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› ARRAROWN ZK-1002T PRO Bluetooth 5.0 Amplifier Board Instruction Manual

ARRAROWN ZK-1002T Pro

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User Instruction Manual

1. INTRODUCTION

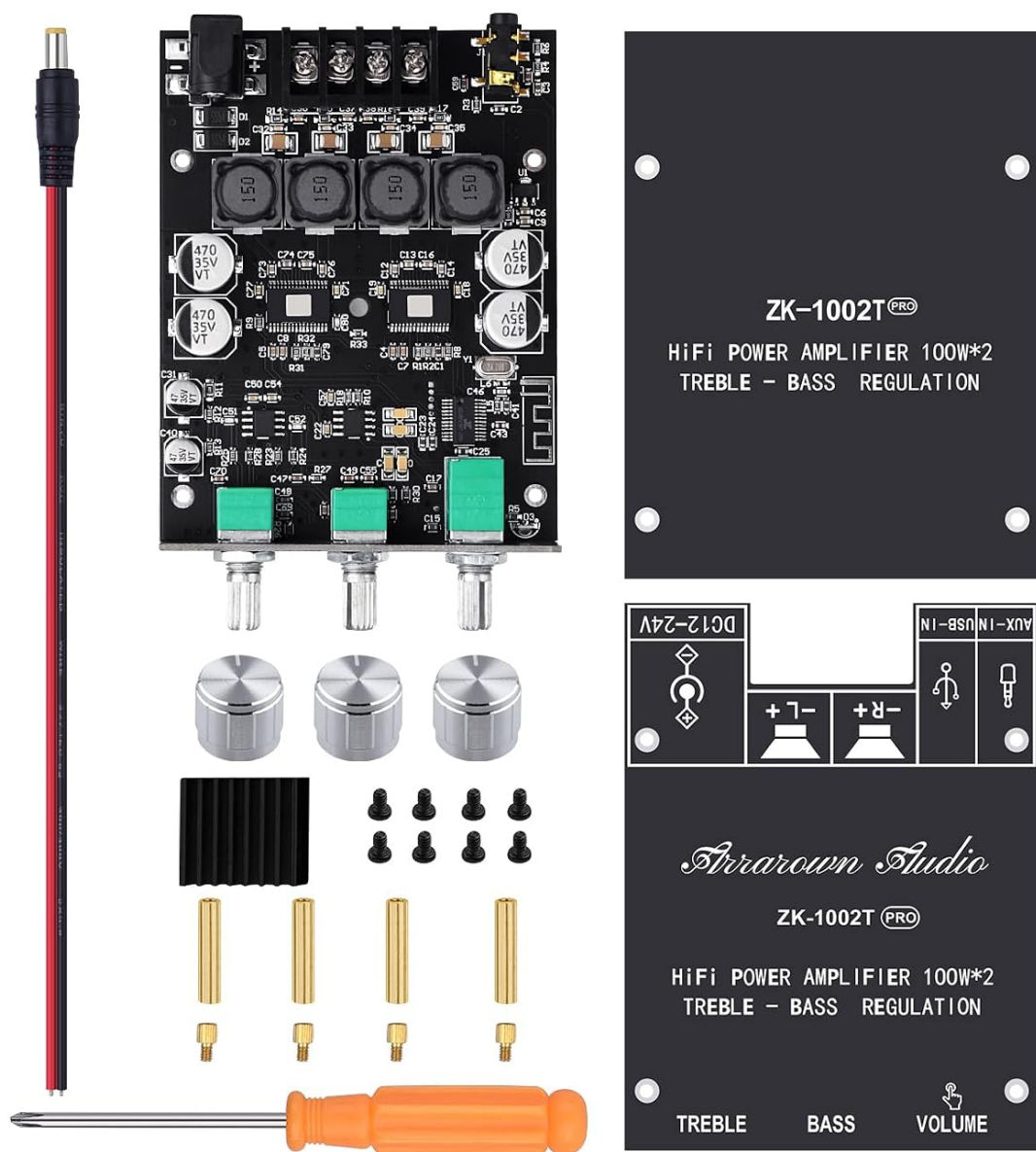
The ARRAROWN ZK-1002T PRO is a 2.0 channel Bluetooth 5.0 amplifier board designed for DIY speaker projects. It offers 200W (100W+100W) stereo output with independent treble and bass adjustment. This module supports Bluetooth, USB, and AUX audio inputs, operating on a DC 12-24V power supply. It incorporates multiple protection features for reliable operation.

