



Operator's manual
HUSQVARNA AUTOMOWER® 520/550

Read the operator's manual carefully and make sure that you understand the instructions before you use the product.



EN, English

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1 Introduction

1.1 Memo

| | |
|----------------------------|--|
| Serial number: | |
| PIN code: | |
| Dealer: | |
| Dealer's telephone number: | |

If the robotic lawnmower is stolen, it is important to notify Husqvarna of this. Contact your local Husqvarna representative and provide the robotic lawnmower's serial number so that it can be registered as stolen in an international database. This is an important step in the robotic lawnmower's theft protection, which reduces interest in the buying and selling of stolen robotic lawnmowers.

The product's serial number consists of 9 digits and is shown on the product rating plate and packaging.



1.2 Product description

Congratulations on your choice of an exceptionally high quality product. To get the best results from your Husqvarna robotic lawnmower requires knowledge of how it works. This Operator's manual contains important information about the robotic lawnmower, how it must be installed and how to use it. As a complement to this Operator's manual, there are information movies with instructions available on Husqvarna's website, www.husqvarna.com.

Keep in mind that the operator is responsible for accidents or hazards occurring to other people or their property.

Husqvarna has a policy of continuous product development and reserves the right to modify the design, appearance and function of products without prior notice.

1.2.1 Capacity

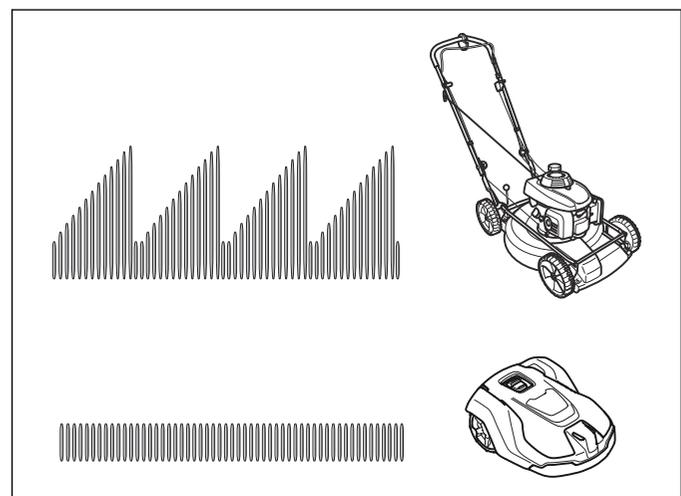
The robotic lawnmower is recommended for lawn sizes up to maximum capacity listed in the *Technical data on page 57*.

How big an area the robotic lawnmower can keep cut depends primarily on the condition of the blades and the type, growth and moisture of the grass. The shape of the lawn is also significant. If the garden mainly consists of open lawn areas, the robotic lawnmower can mow more per hour than if the garden consists of several small lawns separated by trees, flower beds and passages.

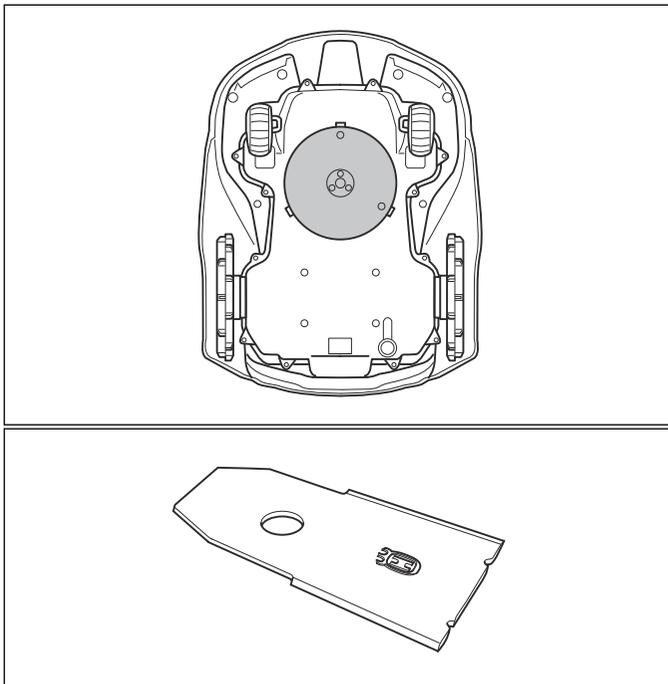
A fully charged robotic lawnmower mows for 75 to 270 minutes depending on the status of the battery and lawn. Then the robotic lawnmower will charge for 50 to 60 minutes. The charging time can vary depending on factors like the ambient temperature.

1.2.2 Mowing technique

The robotic lawnmower's system is based on an efficient and energy saving principle. Unlike many standard lawnmowers, the robotic lawnmower cuts the grass instead of knocking it off. This frequent cutting technique improves the grass quality. No collection of grass is required, and small pieces of cut grass will reduce the need of fertilizers. Furthermore, it is emission free, convenient and your lawn will always look well maintained.



It is recommended to let the robotic lawnmower to mainly mow in dry weather to obtain the best possible result. The robotic lawnmower can also mow in the rain, however wet grass easily sticks on the robotic lawnmower and there is a greater risk of slipping on steep slopes.



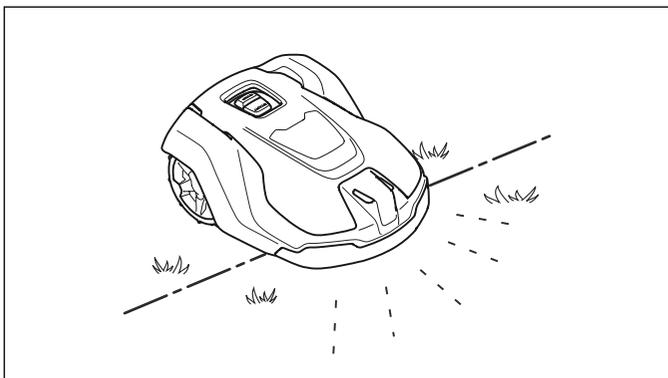
The blades must be in good condition to obtain the best mowing result. In order to keep the blades sharp for as long as possible it is important to keep the lawn free from branches, small stones and other objects.

Replace the blades regularly for the best mowing result. See *Replace the blades on page 43*.

1.2.3 Working method

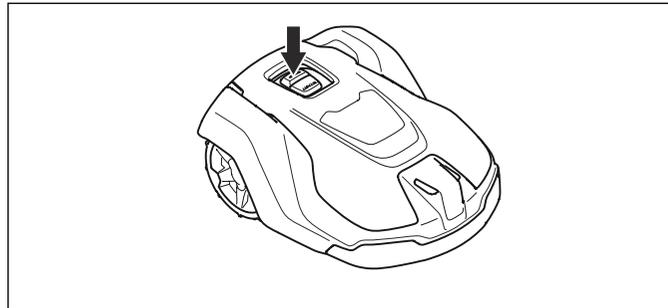
The robotic lawnmower automatically mows the lawn. It continuously alternates between mowing and charging.

When the robotic lawnmower body hits an obstacle or approaches the boundary wire the robotic lawnmower reverses and selects a new direction. Sensors at the front and back will sense when the robotic lawnmower is approaching the boundary wire. The front of the robotic lawnmower always passes the boundary wire by a specific distance before the mower turns around. The distance can be changed to adapt to the installation if required.



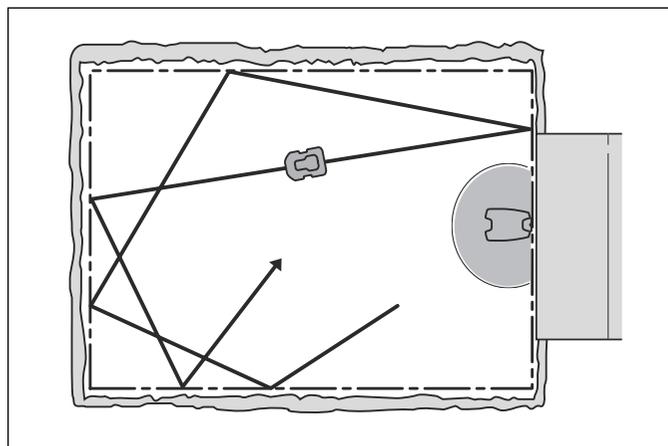
The **STOP** button on the top of the robotic lawnmower is used to stop the robotic lawnmower from operating out on the lawn. The **STOP** button also needs to be pressed

if the robotic lawnmower is in an active status, but standing still in the charging station.



1.2.4 Movement pattern

The movement pattern of the robotic lawnmower is random, which means that a movement pattern is never repeated. With this cutting system the lawn is mown evenly without any mowing lines from the robotic lawnmower.



1.2.5 Finding the charging station

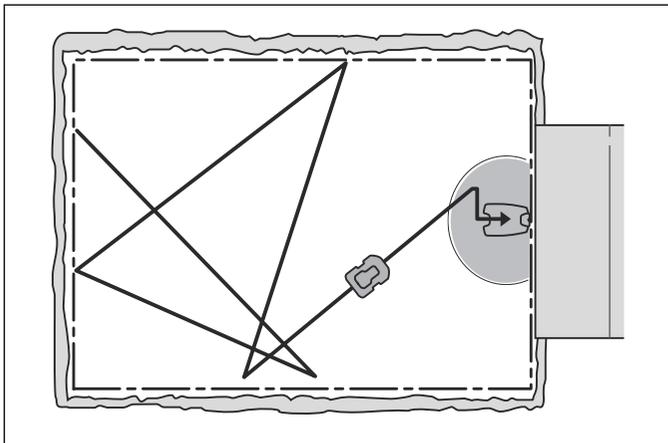
The robotic lawnmower can be set to search for the charging station in up to 3 different ways. The robotic lawnmower automatically combines these 3 search methods to locate the charging station as fast as possible, but also to avoid as much tracks forming as possible.

Using the manual settings options, the 3 search methods can be combined to optimize the search for the shape of the garden in question, see *Installation on page 27*.

1.2.5.1 Search method 1 - Irregular

Irregular search method means that the robotic lawnmower operates irregularly until it gets close to the charging station.

The benefit with this search method is that there is no risk of tracks on the lawn from the robotic lawnmower. The disadvantage is that search times can be somewhat long.



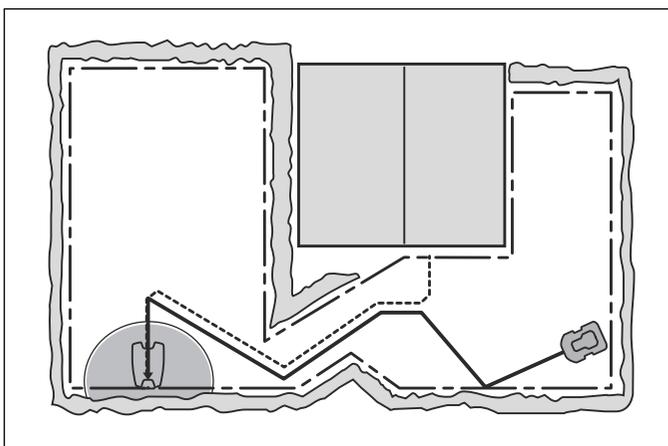
1.2.5.2 Search method 2 - Follow guide wire

Follow guide wire means that the robotic lawnmower operates irregularly until it reaches the guide wire. Then the robotic lawnmower follows the guide wire to the charging station.

The guide wire is a wire that is laid from the charging station towards, for instance, a remote part of the working area or through a narrow passage. The guide wire is then connected with the boundary loop. See *Installation of the guide wire on page 19*.

This search method makes it easier for the robotic lawnmower to find the charging station despite many or large islands, narrow passages or steep slopes.

The benefit of this search method is shorter search times.



1.2.5.3 Search method 3 - Follow boundary wire

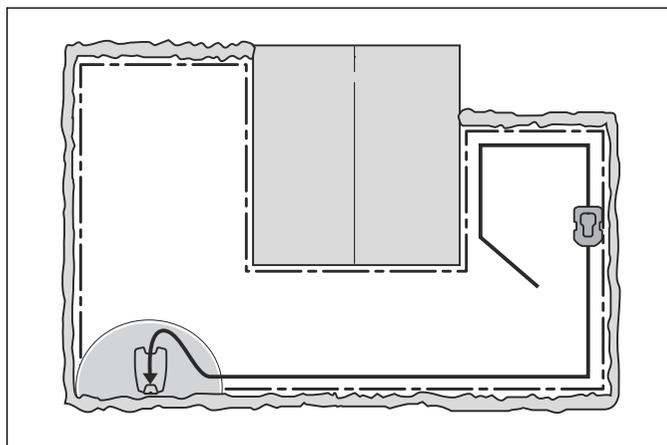
Follow boundary wire means that the robotic lawnmower operates irregularly until it reaches the boundary loop. Then it follows the boundary loop to the charging station. The robotic lawnmower randomly selects to travel clockwise or anticlockwise.

This search method is suitable in an installation with an open lawn space, wide passages (wider than about 3 m /10 ft.), and no or only a few small islands.

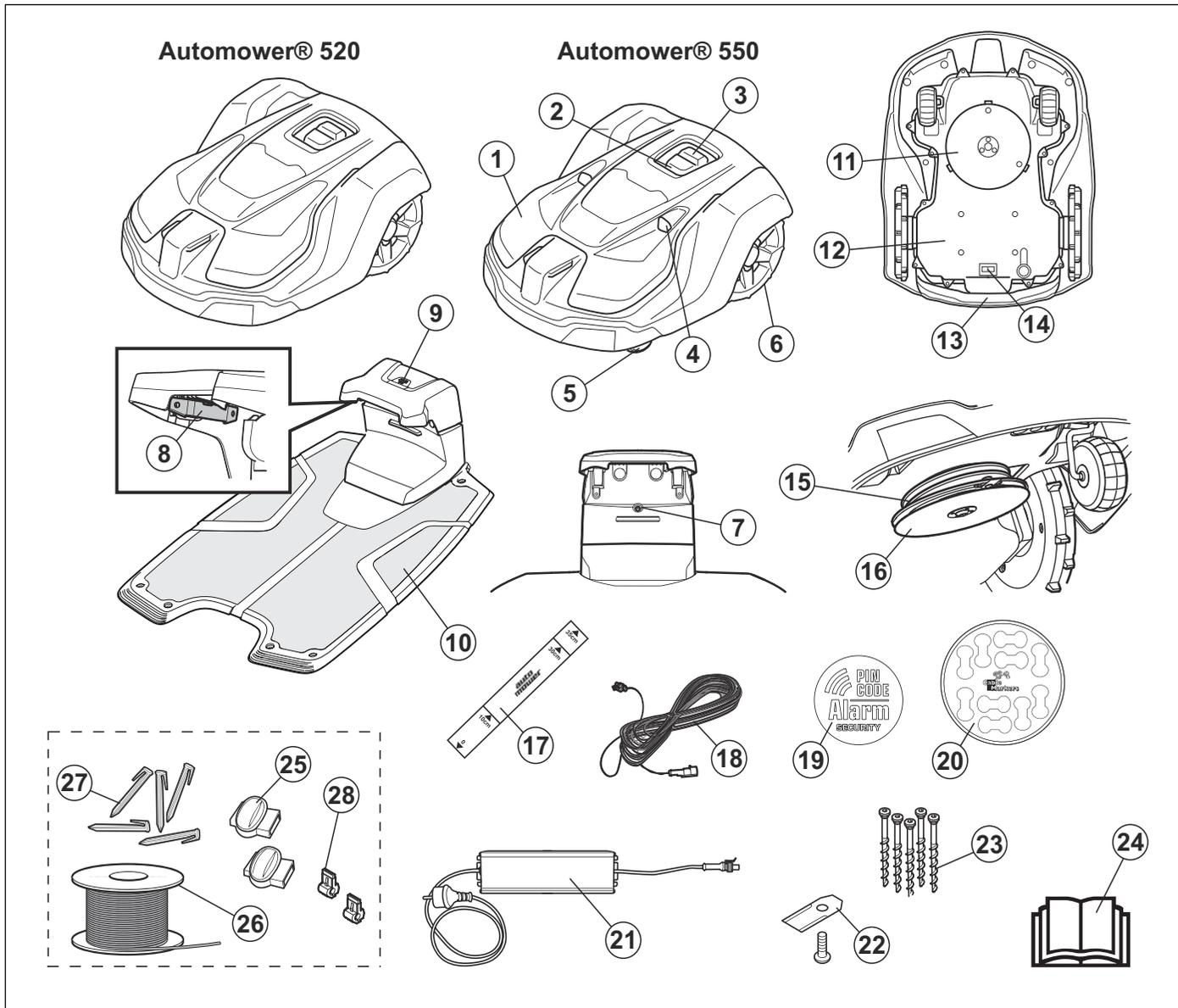
The benefit of this search method is that there is no need to install a guide wire.

The disadvantage is that some tracks can be formed alongside the boundary loop. The search time will also be longer if there are narrow passages or numerous islands in the installation.

As a rule, this search method is used only if the robotic lawnmower cannot find the charging station using search method 1 or 2 within the expected time period.



1.3 Product overview



The numbers in the illustration represent:

- | | |
|---|--|
| <ul style="list-style-type: none"> 1. Body 2. LED indicator lamp for the robotic lawnmower status 3. STOP/START button 4. Ultrasonic sensors 5. Front wheels 6. Rear wheels 7. LED indicator lamp for the status of the charging station and boundary wire 8. Contact strips 9. Park button 10. Charging station 11. Cutting system 12. Chassis box with electronics, battery and motors 13. Handle 14. Main switch 15. Blade disc | <ul style="list-style-type: none"> 16. Skid plate 17. Measurement gauge for help when installing the boundary wire (the measurement gauge is broken loose from the box) 18. Low voltage cable 19. Alarm decal 20. Cable markers 21. Power supply (the appearance of the power supply may differ depending on market) 22. Extra blades 23. Screws for securing the charging station 24. Operator's manual and Quick Guide 25. Couplers for loop wire ¹ 26. Loop wire for boundary loop and guide wire ² 27. Pegs ³ 28. Connector for the loop wire ⁴ |
|---|--|

¹ Is a part of the Installation kit which is purchased separately.

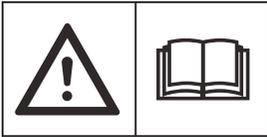
² See note 1

³ See note 1

⁴ See note 1

1.4 Symbols on the product

These symbols can be found on the robotic lawnmower. Study them carefully.

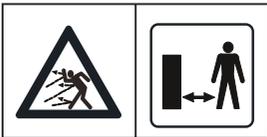


WARNING: Read the user instructions before operating the robotic lawnmower.



WARNING: Operate the disabling device before working on or lifting the machine.

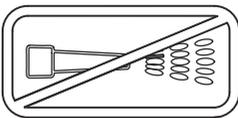
The robotic lawnmower can only start when the main switch is set to 1 and the correct PIN code has been entered. Turn the main switch to 0 before carrying out any inspections and/or maintenance.



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



WARNING: Do not ride on the machine. Never put your hands or feet close to or under the machine.



Never use a high-pressure washer or even running water to clean the robotic lawnmower.



This product conforms to the applicable EC Directives.



Noise emission to surroundings. The product's emissions are set out in *Technical data on page 57* and on the rating plate.



It is not permitted to dispose this product as normal household waste. Ensure that the product is recycled in accordance with local legal requirements.



The chassis contains components which are sensitive to electrostatic discharge (ESD). The chassis must also be resealed in a professional manner. For these reasons the chassis shall only be opened by authorized service technicians. A broken seal can result in the entire or parts of the guarantee no longer being valid.



The low voltage cable must not be shortened, extended or spliced.

Do not use a trimmer nearby the low voltage cable. Be careful when trimming edges where the cables are placed.

Operate the disabling device before you use or lift the product.

2 Safety

2.1 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.

2.2 General safety instructions

The following system is used in the Operator's Manual to make it easier to use:

- Text written in *italics* is a text that is in the Automower® Connect, or is a reference to another section in the Operator's manual.
- Text written in **bold** is one of the buttons on the robotic lawnmower.
- Text written in *UPPERCASE* and *italics* refer to the different operating modes available in the robotic lawnmower.

2.2.1 IMPORTANT. READ CAREFULLY BEFORE USE. KEEP FOR FUTURE REFERENCE

The operator is responsible for accidents or hazards occurring to other people or property.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, 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. Children should be supervised to ensure that they do not play with the appliance.

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Local regulations may restrict the age of the operator. Clearing and maintenance shall not be made by children without supervision.

Never connect the power supply to an outlet if plug or cord is damaged. Worn or damaged cord increase the risk of electric shock.

Only charge the battery in the included charging station. 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, seek medical help if it comes in contact with the eyes.

Use only original batteries recommended by the manufacturer. Product safety cannot be guaranteed with other than original batteries. Do not use non-rechargeable batteries.

The appliance must be disconnected from the supply mains when removing the battery.



WARNING: The robotic lawnmower can be dangerous if used incorrectly.



WARNING: Never use the robotic lawnmower when persons, especially children or pets, are in the cutting area.

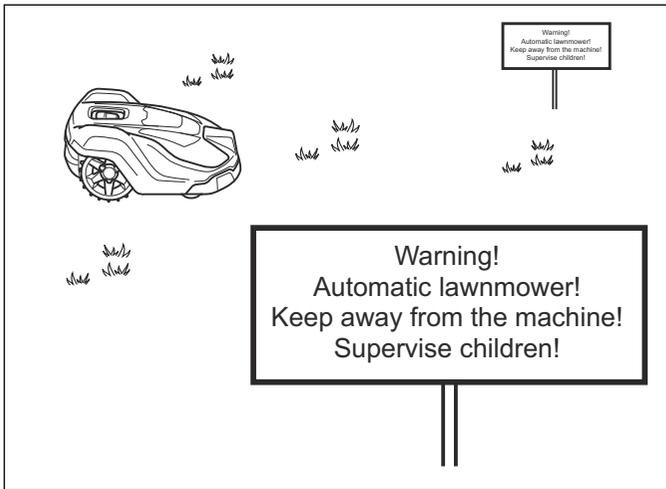


WARNING: Keep your hands and feet away from the rotating blades. Never put your hands or feet close to or under the machine when the motor is running.

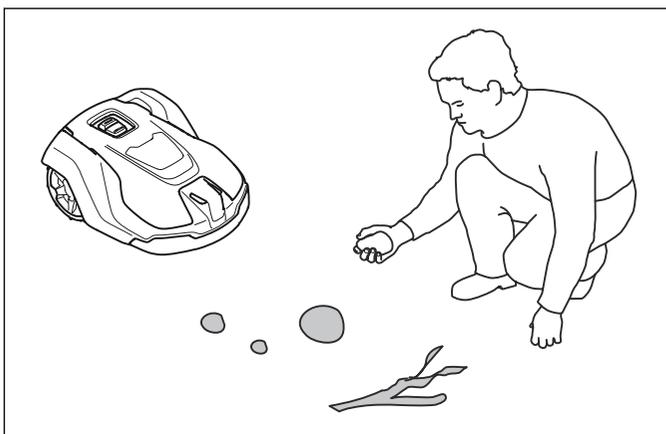
2.3 Safety instructions for operation

2.3.1 Use

- This robotic lawnmower is designed to mow grass in open and level ground areas. It may only be used with the equipment recommended by the manufacturer. All other types of use are incorrect. The manufacturer's instructions with regard to operation/maintenance must be followed precisely.
- Warning signs shall be placed around the working area of the robotic lawnmower if it is used in public areas. The signs shall have the following text:
Warning! Automatic lawnmower! Keep away from the machine! Supervise children!



- Use the **PARK** function or switch off the main switch when persons, especially children or pets, are in the cutting area. It is recommended to program the lawnmower for use during hours when the area is free from activity, e.g. at night. See *Timer on page 24*.
- The robotic lawnmower may only be operated, maintained and repaired by persons that are fully conversant with its special characteristics and safety regulations. Please read the Operator's Manual carefully and make sure you understand the instructions before using the robotic lawnmower.
- It is not permitted to modify the original design of the robotic lawnmower. All modifications are made at your own risk.
- Check that there are no stones, branches, tools, toys or other objects on the lawn that can damage the blades. Objects on the lawn can also lead to the robotic lawnmower getting stuck in them and help may be required to remove the object before the mower can continue mowing. Always set the main switch in position 0 before clearing a blockage.



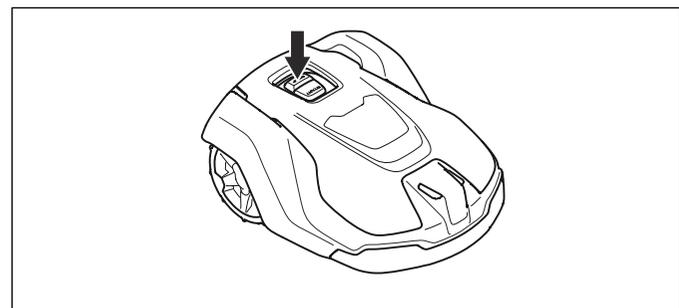
- Start the robotic lawnmower according to the instructions. When the main switch is set to 1; make sure to keep your hands and feet away from the rotating blades. Never put your hands and feet under the robotic lawnmower.
- Never touch moving hazardous parts, such as the blade disc, before it has come to a complete stop.
- Never lift up the robotic lawnmower or carry it around when the main switch is in position 1.
- Do not let persons who do not know how the robotic lawnmower works and behaves use it.

- The robotic lawnmower must never be allowed to collide with persons or other living creatures. If a person or other living creature comes in the lawnmower's way it shall be stopped immediately. See *Stop on page 41*.
- Do not put anything on top of the robotic lawnmower or its charging station.
- Do not allow the robotic lawnmower to be used with a defective guard, blade disc or body. Neither should it be used with defective blades, screws, nuts or cables. Never connect a damaged cable, or touch a damaged cable before it is disconnected from the supply.
- Do not use the robotic lawnmower if the main switch does not work.
- Always switch off the robotic lawnmower using the main switch when the robotic lawnmower is not in use. The robotic lawnmower can only start when the main switch is set to 1 and the correct PIN code has been entered.
- The robotic lawnmower must never be used at the same time as a sprinkler. Use the timer function (see *Timer on page 24*) so the mower and sprinkler never run simultaneously.
- Husqvarna does not guarantee full compatibility between the robotic lawnmower and other types of wireless systems such as remote controls, radio transmitters, hearing loops, underground electric animal fencing or similar.
- The built-in alarm is very loud. Be careful, especially if the robotic lawnmower is handled indoors.
- Metal objects in the ground (for example reinforced concrete or anti-mole nets) can result in a stoppage. The metal objects can cause interference with the loop signal which then can lead to a stoppage.
- The robotic lawnmower must never be stored, operated or charged in temperatures below 0 °C / 32 °F or above 45 °C / 113 °F. This might cause damage to the product.

