# EN-8500 System User Manual




EN-8500SFT

EN-8500

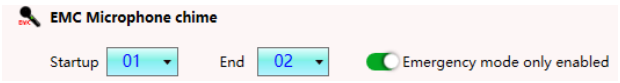
EN-8500ET

EN-8500TM

EN-8500RM

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# ● About this manual

❖ The purpose of this manual

- ➢ Provide assistance in installing, configuring, and operating the EN-8500 system voice alarm system.

❖ Target Readers

- ➢ Users and installers of the EN-8500 system voice alarm system;

❖ term

- ➢ “control software ” —— EN-8500SFT;
- ➢ “System host ” —— EN-8500;
- ➢ “Expansion host” —— EN-8500ET;
- ➢ “Remote console” —— EN-8500TM;
- ➢ “Business MIC” —— EN-8500RM;

**Due to the continuous upgrade of software functions in this system, but all of them are backward compatible, please pay attention to the real-time information on the company's website.**

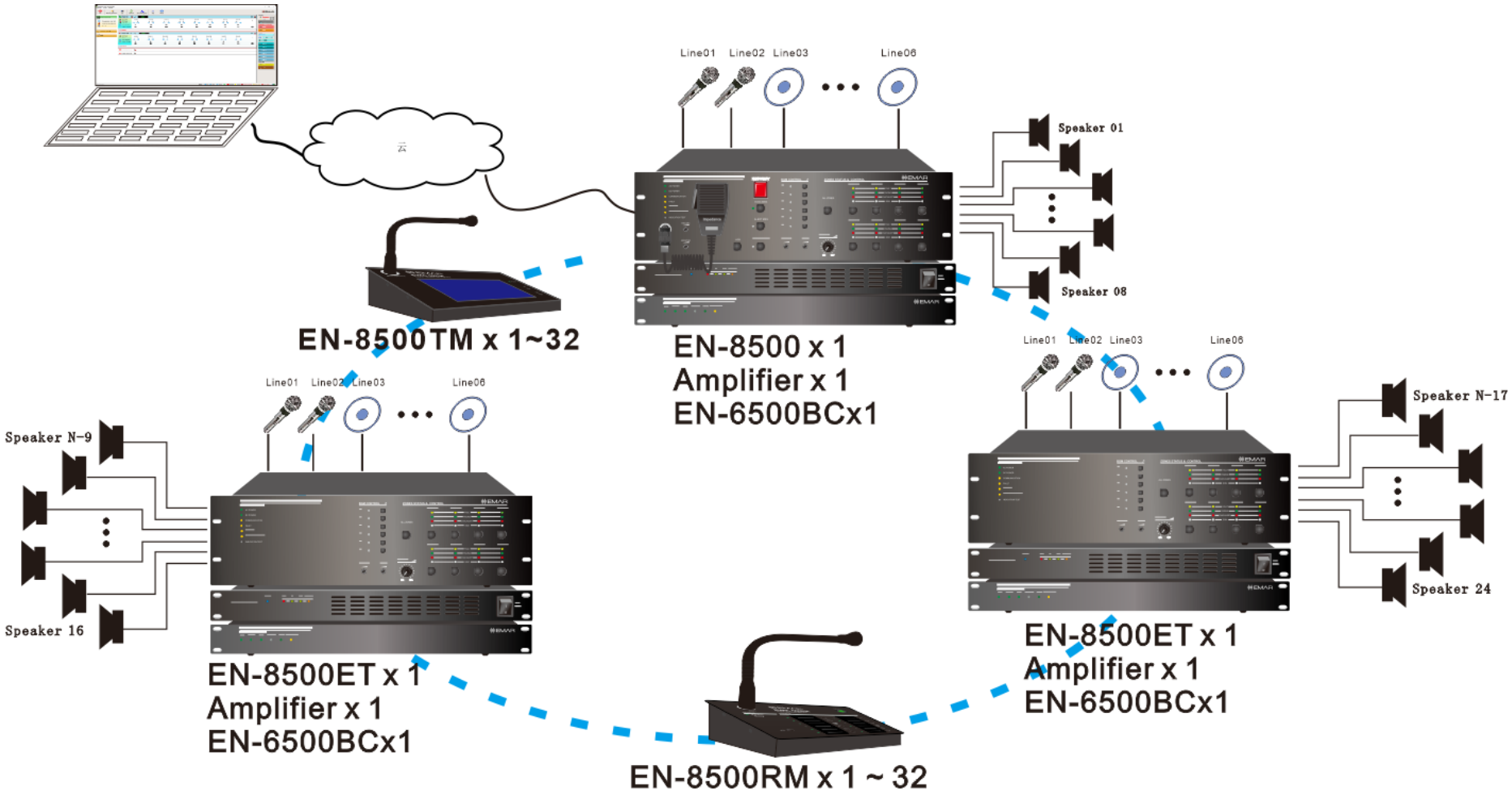
# ● System Overview

EN-8500 System Voice Alarm System integrates public broadcasting background music playback and voice alarm systems, which comply with evacuation standards such as EN60849, BS5839/8, and EN54-16. It is usually used for small systems that must meet evacuation standards, or systems that only require one call channel to meet application requirements.

# ● System characteristics

- ❖ Complies with the requirements of GB16806-2006 standard and the European standard for voice alarm control and indication equipment EN54-16;
- ❖ System automatic fault diagnosis, data backup, line redundancy, and recording of fault status (<=3000) are safe, stable, and reliable;
- ❖ The system is compatible with standard 3-wire and 4-wire wiring;
- ❖ The system is equipped with emergency voice information and prompt sound information, and users can freely change according to the on-site environment, language, and preferences;
- ❖ System programming to partition, supporting manual, automatic, selection, and grouping operations;
- ❖ The system supports visual human-machine interface operation and control, as well as simultaneous operation and control of multiple Windows human-machine interfaces. After configuration, it can work offline;

- system configuration


Line01
Line02
Line03
Line06
Speaker 01
Speaker 08
EN-8500TM x 1~32
EN-8500 x 1
Amplifier x 1
EN-6500BCx1
Speaker N-9
Speaker 16
EN-8500ET x 1
Amplifier x 1
EN-6500BCx1
Speaker N-17
Speaker 24
EN-8500ET x 1
Amplifier x 1
EN-6500BCx1
EN-8500RM x 1 ~ 32

# ● Equipment Introduction

## 1. EN-8500/EN-8500ET（Control host/Expansion host）

**The EN-8500 is the core of voice alarm control in the EVAC system, with a built-in 240W/350W/500W digital power amplifier. It can not only provide early warning and alarm (both alarm mode and alarm voice can be programmed), but also provide on-site shelter guidance through handheld microphones. It can control emergency calls in up to 160 zones, as well as the playback of business broadcasts and background music.**

- Handheld microphone for on-site guidance in emergency situations;
- Built in EVAC voice information and Chimes management for real-time monitoring;

**Note: 1 The audio information format extension is: *. wav;**

**2. The number of information in the "evac_message/", "alert_message/", "bgm/", and "prompt/" directories in the SD card is limited to 255;**

Equipped with a built-in 240W/350W/500W digital power amplifier, and can also be connected to an external backup power amplifier of the same power, with automatic backup;

- **Attention: Please keep consistent with the actual configuration. For example, if the user has configured a backup power amplifier, they have not actually connected an external backup power amplifier of the same power or a higher power amplifier. Therefore, the host cannot detect the presence of the backup power amplifier;**

8 partitions, each partition can output 500W;

