

ROBOT LAWN MOWER

RF320A



Robot Lawn **MOWER**

— Operating & Safety Manual —




IMPORTANT

The following pages contain important safety and operating instructions. Please carefully read and review all safety instructions, warnings and cautions contained in this manual. Failure to read and follow these instructions, warnings and cautions may result in severe injury death to persons and pets or damage to personal property.

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Safety Warnings & Precautions

 **WARNING:** Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire or serious injury. Carefully read the instructions for the safe operation of the mower. Save all warnings and instructions for future reference.

Training

1. Read this manual carefully before operating the mower. Be familiar with the controls and the proper use of the mower and follow all safety and warning instructions.

2. The mower is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience or knowledge, unless they have been given supervision or instruction concerning use of the mower.

3. Never allow children to play with the mower. Operating, cleaning and maintenance shall not be made by children.

4. Never operate the mower if unattended; Keep bystanders, children and pets away from the mower when in operation. Otherwise the user is responsible for accidents or hazards occurring to other people or their property.

Operation

1. Do not use the mower for other purposes for which it is not intended. Using it for any other

purposes will be dangerous or damage the mower, and will invalidate the warranty.

2. Keep your hands and feet away from the rotating blades. Never put your hands or feet close or under the mower bottom when the mower is running.

3. Do not operate the sprinkler systems at the same time the mower is operating.

4. Do not mow on steep slopes.

5. Never allow anyone to ride or sit on the mower.

6. Do not put anything on top of the mower and the Charging Station during operation.

7. It is suggested to avoid operating the mower on wet grass and placing the Charging Station close to sprinklers.

8. Never pick up or carry the mower while the mower is running.

9. Never lift the mower when it is charging.

10. Never adjust or inspect the blades while the mower is running.

11. Do not operate the mower if any safety feature or device is damaged or unusable.

12. Do not attempt to disable or defeat any safety feature or device.

13. It is not permitted to modify the original design of the mower. All modifications are made at your own risk.

14. Only use accessories and parts designed for this product. Incorrect use may result in

Safety Warnings & Precautions

electric shock, overheating or leakage of corrosive liquid from the battery.

15. To ensure safety, the main power switch must be set to the OFF position before lifting, replacing, repair and any other manipulations.

16. Ensure to lay out and install the perimeter wire according to the instructions. It is best to wear eye protection and use gloves when installing the perimeter wire and driving pegs. Firmly drive all pegs in order to keep the wire from becoming a tripping hazard.

17. Input the four passwords when start the mower every time.

18. The Charging Station must be placed on the perimeter wire.

19. Do not start the mower outside the area bounded by the perimeter wire.

20. It is not suggested to start the mower during charging, which may have a bad influence on the battery lifetime.

21. Do not use the power adapter with any extension wire not designed for this mower.

22. Do not use the power adapter if the wire has been damaged.

23. After turning on the main power switch, always check the current day and time and reset if necessary. Failure to do so may result in improper setting of the day and time and non-intentional operation of the mower, which may cause severe injuries or damage.

24. Do not place metal objects in the area of the charging contacts on the Charging Station.

25. Do not place metal objects across the charging poles.

Maintenance and storage

1. Keep all guards, shields, safety devices, and sensors in place. Repair or replace any damaged parts. Do not operate the mower if any parts are damaged or worn.

2. Keep all nuts, bolts, and screws tight to ensure safe condition of the mower.

3. Periodically inspect the blades, blade screws and cutter assembly are not worn or damaged. Replace any worn or damaged blades and blade screws. Remove grass winding the mowing motor shaft or driving wheels.

4. Do not open or mutilate the battery.

5. Do not use a high-pressure washer or a garden hose to clean the mower.

6. It is best to use the power adapter indoor. Do not use it in areas where moisture or water is likely. It is required to place the power adapter and the mower in a sheltered place, dry location, where is well ventilated.

7. Main power switch must be turned off before putting mower into storage, or self-discharge will lock the battery to make next use unlikely.

Safety Warnings & Precautions

Checking mowing area

1. Periodically inspect the area where the mower is used and remove all stones, sticks, wires, and other foreign objects. Objects stuck by the blades may be thrown out and cause severe injuries.
2. Check to be certain no perimeter wires are loosen in the mowing area. Perimeter wires should be pegged into ground.

Wear appropriate Clothing

1. Always wear eye protection when pegging perimeter wires and replacing damaged parts.
2. Wear thick gloves, substantial footwear and long trousers when inspecting or replacing the blades.

Handling waste product and chemicals

1. Do not dispose of the battery in a fire and do not place used batteries in your household trash. The battery must be collected, recycled, or disposed of in an environmentally sound manner.

Transport

1. To safely move from or within the mowing area:
 - a) Press the STOP button to stop the mower.
 - b) Set the the main power switch to the OFF position if you intend to carry the mower.Lift the mower in the right way. Carry the mower with the blade plates away from the body.

Safety Devices

1. The mower accesses to EN 50636-2-107 safety certification and complies with the latest CE,EMC,MD

2. Charging Station Safety Guard

When the perimeter wire is cut off or the power adapter has been unplugged or struck by lightning, the Charging Station will send danger signals and stop the mower working immediately.

3. Tilt Sensor

If the mower is tilted approximately 30 ° on the ground during blades operation, the blades will stop rotating immediately.

4. Lifting Sensor

If the mower is picked up or lifted during operating, the mower will stop working immediately.

5. Bump Sensor

The front bumper is equipped with sensors that will activate when the mower strikes a solid, fixed object. When the bump sensor is activated, the mower will stop movement in that direction and reverse itself away from the obstacle.

6. Rain Sensor

The mower can be operated in light rain and moderate rain. The rain sensor will be activated when operating in heavy rain and the mower will go back to Charging Station itself. Dry the rain sensor before next use.

7. Emergency Stop Button

It's on top of the mower. Pressing this emergency stop button at any time during operating will stop all mower movements and stop rotation of the

blades in 2s.

8. Automatic Charging System

The mower is equipped with an automatic charging control system. It allows you to choose the Home Mode, the mower will go back to the Charging Station even the battery is full. The control system will also prevent an overcharge to the battery and keep it fully charged and maintained for the next use.

