OPERATION MANUAL

DIGITAL NETWORK PUBLIC ADDRESS & VOICE ALARM SYSTEM

VA-6000FM

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.

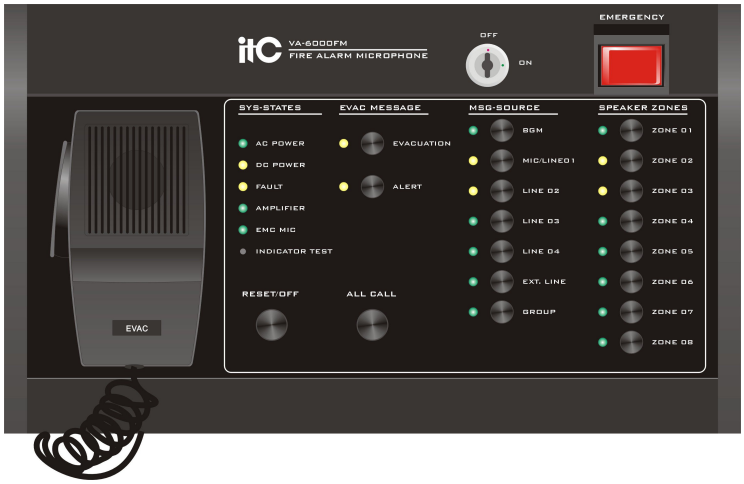
2. Introduction

➢ Nowadays the building is higher and higher and the area need to be controlled at the same time is becoming wider and wider. If EVAC System also is designed based on the traditional analog technology, there are problems about signal attenuation from the long-distance, electromagnetic interference between different space, the cost of construction and maintain, the system centralized control and monitor, the data backup, the more redundancy and so on.

➢ VA-6000 is designed for solving all the above problems. It is a perfect PA system solution that meets the demands of fire alarm, public address and BGM. It is controlled by effective MPU Module without linkage problem between different systems. The system contains our Independent developed ASD technology which system automatically detect fault, SID technology which speakers circuit detect automatically, DLB technology which for data lines Automatic redundancy. It is a more stable system with low maintenance cost in the future. If you are looking for a perfect PA system, VA-6000 is your best choice. It is widely used for five-star hotel, office building, super market and stadium. Compared to VA-2000 System, it is more stable with better audio output which could bring you perfect feeling.

3. Fireman remote MIC—VA-6000FM

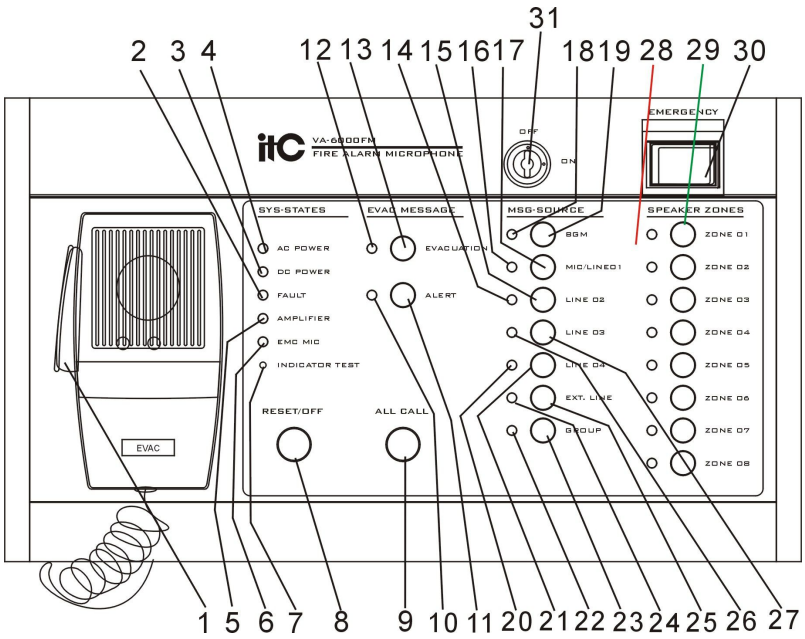
VA-6000FM is used for remote control of VA-6000 system, it allow user control system voice information and zone paging, support 8 zones/group selection, and can extended by MIC extension unit(VA-6000EM), support max 7 keyboard, every extension keyboard can add 8 zones.



