

Boundary Wire-Free Robotic Lawn Mower

# User Manual

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Please go through the User Manual in detail before use to understand all instructions and safety guidelines.

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# Welcome

Welcome to the RoboUP family!

We're happy to have you, and we hope your new RoboUP mower helps you create the most amazing living spaces.

Remember, it's not just a mower, it's a trusted family member that's ready to keep your lawn looking its best, whilst giving you more time in your hands.

With our advanced C-PASS system, you can forget about boundary wires. Your RoboUP mower will map out your lawn and start mowing on its own, even on the most challenging terrains.

Safety is at the heart of what we do. Thanks to AI vision technology, your mower's smart eyes can detect and avoid obstacles at all times, ensuring your family is safe and your garden is immaculate at all times.

It's all in your hands! With our feature-rich App, you can control your RoboUP mower anytime and anywhere. Just follow the User Manual to get started, and you'll soon be enjoying more free time and a perfectly manicured lawn.

Thank you for choosing RoboUP.

Your RoboUP® Team



**IMPORTANT!**  
Please go through the User Manual in detail before use to understand all instructions and safety guidelines.

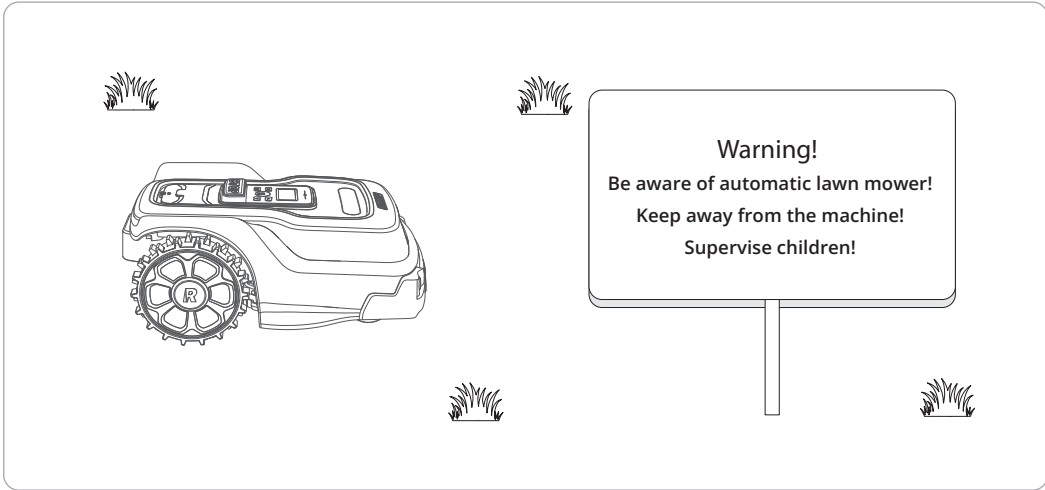
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# Safety

## 1.1 General Safety Instructions

**⚠ Warning: Read the warnings below before using the mower!**

- Read this User Manual carefully and make sure you understand the instructions before use. Keep the manual for future reference.
- Children should be supervised to ensure that they do not play with the mower.
- Never allow children, persons with physical, sensory or mental limitations or a lack of experience and/or knowledge and/or people unfamiliar with these instructions to use the mower. Local regulations may restrict the age of the operator.
- The mower must only be used with original equipment/accessories.
- Warning signs must be put around the working area of the product if it operates in public areas. The signs shall have the following text: **"Warning! Be aware of automatic lawn mower! Keep away from the machine! Supervise children!"**



- Do not touch moving hazardous parts, such as the blade disc, before it has come to a complete stop.
- If an injury or accident occurs, make sure to get medical aid.
- If there is a risk of thunderstorm, it is recommended that the power supply and all the wires to the Charging Station are disconnected to avoid the risk of damaging electrical components. Reconnect power supply and all wires again when the risk of thunderstorm is gone. It is important that all wires are connected correctly.
- The operator is responsible for accidents or dangers that occur to other persons or property.
- The mower must only be operated, maintained and repaired by persons that are fully familiar with its special characteristics and safety regulations.
- It is not permitted to modify the original design of the mower. If there are any modifications made at your own risk, manufacturer's warranty will expire immediately in due course.
- Comply with national regulations about electrical safety.
- The operating temperature and the charging temperature range is 0°C to 45°C, and the storage temperature range is -20°C to 50°C.
- Please do not run when operating the mower manually using the RoboUP App. Always walk, ensure stability on slopes and maintain balance at all times.

## 1.2 Safety Instructions for Installation

- Do not install the Charging Station, including any accessory, at the location that is closer than 60cm, 24in, to any combustible material in case of malfunction, over-heating of the Charging Station or if the power supply could create a potential risk of fire.
- Never connect the power supply to a mains AC outlet if the plug or cord is damaged. Worn or damaged cord increases the risk of electric shock.
- Do not mount the power supply at a location with a risk of flooding or submersion into water. Do not put the power supply on the ground.
- Do not encapsulate the power supply. Condensed water can harm the power supply and increase the risk of electrical shock.
- Applicable to USA/Canada and when power supply is installed outdoors with risks of electric shock. Install only to a covered Class A GFCI receptacle (RCD) that has an enclosure that is weatherproof with the attachment plug cap inserted or removed.
- Do not install power cords or extension cords in the mower's cutting area install the power cord according to these instructions:
  - Do not install the Charging Station in places where people might trip over.
  - Do not connect damaged cables or plugs, and do not touch damaged cables. If a cable is damaged during operation, unplug it from the power outlet. Cable wear or damage increases the risk of electric shock. Damaged cables must be replaced by qualified personnel.

## 1.3 Safety Instructions for Operation

- Keep your hands and feet away from the rotating disc blades. Never put your hands or feet near or below the mower when it is set to ON.
- Stop or turn off the mower when persons, especially children or animals are in the work area. It is highly recommended to run the mower only when the work area is clear. Though the mower has AI camera to recognize wildlife and other living animals at night, it is still recommended to set a daytime mowing schedule to protect wildlife.
- Check that there are no stones, branches, tools, toys, water pipes, small grill or other objects on the lawn that can damage the mower's blades or get damaged by mower. Objects on the lawn can also lead to the mower getting stuck. Assistance may be required to remove the object before the mower can continue mowing.
- Do not lift the mower or carry it around when powered ON.
- Do not put (metal) objects on top of the mower or Charging Station. The GPS signal could be weakened or blocked.
- Do not use the mower if the STOP button fails to work.
- Always set the mower to OFF when it is not in operation for a longer period.
- Do not use the mower at the same time as a water sprinkler. Sprinkled water will activate the mower's rain sensor and disrupt its operation. You can use the App to disable the rain sensor so that watering the lawn and cutting grass can be done simultaneously.
- Do not allow the mower to use a defective cutting blade, nor should it be used with defective screws, or cables.

## 1.4 Safety Instructions for Maintenance

- Always turn off the mower before you clear a blockage, do maintenance, or examine the mower, and if the mower starts to vibrate abnormally, examine the mower for damage before you start again. Do not use the mower in case it is defective.
- Do not use a high-pressure washer to clean the mower. Do not use solvents for cleaning. After cleaning, make sure to place the mower on the ground in the correct orientation and do not invert it.
- Disconnect the mains power plug of the Charging Station before cleaning or maintenance of the Charging Station.
- Regularly inspect the blades, blade screws, and cutting components for wear or damage. Replace worn or damaged blades and screws as a set to maintain balance.

## 1.5 Battery Safety

- Lithium-ion batteries can explode or cause fire if disassembled, short-circuited, exposed to water, fire, or high temperatures. Handle carefully, do not dismantle, open the battery or use any type of electrical/mechanical abuse. Avoid storage in direct sunlight.
- Only use the original detachable power supply provided with the mower to recharge the battery.
- Incorrect usage may result in electric shock, overheating, or leakage of corrosive liquid from the battery. If electrolyte leakage occurs, rinse with water/neutralizing agent. If corrosive liquid gets into the eyes, seek medical attention immediately.
- Fully charge the battery before storage to avoid over-discharge and damage to the electrical components. Charge the mower every 120 days for long-term use and storage. Battery damage caused by over-discharge will not be covered by the Limited Warranty.
- The battery pack must be replaced by a skilled person only.
- DO NOT store the battery under extreme temperature conditions. i.e., above 50°C (122°F) or below -20°C (-4°F).

## 1.6 Transportation Safety

- The mower must be switched OFF before lifting, moving, or transporting.
- DO NOT lift the mower when parked in the Charging Station. This can damage the Charging Station and/or the mower. Push STOP and pull the mower out of the Charging Station before lifting.
- Carry the mower using the handle and with the blade disc pointing away from your body.
- To protect the mower, use the original carton packaging for long-distance transportation. Handle with care and avoid violent force, such as throwing and heavy pressure.

## 1.7 Symbols on the Product



Warning: Read the User Manual before operating the mower.



Warning: Disable the mower before working or lifting the mower.



Warning: Keep a safe distance from the mower when operating. Keep your hands and feet away from the rotating blades.

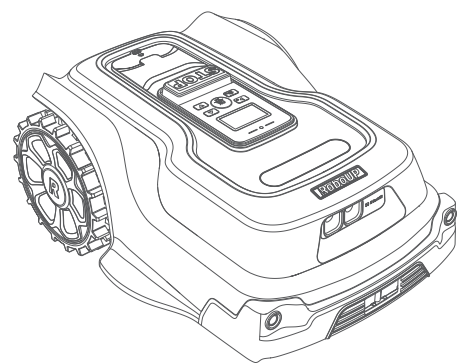


Warning: Do not ride on the mower. Do not put your hands or feet close to the mower.

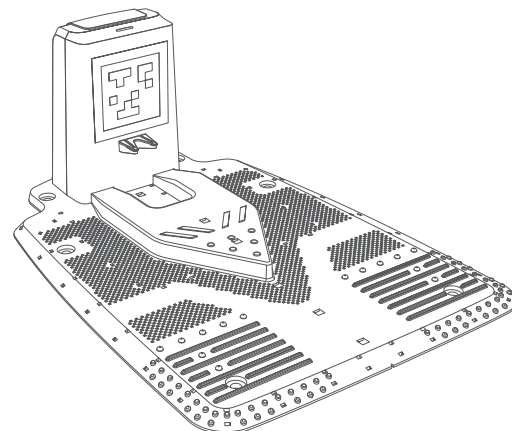
## What's in the Box?

