



AMY DISH DELIVERY ROBOT

USER OPERATING MANUAL

VERSION: V4.2.2

Suzhou Pangolin Robot Corp., Ltd.

Directory

Chapter 1	Overview	3
Chapter 2	Copyright Statement	3
Chapter 3	Product Function	3
Chapter 4	Precautions for Use	4
Chapter 5	Safety Precautions	5
Chapter 6	On/Off button and Map building	7
6.1	On/off Button	7
6.2	Emergency Stop	8
6.3	Map building	8
Chapter 7	System setting	13
7.1	Enter Setting Interface	13
7.2	Network Setting	14
7.3	Speed Setting	15
7.4	Charging management	16
7.5	Language Setting	16
7.6	Restore the Map	17
7.7	Password Management	17
7.8	Situation Statement Setting	19
7.9	About BOT	20
7.10	Function switch	21
7.11	Waiting Point Setting	21

7.12	Waiting Time Setting	22
7.13	Dishes setting.....	23
7.14	Table Number Setting	23
7.15	Table Number Saving	24
7.16	Background image replacement.....	25
7.17	Health Condition	26
7.18	Status information	26
7.19	Application exiting.....	26
Chapter 8	Dish Delivery	27
8.1	Multiple Mode	27
8.2	Circle Mode.....	28
Chapter 9	Best practical.....	29
9.1	The robot starts on the charging pile.	29
9.2	New map creating.....	29
9.3	Delivery task.....	29
Chapter 10	Maintenance	30
10.1	Charge.....	30
10.2	Motor Clean	30
10.3	Laser Wipe	30
Chapter 11	Packaging and Handling.....	30
11.1	Inner Packaging.....	30
11.2	Short Distance Handling	31
11.3	Long-Distance Transport (including Logistics Transport, Chartered Vehicle)	31

Chapter 1 Overview

Thanks for purchasing the 8th Generation Dish Delivery Robot Amy of Suzhou Pangolin Robot Corp., Ltd.!

This manual briefly introduces various functions which will guide you well about the machine. At the same time, a series of high-quality and premium solutions will be provided to bring you a comprehensive service experience!

Please carefully review this manual before using the machine.

Chapter 2 Copyright Statement

Suzhou Pangolin Robot Corp., Ltd. (hereinafter referred to as “Pangolin Robot”) will reserve all rights to modify this manual and we insure the information offered is correct and reliable.

Please kindly be noted that:

1. This manual is compiled to fulfill company series of products and it is permissible that your purchased machine may not be equipped with all specified functions.
2. When it comes to patent, copyright, trademarks and some other intellectual properties, you shall not be allowed to use our products or related documents until or only if you get the approval or authorization from Pangolin Robot, however, which don't belong to Pangolin Robot's responsibility.
3. Pangolin Robot will reserve all rights to this manual and users shouldn't disseminate, copy or modify any contents of this manual.

Chapter 3 Product Function

1 HMI (Human Machine Interface)

Set the functionality like dish delivery and other basic operations by touching on the screen interface.

2 Playing Advertisement

The robot can support to play music and video during her work process. The user can import the advertisement contents from the operation platform.

3 Trackless Navigation and Obstacle Navigation:

Robot will achieve auto navigation by laser sensor, which is designated by point to point. When there is any obstacles detected ahead, robot will stop until the obstacle is cleared.

4 Voice reminding during dish delivery

During the dish delivery process, there will be corresponding voice reminding at each stage, for example: 1. at the beginning of delivery, the robot will remind “ I am going to delivery dish” 2. if some obstacles on they way of delivery ,the robot will say “ excuse me, you are on my way” . 3. When the robot takes the dish arriving at the set table, the robot will remind “ dear customer, your order is here”. After waiting for a while, The robot will remind “If there is nothing else, please touch my hand and let me get back”. 4. When returning to the waiting point, the robot will remind “I am back”. All the voice content can be set according to the actual situation by users.

5 Auto-charging system

The robot equipped with an automatic charging pile can realize the automatic charging. When the power is lower than a certain value, the robot will automatically find the charging pile and complete the charging.

Chapter 4 Precautions for Use

- 1 The robot is internally installed with Industrial Personal Computer (hereinafter referred to as IPC), with which the screen is adopted with touch screen technology. Please DO NOT frequently cut the power voltage during the system starts up in case of any machine breakdown.
- 2 Only if or unless urgent situation, please DO NOT press the “Emergency Stop Switch” in protection of the machine life expectancy.
- 3 DO NOT assembly and disassembly the robot or any spare part of the robot by yourself due to its high precision.
- 4 When the robot is in the process of working, DO NOT open her outer shell lest any careless touching on the electronic moving parts will do unnecessary damage on human body.
- 5 Avoid any strong collision impact or man force on the robot.
- 6 When the robot is in the process of working, DO NOT force to change her moving way in case of any unnecessary damage on human body.

- 7 Please use the AC 100~240V, the original charger and make sure it's under the guardianship of somebody. Remember to unplug the charger once the robot finished charging. DO NOT shaking the battery during the whole process above mentioned.
- 8 It is a must that you should use the originally equipped charger and put the battery into the originally installed battery pack, all of which must also be under custody of somebody. DO NOT forget to unplug the charger after it finishes charging.
- 9 Any chemical cleaning is forbidden and you can use a dry clean cloth to wipe the surface dust out.
- 10 Please kindly deal with waste products and accessories in accordance with the relevant local environmental protection regulations.
- 11 In case of any data loss, it is recommended that the user backup the important documents, especially when software and firmware is about to upgrade. Our company shall not be responsible for any data loss caused herein.
- 12 During the process of repairing defective products, the company will root all of the data and back to manufacturer default Settings.
- 13 There won't be prior notice on any product changes. We apologize for any inconvenience caused.
- 14 Any problems please directly contact with our customer service.

Chapter 5 Safety Precautions

Before installing, using, carrying, maintenance and repairing, please make sure read carefully and master the content of this manual and relevant appendix. Make sure operate after you are fully familiar with all equipment, safety precaution and matters need attention. The following precaution is involved with five main categories: "Danger", "Attention", "Force", "Prohibited", "Important".



Compulsory: Rules must abide by.



Danger: Wrong operation might hurt or cause causality.



Attention: Wrong operation may cause irreversible or serious damage to the robot.



Prohibited: Matters excluded from use



Important



Compulsory

This user manual belongs to technical materials concerned with robot body content. In order to ensure the normal application of this system and the proper maintenance and repair, including product profile, precautions for use, safety precautions, product instructions, installation and so on, please make sure read carefully and fully understand this manual before using.

