

50W + 50W + 100W

2.1 Channels Bluetooth Power Amplifier Module

AUX+Bluetooth | Subwoofer+Left and right channel output



MINI
ZK-MT21

External antenna can be connected

Application scenarios

High Cost Performance
Digital Power Amplifier Module





Product Parameters

High Cost Performance
Digital Power Amplifier Module

Product Name : 2.1 channel audio amplifier module with Tone

Product Model : ZK-MT21

Bluetooth Version : 5.0 (no shielding, 15 meters)

Input Sensitivity: 500mV

Audio Input : AUX + Bluetooth

Channel : 2.1

Chip Solution : Domestic power amplifier chip

Power Range: DC 12~24 V / 5A above (Do not connect to 24V
battery pack)

Adapter Speaker : 20~100 W, 4~8 Ω

Output Power : Max 50W @ R&L channel
Max100W @ subwoofer

Protection Mechanism : Anti reverse connection、Overheat、Over-
current、Short circuit

Product Dimensions : 93mm*90mm*22mm

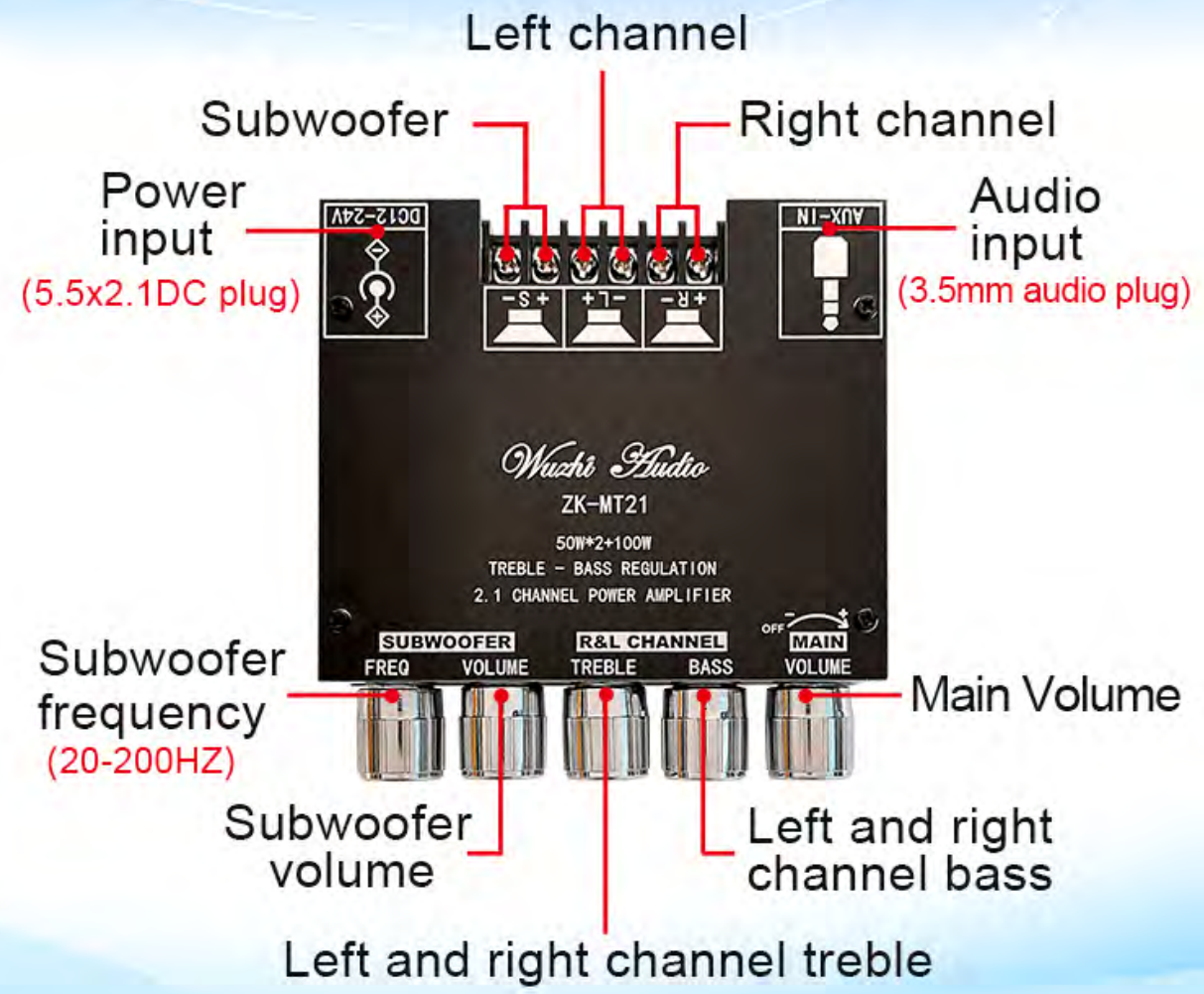
Package Weight : about 185g (packaging)

