HELIOS UVC ROBOT

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1. Initialization

1.1 Installation of charging pile

Install the robot charging pile (shown below) in a suitable position according to the following requirements:

(1) Check whether there are obstacles within a 1m radius in front of the power supply on the wall, and whether the ground is flat. Remove obstacles if any, or use this product in an obstacle-free flat area.

(2) The charging pile should be installed against the wall and kept stable without shaking when pushed.

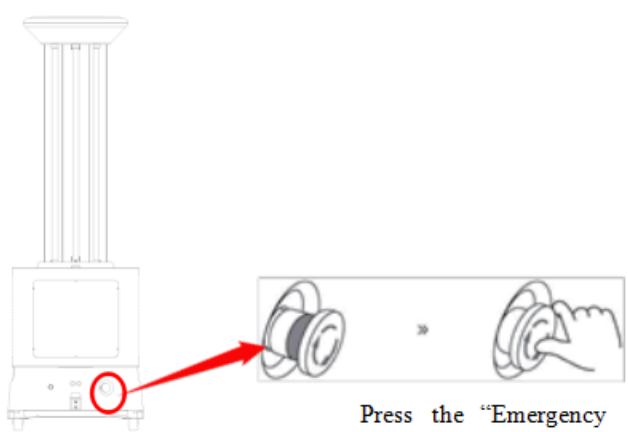
(3) When the power adapter is connected to the charging pile and mains power, the charging pile will be in the charging state.

(4) The indicator of the power adapter is red when the robot is charging and green after charging is finished.

1.2 Robot ON/OFF

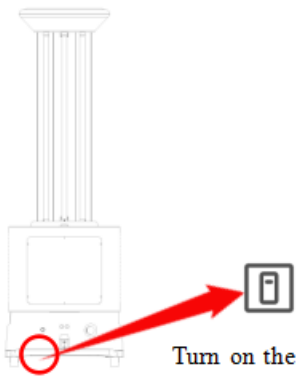
1.2.1 Emergency stop button

Press the red "Emergency stop button" (as shown in the figure below) at the bottom of the robot to stop the robot. In this case, the robot can be pushed to move.



Press the "Emergency stop button"

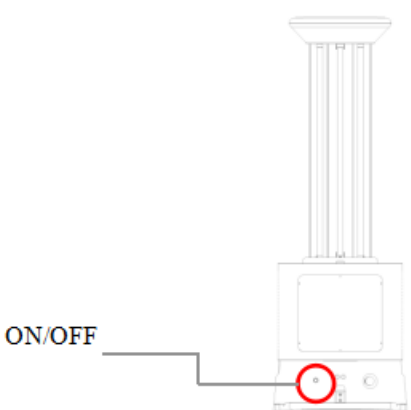
Push the robot to 0.5 meters in front of the charging pile, and turn on the "Emergency stop button" (turn it right until it pops up). The automatic movement system of the robot will be enabled. Then turn on the "Main power switch" (shown below) at the bottom of the robot.



1.2.2 ON/OFF

ON: Press and hold the "ON/OFF" button (shown below) for 3-5 seconds, until the body indicator continuously flicker in yellow, and the robot buzzer utters two sounds, indicating that the startup program is enabled. The screen of the robot control panel will light up, and the system will be started properly. After startup, the self-test program of the robot will be enabled. When the self-test is finished, the body indicator will turn green, indicating that the robot is started successfully.

OFF: Press and hold the "ON/OFF" button (shown below) for 3-5 seconds.



2. Navigation Mapping

2.1 Downloading of mobile APP

Prepare an Android phone, scan the QR code below and install the mobile APP.

Note: APP registration is not required at present.

2.2 Network configuration & robot connection

2.2.1 Network configuration

Open the robot network setting interface by clicking "System Management - WLAN" in the welcome interface.

Network connection method 1: link the robot to the hotspot of the mobile phone.

Network connection method 2: connect the robot and mobile phone to the same WiFi network.

* Alternative solution: Connect the mobile phone and robot by enabling the robot hotspot and connect the mobile phone to this robot.

2.2.2 Robot connection (mobile terminal)

Keep the mobile phone and robot in the same LAN and open the remote control interface. Automatically scan the robot in the LAN, and click the target robot in the list to automatically connect the robot Server.

* Special case: If the robot and mobile phone are not within the same network segment, you can select "custom connection" to connect them. (Enter the robot CID. No password is required by default). This connection method is not recommended.

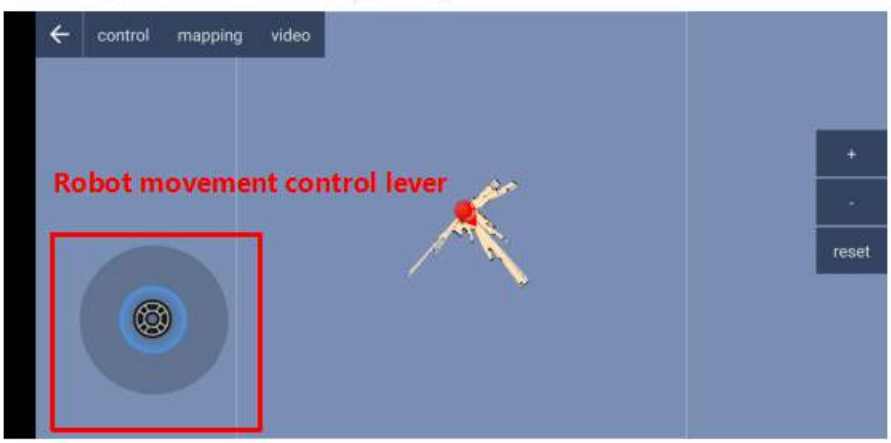
After they are connected successfully, the "function" interface will appear.

2.3 Mapping (mobile terminal)

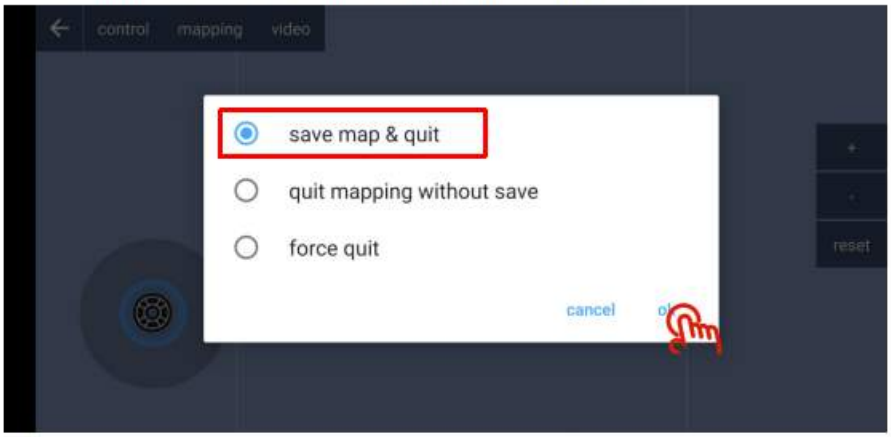
Click "mapping" in the "function" interface, enter the map name and click "start mapping".

The mapping interface will appear, indicating that the robot is ready for mapping.

Control the robot to move for mapping. (It is recommended to manually operate the robot by one turn in the initial position.)



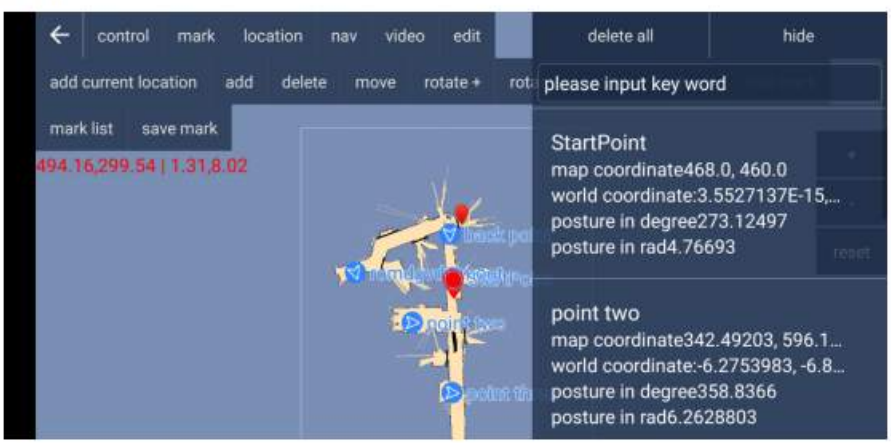
After mapping, click "save map & quite" to exit mapping.



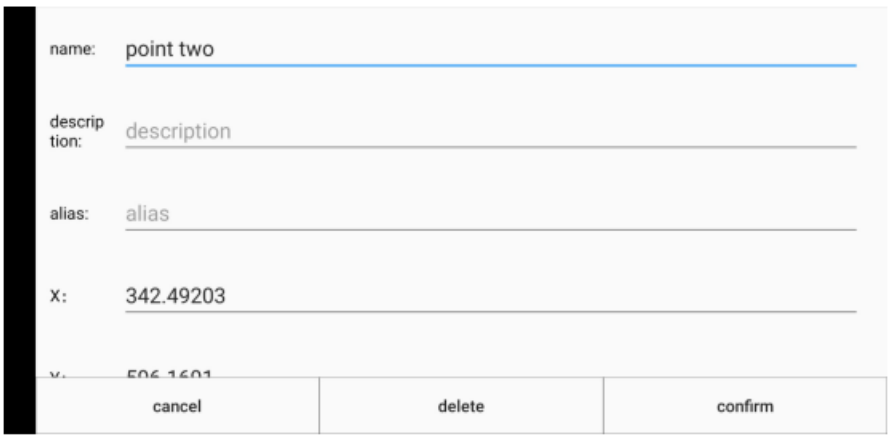
(Note: If you select "quit mapping without save" or "force quit", the map will not be saved.)

2.4 Marking of disinfection point (mobile terminal)

Select a map and enter the "mark management" interface. You can "add/delete/move/rotate" marks. All modifications will not take effect if they are not saved.



Mark point editing: Press and hold the mark point in the mark list to edict the mark by changing its name, description, coordinates, angle and other related information. It is recommended to change the coordinates of the mark point in the map.



Note: The starting point cannot be deleted. Only the name and coordinates can be changed.

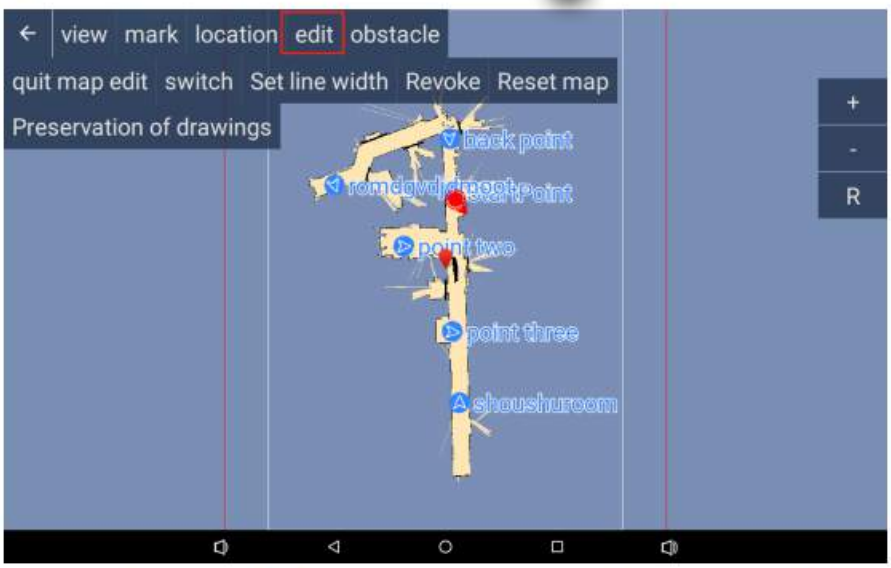
The initial position will not take effect until navigation is enabled again.

