

AIYIMA A06

AIYIMA A06 TDA7498E Stereo HiFi Class D Power Amplifier User Manual

Model: A06

1. INTRODUCTION

Thank you for choosing the AIYIMA A06 TDA7498E Stereo HiFi Class D Power Amplifier. This compact and powerful amplifier is designed to deliver clear and robust audio for your home entertainment system. Featuring a TDA7498E chip and a replaceable NE5532 op-amp chip, the A06 offers high fidelity sound with intelligent protection features. Please read this manual carefully before use to ensure proper operation and to maximize your listening experience.

2. SAFETY INFORMATION

- Ensure the power supply voltage matches the amplifier's requirements (DC 18-36V).
- Do not expose the device to rain, moisture, or extreme temperatures.
- Avoid placing the amplifier in direct sunlight or near heat sources.
- Do not open the casing. Refer all servicing to qualified personnel.
- Keep out of reach of children.
- Disconnect power before making any connections or disconnections.

3. PACKAGE CONTENTS

Upon opening the package, please verify that all items are present and in good condition:

- 1x AIYIMA A06 Amplifier
- 1x 36V 6A Power Adapter
- 1x User Manual

4. PRODUCT FEATURES

- **Classic TDA7498E Chip:** Two-channel Class D stereo audio amplifier with intelligent protection against thermal overload. Features a small offset below 20mV and differential input to minimize common-mode noise, ensuring clear sound even at high power.
- **High Output Power:** Delivers 160W x 2 into a 4Ω load, providing strong and clear audio. Can power 128-watt speakers at 4 ohms, 86-watt speakers at 6 ohms, and 64-watt speakers at 8 ohms when equipped with the

36V 6A power adapter.

- **Dual Input Modes:** Supports RCA and 3.5mm AUX input, allowing connection to various devices such as decoders, preamplifiers, computers, CD players, mobile phones, and MP3 players.
- **Tone Control:** Features independent bass and treble controls ($\pm 6\text{dB}$) to adjust the sound range according to different music genres and personal preferences.
- **Replaceable Op-Amp Chip:** Designed with a replaceable operational amplifier chip (NE5532) for enthusiasts to upgrade and further enhance sound quality. Compatible with chips like SRT3609SM, OPA2604, OPA2134, LM4562, JRC5532, OP275GSZ, OPA1612AIDR.
- **Compact Design:** Small size with a simple function and excellent sound quality, suitable for home Hi-Fi audio systems.

5. PRODUCT OVERVIEW

Familiarize yourself with the front and rear panels of the AIYIMA A06 amplifier.

