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Fosi Audio BT20A MAX, ZA3

Fosi Audio BT20A MAX Stereo Power Amplifier and ZA3 Balanced Stereo Amplifier User Manual

Model: BT20A MAX, ZA3
Brand: Fosi Audio

1. Introduction

Thank you for choosing Fosi Audio. This manual provides detailed instructions for the Fosi Audio BT20A MAX Stereo Power Amplifier and the Fosi Audio ZA3 Balanced Stereo Amplifier. These high-fidelity audio components are designed to deliver exceptional sound quality for your home audio system. Please read this manual thoroughly before operating the devices to ensure proper setup and optimal performance.

2. Safety Instructions

To prevent fire, electric shock, or product damage, please observe the following safety precautions:

- Do not expose this appliance to rain or moisture.
- Do not place objects filled with liquids, such as vases, on the apparatus.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Only use attachments/accessories specified by the manufacturer.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way.
- Ensure proper ventilation around the unit. Do not block any ventilation openings.

3. Fosi Audio BT20A MAX Stereo Power Amplifier

3.1. Key Features

- **PFFB Technology:** Delivers ultra-low distortion (≤0.003%) and high SNR (≥112dB) for clean, detailed audio.
- **High Power Output:** Powered by TPA3255 & NE5532 chips, providing 300W per channel.

- **Enhanced Cooling:** Built-in silent fan for stable, high-power performance.
- **Hi-Res Bluetooth 6.0:** Qualcomm QCC3095 chip with LDAC/aptX Lossless/aptX HD/aptX Adaptive/aptX/SBC/AAC codecs, supporting PCM 24bit/96kHz.
- **Versatile Connectivity:** Dual RCA inputs, dedicated subwoofer output, 12V Trigger input.
- **Audio Control:** Bypass mode for pure sound, customizable bass & treble controls in Tone mode, HPF adjustment.

3.2. Product Overview

The Fosi Audio BT20A MAX is designed for effortless connectivity and high-fidelity audio reproduction.



Figure 3.2.1: Front view of the Fosi Audio BT20A MAX amplifier, highlighting its compact design and controls.



Figure 3.2.2: The BT20A MAX emphasizing its PFFB (Post-Filter Feedback) technology for reduced distortion.



Figure 3.2.3: The BT20A MAX showcasing its Hi-Res Bluetooth 6.0 capabilities and supported codecs.

Rear Panel Overview



Figure 3.2.4: Rear panel of the BT20A MAX, detailing all input and output connections.

- **RCA Input (RCA1, RCA2):** Connect audio sources like CD players, DACs, or preamplifiers.
- **Subwoofer Output (SUB OUT):** Connect to an active subwoofer for enhanced bass.
- **Speakers Output (SPK OUT L/R):** Connect passive speakers.
- **Tone/Bypass Switch:** Select between tone control (bass/treble adjustable) or bypass mode (flat frequency response).
- **12V Trigger Input:** For synchronized power on/off with other compatible equipment.
- **HPF Switch (High-Pass Filter):** Adjusts the high-pass filter for connected speakers.
- **Power Input (DC 30-48V):** Connect the provided power adapter.
- **Bluetooth Antenna:** Connect the included Bluetooth antenna for wireless connectivity.

3.3. Setup and Operation (BT20A MAX)

3.3.1. Initial Setup

1. Ensure the amplifier is turned off and unplugged from the power outlet.
2. Connect your passive speakers to the **Speakers Output (SPK OUT)** terminals. Ensure correct polarity (+ to + and - to -).
3. If using an active subwoofer, connect it to the **Subwoofer Output (SUB OUT)**.
4. Connect your audio sources (e.g., CD player, DAC) to the **RCA Input (RCA1 or RCA2)**.
5. Screw the Bluetooth antenna onto the designated connector.
6. Connect the power adapter to the **Power Input** and then to a wall outlet.

3.3.2. Operating Instructions

- **Power On/Off:** Press the power button on the front panel. The indicator light will illuminate.
- **Input Selection:** Use the input selector button (G/MODE) on the front panel to switch between RCA1, RCA2, and Bluetooth inputs.
- **Bluetooth Pairing:**
    a. Select Bluetooth input. The indicator light will flash.
    b. On your device (phone, tablet), search for "Fosi Audio BT20A MAX" in the Bluetooth settings and pair.
    c. Once connected, the indicator light will remain solid.
- **Volume Control:** Rotate the "VOL" knob on the front panel to adjust the output volume.
- **Tone Control:** If the Tone/Bypass switch is set to "Tone", use the "BASS" and "TREBLE" knobs to adjust the respective frequencies.
- **Bypass Mode:** Set the Tone/Bypass switch to "Bypass" for a direct, unaltered audio signal.
- **HPF Adjustment:** Use the HPF switch on the rear panel to adjust the high-pass filter frequency for your main speakers, typically used when a subwoofer is connected.
- **12V Trigger:** Connect a 12V trigger cable from a compatible device to enable synchronized power control.

4. Fosi Audio ZA3 Balanced Stereo Amplifier

4.1. Key Features

- **Balanced XLR Inputs:** For professional-grade audio connections with reduced noise.
- **RCA Inputs:** Standard unbalanced inputs for versatile connectivity.
- **Mono Mode (PBTL):** Supports bridging two ZA3 units for increased power output to a single channel.
- **Subwoofer Output:** Dedicated output for connecting an active subwoofer.
- **12V Trigger Input:** For synchronized power control.

4.2. Product Overview

The Fosi Audio ZA3 is a versatile amplifier designed for both stereo and mono applications, offering balanced input options.



