

BestMow

Quick User Guide

*Please read the user guide carefully before using our product.



“A Robot On Every Lawn”

Product: BESTMOW
Model: T100

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BestMow We001

Read before use

To avoid or reduce the risk of injury, users must read and understand this user manual before using this product.

Please keep this user manual properly.

Safety Tips

This symbol indicates important safety instructions. Failure to follow these instructions may endanger the personal safety or property safety of operators and other personnel. Before attempting to operate the lawnmower, please read and understand all instructions in this manual.

Preface

Thank you for using the product of BESTMOW. This manual provides you with instructions on the functional characteristics, installation, debugging, deployment, and the usage of Robotic Lawn mower, as well as matters needing attention during use. Before using this product, please read this manual carefully and use it according to the instructions. If you encounter any problems during the use of this product, please contact customer service or after-sales services personnel, and we will serve you wholeheartedly.

1. Safety instructions

Please read this safety statement and the safety advice and precautions in the text carefully before using this product. You must comply with the safety information in this manual and all applicable local regulations.

The safety recommendations and precautions in this manual introduce important information that must be followed to prevent personal and property damage when using and working around the product, aiming to help users:

- Detect and prevent dangerous situations
- Safe and correct use of this product and related equipment
- View the information on the safety label posted on this product
- Work in a safe working environment

1.1 Safety marking



WARNING: Disable the product before working on or lifting the product.



WARNING: Keep a safe distance from the product when operating.

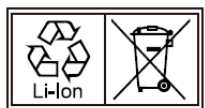
Keep your hands and feet away from the working blades.



WARNING: Read the user manual before operating the product.



WARNING: Do not ride on the product.



Lithium Ion Battery. This product has been marked with the symbol relating to all batteries «collected separately» bag and battery pack. It will then be recycled or dismantled to reduce environmental impact. Batteries can be harmful to the environment and human health because they contain harmful substances.



Preventing product from being incinerated or dumped in landfills. Make sure to recycle the product according to local legal requirements.

1.2 Notes

Operator Instructions

- Operators must be trained to use this product. Any losses or injuries caused by improper use shall be borne by the user.
- Please clean and maintain the robot when it is turned off or powered off.
- Prohibit unauthorized disassembly of robots.

Who can't use this product

- Never allow children, people with reduced physical, sensory, or mental capabilities or lack of experience and knowledge, or people unfamiliar with these instructions to use the machine, local regulations may restrict the age of the operator.
- Not to allow children to be in the vicinity or play with the machine when it is operating.

Where this product can't use

- Only use this product in the ways described in this manual.
- Never leave anything that can be climbed over by product in the working area which may cause damage to the product or injury to people.
- Keep any supply and extension cords away from the working area to avoid damage to the cords which can lead to contact with live parts.
- When used in public areas, warning signs shall be placed around the working area of the machine. They shall show the substance of the following text: "Warning! Automatic lawnmower! Keep away from the machine! Supervise children!".

When this product can't use

- Avoid using the machine and its peripherals in bad weather conditions, especially when there is a risk of lightning.
- Timely check the working area to remove any foreign objects that may damage the product or be damaged by the product.
- Timely inspect the product to make sure it's in good condition. Never operate a machine with a defective guard, a worn blade or a damaged cord, or any lost parts. And do not connect a damaged cord to the supply or touch a damaged cord before it is disconnected from the supply.
- Only use peripherals that come with the original product, such as battery, charger. Any unofficial peripherals may lead to unexpected results.

What should be done to this product

- Recommend connecting the peripherals only to a supply circuit protected by a residual current device (RCD) with a tripping current of not more than 30 mA.
- Turn off the product and remove the plug from the mains before the following operations.
- A. Lifting up the product or carrying it.
- B. Any assembly or disassembly of the machine that is allowed in this manual, such as changing blades, and battery.
- C. Clearing a blockage on the machine.
- D. Checking, cleaning or working on the machine or charging station.
- E. If the machine starts to vibrate abnormally, check for damage before restarting.
- Press the STOP button immediately in case of abnormal vibrations and carefully check if there is anything stuck under the product. Clear it and restart the product. Contact the service center if the vibration persists.
- Only touch blades when it's totally stopped and wear anti-cut gloves before changing blades.
- In the event of leakage of electrolyte flush with water and seek medical help if contact with skin or eye.

What can't be done to this product

- Keep away from the product when it's working. Especially keep your hands and feet away from the rotating blades.
- Don't overreach and maintain balance at all times, always be sure of footing on slopes, walk, and never run while operating the machine or its peripherals.
- Don't put anything on the top of the product or its charging station.
- Don't do any modifications to the product which may lead to unexpected results.
- Don't dismantle any part that is not described in the manual.
- Keep the battery in a safe place away from any dangerous objects that may cause dangerous problems objects, like fire, water, matter, and so on. Don't put the battery in a short-circuit condition.
- For the purposes of recharging the battery, only use the detachable supply unit provided with this appliance..

2. Product introduction

2.1 Introduction

In the following section, we would like to help you better understand how BESTMOW works. BESTMOW is equipped with AI and several sensors. It can deal with various complicated scenes autonomously.

1 Multi-map mowing

BESTMOW can create multiple maps (currently supports up to three maps). And BESTMOW can choose to mow one lawn or mow several lawns in sequence. It can intelligently plan the mowing path and complete the mowing task.



2 Intelligent mowing

BESTMOW also has the ability for intelligent mowing, using panoramic vision, RTK positioning, and visual perception technology to achieve intelligent mapping, charging, mowing, and obstacle avoidance functions.



3 Autonomous charging

When the battery is low, BESTMOW will pause the task autonomously and go back to the charging station to charge itself. When fully charged, BESTMOW will resume the unfinished mowing task of the day or stay in the charging station according to its mowing schedule.



4 Obstacle avoidance

BESTMOW can detect obstacles using AI cameras, avoiding interference from them. You can set the obstacle area in BESTMOW APP to avoid the machine driving in and affecting normal work.



5 Schedule

You can set mowing schedules and security schedules in BESTMOW APP so that BESTMOW can mow the lawn automatically or enable watchdog mode on a regular basis according to the schedules.



6 No more need to collect grass clippings

BESTMOW leaves short clippings after mowing. There is no need to collect them, they will become fertilizer for the lawn.



