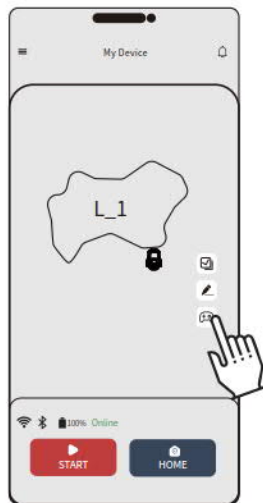
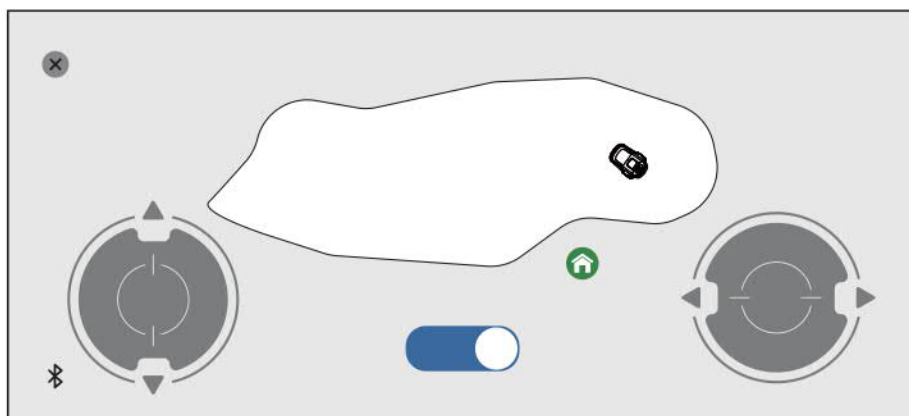


4.12 Manual Mowing

- 1) Select manual Mow from the home page



- 2) Control the mower to the place you want to start manual mowing, tap the icon to start the cutting disc.

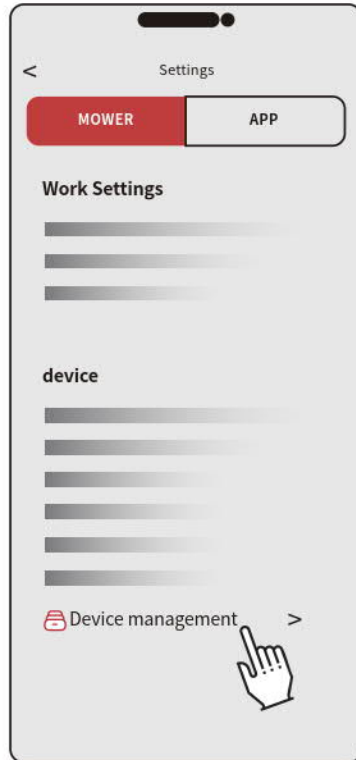


- 4) Maneuver forwards/backward or turn left/right to start manual mowing. If you stop maneuver, the cutting disc will turn off for safety, you can tap again to turn on the cutting disc.

4.13 Share Your Device

Sharing your device permits the recipient to manage settings and access device information.

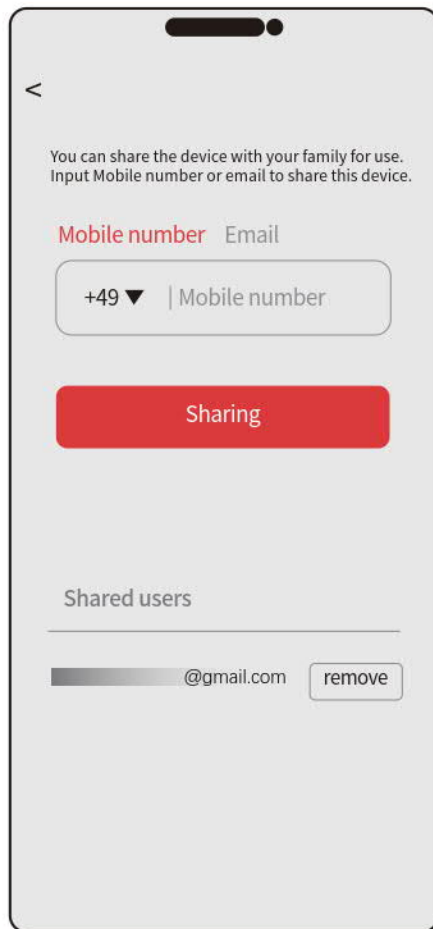
- 1) Go to Settings and tap **Device management**.



