

4.2 Create a Map

4.2.1 Set the Virtual Boundary

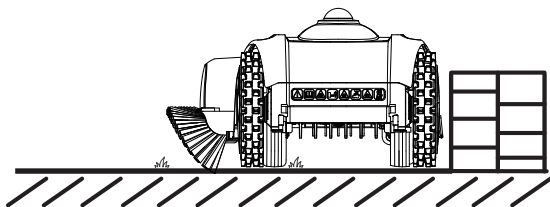
① Boundary Types

Various types of boundaries define the outline of your lawn, such as hedges, fences, and drainage ditches. For different types of physical boundaries, it is recommended that when remotely controlling GOAT, you pay attention to the distance between GOAT and the boundary to achieve the best cutting results.

• Barriers

Walls or fences that rise more than 5cm(1.97") above ground level.

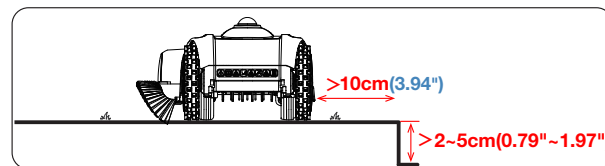
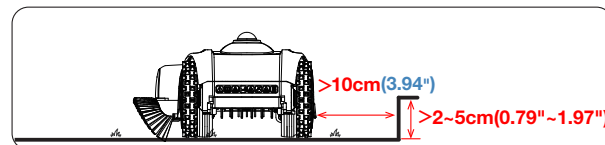
Recommendation: When mapping along this type of boundary, remotely control GOAT to follow the barrier's edge closely.



• Restrained Boundaries

Steps with a height of 2cm~5cm(0.79"~1.97") above ground level. Concave surfaces lower than the surrounding ground.

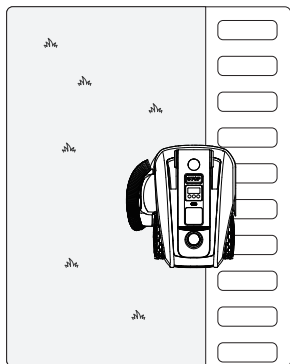
Recommendation: When mapping, keep GOAT approximately 10cm(3.94") away from this type of boundary.



• Flat Boundaries

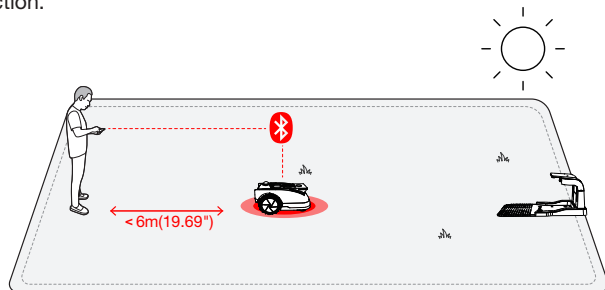
Flat road surfaces flush with the lawn.

Recommendation: When mapping along this type of boundary, extend the mapping path slightly outward.

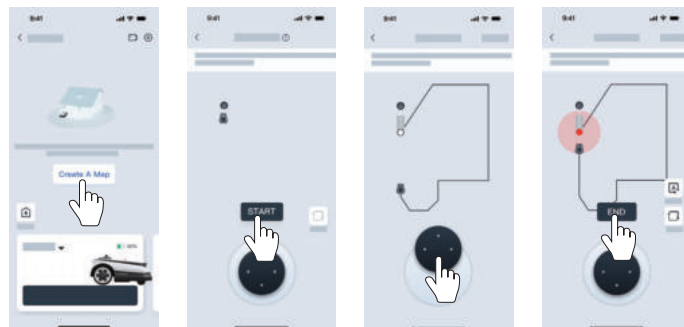


② Create a Map

- Build the map at daytime under optimal sunlight.
- Ensure your GOAT docks properly at the Charging Station and starts from there.
- Keep close to GOAT within 6m (19.69') for a steady Bluetooth connection.



