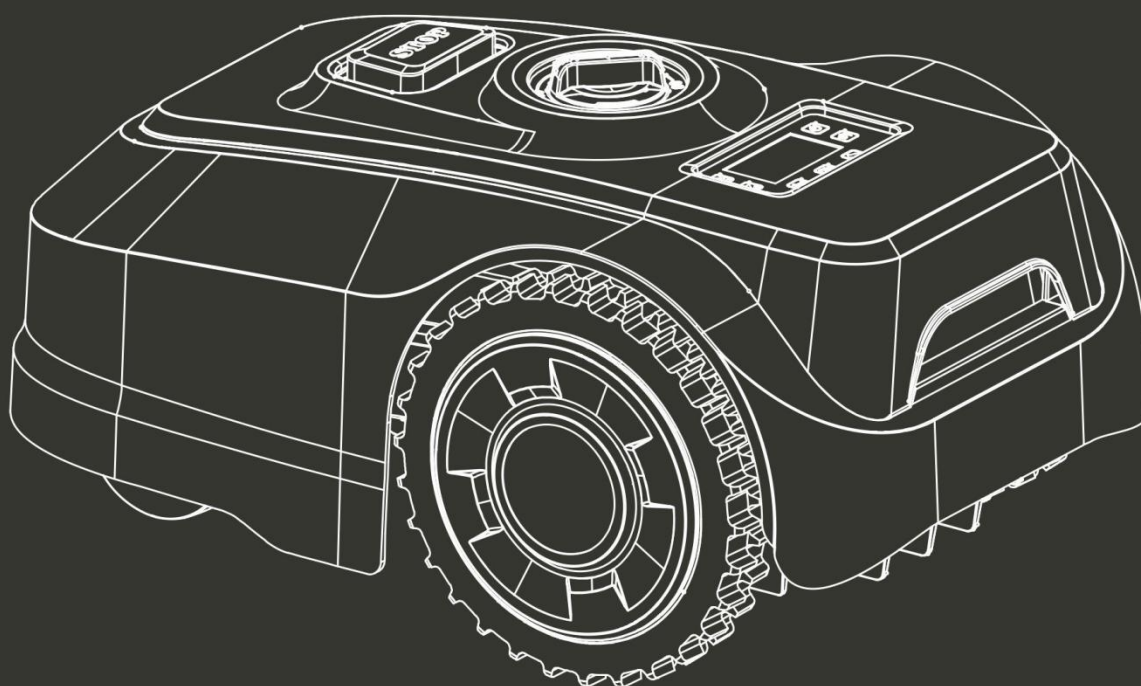


HYUNDAI
POWER PRODUCTS

ROBOT LAWN MOWER
HRM20V600-A

ORIGINAL INSTRUCTIONS



WARNING: Read thoroughly the instruction manual before using.

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1. SAFETY INSTRUCTIONS

- **WARNING!** Before using this machine, please read this manual carefully and understand the instructions. Please keep these instructions for future use. If you give this tool to a third party, please also give this manual.
- Failure to comply with these safety rules is not only dangerous, but also voids the warranty conditions.
- Never allow children, persons with reduced physical or sensory or mental abilities, or no experience or knowledge, or persons unfamiliar with these instructions to use this machine. Local laws may restrict the age of the operator.
- Children should not be near the machine when it is in use.
- Do not let children play with this machine, whether it is in operation or not.
- Please ensure that the machine is in good working order. In case of damage or defect, do not use the tool and have it repaired by a qualified service.
- Never turn the mower on if it is turned over or if it is not in the working position.
- Switch off the machine when:
 - You do not use it,
 - When left unattended,
 - When performing an intervention on the machine,
 - When the battery fails,
 - During maintenance work,
 - When you transport the machine from one place to another.
- Keep children and animals out of reach of the machine.
- Before working, inspect the work area; remove any cables, stones, debris and any objects / materials from the area to be mowed that could cause an accident and damage.
- Avoid using the mower to cut grass that is not on the ground, for example, grass growing on walls or rocks, etc.
- Do not use the tool in the presence of flammable and / or explosive substances such as liquids, gases and powders.
- The operator is responsible for any damage caused to third parties within the work area.
- Mow only in daylight or with adequate artificial light.
- If you do not use the mower, store it in a dry place out of the reach of children.
- The mower must be used in accordance with these instructions and only in a vertical position relative to the ground. Any other position is forbidden because dangerous.
- Check regularly that the screws are correctly tightened.
- Before using the appliance and after any impact, check for signs of wear or damage and have the tool repaired if necessary.
- Never use spare parts or accessories not supplied or recommended by the manufacturer.
- Never allow children, persons with reduced physical, sensory or mental abilities or lacking experience or knowledge, or persons unfamiliar with these instructions to use this machine.
- Never use this machine when people, especially children or animals are nearby.
- Never replace non-metallic cutting means with metal cutting means.
- Do not touch dangerous moving parts before stopping the unit completely.
- Do not use the tool without guards.
- Never use the mower when it is raining. Do not expose it to water and moisture. Do not leave it

outside during the night. Avoid cutting wet or damp grass.

- Familiarize yourself with the controls and proper use of the equipment.
- After the operation, perform the maintenance of the tool. Carefully follow the instructions in the chapter "Care and maintenance". These instructions will help keep the tool in good condition.
- Never replace non-metallic cutting elements with metal cutting elements.
- Do not expose the tool to rain or moisture.
- Do not use the tool when there is a risk of thunderstorms and lightning. Do not use the tool when weather conditions are poor.
- Do not insert metal objects into the charger or the battery connections, as this may cause a short circuit or be a source of danger.
- When the mower is in operation:
 - Do not open it and do not disassemble it
 - Do not carry repairs
 - Do not lift it
 - Do not check the blade
- Any inspection, repair, maintenance must be done completely off machine.
- Do not use the mower on slopes of more than 30 degrees max.
- Do not use the mower when its safety device is damaged.
- When the machine is no longer used, turn off the main switch and keep the appliance in a place out of the reach of children, to avoid damage to children or the lawn mower.
- The battery should always be charged when using the mower.
- Always use the battery and charger supplied. Do not use or mix these elements with other similar products. Incorrect use may result in electric shock, overheating, or leaking corrosive liquid from the battery.

IMPORTANT

READ CAREFULLY BEFORE USE KEEP FOR FUTURE REFERENCE

1) Safe operating practices

Training

- a) Read the instructions carefully. Be familiar with the controls and the proper use of the machine.
- b) Never allow people unfamiliar with these instructions or children to use the machine. Local regulations may restrict the age of the operator.
- c) The operator or user is responsible for accidents or hazards occurring to other people or their property.

2) Preparation

- a) Ensure the correct installation of the automatic perimeter delineation system as instructed.
- b) Periodically inspect the area where the machine is to be used and remove all stones, sticks, wires, bones, and other foreign objects.
- c) Periodically visually inspect to see that the blades, blade bolts and cutter assembly are not worn or damaged. Replace worn or damaged blades and bolts in sets to preserve balance.
- d) On multi-spindle machines, take care as rotating one blade can cause other blades to rotate.

3) Operation

General

- a) Never operate the machine with defective guards, or without safety devices, for example deflectors and/or grass catchers, in place.

- b) Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times.
- c) Never pick up or carry an machine while the motor is running.
- d) Remove (or Operate) the disabling device from the machine
 - Before clearing a blockage;
 - Before checking, cleaning or working on the machine.

4) Additionally when the machine is operating automatically

Do not leave the machine to operate unattended if you know that there are pets, children or people in the vicinity.

5) Additionally when using the manual controller

- a) Mow only in daylight or in good artificial light.
- b) Avoid operating the machine in wet grass.
- c) Do not operate the machine when barefoot or wearing open sandals. Always wear substantial footwear and long trousers.
- d) Always be sure of your footing on slopes.
- e) Use extreme caution when reversing the machine towards you.
- f) Always switch on the motor according to instructions with feet well away from the blade(s).

6) Maintenance and storage

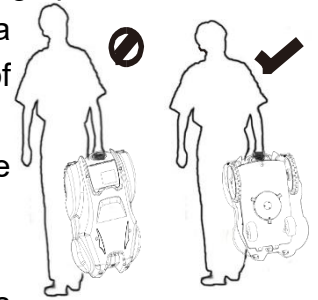
- a) Keep all nuts, bolts, and screws tight to be sure the machine is in safe working condition.
- b) Check the grass catcher frequently for wear or deterioration.
- c) Replace worn or damaged parts for safety.
- d) Ensure that only replacement cutting means of the right type are used.
- e) Ensure that batteries are charged using the correct charger recommended by the manufacturer. Incorrect use may result in electric shock, overheating or leakage of corrosive liquid from the battery.
- f) In the event of leakage of electrolyte flush with water/neutralizing agent, seek medical help if it comes into contact with the eyes, etc.
- g) Servicing of the machine should be according to manufacturers' instructions.

7) Additional instructions

- a) Congratulations on the purchase of this exceptional quality product. For best results with your mower, read all of these features. This user manual contains important information regarding the specifications of this product, its installation and use.
- b) Read this user manual carefully before using the automatic mower.
- c) The mower may be damaged if not used properly.
- d) Do not modify the original design of this mower. Any changes to this instruction manual will damage the mower and may cause accidents.
- e) Check for stones, branches, tools, toys and other objects on the lawn that may damage the blades and stop the mower.
- f) Never use a pressure washer or water to clean the mower.
- g) Do not sit on the mower and do not use it as a means of transportation. Children and pets should be kept away from the lawn mower.
- h) Turn off the mower before lifting or transporting it.
- i) **WARNING** - Never allow children, people with reduced physical, sensory or mental abilities or

lack of experience and knowledge or persons unfamiliar with these instructions to use the machine, local regulations may restrict the age of the operator;

- j) **WARNING** - Do not allow children to be near or play with the machine during operation.
- k) **WARNING** - Do not use the machine to create a hazard. Only use a machine in good working order, on grass, with a work area free of obstacles.
- l) Persons who are inexperienced and / or have no knowledge of the instructions should not use this automatic mower (to avoid serious injury).
- m) Do not place anything on the mower or its charging station.
- n) Do not operate the mower with defective or damaged components such as blades, screws, nuts, etc.
- o) Never put your hands and feet under the mower.
- p) The mower does not guarantee full compatibility between the mower and other types of wireless systems such as remote controls, radio transmitters, electrified fences, etc.
- q) Start the mower according to these instructions.
- r) It is recommended that the cutting height be less than 7cm.
- s) It is forbidden to use the mower on a lawn with a slope of more than 30 degrees.
- t) Turn off the power before cleaning.
- u) Carefully read all warnings on the machine, the battery, the charging station and in this manual.
- v) Turn off the mower before transporting or repositioning.
- w) Carry the mower by the handle at the back under the mower. Carry the mower with the blade disc away from the body.
- x) Do not lift the mower by the outer protective case.
- y) Turn off the mower and make sure it is completely shut down before performing any maintenance and cleaning.
- z) Inspect the mower weekly and have damaged or worn parts replaced, such as blades or brushes. Any replacement of parts and accessories must be done by the manufacturer or an authorized after-sales service.
- aa) **CAUTION:** Do not touch the rotating blade. The blade must stop completely before handling.
- ab) Always check the baffle condition to keep the material discharge chute clean and unhindered.
- ac) Always use the battery supplied with this machine. In case of replacement, contact your dealer or the manufacturer for the type (s) of batteries that can be used with this machine.
- ad) Stop the machine by pressing the STOP button when you need to:
- to remove a blocked item
 - check, clean or work on the machine.
 - Inspect the machine for damage after striking a foreign object.
 - Check the machine if it starts to vibrate abnormally. Check the damage before restarting;
- ae) The boundary wire must be disconnected from the docking station if it is damaged or intermingled. The mower must be extinguished before. the power plug of the adapter must be removed from the wall outlet.
- af) Avoid using the machine and its peripherals in bad weather, especially in case of lightning, thunderstorms and generally in bad weather.