3.1 Features

1. 1 key zone/group selection, easy to operate.
2. Mic output level is adjustable.
3. Balanced transmission can extend transmission distance by CAT-5.
4. Showy system failure and main module status indication.
5. Support zone/group selection keyboard extention.
6. Support line audio input and support input volume adjustment.
7. Support line redundancy wiring.
8. Support monitoring output.
9. Support 24V phantom power supply.
10. Zone Paging priority is configurable.

3.2 Front panel



1. Handheld PTT(push to talk) MIC.

2. System status indicator(remind: not current MIC status indicator).

- OFF—All device or module or spare power of the system is normal.
- Yellow—All devices or module or spare power of the system is failure(all, part or one of them).

3. System all devices'spare DC power status indicator(if DC power has not be configured, system will ignore its working status, default as normal).

- OFF—System all devices' spare DC work well.
- Yellow—All devices or part of spare device's spare power supply of the system is failure.

4. All system device main power status indication.

- OFF—All device or module main power supply work well.
- Yellow—All device or module main power supply is failure(all or one of them)

5. System amplifier working status indication.

- OFF—All amplifier in system(including spare amplifier) work well.
- Yellow—There is failure of all amplifier or one of them in this system(including spare amplifier)

6. Handheld PTT (push to talk) MIC working status indication.

- OFF—PTT MIC works well.
- Yellow—PTT MIC fault.
- Green flashing—Present zone paging MIC is switched by the audio with higher priority.

7. Panel indicator testing button: press all button in rear panel and indicator from green-red-yellow-turn to normal.

8. Reset/close zone button.

9. All zone selection button.

10. Alert voice working status indicator.

- OFF—Player and audio file in SD card is normal.

- Green—Alert voice is playing.
- Yellow—Alert voice file lost or player failure.

11. Alert voice control button.
12. EVAC audio working status indicator.
- OFF—EVAC audio player and audio files in SD card is normal.
- Green—EVAC voice is playing.
- Yellow—EVAC voice file lost or player failure.

13. EVAC voice control button.
14. Line input 02 working status indicator.
- OFF—Line input 02 no working.
- Green—line input 02 playing.

15. Line input 02 control button.
16. Line input 01 working status indicator.
- OFF—Line input 01 no working.
- Green—Line input 01 is playing.

17. Line input 01 control button.
18. BGM working status indication light.
- OFF—BGM player and audio files in sd card is normal.
- Green—BGM is playing.
- Yellow—BGM music file lost or player failure.

19. BGM control button.
20. Line input 04 working status indicator.
- OFF—Line input 04 no working.
- Green—Line input 04 playing.

21. Line input 04 control button.
22. Device zone/group control model indicator.
- OFF—Device is under zone model control.
- Green—Device is under grouping model control.

23. Device zone/group control model selection button.
24. Microphone and line input audio selection indicator.
- OFF—Device is under mic input condition.
- Green—Device is in extension line input.

25. Extension line input audio selector button(green means present output).
26. Line input 03 working status indicator.
- OFF—Line input 03 no working.
- Green—Line input 03 play.

27. Line input 03 control button.

28. Zone working status indicator.

- OFF—There is no broadcasting in this zone or no configuration.
- Green—This zone is broadcasting, output is normal audio.
- Red—This zone is broadcasting, output evac voice or remote paging audio like RM/FM/PSTN.
- Yellow—This zone failure.

