

## Fosi Audio BT20A Pro, T20X

# Fosi Audio BT20A Pro & T20X Amplifier Instruction Manual

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## 1. INTRODUCTION

This manual provides detailed instructions for the Fosi Audio BT20A Pro Bluetooth 5.0 Amplifier and the Fosi Audio T20X Bluetooth Tube Stereo Amplifier. It covers essential information for setup, operation, maintenance, and troubleshooting to ensure optimal performance and longevity of your audio equipment.

## 2. PRODUCT OVERVIEW

### 2.1 Fosi Audio BT20A Pro Bluetooth 5.0 Amplifier

The Fosi Audio BT20A Pro is a compact and powerful Bluetooth 5.0 amplifier designed for high-fidelity audio. It delivers 300W x2 output, making it suitable for driving a wide range of passive speakers. A key feature is its replaceable Op-Amps, allowing users to customize the sound signature by swapping out the NE5532 Op-Amps with compatible models like LME49720HA, MUSES02, OPA2604AP, OPA2134PA, LM4562, or NJM4556AD. It also includes a pre-out port for connecting an active subwoofer or another power amplifier, offering flexibility for system expansion.

## Compact and Sleek Design

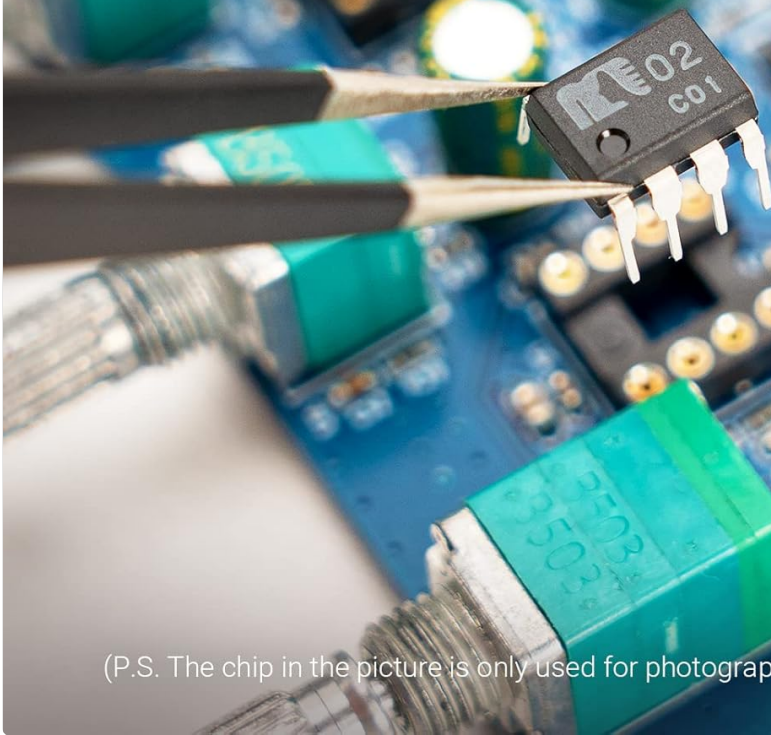
Low Distortion, Low Noise, Great Frequency Response



Figure 1: Fosi Audio BT20A Pro showcasing its compact and sleek design on a desk with a laptop and smartphone.

# DIY Your Own Stereo System

Replace NE5532 with Your Own OP-Amp Chips for a Unique Music Space



(P.S. The chip in the picture is only used for photography, not the product comes with)

Figure 2: Close-up view of the BT20A Pro's circuit board, highlighting the replaceable Op-Amp chips for sound customization.

