

Welcome To The Era Of AI Vision



S1200/S800 **User Manual**

Original Instruction Manual

目录页预留

Welcome To The Era Of AI Vision

Thank you for choosing TerraMow as your garden care lawn mower!

TerraMow is ready to go with a simple one-step setup, in less than 1 minute. Say goodbyes to perimeter wires, intricate RTK setup and difficult-to-operate manual lawn mapping. TerraMow mows smartly as a human, thanks to its cutting-edge AI vision system Terra Vision.

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This user manual will help you learn and operate TerraMow. Please enjoy the fun of care-free mowing and a perfectly maintained lawn!

Intended use

This product is strictly intended for domestic lawn mowing only. Using the mower for any other purpose is prohibited and may lead to serious injury. It is essential to read and understand all warnings and precautions in this manual to reduce risks. While following the instructions can lower the chance of accidents, some risks are inherent and cannot be completely eliminated. The operator or user is responsible for any incidents involving others on their property while operating the mower.

Customer service

support@terramow.com

1.Safety first

IMPORTANT

READ CAREFULLY BEFORE USE - KEEP FOR FUTURE REFERENCE

Your safety is our priority. Before using the product, please read the following important safety guidelines to ensure a safe and enjoyable experience.

The purpose of the safety rules is to draw your attention to potential dangers. The safety symbols, along with their explanations, require your careful attention and understanding. The safety warnings do not, by themselves, eliminate any danger. The instructions or warnings they provide are not substitutes for proper accident prevention measures.

WARNING: Read all safety warnings and all instructions. Make sure you understand the instructions and be familiar with the controls and the proper use of the appliance. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury. Carefully read the instructions for the safe operation of the appliance. Save all warnings and instructions for future reference.

WARNING: Failure to obey a safety warning can result in serious injury to yourself or to others. Always follow safety precautions to reduce the risk of fire, electric shock and personal injury. Save owner's manual and review frequently for continuing safe operation and instructing others who may use this tool.

WARNING: This machine produces an electromagnetic field during operation. This field may under some circumstances interfere with active or passive medical implants. To reduce the risk of serious or fatal injury, we recommend persons with medical implants to consult their physician and the medical implant manufacturer before operating this machine.

NOTE: The term "appliance" encompasses TerraMow, the base station, and all components, accessories, and equipment related to this product.

- Read the instructions carefully. Be familiar with the controls and the proper use of the appliance.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety.
- It is advised that users should be between the ages of 18 and 70. Local regulations may restrict the age of the operator. Children should be supervised to ensure that they do not play with the appliance.
- Make sure to set up and use the mower and the base station following the guidelines. For the full User Manual and up-to-date information, please visit terramow.com.
- Using the appliance for purposes other than mowing can bring serious injury. To avoid risks of injuries, please read and understand all the warnings and cautions. Please understand that you can reduce the risk by following the instructions and warnings in this manual, but you cannot eliminate all risk. The operator or user is responsible for accidents or hazards occurring to other people on their property.
- The mower has many built-in safety sensors; however, safety risks still exist. Set a mowing time when there are no people or pets on the lawn. Inform the neighbors about the risks for accidents or hazards. When using the mower on a public lawn, or when your lawn is open to your neighbor or street, protect or fence the lawn, or put up a warning sign around the working area that says: **WARNING! Automatic lawn mower! Keep away from the machine! Supervise children!**
- DO NOT attempt to modify this appliance on your own. Alterations could disrupt its functions, leading to serious injuries and/or damage, or invalidate the Limited Warranty.
- Only use parts and accessories approved by TerraMow's manufacturer.
- Please ensure you receive the proper training before using the appliance. Never let individuals who are not familiar with this appliance, or children operate it. Ensure only those who understand how mower works and behaves are allowed to use it.
- The mower contains batteries that can only be replaced by the manufacturer or authorized service personnel.
- For the purpose of recharging the mower, only use the base station.

- Seek medical advice immediately if any cell of this appliance has been swallowed.
- To prevent potential damage, ensure the mower operates at least 1 meter (3') away from sprinkler heads. Do not use the mower and sprinklers at the same time. Schedule the mower to operate at a different time from the sprinklers.
- Be careful during adjustment of the machine to prevent entrapment of the fingers between moving blades and fixed parts of the machine.
- Replace worn or damaged parts for safety; Use only genuine replacement parts and accessories. Where parts are consumable, the spare part shall be clearly identified, e.g. by the use of a part number or other means.

