

HOBOT-2S

Exclusive Patent

WINDOW CLEANING ROBOT

User Manual



© Important Safety Precautions

PLEASE READ ALL INSTRUCTIONS

- Read and follow the instructions and warning when setting up, using, and maintaining HOBOT.
- Please keep this manual in an easily accessible place for future reference.
- Keep HOBOT and the accessories out of reach of children.
- Keep HOBOT in cool and dry places, away from direct sunlight, naked flames, heat, humidity, water and any other liquids.
- Do not store HOBOT near oil, combustible spray or flammable materials.
- Product operating temperatures: 0°C ~40°C (32°F ~104°F)
- Product storage temperatures: -10°C ~50°C (14°F ~122°F)

© Operation Cautions

Before operation- check the environmental surroundings

- Do not operate HOBOT on rainy or humid days.
- Do not operate HOBOT on cracked glasses.
- HOBOT is for domestic use only; it's not for commercial or industrial environments.
- Remove any obstacle on the glass/surface and clear away objects like pull cords, electrical cords and curtains.
- When cleaning windows on upper floors, a warning sign must be established on the ground to prevent people from approaching the area.

Before operation- check the device

- Check if the safety rope is broken or if the knot is loose.
- Fasten the safety rope and tie the end of the rope to a fixed object.
- HOBOT must be connected to an electrical outlet supply to operate.
- The UPS battery must be fully charged. (Green light ON)
- Attach the cleaning cloth firmly to HOBOT to avoid air leakage.
- Fill the water tank only with water or the HOBOT window detergent. Other detergents are not allowed.

Switching on and switching off

- Switch on the power before putting HOBOT onto the glass/surface.
- Make sure HOBOT is firmly attached to the glass/surface before letting go.
- Remove HOBOT from the glass/surface before switching off the power.
- Please be aware that reflective glass and coated glass could be scratched by the dust and dirt during cleaning.
- Always empty the water tank before storing HOBOT away.
- Do not touch the ultrasonic nozzles in any case as they are very fragile.

©Battery & Power Adapter Safety Warnings

- Only plug the power adapter into a power outlet that matches the specifications. (100-240VAC)
- Do not attempt to repair the power adapter. Replace the whole unit if it is damaged or exposed to high moisture. Please contact local HOBOT dealer for help and maintenance.
- Always make sure that HOBOT and the power adapter are not trapped under heavy objects.
- Allow adequate ventilation around HOBOT and the power adapter. Do not cover them with objects.
- Do not use HOBOT and the power adapter in strong magnetic fields, humid or high heat environments.
- HOBOT has a non-removable battery, please contact the authorized service center for assistance.
- Please use the original power supply cord that comes with the HOBOT window cleaning robot. Do not use unauthorized chargers. Use of an unauthorized charger could cause damage, malfunction and danger.
- Do not open, crush, cut, puncture, short-circuit, or incinerate the battery. Do not expose the battery to water, fire, or heat it above 60°C (140°F).
- Store HOBOT in a dry and safe place if you won't be using it for an extended period of time. Charge the battery every 3 months to preserve battery life.
- Never operate HOBOT if the power supply cord is damaged. Make sure the power cord is not stretched or exposed to sharp objects or edges.
- Do not use HOBOT if any part or accessory is damaged or defective.
- Always switch off the power and disconnect your robot from the charging station before cleaning or maintaining it.
- HOBOT is not waterproof. Damage may occur to the electronics if it is sprayed with water or submerged.
- Any procedure other than regular cleaning and care should only be performed by an authorized service representative.
- Contact your local waste management authority for recycling and disposal regulations of electronic appliances in your area. Do not dispose of HOBOT and the batteries as unsorted household waste.

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©Limited Warranty

If there are defects in your HOBOT due to faulty materials, poor workmanship, or malfunction within the warranty period from the date of purchase or delivery, please immediately contact a local retailer or local authorized dealer for repairs or replacement. This limited warranty does not cover:

- Normal wear and tear, including parts that might wear out over time (e.g. water tank, spraying nozzle, cleaning cloth, safety rope and packaging, etc.)
- Reduction in battery runtime due to battery age or use, as the life of the battery (1 year) and number of times HOBOT is used.
- Transit, delivery or accidental damage or misuse and abuse that is not in accordance with the instructions.
- Faults or damage caused by:
 - Negligent use, misuse, abuse or careless operation of HOBOT.
 - Use of HOBOT which is not in accordance with this manual.
 - Use of anything other than normal domestic household purposes in the country in which it was purchased.
 - Use of parts not assembled or installed in accordance with this instruction.
 - Use of any unauthorized parts and accessories. Please contact a local retailer or local authorized dealer for spares and accessories.
 - Faulty assembly or installation.
 - Repairs or alterations carried out by parties other than HOBOT authorized dealer.