9. Safe Battery

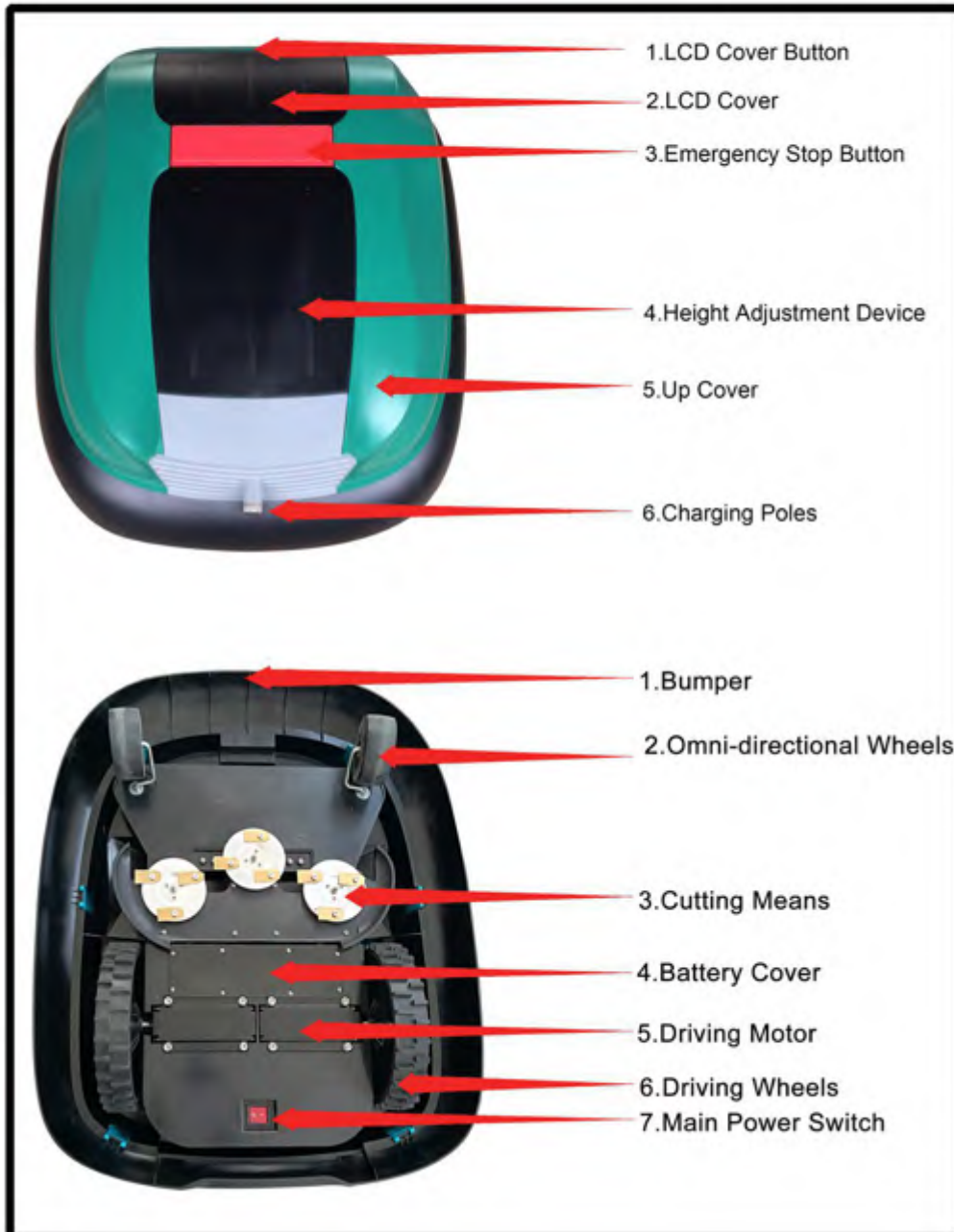
The battery accesses to EN 50636-2-107 safety certification

10. Over-Current Monitoring Protection

Each of the three blade motors and each of the two wheel driving motors are monitored continuously during operation for any situation that may cause these motors to overload. In such event, the mower will stop operation of that motor to make sure that the motor is cooling down. This may happen:








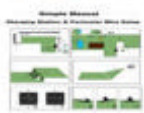


- a) When the mower is put in grass that is severely overgrown;
- b) The underside of the mower is clogged by poor cleaning maintenance;
- c) The mower has encountered an obstacle that is unable to activate bump sensors;
- d) An uneven landscape area causes the mower to get stuck;

Appearance & Structure



RF320A robot lawn mower

IN THE BOX

1		1.Mower	7	
2		2.Charging Station	8	
3		3.Charging Station base	9	
4		4.Iron nail (10pcs)	10	
5		5.Plastic peg (100pcs)		
6		6.Perimeter Wire		
		7.Screw M4*8 (6pcs)		
		8.Connector (6pcs)		
		9.Power adapter		
		10.Simple Manual		

Information on the mower



WARNING - The robot lawn mower can be dangerous if incorrectly used.



Read through the Operator's manual carefully and understand the content before using the robot lawn mower.



WARNING - Keep a safe distance from the mower while operating. Keep your hands and feet away from the rotating blades.



WARNING - Do not put your hands or feet close to the bottom of the mower while the mower is running.



Do not ride on the mower.



Do not dispose of the batteries. Return exhausted batteries to your local collection or recycling point.



Contain Li-ion battery, battery must be recycled or disposed of properly.

Pb



It is not permitted to dispose of the mower or battery as normal household waste when it has reached the end of its useful life. Ensure that the mower or battery is recycled in accordance with local legal requirements.



Do not touch the rotating blade, do not put hands and feet under the machine when it is running.



Wait until the blade and rotating parts are completely stopped before accessing them.



Warning! Do not clean or wash the machine with water jets.



During the operation of the robot check the absence of persons (especially children, elderly or disabled persons) and domestic animals in the working area. Keep children, pets and other persons at a safe distance.

Product Description

It has fully-automatic mowing

functions with the latest CE

certification.

The mower uses a 24V Li-ion rechargeable battery.

- **Automatic Driving-motor Speed Control**

The mower can adjust its speed on the relatively complex lawn and find a mowing solution.

- **Intelligent Mowing Function**

There are three working modes in the mower.

Different working modes can be chosen according to the need. In such a way, the service lifetime of mowing motor and power pack can be ensured.

Furthermore, mowing efficiency can be increased.

- **Display day, time, working mode, battery and program mowing times.**

- **Time Adjustment**

- **Program mowing times.**

- **Automatic Charging**

The mower will return to the Charging Station when its battery is almost empty.

- **Cutting Height Adjustment**

The cutting height is easily adjusted by turning the knob in the middle of the mower.

- **Perimeter Wire**

Before the mower works, an electronic fence need be set up to the perimeter of the lawn.

This wire can be sensed by the mower and will ensure that only this area of grass is cut.

- **Auto Mow**

The mower moves randomly to mow.

- **Perimeter Mow**

The mower moves on and along the perimeter wire and stops on the Charging Station.

- **Spiral Mow**

The mower moves as a clockwise involute and expands gradually.

- **Home**

The mower goes back to the Charging Station for recharging along the perimeter wire without blades rotating

- **Sub-area Mow**

When mowing a sub-area, it is possible to set up mowing duration.

- **Wire controller**

The mower can be controlled to somewhere you want it to mow by a 2m wire controller

Chapter 1

Charging Station & Perimeter Wire Setup

IMPORTANT: It is necessary to first read this chapter (Charging Station & Perimeter Wire Setup) before starting to lay out the Perimeter Wire, in order to be aware of all setup rules and instructions.

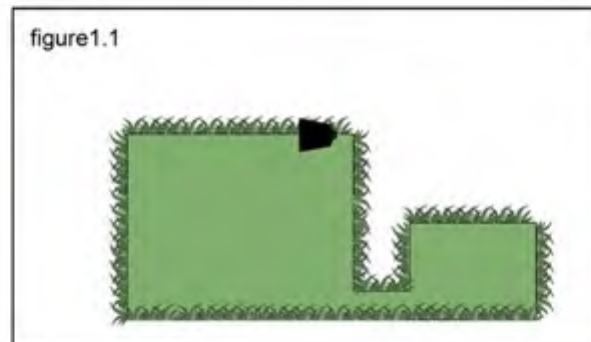
Charging Station setup

1.1 Charging Station Zone

Before setting up the perimeter wire and Charging Station, it is best to examine your lawn and determine the best location for the Charging Station. The Charging Station must be positioned on the edge of the lawn. It is suggested to set it up in the largest area from which other areas of the lawn are easily accessible.