1.1 Before mowing

- Ensure the correct installation of the automatic perimeter delineation system as instructed.
- On multi-spindle appliances, take care as rotating one blade can cause other blades to rotate.
- Avoid operating the equipment in wet grass, where feasible.
- Do not use the appliance if the guards or shields are damaged, or if the cord is frayed or worn out.
- Do not operate the mower and/or its peripherals with defective guards or shields, or if the cord is damaged or worn.
- Do not use the mower if the blade disc, body, blades, screws, nuts, or cables are damaged.
- Be careful with sharp objects in this product, like screws and stakes. Do not point them towards people or animals.
- For optimal mowing performance, we recommend mowing in dry conditions. Mowing in the rain can cause grass to clump on the mower, and the mower may slip. Avoid mowing in adverse weather conditions, including heavy rain, thunderstorms, or snow.
- Regularly check that all parts of the mower are working properly.
- Regularly check to ensure the blades, blade bolts, and the cutting assembly are not worn or damaged. If they are, replace the blades and bolts in sets to maintain balance. Be cautious

with multi-spindle models, as turning one blade may cause others to rotate as well.

- Thoroughly inspect the area where the equipment is to be used and remove all objects which can be thrown by the machine.
- Regularly check the area where the mower will be used and clear away stones, sticks, wires, bones, and other foreign objects. The Limited Warranty does not cover damage caused by objects left on the lawn.

1.2 When mowing

- Not to allow children to be in the vicinity or play with the machine when it is operating.
- Start the mower as directed in the manual. When powering on, ensure your hands and feet are clear of the rotating blades. Avoid placing hands or feet near or under any moving parts and blades. Always stay away from the discharge opening. Never position your hands or feet close to or under the mower when it is running.
- Never pick up or carry the mower when the motor is running. Avoid lifting the mower during operation. Sitting or riding on the mower or the base station is strictly prohibited. Additionally, do not place any objects on top of the mower or the base station.
- switch off the mower:
 - Before removing a blockage.
 - Before inspecting, cleaning, or performing maintenance on the mower.
- Always switch off the mower when it is not in use. The mower can only be started when its power is switched on.
- Do not touch moving parts until they have completely stopped.
- Do not let the mower operate unsupervised if you are aware of pets, children, or people nearby.
- Be cautious of flying objects! Maintain a safe distance from the mower when it is operating.
- Avoid overreaching. Always keep your balance and make sure your footing is secure

on slopes. Walk—do not run—while using the mower or its accessories. Do not mow on slopes that are steeper than the maximum incline specified for the operating area, including the boundary.

- If the mower emits an unusual sound or triggers an alarm, immediately press the STOP button.
- If the machine starts to vibrate abnormally, and checks for damage before restarting.
- Should you experience unusual vibrations, switch off the mower, place it on flat ground for about 30 seconds, and then restart it. If the problem continues, reach out to the authorized after-sales service.

1.3 Safe usage

- Do not use the mower outside the temperature range of 5–45° C. Operating it in low or high temperatures can reduce its performance and may cause accidents.

Maintenance and storage

WARNING: Always switch off the power when the mower is flipped upside down. The power should also be switched off when performing any maintenance on the mower's underside, including cleaning or changing blades.

- It is recommended that an adult perform regular maintenance on the mower (refer to Section 5: Maintenance).
- Regularly inspect the warning devices to ensure their effectiveness. These include the buzzer, the LED light on the charging station, and the mower's ambient light.
- Keep all nuts, bolts, and screws tightly secured to ensure the appliance is in a safe working condition.
- Check the mower each week for worn or damaged parts and replace them as necessary for safety.
- Pay close attention to the blades and blade disc to ensure they are not damaged. If necessary, replace all blades and screws simultaneously to maintain balance in the rotating parts.
- Follow the manufacturer's instructions for appliance maintenance.
- Wear protective gloves when replacing blades to prevent injuries.

Charging and battery safety

- If under extreme conditions any electrolyte should escape from the battery, it's essential to avoid contact with skin. If electrolyte does come into contact with your skin, rinse it off with water and consult a doctor. In the event of electrolyte contact with your eyes, it's essential to consult a doctor.

- Keep moisture, rain, or splashed water away from the charging location.

