

9. Maintenance

Regular cleaning and part replacement are key to long-term performance.

Recommended Replacement Intervals

Component	Recommended Interval
Cutting blades	Every 6–8 weeks (or as needed)
Sensor Cleaning Brush	Every 12 months (or as needed)

Maintenance Check remaining component life in: App → Settings → Maintenance.

After replacement, tap Confirm Replacement to reset maintenance timers.

9.1 Component Replacement

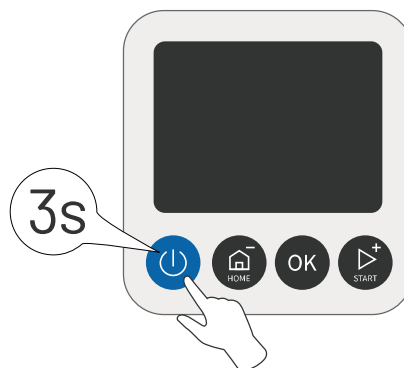
Replacing Cutting Blades

Frequency: Every 6–8 weeks or sooner if worn.

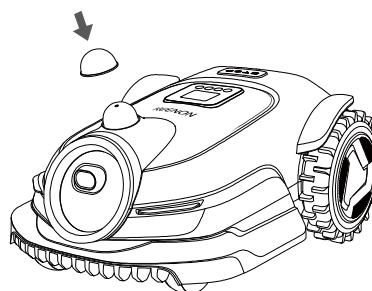
Safety: Power off device and Always wear cut-resistant gloves.

Steps:

1. Power off the device



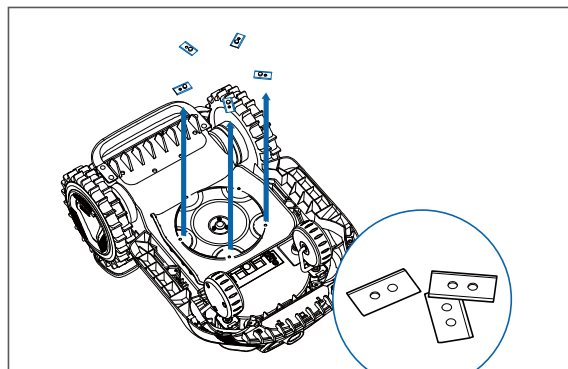
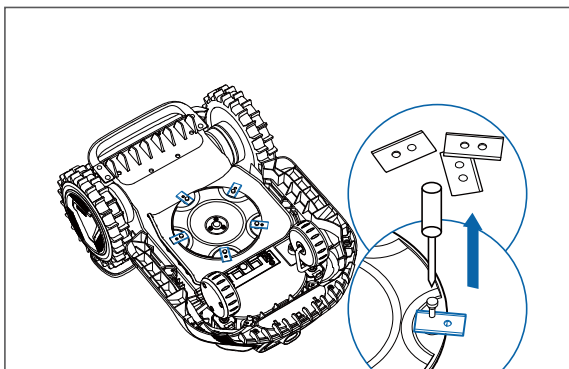
2. Install the LiDAR protective cover.



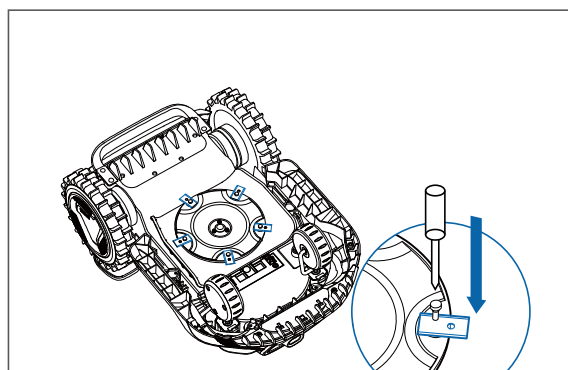
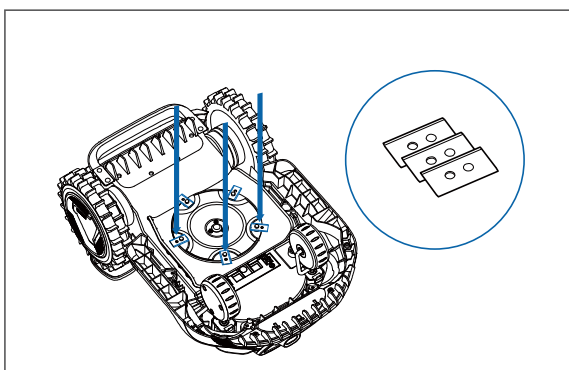
3. Place the mower upside down on a stable, soft surface.



