OPERATION MANUAL

DIGITAL NETWORK PUBLIC ADDRESS & VOICE ALARM SYSTEM

VA-P8500S

Thanks for using ITC Digital Network Public Address & Voice Alarm System.
For better operation, please read this manual carefully before operating the system.

1. Dear Readers

Thank you for using ITC fire voice broadcasting system, in order to facilitate your understanding and the manual's description, suggestion are as follows:

◆ **The mentioned "Voice information" in the manual includes**

➢ Built-in EVAC, ALERT voice.

➢ Built-in paging and PSTN voice menu prompt tone.

➢ Built-in BGM, line input audio and remote paging audio.

Note: The qty of voice information of EVAC / ALERT / BGM / PROMPT memory cards cannot exceed 100.

◆ **The system control priority**

➢ When configuring audio operation priority, please follow the principle that manual first, then automatic, local first, then remote.

➢ Recommend to make Mic PTT and EVAC voice configuration with a higher priority.

It has total 39 kinds of audio signal system, in consideration of the network bandwidth, only 24 different audio signal can be sent to the system partitions, audio priority can be configured through software (when configured with backup host, the priority of the audio signals come from one host can be the same, the priority of the audio signals come from diferent hosts must be different).

◆ **Some icons are described as belows**

 —Loop playback.

 —Single cycle.

 —Order play.

 —Single player.

 —Random Play.

 —Click to adjust the output level of the current partition (It is invalid for EVAC voice and zone paging broadcasting).

 —Represent the current partition output muted (volume output is 0).

 —Click for monitoring audio signal of current partition.

 —It means audio signal of current partition is monitored.

 —Equipment or module fault appears in the system.

 —It indicates that the system is currently operating in an emergency mode.

 —It represents that the host is offline.

 —It indicates that the network is connected.

 —It represents the host starts the PSTN calling function.

 —It indicates that MIC is calling.

 —Green indicates that the module is working.

 —Yellow indicates module failure.

 —Grey indicates that the module is normal.

◆ LED Status Description of the Equipment

Yellow —Fault, system detect that some equipment is lost comparing to the current configuration, the normal operation of the system may be affected.

Off - indicates that the system according to the user's current configuration does not detect the equipment, or equipments work abnormally, everything runs smoothly (in the case that module is not configured, it is also off).

Green – 1. On ---- works normally; 2. Flashing ----- current partitions which are called are all switched to playing the audio with the higher priority.

Red – 1. On ---- warning; 2. Flashing ----- waiting.

◆ **The system partition status descriptions**

Partition status means that the real-time job status of local speaker loop bus, which includes the loop bus open, short-circuit, ground, normal and currently working audio. When system diagnostics speakers' partition bus that has short circuit, in order to protect the power amplifier, it will immediately stop outputting audio signal of the current partition; when system diagnostics speakers' partition bus that has grounded and open, it does not stop outputting audio signal of the current partition, but it will beep and fault indication to alert the user and record the time point of failure and failure of the partition, for the specific view, please refer to the following sections.

◆ **Attention**

1) Do not let the system equipment install in the sunlight or near a heater, because the device may become deformed or fade into the protected status due to high temperature and stop working.

2) Do not install the system device or store in a dusty, humid place, otherwise it will affect stability or cause intermittent fault when the system is working.

3) System equipment should be as far away from the strong magnetic field generated by the device, in case of high electromagnetic interferences system equipment normal operation.

4) System equipment VA-6000MA / VA-6000MS/ VA-6000BC, VA-P8500S are designed specifically for cabinet installation, if you install two or more units on a cabinet, between the device and the device you should set aside the corresponding space for ventilation to maintain good heat dissipation.

5) In order to make the system work stably, please ensure the reliability of ground connection of the equipment.

6) The system does not allow parallel amplifier, which may cause permanent failure.

7) Remote Microphone (VA-6000FM / VA-6000RM) provides phantom power, real-time testing, please do not turn off the switch at work to avoid system to report failures misjudgment.