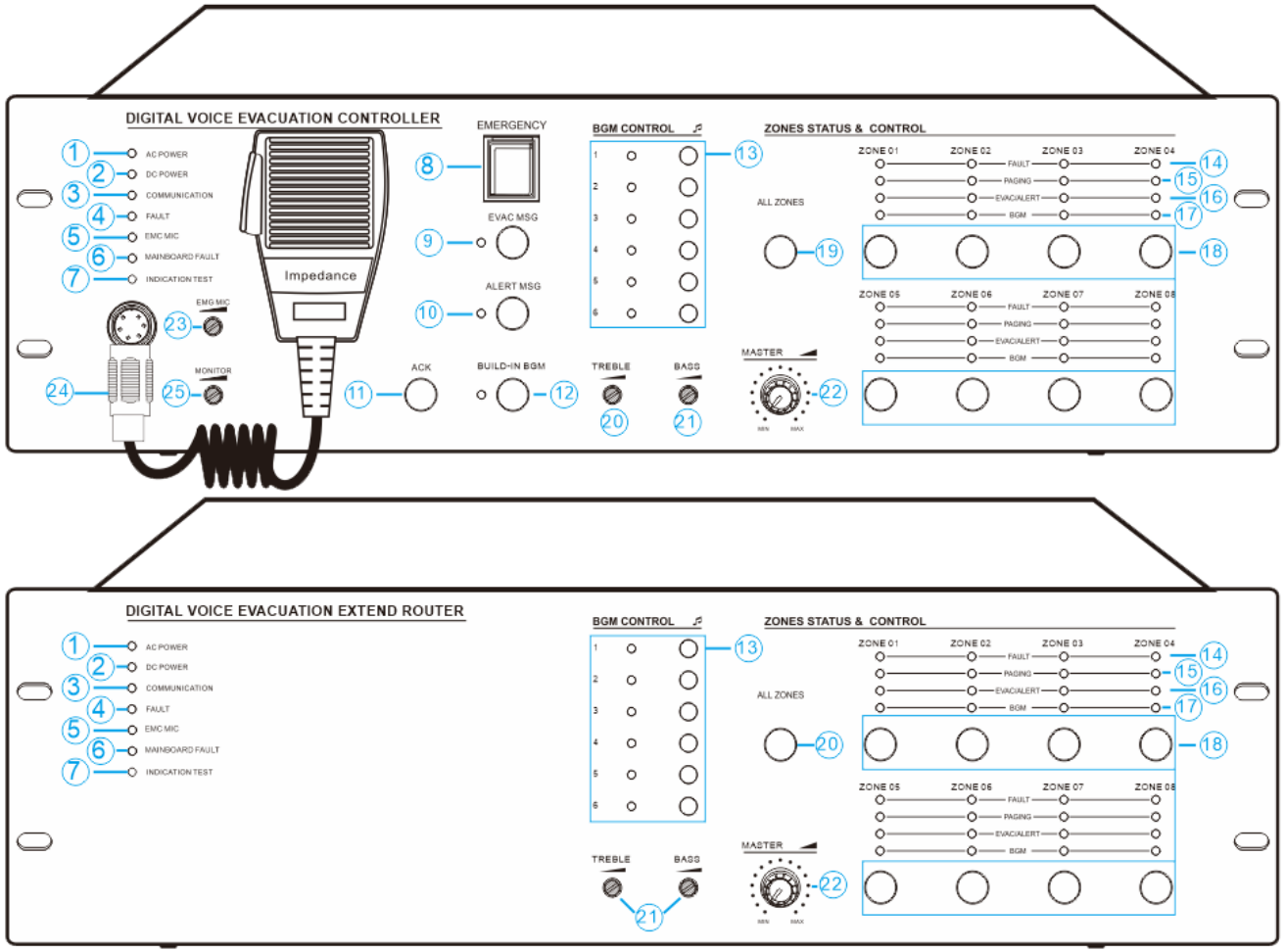
**Attention: The total power of 8 zones cannot exceed 500W;**

- Can connect 6 external line inputs for background music playback;

- Support event linkage and partition output;
- Up to 3000 device module status records, including power modules, handheld microphones, voice information, power amplifier modules, speaker circuit modules, etc. (please refer to the relevant descriptions in the server software);
- Can simultaneously connect up to 32 EN-8500ET/EN-8500RM/EN-8500TM devices at a distance of at least 600 meters;
- Support redundant wiring for business microphones, touch microphones, firefighter specific microphones, and host and expansion host lines:

  **Attention: The total redundant length of the handle is less than or equal to 600 meters;**

# 1.1. Front panel (please refer to ‘Front and rear panel instructions.pdf’)




① —— **Main power indicator of the host:**

- Green - indicates that the current host's AC power supply is normal;
- Yellow - indicates current host AC power failure;

**② —— Host DC24V backup power indicator:**

- Green - indicates that the backup power supply of the current host is normal;
- Off - indicates that the backup power supply of the current host is not configured;
- Yellow - indicates a backup power failure on the current host;

**Explanation: In the EN-8500 host, it is the second position, and in the EN-8500ET, it is the sixth position:** Pull up indicates configuration, pull down indicates no configuration;

**③ —— Host/expansion host connection status indicator light:**

- Yellow - indicates that the current expansion host has not established a connection with the host;
- Off - indicates that the current host and server software have not established a connection;
- green:
  - For the host: indicates that the connection between the host and the server software is normal;
  - For extended hosts: indicates normal connection to the host;

**④ —— System/device status indicator lights**

- Off - All modules of the system/equipment are working normally (if the overall detection switch is disabled, it will also go off, but it does not mean that all modules are working properly):
- Yellow - There is a malfunction in the system/equipment (if there is no malfunction in the system, this light still flashes, please press the "ACK" button to eliminate it. Under normal circumstances, it will automatically reply without the need to perform this operation);

Explanation: For the host, in addition to the normal operation of its own modules, all devices connected to it are also working properly. This light will only turn off. Otherwise, it will light up or flash. For the expansion host, it only includes the working status of its own modules;

**⑤ —— Host panel handheld microphone status indicator light**

- Yellow - indicates a malfunction when the handheld microphone is lost or malfunctioning;
- Green - the microphone is working;
- Off - When the handheld microphone is working normally but not working;

**⑥ —Main board power-off indicator light (If the host/expansion host motherboard is powered off, the light will light up at this time -**

**during simulation testing, the power supply terminal P7 of the motherboard can be unplugged, which is located on the left end of the PCBA-A board facing the device)**

**⑦ —— System equipment LED indication test (mainly testing the LED of the host and expansion host and business microphone panel);**

**Note: If the system is configured with an expansion host or business microphone, pressing this button will synchronize to enter LED testing mode;**

**⑧ —— System working mode indication**

- Red flashing - the current system is working in emergency mode;
- Off - the current system is working in normal mode;
- There are two ways to enter emergency mode:

  There are two ways to enter emergency mode:

  Manual mode - In normal mode, pressing this button will cause the red indicator light to flash, indicating manual entry into emergency mode;

  Automatic mode - In normal mode, when the device detects a valid trigger signal from the rear "TriggerInputs" of the host or expansion host, this light will also flash to indicate that it is working in emergency mode;
- There are two ways to exit emergency mode:

  Automatic mode - In emergency mode, by directly short circuiting the input port 2 of the "System Link Control" port 3 in the rear row, the emergency mode can be exited, and the playback of EVAC voice information and partition output can be stopped at the same time;

**Explanation:** Whether manually entering (exiting) or automatically entering (exiting), the execution time and method can be viewed through "Other"->"LOG" on the main interface of the server software.

**⑨ / ⑩/⑫ —— EVAC/BG MVoice message status indicator light**

- Green - "EVAC MSG/ALERT MSG/BUILD-IN BGM" voice message is truly broadcasting;
- Yellow - "EVAC MSG/ALERT MSG" voice information lost or SD card lost;
- Off - "EVAC MSG/ALERT MSG/BUILD-IN BGM" is normal;

**Explanation:**

1. "EVAC voice information" refers to the collective term for EVAC voice and ALERT voice;

2. If you need to manually play EVAC voice messages, you need to first enter emergency mode and then press the voice message button;

3. The system defaults that the priority of "EVAC" voice is higher than that of "ALERT" voice. Of course, it can also be modified through server software. If it is not a special application requirement, please do not change it;

### ⑪ —— Multi functional reuse button (ACK) :

- Press this function key to execute:

  a. If the system is currently operating in emergency mode - stop the buzzer alarm;

  b. The system module is working abnormally, with the indicator light intermittently flashing and changing to a long and non flashing state to indicate its fault status. The buzzer stops, and when a new module detects an abnormality, it flashes the "FAIL" LED again and starts the buzzer to prompt the user;

### ⑬ ——Line output selection

- Mainly used to select the audio output from the current partition;

**Explanation:** The user's current selection can be seen through the server software interface. To change different audio outputs, they can only choose from the panel. It should be noted that the audio of the host can be output to the expansion host, but the audio of the expansion host cannot be output to the host and other expansion hosts.

