

# X6

## Remote Control Hanging Solar Panel Cleaning Machine

Instruction manual



National service hotline: +86 400-001-0111

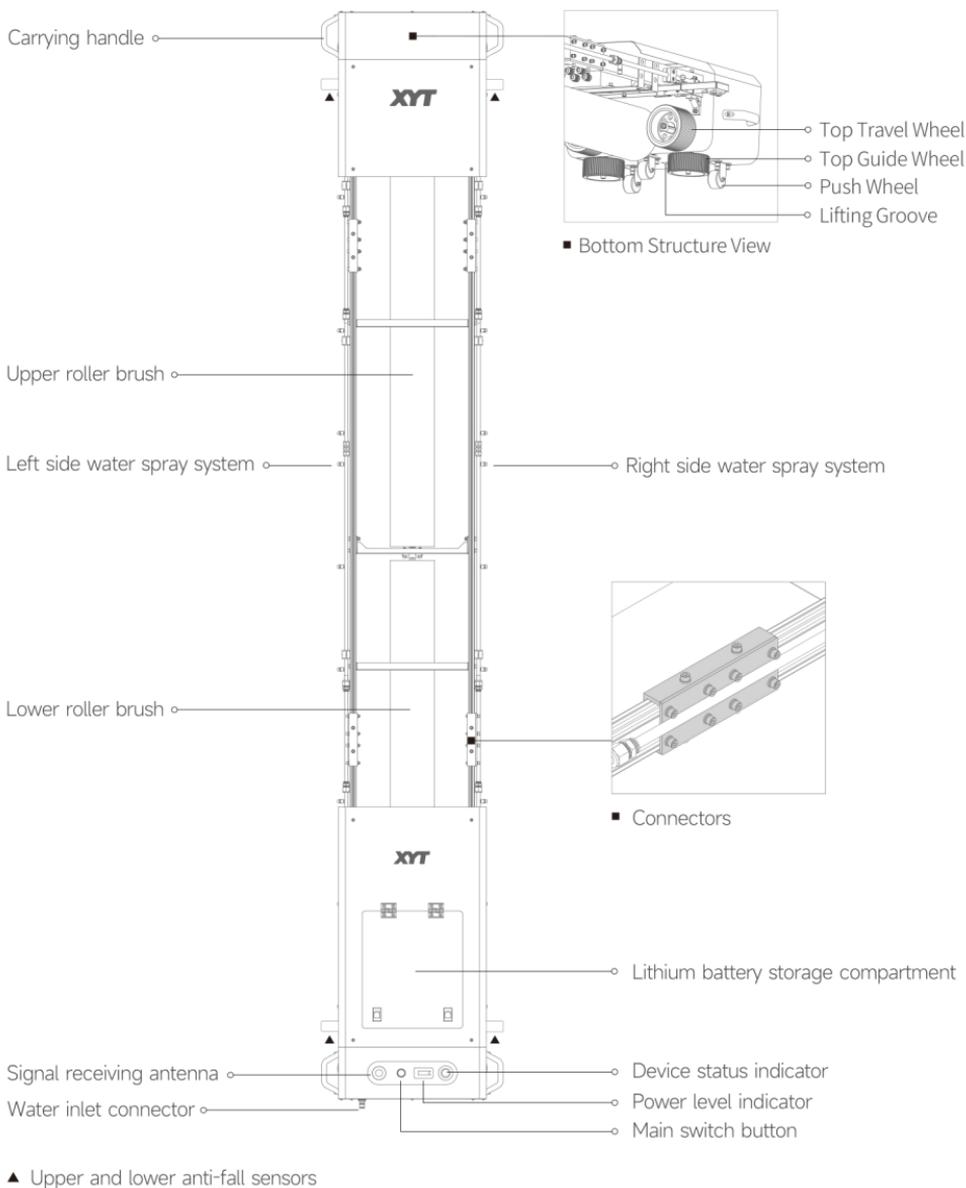


Installation video

## Product Introduction

Please read this instruction manual carefully before using the product and keep it properly.

The X6 remote control hanging photovoltaic cleaning machine adopts a hanging structure and can be hung on the photovoltaic module to pass quickly. It is suitable for photovoltaic power stations within 50°. Compared with traditional power tools, crawler cleaning robots and other products, it has a large cleaning area and a high pass rate. It is not afraid of terrain restrictions such as mountains, deserts, high piles, and lakes. It can be remotely controlled for cleaning, and the cleaning efficiency is increased by more than 76%, which is the efficiency ceiling among photovoltaic cleaning products.





