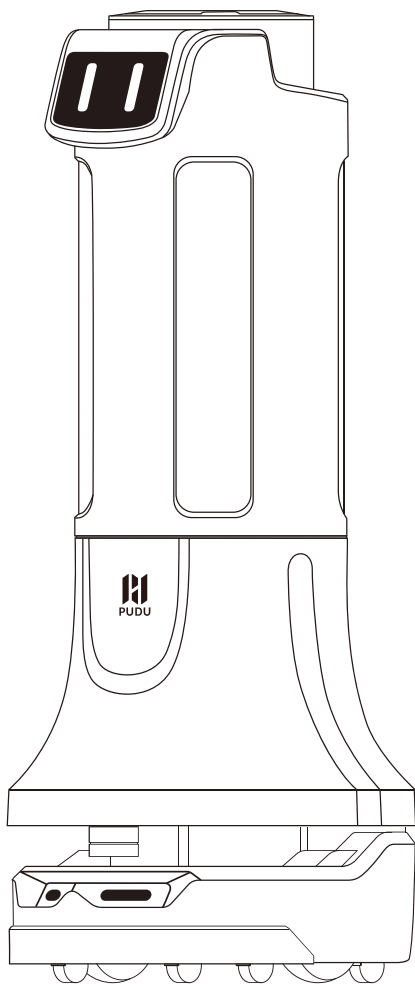




PuduRobotics



www.pudurobotics.com



Puductor2 **User Manual** (V1.0)

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Statement

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Safety Instructions

1.1 Instructions for use

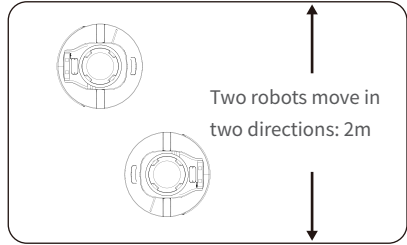
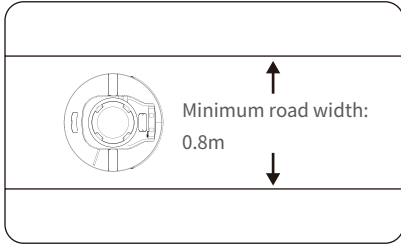
- Puductor 2 is only suitable for disinfecting indoor air and surfaces and is not recommended for outdoor use.
- Many disinfectants decompose quickly under heat and light. It is recommended to divert disinfectants in the ultrasonic chamber back to the disinfectant tank and keep the robot in the shade after ultrasonic dry mist disinfection.
- The UV device will be screwed out only when it is working, and it will be screwed in automatically after the UV disinfection is over. Please restart the disinfection robot when the UV lamp is found not fully screwed in or screwed out. If the problem cannot be solved, please turn off the robot and contact Pudu staff.
- In the ultra-dry mist disinfection mode, a small amount of atomized liquid may remain on the robot surface, which is normal. After disinfection is completed, wipe the robot clean with dry tissue or cloth.
- DO NOT push the robot in the opposite position while it is powered on.
- DO NOT block the sensor, or the robot may fail to move properly.
- The product must be used according to the User Manual or this Quick Guide. Loss caused by improper use shall be borne by users.
- The product's lidar meets safety standards for Class 1 laser and would not cause harmful laser radiation.

A rectangular label with rounded corners and a thin border, containing the text "Class I".

Class I

1.2 Environmental instructions

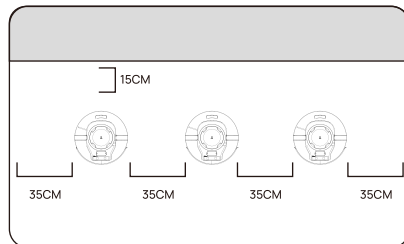
- The robot can only be used in flat indoor environments, such as floorboard floors, tile floors, and floors with thin carpets, and may not be used in any outdoor environments such as an open balcony or on any rugged ground such as a staircase. DO NOT use the robot in any environment with a temperature above 40 ° C or below 5 ° C or on any wet slippery ground surfaces.
- Before use, put away any wire or cable in the environment to prevent the robot from being dragged around. All sharp-edge objects (such as decoration wastes, glasses, nails) should be removed from the ground to prevent damage to the robot chassis.
- The optimal travel width of the robot should be greater than 0.8m. A width greater than 1 m is needed for the robot to move smoothly through a long passage. Passages with a width of greater than 2 m can accommodate two robots passing each other. (The appropriate width is evaluated by the technician based on the use case required.)



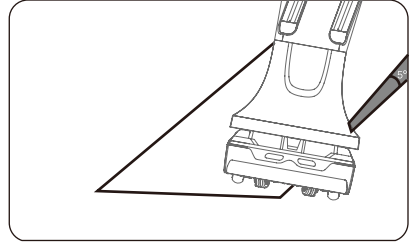
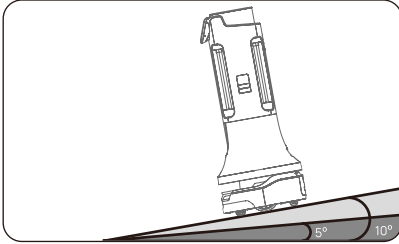
- It is necessary to add fences or other barriers at the edge of a staircase, entrance to a downslope, or other places where the robot is at risk of falling.
- Pure black (such as baseboards), specular (such as walls), and fully transparent (such as floor-to-ceiling glass windows) objects that are 16 to 22 cm high from the ground may interfere with the lidar detection of the robot and cause the robot to move abnormally. Make some necessary modifications to the space to allow the lidar to reflect (such as sticking some stickers).



- Robots at the standby point, if arranged side by side, should stay apart from each other at a distance of 35 cm, from the back wall at a distance of 15 cm, and from the side wall at a distance of 35 cm.