4. Unscrew each blade holder and remove old blades



5. Install new blades and tighten screws firmly.



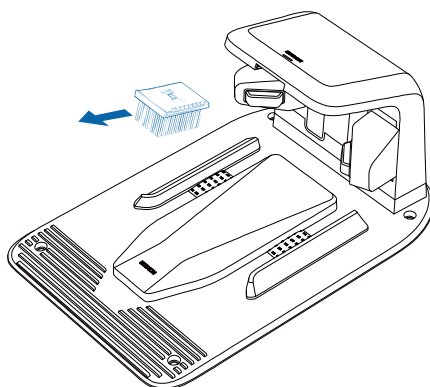
6. Ensure all blades rotate freely without obstruction.

Tip: Replace all blades at once to maintain cutting balance.

Replacing Sensor Cleaning Brush

Frequency: Every 12 months or when bristles are visibly worn.

Replace only with Keenon-approved parts for best cleaning performance.



9.2 Cleaning Procedure

Regular cleaning prevents grass buildup and ensures smooth operation.

Safety Precautions:

- Always power off the mower before cleaning.
- Disconnect the charging base from power.
- Install the LiDAR protective cover before tilting or inverting the unit.
- Wear protective gloves.

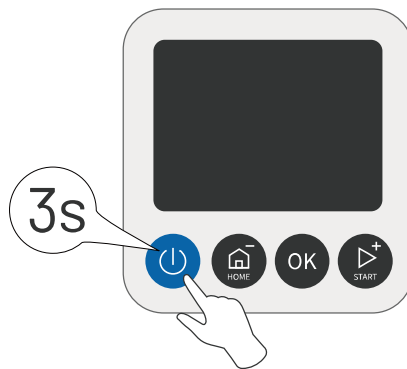
Clean steps:

Cleaning the Bottom Housing, Undercarriage & Cutting Assembly

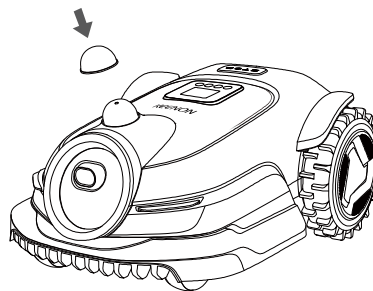
Important:

- Do not use solvents or chemical cleaners.
- Avoid direct contact with blades while cleaning.

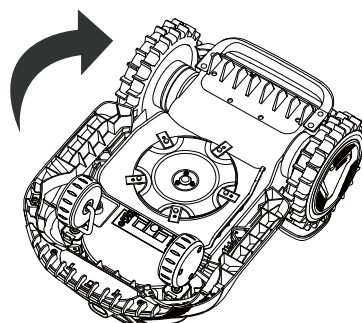
1. Power off the device completely



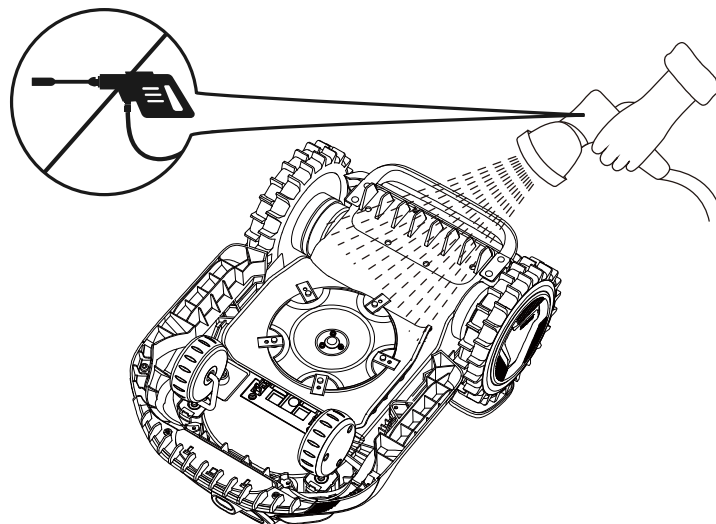
2. Install the LiDAR sensor protective cover.



