L-faster MY1020, YK31C

L-faster MY1020 500W Brushed DC Motor and YK31C Controller Kit User Manual

Model: MY1020 Motor, YK31C Controller

1. Introduction

This manual provides comprehensive instructions for the installation, operation, and maintenance of your L-faster MY1020 500W Brushed DC Motor and YK31C Controller Kit. This kit is designed for use in electric scooters, karting, and bicycles, offering reliable power and control. Please read this manual thoroughly before installation and use to ensure safe and optimal performance.

What's Included:

- MY1020 500W Brushed DC Motor
- Yiyun Controller YK31C
- Fuse Cable with 20A and 25A fuses

2. Safety Information

Always prioritize safety during installation and operation. Failure to follow these safety guidelines may result in injury or damage to the product.

- Ensure all power is disconnected before performing any installation or maintenance.
- Wear appropriate personal protective equipment (PPE), such as safety glasses and gloves.
- Verify that the voltage of your battery matches the rated voltage of the motor and controller (24V, 36V, or 48V).
- Avoid short circuits by ensuring all connections are secure and insulated.
- Do not operate the motor or controller in wet conditions.
- Keep children and unauthorized personnel away from the installation area.

3. Product Overview

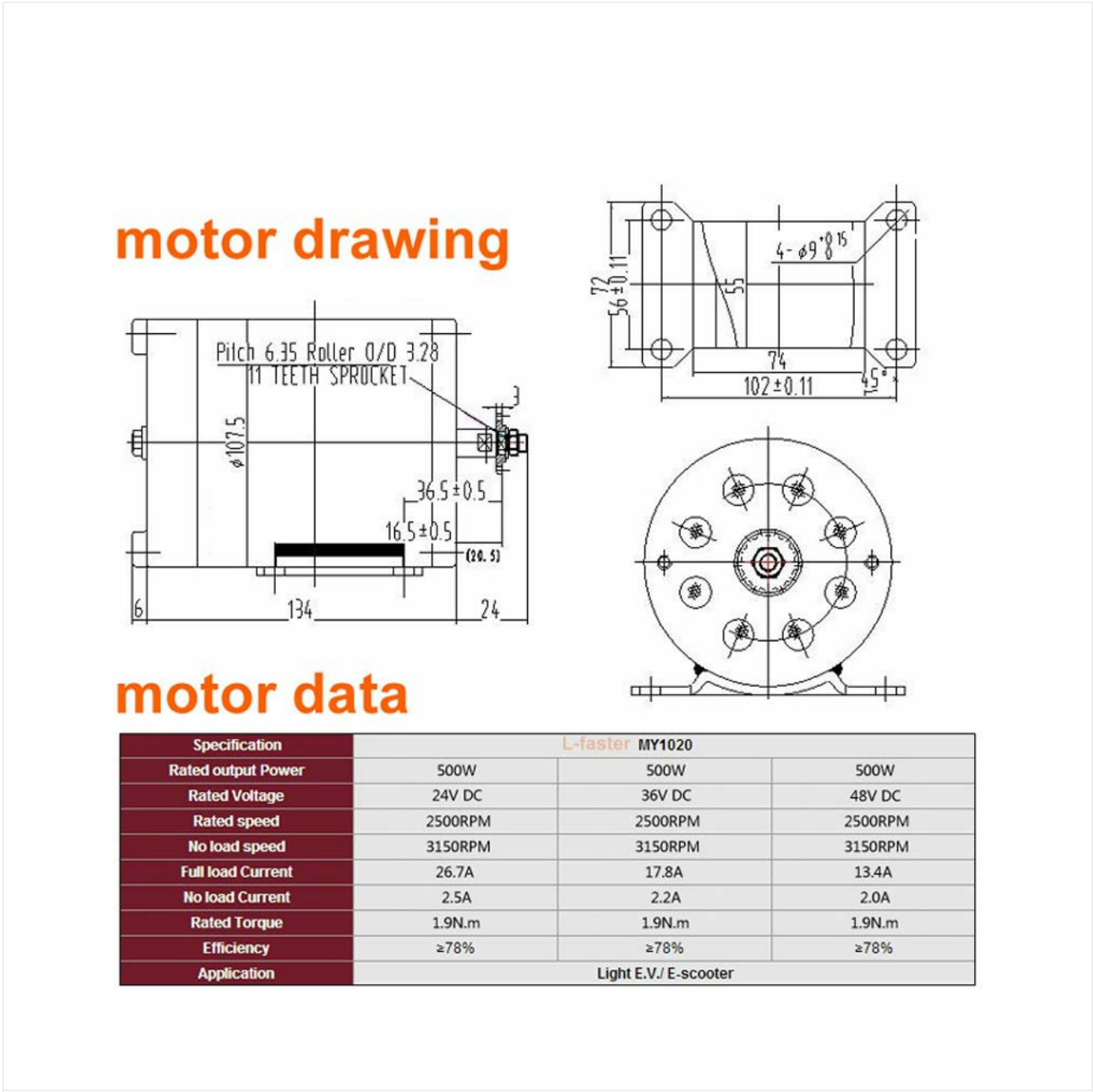
This section details the components of your motor and controller kit.