7 PIN code protection

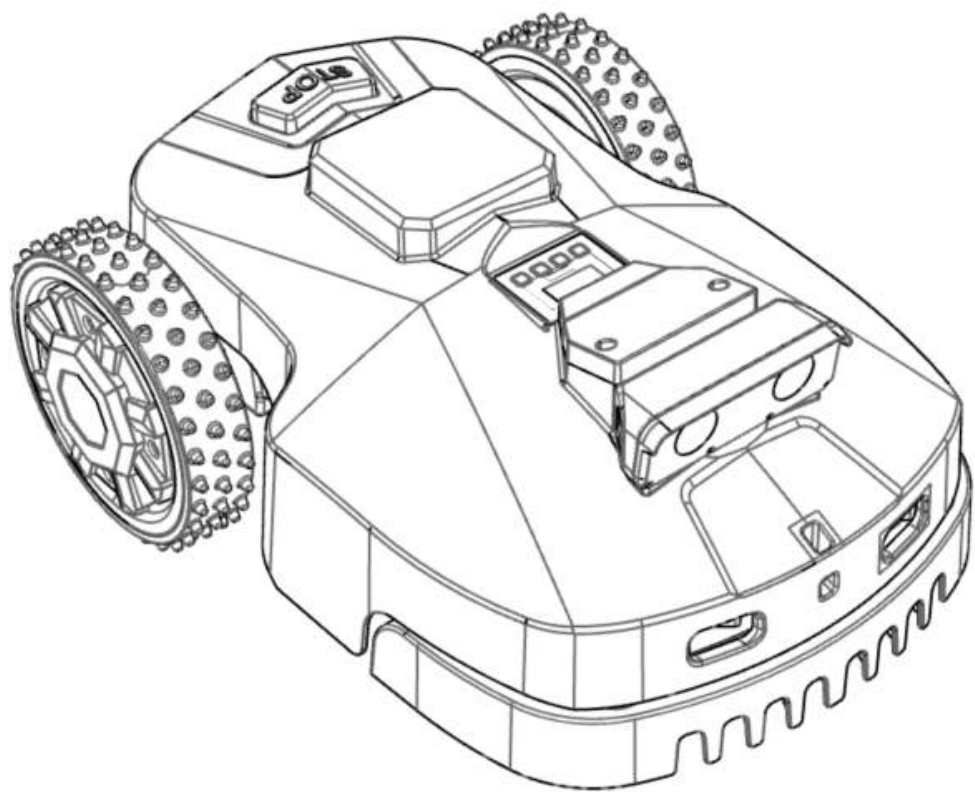
The PIN code is used to prevent being stolen and operated by children or unauthorized people. When there is a machine malfunction or the STOP button is pressed, BESTMOW will lock itself. You can unlock it by entering the PIN code.



