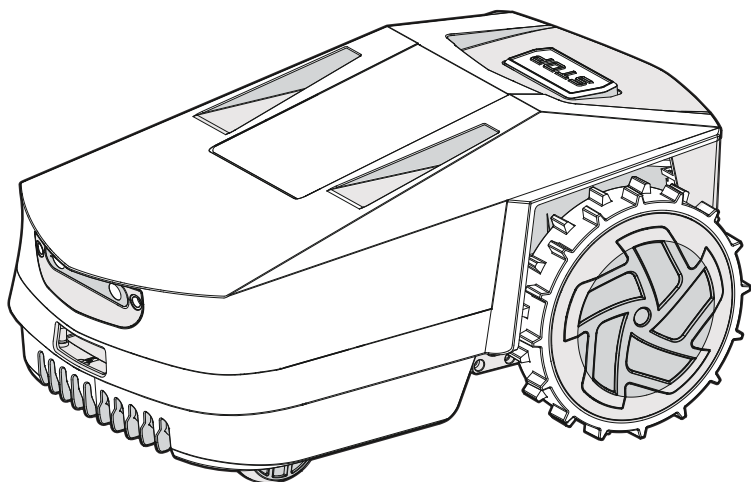


INVERX®



INVERX Lawn Mower Z Series

— USER MANUAL —

Please read this manual carefully before using it and keep it for future reference.

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Section 1. SAFETY INSTRUCTIONS



WARNING:

Read the safety instructions before you use the product. Fail to observe the following warnings may result in damage to your lawn mower or cause serious injury.

1.1 General Safety Instructions

- The product should only be operated, maintained and repaired by persons who are fully familiar with its special characteristics and safety regulations. Please read the user manual carefully and ensure that you understand all instructions before using the product.
- The robot is designed for lawn mowing only; it must not be used for any other purpose.
- Never allow children, persons with reduced physical, sensory or mental capabilities, those lacking experience or knowledge, or anyone unfamiliar with these instructions to use the robot. Local regulations may impose additional age restrictions for the operator.
- Warning signs must be placed around the working area of the robotic lawn mower when it is used in public spaces. The signs shall include the following text: "Warning! Automatic lawn mower! Keep away from the machine! Supervise children!"
- Except for the simple routine maintenance described in this manual, the robot must be serviced by qualified professionals under all circumstances.
- Switch off the robot before performing any adjustments or maintenance that the user is authorized to carry out. Always use the personal protective equipment recommended by the manufacturer — especially protective gloves when handling the cutting blade.
- Do not use the product if any parts are defective.
- Incorrect installation or improper use of the robot may cause serious property damage or personal injury.
- If any injury or accident occurs, seek medical attention immediately.
- The product should only be used with the equipment recommended by the manufacturer.
- Use only the battery charger and power supply provided by the manufacturer. Improper use may result in electric shock, overheating, or leakage of corrosive liquids from the battery. If any liquid leaks, clean the battery with water/neutralizer; if contact with eyes occurs, seek immediate medical attention.

- Never connect the power supply to an outlet if the plug or cord is damaged. A damaged cable must be replaced by service personnel.
- Modifying the original design of the product is not permitted. Any modifications are carried out at your own risk.
- The illustrations in this manual are for reference only. Please refer to the actual products.

1.2 Safety Instructions for Installation

- Installers must follow manufacturer's instructions and comply with national or local installation standards. Under no circumstances will the manufacturer be responsible for any consequences resulting from non-compliance with applicable standards or local regulations.
- Do not install the charging station (including any accessories) under or within 60 cm / 24 inches of any combustible material. In the event of a malfunction, the charging station or power supply may heat up and pose a potential fire hazard.
- Do not install the charging station in areas where pests (e.g., ants) are present or where there is a risk of standing water.
- Do not install the charging station and the RTK antenna in areas where people could trip over them.
- Keep the power supply cable and extension cable out of the work area, and ensure the power supply is positioned above ground and away from any potential water exposure to prevent damage.

1.3 Safety Instructions for Operation

- Do not use the mower when people—especially children—or animals are in the work area.
- Check the lawn for foreign objects such as stones, branches, tools, or toys. If the blades hit a foreign object, they may be damaged. Switch off the product before clearing the obstruction and inspect the product for damage before switching it on again.
- When manually operating the mower with the iGarden App, do not run, watch your steps on slopes, and maintain proper balance at all times.
- In working areas not bounded by a fence that cannot be easily climbed over, supervise the device during operation.

-
- Keep away from the rotating blades. Do not place your hands or feet near or under the product when it is switched on.
 - Never allow anyone to sit on the robot.
 - Never lift the mower to inspect the blade or to carry it while it is running.
 - Avoid touching moving hazardous parts, such as the blade disc, until they have come to a complete stop.
 - Do not use the product if the STOP button does not work.
 - Always switch the mower to OFF when it is not in operation.
 - If the mower begins to vibrate abnormally, switch it off and inspect it for damage.
 - Do not use the mower if any external parts are damaged. If any mechanical parts are damaged, they must be replaced.
 - Visually inspect the mower periodically to ensure that the blades, mounting screws and cutting mechanism are not worn or damaged. Tighten all bolts and screws to ensure the mower remains in good working condition.
 - To avoid possible damage, operate the mower at a distance from the pop-up sprinkler. Do not set a channel where pop-up sprinklers are installed. The mower and sprinklers should not be operated at the same time.
 - The operating temperature range is 0–55 °C (32–131 °F). The charging temperature range is 5–45 °C (41–113 °F). Excessive temperatures can damage the mower.
 - For the best mowing results, it is recommended to mow in dry weather. Mowing in the rain may cause grass to stick to the mower and increase the risk of slipping. Never mow in severe weather such as heavy rain or snow.
 - Do not use the mower during thunderstorms or stormy weather. If there is a risk of thunderstorms, all connections to the charging station (power supply, antenna power cable) must be disconnected.
 - Do not allow the mower to operate in areas with standing water, such as puddles formed after heavy rain, as this may cause damage to the machine and the lawn.
 - Do not place any objects on top of the mower, its charging station, or the RTK antenna.

1.4 Battery Safety

- Use only original batteries recommended by the manufacturer.
- Lithium-ion batteries may explode or cause a fire if they are disassembled, short-circuited, or exposed to water, fire or high temperatures. Handle the battery with care and do not disassemble or open it. Store it away from direct sunlight.
- Do not charge the mower if the bottom of the unit has been soaked with water, as this poses a risk of battery explosion. In the event of flooding, move the robot away from the area immediately.
- This appliance contains batteries that can only be replaced by skilled personnel.

KEEP THE ABOVE SAFETY INSTRUCTIONS FOR FUTURE REFERENCE

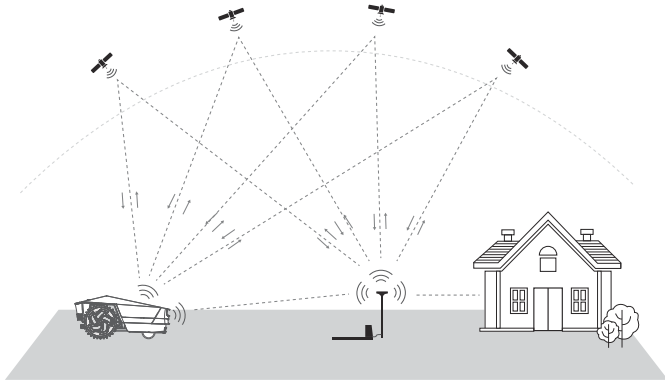
Section 2. PRODUCT OVERVIEWS

2.1 Introduction

The product features an advanced robotic mowing system with a virtual border that eliminates the need for complex perimeter wiring. It also includes smart App connectivity and an intuitive control panel for easier operation and management.

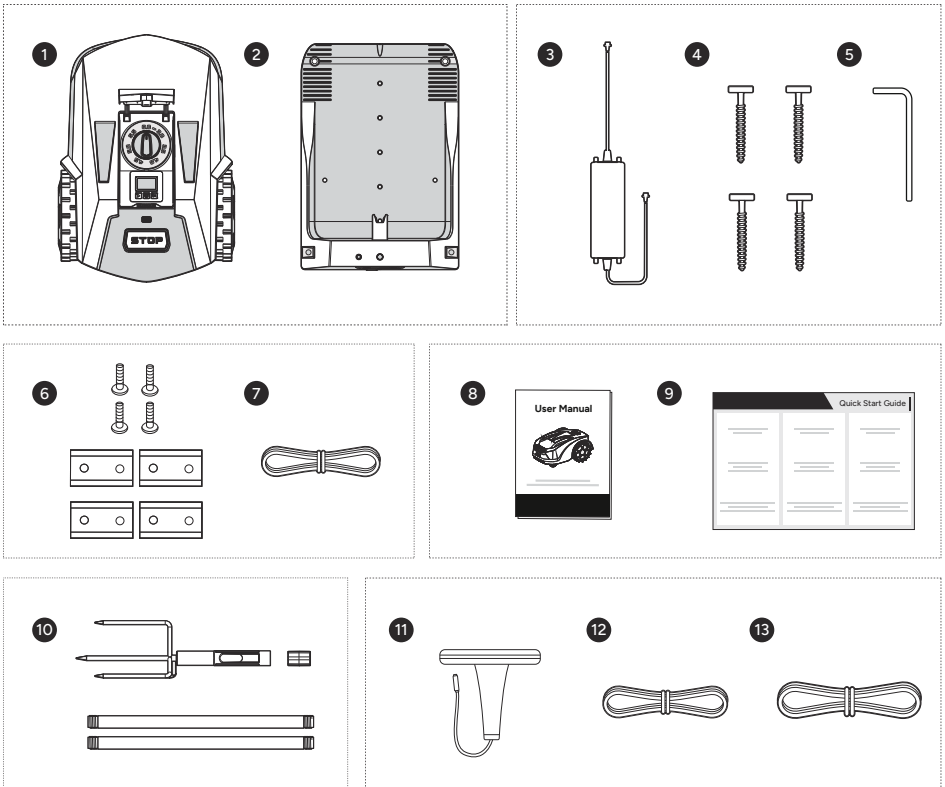
The system consists of robotic lawn mower, a charging station, Net RTK or a RTK antenna, and the iGarden App. The mower and antenna receive positioning signals from satellites. The charging station charges the mower and sends correction data to ensure accurate positioning. The App is used to remotely control the mower and monitor its real-time status.