8) The main equipment lines of the system all have back-up, please allocate according to the actual needs. If any serious fault happens and lead to system disorder, please contact the staff for after-sales service. Do not attempt to disassemble the internal portion for personal maintenance treatment , in order to prevent permanent damage to the device or module and avoid electrical shock.

9) The product is the Class I device that must be connected to a power outlet with a grounding power outlet to ensure adequate grounding device.

10) The equipment used the power plug is disconnected from the grid power supplies, to ensure security, please pull out the power plug after using the equipment, and make sure complete loss of the power.

11) Because the appearance and functions of this system will continue to upgrade, but are backward compatible, any discrepancy in kind, please in kind prevail.

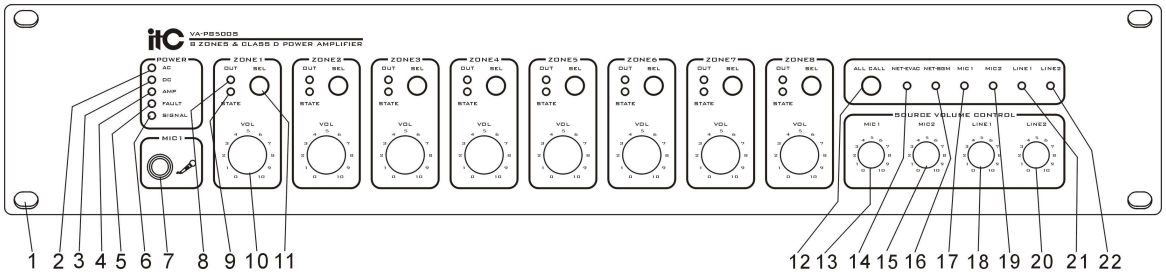
2. 8 Zone Voice Alarm Amplifier—VA-P8500S

VA-P8500S integrated one 500w digital power amplifier for 8 zones, each zone can be opened or closed separately, and the volume can be adjusted separately, it can also connect with one external standby power amplifier, when the main power amplifier breakdown, it will switch to the standby power amplifier automatically; The working status of speaker loop in each zone were monitored (grounding, open circuit and short circuit), support 3/4 wired wiring. Allow network EVAC audio input, the network background music input, local emergency microphone input, Normal MIC input and 2 line input, and priority can be configured by VA-6000ST, equipped with 8 programmable trigger input and 8 programmable relay short circuit output etc.

2.1 Features

1. 2U design, integrated 8 power zones.
2. Each zone has independent LED indicator.
3. Each zone has independent output control button.
4. Each zone has independent volume control knob.
5. Support speaker loop grounding, open circuit and short circuit detection.
6. Support Speaker loop 3/4 wired wiring.
7. 8 programmable trigger input online interface.
8. 8 programmable trigger output online interface.
9. Support users change the audio output priority according to actual situations.
10. Support amplifiers enter into electricity saving mode to save more energy when there is no signal input.
11. Support the line redundant wiring.

2.2 Front Panel



1. 19 inch cabinet location hole and machine feet.
2. Partition amplifier power supply LED indicator
- OFF: partition amplifier power supply is not connected.
- GREEN: partition amplifier power supply is working.
- YELLOW: partition amplifier power amplifier breakdown.

3. Partition amplifier DV 24V
- OFF: partition amplifier standby power is not configured.
- GREEN: partition amplifier standby power is working.
- YELLOW: partition amplifier standby power breakdown.

4. Partition amplifier status instruction (if there is no configured standby amplifier, then it indicate the main amplifier status)
- OFF: Main amplifier and standby amplifier are all working.
- YELLOW: main amplifier and standby amplifier breakdown or one of them is breakdown.

5. Partition amplifier general working status instruction
- GREEN: partition amplifier is working.
- YELLOW: Partition amplifier breakdown.

