

Sveaverken Blix User Manual

Last edited: July 5

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Sveaverken Blix

Robotic Lawn Mower



- Version of the Manual:
 - V0.1
- Date of Publication:
 - TBD

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Copyright Page

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Contact Information

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Preface

- Purpose of the Manual:

This User Manual aims to e

- How to Use the Manual: Instructions on how to navigate and use the manual effectively.

Legend

⚠ Warning

⚠ Important

💡 Hints and Tips

📖 Reference

Table of Contents

Introduction

The Sveaverken Blix is an advanced robotic lawn mower designed to provide efficient, autonomous lawn care. This user manual covers the setup, operation, and maintenance of the Blix mower.

The Blix utilizes cutting-edge sensor fusion technology, including LiDAR, to create a 3D map of your yard for precise navigation and mowing coverage. It features obstacle avoidance, autonomous path planning, and virtual boundary mapping capabilities through the companion app.

Key features include:

- Easy setup - drive the mower around your lawn to create Work Zones and No-go Zones. No need for perimeter wires or GNSS reference stations
- Customizable mowing heights, patterns, and schedules
- Automatic rain sensing and terrain adaptation
- Quick blade removal and replacement
- App control and regular, free over-the-air updates

This manual will guide you through the initial installation, setting up the app, operating modes, maintenance procedures, troubleshooting, and technical specifications of the Sveaverken Blix. Follow the instructions carefully to ensure safe and optimal performance of your robotic lawn mower.

1. Safety Information

1.1 Safety Definitions

Warnings, cautions, and notes are used to highlight particularly important parts of the manual.

- **WARNING:** Indicates a risk of injury or death for the operator or bystanders if the instructions in the manual are not followed.
- **CAUTION:** Indicates a risk of damage to the product, other materials, or the adjacent area if the instructions in the manual are not followed.
- **Note:** Provides additional information that is necessary in a given situation.

1.2 General Safety Instructions

WARNING: Read the following warning instructions carefully before using the product.

- **Read the Operator's Manual:** Ensure you understand the instructions before using the product. Keep the manual for future reference.
- **Supervision and Instruction:** This appliance is not intended for use by children or persons with reduced physical, sensory, or mental capabilities, or lack of experience

and knowledge, unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety. EU requirements allow this appliance to be used by children aged from 8 years and above and persons with reduced physical, sensory, or mental capabilities or lack of experience and knowledge, if they have been given supervision or instruction concerning the use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be done by children without supervision.

- **Recommended Equipment:** Use the product only with the equipment recommended by Sveaverken. All other types of use are incorrect.
- **Work Area Safety:** Do not use the product when people, especially children, or animals, are in the work area. Keep children and pets away from the mower when it is operating.
- **Warning Signs:** Place warning signs around the work area if the product operates in public areas. The signs must read: "Warning! Automatic lawn mower! Keep away from the machine! Supervise children!"
- **Moving Parts:** Do not touch moving hazardous parts, such as the blade disc, before it has come to a complete stop.
- **Product Handling:** Set the product to OFF before clearing a blockage, performing maintenance, or examining the product. If the product starts to vibrate abnormally, examine it for damage before restarting. Do not use the product if it is damaged.
- **Injury or Accident:** Seek medical aid if an injury or accident occurs.
- **Power Supply Cables:** Do not place the power supply cable and extension cable in the work area to avoid damage. Disconnect the plug from the power outlet if the cable becomes damaged while in operation. A worn or damaged cable increases the risk of electrical shock and must be replaced by service personnel.
- **Residual-Current Device (RCD):** When connecting the power supply to the power outlet, use an RCD with a tripping current of maximum 30 mA.
- **Charging Station:** Only charge the product in the included charging station. For safe disposal of the battery, refer to the Disposal section. Incorrect use may result in electric shock, overheating, or leaking of corrosive liquid from the battery. In the event of electrolyte leakage, flush with water/neutralizing agent and seek medical aid if corrosive liquid comes into contact with your eyes.
- **Original Batteries:** Use only original batteries recommended by Sveaverken. Product safety cannot be guaranteed with non-original batteries.
- **Installation Instructions:** Follow the installation instructions to specify the work area.
- **Operation Instructions:** Follow the instructions for starting and operating the product.
- **Thunderstorm Precautions:** If there is a risk of a thunderstorm, disconnect the power supply and all wires to the charging station to reduce the risk of damage to

