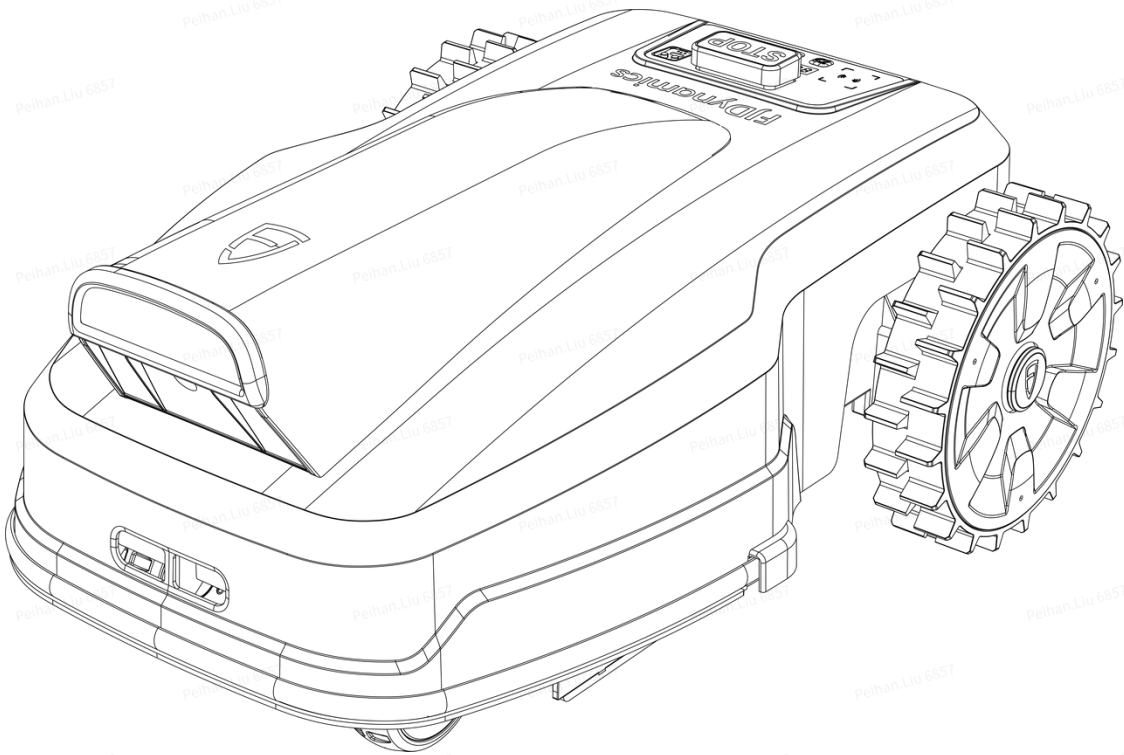


EN_FV2000 Robotic Lawn Mower_User Guide V1.0.4



Product: Robotic Lawn Mower

Model: FV2000

Version: V1.0.3 / 2025-02-07

©2025 FJDynamics. All rights reserved.

Copyright statement

FJDynamics reserves the copyright for this guide and all content herein. No part of this guide may be reproduced, extracted, reused, and/or reprinted in any form or by any means without the prior written permission of FJDynamics.

This guide is subject to change without notice.

Read before use

To avoid or reduce the risk of injury, users must read and understand this user manual before using this product.

Please keep this user manual properly.

Safety Tips

This symbol indicates important safety instructions. Failure to follow these instructions may endanger the personal safety or property safety of operators and other personnel. Before attempting to operate the lawnmower, please read and understand all instructions in this manual.

Revision Record

Version	Date	Description
v1.0	2024.11.06	Initial Version
v1.0.3	2025.02.07	Added visual corridor function to simplify the deployment process

Preface

Thank you for using the product of FJDynamics. This manual provides you with instructions on the functional characteristics, installation, debugging, deployment, and the usage of 【FV2000】 Robotic Lawn mower, as well as matters needing attention during use. Before using this product, please read this manual carefully and use it according to the instructions. If you encounter any problems during the use of this product, please contact customer service or after-sales services personnel, and we will serve you wholeheartedly.

1. Safety instructions

Please read this safety statement and the safety advice and precautions in the text carefully before using this product. You must comply with the safety information in this manual and all applicable local regulations.

The safety recommendations and precautions in this manual introduce important information that must be followed to prevent personal and property damage when using and working around the product, aiming to help users:

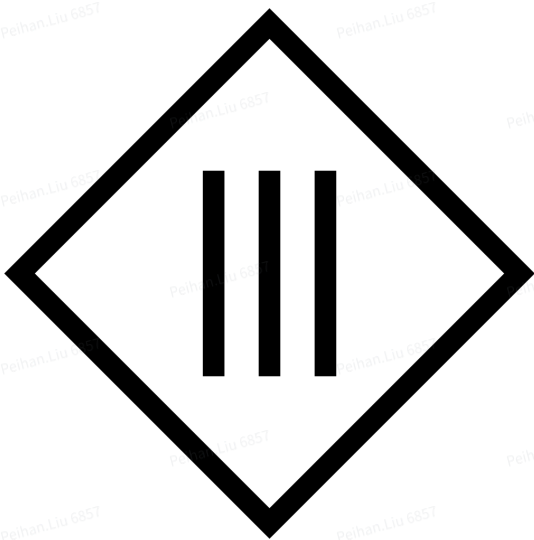
- Detect and prevent dangerous situations

- Safe and correct use of this product and related equipment
- View the information on the safety label posted on this product
- Work in a safe working environment

1.1 Safety marking



*Please refer to this instruction manual



*To identify equipment meeting the safety requirements specified for class III according to IEC 61140.



*Certified IPX5 Waterproof level for this equipment.

1.2 General Safety Instructions

WARNING: Read the following warning instructions carefully before using the product.

Read the Operator' s Manual: Ensure you understand the instructions before using the product. Keep the manual for future reference.

Supervision and Instruction: This appliance is not intended for use by children or persons with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety. EU requirements allow this appliance to be used by children aged from 8 years and above and persons with reduced physical, sensory, or mental capabilities or lack of experience and knowledge, if they have been given supervision or instruction concerning the use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be done by children without supervision.

Operator Responsibilities: The operator assumes full responsibility for all accidents or hazards that occur to people or property while using this equipment. This responsibility includes proper installation, safe operation, and maintenance of all safety features. The operator must ensure all additional users are properly trained in safety procedures and must maintain constant supervision of the work area when the equipment is in use.

1.2.1 Work Area Safety

WARNING: Failure to follow proper safety procedures may result in injury or damage to property.

When operating in public areas, warning signs must be prominently displayed at all entry points to the work area. Each sign must clearly state: "Warning! Robotic lawn mower working! Keep away and supervise children and pets!" These signs must remain clearly visible throughout the operation and should be removed when the mower is not in use.

The work area must be completely cleared of people, especially children, and all pets before operation begins. No one should enter the work area while the mower is operating. All toys, recreational equipment, garden tools, and debris must be removed from the area before starting the mower.

1.2.2 Equipment Safety

The safe operation of this equipment depends on using only FJDynamics-recommended components and original FJDynamics batteries. The use of unauthorized parts may compromise safety features and void warranty protection. All safety features and warning labels must be maintained in good condition and replaced if damaged or illegible.

Power supply cables require special attention for safe operation. All cables must be routed outside the mowing area to prevent damage. The installation must include an appropriate Residual-Current Device (RCD) for electrical safety. Operators must inspect cables regularly for signs of wear or damage. If any cable becomes damaged during operation, immediately disconnect it from the power outlet and contact authorized service personnel for replacement. A damaged or worn cable presents a serious electrical hazard and must never be used.

1.2.3 Operational Safety

The mower must be immediately powered off if any abnormal vibration occurs or if damage is detected. In the event of an accident or injury, seek immediate medical attention. Before performing any maintenance, clearing blockages, or examining the product, the mower must be completely powered off and all moving parts must come to a complete stop.

Never touch the blade disc or other moving parts until they have completely stopped moving. When maintenance is required, particularly when changing blades, proper protective gloves must be worn and appropriate tools must be used. This ensures both operator safety and prevents damage to the equipment.

1.2.4 Maintenance

WARNING: Always power off the product before maintenance.

Regular maintenance inspections must be performed weekly. This includes checking blade condition, verifying safety features are functioning properly, and ensuring warning signs remain visible and legible. The emergency stop function should be tested before each use.

Indoor storage is required when the mower is not in use. The storage area must be inaccessible to children, and the mower must be thoroughly cleaned before storage. All power connections should be disconnected during long-term storage.

1.2.5 Charging Station Safety

The charging station provided with your mower is specifically designed for this model. No other charging methods should be used. The station must be installed in a location that meets all clearance requirements and must be kept free of debris. During thunderstorms, disconnect all power and wiring from the charging station to protect the electrical components. After the storm passes, reconnect all wires carefully, ensuring proper connections.

1.2.6 Battery Safety

WARNING: Improper battery handling may result in fire or explosion.

Original Batteries: Use only original batteries recommended by FJDynamics. Product safety cannot be guaranteed with non-original batteries.

The mower must only be charged using the included charging station. In the event of battery electrolyte leakage, immediately flush the affected area with water or an appropriate neutralizing agent. If the corrosive liquid contacts eyes, seek immediate medical attention.

1.2.7 Maintenance and Storage

Regular maintenance inspections must be performed weekly. This includes checking blade condition, verifying safety features are functioning properly, and ensuring warning signs remain visible and legible. The emergency stop function should be tested before each use.

Indoor storage is required when the mower is not in use. The storage area must be inaccessible to children, and the mower must be thoroughly cleaned before storage. All power connections should be disconnected during long-term storage.

2. Product introduction

2.1 Introduction

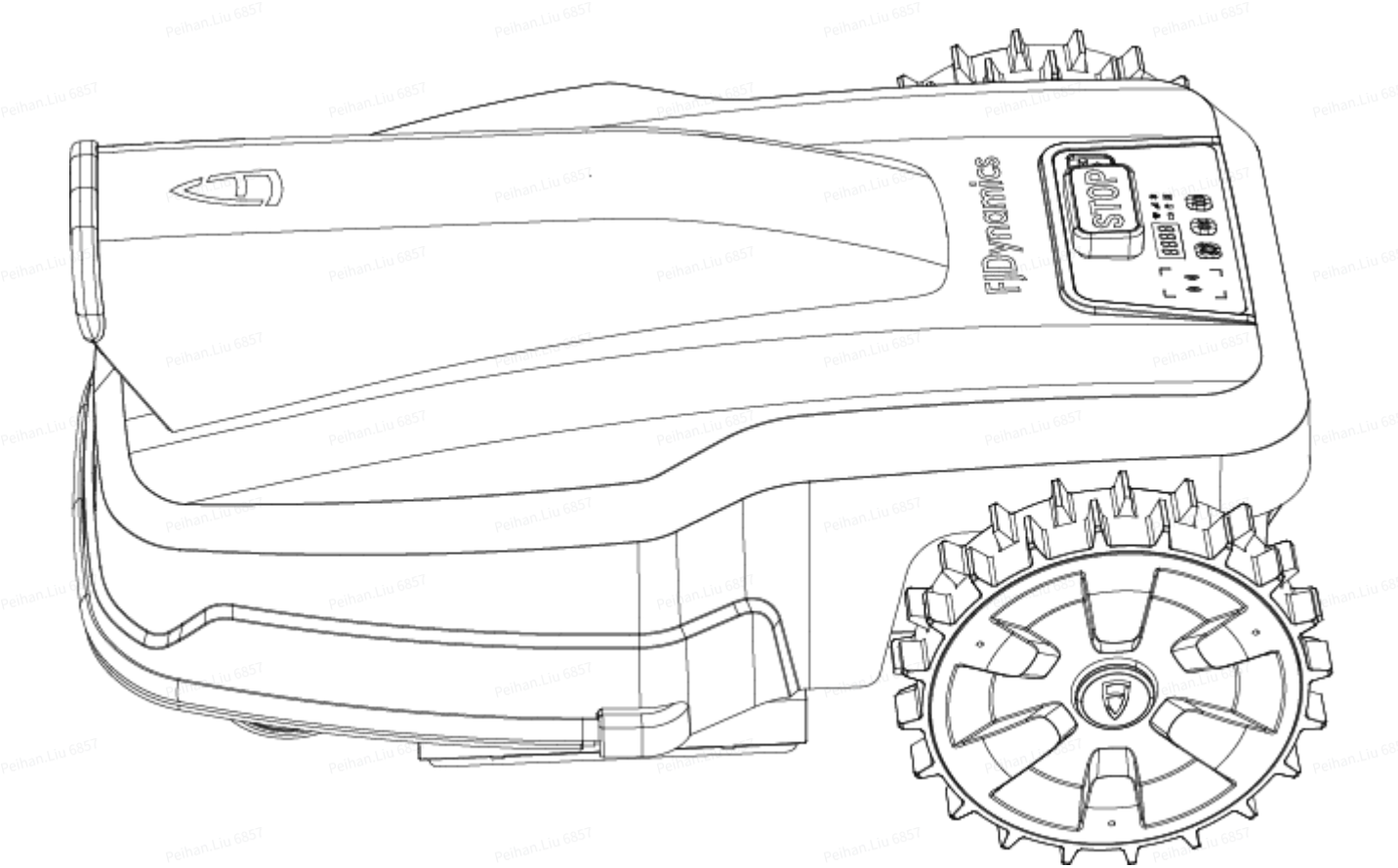
The smart robotic lawn mowers can effectively reduce residential lawn maintenance manpower, reduce greening service costs, promote healthy grass growth, and also can be considered as a very ideal intelligent solution for home lawns. FJD robotic lawn mowers adopt automatic smart route planning and specific task mowing modes, based on vision, LiDAR and GNSS multiple navigation and planning modes, which can conquer different types of lawn mowing tasks in various complex terrains.

With the self-developed mobile APP, users can build their own mowing maps and path planning without on-site technical support from the manufacturer, so that the mower can automatically carry out various mowing tasks and return to the charging station for fast charging. Users can control and view the mowing status and progress in real time on the APP.

The main users are individuals around the world who have a need for lawn maintenance in their yards, want to improve maintenance efficiency, reduce labor costs, and need to remotely monitor outdoor conditions.

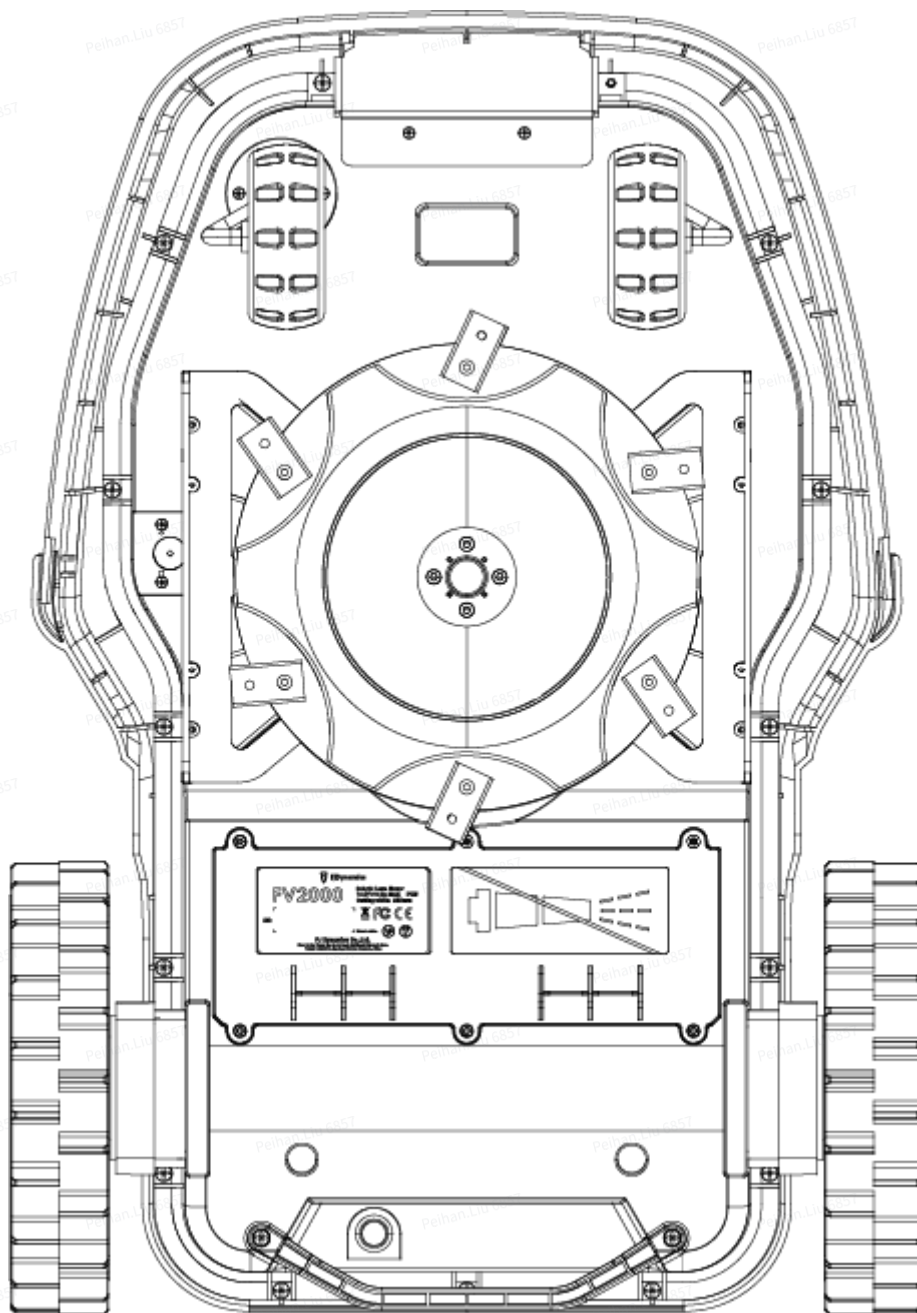
2.2 Main components

2.2.1 Lawn Mower



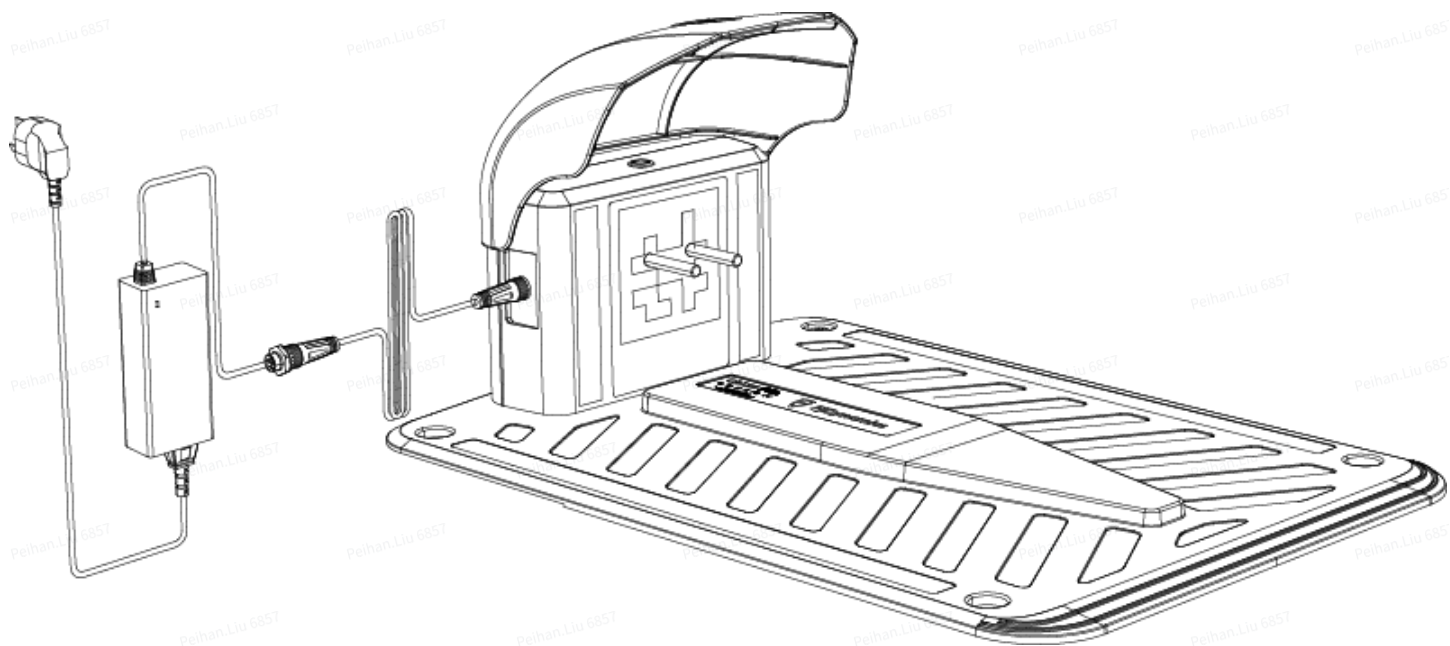
Number	Component name
1	Emergency Stop Button
2	Recharge Button
3	Mowing Button
4	Confirm Button
5	Rain Sensor
6	Digital Display Screen
7	Indicator Lights (6 in total)
	Wi-Fi Indicator Light

	RTK Signal Indicator Light
	Bluetooth Indicator Light
	Power Indicator Light
	Lock Indicator Light
	Mower Blade Indicator Light
8	Bumper Strip
9	Charging Port
10	Monocular camera
11	Binocular camera
12	searchlight



13	Power Switch
14	Universal Wheel
15	Driving Wheel
16	Cutting Deck
17	Mowing Blades
18	Battery Compartment

2.2.2 Charging Station



Number	Component name
20	Top Button/Status Indicator Light
21	Garage
22	Charging Interface
23	Charging Electrode
24	Power Supply
25	Power Adapter <u>(Must Be Placed Indoors)</u>

2.3 Specification

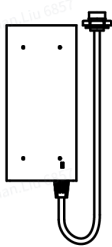

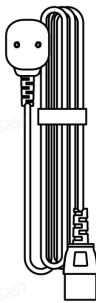
Specs		FJD FV2000
Capacity	Max mowing size	2000m ² (0.5 acre)
	Boundary type	Virtual boundaries (No perimeter wire)
	Net weight	13.3kg
	Dimension	631mm*444mm*290mm 24.84in×17.48in×11.42in
	Max climbing ability	33° (65%)
	Waterproof level	IPX5, IP65, IP67

	(mower, charging station, RTK reference station)	
Positioning & Navigation	Industrial RTK & enhanced vision	Supported
	Radio RTK mode & network RTK mode	Supported
	User interface	Keyboard & APP control
	Firmware update	APP update through OTA
	Connectivity	Wi-Fi & Bluetooth
Cutting System	Cutting width	255mm 10in
	Cutting height range	10~50mm 0.4~2in
	Mowing speed range	0.3~0.5m/s
	Blade speed range	high, middle, and low
	Blade type	6 pivoting stainless steel blades
	Cutting mode	parallel stripes with a specific angle
Product Safety	Object detection & avoidance system	RGB camera & physical bumper
	Lift sensor	Yes
	Security System	PIN access, alarm, charging station pairing, GPS theft tracking
	Tilt sensor	Yes
Battery & Charging	Single battery capacity	95Wh
	Battery type	Lithium-ion battery
	Charging mode	Automatic & manual
	Auto-recharging	Yes
	Mowing time per full charge	90 min
	Charging time	60 min

3. Preparation before use


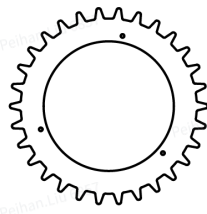
3.1 Packing List

Charging Station Kit







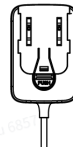
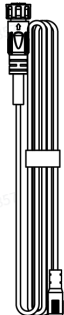
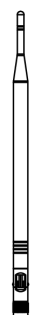


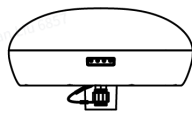
Power Supply Cable Extension Cable (10m) Power Adapter

Mower Accessory Kit









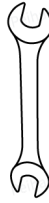

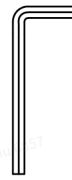
Skid Plate*2 M4 Screw*6

Lite RTK Station Accessory Kit



Lite Rtk Station Straight Mounting Pole Bent Mounting Pole Radio Antenna Power Supply Cable (5m) Plug Adapter (Europe/uk/us)

Universal Tool Kit



Hex Wrench (Large) Hex Wrench (Small) M8 Wrench Screwdriver M8 Expansion Screw*3 Spare Blade*6 Skid Plate Screw*6 M6 Screw*3 Screw*4

4. Deploy and install

If you have a network RTK service account based on Ntrip, you can use the network RTK positioning solution without deploying an RTK antenna.

4.1 Deploy RTK stations

To optimize the performance of your RTK system, the RTK base station must be located in an open area to receive satellite signals. You can install the RTK reference station on a flat, open surface or on a wall or roof. Generally, you can place the RTK base station on the ground, but if yours has multiple lawns, we prefer that you place the RTK base station on a wall or roof to improve stability and coverage.



4.1.1 Install RTK on the ground

If the RTK antennas installed on walls/roofs are not available for your using scenarios, you can choose to purchase our [Tripod Kit] accessories. You can check the detailed instructions below.

Site selection requirement

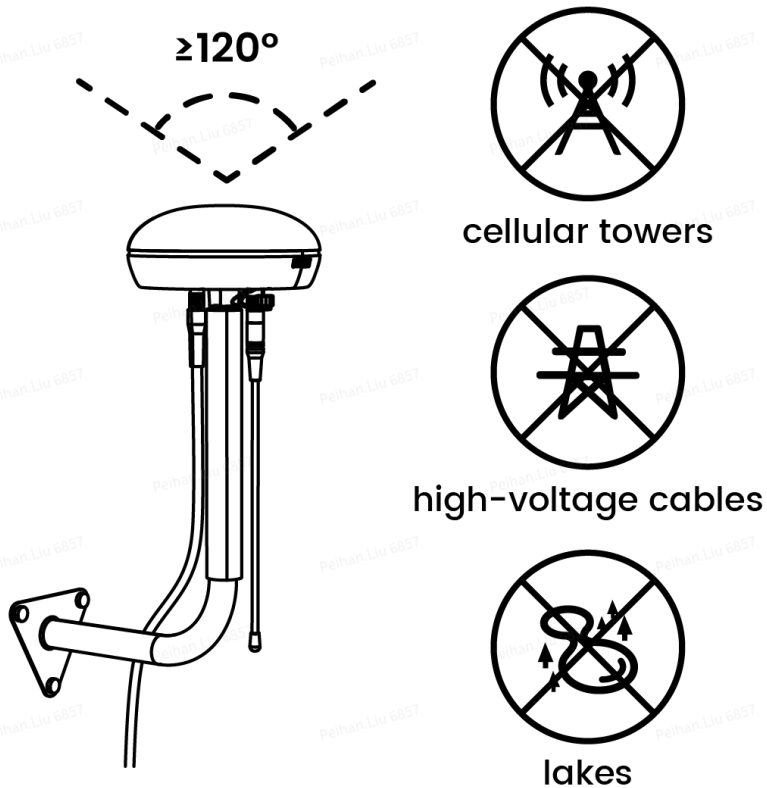
Select the appropriate position to install the reference station. The requirements are as follows:

- Choose a place with no trees or power towers nearby. Also locate your RTK antenna with the tripod on an open field & a terrain as high as possible;
- Choose the land with dense soil to ensure that the position does not move after installation;
- The position will not be affected by collision of operating machinery;
- Choose a location that is easy to find.

4.1.2 Install RTK antennas on walls/roofs

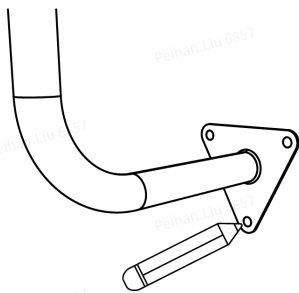
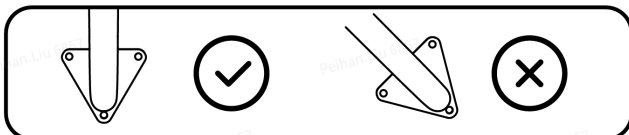
1. RTK antennas should be installed in open areas such as rooftops or walls.
 - a. Ensure that there is partial unobstructed sky within a 120° angle.

