

KGUSS L06

KGUSS FX-AUDIO- L06 Fully Balanced Power Amplifier User Manual

Model: L06

1. INTRODUCTION

Thank you for choosing the KGUSS FX-AUDIO- L06 Fully Balanced Power Amplifier. This device is designed to deliver high-fidelity audio performance with its advanced Class D amplification and balanced circuit architecture. Please read this manual thoroughly before operating the amplifier to ensure proper setup, optimal performance, and safe use.



Figure 1: Front view of the KGUSS FX-AUDIO- L06 Fully Balanced Power Amplifier, showcasing the VU meters and control knob.

2. SAFETY INSTRUCTIONS

- Do not expose this device to rain, moisture, or extreme temperatures.
- Ensure proper ventilation around the amplifier to prevent overheating.
- Do not open the amplifier casing. Refer all servicing to qualified personnel.
- Use only the specified power adapter or a compatible power supply that meets the voltage and current requirements.
- Disconnect the power supply before making any connections or disconnections.
- Keep the device away from strong magnetic fields.

3. PACKAGE CONTENTS

Please check the package for the following items:

- 1 x KGUSS FX-AUDIO- L06 Amplifier
- 1 x Power Adapter (standard)
- 1 x User Manual

4. PRODUCT OVERVIEW

4.1 Front Panel

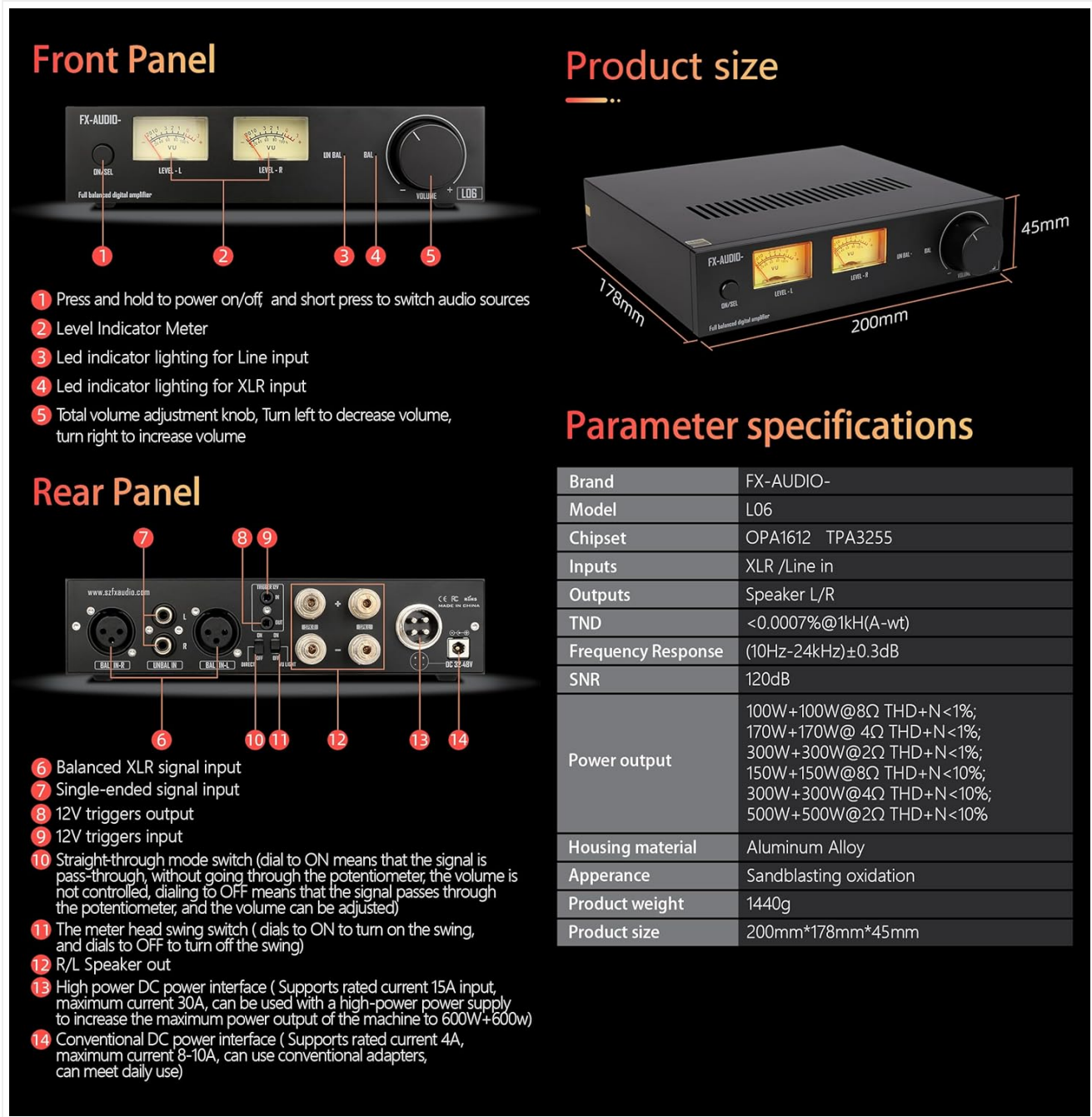


Figure 2: Front and Rear Panel Layout with corresponding descriptions.

1. **ON/SEL Button:** Press and hold to power on/off. Short press to switch audio sources (UNBAL/BAL).
2. **Level Indicator Meter (VU Meter):** Displays the audio output level for the left (L) and right (R) channels.
3. **LED Indicator for Line Input:** Illuminates when the unbalanced (RCA) input is selected.
4. **LED Indicator for XLR Input:** Illuminates when the balanced (XLR) input is selected.
