

## HiLetgo TDA7297

# HiLetgo TDA7297 Audio Amplifier Board User Manual

Model: TDA7297 (3-01-0123)

Brand: HiLetgo

## 1. INTRODUCTION

This manual provides detailed instructions for the proper installation, operation, and maintenance of your HiLetgo TDA7297 Audio Amplifier Board. This dual-channel amplifier module is designed for various audio applications, offering 15W+15W output power with a 12V DC power supply. Please read this manual thoroughly before use to ensure optimal performance and safety.

## 2. SAFETY INFORMATION

- **Power Supply:** Use a DC power supply within the specified range of 8-18V. Exceeding this voltage can damage the board. A 12V DC, 2A power supply is recommended.
- **Polarity:** Ensure correct polarity when connecting the power supply. Incorrect connections can cause irreversible damage.
- **Speaker Impedance:** Connect speakers with an impedance of 4-8 ohms. Using speakers outside this range may reduce performance or damage the amplifier.
- **Heat Management:** The amplifier generates heat during operation. Ensure adequate ventilation around the heatsink to prevent overheating. Do not cover the heatsink.
- **Short Circuits:** Avoid short-circuiting the speaker outputs or power terminals.
- **Moisture:** Keep the amplifier board away from moisture and liquids.

### 3. PACKAGE CONTENTS

The package includes the following items:

- 2 x HiLetgo TDA7297 Audio Amplifier Board

### 4. PRODUCT OVERVIEW

The HiLetgo TDA7297 Audio Amplifier Board is a compact, high-performance stereo amplifier module. It features a TDA7297 chip, a volume potentiometer, and screw terminals for easy connections.

