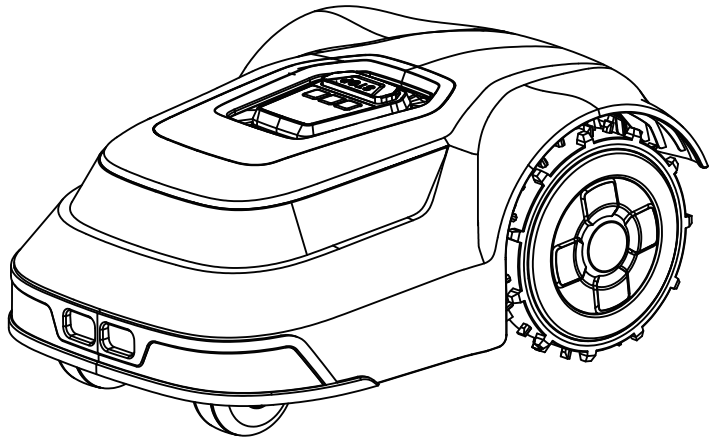
Redkey



Operator’ s manual

MGC SERIES

Original instruction

Welcome

Thank you for choosing the Redkey robotic mower. Please read the instruction below before installing the robot.

Safety Notes

Important! Read all safety warnings and all instructions. Make yourself familiar with the controls and the proper use of the machine. Please keep the instructions safe for later use!

Explanation of symbols on the machine



WARNING
-Read instruction manual before operating the product!





WARNING
-Keep a safe distance from the machine when operating!

Keep your hands and feet away from the rotating blades!





WARNING
-Disable the product before working on or lifting the product!

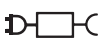




WARNING
-Do not ride on the product.Do not put your hands and close to or under the product!



WARNING:
-For the purposes of or recharging the battery, only use the detachable supply unit provided with this. appliance!



Explanation of symbols on the package



Recyclable



Fragile



This side up



Keep dry



Stacking layers limit:6

SAFETY WARNINGS

OPERATION

Before using

- Be sure to install and operate the mower and the charging station according to the instructions.
- Using the mower for purposes other than mowing can bring serious injury. To avoid risks of injuries, please read and understand all the warnings and cautions. Please understand that you can reduce the risk by following the instructions and warnings in this manual, but you cannot eliminate all risk. The operator or user is responsible for accidents or hazards occurring to other people on their property.
- Redkey has many safety sensors to protect our customers, however, safety risks still exist. Set a mowing time when there are no people or pets on the lawn. Inform the neighbors about the risks for accidents or hazards. When using the mower on a public lawn, or when your lawn is open to your neighbor or street, protect or fence the lawn, or put up a warning sign around the working area that says: WARNING! Automatic lawn mower! Keep away from the machine! Supervise children!
- DO NOT modify the mower by yourself. Modifications could interfere with mower operations, result in serious injury and/or damage, or void the Limited Warranty.
- Before working on the mower itself (e. g. maintenance, tool change, etc.) as well as during transport and storage, power off the mower by pressing and holding the on/off button 15s.
- The manufacturer recommends the user to be 18–70 years old. Be sure to get the necessary training before operating the machine.
- Never allow children, persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge or people unfamiliar with these instructions to use the machine, local regulations may restrict the age of the operator.

Before mowing

- Regularly check that all parts of the mower can function normally.
- Operate the machine only when the battery compartment is shut with the cover and all the screws in place. This protects the battery against moisture.
- DO NOT mow on areas with slopes steeper than the maximum incline inside the working area (45%), as well as the boundary (15%).
- keep extension cords away from moving hazardous parts to avoid damage to the cords which can lead to contact with live parts
- Do not to connect a damaged cord to the supply or touch a damaged cord before it is disconnected from the supply for the reason that damaged cords can lead to contact with live parts
- For the best mowing results, it is recommended to mow in dry weather. Mowing in the rain can make the grass stick on the product and the mower may slip. DO NOT mow in bad weather, such as heavy rain, thunderstorms or snow.
- Periodically inspect the area where the machine is to be used and remove all stones, sticks, wires, bones and other foreign objects. The Limited Warranty does not cover damages caused by objects left on the lawn.
- To avoid possible damage, keep the operating mower at least 1 m (3 feet) away from sprinkler heads. The mower and sprinklers should NOT work simultaneously. Time the mower so that it works at a different time from sprinklers.
- NEVER allow children to touch the power supply unit, charging station, blades, the battery compartment, or any parts with gaps such as the wheels.
- To connect the peripherals only to a supply circuit protected by a residual current device (RCD) with a tripping current of not more than 2A.

Mowing

- While operating and as well while approaching the mower, take sufficient precaution to keep balance at all times particularly on slopes and wet grass. Do not stretch yourself too much forwards.Do not operate the mower in a rush.
- Do not operate the machine when barefoot or wearing open sandals, always wear substantial footwear and long trousers.
- Avoid mowing in bad weather conditions especially when there is a risk of lightning.
- If the mower makes an abnormal sound or signals an alarm, press the STOP button immediately.
- DO NOT leave the machine to operate unattended if you know that there are pets, children or people in the vicinity.
- DO NOT allow children to be in the vicinity or play with the machine when it is operating.
- DO NOT lift the mower in operation. DO NOT ride on the mower.
- DO NOT mow on areas with slopes steeper than the maximum incline inside the working area (45%), as well as the boundary (15%).
- DO NOT touch moving hazardous parts before they have come to a complete stop.
- DO NOT put other cables near by the docking station and your boundary wire.

