

Manuals+

[Q & A](#) | [Deep Search](#) | [Upload](#)

[manuals.plus](#) /

› [Hosyond](#) /

› [Hosyond Bluetooth 5.0 50W+50W+100W 2.1 Channel Subwoofer Amplifier Board User Manual](#)

Hosyond H017

Hosyond Bluetooth 5.0 2.1 Channel Subwoofer Amplifier Board User Manual

Model: H017
Brand: Hosyond

1. INTRODUCTION

This user manual provides detailed instructions for the Hosyond Bluetooth 5.0 2.1 Channel Subwoofer Amplifier Board (Model H017). This amplifier board is designed for DIY home theater and wireless speaker projects, offering high-fidelity audio output with versatile connectivity options.

Key Features:

- **TPA3116D2 HiFi Chip Solution:** Delivers stereo dual-channel output (50W+50W) and a dedicated subwoofer channel (100W) for continuous high-power operation with low total harmonic distortion (THD 0.1%). Features high-quality filter inductors for clear and full sound.
- **Bluetooth 5.0 and AUX Audio Input:** Supports Bluetooth 5.0 for efficient and long-distance wireless audio streaming. A 3.5mm AUX jack is also available for wired audio input from non-Bluetooth devices.
- **Comprehensive Safety Protection:** Equipped with overheat protection, reverse connection protection, circuit breaker protection, and overvoltage/undervoltage protection to ensure safe and reliable operation.
- **User-Friendly Design:** Features copper DC connectors and barrier terminals for secure and heat-resistant wiring. Includes a free DC head lead for easy power connection.
- **Independent Tone Controls:** Independent knobs for high and low bass control, along with master volume, allow for precise audio customization and a theater-like sound experience.