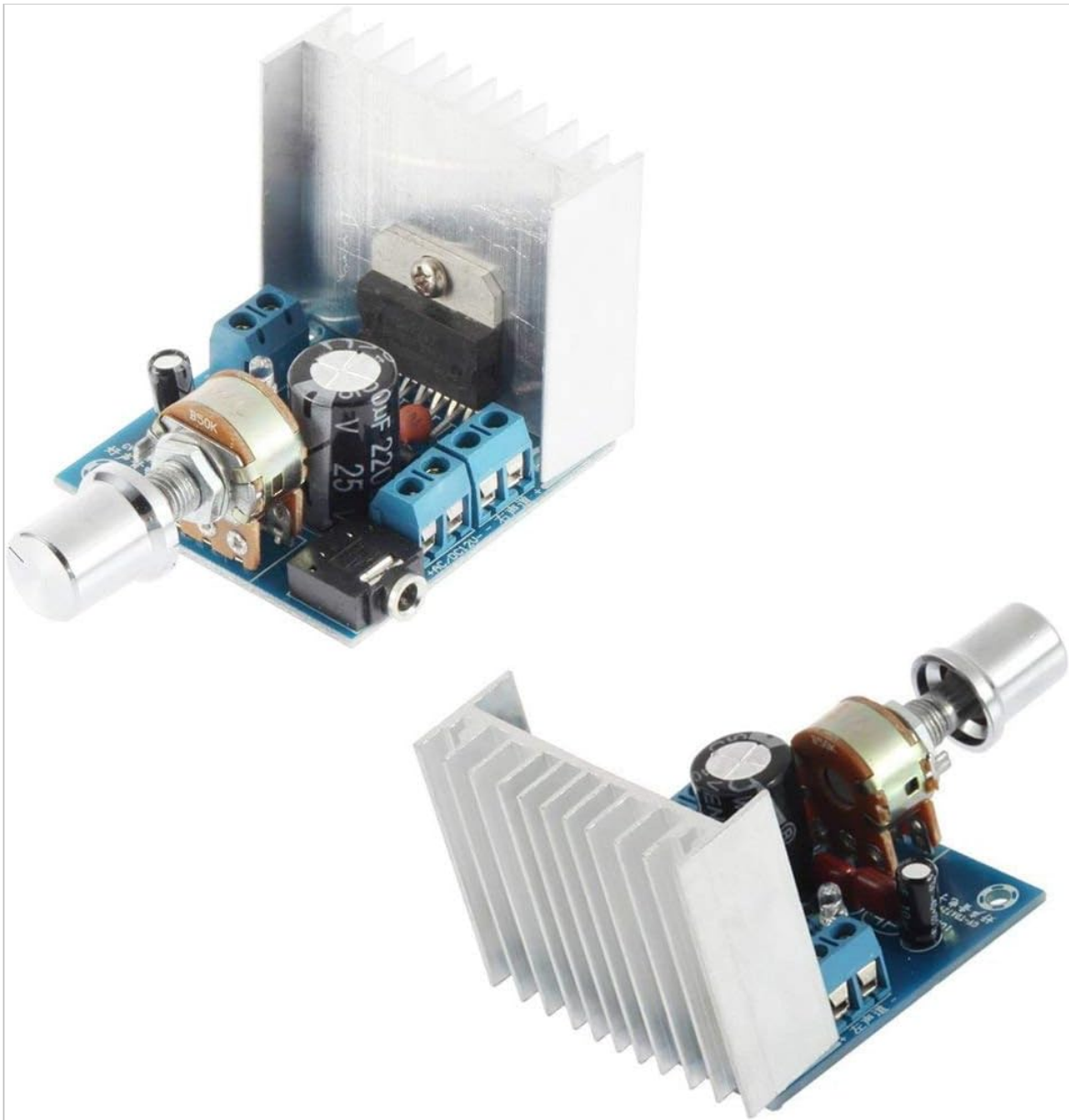


Figure 4.1: General view of two HiLetgo TDA7297 Audio Amplifier Boards.