- b. Install RTK antennas at least 500 meters away from base stations, high-voltage cables, and bodies of water like lakes.



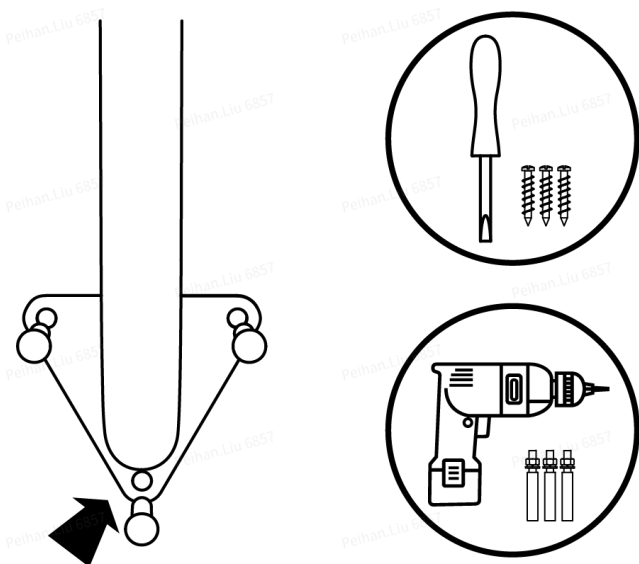
2. Mark the installation position of the curved mounting rod on the wall.

- a. The mounting rod must be positioned vertically upwards.

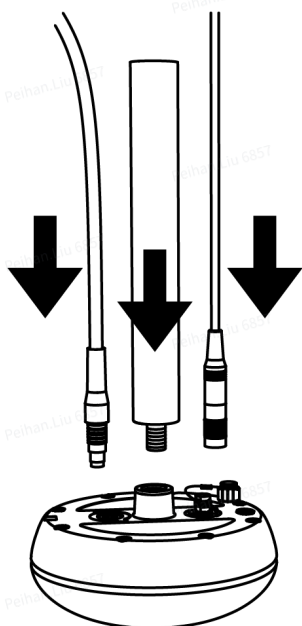


3. Choose the appropriate screws according to the wall material and drill holes at the marked positions.

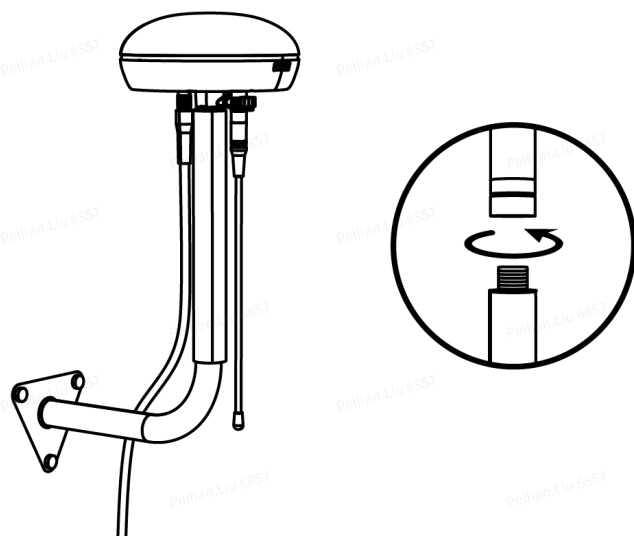
- a. For wooden walls: Use M6 screws and screwdrivers.
b. For concrete walls: Use M8 expansion bolts and power tools (Bring your own).



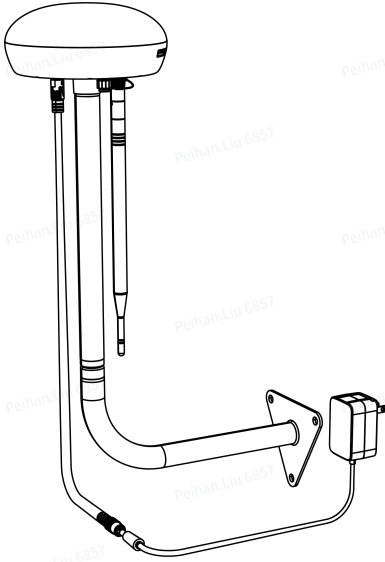
4. Install a direct hanging pole, RF antenna, and power cord (5m) on the RTK base station.



5. Securely fasten the two mounting rods.

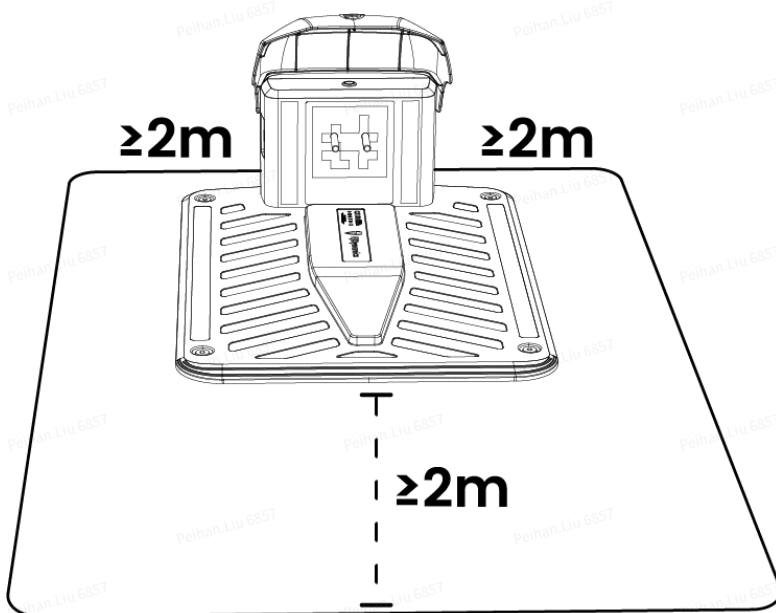


6. Insert the DC to USB-C cable, adapter, and power adapter plug into the power outlet to activate the RTK base station.

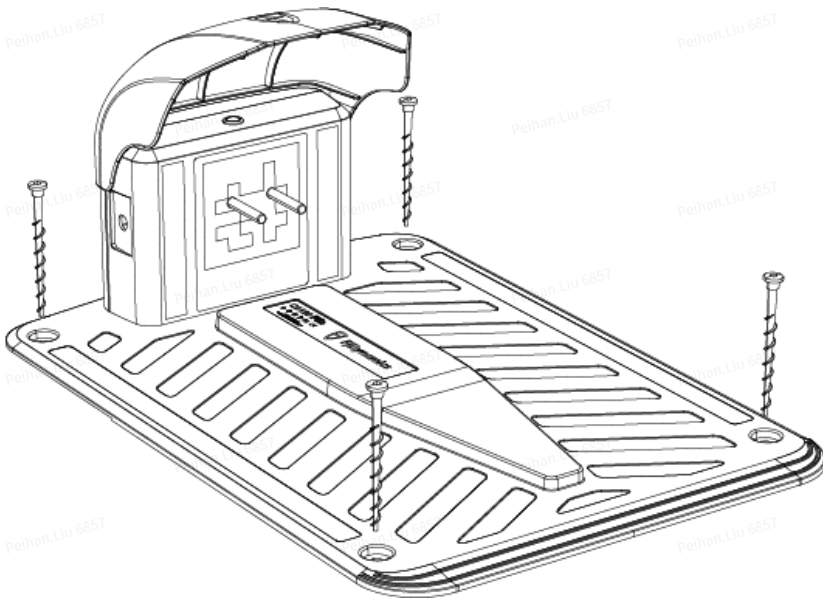


4.2 Deploy lawn mowers and charging stations

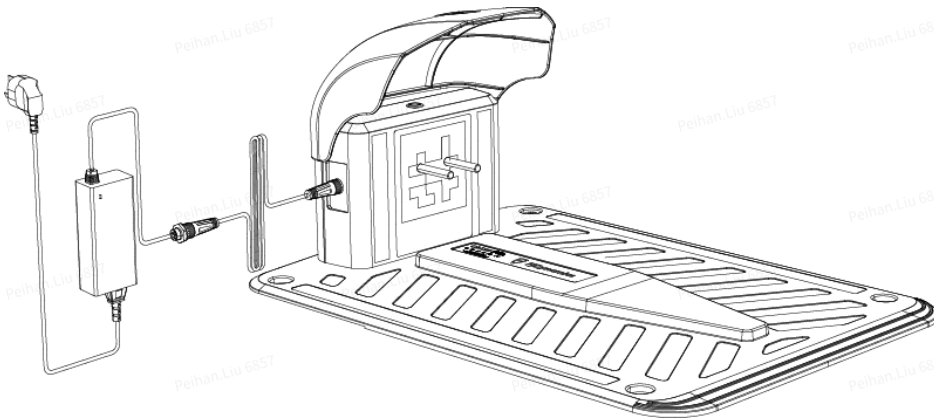
1. Select a flat and level place to place the charging station. Ensure there is a clear, unobstructed horizontal area extending at least 2 meters in front of the station, devoid of hills, slopes, indentations, potholes, or obstacles.
 - Confirm that the grass beneath the charging station board does not exceed a height of 5cm (about 2 inches).



2. Fix the charging station and garage to the ground with bolts.



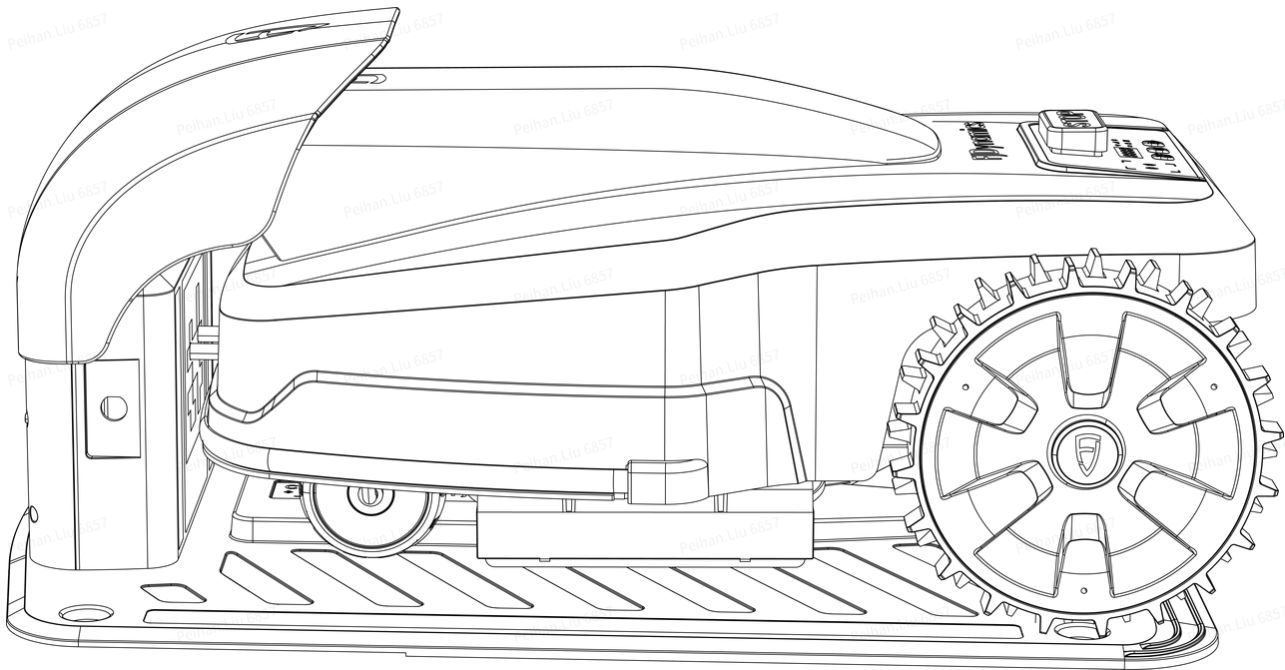
3. Connect the power adapter(Must be placed indoors), 10-meter extension cord, and power cord, and plug them into the power outlet.



4.3 Docking the robotic lawn mower

After the deployment of the charging station and RTK antenna is completed, take out the robotic lawn mower and dock it with the charging station as follows:

- Press the button on the charging station to ensure the indicator light turns green and blinks rapidly, indicating it has entered direct charging mode.
- Connect the robotic lawn mower with the charging station as shown in the diagram, and wait for it to power on.
- Once the robotic lawn mower is powered on, turn on the switch of the robotic lawn mower.



5. Instructions for use

5.1 Preparations

- Read and understand the safety instructions before use.
- Ensure both the charging station and RTK antenna have been deployed.
- Verify that the robotic lawn mower has been docked with the charging station and is charging. If not completed, refer to the [Section 4.3 - Docking Instructions] for the robotic lawn mower.
- Ensure there is a good Wi-Fi or mobile hotspot signal available nearby.
- Confirm that the Bluetooth function on your phone is enabled.

5.2 Download the FJD Landscaping APP

FJDynamics robotic lawn mower is designed to be used in conjunction with an app. Please download the app first. You can obtain the app by scanning the QR code below or by searching for {FJD Landscaping} on Android or iOS app store.



5.3 Register an FJDynamics account and log in

If you already have a FJDynamics account, please refer to Log in only.

Mobile phone number registration is currently only supported in mainland China.

5.3.1 Register and log in

After downloading the app, you can create an account according to the instructions below.

5.3.1.1 Register with an email

1. Click Register Now.
2. Enter an email address.
3. Click the Send Verification Code button, and a verification email will be sent to your email address (if not received, please check your spam folder).
4. Enter the verification code (the valid period of the verification code is 10 minutes, please click the send button again to get a new verification email).
5. Set a password (the password needs to be between 8 and 22 characters, with at least lowercase letters and numbers).
6. Check the User Agreement and Privacy Policy.
7. Click to complete registration and login.

9:41

<

REGISTER

For account security, please set a login password and enter verification code. Your password must be a combination of numbers, letters and special characters, and at least 8 characters long.

Enter Email Address

Enter Password

Enter Verification Code Send

Create Account

☐ I've read and agreed to [User Agreement](#) and [Privacy Policy](#)

Europe V0.4.4 (24080101)

5.3.1.2 Registering with a cell phone number



Cell phone number registration currently only supports cell phone numbers from mainland China.

5.3.2 Log in only

You can log in directly by entering your username (i.e., email) + password, or username (i.e., email) + verification code. After that, check the User Agreement and Privacy Policy, and click Log in to access the main interface of the system.

To switch the language of the app, click on the upper right corner of the login page.

Password login

Verification Code Login



5.4 FV2000 Deployment

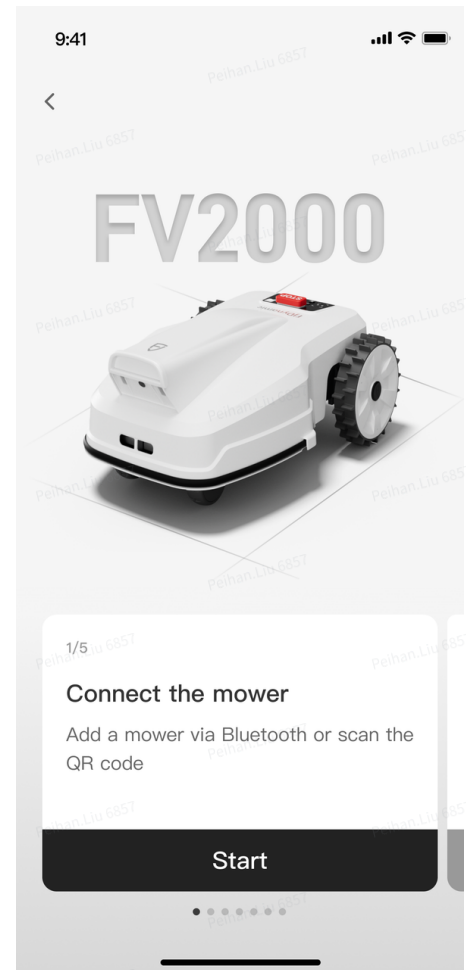
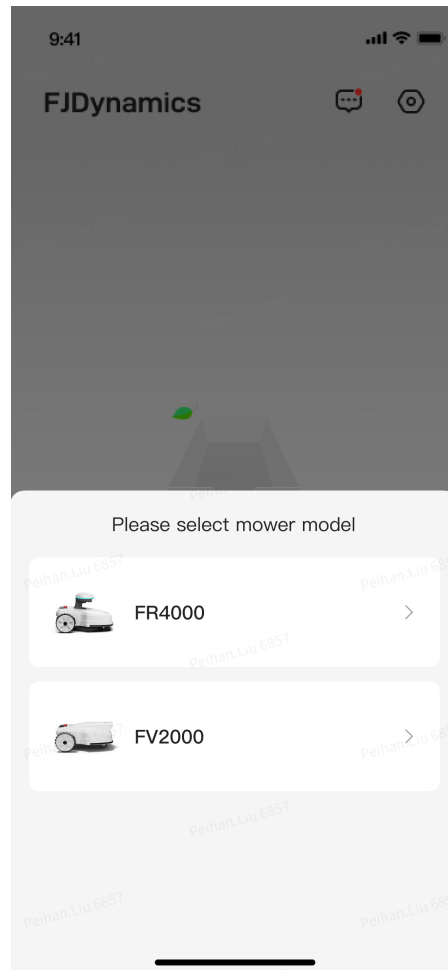
5.4.1 Binding and Distribution Networks



Caution:

To ensure that the Bluetooth function is working properly, please make sure that the Bluetooth function is enabled on your cell phone and that the distance between your cell phone and the lawn mowing robot is less than 3m.

1. Click + Add Device
2. Selecting "FV2000"
3. Follow the guidelines to complete the setup of the mowing robot

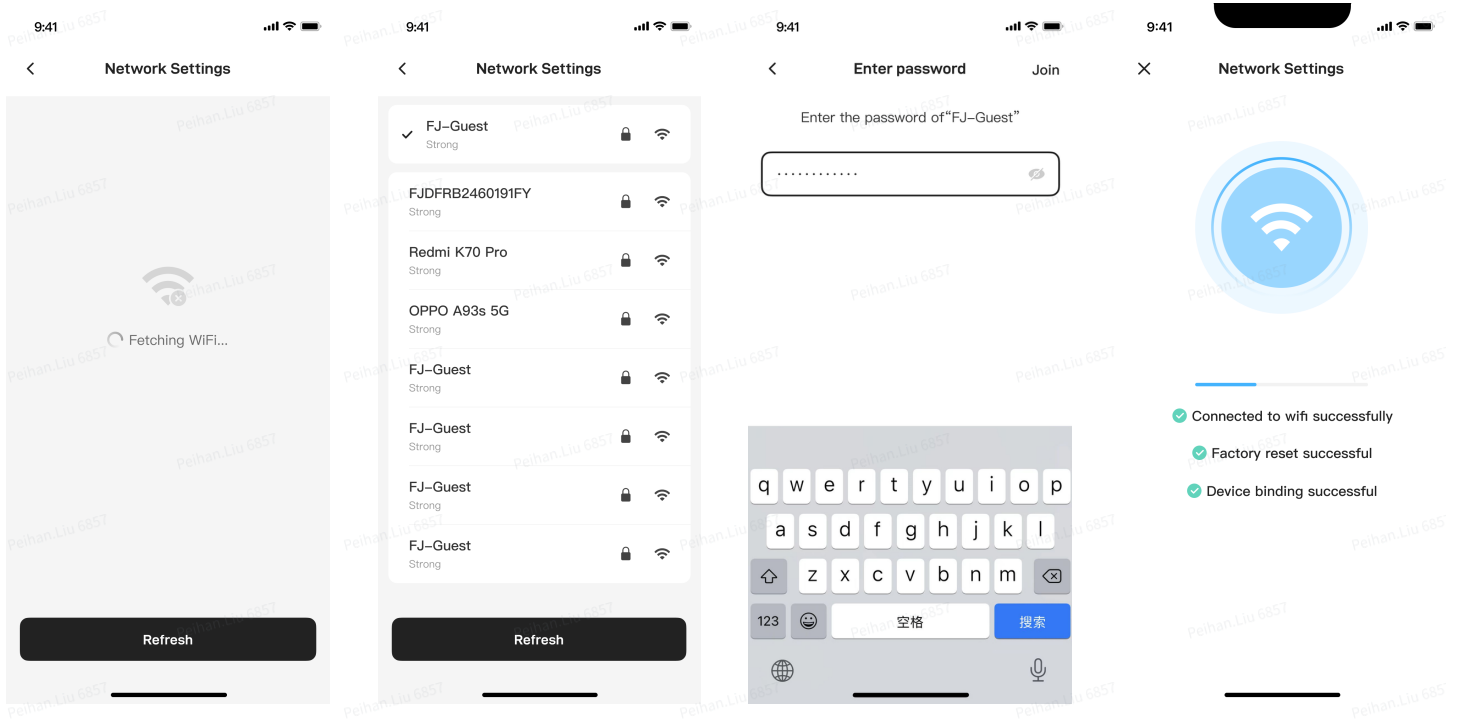


Attention:

- The FJDynamics robotic lawn mowers(FR4000/FV2000) only support 2.4GHz Wi-Fi networks.
- If you are using an iOS device, the mower only has the option of connecting to the Wi-Fi that your mobile device is connected to. Please connect your mobile device to the Wi-Fi first, then connect the mower to the same Wi-Fi.

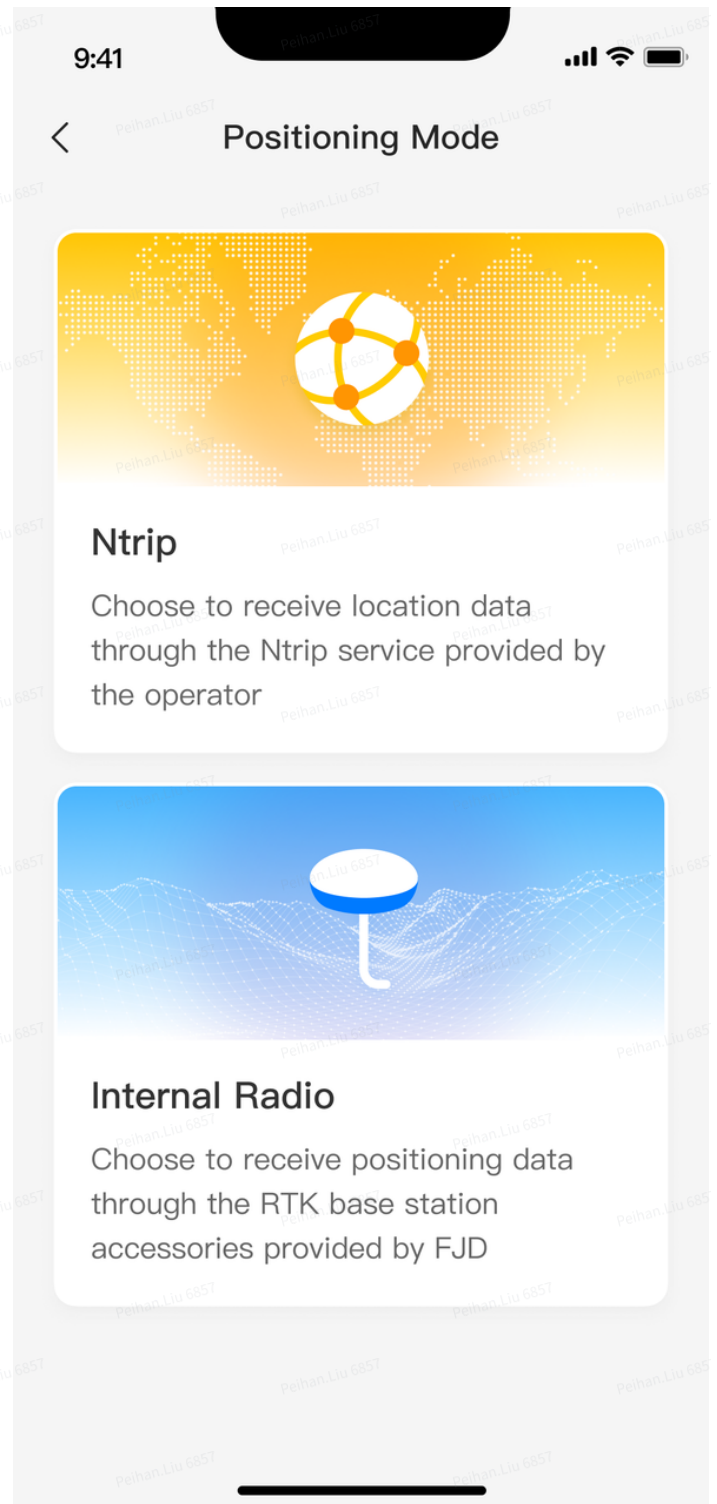
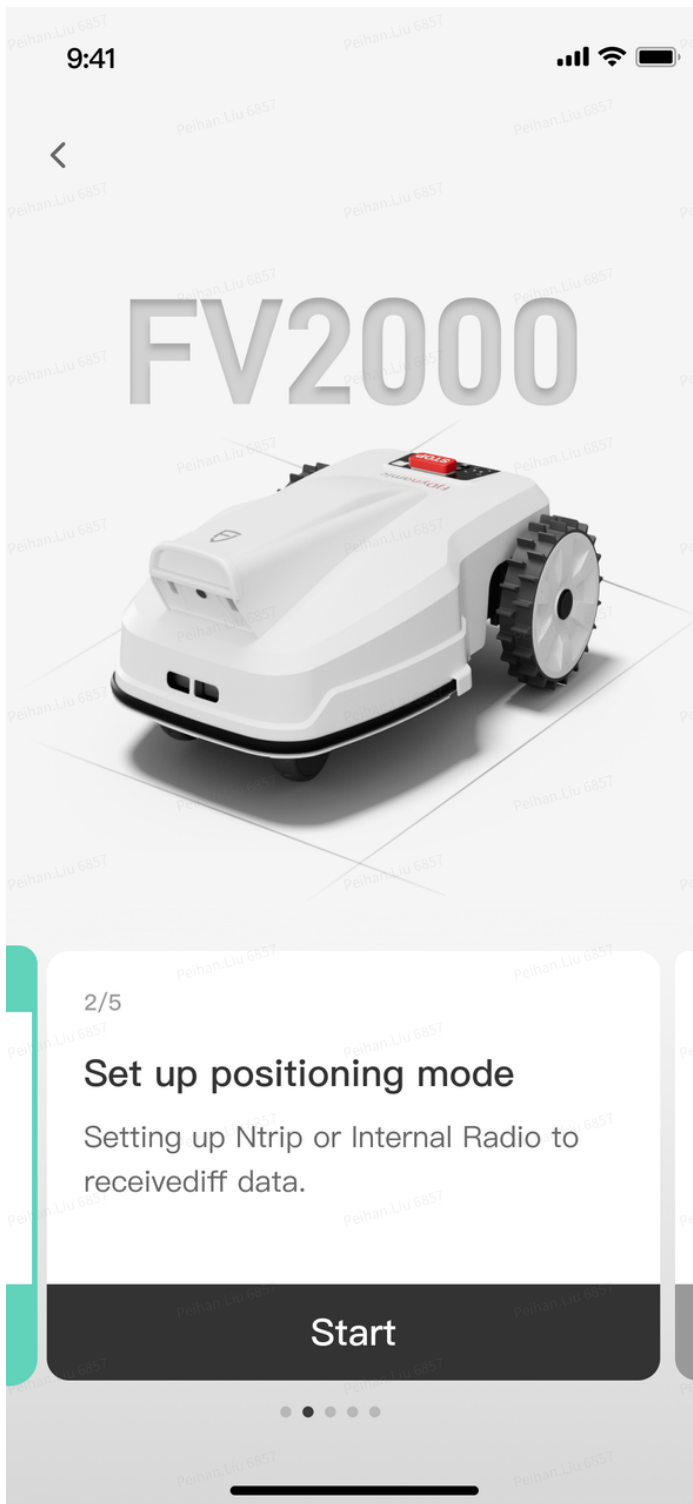
When adding a device for the first time, after guiding the Bluetooth connection of the cell phone to the car, the process of network allocation will be initiated

- Select the Wi-Fi network you want to access
- Input Wi-Fi password
- Click Join to complete the network and machine binding.



