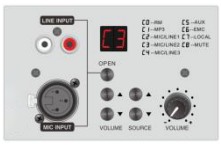
adertech

MPAMP-4120X
MPAMP-4240X
MPAMP-4350X
MPAMP-4500X

4 Zone Matrix Amplifiers with MP3/FM/BT









USER MANUAL

SAFTY WARNINGS!

1. Read and keep these instructions.
2. Heed all warnings and follow all instructions.
3. Do not use this apparatus near water.
4. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
5. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus that produce heat.
6. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
7. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
8. Only use attachments/accessories specified by the manufacturer.
9. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
10. Unplug this apparatus during lightning storms or when unused for long periods of time.
11. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
12. This appliance shall not be exposed to dripping or splashing water and that no object filled with liquid such as vases shall be placed on the apparatus.
13. Plug this apparatus to the proper wall outlet and make the plug to be disconnected readily operable.
14. Main plug is used as disconnected device and it should remain readily operable during intended use. In order to disconnect the apparatus from the mains completely, the mains plug should be disconnected from the mains socket outlet completely.
15. WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
16. An appliance with a protective earth terminal should be connected to a mains outlet with a protective earth connection.

WARNING!

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT USE THE PLUG WITH
AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES
CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE
THIS APPLIANCE TO RAIN OR MOISTURE.
TO PREVENT ELECTRICAL SHOC
K, MATCH WIDE BLADE PLUG TO WIDE SLOT, FULLY INSERT.



INTRODUCTIONS

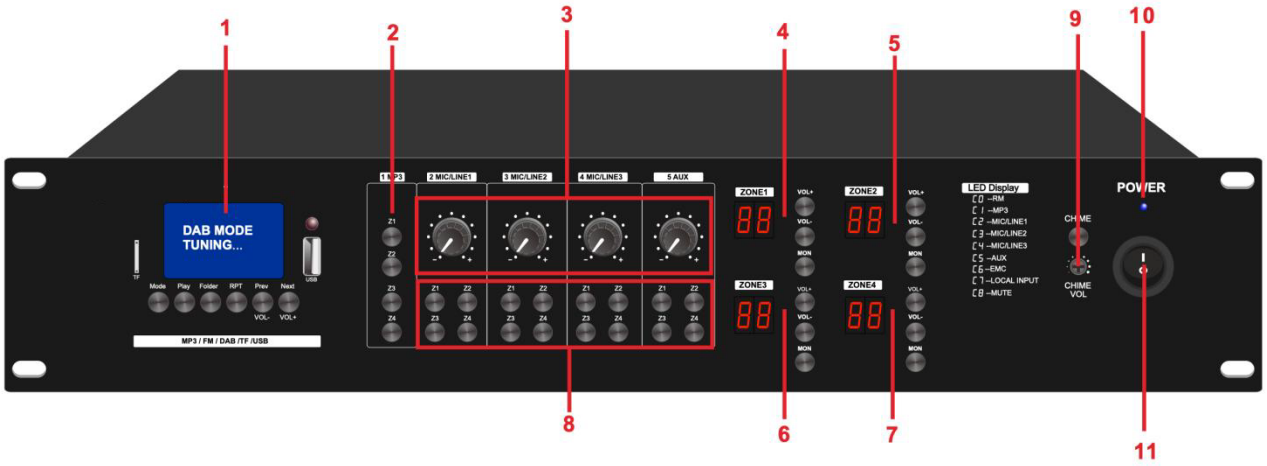
Description:

The MPAMP-4xxxX series 4 zone matrix amplifier is designed for 19" rack mount installation or tabletop use both application, it is ideal for both professional sound system and commercial audio solutions, since it is designed with 4 zone speaker outputs support 100V & 8-16Ω. This series matrix amplifier integrates two 100V & 8 Ω amplifier into one unit, so it could be used as stereo matrix amplifier or 4 zone commercial matrix amplifier. The matrix amplifier is built-in media player of USB/SD/FM/ & Bluetooth, with 3 mic inputs, line input, EMC input, 6 units 4 zone remote paging mic MCH-MX4 and 4 units remote panel CTRL-WP1MX4 or remote panel CTRL-WP2MX4 and one mute input. 3 Mic/line switchable inputs, 1 aux input and an integral USB/SD/FM audio player with Bluetooth receiver can be matrix switched to any of the 4 zones independently. Mic1 channel with VOX highest priority and each microphone 1-3 inputs have switchable +48V phantom power. A master chime with volume can be used for paging calls and Alerts. The 4 zone matrix amplifier is designed for multi-room commercial audio systems requiring different audio sources & multiple paging microphones, additionally, up to 6 units remote microphones and 4 units remote control panel could be connected to this 4 zone matrix amplifier through CAT6 cable , which could be installed in four separate rooms to select different audio sources locally and adjust the local loudspeaker loudness and input Bluetooth to its own room. The mute input could integrate with fire alarm system or other third party system. The amplifier is designed with complete protection includes short-circuit, clip, overload and high temp.