The ambient temperature must not exceed 45° C. Never expose the device to direct insulation.

- Battery, which are defective or damaged or can no longer be recharged, must be disposed of as hazardous waste. Hand them over at a special collection point. Never harm our environment. Do not dispose of unusable batteries in domestic waste, fire, or water.
- Use only battery, which has been produced by the original manufacturer.
- Do not throw Li-ion batteries into water or fire, risk of explosion!
- Protect the battery from impacts, and don't open it.
- Never discharge the battery completely and recharge occasionally if not used for a prolonged period. If the battery has not been used for over 6 months, it is advisable to recharge it.
- Do not remove the battery from the mower. Do not take out, repair, or replace the battery, nor perform any manipulation of it. These actions should only be carried out by after-sales or manufacturer-appointed technicians.
- Please read the "How to Charge" section in Chapter 3.3 before charging. Incorrect charging may lead to electric shock, overheating, or leakage of corrosive liquid.
- If the cord of the power supply or the extension cable is damaged or entangled, disconnect the power supply from the socket and then untangle. For safety, always pull from the plug body, not the cord, when disconnecting from the socket. If the cord is damaged, contact after-sales service for professional repair or replacement.
- Connect the base station and/or its peripherals only to a supply circuit that is protected by a Residual Current Device (RCD) with a tripping current not exceeding 30 mA.
- During the charge process, the current used should correspond to the current of the battery charger.

- Do not dismantle, open, or shred battery cells. Avoid short-circuiting the battery as it may cause burns or a fire. Do not expose the battery to mechanical shock.
- Always follow the instructions and use the correct charging process. The battery should not be charged independently and must only be charged when installed in the TerraMow mower. Use only the TerraMow base station and the provided adapter for charging. Incorrect use can lead to electric shock, overheating, or battery leakage.

Safe transport

- For transportation over long distances, use the original packaging for the base station and mower.
- To safely move the appliance:
 - Press the STOP button to stop the mower
 - Always turn the mower off before lifting or carrying it.
 - Lift the mower by grabbing its handle.
 - When carrying the mower, keep the blade disc pointed away from your body.

1.4 Symbols and decals

Symbols and Decals

Symbol	Description
	WARNING – Read user instructions before operating the machine
	WARNING – Keep a safe distance from the machine when operating
	WARNING – Operate the disabling device before working on or lifting the machine
	WARNING – Do not ride on the machine
	WARNING – It is not permitted to dispose of this product as normal household waste. Ensure that the product is recycled in accordance with local legal requirements
	This product conforms to the applicable EC Directives
	Warning
	Class II appliance
	Class III appliance

Symbol	Description
	Li-ion battery. This product has been marked with a symbol relating to 'separate collection' for all battery packs and battery pack. It will then be recycled or dismantled in order to reduce the impact on the environment. Battery packs can be hazardous for the environment and for human health since they contain hazardous substances
 Li-ion	

IPX1 IPX1 for base station

IPX6 IPX6 for robotic lawnmower

 Direct current

 Alternating current

 This item can be recycled

 This product is fragile

 This way up

 Keep away from sunlight

 Keep the pack of this product dry

 Do not roll

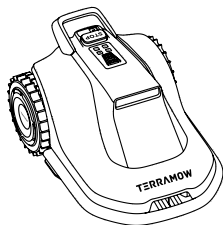
1.5 Environmental protection



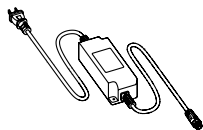
Do not dispose of electrical products with household trash. Please recycle where possible. Contact your local waste authority or the place of purchase for recycling guidance.

