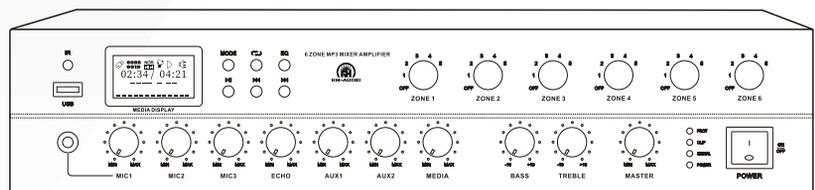


RH-AUDIO COMMERCIAL SOUND SYSTEM



User Manual



6-ZONE MP3 MIXING AMPLIFIER

Thank you for purchasing the **6-Zone MP3 Mixing Amplifier**.

Please carefully follow the instructions in this manual to ensure long, trouble-free use of the equipment.

Packaging Contents

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BT Antenna.....	1
FM Antenna.....	1
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SAFETY PRECAUTIONS

- ※ Be sure to read the instructions in this section carefully before use.
- ※ Make sure to observe the instructions in this manual as the conventions of safety symbols and messages regarded as very important precautions are included.
- ※ We also recommend you keep this instruction manual handy for future reference.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING

When Installing the Unit

- ※ Do not expose the unit to rain or an environment where it may be splashed by water or other liquids, as doing so may result in fire or electric shock.
- ※ Use the unit only with the voltage specified on the unit. Using a voltage higher than that which is specified may result in fire or electric shock.
- ※ Do not cut, kink, otherwise damage nor modify the power supply cord. In addition, avoid using the power cord in close proximity to heaters, and never place heavy objects -- including the unit itself -- on the power cord, as doing so may result in fire or electric shock.
- ※ Be sure to replace the unit's terminal cover after connection completion. Because high voltage is applied to the speaker terminals, never touch these terminals to avoid electric shock.
- ※ Be sure to ground to the safety ground (earth) terminal to avoid electric shock. Never ground to a gas pipe as a catastrophic disaster may result.
- ※ Avoid installing or mounting the unit in unstable locations, such as on a rickety table or a slanted surface. Doing so may result in the unit falling down, causing personal injury and/or property damage.

When the Unit is in Use

※ Should the following irregularity be found during use, immediately switch off the power, disconnect the power supply plug from the AC outlet and contact your nearest dealer. Make no further attempt to operate the unit in this condition as this may cause fire or electric shock.

· If you detect smoke or a strange smell coming from the unit.

· If water or any metallic object gets into the unit.

· If the unit falls, or the unit case breaks.

· If the power supply cord is damaged (exposure of the core, disconnection, etc.)

· If it is malfunctioning (no tone sounds.)

※ To prevent a fire or electric shock, never open nor remove the unit case as there are high voltage components inside the unit. Refer all servicing to your nearest dealer.

※ Do not place cups, bowls, or other containers of liquid or metallic objects on top of the unit. If they accidentally spill into the unit, this may cause a fire or electric shock.

※ Do not insert nor drop metallic objects or flammable materials in the ventilation slots of the unit's cover, as this may result in fire or electric shock.

CAUTION**When Installing the Unit**

※ Never plug in nor remove the power supply plug with wet hands, as doing so may cause electric shock.

※ When unplugging the power supply cord, be sure to grasp the power supply plug; never pull on the cord itself. Operating the unit with a damaged power supply cord may cause a fire or electric shock.

※ When moving the unit, be sure to remove its power supply cord from the wall outlet.

Moving the unit with the power cord connected to the outlet may cause damage to the power cord, resulting in fire or electric shock. When removing the power cord, be sure to hold its plug to pull.

※ Do not block the ventilation slots in the unit's cover.

Doing so may cause heat to build up inside the unit and result in fire.

※ Avoid installing the unit in humid or dusty locations, in locations exposed to the direct sunlight, near the heaters, or in locations generating sooty smoke or steam as doing otherwise may result in fire or electric shock.