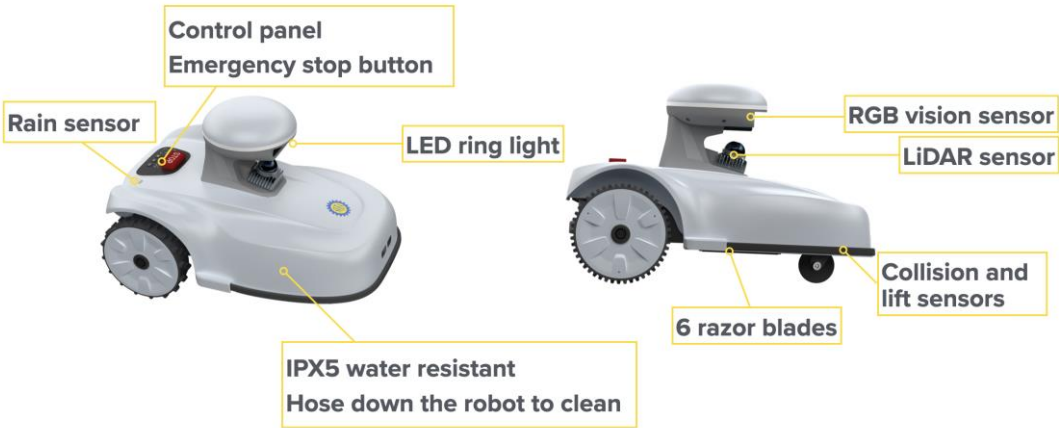
electrical components. Reconnect the power supply and all wires when the risk of a thunderstorm has passed. Ensure all wires are connected correctly.

- Maintenance Instructions: Follow the maintenance instructions and use Sveaverken original spare parts if necessary.
- Technical Data: For technical data such as weight, dimensions, and noise emission values, refer to the Technical Data section.
- Operator Responsibility: The operator is responsible for accidents or dangers that occur to other persons or property.

1.3 Specific Safety Considerations

- Wearing Gloves: Always wear gloves when changing blades to prevent injury.
- Proper Tools: Use proper tools when changing parts to ensure safety and prevent damage to the product.

2. Technical Specifications



Number	Blix
1	Control panel
	Emergency Stop
	Return to Charge
	Start Mowing
	OK
	Display Screen

2	Indicator lights
	WiFi
	Bluetooth
	Battery Level
	Lock
	Blades
3	Rain sensor
4	LED ring light
5	RGB vision sensor
6	LiDAR sensor
7	Collision sensor
8	Lift sensor
9	Blade deck
10	Front wheels
11	Drive wheels
12	SIM card slot
13	Charging port

In the Box



Item number	Item name	Quantity
1	Robotic lawn mower	1
2	Charging station	1
3	Weather shed	1
4	Wheel spikes	2
5	Power cables and adapter	1 set
6	Plastic pegs	8
7	Tool set: Parker screws *6 Anti-slide screws * 10 Allen wrench (small *1, large *1) Extra blades *6 Phillips screwdriver *1 Wrench *1	1 set

2.1 Robotic Lawn Mower

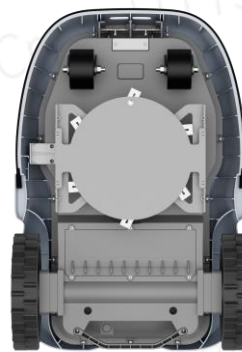
Specifications	Blix
Lawn Size	3000 m ² /day
Sensors	LiDAR *1, RGB camera *1
Weight	13.5 kg
Dimensions (L*W*H)	632 mm*440 mm*412 mm
Battery Capacity	0.095 kWh*2
Work Time per Charge	2 h
Cutting height (min-max)	10-50 mm
Cutting Width	255 mm
Max. Slope	65% or 33°
Waterproof Rating	Robotic Lawn Mower: IPX5 Charging Station: IP65
Noise Level	<60dB
Rain Sensor	Yes
Connectivity	WiFi, Bluetooth, 4G
Firmware update	OTA

2.2 LiDAR Sensor

Laser Wavelength	905 nm
Laser Safety	Class I (IEC 60825-1:2014) (safe for eyes)
Detection Range (@100 klx)	40 m @ 10% reflectivity 70 m @ 80% reflectivity

Point Rate	200,000 points/s
Operating Temperature	20°to 55°C (-4°to 131°F)
Power Supply Voltage Range	9-27 V DC
IP Rating	IP67

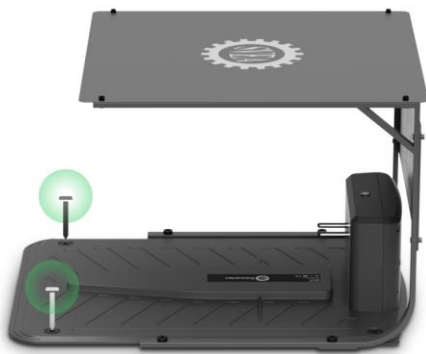
2.3 Parts



3. Getting Started

3.1 Charging station and weather shed

1. Secure the charging station and weather shed into your garden soil or on the ground with the pegs.
2. It's best to place the charging station on a flat surface with access to a power outlet to plug in the power cable.
3. There needs to be a 2-meter radius around the charging station for the mower to have enough clearance and be able to return home accurately.



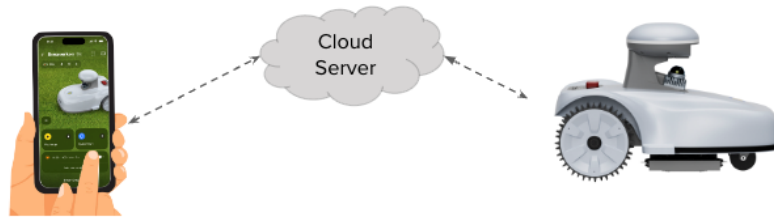
3.2 Charging the mower

1. Press the button at the bottom of the mower to turn it on.
2. Press the STOP button down. Roll the mower onto the charging station.
3. Press the power button on the charging station. You should see it blink green then red, and the mower's battery light will blink green and red as well. This means the mower is charging.

