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knitting machine DHJ 02B

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1. INTRODUCTION

The knitting machine DHJ 02B Intelligent Spot Welder Control Board is a versatile module designed for battery spot welding applications. It features intelligent control, adjustable power settings, and supports welding nickel sheets within a specified thickness range. This manual provides essential information for the safe and effective use of your spot welder control board.

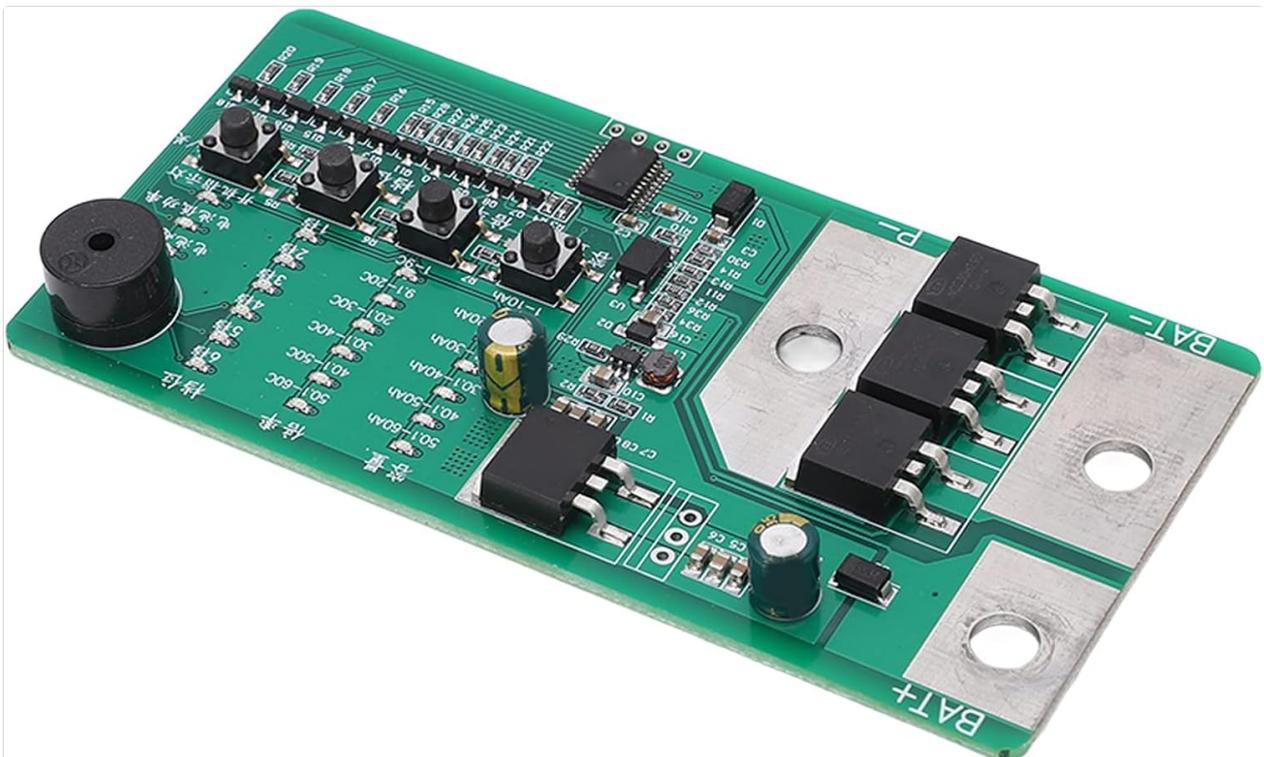


Image 1.1: The DHJ 02B Intelligent Spot Welder Control Board. This image shows the main components of the control board, including buttons for adjustment and connection terminals.