29. Zone selection button.

30. System working model switcher.

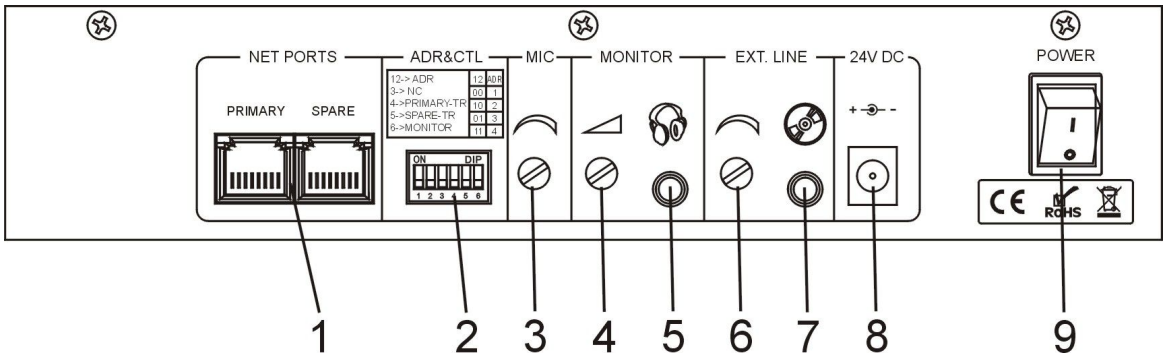
- Red flashing fast—System works as reset model, forbid all manual manipulation.
- Red slow flashing—System is in emergency model(can press button to enter or trigger enter automatic, this model can play EVAC voice message, which can not play in normal model.
- OFF—System works well.

Remark: 1. When indicator is flashing, press can exit emergency model.

2. When indicator is off, press can enter emergency model.

31. Electronic lock switch.

3.3 Rear panel



1. Main and spare interfaces for networking (connect with remote MIC online interface of the host VA-6000MA).

2. Device address and function setting(toggle switcher “1,2” is main control bit, “3” toggle switcher is remained with no function. “4,5” toggle switcher control main and spare terminal resistance control bit, “6” is local phone monitoring control bit).

3. PTT MIC output volume control potentiometer.

4. Monitoring volume adjustment potentiometer.

5. Monitoring audio output, can connect extra monitoring earphone and other monitoring device.

6. Extension line input volume control potentiometer.

7. Extension line audio input interface.

8. DC 24V input(when transition distance over 50m, need to add extra DC 24V power supply.

9. Device power switcher.

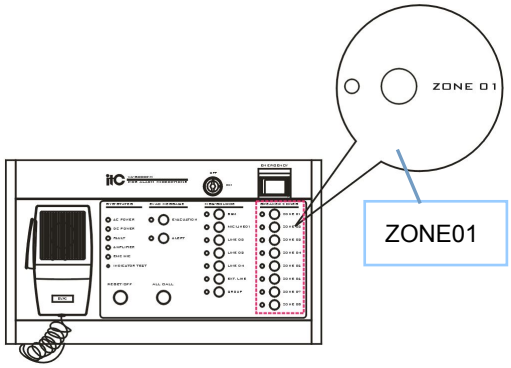
3.4 Technical specification

Electric index	
DC	
Voltage	24V DC, ±20%
Max current	0.1 A (including extension panel)
Power consumption	2.4W(including extension panel)
Performance index	
Balanced signal output	
Distortion	<1%, 1kHz rated power
Frequency response	80Hz~16kHz
Sensitivity	500mV
Impedance	10kΩ
SNR	>70dB
Line input	
Distortion	<1%, 1kHz rated power
Frequency response	80Hz~16kHz
Sensitivity	350mV
Impedance	10kΩ
SNR	>70dB
Microphone	
Sensitivity	5mV
Impedance	600Ω
Mechanical index	
size	256×52×149mm
Net weight	1.5KG
Installation	Desktop or 19 inch rack
Color	Black
Environmental requirement	
Operating temperature	+5℃ ~ +40℃
Storage temperature	-20℃ ~ +70℃
Relative humidity	<95% (no condensation)

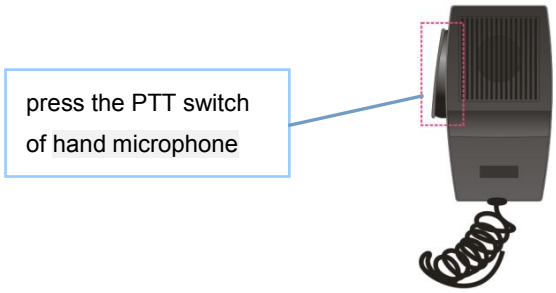
4. Fireman special microphone paging

4.1 Partition broadcast operation.

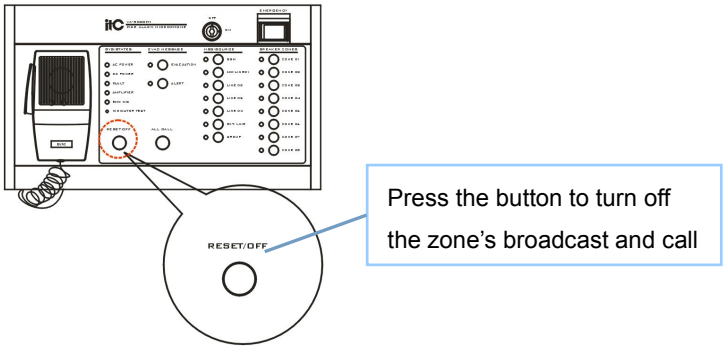
1) Press key 01 partition on VA-6000FM, as following:



2) Pick up the handset and press the PTT switch, you can broadcast to the partition 01 (other partition or multiple partitions are as the same operation), as following:

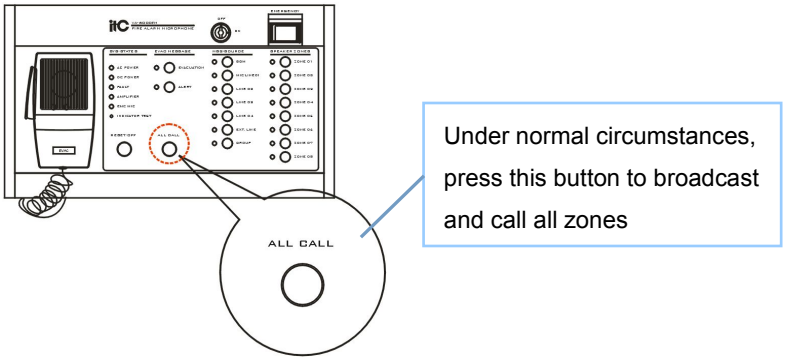


3) Press the fault reset / close button, you can turn off the radio calls, as following:



4.2 Operation of all-zone broadcast

1) Press the all-zone key on VA-6000FM, such as following pictures:



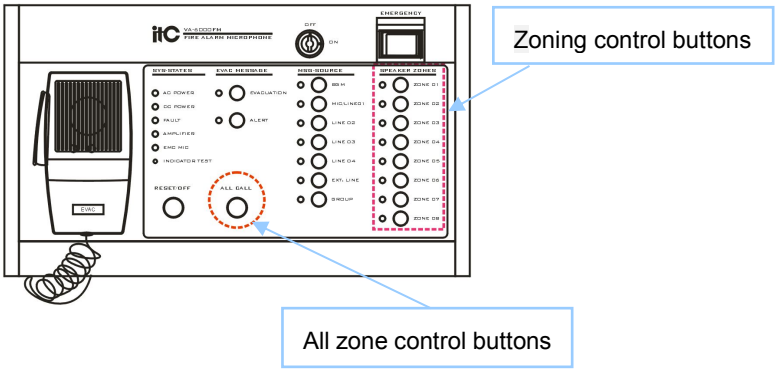
2) Pick up the handset and press the PTT switch to broadcast to all zones.

3) Press the reset button, then you can close the current radio talk.

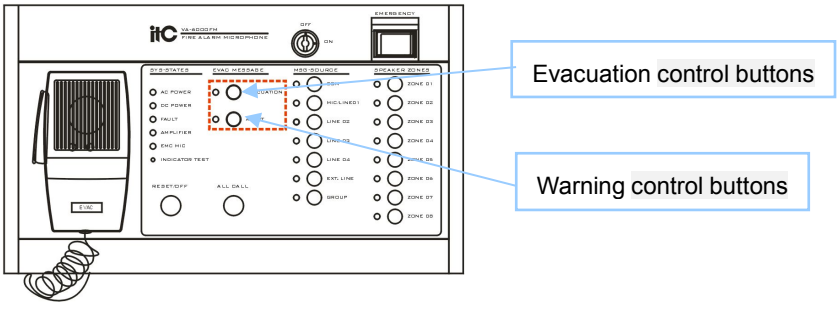
4.3 VA-6000FM emergency broadcast operation steps

1) Open EMERGENCY work on VA-6000FM switch, as shown below, after you press, you can enter emergency mode (slow blinking red), while the VA-6000MA host of "Logo standby interface" will activate emergency mode " " icon.