2. PRODUCT FEATURES

- **Audio Output:** 2.0 Channel stereo output, 100W + 100W.
- **Audio Inputs:** Bluetooth 5.0 wireless connection, USB, and AUX.
- **Sound Adjustment:** Independent treble and bass control knobs.
- **Sound Quality:** Features a powerful chip, AM interference suppression, shielded power inductance, and a low-noise front-stage operational amplifier.
- **Protection Mechanisms:** Includes over-voltage, under-voltage, over-heat, short-circuit, and DC detection protection.
- **Compact Design:** Small form factor for integration into various DIY speaker enclosures.

3. PACKAGE CONTENTS

Verify that all components listed below are present in your package:



This image displays all items you should find in your package: the ZK-1002T PRO amplifier board, two protective acrylic plates, four brass standoffs, several screws, a DC power input cable, and a small screwdriver for assembly.

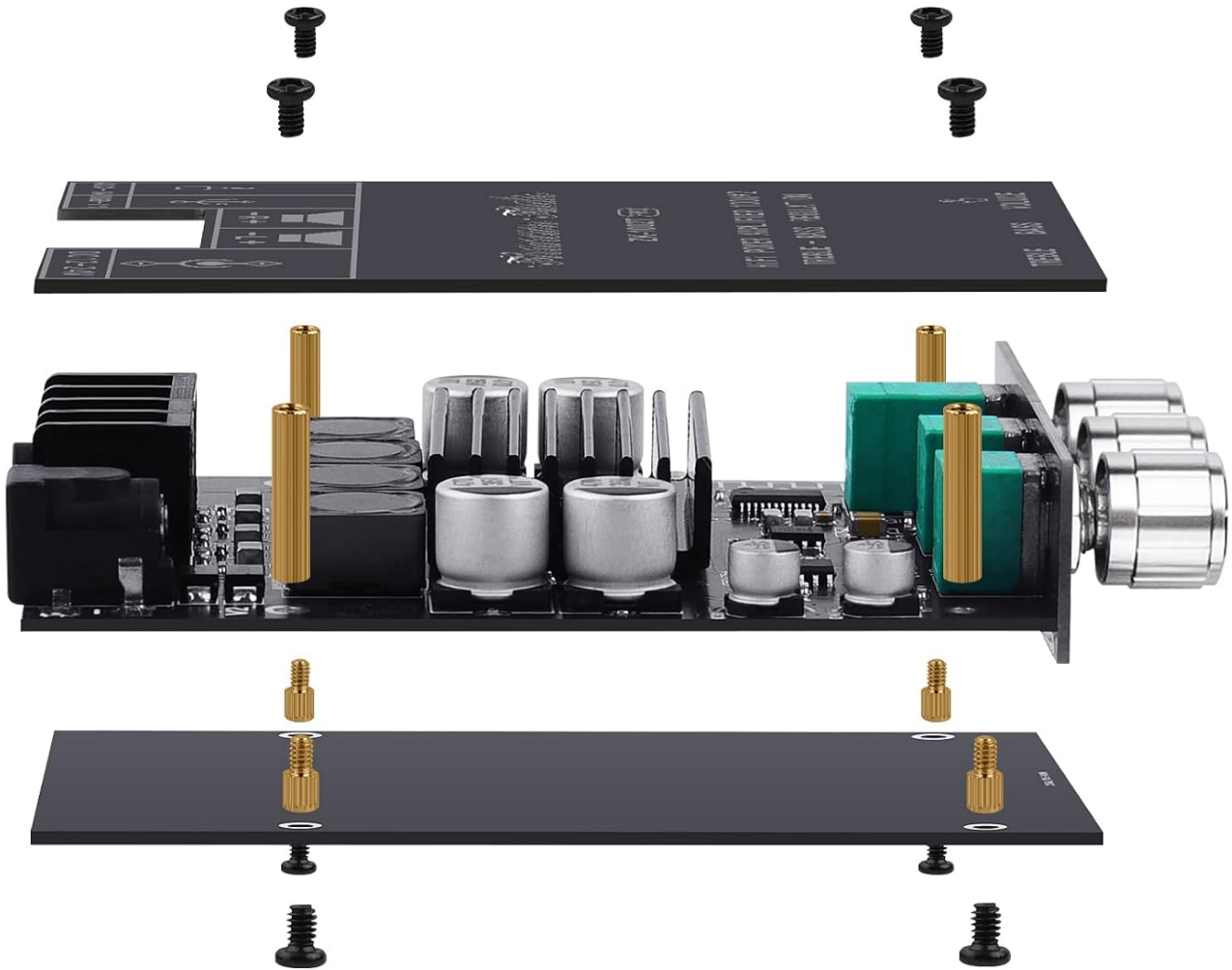
- ZK-1002T PRO Amplifier Board
- Protective Acrylic Plates (2)
- Brass Standoffs (4)
- Mounting Screws
- DC Power Input Cable
- Small Screwdriver