3. Map Editing

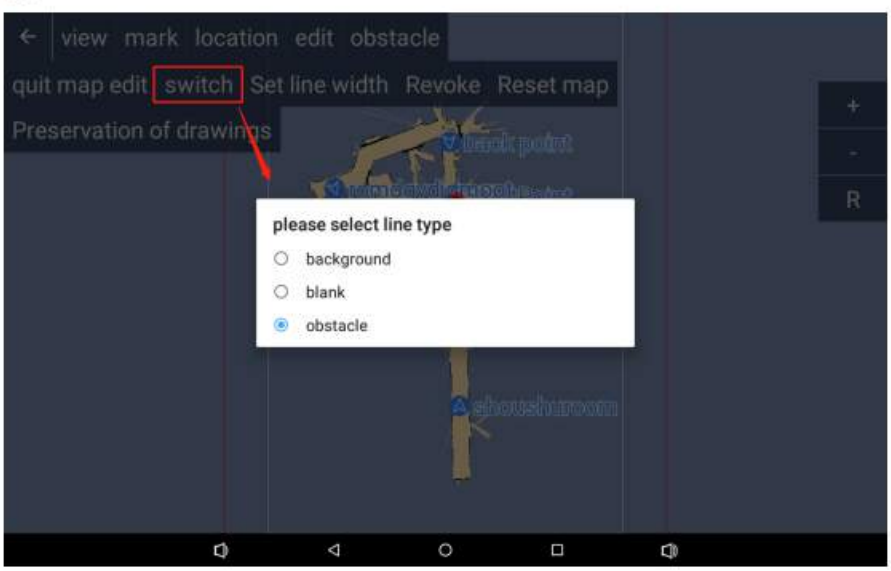
Purpose of editing: Make the map more flexible by adding obstacles and feasible blank areas, without destroying the original pattern.

Open the map editing interface (prerequisite: a map already exists).

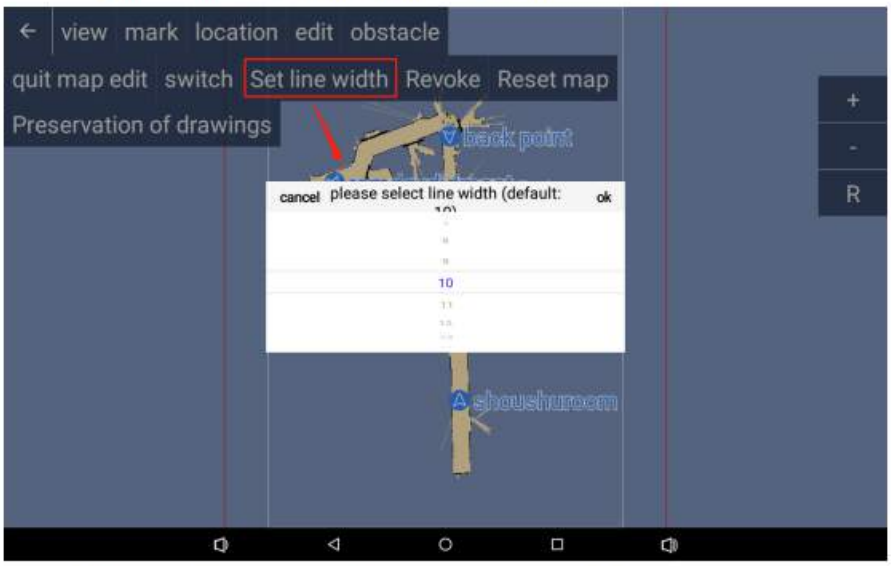
robot control (formerly remote control) -> manage maps -> select a map and enter the interface of map details -> click "edit" -> start editing in the map editing mode.



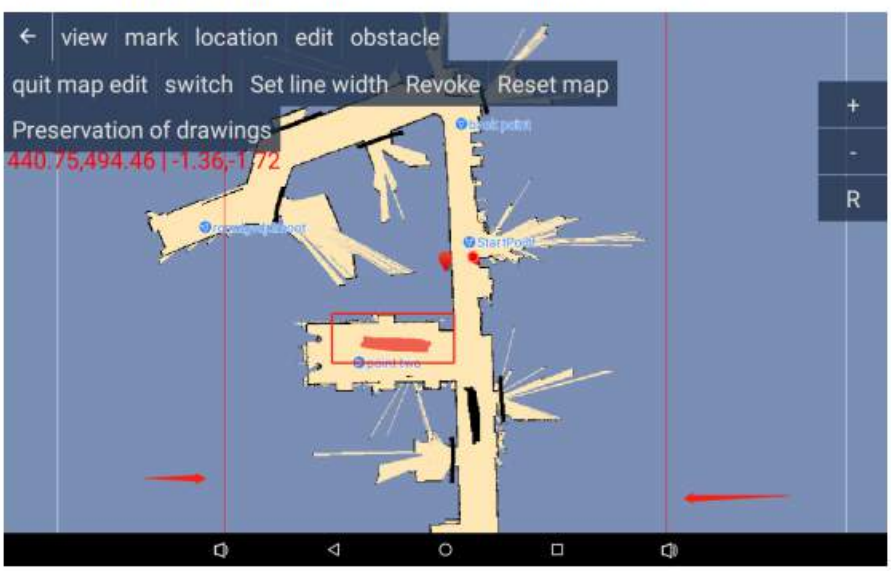
Add obstacle (excluded from navigation): click "switch" -> select the obstacle type.



You can set the line width to adjust the brush size.

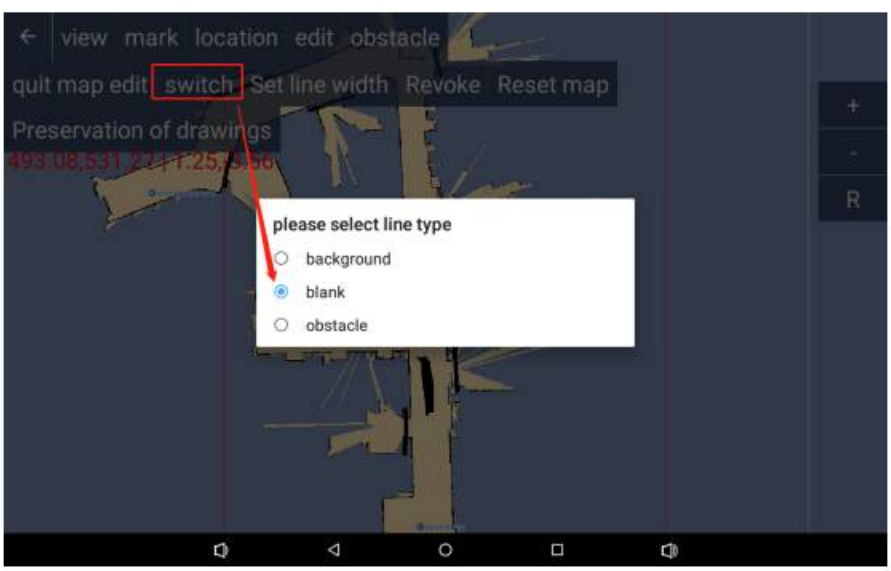


Edit the map by touching in the red area. You can drag the red area to adjust its range. The red graffiti indicates the obstacle added in the touch screen.

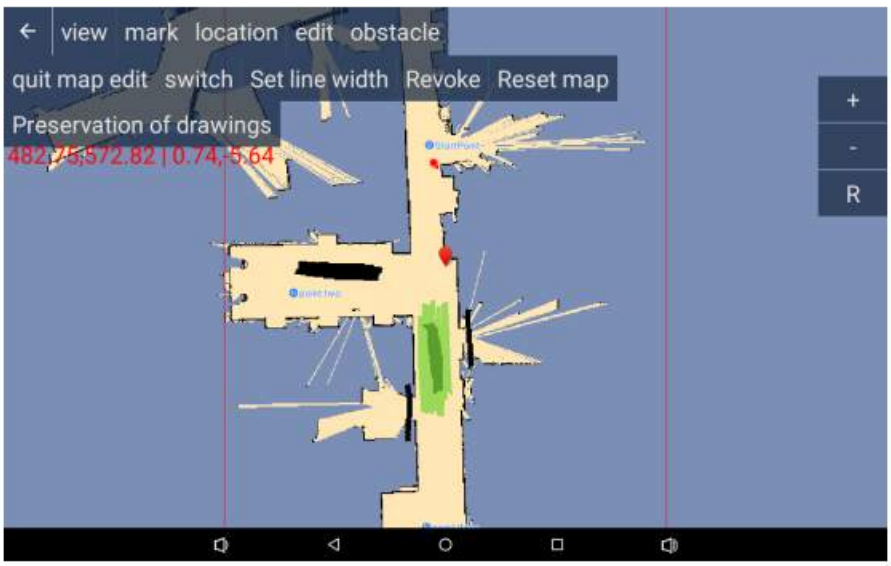


Click "Revoke" to revoke the previous editing step. After editing the obstacle map, click "Preservation of drawings" to enable the edited content. The black graffiti indicates the effect of adding an obstacle and saving the edited map. The robot will not pass the obstacle area in the subsequent navigation process (even if there is no obstacle actually).

Add "blank" (feasible area): click "switch" -> select the blank type.



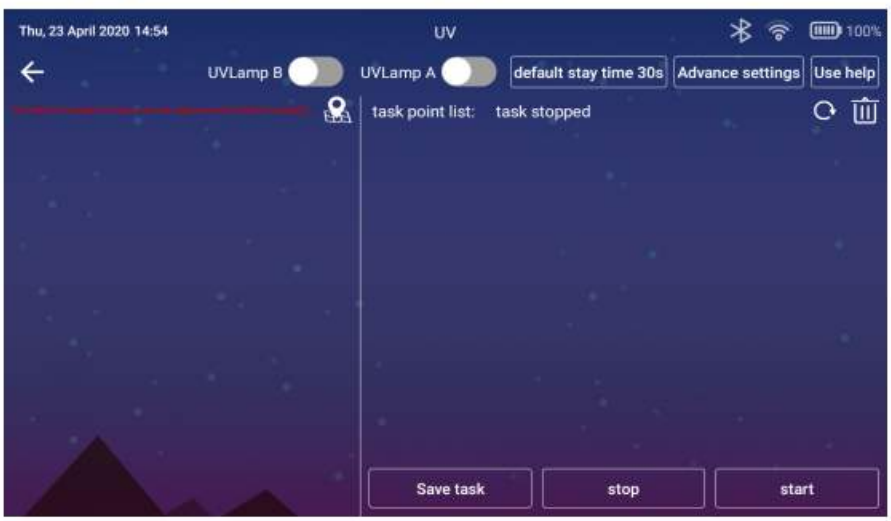
You can set the line width to adjust the brush size, and touch the red area to edit the map; or drag the red area to adjust its range. The green graffiti indicates the effect of adding a "blank" on the touch screen. The black line under the green graffiti indicates the obstacle in the original map. You can erase the obstacle by adding a "blank".



