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> hobbyant LANGFEITE L8S Electric Scooter Brushless Controller (DC48V 21A) Instruction Manual

hobbyant LANGFEITE L8S Controller B

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Instruction Manual

1. INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your hobbyant LANGFEITE L8S Electric Scooter Brushless Controller. This controller is specifically designed for the LANGFEITE L8S electric scooter, ensuring stable and efficient power management. Please read this manual thoroughly before attempting any installation or operation.



Image 1.1: The LANGFEITE L8S Electric Scooter, for which this controller is designed.

2. SAFETY INFORMATION

- Always disconnect the scooter's power source before installing, removing, or servicing the controller.
- Electrical work should ideally be performed by a qualified technician to prevent damage to the product or personal injury.
- Ensure all connections are secure and properly insulated to avoid short circuits.
- While the controller is designed to be rainproof, avoid submerging it in water or exposing it to heavy, prolonged rainfall.
- Do not attempt to modify the controller. Unauthorized modifications can lead to malfunction, electric shock, or fire.

3. PRODUCT OVERVIEW

The hobbyant LANGFEITE L8S Electric Scooter Brushless Controller is a critical component for managing the power delivery to your scooter's motor. It operates at DC 48V with a low voltage cutoff of 37V and a current limit of 21A. Constructed from durable plastic and metal, it is designed for reliability and features a brushless design for quiet and stable operation.



Image 3.1: Two hobbyant LANGFEITE L8S Electric Scooter Brushless Controllers, showing the main unit and attached

wiring harnesses. Note the labels indicating DC 48V operating voltage and 21A current limit.

The controller ensures smooth acceleration and deceleration, contributing to a safer riding experience by preventing sudden power changes.

4. SETUP AND INSTALLATION

Installation of the controller requires careful attention to wiring connections. It is highly recommended that installation be performed by a professional electric scooter technician.

1. **Preparation:** Ensure the scooter is powered off and the battery is disconnected. Access the existing controller compartment on your LANGFEITE L8S scooter.
2. **Removal of Old Controller (if applicable):** Carefully disconnect all wires from the old controller, noting their positions and colors. Take photographs for reference if necessary.
3. **Connecting the New Controller:** Connect the new hobbyant LANGFEITE L8S controller by matching the wire colors and connectors to the scooter's wiring harness. Common connections include:
 - Motor Phase Wires (typically thicker, three wires)
 - Hall Sensor Wires (typically thinner, five wires)
 - Battery Power Input (red for positive, black for negative)
 - Ignition/Key Switch Wire
 - Throttle Signal Wire
 - Brake Signal Wires
 - Display/Meter Wires
4. **Secure Connections:** Ensure all connections are firm and properly insulated. Avoid loose wires that could short circuit or become damaged during operation.
5. **Mounting:** Securely mount the controller within the scooter's compartment, ensuring it is protected from physical impact and excessive moisture.
6. **Testing:** Reconnect the battery and perform a functional test of the scooter at a low speed in a safe environment before full operation.

5. OPERATING INSTRUCTIONS

Once correctly installed, the controller operates automatically in conjunction with your scooter's throttle and braking systems. Its brushless design ensures:

- **Silent Operation:** The motor will run quietly, enhancing the riding experience.
- **Stable Performance:** The controller manages power delivery to prevent sudden acceleration or deceleration, providing a consistent and predictable ride.
- **Efficient Power Usage:** Optimized to work with the LANGFEITE L8S scooter's electrical system for efficient battery usage.



Image 5.1: The LANGFEITE L8S Electric Scooter, shown in its folded state, demonstrating its portability.

6. MAINTENANCE

To ensure the longevity and optimal performance of your controller, follow these maintenance guidelines:

- **Keep Dry:** Although rainproof, avoid prolonged exposure to moisture. If the controller gets wet, allow it to dry completely before operating the scooter.
- **Regular Inspection:** Periodically check all wiring connections to ensure they are secure and free from corrosion or damage.
- **Cleanliness:** Keep the controller and its compartment free from dust, dirt, and debris. Use a soft, dry cloth for cleaning.
- **Avoid Impact:** Protect the controller from physical shocks or impacts, which can damage internal components.

7. TROUBLESHOOTING

If you experience issues with your scooter's power or motor response, consider the following troubleshooting steps related to the controller:

Problem	Possible Cause	Solution
Scooter does not power on.	Disconnected battery, faulty ignition, or controller issue.	Check battery connection and charge. Inspect ignition switch. If these are fine, the controller may require professional diagnosis.
Motor not responding to throttle.	Loose throttle connection, faulty throttle, or controller malfunction.	Verify throttle wiring. Test throttle unit if possible. If issues persist, consult a technician.
Erratic acceleration/deceleration.	Loose motor phase wires, faulty Hall sensors, or internal controller fault.	Check motor wiring. This symptom often indicates a more complex internal issue with the controller or motor, requiring professional service.
Controller gets excessively hot.	Overload, short circuit, or internal component failure.	Immediately power off the scooter. Check for any obstructions to motor rotation. Seek professional inspection.

For issues not listed or if solutions do not resolve the problem, contact a qualified electric scooter repair

service.

8. SPECIFICATIONS

- **Brand:** hobbyant
- **Model:** LANGFEITE L8S Scooter Controller B
- **Material:** Plastic + Metal
- **Operating Voltage:** DC 48V
- **Low Voltage Cutoff:** 37V
- **Current Limit:** 21A
- **Type:** Brushless Controller
- **Compatibility:** Specifically designed for LANGFEITE L8S Electric Scooters
- **Features:** Lightweight, rainproof, sturdy, stable and silent operation.

9. WARRANTY AND SUPPORT

Specific warranty information for this product may vary depending on your point of purchase. Please refer to the documentation provided by your retailer or contact hobbyant customer support for details regarding warranty coverage and service.

For technical assistance or inquiries, please reach out to your product supplier or an authorized service center.