When the Unit is in Use

- ※ Do not place heavy objects on the unit as this may cause it to fall or break which may result in personal injury and/or property damage. In addition, the object itself may fall off and cause injury and/or damage.
- ※ Make sure that the volume control is set to minimum position before power is switched on. Loud noise produced at high volume when power is switched on can impair hearing.
- ※ Do not operate the unit for an extended period of time with the sound distorting. This is an indication of a malfunction, which in turn can cause heat to generate and result in a fire.
- ※ Contact your dealer as to the cleaning. If dust is allowed to accumulate in the unit over a long period of time, a fire or damage to the unit may result.
- ※ If dust accumulates on the power supply plug or in the wall AC outlet, a fire may result. Clean it periodically. In addition, insert the plug in the wall outlet securely.
- ※ Switch off the power, and unplug the power supply plug from the AC outlet for safety purposes when cleaning or leaving the unit unused for 10 days or more. Doing otherwise may cause a fire or electric shock.

LIMITED WARRANTY

We warrant that the hardware products it manufactures will be free from defects in materials and workmanship.

The warranty term, beginning on the date of invoice, is one year for Parts replacement, two years for parts repair and six months on accessories.

This warranty does not cover damage or failure caused by alterations, mishandling, abuse, misuse, neglect, accident or resulting from any cause other than a product defect.

In case of defects in material and workmanship under normal use and conditions, we will replace or repair products covered under this limited warranty that are returned to our facility.

To request warranty service, you must contact our international sales team within the warranty period, ship the products back to us in their original or equivalent packaging (freight prepaid). If we repair or replace a product, its warranty term is not extended.

DISCLAIMER

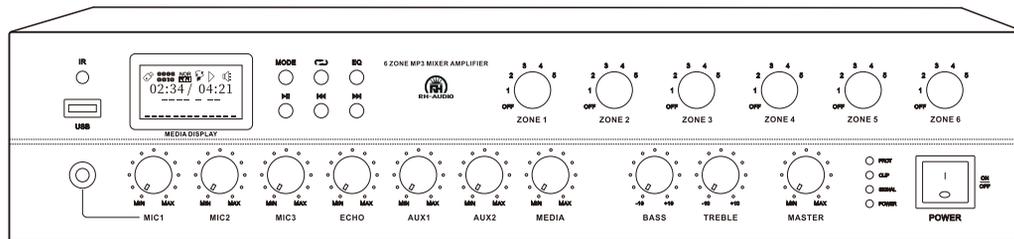
Information contained in this manual is subject to change without prior notice and does not represent a commitment on the part of the vendor. We shall not be liable for any loss or damages whatsoever arising from the use of information or any error contained in this manual.

It is recommended that all services and repairs on this product be carried out by us or its authorized dealer.

This product must only be used for the purpose it was intended by the manufacturer and in conjunction with this operating manual.

We cannot accept any liability whatsoever for any loss or damages caused by service, maintenance or repair by unauthorized personnel, or by use other than that intended by the manufacturer.

DESCRIPTION & FEATURE



This **PA Mixer Amplifier** (Class AB) is designed to meet the requirements of medium sized professional public address installations, and designed with overall **70/100-volt and 4/8 ohms(Ω)** loads and featured an industry leading **6-zoned 100 volt load solution**, with provided an audio output to 6 different zones within the venue, each zone has its own volume control manually operated on front panel.

Built-in music streaming media including USB player, FM tuner and Bluetooth receiver, a high-definition **LCD display (128*64)** for the working status of playing media source.

Three microphone jacks, Mic1 has priority over background music, Mic2 and Mic3 can provide **48V Phantom Power** for microphone, built-in **echo effect** can create a sense of space, depth and repetition in your sound.

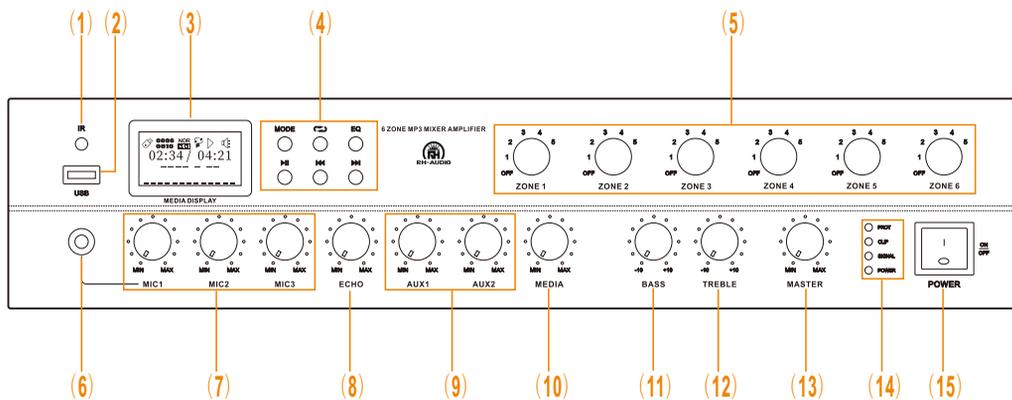
All units feature protections against operation under severe misuse such as over temperature, over voltage, over load and short circuit speaker line conditions with colorful indicators on front panel.