6. The current partition amplifier audio output signal indicator lights, which indicates the current partition audio output state.
7. Panel MIC1 emergency MIC input interface.
8. Partition output status instruction.
- OFF: the current partition is off.
- GREEN: the current partition is working, output is normal audio.
- RED: the current partition is working, output is EVAC voice or remote zone paging such as RM/FM/PSTN.

9. Partition status LED 3-color indicator.
- OFF: the current partition is working.
- YELLOW: the current partition breakdown(including open circuit,short circuit and grounding); open circuit, grounding show YELLOW, short circuit or breakdown show RED, and with slow detection.

10. Partition volume control button (partial output EVAC voice and remote paging, the volume will fail, only broadcast BGM).

11. Partition output selection button.
12. The button for selecting all partition outputs.
13. MIC1 volume control potentiometer.
14. Internet EVAC voice working status indicator.
- OFF: the current partition amplifier audio is not network EVAC voice.
- GREEN: the current partition amplifier audio is network EVAC voice.

15. MIC2 volume control potentiometer.
16. Network BGM music working status indicator.
- OFF: the current partition amplifier audio is not network BGM music.
- GREEN: the current partition amplifier audio is network BGM music.

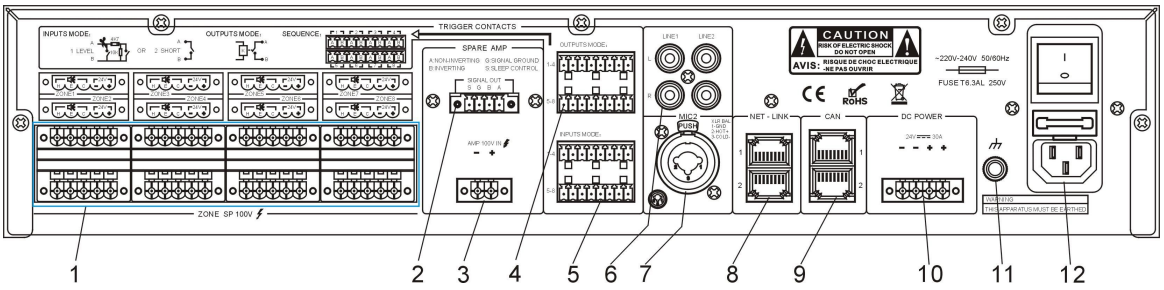
17. MIC1 working status indicator
- OFF: the current partition amplifier audio is not from MIC1.
- GREEN: the current partition amplifier audio is from MIC1.

18. Line input 1 volume control potentiometer.
19. MIC2 working status indicator
- OFF: the current partition amplifier audio is not from MIC2.
- GREEN: the current partition amplifier audio is from MIC2.

20. Line input2 volume control potentiometer.
21. Line input1 working status indicator
- OFF: the current partition amplifier audio is not line input 1.
- GREEN: the current partition amplifier audio is line input 1.

22. Line input 2 working status indicator
- OFF: the current partition amplifier audio is not line input 2.
- GREEN: the current partition amplifier audio is line input 2.

2.3 Rear Panel



1. 8 channels 100V audio signal output, connecting with3/4 wired volume controller or speaker.

2. Backup amplifier balance audio signal and standby signal output, to connect backup amplifier signal input.

3. Backup amplifier 100V power audio signal input(Extra backup amplifier 100V output).

4. 8 channel editable relay trigger output signal.

5. 8 channel editable trigger input signal (level signal or short circuit signal decided by configuration)

6. 2 channel line input signal interface, connect CD/MP3/TUNER standard audio signal.

7. Normal mic/line input, connect user MIC/CD/MP3/TUNER standard audio signal(when input 6.3 plug unbalance audio signal, which is mic input, when input XLR balance audio signal, which is line input.