- The maximum possible slope is 5° for the robot. To prevent sliding, the robot should not be paused when moving uphill. To prevent the robot from falling, the slope should be at least 80 cm wide, and the roll angle should not exceed 5° .

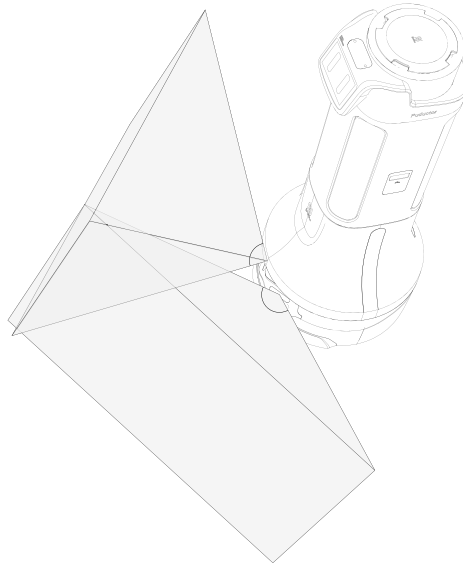


1.3 Instructions on power supply and power usage

- DO NOT use any third-party batteries, power cables, or chargers.
- DO NOT dismantle, repair, or modify the batteries or charger without permission.
- The power must be disconnected and the batteries removed before scrapping the robot or its batteries.
- DO NOT place or charge the robot near flammables, explosives, or heat sources (including the radiator).
- DO NOT place the robot or the charger in an area of elevated temperatures ($> 40^{\circ} \text{C}$).
- DO NOT place the robot loaded with disinfectant in an area of low temperatures ($< 5^{\circ} \text{C}$).
- DO NOT collide the charger with other objects to avoid any damage.
- When being transported, the robot should be shut down and the disinfectant should be emptied. Use the original package to protect the robot.
- To maximize the efficiency and battery life of the robot, always keep the battery level above 10%.
- Disconnect the power and timely contact Pudu staff for repair or replacement when the charger is found damaged or abnormal.
- Unplug the charger timely after the charging cycle is complete. DO NOT leave the charger plugged in for a long time if the robot is fully charged.
- Designate a person to charge the robot. DO NOT charge the robot in an unattended manner.
- If the robot is not used for a long time, please fully charge the battery, turn off the machine with the key, and put it in a cool and dry place.
- Charge the battery at least once every month to avoid battery damage.

1.4 Safety instructions

- An unmanned environment is necessary for the UV disinfection mode.
- Puductor 2 can only function as an ultra-dry atomizer. During ultra-dry disinfection, make sure to follow the user instructions for your disinfectant. Check with your disinfectant supplier whether it is safe for people to be in the same space with dry mist.
- While the robot is performing UV disinfection, it emits strong UV rays, to which direct exposure of eyes and skin should be avoided. Make sure that operators are well protected, and no people should get close to the robot when working.
- DO NOT knock over the robot when there is liquid in the disinfectant tank, otherwise, it will cause liquid leakage which may damage the circuit in the robot.
- DO NOT pull the robot while it is working. In case of an emergency, press the emergency button or stop the robot using the remote control terminal.
- A maximum speed of 0.8 m/s is recommended for safe operation. No playing is allowed within 1 m in front of the robot to avoid unnecessary harm. Although the robot features automatic obstacle avoidance, there is a blind spot. Therefore, never block the robot moving at a high speed.
- The blind spots of the robot are shown in the figure below:



Note: ⚠

We shall not be held responsible for any accident caused by improper operation.

Product Overview

2.1 Product information

Product name:

Puductor 2

Model:

PJ1

Features:

Puductor 2 boasts both Ultrasonic Dry Mist Disinfection and Ultraviolet-C Disinfection. Ultrasonic Dry Mist Disinfection is achieved by atomizing food-grade hydrogen peroxide and other disinfectant solutions into micron-level dry fog, which is fully and quickly dispersed into the indoor environment through the high-flow air outlet. The dry mist can kill various microorganisms including bacteria, fungi, viruses and highly resistant bacterial spores. In the UV mode, Puductor 2 can destroy the DNA and RNA structure of natural bacteria when exposed to ultraviolet rays for a certain time, thus killing harmful germs indoors.

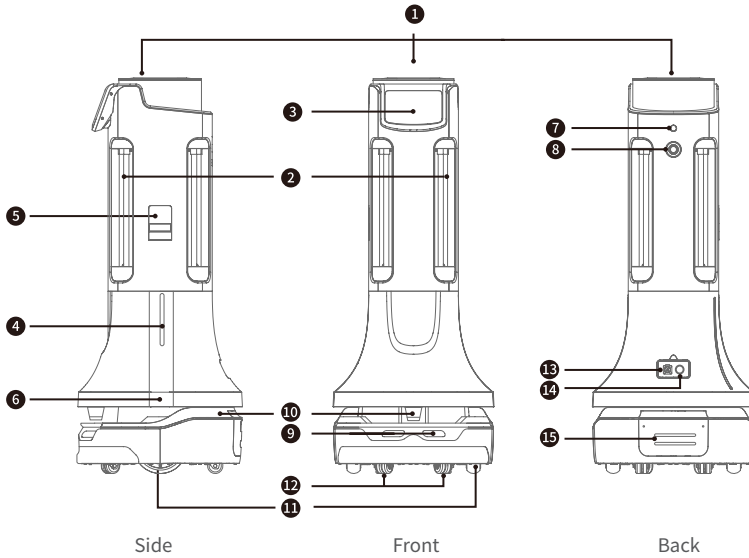
Powered by technologies like self-navigation, intelligent start-stop, and human induction, Puductor 2 can work independently in different disinfection modes. When using harmful disinfectant solutions like hydrogen peroxide and operating in the UV mode, Puductor 2 can automatically stop when humans are detected, to enable automatic, timed, accurate, and safe operation. Puductor 2 boasts carefree charging and can return on its own when the battery is low.