3.3 Connecting to the app

1. Download the app from the app store (Apple and Google Play Store links to be added)
2. Ensure Bluetooth is turned on.
3. Create an account
4. Scan the QR code on the mower to add and pair it with your account
5. Make sure the mower is on, connect the app to the mower via WiFi
 - a. The Bluetooth logo will light up when connected.
 - b. WiFi light: Blinking while connecting, Solid when ready.
 - c. Use the app for WiFi network configuration
 - d. Once successful, the mower will contact the cloud server
 - e. Once server information is received, the mower is officially online.

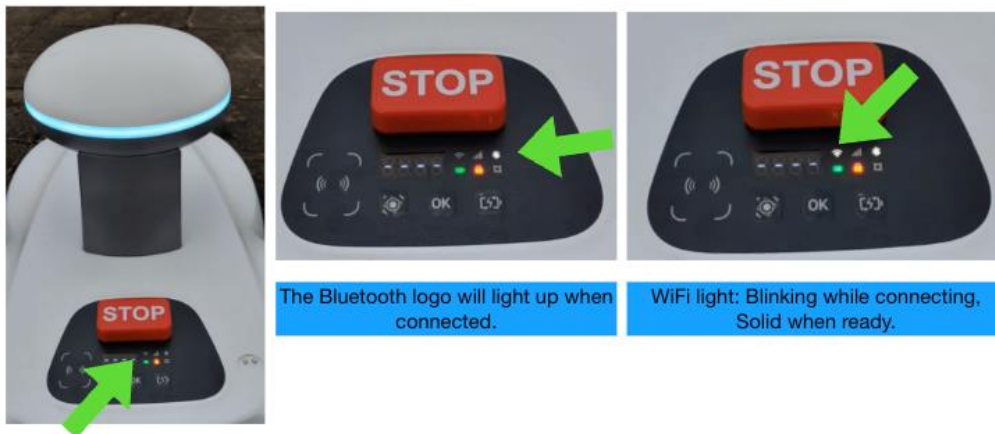
Connectivity overview



1. Use the app for WiFi network configuration
2. Once successful, the mower will contact the cloud server
3. Once server information is received, the mower is officially online!

Data transmitted and stored on the cloud server

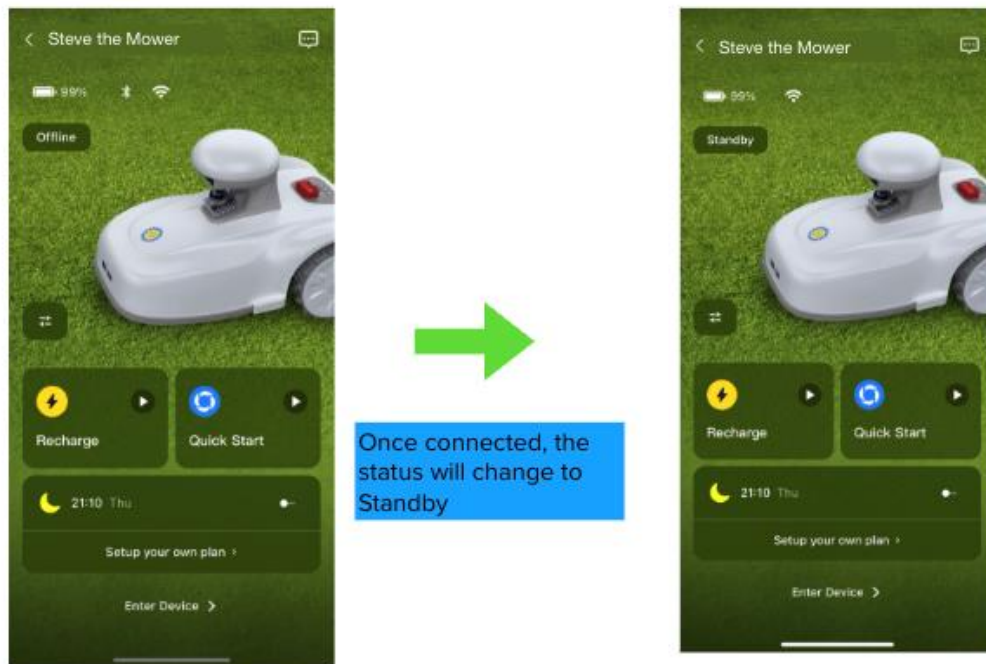
- Abstracted zone boundaries (No geographic information)
- Mission and scheduling information
- User login information (email, password, pairing information with mower)



6. Connect your robot to the internet.

Note: If you are using an iOS device, the mower can only connect to the Wi-Fi that your mobile device is connected to. Please connect your mobile device to the Wi-Fi first, then connect the mower to the same Wi-Fi.