Built-in music streaming media including USB player, FM tuner and Bt receiver.

- ※ Class AB amplifier solution.
- ※ High-definition LCD display (128*64).
- ※ Overall 70/100-volt and 4/8 ohms(Ω) output loads.
- ※ 6-Zone 100V speaker outputs with separate volume control.
- ※ 48V Phantom Power microphone jacks support unbalanced 6.35mm plug or balanced XLR plug.
- ※ Mic 1 has priority over the background music.

Built-in echo effect.

- ※ BASS and TREBLE tone controllers. Master volume control.
- ※ Complete protection provided for output short circuit, overload, high temperature.
- ※ Removable rack mounting brackets supplied.

FRONT PANEL


(1) IR Receiver: This receives signal of remote control.

(2) USB Interface: Allows to play USB disk.

(3) LCD Screen: Displays the working status of playing programmes.

(4) MP3 Controllers:

Mode: To select the mode among USB, BT and FM sources.

: To press this button to play the song repetitively.

EQ: To create 6 different equalizer effects.

: To play or pause song.

: This button shall return to the previous song.

: This button shall skip to the next song.

(5) Zone Volume Controllers: Allow to adjust the zone volume respectively.

(6) MIC1 Jack: 6.35mm microphone input jack (with priority over background music).

(7) MIC Volume Controllers: Allow to adjust MIC1, MIC2 and MIC3 volume respectively.

(8) ECHO: Allows to adjust the echo effect of this unit.

(9) AUX Volume Controllers: Allow to adjust the AUX1 and AUX2 volume respectively.

(10) Media Volume Control: Allows to adjust the volume of USB or BT source.

(11) Bass: Allows to adjust the bass tone of the amplifier output.

(12) Treble: Allows to adjust the treble tone of the amplifier output.

(13) Master: Allows to collectively control the sound level of all outputs.

(14) LED Indicators:

Power Indicator: Lights red when the amplifier is powered on.

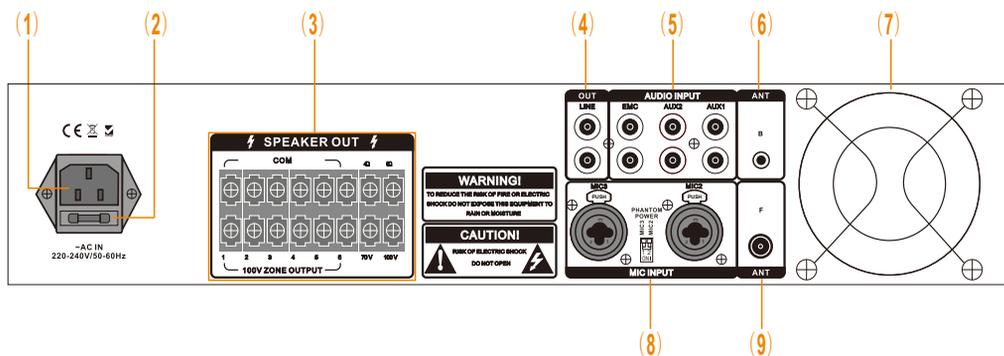
Signal Indicator: Lights blue when the amplifier works normally.

Clip Indicator: Lights yellow when amplifier is overdriven.

Protection Indicator: Lights red when the protection mode is activated.

Power Switch: Switch on or off the amplifier.

REAR PANEL



(1) AC Power Inlet: It accepts a standard 3-pin cable.

(2) AC Fuse Drawer: Contains one main 1A fuse and one spare 1A fuse.

(3) Speaker Output Terminals:

COM, 4Ω, 8Ω, 70V, 100V

It's only possible to use one output at the same time, connecting more than one may damage internal parts of the amplifier. Each of 100V, 70V, 4Ω and 8Ω terminals must work with COM.