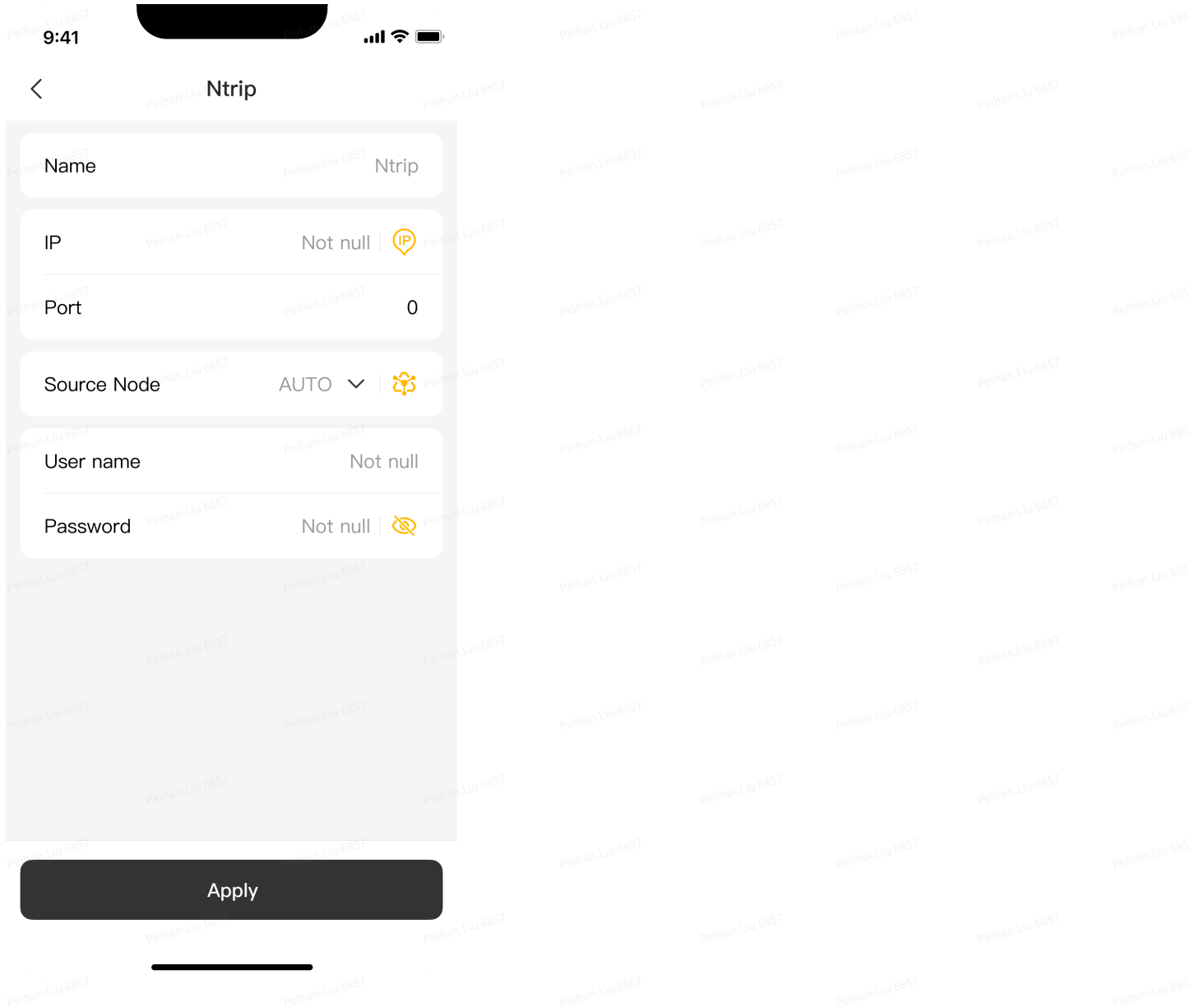
5.4.2 Selecting the positioning mode

The positioning of FV2000 supports both Ntrip (Network RTK) or Internal Radio (Local Reference station) solutions.



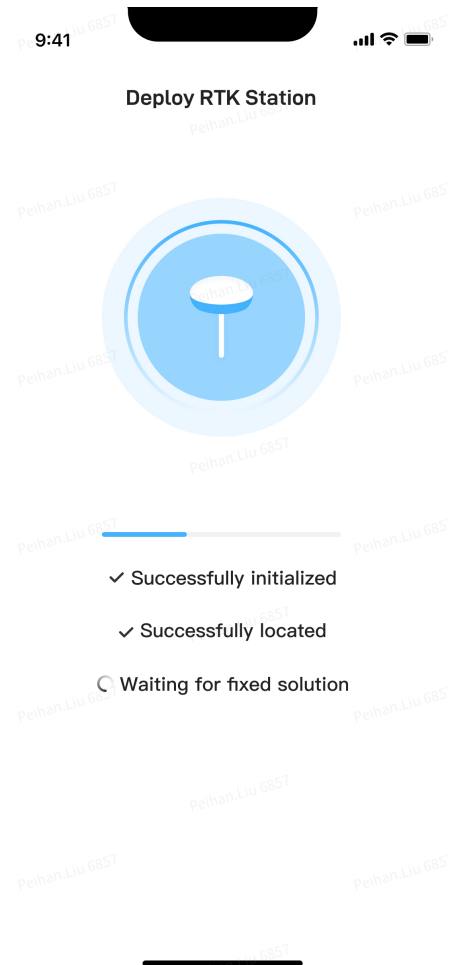
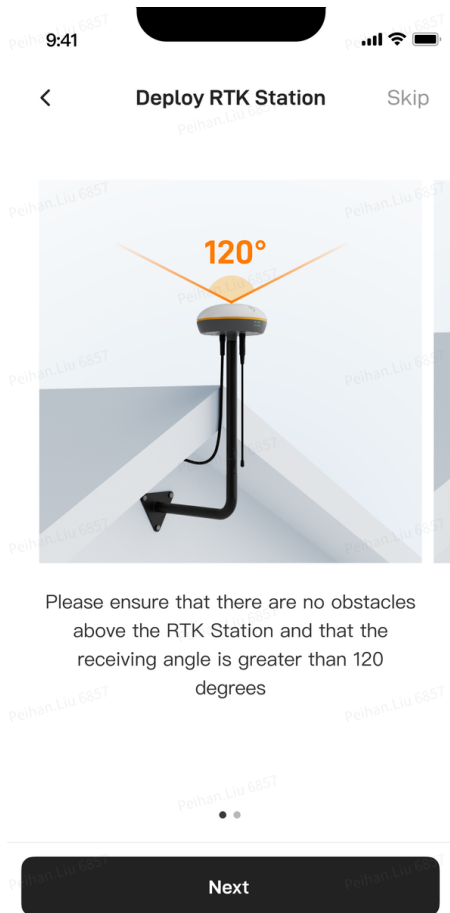
5.4.2.1 Ntrip mode

1. Select {Ntrip} Mode.
2. Read the deployment instructions
3. Enter the required Ntrip network RTK configuration.
4. Wait for the reference station functionality to be deployed.

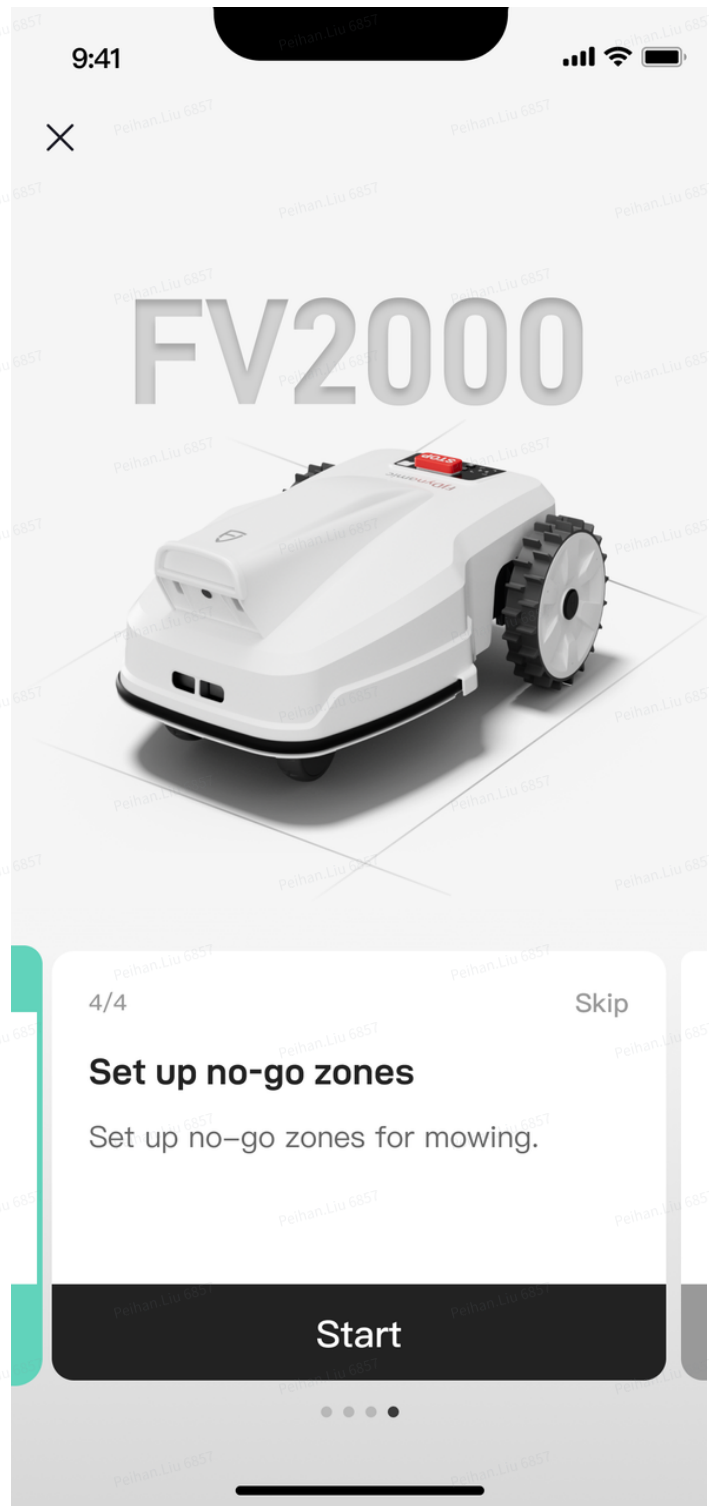
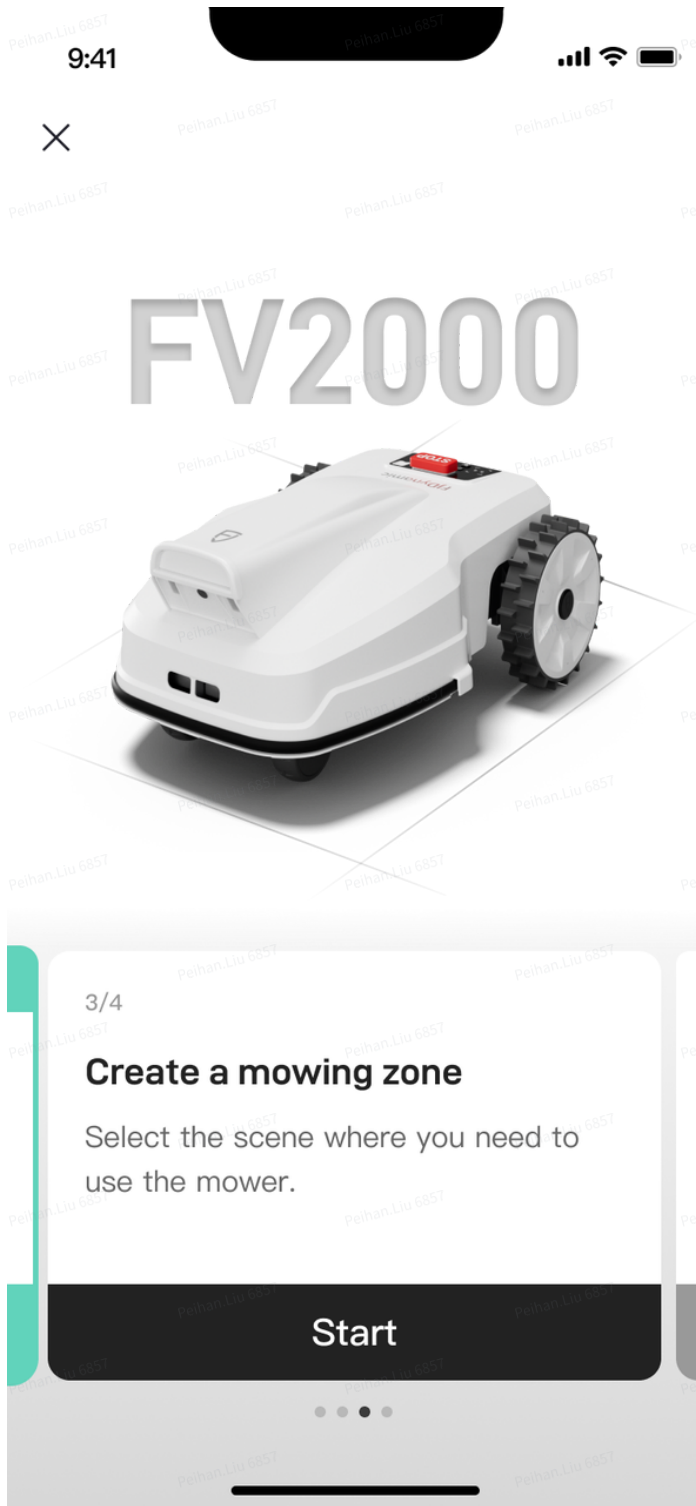


5.4.2.2 Internal Radio RTK Mode

1. Make sure the RTK reference station has been installed and powered up.
2. Make sure your cell phone is connected to the mower by Bluetooth.
3. Select {Internal Radio} in the positioning mode.
4. Confirm that the all preparations have been completed, and then click Start Creating.
5. Wait for the base station to finish deploying.



5.4.3 Set up Work Zones

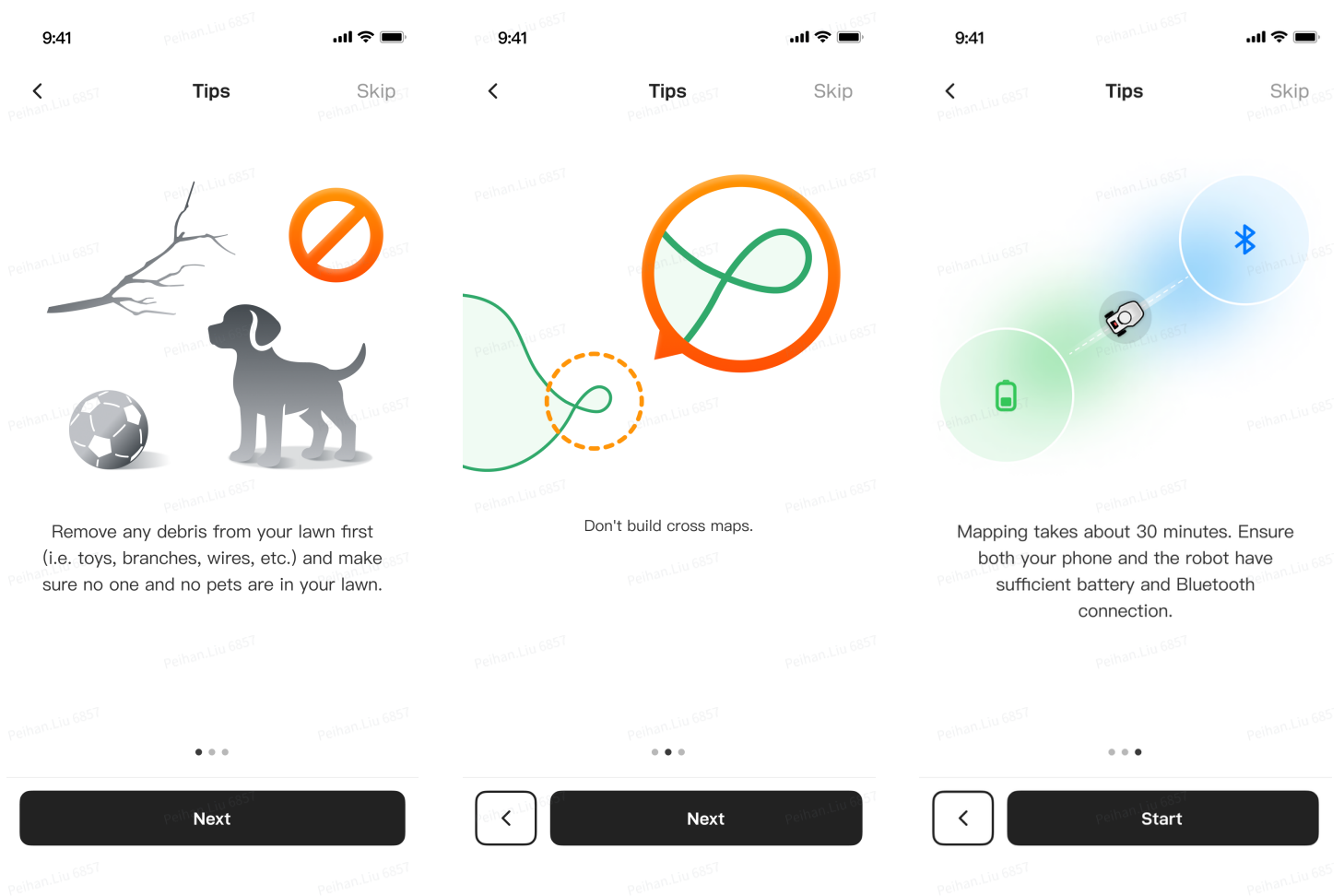


5.4.3.1 Precautions before building a work zone

There are the following precautions to be taken before building a work zone:

- The lawn needs to be cleared. Please remove debris, piles of leaves, toys, wires, rocks, and other obstacles before building the work zone. Please ensure that there are no children or animals on the lawn.
- The mower is in proper condition and the positioning is stable.
- It is still recommended that you leave a distance of 15cm when remotely controlling the lawnmower robot along obstacles such as walls, fences, ditches and so on.

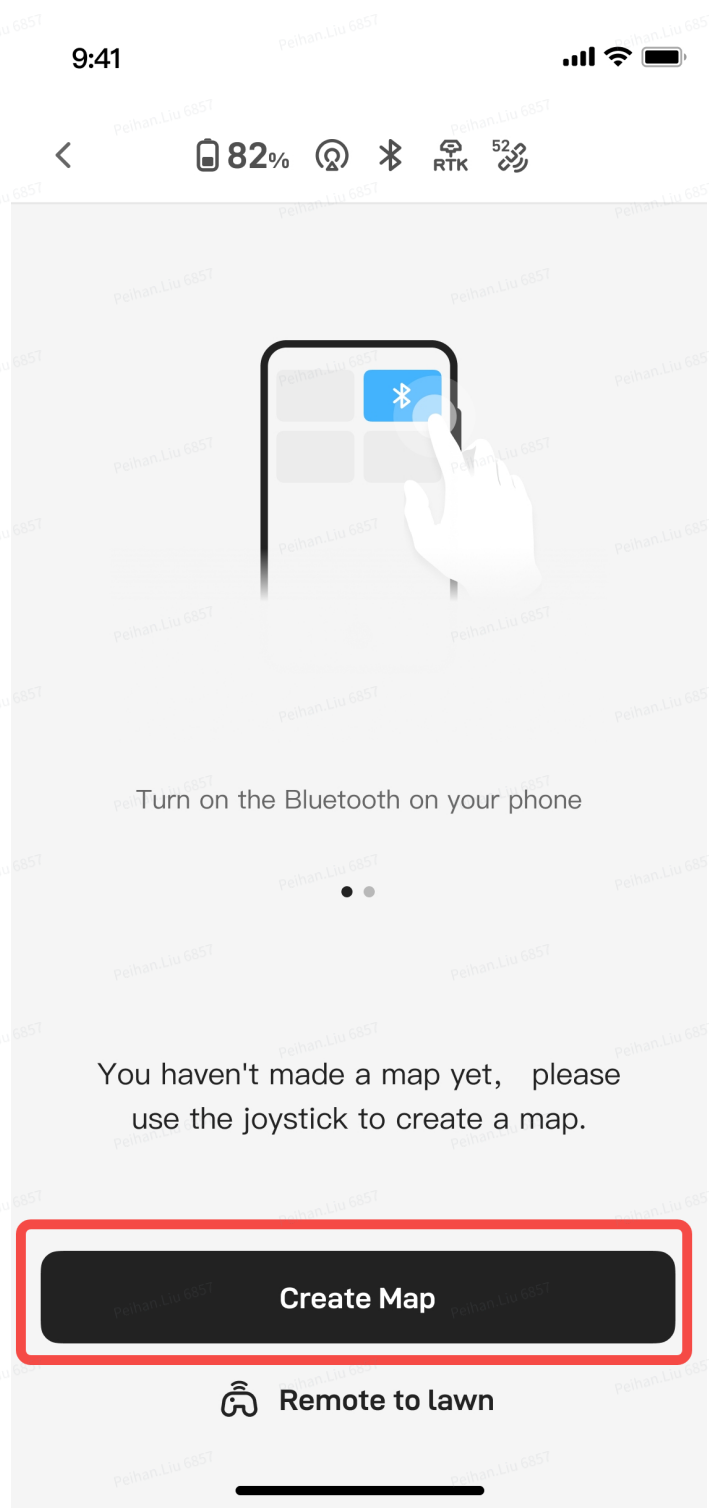
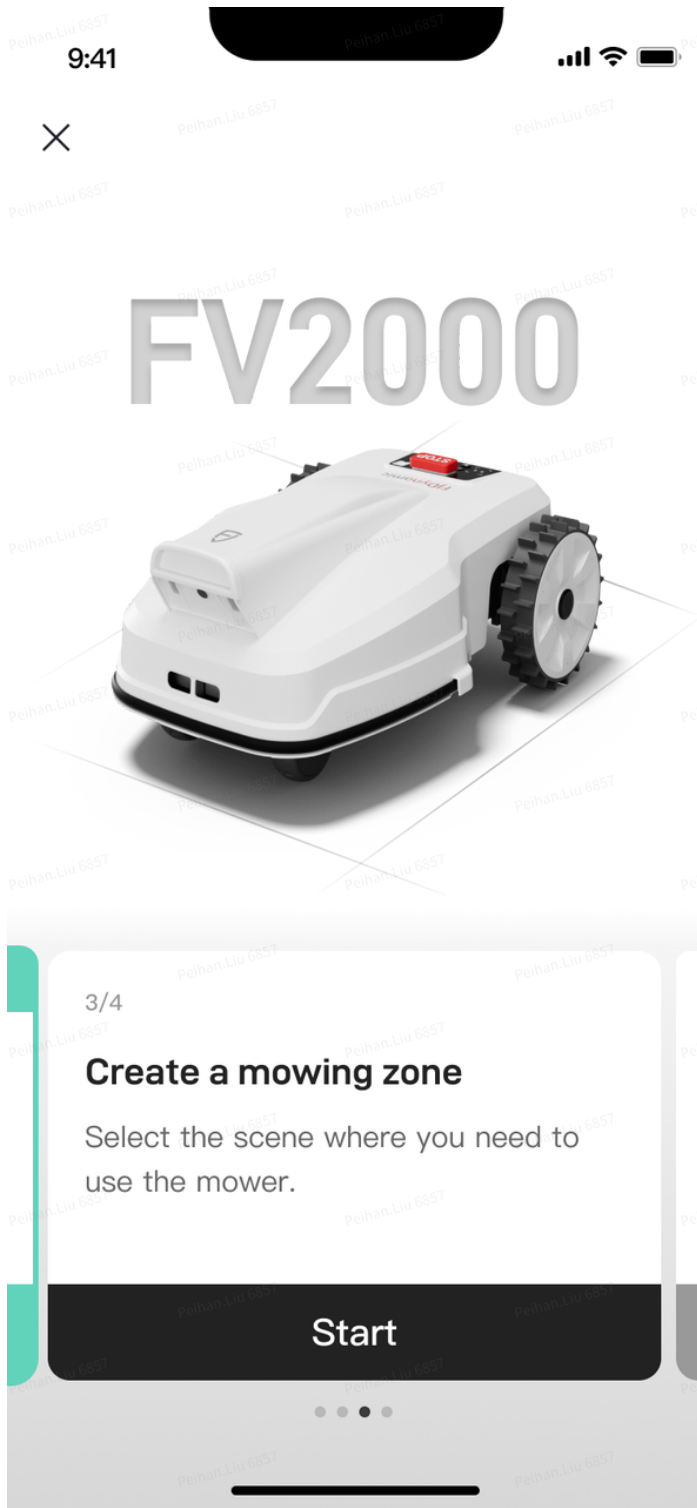
- To ensure a better Bluetooth connection and to be able to deal with different situations on the spot, please follow the mower robot and stay within a distance of 3m during the building process.
- Please draw a line along the edge of the lawn.



5.4.3.2 Create work zones

5.4.3.2.1 mapping without charging station

1. Make sure the mower is turned on, the emergency stop button is not pressed, and the battery level is recommended to be above 50%.
2. Click the {Start} button in the process, or click the {Create Map} button on the device management page.



3. 3. Click {Mowing Area - No Charging Station}.



4. Click {No passage} to start drawing the work area boundary directly at the current position of the mower. The {With passage} mode is not available yet.



5. After clicking confirm, the lawn mower will leave the charging station automatically.



5.4.3.2.2 If there is RTK fixed at the charging station

If the mower has RTK fixed at the charging station, the map will be created by RTK method.