2. Get familiar with TerraMow

2.1 What's in the box



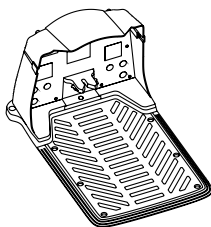
TerraMow



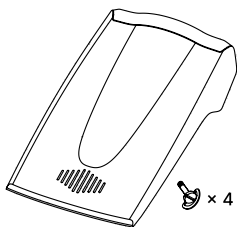
Power Adapter



Extension Cable



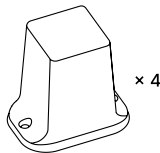
Base Station



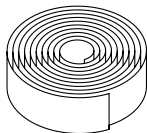
Garage Kit



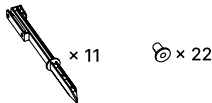
Blade & Bolt



Multi-Zone Pathway Sign



No-Go Zone Marker & Stake



Hex Key



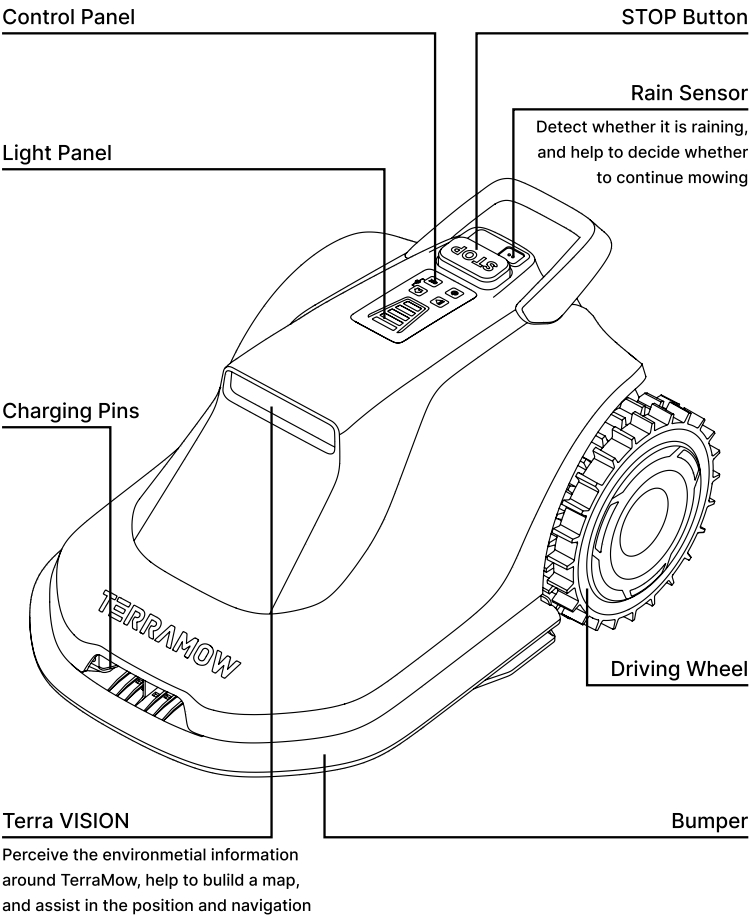
Screw

8 pcs for Base Station
8 pcs for Multi-Zone Pathway Sign

2.2 TerraMow overview

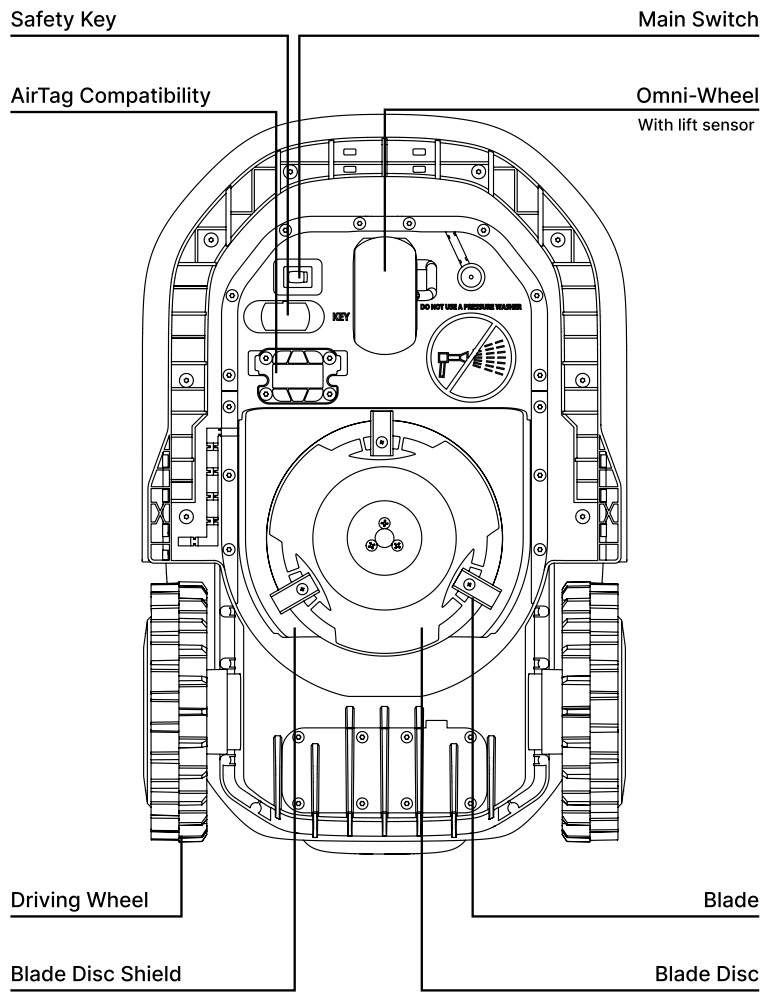
Top view

The picture is for reference only



Button view

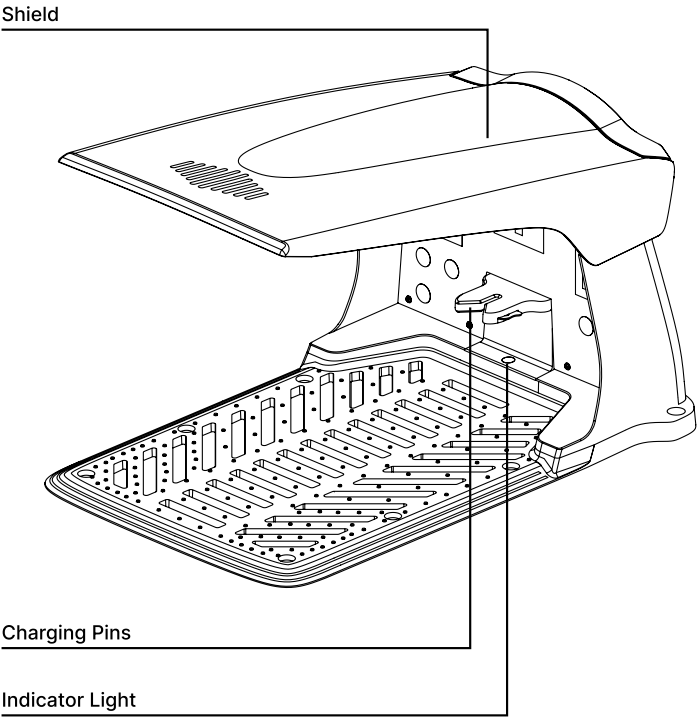
The picture is for reference only



NOTE: An AirTag is not a necessary item and is not included in our product. Please purchase separately if needed. The TerraMow APP does not have the functionality to support AirTag.

