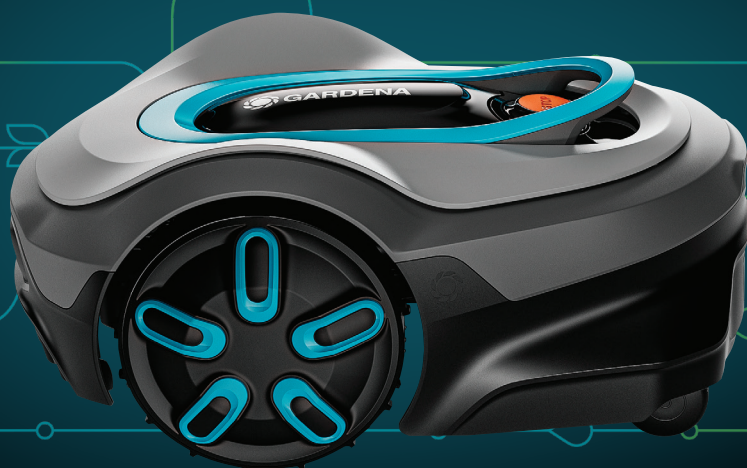




Operator's manual

SILENO flex



gardena.com

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1 Safety

1.1 Safety definitions

Warnings, cautions and notes are used to point out specially important parts of the manual.



WARNING: Used if there is a risk of injury or death for the operator or bystanders if the instructions in the manual are not obeyed.



CAUTION: Used if there is a risk of damage to the product, other materials or the adjacent area if the instructions in the manual are not obeyed.

Note: Used to give more information that is necessary in a given situation.

1.2 General safety instructions



WARNING: Read the warning instructions that follow before you use the product.

- Read the Operator's manual carefully and make sure you understand the instructions before you use the product. Keep for future reference.
- This appliance is not intended for use by children or persons with reduced physical, sensory or mental capabilities (that could affect a safe handling of the product), or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- The product must only be used with the equipment recommended by GARDENA. All other types of use are incorrect.
- Do not use the product when persons, especially children, or animals are in the work area.
- Warning signs must be put around the work area of the product if it operates in public areas. The signs must have the text that follows: Warning! Automatic lawn mower! Keep away from the machine! Supervise children!
- Do not touch moving hazardous parts, such as the blade disc, before it has come to a complete stop.
- Set the product to OFF before you clear a blockage, do maintenance or examine the product, and if the product starts to vibrate abnormally. Examine the product for damage before you start the product again. Do not use the product if it is damaged.
- If an injury or accident occur, get medical aid.
- Do not put power supply cable and extension cable in the work area. This can cause damage to the cables.
- Do not connect a damaged cable or plug, or touch a damaged cable, before it is disconnected from the power outlet. Disconnect the plug from the power outlet if the cable becomes damaged while in operation. A worn or damaged cable increases the risk of electrical shock. A damaged cable must be replaced by service personnel.
- When you connect the power supply to the power outlet, use a residual-current device (RCD) with a tripping current of maximum 30 mA.
- Only charge the product in the included charging station. For safe disposal of the battery, refer to *Disposal on page 40*. Incorrect use may result in electric shock, overheating or leaking of corrosive liquid from the battery. In the event of leakage of electrolyte, flush with water/neutralizing agent. Get medical aid if corrosive liquid comes in your eyes.
- Use only original batteries recommended by GARDENA. Product safety cannot be guaranteed with other than original batteries. Do not use non-rechargeable batteries.
- Follow the installation instructions that includes to specify the work area, refer to *Installation on page 11*.
- Follow the instructions about to start and operate the product, refer to *Operation on page 23*.
- If there is a risk of thunderstorm, GARDENA recommends that the power supply and all the wires to the charging station are disconnected to decrease the risk of damage to electrical components. Connect the power supply and all the wires again if there is no longer a risk of thunderstorm. It is important that all wires are connected correctly.
- Follow the maintenance instructions and if necessary use GARDENA original spare parts, refer to *Maintenance on page 27*.
- For technical data such as weight, dimensions and noise emission values, refer to *Technical data on page 41*.
- The operator is responsible for accidents or dangers that occurs to other persons or property.
- The product must only be operated, maintained and repaired by persons that are fully conversant with its special characteristics and safety regulations.
- It is not permitted to change the initial design of the product.
- Obey national regulations about electrical safety.
- GARDENA does not guarantee full compatibility between the product and other types of

wireless systems such as remote controls, radio transmitters or equivalent.

- Operation and charging temperature range is 5-40 °C / 41-104 °F. Temperature range for storage is 0-50 °C / 32-122 °F. Too high temperatures can cause damage to the product.

1.3 Safety instructions for installation



WARNING: Read the warning instructions that follow before you use the product.

- Do not install the charging station, including any accessory, at a location that is below, or within 60 cm / 24 in. from, any combustible material. In case of malfunction, heating of the charging station and the power supply may occur and create a potential risk of fire.
- Do not put the power supply at a height where there is a risk it can be put in water. Do not put the power supply on the ground.
- Do not encapsulate the power supply. Condensed water can harm the power supply and increase the risk of electrical shock.
- Do not install the charging station where there are pests, for example ants.
- Applicable to USA/Canada. If power supply is installed outdoors: Risk of Electric Shock. Install only to a covered Class A GFCI receptacle (RCD) that has an enclosure that is weatherproof with the attachment plug cap inserted or removed.
- Do not install the charging station where there is a risk of standing water.

1.4 Safety instructions for operation



WARNING: Read the warning instructions that follow before you use the product.

- Keep your hands and feet away from the rotating blades. Do not put your hands or feet near or below the product when it is set to ON.
- Use the park mode or set the product to OFF when persons, especially children or animals are in the work area. Refer to *Park on page 24*. GARDENA recommends to set the product to operate when the work area has no activity. The product can cause injury to animals at night in work area, for example hedgehogs. Refer to *Park / Schedule on page 24*.
- Make sure that there are no objects such as stones, branches, tools or toys on the lawn. The blades can be damaged if it hits an object.
- Do not lift the product or move it when it is set to ON.

- Do not let the product collide with persons or animals. If a person or animal comes in the way of the product, stop the product immediately. Refer to *To stop the product on page 25*.
- Do not put objects on top of the product or its charging station.
- Do not use the product if the **STOP** button does not work.
- Always set the product to OFF when it is not in operation. The product can only start when you enter the correct PIN code.
- Do not use the product at the same time as a pop-up sprinkler. Use the *Schedule* function so the product and pop-up sprinkler do not operate at the same time. Refer to *Park / Schedule on page 24*.
- Do not let the product operate when there is standing water in the work area. For example when heavy rain forms pools of water.

1.5 Safety instructions for maintenance



WARNING: Read the warning instructions that follow before you do maintenance on the product.

- Set the product to **OFF** when you do maintenance on the product.
- Do not use a high-pressure washer to clean the product. Do not use solvents to clean the product.
- Disconnect the plug to the charging station before you clean or do maintenance of the charging station.

1.6 Battery safety



WARNING: Read the warning instructions that follow before you use the product.

- Lithium-ion batteries can explode or cause fire if disassembled, short-circuited, exposed to water, fire, or high temperatures. Handle carefully, do not dismantle, open the battery or use any type of electrical/mechanical abuse. Avoid storage in direct sunlight.

1.7 To lift and move the product



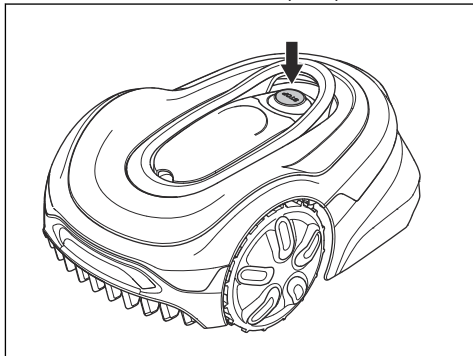
WARNING: The product must be set to OFF before you lift the product. The product is disabled when the indicator on the **ON/OFF** button goes off.



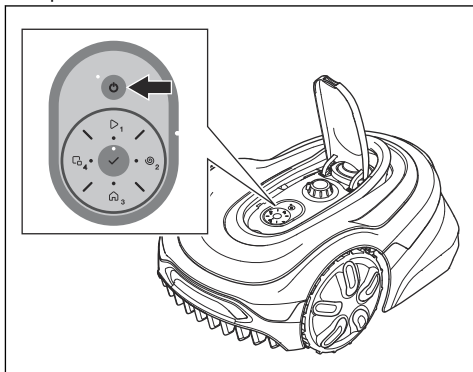
CAUTION: Do not lift the product when it is parked in the charging station. It can cause damage to the charging station and/or the product. Push the **STOP** button and pull the product out of the charging station before you lift it.

To safely move the product from or in the work area:

1. Push the **STOP** button to stop the product.



2. Push the **ON/OFF** button for 3 seconds to set the product to OFF.



3. Make sure that the product is disabled. The indicator on the **ON/OFF** button goes off when the product is disabled. Refer to *LED status indicator on the keypad on page 8*.
4. Lift the product by the handle with the blade disc away from your body.



2 Introduction

2.1 Introduction

Serial number:
PIN code:
Product registration key:

The serial number is on the product carton and on the product rating plate. Refer to *Product overview on page 7*.

- Use the serial number to register your product on www.gardena.com.

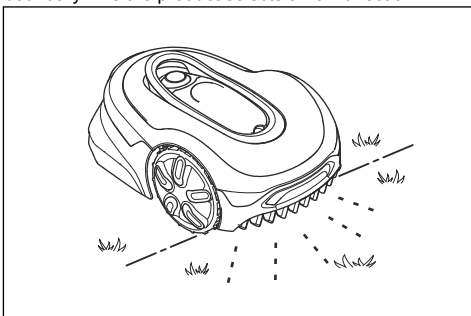
2.1.1 Support

For support about the GARDENA product, speak to your GARDENA service.

2.1.2 Product description

Note: GARDENA regularly updates the appearance and function of the products. Refer to *Support on page 6*.

The product is a robotic lawn mower. The product has a battery power source and cuts the grass automatically. It continuously alternates between mowing and charging. The movement pattern is random, which means that the lawn is mowed evenly and with less wear. The boundary wire and the guide wire controls the movement of the product within the work area. Sensors in the product senses when it is approaching the boundary wire. The front of the product always passes the boundary wire by a specific distance before the product turns around. When the product hits an obstacle or approaches the boundary wire the product selects a new direction.



You can select the operation settings in the app or with the buttons on the keypad of the product. The app and the LED status indicator show the operation mode of the product.