8. Device online communication interface.

9. CAN interface, connect to charger(VA-6000BC or DC 24V UPS).

10. Backup power input interface(connect DC 24V which is VA-6000BC power output interface).

11. Rack earth point(Mind: make sure this point can connect with land).

12. Power switcher and main power input with fuse.

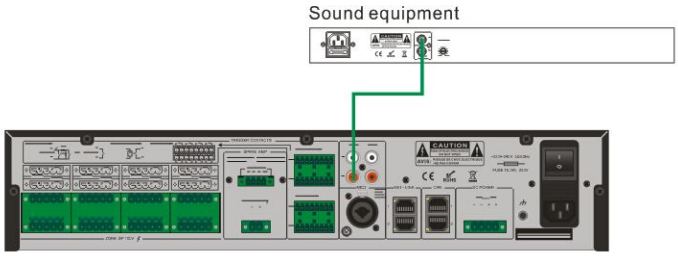
2.4 Technical Specification

Electrical Specifications	
Model	VA-P8500S
AC	
Voltage	~220-240V/50-60Hz
Max current	3A(not including wired 4 output)
Fuse specification	250V/5A, slow type
DC	
Voltage	24V DC, ±20%
Max current	25A(not including wired 4 output)
Power consumption	600W
Performance index	
Line in	
Distortion	<1%, 1kHz rate power output
Frequency response	80Hz~20kHz
Sensitivity	350mV
Impedance	10kΩ
Signal to Noise Ratio	>70dB
Emergency microphone	
Sensitivity	5mV
Impedance	600Ω
Contact output	8 channel relay programmable output Short circuit, no voltage
Level model	Max 3.3V
Short circuit mode	No voltage, short circuit
Cooling way	wind blow cooling way
Protection way	delay/over heat/short circuit/overload
Mechanical index	
Dimension (L*W*D)	(484*88*446 mm)
N/W	11.4kg
Installation	desk surface 19 inch rack
Color	Black
Environment requirement	
Operate temperature	+5℃ ~ +40℃
Stock temperature	-20℃ ~ +70℃
Relative temperature	<95%(No condensation)

3. District power amplifier local line radio and local microphone broadcast

3.1 Local line input audio broadcast operation

1) For LINE1 and LINE2 input signals, the power amplifier will automatically detect the signal input channels, such as figure:

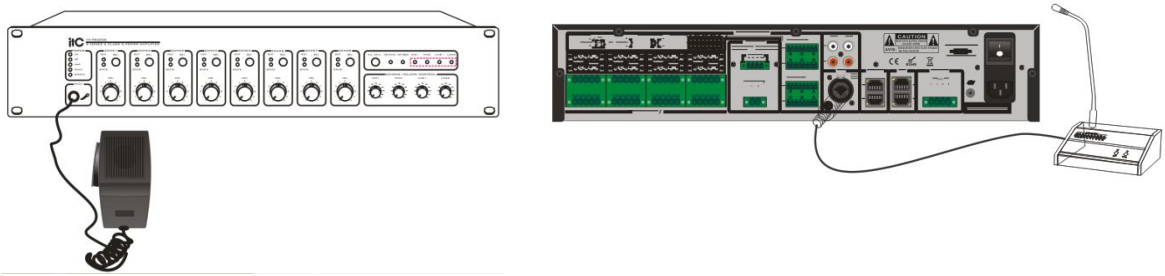


2) Selecting the corresponding partition select keys, you can turn on the appropriate partition; or selecting the CALL ALL keys, you can turn on all the partitions (**this step is necessary to operate since the default setting of the device does not turn on the partition selecting; if there is no selected zones currently, the device will be without any sound output**).