Base station

Base Station (Top View)

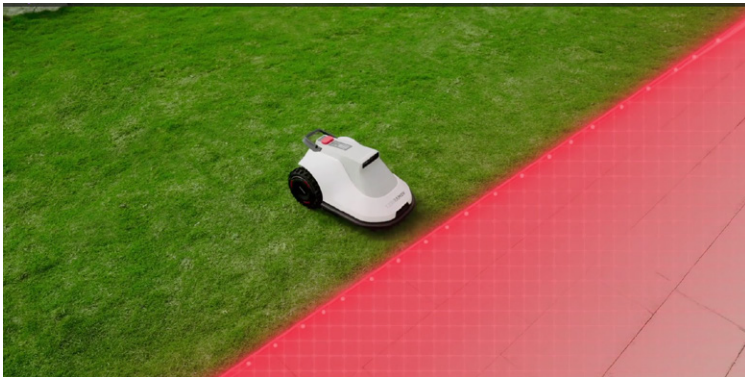


2.3 How TerraMow works

In the following section, we would like to help you better understand how TerraMow works.

TerraMow comes with a TerraVision visual perception system that empowers it to operate autonomously.

- This system can distinguish between grass-covered areas and other surfaces to ensure that the robot does not stray beyond the boundaries of the lawn.
- This system utilizes visual positioning technology, enabling functions such as robot navigation, systematic cutting, and returning to the base station.
- This system combines the 3D structure of the environment perceived by stereo vision technology with the grass and non-grass semantic information identified by image segmentation technology to achieve precise obstacle avoidance.



