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› TANCHJIM LUNA Portable USB DAC/Headphone Amplifier Instruction Manual

TANCHJIM LUNA

TANCHJIM LUNA Portable USB DAC/Headphone Amplifier

Instruction Manual

1. INTRODUCTION

Thank you for purchasing the TANCHJIM LUNA Portable USB DAC/Headphone Amplifier. This device is designed to enhance your audio experience by providing high-fidelity sound from various digital sources. This manual will guide you through the setup, operation, and maintenance of your LUNA device.





Image 1: TANCHJIM LUNA Portable USB DAC/Headphone Amplifier (Asano Tenki Limited Edition)

2. PRODUCT OVERVIEW AND KEY FEATURES

The TANCHJIM LUNA is a high-performance portable USB DAC and headphone amplifier, engineered for superior audio reproduction. It integrates advanced technology to deliver a clear, powerful, and detailed sound.

2.1 High-Performance Dual DAC Chip

The LUNA features two CS43198 DAC audio decoding chips, commonly found in flagship-grade audio players. Each left and right channel utilizes an independent operational amplifier chip, resulting in enhanced audio resolution. It boasts a Signal-to-Noise Ratio (SNR) exceeding 132dB, a Signal-to-Noise and Distortion (SINAD) of 118.5dB, and a remarkably low distortion rate of 0.000139%. The device supports high-resolution audio decoding up to 32bit/768kHz and DSD256, ensuring accurate and detailed sound reproduction.

