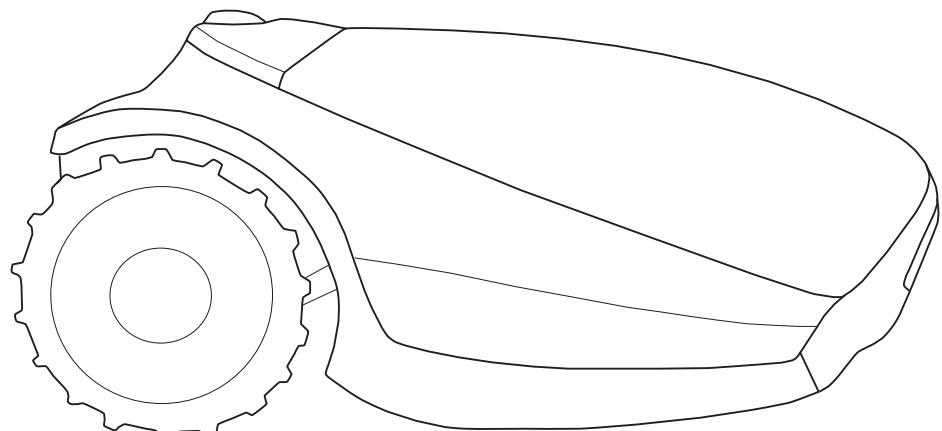




Robomow®

Original Operating Instructions (EN)

Robotic Mower



Robomow®

RC304 / RC306 / RC312
TC300 / TC500 / TC1000
MC300 / MC500 / MC1000
Operating Manual

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1. Introduction And Safety

Robomow® EC Declaration of Conformity

Manufacturer: F. Robotics Acquisitions Ltd.
Hatzabar St., Industrial Zone
P.O.Box 1412 Pardesiya,
42815 Israel

The products covered by this Declaration
26 Volt Battery operated Robotic Lawn Mower model:
Robomow RC 304/306/312 MC 300/500/1000 and
TC 300/500/1000 (with Base Station)

EN

F. Robotics Acquisitions Ltd. declares under sole responsibility that the products identified above conform to the Directives below:

- **Machinery Directive 2006/42/EC**

Standards referenced: EN ISO 12100:2010.

- **EMC Directive 2004/108/EC**

Standards referenced: EN 55014-1:2011. EN 55014-2:2008. EN 61000-3-2:2006. EN 61000-3-3:2008.

- **Noise Directive 2000/14/EC**

Standards referenced: BS EN ISO 3744:2010. ISO 11094:1991.

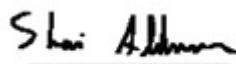
- **RoHS Directive 2011/65/EU.**

Technical file representative:

Mr. Gerome De Schutter Friendly Robotics BV.

Address: Expeditieweg 4-6, Andelst 6673 DV, Netherlands.

I hereby declare that the above product conforms to the requirements as specified above



Shai Abramson – Senior VP R&D

F. Robotics Acquisitions Ltd.

Israel

26 December 2014

1.1 Introduction

The products are manufactured by F. Robotics Acquisitions (Friendly Robotics).

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Product, product specifications and this document are subject to change without notice. All other trademarks are property of their respective owners.

Welcome to the world of home robotics with the Friendly Robotics Robomow!

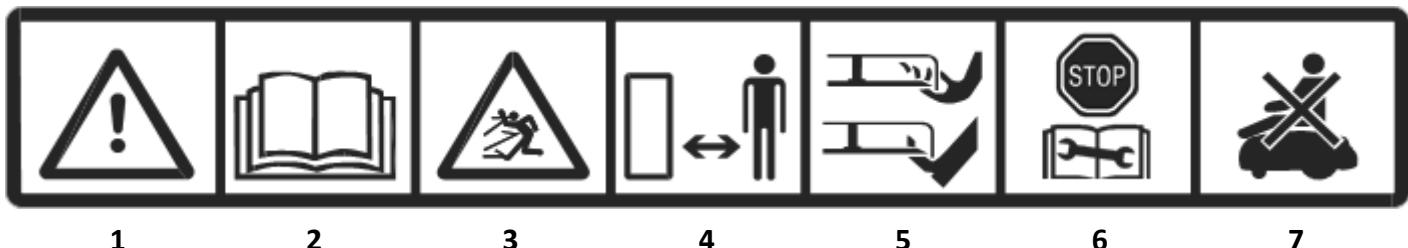
Thank you for purchasing our product. We know that you will enjoy the extra free time you will have while using Robomow to mow your lawn. When set up and used properly, Robomow will operate safely on your lawn and provide you with a quality of cut matched by a few mowers of any kind. You will be impressed with your lawn's appearance and best of all, Robomow did it for you.

IMPORTANT!

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

1.2 Warning Decal Definitions

These are the symbols on Robomow®; Read them carefully before operating Robomow®.



1 2 3 4 5 6 7

1. This is a dangerous power tool. Use care when operating and follow all safety instructions and warnings.
2. Read through the Operating & Safety Manual carefully before operating your Robomow®.
3. Hazard of throwing or flying objects while in operation.
4. Keep a safe distance from Robomow® when operating. Keep people in particular children, pets and bystanders away from the area in which Robomow® is being used.
5. Severing of toes or fingers – Rotary mower blade. Risk of injury from rotating cutting blade. Keep hands and feet away and do not attempt to lift Robomow® from this area.
6. Operate the disabling device before working on or lifting Robomow® (see section 1.4).
7. Do not ride on Robomow®.



Do not dispose Robomow® or any other part of it as unsorted municipal waste –  It should be collected separately.

This product conforms to the applicable EU Directives



1.3 Safety Warnings & Precautions

Training -

1. Read this Operating and Safety Manual carefully before operating Robomow®. Be familiar with the controls and the proper use of Robomow®.
2. Never allow people unfamiliar with these instructions or children to use Robomow®.
3. The operator or user is responsible for accidents or hazards occurring to other people or their property.

Preparation -

1. Ensure the correct installation of the Perimeter Wire system as instructed.
2. Periodically inspect the area where Robomow® is to be used and remove all stones, sticks, wires, bones, and other foreign objects.
3. Periodically visually inspect to see that the blade is not worn or damaged. Replace worn or damaged blade in sets to preserve balance.

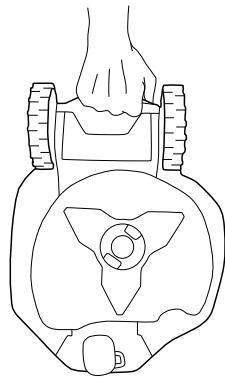
Operation -

1. Do not operate Robomow® if any safety feature or any part is damaged, worn or inoperable.
2. Keep hands and feet away from the cutting blade and other moving parts.
3. Never pick up or carry Robomow® while the motors are running.
4. Do not leave Robomow® to operate unattended if you know that there are pets, children or people in the vicinity.
5. Never mow while people, especially children, or pets are nearby.
6. Always switch off the Safety Switch before lifting the mower or attempting any adjustments.
7. Do not touch the blade before the blade has come to a complete stop.
8. Do not use Robomow® for any purpose other than for which it is intended.
9. Keep all guards, shields, safety devices, and sensors in place. Repair or replace damaged parts, including decals.

Transportation –

To safely move from or within the working area:

1. Press the STOP button to stop Robomow®.
2. Use the Remote Control (available as an accessory) to drive it from place to place.
3. In case of different height level, switch off the Safety Switch, and carry the mower by the carrying handle.
4. In case of long transportation, use the original packaging.
5. When transporting Robomow® over long distances switch off the Safety Switch. **IMPORTANT!** After turning on the Safety Switch, always re-set the current day and time. Failure to do so may result in non-intentional operation of the Robomow.



Using Remote Control (Manual Mowing)

1. Mow only in daylight or in a good artificial light and avoid operating in wet grass.
2. Do not operate Robomow® when barefoot or wearing open sandals. Always wear substantial footwear and long trousers; always be sure of your footing on slopes.
3. Use extreme caution when reversing the mower towards you.
4. Always switch on the motor according to instructions with feet well away from the blade.
5. Do not mow manually in slope greater than 15 degrees or where a firm footing is not possible.

Maintenance and Special Instructions–

1. Always switch off the Safety Switch of Robomow® before clearing blockage/ checking/ cleaning/ working on Robomow® or replacing the blade. Never attempt to service or adjust the mower while it is in operation.
2. In case of abnormal vibrations, stop the mower, switch off the Safety Switch and check for any damage of the blade. Replace worn or damaged blade to preserve balance. If vibration continues, call for service.
3. Use heavy gloves when inspecting or servicing the blade.
4. Do not perform maintenance when barefoot or wearing open sandals. Always wear suitable work shoes and long trousers;
5. Replace worn or damaged parts for safety.
6. Use only the original equipment and accessories. It is not permitted to modify the original design of Robomow®. All modifications are made at your own risk.
7. Maintenance/ Servicing / Cleaning of Robomow® should be according to manufacturer's instructions.
8. Keep all nuts, bolts and screws tight to be sure the machine is in safe working condition.
9. Warning! When there is a risk of a lightning storm, disconnect the Perimeter Wire from the Base Station / Perimeter Switch and the Power Box 230V/120V plug from the power outlet.

Batteries –

1. Do not open or damage the battery pack.
2. The battery pack should be replaced by a service dealer only.
3. The Battery Pack contains electrolytes. In case of an electrolyte leakage from the battery pack, the actions described below are required:
 - Skin contact: Wash the contact areas off immediately with plenty of water and soap.
 - Eye contact: Flush the eyes with plenty of clean water for at least 15 minutes immediately, without rubbing.
 - Get medical treatment.
4. Ensure that the battery pack is charged using the correct charger recommended by the manufacturer. Incorrect use may result in electric shock, overheating or leakage of corrosive liquid from the battery.

Product End of Use -

1. Robomow and its accessories should be collected separately at the end of their life to prevent waste electrical and electronic equipment from ending up in landfill sites, to promote the reuse, treatment and recovery of electrical and electronic equipment with the purpose to preserve, protect and improve the quality of the environment, protect human health and utilize natural resources prudently and rationally.
2. Do not dispose of Robomow or any other part of it (including the Power Box, Base Station and Perimeter Switch) as unsorted municipal waste – it should be collected separately.
3. Ask your local distributor/dealer about return and collection systems available.
4. Do not dispose of the battery pack in a fire and do not place used batteries in your household trash.
5. The battery must be collected, recycled, or disposed of in an environmentally sound manner.

1.4 Robomow Safety Features

1. Child Lock

The Child Lock prevents unintended operation of Robomow® by an accidental press of one of the buttons. Only pressing of two buttons in a certain order will initiate the operation.

2. Anti-Theft / Disabling Device

The Anti-Theft/Disabling Device system provides the user a disabling function that will prevent anyone from using or driving the Robomow® unless they have the valid code to enter. You will be prompted to enter a four digit code of your choice to use as your personal security code.

3. Lift Sensor

In the event the mower is raised from the ground during blade operation, the blade will stop rotating immediately.

4. Tilt Sensor

In case the mower is tilted up towards a vertical position, the blade will stop immediately.

5. Obstruction Sensor

Robomow detects when there is an obstacle in its way during operation. When the mower collides with an obstacle, the mower will stop the rotation of the blade immediately, will stop movement in that direction and reverse itself away from the obstacle.

6. Emergency Stop Button

Pressing the STOP button at any time during operation will stop the mower and the blade immediately.

7. Safety Switch

Switching off the Safety Switch will prevent any operation of Robomow®. It is required to switch it off before lifting Robomow® and before any maintenance is done.

8. Sealed Batteries

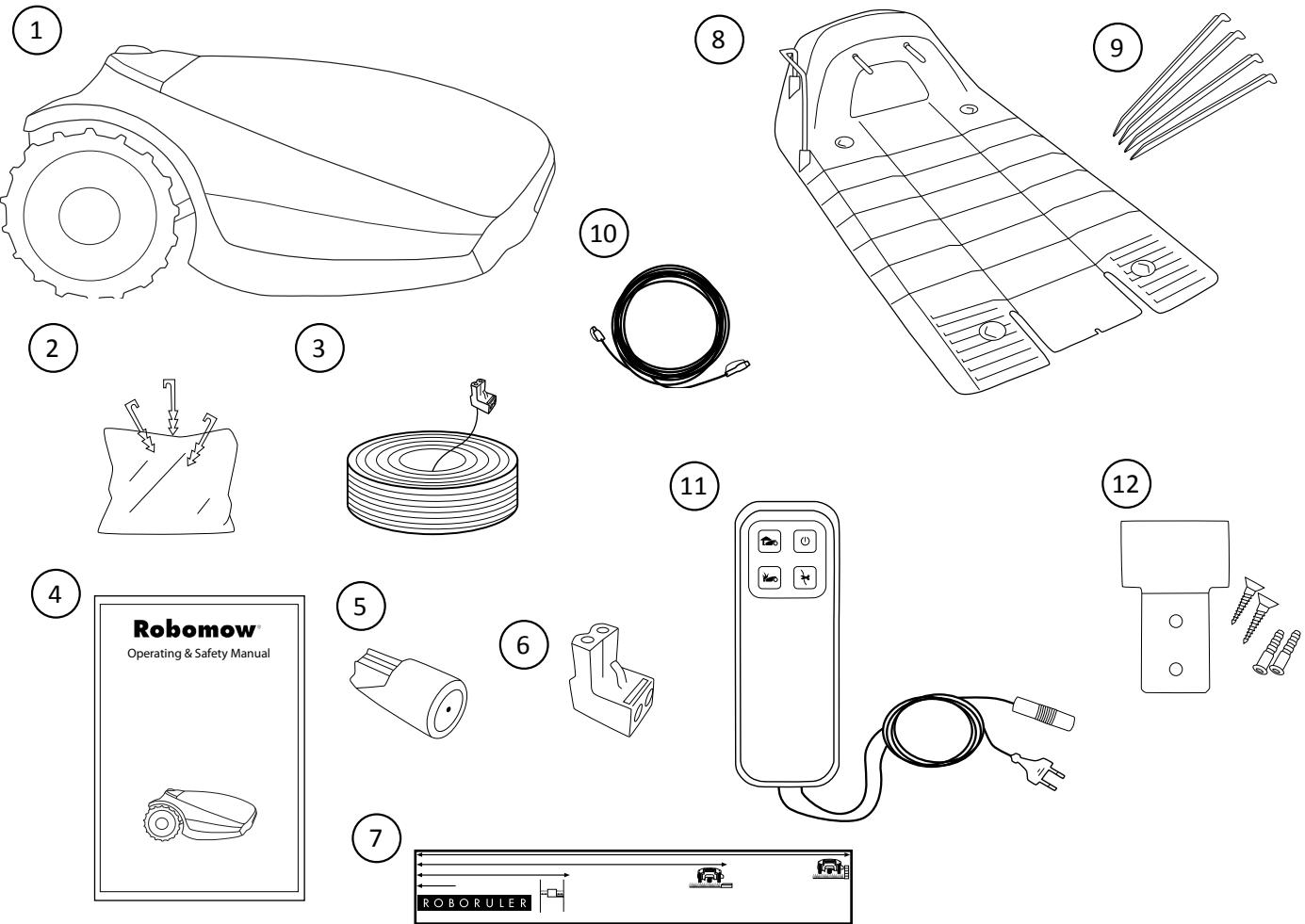
The batteries that operate Robomow® are completely sealed and will not leak any type of fluids, regardless of position.

9. Base Station / Perimeter Switch and Perimeter Wire

Robomow® cannot operate without a Perimeter Wire installed and activated through the Base Station / Perimeter Switch. In the event the Perimeter Switch is turned off or otherwise fails to function, Robomow® will stop operating.

2. Know Your Robomow®

2.1 What's in the Box

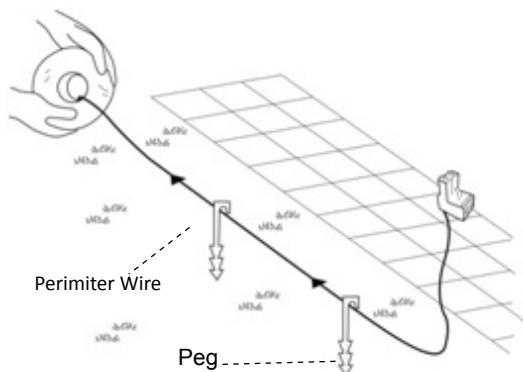


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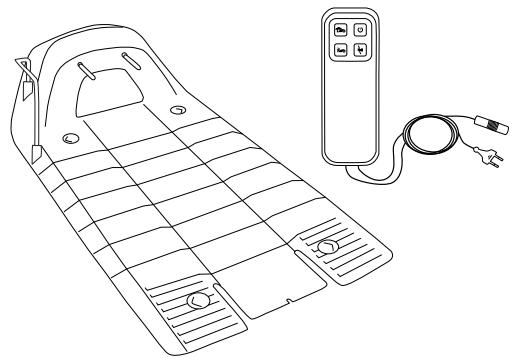
1	Robomow®	7	RoboRuler Used for setting the distance of the Perimeter Wire from the lawn edge.
2	Wire Pegs Used for securing the wire to the ground.	8	Base Station Used by Robomow to dock and charge when it is not mowing.
3	Perimeter Wire Used to create a virtual wall for your Robomow	9	Base Station Stakes Used for securing the Base Station to the ground
4	Operating & Safety Manual	10	Extension Cable 15 meters (50 ft.), (Low voltage cable)
5	Wire Connectors Used for splicing wires (as needed)	11	Power Box Used to deactivate (halt) the automatic operation mode and reactivate it as needed. Also provides indication of Robomow's status (Docking or Operating) and the Perimeter Wire's health.
6	Plot Connectors Used for connecting the Perimeter Wire to the Base Station	12	Power Box Mount Used for fixing the Power Box to a wall (including Screws and dowels).

2.2 How Robomow Works for You

- First, you need to install a perimeter wire around the entire lawn and around protected areas within the lawn area.
- The Perimeter Wire sets the boundaries for Robomow. The Perimeter Wire is laid around the edges of the lawn and around trees, plants, ponds and objects that you want to prevent Robomow to run into.
- If the supplied wire is not sufficient, more wire can be purchased and spliced with a supplied connector to the existing wire.
- Small pegs are used to fasten the Perimeter Wire into the ground, below grass level.
- The Perimeter Wire will gradually disappear under the growth of new grass until it will be invisible.



- The Base Station is placed along the Perimeter Wire. It performs two basic functions:
 - Generate a signal along the Perimeter Wire.
 - Charge Robomow's batteries.
- The Power Box is connected between the Base Station and a 230V / 120V wall socket, using a 15m (50 ft.) long low voltage cable.

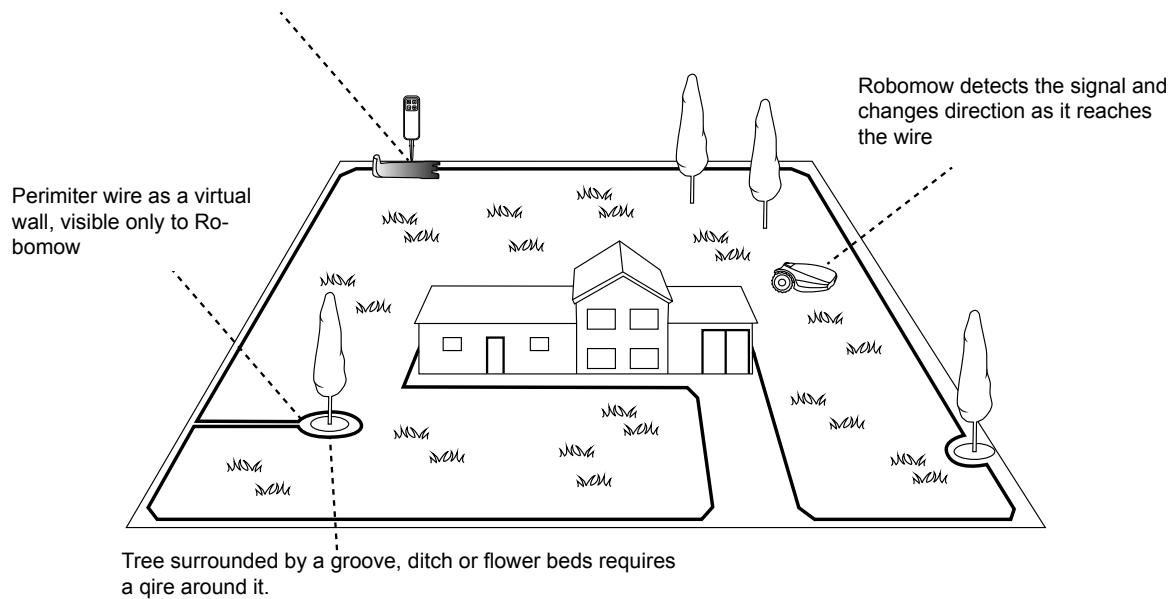


- After having completed the installation of the Perimeter Wire, Base Station, and the Power Box, and performing the One-Time Setup [**needs to be performed before operating Robomow for the first time** – detailed instructions are in the following chapters], Robomow will do all the mowing for you for during the entire season!
- Robomow is a robotic lawn mower that is powered by a maintenance-free battery. It leaves its Base Station at scheduled mowing times. Robomow mows the lawn and then drives back to the Base Station to be charged and ready for its next scheduled mowing.
- As soon as Robomow departs for mowing, the Base Station automatically triggers a special signal. This signal creates a virtual wall, visible only to Robomow. This signal keeps Robomow within the lawn boundaries, and prevents it from entering areas it was intended to skip or protect.

Base Station and Power Box:

- Generates signal along the wire.
- Charges Robomow's battery.