- a. Connect phone to mower via Bluetooth (ensure Bluetooth is on and within 3 meters).
 - b. Enter/select Wi-Fi name and password.
 - c. Confirm connection.
 - d. Mower connects to cloud server and becomes online.
7. Once the server message is received, the mower is officially online.
 8. Mower status will change to Standby when it's online.



4. Basic Operations

Things to Know Before Mapping

Before mapping your lawn:

- Remove any debris, piles of leaves, toys, wires, stones, or other obstacles from the lawn. Make sure there are no children or pets on the lawn.
- Ensure the lawn mower is in good working condition and that the positioning and localization function is working properly.
- It is recommended that you leave a 15 cm gap when the robotic lawn mower is working along walls, fences, ditches, and other obstacles.
- During the mapping process, to ensure a better Bluetooth connection and timely handling of on-site situations, please follow the robotic lawn mower and stay within 3 meters of it.
- Map along the edge of the lawn.

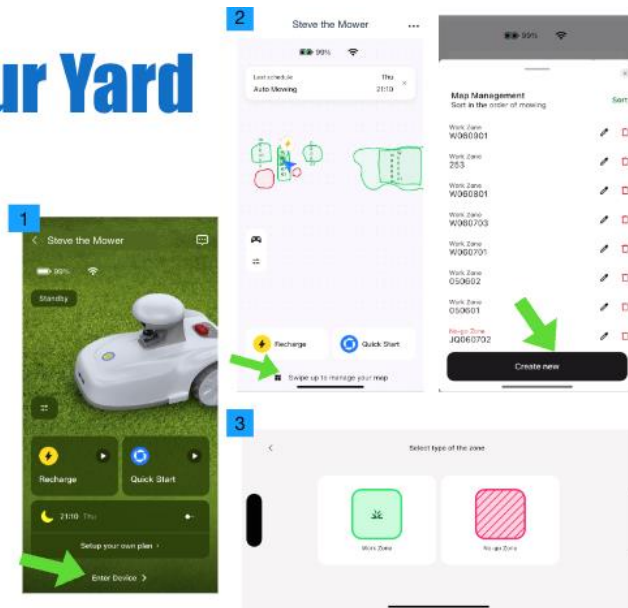
Additional Tips:

- If you have multiple lawns, you will need to map each lawn separately.
- If you have areas that you do not want the robotic lawnmower to mow, you can create virtual walls using the app.
- You can adjust the mowing schedule and other settings using the app.

4.1 Map your yard

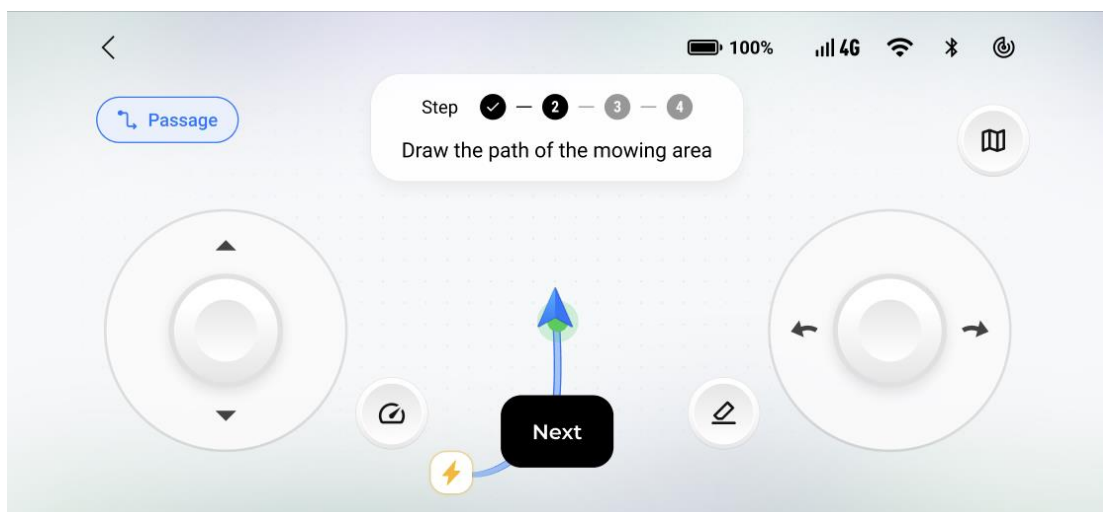
Step 3 Map Your Yard

1. Enter Device → Swipe up to manage your map
2. Tap on Create New and select the type of the zone you want to map
3. The mower will automatically back out of the charging station.
4. Use the controls on your phone to drive the mower along the edge of your Work Zone.
 - The left dial is forward and back, right dial is left and right.
5. Tap Completed to name and save the Work Zone.
6. Tap Recharge or manually drive the mower back to the charging station. Repeat the process to create multiple Work Zones.