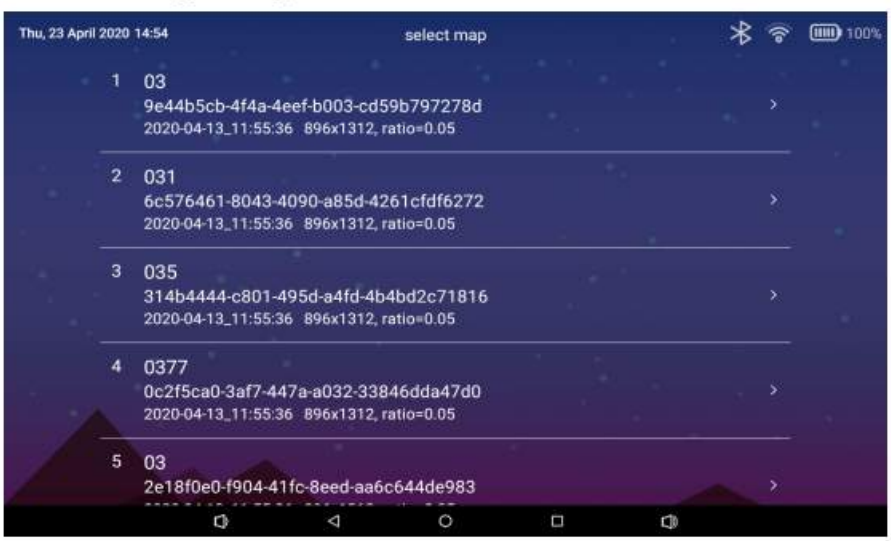
Click "Revoke" to revoke the previous step of editing. After adding a blank (feasible area), you need to click "Preservation of drawings" to enable the edited map. The original black line can be erased successfully by adding a "blank". The robot will pass this area in the subsequent navigation process (the actual obstacle will be avoided automatically).

4. Disinfection Task Setting

Navigation-related functions are required to perform a UV lamp disinfection task. The disinfection task cannot be created until the map is built and mark points are added. For details, refer to the navigation instructions. UV lamp disinfection task management interface: click "UV" to enter the UV lamp disinfection interface.



Select a navigation map.



4.1 Disinfection task point management

4.1.1 Adding of task point

Click the "task point" and select a task point. The task point will be added at the end by default. The last point is a return point in the default mode, at which disinfection will not be performed.

4.1.2 Sorting of task point

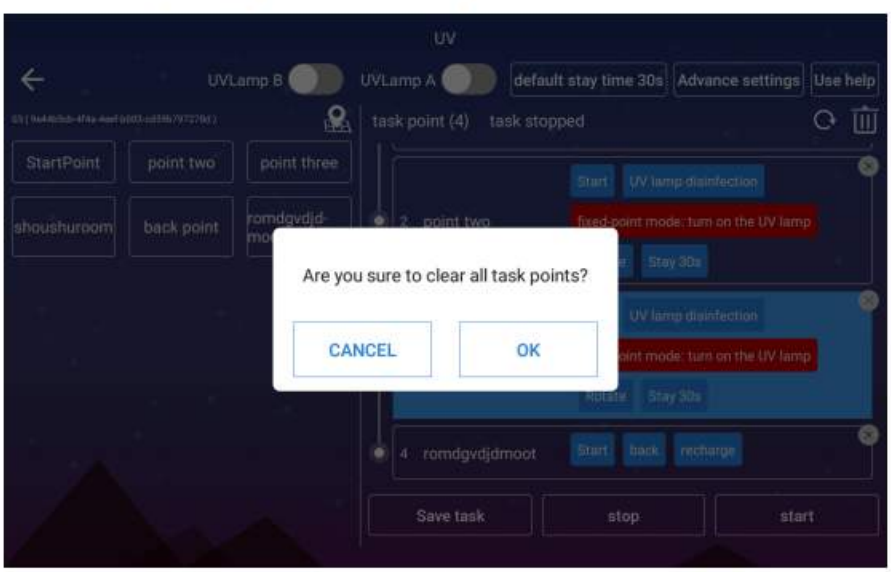
Select a task point by clicking it. If a new task point is added, a mark point will be in front of the selected task point.

Example: Select the point 2, and a new task point will be added before the selected point. Click the mark point 3 and add it in front of the mark point 2.

Dragging of task point: press and hold a task point, and drag it to change the sequence.

4.1.3 Deletion of task point

Deletion of task point: click the "delete" button to delete a task point. You can click "Clear" to clear all task points and reset them.



4.2 Task point configuration

(1) Click "UV lamp disinfection" under a task point to set whether to disinfect this task point. If no disinfection is set, disinfection will not be performed after the robot is navigated to this point, nor rotation, etc.

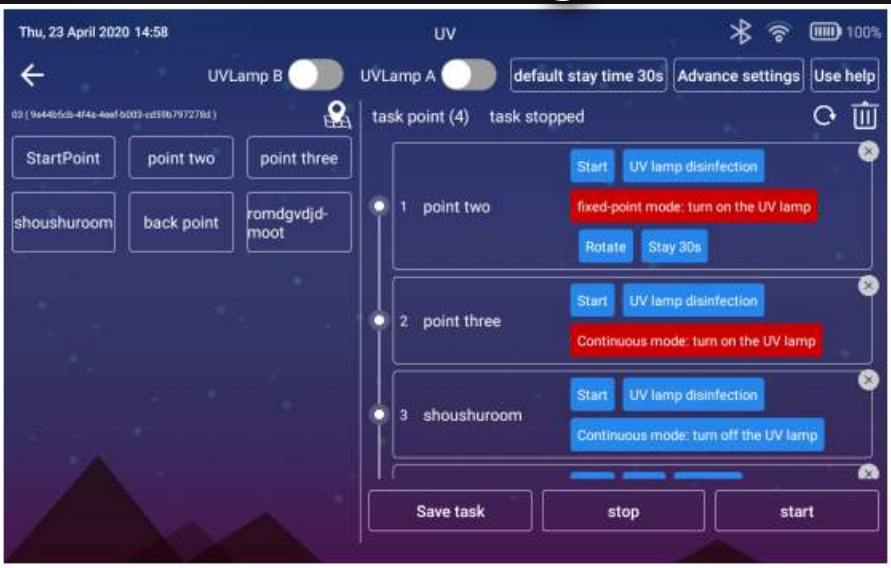
(2) Click "Rotate" under a task point to set the task to rotate. If rotation is enabled, a rotation command will be sent automatically after navigation to this point and successful disinfection. The robot will not stop rotating until disinfection is finished.

(3) Click the stay time of a task point to set the stay time of this task point. The stay time is dependent on the space to be disinfected.

(4) Click the disinfection mode of a task point to enable the fixed-point or continuous mode. If the fixed-point mode is enabled, the robot navigated to this point will perform disinfection at this point for the set time. If the continuous mode is enabled, the robot navigated to this point will perform disinfection while running (without rotation or stay) to the task point with disinfection disabled.

(5) Click "Recharge" under a task point to set whether to perform recharging at the return point.

(6) The last task point is for return only. That is, the robot will be navigated to this point, but will not perform disinfection.


Thu, 23 April 2020 14:58
UV
100%
UVLamp B
UVLamp A
default stay time 30s
Advance settings
Use help
StartPoint
point two
point three
shoushuroom
back point
romdgvdjd-moot
task point (4)
task stopped
1 point two
Start
UV lamp disinfection
fixed-point mode: turn on the UV lamp
Rotate
Stay 30s
2 point three
Start
UV lamp disinfection
Continuous mode: turn on the UV lamp
3 shoushuroom
Start
UV lamp disinfection
Continuous mode: turn off the UV lamp
Save task
stop
start

Thu, 23 April 2020 14:59
UV
100%
UVLamp B
UVLamp A
default stay time 30s
Advance settings
Use help
StartPoint
point two
point three
shoushuroom
back point
romdgvdjd-moot
task point (4)
task stopped
1 point two
fixed-point mode: turn on the UV lamp
Rotate
Stay 30s
2 point three
Start
UV lamp disinfection
Continuous mode: turn on the UV lamp
3 shoushuroom
Start
UV lamp disinfection
Continuous mode: turn off the UV lamp
4 back point
Start
back
recharge
Save task
stop
start

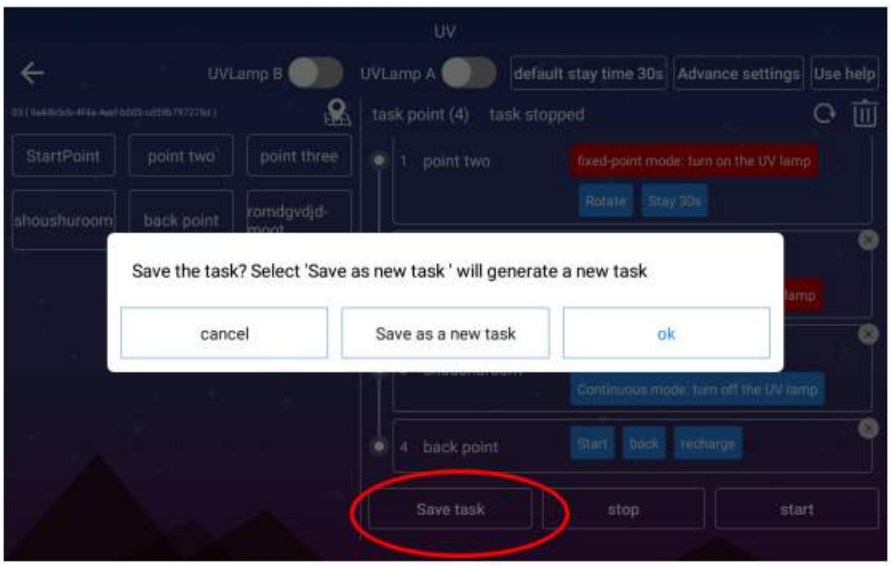
4.3 Disinfection Task Management

4.3.1 Task saving

Save the modified task before starting it.

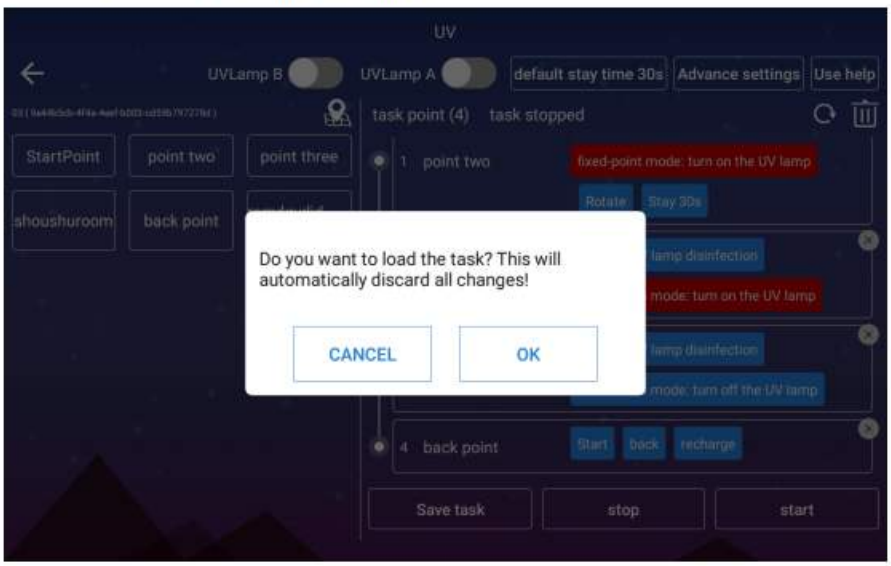
A task can be saved as a new task or current task.