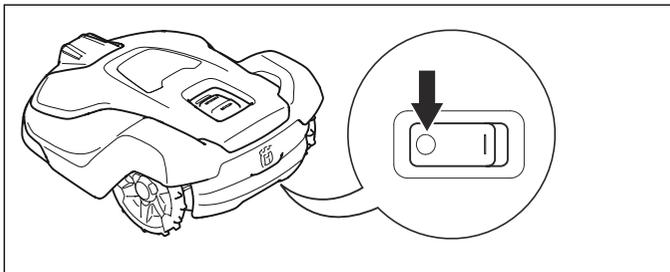
2.3.2 How to lift and move the robotic lawnmower

To safely move from or within the working area:

1. Press the **STOP** button to stop the robotic lawnmower.



2. Set the main switch in position 0.



3. Carry the robotic lawnmower by the handle under the robotic lawnmower with the blade disc away from the body.



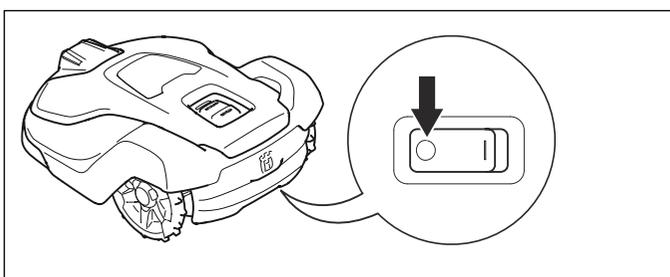
CAUTION: Do not lift the robotic lawnmower when it is parked in the charging station. It can damage the charging station and/or the robotic lawnmower. Press **STOP** and pull the robotic lawnmower out of the charging station before lifting it.

2.3.3 Maintenance



WARNING: When the robotic lawnmower is turned upside down the main switch must always be in the 0 position.

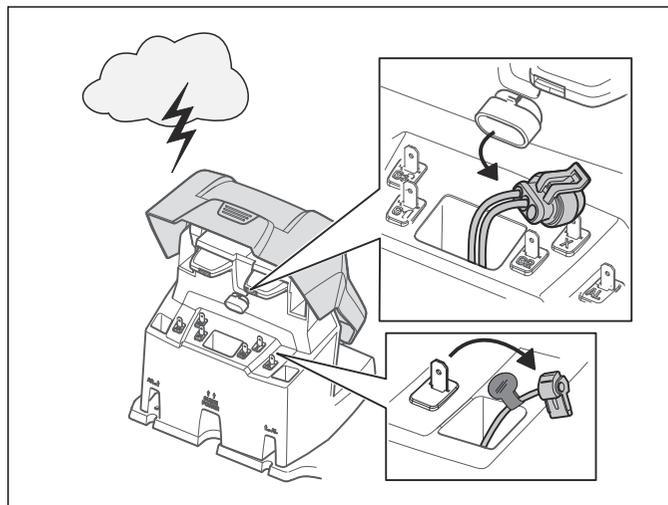
The main switch should be set in the 0 position during all work on the mower's chassis, such as cleaning or replacing the blades.



CAUTION: Never use a high-pressure washer or even running water to clean the robotic lawnmower. Never use solvents for cleaning.

Inspect the robotic lawnmower each week and replace any damaged or worn parts. See *Maintenance* on page 43.

2.3.4 In the event of a thunderstorm



To reduce the risk of damage to electrical components in the robotic lawnmower and its charging station, we recommend that all connections to the charging station are disconnected (power supply, boundary wire and guide wires) if there is a risk of a thunderstorm.

1. Make sure the wires are marked with the supplied markers to simplify reconnecting. The charging station's connections are marked AR, AL, G1, G2 and G3.
2. Disconnect all connected wires and the power supply.
3. Connect all the wires and the power supply if there is no longer a risk of thunder. It is important that each wire is connected to the right place.

3 Installation

3.1 Presentation

This chapter contains information that is important to be aware of when planning the installation.

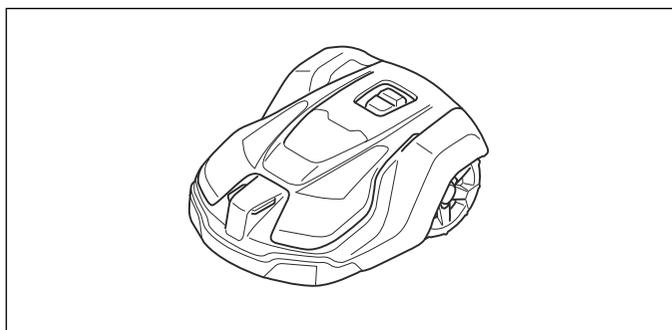
Before starting the installation make yourself familiar with what is included in the carton.

| Automower® 520/550 | |
|-----------------------------------|-------|
| Robotic lawnmower | ✓ |
| Charging station | ✓ |
| Power supply | ✓ |
| Low voltage cable | ✓ |
| Charging station screws | 6 pcs |
| Allen key | ✓ |
| Measurement gauge | ✓ |
| Cable markers | ✓ |
| Operator's manual and Quick guide | ✓ |
| Extra blades | 9 pcs |
| Alarm decal | ✓ |

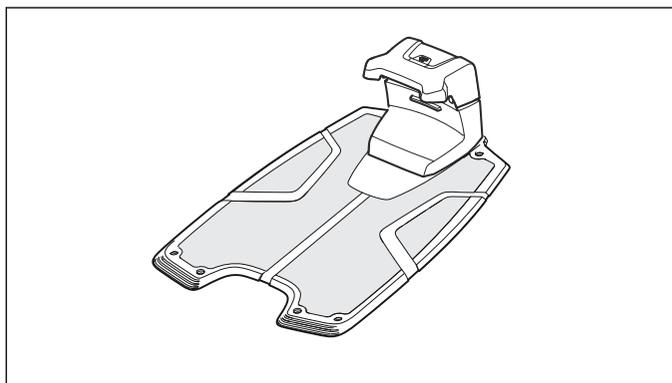
3.1.1 Main components for installation

The installation of the robotic lawnmower involves 4 main components:

1. A robotic lawnmower that mows the lawn by essentially operating in a random pattern.

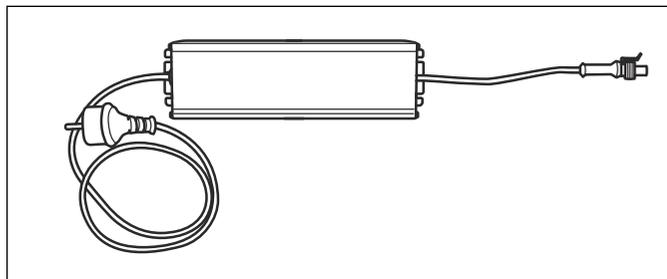


2. A charging station, to where the robotic lawnmower returns when the battery level becomes too low.

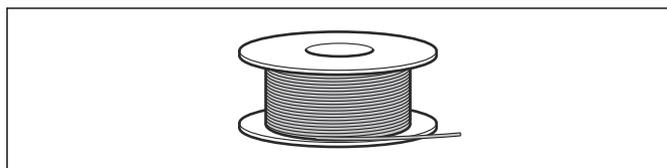


3. A power supply, which is connected to the charging station and a 100-240V wall socket. The power supply is connected to the wall socket and to the

charging station using a 10 m / 33 ft. long low voltage cable. Low voltage cables with 3 m / 10 ft. and 20 m / 66 ft. length are available as optional accessories. No parts of the power supply must be changed or tampered with. For example, the low voltage cable must not be shortened or extended.



4. Loop wire, which is laid around the edges of the lawn and around objects and plants that the robotic lawnmower must not run into. The loop wire is used both as a boundary wire and a guide wire. The maximum permitted length for the boundary loop is 800 m / 874 yd.



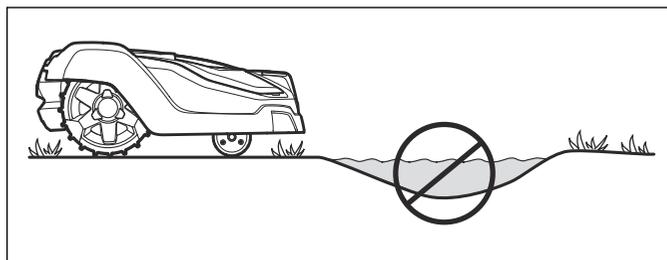
3.2 Preparations

Read through this entire chapter before beginning the installation. How the installation is done affects how well the robotic lawnmower works. It is therefore important to plan the installation carefully.

Planning is simplified if you make a sketch of the working area, including all obstacles. This makes it easier to see the ideal positions for the charging station, the boundary wire and the guide wire. Draw on the sketch where the boundary and guide wires should be routed.

Visit www.husqvarna.com for further descriptions and tips regarding installation.

1. If the lawn in the working area is longer than 10 cm / 4 in. mow it using a standard lawnmower. Collect the grass.
2. Fill in holes and hollows to stop rainwater from forming pools of water. The product may be damaged if it operates in pools of water. See *Guarantee terms on page 59.*



3. Read carefully through all the steps before the installation.

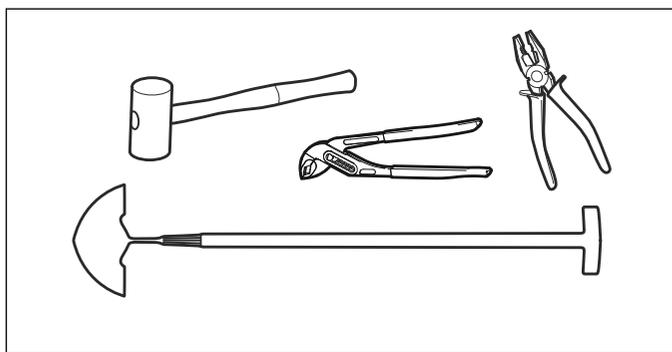
4. Check that all parts for the installation are included.
See *Product overview on page 6*.

- Robotic lawnmower
- Charging station
- Power supply
- Low voltage cable
- Screws for the charging station
- Measurement gauge

3.2.1 Installation tools

During installation you will also need:

- Hammer/plastic mallet (to simplify putting the pegs in the ground).
- Combination pliers for cutting the boundary wire and pressing the connectors together.
- Multigrip pliers (for pressing the couplers together).
- Edge cutter/straight spade if the boundary wire is to be buried.



3.3 Charging station

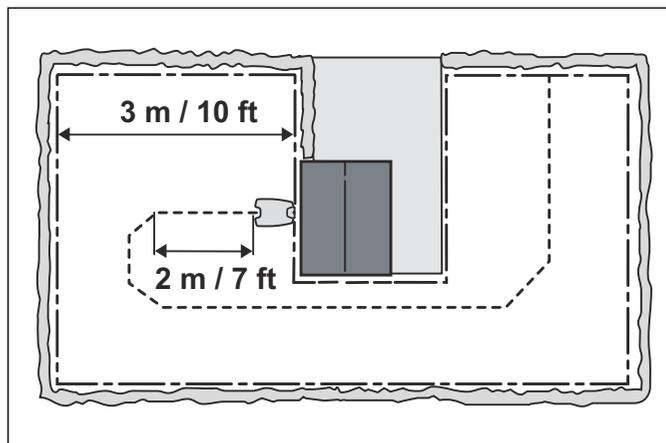
The charging station has 3 functions:

- To send control signals along the boundary wire.
- To send control signals in the guide wire so that the robotic lawnmower can find the charging station.
- To charge the robotic lawnmower battery.

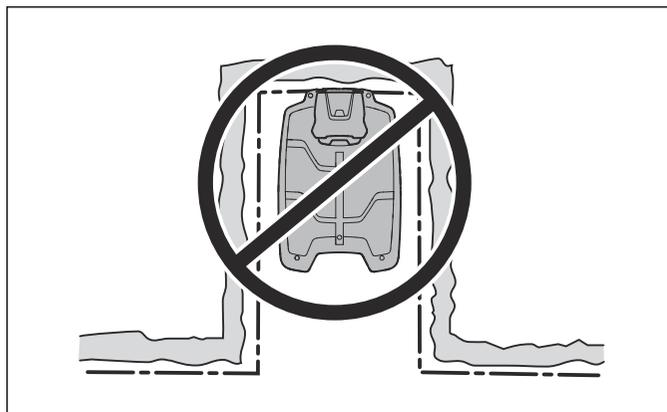
3.3.1 Best charging station location

Consider the following recommendations when identifying the best location for the charging station:

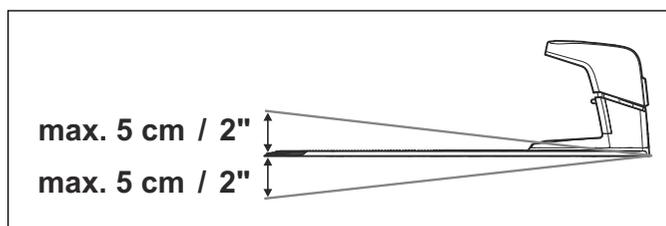
- Allow minimum 3 m / 10 ft. of free space in front of the charging station.
- Lay minimum 1.5 m / 5 ft. of boundary wire straight out to the right and left of the charging station.
- Place the charging station close to a wall socket. The supplied low voltage cable is 10 m / 33 ft. long.
- Place the charging station on a level surface free from sharp objects.
- Protect the charging station from water spray, for instance from irrigation.
- Protect the charging station from direct sunlight. The charging process is affected by the ambient temperature.
- Place the charging station in the lower part of a working area that has a major slope.
- Consider if the charging station should be placed out of sight for outsiders.



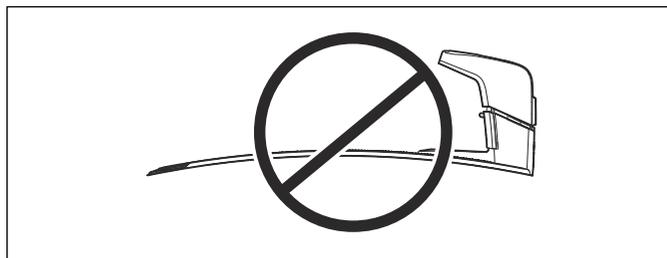
Avoid putting the charging station in confined spaces or in a corner. This can make it difficult for the robotic mower to find the charging station.



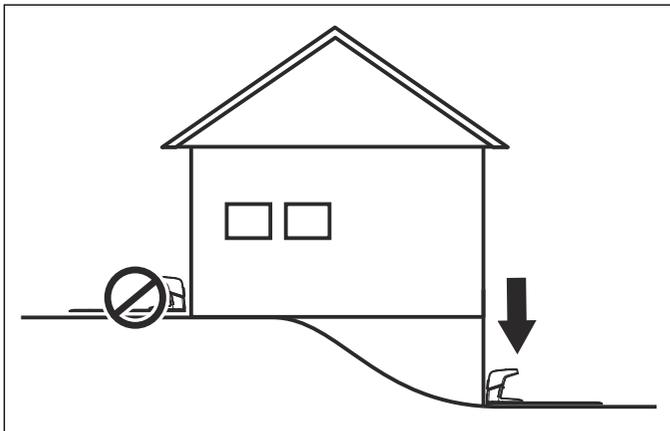
The charging station must be positioned on level ground. The front end of the charging station cannot be positioned higher or lower than the back end according to picture below.



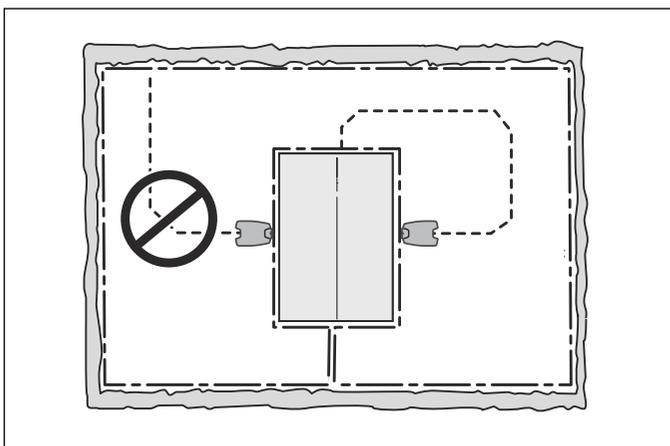
The charging station must not be positioned in a way that can bend its base plate.



If the installation is done in a working area with a steep slope, the charging station should be placed at the bottom of the slope. This makes it easier for the robotic lawnmower to follow the guide wire to the charging station.



The charging station should not be placed on an island as this limits the laying of the guide wire in an optimal way. However, if the charging station has to be installed on an island, the guide wire also has to be connected to the island. Read more about islands in the *Boundaries within the working area* on page 16.



3.3.2 Connecting the power supply

Take the following into consideration when planning where to place the power supply:

- Close to the charging station
- Protection from rain
- Protection from direct sunlight



WARNING: The robotic lawnmower is only to be used with a power supply unit supplied by Husqvarna.

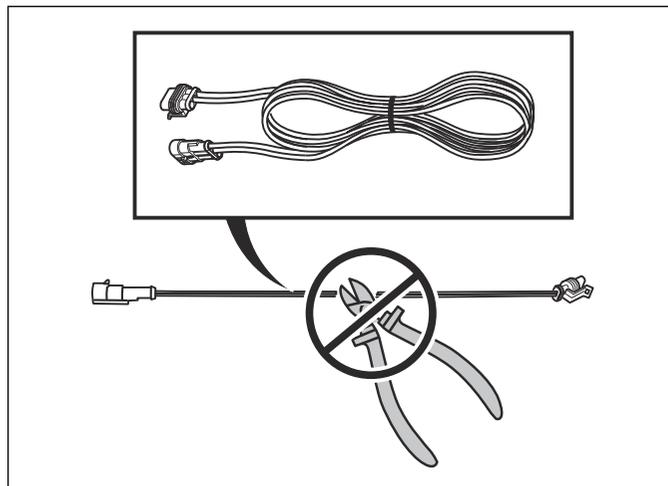
The power supply must be placed where it is well ventilated and must be placed under a roof. If the power supply is connected to an electrical socket outdoors, this must be approved for outdoor use. It is recommended to use an earth fault-breaker (RCD) when connecting the power supply to the wall socket.



WARNING: Applicable to USA/Canada. If the 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.

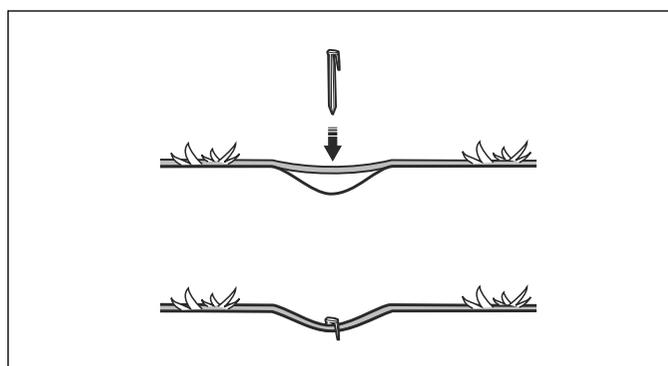
No parts of the power supply must be changed or tampered with. For example, the low voltage cable must

not be shortened or extended. Low voltage cables with 3 m / 10 ft. or 20 m / 66 ft. length are available as optional accessories.

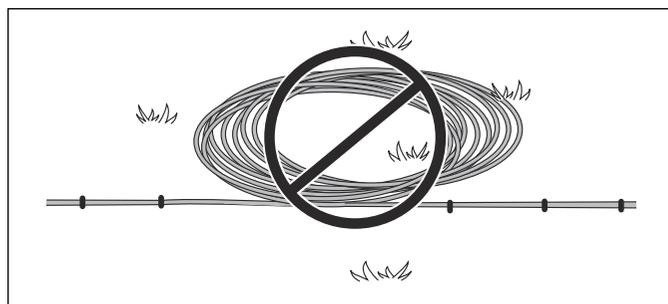


It is possible to let the low voltage cable cross the working area. The low voltage cable must be stapled down or buried, and the cutting height should be such that the blades on the blade disc can never come in contact with the low voltage cable.

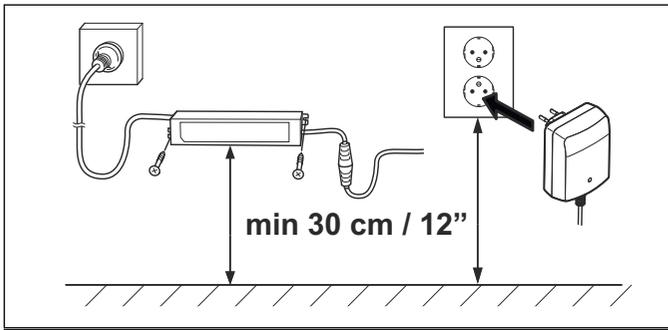
Make sure the low voltage cable is laid along the ground and secured with pegs. The cable must lie close to the ground so as not to be cut before the grass roots have grown over it.



The low voltage cable must never be stored in a coil or under the charging station's base plate as this can interfere with the signals from the charging station.



If the power supply cannot be plugged directly into a wall socket, do not under any circumstances mount the power supply at a height where there is a risk it can be submerged in water (at least 30 cm / 12 in. from the ground). It is not permitted to place the power supply on the ground.



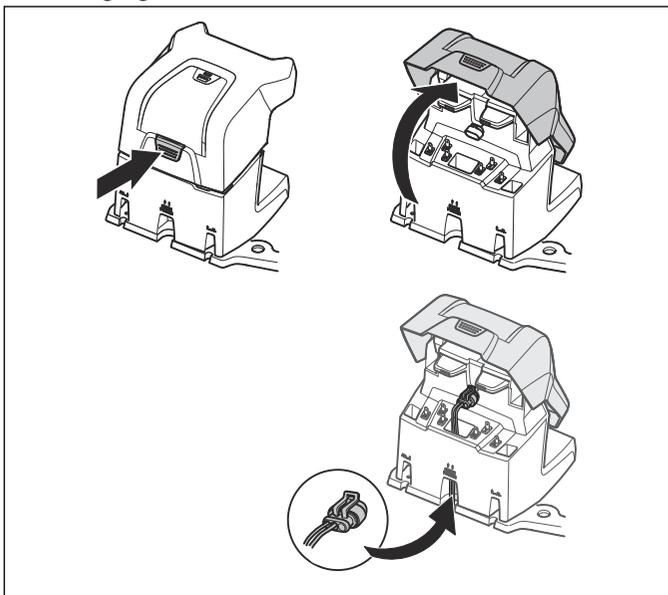
WARNING: No parts of the power supply must under any circumstances be changed or tampered with. The low voltage cable must not be shortened or extended.

CAUTION: Place the low voltage cable so that the blades on the blade disc can never come in contact with it.

CAUTION: Use the plug to disconnect the charging station, for instance before cleaning or repairing the loop wire.

3.3.3 Installing and connecting the charging station

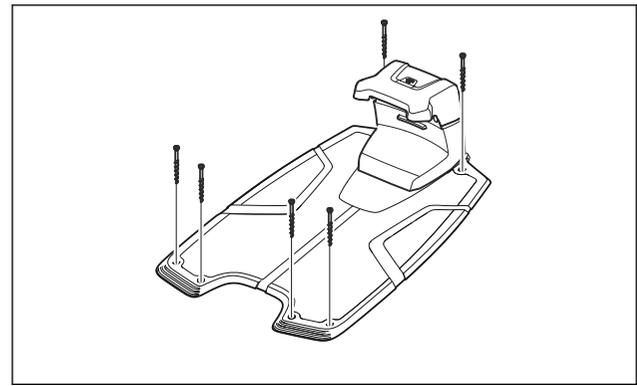
1. Position the charging station in a suitable spot. See *Best charging station location on page 12*.
2. Tilt the protective cover on the charging station forward and connect the low voltage cable to the charging station.



3. Connect the power supply's power cable to a 100-240V wall socket. If the power supply is connected to an electrical socket outdoors, this must be approved for outdoor use. See *Connecting the power supply on page 13*.
4. Attach the charging station to the ground using the supplied screws. Ensure the screws are screwed all the way down in the countersink.

Note: The guide wire must be laid and connected to the charging station before securing the charging

station to the ground. See *Laying and connecting the guide wire on page 20*.



CAUTION: It is not permitted to make new holes in the charging station's plate. Only the existing holes may be used to secure it to the ground.

CAUTION: Do not tread or walk on the charging station's plate.



3.4 Charging the battery

When the charging station is connected, it is possible to charge the robotic lawnmower. Set the main switch to position 1.

Place the robotic lawnmower in the charging station while the boundary and guide wires are being laid.

If the battery is flat, it takes about 80 to 100 minutes to fully charge it.

WARNING: Only charge the robotic lawnmower 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.

Note: The robotic lawnmower cannot be used before the installation is complete.

3.5 Boundary wire

The boundary wire can be installed in the following ways:

- Secure the wire to the ground with pegs.

Staple down the boundary wire if you want to make adjustments to the boundary loop during the first few weeks of operation. After a few weeks the grass will have grown over the wire, making it no longer visible. Use a hammer/plastic mallet and pegs.

- Bury the wire.

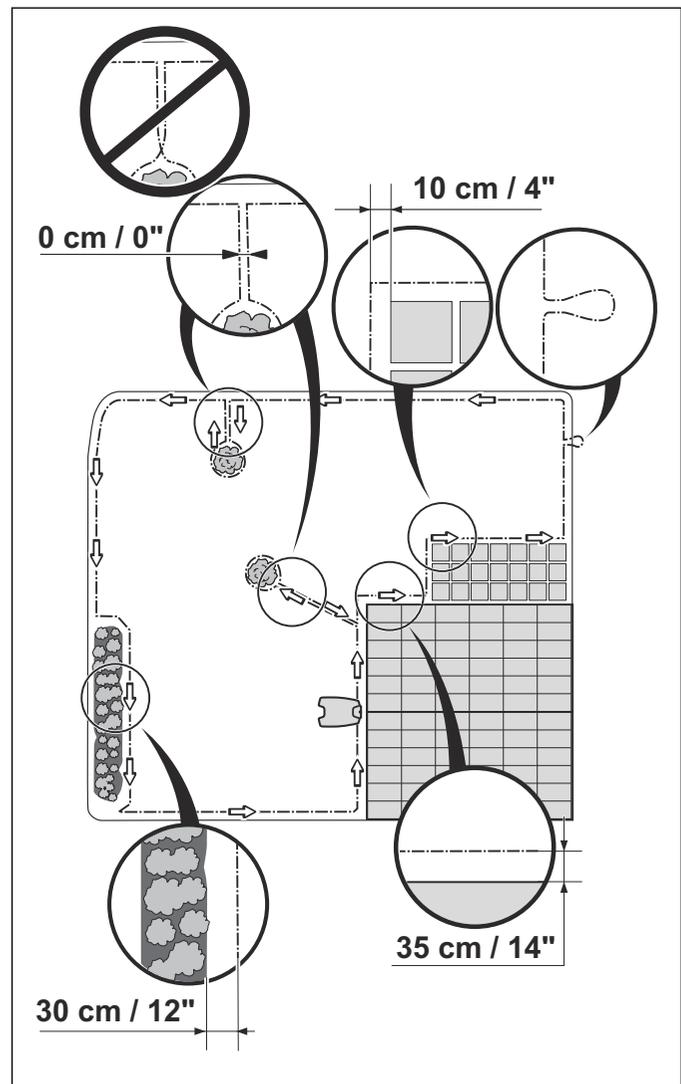
Bury the boundary wire if you want to dethatch or aerate the lawn. If necessary, both methods can be combined so one part of the boundary wire is stapled down and the other is buried. The wire can be buried for instance using an edge cutter or a straight spade. Make sure to lay the boundary wire at least 1 cm / 0.4 in. and a maximum of 20 cm / 8 in. in the ground.