- 2) Select one of your own devices to share, tap "⋮" select **Device sharing management**.



3) Enter the account you want to share.



The image shows a mobile application screen for sharing a device. At the top, there is a back arrow icon. Below it, a message states: "You can share the device with your family for use. Input Mobile number or email to share this device." There are two tabs: "Mobile number" (highlighted in red) and "Email". Under the "Mobile number" tab, there is a text input field with a dropdown menu showing "+49" and a label "Mobile number". Below the input field is a red button labeled "Sharing". Further down, there is a section titled "Shared users" with a horizontal line. Below the line, there is a grey rectangular placeholder, an email address "@gmail.com", and a button labeled "remove".

4.14 User feedback

Contact us for support.

<

User feedback

When you encounter problems while using, you can submit feedback and our engineers will contact you promptly.

*Question:

Question description(1-200 Chars)

Upload Picture(5 pictures almost):



Upload Video(1 file almost):



Submit

5 Maintenance

To achieve optimal mowing results and extend the service life, we recommend:

- 1) Weekly system checks focusing on blade integrity and debris removal.
- 2) Prompt replacement of compromised components.
- 3) Mandatory use of protective apparel (trousers + work shoes) during maintenance.
- 4) Complete avoidance of open-toed footwear during maintenance.

5.1 Cleaning

Warning:

- Before cleaning, ensure the mower is powered off.
- Always power off the mower before turning it upside down.

5.1.1 Camera

Use a soft cloth to remove any stains on the camera lens. A clean sight is crucial for the camera to work normally, check camera weekly.

5.1.2 Housing

Use a soft brush or cloth to clean the housing of the mower. Avoid using alcohol, gasoline, acetone, or other corrosive or volatile solvents, they may damage the appearance and internal components of the mower.

5.1.3 Wheels

Regularly clean the wheels with a brush or water hose, keep wheels clean to ensure strong grip.

5.1.4 Blade Disc

Mandatory wear protective gloves while cleaning the blade disc, use a brush or water hose to clean. Check the damage of blades, and ensure the blades and cutting disc rotate freely.

5.1.5 Charging port

Check if grass clippings, dirt, or other objects are stuck inside the charging station, clean them in time.

5.1.6 Rain Sensor

Check rain sensor weekly, ensure it is not covered by mud, grass or other objects.

5.1.7 Charging Station

Use a brush or cloth to clean the charging pin.

5.1.8 RTK Reference Station

Use a brush or cloth to clean any dirt on the RTK reference station.

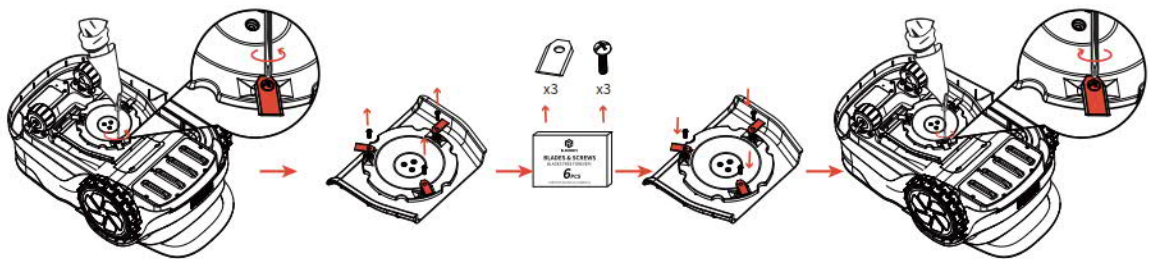
5.2 Replacing Blades

Warning

- Mandatory power off the mower before operation.
- Mandatory wear protective gloves when replacing the blades.
- Do not use an electrical screwdriver to install or loosen the blade.
- Use only the blades manufactured by BladeMate and new screws when assembling the blades.