Figure 4.2.1: Close-up of the Fosi Audio ZA3 showcasing its XLR balanced input ports.



Figure 4.2.2: Two ZA3 units stacked, illustrating their use in PBTL (Parallel Bridge-Tied Load) mono mode for increased power.

Front and Rear Panel Overview



Figure 4.2.3: Detailed view of the Fosi Audio ZA3's front and rear panels with labels for all controls and connections.

- **Front Panel:**
    - **XLR/RCA Input Mode Switch:** Selects between balanced XLR or unbalanced RCA inputs.

- **Power/Volume Knob:** Controls power on/off and output volume.
- **Mono/Stereo Output Mode Switch:** Selects between stereo output or mono (PBTL) output.

- **Rear Panel:**
  - **XLR Balanced Input (XLR IN L/R):** Connect balanced audio sources.
  - **RCA Input (RCA IN L/R):** Connect unbalanced audio sources.
  - **Subwoofer Out (SUB OUT):** Connect to an active subwoofer.
  - **Speaker Out (L/R):** Connect passive speakers.
  - **Mono Mode Speaker Out:** Specific output for mono (PBTL) configuration.
  - **12V Trigger In:** For synchronized power control.
  - **Power In (DC 24-48V):** Connect the provided power adapter.

4.3. Setup and Operation (ZA3)

4.3.1. Initial Setup

1. Ensure the amplifier is turned off and unplugged from the power outlet.
2. Connect your passive speakers to the **Speaker Out** terminals. Ensure correct polarity.
3. If using an active subwoofer, connect it to the **Subwoofer Out**.
4. Connect your audio sources to either the **XLR Balanced Input** or **RCA Input**.
5. Connect the power adapter to the **Power In** and then to a wall outlet.

4.3.2. Operating Instructions

- **Power On/Off and Volume:** Rotate the Power/Volume knob clockwise to turn on and increase volume, counter-clockwise to decrease volume and turn off.
- **Input Selection:** Use the XLR/RCA Input Mode Switch on the front panel to select your desired input source.
- **Output Mode:** Use the Mono/Stereo Output Mode Switch to select between stereo output (for two speakers) or mono output (for PBTL configuration).
- **Mono (PBTL) Configuration:** To use two ZA3 units in mono mode, set both units to "Mono" output. Connect each ZA3 to one speaker using the "Mono Mode Speaker Out" terminals. Refer to the ZA3 specific manual for detailed wiring diagrams for PBTL.
- **12V Trigger:** Connect a 12V trigger cable from a compatible device to enable synchronized power control.

5. Maintenance

To ensure the longevity and optimal performance of your Fosi Audio amplifiers:

- Keep the units clean by wiping them with a soft, dry cloth. Do not use liquid cleaners or aerosol sprays.
- Avoid placing the units in direct sunlight or near heat sources.
- Ensure adequate ventilation around the amplifiers to prevent overheating.
- Unplug the power adapter from the wall outlet if the units will be unused for an extended period.

6. Troubleshooting

If you encounter any issues, please refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution

Problem	Possible Cause	Solution
No sound output	◦ Power not connected ◦ Incorrect input selected ◦ Speaker wires loose or incorrect polarity ◦ Source device not playing or volume too low	◦ Check power connection and indicator light. ◦ Select the correct input source (RCA1, RCA2, Bluetooth, XLR). ◦ Verify speaker wire connections and polarity. ◦ Ensure source device is playing and its volume is adequate.
Bluetooth connection issues (BT20A MAX)	◦ Device too far from amplifier ◦ Interference ◦ Not in pairing mode	◦ Move device closer to the amplifier. ◦ Remove obstacles or other wireless devices. ◦ Ensure BT20A MAX is in Bluetooth input mode and indicator is flashing. ◦ Forget device on your phone and re-pair.
Distorted sound	◦ Volume too high (amplifier or source) ◦ Poor cable connection ◦ Speaker impedance mismatch	◦ Reduce volume on both amplifier and source. ◦ Check all audio cables for secure connection. ◦ Ensure speakers are within the amplifier's supported impedance range.

7. Specifications

Fosi Audio BT20A MAX

- **Output Power:** 300W x 2 (into 4Ω)
- **THD+N:** ≤0.003%
- **SNR:** ≥112dB
- **Bluetooth Version:** 6.0 (Qualcomm QCC3095)
- **Bluetooth Codecs:** LDAC, aptX Lossless, aptX HD, aptX Adaptive, aptX, SBC, AAC
- **Sampling Rate:** PCM 24bit/96kHz (Bluetooth)
- **Inputs:** 2x RCA, Bluetooth
- **Outputs:** Speaker L/R, Subwoofer Out
- **Power Supply:** DC 30-48V
- **Features:** PFFB Technology, Tone Control (Bass/Treble), Bypass Mode, HPF Adjustment, 12V Trigger

Fosi Audio ZA3

- **Inputs:** XLR Balanced, RCA
- **Outputs:** Speaker L/R, Subwoofer Out, Mono Mode Speaker Out
- **Output Modes:** Stereo, Mono (PBTL)
- **Power Supply:** DC 24-48V
- **Features:** 12V Trigger

- *(Specific power output and THD for ZA3 are not provided in the input data, general features are listed.)*

8. Warranty and Support

Fosi Audio products come with a standard warranty. For detailed warranty information, technical support, or service inquiries, please visit the official Fosi Audio website or contact their customer support directly. Please retain your proof of purchase for warranty claims.
Official Website: www.fosiaudio.com

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