1. Enter Device → Swipe up to manage your map
2. Tap on Create New and select the type of the zone you want to map
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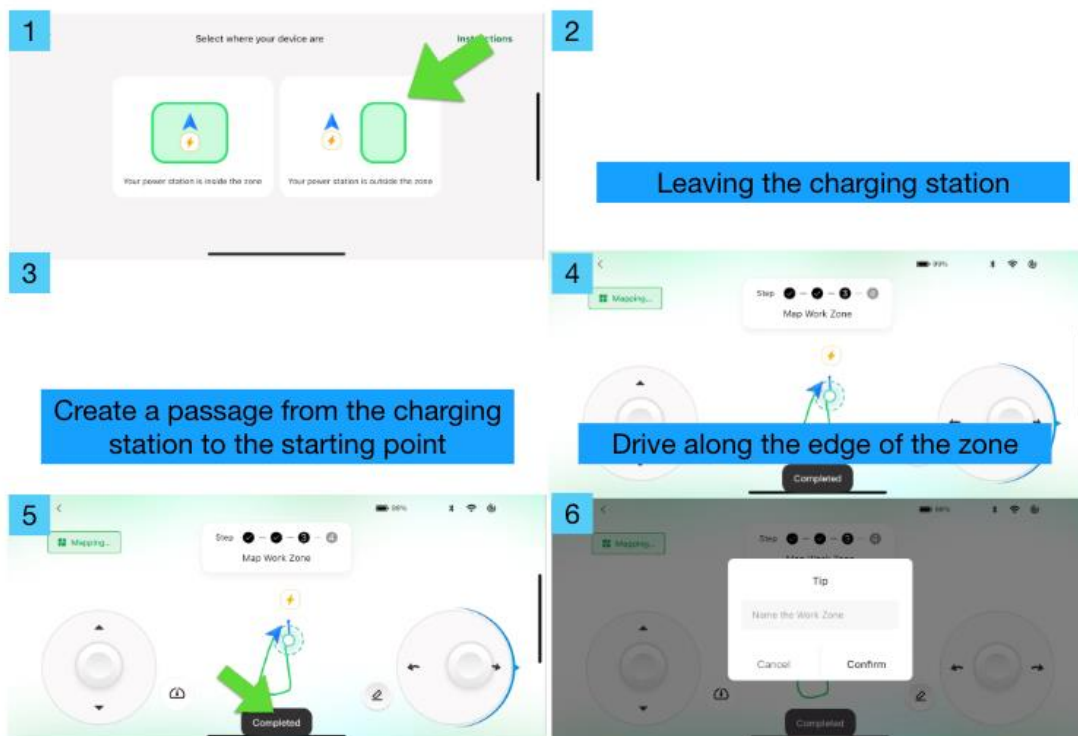
4.1.1 Passage



*This process creates a virtual passage that helps the mower understand where it needs to return to for charging. The mower needs to face the charging station while it's backing out to be able to return to the station accurately.

4.1.2 Create a Passage + Work Zone

1. Choose where your Charging Station is set up in relation to the Work Zone.
2. Drive the mower out of the Charging Station
3. Create a passage from the charging station to the starting point of the Work Zone
4. Drive the mower along the edge of the Work Zone
5. Make sure Bluetooth is on during the mapping process
6. Tap Complete and name the Work Zone



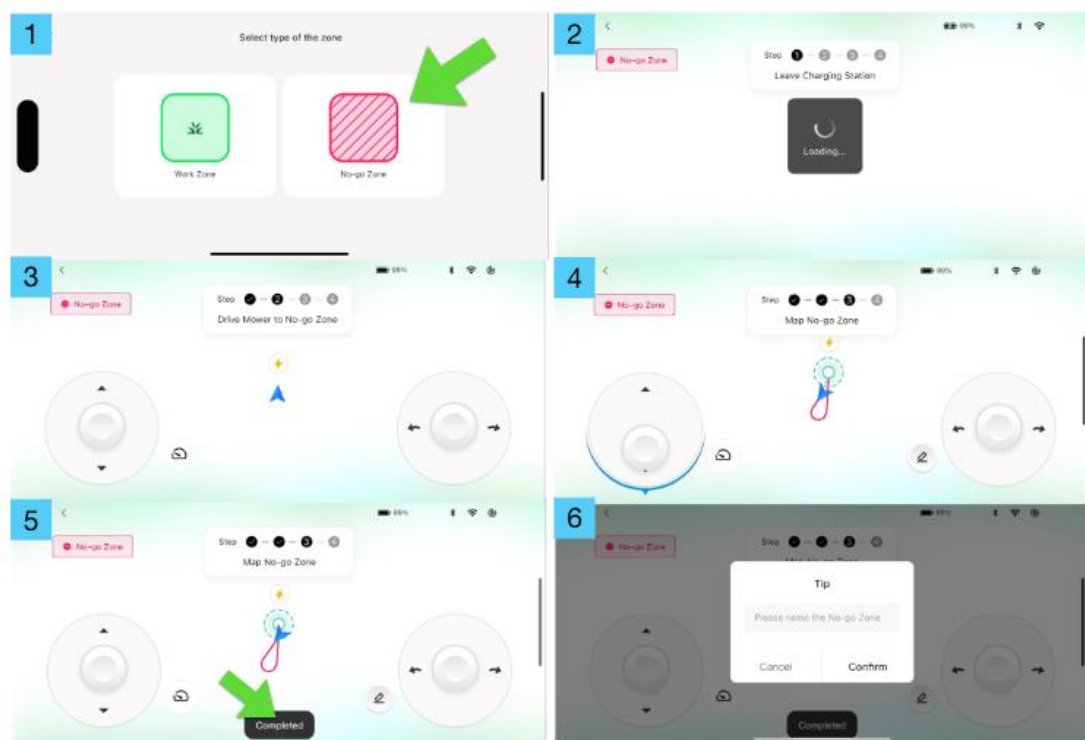
4.1.3 Create a Work Zone without a Passage