1. Tap to start mapping on the APP. GOAT will automatically exit the Charging Station.
2. Once GOAT has exited the station, use  on the APP to control its movement.
3. Drive GOAT to the boundary and position it at a suitable starting point, then tap to start mapping.
4. Control GOAT along the boundary following the recommendations in the “Boundary Types” chapter.
5. When GOAT approaches the starting point, the **END** button will appear on the APP. Tap to close the boundary and generate the map.



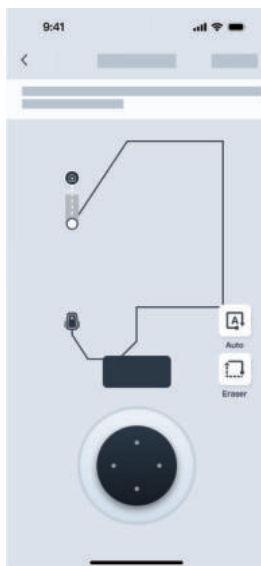
③ Function Button during Mapping

 This function becomes available when GOAT detects a clear boundary between grass and non-grass areas. The button will flash to indicate availability.

Tap it, and GOAT will automatically follow the boundary until the boundary becomes unclear.

*Monitor GOAT and switch to manual mode if the automatic mapping is not as expected.

 This function allows GOAT to reverse its most recent mapping path. Press and hold the button until GOAT returns to the point where you want it to stop reversing.



4.2.2 Explore Map Features

You can explore more mapping features on the App. You can enter Map Editing once the map is finished.

① Map Editing Functions

- Area

A working area that you can add, delete, merge, or divide. The first area is the boundary you just drew by remotely controlling GOAT.

- Path

A connection between two areas.

A path can be created manually using the add path function or generated automatically when you create a new area by starting from one area and reaching the starting point of another.

- No-Entry Zone

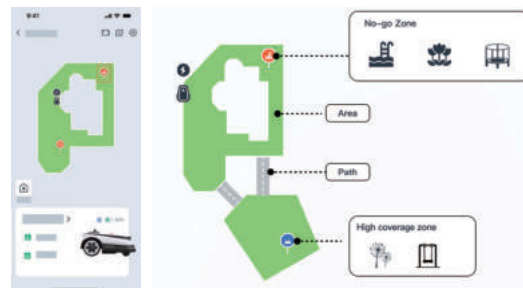
A zone that GOAT will not enter.

It is necessary to set up No-Entry Zones for objects, such as flowerbeds, trampolines, vegetable plots, raised tree roots, exposed wires, and slopes that exceed 45%.

You can create a No-Entry Zone and control GOAT to draw a boundary around the zone—just like creating the map, including setting the starting point and end point.

Note:

It is recommended to keep the No-Entry Zone boundaries 30cm(11.8") away from dangerous areas such as ponds or cliffs.



• High Coverage Area

To ensure a comprehensive mowing experience, GOAT is equipped with sensitive multi-obstacle avoidance sensors. Sometimes, the obstacle avoidance function may be triggered by taller objects such as dandelions or wild grass. This feature allows you to create Non-Obstacle Avoidance Areas, enabling GOAT to cut smoothly through these plants.

Note:

If the wild grass covers a large area, it is recommended to use a push mower for cutting.

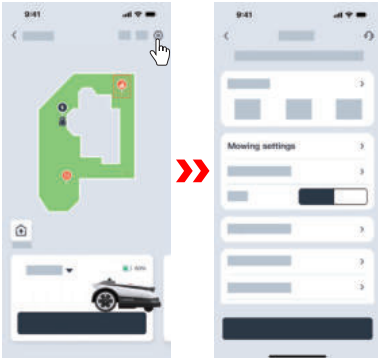
• Map

It involves functions such as map modification, backup, deletion, and restoration.