Safe usage

- DO NOT operate the mower outside the temperature limits: 0–50℃ (32–122 ° F), because low/high temperatures can decrease mower performance and even lead to accidents.
- DO NOT place anything on the mower or the charging station.
- It is recommended to conduct regular maintenance of the mower by an adult.
- Regularly check the warning devices to ensure they are effective. These devices include the buzzer, the LED light on the charging station, and the screen on the mower.
- Before charging, please read How to Charge in To set the docking station. Improper use may cause electric shock, overheating, or leakage of corrosive liquid.

Turn off the mower by pressing and holding the On/Off button:

– before clearing a blockage,
– before checking, cleaning,
– before storage
– if the machine vibrates abnormally (stop and check immediately),
– after striking a foreign object, inspect the machine for damage and get advice on necessary repairs from your after-sales service.

Maintenance

- Please wear gardening gloves when handling or working near the sharp blades.
- Before working on the docking station or power supply, remove plug from mains.
- Clean the exterior of the machine.Remove all grass and debris, especially from the blade disc shield.
- Turn the mower upside down and clean the blade area and the swivel castors regularly. Use a stiff brush or water to remove compacted grass clippings.
- Make sure all nuts, bolts and screws are tight to ensure safe working with the garden tool.
- Periodically visually inspect the machine and replace worn or damaged parts for safety.
- Ensure that only official replacement parts are used.
- Replace all blades and bolts as a set as required.
- If it was need to replace the battery, open the battery holder with symbol pointing

Storage

- Before storage, power off the mower by press and holding the On/Off button 15s till mower buzzed and charge its battery to 80% or higher to avoid over-discharge, which will cause permanent damage.

  Store in a cool and dry place indoors.
-
- Keep the mower, charging station and power supply away from heat sources (such as stoves, radiators, etc.) or chemicals.
- Protect the power supply from moisture and keep it in a well-ventilated place.
- Store the mower only within a temperature range between −20℃ and 70℃. As an example, do not leave the mower in the car in summer.

About battery

Do not open the battery compartment. there is a sign pointing out the position of battery, but it is not recommend open it. There is a risk of short-circuiting.

Protect the battery against heat (e.g.,against continuous intense sunlight), fire, water, and moisture. There is a risk of explosion.

Keep any unfitted battery away from paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.

In case of damage and improper use of the battery pack, vapours may be emitted. Ventilate the area and seek medical help in case of complaints. The vapours can irritate the respiratory system.

The battery can be damaged by pointed objects such as nails or screwdrivers or by force applied externally. An internal short circuit can occur and the battery can burn, smoke, explode or overheat.

If used incorrectly or if the battery is damaged, flammable liquid may be ejected from the battery. Contact with this liquid should be avoided. If contact accidentally occurs, rinse off with water. If the liquid comes into contact with your eyes, seek additional medical attention. Liquid ejected from the battery may cause irritation or burns.

Do not short-circuit the battery. There is a risk of explosion.

Use only original battery packs intended specifically for the machine. Use of any other battery packs may create a risk of injury and fire.

Ensure the robot has power off before inserting battery. Inserting the battery pack into machines with power on can cause accidents.

The Redkey will operate between 0℃ and 50℃. If the battery temperature is outside this range, the APP will display a message and the robot will not leave the docking station. If operating, the robot will return to the docking station or stay in place.

Recharge only in the original docking station.

This appliance contains batteries that are only replaceable by skilled persons.

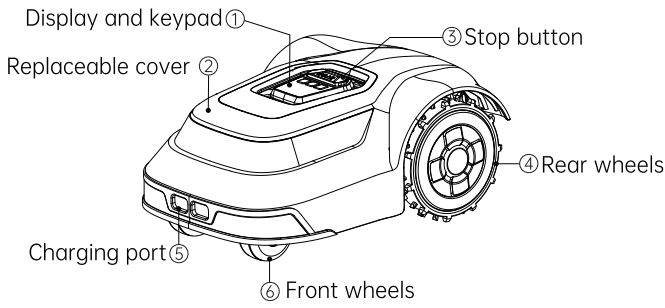
Intended use

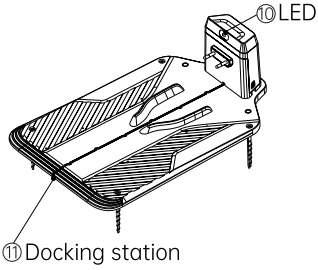
The mower is intended for domestic lawn mowing.
Do not operate the mower indoors.
Do not use the mower for any other purpose because of the increased risk of accidents and damage to the mower. Never attempt to modify the mower in any way since this may result in accidents or damage to the mower.

