ZK-301B 30W TWS Bluetooth Amplifier Audio Module

1.Description:

ZK-301B is a DC 12V 24V 30W TWS Bluetooth Amplifier Audio Module, perfect for DIY wireless Bluetooth speakers and transponders. It can receive Bluetooth music, as well as AUX/USB audio input. It also features a unique TWS technology that allows to combine two mono into stereo dual channels for wireless pairing. It also allows you to switch between mono and dual channels according to your needs.

This Bluetooth amplifier module is ideal for those who want to add a surround sound experience to their home theater, KTV, outdoor parties, and more. With its powerful 30W output and adjustable volume control, you can customize the sound according to your preference. It is also easy to install and use, allowing you to enjoy an immersive sound experience with minimal effort.

In addition, it also comes with a power switch, allowing you to turn off the power when not in use, saving energy. With its unique TWS technology, adjustable volume.

2.Features:

1>.TWS Bluetooth Pairing: It is equipped with TWS technology that allowing you to combine two mono amplifiers into stereo dual channels for wireless pairing connection. It also allows you to switch between mono and dual channels according to your needs. Enter/exit TWS by press potentiometer three times.

2>.Bluetooth/AUX/U-disk Audio: It can not only receive music via Bluetooth, but also via AUX and U-disk to fit different needs. It is capable of playing WAV, WMA, FLAC, APE, MP3 and APE music files.

3>.30W Amplifier: It features a built-in power amplifier circuit, allowing it to directly drive up to 30W speakers. All that is needed is sufficient power supply and matching speakers to achieve an outstanding music playback effect.

4>.Application: Perfect for home theaters, KTVs, outdoor parties, and more, this Bluetooth amplifier will improve sound quality and provide a surround sound experience. It is easy to install and use, allowing you to experience an immersive sound with minimal effort.

5>.Easy to use: It is equipped with an adjustable volume control, allowing users to customize the sound according to their preference. Furthermore, it also provides functions such as switching to the next music, playing/pausing music, and turning on/off the power.

3.Functions:

1>.TWS True Wireless Player
2>.Bluetooth APP Control
3>.Bluetooth/AUX/U-disk Audio Input
4>.30W Single Channel Mono
5>.ON/OFF Prompt Voice
6>.Modify Bluetooth Name
7>.ON/OFF Bluetooth Password
8>.Modify Bluetooth Password
9>.Adjust Volume for Prompt Voice

4.Parameters:

1>.Work Voltage:DC 9V-24V
2>.Work Current:>3A
3>.Channel: Single Track Mono Output
4>.Bluetooth Version:BLE 5.3
5>.Audio input type:Bluetooth/AUX/U-disk/USB sound card
6>.Output power:5W-30W
7>.Output impedance:4ohm-8ohm
8>.Communication distance:15meter(Max)
9>.Over temperature protection:Yes
10>.Over current protection:Yes
11>.Short circuit protection:Yes
12>.Input reverse connection protection:Yes
13>.Work Temperature:-20℃~85℃
14>.Work Humidity:5%~95%RH
15>.Module Size(Installed):71*46*21mm

4.Use steps:

1>.Using the wiring diagram, select the correct speakers to connect to the black terminal.

2>.Connect the power supply from the DC-005 power socket and wait for the 'ding dong' prompt to indicate the module is ready for pairing. Note: There is a DC-005 screw terminal power converter that allows users to directly connect other wires.

3>.Activate Bluetooth on your phone.

4>.Select the 'WuZhi Audio' device from the Bluetooth device listing.

5>.Once the device is selected, the module will prepare start playing music.

6>.Adjust the volume using the rotary potentiometer. Rotate the knob clockwise to increase the volume.

7>.Press the potentiometer once to play/pause the music.

8>.Press the potentiometer twice to switch to the next music.

9>.Press the potentiometer three times to enter or exit TWS pairing mode. The red LED will keep flashing. If pairing is not successful, the module will automatically exit TWS pairing mode.

9.1>.Two identical ZK-301B must be prepared. Note: It is not recommended to pair TWS devices of different models with each other.

9.2>.Press the potentiometer three times on either device to automatically pair the other ZK-301B. When the pairing is successful, a stereo speaker is created.

