4. During the motion process, you can click the robot screen, and the robot will stop for waiting immediately, if a touch command is not received after 20 seconds, the robot will continue to perform the task.
5. After reaching the destination, return to the main interface of the direct delivery mode, select a destination, and the robot can proceed with the next task.

Used plate collection mode

Used plate collection mode is used for the task of collecting plates, the robot can execute the command of returning to the collection position or the dishwashing room from the table. The specific steps are as follows:
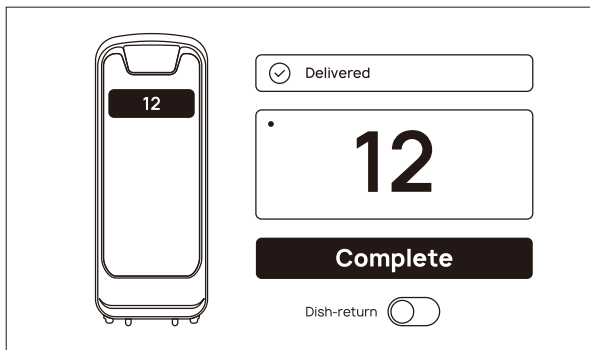
1. While delivering food, if there are plates to be collected, you can place the plates in the robot's recycling box, when the food is delivered, you can check the "Used plate collection" switch.
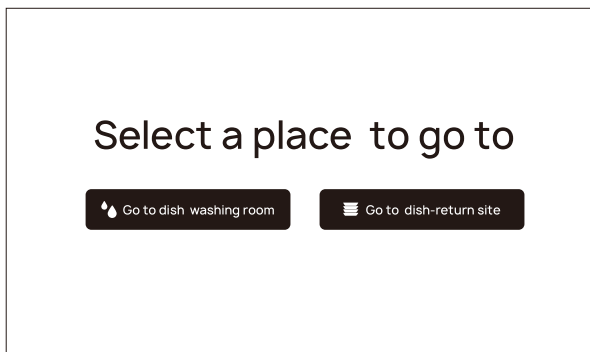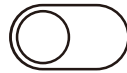

2. After the robot has delivered food to the last table, it will choose to go to the collection position or the dishwashing room to return the plates.
3. If you select the collection position, the robot will go to the nearest collection position through the optimal path, if you select the dishwashing room, the robot will go to the dishwashing room through the optimal path.
4. After reaching the collection position or the dishwashing room, the waiter can enter the table number for used plate collection to proceed with the process, or select "Return" to execute the food delivery task.

Arrived

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Waiting for dish-return

| 1 |
| 2 |
| 3 |

Continue dish-return

💧 Go to dish washing room   ≣ Go to dish-return site

5. During the following process of used plate collection, the waiter can select the next table for collection or returning to the collection position or dishwashing room according to the recycling capacity of the robot.

6. During the used plate collection process, you can touch the robot screen to stop the command, and the robot will stop for waiting immediately, if a touch command is not received after 10 seconds, the robot will continue to perform the task.
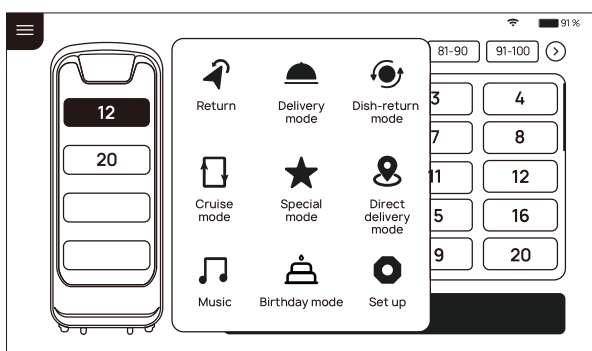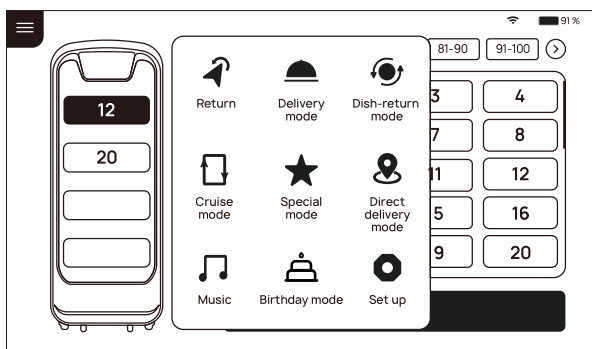

7. When the robot has no command for task, the waiter can directly choose a table for used plate collection by selecting the used plate collection mode, or go directly to the collection position or the dishwashing room.
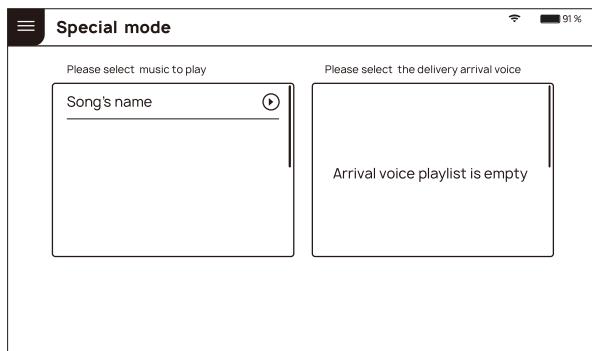
Special mode

The special mode is used for food delivery services with robot in special scenario, you can quickly set the music played during food delivery, and the specific steps are as follows:
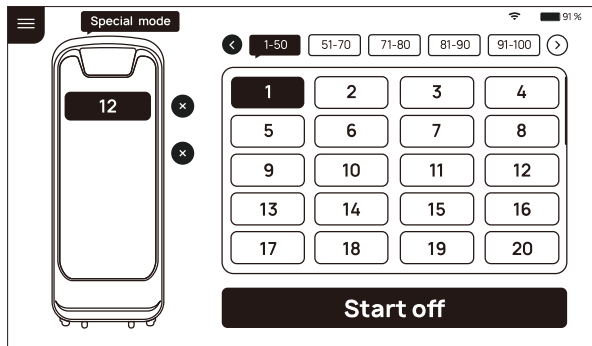