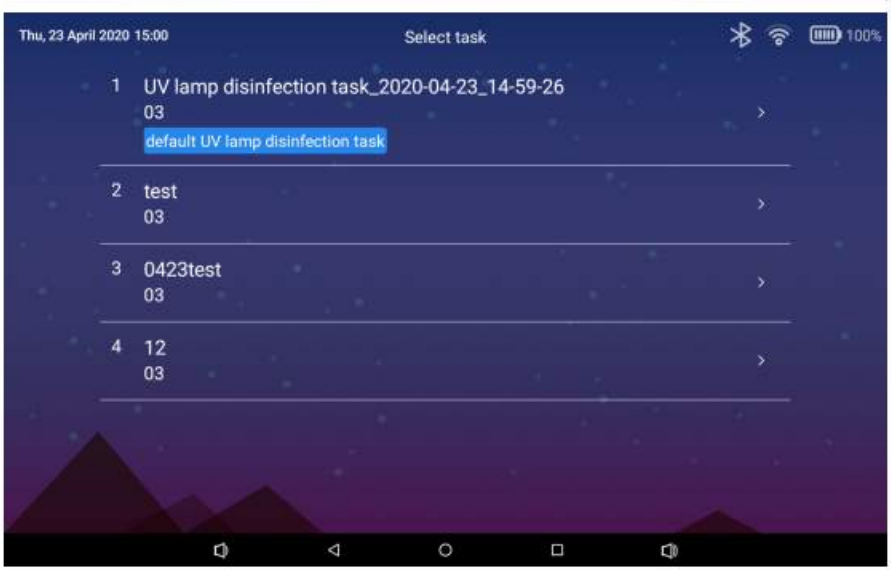
The task that is not saved cannot be started.



4.3.2 Task loading

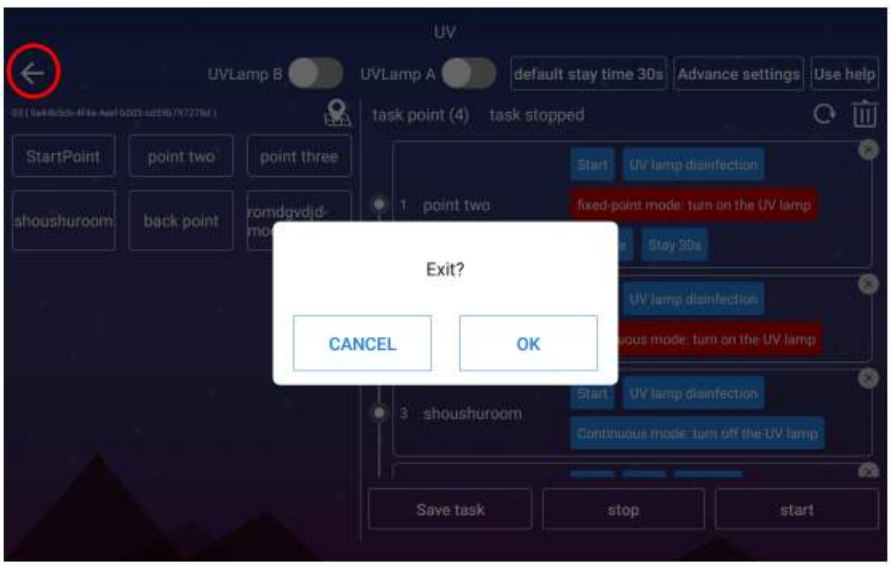
Click "Load task" to manage multiple tasks.





4.3.3 Exit from Disinfection Task Management

Click "Back". The "Exit" dialog box will appear.



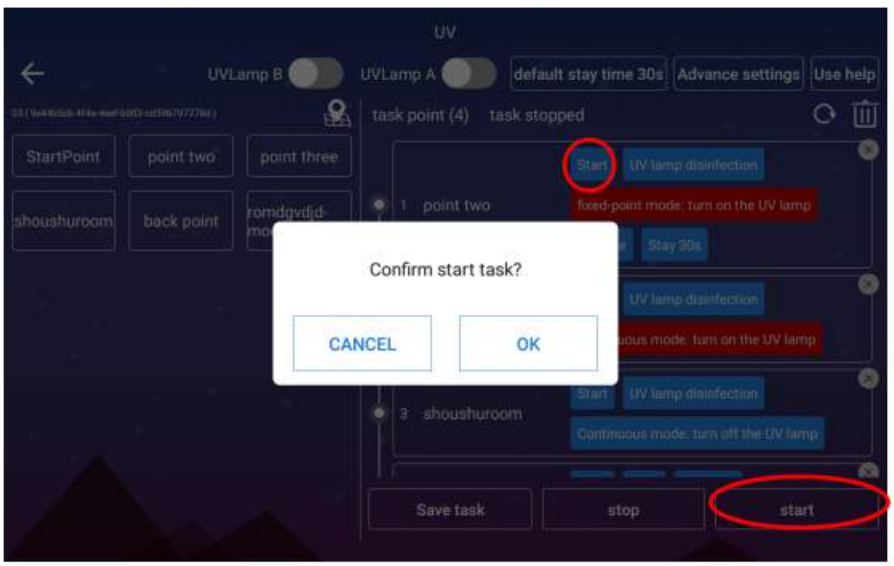
5. Disinfection Task Operation

5.1 Start of Disinfection Task

Start a task:

Click "Start" to start tasks from the first point;

Click "Start" under a task point to start the task from the selected point.



When a task is started, the robot will be navigated to the task point according to the task point configuration and sequence. Disinfection will be performed based on the disinfection configuration, disinfection mode and time.

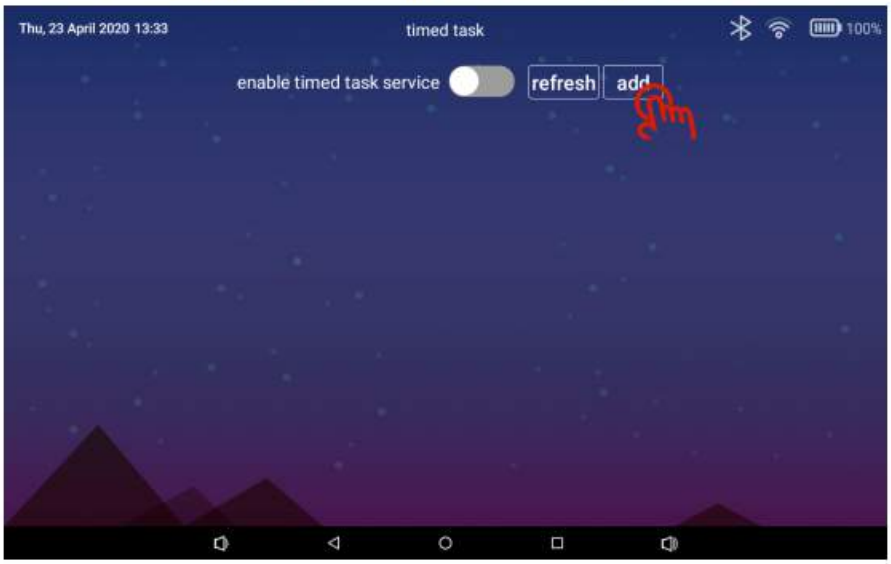
5.2 Task Timing

5.2.1 Timed Task Management

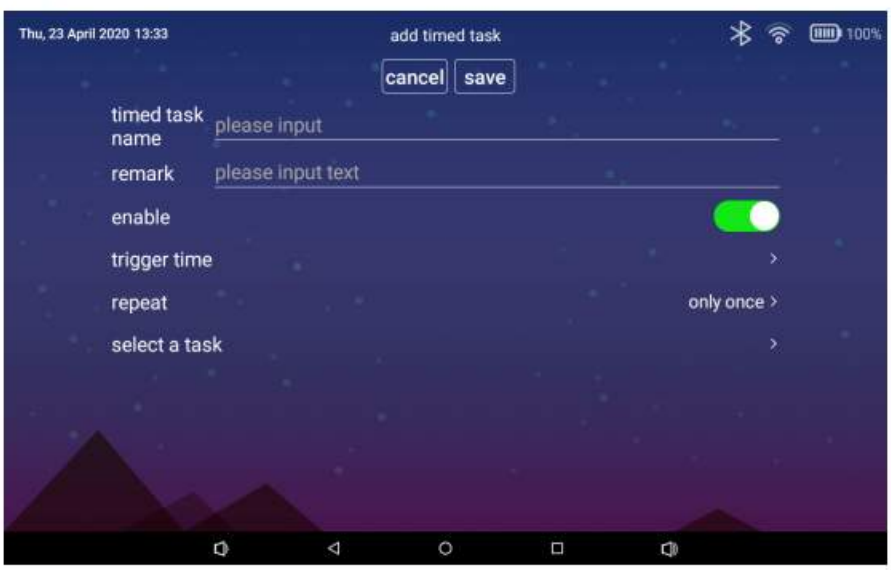
Open the timed task list interface: robot control (formerly remote control) -> timed task.

Add timed task:

Click "Add" in the timed task list interface to open "add timed task".



Enter the task name, remark, enable mode, trigger time, repeat mode, and select a task.