©Product Description

With the patented dual ultrasonic spray nozzles, the Edge-Leakage Sensors, and the Creative Voice function, the HOBOT-2S will redefine your window cleaning experience because it couldn't be easier! Our ultrasonic spray nozzles nebulize water into fine mist particles, employing biomimicry design concepts to imitate the human action of blowing a breath onto the glass before cleaning it. The innovative Edge-Leakage Sensors offer more accurate detection, allowing the robot to move effortlessly on any vertical surface. With the HOBOT App, you can now replace the default voice prompt with any sound of your choice, creating more fun and a personal touch to your robot. You can also update the firmware easily through the App to stay up-to-date with the latest features.

©Product Features

- Dual ultrasonic water spray
- Edge-Leakage sensor- for edge detection on frameless window
- Update firmware through Over-The-Air technology (OTA)
- Voice prompt
- Creative voice
- Stops automatically upon completion of cleaning
- Designed for glass in any thickness
- Cleaning speed: 2.4 min/m²
- 3 automatic operation modes to clean the entire window
- Uninterruptible power system (UPS)
- Anti-falling control algorithm
- Extra secure DC power jack
- Microfiber cleaning cloth
- Remote and smartphone controlled

©Product and Accessories

HOBOT-2S × 1

Adapter × 1

AC Power Cord × 1

DC Extension Cord × 1

Remote Control × 1

Window Detergent × 1

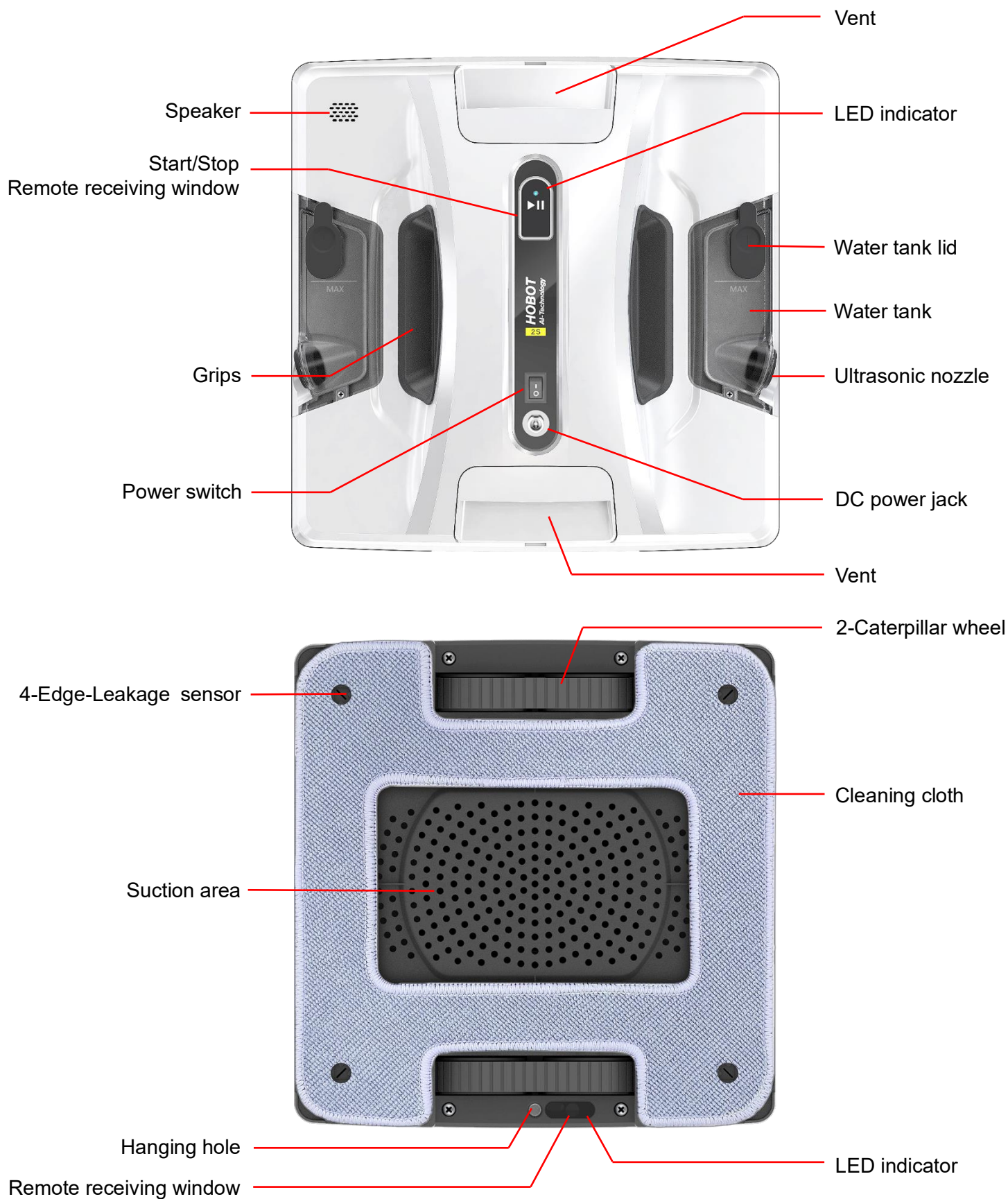
Microfiber Cleaning Cloth × 3

Safety Rope × 1

Ultrasonic Nozzle × 2

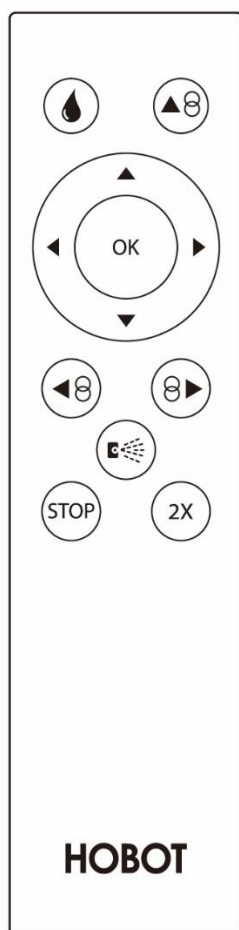
User Manual × 1

©About the HOBOT-2S

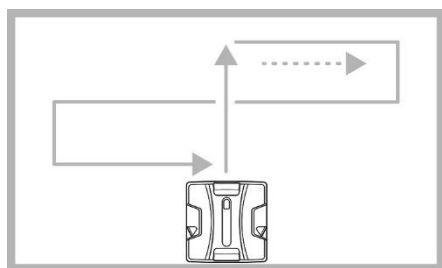


Remote Control and App Control

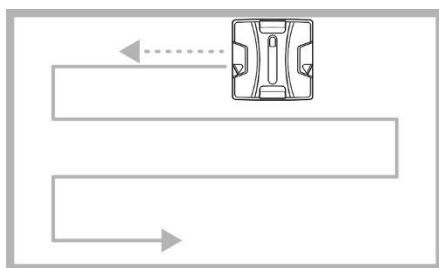
HOBOT can be controlled from the front and back sides with the remote control or with your smartphone via the HOBOT App.



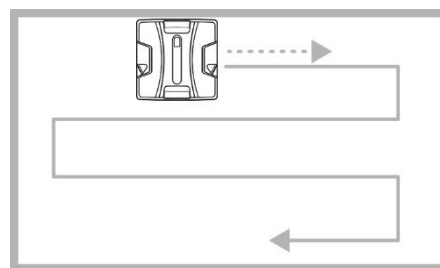
Orientation	Horizontal	Vertical
	Zigzag, then N-way auto-clean entire window	N-way auto-clean entire window
	move LEFT then Zigzag auto-clean the rest window	move UP then N-way auto-clean the rest window
	move RIGHT then Zigzag auto-clean the rest window	move DOWN then in N-way auto-clean the rest window
	Manual Control	
	Stop Cleaning	
	Clean Twice	
	Water Spray Function On/Off	
	Spray Water Once	



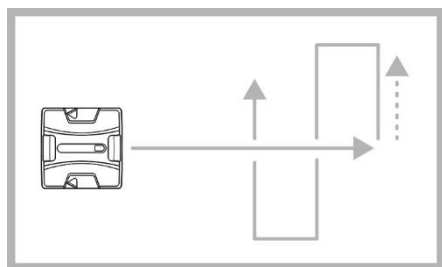
Auto-clean the entire window in zigzag routes first horizontally then vertically.