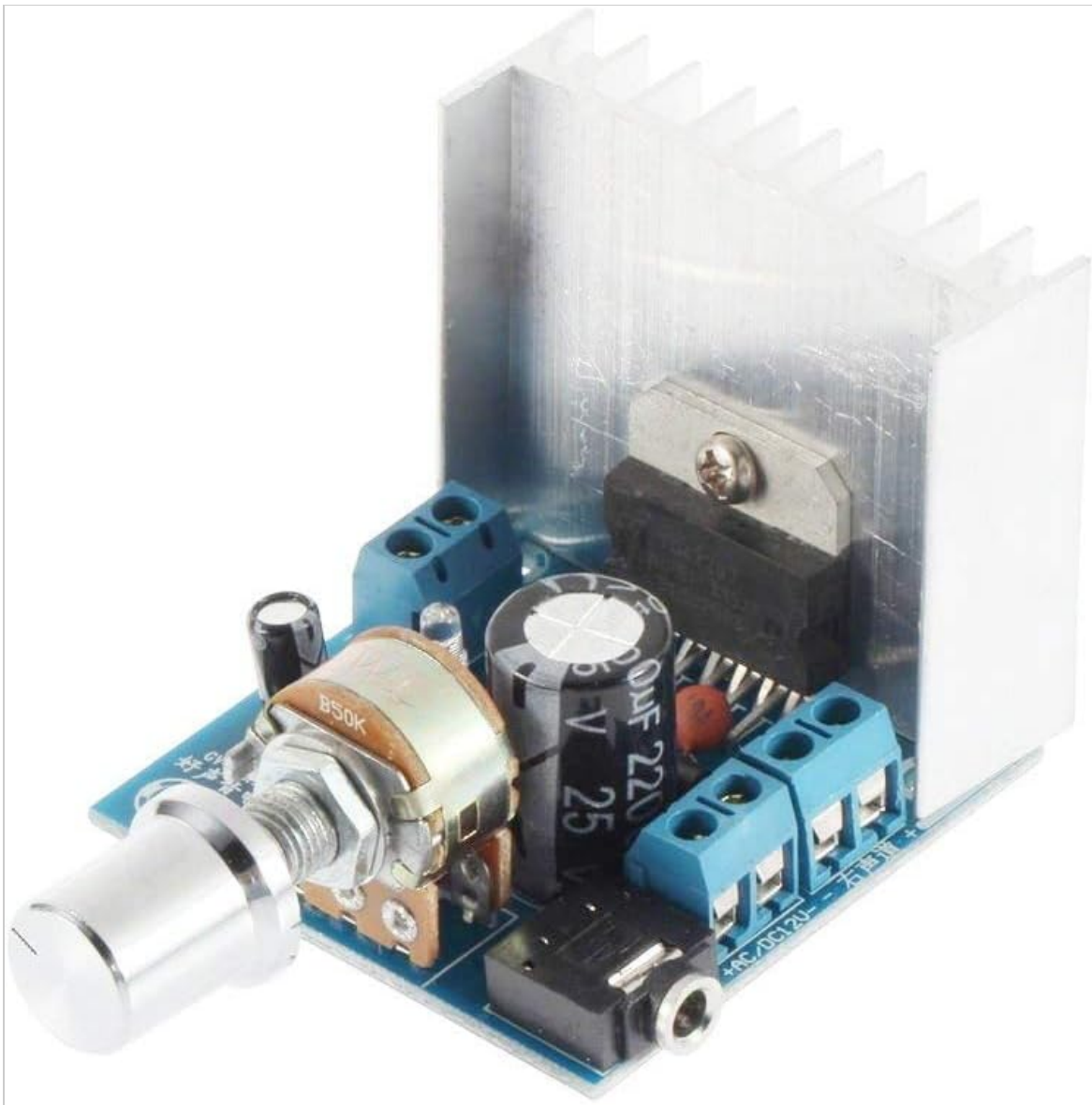


Figure 4.2: Top-down view of the amplifier board, showing the TDA7297 chip, capacitors, and terminals.