Steps to Replace the Blades

- 1) Power off the mower.
- 2) Gently turn the mower upside down on a soft surface.
- 3) Loosen the screws with a screwdriver.
- 4) Remove the screws and the blades.
- 5) Tighten the new blades with the new screws.
- 6) Make sure that the blades can spin freely.

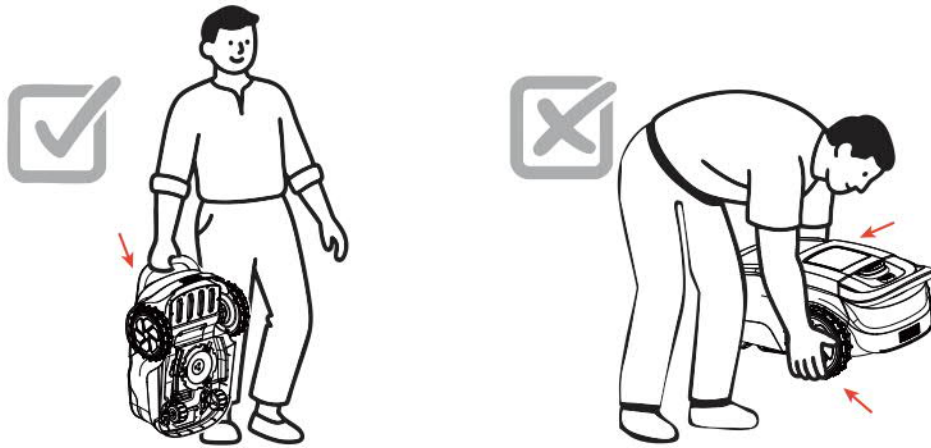


5.3 Battery Maintenance

- Maintain the battery fully charged before storage to avoid over-discharge.
- Power off the mower before storage long-term.
- Charge the battery fully every 120 days, even if it is not in use.

5.4 Transportation

- For optimal protection during long-distance transportation, always use the original packaging.
- Power off the mower before lifting, moving, or transporting the mower.
- Carry the mower by the big handle, position the blade disc to face outward, opposite your torso and limbs.



5.5 Winter Storage

To ensure the product is in optimal performance and extend its lifespan, store the mower, charging station, and RTK reference station properly during winter.

Please mark the location of charging station, if you don't install the charging station at same place of next spring, you must delete the old map and remap your lawn.

5.5.1 Store the Mower

- Fully charge the mower.
- Power off the mower.
- Clean the mower.
- Store the mower in a cool and dry place indoor.

5.5.2 Store the Charging Station

- Disconnect the power supply and RTK reference station.
- Unscrew the ground screws off the charging station.
- Clean the charging station.
- Store the mower in a cool and dry place indoor.

5.5.3 Store the RTK Reference Station

- Disconnect the cable of RTK reference station.
- Remove the RTK reference station mounting pole from the base fork.
- Clean the RTK reference station.
- Store the RTK reference station in a cool and dry place indoor.

5.6 Spring Reinstall

- Reinstall the RTK reference station.
- Reinstall the charging station.
- If you don't install the charging station at same place, you must delete the old map and remap your lawn.