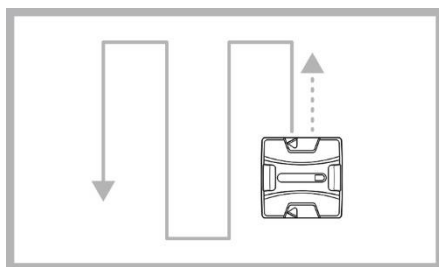
Move LEFT then auto-clean the rest of the window in horizontal zigzag route.



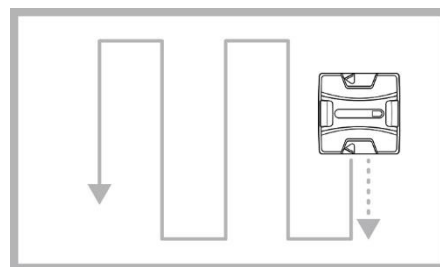
Move RIGHT then auto-clean the rest of the window in horizontal zigzag route.



Auto-clean the entire window in vertical zigzag route.



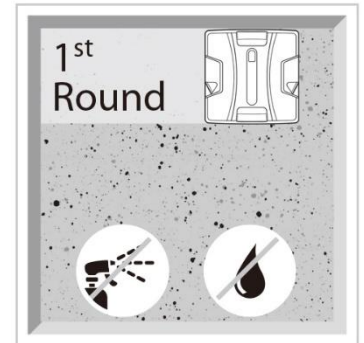
Move UP then auto-clean the rest of the window in vertical zigzag route.



Move DOWN then auto-clean the rest of the window in vertical zigzag route.

◎ Recommended Cleaning Procedures

- For the best window cleaning results, use HOBOT on sunny days or days with low humidity.
- To avoid water stains on your glass, do not use HOBOT on rainy days or days with high humidity



Turn off the spray function. Attach a clean and dry cleaning cloth. Run the 1st round to wipe dust and dirt off the glass/surface.

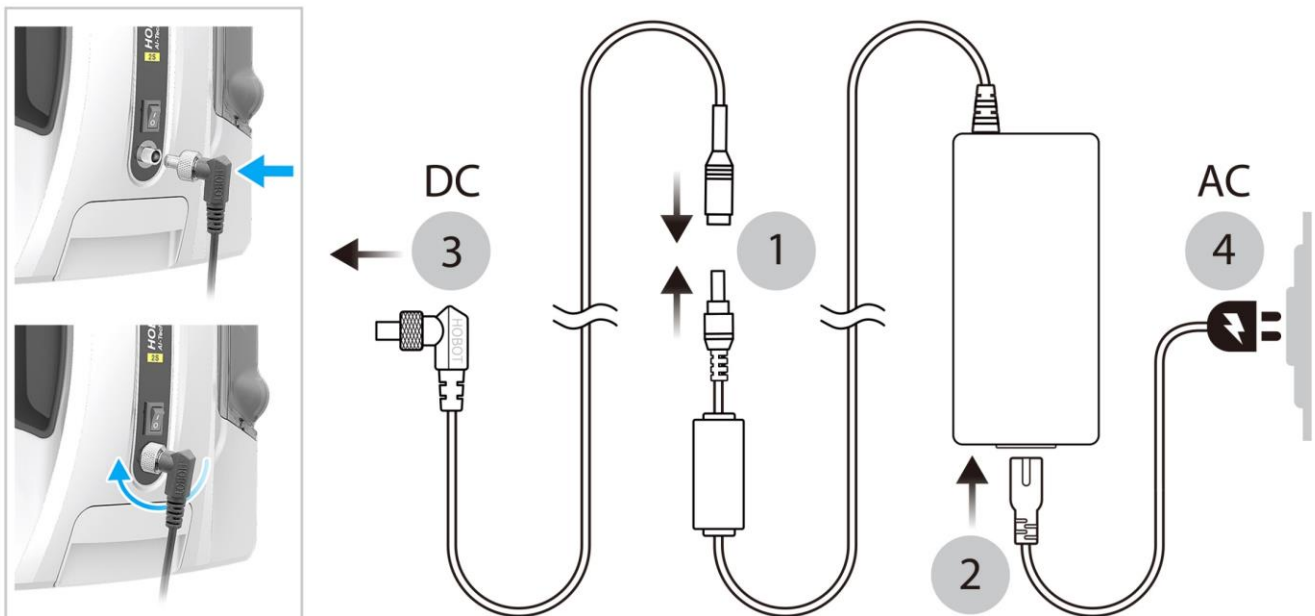
This step is to prevent dirt from turning into a muddy mess when mixed with water or detergent.