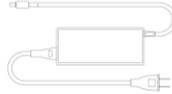
Telescopic rod\*2  
60cm bridge\*2



Remote  
Control



Lithium battery



Charger



Toolkit



Backpack

## Product Parameters

Model	Applicable photovoltaic array size (mm)	Roller brush length (mm)	Machine weight (kg)
X601	1640-1650	1640	40
X602	1990-2000	2000	45
X603	2268-2278	2278	50
X604	2370-2384	2384	55
X605	3310-3320	1640*2	60
X606	4010-4020	2000*2	65
X607	4566-4576	2278*2	70
X608	4768-4788	2384*2	75
Custom made	Other sizes can be customized	Custom made	-

Power supply: Lithium battery\*2

Battery weight: 6.5kg/piece

Battery life: 6-8h

Charging time: 7-8h

Voltage capacity: 48V20Ah

Travel speed: ≤15m/min

Roller brush speed: 300r/min

Roller brush motor power: 400W

Travel motor power: 200W\*2

Cleaning method: Dry cleaning/water washing

Remote control distance: 100m

Protection level: IP65

Working temperature: -20~60°C

Suitable photovoltaic tilt angle: ≤50°

Plane misalignment obstacle crossing: ≤40mm

Left and right board up and down misalignment: ≤30mm

Auxiliary bridge can cross: 600mm or larger

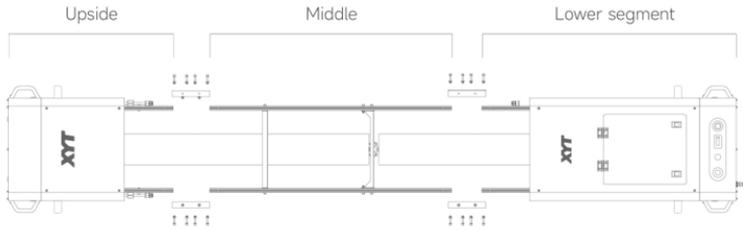
## Product Installation Method

- 1 Whole machine assembly: Assemble the upper, middle, and lower parts according to the installation video/diagram. (As shown in Figure 1)
- 2 Turn on the anti-drop sensor: adjust the 4 sensors at the upper and lower ends to the - operation mode (it is recommended to fold them up during transportation to avoid collision).
- 3 Connect the water supply system: take out the water pipe connector (including valve) in the accessory package, connect the quick-plug end to the water inlet at the lower end of the machine, connect the valve end to the high-pressure water pipe-male end, and connect the high-pressure water pipe-female end to the faucet or water pump; dry cleaning does not require connecting the water supply system.
- 4 Connect the power supply device: open the upper cover of the battery compartment, connect the internal power supply connector (yellow) to the output interface of the lithium battery; press the main

switch button, and the red indicator light of the button is always on (indicating that the device is powered on).

- 5 Test the machine: move the device above the photovoltaic panel and turn on the remote control to test whether the function buttons are normal.

(Figure 1)

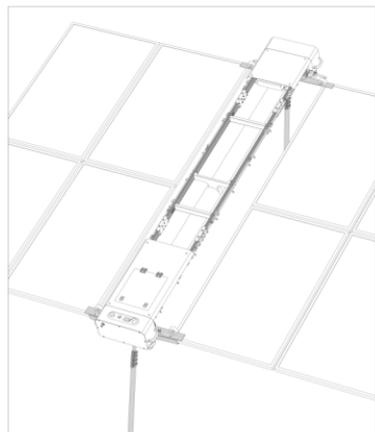


## Product handling/span-passing method

- **Handling Method I:** Two persons lift the upper section of X6 to place the lower pushing wheels onto the PV panel surface. Then, one person lifts the lower section of the equipment and pushes it forward. Meanwhile, another person moves to the rear row of PV panels and uses a support pole to hold the upper section of X6, ensuring the hanging wheels and travel wheels descend steadily (Preferred for ground-mounted power plants where PV panels are installed at a low height).

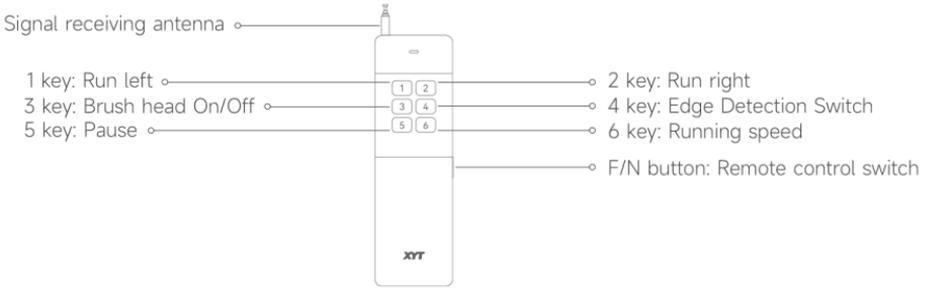
**Handling Method II:** There are carrying handles (orange) on the upper and lower ends of the equipment, which can be carried by two people to the top of the photovoltaic panel; if the upper photovoltaic panel is too high, you can use the matching telescopic rod, insert it into the groove at the bottom of the upper end, and lift the equipment to the photovoltaic panel (the upper height of the photovoltaic panel exceeds 3m, and a fork ladder and manual lifting are required);