Large trees: Robomow is allowed to bump into them. at this size the objects do not require a Perimeter Wire around them

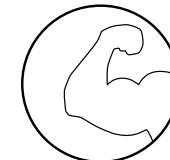
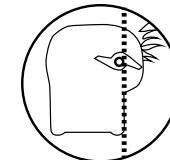


2.3 Operation Method

- Robomow is a robotic lawnmower designed to mow and maintain your lawn completely by itself.
- **Simple One-Time Setup** – Robomow requires a simple one time setup, which can easily be done by the consumer. Robomow recognizes the wire using special sensors, and makes sure it always stays inside the designated area. Essential accessories are supplied with the product.
- **Working Method –**
 - Robomow will automatically mow the lawn. It continuously alternates between mowing and charging.
 - It independently leaves the Base Station and cuts the lawn by moving around it in a random pattern, until the entire area looks evenly cut.
 - Edge Cutting – Unlike other robotic lawn mowers, Robomow is the only robotic mower that has a special Edge mode, in which it follows the perimeter wire for complete coverage of the lawn edges. Robomow is the only robotic mower to cut outside the wheels.
 - Strong Cutting System – Robomow's extra sharp blade enables to perform the first cut of the season, when the grass is relatively high.
 - TurboMow Mode – TurboMow feature allows faster and stronger mowing of a high grass during the first cut of the season (see P026 in Section 6.4.2 for more information).
 - SmartMow Mode – SmartMow feature allows more efficient mowing operation through smooth and continuous turns at lawn's edge (see P024 in Section 6.4.2 for more information).
 - Search the Base Station – Robomow starts to search for the Base Station when the battery capacity becomes low. It does not mow when it is searching for the Base Station.
 - Robomow will then recharge and proceed mowing as needed. It will continue in mowing until completing the required mowing time for your lawn (based on the area you have set).
 - When completing the mowing of the entire area (Mowing Cycle), Robomow will stay in the Base Station until the next Mowing Cycle will start.
 - Robomow completes two Mowing Cycles per week in order to keep your lawn healthy and good looking. However if your lawn requires more time to maintain your lawn, you can easily adjust the time Robomow runs in a single Mowing Cycle.
 - The Operating Panel on the top of Robomow is where you manage the mower and operating settings.
 - Availability - The mowing width of Robomow (28cm / 11") and the powerful cutting system help Robomow to finish the job very fast and leave your lawn free for the family to enjoy.
- **A Remote Control** is available as an accessory and is used for driving Robomow to a separated zone, if necessary. It is also used for mowing small patches of grass that cannot be reached in automatic operation.
- **Grasscycling** – Robomow cuts the grass into very small clippings that are buried in the roots of the lawn, where they decompose and act like a natural fertilizer. Grass clippings contain 80-85% water and release valuable nutrients that return back into the soil. It is the natural recycling of grass.
- **Robomow App** – a mobile application (available for Android and iOS), which enables user friendly and intuitive operation of your Robomow, and opens additional menu options and features.

For compatibility information of Robomow App please visit Robomow webpage.

To download the Robomow App, use your mobile device to scan the QR code on the left, or simply search for it in the App Store or Google Play Store.



3. Planning Ahead

Getting your lawn ready for Robomow is rather simple.

Still, as every lawn is unique, we recommend reading this chapter before starting to install the perimeter wire. Planning the wire route and drawing a sketch of the lawn, including all obstacles and Base Station location, will make it easier and will prevent mistakes during the setup.



Watch Robomow setup & operation video.
Also available on Robomow website.

 Please complete reading this “Planning Ahead” chapter before you start the setup. It will guide you in finding the best locations for the Base Station, Power Box, and for the Perimeter Wire.

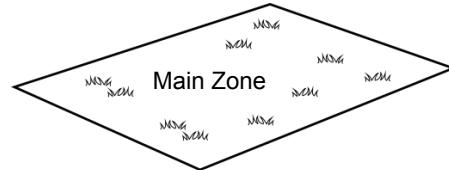
The Perimeter Wire functions as an “invisible wall” for Robomow. It sets the boundaries of lawn zones and it surrounds specific areas where you do not want Robomow to enter. The Perimeter Wire is held to the ground with small pegs, supplied with Robomow. Soon after settling, the wire will become invisible under the growth of new grass.

As soon as Robomow starts operating, it turns on a signal that runs along the Perimeter Wire. This signal keeps Robomow within its working zones and away from preset demarcated areas.

3.1 Lawn Types: What does your lawn look like?

There are 3 basic types of lawns: Some lawns are combinations of more than one type.

Your first task is to determine which type is yours.

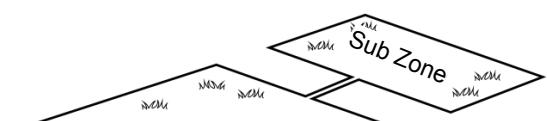


- **Main Zone Only**

Robomow will simply mow this lawn within its set boundaries.

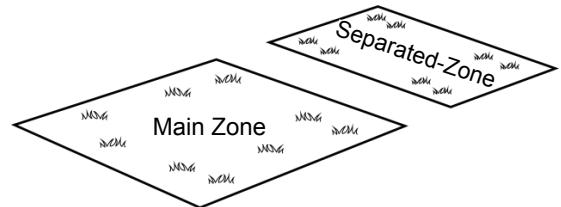
- **Main Zone + Sub-Zone(s)**

Robomow will mow the Main Zone and will move automatically to the Sub-Zone(s).



- **Separated Zone**

Robomow will mow each zone separately. Its movement between zones is restricted. Thus, you will have to bring the mower from the Main Zone to the Separated Zone every time you want to mow it.

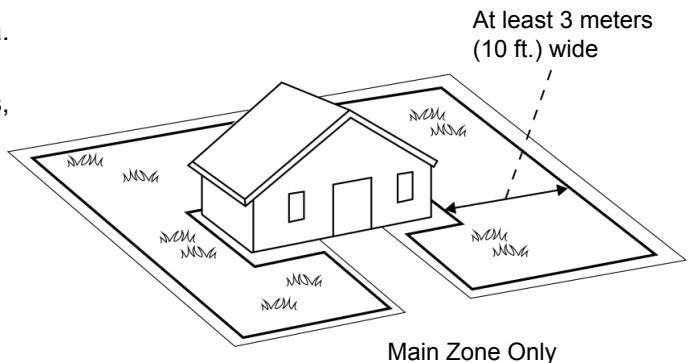


3.1.1 “Main Zone Only” Type Lawn

The “Main Zone Only” lawn consists of one whole area. It has no Sub-Zones and no Separated Zones.

If you answer “yes” to all of the following questions, your lawn is a “Main Zone Only” type lawn:

- Is your grass area one continuous zone?
And:
 - Are all areas of your lawn wide enough for Robomow to navigate through effectively? (Min. 3 meters (10 ft.) wide at its narrowest point).



Main Zone Only

►► If your lawn does not match this description, read the next Sections to find the style of your lawn.

►► If your lawn is “Main Zone Only”, you can skip to Section 3.3 of this chapter to determine the Base Station location.

3.1.2 “Main Zone + Sub-Zone(s)” Type Lawn

This type of lawn consists of more than one zone and these zones are connected by a narrow pass.

In this type of lawn, Robomow will be able to drive from one zone to the other in order to mow the whole area.

If you answer “yes” to all of the following questions, your lawn is a “Main Zone + Sub-Zone” type lawn:

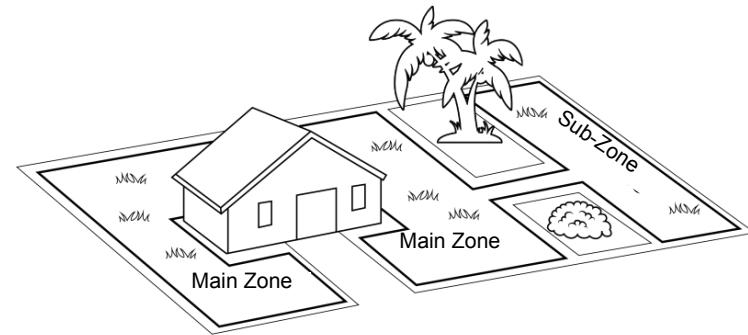
- Is your grass area one continuous area?
- Are parts of your lawn separated from the Main Zone?
- Is there a Narrow Pass of at least 1m (3.3 ft.) for Robomow to drive through between these zones?
- Is this Narrow Pass firm, level and smooth (not stony, sandy or elevated)? For example: grass area, sidewalk, firm path, solid ground.

Such additional areas are called Sub-Zones.

If your lawn contains a Sub-Zone as defined in this section, refer to Section 6.4.2 (Add Sub-Zone – number p022 in the table).

Defining Sub-Zone(s) will enable Robomow to drive through the Narrow Pass in order to get to a Sub-Zone and to mow both the Main Zone and its Sub-Zone(s) one zone at a time.

If your lawn does not match this description, skip to the next Section 3.1.3 of this chapter: “Separated Zones”



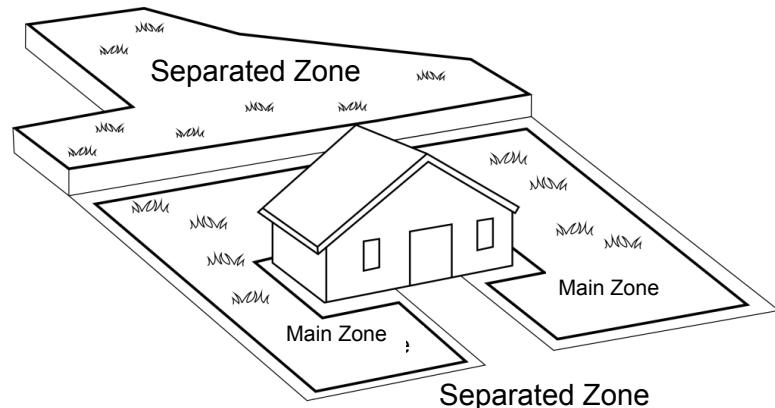
Main + Sub-Zone with a Narrow Pass

3.1.3 “Separated Zones” Type Lawn

“Separated Zones” type lawn consists of two or more zones that are not connected. Robomow cannot drive between these zones.

If you answer “yes” to at least one of the following questions, your lawn is of the “Separated Zones” type.

- Are parts of your lawn separated by fences, sidewalks, or other objects that Robomow cannot pass?
Or
- Are parts of your lawn separated by a gravel path or similar material that may damage the mower blade?
Or
- Are the zones of your lawns joined by a pass too narrow for Robomow to drive through: less than 1m (3.3 ft.) in width?
Or
- Are the zones of your lawn situated at lower or higher level?



Separated Zone

If your lawn contains a Separated Zone as defined in this section, refer to Section 6.4.2 (Add Separated Zone - number p014 in the table).

► If your lawn does not fit any of these descriptions, it is probably either a “Main Zone Only” or “Main Zone +Sub- Zone” type. Skip to Section 3.3 – Select Base Station and Power Box Location.

- A lawn may consist of up to 2 Separated Zones.
- The mower must be carried or driven to this area manually.
- Any of the 3 types can be a combination of more than one type of lawn.

Types of Separated Zone setups:

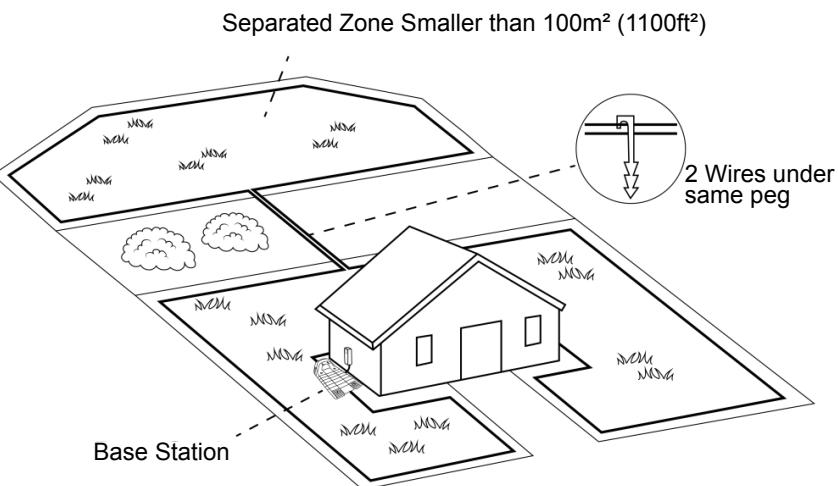
A Separated Zone smaller than 100 m² (1100 ft²)

- Separated area that is smaller than 100m² (1100 ft²) can be covered in a single operation, thus, if possible, the separated area may be connected to the main area's Perimeter Wire (have the signal come from the Main Base Station).

Or

- It may need its own separate Perimeter Wire.

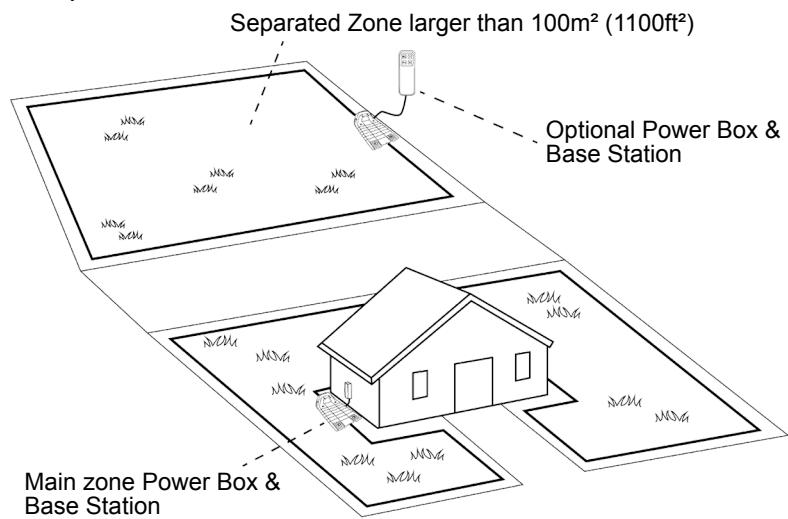
In that case, it will have to be connected to a Perimeter Switch (optional accessory – see Chapter 12 – Accessories).



Or:

A Separated Zone larger than 100 m² (1100 ft²)

- If a separated area is larger than 100m² (1100 ft²), then it requires more than a single operation to cover the area;
- In such cases, an additional Base Station (optional accessory) should be installed in the Separated Zone; otherwise you will have to manually bring the mower several times to the Separated Zone in order to complete the mowing of the area.

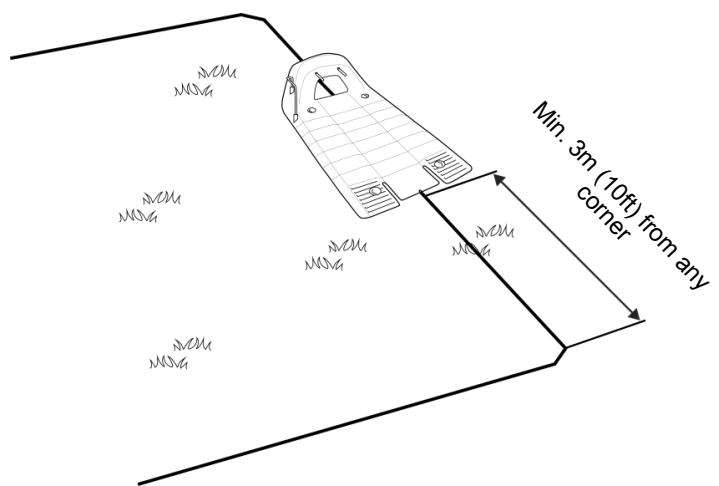


3.2 Select Base Station Location

3.2.1 Base Station Location Guidelines

- Do not place the Base Station within 3 meters (10 ft.) after a corner (relevant for Internal Setup only – section 3.2.2)

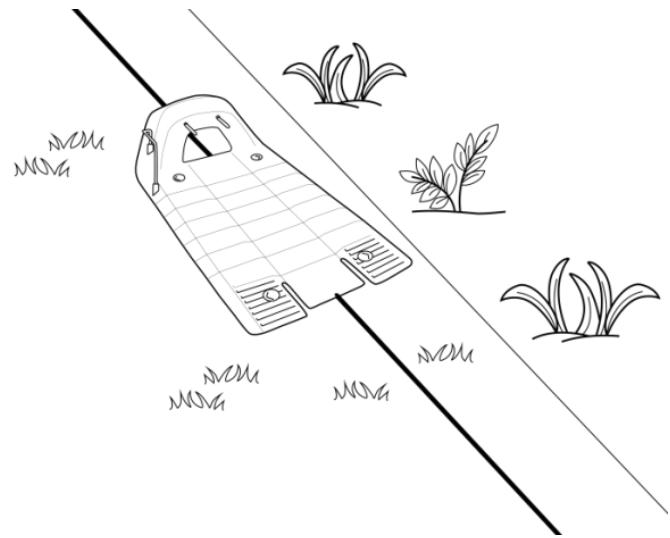
- The Base Station should be within 15m (50 ft.) of a power outlet (230V / 120V).
- If the lawn has more than one zone, place the Base Station within the largest zone.
- Make the Base Station invisible to the street to avoid theft.
- Select a shady spot. This will extend battery lifetime.
- Place the Base Station on a relatively level ground. Do not place it on a slope.
- Place the Base Station away from sprinkler heads.



There are two options to set the Base Station:

3.2.2 Internal Setup (on the lawn perimeter)

- Choose a place along the Perimeter Wire where you want to place the Base Station, based on the inputs given in paragraph 3.2.1.
- Place the Base Station in the direction shown in the figure to the right.



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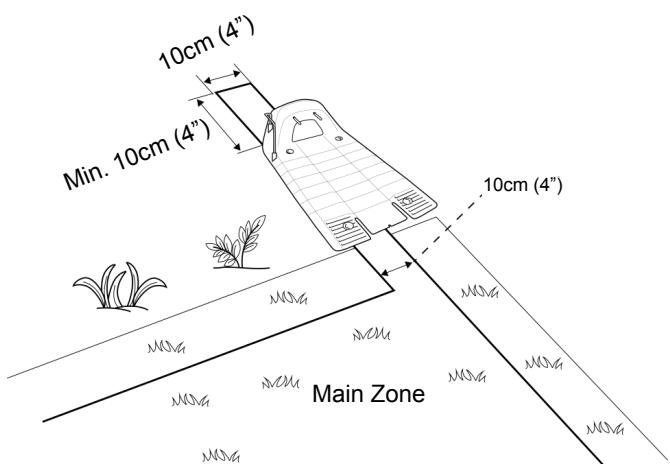
3.2.3 External Setup (off the lawn perimeter):

There are two types of External Setup:

A. At a corner

In this type of setup, the Base Station is located at **one of the corners** of the lawn, as shown in the figure at the right.

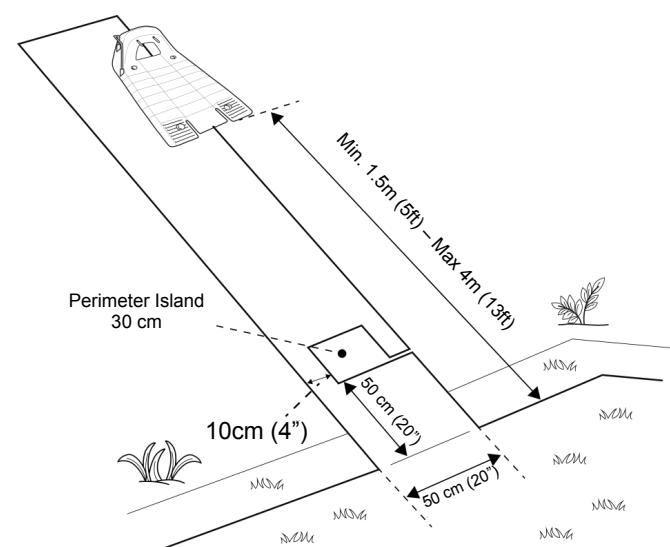
- Choose a **corner** where you want to place the Base Station outside of the lawn area.
- Place the Base Station, where its front side is touching the lawn edge or placed somewhat on the lawn.
- Continue to lay the perimeter wire as shown in the figure to the right, where it continues at least 10cm (4") beyond the Base Station and turns back towards the lawn at a distance of 10cm (4") from the other wire.
- The Base Station may be placed in a small shift to the right in order to allow smooth entry of the mower to the Base Station.
- You will have the opportunity to later adjust the Base Station position to confirm smooth entry.



B. Outside the lawn

(Can be set only through the Robomow App for specific models)

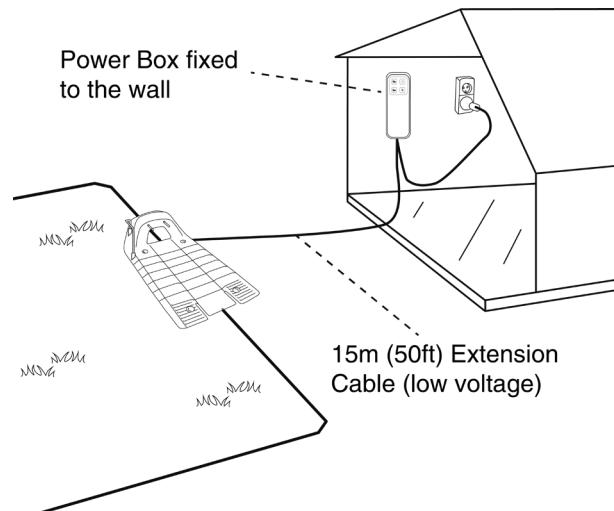
- Choose a place outside the lawn where you want Robomow to dock and charge.
- Confirm the path between the lawn and the outside area is smooth with no height difference, so Robomow will not get stuck and will follow the wire smoothly.
- The surface between the lawn and the Base Station should be hard (such as a sidewalk or rigid ground) and not sandy or stony, so Robomow will not slip or get stuck on it.
- The area between the lawn and the Base Station should be clear of obstacles and objects.
- Lay the wire as shown in the figure to the right:
 - Narrow path of 50cm (20") width.
 - Square Perimeter Island of 30cm (12") edges.
 - Island starts 50cm from the Perimeter Wire.
 - Keep a distance of 10cm (4") between Perimeter Wire and the Island from both sides.
 - The front of the Base Station should be placed a minimum distance of 1.5m (5 ft.) from the Perimeter Wire and NOT more than 4m (13 ft.).