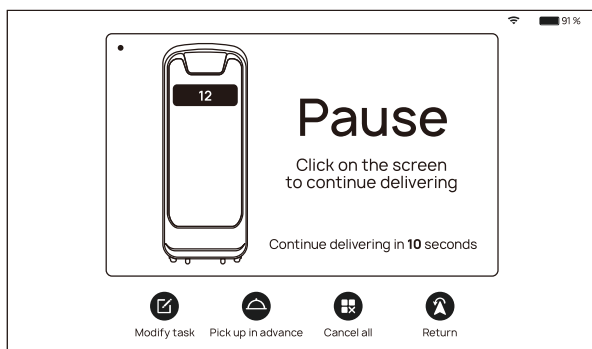1. At the food delivery location, select the Special Mode.

Special mode

Please select music to play

Song's name ⊙

Please select the delivery arrival voice

Arrival voice playlist is empty

2. Place dishes or gifts on the tray.

Special mode

12

| 1-50 | 51-70 | 71-80 | 81-90 | 91-100 |

| 1 | 2 | 3 | 4 |
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20

Start off

3. Select the background music used for the service, and choose the table number for the food delivery.
4. After the table number is entered, click to start the delivery, the robot will start executing the task and start playing the playlist set for the Special Mode.

12

Pause

Click on the screen to continue delivering

Continue delivering in **10** seconds

Modify task   Pick up in advance   Cancel all   Return

5. The robot quickly arrives at the designated location according to the established trajectory. During the delivery process, you can touch the robot screen to stop the command, and the robot will stop for waiting immediately, if a touch command is not received after 10 seconds, the robot will continue to perform the task.


12

⊘ Delivered

12

Complete
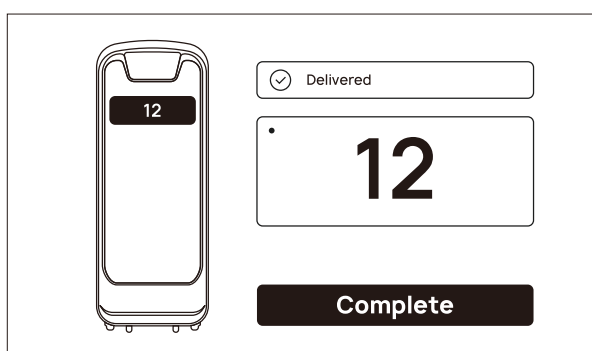
6. After reaching the task destination, click "Finish" to return to the food pick-up position.

Alarm display

In the following cases, the robot will stop working and give an alarm tone, the tablet interface will prompt the corresponding instructions, and the machine will need your assistance.

| Alarm display	Solutions
Battery is too low	Please push the robot back for charging(Figure 1)
Loss of positioning	Push the robot directly below the visual mark (Figure 2)
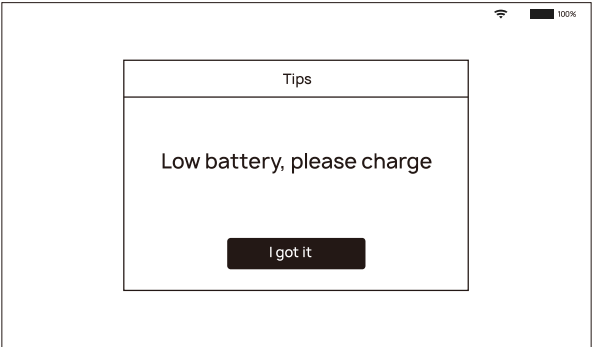
(Figure 1)
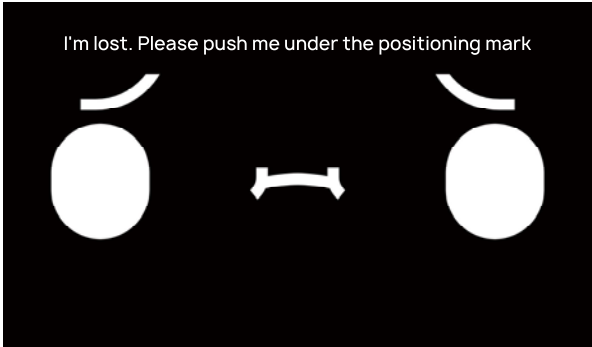
(Figure 2)

Emergency handling

An abnormal state of the robot or an unexpected situation may cause damages to the surrounding environment, the user can press the emergency stop switch on the top of the robot to stop the robot.
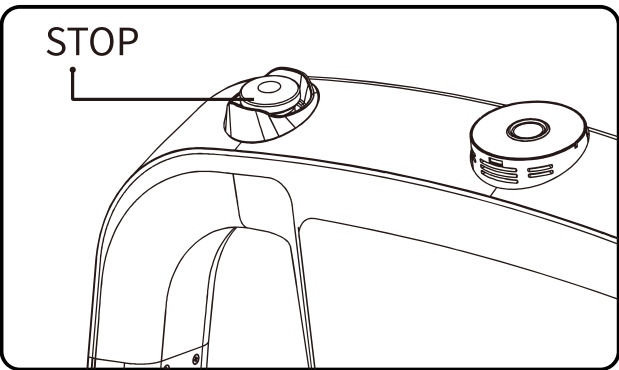
Service functions

Basic settings

The "Basic settings" function provides display brightness adjustment and multi-language setting functions.
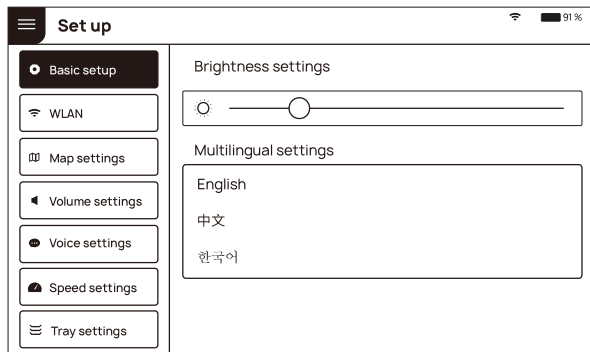
1. The brightness of the display can be adjusted through the brightness adjustment slide;