100V ZONE OUTPUT (1,2,3,4,5,6)

Please use 100V ZONE OUTPUT when there are two or more (up to six) zones in the pa system.

(4) Audio Signal Output (RCA): Supply signal to additional amplifier.

(5) Audio Signal Inputs (RCA): Supply signal to additional amplifier.

EMC: Receives signal from the emergency/alarm panel.

AUX1 & AUX2: Receive signal from additional audio source device.

(6) BT Antenna Jack: Allows to plug in a provided bluetooth antenna.

(7) Ventilation Outlet: Prevents the amplifier from overheating or suffering thermal damage.

(8) MIC2/MIC3 Input Jack: These combo jacks allow to accept 1/4" or XLR plug.



Push the DIP switch down to switch on the Phantom Power 48V.

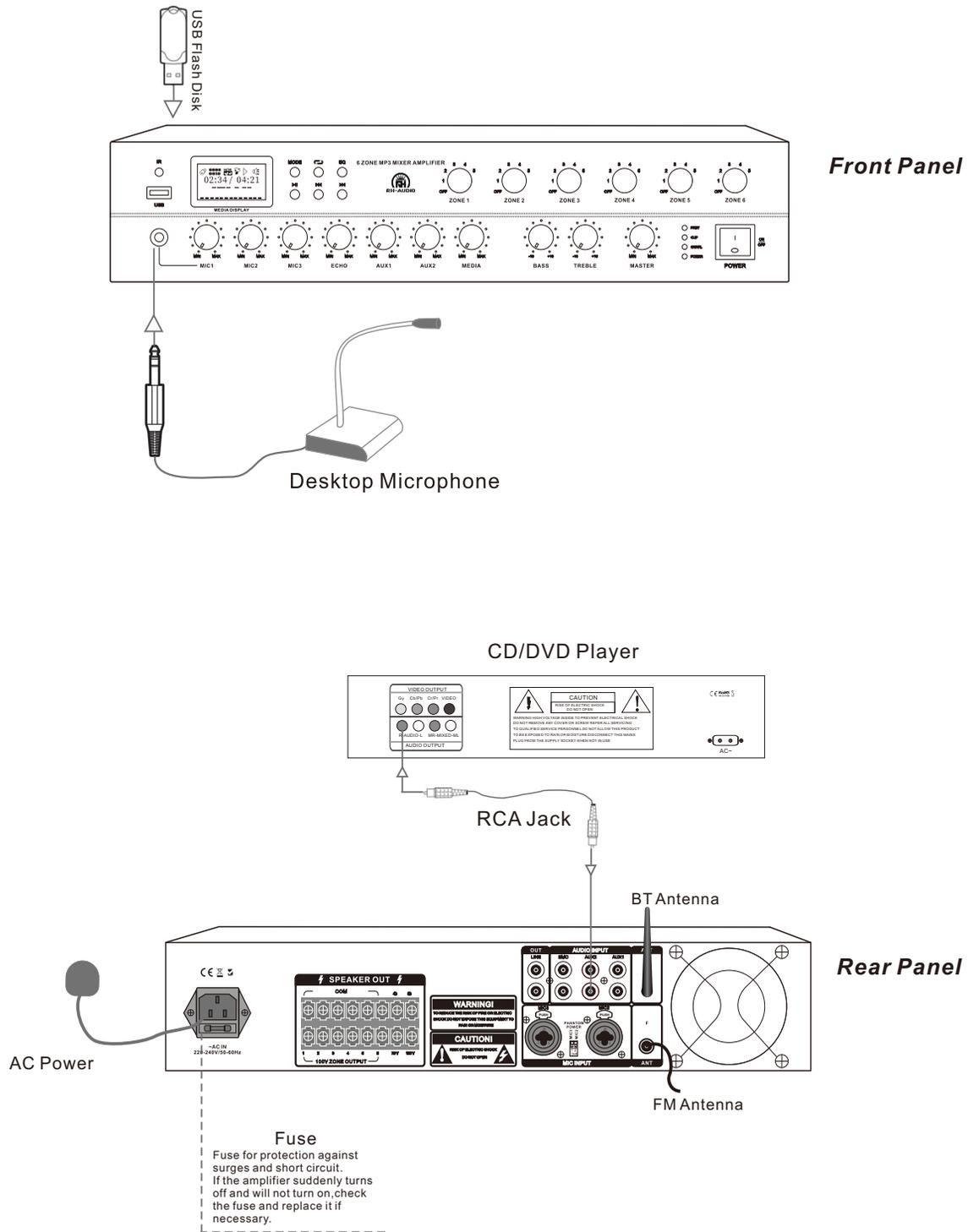
Push the DIP switch up to switch off the Phantom Power 48V.