2.2 Applicable scenarios

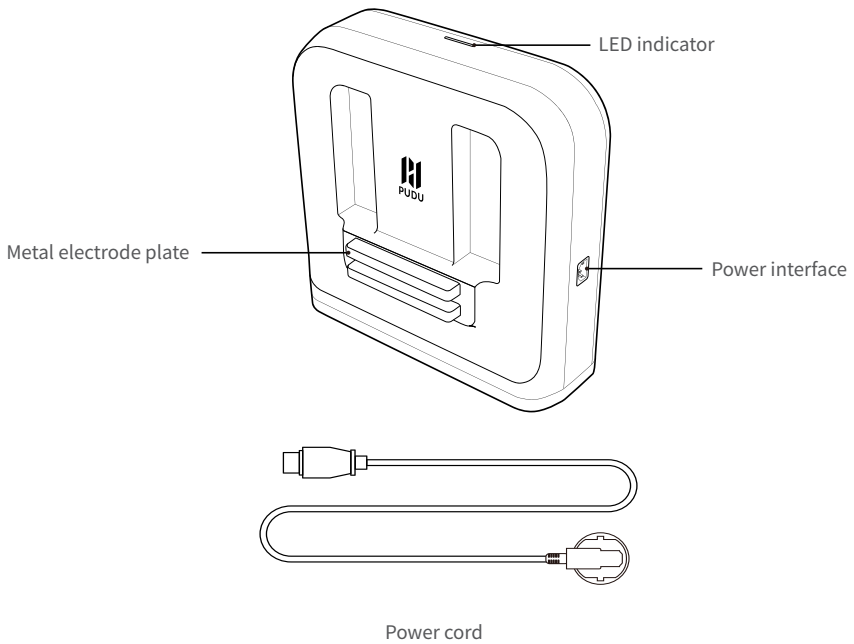
Puductor 2 can disinfect the hard surface and indoor air of medical institutions, public places, labs, pet clinics, enterprises, schools, and other indoor locations requiring infection prevention and control measures.

2.3 Exterior and components

Puductor 2 can disinfect the hard surface and indoor air of medical institutions, public places, labs, pet clinics, enterprises, schools, and other indoor locations requiring infection prevention and control measures.



- | | | |
|----------------------|-------------------------|----------------------|
| ① Ultrasonic chamber | ⑥ Liquid outlet | ⑪ Drive wheel |
| ② UV lamp | ⑦ On/Off switch | ⑫ Auxiliary wheel |
| ③ Screen | ⑧ Emergency stop switch | ⑬ Charging jack |
| ④ Level indicator | ⑨ Depth vision sensor | ⑭ Key switch |
| ⑤ Liquid inlet | ⑩ Lidar | ⑮ Auto charging port |



2.4 Performance parameters

Feature	Description
Model	PJ1 Standard
Power input	AC 100-240V, 50/60Hz
Power output	29V-8A
Robot input	DC 29V/8A
Operating voltage	DC 23-29V
Charging time	8h
Continuous working time	6h
Moving speed	0.1~1.2m/s
Climbing angle	≤ 5°
Machine material	ABS/aviation grade aluminum alloy

Battery capacity	51.2Ah
Robot weight	68kg
Machine dimension	544x 538x1290mm
Rated power	232W
Ultra-dry spray	4 sets of nozzles, spray angle: 30°
Spraying output	2L/h
Disinfection liquid capacity	15L
Spray particle size	< 10 μm
Applicable disinfectants	Hydrogen peroxide, hypochlorous acid, and chlorine dioxide
UV lamp	4 sets of lamps
UV wavelength	UV-C 254nm
UV illuminance	> 180 μW/cm ² at 1 m
Protection against UV rays	Autonomously retractable UV lamps
Screen size	7-inch HD color touch screen
Speaker power	2 × 20W stereo speakers
Design life span	5 years
Working environment	5 ° C to 40 ° C, RH: 85%
Storage environment	-40 ° C to 65 ° C, RH: 85%
Charging mode	Manual and auto charging
Level of environmental pollution	Level 3
Navigation	Lidar-based positioning and navigation
Transmission mode	Wi-Fi
Band	2.4G/5G
Transmission standard	802.11b/g/n/ac
Working altitude	< 2000m
Operation environment	Indoor environment, flat and smooth ground
IP grade	IP20
Illuminance	< 70,000 lux

2.5 Disinfection

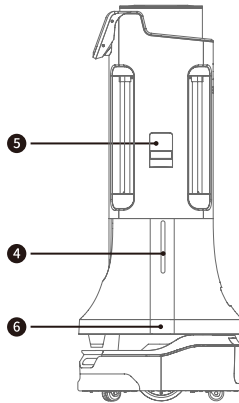
Sterilization principle:

Confirm there are no people except the operator in the location to be disinfected. Close the doors and windows. Start the right disinfection mode at room temperature.

Dry mist and UV rays work together to kill bacterias, fungi, viruses, highly resistant bacterial spores, and other microorganisms on the surface.

