

用户使用手册

User Manual



Initial Release
November 30, 2021
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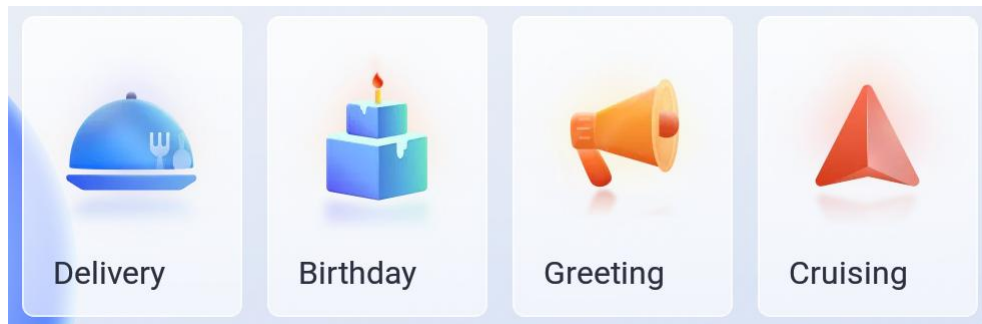
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1. Product Description

This is a service robot designed for indoors food delivery, cursing around, greeting and attracting customers, recycling plates, providing service and package delivery. It can be used in restaurants, hospitals, supermarkets, Karaoke business, coffee shops, Administration Service Halls, 4S shops, etc.

Product Features



- Delivery: The robot delivers food to the table for customers. After the food is picked up, the robot will return on its own.
- Birthday: The robot delivers birthday dishes, plays birthday songs and gives audio birthday wishes.
- Greeting: The robot greets and attracts customers by displaying images, playing videos and audios.
- Cruising: The robot gives away snacks and other objects and plays promotional advertisement while cruising around, saving human much labor

Diagram:



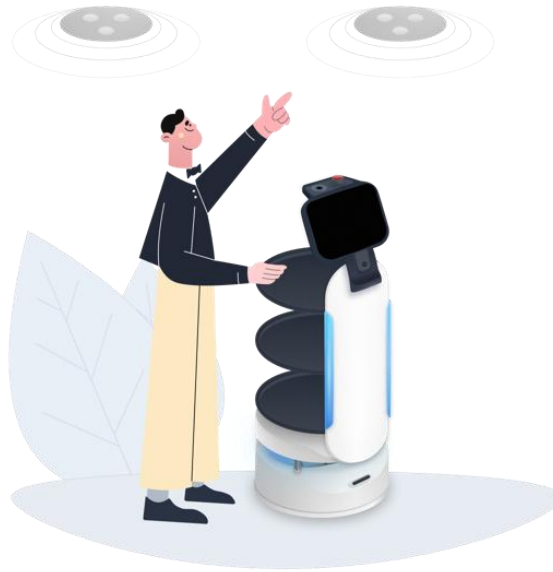
2. Getting Started

Power on the robot and start using it.

Note: before first used, the robot needs to be activated and given route plans by a designated staff. Please refer to the SOP document for this.

2.1 First step: Acquire position

To ensure the robot roll out as intended, please push the robot to stand under the positioning marks.



Note: The positioning marks are the plates stuck at the ceiling.

2.2 Second step: Power on & Run system check.

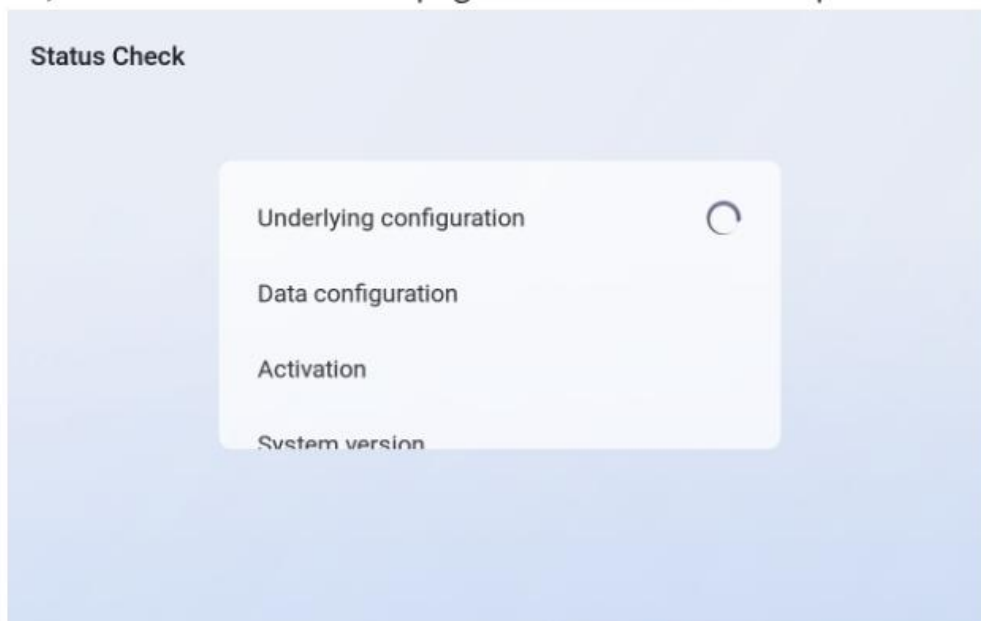
1 Hold and press the power button

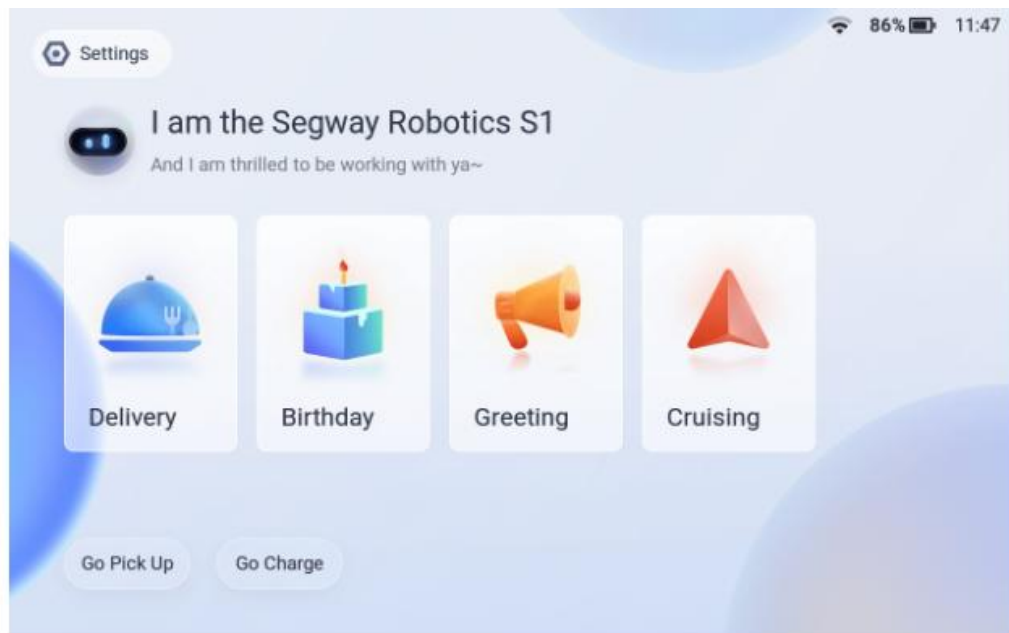
until the screen lights up.



2 Enter the home page after Status Check

The Status Check starts automatically when the robot is powered on; it will land on the home page after the check is completed.





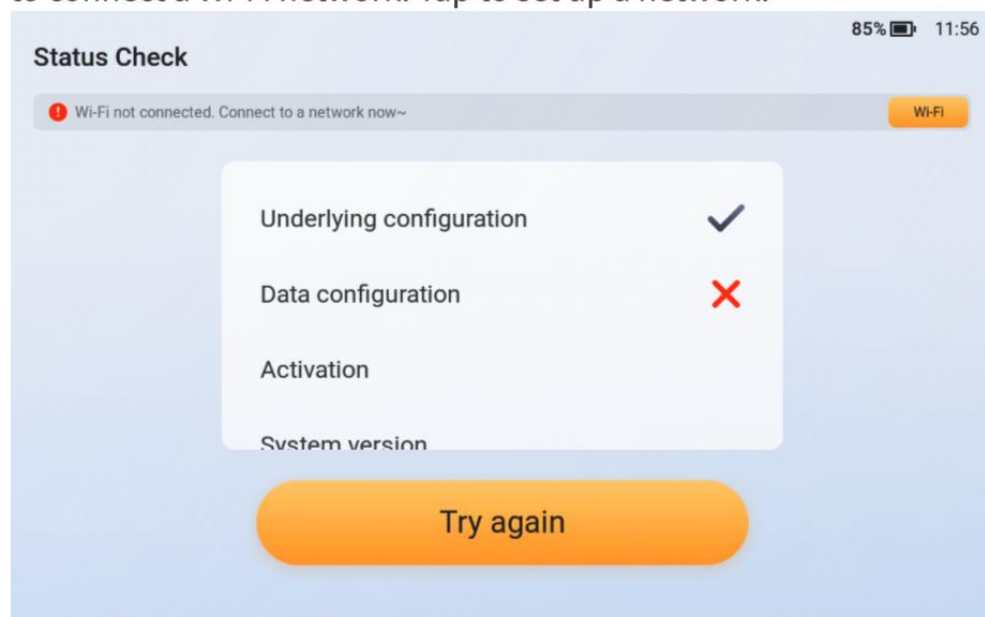
2.3 Third step: Connect to the internet

If internet connection works, it will lead you directly to the home page; if not, you need to connect to a Wi-Fi network first.

How to connect:

1 Wi-Fi not connected

During the Status Check, the notification will pop out prompting you to connect a Wi-Fi network. Tap to set up a network.



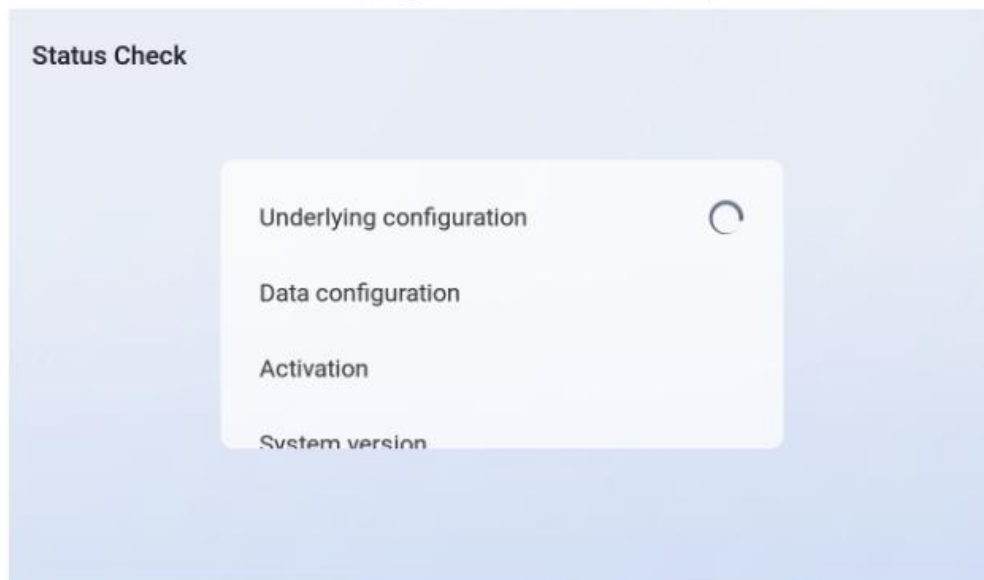
2 Connect to Wi-Fi

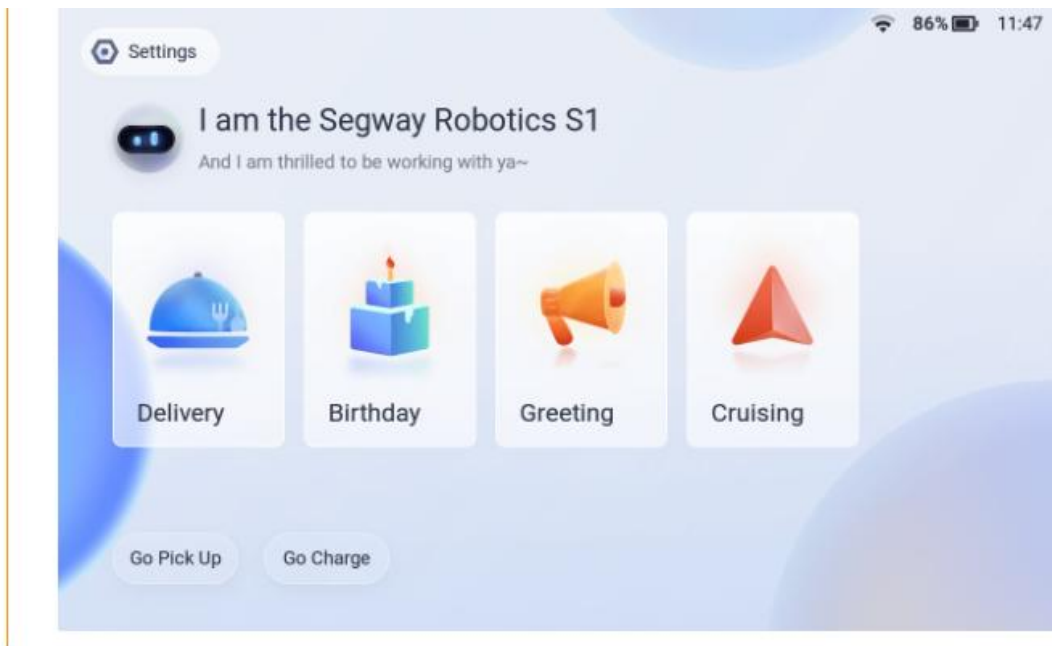
Tap the Wi-Fi button and it will lead you to the page below; select and connect to a network and tap **Done**



3 Home page

Return to the Status Check page after Wi-Fi is connected to continue; It will land on the home page after check is completed.





3. Features

3.1 Delivery

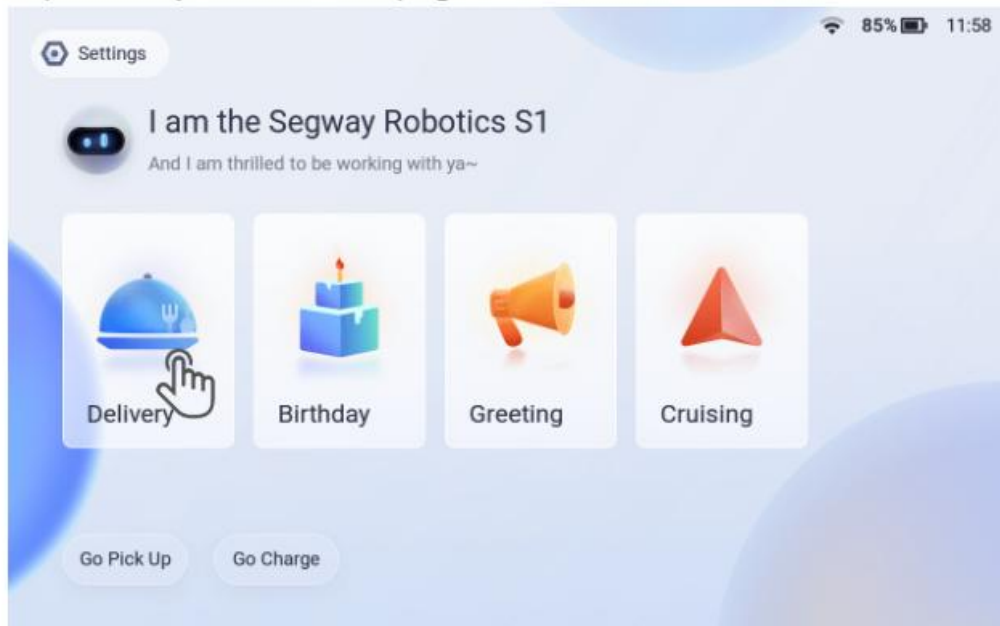
When you've placed the food on the trays and selected the corresponding table number, the robot will deliver the food according to the chosen order.

Note: To Enable/Disable **One to Many**, please go to **Settings** > **Trays** > **One to Many**.

3.1.1 How to use this feature

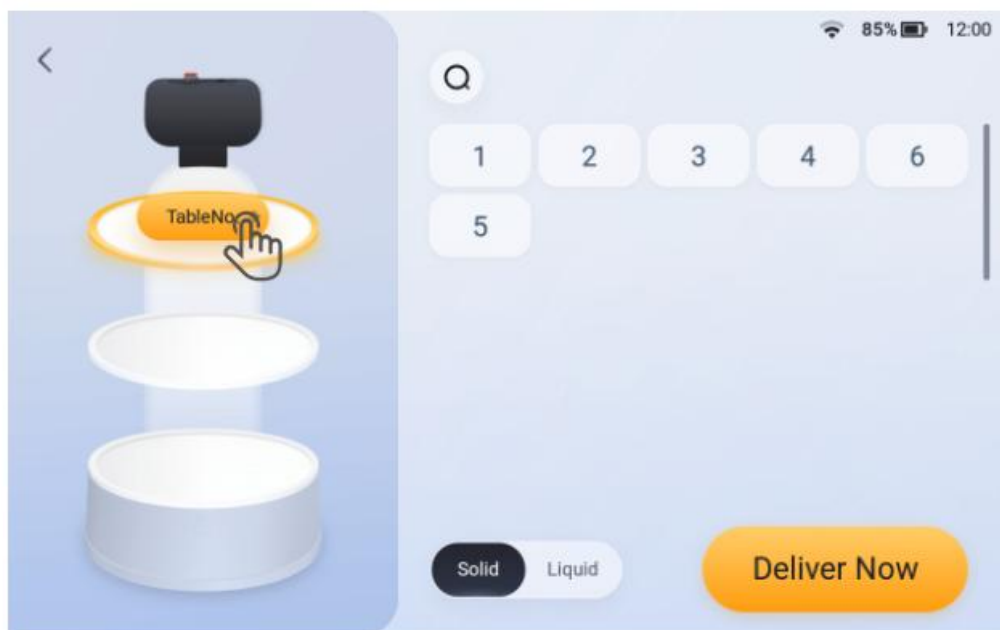
1 Select Delivery

Tap Delivery on the home page.



2 Select a table number

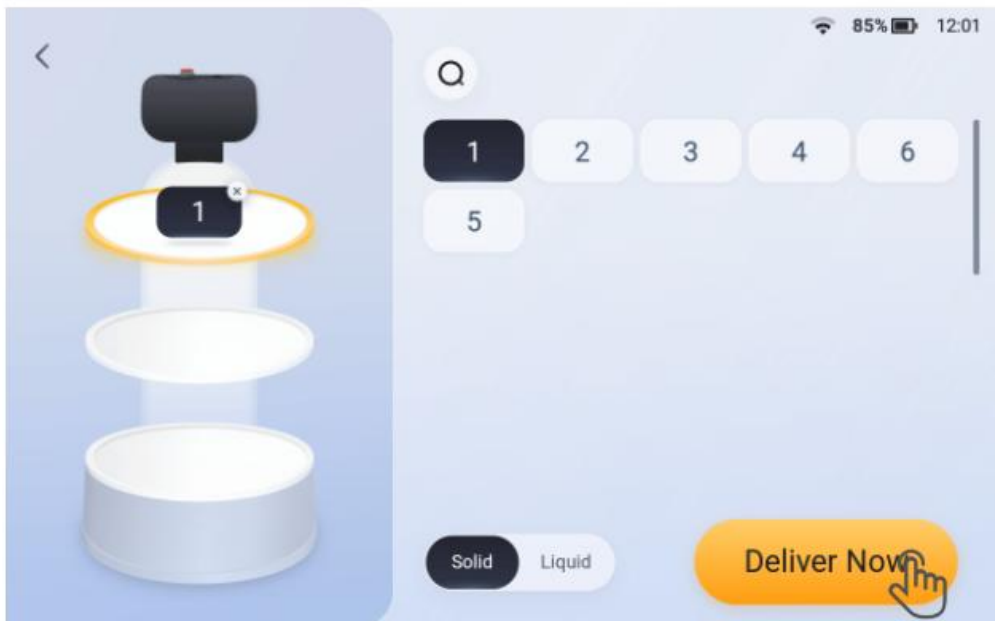
Select the intended table number.