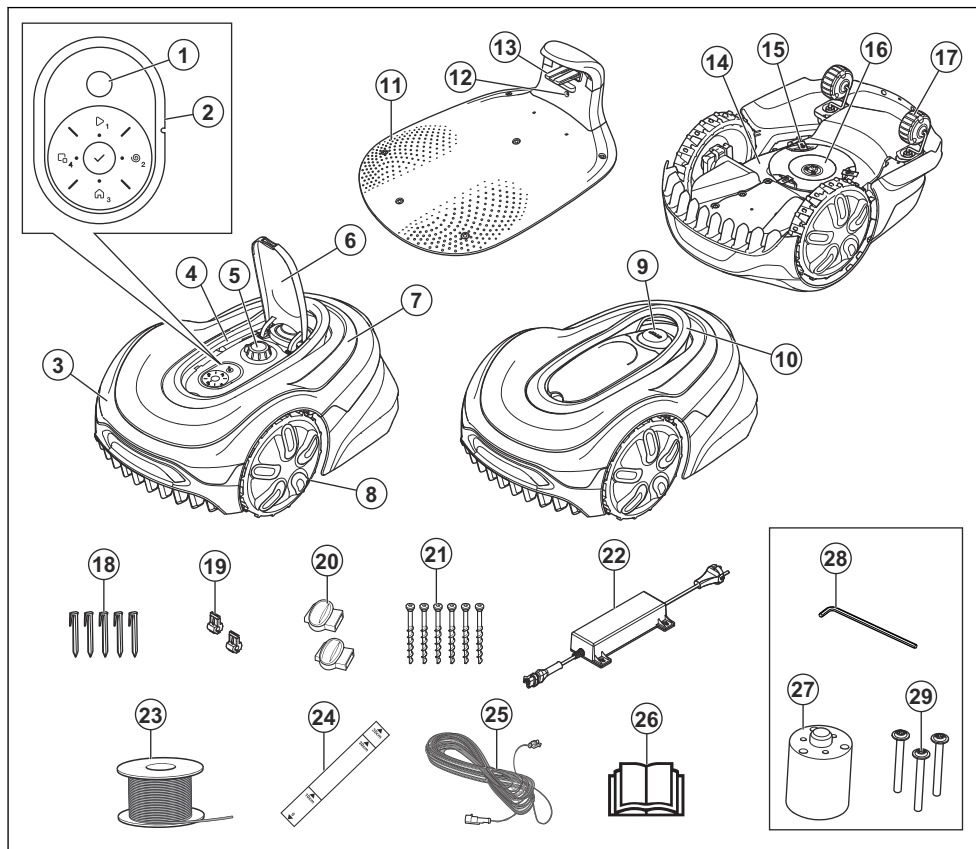
2.1.2.1 Mowing technique

The frequent cutting technique improves the grass quality and decreases the use of fertilizers. Collection of grass is not necessary.

2.1.2.2 GARDENA Bluetooth® App

The GARDENA Bluetooth® App is used to do the settings and to operate the product. The product can be controlled remotely with Bluetooth® within short-range. The product can also be operated with the keypad on the product.

2.2 Product overview



- | | |
|--|---|
| <ol style="list-style-type: none"> 1. ON/OFF button 2. Keypad 3. Body 4. Rating plate¹ 5. Cutting height adjustment knob 6. Conversion table for cutting setting and cutting height in inch 7. Top cover 8. Front wheels 9. Stop button 10. Handle 11. Charging station 12. LED indicator of the charging station 13. Contact plates 14. Chassis box with electronics, battery and motors | <ol style="list-style-type: none"> 15. Cutting system 16. Blade disc 17. Rear wheels 18. Stakes 19. Connector for the loop wire 20. Couplers for loop wire 21. Screws to attach the charging station 22. Power supply unit 23. Loop wire for boundary wire and guide wire 24. Measurement gauge for installation of the boundary wire (the measurement gauge is removed from the carton of the product) 25. Low-voltage cable 26. Operator's manual and Quick guide |
|--|---|

¹ Found below the top cover. The top cover must be removed to access it.

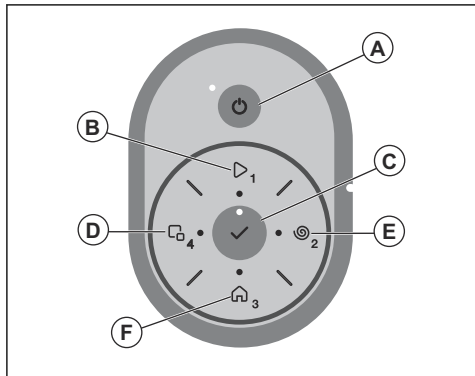
- 27. Spacer for cutting height adjustment²
- 28. Hex key³
- 29. Screws for spacer⁴

- The **Park** button (F) is used to send the product to the charging station.

2.3 Keypad

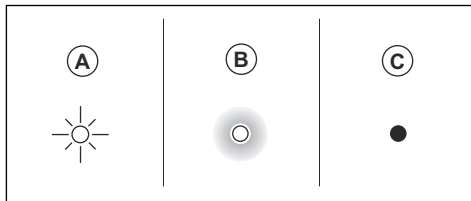
The keypad on the product is used to select an operating mode for the product. Push the button for 1 second or 3 seconds to set an operating mode, refer to *Operating modes on page 23*. You must enter the PIN code for the product before you can select an operating mode.

- The **ON/OFF** button (A) is used to set the product to ON or to OFF.
- The **Start** button (B) is used to cut the main area.
- The **OK** button (C) is used to confirm the selections.
- The **Secondary area** button (D) is used to cut the secondary area. Refer to *Secondary area on page 23*.
- The **SpotCut** button (E) is used to start the SpotCut pattern. Refer to *SpotCut on page 24*.



2.4 LED status indicator on the keypad

The LED status indicator on the keypad shows the status of the product. There are 3 light modes on the LED status indicator, the light flashes quickly (A) the light is solid (B), and the light is out (C).






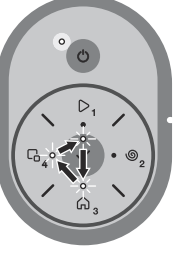


Standby or charging if parked in the charging station	Waiting for PIN code

² Included in the low cutting kit.

³ Included in the low cutting kit.

⁴ Included in the low cutting kit.

<p>Cutting according to set <i>Schedule</i></p> 	<p>SpotCut</p> 
<p><i>Parked</i></p> 	<p>Cutting in <i>Secondary area</i></p> 
<p>Error</p> 	<p>Firmware update</p> 

2.5 Symbols on the product

These symbols can be found on the product. Make sure that you understand them.



WARNING: Read the operator instructions before you operate the product.



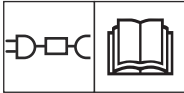
WARNING: Disable the product before maintenance or before you lift the product.



WARNING: Keep a safe distance from the product when it is in operation. Keep your hands and feet away from the rotating blades of the product.



WARNING: Do not sit on the product. Do not put your hands or feet near or below the product.



Use a detachable power supply as specified on the rating plate adjacent to the symbol.



Do not make modifications on the low-voltage cable.

Do not use a hedge trimmer or a grass trimmer near the low-voltage cable.

2.6 Symbols on the battery



WARNING: Lithium-ion batteries can explode or cause fire if disassembled, short-circuited or handled roughly. Do not expose to water, fire or high temperature.



Read the user instructions.



Do not discard the battery into fire and do not expose the battery to a heat source.



Do not immerse the battery into water.

2.7 Product damage

We are not responsible for damages to our product if:

- the product is incorrectly repaired.
- the product is repaired with parts that are not from the manufacturer or not approved by the manufacturer.
- the product has an accessory that is not from the manufacturer or not approved by the manufacturer.
- the product is not repaired at an approved service center or by an approved authority.

3 Installation

3.1 Introduction - Installation

Refer to www.gardena.com for more information about installation and instruction videos.

We recommend you to update the firmware before you install the product to make sure that the product has the latest firmware. Refer to *Firmware update on page 29*.



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



CAUTION: Use original spare parts and installation material.

3.2 Primary components for installation

The installation involves the following components:

- A robotic lawn mower that mows the lawn automatically.
- A charging station, which has 3 functions:
 - To send control signals along the boundary wire.
 - To send control signals along the guide wire so that the product can follow the guide wire to specific remote areas in the garden and can find its way back to the charging station.
 - 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 and guide wire.

3.3 To prepare for installation

Read the installation chapter before you start the installation. Prepare the installation carefully to make the product operate satisfactorily.

- Make a blueprint of the work area and include all obstacles. This makes it easier to examine where to put the charging station, the boundary wire and the guide wire.
- Make a mark on the blueprint where to put the charging station, the boundary wire and the guide wire.
- Make a mark on the blueprint where the guide wire connects to the boundary wire. Refer to *To install the guide wire on page 18*.
- Fill in holes in the lawn to make it level.



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

- Cut the grass to the desired cutting height and trim the edges before you install the product.

Note: The first weeks after installation the sound level when the product cuts the grass can be higher than usual. The sound level decreases after some time.

3.4 Before the installation of the wires

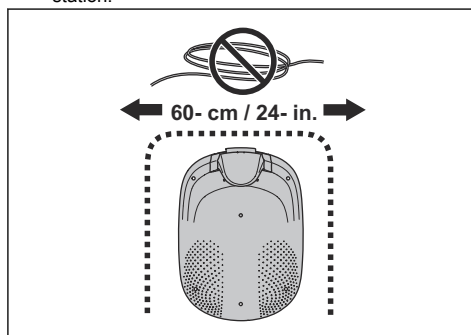
You can select to attach the wires with stakes or bury them. You can use the 2 procedures for the same work area.



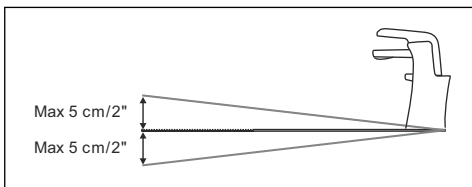
CAUTION: If you use a dethatcher in the work area, bury the boundary wire and the guide wire to prevent them from damage.

3.4.1 To examine where to put the charging station

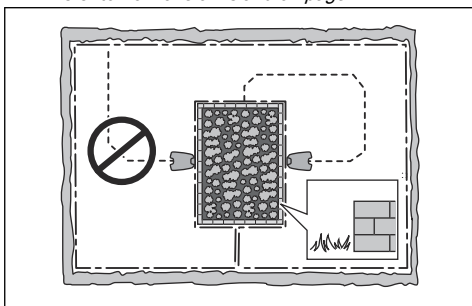
- Keep a minimum 2 m / 6.6 ft. of free space in front of the charging station. Refer to *To examine where to put the guide wire on page 15*.
- Keep a minimum of 30 cm / 12 in. of free space to the right and left of the center of the charging station.



- Put the charging station near a power outlet.
- Put the charging station on a level surface.
- The baseplate of the charging station must not be bent.



- If the work area has two parts separated with a steep slope, we recommend to put the charging station in the lower section.
- Put the charging station in an area with protection from the sun.
- If the charging station is installed on an island, make sure to connect the guide wire to the island. Refer to *To make an island on page 14*.



3.4.2 To examine 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.

- Use a residual-current device (RCD) with a tripping current of maximum 30 mA when you connect the power supply to the power outlet.

Low-voltage cables of different lengths are available as accessories.

3.4.3 To examine where to put 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.



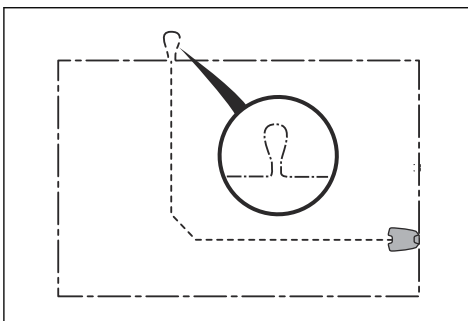
CAUTION: Do not make sharp bends when you install the boundary wire.



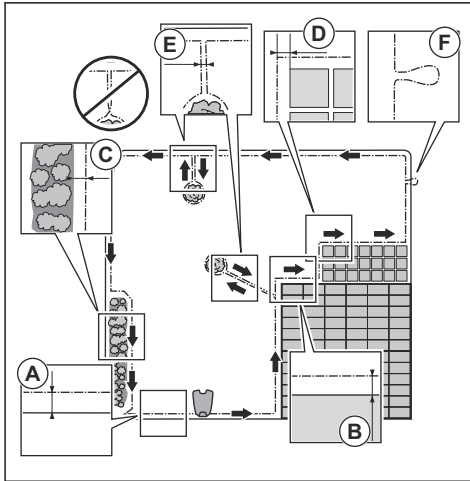
CAUTION: For careful operation without noise, isolate all obstacles such as trees, roots and stones.

The boundary wire should be put as a loop around the work area. Sensors in the product senses when the product approaches the boundary wire, and the product selects another direction.

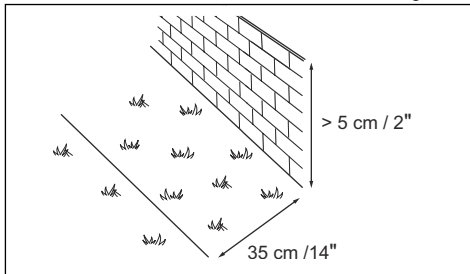
To make the connection easier between the guide wire and the boundary wire, it is recommended to make an eyelet where the guide wire will be connected. Make the eyelet with approximately 20 cm / 8 in. of the boundary wire.



