

ZK-HT21-3G

ZK-HT21-3G 2.1 Channel Bluetooth Audio Amplifier User Manual

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of the ZK-HT21-3G 2.1 Channel Bluetooth Audio Amplifier. This amplifier is designed to deliver high-quality audio output for stereo speakers and a dedicated subwoofer, featuring Bluetooth connectivity, APP control, and TWS (True Wireless Stereo) support.

2. SAFETY INSTRUCTIONS

- Ensure the power supply voltage matches the amplifier's requirements to prevent damage.
- Do not expose the device to water, moisture, or extreme temperatures.
- Avoid placing the amplifier in direct sunlight or near heat sources.
- Ensure adequate ventilation around the amplifier to prevent overheating.
- Do not attempt to disassemble or modify the amplifier. Refer all servicing to qualified personnel.
- Keep out of reach of children.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- ZK-HT21-3G Amplifier Board
- Control Knobs (Volume, Treble, Bass, Subwoofer Frequency)
- Connecting Cables for Control Knobs
- User Manual (this document)

4. PRODUCT OVERVIEW

The ZK-HT21-3G amplifier board integrates various components for audio processing and amplification. Key features include multiple input/output terminals and dedicated interfaces for external control knobs.

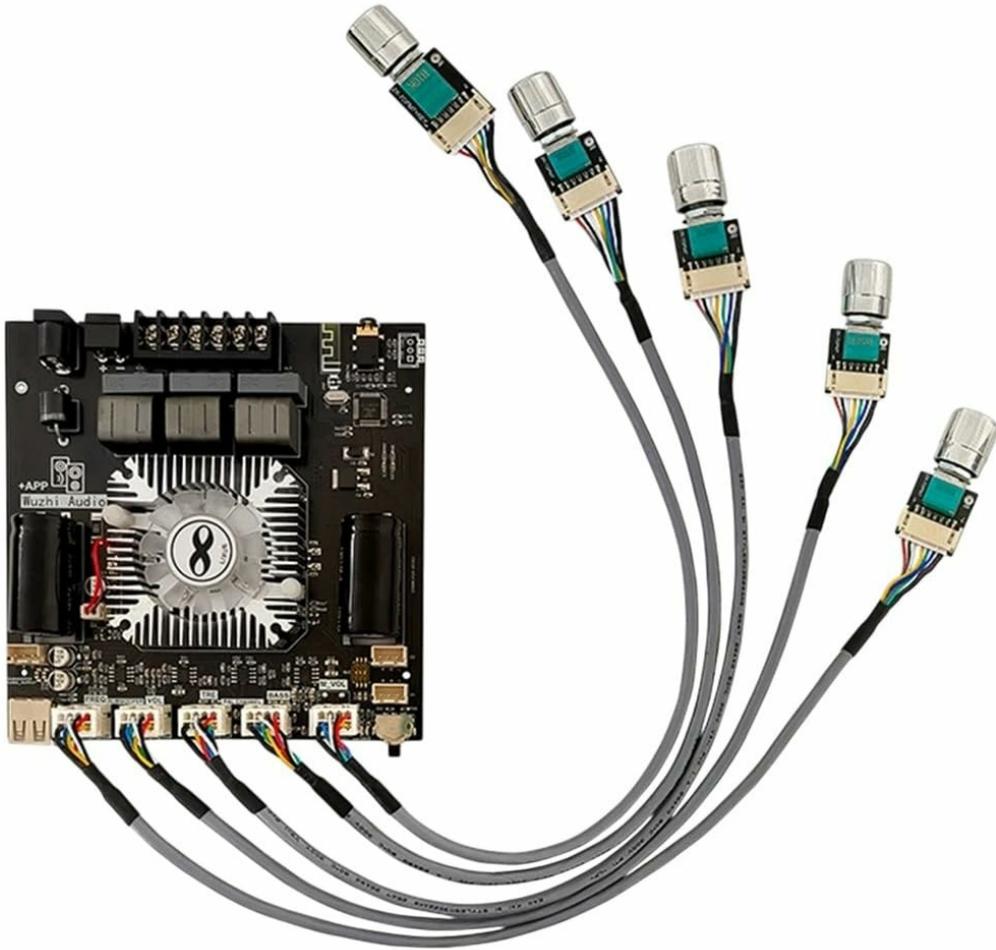


Image 1: ZK-HT21-3G Amplifier Board with Control Knobs. This image displays the main amplifier circuit board, featuring a central heatsink, various input/output terminals, and several connected cables leading to individual control knobs for audio adjustments.