Feature:

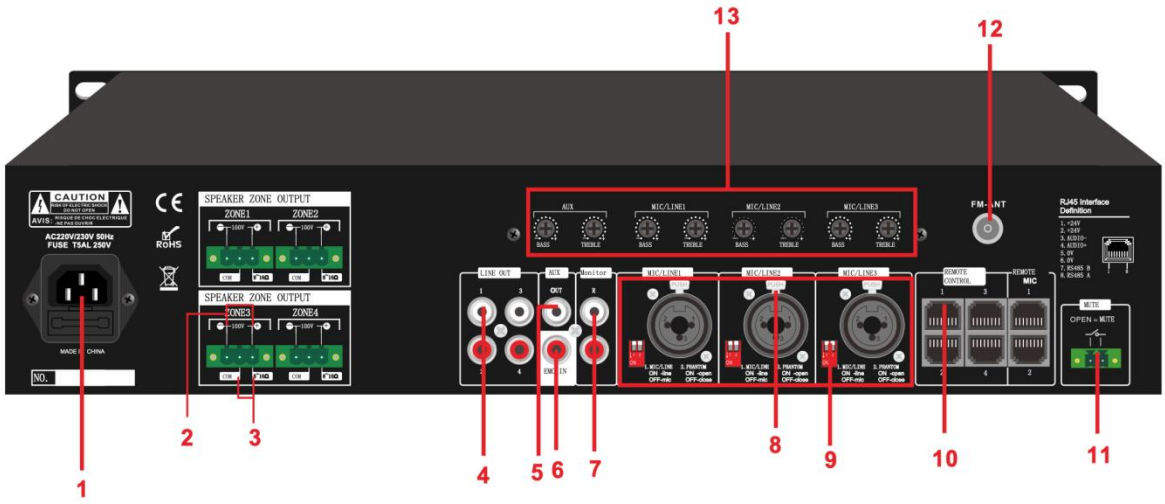
- Multi-room commercial audio systems requiring different audio sources & multiple paging microphones
- 4 zone matrix amplifier built-in USB/SD/FM/Bluetooth audio player
- 4 zone matrix amplifier built-in 4 channel power amplifier & 4 channel audio matrix
- Support both 100V or 8-16 Ohms speaker applications
- 4 independent output zones with attenuation
- 3 mic/line inputs, 1 aux input & an integral audio player matrix switched to any of the 4 zones independently
- 3 mic/line switchable input with +48V phantom power balanced COMBO XLR
- Each input with bass/treble includes 3 mic/line & 1 auxiliary input
- With emergency remote mute input
- Input priority level from high to low: Mute, EMC, Mic1 and remote paging mic to others inputs
- Up to 6 remote microphones MCH-MX4 connection to the amplifier through CAT6 cable
- Up to 4 remote control panels CTRL-WP1MX4 or CTRL-WP2MX4 connection to the amplifier through CAT6 cable
- Remote control panel CTRL-WP2MX4 select source, adjust volume and 1 line input and 1 mic input
- With complete protection includes short-circuit, clip, overload and high temp

FRONT PANEL



1. Mp3/FM/Blue tooth media player module.
2. MP3 output zone 1-4 selector
3. Mic2-4 & Aux output attenuator
4. Zone 1 output volume attenuator and Mono selector
5. Zone 2 output volume attenuator and Mono selector
6. Zone 3 output volume attenuator and Mono selector
7. Zone 4 output volume attenuator and Mono selector
8. Mic2-4 & Aux output selector to Zone1-4
9. Chime button and chime volume attenuator
10. Power supply on/off indicator
11. Power switch

REAR PANEL



1. AC Power Socket with removable fuse
2. Zone1-4 output-100V (- & + terminals)
3. Zone1-4 output-8-16 Ohm (COM & 8-16 Ohm terminals)
4. Line output
5. AUX OUT
6. EMC input from fire alarm system with priority except MUTE input (11)
7. Monitor output
8. Mic/line input of COMBO input for both XLR and 6.3mm jack.
9. Dipswitch of 2 PIN. Mic/line selector and +48V phantom power on/off selector.
10. RJ45 ports for remote microphone and remote control panel.
11. Mute input, open circuit to activate mute of highest priority and closed circuit back to amplifier normal working status.
12. FM antenna
13. Mic2-4 & Aux input bass & treble gain control

