

Short Run Time Trouble-Shooting Guide

Short run times are frustrating to deal with because the Ambrogio/LawnBott robot gets behind on its cutting job and the lawn may look terrible! There are numerous possible causes.

1. **Recharging Nuts and Plates Oxidized** Shine them up with fine sandpaper (see Winter Service Instructions).
2. **Incorrect Date and/or Time set in the Menu** This issue is more common than you might think. Make sure the date matches today's date, note it is in European format (day & month are switched) and the time is the correct time (it is a 24 hour clock).
3. **Incorrect Programming** The robot must have enough time to charge fully in between work sessions. Due to the convenience of being able to set two work times, it is possible that the robot will return to the base to charge during the second work time because it did not have enough time to fully charge between the two work times. Evaluate work time settings and widen the charging window to solve this issue.
4. **Auto Setup Turned On** Auto Setup is a feature that sends the robot back to the base when it thinks it is finished mowing the grass. Run times can be significantly shortened. If your grass is staying mowed, it's better for the robot to stay in the base because it reduces wear and tear. But if you find it bothersome, you can always turn the feature off. Use the largest zone to evaluate the performance of Auto Setup. Program a wide working window, observe the robot's run times vs. completion of the work.
5. **Blown fuse** Check all three fuses on the motherboard. 20/30A, 1A and cylindrical fuse under black plastic cap, upper left corner.
6. **Battery Cell Died** Read the charging voltage from the display (when in the base, it flashes on the screen). It should be 28XX or higher. If not, it could be that a cell died in the battery. New batteries have a one year warranty.
7. **Front Wheels Stuck or Clogged with Grass** Make sure the tires turn within the wheel frame and that the wheel frame turns a full 360 degrees.
8. **Rear Wheel Mechanical Issue** Check the attachment of the rear wheels. Add threadlock to wheel bolt if loose. Check wheel motor mounting screws for presence of threadlock. These screws must be tight to the chassis or the chassis can break. Makes sure the mud flaps (if present) do not contact the wheels. Trim them, if necessary.
9. **Rear Wheels Dirt/Grass Buildup** Dirt, grass or mud that builds-up between the chassis and the wheels must be cleaned periodically. Use a putty knife to scrape it off and a damp rag to clean it. Remove all mud from tires. Remove anything that wound itself around the motor shaft, such as hair, string or long grass strands.
10. **Grease Required** Front or rear wheels lacking grease. Follow our Winter Service instructions.
11. **Blade not Sharp** Flip it or replace it.
12. **Weak Battery** Battery was allowed to go dead over the Winter. If this is the cause, run times will increase over time with multiple re-charges.
13. **Faulty Charge Button.** The "Charge" button (sometimes called "Work/Home" button) makes the robot go back to the base. If it activates when it is not supposed to, it will go back. You might also see the robot driving on the wire outside the mowing time if this is the cause.
14. **Bad Power Supply** Verify the voltage coming out of the supply is 29.3V. There is also a rare case where the voltage is fine but the power supply is not delivering enough current. It is a difficult measurement so we recommend sending the power supply to us and we'll figure out a way to check it.
15. **Weak Connection Between Power Supply and Motherboard** Visually inspect everything and check continuity with an ohm meter. All measurements should be very close to zero ohms. If not, that could be the source of the issue.
16. **Failed Motherboard (Rare)** Not able to charge at all is more likely than short run times caused by a motherboard failure. That is if the batteries won't charge but the voltage at the plates is fine, you should be using the "Dead Robot Troubleshooting Guide".

How to Isolate the Issue between the Base/Electronics and the Robot

You can easily isolate the issue between the base and the robot by charging the robot another way, such as with the Winter Charger or alligator clips (be careful to avoid shorts!) If you determine the issue is in the base and you have already shined the nuts and plates, you can try replacing the base cable. It's not super easy to do, though. But, it can be done.



Web: ParadiseRobotics.com
Email: info@paradisrobotics.com
Tel: (847) 960-8520

