

MakerHawk SDMGKR

MakerHawk Mini Bluetooth Amplifier Board 2x50W (Model: SDMGKR) Instruction Manual

Your guide to setting up and operating your audio amplifier module.

INTRODUCTION

Thank you for choosing the MakerHawk Mini Bluetooth Amplifier Board. This compact and powerful audio amplifier module is designed to enhance your audio experience, whether for DIY speakers, home theater systems, or car audio applications. Featuring Bluetooth 5.0 for stable and efficient wireless audio transmission, this module delivers a maximum output of 2x50W, ensuring high-quality sound. Its robust design includes essential protection mechanisms for reliable operation.

KEY FEATURES

- **Bluetooth 5.0:** Ensures higher transmission efficiency and a farther transmission distance for seamless wireless audio.
- **High Performance:** Dual-channel audio power amplifier module with a maximum output power of 2x50W.
- **Stable Power Supply:** Equipped with a 470uF 35V capacitor for stable power storage and heat dissipation.
- **Protection Mechanisms:** Includes short-circuit protection and overheating protection to prevent damage and ensure device longevity.
- **High-Quality Components:** Features a copper DC connector and fence-type terminals for large current handling without heat or wire damage.
- **User-Friendly Control:** A potentiometer adjusts volume and includes an integrated switch for easy control.
- **Versatile Application:** Ideal for DIY speakers, car audio, and home theater systems.

PACKAGE CONTENTS

Please verify that all items are present in your package:



Image: The MakerHawk Mini Bluetooth Amplifier Board along with its included accessories, such as screws, standoffs, a screwdriver, a heatsink, and a DC power cable.

- MakerHawk Mini Bluetooth Amplifier Board (Model: SDMGKR)
- Heatsink
- Volume Knob
- Mounting Hardware (screws, standoffs)
- Screwdriver
- DC Head Lead Cable

SPECIFICATIONS

Feature	Detail
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Feature	Detail
Model Number	SDMGKR
Output Power	2x50W (Dual Channel)
Bluetooth Version	5.0
Minimum Supply Voltage	5 Volts (DC)
Maximum Supply Voltage	24 Volts (DC)
Mounting Type	Surface Mount
Package Dimensions	4.45 x 2.72 x 1.93 inches
Item Weight	1.76 ounces

SETUP INSTRUCTIONS

1. **Attach Heatsink:** Carefully remove the backing adhesive from the heatsink and firmly attach it to the main chip on the amplifier board. This is crucial for proper heat dissipation.



Image: A heatsink being applied to the main chip of the amplifier board to ensure efficient cooling.

2. **Install Volume Knob:** Gently push the included volume knob onto the potentiometer shaft until it is securely seated.

