QINIZX 2.1CH 6W+6W+25W

QINIZX Digital 2.1 Channel Subwoofer Amplifier Board TDA1517P User Manual

Model: 2.1CH 6W+6W+25W

Introduction

This manual provides detailed instructions for the setup, operation, and maintenance of your QINIZX Digital 2.1 Channel Subwoofer Amplifier Board. This compact amplifier board is designed for various audio applications, including home TV audio, car speakers, multimedia audio, and computer desktop speaker systems. Please read this manual thoroughly before use to ensure proper functionality and longevity of the product.

Product Specifications

Feature	Specification
Model Number	2.1CH 6W+6W+25W
Output Power (Left/Right Channel)	6W + 6W
Output Power (Bass Channel)	Maximum 25W
Recommended Left/Right Speakers	2-4 inch, 4-8Ω, 3-25W full-range speakers
Recommended Bass Speaker	4-6 inch, 4-6Ω, 20-50W subwoofer speaker
Power Input	DC 6.5V - 15V (Recommended >13.5V DC for optimal performance)
Recommended Current	>3A
Power Interface	5.5*2.1 DC socket or welding pad
Audio Input Interface	3.5mm plug or welding pad
Amplifier Chip	TDA1517P
Board Dimensions (LxWxH)	2.48 x 1.77 x 0.78 inches (excluding potentiometer handle)

Potentiometer Handle Length	0.59 inches
Potentiometer Shaft Center Distance	0.94 inches (24mm)
Potentiometer Mounting Hole Diameter	0.28 inches (7mm)
PCB Material	FR-4 fiberglass board, 1.6mm thickness

What's in the Box

- 1 x QINIZX 2.1 Channel Amplifier Board

Setup Instructions

Follow these steps to correctly set up your amplifier board:

1. Identify Components

Familiarize yourself with the various connection points and controls on the amplifier board.



Image: Top view of the amplifier board with key components labeled, including power input, audio input, speaker outputs, and volume potentiometers.

- **DC 5.5-2.1mm Power Input:** Located at the top right, for connecting the power supply.
- **Power Welding Pad:** Alternative power input connection point.
- **3.5mm Audio Input:** Located on the right side, for connecting audio sources.
- **Audio Input Welding Pad:** Alternative audio input connection point.

- **Left/Right Channel Output:** Blue screw terminal block on the top left for connecting stereo speakers.
- **Bass Output:** Blue screw terminal block on the top left for connecting the subwoofer.
- **Total Volume Potentiometer:** The rightmost knob for overall volume control.
- **Bass Volume Potentiometer:** The leftmost knob for adjusting bass level.
- **M3 Fixing Hole:** Mounting holes for securing the board.

2. Power Connection

1. Ensure the amplifier board is disconnected from all other components before connecting power.
2. Connect a DC power supply (6.5V to 15V, recommended >13.5V DC with >3A current) to the 5.5*2.1mm DC socket or solder wires to the designated power welding pads.
3. Verify correct polarity if using welding pads.

3. Audio Input Connection

1. Connect your audio source (e.g., smartphone, computer, TV) to the 3.5mm audio input jack using a standard 3.5mm audio cable.
2. Alternatively, solder audio input wires to the audio input welding pads (L, G, R for Left, Ground, Right).

4. Speaker Connections

Connect your speakers to the blue screw terminal block. Ensure correct polarity (+/-) for each speaker.



Image: Angled view of the amplifier board, highlighting the blue screw terminal block for speaker connections.

- **Left and Right Channels:** Connect your 2-4 inch, 4-8Ω, 3-25W full-range speakers to the "L+" and "L-" terminals for the left channel, and "R+" and "R-" terminals for the right channel.
- **Bass Channel:** Connect your 4-6 inch, 4-6Ω, 20-50W subwoofer speaker to the "BASS+" and "BASS-" terminals.