3.5.1 Plan where to lay the boundary wire

The boundary wire must be laid so that:

- The wire forms a loop around the working area. Use original boundary wire. It is specially designed to resist dampness from the soil.
- The robotic lawnmower is never more than 35 m / 14 ft. from the wire at any point in the working area.
- The wire is no more than 800 m / ft. long.
- About 20 cm / 8 in. of extra wire is available to which the guide wire will be connected later. See *Laying the boundary wire on page 18*.

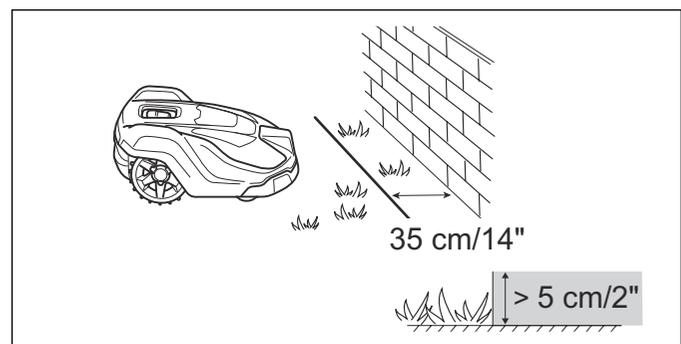
The illustration below shows how the boundary wire must be laid around the working area and around obstacles. Use the supplied measurement gauge to obtain the correct distance. See *Product overview on page 6*.



3.5.2 Working area boundaries

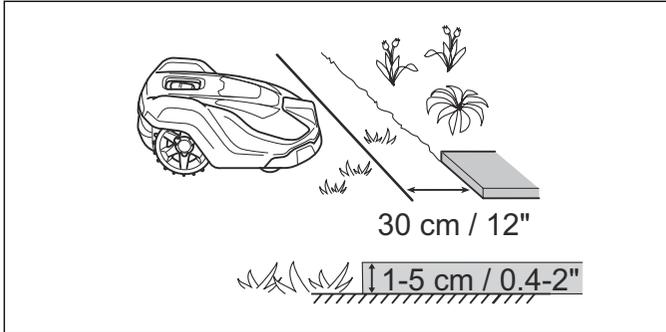
Depending on what the working area is adjacent to, the boundary wire must be laid at different distances from obstacles.

If a high obstacle (5 cm / 2 in. or more), for example a wall or fence, borders the working area, the boundary wire should be laid 35 cm / 14 in. from the obstacle. This will prevent the robotic lawnmower from colliding with the obstacle and reduce body wear. About 20 cm / 8 in. of the lawn around the fixed obstacle will not be mown.

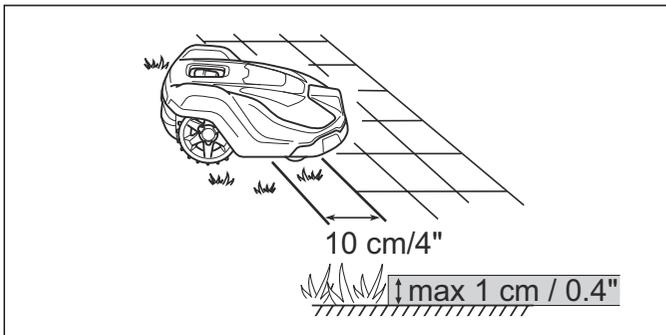


If the working area borders a small ditch, a flower bed or a small elevation, for example a low kerbstone (1-5 cm / 0.4-2 in.), the boundary wire should be laid 30 cm / 12 in. inside the working area. This prevents the wheels from driving into the ditch or up onto the kerbstone, which might lead to excessive wear on the robotic

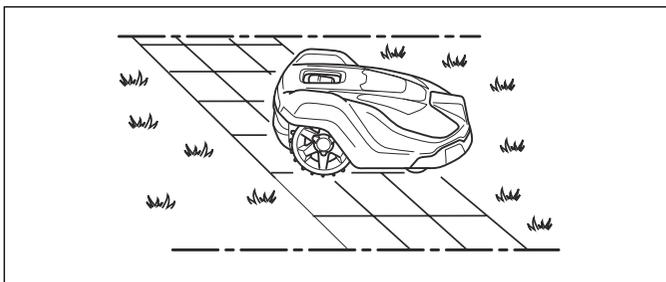
lawnmower. About 15 cm / 6 in. of the lawn along the ditch/kerbstone will not be mown.



If the working area borders on a paving stone path or similar that is level with the lawn (+/- 1 cm / 0.4 in.), it is possible to allow the robotic lawnmower to run a little over the path. The boundary wire should then be laid 10 cm / 4 in. from the edge of the path. All the grass along the side of the paving stone path will be cut.



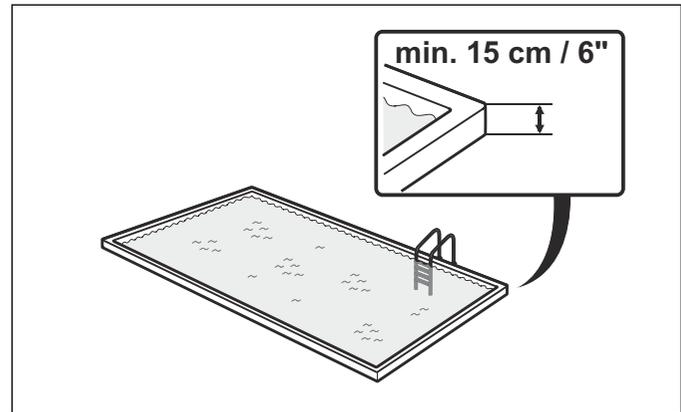
When the working area is divided by a paving stone path that is level with the lawn, it is possible to allow the robotic lawnmower to run over the path. It can be an advantage to lay the boundary wire under the paving stones. The boundary wire can also be laid in the joint between the paving stones. Ensure that the tiles are in level with the lawn to avoid excessive wear on the robotic lawnmower.



CAUTION: The robotic lawnmower must never run over gravel, mulch or similar material which can damage the blades.

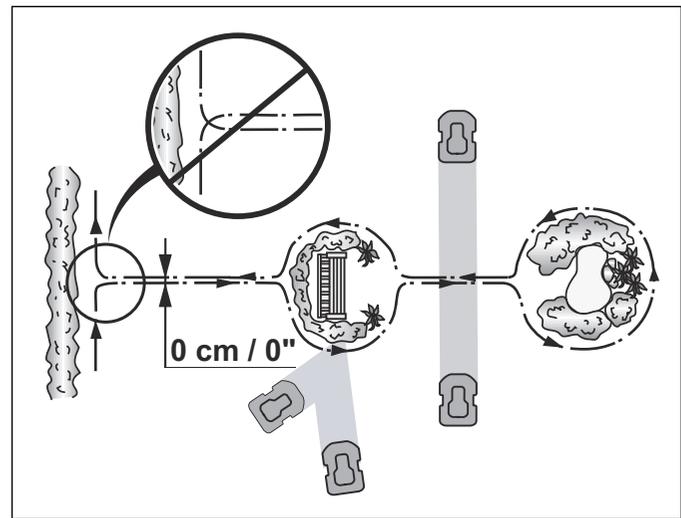


CAUTION: If the working area is adjacent to water bodies, slopes, precipices or a public road, the boundary wire must be supplemented with an edging or the like. It must then be at least 15 cm / 6 in. in height. This will prevent the robotic lawnmower from ending up outside the working area under any circumstance.



3.5.3 Boundaries within the working area

Use the boundary wire to isolate areas inside the working area by creating islands around obstacles which cannot withstand a collision, for example flowerbeds, bushes and fountains. Lay the wire up to and around the area to be isolated, and then return it back along the same route. If pegs are used, the wire should be laid under the same pegs on the return route. When the boundary wires to and from the island are laid close together, the robotic lawnmower can drive over the wire.

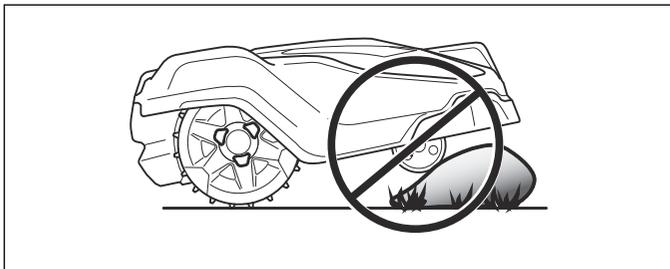


CAUTION: The boundary wire may not be crossed on its way to and from an island.

Obstacles that can withstand a collision, for example, trees or bushes taller than 15 cm / 6 in., do not need to be isolated with the boundary wire. The robotic lawnmower will turn around when it collides with this type of obstacle.

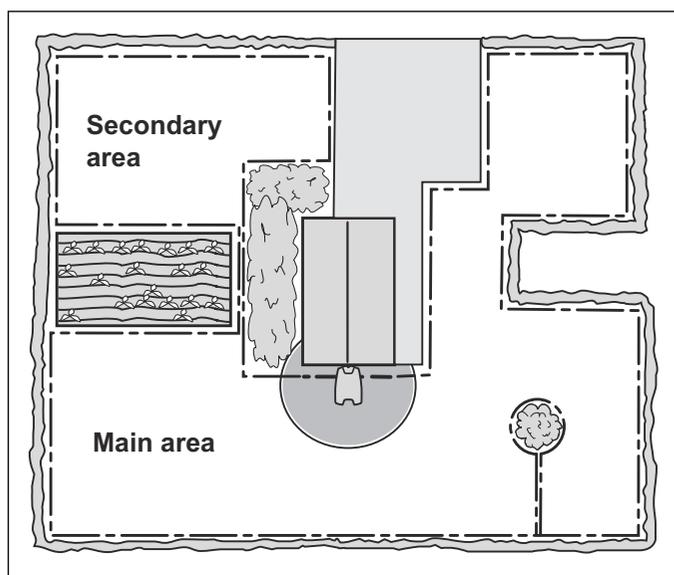
However, to achieve careful and silent operation, it is recommended to isolate all fixed objects in and around the working area.

Obstacles that slope slightly, for example stones or large trees with raised roots, must be isolated or removed. Otherwise the robotic lawnmower can slide up onto this kind of obstacle causing the blades to be damaged.



3.5.3.1 Secondary areas

If the working area consists of two areas, which the robotic lawnmower has difficulty travelling between, it is recommended to set up a secondary area. Instances of this are 45% slopes or a passage that is narrower than 60 cm / 24 in. Lay the boundary wire then around the secondary area so that it forms an island outside of the main area. The robotic lawnmower must be moved manually between the main and secondary area when the lawn in the secondary area has to be cut.



The *Secondary area* operating mode must be used as the robotic lawnmower cannot travel on its own from the secondary area to the charging station. See *Operating mode - Start* on page 40. In this mode, the robotic lawnmower will never look for the charging station but will mow for the chosen time or until the battery runs out. Place the robotic lawnmower in the charging station to charge the battery. If the main area has to be cut straight after charging, tap on *Start* in the Automower® Connect app and then select *Resume on main area*.

3.5.3.2 Passages when mowing

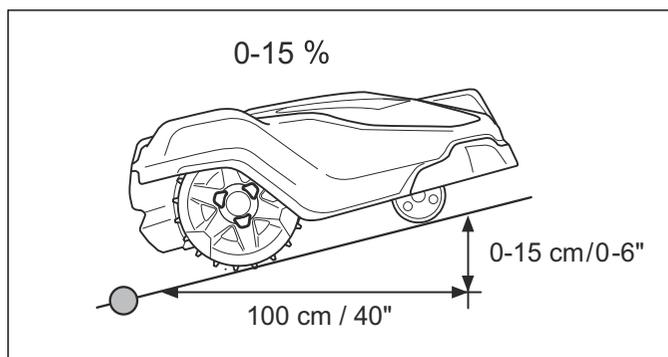
Long and narrow passages and areas narrower than 1.5 - 2 m / 3.2 - 6.5 ft. should be avoided. It is then a risk that the robotic lawnmower travels around in the passage or area for a period of time. The lawn will then look flattened. The narrowest possible passage for the robotic lawnmower is 60 cm / 24 in (between boundary wires).

Note: In passages narrower than 2 m / 6.5 ft. (between boundary wires) Husqvarna recommends that a guide wire is installed.

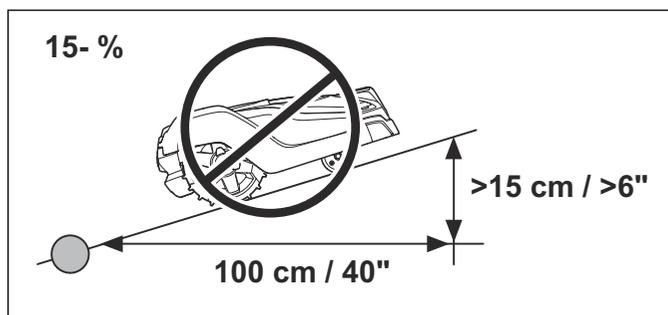
3.5.3.3 Slopes

The robotic lawnmower can operate in slopes. The maximum gradient is defined as percentage units (%) and is calculated as difference in elevation in centimetres for every meter. Inside the working area the robotic lawnmower can mow areas which slope up to 45%. Areas that slope more must be isolated with the boundary wire.

The boundary wire can be laid across a slope that slants less than 15%.

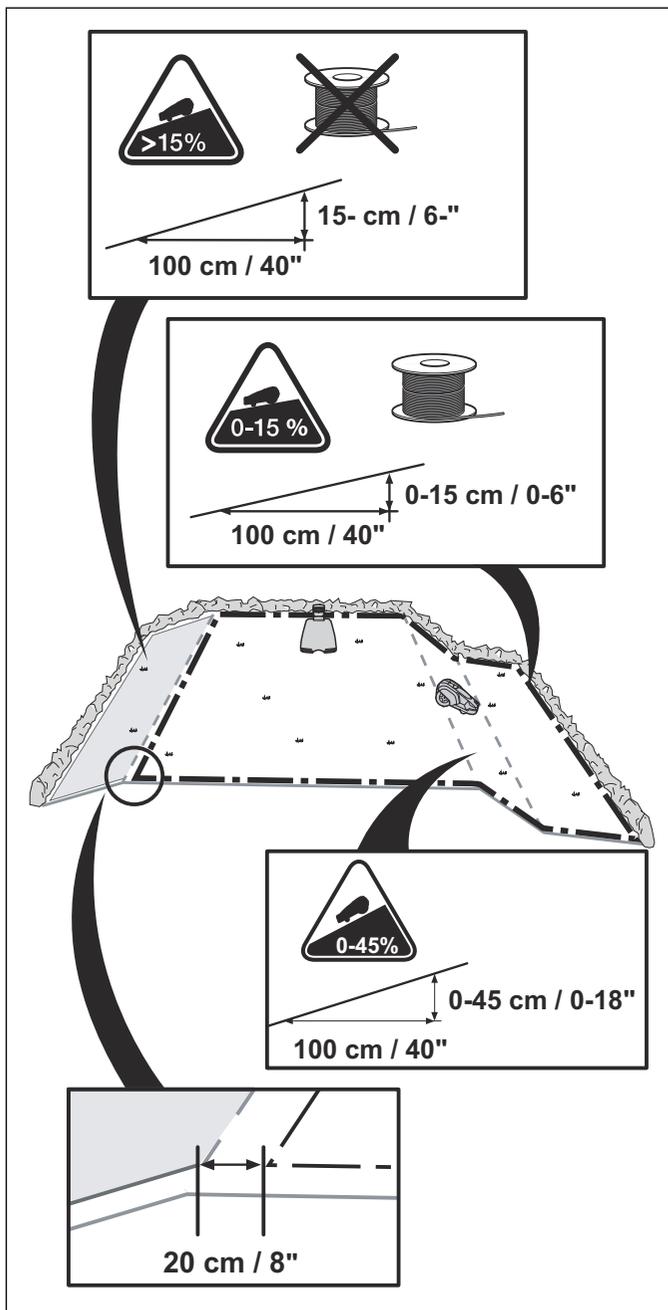


The boundary wire should not be laid across a slope that is steeper than 15%. There is a risk that the robotic lawnmower will find it difficult to turn there. The robotic lawnmower will then stop and the *Outside working area* fault message is displayed. The risk is at its greatest in damp weather conditions, as the wheels can slip on the wet grass.



However, the boundary wire can be laid across a slope steeper than 15% if there is an obstacle that the robotic lawnmower is allowed to collide with, for example, a fence or a dense hedge.

When a part of the working area's outer edge slopes more than 15%, the boundary wire must be laid about 20 cm / 8 in. in on the flat ground before the beginning of the slope.



3.5.4 Laying the boundary wire

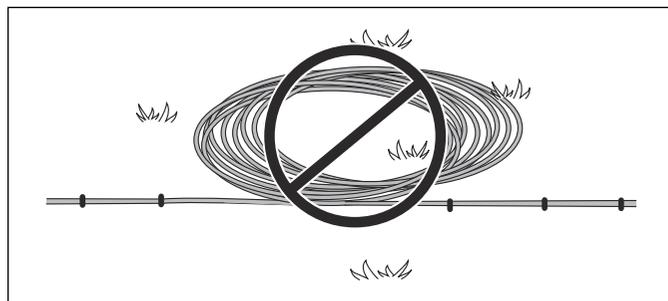
If you intend to staple down the boundary wire:

- Cut the grass very low with a standard lawnmower or a trimmer where the wire is to be laid. It will then be easier to lay the wire close to the ground and the risk of the robotic lawnmower cutting the wire or damaging the insulation of the wire is reduced.
- The boundary wire must lie close to the ground so as not to be cut before the grass roots have grown over it. Mowing the grass too low right after the installation can damage the 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.
- Use a hammer to knock the pegs into the ground. Exercise care when knocking the pegs and make sure the wire is not under strain.

If the boundary wire is to be buried:

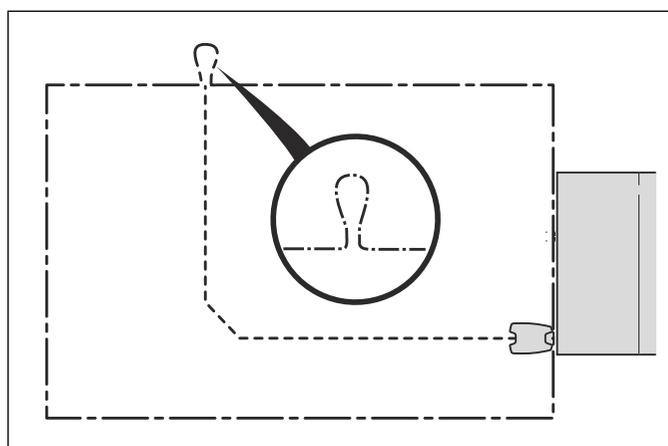
- Make sure to lay the boundary wire at a minimum of 1 cm / 0.4 in. and a maximum of 20 cm / 8 in. in the ground. The wire can be buried for instance using an edge cutter or a straight spade.

Note: Extra wire must not be placed in coils outside the boundary wire. This can disrupt the robotic lawnmower.



3.5.4.1 Eyelet for connecting the guide wire

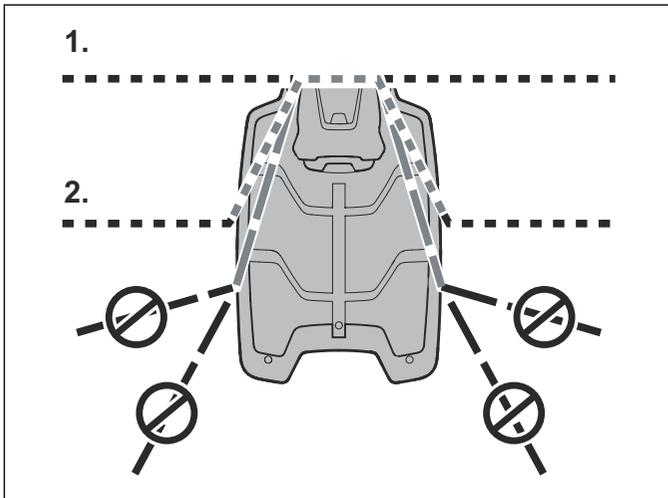
To facilitate the connection of the guide wire to the boundary wire, it is recommended to create an eyelet with about 20 cm / 8 in. of extra boundary wire at the point where the guide wire will later be connected. It is a good idea to plan where the guide wire will be placed before laying out the boundary wire. See *Laying the boundary wire on page 18*.



3.5.4.2 Laying the boundary wire in towards the charging station

The boundary wire can be laid completely outside the charging station (see option 1 in the figure). If there is a need to partly locate the charging station outside the working area, it is also possible to lay the wire under the charging station plate (see option 2 in the figure).

However most of the charging station must not be placed outside the working area as the robotic lawnmower can then find it difficult to find the charging station (see figure).



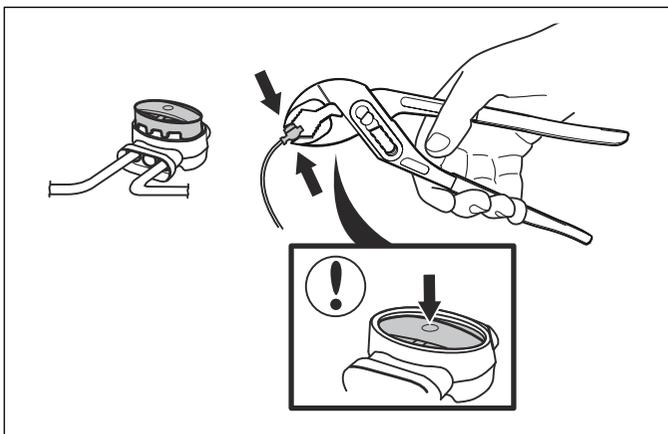
3.5.4.3 Splicing the boundary wire



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 oxidise and after a time result in a broken circuit.

Use an original coupler if the boundary wire is not long enough and needs to be spliced. It is waterproof and gives a reliable electrical connection.

Insert both wire ends in the coupler. Check that the wires are fully inserted into the coupler so that the ends are visible through the transparent area on the other side of the coupler. Now press down the button on top of the coupler fully. Use a multigrip pliers to completely press down the button on the coupler.



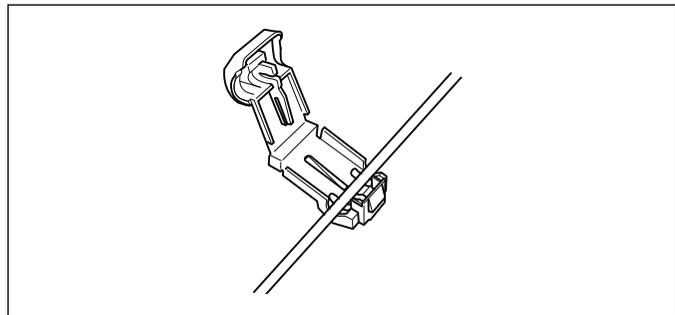
3.6 Connecting the boundary wire



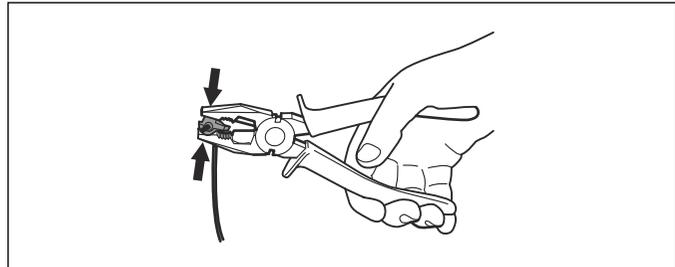
CAUTION: The boundary wire must not be crossed when connecting it to the charging station. The right hand wire end must be connected to the right hand pin on the charging station and the left hand wire end to the left pin.

Connect the boundary wire to the charging station:

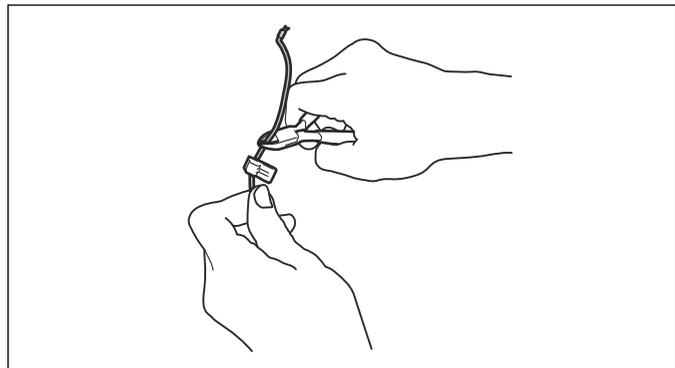
1. Open the connector and place the wire in the connector grip.



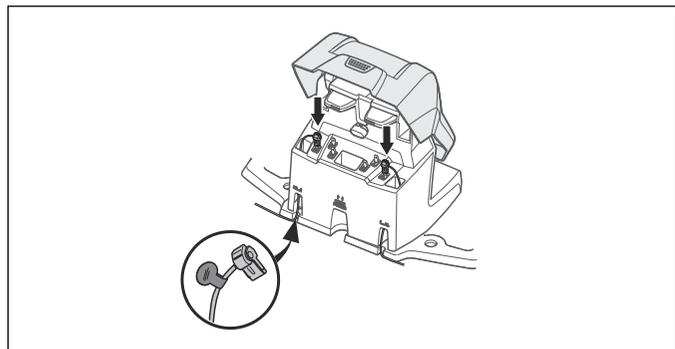
2. Press the connectors together using a pair of pliers. Press until you hear a click.



3. Cut off any surplus boundary wire. Cut 1-2 cm / 0.4-0.8 in. above each connector.



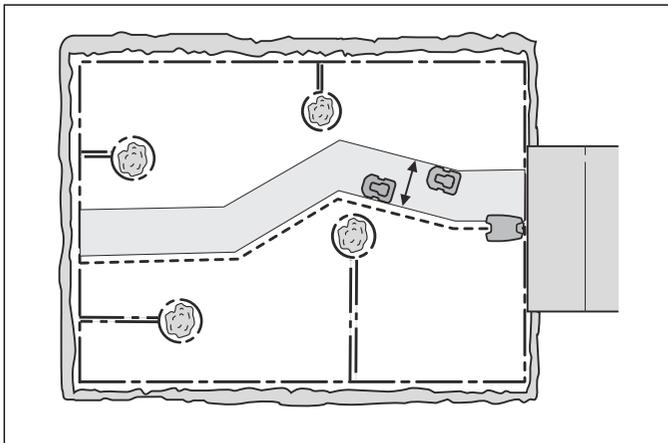
4. Tilt the protective cover on the charging station forward and run the wire ends up each channel at the rear of the charging station. Press the connector onto the metal pins, marked AL (left) and AR (right), on the charging station.
5. Mark the wires with the accompanying cable markers. This makes it easier to connect the wires correctly when for instance the charging station has been stored indoors for the winter.