3.3 Select Power Box Location

Consider the following in order to select the Power Box location:

- The Power Box will be connected to the Base Station using the 15m (50ft.) Extension Cable.
- Select a suitable location for the Power Box to be mounted on a wall near a power outlet.
- Locate it outside the lawn perimeter.
- Select an easily accessed spot.
- Select a dry and sheltered location.
- The Power Box is to be mounted vertically.

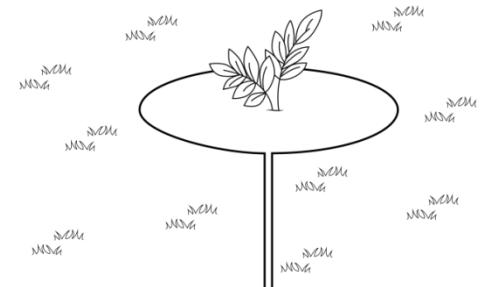


The Power Box is suitable for Outdoor use. Yet, it should be placed in a sheltered, dry and well ventilated spot. The Power Box should not be exposed to direct sunlight or rain.

3.4 Planning the Perimeter Wire Layout

3.4.1 Objects inside lawn

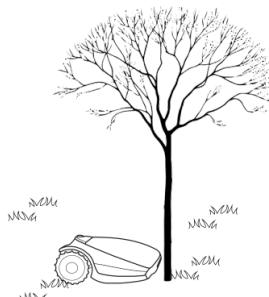
- Objects such as flower beds, ponds, or small trees can be protected by creating “**Perimeter Islands**”, which are demarcated areas of the lawn, where Robomow does not enter.
- In the areas where obstacles are grouped closely together, they should be demarcated by a single, continuous Perimeter Island.
- Obstacles that are vertical, relatively rigid, and higher than 15 cm (6 inches), such as trees, phone or power poles, do not need Perimeter Island. Robomow will turn when it collides with these obstacles.



3.4.2 Slopes

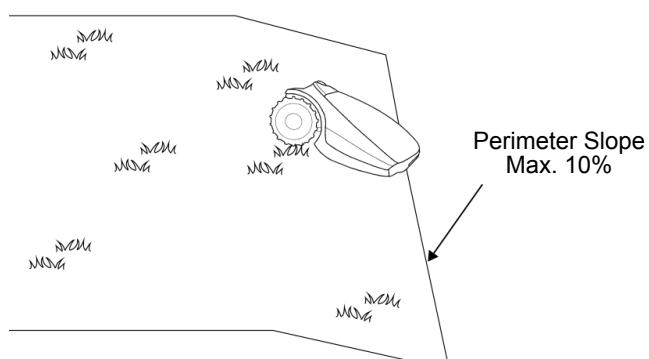
Slope on the perimeter

- The Perimeter Wire can be laid across a slope that slants less than 10% (10cm rise per 1m).



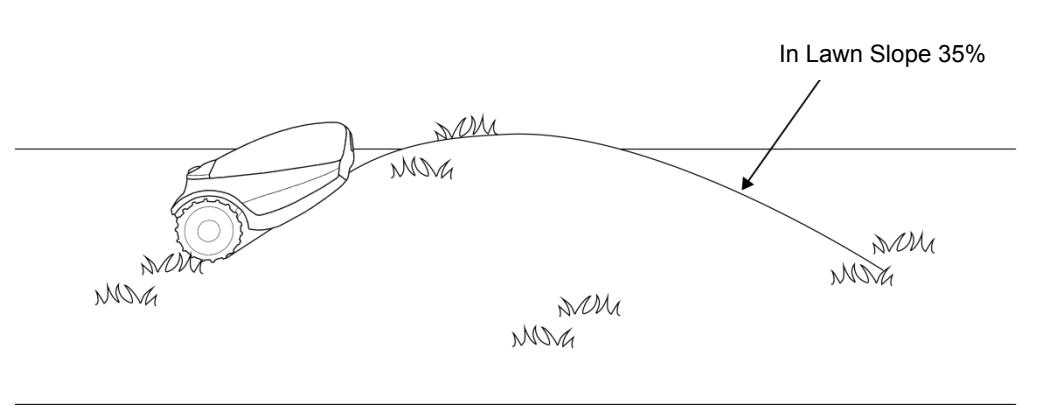
CAUTION! If the Perimeter Wire is laid across a slope steeper than 10%, there is a risk that the mower will slip and cross outside the wire, especially when the grass is wet’.

However, if there is a barrier (e.g. fence or wall) that can protect the mower from slipping off, the Perimeter Wire can be set on that slope.



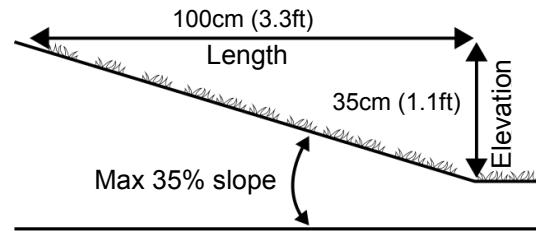
Slope inside the lawn

- Robomow can mow areas inside the working area with a slope of up to 35% (35cm rise per 1m).
- Tip: If the mower tilts off the ground while climbing a slope, it is too steep. Exclude this steep area from Robomow's cutting area.



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How to calculate the slope of your lawn?

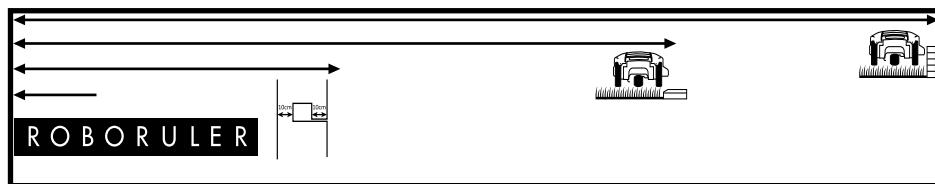


How to calculate the slope of your lawn?

$$\frac{35\text{cm (Elevation)}}{100\text{cm (Length)}} = 35\% \text{ (slope)}$$

3.4.3 Distances from the Edge (Pools, Ponds, Cliffs, etc.)

- RoboRuler is used to measure the distance from the edge, where the wire is to be placed.



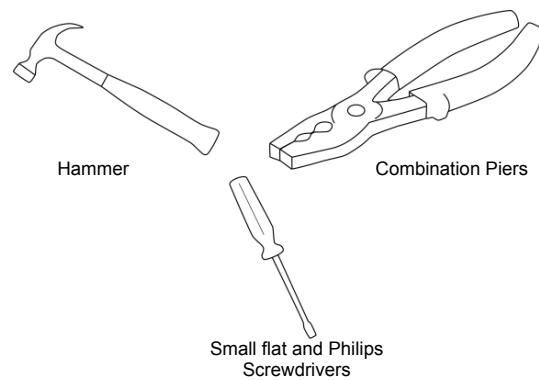
- In certain cases, near bodies of water such as pools and ponds, or great height differences such as cliffs, it is required to maintain a greater distance from the Edge (see Section 4.2.2).

4. Initial Setup

4.1 Preparations

Recommendations before you start:

During setup, you will insert pegs into the ground. To complete this task smoothly, we recommend not to do it while the grass is high and to water it before starting.



4.1.1 Getting Ready

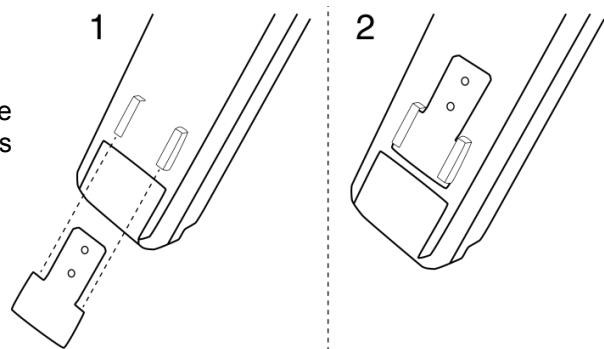
Make sure all parts needed for setup are within reach. Have the Robomow box nearby, so all items are available.

In addition, you will need the following tools: A hammer, small flat screwdriver, Phillips screwdriver, Combination Pliers.

4.1.2 Installing the Power Box

Mount the metal bracket onto a vertical surface with the provided screws. Make sure the narrow part with the holes facing up as shown in the figure to the right.

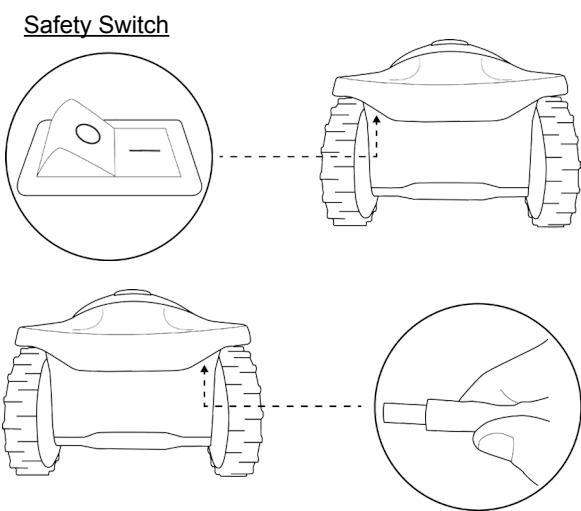
- Place the Power Box above the metal bracket and slide it into place along the vertical surface.
- Connect the Power Box to a regular power outlet (230V / 120V).



4.1.3 Charging the battery before the first operation

You can charge the Robomow battery while running the setup of the Perimeter Wire. This will ensure that Robomow will be ready for operation when the setup is completed.

- The power of the mower is switched off when shipped from the factory. Switch on the Safety Switch to power on the mower.
- Connect the DC Cable coming from the Power Box to the Charging Socket at the rear side of Robomow.
- Confirm the Battery LED on Robomow is blinking, which is an indication of charging.
- Leave Robomow connected to the Power Box while completing the setup of the Perimeter Wire.



4.2 Perimeter Wire Setup

Before you start the setup, you should have a plan for the Perimeter Wire layout and for the location of the Base Station. Your plan should consider the following:

- What type of lawn areas does your lawn have?
(Main Zone Only / Main + Sub-Zones / Separated Zones / combination of types).
- Are there protected or excluded areas on the lawn? (Perimeter Islands).
- Are there any slopes that Robomow should avoid?
- Are there edges of pools, ponds, cliffs etc., which need an extra distance from the Perimeter Wire?

4.2.1 Starting Point: Perimeter Wire at the Base Station area.

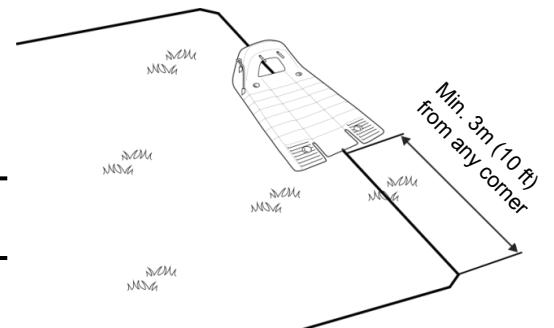
- Place the Base Station, according to your plan, as shown in the figure to the right.

- Do not place the Base Station within 3m (10 ft.) of a corner**

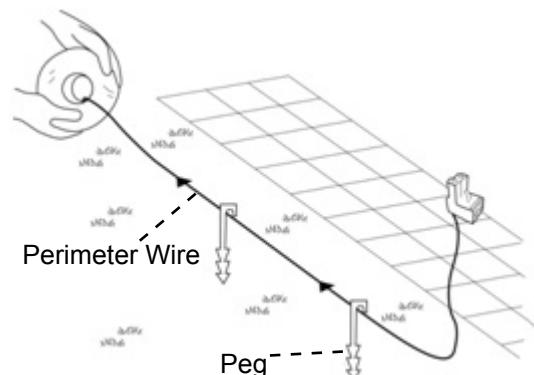
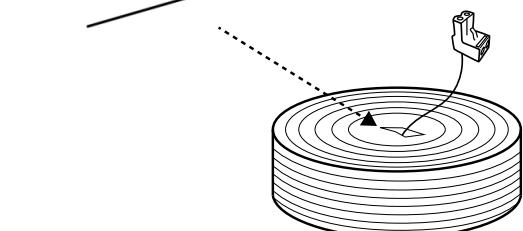
- Select the roll of wire with a green plot connector attached to the end.
- Pull the plot connector and some wire out of the plastic covering.

! Do not remove the spool of wire from its covering. The plastic covering is the dispenser for the wire.

- Peg the beginning of the wire to the ground, where the Base Station will be located. Pegs are supplied in the Robomow's box.
- Pull out 30 cm (12 inches) of wire and leave it loose near the Base Station location. Later, at the end of the setup, this part of the wire will close the Perimeter Wire loop.
- Start laying the wire in an anticlockwise direction.
- Continue to pull the Perimeter Wire out of its covering, laying it loosely as you walk along the lawn edge.



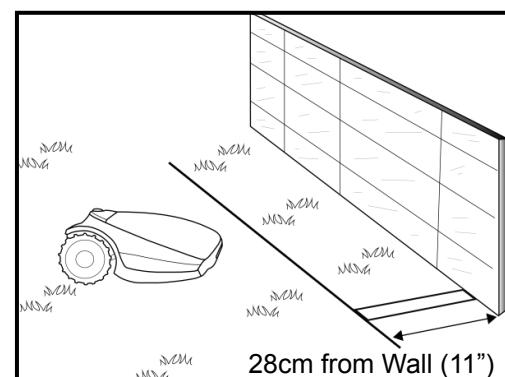
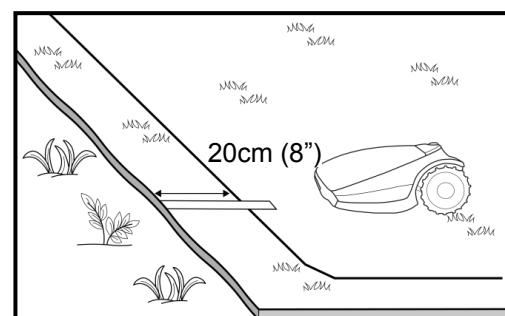
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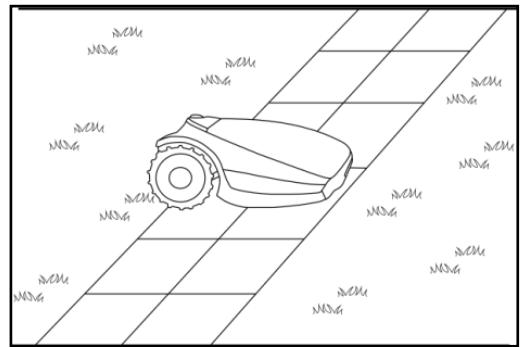
! If you get to any area /object that needs care or special boundaries, make sure you carefully lay the Perimeter Wire as needed. The next sections deal with such special cases.

4.2.2 Laying the Perimeter Wire

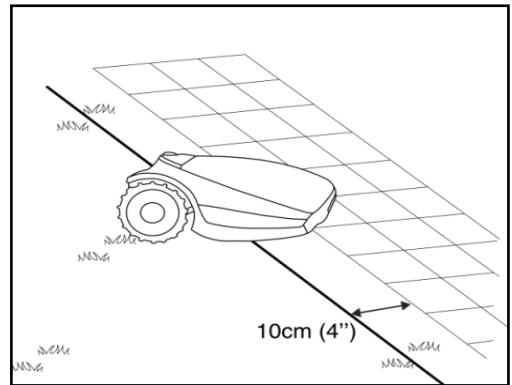
- The Perimeter Wire is secured to the ground by pegs supplied with Robomow. Initially insert pegs every few meters and at corners. At this early stage set a minimum number of pegs. Later, after testing the wire setup, you will insert all necessary pegs.
- After uncoiling some wire, before inserting pegs, use the RoboRuler to determine the distance of the wire from the lawn edge or obstacles.
 - If the working area borders with a flat area, a flower bed, a small cliff (not more than 1 cm / 0.4"), or a small stair (up to 5 cm / 2"), the Perimeter Wire should be laid 20 cm (8 inches) inside the working area. This prevents the wheels from driving into a ditch. Use the shorter distance of the RoboRuler to set the distance of the wire from the lawn edge.
 - If the edge is sloped (max 10% is allowed) or is bordered with high obstacles such as a wall or fence, the Perimeter Wire should be laid at a distance of 28 cm (11 inches) from the obstacle. Use the longer distance of the RoboRuler to set the distance of the wire from a wall.



- If the working area borders against a flat path that lies level with the lawn, it is possible to allow Robomow to run over the path. The Perimeter Wire should then be laid 10 cm (4 inches) from the edge of the path.



- When the working area is divided by a flat path that is level with the lawn, it is possible to allow Robomow to run over the path. The Perimeter Wire can be laid under the pavement blocks or in the joint between them.



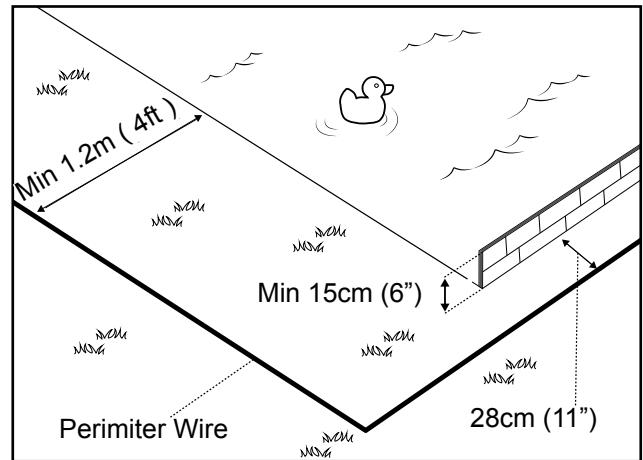
Important! The mower must never run over gravel, mulch, or similar material, which can cause the mower to slip and damage the blade.

IMPORTANT INFORMATION

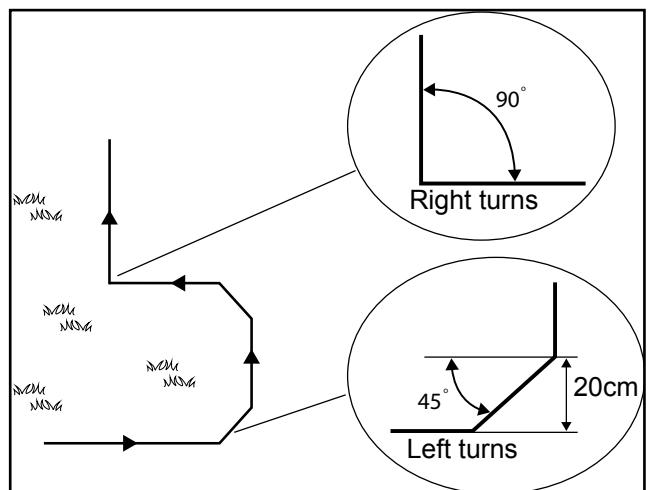
If the working area is adjacent to a swimming pool, watercourse, slope greater than 10%, precipice higher than 50cm (20 inches) or a public road, the Perimeter Wire must be supplemented with a fence or the like. The height must then be at least 15cm (6 inches). This will prevent the mower from ending up outside the working area under any circumstances.

If such a barrier exists, you may set the Perimeter Wire 28cm (11 inches) from the barrier.

If there is no fence or the like, then lay the Perimeter Wire at minimum distance of 1.2m from the water.



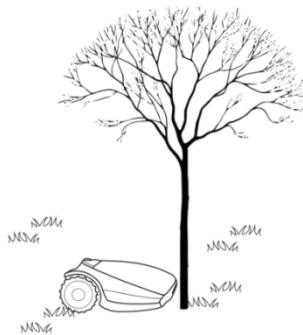
- Maintain a 45° angle in all left-turn corners when laying the wire along the perimeter. It is not necessary to maintain 45° angle on right-turn corners along the perimeter.
- Continue laying the wire, according to your plan. Gradually pull the wire out of its dispenser and lay it loosely as you are moving in an anticlockwise direction.



4.3 Perimeter Wire within the Working Area

4.3.1 Hard Obstacles

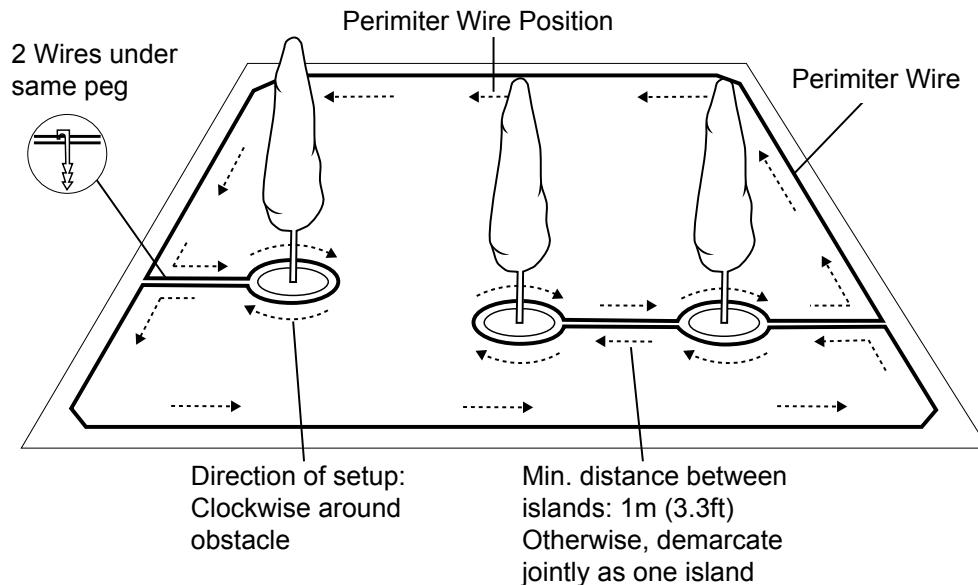
- Obstacles that can withstand a collision, for example, trees or bushes higher than 15 cm (6"), do not need to be demarcated by the Perimeter Wire. Robomow will turn when it collides with this type of obstacle.



