Douk Audio U10

Douk Audio U10 Mini Vacuum Tube Headphone Amplifier User Manual

MODEL: U10

1. Introduction

This manual provides detailed instructions for the proper setup, operation, and maintenance of your Douk Audio U10 Mini Vacuum Tube Headphone Amplifier. Please read this manual thoroughly before using the device to ensure optimal performance and longevity.

The Douk Audio U10 is a versatile mini vacuum tube amplifier designed to enhance your audio experience. It can function as a headphone amplifier for a wide range of headphones and also as a stereo preamplifier for home speakers.

2. Safety Information

- **Power Supply:** Use only a high-quality DC 5V/≥2A power adapter. Using an inadequate power supply may result in poor performance or damage to the unit.
- **Heat:** The vacuum tubes generate heat during operation. Avoid touching them directly and ensure adequate ventilation around the unit.
- **Environment:** Do not expose the unit to water, moisture, direct sunlight, or extreme temperatures.
- **Handling:** Handle the vacuum tubes with care. They are fragile.
- **Connections:** Ensure all connections are secure before powering on the device. Do not connect both 3.5mm and RCA inputs simultaneously to avoid mixed audio signals.

3. Package Contents

Verify that all items are present in the package:

- 1 × U10 Headphone Amplifier
- 2 × 6A2 Vacuum Tubes
- 1 × Acrylic Board
- 1 × USB to DC Cable
- 1 × User Manual (this document)



Image: The Douk Audio U10 amplifier, two 6A2 vacuum tubes, an acrylic board, a USB to DC power cable, and a user manual are shown as the complete package contents.

4. Product Overview

The Douk Audio U10 features a compact design with essential controls and connections for audio amplification.

