MPA-Q SERIES
MPA-QF SERIES
MPA-QUF SERIES
MPA-QUSB SERIES

Public Broadcasting Power Amplifiers

User's Manual

- Read this manual carefully before using this product for the first time. This manual includes important instructions about installation, operation and safety precautions
- We will assume no responsibility if you do not comply with these instructions and meet troubles
- The output voltage can reach up to 180 volts, all installations and operations must be referred to qualified personnel who has been specially trained.
- Not suitable for household
- Do not remove the ground terminal of the power cord

1. Location
Keep the unit away from locations where it is likely to be exposed to high temperatures or humidity-such as near radiators, etc. Also avoid locations which are subject to excessive dust accumulation or vibration which could cause mechanical damage and locations subject to strong electromagnetic fields, such as close to broadcast equipment.

2. Ventilation
The unit has ventilation slots on the side and bottom panels. Do not block these vents.

3. Avoid physical shocks
Strong physical shocks to the unit can cause damage. Handle it with care.

4. Do not open the case or attempt repairs or modifications yourself
This product contains no user-serviceable parts. Refer all repair or maintenance to qualified engineer.

5. Always power off before making connections
Always turn the power off before connecting or disconnecting cables. This is important to prevent damage to the unit itself as well as other connected equipment.

6. Clean with a soft dry cloth
Never use solvents such as Benzine or thinner to clean the unit.
Wipe clean with a soft, dry cloth.

7. Always use the correct power supply
Make sure that the power supply voltage specified on the rear panel matches your local AC mains supply. Also make sure that the AC mains supply can deliver more than enough current to handle all equipment used in your system.

8. Must be connected correctly
Although this unit have goodly protect functions to avoid damage because of short or overload, we should be turn away short or overload for system chronically turning normally.

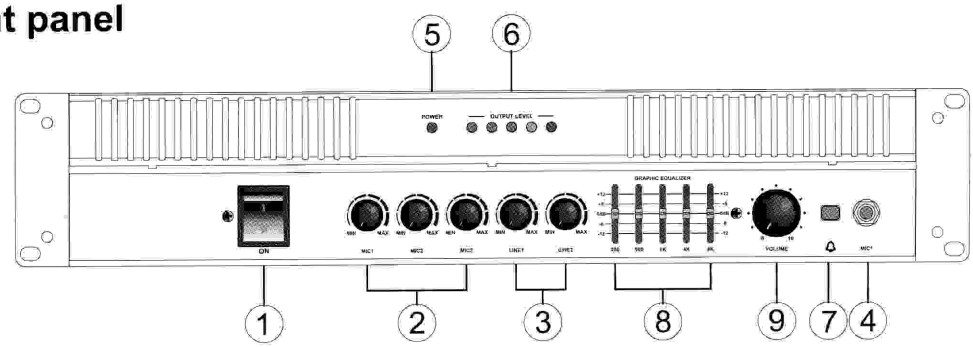
CONTENTS

We reserve the right to make any modification for this products to improve them without prior notice.

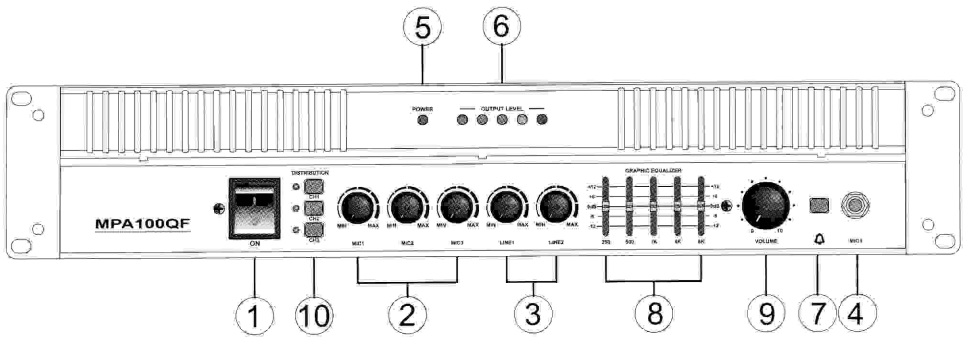
FEATURES:

- 3 microphone inputs, and one is first with mute function.
- 2 stereo line inputs, they can be linked to all kinds of sources as CD, radio, tape player etc.
- The level of microphones or lines can be adjusted separately.
- Five-band graphic equalizer, output level control, ring generator.
- The unit provides one line output for recording or linking to other amplifier.
- The power output mode is stable voltage 100V(120V)rms.
- Output power can be distributed to 3 sections. (This function only for MPA-QF branch series)
- Output level indicator.
- Built-in music player, can play songs from U disk or SD card directly. (This function for MPA-QUSB and MPA-QUF series)
- FM radio(This function only for MPA-QUF series).

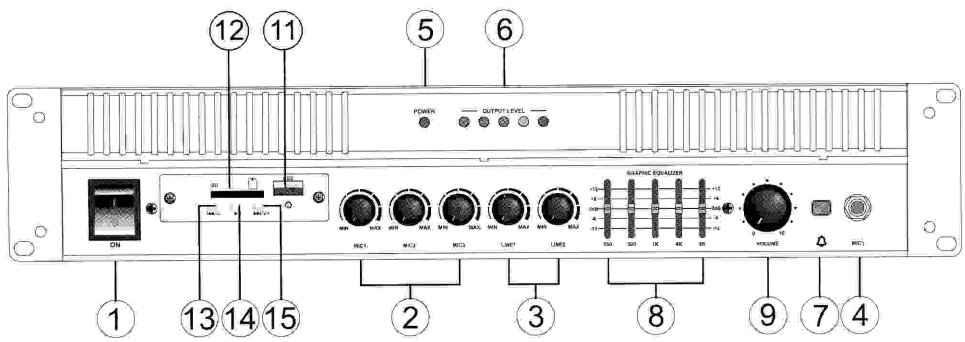
● The front panel



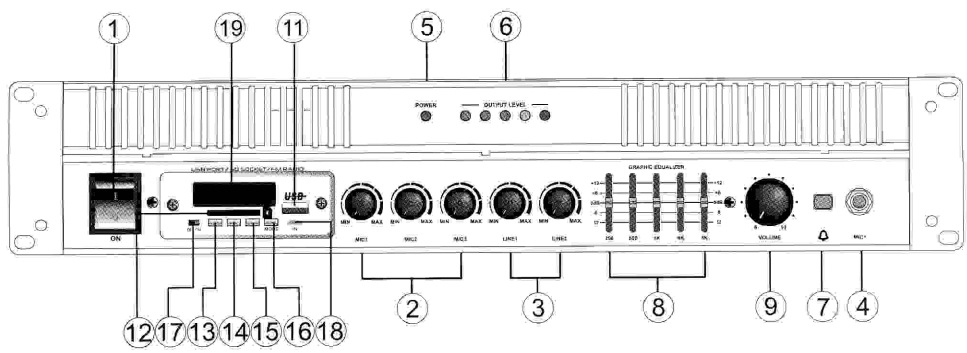
MPA-Q series front panel



MPA-QF series front panel



MPA-QUSB series front panel



MPA-QUF series front panel

1. Power switch
2. Controls for adjusting MIC input level
3. Controls for adjusting LINE input level
4. MIC1 input connector (this MIC has priority with mute function)
5. Power on indicator
6. Output level indicator

7. Button for prompting

8. Controls for adjusting five-band equalizer

9. This control adjusts the final output level

10. Buttons and LEDs for distributing.(only for MPA-QF)

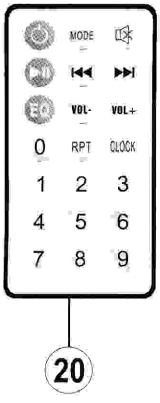
11.USB Port,This unit built-in a music player, An U disk which loaded many songs easily can be a good quality line signal source via this port. (for MPA-QUSB & MPA-QUF)

12.A SD Card which loaded many songs easily can be a good quality line signal source via this port. (for MPA-QUSB & MPA-QUF)

13.⏮/V- , Short press this button is to Previous Song, and long press this button is to lower the volume. For MPA-QUF series, when in FM mode ,short press this button is search radio station from high to low (for MPA-QUSB & MPA-QUF)

14. ▶II, For MPA-QUF:This button switch between play and pause. For MPA-QUF :short press this button to get the next storage radio. long press will automatic search and storage radio station.