9.3>.The first ZK-301B will be the left channel and the red LED indicator will remain on. The second ZK-301B will be the right channel and the red LED indicator will keep flashing.

9.4>.The devices will automatically pair upon powering on.

9.5>.Select any ZK-301B and press the potentiometer three times to cancel TWS pairing if needed.

10>.Press and hold the potentiometer for more than 3 seconds to turn the work power ON or OFF.

5.Application:

1>.Modified/repair/replace speaker

2>.Amplifier equipment for training/activity site and so on

3>.Car Bluetooth device

4>.Music Festival Party

5>.Family entertainment and leisure

6>.Games and Cinema

7>.Home theater

8>.Security system

9>.KTV singing hall

10>.Home background music

6.Note:

1>.One ZK-301B is mono and two ZK-301B can be connected in stereo using TWS functionality.

2>.Please input 12V if connected 4ohm speaker.

3>.The power amplifier board should be placed as far away from the WIFI signal (router) as possible to avoid signal interference.

4>.The power supply voltage should be DC 9V-24V with more than 3A current. The module will be damaged if the input voltage is above 25V.

5>.Avoid signal interference by not using excessively long wires.

6>.The audio input and power supply voltage/current must both be sufficient to ensure enough power output.

7>.The higher the power supply voltage, the greater the output power.

8>.The smaller the impedance of the speaker, the greater the output power. It is recommended to use 4ohm speakers.

9>.Please read the user manual and product description carefully before use.

7.Frequently Asked Questions:

1>.How to choose a power supply adapter?

The power supply for the module is very important and must be used with caution. The ripple of the selected power supply should be kept to a minimum as a large ripple will cause the background noise of the power amplifier board to increase and a current sound will be produced.

A power adapter with a 5.5*2.1mm or 5.5*2.5mm plug is required, and it is recommended to use a 24V power supply with a current of more than 3A. The higher the voltage and current, the better the

output power. For power voltages lower than 12V, it is best to connect a 4ohm speaker. If an 8ohm speaker is used, 24V voltage is recommended.

Input voltages higher than 25V may damage the module. Low voltage inputs will distort the sound after amplification and low currents will not be able to drive the speaker properly or will pull the voltage down, resulting in abnormal operation or poor sound quality. If a low powered adapter such as a 9V 2A adapter is used, it is advised to adjust the volume to the maximum as this may cause distortion and affect the sound quality.

2>.How to choose a speaker?

Commonly used speakers usually have an impedance of 4ohm to 8ohm and do not require distinguishing between positive and negative polarity.

The module can also work properly with low powered speakers with a power range of 5W to 15W, however, it must be connected to a low powered adapter such as one with a voltage lower than 12V to avoid damaging the speaker.

There is no need to worry about the speaker burning out when connecting to speakers with a power of 30W to 40W. The module can be connected to a 12V to 24V power supply, with the higher voltage providing more output sound or power. The speaker's power must not exceed 40W as this will affect the sound quality.

3>.How to choose Bluetooth or AUX audio input mode?

Q: AUX/USB mode takes priority over Bluetooth mode. If you wish to use Bluetooth as your input audio signal, you must first disconnect the AUX or USB. AUX and USB connections take precedence.

4>.Why is the volume normally when small and there is turbidity after increase volume?

Q: If there is sound distortion, try changing the adapter power supply to one with a higher voltage and current or turn down the volume.

5>.Why is the volume normally when volume small and there is pause after increase volume?

The input power is insufficient. Try using an adapter power supply with higher voltage and current.

The power supply has an intermittent power-off protection feature. Use a power adapter that matches the requirements.

If the power of the power supply is too high, reduce the power of the input power.

If the power amplifier board is too hot, triggering the overheat protection, increase size of radiator.

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

The sound quality is not just determined by the power amplifier module, but also by the power supply, sound source and the entire sound system. Every component of the sound system affects the sound quality, including the audio transmission line, audio power supply, tone circuit, power amplifier circuit, speaker and surrounding environment.

The sound quality is at its best when the sound source, power supply, power amplifier module and speaker are all well-matched.

