problem occurs multiple times, contact after-sales assistance to solve it.
- The pressure of the water pump during washing should not exceed 4mpa;
- Can span up to 15cm wide and 5cm high photovoltaic panel environments;
- The tilt angle of the photovoltaic panel should be $\leq 20^\circ$. A tilt angle of $15\text{--}20^\circ$ is a dangerous angle, and a safety rope must be tied during operation to prevent falling; If traveling to the edge of the photovoltaic panel, the speed should be reduced to prevent accidental slipping; The manufacturer shall not be held responsible for any risks or losses caused by falls;
- After use, the brush head should be kept clean. When storing the equipment, the brush head should be placed upwards or the vehicle body should be lifted to suspend the brush head, avoiding contact with the ground or other factors that may cause deformation of the bristles;
- Please be sure to maintain and repair the product under the guidance of professional personnel.
- Lithium batteries and chargers are not waterproof, please do not splash water.

Investigation of the reasons for the unsatisfactory cleaning effect of photovoltaic panels

• Is it heavy sedimentary dust or special dirt

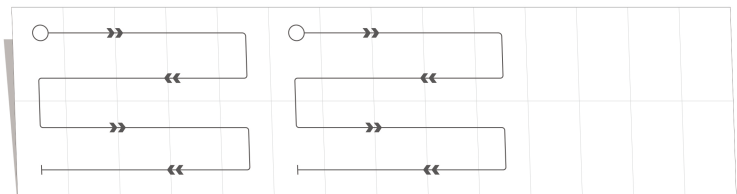
- ① Severe dust deposition should be cleaned multiple times with a large amount of water;
- ② Special pollutants such as oil stains, gel like, sticky, rust, bird droppings, and cement solidified substances need to be cleaned with corresponding cleaning agents or multiple times to achieve the desired effect;

• Has sufficient water been provided

Check if a fan-shaped mist is sprayed while spraying water, and the mist should basically cover the entire brush head; Adequate water volume can significantly improve the cleaning effect;

• Is the cleaning route reasonably planned according to the tilt direction of the photovoltaic panel

The best cleaning route is to clean from top to bottom row by row to avoid secondary pollution caused by sewage flowing downwards. (as shown belo)



- Is the edge cleaning effect of the photovoltaic panel poor due to deformation or protrusion in the middle

When there are large protrusions on the surface of the photovoltaic panel, it may cause the brush head to be suspended and unable to touch the photovoltaic panel, affecting the cleaning effect; At this point, the cleaning direction can be changed to follow the convex direction for cleaning, which can improve the cleaning effect.

- Whether to reduce the travel speed or operating speed

Properly reducing the travel speed or operating speed can achieve better cleaning results;

- Whether to overlap cleaning to avoid missing areas

It should be cleaned with a new line that overlaps with the previous line by about 10cm to avoid some areas not being cleaned;

Product warranty instructions

The after-sales service of X7 remote control crawler photovoltaic cleaning robot products is strictly in accordance with the Law of the China on the Protection of Consumer Rights and Interests and the Product Quality Law of the People's Republic of China. The service contents are as follows:

Warranty Policy

After the fault is detected and confirmed by Shandong Yunjie Cleaning Equipment Co., Ltd., from the day after signing for it:

- You can enjoy return service within 7 days (without affecting secondary sales);
- Exchange service for quality issues within 30 days;
- Free repair service is available within 12 months (excluding natural wear and tear of brush heads, tool kits, and gifts).
- 5-year free warranty for core components (motors, circuit boards);

★ **China Region**

Free repair service provided by China HQ, including domestic round-trip shipping costs.

★ **Other Countries**

Products purchased through local XYT agents: Warranty service provided by the local agent.

Products purchased directly from China HQ: Free repair service provided by China HQ; Customer bears all international shipping costs for repairs/part replacements.

Non warranty regulations

- Unauthorized maintenance, misoperation, collision, abuse, liquid intake, accident, modification, etc.;
Use the product incorrectly or tear the label;
- The validity period of the three guarantees stipulated by the state has been exceeded;
- Failure of the product and accessories due to human causes;
- Damage caused by force majeure.

Service phone number: +86 400-001-0111

Official website: XYT.CN

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