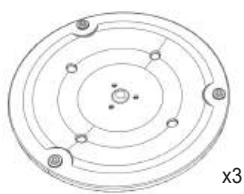
2.2 My BESTMOW

► Unboxing

Please check the items in the package shown as below



BESTMOW



x3

Blade disc

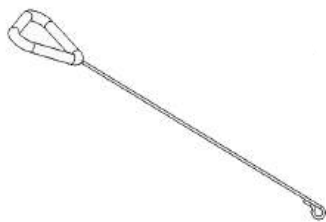


x12

Blade



Blade installation fixture



Hand pull rod



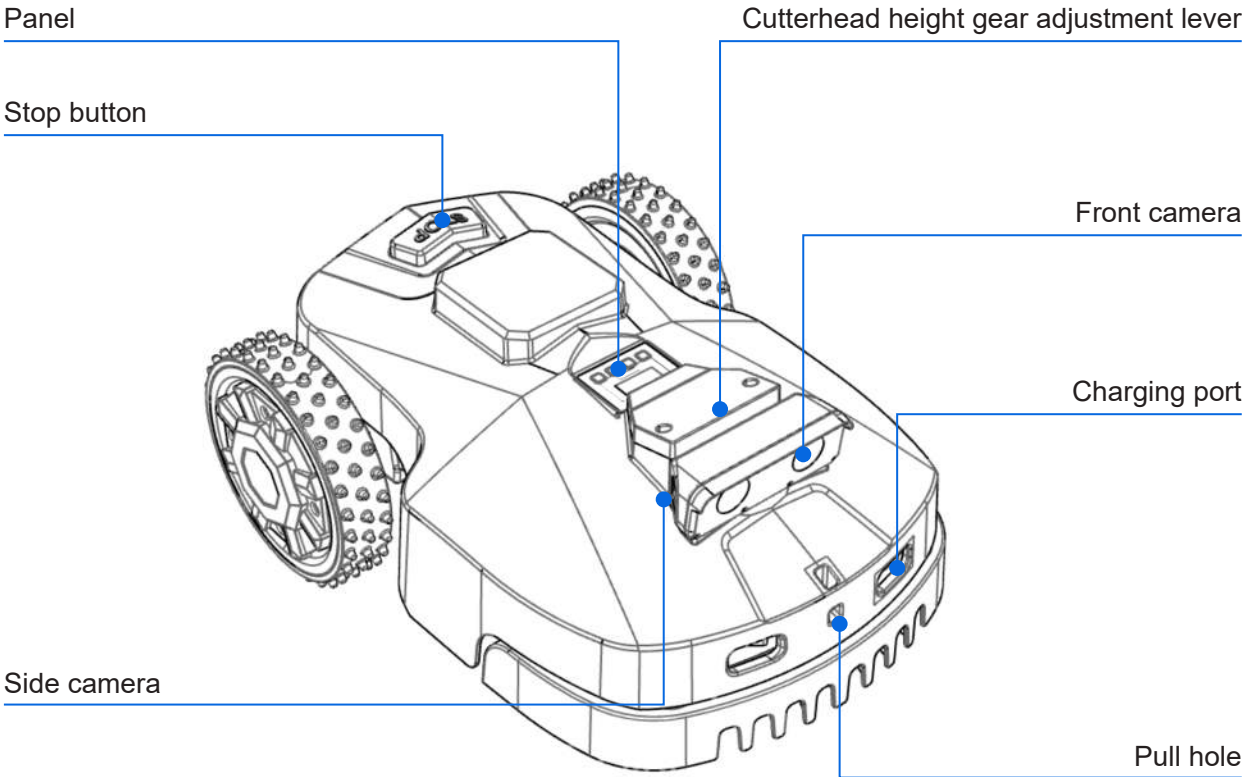
User manual
user manual



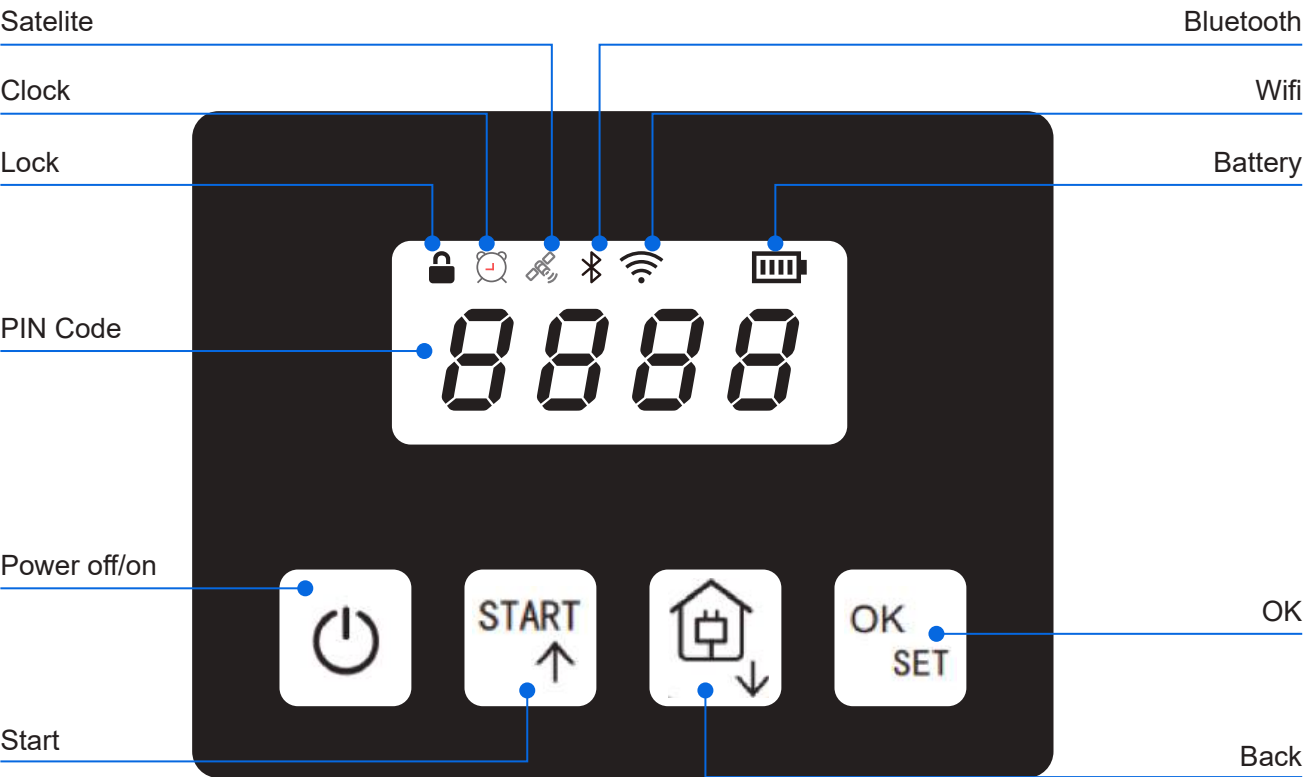
Velcro Blades
Bolts Pegs
Other parts

2.2.1 Main component

Top view

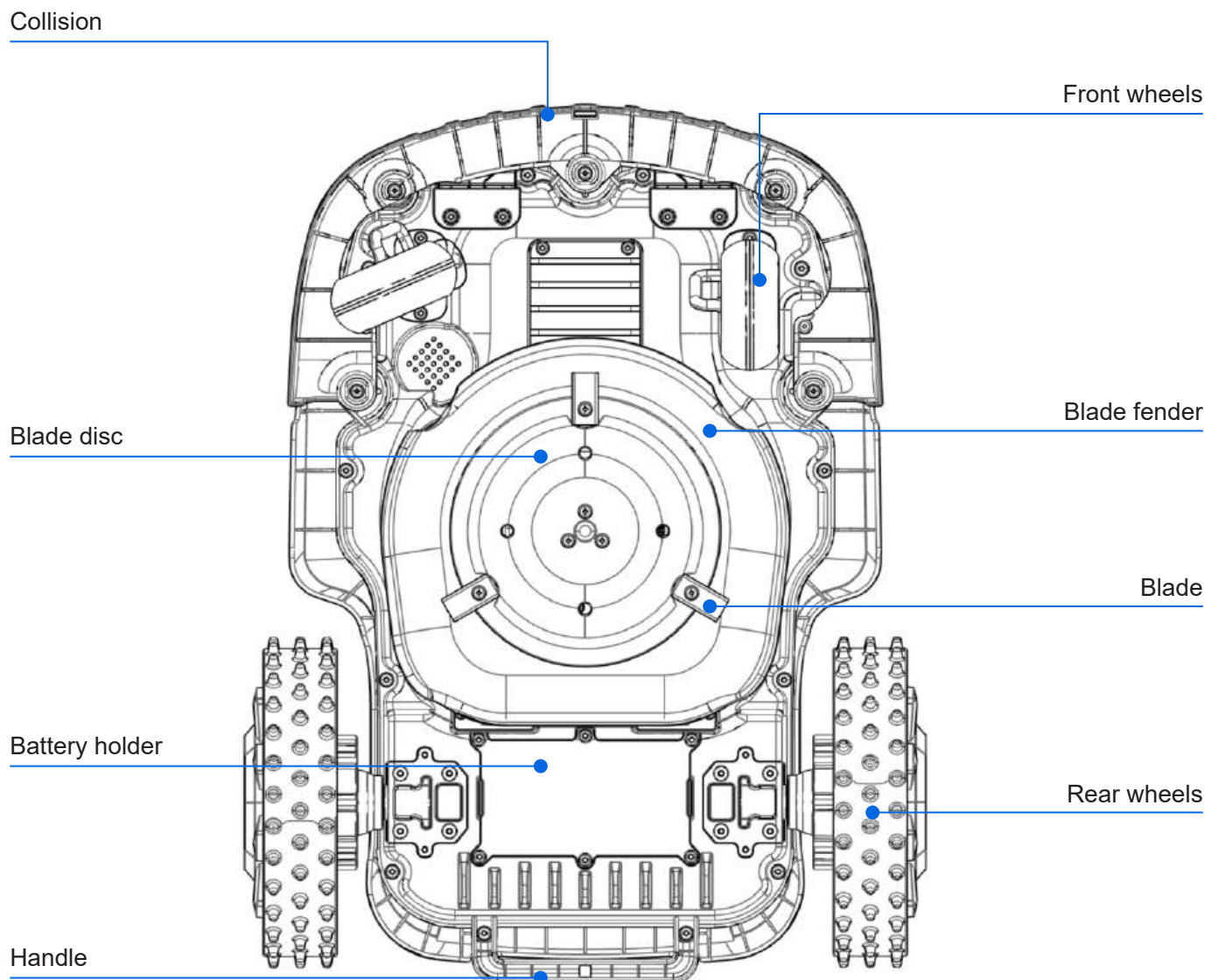


Control & Panel



- Power On/Off: Press and hold the power button for a long time to turn it on or off.
- Lock: It stays lit when a password needs to be entered; otherwise, it goes off.
- Timing: It stays lit when there is a scheduled task; otherwise, it goes off.
- Satellite: It stays lit when the satellite search quality is good; otherwise, it goes off.
- Bluetooth/Wi-Fi: It stays lit when connected; otherwise, it goes off.
- Battery Level: It can display the battery level in three gears. The running lights indicate that it is being charged.
- Four-character Display (Password Input Interface): The characters to be entered blink, the entered characters stay lit, and the unentered characters stay off.
- Four-character Display (Error Reporting Interface): It shows “E-xx” (xx represents the error code in numeric form).
- Four-character Display (Status Display): Mowing, returning to charge, charging, etc. are represented by one or more specified characters (provided that the characters can be displayed on the digital tube. For example, the character “W” cannot be displayed).
- Up and Down Buttons (Short Press): Increase (decrease) the password number by 1, increase or decrease the mowing height.
- Up and Down Buttons (Long Press): Press and hold ↑ to start, press and hold ↓ to return to charge.
- OK/SET: Confirm button.