2. Select the language drop-down list to switch the language, after the switch, the text on the robot display and the voice played will be switched to the corresponding language.
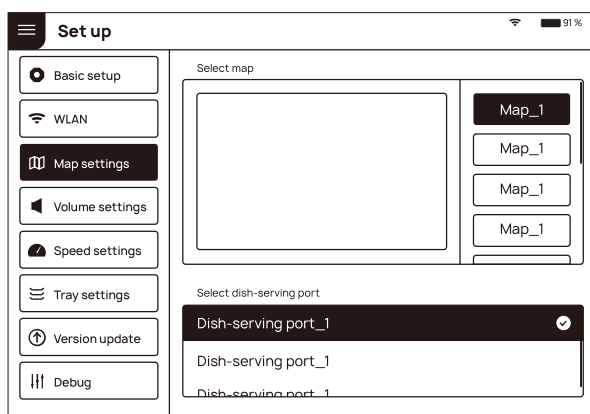
Wireless LAN

In Wireless LAN settings, you can view the network connection status, and click WIFI settings for network switching and connection operations.
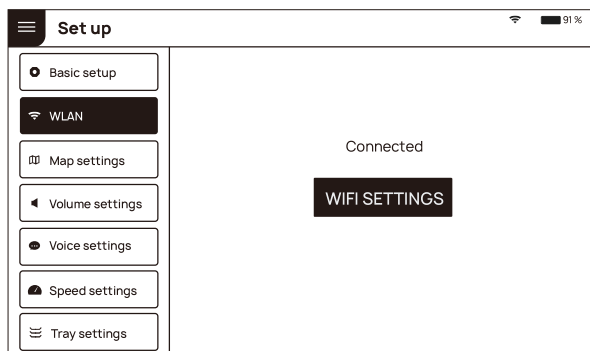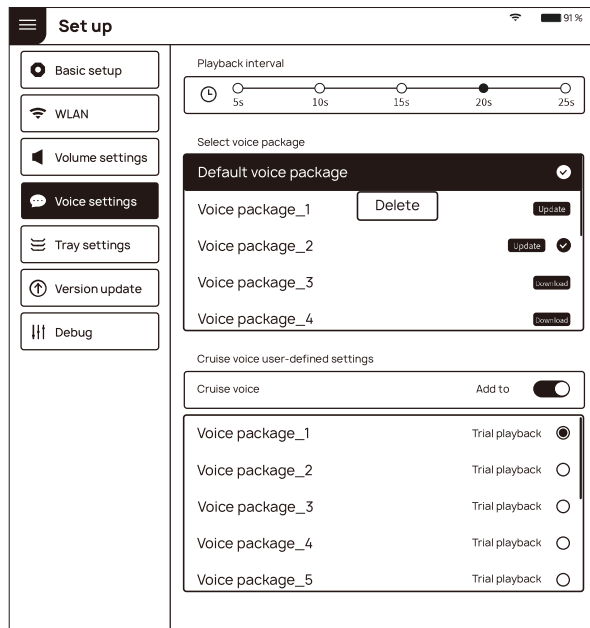
Map settings

In the "Map settings" function, you can select from multiple maps. In the robot one-to-one parking mode, select the current map to configure the parking position for the robot.
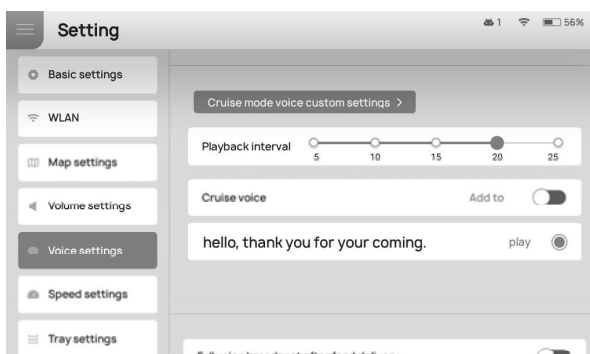
Voice settings

The "Voice settings" function provides voice packet replacement and custom settings of cruise voice.

1. Check the available voice packets for update support and choose to download the voice packets.
2. After downloading, select the corresponding voice packet for replacement.
3. Select "Default" to restore the default voice packet
4. Press and hold the voice packet to delete it.

The operating steps for custom settings of cruise voice are as follows:
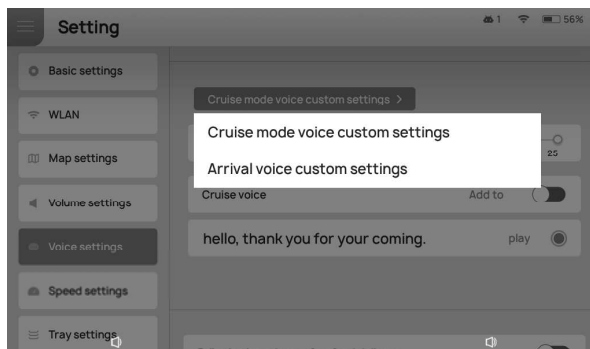
1.Select cruise mode voice custom settings or food delivery arrival voice custom settings;
2. Select "Add voice" to pop up the voice text editing box, enter the text to be played, and click OK to generate a custom voice.
3. It supports adding multiple voices, if multiple voices are selected, these will be played at random.
4. Turn off the cruise voice switch to restore the default voice packet
5. Click for voice preview, press and hold a voice packet to delete it.
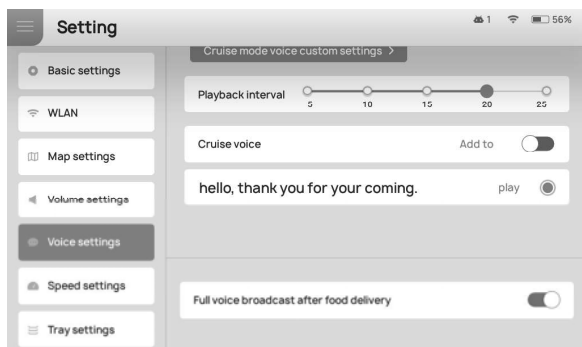
Choose full voice broadcast after food delivery, after the user clicks on "Food delivered", the robot will play the voice broadcast before moving back
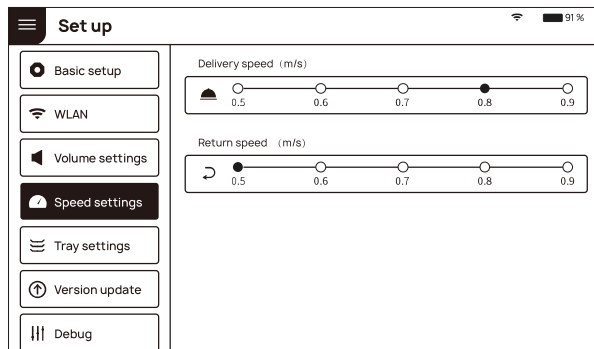
Speed settings