In addition, details regarding safety precautions are stated in chapter of "Safety", please read it carefully before using.



Danger

The product is supplied with 24V battery but it is unguaranteed that individual spare parts are within 36V that is affordable safety voltage for human. In the process of working, any touching to electron moving parts is strictly prohibited in case of unnecessary damage to robot or human body.

The product is charged with 220V AC. Watch out the electricity shock when plug in. Please be carefully noted that lithium battery is vulnerable and explosive. For the sake of your health and property, it is suggested that charging is under the guardianship of somebody to avoid any potentiality of explosion and fire. Remember to unplug the charger once the robot finished charging. DONOT shake the battery during the whole process above mentioned.

Any individual part isn't so safe up to food grade that please DO NOT devour it and keep spare parts away from food material.

Please keep the minors and the elderly out of reach the product unless being under the custody.



Attention

Some of the illustrations in this manual are drafted upon uncovering the robot shell to more specify the robot, therefore when you are working with this kind of parts, ensure to recover the shell and operate it adhere to the specification.

Graph and pics in this manual is only for your reference and there might be slightly different from the real purchased product on hand.

Sometimes due to product improvement, spec change and utilizing, there should be times of modification which edition will be followed by hereafter.

Perhaps due to loss or damage, please directly contact with the sales person if you need to book the manual and follow the material no to purchase.

We won't be responsible for any alternation without authorization which as well shall not fall within the range of warranty.



Prohibited

The product shell is made from ABS plastic. Please keep it from metal components or sharp object.

When the robot is in the process of working, DO NOT strongly force her to change the moving way.

The product is equipped with server and IPC so those non-professional people is prohibited from opening the back cover or plug and unplug the electric wire.

Please keep customers away from touching ON/OFF switch and Emergency Stop switch.

Please leave it in a dry, cool dark place. DO NOT put it lean or upside down.



In spite of inconformity with content of “Attention “or” Danger” but these are indeed important matters marked exclusively to abide by.

Besides, even though it is recorded in “Important”, occasions changing will also result in serious consequences; accordingly any precautions should be paid extreme attention on and strictly obeyed herein.

Encountering emergent circumstances, quickly press the emergency stop button so that electricity is cut out from the movable parts and robot stops. Only after the emergency can you free emergency stop button (shown as Pic 1) and back to normal work. Way to relieve the emergency stop as following: Right turn the emergency stop button (shown as Pic 2):



Pic1. Emergency Stop



Pic2.Free Emergency Stop

Chapter 6 On/Off button and Map building

6.1 On/off Button

6.1.1 Firstly confirm if it has freed the emergency stop, if not, gently rotate the red button to relieve the emergency stop state(refer to Chapter 5)

6.1.2 Press the “On/Off Button” to turn on the robot.

The positions of emergency stop switch and on/off button shown as Pic.

The on/off button is located in the middle of the tray on the front (the screen is facing the front), and the emergency stop is located on the top of the back



6.2 Emergency Stop

6.2.1 When it occurs to an emergency, please press the Emergency Stop asap. To cut out partly electricity and shut down any movement.

6.2.2 Right turn the emergency stop button to relieve the emergency stop.

6.3 Map building

6.3.1 Preparations

- 1) Make sure it a vacant area or with limited people within the area;
- 2) Clear up all the frequently movable objects in the area;
- 3) Regarding to those objects may reflect, transmit and absorb lights, under some conditions permissible, stick several ordinary materials on the plane domain area where laser radar may reflect;

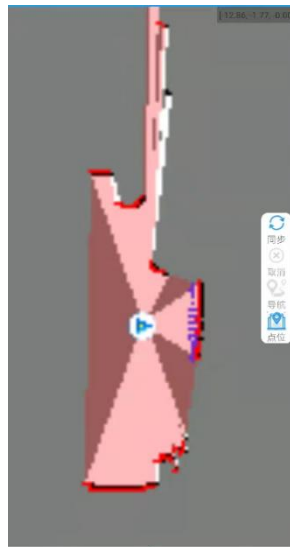
6.3.2 Frequently Disturbed Objects

Before starting mapping, you should figure out what kind of objects that may have an influence on the laser radar that requires us to do several precautions as the case may be. Generally speaking, 70% of light reflective rate will be up to the limit that radar data manual instructs. Attention should be focused that all the environment we are talking is inside the room /indoor environment. Below are several interfered objects:

- 3) Low reflective objects, e.g. light absorbing wall in black, furniture, etc.;
- 4) Glasses;
- 5) Mirror, stainless steel that reflects the objects;
- 6) Other reflective objects.

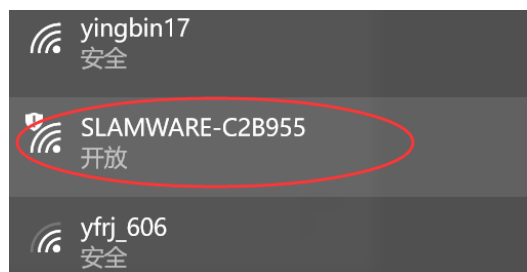
6.3.3 Mapping Steps:

1) Push robots to the **Starting Point** where you turn on the robot. In order to generate a high-quality map, make sure the direction to which robot is facing towards a vertical straight wall (not a curve wall or closed loop area) among the area, no obstacles surround the robot within 1m in case of not interrupt robot to get more valid points, shown as below Pic 4;



Starting point

2) Connect your phone to the WIFI released by the robot router, shown as below Pic ;



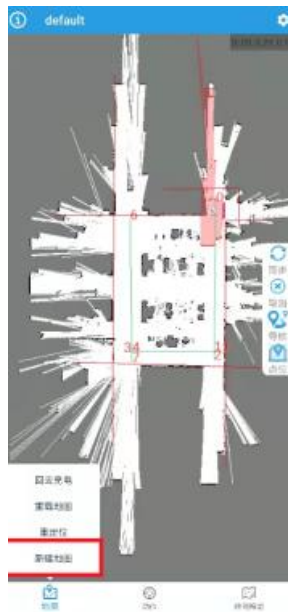
Connect to the robot WIFI

3) Then open the software: CsjRobotStudio.apk, Click "Connect Robot", enter the IP address: 192.168.99.2, then make it connected to enter the mapping pageshown as below Pic ;

If the scanned map is tilted, please turn off the robot and push it to the charging pile to restart it. If you continue to scan the map, the quality of the scanned map is very poor and it is easy to lose the positioning.