- A. RoboUP Mower
- B. Charging Station
- C. Power Supply and Extension Cable
- D. 9\* Spare Cutting Blades & Screws
- E. User Manual & Quick Start Guide

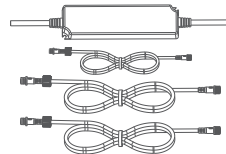
- F. Allen Key
- G. 6\* Fixing Screws
- H. 2\* Spare QR code
- I. RTK Base Station
- J. Trident Ground Stake
- K. RTK Installation Poles



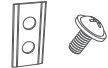
A:RoboUP® Mower



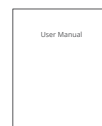
B:Charging Station



C:Power Supply & Extension Cable



D:9\* Spare Cutting Blades & Screws



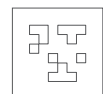
E:User Manual



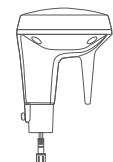
F:Allen Key



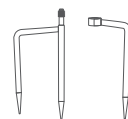
G:6\*Fixing Screws



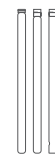
H:2\*Spare QR code



I:RTK Base Station

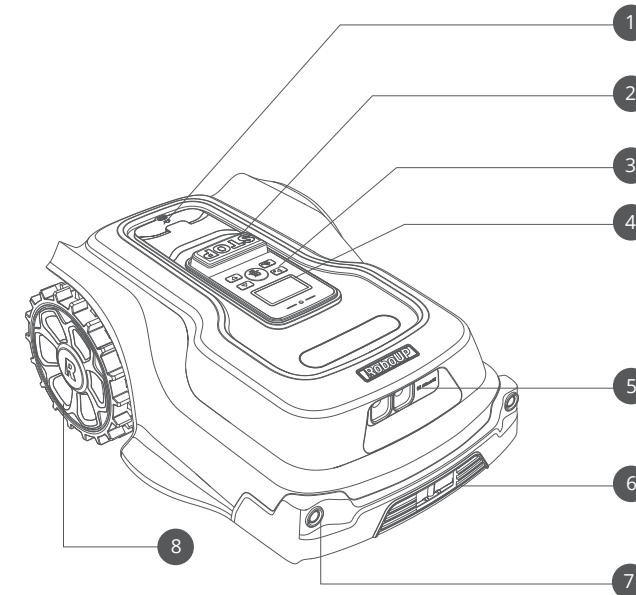


J:Trident Ground Stake

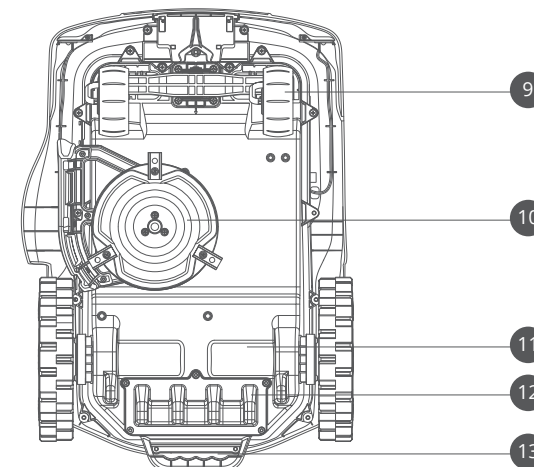


K:RTK installation Poles

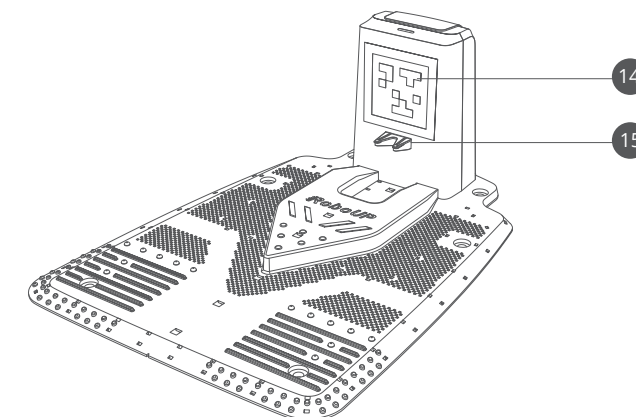
**Note:**  
If there are missing or defective parts, contact RoboUP® After-Sales Service Team: [service@iroboup.com](mailto:service@iroboup.com). It is recommended to retain the original carton for future transportation and shipping.



- 1. Rain Sensor
- 2. STOP Button
- 3. Control Panel
- 4. LC Display
- 5. AI and VSLAM Cameras
- 6. Mower Battery Charging Contacts
- 7. LED Headlights
- 8. Rear wheels



- 9. Front Wheels
- 10. Off-set Blade Disc (with 3 blades)
- 11. Brushless DC Motor (1 per wheel)
- 12. Battery Compartment Cover
- 13. Lifting Handle



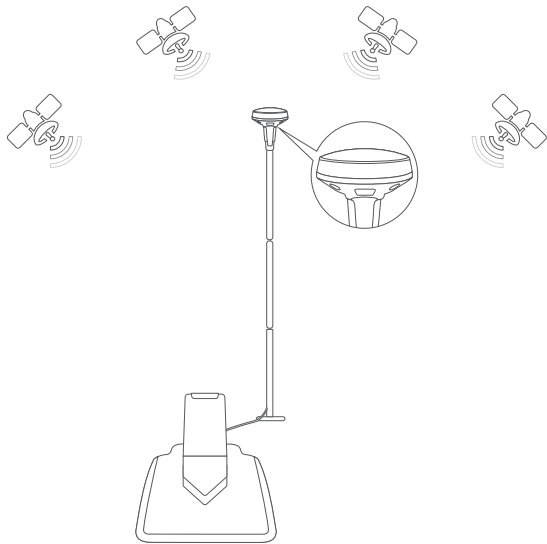
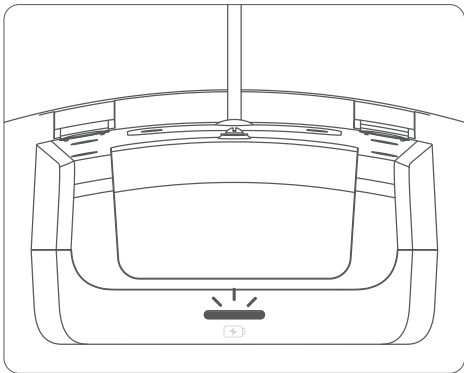
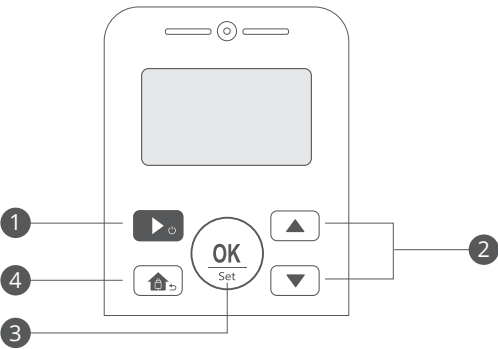
- 14. QR Code
- 15. Charging Station Contacts

Control Panel (Keys & LC Display)

- 1.Long press the button to turn the mower ON/OFF. The button also triggers quick start mowing.
- 2. Use the and arrow buttons to navigate in the menu or to enter PIN code digits.
- 3. Press the button for quick access to the settings menu or to confirm the chosen settings in the menu.
- 4. Use the button to return the mower back to the Charging Station. It can be triggered only when you are in the "Welcome to use" page (top line).

LED Indicator of the Charging Station	
Breathing Green	The mower is charging
Solid Green	The mower is fully charged / There is no mower on the Charging Station
No indication	The Charging Station is not power on

LED Indicator of the Charging Station	
Solid Blue	Strong RTK signal
Flashing Blue	Poor RTK signal
Slow Flashing Red	The RTK Base Station is searching for signal
Solid Red	The RTK Base Station is unpaired
Fast Flashing Red	Malfunction
Flashing Green and Solid Green	The RTK Base Station is upgrading
Solid Purple	The RTK Base Station upgrade failed
Fast Flashing Purple	Strong interference at current position



4 Installation Guide

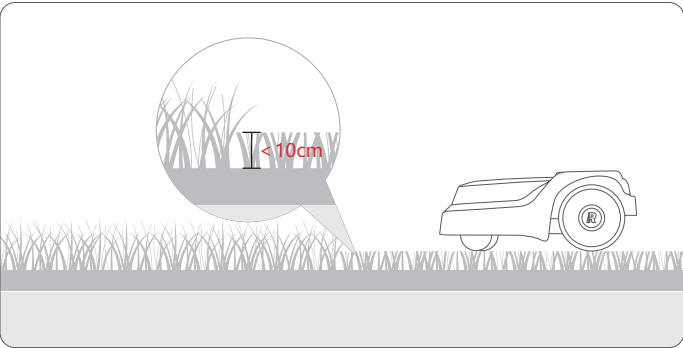
4.1 App Installation

- 1.Scan the QR code to download the RoboUP App. You can also download the app at:  
<https://play.google.com/store/apps/details?id=com.tb.mower>
- 2.Launch the RoboUP App after installation, register your account and log in.
- 3.Connect your smart phone with your home Wi-Fi network, which you want the mower to connect with.



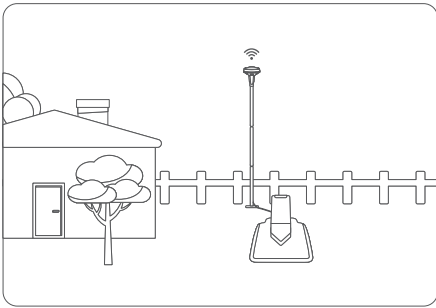
4.2 Cut Your Lawn to Required Maximum Height

This mower is suitable for cutting grass less than 10cm. So before using the mower for the first time, please cut your lawn under height of 10cm so that the mower can easily mow your lawn in high frequency to make it look fresh.

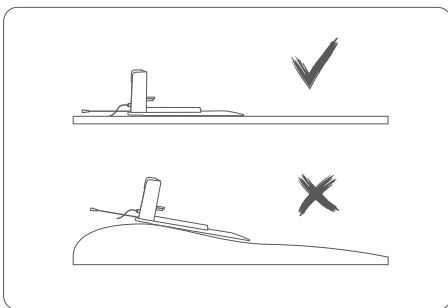


4.3 Find a Good Spot for the Charging Station

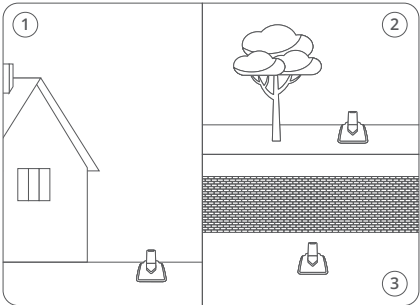
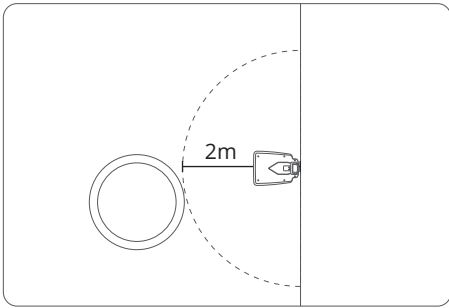
You can find a place that meets the following requirements:



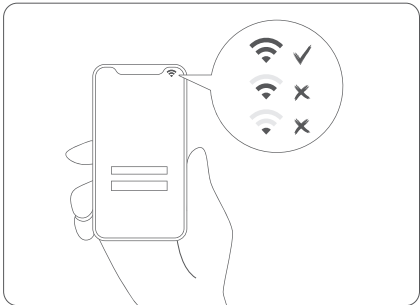
1.Open area with strong GPS signal, far away from your house, trees, etc.



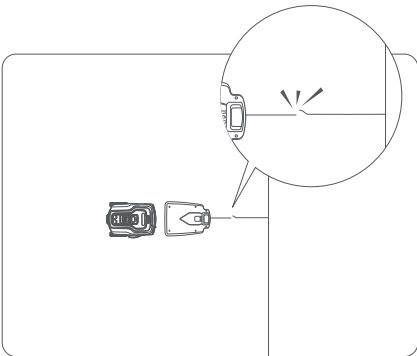
2.Flat ground and no slopes or obstacles within 2m.



3.Maintain a 3-meter distance from roofs, trees, and walls.



4.Strong Wi-Fi signal is needed for Wi-Fi connection and firmware upgrades.



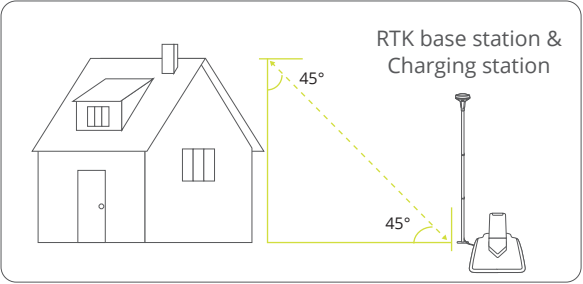
5.Avoid placing the charging station in the middle of the lawn to prevent risks of cutting through buried wires or cables.