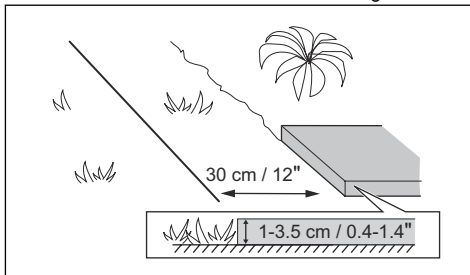
Note: Make a blueprint of the work area before you install the boundary wire and guide wire.



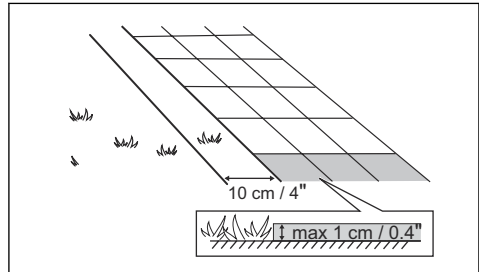
- Put the boundary wire around all of the work area (A). Adapt the distance between the boundary wire and obstacles.
- Put the boundary wire 35 cm / 14 in. (B) from an obstacle that is more than 3.5 cm / 1.4 in. high.



- Put the boundary wire 30 cm / 12 in. (C) from an obstacle that is 1-3.5 cm / 0.4-1.4 in. high.



- Put the boundary wire 10 cm / 4 in. (D) from an obstacle that is less than 1 cm / 0.4 in. high.



- If you have a paving stone path that is in level with the lawn, put the boundary wire below the paving stone.

Note: If the paving stone is minimum 30 cm / 12 in. wide, use the factory setting for the *Drive Past Wire* function to cut all the grass adjacent to the paving stone. Refer to *Drive Past Wire* function on page 20.

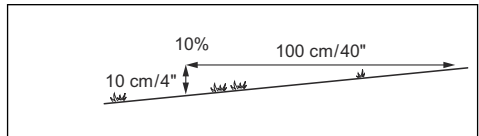
- If you make an island, put the boundary wire that runs to and from the island near together (E). Put the wires in the same stake. Refer to *To make an island* on page 14.
- Make an eyelet (F) where the guide wire is to be connected to the boundary wire.

3.4.3.1 To put the boundary wire in a slope

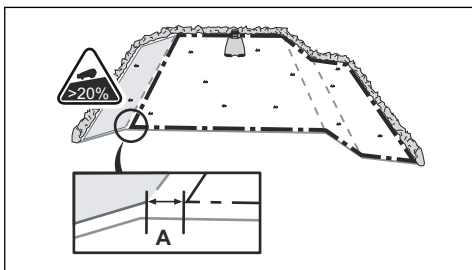
The product can operate in 35% slopes. Slopes that are too steep must be isolated with the boundary wire. The gradient (%) is calculated as the vertical height divided by the horizontal distance.

Example:

- $10 \text{ cm} / 100 \text{ cm} = 10\%$.
- $4 \text{ in} / 40 \text{ in} = 10\%$.



- For slopes steeper than 35% inside the work area, isolate the slope with boundary wire.
- For slopes steeper than 20% along the outer edge of the lawn, put the boundary wire 20 cm / 8 in. (A) from the edge.



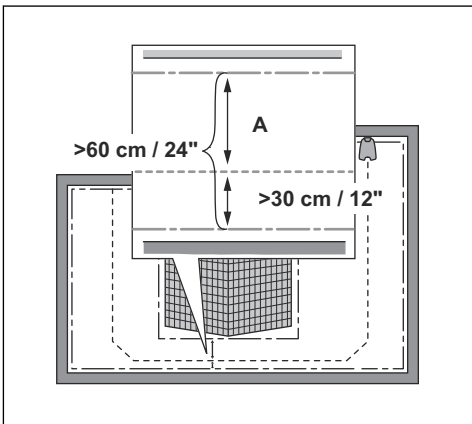
- For slopes adjacent to a public road, put a barrier of minimum 15 cm / 6 in. along the outer edge of the slope. You can use a wall or a fence as a barrier.

3.4.3.2 Passages

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

Note: If a passage is less than 2 m / 6.5 ft. wide, install a guide wire through the passage.

The recommended minimum distance between the guide wire and the boundary wire is 30 cm / 12 in. The product always runs to the left of the guide wire as seen facing the charging station. It is recommended to have as much free area as possible to the left of the guide wire (A).



3.4.3.3 To make an island



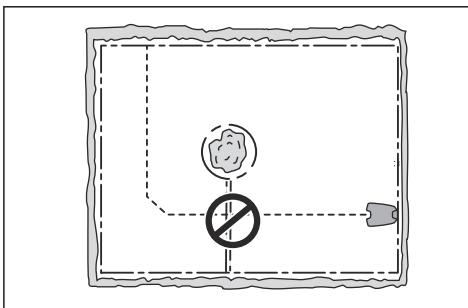
CAUTION: Do not put the boundary wires across each other. The sections of boundary wire must be parallel.



CAUTION: Do not put the guide wire across the boundary wire.



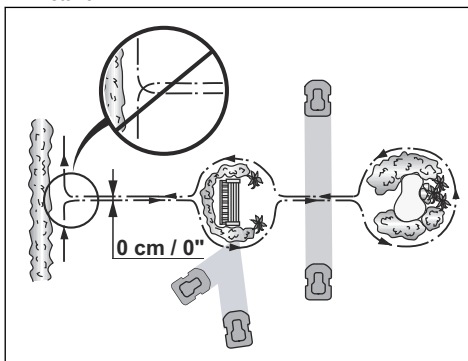
CAUTION: Isolate or remove obstacles that are less than 15 cm / 5.9 in. in height. Isolate or remove obstacles that slope slightly, for example, stones, trees or roots. This will prevent damage to the blades of the product.



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

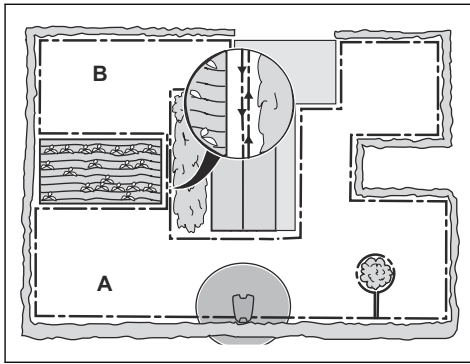
Some obstacles are resistant to a collision, for example, trees or bushes that are more than 15 cm / 5.9 in. in height. The product will collide with the obstacle and then select a new direction.

- Put the boundary wire to and around the obstacle to make an island.
- Put the 2 sections of boundary wire to and from the island close together. This will make the product run across the wire.
- Put the 2 sections of boundary wire in the same stake.



3.4.3.4 To make a secondary area

Make a secondary area (B) if the work area has 2 areas that are not connected with a passage. The work area with the charging station is the main area (A).



Note: The product must be manually moved between the main area and the secondary area.

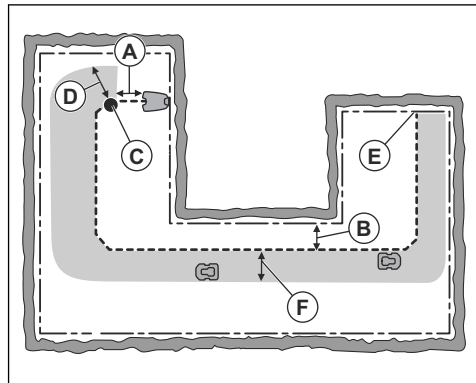
- Put the boundary wire around the secondary area (B) to make an island. Refer to *To make an island on page 14*.

Note: The boundary wire must be put as 1 loop around all of the work area (A + B).

Note: When the product cuts grass in the secondary area, the *Secondary area* mode must be selected. Refer to *Secondary area on page 23*.

3.4.4 To examine where to put the guide wire

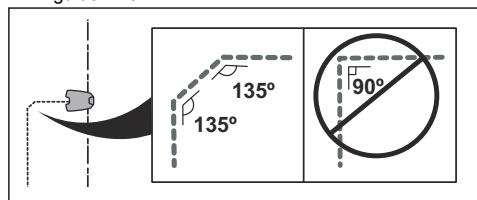
Installation of the guide wires is optional. You can install 2 guide wires to make the product go to 2 different parts of the work area. Put the guide wire from the charging station through the work area and connect it to the boundary wire.



- Put the guide wire in a line at a minimum of 1 m / 3.3 ft. in front of the charging station (A).
- Put the guide wire minimum 30 cm / 1 ft. from the boundary wire (B).
- Starting point (C). Refer to *Charging station starting point on page 20*.
- Minimum distance 60 cm / 2 ft. from the starting point to perpendicular to the boundary wire (D). Refer to *To install the guide wire on page 18*.
- Where the guide wire is connected to the boundary wire (E).
- Guide corridor (F). The product always runs to the left of the guide wire as seen facing the charging station. Make sure that the guide wire has as much free area as possible to the left of the guide wire. The guide corridor can be maximum 1.2 m / 4 ft.

Note: The product always runs in the guide corridor but changes the distance to the guide wire.

- Do not make sharp bends when you install the guide wire.

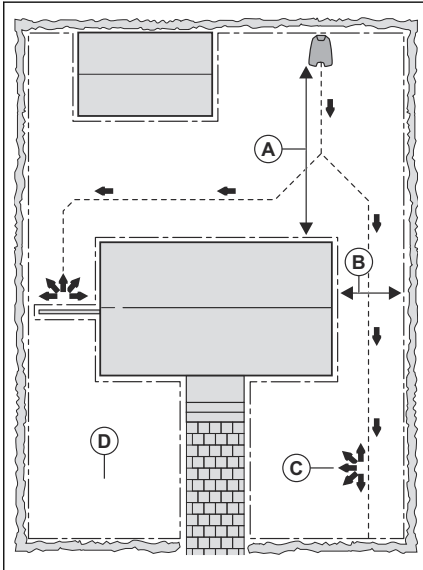


3.4.5 Work area examples

- If the charging station is put in a small area, make sure that the distance to the boundary wire (A) is at a minimum 2 m / 6.6 ft. in front of the charging station.
- If the work area has a passage (B) with no guide wire installed, the minimum distance between the boundary wires is 2 m / 6.5 ft. With a guide wire installed through the passage, the minimum

distance between the boundary wires is 60 cm / 24 in. Use the *CorridorCut* function to cut this passage, Refer to *Starting points and CorridorCut* on page 20.

- If the work area has areas which are connected by a narrow passage (B), you can set the product to first follow and then leave the guide wire after a certain distance (C). The settings can be changed in *Starting points and CorridorCut* on page 20.
- If the work area includes a secondary area (D), refer to *Secondary area* on page 23. Put the product in the secondary area and select *Secondary area mode*.



3.5 Installation of the product

3.5.1 Installation tools

- Hammer/plastic mallet: To simplify putting the stakes into the ground.
- Edge cutter/straight spade: To bury the boundary wire.
- Combination pliers: For cutting the boundary wire and pressing the connectors together.
- Adjustable plier: For pressing the couplers together.

3.5.2 To install the charging station



CAUTION: Do not make new holes in the charging station plate.



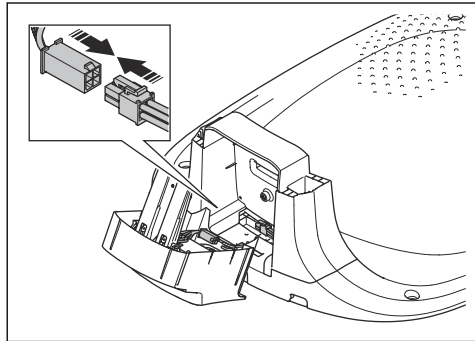
CAUTION: Do not put your feet on the baseplate of the charging station.



