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Fosi Audio ZA3

Fosi Audio ZA3 Balanced Stereo Amplifier User Manual

Model: ZA3 | Brand: Fosi Audio

1. INTRODUCTION

The Fosi Audio ZA3 is a new generation mini amplifier designed for home audio systems, offering versatile stereo and mono modes. It features audiophile-grade components and advanced heat dissipation for exceptional sound quality and stable high power output. This manual will guide you through the setup, operation, and maintenance of your ZA3 amplifier.

2. WHAT'S IN THE BOX?

- Fosi Audio ZA3 Power Amplifier x1
- 48V5A Power Adapter x1
- User Manual x1

What's in the Box?

Weight: 830g



ZA3 Amplifier



User Manual



Power Supply Unit

Figure 2.1: Contents included with your Fosi Audio ZA3 amplifier.

3. PRODUCT OVERVIEW



Figure 3.1: Front view of the Fosi Audio ZA3 amplifier.

Front and Rear Panel Overview

Versatile Inputs and Outputs with Effortless Controls



Figure 3.2: Detailed overview of the ZA3's front and rear panels.

3.1 Key Features

- **Dual-Mode Innovation:** Offers both stereo (up to 180W) and mono (up to 235W) modes, allowing flexible system configurations.
- **Richer Connectivity:** Features balanced XLR and 1/4" TRS combo input, RCA inputs, subwoofer output, and a 12V trigger-in for synchronized operation with other devices.
- **Audiophile-Grade Components:** Utilizes TPA3255 amp chip, Japanese NCC, ELNA, German WIMA capacitors, and Japanese Sumida inductors for superior audio quality.
- **Advanced Heat Dissipation:** Larger chassis with side vents and dust covers ensures sustained high power output

without overheating.

- **Enhanced Scalable Fun:** Five swappable DIP8 dual op-amps allow for sound customization.