PS: In the audio input is enough, the supply voltage/current is enough, there will be
enough output power! The higher the supply voltage, the greater the output power!
The smaller the impedance of the speaker, the greater the output power! Please



Product introduction

High Cost Performance
Digital Power Amplifier Module



Welding Example

High Cost Performance
Digital Power Amplifier Module

Example of antenna
base welding

Example of antenna
welding



Antenna pedestal

2.4G antenna

Note: the antenna and pedestal should be purchased by
yourself

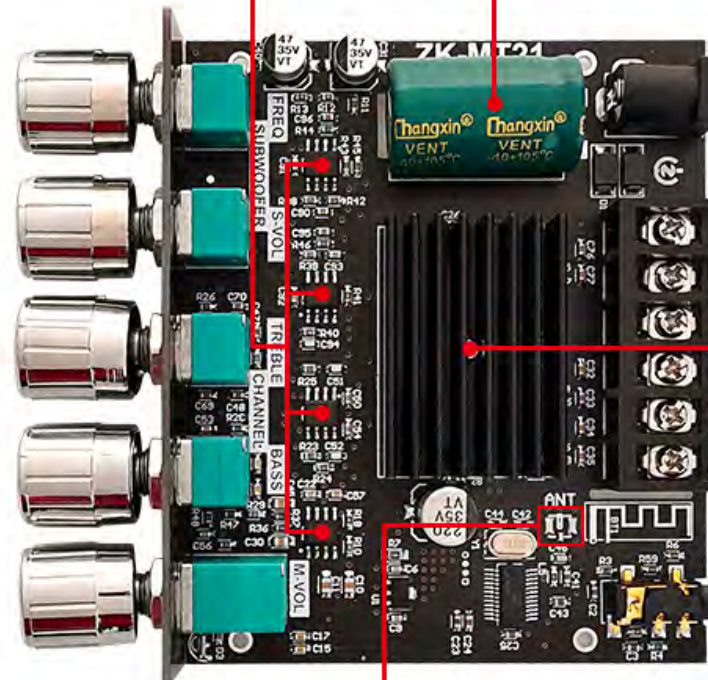


Product details

High Cost Performance
Digital Power Amplifier Module

Low noise front stage
operational amplifier

Large capacity energy
storage capacitor



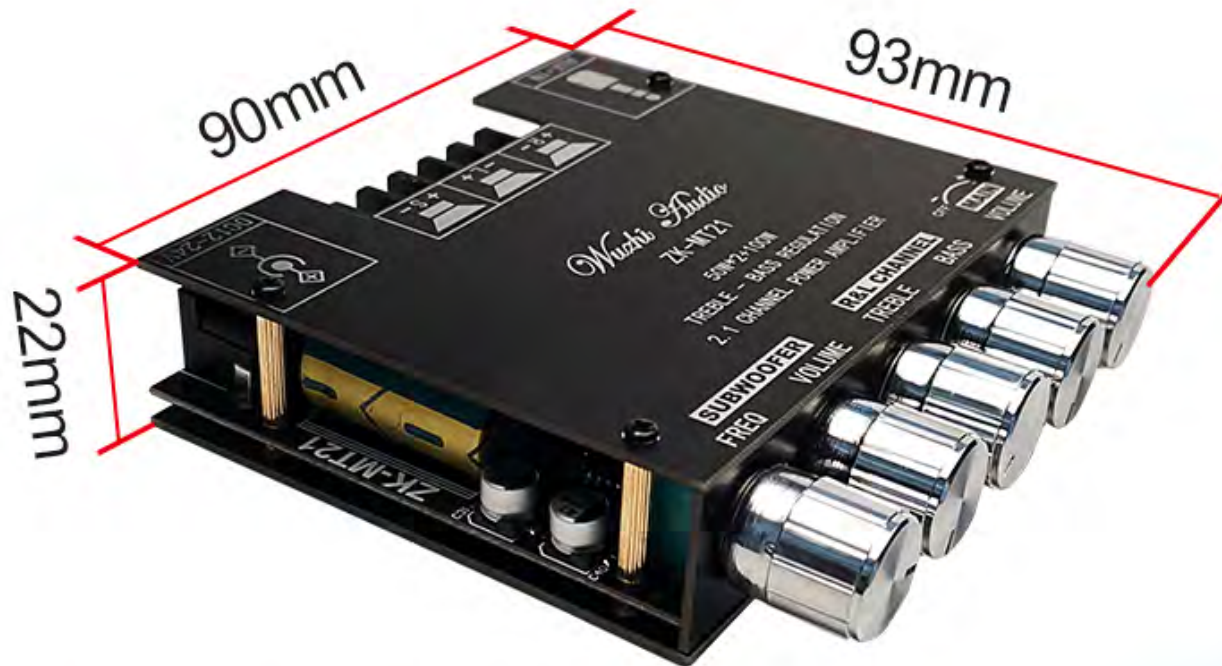
cooling fin
(36*25*10mm)