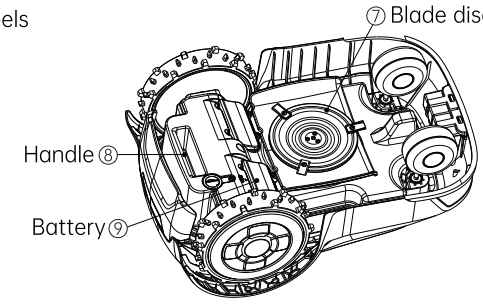
Technical date

		MGC500	MGC750	MGC1000
Basic Information	Dimensions: Length x Width x Height	606 x 420 x 258 mm	606 x 420 x 258 mm	606 x 420 x 258 mm
	Net Weight: (Battery Included)	10.7kg	10.7kg	10.9kg
Mower Parameters	Working Capacity	500 ㎡	750 ㎡	1000 ㎡
	Typical Mowing Time Per Full Charge	70min	70min	110min
	Charging Time	110min	80min	130min
	Area Capacity per Hour	90 ㎡		
	Cutting Width	20cm		
	Cutting Height	30-70mm		
	Obstacle Height	30mm		
Working Conditions	Sound Data	Measured Sound Power Level L_{wA} : < 70dB(A) Sound Pressure Level L_{pA} : 55dB(A) Sound Pressure Uncertainties K_{pA} : 3.0dB(A)		
	Working Temperature	0℃—50℃		
	Storage Temperature	-10℃—60℃		
	IP Rating	Mower body IPX6; docking station IPX5; power supply IPX4		
	Maximum Slope for Work Area	45%/24°		
	Maximum Slope for Boundary Wire	15%		
	Minimum Angle for Cutting Area	90°		
Connectivity	Bluetooth	2400.0–2483.5 MHz		
	Wi-Fi	Wi-Fi 2.4–2.5G (2400–2483.5M)		
Motor	Motor Type	Brushless motor		
	Driving Motor Rated speed	0.35m/s		
	Blade Motor Top Speed	2500/min		

		MGC500	MGC750	MGC1000
Battery pack	Battery Type	Lithium-ion battery		
	Nominal Voltage	18V		
	Capacity	2.5Ah	2.5Ah	4Ah
Power Supply	Input Voltage	100~240V AC	100~240V AC	100~240V AC
	Output Voltage	24V	24V	24V
	Output Current	1.5A	2A	2A
The Docking Station	Input Voltage	24V	24V	24V
	Input Current	1.5A	2A	2A
	Output Voltage	24V	24V	24V
	Output Current	1.5A	2A	2A
Boundary Wire	Wire Supplied	120m	150m	180m
	Minimum Required Length	20m	20m	20m
	Pegs Supplied	160	200	240
	Maximum Permissible Length	180m	180m	180m

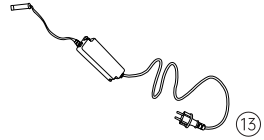




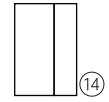




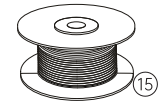
Low-voltage cable



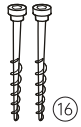
Power supply unit



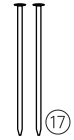
Instructions



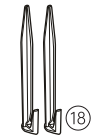
Boundary wire



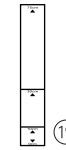
Screws



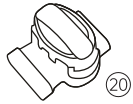
Nails



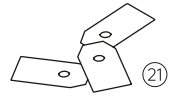
Pegs



Ruler



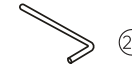
Wire connector



Extra blades



Screws



Hex key

Installation

General preparation

It is recommended that you mow your lawn once with a conventional lawnmower before installing and before the first mowing of the new season and whenever the grass would be higher than 10 cm.
The mower's cutting system is designed to cut small lengths of grass (30–70mm). The clippings can remain as mulch to fertilize the lawn, so it' s no need to collect. The height of cut for mower can be adjusted to 30 to 70mm via the R HOME APP.
It is recommended to start with a higher setting and then gradually decrease the height of cut as the wire disappears under the grass. This prevents your robot from cutting the wire.

Preparing tools

• Hammer/plastic mallet: To simplify putting the pegs into the ground.

• Edge cutter/straight spade: To bury the boundary wire.

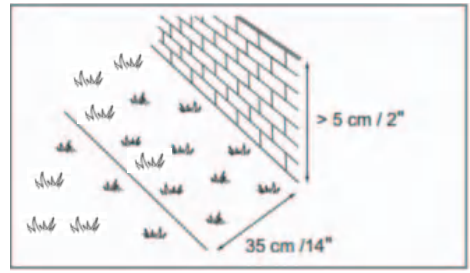
• Wire srtipping pliers: For srtipping the 10–15 mm of insulation off the boundary wire to connect the docking station.

• Combination plier: For pressing the couplers together.

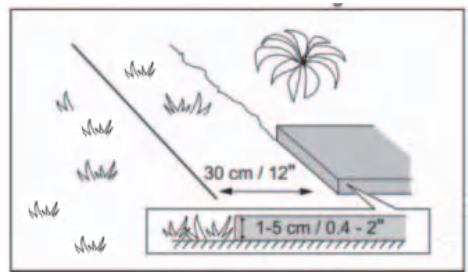
The boundary wire

The recommended distance between the pegs is 75 cm / 2.5 ft. Check if the boundary wire is fully pegged to the ground avoiding any slack lengths of wire, it can ensure the accuracy of broken points detection.
Remove stones, loose pieces of wood, sticks, wire, live mains cables and other foreign objects from the cutting area.
Make sure that the cutting area is even and has no ditches, grooves and steep slopes above 24 ° /45% that are clear obstructions for the mower.
For slopes steeper than 15% along the outer edge of the lawn, put the boundary wire 20 cm / 8 in. from the edge.