3.7 Installation of the guide wire

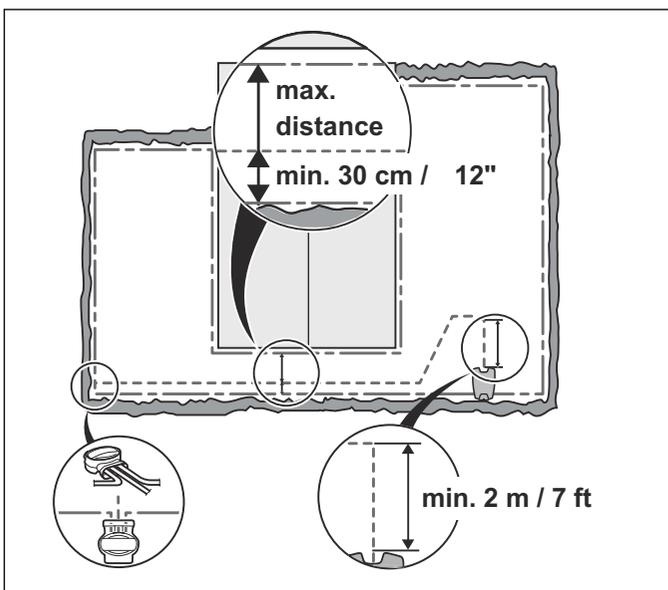
The guide wire is used by the robotic lawnmower to find its way back to the charging station but also to guide the robotic lawnmower to remote areas of the garden.

The same cable roll is used for both the boundary and guide wires. The guide wire, as the boundary wire, can be stapled to or buried in the ground.



The robotic lawnmower runs at varying distances from the guide wire to reduce the risk of tracks forming. The area beside the wire which the robotic lawnmower then uses is called the Corridor. The wider the corridor allowed by the installation, the less the risk of tracks forming.

The robotic lawnmower always runs to the left of the guide wire as seen facing the charging station. Thus the corridor is to the left of the guide wire. When installing, it is therefore important to create as much free space as possible to the left of the guide wire, as seen facing the charging station.



The guide wire, as the boundary wire, can be stapled to or buried in the ground.



CAUTION: Make as much space as possible to the left of the guide wire (as seen facing the charging station). Also, it is not allowed to lay the guide wire closer than 30 cm / 12 in. to the boundary wire.

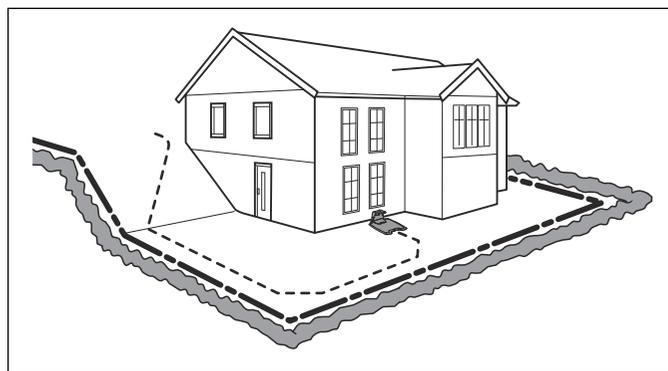
3.7.1 Laying and connecting the guide wire

1. Before laying and connecting the guide wire, it is important to considerate the length of the guide wire, especially in large or complex installations. If the guide wire is longer than 400 m / 218 yd. the robotic lawnmower can have difficulty following it. The current in the guide wire always goes to the left at

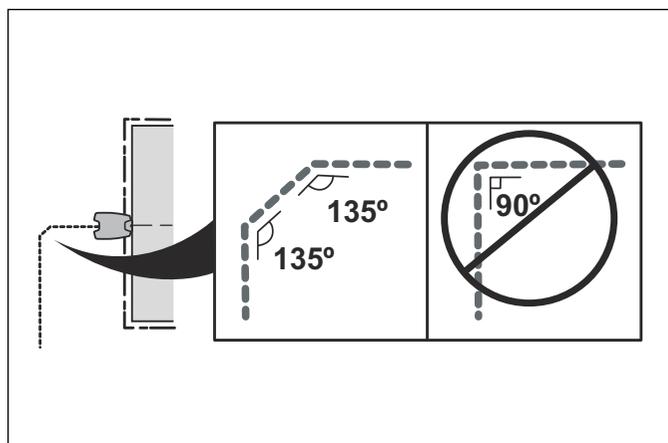
the connection from the guide wire to the boundary loop.

2. Tilt the top cover on the charging station forward and run the guide wire through one of two channels marked GUIDE leading to the guide connection.
3. Fit a connector to the guide wire in the same way as for the boundary wire in *Connecting the boundary wire on page 19*. Connect it to the contact pin on the charging station that is labelled G1 (G2, G3).
4. Mark the wires with the accompanying cable markers. This makes it easier to reconnect the wires correctly when for instance the charging station has been stored indoors for the winter.
5. Run the guide wire through the slot under the charging plate and then at least 2 m / 6.5 ft. straight out from the front edge of the plate.

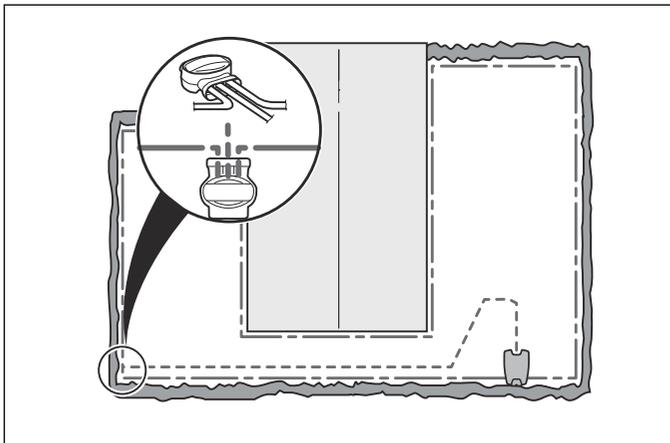
If the guide wire has to be installed on a steep slope, it is an advantage to lay the wire at an angle to the slope. This makes it easier for the robotic lawnmower to follow the guide wire on the slope.



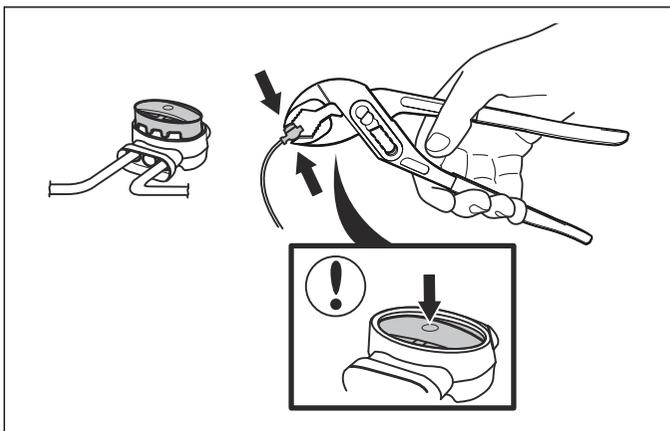
Avoid laying the wire at sharp angles. This can make it difficult for the robotic lawnmower to follow the guide wire.



6. Run the guide wire to the point on the boundary loop where the guide wire is to be connected.
7. Cut the boundary wire using for instance a pair of wire cutters. Connecting the guide wire is made easier if an eyelet has been made on the boundary wire as outlined in the previous description. See *Eyelet for connecting the guide wire on page 18*.



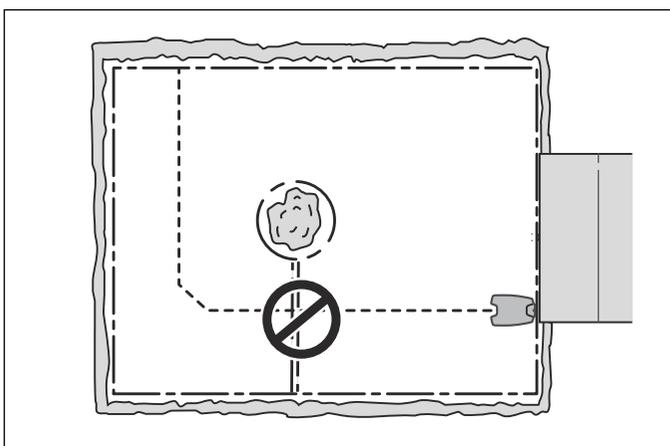
8. Connect the guide wire to the boundary wire using a coupler:
- Insert the boundary wire and guide wire in the coupler. Check that the wires are fully inserted into the coupler so that the ends are visible through the transparent area on the other side of the coupler.
 - Use a multigrip pliers to completely compress the button on the coupler. It does not matter which holes are used to connect each wire.



9. Staple down or bury the splice in the lawn.

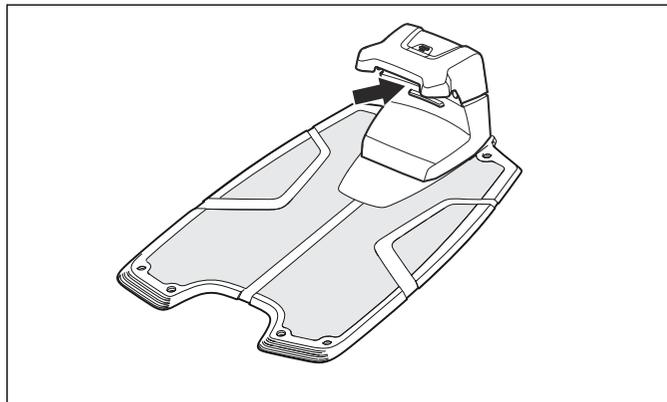


CAUTION: The guide wire may not cross the boundary wire, for instance a boundary wire that is laid out to an island.



3.8 Checking the installation

Check the loop signal by inspecting the indicator lamp on the charging station.



See *LED indicator lamp on the charging station* on page 50 if the lamp does not indicate a solid or flashing green light.

3.9 Connectivity

The Automower® Connect app allows you to monitor, control and configure your robotic lawnmower conveniently on your mobile device. You will also receive push notifications from the app, for example if the robotic lawnmower is stopped.

The app provides two modes of connectivity: Long-range cellular connectivity and Short-range Bluetooth connectivity. Automower® 520 and Automower® 550 support both cellular communication and Bluetooth communication. See *Automower® Connect* on page 21.

It is also possible to monitor and control your robotic lawnmower if you are subscribing to Husqvarna Fleet Services. See *Husqvarna Fleet Services* on page 22.

3.9.1 Automower® Connect

Automower® Connect is included in Automower® 520/550.

Automower® Connect brings the mower's menu system to your mobile device, making it easy to read and change the mower settings remotely. Through this application, you can receive the status of your Automower® and send commands to the robotic lawnmower from anywhere in the world. In case of theft, you will get an alarm and be able to track your lawnmower's position. Some countries do not support Automower® Connect due to region specific cellular systems. Please, contact your local Husqvarna representative for more information.

3.9.2 Getting started

Download the Automower® Connect app from AppStore or GooglePlay. Once you have downloaded the app, you can specify an e-mail address and a password to create an account. You will receive a validation e-mail to the e-mail address you specified. Follow the instructions in the e-mail within 24 hours to validate your account. If not validated within 24 hours, you will have to create your account again. When the account has been created in the app, you can pair the robotic lawnmower and your mobile device. See *First start-up sequence* on page 22.

To get started with Husqvarna Fleet Services™ app, see *Remote HMI* on page 22.

3.9.3 Remote HMI

Husqvarna cannot guarantee the uptime or coverage of the 3rd party data connection (long-range connectivity). However, it is always possible to communicate with the robotic lawnmower via Bluetooth, as long as you are within short-range of the robotic lawnmower.

Remote HMI is, for example, useful if the operator has the Automower® Connect app and the PIN code, but has not created a Husqvarna account.

1. Select *Remote HMI*.
2. Activate Bluetooth pairing on the robotic lawnmower:
 - Turn off the robotic lawnmower (Main switch, position 0).
 - Wait until the LED indicator lamp goes out, and then set the Main switch to position 1 again.

Bluetooth pairing mode is active for 3 minutes.

3. Select robotic lawnmower to pair with.
4. Enter the PIN code for the robotic lawnmower.

When the pairing has been confirmed, you have access to the menus and functions as long as you are within short-range (Bluetooth).

How to pair with the robotic lawnmower when using Husqvarna Fleet Services™ app:

Note: Both the Husqvarna Fleet Services™ app and the Automower® Connect app must be downloaded to your smartphone.

1. Log in to the Husqvarna Fleet Services™ app, and follow the instructions for how to pair with a robotic lawnmower. Pairing is done by using Automower® Connect in conjunction with the Husqvarna Fleet Services™ app.
2. Follow step 2-4 above.
3. Select *Settings > Automower® Connect > Initiate new pairing*.
4. Confirm pairing.

3.9.4 Husqvarna Fleet Services

Husqvarna Fleet Services™ is a cloud solution that gives the commercial fleet manager an updated overview of all the machines. Both Automower® 520 and Automower® 550 can be added to Husqvarna Fleet Services™ and upload valuable data. The data is transferred automatically and wirelessly to the Husqvarna Fleet Services™ pages. All this gives the best possible prerequisites for planning the business ahead, to ensure high uptime, productivity and good profitability. The robotic lawnmowers are paired to the rest of the fleet by using the Automower® Connect app in conjunction with the Husqvarna Fleet Services™ app, which is available at AppStore and GooglePlay. There is more information about Husqvarna Fleet Services™ and how to subscribe to the services on www.husqvarna.com.



3.10 How to start up the robotic lawnmower

When the main switch is set to position 1 for the first time, a start-up sequence is carried out, as well as a pairing process between the robotic lawnmower and the Automower® Connect app. There is also an automatic calibration of the guide signal.

3.10.1 First start-up sequence

1. Download the Automower® Connect app and create an account. See *Getting started on page 21*.
2. Log in to your Husqvarna account in the app.
3. Enable Bluetooth® mode on your mobile device.
4. Set the **Main switch** to position 1 on the robotic lawnmower.

Note: The robotic lawnmower is available for pairing for 3 minutes. If pairing has not been successful within this time period, turn off the robotic lawnmower (Main switch, position 0). Wait until the LED indicator lamp goes out, and then set the Main switch to position 1 again.

5. Select *My mowers* in the Automower® Connect app, and then select the plus sign (+).
6. Select model. The Automower® Connect app is now searching for available robotic lawnmowers within short-range (via Bluetooth).
7. Select robotic lawnmower.
8. Enter the PIN code for the robotic lawnmower. The first time you start the robotic lawnmower there is a start-up sequence that needs to take place before the pairing between the robotic lawnmower and the Automower® app can be finalized.
9. Choose a new PIN code for the robotic lawnmower.
10. Confirm the new PIN code.

Note: Use the MEMO page in the beginning of the manual to make a note of the chosen PIN code.

11. Time and date is the same as for the mobile device. Select *Edit* if time or date needs to be changed. Select *Next* if time and date are correct.
12. Put the robotic lawnmower into the charging station and select *Pair* in the Automower® Connect app.

13. When the pairing between the robotic lawnmower and the charging station has been confirmed, select *Pair* to connect the robotic lawnmower to your Husqvarna account.
14. When the pairing between the robotic lawnmower and the Husqvarna account has been confirmed, select *Enable* to activate the theft protection in GeoFence. If GeoFence fails, select *Skip* and try later. See *GeoFence on page 31*.
15. Name your robotic lawnmower, and select *Done*.

3.10.2 Pairing with the Automower® Connect app

If the first start-up process already has been carried through, the next operator follows the normal pairing process.

The normal pairing process between the Automower® Connect app and the robotic lawnmower involves the following steps:

1. Download the Automower® Connect app and create an account. See *Automower® Connect on page 21*.
2. Log in to your Automower® Connect account in the app.
3. Enable Bluetooth® mode on your mobile device.
4. Set the **Main switch** to position *1* on the robotic lawnmower.

Note: The robotic lawnmower is available for pairing for 3 minutes. If pairing has not been successful within this time period, turn off the robotic lawnmower (Main switch, position 0). Wait until the LED indicator lamp goes out, and then set the Main switch to position 1 again.

5. Select *My mowers* in the Automower® Connect app, and then select the plus sign (+).
6. Select model. The Automower® Connect app is now searching for available robotic lawnmowers within short-range.
7. Select robotic lawnmower.
8. Enter the PIN code of the robotic lawnmower.
9. Press *Pair* to connect the robotic lawnmower to your Husqvarna account.
10. Name your robotic lawnmower, and select *Done*.

3.10.3 Guide calibration

When first start-up sequence and pairing have been carried out, press the **START** button on top of the robotic lawnmower. The robotic lawnmower then backs out of the charging station, and starts to calibrate the guide wire signal to create as wide guide corridor as possible. This prevents tracks from forming along the guide wire. When this is completed, mowing can begin.

3.11 Control panel

Automower® 520 and Automower® 550 do not have a keypad or a display. The commands and settings for the robotic lawnmower are therefore done in the Automower® Connect app. The only command that is possible to do on the robotic lawnmower is pressing the **START** and **STOP** button.

3.11.1 START and STOP button

- The **START** button on top of the robotic lawnmower is used to activate the robotic lawnmower.

When pressing the **START** button, the robotic lawnmower starts to operate, and the operating mode in Automower® Connect is changed to *Mowing* in the *Dashboard* view.

- The **STOP** button is used to immediately stop the robotic lawnmower from operating.

When pressing the **STOP** button, the operating mode in Automower® Connect is changed to *Stopped* in the *Dashboard* view.

3.11.2 The LED indicator lamp on the robotic lawnmower

The LED indicator lamp on the robotic lawnmower shows the current status:

- Solid green light: The robotic lawnmower is either mowing the lawn or leaving the charging station.
- Solid blue light: The robotic lawnmower is either paused or parked, or is searching for the charging station.
- Solid yellow light: The **STOP** button on top of the robotic lawnmower has been pressed.
- Solid red light: The robotic lawnmower has stopped due to an error.

Note: Clear the error by pressing the **STOP** button, and then activate the robotic lawnmower by pressing the **START** button.

- Flashing yellow light: The PIN code needs to be confirmed in the Automower® Connect app before the robotic lawnmower can be activated.

3.12 Automower® Connect menu

The main menu in Automower® Connect offers 4 options:

- *Dashboard*
- *Map*
- *Settings*
- *Messages (only available for Bluetooth short-range connectivity)*

3.12.1 Dashboard

The dashboard shows the current status of the robotic lawnmower both visually and in text. It is very easy to control the robotic lawnmower by tapping the controls, for example *Park*.

In the lower part of the dashboard there are shortcuts to the *Timer settings* and the *Map*. The dashboard also shows symbols according to below:

1. The battery status shows the remaining battery charge. A flash is shown over the battery symbol when the robotic lawnmower charges its battery. A plug is shown over the battery symbol when the robotic lawnmower is standing in the charging station without charging.
2. Cutting height.



For more information about the operating modes *Start*, *Park* and *Pause*, see *Operation on page 40*.

3.12.2 Map

The map shows the current position of the robotic lawnmower and the set centerpoint (origin) for GeoFence.

3.12.2.1 Map settings

1. Open *Map* in the main menu.
2. Tap the settings symbol down to the right.
3. Enable/disable *Movement path*.
4. Enable/disable *GeoFence radius*.
5. Choose *Map view* or *Satellite view*.

3.13 Settings - overview

For many working areas there is no need to change the default settings. However sometimes, depending on the lawn complexity, the mowing result can be improved by making manual settings. For an overview of possible settings, see *Overview of the settings structure (1) on page 33*, *Overview of the settings structure (2) on page 34* and *Overview of the settings structure (3) (Bluetooth short-range connectivity only) on page 35*.



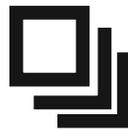
Timer

The timer function is an ideal tool to control which periods the robotic lawnmower should not mow, for example when children are playing in the garden. See *Timer on page 24*



Cutting height

The cutting height can be varied from MIN (2 cm / 0.8 in.) to MAX (6 cm / 2.5 in.). During the first week after a new installation, the cutting height must be set to MAX to avoid damaging the loop wire. After this, the cutting height can be lowered one step every week until the desired cutting height has been reached. See *Cutting height on page 26*.



Operation

This menu function is used to customize the settings for *Weather timer*, *ECO mode* and *Spiral cutting*. See *Operation on page 26*.



Installation

This menu function is used to customize the installation. For many working areas there is no need to alter the default settings, but depending on the lawn complexity, the mowing result can be improved by making manual settings. See *Installation on page 27*.



Accessories

This menu handles the settings for robotic lawnmower accessories, for examples Automower® Connect. Contact your local Husqvarna representative for information on what accessories are available for your robotic lawnmower. See *Accessories on page 30*.



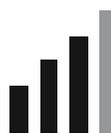
General (only available for Bluetooth short-range connectivity)

This selection allows you to make changes to the general robotic lawnmower settings, such as date and time. You can also reset the robotic lawnmower to the default settings. See *General on page 30*.



Security (only available for Bluetooth short-range connectivity)

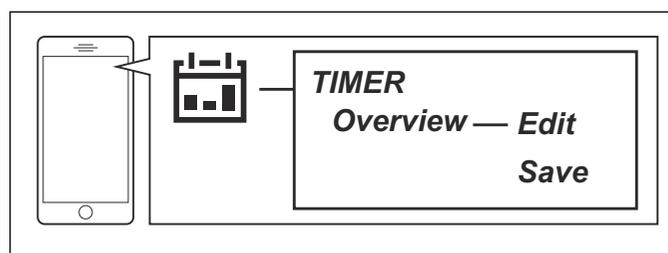
In this menu, settings relating to security and the connection between the robotic lawnmower and the charging station can be made. See *Security on page 30*.



Automower® Connect (only available for Bluetooth short-range connectivity)

This enables/disables the Automower® Connect module on the robotic lawnmower.

3.14 Timer



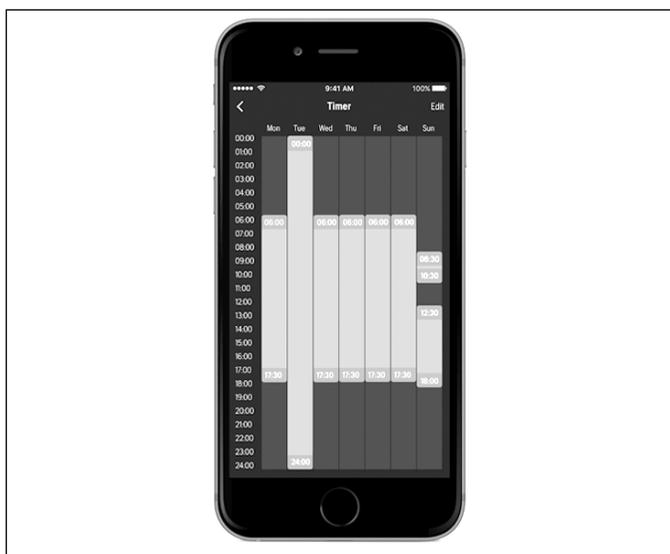
The lawn should not be cut too often to obtain the best mowing result. When the robotic lawnmower is allowed

to mow too much, the lawn may appear flattened. Also, the robotic lawnmower is subjected to unnecessary wear. If the working area is less than the robotic lawnmower's area capacity, the quality of the grass can be further improved if it is cut every other day instead of a few hours every day. In addition, the grass benefits from resting completely during at least a three-day period once a month.



WARNING: Use the timer to avoid mowing when there are children, pets and anything else that could be damaged by the rotating blades on the lawn.

The operating hours and days can be seen in an overview. Active mowing per day is illustrated by a colored bar. The rest of the time, the robotic lawnmower is parked in the charging station.



The default timer setting allows the robotic lawnmower to operate around the clock 7 days a week. This is

3.14.1 Timer suggestions Automower® 520

| Work area | Work days per week | Work hours per day | Suggestion of time interval |
|---------------------|--------------------|--------------------|-----------------------------|
| 500 m ² | 5 | 7.5 | 07:00 - 14:30 |
| | 7 | 5.5 | 07:00 - 12:30 |
| 1000 m ² | 5 | 15.5 | 07:00 - 22:30 |
| | 7 | 11 | 07:00 - 18:00 |
| 1500 m ² | 5 | 23 | 00:00 - 23:00 |
| | 7 | 16.5 | 07:00 - 23:30 |
| 2200 m ² | 7 | 24 | 00:00 - 24:00 |

normally a suitable setting for a working area corresponding to the maximum capacity, see *Technical data on page 57*.

If the working area is less than maximum capacity then the timer should be used to minimize wear on grass and lawnmower. When setting the timer, calculate that the robotic lawnmower mows about the number of square meters per hour and day listed in table Work capacity below.

| Model | Approximate work capacity, m ² per hour and day |
|----------------|--|
| Automower® 520 | 92 |
| Automower® 550 | 208 |

The table below provides suggestions for different timer settings depending on the size of the lawn. The time intervals should be seen as indicative. They may need to be adjusted to suit the garden and for example grass quality and growth during the season. Use the table as follows:

- Find a work area that closest matches the size of the lawn.
- Select an appropriate amount of work days.
- Work hours per day shows how many hours a day the robotic lawnmower will be allowed to work for the selected amount of work days.
- Suggested time interval shows a time interval that corresponds to the required work hours per day.

It is possible to configure 2 work periods a day. There can be unique work periods in each day, but it is also possible to copy the current day's work period to all the other days.

3.14.2 Timer suggestions Automower® 550

| Work area | Work days per week | Work hours per day, hours | Suggestion of time interval |
|---------------------|--------------------|---------------------------|-----------------------------|
| 1000 m ² | 5 | 7 | 07:00 - 14:00 |
| | 7 | 5 | 07:00 - 12:00 |
| 2000 m ² | 5 | 13.5 | 07:00 - 20:30 |
| | 7 | 10 | 07:00 - 17:00 |
| 3000 m ² | 5 | 20.5 | 03:00 - 23:30 |
| | 7 | 14.5 | 07:00 - 21:30 |
| 4000 m ² | 6 | 22.5 | 00:00 - 22:30 |
| | 7 | 19.5 | 04:00 - 23:30 |
| 5000 m ² | 7 | 24 | 00:00 - 24:00 |

3.14.3 Edit timer settings

Tap *Edit* on the Timer Overview screen in the Automower® Connect app. Several timer intervals can be useful to enable the lawn for children's game or other activities during certain hours. To disable mowing a whole day, uncheck that day in the timer settings.

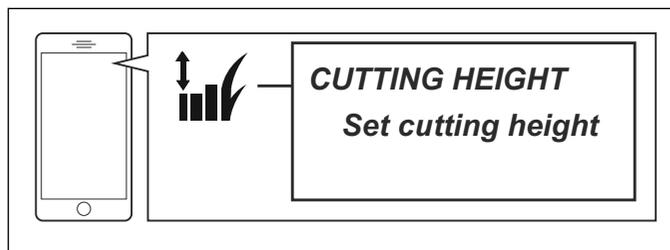
3.14.3.1 Edit current timer settings

1. Tap the pencil icon to edit an existing timer setting.
2. Choose which days of the week and hours the robotic lawnmower should operate.
3. Tap *Save*.