1. Choose where your Charging Station is set up in relation to the Work Zone.
2. Drive the mower out of the Charging Station
3. Drive the mower along the edge of the Work Zone
4. Tap Complete and name the Work Zone

4.1.4 Create a No-go Zone

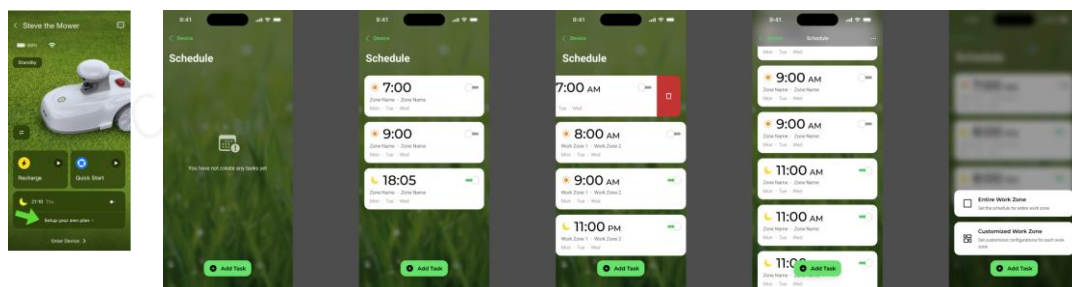
1. Select No-go Zone
2. Drive the mower out of the Charging Station
3. Drive the mower toward the No-go Zone, tap Start
4. Drive the mower around the zone where you don't want mowed

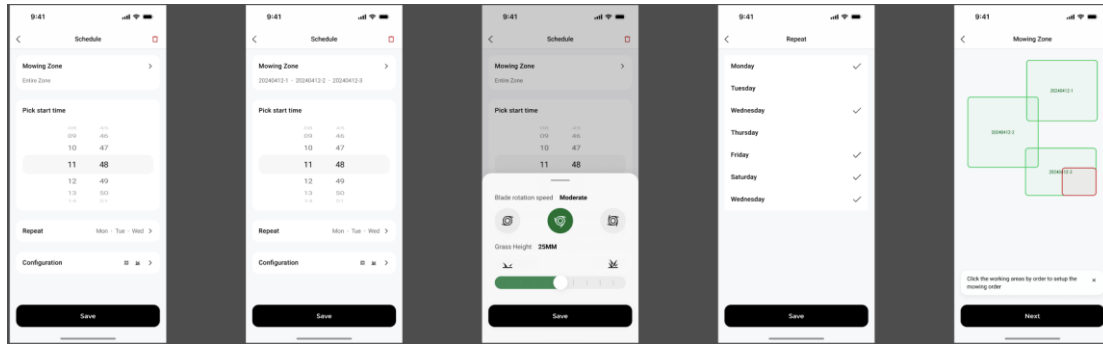
5. Tap Complete and name the No-go Zone



4.2 Schedule Mowing Tasks

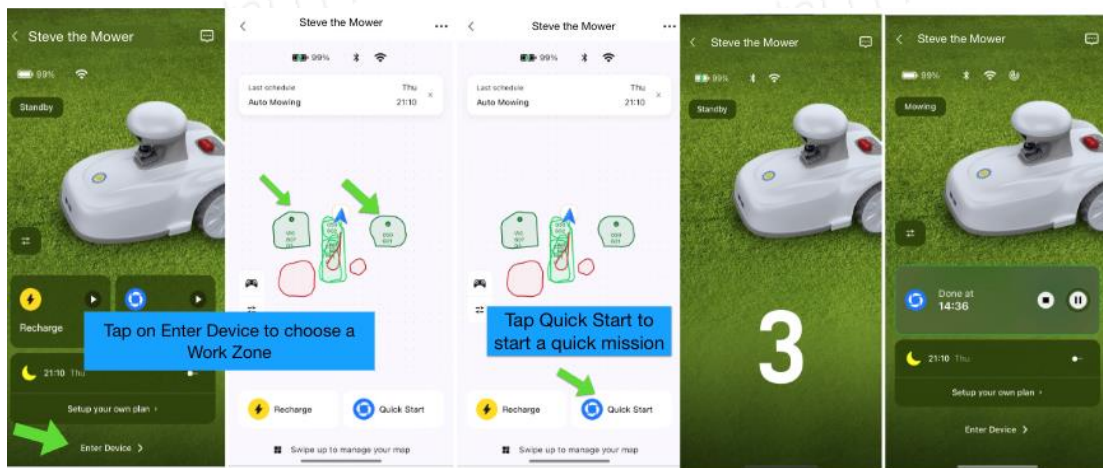
1. Tap Set Up Mowing Schedule
2. Tap Add Task
3. Set the time, frequency, and mowing parameters
4. Save