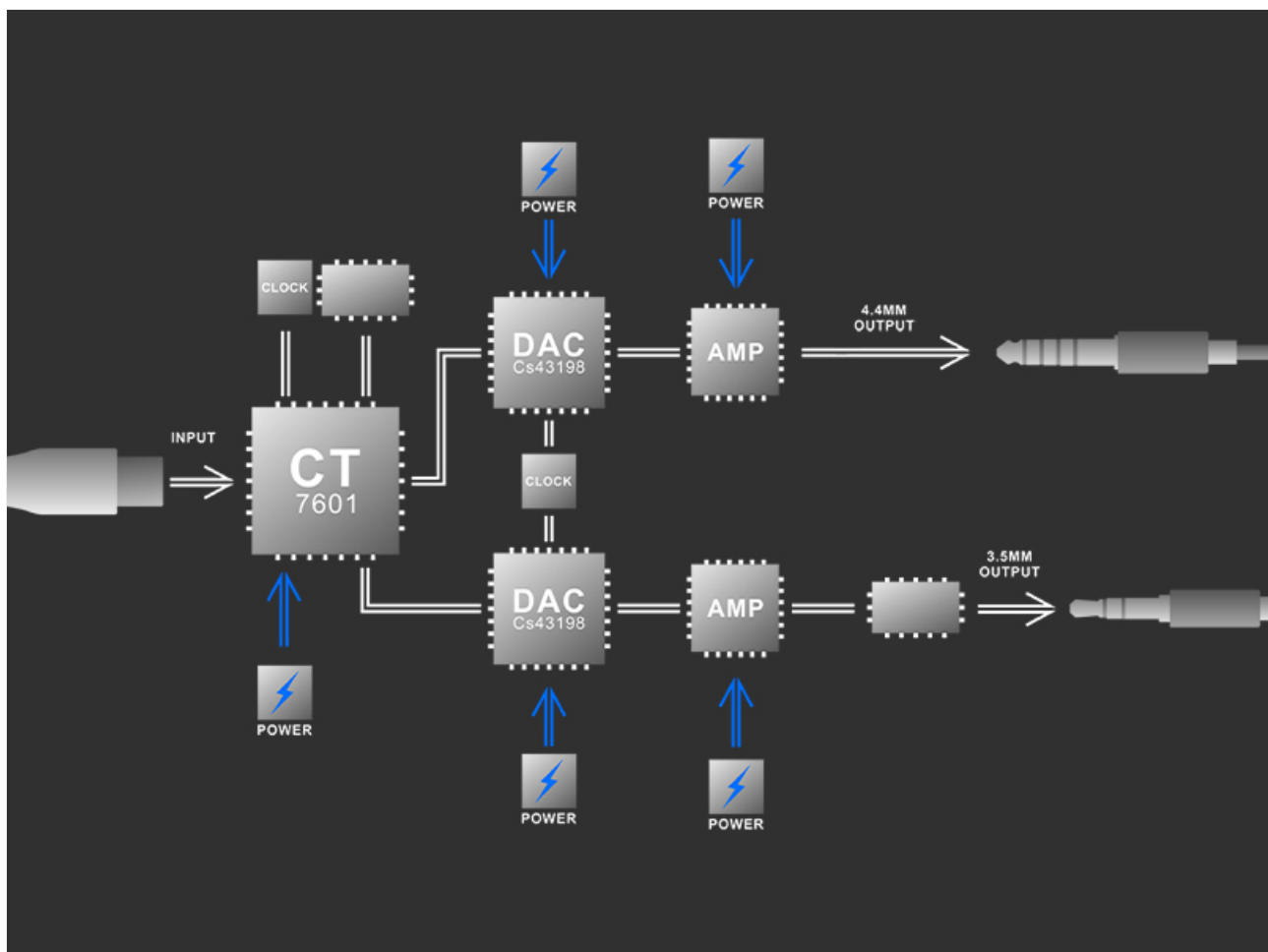


Image 2: Internal Block Diagram showing Dual DAC and Amplifier Stages

2.2 Flagship-Grade Output Performance

Equipped with a high-performance independent power supply structure, the LUNA provides ultra-low noise positive and negative power supplies, along with low-dropout linear regulator technology. This design enables high-precision and high-output current drive, delivering robust and impactful sound comparable to high-end audio players.

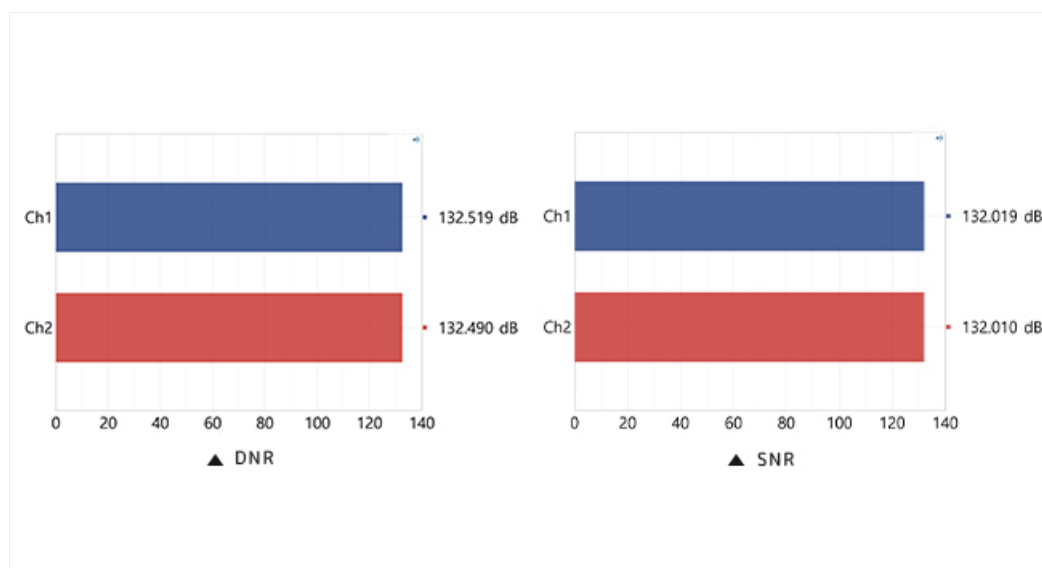


Image 3: Dynamic Range (DNR) and Signal-to-Noise Ratio (SNR) Performance Graphs

2.3 Dual Output Terminals and Wide Compatibility

The LUNA features both 3.5mm single-ended and 4.4mm balanced output terminals, ensuring compatibility with a wide range of earphones and headphones. The included Type-C cable allows for broad compatibility with mainstream devices, including Android

smartphones, iPhones, iPads, PCs, and laptops. The device's chassis is precision-machined from aerospace-grade aluminum alloy in a unibody design, providing exceptional robustness and shock resistance.