8.Package:

1>.1pcs ZK-301B 30W TWS Bluetooth Amplifier Audio Module
2>.2pcs Aluminium Alloy Shell
3>.1pcs 6mm knob cap
4>.1pcs '+' Screwdriver
5>.1pcs DC005 to 2P Screw Terminal
6>.1pcs Potentiometer metal gasket
7>.1pcs Potentiometer metal screw
8>.4pcs M2*14mm Copper column
9>.4pcs M2*3+3mm Copper column Screw
10>.8pcs M2*3mm screw

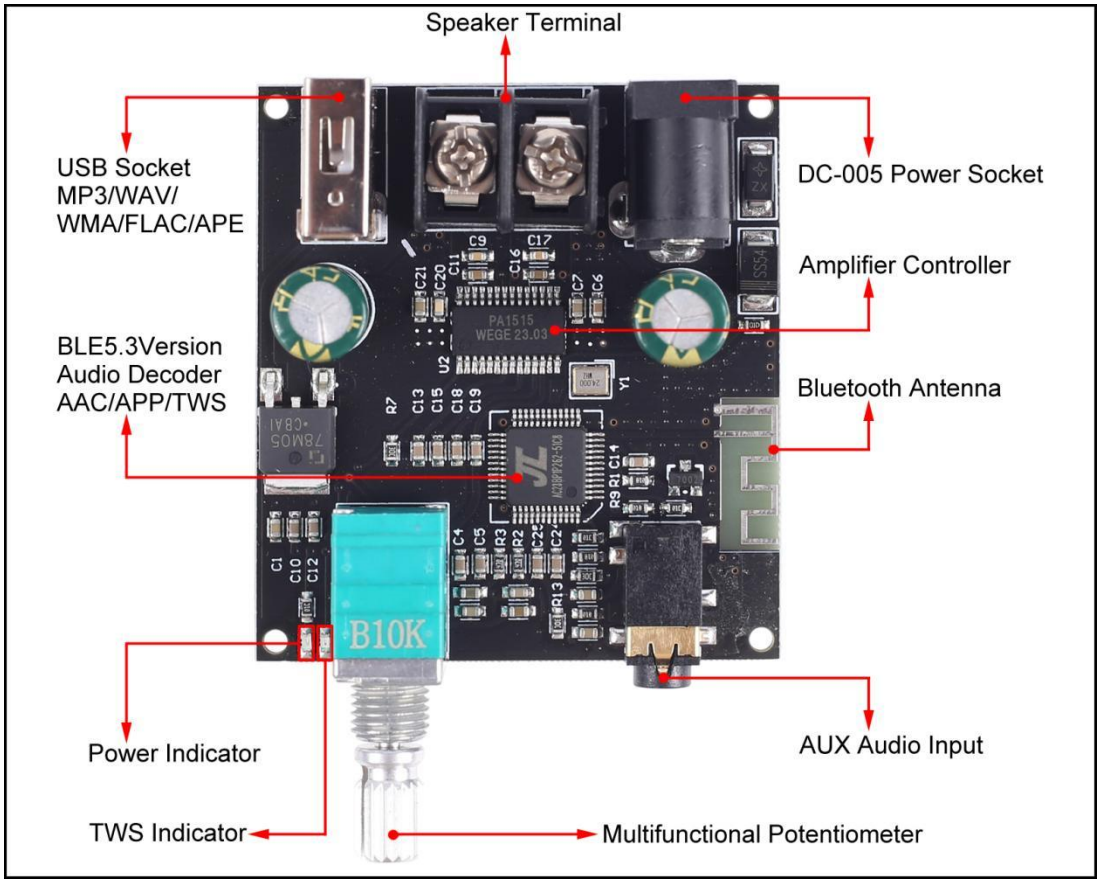
9.Aluminium Alloy Shell Installation Steps:

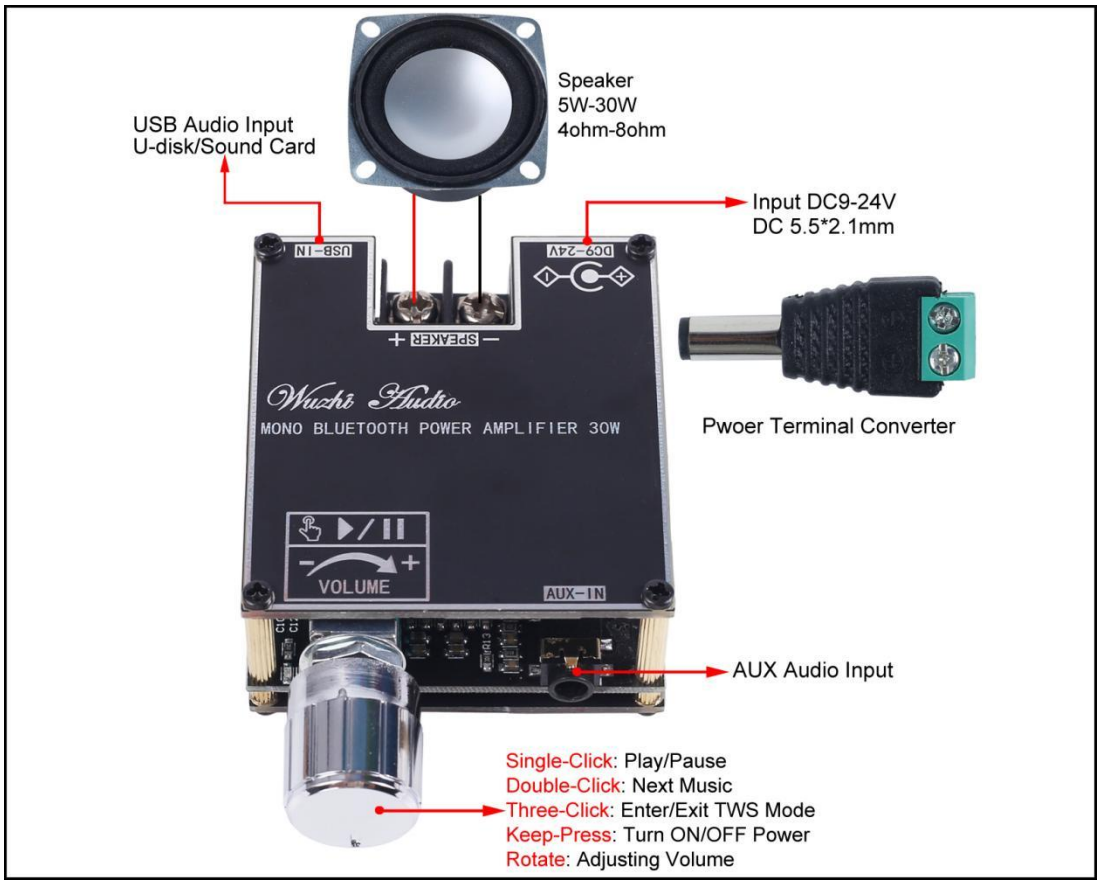
1>.Step 1: Fix 4pcs M2*14mm Copper column on PCB mounting hole by 4pcs M2*3+3mm Copper column Screw.

2>.Step 2: Fix 1pcs Aluminium Alloy Bottom Shell by 4pcs M2*3mm screw. Pay attention to the front and back sides.

3>.Step 3: Fix 1pcs Aluminium Alloy TOP Shell by 4pcs M2*3mm screw. Pay attention to the front and back sides.

4>.Step 4: Insert 1pcs 6mm knob cap onto the potentiometer.


Speaker Terminal
USB Socket
MP3/WAV/
WMA/FLAC/APE
DC-005 Power Socket
Amplifier Controller
BLE5.3Version
Audio Decoder
AAC/APP/TWS
Bluetooth Antenna
B10K
Power Indicator
AUX Audio Input
TWS Indicator
Multifunctional Potentiometer


Speaker
5W-30W
4ohm-8ohm
USB Audio Input
U-disk/Sound Card
Input DC9-24V
DC 5.5*2.1mm
USB-IN
DC9-24V
SPEAKER
Wuzhi Audio
MONO BLUETOOTH POWER AMPLIFIER 30W
Pwoer Terminal Converter
VOLUME
AUX-IN
AUX Audio Input
Single-Click: Play/Pause
Double-Click: Next Music
Three-Click: Enter/Exit TWS Mode
Keep-Press: Turn ON/OFF Power
Rotate: Adjusting Volume

