

ZK-1002T

2.0声道 蓝牙功放模块

产品名称：2.0声道蓝牙音频功放模块

产品型号：ZK-1002T

蓝牙版本：5.0（无遮挡,10米）

输入灵敏度：500mV

输入方式：AUX+蓝牙

声道数：2.0声道

功放芯片：TPA3116D2

适配电源：DC 12~24V(5A以上)

适配喇叭：20~200W,4~8Ω

输出功率：左右声道≤100W

保护机制：过压、欠压、过热、直流检测、短路保护

产品尺寸：110*70*21mm

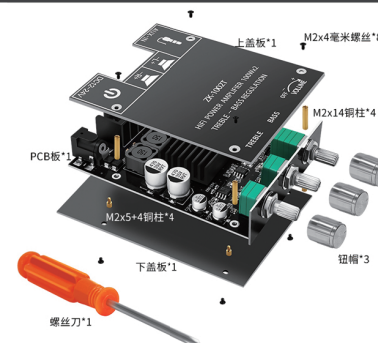
产品重量：约 161g (含包装)

提示：在音频输入足够,电源电压/电流足够的情况下,才会有足够的输出功率!!!

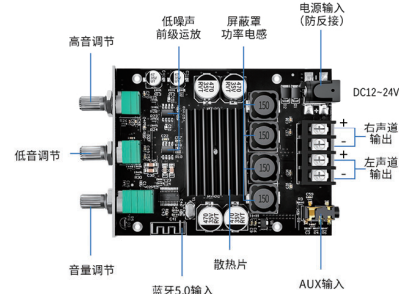
电源电压越高输出功率越大,喇叭阻抗越小输出功率越大!!!

请确保适配电源功率大于功放实际工作功率!!!

组装图



产品功能



使用说明书

ZK-1002T 2.0 CHANNEL BLUETOOTH AMPLIFIER MODULE PRODUCT PARAMETERS

Product name : 2.0 channel Bluetooth audio amplifier module

Product model : ZK-1002T

Bluetooth version : 5.0 (unobstructed, 10 meters)

Input sensitivity : 500mV

Input method : AUX+Bluetooth

Number of channels : 2.0 channels

Power amplifier chip : TPA3116D2

(with AM interference suppression function)

Adapted power supply : DC 12-24V/5A or above

(the higher the voltage, the greater the output power)

Adapted speaker : 20~200W,4-8Ω

Output power : Left and right channels ≤ 100W

Protection mechanism : overvoltage, undervoltage, overheating,

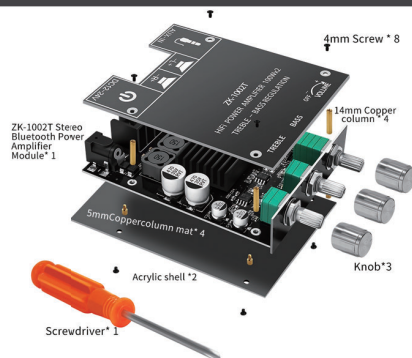
DC detection, short circuit protection

Product size : 117*70*21mm

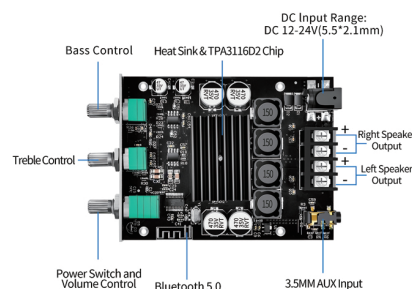
Product weight : approximately 161g (including packaging)

Tip: Only when the audio input is sufficient and the power supply voltage/current is sufficient, can there be sufficient output power !!!
The higher the power supply voltage, the greater the output power, the smaller the horn impedance, and the greater the output power !!!
Please ensure that the power of the adapter power supply is greater than the actual working power of the amplifier !!!

