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Douk Audio A5

Douk Audio A5 TPA3255 Stereo Amplifier Instruction Manual

Model: A5

Brand: Douk Audio

1. INTRODUCTION

This manual provides detailed instructions for the proper setup, operation, and maintenance of your Douk Audio A5 TPA3255 Stereo Amplifier. Please read this manual thoroughly before using the product to ensure optimal performance and safety. The Douk Audio A5 is a high-fidelity Class D power amplifier designed for home stereo and theater audio systems, offering powerful and clear sound reproduction for passive bookshelf or tower speakers.

2. SAFETY INFORMATION

- Power Supply:** Use only the provided power adapter or one with identical specifications (DC 24V-48V). Incorrect voltage can damage the device.
- Ventilation:** Ensure adequate ventilation around the amplifier. Do not block ventilation openings. Avoid placing the unit in enclosed spaces or on soft surfaces that may impede airflow.
- Moisture:** Keep the amplifier away from water, moisture, and high humidity environments. Do not operate with wet hands.
- Heat:** The casing may become warm during operation, which is normal. Avoid placing the unit near heat sources or in direct sunlight.
- Handling:** Handle the unit with care. Avoid dropping or subjecting it to strong impacts.
- Servicing:** Do not attempt to open or repair the unit yourself, except for specified user-serviceable parts like op-amps. Refer all servicing to qualified personnel.

3. WHAT'S IN THE Box

Upon unpacking, please verify that all the following items are included:

- 1 x Douk Audio A5 Amplifier
- 1 x DC 32V/5A Power Adapter
- 1 x User Manual (this document)

4. PRODUCT OVERVIEW

4.1 Front Panel Controls



Image: Front panel of the Douk Audio A5 amplifier.

The front panel features two main control knobs and a power button. The left knob controls the High-Pass Filter (HPF) frequency, ranging from 30Hz to 200Hz, with an 'off' position. The right knob serves as both the power on/off switch and the volume control.