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4.3.2 Perimeter Islands

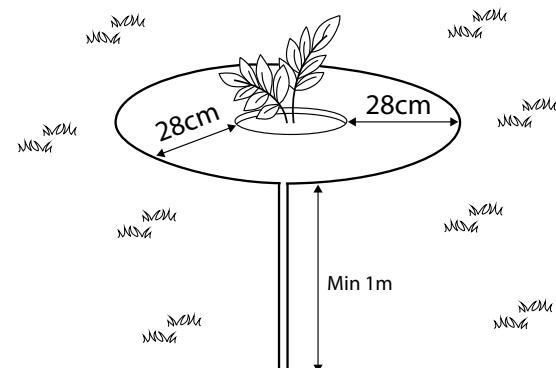
- Use the Perimeter Wire to demarcate areas inside the working area by creating islands around obstacles that cannot withstand a collision, for example, flower beds and fountains.
- Continue uncoiling the wire, moving from the edge towards the protected object.
- Peg the Perimeter Wire around the protected object in a clockwise direction.
- Complete bordering the island and return to the spot where you left the lawn's edge
- The wires leading to the Island and from it should be parallel and touching. Therefore, peg both wires, to and from the island, together **with the same pegs**.
- Robomow will not recognize these two wires. It will mow over them as if they do not exist.
- Robomow will recognize the single blocking wire around the Perimeter Island and will not enter this area.



CAUTION ! Setting the Perimeter Wire anticlockwise around the obstacle will cause the mower to drive into the island.

Keep the following distances when setting Perimeter Islands:

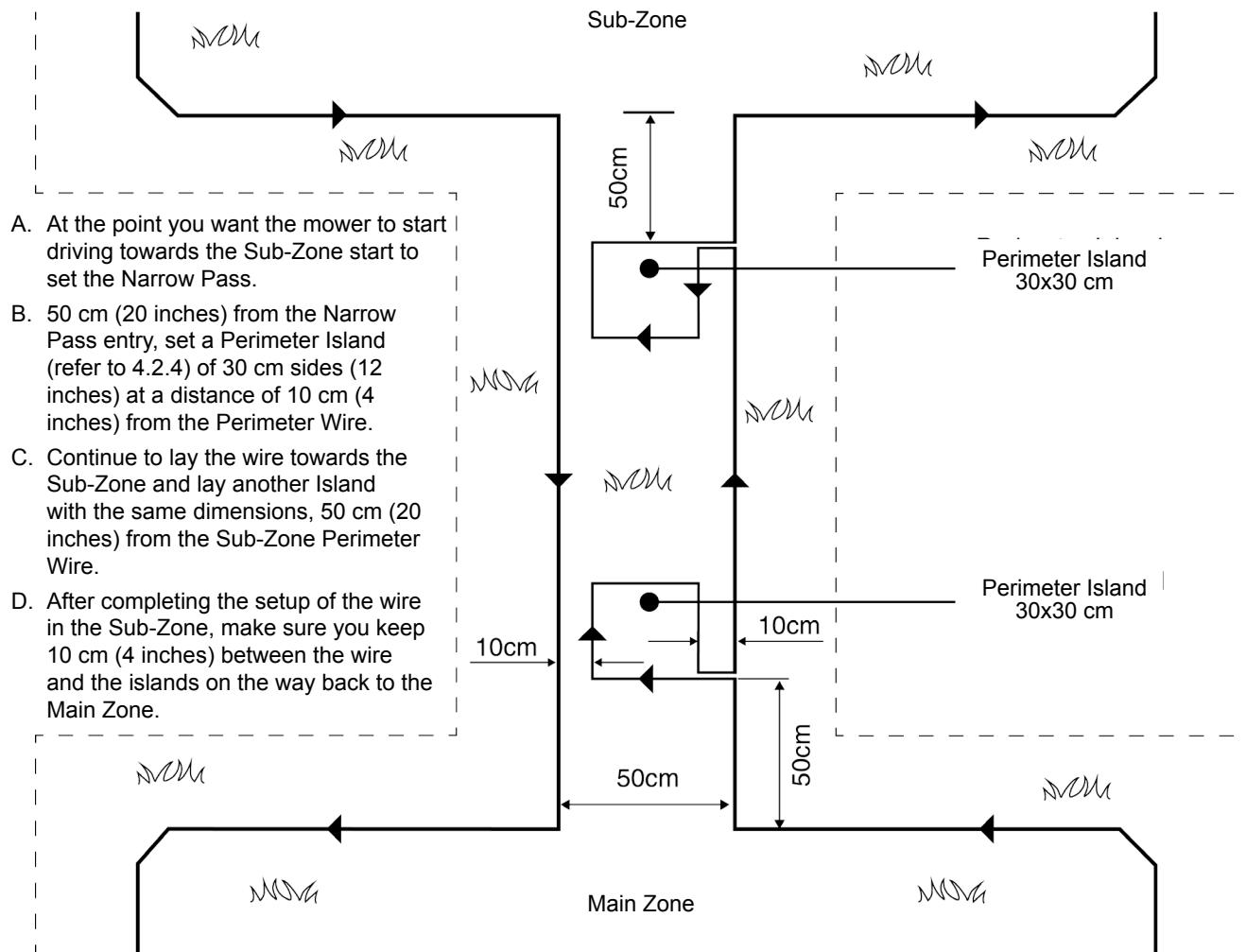
- The minimum distance of the Perimeter Wire from the protected area should be 28 cm (11 inches).
- If you need to protect a thin object, set the minimum radius of the Island to 35 cm (15 inches).
- Maintain a minimum of 1m (3.3 ft.) between adjacent islands.
- Maintain a minimum of 1m (3.3 ft.) between island wire and the Perimeter Wire.
- If protected objects are grouped closely together, demarcate them as a single Perimeter Island.



4.3.3 Setting a Narrow Pass

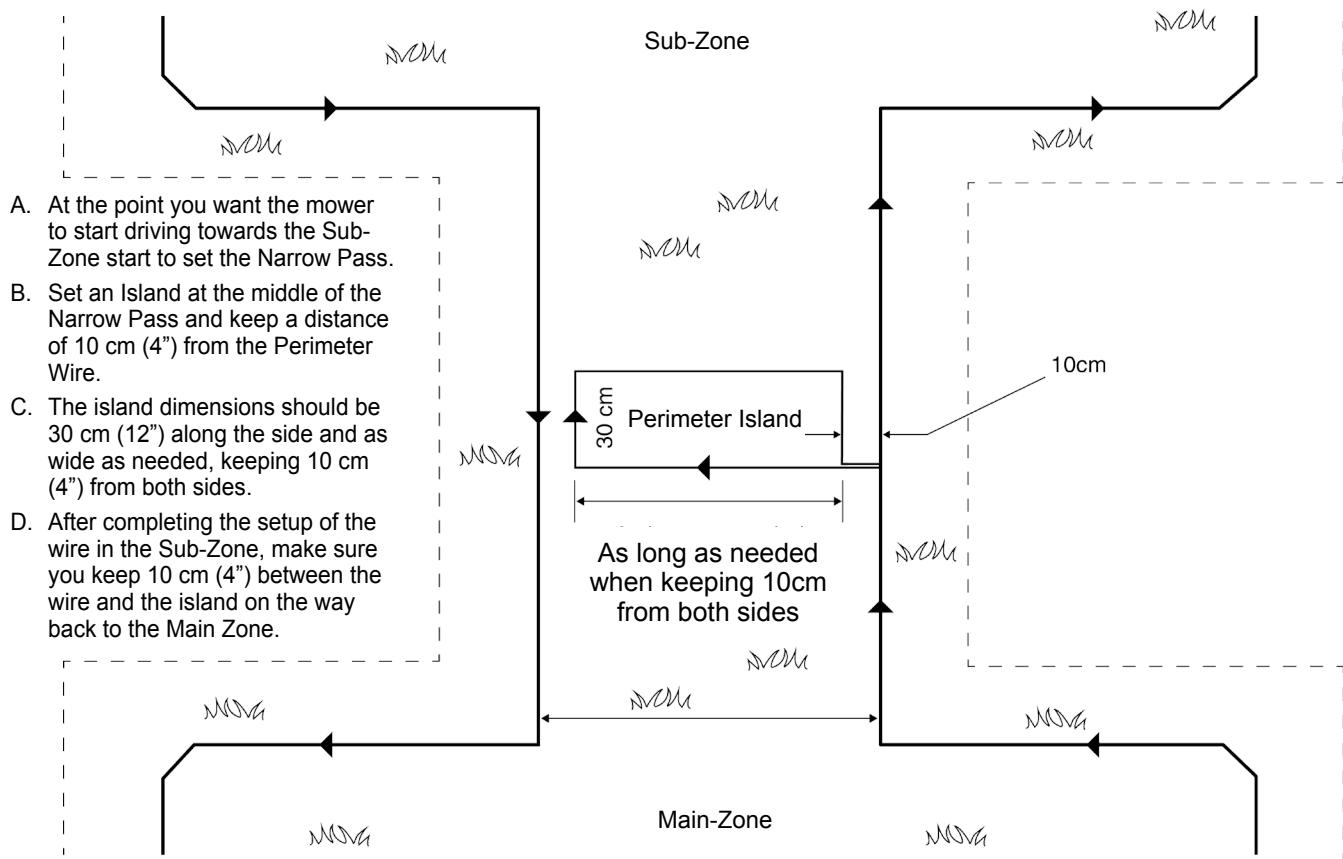
A Narrow Pass is defined as a path that connects two zones of the lawn. The path enables Robomow to drive between the zones while following the wire, but prevents the mower from crossing between them while mowing the inner area of the zones.

To set up a Narrow Pass follows the instructions given in the figure below:



The above setup allows Robomow to drive along the wire to reach the Sub-Zone. However, while mowing each zone individually, it will not cross over to the other zone.

If the Narrow Pass is wider than 2m (6.5ft.), and you want Robomow to mow the area inside the Narrow Pass, then you can set the wire as shown in the figure below. Such a setup allows the mower to mow inside the Narrow Pass while mowing the inner part of the lawn, but prevents it from crossing between the zones.



4.4 Fastening Perimeter Wire to the Ground

- Before starting to lay the Perimeter Wire, it is recommended to cut the grass where the wire is to be laid. It will then be easier to attach the wire to the ground. The risk that the mower will damage the wire during the operation is reduced.
- It is not necessary to bury the Perimeter Wire, though you may do so, up to 5 cm (2 inches) deep.
- Pull the wire tight while hammering the peg all the way into the ground.

WARNING !

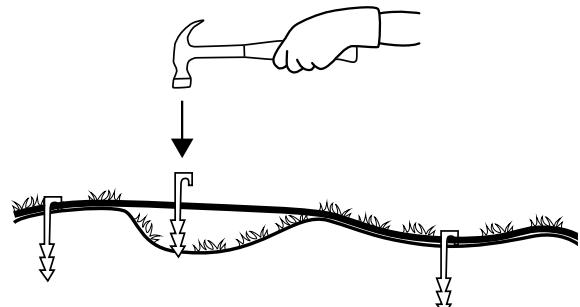


Protect your eyes! Protect your hands!

Use proper eye protection and wear appropriate work gloves when hammering the pegs.

Hard or dry ground may cause pegs to break when driving them in.

- Use a hammer to insert the pegs into the ground.
- Insert the pegs at distances that will keep the wire down below the grass level and prevent the wire from becoming a tripping hazard (approximately 75 cm / 30" between pegs).
 - The wire and the pegs will gradually become invisible under the growth of new grass.
- If an additional wire is required in order to complete the setup, connect it using the water-proof wire connectors supplied with Robomow. (See Section 11.4 – Splicing the Perimeter Wire).

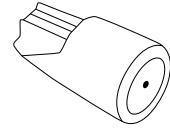


Use only the wire connectors supplied with Robomow.



Neither Twisted cables, **nor** a screw terminal insulated with insulation tape are a satisfactory splice.

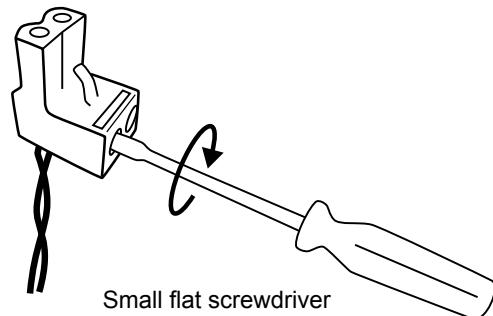
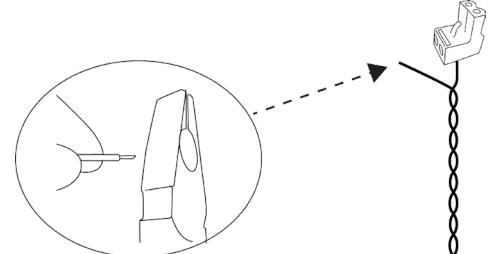
Soil moisture will cause the conductors to oxidize, which will later cause a broken circuit.



4.5 Back at the Base Station – Completing the Perimeter Wire Setup

Once the Perimeter Wire loop is completed and pegged to the ground, complete the setup by attaching the beginning and the end of the Perimeter Wire to the Base Station Head.

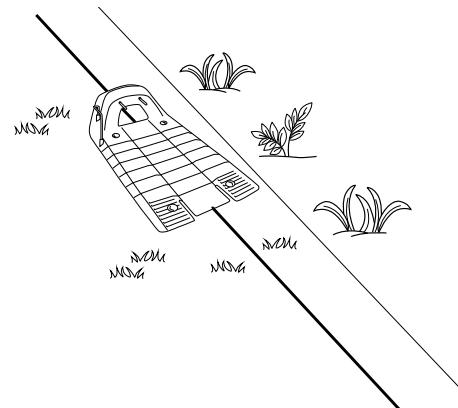
- Peg the two Perimeter Wires down to the ground using the same peg leaving enough loose wire.
- Trim the end without the connector to make both of equal length and twist the two wires.
- Strip back 5 mm (1/4 inches) of insulation from the wire end.
- Insert the end of the wire without the connector into the hole of the connector. Use a small flat screwdriver to tighten and secure this wire into the connector.



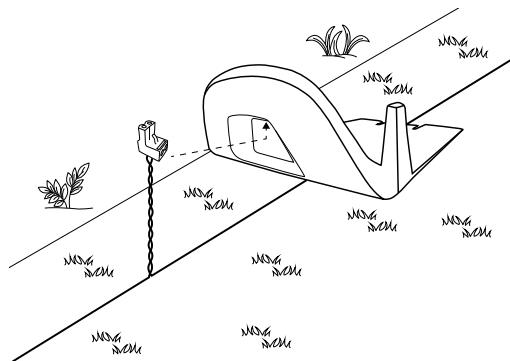
Small flat screwdriver

4.6 Placement and connection of the Base Station

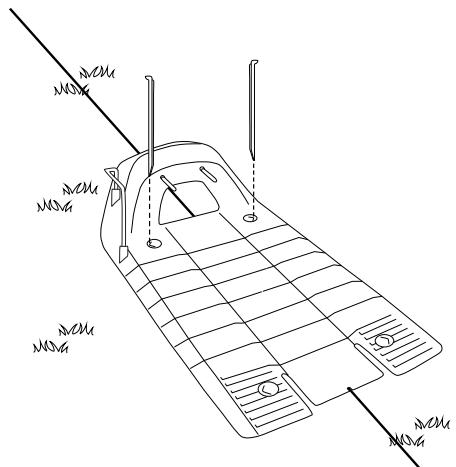
- Place the Base Station on the Perimeter Wire as shown in the figure to the right.
- Align the center of the Base Station on the wire.



- Attach the Perimeter Wire connector to the Base Station Head.



- After the Base Station has been positioned, insert 2 stakes into the Base Station holes as shown in the figure to the right. Only after the Base Station position has been tested during the One-Time Setup process (see Section 5.2), you will be able to insert the remaining two stakes.



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4.7 Connecting the Power Box

In order to find a proper location for the Power Box, please refer to Section 3.3.

For the Power Box installation instructions please refer to Section 4.1.2.

Laying and Fastening Extension Cable

Safety – Avoid injury!



The Extension Cable from the Power Box to the Base Station should be securely fastened to the ground! It should never present a tripping hazard.

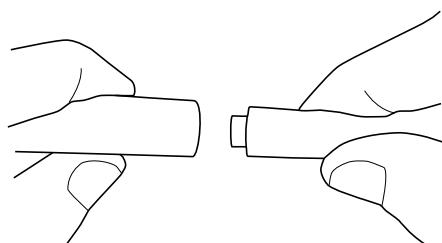
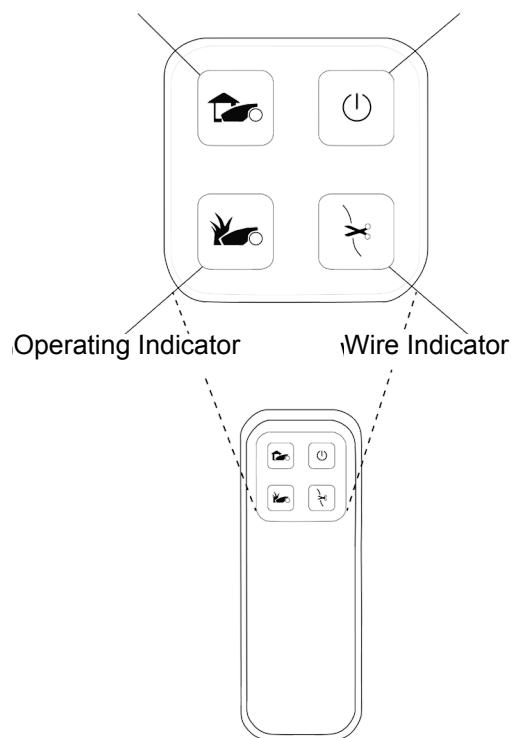
The Extension Cable should cross ONLY over soft surfaces. It should not cross over hard surfaces (e.g. Sidewalk, driveway) where it cannot be securely fastened.



4.7.1 At the Power Box Location:

- Connect the DC Cable from the Power Box to the 15 m (50 ft.) Extension Cable.
- Connect the Power Box to a regular power outlet (230V / 120V).
- The Docking Indicator (1) will light up if the mower is in the Base Station.
- The Operating Indicator (3) will light up if the mower is not in the Base Station.

Docking Indicator Program On/Off Button

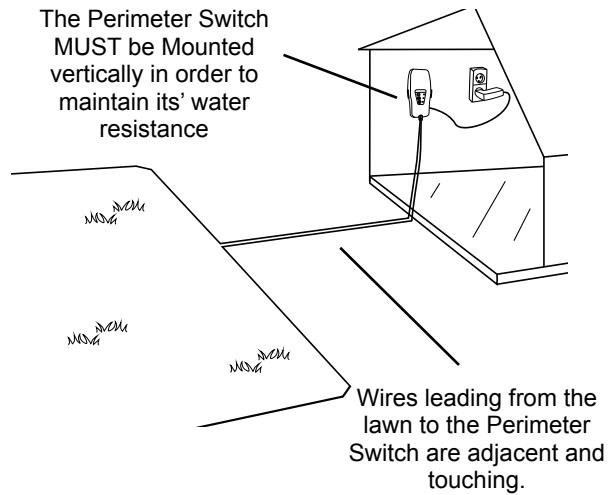


4.8 Setup in a Non-Base Zone

A Non-Base Zone is an area of the lawn that is not connected to a Base Station.

A Perimeter Switch should be installed in these areas.

When necessary, the Perimeter Switch can be easily moved to other zones.

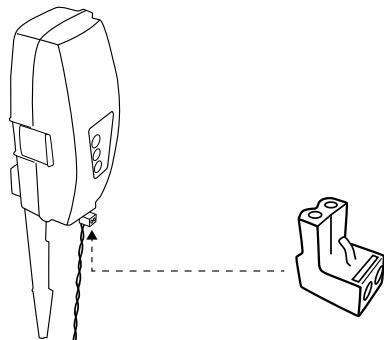


4.8.1 Determining the Perimeter Switch Location

Consider the following in order to install the Perimeter Switch at an optimal location:

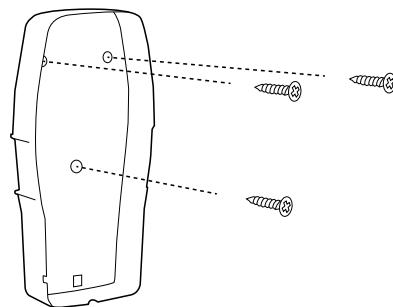
- The Perimeter Switch is to be installed outside the perimeter of the Non-Base Zone.
- Select a dry and sheltered location.
- The Perimeter Switch is to be mounted vertically.
- The Perimeter Switch is supplied with an indoor power supply. Choose a location close to a regular power outlet (230V / 120V).

Note – a rechargeable battery for the Perimeter Switch is available as an accessory (See Chapter 12 – Robomow Accessories).



4.8.2 Perimeter Switch placing options

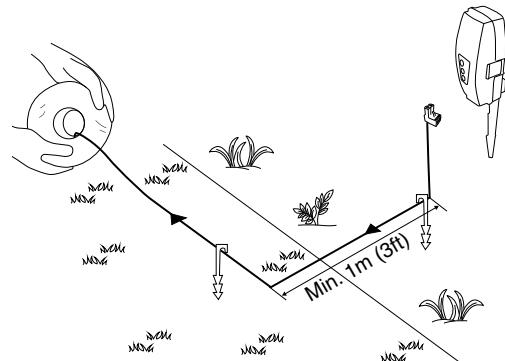
- The Perimeter Switch connector is easily connected and disconnected. It allows for quickly switching from one zone to another.
- You may use the large stake, attached to the back of the Perimeter Switch, to easily insert it in and out of the ground.
- You may mount the Perimeter Switch on a vertical surface, such as a wall or deck railing. Use the three marks on the back of the Perimeter Switch cover.