ASSEMBLY DRAWING



FUNCTION



FAQ

1. How to choose a power supply?

The power supply that matches the board is crucial, and the ripple of the selected power supply must be small. A power supply with large ripple can cause the amplifier board to malfunction. The bottom noise increases and there is an electric current sound. The higher the voltage, the greater the current, and the more sufficient the output power. If you only have 12V1A, this way it can come with 3-4 inch speakers. If you are 19V 5A or above, with 8-10 inches, there is no problem with the power supply. It must be highly valued. If the voltage is too low, sound amplification can easily cause sound distortion. If the current is too small, the speaker will lower the voltage, cause abnormal operation, or deteriorate the sound quality if it does not work properly.

2. Introduction to audio input modes

This audio amplifier module has two audio input methods: Bluetooth input and AUX input, blue Tooth pattern priority. Bluetooth can be connected in any mode. As long as the Bluetooth connection is successful, it is Bluetooth Mode, and Bluetooth mode supports automatic reconnection. When there is no Bluetooth connection, AUX insertion is in AUX mode.

It should be noted that when using AUX mode, it is necessary to confirm that the Bluetooth connection of this module has been disconnected.

3. How to adjust the main volume?

The main volume knob is used to adjust the main volume. The main volume increases when turning right, and decreases when turning left.

The main volume has an impact on the volume of both the left and right channels and the subwoofer.

4. It's okay if the sound is low, but when the sound becomes louder, there is a phenomenon of cloudy sound?

The sound is distorted. Please reduce the total volume or switch to a higher voltage adapter power supply.

5. It's okay if the sound is low, but when the sound becomes louder, there is a phenomenon of sound lag?

The input power is insufficient, and the power supply itself is intermittently powered off for protection.

Please replace it with a higher power supply. Or merit: The rate is too high, causing severe heating of the power amplifier board, resulting in thermal protection. Reduce power usage or strengthen heat dissipation.

6. What factors are related to the quality of sound?

The quality of sound is not only related to the amplifier module, but also to the power supply, sound source, and the entire audio system.

Basically, every aspect of the audio system affects sound quality, with the main components being the audio transmission line and the audio system.

Power supply, tone circuit, amplifier circuit, speaker, and surrounding environment. Only the sound source, power supply, amplifier module, and When the speakers match, the sound quality is the best.

问题解答

1.如何选择电源?

板子搭配的电源很关键,所选电源的纹波一定要小,纹波大的电源会导致功放板底噪变大,有电流声。电压越高,电流越大,输出功率越足,要是你只有 12V 1A,这样可以带 3-4 寸音箱。如果你是 19V 5A 以上,带 8-10 寸没问题。电源必须高度重视。如果电压太低声音放大后容易引起声音失真,如果电流太小带不起来喇叭会把电压拉低,工作不正常或音质变差。

2.音频输入模式介绍

此音频功放模块有两种音频输入方式:一种是蓝牙输入,一种是 AUX 输入,蓝牙模式优先。无论在何种模式蓝牙都可以连接。只要蓝牙连接成功就是蓝牙模式,并且蓝牙模式支持自动回连。蓝牙无连接时 AUX 插入则是 AUX 模式。需要注意的是使用 AUX 模式时需要确认本模块的蓝牙连接已经断开。

3.主音量如何调节?

MAIN—VOLUME 旋钮是调节主音量的,右旋主音量增大,左旋主音量减小。主音量对左右声道和低音炮的音量都有影响。

4.声音小没事,声音变大后,出现声音浑浊的现象?

声音出现了失真,请将总音量调小或者换电压等级更高的适配器电源。

5.声音小没事,声音变大后,出现声音卡顿的现象?

输入电源功率不足,电源自身间歇性断电保护,请更换更大功率的电源;或功率太大,功放板发热严重,出现了热保护的情况,减小功率使用或加强散热。

6.音质的好坏跟哪些因素有关系?

音质的好坏不光和功放模块有关系,还跟电源、音源以及整个音响系统有关系。基本上音响系统的每个环节都会影响音质,其中主要环节有音频传输线、音响电源、音调电路、功放电路、音箱和周围环境。只有音源、电源、功放模块和音箱相匹配的时候,音质才是最好的。

FCC WARNING

This device complies with part 15 of the FCC Rules. Operation is subject to The following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum 20cm distance between the radiator and your body. Use only the supplied antenna.