4.2 Rear Panel Connections

Customizable Sound

No need to remove screws | Plug-and-Play Op-Amp Rolling

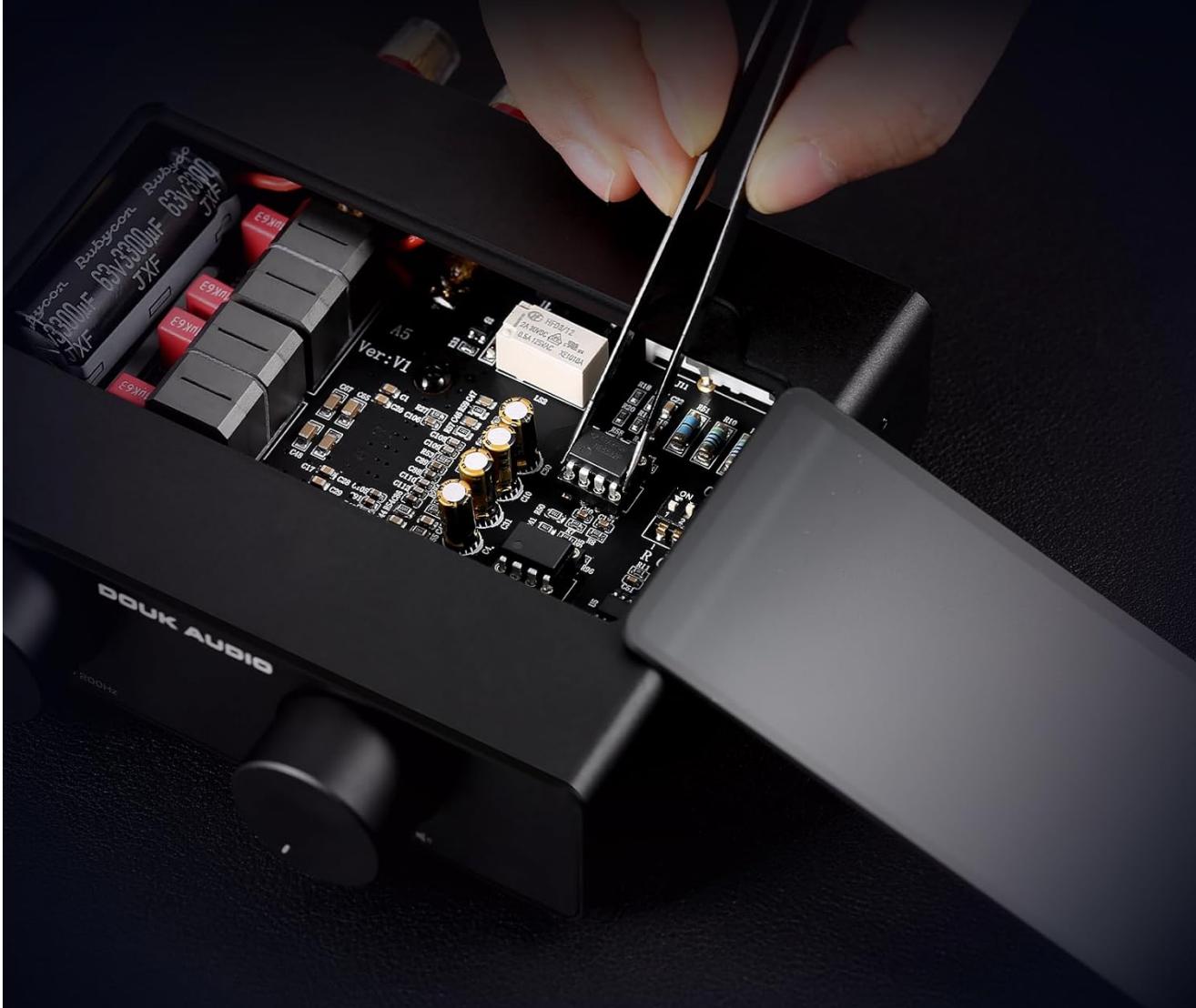


Image: Rear panel connections of the Douk Audio A5 amplifier.

The rear panel provides all necessary input and output connections:

- **AUDIO IN (RCA):** Stereo RCA input for connecting audio sources like CD players, DACs, or preamplifiers.
- **AUX OUT (3.5mm):** 3.5mm auxiliary output, typically used for connecting to an active subwoofer.
- **SPK OUT (Speaker Terminals):** Gold-plated binding posts for connecting passive speakers. Ensure correct polarity (red for positive, black for negative).
- **DC 24V-48V:** Power input for the DC power adapter.

4.3 Internal Components and Op-Amp Rolling

Adjustable High-Pass Filter

30Hz-200Hz | Optimize Mid-High Frequencies



Image: Internal view of the Douk Audio A5, highlighting the op-amp sockets.

The Douk Audio A5 features a transparent top panel, allowing visibility of the internal circuitry. This design also facilitates easy access to the op-amp sockets for users who wish to customize the sound profile by 'op-amp rolling'.

4.4 LED Ambiance and PFFB Technology

Image: Internal LED lighting and color selection DIP switches.

The amplifier includes adjustable internal LED lighting with multiple color options, controlled by DIP switches located on the circuit board. This allows for aesthetic customization. The unit also incorporates Post-Filter Feedback (PFFB) technology and a 4-layer immersion gold PCB, which contribute to reduced distortion, improved frequency response, and efficient heat management.

4.5 Heat Dissipation



Image: Heat dissipation pathways of the amplifier.

The amplifier's design includes advanced full-body heat dissipation to ensure stable performance even during prolonged high-power output. It is normal for the casing to become warm during operation.

5. SETUP INSTRUCTIONS

Follow these steps to set up your Douk Audio A5 amplifier:

- 1. Connect Speakers:** Connect your passive speakers to the 'SPK OUT' binding posts on the rear panel. Ensure that the positive (+) terminal of the amplifier connects to the positive terminal of the speaker, and the negative (-) terminal connects to the negative terminal. Tighten the binding posts securely. The amplifier supports speakers with an impedance of 4Ω to 8Ω.
- 2. Connect Audio Source:** Connect your audio source (e.g., CD player, DAC, computer) to the 'AUDIO IN' RCA inputs on the rear panel using appropriate RCA cables.
- 3. (Optional) Connect Subwoofer:** If using an active subwoofer, connect its input to the 'AUX OUT' 3.5mm jack on the amplifier using a 3.5mm audio cable.
- 4. Connect Power:** Connect the provided DC 32V/5A power adapter to the 'DC 24V-48V' input on the rear panel. Then, plug the power adapter into a wall outlet.
- 5. Power On:** Turn the right knob on the front panel clockwise to power on the amplifier. The internal LEDs will illuminate.

Setup Demonstration Video

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Video: A demonstration of the Douk Audio A5 amplifier's features and setup, including internal component access and LED lighting.

6. OPERATING INSTRUCTIONS

6.1 Basic Operation

- Power On/Off:** Rotate the right knob clockwise to turn on the amplifier. Rotate it counter-clockwise until it clicks to turn off.
- Volume Control:** Adjust the right knob clockwise to increase volume and counter-clockwise to decrease volume.

6.2 High-Pass Filter (HPF) Adjustment



Image: High-Pass Filter control and its effect on frequency response.

The left knob controls the High-Pass Filter. This feature allows you to cut off low frequencies from your main speakers, which is particularly useful when using an active subwoofer. By filtering out low frequencies from your main speakers, you can improve their clarity and allow the subwoofer to handle the bass more effectively.