8) Residual risks






















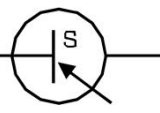

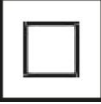
Even if you use this product in compliance with all safety requirements, the potential risks of injury

and damage remain. The following hazards may occur in the structure and design of this product. There is a risk of injury and damage to property due to attachments or broken the sudden impact of hidden objects when using cutting.

Risk of damage to personal injury and property caused by flying objects.

To reduce residual risk, always inspect the work area, wear safety shoes and protective equipment.

9) Warning Label Descriptions

	Warning/Danger! Do not play with this robot lawn mover.		Read the instruction manual.
	Beware of severing toes or hands. Do not put hands or feet near a rotating blade.		Do not dispose electrical products with general household waste. Please check with your local authorities for recycling advice.
	Danger of electric shock!		Press the STOP button before maintenance or lifting the machine. Read the instruction manual
	Danger - risk of projection		Caution: Wait until blades stop rotating when switched off
	Keep bystanders at a safe distance (at least 5m).		Do not ride on the mower or allow children or pets to do so.
	Pick up sticks, stones and foreign objects before using.		Do not use the device when it is raining, do not cut wet grass
	Keep nearby persons and children away from the lawn mower		Caution! Risk of injury from moving blades. DANGER - rotating cutting blades
	Do not subject the battery to strong sunlight over long periods of time. Do not leave on a heater Waterproof grade (max.60°C).		Sound power level LWA indicated in dB
	Do not throw on fire.		Do not throw into water.
	Removable supply unit		Device fuse
	Short-circuit proof, closed safety transformer		Switched-mode power supply
	For indoor use only (power supply unit)		Protection class II Electrical

2. INTENDED USE

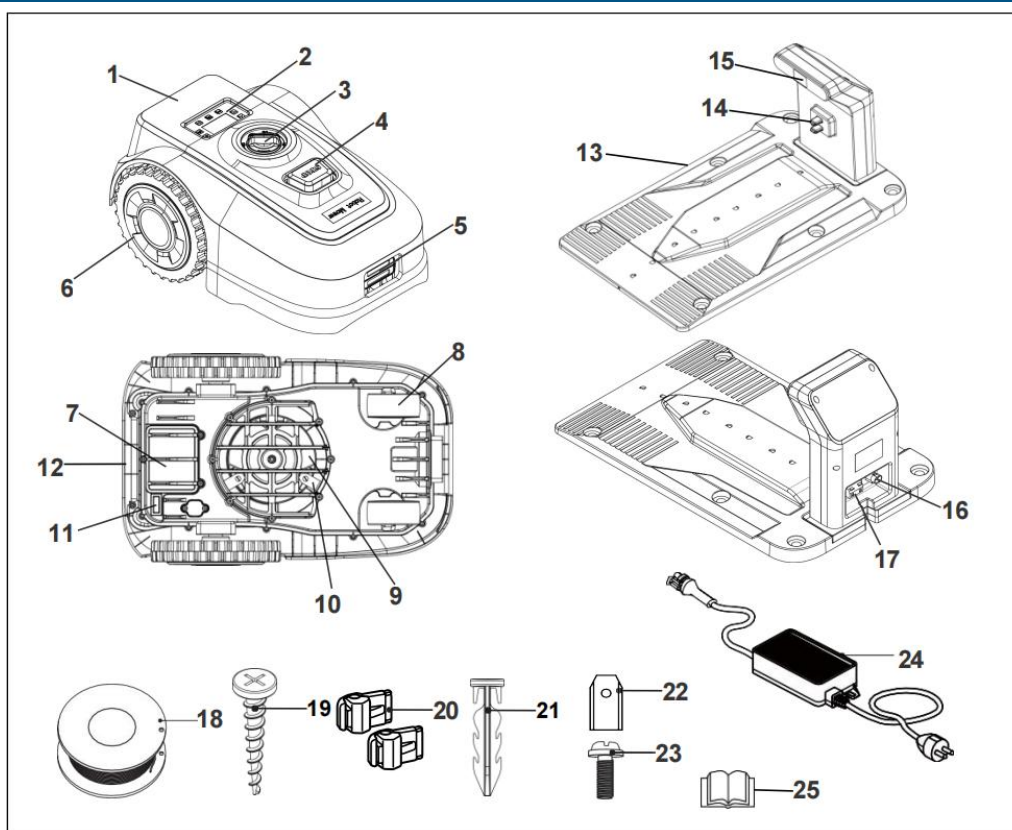
This robot lawn mower is designed for mowing natural grass. Any other use is prohibited.

It is only suitable for private use in a garden or a plot. Lawn mowers designed for private plots or gardens are those used for the maintenance of grassy areas and private lawns.

Robot mowers work by making regular small cuts of the grass to maintain a set height. To do this they must be able to mow the grass multiple times per day every day. This will keep the grass level constantly in check. As it is cutting small amounts regularly the clipping will fall to the ground and are not collected. Over time these small clippings will compost and add nitrogen to the lawn. Eventually this will leave the lawn looking more green and lush and enhance the general health of the lawn.

WARNING - These types of mowers should not be used in public areas, parks, sports, agricultural or forestry areas.

3. PRODUCT OVERVIEW



1	Body	10	Cutting blades	19	Screws for securing the charging station
2	Control Panel	11	ON/OFF button	20	Couplers for loop wire
3	Cutting Height Adjustment Knob	12	Rear handgrip	21	Boundary wire pegs
4	Stop button	13	Charging station	22	Spare cutting blades
5	Charging Port	14	Charging Contacts	23	Spare screws
6	Driving wheels	15	LED light	24	Power supply unit
7	Battery Compartment	16	Charging socket	25	Operator's Manual and Quick Guide
8	Castor wheel	17	Boundary line socket		
9	Blade disc	18	Boundary wire		

4. TECHNICAL DATA

Model	HRM20V600-A
Mower	
Rated voltage	18V d.c.
No load speed	4500/min
Cutting area	600m ²
Cutting diameter	18cm
Cutting height	30-60mm
Weight	7.8kg
Protection degree	IPX4
Software version	RLM VXX
Sound pressure level	46.6dB(A), K=3dB(A)
Sound power level	66.6dB(A), K=3dB(A)
Guaranteed sound power level	70dB(A)
Battery	
Battery type	EB1802 Lithium-ion
Capacity	18V d.c. 2Ah
Adapter	
Adapter type	GM95-230200-2FG
Input	100-240V~ 50/60Hz 2.5A
Output	23V d.c. 2.0A 46W
WIFI & Bluetooth	
Frequency range for WIFI	2412~2472 MHz
Transmit Power for WiFi	18.81 dBm
Frequency range for Bluetooth	2402~2480 MHz
Transmit Power for Bluetooth	9.24 dBm

5. INSTALLATION

5.1 Introduction



WARNING: Read and understand the safety chapter before you install the product.



CAUTION: Use original spare parts and installation material.

5.1 Main components for installation

The installation involves the following components:

- A robotic lawn mower that mows the lawn automatically.
- A charging station, which has 2 functions:
 - To send control signals along the boundary wire.
 - To charge the product.
- A power supply, which is connected to the charging station and a 100-240V power outlet.
- Loop wire, which is laid around the work area and around objects and plants that the product must not run into. The loop wire is used both as boundary wire.

5.3 General preparations



CAUTION: Holes with water in the lawn can cause damage to the product.

Note: Read through the Installation chapter before beginning the installation.

How the installation is done affects how the product performs. It is therefore important to plan the installation carefully.

- Fill in holes in the lawn.
- Cut the grass before you install the product. Make sure that the grass is maximum 4cm/1.6 in.

Note: The first weeks after installation the perceived sound level when cutting the grass may be higher than expected. When the product has cut the grass for some time, the perceived sound level is much lower.

5.4 Before the installation of the wires

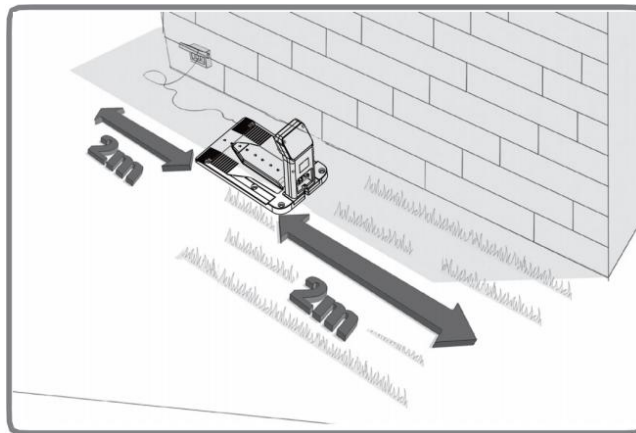
You can select to attach the wires with stakes or bury them. You can use the 2 procedures for the same work area.



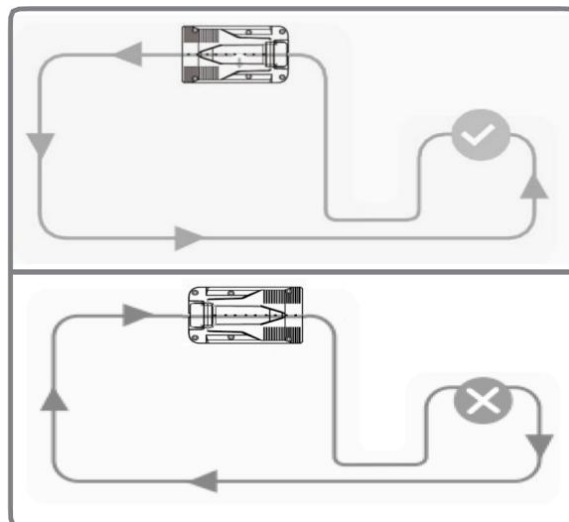
CAUTION: If you use a dethatcher in the work area, bury the boundary wire to prevent them from damage.