3 Start delivering

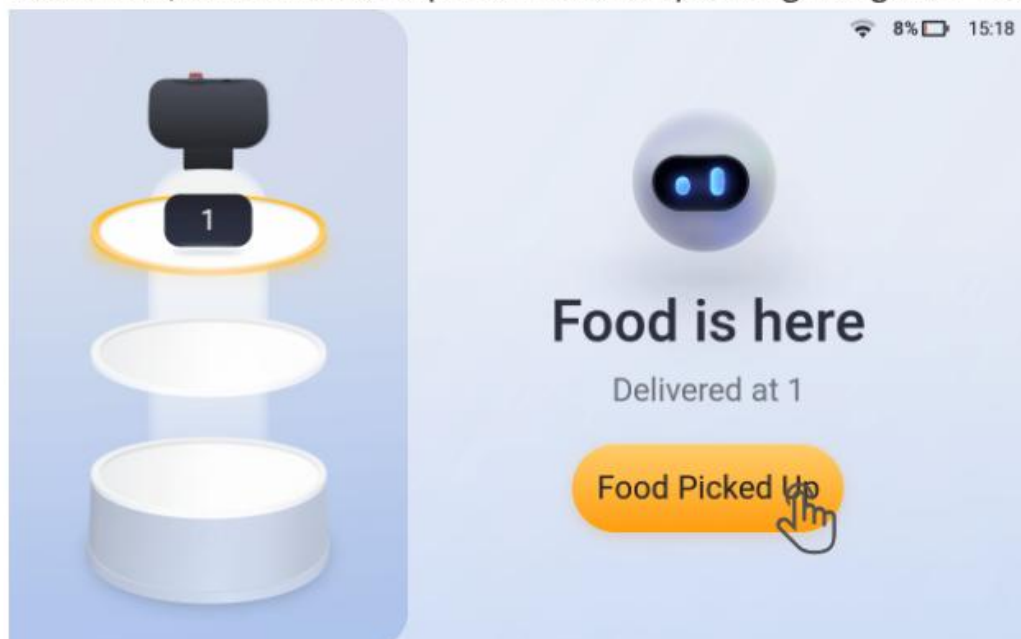
After selecting the table number, tap "Delivery Now" and the robot will roll out to deliver food.





4 Reach destination

When arriving at the intended table, the robot will notify the customers, who needs to tap Food Picked Up after getting their food.



5 Delivery finished

After delivering all the food, the robot will return on its own.

3.1.2 Delivery order

- **Closest first**

Deliver food to the closest table first and work along the route.

- **Customize order**

Deliver by the order of your choice.

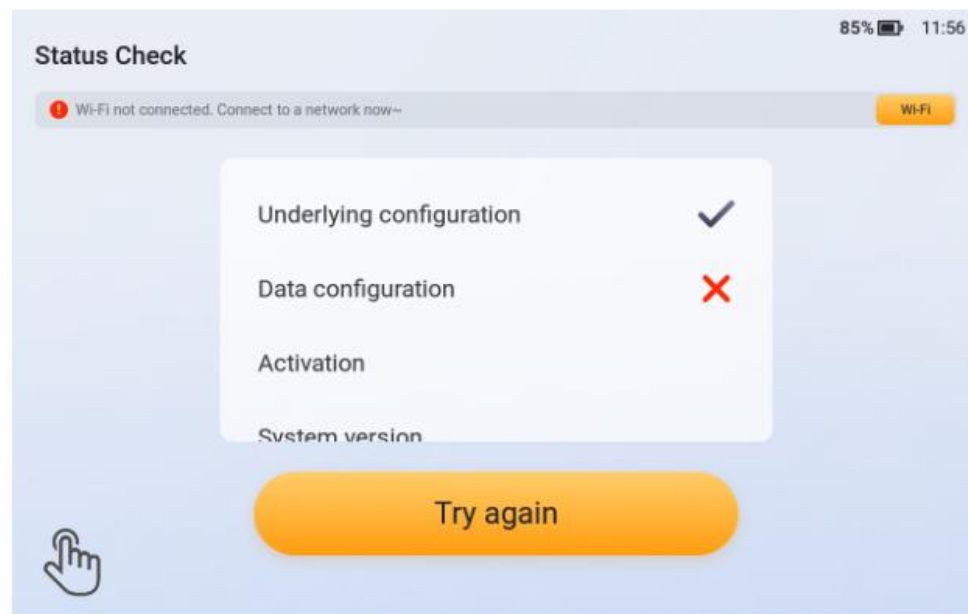
- **Top to bottom**

Deliver the food on the top tray first and work its way down.

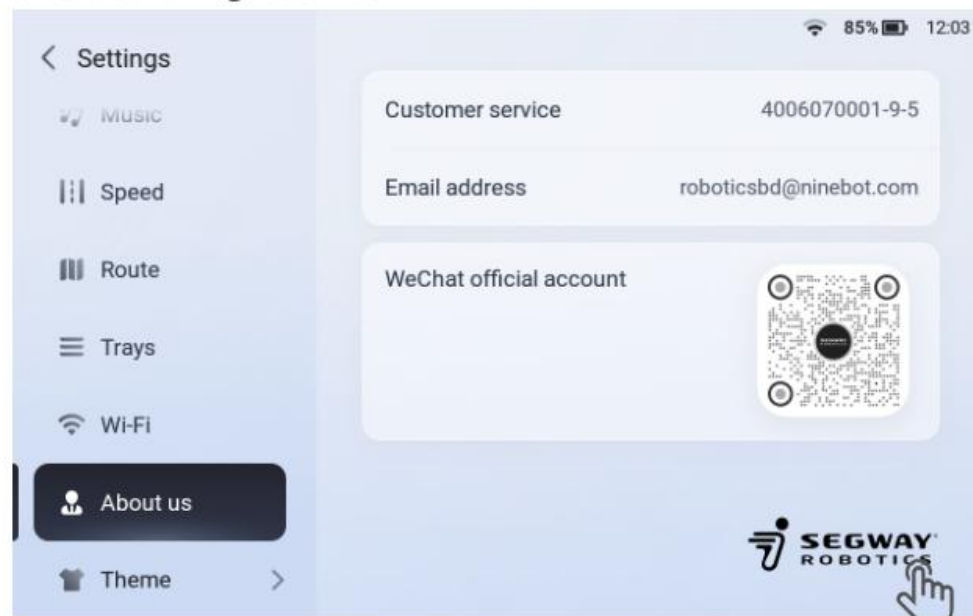
How to choose the Food Delivery Order

1 Advanced settings

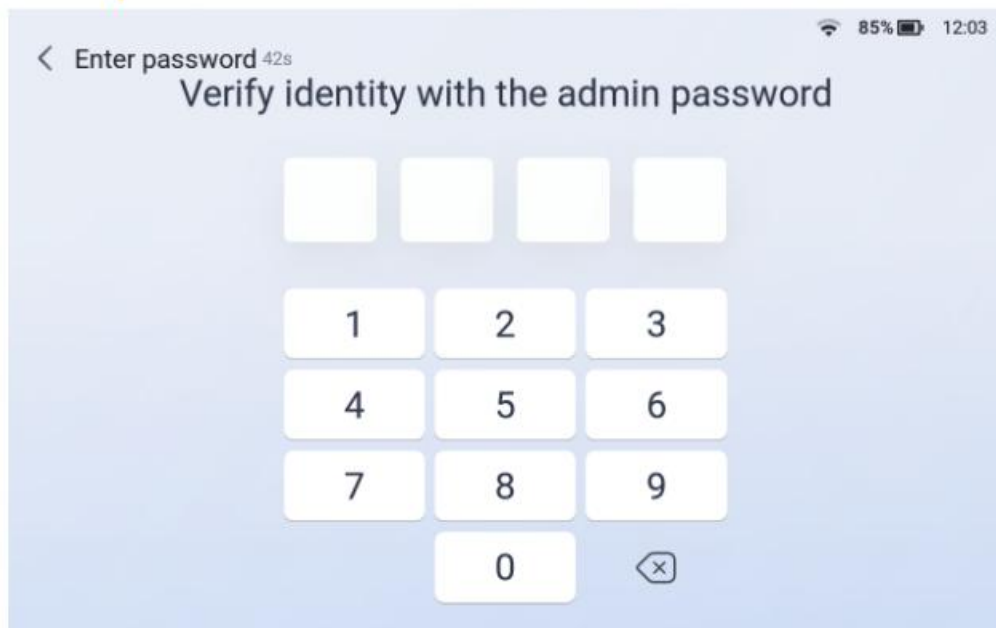
1. During the Status Check, repeatedly and quickly tap the lower-left corner.



2. Tap **Settings > About us** and repeatedly and quickly tap the logo on the lower-right corner.

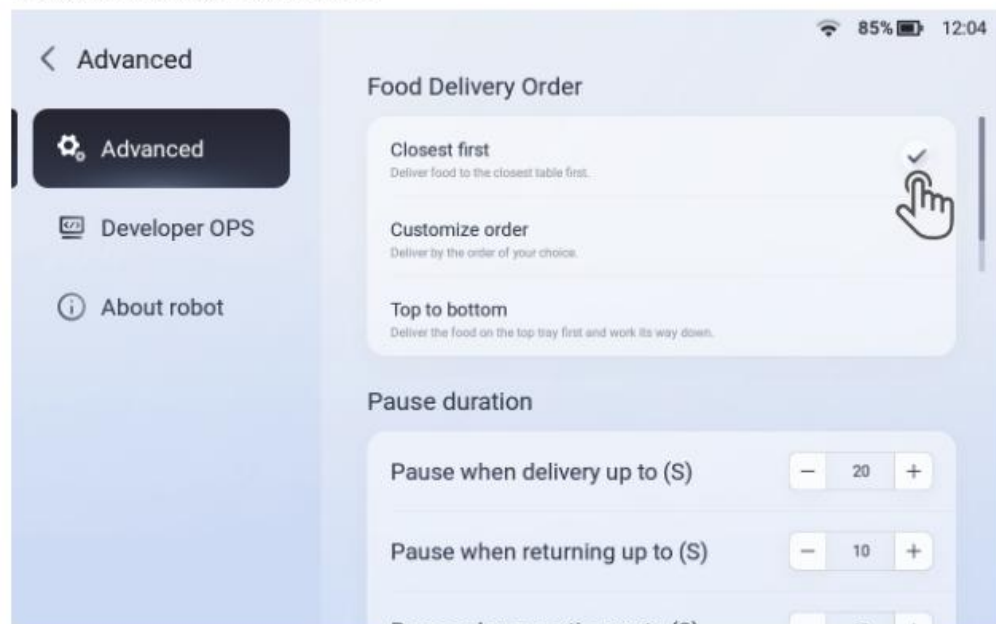


2 Enter password



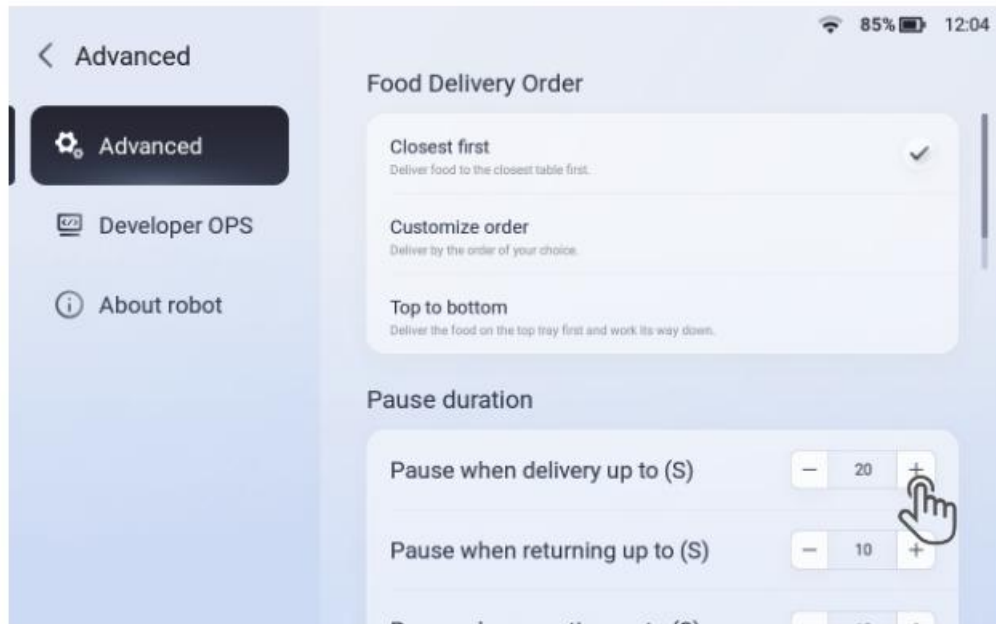
3 Food Delivery Order

Select the desired order.



4 Pause duration

Tap the add/minus icon to adjust the Pause duration.



3.1.3 One to Many

- Enable **One to Many** (Default setting)

One tray holds food for multiple tables so that the robot delivers for many tables at one run (advantage: improve the delivery efficiency).

- Disable **One to Many**

One tray holds food for only one table (advantage: no need to worry about picking up someone else's food).

How to enable/disable it:

1 Switch to One for Many

Tap **Settings** > **Trays** to switch on/off **One for Many**.



3.1.4. Pick Up Now

If you need pick up the food in advance before it reaches the intended table, a few steps will do.

Steps:

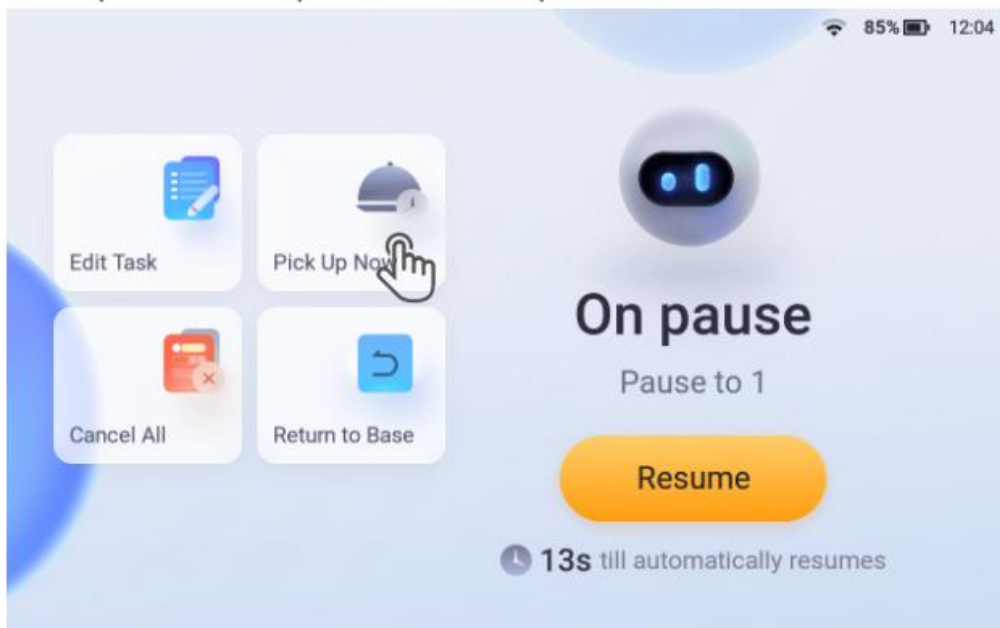
1 Pause

Tap the screen or press the emergency stop button to pause the robot when it is delivering.



2 Pick up food

Pick up food and tap Food Picked Up.



3.1.5 Cancel All

Cancel all ongoing delivery tasks and go back to the home page.

How to cancel all:

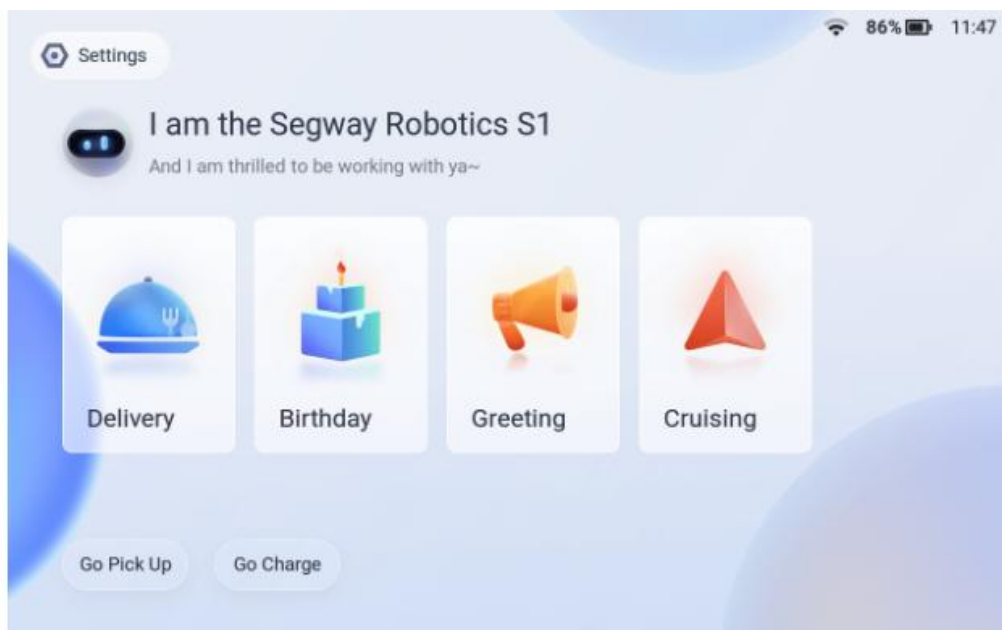
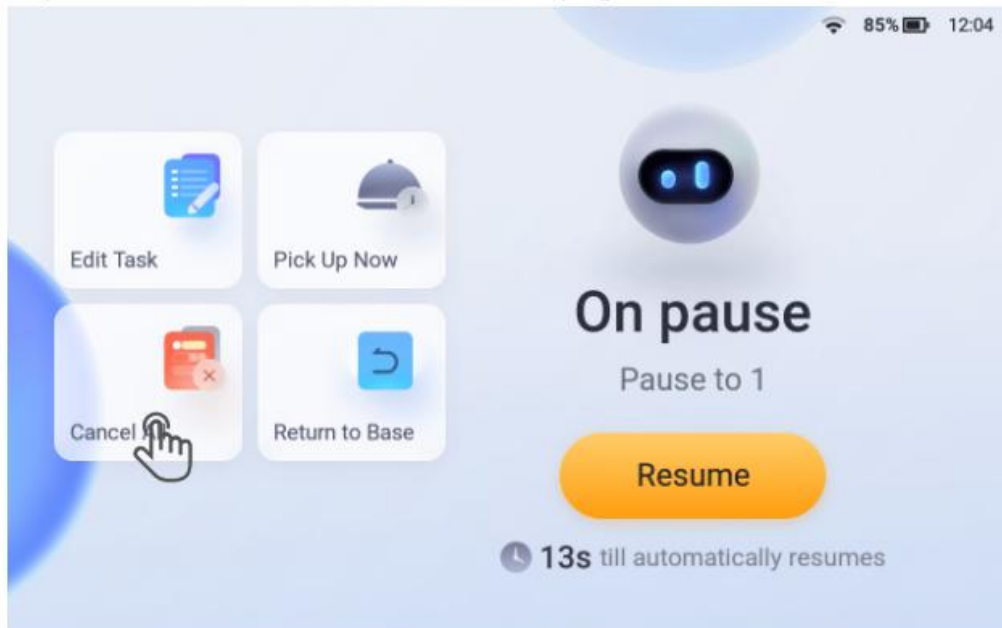
1 Pause

Tap the screen or press the emergency stop button to pause the robot when it is delivering.