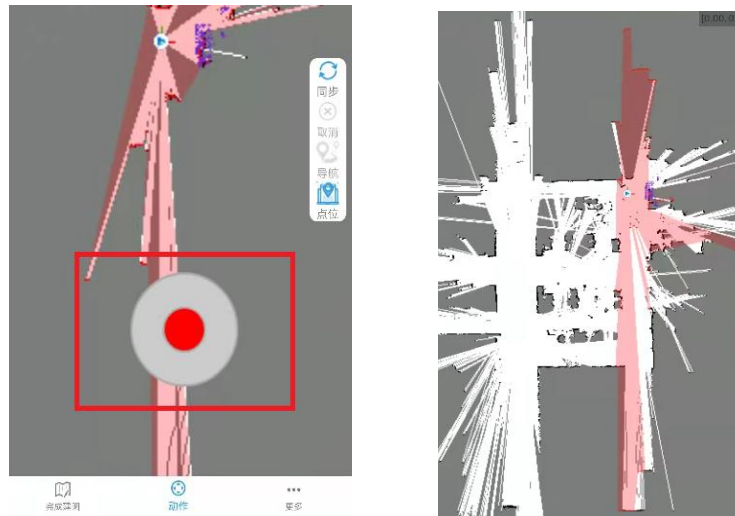
4) After clicking the New Map button, you can start to create a new map, as shown in the following figure:



5) Create new map

After entering the [Map Scan] page, you can use the joystick to control the robot, slide the joystick to control the robot to walk, as shown in the following figure:

When you encounter a turn, you need to wait for a while, let the map refresh in RobotStudio, and then control the walking. Try to ensure the integrity of the map. On the possible walking path of the machine, all the surrounding 360-degree areas need to be detected by radar. The purpose is to increase the integrity of the map and make more reference points for laser matching.



6) Save map

After the map has been scanned, run to the vicinity of the charging pile, and then press the emergency stop button to slowly push the robot to the charging pile.

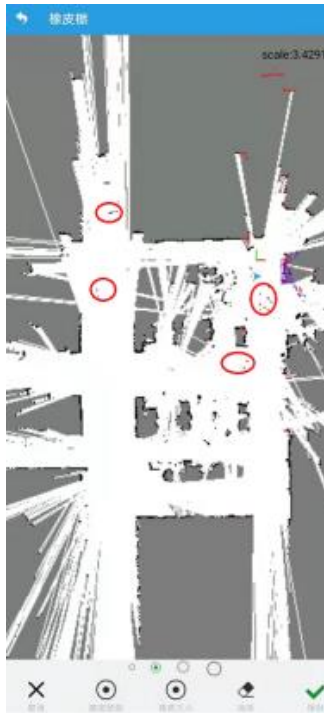
Click the [Save Map] button in the upper right corner to fill in the required map name in the input box. The default is default, if it prompts [the map already exists, please check overwrite], you need to check the [overwrite map] radio button.



7) Edit map: eraser operation

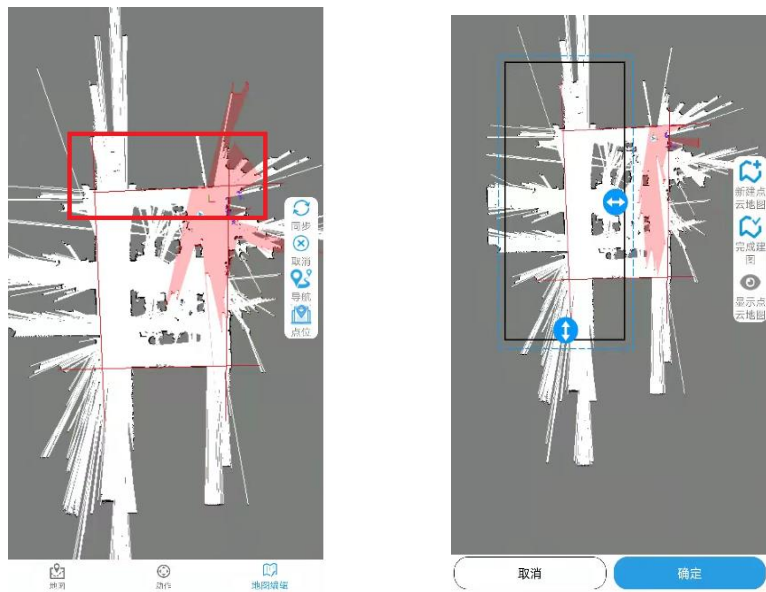
On the homepage (navigation mode), click the [Map Edit] button, click [Eraser], the white eraser can erase moving objects (people in known areas, moving objects), as shown in the following figure:

Drag and drop on the screen to set certain grid areas as black, white or gray areas. At the same time, you can also choose the size and color of the eraser sassafras



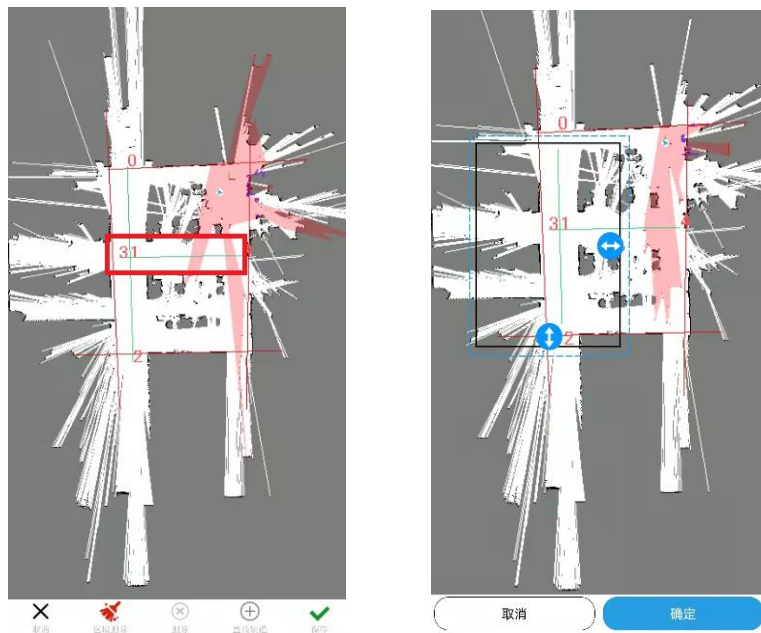
8) Edit map: virtual wall operation

Click the [Virtual Wall] button to operate the virtual wall, add or delete the virtual wall, as shown in the figure below:



9) Edit map: virtual track

Click the [virtual track] button to operate the virtual track, add or delete a linear virtual track, as shown in the figure below:



10) After completing the above, please return to the navigation page and start navigation.