2. PACKAGE CONTENTS

Please verify that all items listed below are included in your package:

- 2 x Cables
- 2 x Spot Welder Pens
- 1 x Control Board (DHJ 02B)
- 1 x Nickel Belt
- 6 x Screws
- 6 x Nuts
- 2 x Heat Shrinkable Tubes
- 1 x User Manual (this document)

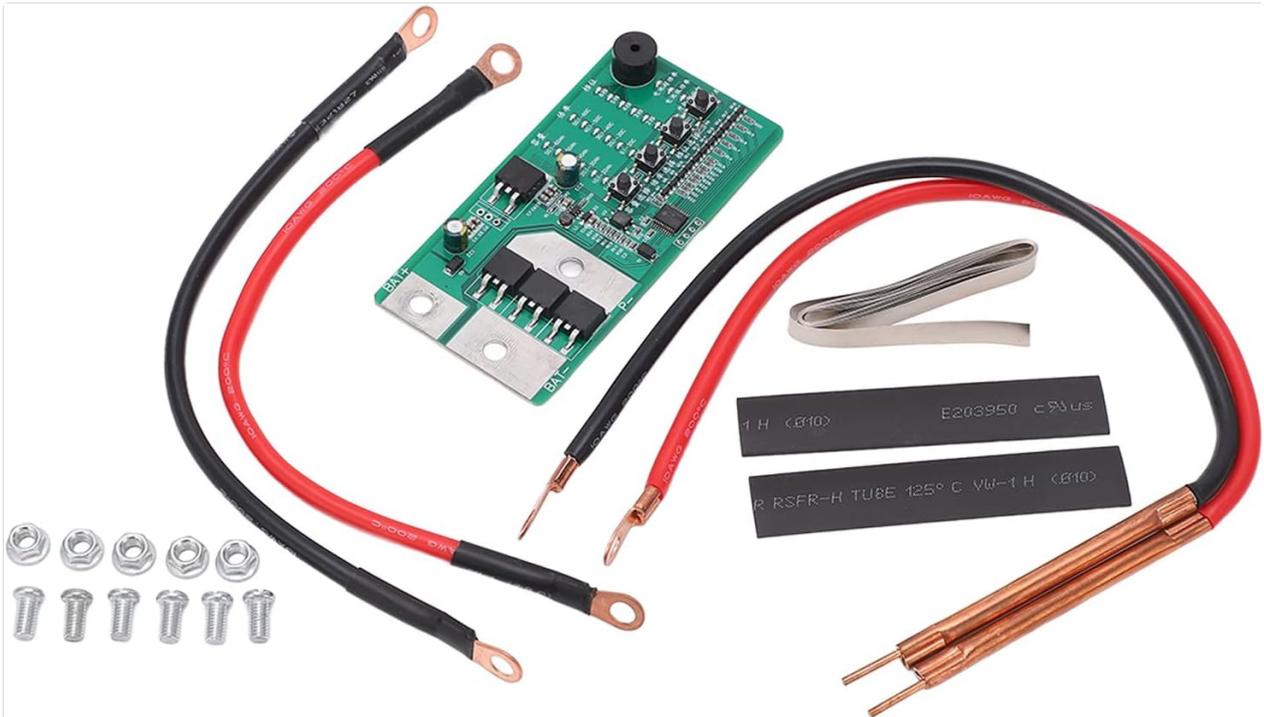


Image 2.1: Complete kit contents. This image displays all the items typically included with the DHJ 02B Intelligent Spot Welder Control Board, such as the board, cables, spot welder pens, nickel belt, screws, nuts, and heat shrinkable tubes.

3. SPECIFICATIONS

The following are the technical specifications for the DHJ 02B Intelligent Spot Welder Control Board:

Feature	Specification
Product Model	DHJ 02B
Working Voltage	6.5-16V
Working Current	<20mA
Standby Power Consumption	<0.5mA
Recommended Operating Temperature	-10-60°C
Welding Peak Current	1800A Maximum
Smart Sleep	Automatic sleep after 8 minutes of inactivity

Feature	Specification
Welding Mode	Default automatic welding mode
Welded Nickel Sheet Thickness	0.1-0.25mm (dependent on battery discharge energy)
Common Power Supply	High rate lithium battery, high rate lithium iron phosphate, and other lithium batteries
Maximum Stable Current	1800A (with 6 original MOS tubes)
Welding Current Range	100A-900A
Dimensions (approx.)	107mm x 53mm (4.2in x 2.1in)



Image 3.1: System Voltage and Operating Current. This image visually confirms the system voltage range of 6.5V-16V and an operating current range of 100-900A.