2 Cancel ALL

Tap **Cancel All** to return to the home page.



3.1.6 Edit Task

When the robot is on its way to delivery, if you need to change the destination, you can edit the task.

How to edit task:

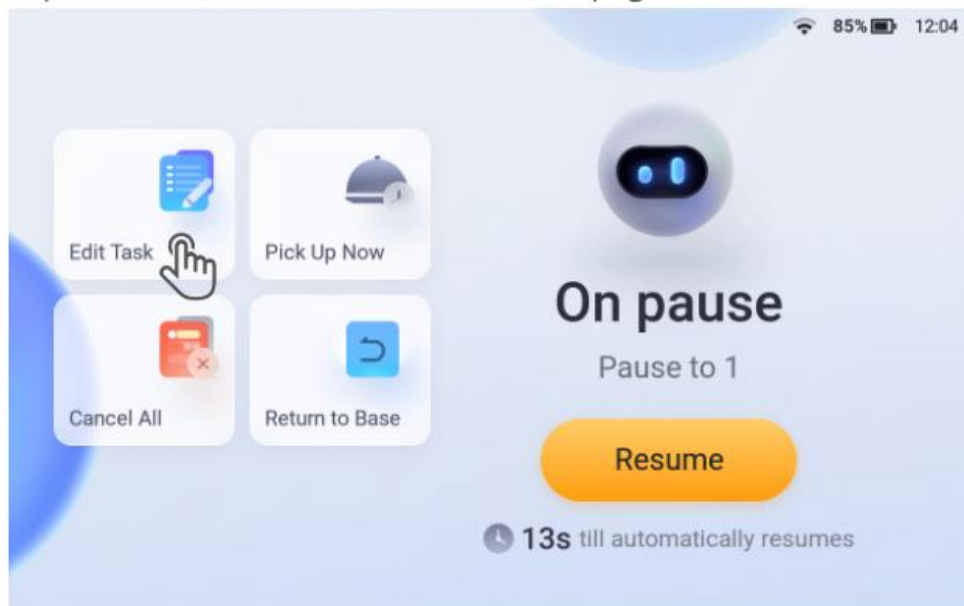
1 Pause

Tap the screen or press the emergency stop button to pause the robot when it is delivering.



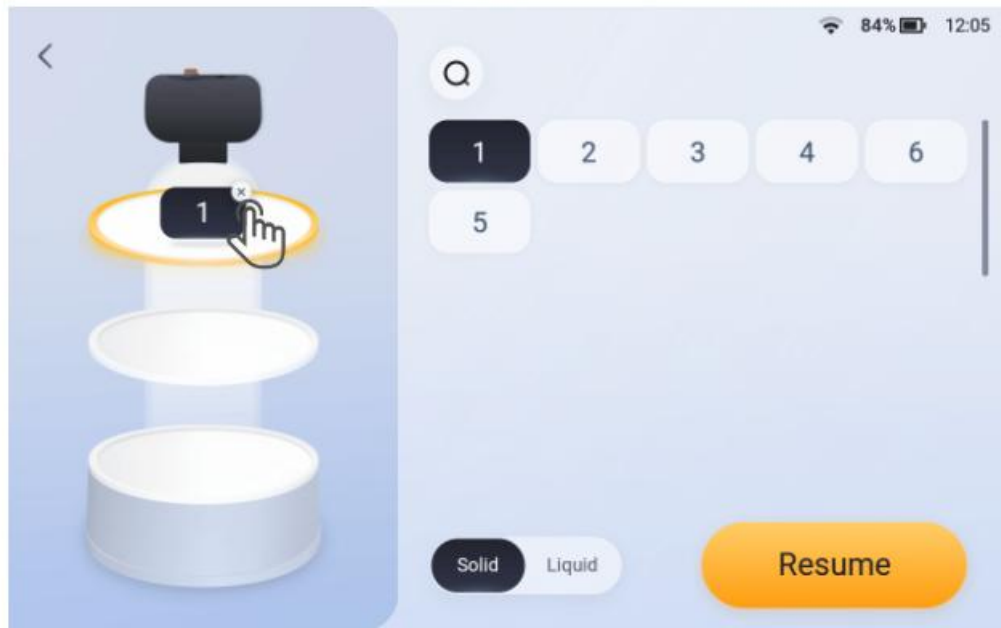
2 Edit Task

Tap **Edit Task** to enter the table number page.

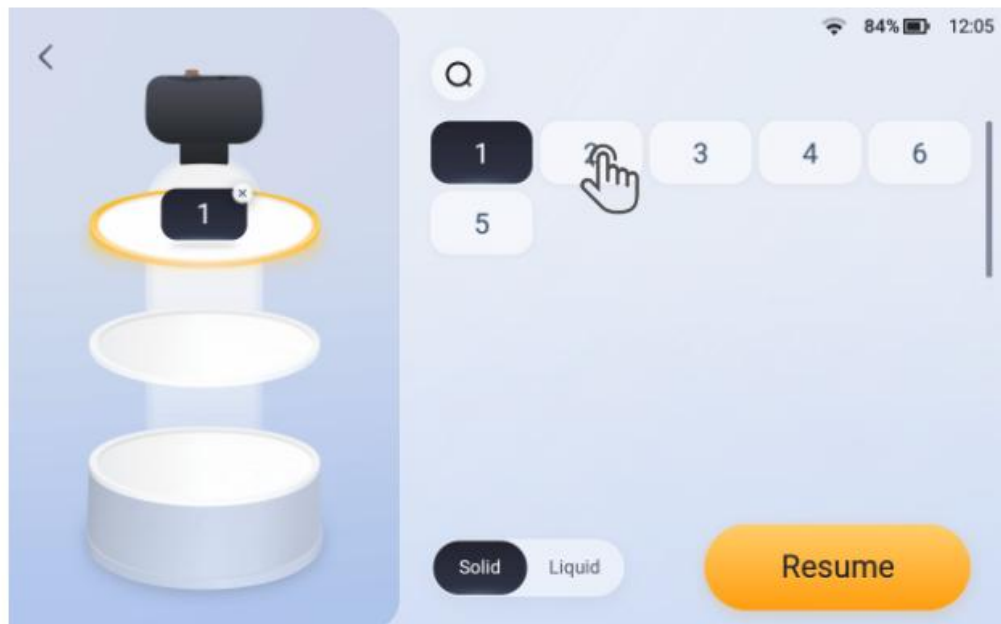


3 Edit table number

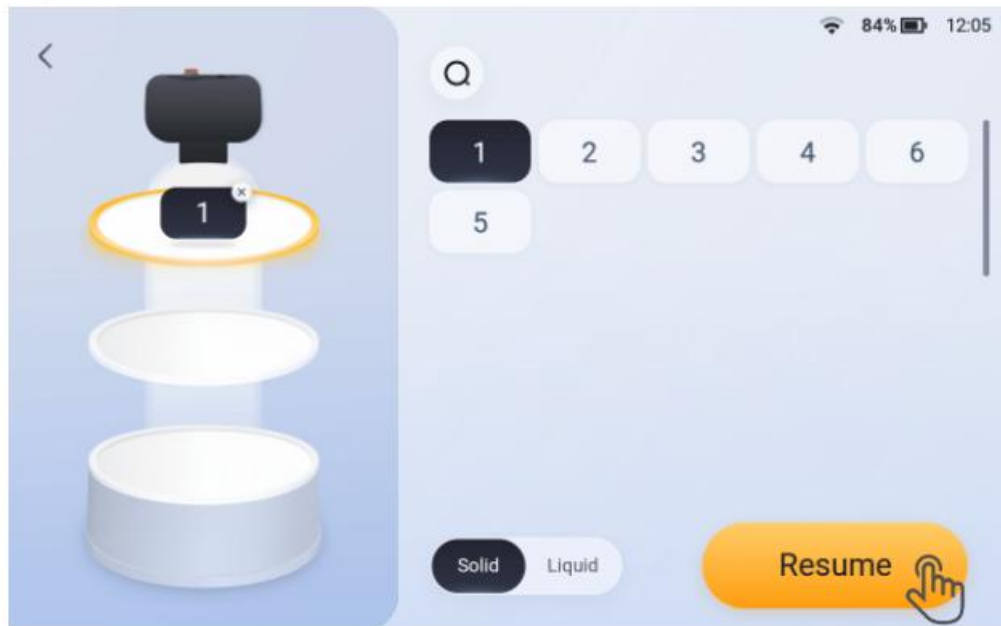
Tap the tray whose destined table number you want to change.



Select a new table number.



Tap Resume



3.1.7 Return to Base

This means the robot will return to where it starts (the pick-up site).

How to return to base:

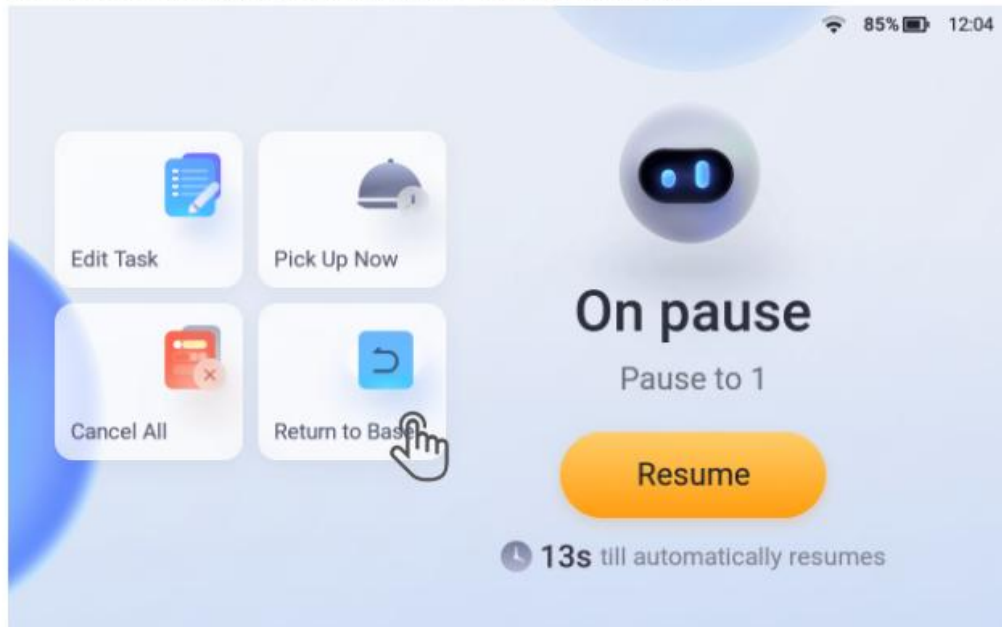
1 Pause

Tap the screen or press the emergency stop button to pause the robot when it is delivering.



2 Return to Base

Tap Return to Base and it will lead you to the corresponding page; the robot will start returning to the pickup site.



3.2 Birthday

If it is a customer's birthday, the robot can make a special run to deliver the birthday dishes, during which, it can also play the customized birthday song, creating a romantic atmosphere for the customer.

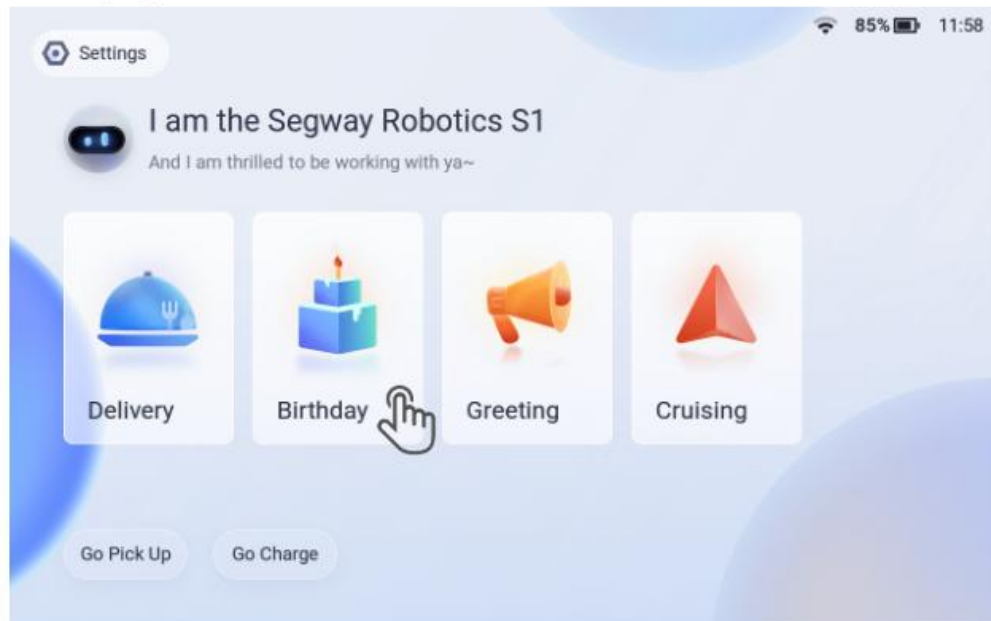
In Birthday mode, the robot delivers for one table at one run.

NOTE: Edit Task, Pick Up Now, Cancel All, Return to Base are all available in the Birthday mode and the steps are the same as those in the Delivery mode.

How to use this feature:

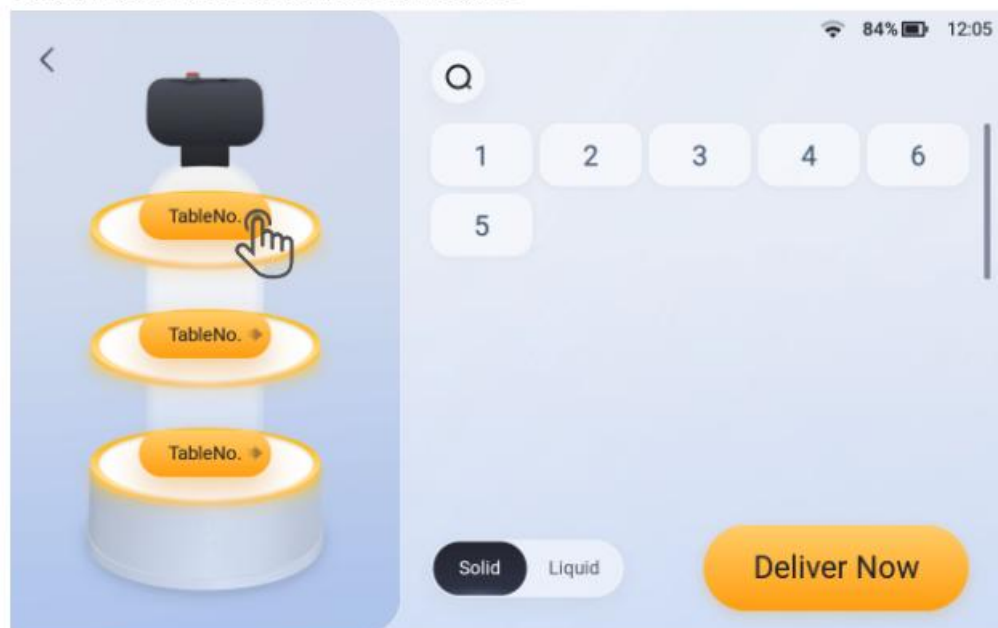
1 Select Birthday

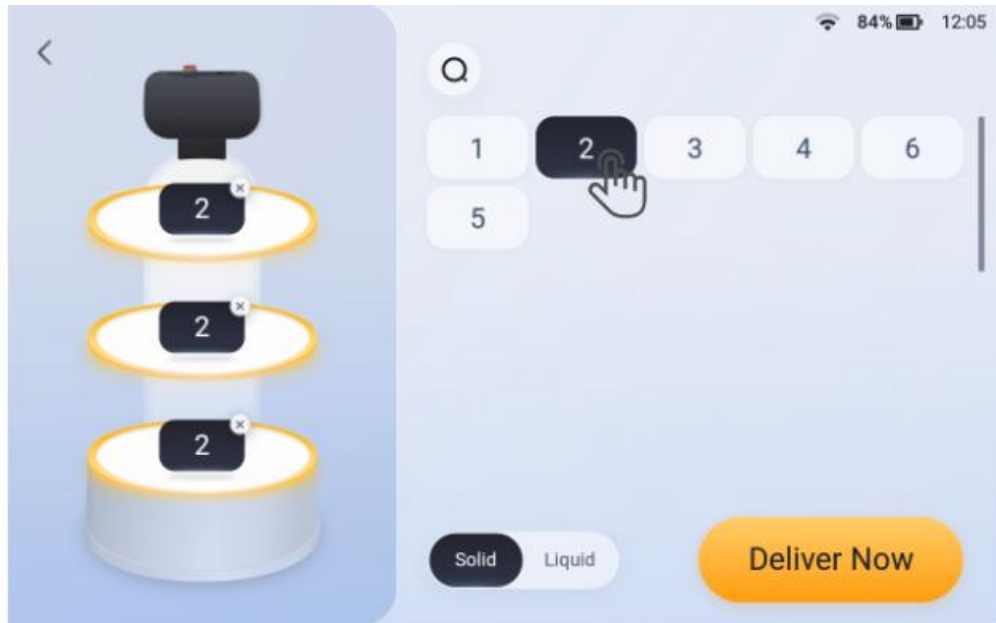
Place the birthday dished on the trays and tap **Birthday** on the home page.



2 Select a table number

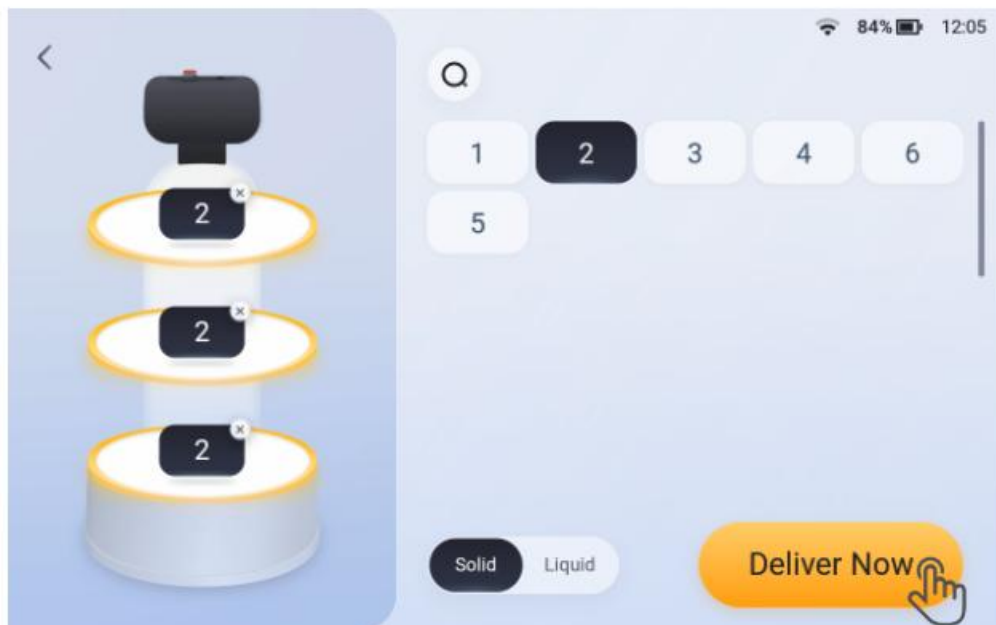
Select the intended table number.