Functions

Boundary management

No perimeter wire or RTK reference station installation, no manual guided mapping. With TerraVision visual perception technology TerraMow knows where the boundary is. To ensure its safety navigation around your lawn area, there are some scenarios that need to be paid special attention to. Please refer to the “3.1 before you start” and “3.4 Working zone setting” section.

Systematic Cutting

TerraMow, equipped with an advanced visual positioning system, achieves back-and-forth systematic cutting. The mower's cutting path is seamlessly displayed on the accompanying app, allowing users to monitor the progress visually. With a single job initiation, TerraMow can complete a full coverage cut.

Obstacle avoidance

TerraMow is able to detect objects ahead in real time using its stereo vision technology and image segmentation technology. Non-grass obstacles, such as tree stump, balls and child's toys will be avoided.

Cutting Height

Before your first TerraMow run, please make sure that your grass does not exceed 9 cm in length. If needed, use a regular mower to cut it before operating TerraMow. If you want to drastically shorten the height of your grass, it is recommended that you do so gradually over time, by adjusting the cutting height in steps. You can adjust the cutting height through the App.

Charge itself

When your TerraMow needs to recharge its battery, it will stop mowing and navigate back to the base station. Once charging is completed, TerraMow Vision will automatically return to the exact spot where mowing was interrupted before recharging, and then resume mowing. Or TerraMow will stay on the base station according to its mowing schedule.

Precise Edge Trimming

You can activate the "Precise Edge Trimming" feature on the App. Once enabled, TerraMow performs two rounds of edge cutting. In the first round TerraMow cuts closely as close as possible to the boundary of your lawn. Then TerraMow autonomously assesses whether it can straddle the boundary for a second cut. If conditions allow, it

carries out this in the second round. Before enabling this feature, please be mindful of the suitability of your lawn for straddling edge cutting to ensure the best results.

Spot Mode

If you have a separate lawn of less than 120 square meters that the robot cannot reach from its base station, you can use spot mode. Carry the robot out of the base station and place it on the independent lawn, then press start/pause + OK. After hearing the prompt voice, press OK again to enter spot mode. You can also access spot mode through the App. In this mode, the robot will return to the starting point upon completion of the task or if the battery level drops below 15%.

Multi-base Mode

If you have a separate lawn larger than 120 square meters that the robot cannot reach from its existing base station, you can utilize the Multi-base mode. Each TerraMow base station has a unique ID, allowing you to own a single TerraMow robot to operate on multiple lawns. To use Multi-base mode, you will need to purchase an additional TerraMow base station. Once the new base station is set up on the second lawn and TerraMow is placed inside the base station, it will automatically recognize the new base station. Upon starting TerraMow, it will create another new map for that lawn. When TerraMow is moved to a different base station, it will load the corresponding map and any no-go zone configurations.

Schedule

You can set your mowing schedule through the App. TerraMow enables you to set a unique mowing schedule for each day of the week.

Rain sensor and rain delay

TerraMow is designed to be fully weather-resistant. But mowing wet grass does not give you the best result. TerraMow is equipped with a rain sensor which detects rain and tells TerraMow to stop mowing and go back to its base station. TerraMow then re-starts mowing when the grass is no longer wet.

2.4 Specifications

Model		S1200	S800
Recommended Mowing Area		1200 m ² (0.3 Acre)	800 m ² (0.2 Acre)
Mowing Area Per Hour		150 m ²	
Capacity of Battery		4.5 Ah / 98.6 Wh	
Charging Time		120 min	
Mowing Time on One Full Charge		120 min	
Mowing Height		25 - 75 mm (1" - 3")	
Mowing Width		203 mm (8")	
Maximum Slope		24° (45%)	
Recommend Operation Temperature		0 ° C -55 ° C	
IoT Connectivity	Wi-Fi	2.4G and 5.8G Support 2400.0 - 2483.5 MHz 5150 - 5250 MHz 5735 - 5835 MHz	
	Cellular Network	LTE-FDD: B1/B2/B3/B4/B5/B7/B8/ B12/B13/B20/B25/B26/B28/B66 LTE-TDD: B38/B40/B41	
4G Data Usage		1 Year Free	Subscription
Over-the-air Update (OTA)		App, Firmware	
Noise		< 54 dB	
Waterproof (IP rating)		IPX6 for robotic lawnmower IPX1 for base station	
Warranty		2 Years	
Working Voltage		24Vd.c.	
N.W.		12.5 kg	
Measured Sound Power Level LWA		66.30 dB	
Sound Power Uncertainties KWA		3 dB	
Sound pressure Level LpA		56.0 dB	
Sound pressure Uncertainties KpA		3 dB	

3. Getting started

3.1 Before your start

Prepare the App

You can get the free TerraMow app from the Android or Apple app stores by scanning the QR code or searching "TerraMow" simply. After installing the app, please create your account and sign in.



