xDuoo TA-10R

xDuoo TA-10R Tube Headphone Amplifier User Manual

Model: TA-10R

Introduction

The xDuoo TA-10R is a high-performance tube headphone amplifier and DAC (Digital-to-Analog Converter) designed to deliver exceptional audio quality. It features an AK4493EQ DAC chip, XMOS USB input, and a 12AU7 tube for a rich, warm sound signature. This manual provides essential information for the proper setup, operation, and maintenance of your TA-10R amplifier. Key features include a dual clock system for reduced signal jitter, a robust all-aluminum alloy CNC shell for anti-interference, and compatibility with a wide range of headphone impedances (8Ω to 600Ω).

Safety Information

- Ensure the power supply voltage matches the requirements specified on the unit.
- Do not expose the unit to rain, moisture, or extreme temperatures.
- Avoid placing the unit near heat sources or in direct sunlight.
- Do not open the casing or attempt to service the unit yourself. Refer all servicing to qualified personnel.
- Handle the vacuum tube with care as it can become hot during operation.
- Keep the unit away from strong magnetic fields.

Package Contents

Verify that all items are present in the package:

- xDuoo TA-10R Amplifier (x1)
- Power Cable (x1)
- User Manual (x1)
- Driver DAC (x1)

Product Overview

Front Panel



Figure 1: Front Panel Layout

The front panel features the visible 12AU7 vacuum tube, a digital display for input and volume level, a 4-pin XLR balanced headphone output, a 6.35mm single-ended headphone output, and a multi-function knob for volume control and input selection.

Rear Panel



Figure 2: Rear Panel Layout

The rear panel provides various input and output options. These include USB input, Coaxial input, Optical input, RCA Line In, and RCA Line Out. The main power switch and AC power input are also located on the rear panel.

Setup

1. **Tube Installation:** Carefully insert the 12AU7 vacuum tube into its socket on the top panel. Ensure it is seated firmly. The detachable aluminum alloy tube guardrail can be installed around the tube for protection.
2. **Power Connection:** Connect the provided power cable to the AC power input on the rear panel and then to a suitable wall outlet. Ensure the power switch is in the OFF position before connecting.
3. **Source Connection:**
    - **USB Input:** Connect a USB cable from your computer (WIN7, WIN8, WIN10, LINUX, MAC OSX, ANDROID, IOS) to the USB input on the rear panel. For Windows systems, driver installation may be required (refer to the included driver DAC).
    - **Optical/Coaxial Input:** Connect an optical or coaxial cable from your digital audio source (e.g., CD player, TV) to the corresponding input on the rear panel.
    - **RCA Line In:** Connect an analog audio source (e.g., preamplifier, turntable with phono stage) using RCA cables to the Line In ports.

4. **Headphone Connection:** Connect your headphones to either the 4-pin XLR balanced output or the 6.35mm single-ended output on the front panel. Ensure the headphone impedance is within the supported range of 8Ω to 600Ω.
5. **Line Out (Optional):** If you wish to use the TA-10R as a DAC/preamplifier for another amplifier, connect RCA cables from the Line Out ports to your power amplifier or active speakers.

Operating Instructions

1. **Power On:** Flip the power switch on the rear panel to the ON position. The tube will begin to warm up, and the display will illuminate.
2. **Input Selection:** Rotate the multi-function knob on the front panel to cycle through the available input sources (USB, Optical, Coaxial, Line In). The selected input will be shown on the display.
3. **Volume Adjustment:** Rotate the multi-function knob to adjust the headphone output volume. Start with a low volume level and gradually increase it to a comfortable listening level.
4. **Listening:** Once the input is selected and volume is set, audio will be output through the connected headphones.
5. **Power Off:** Flip the power switch on the rear panel to the OFF position when not in use.

Maintenance

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the amplifier. Do not use liquid cleaners or solvents.
- **Tube Care:** The 12AU7 vacuum tube has a finite lifespan. If you notice a degradation in sound quality or the tube fails, it can be replaced. Ensure the amplifier is powered off and unplugged before attempting to replace the tube. Allow the tube to cool completely before handling.
- **Ventilation:** Ensure adequate ventilation around the amplifier to prevent overheating, especially around the vacuum tube.

Troubleshooting

Problem	Possible Cause	Solution
No power	Power cable not connected; Power switch off; Wall outlet issue	Check power cable connection; Ensure power switch is ON; Test wall outlet with another device.
No sound	Incorrect input selected; Volume too low; Headphones not connected; Source device issue; Driver not installed (for USB on Windows)	Select correct input; Increase volume; Connect headphones properly; Verify source device is playing audio; Install USB driver if using Windows.
Distorted sound	Source audio quality; Volume too high; Faulty cable; Tube issue	Check source audio quality; Reduce volume; Replace audio cables; Consider replacing the 12AU7 tube.
Humming or noise	Ground loop; Interference from other devices; Faulty tube	Ensure proper grounding; Move amplifier away from other electronic devices; Replace the 12AU7 tube.

Specifications

- **Power Supply:** External electricity (AC100-240V)
- **USB Application System:** WIN7, WIN8, WIN10 (driver required); LINUX, MAC OSX (no driver); ANDROID, IOS
- **USB Sample Rate Support:**
  - PCM: 16-24Bit, 44.1KHz-384KHz
  - DSD: DSD64-256

- DXD: 24-32Bit/ 352.8-384KHz

- **Optical Coaxial Input:**
  - PCM: 16-24Bit/44.1-192kHz
  - DSD: 64 (DOP)
- **Output Power:**
  - Phone: 2000mW (32Ω@1KHz)
  - XLR: 2000mW (32Ω@1KHz)
- **Gain:** +18 dB
- **Distortion:** ≤0.01% (1KHz)
- **Crosstalk:** 118dB
- **Impedance:** 8Ω ~ 600Ω
- **Size:** 230x120x105MM
- **Weight:** 1.5KG

Warranty and Support

For warranty information and technical support, please refer to the documentation provided with your purchase or contact the manufacturer directly. Keep your proof of purchase for warranty claims.

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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.

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