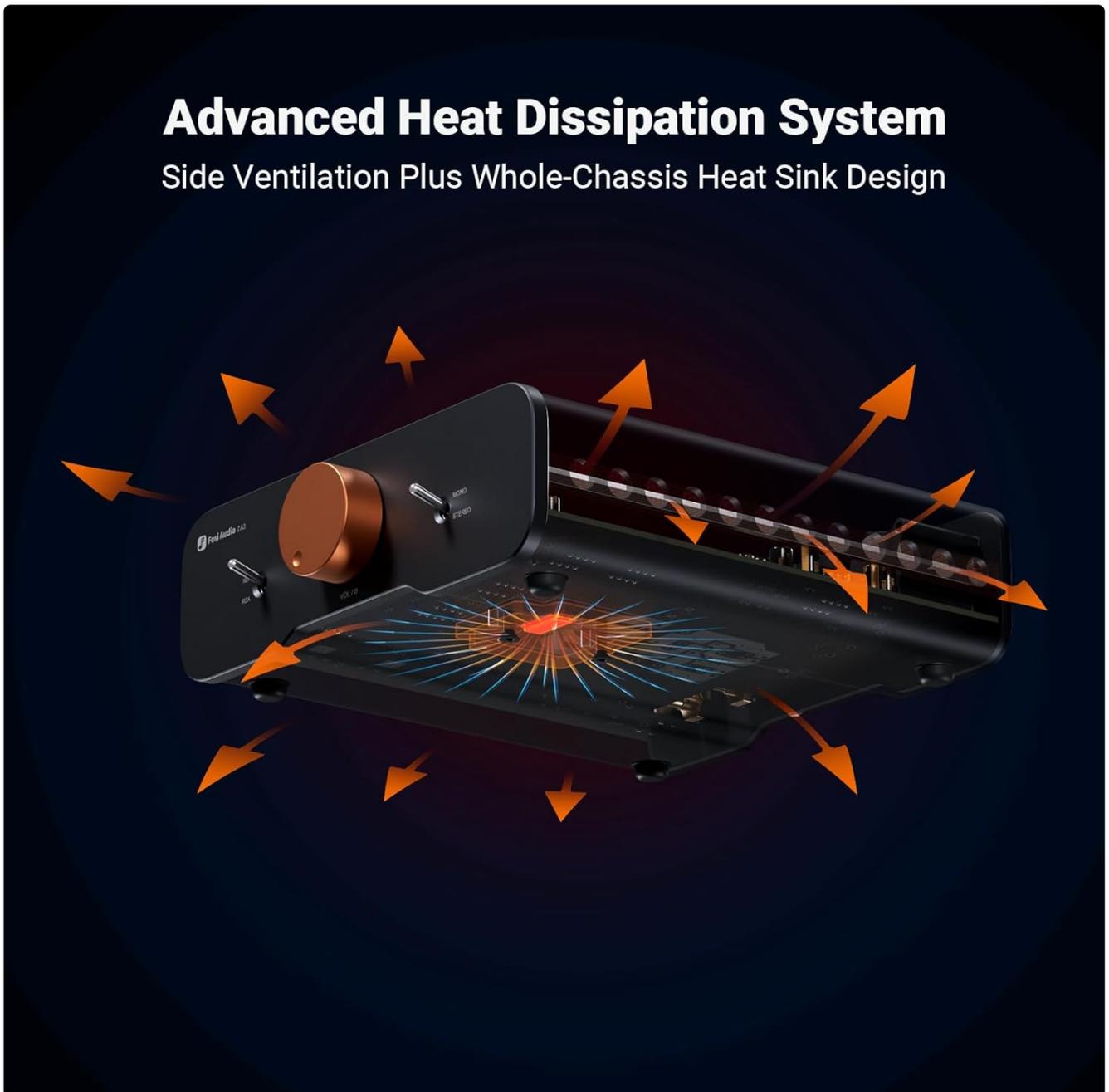


Figure 3.3: Internal view highlighting audiophile-grade components.

Audiophile-Grade Components

Meticulous Selection for Extraordinary Sound Quality

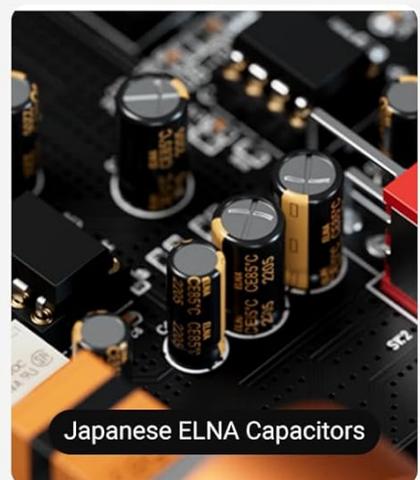
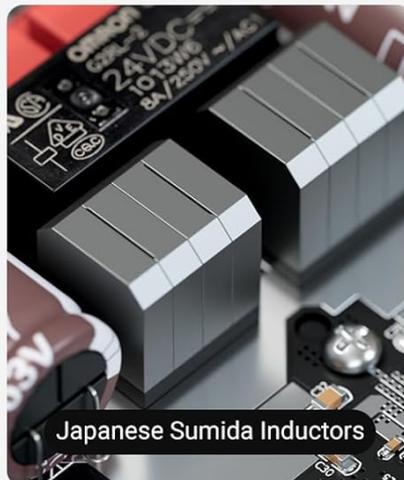
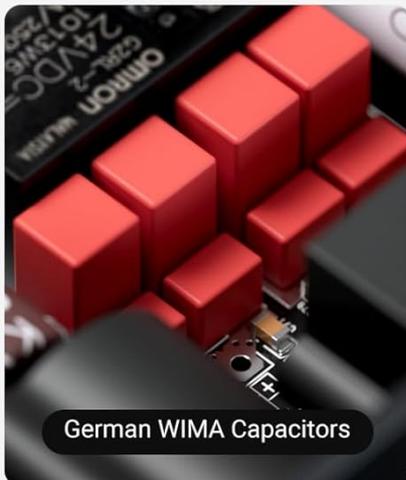
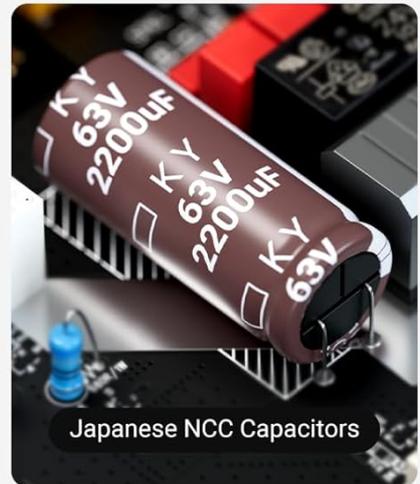
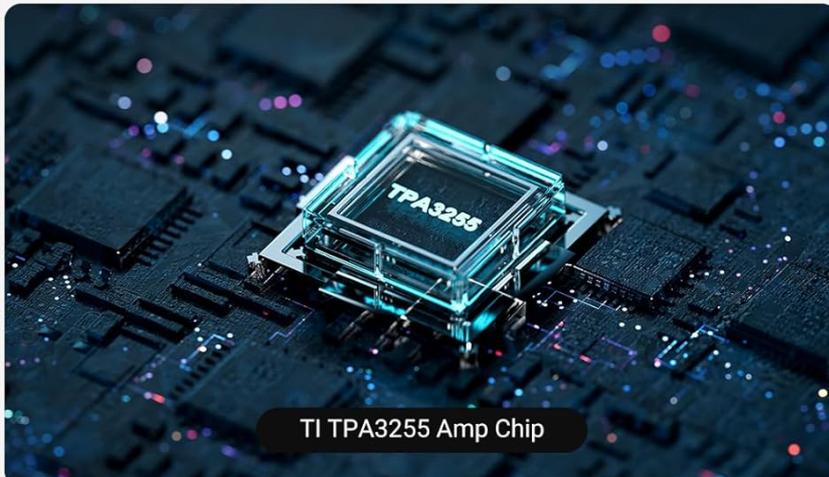