3.14.3.2 Add a new timer setting

1. Tap the plus sign.
2. Choose which days of the week and hours the robotic lawnmower should operate.
3. Tap *Save*.

3.15 Cutting height



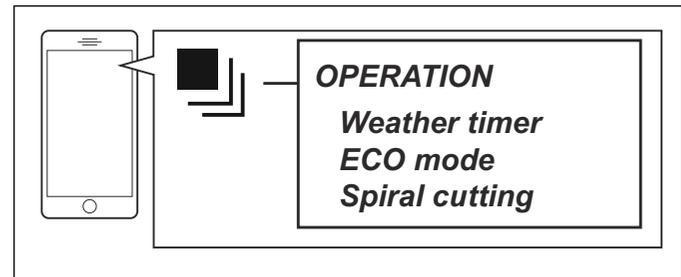
The cutting height can be varied from MIN (2 cm / 0.8 in.) to MAX (6 cm / 2.5 in.) in nine stages. If the grass is long, let the robotic lawnmower start mowing at the MAX cutting height. Once the grass is shorter, you can gradually lower the cutting height.



CAUTION: During the first week after a new installation, the cutting height must be set to MAX to avoid damaging the loop wire. After this, the cutting height can be lowered one step every week until the desired cutting height has been reached.

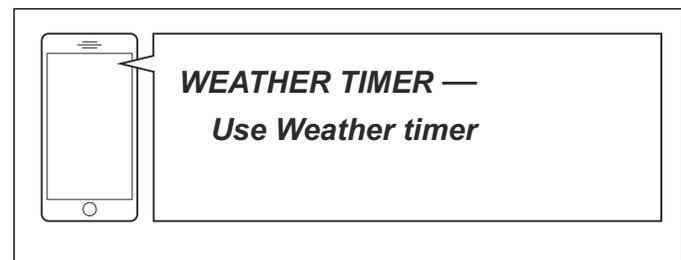
1. Tap the horizontal bar and drag it to the desired cutting height.
2. Tap *Save*.

3.16 Operation



In the Operation's menu it is possible to change the settings of the *Weather timer*, *ECO mode* and *Spiral cutting*.

3.16.1 Weather timer



The *Weather timer* allows the robotic lawnmower to automatically adjust its mowing time based on how fast the grass grows.

When the *Weather timer* is activated, the robotic lawnmower needs time to decide the optimal mowing time for the working area in question. For this reason it can take a couple of days before mowing is optimized for the *Weather timer*.

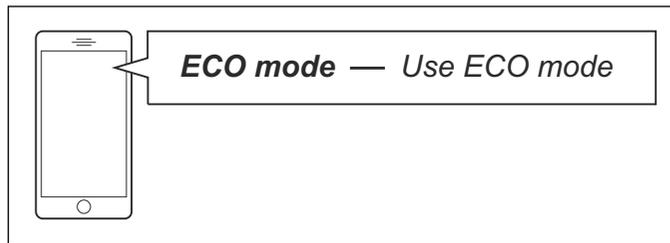
The robotic lawnmower can not operate longer than the timer settings. It is therefore recommended to only deselect the times when the robotic lawnmower must not operate. All other time should be made available for the *Weather timer*.

When the *Weather timer* is activated, it is very important to regularly check that the blade disc is clean and that the blades are in good condition. Any grass twisted around the blade disc shaft, or blunt blades, can affect the *Weather timer*.

1. Tap the **On/Off** bar to enable/disable the *Weather timer*.

- If the mowing results are not satisfying, the cutting time can be adjusted to mow for a longer time (*High*) or for a shorter time (*Low*)

3.16.2 ECO mode



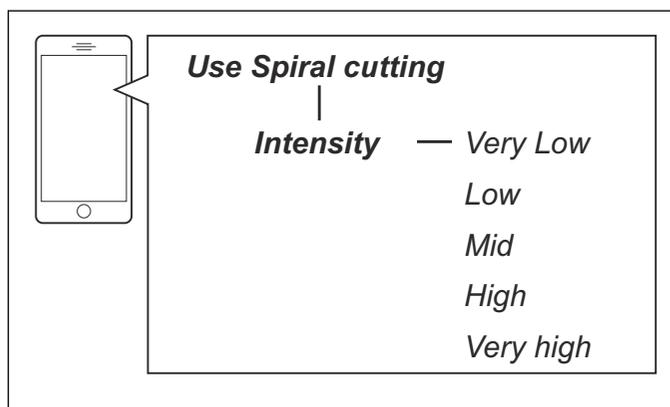
The ECO mode function automatically turns off the signal in the boundary loop, the guide wires and the charging station when the robotic lawnmower is not mowing. ECO mode is suitable to use where there is other wireless equipment not compatible with the robotic lawnmower, for example some hearing loops or garage doors. When ECO mode is activated, the indicator lamp in the charging station flashes green.

ECO mode means that the robotic lawnmower can only be started in the charging station and not out in the working area. In ECO mode, it is therefore very important to always press the **STOP** button on top of the robotic lawnmower, before removing the robotic lawnmower from the charging station. It is otherwise not possible to start the robotic lawnmower inside the working area. If the lawnmower has been removed by mistake without first pressing the **STOP** button, the lawnmower must be placed back in the charging station and the **STOP** button pressed. Then press the **START** button to be able to start inside the working area.

Note: In ECO mode, always press the **STOP** button before removing the robotic lawnmower from the charging station.

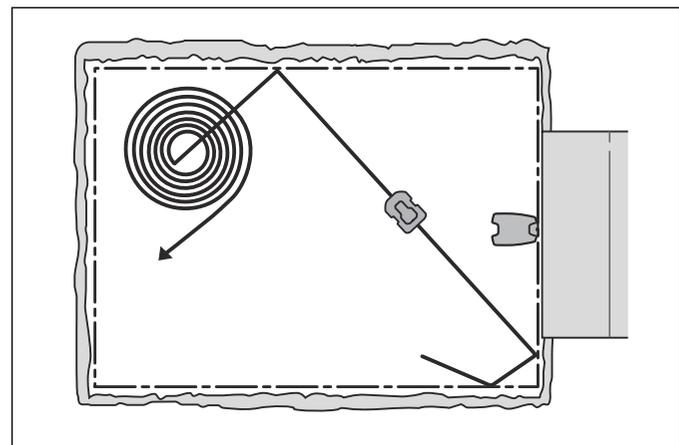
- Tap the **On/Off** bar to enable/disable ECO mode.

3.16.3 Spiral cutting



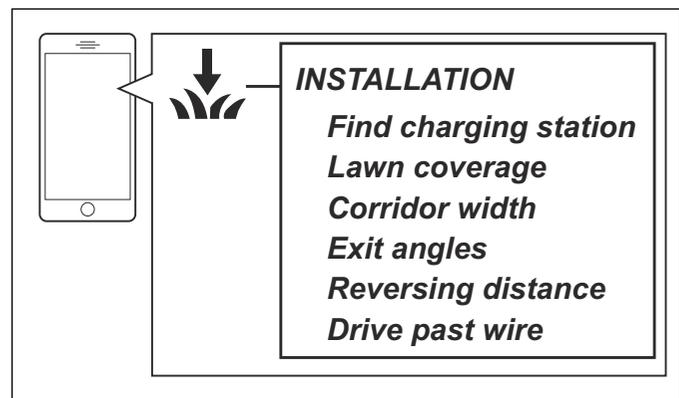
If the robotic lawnmower enters an area where it senses the grass is longer than average, it can change the movement pattern to spiral cutting. This means that the robotic lawnmower mows in a spiral pattern to faster cut the area with longer grass. It is possible to set the intensity of the spiral cutting. *Very low / Low* intensity means that spiral cutting begins less often. *High / Very high* intensity means that spiral cutting begins more often.

Note: In order to minimize the risk for lawn wear in steep slopes, spiral cutting does not start in slopes steeper than 15%.



- Tap the **On/Off** bar to enable/disable *Spiral cutting*.
- The intensity can be adjusted to trigger on a shorter or longer grass length. Choose an appropriate intensity level by tapping on *Very low, Low, Medium, High* or *Very high*.

3.17 Installation



The default settings are selected in a way that should suit most working areas. However, complex gardens may require changed settings.

3.17.1 Finding the charging station

The robotic lawnmower can be set to search for the charging station in one or more of the following three ways:

- Charging station signal
- Follow boundary wire
- Follow guide wire

The default settings are set so that these 3 search options are combined to find the charging station as fast as possible, but also with a minimum risk of tracks forming on the lawn. The robotic lawnmower always starts by searching for the *Charging station signal*. After a specified time delay, it also uses *Follow guide* and *Follow boundary wire*.

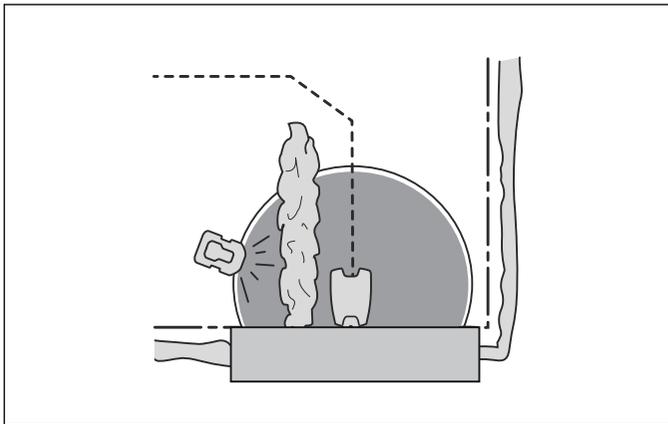
Common causes why the robotic lawnmower cannot follow the wire are:

- Obstacles close to the wire have not been isolated.

- The charging station, the boundary wire or the guide wire is not installed in accordance with the instructions in *Installing and connecting the charging station on page 14*, *Boundary wire on page 14* and in *Installation of the guide wire on page 19*.

3.17.1.1 Charging station signal

The charging station signal is used so that the robotic lawnmower knows that it is in the vicinity of the charging station. The default setting for the charging station signal is *Max* but in rare cases, there can be reasons for reducing the charging station signal. See example below.



3.17.1.2 Follow boundary wire

If the robotic lawnmower cannot find the charging station signal, it starts to search for the guide wires. If it still cannot find the charging station, the robotic lawnmower can follow the boundary wire back. The recommended setting is between 10-20 minutes.

3.17.1.3 Follow guide wire

If the robotic lawnmower cannot find the charging station signal, it starts to search for the guide wires. It is recommended to have a short time delay to reduce the time when the robotic lawnmower is searching out on the lawn. However, if the robotic lawnmower always uses the guide wires there is a greater risk that tracks are formed than if it uses the charging station signal. The delay time is normally between 0 and 10 minutes. It is possible to have the same time delay for all guide wires.

Guide > Disable / Enable

Normally *Follow guide wire* does not need to be deactivated even if there is no guide wire installed. However, to disable it, tap the **On/Off** bar.

3.17.2 Lawn coverage

This menu function is used to steer the robotic lawnmower to remote parts of a working area. This important function is used to maintain an even mowing result in the entire working area. The default settings can be used for many working areas. In more complex gardens operation can be improved by carrying out some of the manual settings below.

3.17.2.1 GPS assisted navigation

There is no need to set *Lawn coverage* manually for Automower® 520 and Automower® 550. They use a built-in GPS to check which areas have been mowed,

and thereby which areas need to be mowed next. Automower® 520 and Automower® 550 will this way automatically get to parts of the working area that are hard to reach.

Note: No manual settings of Area 1-5 is necessary if GPS assisted navigation is enabled.

GPS assisted navigation is applicable for Automower® 520 and Automower® 550. After a number of days operating, the robotic lawnmower creates a map of the working area. Automower® 520 and Automower® 550 automatically set distance and proportion for hard to reach parts of the working area.

Note: If the same robotic lawnmower is used for two or more charging stations that are close together (neighbors for instance), the GPS assisted navigation can only be used in one of the working areas. Otherwise the digital map can be misleading and the robotic lawnmower's lawn coverage can therefore be reduced.

3.17.2.2 Area 1-5

Up to 5 remote areas can be set. You must first disable GPS assisted navigation if you want to use manual settings. When you disable GPS assisted navigation the GPS map is automatically reset.

1. Tap the **On/Off** bar to disable GPS assisted navigation.

Note: When GPS assisted navigation is enabled it is used as long as there is a GPS service - even if manual settings have been made. Only when GPS service is not available, the manual settings are used.

Area 1-5 > Enable/disable

Each area can be enabled/disabled, without having to reenter the settings.

1. Tap the **On/Off** bar for Area 1-5.

Area 1-5 > How? and How far?

Specify to the right, left or Guide depending on which direction the robotic lawnmower should go. The direction (left or right) is when facing the charging station.

1. Slide the horizontal bar to alternate between *Lawn coverage* settings.
2. Slide the horizontal bar to change the distance.

The default settings for Automower® 520 and Automower® 550 let the robotic lawnmower follow the guide wire 300 m / 328 yd. in 20% of the times it leaves the charging station. If the guide wire in reality is less than 300 m / 328 yd. the robotic lawnmower will follow it to the point where the guide wire is connected to the boundary wire.

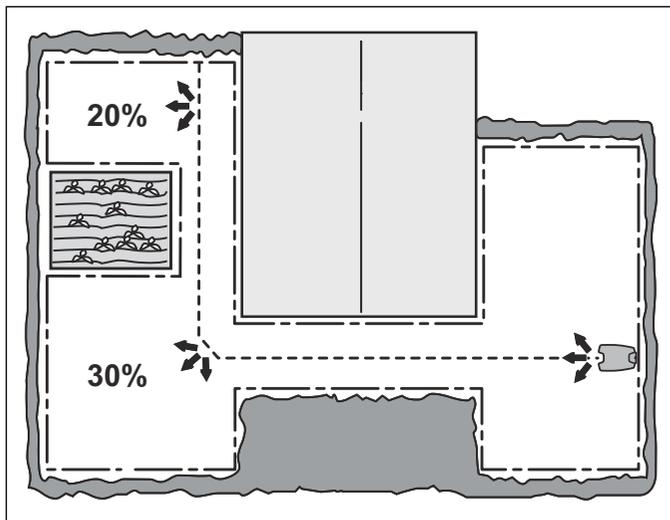
Area 1-5 > How often?

How often the robotic lawnmower should go to the remote area is selected as a proportion of the total number of times it leaves the charging station. At all other times, the robotic lawnmower starts to mow close to the charging station.

Select the percentage that corresponds to the size of the remote area relative to the total working area. If the remote area is for instance half of the total working area, 50% should be selected. A lower figure should be specified if the remote area is smaller. If more areas are used, take into account that the total figure cannot exceed 100%.

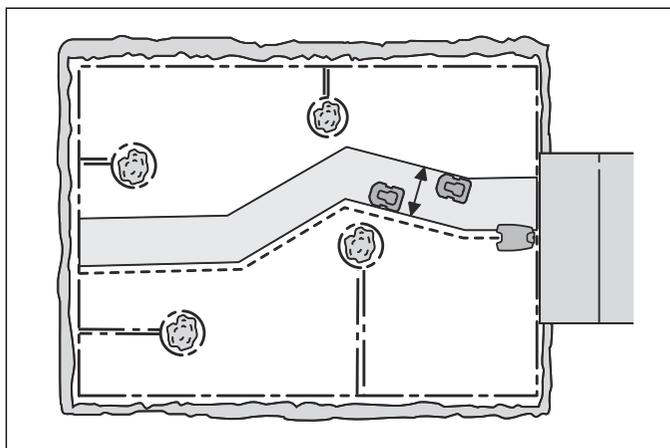
Compare with the examples in *Yard layout examples on page 36*.

1. Slide the horizontal bar to change the percentage.



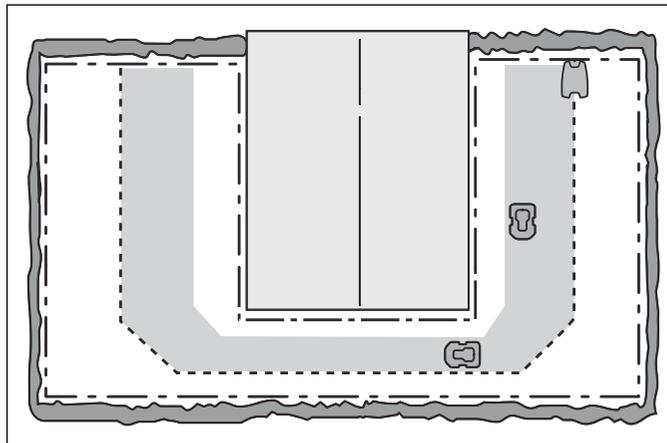
3.17.3 Corridor width

The corridor width is a measure of how far from the guide wire/boundary wire the robotic lawnmower is allowed to run when it follows this to and from the charging station. The area beside the wire, which the robotic lawnmower uses, is called the Corridor.



The aim of operating at varying distances from the wire is to reduce the risk of tracks forming. Therefore it is recommended to select the widest corridor possible.

The robotic lawnmower adjusts the corridor when following along a guide wire. The inbuilt automatic mechanism allows the robotic lawnmower to vary the distance from the wire depending on where in the working area it is located. It automatically makes the corridor narrower in narrow passages for instance.



The default settings can be used for many working areas. In more complex gardens operation can be improved by carrying out some of the manual settings below.

3.17.3.1 Corridor width > Boundary

The boundary corridor width is specified in intervals from 1-9. The first number in the interval specifies the shortest distance to the boundary loop and the second number the longest distance.

The distance the robotic lawnmower maintains from the boundary loop varies depending on the layout of the working area.

1. Slide the horizontal bar to specify the required interval.

The default setting is 3-6.

3.17.3.2 Corridor width > Guide

The guide corridor width is adjusted automatically. Only in rare occasions manual settings need to be entered. The guide corridor width can be set between 0 and 9.

If guide corridor width is set to 0, the robotic lawnmower straddles the guide wire. This means that the robotic lawnmower runs right over the guide wire.

1. Slide the horizontal bar to specify the required value.

The default setting is 9.

3.17.4 Exit angles

Normally the robotic lawnmower leaves the charging station in a direction within the 90°-270° exit sector. By changing the exit angles, it makes it easier for the robotic lawnmower to reach the working areas.

3.17.4.1 Exit angles > Sectors

The robotic lawnmower can be set for 1 or 2 exit sectors. If the charging station is placed in a passage, 2 exit angles, for instance 70° - 110° and 250° - 290°, can be used.

When 2 exit angles are used, there is a need to also specify how often the robotic lawnmower must leave the charging station in *Sector 1*. This is done using the *Proportion* function by initially specifying a percentage.

For instance the percentage of 75 % means that the robotic lawnmower leaves the charging station in *Sector 1* on 75% of the times and 25% of the times in *Sector 2*.

- Slide the horizontal bar to specify the required angles in degrees for the sectors, and proportion as a percentage.

3.17.5 Reversing distance

This functions allows you to control how far the robotic lawnmower reverses out from the charging station before it starts mowing. This is a useful function for instance if the charging station is placed way in under a veranda or in another limited space area.

- Slide the horizontal bar to specify the required reversing distance. The default setting is 60 cm / 24 in.

3.17.6 Drive past wire

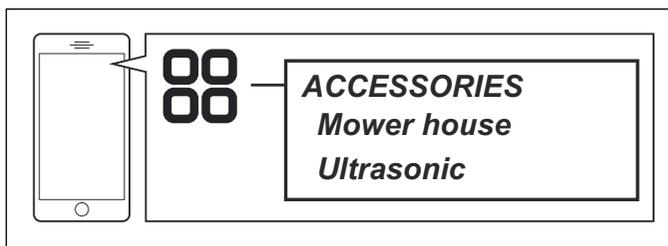
The front of the robotic lawnmower always passes the boundary wire by a specific distance before the mower turns around. The default distance is 31 cm / 12 in., but this can be changed if required. A figure between 20 (cm) and 50 (cm) can be selected.

Note: The distance given is only an approximate value and should be regarded as a guide. The actual distance the robotic mower passes the boundary wire can vary.

- Slide the horizontal bar to specify how much the robotic lawnmower should pass the boundary wire.

3.18 Accessories

Settings for accessories mounted on the mower can be made in this menu.



3.18.1 Mower house

When this option is enabled, the wear on the mower and the house is reduced, but it can result in more uncut grass around the charging station.

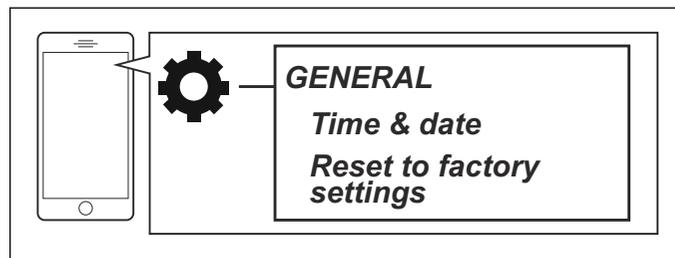
3.18.2 Ultrasonic

Ultrasonic is applicable for Automower® 550. It ensures that the robotic lawnmower reduces speed before it hits an obstacle. This function can be disabled, which means the robotic lawnmower will always operate at a lower speed.

3.19 General

This function is used to set time and date, or to reset to default settings.

Note: The *General* menu is only available for short-range connectivity (Bluetooth).



3.19.1 Time & Date

This function allows you to set current time and date manually, or to choose to get it from the mobile device.

- Set time:** Tap *Edit*, then enter the correct time and tap *OK*.
- Set date:** Tap *Edit*, then enter the correct time and tap *OK*.

3.19.2 Reset to factory settings

This function allows you to reset the robotic lawnmower to the factory default settings.

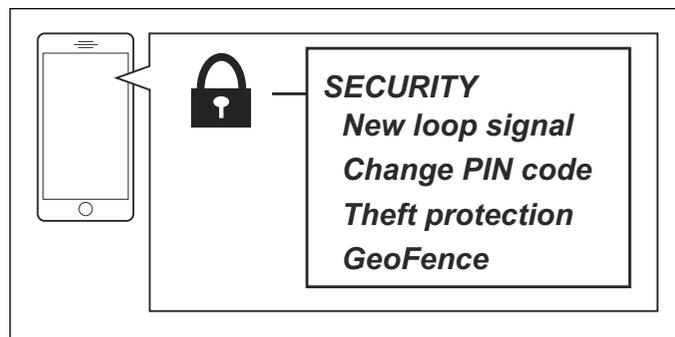
The following settings are however not altered:

- Security level
- PIN code
- Loop signal
- Messages
- Date & Time

- Select *Reset to factory settings*.
- Confirm by choosing *Reset*.

3.20 Security

Through this selection, settings relating to security and the connection between the robotic lawnmower and the charging station can be made.



3.20.1 New loop signal

The loop signal is randomly selected to create a unique link between the robotic lawnmower 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.

- Place the robotic lawnmower in the charging station.
- Select *Create new loop signal*.
- Await confirmation that the loop signal has been generated. This normally takes about 10 seconds.

3.20.2 Change PIN code

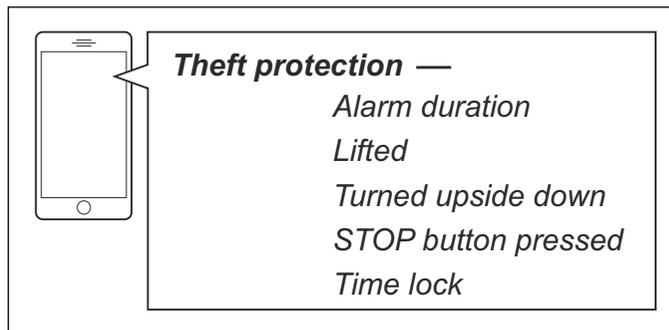
Note: Changing the PIN code is not possible if the LED indicator lamp on top of the robotic lawnmower is either red (error) or green (mowing).

1. Enter the current PIN code.
2. Enter the new PIN code.
3. Confirm by entering the same code again.

Make a note of the new PIN code on the designated line in Memo. See *Introduction on page 3*.

3.20.3 Theft protection

In the *Theft protection* menu it is possible to set the alarm duration and also what events should trigger the alarm.



3.20.3.1 Alarm duration

There is a possibility to set how long the alarm signal should last. A setting between 1 and 10 minutes is possible.

3.20.3.2 Lifted

If the alarm *Lifted* is enabled, the robotic lawnmower senses changes in the lift sensors, and the alarm goes off.

3.20.3.3 Turned upside down

If the alarm *Turned upside down* is enabled, the robotic lawnmower senses changes in the tilt sensors, and the alarm goes off.

3.20.3.4 STOP button pressed

If the alarm *"STOP button pressed"* is enabled, the alarm goes off if someone presses the **STOP** button. To avoid alarm, the operator must be within short-range (Bluetooth).

Note: After an alarm has been triggered, you must be close by the robotic lawnmower, and clear the alarm in the app by entering the PIN code (only available for short-range Bluetooth connectivity).

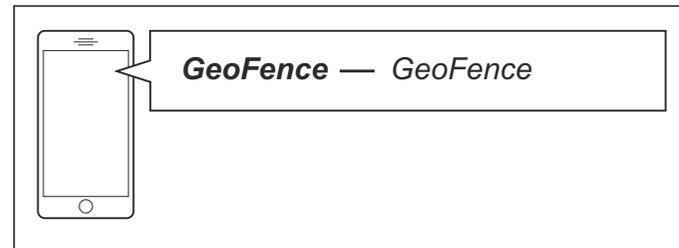
3.20.3.5 Time lock

A time lock can be set to decide how many days will pass before the PIN code must be entered. This means that the robotic lawnmower cannot be operated/controlled without first entering the correct PIN code. When the time limit has passed the robotic lawnmower continues to mow as normal, but the PIN code must be entered before any new commands or settings can be done. When the PIN code is entered, the robotic

lawnmower is ready to continue operating. A setting between 1 to 100 days is possible, and the default setting is 30 days.

3.20.4 GeoFence

The GeoFence function makes it possible to track the movement of the robotic lawnmower, for example in case of theft.



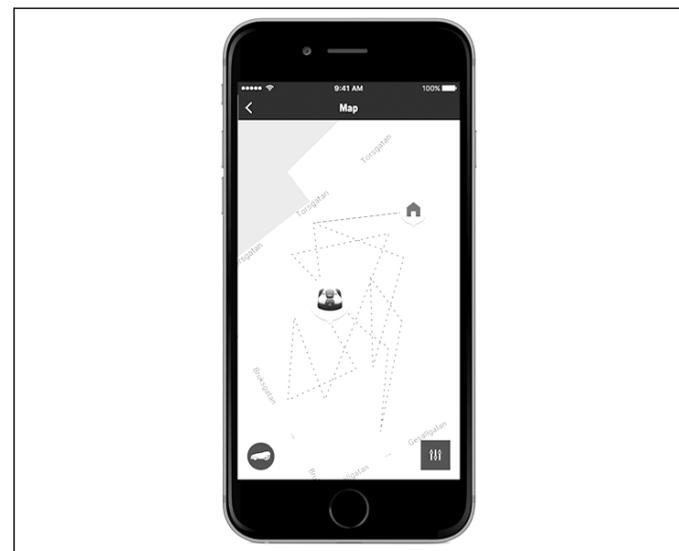
Before GeoFence can be used, its center point (origin) must be set. This is either done during the first start-up sequence, or in the *Security* menu.

Note: It is only possible to set the center point in GeoFence with short-range connectivity (Bluetooth).

Note: The robotic lawnmower must have access to GPS satellites to be able to set a GPS position. If the charging station is placed in a mower house, under a roof or a large tree, try to place the robotic lawnmower out on the lawn. Then try to set GeoFence again.

