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› DAMGOO ZK1002L Bluetooth 5.0 Amplifier Board User Manual

DAMGOO ZK1002L

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Model: ZK1002L

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of your DAMGOO ZK1002L Bluetooth 5.0 Amplifier Board. This 2.0 channel amplifier delivers 100W+100W peak output power, designed for DIY wireless speaker projects. Please read this manual thoroughly before use to ensure proper functionality and safety.

2. SAFETY INFORMATION

- Ensure the power supply voltage is within the specified range of DC 5V-24V. Using an incorrect voltage can damage the device.
- Always disconnect power before making any connections or disconnections to prevent electrical shock or damage.
- Avoid exposing the amplifier board to moisture, extreme temperatures, or direct sunlight.
- Do not operate the device if it has been damaged or dropped.
- Keep the amplifier board away from strong Wi-Fi signals to prevent interference.
- Ensure adequate ventilation around the heatsink to prevent overheating.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- ZK-1002L Power Amplifier Board (1 unit)
- Protective Shell (1 set)
- DC Jack with Cable (1 unit)
- Screwdriver (1 unit)
- Knob (1 unit)

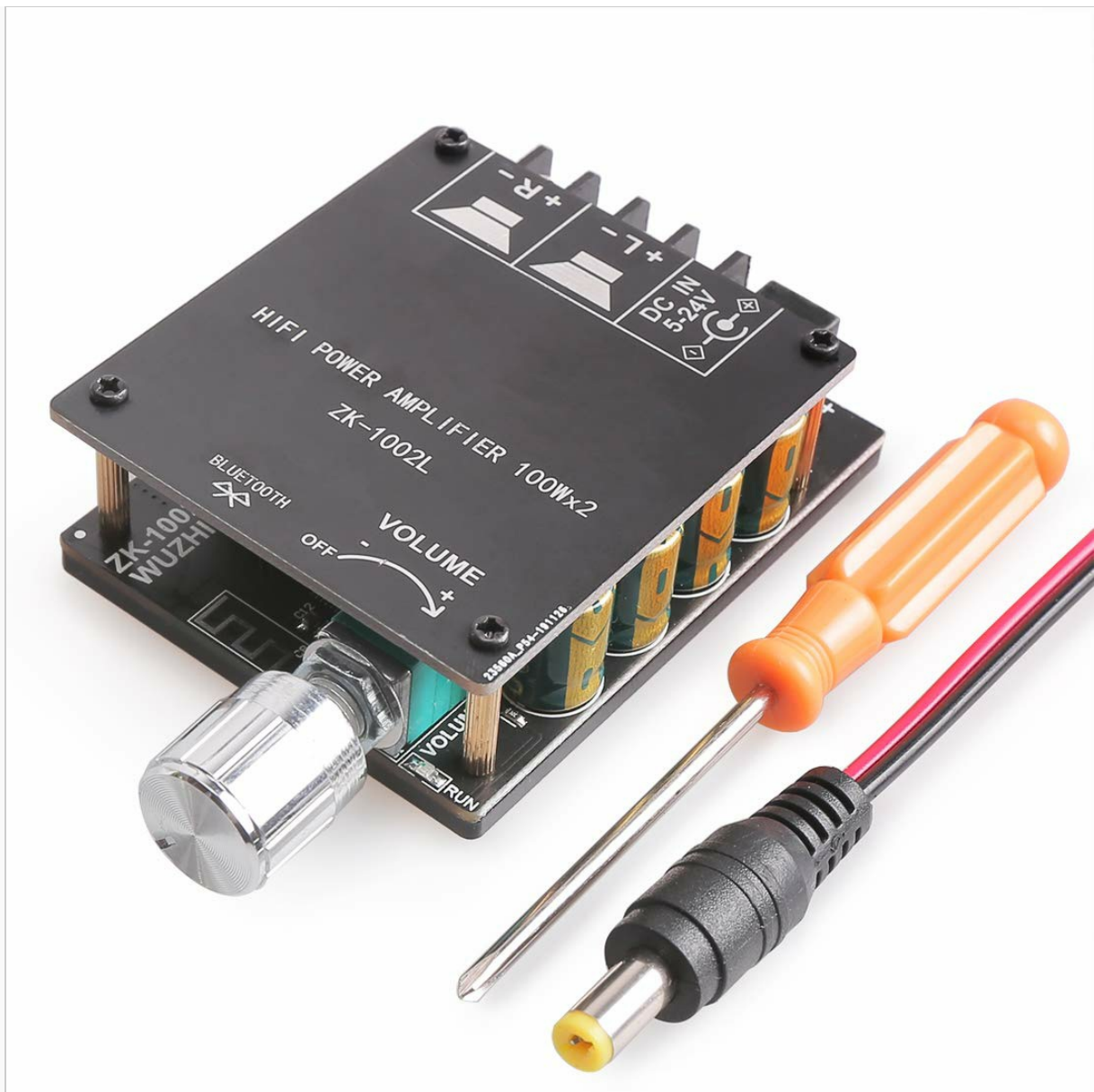


Image: The DAMGOO ZK1002L amplifier board shown with its protective shell, screwdriver, DC power cable, and volume knob, illustrating the complete package contents.