- **Spanning method/method:** Two operators work together to adjust the retractable bridge bracket to the appropriate height, and respectively build it at the top and bottom of the array spacing to build a convenient bridge to achieve bridge crossing. (As shown below)



## How to use the remote control

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**F/N key:** There is a switch on the side of the remote control. Turn it to N and the remote control will turn on.

**1 key: Run Left:** A single press activates the drive motor, moving the device leftward, while the brush motor operates to sweep dust in the direction of travel. In this state, if the device reaches an edge and either (Ultrasonic 2) or (Ultrasonic 4) is triggered, all motors stop, and it enters standby mode (only reverse travel is permitted thereafter).

**2 key: Run Right:** A single press activates the drive motor, moving the device rightward, while the brush motor operates to sweep dust in the direction of travel. In this state, if the device reaches an edge and either (Ultrasonic 1) or (Ultrasonic 3) is triggered, all motors stop, and it enters standby mode (only reverse travel is permitted thereafter).

**3 key:** Brush Head On/Off: A short press turns it on; another press turns it off.

**4 key: Edge Detection Switch:** Press and hold to disable the drop-sensing sensors, allowing the device to pass through array gaps (ensure the bridging bracket is properly installed in advance). Release to resume normal drop-sensing operation.

**5 key:** Pause: Click once, the device pauses and the brush head stops. To work again, press the 3/4 button again.

**6 key:** Three-speed travel speed switching: maximum 15m/min, adjustable to 10m or 5m/min, three-speed cycle switching; for severely contaminated photovoltaic panels such as bird droppings, it can travel at a low speed to achieve deep cleaning.

## Precautions and Warnings

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- **Anti-fall alarm:** When the red warning light is always on, it reminds you that you have reached the edge. At this time, you can only return to the safe area in the opposite direction to resume the forward state.
- **Low battery alarm:** When the battery is less than 15%, the red warning light starts to flash slowly (about once per second). At this time, the battery should be replaced in time.
- **Travel motor overload alarm:** The red warning light flashes synchronously (about 5 times per second), and it can return to normal after 3 seconds. If this problem occurs multiple times, contact after-sales service for assistance.

- The brush head should be kept clean after use. When storing the device, the brush head should be placed upward or the vehicle body should be lifted up to keep the brush head suspended in the air to avoid contact with the ground or other objects that may cause deformation of the bristles;
- Please be sure to maintain and repair the product under the guidance of professionals;
- Lithium batteries and chargers are not waterproof, so do not soak or splash them.
- Operating under excessive temperature differentials between PV panels and cold water may cause module damage. It is recommended to delay cleaning until the module surface temperature drops below 50°C, avoiding the midday high-temperature period.

## Causes of unsatisfactory solar panels cleaning results

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### . Is there heavy dust or special dirt?

- ① If dust is seriously deposited, it should be cleaned multiple times with large amounts of water;
- ② Special pollutants such as oil, colloid, stickiness, rust, bird droppings, cement solidification, etc. require the use of corresponding cleaning agents or multiple cleanings to achieve the ideal effect;

### . Is there enough water?

Check whether a fan-shaped mist is sprayed out under the water spray state. The water mist should basically cover the entire brush head; sufficient water can significantly 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 effect;

## Product Warranty Description

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The after-sales service of X6 remote control hanging photovoltaic cleaning machine strictly implements the after-sales three guarantees service in accordance with the "Consumer Rights Protection Law of the People's Republic of China" and the "Product Quality Law of the People's Republic of China". The service content is 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 the return service within 7 days (without affecting the secondary sale);
- Replacement service for quality problems within 30 days;
- Free repair service within 12 months (excluding natural wear and tear of brush heads, tool kits, and gifts);
- 2-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 repair, misoperation, collision, neglect, abuse, liquid intrusion, accident, modification, etc.; improper use of the product and accessories or tearing of labels;
- The three-guarantee validity period stipulated by the state has been exceeded;
- The product and its accessories fail due to human factors;
- Damage caused by force majeure.

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Service hotline: +86 400-001-0111

Official website: [XYT.CN](http://XYT.CN)

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