OPERATION MANUAL

DIGITAL NETWORK PUBLIC ADDRESS & VOICE ALARM SYSTEM

VA-P120 / VA-P240 / VA-P350 / VA-P500

VA-P2120 / VA-P2240 / VA-P2350 / VA-P2500

VA-P4120 / VA-P4240 / VA-P4350 / VA-P4500

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 / MS / BC, 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 / RM) 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. Power Amplifier

VA-P series power amplifiers are mainly used for audio power amplifier system partition, it converts the standard audio signal into a 100V constant voltage signal to drive the speakers, simultaneously detects each channel and each line output amplifier operating status and then send to the host.

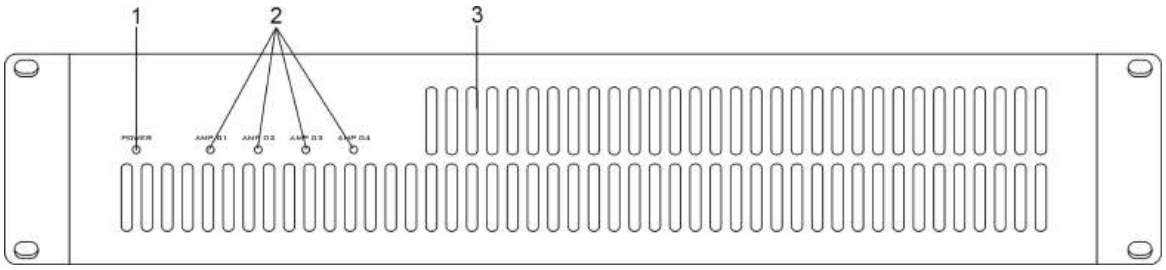
2.1 Feature

1. Modularized design, easy to configure on-demand.
2. Efficient Class-D digital amplifier design led to lower power consumption.
3. 2U chassis, four independent channels, each with maximum 500W / 100V output.

2.2 Functions

1. Overload and short circuit protection.
2. Automatic temperature control.
3. LED status indication.
4. Automatic detection of each channel amplifier working status.
5. Automatic standby switching and automatic speaker amplifier circuit line state detection.
6. Support 3-wired wiring.
7. Support power saving mode, when no signal it will automatically turn to standby mode (disabled by default).

2.3 Front panel



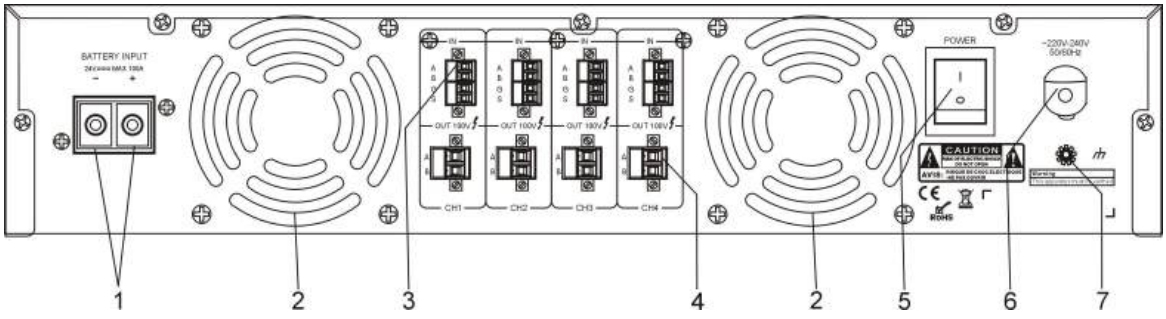
1. LED power indicator (POWER) indicates the current system power status.
2. 01 to 04 channel amplifier operation indicator (AMP 01~AMP 04).

➢ Off - If the current channel configuration and power indicator lights up, indicating that this channel amplifier works normally.

➢ Yellow - Current amplifier channel is faulty.