External antenna or antenna base solder joint
(The antenna can be directly welded or the antenna
base can be welded)



Product size

High Cost Performance
Digital Power Amplifier Module



Net weight: about **130g**

Weight: about **185g** (packaging)

Packaging form

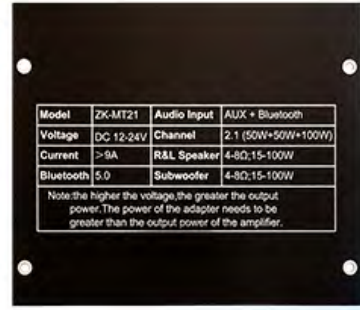
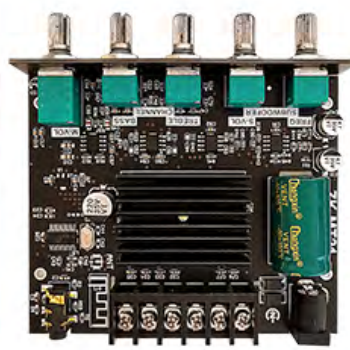
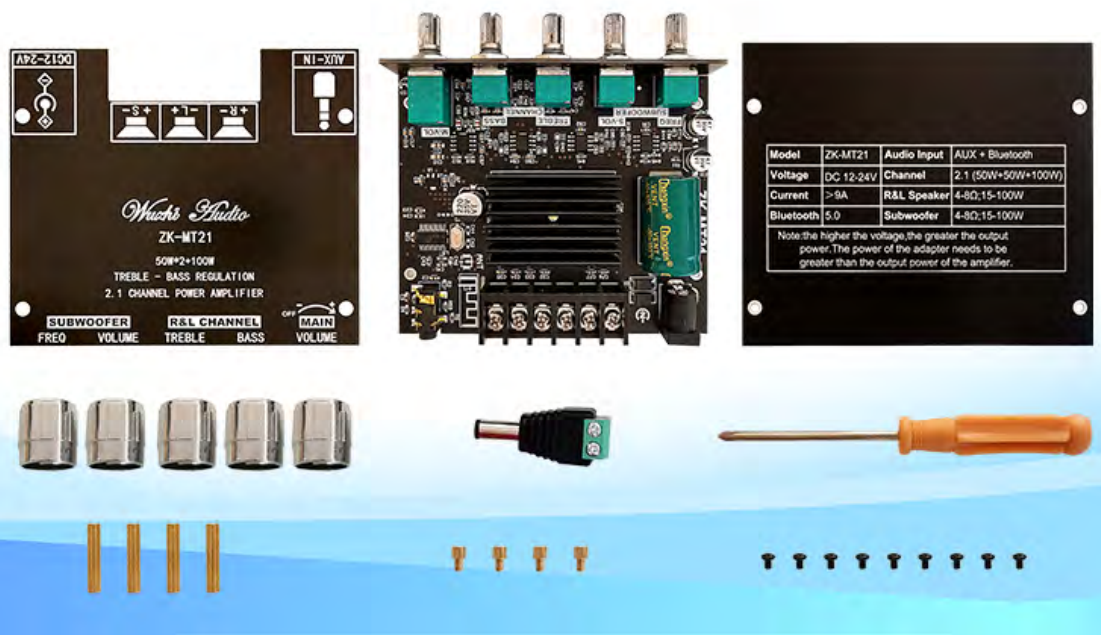
High Cost Performance
Digital Power Amplifier Module