4. SETUP INSTRUCTIONS

4.1. Assembly of Protective Plates

1. Carefully align one protective acrylic plate with the bottom of the amplifier board.
2. Insert the four brass standoffs through the designated holes from the bottom plate, through the amplifier board.

3. Place the second protective acrylic plate on top, aligning it with the standoffs.
4. Secure the assembly using the provided screws, tightening them gently with the screwdriver. Do not overtighten.



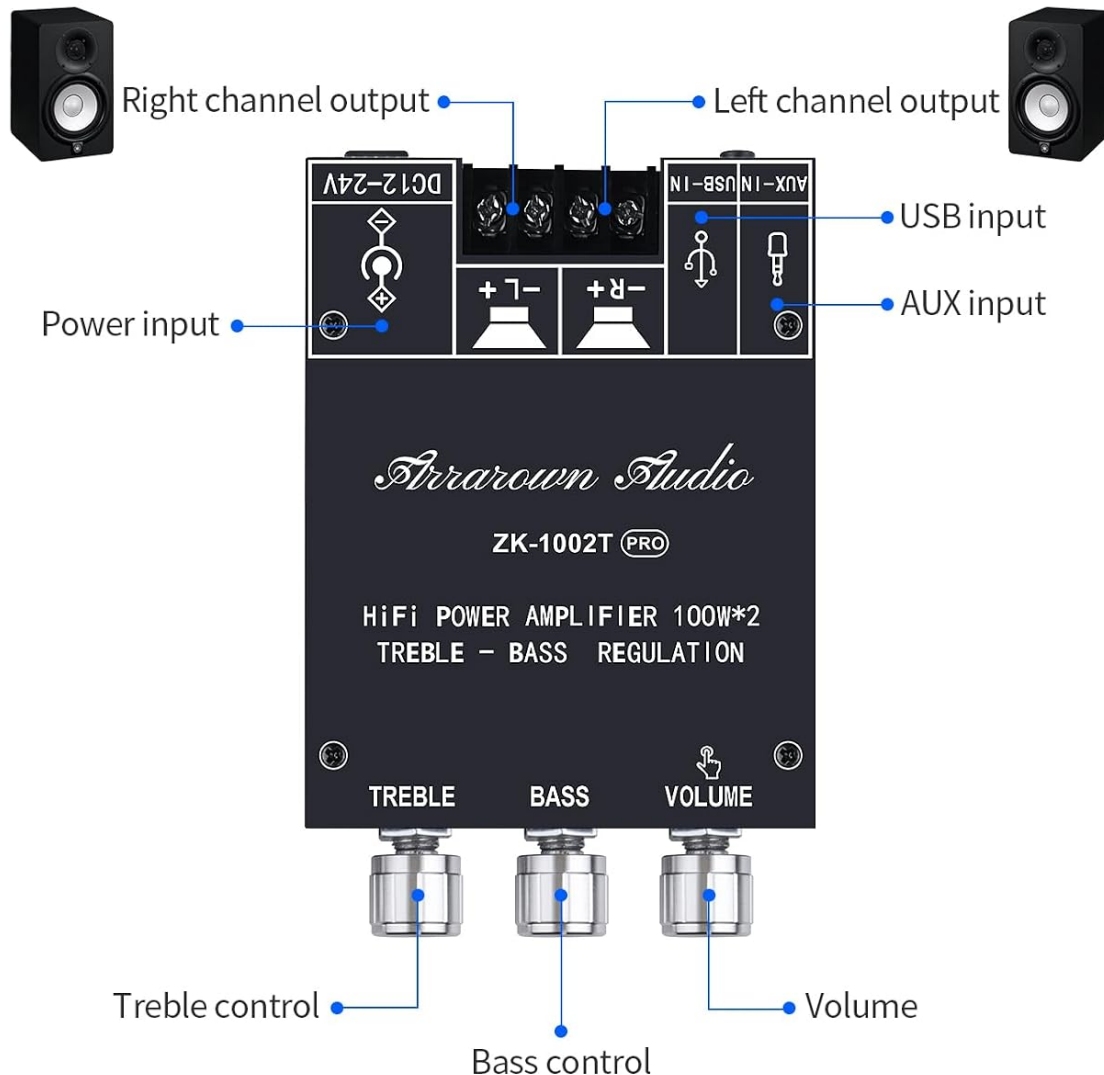
This diagram illustrates how to assemble the protective acrylic plates onto the amplifier board using the provided standoffs and screws. The board fits between the two plates, secured by the hardware.