Image 4: Precision CNC Machined Aerospace-Grade Aluminum Alloy Casing

2.4 High-Purity Monocrystalline Copper-Silver Plated Cable

The included USB2.0 Type-C cable utilizes monocrystalline copper-silver plated material for its core. Its internal structure features independently shielded digital signal transmission lines and power supply lines with a copper-silver plated layer, arranged in parallel. This design significantly enhances transmission capability and provides superior anti-interference and shielding effects compared to standard unshielded cables.

3. SETUP INSTRUCTIONS

3.1 Package Contents

- TANCHJIM LUNA Portable USB DAC/Headphone Amplifier
- USB Type-C to Type-C Cable
- USB Type-C to USB-A Adapter
- Instruction Manual

3.2 Connecting to a Source Device

1. Identify the USB port on your source device (smartphone, tablet, PC, laptop, gaming console).
2. Connect one end of the provided USB Type-C cable to the LUNA device.
3. Connect the other end of the USB Type-C cable to your source device. If your source device has a USB-A port, use the provided USB Type-C to USB-A adapter.

The LUNA is a plug-and-play device for most operating systems (Android, iOS, Windows, macOS). Drivers are typically installed automatically. For advanced settings and firmware updates, a dedicated application may be required (see Section 4.3).



Image 5: TANCHJIM LUNA connected to a mobile device with earphones

3.3 Connecting Headphones/Earphones

1. Identify the audio connector type of your headphones/earphones (3.5mm single-ended or 4.4mm balanced).
2. Insert the headphone/earphone connector into the corresponding port on the TANCHJIM LUNA. Ensure a secure connection.



Image 6: LUNA with 3.5mm and 4.4mm output jacks

4. OPERATING INSTRUCTIONS

4.1 Volume Control

The LUNA features physical buttons for volume adjustment. Press the '+' button to increase volume and the '-' button to decrease volume. The volume level can be adjusted in 100 steps.

4.2 Gain Settings (Class AB / Class H Modes)

The LUNA offers switchable DAC output stage amplification modes: Class AB and Class H. To switch between these modes, simultaneously press both the '+' and '-' volume buttons. Class AB mode is generally preferred for high-fidelity audio due to its linear characteristics and stability, while Class H mode offers higher power efficiency. Select the mode that best suits your listening preferences and power requirements.

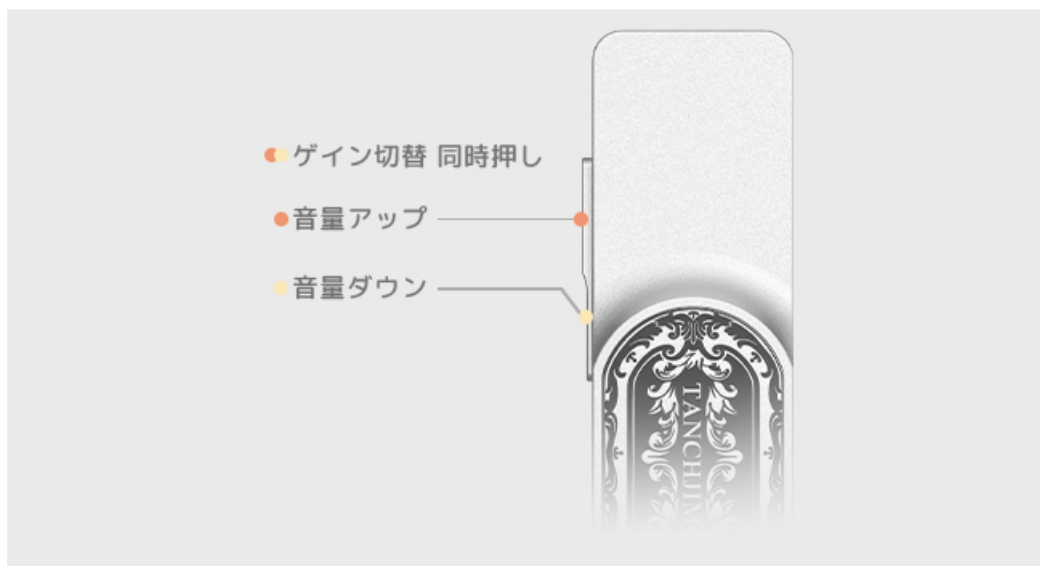


Image 7: Volume and Gain Control Buttons

4.3 TANCHJIM LUNA Companion Application

For advanced configuration and firmware updates, TANCHJIM provides a companion application. This application allows users to adjust settings such as sampling rate, gain level, digital filters, and DAC output mode. The application is available for Android devices and PC. For Android, the application is typically downloaded as an .apk file via a QR code provided with the product, not directly from Google Play. For PC, a firmware update tool is available from the official TANCHJIM website.