4. SETUP AND ASSEMBLY

The ZK1002L amplifier board requires minimal assembly. Follow these steps:

1. **Attach the Protective Shell:** Carefully align the protective acrylic plates with the amplifier board and secure them using the provided screws and standoffs. The top plate often has connection diagrams printed on it.
2. **Install the Volume Knob:** Push the metal volume knob onto the potentiometer shaft until it is firmly seated.
3. **Connect Speakers:** Identify the speaker output terminals labeled "+L -" for the left channel and "+R -" for the right channel. Connect your passive speakers (4-8Ω, 50W-150W recommended) to these terminals. Ensure correct polarity (+ to + and - to -).
4. **Connect Power:** Use the provided DC jack with cable. Connect the DC jack to a compatible power adapter (DC 5V-24V). The amplifier board uses a 5.5*2.1mm DC socket. Ensure the power adapter has sufficient current output for optimal performance (e.g., 12V 5A or 24V 5A for 100W+100W output).

USE FRIENDLY
Protective shell
is Also a Connection Guide



Easy wiring
Without Damaging the Wires

Image: The amplifier board with its protective top plate, which doubles as a connection guide, showing speaker and power input terminals. This illustrates the ease of wiring.

DUAL Chip & Big Heatsink

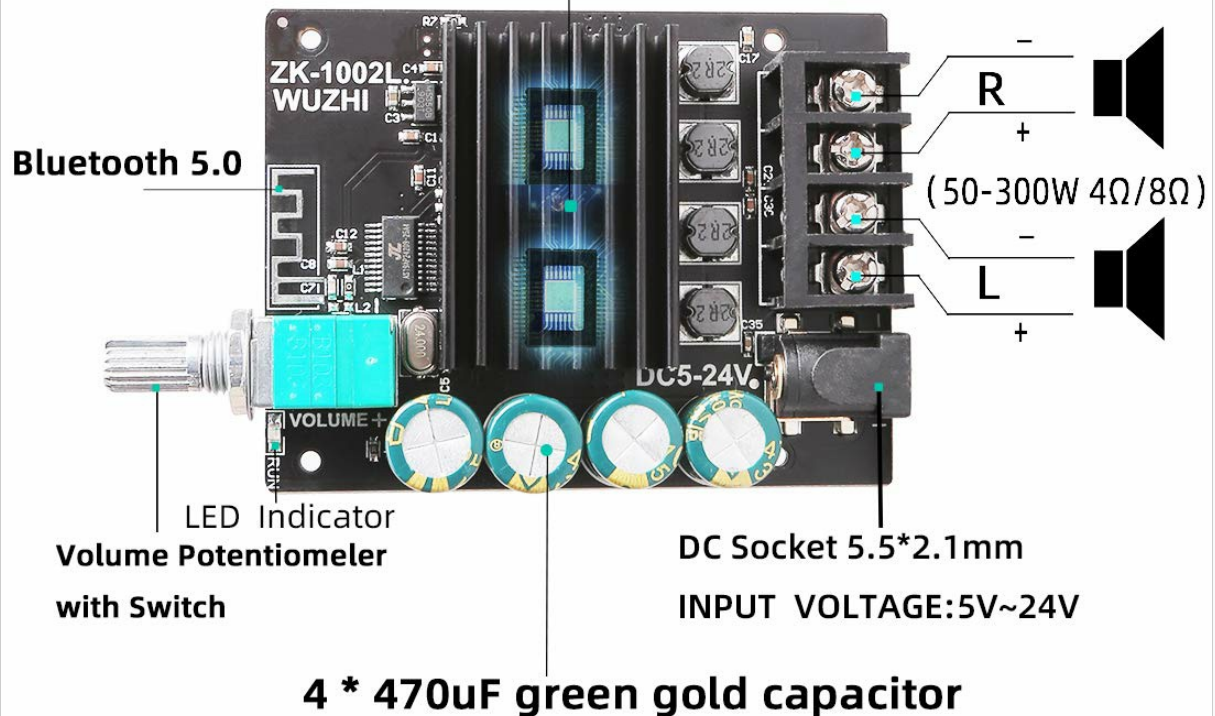


Image: A detailed diagram of the ZK1002L board, highlighting the Bluetooth 5.0 module, LED indicator, volume potentiometer, DC socket, and speaker output terminals (R and L), along with the input voltage range and capacitor details.