MY1020 Brushed DC Motor

The MY1020 is a 500W brushed DC motor designed for various electric vehicle applications. It features a robust construction and an 11-tooth sprocket for a 25H chain.



Image: The L-faster MY1020 500W Brushed DC Motor, showing its cylindrical body and mounting bracket.



Specification	L-faster MY1020		
Rated output Power	500W	500W	500W
Rated Voltage	24V DC	36V DC	48V DC
Rated speed	2500RPM	2500RPM	2500RPM
No load speed	3150RPM	3150RPM	3150RPM
Full load Current	26.7A	17.8A	13.4A
No load Current	2.5A	2.2A	2.0A
Rated Torque	1.9N.m	1.9N.m	1.9N.m
Efficiency	≥78%	≥78%	≥78%
Application	Light E.V./ E-scooter		

Image: Detailed technical drawing of the MY1020 motor with dimensions and a table of motor specifications for 24V, 36V, and 48V configurations.

Refer to the "Specifications" section for detailed performance data.

Yiyun Controller YK31C

The YK31C is a brushed motor controller compatible with 24V, 36V, and 48V 500W motors. It manages power delivery and integrates connections for throttle, brake, lights, and charging.

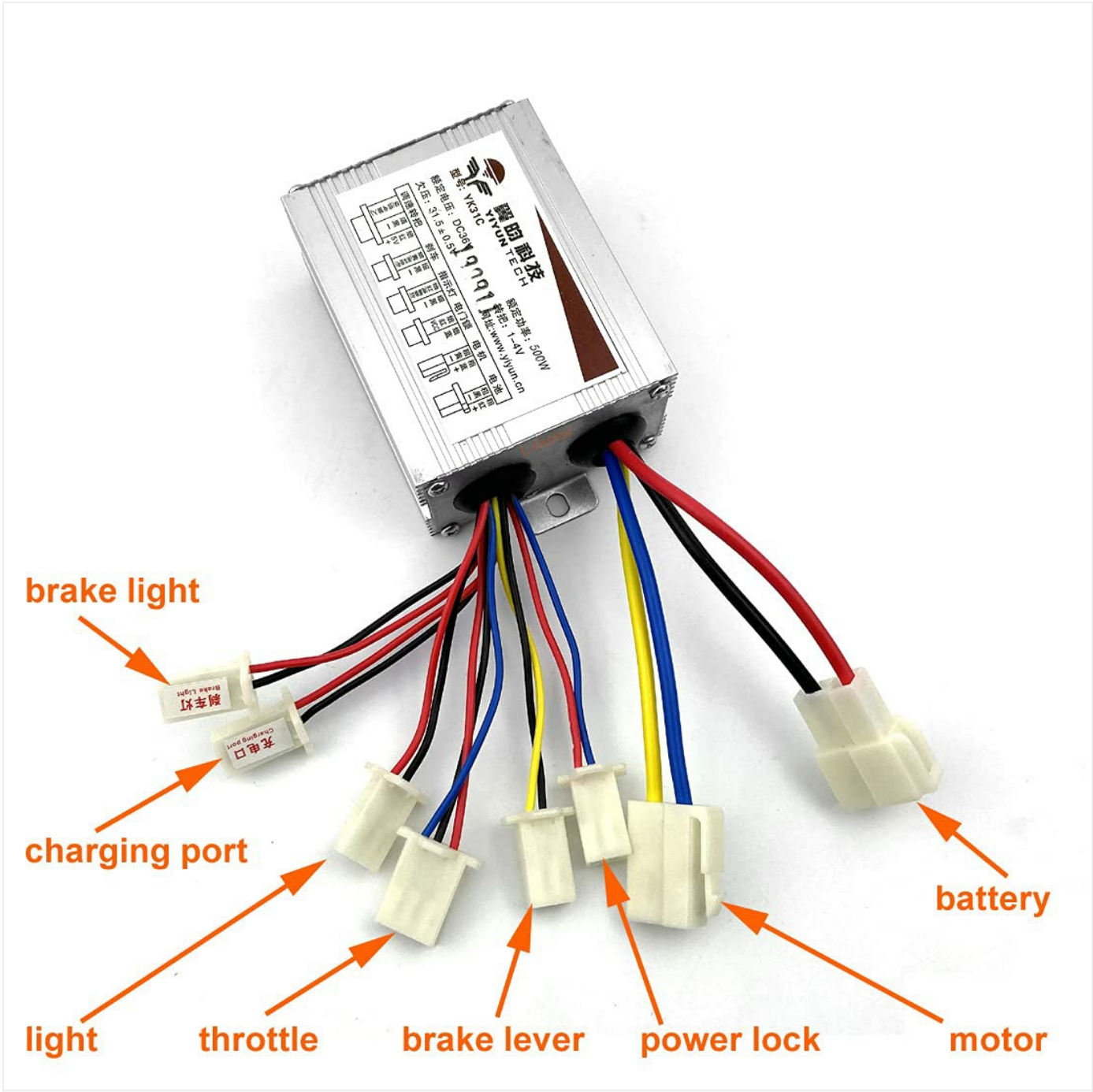


Image: The Yiyun Controller YK31C, showing its various labeled wire connections for brake light, charging port, light, throttle, brake lever, power lock, and motor/battery connections.

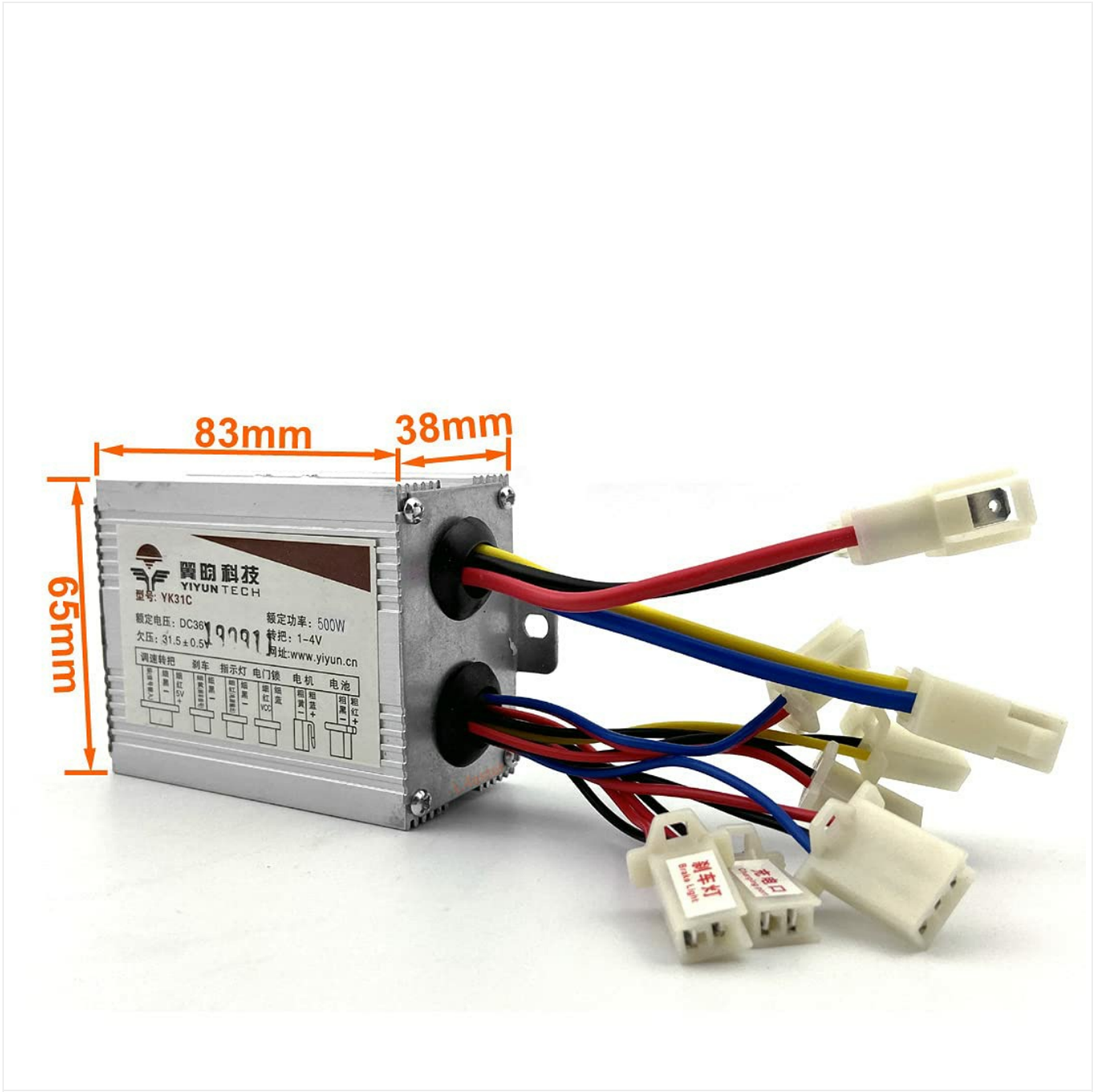


Image: The Yiyun Controller YK31C with its physical dimensions indicated (83mm length, 65mm width, 38mm height).