4.2. Connections

Refer to the diagram below for connection points:

100W+100W Bluetooth Subwoofer Amplifier Board

BT+AUX audio input, two-channel stereo output



This image provides a detailed overview of the amplifier board's interface. It highlights the DC 12-24V power input, left and right speaker outputs, USB audio input, AUX audio input, and the three control knobs for Treble, Bass, and Volume.

1. **Speaker Connection:** Connect your passive speakers to the 'Left channel output' and 'Right channel output' terminals. Ensure correct polarity (+ to + and - to -).
2. **Power Supply:** Connect a DC 12-24V power adapter (not included) to the 'Power input' jack. Ensure the power supply meets the voltage and current requirements for your speakers.
3. **Audio Input (Optional):**
 - **AUX Input:** For wired audio, connect your audio source (e.g., smartphone, MP3 player) to the 'AUX input' using a 3.5mm audio cable.
 - **USB Input:** For USB audio, connect a USB device to the 'USB input'.

Note: When using AUX mode, ensure that any active Bluetooth connection to the module has been disconnected.

5. OPERATING INSTRUCTIONS

5.1. Power On/Off

Once the power supply is connected, the amplifier board will power on automatically. There is no dedicated power switch on the board. Disconnect the power supply to turn off the unit.

5.2. Bluetooth Connection

1. Ensure the amplifier board is powered on.
2. On your audio device (e.g., smartphone, tablet), enable Bluetooth and search for available devices.
3. Select "ZK-1002T PRO" from the list of devices to pair.
4. Once paired, audio from your device will be streamed to the amplifier.

5.3. AUX Input Usage

Connect your audio source to the 'AUX input' using a 3.5mm audio cable. The amplifier will automatically switch to AUX mode if a Bluetooth connection is not active. If Bluetooth is active, disconnect it from your device to enable AUX input.

5.4. USB Input Usage

Connect a USB audio source to the 'USB input'. The amplifier will prioritize USB audio if detected. Ensure your USB device is compatible with the amplifier's USB audio playback capabilities.

5.5. Adjusting Sound

Use the three control knobs on the front of the board:

- **Volume:** Adjusts the overall output volume.
- **Bass:** Adjusts the low-frequency response.
- **Treble:** Adjusts the high-frequency response.



This image depicts a common application of the amplifier board, showing it connected to a pair of speakers and receiving audio wirelessly from a smartphone via Bluetooth. It illustrates how the module integrates into a home audio system.

6. MAINTENANCE

- Keep the amplifier board clean and free from dust. Use a soft, dry cloth for cleaning.
- Avoid exposing the board to moisture, extreme temperatures, or direct sunlight.
- Ensure proper ventilation around the board to prevent overheating, especially during prolonged use at high volumes.
- Do not attempt to disassemble or modify the board beyond the protective plate assembly. This may void the warranty and cause damage.

7. TROUBLESHOOTING

- **No Sound:**
 - Check if the power supply is correctly connected and providing the correct voltage (DC 12-24V).

- Ensure speakers are properly connected to the output terminals with correct polarity.
- Verify the volume knob is not set to minimum.
- If using AUX input, ensure Bluetooth is disconnected.
- Test with a different audio source or cable.

- **Bluetooth Connection Issues:**

- Ensure the amplifier board is powered on and within range of your Bluetooth device.
- Turn off and on Bluetooth on your audio device, then try pairing again.
- Forget the device from your audio device's Bluetooth settings and re-pair.
- Ensure no other device is currently connected to the amplifier via Bluetooth.