You can complete the system installation and map the work area by following the operating instructions displayed in the App. The mowing path is planned to maximum efficiency. If the battery runs out before the task is completed, the mower will return to the charging station to recharge. Grass collection is not required, as the finely shredded clippings act as a natural fertilizer.



2.2 What's in the Box?









Make sure that all parts corresponding to your selected model are included in the package. If any items are missing or damaged, please contact your dealer. We recommend retaining the packaging materials for any future transportation of the product.



1 Lawn mower	8 User manual
2 Charging station	9 Quick start guide
3 Power supply	10 RTK antenna installation kit (Optional)
4 Fixing screws	11 RTK antenna (Optional)
5 Hex key	12 RTK antenna power cable (3 m) (Optional)
6 Extra blades	13 RTK antenna extension cable (10 m) (Optional)
7 Charging station extension cable (10 m)	

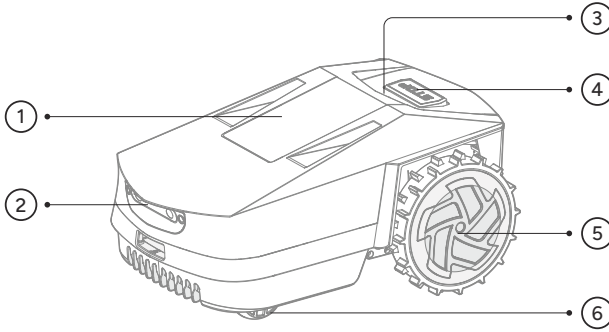
2.3 Symbols on the Product

Please study the symbols on the mower and labels carefully and ensure you understand their meanings.

Symbols	Description
	WARNING — Read the user instructions carefully to understand meanings before using the machine.
	WARNING — Disable the mower before working on or lifting it.
	WARNING — Keep a safe distance from the mower when operating. Do not run after the mower.
	WARNING — Do not ride on the mower. Do not put your hands or feet close to or under the mower.
	WARNING — Do not touch the rotating blade.
	This product must not be disposed of as normal household waste. Ensure that it is recycled in accordance with local legal requirements.
	This product conforms to the applicable EC Directives.
	This product conforms to the regulations of Restriction of Hazardous Substances.

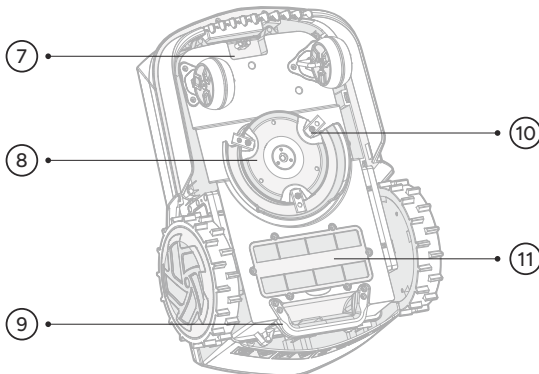
2.4 Parts and Functions

2.4.1 Mower



① Control panel cover	② Camera sensor	③ Rain sensor
④ Stop button	⑤ Rear wheel	⑥ Front wheel

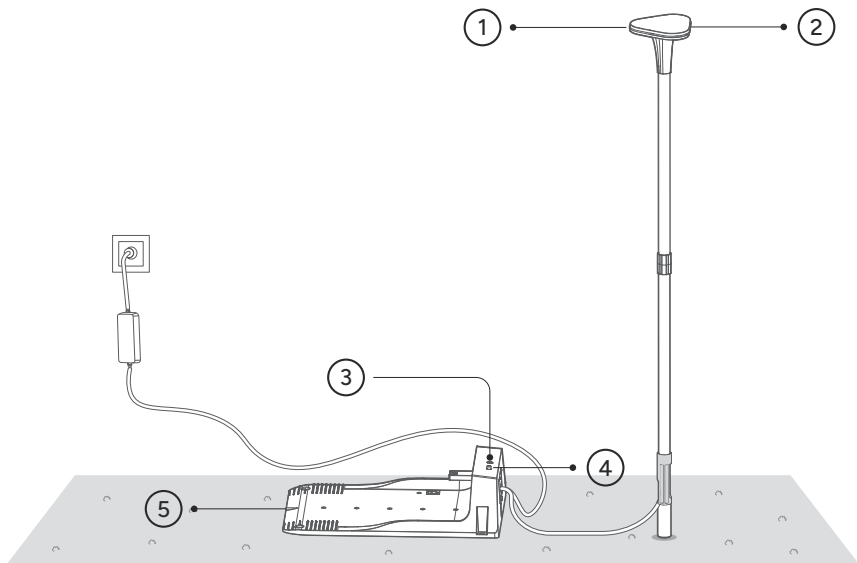
- Control panel cover: Protects the control panel. The control panel beneath the cover is used for basic operations, adjustment settings, and status display of the mower.
- Camera sensor: Identifies and avoids obstacles, and can also be used for positional navigation in areas with poor satellite signal.
- Rain sensor: Detects rain and automatically sends the robot back to the charging station.
- Stop button: Immediately stops the mower and blade rotation. Enter the PIN code to unlock. When a motor error message appears, press the STOP button to clear the error and attempt to resolve the issue.



⑦ Charging contacts	⑧ Blade disc	⑨ Lifting handle
⑩ Blades	⑪ Battery cover	

- Charging contacts: Connect to the contact strips on the charging station to charge the mower.
- Blades: The blades rotate freely when attached to the blade disc. During mowing, the rotating blade disc creates centrifugal force that extends the blades outward to cut the grass.
- Blade disc: Adjust the blade disc height by turning the cutting deck knob on the mower to change the cutting height.
- Lifting handle: Allows you to move the mower safely, ensuring the blade disc is facing away from your body.

2.4.2 Charging Station and RTK Antenna (Non-Net RTK)



① RTK antenna LED indicator	② RTK antenna	③ Charging station LED indicator
④ Charging station button	⑤ Charging station	

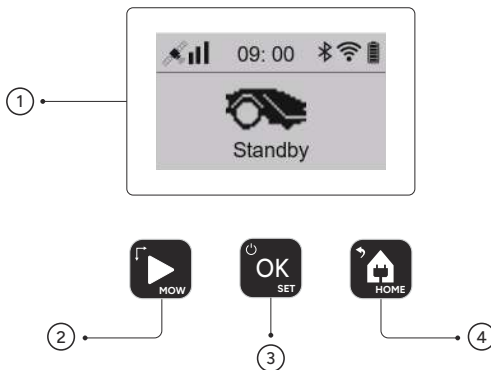
- Charging station LED indicator: Displays different working statuses using various light colors.
- Charging station button: Press the button to recall the mower to the charging station.

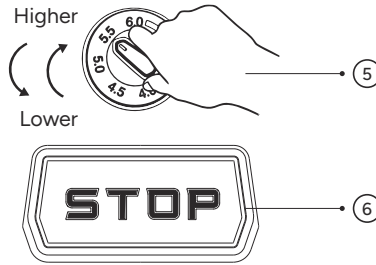
Charging station LED indicator	Meaning
Pulsating green	The mower is charging in the charging station.
Solid green	Mower on standby / Mower is fully charged in the charging station.
Flashing green (3 times)	Press the button to trigger the one-touch recall function.
Flashing red	The guide wire at the bottom of the charging station is disconnected.

- RTK antenna: Receives satellite signals to improve the mower's positioning accuracy.
- RTK antenna LED indicator: Displays different antenna statuses using various light colors. The light turns off at sunset and turns on at sunrise.

RTK antenna LED indicator	Meaning
Flashing red	Powering up and ready to be paired with the mower.
Flashing blue	The antenna is searching for satellites / Poor satellite signal.
Solid green	Strong satellite signal.
Alternately flashing red and green	The data transfer modules are being paired.
Alternately flashing red/green/blue	The mower is in the process of OTA upgrading.