2. Run “Wet Cleaning” Later

Change the cleaning cloth. Turn on the spray function or spray a small amount of water/detergent on the cloth. Run the 2nd cleaning round.

◎ Instructions for Using the HOBOT

1. Set-up



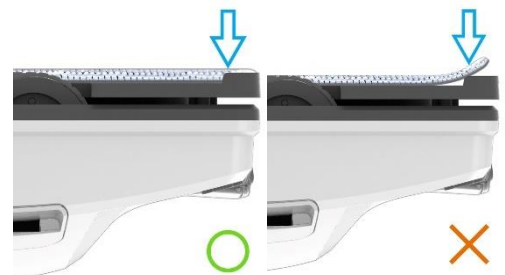
- (1) Connect the adapter to the DC extension cord.
- (2) Connect the adapter to the AC power cord.
- (3) Plug the L-shaped connector into DC power jack on the HOBOT and screw it tight.
- (4) Plug the AC power cord into the socket.

2. Charging HOBOT

- (1) Turn off the power and connect HOBOT to a power source. (LED Indicator turns orange while charging)
- (2) Make sure the battery is fully charged (Light Indicator: green) before use.

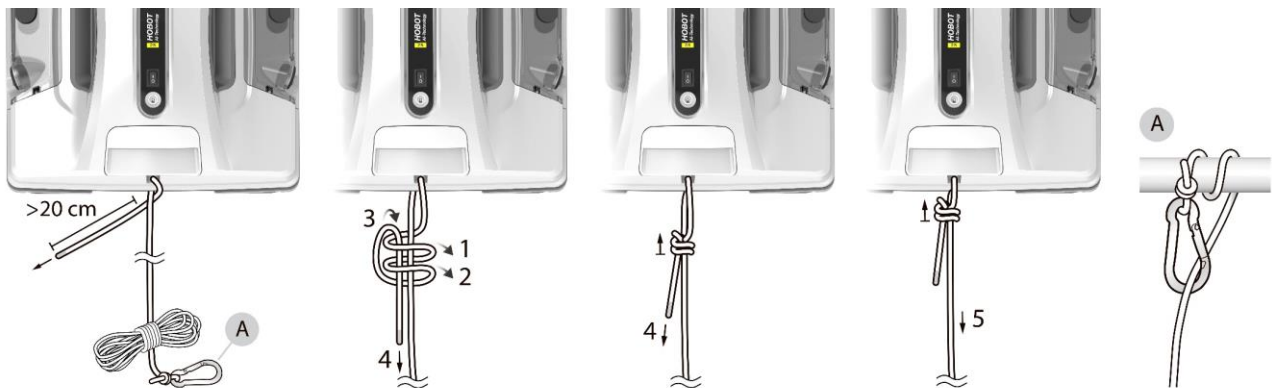
3. Attach the Cleaning Cloth

Make sure the cleaning cloth is flatly attached and does not cover the 4 Edge-leakage Sensors.



4. Apply Safety Measures

- (1) When cleaning windows on upper floors, a warning sign must be established on the ground to prevent people from approaching the area.
- (2) Please check if the safety rope is broken or if the knot is loose.
- (3) Fasten the safety rope and tie the end of the rope to a fixed object.



5. Fill the Water Tanks

Only fill the water tanks with water or with the HOBOT window detergent. Do not fill water/detergent pass the MAX mark and remember to tighten the lid.



6. Position the HOBOT onto Glass/Surface

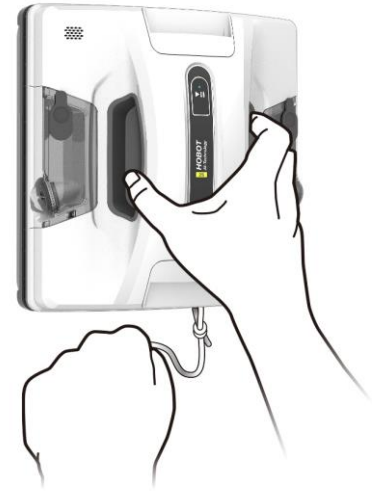
- (1) Turn on the power. Make sure the fan is running.
- (2) Put HOBOT onto glass, at least 10cm away from the edge.
- (3) Make sure HOBOT is firmly attached to the glass/surface before letting go.