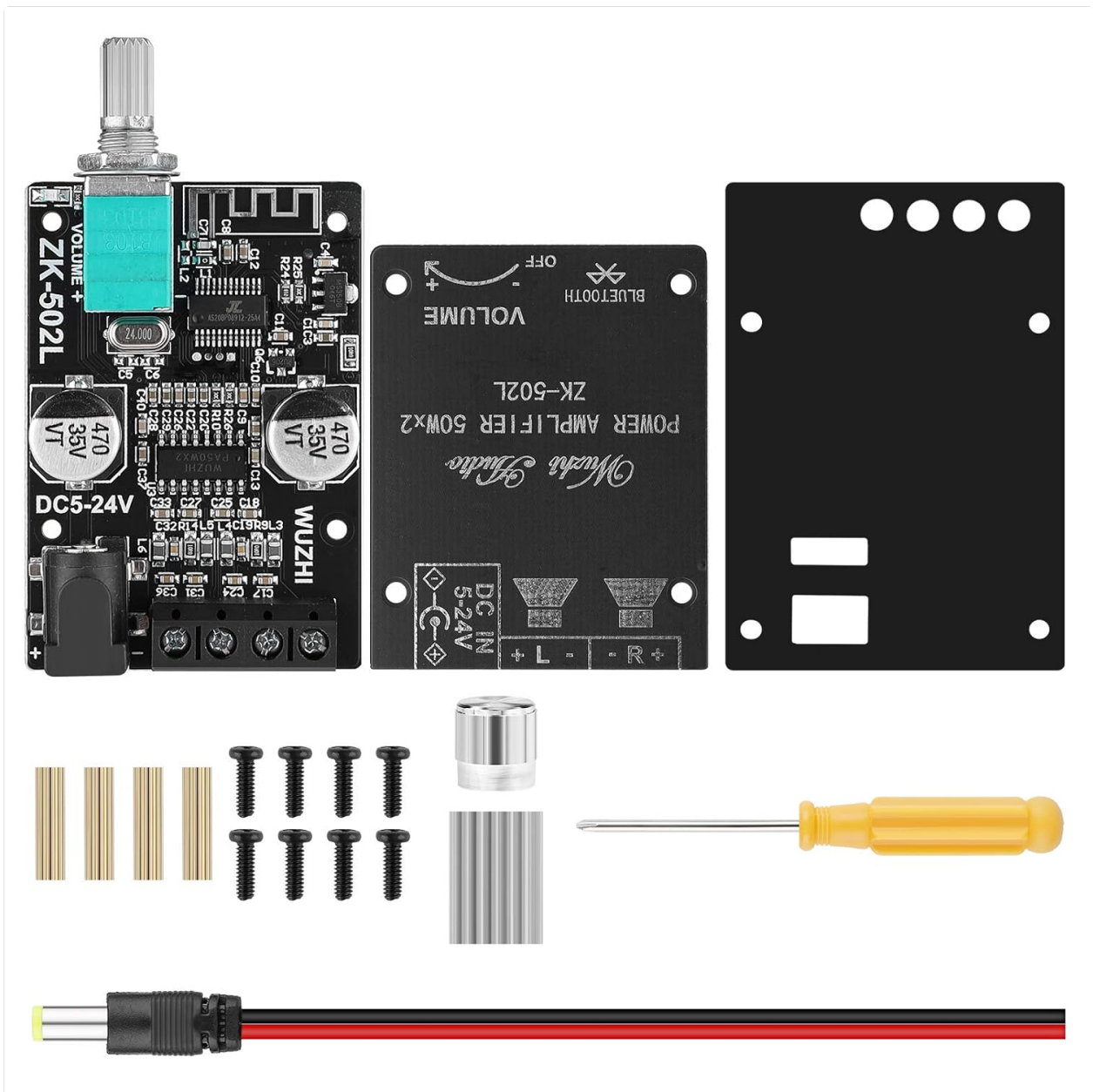


Image: The MakerHawk Mini Bluetooth Amplifier Board with the volume knob already installed, showing its compact design.

3. **Connect Speakers:** Connect your passive speakers to the "SPK+" and "SPK-" terminals on the amplifier board. Ensure correct polarity for optimal sound.

ONE KONB ADJUSTMENT

The potentiometer adjusts the volume with a switch for easy control of the volume

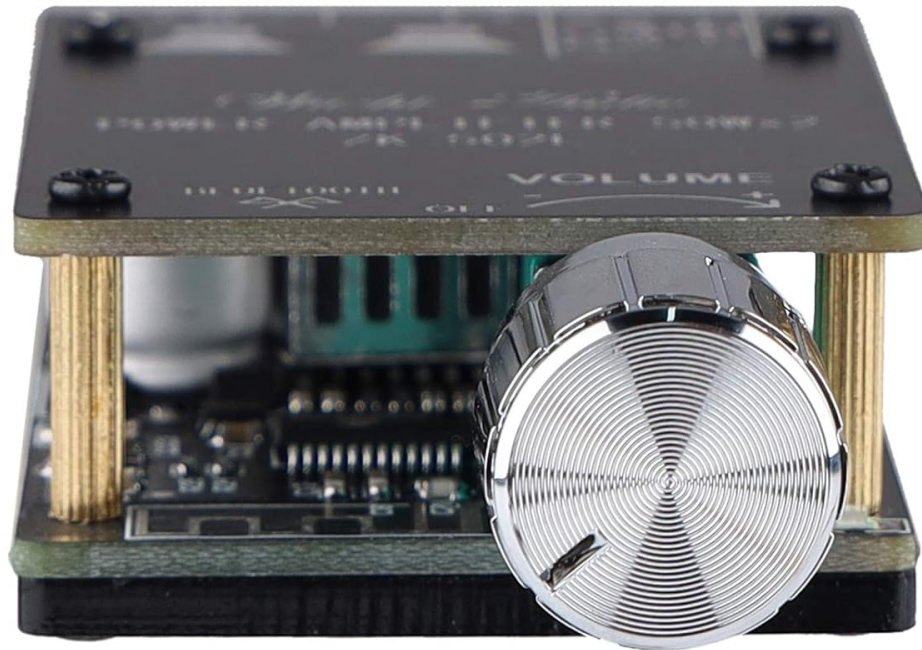


Image: A close-up of the amplifier board showing the terminals for speaker connections, labeled "SPK+" and "SPK-".