Bottom view

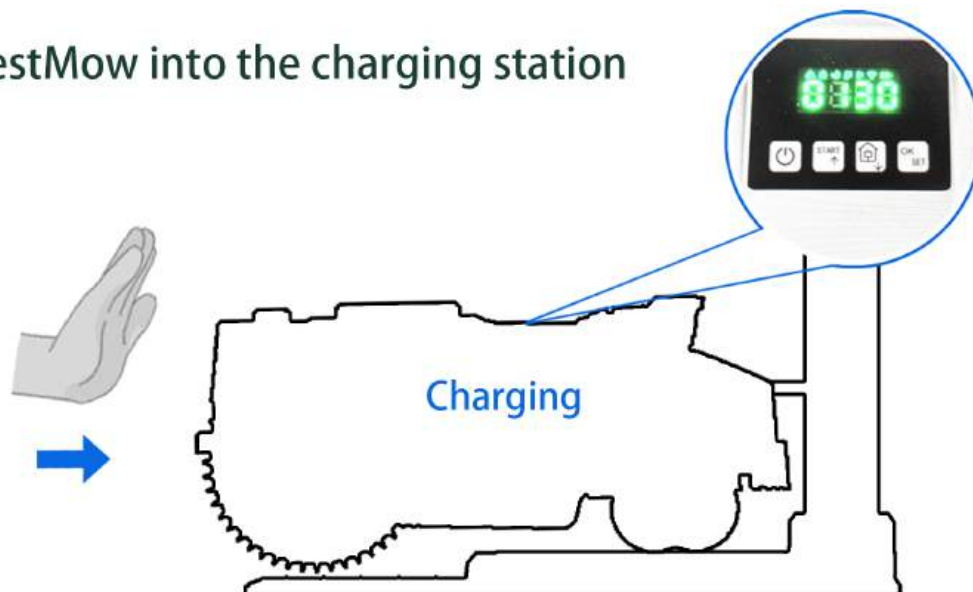


2.3 Specifications

Specs		
Capacity	Max mowing size	6000m²(1.5 acre)
	Boundary type	Virtual boundaries (No perimeter wire)
	Net weight	12kg
	Dimension	609mm×506mm×264mm (23.9in×19.9in×10.4in)
	Max climbing ability	25°
	Waterproof level	IP66
Positioning & Navigation	Navigation	RTK&Vision
	User interface	Keyboard & APP control
	Firmware update	APP update through OTA
	Connectivity	2.4G & Wi-Fi & Bluetooth
Cutting System	Cutting width	220mm 8.7in
	Cutting height range	30-80mm 1.2-3.1in
	Mowing speed range	0.04–1m/s
	Blade type	3 pivoting stainless steel blades
	Cutting mode	parallel stripes with a specific angle
	Noise	67dB(A)
Product Safety	Object detection & avoidance system	camera & collision
	Lift sensor	Yes
	Security System	PIN access, alarm, charging station pairing, GPS theft tracking
	Tilt sensor	Yes
Battery & Charging	Dual battery capacity	189Wh
	Battery type	Lithium-ion battery
	Charging mode	Automatic & manual
	Auto-recharging	Yes
	Mowing time per full charge	210 min
	Charging time	210 min

3. Instructions for use

3.1 Push BestMow into the charging station



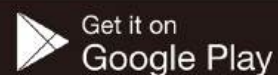
► Connect to BestMow

3.2 Search and download BestMow

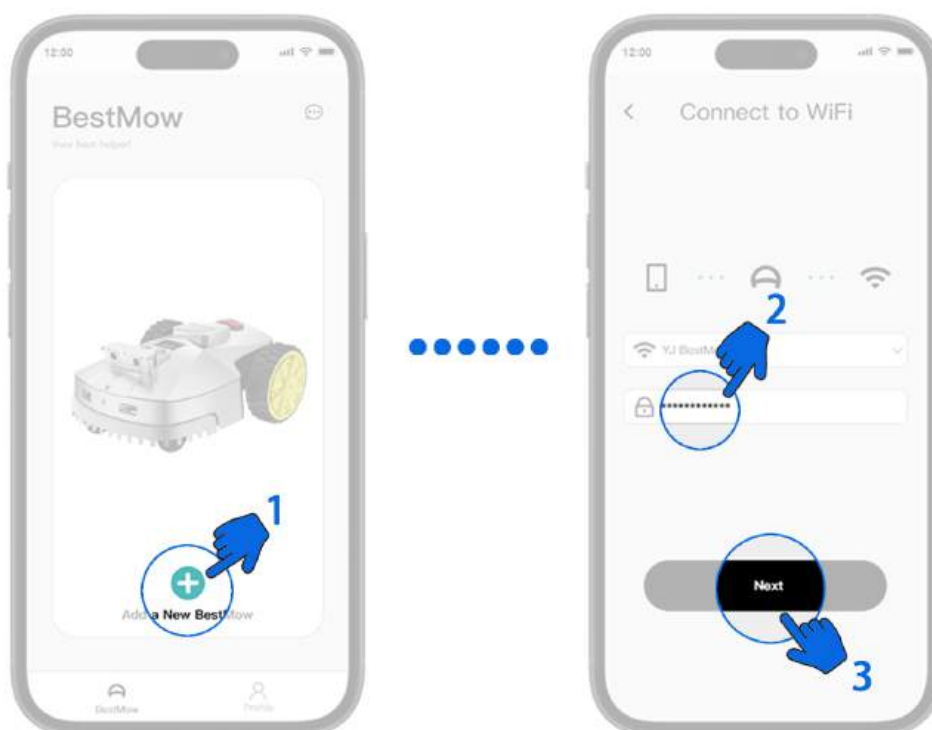
Download BestMow APP from Google Play or Apple app stores.



After installing BestMow APP, please complete the registration and login.