AMPLIFIER OPERATION GUIDANCE

Connection and setup

With the MPAMP-4xxxX power switched off (20), connect the rear IEC inlet (21) to the mains using the supplied mains lead (or an equivalent approved type). Ensure that the voltage is correct and the speaker connect is correct then power on

The MPAMP-4xxxX has 5 input channels and an integral multi-source audio player.
Microphone input 1, 2 and 3 are designed for either microphones or line level sources (such as a CD/mp3 player or output from a matrix) via combo connectors on the rear panel, it is switch able by DIP switch.
These can accept either XLR or 6.3mm plugs for balanced or unbalanced signals.

DIP switches

Mic/Line inputs 1, 2 and 3 each have 2 DIP switches on the rear panel to set the input level and/or activate +48V phantom power for use with condenser microphones.

Set the level correctly for the type of input source connected (Mic or Line)
If the source connected is a condenser microphone which requires phantom power, make sure that the phantom is switched on for that channel.

Be sure to make these DIP switch settings when the amplifier is switched off. Making any changes when the amplifier is powered up may cause loud bangs through the system which can damage the speakers.

Priority and Emergency Activation

1. Mute input, open circuit to activate mute of highest priority and closed circuit back to amplifier normal working status.
2. EMC input- this one is EMC audio input of secondary priority
3. Mic1 input
4. Remote microphone MCH-MX4 to others inputs

Signal Inputs and Outputs

Connect microphones or line signals to Mic/Line 1, 2 and 3 inputs using good quality signal leads. A stereo or mono line level source can be connected to the Auxiliary channel 4 input on 2 RCA connectors.

For checking the output of any zone, an assignable Monitor output can be connected to headphones from the front panel 6.3mm jack or as a line output (e.g. to active speakers) from RCA connectors at the rear.

Each zone output has a dedicated RCA signal output on the rear panel, which can be connected to the line inputs of active speakers or amplifiers. These are in addition to the speaker outputs detailed below.

An antenna input is provided on the rear panel for connection to an external aerial for FM tuning
There are Bass and Treble volume control on rear panel to adjust the sound of MIC and Line input signal

Speaker outputs

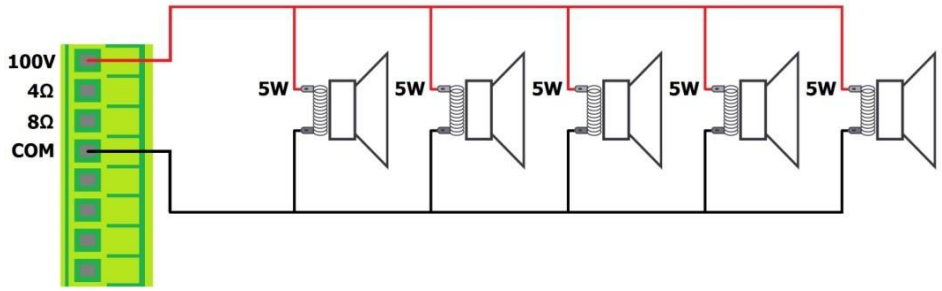
The MPAMP-4xxxX has a separate speaker output for each zone, connected via 3 large modular terminal plugs. Each plug can be removed from the rear panel for convenient connection of speaker outputs to 2 zones.

Each zone output can be used to power either 100V line speakers or standard low impedance speakers. These 2 configurations cannot be used together, so it is important to decide which will be used at the start.

100V line systems

For 100V speakers, connect the selected zone output to the first speaker in the zone using double-insulated speaker wire which has adequate current rating to handle the total output of the amplifier.

Connect the “100V” output terminal for the selected zone to the positive (+) connection of the speaker and “COM” output to the negative (-) connection of the speaker. Connect further speakers in parallel to the first speaker with all positive terminals and connected together and all negative terminals connected together as shown below.



A 100V line speaker system can comprise of many speakers connected together. The determining factor for how many speakers can be used on a single amplifier is the power rating. For most purposes, it is advised to connect as many speakers as needed with a combined wattage of no more than 80% of the amplifier’s output power rating (in the case of the MPAMP-4xxxX this is 500W per zone output)

The terminals of a 100V speaker are connected via a transformer and if necessary, this transformer may be “tapped” for different power ratings. These tappings can be used to adjust the wattage (and output volume) of each speaker in a zone to help achieve the ideal total power of the system for the relevant zone output.