3 Start delivering

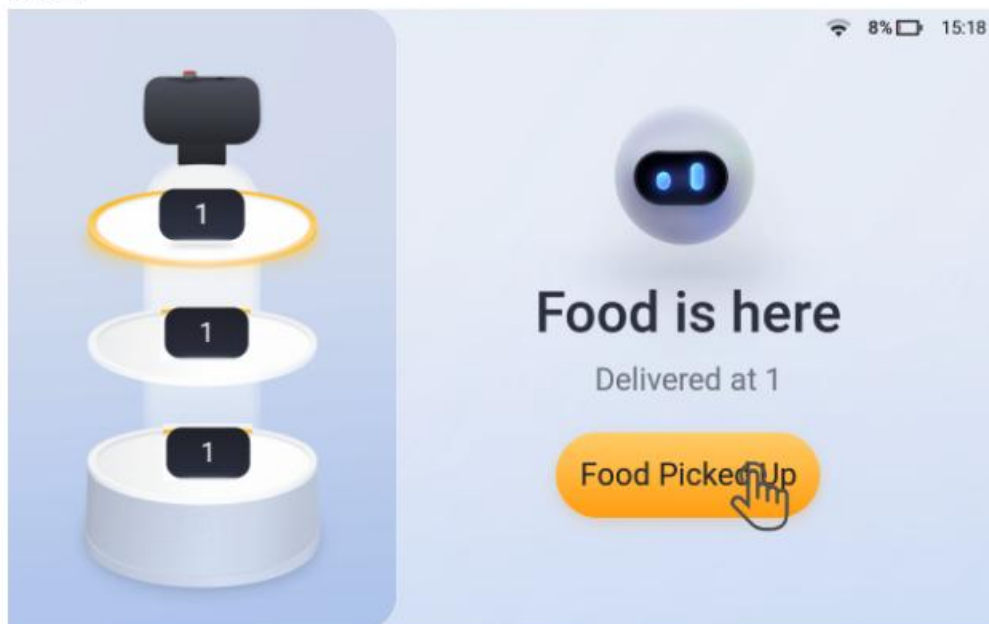
After selecting the table number, tap **Delivery Now** and the robot will roll out to deliver food.





4 Reach destination

When arriving at the intended table, the robot will notify the customers, who needs to tap **Food Picked Up** after getting their food.



5 Delivery finished

After delivering all the food, the robot will return on its own.

3.3 Greeting

3.3.1 Stand & Greet

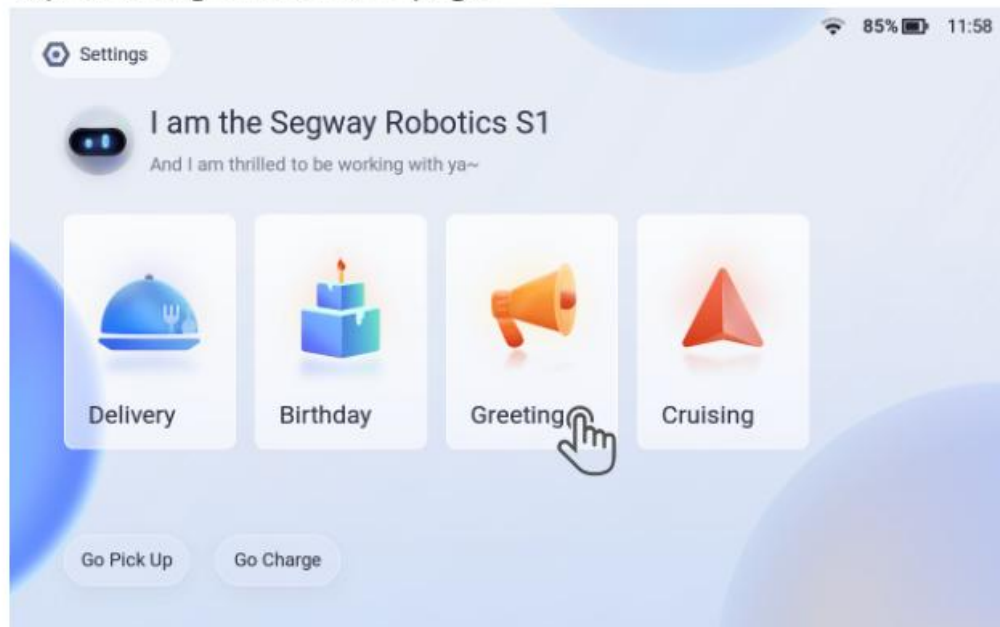
The robot stands at the designated site to greet and attract customers.

- If there is no site designated for this, please contact the customer service to set a site or route for greeting and attracting.

How to use this feature:

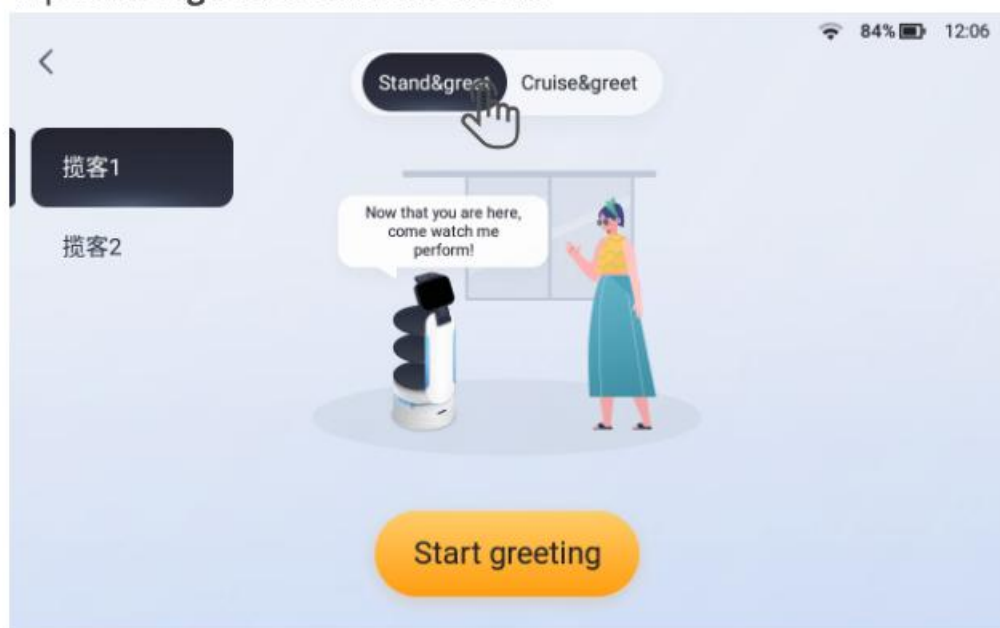
1 Select Greeting

Tap **Greeting** on the home page.



2 Select Stand&greet

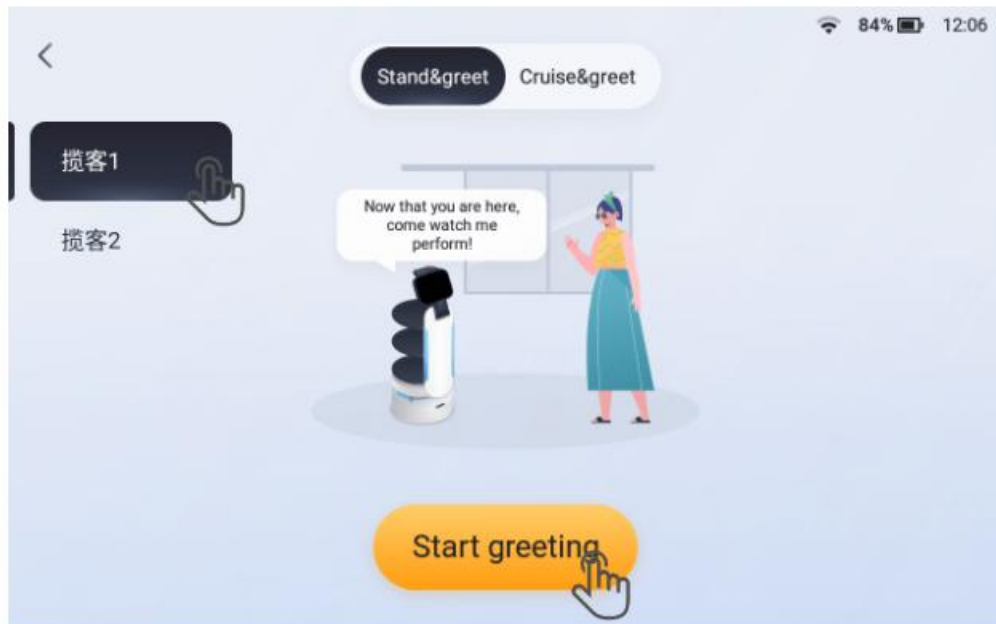
Tap **Stand&greet** to start this mode.



3

Start greeting

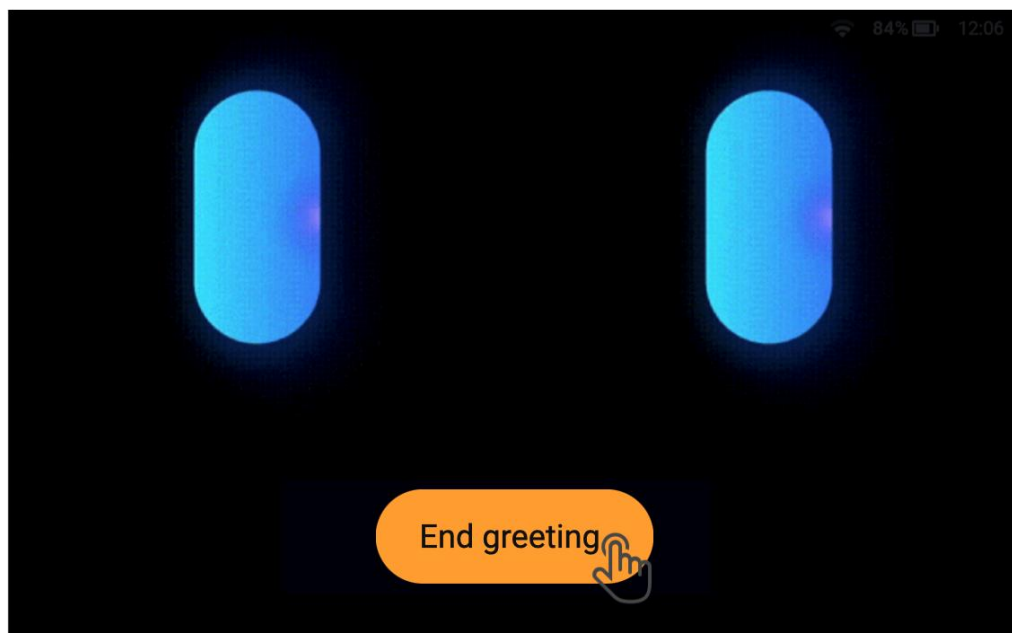
Select a site, tap **Start greeting** and the robot will go to that location to start greeting customers.



4

End greeting

After greeting is done, tap **End greeting** and the robot will return to the pickup site.



3.3.2 Cruise & greet

The robot cruises around the designated route to greet and attract customers.

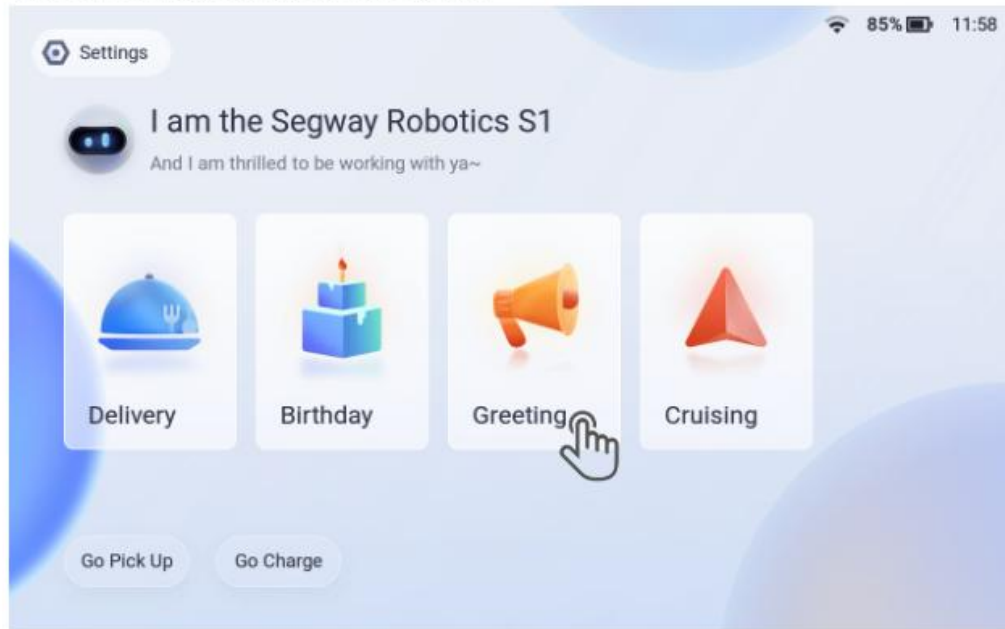
- If there is no route designated for this, please contact the customer service to set a site or

route for greeting and attracting.

How to use this feature:

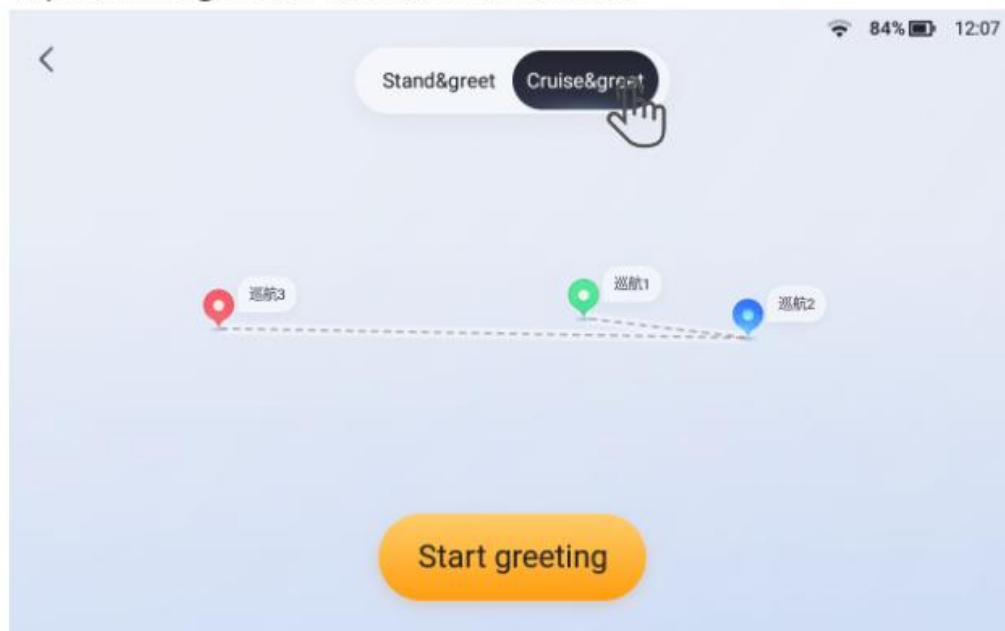
1 Select Greeting

Tap **Greeting** on the home page.



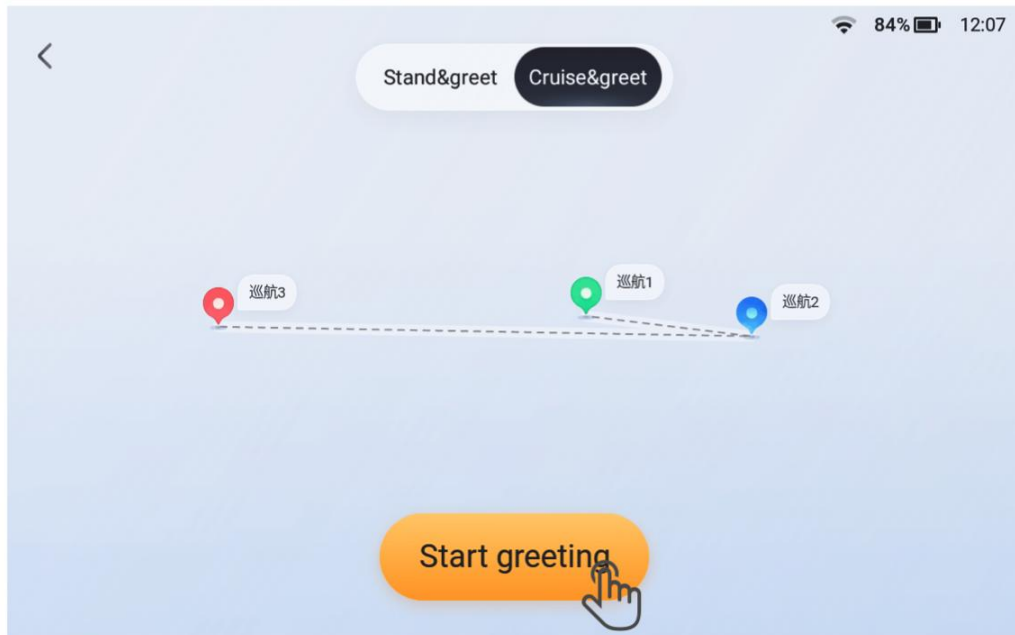
2 Select Cruise&greet

Tap **Cruise&greet** to switch to this mode.



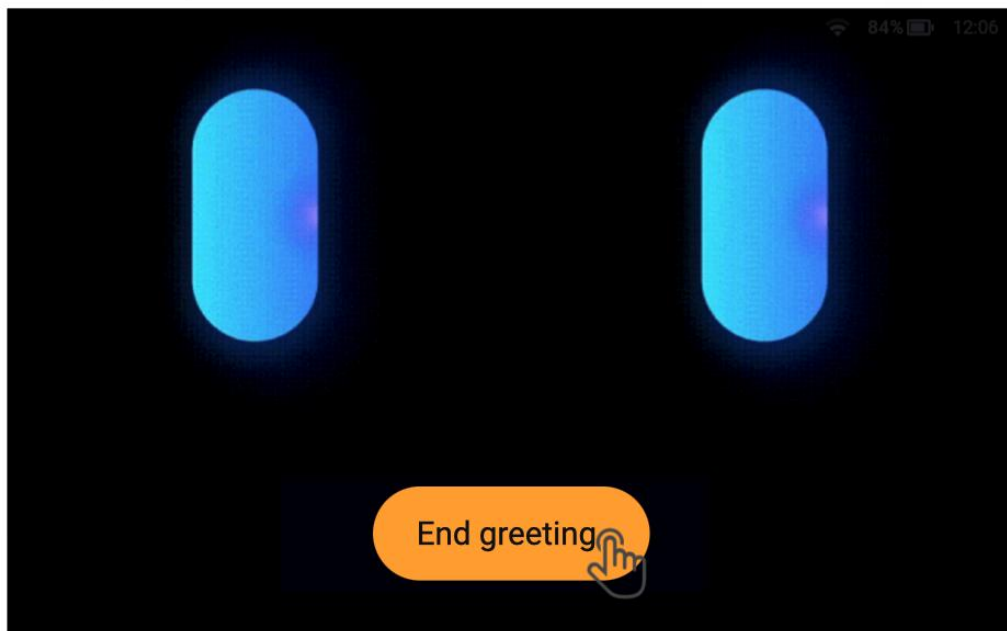
3 Starting greeting

Select a site, tap **Start greeting** and the robot will roll out on the intended route to start greeting customers.