3.3 Operate according to the picture below



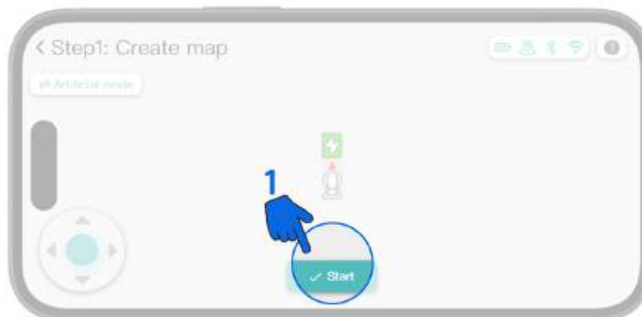
► Mapping

3.4 Create a new map

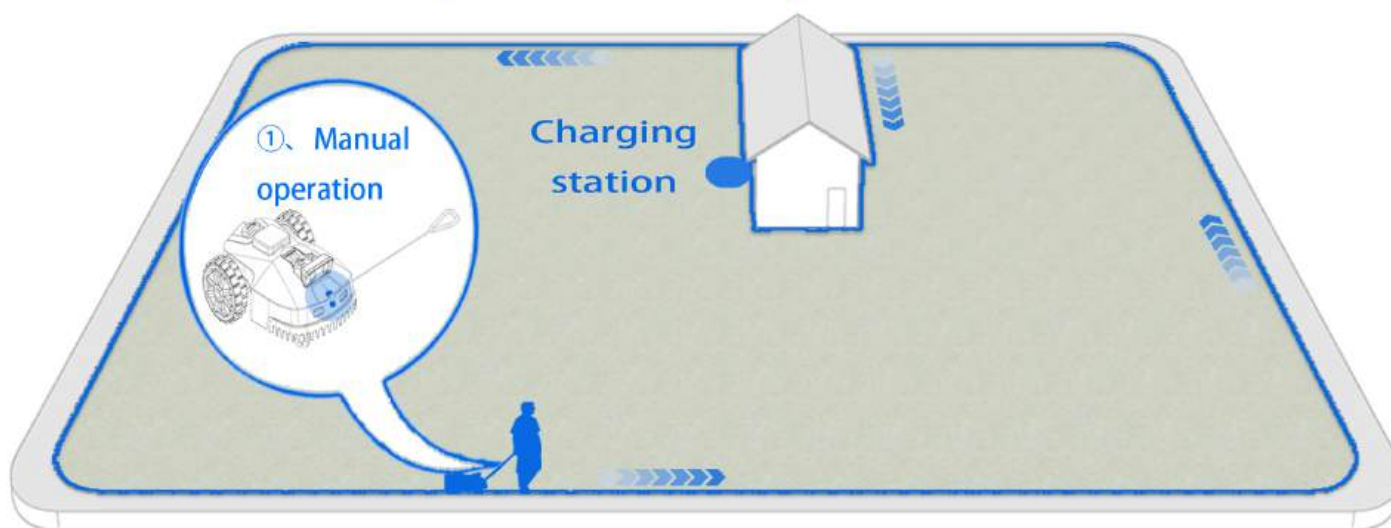
A. Entry mapping



B. Click "Start" to start mapping around the edge of lawn



C. Now, you can use your phone or manually drag Bestnow to create a map around the lawn.



D. Click "Back" to back the charging station

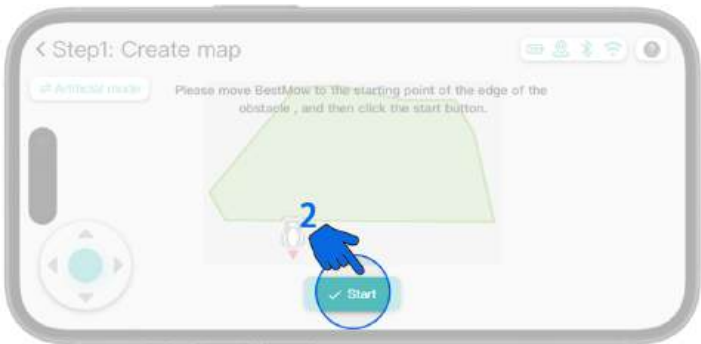


3.5 Create the inaccessible areas

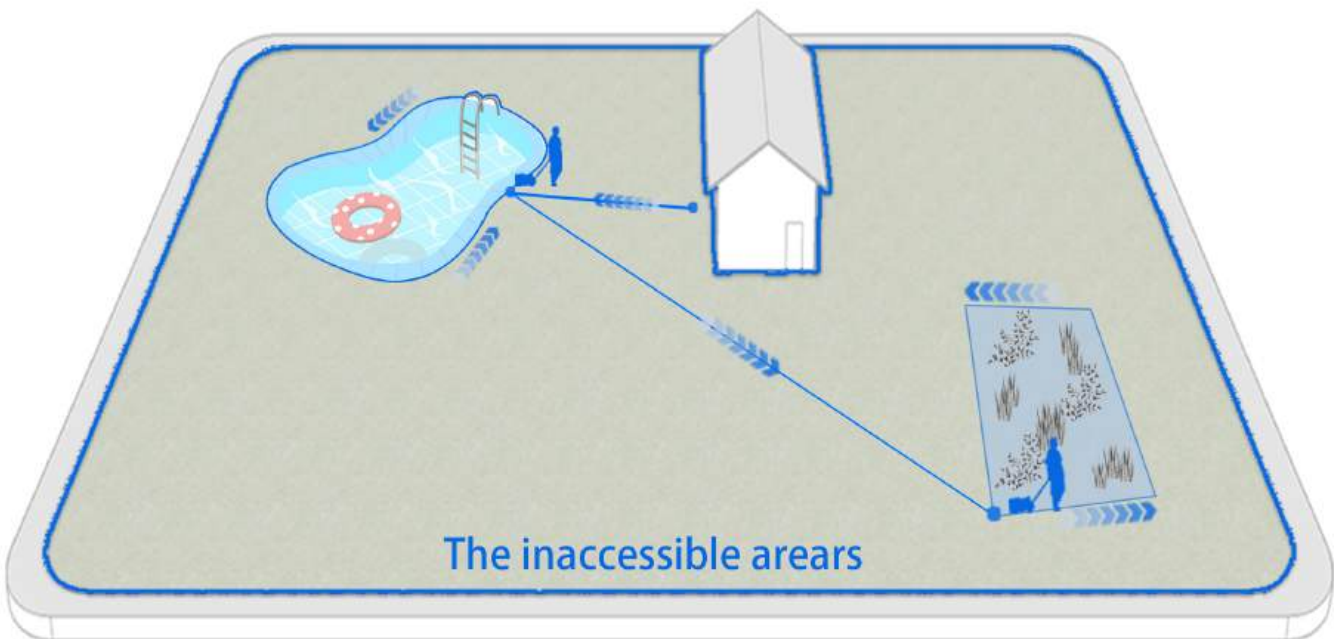
A、Click “A” to switch to the page for creating the inaccessible areas



B、Click “Start” to to create the inaccessible areas



C、Now, you can use your phone or manually drag BestMow to create inaccessible areas of the map



D、Select Save or continue to create the inaccessible areas



► Mowing

3.6 Mowing controls on the app

A. Click "Start"



NOTES:

- During the mowing process, if the battery is too low (below 20%), the robotic lawn mower will automatically stop mowing and return to recharge. Once the battery level reaches the resumed mowing threshold (default 80%), the robotic lawn mower will automatically return to the last mowing point and resume mowing operations.

3.7 Return to charge

Automatic recharge:

When the robotic lawn mower completes mowing tasks normally or triggers the resume mowing condition, it will attempt to return to the charging station and recharge. To trigger the recharge function, the robotic lawn mower needs to be within the established working zones and not within any no-go zone.

Manual recharge:

By operating the top panel button or issuing instructions through the APP, the robotic lawn mower can return to the charging station.

Execute via the top panel button

- Unlock the PIN code on the top panel.
- Click the home icon, then click OK.
- The robotic lawn mower will make a “beep” sound, indicating that the task instruction has been received.
- The robotic lawn mower will activate the return to charge function.

Execute via the app

- Click the recharge icon on the homepage of the robotic lawn mower app.
- Click the Confirm button.
- The robotic lawn mower will activate the return to charge function

4. About Security

4.1 PIN Code protection

- When you turn on BESTMOW for the first time, you need to manually set the PIN code on the machine.
- When you forget your PIN code, you can check it on the personal information interface of the APP.
- When you need to change the PIN code, you can change it on the personal information interface of the APP.
- When BESTMOW shuts down automatically for some reason. After restarting, you need to manually enter the PIN code on BESTMOW to start.
- When the wrong PIN code is entered more than 5 times, BESTMOW will be automatically locked. At this time, you will receive a message notification. You can unlock it on the APP, and check the correct PIN code on the personal information interface.

ATTENTION

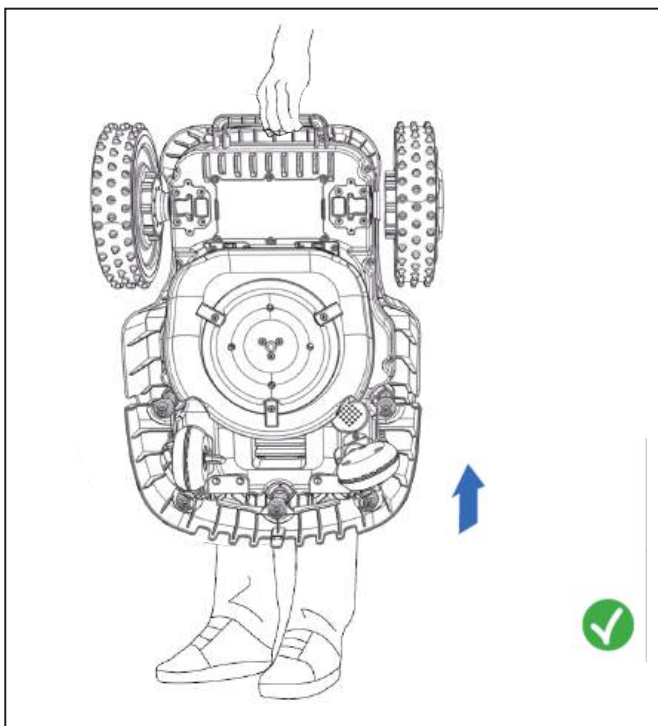
- To protect BESTMOW's security, it is not recommended to use 4 same numbers as the PIN code.
- When changing the PIN code, BESTMOW needs to be turned on and the GPS and home Wi-Fi are connected normally.
- When using the APP to unlock BESTMOW, it needs to be turned on and the GPS and home Wi-Fi are connected normally.