Front Panel

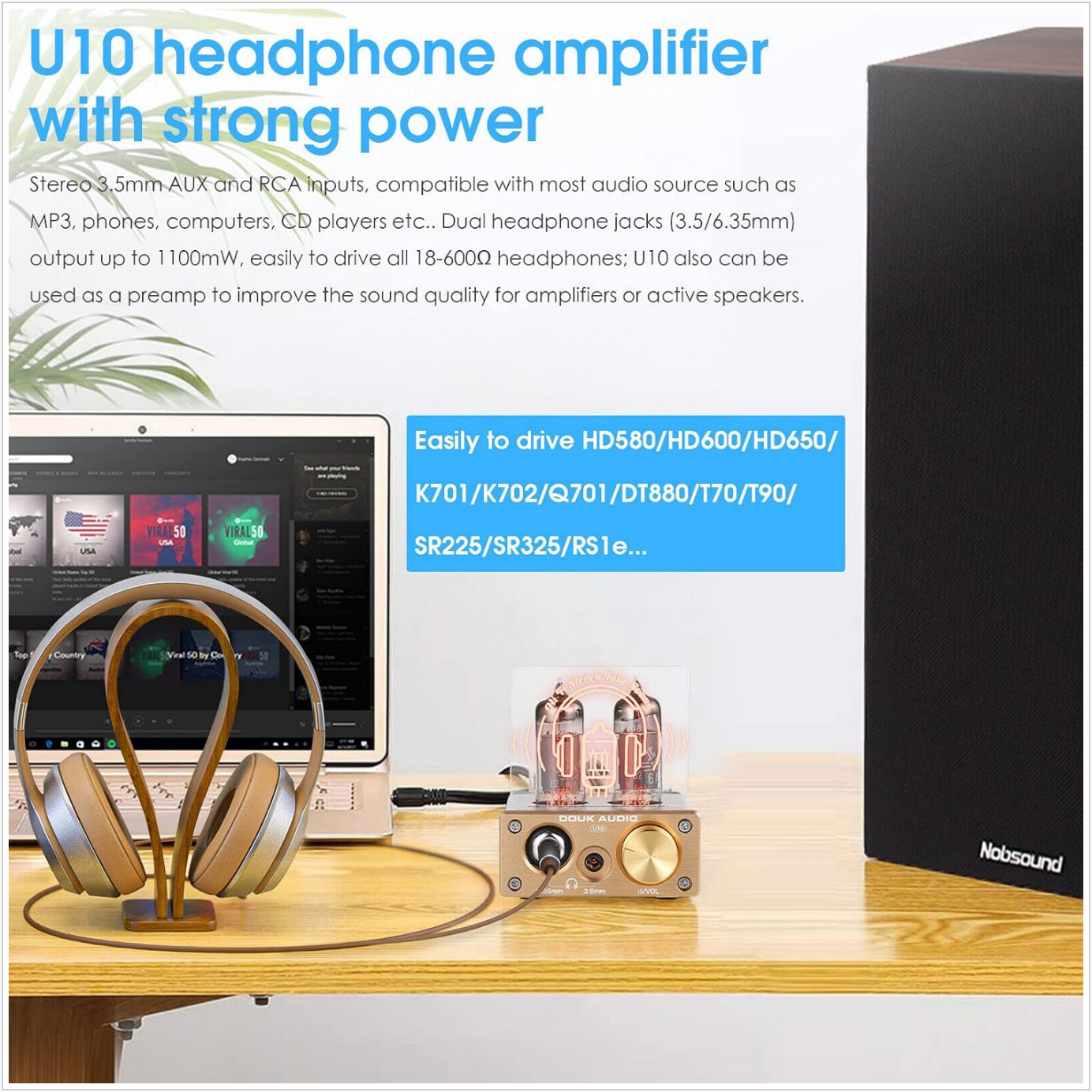


Image: Close-up of the Douk Audio U10 front panel, showing the 6.35mm headphone output, 3.5mm headphone output, and the volume/power knob.

- **6.35mm Headphone Output:** For headphones with a 6.35mm (1/4 inch) jack.
- **3.5mm Headphone Output:** For headphones with a 3.5mm (1/8 inch) jack.
- **Volume** / **Power Knob:** Rotates to adjust volume. Press to power the unit on or off.

Rear Panel



Image: The rear panel of the Douk Audio U10, displaying the DC 5V power input, RCA stereo input (red for right, white for left), and 3.5mm AUX input.

- **DC 5V IN:** Power input port. Requires a DC 5V, 2A or greater power adapter.
- **RCA Input (L/R):** Stereo audio input for connecting sources like CD players or DACs.
- **3.5mm AUX Input:** Stereo audio input for connecting sources like smartphones or computers.

Top Panel



Image: Top view of the Douk Audio U10, highlighting the two glowing 6A2 vacuum tubes inserted into their sockets.

- **6A2 Vacuum Tubes:** Two pluggable 6A2 tubes provide the amplifier's characteristic warm sound.

5. Setup Instructions

Follow these steps to set up your Douk Audio U10 amplifier:

1. **Install Vacuum Tubes:** Carefully insert the two 6A2 vacuum tubes into their respective sockets on the top of the amplifier. Ensure they are seated firmly but do not force them.
2. **Connect Audio Source:** Choose one of the following input methods:
    - **RCA Input:** Connect your audio source (e.g., CD player, DAC) to the RCA L/R inputs on the rear panel using an RCA cable.
    - **3.5mm AUX Input:** Connect your audio source (e.g., smartphone, computer) to the 3.5mm AUX input on the rear panel using a 3.5mm audio cable.

    Note: Do not connect both RCA and 3.5mm inputs simultaneously to avoid audio interference.

3. **Connect Headphones or Speakers:**
    - **Headphones:** Plug your headphones into either the 6.35mm or 3.5mm jack on the front panel.
    - **Preamplifier Function:** If using as a preamplifier, connect the 3.5mm output on the front panel to the input of your power amplifier or active speakers.
4. **Connect Power:** Connect the provided USB to DC cable to the DC 5V IN port on the rear panel. Plug the USB end into a reliable DC 5V/≥2A power adapter (not included).