With the "Speed settings" function, you can set the food delivery speed and cruise speed respectively, supporting the speed settings of 0.5m/s, 0.6m/s, 0.7m/s, 0.8m/s and 0.9m/s.
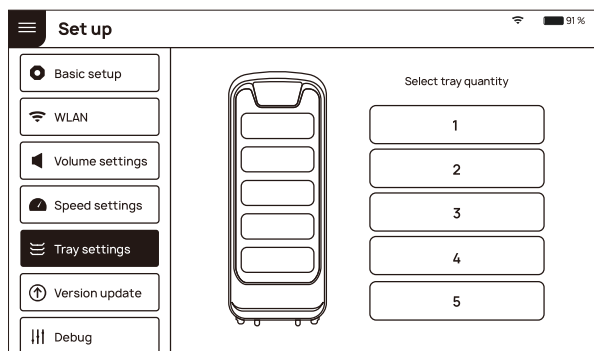
Tray settings

With the "Tray settings" function, you can choose the number of trays for food delivery, supporting 5 layers of of trays.
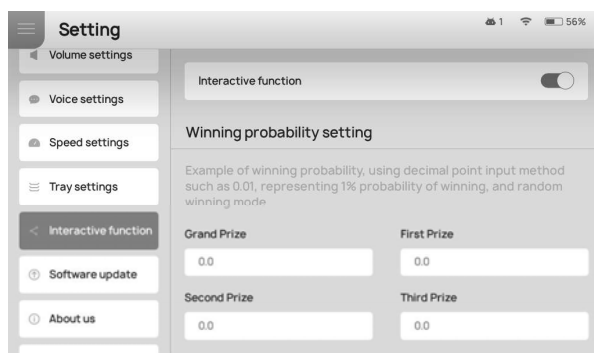
Interactive function

In the interactive function menu, start the interactive function, the user can participate in the interactive lottery during the robot food delivery process

· Set the probability according to the decimal method, the number range should be between 0 ~ 1;

· The sum of all probabilities needs to be less than or equal to 1, but you can quickly set a certain probability to 1.
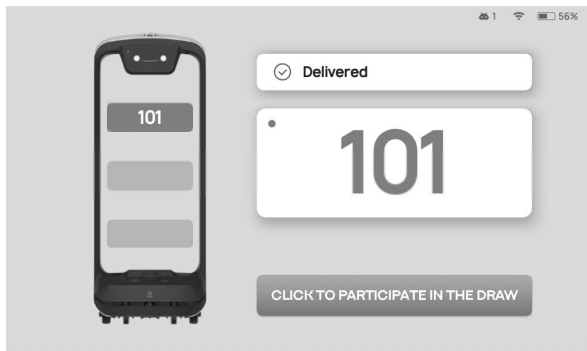
When the delivery arrives, select the Reminder button for lottery drawing

If the guest wins, please remind the guest to take a picture and contact the waiter to claim the prize. Click Finish, the robot returns automatically
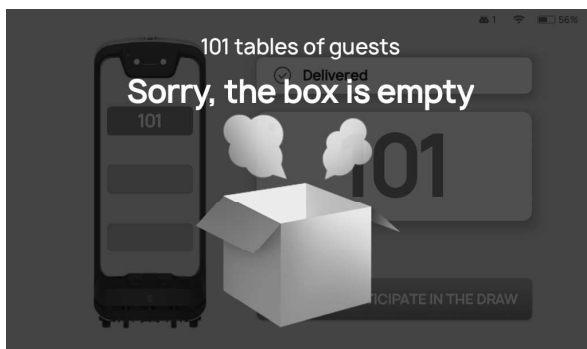
If the guest does not win the prize, the robot shows that there is no prize and automatically returns after a delay of 3 seconds

Version upgrade

With the "Version upgrade" function, you can check the current version and whether it is up-to-date. If it is not up-to-date, you can choose to check for updates, download and update the latest version.
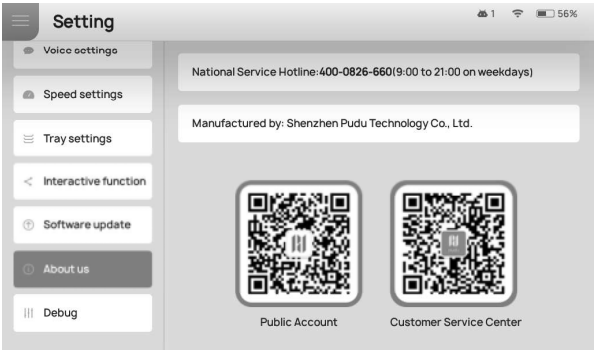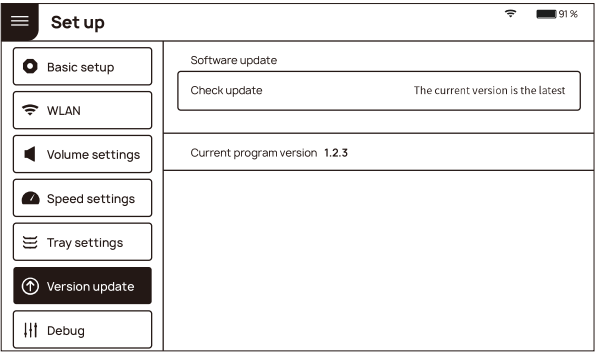
About