The board includes terminals for power input, speaker outputs (left, right, subwoofer), and audio input. The external control knobs allow for precise adjustment of master volume, treble, bass, and subwoofer frequency cutoff.

5. SETUP

5.1 Connecting Speakers

1. **Stereo Speakers:** Connect your left and right passive speakers to the designated L/R speaker output terminals on the amplifier board. Ensure correct polarity (+ to + and - to -).
2. **Subwoofer:** Connect your passive subwoofer to the dedicated subwoofer output terminal. Observe correct polarity.

5.2 Connecting Control Knobs

Connect the provided cables from the control knobs (Volume, Treble, Bass, Subwoofer Frequency) to their

corresponding ports on the amplifier board. Ensure secure connections.

5.3 Connecting Power Supply

Connect a compatible DC power adapter (not included, refer to specifications for voltage and current requirements) to the power input terminal on the amplifier board. Ensure the power supply is off before connecting.

6. OPERATING INSTRUCTIONS

6.1 Powering On/Off

After all connections are made, turn on the power supply. The amplifier will power on. To power off, disconnect the power supply.

6.2 Bluetooth Pairing

1. Ensure the amplifier is powered on.
2. On your mobile device, enable Bluetooth and search for available devices.
3. Select "ZK-HT21-3G" (or similar name) from the list to pair. A confirmation sound may indicate successful pairing.

6.3 APP Control

The amplifier supports control via a dedicated mobile application. Download the relevant application (details typically provided via QR code on packaging or product information) and follow the in-app instructions to connect and control the amplifier's functions.

6.4 TWS Function

The amplifier supports True Wireless Stereo (TWS) functionality, allowing two ZK-HT21-3G units to be paired together for a wider stereo soundstage. Refer to the APP or specific product documentation for TWS pairing instructions.

6.5 Adjusting Audio

- **Volume:** Use the Master Volume knob to adjust the overall sound level.
 - **Treble:** Use the Treble knob to adjust the high-frequency response.
 - **Bass:** Use the Bass knob to adjust the low-frequency response.
 - **Subwoofer Frequency:** Use the Subwoofer Frequency knob to set the crossover point for the subwoofer output.
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7. MAINTENANCE

- **Cleaning:** Use a soft, dry cloth to clean the amplifier. Do not use liquid cleaners or solvents.
- **Storage:** When not in use for extended periods, store the amplifier in a cool, dry place away from direct sunlight.
- **Ventilation:** Ensure the heatsink and ventilation areas remain clear of dust and obstructions.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
No power	Incorrect power supply; Loose power connection	Verify power adapter specifications; Check power cable connection.
No sound output	Incorrect speaker wiring; No audio source; Low volume	Check speaker polarity and connections; Ensure audio source is playing; Increase master volume.
Bluetooth connection issues	Device too far; Interference; Amplifier not in pairing mode	Move device closer; Reduce interference; Restart amplifier and try pairing again.
Distorted sound	Volume too high; Improper gain settings; Speaker impedance mismatch	Reduce volume; Adjust input gain (if available); Ensure speakers match amplifier's impedance range.

9. SPECIFICATIONS

- **Model:** ZK-HT21-3G
- **Channels:** 2.1 (Left, Right, Subwoofer)
- **Output Power:** 160W x 2 (Stereo), 220W (Subwoofer)
- **Amplifier Chip:** TDA7498E
- **Connectivity:** Bluetooth, APP Control, TWS Support
- **Material:** Electronic components, Metal
- **Operating Temperature:** Standard
- **Power Input:** DC (Voltage and Current specifications typically found on product label or separate documentation)

10. WARRANTY AND SUPPORT

This product is designed for reliable performance. For any questions or concerns regarding the ZK-HT21-3G amplifier, please refer to the seller's support channels. A money-back guarantee may be offered, subject to the seller's terms and conditions.