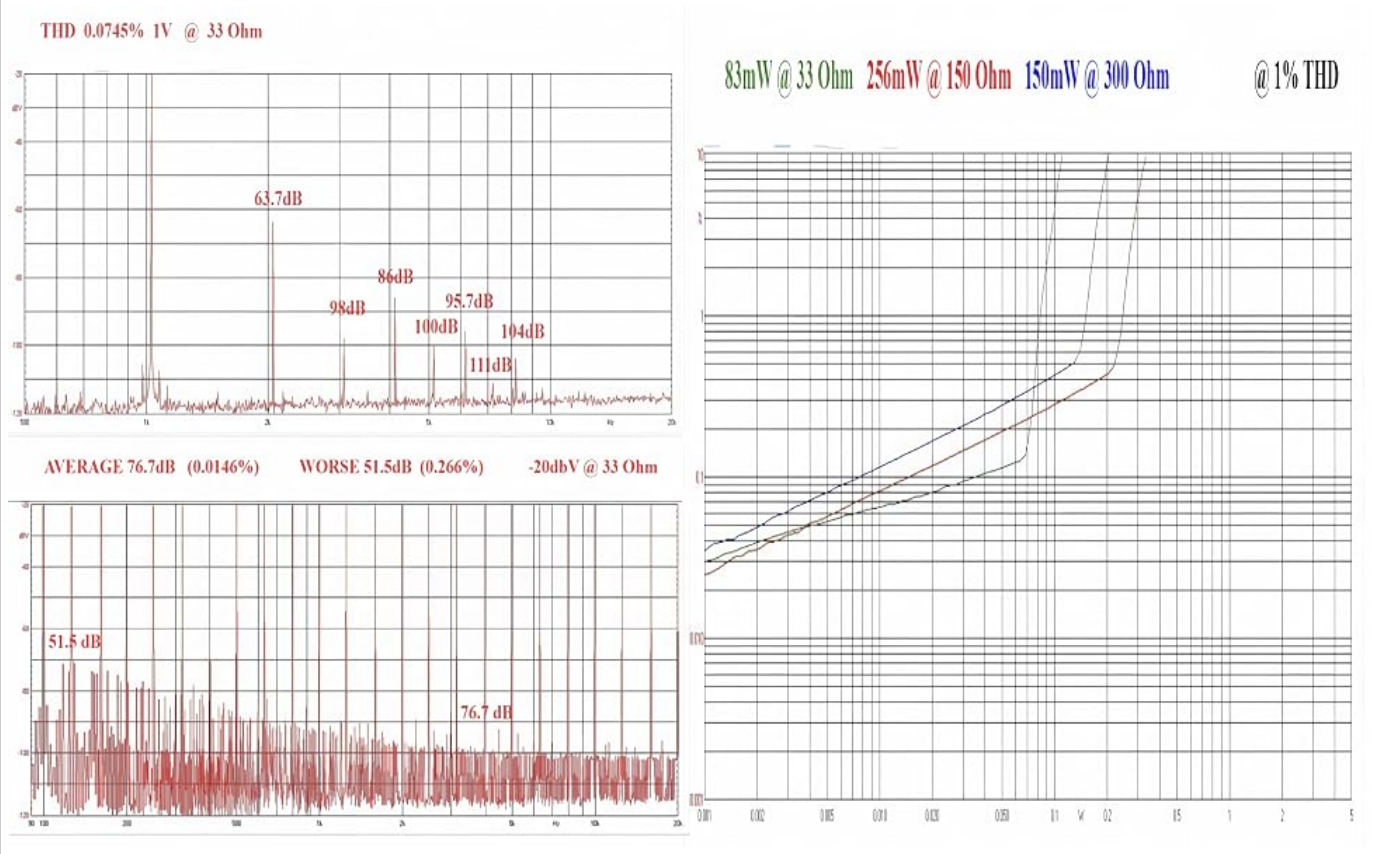


Image: A diagram illustrating various connection options for the Douk Audio U10, including connecting to a tablet, smartphone, CD player, TV, laptop, or MP3 player via RCA or 3.5mm AUX input, and outputting to headphones, an amplifier, or active speakers via 6.35mm or 3.5mm jacks. The diagram also emphasizes the DC 5V IN (≥2A) power requirement.