5.5 where to put the charging station

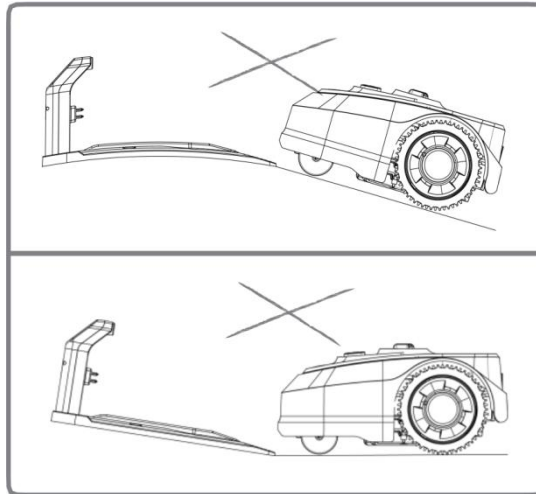
- The charging base should be placed along a straight line . Allow 2m distance with no obstacles both front and back of the charging base.
- Put the charging station in an area with protection from the sun.



- The Charging Station should be placed counter-clockwise at the edge of the work area.



- Position the charging station on the flat level ground . The free space (200cm) around the charging station shall also be level.

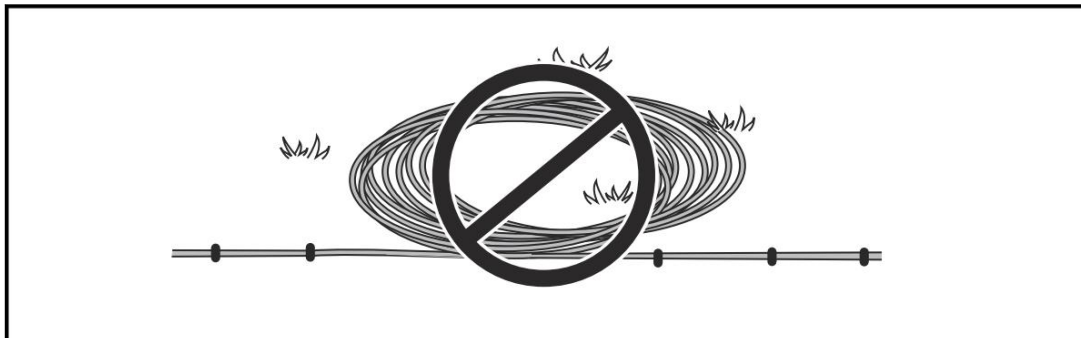


5.6 Where to put the power supply

⚠ WARNING: Do not cut or extend the low-voltage cable. There is a risk of electrical shock.

⚠ CAUTION: Make sure that the blades on the product do not cut the low-voltage cable.

⚠ CAUTION: Do not put the low-voltage cable in a coil or below the charging station plate. The coil causes interference with the signal from the charging station.



- Put the power supply in an area with a roof and protection from the sun and rain.
- Put the power supply in an area with good airflow.

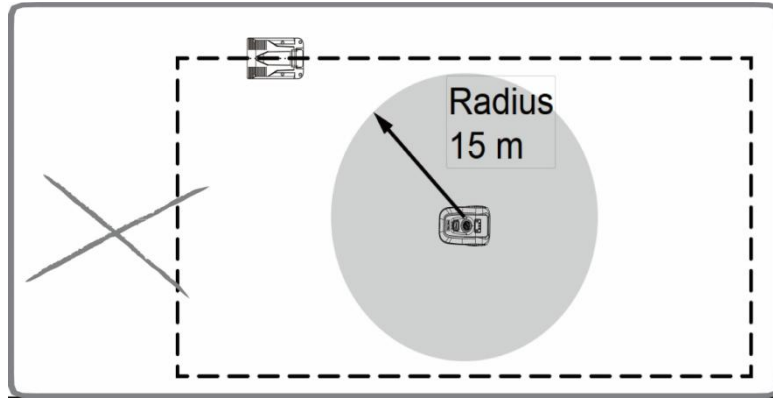
5.7 Installing the boundary wire

⚠ CAUTION: There must be a barrier of minimum 15 cm / 6 in. in height between the boundary wire and water bodies, slopes, precipices or public roads. This will prevent damage to the product.

⚠ CAUTION: Do not let the product operate on gravel.

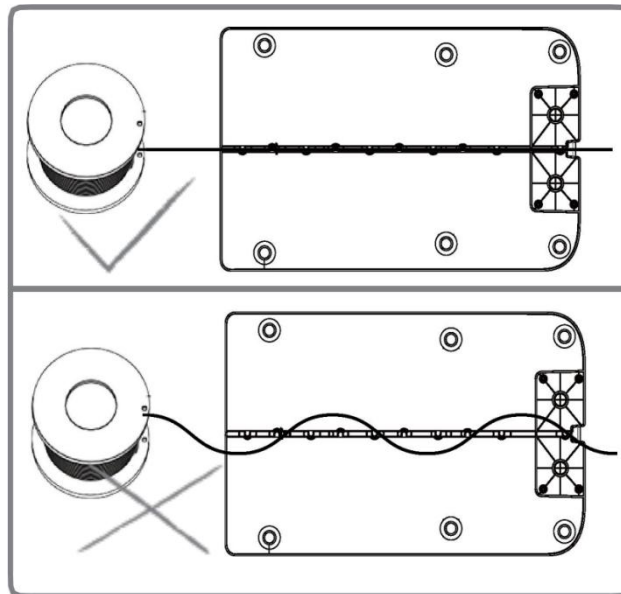
⚠ CAUTION: For careful operation isolate all obstacles such as trees, roots and stones.

- The lawnmower can detect the signal from the boundary wire within a 15 m radius.
- work area with no boundary wire within a 15 m radius, the signal will not be detected and the lawnmower will stop.

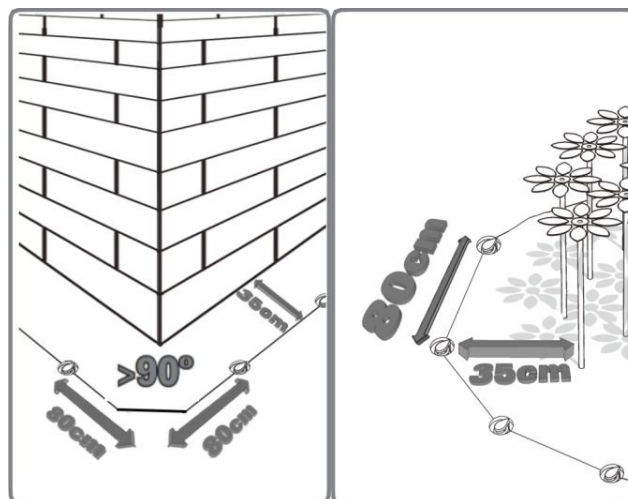


- Pass the other end of the boundary wire through the groove under the charging station.

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

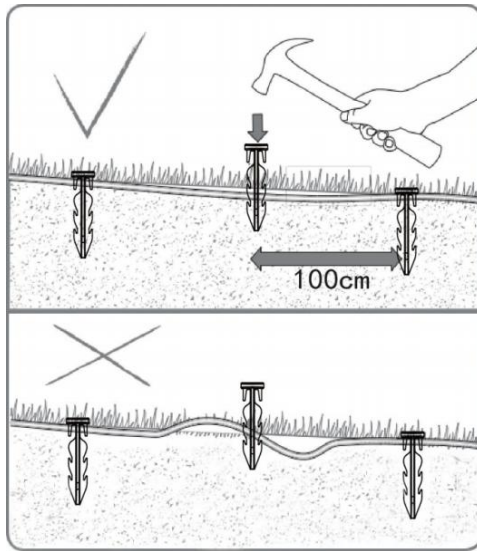


- When laying the boundary wire, use the distance gauge to keep a 35cm space between the wire and the boundary.

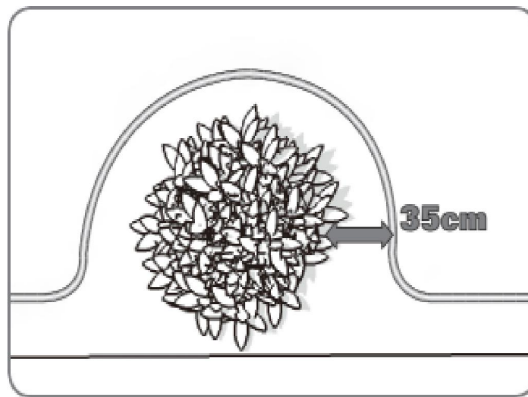


- Each Boundary wire pegs should be placed around 80cm to 100cm apart.

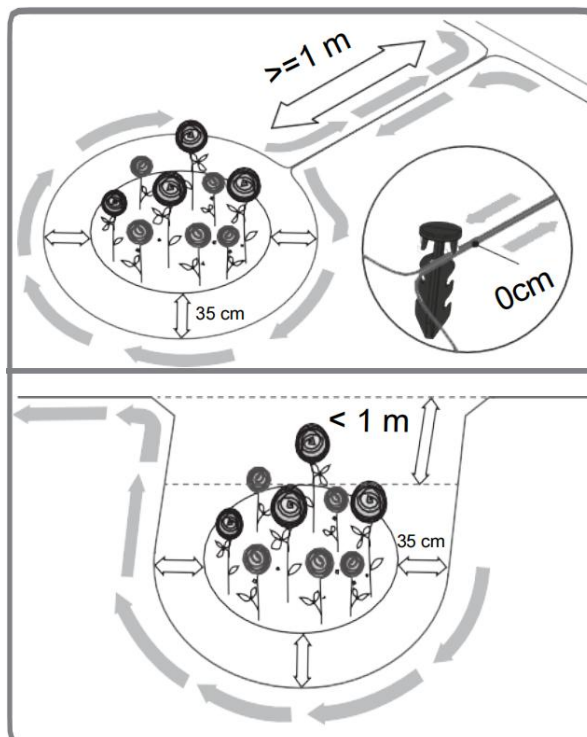
Note:Keep the boundary wire straight and tight between the pegs, there should be no slack wire between the pegs.