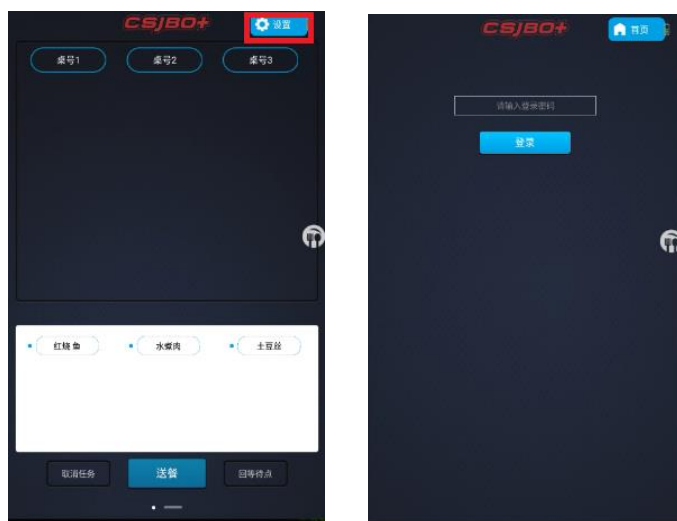
Click the [Return] button in the upper left corner, or the system's [Return] to switch the mode to [Navigation Mode].



Chapter 7 System setting

7.1 Enter Setting Interface

Click the Settings button to enter the password verification interface. The manufacturer default password of the robot is “csjbot”, which can be modified by the user in the setting interface. See the below pic for details.

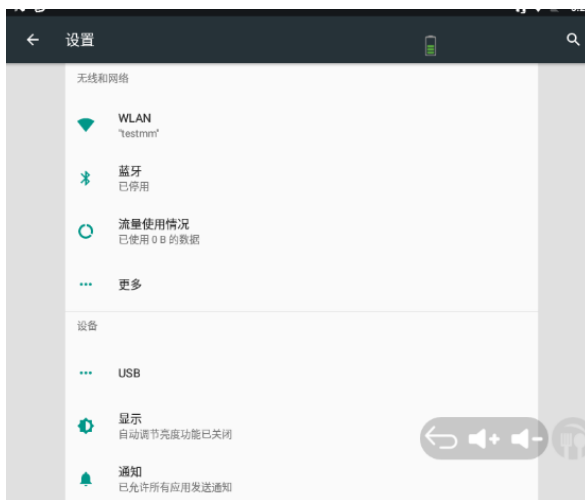


In the setting interface, we can realize many functions: set network, set walk speed, set language, save the map, and manage the power and so on. See the below pic for details.

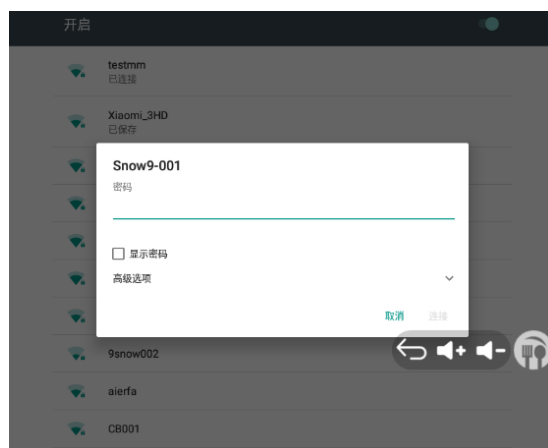


7.2 Network Setting

Click the Network Settings icon to go to the page shown as below Pic.

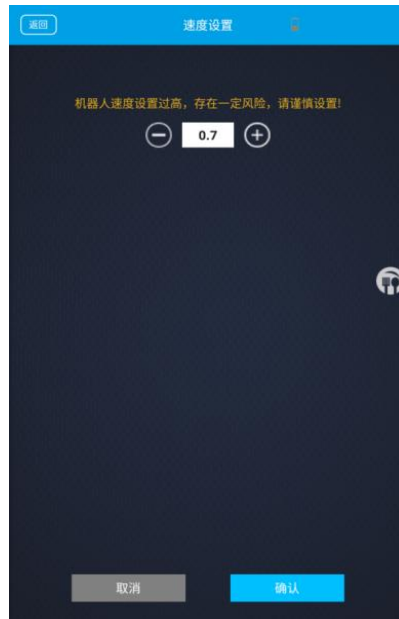


Click Scan, then select a Wifi, enter the network password and click Connect, and click Save when the connection is successful. See the below pic for details.



7.3 Speed Setting

Click the speed setting button to enter the speed setting interface. At present, the speed range is 0.4~0.7m/s, and the default speed is 0.7m/s. If the safety speed is exceeded, there will be a risk warning. Please set it carefully.



7.4 Charging management

Click the button of Charging Management to enter the charging management interface. The user can set the robot charging strategy here.

Charge now: Click the button to return to charging immediately. If there is a charging station, go to the charging station to charge, and if there is no charging station, return to the starting point to charge.



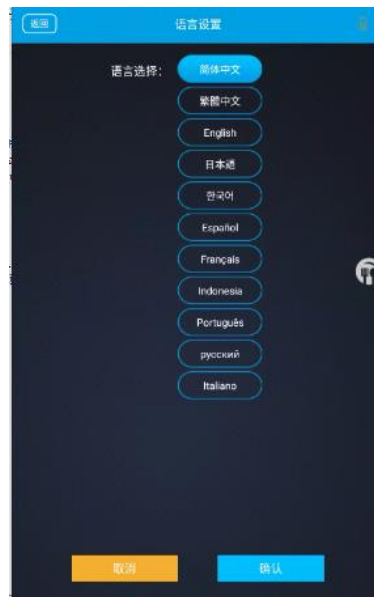
7.5 Language Setting

Click the button of language setting to enter the language setting interface.

Language options: Simplified Chinese, Traditional Chinese, English, Japanese.

Note: The robot's interface and the broadcast contents of each scene will be displayed in selected language

Please see the below for details.



7.6 Restore the Map

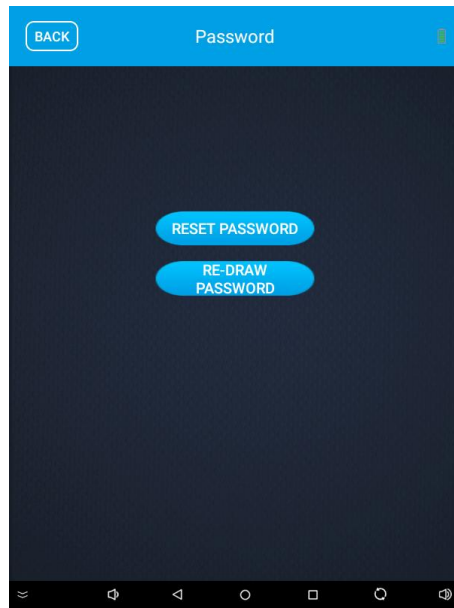
After booting, you can boot from near the boot point, try to choose a place where the reference object is obvious, otherwise the map restoration may not succeed. Click the restore map option in the settings interface, and you can also restore the map.