**If you need to output the audio from the host to the extended host, the operation methods include:**

1. On the server software, select the audio of the host on the main interface and open the partition of the extended host;
2. The operation on the touch desktop microphone is the same as the operation on the server interface;
3. To operate on the button microphone, it is necessary to first program it through server software. The specific method parameters will be described in the software operation section later;

### ⑭ —— Horn partition status indication

- Yellow - The impedance of the speakers in current zones A and B, or A or B, has changed, possibly due to an open or short circuit;
- Off - the current change in the impedance of the horn circuit in the partition is within the impedance range when modeling the horn partition;

**Explanation:** Before connecting the host or expansion host to the system according to the engineering wiring, a resistance check is required to obtain the impedance value in the current horn circuit. The method is as follows:

**Method 1:** Remove the 7th position of the ID switch on the back of the host, and then restore it;

**Method 2:** Complete the impedance verification function in the upper left corner of the server software;

**Method 3:** Complete the impedance calibration function through the touch microphone configuration interface;

**In addition:** when the impedance change of the horn circuit exceeds the positive or negative 10%~30% of the impedance value obtained by the current host or extended host, the current change will be recorded and notified to the user in the form of sound and light. The partition detection sensitivity is about 100000 or more

**⑮ —— Partitioned PTT or remote service microphone paging indication**

**Explanation:** When paging, it is possible to manually close partitions that do not require calls or add new partitions.

**1. Paging operation method:**

**2. Paging through handheld microphone on the panel:**

The handheld microphone operation can be configured through server software as (default: normal mode)

- ✧ General mode: In this mode, it means that it can be used for paging in any situation;
- ✧ Emergency mode: In this mode, it means that it can only be used when the system enters emergency mode;

3. Paging through remote RM or TM:

- ✧ Select partitions or groups;
- ✧ Press the "CALL" button and wait for the red LED light on the microphone to light up to page;

**⑯ —— The partition is broadcasting an "EVAC" voice message (EVAC or ALERT MSG) indication**

**Explanation:** You can manually close partitions that do not require calls or add new partitions.

**⑰ —— The partition is broadcasting background music instructions**

**Tip:** To manually play voice messages, you need to first select the audio and then select the output partition. For example, if you want to output audio from Line 3 to the 3rd partition, you can first select the partition, then select the audio, or you can first select the audio and then select the partition. Of course, the final alliance result is the same. Generally, it is customary to first select the partition, then select the audio, so that each partition will output audio at the same time. In addition, you can also operate in the partition control interface of the server software or touch microphone

**⑱ —— Partition selection button**

**Explanation:**

1. One of the current partition output indicator lights "PAGING", "EVAC/ALERTA", or "BGM" lights up, and pressing some keys will turn off the output of the current partition;
2. If none of the current partition output indicator lights "PAGING", "EVAC/ALERTA", or "BGM" are lit, pressing this key will light up one of them (according

to the current output audio, light up the corresponding LED lights);

⑲ —— **Select all zones/select all levels**

◆ If there are any closed partitions in the current partition, open them all. If all the partitions are open, close them all;

⑳ / ㉑ —— **Audio pitch and bass adjustment**

㉒ —— **Partition output total volume adjustment**

㉓ —— **Handheld microphone output sensitivity adjustment**

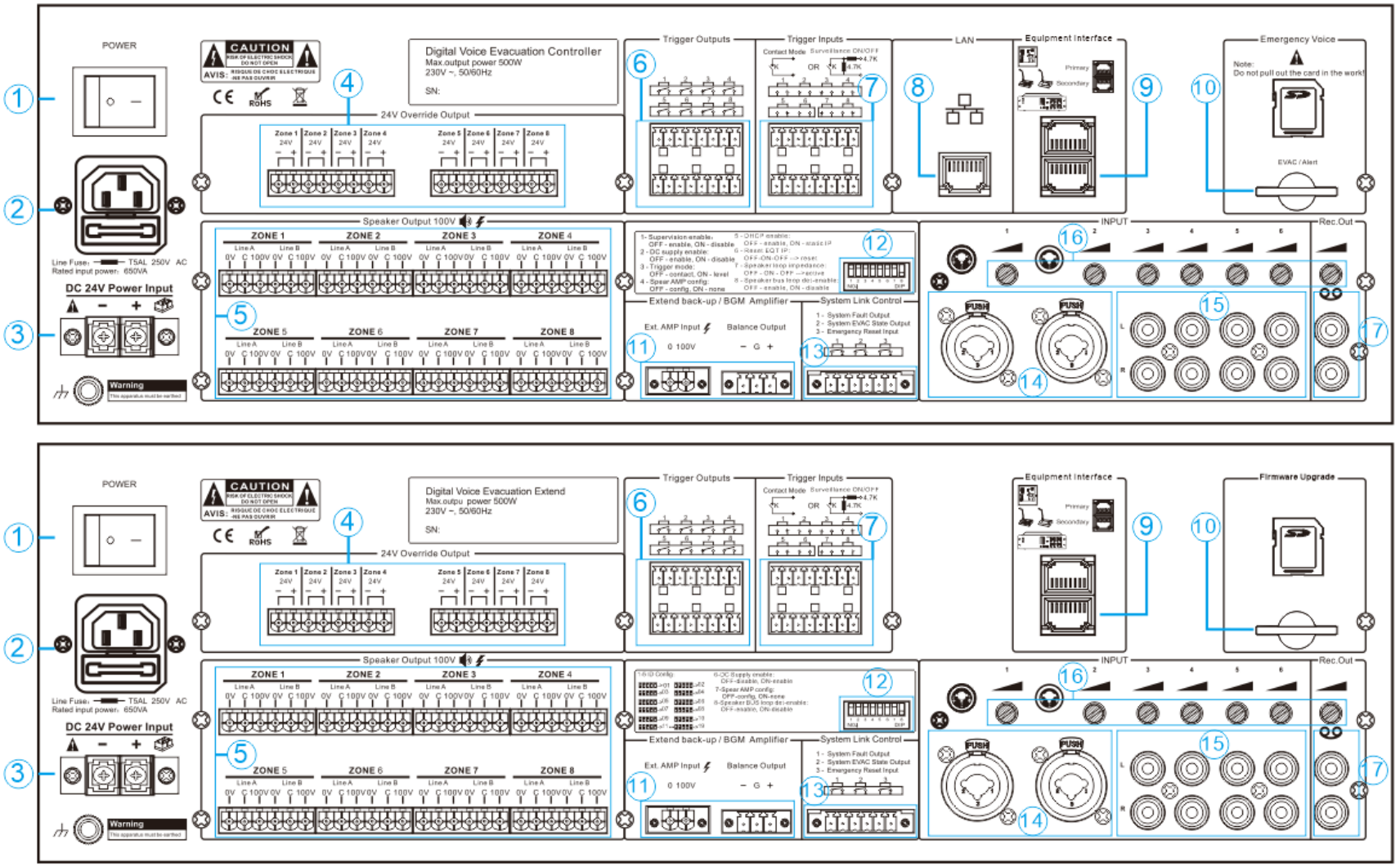
◆ Adjusting the sensitivity of handheld microphone output;

㉔ —— **hand microphone**

㉕ —— **Monitor speaker output volume adjustment**

**Explanation:** The host can listen to the output of the current partition, and the size can be adjusted through this knob (Tip: If there is sound output from this speaker, at least it indicates that the built-in amplifier is working properly);

## 1.2. Rear panel (please refer to ‘Front and rear panel instructions.pdf’)




## ① —— Equipment power switch

- ‘—’ Power on the device;
- ‘0’ Equipment power failure;

### ② —— AC power supply interface

◆ External AC power supply: 220V±10%;

### ③ —— DC24V DC power input interface

◆ External DC24V power supply, which can be sealed lead-acid batteries, UPS or similar products;

**Explanation:**

1. If EN standard is required, please confirm that the power supply complies with EN54-4 standard;

2. Please confirm that the DC24V power supply can provide the minimum working current that meets the rated output of the equipment (if working at full load, using EVAC-500BC in conjunction with sealed lead-acid batteries as an example: providing an output current of no less than 27A, that is, the power supply capacity is no less than 27Ah, and the working time is:<full load working * 27Ah * 1.2>(hours));

### ④ —— 8-way DC24V output interface

◆ External four wire voice control;

◆ The rated output current of each circuit is 0.2A;

**Attention: T**he total power output of 6 channels should not exceed 28W;

### ⑤ —— 8-way speaker A&B circuit output interface

◆ External constant pressure horn or 3-wire sound control;