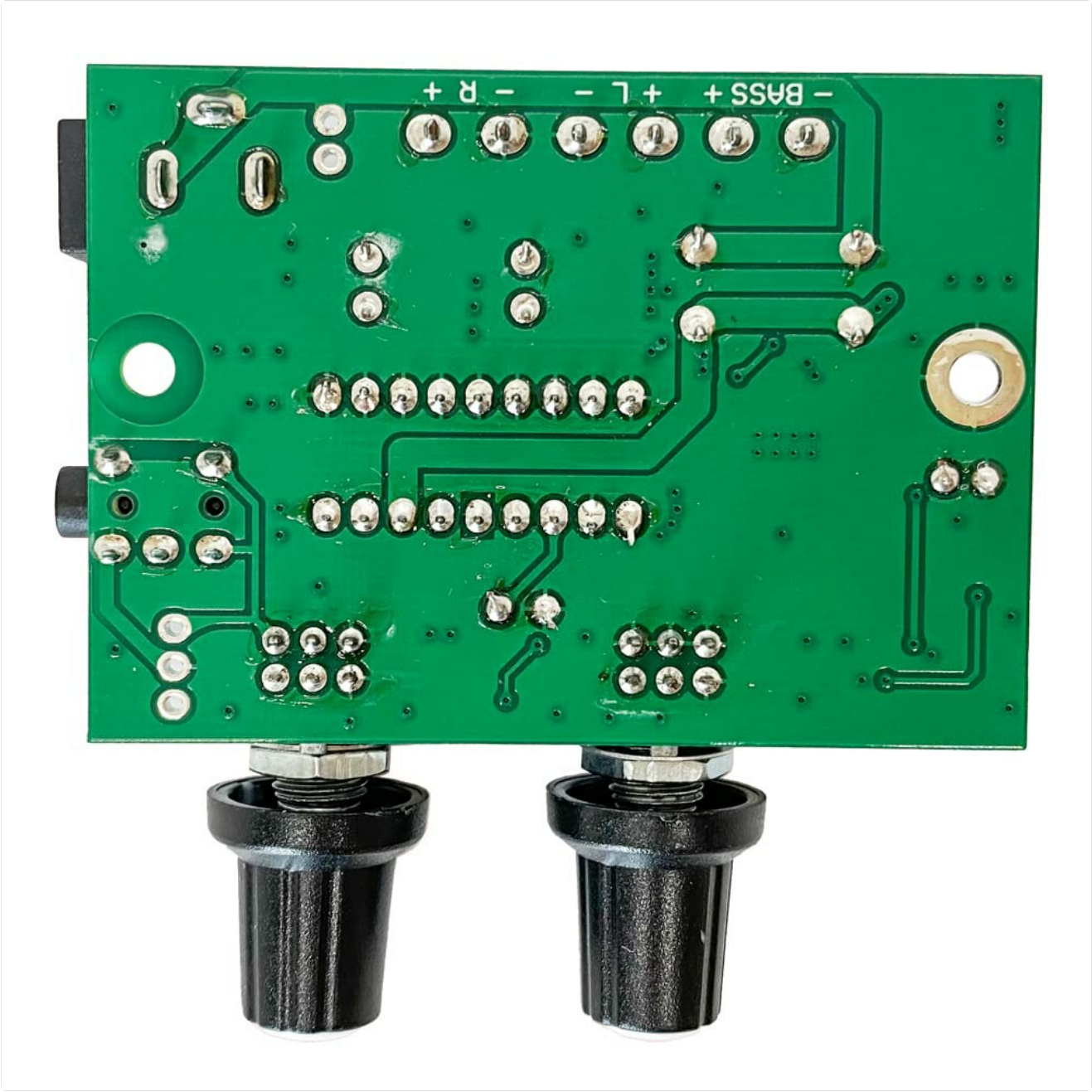


Image: Top-down view of the amplifier board, showing speaker wires connected to the blue terminal block.

Note: *Ensure all connections are secure to prevent short circuits or poor audio quality.*

Operating Instructions

Once all connections are made, you can begin operating your amplifier board.

1. Power On

Connect the power supply to an electrical outlet. The amplifier board will power on automatically as there is no dedicated power switch. It is recommended to turn the volume knobs to their minimum position before powering on to avoid sudden loud sounds.

2. Adjust Volume

- **Total Volume:** Rotate the rightmost potentiometer knob clockwise to increase the overall volume.
- **Bass Volume:** Rotate the leftmost potentiometer knob clockwise to increase the bass level.

3. Audio Playback

Start playing audio from your connected source. Adjust the volume controls on both your audio source and the amplifier board to achieve the desired sound level and balance.



Image: An example application setup showing the amplifier board connected to a smartphone, two satellite speakers, and a subwoofer.

Maintenance

- Keep the amplifier board in a dry, dust-free environment.
- Avoid exposing the board to extreme temperatures or direct sunlight.
- Do not use harsh chemicals or abrasive materials for cleaning. A soft, dry cloth is sufficient.
- Ensure adequate ventilation around the board during operation to prevent overheating.

Troubleshooting

Problem	Possible Cause	Solution

No sound output	• Incorrect power supply voltage or current. • Loose or incorrect speaker connections. • Audio source not playing or volume too low. • Faulty audio cable.	• Verify power supply meets specifications (DC 6.5-15V, >3A). • Check all speaker wire connections for proper polarity and tightness. • Ensure audio source is active and its volume is up. • Try a different audio cable.
Distorted sound	• Volume set too high (clipping). • Speaker impedance mismatch. • Insufficient power supply.	• Reduce the volume on the amplifier and/or audio source. • Ensure speakers meet the recommended impedance (4-8Ω for L/R, 4-6Ω for Bass). • Use a power supply with sufficient current (>3A) and voltage (ideally >13.5V).
Popping sound when powering on/off	• Normal characteristic of some amplifier designs without soft-start/stop. • Power supply transient.	• This can be a common occurrence. Ensure volume is at minimum before connecting/disconnecting power. • Consider adding a dedicated power switch to your setup for controlled power cycling.

Warranty and Support

No specific warranty information is provided with this product. For technical support or inquiries, please refer to the seller or manufacturer, QINIZX, through your purchase platform.

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Details

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