The perimeter wire of big area and small area must also form a closed circuit.

See figure 1.1

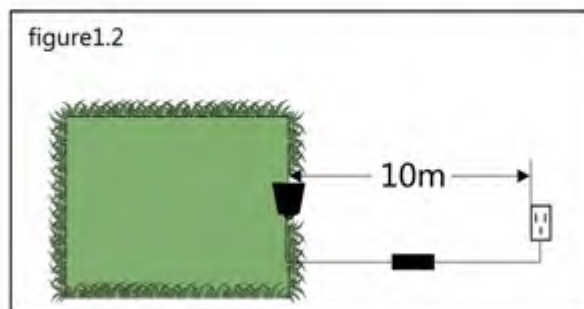


1.2 Charging Station Placement

There is a maximum distance of 10m from the socket to the Charging Station, see figure 1.2 Do not use normal extension wire to increase this distance. If the distance required is more than 10m, a power strip can be used.

Chapter 1

Charging Station & Perimeter Wire Setup



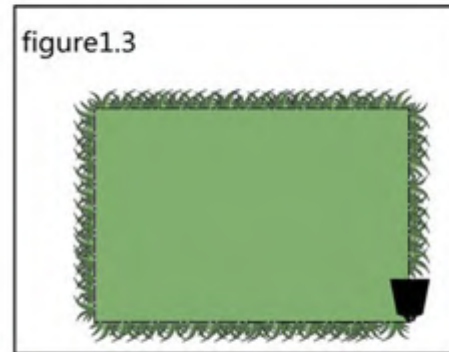
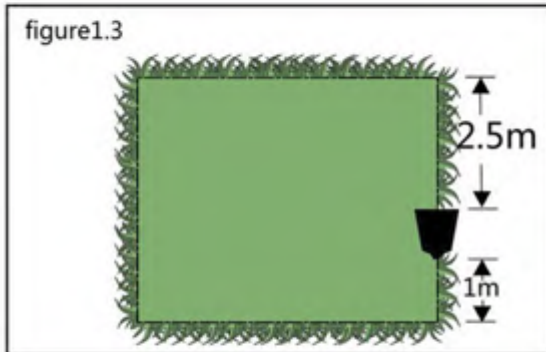
Note:

- 1) The power adapter is not suggested for outdoor use, it is required placing it in a sheltered place, dry location, which is well ventilated .
- 2) It is suggested to place the Charging Station as close as possible to a socket, move the cord away from the Charging Station on the outside of the mowing area.
- 3) Any metal bars or rails separating the lawn near the Charging Station may interfere the signal. Position the Charging Station on a different side of the garden or at a safe distance from metal barrier.
- 4) The mower searches for the Charging Station in clockwise direction. Charging Station base must be placed as anticlockwise direction so that the mower can make proper docking into the Charging Station.
- 5) The Charging Station must be well fastened to the ground.

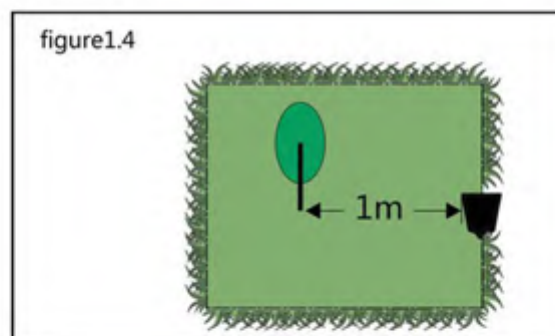
- A minimum distance of 2.5 meters is required from the Charging Station base to any corners of the perimeter. A minimum distance of 1m is required from the back of the Charging Station to any corners of the perimeter. Or just put the Charging Station in the corner. See figure 1.3

Chapter 1

Charging Station & Perimeter Wire Setup



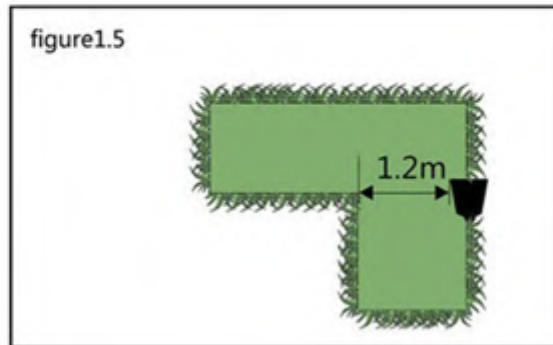
- A minimum distance of 1m is required between the Charging Station base and any obstacles. See figure 1.4



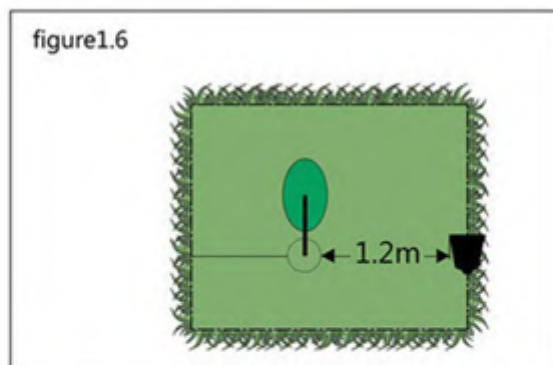
- A minimum distance of 1.2m is required between the Charging Station base and opposite perimeter wire. See figure 1.5

Chapter 1

Charging Station & Perimeter Wire Setup



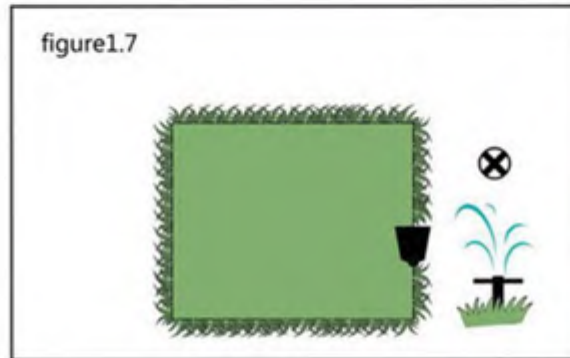
- A minimum distance of 1.2m is required between the Charging Station base and the perimeter island. See figure 1.6



- The mower is impervious to water and rain, however it is not suggested to place the Charging Station close to sprinklers for maximum protection. See figure1.7