6 Troubleshooting

Fault Codes	Causes	Solutions
0x10	Power on self-test failed	Shut down and restart the robot
0x11	Overcharged battery pack	Shut down robot. Take it to the after-sales store for repair or replacement.
0x12	Over-discharge battery pack	The battery has automatically stopped discharging. Shut down and restart the robot.
0x13	Battery pack overload	The battery has automatically stopped discharging. Shut down and restart the robot.
0x14	Battery pack undervoltage	The battery has automatically stopped discharging. Shut down and restart the robot.
0x15	Battery charge overheat protection	The battery has automatically stopped charging. It will resume charging when the temperature drops.
0x16	Battery discharge overheat protection	The battery has automatically stopped discharging. It will resume charging when the temperature drops.
0x17	Battery pack Internal communication abnormality	Shut down robot. Take it to the after-sales store for repair or replacement.
0x21	Battery pack external communication abnormality	Shut down robot. Take it to the after-sales store for repair or replacement.
0x22	Left/right walking, mowing/height adjustment motor controller undervoltage	The robot stops for self-protection and recovers after 2 seconds
0x23	Left/right walking, mowing/raising motor controller overvoltage	The robot stops for self-protection and recovers after 2 seconds
0x30	Power on self-test failed	Shut down and restart the robot.
0x31	Left walking motor controller overcurrent	The robot stops for self-protection and recovers after 2 seconds
0x32	Left walking motor controller short circuit	Shut down robot. Take it to the after-sales store for repair or replacement.
0x33	Left walking motor controller is locked	The robot stops for self-protection and recovers after 2 seconds
0x34	Left walking motor controller MOS temperature too high protection	The robot stops for self-protection and recovers after 30 seconds
0x35	Left walking motor controller MOS abnormality	Shut down robot. Take it to the after-sales store for repair or replacement.
0x36	Left walking motor controller Hall abnormality	Shut down robot. Take it to the after-sales store for repair or replacement.
0x37	Left walking motor controller phase loss	Shut down robot. Take it to the after-sales store for repair or replacement.
0x38	Left walking motor controller communication abnormality	Shut down and restart the robot.

0x39	Left walking controller bias abnormality	Shut down robot. Take it to the after-sales store for repair or replacement.
0x3A	Left walking controller IPD position abnormality	Shut down robot. Take it to the after-sales store for repair or replacement.
0x3B	Left walking controller out of step abnormality	Shut down robot. Take it to the after-sales store for repair or replacement.
0x3C	Left walking controller other abnormalities	Shut down robot. Take it to the after-sales store for repair or replacement.
0x40	Power on self-test failed	Shut down and restart the robot.
0x41	Right walking motor controller overcurrent	The robot stops for self-protection and recovers after 2 seconds
0x42	Right walking motor controller short circuit	Shut down robot. Take it to the after-sales store for repair or replacement.
0x43	Right walking motor controller is locked	The robot stops for self-protection and recovers after 2 seconds
0x44	Right walking motor controller MOS temperature too high protection	The robot stops for self-protection and recovers after 30 seconds
0x45	Right walking motor controller MOS abnormality	Shut down robot. Take it to the after-sales store for repair or replacement.
0x46	Right walking motor controller hall abnormality	Shut down robot. Take it to the after-sales store for repair or replacement.
0x47	Right walking motor controller phase loss	Shut down robot. Take it to the after-sales store for repair or replacement.
0x48	Right walking motor controller communication abnormality	Shut down and restart the robot.
0x49	Right walking controller bias abnormality	Shut down robot. Take it to the after-sales store for repair or replacement.
0x4A	Right walking controller IPD position abnormality	Shut down robot. Take it to the after-sales store for repair or replacement.
0x4B	Right walking controller out of step abnormality	Shut down robot. Take it to the after-sales store for repair or replacement.
0x4C	Right walking controller other abnormalities	Shut down robot. Take it to the after-sales store for repair or replacement.
0x50	Power on self-test failed	Shut down and restart the robot.
0x51	Mowing motor controller overcurrent	The robot stops for self-protection and recovers after 2 seconds
0x52	Mowing motor controller short circuit	Shut down robot. Take it to the after-sales store for repair or replacement.
0x53	Mowing motor controller is locked	The robot stops for self-protection and recovers after 2 seconds
0x54	Mowing motor controller MOS temperature too high protection	The robot stops for self-protection and recovers after 30 seconds
0x55	Mowing motor controller MOS abnormality	Shut down robot. Take it to the after-sales store for repair or replacement.