- Rotate the left knob to select a cutoff frequency between 30Hz and 200Hz.
- Set the knob to 'off' to bypass the HPF and allow full-range audio to your main speakers.

6.3 Op-Amp Replacement (Op-Amp Rolling)

PFFB Technology + Gold PCB

Low Distortion | Stable Signal | Efficient Heat Dissipation

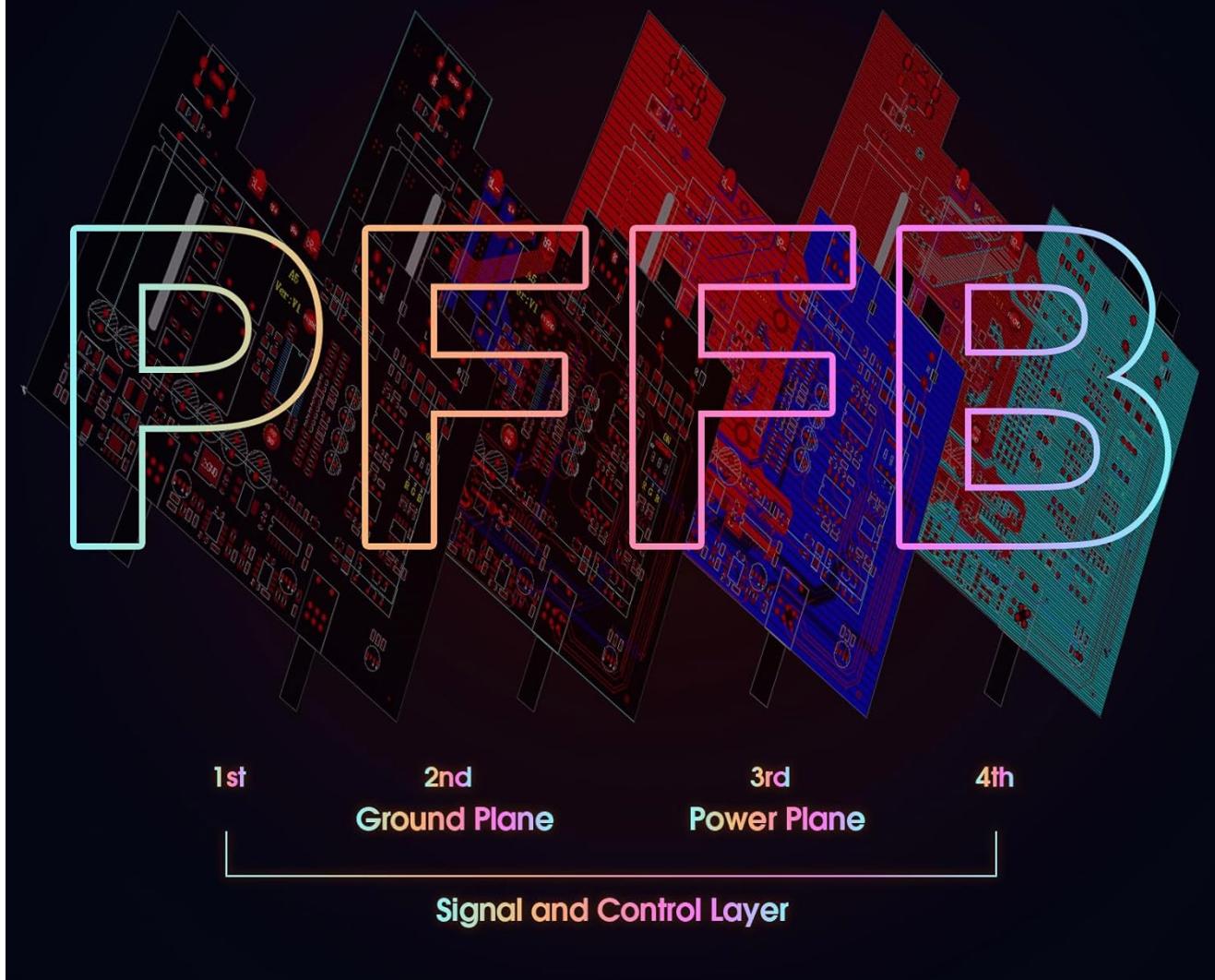


Image: Demonstrating op-amp replacement using tweezers.

The Douk Audio A5 allows for easy replacement of operational amplifiers (op-amps) to customize the amplifier's sound characteristics. This process is known as 'op-amp rolling'.