7.7 Password Management

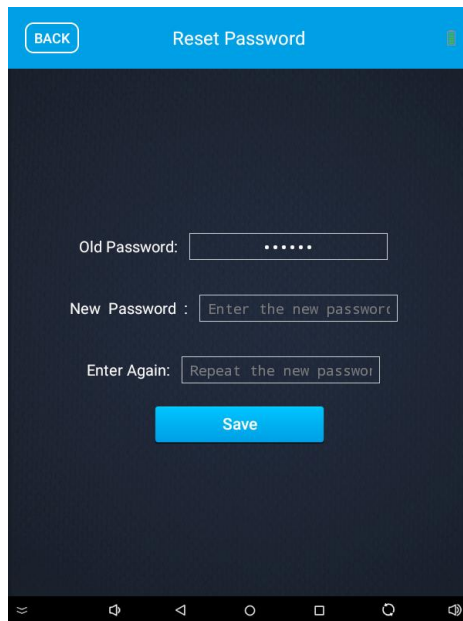
Enter the page of password setting to set the login password and the gesture password.

Please see the below pic.25 for details.



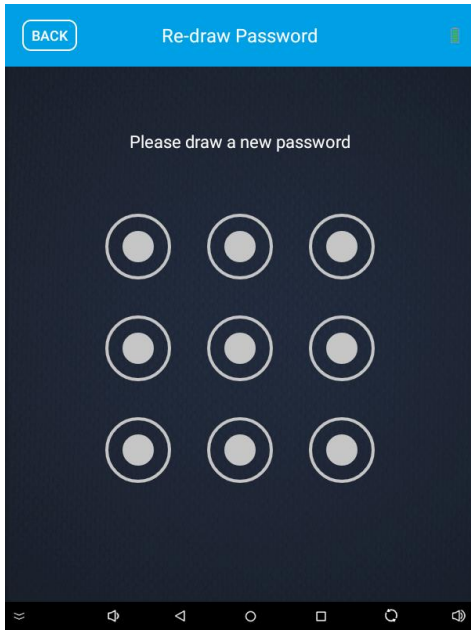
Pic. 25

Click Reset verification password to enter the interface of reset verification password. The default password of the robot is csjbot. The administrator can verify the password according to the actual situation. The password length is between 8~16 digits. When the password are consistent in 2 times: the robot will remind that the password change is successful. Please see the below pic.26 for details.

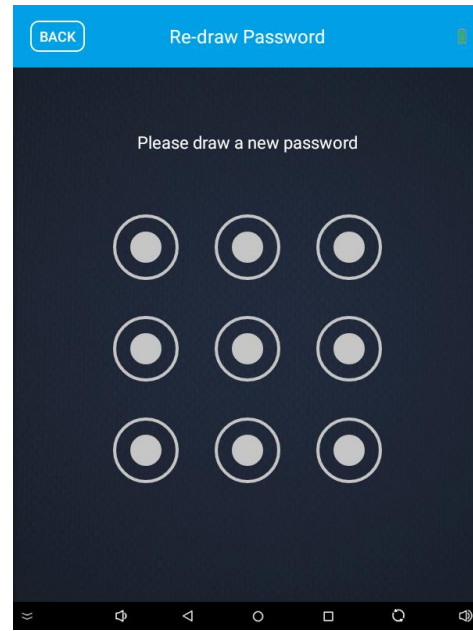


Pic. 26

Click Reset Graphic Password to enter the interface of the reset graphic password. The default graphic password of the robot is L. The administrator can modify it according to the actual situation. For resetting the graphic password, you need to draw the same graphic twice. Please see the below pic.27/28 for details.



Pic. 27



Pic. 28

7.8 Situation Statement Setting

Click Scenario Sentence Setting to enter the Scenario Sentence Setting interface. This interface is mainly to set the content to be broadcast in each context of active speaking.

1. The table number and the name of the dishes are for "delivery arrival".

(1) When the table number is turned on and the name of the dish is turned off and the default context sentence is used, the table number is added before the default sentence (for example, hello, the dishes for table 11 are here, please enjoy it slowly);

(2) When the table number is turned off and the dish name is turned on and the default contextual sentence is used, use the actual dish to replace the'dish' in the default sentence (for example, hello, your Kung Pao chicken is here, please enjoy it slowly) ;

(3) When the table number and dish name are all enabled and the default situational sentence is used, the table number is added before the default sentence, and the actual dish is used to replace the'dishes' in the default sentence (for example, hello, table 11 Kung Pao Chicken is here, please enjoy it slowly);

(4) When the table number and dish name are all closed, the default scenario sentence is used.

2. If no situational sentence is set, the default situational sentence content will be used; if a new situational sentence content is set, the newly set situational sentence content will be used as the situational sentence.

3. Click the speaker on the right to set the context sentence on the right to preview the audio of the complete context sentence.



7.9 About BOT

Click About BOT to enter the About BOT interface, where you can see basic information about the robot. Robot model, Android version, SN number, navigation algorithm version. If you upload the latest version of the Android app and algorithm version in the background, click the android update button to update the Android version, and click the navigation update button to update the navigation algorithm.



7.10 Function switch

Click the function switch option to enter the function switch interface. The functions can be turned on or off .

When the button of locking screen is opened, the lock screen operation will be carried out during the delivery process;

Please see the below pic for details.



7.11 Waiting Point Setting

Click the Waiting Point Settings option to enter the Settings Waiting Point page, and set the starting point of dish delivery task.