4.4 Find an Open Area for the RTK Base Station

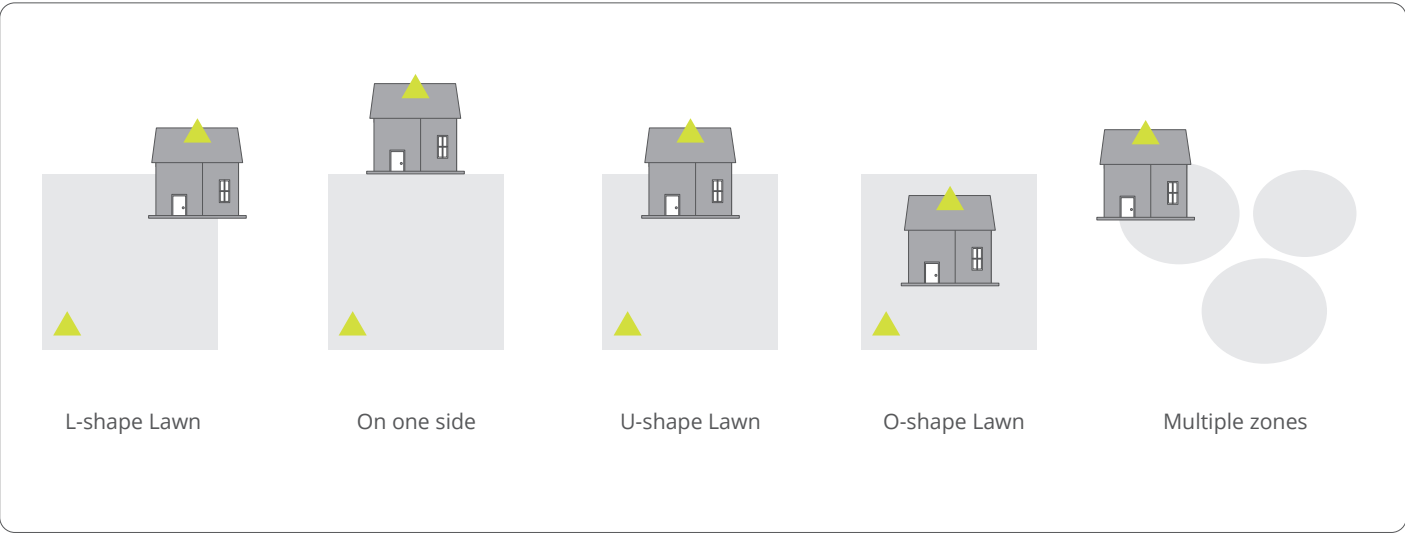
RoboUP utilizes a comprehensive navigation system with multiple sensors including RTK, VSLAM, MU, and odometry for navigation. Real Time Kinematic (RTK) is a satellite navigation system that significantly enhances equipment positioning accuracy, offering access to all global navigation satellite system. It can achieve 1cm positioning accuracy.

1. For best positioning accuracy and mowing performance, it is strongly recommended to keep the RTK Base Station at a distance that equals or exceeds the height of nearby buildings or tall trees. Trees or buildings close to the RTK Base Station and the mower can weaken or block the RTK signal.

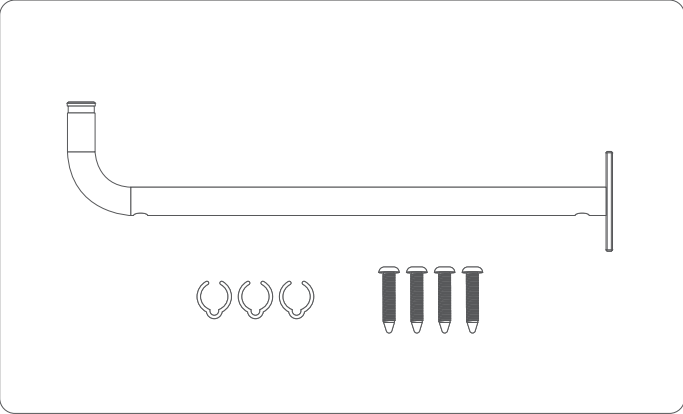


Height of the Building or Obstacle	Distance Between the RTK Base Station and the Building/Obstacle
1m	≥ 1m
2m	≥ 2m
3m	≥ 3m
4m	≥ 4m

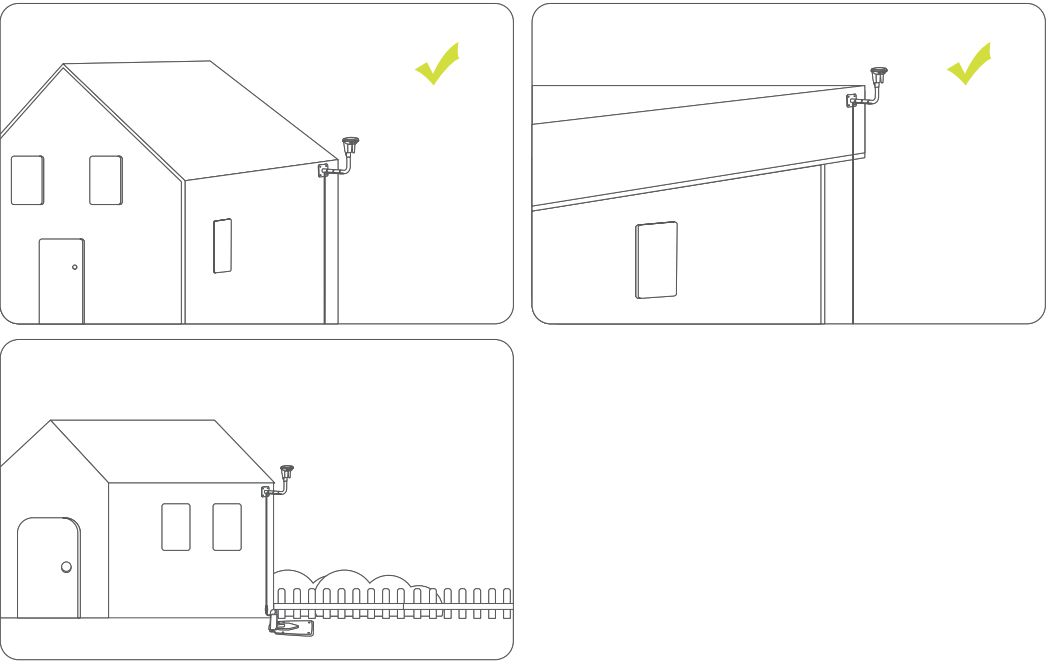
2. When the RTK Base Station indicator is flashing blue or slow flashing red, it means the RTK signal at this location is weak or difficult to search. You can relocate the entire Charging Station or use the extension cable to only move the RTK Base Station separately to another open or higher spot. You can find the recommended location (triangle mark) for the RTK Base Station.



3. If you can't find a suitable location on the ground, we also provide compatible wall mounting components to mount the RTK Base Station on a roof or wall for a better signal. You can buy the wall mounting components and RTK Base Station power supply adapter from our retail partners and online.



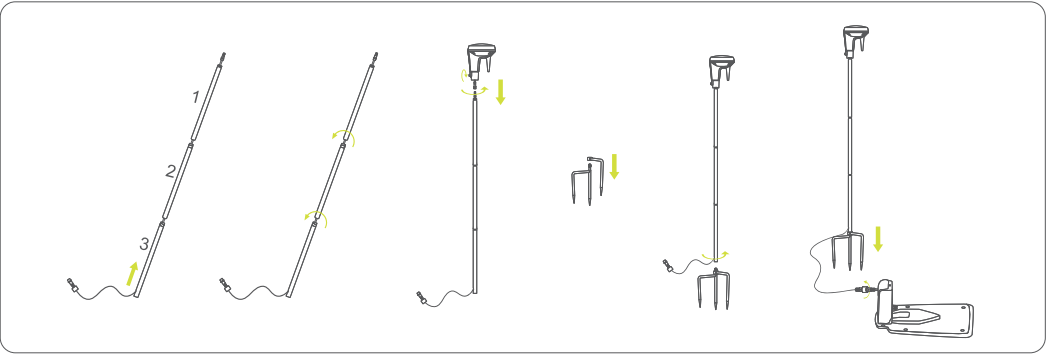
When installing the RTK Base Station on the roof or wall of your house, make sure it has a clear view of the sky above it. Install the RTK Base Station as high above ground as possible.



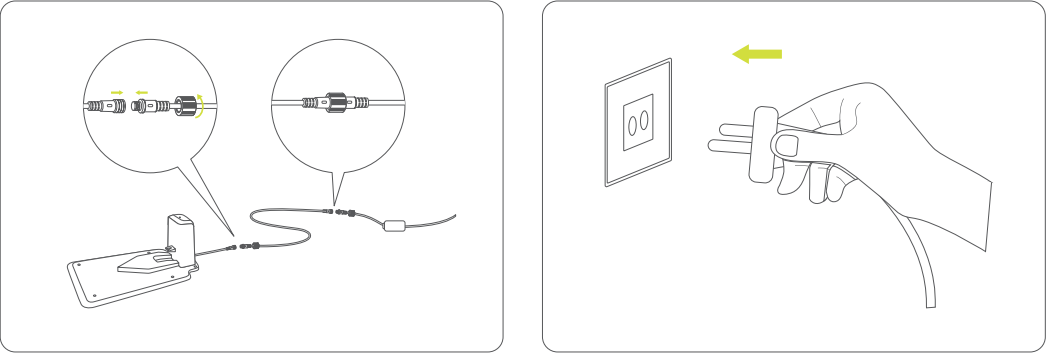
4. Do not place metal objects such as mobile phones or iron plates on the RTK Base Station, as they will block the RTK signal.

4.5 Install the Charging Station and RTK Base Station

- 1. Place the Charging Station and the RTK Base Station on the preferred spot.
- 2. Install the RTK installation components and use the RTK connection cable to connect the RTK Base Station to the Charging Station. Use an extension cable as needed.

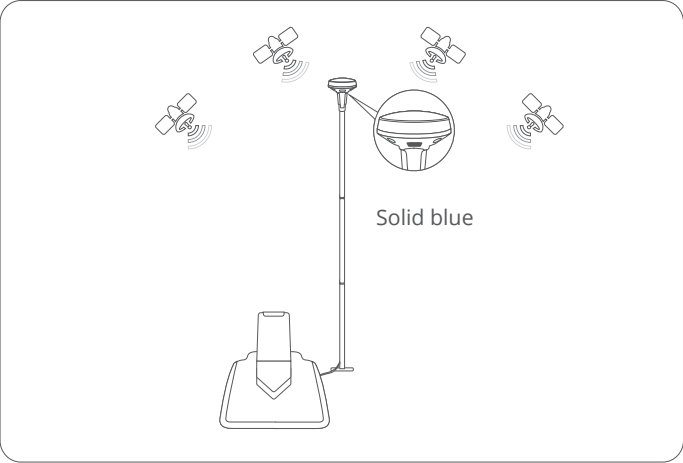


3. Connect the Charging Station to the power supply DC outlet connector. Use an extension cable as needed. Plug power supply into a mains AC power socket.