Attention:

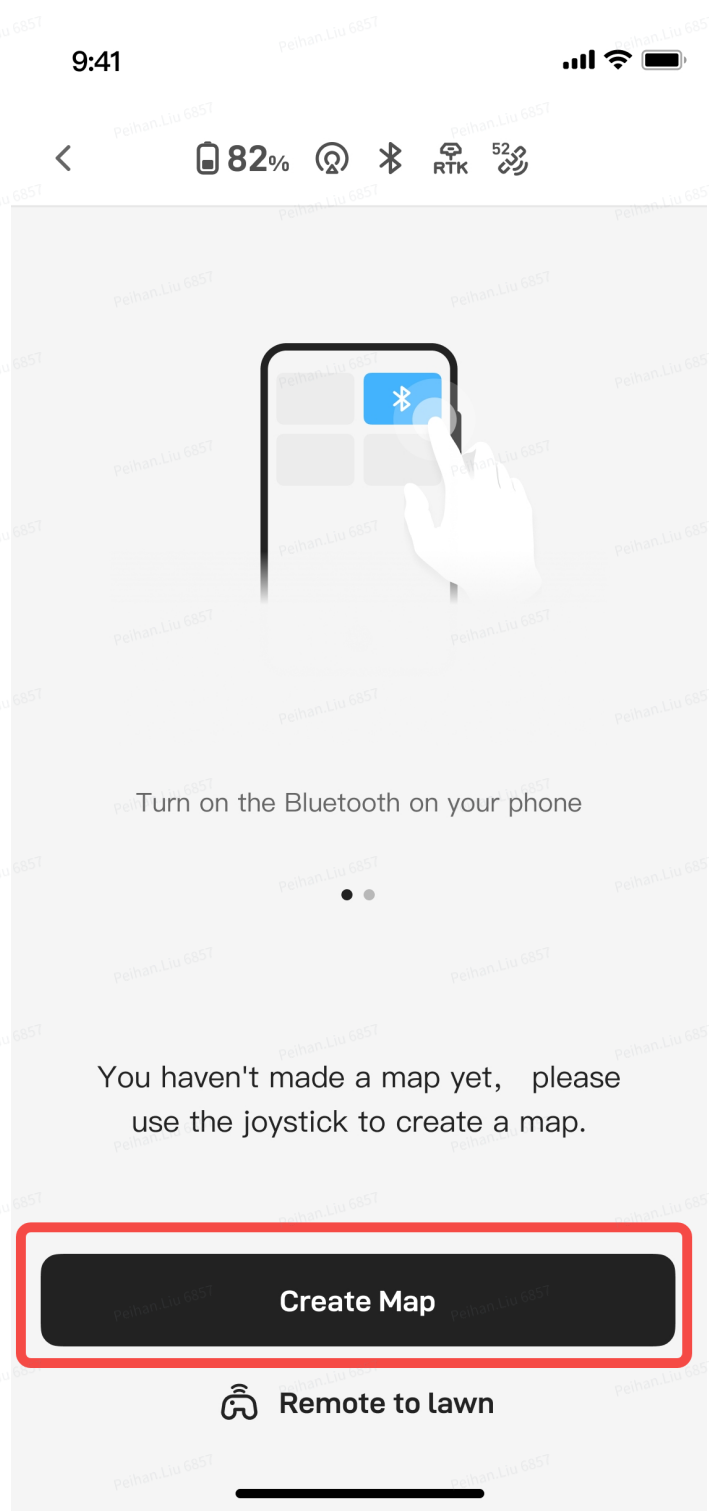
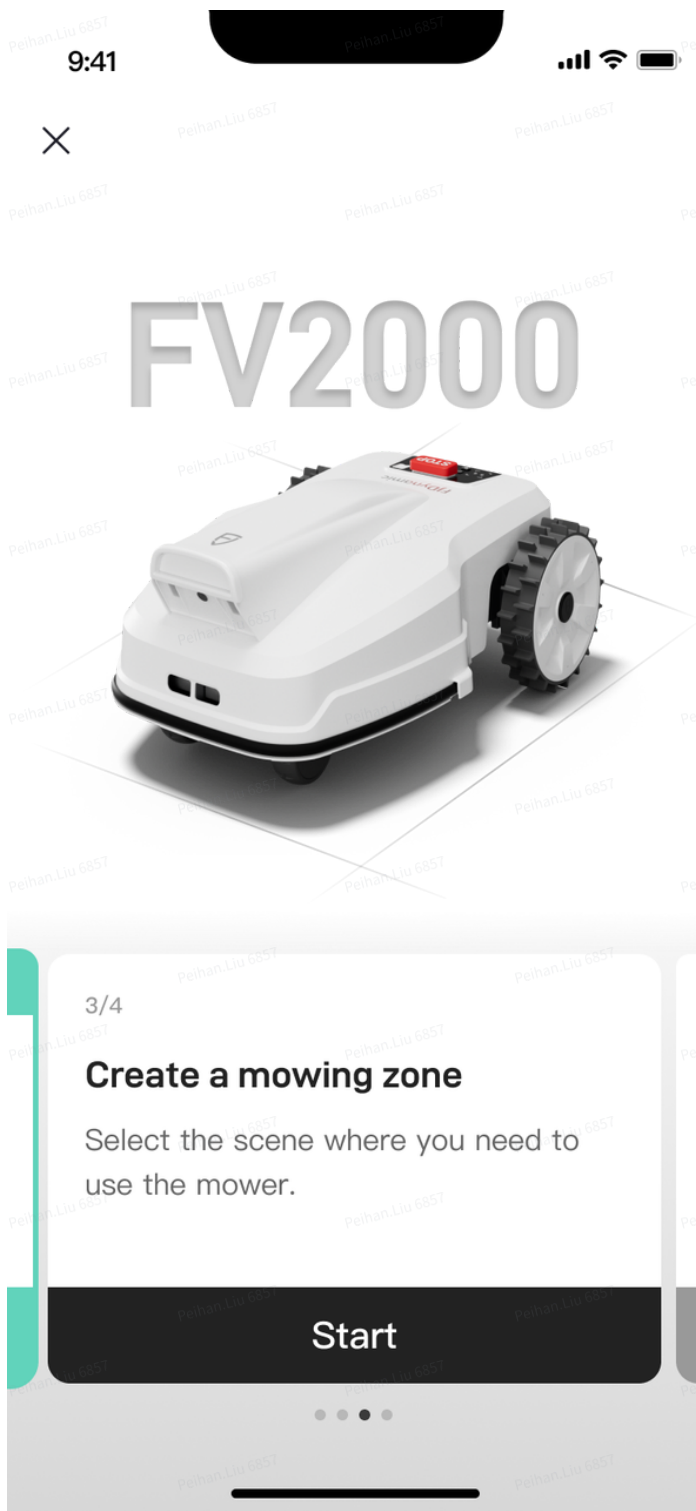
If you are deploying charging stations outside the intended work area, please refer to "Charging Station Inside";

If you are deploying charging stations inside the intended work area, please refer to "Charging Station Outside";

If the location of charging stations has not yet been marked, they will be marked together during the first work zone was being built.

5.4.3.2.2.1 Creating Work Zones While "Charging Station Outside"

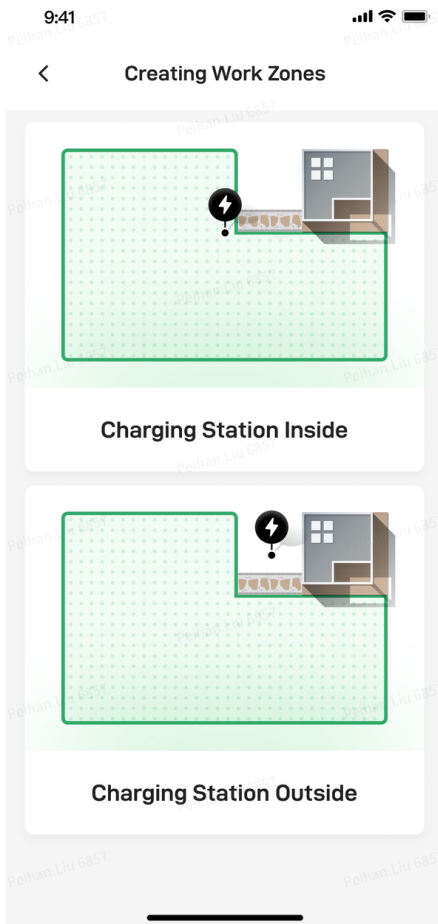
1. Make sure the mower is turned on, in the charging dock and in normal working condition, with fixed solution, emergency stop button is off, and the battery level is recommended to be more than 50%.
2. Click the {Start} button, or click the {Create Map} button in the device management page.



3. If the charging station has not yet been marked, it will indicate that there is no charging station at the moment and whether to deploy.
 - a. The APP will start the Bluetooth connection to the mowing robot.
 - b. After the APP connects to the FV2000 by Bluetooth and confirms the charging station deployment requirements, the mowing robot will go out of the station by itself and return to the charging station automatically after completing the marking of the charging post location.
 - c. After the deployment is completed, the charging station icon will appear on the map.
4. Select "Work Zone"



5. Select "Charging Station Outside"

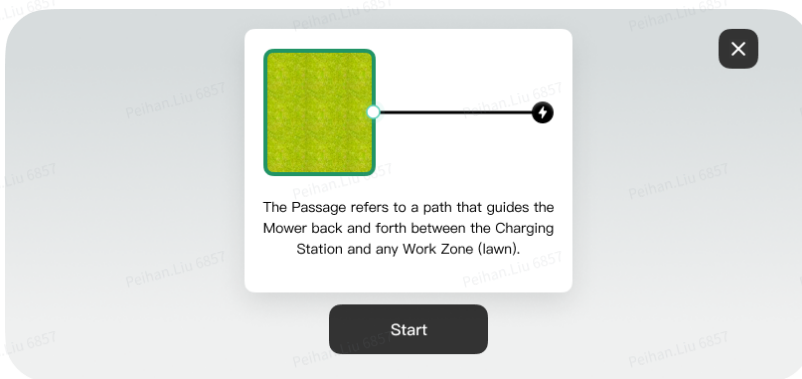


6. The FV2000 will reverse from the charging station automatically.

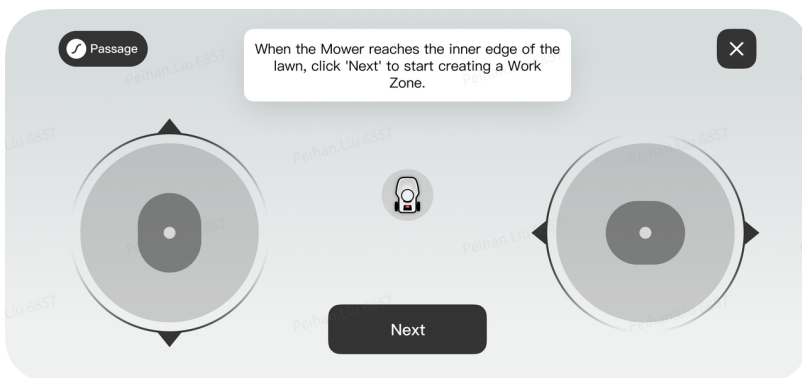


7. The connection line can be established by APP operation after the mower stops.

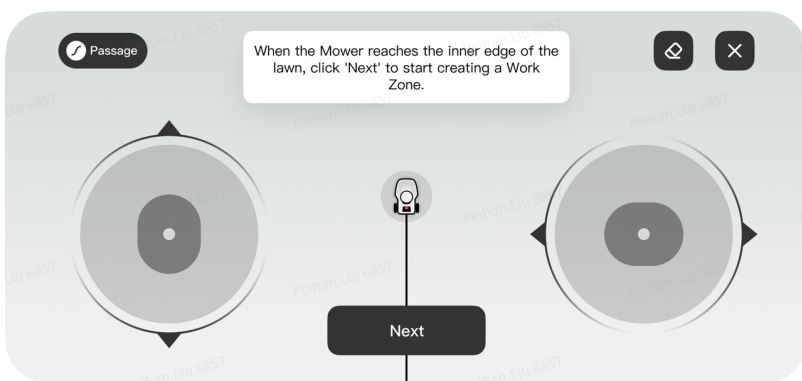
- a. The connection cable is to record the path the mowing robot takes from the charging post to the work area. The actual work will start walking along this path. Please make sure that the path is a drivable path;



- b. After clicking on the Start button, operate the joystick to remotely control the mowing robot to the edge of the intended working area;



- c. Click the {Next} button to save the connection line and enter the process of establishing a work zone.

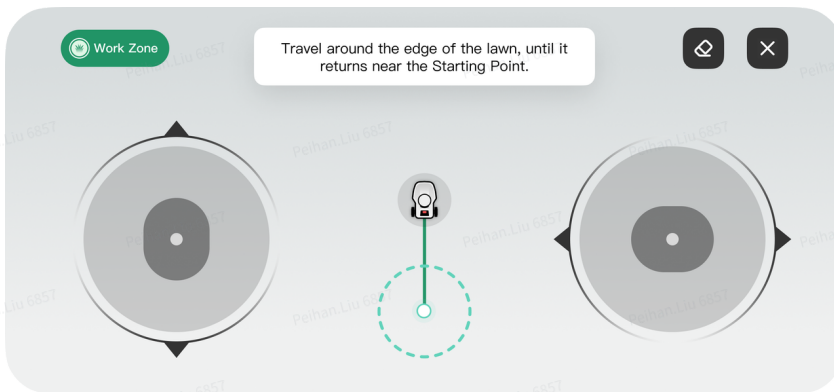


8. After the connection line is saved, the work zone can be established by APP operation. The steps are as follows.

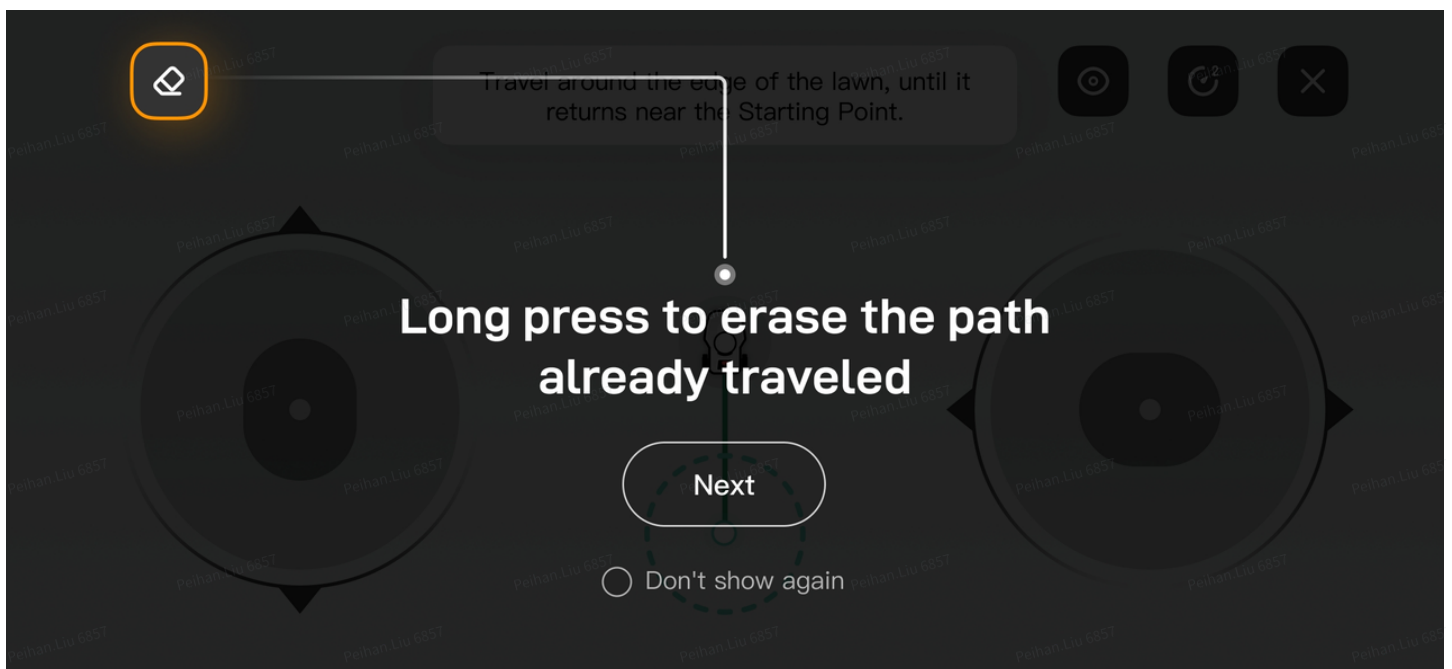
- a. After clicking on the {Start} button, operate the joystick to remotely control the mowing robot along the intended edge of the lawn in order to draw the border of your lawn.;



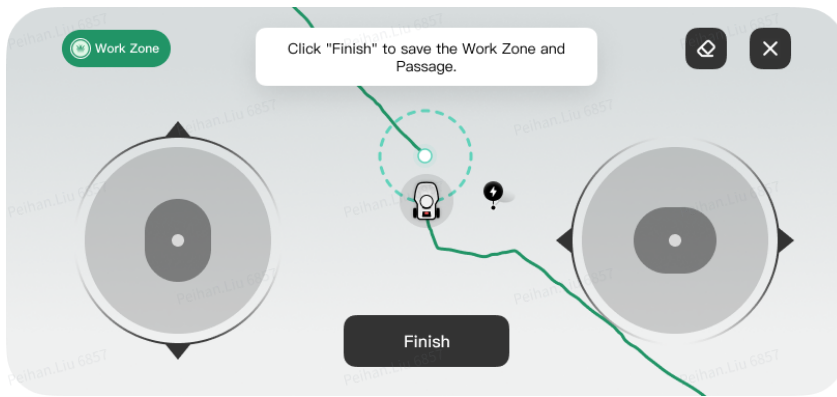
- b. The solid line marks the boundary you have drawn, while the dotted line will help you get back to the starting point;



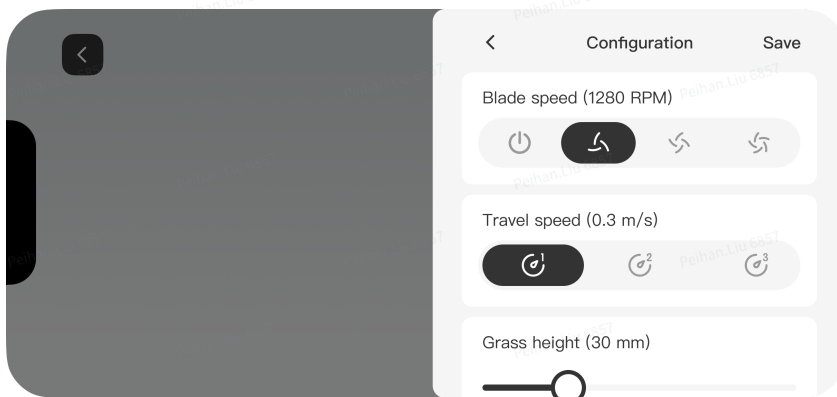
- c. The work zone will not be created until you control the mowing robot back to the drawing start point and click {Finish!}
9. If necessary, click the {Erase Button} and the mowing robot will backtrack along the path already drawn, erasing the backtracked work area boundaries.



10. Control the mowing robot to the starting point and save the working area by clicking on the {Finish} button.



11. Name the work zone.
12. Adjust the default mowing configuration for this area, including the cutting height, blade speed, travel speed & path planning.



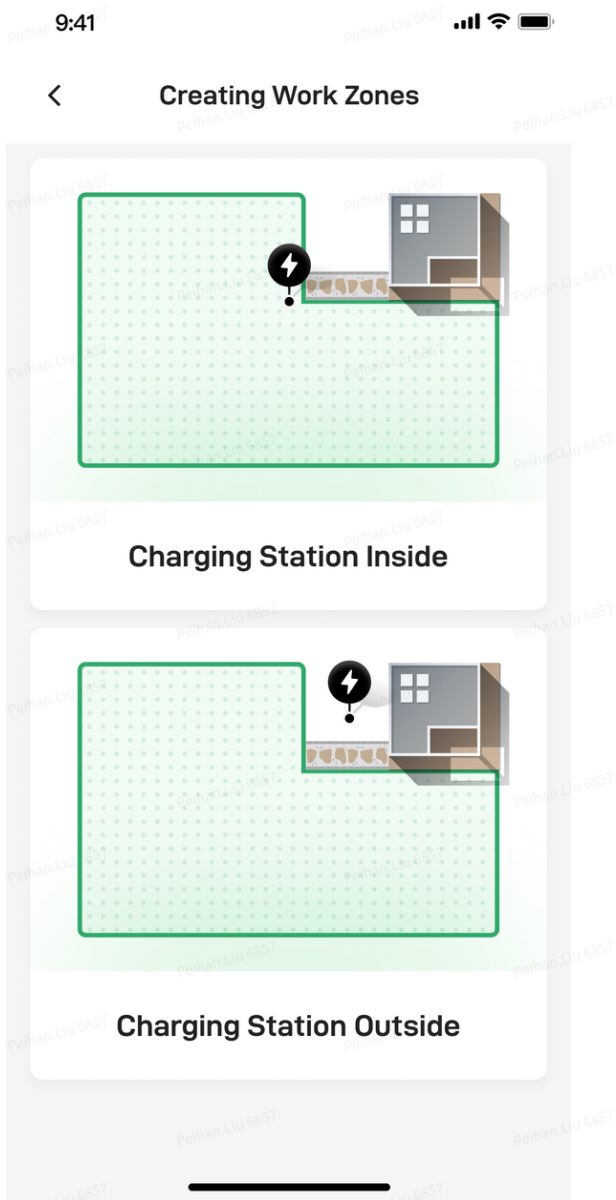
13. Finished.

5.4.3.2.2.2 Creating Work Zones While "Charging Station Inside"

1. Make sure the mower is turned on, in the charging dock and in normal working condition, with fixed solution, emergency stop button is off, and the battery level is recommended to be more than 50%.
2. Click the {Start} button, or click the {Create Map} button in the device management page.
3. If the charging station has not yet been marked, it will indicate that there is no charging station at the moment and whether to deploy.
 - a. The APP will start the Bluetooth connection to the mowing robot.
 - b. After the APP connects to the FV2000 by Bluetooth and confirms the charging station deployment requirements, the mowing robot will go out of the station by itself and return to the charging station automatically after completing the marking of the charging post location.
 - c. After the deployment is completed, the charging station icon will appear on the map.
4. Select "Work Zone"



5. Select "Charging Station Inside"

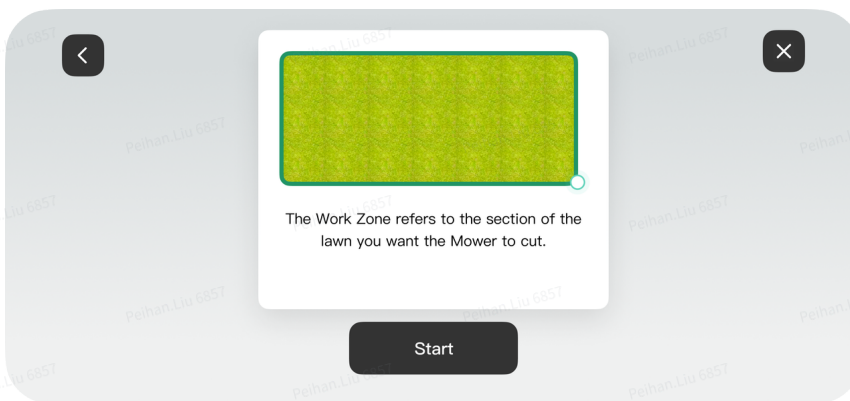


6. The FV2000 will reverse from the charging station automatically.

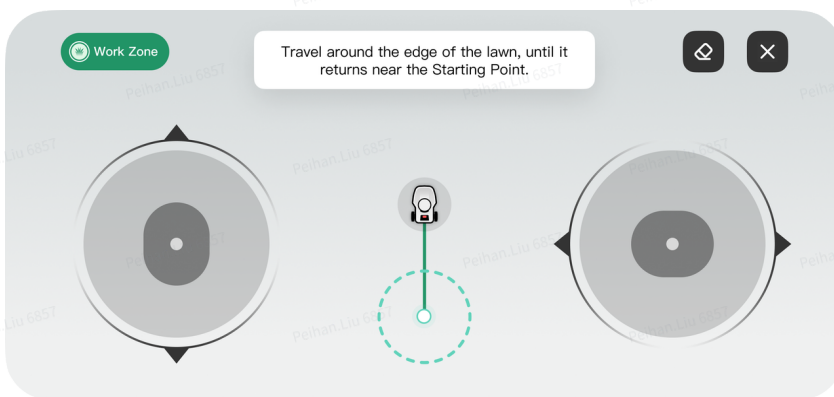


7. The connection line can be established by APP operation after the mower stops.

- a. After clicking on the {Start} button, operate the joystick to remotely control the mowing robot along the intended edge of the lawn in order to draw the border of your lawn.



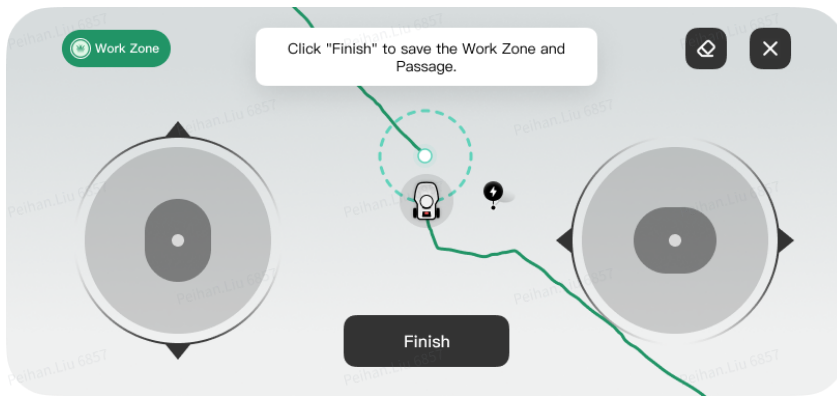
- b. The solid line marks the boundary you have drawn, while the dotted line will help you get back to the starting point;



- c. The work zone will not be created until you control the mowing robot back to the drawing start point.

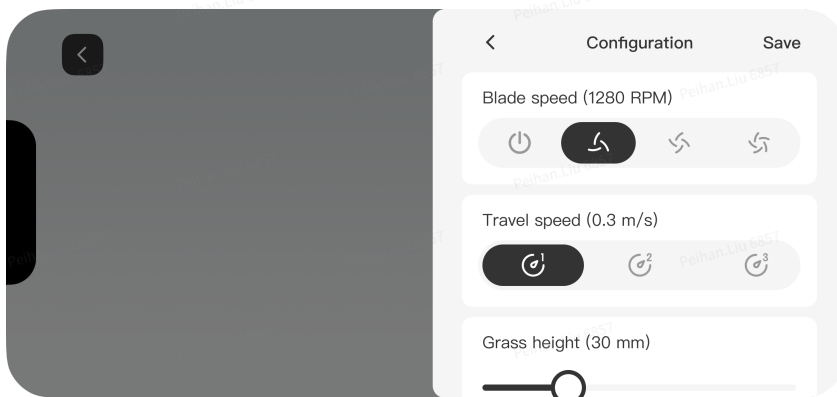
8. If necessary, click the {Erase Button} and the mowing robot will backtrack along the path already drawn, erasing the backtracked work area boundaries.

9. Control the mowing robot to the starting point and save the working area by clicking on the {Finish} button.



10. Name the work zone.

11. Adjust the default mowing configuration for this area, including the cutting height, blade speed, travel speed & path planning.

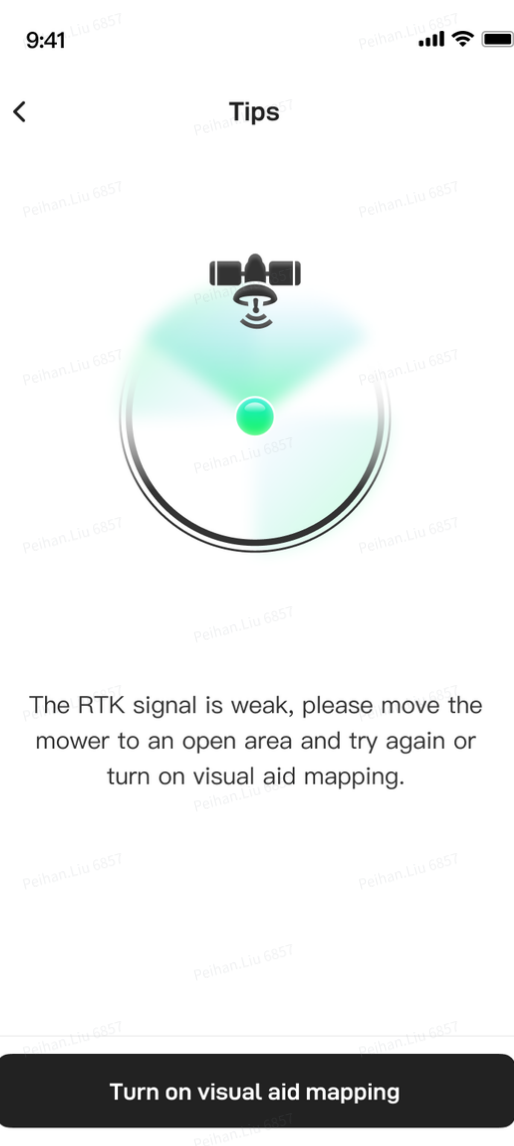
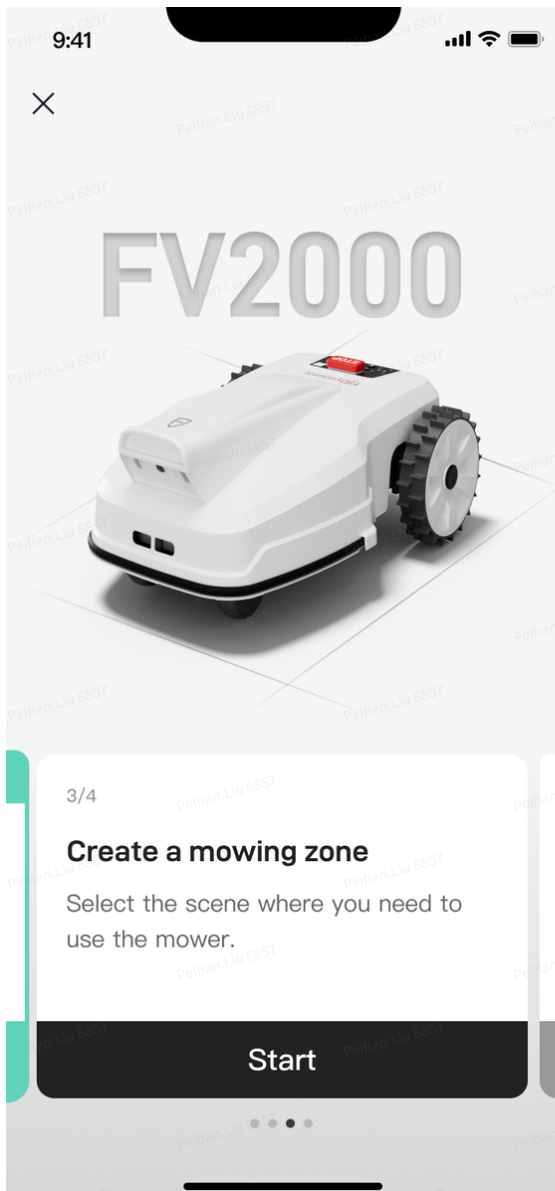


12. Finished.

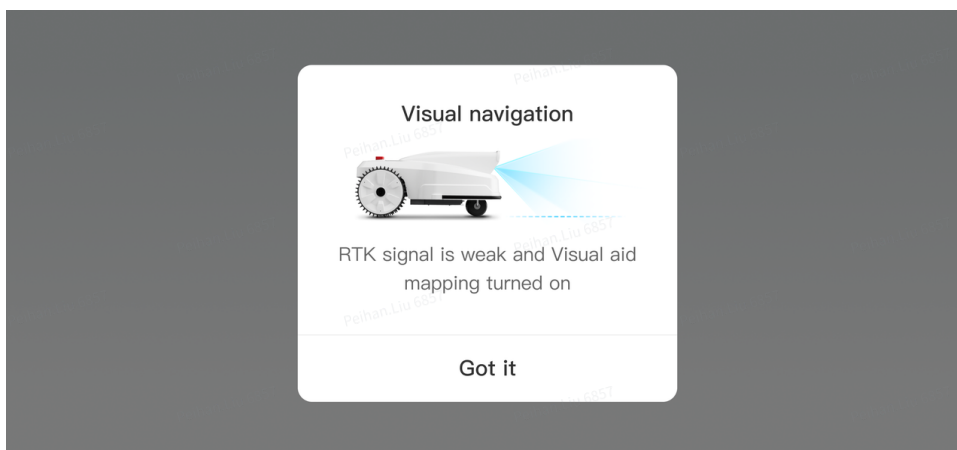
5.4.3.2.3 If there is no RTK fixed at the charging station

If the mower is covered by eaves or other factors at the charging station, resulting in no RTK fixed solution, mapping will be done with visual assistance.