Sterilizing factors and working environment:

Feature	Description
Sterilizing factors	Hydrogen peroxide, ultraviolet rays
Sterilization intensity	Hydrogen peroxide solution, atomized at a rate of 2 L/H and then diffused into the air. $\geq 180\mu\text{W}/\text{cm}^2$ 4 x 36 w UV-C lamps with an industry-leading ultraviolet illumination of $180\mu\text{W}/\text{cm}^2$ at 1 meter
Applicable target	Hard surface and air
Target microorganisms	Bacteria, fungi, viruses, and highly resistant bacterial spores
UV-C lamps	
Power	36 w for each UV-C lamp
UV wavelength	UV-C 254 nm
Illuminance	$\geq 180\mu\text{W}/\text{cm}^2$ (at 1 meter)
Number of lamps	4 sets of lamps
Ultra-dry atomizer	
Ultra-dry spray	4 sets of nozzles, spray angle: 30°
Spraying output	Adjustable between 0-2 L/h
Spray particle size	$< 10\mu\text{m}$
Disinfectant tank capacity	15 L



Disinfectant refill:

When the robot prompts a low liquid level, the disinfectant should be added manually. The liquid inlet is by the side 5 . Open the liquid inlet and add the disinfectant.

NOTE: ⚠️
 When refilling the disinfectant tank, corresponding use guidance should be followed to avoid injury, and the disinfectant added should be of the same type and concentration. The liquid level should be observed when refilling 4 to prevent overflow.

Disinfectant discharge:

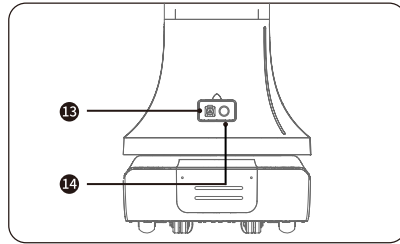
When the disinfectant should be discharged from the robot, make sure that the disinfectant in the ultrasonic chamber has flowed back to the disinfectant tank. If not, make it so first. Open the liquid outlet 6 and unscrew the switch for the disinfectant to be discharged. When fully discharged, screw the switch and close the liquid outlet.

How to Use

3.1 Powering on and off

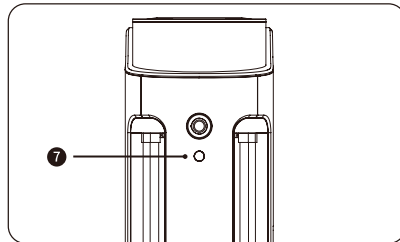
Key switch:

Use the key switch 14 to turn on/off the power of the robot. Rotate the key switch clockwise to turn on the power of the robot and counter-clockwise to turn it off.



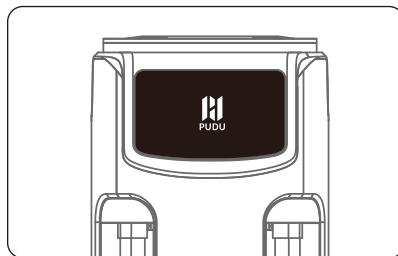
Powering on:

Push to the initial position → Turn on the key switch → Press and hold the 7 switch for 2 seconds, and wait until the bottom appears in blue.



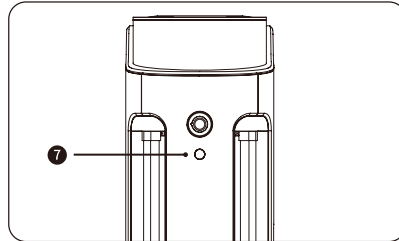
Upon powering on:

Upon powering on, the screen enters the working mode, indicating that the robot is successfully powered on.



Powering off:

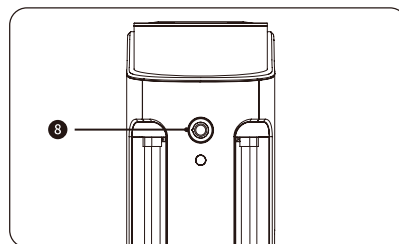
Press and hold the 7 switch for 3 seconds, at which point the light tube and screen are off, indicating that the robot is successfully powered off.



3.2 Emergency handling

Puductor 2 is designed in part to work in environments with no people. Such environments are more open, have more sloped surfaces, and are short of staff responsible for following the robot's movements in real time. Therefore, a park while idling function is added to keep the robot in park when it moves involuntarily while being powered on idling. This function is to prevent the robot from sliding or being moved unexpectedly during a quick disinfection or fixed-point disinfection task. In case of any emergency that requires moving the robot when it is powered on idling, press the emergency stop switch 8 on the back. When you are done moving the robot, rotate the emergency stop switch clockwise to reset it.

When the robot is not working properly, in an unexpected condition or in any other emergency that may cause harm to the surrounding environment, you can stop the robot by pressing the emergency stop switch 8 on the back. The robot can only be manually pushed during an emergency stop.



3.3 Charging instructions

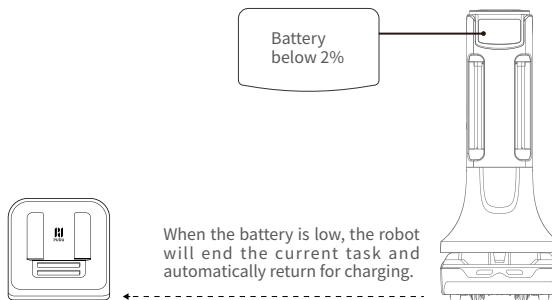
3.3.1 Charging mode

The robot is charged through the charging pile. There are three charging modes:

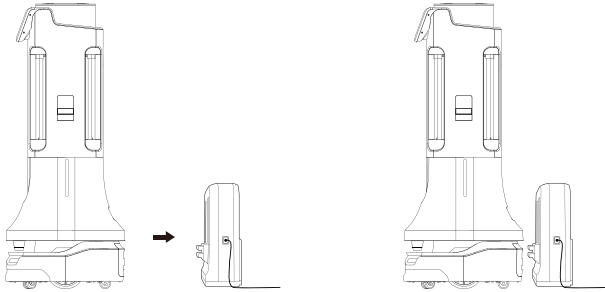
- Charge Now: Tap "Charge Now" on the APK, and the robot will receive the command and return to the specified charging location for charging.




- Auto charging when battery is low: The docking location should be the same as the charging location. When the robot runs in fixed-point or cruise disinfection mode at a battery level below 2%, it will automatically return to the charging location for charging.