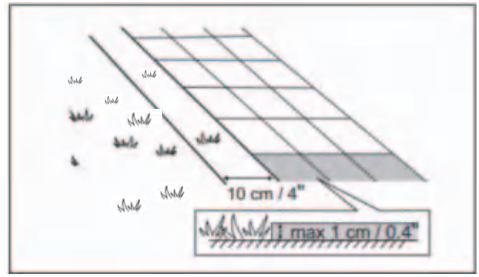
It can be add Additional boundary wire added using a wire connector.
The boundary wire can be extended up to a maximum length of 180 m under area limit.
The boundary wire can be buried up to max 5cm under the ground (or under non-metallic slabs).
To avoid causing damage to the perimeter wire, do not vertical cut or rake the area where it is positioned.
Put the boundary wire around all of the work area. Adapt the distance between the boundary wire and obstacles.



Put the boundary wire 35 cm / 14 in. from an obstacle that is more than 5 cm / 2 in. high.



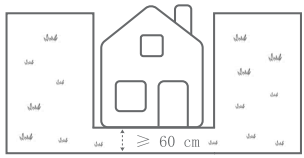
Put the boundary wire 30 cm / 12 in. from an obstacle that is 1-5 cm / 0.4-2 in. high.



Put the boundary wire 10 cm / 4 in. from an obstacle that is less than 1 cm / 0.4 in. high.
For slopes adjacent to a public road, put a barrier of minimum 15 cm / 6 in. along the outer edge of the slope. You can use a wall or a fence as a barrier.
If you have a paving stone path that is in level with the lawn, put the boundary wire below the paving stone.
Please Keep no obstacles on the boundary wire.

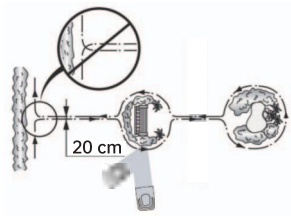
Passages

A passage is a section that has boundary wire on each side and that connects 2 parts of the work area. The distance between the boundary wire on each side in the passage must be a minimum of 60 cm / 24 in.



Island

To make an island, isolate areas in the work area with the boundary wire. We recommend to isolate all stable objects in the work area.



Some obstacles are resistant to a collision, for example,trees or bushes that are more than 5 cm in height. The product will collide with the obstacle and then turn around or get around.

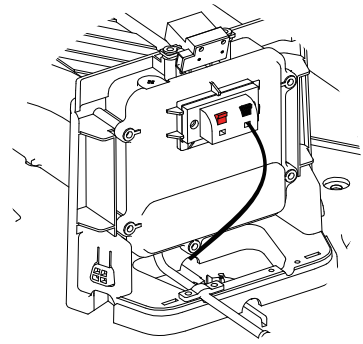
Run the boundary wire to the object and lay the wire around it at a distance of 35 cm, and finally return vertically to the outer boundary wire.

The distance between the two parallel wires should be 20 cm not crossing.

Installation steps

1.Feed the perimeter wire through the cable duct on the docking station as indicated by the arrow until it appears on the other side.

2.Use the pliers to carefully strip 10~15mm of insulation off the wire



3.Connect the wire to the black connector point. Ensure that no stripped wire is visible outside of the connector points.

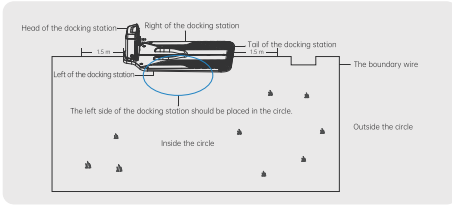
4.Put the boundary wire around all of the work area. Start and complete the installation behind the charging station.

5、Cut the other end of boundary wire.Strip off 10–15 mm of insulation. Then connect to the red connector point.

6、Finish all the above steps, close the docking cover.

To set the docking station

The docking station must be positioned on the wire at an outer edge of the cutting area. It may not be positioned on the side of a tool or garden shed standing as an island within the lawn to be mowed.
Keep a minimum 1.5m/5 ft straight line in front and at the back of the docking station.
Put the charging station near a power outlet.
Put the charging station on a level surface.
The baseplate of the charging station must not be bent.
If the work area has two parts separated with a steep slope, we recommend to put the charging station in the lower section.



Installation steps

1.Read and understand the instructions about the charging station.

2.Put the charging station in the selected area.
Note: Do not attach the charging station to the ground with the screws until the boundary wire is installed.

3.Connect the low-voltage cable to the charging station.

4.Connect the power supply cable to a 100-240V power outlet.

5.When the charging station is connected, it is possible to charge the product. Place the product in the charging station while the boundary wire are being laid. Switch on the product. Do not continue with any product settings before the installation is complete.

6. Connect the wires to the charging station after the installation of boundary wire and guide wire is complete.

7. Attach the charging station to the ground with the supplied screws after the guide wire is installed.
NOTE: The docking station is must to be pinned by supplied nails.

To extend the boundary wire

Extend the boundary wire if it is too short for the work area. Use original spare parts, for example wire connector.

1.Disconnect the charging station from the power outlet.

2. Cut the boundary wire with a pair of wire cutters where it is necessary to install the extension.

3. Add wire where it is necessary to install the extension.

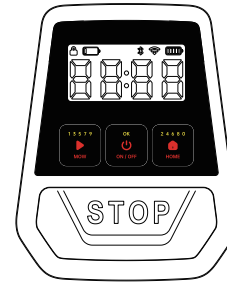
4. Put the boundary wire into position.

5. Put the wire ends into a connector.
Note: Make sure that you can see the ends of the boundary wire through the transparent area of the connector.

6. Push down the cover on the connector with adjustable pliers to attach the wires in the connector.

7.Connect the charging station to the power outlet.