1. Make sure the mower is turned on, in the charging dock and in normal working condition, emergency stop button is off, and the battery level is recommended to be more than 50%.
2. Click the {Start} button, or click the {Create Map} button in the device management page.

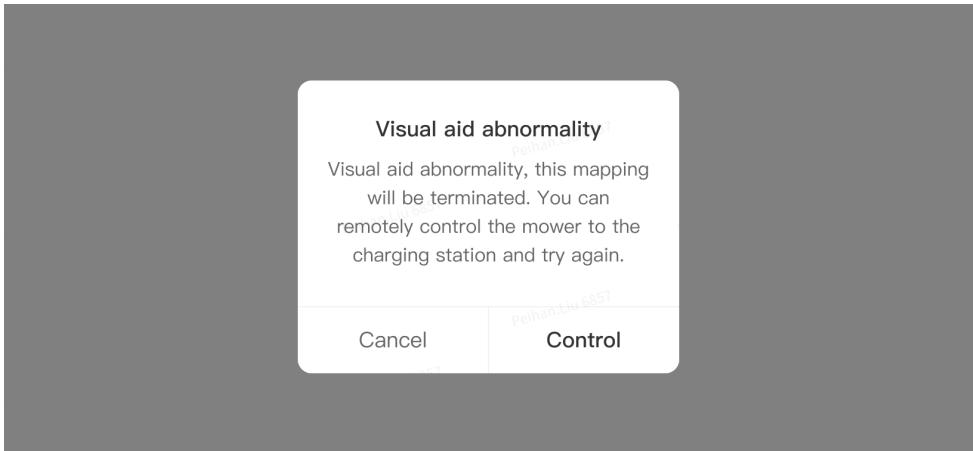


3. A reminder pops up indicating that the RTK signal is weak. Do you want to use visual aid mapping? Click the {Turn on visual aid mapping} button to confirm that visual aid mapping is used.

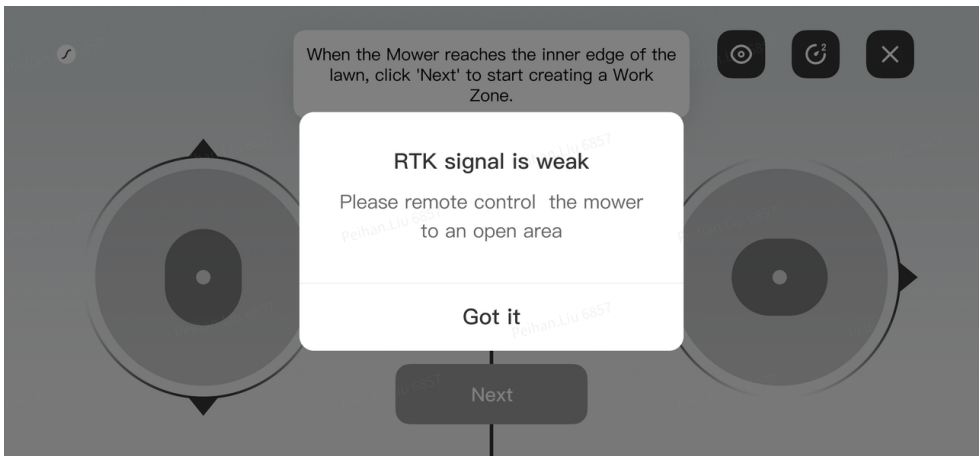


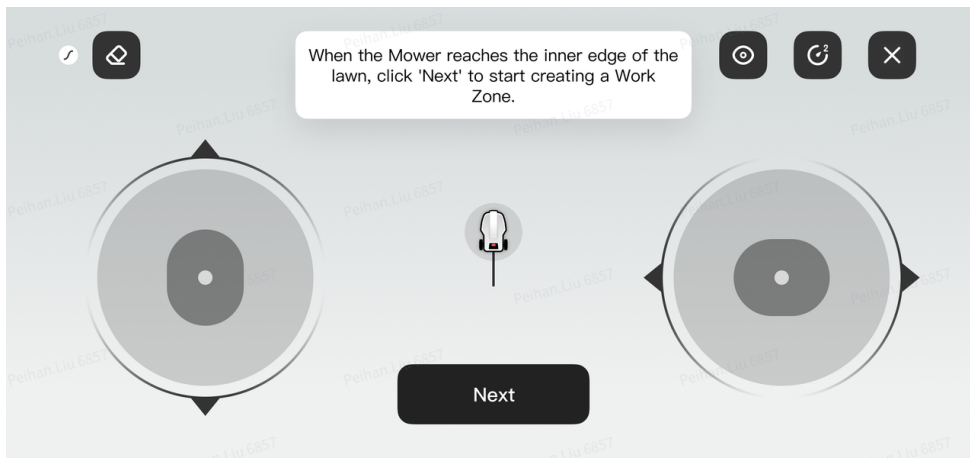


4. Please note that the distance of visual-assisted mapping should not exceed **10 meters** (that is, the distance from the obstructed area to the open environment with RTK fixed solution should not exceed 10 meters, otherwise the accumulated error may make it difficult for the mower to automatically return to the charging station after the operation is completed). Otherwise, the abnormal termination shown in the figure below may pop up. If the abnormal termination occurs, the mapping process must be restarted.



5. When the mower reaches an open environment with a fixed RTK solution, a window will pop up to remind you that you can start to establish the work area as appropriate. Click the {Next} button to start drawing the work area boundary.



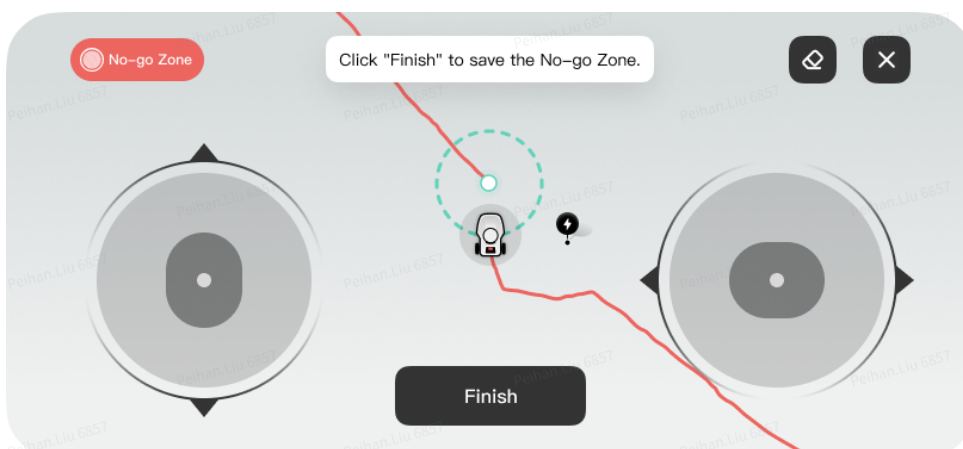


6. The subsequent process of establishing a work area is the same as that of RTK fixed solution.

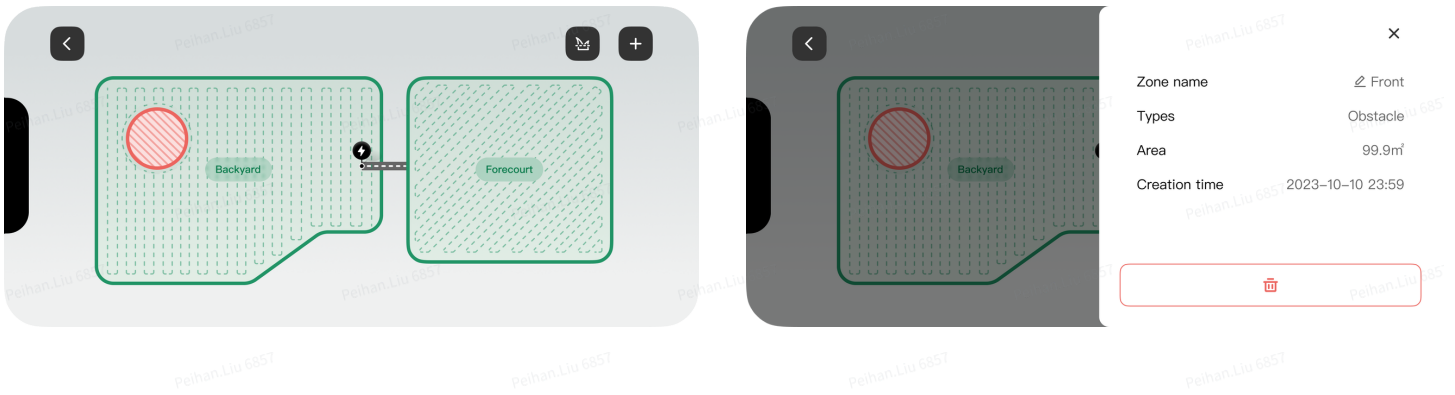
5.4.3.3 Create No-go Zones

No-go zones include areas such as swimming pools, flower beds, trees, tree roots, ditches, and any other obstacles on the lawn. The robotic lawn mower will avoid mowing within these designated areas.

1. Ensure the robotic lawn mower is powered on, positioned on the charging station, and in normal working condition with a fixed solution, the emergency stop button closed, and the battery level above 50%.
2. Click the + button on the Map Management page.
 - Click on the No-go Zone, and remotely control the robotic lawn mower via the app to draw the no-go zone.
 - Use the app to guide the robotic lawn mower to the edge of the intended no-go area.
 - Click the Start button, then use the joystick to remotely control the robotic lawn mower to draw the boundary of the no-go zone.
3. If needed, click the Erase icon, and the robotic lawn mower will retreat along the drawn path to erase the boundaries of the retraced no-go zone.
4. Control the robotic lawn mower to return to the starting point, then click the Finish button to save the no-go zone.



5.4.3.4 Map Management



Caution:

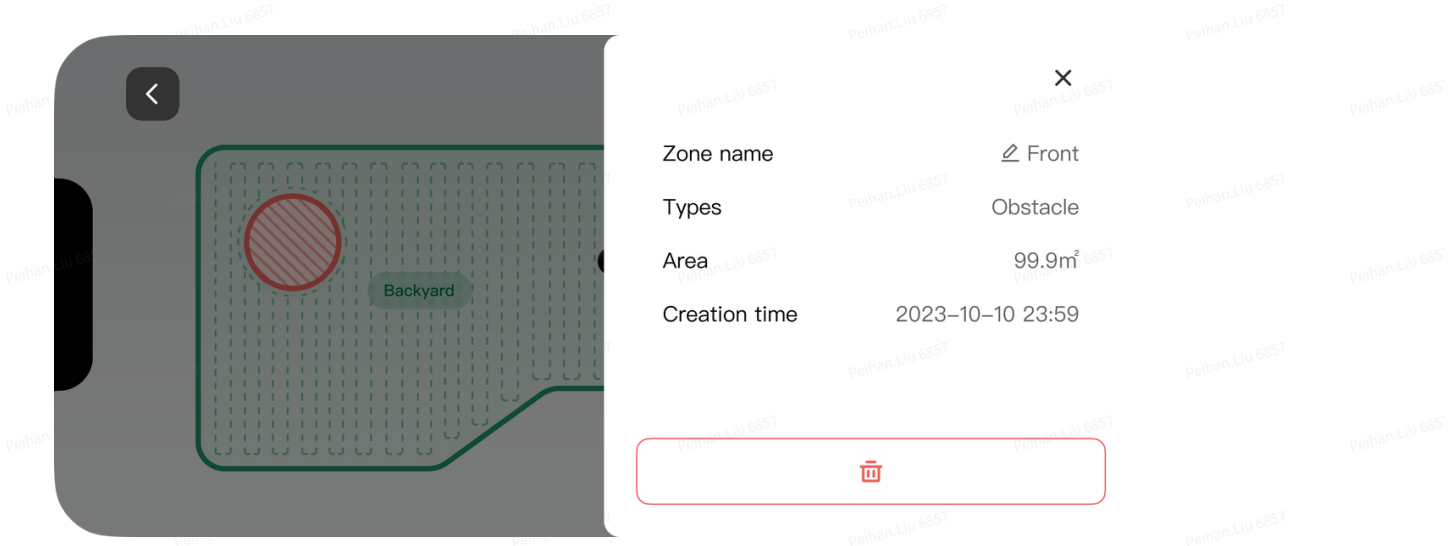
The RTK reference station cannot be moved after mapping

Do not move the RTK base station after the mapping is completed, otherwise the operation execution area will deviate from the mapped work area.

If there is a need to relocate the RTK base station, after the relocation is completed, delete and rebuild the base station points, and then re-map all the plot data.

5.4.3.5 Delete Maps

- Delete map: On the map management page, select the work area, prohibited area, or charging post you want to delete, click Delete and confirm.
 - Warning: Deleting a Charging Station will clear all saved maps for the current mowing robot.



5.5 Mowing schedule

With the 【Mowing Schedule】 function, you can set a scheduled task and the FV2000 will automatically do its job according to your scheduled task settings.



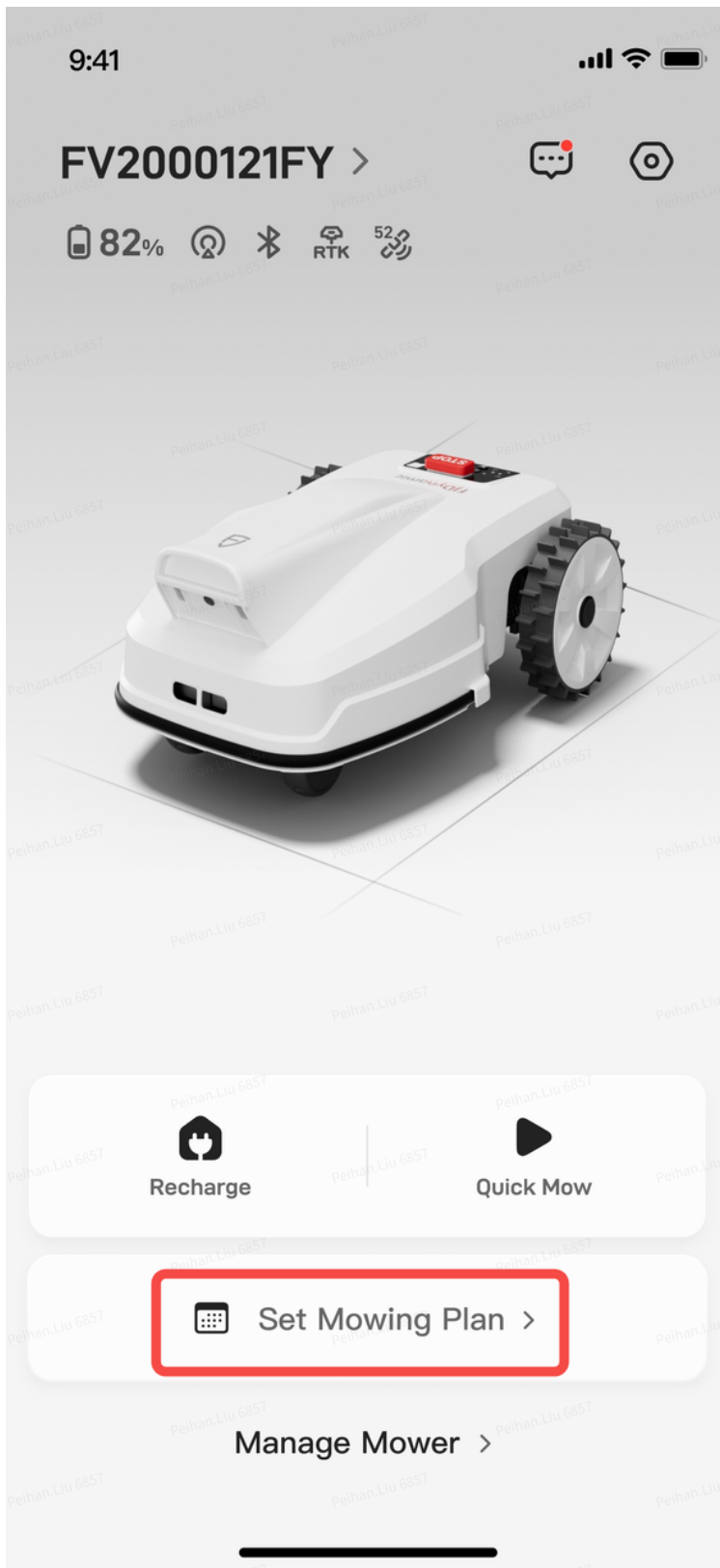
Be cautious:

Scheduled tasks can only be set after the build has been completed;

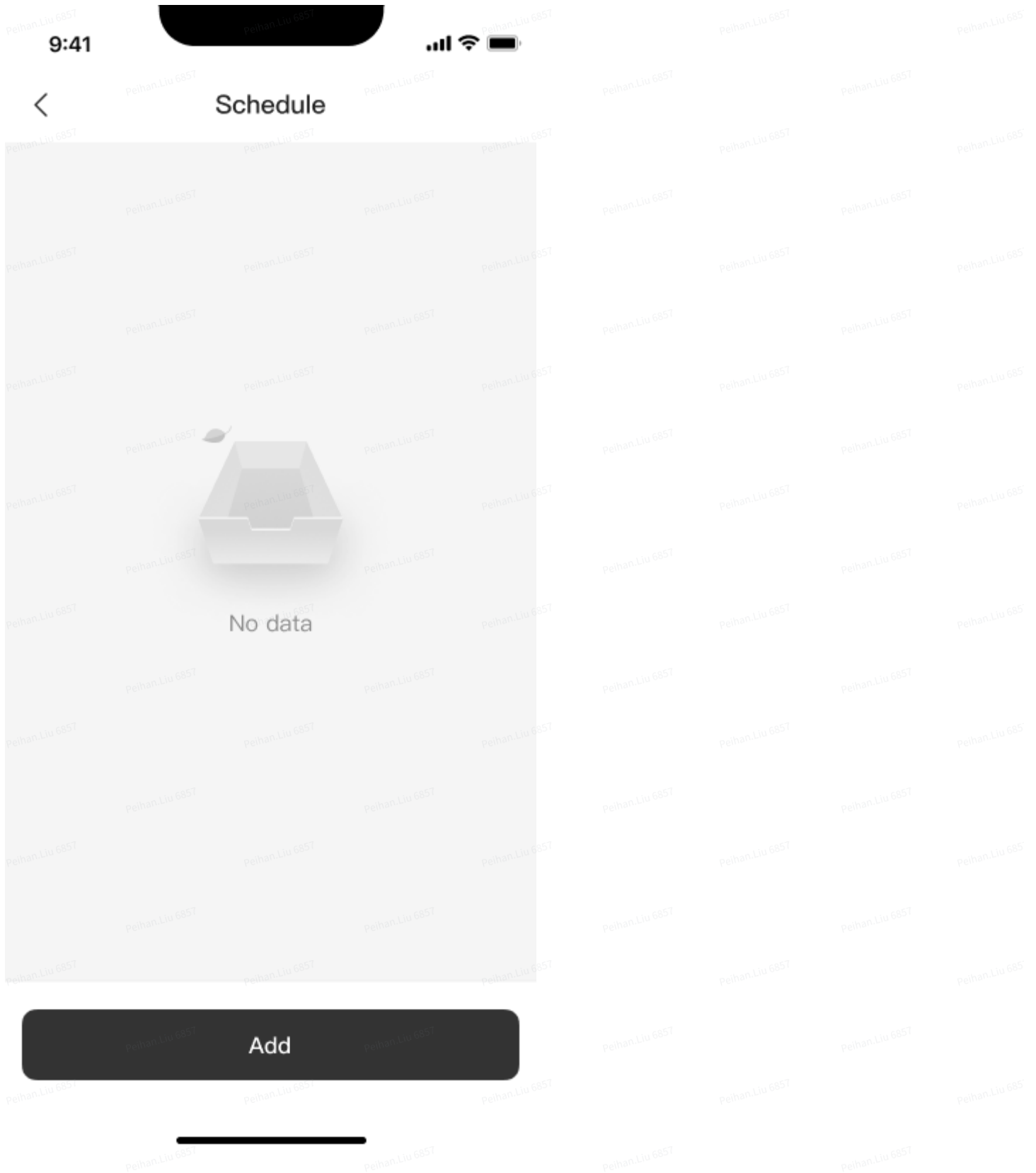
Changes to the planned tasks during the execution of a task by the mowing robot do not affect jobs that have already been executed;

5.5.1 Add a mowing task

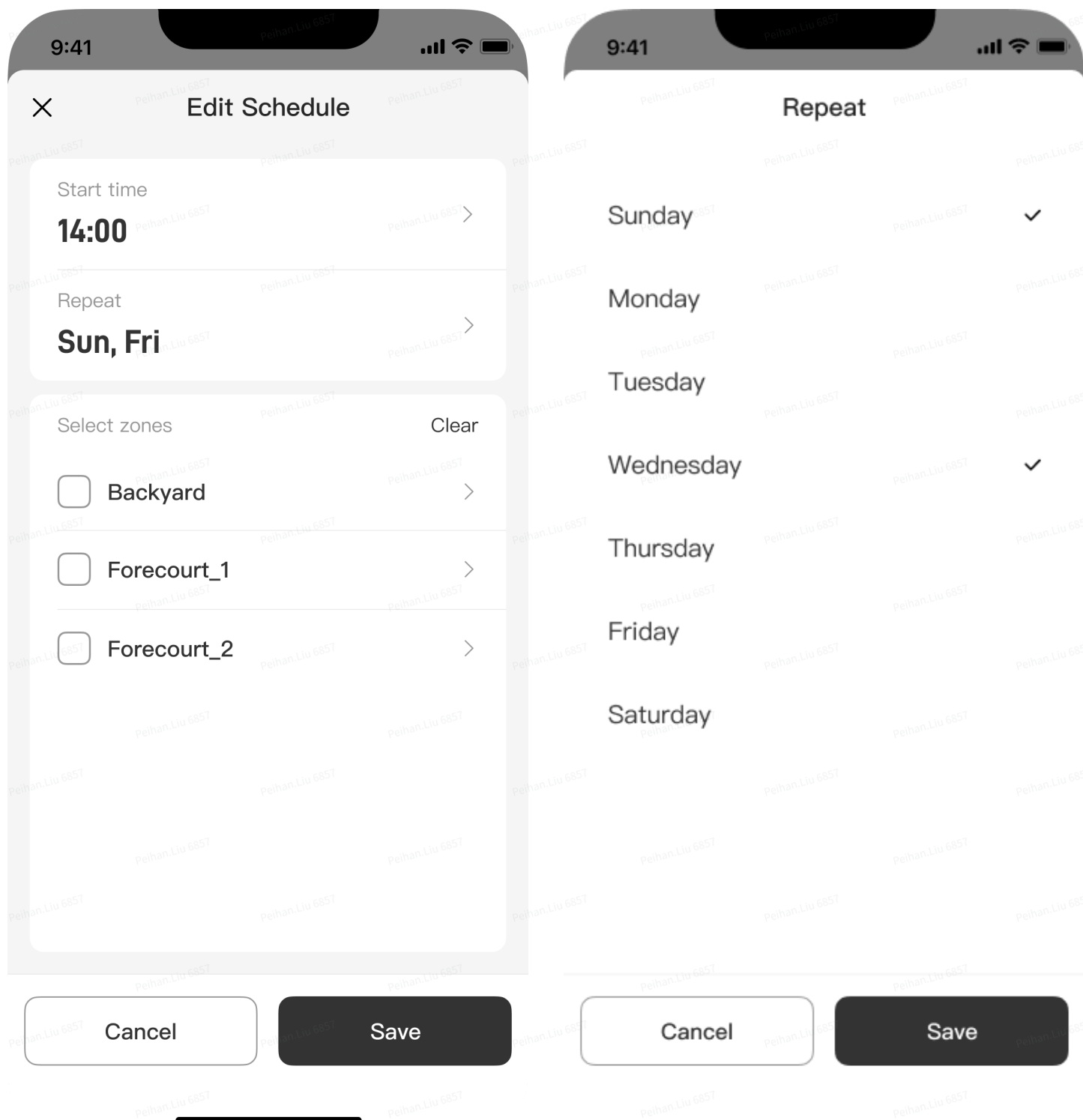
1. Click Mowing Schedule on the product homepage;



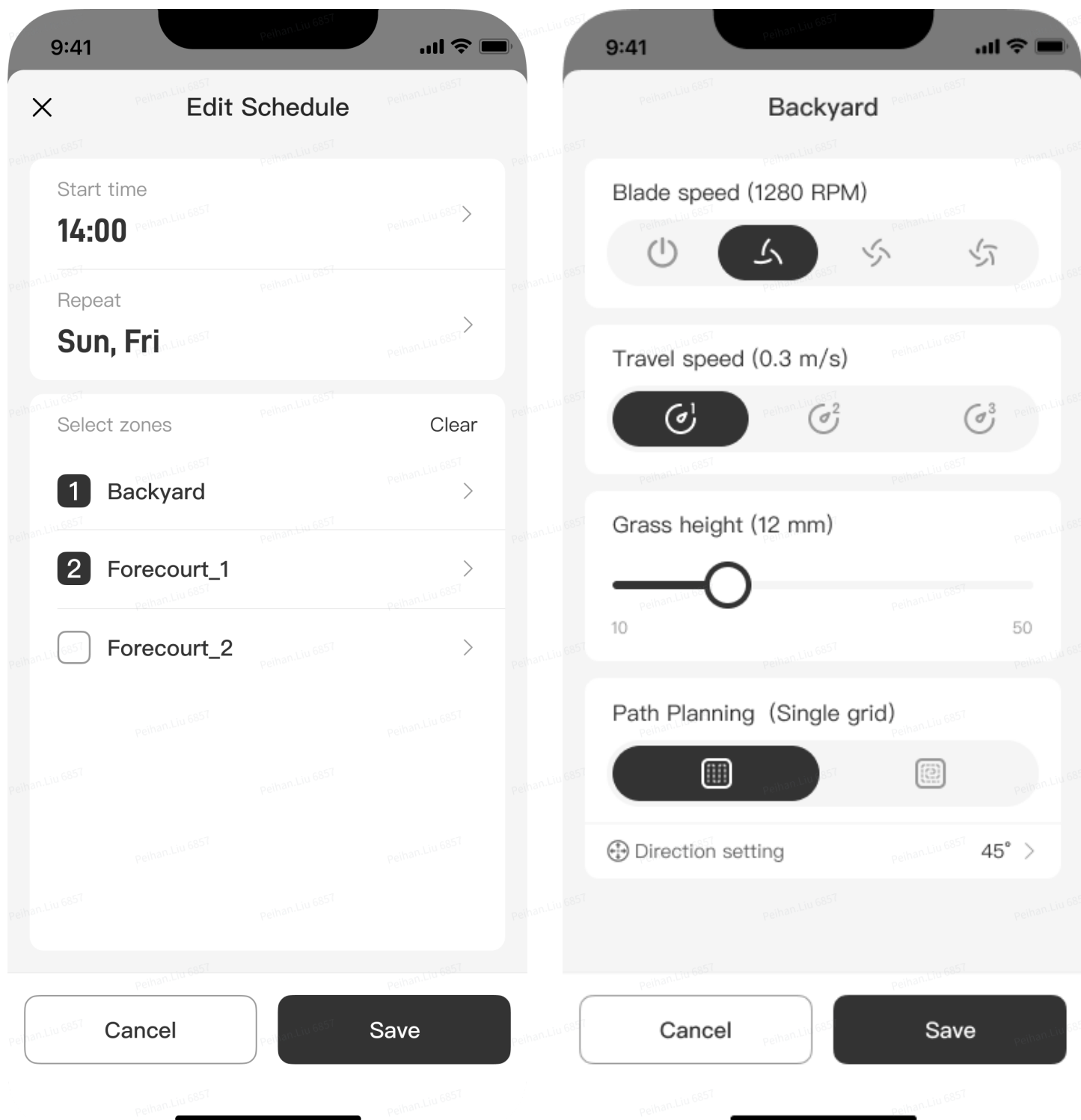
2. Press the {Add} button below to create a new scheduled task;