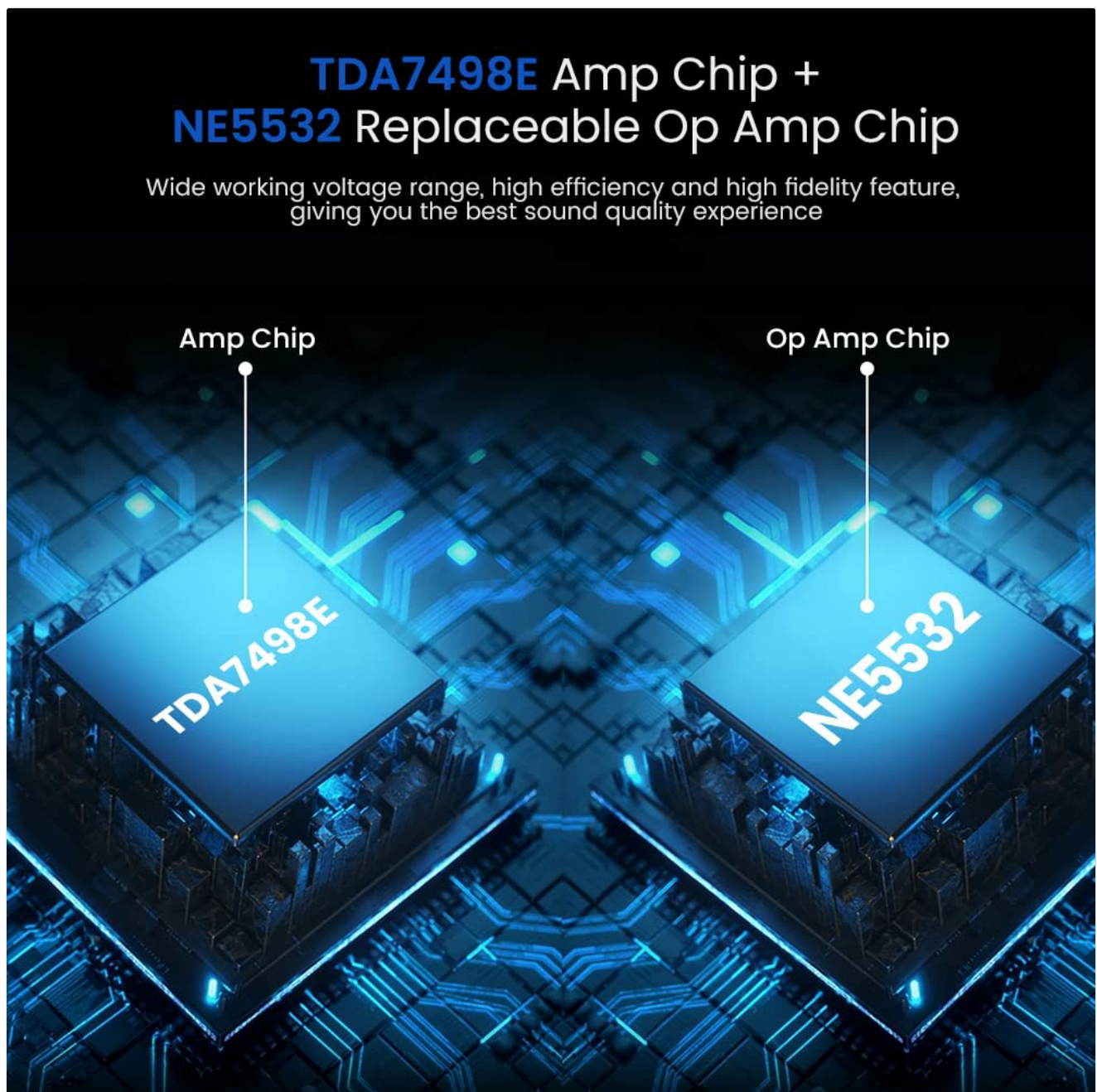


Image: AIYIMA A06 Front and Rear Panel Layout. This image displays the front panel with Power Switch, AUX/RCA Input Switch, Power Indicator, Bass Control, Treble Control, and Volume knob. The rear panel shows RCA/AUX Input, 3.5mm AUX Output, Audio Output terminals for passive speakers, and DC 18-36V Power Input.



Image: AIYIMA A06 Dimensions and Rear Panel Details. This image provides the dimensions of the amplifier (134mm/5.27inch length, 114mm/4.48inch width, 33mm/1.29inch height) and highlights the Audio Input, RCA/AUX/Switch Toggle, and Treble/Bass Control sections.

6. SPECIFICATIONS

Parameter	Value
Chipset	TDA7498E+NE5532
Replaceable Op-Amp Chips	SRT3609SM, OPA2604, OPA2134, LM4562, JRC5532, OP275GSZ, OPA1612AIDR, etc.
Distortion	≤0.1% (1KHZ 1W)
Signal-to-Noise Ratio (SNR)	≥94dB
Bass and Treble Control	±6dB

Parameter	Value
Frequency Response	20Hz-20KHz (± 3 dB)
Input Sensitivity	0.775V
Speaker Impedance	2-8 Ω
Output Power	160W + 160W (4 Ω load, 36V)
Input Modes	RCA, AUX (3.5mm)
Supported Devices	Decoder, Preamplifier, Computer, CD Player, Mobile Phone, MP3 Player, etc.
Output Mode	2.0 Speakers + AUX Out (for active subwoofer)
Working Power Supply	DC 18-36V (5-12A)
Product Dimensions (L x W x H)	13.4 x 11.3 x 3.25 cm (5.27 x 4.48 x 1.29 inches)
Net Product Weight	505 g (1.11 lbs)
Manufacturer	AIYIMA TECH
Certifications	CE

7. SETUP AND CONNECTIONS

Follow these steps to connect your AIYIMA A06 amplifier to your audio system.