4 End greeting

After greeting is done, tap **End greeting** and the robot will return to the pickup site.



3.4 Cruising

In this mode, the robot cruises around in the plotted route, offering things like snacks and

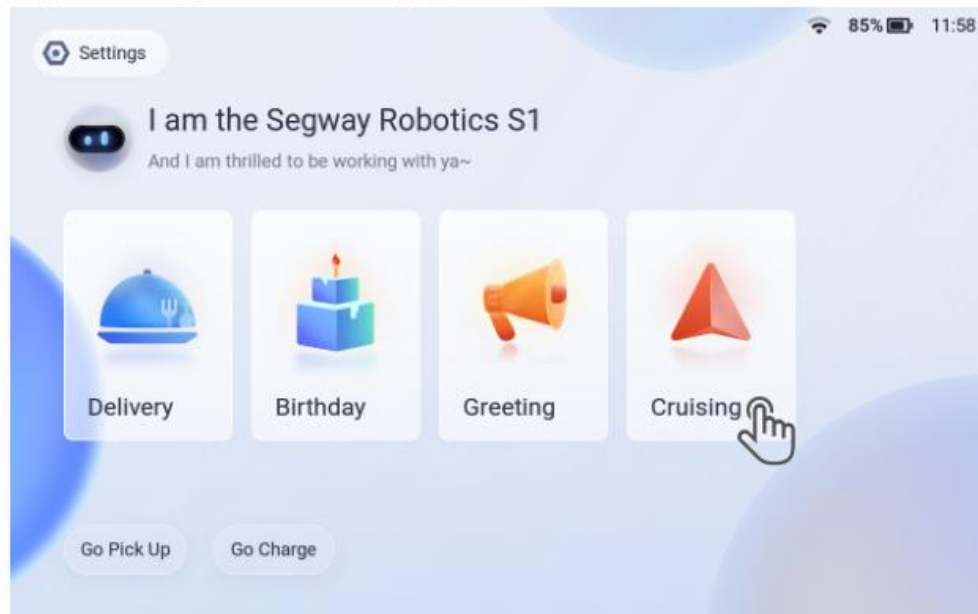
napkins. The customer can put the mode on pause by tapping the screen whenever he/she needs to.

- If there is no route for this, please contact the customer service to plot a route for Cruising.

3.4.1 How to use this feature

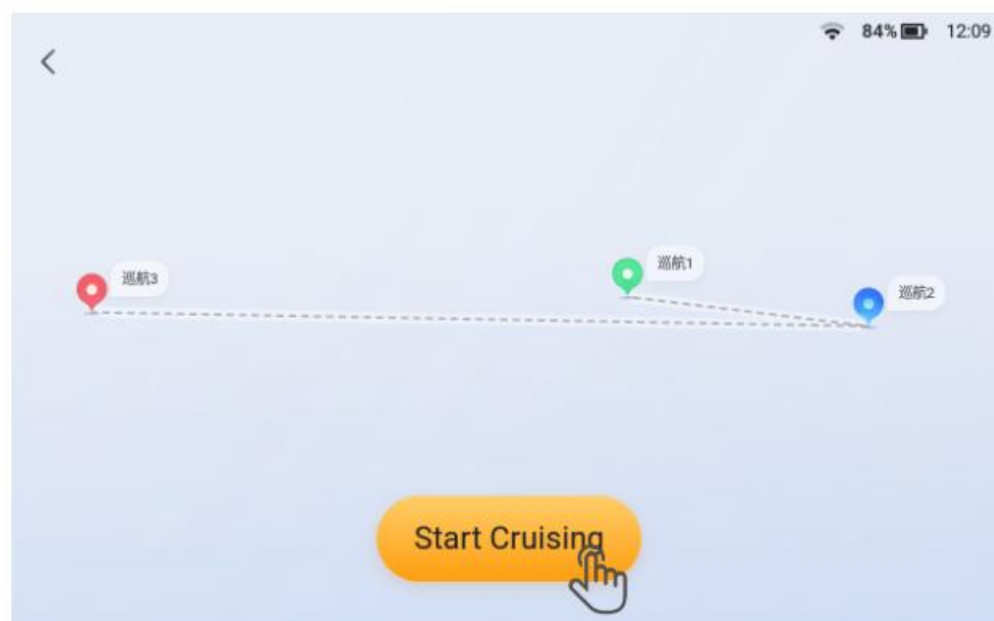
1 Select Cruising

Tap **Cruising** on the home page.



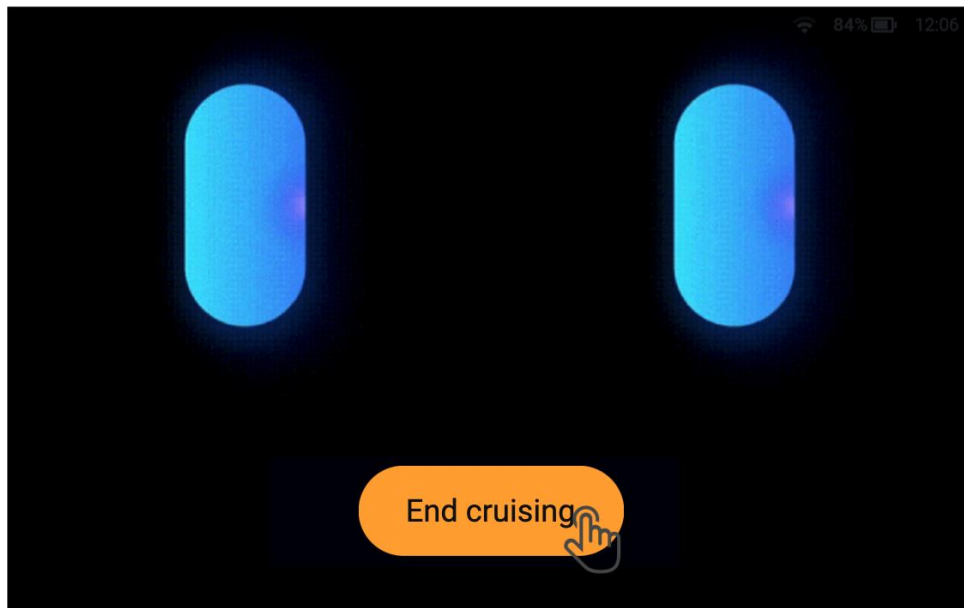
2 Select a Cruising route

Select a route, tap **Start Cruising** and the robot will roll out on the route to cruise.



3 End Cruising

After cruising is done, tap **End cruising** and the robot will return to the pickup site.

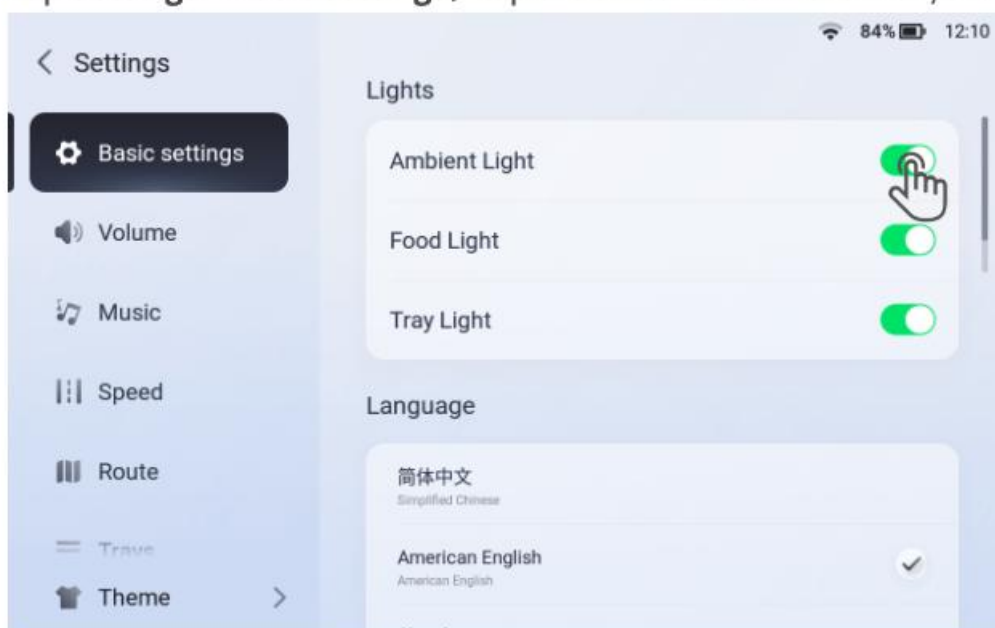


4. Settings

4.1 Basic settings

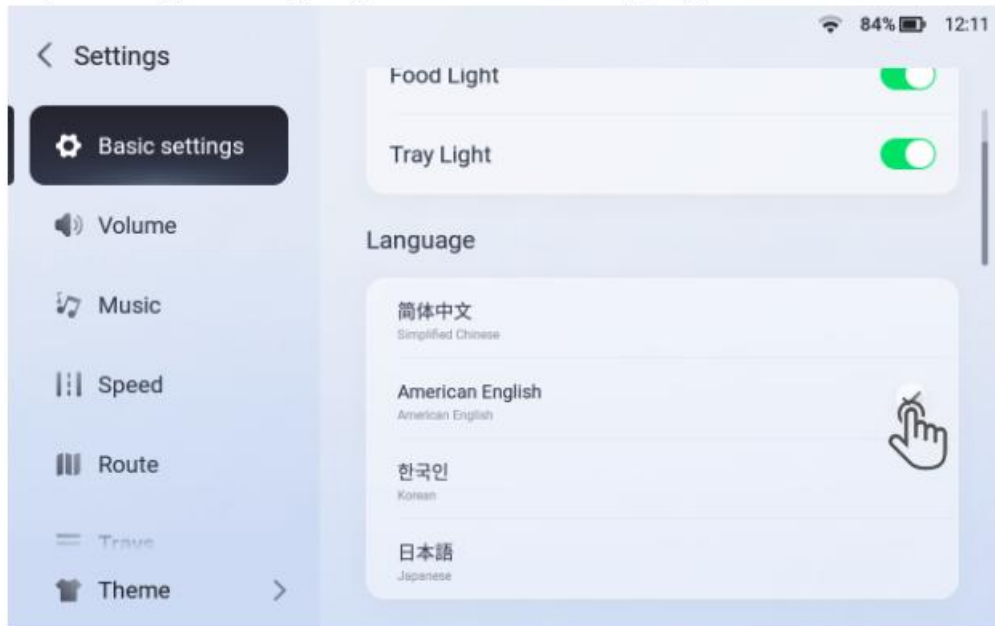
1 Turn on/off the lights

Tap **Settings > Basic settings**, tap the switch to turn them on/off.



2 Change language

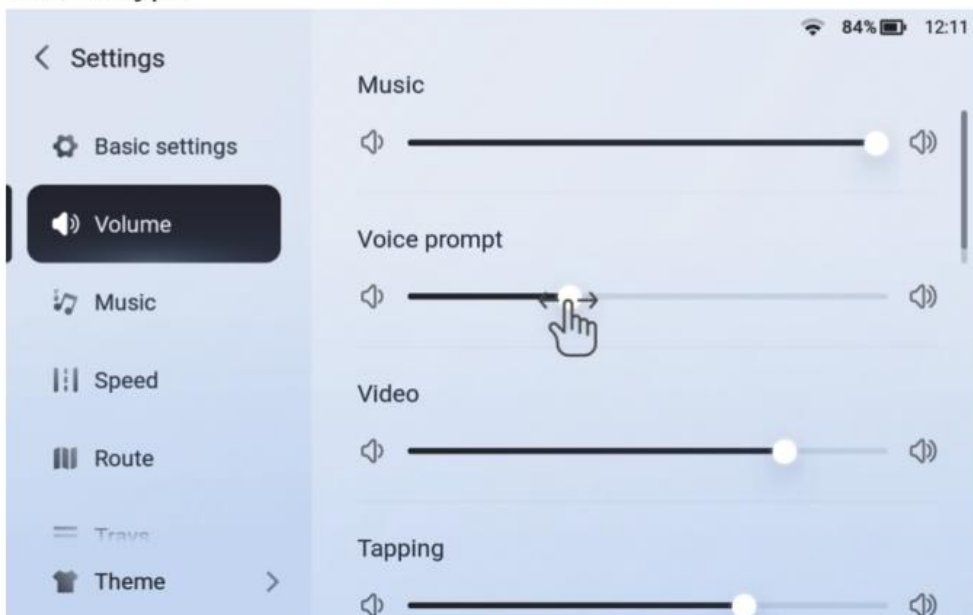
Tap **Settings** > **Language** to select the language.



4.2 Volume

1 Change volume

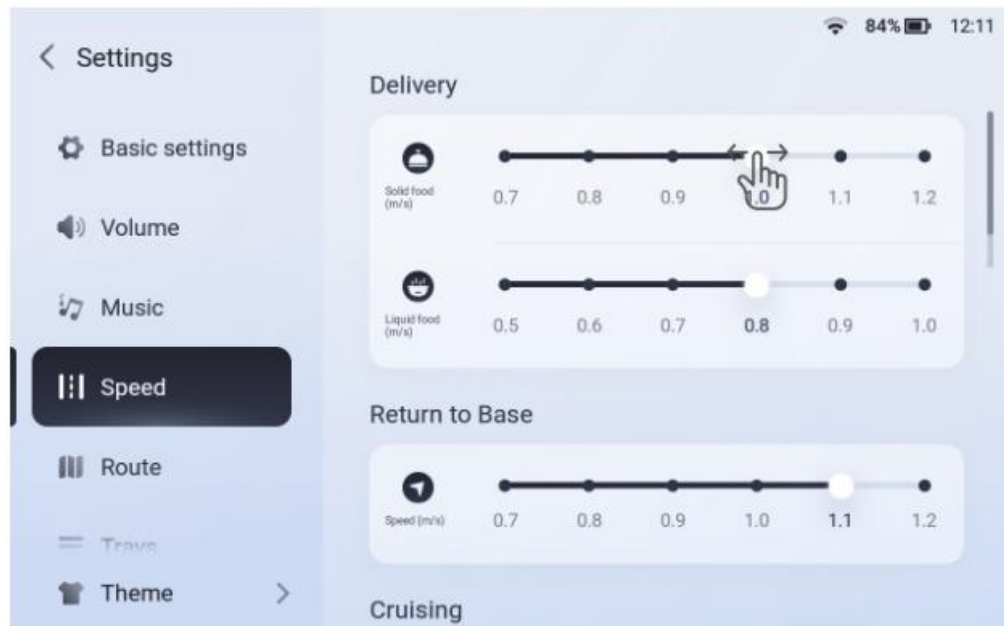
Tap **Settings** > **Volume**; drag the slider of the corresponding volume type.



4.3 Speed

1 Change speeds

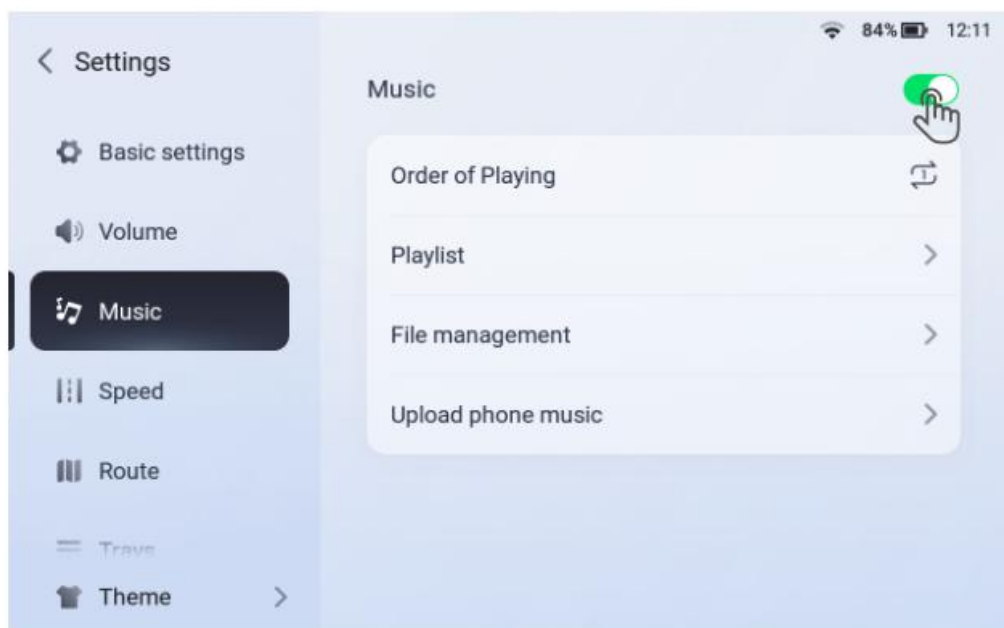
Tap **Settings** > **Speed**; drag the slider to change the speed under different modes.



4.4 Music

1 Turn on/off music

Tap **Settings** > **Music**; turn on/off the music by tapping the switch.



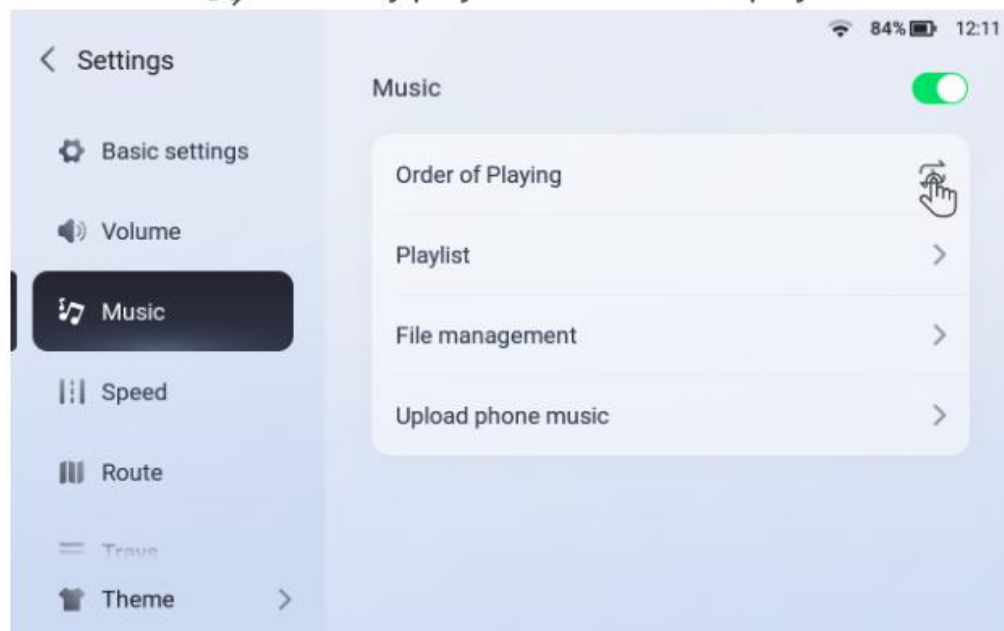
2 Change the order of playing

Tap the icon on the right to change the playing order.