3. Follow the prompts on the operational interface to select and set the start time, repeat frequency, and working zones for the scheduled task;



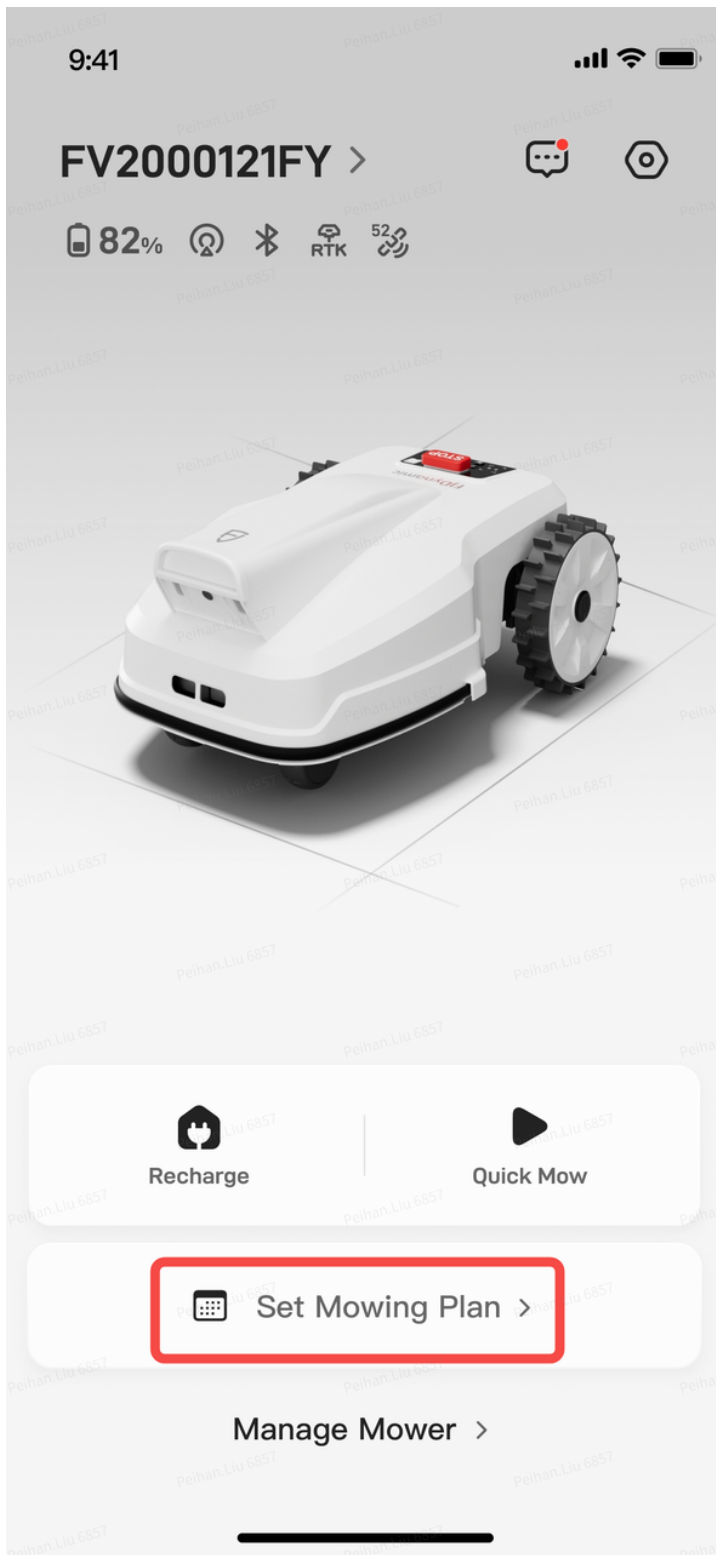
4. You can individually configure mowing settings for each plot, including blade speed, travel speed, grass height, and path planning. The default settings are those configured during mapping.



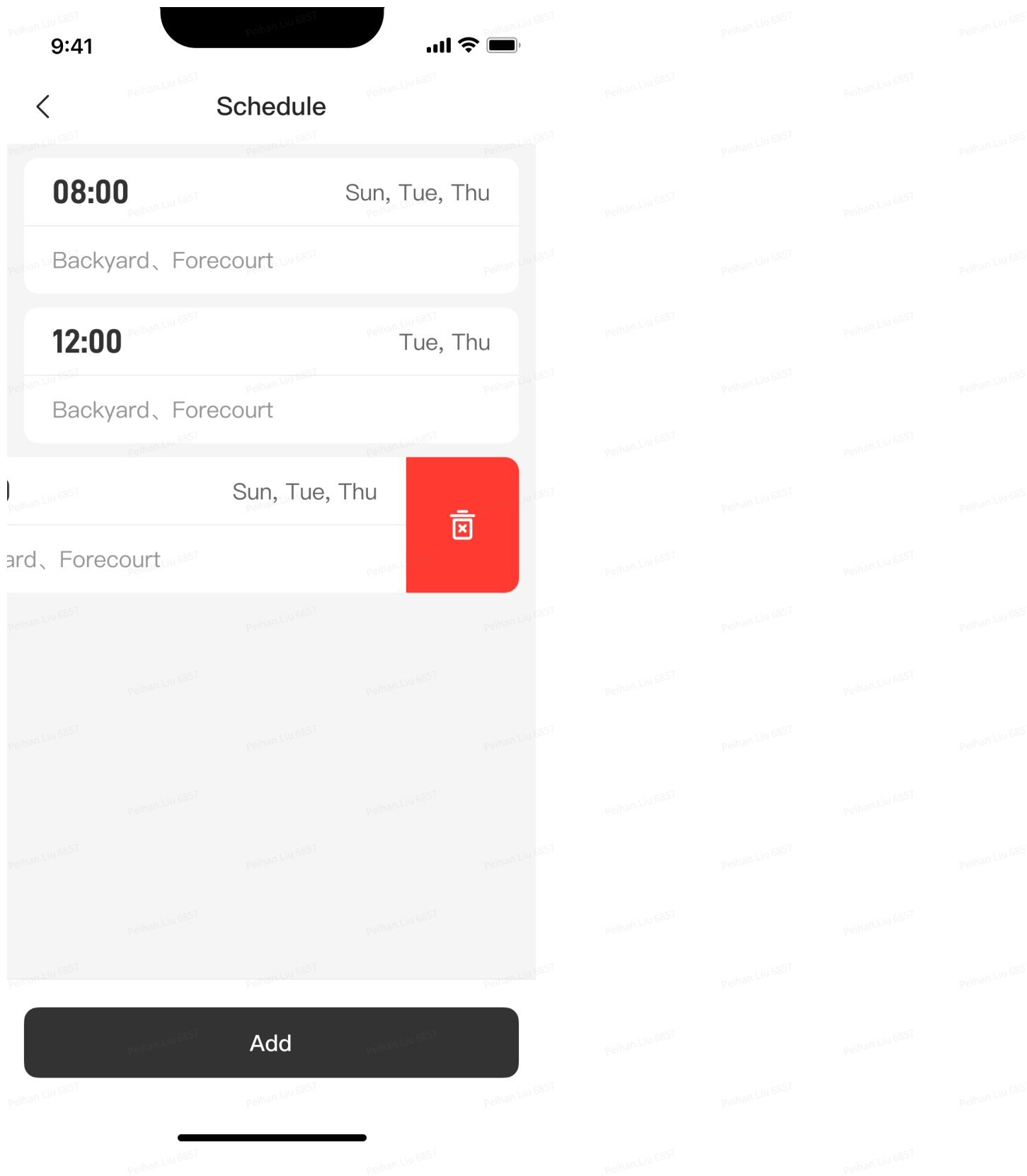
5. Press the {Save} button to save the scheduled task.

5.5.2 Modify scheduled tasks

1. Click Mowing Schedule on the product homepage;



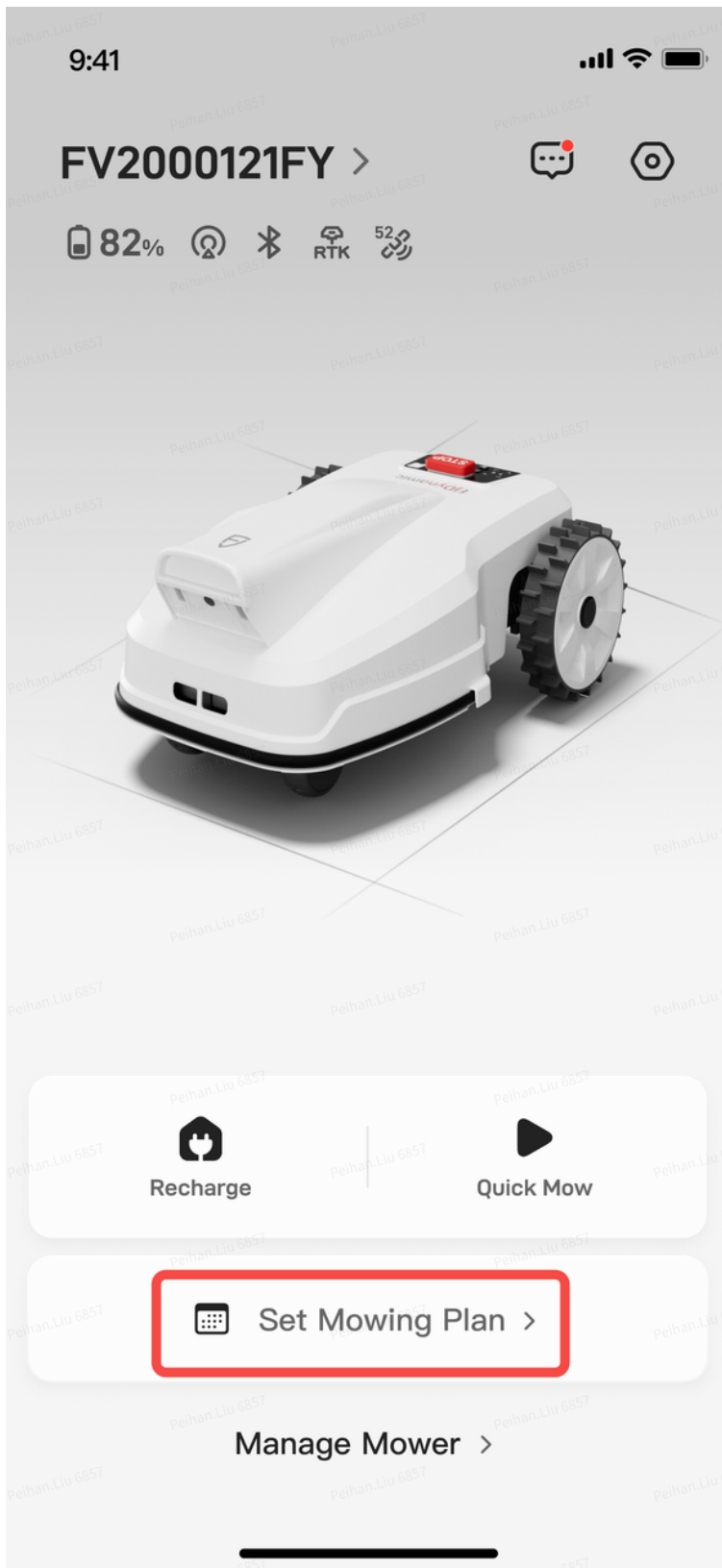
2. Click on the scheduled task item you want to modify;



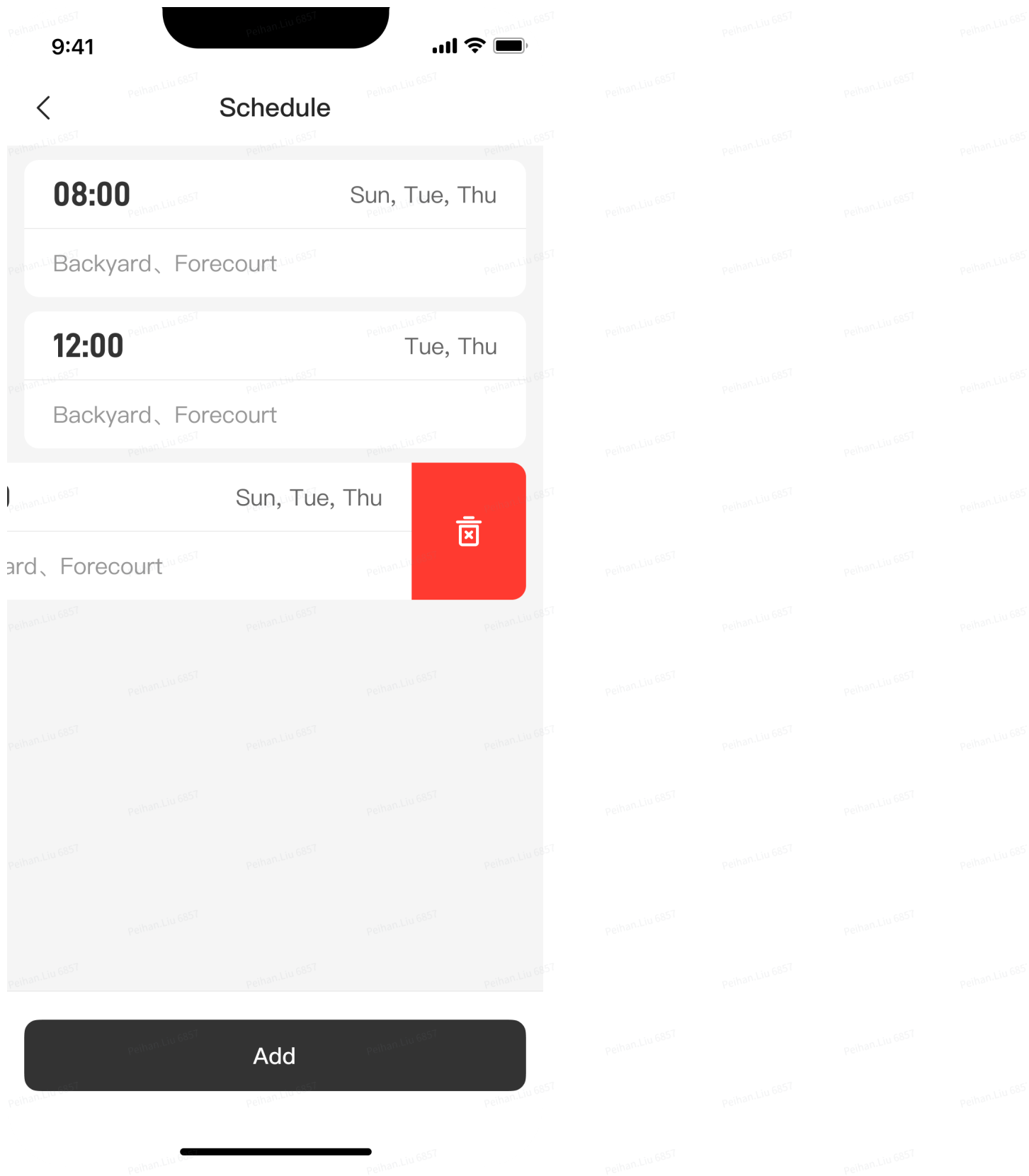
3. Modify the start time, repeat frequency, work zone, mowing configuration of the plot, and other parameters of the scheduled task;
4. Click the {Confirm} button to save the scheduled task.

5.5.3 Delete a scheduled task

1. Click Mowing Schedule on the product homepage;



2. Swipe left on the scheduled task item you want to delete;



3. Click the {Delete} icon that appears and confirm.

5.6 Manual Mode

For your safety, please note the following before using the remote manual mode function:

- Users under 18 years old should not be allowed to use this function.
- Always keep an eye on your children, pets, and important items to prevent accidents.

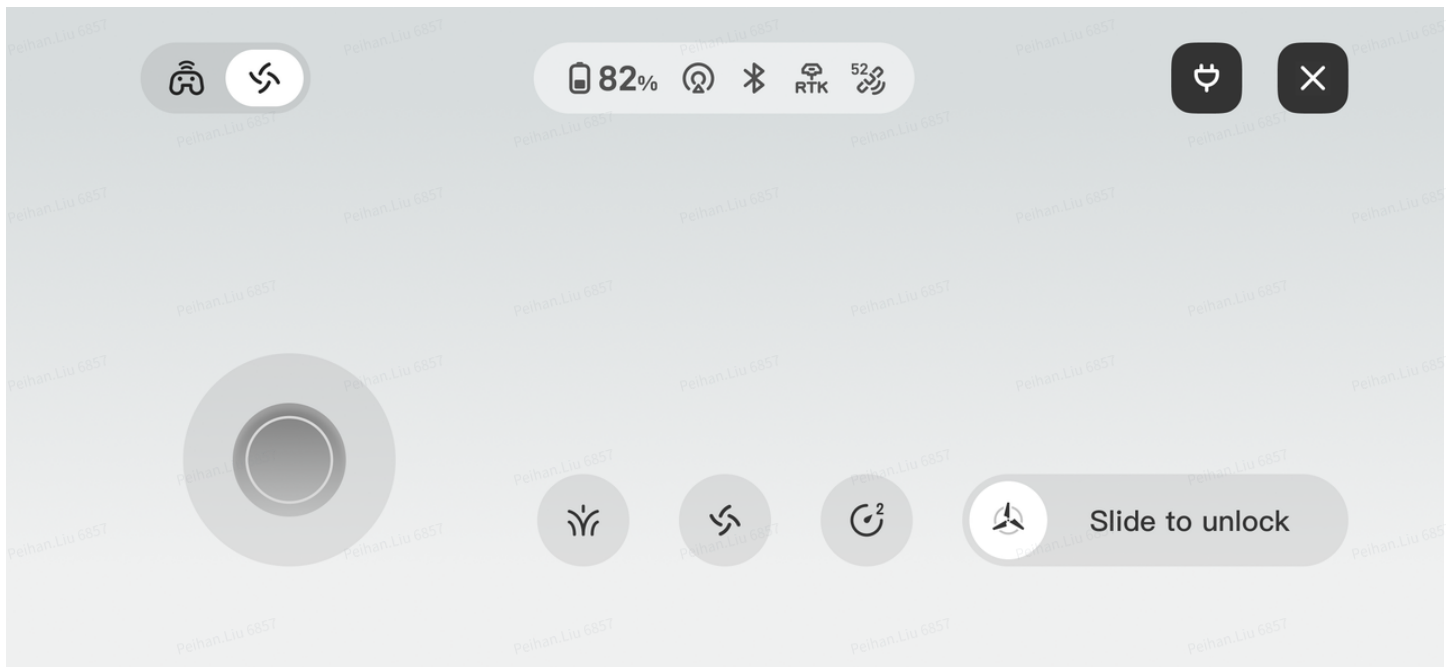
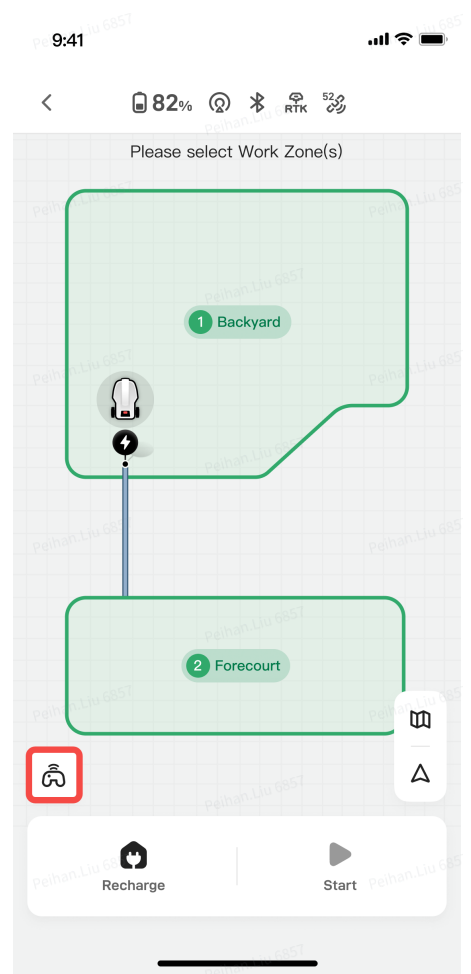
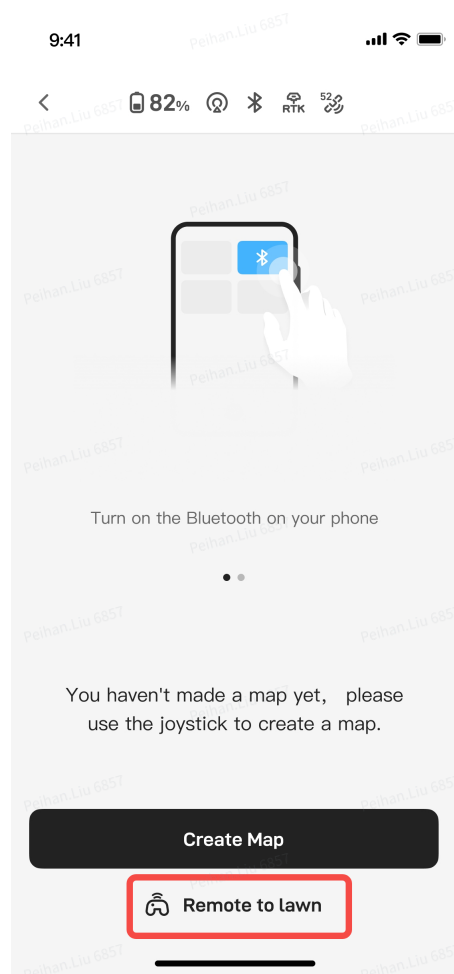
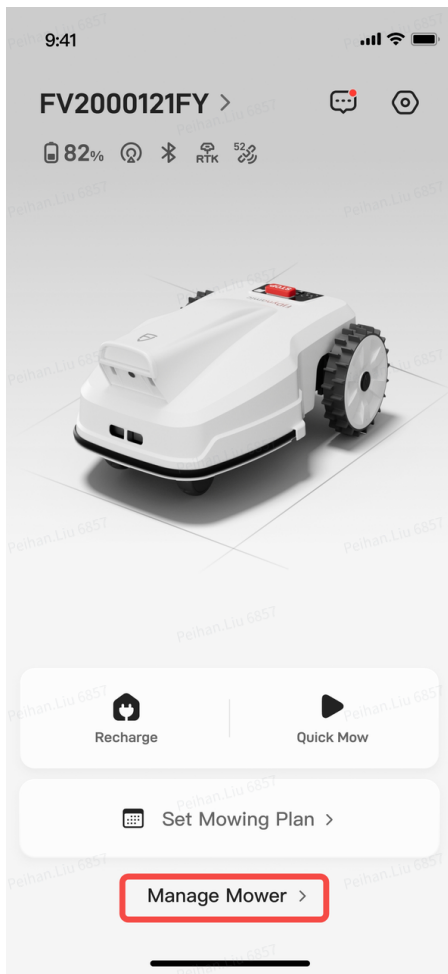
- Be extra careful when using the remote manual mode to avoid injury.
- Activating the remote manual mode while the robotic lawn mower is executing a task will interrupt that task.

5.6.1 Introduction to the remote manual mode

5.6.2 Activate Manual Mode

1. Please ensure that the Bluetooth function of your phone is turned on and that the distance between your phone and the robotic lawn mower is less than 3m.
2. Make sure the robotic lawn mower is working properly and the emergency stop switch is turned off.
3. Click Manual Mode on the product function homepage.
4. The app will activate Bluetooth connection to the robotic lawn mower, and after a successful connection, it will enter the Manual Mode page.
5. Operate the forward/backward, left/right joystick to remotely control the robotic lawn mower.
6. Click the Speed icon to adjust the driving speed in remote manual mode.

Note: Adjusting this speed will not affect the speed of the robotic lawn mower during automatic operation.



5.6.3 Exit Manual Mode

Click the {X} icon in the top left corner to exit the remote manual mode.

5.7 Mowing operations

5.7.1 Preparation

Ensure that the robotic lawn mower is at the charging station within the working area and has sufficient battery.

In case of any accidents during mowing, press the emergency stop button on the robotic lawn mower. It will prioritize the command from the emergency stop button, pause the task, and stop cutting.

It is not recommended to mow the same area more than once a day as it may damage your lawn.

The recommended cutting height for each mowing session is approximately 2/3 of the current grass height. If the grass height exceeds 60mm (2 inches), it is recommended to set the lowest grass height to 40mm (1.6 inches).

5.7.2 Activate immediate operation

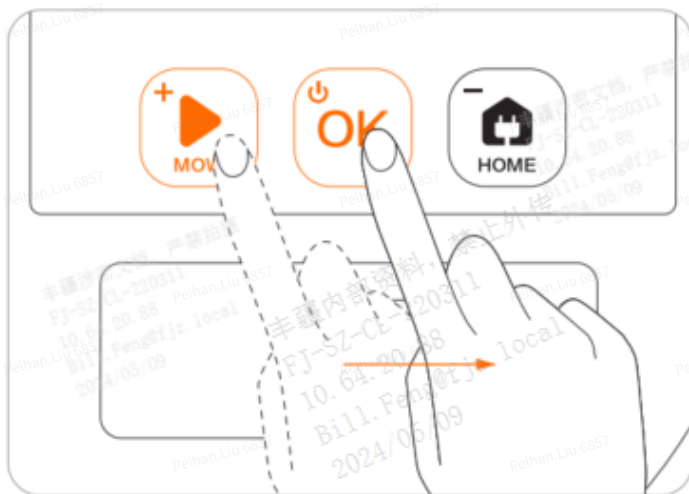
5.7.2.1 Execute through the top panel button



Note:

When activated via the top panel button, the robotic lawn mower will execute mowing operations for all mapped plots in the order they were mapped.

1. Enter the PIN code to unlock the command function on the top panel.
2. Click the Mow button, then click the OK.
3. The robotic lawn mower will make a "beep" sound, indicating that the task instruction has been received.
4. The robotic lawn mower will perform the mowing operation.