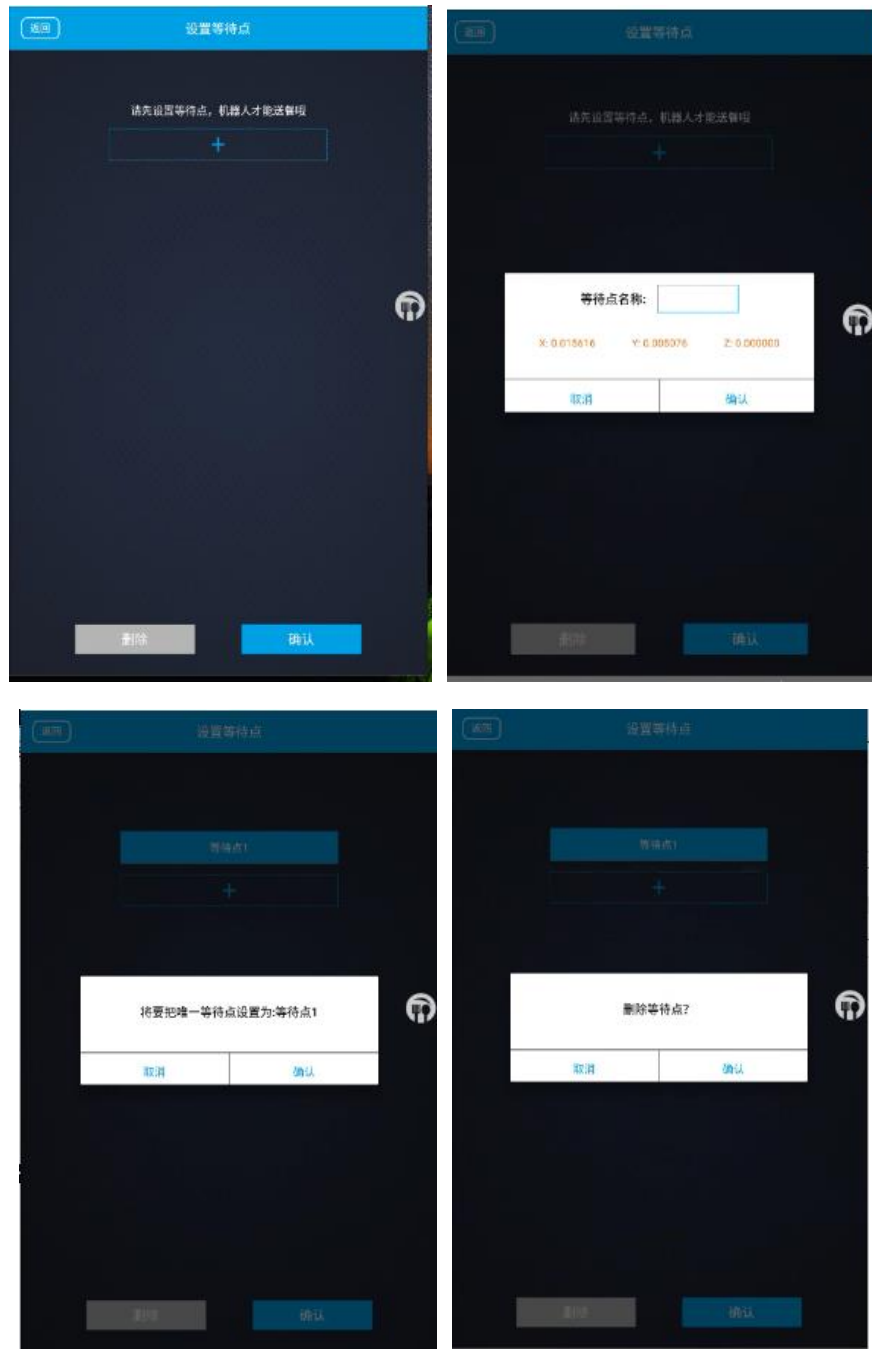
When using the robot for the first time, the system will prompt you to set the waiting point; you can use the delivery function only after the wait point was set.

The user can set up three waiting points at most, and only one waiting point can be used in one time.

The user can add new waiting point to the system or change the current waiting point to a different waiting point.

The waiting points in the system can be deleted.

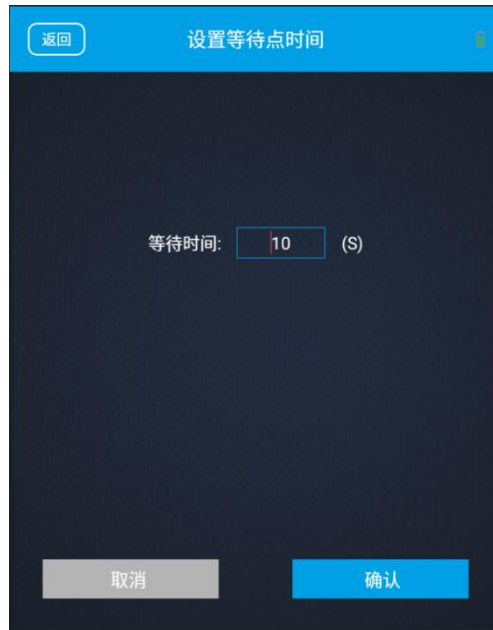
Please see the below pic for details.



7.12 Waiting Time Setting

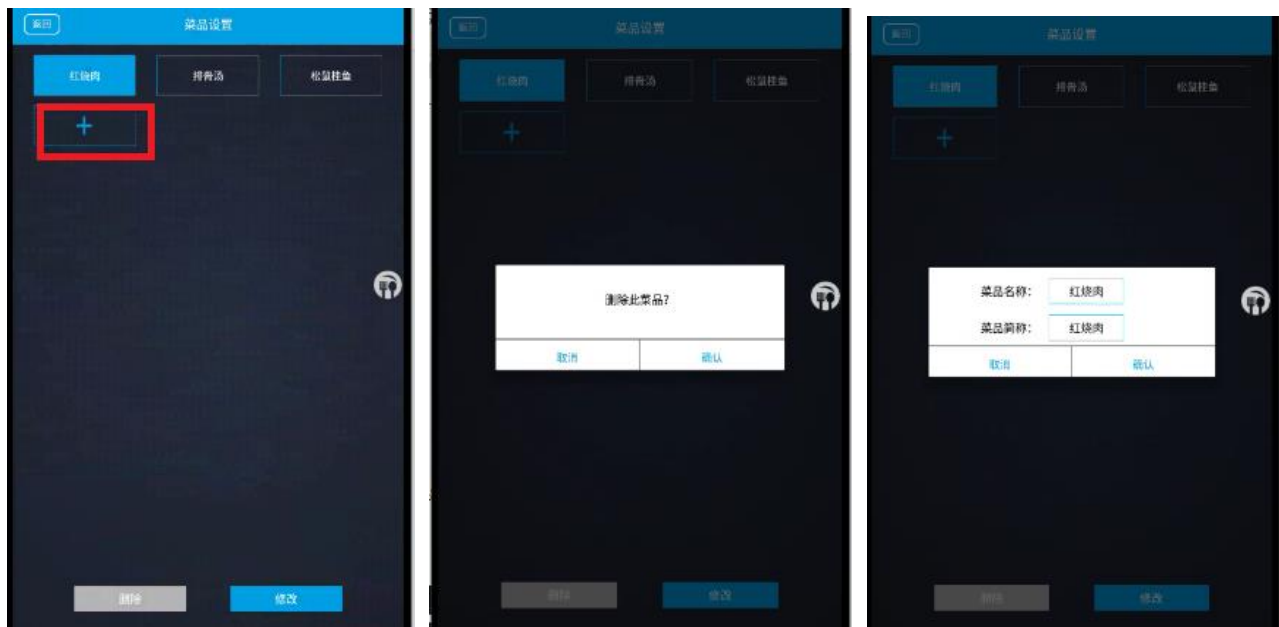
Click the Set Waiting Time option to enter the setting waiting time interface. The administrator can view or set the waiting time for food delivery through the waiting time setting.