About the interface, you can check the Company's service information and WeChat public account
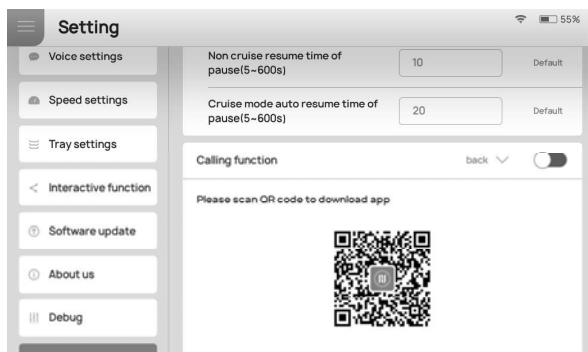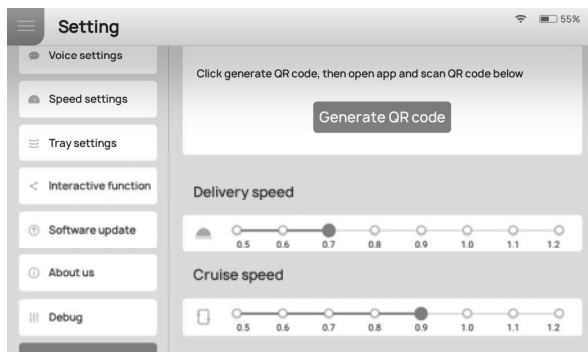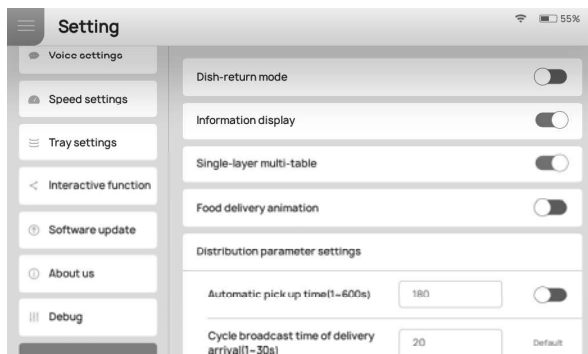
Advanced settings

Select advanced settings, which support the following function settings

· Turn ON/OFF tableware collection mode
· Open and close the information display, hide the About menu in the settings after closing
· Choose to play table number or animation during traveling
· Configuration parameter settings: supporting automatic return when food delivery arrives, setting the time of arrival voice looped playback, and the time when the robot pauses and resumes automatically
· Open the third-party interface function of the robot, this function is used in conjunction with Pudu Call Assistant and Pudu Reminder Assistant, and supports docking of third-party systems;
· You can also set the speed for food delivery mode and cruise mode, which supports larger gears such as 1.0m/s, 1.1m/s and 1.2m/s.
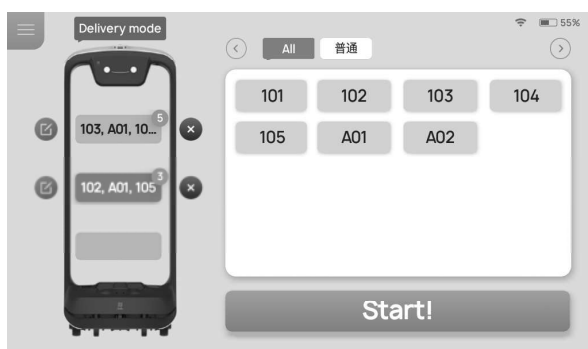
· Open and close the single-floor multi-table function, after opening, multiple table numbers can be set for a single floor, and a maximum of 20 tables can be set for a single delivery

Note: The advanced setting is advanced robot operation, which requires consulting technical support personnel before proceeding with the operation, the Company does not assume any responsibility for all accidents caused by unauthorized operation.

Music function

Select the "Music" switch to control the playback and start of the music.
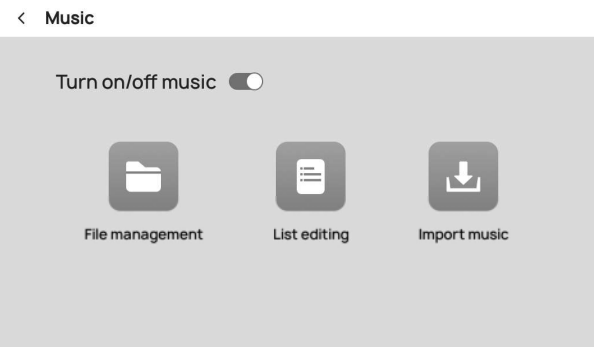
Music playlist