- Manual charging: Press the emergency stop button. Push the robot to align the charging electrode on the back of the robot with the metal electrode on the charging pile. Push further to make the electrodes in contact to start charging.



1. Push the robot to make the electrodes in contact.
2. When the electrodes are in contact, light effect changes will be seen on the robot and the charging pile, and the APK will show a prompt indicating that the robot is charging.

NOTE:  In case of charging failure, please contact Pudu staff for emergency charging methods.

3.3.2 Battery status indication

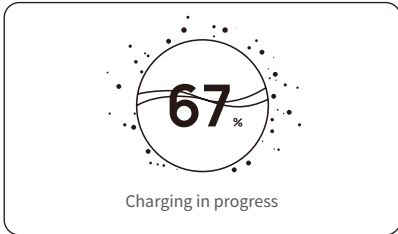
Low battery notification:

Battery level	Reminder
0% - 2%	Bottom light strip flashes red with voice notification
2% - 5%	Bottom light strip remains red with voice notification
5% - 10%	Bottom light strip remains yellow with voice notification

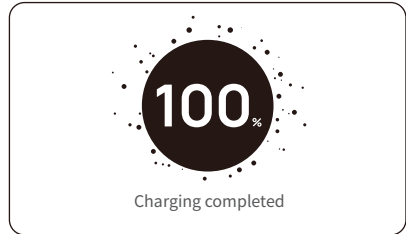
Charging status:

Battery level	Bottom light strip
0% - 19%	Breathing red
20% - 39%	Breathing orange
40% - 59%	Breathing yellow
60% - 79%	Breathing green
80% - 99%	Breathing blue
100%	Steady blue

3.3.3 Charging screens



After the charging cycle starts, the screen shows a prompt indicating that the robot is charging.



After the charging cycle is complete, the screen shows a prompt indicating that the battery is fully charged.

3.4 Service features

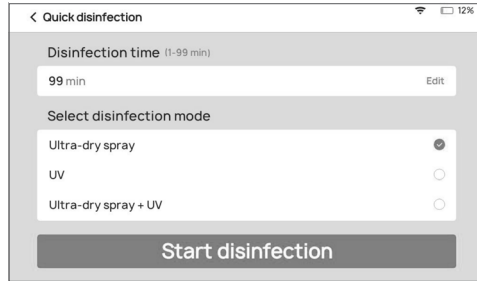
You can make basic settings and operate on the robot on the home screen of the robot APK.



3.4.1 Quick disinfection

This mode supports quick disinfection at a single location. Push the robot to the desired location and then specify the disinfection time and location. The robot will perform disinfection there.

As described in 3.5.3, you can make disinfection settings based on area instead of time. Enter the disinfection area and the disinfection time will be calculated automatically.



3.4.2 Fixed-point disinfection

This mode supports setting up multiple destinations for each task. You can set the disinfection time and method for each destination. The robot will automatically make the plan to disinfect all destinations. After the disinfection is completed, the robot will return to the docking location.

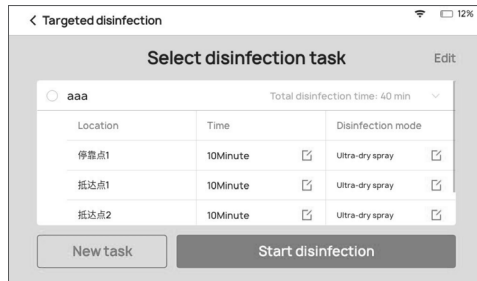
Tap the "Edit" button in the upper right corner to delete task(s) from the current task list.

Tap on a task in the task list to show the task details, where you can modify the disinfection time and mode for each destination.

Tap "New Task" to add a new task to the task list. You can select one or more destinations for the task.

Select a task from the task list and tap the "Start Disinfection" button to start performing the task.

As described in 3.5.3, you can make disinfection settings based on area instead of time. Enter the disinfection area for each destination and the disinfection time will be calculated automatically.



3.4.3 Cruise disinfection

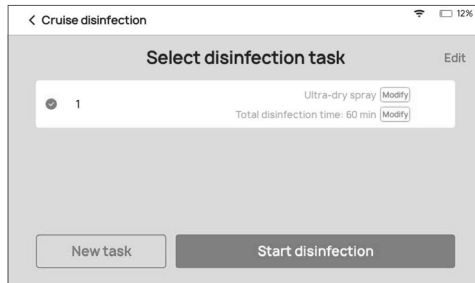
You can specify a disinfection path and the total disinfection time. The robot will circulate for disinfection along the specified path for the specified length of time. The robot will automatically return to the docking location upon completion of the task.

Tap the "Edit" button in the upper right corner to delete task(s) from the current task list.

Tap "Edit" to set the disinfection mode and time.

Tap "New Task" to add a new task to the task list. You can select the cruise path to cover for disinfection.

Select a task from the task list, and tap the "Start Disinfection" button to start performing the task.



3.4.4 Return

Tap the "Return" button on the APK, and the robot will automatically return to the docking location.

3.4.5 Settings

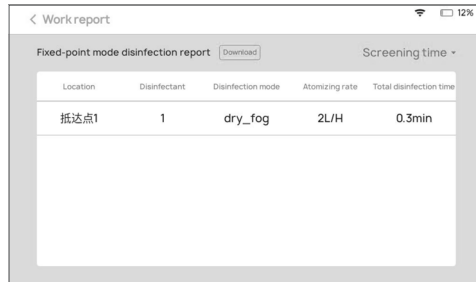
See 3.5 Function settings for details.

3.4.6 Charge Now

Tap "Charge Now" on the APK, and the robot will receive the command and go to the specified charging location for charging.