② **Mowing Settings**

• Mowing Parameter Setting

Once the mapping is complete, you can set mowing parameters such as mowing direction, mowing speed, and cutting height. Different parameters can be assigned to each area, allowing you to create the optimal mowing plan for your lawn.



• Boundary Type Settings

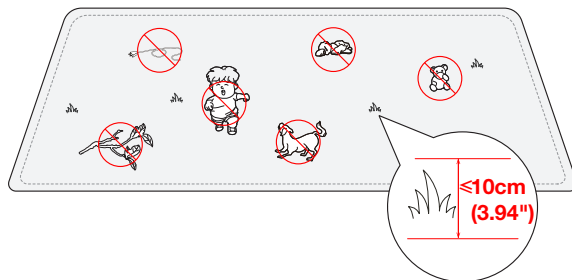
Please refer to Chapter "Boundary Types" By default, GOAT will strictly follow the original path recorded during mapping. You can also choose boundary sections such as Barriers or Flat Boundaries, as described in "Boundary Types." Select these sections on the App and enable the Adaptive Mode. This allows GOAT to intelligently identify the actual grass-non-grass edge and extend mowing coverage.

Cutting Height Setting Recommendation	
Grass Height	Cutting Height Setting
7-10cm (2.8"-3.9")	5-8cm (2.0"-3.2") (cut by 2cm / 0.8")
4-7cm (1.6"-2.8")	3-6cm (1.2"-2.4") (cut by 1cm / 0.4")

5. Time for Mowing

5.1 Tips Before First Mowing

- Precut the grass to a height of no more than 10cm (3.94") with your manual lawnGOAT and clear away obstacles including debris, piles of leaves, toys, wires and stones.
- Do not let your children play on the lawn when your GOAT is mowing.



- GOAT will pause mowing when it is raining or the battery is low, and will resume mowing automatically afterward.

Note: The rain delay time can be adjusted in Settings.

5.2 Manually Triggered Tasks

- Auto

Tap and select the cutting sequence for the area. GOAT will start mowing the entire area. After completing logical mowing within the area, it will mow along the boundaries, including the Area and No-Entry Zone boundaries.

This function can also be triggered from GOAT's panel.

- Area

Tap and select the mowing area. GOAT will start mowing the selected areas. After completing logical mowing within these areas, it will mow along their boundaries, including the Area and No-Entry Zone boundaries.

- Trim

Tap and select the edges to trim, including the parts of the Area and No-Entry Zones boundaries.



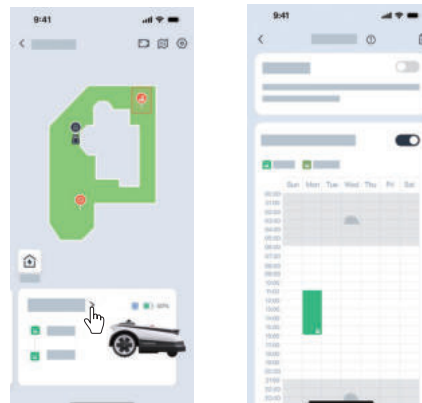
Note:

- To ensure optimal trimming, GOAT will mow as close to the edge as possible. When selecting trimming boundaries, avoid areas with objects that could be damaged.
 - When the Trimmer is operating and the system detects a person nearby, trimming will stop. Keep at least 2 meters(6.56') away from GOAT during operation.
 - To reduce wear caused by frequent starts and stops, the Trimmer will not stop rotating between tasks if trimming is incomplete. Instead, it will switch to a low-speed mode, which is less effective at cutting grass, until it reaches the next task area.
 - To ensure optimal mowing performance, GOAT operates at a walking speed of 0.2 m/s during mowing.
- **Manual**
Tap to enter manual mode, allowing GOAT to mow or trim under Bluetooth control.

Note:

Keep within 6m(19.69') of GOAT to maintain an effective Bluetooth connection.

5.3 Schedule Triggered Tasks



- **Animal Protection Time**

To protect nocturnal animals, you can set non-working time periods. By default, this period is 19:00-7:00. Tap to adjust the time period as needed.