3. Amplifier ventilation holes.

2.4 Rear panel

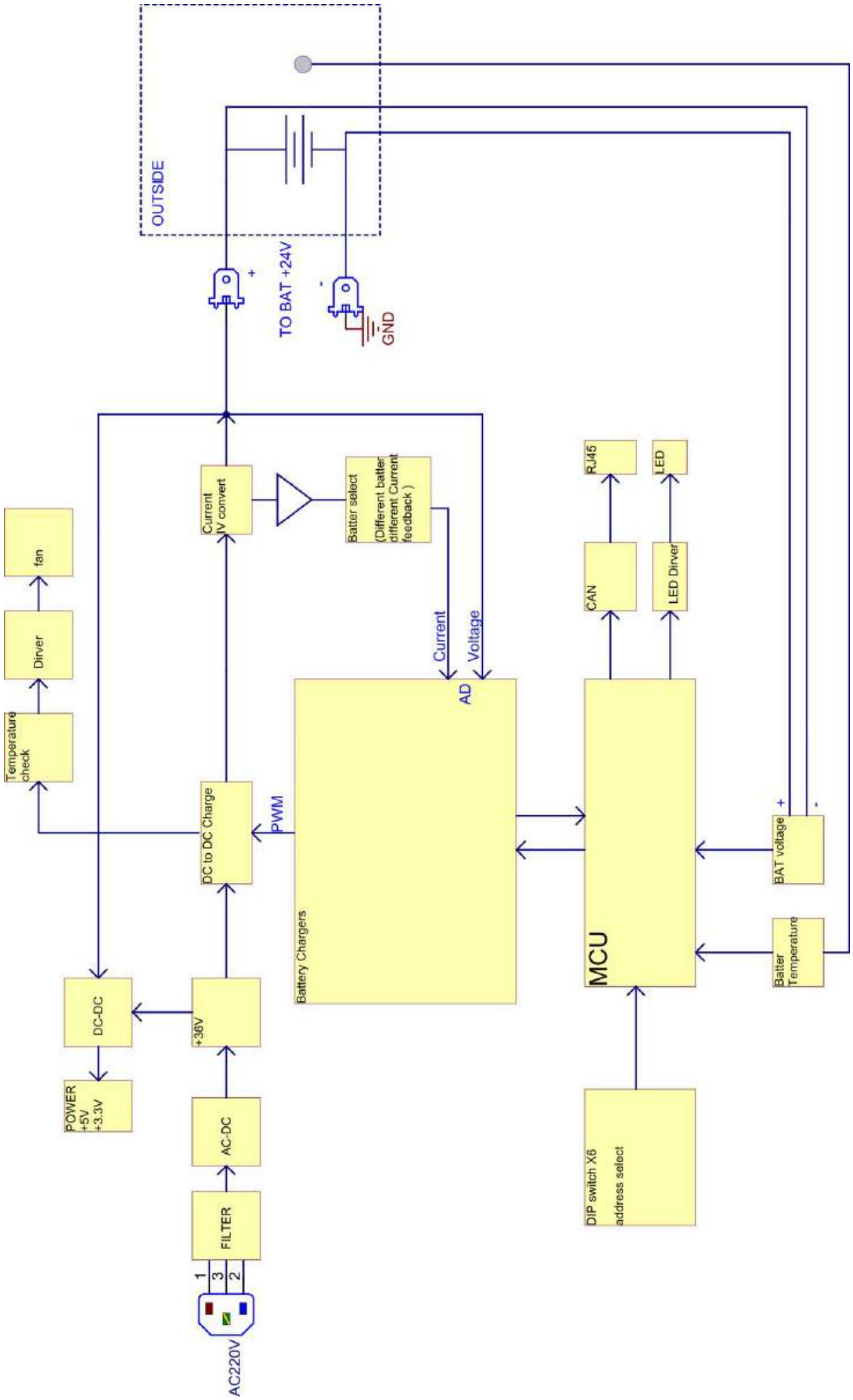


1. DC 24V power input interface.
2. Temperature-controlled fan hole.
3. 1 to 4 channels of balanced audio signals and the standby signal input interface (reference system wiring connection diagram).
4. 1 to 4-channel 100V audio signals output.
5. Power switch.
6. AC power input line.
7. Equipment grounding terminal.

3. Technical parameters

Electric index				
Model	VA-P120	VA-P240	VA-P350	VA-P500
	VA-P2120	VA-P2240	VA-P2350	VA-P2500
	VA-P4120	VA-P4240	VA-P4350	VA-P4500
Voltage	AC ~220V, 50/60Hz			
Working current	2.8A/5.6A/8A/12A			
DC power supply				
DC power input	DC 24V±20%			
Working current	19.5A/52A/72A/100A			
Audio parameters				
Input mode	balanced 385mV			
Frequency response	40Hz~20KHz±3dB			
Input	Constant voltage 100V			
Distortion	≤1% (rated output power), 1KHz			
SNR	≤90dB			
Environmental requirements				
Operating temperature	+5℃ ~ +40℃			
Storage temperature	-20℃ ~ +70℃			
Relative humidity	<95%(Non-condensing)			
Cooling mode	Air-cooled			
Protection mode	Delay, over-temperature, overload, short-circuit			
Dimensions (L x W x D)	484*500*88 mm (Not including machine feet)			
Weight	16.6Kg			

4. Block Diagram



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