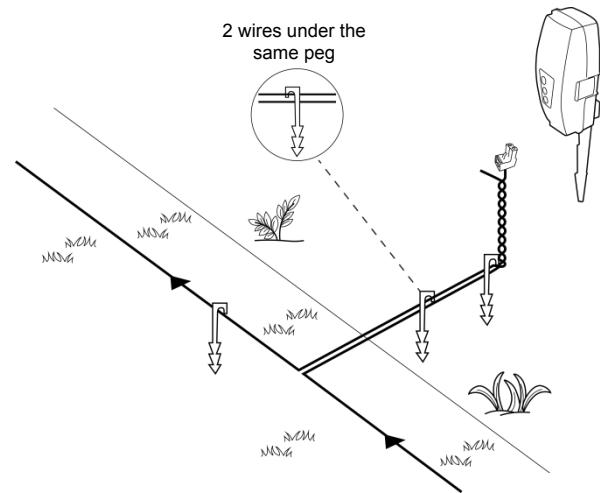
4.8.3 Laying out the Perimeter Wire

The perimeter wire setup in a Base and Non-Base Zone are the same, except for the starting point:

- The Perimeter Switch is placed out of the area (at least 1 meter / 3.3 ft. from the lawn).
- Start to lay the Perimeter Wire from the Perimeter Switch location.



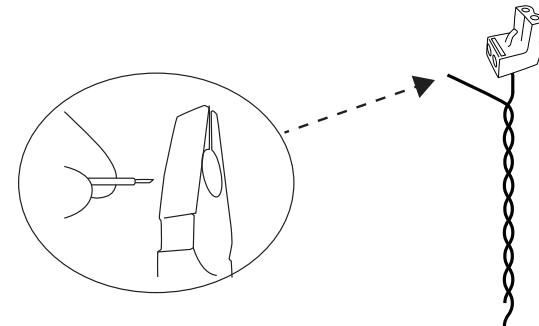
- Lay the Perimeter Wire from the Perimeter Switch to the lawn.
- Start laying the wire in anticlockwise direction.
- Once completing the Perimeter Wire loop, lay the wire back towards the Perimeter Switch.
- At the end of the Perimeter Wire loop, you have now two wires. Lay the two loose wires in the direction of the Perimeter Switch location and peg them to the ground using a single peg for both.



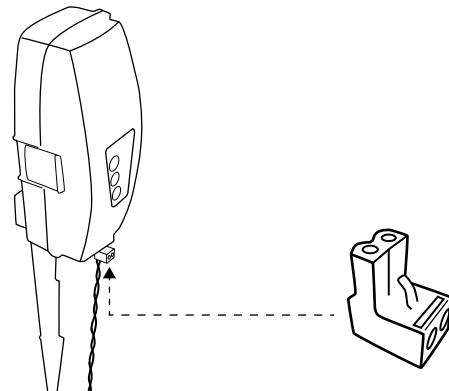
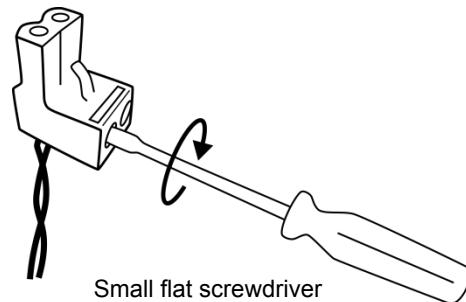
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4.8.4 At the Perimeter Switch's location:

- Trim the ends of the loose wire to equal length and twist them together.
- Strip 5mm (0.2 inches) of insulation from the wire without the plot connector.

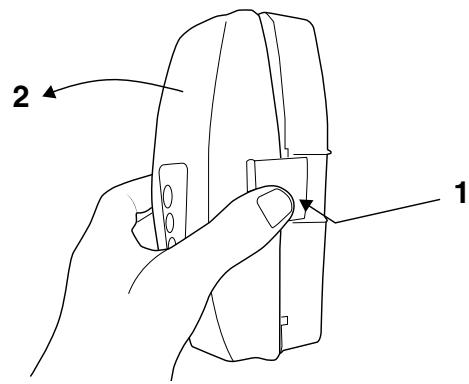


- Insert this wire end into the free hole in the connector and tighten the screws.

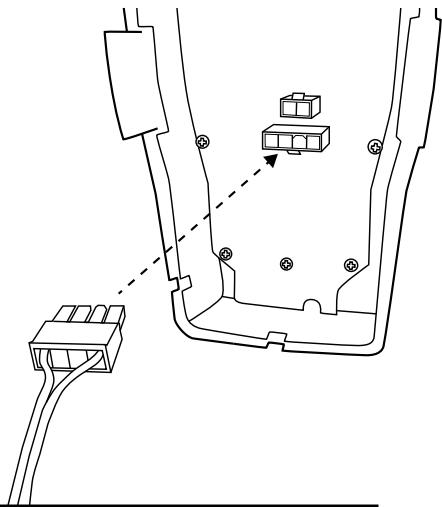


- Plug the perimeter wire connector into the Perimeter Switch.

- Hold the Perimeter Switch and squeeze its side tabs (1) to remove it from the back cover (2).



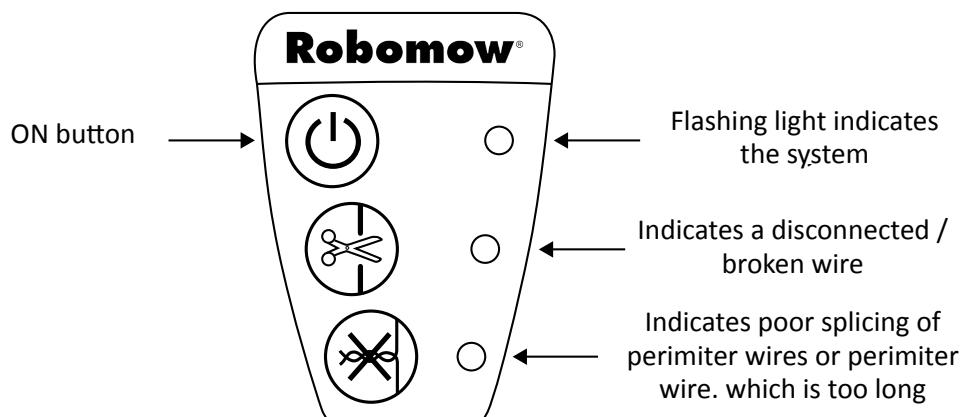
- Connect the Power Supply plug to the Perimeter Switch board. Replace the cover.
- Connect the power supply to a regular power outlet (230V / 120V).



! IMPORTANT ! The Power Supply is for indoor use ONLY.

Choose a sheltered, dry, and well ventilated location that is NOT exposed to direct sunlight, water, or rain.

- Press the 'ON' button on the Perimeter Switch. A small flashing green light next to the 'ON' button indicates the system is on and functioning correctly. The control panel has other indicators: a disconnected or broken Perimeter Wire and a poor splicing (connection) in the Perimeter Wire.



The Perimeter Switch has an automatic shutoff feature. There is no need to turn it off after each use. The Perimeter Switch will shut itself off after 12 hours of operation. You may manually turn it off by pressing the ON/OFF button and holding it for 3 seconds. A beep will sound to indicate that the Perimeter Switch is off.

The Perimeter Switch can be operated by a rechargeable battery (available as an accessory).

5. Preparing Robomow

Before using Robomow for the first time, you have to perform some simple preliminary settings. Once the preparations are complete, your Robomow will be ready to mow your lawn.

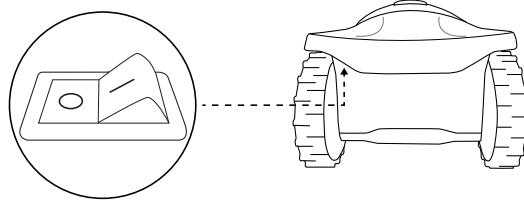
5.1 Adjust the Cutting Height

Blade Cutting Range: 15 – 60 mm (0.6 – 2.4 inches)

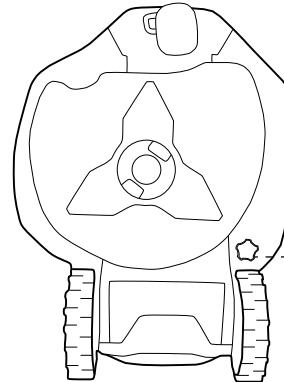
To adjust the cutting height of the blade, do the following:

CAUTION! ALWAYS TURN THE SAFETY SWITCH OFF BEFORE ADJUSTING THE CUTTING HEIGHT!

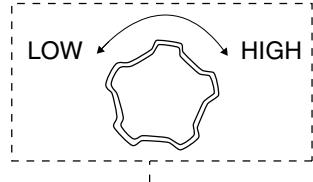
Safety Switch



- Lift the front side of the mower.
- Turn the knob while pushing it down.
- To raise the cutting height, turn clockwise.
- To lower the cutting height, turn anticlockwise
- The cutting height is displayed at the side of the mower.



Cutting height adjustment



5.2 One-Time Setup (Step by Step)

Make sure the Safety Switch is on and the Power Box is plugged in before starting the One-Time Setup process.

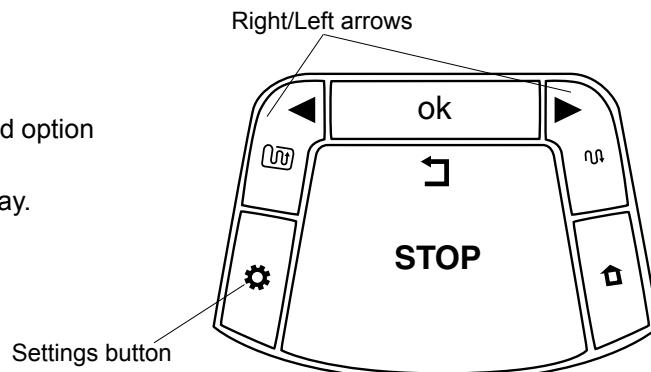
The mower is now ready to perform the One-Time Setup process.

IMPORTANT! To restart the One-Time Setup process press and hold **STOP + Setting + Left arrow** buttons together for more than 4 seconds. This will invoke Factory Defaults ("Out of the Box" settings).

5.2.1 Using the Operating Panel

Use the buttons on the Operating Panel as follows:

- Press the 'Right' or 'Left' arrows until your desired option is displayed.
- Press OK to select the value shown on the display.
- Press 'Back' (STOP) to go back or to cancel.



5.2.2 Choose Measurements Units and Formats

	Area / Distance	Temp.	Clock
EU	Meter	Celsius	24 Hours
US	Foot	Fahrenheit	12 Hours (AM / PM)



5.2.3 Set Day and Time

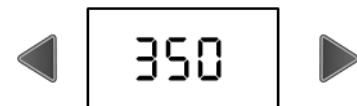
- Scroll to set the Day and press OK to confirm.
- Scroll to set the Time and press OK to confirm.

Mo Tu We Th Fr Sa Su

10:35

5.2.4 Main Zone Area

- Scroll to select an approximate area (EU- m² / US- ft²) for the Main Zone, where the Base Station is installed.
- If an additional zone (Sub-Zone or Separated Zone) exists, do not include it in main zone's area (it will be set separately).



Note – It is necessary to complete the above settings (5.2.1 – 5.2.3) in order to operate the mower. Every press on the STOP button will change the screen one step back in the process.

5.2.5 Test Base Station Position

- After setting the area, **U001** (Test Base Station Position) is displayed.
- Place Robomow inside the lawn, approximately 3 m (10 ft.) in front of the Base Station, facing the Perimeter Wire and press OK to start the test.
- Robomow drives towards the Base Station:

If the mower does not start the test, then one of the following messages will be displayed:

E3 (No Wire Signal) – Confirm that the Power Box is connected to the power outlet and that the Extension Cable is connected at both ends, from the Power Box to the Base Station.

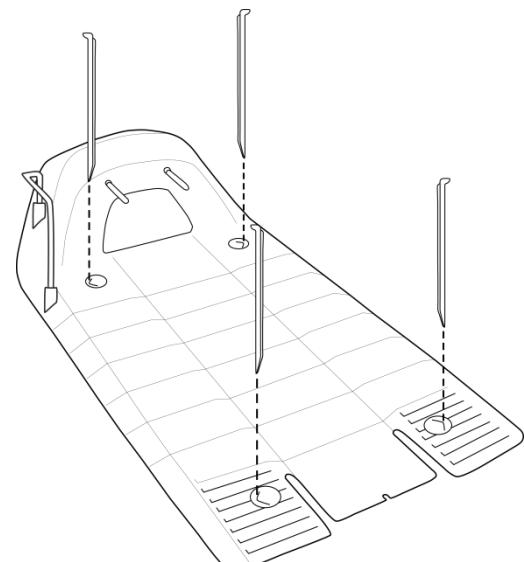
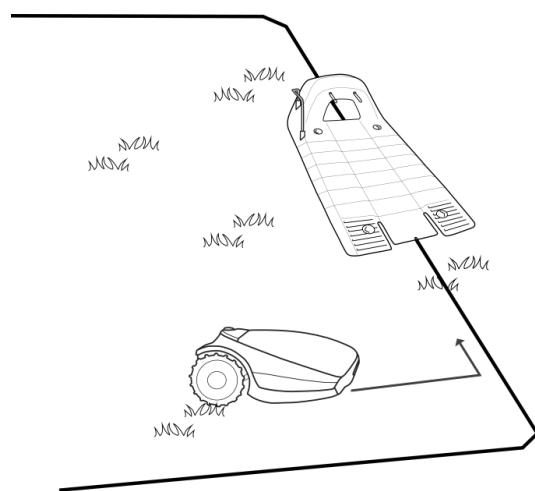
U029 (Swap wires in plot connector) – The Perimeter Wire has been connected in the opposite direction. Swap the wires at the plot connector.

- Robomow will enter the Base Station, drive back, wait in front of the Base Station, and display **U002 (Peg Base)**.

If **U051 (Reposition Base Station)** message is displayed:

- Move the Base Station slightly to align it with the Perimeter Wire.
- Check for any obstacles that may interfere with the mower's entrance to the Base Station.

- While '**U002** (Peg Base)' is displayed, insert the remaining Stakes of the Base Station to secure it to the ground and press **OK**.



5.2.6 Test Wire Position

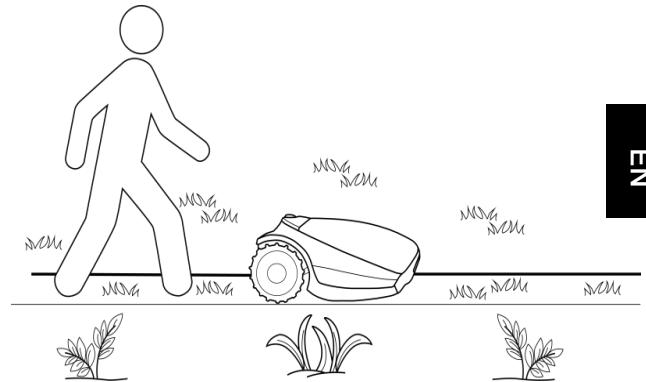
- U003 is displayed (*Test Wire Position*) – press **OK**.
- Robomow will follow the wire along the edge to test the wire position.

Walk alongside Robomow while it is following the edge. Having completed the process, Robomow will enter the Base Station and the setup process will be completed.

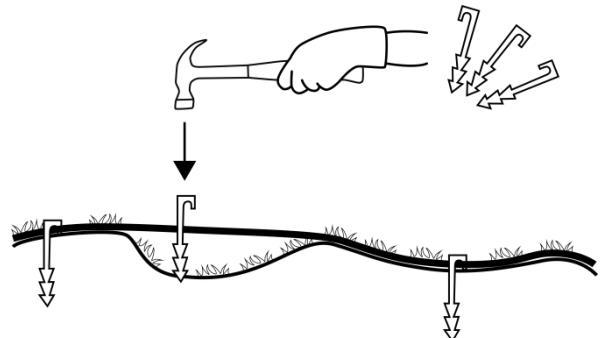
If the mower collides with obstacles along the edge, the mower will stop and drive backwards with 'U052' (*Adjust Wire*) displayed:

- Move the wire slightly inward.
- Press **OK** to continue the Wire Test.

- If, at any point, you wish the mower to drive closer to the edge to enlarge the covered area, press Stop ('U003' is displayed – *Test Wire Position*):
 - Move the wire slightly outward.
 - Place the mower in front of the changed section of wire.
 - Press **OK** to continue the "Test Wire Position" process.
- If you want to quit the setup process, press and hold the **STOP** button for 3 seconds. The screen will change to the Main Display (current time).
- After completing the Test Wire Position, test the mower in Near Wire Follow mode to confirm it completes the drive near the wire smoothly, without acquiring any adjacent wire or hitting any obstacle on its way to the Base Station.
- If the mower fails to complete the Near Wire Follow smoothly to the Base Station, then reduce the Near Wire Follow Distance (Menu P004) and repeat the test until it will complete the drive smoothly.



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IMPORTANT To restart the One-Time Setup process press and hold **STOP + Setting + Left arrow** buttons together for more than 4 seconds. This will invoke Factory Defaults ("Out of the Box" settings).

5.2.7 After Setup is Completed

Once the wire setup is complete, drive additional pegs at a distance of approximately 0.75 m (2.5 ft.) apart.

- Use additional pegs in areas where there are bumps or dips in the lawn.

If needed, purchase extra pegs.

- Inspect the wire installation for tripping hazards.

6. Robomow Operation

6.1 Automatic Operation

- As a part of the One-Time Setup, you have defined the area of your lawn. Based on this setting, Robomow will automatically derive the required number of mowing hours for your lawn (Mowing Cycle).
- Once the One-Time Setup is finished, Robomow will be set to perform automatically the following cycle of mowing operations:
 - When the battery is fully charged, Robomow will automatically depart from the Base Station.
 - It will mow the lawn.
 - It will start searching for the Base Station, when the battery level gets low (Robomow will not mow when it is searching for the Base Station).
 - It will recharge the battery and get ready for the next scheduled operation.
 - It will continue mowing until it completes the required number of mowing hours (end of a Mowing Cycle).

Note: Robomow mows the Edge only on the first mowing operation of each Mowing Cycle. In the rest of operations Robomow mows the lawn without the Edge. When Mowing Frequency (p001 in Section 6.4.2) is set to HIGH, Robomow will mow the Edge twice a week.

- Robomow stays in the Base Station during the default **Inactive Time** (All day Sunday and nighttime daily 23:00 to 06:00). Inactive Time may be changed – see Section 6.4.1.3.
- The required mowing time is automatically derived from the **Area** setting.
The mowing time may be adjusted using the **Mowing Hours (%)** menu – see Section 6.4.1.2.
- Robomow mows the entire area (i.e. starts a new Mowing Cycle) twice a week by default. This corresponds to a medium Mowing Frequency, which can be changed using the **Mowing Frequency** menu – see Section 6.4.2 (p001 in the table).

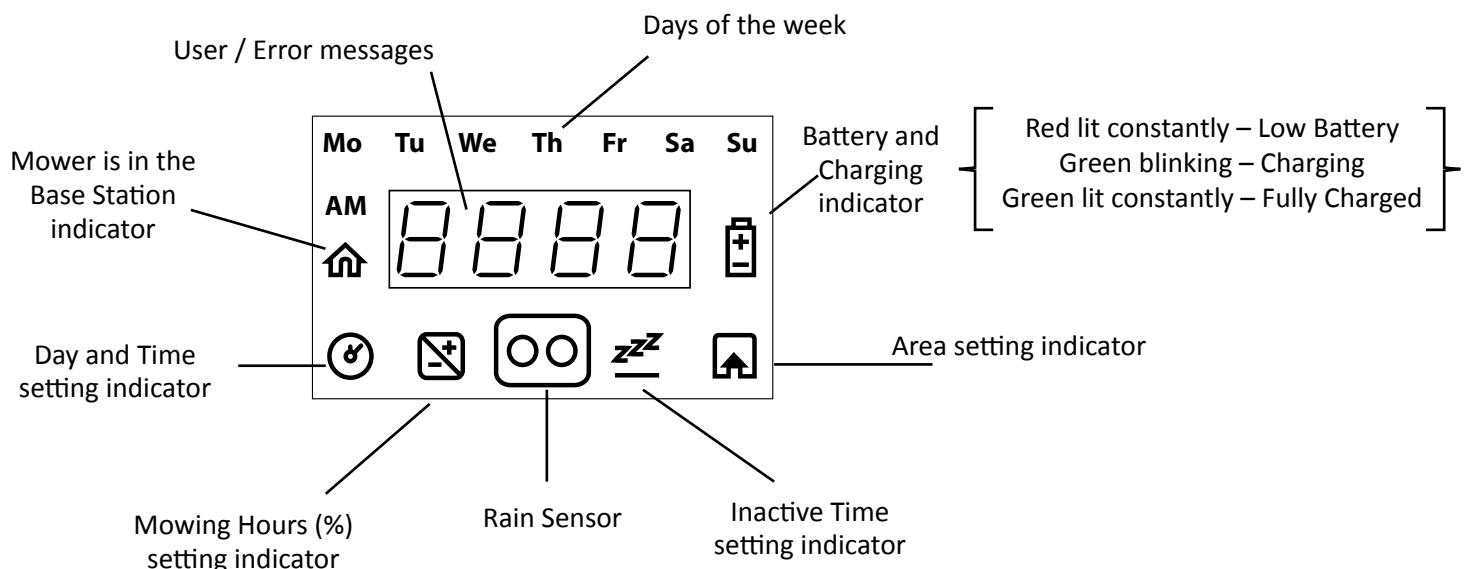
Note!