A06 2.1 Channel Amplifier



Image: AIYIMA A06 Connection Diagram. This diagram illustrates how to connect various audio sources (laptop, phone, tablet via AUX; tablet, laptop, PC, DVD via RCA) to the A06 amplifier, and how to connect the amplifier to passive speakers or an active subwoofer.

7.1 Connecting Audio Sources

1. **RCA Input:** Connect your audio source (e.g., CD player, DAC, PC) to the RCA L/R input jacks on the rear panel using an RCA cable.
2. **AUX Input:** Connect your audio source (e.g., smartphone, tablet, laptop) to the 3.5mm AUX input jack on the rear panel using a 3.5mm audio cable.
3. Use the input switch on the front panel to select between RCA and AUX input.

7.2 Connecting Speakers

1. **Passive Speakers:** Connect your passive speakers to the speaker output terminals on the rear panel. Ensure correct polarity (+ to + and - to -) for both left and right channels. The amplifier supports speakers with an impedance of 2-8Ω.
2. **Active Subwoofer:** If you wish to add an active subwoofer, connect its input to the 3.5mm AUX OUT jack on the rear panel.

7.3 Power Connection

1. Connect the provided 36V 6A power adapter to the DC 18-36V power input jack on the rear panel of the amplifier.
2. Plug the power adapter into a suitable wall outlet.

8. OPERATING INSTRUCTIONS

Once all connections are made, you can begin operating your AIYIMA A06 amplifier.

8.1 Power On/Off

- Toggle the power switch on the front panel to the 'ON' position to power on the amplifier. The power indicator light will illuminate.
- Toggle the power switch to the 'OFF' position to power off the amplifier.

8.2 Input Selection

- Use the RCA/AUX input switch on the front panel to select your desired audio input source (RCA or AUX).

8.3 Volume Control

- Rotate the 'VOLUME' knob on the front panel clockwise to increase the volume and counter-clockwise to decrease it. Start with a low volume level before playing audio.

8.4 Tone Control (Bass & Treble)



Image: AIYIMA A06 Treble and Bass Control. This image highlights the independent Treble and Bass adjustment knobs on the front panel of the amplifier, allowing users to fine-tune their audio output.

- Use the 'BASS' knob to adjust the low-frequency response. Rotate clockwise to increase bass, counter-clockwise to decrease.
- Use the 'TREBLE' knob to adjust the high-frequency response. Rotate clockwise to increase treble, counter-clockwise to decrease.