5. Maintenance

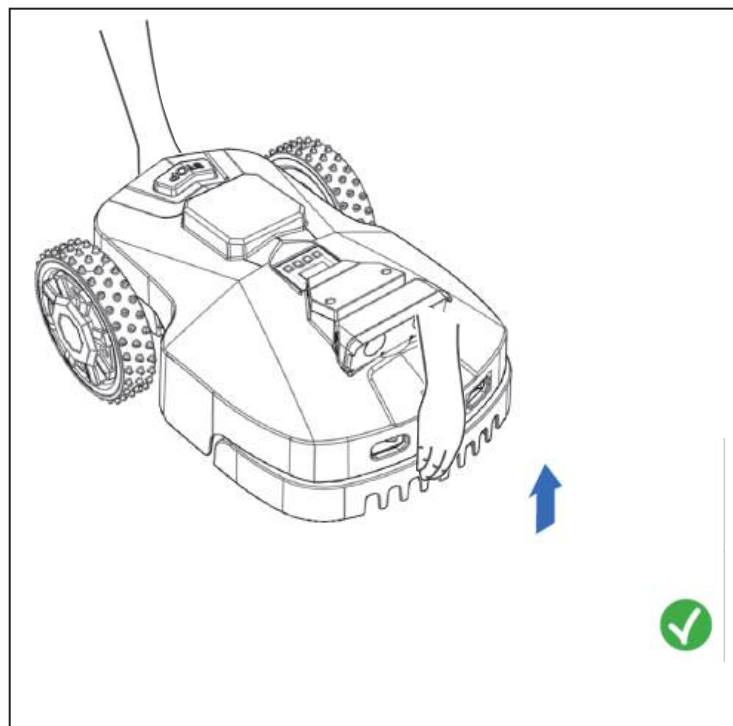
5.1 Transportation

WARNING

- Turn off the product when you raise or move BESTMOW.
- There are blades on the bottom of BESTMOW, which need to be kept away from the body.
- Do not lift the product while BESTMOW is charging at the charging station.
- To ensure your safety, please do not reach into the charging port to carry the machine.



With the blade facing outward, lift the BESTMOW handle with two or one hands.



With the blade facing the ground, hold the handle and the front collision with both hands.

5.2 Clean

We recommend that you maintain good cleaning habits to keep your BESTMOW in good condition.

WARNING

- BESTMOW must be disconnected from power for any cleaning work.
- Please do personal protection before cleaning. Wear gloves, protective clothing, and shoes at all times.
- Do not use a high-pressure water jet to rinse BESTMOW (both top and bottom). High pressure can cause water to enter the machine and damage electronic and mechanical components.
- Avoid cleaning BESTMOW and charging station with corrosive cleaning agents such as alcohol and gasoline. These substances may

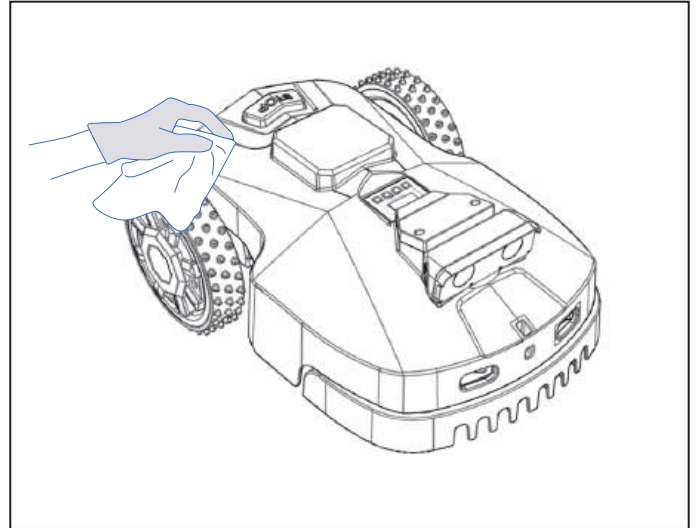
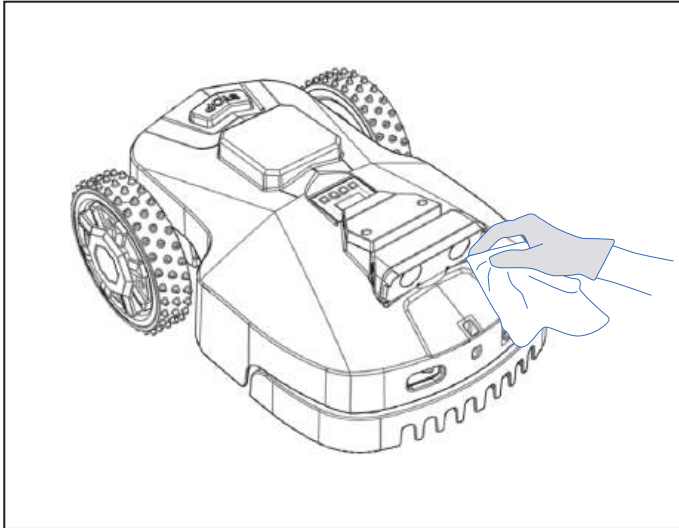
damage the internal and external structures of the machine.

- When placing BESTMOW on the reverse side, it can be placed on a soft surface to avoid scratching the body.

A.Clean the upper body

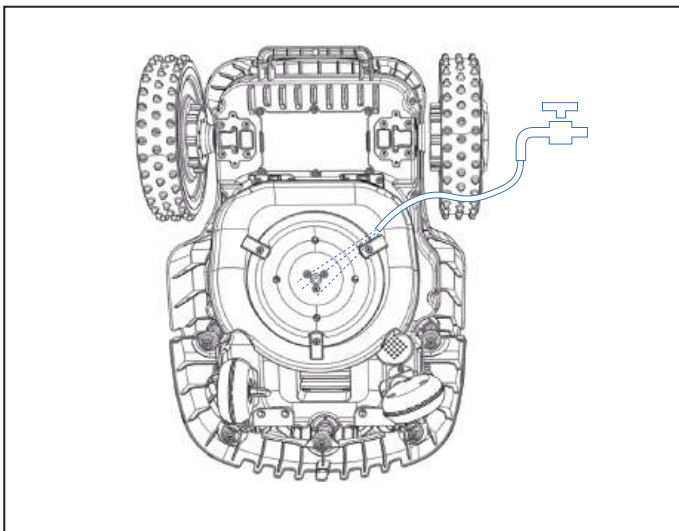
1.Wipe the upper part of the fuselage and the front camera with a rag dampened with water. Check if there are branches, stones, etc. stuck above BESTMOW.

2.Check the charging port for branches or other objects.