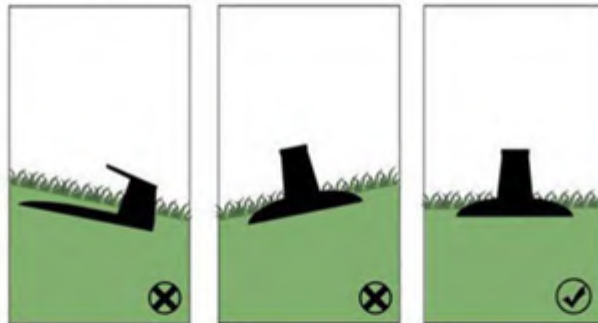
Chapter 1

Charging Station & Perimeter Wire Setup



- Place the Charging Station on level ground. Do not place the Charging Station on a slope. The area under the Charging Station MUST be flat to ensure proper docking of the mower into the Charging Station. Ensure both driving wheels are leveled with the Charging Station base. See figure 1.8

figure1.8

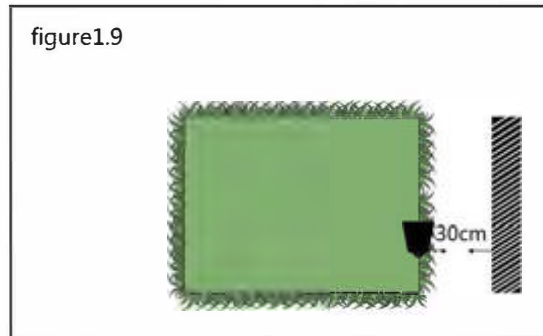


Note:

A distance of 30cm should be required where the area outside the immediate perimeter wire of the Charging Station is free of obstacles so that the mower can dock into the Charging Station successfully. See figure 1.9

Chapter 1

Charging Station & Perimeter Wire Setup



Perimeter wire setup

1.3 Checking and Preparation

Before installing the perimeter wire, it is necessary to check the entire surface of the lawn. Make any necessary adjustments to the grassy surface during the laying of the perimeter wire to ensure the mower operates normally.

Make sure the lawn to be mowed is even and does not contain holes, stones or other obstacles. If necessary, prepare the lawn by filling in any holes and removing any obstacles. If some obstacles cannot be removed, it is necessary to properly mark these areas with the perimeter wire.

1.4 Installation direction

When laying the perimeter wire, the installation direction can be from clockwise or anti clockwise.

Note:

Wire end with RED mark must be connected to the red terminal in Charging Station and laid in the center groove under Charging Station base.

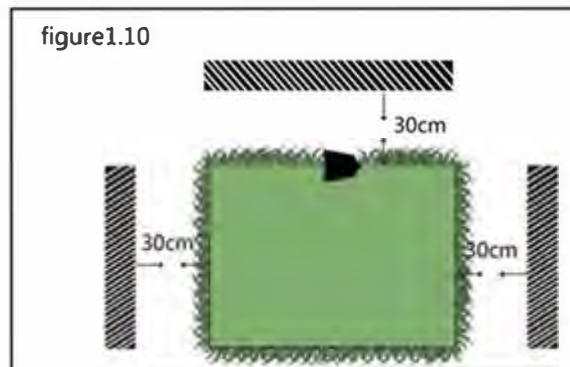
1.5 Laying perimeter wire

Start laying the perimeter wire from the area where the Charging Station is installed, leaving a couple of extra meters so that it can be connected to Charging Station easier.

Chapter 1

Charging Station & Perimeter Wire Setup

If an obstacle is present outside the mowing area, such as a kerb or wall, lay the perimeter wire at least 30cm from the obstacle to avoid the mower from bumping into the obstacle. See figure 1.10



If there are no obstacles close to the lawn, the wire should be laid on the lawn edge.

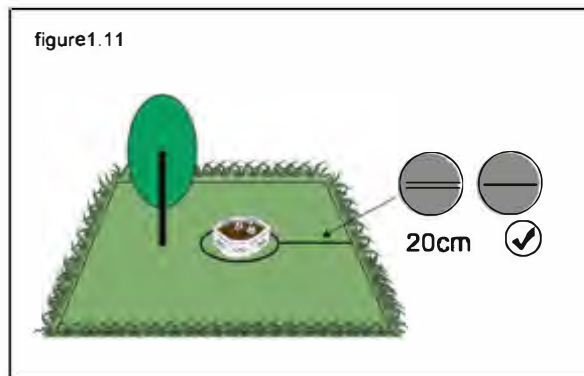
1.6 Delimiting obstacles-Perimeter island

Obstacles resistant to knocks, such as trees, poles without sharp edges present inside the mowing area do not need to be delimited. The mower hits the obstacle and changes direction. If you don't want the mower to bump into the obstacles and for its safety and silent operation, all the fixed obstacles need to be delimited. Slightly sloping obstacles such as flower pots, stones or trees with protruding roots must be delimited to protect the cutting blade and the obstacles themselves. This is done as a part of the perimeter wire setup and is commonly referred to as a perimeter island.

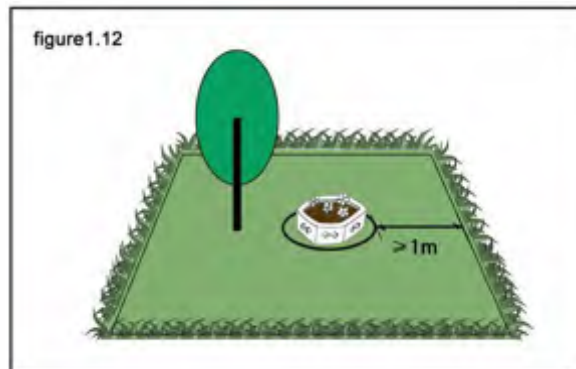
Chapter 1

Charging Station & Perimeter Wire Setup

To create a perimeter island, take the wire from the outside point of the perimeter close to the obstacle and go around it, then travel back along the previous path. Overlap the outgoing wire and the incoming wire under the same peg. A proper placement of these two wires should be touching and paralleling each other but twining. Placement of the wires as described allows the signal in the two wires to cancel. The mower is free to cross this area but will still recognize the signal of the perimeter island. Or put the parallel wires at the distance of 20cm, in the situation, the mower can't pass through the parallel perimeter. See figure 1.11



For the mower to function well, the minimum overlapping length should be greater than 1 m in order to allow the mower to move normally. See figure 1.12

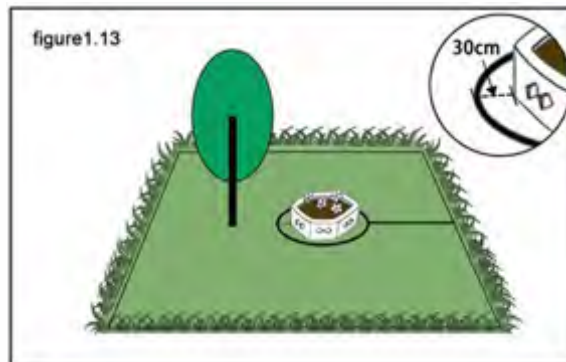


Chapter 1

Charging Station & Perimeter Wire Setup

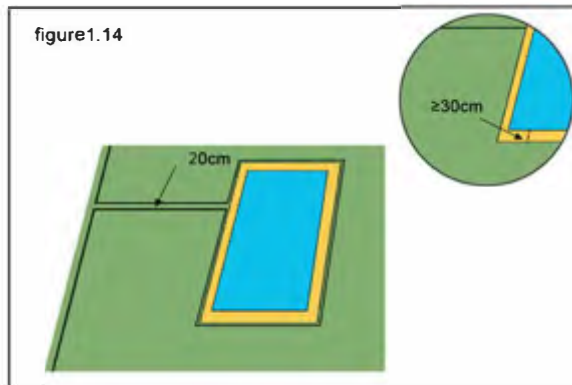
If a flower bed, hedge, plant with protruding roots, small ditch of 2-3 cm or small kerb of 2-3 cm are to be delimited as a perimeter island, lay the perimeter wire at least 30cm from them to prevent damage to the mower or the obstacles themselves.