Repeat One:  Repeatedly plays the selected song

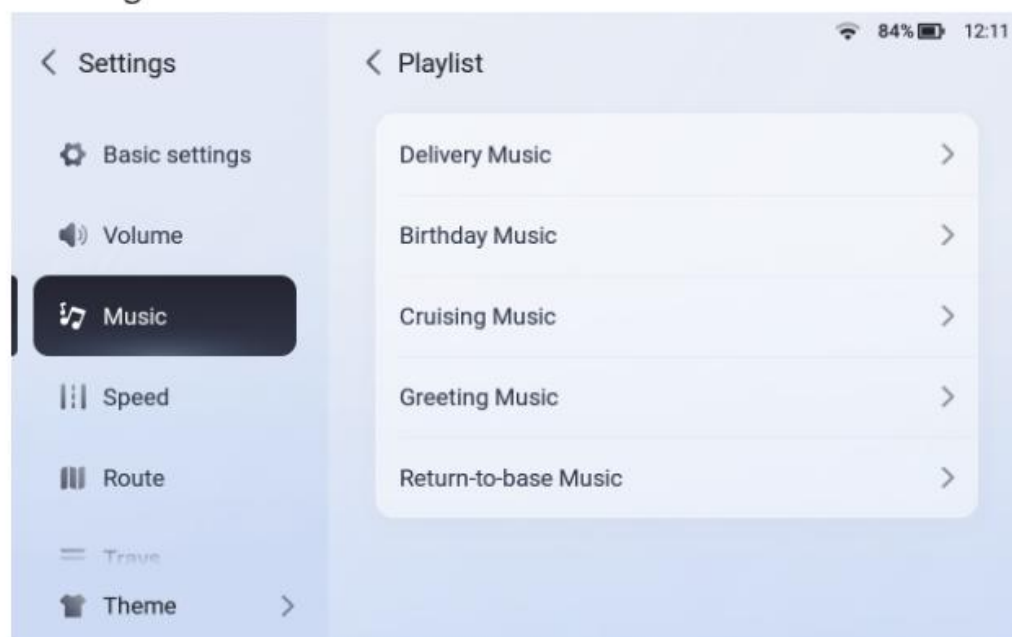
Repeat All:  Repeats all the songs from the selected playlist

Shuffle:  Randomly plays musics from the playlist

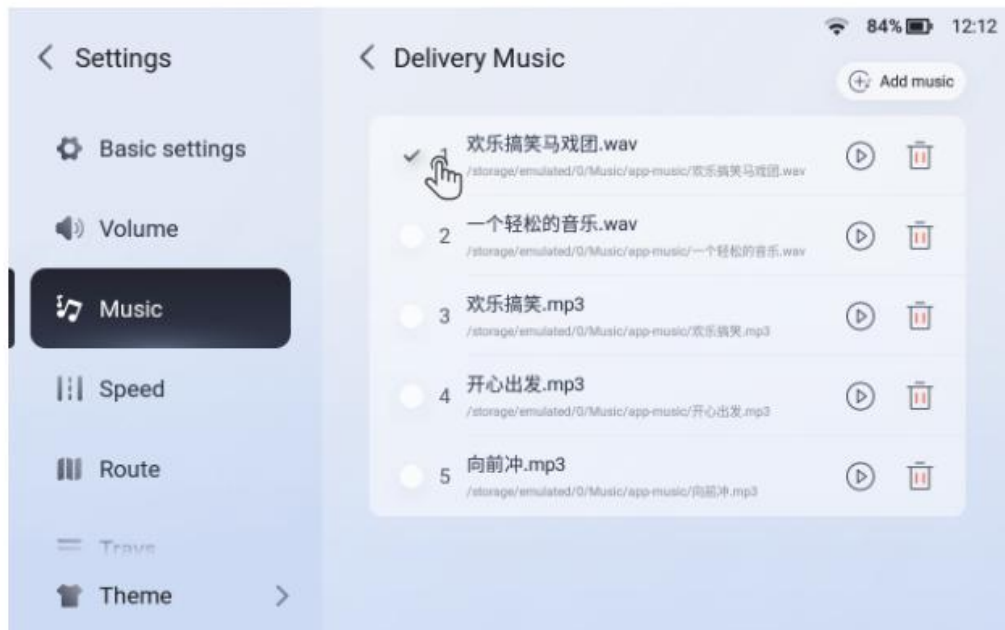


3 Playlist

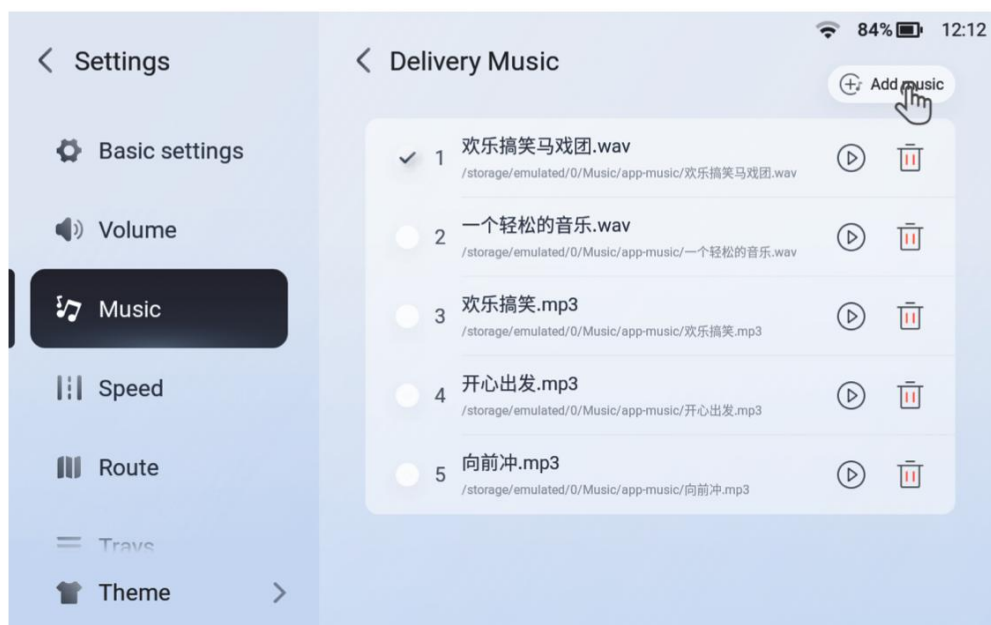
Here you will find Delivery Music, Birthday Music, Cruising Music, Greeting Music and Return-to-base Music.



Select the music from the list to play in the corresponding scenario.

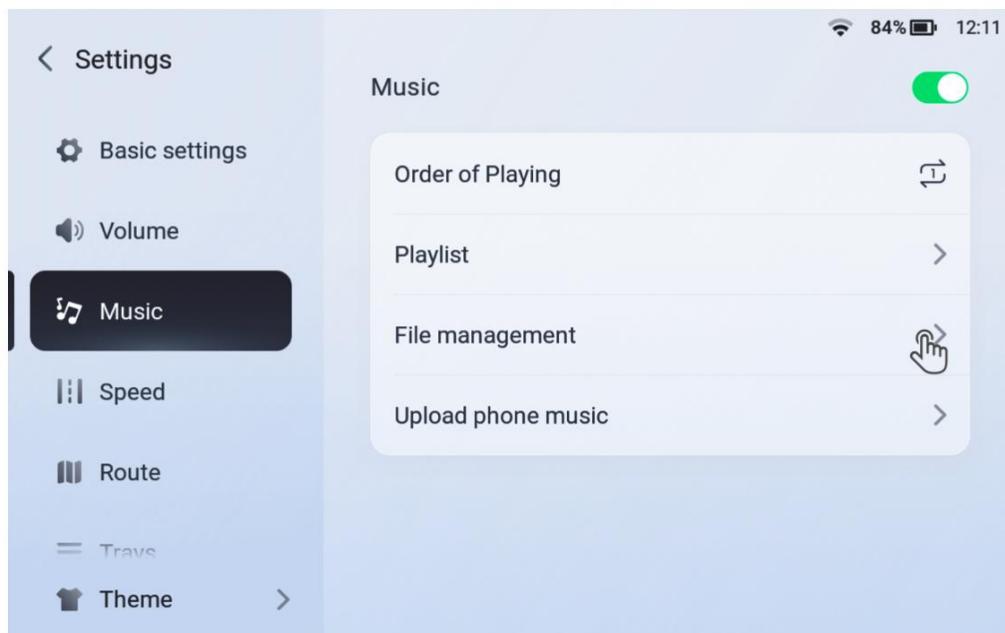


You can also upload music from your phone to File management; and tap **Add music** to add it to the list to play it in the corresponding scenario.



4 File management

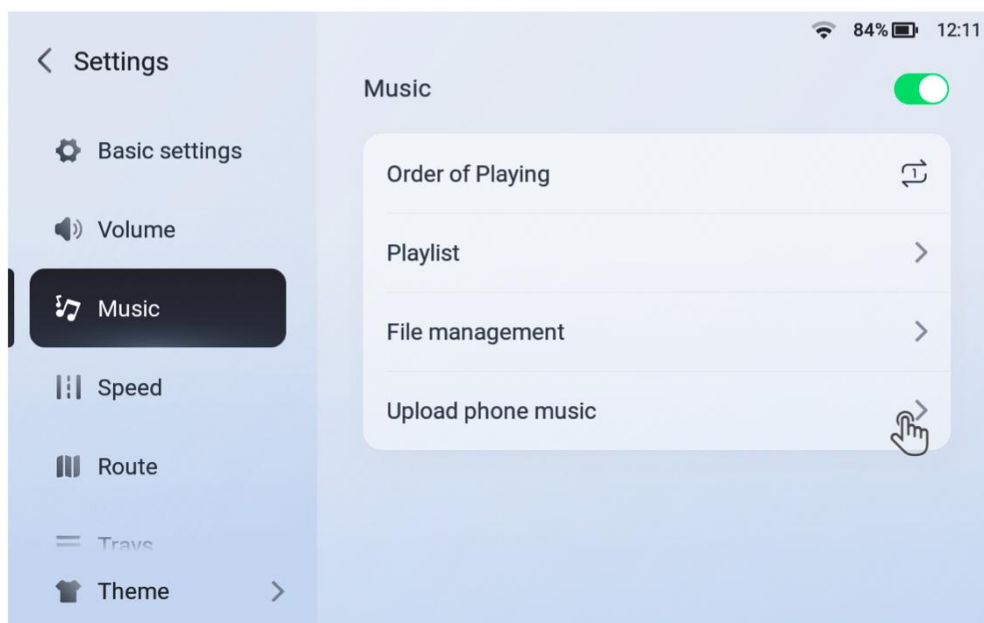
Here you will find the default music and the music uploaded from your phone.



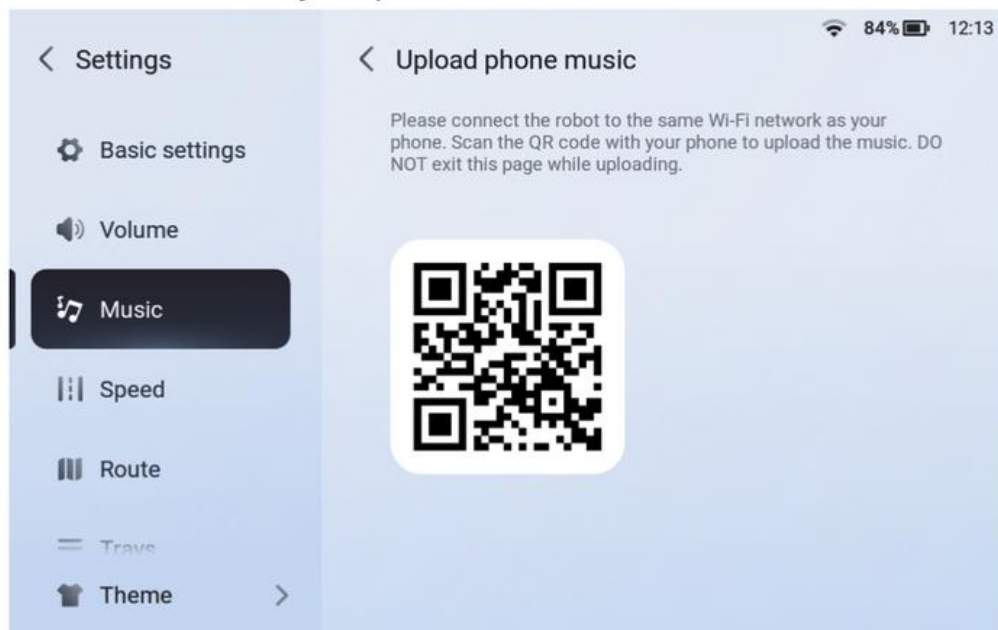
5 Upload phone music

NOTE: The phone HAS TO connect to the same network as the robot!

Tap **Upload phone music**



Scan the code with your phone



It will lead you to the page below, where you can start uploading (make sure the music has already been saved in the phone).

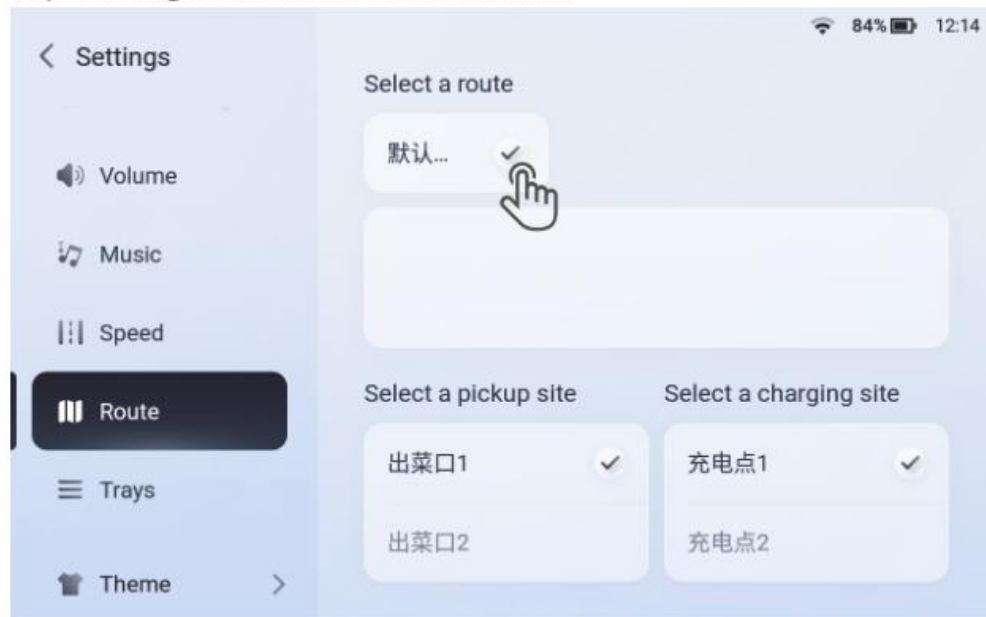


4.5 Change route

“Route” here means the path(s) inside the map the robot rolls in, including: the Pick-up site, charging site, tables, cruising routes and so on. Please change route with discretion.

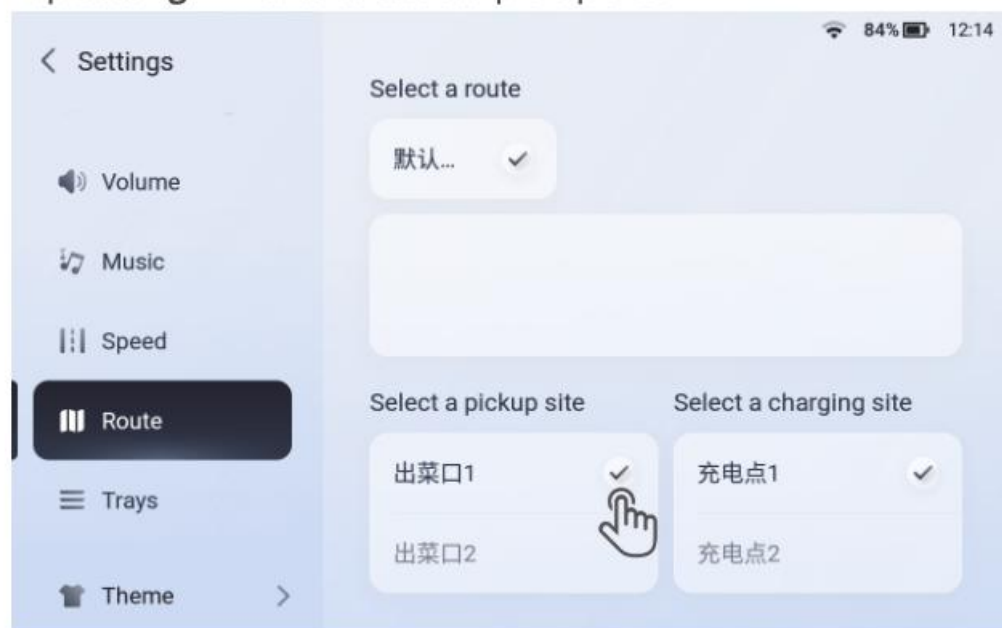
1 How to change route

Tap **Settings** > **Route** to select a route.



2 How to change the pickup site

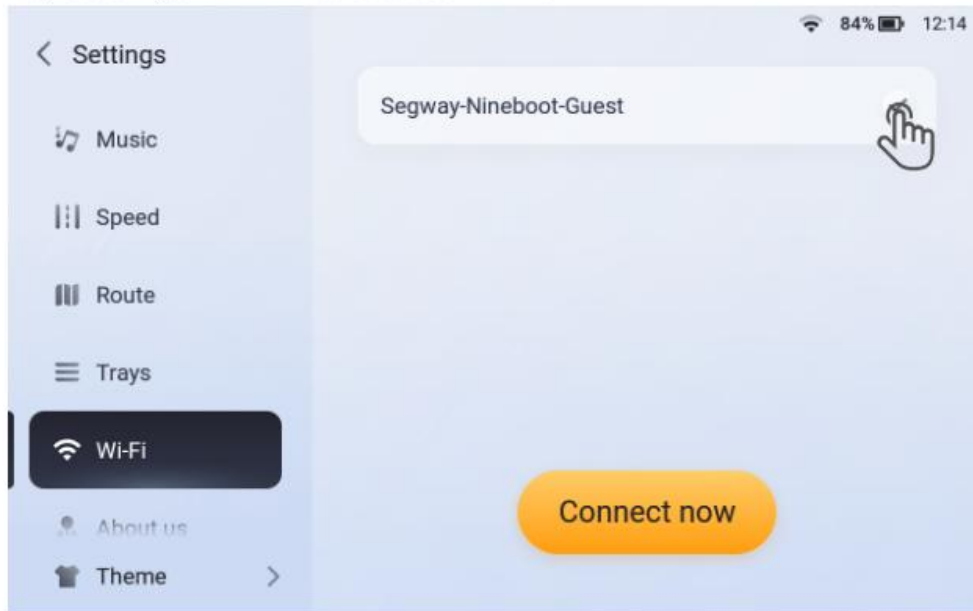
Tap **Settings** > **Route** to select a pickup site.