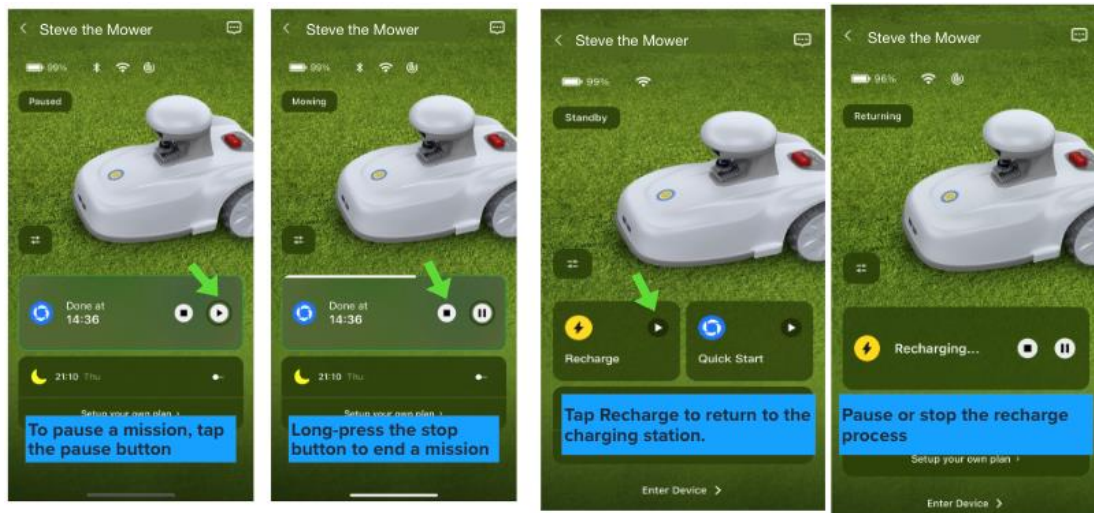
4.3 Quick Mow

1. Tap on Manage Mower to choose a Work Zone
2. Tap Quick Mow to start a quick mission



4.4 Pause and end mission

1. To pause a mission, tap the pause button
2. Long-press the stop button to end a mission
3. Tap Recharge to return to the charging station
4. Pause or stop the recharge process



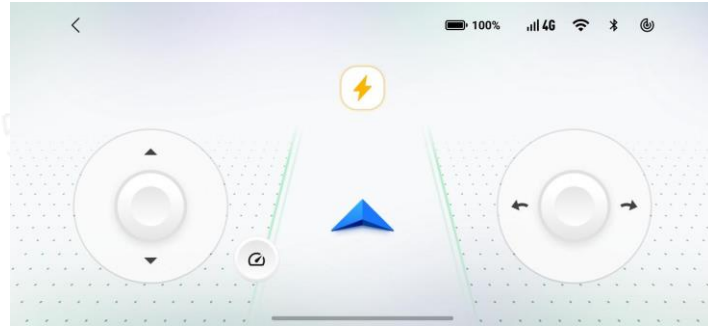
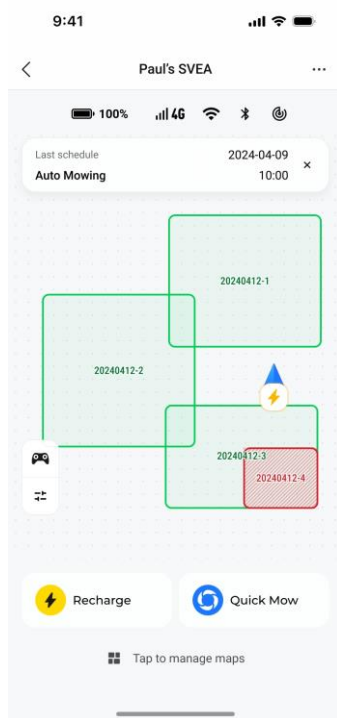
5. Manual Remote Control Function

Before using the manual remote control function:

1. Ensure your phone's Bluetooth is turned on and that the phone is within 3 meters of the robotic lawn mower.
2. Make sure the robotic lawn mower is powered on and the emergency stop switch is turned off.