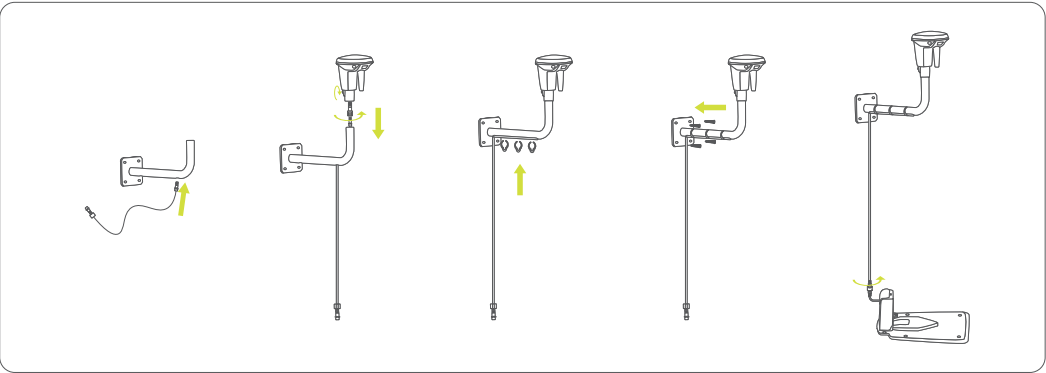


**Warning:** When connecting the power supply to mains power socket, use a residual-current device (RCD) with a tripping current of maximum 30mA.

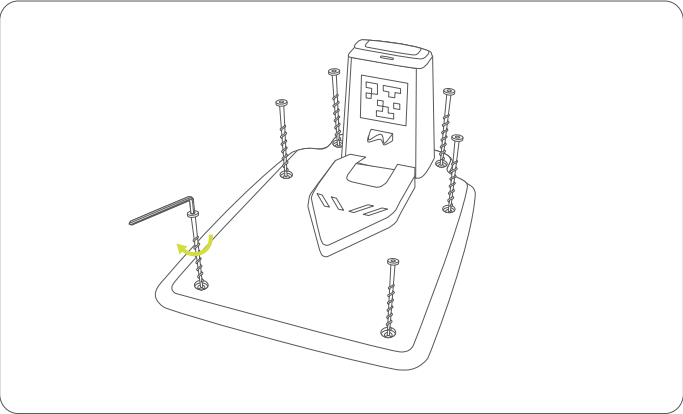
4. When the Charging Station indicator lights up, the RTK Base Station indicator turns solid blue, it means that the Charging Station and the RTK Base Station are powered ON, and the RTK signal is strong. If the signal is poor, relocate the RTK Base Station to an open space.



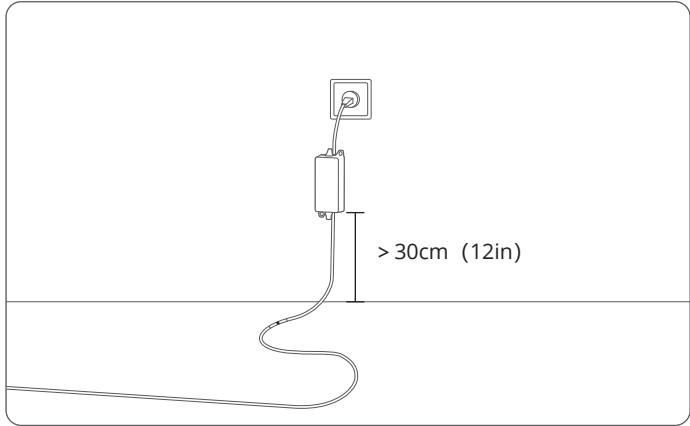
5. If you use the wall mounting component to install the RTK Base Station:
- 1) Remove the fixing screws of the RTK Base Station module and detach it from the RTK tripod.
  - 2) Use a 10m extension cable to connect the RTK Base Station module to the power connector in the Charging Station.If it is inconvenient to connect the RTK base station to the charging station, you can also buy an RTK base station power supply adapter from our retail partners and online.
  - 3) Install the RTK wall mounting components. Secure the wall mounting rod onto the corresponding wall, and lock the cables using fasteners.



6. Use the supplied long anchor screws and Allen key to secure the Charging Station to the ground.

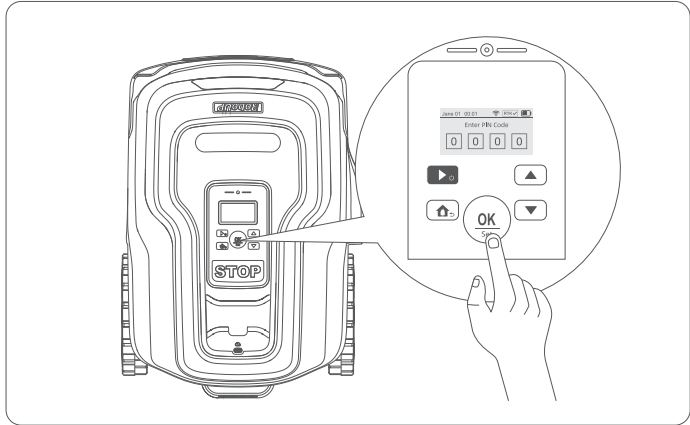


- Warning:**
- Do not put power supply cable and extension cable into the work area, After confirming the mower is normally charged, secure the extension cable on the ground or hedge with the attached pegs or nylon zip ties to prevent the mower cutting the cable. Keep the power adapter at least 30cm (12 inch) above floor level to avoid possible damages caused by rain or water flooding.
  - Do not connect a damaged cable or plug, or touch a damaged cable, before it is disconnected from the power outlet. Disconnect the plug from the power outlet if the cable becomes damaged while in operation. A worn or damaged cable increases the risk of electrical shock. A damaged cable must be replaced by authorized service personnel.
  - DO NOT charge if mower, power supply, Charging Station, or power socket is wet or damaged.
  - DO NOT charge mower when ambient temperature is above +45°C (122°F), or below 0°C (32°F).
  - When there is an abnormal smell, sound, or light display, stop charging immediately and contact RoboUP® After-Sales Service Team.
  - Keep away from inflammable and explosive materials when charging.



#### 4.6 Charge and Activate the Mower

1. A new mower may have a low battery after long storage. Push the mower into the Charging Station. Make sure the mower's charging contacts and the contact blades on the Charging Station are in good contact.
2. Press and hold the button for 3 seconds to start the mower. Press the button 4 times to input the default PIN "0000" to unlock mower.

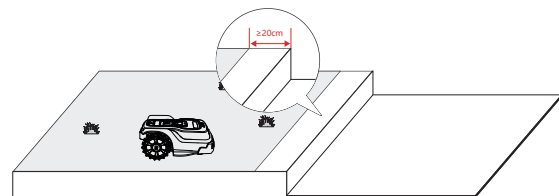
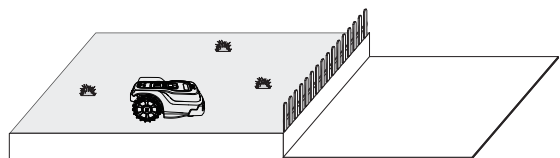


3. Wait for approx. 10 minutes to allow the mower to search/find as many satellites as possible for the best RTK signal. The mower will prompt RTK✓ when completing search.
4. Enable Bluetooth on your smart phone, start RoboUP App and follow instructions to pair the mower.

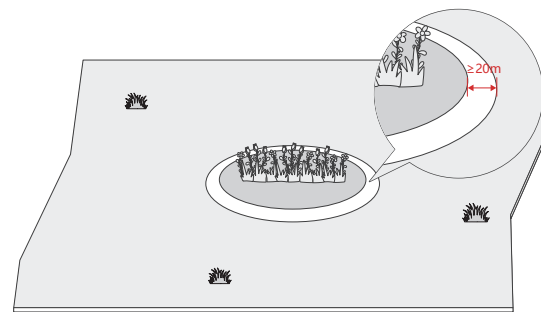
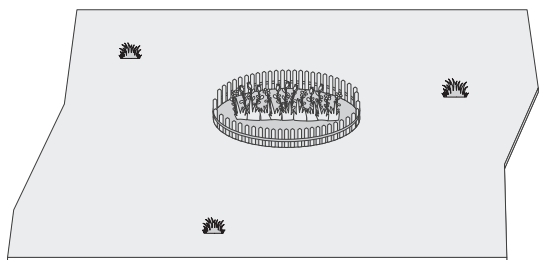
# Set Up the Work Area

## 5.1 Preparation

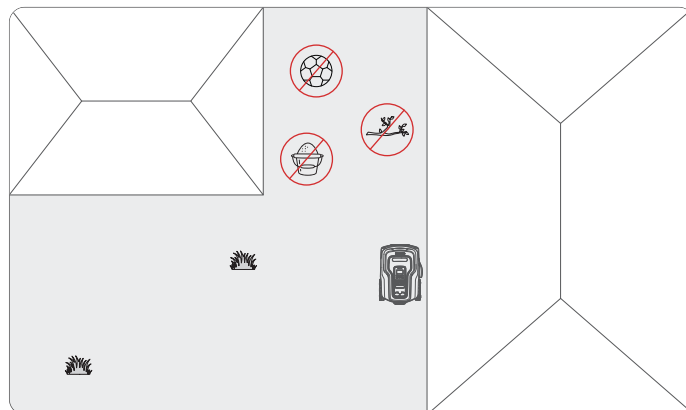
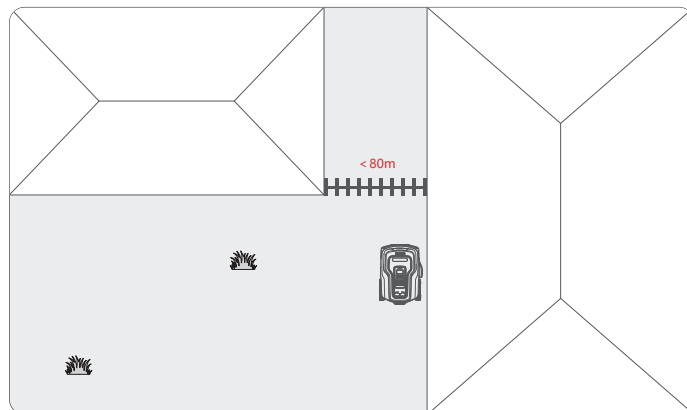
1. Make sure children and pets are off the lawn and some temporary obstacles like garden hose, debris, toys, stones, clothes are removed to avoid any damage.
2. Fill hollows dug by wild animals and cover the drain outlet with drain cover in your lawn to make sure the mower won't get trapped.
3. Put a fence or a protective wall along the ditches or cliffs (depth exceeds 5cm) and the boundary along the edge is not visible clearly to prevent the mower from getting stuck or falling. You can also cut the long grass covered on the edge to create a visible and horizontal boundary with least width of 20cm so that the mower can recognize it and won't pass by. Putting a fence or a protective wall around the edge of cliffs is necessary when it is impossible to set a visible boundary in such a situation.



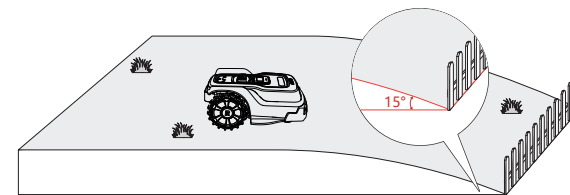
4. For short flower beds that look similar to grass, it is recommended to put a physical boundary around (e.g. wooden fence) for protection from being cut by accident. You can also dig out the grass covering the edge to create a clearly visible boundary (min. width of 20cm) so that the mower can detect the edge.



5. The mower can handle narrow passages with a minimum width of 80cm, so please lay a physical boundary to exclude those small narrow passage within 80cm. In addition, please remove the obstacles in the narrow passage to ensure the mower can pass smoothly.