# Stream Hi-Fi Music to Your System

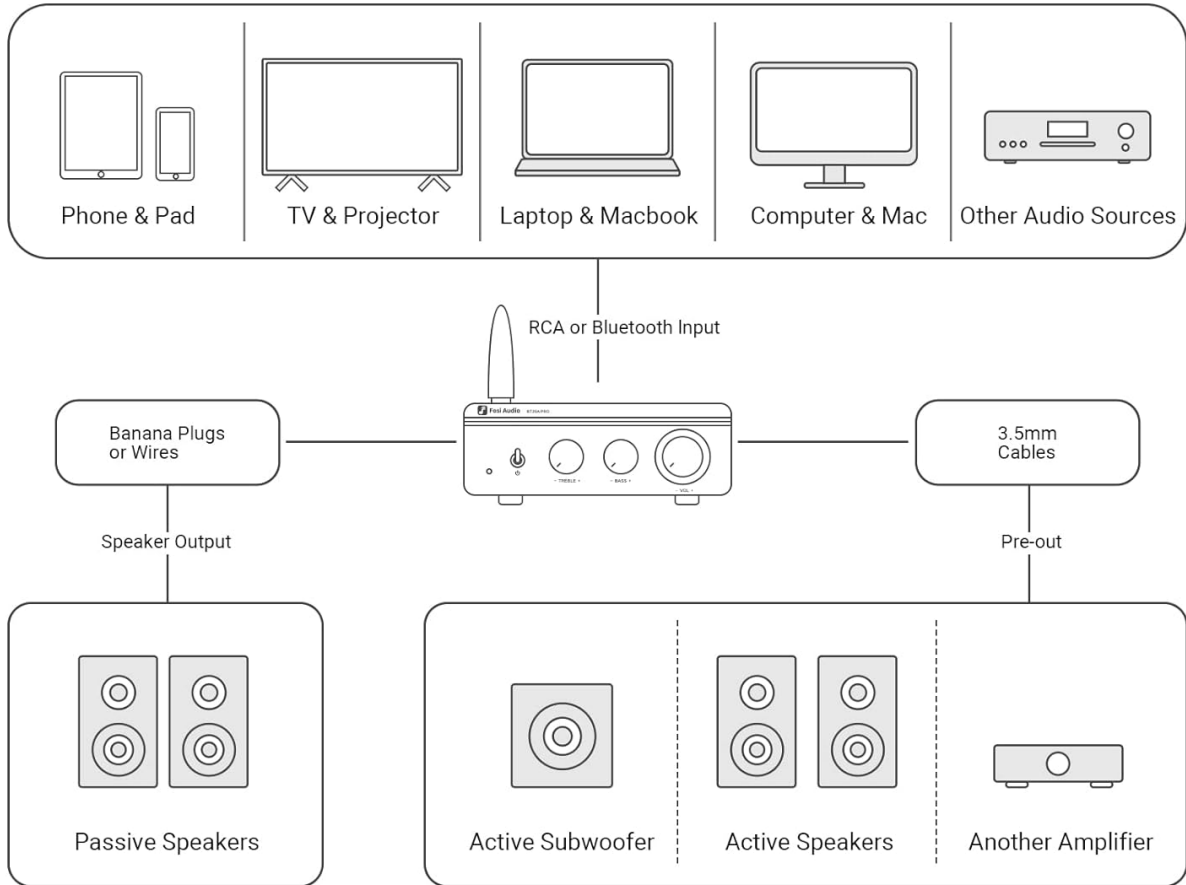


Figure 3: A diagram illustrating various connection options for the BT20A Pro, including Bluetooth, RCA, and outputs to passive speakers, active subwoofers, and other amplifiers.

Video 1: An overview of the Fosi Audio BT20A Pro amplifier, detailing its features and functionalities.

## 2.2 Fosi Audio T20X Bluetooth Tube Stereo Amplifier

The Fosi Audio T20X is a unique Bluetooth tube stereo amplifier that combines classic tube sound with modern connectivity. It features upgraded JAN 5654W Vacuum Tubes, which can be replaced with different models to customize the listening experience. The T20X also functions as a headphone amplifier with a 3.5mm output, supporting headphones with 16-300 ohms impedance. Bluetooth 5.0 ensures fast and stable wireless streaming up to 50ft/15m.



Figure 4: Fosi Audio T20X Bluetooth Tube Amplifier, highlighting its distinctive vacuum tubes and soft, clear sound.

## Upgrade GE JAN 5654W Vacuum Tubes

The brand new T20X is an updated version for T20 equipped with 7-Pin GE JAN 5654W fully-tested vacuum tubes that has higher durability and life to achieve better audio details and resolution.



Figure 5: Detailed view of the upgraded GE JAN 5654W Vacuum Tubes used in the T20X, emphasizing their durability and audio resolution.

### 3. SETUP GUIDE

#### 3.1 Speaker Connections (BT20A Pro)

1. Ensure the amplifier is powered off before making any connections.
2. Connect your passive speakers to the OUTPUT terminals on the rear panel using banana plugs or bare speaker wires. Ensure correct polarity (red to red, black to black).
3. If using an active subwoofer or another power amplifier, connect it to the PRE OUT (3.5mm) port on the rear panel.
4. Connect your audio source (e.g., CD player, DAC) to the LINE IN (RCA) inputs on the rear panel.
5. Attach the Bluetooth antenna to the designated port.
6. Connect the power adapter to the DC 24-48V input.