Select "List editing" to view the music settings of each music mode. Click the corresponding list to view the music playlist. With the "Edit menu" function, you can modify the configuration list, and you can click "Add music" to configure other music.
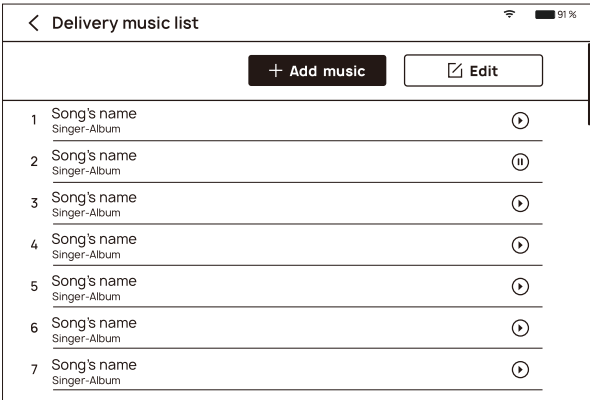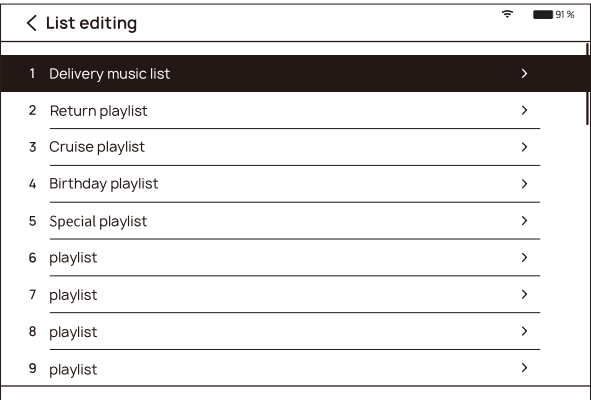
Music import

The user can use a mobile phone to connect to the same Wifi with the robot, and can scan directly to upload music. When uploading music files, you need to make sure that the uploaded files are in music format.
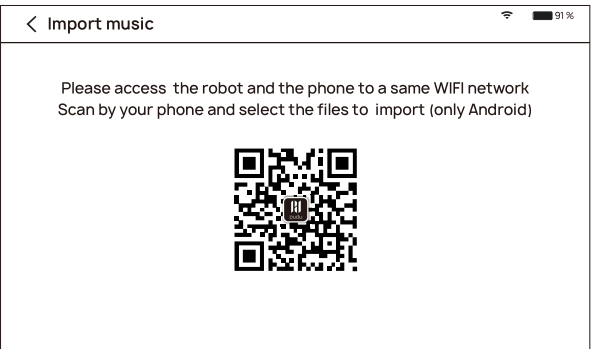
Filemanagement

The user can view music files with this function, which also supports delete function
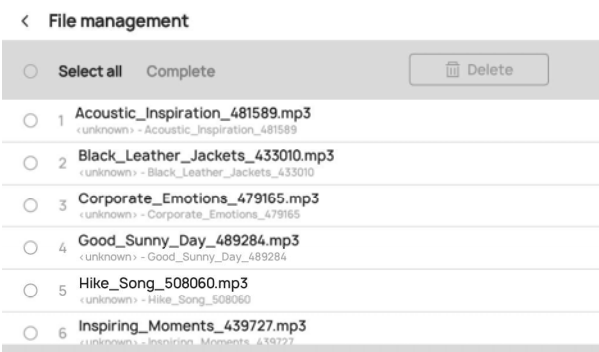
Parking instructions

Depending on the size of the restaurant, there are three robot parking options available.

1. One-to-one parking: fixed parking locations can be set for each robot.

2. Free mode: multiple parking locations can be set the robots, and the robots can be parked according to priority.

3. Parking replenishment mode: In addition to the settings of parking locations in 1) and 2), you can also set temporary parking locations in other areas, and when there is location available, the robot can automatically go to the parking location for replenishment.When a robot is parking at non-parking location with no task designated, you can choose the "Return" command to let the robot return to the parking location automatically, or push the robot to the parking location.

Note: The robot at the temporary location will display "Temporary parking" in the normal state, when there is location available at food pick-up position, the robot will automatically to to the pick-up position for parking.

Watch notice of arrival

The robot is installed with LoRa module, which automatically starts the function for watch notice of arrival, which is suitable for VIP room notifications. When the delivery arrives at the target position, the watch can receive a message that the robot has arrived and notify the waiter by means of vibration, ringtone, and text reminder.

1)The text reminder is "The robot has arrived at XX, please note", vibration and ringtone may last for 15s and repeat the reminder every 30s;

2)Touch any key on the watch to close the reminder. Users can also set whether to enable vibration or ringtone reminder;

3)The in-position watch function is realized through the LoRa ad hoc network, which does not depend on the network, and the transmission distance can reach 200m.

Computer reminder of arrival

Install "Pudu Reminder Assistant" on the computer, which can realize the computer reminder function of robot arrival, it is suitable for the notification of the arrival at Internet cafes and the notification of office delivery. When the delivery arrives at the target position, the computer can notify the guest by computer voice or pop-up window reminder.

1)"Pudu Reminder Assistant" is divided into server and client, one server is installed in a local area network, which can manage multiple clients;

2)The user configures the voice reminder or pop-up window reminder on the server, it is recommended to use the voice reminder when using in Internet cafes, and repeat the reminder every 15s. When using the function, it is necessary to ensure that the server computer and the robot can access the Internet, and the robot needs to open the open interface function in the advanced settings;

3)Add the Device ID and Secret of the restaurant in the registration configuration, and the account needs to be applied on the Pudu Cloud platform;

4)On the server, you can add the client location and IP individually by adding devices, or you can add multiple items by importing the list. It is necessary to ensure that the table number is consistent with the corresponding robot map location name

APP call function

The "Pudu Call Assistant" installed on mobile phone can remotely call Pudu robot, which is suitable for calling from multiple food pick-up positions at restaurant and calling from multiple delivery positions at office area.

1)To use this function, you need to ensure that both the mobile phone and the robot can access the Internet, and open the development interface function of the advanced settings of the robot;

2)The first time you open the Call Assistant App, you need to bind the robot according to the guidance. Scan the dynamic QR code on the robot to bind the robot group corresponding to the robot;

3) Select the calling location and set the default calling location of the Call App

4、On the Call page, click the Call button to make a call at the default location
a)Click to enter the "Calling" state, click the button again to exit the call
b)When the robot responds to the call, according to the working status of the robot, the APP interface displays "Called successfully" or "In queue";
c)When the call times out or the robot is interrupted to perform other tasks, the App interface displays "Call failed"

5、Choose another call location, you can choose another location to call

6、In the notification bar, you can check the robot's message status, including the robot "Coming", "Canceled", "Arrived"

7、In the "My robot" column, select the version update, you can check the latest software and update

Product Maintenance

Trays, drive wheel and auxiliary wheel

Keep the tray clean and clean with a clean cotton cloth,Please check for cleaning at least once a week.when the bottom wheel is entangled or stuck by debris, the robot needs to be lifted for cleaning.