Low impedance systems

Alternatively, each zone output of the amplifier is capable of powering one or more low impedance speakers. There is an option on each zone for either a 8-16Ω speaker output to determine the minimum impedance. It is essential to select the correct output terminal when opting for low impedance speakers.

For a single 8Ω speaker, connect the positive (“+” 8-16Ω) wire to the (+) of speaker terminal and the speaker negative (-) wire to “COM” of the amplifier terminals.

In either case, the connected load should have a combined impedance no lower than stated on the terminal. Lower impedance may cause irreparable damage to the amplifier.
The connected speaker(s) must also have a power handling to accept up to RMS loading from the zone output. Lower power handling may risk damage to the speakers

LED Display meaning:

- C0-MCH-MX4
- C1-MP3 Module
- C2-MIC1/Line1
- C3-MIC2/Line2
- C4-MIC3/Line3
- C5-AUX
- C6-EMC
- C7-Local input
- C8-Mute

Operation

When all connections to the amplifier are made, turn all rotary controls down and switch on the power and the power LED will illuminate.

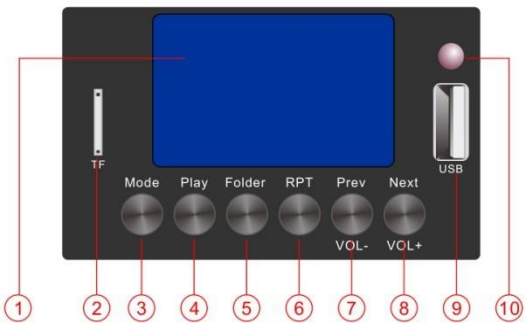
To check for correct operation of the system, select an input source and output zone for testing. In the following example, Mic/Line 1 input and Zone 1 output have been selected.

Press Z1 button on the line of MIC/Line1, if zone1 display C2, that means MIC/Line1 output to zone 1
If you playing MP3, press zone1 on the line of MP3, then zone 1 will have MP3 music and display on Zone1 will show C1

If Zone 1 cannot be heard from the location of the MPAMP-4xxxX, use the monitoring feature as follows
Press the button of Monitor and connect headphones to the Monitor output
Make sure that the Monitor button for Mic/Line 1 is pressed in and listen through the headphones
Gradually turn up the Monitor level control and check for the output to Zone 1

Onboard Multi-Source Audio Player

The MPAMP-4xxxX is fitted with a built-in audio player, operated via a backlit LCD display and transport buttons. This section provides access to a Bluetooth™ receiver, FM radio tuner and USB/SD audio player
In order to play audio to one of the zones, it is necessary to press in one of the “Play” buttons (4).



Mode: Select between Bluetooth, FM tuning, USB or SD playback
Play: play music
Folder: hold on the music **RPT:** repeat the music
Prev: Back to last music **Next:** go to next Music
Vol+: Increase volume **Vol-**: Reduce Volume
Short press: Prev& Next **Long Press**: Vol+&Vol-

Bluetooth Operation

In order to play back audio from a smartphone, tablet or other Bluetooth device, the built-in Bluetooth receiver will need to be paired with a device which is within range.”

To pair a device with the MPAMP-4xxxX Bluetooth receiver, it is necessary to scan for devices in the Bluetooth menu of the sending device and select to pair with “**BT66078**”. Once paired, the MPAMP-4xxxX display will show it is connect, **Password: 1234**



Select to connect as an audio device and play audio tracks on the smartphone or tablet (or other) and the audio should be heard on the selected zone.

The buttons labelled “Prev” and “Next” can adjust the audio player output volume.
Press and hold “Prev” to increase volume or press and hold “Next” to decrease volume.

If the sending device goes out of range or the Mode of the audio player is changed, the connection will stop. Returning to within range or to Bluetooth mode will restore the pairing.
It may be necessary to re-select connection as an audio device on the sending device.

FM Tuner

Press the Mode button to switch to the FM tuner function. For good FM reception, it will be necessary to connect an external aerial to the Antenna connector on the rear panel using good quality coaxial RF cable terminated .

If no channels are tuned in, press the Play button to begin auto tuning, which scans available stations and stores them as channels within the MPAMP-4xxxX FM tuner. To step through pre-set stations, press the Previous or Next buttons.