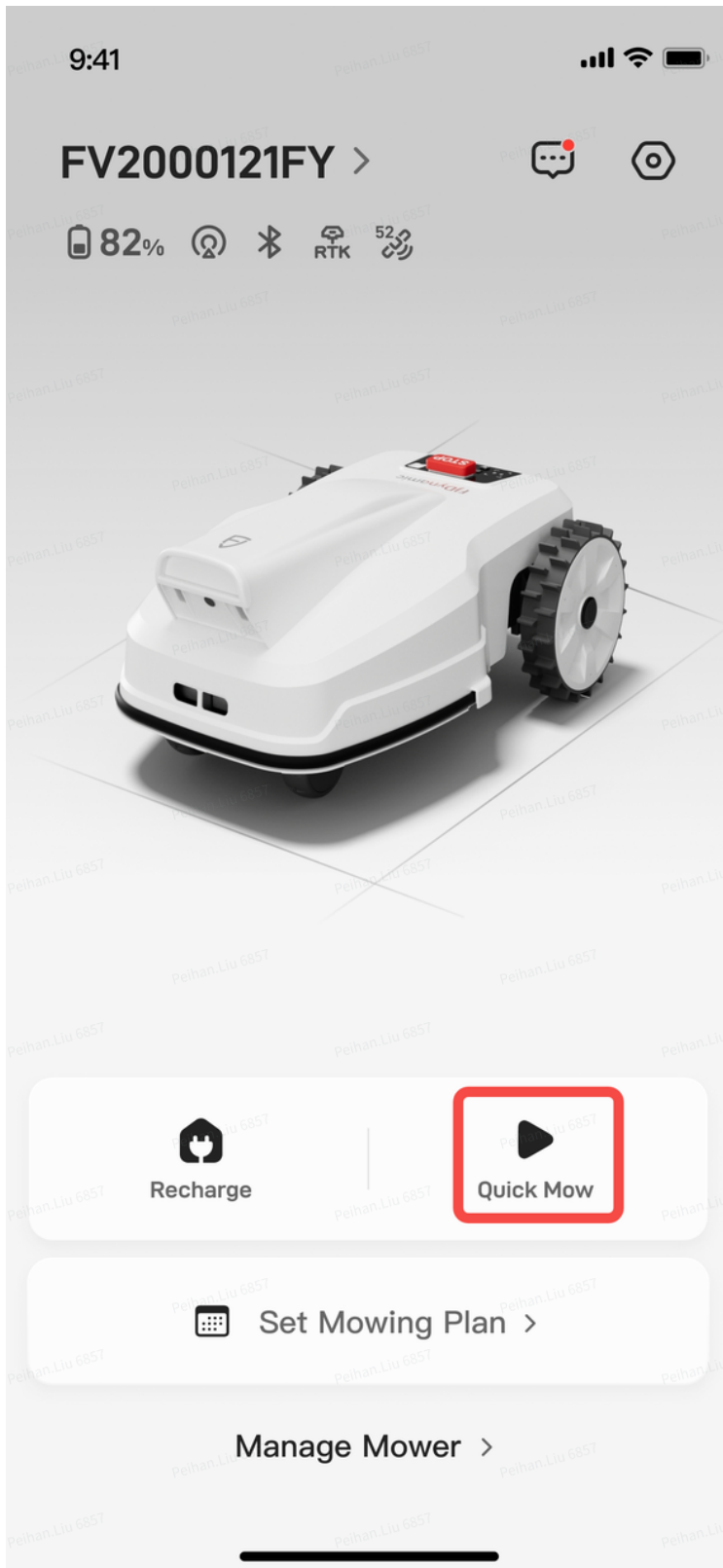
5.7.2.2 Activate one-touch operation via the app



Note:

When activated via the app, the robotic lawn mower will execute mowing operations for all mapped plots in the order they were mapped.

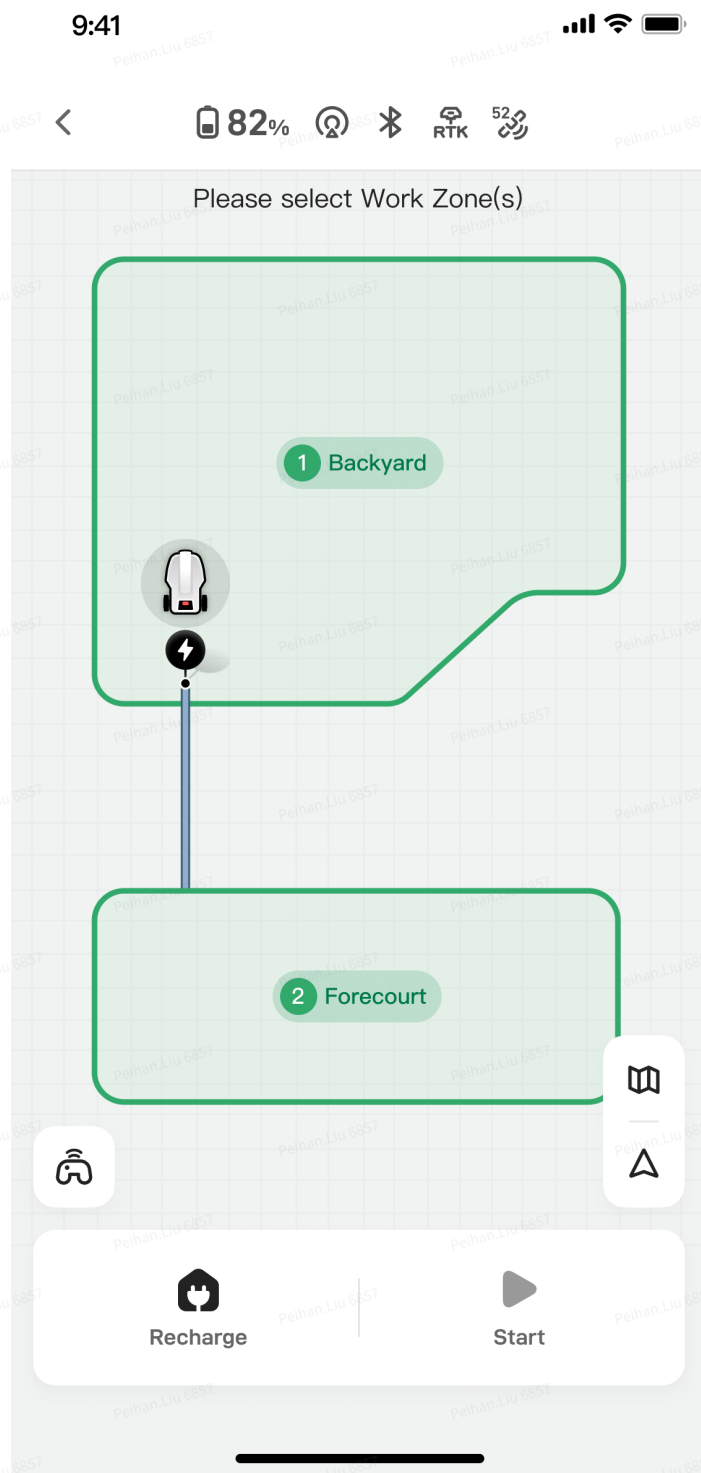
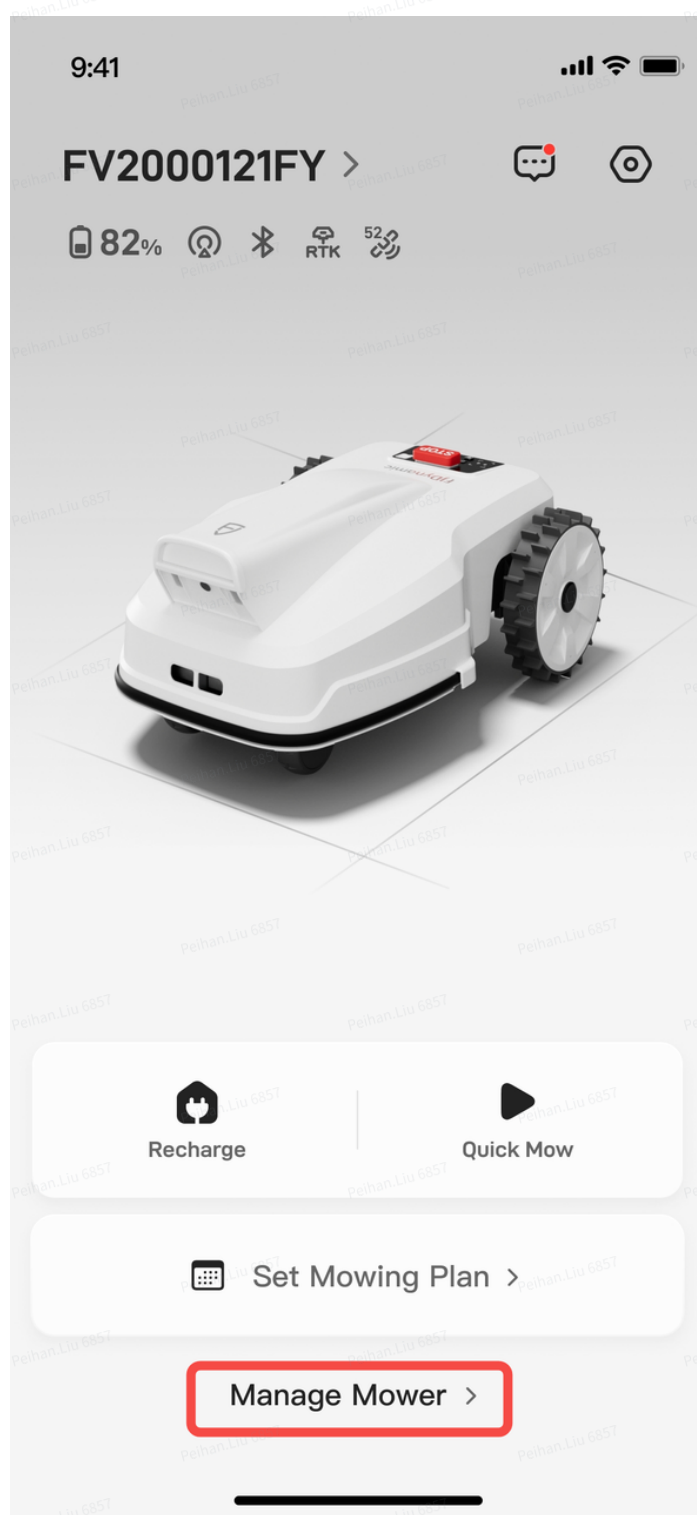
1. On the home page of the Mowing Robot App, click {Quick Mow} , the Mowing Robot will perform a one-touch operation.



5.7.2.3 Execute selected operations via the app

1. On the home page of the Mowing Robot App, click {Manage Mower};

2. Select the intended mowing area;
3. Press and hold the {Start} button for 5 seconds, The robotic lawn mower will execute the mowing operation in a specific area.



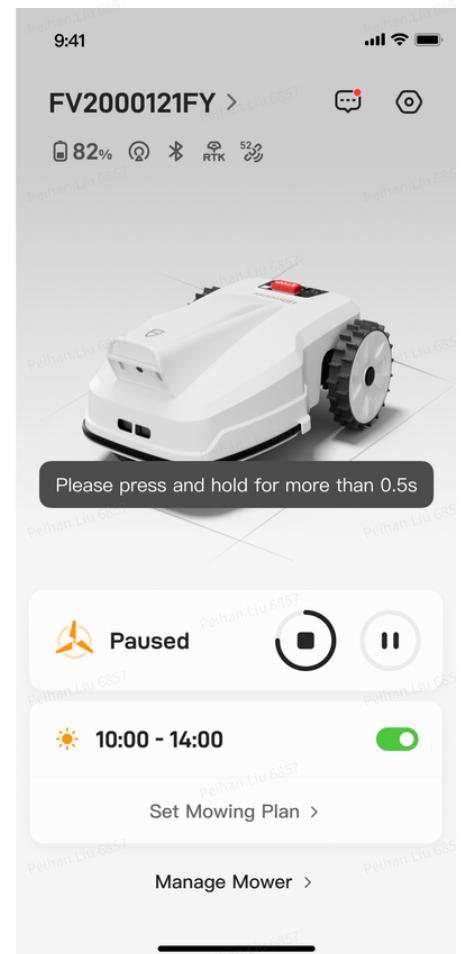
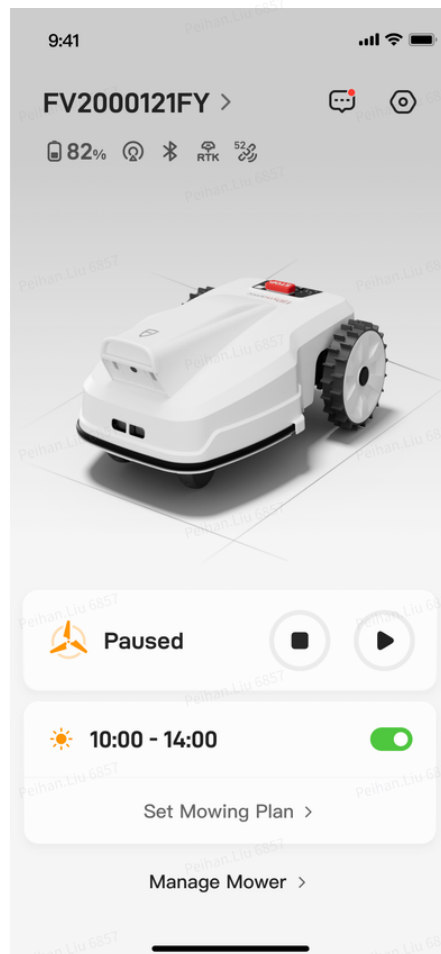
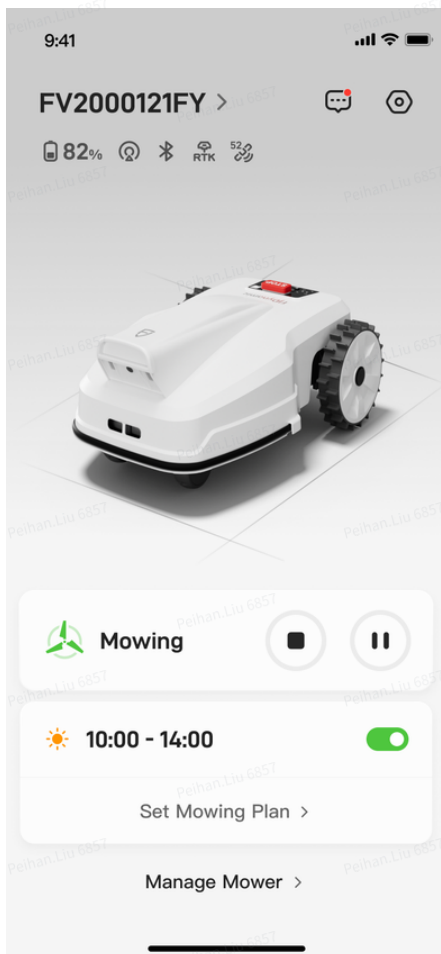
5.7.3 Set scheduled tasks

1. Set the schedule through the APP.
 - a. Please refer to the section "Add a mowing task"

2. The robotic lawn mower will automatically activate operations according to your scheduled task settings.

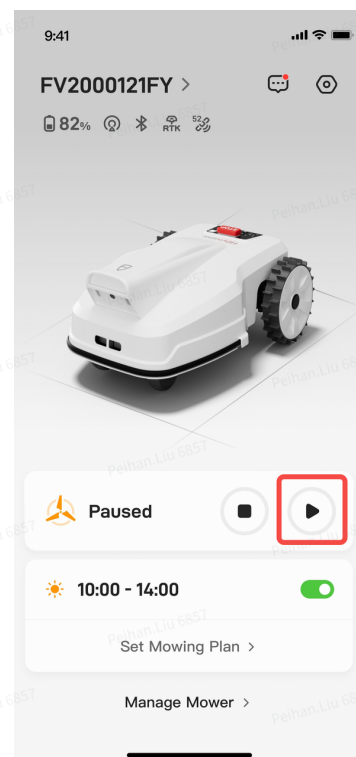
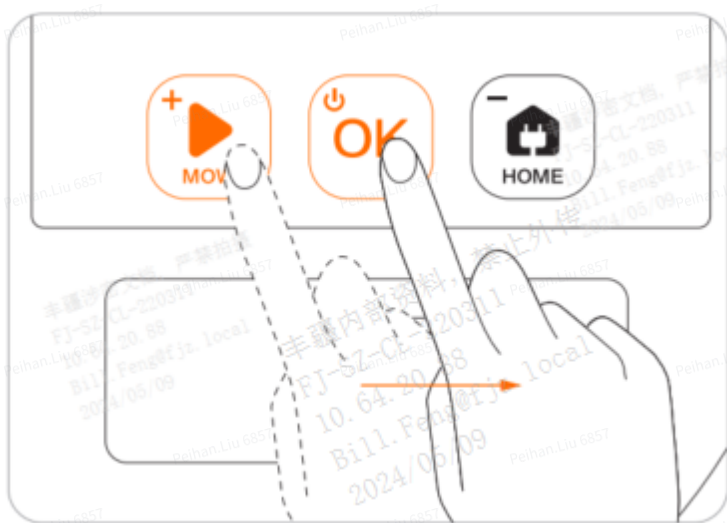
5.7.4 Pause operations

Press the emergency stop button on the top control panel of the lawn mower or click the pause icon on the APP



5.7.5 Resume operations

Press the {Mow} button and {OK} button on the top control panel of the lawn mower or click the Continue icon on the APP



💡 During the mowing process, if the battery is too low (below 20%), the robotic lawn mower will automatically stop mowing and return to recharge. Once the battery level reaches the resumed mowing threshold (default 80%), the robotic lawn mower will automatically return to the last mowing point and resume mowing operations.

5.8 Return to charge

5.8.1 Automatic recharge

When the robotic lawn mower completes mowing tasks normally or triggers the resume mowing condition, it will attempt to return to the charging station and recharge.

To trigger the recharge function, the robotic lawn mower needs to be within the established working zones and not within any no-go zones.

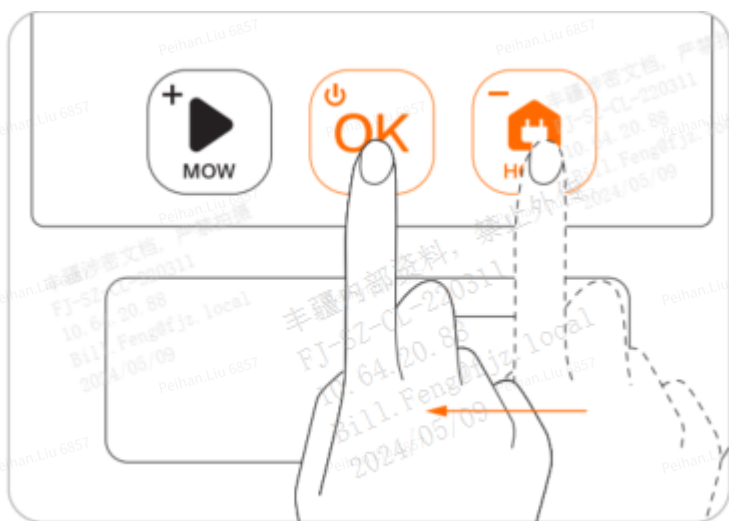
5.8.2 Manual recharge

By operating the top panel button or issuing instructions through the APP, the robotic lawn mower can return to the charging station.

5.8.2.1 Execute via the top panel button

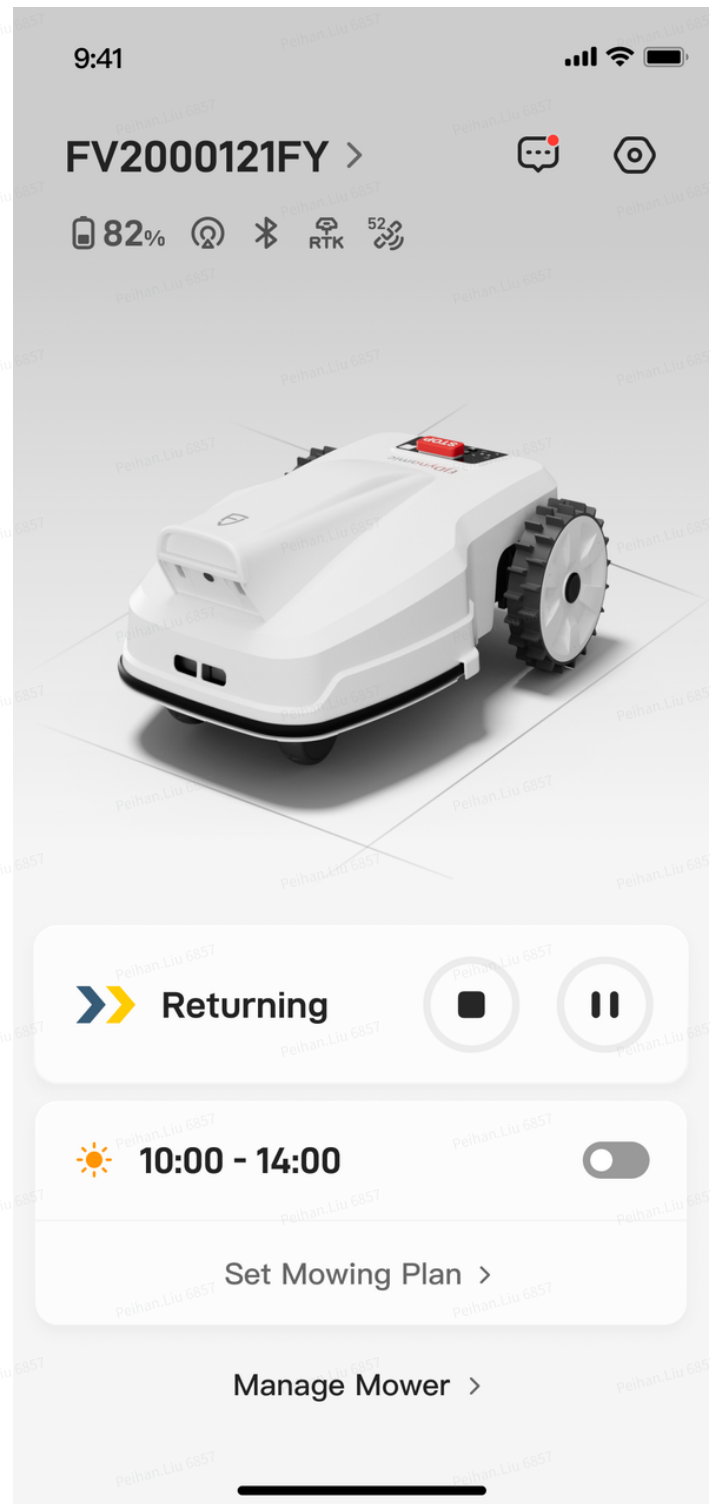
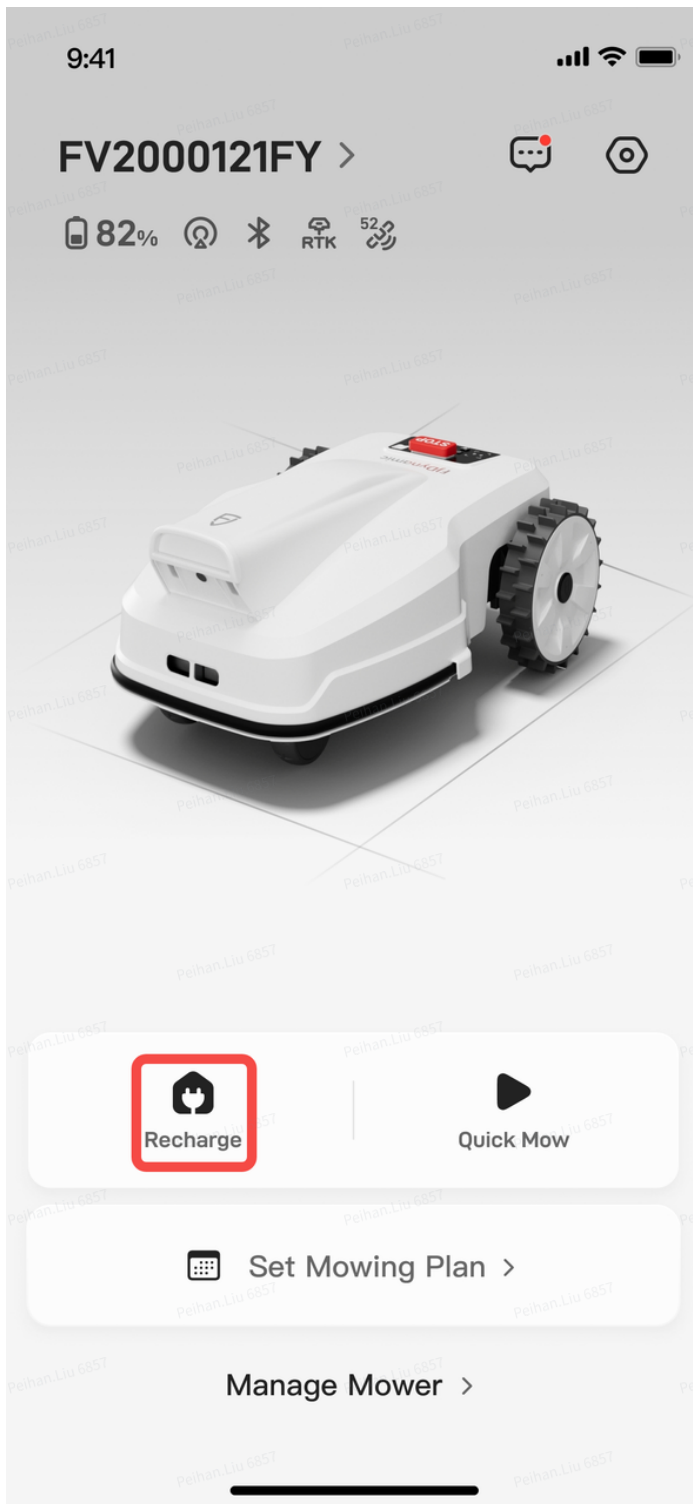
1. Unlock the PIN code on the top panel.
2. Click the home icon, then click OK.
3. The robotic lawn mower will make a "beep" sound, indicating that the task instruction has been received.

4. The robotic lawn mower will activate the return to charge function.



5.8.2.2 Execute via the app

1. Click the recharge icon on the homepage of the robotic lawn mower app.
2. Click the Confirm button.
3. The robotic lawn mower will activate the return to charge function.



5.9 Resume Mowing

During the mowing operation, if the battery is too low (below 10%), the mower will automatically stop mowing and recharge. When the battery power is restored to the setting value of continuous mowing (default 80%), the mower will automatically return to the break point of the previous operation to continue mowing.

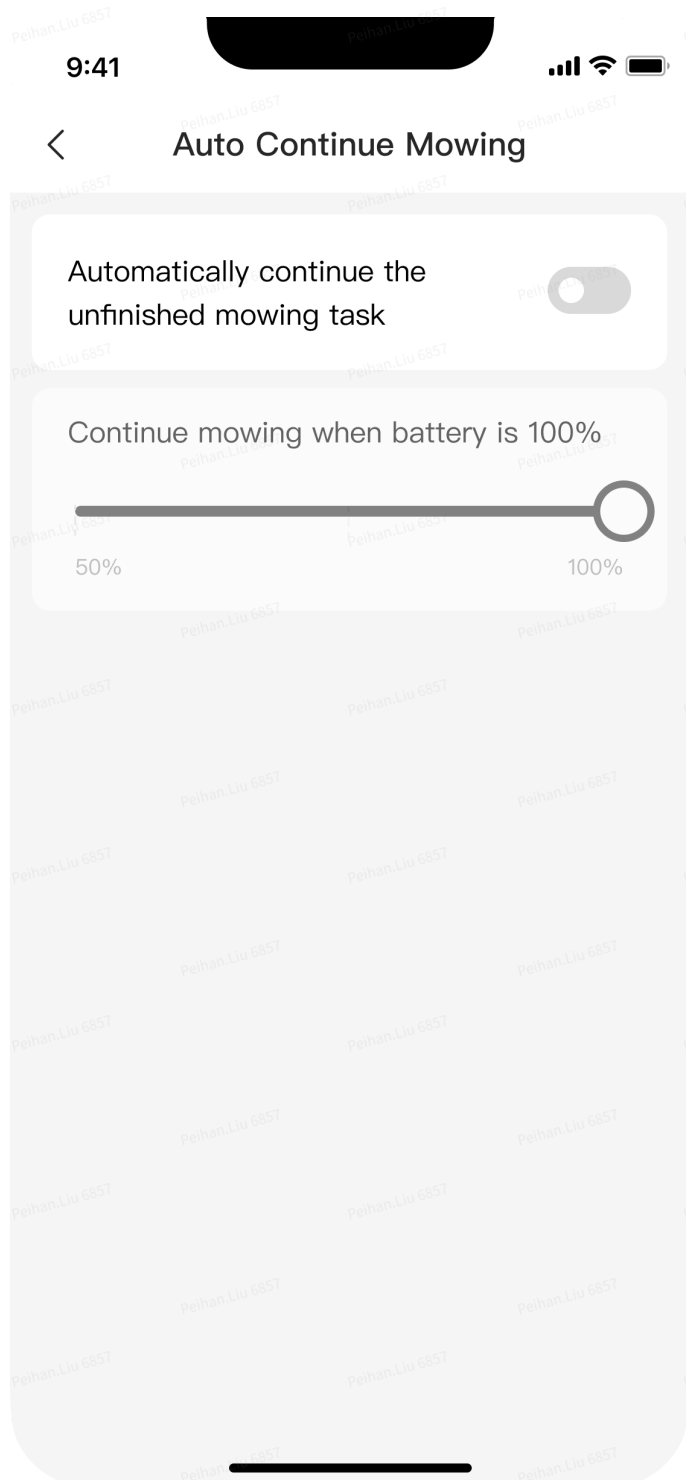
When the mower returns to the charging post for charging due to continuous mowing, its reported status is Continuous Mowing Waiting.