Figure 3.4: Advanced heat dissipation system.

4. SETUP AND CONNECTIONS

4.1 Stereo Mode Setup (RCA Input)

This setup demonstrates connecting an audio source to a single ZA3 amplifier for stereo sound using RCA inputs.

1. Connect a single RCA cable from the right-channel RCA output of your preamp (e.g., Fosi Audio P3) to the right-channel RCA input port on the ZA3.
2. Repeat the process for the left channel, connecting a single RCA cable from the left-channel RCA output of your preamp to the left-channel RCA input port on the ZA3.
3. Connect your passive speakers to the ZA3's speaker output terminals. Ensure correct polarity (positive to positive, negative to negative) and match left and right channels. The ZA3's binding posts support both banana plugs and bare wire connections.
4. Press and hold the power knob on the ZA3 for two seconds to turn it on.
5. Switch the input on the ZA3 to RCA mode and ensure the output is set to Stereo mode.
6. Play music from your audio source and gradually adjust the volume on the ZA3 to a comfortable listening level.

Video 4.1: Usage Demonstration - Stereo Mode with RCA inputs. This video illustrates the step-by-step connection process for a stereo setup using RCA cables.

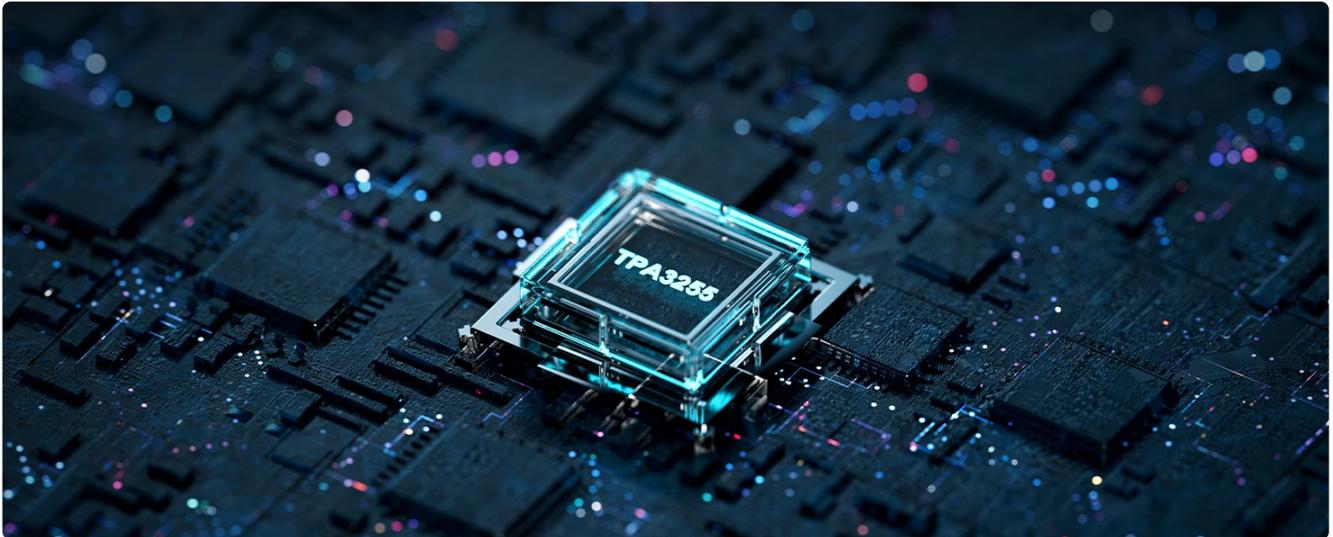


Figure 4.1: Stereo Mode Connection Diagram.