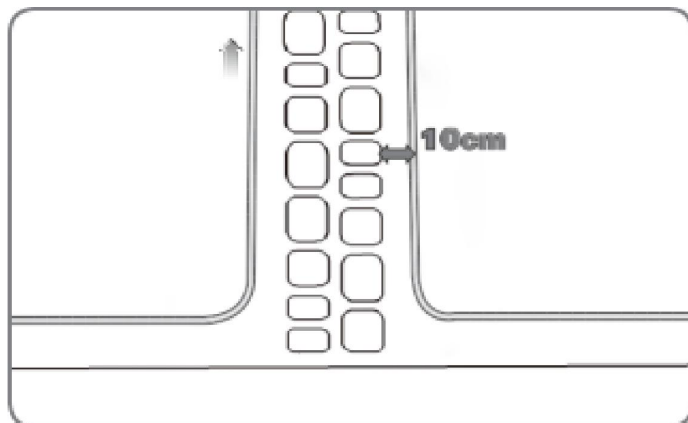
- A feature, such as flowers or shrubs that are close to the mowing boundary, should be part of the boundary as shown in the picture.



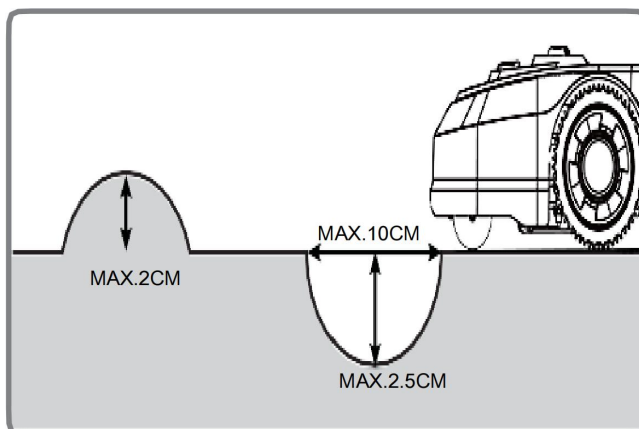
- Obstacles with a distance $\geq 1\text{m}$ to boundary can be excluded as “Islands”.
- Obstacles with shorter distance to boundary shall be excluded as “peninsulas”.
- The boundary wire between the island and perimeter should be laid close together and held in place by the same wire peg.



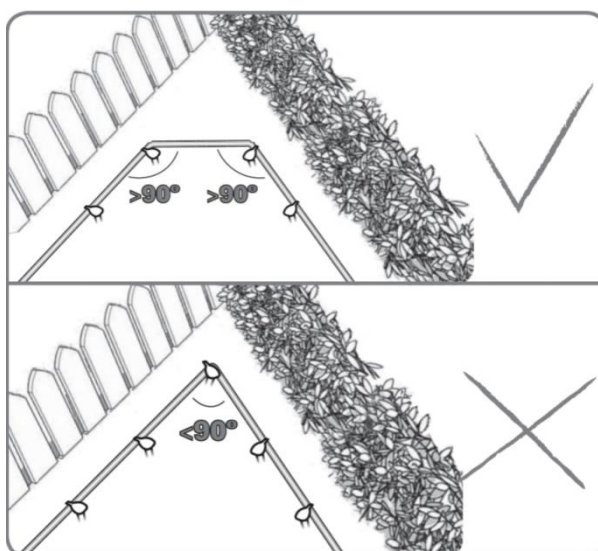
- In the case of an obstacle that is level with ground and safe for the Lawn Mower to run over, such as a driveway or path, then only a 10cm space is needed.



- In case of large bumps (higher than 2cm, lower than 10 cm) or dips (wider than 10cm and deeper than 2.5 cm), please determine if the blades would touch the ground or if your robotic lawnmower would get stuck. If this is the case, either make the inclines smoother or exclude these areas with boundary wire.

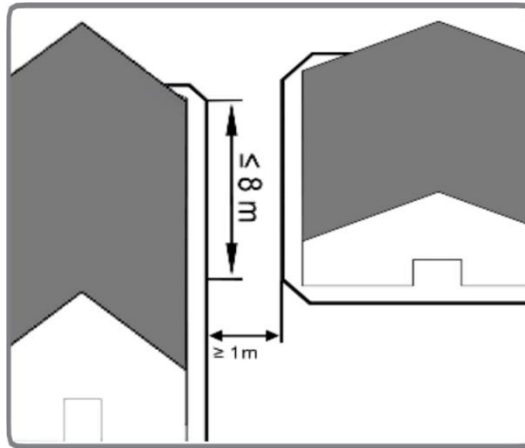


- Ensure the Boundary Wire is perfectly straight in each corner, and the angle of boundary wire is bigger than 90°.



5.7.1 Narrow passages

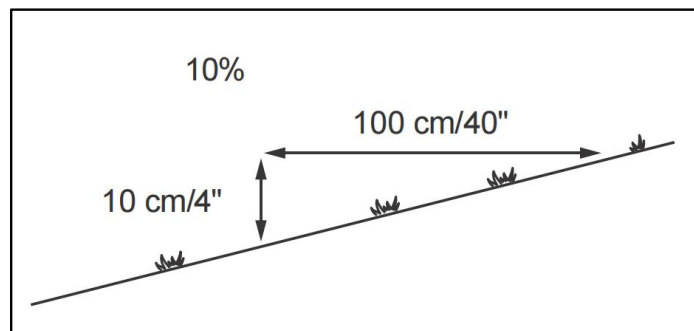
Narrow passages on the bordered lawn area should be at least 1 m wide and no more than 8 m long.



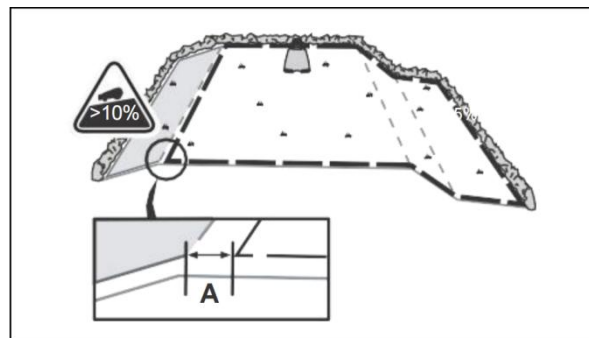
5.7.2 To put the boundary wire in a slope

The product can operate in 30% slopes.

Slopes that are too steep must be isolated with the boundary wire. The gradient (%) is calculated as height per m. Example: 10cm / 100 cm = 10%.



- For slopes steeper than 30% inside the work area, isolate the slope with boundary wire.
- For slopes steeper than 10% along the outer edge of the lawn, put the boundary wire 20 cm / 8 in. (A) from the edge.

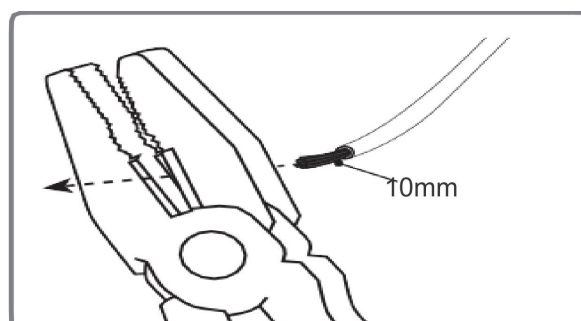


- For slopes adjacent to a public road, put a barrier of minimum 15 cm / 6 in. along the outer edge of the slope.

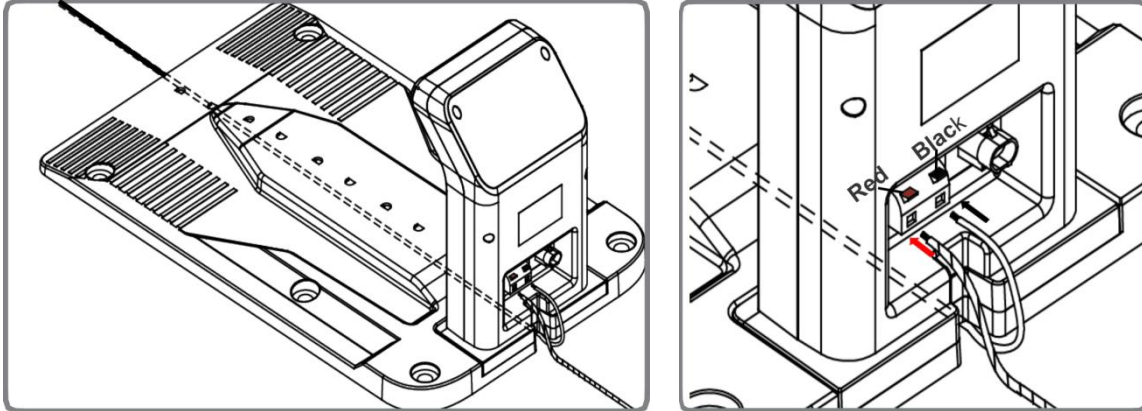
You can use a wall or a fence as a barrier.

5.7.3 Connect the base to the boundary wire

Use a wire stripper to remove 10-15 mm insulation from the wire end. Twist the strands tight .



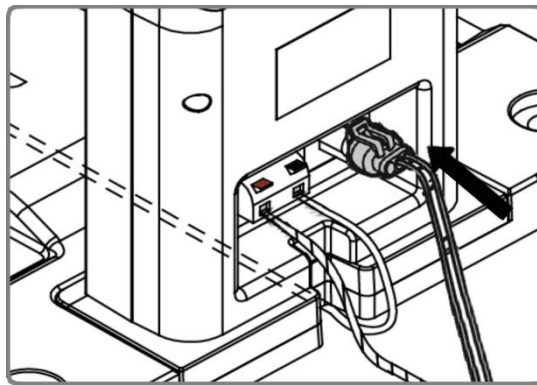
1. Connect one end of the boundary wire passing through the bottom plate of the charging station to the contact socket marked in black.
2. Connect the wire end of the boundary wire that runs away from the front and surrounds the lawn to be mown to the contact socket marked red.



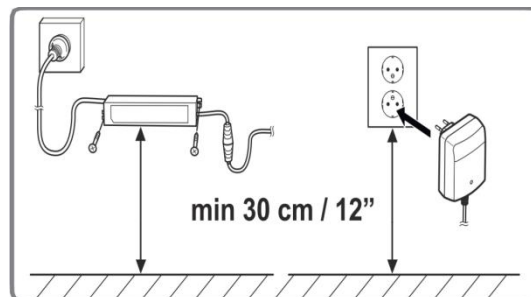
Note: Do not attach the charging station with the screws to the ground until the guide wire is installed.

