

## xDuoo TA-66

# xDuoo TA-66 Tube Headphone Amplifier User Manual

Model: TA-66

## 1. INTRODUCTION

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The xDuoo TA-66 is a high-performance tube headphone amplifier designed to enhance your audio experience. It incorporates both 6N2 and 6N5P tubes for a rich and detailed sound. This manual provides essential information for setting up, operating, and maintaining your device.

## 2. KEY FEATURES

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- **6N2 Tube for Pre-Amplifier:** Utilizes a 6N2 tube for the pre-amplification stage, contributing to a sweet and exquisite vocal reproduction.
- **6N5P Tube for Buffer:** Employs a 6N5P tube for buffering, which softens and enriches the sound. Note: Tubes may show minor rust on holders due to manufacturing, which does not affect performance.
- **Step-by-Step Potentiometer:** Features a precise step-by-step potentiometer to eliminate low volume imbalance issues.
- **Pre-amplifier Line Out:** Includes a line output that passes through the tube and is volume-controlled, allowing it to function as a pre-amplifier for other audio amplifiers or active speakers, thereby improving overall sound quality.
- **Professional Resistances and Capacitors:** Equipped with custom xDuoo metal polyester film capacitors for tube output coupling.
- **Point-to-Point Wiring:** Utilizes point-to-point soldering with copper wiring for the tube circuit, minimizing excessive leads and wiring distances. This design ensures cleanliness, reduces interference, and provides mutual shielding, optimizing the circuit for authentic vacuum tube sound characteristics.



Image: The 6N2 tube, responsible for the pre-amplification stage, glowing with a blue hue.



Image: The 6N5P buffer tube, glowing orange, with a visual representation of sound enhancement before and after processing.



Image: The red step-by-step volume potentiometer, designed for precise volume control.



Image: Internal components of the amplifier, highlighting the professional resistances and capacitors.



Image: Detailed view of the point-to-point wiring technique used in the amplifier for enhanced sound authenticity.

### 3. PACKAGE CONTENTS

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Upon opening the package, please ensure all the following items are present:

- xDuo TA-66 Tube Headphone Amplifier Unit
- 6N5P Tube (main buffer tube)
- 6N2 Tube (pre-amplifier tube)
- AC Power Cable
- 6.35mm to 3.5mm Headphone Adapter

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Video: An unboxing demonstration of the xDuo TA-66, showing the amplifier unit, tubes, and accessories included in the package.

### 4. SETUP INSTRUCTIONS

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Follow these steps to set up your xDuo TA-66 amplifier:

1. **Install Tubes:** Carefully insert the 6N5P tube into its designated larger socket and the 6N2 tube into its smaller socket on the amplifier. Ensure they are seated firmly.
2. **Connect Power:** Connect the AC power cable to the amplifier's AC IN port and then to a suitable power outlet (AC100-240V).
3. **Audio Input:** Connect your audio source (e.g., DAC, CD player) to the AUX IN RCA ports on the rear panel using appropriate RCA cables.
4. **Audio Output (Optional):** If using the TA-66 as a pre-amplifier, connect the AUX OUT RCA ports to your power amplifier or active speakers.
5. **Headphone Connection:** Plug your headphones into the 6.35mm headphone output jack on the front panel. Use the provided 6.35mm to 3.5mm adapter if your headphones have a 3.5mm jack.
6. **Power On:** Flip the power switch on the rear panel to the 'ON' position. The tubes will begin to warm up.

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Video: A demonstration of installing the tubes, connecting power, and setting up audio input/output for the xDuo TA-66 amplifier.



Image: Front and rear panel overview of the xDuo TA-66, detailing connection points and controls.

## 5. OPERATING INSTRUCTIONS

Once set up, operating the TA-66 is straightforward:

1. **Warm-up Time:** Allow the tubes approximately 15-30 seconds to warm up after powering on for optimal sound performance.
2. **Adjust Volume:** Use the red step-by-step volume knob on the front panel to adjust the output volume for both the headphone out and the AUX OUT (if used as a pre-amplifier). The knob offers 24 distinct levels for precise control.
3. **Enjoy Audio:** Play your desired audio from the connected source.

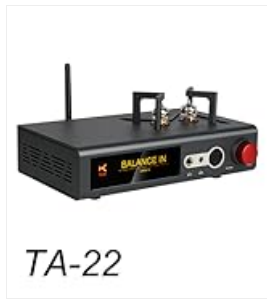


Image: Demonstrating the adjustment of the step-by-step volume knob.

## 6. SPECIFICATIONS

Parameter	Value
Power Source	AC 110V (100-120V) / 220V (220-240V)
Output Power	200mW (300Ω Load)
Frequency Range	10Hz-30KHz (±1dB)
Gain	+18dB
THD+N	0.08% (1KHz@300Ω Load)
S/N	107dB
Suitable Earphone Impedance	60Ω ~ 600Ω
Size (L*W*H)	29.0 * 15.3 * 18.4 cm
Weight	5.0 kg

## 7. MAINTENANCE

To ensure the longevity and optimal performance of your TA-66 amplifier, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the amplifier. Avoid using liquid cleaners or solvents, as they may damage the finish or internal components.
- **Tube Handling:** When handling the tubes, always wear gloves to prevent oil from your skin from affecting the glass. Ensure the amplifier is powered off and cooled down before installing or removing tubes.
- **Ventilation:** Ensure the amplifier is placed in a well-ventilated area to prevent overheating. Do not block the ventilation holes.
- **Storage:** Store the amplifier in a cool, dry place away from direct sunlight and extreme temperatures when not in use for extended periods.

## 8. TROUBLESHOOTING

If you encounter any issues with your xDuo TA-66, please refer to the following common troubleshooting steps:

- **No Power:**
  - Check if the power cable is securely connected to both the amplifier and the power outlet.
  - Ensure the power switch on the rear panel is in the 'ON' position.
  - Verify the power outlet is functional.

- Check the fuse (250V/10A) on the rear panel. If blown, replace it with a fuse of the same rating.

- **No Sound:**

- Confirm that your audio source is playing and connected correctly to the AUX IN ports.
- Ensure headphones are properly plugged into the headphone output.
- Increase the volume using the step-by-step volume knob.
- Allow sufficient warm-up time for the tubes.
- If using AUX OUT, ensure the connected power amplifier or active speakers are powered on and correctly configured.

- **Distorted Sound:**

- Reduce the volume from both the source and the amplifier.
- Check all cable connections for looseness or damage.
- Ensure the tubes are correctly seated in their sockets.
- Verify that your headphones' impedance is within the recommended range (60Ω ~ 600Ω).

## 9. SAFETY INFORMATION

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Please read and adhere to the following safety precautions:

- Do not expose the amplifier to water, moisture, or extreme temperatures.
- Avoid placing heavy objects on top of the amplifier.
- Do not attempt to open or repair the unit yourself. Refer all servicing to qualified personnel.
- Keep the amplifier away from children and pets.
- Always disconnect the power cable before cleaning or moving the unit.
- The tubes can become hot during operation. Avoid touching them directly.

## 10. WARRANTY AND SUPPORT

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The xDuo TA-66 Tube Headphone Amplifier comes with a standard manufacturer's warranty. For specific warranty terms, duration, and conditions, please refer to the warranty card included in your package or contact the seller/manufacturer directly.

For technical support, troubleshooting assistance beyond this manual, or service inquiries, please contact your point of purchase or visit the official xDuo website for customer service contact information.