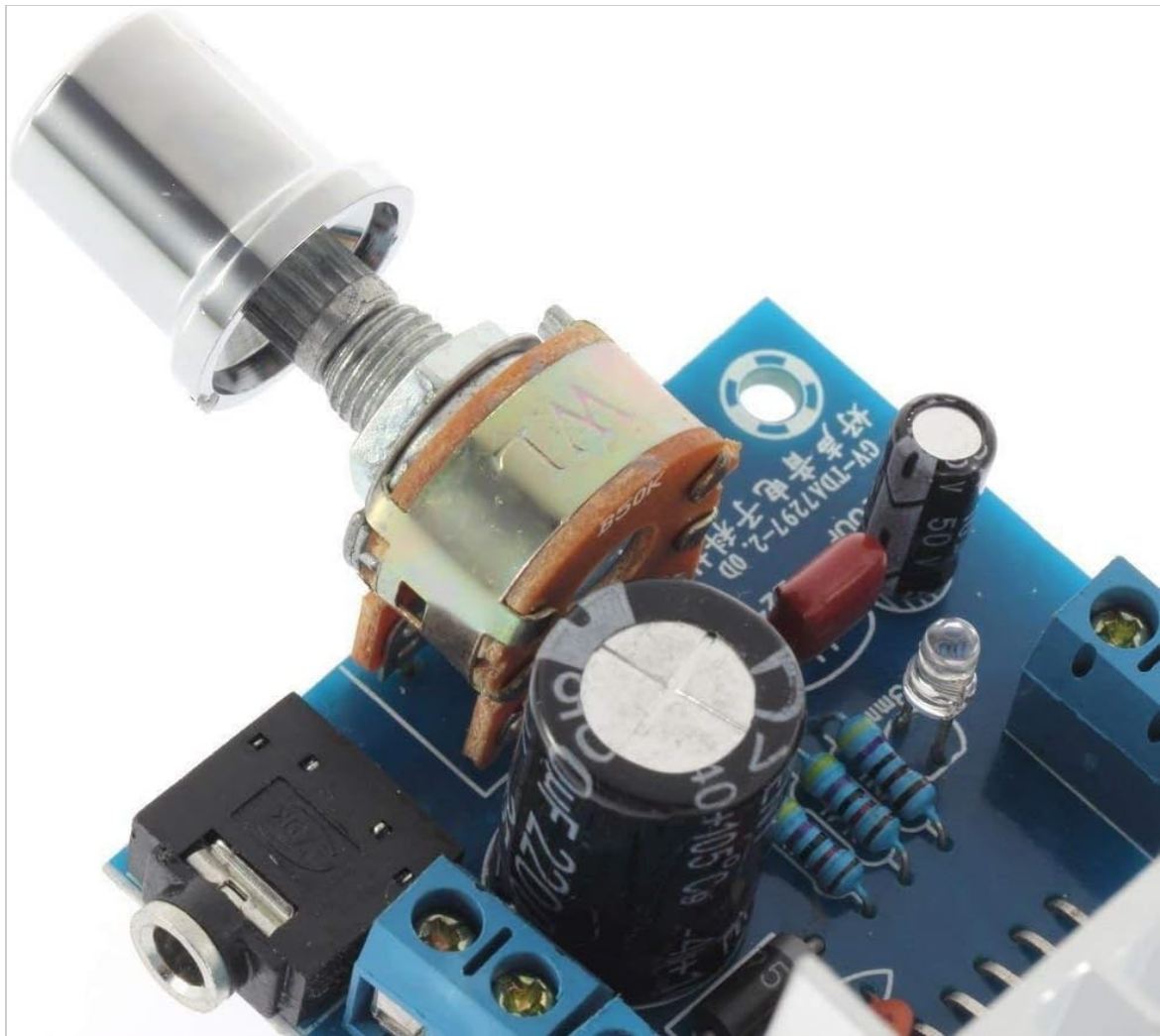


Figure 4.3: Detail of the volume control potentiometer and the 3.5mm audio input jack.