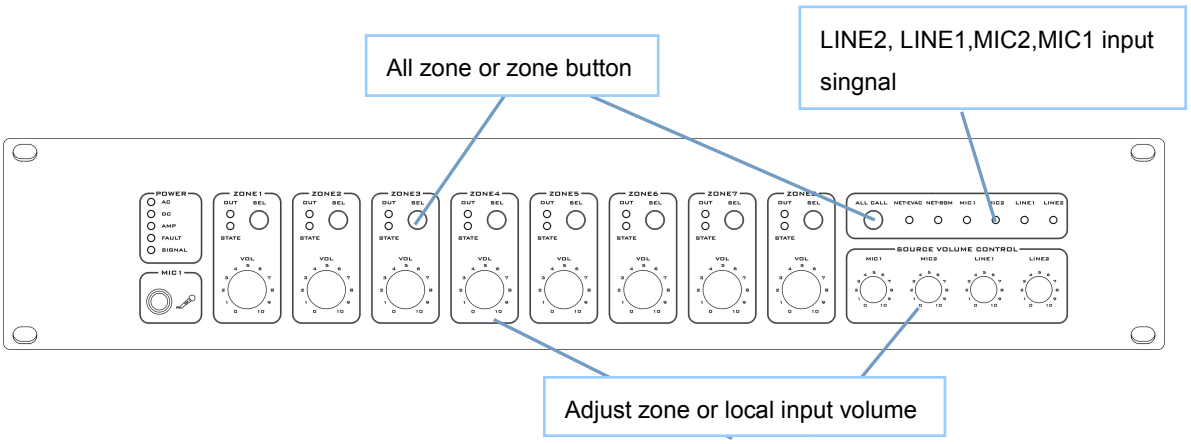
3) To regulate corresponding partition volume, at the same time, adjust the input volume potentiometer to independently control and adjust the audio input signal volume.

3.2 Local microphone input audio broadcast operation

1) In the MIC2, MIC1 input microphone signal, the division of the power amplifier will automatically detect the signal, and open the input signal channel, as shown in figure:



2) Selecting the corresponding partition select keys to open the corresponding partition, or CALL ALL keys to open all the partitions (**This step is not necessary; if there are already selected partitions, the default is the choice of the partition; if there is no choice, the device will automatically consider the all-zone choice**).You are able to adjust the corresponding partition volume. At the same time, adjust the input volume potentiometer to independently control to adjust the audio input signal volume.



3) MIC1 emergency priority operation; when there is signal input in MIC1, the priority to output of the audio signal MIC1.

Explanation:

➢ 1. The zone power amplifier can input 6 different types of audio signal with different priority level, but only output type 1 ; this occurs only when the audio input simultaneously, when there is not the high priority of the audio signal input, will be the lower priority audio the output. But in this continuous process from output in the high priority to low priority , taking into account the audio signal is not turned off, for example, the speaking time interval, the normal switch between music, etc. , so it is not immediately converted, there is an about 3 to 5 seconds of delay.

➢ 2. The input sensitivity for each partition can be adjusted from the volume potentiometer on the right side of the panel, and the size of the output volume can be controlled via the front panel volume knob. When the audio signal output is "network EVAC", local emergency MIC become invalid , and it automatically maximum volume output.

➢ 3. Zone open and close can be manually controlled or controlled by the host.

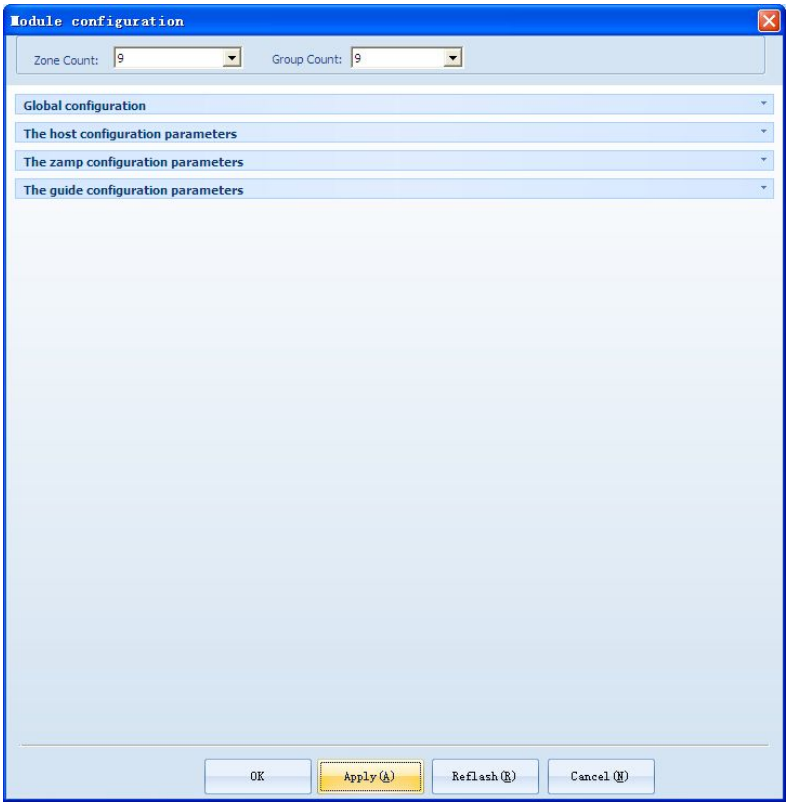
➢ Note: When network has the highest priority and broadcast network background signal, the local audio input is invalid. If the configuration of the local network signal to be the highest priority, when the network signal is playback, the local input signal will automatically override the network signal .But when under network priority settings, in case the network without occupation, the local signal can also output normally.