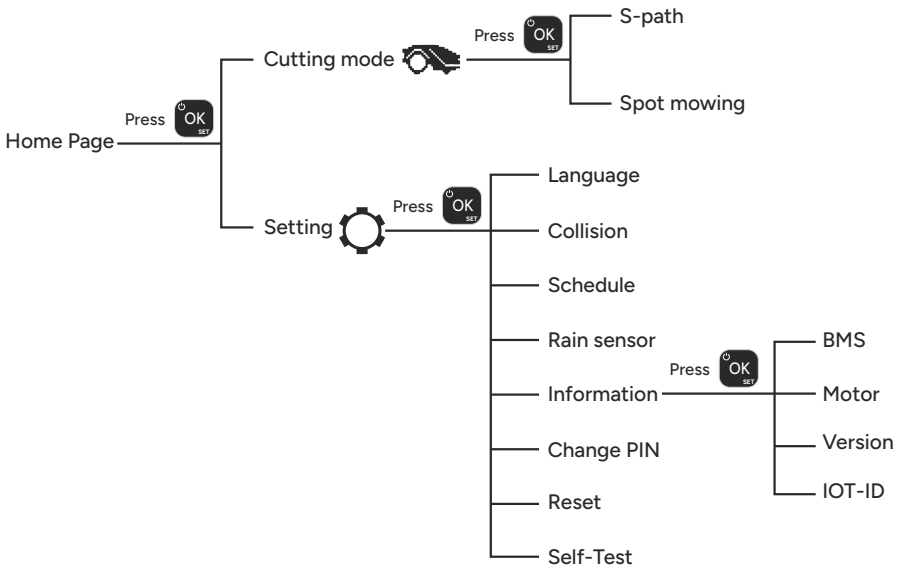
2.5 Control Panel Introduction





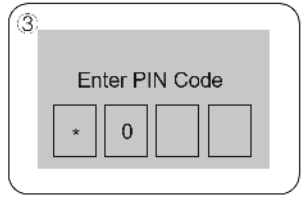
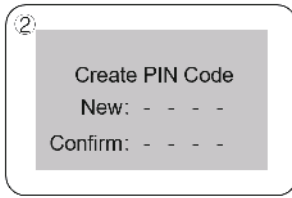
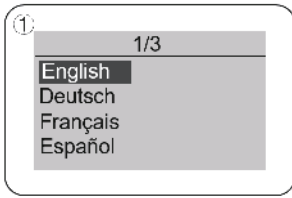
① Display	② Start mowing Page turning Plus number	③ Confirm Enter the menu Press 3s to power on/off
④ Back to charging station Return	⑤ Cutting height adjustment	⑥ Emergency Stop Input the PIN code to unlock

Menu Structure Overview



First Use Introduction

Power on the mower and complete the initial setup. Press MOW to change the numbers and press OK to confirm the code. If you forget your PIN code, please contact your dealer.



2.6 Product Specifications

Model	Z4	Z5
Maximum Area, m ²	≤1500	≤2500
Mowing Time, h	4	5
Battery Type	Li-ion	Li-ion
Battery Capacity, Ah	8.6	10
Battery Voltage, V	21	21
Charging Current, A	4	4
Charging Time, h	2	2.5
Blade	3	3
Cutting Blade Speed, rpm	2600-3000	2600-3000
Cutting Height min/ max, mm	30-60	30-60
Cutting Width, mm	180	180
Moving Speed, m/s	0.3-0.5	0.3-0.5
Max Slope, Inside/ by edge	46 % (25°)	46 % (25°)
Sound Level, dB(A)	55	55
IP Rating	IP66	IP66
Max, Map Management	20	30
Max, Multi-zone Management	20	30
Positioning & Navigation	RTK & Vision	RTK & Vision

Obstacle Avoidance	Binocular Vision + RGB	Binocular Vision + RGB
Animal Friendly Algorithm	Yes	Yes
App / WiFi / Bluetooth	Yes	Yes
4G / Anti-theft	Yes	Yes
Dimensions, mm	558*400*251	558*400*251
Net Weight, kg	10.5	10.5
Working Temperature, °C	0-55	0-55
Charging Temperature, °C	5-45	5-45
Storage Temperature, °C	-20-60	-20-60

Mowing Time: Tested at a moving speed of 0.3 m/s with a full battery at an ambient temperature of 25 °C, while mowing a freshly cut, flat lawn.

Section 3. INSTALLATION



WARNING:

Read and understand the safety instructions chapter before you installation.



CAUTION:

Use original spare parts and installation material.

3.1 Preparation

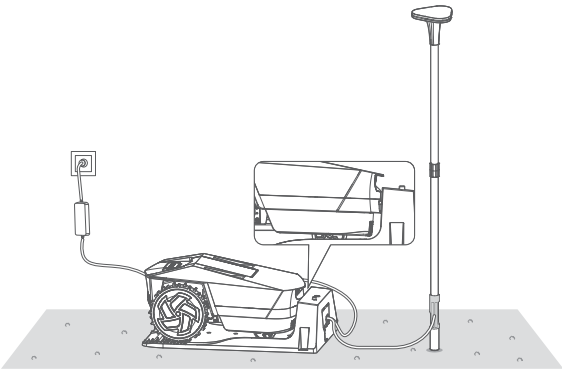
3.1.1 To Prepare for Installation

- Create a blueprint of the work area that includes all obstacles. This makes it easier to determine where to place the charging station and RTK antenna (for non-Net RTK models) and to set the virtual boundaries.
- Make the locations of the charging station, RTK antenna (Non-Net RTK), channels, and the virtual boundaries of the work areas and off-limit zones on the blueprint.
- Holes containing water can damage the mower. Fill any holes in the lawn to ensure the surface is level.

-
- Cut the grass before installing the product. Make sure the grass height does not exceed 10 cm / 4 in.
 - Remove leaf piles, debris, toys, wires, stones and other obstacles. Ensure that children and pets are kept away from the lawn during installation.

3.1.2 Charging the Mower

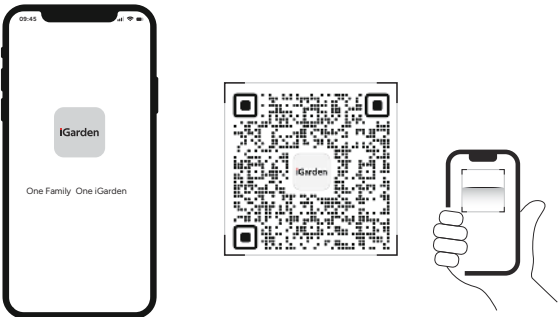
A new mower may have a low battery after prolonged transport or storage. Place the mower on the charging station until the indicator light turns pulsating green. Ensure that the charging contacts on the mower and the contact strips on the charging station are properly aligned and making good contact. Fully charge the mower to at least 90% before its first use.



3.1.3 Prepare the App

Use a mobile device with the iGarden App to complete the installation and configure the product settings.

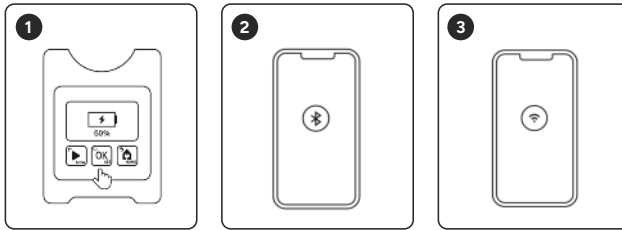
Scan the QR code to download the iGarden App, or visit the Apple App Store (iOS) or Google Play Store (Android) and search for "iGarden." After installing the App, please register and log in.



Note: During use, the App may request access to Bluetooth, GPS location, and Wi-Fi when needed. It is recommended to enable these permissions to ensure proper operation.

3.1.4 Activate the Mower

To ensure a successful installation, please activate the mower first.



CAUTION:

If there is a lightning rod nearby, do not install the RTK antenna higher than the lightning rod.

3.2 Find Locations

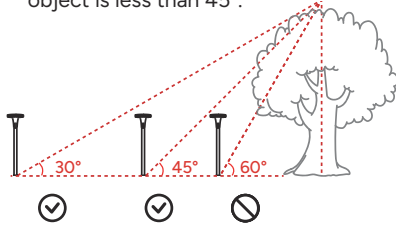
Basic Principles for Placing the RTK Antenna and Charging Station :

1. Keep them away from houses and trees; the distance should exceed the height of any nearby elevated objects.
2. Place the RTK antenna and charging station in an open area where nothing blocks the satellite signal (e.g., tree canopies or sunshades).
3. Install the RTK antenna and charging station on flat, non-hardened ground and keep them upright. Do not install them on a slope.

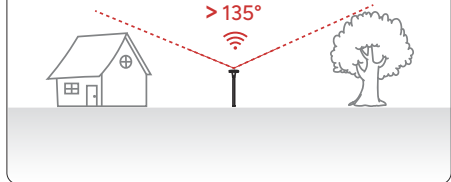
3.2.1 RTK Antenna Location (For Net RTK, see Section 3.2.2)

The antenna must be installed in a location with an open field of view. Otherwise, the mower may have difficulty determining its position accurately during mowing. Follow the guidelines below to select the optimal installation location.

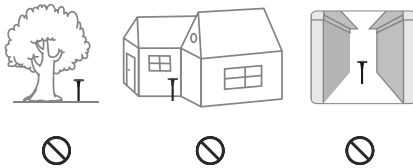
- 1** Place the antenna in a flat, open area where the elevation angle from the antenna base to any nearby elevated object is less than 45°.



- 2** A minimum of 135° of open-sky view is required. Ensure that no roofs, trees, or other obstacles block the satellite signal.



- 3** Do not install the antenna under large trees, at the corner of an L-shaped building, or on a narrow path between two buildings.