Free screw driver
The shell needs to be self-assembled

Packing list

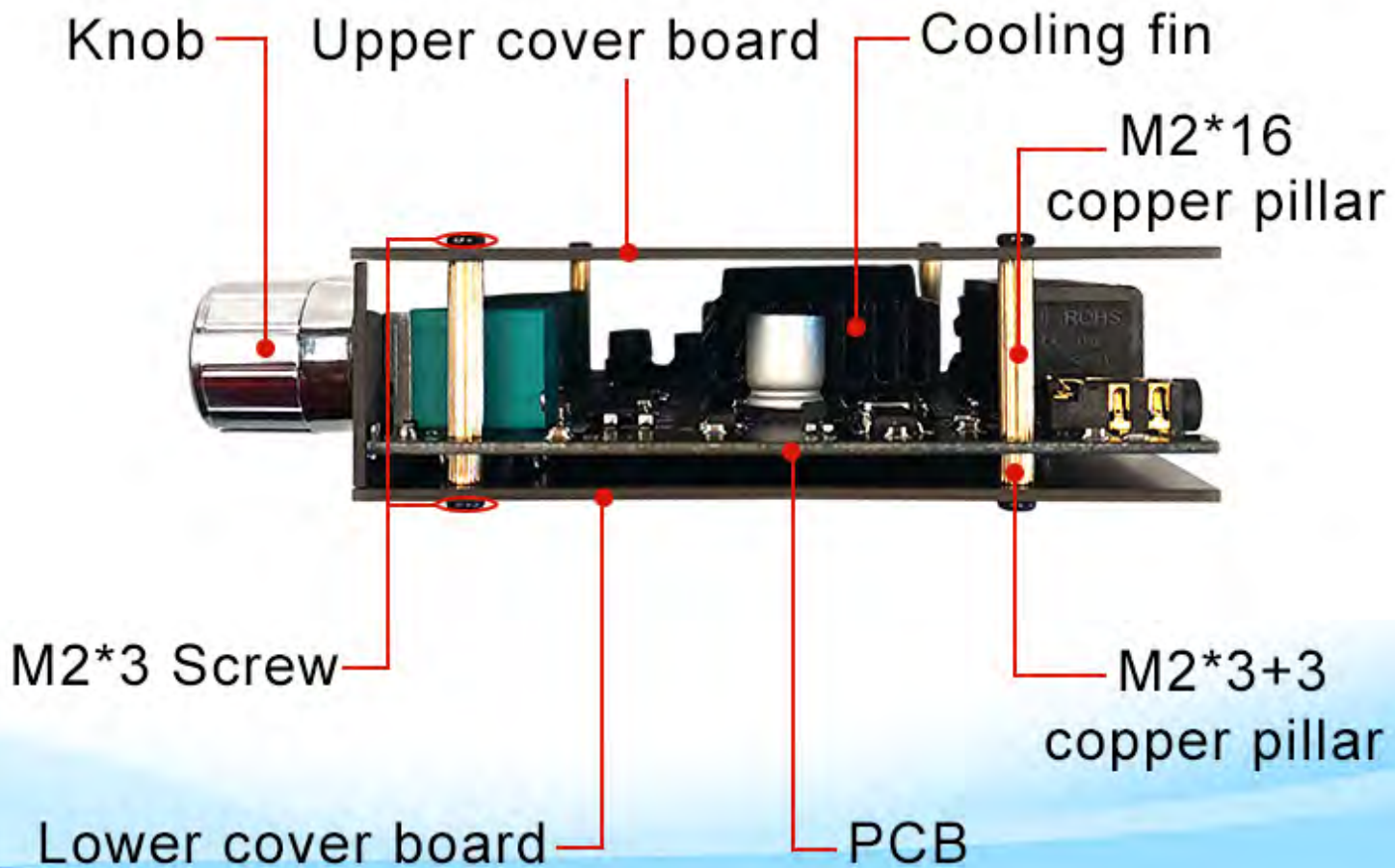
High Cost Performance
Digital Power Amplifier Module





Installation Diagram

High Cost Performance
Digital Power Amplifier Module





Answering questions

High Cost Performance
Digital Power Amplifier Module

1. How to choose the power supply?

The power supply with the board is very key, the selected power supply ripple must be small, ripple large power supply will lead to power amplifier bottom noise, there is a current sound. The higher the voltage, the higher the current, and the higher the power output. If you only have 12V 1A, you can have 3-4 inch speakers. If you are above 19V 5A, no problem with 8-10 inches, power must be highly valued. If the voltage is too low and the sound is amplified, it will easily cause sound distortion. If the current is too low and the horn cannot be brought up, the voltage will be pulled down, which will lead to abnormal operation or poor sound quality.