➢ When the line has failure (open circuit, short circuit, earth grounding), the main line audio input and output will switch to the standby line corresponding to the spare power amplifier in the 1S-10S. When the main line fault return to normal, it will switch back to the main line in 1S-10S .

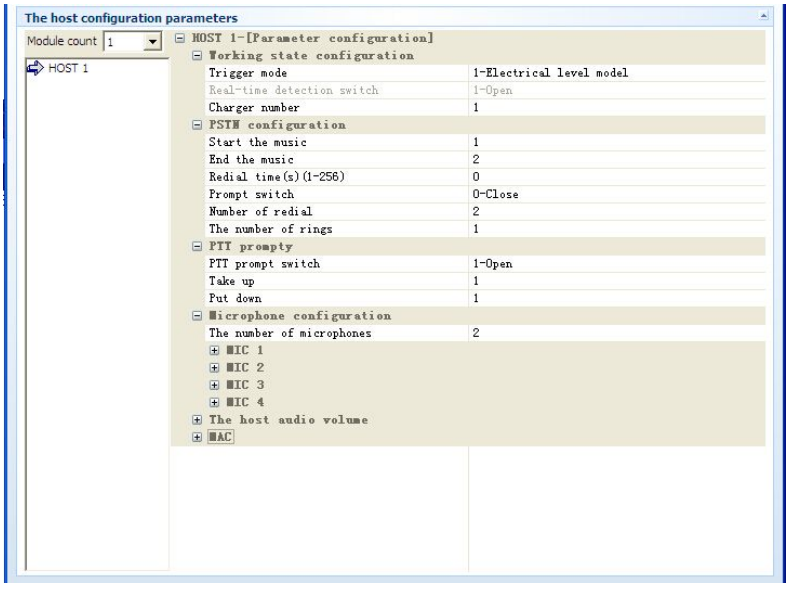
➢ Priority level can be set via PC software.

3.3 Priority configurations on zone amplifier EVA-8500

1) Open the PC computer, install PC software, then click "Device Configuration" under "configuration" , it will pop up "Device Configuration" configuration window.



2) Click on the configuration window "partition amplifier parameters", click the [...] sub-menu under "Audio Priority Configuration" , it will pop-up "Audio priority partition amplifier configuration" configuration window, as shown:

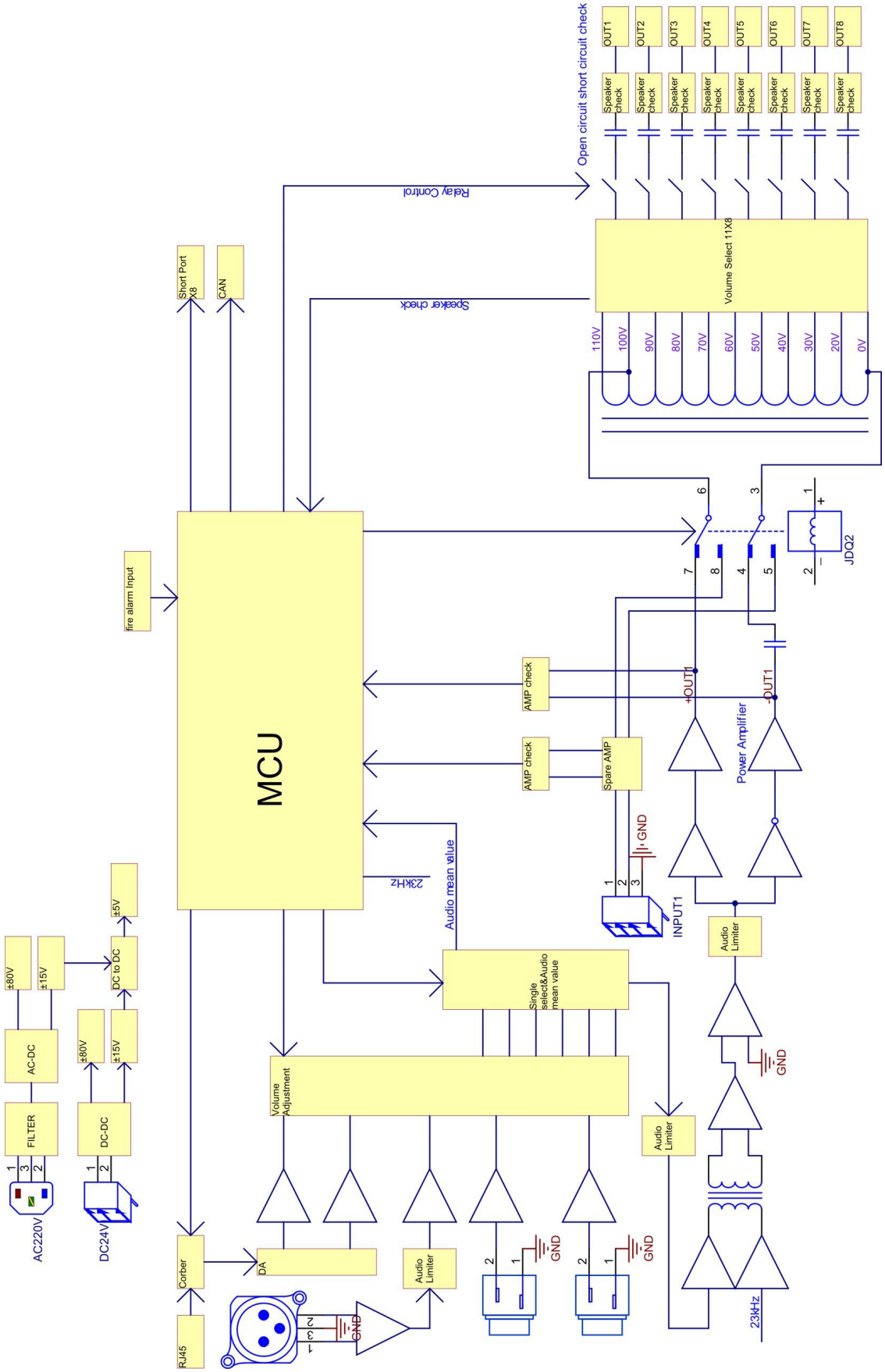


3) In the "Partition Amplifier Audio Priority Configuration" window, the user can adjust the partition local audio and network audio amplifier priority sequence upon demand, select audio, hold down the left mouse button and drag up or down move, change their sequence, to set up the amplifier priority level.

Description: 00-the highest priority, 05- the lowest priority.

- Network EVAC voice --00
- Network Background music --03
- local emergency MIC - 01
- local ordinary MIC - 02
- line 1--04
- line-2--05

4. Block Diagram



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