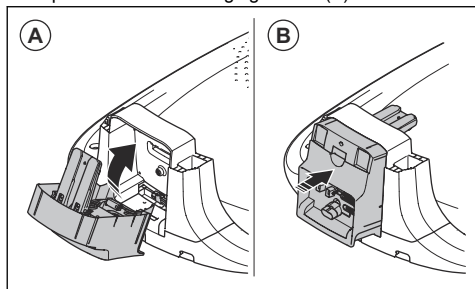
WARNING: Make sure that the plugs of the low-voltage cable and the power supply unit are clean and dry before you connect them.

When connecting the power supply, only use a power outlet that is connected to an residual-current (RCD) device.

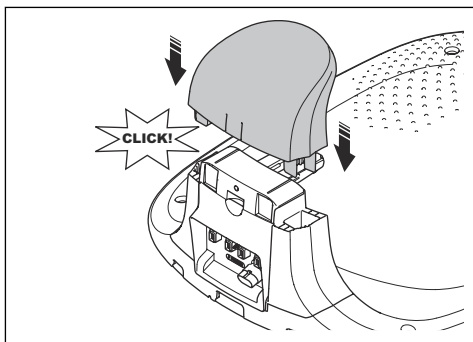
1. Read and understand the instructions about the charging station. Refer to *To examine where to put the charging station* on page 11.
2. Connect the cable of the charging module to the cable of the charging station.



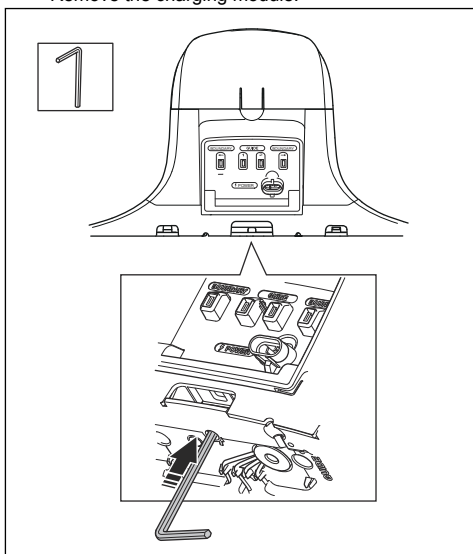
3. Tilt the charging module (A) and push it into position into the charging station (B).



4. Install the charging station top to the charging station.



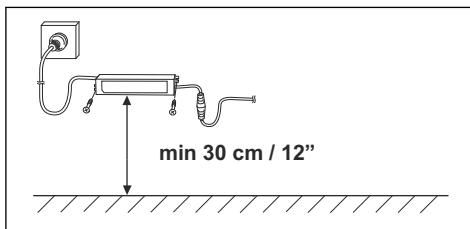
5. If it is necessary to remove the charging module, push the clips from below with the hex key. Remove the charging module.



6. Put the charging station in the selected area.

Note: Do not attach the charging station to the ground with the screws until the guide wire is installed. Refer to *To install the guide wire on page 18*.

7. Connect the low-voltage cable to the charging station.
8. Put the power supply at a minimum height of 30 cm / 12 in.



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

Note: The product can be put in the charging station to charge while you install the boundary wire and the guide wire.

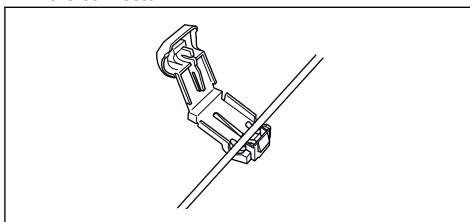
10. Put the low-voltage cable in the ground with stakes or bury the cable. Refer to *To put the wire or the cable into position with stakes on page 18* or *To bury the wire or the cable on page 19*.
11. Connect the wires to the charging station after the installation of boundary wire and guide wire is complete. Refer to *To install the boundary wire on page 17* and *To install the guide wire on page 18*.
12. Attach the charging station to the ground with the supplied screws after the guide wire is installed. Refer to *To install the guide wire on page 18*.

3.5.3 To install the boundary wire

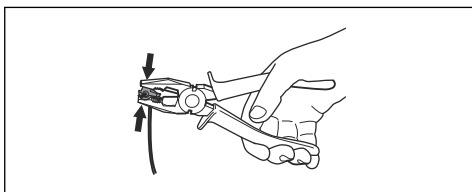


CAUTION: Do not put remaining wire in a coil. The coil causes interference with the product.

1. Put the boundary wire around all of the work area. Start and complete the installation behind the charging station.
2. Open the connector and put the boundary wire in the connector.



3. Close the connector with a pair of pliers.



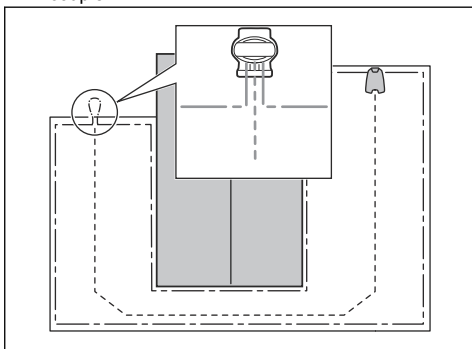
4. Cut the boundary wire 1-2 cm / 0.4-0.8 in. above each connector.
5. Push the right connector onto the metal pin on the charging station with the mark "BOUNDARY->".
6. Push the left connector onto the metal pin on the charging station with the mark "<-BOUNDARY".

3.5.4 To install the guide wire



CAUTION: Twinned cables, or a screw terminal block that is insulated with insulation tape are not satisfactory splices. Soil moisture will cause the wire to oxidize and after a time result in a broken circuit.

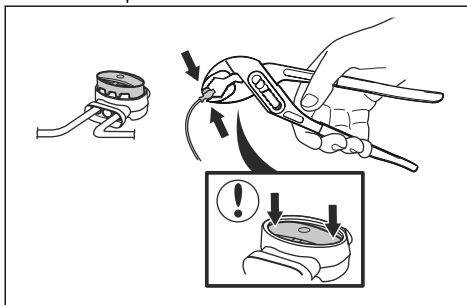
1. Open the connector and put the wire in the connector.
2. Close the connector with a pair of pliers.
3. Cut the guide wire 1-2 cm / 0.4-0.8 in. above each connector.
4. Push the guide wire through the slot in the charging station plate.
5. Push the connector onto the metal pin on the charging station with the mark "GUIDE 1/GUIDE 2".
6. Disconnect the charging station from the power outlet.
7. Put the end of the guide wire at the eyelet on the boundary wire.
8. Cut the boundary wire with a pair of wire cutters.
9. Connect the guide wire to the boundary wire with a coupler.



- a) Put the 2 ends of the boundary wire and the end of the guide wire into the coupler.

Note: Make sure that you can see the ends of the wires through the transparent area of the coupler.

- b) Push down the cover on the coupler with adjustable pliers to attach the wires in the coupler.



10. Attach the guide wire to the ground with stakes or bury the guide wire in the ground. Refer to *To put the wire or the cable into position with stakes on page 18* or *To bury the wire or the cable on page 19*.
11. Connect the charging station to the power outlet.

3.6 To put the wire or the cable into position with stakes



CAUTION: Make sure that the stakes hold the wire or the cable against the ground.



CAUTION: Cutting the grass too low right after installation can damage the wire or the cable insulation. Damage to the insulation may not cause disruptions until several weeks or months later.

1. Put the wire or the cable on the ground.
2. Put the stakes at a maximum of 100 cm / 40 in. distance from each other.
3. Attach the stakes to the ground with a hammer or a plastic mallet.

Note: The wire or the cable is overgrown with grass and not visible after a few weeks.

3.7 To bury the wire or the cable

- Cut a groove in the ground with an edge cutter or a straight shovel.
- Put the wire or the cable 1-20 cm / 0.4-8 in. into the ground.

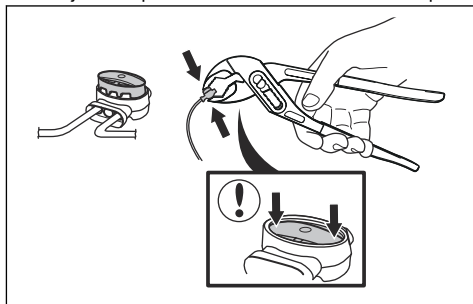
3.8 To extend the boundary wire or the guide wire

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.

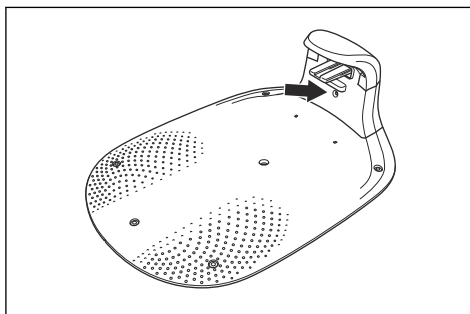


7. Put the boundary wire or the guide wire into position with stakes.
8. Connect the charging station to the power outlet.

3.9 After the installation of the product

3.9.1 To do a visual check of the charging station

1. Make sure that the indicator LED lamp on the charging station has a green light.



2. 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 35* and *To install the charging station on page 16*.

3.10 To download and pair with the GARDENA Bluetooth® App

The GARDENA Bluetooth® App is a free app for your mobile device. The GARDENA Bluetooth® App is used for the settings and operation of the product. You can access the menus and functions when the product is connected to the app with Bluetooth®.

1. Download the GARDENA Bluetooth® App on your mobile device.
2. Set the product to OFF and then to ON. Refer to *To use the ON/OFF button on page 23*.
3. Enable the pairing operation between the GARDENA Bluetooth® App and the product.

Note: The Bluetooth® pairing operation is enabled for 3 minutes.

4. Enter the factory PIN code 1234 with the buttons on the product and push **OK** button. Refer to *PIN code on page 22*.

Note: GARDENA recommends you to change to a new PIN code in the GARDENA Bluetooth® App.

4 Settings

Use the app for product settings. The factory settings are applicable for almost all work areas, but the settings can be adapted to the conditions for each work area.

4.1 To do the Schedule settings



You can set the schedule in 2 different procedures:

- Use the GARDENA-assisted scheduling where you enter the size of your work area, grass type, location and cutting height. The scheduling wizard shows an applicable schedule.
- Use the Manual scheduling to set or adjust the schedule manually.



CAUTION: Do not cut the lawn more than it is necessary to prevent wear on the product and the lawn.

4.2 Starting points and CorridorCut

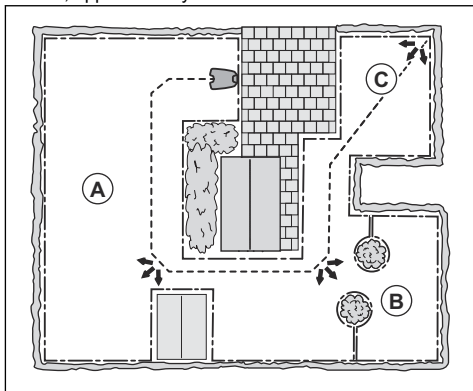
The *Starting points* and *CorridorCut* function is used for remote parts and narrow passages in the work area. The *Starting points* function is used for remote parts and the *CorridorCut* function is used for narrow passages. A guide wire must be installed to use these functions. You can set a maximum of 5 remote areas.

With the *Starting points* function the product follows the guide wire to the set specified distance before it starts to cut the work area.

Area A, approximately 50%

Area B, approximately 30%

Area C, approximately 20%



The *CorridorCut* function is used in narrow passages of 60 cm - 1.5 m / 2 ft. - 4.9 ft. width. The product operates in a pattern to cut the passage width. The product starts the *PassageSense* at the set distance from the charging station. The product continues to cut the work area when it is at the end of the narrow passage.

Note: To prevent that the grass in the narrow passage is worn, GARDENA recommends to set a low percentage for the *CorridorCut*.