◆ Output voltage: 0-100V;

**Attention: After completing the wiring, please model the horn circuit at least once. The partition without the horn can be suspended, and of course, its output can also be disabled in the server software configuration interface;**

### ⑥ —— 8-way programmable linkage relay output interface

◆ It can be configured through server software to detect the output status of valid signals, and of course, its output status can also be manually controlled through the server software operation interface (manual operation is mainly used for testing);

**Explanation:** When multiple input states simultaneously control the linked relay, its output is in an additive relationship. For example, if contact 1 of "" is configured to open output interface 1 and output interface 2 is not selected, but contact 4 of "" selects output interface 2 instead of output interface 1. When they occur simultaneously, the output interfaces are 1 and 2;

## ⑦ —— 8-way programmable input contact interface (working mode configured through the 3rd bit)

- ◆ Short circuit detection mode: Keep it normally open. When a short circuit is detected on the interface, a preset processing event is triggered (refer to the server software section for the contact preset processing event);
- ◆ Short circuit detection mode: Keep it normally open. When a short circuit is detected on the interface, a preset processing event is triggered (refer to the server software section for the contact preset processing event) ;

## ⑧ —— Ethernet connection interface

- ◆ Server software running on the upper computer;

**Explanation:**

- ● Static IP address connection (the 5th bit of the DIP switch in the back row of the device is in the ON state downwards): (The default IP address is 192.168.0.168, and the communication port number is 22777)

1. Ensure that the IP address of the computer is on the same subnet as the host;
2. Connect to the host through a switch via TIE/EIA568B:
3. Connect directly to the host through TIE/EIA:



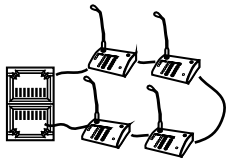

TIE/EIA-T568A Direct connection TIE/EIA-568B Connect through a switch

- ● Dynamic IP address connection: (The 5th bit of the DIP switch in the back row of the device is in the "OFF" state downwards (default IP address is 0.0.0.0, communication port number is 22777)
- ●

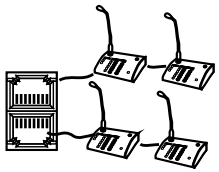
1. Ensure that the network where the computer and device are located requires the presence of a DHIP server, most commonly a router, and enable DHIP functionality;
2. Connect to the host through a switch via T568B;

## ⑨ —— Business/touch microphone and extension host interface

- ◆ Used for external EN-8500ET/EN-8500RM/EN-8500TM;
- ◆ Supports closed and star shaped connections (as shown in the figure below), automatically recognized by the software;



Closed or loop connection method



Star connection method

Explanation: The maximum distance between the rear host and the last device is 600 meters. It should be noted that due to the production process of the communication chip manufacturer and the electromagnetic strength on site, as the distance increases, the number of devices connected to the same device and communication speed will also be affected. Please test and use the most stable and reliable configuration according to the on-site situation. 600 meters is the stable and reliable distance tested by using standard Class 5 oxygen free copper for the host, which may be farther or shorter. This may be caused by the electromagnetic environment on site. At this time, the terminal of the last device can be matched with a resistor to enable it. In short, on-site testing is the standard.

## ⑩ —— SD card

- The device detects the presence or absence of this SD card in real-time;
- The maximum capacity that passed the test is 32GB (please use FAT file storage format for formatting);
- It is prohibited to remove this card during work, as this may result in the loss of device module logs and important references;

**Explanation: File storage method in SD card:**

1) The root directory consists of four folders, each containing EVAC MSG and ALERT MSG, paging beeps (CHIMES), and background music information (BGM);

2) The voice files in the "alert_message" and "evac_message" files default to one each when they leave the factory. Users can add or delete them according to their actual needs, and the host will detect them in real time;

3) The "Chime" folder contains the chimes and prompt sounds before and after the user's paging. Users can also configure different prompt sounds for the host's handheld microphone and remote microphone to start and stop paging according to their actual needs;

4) When the host detects that the SD card does not have a folder, it will be automatically created. However, the information needs to be downloaded by the user through a computer transfer. Of course, users can also download it through server software. Due to the large size of WAV files, downloading may take a long time. Please be patient and refer to the server software for relevant operations;

5) Please do not exceed 255 files in each audio file storage folder. When exceeded, only the first 255 files are valid;

6) Before powering on, this card will check if there are upgrade files in its root directory, so you can also store the upgrade files in the root directory. After the upgrade is completed, the upgrade files will be automatically deleted. Please note that;

7)For extended hosts only used for firmware upgrades;

## ⑪ —— Backup amplifier interface

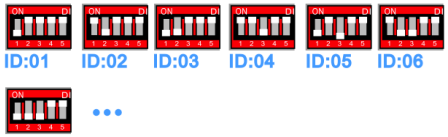
- “0 100V” Power signal input;
- “— G ＋ ” Audio signal output, connected to the signal input terminal of the external power amplifier<Note that this is a balanced output>;
- When connecting an external backup power amplifier, please ensure that the fourth bit of the DIP switch is unplugged to configure the backup power amplifier. Otherwise, the external connection will be lost and the switch will not occur. The host will ignore its presence. In addition, the power of the external backup power amplifier must be greater than or equal to the built-in power amplifier of the device;

## ⑫ —— Host module configuration switch (up indicates "enable" and down indicates "disable")

- “1” Indicates the total detection ID of the system equipment. When "enabled", it means that the user allows the device to monitor the working status of each module in the system. Conversely, when "disabled", it means that the user allows the device to monitor the working status of each module in the system;
- “2” DC24V power supply configuration ID, "enable" indicates that the system is configured with DC24V power supply, and the user needs to connect 24VDC power supply at "1". Otherwise, "disable" means that the DC24V wiring port is suspended;
- “3” Trigger mode configuration ID, "enable" indicates using relay short circuit triggering, "prohibit" indicates using level method triggering;
- “4” Backup amplifier configuration ID, "enable" indicates configuring backup amplifier, "disable" indicates not configuring backup amplifier;
- “5” Host IP address selection method, "enable" the host's IP address will use the IP address automatically assigned by the router, "disable" means the host will use a static IP address;
- Reference ⑧ "- Ethernet Connection Interface";
- “6” Reset the host IP address to the factory value: IP address is 192.168.0.168, port number is 22777;
- “7” Horn circuit impedance calibration, please refer to ‘⑭ the description of Explanation of horn partition status indication";
- “8” Horn circuit impedance detection enabled, "enabled" indicates enabling horn circuit impedance detection, otherwise, horn circuit impedance detection is turned off, that is, regardless of line resistance, it is assumed to be normal and not detected;

## ⑫ —— Expansion host module configuration switch (up indicates "enable" and down indicates "disable")

- "1-5" bits represent the device networking ID, as shown in the figure on the right:
- "6" bits represent DC power configuration, "enable" indicates configuration, and "prohibit" indicates no configuration;
- "7" bits represent backup amplifier configuration, "enable" indicates configuration, and "disable" indicates no configuration;



◆ "8" indicates the horn circuit monitoring switch, "enable" indicates on, and "prohibit" indicates off;

**⑬ —— System online interface**

◆ When there is any malfunction in the system, this output interface '1' is disconnected, and vice versa, it is engaged;

◆ When the system is operating in a fire alarm state, this output interface '2' is engaged, otherwise it is disconnected;

◆ When the current device is operating in event triggered mode, the relay short circuit input reset system is greater than or equal to 0.5S;

**⑭ ——MIC input, used in conjunction with "⑯" adjusting input sensitivity**

◆ External MIC or line audio input signal;

**⑮ —— Line input interface, used in conjunction with "⑯" adjusting input sensitivity**

**⑯ —— MIC/Line Input Audio Sensitivity Adjustment, Used in conjunction with "⑭、⑮、⑰"**

**⑰ —— Host output audio interface**

◆ This interface outputs the audio output of the current amplifier;

# 1.3. technical specifications

✧ **Electrical indicators**

**AC power supply**

| | |
|---|---|
| Voltage | AC 220V±10%, 50/60Hz |
| Power consumption | Up to 650W |
| Maximum current | Less than 3A |
| Specification of fuse | 250V/5A, Slow melting |