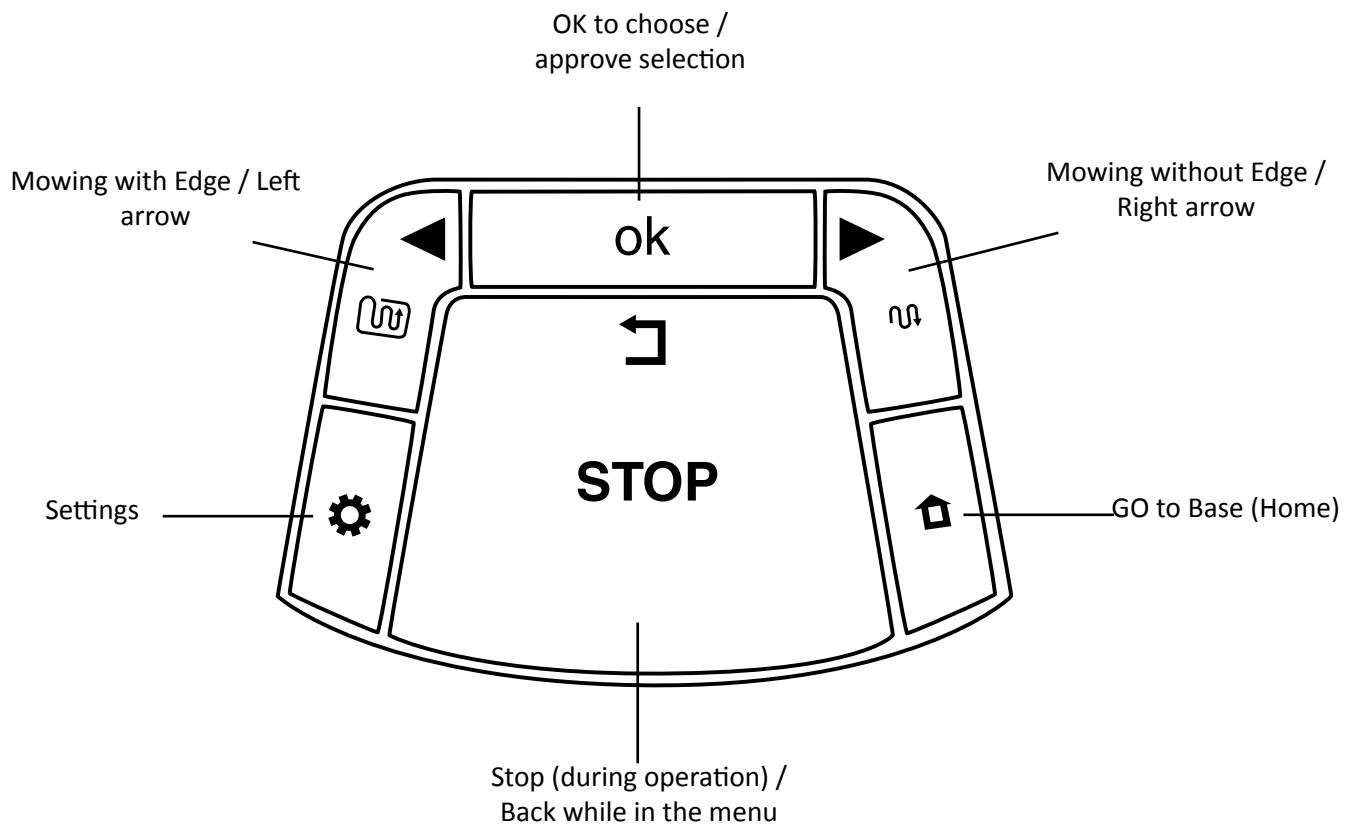
Robomow has the power to mow high grass. However when mowing high grass during the first use or the first mowing of the season, initially you will see uneven patches of grass.

Please be patient as it may take a few days to one week to overcome and bring the lawn to an even height and consistency.

6.2 Operating Panel

Operating Panel and buttons:





6.3 Manual Operation

Manual Operation is used when you want to manually send the mower to mow your lawn, regardless the Automatic Operation's schedule.

To initiate Manual Operation, while Robomow is at the Base Station, press one of the buttons (except the STOP button) to show the display.

If the battery is fully charged and the Automatic Operation is enabled (see Section 7.3), then the start time of the next operation is displayed, otherwise the current day and time are displayed.

Once the display is shown, choose the operation mode you want as provided in the table below:

Operation Mode	Child Lock is Off	Child Lock is On
Mowing with Edge – Mowing the edge before starting to mow the inner area. It is recommended to use this mode once or twice a week, depending on how fast the grass is growing.	Press the ' Edge before mowing ' (left arrow) button once	Press the ' Edge before mowing ' (left arrow) button then press OK
Mowing without Edge – Mowing only the inner area without the edge. It is recommended to use this mode only in the first operation of each Mowing Cycle.	Press the ' Mowing ' (right arrow) button once	Press the ' Mowing ' (right arrow) button then press OK

Note – if a Sub-Zone is defined, **L1** (Main Zone) will be displayed when you choose an operating mode. Use the arrow buttons to scroll and choose the required zone to be mowed and press **OK**.

6.4 Menu Options

There are several levels of menu options that can be set in your Robomow:

- A. Basic Settings
- B. Advanced Settings
- C. Robomow App Settings

6.4.1 Basic Settings

The Basic Settings are the most common menu options changed by the user. Each of the Basic Settings has an icon on the mower (refer to 6.2 – Operating Panel) that is lit to indicate the selected menu option.

- To change Basic Settings, press the ‘**Settings**’ button.
- Every press on the Setting button will move between the following 4 menu options:

6.4.1.1 Day and Time – Set the current Day and Time.

Press the ‘**Settings**’ button so the ‘Day and Time’ (Clock) icon is constantly lit.

‘**Day**’ is blinking → Scroll to the required day and press **OK** to confirm;

‘**Hours**’ is blinking → Scroll to the required hour and press **OK** to confirm;

‘**Minutes**’ is blinking → Scroll to the required min and press **OK** to confirm;

Note! If the mower is switched off and then back on, the ‘Day’ and ‘Time’ will start blinking to indicate that the day and the time should be re-set.

6.4.1.2 Mowing Hours (%) – increase/decrease the number of mowing hours (in %) needed to cover the lawn size.

Press the ‘Settings’ button twice until the ‘**Mowing Hours (%)**’ LED is constantly lit.

Use the scrolling arrows to adjust the number of mowing hours (in %) and press **OK** to confirm;

The default value of this setting is 100% and it can be changed from 50% to 150%.

Example: a value of 120%, means that Robomow will run 20% more hours on the lawn.

6.4.1.3 Inactive Time – Set times when the mower will be inactive. Inactive operating times can be set for specific day(s) of the week, and for specific hours for all days in the week.

Inactive Day(s) defines the day(s) when the mower will be inactive (Default: Sunday).

Inactive Hours define the hours when Robomow will not mow and stays in the Base Station (Default: 23:00-06:00)

IMPORTANT! It is required to go through the entire Inactive Days and Hours sequence in order to save the settings. Pressing STOP before completing the whole sequence will not save the settings.

To change the Inactive Time, it is required to perform the following steps:

- Press the ‘**Settings**’ button 3 times until the ‘**Inactive Time**’ icon is constantly lit.
- The current Inactive Day(s) will constantly lit.
- Press the **OK** button; ‘Mon’ will start blinking.
 - Press the **RIGHT** arrow to scroll to the day you want to set.
 - Press ‘**OK**’ to toggle between ‘Active’ and ‘Inactive’ options for that day:
The LED is lit – ‘Inactive Day’ (mower will stay in the Base Station all day).
The LED is off – available day for mowing.
Press the **RIGHT** arrow to scroll to the next day you want to set
- Scroll through all the days to the right until the ‘**Inactive Hours**’ will start blinking.
- First set the time, which the Inactive Hours start and press ‘**OK**’. Then set the time which the Inactive Hours will end.
- Robomow will not operate during the Inactive Hours throughout all days of the week.
- If too many days/hours have been deactivated relative to the zone area, then ‘**E8**’ (Decrease Inactive Time) will be displayed – you need to decrease the number of inactive time so that the mower will have enough time to mow your lawn.
- To set the ‘Inactive Hours’ to ‘Off’ set the same time for the start and the end (i.e.: 00:00 to 00:00).
- Only one window of Inactive Hours can be set in the Basic Settings. To open an additional window of Inactive Hours use the **Robomow App**.

6.4.1.4 Area – Update the size of the lawn in case it has been changed.

- Press the ‘**Setting**’ button 4 times until the Area icon is blinking.
- Scroll to change the area and press ‘**OK**’ to confirm.
- If more than one zone is defined, then first scroll to select the zone you want to edit and set the area for that zone as described above.

Names of zones are as follows:

L1 – Main Zone
L2 – Separated Zone A
L3 – Separated Zone B
A1 – Sub-Zone 1
A2 – Sub-Zone 2
A3 – Sub-Zone 3
A4 – Sub-Zone 4

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6.4.2 Advanced Settings

The Advanced Settings are additional menu options that are not changed very often and thus are not included in the Basic Settings.

- To change any option/feature in the Advanced Settings, press the ‘**Settings**’ button continuously for 3 Sec.
- ‘P001’ is displayed. Use the arrows to scroll to the setting you want to change, and then press **OK**.
- Use the arrow button to change the setting and press **OK** to confirm.
- Scroll to change additional menu options or press **STOP** to go back to the main display.

Below are the Advanced Settings options:

Screen	Setting	Description	Options
P001	Mowing Frequency (Default = 2)	<ul style="list-style-type: none"> • Controls the frequency of mowing cycles in a particular zone of your lawn. • The default mowing frequency is Medium (equivalent to two mowing cycles in a week). It means that Robomow will complete the entire mowing of your lawn twice a week. • The numbers in the menu represent the following values of mowing frequency: <ul style="list-style-type: none"> 1 – LOW (one mowing cycle in a week) 2 – MEDIUM (two mowing cycles in a week) 3 – HIGH (daily mowing with accordance to Inactive Time) • If there is more than one zone, the Mowing Frequency can be set for all zones together or for each zone individually. You can choose All for all zones or scroll to a particular zone you want to change. • During off-season when the growth rate of the grass is slower, it is recommended to change the Mowing Frequency to ‘LOW’. This resting period helps the grass and prolongs the lifetime of the mower. • Grass growth rate changes during the year (depending on temperature, grass type, fertilizing and etc.). • High fertilization and favorable weather conditions may cause the grass to grow faster. In such cases, use the Mowing Frequency option to decrease the time between cycles. 	1/2/3
P002	Islands (Default = OFF)	<ul style="list-style-type: none"> • In rare cases, you may notice that the mower unnecessarily circles around a Perimeter Island, while searching for the Base Station. • The Islands option helps overcome this situation. To avoid such cases, turn the Islands feature On. • When the Islands feature is set to On, the mower will execute a special method of searching for the Base Station. As a result it may take the mower longer time to arrive to the Base Station. • See also menu P006 below. 	ON/OFF

Screen	Setting	Description	Options
P003	Near Wire Follow (Default = ON)	<ul style="list-style-type: none"> When Robomow completes its operation, or when the 'Home' button instructs it to Go To Base, it drives itself to the Base Station. Robomow drives along the Perimeter Wire with a dynamic offset (not centered) to prevent wheel tracks along the same path. This return behavior can be turned off. 	ON/OFF
P004	Max Near Wire Follow Distance (Default = changed based on the lawn area)	<ul style="list-style-type: none"> The maximum distance Robomow will drive from wire when returning to the Base Station. The distance does not represent actual units of measurement. The offset Distance values range from 1 to 12. They represent different distances from the wire. The higher the Distance setting, the smaller the probability of tracks along the perimeter. Perimeter Islands that are relatively close to the Perimeter Wire or narrow passages may prevent the mower to complete its drive to the Base Station with 'Near Wire Follow' mode. In such cases decrease the distance to allow the mower to complete the drive to the Base Station. 	1-12
P005	Min Near Wire Follow Distance (Default = 1)	<ul style="list-style-type: none"> The minimum distance Robomow will drive from wire when returning to the Base Station. The larger the number, the bigger the distance the mower will drive from the wire while returns to the Base Station. 	1-5
P006	Near Wire Follow Test	<ul style="list-style-type: none"> Enables to test the mower in the max 'Near wire Follow Distance' that is defined in menu P004. If the mower is not able to complete the drive in 'Near Wire' mode smoothly, then it is recommended to reduce the max distance set in menu P004. 	
P007	Rain Sensor (Default = ON)	<ul style="list-style-type: none"> The Rain Sensor feature halts operation on rainy or highly humid weather. This is recommended for the health of the lawn. However, mowing wet grass does not present any technical problem. 	ON/OFF
P008	Rain Sensor Sensitivity (Default = 25)	<ul style="list-style-type: none"> Robomow detects rain when the current reading value is below the set Sensitivity value and postpones operation. The higher the Sensitivity setting, the more sensitive Robomow is to rain detection. 	0-30
P009	Edge On/Off (Default = ON)	<ul style="list-style-type: none"> The Edge is a special mode, in which Robomow follows the perimeter wire for complete and accurate owing of the lawn edges. In lawns where the edge is not maintained well and the mover fails to complete the drive along the edge of the lawn, it is recommended to set the Edge to 'Off'. Setting the Edge to 'Off' disables the Edge mode in automatic departures from the station, but still allows the Edge mowing when pressing the 'Edge' mode button on the operating panel. 	ON/OFF
P010	Child Lock (Default = OFF)	<ul style="list-style-type: none"> The Child Lock feature locks the buttons to prevent unintended operation, especially by children. If the Child Lock is set to 'On', to operate the mower it is required to first press one of the operating mode buttons and then to press the OK button to confirm. 	ON/OFF
P011	Anti-Theft / Disabling Device (Default = OFF)	<ul style="list-style-type: none"> The Anti-Theft / Disabling Device feature alarms the surroundings in the event of an unintended use or removal of the mower from its designated area. To turn the Anti-Theft / Disabling Device On for the first time, set it to 'On' and choose a PIN code of 4 digits. <p>Tip: Select a number you can remember. Write it down (bottom of Chapter 10), and keep it in a safe place.</p> <ul style="list-style-type: none"> When the Anti-Theft / Disabling Device system is activated, 0000 will be displayed. Enter your 4-digit code to deactivate the Anti-Theft / Disabling Device. If the code is not entered, then the message is changed to U062 (Alarm will soon be activated). Enter the code, otherwise the alarm will start. 	ON/OFF 1234

Screen	Setting	Description	Options
P012	Anti-Theft / Disabling Device Change PIN code	<ul style="list-style-type: none"> Allows changing of the Anti-Theft / Disabling Device PIN code. Enter a new code and then re-enter the new code for confirmation. 	0000
P013	Base Station (Default = ON)	<ul style="list-style-type: none"> This option should be used in a Separated Zone which has a Base Station If you have defined more than one zone, then select the relevant zone before changing the setting. 	ON/OFF
P014	Add Separated Zone	<ul style="list-style-type: none"> Enables the addition of a Separated Zone. L2 is displayed for Separated Zone A – press OK. Scroll to set the area of the Separated Zone and press OK. 	L2 100
P015	Remove Zone	<ul style="list-style-type: none"> Enables the removal of a Separated Zone or a Sub-Zone. Choose the Zone you want to remove and press OK. 	L2/L3 R1/R2/R3/R4
P016	Sound (Default = ON)	<ul style="list-style-type: none"> Use the Sound option to turn all non-safety sounds off. 	ON/OFF
P017	Mobile Communication System (Default = OFF)	<ul style="list-style-type: none"> Enables remote communication with the mower using a GSM Module Accessory, which can be purchased separately. For more information, refer to Section 12 – Accessories. 	ON/OFF
P018	Statistics (Default = OFF)	<ul style="list-style-type: none"> This menu is displayed only if P018 is set to 'On'. Enables to send the operation statistics from the mower to the manufacturer for diagnostics in case of problems. 	ON/OFF
P019	Bluetooth Remote Control Pairing	<ul style="list-style-type: none"> Enables the pairing process between your Robomow and an outdoor Bluetooth Remote Control that is available as an accessory (Refer to Paragraph 12 Accessories). 	
P020	Last Termination Event	<ul style="list-style-type: none"> Enables the Behavior View of the special display (may be required by a Service Station) 	
P021	Program On/Off (Default = OFF)	<ul style="list-style-type: none"> This menu enables or disables (pauses) Automatic Operation either in the main zone ('L1'), one of the Sub-Zones ('A1/ A2/ A3/ A4') or in the entire lawn ('All'). When Program is set to Off in a particular zone, the mower will skip the operation in that zone, but will continue to mow all the other zones 	RLL LI R1/R2/R3/R4 ON/OFF
P022	Add Sub-Zone	<ul style="list-style-type: none"> Enables the addition of a Sub-Zone. Maximal number of Sub-Zones may be different for each Robomow model. A1/A2/A3/A4 (name of the first available sub-zone) is displayed – press OK. If the mower is not at the Base Station, then 'U044' ("Place the mower in the Base Station") is displayed. Place the mower in the Base Station and press OK. The mower will start moving towards the Sub-Zone. 'U041' ("Press the STOP button at Sub-Zone entry.") will be displayed. Press 'STOP' button, when the mower is at any point beyond the Narrow Pass and inside the Sub-Zone (Entry Point). Scroll to set the area of the Sub-Zone and press OK. Note! This process is not a part of the One-Time Setup (see Section 5.2) The area setting of a Sub-Zone can be later updated through the 'Area' menu of the Basic Settings (see Section 6.4.1) The distance to Sub-Zone's entry point can later be updated through menu P023 	R1/R2/R3/R4 100
P023	Update Distance To Sub-Zone	<ul style="list-style-type: none"> This menu is shown only if a Sub-Zone has been defined. It allows to update the distance to Sub-Zone's entry point. Scroll to choose the required Sub-Zone (A1/A2/A3/A4) and press OK to update the distance to the entry point. 	

Screen	Setting	Description	Options
P024	SmartMow (Default = OFF)	<ul style="list-style-type: none"> Enables the unique SmartMow feature. SmartMow feature allows more efficient mowing operation through the smooth and continuous turns when reaching lawn's edge. This feature may not be efficient in the same way in every lawn or in some parts of a particular lawn. When this feature is enabled for the first time in a particular zone, it may require the mower to cross the lawn and "touch" the perimeter wire several times (to perform an initial calibration of the algorithm), before it will start performing smooth turns at lawn's edge. If there is more than one zone defined, then there is an option to enable this feature for a particular zone or for the entire lawn ('All'). 	ALL L1/L2/L3 R1/R2/R3/R4 ON/OFF
P025	SmartMow Edge Overlap (Default = 10)	<ul style="list-style-type: none"> Allows adjusting the degree of overlapping with lawn's edge, when performing the smooth and continuous turns in SmartMow mode. Increasing this value will cause a higher overlapping with lawn's edge (for better mowing results), but at some point may prevent the mower from performing a smooth turn. If there is more than one zone defined, this setting may be set per zone or for the entire lawn ('All'). 	5-30
P026	TurboMow (Default = OFF)	<ul style="list-style-type: none"> TurboMow feature allows faster and stronger mowing of a high grass during the first cut of the season. When a mower is operated for the first time, or if the Factory Defaults ("Out of the Box" settings – see Section 5.2) are invoked, this feature is automatically set to ON to provide better mowing results already after the initial mowing cycle. At the end of the initial mowing cycle, the feature will be automatically disabled (set to OFF). This menu allows to activate TurboMow feature manually. 'U094' ("Raise mowing height when activating the TurboMow mode.") will be displayed. At the end of the cycle the feature will be automatically deactivated (set to OFF). 	ON/OFF

6.4.3 Robomow App Settings

Using the Robomow App you will have access to additional menu options that are not available on the mower, such as an option to define an external setup of a Base Station or an option to set an additional window of Inactive Hours.

6.5 Operation in a Non-Base Zone (using a Perimeter Switch)

In order for Robomow to operate in a Non-Base Zone, the Perimeter Switch has to be turned on and the mower should be inside the active perimeter area.

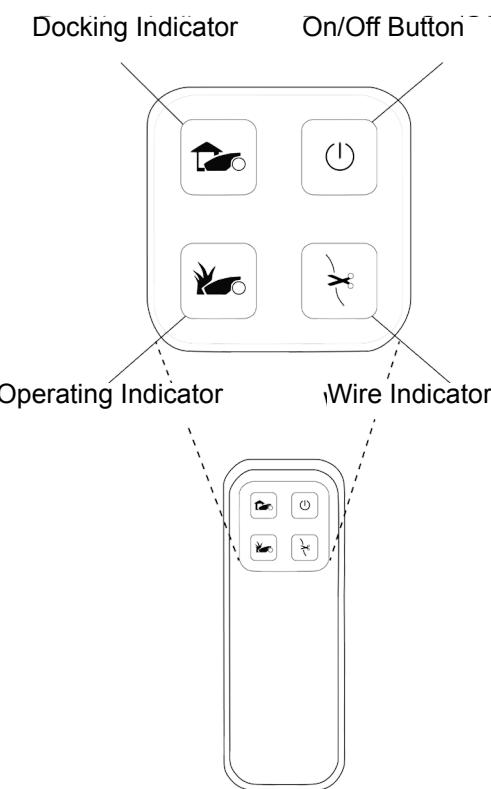
- Verify that the Perimeter Switch is connected to the zone to be mowed.
- Press the 'ON' button to turn on the Perimeter Switch.
- Drive/carry Robomow to the lawn area. Refer to "Transportation" part of Section 1.3 for carrying instructions.
- To initiate the operation, choose the operation mode you want, press the arrow buttons to choose the Zone you want to mow and press OK to start operation (refer to Section 6.3).
- When Robomow completes the mowing, it will stay on the lawn. You will have to drive/carry it back to its place for charging.