6. Operating Instructions

1. **Power On:** Press the Volume / Power knob to turn on the amplifier. The tubes will begin to glow.
2. **Warm-up Time:** Allow approximately 15-20 minutes for the vacuum tubes to warm up and stabilize for optimal sound quality.
3. **Adjust Volume:** Rotate the Volume / Power knob clockwise to increase volume and counter-clockwise to decrease it. Start with a low volume and gradually increase to a comfortable listening level.
4. **Power Off:** Press the Volume / Power knob again to turn off the amplifier.

Advanced Customization (Tube Rolling / Op-Amp Upgrading)

The U10 features a pluggable design for its 6A2 tubes and operational amplifiers (op-amps), allowing users to customize the sound signature. This is an advanced feature for experienced users. Refer to specialized audio forums or resources for compatible tube and op-amp types and replacement procedures. Always ensure the unit is powered off and disconnected from the power supply before attempting any component changes.

7. Maintenance

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the unit. Do not use liquid cleaners or solvents.
- **Tube Care:** The vacuum tubes have a finite lifespan. If you notice a degradation in sound quality or if a tube stops glowing, it may need replacement. Ensure the unit is off and cooled down before replacing tubes.
- **Storage:** When not in use for extended periods, store the amplifier in a cool, dry place, away from dust and direct sunlight.

8. Troubleshooting

Problem	Possible Cause	Solution
No sound output	• Incorrect input/output connection • Low volume setting • Faulty audio cable • Tubes not properly seated or faulty • Inadequate power supply	• Verify all audio cables are correctly connected to the chosen input and output. • Increase the volume on the U10 and your audio source. • Test with a different audio cable. • Ensure tubes are fully inserted. Consider replacing tubes if they are old or damaged. • Ensure power adapter is DC 5V/≥2A.
Humming or static noise	• Poor quality power supply • Ground loop issue • Interference from other electronics • Loose tube connection	• Use a high-quality, stable DC 5V/≥2A power adapter. Avoid using noisy USB ports from computers. • Try connecting the amplifier to a different power outlet. • Move the amplifier away from other electronic devices. • Gently reseat the vacuum tubes.
Tubes not glowing	• Unit not powered on • Tubes not properly seated • Faulty tubes • Power supply issue	• Press the Volume / Power knob to turn on the unit. • Ensure tubes are fully inserted into their sockets. • Replace tubes if they are confirmed faulty. • Verify the power adapter is connected and functioning.
Distorted sound	• Volume too high • Input signal too strong • Faulty tubes • Improper impedance match with headphones	• Reduce the volume on the U10 and your audio source. • Ensure the input signal level is appropriate. • Consider replacing tubes. • The U10 drives headphones from 18-600Ω. Ensure your headphones are within this range.

9. Specifications

Feature	Specification
Model	U10
Product Dimensions	3.74 x 2.72 x 1.18 inches (95 x 69 x 30 mm)

Feature	Specification
Item Weight	7 ounces (200g)
Input Voltage	DC 5V (≥2A recommended)
Headphone Output Power	Up to 1100mW
Headphone Impedance Range	18-600Ω
Inputs	RCA Stereo, 3.5mm AUX
Outputs	6.35mm Headphone, 3.5mm Headphone (also functions as Preamp Out)
Tubes	2 × 6A2 Vacuum Tubes (pluggable)



Image: Technical graphs displaying Total Harmonic Distortion (THD) at 0.0745% 1V @ 33 Ohm and output power measurements at various impedance levels (33 Ohm, 150 Ohm, 300 Ohm).

10. Warranty and Support

Douk Audio products are designed for reliability and performance. For warranty information, please refer to the purchase documentation or contact your retailer. For technical support or inquiries, please visit the official Douk Audio website or contact their customer service department.

Manufacturer: Douk Audio

Official Website: www.doukaudio.com

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Question

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.

Submit question