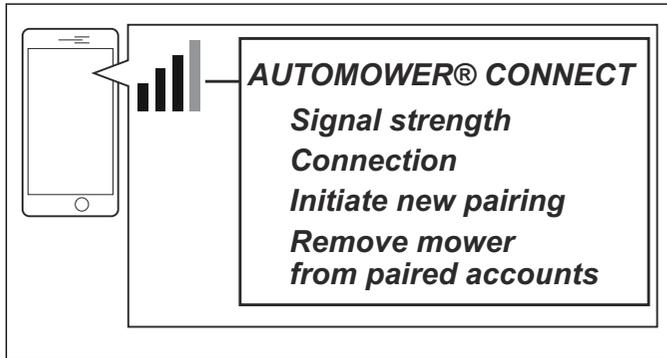
1. Select *Settings > Security > GeoFence* in the Automower® Connect app.
2. Enable GeoFence by tapping on the **On/Off** bar.
3. Save the GeoFence setting.

The GeoFence radius is 500 m.



When putting the robotic lawnmower into storage for a long period, such as during the winter, Husqvarna recommends turning off the **main switch**. With the GeoFence function activated, you will need the PIN code in order to turn off the robotic lawnmower. Once the main switch has been turned off, the function will stay active for another 12 hours. After that it will not be possible to communicate with the robotic lawnmower and the GeoFence function will not be active.

3.21 Automower® Connect



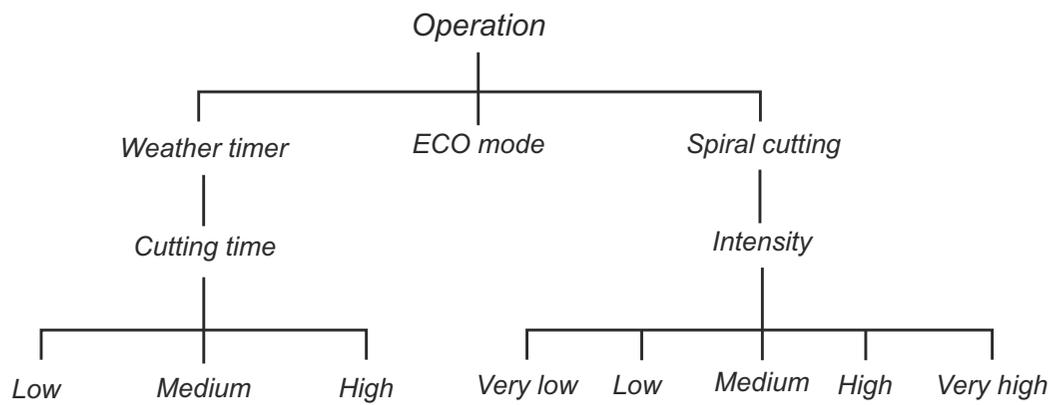
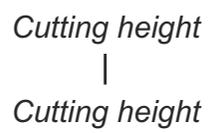
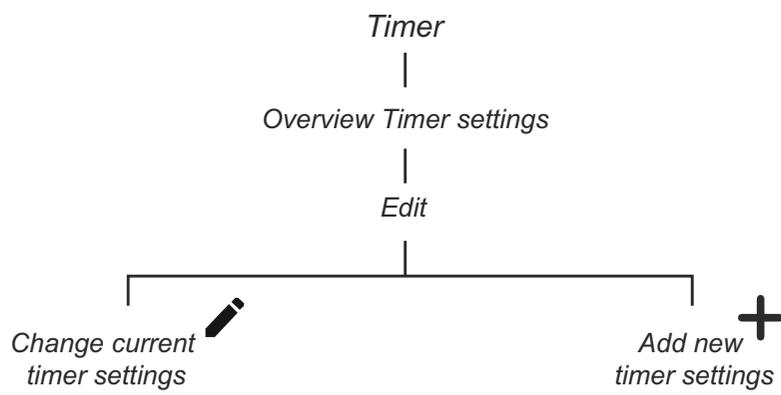
The Automower® Connect module can be enabled/disabled in the robotic lawnmower.

Note: The *Automower® Connect* menu is only available for short-range connectivity (Bluetooth).

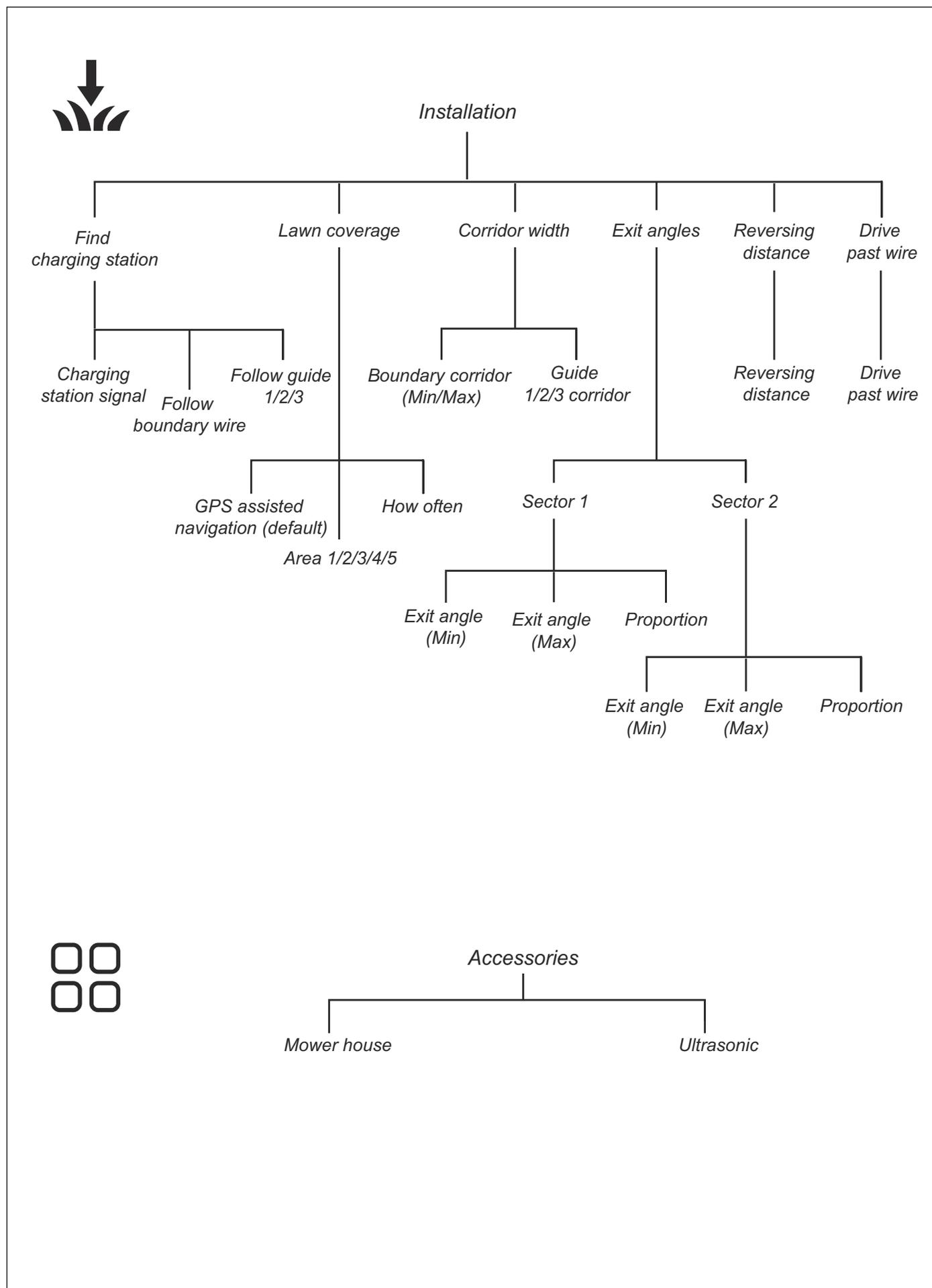
When the Automower® Connect module is enabled there are symbols showing the signal strength and if the module is connected. In this menu it is also possible to remove the robotic lawnmower from all paired accounts, or to initiate a new pairing.

Note: When the Automower® Connect module is disabled, this means that the module is inactivated and that all accounts paired with the robotic lawnmower will lose their connection.

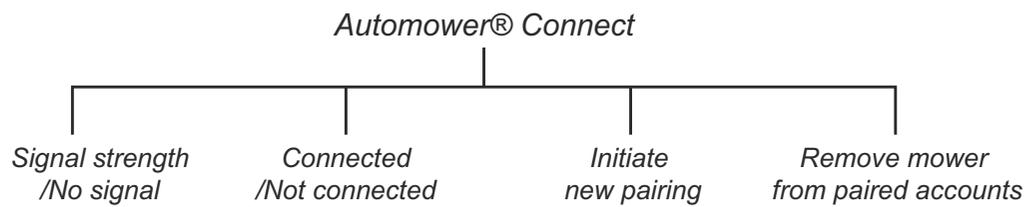
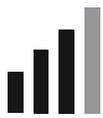
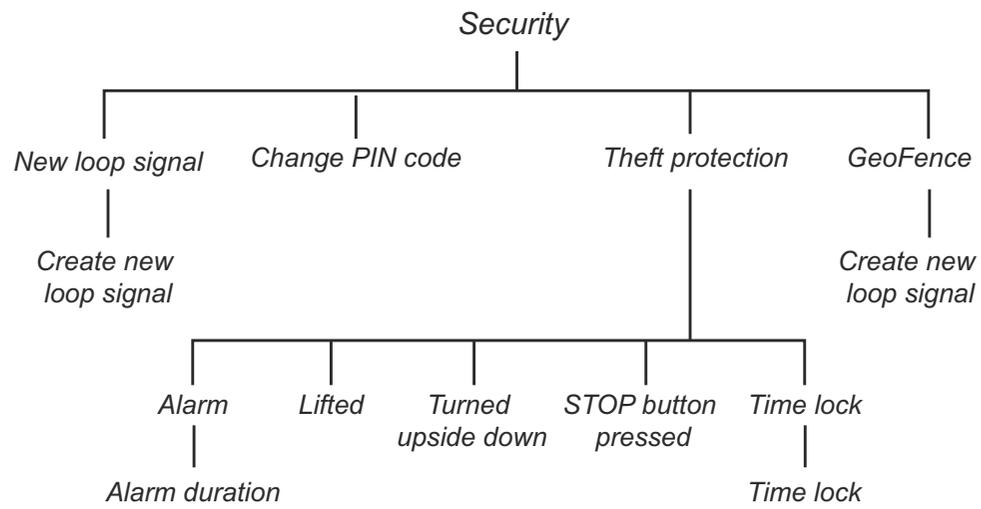
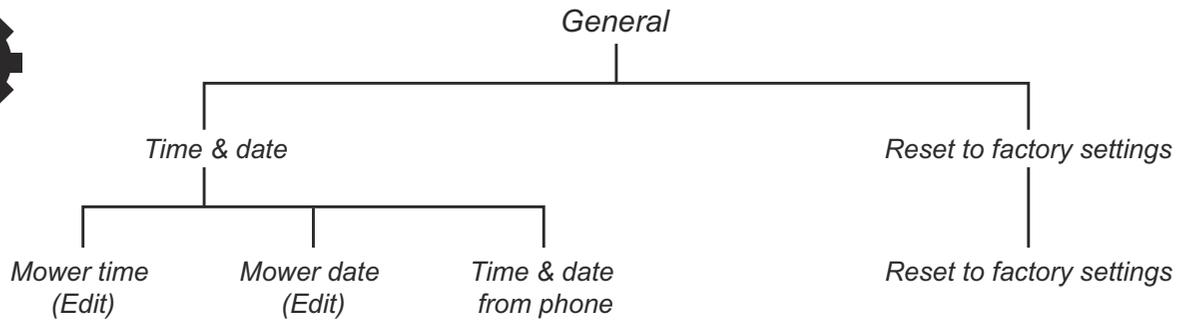
3.22 Overview of the settings structure (1)



3.23 Overview of the settings structure (2)



3.24 Overview of the settings structure (3) (Bluetooth short-range connectivity only)



3.25 Messages

In this menu the previous fault and information messages can be found. For some of the messages, there are tips and advice to help to rectify the fault.

Note: The *Messages* menu is only available for Bluetooth short-range connectivity.

If the robotic lawnmower is disrupted in any way, for example it is trapped or the battery is low, a message is saved relating to the disruption and the time it happened.

If the same message is repeated several times, this may indicate that an adjustment to the installation or the robotic lawnmower is required. See *Fault messages on page 45* or *Information messages on page 48*.

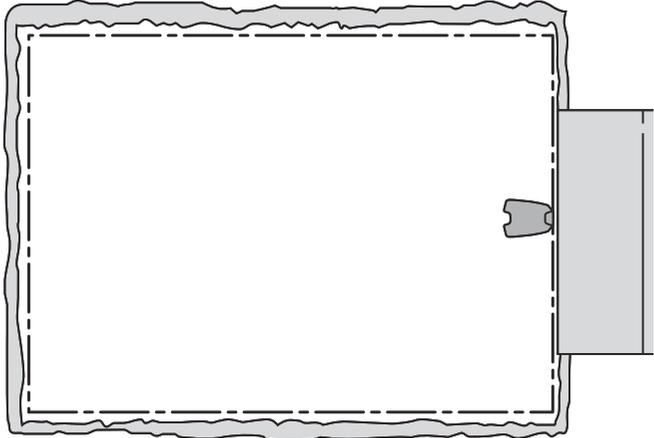
3.27 Yard layout examples

Different layouts require different settings. Adapting the robotic lawnmower's settings according to the shape of the lawn makes it easier for the robotic lawnmower to frequently reach all parts and therefore achieve a perfect mowing result. The following pages outline a number of layout examples with installation proposals and settings.

The recommended timer settings in the following examples are applicable to Automower® 520 unless otherwise stated. There is more installation help on www.husqvarna.com.

Note: The default settings for the robotic lawnmower have been chosen to work in as many different gardens as possible. The settings only need to be adjusted when special installation conditions exist.

3.27.1 Open and level area

| | | |
|------------------------------|--|--|
| Area | 500 m² |  <p>The diagram shows a rectangular lawn area outlined with a dashed line. A charging station is located on the right side of the lawn, represented by a grey rectangle with a small protrusion on its left side. The lawn area is shaded with a light grey pattern.</p> |
| <i>Timer</i> | 07:00-14:30 Monday, Tuesday, Thursday, Friday, Saturday | |
| <i>Lawn coverage</i> | GPS assisted navigation | |
| <i>Find charging station</i> | Default settings | |
| Remarks | The timer should be used to prevent the grass looking trampled since the area is significantly less than the maximum capacity of the robotic lawnmower. As the area is open and uncomplicated there is no need for a guide wire in this installation. | |

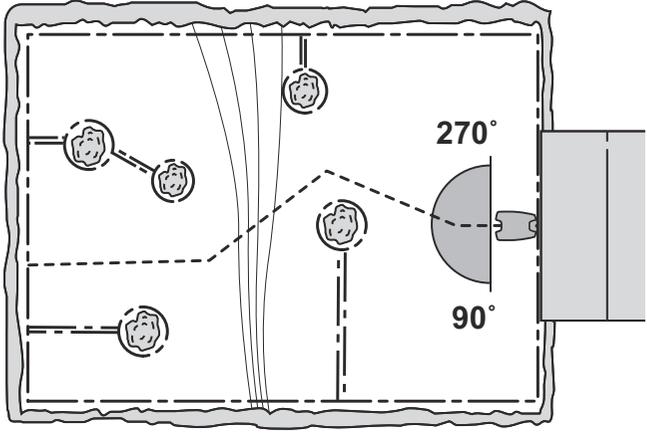
3.26 My mowers

When choosing *My mowers* you can manage all the robotic lawnmowers paired to your account, as well as add new ones. If there are several paired robotic lawnmowers it is possible to select one of them as *Current mower*.

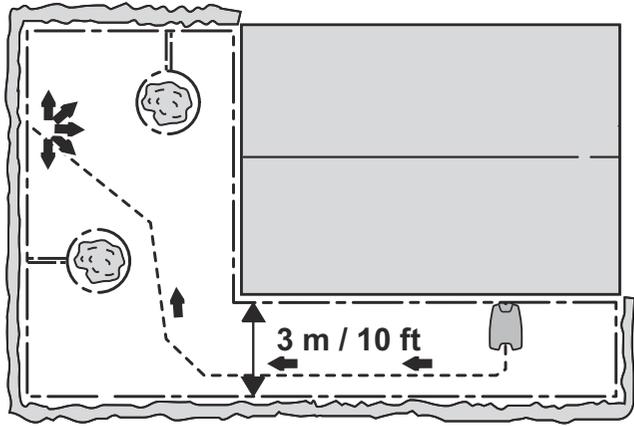
To pair a new robotic lawnmower to the Automower® Connect app:

1. Select the plus sign (+).
2. Select model.
3. Follow the instructions in the Automower® Connect app to finalize the pairing.

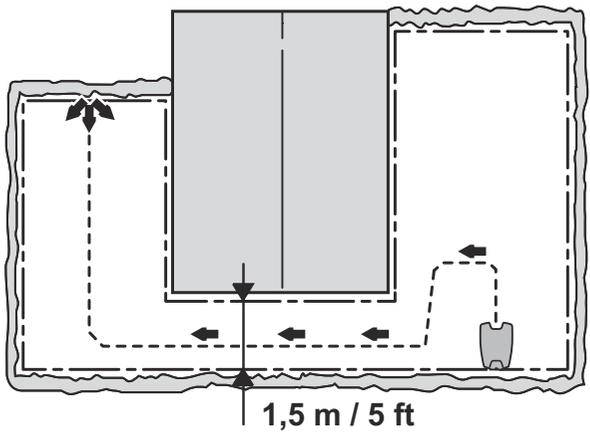
3.27.2 A number of islands and a 35% slope

| | | |
|------------------------------|---|--|
| Area | 1000 m ² |  |
| Timer | 07:00-22:30 Monday, Tuesday, Thursday, Friday, Saturday | |
| Lawn coverage | GPS assisted navigation | |
| Find charging station | Default settings | |
| Remarks | Place the charging station in the lower part of the working area. Lay the guide wire at an angle over the steep slope. Make sure that the guide wire is laid according to recommendations in <i>Laying and connecting the guide wire on page 20</i> | |

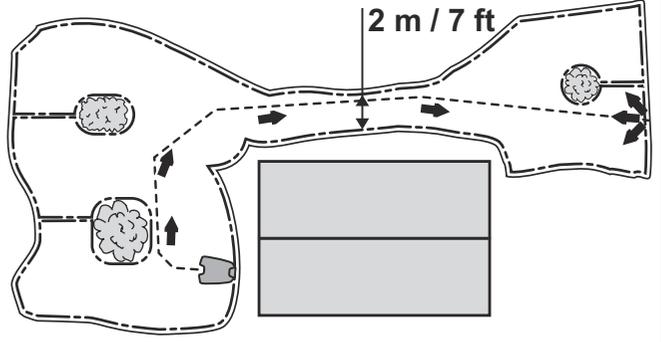
3.27.3 L-shaped garden with a couple of islands and the charging station installed in the narrow area

| | | |
|------------------------------|--|---|
| Area | 1500 m ² |  |
| Timer | 00:00-23:00 Monday, Tuesday, Thursday, Friday, Saturday | |
| Lawn coverage | GPS assisted navigation | |
| Find charging station | Default settings | |
| Remarks | Make sure that the guide wire is laid according to recommendations in <i>Laying and connecting the guide wire on page 20</i> . | |

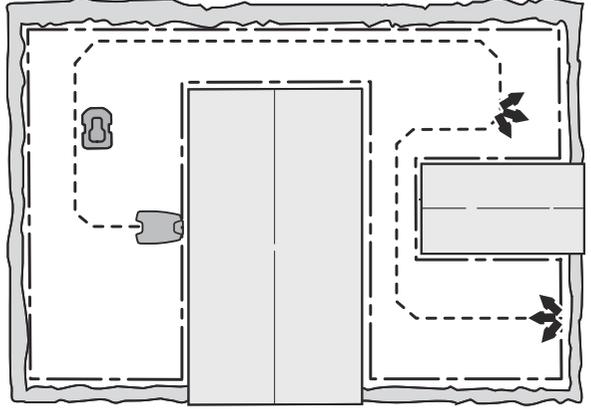
3.27.4 U-shaped garden linked with a narrow passage

| | | |
|------------------------------|---|--|
| Area | 2200 m ² |  |
| Timer | 00:00-24:00 Monday-Sunday | |
| Lawn coverage | GPS assisted navigation | |
| Find charging station | Default settings | |
| Remarks | The guide wire should be placed along the narrow passage to ensure that the robotic lawnmower can with ease locate the left hand side of the working area. Make sure that the guide wire is laid according to recommendations in <i>Laying and connecting the guide wire on page 20</i> . | |

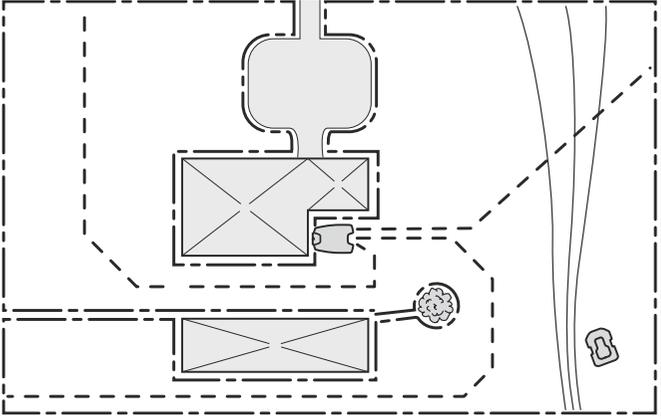
3.27.5 Unsymmetrical working area with a narrow passage and a number of islands

| | | |
|------------------------------|---|--|
| Area | 1500 m ² |  |
| Timer | 00:00-23:00 Monday, Tuesday, Thursday, Friday, Saturday | |
| Lawn coverage | GPS assisted navigation | |
| Find charging station | Default settings | |
| Remarks | The guide wire should be placed along the narrow passage to ensure that the robotic lawnmower can with ease locate the charging station from the right hand side of the working area. Make sure that the guide wire is laid according to recommendations in <i>Laying and connecting the guide wire on page 20.</i> | |

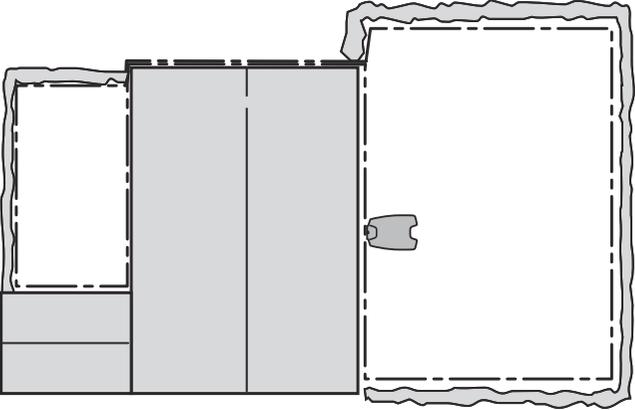
3.27.6 Three areas linked with two narrow passages

| | | |
|------------------------------|--|---|
| Area | 1000 m ² |  |
| Timer | 07:00-22:30 Monday, Tuesday, Thursday, Friday, Saturday | |
| Lawn coverage | GPS assisted navigation | |
| Find charging station | Default settings | |
| Remarks | The guide wire should be placed along the narrow passage to ensure that the robotic lawnmower can with ease locate the charging station from the right hand side of the working area. Make sure that the guide wire is laid according to recommendations in <i>Laying and connecting the guide wire on page 20.</i> | |

3.27.7 Large complex area with 3 guide wires

| | | |
|------------------------------|---|--|
| Area | 4000 m ² Applicable for Automower® 550. |  |
| Timer | 04:00-23:30 Monday-Sunday | |
| Lawn coverage | GPS assisted navigation | |
| Find charging station | Default settings | |
| Remarks | As the installation requires 3 guide wires, this working area is not suitable for Automower® 520. Make sure that the guide wire is laid according to recommendations in <i>Laying and connecting the guide wire on page 20.</i> | |

3.27.8 A secondary area

| | | |
|-----------------------|---|--|
| Area | 1000 + 300 m ² |  |
| Timer | 07:00-22:30 Monday, Tuesday, Thursday, Friday, Saturday | |
| Lawn coverage | GPS assisted navigation | |
| Find charging station | Default settings | |
| Remarks | <p>The secondary area is cut using the <i>Secondary area</i> mode on Wednesday and Sunday.</p> <p>As the area is open and uncomplicated there is no need for a guide wire in this installation. Make sure that the guide wire is laid according to recommendations in <i>Laying and connecting the guide wire</i> on page 20.</p> | |

4 Operation

4.1 Main switch



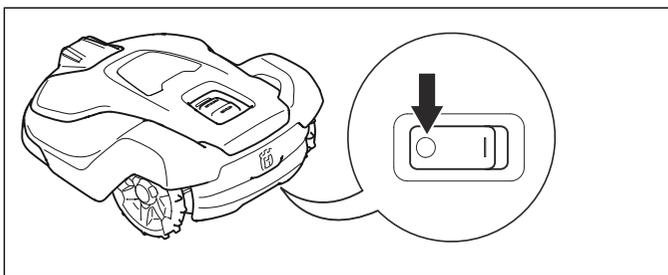
WARNING: Read the safety instructions carefully before you start your robotic lawnmower.



WARNING: Keep your hands and feet away from the rotating blades. Never put your hands or feet close to or under the machine when the motor is running.



WARNING: Never use the robotic lawnmower when persons, especially children, or pets, are in the cutting area.



- Set the **Main switch** in the *1* position to start the robotic lawnmower.
- Set the **Main switch** in the *0* position when the robotic lawnmower is not in use or if any work, inspection or maintenance is being carried out.

When the main switch is set in the *0* position the motors on the robotic lawnmower cannot start.

4.2 Start

1. Set the **Main switch** to position *1*.
2. Open the Automower® Connect app.
3. Select the *Dashboard*.
4. Select *Start* in the app.

If the robotic lawnmower is parked in the charging station, it will only leave the charging station when the battery is fully charged and if the timer is set to allow the mower to operate.

Note: Make sure that the **START** button on top of the robotic lawnmower is in the correct position. The robotic lawnmower does not start if the **STOP** button is activated.



4.3 Operating mode - Start

When *Start* has been selected the following operation selections can be selected.

- Main area
- Override timer
- Secondary area

4.3.1 Main area

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

1. Open Automower® Connect.
2. Select *Dashboard* in the Main menu.
3. Select *Start*
4. Select *Resume on main area* to start the robotic lawnmower.

4.3.2 Override timer

Any timer settings can be temporarily overridden by selecting *Override timer*.

1. Select *Dashboard* in the Main menu.
2. Select *Start*.
3. Slide the horizontal bar of *Override timer* to find a suitable override duration. It is possible to override the timer up to 7 days.
4. Select a suitable override duration.

4.3.3 Secondary area

For more information about Secondary area, see *Secondary areas on page 17*. If *Secondary area* is selected, the robotic lawnmower operates for a selected time period, or until the battery is empty.

If the robotic lawnmower charges in the *Secondary area* mode, it will fully charge, drive out about 50 cm / 20 in. and then stop. This indicates that it is charged and ready to start mowing.