3.4.7 Work report

The Work Report screen shows the records of fixed-point disinfection performed by the robot. Tap "Filter by time" in the upper right corner to specify a time range for the disinfection records to view. Tap the "Download" button at the top to download the disinfection report to your mobile phone as a PDF file.



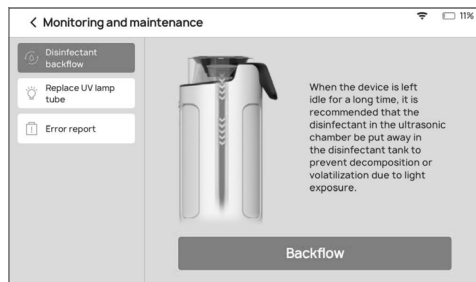
NOTE: ⚠

When downloading the report, make sure that the mobile phone and the robot are connected to the same LAN.

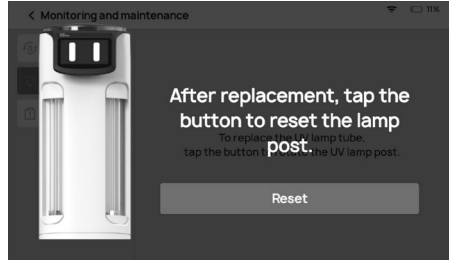
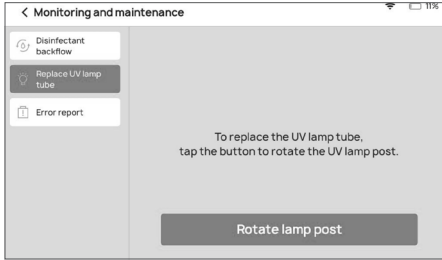
3.4.8 Monitoring & Maintenance

The Monitoring & Maintenance screen provides three functions: disinfectant backflow setting, UV lamp tube replacement, and error report viewing.

1. Disinfectant Backflow: When the device is left idle for a long time, it is recommended that the disinfectant in the ultrasonic chamber be put away in the disinfectant tank to prevent decomposition or volatilization due to light exposure. Tap the "Backflow" button at the bottom to complete disinfectant backflow.

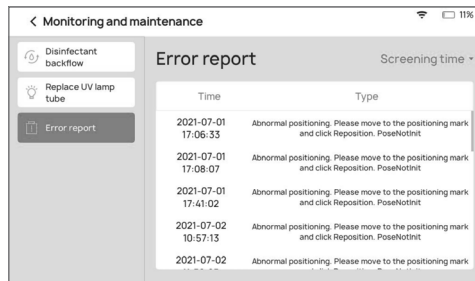


2. Replace UV Lamp Tube: When the robot is in non-working state, the UV lamp post will remain off. To replace the UV lamp tube, tap the "Rotate Lamp Post" button at the bottom to twist off the lamp post and mount a new lamp tube. Then, tap the "Reset" button to reset the lamp tube.



NOTE: ⚠️ Although limitation is imposed on lamp post rotation, you still need to be careful not to hurt your hand when performing the replacement.

3. Error Report: You can view past error reports here. Tap the "Filter by time" button in the upper right corner to specify a time range for the reports to view.



3.5 Function settings

3.5.1 Basic settings

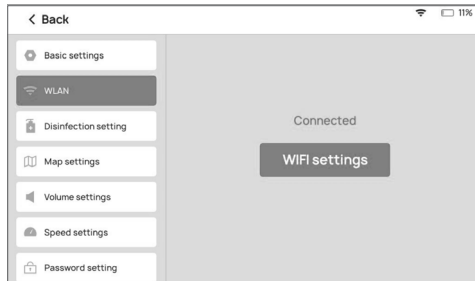
You can adjust display brightness and switch between different languages here.

1. Drag the brightness slider to adjust the brightness of the display.
2. Select a language from the language list and switch to that language for APK text display and voice broadcast.



3.5.2 WLAN

You can view the network connection status here. Tap "WIFI Settings" to go to the network configuration screen where you can connect to a WIFI network and switch to a different one.



3.5.3 Disinfection settings

You can make ultra-dry spray and UV disinfection settings here.

1. Ultra-dry spray + UV disinfection settings:

When quick disinfection or fixed-point disinfection is in progress, select ultra-dry spray + UV to enable ultra-dry spray and UV disinfections simultaneously. If the ultra-dry spray and UV disinfections are not enabled simultaneously, you can set a time ratio for the two modes. UV disinfection comes first by default.

2. Disinfection time settings:

When quick disinfection or fixed-point disinfection is in progress, you can select Time to specify the disinfection time directly; or alternatively, you can select Area and the recommended disinfection time will be calculated automatically based on the area you entered.

3. Pause duration:

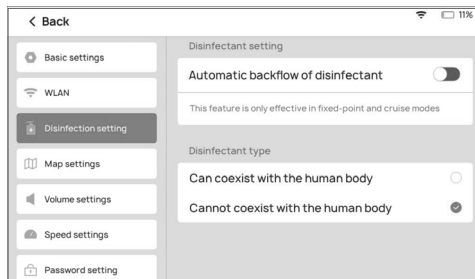
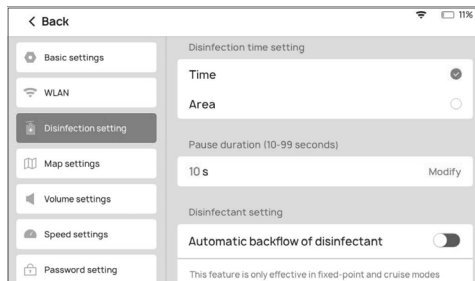
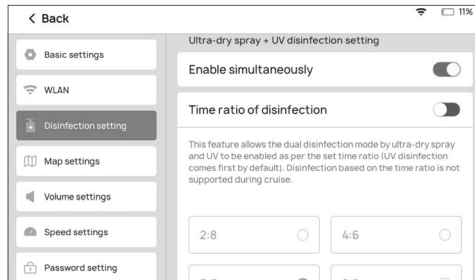
Before disinfection starts in any of the three modes, the robot will start a countdown to allow time for the operator to evacuate. Disinfection will start after the countdown ends. In the pause duration settings, you can set the countdown time within a range of 10-99 seconds.