2) Press the VA-6000FM panel, need to play "EVAC emergency voice message" partition / group or all zone keys, as shown:

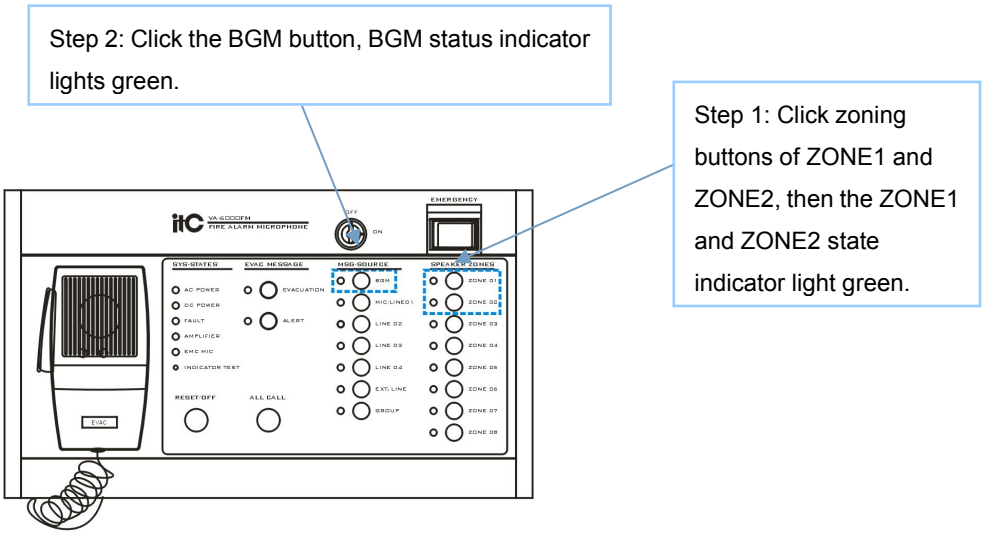


3) Press the "EVAC or ALERT" button on the VA-6000FM , the emergency system will broadcast the voice message to the selected partition or region , as shown in Figure:



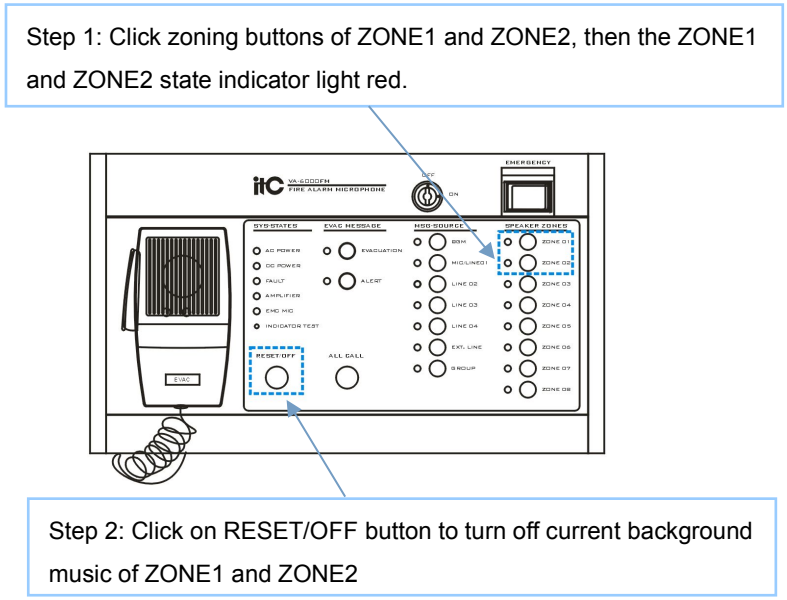
4.4 Background music broadcast from remote microphone

1) Select the partition you want to play on the microphone panel, click the button corresponding partition until the partition status indicator light on, then press the need audio button to play. If you need to select the first and second partitions play background music, firstly press the Partition button 1 and 2, when the state after the light on in green, then click the button to complete the background music operating.