(9) FM Antenna Jack: Allows to plug in a provided FM antenna.

SPECIFICATION

Model	RH120MF	RH240MF	RH350MF	RH500MF	RH650MF
Rated Power	120W	240W	350W	500W	650W
Output Terminals	120W	Voltage line:70V(38 ohms(Ω)) 100V(77 ohms(Ω))			
	240W	Voltage line:70V(19 ohms(Ω)) 100V(39 ohms(Ω))			
	350W	Voltage line:70V(14 ohms(Ω)) 100V(28 ohms(Ω))			
	500W	Voltage line:70V(10 ohms(Ω)) 100V(20 ohms(Ω))			
	650W	Voltage line:70V(7.54 ohms(Ω)) 100V(15.38 ohms(Ω))			
6 Zone Outputs	100V line voltage				
Media Source	USB,Bluetooth,FM,AUX				
Audio Format	USB: APE,FLAC,WMA,WAV,MP3				
Bluetooth Version	5.0, 2400MHz-2483.5MHz				
FM	87-108MHz				
MIC. Input	MIC1:600 ohms(Ω) 5mV \pm 2mV,unbalanced				
	MIC1:600 ohms(Ω) 5mV \pm 2mV,unbalanced/balanced,48V phantom power				
LINE Input	AUX1/AUX2:10k ohms(Ω) 300mV \pm 2mV,unbalanced				
EMC Input	EMC:10k ohms(Ω) 775mV \pm 50mV,unbalanced				
AUX Output	0.775V (0 dB)				
Freq. Response	60 Hz ~ 15k Hz (\pm 3 dB)				
THD	<0.5% at 1kHz,1/3 of rated power				
S/N	Line:85 dB , MIC:>72 dB				
Tone	BASS:100 Hz (\pm 10 dB) , TREBLE:12k Hz (\pm 10 dB)				
Mute Sensitivity	MIC1 overrides MIC2、 MIC3、 AUX1、 AUX2				
Controls	Volume controls,tone/treble control,power control				
Indicator	POWER,SIGNAL,CLIP,PROTECTION				
Power Fuse	T2A	T4A	T6A	T8A	T10A
AC Power	AC220V \pm 10% 50-60Hz				
Consumption	240W	400W	583W	833W	1083W
Dimension	89(H) \times 430(W) \times 340(D)mm				
Packing Size	185(H) \times 520(W) \times 435(D)mm				
Net Weight	11.50kg	13.80kg	14.50kg	15.50kg	16.60kg
Gross Weight	13.10kg	15.40kg	15.80kg	17.20kg	16.30kg

CONNECTION ILLUSTRATION



* Notes:

Please refer to page 9 to 10 for details of connections of speakers.

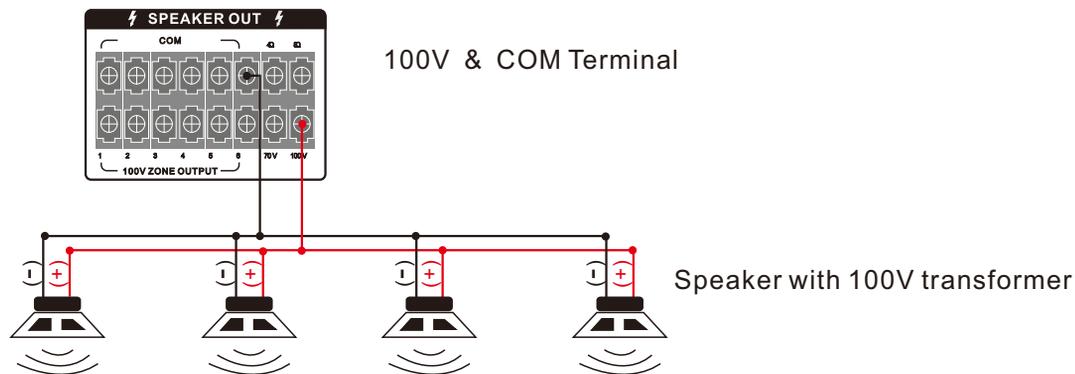
Please refer to page 11 for details of Bluetooth operations.