**DC power supply**

Voltage 24V DC, 20V ~ 27.5V

### 1.3.1. Maximum current ≤27A

**Emergency microphone**

sensitivity 10mV

Impedance 160Ω

**Karon input**

Distortion ＜1% (Rated output power) ,1kHz

Sensitivity 775mV

Impedance 10kΩ

Signal-to-noise ratio >70dB

**Line input**

Distortion <1% (rated output power), 1kHz

Sensitivity 775mV

Impedance 10k Ω

Signal to noise ratio >70dB

**Recording output**

Distortion <1% (rated output power), 1kHz

Sensitivity 0dBmV

Signal to noise ratio >70dB

**System connection control contact output/input**

System fault relay output short circuit, no voltage

Short circuit in the output of the connected relay in the working state of the equipment no voltage

Fire reset input short circuit,t ≥ 0.5S, no voltage

8-way relay programmable output short circuit, no voltage

8-way programmable trigger input

Level mode: up to 3.3V

Short circuit mode: No voltage, short circuit

Voice information

Data format WAV format

Storage type SD card/FALSH

Information quantity 255 * 4

Storage time >10 years

Log information

Data Format HEX

Storage type Nand Flash

3000 pieces of information

Storage time >10 years

**Voice information**

Data format WAV format

Storage type SD card/FALSH

Information quantity 255 * 4

Storage time >10 years

**Log information**

- ✧ **Data Format HEX**
- ✧ **Storage type Nand Flash**
- ✧ **Information quantity 3000**
- ✧ **Storage time >10 years**

## Mechanical indicators

Dimensions (length x width x depth) 484* 132* 449 mm (3U)

Net weight About 11.5 kilograms

Install desktop or 19 inch cabinet

Color black

## Environmental requirements

Operating temperature +5℃ ~ +40℃

Storage temperature -20℃ ~ +70℃

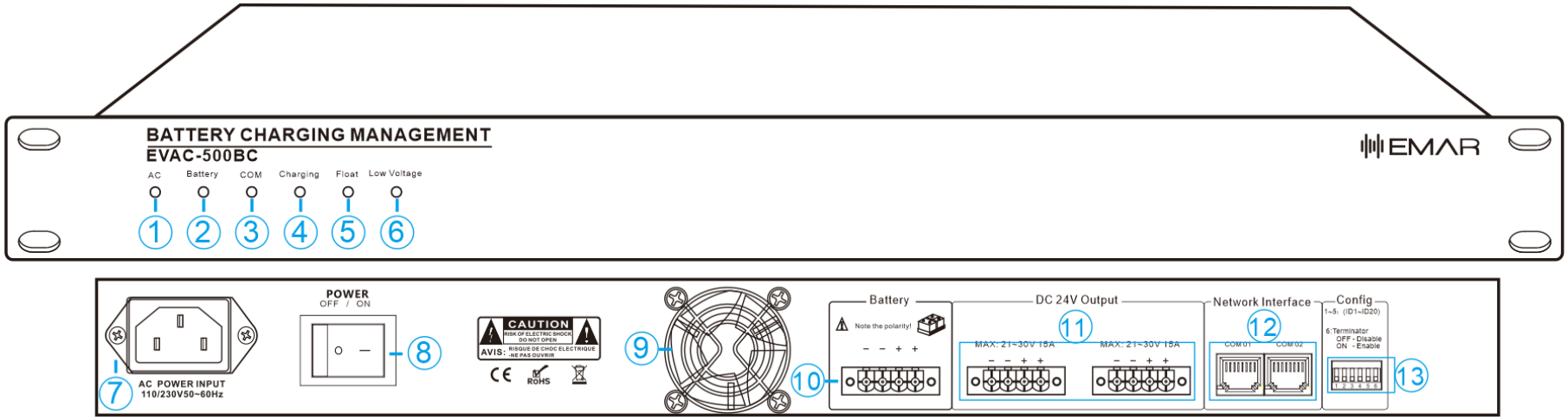
Relative temperature < 95%

# 2. Charging management unit－EVAC－500BC

EVAC-500BC is used to provide a backup power supply for the system. When the main power supply (AC) of the system loses power, it automatically switches to a DC 24V DC power supply.

- Automatic charging management;
- Programmable battery detection;
- Real time status monitoring and display of its working status through panel LEDs;
- Multiple online, remote monitoring.

## 2.1. Front and rear panels




## ① —— Device AC power status indicator light

- Green - AC power supply is normal;
- Yellow - AC power failure;

## ② —— DC status indicator light

- Green - DC power supply is normal;
- Yellow - DC power failure;

## ③ —— Device online status indicator light

- Green - The connection between the device and the host is normal;
- Yellow - device offline status;

## ④ —— Charging status indicator light

- Green - The device is charging the battery (when the device is fully charged, this light will switch back and forth with "⑤", which is a normal state);
- Off - the battery is fully charged or not connected to the battery;

⑤ —— Battery maintenance and charging indicator light

- Green - The device enters maintenance charging state (when the device is fully charged, this light will switch back and forth with "④", which is a normal state);
- Off - the device has not entered the maintenance charging state;

⑥ —— Low battery voltage indicator light

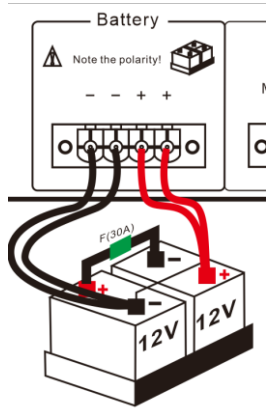
- Yellow - indicates that when the voltage at both ends of the battery is below 21V, this light will light up and the output will be turned off to protect the battery from over discharge;
- Off - indicates that the voltage at both ends of the battery is within the normal range;

⑦ —— Equipment AC power input interface

⑧ —— The device AC power switch, when in "O", indicates that the AC power input is turned off (note that this switch cannot turn off the battery input)

⑨ —— Fan

⑩ —— Lead acid battery interface (please pay attention to polarity, use 2 12V batteries in series), refer to the connection method shown in the right figure<it is recommended to connect fuses in series between the 2 batteries>:




⑪ —— DC24V output interface (please pay attention to polarity, and the total output current should not exceed 30A, and the output current of a single terminal should not exceed 15A);

⑫ —— Device Plus Online Interface;

⑬ —— Device DIP configuration:

1-5 bits are used to configure the communication ID, with an address range of 0 to 9, which is 1 to 10;

6 bits are used to control whether to connect to the terminal matching resistor. Please note that it must be the last device. If the device is connected in a loop, this bit does not need to be configured and is only used for open-loop.

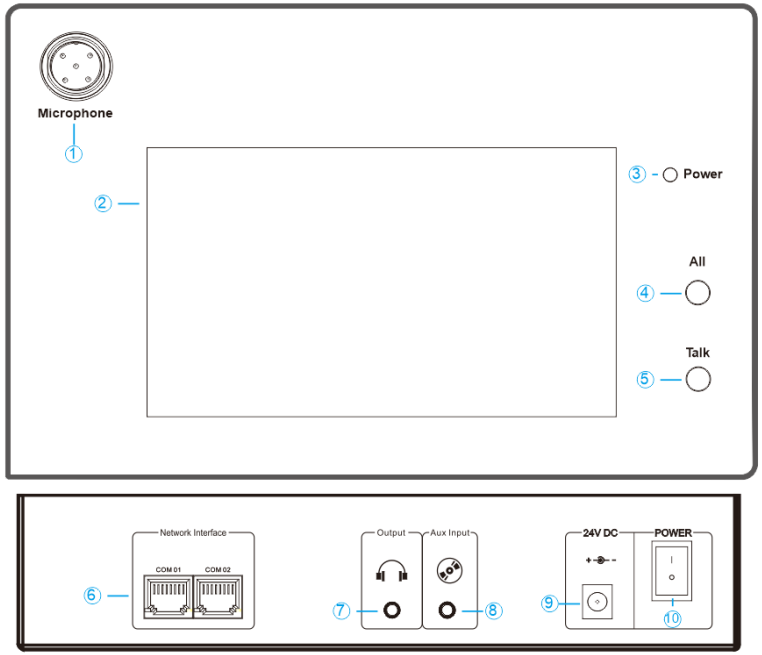
# 3. Touch microphone—EN-8500TM

EN-8500TM for remote control of EN-8500 system, integrating functions such as host, expansion host, remote microphone, and server software control, allowing users to remotely page and control system partitions. Supports control of 40 programmable groups, designated partitions, and all host partitions, and supports redundant wiring.