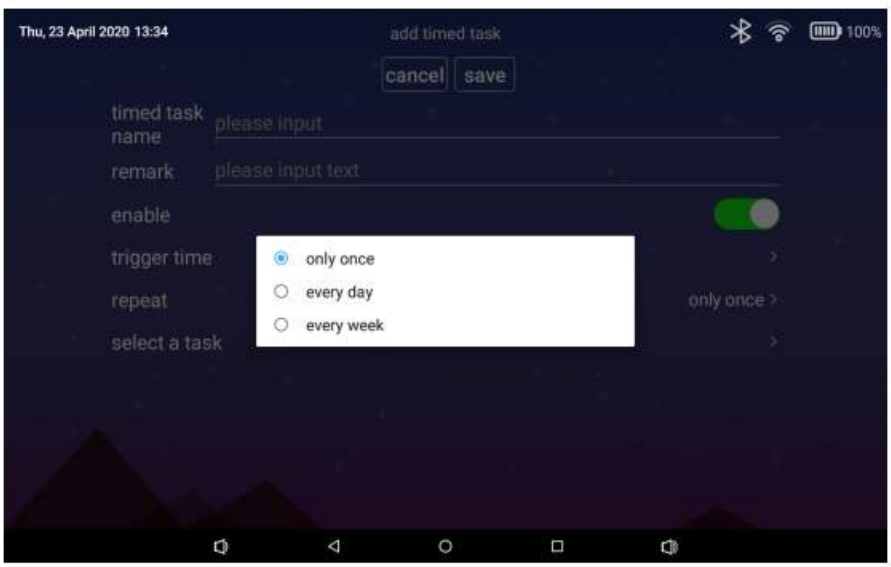


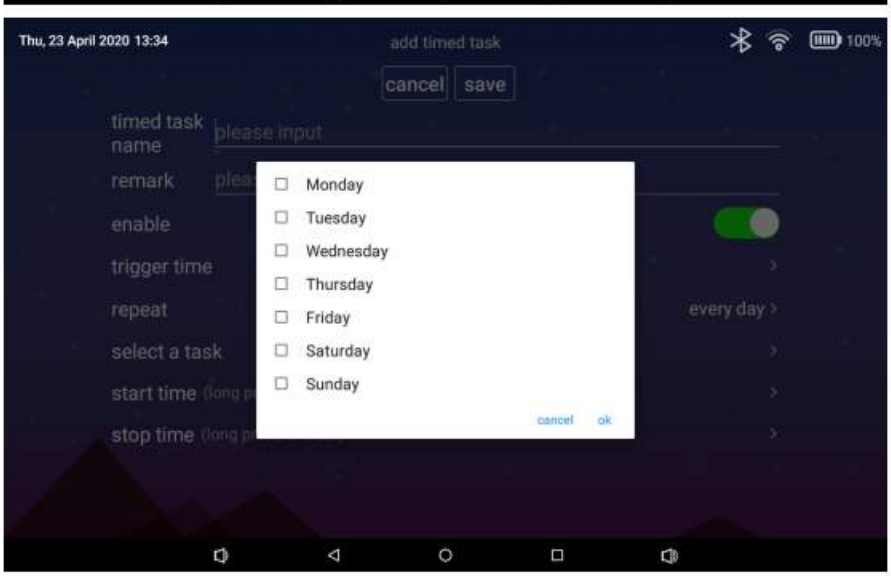
Enable or disable timed task: use the timed task enabling or disabling switch.

Trigger time: depending on the repeat mode. For details, refer to the repeat setting.

Repeat mode: click the repeat mode, which includes three options:

1) Only one: indicating that a task will be triggered once only;
2) Every day: indicating that a task will be triggered at the specified time every day;
3) Every week: indicating that a task will be triggered at the specified time every week. For example, a task can be set to be triggered from Monday to Friday and not to be triggered on Saturday and Sunday.



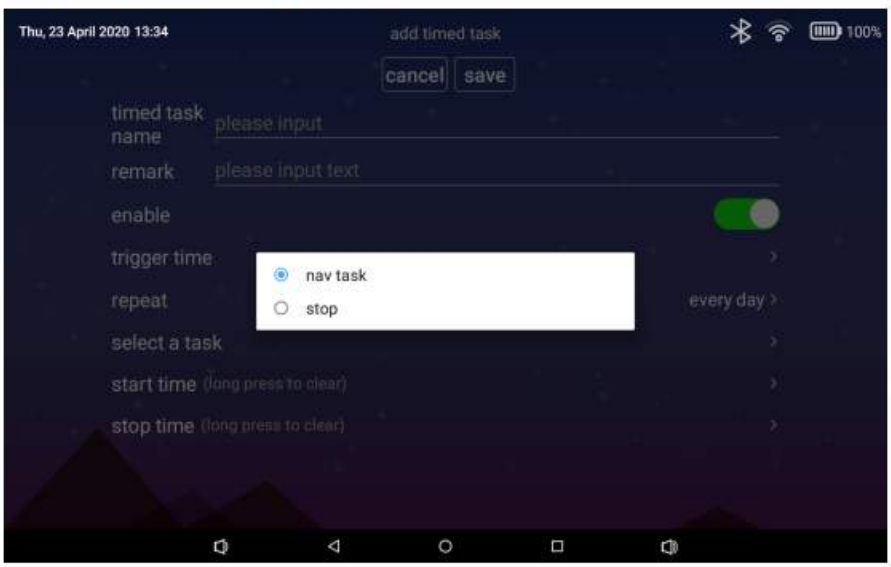


5.2.2 Setting of trigger task

You can select a general task (navigation task) or stop a task:

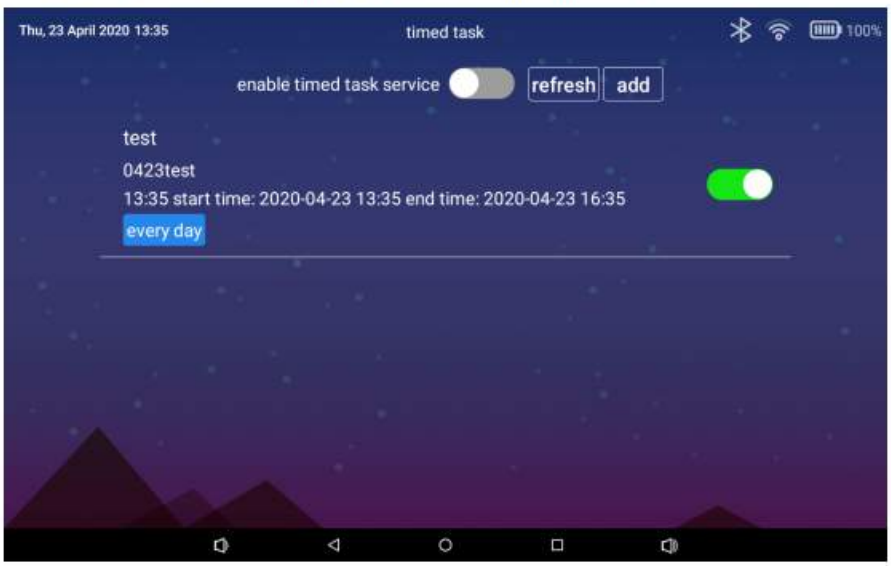
General task: a task preset in task management;

Stop task: the current task is stopped in a forced manner at the specified time. For example, an infinite loop task or infinite audio and video playback task can be stopped by selecting this option.



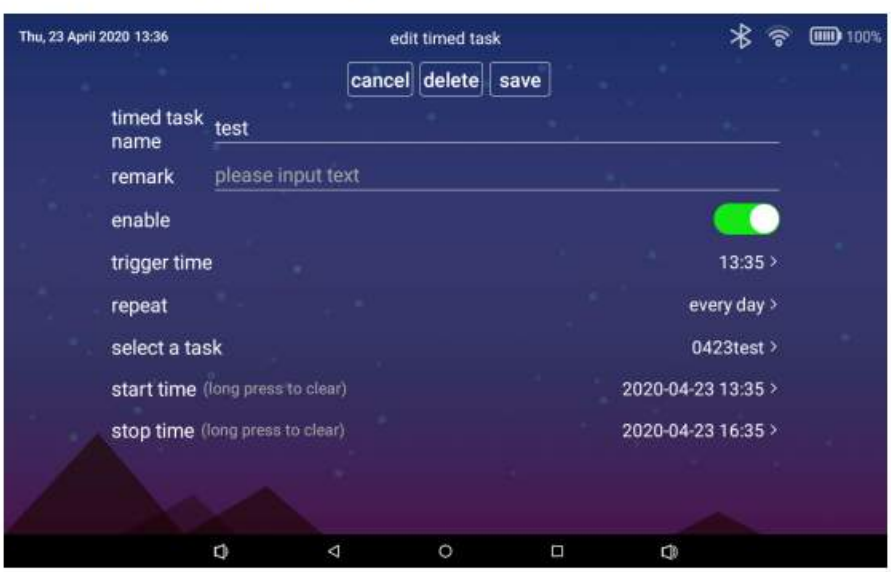
5.2.3 Timed Task List

The task added successfully is displayed in the timed task list.



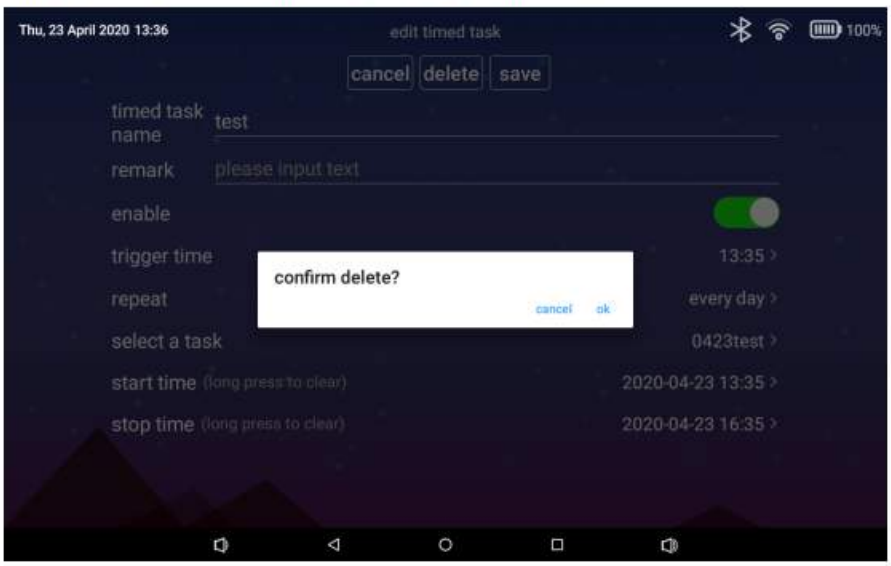
5.2.4 Editing of timed task

Click the "timed task" in the timed task list to enter the "edit timed task" interface. Click "Save" after editing.



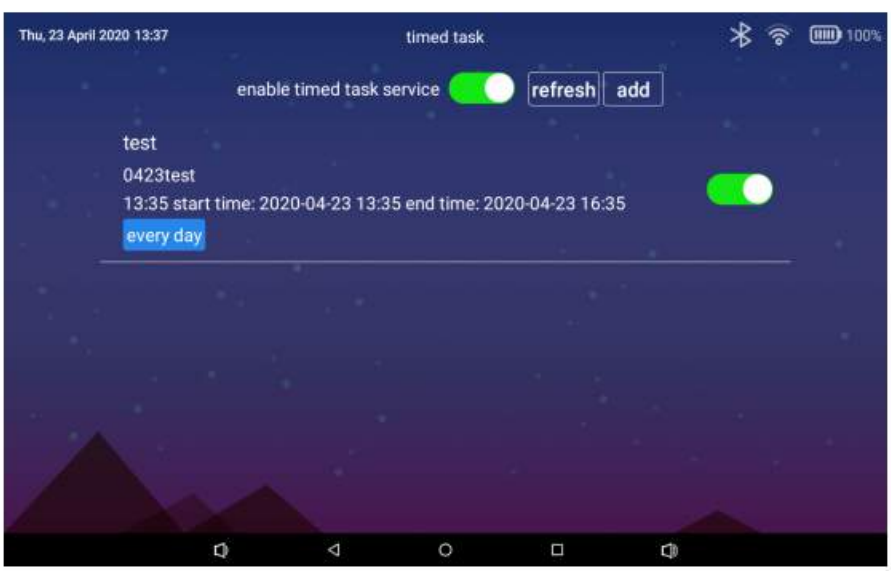
5.2.5 Deletion of timed task

Click the "timed task" in the timed task list to enter the "edit timed task" interface. Click "Delete" and "OK" to delete a timed task.



5.2.6 Enabling or disabling of timed task service

Use the switch of "enable timed task service" to enable or disable all timed tasks.