5.7.4 Connection adapter

1. One end plug of power adapter to the Power plug on the charging station .



2. Put the power supply at a minimum height of 30 cm / 12 in.



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

Note: Check the LED on the charging station.

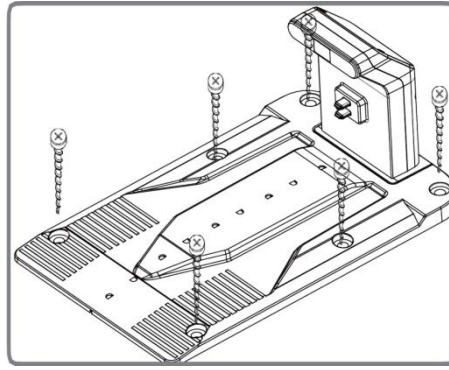
If the LED lights up blue, the boundary wire is connected to the charging station correctly.

5.7.5 Fixing the charging Station

When you are happy that the boundary wire and Charging station are in the correct position, permanently secure the base plate in place using the supplied threaded plastic fixing screws .

Tap into place with hammer to a depth of approx. 30mm before then using the Phillips screwdriver to screw into place.

Note: If the indicator LED lamp does not have a green light, do a check of the installation. Refer to Indicator lamp in the charging station on page 26 and To install the charging station.



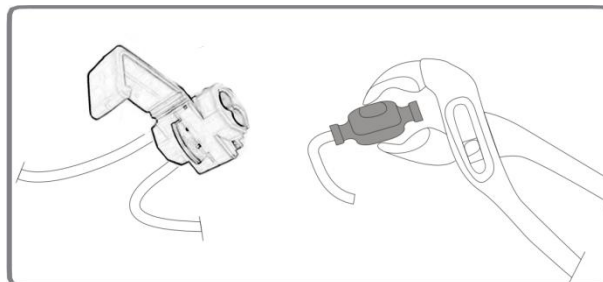
5.7.6 To extend the boundary wire or the guide wire

Note: Extend the boundary wire or the guide wire if it is too short for the work area. Use original spare parts, for example couplers.

1. Disconnect the charging station from the power outlet.
2. Cut the boundary wire or the guide 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 or the guide wire into position.
5. Put the wire ends into a coupler.

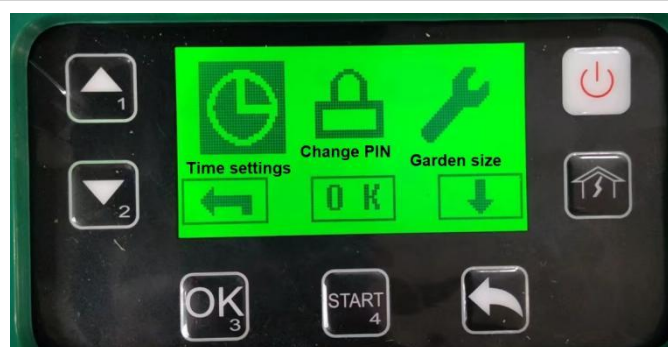
Note: Make sure that you can see the ends of the boundary wire or the guide wire through the transparent area of the coupler.

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



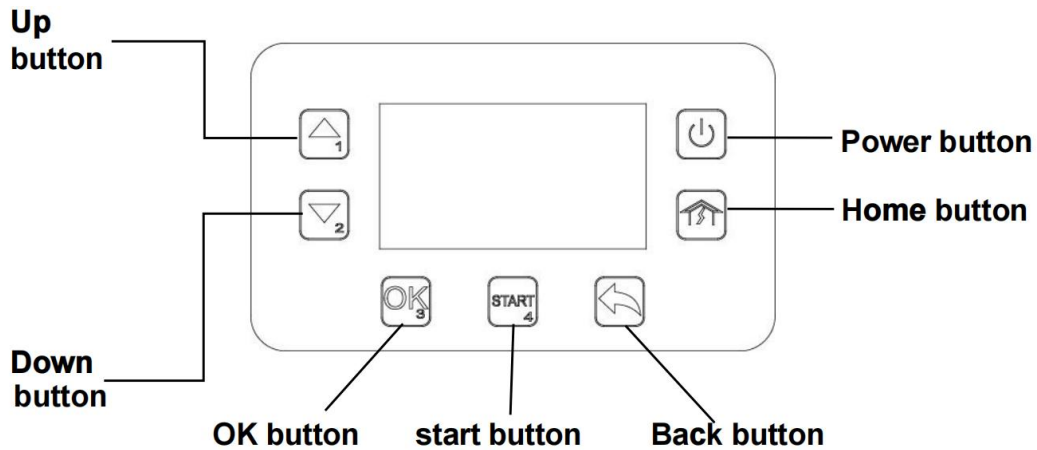
5.8 Menu structure overview








Main menu	Menu level 2	Menu level 3
Auto mode		
Perimeter		
Home		
Spiral		
Menu	Schedule(Garden size)	
	Change PIN	
	Time Settings	Adjust time
		Program mowing times



6. OPERATION


6.1. Control panel




Button on the control panel	Name	Number for PIN entry	Functions
	UP button	1	Move the selection/cursor up in the menu interface Increase digit when setting parameters
	DOWN button	2	Move the selection/cursor down in the menu interface Reduce digit when setting parameters
	OK button	3	Confirm setting Call up PIN entry interface after an error condition has ended Call up next menu Confirmation to move from main menu to next menu level
	START button	4	Start
	BACK button		Back to previous menu Cancel next job
	HOUSE button		Press in standby mode to make the robot return to the charging station
	POWER button		Power on/off

6.2. Main switch

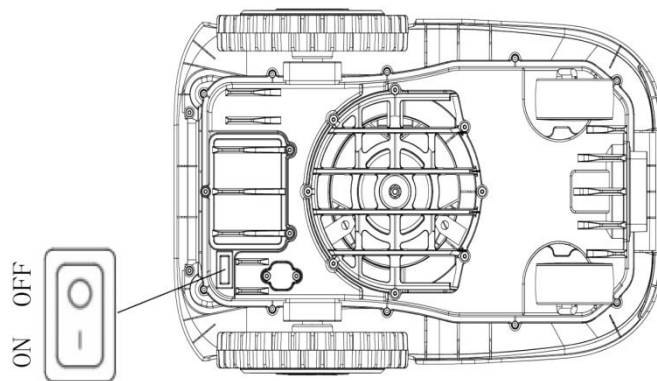
 **WARNING:** Read the safety instructions carefully before you start the product.

 **WARNING:** Keep your hands and feet away from the rotating blades.

Do not put your hands or feet close to or under the product when the product is switched on.

 **WARNING:** Do not use the product when persons, especially children, or animals are in the work area.

- Set the main switch to position I to start the product.
- Set the main switch to the 0 position when not in use or before performing inspection or maintenance on the product.



6.3 To start the product

1. Put the product in the charging station.
2. Push the ON/OFF button to ON.

Note: If the battery is very low, the product needs to charge before you can switch on the product.

3. Push the Power buttons, the display screen lights up.
4. Enter the 4-digit PIN (factory setting password "1234").



You will find which buttons correspond to which numbers in the chapter "Control panel".

Note: The first weeks after installation the perceived sound level when cutting the grass may be higher than expected. When the product has cut the grass for some time, the perceived sound level is much lower.

6.4 Operation mode start (Start)

After input the password, it shows menu to select the following operating modes:

- Auto mode
- Perimeter
- Home
- Spiral

Refer to Menu structure overview 1 on page 17.

6.4.1 Auto mode

- In this mode, the product will automatically mow and charge.

1. Use the arrow buttons to select AUTO mode, and press the OK button to enter the mode.
2. Press the start button to activate the automatic mowing mode

Note: Starting from the charging station requires a battery capacity of more than 70%. Otherwise, the mower automatically switches to charge mode until the capacity is more than 90%, then it automatically leaves the charging station.

Starting outside the charging station and inside the boundary wire requires a battery capacity of more than 40%. If the battery capacity is less than or equal to 40%, the mower automatically returns to the charging station.

6.4.2 Perimeter

Use the arrow buttons to select Perimeter mode, and press the OK button to enter the mode.

Press the start button to activate the Perimeter mode.

The mower cuts along the Boundary wire once and returns to the charging station to enter standby mode.

6.4.3 Home

When the unit is in standby mode, press the HOME button .

Then press the start button the mower moves to the charging station. It then begins to charge there.

6.4.4 Spiral

1. Select "Spiral mode" with the arrow button, Press the OK button to enter.
2. Press the start button to start.
3. The mower starts mowing with the fixed point. clockwise spiral direction and after mowing for 5 minutes, continue cutting at the next point .

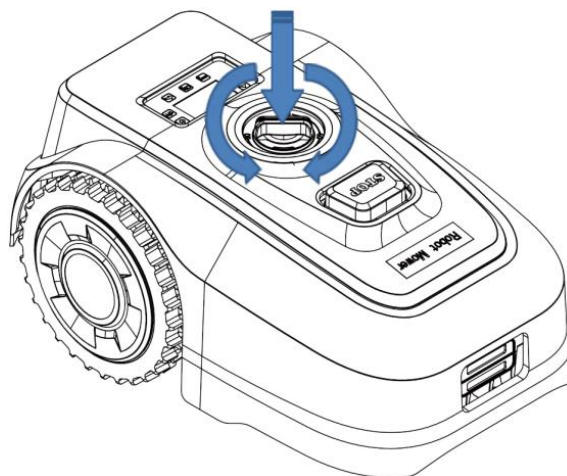
Note: When the lawn mower hits the boundary wire it continues mowing in the opposite direction.

6.5 Setting the cutting height

 **CAUTION:** Switch off the device and wait for the blades to stop .

There is a risk of personal injury!

1. Press down on the height adjustment knob and turn the knob.
2. Rotate to the desired height and release.

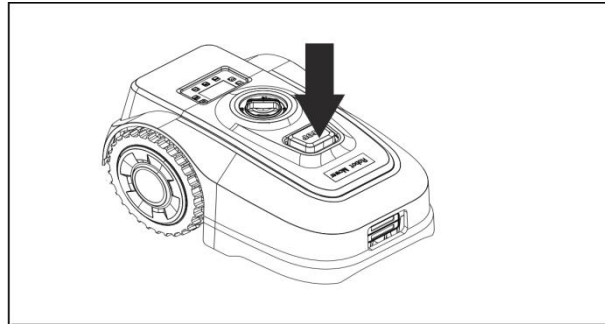


- The device can be adjusted to a height of 30-60mm.
- The correct cutting height is between 30 and 45 mm for an ornamental lawn and about 30 to 65 mm for a utility lawn.

Note: A high cutting height should be selected for the first cuts in the season.