1. Select *Dashboard* in the Main menu.
2. Select a suitable time period, or to mow until the battery is empty.

Note: If the main working area has to be cut after charging, it is recommended to select *Resume on main area* when placing the robotic lawnmower back in the charging station.

4.4 Operating mode - Park

When selecting *Park* the following operation selections can be chosen.

- Park until further notice
- Start on next timer
- Parking duration

4.4.1 Park until further notice

When *Park until further notice* is chosen, the robotic lawnmower stays in the charging station until *Start* is selected.

1. Select *Dashboard* in the Main menu.
2. Select *Park*.
3. Select *Until further notice*.

4.4.2 Start on next timer

The robotic lawnmower stays in the charging station until the next Timer setting permits operation. This operation selection is suitable if one wishes to cancel an ongoing mowing cycle and allow the robotic lawnmower to stay in the charging station until next Timer setting permits operation.

1. Select *Dashboard* in the Main menu.
2. Select *Park*.
3. Select *Start on next timer*.

4.4.3 Parking duration

In the *Park* menu it is possible to choose parking duration. The robotic lawnmower stays in the charging station for the chosen park duration and then automatically returns to normal operation. This operation selection is suitable when there is a need to pause operation for a known time period. This could be the case for a shorter time period, for example when watering the lawn. It could also be the case for a longer period, for example if the grass is too short and need to grow for a couple of days.

When the chosen duration is over, the robotic lawnmower follows the normal Timer settings.

1. Select *Dashboard* in the Main menu.
2. Select *Park*.
3. Slide the horizontal bar of *Parking duration* to find a suitable duration. It is possible to override the timer up to 7 days.
4. Select a suitable parking duration.

4.4.4 The charging station's park button

The **PARK** button on the charging station is applicable for Automower® 520 and Automower® 550. It is used to call the robotic lawnmower back to the charging station. *Park* in the Automower® Connect app offers the same function. The **PARK** button on the charging station is useful for instance when the robotic lawnmower

operates in a large working area and the operator does not have access to the Automower® Connect app.

An LED in the **PARK** button is lit when the button has been pressed. The LED diode goes out when the robotic lawnmower is parked in the charging station.

The robotic lawnmower remains parked in the charging station until *Start* in the Automower® Connect app has been activated.



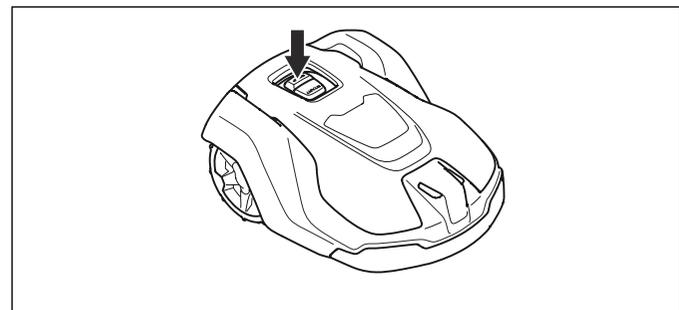
4.4.5 Operating mode - Pause

When selecting *Pause* in the Automower® Connect app, it sends a command to the robotic lawnmower to stop the current activity and pause. The robotic lawnmower is paused until either *Park* or *Start* is selected in the app.

4.5 Stop

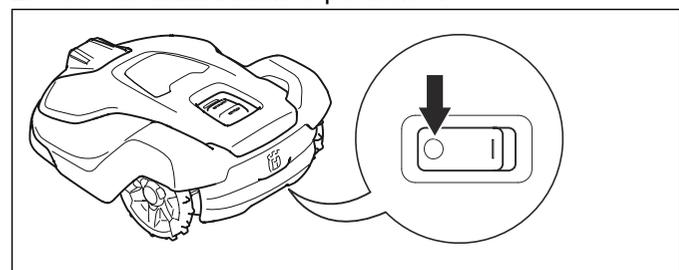
1. Press the **STOP** button on top of the robotic lawnmower.

The robotic lawnmower stops and the blade motor stops.



4.6 Switch off

1. Press the **STOP** button on top of the robotic lawnmower.
2. Set the **Main switch** to position 0.





WARNING: Always switch off the robotic lawnmower using the main switch if it requires maintenance, or if the robotic lawnmower must be moved outside the working area.

4.7 Charge a flat battery

When the Husqvarna robotic lawnmower is new or has been stored for a long period, the battery will be flat and needs to be charged before starting.



WARNING: Only charge the robotic lawnmower 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.

1. Set the **Main switch** to position *1*.
2. Place the robotic lawnmower in the charging station. Slide the robotic lawnmower in as far as possible to ensure proper contact between the robotic lawnmower and the charging station. See contact and charging strips in *Product overview on page 6*
3. The dashboard in the Automower® Connect app shows that charging is in progress.

4.8 Slope control

In order to reduce lawn wear near boundary wire in slopes, the robotic lawnmower avoids reversing when driving downhill. When approaching the boundary wire it therefore either bounces away or makes a U-turn.

5 Maintenance

5.1 Introduction - maintenance

For better operating reliability and longer service life: check and clean the robotic lawnmower regularly and replace worn parts if necessary. All maintenance and servicing must be done according to Husqvarna's instructions. See *Guarantee terms on page 59*.

When the robotic lawnmower is first used, the blade disc and blades should be inspected once a week. If the amount of wear during this period has been low, the inspection interval can be increased.

It is important that the blade disc rotates easily. The edges of the blades should not be damaged. The lifetime of the blades varies immensely and depends for instance on:

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

The normal life is 2 to 5 weeks when used under favorable conditions. See *Replace the blades on page 43* on how to replace the blades.



WARNING: Wear protective gloves.

Note: Working with blunt blades gives a poorer mowing result. The grass is not cut cleanly and more energy is needed, resulting in the robotic lawnmower not being able to maintain such a large area.

5.2 Clean the robotic lawnmower

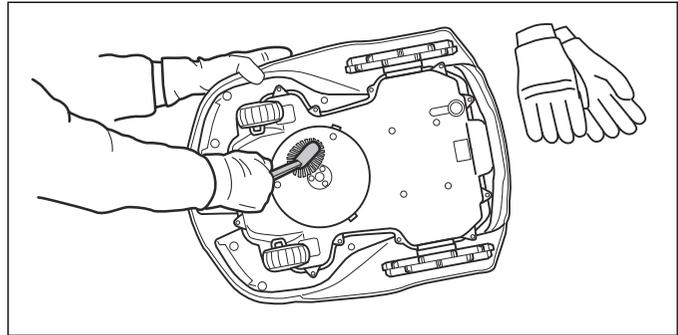
It is important to keep the robotic lawnmower clean. A robotic lawnmower with large amounts of grass stuck to it will not cope as well with slopes. It is recommended to clean using a brush.



CAUTION: Never use a high-pressure washer to clean the robotic lawnmower. Never use solvents for cleaning.

5.2.1 Chassis and blade disc

1. Set the **Main switch** to position 0.
2. Lift the robotic lawnmower onto its side.
3. Clean the blade disc and chassis using for example a dish brush. At the same time, check that the blade disc rotates freely in relation to the foot guard. Also, check that the blades are intact and can pivot freely. If long grass or other objects find their way in, these may impede the blade disc. Even a slight braking effect leads to a higher consumption of energy and at worst will prevent the robotic lawnmower from being able to mow a large lawn.



5.2.2 Chassis

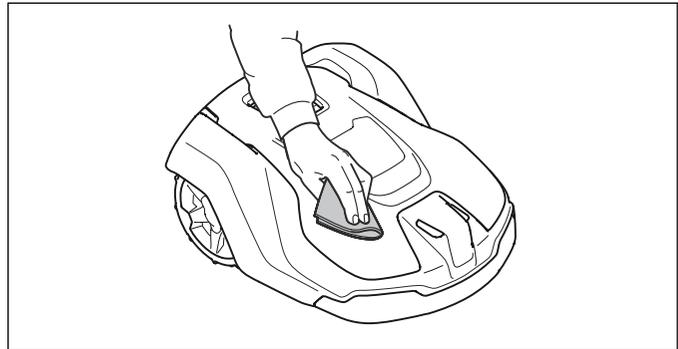
Clean the underside of the chassis. Brush or wipe with a damp cloth.

5.2.3 Wheels

Clean around the front and rear wheels. Grass on the wheels can impact on how the lawnmower works in slopes.

5.2.4 Body

Use a damp, soft sponge or cloth to clean the body. If the body is very dirty it may be necessary to use a soap solution or washing-up liquid.



5.2.5 Charging station

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

5.3 Replace the blades

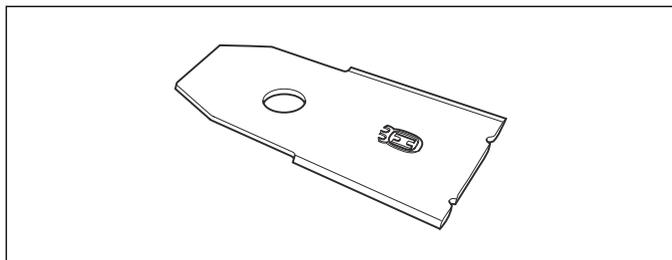


WARNING: Always use blades and screws of the right type. Husqvarna can only guarantee safety when using original blades. Only replacing the blades and reusing the screw can result in a screw wearing during mowing and shearing. The blades can then be propelled from under the body and cause serious injury.

Replace worn or damaged parts for safety reasons. Even if the blades are intact, they should be replaced on a regular basis for the best mowing result and low energy usage.

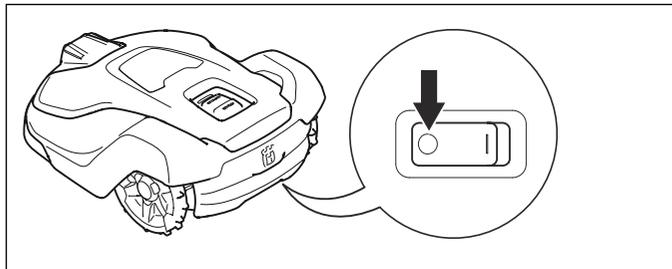
There are 3 blades on the robotic lawnmower, which are screwed into the blade disc. All 3 blades and screws must be replaced at the same time to obtain a balanced cutting system.

Use Husqvarna original blades embossed with the crowned H-mark logotype, see *Guarantee terms on page 59*.

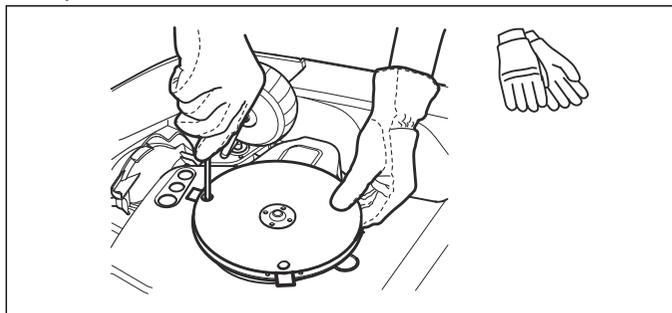


5.3.1 To replace the blades

1. Set the **Main switch** to position *0*.



2. Turn the robotic lawnmower upside down. Place the robotic lawnmower on a soft and clean surface to avoid scratching the body and the hatch.
3. Rotate the skid plate so that its holes align with the screws for the blade.
4. Remove the 3 screws. Use a straight slot or cross-tip screwdriver.



5. Remove each blade and screw.
6. Fasten new blades and screws.
7. Check that the blades can pivot freely.

5.4 Battery

The battery is maintenance-free, but has a limited life span of 2 to 4 years.



WARNING: Only charge the robotic lawnmower 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.



WARNING: Use only original batteries recommended by the manufacturer. Product safety cannot be guaranteed with other

batteries. Do not use non-rechargeable batteries.



CAUTION: The battery must be charged fully before winter storage. If the battery is not fully charged it can be damaged and in certain cases be rendered useless.

Below indicates that the battery is getting old and eventually needs replacing:

- The operating time for the robotic lawnmower is shorter than normal between charges. This leads to more charging cycles than normal, which increases the risk of tracks forming near the charging station.
- The robotic lawnmower is found standing out on the lawn with *Empty battery* message. This indicates that the robotic lawnmower does not have battery capacity enough to find the charging station.

The battery is fine as long as the robotic lawnmower maintains a well-cut lawn.

Note: Battery life is dependent on the length of the season and how many hours a day the robotic lawnmower is operating. A long season or many hours of use a day means that the battery must be replaced more regularly.

Contact your local Husqvarna representative to replace the battery.

5.5 Winter service

Take your robotic lawnmower to your local Husqvarna representative for service prior to winter storage. Regular winter service will maintain the robotic lawnmower 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 mower's function and components.
- Checking and, if required, replacing wear items such as blades and bearings.
- Testing the mower's battery capacity as well as a recommendation to replace battery if necessary.
- If new software is available, the local Husqvarna representative updates the robotic lawnmower.

6 Troubleshooting

6.1 Introduction - troubleshooting

All messages can be found in the *Messages* menu in Automower® Connect. More suggestions for steps to take in the event of malfunction or symptoms can be found on www.husqvarna.com.

Note: The *Messages* menu is only available for short-range connectivity (Bluetooth).

6.2 Fault messages

Below a number of fault messages are listed which may be shown in the display of the robotic lawnmower. Contact your local Husqvarna representative if the same message appears often.

| Message | Cause | Action |
|-----------------------------------|---|---|
| <i>Wheel motor blocked, left</i> | Grass or other object is wrapped around the drive wheel. | Check the drive wheel and remove the grass or other object. |
| <i>Wheel motor blocked, right</i> | Grass or other object is wrapped around the drive wheel. | Check the drive wheel and remove the grass or other object. |
| <i>Cutting system blocked</i> | Grass or other object is wrapped around the blade disc. | Check the drive wheel and remove the grass or other object. |
| | The blade disc lies in a pool of water. | Move the robotic lawnmower and prevent the collection of water in the working area. |
| <i>Cutting height blocked</i> | Grass or other object is wrapped around the cutting height adjustment, or between the blade disc and chassis. | Check the blade disc and the bellows around the cutting height adjustment, and remove any grass or other objects that may have got stuck. |
| <i>No loop signal</i> | The power supply is not connected. | Check the wall socket connection and whether an earth-fault breaker has tripped or not. Check that the low voltage cable is connected to the charging station. |
| | The low voltage cable is damaged or not connected. | Check that the low voltage cable is not damaged. Check that it is also properly connected to the charging station and to the power supply. |
| | The boundary wire is not connected to the charging station. | Check that the boundary wire connectors are fitted properly to the charging station. Replace connectors if damaged. See <i>Connecting the boundary wire on page 19</i> . |
| | Boundary wire broken. | Find out where the break is. Replace the damaged section of the loop with a new loop wire and splice using an original coupler. See <i>Finding breaks in the loop wire on page 52</i> . |
| | <i>ECO mode</i> is activated and the robotic lawnmower has attempted to start outside the charging station. | Place the robotic lawnmower in the charging station and start the robotic lawnmower again. See <i>Start on page 40</i> . |
| | The boundary wire is laid in the wrong direction around an island. | Check that the boundary wire was laid according to instructions, e.g. in the right direction around the island. See <i>Boundary wire on page 14</i> . |
| | The connection between the robotic lawnmower and the charging station has been broken. | Place the robotic lawnmower in the charging station and generate a new loop signal, see <i>Security on page 30</i> . |
| | Disturbances from metal objects (fences, reinforcement steel) or buried cables close by. | Try moving the boundary wire. |

| Message | Cause | Action |
|--------------------------------------|---|---|
| <i>Trapped</i> | The robotic lawnmower has got caught in something. | Free the robotic lawnmower and rectify the reason for it becoming trapped. |
| | The robotic lawnmower is stuck behind a number of obstacles. | Check if there are any obstacles which make it hard for the robotic lawnmower to move on from this location. |
| <i>Outside working area</i> | The boundary wire connections to the charging station are crossed. | Check that the boundary wire is connected correctly. |
| | The boundary wire is too close to the edge of the working area. | Check that the boundary wire has been laid according to the instructions. See <i>Boundary wire on page 14</i> . |
| | The working area slopes too much by the boundary loop. | |
| | The boundary wire is laid in the wrong direction around an island. | |
| | Disturbances from metal objects (fences, reinforcement steel) or buried cables close by. | Try moving the boundary wire. |
| | The robotic lawnmower finds it hard to distinguish the signal from another robotic lawnmower installation close by. | Place the robotic lawnmower in the charging station and generate a new loop signal, see <i>Security on page 30</i> . |
| <i>Empty battery</i> | The robotic lawnmower cannot find the charging station. | Check that the charging station and the guide wire are installed in accordance with the instructions. See <i>Installation of the guide wire on page 19</i> . |
| | The guide wire is broken or not connected. | Find out where the break is and rectify it. |
| | The battery is spent. | Replace the battery. See <i>Battery on page 44</i> . |
| | The charging station's antenna is defective. | Check if the indicator lamp in the charging station flashes red. See <i>LED indicator lamp on the charging station on page 50</i> . |
| <i>Wrong PIN code</i> | Wrong PIN code has been entered. Five attempts are permitted, and the keypad is then blocked for five minutes. | Enter the correct PIN code. Contact your local Husqvarna representative if you forget the PIN code. |
| <i>No drive</i> | The robotic lawnmower has got caught in something. | Free the robotic lawnmower and rectify the reason for the lack of drive. If it is due to wet grass, wait until the lawn has dried before using the robotic lawnmower. |
| | The working area includes a steep slope. | Maximum guaranteed slope is 45%. Steeper slopes should be isolated. See <i>Slopes on page 17</i> . |
| | The guide wire is not laid at an angle on a slope. | If the guide wire is laid on a slope, it must be laid at an angle across the slope. See <i>Installation of the guide wire on page 19</i> . |
| <i>Wheel motor overloaded, right</i> | The robotic lawnmower has got caught in something. | Free the robotic lawnmower and rectify the reason for the lack of drive. If it is due to wet grass, wait until the lawn has dried before using the robotic lawnmower. |
| <i>Wheel motor overloaded, left</i> | | |

| Message | Cause | Action |
|---|---|--|
| <i>Charging station blocked</i> | The contact between the charging strips and contact strips may be poor and the robotic lawnmower has made a number of attempts to charge. | Put the robotic lawnmower in the charging station and check that the charging strips and contact strips make good contact. |
| | An object is obstructing the robotic lawnmower. | Remove the object. |
| | The charging station is tilted or bent. | Confirm that the charging station is placed on a fully flat and horizontal ground. The charging station must not be tilted or bent. |
| <i>Stuck in charging station</i> | There is an object in the way of the robotic lawnmower preventing it from leaving the charging station. | Remove the object. |
| <i>Upside down</i> | The robotic lawnmower is leaning too much or has turned over. | Place the robotic lawnmower on a flat, level surface, and start the robotic lawnmower again. |
| <i>Needs manual charging</i> | The robotic lawnmower is set to the <i>Secondary area</i> operating mode. | Place the robotic lawnmower in the charging station. This behaviour is normal and no action is required. |
| <i>Next start hh:mm</i> | The timer setting prevents the robotic lawnmower from operating. | Change the timer settings. See <i>Edit timer settings on page 26</i> . |
| | The clock on the robotic lawnmower is not correct. | Set the time. See <i>Timer on page 24</i> . |
| <i>Lifted</i> | The lift sensor has been activated as the robotic lawnmower has become trapped. | Free the robotic lawnmower. |
| <i>Collision sensor problem, front/rear</i> | The body of the robotic lawnmower can not move freely around its chassis. | Check that the body of the robotic lawnmower can move freely around its chassis. If the problem remains, the message requires action by an authorized service technician. |
| <i>Wheel drive problem, right/left</i> | Grass or other object is wrapped around the drive wheel. | Clean the wheels and around the wheels. |
| <i>Alarm! Mower stopped</i> | The alarm was activated because the mower was stopped. | Adjust the mower security settings in the <i>Security</i> menu, see <i>Security on page 30</i> . |
| <i>Alarm! Mower lifted</i> | The alarm was activated because the mower was lifted. | |
| <i>Alarm! Mower tilted</i> | The alarm was activated because the mower was tilted. | |
| <i>Electronic problem</i> | Temporary electronic or software related issue in the mower. | Restart the mower. |
| <i>Loop sensor problem, front/rear</i> | | If the problem remains, the message requires action by an authorized service technician. |
| <i>Charging system problem</i> | | |
| <i>Tilt sensor problem</i> | | |
| <i>Temporary problem</i> | | |
| <i>Temporary battery problem</i> | Temporary battery or software related issue in the mower. | Restart the mower. |
| <i>Battery problem</i> | | Disconnect and reconnect the battery. If the problem remains, the message requires action by an authorized service technician. |

| Message | Cause | Action |
|---------------------------------------|---|---|
| <i>Charging current too high</i> | Wrong or faulty power supply unit. | Restart the mower. If the problem remains, the message requires action by an authorized service technician. |
| <i>Connectivity problem</i> | Potential problem on the connectivity circuit board in the mower. | Restart the mower. If the problem remains, the message requires action by an authorized service technician. |
| <i>Connectivity settings restored</i> | The connectivity settings were restored due to a fault. | Please check and change the settings if needed. |
| <i>Poor signal quality</i> | The connectivity circuit board in the mower is assembled upside down, or the mower itself is tilted or upside down. | Verify the mower is not upside down or tilted. If not, the message requires action by an authorized service technician. |

6.3 Information messages

Below a number of information messages are listed, which can be found in the *Messages* menu in Automower® Connect. Contact your local Husqvarna representative if the same message appears often.

| Message | Cause | Action |
|--|--|---|
| <i>Low battery</i> | The robotic lawnmower cannot find the charging station. | Check that the charging station and the guide wire are installed in accordance with the instructions. See <i>Installation of the guide wire on page 19</i> . |
| | The guide wire is broken or not connected. | Find out where the break is and rectify it. |
| | The battery is spent. | Replace the battery. See <i>Battery on page 44</i> . |
| | The charging station's antenna is defective. | Check if the indicator lamp in the charging station flashes red. See <i>LED indicator lamp on the charging station on page 50</i> . |
| <i>Settings restored</i> | Confirmation that a <i>Reset all user settings</i> has been carried out. | This is normal. No action required. |
| <i>Limited cutting height range</i> | The maximum and minimum position of the cutting height adjustment is limited. | Check that no grass or other objects are blocking the blade disc from moving up or down. |
| | | Carry out a cutting height calibration. Contact your local Husqvarna representative. |
| <i>Unexpected cutting height adj</i> | The cutting height adjustment is altered without a request from the robotic lawnmower. | Carry out a cutting height calibration. Contact your local Husqvarna representative. |
| <i>Cutting system imbalance</i> | The robotic lawnmower has discovered vibrations in the cutting disc. | Verify that the blades (and screws) are intact and not worn out. Verify that all blades are correctly mounted. Check that no double blades are mounted on any of the three blade positions. |
| <i>Guide 1 not found</i> <i>Guide 2 not found</i> <i>Guide 3 not found</i> | The guide wire is not connected to the charging station. | Check that the guide wire's connector is tightly connected to the charging station. See <i>Laying and connecting the guide wire on page 20</i> . |
| | Break in the guide wire. | Find out where the break is. Replace the damaged section of the guide wire with a new loop wire and splice using an original coupler. |
| | The guide wire is not connected to the boundary loop. | Check that the guide wire is connected correctly to the boundary loop. See <i>Laying and connecting the guide wire on page 20</i> . |

| Message | Cause | Action |
|---|---|--|
| <i>Guide calibration failed</i> | The robotic lawnmower has failed to calibrate the guide wire. | Check that the guide wires are installed according to the instructions, See <i>Installation of the guide wire on page 19</i> . |
| <i>Guide calibration accomplished</i> | The robotic lawnmower has succeeded to calibrate the guide wire. | No action required. |
| <i>GPS navigation problem</i> | Problem with the GPS assisted navigation equipment. | Contact your local Husqvarna representative if this message appears often. |
| <i>Weak GPS signal</i> | The GPS signal is weak for the current working area. GPS assisted navigation cannot be used. | If the message appears often, turn off the GPS assisted navigation and instead use the manual settings for Lawn coverage, see <i>Area 1-5 on page 28</i> . |
| <i>Difficult finding home</i> | The robotic lawnmower has been following the boundary wire several laps without finding the charging station. | The installation has not been done correctly. See <i>Laying the boundary wire on page 18</i> . |
| | | Wrong corridor width setting on boundary wire. See <i>Corridor width on page 29</i> . |
| | | The robotic lawnmower was started on a Secondary area with the Main area setting. |
| <i>Temporary problem with the server.</i> | Please try again. | Contact your local Husqvarna representative if this message appears often. |
| <i>Connection problems</i> | Problem with the Automower® Connect module | Restart the robotic lawnmower. If there still is a connection problem, try to unpair the robotic lawnmower (<i>My mowers</i>) and then pair it again. If the problem remains, contact your local Husqvarna representative. |
| <i>Connection settings restored</i> | Settings for wireless connectivity have been restored due to an error. | Check and revise settings if necessary. |
| <i>Weak signal</i> | Weak GPRS signal for Automower® Connect module | Make sure that the robotic lawnmower is not upside down. If the problem remains, the message requires action by an authorized service technician. |
| <i>SIM card requires PIN</i> | The SIM card must be unlocked. | Make sure the correct SIM PIN has been entered into the mower's menu (Network > SIM card). Contact your local Husqvarna representative if this message appears often. |
| <i>SIM card locked</i> | The SIM card must be replaced. | Contact your local Husqvarna representative. |
| <i>SIM card not found</i> | Automower® Connect requires a SIM card to be inserted in the mower. | Contact your local Husqvarna representative. |
| <i>GeoFence problem</i> | The GeoFence is not working due to poor (or no) communication with the system. | Contact your local Husqvarna representative. |

6.4 LED indicator lamp on the charging station

For a fully functional installation, the indicator lamp in the charging station must emit a solid or flashing green light. If any other colour than green is visible, follow the troubleshooting guide below.

There is more help on www.husqvarna.com. If you still need help, please contact your local Husqvarna representative.

| Light | Cause | Action |
|-----------------------------|--|---|
| <i>Solid green light</i> | Good signals | No action required |
| <i>Green flashing light</i> | The signals are good and <i>ECO mode</i> is activated. | No action required. For more information on <i>ECO mode</i> , see <i>ECO mode on page 27</i> . |
| <i>Blue flashing light</i> | The boundary loop is not connected to the charging station. | Check that the boundary wire connectors are fitted properly to the charging station. See <i>Connecting the boundary wire on page 19</i> . |
| | Break in the boundary loop. | Find out where the break is. Replace the damaged section of the loop with a new loop wire and splice using an original coupler. |
| <i>Red flashing light</i> | Interruption in the charging station's antenna. | Contact your local Husqvarna representative. |
| <i>Solid red light</i> | Fault in the circuit board or incorrect power supply in the charging station. The fault should be rectified by an authorized service technician. | Contact your local Husqvarna representative. |

6.5 LED indicator lamp on the robotic lawnmower

There is a LED indicator lamp on top of the robotic lawnmower, which shows the current status:

| Light | Cause | Action |
|------------------------------|---|--|
| <i>Solid green light</i> | The robotic lawnmower is either mowing the lawn, or leaving the charging station. | No action required. |
| <i>Solid blue light</i> | The robotic lawnmower is either paused or parked, or is searching for the charging station. | No action required. |
| <i>Solid yellow light</i> | The STOP button has been pressed. | Press the START button on top of the robotic lawnmower to start it again. |
| <i>Solid red light</i> | The robotic lawnmower has stopped due to a fatal error. | Clear the error by pressing the STOP button, and then activate the robotic lawnmower by pressing the START button on top of the robotic lawnmower. |
| <i>Flashing yellow light</i> | The robotic lawnmower requests the PIN code. | The PIN code needs to be confirmed in the Automower® Connect app before the robotic lawnmower can be activated. |

There is more help on www.husqvarna.com. If you still need help, please contact your local Husqvarna representative.