5. OPERATING INSTRUCTIONS

- Power On:** Once all connections are secure, connect the power adapter to a wall outlet. Turn the volume knob clockwise to power on the amplifier. A short audible tone will indicate the board is powered on and ready for Bluetooth pairing.
- Bluetooth Pairing:**
 - On your audio source device (e.g., smartphone, tablet), enable Bluetooth.
 - Search for available Bluetooth devices. The amplifier board will appear as "BT-WUZHI" or a similar identifier.
 - Select the amplifier to pair. No password is required.
 - A confirmation tone will sound upon successful pairing.
- Audio Playback:** Begin playing audio from your paired device. Adjust the volume using the knob on the amplifier board and/or your source device.
- Power Off:** Turn the volume knob counter-clockwise until it clicks off. Note that the power switch on the board is a standby switch; for complete power disconnection, unplug the DC power adapter.

6. MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the amplifier board. Do not use liquid cleaners or solvents.
- **Ventilation:** Ensure the heatsink remains free of dust and debris to maintain optimal cooling.
- **Storage:** When not in use for extended periods, store the amplifier in a dry, cool place, disconnected from power.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
No sound or distorted sound	Insufficient power supply. Incorrect speaker wiring or impedance. Volume too low on amplifier or source. Overheating.	Use a power adapter with sufficient current (e.g., 12V 5A or 24V 5A). Check speaker connections and ensure speakers are 4-8Ω. Increase volume on both amplifier and source device. Ensure proper ventilation; disconnect power for a few minutes if overheated.
Bluetooth not connecting	Amplifier not in pairing mode. Source device too far or obstructed. Interference from other devices (e.g., Wi-Fi).	Ensure amplifier is powered on and Bluetooth is enabled on source. Move source device closer to the amplifier. Relocate amplifier away from strong Wi-Fi signals or other interfering electronics.
Amplifier cuts off intermittently	Overheating protection activated. Power supply instability.	Check ventilation around the heatsink. Reduce volume if playing at high levels for extended periods. Ensure power supply is stable and provides sufficient current.

8. SPECIFICATIONS

Model Number	ZK1002L
Output Power	100W + 100W (Peak)
Channels	2.0 Stereo
Bluetooth Version	5.0
Input Voltage	DC 5V - 24V
Adapter Speaker Impedance	4-8Ω (50W-150W)
Dimensions (L x W x H)	3.31 x 2.05 x 0.95 inches (84 x 52 x 24 mm)
Weight	3.53 ounces (100g)
Manufacturer	DAMGOO

Size Parameters

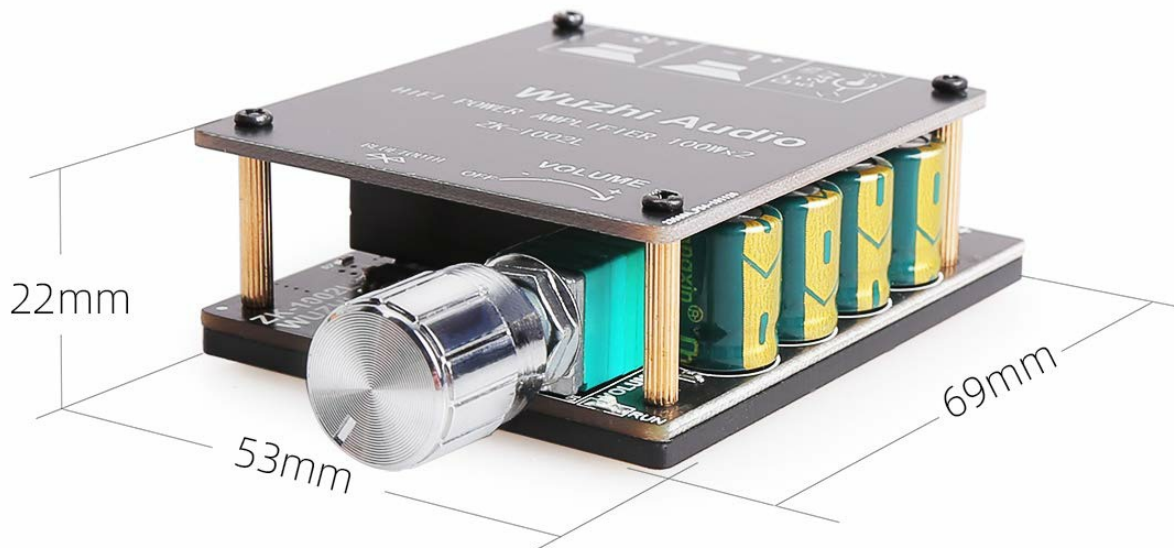


Image: A diagram illustrating the physical dimensions of the ZK1002L amplifier board, showing measurements of 53mm width, 69mm length, and 22mm height.

9. WARRANTY AND SUPPORT

DAMGOO products are designed for reliability and performance. For any questions, technical assistance, or warranty claims, please contact DAMGOO customer support through your purchase platform. Please retain your proof of purchase for warranty service.

Warm Reminder: The power switch on the board is a standby switch. After the switch is turned off, the machine is in a low-power standby state. To completely turn off the power or unplug it for a long time, you can unplug the DC plug on the machine.