4. Disinfectant settings:

Enable or disable automatic backflow of disinfectant here. Automatic backflow of disinfectant is only available in fixed-point and cruise modes.

5. Disinfectant type:

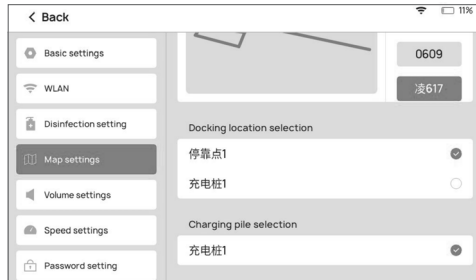
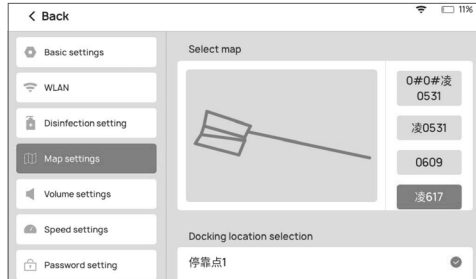
Specify whether the disinfectant can co-exist with the human body. When only the ultra-dry spray mode is used, human body detection will be disabled if the disinfectant can coexist with the human body and enabled if the disinfectant cannot coexist with the human body.



3.5.4 Map settings

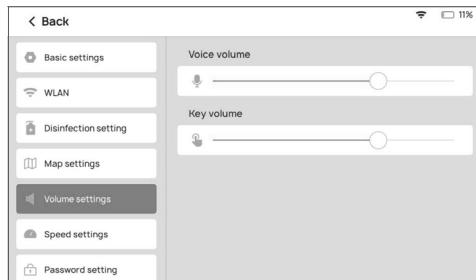
You can select from different maps, docking locations, and charging locations here.

1. Map selection: Switch between different maps.
2. Docking location selection: After a fixed-point or cruise disinfection task ends, or when the battery falls below 2% during the task, the robot will automatically return to the docking location.
3. Charging location selection: Tap "Charge Now" on the APK, and the robot will automatically return to the specified charging location for charging.



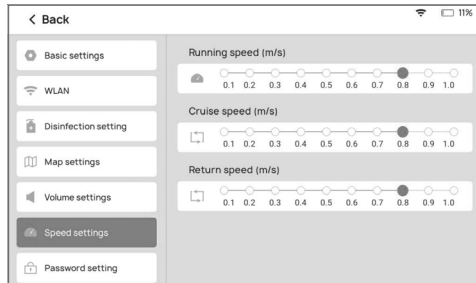
3.5.5 Volume settings

Drag the volume slider to adjust the voice volume and the button-pressing volume.



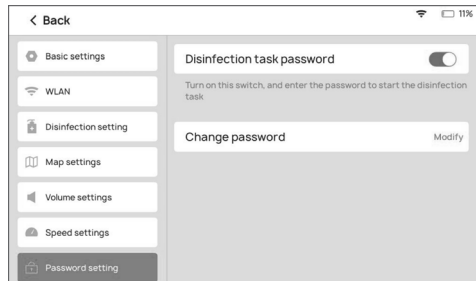
3.5.6 Speed settings

Tap to specify the moving speed, cruise speed, and return speed of the robot. The speed options include 0.1m/s, 0.2 m/s, 0.3 m/s, 0.4 m/s, 0.5 m/s, 0.6 m/s, 0.7 m/s, 0.8 m/s, 0.9 m/s, and 1.0 m/s. A maximum speed of 0.8 m/s is recommended for safe operation.



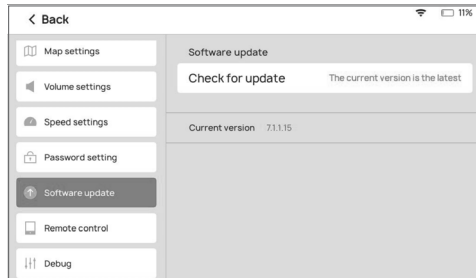
3.5.7 Password settings

You can enable/disable password-required disinfection and modify the password here.



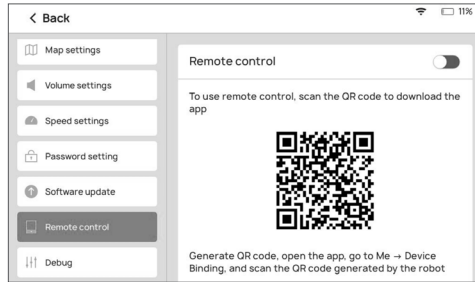
3.5.8 Version upgrade

Check which version is currently installed and whether it is the latest version. If it is not the latest version, you can check for, download, and update to the latest version.



3.5.9 Remote control

You can enable/disable remote control here. To use remote control, perform the following steps: scan the QR code on the screen to download the app; tap the "Generate QR Code" button to generate a QR code; open the app, go to Me, and scan the QR code to bind the device.



NOTE: ⚠️
The app can only be downloaded to an Android mobile phone.

3.6 Docking and charging locations

The docking and charging locations can be selected as described in 3.5.4 Map settings.

Docking location selection: After a fixed-point or cruise disinfection task ends, or when the battery falls below 2% during the task, the robot will automatically return to the docking location.

Charging location selection: Tap "Charge Now" on the APK, and the robot will automatically return to the specified charging location for charging.