Left Channel

TWS Pair

Right Channel

1.Press the potentiometer three times to enter or exit TWS pairing mode.
2.The red LED will keep flashing at pairing mode.
3.If pairing is not successful, the module will automatically exit TWS pairing mode.
4.Two identical ZK-301B must be prepared. Note: It is not recommended to pair TWS devices of different models with each other.
5.Press the potentiometer three times on either device to automatically pair the other ZK-301B. When the pairing is successful, a stereo speaker is created.
6.The first ZK-301B will be the left channel and the red LED indicator will remain on. The second ZK-301B will be the right channel and the red LED indicator will keep flashing.
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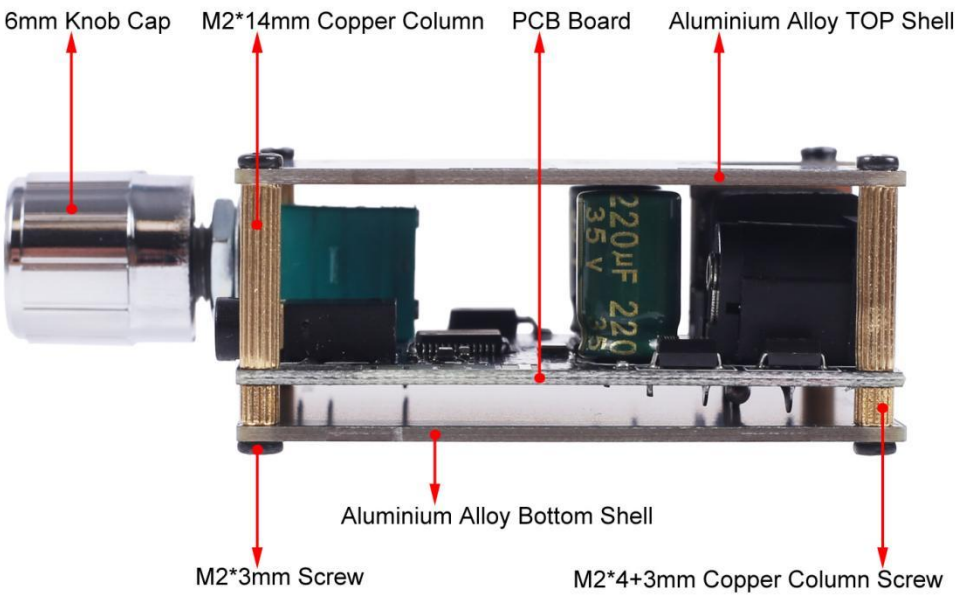
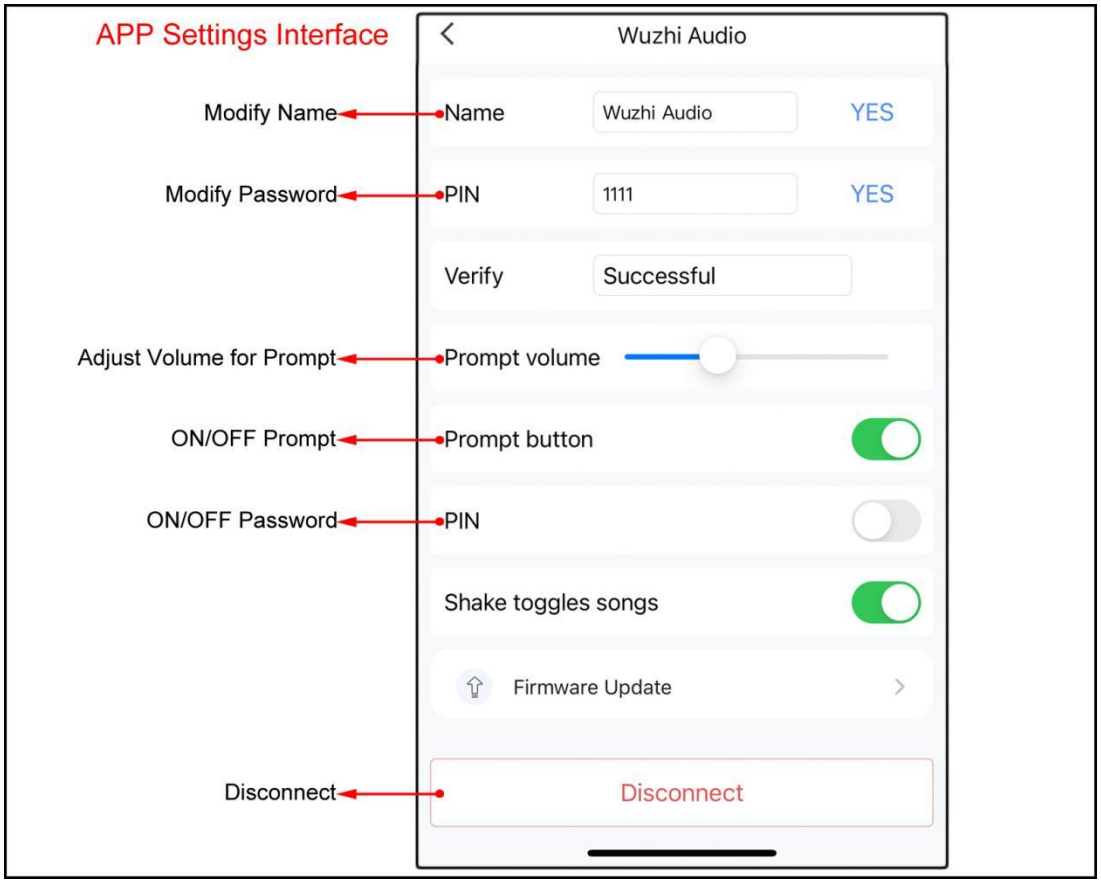
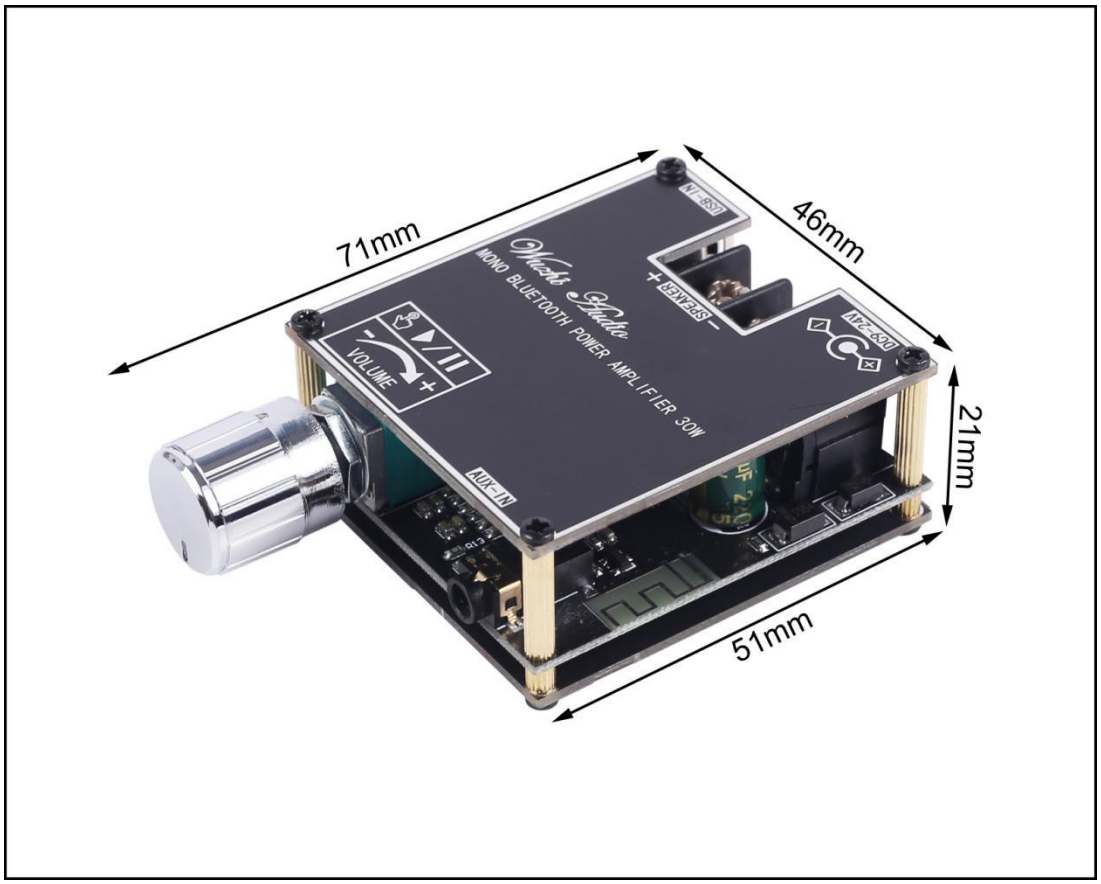
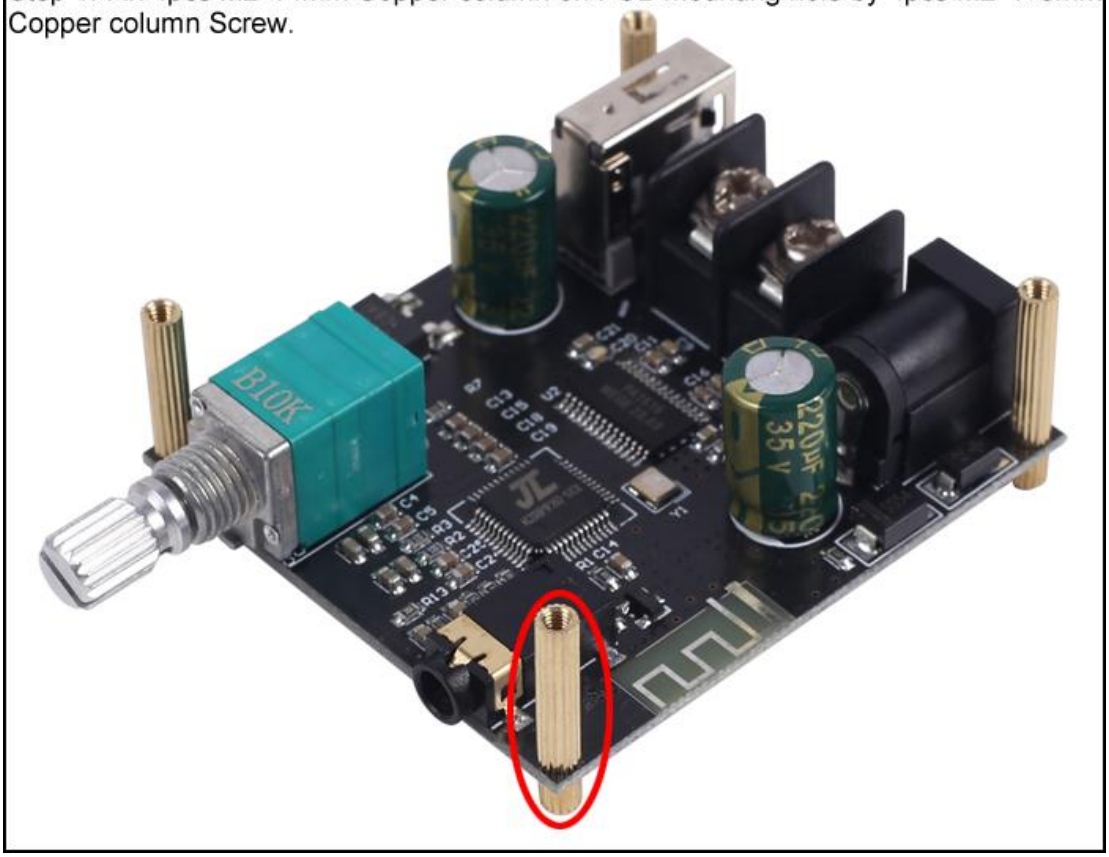
8.Select any ZK-301B and press the potentiometer three times to cancel TWS pairing if needed.