SPEAKER CONNECTION
When there is only one zone in the pa system:

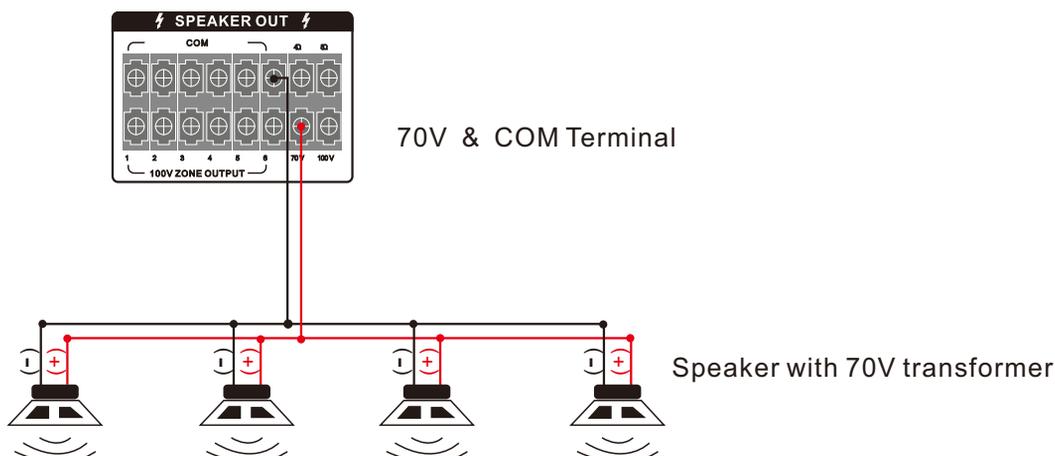
This amplifier has different loudspeakers outputs of 100V,70V and low impedance 4Ω/8Ω. **It's only possible to use one output at the same time, connecting more than one may damage internal parts of the amplifier.** Each of 100V,70V,4Ω and 8Ω terminals must work with COM. (common) terminal.

100V line output

This system is most commonly used in for PA system. Only use 100 V line loudspeakers with transformers. All loudspeakers are wired in parallel and the sum of their power must not exceed the rated output power of the amplifier. **It is advisable not to load the amplifier at more than 70% of its rated output power when using music sources.**


70V line output

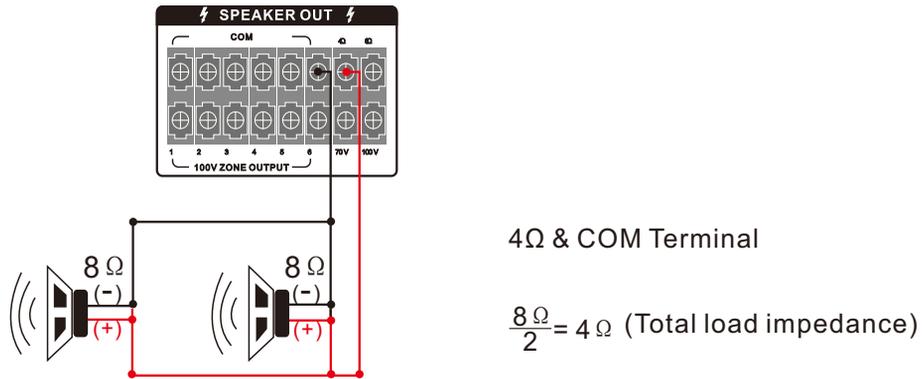
This system is common in the USA, it operates on the same principles as 100 V line except that at rated output power the amplifier has 70V RMS on its output terminals.