5. **Volume Knob:** Turn left to decrease volume, turn right to increase volume.

4.2 Rear Panel

6. **Balanced XLR Signal Input (L/R):** For connecting audio sources with balanced XLR outputs.
7. **Single-ended RCA Input (L/R):** For connecting audio sources with unbalanced RCA outputs.
8. **12V Trigger Output:** For controlling other devices with a 12V trigger input.
9. **12V Trigger Input:** For receiving a 12V trigger signal from another device.
10. **Straight-through Mode Switch (DIAL ON):** When set to ON, the signal passes through without volume control, allowing an external preamplifier to manage volume.
11. **Meter Head Swing Switch (DIAL ON):** When set to ON, the VU meters will swing. When set to OFF, the meters will be static.
12. **R/L Speaker Output:** Connects to passive speakers (2Ω - 8Ω).
13. **High Power DC Power Interface:** Supports rated current 15A input. Requires a GX20-4 pin aviation power connector for maximum output (600W+600W).
14. **Conventional DC Power Interface:** Supports rated current 4A input. For routine use with standard power sources.

5. SETUP INSTRUCTIONS

5.1 Connecting Speakers

Connect your passive speakers to the R/L Speaker Output terminals on the rear panel. Ensure correct polarity (+ to + and - to -) for each speaker. The L06 supports speakers with an impedance of 2Ω to 8Ω .

5.2 Connecting Audio Sources

The L06 offers both balanced (XLR) and unbalanced (RCA) inputs. Choose the appropriate input based on your audio source device.

- **XLR Input:** Use XLR cables to connect your audio source (e.g., DAC, preamplifier) to the Balanced XLR Signal Input (L/R) on the rear panel.
- **RCA Input:** Use RCA cables to connect your audio source (e.g., CD player, TV BOX, smartphone) to the Single-ended RCA Input (L/R) on the rear panel.