- 4** The RTK antenna must be installed vertically with no visible tilt.

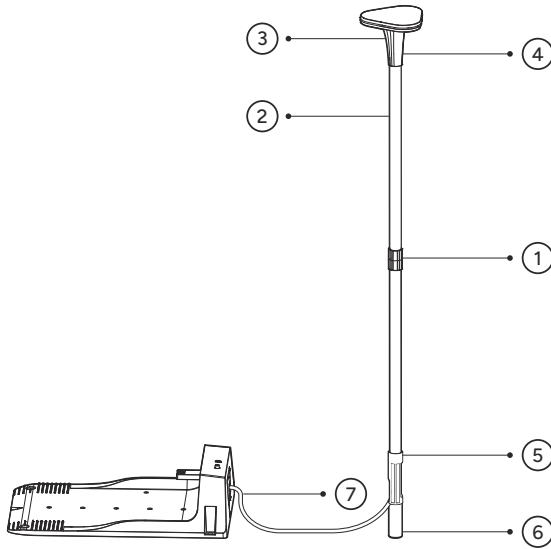


3.2.2 Charging Station Location

The charging station is where the mower rests and recharges after each mowing session. If it is not positioned correctly, the mower may fail to start mowing due to weak satellite signals (the robot initializes its position while on the charging station).

Install the charging station on a flat, soft surface. If it is placed in a non-working area, ensure the charging station and the lawn are at the same level and that there are no obstacles blocking the mower's path to the working area.

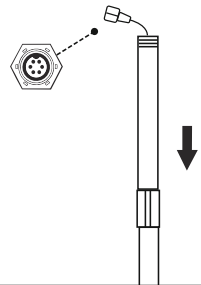
3.3.1 Install the RTK Antenna (Net RTK switch to 3.3.2)



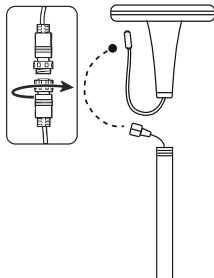
- ① Assemble the two mounting poles.



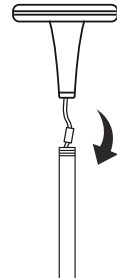
- ② Thread the 3 m RTK antenna power cable through the assembled long mounting pole.



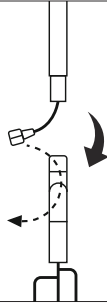
- ③ Connect the RTK antenna to the power cable.



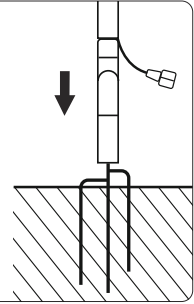
- ④ Rotate the RTK antenna onto the long pole.



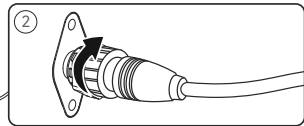
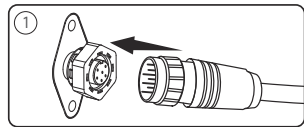
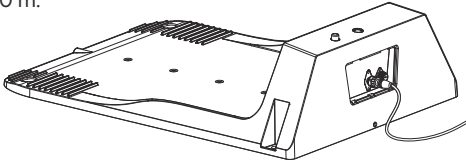
- ⑤ Thread the cable through the base fork first, then rotate the pole into the base fork.



- ⑥ Stick the base fork firmly into the lawn near the charging station.



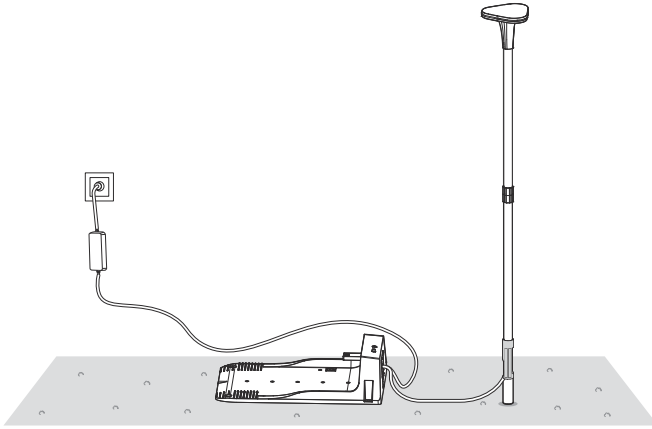
- ⑦ Connect the RTK antenna power cable to the charging station. If the cable is not long enough, you may use up to three antenna extension cables to extend the total length to a maximum of 30 m.



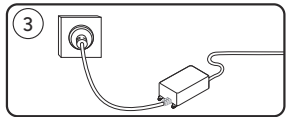
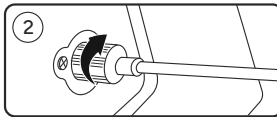
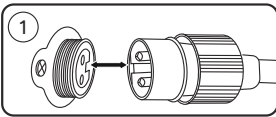
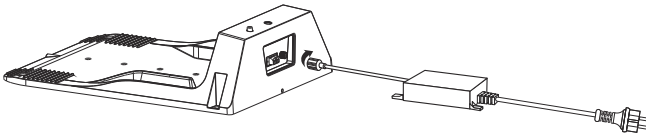
Note:

- Please tighten all cable connectors to prevent water ingress.
- To ensure proper satellite signals and avoid damage, do not place any objects on the RTK antenna.
- If you move the RTK antenna after creating a map, go to Settings > Work Customization in the App for antenna repositioning

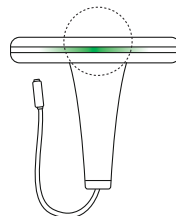
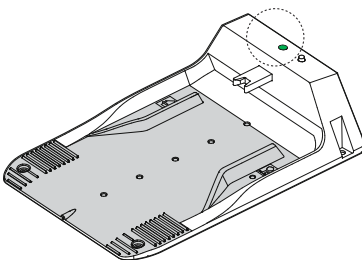
3.3.2 Installing the Charging Station



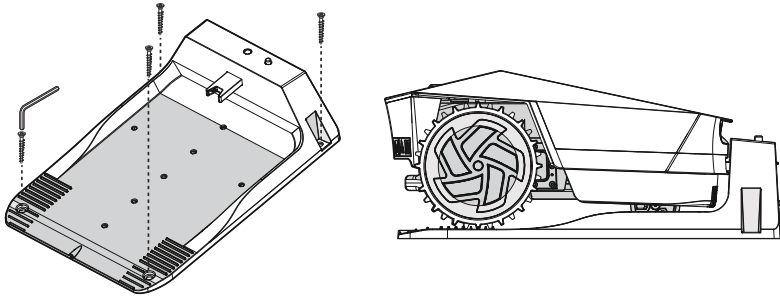
- 1 Align the notch on the charging station with the power supply, tighten them, and then plug the power supply into a 100-240 VAC socket. If necessary, connect an extension cable to the power supply adapter first.



- 2 Power on the mower and ensure that the charging station and RTK antenna lights are green. If the antenna light flashes blue for more than 5 minutes, the satellite signal is weak, and you will need to relocate the antenna.



- Secure the charging station to the ground using the supplied fixing screws. Place the mower on the charging station until the indicator light turns pulsating green, and charge it to at least 90% before use.



Note:

- Ensure all cable connectors are tightly secured to prevent water ingress.
- Keep cables out of the mowing area and away from any paths the mower may travel, as they may be damaged if left in these areas.

Section 4. OPERATION



WARNING:

Read and understand the safety instructions chapter before you use the mower.

4.1 Preparation

- Ensure that the charging station and RTK antenna (Non-Net RTK) have been properly installed.
- Ensure that the mower is docked on the charging station and switched on.
- Ensure a stable network connection and keep Bluetooth enabled on your mobile device.

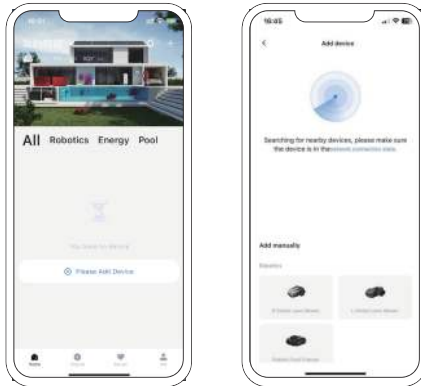
4.2 Download App and Add Your Mower

4.2.1 Download App

The mower is designed to work with the iGarden App. Download the App by following the instructions in section 3.1.3 Prepare the App. After installation, register an account and log in.

4.2.2 Add Your Mower

Open the App and tap + to add your mower. Follow the on-screen instructions to connect the device and configure the network settings.



Note:

- Ensure that the distance between your mobile device and the mower is less than 3 m.
- If you are using 4G cellular data, you can skip the Wi-Fi setup. However, it is recommended to connect to a Wi-Fi network for optimal performance.

4.3 App Home Page Introduction

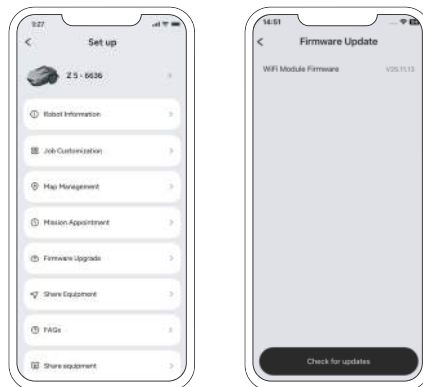


4.4 Upgrade Firmware

iGarden lawn mower uses Over - the - Air (OTA) to upgrade the firmware. To ensure optimal performance, make sure your mower is updated to the latest firmware version.