4.6 Wi-Fi

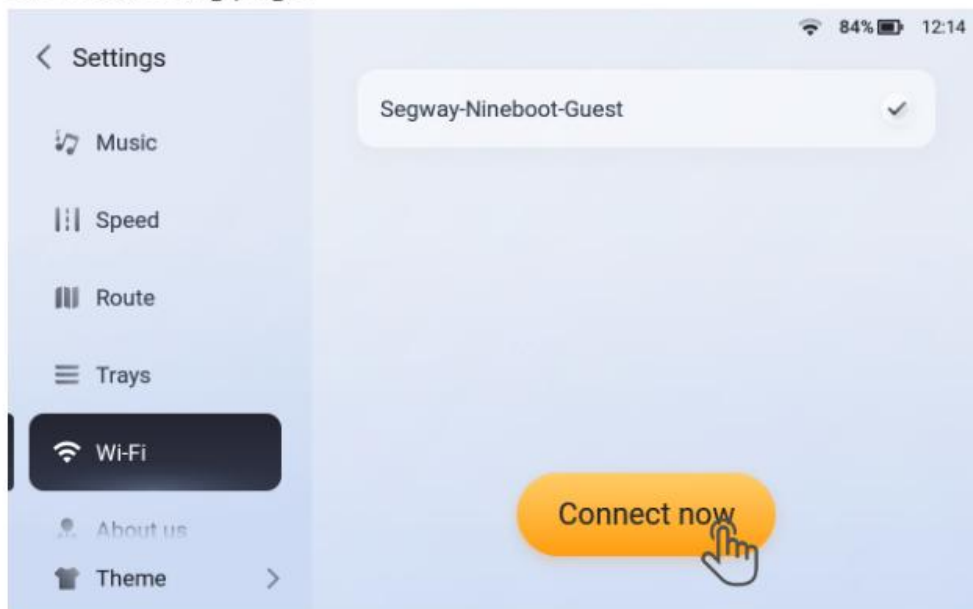
1 Change Wi-Fi

Tap **Settings** > **Wi-Fi** to select a Wi-Fi.



2 Connect to a new Wi-Fi

Tap **Settings** > **Wi-Fi** then tap **Wi-Fi** on the lower right corner to enter the connecting page.

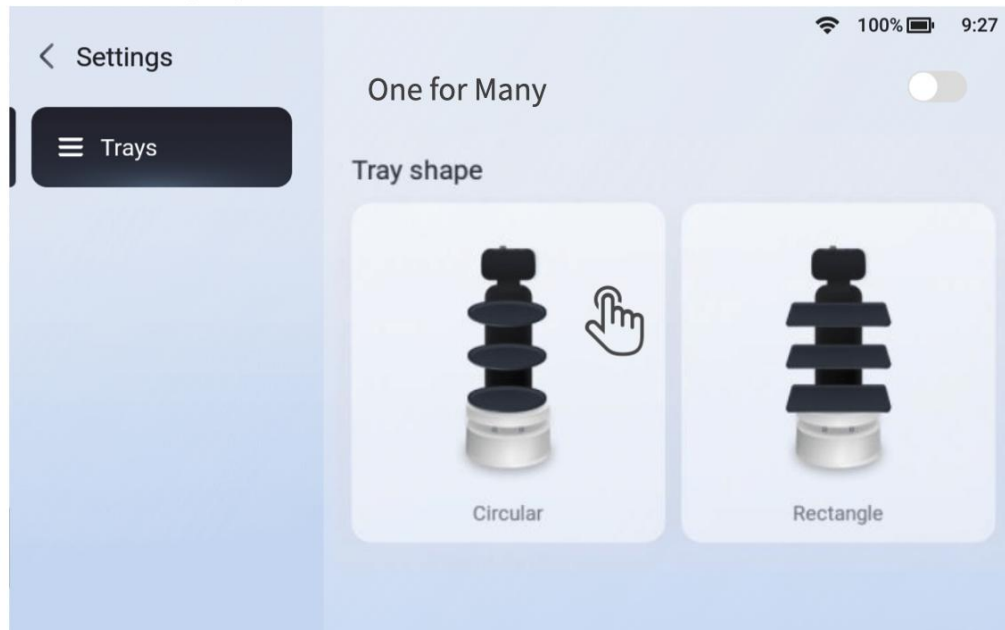


4.7 Tray

1 How to change tray shape

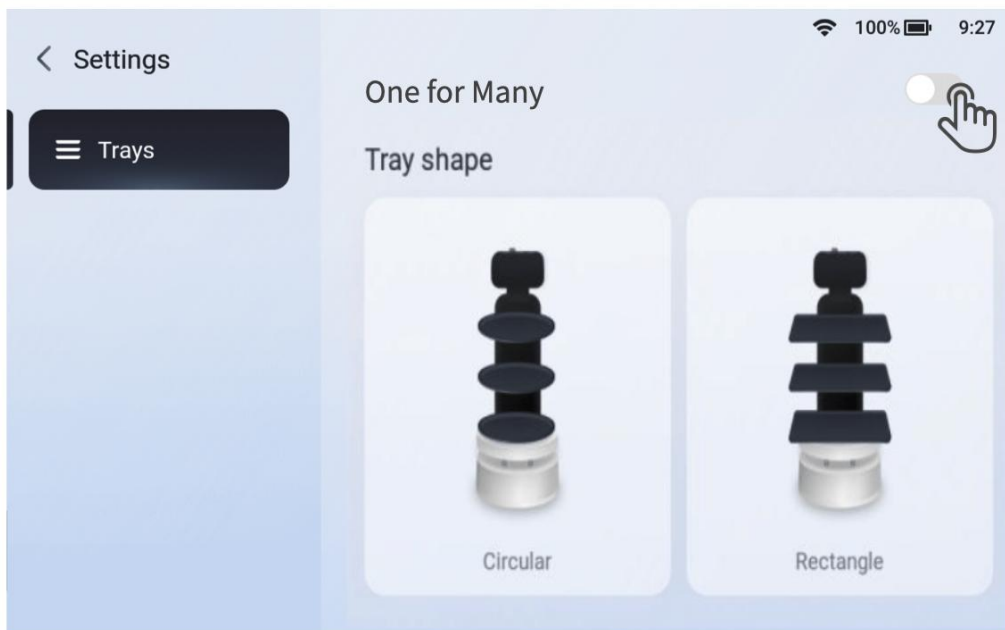
Tap **Settings** > **Trays** to select a tray shape.

NOTE: changing the tray shape will restart the system.



2 Switch to One for Many

Tap **Settings** > **Trays** to switch on/off **One for Many**.

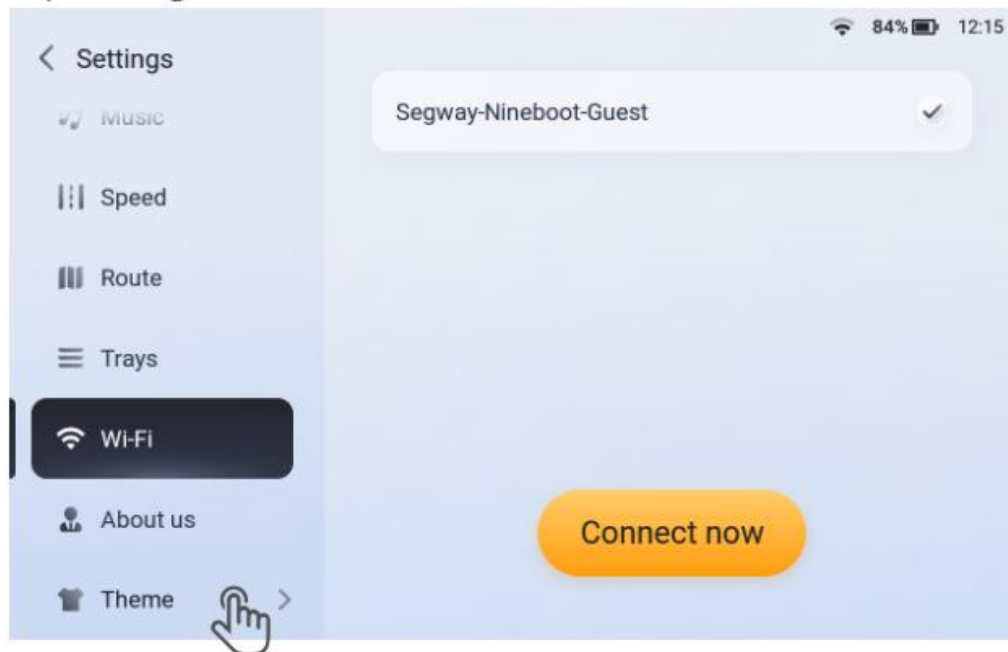


4.8 Theme

Choose the theme of the page according to your preference.

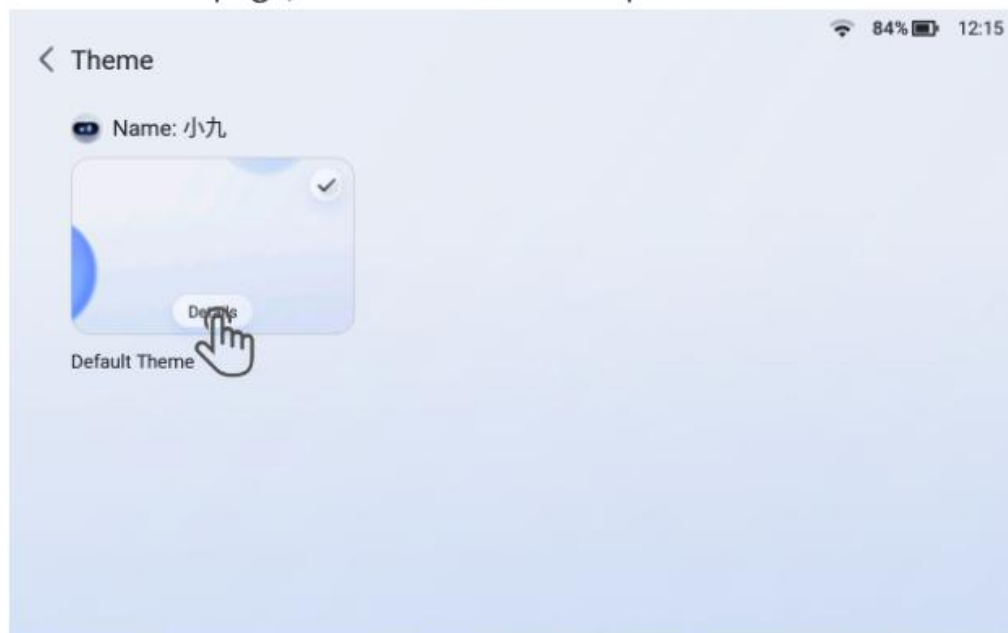
1 Theme

Tap **Settings > Theme**



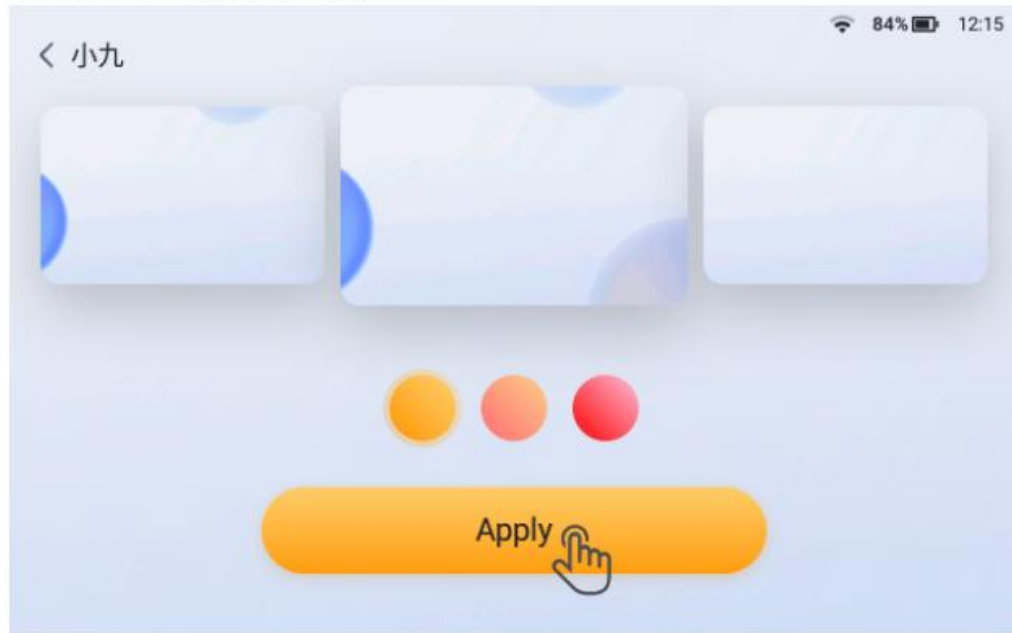
2 Select a theme

When on this page, select a theme and tap **Details**



3 Select a theme

Select a color, tap **Apply**



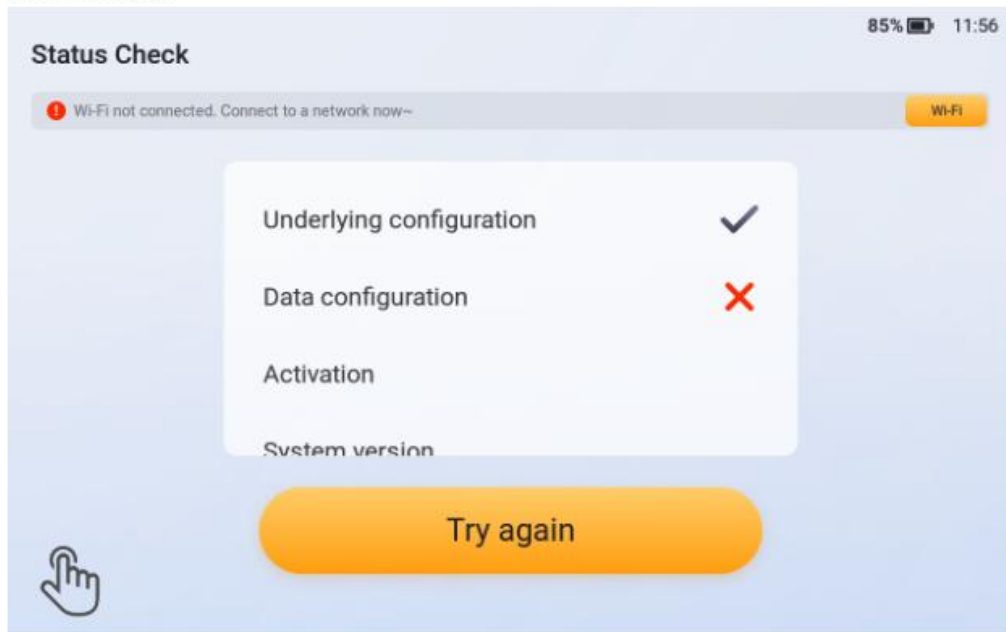
4.9 Advanced

Change the advanced settings by entering the password to acquire more access. Please do not change the advanced settings without permission.

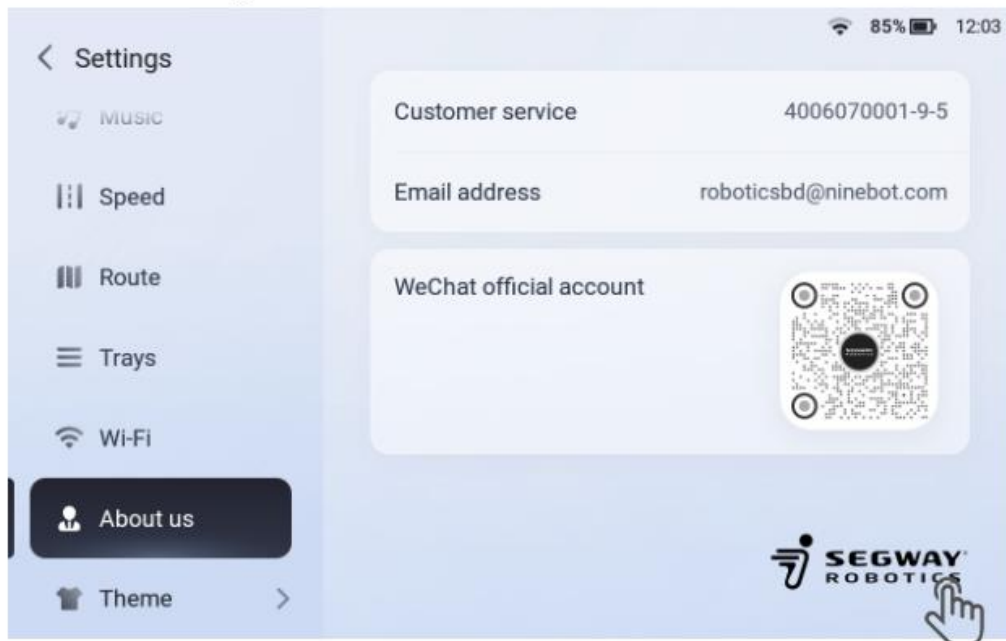
NOTE: Please consult a professional technical support if you would like to edit the “Developer OPS”.

1 Advanced settings

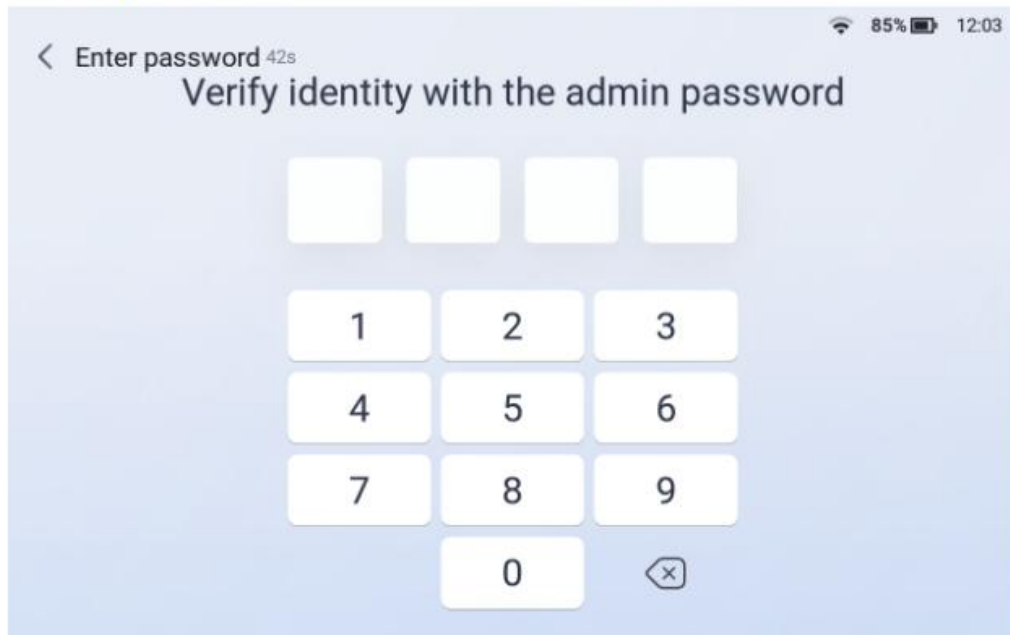
1. During the Status Check, repeatedly and quickly tap the lower-left corner.