1. After the meal is delivered to the table number and the delivery content is broadcasted, the user touches the screen during the waiting time, and the robot returns to the waiting point or delivers the meal to the next table number (for multi-order meal delivery).
2. After the broadcast ends, the time is counted and the user does not touch the screen. After the waiting time is reached, the robot will return to the waiting point or deliver the meal to the next table number (for multi-order meal delivery).



7.13 Dishes setting

Click the dish setting option to enter the dish setting interface. The administrator can add dishes, modify, and delete dishes on this interface.



7.14 Table Number Setting

Click the table number setting option to enter the table number setting interface. The administrator can add, modify, and delete table numbers in this interface, as shown in the figure below. Need to pay attention to the following two points:

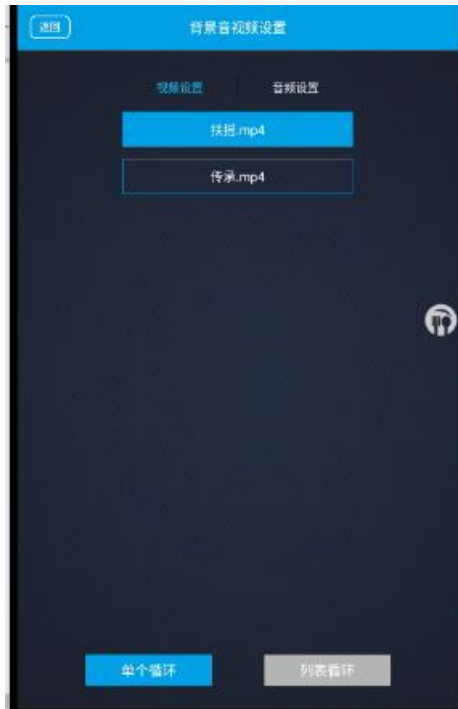
1. The table number corresponds to the map. You need to reset the table number information after creating a new map.
2. The table number information needs to be set before using the meal delivery service for the first time.
3. You can select any table number to modify it.



7.15 Table Number Saving

Click the background audio and video settings button to enter the background audio and video settings interface. The administrator can choose the multimedia playback files during the delivery process.

The background audio and video are played when the meal is delivered, and the playback is stopped when touched or stopped, and the audio and video playback time node is recorded. When the meal is continued, the playback node will continue to play the audio and video. If the meal delivery task is cancelled, the background audio and video will no longer be played.



7.16 Background image replacement

Click the background picture replacement button to enter the background picture replacement page, the administrator can choose the picture (.jpg/.png) and put it under the fixed file directory: Internal Memory/Robot/picture, in the APP settings page, select the background replacement picture page to send Meal playback pictures, you can choose single or multiple pictures.

You can select single cycle mode or list cycle mode.



7.17 Health Condition

Click the health status button to enter the health status query page, and you can view the health status of radar, depth camera, odom, imu, and infrared.



TYPE	LEVEL	VALUE
lidar_health	1	0.8319218158721924
depth_health	-1	0.0
odom_health	1	1.0
imu_health	1	1.0
ir_health	1	0.0

7.18 Status information

Click the status information button to enter the status information page, you can view the firmware version information: main control board information and power management board information.



名称	品牌	序列号	运行状态	固件版本
主控板	STM32H743	010101017792858 H	OK	9_Main_Board_Amy V2.0.0
电源管理板	STM32F103	010101011619571 S	OK	9_Power_Board V2.0.0

7.19 Application exiting

Click the Exit Application button, and the system prompts "Whether to exit the application" pops up, and you can choose whether you want to exit the application.



Chapter 8 Dish Delivery

The mode of delivery includes single mode, multiple mode and circle mode, for normal delivery, please confirm whether the map is restored, whether the table number and waiting point is set, whether the data needs to be synchronized. Whether the background music settings, scene statements, lock screen switch settings are correct. During the delivery , if the power is low, the current delivery task will be cancelled and charged according to the charging management method.

8.1 Multiple Mode

Home page is a multi-point delivery interface, in which you can create a delivery task, delete the delivery task, start delivery, cancel delivery, return to the waiting point.

Choose the table number and the menu , the task content in the tasks window. The table number is selected, and the dishes are optional.

Click the Delete button to delete the meal assignment.

Click the delivery button to start serving meals.

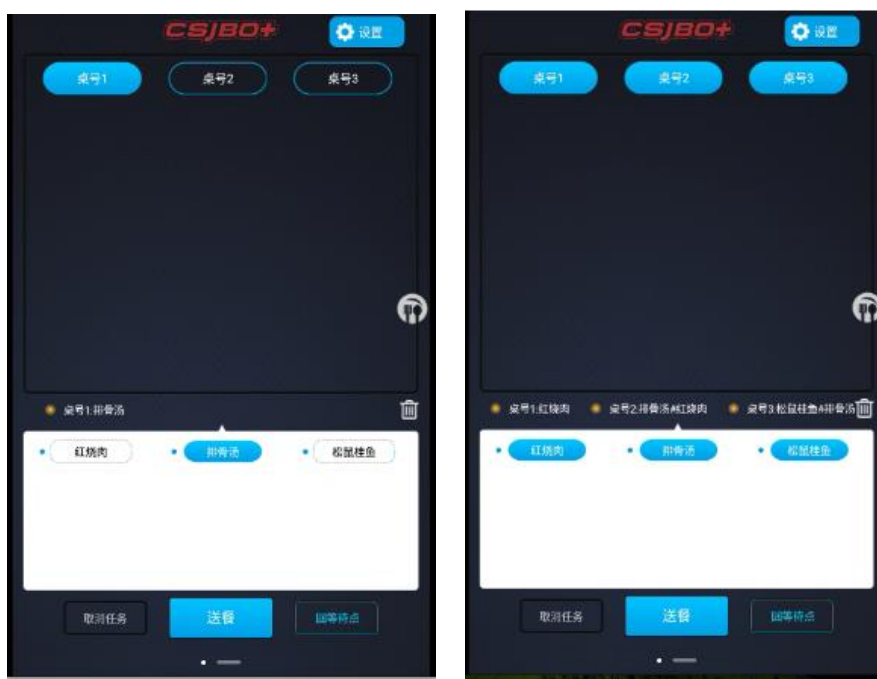
Once "Delivery Lock Screen" opens, the screen locks after click confirm delivery, the interface display pictures or videos.