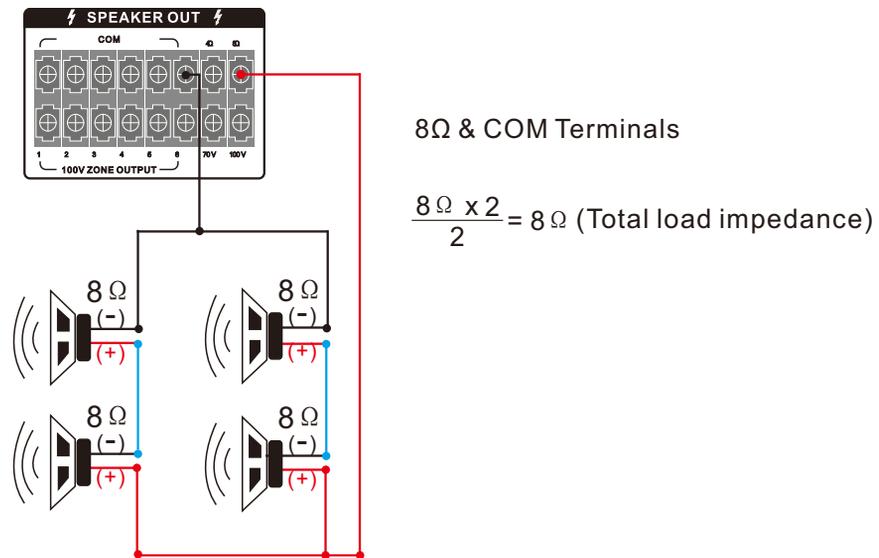
4Ω & 8Ω low impedance output

This output allows connection of low impedance loudspeakers without transformers, When two or more loudspeakers are used ensure that they are wired in such a way in Series, or in Parallel, or in Series & Parallel Combination that total load impedance remains at 4Ω or 8Ω.

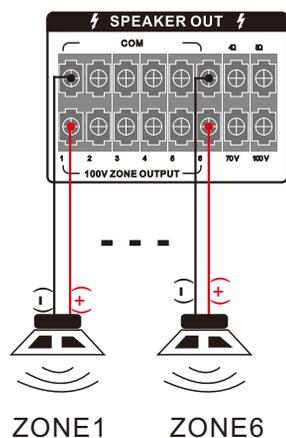
A. Connecting speakers in Parallel.



B. Connecting speakers in Series & Parallel combination.



When there two or more up to six zones (100V) in the pa system:



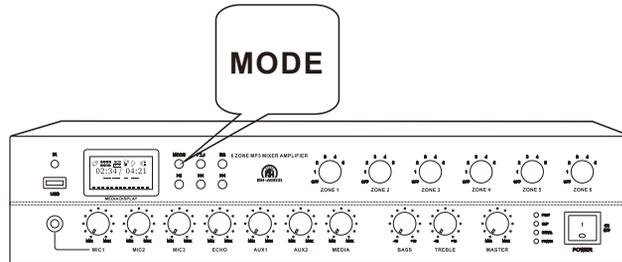
BLUETOOTH OPERATIONS

*Note: The Bluetooth name of this amplifier is **“BGM SYSTEM”**

In order to enjoy music from a Bluetooth device on this amplifier, the Bluetooth device must first be paired with this amplifier.

Once the Bluetooth device has been paired, it does not need to be paired again.

1. Press the MODE button on the front panel of the amplifier to switch the input source to “Bluetooth”.



2. Activate the Bluetooth settings on your mobile device.

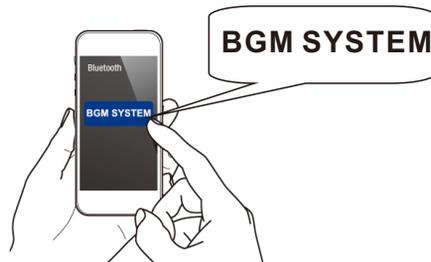


3. Select this unit **“BGM SYSTEM”** when its name appears in the list of devices displayed on the screen of your mobile device.

Perform the connection with your mobile device close to the unit (about 1 m).

At the end of the pairing, the name **“BGM SYSTEM”** appears on the paired list of your mobile device.

*Note: Enter **“1688”** when the password is requested on the screen of the your mobile device.



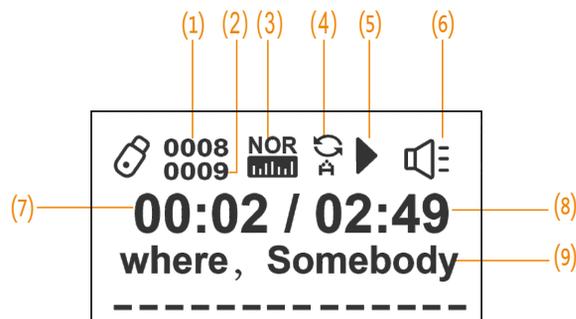
4. Play music using any app on your mobile device.