15.⏭/V+, Short press this button is to Next Song, and long press this button is to increase the volume. For MPA-QUF series, when in FM mode ,short press this button is search radio station from low to high (for MPA-QUSB & MPA-QUF)



16.MODE:Used to choose the machine's working mode, the working mode cycling according to the order "FM、AUX、MP3"(only for MPA-QUF).

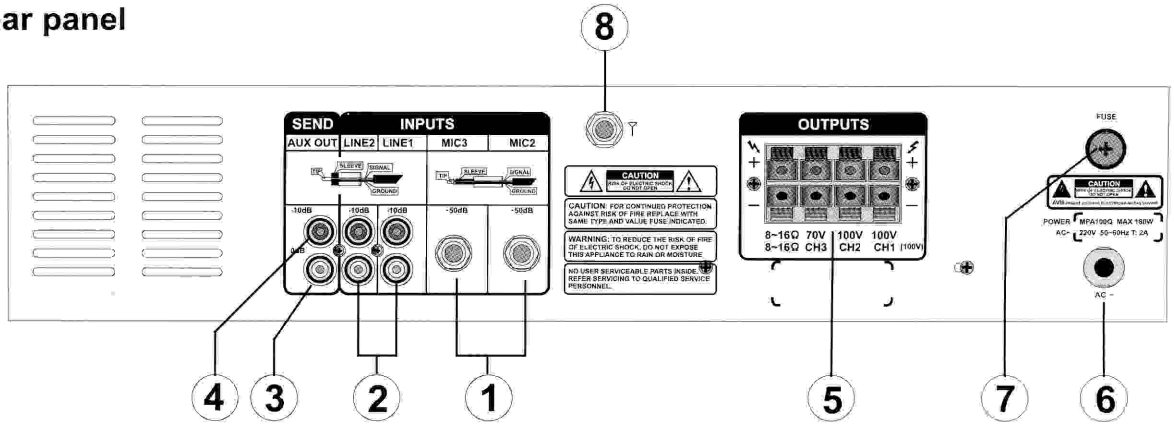
17.Switch: Turn on or turn off the Mp3 part.(only for MPA-QUF).

18.MINI USB: Used to input the AUX signal.(only for MPA-QUF).

19.DISPLAY:This machine built in one FM/AM digital radio, one MP3 player with USB/SD port. This LED shows the status of the Radio/MP3/AUX player. (only for MPA-QUF).

20.REMOTE:This remote is used to control the built-in player (Only for MPA-QUF series).

● Rear panel



1. Connectors for MIC2 and MIC3 input

2. RCA connectors for 2 stereo line inputs

3. Line output

4. Record output

5. Power output terminals(3 sections, 100Vrms stable voltage)

6. Power cord

7. Fuse holder

8. Connectors for FM radio antenna.(Only for MPA-QUF series)

● Installations and operations

Connection to the mains supply

Before connecting the amplifier to the mans socket, always make certain that:

1. The electric system and mains socket have an adequate grounding, compatible with the safety norms(if you're uncertain, consult specialized personnel);

2. The mains voltage corresponds to that shown on the rear of the unit (an allowance of up to +/-10% is accepted);

3. The on/off switch is in the OFF position.

Make sure the amplifier is also off before disconnecting the power cord from the mains socket.

Switch on and off

In your reinforcement system, always switch on the amplifier after all the other equipment and always switch it off before anything else, if possible with the gain controls set at minimum: this will avoid annoying and sometimes dangerous signal peaks.

Audio connections

Remember to always connect and disconnect other units with amplifier switch off.

Let the signals from sources as CD player, tape player and radio etc. Into the input sockets via audio cable with shield. This unit can accept at the same time 2 stereo line inputs, adopt RCA connector. Link microphone you will need to microphone input (this unit has 3 microphone inputs, MIC1 is first with mute function located at the front panel, MIC2 and MIC3 are located at the rear panel, they are all TRS phone jacks).