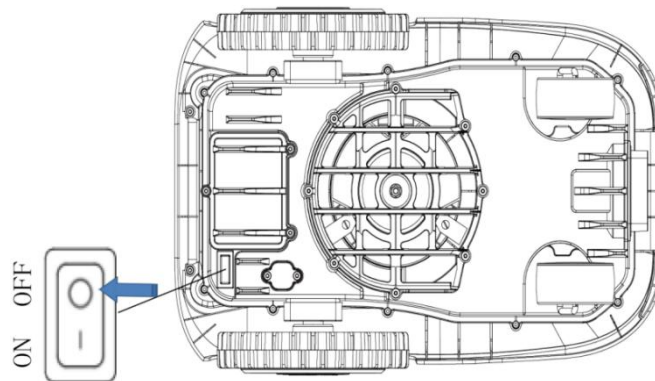
6.6 To stop the product

1. Push the STOP button on top of the product. The product stops and the cutting motor stops.



6.7 To switch off the product

1. Press and hold the Power button .
2. Long term non use requires turning off the bottom power switch.



The lawn mower stops if:

- The STOP button is pressed
- It loses the boundary wire signal and does not find it again within 5 minutes
- It crosses the boundary wire when mowing
- It gets stuck between obstacles and needs more than 10 seconds to find a way out.
- It is raised

6.8 Charging the battery

- The lawn mower automatically returns to the charging station when it has a low charge status. To do so, the lawn mower locates the nearest boundary wire and follows this in a clockwise direction.
- You can also place the lawn mower in the charging station yourself.

⚠ CAUTION: Risk of injury! Press the STOP button before picking up the mower!

After the battery is fully charged Or charge for 1 hour, the charging process stops and the lawn mower switches to standby mode.

6.9 Working instructions

- Regular mowing stimulates the grass to an increased leaf formation, while at the same time killing weeds. As a result, the lawn becomes denser after each mowing and an evenly resilient lawn is created.
- The first cut takes place roughly in April when the grass is about 7-8cm high. During the main growing season, the lawn is mowed at least once a week.

6.10 Make an estimate of the necessary operating time

If the work area is less than maximum product capacity, the schedule must be set to decrease the wear on the lawn and the product. The product has a maximum cutting time each day. You can set

the operating time of the product in the schedule. The operating time includes cutting, searching and charging. The operating time can be different because of many reasons, for example the layout of the work area, the grass growth and age of the battery. When the product has operated to the maximum cutting time in a day, the message of today's mowing complete is shown in the display of the product.

The recommended operating times for some work area examples are shown in the table below. If the result is not satisfactory, increase the operating time.

Area(m ²)	Recommended operating time(h)
100	3
200	5
300	8

7. MAINTENANCE

7.1 Introduction

 **WARNING:** The product must be switched off before any maintenance is done.

 **WARNING:** Wear protective gloves.

For better operation and longer service life, make sure to clean the product regularly and replace worn parts. All maintenance and servicing must be done according to instructions.

When the product is first used, the blade disc and blades should be inspected once a week. If the amount of wear during this period has been low, the inspection interval can be increased. It is important that the blade disc rotates easily. The edges of the blades should not be damaged. The lifetime of the blades varies immensely and depends for instance on:


- Operating time and size of the work area.
- Type of grass and seasonal growth.
- Soil, sand and use of fertilizers.
- The presence of objects such as cones, windfalls, toys, tools, stones, roots and the like.

The normal life is 4 to 7 weeks when used under favorable conditions.

Refer to To replace the blades on page 23 on how to replace the blades.

Note: Working with blunt blades gives a poorer mowing result. The grass is not cut cleanly and more energy is needed resulting in the product not mowing such a large area.

7.2 Clean the product

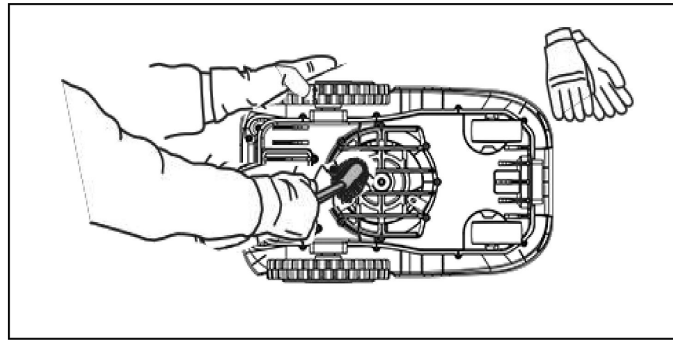
 **CAUTION:** Do not use a high-pressure washer to clean the product. Do not use solvents for cleaning.

The product does not operate satisfactorily in slopes if the wheels are blocked with grass. Use a soft brush to clean the product.

7.2.1 Chassis and blade disc

1. Push the STOP button.
2. Push the Power button to switch off the product.
3. If the product is dirty, clean it by using a brush or a water hose. Do not use a high-pressure washer.
4. Lift the product onto its side.
5. Clean the blade disc guard and chassis using for example a dish brush. At the same time, check

that the blade disc rotates freely in relation to the foot guard. Also, check that the blades are intact and can pivot freely.



7.2.2 Wheels

Clean around the wheels. Grass on the wheels can impact on how the product performs in slopes.

7.2.3 The body of the product

Use a moist, soft sponge or cloth to clean the body of the product. If the body of the product is dirty, use a mild soap solution to clean it.

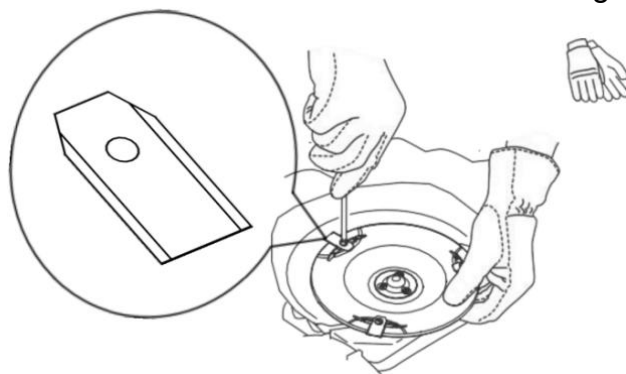
7.2.4 Charging station

WARNING: Disconnect the power supply from the power outlet before any maintenance, or cleaning of charging station or power supply.

Clean the charging station regularly from grass, leaves, twigs and other objects that may impede docking.

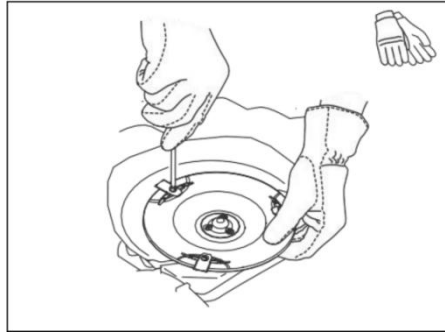
7.3 Replace the blades

WARNING: Use blades and screws of the right type. can only guarantee safety when using original blades. Only replacing the blades and reusing the screw can result in a screw wearing during mowing. The blades can then be propelled from under the body and cause serious injury. Replace worn or damaged parts for safety reasons. Even if the blades are intact, they should be replaced on a regular basis for the best mowing result and low energy usage. All 3 blades and screws must be replaced at the same time to obtain a balanced cutting system.



7.3.1 To replace the blades

1. Push the STOP button.
2. Set the main switch to the 0 position.
3. Check if the screen is turned off.
4. Turn the product upside down. Place the product on a soft and clean surface to avoid scratching the body and the hatch.
5. Remove the 8 screws on the protective cover and remove the protective cover.
6. Remove the 3 screws. Use a straight slot or cross-tip screwdriver.



7. Remove each blade and screw.
8. Fasten new blades and screws.
9. Check that the blades can pivot freely
 - Checking and, if required, replacing wear items such as blades and bearings.
 - Testing the product's battery capacity as well as a recommendation to replace battery if necessary.
 - If new firmware is available, the product is updated.

8. TROUBLESHOOTING

8.1 Fault messages

The fault messages in the table below are shown in the display of the product. Speak to your representative if the same message shows frequently.

Error message	Cause	Action
left/right Motor Overloaded	Grass or other object around the drive wheel.	Remove grass or other object.
Mowing Motor Overloaded	Grass or other object around the blade disc.	Remove grass or other object.
	The blade disc is in water.	Move the product and prevent the collection of water in the work area.
	The grass is too high.	Cut the grass before you install the product. Make sure that the grass is maximum 4 cm / 1.6 in.
Stop	Robotic lawnmower stops working	Press the OK button to restore.
Out of boundary	A section of boundary wire is put across the other section of boundary wire to the charging station	Make sure that the boundary wire is connected correctly.
	The boundary wire is too near the edge of the work area.	Make sure that the boundary wire is installed correctly. Refer to To install the boundary wire on page 11 .
	The work area slopes much by the boundary loop	
	The boundary wire is put in the incorrect direction around an island.	
	Interference to the boundary wire from metal objects such as fences, reinforcement steel or buried cables near by.	Move the boundary wire.
	The product can not find the correct loop	Identify and turn off other

	signal because of interference with a loop signal from a different product installation near by.	interfering signals
No Station Signal	The power supply or low-voltage cable are not connected.	If the LED status indicator on the charging station is not lit, it shows that there is no power. Examine the power outlet connection and the residual-current device. Make sure that the low-voltage cable is connected to the charging station.
	The power supply or low-voltage cable are damaged or not connected.	Replace the power supply or low-voltage cable.
	The boundary wire is not connected to the charging station.	Connect the boundary wire to the charging station. Replace the connectors if damaged. Refer to To install the boundary wire on page 11.
	The boundary wire is damaged	Do a check of the LED status indicator on the charging station. If it shows damage in the boundary wire, replace the damaged section with new boundary wire.
	Interference from metal objects such as fences, reinforcement steel or buried cables near by	Move the boundary wire and/or make islands in the work area to increase the signal strength.
	The product is too far from the boundary wire.	Install the boundary wire to make all parts of the work area maximum 15 m / 50 ft. from the boundary wire.
CURRENT MODE POWER LOW	The product cannot find the charging station.	Manually dock robotic lawnmower in the charging station for charging.
	The battery is at the end of its life cycle.	Replace the battery.
Wrong Password	Incorrect PIN code has been entered. 5 tries are permitted to enter the correct PIN code, and then the keypad is blocked for a period of time.	Enter the correct PIN code.If you forget your PIN, please modify it on the app
Tilt Sensor Triggered	Robotic lawnmower is tilted more than the maximum angle.	Place the lawnmower on a fat surface
Lift Sensor Triggered	Robotic lawnmower is lifted up	Check if the robotic lawnmower is lifted up by obstacles.
Collision Error	Robotic lawnmower is tilted more than the maximum angle.	Place the lawnmower on a fat surface

Both Hall Anoma	Robotic lawnmower is tilted more than the maximum angle. Place the lawnmower on a flat surface	Restart this product. If the problem exists, please join the licensed maintenance agent.
Obstacle On Perimeter		
Collision Error		

8.2 Indicator lamp in the charging station

The charging station LED indicates the status of the charging station.