- 1. Power Off and Disconnect:** Ensure the amplifier is powered off and disconnected from the power supply.
- 2. Remove Top Panel:** Carefully lift the transparent top panel to access the internal circuit board.
- 3. Remove Existing Op-Amps:** Using a suitable tool (e.g., IC extractor or small flat-head screwdriver), gently pry up the existing op-amp chips from their sockets. Be careful not to bend the pins.
- 4. Insert New Op-Amps:** Align the pins of the new op-amp chips with the sockets. Ensure the orientation (usually indicated by a dot or notch on the chip and socket) is correct. Gently press the op-amps into place until they are fully seated.
- 5. Replace Top Panel:** Carefully place the transparent top panel back onto the amplifier.
- 6. Reconnect Power and Test:** Reconnect the power supply and power on the amplifier to test the new op-amps.

Note: Only replace op-amps with compatible models. Refer to online resources or consult with audio experts if unsure.

6.4 Adjusting LED Colors

The internal LED lighting can be adjusted to various colors using DIP switches on the circuit board. To change the color:

- Power Off and Disconnect:** Ensure the amplifier is powered off and disconnected from the power supply.
- Remove Top Panel:** Carefully lift the transparent top panel.
- Locate DIP Switches:** Identify the small DIP switches on the circuit board, typically labeled 1, 2, 3, and R, G, B.
- Adjust Switches:** Use a small tool (like tweezers or a pen tip) to toggle the switches to achieve your desired color combination. Refer to the diagram on the circuit board or in the image above for specific color settings.
- Replace Top Panel:** Carefully place the transparent top panel back onto the amplifier.
- Reconnect Power:** Reconnect the power supply and power on the amplifier to see the new LED color.

7. MAINTENANCE

- Cleaning:** Use a soft, dry cloth to clean the exterior of the amplifier. Do not use liquid cleaners or abrasive materials.
- Storage:** When not in use for extended periods, store the amplifier in a cool, dry place, away from direct sunlight and extreme temperatures.
- Ventilation:** Regularly check that the ventilation holes are free from dust and debris to prevent overheating.

8. TROUBLESHOOTING

If you encounter any issues with your Douk Audio A5 amplifier, please refer to the following troubleshooting guide:

Problem	Possible Cause	Solution
No power	Power adapter not connected or faulty; power outlet not working.	Ensure the power adapter is securely connected to both the amplifier and a working power outlet. Test the outlet with another device.
No sound output	Incorrect speaker connections; audio source not connected or playing; volume too low; incorrect input selection (if applicable).	Check all speaker and audio source connections for proper seating and polarity. Ensure the audio source is playing and the amplifier volume is turned up.
Distorted sound	Volume too high; faulty cables; incorrect speaker impedance; damaged speakers.	Reduce the volume. Check audio cables for damage and replace if necessary. Ensure your speakers' impedance is compatible (4-8Ω). Test with different speakers if possible.
Intermittent sound	Loose connections; faulty cables; overheating.	Check all connections. Ensure the amplifier has adequate ventilation to prevent overheating.
HPF not working	HPF knob set to 'off'.	Rotate the left HPF knob to a frequency setting (e.g., 30Hz, 80Hz, 200Hz) instead of 'off'.

If the problem persists after trying these solutions, please contact Douk Audio customer support for further assistance.

9. SPECIFICATIONS



Image: Output power table for Douk Audio A5.

Feature	Specification
Model	A5
Brand	Douk Audio
Number of Channels	2
Amplifier Chip	TPA3255
Output Power (32V/5A)	78W+78W (4Ω), 71W+71W (6Ω), 65W+65W (8Ω)
Output Power (36V/6A)	107W+107W (4Ω), 100W+100W (6Ω), 94W+94W (8Ω)
Output Power (48V/5A)	120W+120W (4Ω), 110W+110W (6Ω), 102W+102W (8Ω)
Output Power (48V/10A)	250W+250W (4Ω), 210W+210W (6Ω), 185W+185W (8Ω)
High-Pass Filter (HPF)	Adjustable 30-200Hz
Input Sensitivity	0.775V
Frequency Response	20Hz-20kHz (±0.5dB)
SNR	≥108dB
THD	0.002%
Speaker Impedance	4-8Ω
Audio Input	Stereo RCA
Audio Output	Speaker Terminals, 3.5mm AUX Out
Working Voltage	DC 24V-48V
Dimensions (W*D*H)	102mm x 130mm x 33mm (4.02in x 5.12in x 1.30in)
Net Weight	506g (1.12lb)
Material	Aluminum

10. WARRANTY AND SUPPORT

10.1 Warranty Information

Douk Audio products typically come with a standard manufacturer's warranty. Please refer to the warranty card included with your product or visit the official Douk Audio website for specific warranty terms and conditions. Keep your purchase receipt as proof of purchase for warranty claims.

10.2 Customer Support

For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact Douk Audio customer support. You can usually find contact information on the official Douk Audio website or through the retailer where you purchased the product.

Online Resources:

- Visit the [Douk Audio Store on Amazon](#) for product information and updates.