Display and control



Display

PIN code lock status	Mower locked. Please enter the PIN code to unlock
Low power	The power levels below 15%. When this sign lights up, the mower will return to the station and charge.
Bluetooth	Bluetooth connected
Wi-Fi	Wi-Fi connected
Battery level	The quantity of cells indicates the battery level from 25% to 100%
Dashboard display	It shows the mowing duration, PIN code, error code, etc. Meanings of the numbers and symbols on the display : Time: Mowing duration EXXX: error code, for example, E305. See for further instruction. A-XX: Updating firmware progress .

Control

Basic operation

Power on	Press and hold On/Off 3s
Power off	Press and hold On/Off 3s
Start mowing	Press MOW and then On/Off.
Start spot mowing	Press MOW and then press and hold HOME 3s
Stop mower operation	Press STOP.
Mower returns to the charging station	Press HOME and then On/Off.
How to unlock the mower	Enter the PIN code. Press MOW to enter the singular, press HOME to enter the dual Press On/Off to verify input
How to restore the factory default settings	Press and hold MOW + HOME 5s
Forced shutdown	Press and hold On/Off 15s

Mowing

Do not let children ride the mower.
Press the stop button on top of the mower before lifting. Always lift the mower by its handle.

After successful installation, it' s able to press and hold "On/Off" key 3s or move the robot on the dock station to power on the robot.
Before mowing, it is needed to enter the PIN code to unlock the device.
Note: The default code is 0000, and you can go to Device page > MORE CONTENT > PIN-Code Reset in the R HOME app to reset the code.
After unlocking the device, you can begin mowing immediately by press "Mow" + "On/Off" on the display, or on the R HOME app by pressing "START" .
You could also set up a programmed schedule in the calendar using the R HOME app.
Set a schedule with frequent repetitions. This achieves good mowing results, the battery charge will last longer and you avoid debris on the lawn.

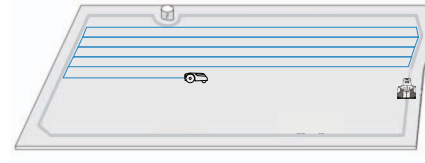
Auto mapping

Before mowing, the robot will move along the boundary wire to create the map, so that the R HOME is able to mow in planned path for maximum efficiency
For positioning accuracy, the mower will not open the cutting system when auto mapping. After mapping is over, the mower will stay at the dock to communicate data few seconds, then leave the dock to global mow.



Global mow

The R HOME is different from most robotic lawnmowers with boundary, inside work area, the lawnmower will mow the lawn along a planned path by an algorithm, leave a beautiful parallel lines on your lawn.



The mowing progress can be seen on the app . The mowing progress is defined as: current mowed area/total work area.
During the working process, if the battery is low (< 15%), the mower will stop mowing and return to the charging station to charge. After charging to 90%, it will automatically return to the area where it previously stopped and continue mowing.
The default mowing mode is global mowing.

Mowing schedule

You can set the mowing schedule in the app. The mower will work automatically according to the schedule.

Edge cut

After mowing the work area, the mower will cut along the boundary autonomously.

Spot mow

Spot Mow is intended for mowing small areas that require special treatment without having to mow the whole lawn, such as the area under a trampoline that has been removed. The mower is positioned at the centre of the intended area to mow, once pressing the "Spot Mow" button on the RHOME APP, it will leave a circle with a radius of 1.5m by spiral mowing path.
After completion of "Spot Mow" , robot will pull up, it' s need to be moved back to the dock station manually.
Note: For safety reasons, "Spot Mow" cannot be used outside the perimeter wire.

Broken points detection

When the boundary wire is broken, the device will pull up immediately.
Putting the robot back to the dock then check the R HOME APP, the position of broken point will be marked on map.
Benefit from C-TOF technology, this function help you reduce maintenance costs to detect broken wire. The rest of works are walking to the point with tools and fixing it.

Sensors

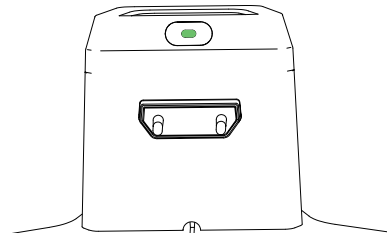
The mower is equipped with the following sensors:
– The lift-up sensor is activated when the mower is lifted.
– The rollover sensor detects when the mower tips over.
– The tilt sensor is activated when the mower reaches a slope angle of 32 ° . When one of the sensors is activated, e.g. the lift-up sensor, the drive motors and cutting blades are stopped with buzzing, A message is pushed in the APP, e.g. "lift-up".
–The rain sensor detects rainy day to protect your lawn from the mower rolls soil up.
–The bumper sensor detects objects/obstacles alongside the entire cover of the mower and causes a change of moving or winding direction.
–The C-TOF sensors navigates and positions on the lawn.

Battery charging

The battery is equipped with temperature monitoring that allows charging only if the battery internal temperature is in the range between 0°C and 45°C.

The lithium-ion battery is supplied partially charged. It is recommended to charge the mower during installation of the perimeter wire in the docking station.
The lithium-ion battery can be charged at any time without reducing its service life. Interrupting the charging procedure does not damage the battery.

Docking station light cue



Charging station LED indicator color and meaning:

Solid white	The mower is not on the charging station.
Solid red	Mower is charging.
Solid green	Mower is fully charged.
White and red flashes alternately.	Boundary wire broken.
Flashing yellow	Mower is updating firmware.

