SPTBMDJ SPTBMDJ124

User Manual: Scooter Parts 48V 20A Sine Wave Controller & 6-Pin LCD Display Set

Brand: SPTBMDJ

1. Introduction

This manual provides essential information for the installation, operation, and maintenance of your SPTBMDJ 48V 20A Sine Wave Controller and 6-Pin LCD Display Set. This product is designed to enhance the performance and control of compatible LIVIAE electric scooters, offering reliable speed control and display functionalities. Please read this manual thoroughly before installation and use to ensure proper function and longevity of the components.

2. Package Contents

Upon opening the package, please verify that all components are present and undamaged:

- 1 x 48V 20A Sine Wave Controller
- 1 x 6-Pin LCD Dashboard Display Screen

Figure 2.1: Overview of the 48V 20A Sine Wave Controller and 6-Pin LCD Display Set.

3. Product Features

- Simple operation for user convenience.
- Exquisite workmanship ensuring quality and reliability.
- Long service life, designed for durability.
- Constructed from high-quality materials for robust performance.
- Direct replacement for old or damaged parts, ensuring compatibility.
- Elegant and practical design.

4. Specifications

Attribute	Value
Product Size (Controller)	Approx. 9 x 5.5 x 3 cm (3.54 x 2.17 x 1.18 inches)
Product Size (Display)	Approx. 12.5 x 11 cm (4.92 x 4.33 inches)
Total Weight	300g/set (approx. 10.58 oz)
Voltage	48V DC
Current Limiting	20A
Undervoltage Protection	39 ± 1V
Brake Level	Low level
Angle	120°
Function	Sine wave
Display Type	6-Pin LCD
Application	For LIVIAE Electric Scooters

Attribute	Value
Model Name	SPTBMDJ124

Figure 4.1: Dimensions of the 6-Pin LCD Display.

Figure 4.2: Dimensions of the 48V 20A Sine Wave Controller.

5. Setup and Installation

Installation of the controller and display set requires basic electrical knowledge and careful attention to wiring. It is recommended to disconnect the scooter's battery before beginning installation.

5.1 Identifying Components and Connectors

The controller features various color-coded connectors for different functions. The LCD display connects to the controller via a specific 6-pin connector.

Figure 5.1: Detailed view of controller wiring and connectors.

Figure 5.2: The 6-pin connector for the LCD display.

5.2 Installation Steps

1. **Mount the LCD Display:** Securely attach the LCD display to the handlebar of your scooter using the integrated clamp. Ensure it is positioned for easy viewing and access to buttons.
2. **Mount the Controller:** Find a suitable, protected location on your scooter for the controller. Ensure it is away from direct water exposure and excessive vibration. Secure it firmly.
3. **Connect the LCD Display:** Locate the 6-pin connector on the LCD display cable and connect it to the corresponding port on the controller. Ensure the connection is firm and secure.
4. **Connect Power (Battery):** Identify the main power connectors from your scooter's battery (typically thicker red and black wires) and connect them to the corresponding power input on the controller. Pay close attention to polarity (red to positive, black to negative).
5. **Connect Motor Wires:** Connect the motor phase wires (usually three thicker wires, e.g., yellow, green, blue) from your scooter's motor to the corresponding output wires on the controller.
6. **Connect Hall Sensor Wires (if applicable):** If your motor uses Hall sensors, connect the smaller Hall sensor wires from the motor to the corresponding Hall sensor input on the controller. These are typically a bundle of five thinner wires.

7. **Connect Other Peripherals:** Connect other scooter components such as throttle, brake levers, headlights, and taillights to their respective connectors on the controller. Refer to your scooter's original wiring diagram if available.

Figure 5.3: Example of main power and signal connectors.

8. **Secure Wiring:** Use cable ties or electrical tape to neatly secure all wires, preventing them from snagging or being damaged during operation.
9. **Test Functionality:** Once all connections are made, reconnect the scooter's battery and perform a preliminary test. Check if the display powers on and if the throttle responds correctly.

Important: If you are unsure about any wiring connections, consult a qualified technician or refer to specific wiring diagrams for your scooter model. Incorrect wiring can damage the controller, display, or scooter components.

6. Operating Instructions

The 6-pin LCD display provides real-time information and allows for control of your scooter's functions.

6.1 Basic Operation

- **Power On/Off:** Press and hold the power button (usually marked with a power symbol) on the LCD display to turn the system on or off.
- **Display Information:** Once powered on, the display will typically show information such as current speed, battery level, mileage, and possibly riding mode.
- **Mode/Setting Adjustment:** Use the mode or setting buttons (often marked with 'M' or arrows) to cycle through different display modes or adjust parameters like speed limits, cruise control, or light settings, if supported by the

controller firmware.

- **Throttle Control:** The controller manages motor speed based on the throttle input. Apply throttle gradually for smooth acceleration.

Specific button functions and display parameters may vary slightly. Refer to the display's on-screen prompts or experiment carefully to understand all functionalities.

7. Maintenance

Proper maintenance ensures the longevity and reliable performance of your controller and display set.

- **Keep Clean:** Regularly wipe the display and controller with a soft, dry cloth. Avoid using harsh chemicals or abrasive materials.
- **Protect from Water:** While the components are designed for outdoor use, avoid submerging them in water or exposing them to heavy rain. Ensure all connectors are dry before powering on.
- **Check Connections:** Periodically inspect all wiring connections to ensure they are secure and free from corrosion or damage. Loose connections can lead to intermittent operation or component failure.
- **Avoid Physical Impact:** Protect the display and controller from drops or impacts, which can damage internal components or the screen.
- **Storage:** If storing the scooter for an extended period, ensure the battery is charged to an appropriate level (as per battery manufacturer recommendations) and store the scooter in a dry, temperate environment.

8. Troubleshooting

If you encounter issues with your controller and display set, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
Display does not power on.	No power from battery; Loose power connection; Faulty display or controller.	Check battery charge. Verify all power connections are secure. Ensure the 6-pin display cable is fully inserted.
Motor does not respond to throttle.	Loose throttle connection; Faulty throttle; Controller issue; Motor issue.	Check throttle wiring. Ensure motor phase and Hall sensor wires are correctly connected.
Inconsistent speed or jerky operation.	Loose motor or Hall sensor connections; Interference; Controller fault.	Inspect all motor and sensor connections for looseness or damage. Ensure wiring is not pinched.
Display shows error code.	Specific system fault.	Consult the scooter's original manual or contact SPTBMDJ customer support with the specific error code for diagnosis.

If the problem persists after attempting these solutions, it may indicate a component failure. Contact customer support for further assistance.

9. Warranty and Support

For specific warranty terms and conditions, please refer to the product listing on the platform where it was purchased or contact SPTBMDJ customer support directly. Keep your proof of purchase for any warranty claims.
For technical support or inquiries, please reach out to the seller or manufacturer through the contact information provided with your purchase or on the official SPTBMDJ website.

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