- **Distorted Sound:**

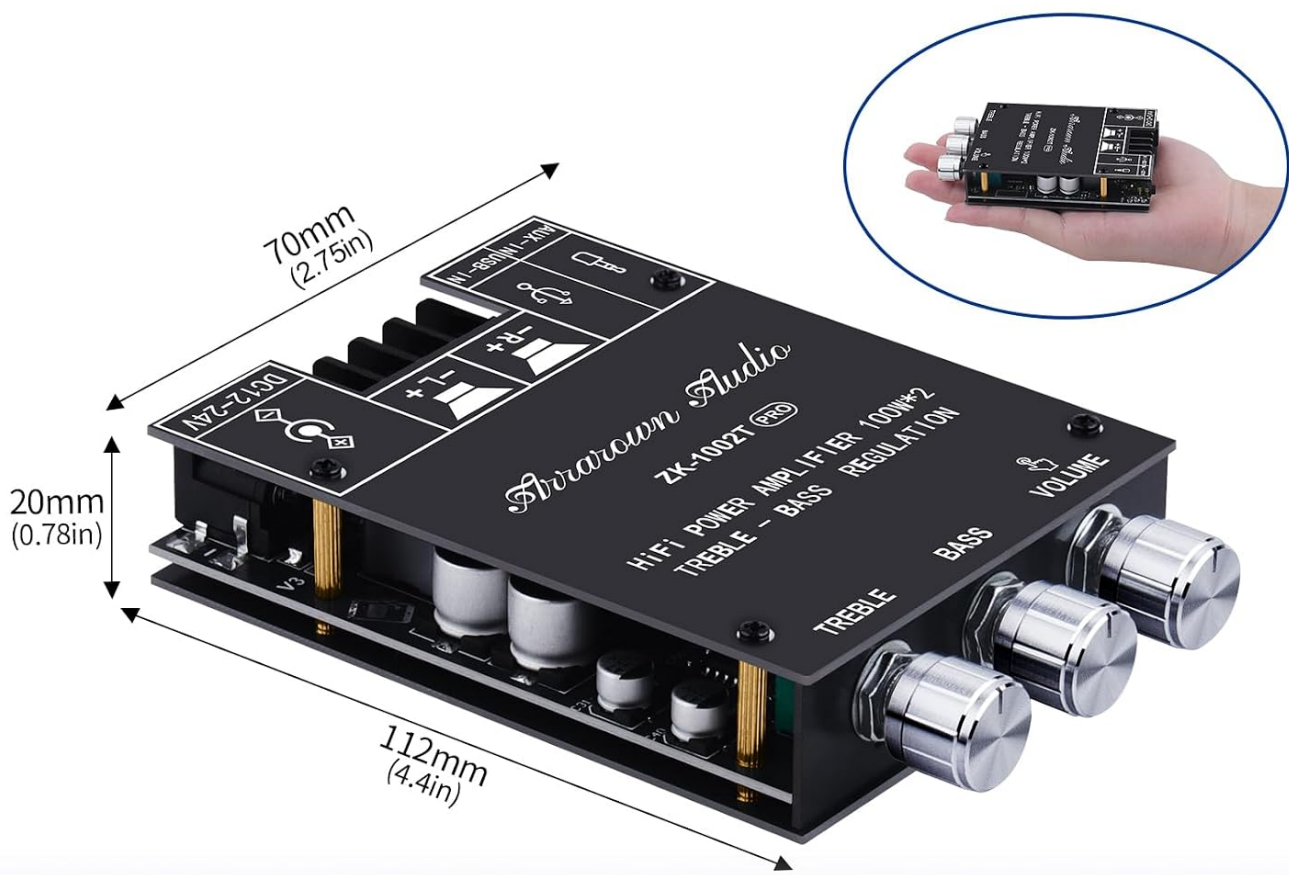
- Reduce the volume level on both the amplifier and the audio source.
- Check speaker impedance and power handling to ensure compatibility with the amplifier's output.
- Ensure the power supply is stable and sufficient.
- Adjust treble and bass controls to a neutral position or lower.

- **Overheating:**

- Ensure adequate airflow around the amplifier board.
- Reduce the volume or operating time.
- Verify speaker impedance is not too low, which can cause the amplifier to work harder.