7. Using The Power Box

7.1 Power Box Alerts

Event	Description
Docking Indicator is lit.	The mower is in its Base Station.
Operating Indicator is lit	The mower is not in its Base Station.
Program On/Off Indicator is lit. 'OFF' will be displayed on the mower.	Automatic Operation is paused.
Wire Indicator – Flashes and Beeps	The Perimeter Wire is cut, disconnected, or too long.
All Indicators flash	The mower did not return to the Base Station after 4 hours of departure. When the mower is detected at the Base Station, alerts will turn Off.
All Indicators flash and Buzzer sounds for 10 seconds.	The Anti-Theft option is set to On, and the mower was removed from its Base Station when it was not scheduled to operate.

Note – To stop an alert when sounding, press the On/Off Button.



7.2 Turn the Buzzer On/Off

- Press and hold the On/Off button for 10 seconds.
 - A short beep indicates **On**.
 - A flash indicates **Off**.

7.3 Enable/Disable the Automatic Operation

- This option is used to disable (pause) a predefined Automatic Operation (Program) of Robomow. This option does not prevent Manual Operation (Section 6.3).
- Press and hold the **Program On/Off** button for 2 seconds. A red LED will be lit on the Power Box. 'OFF' indication will be displayed on the mower:
 - If Robomow is currently in the process of mowing:
 - Robomow will complete the current mowing cycle.
 - After completing the current mowing cycle, Robomow will stay in the Base Station and will not start another mowing cycle.
- To Enable the Automatic Operation
 - Press and hold the Program On/Off button for 2 seconds.
 - Use P021 menu in Advanced Settings (see Section 6.4.2 for more details).

8. Charging

8.1 Charging During the Season

The Base Station is the primary charging source when Robomow is docked and will maintain the optimal battery charge while awaiting departure.

8.2 Charging Out of Season

During out of season months, such as winter, it is required to:

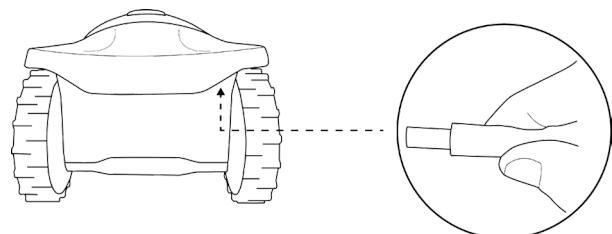
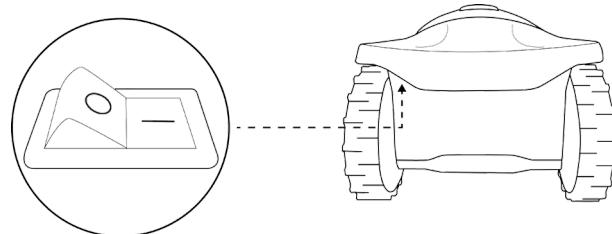
- Fully charge the battery in the Base Station till the Battery indicator is green and lit constantly.

Note! The Safety Switch should be in 'On' position during charging.

LED indicators for charging:

- Red is lit constantly – Charge the battery.
- Green is blinking – During battery charging.
- Green is lit constantly – Battery is fully charged.

- Remove Robomow from its Base Station. Turn the Safety Switch off and store the mower in a room temperature.
- If the mower is stored for more than 3 months, it is required to recharge the battery every 3 months till the Battery indicator shows it is fully charged.
- The charging can be done in one of the following options:
 1. Place the mower in the Base Station for charging.
 2. Connect Robomow directly to the Power Box as follows:
 - Disconnect the DC Cable coming from the Power Box to the 15m Extension Cable and connect it to the rear side of the mower as shown in the figure to the right.
- Once the season starts, just place Robomow in its Base Station to begin automatic operation.



!IMPORTANT! Always charge your mower in a horizontal position. The mower should be flat on the ground while connected to the Power supply.

9. Troubleshooting and User Messages

9.1 General Error Codes

Robomow continuously monitors its operation. It produces error codes to assist you in running it smoothly.

A sticker containing the most common error codes is provided in the box. You can place it on the mower for your convenience.

E9* (See Troubleshooting in Manual) represents stops and error that are not very common, and thus they are not shown in the above Error Code Table. If E9 is displayed, press the RIGHT arrow to receive the Error Code reason, for which the mower has stopped and refer to the User Manual for more details.

- Usually, if the mower stops, an error code is displayed. This display stays on for 5 minutes. If you arrive later than those 5 minutes, the display will be blank.
- To wake Robomow up and see the last error code displayed prior to stopping, press the OK button on the mower.

Robomow Error Codes Table	
E 1	Stuck in Place
E 2	Mower is Outside
E 3	No Wire Signal
E 4	Check Power
E 5	Check Blade / Cutting Height
E 6	Check Drive
E 7	Front Wheel Problem
E 8	Decrease Inactive Time
E 9*	See Troubleshooting in Manual
E5XX	Call Support

The following table displays all Error Codes and gives possible causes and corrective actions:

Display	Message	Probable Cause/Event	Corrective Actions
E 1	Stuck in Place	<ul style="list-style-type: none"> - Robomow got stuck in place. It cannot continue driving. - Drive wheel motors have been working under a severe load. - Robomow has difficulty turning in place because the front wheel is blocked by a ditch or non-level ground. 	<ul style="list-style-type: none"> - Remove the mower away from this particular location and restart operation. - Rectify the reason for it getting stuck. - Check the ground around the mower for ditches or non-level ground. Fill with dirt and level off. - Check if the drive wheels are free to rotate and nothing is blocking them. - Verify that the cutting height is not set too low for the grass condition – increase the cutting height if needed.
E 2	The mower is Outside	<ul style="list-style-type: none"> - The Perimeter Wire is too close to the edge of the lawn. - The Perimeter Wire has been laid the wrong way around a perimeter island. - The lawn slope is too steep along the edge. - Robomow does not succeed to turn in place at the edge, and it is causing the mower to slip out of the designated area. - Automatic operation is initiated while the robot is placed out of the Perimeter Wire loop. 	<ul style="list-style-type: none"> - Check that the Perimeter Wire is not too close to the edge – remove the wire towards the inner side of the lawn. - Confirm that the Perimeter Wire has been laid according to the instructions in the Manual. - Do not include areas with very steep slopes. - Verify that the cutting height is not set too low – Increase the cutting height. - Place the mower inside the lawn and renew the operation.
E 3	No Wire Signal	<ul style="list-style-type: none"> - Power Box/Perimeter Switch is not turned on or not connected - Power Box may need to be restarted - The Perimeter Wire is not connected to the Base Station/ Perimeter Switch. - The Perimeter Wire is cut. 	<ul style="list-style-type: none"> - Make sure the Base Station is connected to the mains supply. - Disconnect the Power Box from the mains power and reconnect after 10 seconds. - Check that the low voltage cable between the Power Box and the Base Station is connected. - Check the LED indications on the Power Box. - Check the connection of the Perimeter Wire to the Base Station / Perimeter Switch. - Check the installation for cut wire. Repair broken cable with the waterproofed connector supplied in the box.
E 4	Check Power	<ul style="list-style-type: none"> - Power Box is not plugged in properly into the power outlet. - No power at the power outlet or the main power is shut off. - The mower or Base Station contacts are dirty. - Charging is not detected, although there is a physical contact between the mower and the Base Station contacts. 	<ul style="list-style-type: none"> - Confirm Power Box is plugged into the power outlet. - Turn power on to the power outlet. - Check the power outlet using another appliance. - Clean the contacts with a brush or piece of cloth. - Confirm a good connection of the Power Box to the Base Station.
E 5	Check Blade / Cutting Height	<ul style="list-style-type: none"> - Mowing motor has faced over-current conditions for too long as a result of high grass or an obstacle that is stuck or wrapped around the blade. - Something is preventing a blade from rotating freely (Accumulated grass clippings under the mowing deck; rope or similar object wrapped around mowing blade). 	<ul style="list-style-type: none"> - CAUTION – Switch off the Safety Switch before checking the blade. - Inspect blade for foreign material or debris preventing rotation. - Clean out accumulated grass clippings using a wooden stick.

Display	Message	Probable Cause/Event	Corrective Actions
E 6	Check Drive	<ul style="list-style-type: none"> - Grass or other object has wrapped around the drive wheel. - The drive motors have been working under severe load for too long. 	<ul style="list-style-type: none"> - Check the drive wheels and remove the grass or other objects.
E 7	Front Wheel Problem	<ul style="list-style-type: none"> - The Front Wheel has left the ground for too long during operation. 	<ul style="list-style-type: none"> - If Robomow has driven onto an obstacle, Switch off the Safety Switch, raising the front end: Remove or exclude the object from the mowing area. - If Robomow is being used on a slope too steep for safe mowing, exclude this from the mowing area. - If high grass is preventing the front wheel from fully turning on the ground, raise the cutting height. - If the ground contains large holes or indentations where the front wheel can drop into when passing across, fill these areas with dirt and level off.
E 8	Decrease Inactive Time	<ul style="list-style-type: none"> - Too many Inactive Days and/or Hours have been set for your lawn area. Current settings will not be changed. - Mowing Frequency is too high for current settings of Inactive Time. The Inactive Time settings will be set to defaults. - Area setting is too high for current settings of Inactive Time. The Inactive Time settings will be set to defaults. 	<ul style="list-style-type: none"> - Decrease the number of Inactive Days and/or the number of Inactive Hours to allow Robomow to complete mowing your lawn. - Decrease Mowing Frequency (see p001 in the table in Section 6.4.2) - Decrease Area setting
E 9	See Troubleshooting in Manual	<ul style="list-style-type: none"> - E 9 is displayed for all other messages that are not listed in the above table. 	<ul style="list-style-type: none"> - Press the 'Right arrow' button to receive the stop reason number and refer to the next table for more details about the stop reason, causes, and actions.

9.2 Detailed Error Codes

If the above table (Section 9.1) does not give enough information to help solve the problem, then press the LEFT arrow while the error code is displayed in order to receive a number that gives more details about the problem and refer to the table below:

Display	Message	Probable Cause/Event	Corrective Actions
0010	Mow Overheat	<ul style="list-style-type: none"> - The mowing motor has been working under a severe load for too long. 	<ul style="list-style-type: none"> - No need for action – Robomow will renew automatically the operation after the mowing motor will cool down.
0011	Drive Overheat	<ul style="list-style-type: none"> - The drive motors have been working under a severe load for too long. 	<ul style="list-style-type: none"> - No need to do anything. - Robomow will renew the operation automatically as soon as the drive motor will cool down.
0012	No wire signal	<ul style="list-style-type: none"> - See E3 in the above table 	
0014	Front wheel problem	<ul style="list-style-type: none"> - See E7 in the above table 	
0015	Button pressed	<ul style="list-style-type: none"> - One of the operating panel buttons is constantly pressed. 	<ul style="list-style-type: none"> - Press 'OK' to confirm the message and continue operation. This message is displayed to inform only.

Display	Message	Probable Cause/Event	Corrective Actions
0016	Low temperature	<ul style="list-style-type: none"> - Mower does not depart automatically from the Base Station when the ambient temperature is lower than 5°C (41°F). - Information – When the temperature is below 5°C (41°F) the grass does not grow or grows very slowly. <p>However Manual Depart is enabled.</p>	<ul style="list-style-type: none"> - No need to do anything. - Robomow will renew the operation automatically as soon as the ambient temperature will rise above 5°C (41°F).
0020	Rain detected	<ul style="list-style-type: none"> - The operation is delayed as Robomow detects rain. - Robomow should resume operation 30 minutes after it stops to detect the rain. 	<ul style="list-style-type: none"> - No need for action. - The message is displayed until Robomow will not detect rain and then will start mowing.
0021	Check mowing height	<ul style="list-style-type: none"> - Mowing motor has faced over-current conditions for too long as a result of high grass or an obstacle that is stuck or wrapped around the blade. - Something is preventing a blade from rotating freely. - Severe grass accumulation under the mowing deck, rope, or similar object is wrapped around mowing blade. 	<ul style="list-style-type: none"> - CAUTION – Switch Off the Safety Switch before checking the blade. - Inspect the blade for foreign material or debris preventing rotation. - Clean out accumulated grass clippings using a wooden stick.
0022	Check mowing motor	<ul style="list-style-type: none"> - Mowing motor has faced over-current for too long in the Base Station before starting the operation. 	<ul style="list-style-type: none"> - CAUTION – Switch Off the Safety Switch before checking the blade. - Remove the mower from the Base Station. Inspect the blade for foreign material or debris preventing rotation.
0023	Check power	- See E4 in the above table	
0026	Base problem	<ul style="list-style-type: none"> - Robomow fails to enter the Base Station several consecutive times. 	<ul style="list-style-type: none"> - Adjust the Base Station position. - Clean the contacts with a brush or piece of cloth.
0027	Start Elsewhere	<ul style="list-style-type: none"> - Drive wheel motors have been working under severe load during automatic or manual operation. 	<ul style="list-style-type: none"> - Check to insure the mower is not stuck, causing the drive wheels to slip. - Check the ground around the mower for holes or indentations. Fill with dirt and level off. - Check if the drive wheels are free to rotate and nothing is blocking them. - Remove the mower away from this particular location and restart operation.
0028	Cross Outside	<ul style="list-style-type: none"> - The Perimeter Wire is too close to the edge. - The lawn slope is too big. - Robomow does not succeed to turn in place at the edge and it causes the mower to slip out of the designated area. - Robomow has slipped out of the Perimeter Wire loop because of sloping area or wet grass. 	<ul style="list-style-type: none"> - Remove the wire towards the inner part of the lawn. - Do not include this area because of its steep slopes. - Fill holes and pits in the ground. - Increase the cutting height.
0030	Start Inside	<ul style="list-style-type: none"> - Automatic operation is initiated while the robot is placed out of the Perimeter Wire loop. 	<ul style="list-style-type: none"> - Place the mower inside the lawn and renew the operation.
0031	Stuck in place	- See E1 in the above table	
0060	Check mowing hours (%)	<ul style="list-style-type: none"> - The mowing hours % value you have set is too high for your lawn area. 	<ul style="list-style-type: none"> - Decrease the mowing hours % you have set for the zone(s) in your lawn.
0061	Decrease Inactive Time	- See E8 in the above table	

9.3 User Messages

The next table gives information about User Messages that can be displayed on the mower:

Display	Message / Description	Required Action
BRTT	Recharge Battery. Low battery voltage.	Recharge the Battery.
U001	Test Base Station position. Displayed during the One-Time Setup.	Refer to section 5.2.4 in the User Manual.
U002	Peg Base Station. Displayed during the One-Time Setup.	Refer to section 5.2.4 in the User Manual.
U003	Test wire position. Displayed during the One-Time Setup.	Refer to section 5.2.5 in the User Manual.
U004	Wire Test ended (during the One-Time Setup) Displayed only when using the Robomow App.	No action is required.
U017	Operation time is completed as expected.	No action is required.
U018	Operation time is shorter than expected	Battery run time is too short. Replace Battery.
U024	Keep charging if not used. Displayed only if the mower is disconnected from a Charging Adaptor.	It is recommended to keep the mower connected to the Power Supply when not in use.
U025	Switch Off before lifting	It is required to switch Off the System Switch before lifting and carrying the mower.
U029	Change the wires in plot connector Displayed during the One-Time Setup.	Swap the wires at the plot connector. Refer to section 5.2.4 in the User Manual.
U032	Switch on the System Switch. Displayed if the mower is connected to charging, but the System Switch is 'Off'.	Switch the System Switch to 'On'.
U041	Press the STOP button at Sub-Zone entry.	Press STOP at the point you want the mower to start mowing the Sub-Zone.
U042	Learning edge distance.	The mower learns the distance of the Perimeter Wire in a Separated Zone. Press STOP to learn the distance.
U043	Going to Sub-Zone entry point. Displayed when the mower drives towards the Sub-Zone.	No action is required.
U044	Place the mower in the Base Station.	Place the mower in the Base Station before starting the process of adding a Sub-Zone.
U051	Reposition the Base Station position. Displayed during the One-Time Setup.	Refer to section 5.2.4 in the User Manual.
U052	Adjust Wire	Refer to section 5.2.5 in the User Manual.
U062	An alarm will soon be activated.	This message warns you to enter the PIN code before the Anti-Theft alarm will sound.
U064	The Searching Base Station operation cannot be performed	When choosing the 'Home' button in a zone without a Base Station.
U086	Waiting for the signal... Robomow has stopped the operation. It does not detect a signal.	Check the power to the Power Box. There may be an electrical power interruption. There is no need to do anything. Robomow will renew operation as soon as the power is back on.
U087	Mow motor overheat, Cooling... The mowing motor has been working under a severe load for too long.	No need for action – Robomow will renew automatically the operation, as the mowing motor will cool down.
U088	Drive motor overheat, Cooling... The drive motors have been working under a severe load for too long.	No need to do anything. Robomow will renew the operation automatically as soon as the drive motor will cool down.
U089	Child Lock feature is activated. The operational buttons are locked to prevent unintended operation, especially by children.	To operate the mower, first press one of the operating mode buttons and then to press the OK button to confirm.

Display	Message / Description	Required Action
U090-U093	<p>Sub-Zone 1/2/3/4 entry problem.</p> <p>The mower either fails to leave/bypass the Base Station on its way to the Sub-Zone, or fails to enter the Sub-Zone.</p> <p>The mower will try to reach the Sub-Zone every two hours. If the mower fails to reach the Sub-Zone within three attempts, it will stay in the Base Station until the end of current mowing cycle.</p> <p>The mower will not skip to the next Sub-Zone (if there are any), if it fails to reach the current one.</p>	<p>Try to start manual mowing (refer to section 6.3 – Manual Operation). Check if something disturbs mower's driving backwards and/or bypassing the Base Station. Confirm the mower drives along the perimeter wire and doesn't fall off the lawn's edge, when it departs from the Base Station.</p> <p>Confirm that the mower is able to follow the perimeter wire along the narrow pass until it reaches the Sub-Zone. Refer to section 4.3.3 for instructions on how to set a narrow pass properly.</p>
U094	Raise mowing height when activating the TurboMow mode.	Refer to sections 5.1 and P026 in Section 6.4.2 in the User Manual.

9.4 Basic Troubleshooting

The next table will give details and possible causes of other faults, which do not provide error codes. If a fault cannot be dealt with using these tables, please call your service provider.

Problem Encountered	Probable Cause/Event	Corrective Actions
Poor quality of mowing	<ul style="list-style-type: none"> - Dull blade - The grass is too high in relation to the set cutting height. - The grass is wet and causes accumulation of grass clippings around the blade. 	<ul style="list-style-type: none"> - Replace blade. - It is recommended to cut less than a 1/3 of the green part of the grass. - Set the cutting height to a higher position and then successively lower. - If it is during a fast growing season – change the Mowing Frequency (refer to Section 6.4.2 – P001). - For best cut, operate Robomow when the grass is dry. Do not mow in the early morning hours. - Switch Off the Safety Switch and use heavy gloves to clean and remove the grass clippings.
Mower doesn't find the Base Station	- There is a Perimeter Island or a Narrow Passage that prevents the mower to complete its drive towards the Base Station in Near Wire Follow mode.	- Reduce the Near Wire Follow Distance in the Settings menu from the default 7.
Mower doesn't depart from the Base Station for a long time	- There are several possible reasons for a non-departure, including inactive times, rain detection, etc.	- Press and hold 'Home' button for 1 second while the mower is in the Base Station. The non-depart reason code will be displayed for 3 seconds. Refer to Section 9.4.1 for detailed description of no-depart codes.
Robomow is noisy and vibrates	- Damaged or unbalanced blade	<ul style="list-style-type: none"> - Check if the lawn is free from branches, stones or other objects that can damage the blade. - Replace the blade
Mower does not dock properly and sometimes misses the Base Station contacts	<ul style="list-style-type: none"> - Height differences between the lawn and the Base Station surface. - The wire underneath the Base Station is not tight and placed in the middle of the Station. - The Base Station is set up on a side slope. - The Base Station is placed too close to the corner of the lawn 	<ul style="list-style-type: none"> - Fill some ground to flatten the lawn to the Base Station to allow smooth entrance. - Confirm the wire underneath the Base Station is straight, tight, and centered below the Base Station. - Move the Base Station to a relatively level ground. - Move the Base Station so it is not within 3 meters from a corner.

Problem Encountered	Probable Cause/Event	Corrective Actions
Uneven mowing results	- The time between operations is too long because of long inactive time windows.	- Minimize the Inactive Time windows to allow Robomow to complete the Mowing Cycle faster and to achieve even mowing results.
	- Grass is growing very fast.	- If it is during a fast growing season – change the Mowing Frequency (refer to Section 6.4.2 – P001).
	- The shape of the lawn is complicated (Narrow Passages, obstacle and islands).	- In a complicated lawn more time is required for the lawn to achieve better mowing results. - Increase the mowing hours percentage (refer to Section 4.3.2.1).
	- The set area is smaller than the actual lawn size.	- Increase the zone area (refer to Section 4.3.3 Edit an existing Zone).
Robomow operates during Inactive Time.	- Wrong clock time is set in the mower.	- Verify that the time on the mower is set correctly. - Set the time (refer to Section 4.4.4).
		- Reset the Inactive Time (refer to Section 4.3.1).
Robomow operates during rain	- Rain Sensor is disabled or its sensitivity is set too low	- Enable the Rain Sensor and adjust its sensitivity if required (refer to Section 6.4.2 – P007/p008)
	- The Islands feature is set to On. In this case the mower is searching for the base by moving around the lawn. This special search method takes more time, and may create an impression that the mower is still mowing, while in fact it is already searching for the Base Station.	- No special action is required. For more information about the Islands On/Off feature refer to Section 6.4.2 – P002)
Cut wire indicator is flashing on Power Box	- The Extension Cable is disconnected or damaged between Power Box and the Base Station.	- Confirm the Extension Cable is plugged in and wire leads are firmly attached.
	- Perimeter Wire is cut.	- Walk along Perimeter Wire. - Look for cuts or breaks in the wire. - Repair with Robomow wire splice connectors.
The poor connection indicator is flashing on Power Box	- Poor connections	- Check and repair all loose, poor, or corroded connections.
	- Twisted cables or a screw terminal which is insulated with insulation tape is not a satisfactory splice.	- Use the connectors supplied in the box. They are waterproof and give a reliable electrical connection.
	- Soil moisture causes the conductors to oxidize.	