0x57	Mowing motor controller phase loss	Shut down robot. Take it to the after-sales store for repair or replacement.
0x58	Mowing/Lift motor controller communication abnormality	Shut down and restart the robot.
0x59	Mowing/Lift motor controller bias abnormality	Shut down robot. Take it to the after-sales store for repair or replacement.
0x5A	Mowing/Lift motor controller IPD position abnormality	Shut down robot. Take it to the after-sales store for repair or replacement.
0x5B	Mowing/Lift motor controller out of step abnormality	Shut down robot. Take it to the after-sales store for repair or replacement.
0x5C	Mowing/Lift motor controller other abnormalities	Shut down robot. Take it to the after-sales store for repair or replacement.
0x61	Lift motor controller overcurrent	The robot stops for self-protection and recovers after 2 seconds
0x62	Lift motor controller short circuit	Shut down robot. Take it to the after-sales store for repair or replacement.
0x63	Lift motor controller is locked	The robot stops for self-protection and recovers after 2 seconds
0x64	Lift motor controller MOS temperature too high protection	The robot stops for self-protection and recovers after 30 seconds
0x65	Lift motor controller MOS abnormality	Shut down robot. Take it to the after-sales store for repair or replacement.
0x66	Lift motor controller hall abnormality	Shut down robot. Take it to the after-sales store for repair or replacement.
0x67	Lift motor controller phase loss	Shut down robot. Take it to the after-sales store for repair or replacement.
0x68	Lift motor controller communication abnormality	Shut down and restart the robot.
0x69	Lift motor controller bias abnormality	Shut down robot. Take it to the after-sales store for repair or replacement.
0x6A	Lift motor controller IPD position abnormality	Shut down robot. Take it to the after-sales store for repair or replacement.
0x6B	Lift motor controller out of step abnormality	Shut down robot. Take it to the after-sales store for repair or replacement.
0x6C	Lift motor controller other abnormalities	Shut down robot. Take it to the after-sales store for repair or replacement.
0x80	Lift Up	Press OK + Start to restart.
0x81	Collision	Press OK + Start to restart.
0x82	Tilted	Press OK + Start to restart.
0x83	Upside Down	Press OK + Start to restart.
0x90	Trapped	Press OK + Start to restart.
0x91	Task timeout	Shut down and restart the robot.
0x92	RTK malfunction	Press STOP. Shut down and restart the robot.

0x93	Visual sensor malfunction	Press STOP. Shut down and restart the robot.
0x94	Self-test failed	Shut down and restart the robot.
0x95	Insufficient Light	Shut down and return to the charging-station.
0x96	Outside Boundary	The robot has stopped. Shut down and restart the robot.
0x97	Upper computer and HMI communication malfunction	Shut down and restart the robot.
0x98	Out of operational area	Press STOP. Shut down and restart the robot.
0xb0	Control software malfunction	Press STOP. Shut down and restart the robot.
0xc0	A software malfunction	Press STOP. Shut down and restart the robot.
0xa1	Power on self-test failed	Press STOP. Shut down and restart the robot.
0xa2	Driver software and upper computer communication abnormality	Press STOP. Shut down and restart the robot.
0xa3	Driver software and Lower computer communication abnormality	Press STOP. Shut down and restart the robot.