4. **Power Connection:** Connect a DC power supply (5V-24V) to the "DC5-24V" input terminal. You can use the provided DC head lead for easy wiring if you don't have a compatible adapter.

MAX OUTPUT POWER 50W*2

2.0 Channel, highly effectiveness, very suitable for home and desktop audio system use



Image: The amplifier board with the DC power input port clearly visible, ready for connection to a power source.

OPERATING INSTRUCTIONS

1. **Power On/Off:** Rotate the volume potentiometer clockwise to turn on the amplifier. A blue LED indicator will illuminate. Rotate counter-clockwise until it clicks to turn off.

MINI BLUETOOTH AMPLIFIER

Bluetooth 5.0 version, higher transmission efficiency, farther transmission distance



Image: A close-up of the volume knob, which also functions as the power switch for the amplifier board.

2. Bluetooth Pairing:

- Ensure the amplifier is powered on.
- On your mobile device, enable Bluetooth and search for available devices.
- Select "BT-WUZH" or a similar name from the list to pair.
- Once paired, you will hear a confirmation tone, and the blue LED may change its blinking pattern.

PROTECTION MECHANISM

Feature self-recovery short circuit protection and self-recovery overheat protection

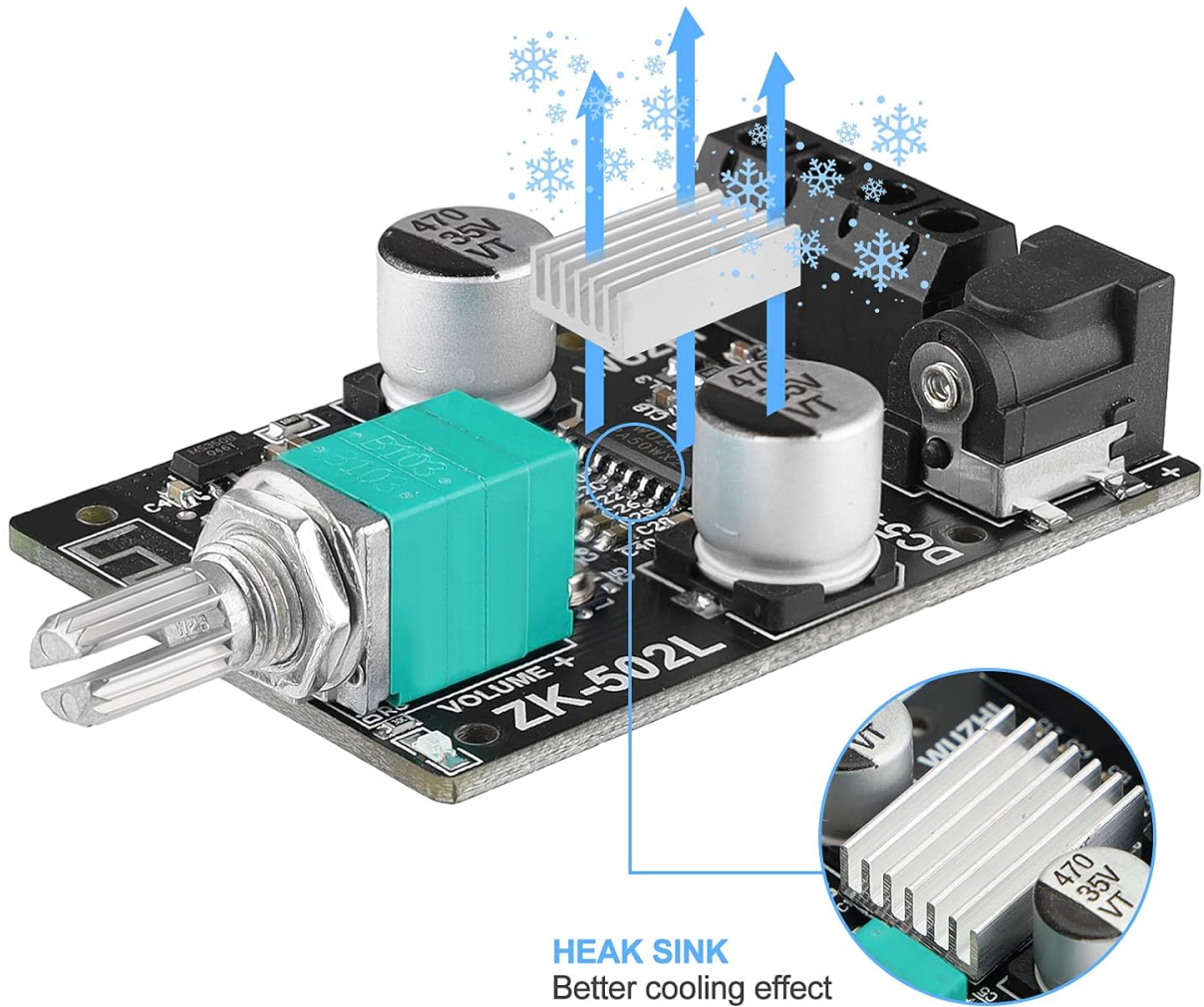


Image: A smartphone displaying a music player interface, wirelessly connected via Bluetooth to the amplifier board, which is powering two speakers.

3. **Audio Playback:** Once paired, play audio from your device. Adjust the volume using the potentiometer on the amplifier board and/or your source device.

MINI BLUETOOTH AMPLIFIER

Bluetooth 5.0 version, higher transmission efficiency, farther transmission distance



Image: A living room setup showing a smartphone connected to the amplifier board, which is driving two speakers, demonstrating its use in a home audio environment.

MAINTENANCE

- Keep the amplifier board clean and free from dust. Use a soft, dry cloth for cleaning.
- Ensure proper ventilation around the heatsink to prevent overheating.
- Avoid exposing the board to moisture or extreme temperatures.
- Regularly check all connections to ensure they are secure.

TROUBLESHOOTING

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