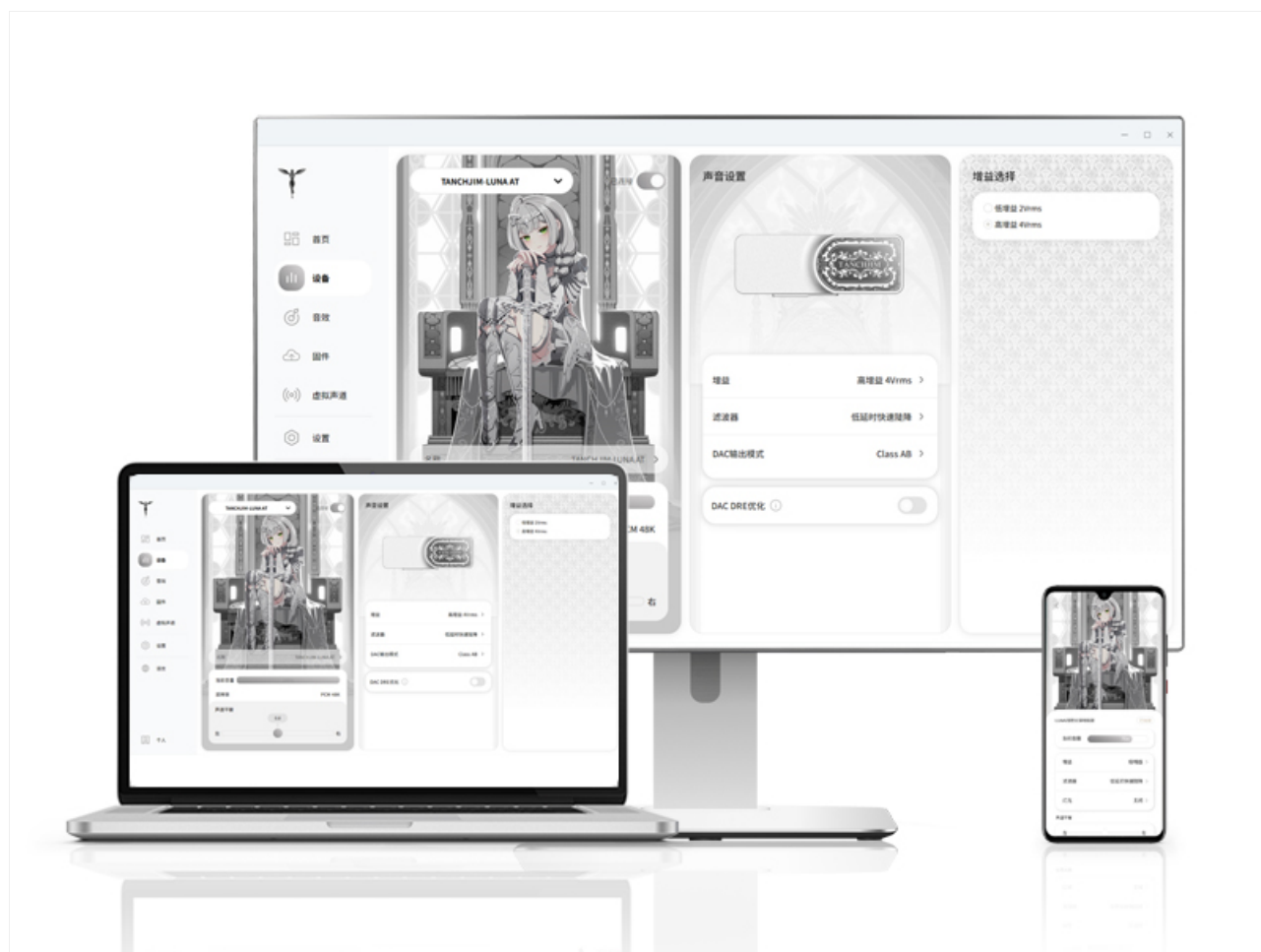


Image 8: TANCHJIM LUNA Companion Application Interface



Image 9: DAC Output Mode Selection in the Companion App

For PC application download links and installation procedures, please refer to the integrated instruction material. This material can be downloaded from the 'Safety and Product Resources' section on the product page by clicking the blue link titled 'Usage Notes (IFU) (PDF)'.

