

Manuals+

[Q & A](#) | [Deep Search](#) | [Upload](#)

manuals.plus /

› [BAFANG](#) /

› [BAFANG 48V500W CAN Protocol Mid Drive Motor Controller User Manual](#)

BAFANG 48V500W

BAFANG 48V500W CAN Protocol Mid Drive Motor Controller

User Manual

INTRODUCTION

This manual provides comprehensive instructions for the BAFANG 48V500W CAN Protocol Mid Drive Motor Controller. This controller is designed as a replacement for BBS/HD series mid-drive ebike motors, featuring the latest CAN protocol for enhanced performance and reliability. It integrates tail light connectivity and battery communication ports, aiming to provide smoother power output and reduced operational noise.

KEY FEATURES

- **2025 Latest CAN Protocol Upgrade:** Features added tail light and battery communication ports for seamless compatibility with BAFANG CAN version BBS/HD mid-drive ebike motors. Delivers smoother power output and quieter operation compared to older models.
- **Smart Ebike Riding Customization:** Programmable via BAFANG-specific display to adjust speed limits, pedal-assist parameters, and slow start and graded current distribution functions. Allows for personalized riding experiences.
- **Durable & Compact Design:** Precision-engineered with premium materials for enhanced anti-interference and a long operational lifespan. Compact dimensions ensure easy installation and seamless integration with original motor setups.
- **Enhanced Safety & Reliability:** Speed limits apply to both pedal-assist and throttle modes, preventing motor overload. Stable voltage output reduces ride vibration and ensures long-distance performance.

SETUP AND INSTALLATION

The BAFANG mid-drive ebike motor controller is designed for straightforward installation. Before installation, verify the voltage and power specifications of your existing motor to ensure compatibility with the new controller.

Compatibility

- Compatible with BAFANG CAN version BBS/HD mid-drive ebike motors.
- Supports 36V, 48V, and 52V systems.
- Suitable for 500W, 750W, and 1000W motors, seamlessly replacing controllers for BBS01B, BBS02B, and BBS-HD BAFANG mid-drive motors.

Installation Steps

1. **Preparation:** Ensure your ebike is powered off and the battery is disconnected before beginning installation.
2. **Removal of Old Controller:** Carefully disconnect and remove the existing motor controller from your ebike. Note the wiring connections for reference.
3. **New Controller Placement:** Position the BAFANG 48V500W controller in the designated area. Its compact design facilitates integration.
4. **Wiring Connections:** Connect the new controller to your motor, battery, display, and other components. Pay attention to the tail light and battery communication ports for proper integration.
5. **Secure Installation:** Securely fasten the controller to prevent movement during operation.
6. **Final Check:** Before powering on, double-check all connections to ensure they are firm and correctly aligned.

Detailed video guides are available to assist with the installation process. Refer to the support section for access to these resources.



Image: The BAFANG 48V500W CAN Protocol Mid Drive Motor Controller, showcasing its compact design and integrated ports.

Once installed, the controller allows for customized ebike operation through a BAFANG-specific display.

Customizing Riding Experience

- **Speed Limits:** Adjust the maximum speed for both pedal-assist and throttle modes to comply with local regulations or personal preference.
- **Pedal-Assist Parameters:** Configure the level of assistance provided by the motor based on your pedaling input.
- **Slow Start Function:** Modify the initial power delivery to ensure a smooth and controlled acceleration from a standstill.
- **Graded Current Distribution:** Fine-tune how power is distributed across different assist levels for optimal efficiency and feel.

These adjustments are made through the connected BAFANG display unit. Refer to your display's user manual for specific navigation and setting procedures.

MAINTENANCE

The BAFANG 48V500W controller is designed for durability and minimal maintenance.

- **Environmental Protection:** The controller features an IP67-rated casing, providing resistance against vibration, dust, and moisture. While robust, avoid submerging the controller in water.
- **Regular Inspection:** Periodically check all cable connections to ensure they remain secure and free from corrosion or damage.
- **Cleaning:** Clean the exterior of the controller with a soft, damp cloth. Do not use harsh chemicals or abrasive materials.

TROUBLESHOOTING

This section addresses common issues you might encounter. The BAFANG 48V500W controller is designed for high reliability, aiming to reduce common after-sales issues.

- **No Power/Motor Not Responding:**
 - Check all power connections, including the battery and motor cables, to ensure they are securely connected.
 - Verify the battery charge level.
 - Ensure the display unit is powered on and functioning correctly.
- **Inconsistent Power Output:**
 - Inspect motor and sensor cables for any damage or loose connections.
 - Check for error codes on your BAFANG display, which can indicate specific issues.
- **Unusual Noises:**
 - While the controller is designed for quieter operation, any new or unusual noises from the motor area should be investigated. This may indicate a mechanical issue with the motor rather than the controller.

If you encounter persistent issues not resolved by these steps, please contact BAFANG customer support for further assistance.

SPECIFICATIONS

Feature	Detail
Model Name	48V500W Controller

Feature	Detail
Voltage Compatibility	36V / 48V / 52V
Power Compatibility	500W / 750W / 1000W
Interfaces	CAN Protocol, Tail Light Connector, Battery Communication Connector
Max Current (36V500W)	24A
Max Current (48V500W)	18A
Max Current (48V750W)	24A
Max Current (48V1000W)	30A
Max Current (52V1000W)	28A
Weight	0.4 KG (0.88 Lb)
Material	Plastic
Environmental Rating	IP67 (resistant to vibration, dust, and moisture)
Included Components	1x 48V500W Controller

WARRANTY AND SUPPORT

Warranty Information

The BAFANG 48V500W CAN Protocol Mid Drive Motor Controller comes with a **one-year warranty** from the date of purchase. Additionally, a **30-day return policy** is available. Please retain your proof of purchase for warranty claims.

Customer Support

For any questions regarding installation, operation, troubleshooting, or warranty claims, BAFANG offers 24/7 customer support. Detailed video guides are also available to assist with installation and common queries. Please visit the official BAFANG website or contact their customer service department for support resources.