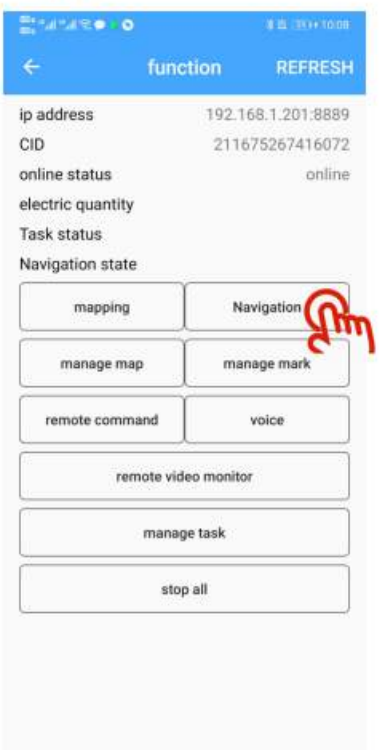
6. Robot Position Resetting

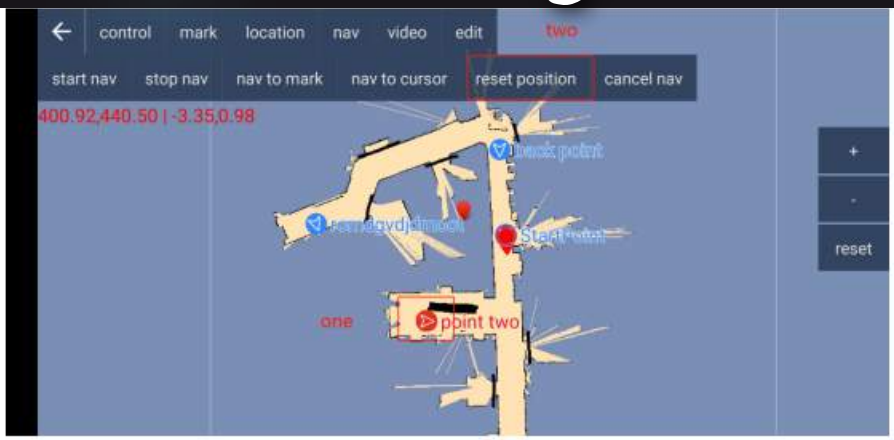
6.1 Position resetting by APP

Scope of application: after the robot is navigated to a stop mark point or restarted, position resetting can be performed to continue navigation (the mobile phone and robot are successfully connected and there is a map).

Example: robot restart/navigation stop at the mark point 3.

1) Open the function interface of the mobile app, click "Navigation" and select the corresponding map: Navigation -> Map. The robot is at the starting point. Click the mark point 3 and "reset position" under "Navigation", and select "reset pos by markpoint". The real-time position of the robot will be included in the mark point 3. Then navigation can be continued.




control
mark
location
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video
edit
two
start nav
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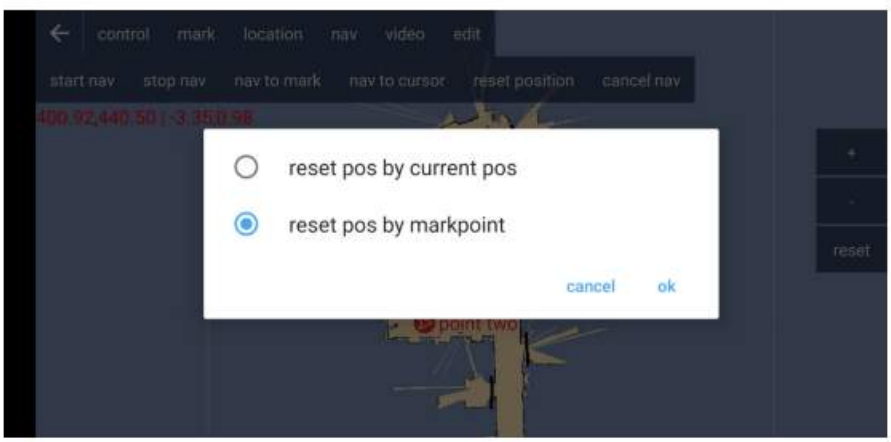
reset position
cancel nav
400.92,440.50 | -3.35,0.98
one
point two
reset


control
mark
location
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video
edit
start nav
stop nav
nav to mark
nav to cursor
reset position
cancel nav
reset pos by current pos
reset pos by markpoint
cancel
ok
reset

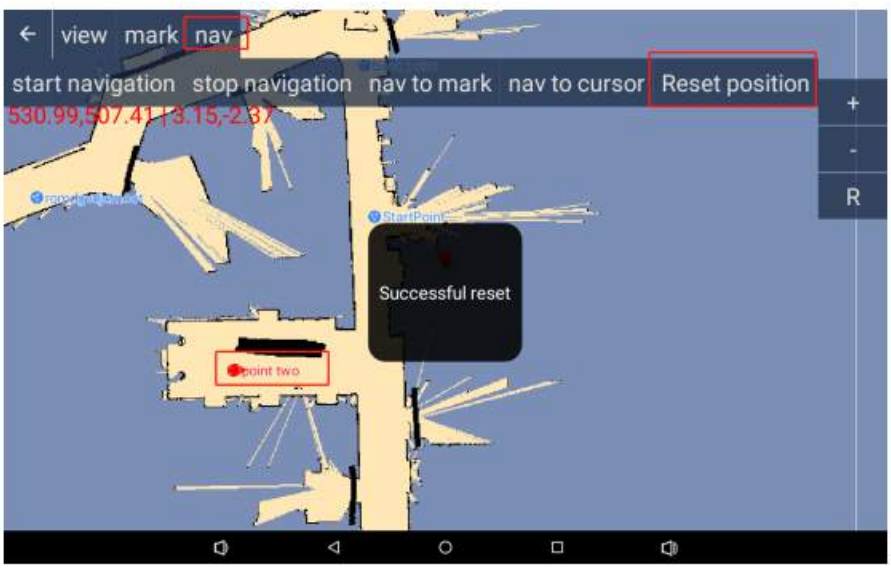
control
mark
location
nav
video
edit
start nav
stop nav
nav to mark
nav to cursor
reset position
cancel nav
698.30,481.73 | 11.52,-1.09
point two
reset robot position succes
reset

6.2 Position Resetting on Robot

Example: robot restart/navigation stop at the mark point 3.

Enter the "robot control" (formerly remote control). Click "Navigation" and select a corresponding map. Enter the navigation interface and map, with the robot at the starting point. Click the mark point 3 and "reset position" under "Navigation". The real-time position of the robot will be included in the mark point 3. Then navigation can be continued.

view mark nav
start navigation stop navigation nav to mark nav to cursor Reset position
530.99,507.41|3.15,-2.37
+
-
R
StartPoint
point two


view mark nav
start navigation stop navigation nav to mark nav to cursor Reset position
530.99,507.41|3.15,-2.37
+
-
R
StartPoint
Successful reset
point two

7. Robot Charging

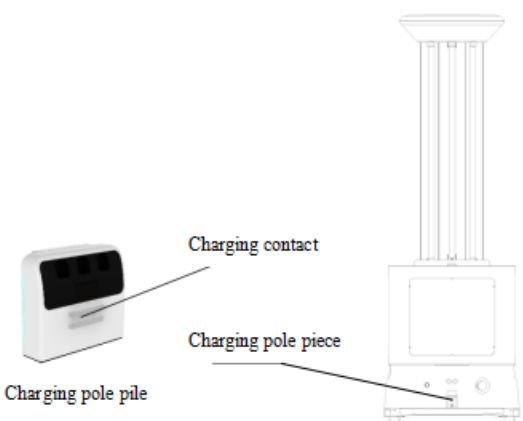
7.1 Manual charging

The robot can be charged by the charging pile and power adapter.

There are two manual charging modes: charging pile and adapter, as described below:

Charging by the charging pile: press the emergency stop button, push the robot to the vicinity of the charging pile, align the charging pole piece (shown below) protruding from the rear of the robot with the charging contact (shown below) on the charging pile, and move the robot until they are fully fitted with each other.

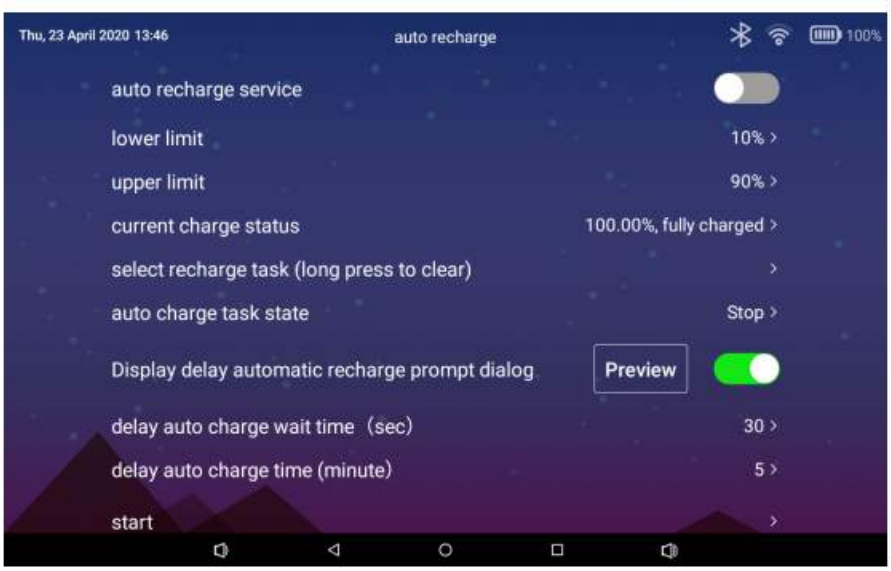
Charging by the adapter: there is an adapter charging port (shown below) on the back of the robot. Insert the matching charger into this port to manually charge the robot by the adapter.



7.2 Automatic charging

7.2.1 Opening of "auto recharge" interface

Click "robot control" (formerly remote control) -> auto recharge, to open the "auto recharge" interface.



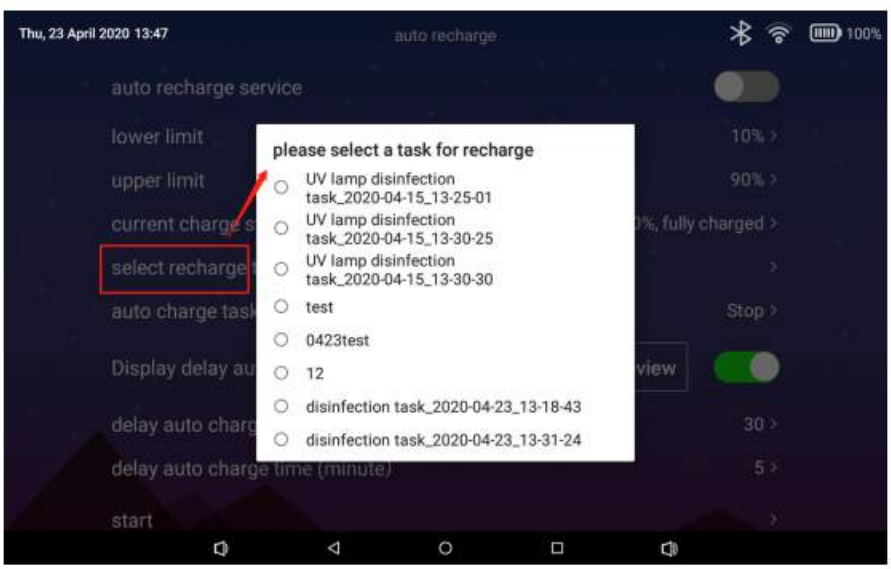
7.2.2 Setting of trigger condition of auto recharge

Use of auto recharge: When the robot power is less than the set value during task execution, the task will be suspended, and the robot should be recharged via the charging pile. When the power of the robot reaches the set value, the robot will exit recharging and continue to perform the task.