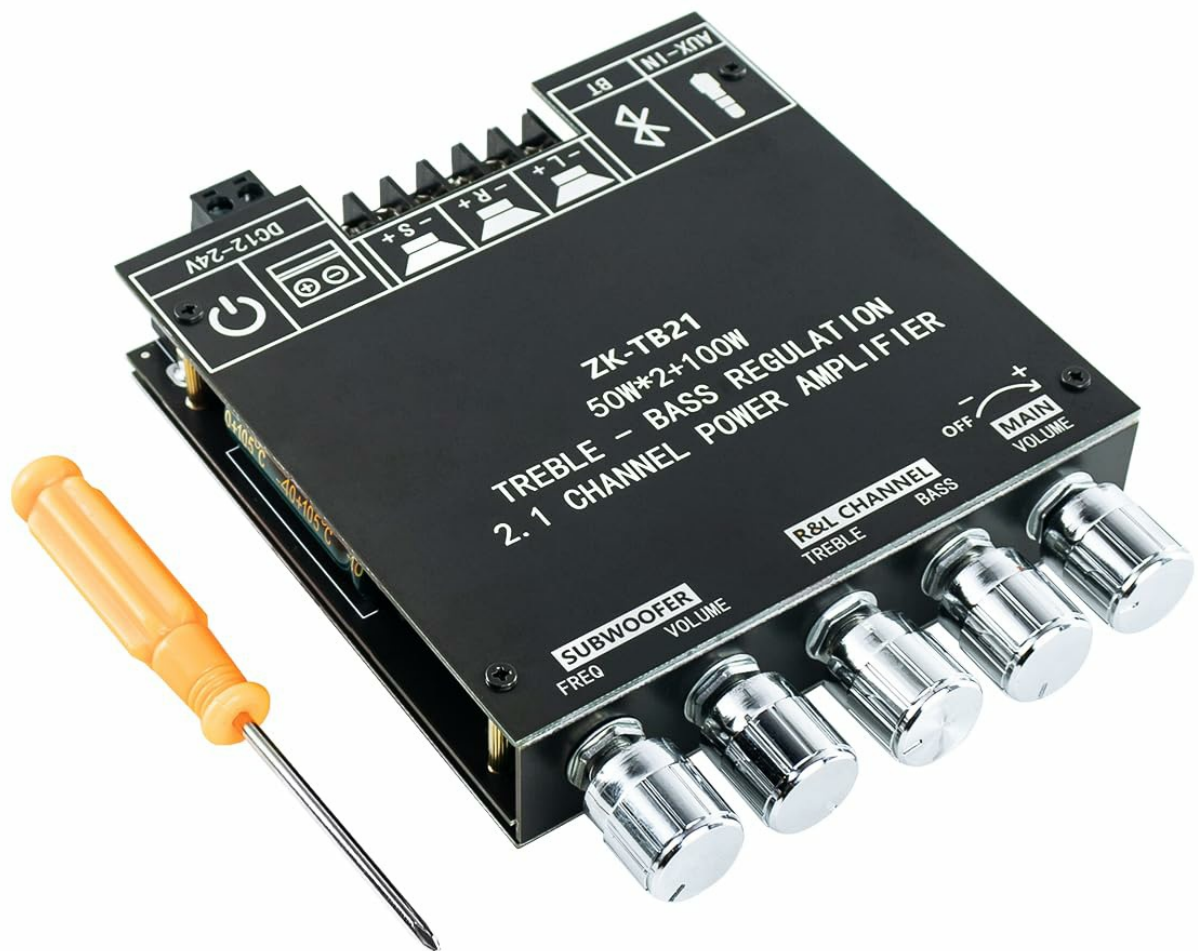


Figure 1.1: The Hosityond Bluetooth 5.0 2.1 Channel Subwoofer Amplifier Board, shown with a small screwdriver for terminal connections.

2. SETUP

Follow these steps to set up your amplifier board:

1. **Power Supply Connection:** Connect a DC 12-24V power supply to the amplifier board. The board supports both 2-pin input socket and 5.5*2.1MM socket. Ensure the power supply meets the voltage and current requirements (recommended 24V, 5A or higher for full potential).
2. **Speaker Connections:**
 - Connect your passive stereo speakers to the R+ / R- (Right Channel) and L+ / L- (Left Channel) terminals.
 - Connect your subwoofer to the S+ / S- (Subwoofer Channel) terminals.
 - Use thicker speaker wires for optimal performance and secure connections.

3. Audio Input Selection:

- For Bluetooth audio, ensure your device's Bluetooth is enabled and pair with the amplifier board.
- For wired audio, connect your audio source (e.g., MP3 player, PC, TV) to the 3.5mm AUX IN jack.



Figure 2.1: Detailed connection diagram for the amplifier board, illustrating speaker outputs, power input, and audio input options.



Easy to Connect

You only need to use thicker speaker wires to connect the speakers easily, which is easy to operate.



Large Heat Sink

The large heat sink can quickly release heat to ensure that the chip can stably output large-scale power and avoid damage to the chip.



Large Capacitance

Ensure stable output of audio signals, provide instantaneous peak current, and protect equipment from power changes

Figure 2.2: Close-up view of the easy-to-connect barrier terminals and internal components like the large heat sink and capacitance, ensuring stable power delivery.

Setup Demonstration Video:



Video 2.1: This video demonstrates the physical setup of the Hositynd Bluetooth 5.0 2.1 Channel Subwoofer Amplifier Board, including power and speaker connections, and initial power-on.

3. OPERATING INSTRUCTIONS

Once connected, operate the amplifier board using the following methods:

Audio Input Modes:

- **Bluetooth Mode:**

After powering on, the amplifier board will automatically enter Bluetooth pairing mode. Search for "Hosyond H017" (or similar name) on your Bluetooth-enabled device and connect. A confirmation sound will indicate successful pairing. You can then stream audio wirelessly.



Figure 3.1: The amplifier board seamlessly integrates with a smartphone for wireless audio streaming via Bluetooth 5.0.

- **AUX Input Mode:**

Connect your audio source to the 3.5mm AUX IN jack. The amplifier will automatically switch to AUX input. Disconnect the AUX cable to revert to Bluetooth mode.

What is in the package?