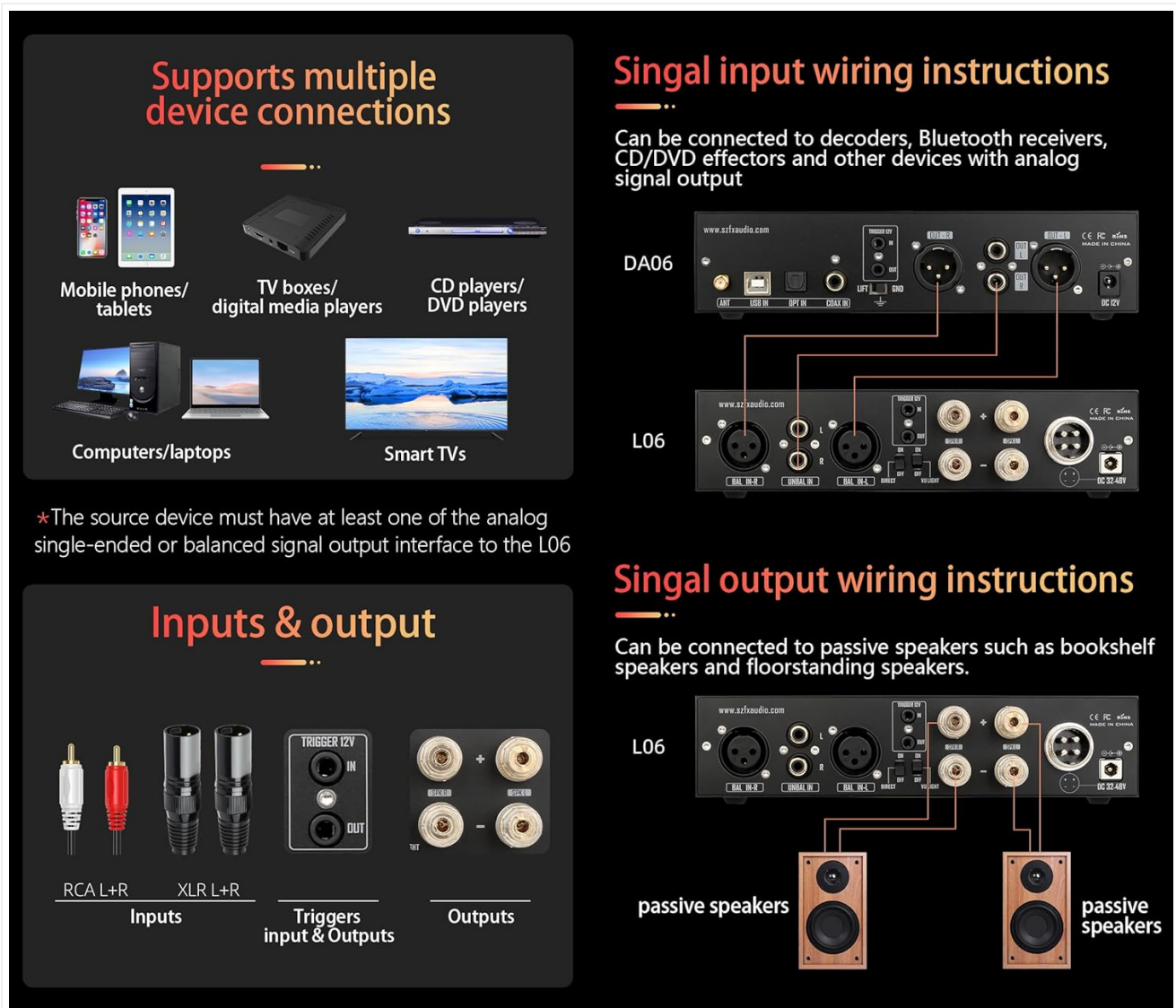


Figure 3: Diagram illustrating various device connections and input/output wiring for the L06 amplifier.

5.3 Power Connection

Connect the provided power adapter to the Conventional DC Power Interface (14) on the rear panel. For high-power applications requiring up to 500W+500W output, use a compatible 15A power supply with a GX20-4 pin aviation connector and connect it to the High Power DC Power Interface (13).