See figure1.13



If a pool, pond, ravine, ditch, or public roads not protected by a wall are to be delimited as a perimeter island, lay the perimeter wire at least 30 cm from the edge. But the outgoing wire and the incoming wire should be separated at the distance of 20cm so that the grass in the area that bounded by the two wires can be mowed.

See figure1.14



Chapter 1

Charging Station & Perimeter Wire Setup

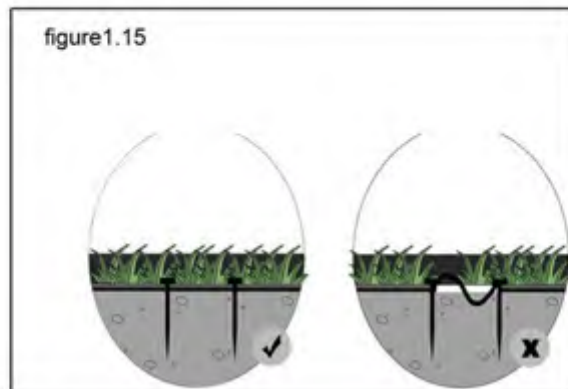
1.7 Fastening the Wire to the Ground

Place pegs to fasten the wire down.

It is not necessary to bury the perimeter wire, if you have a wire layer machine but not more than 2.5 cm under ground. Keep the wire down below the grass level and prevent it from becoming a tripping hazard while in the process of being covered with grass growth.

Test the wire setup for mowing edge before filling in the additional pegs. The perimeter wire must be fastened as a straight line.

See figure1.15



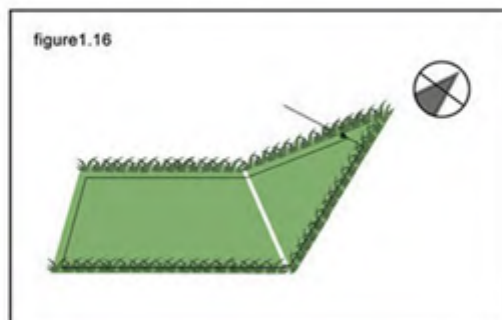
1.8 Corners & Sharp Turns

When laying the perimeter wire, do not create a corner sharper than 90°, which may cause the mower to lose track of the perimeter wire. If a corner may require a wire placement of less than a 90° angle, placement can be adjusted using several angles to avoid it.

See figure1.16

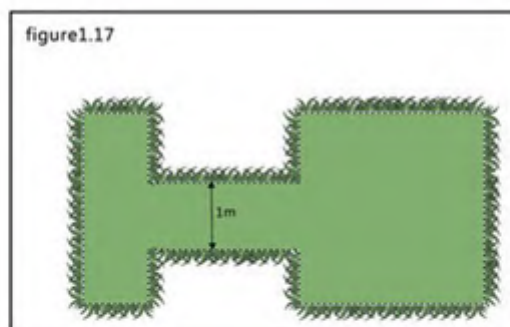
Chapter 1

Charging Station & Perimeter Wire Setup



1.9 Narrow Areas and Passageway

There is a limitation to the width of an area which the mower can effectively navigate through in order to move into another attached area. The width should be at least 1m. See figure 1.17

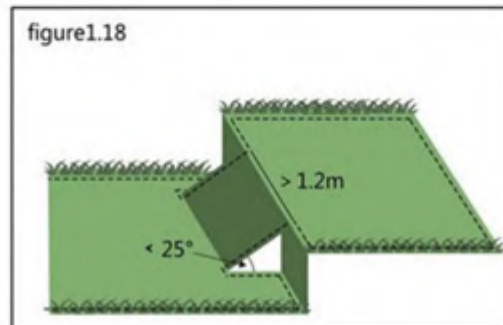


1.10 Slopes

The maximum slope limit is 25°. If the mower attempts to mow on a slope that is too steep, the Tilt Sensor may be activated. If there's a slope less than 25°, set up the perimeter wire as below, see figure 1.18

Chapter 1

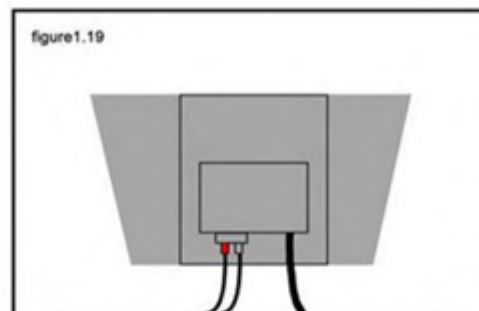
Charging Station & Perimeter Wire Setup



1.11 Completing the Perimeter Wire Setup

Once the perimeter wire is completed and pegged to the ground, the last step is attaching the perimeter wire ends to the terminal in the Charging Station.

See figure1.19.

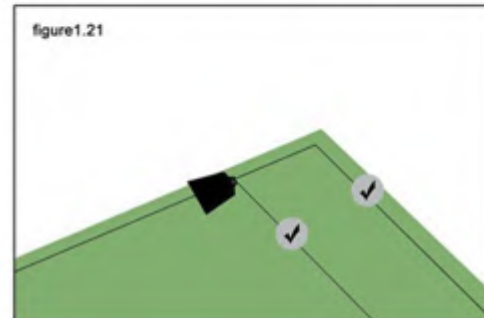
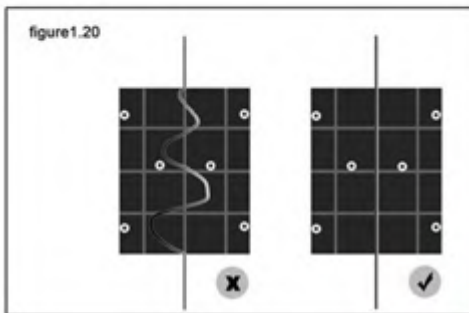


The incoming section of the wire must be straight and aligned perpendicularly the outgoing section must move away from the Charging Station.

See figure1.20 and figure1.21.

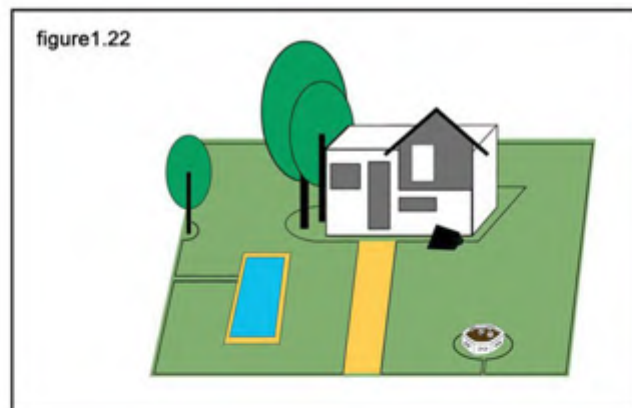
Chapter 1

Charging Station & Perimeter Wire Setup



1.12 Multiple Areas

Your home may require more than one zone to be mowed. Having two or even three zones does not affect the efficiency of the mower. If lawns are not contiguous, or are separated by fences or other objects, it is also suggested to make each of these a separate zone.