B.Clean the blade disc

Clean the blade disc with a brush. Make sure that the blade disc and the blades are not damaged and can pivot freely.



C.Clean the wheels

1.Use a brush to clean the impurities on the wheels to ensure the grip of BESTMOW.

2.After cleaning, you can put some precision machinery oil or WD-40 on the moving parts to make them more lubricated.

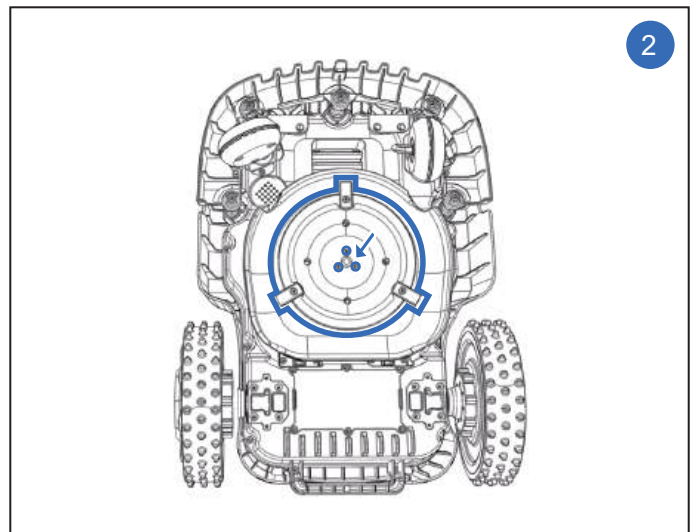
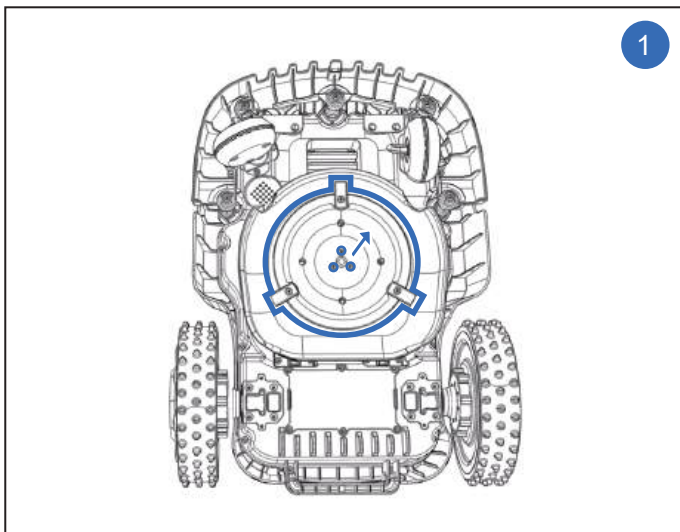
5.3 Replace blades disc

If you use the lawn mower regularly, we recommend that you replace the blades(model LF) and new screws every 80 hours in order to ensure your mowing efficiency.

WARNING and RESIDUAL RISKS

BESTMOW must be POWERED OFF before replacing the blade disc.

- Please do personal protection before cleaning. Wear gloves, protective clothing, and shoes at all times.
- For your mowing safety, we recommend that you purchase official blades set. You can buy it in the BESTMOW app store or the BESTMOW website store.
- To ensure the balance and stability of the blade disc. When replacing the blades disc, be sure to replace them with new screws.



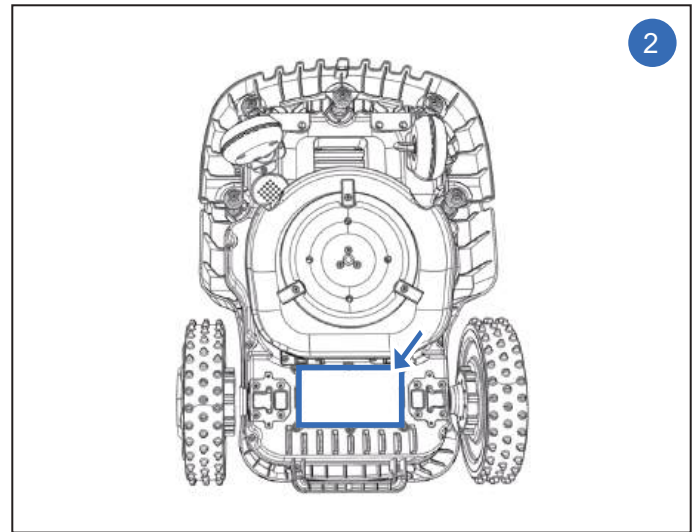
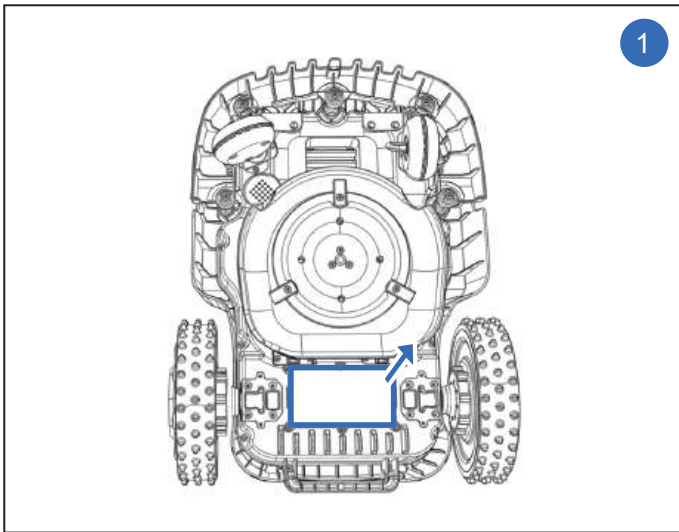
5.4 Change battery

When the BESTMOW APP prompts that the battery health is too low, or the battery time is obviously shortened, or the battery is faulty, the official battery needs to be replaced. You can buy it in the BESTMOW app store or the BESTMOW website store.

ATTENTION

- This appliance contains batteries that are only replaceable by skilled persons.
- The battery can not be charged alone, it can only be charged with the charging station in the BESTMOW.
- Do not replace non-rechargeable batteries.
- Install the new battery according to the polarity direction of the battery marked on the physical object.
- Before discarding the battery, wrap the exposed metal terminals of the battery (connection plug, etc.) with insulating tape.
- If liquid gets on skin or clothing, rinse with water immediately. If liquid gets in your eyes, do not rub, rinse with water and seek medical attention immediately.
- For the battery model, please refer to CZ-LYF6S2P-18650 and CZ-LYF6S2P-21700.

- For the disposal of used batteries, please contact your household waste disposal service, your local or regional waste management office.



5.5 Store

A.Storage BESTMOW

- 1.Avoid extreme cold and extreme heat storage environments.
- 2.It is recommended to be stored in an environment with low humidity, no dust, and no corrosive gas.

B.Storage battery

- 1.Fully charged.
- 2.It is recommended to store indoors at -20°C-50°C.
- 3.It is recommended to be stored in an environment with low humidity, no dust, and no corrosive gas.
- 4.It is recommended to charge every 60 days to prevent battery damage fully. Such damage is not covered by the warranty.