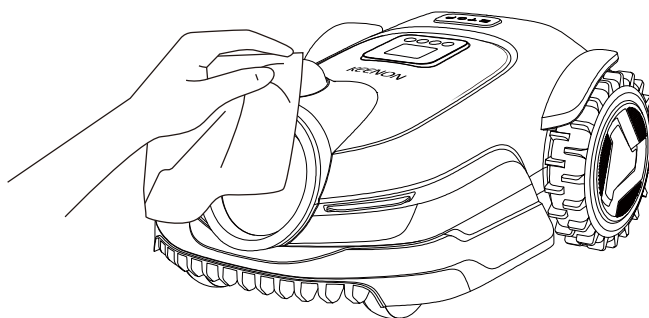
3. Place the mower carefully on its side or upside down.



4. Rinse the undercarriage using a low-pressure garden hose (never use a high-pressure washer).

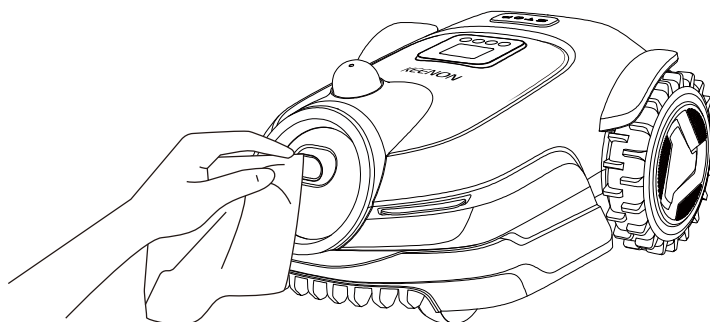


5. Gently wipe the LiDAR sensor with a soft, lint-free cloth



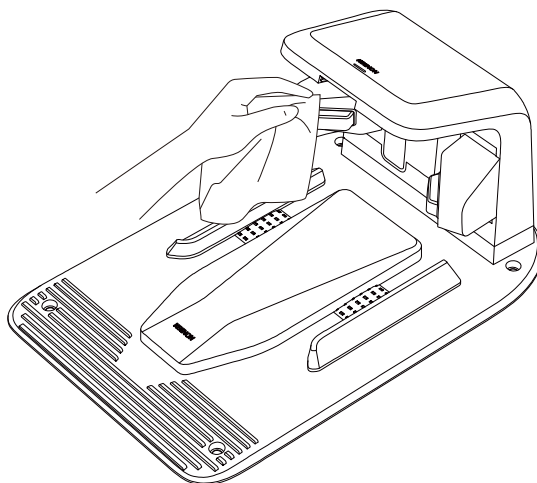
Clean the camera

Clean front-facing camera carefully



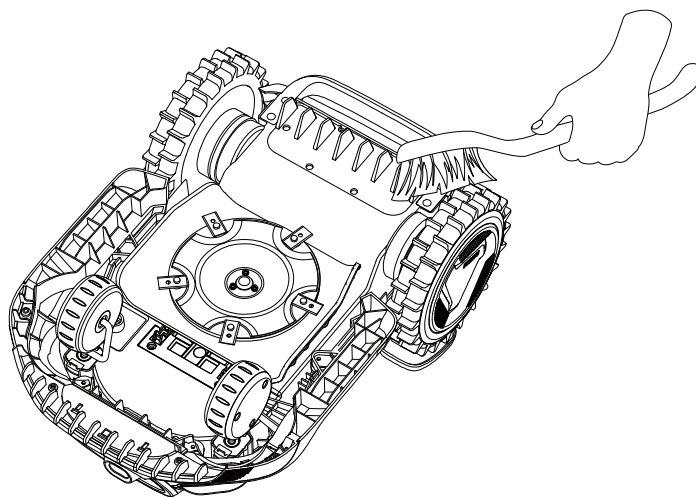
Clean the Charging Contacts

Wipe charging contacts on both device and station with a dry cloth



Clean the wheels

Remove accumulated debris from wheels using a soft brush, and then check for proper traction and free movement



10. Battery Care & Storage

Long-Term Storage Guidelines:

- Recharge the battery at least every 6 months during storage.
- Storage temperature: -10°C to 35°C (14°F to 95°F).
- Ideal temperature: 0°C to 25°C (32°F to 77°F).
- Avoid charging below 6°C (43°F) or above 45°C (113°F).