In the factory settings the product follows the guide wire 20% of the time for 99 m / 325 ft. The product can also follow the guide wire to the point where it is connected to the boundary wire. The remaining time the product starts to cut at the starting point. In the factory settings the *PassageSense* is disabled.

4.3 Drive Past Wire function

The front of the product always moves past the boundary wire by a specified distance. Then the product moves rearward and changes direction. The factory setting is 32 cm / 12 in. You can select a distance of 20-35 cm / 10-20 in.

Note: If you change the distance for *Drive Past Wire*, the distance will change along the boundary wire in all parts of the work area.

4.4 Collision responsiveness

Collision responsiveness is a setting that controls how the product reacts to collisions in different conditions. There are 3 levels: low, medium, and high. The product automatically sets the collision responsiveness to the correct level for your grass type.

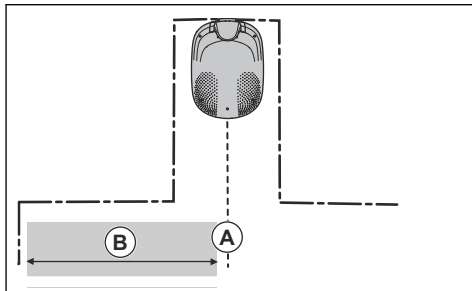
Set it to a lower level if the product stops and turns frequently. Set it to a higher level if the product frequently hits obstacles or slips. GARDENA recommends to not change the level if it is not necessary. The cutting result can be unsatisfactory if the collision responsiveness is set incorrectly.

4.5 Charging station starting point

This function allows you to control how far the product drives along the guide wire from the charging station before it starts operating. The factory setting is 60 cm / 2 ft.

Note: The product straddles the guide wire from the charging station to the starting point. Keep as short distance to the starting point as possible to reduce the risk of tracks forming on the lawn.

If the charging station is put in a small space area, for example between flower beds, set the starting point where the distance to the boundary wire is minimum 60 cm / 2 ft.



A) Starting point

B) Minimum distance 60 cm / 2 ft (perpendicular to the guide wire).

4.6 SensorControl



SensorControl automatically adjusts the cutting time to the growth of the grass. The product is not permitted to operate more than the schedule settings. The product stops cutting and goes back to the charging station if it senses that the grass is cut. The first operation of the day is set by the schedule settings. The product completes 1 mowing cycle, and then *SensorControl* selects if the product continues to operate.

There are 5 levels that you can select for the *SensorControl*: *Very low*, *Low*, *Medium*, *High* and *Very high*. On level *Very low* the product operates for a longer period of time. On level *Very high* the product operates for a less period of time.

Note: When using *SensorControl*, it is recommended to make as much operating time as possible available for *SensorControl*. Do not restrict the schedule more than necessary. Also, check that the blade disc is clean and that the blades are in good condition.

4.7 Avoid collisions with GARDENA mower house

If you have installed a GARDENA mower house⁵, the wear on the product and the mower house decreases when you select *Avoid house collisions*. In the factory setting this function is disabled.

⁵ Available as accessory

Note: If *Avoid house collisions* is selected it can result in grass that is not cut around the charging station.

4.8 ECO mode

ECO mode disables the signal in the boundary wire, guide wire and the charging station, when the product is parked or is charging. The LED indicator of the charging station flashes green when the loop signal is disabled.

Note: Use *ECO mode* to save energy and to prevent interference with other equipment, for example hearing loops or garage doors.

Note: To start the product manually in the work area you must first enable the loop signal.

4.8.1 To enable the loop signal

1. Set the product to ON.
2. Put the product in the charging station.
3. Push the **STOP** button.
4. Wait 2 seconds and then remove the product from the charging station.
5. Make sure that the LED indicator of the charging station is solid green.
6. Put the product where you want it to start to cut.

4.9 Frost Sensor

The grass is extra sensitive to wear if the yard is covered with frost. If the *Frost Sensor* is activated, the product is not allowed to start to cut the grass if the temperature is below 5° C / 41° F. In the factory setting this function is disabled.

Note: The frost sensor is located inside the chassis and there can be a delay compared to the ambient temperature.

4.10 New loop signal

The loop signal is randomly selected to create a unique link between the product and the charging station. In rare cases, there may be a need to generate a new signal, for instance if two adjacent installations have a very similar signal. Put the product in the charging station before you make a new loop signal.

4.11 Reset all user settings

Use this function to reset all user settings.

Note: *PIN code, Loop signal and Messages* are not reset when you select *Reset all user settings*.

4.12 Security

There are 2 security levels for the product. The security levels you can select are low level or high level. If you use the high level, you must enter the PIN code each time the product stops. This is necessary to restart the operation of the product.

4.12.1 PIN code

When you use the product for the first time you must enter the factory PIN code 1234. You can change the PIN code in the app. The PIN code must have 4 digits. You can use the numbers 1-4 to set a new PIN code.

5 Operation

5.1 To use the ON/OFF button



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

- Push the **ON/OFF** button for 3 seconds to set the product to ON. Make sure that the LED indicator comes on.
- The product is ON and in power save mode if the LED indicator flashes. Push the **ON/OFF** button for 3 seconds to set the product to ON.
- Push the **ON/OFF** button for 3 seconds to set the product to OFF. Make sure that the LED indicator goes off.

5.1.1 The indicator lamp

The indicator lamps on the keypad show the operating modes of the product, refer to *LED status indicator on the keypad on page 8*.

5.2 To start the product

1. Push the **ON/OFF** button for 3 seconds.
2. Use the buttons on the keypad to enter the PIN code and then push the **OK** button. Refer to *To use the ON/OFF button on page 23*.
3. Select an operating mode. Refer to *Operating modes on page 23*.

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.

5.3 Operating modes

The following operating modes are available:

- *Main area*
- *Override schedule*
- *SpotCut*
- *Park / Schedule*
- *Park*
- *Secondary area*

5.3.1 Main area

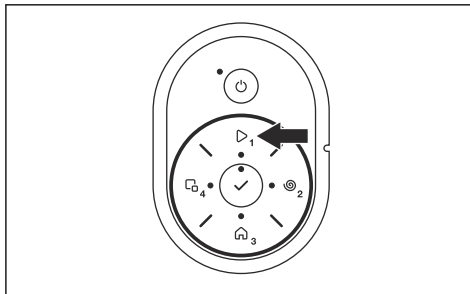
Main area is the standard operating mode where the product mows and charges automatically.

5.3.1.1 To set the product to operate in Main area

This can be set in the dashboard in the app or with the keypad on the product:

1. Push the **STOP** button.

2. Push the **Start** button for 1 second.



3. Push the **OK** button.

Note: If there is no set schedule the product will not start to operate. Connect the product to the GARDENA Bluetooth® App and set a schedule.

5.3.2 Secondary area

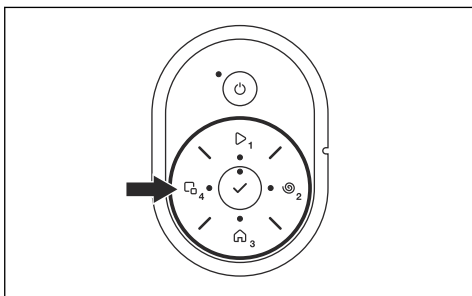
To mow secondary areas the operating mode *Secondary area* must be selected. In this mode, the operator must move the product manually between the main area and the secondary area. The product mows until the battery is empty. When the battery is empty, put the product in the charging station to charge the battery. When the battery is charged, the product moves out of the charging station and stops. The product is now prepared to start operation, but needs confirmation from the operator first.

Note: Put the product in the charging station and change the operating mode to *Main area* in the app or with the keypad on the product if you want to cut the main area after the battery is charged.

5.3.2.1 To set the product to operate in Secondary area

This can be set in the dashboard in the app or with the keypad on the product:

1. Push the **STOP** button.
2. Push the **Secondary area** button for 1 second.



3. Push the **OK** button.

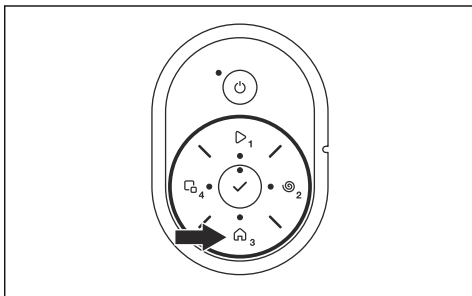
5.3.3 Park

Operating mode *Park* means that the product returns to the charging station where it remains until a different operating mode is selected.

5.3.3.1 To park the product

This can be set in the dashboard in the app or with the keypad on the product:

1. Push the **STOP** button.
2. Push the **Park** button for 3 seconds.



3. Push the **OK** button.

Note: To change the operating mode of the product, push the **STOP** button and the product will be in idle mode where you can set an operating mode.

5.3.4 Park / Schedule

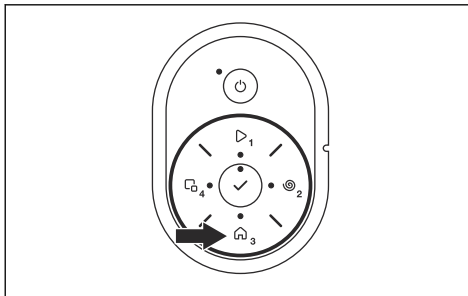
Operating mode *Park / Schedule* means that the product goes back to the charging station where it stays until the next schedule. If the product has operated the maximum cutting time for the day, it will start to operate again the next day. Refer to *To do the Schedule settings on page 20*.

5.3.4.1 To park the product and start again with the next schedule

This can be set in the dashboard in the app or with the keypad on the product:

1. Push the **STOP** button.

2. Push the **Park** button for 1 second.



3. Push the **OK** button.

Note: To change the operating mode of the product, push the **STOP** button and the product will be in idle mode where you can set an operating mode.

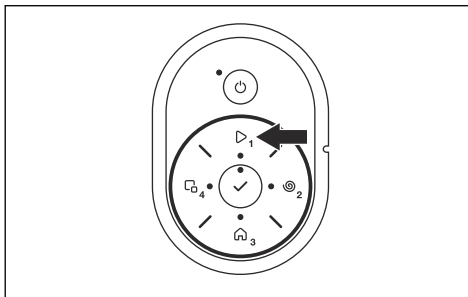
5.3.5 Override schedule

Select *Override schedule* to temporarily override the schedule settings. You can select to override the schedule settings for 3 hours. The product cannot be set to cut more than the maximum cutting time for each day.

5.3.5.1 To override the schedule

This can be set in the dashboard in the app or with the keypad on the product:

1. Push the **STOP** button.
2. Push the **Start** button for 3 seconds.



3. Push the **OK** button.

5.3.6 SpotCut

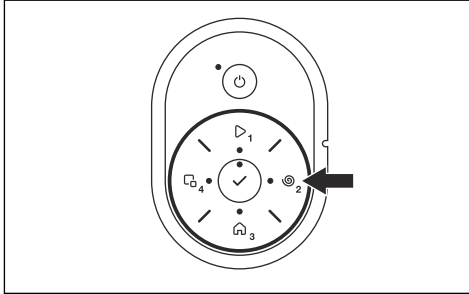
Use the operating mode *SpotCut* to cut a selected area in a spiral pattern. You must move the product manually to the selected area before you start the *SpotCut* operating mode.

Note: After the product has operated in the operating mode *SpotCut*, it will automatically start to cut in the operating mode *Main area* or *Secondary area*.

5.3.6.1 To enable SpotCut

This can be set in the dashboard in the app or with the keypad on the product:

1. Push the **STOP** button.
2. Push the **SpotCut** button for 1 second.



3. Push the **OK** button.

5.4 To stop the product

1. Push the **STOP** button on top of the product.

Note: When the **STOP** button is pushed the product will be idle. The product stops and the cutting motor stops.

5.5 To set the product to OFF

1. Push the **STOP** button.
2. Push the **ON/OFF** button for 3 seconds to set the product to OFF. Make sure that the LED indicator goes off.