1. Go to Settings > Firmware Upgrade to check the current firmware version and confirm the update.
2. Ensure the mower is connected to a stable network and placed on the charging station. You can also choose not to upgrade the firmware at the charging station if the mower's battery is above 50%.

During the upgrade, do not exit the App, power off the mower, or perform any other operations. You can start using the mower once the App confirms that the upgrade is complete.

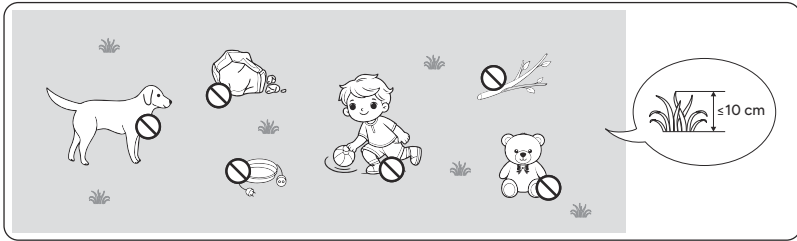


4.5 Create a Map

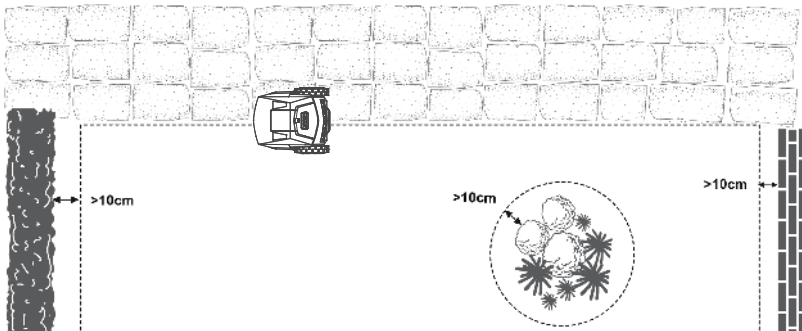
4.5.1 Before Mapping

Before mapping, please take note of the following important considerations :

- Remove leaf piles, debris, toys, wires, stones and other obstacles. Ensure that children and pets are kept off the lawn.
- Cut the lawn to a height of no more than 10 cm to prevent the mower from getting stuck in tall or dense grass.

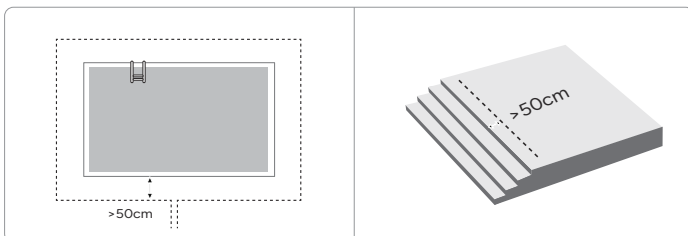


- Stay within 6 m of the mower during the mapping process to maintain a strong Bluetooth connection.
- When driving the mower along walls, fences, obstacles, ditches, or uneven paths to create a map, keep the mower at least 10 cm away from the edge.
- If the edge borders a level and even pathway or pavement, you may drive the mower on the pathway for more efficient mowing.

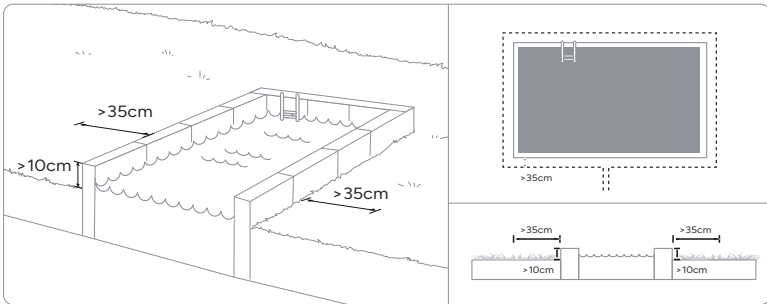


Note: To prevent force majeure-induced positioning deviations that could result in mower scratches or fall damage, it is recommended to reserve sufficient turning space when mapping.

- When driving the mower along pools, downward steps, slopes, or other hazardous areas to create a map, maintain a distance of at least 50 cm from the edge.



- If these hazardous areas are bordered by a rigid fence taller than 10 cm, maintain a minimum distance of 35 cm.





4.5.2 Map Out the Mowing Area

Place the mower on charging station and set the cutting height to 6 cm. Ensure the mower is powered on and your phone's Bluetooth is enabled. The phone will automatically connect to the mower via Bluetooth.

1. Tap 'Create a map' to start mapping.

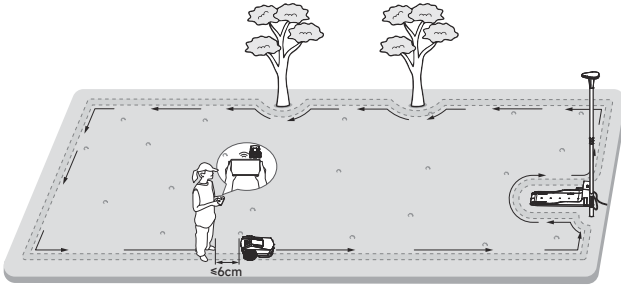


2. Select a suitable starting point along the edge of your lawn and tap 'Start'.

- Move the virtual joystick  up or down to control the mower's forward or backward movement.
- Move the virtual joystick  left or right to turn the mower left or right.



3. Guide the mower along the lawn edge. Keep the controller within 6 m of the mower.



4. Guide the mower back to the starting point and tap 'Confirm' to save the boundary.



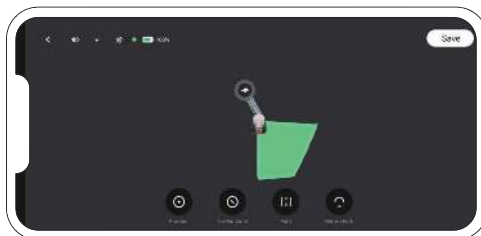
4.5.3 Map Out No-Go Zones

The mower's camera sensor helps it recognize obstacles on the lawn and avoid collisions. To better protect both the mower and objects, you can create No-Go Zones where the mower is not allowed to enter.

For example:

- A. Areas that affect the performances, such as slopes greater than 25° (46%).
- B. Pools, flowerbeds, sprinkler heads, trees, roots, ditches, dining tables, and other areas where the mower is prohibited.

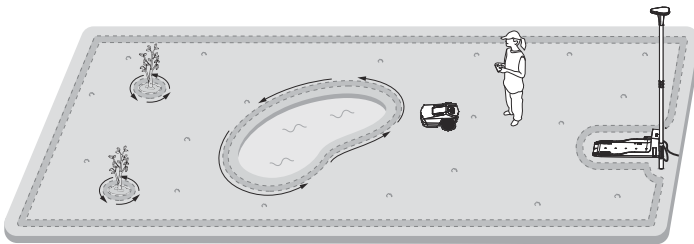
1. Tap 'No-Go Zone' on the Map page.



2. Select a suitable starting point along the edge of the No-Go Zone and tap 'Start'.



3. Guide the mower along the edge of the No-Go Zone until it returns to the starting point.



4. Tap 'Confirm' to save the No-Go Zone.



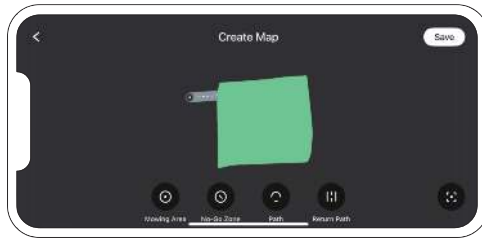
Note: The mower's camera sensor has a recognition blind spot. It is recommended to create a No-Go Zone for obstacles larger than 60 cm.

4.5.4 Map Out a Path

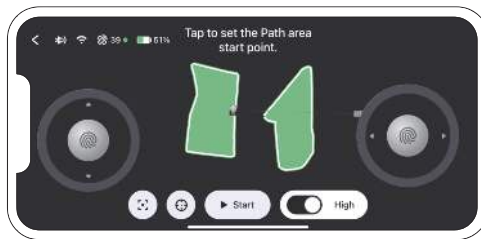
Paths can be created to connect the edge of a lawn to the charging station or to link two separate zones.

To ensure the mower can return to the charging station and perform zoned mowing, follow the steps below to create paths.

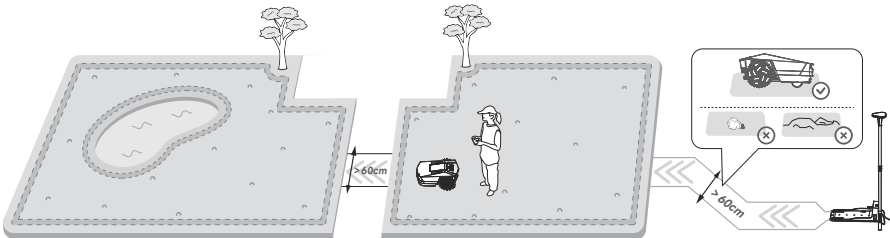
1. Tap 'Path' on the map page.