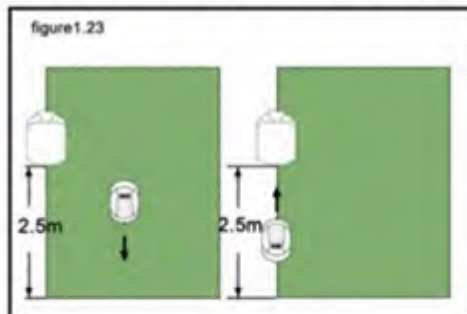
Chapter 1

Charging Station & Perimeter Wire Setup

1.13 Testing the Charging Station for docking

It is best to test the position of the Charging Station and to determine if any small adjustments need be made before driving the rest of the iron nails into ground.

Position the mower towards the perimeter wire, at least 2.5m before the Charging Station to allow the mower to stabilize itself on the wire.



Note:

- 1) Confirm that the perimeter wire leading to the Charging Station is fastened to the ground.
- 2) The wires connecting to the Charging Station must be placed in the center groove under the Charging Station as straight lines.
- 3) The Charging Station must be placed as anticlockwise direction.
- 4) Confirm the 'Signal' is blue on the Charging Station. If the perimeter wire is broken, the 'Signal' turns red and alarm sounds, the mower can no longer work.
- 5) Follow the mower and confirm that it docks properly into the Charging Station. This is done by ensuring the two metal poles make full contact with the metal contact bars.

Once the test is completed and you are satisfied with the Charging Station position, finish driving the ten iron nails securing the Charging Station into the ground.

Chapter 2

Instruction of keys and LCD screen

2.1 Instruction of key



Menu and back



Help and down

2.2 Instruction of LCD screen



Time Setting



Passwords resetting



Language and Garden size setting


Chapter 3

Start up and set up

3.1 Starting up and input the original password





Open the main power switch, LCD screen lights. After several seconds, input the original password "1234"

Note: Press slowly when inputting the passwords.





For the first time, if wrong passwords are input 3 times, the mower will show "Mower locked". Alarm lasts 1 minute, the mower is in standby condition for another 1 minute. Press  key to reset.

Since the first passwords inputting, every wrong inputting will cause alarm 1 minute and the standby condition for another 1 minute.





3.2 Change the original passwords

Press  key, press  key to select "Passwords change", press  to enter. Original passwords need be input first, input your own passwords then input again. Press  to confirm.






3.3 Set the current time

Press  key, select "Program mowing time", press  to enter. Select the first line "Adjust time", press  to enter. Input the number as the sequence "year-month-day, hours-minutes-seconds" After all inputting, press  to confirm.

3.4 Set the language

Press  key, select "Language and Garden size setup" icon, press  to enter. Select the first line "Language", press  to enter. English and local language can be chosen. Press  to confirm.

3.5 Select the garden size

Press  key, select "Language and Garden size setup" icon, press  to enter. Select the second line "Garden size", press  to enter. Press  key to select your garden size, press  to confirm.

280: <300SQM <600SQM <900SQM >900SQM

Chapter 4



Come into use

Note:

- 1)The mower will begin to move in 3s after closing LCD cover.
- 2)The mower will slow down when it gets close to the perimeter wire.

4.1 Auto Mow

Two ways to start:

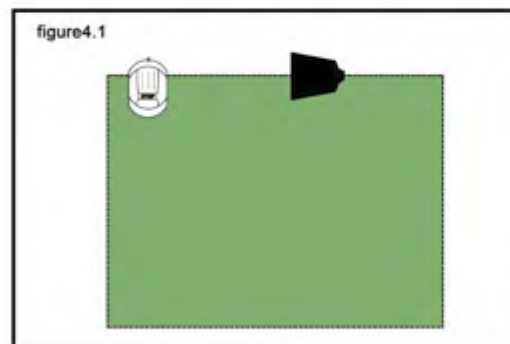
1. Press "Auto" key to start directly. The LCD Cover must be closed in 6s.
2. Press  key to select "Auto" icon, press  to start. LCD Cover must be closed in 6s.

4.1.1 Start on the Charging Station in charging

The mower will reverse and turn 180° in clockwise direction. It will continue to move along the perimeter wire in anticlockwise direction until it reaches the back of the Charging Station. After bumping into the back of the Charging Station 3 times, it will turn 90° in anticlockwise direction into the mowing area then move randomly to mow.

4.1.2 Start on the Charging Station on perimeter wire

The mower will turn and move randomly to mow. See figure 4.1

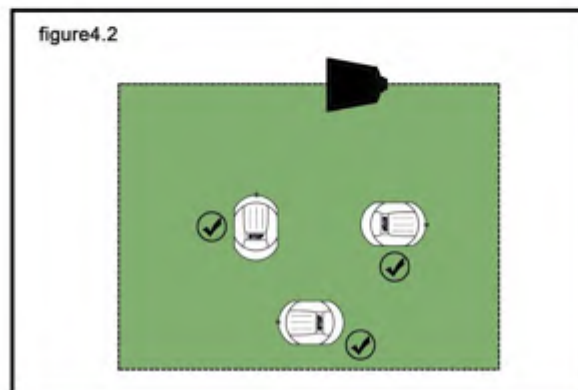


Chapter 4

Come into use

4.1.3 Start anywhere inside mowing area



The mower can be started anywhere inside mowing area, it will move randomly to mow.



Note:

If the mower encounters an obstacle during the moving to the back of the Charging Station, it will bump into the obstacle 3 times and turn 90° in anticlockwise direction into the mowing area then move randomly to mow.

4.2 Perimeter Mow

Press  key to select "Perimeter" icon, press  to start it. LCD Cover must be closed in 6s.

4.2.1 Start on the Charging Station in charging


It will turn 180° in clockwise direction. It will continue to move along the perimeter

Chapter 4


Come into use

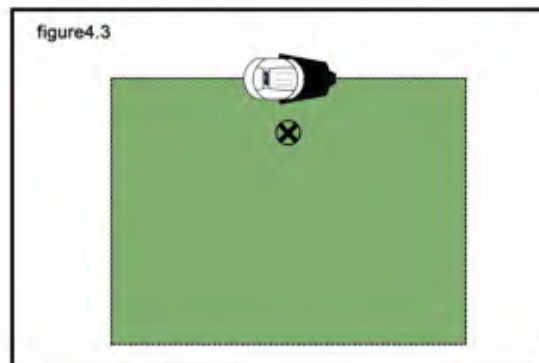
to move along the perimeter wire in anticlockwise direction until it reaches the back of the Charging Station. After bumping into the back of the Charging Station 3 times, it will turn 180° in anticlockwise direction then move back to the Charging Station along the perimeter wire. It will stop on the Charging Station.

Note:

If the mower encounters an obstacle during the moving to the back of the Charging Station, it will bump into the obstacle 3 times and turn 180° in anticlockwise direction then move back to the Charging Station. If the mower encounters another obstacle again, after bumping into it 3 times, the mower will stop, alarm and show "Obstacle On Perimeter". Press  to reset.

4.2.2 Start on the perimeter wire

It shows "Please Restart Off Perimeter". Press  to reset. See figure4.3



4.2.3 Start inside the mowing area


The mower will detect and move towards the perimeter wire. It will continue to move along the perimeter wire in anticlockwise direction until it reaches the back of

Chapter 4

Come into use



the Charging Station. After bumping into the back of the Charging Station 3 times, it will turn 180° in anticlockwise direction then move back to the Charging Station along the perimeter wire. It will stop on the Charging Station.