Updating the firmware

We will update the firmware periodically to fix security vulnerabilities and improve the existing features. After firmware updating, you can experience new features and have a better use experience. When a new firmware version is available, you will receive a pop-up notification in the app. Please follow the instructions shown on the pop-up window to complete the update. A firmware update usually takes 5-10 minutes.
To manually check for updates, go to APP: More content> Firmware version.
To update the firmware successfully, the following conditions need to be met:

-The mower is in the charging station.
-The mower is connected to a network through Wi-Fi and the signal is strong.
-The battery power is more than 20%.
-There is no mowing task scheduled in the next hour.
Note:Do not power off the device or run other operations during the update.

The R HOME APP

Search R HOME in Apple store or Google play store and download R HOME app.

NOTE: The following illustrations regarding the app are for demonstration purposes only. Depending on software version, the options available may be different.

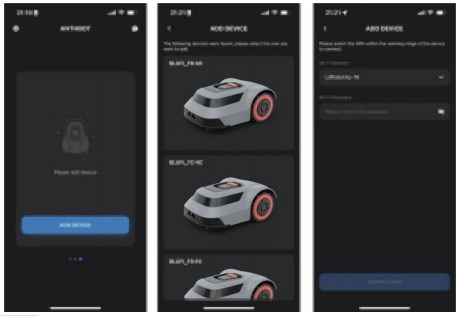
The R HOME app includes all the functions of software, you can use the app to:

1. Bind and activate the mower
2. Remotely control the mower to start, stop or return to the charging station, etc.
3. Check the status and work progress of the mower.
4. View and change mower work settings (Mowing schedule, Cutting height, sensors)
5. View and change mower security/function settings (Eg.PIN)
6. Update firmware.
7. Unbind and add devices

To Use the R HOME App

1. Please search and download the R HOME app through the APP store or Play Store.
2. Register and log in to your account.
3. Turn on your phone's Bluetooth function and make sure your phone has a network signal.

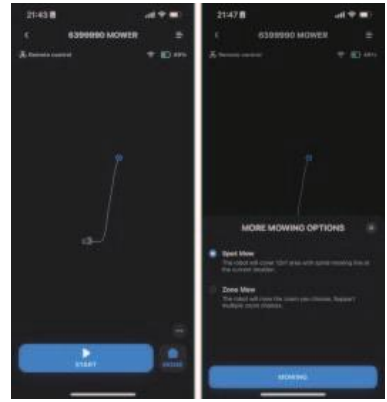
Add device



After registration and login, you will come to home page, which will guide you to connect your R HOME . Tap Add device, chose your device then enter your Wi-Fi password which your phone is connecting(you also can enter your hotspot name and password), tap the connection.

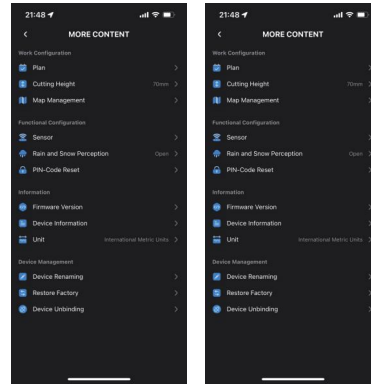
NOTE: The device only supports connecting to WiFi within the 2.4GHz frequency band.

Device page



After connection, you will come to the device page, where you can view the entire work area, the status of the mower, and the work progress, and remotely control the mower to start, pause, more mowing mode or return to the charging station. Settings and Notification pages can also be accessed from here.

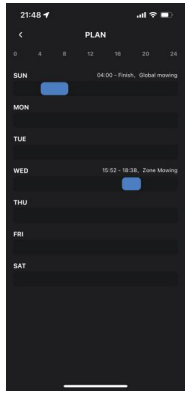
Settings



All mower-related settings can be adjusted in the app. You can:

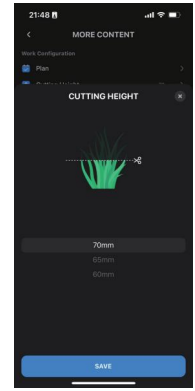
1. Change mower work settings (mowing schedule, cutting height, map management, etc.)
2. Change mower security settings and function settings (reset PIN code, rain sensors, etc.)
3. View device firmware information, unbind devices, etc.

How to set mowing schedule



You can set the mowing schedule in the mower settings. The mower will work automatically according to the schedule.
Choose a specific date and time period on the schedule page to set your mowing schedule:
-Tap the Hour bar on the page to add or delete working hours in the pop-up page.
-Tap a day of the week to toggle the mowing schedule on/off for that day.

How to change the cutting height



The cutting height can be adjusted in Settings >Cutting height, the adjustment range is 30~70mm, and the minimum adjustable segment is 5mm.

TROUBLE SHOOTING

When there is an abnormality, an error code is shown in the app and the mower display. Below is a list of the error codes, what they mean and what to do:

Error code	Meaning	Solution
E101	Error: Mower Wi-Fi pair failed	Please press and hold MOW+HOME 3s to restart device' s Wi-Fi. If it fails, restart the mower and then put it in the docking station. If the error persists, contact after-sales service.
E102	Error: Wi-Fi link error	Please press the STOP button on the mower and press MOW+OK to resume mowing. If it fails, restart the mower and then put it in the docking station. If the error persists, contact after-sales service.
E103	Error: Bluetooth link error	
E104	Error: Firmware update failed	Please restart the mower and then put it in the docking station. If the error persists, contact after-sales service.
E105	Error: The device download failed	Please restart the mower and then put it in the docking station. If the error persists, contact after-sales service.
E201	Error: Structured light sensor error	Please restart the mower and then put it in the docking station. If the error persists, contact after-sales service.
E202	Error: Bumper sensors triggered constantly	Please gently rock the top cover. If it fails, restart the mower and then put it in the docking station. If the error persists, contact after-sales service.
E203	Error: IMU setover error	Please keep the mower level and still, restart the mower. If the error persists, contact after-sales service.
E204	Error: IMU data error	Please remove the obstacles or tap the sensor gently to release it, then press the STOP button and press MOW+ON/OFF to resume mowing. If it fails, restart the mower and then put it in the docking station. If the error persists, contact after-sales service
E205	Error: Lift-up sensor error	
E206	Error: CTOF sensor error	Please restart the mower and then put it in the docking station. If the error persists, contact after-sales service.
E207	Error: CTOF sensor error	
E301	Error: Mower cannot return to the docking station	Please confirm no obstacles in the path and the charging station is installed on a flat surface. Press the STOP button on the mower, then HOME+ON/OFF to return. If the error persists, Please put it in the docking station manually.
E302	Error: Mower is trapped	Pleass press the STOP button, then put it on boundary wire or and press MOW+ON/OFF to resume mowing

Error code	Meaning	Solution
E303	Error: Mower positioning is failed	Pleass press the STOP button, then put it on boundary wire or and press MOW+ON/OFF to resume mowing If this happens frequently, contact after-sales service.
E304	Error: Mower is lifed	Please place the mower on a flat surface and check if the front wheels are stuck, then press the STOP button and press MOW+ON/OFF to resume mowing. If it fails, restart the mower and then put it in the charging station. If this happens frequently, contact after-sales service
E307	Error: Mower has turned over	Please place it in the proper position and put it back in the boundary or charging station. Press the STOP button on the mower, and then press MOW+OK to resume mowing. Please set the area where the mower turns over frequently as an off-limit island.
E310	Error: Mower is not started on the dock or boundary wire	Please relocate the mower on the boundary or the docking station, press the STOP button to clean error code, Press MOW+ON/OFF to start mowing.
E311	Error: Mower has collisions on mapping	Please clear obstacles on the boundary, then move mower to the docking station and press the STOP button to clean error code, Press MOW+ON/OFF to start mowing again. Please check is the docking station set right (the left side of docking station need to be in the mowing area).
E313	Error: Mower is at tilt over limit	Please place it in the proper position and put it back in the boundary or charging station. Press the STOP button on the mower, and then press MOW+OK to resume mowing. Please set the area where the mower turns tilt over 24° as an off-limit island.
E405	Error: Drive motor stall protection	Please check if the wheels are stuck. Remove the foreign objects, then press the STOP button on the mower and press MOW+ON/OFF to resume mowing. If the error persists, contact after-sales service.
E406	Error: Drive motor error	Please press the STOP button on the mower and press MOW+ON/OFF to resume mowing. If it fails, restart the mower and then put it in the docking station. If the error persists, contact after-sales service.
E410	Error: Drive motor error	Please restart the mower and then put it in the docking station. If the error persists, contact after-sales service.
E411	Error: Drive motor overtemperature	Please wait for about 1 minute before the temperature returns to normal. Then, press the STOP button on the mower and press MOW+ON/OFF resume mowing.
E422	Error: Lift motor stall protection	For your safety, power off the mower first. Check if there are foreign objects above the blade fender, such as grass clippings, stones, etc., and clean it up. Restart the mower, and adjust the cutting height to 70 mm for testing. If the error persists, contact after-sales service
E423	Error: Lift motor error	
E424	Error: Lift motor error	

Error code	Meaning	Solution
E432	Error: Cutting motor error	Please keep the mower still, and try to restart the mower. If the error persists, contact after-sales service.
E434	Error: Cutting motor error	Please press the STOP button on the mower. If the error persists, contact after-sales service. Do not disassemble the battery pack and make sure to use a genuine battery
E435	Error: Cutting motor error	Please charge the mower until it has more than 60% battery (2 cells of the battery level on display), then press the STOP button on the mower. If the error persists, contact after-sales service. Do not disassemble the battery pack and make sure to use a genuine battery.
E436	Error: Cutting motor error	Please press the STOP button on the mower. If the error persists, contact after-sales service.
E437	Error: Cutting motor stall protection	For your safety, power off the mower first. 1. Check if the blade disc is stuck, remove the foreign objects. 2. Check if the grass is too thick and dense, cut your lawn to a height of no more than 7 cm. Restart the mower and resume mowing. If the error persists, contact after-sales service.
E438	Error: Left wheel motor error	Please press the STOP button on the mower. If the error persists, contact after-sales service. Do not disassemble the battery pack and make sure to use a genuine battery
E439	Error: Left wheel motor error	Please charge the mower until it has more than 60% battery (2 cells of the battery level on display), then press the STOP button on the mower. If the error persists, contact after-sales service. Do not disassemble the battery pack and make sure to use a genuine battery.
E440	Error: Left wheel motor error	Please press the STOP button on the mower. If the error persists, contact after-sales service.
E441	rror: Left wheel motor stall protection	Please check if the left wheel is stuck. Remove the foreign objects, then press the STOP button on the mower and press MOW+ON/OFF to resume mowing. If the error persists, contact after-sales service.
E444	Error: Left wheel motor overload	Please press the STOP button on the mower and press MOW+ON/OFF to resume mowing. If the error persists, contact after-sales service.
E446	Error: Left wheel motor error	Please press the STOP button on the mower and press and hold on ON/OFF 3s to shut down the robot, then put it on the docking station, restart the mowing task. If the error persists, contact after-sales service.
E448	Error: Right wheel motor error	Please press the STOP button on the mower. If the error persists, contact after-sales service. Do not disassemble the battery pack and make sure to use a genuine battery