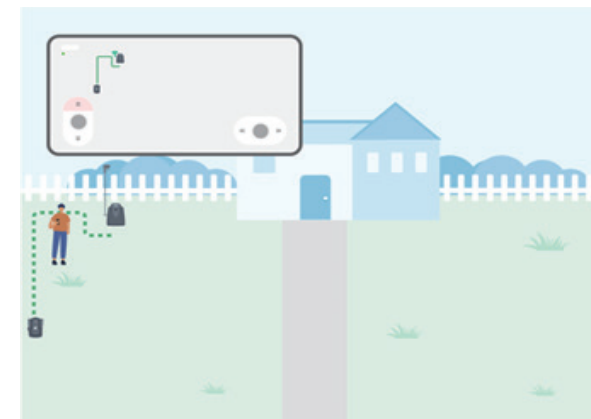
6. For slopes larger than 15° and adjacent to open area like a public road, put a fence or a protective wall along the outer edge of the slope to ensure the mower won't slip out of the lawn.



## 5.2 Map Out the Boundary

Please create a map first to define the working area for the mower.

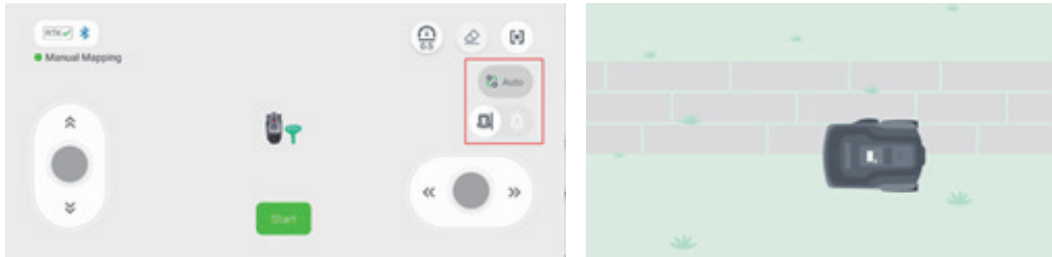
1. Please follow the installation guide to create zone 1 or you can tap "Boundary" in the App to create a map.
2. Please follow the Manual Mapping tips to create a virtual boundary.
3. The mower will perform a status check. The first map needs to start from the Charging Station.
4. If the mower is not at the lawn's boundary, remotely control the mower to the boundary. If the mower is already at the lawn's boundary, tap the start button to proceed.



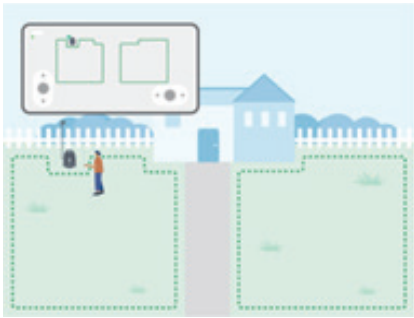
5. Depending on the scenario, you can select Auto-Mapping or Manual Mapping. If the mower can detect a physical boundary, you can tap the 'Auto' button to switch to Auto-Mapping. If the mower cannot detect a physical boundary during Auto-Mapping, you need to switch to Manual Mapping and control it to move along the boundary, to create a virtual map.

- 1) Auto-Mapping is ideal for lawns with clear physical boundaries that are visible, such as walls, bricks, stones, fences, hedges etc.
- 2) If the lawn's boundary consists of a sparse or thin fence, like barbed wire, the mower may not detect it due to the material being too thin.
- 3) If your lawn's boundary consists of an incomplete or patchy area with scattered grass, the mower may detect the grass and have difficulty distinguishing the boundary of the lawn. It is recommended to use Manual Mapping in such cases.
- 4) If your lawn's boundary consists of a bush or fence, the mower may attempt to pass under the bush. It is recommended to use Manual Mapping in such cases.
6. During the mapping process, please keep your phone and mower within 5m to ensure Bluetooth connection.
7. If your lawn's grass is level with a pathway or pavement, the mower may need to slightly cross over the edge in order to fully trim the grass right up to the non-grass area. In such cases, you can choose to control the mower to ride on the boundary to create a map. Once mapped, the mower will follow this boundary during edge mowing to ensure a clean, even cut along the edge.





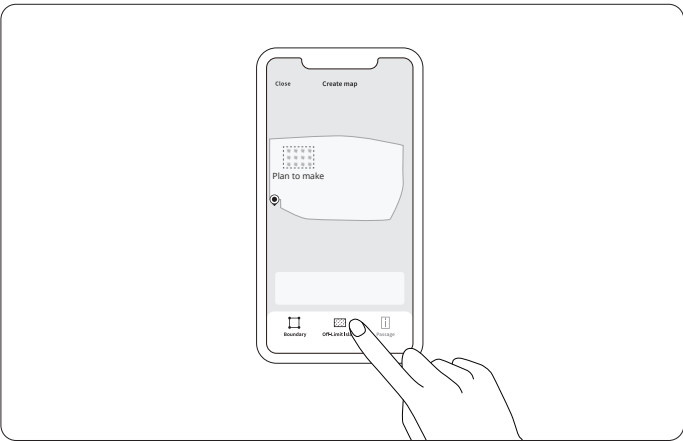
8. When the start and end points are close, the map creation will be complete. Please save the map to finish the process.
9. If your lawn has multiple zones, please repeat the steps above to create multiple virtual boundaries, and eventually create passages between each zone to allow the mower to travel to each zone to mow the grass smoothly.



### 5.3 Create No-Go Zones

Though the mower has an AI camera to detect and bypass obstacles with height over 10cm and width over 5cm, it is recommended to set up a permanent No-Go Zone for areas you want it to stay out (flower beds, small trees, lawn decorations, pond, sprinkler heads, emerged roots, etc.). When there is a trampoline, grill or other objects the mower might run into, set up a No-Go Zone to avoid accidents.

1. Select "No-Go Zone" on the App and follow instructions to set the No-Go Zones.

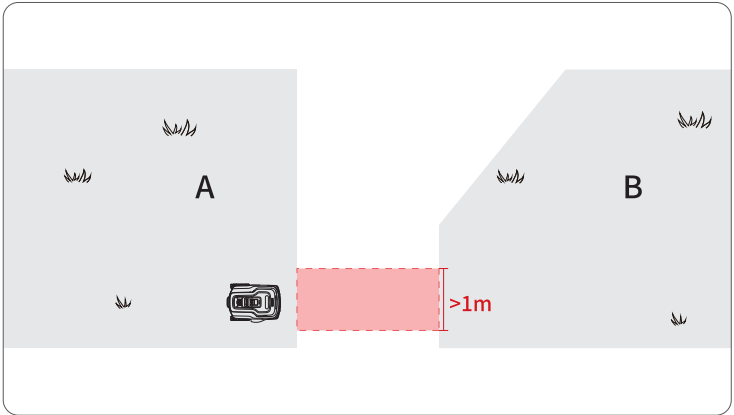
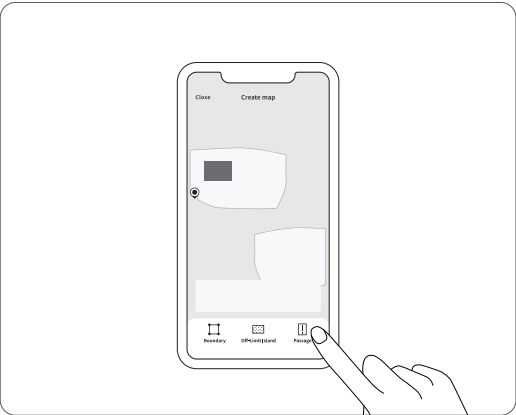


- Control the mower to go along the edges of the area which you don't want the mower to go.
2. The mower can also automatically record temporary No-Go Zones for big obstacles in your lawn and slow down before reaching them again during the same mowing task.
  3. If you want to delete a No-Go Zone, just delete it on the App.

### 5.4 Create a Passage

You can create a passage to link different areas after mapping out boundaries of more than 2 areas.

1. Find a proper passage to link two mapped lawn areas. Make sure the passage is as short as possible and ideally straight, flat and with a width of over 1m. Keep the passage clean from obstacles.
2. Select "Passage" on the App and follow instructions to control the mower to walk through the selected passage to create a virtual passage.



### 5.5 Create a To-Go Zone


When the mower encounters an area that is not grass, it will go around it, for example, stone roads with grass in between. If you need to exclude these certain areas from being avoided by the mower, you can create a To-Go Zone to be ignored by the AI camera. The mower will drive directly through this area and mow the grass. Please note that the height difference between flat obstacles and the lawn in the To-Go Zone cannot exceed 5cm, and there should be no obstacles such as trees or hanging obstacles such as trampolines, otherwise the mower may not be able to pass or may collide.

1. Select "To-Go Zone" on the App and follow instructions to set a To-Go Zone.
2. Control the mower to go along the edges of the area which you want the mower to ignore and pass.



## 6.1 Start Mowing


There are three methods to start mowing.

- The mower will automatically start mowing in preset mowing schedule after the above installation steps are done.
- Tap the "Mow" button in the App to manually start mowing.
- Press the  button on the mower control panel and confirm with "OK" to start mowing.

## 6.2 Pause Mowing


- Simply press the "STOP" button on the mower.
- Tap the "Pause" button on the App.
- The mower will pause and show error code when it encounters issues that need to be fixed manually.

## 6.3 Resume Mowing

- Continue mowing by tapping the "Mow" button on the App.
- Press  button and then "OK" button on the control panel to continue mowing.

Note: When the mower is in an emergency stop state, you need to enter the PIN code to resume mowing.

## 6.4 Return to the Charging Station

- The mower will return to the Charging Station automatically when the battery is low, or when it has finished mowing.
- You can also send the mower back to the Charging Station manually:
  - Tap the "Charge" button on the App.
  - Press  button and then "OK" button on the control panel when the mower is in standby mode.
- When the end of the schedule is reached, the mower will return to the Charging Station automatically.
- If the mower detects rain, or if the mower has been scheduled with a no-mow time, it will automatically return to the Charging Station, ensuring that mowing pauses during these periods.

## 6.5 Turn Off the Mower

Press and hold the  button on the control panel and enter the PIN code to turn off the mower.

Note:

- The mower cannot be turned off when it is in the Charging Station for charging.
- The anti-theft feature will not work when the mower is turned off.
- It is recommended to turn off the mower only for transportation or long-term storage.

## 6.6 Mowing Settings

When the work area is successfully set, you can customize the mowing height, schedule and other parameters on the App.

### A. Mowing Schedule

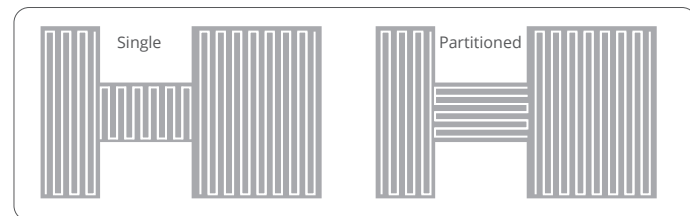
Set a mowing schedule on the App, and the mower will cut the grass within your set time to keep your lawn fresh and tidy.

### B. Cutting Height

According to your desired grass height, select the cutting height on the App and the mower will automatically adjust the blade disc height when it starts mowing your lawn. If your lawn has multiple areas, you can set a different height for each area.

### C. Mowing Path

Set the mowing path for each area on the App. "Single" means that the mower will cut the grass in one direction within a map. "Partitioned" means that each map is divided into different blocks according to shape, and the mower will cut the grass in different directions in each block.



### D. Mowing Angle

Setting the mowing Angle from -90° to 90° on the App can form different stripes on your lawn, or make up for areas that can't be cut when mowing at certain angles.

## 7.1 CW/CCW

The blade disc will rotate in clockwise (CW) and counterclockwise (CCW) directions alternatively to use both cutting blade edges. This will reduce the frequency of replacing worn out blades.