LED light display	Status	Action
Blue light on	Boundary wire is connected successfully; fully charged	Any measures to be taken.
Red light on	Power supply is connected successfully, while the wire is connected unsuccessfully	Check and connect the wire again.
Red and blue lights flashing	Charging	

8.3 Problem

If your product does not work as expected, follow the symptoms guide below.

Problem	Possible cause	Solution
Strong vibration and noise	Blades or blade disc may be damaged	Check the condition of the blades and blade disc.
Bad cutting result	Robotic lawnmower does not work enough hours per day.	Increase the set value of working area.
	Mowing area is too big for this product.	
	Blades are dull	Change all the blades and screws in order to balance the blade disc.
	Grass or other object has wrapped around the blade disc.	Check the blades and blade disc and remove the grass or other object.
	The cutting height is too low for the length of the grass.	Raise the cutting height and then gradually lower the setting.
	Grass accumulated in the chassis.	Clean the chassis.
The charging time is far more than the rated charging time.	No power to charging station, charging station LED is not lighting.	Check the power cord is connected properly.
	Poor contact caused by debris on the charging strips.	Clean the contact pins and charging strips.
	Charging protection has activated due to high temperature.	Place the charging station in a shady area or wait until the temperature has cooled down.
Shorter run-time between charging	Hindrance to blade disc.	Check and clean the blade disc.
	The battery may be exhausted or old.	Replace battery pack by authorized service centre.
Cannot correctly dock in	Bad ground condition around	Fix the ground problem.

the charging station	the base plate	
	Poor electric contact caused by debris on the charging strip.	Clean the contact pins and charging strips.
Robotic lawnmower does not mow an area within a boundary wire zone. Robotic lawn mower reverses or rotates erratically near the boundary wire.	The boundary wire of another robotic lawnmower or another robotic mower is positioned too closely.	Ensure your robotic lawnmower boundary wire has at least 1m distance to the neighbouring boundary wire.
	The boundary wire has been installed with tight corners.	Check the boundary wire to ensure the corners are smooth.
	In wet conditions, the boundary wire signal may leak if wire has been joined or repaired.	Check boundary wire joints. Ensure insulate the joints.
	There is electric signal leakage due to broken insulation of boundary wire.	Repair damaged boundary wire.
Wheels skid or damage lawn.	The lawn is too wet.	Do not mowing when the lawn is wet.
Robotic lawnmower exits the boundary wire due to high speed when going down a hill.	The boundary wire is placed on a slope steeper than 17% (10°).	Reposition the boundary wire away from slopes that are steeper than 17% (10°).

8.4 Symptoms

If your product does not work as expected, follow the symptoms guide below.

Symptoms	Cause	Action
The product has difficulty docking.	The guide wire is not put straight in a line and correct distance from the charging station.	Do a check of the installation of the charging station. Refer to to install the charging station on page 11 .
	The guide wire is not put in the slot in the charging station plate.	Make sure that the guide wire is put straight in a line and put in the slot in the charging station plate. Refer to to install the guide wire on page 11 .
	The charging station is not on a level surface.	Put the charging station on a level surface. Refer to To examine where to put the charging station on page 10 .
Strong vibration and noise	The cutting system is not in balance because of damaged blades.	Examine the blades and screws and replace them if necessary. Refer to Replace the blades on page 23 .
	The cutting system is not in balance because of too many blades in the same position.	Do a check that only one blade is attached to each screw.
	Different thickness of blades are installed on the product.	Do a check if the blades are of different thickness and replace if necessary.
The product operates,	The product searches for the	Usual operation for the product.

but the blade disc does not rotate.	charging station, or is moving to the starting point.	The blade disc does not rotate when the product is searching for the charging station.
The product operates for shorter periods than usual between charges.	Grass or other object causes a blockage to the blade disc.	Remove and clean the blade disc. Refer to Clean the product on page 22 .
	The battery is at the end of its life cycle.	Replace the battery.
	Blunt blades. More energy is necessary when cutting the grass.	Replace the blades. Refer to Replace the blades on page 23 .
Mowing and charging times are shorter than usual.	The battery is at the end of its life cycle.	Replace the battery.
The product is parked for hours in the charging station.	The product has a standby period, refer to the Standby time table. Refer to Make an estimate of the necessary operating time on page 22.	Usual operation for the product.
	The STOP button has been pushed.	Open the hatch, enter the PIN code and confirm with the OK button. Push the GO button and then close the hatch.
	Parking mode is enabled.	Change the operating mode. Refer to Operating modes on page 19 .
	The product does not operate if the battery temperature is too high or too low.	Make sure that the charging station is put in an area with protection from the sun.
Uneven mowing results.	The product operates for a small number of hours per day.	Increase the cutting time. Refer to Make an estimate of the necessary operating time on page 22 .
	For the shape of the work area it is necessary to adjust the settings for Lawn Coverage to cover all parts of the work area.	Change the settings of the areas where the product starts to cut and how often. Refer to To set the Lawn Coverage function on page 22.
	The work area is too large.	Decrease the size of the work area or extend the schedule.
	Blunt blades.	Replace all the blades. Refer to Replace the blades on page 23 .
	Long grass in relation to the set cutting height.	Increase the cutting height and then lower it when the grass is shorter.
	Collection of grass by the blade disc or around the motor shaft.	Remove the collection of grass and clean the product. Refer to Clean the product on page 22.

9. APP INSTRUCTIONS

9.1 APP Quick Start

1. Download and open smart life

Search for “Smart Life” in the APP store or scan the QR code.

(If it is first time download APP please sign up)


2. Ensure that the charging pile is installed within the coverage of 2.4GHz WIFI signal

3. Power on the mower.

4. Ensure that the mobile phone open Bluetooth function and is connected to the 2.4Ghz Wi-Fi network;

5. Connect the Charge Station to the Power Supply .



 Support 2.4GHz WIFI only .If your router supports both the 2.4 GHz and 5 GHz bands, but only one Wi-Fi name is displayed on the Wi-Fi search page of your mobile phone, perform these steps:

1. Go to the Wireless page of the router. (The entry address is usually provided on the label attached to the back of the router).

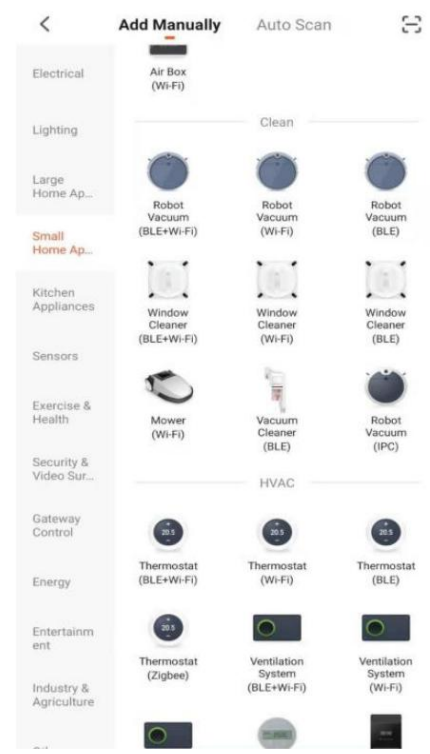
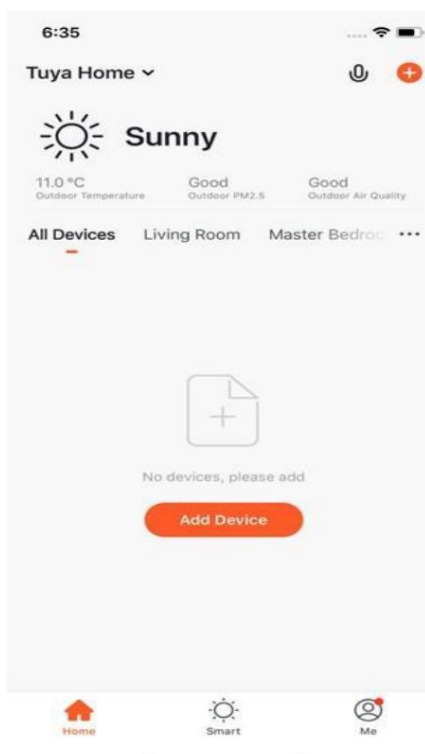
2. Go to the 2.4 GHz setting page, and set the Wi-Fi name (SSID) to (XXX) -2.4G, where xxx indicates the Wi-Fi name. Save setting.

3. Go to the 5 GHz setting page, and set the Wi-Fi name (SSID) to XXX) -5G,where xxx indicates the Wi-Fi name. Save setting.

When the preceding settings are complete, the new Wi-Fi names will appear on the Wi-Fi settings page of your mobile phone.

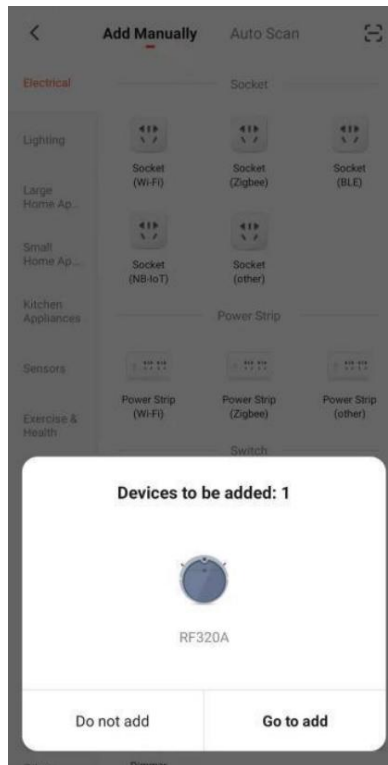
9.2 Add devices

Click Add Devices or + in the top right corner to enter the add device page. There are two ways of adding devices, which are Add Manually and Auto Scan. (If you use Auto Scan, you need to allow the APP’s access to use Wi-Fi and Bluetooth).