7. Clean with Auto Mode and Manual Mode

- (1) Press or or , HOBOT will automatically clean the entire window.
- (2) Press or to stop HOBOT.
- (3) Press to control HOBOT's moving direction manually.

8. Remove the HOBOT from Glass/Surface

- (1) Hold the safety rope with one hand and grasp HOBOT tightly with the other hand to remove it from the glass/surface.
- (2) Switch off the power and store away HOBOT in a safe place.



©Uninterruptible Power System (UPS)

- (1) The UPS provides emergency power supply when a power outage strikes. The backup time of the UPS is 20 minutes.
- (2) HOBOT will stop automatically, flash red and blue light, and play audio alert. Please remove HOBOT from the glass as soon as possible. Please refer to FAQ Q2 for more information.

©Instructions for Using the HOBOT App

1. Install the HOBOT App, Connect, and Start Cleaning

Scan the QR code on the right or search “HOBOT” on the App Store/Google Play to download the App.

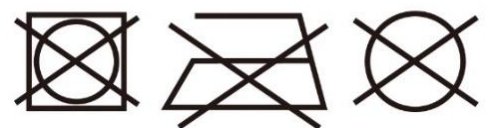
- (1) Turn on Bluetooth and open the HOBOT App.
- (2) To connect your robot to the App, turn on HOBOT and wait for the “Connected” sign to show on the App.
- (3) Start operating HOBOT with the HOBOT App.
- (4) Please put HOBOT on the table before updating the firmware or recording the Creative Voice.



©Cleaning & Maintenance

1. Caring for the Cleaning Cloth

- Wash under 40°C (104°F).
- Do not bleach.
- Do not use softener.
- Do not tumble-dry.
- Do not iron.
- Do not dry clean.



Care Frequency: after each use

Please contact a local retailer or a local authorized dealer for information regarding replacement parts.

2. Replacing the Water Tank

- (1) Remove the screws with a Phillips screwdriver.
- (2) Remove the old water tank by sliding it upwards, then disconnect the cable from HOBOT.
- (3) Connect the new water tank to HOBOT and fix the cable along the side of the water tank.
- (4) Slide down the new water tank, then fasten the screws.



Care Frequency: when ultrasonic nozzle is clogged and cannot spray water.
Please contact a local retailer or a local authorized dealer for information regarding replacement parts.

3. Replacing the Ultrasonic Nozzle

※**DO NOT touch the ultrasonic nozzle as they are fragile**

- (1) Please refer to FAQ Q11 before replacing the ultrasonic nozzle.
- (2) Follow the instructions to remove the water tank.
- (3) Remove the old ultrasonic nozzle by lifting the silicone ring.
- (4) Make sure the cable of the new ultrasonic nozzle comes out from the hole of the water tank. Then install the new ultrasonic nozzle by pressing the edge of the silicone ring gently.
- (5) Put the water tank back into HOBOT.

Care Frequency: when the ultrasonic nozzle is clogged and cannot spray water.
Please contact a local retailer or a local authorized dealer for information regarding replacement parts.

4. Cleaning the Caterpillar Belt

Please wipe the accumulated dust off the caterpillar belts frequently to avoid HOBOT from skidding.

- (1) Flip HOBOT upside-down and turn on the power.
- (2) The caterpillar belts will continue to run for 3 minutes.
- (3) While the belts are running, gently press a cloth onto a belt to clean it. Keep the cloth in the middle of the belt to avoid being tangled.
- (4) In case the cloth is tangled with the belt, turn off the power and pull the cloth out.

Care Frequency: Before each use.



◎LED Indication

Status	LED Indication	Audio Alert	Situation and Handling
Charging	Orange light on	X	UPS charging
	Green light on	X	UPS fully charged
Operating	Blue and white light flashing	Two beeps with voice prompt	Low UPS battery. Please refer to FAQ Q1 for resolution.
	Red and blue light flashing	Long sound alert with voice prompt	Power supply disrupted. Please reconnect HOBOT to a power source. Please refer to FAQ Q2 in case of power outage or inaccessibility of power source.
	Blue light on	O	Spray function on
	White light on	O	Spray function off
	White light flash once	X	Water spraying
	Blue/White light on	One long and two short beeps with voice prompt	Cleaning completed
	Light is off	One beep	Air leakage. HOBOT will reverse.
	Blue light flashing	Two beeps with voice prompt	Please refer to FAQ Q3 for resolution.
	White light flashing		Air leakage. Please refer to FAQ Q7 for resolution. If the leakage still exists, please contact a local retailer or an authorized dealer for repairment.
	Red light flashing		Hardware failure. Please contact a local retailer or an authorized dealer for repairment.