- Adopting a 7-inch capacitor touch operation, the human-machine interface is friendly, and the operation is simple, intuitive, and clear;
- The paging button mode and PTT mode can be configured;
- Paging priority can be configured;
- Support 24V fantasy power supply without the need for an external power adapter (less than or equal to 100m, please connect an external power adapter when it is greater than 100m);
- Using balanced transmission to extend transmission distance by<=600 meters;
- Support redundant wiring of lines;



# 3.1. Front and rear panels （As shown in the figure on the right）




① —— Lighted gooseneck microphone

② —— High definition display screen

③ —— Device power indicator light

④ —— Select All (Partition or Group)

⑤ —— PTT or Talk button

- When the user confirms that a paging group has been selected, pressing this button or using the "

" button on the human-machine interface will initiate the paging process;
- Note: Speak only when the MIC paging indicator light is lit, as shown in the image on the right 

.

⑥—— Device online interface<Please refer to the system wiring diagram>

⑦—— External monitoring output interface - this board function is retained

⑧—— Line input interface

- This connection is used to replace MIC output audio with external "line audio" audio, and when it exists simultaneously, the line input takes priority;

⑲—— Device external power adapter

◆ Attention: When the distance between the device and the host is greater than or equal to 100m, please connect an external power adapter with a specification of DC24V/1A.

⑩—— Equipment power switch

# 1.4. Technical specifications

✧ **Electrical indicators**

**Fantasy Power**

| | |
|---|---|
| voltage | 20V ~ 27.5V |
| Maximum current | Less than 0.5A (24V power supply, all panel LED lights are on, paging status) |
| Power consumption | Less than 7W |

**performance index**

| | |
|---|---|
| Line input | |
| sensitivity | 775mV |
| Impedance | 10kΩ |
| Signal-to-noise ratio | >70dB |

**microphone**

| | |
|---|---|
| sensitivity | 50mV |

✧ **Mechanical indicators**

| | |
|---|---|
| Dimensions (length x width x height) | 280* 140 * 55 mm |
| Net weight | Approximately 1.4 kilograms |
| install | desktop |
| colour | black |

✧ **Environmental requirements**

| | |
|---|---|
| Operating temperature | +5℃ ~ +40℃ |
| Storage temperature | -20℃ ~ +70℃ |

Relative temperature <95% (No condensation)

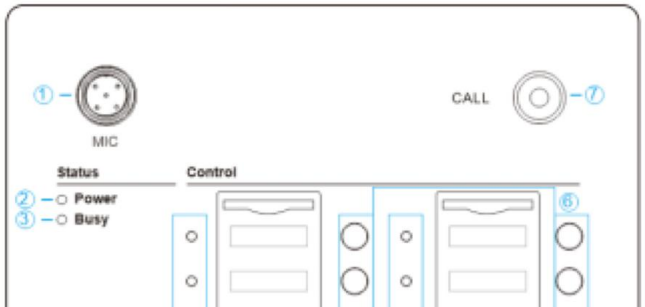
# 4. Business MIC——EN-8500RM



EN-8500RM is used for remote control of EN-8500 systems, allowing users to remotely page partitions. Supports 12 zones and 12 groups for programmable control, supports redundant wiring of lines.

- 1-key partition/group selection, easy to operate, intuitive, and clear;
- Paging button mode and PTT mode can be configured;
- Each button can be independently programmed <Play BGM can be configured to restore switched BGM, refer to server manual>:
  - paging;
  - Play background music;
- Paging priority can be configured;
- Supports 24V fantasy power supply without the need for an external power adapter;
- Using balanced transmission to extend transmission distance by<=600 meters;
- Support redundant wiring of line;

## 1.5.Front and rear panels




① —— Lighted gooseneck microphone

- Allow paging when the red LED light on the microphone head is on;

Remarks:




**② ——Device power indicator light**

- Green - Fantasy power supply is normal;
- Off - Power supply continuity;

**③ —— Device busy indicator: When this indicator light flashes, it indicates that the microphone is busy;**

**④ —— Partition selection and working status indication;**

- Long light —— indicates that its current partition is in working state;
- Flashing —— indicates that the user has currently selected this partition;
- Off —— indicates that this partition is currently not working, processing standby status;

**Description:**

1. If all the LEDs flash together after booting up and other keys are pressed without any response, check if the device connection ID is configured properly or if the device is configured. This can be checked through server software;

**⑤ —— Select All button**

- When MIC is not paging:
  1. If all partitions remain lit and flash, pressing this button will cancel the selection of all partitions;
  2. When the user only selects some partitions, pressing this key will select all partitions;

**⑥ —— Partition selection button (Cooperate with the above "⑤与⑦" Collaborative operations)**

- When there is currently no paging in MIC, when the corresponding button is pressed when the left LED is on or off, the corresponding LED on the left will flash to indicate that the user has selected this partition;
- Pressing the corresponding button while MIC is currently paging indicates that the user needs to modify the partition being paged:

**Description:**

1. If the partition indicator light corresponding to the button is green - turn off the currently selected partition paging;

2. If the partition corresponding to the button indicates that the coal is off - open the currently selected partition, that is, add a paging partition;

### ⑦ ——Paging start button

◆ MIC paging control button;

**Description:**

1. When paging, pressing this key will end the current paging;
2. When there is no paging but a partition is selected, pressing this key indicates the start of paging (waiting for the microphone headlights to light up) ;

**Attention:**

If the MIC is operating in PTT mode, it needs to be pressed continuously during paging, otherwise the paging will end;

### ⑧ —— MIC power switch

◆ Used to turn on or off the MIC working power supply (must be connected to the host first, that is, "8" must be connected to the "⑨" on the back of the host) ;

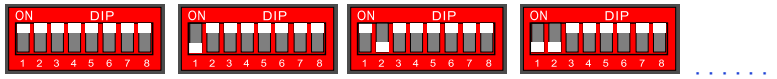
### ⑨ —— Device online interface (2 interfaces without distinction between primary and secondary)

### ⑩ ——MIC output audio sensitivity adjustment

### ⑪ —— MIC external line input audio, mixed and output together with the audio of panel "2";

### ⑫ —— Device ID configuration switch

"1~5" — Represented as the ID of the device online, the device online IDs in the following figure are: (i.e. the binary values of device IDs 1 to 5 plus 1, unplugged as "1", unplugged as "0")




"6" - Pulling it up indicates that the "6- Paging start button" works in normal mode, while pulling it down indicates that the "6- Paging start

button" works in PTT mode, which requires constant pressing during paging;

"7" - MIC panel "LED" light test (please keep unplugged if normal). When it is detected that it has been unplugged, all "LED" lights on the panel will light up from "red" ->"green" ->"yellow" once and automatically return to normal display status. This is mainly used to test whether the display of the "LED" is normal;

"8" - Device terminal matching resistor;

# 1.6.Technical specifications

✧ **Electrical indicators**

**Fantasy Power**

| | |
|---|---|
| Voltage | 20V~27.5V |
| The maximum current | less than 0.1A (24V power supply, all panel LED lights are on, paging status) |
| Power consumption | less than 2.4W |

**Performance index**

Line input

| | |
|---|---|
| Sensitivity | 775mV |
| Impedance | 10k Ω |
| Signal to noise ratio | >70dB |