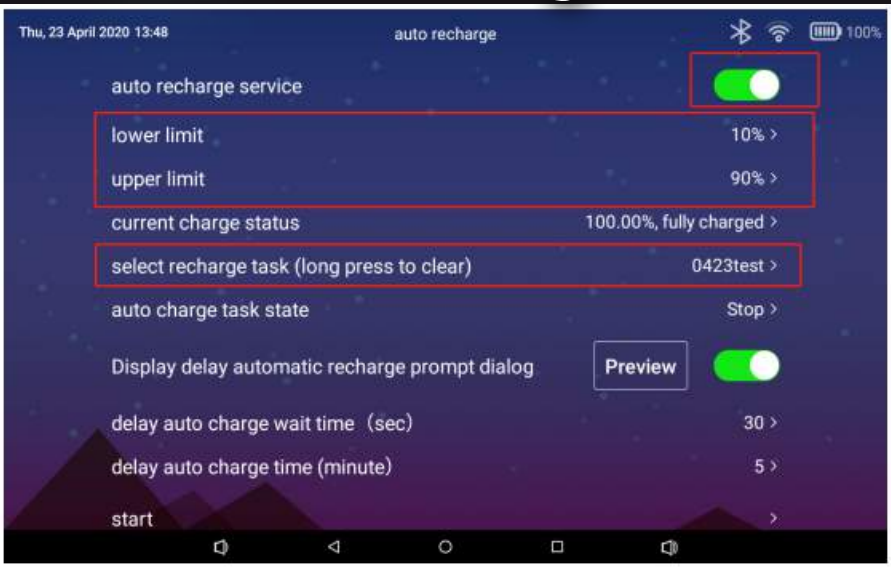
In the "auto recharge" interface, set the upper and lower limits of recharging, select a recharge task, and enable the auto recharge service.

Prerequisite: A roaming task has been set (for details of the roaming task, refer to task settings in the remote control mode).

Click "select recharge task". The task list will appear. Select the desired roaming task.



Set the upper and lower limits of recharging. When the auto recharge service is enabled and the detected power is less than the set value, the task will be suspended, and the robot should be recharged via the charging pile. When the power of the robot reaches the set value, the robot will exit recharging and continue to perform the task.



7.2.3 Setting of "delay auto charge"

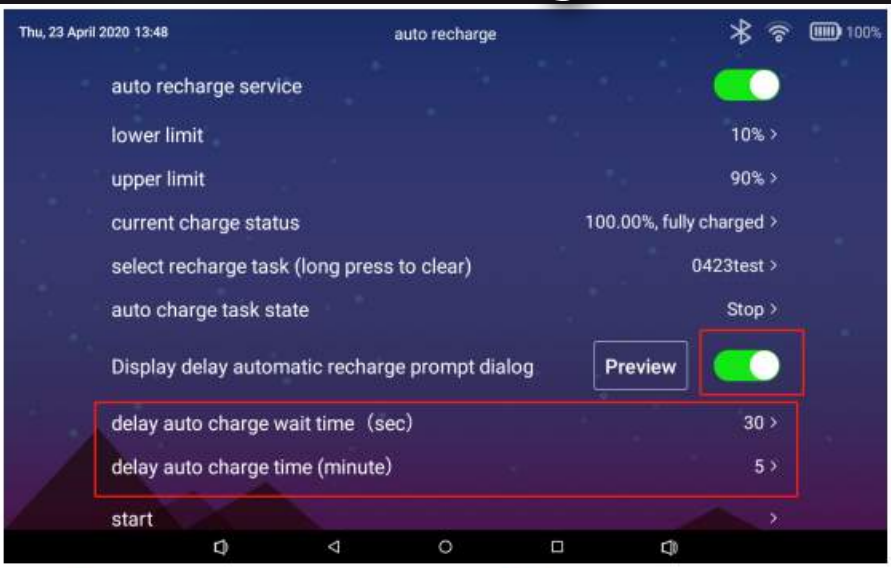
Delay auto charge: when the power is less than the lower limit during task execution, recharging will be triggered. If "delay auto charge" is set, the robot can be recharged selectively.

Click the wait time in the auto recharge prompt dialog and set the time.

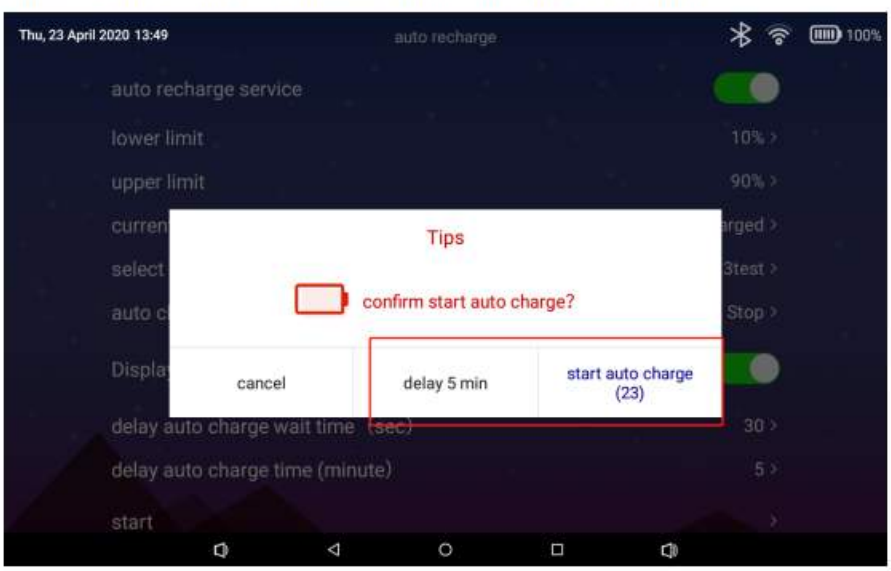
Click the delay time in the auto recharge prompt dialog and set the time.

Enable "Display delay automatic recharge prompt dialog".

After setting the recharge task, the auto recharge service will be enabled.



When the power is less than the lower limit during task execution, the tips will pop up. Click "start auto charge" to suspend the current task and start recharging. If you click "delay", the robot will be recharged after the set delay time.

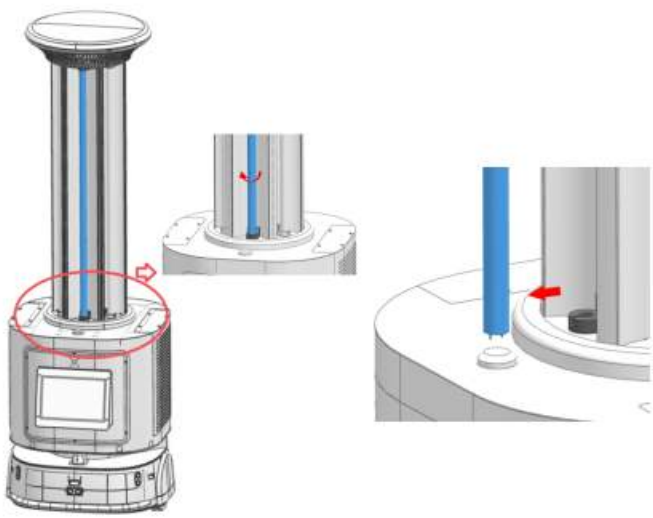


8. UV Lamp Replacement

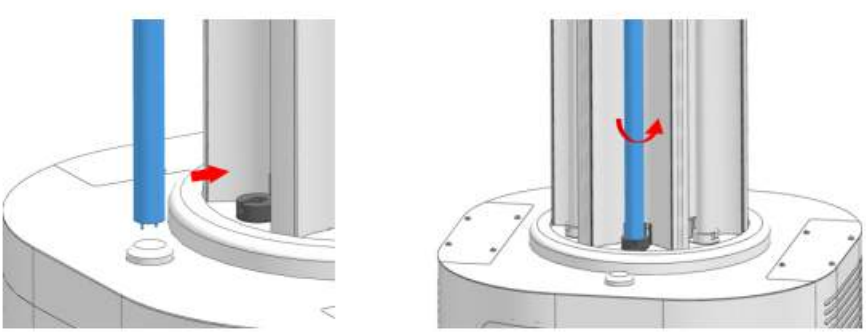
8.1 Replacement of UV disinfection lamp

8.1.1 Replacement of external lamp tube

Step 1: turn the lamp tube by 90° in the direction shown in the figure and move the upper and lower ends of the lamp tube out of the mounting slot, as shown in the figure.

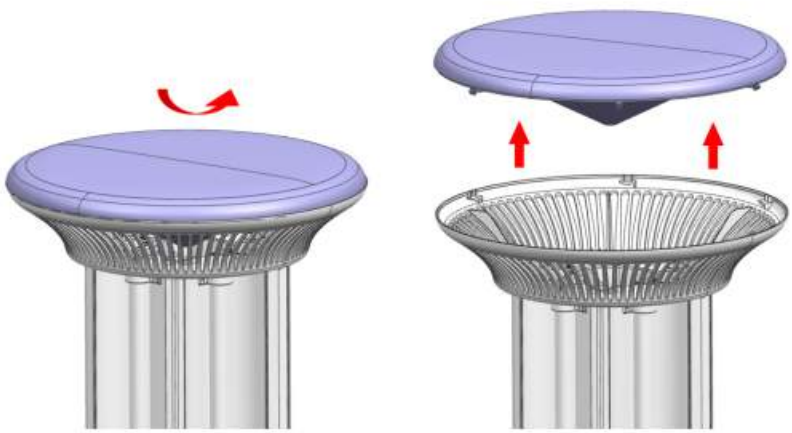


Step 2: Snap both ends of a new lamp tube into the mounting slot as shown in the figure. Then turn the lamp tube by 90° in the direction shown in the figure, until it is tightened.

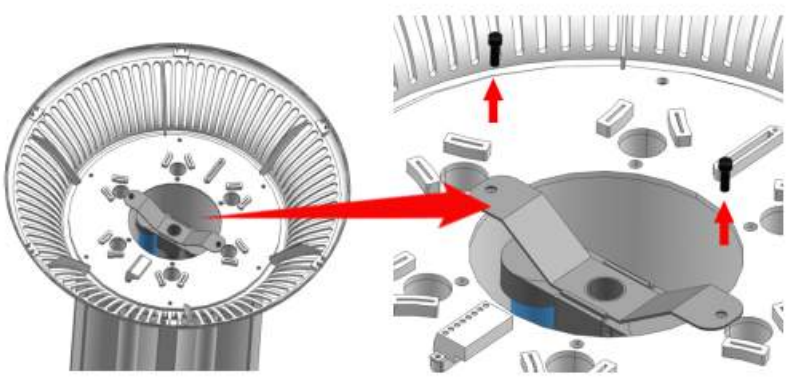


8.1.2 Replacement of internal disinfection lamp

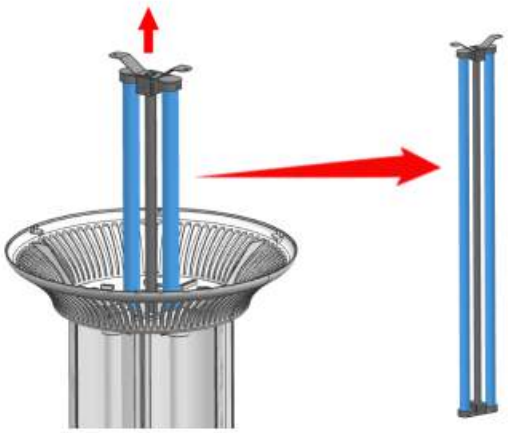
Turn the top cover of the disinfection lamp by 10°-15° in the counterclockwise direction, as shown in the figure. Then remove the top cover of the disinfection lamp as shown below.