## 7.2 Route Planning

Instead of cutting randomly, the mower can plan the most efficient path to mow your lawn and cut it in neat parallel lines, leaving carpet-like stripes on your lawn.

## 7.3 AI Vision

The mower has an AI camera for the recognition system, which enables the mower to detect clear non-lawn edges and automatically create maps along the edges. Once it recognizes a human, hedgehog or other animals, it stops cutting immediately to avoid any harm.

## 7.4 Temporary Obstacle Zones

The mower will automatically create temporary No-Go Zones for large obstacles on the lawn. These temporary No-Go Zones will be showed in yellow on the App. This allows the mower to slow down before reaching these zones in the same cutting cycle to avoid collisions.

## 7.5 Mowing Setting

If your lawn has multiple areas, the App supports customizing settings for each area. You can set the cutting height mowing path, mowing angle, and choose whether the mowing task is the whole or a single area each time you start mowing.

## 7.6 Schedule Mowing

Based on the area of the lawn, the App provides an estimated mowing time, but does not include charging time. Set a mowing schedule to let the mower automatically perform mowing tasks as often as you want. You can customize the start time, end time, and mowing area. Please consider the charging time, and if the lawn is complex (with many obstacles or with multiple zones), it might require more time.

## 7.7 Spot Cutting

Remote control or place the mower to the area that requires spot cutting, and it will execute a spiral cut around the starting point with a radius of 1 meter.

## 7.8 Blade Replacement

The mower can detect the blade's life. When the remaining blade life is 1%, the App will remind you to replace the blade. Inspect blade wear and replace worn out blades every 200 hours or two weeks. Replace the entire set of blades every 400 hours or four weeks.

## 7.9 Rain Sensor

Cutting wet grass can lead to plant fungal diseases and soil damage. The mower's rain sensor is enabled by default, and when it is enabled, the mower will automatically return to the Charging Station as soon as it detects rain. You can also set a rain delay time, which means that after the rain stops, the mower will wait a while for the grass to dry before continuing to mow.

## 7.10 Anti-Theft

When the mower is lifted, or tilted, or outside the working area, it will immediately stop rotating the blade disc and make a sound to alert the user to avoid any injury.

The other Anti-Theft function is enabled by default. When it exceeds a certain distance (Geo-fence), being moved by people, it will automatically lock, an alarm will be set off, and the App will push a message to the user. The alarm will be on until the correct PIN code is entered, or until the mower is moved back to the working area.

## 7.11 OTA

If the mower is connected to the cloud server via your home Wi-Fi, the mower's firmware can be easily upgraded through Over-The-Air (OTA) upgrades.

8

Specifications

	Model	T600	T1200 Pro
Basic Information	Dimensions L*W*H (mm)	620*445*250	
	Net Weight (kg)	10.9	10.9
Mower Parameters	Working Capacity (m²)	600	1200
	Charging Time (min)	≤50	≤70
	Typical Mow Time on One Charge (min)	≥45	≥100
	Noise Sound Level (dBA)	≤56	≤56
	Information Panel	LCD	LCD
Working Conditions	Max. Slope (%)	45%	
	IP Rating	IPX6, hose washable	
	Working Temperature (°C)	-10...+50	
	Charging Temperature (°C)	±0...+45	
	Storage Temperature (°C)	-20...+50	
Battery Pack	Battery Type	Lithium-Ion	
	Nominal Capacity (Ah)	2.5	5
	Nominal Voltage (Vdc)	18.0Vdc	
	Battery Management System	Over-heating, short circuit, over-current and over-charge protection	
Power Supply	Mains Input Voltage (Vac)	100...240Vac	100...240Vac
	Output Voltage (Vdc)	24V±0.2Vdc	
	Output Current (A)	2.0	3.0
	Model	FY2402000/T2420WE T2420US/T2420UK	FY2402000/T2420WE T2420US /T2420UK
Charging Station	Input Voltage (V)	24V±0.2Vdc	
	Input Current (A)	2	3
	Output Voltage (V)	24V±0.2Vdc	
	Output Current (A)	2	3

	Model	T600	T1200 Pro
Cutting System	Blade QTY	3	3
	Cutting Height (mm)	30...60	30...60
	Cutting Width (mm)	200	200
	Cut-to-Edge	•	•
	Manually Spot Cutting	•	•
	Floating Cutting Disc	•	•
	Electric Cutting Height Adjustment	•	•
	CW/CCW Rotating Blade	•	•
Navigation	IMU Navigation	•	•
	RTK Navigation	•	•
	VSLAM Navigation	○	•
	Smart Route Planning	•	•
Obstacles Avoidance	AI Camera Recognition	•	•
	AI Camera Anti-bump	•	•
Smart Control	Information Panel	LCD	LCD
	App Smart Control	•	•
	App Connection Options	Wi-Fi + BT	Wi-Fi + BT
	Bluetooth Frequency Range	2.4GHz	2.4GHz
	Wi-Fi Frequency Range	2.4GHz	2.4GHz
Safety and Easy Use	Night Lighting	•	•
	Rain Sensor	•	•
	Update Option	OTA	OTA

9

# Maintenance

To achieve better mowing results and increase service life, be sure to keep the mower clean and the blades in good condition inspection and maintenance should be carried out by an adult every week during continuous use. Any damaged or worn-out parts should be replaced. DO NOT perform maintenance when wearing open sandals or bare foot. Always wear long trousers and work shoes when servicing the mower.

## 9.1 Cleaning

Use a soft brush or cloth to clean the exterior of the mower thoroughly. DO NOT clean with alcohol, gasoline, acetone, or other corrosive/volatile solvents. These substances may damage the appearance and internal structure of your mower. For proper docking, periodically inspect and clean the Charging Station from debris and mud. Make sure all connecting parts of the Charging Station, the extension cable, and the power supply are not blocked.

### A.Cameras

The AI camera requires regular cleaning to maintain a clear sight. The frequency of cleaning will vary from your mowing settings and conditions of your lawn. Check cameras weekly. Use a soft brush to clean dust on the camera first and use soft cloth with windshield washer fluid to clean the camera thoroughly.

### B.Chassis and Blade Disc

If the chassis and blade disc is dirty, use a brush or a water hose to clean. DO NOT use a high-pressure washer. At the same time make sure that the blade disc rotates freely, and the blades can pivot freely.  
CAUTION: High pressure water can leak into the seals and damage electronic and mechanical parts.

### C.Wheels

Grass or mud on the wheels can affect the mower performance when climbing slopes. Keep wheels clean to ensure strong grip.

### D.Rain Sensor

Check once a week and make sure the rain sensor is not covered by mud, grass or other objects. You can either wash it clean or clean with a soft brush.

#### ⚠ Warning:

- Before cleaning, make sure the mower is powered OFF.
- When the mower is upside down, it must be powered OFF.

## 9.2 Replacing Blades

If the mower is used on a regular basis, it is recommended to replace the blades and screws every 1-2 months to ensure safety and better mowing results. Replace all three blades and their screws at the same time for a safe cutting system.

How to replace the blades:

1. Turn OFF the mower.
2. To avoid scratching, place the mower on a soft and clean surface in an upside-down position.
3. Use a cross-tip/Phillips head screwdriver to loosen the three screws.
4. Remove the screws and blades.
5. Fasten the new blades and screws (Torque: 1 Nm). Make sure the blades can pivot freely.

#### ⚠ Warning:

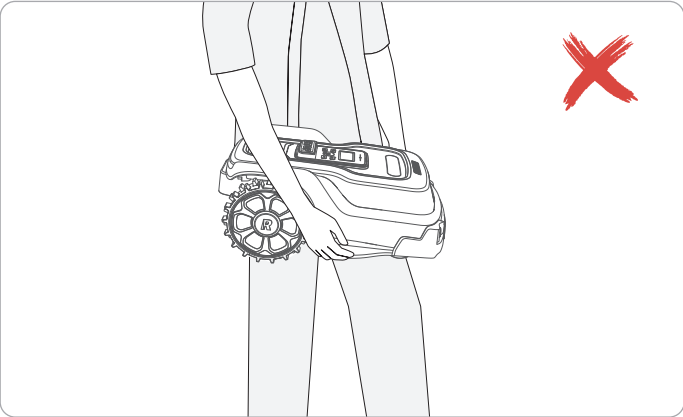
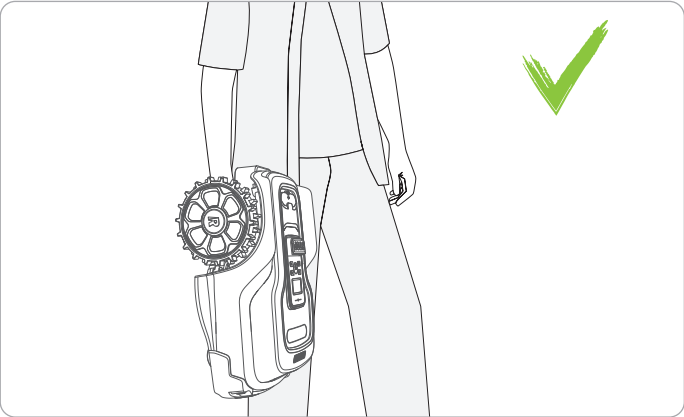
- Wear heavy gloves when you inspect or service the blades.
- Only use the right type of screws and original blades as provided by RoboUP®.
- DO NOT reuse the screws. Doing so can cause serious injury.

## 9.3 Transportation

To protect the mower, use the original carton packaging for long-distance transportation. Before lifting, moving, or transporting the product, turn it OFF. Handle with care and avoid violent force, such as throwing the mower or applying heavy pressure. Never pick up or carry the mower while the motor is running.

How to move or lift properly:

Carry the mower by the handle, with the blade disc facing away from your body.



#### ⚠ Warning:

To avoid damage to the mower and/or the Charging Station. DO NOT lift the mower when it is parked in the Charging Station.

## 9.4 Battery

Fully charge the battery before storage to avoid over-discharge and damage to the electrical components. Charge the mower every 120 days for long-time storage. Battery damage caused by over-discharge will not be covered by the Limited Warranty. DO NOT store the battery under extreme temperature conditions, i.e., above +50°C (122°F) or below -20°C (-4°F).

How to remove the battery?

1. Place the mower on a flat and soft surface upside down.
2. Remove the screws from the cover on the battery area with a Torx 20 screwdriver.
3. Remove the battery cover and disconnect the cable from the main circuit board.
4. Take out the battery and replace it with a new one.

#### ⚠ Warning:

- The battery life depends on how often the product operates and the total working hours.
- When the operation time is shorter than usual per full charge or the lawn is not well-cut, consider replacing the battery. You can contact after-sales service to replace the battery.
- Comply with the local recycling requirements and applicable regulations.
- Only charge the product in the included Charging Station. Incorrect use may resulting electric shock, overheating or leaking of corrosive liquid from the battery. In the event of leakage of electrolyte, flush with water/neutralizing agent. Get medical aid if corrosive liquid comes in your eyes.
- Use only original batteries. Product safety cannot be guaranteed with other than original batteries. Do not use non-rechargeable batteries.

## 9.5 Winter Storage

Fully charge the mower and turn it off to avoid over-discharge, which will cause permanent damage. Clean the mower thoroughly before storage. Check components subject to wear such as the blades. Repair or replace them when needed. Store the mower in a dry and frost free place, while standing on all wheels, preferably in the original packaging.

Unplug the power supply from the power socket and disconnect from the Charging Station. Protect the power supply from moisture and keep it in a well-ventilated place. Take the Charging Station indoors and keep it away from direct sunlight.

Keep the mower, Charging Station and power supply away from heat sources (such as stoves, radiators, etc.) or chemicals. Store them in a cool and dry place indoors. Exposure to sunlight and temperature extremes (both hot and cold) will accelerate the aging process of the components and may permanently damage the battery.