7 Technical Data

Specifications	BladeMate S1 Pro	BladeMate S1 Ultra
Recommended Mowing Area	1000m ²	1600m ²
Mowing Area Per Hour	100 - 150m ²	
Positioning System	RTK + 3D Vision	
Obstacle Avoidance	3D AI Vision	
Cutting Width	21 cm	
Cutting Height	30-70 mm	
Cutting Height Adjustment	APP	
Battery	10 Ah	15 Ah
Working Voltage	21.6 V DC	
Mowing Time per Charge	180 min	270 min
Charging Time	120 min	180 min
Max. Slope	45%	
Noise	<60 dB(A)	
Waterproof	IPX6	
Net Weight	12.5 kg	13 kg
IoT Connectivity	Bluetooth & Wi-Fi & 4G	Bluetooth & Wi-Fi & 4G
Virtual Boundary	●	
Systematic Mowing Pattern	●	
Pause & Resume	●	
Automatic Charging	●	
APP Control	●	
Multi-zone Management	●	
Rain Detection	●	
OTA Updates	●	
Battery Charger	Input: 100-120Vac Output: 26Vdc, 3A, 78.9W	
Robotic Mower Dimensions	655 × 447 × 285 mm	
Charging Station Dimensions	780 × 494 × 291 mm	

8 Warranty

Kunshan Lantuo intelligent Robot Co., Ltd strives to deliver exceptional service to customers. Lantuo warrants that the product will be free from material and workmanship defects under normal use in accordance with the product materials published by Lantuo during the warranty period.

- If the product does not work as warranted during the warranty period, please contact the dealer for customer service.
- Users must present a valid proof of purchase, receipt, or invoice.
- The warranty period for the product starts from the original date of purchase indicated on the sales receipt or invoice.
- Lifetime-long Blades Free-of-Charge: The product is for personal user. Requested once a year, and the product has been used.

Warranty period:

Main Body	3 Years
RTK Reference Station	
Charging Station	
Battery	
Power Supply	
Blades	Lifetime-long Blades Free-of-Charge
Other Accessories	No Warranty

40

Meet but not limited to the following conditions, you can apply for free warranty service:

- The product is within the warranty period.
- The product only be used in compliance with the instructions in this user manual.
- The product has no signs of man-made or external of damage.

Meet but not limited to the following conditions, Lantuo reserves the right to refuse a free warranty:

- Misuse or non-compliance with the user manual.
- The failure is caused by accident, abuse, misuse, flood, fire, earthquake, food or liquid spills, incorrect electrical charge, or other external causes.
- The damage is caused by operating the product outside the permitted or intended uses described by Lantuo.
- The product or part that has been modified to significantly alter functionality or capability without the written permission of Lantuo.
- Defects caused by normal wear or aging.

9 Compliance

9.1 EC Declaration of Conformity

Manufacturer Name: Kunshan Lantuo Intelligent Robot Co., Ltd

Address: Room 2, No. 179, Waihejing Road, Comprehensive Bonded Zone, Kunshan Development Zone, Kunshan City, Jiangsu, China

Object of the declaration

Description: Intelligent Lawan Mower

Brand: BladeMate

Models: S1 Pro; S1 Ultra

The object of the declaration is comply with the following EU Directives:

Directive	Description
2006/42/EC	Relating to machinery
2014/53/EU	Relating to radio equipment

Conformity with EU Directives has been assessed for the product by demonstrating compliance to following standards and/or technical specifications:

EN 60335-1:2012/A15:2021	EN 301 489-1 V2.2.3:2019
EN 50636-2-107:2015/A3:2021	EN 301 489-3 V2.3.2:2023
EN IEC 55014-1:2021	EN 301 489-17 V3.3.1:2024
EN IEC 55014-2:2021	EN 301 489-19 V2.2.1:2022
EN IEC 61000-3-2:2019/A1:2021	EN 301 489-52 V1.2.1:2021
EN 61000-3-3:2013/A2:2021	EN 300 328 V2.2.2:2019
EN 62311:2008	EN 300 220-2 V3.1.1:2017
EN 50665:2017	EN 303 413 V1.2.1:2021
EN 62479:2010	EN 301 908-1 V15.2.1:2023
EN 50663:2017	EN 301 908-13 V13.2.1:2022
EN 62233:2008	

Signed for and on behalf of: Kunshan Lantuo Intelligent Robot Co., Ltd

Signed: Andy Liu

Date: April 15, 2025

Position: General Manager

9.2 FCC Compliance Statement

This device complies with part 15 of the FCC Rules. 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. 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.