**Microphone**

| | |
|---|---|
| Sensitivity | 5mV |
| Impedance | 600Ω |

✧ **Mechanical indicators**

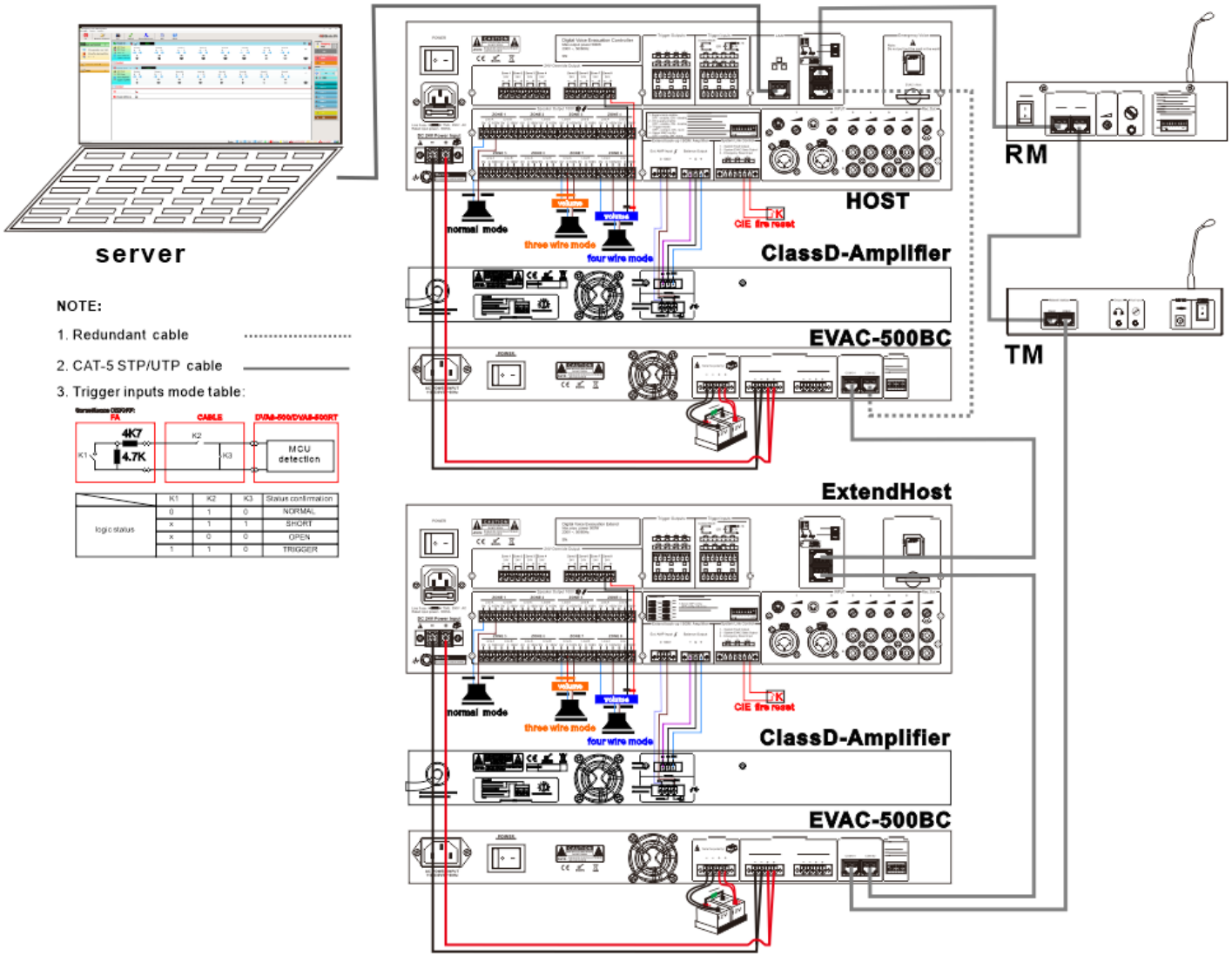
Dimensions (length x width x height) 240 * 140 * 55 mm

| | |
|---|---|
| Net weight | approximately 1 kilogram |
| Install | desktop |
| Color | black |

✧ **Environmental requirements**

| | |
|---|---|
| Operating temperature | +5 ℃~+40 ℃ |
| Storage temperature | -20 ℃~+70 ℃ |
| Relative temperature | <95% (no condensation) |

# 5. System Connection Diagram（refer to‘SystemLineLink.pdf’）



# 6. Regular operations

➢equipment

- ✧ EN-8500SFT;
- ✧ EN-8500;
- ✧ EN-8500ET;
- ✧ EN-8500TM;
- ✧ EN-8500RM;

➢The electrical connections between system equipment are correct and working properly.

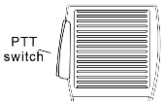
## 6.1. Paging operation using emergency microphone （

）

① When the system is in standby or playing background music, press the"

" key on the console panel or on the firefighter's dedicated microphone. You can enter emergency mode immediately;

② Select the output partition on the host or expansion host (if not selected, the system defaults to the entire partition);

③ Press ”

” the PTT switch on the left and hold the receiver switch to initiate paging;

④ Stop the paging and release it;

**Explanation: When "Emergency mode only enabled" is not selected in the emergency microphone working mode configuration, only the "②~④"**

**step needs to be operated.**

## 6.2. Use the touch microphone TM for paging operations as follows:

① Click "Mice/LineCall" in the main menu mode to enter the paging interface: "Mic/LineCall" group paging interface or "Mic/LineCall" specified partition paging interface<This interface is automatically determined by the system to determine the number of partitions and the available partitions, please refer to the icon in the bottom left corner of the current interface for instructions>;

Explanation: Click on the paging menu item in the main menu to enter group paging or specify partition paging. It is determined by clicking on the configuration icon in the upper right corner of the device's main menu to enter the 'Group List' or 'Specify Zone No.' in the 'Paging Display Mode' configuration interface. Of course, if selected, it can also be converted through the 'Specify' or 'list' in the lower right corner of the interface.

② Select the group to be paged in the group interface<the selected group will flash>or select the specified partition in the specified partition interface (the selected partition will remain lit and will not flash);

③ Press the green "CALL" button and wait for the microphone LED to light up to page (if working in PTT mode, please do not release the "CALL" button);

④ End the paging and press the paging button "CALL" again (for PTT mode, just release it).

**Explanation: PTT mode can also be controlled by clicking on the configuration icon in the upper right corner of the main menu to enter the "PTT Mode" control in the configuration interface: checking indicates PTT mode, otherwise it is normal mode.。**

## 6.3. Use the button microphone RM for paging operations as follows:

① Select the partition that needs to be paged currently (the LED corresponding to the selected partition flashes) - it can be single selection, combination, or all selection (if a partition configured as a function key is mistakenly selected, it will be executed immediately and the previous partition selection will be automatically cancelled. To prevent misselection, please select the corresponding key name through the server software, and the key name should have a certain literal recognition as the context suggests, such as a domain name or a function name);

② Press the green "CALL" button and wait for the microphone LED to light up to page (if working in PTT mode, please do not release the "CALL" button);

③ End the paging and press the paging button "CALL" again (for PTT mode, just release it)。

**Explanation::**

**1. For button microphones, there is no specified partition operation, but users can freely program and determine the partition included in the corresponding button to achieve it;**

**2. The main purpose of grouping is to quickly select multiple partition combinations with higher user usage frequency, without having to perform the same repetitive operation every time.。**

## 6.4.Play background music:

一、On the panel of the host or expansion host:

1. 1. Select the audio to be output through the "BGM Control" area of the panel (the host also includes "BUILD-IN BGM"), and the corresponding indicator light will light up to indicate successful operation (if it does not light up, please confirm whether there is currently audio output and ensure that the newly selected audio has a higher priority than the working audio. The priority of the audio can be modified through server software);

2. Select output partition (corresponding to the illuminated 'BGM' indicator light indicating the selection of output in that partition):

**In addition, you can also choose to select the working audio after selecting the output partition;**

**Attention:**

1. All audio on the host (EVAC voice, handheld microphone, and BGM) can be output to any partition output of the system's extended host;

2. The line audio on the expansion host panel can only be output to the 8 partitions of the local machine, and cannot be sent to the partitions of the host or other expansion hosts for output;

## 6.5. Play the host's line "BUILD-IN BGM" and line "01-06" through server software/touch microphone TM/business button microphone：

二、 Operating on server software:

Method 1：

① Select one or several groups ('Multiple selection and single selection can be controlled through the right-click menu ', and selecting a group requires configuring the included partitions through server software in advance. However, one or any combination of multiple partitions can also be selected)；

② Select the corresponding output audio on the right side of the interface；

Method 2：

① Click on the bottom right corner of the interface “

”,turn on the LED on the left (indicating the selection of partitions for all devices in the system)；

② Select the corresponding output audio on the right side of the interface；

Method 3：

① First, open the partition of the corresponding host or extended host (if the selected host is currently working, the working audio will be output, and the device's working audio can be obtained from the interface “

, Indicates active standby with no audio output”）；

② Select the corresponding output audio on the right side of the interface；

三、Operate on the touch microphone:

Method 1 (for device idle state)：

① Click "ZoningControl" anywhere in the main menu to enter the partition control and module status display interface；

② Select the partition to open or expand the host on the left side of the interface；