No sound	<ul style="list-style-type: none"> Power not connected or insufficient. Speakers incorrectly wired. Bluetooth not paired or source volume too low. 	<ul style="list-style-type: none"> Check power supply (5V-24V) and connections. Verify speaker polarity and connections. Ensure successful Bluetooth pairing and increase volume on both amplifier and source.
Distorted audio	<ul style="list-style-type: none"> Volume too high. Incompatible speakers. Power supply issues. 	<ul style="list-style-type: none"> Reduce volume on amplifier and source. Ensure speakers are compatible with 2x50W output. Use a stable power supply within the recommended voltage range.
Bluetooth connection issues	<ul style="list-style-type: none"> Device too far from amplifier. Interference. Previous pairing conflict. 	<ul style="list-style-type: none"> Move device closer to the amplifier. Avoid placing near other wireless devices. Forget the device on your phone and re-pair.

HELPFUL VIDEOS

DROK 5W+5W Mini Amplifier Board

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Video: This video demonstrates the basic functionality and connections of a DROK 5W+5W mini amplifier board, showcasing its use in a simple audio setup. Note: This video features a related product with similar functionality but different wattage.

Hosyond TDA7498E Bluetooth Amplifier Board 160W*2 220W

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Video: This video illustrates the setup and operation of a Hosyond TDA7498E Bluetooth amplifier board, demonstrating its connection to speakers and audio playback. Note: This video features a related product with similar functionality but different wattage.

ZK-1001U Mono Bluetooth Amplifier Board (Preview)

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Video: A brief preview demonstrating the ZK-1001U Mono Bluetooth Amplifier Board. This short clip shows the board in action, highlighting its compact size and basic function. Note: This video features a related product with similar functionality but different wattage.

WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the official MakerHawk website or contact their customer service directly. Keep your purchase receipt for warranty claims.

Manufacturer: MakerHawk

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This manual is for informational purposes only. Specifications are subject to change without notice.