

# ZK-502MT 2.0 CHANNEL BLUETOOTH POWER AMPLIFIER MODULE

## PRODUCT PARAMETERS

Product name: 50W \* 2 Bluetooth audio amplifier module with tone

Product model: ZK-502MT

Bluetooth version: 5.0 (unobstructed, 15 meters)

Signal to noise ratio:>90dB

Input method: AUX+Bluetooth

Channel count: Left and right dual channels (stereo)

Power amplifier chip: Domestic power amplifier chip

Adapted power supply: DC 9~24V/3A or above  
(cannot be connected to 24V battery pack)

Adapted speaker: 15-100W, 4-8 Ω

Power supply voltage:

12V --8 ohms/12W+12W, 4 ohms/20W+20W

15V --8 ohms/18W+18W, 4 ohms/30W+30W

19V --8 ohms/30W+30W, 4 ohms/40W+40W

24V --8 ohms/40W+40W, 4 ohms/50W+50W

Protection mechanism: overheat, overcurrent, short circuit protection

Product size: 89mm \* 60mm \* 21mm

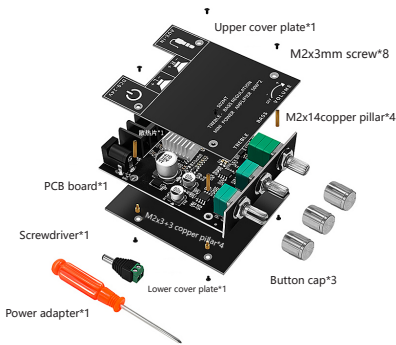
Product weight: approximately 111g (including packaging)

**Tip: Only when the audio input is sufficient and the power supply voltage/current is sufficient, can there be sufficient output power !!!**

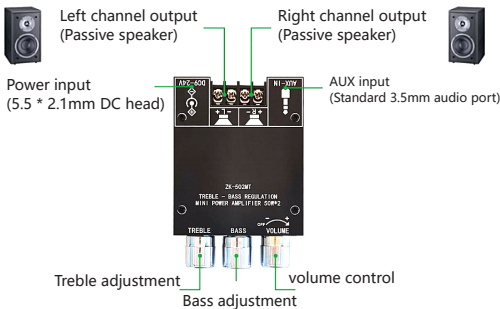
**The higher the power supply voltage, the greater the output power, the smaller the horn impedance, and the greater the output power !!!**

**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.