4.2 Mono Mode Setup (XLR Input for 2.1 System)

This setup demonstrates using two ZA3 amplifiers in mono mode to create a powerful 2.1 audio system with an active subwoofer, utilizing XLR inputs.

1. Connect the right-channel XLR output from your audio source (e.g., DAC) to the right-channel XLR input port on the first ZA3 unit.
2. Connect the left-channel XLR output from your audio source to the left-channel XLR input port on the second ZA3 unit.
3. Connect the right-channel passive speaker to the speaker output terminals of the first ZA3 unit (marked 'Mono').
4. Connect the left-channel passive speaker to the speaker output terminals of the second ZA3 unit (marked 'Mono').
5. Connect your active subwoofer to the 'Sub Out' port on either ZA3 unit using an RCA cable.
6. Press and hold the power knob on both ZA3 units for two seconds to turn them on.
7. Switch the input on both ZA3 units to XLR mode and ensure the output is set to Mono mode.
8. Play music from your audio source and adjust the volume. For optimal balance, set the volume knobs on both ZA3 units to maximum and control the overall volume from your audio source device or preamp.

Video 4.2: Usage Demonstration - Mono Mode to Build a 2.1 System with XLR. This video guides you through setting up a 2.1 system using two ZA3 units in mono configuration.



5. OPERATING INSTRUCTIONS

5.1 Power On/Off

To power on the ZA3, press and hold the volume knob for approximately 2 seconds until the indicator light illuminates. To power off, press and hold the volume knob again for 2 seconds.

5.2 Volume Control

Rotate the large orange knob on the front panel clockwise to increase volume and counter-clockwise to decrease volume. The ZA3 uses a taper A potentiometer, meaning volume increases logarithmically. For finer control at lower volumes, adjust the source device's volume. For louder volumes, adjust the ZA3's knob above 80%.

5.3 Input and Output Mode Switching

Use the toggle switches on the front panel to select between XLR/RCA inputs and Mono/Stereo output modes, depending on your setup.

6. MAINTENANCE

6.1 Cleaning

Wipe the exterior of the amplifier with a soft, dry cloth. Do not use liquid cleaners or aerosols.

6.2 Op-Amp Rolling

The ZA3 features swappable op-amps, allowing you to customize the sound signature. There are five replaceable op-amps on the main board: two for left/right channel outputs, two for subwoofer output, and one for XLR input. Refer to the diagram below for their locations.

1. Carefully remove the amplifier's casing by unscrewing the nuts from the front panel potentiometers and the four screws on the bottom and rear panel.
2. Gently slide out the main board.
3. Using tweezers, gently pry out the existing op-amps from their sockets by applying pressure to the side pin gaps.
4. Insert your preferred compatible DIP8 dual op-amps into the slots. Ensure correct orientation: align the notch or the 'number one' mark on the op-amp chip's cover with the '01' mark on the PCB to avoid damage.
5. Once new op-amps are securely installed, reassemble the casing.

Video 6.1: Rolling the Op-Amps -- ZA3. This video demonstrates the process of replacing op-amps in your ZA3 amplifier.

Video 6.2: Replacing operational amps in different situations of ZA3. This video provides further guidance on replacing op-amps for specific channels.



Figure 6.1: Internal components and op-amp locations.

Compatible Dual Op-Amps:

Manufacturer	Model
Sparkos Labs	SS3602
National Semiconductor	LME49720HA
National Semiconductor	LM4562
JRC	MUSES02
JRC	4580D
JRC	NJM4556AD
Texas Instruments	OPA2604
Texas Instruments	OPA2134PA
Texas Instruments	NE5532
RAY	RM4559
Analog Devices	OP249
Analog Devices	AD827

7. SPECIFICATIONS

Feature	Value
Brand	Fosi Audio
Model Number	ZA3
Item Dimensions L x W x H	6.1 x 7.24 x 2 inches
Item Weight	3.85 pounds
Voltage	48 Volts
Maximum Supply Voltage	48 Volts (DC)