## 9.6 QR Code Replacement

When the QR code sticker on the Charging Station is damaged and the mower cannot find its way back, you can use the spare QR code sticker for replacement. Make sure the location for the new sticker strictly matches the original one.

10.1 Warranty Policy

At RoboUP, we strive to deliver exceptional service to our valued customers. With this objective in mind, we have crafted a Warranty Statement to elucidate our procedures and approach towards handling warranty requests. Kindly be advised that the ensuing statement pertains exclusively to individual customers.

In order to facilitate a seamless experience for warranty support, we kindly request that you retain your purchase receipt, invoice, and any pertinent documentation related to your RoboUP product as evidence of purchase for prospective service inquiries. This practice will enable us to expedite and streamline the process in the event of a warranty claim. It is important to note that only purchase receipts issued by RoboUP or authorized RoboUP distributors are deemed valid for warranty purposes. Please be informed that all refunds, returns, and replacements will be initiated subsequent to the receipt and inspection of the original products at our local warehouse. To the fullest extent permissible by law, these Policies and the outlined remedies are exclusive and serve as a substitute for any other warranties, remedies, or conditions, whether verbal, written, statutory, express, or implied.

10.1.1 Warranty Scope

The warranty period for the main body of RoboUP Products is three (3) years available with App registration, starting on the day you receive the product. (Please note that the warranty period varies for different products and parts. Please check in the table of Part II Warranty Period to verify the duration of the warranty for your particular product or parts.)

Meet but not limited to the following conditions, you can apply for free warranty service:

- The RoboUP products may only be used in compliance with the instructions in the RoboUP User Manual.
- The RoboUP products have been used normally within the specified warranty period and have no signs of man-made or external or damage.
- The RoboUP products have not undergone unauthorized disassembly, modification or addition outside of advice given in the official product guide.
- The RoboUP products have not experienced any accidental damage.
- You are able to provide valid proof of purchase.

Meet but not limited to the following conditions, RoboUP reserves the right to refuse a free warranty:

- Misuse or non-compliance with the User Manual.
- The failure is caused by accident, abuse, misuse, flood, fire, earthquake, food or liquid spills, incorrect electrical charge, or other external causes.
- The product is found damaged in transit, but it is not rejected on delivery, or no certificate confirming damages is issued by the logistics company. Proof of damage during the transit cannot be provided.
- The damage is caused by operating the product outside the permitted or intended uses described by RoboUP.
- The product or part that has been modified to significantly alter functionality or capability without the written permission of RoboUP.
- Product labels, serial numbers, etc. show signs of tampering or alteration.
- A legal proof of purchase from RoboUP, receipt or invoice is not provided or is reasonably believed to have been forged or tampered with.
- Defects caused by normal wear or aging.

10.1.2 Warranty Period

Main body	3 years warranty available with App registration
RTK Antenna	2 years
Charging Station	2 years
Battery	2 years
Power Adapter	2 years
Blades	No warranty, consumables
Wheels	No warranty, consumables
Other Accessories	No warranty

10.1.3 How to Obtain Warranty Service?

For cases under warranty conditions, you can obtain warranty service by contacting RoboUP online service or contact us via service@iroboup.com.



Use camera or QR scanner to scan

✉ service@iroboup.com

🌐 www.iroboup.com

10.1.4 Preparation Before Service

Before providing you with customer service, please be aware of the following important information:

- For products ordered from a local dealer, please contact the dealer first.
- Users are required to provide valid proof of purchase, receipt, or order number (for RoboUP Direct Sales). Additionally, the mac address of the product is essential for initiating warranty service.
- RoboUP will attempt to resolve issues through email, or online chat.
- RoboUP may direct you to download or install particular software updates.

You may be required to deliver the product to RoboUP for further examination or to local RoboUP appointed service centers if issues persist.

10.1.5 What Will RoboUP Do?

When you experience an issue with your product, please contact RoboUP and explain in as much detail as possible what the problem is. RoboUP will attempt to diagnose and resolve your problem by email or remote assistance, and possibly direct you to download and install particular software updates. If the issue cannot be solved remotely, you will obtain an RMA number and need to return the product to RoboUP for further testing and inspection.

If the problem is due to an issue covered under the warranty, RoboUP will be responsible for the repair costs. If the product does not meet the conditions for free repair, RoboUP will charge a fee for testing, replacement parts, labor and courier costs, according to the specific case. Customers can choose to pay for the repair or have the original device returned without repair. The replacement of products or parts provided by RoboUP may not be brand new or packaged, but will be in perfect working order and at least equivalent in performance to the replaced part. The replaced product will still be covered under the warranty of the original product. Please note that the replaced product or part becomes RoboUP's property and the replacement product or part becomes your property. Only unaltered RoboUP products and parts are eligible for replacement. RoboUP may not be able to provide after-sales service in all locations, and the content of the after-sales service policy varies with location. Services outside the regular service range may incur a charge. For local information, please contact RoboUP.

10.1.6 Limitation of Liability

When receiving service, RoboUP is responsible for loss or damage to your product only while it is in RoboUP's possession or in transit, if RoboUP is responsible for transportation. RoboUP is not responsible for loss or disclosure of any data, including confidential information, proprietary information, or personal information contained in a product. Under no circumstances, and notwithstanding the failure of essential purpose of any remedy set forth herein, shall RoboUP, its affiliates, suppliers, resellers, or service providers be liable for any of the following even if informed of their possibility and regardless of whether the claim is based in contract, warranty, negligence, strict liability or other theory of liability:

- Third party claims against you for damages;
- Loss, damage or disclosure of your data;
- Special, incidental, punitive, indirect or consequential damages including but not limited to lost profits, business revenue, goodwill or anticipated savings.



In no case shall the total liability of RoboUP, its affiliates, suppliers, resellers, or service providers for damages from any cause exceed the amount of actual direct damages, not to exceed the amount paid for the product.

The foregoing limitation does not apply to damages for bodily injury (including death), damage to real property or damage to tangible personal property for which RoboUP is liable under law.

As some states or jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, the above limitation or exclusion may not apply to you.

10.1.7 Important Information

- \* Please contact the RoboUP technical support team or submit an after-sales request before sending back any product. RoboUP may reject or return products without an assigned RMA number.
- \* Due to differences between product versions, your product will be designated a specific, regional maintenance center by RoboUP. If you have any questions about the after-sales service policy, please contact the RoboUP After-Sales Service Team.
- \* Please note that product repair may cause data loss; please back up your data first if necessary.
- \* If the recipient address you provide is wrong, or the recipient refuses to receive the delivery, any resulting loss shall be borne by the recipient.
- \* If the product cannot be delivered or is rejected, it will be returned to RoboUP. RoboUP will retain the product and calculate a storage fee from the date of return. The standard storage fee is: US \$10/day or EUROPE 10/day. If/when the storage fee becomes equivalent to the remaining value of the product, RoboUP has the right to dispose of the product. Calculation method for product value = original selling price, subtract the cost of repair.
- \* If you want to send products across different countries/regions, you need to obtain RoboUP's consent, and you will be responsible for paying the resulting tariffs and customs clearance costs.
- \* When you sign for the product please check it is in good condition. Ensure there is no damage that may have occurred during delivery, or for any other reason. Damage to items during transportation must be reported to the RoboUP after-sales service center within 24 hours. For other issues with your returned product, please inform RoboUP within 48 hours from the date of receipt. After this period RoboUP will assume that the product is not damaged and performance is normal.

10.1.8 Additional Legal Rights for Consumers

For consumers, who are covered by consumer protection laws or regulations in their country of purchase or, if different, their country of residence, the benefits conferred by RoboUP's Limited Warranty are in addition to all rights and remedies conveyed by such consumer protection laws and regulations, including but not limited to these additional rights.

10.2 Error Messages

Below is a list of error messages, their meanings, and how to fix the issue. If the issue persists after rebooting, please contact [service@iroboup.com](mailto:service@iroboup.com) for further support.

Error Message	Cause	Action
•Mower is tilted. •Mower is lifted. •Mower is upside down.	The mower is not positioned properly.	Please place the mower on a flat surface.
Mower is trapped.	The mower is stuck and unable to continue its work.	•If the mower is surrounded by obstacles, trapped by No-Go Zones/virtual boundaries, or the passage is blocked, please clear the obstacles. •If the mower is stuck in a pit or the wheels are slipping, and it cannot free itself after repeated attempts, please adjust the pit and move the mower to a new location to restart.
•Left wheel motor overload. •Right wheel motor overload.	Motor abnormality due to overcurrent, possibly caused by entanglement or grass being too tall and dense.	•If the motor is entangled with grass or other debris, please inspect the faulty motor, clear the grass or debris, and restart the mower. •If the mower cannot move due to grass being too tall or dense, please first cut the grass below 10cm.
Cutting motor overload.	Motor abnormality due to overcurrent, possibly caused by entanglement or grass being too tall and dense.	•If the motor is entangled with grass or other debris, please inspect the faulty motor, clear the grass or debris, and restart the mower. •If the blade disc cannot rotate due to overly tall or dense grass, please first cut the grass below 10cm.
•Left wheel voltage too low. •Left wheel voltage too high. •Left wheel motor hall sensor fault. •Left wheel motor disconnected. •Right wheel voltage too high. •Right wheel voltage too low. •Right wheel motor hall sensor fault. •Right wheel motor disconnected. •Cutting motor voltage too high. •Cutting motor voltage too low. •Cutting motor hall sensor fault. •Cutting motor disconnected. •Motor malfunction.	•Motor abnormality due to over voltage, under voltage, or hall sensor failure. •Motor disconnected.	Please check and restart the mower. If the issue persists, contact after-sales service.
Battery low temperature.	Ambient temperature is too low.	Please check if the ambient temperature meets the operating requirements, i.e., both working and charging temperatures must be above 0 C .
Battery high temperature.	Ambient temperature is too high.	•Please check if the ambient temperature meets the operating requirements, i.e., both working and charging temperatures must be below 45 C . •Let the battery cool down before restarting the mower.
•Battery voltage too high. •Battery voltage failure. •Battery defective.	Battery abnormality due to voltage irregularity or damage.	Please check and restart the mower. If the issue persists, contact after-sales service for a battery replacement.
•IMU malfunction. •Electronic malfunction.	IMU data abnormal, or charging circuit abnormal.	Please check and restart the mower. If the issue persists, contact after-sales service.
Outside working area.	The mower is moved out of boundary.	Please move the mower back within the created boundaries.
Outside Geo-fence. The mower has exceeded the anti-theft safety range.	The mower has exceeded the map's boundary by 8 meters.	Please move the mower back within the created boundaries or enter the correct PIN code.
Charging Station blocked.	The mower cannot return to the Charging Station because there is an obstacle on it.	Please remove the obstacle from the Charging Station and ensure the mower can return smoothly.
Cannot find Charging Station.	The mower cannot find the Charging Station due to it being moved, powered off, or the QR code being dirty.	•Please check if the Charging Station has been moved or is powered on, and place the mower back on the Charging Station to charge. •Please check if the QR code is dirty, then clean it or replace the QR code.