Additional Notes:

- Battery lifespan depends on usage and environment.
- Follow local regulations for recycling and disposal.
- Deep discharge damage is not covered under warranty.

11. Winter Storage

Preparing the Mower:

- Fully charge the battery before shutdown.
- Perform full cleaning as described in section 6.1
- Install the LiDAR protective cover.
- Store indoors in a dry, frost-free location (above 0°C / 32°F).

charging base Care

- Unplug the power supply.
- Store in a cool, dry place away from direct sunlight.

Reactivating After Storage

- Reinstall the charging base and place the mower to charge.
- If the station's location has changed, the mower will automatically update its reference point.
- Remap your lawn if major garden changes were made during storage.

12. Transport Guidelines

Safe Transport:

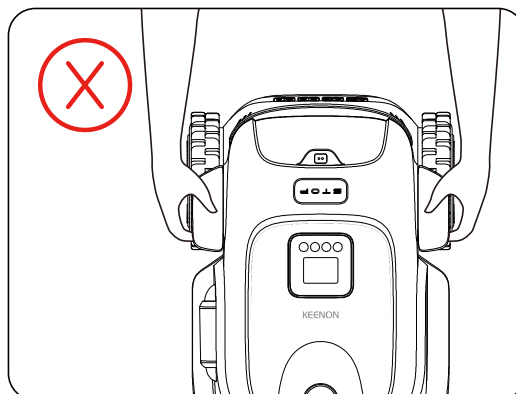
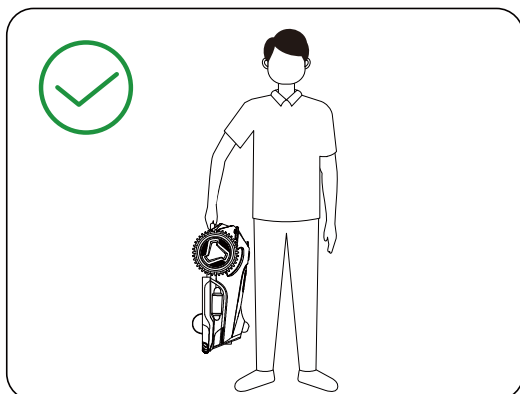
- Ensure the robot is completely powered off
- Install the LiDAR protective cover.
- Use the original packaging if available.

Handling

ALWAYS lift using rear handle provided

Keep cutting blades facing away from your body

Secure the mower to prevent movement during transport.



13. Troubleshooting

This section addresses common operational issues and provides systematic solutions. For persistent problems, please contact our customer support team.

Category	Symptom / Error Message	Possible Cause	Solution
Connection & Setup	Cannot connect to the app.	- Weak or unstable Wi-Fi/Bluetooth signal. - Device is restarting or not fully powered on	1. Wait until the device has fully started. 2. Check your router and internet connection. 3. Move closer to the robot for Bluetooth pairing.
	App shows "Device Offline"	- Wi-Fi disconnected or out of range	1. Ensure your home Wi-Fi is working properly. 2. Restart the robot and reconnect in the app.
Navigation & Mapping	Positioning failed / Robot is lost.	- LiDAR sensor is dirty or blocked. - Robot started in a confined area.	1. Gently clean the LiDAR sensor with a soft, dry cloth. 2. Move the robot to an open area and restart. 3. If the issue persists, start the task from the charging base.
	Failed to return to/dock with charging base.	- Path blocked by obstacles. - charging base sensors are dirty. - Station moved or placed on an uneven surface.	1. Clear the path to the station. 2. Clean the station sensors with a soft cloth. 3. Ensure the station is level and powered. 4. Use the app to guide the robot home or dock it manually.