Feature	Value
Number of Channels	2
Output Power (Stereo)	Up to 180W
Output Power (Mono)	Up to 235W
SINAD Rating	Up to 89dB
SNR	Up to 106dB
Low Noise Floor	150 μ V
Specification Met	FCC
Country of Origin	China

8. TROUBLESHOOTING

8.1 No Sound Output

- Ensure all cables (audio input, speaker wires, power) are securely connected.
- Verify the correct input mode (XLR or RCA) is selected on the front panel.
- Check that the volume knob is turned up sufficiently on both the amplifier and the audio source.
- Confirm that your speakers are passive and correctly wired.
- If using mono mode, ensure both ZA3 units are powered on and correctly configured for mono output.

8.2 Hum or Noise

- Ensure all connections are tight and free from corrosion.
- Try using balanced XLR inputs if possible, as they minimize interference and reduce noise floor.
- Move the amplifier away from other electronic devices that might cause interference.
- Check for ground loop issues; try plugging all audio equipment into the same power strip.

8.3 Overheating

- Ensure the amplifier has adequate ventilation. Do not block the side vents.
- Avoid stacking other heat-generating components directly on top of the ZA3.
- Reduce the volume or usage time if the unit feels excessively hot.

9. WARRANTY AND SUPPORT

Fosi Audio products typically come with a limited warranty. Please refer to the official Fosi Audio website or the included warranty card for specific terms and conditions.

For technical support, troubleshooting assistance, or warranty claims, please contact Fosi Audio customer service through their official website or the contact information provided in your product packaging. You may also find additional resources and FAQs on the Fosi Audio support page.

A detailed Instructions for Use (IFU) in PDF format is available for download: [Fosi Audio ZA3 IFU \(PDF\)](#)

<p>Fosi Audio</p>  <p>ZA3 User Manual</p>	<p>Fosi Audio ZA3 Balanced HiFi Class-D Power Amplifier User Manual</p> <p>Comprehensive user manual for the Fosi Audio ZA3, a high-performance balanced Class-D power amplifier. It covers introduction, specifications, operation, setup instructions for stereo and mono modes, 12V trigger functionality, op-amp replacement, precautions, frequently asked questions, and warranty information.</p>
<p>Fosi Audio</p> <p>BT30D PRO Bluetooth Power Amplifier User's Guide</p>  <p>BT30D PRO</p>	<p>Fosi Audio BT30D PRO Bluetooth Power Amplifier User Guide</p> <p>Comprehensive user guide for the Fosi Audio BT30D PRO Bluetooth 5.0 power amplifier, detailing product overview, specifications, quick setup, troubleshooting tips, and warranty information.</p>
<p>Fosi Audio</p>  <p>ZA3 User Manual</p>	<p>Fosi Audio ZA3 Class D Hi-Fi Amplifier User Manual and Specifications</p> <p>Comprehensive user manual for the Fosi Audio ZA3 Class D Hi-Fi Amplifier, detailing setup, operation, specifications, troubleshooting, and warranty. Learn how to connect and optimize your audio system.</p>
<p>Fosi Audio</p> <p>M01-BT Mono Subwoofer Amplifier User's Guide</p>  <p>M01-BT</p>	<p>Fosi Audio M01-BT Mono Subwoofer Amplifier User Guide & Specifications</p> <p>The Fosi Audio M01-BT is a versatile mono subwoofer amplifier and full-frequency amplifier. This guide details its product specifications, front and rear panel features, quick setup instructions, and troubleshooting tips for optimal audio performance.</p>
<p>Fosi Audio</p> <p>Fosi Audio TB10D User Manual</p>  <p>Thanks for choosing us!</p>	<p>Fosi Audio TB10D User Manual: Setup, Specifications, and Troubleshooting</p> <p>Comprehensive user manual for the Fosi Audio TB10D Hi-Fi stereo amplifier. Includes product specifications, setup instructions, connection guides, and troubleshooting tips.</p>
<p>Fosi Audio</p> <p>Fosi Audio BT10A User Manual</p>  <p>Thanks for choosing us!</p>	<p>Fosi Audio BT10A User Manual - Hi-Fi Bluetooth Amplifier</p> <p>User manual for the Fosi Audio BT10A, a 50W x 2 Hi-Fi wireless stereo 2-channel amplifier with Bluetooth 5.0 and bass/treble control. Includes product specifications, setup guide, troubleshooting, and warranty information.</p>