Please use only professional low impedance microphone with output level at -35dB~-60dB

Load connections

The power output mode of this series is stable voltage 100V(120V), this mode is usually used for public broadcasting, they are easy for load linking, less power consume and suitable for long distance transmission. Be careful to check the load impedance and load type to avoid damage of load or amplifier.

The load can be made up of many sound boxes which are stable voltage type with 120V input voltage, these sound boxes is usually linked in parallel, the total power of these parallel boxes should be less than the total output power of the unit, and have enough surplus.

The line output of the unit can be used for linking to another power amplifier.

CHECK AND MEASURE FOR LOAD

The load must be checked and measured at the first time, because of long distance from the power amplifier to the load, because of load complicated connecting and section controlling. In the public broadcasting systems the bad cable using and mistaken connecting will always occur, such as load short circuit, load part short circuit and indirect short circuit between output cables of two amplifiers.

1. Measure the DC impedance of the end terminal of the load by multi-meter, you may determine roughly if the load has been short circuit.

2. Check when the unit is on

Turn left all potentiometer knobs at the front panel to the minimum position, then turn the source (as CD) on and let it output signal. Turn this unit power on, then rotate the corresponding level knob to 3 o'clock after the buzzer chirps several times and the relay acts. At this time you should feel the output power signal will be right level and excellent tone quality. You may observe the unit status and feel the wind from the vents, if the unit will not protect itself within one hour and also no too hot wind (above 50 C) from vents, and thus we think the load is good. If the unit immediately go into protection (the buzzer always chirps and no signal output) or the wind temperature rise quickly, it means a load trouble has occurred. You should put a current meter into the output load circuit to measure the output current. By comparing the output current with the rated output current as followed, you may determine the load status. You will use this power amplifier again after you getting rid of all load trouble .

OPERATIONS

Rotate all knobs of the potentiometers at the front panel to full closed, turn the unit on, now the power indicator is on. After the buzzer chirps several times and the relay acts, turn right the knob of the corresponding potentiometer, you also can adjust the five-band equalizer and adjust the control of the total output level until the output level is just fit for you. Remember that you should reduce the input signal level when the last one of the level indicator is always on, if not, the unit will be overloading and the output power signal will be clipping.

SPECIFICATIONS

Parameter \ Model	MPA060Q / MPA060QF / MPA060QUSB / MPA060QUF	MPA100Q / MPA100QF / MPA100QUSB / MPA100QUF	MPA300Q / MPA300QF / MPA300QUSB / MPA300QUF	MPA500Q / MPA500QF / MPA500QUSB / MPA500QUF	MPA700Q / MPA700QF / MPA700QUSB / MPA700QUF	MPA900Q / MPA900QF / MPA900QUSB / MPA900QUF
Rated output power	60W	100W	150W	250W	350W	450W
Output 1	8~16 ohms (Section 1 for MPA-QF series)					
Output 2	70V (Section 2 for MPA-QF series)					
Output 3	100V (Section 3 for MPA-QF series)					
Five-band equalizer	250Hz, 500Hz, 1KHz, 4KHz,8KHz +/- 12dB					
Frequency Response – Low-cut	130Hz~22KHz +/-2dB					
Frequency Response – No low-cut	60Hz~22KHz +/-2dB					
THD (1KHz)	≤0.5%					
S/N Ratio – MIC1~3	<-108dB Equivalent input noise					
S/N Ratio – LINE1,2	>88dB					
Inputs – MIC1~3	-50dB 600ohms unbalanced					
Inputs – LINE1,2	-10dB 10Kohms unbalanced					
MIC1 mute adjust	-30dB					
Line(Record) output	0dB(-10dB) unbalanced at 600ohms load					
Rated output current	0.9A@70V	1.4A@70V	2.2A@70V	3.6A@70V	5.0A@70V	6.5A@70V
	0.6A@100V	1.0A@100V	1.5A@100V	2.5A@100V	3.5A@100V	4.5A@100V
Power supply	AC 120V, 220V, 230V, 110V/220V, 50~60Hz. (Please refer to the nameplate on the rear panel.)					
Power consume	110VA	180VA	260VA	440VA	590VA	720VA
Net weights(Kg)	9.0	10.0	11.5	14.3	15.5	17.0
Dimensions(WxDxH)	480x365x88mm					