8. SPECIFICATIONS

Protection Mechanism



Over-voltage
protection



Under-voltage
protection



Over-heat
protection



Short-circuit
protection



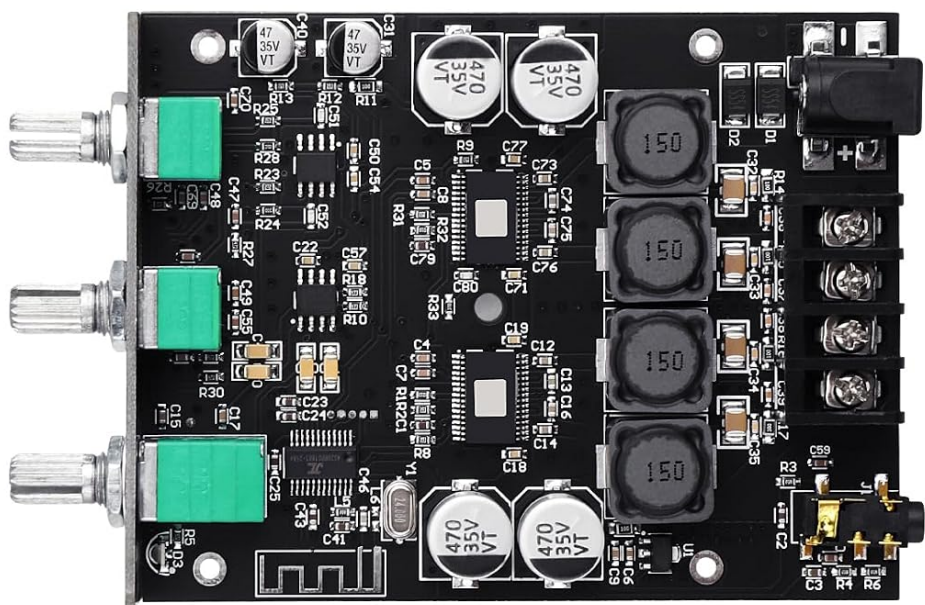
DC detection
protection

This image provides the physical dimensions of the amplifier board (approximately 4.4 inches by 2.75 inches by 0.78 inches) and visually lists its built-in safety features, including protection against over-voltage, under-voltage, overheating, short-circuits, and DC detection.

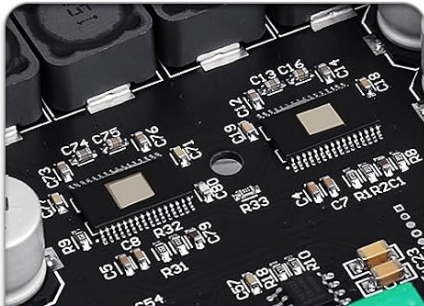
Feature	Specification
Model	ZK-1002T Pro
Brand	ARRAROWN
Number of Channels	2.0 (Stereo)
Output Power	200 Watts (100W + 100W)
Bluetooth Version	5.0
Audio Inputs	Bluetooth, USB, AUX (3.5mm)
Supply Voltage	DC 12-24V

Feature	Specification
Mounting Type	Through-Hole Mount
Dimensions (L x W x H)	112mm x 70mm x 20mm (approx. 4.4 x 2.75 x 0.78 inches)
Protection Features	Over-voltage, Under-voltage, Over-heat, Short-circuit, DC detection

With high-quality sound experience, you will enjoy a more perfect sound quality experience.



Treble & Bass Control



DUAL TPA3116D2 CHIP



Large Heat Sink

This image offers a closer look at the amplifier board's internal design, emphasizing the dedicated Treble and Bass control circuitry, the dual TPA3116D2 amplifier chips for powerful audio output, and the large heat sink designed for efficient thermal management.

9. WARRANTY INFORMATION

The ARRAROWN ZK-1002T PRO amplifier board comes with a **2-year warranty** from the date of purchase. This warranty covers manufacturing defects and malfunctions under normal use. It does not cover damage caused by misuse, unauthorized modifications, accidents, or improper installation. Please retain your proof of purchase for warranty claims.

10. SUPPORT

For further assistance, technical support, or warranty inquiries, please contact ARRAROWN customer service through the retailer where the product was purchased or visit the official ARRAROWN store page.

[Visit the ARRAROWN Store on Amazon](#)

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

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.

Submit question