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› BTZGNDMIO XY-AS21HPA 2.1 Channel Audio Amplifier Board User Manual

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Model: XY-AS21HPA

INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your BTZGNDMIO XY-AS21HPA 300W*2+600W Audio Amplifier Board. This high-power TPA3255 HiFi stereo amplifier module is designed for 2.1 channel audio systems, including a dedicated subwoofer output. Please read this manual thoroughly before using the product to ensure proper function and safety.

SAFETY INFORMATION

- Ensure the power supply voltage is within the specified range (DC 19-51V). Using an incorrect voltage can damage the device.
- Do not expose the amplifier board to moisture, water, or extreme temperatures.
- Avoid placing the device in direct sunlight or near heat sources.
- Do not attempt to disassemble or modify the amplifier board. Refer all servicing to qualified personnel.
- Ensure proper ventilation around the amplifier board to prevent overheating.
- Always disconnect power before making any connections or disconnections.

PACKAGE CONTENTS

Please check the package for the following items:

- BTZGNDMIO XY-AS21HPA Audio Amplifier Board
- Quick Start Guide
- *(Additional accessories may vary by package)*

PRODUCT OVERVIEW

The XY-AS21HPA is a high-performance 2.1 channel audio amplifier board featuring the TPA3255 chip. It delivers a powerful output of 300W per stereo channel and 600W for the subwoofer, providing a rich and dynamic audio experience. This module is designed for HiFi sound reproduction and offers versatile connectivity options.

CABLE CONNECTIONS AND FUNCTIONS

Refer to the diagram below for a detailed overview of the amplifier board's connections and controls.

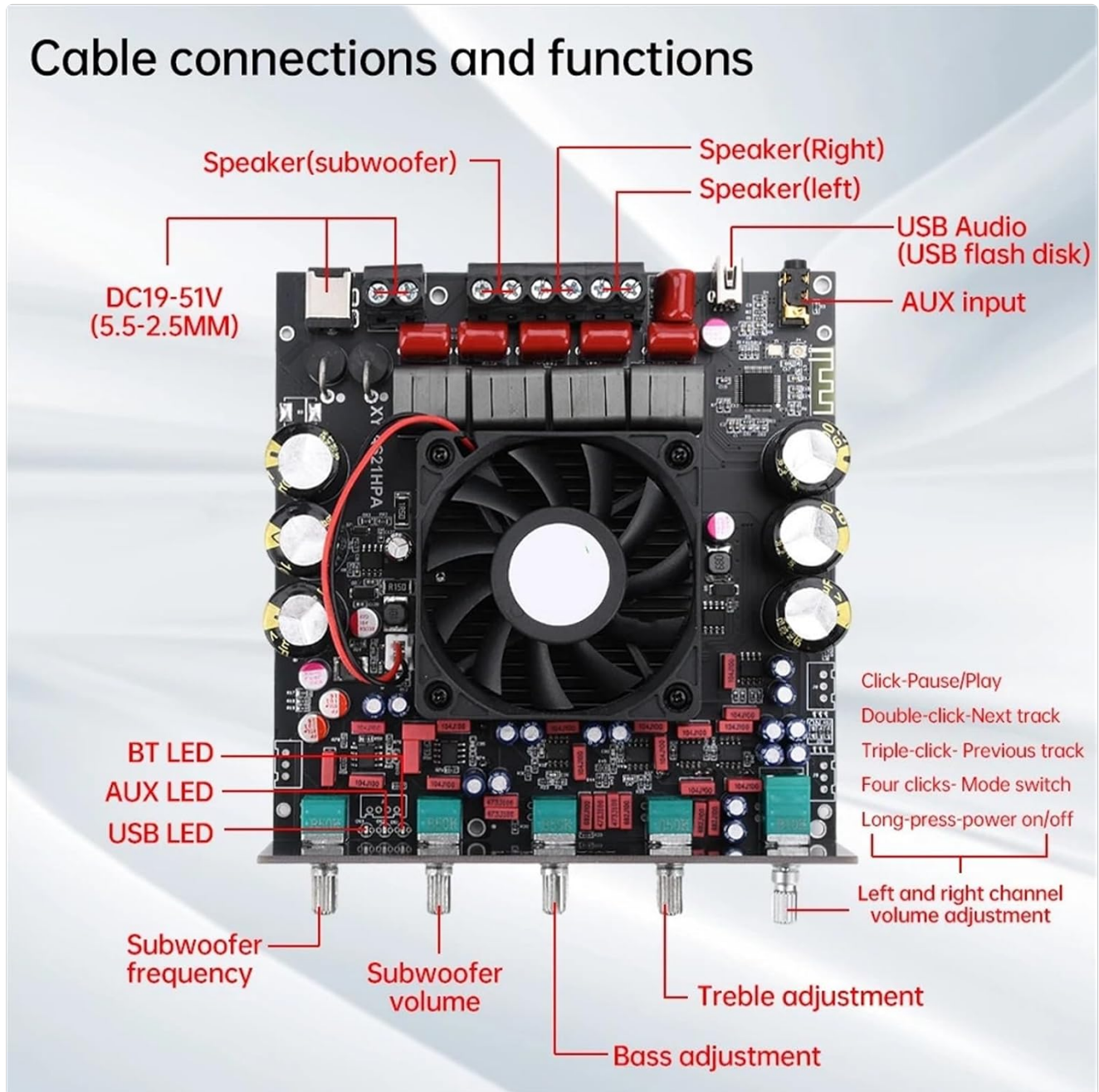


Figure 1: BTZGNDMIO XY-AS21HPA Amplifier Board Layout. This image illustrates the various input/output ports, control knobs, and LED indicators on the amplifier board. Key components include power input, speaker outputs, audio inputs (AUX, USB), and adjustment potentiometers for subwoofer frequency, subwoofer volume, bass, treble, and main volume.