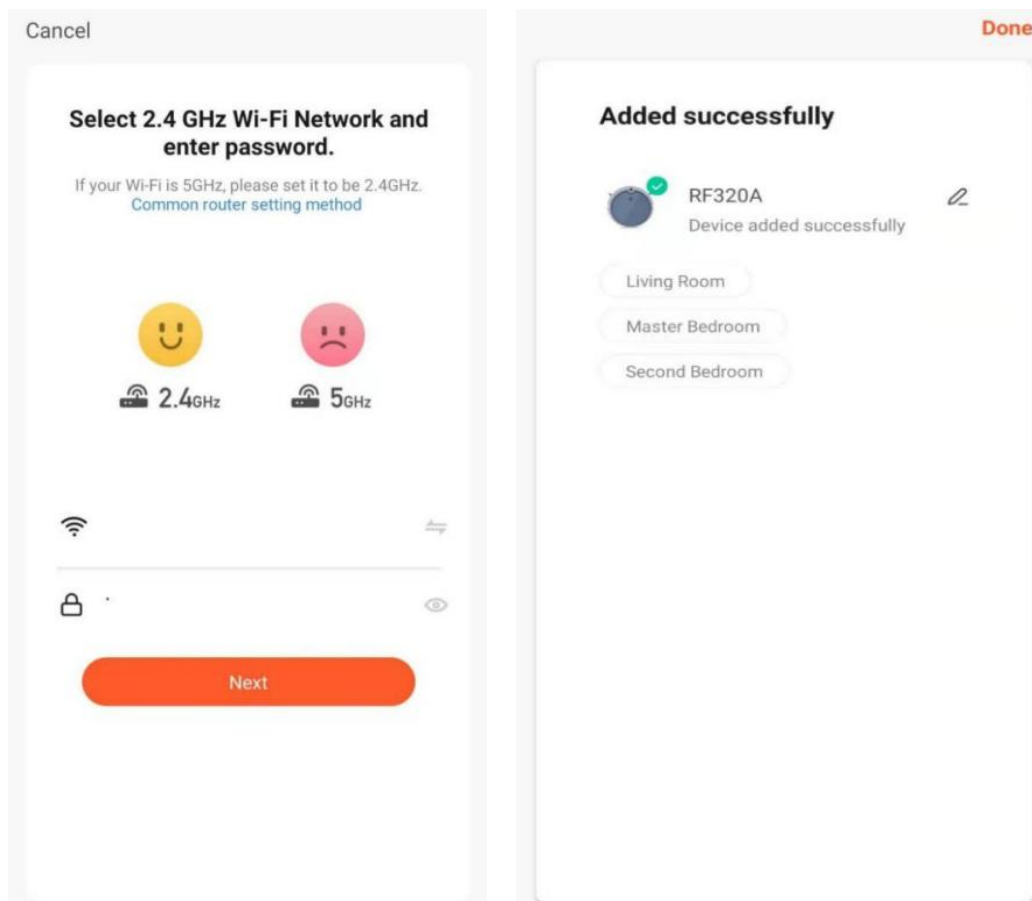


9.3 Add devices By Bluetooth & WIFI Auto Scan

1. Connect the Charge Station to the Power Supply first, and turn on the Bluetooth on your phone and open the App. A notification will pop up on the home page indicating there is a device to be connected. If there are multiple devices to be connected, choose the device you need.



2. Confirm the device to be added, the App prompt user to enter the password for Wi-Fi (Only support 2.4GHz WiFi), then please wait for the device to automatically complete the connecting process.



10. TRANSPORTATION, STORAGE AND DISPOSAL

10.1 Transportation

The supplied Li-ion batteries obey the Dangerous Goods Legislation requirements.

- Obey all applicable national regulations.
- Obey the special requirement on package and labels for commercial transportation, including by third parties and forwarding agents.

10.2 Storage

- Fully charge the product. Refer to charge the battery on page 21 .
- Switch off the product. Refer to The ON/OFF button on page 20 .
- Clean the product. Refer to Clean the product on page 22 .
- Keep the product in a dry, frost free space.
- Keep the product with all wheels on level ground during storage.
- If you keep the charging station indoors, disconnect and remove the power supply and all the connectors from the charging station. Put the end of each connector wire in a connector protection box.

Note: If you keep the charging station outdoors, do not disconnect the power supply and the connectors. Speak to your service for information about available storage accessories for your product.

10.3 Disposal

FOR HOUSEHOLD USE ONLY



Electrical products should not be discarded with household products. According to the European Directive 2012/19/EU on waste electrical and electronic equipment and its implementation into national law, electrical products used must be collected separately and disposed of at collection points provided for this purpose. Talk with your local authorities or dealer for advice on recycling.

11. DECLARATION OF CONFORMITY



BUILDER SAS

32 rue Aristide Bergès - Z.I. du Casque - 31270 Cugnaux - France

Declares that the machine indicated below:

ROBOT LAWN MOWER

HRM20V600-A

Serial number: 20241121207-20241121356

Complies with the provisions of the Directive "machinery" 2006/42 / EC and national laws transposing it;

Also complies with the following European directives:

LVD Directive 2014/35/EU

EMC Directive 2014/30/EU

ROHS Directive(EU)2015/863 amending 2011/65/EU

DIRECTIVE RED 2014/53/EU

Is also in line with European standards, with national standards and the following technical provisions:

EN 60335-1:2012/A15:2021; EN 50636-2-107:2015/A3:2021;

EN 50663:2017; EN 301 489-1 V2.2.3:2019; EN 301 489-17 V3.3.0:2024;

EN 300 328 V2.2.2; EN 303 447 V1.3.1

EN 62311:2008; EN 50665:2017; EN 62479:2010

EN IEC 55014-1:2021; EN IEC 55014-2:2021

EN IEC 61000-3-2:2019/A1:2021; EN 61000-3-3:2013/A2:2021

EN IEC 61558-1:2019; EN 61558-2-16:2009/A1:2013

EN IEC 63000:2018; EN 50665:2017

Noise emission Directive 2000/14/EC Annex V and Directive 2005/88/EC

Guarantee sound power level: 70 dB(A)

Measured sound power level: 66.6 dB (A), k=3.0 dB(A)

Cugnaux, 08/10/2024

Philippe MARIE / CEO

Responsible of technical file: M. Olivier Patriarca

12. WARRANTY

The manufacturer guarantees the product against defects in material and workmanship for a period of 2 years from the date of the original purchase. It can be extended by one year if the user subscribes to website of myswap. The warranty only applies if the product is for household use. The warranty does not cover breakdowns due to normal wear and tear.

The manufacturer agrees to replace parts identified as defective by the designated distributor. The manufacturer does not accept responsibility for the replacement of the machine, in whole or in part, and/or ensuing damage.

The warranty does not cover breakdowns due to:

- insufficient maintenance.
- abnormal assembly, adjustment or operations of the product.
- parts subject to normal wear and tear.

The warranty does not extend to:

- shipping and packaging costs.
- using the tool for a purpose other than that for which it was designed.
- the use and maintenance of the machine done in a manner not described in the user manual.

Due to our policy of continuous product improvement, we reserve the right to alter or change specifications without notice. Consequently, the product may be different from the information contained therein, but a modification will be undertaken without notice if it is recognized as an improvement of the preceding characteristic.

READ THE MANUAL CAREFULLY BEFORE USING THE MACHINE.

When ordering spare parts, please indicate the part number or code, you can find this in the spare parts list in this manual. Keep the purchase receipt; without it, the warranty is invalid. To help you with your product, we invite you to contact us by phone or via our website:

+33 (0)9.70.75.30.30

<https://services.swap-europe.com/contact>

You must create a "ticket" via the web platform.

- Register or create your account.
- Indicate the reference of the tool.
- Choose the subject of your request.
- Describe your problem.

Attach these files: invoice or sales receipt, photo of the identification plate (serial number), photo of the part you need (for example: pins on the transformer plug which are broken).



swap

13. PRODUCT FAILURE

WHAT TO DO IF MY MACHINE BREAKS DOWN?

If you bought your product in a store:

- Make sure that your machine is complete with all accessories supplied, and clean! If this is not the case, the repairer will refuse the machine.
- Go to the store with the complete machine and with the receipt or invoice.

If you bought your product on a website:

- Make sure that your machine is complete with all accessories supplied, and clean! If this is not the case, the repairer will refuse the machine.
- Create a SWAP-Europe service ticket on the site: <https://services.swap-europe.com> When making the request on SWAP-Europe, you must attach the invoice and the photo of the nameplate (serial number).

Contact the repair station to make sure it is available before dropping off the machine.

Go to the repair station with the complete machine packed, accompanied by the purchase invoice and the station support sheet downloadable after the service request is completed on the SWAP-Europe site

Please keep your original packaging to allow for after-sales service returns or pack your machine with a similar cardboard box of the same dimensions.

For any question concerning our after-sales service you can make a request on our website <https://services.swap-europe.com>

Our hotline remains available at +33 (9) 70 75 30 30.



14. WARRANTY EXCLUSIONS

THE WARRANTY DOES NOT COVER:

- Start-up and setting up of the product.
- Damage resulting from normal wear and tear of the product.
- Damage resulting from improper use of the product.
- Damage resulting from assembly or start-up not in accordance with the user manual.
- Periodic and standard maintenance events.
- Actions of modification and dismantling that directly void the warranty.
- Products whose original authentication marking (brand, serial number) has been degraded, altered or withdrawn.
- Replacement of consumables.
- The use of non-original parts.
- Breakage of parts following impacts or projections.
- Accessories breakdowns.
- Defects and their consequences linked to any external cause.
- Loss of components and loss due to insufficient screwing.
- Cutting components and any damage related to the loosening of parts.
- Overload or overheating.
- Poor power supply quality: faulty voltage, voltage error, etc.
- Damages resulting from the deprivation of enjoyment of the product during the time necessary for repairs and more generally the costs related to the immobilization of the product.
- The costs of a second opinion established by a third party following an estimate by a SWAP-Europe repair station
- The use of a product which would show a defect or a breakage which was not the subject of an immediate report and/or repair with the services of SWAP-Europe.
- Deterioration linked to transport and storage*.

* In accordance with transport legislation, damage related to transport must be declared to carriers within 48 hours maximum after observation by registered letter with acknowledgement of receipt. This document is a supplement to your notice, a non-exhaustive list.

Attention: all orders must be checked in the presence of the delivery person. In case of refusal by the delivery person, it you must simply refuse the delivery and notify your refusal.

Reminder: the reserves do not exclude the notification by registered letter with acknowledgement within 72 hours.

Information:

Thermal devices must be wintered each season (service available on the SWAP-Europe site). Batteries must be charged before being stored.

HYUNDAI

POWER PRODUCTS



For inquiries, please contact:

BUILDER SAS

32 rue Aristide Bergès - Z.I. du Casque - 31270 Cugnaux - France

Tél.: +33(0)5.34.502.502 Fax.: +33(0)5.34.502.503

<http://www.hyundaipower-fr.com/>

Fabriqu  en R publique Populaire de Chine(PRC)