It is recommended to use 18V 19V 24V power supply with current above 5A. If you only have 9V 12V or 1A 2A power supply, you can also use it but with low power. When using it, choose the volume close to the maximum, which may cause distortion and affect the sound quality.

2. How to select speakers?

About the speaker type: commonly used speakers are generally 4-8 ohms, can be used. Speakers in left and right channels need to be connected to full frequency or medium and high frequency speakers with power between 20W and 100W. Subwoofer speakers cannot be connected to ordinary speakers. Speakers with subwoofer speakers should be connected, with power between 20-100W. The subwoofer horn must have a dive frequency of at least 50Hz.

If your speaker power is small, such as between 20W-50W can also be used, the power supply voltage needs to be small, to prevent the loud-speaker burnt after loud, such as choose power below 15V. If you are a 50W-100W speaker, you don't have to worry about burning out the horn. You can choose a 12-24V power supply. The higher the voltage you choose, the more sound or power you can output. Speaker power is not easy to exceed 100W, otherwise it will affect the sound quality.

3. Audio input mode

There are two audio input modes for this audio amplifier module: one is Bluetooth input and the other is AUX input. Bluetooth mode is preferred. Bluetooth can be connected in either mode. As long as the Bluetooth connection is successful, it is bluetooth mode, and bluetooth mode supports automatic back up. AUX insert is AUX mode when Bluetooth is disconnected. It should be noted that the bluetooth connection of this module is disconnected when using AUX mode.

4. How to adjust the main volume?

The MAIN - VOLUME knob is used to adjust the MAIN VOLUME. The right main volume goes up and the left main volume goes down. The master volume affects both the left and right channels and the subwoofer volume.

5.How to adjust the height and bass of the left and right channels?

R&L CHANNEL - BASS knob is for BASS, right-handed BASS enhancement, and left-handed BASS attenuation. When the knob is in the right-most position, it does not enhance or attenuate the bass.

The R&L CHANNEL - TREBLE knob is used to control the TREBLE, with right-handed TREBLE enhancement and left-handed TREBLE attenuation. When the knob is in the middle, it does not enhance or attenuate the treble.

Note when adjusting high and low sounds: when the TREBLE or BASS sounds are right-rotated to near maximum, if the sound distortion is distorted, the gain of the TREBLE or BASS sounds is too large. It is necessary to turn the TREBLE or BASS knob to the left to lower the gain or turn the MAIN-VOLUME knob on the right to the left to reduce the total VOLUME.

6.How to adjust the subwoofer?

SUBWOOFER - VOLUME controls the VOLUME of the SUBWOOFER. The right-handed volume goes up and the left-handed volume goes down.

The SUBWOOFER - FREQ knob controls the cutoff frequency of the SUBWOOFER. The right frequency increases and the left frequency decreases. The frequency adjustment range is 20HZ-200Hz.

7.It's ok to have a small voice, but after the voice becomes louder, there will be the phenomenon of sound turbidity?

The sound is distorted, please turn down the total volume or change the adapter to a higher voltage level.

8.It's ok to have a small voice, but when the voice gets louder, there will be the phenomenon of sound lag?

If the input power is insufficient and the power is protected by its own intermittent power failure, please replace the power with a more powerful one. Or the power is too big, the power amplifier heating seriously, appeared the heat protection situation, reduce the power use or strengthen the heat dissipation.

9.What factors are associated with sound quality?

The quality of sound is not only related to the power amplifier module, but also to the power supply, sound source and the whole sound system. Basically every link of the sound system will affect the sound quality, among which the main link is the audio transmission line, audio power supply, tone circuit, amplifier circuit, speakers and the surrounding environment. The sound quality is best when the sound source, power supply, amplifier module and the speaker are matched.