The user can terminate the waiting status by using the {STOP button} of the APP in this state, and the mowing task will not be resumed after this behavior.

The user can start the renewed mowing operation instantly via the {START button} of the APP in this state, even if the power level of the mower has not reached the permitted value of the renewed mowing out of the stake.

5.9.1 Resume Mowing Configuration

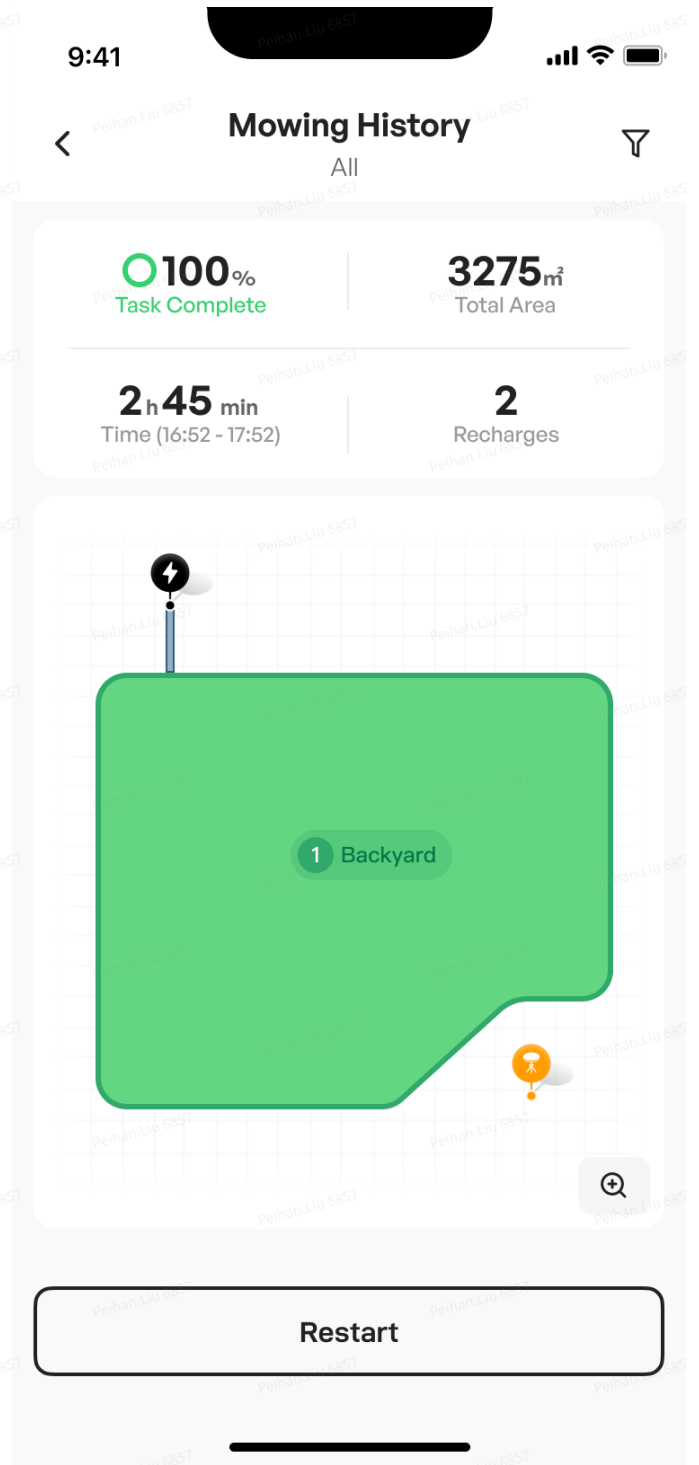
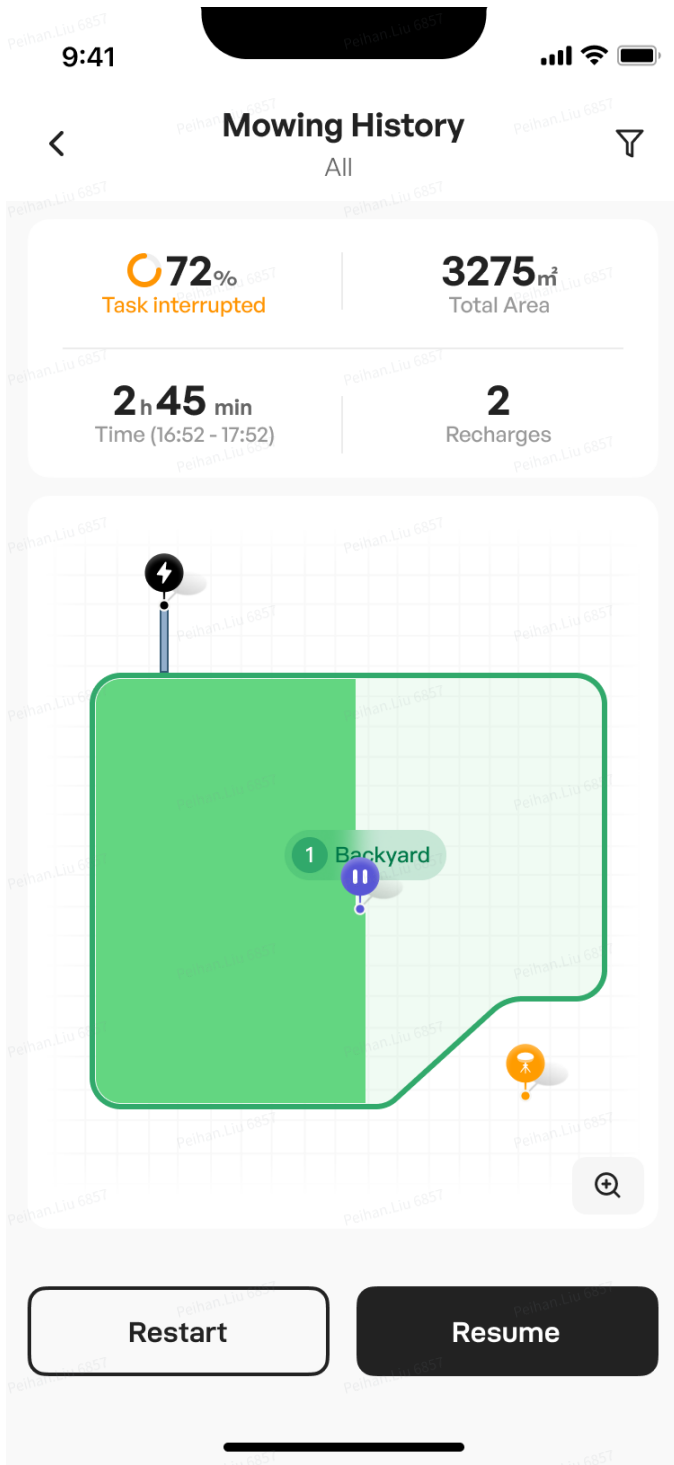
The user can configure the renewal function in the vehicle settings



The user can enable | disable the cut-over function (default on).

Users can set the power trigger value for the renewal recovery operation (default 80%).

5.9.2 Manual Operation

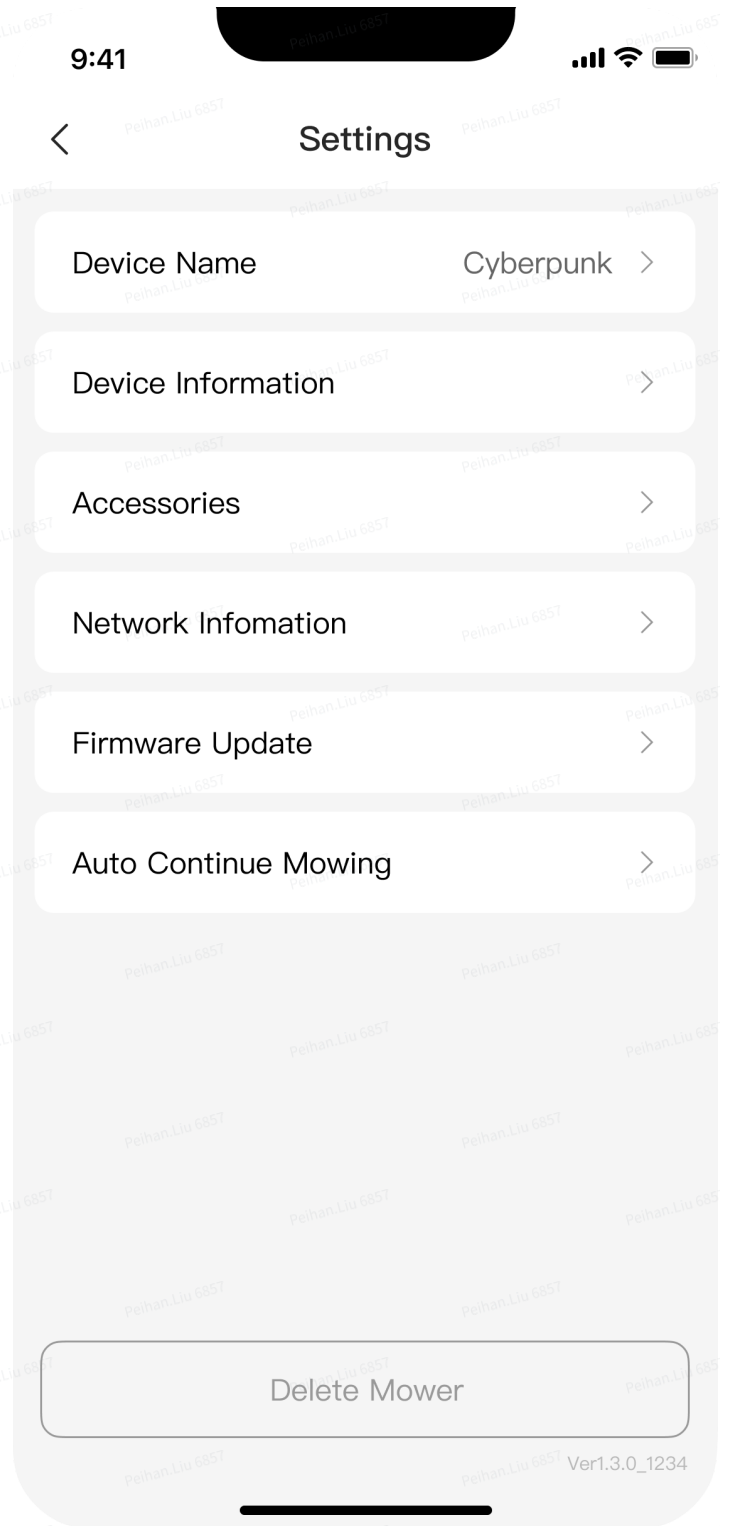


5.10 Notifications

Information about device exception notifications, any errors, etc. will be displayed in the Message Center section. Click Message Center for more details. Error codes will be updated soon here.

5.11 Settings

Click{Me - Settings}, entering the setting page.



5.11.1 Device Name

The name of this mower can be viewed or modified.

5.11.2 Device Information

You can view the device type, serial number, firmware version and other information.

5.11.3 Accessories Maintenance

Accessory information and details of this mowing robot can be viewed.

5.11.4 Network Information

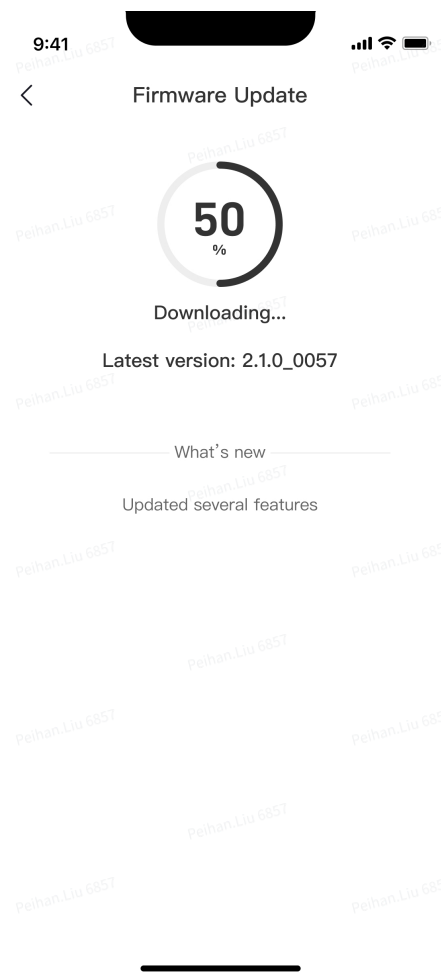
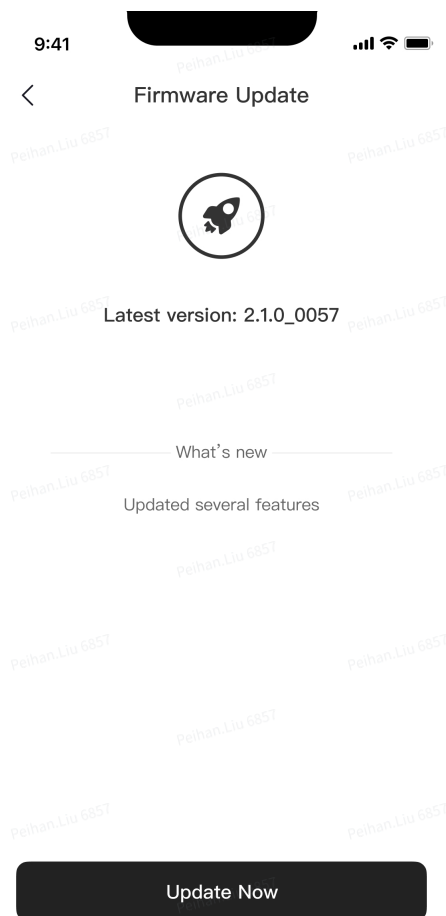
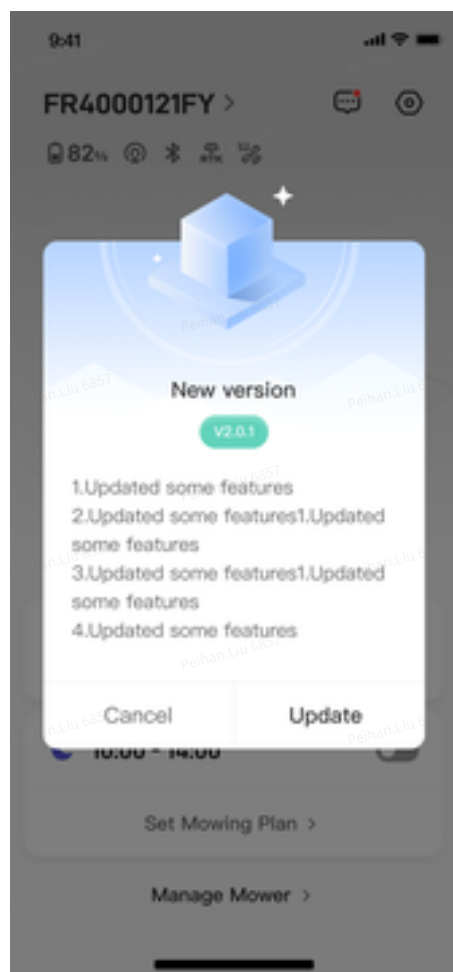
You can view the networking information for this mowing robot.

5.11.5 Firmware Update

You can view the current version and check if there is a newer firmware version available;

When a new version is available, the firmware can be upgraded here.

1. it is recommended to upgrade when the vehicle is fully powered and there is no operation for a certain period of time;
2. make sure the Wi-Fi signal connected to the vehicle is good;
3. Go to Firmware Upgrade and click Update Now;
4. Wait for the upgrade to complete.



6. Maintenance and care

6.1 Precautions

For the first use, choose a flat surface and mow slowly. The mowing method depends on the size and shape of the site. Please consider obstacles such as trees, fences, buildings, etc.

(Mowing method depends on the size and shape of the site. Please consider obstacles such as trees, fences, buildings, etc. Before mowing, it is recommended that the grass height be in the range of 50~80 mm (1.97~3.15 inch). Do not mow more than 1/3 or 25% of the plant height at one time.

(Before mowing, it is recommended that the grass height be in the range of 50~80 mm (1.97~3.15 inch). Do not mow more than 1/3 of the plant height or more than 25 mm (0.98 inch) at a time. If the grass is tall, increase the cutting height and make several cuts to avoid a situation where the grass clippings cannot be discharged well. To make the cut look good, it is best to work in the afternoon or evening when there is little moisture.

6.2 Cutting Deck Cleaning



- Please remember: To ensure safety, always wear heavy duty gloves, long pants and work shoes to clean the cutting table.
- Please follow the instructions, start cutting deck cleaning after the machine switched off.
- Thoroughly clean the exterior of the mower with a soft brush or cloth. Do not clean with alcohol, gasoline, acetone or other caustic/volatile solvents. These substances may damage the exterior and interior structure of the mower.

Chassis & Cutting Blades

If the chassis and cutting blades are dirty, clean them with a brush or water hose. Do not use a pressure washer. Also, make sure that the blade disk rotates freely and that the blades can turn freely.

CAUTION:High-pressure water may penetrate seals and damage electronic and mechanical parts!

Blade Fenders

Inspect the blade fenders periodically. If mud, grass clippings or other objects collect on the blade fenders, remove them with a dry brush or scraper.

Cutting Deck Jams handling

When a grass jam inside the mower deck is suspected, use the mower lift function to view and clear it.

1. Keep the mower on and open the mobile app, go to Settings, Accessories, Mowers, and click the {Grass Blocked} button.
2. After successful Bluetooth connection, the mowing disk will extend outward to the maximum.
3. After the extension is finished, please turn off the power of the mower and lift up the mower body to check whether the mower disk is stuck with grass.
4. After the treatment, put down the mower and turn on the power, the cutter disc lifting and lowering will return to the initial state by itself.

NOTE: Please always wear heavy duty gloves, long pants and work shoes when cleaning the cutting deck.

9:41



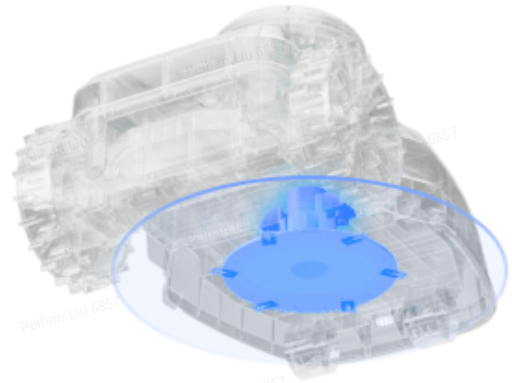
Blade Disc



- Before cleaning, make sure the mower is powered off.
- Before turning the mower upside down, it must be powered off.
- DO NOT use a high-pressure washer.
- DO NOT perform maintenance when wearing open sandals or barefoot.
- Always wear heavy-duty work gloves, long trousers and work shoes when handling the mowing blade disc.

Blocked With Grass?

9:41



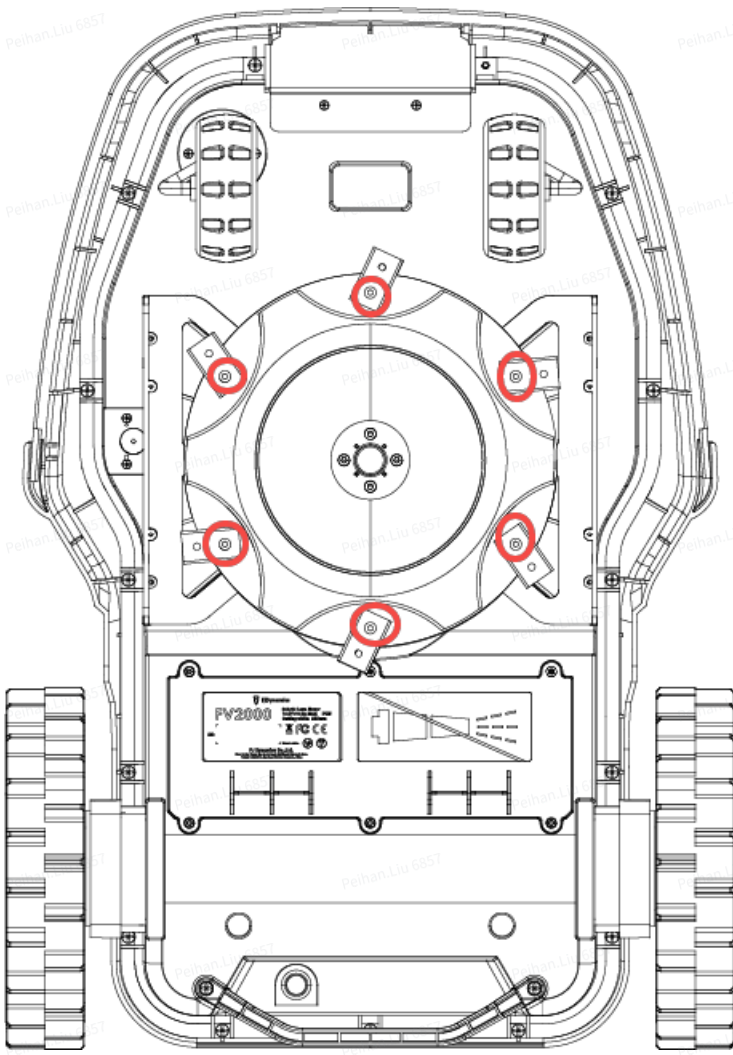
Blade disc reduced successfully!

Please turn off the mower when handling the mowing blade disc.

Got it

Blade replacement

Use an Allen wrench to unscrew the screw shown in the picture to remove the blade and replace it as needed.



6.4 Slope Measurement

FV2000 can mow on slopes up to 33 degrees.



7. Troubleshooting

Common Problems and Solutions: Will be displayed on Applications

You can finish the self-check by checking these parts to confirm the source of faults in orders.

(From left to right) ↓ ↓

Right Rear-Wheels Abnormality

Collision

Positioning Abnormality

Emergency Stops

Left Rear-Wheels Abnormality

Front-Wheels Abnormality

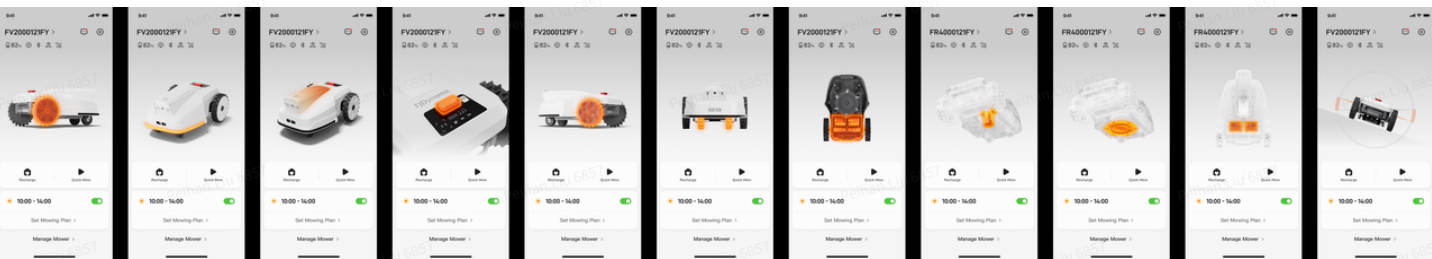
VCU(Vehicle Control Unit) Abnormality

Elevator Motor Abnormality

Cutting System Abnormality

Battery Abnormality

Tilt



8. Warranty Policy

FJDynamic warrants this product to be free from defects in material and workmanship under normal use in accordance with the product literature during the warranty period. Published product literature includes, but is not limited to, user manuals, quick start guides, maintenance, specifications, disclaimers, and in-application notices. Warranty periods vary by product and component. View the following table.

Components	Under Warranty
Mower	2 years

Batteries	2 years
Charging Station & RTK	1 year
Wheels	Not Warranted
Decorations	Not Warranted
Mower Blades	Not Warranted

***Tires, trim/appearance, and cutting blades are wear parts and are not covered under warranty.**

If the product is not working properly under warranty, contact FJDynamics Customer Service for instructions. Please provide your receipt and product serial number when contacting customer service.

- The warranty period for this product begins on the date of product delivery.
- If you are unable to provide an invoice or other valid proof of purchase, the warranty period will begin 90 days after the date of manufacture shown on the product, unless otherwise agreed between you and FJDynamics.
- If the user wishes to send the product to a local service center or FJDynamics facility for further diagnostics, the user will need to arrange for shipment. If the problem is under warranty, FJDynamics will repair or replace it and return it to the user free of charge. If not, FJDynamics or the designated service center may charge accordingly.

9. Important Information

9.1 Trademark and Legal Statement

9.2 Certifications

Federal Communications Commission(FCC)

FCC Statement

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.

CE (Europe)

CE certification is a mandatory conformity marking for certain products sold within the European Economic Area (EEA) since 1985. The CE marking is a manufacturer's declaration that the product meets the essential requirements of the relevant European health, safety, and environmental protection legislation, as set out in the applicable European Directives and Regulations

10. User Agreement - Disclaimers and Limitation of Liability

10.1 User Responsibility

You expressly agree to bear all risks and consequences from using this application. The company is not liable for any issues arising from your use of the application.

10.2 Limitation of Liability

You agree that the company is not responsible for the quality or any other issues with products or services provided by the company that are unrelated to the application, nor for any losses caused by such issues.

10.3 Indemnification

You will indemnify and hold the company harmless from any claims, demands, lawsuits, damages, losses, costs, liabilities and expenses (including reasonable attorneys' fees) arising from:

1. Your use of the application and services.
2. Your user content.
3. Your violation of this agreement.
4. Any other claims related to your actions.

You agree not to settle any such claims without the company's prior written consent. The company reserves the right to assume the exclusive defense and control of any matter subject to indemnification by you, in which case you agree to cooperate with the company's defense of such claims.

10.4 Limitation of Damages

In no event shall the company be liable for any indirect, special, incidental or consequential damages related to your use of the application, including but not limited to damages for loss of profits, goodwill, use, data or other intangible losses, even if the company has been advised of the possibility of such damages.

10.5 Exclusions and Limitations

Some jurisdictions do not allow the exclusion of certain warranties or the limitation or exclusion of liability for incidental or consequential damages. Accordingly, some of the above limitations and disclaimers may not apply to you. To the extent that the company may not, as a matter of applicable law, disclaim any implied warranty or limit its liabilities, the scope and duration of such warranty and the extent of the company's liability shall be the minimum permitted under such applicable law.

11. User Agreement - Governing Law and Dispute Resolution

11.1 Dispute Resolution

Any disputes arising from this agreement shall first be resolved through amicable negotiation. The party raising the dispute must provide written notice detailing the nature of the dispute. Both parties will appoint authorized representatives to negotiate a fair resolution.

11.2 Jurisdiction

If the parties cannot reach an agreement, the courts in the jurisdiction where the service provider is registered shall have exclusive jurisdiction.

11.3 Applicable Law

This agreement shall be governed by the laws of the country or region where the service provider is registered, without regard to conflict of laws principles.

11.4 Severability

If any provision of this agreement is found to be unenforceable, the remaining provisions shall continue in effect, and the unenforceable provision will be modified to the extent necessary to make it enforceable.

11.5 Entire Agreement

This agreement constitutes the complete and exclusive understanding between you and the company regarding the subject matter herein, superseding all prior discussions and agreements.

11.6 Headings

The headings in this agreement are for convenience only and do not create any legal or contractual obligations.

11.7 Assignment

You may not transfer your rights or obligations under this agreement without the company's prior written consent. Any attempted transfer in violation of this provision shall be null and void.

11.8 Effective Date

This agreement is effective as of the date of publication.