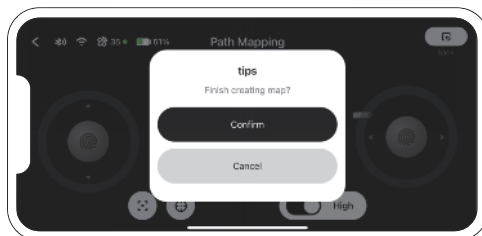
2. Move the mower into a mowing area, find a suitable starting point, and tap 'Start'.



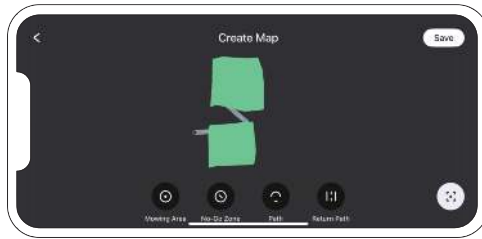
3. Manually control the mower to move from one mowing area to the charging station or to another mowing area.



4. Tap 'Confirm' to save the path.



5. Tap 'Return Path' on the Map page.





6. Tap 'Save' in the upper-right corner to finish mapping.

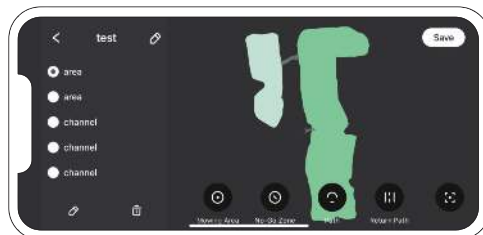
Note: To ensure smooth mowing, make sure the paths you create are wider than 60 cm and free of obstacles or bumps.

4.5.5 Edit the Map

With the iGarden App, you can edit or delete map elements. Ensure your phone is connected to the mower via Bluetooth.



By tapping the  icon on the right of the Home page, you can access the Map List page. From there, tap  icon to add or delete mowing areas, No-Go Zones and paths on the current map. Deleting an area will also remove all items within it.




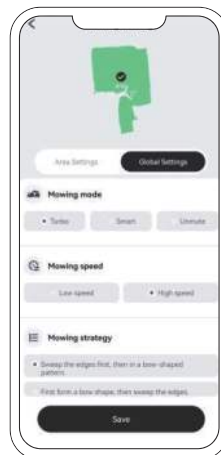
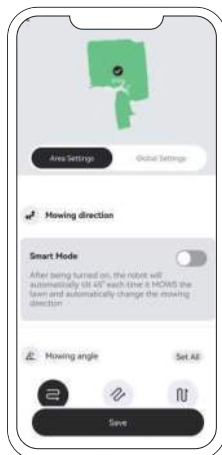
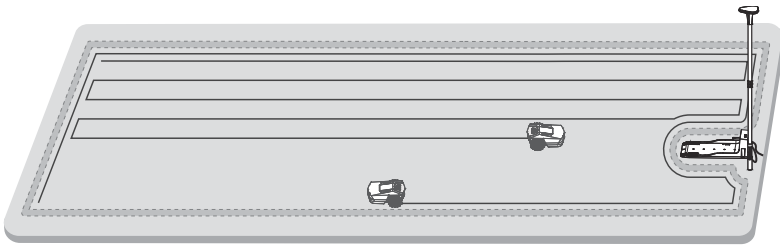
4.6 Mowing Mode

4.6.1 Auto Mowing

After a mowing area is created, you can tap 'Mow' on the Home page or control panel to start automatic mowing.

The mower will first mow once along the boundary, then follow the longest edge of the map using the planned path (0° mowing angle) to complete mowing the area. After finishing, it will automatically return to the charging station.

To avoid repetitive mowing tracks, Smart Mode uses three mowing angles: 0°, 45°, and 90°. Only one angle is executed in per mowing task and the 3 angles are cycled sequentially. You can also customize the mowing angle. Tap the  icon on the right of the Home page to set the mowing angle and spacing for the entire map or individual mowing areas.




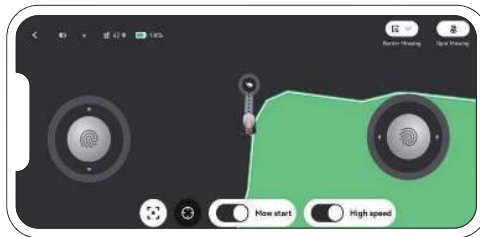
4.6.2 Manual Mowing

If you need to mow your lawn manually, you can use the Remote control mode, which includes Remote Mowing and Spot Mowing. To ensure safety, use manual mowing with caution and follow these guidelines:


- Minors must not use the manual mowing function.
- Operate the manual mowing function with extreme care to avoid injury.
- Keep children and pets off the lawn to prevent accidents.

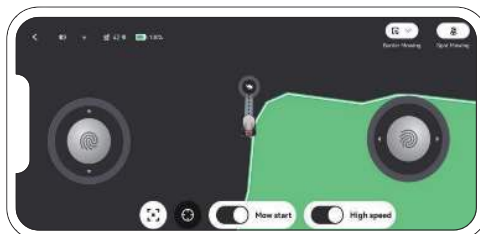
4.6.2.1 Remote Mowing

Tap  icon at the bottom-right of the Home page to enter the Remote Mowing mode. Use the virtual joystick to move the mower to your desired starting point, then turn on the Mow Switch below to begin manual remote mowing.




4.6.2.2 Spot Mowing

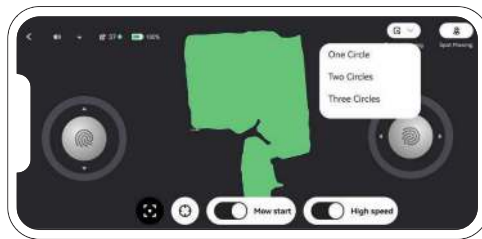
Move the mower to a location with no obstacles within 1.5 m around it as the starting point. Tap  icon at the upper-right corner of the Remote Control page to enter Spot Mowing mode. Using the starting point as the center, the mower will automatically create a 3*3 m square area for planned-path mowing.






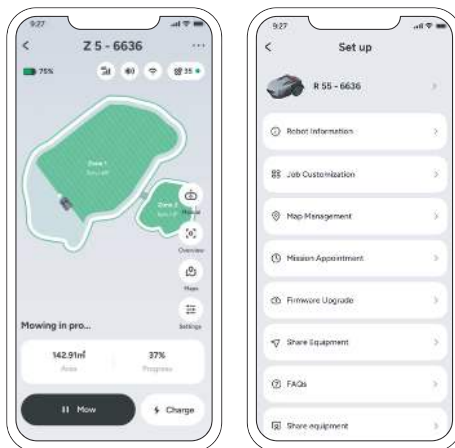
4.6.2.3 Boundary Mowing

To prevent the mower from getting stuck on uneven terrain or in bushes near the boundary while mowing in a bow-shaped pattern, it will mow 20 cm inside the mapped boundary. According to your lawn's needs, you can go to the Remote Control page, click the  button, and select 1/2/3 cycles along the boundary. Each cycle will move inward 9 cm. After clicking, the mower will perform a single boundary mowing task for the selected number of cycles.



4.7 Settings

Tap  icon at the upper right corner of the Home page to enter the Settings page.



4.7.1 Robot Information

On the Robot Information page, you can view the device ID, log, error messages, and change the PIN.

4.7.2 Work Customization

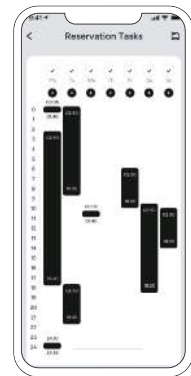
On the Work Customization page, you can adjust the mower's settings, including Mowing mode, Mowing speed, Unit of Temperature, Cash Sensitivity, Camera Switch, Location Method, Rain Sensor, Rain-Delayed Mowing, Digitally Transmitted Pairs, and RTK Station Relocation.

4.7.3 Map Management

On the Map Management page, you can manage all the maps created by the mower, and switch the default display map.

4.7.4 Mowing Schedule

On the Mowing Schedule page, you can set a regular mowing schedule, and the mower will automatically operate according to your settings.



4.7.5 Firmware Upgrade

On the Firmware Upgrade page, you can view the current firmware version of your mower and OTA upgrade to the latest firmware version. For optimal experience, ensure your mower is always updated to the latest firmware.

Note: Before upgrading, ensure that the mower is stationary and the wireless network signal is strong.

4.7.6 Share Equipment

On the Share Equipment page, you can share the mower with your family, allowing them to use the mower to maintain the lawn. You can cancel sharing at any time.

Section 5. MAINTENANCE



WARNING:

Use protective gloves during maintenance, especially when operating the blade.



WARNING:

Before carrying out any type of maintenance, make sure the mower is turned off.

To ensure optimal performance and extend the mower's lifespan, clean the mower and replace worn parts regularly.

The following are essential routine maintenance tasks. For more in-depth maintenance, please contact your dealer.

5.1 Maintenance Schedule

Frequency	Part	Type of maintenance	Reference
Weekly	Blades	Clean and check the efficiency of the blades. Replace if bent or badly worn.	See "5.3 Replace the blades".
	Camera sensor	Clean dirt from the camera lens.	See "5.2.4 Camera Sensor".
	Rain sensor	Clean and remove any rust.	See "5.2.5 Rain Sensor".
	Charging contacts	Clean and remove any rust.	See "5.2.6 Charging Contacts".
Semimonthly	Mower bottom	Clean the mower bottom.	See "5.2.1 Bottom".
	Mower wheels	Clean the mower wheels.	See "5.2.2 Wheels".
Monthly	Mower	Clean the mower.	See "5.2 Clean the Mower".
Every year	Mower	Have the mower serviced at an authorized service center.	See "7.1 Storage".