DC12-24V

AUX-IN

-S+ +L- -R+

Wuzhi Audio

ZK-MT21

50W*2+100W

TREBLE - BASS REGULATION

2.1 CHANNEL POWER AMPLIFIER

SUBWOOFER

R&L CHANNEL

OFF  **MAIN**

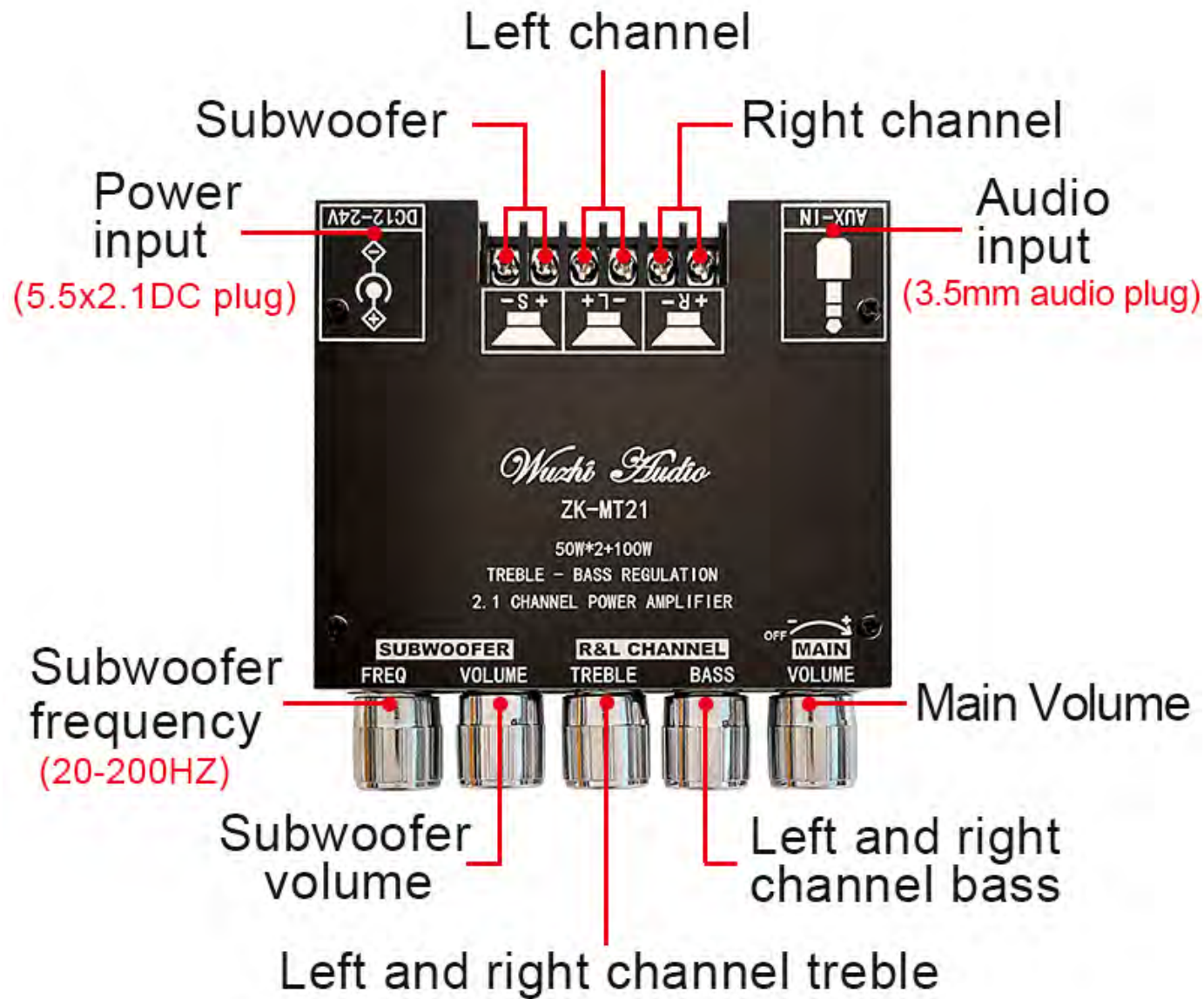
FREQ

VOLUME

TREBLE

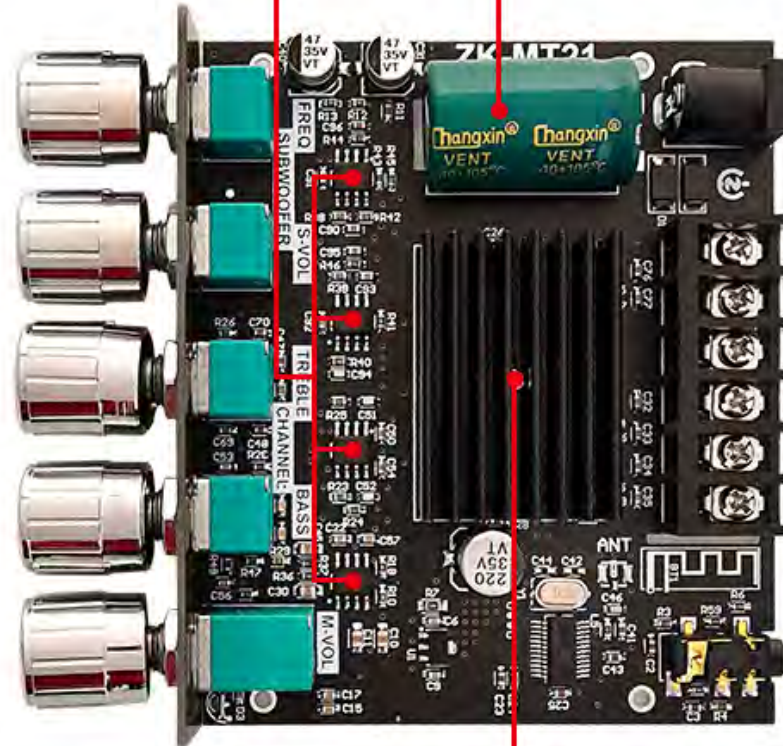