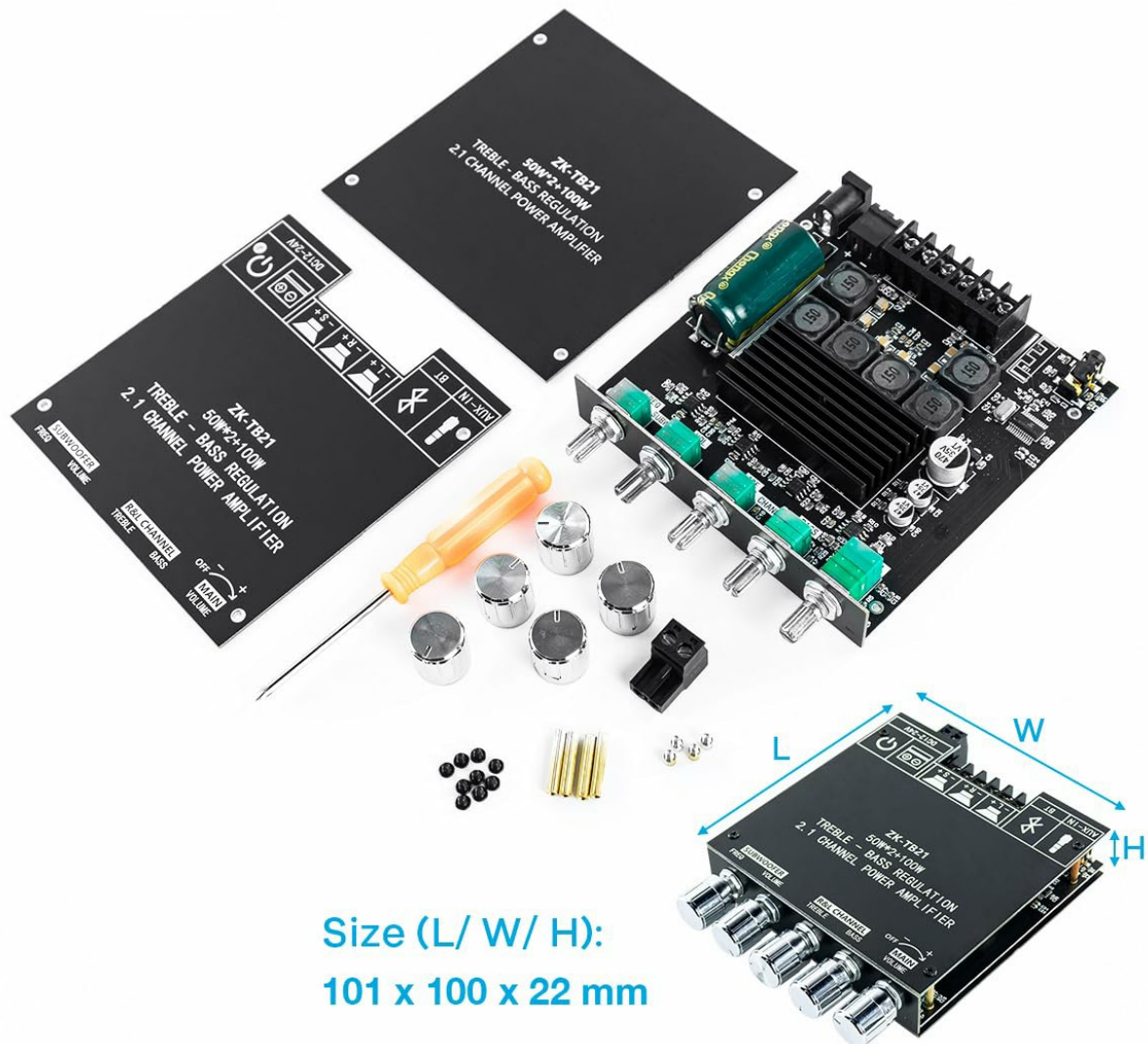


Figure 3.2: The amplifier board supports wired audio input through its 3.5mm AUX jack, connecting to devices like laptops.

Control Knobs:

The amplifier board features five control knobs for precise audio adjustment:

- **Main Volume:** Adjusts the overall output volume of all channels.
- **R&L Channel Treble:** Controls the high-frequency response of the right and left stereo channels.
- **R&L Channel Bass:** Controls the low-frequency response of the right and left stereo channels.
- **Subwoofer Volume:** Adjusts the volume level of the dedicated subwoofer output.
- **Subwoofer Freq (Frequency):** Adjusts the crossover frequency for the subwoofer, allowing you to fine-tune its integration with your main speakers.