* The next time the input source is switched to Bluetooth, this amplifier automatically connects to the last Bluetooth device that was connected.



USB OPERATIONS

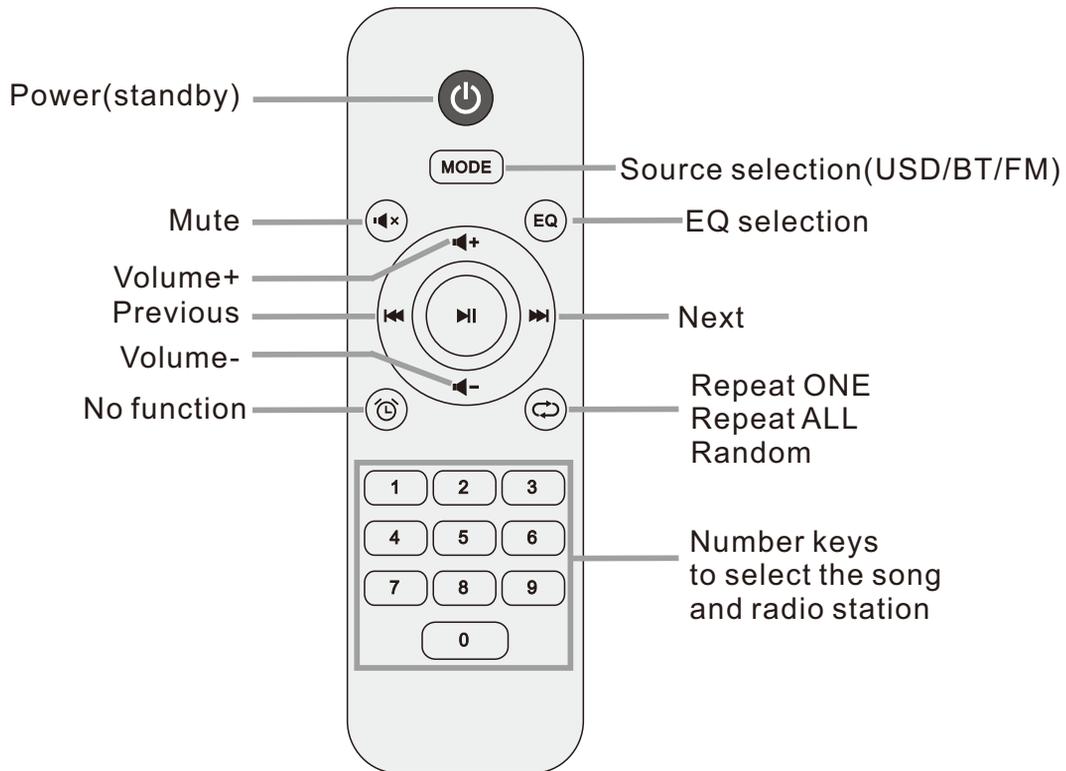
Press the **MODE** button on the front panel of the amplifier to switch the input source to “USB”, the screen will display figure as:



- (1) The serial number of the song that is being played.
- (2) The total number of the songs in the U disk.
- (3) It shows the equalizer effect, please push the button “EQ” on the front panel to switch among NORMAL, POP, ROCK, CLASSIC, JAZZ, COUNTRY.
- (4) It shows the LOOP mode, please push the button  switch the mode among:
 - 1 means to repeat the single one,
 - F means to repeat the folder,
 - R means random playback,
 - A means to repeat all.
- (5) It shows Play or Pause, please push the button .
- (6) Long press the button  to decrease or increase the volume.
- (7) The playing time of the song being played.
- (8) The total time duration of the song being played.
- (9) The name of the song being played.

Note: on front panel, we can control the U disk source via the buttons mentioned as below:

-  This button play or pause song.
-  This button shall return to the previous song. Or keep pressing to reduce the volume.
-  This button shall skip to the next song. Or keep pressing to increase the volume.

Remote Control



CAUTION: Do not open the equipment cover arbitrarily, so as not to electric shock. Please contact the professionals to maintain if necessary.