

## AWAVINGCEM TDA7388

# AWAVINGCEM TDA7388 Four-Channel Power Amplifier Board Instruction Manual

Model: TDA7388  
Brand: AWAVINGCEM

## 1. INTRODUCTION

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This manual provides essential information for the safe and effective use of the AWAVINGCEM TDA7388 Four-Channel Power Amplifier Board. This bare PCB is designed for audio amplification applications, delivering 4x41W output across four channels. Please read this manual thoroughly before installation and operation.

## 2. SAFETY INFORMATION

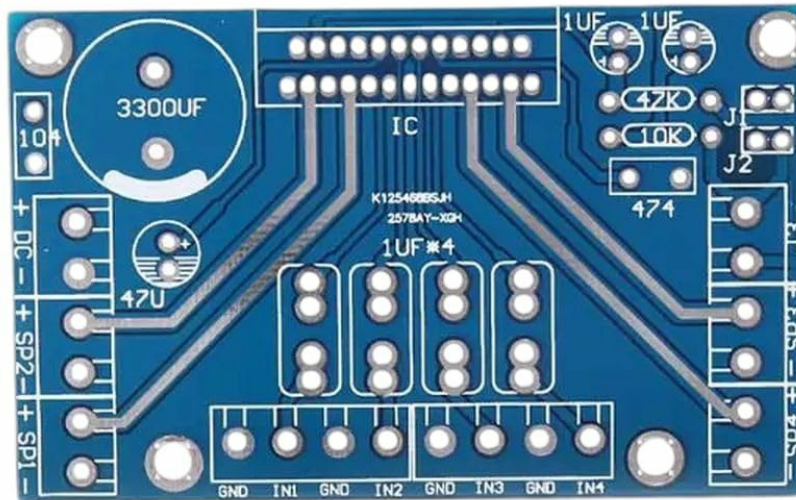
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- Always disconnect power before making any connections or disconnections to prevent electrical shock or damage to the board.
- Ensure the power supply voltage is within the specified range of DC 12V-14.5V. Exceeding this range can damage the amplifier.
- Observe correct polarity for all power and speaker connections. Incorrect polarity can cause damage.
- Handle the PCB by its edges to avoid touching components, especially the IC, to prevent electrostatic discharge (ESD) damage.
- Ensure adequate ventilation around the amplifier board during operation to prevent overheating.
- Do not operate the board in wet or damp conditions.

## 3. PRODUCT OVERVIEW

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The TDA7388 Power Amplifier Board is a compact, four-channel audio amplifier solution. It features the TDA7388 integrated circuit, designed for car radio applications, providing high output power with minimal external components. The board includes input terminals for four audio channels, output terminals for four speakers, and a DC power input.



**Figure 1:** Top view of the AWAVINGCEM TDA7388 Four-Channel Power Amplifier Board. The image displays the blue PCB with various components including the TDA7388 IC, a large 3300uF capacitor, and clearly labeled input (IN1-IN4) and output (SP1-SP4) terminals, along with DC power input.

### Key Components and Connections:

- **IC (TDA7388):** The main amplifier chip.
- **DC Input (+ DC -):** Power supply connection points (DC 12V-14.5V).
- **Audio Inputs (GND, IN1, IN2, IN3, IN4):**Connections for four independent audio input channels.
- **Speaker Outputs (SP1+, SP1-, SP2+, SP2-, SP3+, SP3-, SP4+, SP4-):**Connections for four speakers, each with positive and negative terminals.
- **Capacitors:** Various capacitors, including a large 3300uF electrolytic capacitor for power filtering.

## 4. SPECIFICATIONS

Parameter	Value
Model	TDA7388

Parameter	Value
Input Voltage	DC 12V - 14.5V
Output Power	4 x 41W
Number of Channels	4 (Four)
Chip Type	TDA7388 Integrated Circuit
Board Type	Bare PCB

## 5. SETUP

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Follow these steps to correctly set up your TDA7388 amplifier board:

- Power Connection:** Connect a DC power supply (12V-14.5V) to the '+ DC -' terminals. Ensure correct polarity: '+' to positive, '-' to negative.
- Audio Input Connection:** Connect your audio source (e.g., preamplifier, media player) to the 'GND', 'IN1', 'IN2', 'IN3', 'IN4' terminals. 'GND' is the common ground for all input channels. Each 'INx' terminal corresponds to a specific audio channel.
- Speaker Output Connection:** Connect your speakers to the 'SP1', 'SP2', 'SP3', 'SP4' terminals. Each speaker requires a positive ('+') and negative ('-') connection. Ensure the impedance of your speakers is compatible with the amplifier (typically 4-8 ohms).
- Verification:** Double-check all connections for correct polarity and secure contact before applying power.

## 6. OPERATING INSTRUCTIONS

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Once all connections are securely made and verified:

- Apply power to the amplifier board within the specified DC 12V-14.5V range.
- Ensure your audio source is turned on and playing content.
- Adjust the volume level from your audio source device. The TDA7388 board itself does not have volume controls.
- Monitor the sound output for clarity. If distortion occurs, reduce the input signal level or check speaker connections.

## 7. MAINTENANCE

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- Keep the amplifier board clean and free from dust and debris. Use a soft, dry brush or compressed air for cleaning.
- Avoid exposing the board to moisture or corrosive environments.
- Regularly inspect all wiring connections for looseness or signs of corrosion.
- Ensure the board is operated in a well-ventilated area to prevent thermal stress on components.

## 8. TROUBLESHOOTING

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- No Sound Output:**

- Verify the power supply is connected and providing the correct voltage.
- Check all audio input and speaker output connections for secure contact and correct polarity.
- Ensure the audio source is functioning and providing a signal.
- **Distorted Sound:**
  - Reduce the input signal level from your audio source.
  - Check the power supply for stability; an unstable supply can cause distortion.
  - Ensure speaker impedance matches the amplifier's requirements.
- **Overheating:**
  - Ensure the board has adequate ventilation.
  - Verify that the speaker load impedance is not too low.
  - Check for any short circuits in the speaker wiring.

## 9. WARRANTY AND SUPPORT

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The AWAVINGCEM TDA7388 Power Amplifier Board is backed by a money-back guarantee, reflecting our commitment to product quality. For any technical assistance, questions, or concerns regarding this product, please contact AWAVINGCEM customer support. Our knowledgeable team is available to provide exceptional customer service.