6. Troubleshooting and fault messages

ATTENTION

- Before troubleshooting, please make sure:a.APP software is the latest version;b.BESTMOW software is the latest version;c.Mobile phone system is the latest version.
- If the current symptom cannot be solved, please get in touch with the after-sales service through the BEST-MOW app or the official website.
- In the event of an accident or failure, if the product is still within the warranty period,

CHARGING & BATTERY		
SYMPTOM	CAUSE	SOLUTIONS
BESTMOW can not charge.	• There is an error or failure in the power supply. • Charging plug not contact / not clean. • Too high/low battery temperature.	• Check the power supply. • Make sure the contacts are connected correctly. Clean the contacts. • Wait for the temperature of the charging plug and the machine to return to normal before charging.
Charging time exceeds the rated time.	• There are foreign objects or dirt on the contacts.	• Clean the contacts.
Shorter charging time.	• Battery health is lower than normal. • Poor contact at the charging point.	• Replace the BESTMOW original battery. • Check the charging point and charging plug.
The LED light on the charging station does not turn on.	• The power adapter is faulty or malfunctioning.	• Check the power supply.
BESTMOW can not connect the charging station.	• The identification code on the charging plug is blocked/stained and affects the visual positioning. • There are foreign objects or dirt on the charging plug.	• Remove / clean the covering. • Clean the charging plug.
BESTMOW shuts off when docking the charging station.	• The temperature of the power supply / mower is too high. • The charging plug is not clean.	• The ambient temperature is too high, take off the adapter • and wait for the temperature to return to normal before charging. • Clean the contact plug.

MOWING & SECURITY

WARNING

- When BESTMOW encounters problems during mowing or security, if it is still working, please press the stop button to stop, and then perform corresponding operations after manually moving the mower.
- After solving the problem, BESTMOW's work task will restart, and the machine needs to return to the charging station to start working again.

SYMPTOM	CAUSE	SOLUTIONS
BESTMOW is stuck.	• BESTMOW is trapped in multiple obstacle areas. • BESTMOW is on a steep slope, soft sand or deep ditch. • Wheel traction is reduced. • The height of grass cutting is set too low.	• Set the trapped place as an obstacle area. • Keep the lawn flat / set it as a obstacle area. • Remove stones / soil and other impurities on the wheels. • Increase the cutting height, and then gradually return to the desired height.
BESTMOW slipping.	• The grass is too wet. • BESTMOW is on a steep slope. • Wheel traction is reduced. • BESTMOW is stuck by branches/ stones.	• Wait for the lawn to dry before mowing. • Keep the lawn flat / set it as a obstacle area. • Remove stones / soil from the wheels. • Clean the bottom of the BESTMOW.
Vibration / abnormal sound.	• The blade disc is unbalanced / blades are damaged. • Use unofficial blades. • Lack of blades / too many blades installed at the same position lead to unbalanced cutting system.	• Check the blade disc and blades, if they are damaged / stained, they need to be replaced / cleaned. • Check the official website or APP to purchase official blades. • Check the number of blades.
BESTMOW does not work within the set area	• The time zone settings are out of sync. • The setting time is incorrect.	• Synchronize the time of APP and BEST-MOW. • Confirm your time plan on the schdule interface of the APP.
BESTMOW does not respond when pushing the start button.	• The stop button is stuck and does not rebound	• Check if the stop key is stuck.

SYMPTOM	CAUSE	SOLUTIONS
Uneven mowing height	• The single mowing time is not long enough. • The mowing area is too large / the grass is too high. • The blade disc is unbalanced / blades are damaged. • The mowing height is set too low.	• Increase the single mowing time. • Reduce the size of the mowing area / increase the mowing height, and then gradually return to the desired height. • Check the blade disc and blades, if they are damaged / stained, they need to be replaced / cleaned. • Increase the mowing height, and then gradually return to the desired height.
Mowing height cannot be adjusted.	• BESTMOW system error.	• Restart BESTMOW, if still unsuccessful, please consult the after-sales service.

SIGNAL & CONNECT		
SYMPTOM	CAUSE	SOLUTIONS
Bluetooth connection failed.	- BESTMOW system error. - Related hardware damage.	- Restart the BESTMOW, if it still fails, please consult the after-sales service. - Please consult the after-sales service.
Bluetooth signal is unstable / interrupted.	- BESTMOW system error. - Too far from the mobile phone Bluetooth.	- Restart the BESTMOW, if it still fails, please consult the after-sales service. - Keep the mobile phone and the BESTMOW within 1-2 meters.
Wi-Fi connection failed.	- BESTMOW system error. - Too far away from home Wi-Fi. - Unable to recognize Wi-Fi.	- Restart the BESTMOW, if it still fails, please consult the after-sales service. - Adjust the distance between the GNSS antenna and home Wi-Fi. - Restart the home Wi-Fi or update the Wi-Fi password, if it still fails, please consult the after-sales service.
Unstable / interrupted Wi-Fi signal.	- BESTMOW system error. - Too far away from home Wi-Fi.	- Restart the BESTMOW, if it still fails, please consult the after-sales service. - Adjust the distance between the GNSS antenna and home Wi-Fi.
Weak GPS signal.	- BESTMOW system error. - There are obstacles affecting the GNSS antenna signal.	- Restart the BESTMOW, if it still fails, please consult the after-sales service. - Remove the obstacles or relocate the GNSS antenna to a place with a good signal.
INSTALL & MAPPING		
SYMPTOM	CAUSE	SOLUTIONS
BESTMOW operation delayed / uncontrolled during mapping.	- BESTMOW system error. - The mobile phone Bluetooth is too far away from BESTMOW.	- Restart the BESTMOW, if it still fails, please consult the after-sales service. - Keep the mobile phone and the BESTMOW within 1-2 meters
Bluetooth connection failed.	- BESTMOW system error. - The mobile phone Bluetooth / System version is too low.	- Restart the BESTMOW, if it still fails, please consult the after-sales service. - Update the mobile phone Bluetooth and system to the latest version
Bluetooth signal is unstable / interrupted.	- BESTMOW system error. - Too far from the mobile phone Bluetooth.	- Restart the BESTMOW, if it still fails, please consult the after-sales service. - Keep the mobile phone and the BESTMOW within 1-2 meters.
Wi-Fi connection failed.	Perhaps because of compatibility reasons, BESTMOW only supports 2.4G.	Please consult the after-sales service.
Unstable / interrupted Wi-Fi signal.	- BESTMOW system error. - Too far away from home Wi-Fi.	- Restart the BESTMOW, if it still fails, please consult the after-sales service. - Adjust the distance between the GNSS antenna and home Wi-Fi.

7. Antenna Information

(1) Manufacturer: Chengdu to Ziisor Technology Co., Ltd.

Address: No. 199, West District Avenue, High-tech West District, Chengdu, Sichuan, Mold Industrial Park B5

Antenna Gain: $\leq 3\text{dBi}$ Antenna Type: PCB Antenna

Model: 9514

(2) Manufacturer: Shenzhen NewBit Info Technology Co.,Ltd

Address: Room 1612-Room1616,Global Logistics Center Building,Longgang District, Shenzhen

Antenna Gain: $\leq 1.75\text{dBi}$ Antenna Type: PCB Antenna

Model: MB026A

(3) Manufacturer: Shenzhen Kinvey Communication Technology Co., Ltd.

Address: 5th Floor, Building A3, Xiwan Zhiyuan, Hangkong Road, Sanwei Community, Hangcheng Street, Bao'an District, Shenzhen

Antenna Gain: $\leq 5.5\text{dBi}$ Antenna Type: Survey Antenna

Model: PM380

8. 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