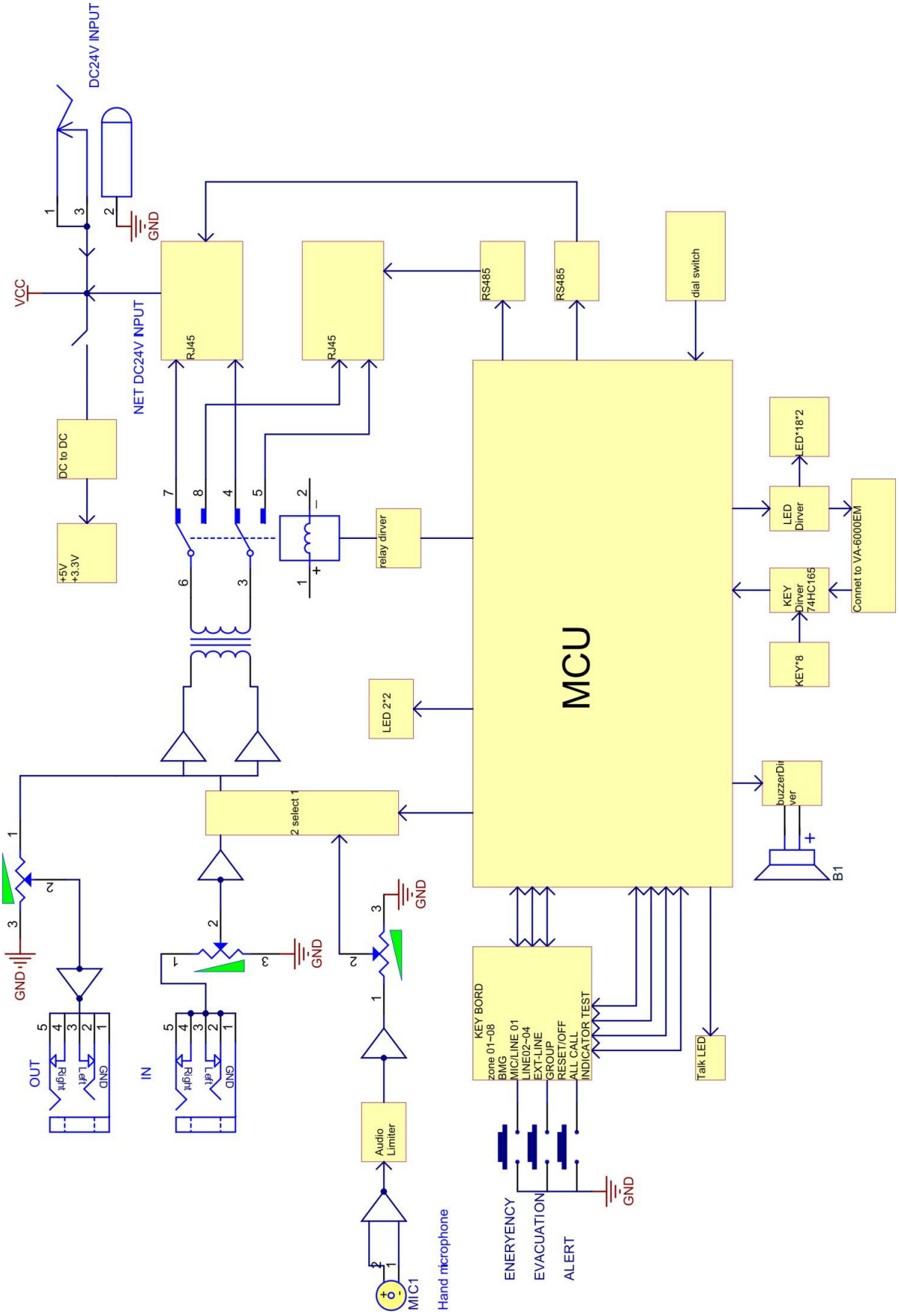
If you choose all zones to play, and press the button all zones, until all of the partition status indicator lights become green, then press the source button you want to play.

2) To close the current partition of the background music, you need to press to turn off the partition button, wait until the status indicator lights is red, press the fault reset / Close button to close the current partition music playing in the background.eg, close after the partition 1 and 2 background music, firstly click on the respective partition 1 and 2, when the partition 1 and 2 status indicator lights red, press namely RESET / OFF button to complete the operation.



If need close all zone background music, simply click the all zone button until all of the partition status indicator lights red, press the RESET / OFF button then it close. (**Note: same operating methods from VA-6000RM and VA-6000FM**)

5. Block Diagram



Version: 0.2