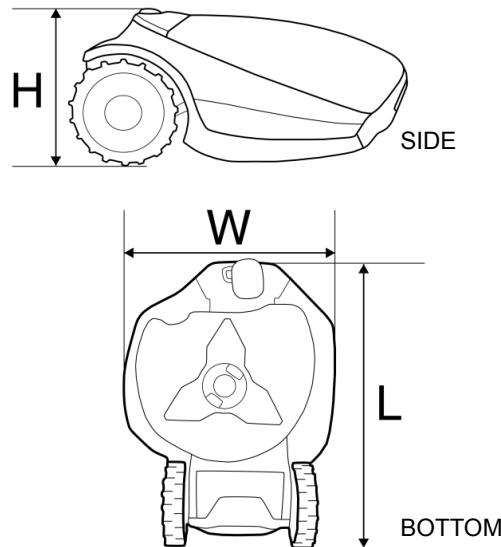
9.4.1 Description of No-Depart Codes

Code	Description	Corrective Action
00	None. Automatic departure is working properly	None. Wait for the end of current charging cycle
01	Mower's battery is not yet in the required state for automatic departure	None. Wait for the end of current charging cycle. May take longer than usual
02	Inactive Time is activated. No automatic departure during Inactive Time	None. Validate Inactive Time settings (see Section 6.4.1)
03	Mowing cycle is completed. Waiting for the next scheduled operation	None
04	Humid conditions or rain were detected during last 30 minutes.	- None. If the rain has stopped, wait at least for another 30 minutes. - If it there was no any raining at all, consider adjusting rain sensor's sensitivity (see P008 in Section 6.4.2) or call Robomow Hotline
05	The mower is switched off	Switch on the Safety Switch
07	User response (interaction) is required in order to continue current operation	Acknowledge the error message
08	Multiple consecutive mowing operations were shorter than expected. Usually accompanied by U018 ("Operation time is shorter than expected")	- Inspect mower's blade and drive wheels. - Battery run-time may be too short.

Code	Description	Corrective Action
09	One-Time setup is running	One-Time setup should be completed before the automatic operation can start
11	Automatic operation is disabled by menu P021 (see Section 6.4.2)	Enable automatic operation through menu p021
12	Automatic operation is put on pause by the Power Box	Un-pause automatic operation on the Power Box or through menu P021
13	All week days are set as inactive days	Validate Inactive Time settings (see Section 6.4.1)
14	The mower is being charged directly by the Power Box (via the DC connector)	Disconnect the DC cable from the mower. Put the mower in the Base Station.
15	Battery cells are being balanced in special charging mode	None. Wait for the end of current charging cycle. May take longer than usual.
16	The mower is in the Base Station, but there is no charging voltage supply	<ul style="list-style-type: none"> - Inspect Power Box's connection to the Base Station - Confirm that nothing is blocking the charging pins
17	Low ambience temperature	None. The mower will automatically depart when it gets warmer.
18	Sub-Zone entry problem. The mower was unable to enter one of the Sub-Zones	Refer to U090-U093 in Section 9.3

10. Product Specification

	RC 304	RC 306	RC 312
Designation	Robotic Mower	Robotic Mower	Robotic Mower
Max Lawn Size	400 m ² / 4400 ft ²	600 m ² / 6600 ft ²	1200 m ² / 13000 ft ²
Base Station	Included	Included	Included
Robot Dimensions	63x46x21cm/25x18x8"	63x46x21cm/25x18x8"	63x46x21cm/25x18x8"
Package Dimensions	80x54x33cm/32x21x13"	80x54x33cm/32x21x13"	80x54x33cm/32x21x13"
Robot Weight	11.1 kg / 24.5 lb.	11.1 kg / 24.5 lb.	11.1 kg / 24.5 lb.
Package Weight	22.8 kg/ 50.5 lb.	22.8 kg / 50.5 lb.	22.8 kg / 50.5 lb.
Cutting Width	28 cm / 11"	28 cm / 11"	28 cm / 11"
Cutting Height	15-60 mm/ 0.6"-2.4"	15-60 mm / 0.6"-2.4"	15-60 mm / 0.6"-2.4"
Mowing Power	200 Watts	200 Watts	200 Watts
Mowing Motors	DC Brush	DC Brushless	DC Brushless
Noise Level	High Power: 67.6 dB measured (Guaranteed 69 dB) The noise at the operator's ears less than 70 dB		
Battery Type	26V Lithium (LiFePO4)	26V Lithium (LiFePO4)	26V Lithium (LiFePO4)
Robot Part No.	PRD7004B	PRD7006B	PRD7012A



Anti-Theft / Disabling Device PIN Code

Write down your 4-digit Anti-Theft / Disabling Device PIN code.

Refer here, if you ever forget the code.

Robomow Serial Number

11. Maintenance and Storage

11.1 General Instructions

- Always switch off the Safety Switch of Robomow® before checking/ cleaning/ working on Robomow® or replacing the blade. Never attempt to service or adjust the mower while it is in operation.
- Check and clean Robomow® regularly and replace worn parts to improve performance and operation and to ensure a longer lifetime of your product.
- In case of abnormal vibrations, stop the mower, switch off the Safety Switch and check for any damage of the blade. Replace worn/damaged blade to preserve balance. If vibration continues, call for service.
- Use only the original equipment and accessories. It is not permitted to modify the original design of Robomow®. All modifications are made at your own risk.

11.2 Battery Maintenance and Disposal

- The battery is maintenance-free, but has a limited lifetime of 2-4 years. Battery life is dependent on the season length and how many hours Robomow® is used. Thus, it is recommended to change the 'Mowing Frequency' (Section 6.4.2 – P001 in the table) when the growth rate of the grass is slower to prolong the lifetime of the mower and the battery.
- Refer to Section 8.2 for more information about out of season battery maintenance.
- Disposing of the Old Battery Pack**

IMPORTANT! Do not place used batteries in your household trash. The battery must be collected, recycled, or disposed of in an environmentally sound manner. Return the old power pack to an approved battery recycler.

11.3 Winter Storage and Service

- Robomow®**
 - Clean Robomow® before putting it away for the winter storage.
 - Follow the instruction for Out of Season Charging in Section 8.2.
 - Store the mower in a dry area, preferably at room temperature.
- Base Station**
 - No winter storage is required for a Base Station. It can be left on the lawn during a winter period.
- Winter Service**
 - To allow better maintenance and keep Robomow® in a good condition, it is recommended to bring your Robomow® to a certified Robomow® dealer for service prior to winter storage.
 - Winter Service includes operations as cleaning the mower parts and mowing deck, checking for wear parts and replace if required (such as blade, drive wheels and other moving parts), testing the mower functions and safety components, checking battery, and upload the latest software version, possibly including newly added features.

11.4 Maintenance of the Mowing Deck

Robomow is a dedicated mulching mower. It may accumulate clippings under the mowing deck, particularly when mowing wet or damp grass.



Warning!

Severe injury hazard!

Always turn the Safety Switch Off before lifting the mower.

The blade is very sharp. They can cause severe cuts or lacerations.

Always wear heavy work gloves when working with or around the blade.

NEVER, use a damaged or a broken blade. Use only a sharp blade.

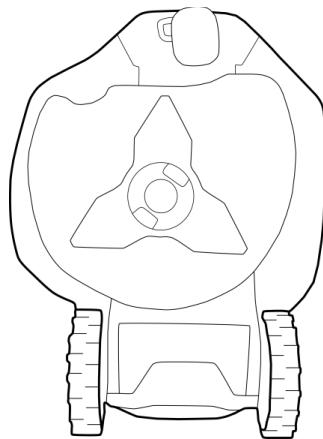
- Inspect the underside of the mower periodically. Clean if necessary.
- Carefully scrape the collected grass debris from under the mowing deck.
 - Most grass accumulation can be removed using a small wooden stick or similar object.
 - You may remove the blade to gain better access to the mowing chambers.

IMPORTANT! Do not place the mower upside down.

Instead, lean the mower against a surface to gain access to the mowing deck area.

IMPORTANT! NEVER use a water hose or any type of liquid to clean the underside of the mower. Liquids can damage components.

Use only damp or wet cloth to wipe the surface clean after scraping.



11.5 Maintenance of the Blade

- Examine the cutting blade for damage periodically.
- Use only a sharp blade. Replace any damaged blade.
- Replace the blade once a year between seasons.

CAUTION! ALWAYS TURN THE SAFETY SWITCH OFF BEFORE SERVICING BLADE!

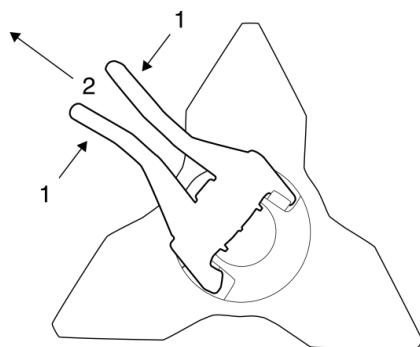
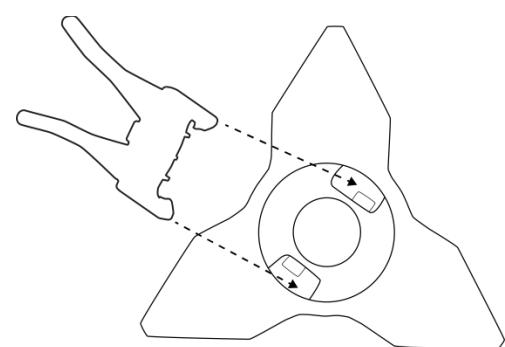
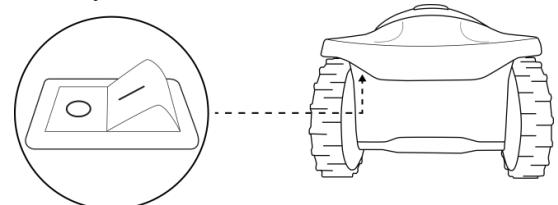
IMPORTANT! After turning off the Safety Switch always reset the current day and time. Failure to do so may result in non-intentional operation of the Robomow.

IMPORTANT! Sharpening is not allowed, since it may create unbalance.

To remove the blade:

- Insert the clamp side of the Blade Removal Tool into the open slits beside the locking tabs on either side of the blade.
- Turn the Blade Removal Tool slightly so that the clamp resides on top of the locking tabs on either side.
- Squeeze the handle of the Blade Removal Tool. The locking tabs on each side of the blade will be pressed (1).
- Pull the blade assembly off, away from the mower (2)
- When reinstalling the blade, line up the mating splines and push until a firm click is heard, indicating a proper seating of the blade onto the shaft.

Safety Switch



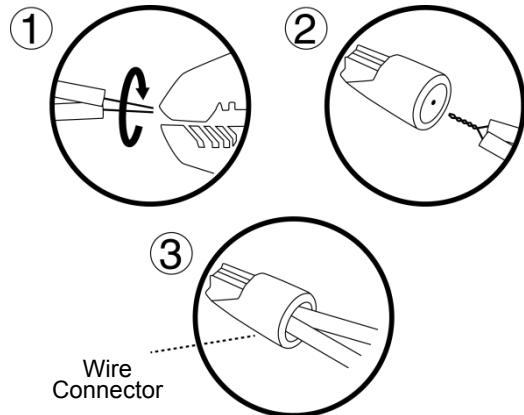
11.6 Splicing the Perimeter Wire

If the Perimeter Wire needs to be spliced, use the connectors supplied in the Robomow box. It is waterproof and gives a reliable electrical connection.

IMPORTANT! Before slicing the Perimeter Wire, disconnect the PowerBox from the power outlet.

1. Strip 1 cm (0.5 inch) of each wire end together and twist the stripped ends using pliers.
2. Insert the twisted wires into the splicing connector.
3. Screw the wire connector on the twisted wires. Make sure it is tightly secured.

IMPORTANT! Neither twisted cables, nor a screw terminal insulated with insulation tape are a satisfactory splice. Soil moisture will cause such conductors to oxidize and will later lead to a broken circuit.



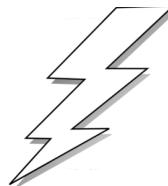
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11.7 Maintenance of the Base Station Area

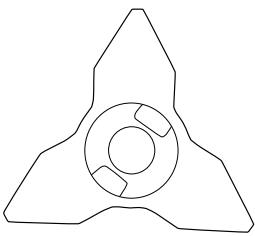
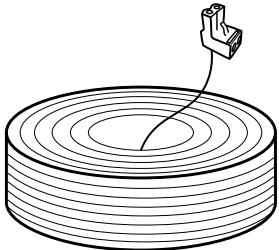
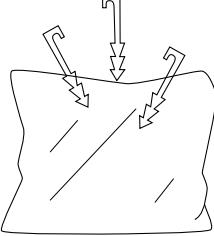
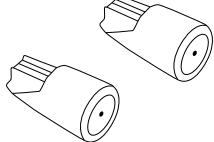
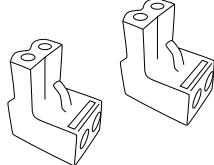
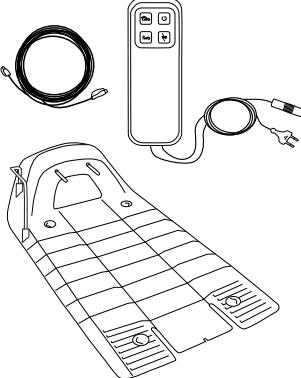
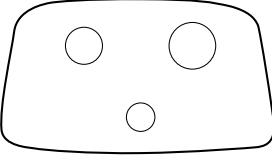
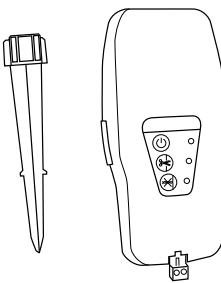
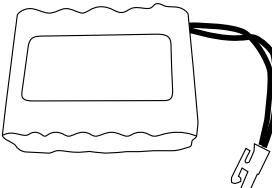
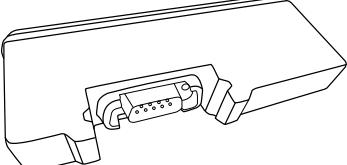
- Keep the Base Station entrance and area clean of leaves, sticks, twigs or any other debris that usually accumulates in such areas.
- NEVER spray a water hose directly towards the Base Station.
- Be careful when trimming around the Base Station with a powered weed trimmer as damage to the Extension Cable may occur.
- In the event of damage to any part of the Extension Cable, stop the use of the mower and the Base Station. Disconnect the Extension Cable and replace it.

11.8 Lightning storm

Warning! To reduce the risk of damage to components in the case of a lightning storm, disconnect the Perimeter Wire from the Base Station /Perimeter Switch and the Power Box 230V/120V plug from the power outlet.



12. Accessories

<p>Blade (Part No. MRK7003A) Keep a spare blade on hand. A sharp blade is important for safety and best cutting performance.</p> 	<p>Battery (Part No. MRK7005A) Used to replace the existing battery and refresh cutting capacity.</p> 
<p>Perimeter Wire (Part No. MRK0014A) For larger lawns or additional zones.</p> 	<p>Peg Pack (Part No. MRK0012A) Used to fasten the Perimeter Wire to the ground. For larger lawns or additional zones.</p> 
<p>Wire Repair Connectors (Part No. MRK0039A) Used for repairing or splicing wires.</p> 	<p>Plot Connectors (Part No. MRK0038A) Used for connecting the Perimeter Wire to the Base Station or Perimeter Switch.</p> 
<p>Base Station and Power Box (Part No. MRK7006A) Used for:<ul style="list-style-type: none">◦ Enabling multiple mowing cycles in a Separated Zone</p> 	<p>Remote Control (Part No. MRK7100) Used to Manually drive and mow anywhere. Includes a Safety function to prevent accidental use.</p> 
<p>Perimeter Switch (Part No. MRK5002C) For zones that are not connected to the Base Station.</p> 	<p>Batteries Pack for Perimeter Switch (Part No. MRK5006A) Preferable for areas where electricity is not available or not close enough to the Perimeter Switch</p> 
<p>Robomow App Enables friendly and intuitive operation of your Robomow and opens more menu options and features, which are not available through the mower Operating Panel.</p> 	<p>GSM Module^(*) (Part No. MRK6100A) Enables remote alerts through the Robomow App (for all RC and TC models). <i>(*) Not available in all markets</i></p> 

13. Tips for maintaining your lawn

Robomow® – Lawn care has never been so easy

EN

Best time to mow

Mow your lawn when the grass is dry. This prevents the clippings from clumping and leaving piles on the lawn. Mow it late in the day rather than during the heat of the day.

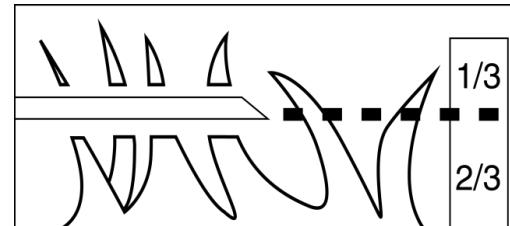
Mowing frequency

Mow often in order to produce short, small clippings. During the active growing season the mowing frequency should be increased to once every 3-5 days, before the grass is too long. Short clippings decompose quickly and will not cover the grass surface. If the grass gets too high, raise the cutting height, mow, and then gradually lower it over several mowings.

Cutting Height

Follow the “1/3 rule”. Mow no more than 1/3 of the length of the grass. Proper mowing will produce short clippings that will not cover up the grass surface.

You may have to cut the lawn more frequently, or double cut, when the lawn is growing fast, such as in the spring.



Grasscycling

Grasscycling reduces the amount of water needed by lawns since the clippings are about 80 – 85% water. Grasscycling slows evaporation losses from the soil surface, and conserves water. Most lawns need less water when Grasscycling.

Watering

Water your lawn between 4 a.m. and 8 a.m. in the morning, so water has time to soak into the soil before the heat of the sun causes evaporation.

Your lawn needs 1 to 1-1/2" (3-4cm) of water weekly. Deep watering allows grass to develop a deep root system, enabling the lawn to resist disease and drought.

Do not over water

Too much water is not only wasteful but can also increase turf growth, which requires more frequent mowing. Let the soil partially dry out between watering. Water when the top two inches of soil have dried out. Use an object such as a screwdriver to probe your soil and measure the depth of the moisture.

Fertilization

Grasscycling reduces the amount of lawn fertilizer needed because the clippings provide about 1/4 of a lawn's annual needs.

Blade

Keep your mower blade sharp. A sharp blade provides a clean, safe, and efficient cut. A dull mower blade will tear and shred the tips of the grass, which can provide an entry for disease organisms and weaken the grass plant. It is recommended to replace the mower blade once a year.

Thatch

Clippings and thatch are simply not connected. As mentioned previously, grass clippings are approximately 80-85 percent water with only small amounts of lignin, and they also decompose rapidly.

When we stop and think about it, golf courses, sports fields, and parks, have been mowing grass for years and recycling with no grass catchers.

A small amount of thatch (approximately 1/2 inch) is actually beneficial to a lawn. Grass clippings protect your lawn's root system from heat and water loss.

Warranty Card
Robomow®
'C' Series Limited Warranty

Friendly Robotics warrants to the original purchaser that the 'C' series 'Product' is free from defects in materials and workmanship when used under normal residential* purposes for a period of three years** (on RC models purchased in Europe), two years (on TC/MC models purchased in Europe) or one year (on any models purchased in the US), one year on the batteries, beginning from the date of purchase. Product accessories, including replacement batteries, are warranted for a period of ninety days from the date of purchase. This warranty provides for the cost of parts and labor to repair covered defects when performed by an authorized Friendly Robotics service and warranty facility. A valid proof of purchase is required for warranty repairs.

The limited warranty does not cover transportation costs of any kind. The owner bears all responsibility for transportation costs to an authorized Friendly Robotics service and warranty facility.

*Normal residential purposes are defined as the use of the product on the same lot as your primary home. Use at more than one location is considered commercial use, and this warranty would not apply.

**the 3rd year covers labor and part only

Items and Conditions Not Covered

This express warranty does not cover the following:

- Cost of regular maintenance service parts or procedures, such as blade or blade sharpening.
- Any product or part that has been altered, misused, abused or requires replacement or repair due to accidents or lack of proper maintenance.
- Normal wear and tear, including fading of paint or plastic parts.
- Cost of installation or reinstallation, removal of installation or any costs or damages associated with improper installation or use of the product.
- Any product that has been opened, repaired, modified or altered by anyone other than a Friendly Robotics authorized repair facility.
- Repairs necessary due to improper battery care and/or improper charging process such as charging in wet conditions, electrical supply irregularities, or failure to properly prepare the mower or battery prior to any period of non-use.
- Repairs necessary due to water damage, other than incidental rain exposure, repairs due to lighting or other acts of God.

Instructions for Obtaining Warranty Service

Should you feel your Friendly Robotics product contains a defect in materials or workmanship, contact the retailer who sold you the product.

Owner Responsibilities

You must maintain and care for your Friendly Robotics product by following the maintenance and care procedures described in the User Manual. Routine maintenance, whether performed by a service provider or by you, is at your expense.

General Conditions

Repair by an authorized Friendly Robotics service and warranty repair facility is your sole remedy under this warranty. There is no other express or implied warranty. All implied warranties of merchantability and fitness for use are limited to the duration of this express warranty. Friendly Robotics is not liable for indirect, incidental or consequential damages in connection with the use of the Friendly Robotics Product covered by this warranty, including any cost or expense of providing substitute equipment or service during reasonable periods of malfunction or non-use pending completion of repairs under this warranty. Some states do not allow exclusions of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusion and limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

Always follow the Safety Instructions specified in this User Manual