6.6 Symptoms

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

There is a FAQ (Frequently Asked Questions) on www.husqvarna.com which provides more detailed answers to a number of standard questions. Contact your local Husqvarna representative if you still cannot find the reason for the fault.

| Symptoms | Cause | Action |
|---|---|---|
| The robotic lawnmower has difficulty docking. | The boundary wire is not laid in a long straight line that is far enough out from the charging station. | Check that the charging station has been installed according to the instructions in <i>Laying the boundary wire on page 18</i> |
| | The guide wire is not inserted in the slot under the charging station. | It is critical for operation that the guide wire is perfectly straight and is in the correct position under the charging station. Therefore make sure that the guide wire is always in its slot in the charging station. See <i>Laying and connecting the guide wire on page 20</i> . |
| | The charging station is on a slope. | Place the charging station on a surface that is entirely level. See <i>Best charging station location on page 12</i> . |
| Uneven mowing results. | The robotic lawnmower works too few hours per day. | Increase the mowing time. See <i>Timer on page 24</i> . |
| | | The <i>Weather timer</i> senses that the lawn has been mowed more than it actually has. Increase the intensity level in the <i>Weather timer</i> . Disable the <i>Weather timer</i> if this does not help. |
| | The <i>How often?</i> setting is incorrect in relation to the layout of the working area. Note: Not applicable if GPS assisted navigation is enabled. | Check that the correct <i>How often?</i> value is selected. |
| | The shape of the working area requires the use of <i>Area 1-5</i> for the robotic lawnmower to find its way to all remote areas. Note: Not applicable if GPS assisted navigation is enabled. | Use <i>Area 1-5</i> to steer the robotic lawnmower to a remote area. See <i>Lawn coverage on page 28</i> . |
| | Working area is too large. | Try to limit the working area, or to extend the working time. See <i>Timer on page 24</i> . |
| | Dull blades. | Replace all the blades. See <i>Replace the blades on page 43</i> . |
| | Long grass in relation to the set cutting height. | Increase the cutting height and then successively lower it. |
| | Accumulation of grass by the blade disc or around the motor shaft. | Check that the blade disc rotates freely and easily. If not, screw off the blade disc and remove grass and foreign objects. See <i>Maintenance on page 43</i> . |
| The robotic lawnmower runs at the wrong time | The robotic lawnmower clock needs to be set. | Set the clock. See <i>Time & Date on page 30</i> . |
| | The start and stop times for mowing are incorrect. | Reset the start time and stop time settings for mowing. See <i>Timer on page 24</i> . |

| Symptoms | Cause | Action |
|--|--|--|
| The robotic lawnmower vibrates. | Damaged blades lead to imbalance in the cutting system. | Inspect the blades and screws and replace them if necessary. See <i>To replace the blades on page 44</i> . |
| | Too many blades in the same position lead to imbalance in the cutting system. | Check that only one blade is fitted at each screw. |
| | Different versions (thickness) of Husqvarna blades are used. | Check if the blades are of different versions. |
| The robotic lawnmower runs, but the blade disc does not rotate. | The robotic lawnmower searches for the charging station. | No action. The blade disc does not rotate when the robotic lawnmower is searching for the charging station. |
| The robotic lawnmower mows for shorter periods than usual between charges. | Grass or other foreign object blocks the blade disc. | Remove and clean the blade disc. See <i>Clean the robotic lawnmower on page 43</i> . |
| | The battery is spent. | Replace the battery. See <i>Battery on page 44</i> . |
| Both the mowing and charging times are shorter than usual. | The battery is spent. | Replace the battery. See <i>Battery on page 44</i> . |
| The robotic lawnmower is parked for hours in the charging station. | The robotic lawnmower is parked due to a timer setting, or because <i>Park until further notice</i> has been chosen in the app. | Open the app and edit the timer settings, or go to <i>Dashboard</i> and start the robotic lawnmower. |
| The robotic lawnmower often moves in circles or spirals. | Spiral cutting is a natural part of the robotic lawnmower's movement pattern. | Adjust the intensity of spiral cutting. This function can be disabled if necessary. See <i>Spiral cutting on page 27</i> . |
| The robotic lawnmower turns round and stays on a small area for several minutes. | This is completely normal for Automower® 520 and Automower® 550 with GPS assisted navigation, and contributes to an even result. | No action. |

6.7 Finding 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.



CAUTION: 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.

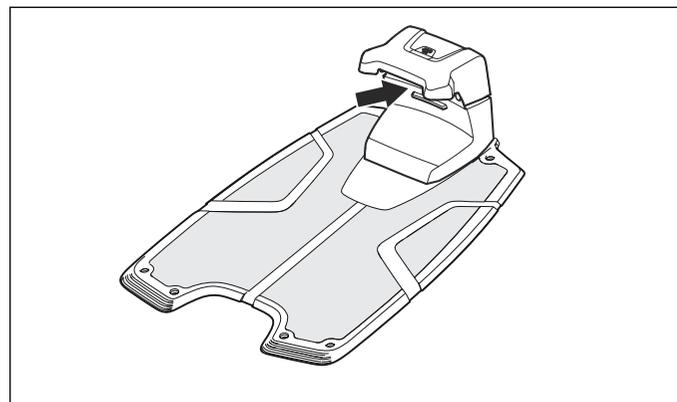
A defective splicing of the loop wire can also lead to disruptions several weeks after the splice was done. A faulty splice can, for example, be the result of the original coupler not being pressed together hard enough with a pair of pliers, or that a coupler of lower quality than the original coupler has been used.

Note: Please first check all known splices before further troubleshooting is done.

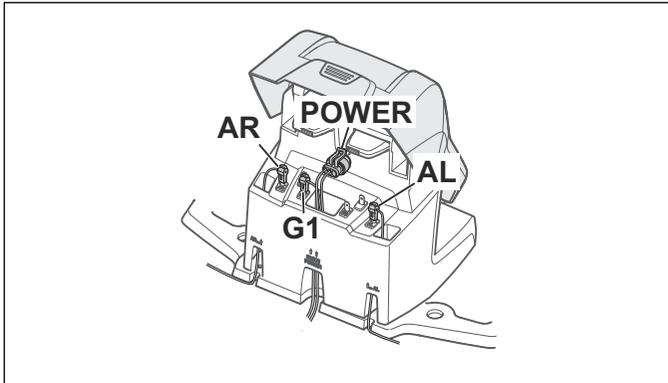
A wire break can be located by gradually halving the distance of the loop where the break may have occurred until there is only a very short section of the wire left.

The following method does not work if *ECO mode* is activated. Make sure first that *ECO mode* is turned off. See *ECO mode on page 27*.

1. Check that the indicator lamp in the charging station flashes blue, which indicates a break in the boundary loop. See *LED indicator lamp on the charging station on page 50*.



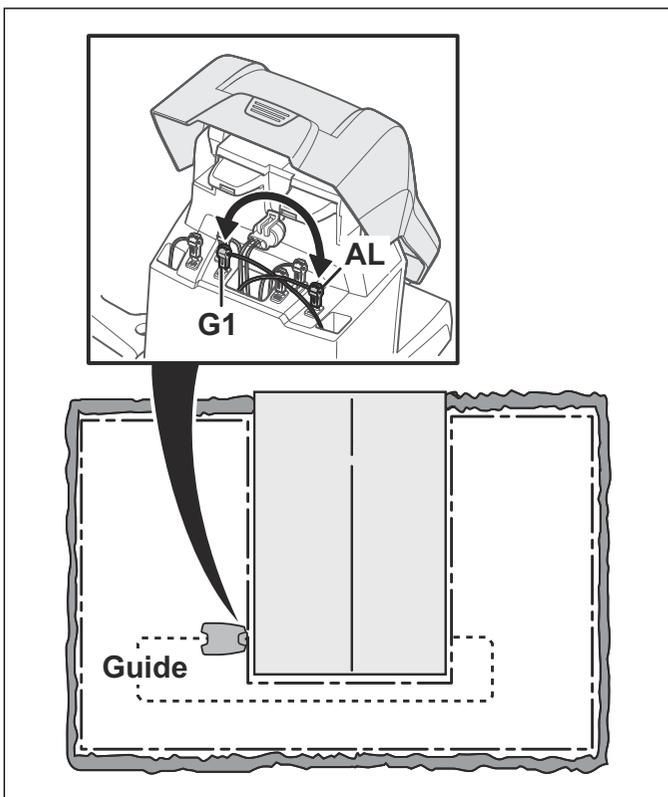
- Check that the boundary wire connections to the charging station are properly connected and not damaged. Check that the indicator lamp in the charging station is still flashing blue.



- Switch the connections between the guide wire and the boundary wire in the charging station.

Start by switching connection AL and G1.

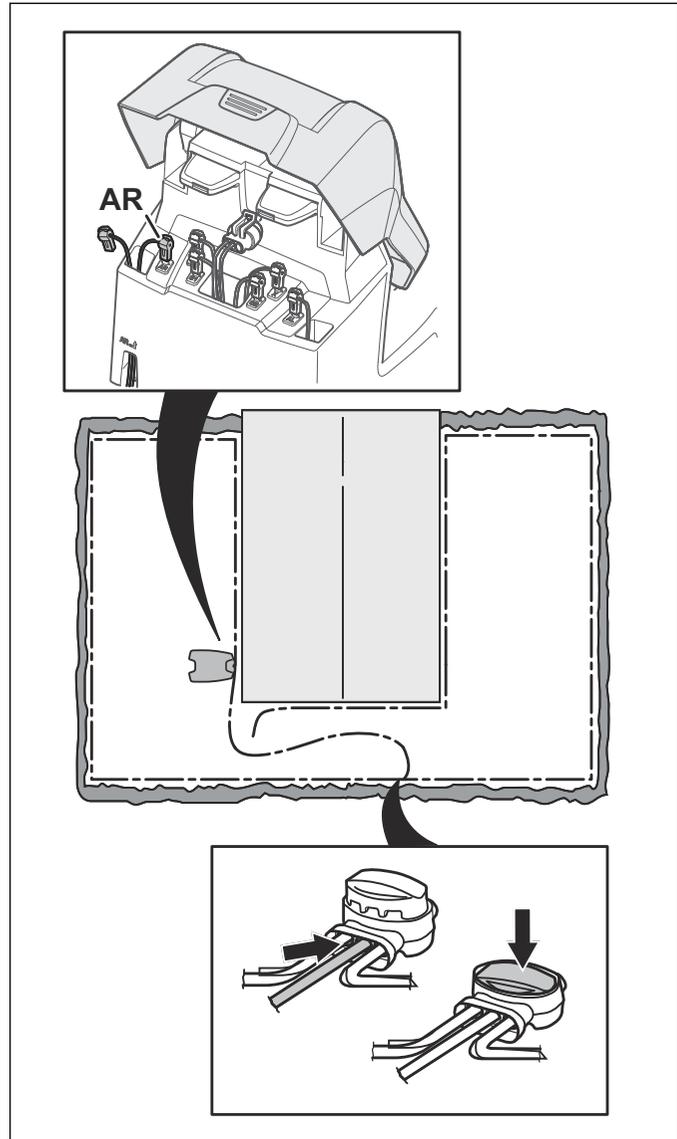
If the indicator lamp is lit with a solid green light, then the break is somewhere on the boundary wire between AL and the point where the guide wire is connected to the boundary wire (thick black line in the illustration).



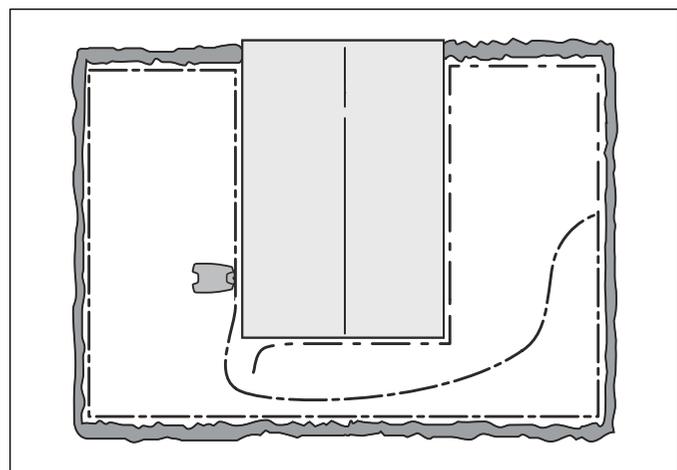
To rectify the fault you will need boundary wire, connector(s) and coupler(s):

- If the suspected boundary wire is short then it is easiest to exchange all of the boundary wire between AL and the point where the guide wire is connected to the boundary wire (thick black line).
- If the suspected boundary wire is long (thick black line) then do as follows: Put AL and G1 back to their original positions. Then disconnect AR. Connect a new loop wire to AR. Connect the other end of this

new loop wire at the middle of the suspected wire section.

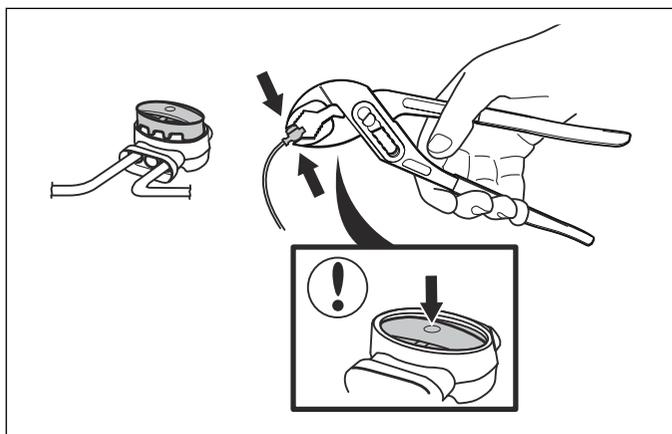


If the indicator lamp now is green, then the break is somewhere in the wire between the disconnected end to the point where the new wire is connected (thick black line below). In that case, move the connection for the new wire closer to the disconnected end (roughly at the middle of the suspected wire 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 AL and G1 back in their original positions. Then switch AR and G1. If indicator lamp now is lit with a solid green light then disconnect AL and connect a new boundary wire to AL. 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.



7 Transportation, storage and disposal

7.1 Transportation

The contained lithium-ion-batteries are subject to the Dangerous Goods Legislation requirements. For commercial transports e.g. by third parties or forwarding agents, special requirement on packaging and labeling must be observed. Consult an expert for hazardous material for preparation of the item being shipped. Please also observe possibly more detailed national regulations.

Tape off open contacts and pack up the battery in such a manner that it cannot move around in the packaging. Always secure the product when transporting it.

7.2 Winter storage

7.2.1 The robotic lawnmower

The robotic lawnmower must be cleaned carefully before putting it away for the winter. See *Clean the robotic lawnmower on page 43*.

To guarantee battery functionality and service life, it is important to charge the robotic lawnmower before storing it away for the winter.

1. Place the robotic lawnmower in the charging station until the battery icon in the app shows that the battery is fully charged.
2. Set the **Main switch** to 0.

Check the condition of wear items such as blades and bearings in the rear wheel. Rectify if necessary to make sure the robotic lawnmower is in good condition prior to next season.

Store the robotic lawnmower standing on all wheels and place it in a dry, frost-free environment, preferably in the mower's original packaging. You can also hang the robotic lawnmower on a Husqvarna original wall hanger. Contact your local Husqvarna representative for more information about available wall hangers.



CAUTION: The battery must be charged fully before winter storage. If the battery is not fully charged it can be damaged and in certain cases be rendered useless.

7.2.2 The charging station

It is recommended to store the charging station and power supply indoors. The boundary wire and the guide wire can be left in the ground.

1. Disconnect the charging station power supply.
2. Release the connector lock of the power supply, and pull the connector out.
3. Disconnect the boundary and guide wire connectors from the charging station.

The ends of the wires should be protected from damp by putting them in a container with grease for instance.



CAUTION: If the charging station is left outdoors during the winter, the charging station must be connected to the mains, the boundary wire and the guide wires the entire winter.

7.3 After winter storage

1. Check if cleaning is needed, particularly the charging strips on both the robotic lawnmower and the charging station.
2. If the charging strips appear to be burnt or coated, clean them using a fine grade emery cloth.
3. Check also that the robotic lawnmower's time and date are correct.

7.4 Environmental information



The symbol on the Husqvarna robotic lawnmower indicates that this product cannot be treated as domestic waste. It should instead be left at a suitable recycling centre to recycle its electronic components and batteries. The battery must be removed from the product before it is scrapped.

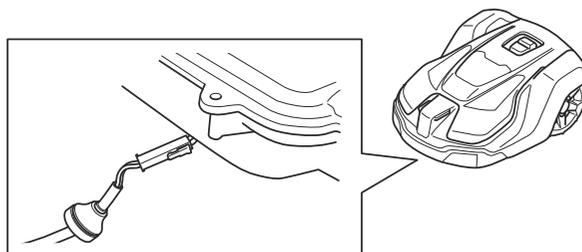
By ensuring that this product is taken care of correctly, you can help to counteract the potential negative impact on the environment and people that can otherwise result through incorrect waste management of this product.

For more detailed information about recycling this product, contact your municipality, your domestic waste service or the shop from where you purchased the product.

7.4.1 Removal of battery for recycling

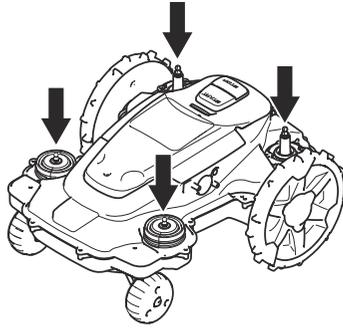
Follow these steps for removal of the battery from the robotic lawnmower.

1. Set the **Main switch** in position 0.
2. Clean the area around the grommet for the charging cable found at the very front under the mower.
3. Pull out the rubber grommet on the charging cable and carefully loosen the connector.

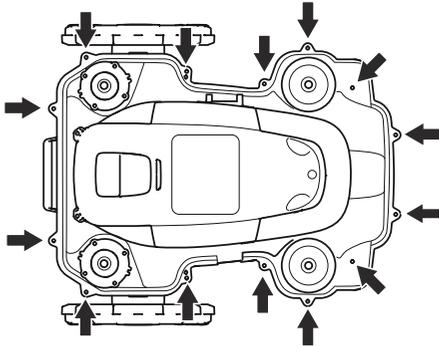


4. The body is fitted to the chassis using 4 quick-mounted, snap-on brackets. Loosen the body from the chassis by lifting the body one corner at a time

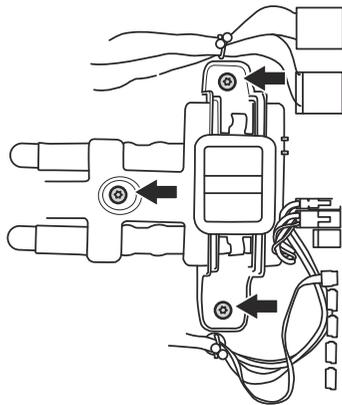
while holding the chassis in place.



5. Loosen all 14 screws (Torx 20).



6. Remove the guarantee seal at the point of separation between the chassis halves on the right-hand side.
7. Carefully lift the rear edge of the upper section of the chassis.
8. Disconnect the MMI cable from the main circuit board and remove the upper section of the chassis.
9. Loosen the 3 screws (Torx 20) holding the battery cover in place.



10. Disconnect the battery connection from the main circuit board. Open the battery cover and remove the battery.

8 Technical data

8.1 Technical data

| Dimensions | Automower® 520 | Automower® 550 |
|------------|----------------|----------------|
| Length, cm | 72 | 72 |
| Width, cm | 56 | 56 |
| Height, cm | 31 | 31 |
| Weight, kg | 11.5 | 13.9 |

| Electrical system | Automower® 520 | Automower® 550 |
|--|--|--|
| Battery, Lithium-Ion | 18 V/3.2 Ah Art.No. 580 68 33-01, 580 68 33-02 | 18 V/10.4 Ah Art.No. 588 14 64-01 (2 pcs.) |
| Power supply, V/28 V DC | 100-240 | 100-240 |
| Low voltage cable length, m | 10 | 10 |
| Mean energy consumption at maximum use | 17 kWh/month in a 2200 m ² working area | 23 kWh/month in a 5000 m ² working area |
| Charging current, A DC | 2.2 | 7 |
| Average mowing time, min | 75 | 270 |
| Average charging time, min | 50 | 60 |

| Boundary wire antenna | Automower® 520 | Automower® 550 |
|---|----------------|----------------|
| Operating Frequency Band, Hz | 300-80000 | 300-80000 |
| Maximum Radio-frequency power, mW @60m ⁵ | <25 mW @60m | <25 mW @60m |

| Noise emissions measured in the environment as sound power ⁶ | Automower® 520 | Automower® 550 |
|---|----------------|----------------|
| Measured sound power noise level, dB (A) | 58 | 60 |
| Noise emissions uncertainties K _{WA} , dB (A) | 1 | 1 |
| Guaranteed sound power noise level, dB (A) | 59 | 61 |
| Sound pressure noise level at the operator's ear, dB (A) ⁷ | 47 | 49 |

| Mowing | Automower® 520 | Automower® 550 |
|--|--------------------------|----------------|
| Cutting system | 3 pivoted cutting blades | |
| Blade motor speed, rpm | 2300 | 2300 |
| Power consumption during cutting, W +/- 20 % | 30 | 35 |
| Cutting height, cm | 2-6 | 2-6 |
| Cutting width, cm | 24 | 24 |
| Narrowest possible passage, cm | 60 | 60 |
| Maximum angle for cutting area, % | 45 | 45 |
| Maximum angle for boundary wire, % | 15 | 15 |
| Maximum length boundary wire, m | 800 | 800 |

⁵ Maximum active output power to antennas in the frequency band in which the radio equipment operates.

⁶ Noise emissions in the environment measured as sound power (L_{WA}) in conformity with EC directive 2000/14/EC. The guaranteed sound power level includes variation in production as well as variation from the test code with 1-3 dB(A).

⁷ Sound pressure noise uncertainties K_{pA}, 2-4 dB (A).

| Mowing | Automower® 520 | Automower® 550 |
|--|-----------------------|-----------------------|
| Maximum length guide wire, m | 400 | 400 |
| Working capacity, m ² +/- 20% | 2200 | 5000 |

| IP-classification | Automower® 520 | Automower® 550 |
|--------------------------|-----------------------|-----------------------|
| Robotic lawnmower | IPX4 | IPX4 |
| Charging station | IPX1 | IPX1 |
| Power supply | IPX4 | IPX4 |

| Frequency Band Support | |
|-------------------------------|-------------------|
| Bluetooth® Frequency range | 2400.0-2483.5 MHz |
| Automower® Connect 3G | Band 19 (800 MHz) |
| | Band 5 (850 MHz) |
| | Band 8 (900 MHz) |
| | Band 2 (1900 MHz) |
| | Band 1 (2100 MHz) |
| Automower® Connect 2G | GSM 850 MHz |
| | E-GSM 900 MHz |
| | DCS 1800 MHz |
| | PCS 1900 MHz |

| Power Class | | |
|-------------------------|-------------------------------|--------|
| Bluetooth® Output power | 8 dBm | |
| Automower® Connect 3G | Power Class 3 | 24 dBm |
| Automower® Connect 2G | Power Class 4 (for GSM/E-GSM) | 33 dBm |
| | Power Class 1 (for DCS/PCS) | 30 dBm |

Full compatibility cannot be guaranteed between the robotic lawnmower and other types of wireless systems such as remote controls, radio transmitters, hearing loops, buried electric animal fencing or similar.

9 Warranty

9.1 Guarantee terms

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

- The robotic lawnmower and the charging station may only be used in compliance with the instructions in this Operator's manual. This manufacturer's guarantee does not have an effect on the user's existing warranty claims against the dealer/seller.
- Users or non-authorized third parties must not attempt to repair the product.

Examples of faults which are not included in the guarantee:

- Damage caused by water seepage from underneath the robotic lawnmower. This damage is normally caused by cleaning or irrigation systems, or holes/hollows in the working area when pools of water are formed when it rains.
- Damage caused by lightning.
- Damage caused by improper battery storage or battery handling.
- Damage caused by using a battery that is not a Husqvarna original battery.
- Damage caused by not using Husqvarna original spare parts and accessories, such as blades and installation material.
- Damage to the loop wire.
- Damage caused by non-authorized changing or tampering with the product or its power supply.

The blades and wheel brushes are seen as disposable and are not covered by the guarantee.

If an error occurs with your Husqvarna robotic lawnmower, please contact your local Husqvarna representative for further instructions. Please have the receipt and the robotic lawnmower's serial number at hand when contacting your local Husqvarna representative.

10 EC Declaration of Conformity

10.1 EC Declaration of Conformity

Husqvarna AB, SE-561 82 Huskvarna, Sweden, tel: +46-36-146500, declares that the Robotic lawnmowers **Automower® 520** and **Automower® 550** with serial numbers dating 2018 week 4 and onwards (the year and week is clearly stated on the rating plate, followed by the serial number), comply with the requirements of the COUNCIL'S DIRECTIVE:

- Directive "relating to machinery" **2006/42/EC**.
 - Particular requirements for robotic battery powered electrical lawnmowers **EN 50636-2-107: 2015**
 - Electromagnetic fields **EN 62233: 2008**.
- Directive on "restriction of use of certain hazardous substances" **2011/65/EU**.
- Directive "relating to noise emissions from outdoor equipment" **2000/14/EC**. See also *Technical data on page 57* for information regarding noise emissions and the cutting width.

The notified body 0404, RISE SMP Svensk Maskinprovning AB, Box 7035, SE-750 07 Uppsala, Sweden, has issued a report regarding the assessment of conformity according to annex VI to the Council's Directive of May 8, 2000 "relating to noise emissions into the environment" 2000/14/EC. The certificate is numbered: for Automower® 520 (01/901/296) and Automower® 550 (01/901/291):

- Directive "relating to radio equipment" **2014/53/EU**.
The following standards have been applied:
 - **ETSI EN 303 447** Final Draft v1.1.0 (2017-06)
 - **ETSI EN 301 511** v12.5.1
 - **ETSI EN 300 328** v2.1.1
- Electromagnetic compatibility:
 - **ETSI EN 301 489-1** Draft v2.2.0
 - **ETSI EN 301 489-52** Draft v1.1.0
 - **ETSI EN 301 489-17** Draft v3.2.0
 - **ETSI EN 301 489-19** v2.1.0



Husqvarna, 2018-01-02

Lars Roos

Global R&D Director, Electric category

(Authorized representative for Husqvarna AB and responsible for technical documentation.)



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Original instructions

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