5.6 To charge the battery



WARNING: Only charge the product using a charging station which is intended for it. Incorrect use may result in electric shock, overheating or leakage of corrosive liquid from the battery.

In the event of leakage of electrolyte flush with water and seek medical help if it comes in contact with the eyes etc.

When the product is new or has been stored for a long period, the battery can be empty and needs to be charged before starting. In the *Main area* mode, the product automatically alternates between mowing and charging.

1. Push the **ON/OFF** button to start the product.
2. Put the product in as far as possible in the charging station. Make sure that the product and the charging station is connected. Refer to contact and charging strips in *Product overview on page 7*

5.7 Cutting height adjustment



CAUTION: The first weeks after a new installation, set the cutting height to the maximum height to prevent damage to the loop wire. You can then lower the cutting height each week.

The spacer that is included is used to extend the cutting height range of the product. You can set the cutting height in 13 steps. Refer to the conversion table on the inside of the hatch to set the correct cutting height in inch.

With the blade disc without a spacer, the cutting height can be set to 6.5–10 cm / 2.5–4 in. With the spacer, the cutting height can be set to 2.5–6.5 cm / 1–2.5 in.

5.7.1 To adjust the cutting height

1. Push the **STOP** button to stop the product.
2. Open the hatch.
3. Turn the cutting height adjustment knob to select a cutting height.
 - a) Turn clockwise to increase the cutting height.
 - b) Turn counterclockwise to decrease the cutting height.

5.7.2 To install the blade disc for low cutting height

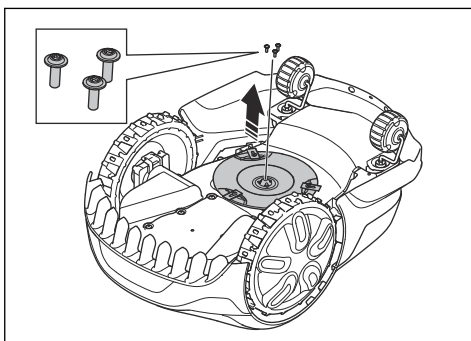


WARNING: Use protective gloves.

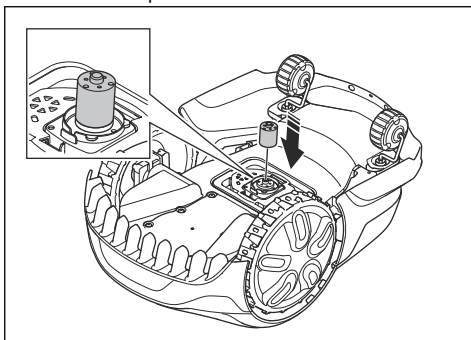


CAUTION: Do not use an electrical screwdriver when you install the screws. Use the supplied Torx 20 hex key.

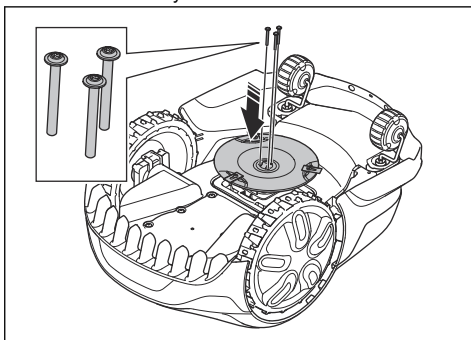
1. Push the **STOP** button.
2. Push the **ON/OFF** button for 3 seconds to set the product to OFF. Make sure that the LED indicator on the keypad goes off.
3. Put the product with the blade disc up on a soft and clean surface.
4. Remove the 3 screws on the blade disc with the supplied Torx 20 hex key.



5. Attach the spacer.



6. Install the blade disc on the spacer. Attach the 3 screws for the low cutting height with the supplied Torx 20 hex key.



6 Maintenance

6.1 Introduction - maintenance



WARNING: Set the product to OFF before you do maintenance on the product.



WARNING: Use protective gloves.

For better operation and lifetime of the product, make sure to clean the product regularly and replace worn parts.

When the product is new, examine the blade disc and blades each week. If the wear is low, you can increase the interval for the next time you examine the blade disc and blades. Examine the blade disc and the blades more regularly if there is much wear.

It is important that the blade disc rotates easily and that the edges of the blades are not damaged. The usual lifetime of the blades are 4 to 7 weeks. The conditions that follow can increase or decrease the lifetime of the blades:

- Operation time and dimension of the work area.
- Length and thickness of the grass.
- Soil, sand and use of fertilizers.
- Objects such as cones, tools, stones and roots in the work area.

Note: The cut result can be unsatisfactory if the blades are blunt. Refer to *Replacement of the blades* on page 28 on how to replace the blades.

6.2 Clean the product

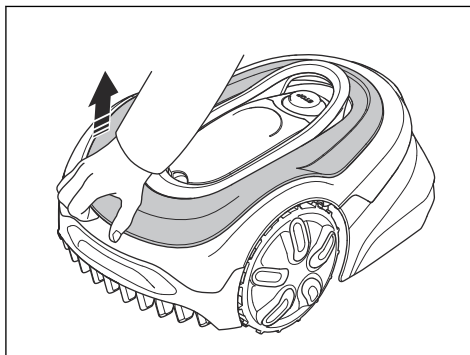


CAUTION: Do not use a high-pressure washer to clean the product. Do not use solvents for cleaning.

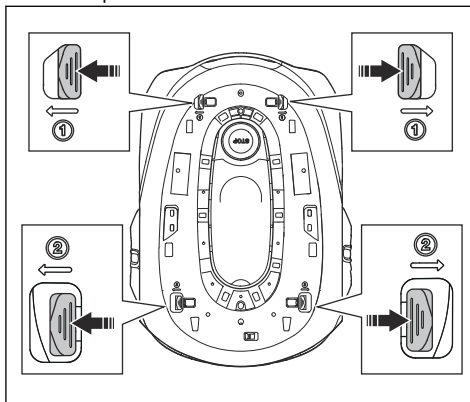
GARDENA recommends to use a special cleaning and maintenance kit. Speak to your GARDENA service for more information.

6.2.1 To remove the body of the product

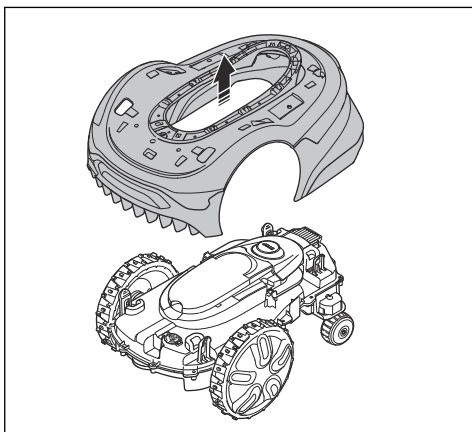
1. Remove the top cover.



2. Push the clips that are on the rear side of the body of the product.



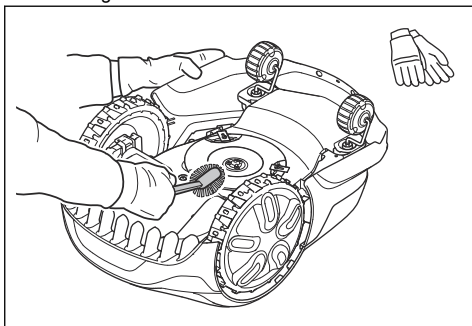
3. Push the clips that are on the front side of the body of the product.
4. Remove the body of the product from the chassis.



6.2.2 To clean the chassis and blade disc

Examine the blade disc and blades weekly.

1. Push the **STOP** button.
2. Push the **ON/OFF** button for 3 seconds to set the product to OFF. Make sure that the LED indicator on the keypad goes off.
3. Put the product with the blade disc up on a soft and clean surface.
4. Make sure that the blades are not damaged and that the blades and blade disc can rotate freely.
5. Clean the blade disc and chassis with a brush and running water.



6.2.3 To clean the wheels

The product does not operate satisfactorily in slopes if the wheels are blocked with grass.

- Use a soft brush to clean the wheels.

6.2.4 To clean the body of the product

- Use a moist cloth and a weak soap solution to clean the body of the product.

6.2.5 To clean the charging plates and contact plates

1. Use a fine grade emery cloth to clean the charging plates and the contact plates.
2. Lubricate the charging plates and contact plates with oil or grease.

6.2.6 To clean the charging station



WARNING: Disconnect the power supply from the power outlet before maintenance, or when you clean the charging station or power supply.



CAUTION: Do not use a high-pressure washer or running water to clean the charging station.

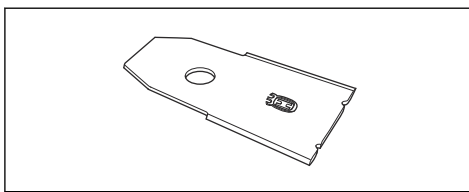
Note: The product cannot enter the charging station if there are objects in the charging station. Clean the charging station regularly.

- Remove grass, twigs and other objects from the charging station.

6.3 Replacement of the blades



WARNING: GARDENA can only guarantee safety if you use GARDENA original blades with the embossed crowned H-mark logotype.

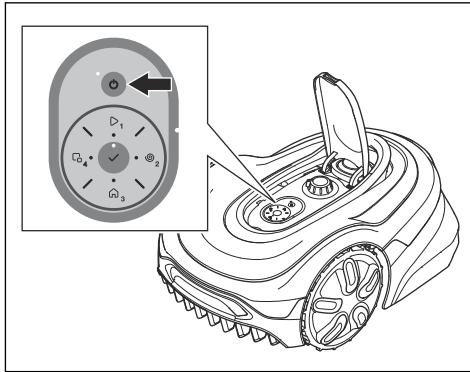


WARNING: You must replace the screws when you replace the blades. The used screws can wear quickly and make the blade come loose, this can cause serious injury.

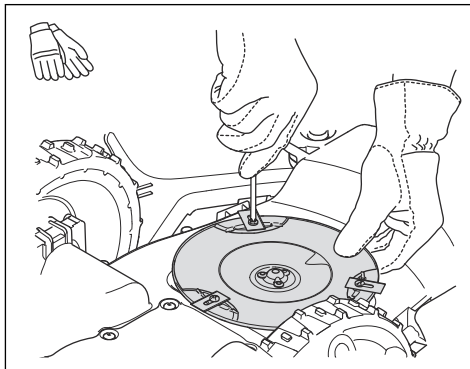
Replace worn or damaged blades for a safe operation. Replace the blades regularly for a satisfactory cut result and a low energy use. All 3 blades and screws must be replaced at the same time to get a balanced cutting system.

6.3.1 To replace the blades

1. Push the **STOP** button.
2. Push the **ON/OFF** button for 3 seconds to set the product to OFF. Make sure that the LED indicator on the keypad goes out.



3. Put the product with the blade disc up on a soft and clean surface.
4. Remove the 3 screws and blades for each cutting disc.



5. Attach new blades and screws.
6. Make sure that the blades can pivot freely.

6.4 Firmware update

GARDENA regularly updates the firmware and the App for the product.

6.5 Update of the GARDENA Bluetooth® App

GARDENA regularly updates the GARDENA Bluetooth® App. Update the app on App Store or on Google Play to make sure that you have the latest version.

6.6 Battery



CAUTION: Charge the battery fully before you put the product into storage. If the battery is not fully charged it can cause damage to the battery.

If the operating time of the product is shorter than usual between charges, this means that the battery is at the end of its life cycle. Replace the battery to extend the operating time.

Note: The battery life is related to the length of the season and how many hours a day the product operates. A long season or many hours of operation a day means that the battery must be replaced more regularly.

6.6.1 To replace or to remove the battery

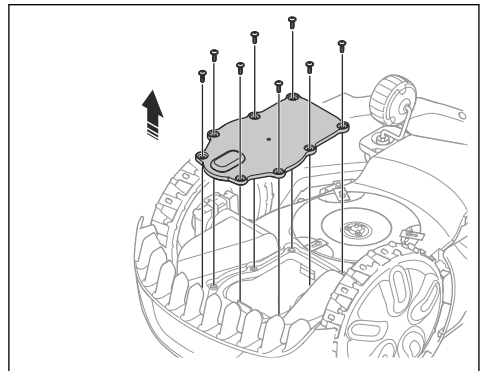


WARNING: Use protective gloves.