Error code	Meaning	Solution
E449	Error: Right wheel motor error	Please charge the mower until it has more than 60% battery (2 cells of the battery level on display), then press the STOP button on the mower. If the error persists, contact after-sales service. Do not disassemble the battery pack and make sure to use a genuine battery.
E450	Error: Right wheel motor error	Please press the STOP button on the mower. If the error persists, contact after-sales service.
E451	Error: Right wheel motor stall protection	Please check if the right wheel is stuck. Remove the foreign objects, then press the STOP button on the mower and press MOW+ON/OFF to resume mowing. If the error persists, contact after-sales service.
E455	Error: Right wheel motor error	Please press the STOP button on the mower and press MOW+ON/OFF to resume mowing. If the error persists, contact after-sales service.
E456	Error: Right wheel motor error	Please press the STOP button on the mower and press and hold on ON/OFF 3s to shut down the robot, then put it on the docking station, restart the mowing task. If the error persists, contact after-sales service.
E457	Error: Right wheel motor temperature anomaly	Please wait for about 1 minute before the temperature returns to normal. Then, press the STOP button on the mower and press MOW+ON/OFF resume mowing.
E501	Error: Battery error	Please restart the mower and then put it in the docking station. If the error persists, contact after-sales service.
E502	Error: Battery overvoltage protection	Please press the STOP button on the mower. If the error persists, disconnect the mower from the charging station, and contact after-sales service. Do not disassemble the battery pack and make sure to use a genuine battery.
E503	Error: Battery undervoltage protection	The battery is over-discharged and needs to be charged. If the battery temperature is lower than 0 degrees or higher than 45 degrees, wait for the temperature to return to above 5 degrees or below 44 degrees before charging. After charging to 60% power, press the STOP button to clear it. If the error persists, disconnect the mower from the charging station, and contact after-sales service. Do not disassemble the battery pack and make sure to use a genuine battery.
E507	Error: Battery temperature is too low	Place the mower in a warm environment (operating temperature: 0~40 degrees Celsius), then press the STOP button on the mower. If the error persists, contact after-sales service. Do not disassemble the battery pack and make sure to use a genuine battery.
E601	Error: The docking station communication error	Please re-plug the docking station into the power supply, then press the STOP button on the mower. If the error persists, contact after-sales service.

Error code	Meaning	Solution
E604	Error: The boundary wire break	Please put the mower in the docking station, according the broken point position showed on the R HOME APP device page to find and fix it.
E605	Error: The mower out of boundary	Please put the mower in the boundary area, then adjust the boundary wire laying where the mower go out frequently.
E606	Error: The mower mapped failed	Please adjust the boundary wire laying refer to Quick Start Guide, eg. The docking station need to be set on flat lawn、the boundary wire need to be laid under 15% slope...
E607	Error: The boundary wine length or working area are overlimit	Please adjust the boundary wire laying to decrease the boundary wire length.
E609	Error: The Metal nails are pinned abnormally	Please re-pin the metal nails, or move the docking station to different place, ensure the nails sink into soil.
E610	Error: The docking station update failed	Please restart the mower and then put it in the docking station. If the error persists, contact after-sales service.
E702	Error: Factory reset failed	Please restart the mower and then put it in the docking station. If the error persists, contact after-sales service.

For the latest error code, please refer to the APP online manual.

Recycling and end-of-life disposal

DO NOT treat this product as domestic waste. For recycling information, contact your domestic waste service, your municipality, or point of sale.
For questions about how to remove the battery, refer to About Battery
WARNING:DO NOT dispose of this product in a landfill, by incineration, or by mixing with household trash. Danger or serious injury can occur because of the electrical components.

Warranty terms

Redkey warranty covers this product's functionality for a period of 1 years from date of purchase.
The warranty covers serious faults relating to materials or manufacturing faults. Within the warranty period, we will replace the product or repair it at no charge if the following terms are met:

• The product and the charging station may only be used in compliance with the instructions in this Operator' s Manual. This manufacturer's warranty does not affect warranty entitlements against the dealer/retailer.

• End-users or non-authorized third parties must not attempt to repair the product.
Examples of faults which are not included in the warranty:

• Damage caused by water seepage from using a high-pressure washer, or from being submerged under water, for example when heavy rain forms pools of water.

• Damage caused by lightning.

• Damage caused by improper battery storage or battery handling.

• Damage caused by using a battery that is not a original battery.

• Damage caused by not using original spare parts and accessories, such as blades and installation material.

• Damage to the loop wire.

• Damage caused by non-authorized changing or tampering with the product or its power supply. The blades and wheels are seen as disposable and are not covered by the warranty.

If an error occurs with your R HOME product, please contact R HOME customer service for further instructions. Please have the receipt and the product' s serial number at hand when contacting R HOME customer service.

NOTE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.
• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio/TV technician for help.
The device must not be co-located or operating in conjunction with any other antenna or transmitter.
FCC RF Radiation Exposure Statement Caution: To maintain compliance with the FCC' s RF exposure guidelines, place the product at least 20cm from nearby persons.
Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user' s authority to operate the equipment.