- **Auto Mowing Time**

You can set a mowing schedule if needed. GOAT will then mow automatically according to the schedule.

6. Maintenance

For better performance and a longer lifespan of your GOAT, please maintain it properly and replace worn parts as needed.

6.1 Routine Maintenance

① Recommended Frequency

Part	Frequency
LiDAR Sensor	Wipe every 1 week
Front AI Camera	Wipe every 1 to 2 weeks
ToF Sensor	Wipe every 1 to 2 weeks
Blades	Replace every 4 to 6 weeks
Trimmer Line	Replace every 4 to 8 weeks
Trimmer Brush	Replace every 4 to 8 weeks

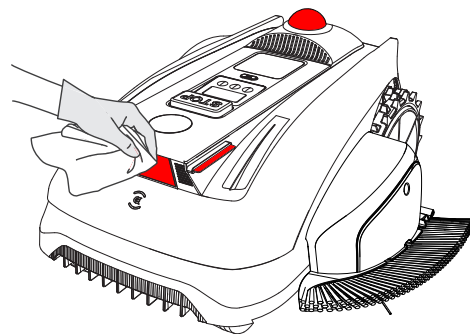
Note: Please utilize only the original battery or that of the same model as specified by ECOVACS.

6.2 Warnings Before Maintenance

- Always power off your GOAT before maintenance operation.
- Always wear protective gloves especially when replacing the Blades.
- Cover the LiDAR sensor when replacing the blades or cleaning the machine before turning GOAT over.

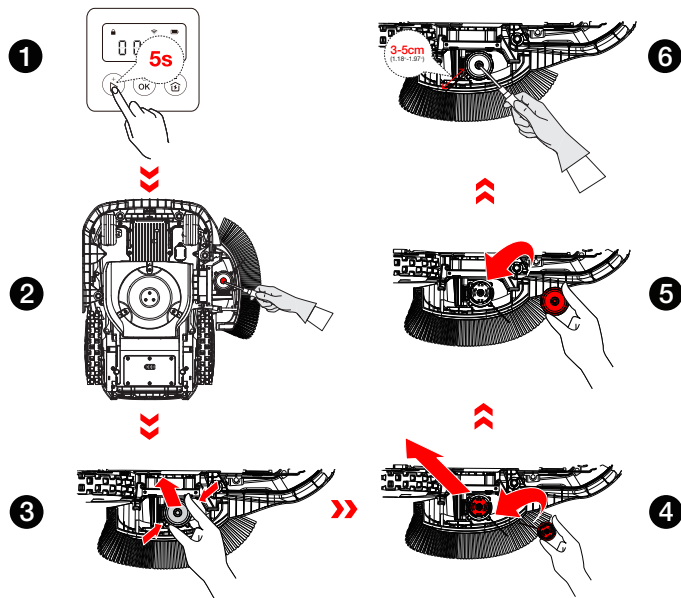
① Steps to Clean the Main Parts

- Clean the Blade Disc and Wheels with a brush, wipe other components with a clean, dry cloth.
- Clean the trimmer structure using a brush or cloth.
- DO NOT use cleaning sprays or detergents.
- DO NOT use a high-pressure sprinkler, as it may damage electronic components.



② Trimmer Line Replacement

1. Press and hold $\triangleright$ for 5 seconds, or power off GOAT, to enter maintenance mode.
2. Loosen and remove the screws of the trimmer line cover.
3. Pinch the clips on both sides of the cover and pull out the cover.
4. Remove the old reel, install the new one, and pull the trimmer line out of the hole.
5. Close the cover and tighten the screws.
6. Hold the line-release button and extend the line by 3-5cm (1.18"-1.97").



③ Trimmer Module Brush Replacement

If the trimmer brush is deformed, press down the trimmer brush clip to remove the Brush. Then insert the new brush clip into the Trimmer housing until it clicks into place.