Once "Delivery Lock Screen" closes, the screen stay on the home page, the interface display delivery task or rotated pictures.

Once the "dining lock screen" is opened, and users need to unlock the gesture when they want to operate.

During the delivery , users can click Cancel Task button to cancel the delivery task.

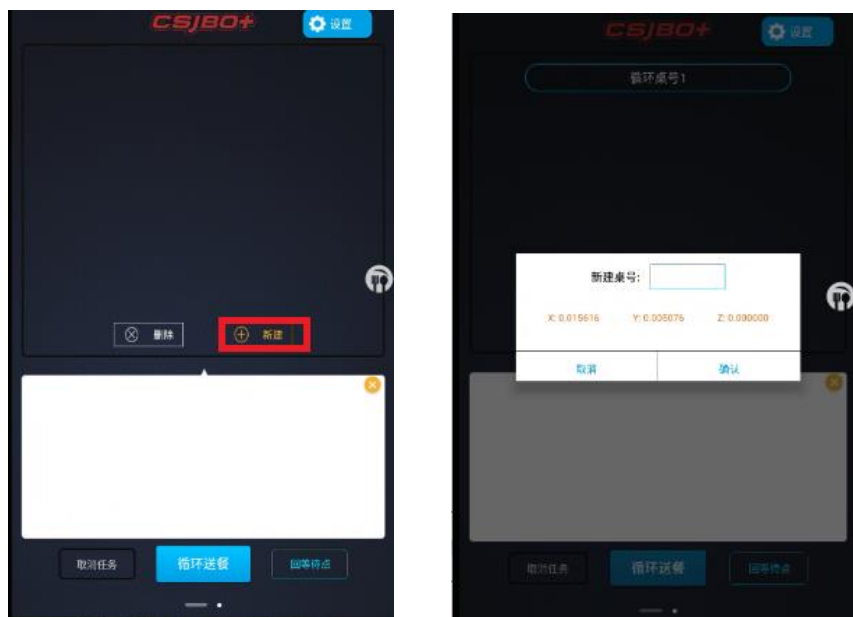
Click back to wait point, the robot can immediately return to the waiting point.



8.2 Circle Mode

Click the “Set Up” button to add the table number to circular table list .

Please see the below pic for details.



In the circular table number list, select the table number to delete. Click Delete to delete the circular table number.

Please see the below pic for details:



Click the table number in the circular table list to add circular tasks.

Click the Delete button to delete the circular task.

When the cycle task is more than or equal to 3 tasks, the cycle meal can be served.

During the delivery, a rotating picture or video is displayed.

For other operations, you need the unlock gesture .

Click Cancel button to cancel the cycle delivery .

Click Back button to return to the waiting point.

Chapter 9 Best practical

9.1 The robot starts on the charging pile.

recharging or navigation or map building functions. It will automatically start into the Android APP, and the BOT option in the settings , Confirm that the robot information is correct, refer to 7.9.

9.2 New map creating

Open the scanning software on the mobile phone, create a new map, save the map, and edit the map. Refer to 6.3 for the detailed process.

9.3 Delivery task

1. Set the delivery table number and cycle table number in the Android APP, set the dishes, and set the other settings

according to your needs. Reference seven.

2. On the homepage of the Android APP, select the task table number and dishes (the table number is required, the table number can be more than one, you can select up to 10 tables at the same time, and the dishes are optional), click the delivery button to start the delivery task, the task ends, and you return automatically Waiting point, during the delivery process, click the cancel task button to cancel the delivery task at any time.

During the delivery process, click Return to waiting point, it will immediately return to the waiting point.

3. On the cycle delivery page, click the New button to create a cycle delivery table number. At least 3 cycle table numbers must be selected before the cycle can be delivered. Click the cycle delivery button to start the cycle delivery task. During the cycle delivery process, Click the cancel task button to cancel the cyclic meal delivery task at any time. During the cycle of food delivery, click to return to the waiting point, and it will immediately return to the waiting point.

Chapter 10 Maintenance

10.1 Charge

It takes as long as 10 hours each time for charging to ensure robot run for 12 hours or more, please promptly charge in time.

10.2 Motor Clean

In the robot's normal walking process, it is inevitable to stick debris on robot's wheels which shall kill the service life of motor.

Therefore, general cleaning cycle is accumulated working for one week.

10.3 Laser Wipe

Users need to clean up laser surface after being in use for a period of time, and please use the specified lens paper to wipe for maintenance. General cleaning cycle is accumulated working for one month.

Chapter 11 Packaging and Handling

11.1 Inner Packaging

In the product turnover (place or workplace transfer), please note that with the winding film from the bottom up evenly wrapped around 2 to 3 layers to protect the outer surface, to prevent scratches, dust, and dirt.

11.2 Short Distance Handling (including the City Chartered Vehicle)

1. In the level of the cement floor or floor on the ground, can manually push the robot to walk, walking speed of not more than 15 m / min.

Note: It is strictly forbidden to manually drive the machine while the robot is powered or working.

2. In the loading and unloading truck, up and down the stairs or more (more than 2mm), slope (more than 10 °), when the outdoor asphalt road, are to use the company's special packaging, pay attention to the following operating practices and procedures will be fixed in the robot Tools, and then the corresponding handling and loading and unloading work

(1) Two adult men (height 1.6 meters above) from the sides of the robot, one hand at the bottom of the box, the other hand holding the middle of the box at the same time raised 15 ~ 25cm high, moved to the top of the special handling tools, In the middle of the tool plane.

(2) Two adult men (height 1.6 meters above) from the robot on both sides, one hand at the bottom of the box, the other hand holding the middle of the box at the same time lift, get off, steps.

(3) When loading, the internal height of the vehicle must be greater than 1800mm, and the robot and the truck interior box through the rope fixed, the machine and the car wall, between the machine and the machine need to use 2cm thick foam cotton filled to prevent bruises.

11.3 Long-Distance Transport (including Logistics Transport, Chartered Vehicle)

Transport needs to use the dedicated packaging and external packing box (company provided) filling method