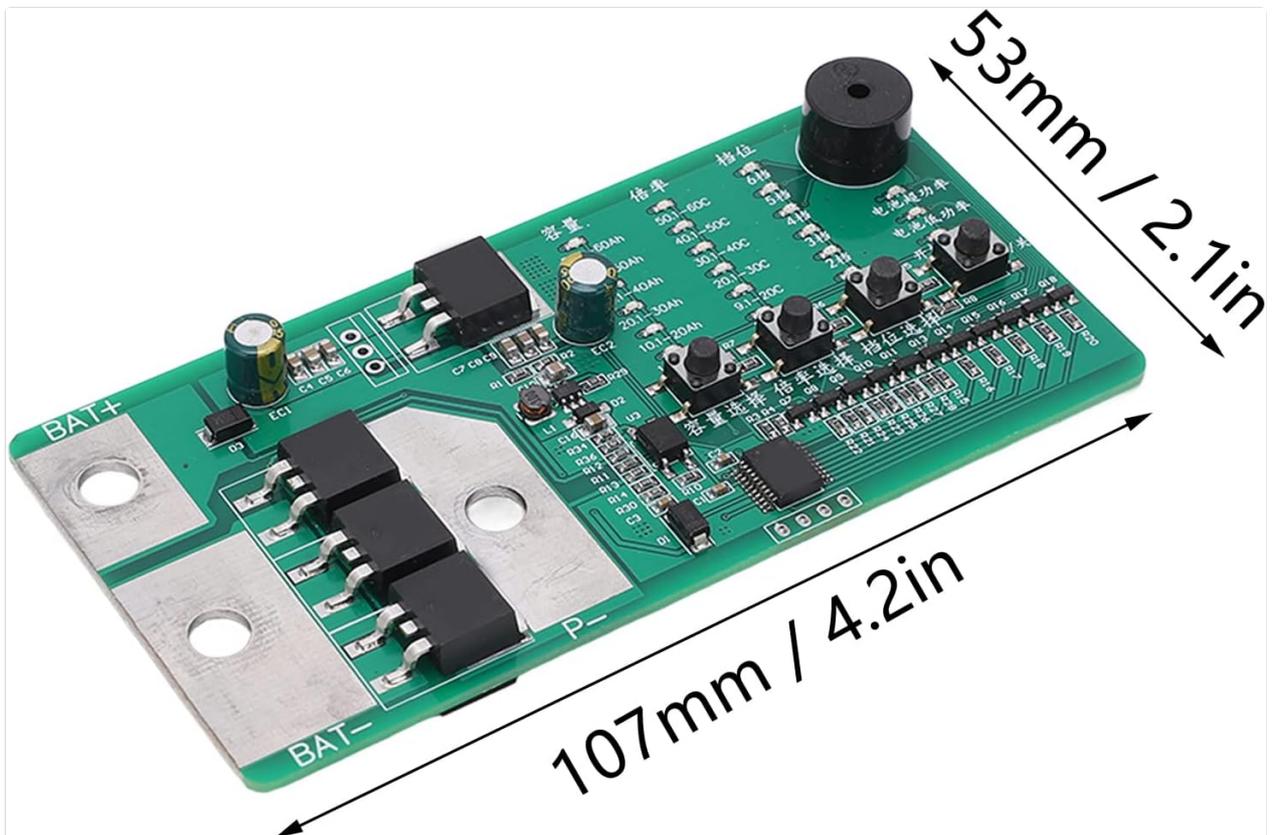


Image 3.2: Board Dimensions. This image illustrates the physical dimensions of the control board, showing its length as approximately 107mm (4.2 inches) and width as 53mm (2.1 inches).