6. OPERATING INSTRUCTIONS

6.1 Powering On/Off

Press and hold the **ON/SEL** button (1) on the front panel for a few seconds to power the amplifier on or off.

6.2 Input Selection

After powering on, short press the **ON/SEL** button (1) to cycle between the balanced (XLR) and unbalanced (RCA) inputs. The corresponding LED indicator (3 or 4) will illuminate to show the active input.

6.3 Volume Control

Adjust the audio output level using the **Volume Knob** (5). Turn clockwise to increase volume and counter-clockwise to decrease volume.

6.4 VU Meter Operation

The **Level Indicator Meters (VU Meters)** (2) provide a visual representation of the audio signal level. Ensure the Meter Head Swing Switch (11) on the rear panel is set to 'ON' for the meters to function. If the 'Straight-through Mode Switch' (10) is 'ON', the volume knob will be bypassed, and the VU meters will reflect the input signal level without volume attenuation from the L06.

7. KEY FEATURES

- **High Power Output:** Features dual TPA3255 Class D amplifier chips, delivering up to 500W + 500W into 2Ω speakers.
- **Ultra-low Distortion:** Utilizes TI ultra-low distortion chipset and OPA1612 operational amplifier, achieving THD <0.007% and SNR >120dB.
- **Fully Balanced Circuit Design:** Supports selectable balanced (XLR) and single-ended (RCA) inputs, effectively reducing interference and improving signal clarity.
- **Dual Power Input Modes:** Accommodates both standard power sources and high-power configurations (up to 600W+600W with a GX20-4 pin aviation power connector) for versatile use.
- **Protection Circuitry:** Incorporates multifunctional protection circuits for enhanced device longevity and safety.
- **Relay Channel Switching:** Ensures smooth and reliable input source switching.