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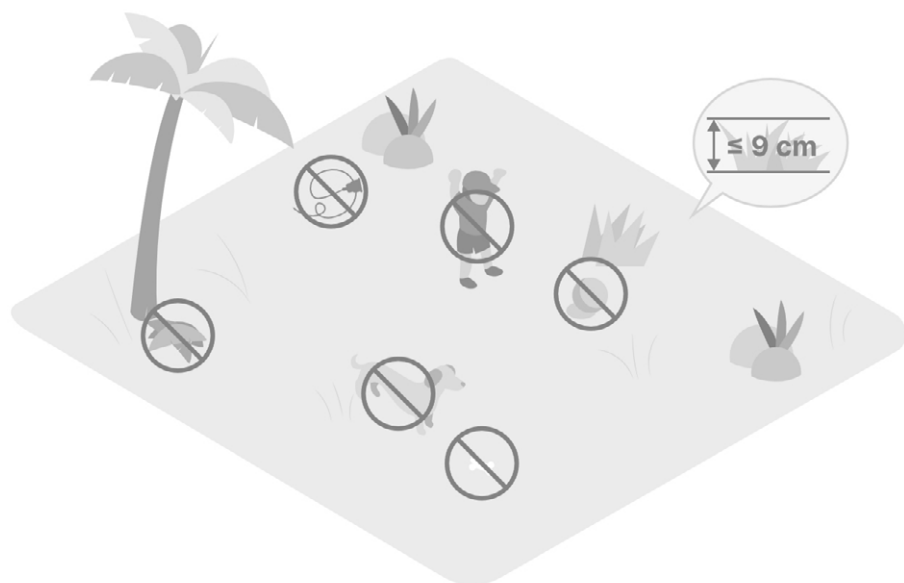


NOTE:The TerraMow App may request access to your phone's permissions, including location, notifications, and Wi-Fi network information, to ensure optimal functionality. For a seamless experience, we recommend granting these permissions. For more information, please see our Privacy Policy in the App by navigating to "More" > "About" > "Privacy Policy".

Prepare your lawn

Remove all obstacles from your lawn, including debris, piles of leaves, toys, wires, stones and so on. Cut the grass to a height of no more than 9 cm.

Make sure your kids and pets are away from the lawn.



3.2 Install base station

WARNING:

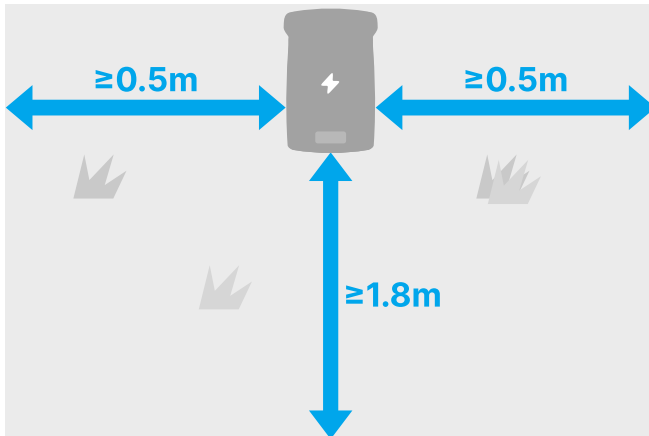
The illustrations in this user manual are for your reference only.

Find a good spot

Base station is where your TerraMow mower parks and charges.

To ensure your TerraMow can return to the base station and charge smoothly, please select an appropriate location to place:

- Place the station on a flat lawn area with no slope, stones or steps.
- Make sure there is a strong Wi-Fi signal nearby. (Either 2.4 or 5G is OK).
- Make sure there are no obstacles, such as houses, trees, or bushes, within 0.5 meters (about 1.6') on both sides and 1.8 meters (about 5.9') in front of the base station.



Note: If you move the base station after creating the map, you will need to create a new map. "Map management" - "Settings" - "Base station relocation" in the App.