4. SETUP AND CONNECTIONS

Proper connection is crucial for the safe and effective operation of the spot welder control board. Follow these steps carefully:

- 1. Power Supply Connection:** Connect your high-rate lithium battery (or other compatible power supply) to the BAT+ and BAT- terminals on the control board. Ensure correct polarity: positive to BAT+ and negative to BAT-.
- 2. Spot Welder Pen Connection:** Connect the red spot welder pen to the positive pole of the power supply or the BAT+ terminal on the spot welder board. Connect the black spot welder pen to the negative pole of the power supply or the BAT- terminal on the spot welder board.
- 3. Secure Connections:** Use the provided screws and nuts to secure all cable connections firmly. Loose connections can lead to poor performance or safety hazards.
- 4. Insulation:** After making connections, use the heat shrinkable tubes to insulate exposed metal parts, preventing short circuits.

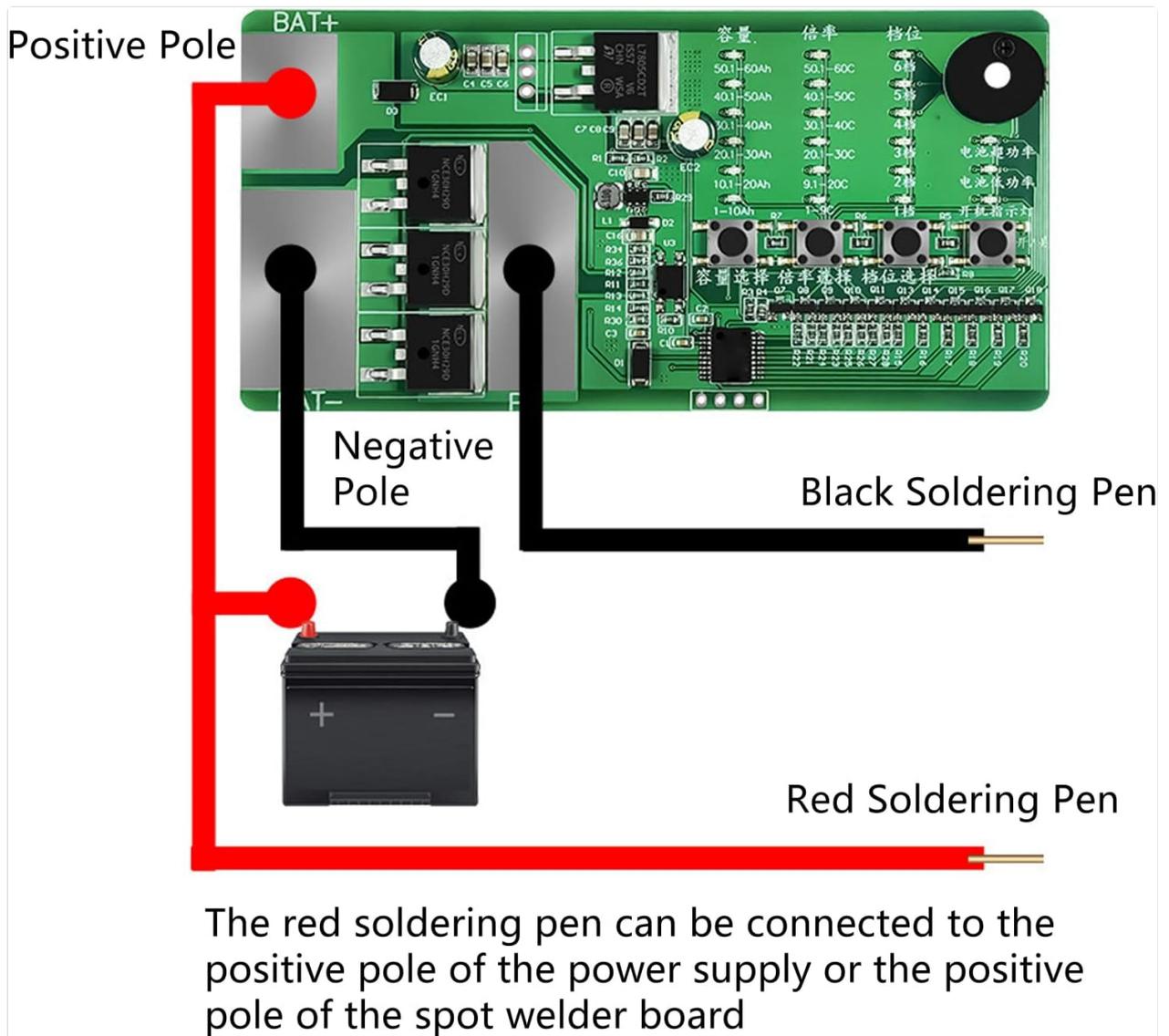


Image 4.1: Wiring Diagram. This diagram illustrates the correct connections for the positive (BAT+) and negative (BAT-) poles of the power supply and the corresponding red and black soldering pens to the control board.