- 1. DC 19-51V (5.5-2.5MM):** Power input terminal. Connect a DC power supply within the specified voltage range. Ensure correct polarity.
- 2. Speaker (Subwoofer):** Output terminals for connecting your passive subwoofer.
- 3. Speaker (Right):** Output terminals for connecting the right channel passive speaker.
- 4. Speaker (Left):** Output terminals for connecting the left channel passive speaker.

- 5. **USB Audio (USB flash disk):** USB input port for playing audio files directly from a USB flash drive.
- 6. **AUX Input:** 3.5mm auxiliary audio input jack for connecting external audio sources (e.g., smartphone, PC).
- 7. **BT LED:** Bluetooth indicator light. Illuminates when Bluetooth is active or paired.
- 8. **AUX LED:** Auxiliary input indicator light. Illuminates when AUX input is selected.
- 9. **USB LED:** USB audio input indicator light. Illuminates when USB input is selected.
- 10. **Subwoofer Frequency:** Rotary knob to adjust the crossover frequency for the subwoofer output.
- 11. **Subwoofer Volume:** Rotary knob to adjust the volume level of the subwoofer output.
- 12. **Treble Adjustment:** Rotary knob to adjust the high-frequency response of the main stereo channels.
- 13. **Bass Adjustment:** Rotary knob to adjust the low-frequency response of the main stereo channels.
- 14. **Left and Right Channel Volume Adjustment:** Rotary knob to control the overall volume of the left and right stereo channels.
- 15. **Multi-function Button:**
 - **Click:** Pause/Play audio.
 - **Double-click:** Next track.
 - **Triple-click:** Previous track.
 - **Four clicks:** Mode switch (e.g., between Bluetooth, AUX, USB).
 - **Long-press:** Power on/off.

SETUP AND INSTALLATION

1. **Power Off:** Ensure the amplifier board is powered off and disconnected from any power source before making connections.
2. **Connect Speakers:**
 - Connect your passive left speaker to the "Speaker (Left)" terminals.
 - Connect your passive right speaker to the "Speaker (Right)" terminals.
 - Connect your passive subwoofer to the "Speaker (Subwoofer)" terminals.
 - Ensure correct polarity (+ to + and - to -) for all speaker connections.
3. **Connect Audio Source:**
 - **AUX Input:** Connect an audio cable from your source device (e.g., smartphone, PC) to the "AUX Input" jack.
 - **USB Audio:** Insert a USB flash drive containing audio files into the "USB Audio" port.
 - **Bluetooth:** For Bluetooth connection, ensure no other audio source is active and the amplifier is in Bluetooth mode (indicated by BT LED). Pair with your device.
4. **Connect Power:** Connect a DC 19-51V power supply (5.5-2.5MM connector) to the "DC 19-51V" input.
5. **Power On:** Long-press the multi-function button to power on the amplifier.

OPERATING INSTRUCTIONS

- **Power On/Off:** Long-press the multi-function button.
- **Mode Selection:** Four clicks on the multi-function button will cycle through available input modes (Bluetooth, AUX, USB). The corresponding LED (BT, AUX, USB) will illuminate.
- **Volume Adjustment:** Use the "Left and Right Channel Volume Adjustment" knob for overall stereo volume. Use the "Subwoofer Volume" knob for subwoofer level.

- **Tone Control:** Adjust "Bass Adjustment" and "Treble Adjustment" knobs to fine-tune the sound. Use "Subwoofer Frequency" to set the subwoofer's upper frequency limit.
- **Playback Control (USB/Bluetooth):**
 - **Click:** Play/Pause.
 - **Double-click:** Next track.
 - **Triple-click:** Previous track.

MAINTENANCE

- Keep the amplifier board clean and free from dust. Use a soft, dry cloth for cleaning.
- Do not use liquid cleaners or solvents.
- Ensure adequate airflow around the board, especially around the cooling fan, to prevent dust buildup and maintain optimal operating temperature.

TROUBLESHOOTING

Problem	Possible Cause	Solution
No power	Incorrect power supply voltage; loose power connection; power supply failure.	Verify power supply is DC 19-51V. Check power cable connection. Test power supply. Long-press power button.
No sound	Incorrect input mode selected; loose audio cable; speaker wires disconnected; volume too low; source device issue.	Ensure correct input mode (AUX, USB, BT) is selected. Check all audio and speaker connections. Increase volume. Verify source device is playing audio.
Distorted sound	Volume too high; impedance mismatch with speakers; poor audio source quality; faulty speaker.	Reduce volume. Ensure speakers are compatible (4-8 ohms recommended). Test with a different audio source. Check speaker condition.
Bluetooth connection issues	Amplifier not in Bluetooth mode; device too far; interference; device not paired.	Ensure BT LED is on. Move device closer. Re-pair the device. Avoid strong interference sources.

SPECIFICATIONS

Model	XY-AS21HPA
Output Power	2 x 300W (Stereo) + 600W (Subwoofer)
Amplifier Chip	TPA3255
Channels	2.1 Channel
Power Input	DC 19-51V (5.5-2.5MM connector)
Audio Inputs	AUX (3.5mm), USB Audio (Flash Disk), Bluetooth
Item Weight	1.76 ounces

Package Dimensions	0.39 x 0.39 x 0.39 inches
Manufacturer	BTZGNDMIO

WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or contact the manufacturer directly. Keep your purchase receipt as proof of purchase.