USB/SD Player

The MPAMP-4xxxX audio player has inputs for a USB pen drive or SD card with standard compressed digital audio files on them. Inserting either or both of these will switch the player to read from these sources and the display will show “MP3 Mode”.

After you Insert the USB it will play automatically, you can use “Prev” or “NEXT” to choose last or next song, “REPT” is for one song or all song repeat.

MCH-MX4

4 ZONE REMOTE PAGING MICOPHONE

- Communication through CAT6 cable up to 200 m
- Direct power supply from matrix controller
- 4 speaker zone individual, group or all zone paging
- Up to 6 Mics working simultaneously loop connection



MCH-MX4

CTRL-WP1MX4
CTRL-WP2MX4

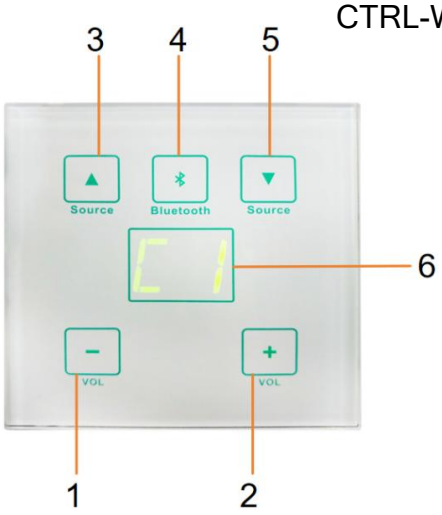
REMOTE CONTROL PANEL

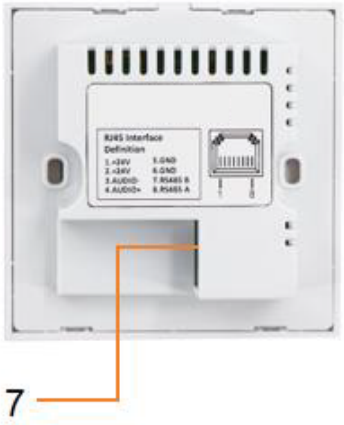
- Communication through CAT6 cable up to 999 m
- Direct power supply from matrix controller
- Audio sources selection and volume control
- 4 units capacity for each matrix controller
- **CTRL-WP1MX4 Bluetooth Name: BK3254, Password: no password**

CTRL-WP1MX4

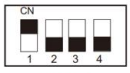
Feature:

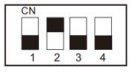
1. Volume -
2. Volume +
3. Output source Prev
4. Bluetooth switch
5. Output source Next
6. Display window
7. RJ45 port



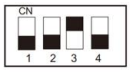


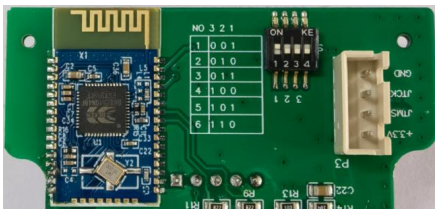
DIP switch guide

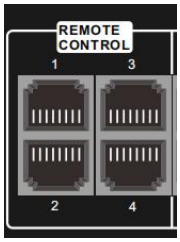


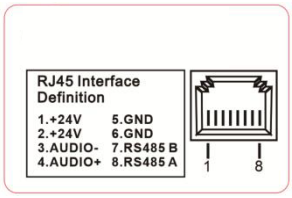






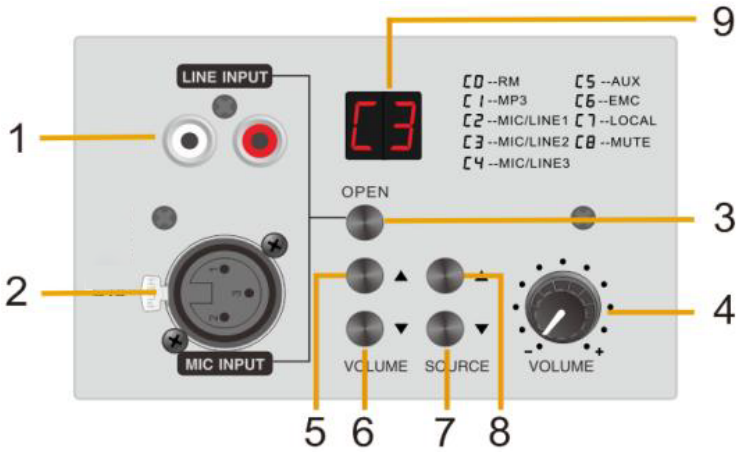






Feature:

1. Line input
2. Mic input
3. Local panel switch/Bluetooth switch
4. Local panel/Bluetooth volume selection knob
5. Volume +
6. Volume -
7. Output source Next
8. Output source Prev
9. Display for audio source selection



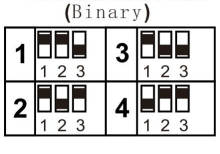
CTRL-WP2MX4

DIP switch guide

1.ADD1
2.ADD2
3.ADD3
4.ADD4

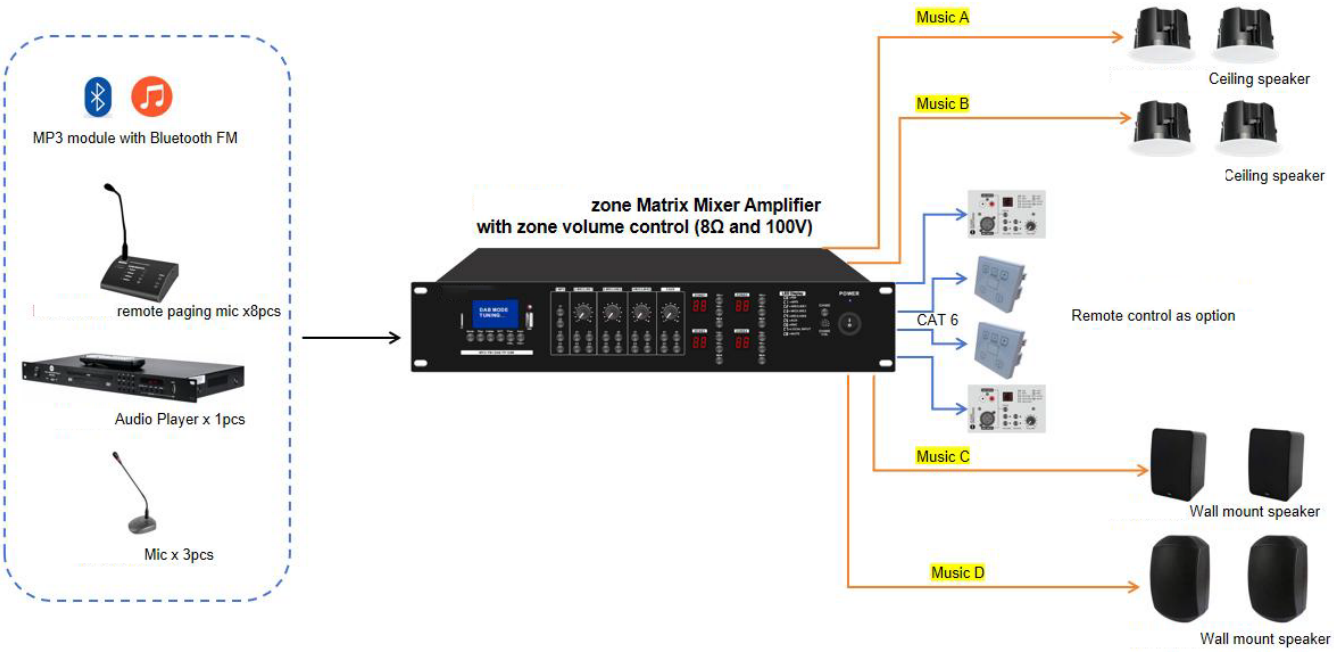


Device address
(Binary)





CONNECTION DIAGRAMS



SPECIFICATION

Description	MPAMP-4120X	MPAMP-4240X	MPAMP-4350X	MPAMP-4500X
Rated Power Output	4×120W	4×240W	4×350W	4×500W
Speaker Output	100V and 8-16 Ohms			
Connector	Mic/line1-3: 10mV, balanced COMBO XLR input with +48V phantom power Line1-2: 775mV; RCA type Mute: Closed circuit = remote mute, open circuit=normal working, Two RJ45 ports for remote microphone & Four RJ45 ports for remote control panel			
Input	MIC1-3: 10mV; Line, 150-470mV, 10KΩ, unbalanced RCA			
Line Out	0.775(0dBV)			
Frequency Response	70-20KHz			
THD	<0.1%			
S/N Ratio	>80dB			
Protection	High temp, short circuit, clip & overload			
Power Supply	230V AC, 50-60Hz			
Power Consumption	550W	1150W	1650W	2400W
Dimension	484×405×88mm			
Weight	6.3kg	6.5kg	6.7kg	6.9kg

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