5. OPERATING INSTRUCTIONS

The DHJ 02B control board offers intelligent features for efficient spot welding:

- **Power On:** Once connected to a suitable power supply, the board will power on.
- **Gear Adjustment:** The board supports magnification gear and 6-gear power selection. Use the onboard buttons to adjust the welding power according to the nickel sheet thickness and battery type.
- **Automatic Welding Mode:** The default welding mode is automatic. The system intelligently detects contact and initiates the weld.
- **Low Power Warning:** The board includes a low power warning function to alert you when the battery voltage is insufficient for optimal welding.
- **Over Power Warning:** An over power warning function is also integrated for safety and to prevent damage.
- **Smart Sleep:** To conserve power and ensure reliable operation, the control board will automatically enter a sleep mode after 8 minutes of inactivity.

6 original MOS tubes
Spot welding peak current 1800A

4 channel LED display
Capacity, magnification, gear, power warning

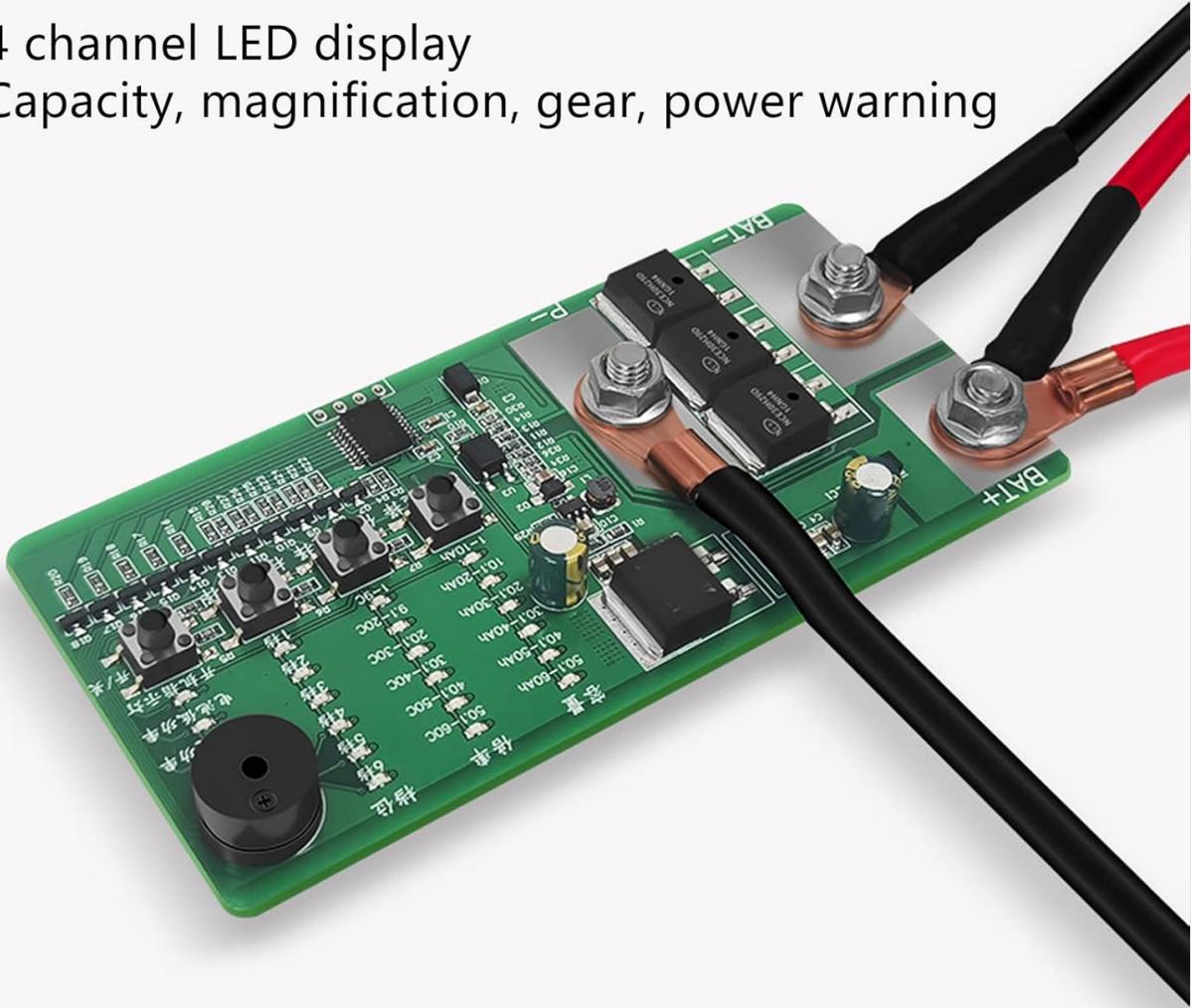


Image 5.1: Key Features. This image highlights the 6 original MOS tubes for stable current delivery, the 1800A spot welding peak current, and the 4-channel LED display for capacity, magnification, gear, and power warnings.

6. MAINTENANCE

To ensure the longevity and optimal performance of your DHJ 02B Intelligent Spot Welder Control Board, follow these maintenance guidelines:

- **Cleaning:** Regularly clean the board with a soft, dry brush or compressed air to remove dust and debris. Avoid using liquids or abrasive cleaners.
- **Storage:** When not in use, store the control board in a dry, cool environment, away from direct sunlight and extreme temperatures.
- **Connection Check:** Periodically inspect all connections for tightness and signs of wear or corrosion. Retighten or replace components as necessary.
- **Avoid Physical Damage:** Handle the board with care to prevent physical impact or bending, which could damage internal components.

7. TROUBLESHOOTING

If you encounter issues with your spot welder control board, consider the following common troubleshooting steps:

- **No Power:** Ensure the power supply is adequately charged and correctly connected to the BAT+ and BAT- terminals with proper polarity. Check all cable connections.
- **Poor Welds:**
 - Verify the power supply can deliver sufficient discharge current for welding.
 - Adjust the welding gear/power settings. Higher power may be needed for thicker nickel sheets.
 - Ensure the spot welder pens are clean and have good contact with both the nickel strip and the battery terminal.
 - Check the nickel sheet thickness; the board supports 0.1-0.25mm.
- **Overheating:** Ensure adequate ventilation around the board during prolonged use. If the board becomes excessively hot, allow it to cool down before continuing operation.
- **Automatic Sleep:** If the board seems unresponsive, it might be in smart sleep mode. Briefly activate a button or make a welding attempt to wake it up.
- **Warning Indicators:** Pay attention to any low power or over power warnings and address the underlying cause (e.g., charge battery, reduce load).

8. SAFETY INFORMATION

Please observe the following safety precautions when operating the DHJ 02B Intelligent Spot Welder Control Board:

- **Eye Protection:** Always wear appropriate eye protection (e.g., safety glasses) when performing spot welding.
- **Ventilation:** Work in a well-ventilated area to avoid inhaling fumes.
- **Electrical Safety:** Ensure all electrical connections are secure and insulated. Avoid touching live circuits.
- **Battery Safety:** Use only compatible and undamaged high-rate batteries as a power source. Be aware of battery polarity.
- **Flammable Materials:** Keep flammable materials away from the welding area.
- **Children and Pets:** Keep the device out of reach of children and pets.
- **Modifications:** Do not attempt to modify the control board. Unauthorized modifications can be dangerous and will void any potential warranty.

9. WARRANTY AND SUPPORT

Specific warranty details for the knitting machine DHJ 02B Intelligent Spot Welder Control Board are not provided in this manual. For warranty claims, technical support, or further assistance, please contact the seller or manufacturer directly through your purchase platform.