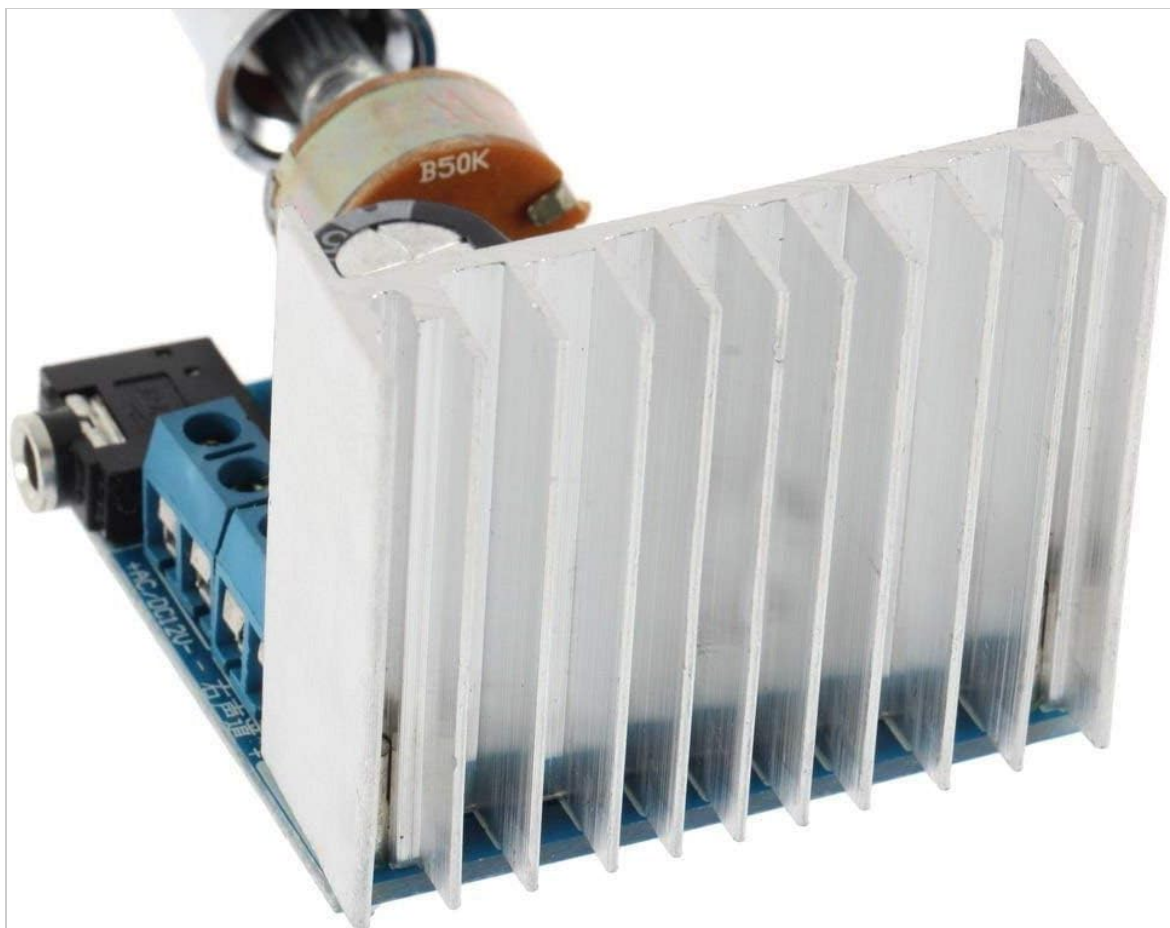


Figure 4.4: Detail of the blue screw terminals for power input and speaker outputs.