## 3.2 T20X Connections

1. Ensure the amplifier is powered off before making any connections.
2. Insert the JAN 5654W Vacuum Tubes into their sockets on the top panel.
3. Connect your passive speakers to the speaker output terminals on the rear panel.
4. For wired audio sources, connect to the RCA inputs.
5. For headphone use, plug your headphones into the 3.5mm headphone output on the front panel.
6. Attach the Bluetooth antenna to the designated port.
7. Connect the power adapter to the DC input.

## 3.3 Bluetooth Pairing

1. Turn on the amplifier. The Bluetooth indicator light will activate.
2. On your source device (smartphone, tablet, computer), enable Bluetooth and search for "Fosi Audio BT20A Pro" or "Fosi Audio T20X" in the list of available devices.
3. Select the amplifier to pair. A confirmation tone will sound upon successful pairing.
4. To disconnect or clear the current Bluetooth pairing, press and hold the volume control knob for 5 seconds. The amplifier has a memory function and will automatically reconnect to the last paired device when powered on.

## 4. OPERATING INSTRUCTIONS

### 4.1 Power On/Off & Input Selection

- **BT20A Pro:** Use the toggle switch on the front panel to power on/off and select between RCA (red light) and Bluetooth (blue light) inputs.
- **T20X:** Long-press the master volume knob to power on/off. Short-press the master volume knob to cycle through input modes (Bluetooth, RCA).

### 4.2 Audio Adjustment

- **Volume:** Rotate the master volume knob clockwise to increase volume and counter-clockwise to decrease.
- **Treble/Bass:** Adjust the dedicated treble and bass control knobs to fine-tune your audio output. The central detent position typically represents a flat frequency response.
- **T20X Headphone Output:** For private listening, plug your headphones into the 3.5mm jack on the front panel. The speaker outputs will be muted when headphones are connected.

## 5. MAINTENANCE

- Keep the amplifier in a dry, well-ventilated area away from direct sunlight and heat sources.
- Clean the exterior with a soft, dry cloth. Avoid using harsh chemicals or abrasive materials.
- Ensure proper ventilation around the unit to prevent overheating.

- For T20X, handle vacuum tubes with care. Protective covers are provided to safeguard the tubes and prevent accidental burns.

## 6. TROUBLESHOOTING

### 6.1 No Sound Output

- Check all cable connections (power, input, speaker).
- Ensure the correct input mode is selected (Bluetooth or RCA).
- Verify that the volume is not set to minimum on both the amplifier and the source device.
- If using headphones with T20X, ensure they are properly plugged in and that speaker outputs are expected to be muted.

### 6.2 Bluetooth Connectivity Issues

- Ensure the amplifier is in Bluetooth mode (blue indicator light).
- Clear previous pairings by holding the volume knob for 5 seconds and re-attempt pairing.
- Ensure your source device is within the 50ft/15m range.

### 6.3 Distorted Sound

- Reduce the volume on both the amplifier and source device.
- Check speaker wire connections for proper polarity.
- Ensure the impedance of your speakers is compatible with the amplifier.

## 7. SPECIFICATIONS

Feature	BT20A Pro	T20X
Max Output Power	300W x2 @ 4Ω	50W x2 @ 4Ω
Bluetooth Version	5.0	5.0
SNR	≥108dB	≥98dB
THD	≤0.005%	≤0.05%
Op-Amps	Replaceable NE5532	N/A
Vacuum Tubes	N/A	JAN 5654W (replaceable)
Headphone Impedance	N/A	16-300 ohms
Inputs	Bluetooth, RCA	Bluetooth, RCA
Outputs	Speaker Out, Pre-Out	Speaker Out, Headphone Out

## 8. WARRANTY & SUPPORT

Fosi Audio products typically come with a standard manufacturer's warranty. Please refer to your product packaging or the official Fosi Audio website for specific warranty terms and conditions.

For technical support, troubleshooting assistance, or any inquiries regarding your Fosi Audio amplifier, please visit the official Fosi Audio website: [www.fosiaudio.com](http://www.fosiaudio.com).