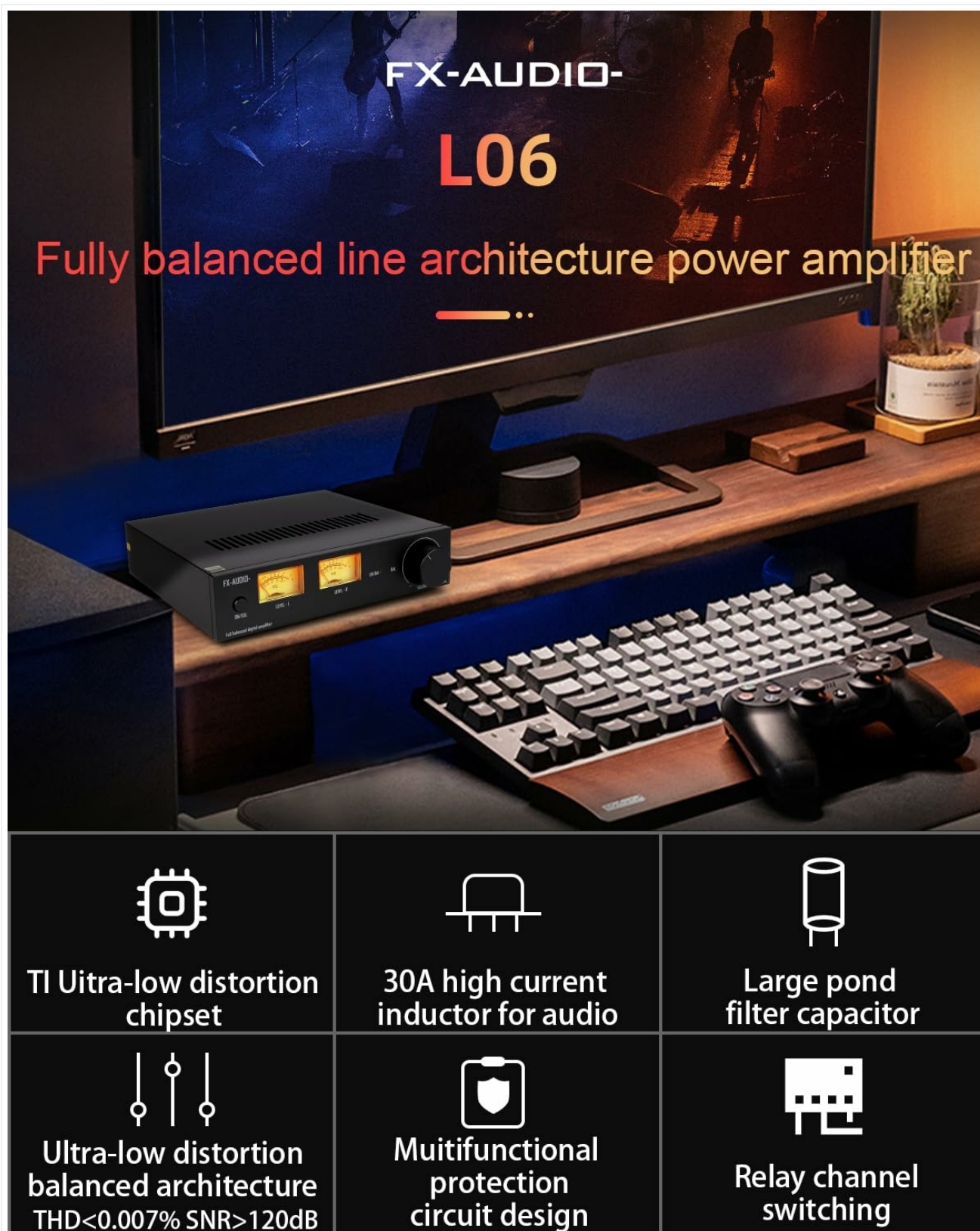


Figure 4: Visual representation of the L06's core features, including chipset, inductor, and protection.

8. MAINTENANCE

- Clean the amplifier's exterior with a soft, dry cloth. Do not use liquid cleaners or solvents.
- Ensure the ventilation slots are free from dust and obstructions to maintain proper airflow.
- Store the device in a cool, dry place when not in use for extended periods.

9. TROUBLESHOOTING

Problem	Possible Cause	Solution
No power	Power cable not connected; Power outlet faulty; Amplifier off.	Check power cable connection; Try a different outlet; Press and hold ON/SEL button to power on.
No sound output	Incorrect input selected; Volume too low; Speaker cables loose; Audio source issue.	Short press ON/SEL to select correct input; Increase volume; Check speaker connections; Verify audio source is working.
Distorted sound	Volume too high; Input signal too strong; Speaker impedance mismatch.	Reduce volume; Check audio source output level; Ensure speakers are within 2Ω-8Ω range.
VU meters not moving	Meter Head Swing Switch is OFF; No audio signal.	Set Meter Head Swing Switch (11) to ON; Ensure audio is playing and input is selected.

10. SPECIFICATIONS

Parameter	Value
Brand	FX-AUDIO-
Model	L06
Chipset	OPA1612+TPA3255
Inputs	XLR / Line in (RCA)
Outputs	Speaker L/R
Frequency Response	(10Hz - 24kHz) ±0.3dB
SNR	120dB
THD+N	<0.007% (1KHz, A-wt)
Power Output (THD+N<1%)	100W+100W@8Ω 170W+170W@4Ω 300W+300W@2Ω
Power Output (THD+N<10%)	150W+150W@8Ω 300W+300W@4Ω 500W+500W@2Ω
Housing Material	Aluminum Alloy
Appearance	Sandblasting oxidation
Product Weight	1440g (approx. 3.17 lbs)
Product Size (L*W*H)	200mm * 178mm * 45mm (approx. 7.87 x 7.01 x 1.77 inches)

11. WARRANTY AND SUPPORT

Warranty information for the KGUSS FX-AUDIO- L06 amplifier is typically provided at the point of purchase or included with the product packaging. Please refer to your purchase documentation for specific warranty terms and conditions. For technical support or service inquiries, please contact your retailer or the manufacturer directly.