Fuse Cable

The included fuse cable provides essential overcurrent protection for your system. It comes with a 20A fuse pre-installed and two spare 25A fuses.



Image: The fuse cable assembly, showing the inline fuse holder with a 20A fuse and two spare 25A fuses.

4. Setup and Installation

Follow these steps carefully to install your motor and controller kit. Ensure all power is off before making any connections.

Wiring Diagram and Connections:

The YK31C controller has clearly labeled connectors. Match each connector to its corresponding component:

- **Battery:** Connect the main power wires from your battery to the controller's battery input. Ensure correct polarity (red to positive, black to negative).
- **Motor:** Connect the motor wires to the controller's motor output.
- **Throttle:** Connect the throttle unit to the designated throttle connector.
- **Brake Lever:** Connect the brake lever switch to the brake lever connector.
- **Power Lock:** Connect the power lock switch (if applicable) to its connector.
- **Light:** Connect any auxiliary lights to the light connector.

- **Brake Light:** Connect the brake light (if applicable) to the brake light connector.
- **Charging Port:** Connect your charger to the charging port connector.

Your browser does not support the video tag.

Video: An instructional video demonstrating the components of the MY1020 motor kit and showing basic connections. This video illustrates the motor, controller, and throttle unit.

Important: Double-check all connections before applying power. Incorrect wiring can damage the components.

5. Operating Instructions

Once installed, operate your electric vehicle as follows:

- **Power On:** Turn on the power lock switch (if installed) or the main power switch for your battery.
- **Throttle Control:** Gently twist the throttle to accelerate. The speed will increase proportionally to the throttle input.
- **Braking:** Engage the brake lever to slow down or stop. The controller may cut power to the motor when the brake is applied.
- **Charging:** When the battery is low, connect your compatible charger to the charging port.

6. Maintenance

Regular maintenance ensures the longevity and safe operation of your motor kit.

- **Cleaning:** Keep the motor and controller free from dirt, dust, and moisture. Use a dry cloth for cleaning.
- **Connections:** Periodically inspect all electrical connections for tightness and signs of corrosion.
- **Fuse Replacement:** If the system loses power unexpectedly, check the fuse in the fuse cable. Replace a blown fuse only with a fuse of the same rating (20A or 25A, depending on your system's requirements).
- **Motor Inspection:** Check the motor's sprocket and chain for wear and proper tension.

7. Troubleshooting

This section addresses common issues you might encounter.

Problem	Possible Cause	Solution
Motor does not run.	No power, blown fuse, loose connection, faulty throttle.	Check battery charge, inspect fuse, verify all connections, test throttle.
Motor runs intermittently.	Loose wiring, intermittent throttle signal.	Secure all connections, inspect throttle wiring.
Motor runs but has low power.	Low battery charge, incorrect voltage, motor overload.	Charge battery, ensure correct voltage battery is used, reduce load.

If you experience issues not listed here or if the suggested solutions do not resolve the problem, please contact customer support.

8. Specifications

MY1020 Motor Specifications:

Specification	24V DC	36V DC	48V DC
Rated Output Power	500W	500W	500W
Rated Speed	2500 RPM	2500 RPM	2500 RPM
No Load Speed	3150 RPM	3150 RPM	3150 RPM
Full Load Current	26.7A	17.8A	13.4A
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Rated Torque	1.9 N.m	1.9 N.m	1.9 N.m
Efficiency	≥78%	≥78%	≥78%
Application	Light E.V. / E-scooter		

Motor Dimensions: Refer to the motor drawing in Section 3 for detailed dimensions.

YK31C Controller Specifications:

- **Rated Voltage:** 24V / 36V / 48V (auto-sensing or specific model)
- **Rated Power:** 500W
- **Controller Type:** Brushed DC Motor Controller
- **Dimensions:** Approximately 83mm x 65mm x 38mm

9. Warranty and Support

L-faster products are manufactured to high-quality standards. This product is covered by a standard manufacturer's warranty against defects in materials and workmanship. Please retain your proof of purchase for warranty claims. For technical support, troubleshooting assistance, or warranty inquiries, please contact your retailer or the L-faster customer service department. Contact details can typically be found on the product packaging or the official L-faster website.

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Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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