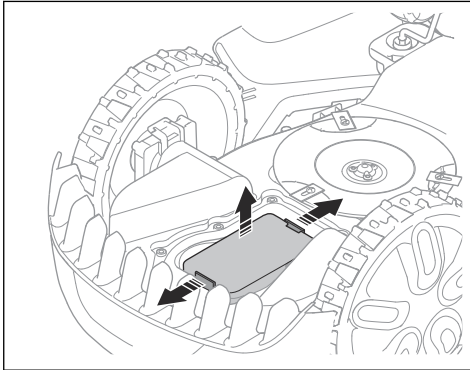


CAUTION: Do not touch the circuit boards.

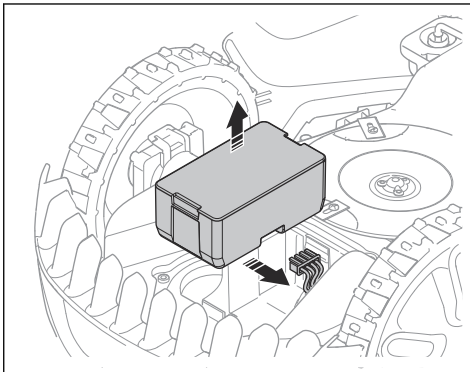
1. Push the **ON/OFF** button for 3 seconds to set the product to OFF. Make sure that the LED indicator goes out. Refer to *To use the ON/OFF button on page 23*.
2. Put the product with the blade disc up on a soft and clean surface.
3. Remove the 8 screws with a Torx 20.



4. Push the 2 clips and carefully lift up the battery.



5. Disconnect the cable to the battery.



6. Remove the battery.
7. Install the new battery in opposite sequence.

6.7 Winter service

Take your product to your GARDENA service for service prior to winter storage. Regular winter service will maintain the product in good condition and create the best conditions for a new season without any disruptions.

Service usually includes the following:

- Thorough cleaning of the body, the chassis, the blade disc and all other moving parts.
- Testing of the product's function and components.
- 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.

7 Troubleshooting

7.1 Messages

The fault messages in the table below are shown in the app. Speak to your GARDENA service if the same message shows frequently.

Message	Cause	Action
<i>Wrong PIN code</i>	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 do not know the correct PIN code, go to www.gardena.com to get information about how to get the PIN code or speak to your GARDENA service.
<i>Wheel motor blocked, left/right</i>	Grass or other object around the drive wheel.	Remove grass or other object.
<i>Wheel motor overloaded, left/right</i>	Grass or other object around the drive wheel.	Remove grass or object from the drive wheel.
<i>Wheel drive problem, right/left</i>	Grass or other object around the drive wheel.	Clean the wheels and around the wheels.
<i>Cutting system blocked</i>	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.
<i>Upside down</i>	The product is in an incorrect position, the product is tilting too much or is upside down.	Put the product in the correct position.
<i>Mower tilted</i>	The product is tilted more than the maximum angle.	Move the product to a level area.
<i>Lifted</i>	The lift sensor has been enabled because the product has been lifted.	Make sure that the product body can move freely around its chassis. Remove or create an island around objects that can cause the chassis to be lifted. If the problem stays speak to your GARDENA service.
<i>Trapped</i>	The product is behind a number of obstacles in a small area.	Remove the obstacles or put the boundary wire around the obstacle to make an island. Refer to <i>To make an island on page 14</i> .

Message	Cause	Action
<i>Slipped</i>	The product has got caught in something and has been slipping.	Free the product and correct the cause of problem. If it is because of wet grass, wait until the lawn is dry before you use the product.
	The work area includes a steep slope.	Steep slopes must be isolated. Refer to <i>To install the boundary wire on page 17</i> .
	The guide wire is not put diagonally in the slope.	Make sure that the guide wire is installed diagonally across the slope. Refer to <i>To examine where to put the guide wire on page 15</i> .
<i>Slope too steep</i>	The product stopped because the slope is too steep.	Change the installation of the boundary wire to exclude this steep part of the work area. Refer to <i>To install the boundary wire on page 17</i> .
<i>Outside working area</i>	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 <i>To install the boundary wire on page 17</i> .
	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 nearby.	Move the boundary wire.
	The product can not find the correct loop signal because of interference with a loop signal from a different product installation nearby.	Put the product in the charging station and generate a new loop signal.
<i>Collision/Collision sensor problem</i>	The front wheels on the product are blocked.	Free the product and correct the cause of problem. If the problem stays speak to your GARDENA service.
<i>Stuck in charging station</i>	An object prevents the product to move out from the charging station.	Remove the object.
<i>Charging station blocked</i>	The contact between the charging plates on the product and the contact plates on the charging station is not good. The product has made a number of tries to charge.	Put the product in the charging station and make sure that the charging plates and contact plates are connected.
	An object prevents the product to enter the charging station.	Remove the object.
	The charging station is tilted or bent.	Put the baseplate on level ground.
	The guide wire is not installed correctly.	Install the guide wire correctly. Refer to <i>To install the guide wire on page 18</i> .

Message	Cause	Action
<i>No power in charging station</i>	The power supply unit is incorrect or damaged.	Examine the power supply unit. Replace the power supply unit if it is necessary.
	Power failure.	Find and correct the cause of the power failure.
	The product cannot charge because there is no contact between the contact plates and the charging plates.	Make sure that the charging plates and the contact plates are in contact. Clean the charging plates and the contact plates.
<i>Electronic problem</i>	Temporary electronic or firmware related problem in the product.	Restart the product. If the problem stays speak to your GARDENA service.
<i>Loop sensor problem, front</i>		
<i>Tilt sensor problem</i>		
<i>STOP button problem</i>		
<i>Invalid sub-device combination</i>		
<i>Temporary problem</i>		
<i>Safety function faulty</i>		
<i>Temporary battery problem</i>		
<i>Lift sensor problem</i>		
<i>Empty battery</i>	The product cannot find the charging station.	Change the position of the guide wire. Refer to <i>To install the guide wire on page 18</i> .
	The battery is at the end of its life cycle.	Replace the battery. Refer to <i>Battery on page 29</i> .
	The antenna of the charging station is damaged.	Do a check if the indicator lamp in the charging station flashes red. Refer to <i>Indicator lamp in the charging station on page 35</i> .
	The charging plates on the product or contact plates on the charging station are damaged because of corrosion.	Clean the charging plates and contact plates. Refer to <i>To clean the charging plates and contact plates on page 28</i> . If the problem stays speak to your GARDENA service.
<i>Battery problem</i>	Temporary battery or firmware related problem in the product.	Restart the product. If the problem stays speak to your GARDENA service.
	Incorrect type of battery.	Use original batteries recommended by the manufacturer.
<i>Battery temperature outside limits</i>	The temperature in the battery is too high or too low to start operation.	The temperature in the battery is not in its operating limits and charging/mowing has stopped. Charging/mowing will start when the temperature is restored to its limits.

Message	Cause	Action
<i>Charging system problem</i>	There is corrosion or dirt on the charging plates and contact plates.	Restart the product. Clean the charging plates on the product and the contact plates on the charging station.
	Temporary electronic or firmware problem in the product.	Restart the product. If the problem stays, speak to your approved servicing dealer.
<i>Charging current too high</i>	Incorrect or damaged power supply unit.	Restart the product. If the problem stays speak to your GARDENA service.

Message	Cause	Action
<i>No loop signal</i>	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 <i>To install the boundary wire on page 17</i> .
	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.
	The product has tried to start but it is not in the charging station and <i>ECO mode</i> is enabled.	Put the product in the charging station and start the product.
	A section of the boundary wire is across the other section of boundary wire to and from an island.	Install the boundary wire in the correct direction around the island. Refer to <i>To install the boundary wire on page 17</i> .
	Problem with the pairing between the product and the charging station.	Put the product in the charging station and make a new loop signal. Refer to <i>New loop signal on page 21</i> .
	Interference from metal objects such as fences, reinforcement steel or buried cables nearby.	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.	

Message	Cause	Action
<i>Guide 1/2 not found</i>	The guide wire is not connected to the charging station.	Connect the guide wire to the charging station. Refer to <i>To install the guide wire on page 18</i> .
	Damage in the guide wire.	Replace the damaged section with new guide wire.
	The guide wire is not connected to the boundary loop.	Connect the guide wire correctly to the boundary loop. Refer to <i>To install the guide wire on page 18</i> .
<i>Invalid firmware configuration</i>	The firmware in the product is invalid.	Put the product in the charging station and update the firmware via . If the problem remains, speak to your authorized service technician.

7.2 Indicator lamp in the charging station

The indicator lamp in the charging station must show a solid or flashing green light for a correct installation. If not, follow the instructions in the troubleshooting table below.

Speak to your GARDENA service for more information.

Light	Cause	Action
Green solid light	Good signals.	Usual operation of the product.
Green flashing light	The signals are good and <i>ECO mode</i> is enabled.	Usual operation of the product. Refer to <i>ECO mode on page 21</i> .
Blue flashing light	The boundary wire is not connected to the charging station.	Make sure that the boundary wire is correctly installed in the charging station. Refer to <i>To install the boundary wire on page 17</i> .
	Damage in the boundary wire.	Find out where the damage is. Replace the damaged section with new boundary wire.
Red flashing light	Interference in the antenna of the charging station.	Speak to your GARDENA service.
Red solid light	Error in the circuit board or incorrect power supply in the charging station. The error must be corrected by your GARDENA service	Speak to your GARDENA service.

7.3 Symptoms

If the product does not operate as usual, follow the symptoms table below. Speak to your GARDENA service if you cannot find the cause for the fault.

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 <i>To install the charging station on page 16</i> .
	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 <i>To install the guide wire on page 18</i> .
	The charging station is not on a level surface.	Put the charging station on a level surface. Refer to <i>To examine where to put the charging station on page 11</i> .
The product operates at the wrong time.	The start and stop times for operating are incorrect.	Change the schedule settings. Refer to <i>To do the Schedule settings on page 20</i> .
The product vibrates.	The cutting system is not in balance because of damaged blades.	Examine the blades and screws and replace them if necessary. Refer to <i>Replacement of the blades on page 28</i> .
	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 cutting disc is not installed correctly.	Make sure that the screws for the cutting disc are attached correctly.
The product operates, but the blade disc does not rotate.	The product searches for the charging station, or is moving to the starting point.	Usual operation for the product. 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 <i>To clean the chassis and blade disc on page 28</i> .
	The battery is at the end of its life cycle.	Replace the battery. Refer to <i>Battery on page 29</i> .
	Blunt blades. More energy is necessary when cutting the grass.	Replace the blades. Refer to <i>Replacement of the blades on page 28</i> .
Mowing and charging times are shorter than usual.	The battery is at the end of its life cycle.	Replace the battery. Refer to <i>Battery on page 29</i> .

Symptoms	Cause	Action
The product is parked for hours in the charging station.	The product has operated the maximum cutting time for the day.	Usual operation for the product. Refer to <i>To do the Schedule settings on page 20</i> .
	The STOP button has been pushed.	Enter the PIN code and push the OK button. Push the Start button.
	Parking mode is enabled.	Change the operating mode. Refer to <i>Operating modes on page 23</i> .
	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 .
	For the shape of the work area it is necessary to adjust the settings for <i>Starting points</i> 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 <i>To do the Schedule settings on page 20</i> .
	The work area is too large.	Decrease the size of the work area or extend the schedule. Refer to <i>To do the Schedule settings on page 20</i> .
	Blunt blades.	Replace all the blades. Refer to <i>Replacement of the blades on page 28</i> .
	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 <i>Clean the product on page 27</i> .
The battery state of charge is high, but the product goes back to the charging station.	To prevent to become blocked in a small area, the product follows the guide wire to the charging station.	Usual operation for the product.