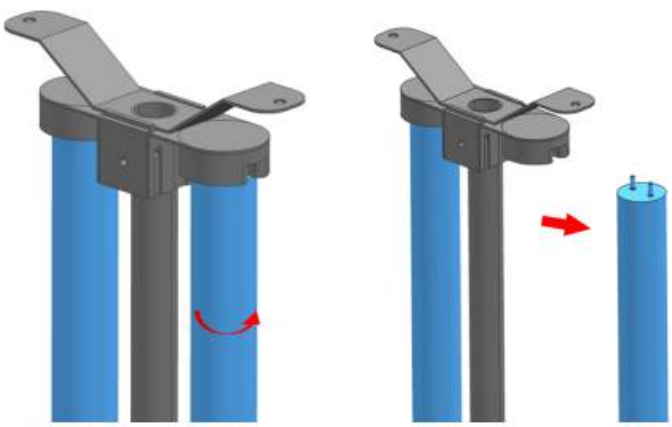
Observe the internal structure of the top cover, and find two screws fixing the internal lamp tube. Remove the two screws as indicated in the figure.



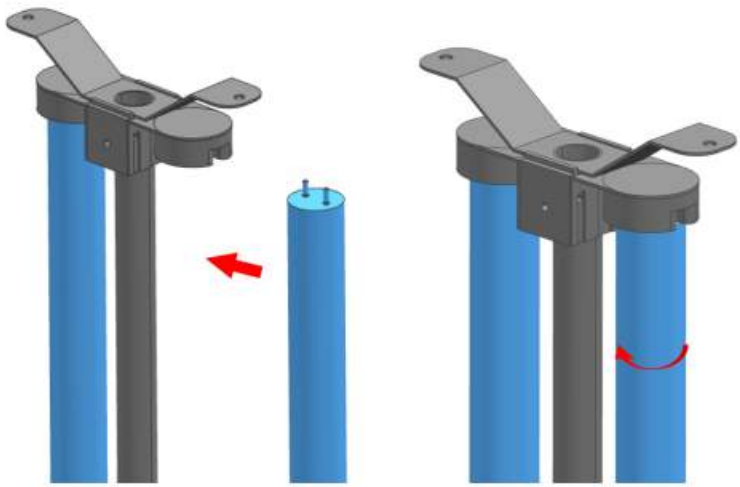
Remove the inner tube assembly in the direction shown in the figure. After the inner tube assembly is removed, the structure is as follows.



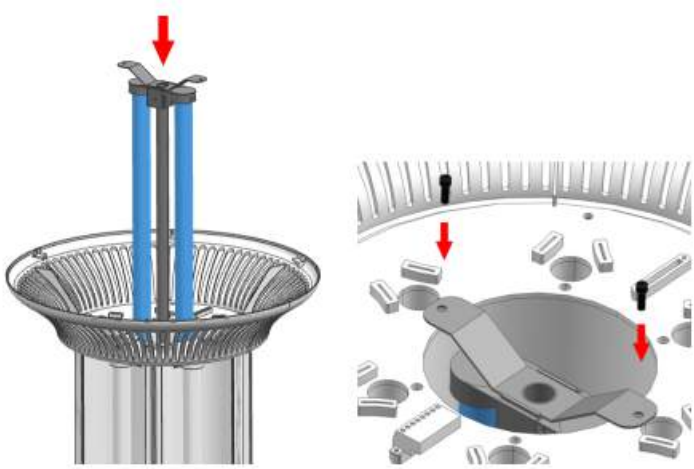
Turn the lamp tube by 90° in the direction shown in the figure. Remove the upper and lower ends of the lamp tube out of the mounting slot, as shown below.



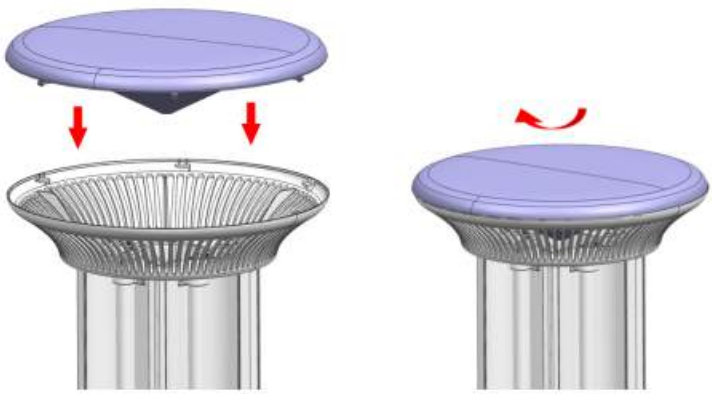
Install the upper and lower ends of a new lamp tube into the mounting slot in the direction shown in the figure. Then turn the lamp tube by 90°, as shown below.



Install the inner tube assembly in the direction shown in the figure. Tighten the two screws as shown below.

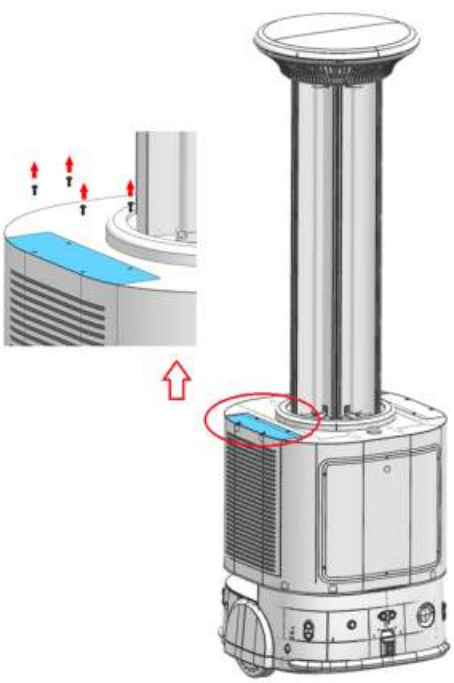


Place the top cover and tighten it in the clockwise direction, as shown below.

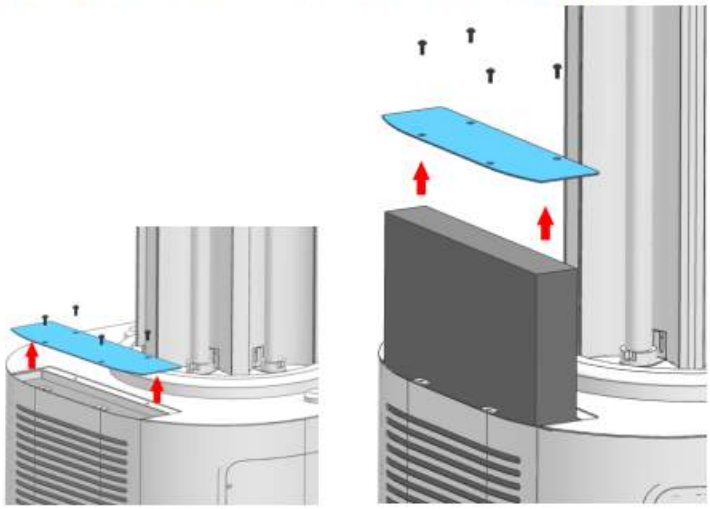


8.2 Replacement of filter screen of air filter module

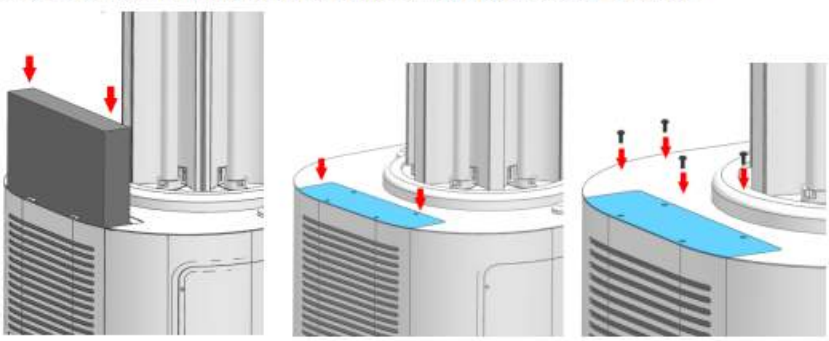
Remove four cross-head bolts as shown below, and properly keep them.



Remove the filter screen cover and filter screen, as shown below.



Install a new filter screen as shown in the figure. Then install the filter screen cover as indicated by the figure, and tighten the four cross-head bolts.



9. Annex

9.1 Routine maintenance

- For normal use, the sensor and other parts of the robot must be kept clean and dry. Please wipe dust on the surface with soft dry cloth on a regular basis.
- Make sure that the charging pile is in a power-off state before cleaning the robot and charging pile!
- Do not directly contact the robot or charging pile with strong acid or alkaline cleaner or water.
- Gently clean the surface of the robot with wet cloth.
- Keep the surface completely dry after cleaning and before powering on.
- If the robot is not in use in a long time, turn off the power supply and robot.

9.2 Troubleshooting

- The robot cannot be started.

Check whether the robot needs to be charged and whether the startup process is correct.

- The screen is blank or black after the robot is started.

Check whether the robot is powered on and whether its appearance is intact without damage.

Restart the robot according to the standard process. For the startup process, refer to the "Initialization" section.

If the robot still fails to start working, contact our sales staff.

- How to connect/change WIFI?

After the robot is started, a prompt of WIFI connection will appear. please complete settings according to the prompt.

Click the WIFI icon in the upper left corner to jump to the WI-FI setting interface, and then perform setting.

- The robot cannot be started by pressing and holding the "ON/OFF" button.

Check whether the main switch on the chassis is turned on, and then press and hold the "ON/OFF" button.

- The robot cannot run or its wheels cannot move.

Check the emergency stop button. Manually turn the emergency stop button until it pops up, thus unlocking the robot.

9.3 FAQ

Q: Does the robot need to be connected to the Internet?

A: The robot needs to be connected to the Internet during initial mapping, and supports offline operations in the subsequent application.

Q: How to use the robot?

A: You can operate the robot according to the manual or contact sales or after-sales staff for remote guidance.

Q: Will the robot hit the furniture?

A: The robot is provided with an automatic protection device to automatically identify and avoid obstacles within 20 cm.

Q: How long can the robot work once charged?

A: Once charged, the robot can work continuously for 4-6 hours.

Q: Is the robot capable of going upstairs?

A: It cannot go upstairs at present. Please use it on a flat ground.

Q: How to clean the robot?

A: The surface of the robot is painted. Do not use any detergents that may lead to dissolution or corrosion of paint. It is recommended to wipe the surface of the robot with water. For deep cleaning, contact us.