PC版アプリのダウンロードリンクおよびインストール手順につきましては、
一つの説明資料に統合のうえご用意しております。

**製品ページ内の「安全性と商品リソース」セクションにございます
「使用上の注意 (IFU) (PDF)」という青色のリンクを
クリックいただくことで、当該資料をダウンロードいただけます**

Image 10: Information on PC Application and Firmware Download

5. MAINTENANCE

5.1 Cleaning

To clean the LUNA, use a soft, dry, lint-free cloth. Do not use abrasive cleaners, solvents, or aerosol sprays, as these may damage the finish or internal components. Avoid getting moisture into any openings.

5.2 Storage

When not in use, store the LUNA in a cool, dry place away from direct sunlight and extreme temperatures. Disconnect all cables to prevent strain on the ports.

5.3 Cable Care

Handle the USB cable and headphone cables with care. Avoid sharp bends, twists, or excessive pulling, which can damage the internal wiring. Always grasp the connector, not the cable, when plugging or unplugging.

6. TROUBLESHOOTING

6.1 No Sound Output

- Ensure the LUNA is properly connected to both the source device and your headphones/earphones.
- Check the volume level on both the LUNA and your source device. Increase volume gradually.
- Verify that the correct audio output device is selected on your source device (e.g., in Windows Sound Settings or Android Developer Options).
- Test with different headphones/earphones and a different source device to isolate the issue.

6.2 Distorted or Poor Sound Quality

- Ensure all connections are secure and free from debris.
- Try switching between Class AB and Class H gain modes (see Section 4.2) to see if it improves sound.
- Check the audio settings on your source device for any active equalizers or sound enhancements that might be causing distortion.
- Ensure you are using high-quality audio files.

6.3 Device Disconnects Frequently (especially with PC)

- Ensure the USB cable is firmly connected to both the LUNA and the source device.
- Try using a different USB port on your PC.
- Update the LUNA's firmware using the companion application or official firmware tool (see Section 4.3). Some firmware versions may address connectivity issues.
- Ensure your PC's USB drivers are up to date.

6.4 Device Becomes Warm During Use

It is normal for the LUNA to become warm during extended use, especially when driving high-impedance headphones or operating in Class AB mode. If the device becomes excessively hot or exhibits unusual behavior, disconnect it immediately and contact customer support.

7. SPECIFICATIONS

Brand	TANCHJIM
Model	LUNA (Luna-Asano Tanch / LunaAT)
Color	Asano Tenki Limited Edition
DAC Chip	Dual CS43198
Max Decoding Capability	32Bit/768kHz PCM, DSD256
Signal-to-Noise Ratio (SNR)	>132dB
Signal-to-Noise and Distortion (SINAD)	118.5dB
Total Harmonic Distortion (THD+N)	0.000139%
Output Jacks	3.5mm Single-Ended, 4.4mm Balanced
Recommended Headphone Impedance	16 ohms (minimum)
Connectivity	Wired (USB Type-C)
Compatible Devices	Android smartphones, iPhones, iPads, PCs, Laptops, Gaming Consoles
Chassis Material	Aerospace-grade Aluminum Alloy
Waterproof	No
Included Accessories	USB Cable, Instruction Manual

Origin	China
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8. WARRANTY AND SUPPORT

8.1 Manufacturer's Warranty

The TANCHJIM LUNA comes with a 3-year manufacturer's warranty from the date of purchase. This warranty covers defects in materials and workmanship under normal use. It does not cover damage caused by misuse, accidents, unauthorized modifications, or normal wear and tear.

8.2 Customer Support

For technical assistance, warranty claims, or any other inquiries, please contact TANCHJIM customer support through the official website or your point of purchase. Please have your proof of purchase and product model information ready when contacting support.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

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