◎Frequently Asked Questions (FAQ)

1. Charging UPS battery.

Store HOBOT in a dry and safe place if you won't be using it for an extended period of time. Charge the battery every 3 months to preserve battery life. If the battery cannot be fully charged (green light on) after 3 to 4 hours, please contact a local retailer or an authorized dealer for battery replacement.

2. HOBOT stops working due to power outage with red and blue light flashing and audio alert on.

If HOBOT is in an accessible area:

- (1) Hold the safety rope with one hand and grasp HOBOT tightly with the other hand to remove it from the glass/surface.
- (2) Switch off the power when HOBOT is in a safe area.
- (3) Check if the power cord is damaged or broken.

If HOBOT is not in an accessible area:

The safety rope can be used to pull HOBOT back. Gently pull the safety rope while keeping the rope close to the glass/surface to avoid HOBOT from falling off. Repeat the above (1)-(3) steps once HOBOT is within reach.

3. HOBOT fails to complete the initial hardware check, blue light flashes with audio alert.

- (1) Please check if the cleaning cloth is too dirty or if it is flatly attached to the bottom side of HOBOT.
- (2) Could be insufficient friction caused by the following reasons.
 - Glass stickers and window film
 - Slippery glass/surface due to excessive cleaning
 - Low humidity environment such as an air-conditioned roomTo increase friction, please spray a very small amount of water on the cleaning cloth. DO NOT spray water on the caterpillar belts.
- (3) To avoid false detection, please keep HOBOT at least 10 cm away from the window frame when placing it on the glass/surface.

4. HOBOT skids and is unable to detect the upper frame of the window in “Auto Up then Down ▲⌂” mode.

Press  and switch to  or  auto cleaning mode.



5. HOBOT skids and is unable to move upwards.

- (1) Please clean the caterpillar belts.
- (2) The cleaning cloth might be too wet. Please change to a dry cloth.
- (3) Could be insufficient friction on the surface. Please refer to FAQ Q3-2 for resolutions.

6. HOBOT does not finish cleaning the whole window and stops in the middle of the work.

Press  or  to switch to left or right auto cleaning mode.

7. HOBOT stops at the edge of the glass, white light flashes with audio alert.

Some glass sealing strips are very flat, causing air leakage to HOBOT when it rides and gets stuck on the strips. Please keep HOBOT at least 10 cm away from the window frame and use  or  auto cleaning mode to continue.

8. HOBOT does not move smoothly or moves irregularly.

- (1) Please clean the caterpillar belts.
- (2) The cleaning cloth might be too dirty. Please change to a clean cloth.
- (3) Friction on the glass/surface may differ due to glass stickers, window film, and other factors. Please limit the use of HOBOT in certain areas of the window/surface.

9. HOBOT does not stop cleaning after task is completed.

Please press  button to stop HOBOT.

10.Unable to connect HOBOT to the HOBOT App.

- (1) Please restart both HOBOT and the App.
- (2) Please turn on Bluetooth function on your smartphone and connect.
- (3) Please check the Bluetooth device list on your smartphone and disconnect “HOBOT” to allow the App to connect to HOBOT.

11.HOBOT does not spray water.

- (1) Check if you have turned on the spray function.
- (2) Clean the ultrasonic nozzle with a soft, dry and clean cloth.
- (3) Replace the water tank after you have tried step (1) and (2).

If you cannot resolve the problem with any of the workarounds in this manual, please contact a local retailer or local authorized dealer.

©Specifications

Model	HOBOT-2S
Adhesive type and shape	Vacuum, Square
Device weight	1.3 Kg (2.9 lbs)
Device size (L×W×H)	240×240×86 mm (9.5×9.5×3.4 in)
Cleaning method	Linear clean, Zigzag
Auto water spray	●
Dual replaceable water tank	●
Suitable glass thickness	All thickness
Input rating	DC 24V, 3.0A, 72W
Uninterruptible Power System (UPS)	20mins
Certifications	CE, FCC, RoHS, RCM



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