7.4 Find breaks in the loop wire

Breaks in the loop wire are usually the result of unintentional physical damage to the wire such as when gardening with a shovel. In countries with ground frost, also sharp stones that move in the ground can damage the wire. Breaks can also occur due to the wire being stretched excessively during installation.

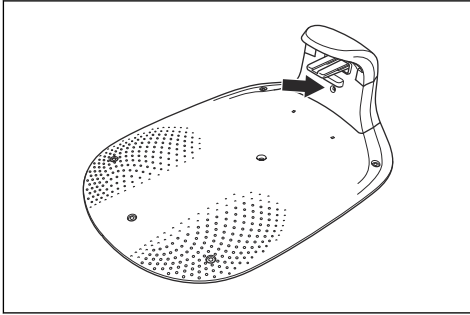
Mowing the grass too low right after the installation can damage wire insulation. Damage to the insulation may not cause disruptions until several weeks or months later. To avoid this, always select the maximum cutting height the first weeks after installation and then lower the height one step at a time every second week until the desired cutting height has been reached.

A damaged splicing of the loop wire can also lead to disruptions several weeks after the splice was done. A faulty splice can, for example, be the result of the coupler not being pressed together hard enough with a pair of pliers, or that a coupler of lower quality than the original coupler has been used. Please first check all known splices before further troubleshooting is done.

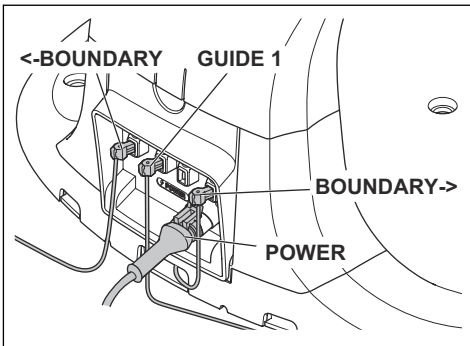
A wire break can be located by gradually halving the distance of the loop where the break may have occurred until there is only a very short section of the wire left.

The following method does not work if *ECO mode* is activated. Make sure first that *ECO mode* is switched off. Refer to *ECO mode on page 21*.

1. Check that the indicator lamp in the charging station flashes blue, which indicates a break in the boundary loop. Refer to *Indicator lamp in the charging station on page 35*.

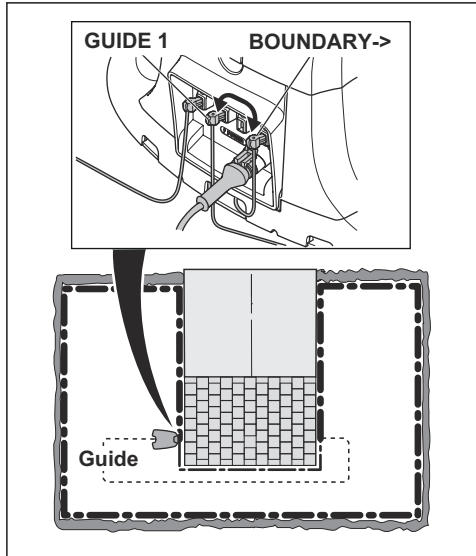


2. Check that the boundary wire connections to the charging station are properly connected and not damaged. Check that the indicator lamp in the charging station is still flashing blue.



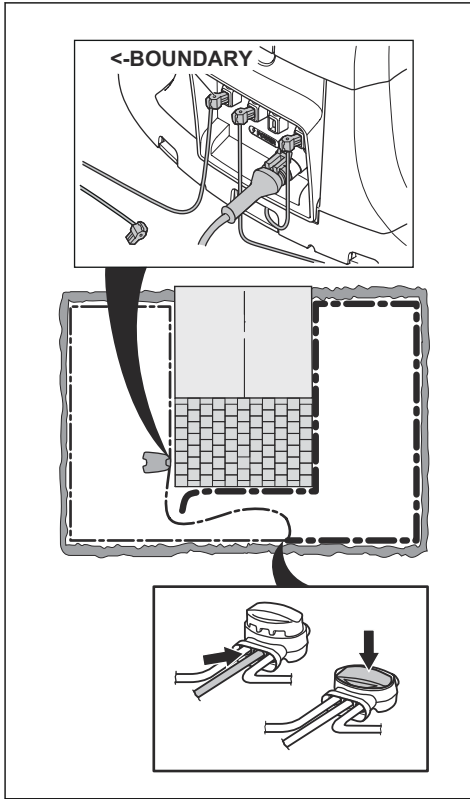
3. Switch the connections between the guide wire and the boundary wire in the charging station. Start by switching connection L and GUIDE.

If the indicator lamp is flashing yellow, then the break is somewhere on the boundary wire between L and the point where the guide wire is connected to the boundary wire (thick black line in the illustration).

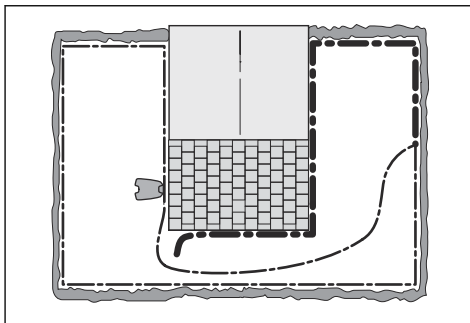


To rectify the fault you will need boundary wire, connector(s) and coupler(s):

- a) If the suspected boundary wire is short then the easiest way is to exchange all of the boundary wire between L and the point where the guide wire is connected to the boundary wire (thick black line).
- b) If the suspected boundary wire is long (thick black line) then do as follows: Put L and GUIDE back to their original positions. Then disconnect R. Connect a new loop wire to R. Connect the other end of this new loop wire at the middle of the suspected wire section.

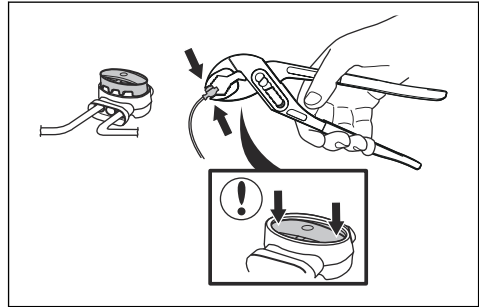


If the indicator lamp now is flashing yellow, then the break is somewhere in the wire between the disconnected end to the point where the new wire is connected (thick black line below). In that case, move the connection for the new wire closer to the disconnected end (roughly at the middle of the suspected wire section) and check again if the indicator lamp is green.



Continue until only a very short section of the wire remains which is the difference between a solid green light and a flashing blue light. Then follow instruction in step 5 below.

4. If indicator lamp still flashes blue in step 3 above: Put L and GUIDE back in their original positions. Then switch R and GUIDE. If indicator lamp now is lit with a solid green light then disconnect L and connect a new boundary wire to L. Connect the other end of this new wire at the middle of the suspected wire section. Follow the same approach as in 3a) and 3b) above.
5. When the break is found, the damaged section must be replaced with a new wire. Always use original couplers.



8 Transportation, storage and disposal

8.1 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 transportations, including by third parties and forwarding agents.

8.2 Storage

- Fully charge the product. Refer to *To charge the battery on page 25*.
- Set the product to OFF. Refer to *To use the ON/OFF button on page 23*.
- Clean the product. Refer to *Clean the product on page 27*.
- Keep the product in a dry, frost free space.
- Keep the product with all wheels on level ground.
- 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 GARDENA service for information about available storage accessories for your product.

8.3 Disposal

- Obey the local recycling requirements and applicable regulations.
- For questions about how to remove the battery, refer to *Battery on page 29*.

9 Technical data

9.1 Technical data

Dimensions	SILENO flex
Length, cm / in.	67 / 26.3
Width, cm / in.	47 / 18.5
Height, cm / in.	29 / 11.4
Weight, kg / lb	12.9 / 28.4

Electrical system	SILENO flex
Battery, Lithium-Ion 18 V/4.0 Ah Art.No	593 11 41-07
Power supply (28V DC), V AC	100-240
Low-voltage cable length, m / ft.	3 / 9.8
Mean energy consumption per month at maximum use, kWh	15
Charge current, A DC	2.2
Type of Power Supply Unit ⁶	FW7438/28/D/XX/Y, ADP-60PR XX
Average mowing time, min	100
Average charging time, min	100

Boundary wire antenna	SILENO flex
Operating Frequency Band, Hz	100-80000
Maximum magnetic field ⁷ , dBuA/m	82
Maximum Radio-frequency power ⁸ , mW @60m	<25

Sound data ⁹	SILENO flex
Sound level, perceived, dB (A)	59
Measured sound power noise level, dB (A)	58
Noise emissions uncertainties K_{WA} , dB (A)	2
Sound pressure noise level at the operator's ear ¹⁰ , dB (A)	50

⁶ XX, YY can be any alphanumeric characters or blank for marketing purpose only, no technical differences.

⁷ Measured according to EN 303 447.

⁸ Maximum active output power to antennas in the frequency band in which the radio equipment operates.

⁹ Determined according to Directive 2006/42/EC and standard EN 50636-2-107. Except Sound level, perceived that is measured according to ISO 11094:1991.

¹⁰ Sound pressure noise uncertainties K_{pA} , 2-4 dB (A)

Mowing	SILENO flex
Cutting system	3 pivoted cutting blades
Cutting motor speed, rpm	2500
Power consumption during cutting, W +/- 20 %	30
Cutting height, cm / in.	2.5-10 / 1-4
Cutting width, cm / in.	22 / 8.6
Narrowest possible passage, cm / in.	60 / 24
Maximum slope for cutting area, %	35
Maximum slope for boundary wire, %	20
Maximum length boundary wire, m / ft.	500 / 1640
Maximum length guide loop ¹¹ , m / ft.	300 / 980
Area capacity m ² / acre	800 / 0.2

IP-code	SILENO flex
Product	IPX5
Charging station	IPX5
Power supply	IP44

Bluetooth®	SILENO flex
Operating frequency band, MHz	2400 - 2484
Maximum transmitted power, dBm	8

Husqvarna AB does not guarantee full compatibility between the product and other types of wireless systems such as remote controls, radio transmitters, hearing loops, underground electric animal fencing or similar.

The products are made in England or the Czech Republic. See information on the rating plate. Refer to *Introduction on page 6*.

9.2 Registered trademarks

The *Bluetooth®* word mark and logos are registered trademarks owned by *Bluetooth SIG, inc.* and any use of such marks by GARDENA is under license.

App Store is a trademark of Apple Inc.

Google Play is a trademark of Google LLC.

¹¹ The guide loop is the loop that is formed by the guide wire and the part of the boundary wire from the junction with the guide wire to the right connection in the charging station.

10 Applicable to US/CA market

10.1 Supplier's Declaration of Conformity

Responsible party: Husqvarna Consumer Outdoor Products N.A., Inc, 8825 Statesville Road, Charlotte, NC 28269, Tel: +1 704 597 5000, www.husqvarna.com/us/support/e-mail/.

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

10.2 Compliance requirements

2AC7Z-ESPS3WROOM1ZASHQ-BLE-1J (the Bluetooth® module).

The Bluetooth® module is located on the HMIboard (PCBA) in the upper chassis. It must only be accessed by GARDENA service.



WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov



WARNING: To comply with RF exposure requirements, please maintain a separation distance of at least 20 cm / 7 inches from any part of the product.

Note: Changes or modifications made to this equipment not expressly approved by Husqvarna may void the FCC authorization to operate this equipment.

Note: This device complies with Part 15 of the FCC Rules [and with Industry Canada license-exempt RSS standard(s)]. Operation is subject to the following two conditions: this device may not cause harmful interference, and this device must accept any interference received, including interference that may cause undesired operation.

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

- Reorient or relocate the receiving antenna.



ORIGINAL INSTRUCTIONS
We reserve the right to make changes without prior notice.
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