Sensor maintenance

Inspect and clean the positioning sensor on the top and the 3D obstacle avoidance sensor at least once a week. In case of unexpected contamination, be sure to clean it immediately so as not to block the sensors and cause abnor- mal operation of the product. Use soft tissue or other lens cleaner for cleaning.

Robot body maintenance

Keep the robot body clean with clean cotton cloth. Do not lift, climb, bump, push, or break the robot or stack things on its body. If it operates abnormally, do not uninstall any screw or open any cover without permission or instruction of our technical support engineers.

Handling of robot

During the transportation of the robot, it is necessary to meet GB/T 4857.23-2012 requirements for road transport of steel spring vibration-damped trucks, please use forklifts and other handling tools for transportation.

The robot is a valuable equipment, when you need to manually move the robot, please strictly follow the instructions below.As shown in the figure, the left and right profiles of the robot (indicated by the arrows) are the parts that can be stressed, and you can lift the robot through this part. Please ask two colleagues to lift the profile from both sides, pay attention to balance, and keep the robot's upright posture during the handling. It is strictly forbidden to carry out the handling by lifting the tray.
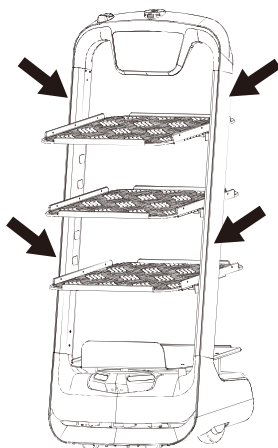
Sign maintenance

No other objects (such as balloons, barbed wire, slogans, etc.) can be hung directly under the sign, and no billboards or safety exit signs can be hung near the sign; pay attention not to damage the sign during routine ceiling cleaning and maintenance, and the sign cannot be moved or rotated.

Declaration of Conformity
Hereby, Shenzhen Pudu Technology Co., Ltd. Declares that the radio equipment type PD1 of PuduBot is in compliance with Directive 2014/53/EU. and this product is allowed to be used in all EU member states

2.4G Tx Frequency Range: 2402~2480MHz, 2412MHz~2472MHz;
5G Tx Frequency Range: 5150MHz~5725MHz;
5.8G Tx Frequency Range: 5725MHz~5875MHz;

Outputpower:
Bluetooth for classic: 9dBm(MAX)
BLE: 5.5Bm(MAX)
2.4G Wifi:18.5dBm(MAX)
5G Wifi:17dBm(MAX)
5.8G Wifi:14dBm(MAX)

The device is restricted to indoor use when operated in the European Community using frequency in 5150MHz~5350MHz to reduce the potential for interference.
Restriction in BE, BG, CZ, DK, DE, EE, IE, EL, ES, FR, HR, IT, CY, LV, LT, LU, HU, MT, NL, AT, PL, PT, RO, SI, SK, FI, SE, UK.

Troubleshooting

POST fails

If the robot has sufficient battery power, restart the robot under the positioning mark, if the self-test still fails, please contact the after-sales service personnel in time.

Robot stops during operation

1. Click the interface to show the pause page, the robot pauses, click again to run normally.
2. Voice prompt "Excuse me": Click the screen to pause the robot, then the robot will be on the right track, then click Continue.

"Signal Loss" prompt

The robot interface prompts "I am lost, please push me directly below the positioning mark".At this time, the robot will issue a voice prompt for help, please push the robot directly below the positioning mark.

Robot can't boot normally

1. Check if the emergency switch is pressed or damaged, if it is damaged, please contact customer service.
2. The battery is insufficient, please connect the robot through the adapter for charging.
3. For other reasons, please contact customer service staff for processing.

After Sales

Free Warranty Services

Shenzhen Pudu Technology Co.Ltd. promises to meet the following conditions. From the date of product receipt, within the effective warranty period of the product (the warranty period of different parts of the product may be different, See "warranty period of major parts" for details.), we will provide free products warranty service. Customers do not need to pay after-sales service fees. Circumstances beyond the warranty period or not covered by the free product warranty service. We will charge a normal price. Please contact the official website after-sales service hotline for product maintenance.

Free warranty service must meet the following conditions

1. Self-purchased products are used normally within the specified product warranty period, and non-artificial quality problems occur;
2. No unauthorized disassembly, no modification or installation under the guidance of non-official instructions, other non-man-made failures;
3. Product serial number, factory label and other signs have no signs of tearing or alteration;
4. Provide valid proof of purchase, documents;
5. Damaged spare parts replaced during the free warranty period are owned by Pudu Technology and should be returned as requested by Pudu Technology, otherwise Pudu Technology reserves the right not to grant free warranty service.

The following conditions are not included in the free product warranty service

1. Collision, burnout caused by non-product quality problems, and quality problems caused by foreign body intrusion (water, oil, sand, etc.);
2. Damage caused by unauthorized modification, disassembly, opening of the shell, etc., as instructed by unofficial instructions;
3. Damage caused by improper installation, use and operation without following the instructions;
4. Damage caused by customer repairs without official instructions;
5. Damage caused by improper use of circuit modification, battery pack, and charger under the guidance of unofficial instructions;
6. Damage caused by use in excess of the safe load weight;
7. Damage caused by insufficient discharge when the battery is low or the use of a battery with quality problems;
8. Services such as secondary on-site deployment or installation and commissioning due to customer's own reasons;
9. Malfunction and damage caused by force majeure (such as earthquake, fire, etc.);

warranty period

The product receipt date recorded by Pudu's after-sales service system is used as the warranty start date.