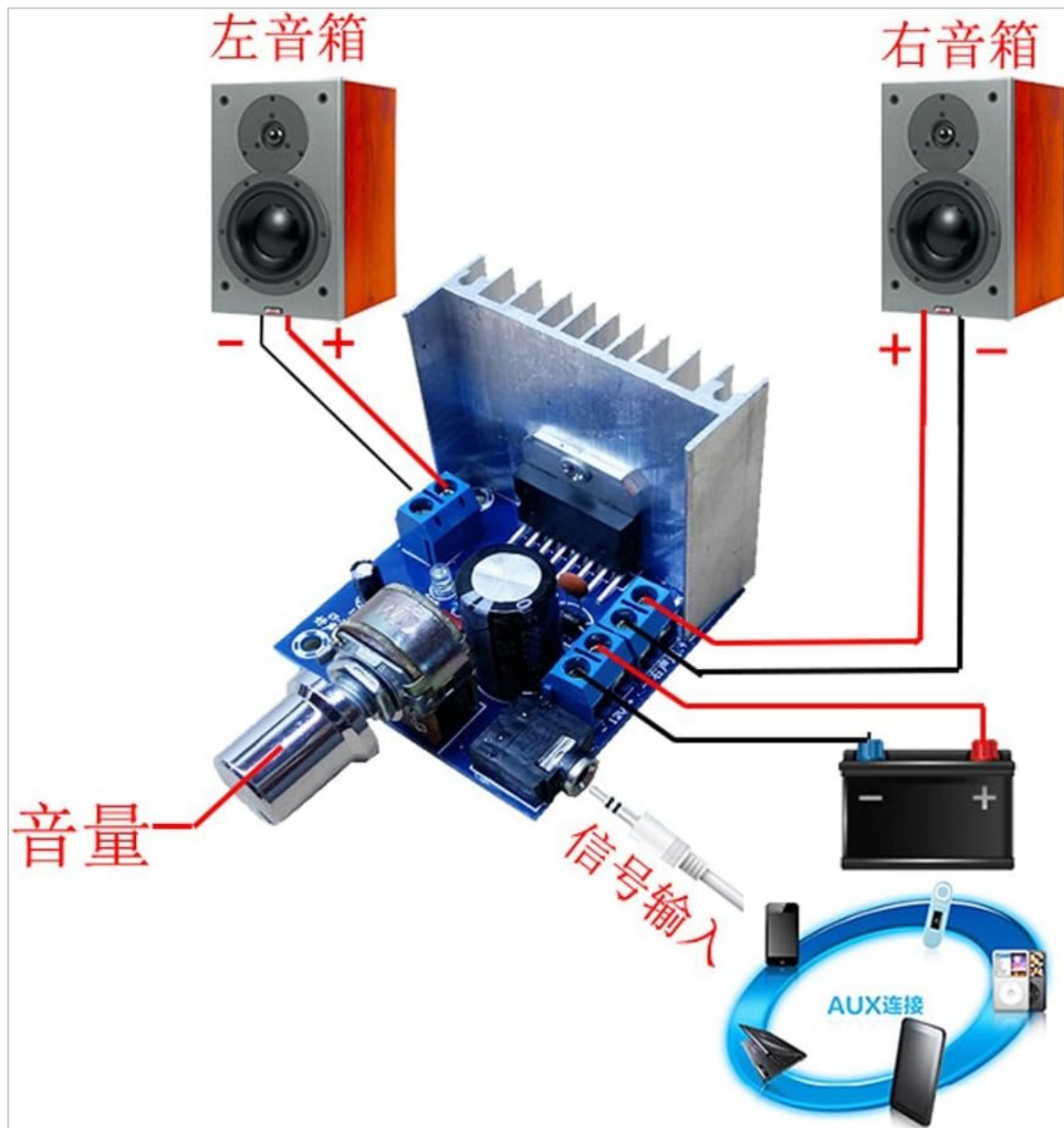


Figure 4.5: Side view highlighting the aluminum heatsink for thermal dissipation.

## 5. SETUP INSTRUCTIONS

Follow these steps to correctly set up your TDA7297 Audio Amplifier Board:



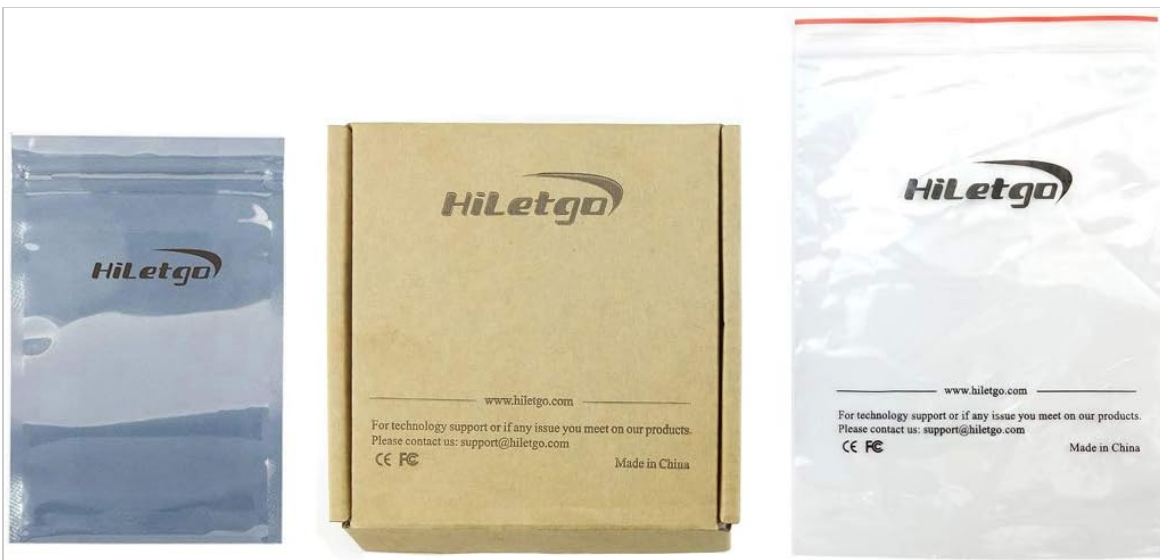


Figure 5.1: Wiring diagram for the amplifier board.