5.2 Clean the Mower



CAUTION:

Do not use a high-pressure water jet to clean the mower and charging station.

**CAUTION:**

Do not use solvents or polishers for cleaning to avoid potential damage.

**CAUTION:**

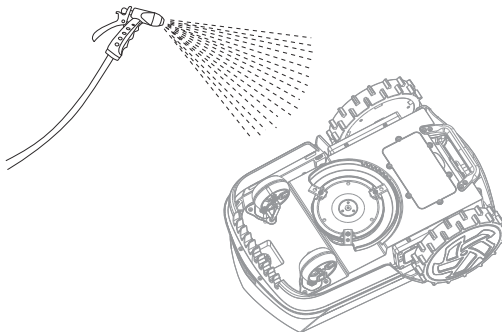
The control panel cover must be closed before cleaning and do not rinse the screen directly to avoid damaging the mower.

1. The mower and charging station are IPX6 waterproof, allowing you to clean all the surfaces with a hose.
2. For better cleaning results, use a brush and rag to remove grass clippings and mud before rinsing with water.
3. Do not clean the internal parts of the mower, as this may damage electrical and electronic components.

5.2.1 Bottom

1. Switch off the mower and clean it with a brush and hose.
2. After cleaning, check that the blade disc and blades rotate freely.

Note: If mowing a wet lawn, clean the underside of the mower immediately after finishing.



5.2.2 Wheels

1. Remove mud and grass from the wheels with a brush and water to maintain good wheel traction.
2. It is recommended to replace the front wheels every 2-3 years to ensure proper mower operation.

Note: If mowing a wet lawn, clean the wheels immediately after finishing.

5.2.3 Body

1. Clean the body of the mower with a rag and water.
2. Do not use solvents or polishers to avoid potential damage.

5.2.4 Camera Sensor

1. Regularly clean the camera sensor lens with a soft cloth to remove dirt.
2. Ensure the lens is free of dirt to maintain obstacle avoidance and proper operation.

Note: Be careful not to scratch or damage the camera sensor lens when cleaning.

5.2.5 Rain Sensor

1. Regularly clean the rain sensor with a rag and remove any oxides.
2. Prevent rust on the rain sensor caused by long-term exposure to moisture, especially on rainy days.

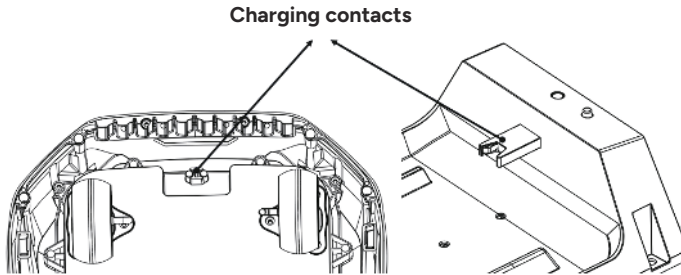
5.2.6 Charging Contacts



WARNING:

Disconnect the power before maintenance or cleaning the charging station.

1. Clean the charging contacts on both the charging station and the mower using a rag and water hose .
2. Regularly remove grass clippings and dust from around the charging contacts to ensure the mower charges properly each time.



5.3 Replace the Blades



WARNING:

Replace the worn or damaged blades with original spare parts.

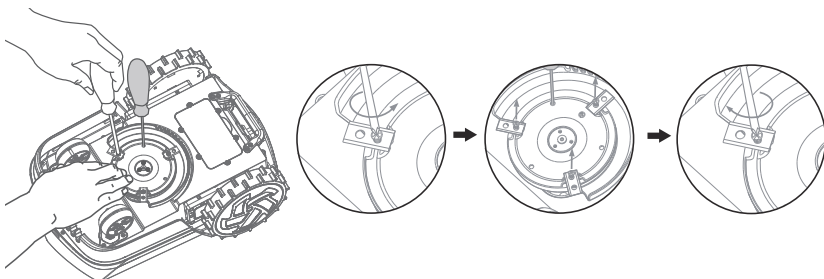


WARNING:

All blades and screws must be replaced at the same time to ensure the cutting system is balanced and to avoid serious injury.

1. Switch off the mower.
2. Turn the mower upside down and place it on a soft, clean surface to prevent scratches.
3. Before removing or installing screws, insert a long screwdriver to secure the blade disc and avoid accidental rotation.
4. Use a straight slot or cross-tip screwdriver to remove the screws.
5. Remove the worn blade and attach the new one.
6. Use a straight slot or cross-tip screwdriver to tight the screws, make sure that the blades can pivot freely.

Note: The typical lifespan of the blades is 1 to 3 months. Replace them regularly to maintain optimal cutting performance and energy efficiency.



5.4 Battery



CAUTION:

If the mower is not used for a long time, it is recommended to fully charge it at least every six months to protect the battery.

1. Do not use or store the battery under extreme temperature conditions, i.e., above 55 °C (131 °F) or below -20 °C (-4 °F). It is recommended to always keep the battery in a cool, dry place and have it replaced by your dealer for safety.
2. Temperature protection is activated at 0 °C (32 °F)/47 °C (117 °F); the battery will not charge unless the temperature rises to 5 °C (41 °F) or above, or falls to 45 °C (113 °F) or below.
3. The battery's lifespan depends on the length of the mowing season and daily operating hours. A longer mowing season or extended daily operation means the battery may need to be replaced more regularly.
4. If the mower's endurance is shorter than usual, this indicates that the battery has reached the end of its life cycle. Please replace the battery to extend the operating time.

Section 6. TROUBLESHOOTING

The application notifies you of common fault messages and displays their causes and troubleshooting steps. The most common issues are listed below.

For additional troubleshooting, including product/ application-related problems and frequently asked questions, go to [iGarden App > Serve > User manual > Q&A](#).

6.1 Abnormal Messages

Message	Cause	Solution
Mower lifted, please press "the OK" button within 10 min and wait for auto mowing.	The mower's two front wheels have triggered consecutive lifts.	Move the mower to a flat area with no obstacles or low ground. Press the OK button on the mower to continue operation. If the issue persists, restart the mower.
Slip detected, mower stopped, please press the "OK" button and wait for auto mowing.	The mower has slipped four times consecutively.	Press the OK button on the mower's display to automatically resume operation. If more than 10 minutes pass, the mower will enter sleep mode and must be manually moved to the charging station.

Collision detected, mower stopped, please press the "OK" button within 10 min and wait for the auto mowing.	The mower has triggered four consecutive collisions.	Ensure there are no obstacles or low ground. Press the OK button on the mower to continue operation. If the issue persists, restart the mower.
RTK antenna disconnected, please check the RTK cable.	The RTK antenna is disconnected and the RTK signal is disconnected.	Check that the RTK antenna power cable is properly connected and that the mower is too far away from the antenna. If the issue persists, please contact the after-sales service to check the hardware.
Mower overturned, please remote control the robot to return to the charging station.	The front wheels were lifted to 35° for 3 seconds or more than 55°, causing the mower to stop immediately.	Move the mower to a flat area. Press the OK button on the mower to continue operation. If the issue persists, restart the mower.
Recharge failed, please manually place the robot into the charging station.	The mower failed to automatically recharge even after 5 attempts to return to the charging station.	Manually push the mower into the charging station and check the following: 1. Ensure the charging station is correctly placed and not blocked by obstacles. 2. Check for foreign objects in the charging port that may cause poor contact. If the issue persists, restart the mower.
Charging station unknown, please remote control the robot to return to the charging station.	The mower was not on the charging station when powered on.	Push the mower into the charging station manually or remotely and press the OK button on the mower to continue operation. If the issues persists, please restart the mower.
Positioning failed, please remote control the robot to return to the charging station.	The mower's camera positioning is lost, or combined navigation data has timed out.	Push the mower into the charging station manually or remotely, then resume operation. If the issue persists, please restart the mower.
Failed to escape, please press "the "ok" button in 10 min and wait for the auto mowing.	The mower is trapped and has stopped after four failed attempts to extricate itself.	Assist the mower out of the trapped area and press the OK button on the mower to continue. If the mower frequently gets stuck in the same area, set the area as a No-Go Zone or level gaps and uneven areas.
E-Stop	The STOP button is held down.	Enter the PIN code to unlock and eliminate the message. Check if the STOP button is accidentally pressed; if so, remove the obstruction. If the issue persists, restart the mower.
Cannot spot mowing on charging station	The mowe started a spot mowing operation while on the charging station.	Move the mower to a location outside the charging station and select spot mowing.