If you meet one of the following conditions, you can ask for a refund

1. Within 7 natural days of receiving the goods, the customer found obvious manufacturing defects without using the goods. Round-trip freight is borne by Pudu.

We have the right to reject the customer's return request in the following cases

1. The goods were damaged, but the delivery staff was not requested to return them on the spot when receiving the goods;
2. If the return request is made after the return period of the product exceeds 7 natural days (calculated from the date of receipt);
3. Incomplete returned goods, incomplete packaging, accessories, gifts, manuals, or damage caused by appearance;
4. Failure to provide legal proof of purchase or documents when returning goods, or forging or altering documents;
5. Quality problems caused by collisions, burns caused by non-product quality problems, artificial modifications, foreign objects (water, oil, sand, etc.), improper installation, or failure to use and operate according to the instructions;
6. Torn, altered labels, machine serial numbers, waterproof marks, anti-counterfeit marks, etc.;
7. Products damaged due to force majeure such as fire, flood, lightning, traffic accident, etc.;
8. After contacting Pudu Technology Co., Ltd. to confirm the return service, Pudu Technology has the right not to accept the corresponding items within 7 days from the date of contacting Pudu Technology.

If you meet one of the following conditions, you can request a replacement

1. Within 15 natural days of receiving the goods, the customer found obvious manufacturing defects without using the goods. Pudu Technology bears the return freight;
2. Within 15 natural days after the customer receives the goods, after the product is unpacked, it cannot be started normally according to the instructions or under the guidance of a technician, or a non-artificial product quality defect is found. Round-trip freight is borne by Pudu;
3. When customers receive the goods, they need to unpack and inspect them in front of the deliveryman , and find that the product has been damaged due to transportation. Pudu Technology bears the return freight;
4. There was a clear discrepancy between the actual received goods and the description of the goods. Round-trip freight is borne by Pudu;

We have the right to reject the customer's replacement request in the following situations

1. Cannot provide legal purchase vouchers or documents when exchanging goods, or forge or alter the documents;
2. The goods were damaged, but the delivery staff was not required to return or exchange them on the spot when receiving the goods;
3. Requests for replacement after the replacement period of 15 natural day products (calculated from the date of receipt);
4. Incomplete replacement, incomplete packaging, accessories, gifts, manuals, or damage caused by appearance;
5. The goods have been tested by the technical support department of Pudu Technology Co.Ltd. and there is no quality problem;
6. Product quality problems caused by collisions or burns caused by non-self quality problems, artificial modification, foreign objects (water, oil, sand, etc.), improper installation, or failure to use and operate according to the instructions;
7. Torn, altered labels, machine serial numbers, waterproof marks, anti-counterfeit marks, etc.;
8. Products damaged due to force majeure such as fire, flood, lightning, traffic accident, etc.;
9. After contacting Pudu Technology Co. Ltd. to confirm the return service, the corresponding items were not sent within 7 days from the date of contacting Pudu Technology. Pudu Technology has the right not to accept it.

After-sales service process

1. Please contact Pudu technical support staff in time, call: 400-0826-660;
2. Technical support staff fill in relevant forms according to your product situation;
3. Technical support staff will review and confirm and follow up within 7 working days as soon as possible.

Instructions for return and exchange and after-sales service within the warranty

1. Remote technical guidance service free on-site maintenance
   Pudu Technology officially provides online and remote technical support channels, and customers need to cooperate with technical engineers for problem diagnosis and troubleshooting;
2. On-site service
If the Pudu technology engineer diagnoses that the problem must be solved at home, Pudu Technology assigns professional and technical personnel to provide on site service;
3. Return processing time
After your return application is reviewed and approved, Pudu Technology Co.Ltd. will process the returned goods for you within 7 days from the date of receipt of the problem product you sent back;

4. Exchange processing time
After your replacement request is approved, Pudu Technology Co.Ltd. will process the replacement for you within 15 days you receive the problem product you sent back；
5. Return to factory for processing time
After your repair application is approved, Pudu Technology Co. Ltd. will process the repair for you within 30 days from the date you receive the problem product you sent back. If the service is postponed due to national statutory holidays or after-sales service centers of some brand manufacturers, the repair time will be extended accordingly.
6. Refund time
6.After approved by Pudu technology, the refund will be transferred to the bank account of the other party within 10 working days after receiving the returned product.

Out-of-warranty service

Pudu Technology officially provides online and remote technical support channels, and customers need to cooperate with technical engineers for problem diagnosis and troubleshooting;

On-site service

If the Pudu technology engineer diagnoses that the problem must be solved on the site, Pudu Technology assigns professional and technical personnel to provide on site service;

After-sales service cost standard

For after-sales services not covered by the free warranty, you need to fill in the Pudu Technology After-Sales Record Form in accordance with the requirements. Pudu's after-sales service costs include after-sales maintenance costs and spare parts costs.

Pudu technology technicians provide remote technical guidance services. Customers assist in handling after-sales issues. Pudu technology only charges the cost of spare parts.

After-sales service of Pudu technology technicians providing on-site services. Service costs include spare parts costs and after-sales maintenance costs.

After-sales service consultation

If you have any questions, please contact the customer service hotline of Pudu tech at 400-0826-660.

The service hours of Pudu technology after-sales staff are from 9:00 a.m. to 12:00 p.m. and from 14:00 p.m. to 18:00 p.m. every Monday to Saturday in China.

Main Parts Warranty

Main components	Warranty period
Upper computer master control board	12 months
Upper computer expansion board	12 months
Upper computer cooling fan	12 months
Lower computer master control board	12 months
Audio amplifier board	12 months
Lidar	12 months
RGBD vision sensors	12 months
Audio device	12 months
Camera module	12 months
Trays	No
Chassis lower front shell	12 months
Chassis left shell	12 months
Chassis right shell	12 months
Display assembly	12 months
Waterproof light strip	12 months
Universal wheel	12 months
DC hub motor	12 months
Battery	12 months
E-stop switch	12 months
In-line charger	12 months

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