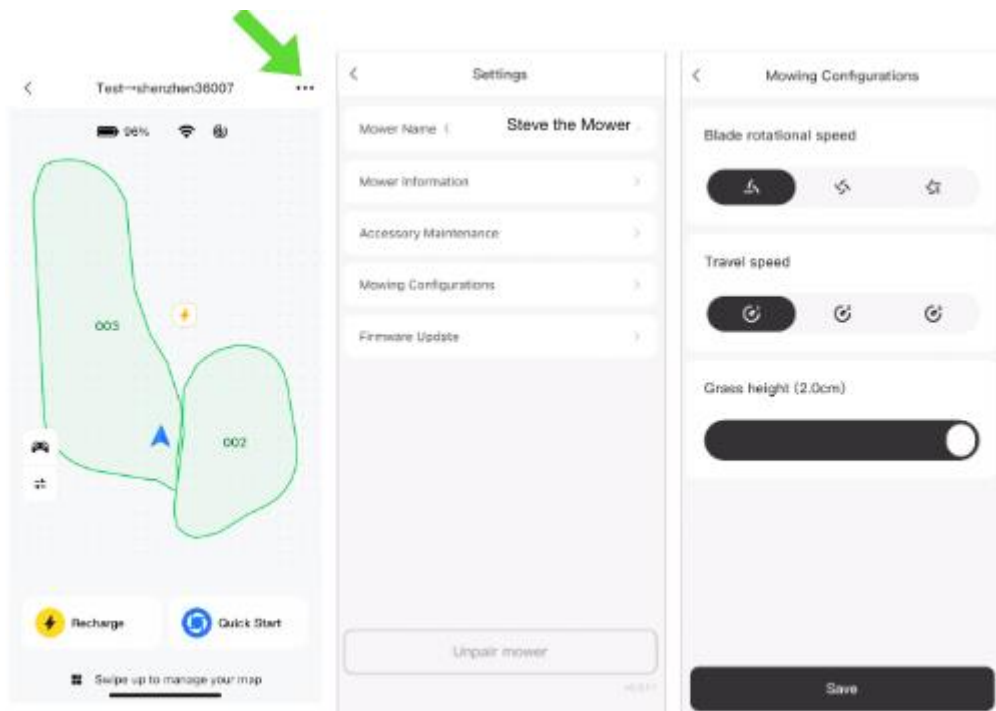
To use the manual remote control function:

1. Open the app and tap the remote control icon.
2. The app will activate Bluetooth and connect to the robotic lawn mower. Once connected, you will enter the remote control page.
3. Use the joystick to control the robotic lawn mower forward, backward, left, and right.
4. Tap the Speed Button to adjust the driving speed in manual remote control mode.
 - a. **Note:** Adjusting the speed in this mode will not affect the driving speed of the robotic lawn mower during automatic mowing.
5. Tap X in the upper left corner to exit the manual remote control function.



6. Settings

1. Change the name of your mower.
2. Monitor the health status of your mower's accessories.
3. Adjust mowing settings including blade speed, travel speed, and grass height.



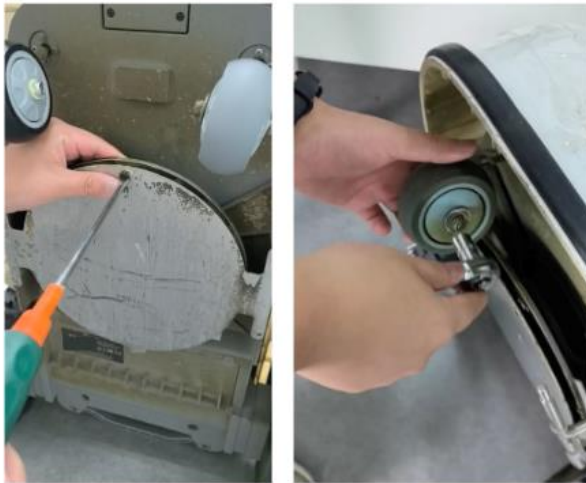
7. Advanced Features

- Custom Settings and Adjustments:
 - Blade rotation speed
 - Robot mower travel speed
 - Grass height - don't take off more than 1/3 of the grass height.
- Tips for Optimizing Performance:
 - 2-pass mode
 - Wet grass

8. Maintenance and Care

7.1 Routine Maintenance Schedule

Changing Blades and Wheels



7.1.1 Changing Blades

7.1.2 Changing Wheels

7.2 Cleaning and Storage Instructions

Troubleshooting

- Common Problems and Solutions: List of common issues and how to resolve them.

- When to Contact Customer Service: Guidance on when to seek professional help.

Warranty and Service

- Warranty Information
 - Standard warranty is 2 years.
- Service and Repair Instructions
 - Contact your local distributor
- Contact Information for Customer Support
 - Sveaverken support

Glossary

- Definitions of Technical Terms and Acronyms: Explanation of technical terms used in the manual.

Appendices

- Additional Resources: Links to additional resources and information.
- Accessories and Replacement Parts: List of available accessories and replacement parts.
- Regulatory Information: Compliance and regulatory information.

Warning

This device complies with Part 15 of the FCC Rules.

1.Operation is subject to the following two conditions:

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

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

interference by one or more of the following measures:

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

3. The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

4. Install and operate radiators at least 20 cm away from the human body in compliance with the FCC's radiation exposure limits for uncontrolled environments

Antenna Information

Model	Antenna type	Antenna gain	Manufacturer
YF0006BA	FPC	MAX 6dBi	Quectel Wireless Solutions Co., Ltd.
TB-02	PCB	MAX 1.74dBi	Shenzhen Ai-Thinker Technology Co., Ltd
Dual-band 3511	FPC	MAX 3.5dBi	Shenzhen Kexin Wireless Technology Co., Ltd