8.5 Op-Amp Chip Replacement (Advanced Users)

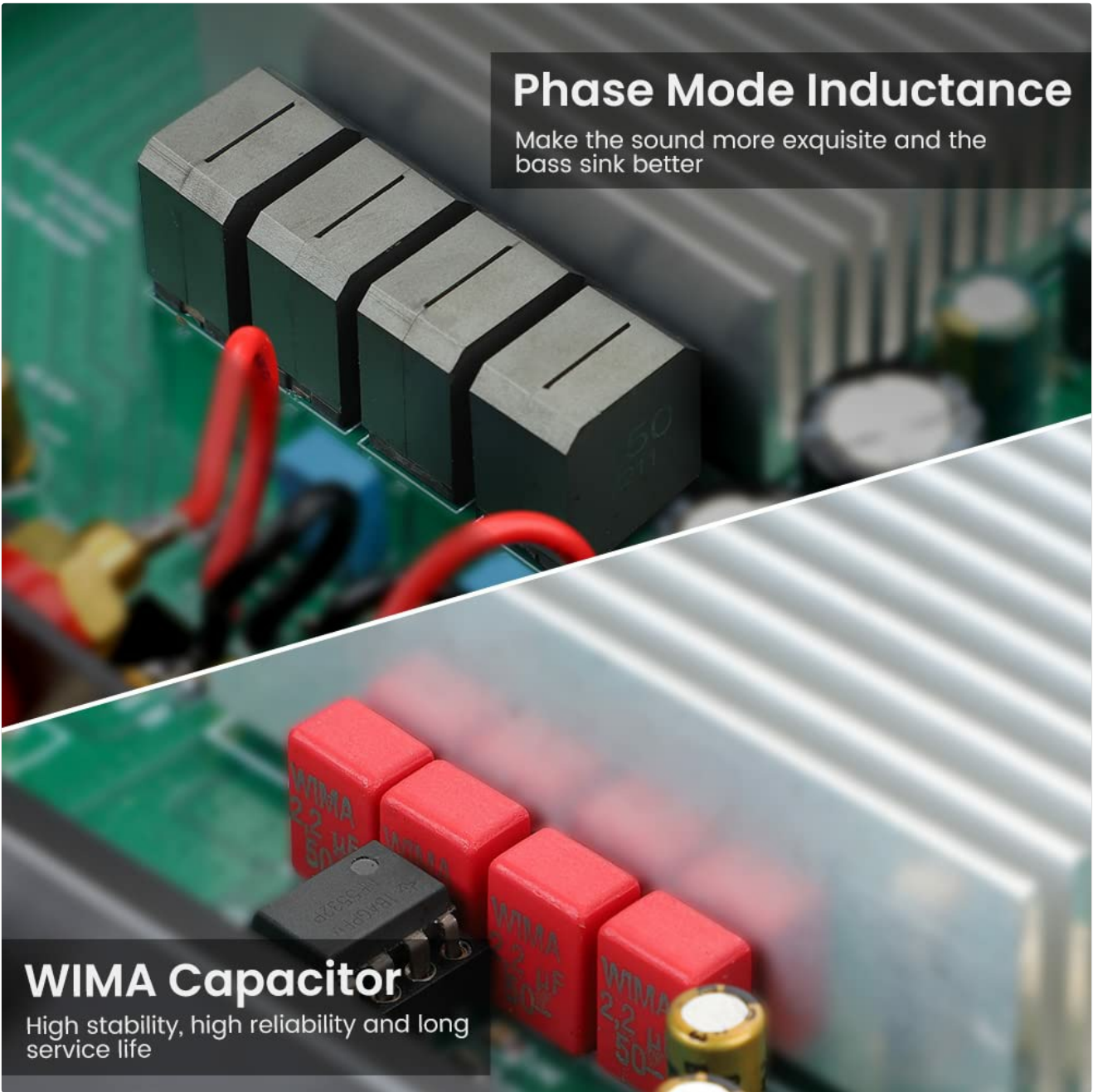


Image: AIYIMA A06 TDA7498E and NE5532 Chips. This image shows the internal TDA7498E amplifier chip and the replaceable NE5532 operational amplifier chip, highlighting the modular design for sound customization.

The AIYIMA A06 allows for the replacement of the NE5532 op-amp chip for sound customization. This procedure is recommended for advanced users only. Ensure the amplifier is powered off and unplugged before attempting any internal modifications. Refer to specialized guides for compatible op-amp chips and replacement procedures.

9. MAINTENANCE

- Clean the amplifier with a soft, dry cloth. Do not use liquid cleaners or aerosols.
- Ensure proper ventilation around the amplifier to prevent overheating.
- Store the device in a cool, dry place when not in use for extended periods.

10. TROUBLESHOOTING

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
No power	Power adapter not connected or faulty; power switch off.	Check power connections; ensure power switch is ON; try a different power outlet.
No sound output	Incorrect input selected; volume too low; speaker cables loose or incorrectly connected; faulty audio source.	Select correct input (RCA/AUX); increase volume; check speaker cable connections and polarity; test with a different audio source.
Distorted sound	Volume too high; input signal too strong; faulty cables or speakers.	Reduce volume; check input signal level; inspect cables and speakers for damage.
Humming or buzzing noise	Ground loop issue; interference from other electronic devices; faulty cables.	Ensure all components are on the same power circuit; move amplifier away from other electronics; try different audio cables.

11. WARRANTY INFORMATION

AIYIMA products are covered by a standard manufacturer's warranty against defects in materials and workmanship. The specific duration and terms of the warranty may vary by region and retailer. Please retain your proof of purchase for warranty claims. For detailed warranty information, refer to the warranty card included with your product or contact AIYIMA customer support.

12. CUSTOMER SUPPORT

If you encounter any issues or have questions regarding your AIYIMA A06 amplifier that are not covered in this manual, please contact AIYIMA customer support. You can typically find contact information on the official AIYIMA website or through your retailer.

Online Resources: For additional information, FAQs, and product updates, visit the official AIYIMA website.