1. **Power Connection:** Connect your DC power supply (8-18V, recommended 12V 2A) to the power input terminals labeled '+AC/DC 12V-' on the board. Ensure correct polarity: positive to '+' and negative to '-'.
2. **Audio Input:** Connect your audio source (e.g., smartphone, MP3 player) to the 3.5mm audio input jack on the board using a standard audio cable.
3. **Speaker Connection:** Connect your speakers (4-8 ohms impedance) to the speaker output terminals. The board supports two channels (left and right). Connect the positive and negative terminals of each speaker to the corresponding output terminals on the amplifier board.
4. **Volume Control:** The board features an integrated potentiometer for volume adjustment. Turn it counter-clockwise to decrease volume and clockwise to increase volume.

## 6. OPERATING INSTRUCTIONS

Once the amplifier board is correctly wired:

1. Ensure all connections are secure.
2. Turn the volume potentiometer to its minimum setting (fully counter-clockwise).
3. Apply power to the amplifier board.
4. Start playing audio from your connected source.
5. Slowly adjust the volume potentiometer clockwise to your desired listening level.

## 7. MAINTENANCE

- **Cleaning:** Keep the board clean and free from dust. Use a soft, dry cloth for cleaning. Avoid using liquids or solvents.
- **Ventilation:** Regularly check that the heatsink is not obstructed and has sufficient airflow to

prevent overheating.

- **Connections:** Periodically inspect all wiring connections to ensure they remain tight and secure.
- **Storage:** When not in use for extended periods, store the amplifier board in a dry, cool environment.

## 8. TROUBLESHOOTING

- **No Sound:**
  - Check power supply connections and ensure the power source is active.
  - Verify audio input cable is securely connected to both the source and the amplifier.
  - Ensure speaker wires are correctly connected and not short-circuited.
  - Increase the volume using the potentiometer.
- **Distorted Sound:**
  - Reduce the volume from both the audio source and the amplifier.
  - Check speaker impedance; ensure it is within the 4-8 ohm range.
  - Verify the audio source is not overdriving the input.
- **Overheating:**
  - Ensure adequate ventilation around the heatsink.
  - Reduce the output volume or operating time.
  - Confirm the power supply voltage is not too high.

## 9. SPECIFICATIONS

Feature	Specification
Amplifier Chip	TDA7297
Voltage Range	DC 8-18V
Recommended Voltage	DC 12V
Recommended Current	2A or above
Output Power	15W + 15W
Output Impedance	4-8 ohms
Number of Channels	2 (Dual Channel)
Dimensions (LxWxH)	52 x 48 x 40mm (excluding potentiometer handle)
Item Weight	55g (approx. 4 ounces)



Model Number	3-01-0123
UPC	702082654484

## 10. WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the HiLetgo official website or contact your retailer. Keep your purchase receipt for any warranty claims.

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### Related Documents - TDA7297

	<p><a href="#">ESP8266 User Manual</a></p> <p>User manual for the ESP8266 module, detailing its features, parameters, and pin descriptions. Includes FCC compliance information and RF exposure considerations.</p>
	<p><a href="#">SmartBar Cocktails Project Bill of Materials and Component List</a></p> <p>Detailed bill of materials (BOM) for the SmartBar Cocktails project, listing all electronic components, their specifications, quantities, and costs. Includes Raspberry Pi 4, relays, sensors, wires, and more.</p>