Note:

If the mower encounters an obstacle during the moving to the back of the Charging Station, it will hit the obstacle 3 times and turn 180° in anticlockwise direction then move back to the Charging Station. If the mower encounters another obstacle, after bumping into it 3 times, the mower will stop, alarm and show "Obstacle On Perimeter". Press  to reset.

4.3 Spiral Mow

Two ways to start:


1. Press "Spiral" key to start it directly. LCD Cover must be closed in 6s.
2. Press  key to select "Spiral" icon, press  to start it. The LCD Cover must be closed in 6s.

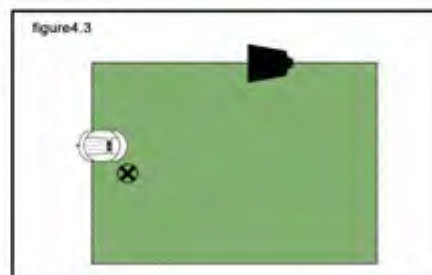
4.3.1 Start on the Charging Station in charging

The mower will reverse and turn 90° in clockwise direction. It will move some time to find a spot big enough. The mower will move as a clockwise involute and expand gradually. After several circles, it will move to another spot and continue the involute expanding. It will move to find another spot when it touches perimeter wire or obstacle during involute expanding.

4.3.2 Start on the perimeter wire

It shows "Please Restart Off Perimeter".

Press  to reset. See figure 4.3



Chapter 4

Come into use

4.3.3 Start inside the mowing area

The mower will directly move as a clockwise involute and expand gradually.



If the perimeter wire is touched during involute expanding, the mower will move to another spot and continue the involute expanding.

4.4 Home

Home is charging mode.

Two ways to start:


1. Press "Home" key to start it directly. LCD Cover must be closed in 6s.

2. Press  key to select "Home" icon, press  to start it. LCD Cover must be closed in 6s.

4.4.1 Start on the Charging Station in charging

The mower will alarm and show "Charging" .


4.4.2 Start on the perimeter wire

It shows "Please Restart Off Perimeter". Press  to reset.

4.4.3 Start inside the mowing area

The mower will detect and move towards the perimeter wire. It will move along the perimeter wire in clockwise direction. It stops to charge with its charging poles making full contact with charging bars on the Charging Station.

Note:

1) If the mower encounters an obstacle during the moving to the Charging Station, it will bump into the obstacle 3 times. Then it will stop, alarm and show "Obstacle On Perimeter". Press  to reset.

2) Do not lift the mower when it is charging. It can damage the Charging Station and the mower.



3) The blades do not rotate during the moving to Charging Station.

Chapter 4

Come into use

4.5 Sub-area Mow


Carry the mower manually to the sub-area.

Press  key to select "Sub-area mow". Press  to enter it.

Set up mowing duration from 0-120 minutes.

The mower will move randomly to mow. Carry the mower back to the big lawn where charging station is located after mowing duration is done.

4.6 Stop

Press "STOP" at any time when the mower is running, the mower will stop in 2s and show "Emergency Stop". Press  to reset.

4.7 Recharging

4.7.1 The mower starts to search for the Charging Station automatically when battery is too low. The mower does not mow when it is searching for the Charging Station.

4.7.2 The light on the power adapter should be red when it is charging. If it is green, it's not successful charging. Please contact local retailer.

4.8 Adjust Cutting Height

The mower can mow within the height of 2.5—6.5cm. Turn the knob to the height you want. See figure 4.4

The cutting means is designed to cut small lengths of grass(3-5mm) clippings.

4.9 Wire controller

Connect the plug of wire controller with the port on the panel. See figure 4.5
Press the button on controller to start blade rotating.

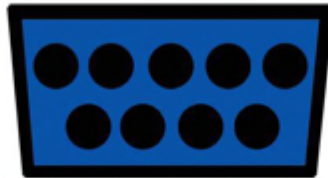
Chapter 4

Come into use

figure4.4



figure4.5



Chapter 5

Program mowing times

5.1 The mower can start itself after recharging under Program mowing times. It can decide working times per day according to the size of garden.




<300SQM mowing once a day



<600SQM mowing twice a day






<900SQM mowing 3 times a day

>900SQM mowing 4 times a day


5.2 How to set the program mowing times.



Press  key to select  icon, press  to enter.

5.2.1 Press  to enter "1.Adjust time". Input the right local time. Press  key to confirm.

5.2.2 Press  to select "2.Program mowing times", press  to enter. Input the working time first. Then choose the working day. Press  to select the working day you want, press  to confirm, repress  to cancel. The day in a square means successful confirmation. See figure5.1



Press  key, the screen shows "Program Success!"

5.2.3 Press  to select "Program Status", press  to enter. Check whether the program mowing day is the day you want. If not, reset the program mowing day as 5.2.2

Chapter 5

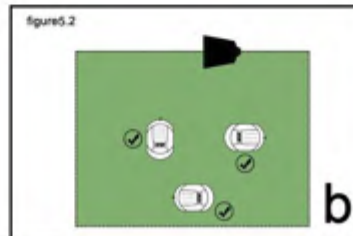
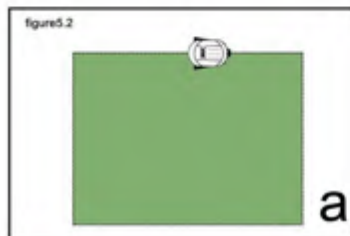
Program mowing times

5.3 Successful program mowing

Set the program mowing times when:

- a.the mower is charging on the Charging Station;
- b.the mower is anywhere inside the mowing area


See figure 5.2



Notice:

LCD cover must be closed after above successful program mowing setting.

If not, the mower will alarm and show "Cover Open, Appointment Failure".

Press  to reset. If resetting is not done after the alarm, alarm will last 1 minute.

5.4 Unsuccessful program mowing

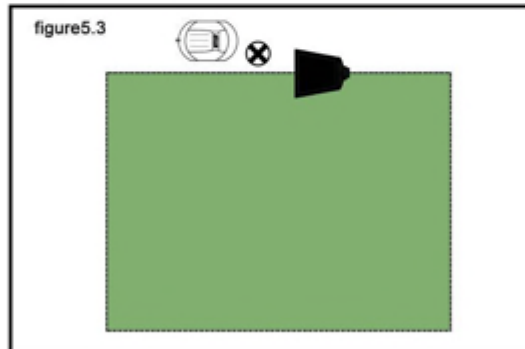
Set the program mowing times when:

- a.the mower is outside the mowing area.

See figure 5.3

Chapter 5

Program mowing times



Chapter 6

Error message

When the mower stops and alarms, LCD screen will show error message.

"Lift Sensor Triggered"

The mower will stop working in 2s if lifted during running.

Press  to reset.

"No Station Signal"

The Charging Station is not connected with power supply when mower is started.

Please connect the Charging Station with power supply.

"Station Out Of Power"

The Charging Station is disconnected with power supply when the mower is running.

Please connect the Charging Station with power supply.

"Perimeter Broken"

The perimeter wire is broken.