APP Settings Interface
Wuzhi Audio
Modify Name
Name
Wuzhi Audio
YES
Modify Password
PIN
1111
YES
Verify
Successful
Adjust Volume for Prompt
Prompt volume
ON/OFF Prompt
Prompt button
ON/OFF Password
PIN
Shake toggles songs
Firmware Update
Disconnect
Disconnect

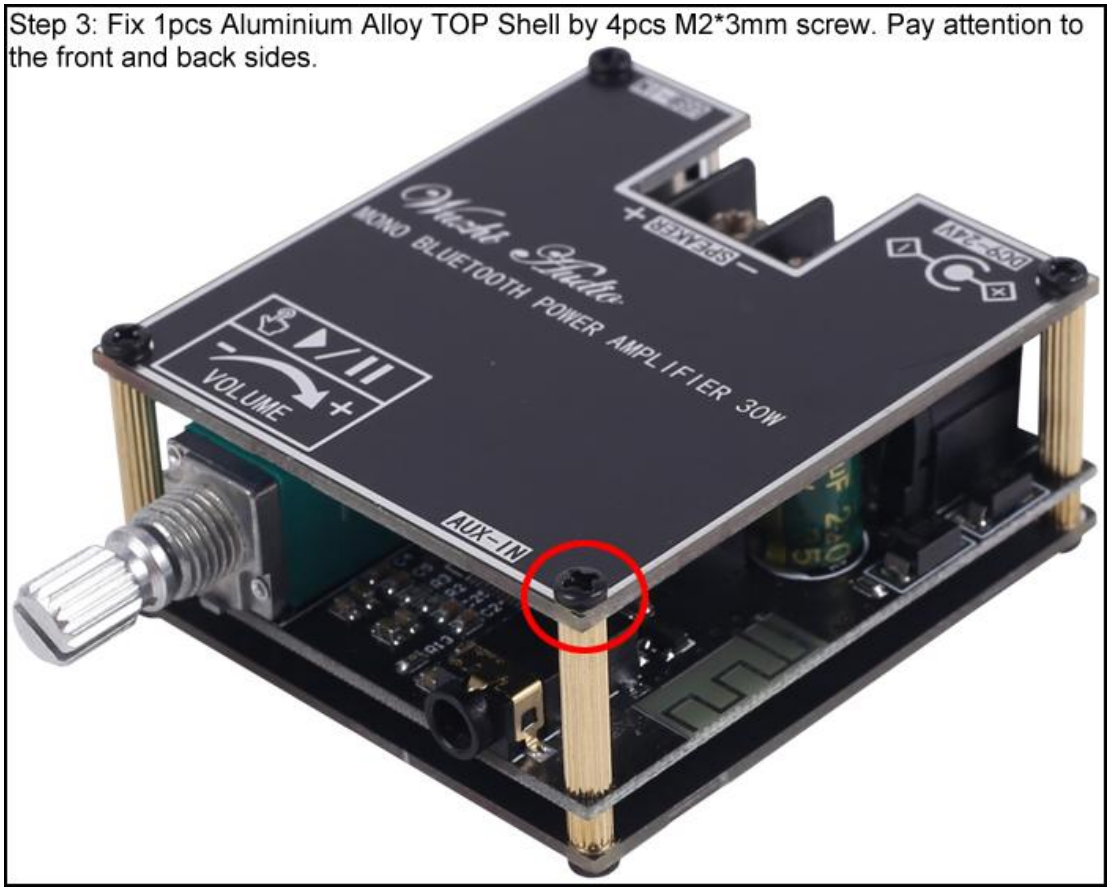

71mm
46mm
21mm
51mm
MONO BLUETOOTH POWER AMPLIFIER 30W
VOLUME
AUX-IN

Step 1: Fix 4pcs M2*14mm Copper column on PCB mounting hole by 4pcs M2*4+3mm Copper column Screw.



Step 2: Fix 1pcs Aluminium Alloy Bottom Shell by 4pcs M2*3mm screw. Pay attention to the front and back sides.

Step 3: Fix 1pcs Aluminium Alloy TOP Shell by 4pcs M2*3mm screw. Pay attention to the front and back sides.



Step 4: Insert 1pcs 6mm knob cap onto the potentiometer.