6.2 Error Messages

Message	Cause	Solution
Lift sensor error, please restart the mower.	The mower reports a front wheel lift hall fault at the charging station.	Check for foreign objects stuck in the front wheels and remove them. Press the STOP button to clear the error message. If it does not work, restart the mower. If the error persists, contact after-sales service.
Left motor error, please press the 'STOP' button and enter the PIN.	Overvoltage/undervoltage/overcurrent/blockage/loss of connection/hall abnormality in the mower's left rear wheel motor.	Check for foreign objects stuck in the left rear wheel and remove them. Press the STOP button to clear the error message. If it does not work, restart the mower. If the error persists, contact after-sales service.
Right motor error, please press the 'STOP' button and enter the PIN.	Overvoltage/undervoltage/overcurrent/blockage/loss of connection/hall abnormality in the mower's right rear wheel motor.	Check for foreign objects stuck in the right rear wheel and remove them. Press the STOP button to clear the error message. If it does not work, restart the mower. If the error persists, contact after-sales service.
Blade motor error, please press the 'STOP' button and enter the PIN.	Overvoltage/undervoltage/overcurrent/blockage/loss of connection/hall abnormality in the mower's cutting motor.	Power off the mower immediately. Then, check the following information to resolve the issue: 1. Check if the blade disc is stuck. If yes, remove any foreign objects. 2. Check if the grass is too thick; cut it to no more than 10 cm. Restart the mower and resume mowing. If the error persists, contact the after-sales service.
Chassis disconnected, please wait for re-connection.	No communication between the mower's chassis MCU and the task computer.	Restart the mower. If the error persists, please contact the after-sales service to check the software and hardware.
Camera error, please restart the mower.	The mower's camera has malfunctioned and cannot communicate with the mainboard.	Restart the mower. If the error persists, please contact the after-sales service to check the hardware.
EM sensor error, please check the charging station.	The mower cannot detect the auxiliary return coil signal at the bottom of the charging station and the coil is disconnected.	Check the coil connection at the bottom of the charging station and reconnect it if it is disconnected. If the error persists, please contact the after-sales service to check the hardware.
IMU sensor error, please restart the mower.	The mower IMU has no data or incorrect data.	Restart the mower to continue operation. If the error persists, please contact the after-sales service.
RTK module error, please restart the mower.	The mower's RTK module has no data; satellite signal is poor.	Wait for the antenna to acquire the satellite signal. If unsuccessful, restart the mower and RTK antenna. If the error persists, please contact after-sales service to check the hardware.

Note: If an error message occurs while the mower is operating and there is no timely human intervention, the mower will automatically switch off after 10 minutes.

6.3 Symptoms

Symptoms	Cause	Solution
Camera obstacle avoidance failure, please restart the mower.	The mower's obstacle-avoidance function is unavailable	Restart the mower. If the issue occurs three times in a row, contact after-sales support.
	The mower is turning or an obstacle suddenly appears.	This type of obstacle enters the visual blind spot, so in order to improve mowing efficiency and prevent missed cuts, the mower uses collision sensor for obstacle avoidance.
Mower vibrates	Blade disc unbalanced, blades may be damaged.	Inspect the blades and replace if damaged. Remove debris and foreign objects from the blades and blade disc.
Grass is being cut unevenly	The mower works too few hours a day.	Increase the mowing time.
	The blades are dull.	Replace all blades for optimal cutting efficiency.
	The cutting height is too low.	Raise the cutting height and gradually lower it.
	Grass or objects entangled in the blade disc.	Check and remove grass or objects from the blade disc.
Charging time exceeds rated time	Poor connection due to debris on charging station.	Clean the contact paddles on the charging station and the charging contacts on the mower.
	The battery temperature is too high.	Place the charging station in a shaded area or wait until the battery temperature drops.
Mower runs shorter periods between charges	Battery is old or exhausted	Contact your dealer to replace the battery.
	Grass or foreign objects block blade disc, or blades are dull	Remove and clean the blade disc.
Repeated rear wheel slip	Foreign obstacles under the mower.	Remove obstacles from the bottom of the mower.
	The lawn is too wet.	Wait for the lawn to dry before mowing.
The mower parked on the lawn and switched off	Error messages occurred while mower was in operation with no human intervention.	Restart the mower, check the error log, troubleshoot the problem, and press the HOME button to return it to the charging station.

Section 7. STORAGE AND DISPOSAL

7.1 Storage

At the end of the mowing season, perform a series of maintenance steps to ensure the mower operates properly when reused :

1. Fully charge the battery before winter storage, and ensure it is recharged at least once every 6 months.
2. Disconnect the power supply plug from the electrical outlet, and disconnect any cord connections on the charging station.
3. Clean the mower and charging station, inspect for worn or damaged parts (e.g. blades), and evaluate them for replacement.
4. Store the mower, charging station, and RTK antenna in a cool, dry place with an ambient temperature of 10- 20 °C, keeping them away from children, animals, and foreign objects.

To keep the mower in optimal condition, it is recommended to have it serviced routinely by an authorized dealer. The service typically includes :

1. Thorough cleaning of the mower and all moving parts.
2. Checking the functioning of the mower.
3. Checking and replacing worn or damaged parts as needed (e.g., blades).
4. Checking the battery capacity and replacing it if necessary.
5. If necessary, the dealer will update the software for the mower.

7.2 Disposal

At the end of its useful life, this product is classified as WEEE (Waste Electrical and Electronic Equipment). It must not be disposed of as ordinary household waste, mixed municipal waste (unsorted) or municipal waste (sorted).

When disposal is required, ensure that the product is recycled according to local legislation. In particular, electrical and electronic components must be separated and sorted at an authorized WEEE Waste Disposal Centre or returned to the dealer in their original condition when purchasing a new product. Improper disposal of WEEE may be subject to penalties under applicable local laws.

Note:

- **Packaging** - Users must dispose of product packaging in a sustainable manner in dedicated waste disposal containers or authorized waste disposal centers.
- **Batteries** - Old or exhausted batteries contain substances harmful to the environment and human health and therefore must not be disposed of as ordinary household waste. The user must dispose of batteries in a sustainable manner in a special waste disposal container or at an authorized waste disposal center.



Section 8. WARRANTY

Under this Limited Warranty, this product is covered for a period of 3 years from the date of purchase against defects in materials or workmanship. The Limited Warranty includes repair coverage for the following key components:

- Host and Core
- RTK Antenna Installation Kit
- Charging Station
- Power Supply

Consumable Parts

- Consumable materials (including but not limited to tires and cutting discs) are covered under the Limited Warranty for 6 months against defects in materials or workmanship.
- The battery pack is covered under the Limited Warranty for 2 years against defects in materials or workmanship.
- Blades and wheels are classified as consumable parts and are not covered under the Limited Warranty.

This manufacturer's warranty does not affect any warranty entitlements you may have against the dealer or retailer.

End users or unauthorized third parties must not attempt to repair the product.

Examples of faults not covered by this warranty:

- Damage caused by water seepage from using a high-pressure washer.
- Damage caused by not closing the control panel cover before cleaning robot and directly rinsing the screen.
- Damage caused by submersion in water, such as pooled water from heavy rain.
- Damage caused by lightning.
- Damage caused by improper battery storage or battery handling.
- Damage caused by using a battery that is not an original battery.
- Damage caused by using non-original spare parts or accessories, such as blades or installation materials.
- Damage caused by unauthorized modification or tampering with the product or its power supply.

If an error occurs with your product, please contact iGarden Customer Service for further instructions. Have your receipt and the product's serial number ready when contacting customer service.

Section 9. DECLARATION OF CONFORMITY

FAIRLAND GROUP LIMITED, 19H MAXGRAND PLAZA, NO.3 TAI YAU STREET, SAN PO KONG, KOWLOON, HONGKONG, declares that the robotic lawn mowers comply with the requirements of the COUNCIL ' S DIRECTIVE :

Product Name: Lawn Mover Z series

Product Model Numbers: RXX,ZX,TSFXX,ZXX,AIFXX

(XX, X are variables, X can be 0~9, XX can be 01-99)

Model Similarity: All models are identical with each other except model designation and appearance.

The object of the declaration described is ensure that the models in conformity with the relevant Union harmonisation legislation:

Radio(RED)directive 2014/53/EU

Electromagnetic compatibility directive 2014/30/EU

LVD Directive 2014/35/EU

Directive 2006/42/EC on mowerry

RoHS directive 2011/65/EU and amending directive ((EU)2015/863)

Complies with the following harmonised standards:

EN 60335-1:2012/AC:2014+A11:2014+A13:2017+A1:2019+A14:2019+A2:2019+A15:2021

EN 50636-2-107:2015/A1:2018+A2:2020+A3:2021 EN IEC 62311:2020

EN 301 489-1 V2.2.3 EN 301 489-3 V2.3.2

EN 301 489-17 V3.3.1 EN 301 489-19 V2.2.1

EN 301 489-52 V1.3.1 EN 55032:2015/A1:2020

EN 55035:2017/A11:2020 EN IEC 61000-3-2:2019/A1:2021

EN 61000-3-3:2013/A2:2021 EN IEC 63000:2018

EN 300 328 V2.2.2

EN 301 893 V2.1.1

EN 300 440 V2.2.1

EN 301 511 V12.5.1

EN 301 908-1 V15.2.1


EN 301 908-2 V13.1.1

EN 301 908-13 V13.3.1

EN 303 413 V1.2.1

EN 300 220-1 V3.1.1

EN 300 220-2 V3.2.1

(Authorized representative for FAIRLAND and responsible for technical documentation.) 

Position: head of certification

Place and Date: Guangzhou 2025.08.27

Name and surname: Eric zhang

Eric zhang

INVERX®



Version: Z-Manual-V1 (EN)

THANK YOU FOR PURCHASING INVERX LAWN MOWER .