2. Tap **Settings** > **About us** and repeatedly and quickly tap the logo on the lower-right corner.

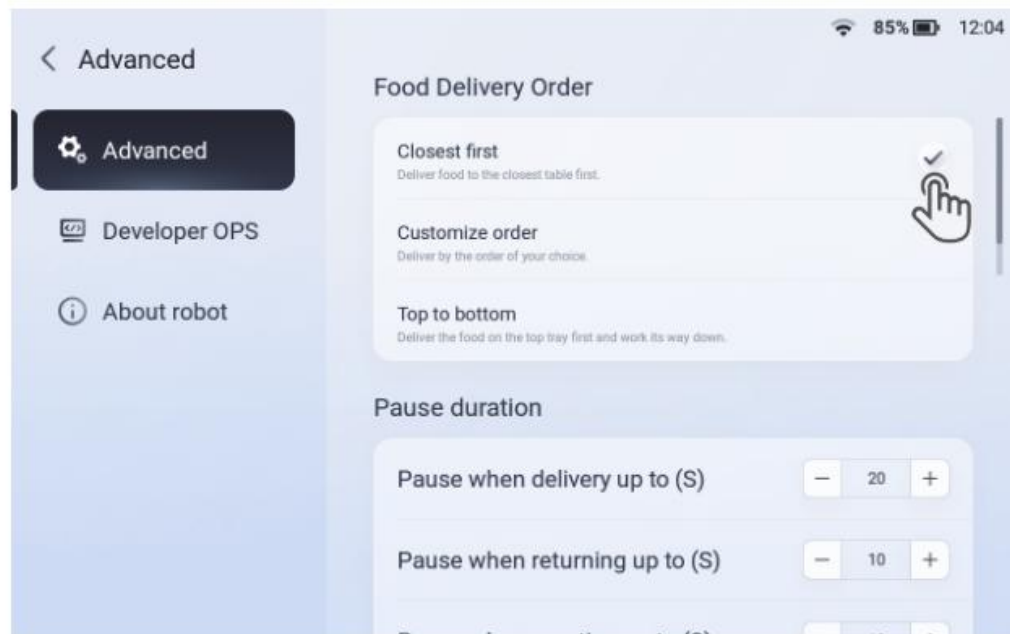


2 Enter password



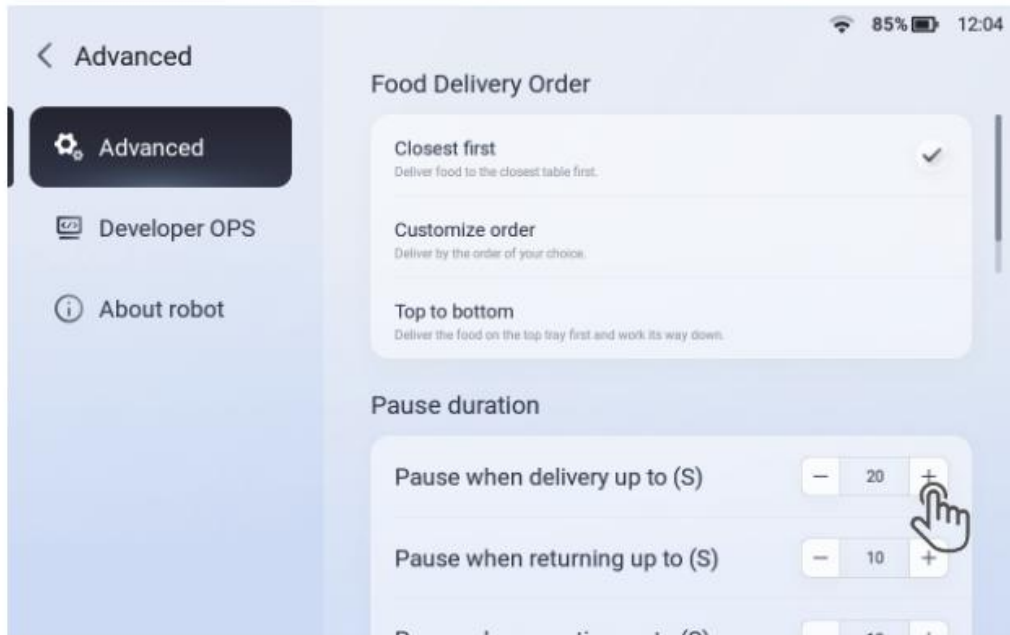
3 Food Delivery Order

Select the desired order.



4 Pause duration

Tap the add/minus icon to adjust the Pause duration.



5. FAQ

5.1 What to do when the robot is lost

- Possible causes:
 1. The robot does not detect the positioning marks over the ceiling.
 2. The robot is outside the radius of the map.
- If it is lost, please:
 1. Push it to stand below the positioning marks and see if the lost notification goes away.
 2. Inspect the positioning marks over the ceiling and see if they are blocked, dirty or damaged.
 3. Inspect the cameras on the robot and see if they are blocked, dirty, or damaged.

5.2 How to pause

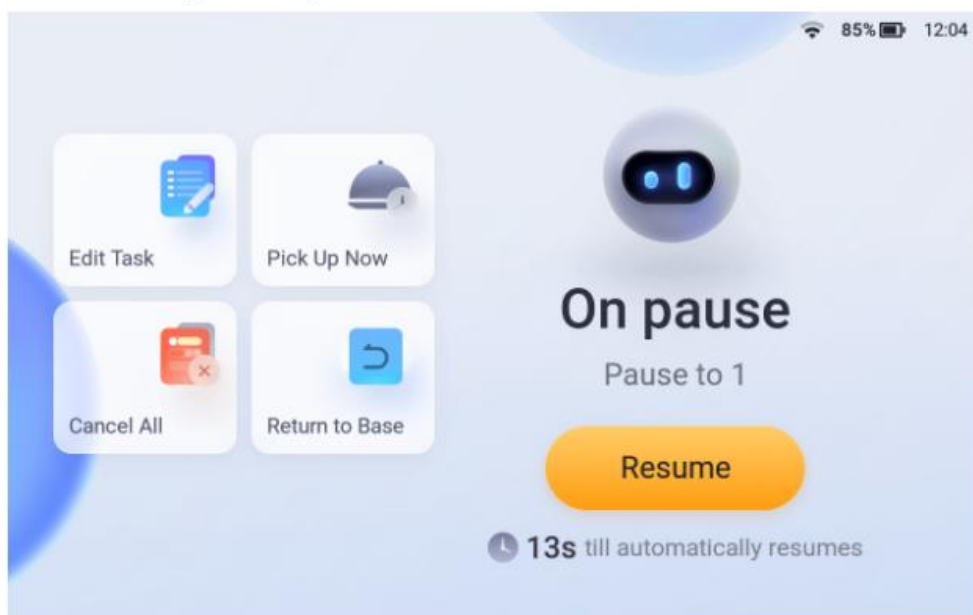
The robot cannot be pushed when it is rolling. Only when paused can the robot be pushed.

1 Two ways to pause



2 Pause page

Pause during Delivery:



5.3 How to push the robot

The robot cannot be pushed when it is rolling. Only when the screen shows that it is paused can the robot be pushed.

5.4 How to charge the robot

5.4.1 Charge the battery

The robot has an internal rechargeable battery. Please do not take it out. If you need to take it out or replace it, please contact a technical professional for assistance.

- The battery icon on the upper-right corner shows the battery level or charging status.
- Plug the robot into the power socket via the charging cable (supplied).

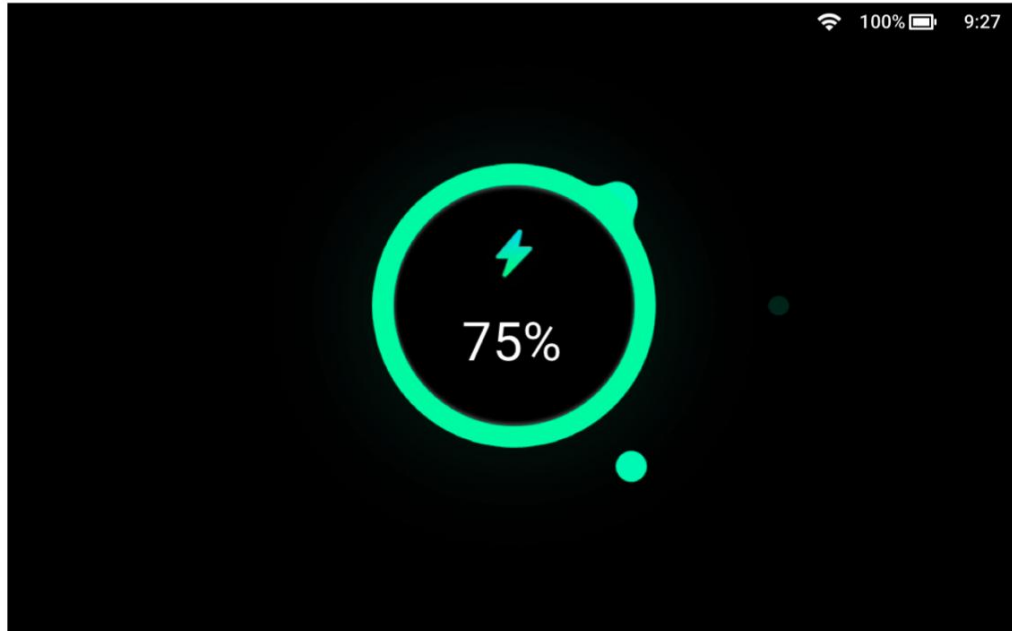


5.4.2 Charging page

The robot cannot work while charging; the screen will show the charging page during this time. You can unplug the cable to quit this page.

1 Charging page

The screen displays the current battery level and the charging animation; charging is completed when the level reaches 100%.

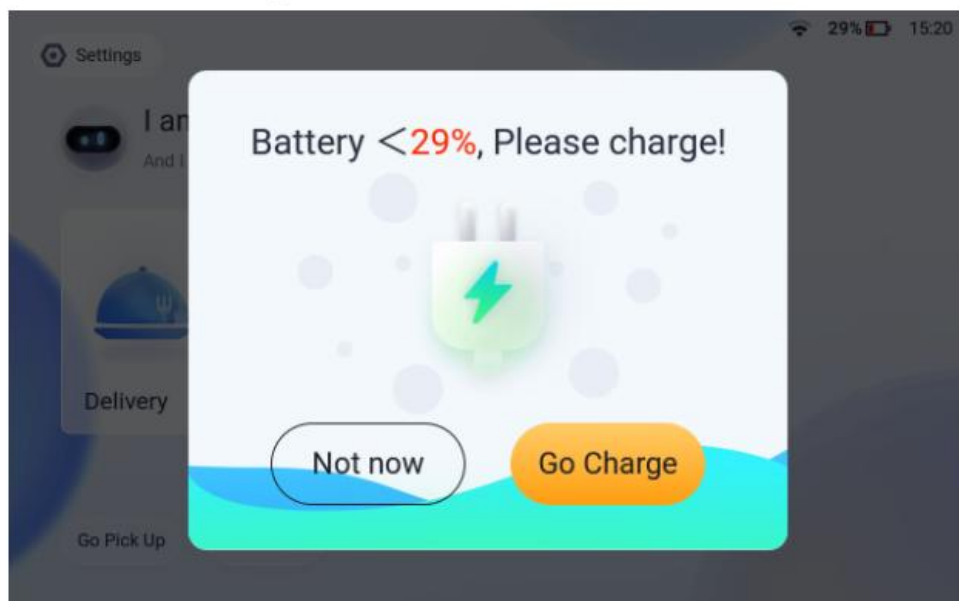


5.4.3 Low battery notification

When the robot's battery level is low, low battery notification will pop out. To make sure the robot works properly, please keep the robot's battery level above 10%.

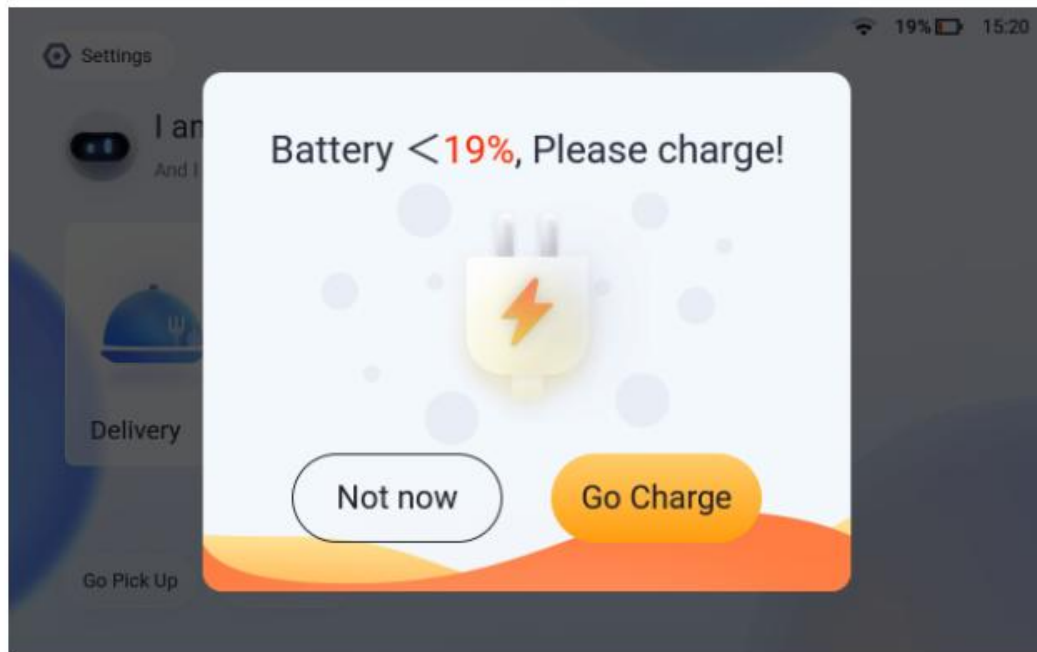
1 Battery level lower than 30%

The low battery alert will pop out when battery level is between 30%~20%; this is to make the user aware of the status but does not stop the robot from working.



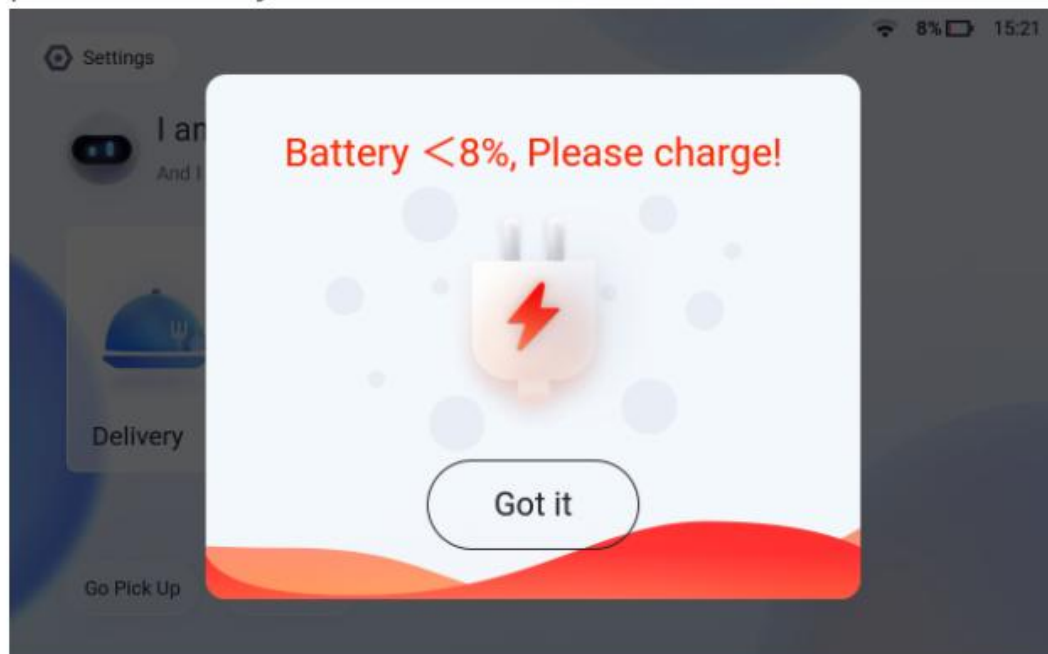
2 Battery level lower than 20%

The low battery alert will pop out when battery level is between 20%~8%; the robot can still work at this point but is very likely to suddenly shut off due to low battery.



3 Battery level lower than 8%

Low battery protection will be on at this point and the robot will be powered off very soon.



6. Precautions

6.1 Usage Precautions

1. Do not block the sensor, the cameras on the top, bottom and under the screen of the robot.
2. The robot is capable of avoiding obstacles. For safety concerns, do not stand suddenly in the robot's way when it is rolling.
3. If you need to push the robot when it is rolling, please tap the screen or press the button on the top of the robot to pause it first.
4. Do not block or damage the positioning marks over the ceiling.
5. If the robot is not rolling on the intended route or tapping the screen does not work, please press the emergency stop button at the top of the robot.
6. Inspect the robot to see if it is dry before first use or before using it after leaving it idle for a while, which can prevent from short circuit due to humidity.
7. Network communication supports 4G and Wi-Fi dual network modes. 4G supports FDD B1 / B3 / B5 / B8 and TDD B38 / 39 / 40 / 41. Wi-Fi modules (AP6256) are 2.4G and 5.8GHz, supporting 802.11a/b/g/n/ac protocol.
8. Lidar supports SLAM algorithm. The detection range is 10m at 10% reflectivity and 25m at 90% reflectivity. The default value of scanning frequency is 15Hz and the default value of ranging frequency is 12KHz. The scanning range is 270°.

6.2 Charging precautions

1. Charge the robot only with the charger supplied by the manufacturer.
2. Stay away from flammable or explosive materials during charging.
3. Input voltage is 220V.
4. Take good care of the charging cable; do not pull or twist it.
5. Unplug the charger and do not keep it charging for a long time when the robot is fully charged.
6. The working temperature of the robot is - 10 ~ 40 °C. Robots can resist UV and corrosion.

6.3 Carry the robot

When manually carrying the robot, please note:

1. Carry the robot by the parts as illustrated.
2. Have two people lift it up from both sides to keep it level; avoid rolling it over.
3. Keep the robot upright throughout the process.
4. DO NOT lift by the top or the bottom of the robot.



6.4 Place food

Note the following when putting food on the trays:

1. Do not place food over the rim of the trays to avoid bumping the food while the robot is rolling.



7. Maintenance

1. Regularly check and clean the cameras; make sure to clean the cameras immediately when they are smudged so that the robot works properly.
2. The wheels under the robot should be kept clean at all times so that it rolls smoothly.
3. Store the robot in a dry place; keep rats or other things from entering the robot.
4. The positioning marks over the ceiling should be kept intact and visible; once positioned, they should not be moved or rotated.

8. Common Failures and Solutions

8.1 System auto-restart

- The system restarts automatically when detecting a malfunction to try to fix it; when this

happens, please wait until it finishes and see if the robot works properly.

8.2 Unrecoverable failure

- When this occurs, please contact the customer service.

9. Limited Warranty

- We offer free product repair service during the Warranty Period.
- The Limited Warranty does not cover and excludes damage to your product caused by misuse or improper maintenance; the repair service will be charged.
- Services for the product that is beyond the warranty period will be charged and such a fee is specified by the after-sales service.

How to leave feedback:

- Make a phone call to the customer service or;
- Scan the code below to contact the support via WeChat.



10. Appendix

FCC Statement

This equipment has been tested and found to comply with the limits for a [Class B](#) digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution: Any changes or modifications not expressly approved by [Segway-Ninebot](#) for compliance could void the user's authority to operate this equipment.

RF Exposure

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.

The antennas used for this transmitter must be installed to provide a separation distance of at least [22 cm](#) from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

FCC ID: 2A64C-SY0001

Contain FCC ID: XMR201903EG25G

Contain FCC ID: 2AC7Z-ESPWROOM32UE

ISED Notice:

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme à la norme RSS d'Industrie Canada. Son fonctionnement est sujet aux deux conditions suivantes:

- (1) le dispositif ne doit pas produire de brouillage préjudiciable, et
- (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

RF Exposure

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance **20 cm** between the radiator & your body.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de **20 cm** de distance entre la source de rayonnement et votre corps.

IC: 28590-SY0001

Contain IC: 10224A-201903EG25G

Contain IC: 21098- ESPWROOM32UE