NOTE: ⚠️
If the docking location is the same as the charging location, after the fixed-point or cruise disinfection task ends, the robot will automatically return to the docking location for charging; when the battery falls below 2% during the task, the robot will end the task and automatically return to the docking location for charging.

3.7 Motion sensing

1. How the sensors work: Motion sensors are placed on the front, rear, left, and right of the robot body (sensors are not exposed). When any object is detected to be moving nearby within a radius of 3-5 meters of the robot, the sensor will be triggered, and the disinfection will be suspended.

2. Workflow: In quick disinfection and fixed-point disinfection modes, if the disinfection is performed by using a disinfectant harmful to human health or UVC, detecting an object moving within the detection range of the sensor will trigger the sensor and suspend the disinfection. After the 30-second countdown ends, the detection will continue, and if the sensor is triggered again, another 30-second countdown will begin. The cycle will continue until the sensor is no longer triggered. If the suspension lasts for over 10 minutes for a single location, the robot will end disinfection for this location and go to the next location.

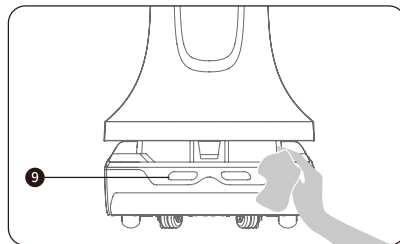
NOTE: ⚠

If the motion sensing function needs to be disabled for demonstration purposes or due to customer demand, please contact Pudu staff.

Maintenance and Care

4.1 Maintenance and care

- The device should be checked regularly, at least once every year. In case of any problem or failure in self-check, please contact Pudu staff.
- Please refer to "FAQs and Troubleshooting" for solutions to any problems and faults. If no solutions are available, please turn off the robot and contact Pudu staff.
- When the robot gets dirty or dusty, wipe it with a soft, clean lint-free cloth.
- Chassis: ⑨ When the depth vision sensor, a precision optical device, becomes dirty or dusty, the machine will become less sensitive in intelligent obstacle avoidance. Please wipe it with a soft, clean lint-free cloth.



- If the robot is not used for a long time, please fully charge the battery, turn off the machine with the key, and put it in a cool and dry place.
- Please charge the battery at least once every month to avoid battery damage.
- Measure the irradiance of a UV lamp in use at a vertical distance of 1 m in front of and at the center of the lamp. The measured value should be $\geq 70 \mu\text{W}/\text{cm}^2$. If not, replace the lamp. First press the spring holder on the head of the lamp, and then remove the lamp.
- When the atomizer is dirty, please wipe it with a soft, clean lint-free cloth.

Note: ⚠

- DO NOT use chemical detergents or sprays.
- The covered depth vision sensor will result in object recognition failure and reduced obstacle avoidance ability.

4.2 Transport, Handling, Storage, Unpacking

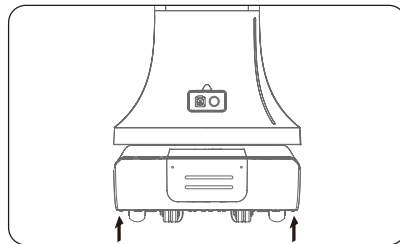
Transport:

The product is a precision instrument. Please handle with great care during transportation. Keep the original package intact and away from pressure. Avoid turning the product upside down or tilting it.

Handling:

Please strictly follow the instructions below when manually moving the valuable device:

When moving the machine, hold on to the chassis (marked with an arrow) as shown on the right and be careful to keep it upright.

**Storage:**

The packaged product should be stored in a well-ventilated, dust-free indoor area without corrosive gas. Temperature range: -40 to 65°C

Unpacking:

Please unpack in an open space area.

FAQs and Troubleshooting

5.1 FAQs

Troubles	Possible Causes and Solutions
Start failure	<ol style="list-style-type: none"> 1. Low battery and please fully charge the battery. 2. The ambient temperature is too low (lower than 0° C) or too high (higher than 40° C).
Charging failure	<ol style="list-style-type: none"> 1. The charging cable is not properly connected. Please check the wiring and ensure enough space around the charging robot. 2. The Li-ion battery is damaged and please replace or contact technicians to replace the battery.
Functional failure	Turn off and restart the robot. If the problem persists, contact our technical support.
The bottom light flashes red without low battery notification and the robot is powered off in three minutes.	Battery failure, please contact our technical support.
Atomization failure	Please contact our technical support.
Failure to start the UV lamps	Please contact our technical support.

5.2 Troubleshooting

Warning	Solution
Low battery, please charge	Please place the robot back to the charging dock and start charging until the battery is fully charged.
Abnormal motor parameters on the screen	Restart the robot.

After-Sales Service

6.1 Free Warranty

When the robots are under warranty (different warranty periods for different components, calculated from the receipt of the robot), Pudu offers a free warranty if:

- Defects are caused by non-human factors;
- There are no unauthorized disassembly, modification or addition not included in the user manual, or other faults caused by non-human factors;
- The robot S/N sticker and other labels are not removed or altered;
- Effective purchase certificate, receipt, and order number are provided;
- Damaged components are sent back to Pudu as required.

6.2 Paid Services

Pudu offers paid after-sales services when the robot is out-of-warranty or the policy of free warranty is not applicable:

- Online and remote technical support is provided, and customers should cooperate with engineers for diagnosis and troubleshooting;
- Technicians will offer on-site service when necessary;
- The “After-sales Service Form” should be filled when the policy of free warranty is not applicable;
- Customers should pay for both maintenance and spare parts.

6.3 Contact

For any questions, please call us at 400-0826-660.

Email: techservice@pudutech.com.

Our technical support staff are available Monday through Saturday from 9:30 a.m. to 12:00 p.m. and 1:30 p.m. to 6:30 p.m. (GMT+8).

www.pudutech.com