4. MAINTENANCE

To ensure the longevity and optimal performance of your amplifier board, follow these maintenance guidelines:

- **Cleaning:** Use a soft, dry cloth to clean the surface of the amplifier board. Do not use liquid cleaners or solvents, as they may damage the components.
- **Ventilation:** Ensure adequate airflow around the amplifier board to prevent overheating. Do not obstruct the heat sink.
- **Storage:** When not in use for extended periods, store the amplifier board in a cool, dry place away from direct sunlight and extreme temperatures.
- **Handling:** Handle the board with care to avoid damaging sensitive electronic components. Avoid dropping or subjecting it to strong impacts.

5. TROUBLESHOOTING

If you encounter issues with your amplifier board, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No sound output.	<ul style="list-style-type: none"> • Incorrect power supply. • Loose speaker connections. • Incorrect audio input selection. • Volume knobs turned down. 	<ul style="list-style-type: none"> • Verify power supply is DC 12-24V and sufficient amperage (e.g., 24V 5A). • Check all speaker wire connections at the terminals. • Ensure correct input mode (Bluetooth or AUX) is active. • Increase Main Volume and individual channel volumes.
Distortion or "screeching" at higher volumes.	<ul style="list-style-type: none"> • Input audio source volume too low. • Amplifier volume too high relative to input. • Speakers not rated for the output power. 	<ul style="list-style-type: none"> • Increase the volume on your audio source device (phone, PC) and keep the amplifier's Main Volume knob at a lower setting (e.g., 10-15%). • Ensure speakers are compatible with the amplifier's output power.
Humming, buzzing, or clicking noise.	<ul style="list-style-type: none"> • Ground loop interference. • Poor quality wiring. • Bluetooth interference. 	<ul style="list-style-type: none"> • Ensure all components are properly grounded. • Use high-quality, shielded audio cables and speaker wires. • Try moving the amplifier away from other electronic devices. • If using Bluetooth, try AUX input to isolate the issue.

Problem	Possible Cause	Solution
Bluetooth connection issues.	<ul style="list-style-type: none"> • Device not in pairing mode. • Too far from the amplifier. • Interference from other devices. 	<ul style="list-style-type: none"> • Ensure the amplifier is powered on and in Bluetooth mode. • Move your Bluetooth device closer to the amplifier. • Turn off other Bluetooth devices nearby. • Try restarting both the amplifier and your Bluetooth device.

6. SPECIFICATIONS

Feature	Detail
Model Number	H017
Audio Chip	TPA3116D2
Channels	2.1 Channel (Stereo R&L + Subwoofer)
Output Power (R&L)	50W + 50W
Output Power (Subwoofer)	100W
Total Harmonic Distortion (THD)	0.1%
Bluetooth Version	5.0
Audio Inputs	Bluetooth, 3.5mm AUX
Input Voltage (DC)	12-24V
Output Impedance	4-8
Protection Features	Overheat, Reverse Connection, Circuit Breaker, Overvoltage, Undervoltage
Dimensions (L x W x H)	5.16 x 4.41 x 1.97 inches (approx. 13.1 x 11.2 x 5 cm)
Weight	7.9 ounces (approx. 224 grams)
Mounting Type	Surface Mount

DUAL TPA3116D2 AYVQ HI-FI CHIP

Peak Power Up to 100w + 100w



Power Output Comparison Table(@1KHZ)

Input Voltage	R&L Channel Output		Subwoofer Output	
	Speaker Impedance	Output Power	Speaker Impedance	Output Power
12V	8Ω	15W	8Ω	20W
	4Ω	30W	4Ω	35W
19V	8Ω	20W	8Ω	35W
	4Ω	40W	4Ω	60W
24V	8Ω	30W	8Ω	50W
	4Ω	50W	4Ω	100W

- There will be sufficient output power only when the power supply voltage and current are sufficient. Only a higher voltage can guarantee sufficient output power!
- Speakers with different resistance values will have different output power. In the case of sufficient voltage and current, the greater the ohm of the speaker, the smaller the relative sound power!
- It is recommended to use a power supply of 12-24V, 5A or more, and the speaker power is 50-100W for the best effect!

Figure 6.1: Power Output Comparison Table at 1KHz, detailing R&L Channel and Subwoofer Output Power based on Input Voltage and Speaker Impedance.

7. WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the product packaging or contact Hosityond customer service directly. Keep your purchase receipt for warranty claims.