FCC Caution:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Radiation Exposure Statement:

This equipment should be installed and operated with minimum distance of 20 cm between the radiator & your body.

Industry Canada Statement

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions: 1. This device may not cause interference. 2. This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. L'appareil ne doit pas produire de brouillage; 2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

ISED Radiation Exposure Statement

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

Déclaration d'exposition aux radiations:

Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé à plus de 20 cm entre le radiateur et votre corps.

EG-Konformitätserklärung

EC Declaration of Conformity

Hiermit erklären wir,
We herewith declare,

Kunshan Lantuo Intelligent Robot Co., Ltd
Room 2, No. 179, Waihejing Road, Comprehensive Bonded
Zone, Kunshan Development Zone 215300 Kunshan City,
Jiangsu Province People's Republic of China

daß die nachfolgend bezeichnete Maschine aufgrund ihrer Konzipierung und Bauart sowie in der von uns in Verkehr gebrachten Ausführung den einschlägigen grundlegenden Sicherheits- und Gesundheitsanforderungen der EG-Richtlinien entspricht.

that the following machine complies with the appropriate basic safety and health requirements of the EC Directive based on its design and type, as brought into circulation by us.

Bei einer nicht mit uns abgestimmten Änderung der Maschine verliert diese Erklärung ihre Gültigkeit.

In case of alteration of the machine, not agreed upon by us, this declaration will lose its validity

Bezeichnung der Maschine: Battery-powered robotic mower for household use only.

Machine Description:

Maschinentyp: S1 Pro; S1 Ultra

Machine Type:

Handelsmarke: N/A

Trade name

Maschinen-Nr.: N/A

Serial Number

Die Maschine erfüllt die

EG-Richtlinien:

The machinery fulfils these EC Directives:

EU Directive_ EMC: 2014/30/EU

EU Directive_ Machinery Directive: 2006/42/EC

EU Directive_ WEEE: 2012/19/EC

EU Directive_ RoHs directive: 2011/65/EU

Angewandte harmonisierte

Normen:

Applicable Harmonized Standards:

EN 60335-1:2012/A15:2021

EN 50636-2-107:2015/A3:2021

EN 62233:2008

Herstellerunterschrift/ Platz

/Datum:

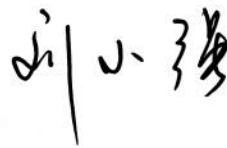
Authorized Signature/Place/Date:

..... Kunshan CHINA 2025-02-25.....

Angaben zum Unterzeichner:

Title of Signatory:

.....



**Name und Anschrift der Person,
die Erstellung der technischen
Unterlagen**

*Name and address of the person
compiling the technical file:*

Kunshan CHINA 2025-02-25

Declaration Letter

We, Kunshan Lantuo Intelligent Robot Co., Ltd

Room 2, No. 179, Waihejing Road, Comprehensive Bonded Zone, Kunshan
Development Zone 215300 Kunshan City, Jiangsu Province People's
Republic of China

Herewith declare that the user manual/instruction for below product,

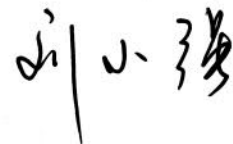
Product: Intelligent Lawn Mower

Product model no.:

S1 Pro; S1 Ultra

The user manual/instruction shall also be available in an alternative format like below:

- ☐ Website
- ☒ Repair/Maintenance centre
- ☐ Sales centre (supermarket, vendor place etc.)
- ☐ Others, pls. specify _____



Seal and signature:



The manufacturer reserves the right to make changes to the product, release firmware updates, and update this manual at any time. Illustrations of the product, accessories, and app interface in the User Manual are for reference purposes only. Actual product and functions may vary. Go to <https://lantotech.com> for the latest user materials.