BASS

VOLUME

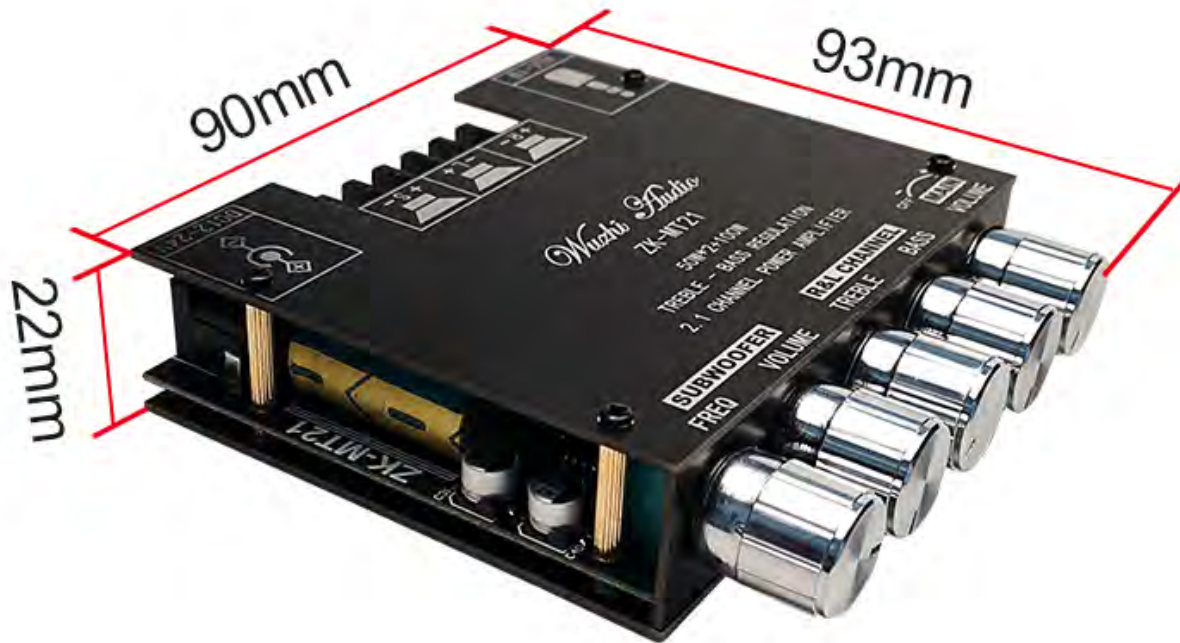


Low noise front stage operational amplifier

Large capacity energy storage capacitor



36mm*25mm*10mm cooling fin



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