Please check the broken point of the perimeter wire and connect it.

"Tilt Sensor Triggered"

The mower is tilted more than 30 degrees from the ground level.

Press  to reset.

"Driving Motor Overloaded"

Some wheel is stuck by something.

Please remove the mower and restart it.

Chapter 6

Error message

"Mowing Motor Overloaded"

a. When the mower is put in grass that is severely overgrown;

b. The underside of the mower is clogged by poor cleaning maintenance;

The grass should not be higher than 6.5cm. Do cleaning maintenance on blade plates frequently.

"Please Restart Off Perimeter"

Restart the mower far away from the perimeter wire.

"Please Restart On Perimeter"

Restart the mower on perimeter wire

"Please Restart on Charging Station"

Restart the mower on Charging Station.

"Emergency Stop"

The mower will stop working in 2s after pressing Emergency STOP button.

Press  to reset.


"Battery Low"

The voltage of the battery is too low to move back to the Charging Station.

Please carry the mower to the Charging Station for recharging.

"Obstacle On Perimeter"

The mower will stop working after hitting the second obstacle on the perimeter wire.

Please remove the obstacle and press  to reset.

Chapter 6

Error message

"Outside"

The mower will stop and show "outside" when it moves over perimeter wire.

"Please Close Cover"

"Cover Open, Program Failed"

"Programmed Start time!"

"Charging"

"Mower Stuck"

"Loading Failure"

"Bump sensor Failure"

Note:

The mower alarms when an error occurs. Press the button to open the LCD cover, the alarm will stop. The mower will show an error message.

Chapter 7

Maintenance and Storage

It is important to keep the mower clean. A mower with a lot of grass stuck to it will find it harder to travel up slopes, perform worse and be exposed to greater wear and damage. For better operating reliability and longer lifetime: check and clean the mower regularly and replace worn parts if necessary.

To reduce the risk of damage to the mower and Charging Station, it is recommended that all connections to the Charging Station are disconnected (Charger, perimeter wire) when there is a risk of thunderstorm.

7.1 Maintenance Plan

Item		Once a week	once a year/ every 500 hours
Blades	Inspect	●	
Blade Plate	Inspect	●	
STOP Button	Inspect	every time	●
Chassis Accessories	Clear	●	
	Inspect		● ●
Charging Station	Clear	●	
	Inspect		●
Charging Station Base	Inspect/ Adjust	●	
Driving Wheel	Clear	●	
	Inspect		● ●
Omni-directional wheel	Clear	●	
	Inspect		● ●

● means frequency

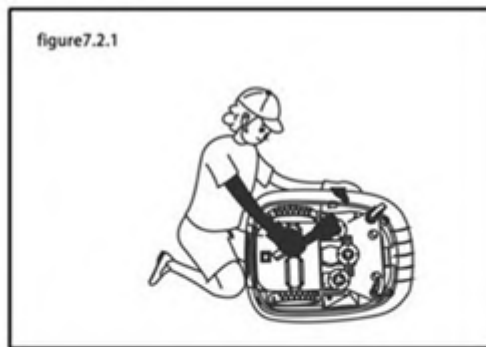
Chapter 7

Maintenance and Storage

7.2 Clear the mower

The main power switch must be set to the OFF position before clearing the mower.
Wear thick gloves.

Clear the blades and the blade plates with a soft brush to remove the grass clippings. See figure 7.2.1



Use a piece of cloth to clear the surface of the mower. See figure 7.2.2



Note:

Don't clear the mower surface with any solvents and polishes.
Don't use high pressure water to flush the mower.

Chapter 7

Maintenance and Storage

7.3 Clear the Charging Station

Unplug the power adapter from the socket before clearing the Charging Station.
Use a brush to clear the Charging Station and the Charging Station base.

Note: Never use a wet brush to clear the terminal in the Charging Station.

7.4 Inspect the STOP Button

Start the mower. When the mower begins to move, press the STOP button.
If the mower stops the movement in 2s, the STOP button works normally.
If not, ask professionals for repair.

7.5 Inspect and replace the blades

1. Blades damaged

If there is a damaged blade, replace the blade.

Wear protective gloves before any operation of the blades. Use a screwdriver to unscrew the screw and the blade. Insert a new blade and fasten the screw.

Check that the blades can pivot freely.

2. Blades loosened

If there is a loosened blade, fasten the screw before using.

7.6 Inspect the Charging Station

1. If the exterior look of the Charging Station is damaged.

Please ask professionals for repair.

2. If iron nails on the Charging Station base are loosened.

Use a hammer to drive the loosened iron nails into the ground.

Chapter 7

Maintenance and Storage

7.7 Clear the wheels

Periodically clear the dirt or grass on the wheels with a brush, including the driving wheels and the all-directional wheels.

7.8 Storage

1.The mower and the Charging Station must be cleared cleanly before storing up. The charging poles and the charging bars can't be cleared by acidic or alkaline liquid.

Keep the mower, the Charging Station and other accessories dry during storage. It is suggested to wrap them with wrapping film in order to prevent oxidation.

2.It is best to store the mower, the Charging Station and other accessories in the original package box in a sheltered place, dry location which is well ventilated and not exposed to rain and snow.

Note:

Turn off main power switch to prevent mower from self-discharging. Failure to do this may lead to battery locked.

7.9 Parts replacement

If parts replacement need be made, please watch videos below:



battery replacement

blade replacement

Chapter 8

Guarantee terms

Our company guarantees the robot lawn mower's functionality for a period of two years from the date of purchase. The guarantee covers serious faults relating to materials or manufacturing faults. Within the guarantee period, we will replace the product or repair it at no charge if the following terms are met:

The mower and the Charging Station may only be used in compliance with the instructions in the Manual.

Non-authorized third parties must not attempt to repair the product.

Examples of faults which are not included in the guarantee:

Damage caused by water seepage.

Damage caused by lightning.

Damage caused by not using original spare parts and accessories, such as battery, blade, motor.

Damage caused by improper storage.

Damage to the perimeter wire.

The blade, wheel and battery are not covered by the guarantee.

Battery lifetime depends on the length of the season, garden size and the mowing frequency that the mower is used. A long season and a big mowing frequency means that battery need be replaced regularly. Generally, battery has limited lifetime of 2-4 years.

If a fault occurs with your robot lawn mower, please contact the retailer.

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

 WARNING

This equipment complies with FCC/IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

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

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radioexempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

 WARNING

This equipment complies with FCC/IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

ce matériel est conforme aux limites de dose d'exposition aux rayonnements, FCC / CNR-102 énoncée dans un autre environnement. cette equipment devrait être installé et exploité avec distance minimale de 20 entre le radiateur et votre corps.

The user manual for local area network devices shall contain instructions related to the restrictions mentioned in the above sections, namely that:

(i) the device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;

(ii) the maximum antenna gain permitted for devices in the band 5725-5825 MHz shall comply with the e.i.r.p. limits specified for point-to-point and non point-to-point operation as appropriate.

(i) Les dispositifs fonctionnant dans la bande 5150-5250 MHz sont réservés uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.

(ii) le gain d'antenne maximal autorisé pour les appareils dans la bande 5725-5825 MHz doivent respecter le pire limites spécifiées pour le point-à-point et l'exploitation non point à point, le cas échéant.