Category	Symptom / Error Message	Possible Cause	Solution
Navigation & Mapping	Path is obstructed.	- A No-Go Zone is set on the path. - Physical obstacles are present.	1. Check the map and adjust No-Go Zones. 2. Remove any physical obstacles. 3. If still blocked, delete and recreate the path in the app.
	Boundary detection error during mapping.	- Poor lighting (too bright or dark). - Fog, rain, or other adverse weather. - Dirty or covered front camera.	1. Perform mapping in good daylight and weather. 2. Clean the front camera lens. 3. Use manual mapping mode if auto-detection fails.
Mechanical & Sensor	Blade disc does not rotate.	- Jammed by debris or tall grass. - Cutting motor malfunction.	1. Turn off power and clean the blade area. 2. Pre-cut grass taller than 10 cm. 3. Ensure underside is dry before restarting. 4. If issue continues, contact service.
	Left/Right rear wheel error.	- Wheel jammed or motor issue.	1. Remove debris from wheels. 2. Restart the robot. 3. If still faulty, contact service.
	Bumper error.	- Bumper stuck or continuously triggered.	1. Check if the robot is trapped. 2. Gently press bumper to confirm it moves freely. 3. Restart robot. If issue remains, contact service.
	Front camera is blocked/dirty/ has an issue.	- Lens dirty or covered.	1. Wipe camera lens with a soft, clean cloth. 2. Restart the robot. 3. Contact service if problem persists.
Power & Charging	Charging error.	- charging base not powered. - Dirty charging contacts.	1. Verify the station is plugged in and powered. 2. Clean charging contacts on both robot and station. 3. Dock the robot again.

Category	Symptom / Error Message	Possible Cause	Solution
Power & Charging	Battery temperature is too high ($\geq 45^{\circ}\text{C}$).	- Hot ambient environment.	1. Avoid operating above 40°C . 2. Charging will resume automatically after cooling.
	Battery temperature is too low ($\leq 6^{\circ}\text{C}$).	- Ambient temperature is too low.	1. Do not charge below 6°C . 2. Move robot to a warmer location before charging.
	Low battery. The robot will shut down soon.	- Battery level below 5%.	Dock the robot immediately to recharge.
Safety & Alerts	Robot lifted.	- Wheels not on ground.	1. Place robot on flat ground. 2. Press "OK" on the control panel to resume.
	Robot tilted.	- Slope too steep (over $45^{\circ} / 24.2^{\circ}$).	1. Move to a level surface. 2. Press "OK" to resume. 3. Avoid operating on steep slopes. 3. Ensure operating slopes do not exceed $50^{\circ} (27^{\circ})$.
	Robot trapped.	- Surrounded by obstacles, in a hole, or in tall grass.	1. Remove obstacles and retry. 2. Level any holes or depressions. 3. Pre-cut grass taller than 10 cm. 4. If recurring, mark the area as a No-Go Zone.
	Emergency stop is activated.	- The STOP button was pressed.	Press "Start", then press "OK" on the robot's control panel to resume.
	Robot is away from the map. Risk of being stolen.	- The robot has been moved outside its defined work area.	1. Enter your PIN to confirm ownership. 2. You can disable the Off-Map Alarm in the app settings if needed.

14. Technical Data

Basic information	Product name	KeenMow K1
	Brand	Keenon
	Model	M-A2501
	Dimensions	643*440*283mm
	Weight (battery included)	16.4 kg
Mowing	Recommended working capacity	1,500 m ²
	Mowing efficiency	Standard: 120 m ² /h Efficient: 200 m ² /h
	Mowing height	20~70 mm
	Mowing width	22 cm
	Charging time [1]	1.7h
Noise emissions	Sound power level LWA	62 dB(A)
	Sound power uncertainties KWA	3 dB(A)
	Sound pressure level LpA	56 dB(A)
	Sound pressure uncertainties KpA	3 dB(A)
Working condition	Operating temperature	5~40° C Recommended: 10~35° C
	Long-term storage temperature	-10~35° C Recommended: 0~25° C
	IP-classification	Robot: IPX6 charging base: IPX4 Power supply: IP67
	Maximum slope for mowing area	50% (27°)

Driving motor	Driving speed under remote control	0.4 m/s
	Driving speed when mowing	Standard: 0.4 m/s Efficient: 0.6 m/s
Cutting Motor	Speed	2850/min
Battery (robot)	Battery model	MBP-A2501
	Battery type	Lithium-ion battery
	Rated capacity	5000 mAh
	Rated voltage	21.6V
Power supply	Charger model	MPA-A2501
	Input voltage	100~240 V AC
	Output voltage	32V
	Output current	3 A
Charging base	Charging base model	MC-A2501
	Input voltage	32V
	Output voltage	32V
	Input current	3 A
	Output current	3 A
Accessories	Spare blades and holders	15

[1]Charging time applies when the robot automatically returns to the charging base at low battery.

[2]Requires the installation of Net Box.

Note: The specifications are subject to change as we continually improve our product. For the latest information, please visit our website at www.Keenmow.com

FCC Caution.

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.

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

Note: 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 Radiation Exposure Statement:

This equipment complies with FCC 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.