Error Message	Cause	Action
Upgrade error.	Upgrade failed due to RTK disconnection or other reasons.	•If the RTK is disconnected, please check if the RTK station is powered on, place the mower and RTK Base Station close together, and restart the mower before retrying. •If the RTK is unpaired and displayed as RTK-, please contact after-sales service.
RTK Base Station connection lost, and the mower has stopped.	The mower has traveled the maximum distance after losing RTK signal.	•Please check if the RTK Base Station is powered on. •Please move the mower to an unobstructed area and restart it.
RTK Base Station is unable to receive data.	The mower cannot obtain RTK data due to abnormal data transmission module or the RTK Base Station not being powered on.	Please check if the RTK Base Station is powered on. If the issue persists, please contact after-sales service.
Unable to pair RTK Base Station.	The mower and RTK Base Station have not been paired.	Please restart the mower and RTK Base Station. If the issue persists, contact after-sales service.
RTK interference, failed to switch frequency bands.	RTK has failed to switch frequency bands multiple times.	Please restart the mower and RTK Base Station. If the issue persists, contact after-sales service.

10.3 Troubleshooting

The following chart offers a guide to help identify an issue, and if possible, repair by yourself. If the issue cannot be solved, please visit the official website [www.iroboup.com](http://www.iroboup.com) for more FAQs, or contact [service@iroboup.com](mailto:service@iroboup.com) for further support.

Issue	Possible Cause	Action
Unable to bind the mower with App.	Weak Wi-Fi Signal.	Please move the mower and the mobile phone closer to the router to get a strong and stable Wi-Fi signal, then try again.
	Your Wi-Fi router is dual-band (5GHz and 2.4GHz) and only 5GHz is enabled.	Please check the router manual and enable 2.4GHz frequency.
The mower cannot be powered on.	The battery is out of power.	Please put the mower in the Charging Station with the power supply connected, wait for the mower to charge, then try to turn it on.
	The ambient temperature is too high or too low, and the battery cannot work.	Please move the mower to a place with a suitable temperature of 5℃-35℃ to cool down or warm up until it automatically exits the protection mode and try again.
The mower is not responding to App commands.	Weak Bluetooth signal or weak Wi-Fi signal.	•Weak Bluetooth signal, please keep the distance between your smart phone App and the mower to be 2-3 meters. •Weak Wi-Fi signal, please make sure your mower is connected to Wi-Fi.
The map or mower location on the App is not updating in real-time.	It is affected by Bluetooth transmission delay or network update delay.	Please ensure Bluetooth or Wi-Fi signals are normal, then wait patiently for it to update, or exit the page and refresh.
	The mower disconnects from the router's network.	Before refreshing the map in the App, please ensure that the mower is connected to the router's network well.
	Cloud storage limit reached when connected only via Wi-Fi.	•Please use Bluetooth to connect the App and the mower for timely data updates. •If connected only via Wi-Fi, please wait until the following day for it to refresh automatically.

Issue	Possible Cause	Action
The mower cannot charge after returning to the Charging Station.	The Charging Station has no power.	Please check if all cables are properly connected or test all interfaces. If a faulty component is identified, please contact after-sales service.
	The charging pins of the Charging Station and the mower are dirty.	Please check the four charging pins on the mower and the Charging Station. If they are dirty, please wipe them with clean tissue, towel or cloth.
	The ambient temperature is too high and the battery cannot work.	Please move the mower to a place with a suitable temperature to cool down until it automatically exits the high-temperature protection mode. After the temperature is restored, you can try again.
	The charging current is overloaded.	Please make sure the original charging adapter is used for charging the mower. If the issue persists, contact after-sales service.
Although the mower is low power it does not return to Charging Station automatically.	Unstable RTK signal is preventing the mower from continuing its work.	Please check if the RTK signal of the RTK station and the mower is strong and stable, then move the mower back to the Charging Station.
	The mower cannot return to the Charging Station because there is an obstacle on it.	Please remove the obstacle from the Charging Station and ensure the mower can return smoothly.
	The mower has encountered a fault or is in an emergency stop state.	Please release the fault or emergency stop state of the mower, then let it return to charging.
	There is no map or no passage for the mower to return to the Charging Station.	Please ensure there is a map and passage for the mower to return to the Charging Station, and confirm that the passage is not blocked.
Mower's mowing path is not straight enough.	The lawn is uneven.	If mowing efficiency is affected, please level the depressions or handle the raised terrain.
The mower does not properly avoid living objects.	The front lens of the camera is blocked, or lens cover is dirty.	Please check whether there are obstacles or dirt in the front of the camera. If yes, please remove objects and wipe the lens cover with a clean tissue or cloth.
	The living object is too short, too small, or within the camera's blind spot.	Please ensure there are no small living objects on the lawn while the mower is operating.
The mower is not executing scheduled tasks.	The mower has encountered a fault or is in an emergency stop state.	Please release the fault or emergency stop state of the mower.
	The mower is powered off.	Please long press the power button to turn on the mower.
	The mower is in a low battery state.	If the mower has insufficient battery when responding to a schedule, it will automatically return to charge.
	The mower's rain sensor is enabled and has detected rain; or the scheduled time is set as a no-mowing period.	•If it is due to rain, please wait for the rain to stop and the delay time to pass, or disable the rain sensor. •If it is due to the no-mow setting, please wait for the no-mowing period to end, or disable the no-mowing function.
	The mower is performing other tasks during scheduled period.	Please end the current task, or wait for the current task to finish. If the scheduled end time has not been reached, the mower will execute the schedule.
The mower moves out of boundaries.	The mower has gone out of boundary due to wheel slippage.	•Please check if the out-of-boundary area has a slope. If the edge terrain slope exceeds 15%, please modify the boundary at least 30cm away from the slope edge, or mark the area as a dangerous boundary. •Please check if the wheels are clogged with dirt or grass clippings, causing insufficient traction and slippage.
	The mower has gone out of boundary due to obstacle avoidance or escaping a stuck situation.	Please check if there are multiple obstacles or No-Zones, and clear the obstacles.

Fehler	Mögliche Ursache	Abhilfe
The mower moves out of boundaries.	The map boundary is a cliff or step, making it easy for the mower to go out of boundary and unable to return when turning at the edge.	Please set dangerous boundaries at the cliff or step boundaries.
	Unstable RTK signal is causing inaccurate positioning of the mower.	Please check if the RTK signal of the RTK station and the mower is strong and stable, and move the mower back to the Charging Station and restart it.
The mowing result is uneven.	Blades are not sharp enough.	Please power off the mower and check blades for chipping or dulling. If so, replace the entire blade set, including the screws.
	Some areas have grass that is too tall or too dense.	•If the grass is long, please adjust the mower's cutting height from high to low or mow twice for better results. •If the grass is dense, please mow the area multiple times.
	The blade disc is stuck.	Please check if the cutting disc is clogged with grass clippings or other debris, causing some blades to fail to cut.
The mower is lingering in some areas.	There are many obstacles or living objects nearby, or dirt remains inside the front lens cover of the camera, causing the mower to constantly avoid obstacles.	Please remove the obstacles or clean the camera to prevent the mower from staying in obstacle avoidance mode.
	There's a narrow path around here, and the mower has been trying to get through.	•If the width of the narrow road is greater than 80cm, please wait until the mower can eventually pass. •If the width of the narrow path is less than 80cm, the mower will cover the area when it is edge mowing.
The mower is trapped.	Wheels, blade disc or other chassis parts are blocked by foreign objects.	After mower is powered off, check blade disc. Remove objects and clean blade disc if necessary.
	The mower is stuck in low-lying or loose soil, causing wheels to slip.	Please help the mower get out of trouble and create No-Go Zones if necessary.
	The mower is stuck in the pit and cannot get out.	Please help the mower get out of trouble and create No-Go Zones or directly fill the pothole area if necessary.
	The mower gets into a narrow lane or blind alley/dead end and cannot get out.	Please help the mower get out of trouble and create No-Go Zones in front of a dead end.
	The mower is surrounded by obstacles, trapped by No-Go Zones and virtual boundaries, or the passage is blocked.	Please clear obstacles to ensure that the mower can pass.
Map changes when the Charging Station or RTK Base Station moves.	The Charging Station was moved.	Please move the mower to the Charging Station. Once the Charging Station movement is detected, the mower will automatically exit from the Charging Station and the map will automatically update.
	The RTK Base Station was moved.	Please recreate the map.

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# Trademark and Legal Statement

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# Environmental Protection



This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.



Separate collection of used machine and packaging let you recycle materials and use them again. Use of the recycled materials helps prevent environmental pollution and decreases the requirements for raw materials.



At the end of their useful life, discard batteries with a precaution for our environment. The battery contains material that is dangerous to you and the environment. You must remove and discard these materials separately at an equipment that accepts lithium-ion batteries.



**Warning:** This product can expose you to chemicals including Lead (Pb), which is known to the State of California to cause cancer. For more information go to [www.p65Warning.ca.gov](http://www.p65Warning.ca.gov).

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# Certifications

RED

868MHz module	Frequency	863MHz-870MHz
	Max. Power	20dBm

This equipment should be installed and operated with a minimum distance of 20cm between the radiator and a human body.

2.4GHz	Frequency	2412 bis 2472 MHz
	Max. Power	20 dBm

Bluetooth module	Frequency	2402 bis 2480 MHz
	Max. Power	9 dBm

This equipment should be installed and operated with a minimum distance of 20cm between the radiator and a human body.

IC

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

**Cet appareil ne doit pas causer d'interférences ; (2) Cet appareil doit accepter toute interférence, y compris celles qui peuvent provoquer un fonctionnement indésirable de l'appareil.**

This device complies with Industry Canada's RSS for license-exempt radio equipment. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) the user must accept any interference received, including interference that may cause undesired operation. This equipment complies with Industry Canada radiation exposure limits established for an uncontrolled environment.

Cet appareil est conforme aux exigences du RSS d'Industrie Canada concernant les équipements radio exemptés de licence. Son fonctionnement est soumis aux deux conditions suivantes : (1) il ne doit pas provoquer d'interférences, et (2) l'utilisateur doit accepter toute interférence reçue, y compris celles susceptibles de provoquer un fonctionnement indésirable. Cet équipement respecte les limites d'exposition aux rayonnements fixées par Industrie Canada pour un environnement non contrôlé.

This radio transmitter [contains IC ID: 23804-BT241 for 2.4GHz&Bluetooth module, 23804-RF915 for 868MHz module] has been approved by Innovation, Science and Economic Development Canada to operate with the antenna types listed below, with the maximum permissible gain indicated, Antenna types not included in this list that have a gain greater than the maximum gain indicated for any: type listed are strictly prohibited for use with this device.

Cet émetteur radio [contient l'ID IC : 23804-BT241 pour le module 2,4 GHz et Bluetooth, 23804-RF915 pour le module 868 MHz] a été approuvé par Innovation, Sciences et Développement économique Canada pour fonctionner avec les types d'antennes énumérés ci-dessous, avec le gain maximal autorisé indiqué. appareil.

These modules are approved for installation into mobile or/and portable host platforms at least 20cm away from the human body.

Ces modules sont approuvés pour une installation sur des plateformes hôtes mobiles et/ou portables à au moins 20 cm du corps humain.

Caution: Any changes or modifications to this device not expressly approved by Shenzhen Kaiqi Technology Co., Ltd. for compliance could void the user's authority to operate the equipment.

Attention : toute modification ou changement apporté à cet appareil non expressément approuvé par Shenzhen Kaiqi Technology Co., Ltd.

Innovation, Science and Economic Development Canada ICES-003 Compliance Label:CANICES-3(B)/NMB-3(B)

FCC SDOC

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:This device may not cause harmful interference.  
This device must accept any interference received, including interference that may cause undesired operation.

FC

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.

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

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

These modules are approved for installation into mobile or/and portable host platforms at least 20cm away from the human body.

**Caution:**  
Any changes or modifications to this device not expressly approved by Shenzhen Kaiqi Technology Co, Ltd. for compliance could void the user's authority to operate the equipment.  
**Contains FCCID:2ADDW-BT241**  
**Contains FCCID:2ADDW-RF915**

CC

This product conforms to the applicable EC Directives.

**RoboUP**