③ Select the corresponding output audio on the right side of the interface；

Method 2 (practical for playing audio when the device is working and directly switching to output audio)：

① Click "ZoningControl" anywhere in the main menu to enter the partition control and module status display interface;；

Select the corresponding output audio on the right side of the interface. If the LED on the left side of the corresponding audio is not lit, it indicates that the selected audio has lower priority than the working audio. Please turn it off and then select again；

Method 3 (Directly switch output to all partitions of the system, practical for all situations)：

① Click on the bottom right corner of the interface “

” Check the corresponding box on the left to select all partitions in the system；

② Select the output audio from the audio list on the right side of the interface, which avoids switching the audio output to an unwanted partition in method 2 above；

Explanation: The user is responsible for selecting the appropriate method based on their actual situation；

## 6.6.Manually play EVAC voice

四、Enter "EMERGENCY" mode - Press to light up and flash while "EMERGENCY" is off;

五、Select output partition;

六、Select the output EVAC voice - "EVAC MSG" or "ALERT MSG" to light up the corresponding LED light;

**Explain:**

**There are four ways to exit EMERGENCY mode (i.e. reset) (to perform the same function):**

Method 1: Press "EMERGENCE" again to turn off the LED;

Method 2: Input a voltage free relay short circuit signal greater than or equal to 0.5S through the CIE reset input contact in the rear of the host;

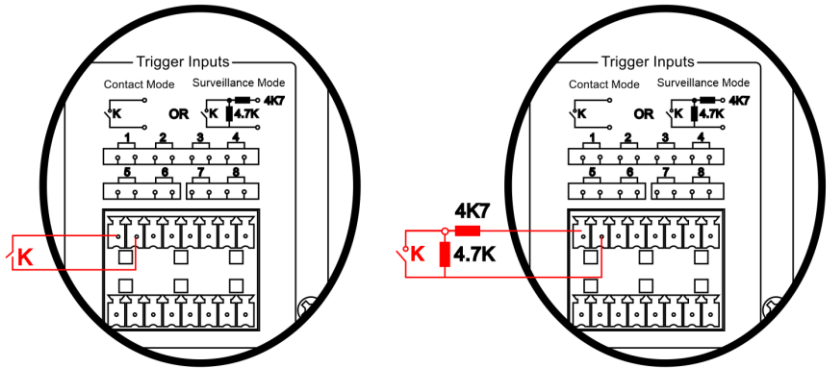
Method 3: Use the flashing red button in the upper right corner of the server's main interface;

## 6.7.Automatically trigger EVAC voice

七、The current user has effectively configured the touchpoints of the host or extended host through server software;

八、If not configured, the system defaults to full area output;

九、For the "Contact Mode" and "Surveillance Mode" modes, simply close them in the image below the host or extended host to trigger (exit and reset like manual playback):




Contact mode　　Surveillance mode

## ● Server software operation

EN-8500SFT is the human-computer interaction interface of the system, which is a highly integrated software that integrates system configuration, system control, module status monitoring, fault diagnosis, log recording, and more. It has a user-friendly interface and follows Windows operating habits.

一、Installation of EN-8500SFT:

1. operating system:

(1) Win7 and above;

(2) Memory: 4G;

(3) Hard disk: larger than 24GB;

2. Installation: Click "next" to proceed;

**Tip: Please run as an administrator during runtime:**

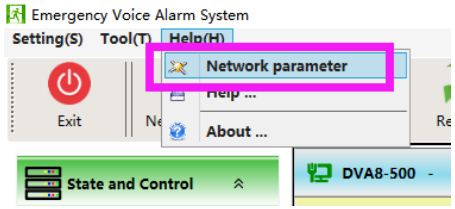
1. Right click properties - Compatibility - Run as administrator (only needs to be set once);

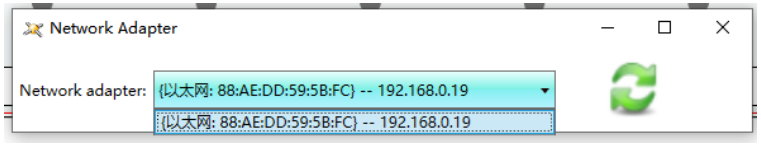
2. Right click properties - run in administrator mode (this method needs to be executed every time, troublesome);

二、 Operation: (Before operation, please follow the description in 'Device 1.2-' and ensure that the connection is correct, and the host LAN port data and connection indicator light are on.)

1. Double click on the desktop icon (after pressing 1 to reveal the settings, if pressing 2 to set, right-click on the administrator, remember):

2. After entering the main interface, the server software automatically searches for the hosts in the current network and completes synchronization (no other operations are required)

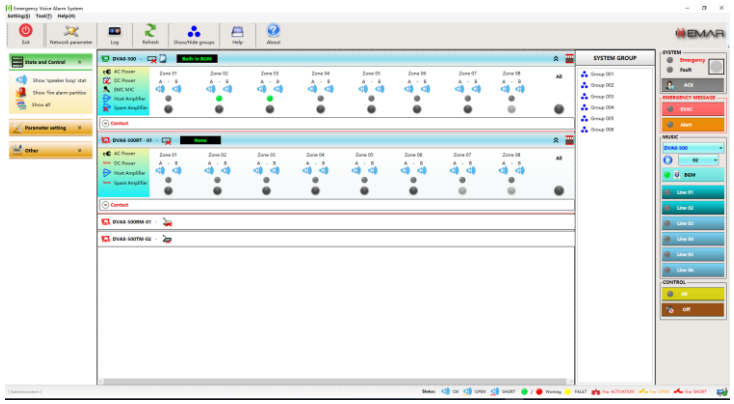



If there is no response for a long time, it is possible that the user's computer network card does not correspond - select the corresponding network card as shown in the following operation;

三、system configuration:

After the connection is correct, the interface will automatically display the current system's various devices as shown in the following figure:



**Tip: (From top to bottom, left to right)**

1. Above are some special operations and controls of the system in the menu bar;
2. On the left is the navigation bar: status and control, system configuration, and system logs, etc;

3. Displayed when the device module status is in the middle;
4. On the right is the audio of the system host or expansion host;
5. The following is an explanation of the main icon status of the current logged in user and device;

四、system configuration:

A. Left navigation bar "Parameter setting" --> "Equipment":

(1) "Chime volume" Pre set the size of the prompt sound when using the microphone on the host panel for paging (the microphone here includes the handheld microphone on the host panel as well as remote RM and TM microphones);

(2) "EN-8500" Host related parameter configuration:

① "EMC Microphone chime" The prompt tone used to configure "" (Place the prompt sound in the "Chime" folder on the host SD card), Selecting "00" means disabling;

② "Player mode control" Used to configure the playback mode of the built-in "BUILD-IN BGM";

③ "Restore the BGM playback control after the reset fire" Used to configure whether the system will resume background music playback before entering should mode after exiting: (Check ->to indicate recovery, otherwise it will not be restored)

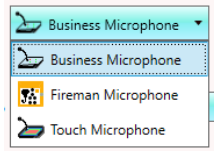
④ "Zoning Enabling and Detection" Enabling and speaker loop monitoring for configuring or expanding host partitions:
"Enable" is displayed as: "" —Indicates enabled, normal operation and operation, "" —Indicates that it is disabled and cannot be controlled. The server software, TM, and the host or extended host panel ignore the operation of this partition, and it can be considered that this partition does not exist;
In addition, if the 8th bit of the DIP configuration switch behind the host is "DW", the configuration here will be ignored as "enabled" and considered as "disabled" uniformly;

(3) "EN—8500ET" Related parameter configuration:
Remarks: The configuration of "EN-8500" is similar to "EN-8500ET", but the difference is :
1. EN-8500 must exist, while EN-8500ET only has optional configurations to be added if the system has more than 8 partitions or extended power;
2. The audio of the host can be output to the expansion host, but the audio of the expansion host cannot be output to other hosts and expansion hosts;

(4) "Number of chargers" configuration allows for a maximum of 10 chargers to be selected for the same system;

(5) "Microphone" configuration:

1. "MIC quantity" is used to configure the total number of system microphones, with a maximum of 32 RM/TM/FM



microphones in the same system;

2. "MIC type" is used to configure microphone types, including business microphones, firefighter specific microphones, and touch microphones;

3. "MIC address" is used to configure the microphone address - the address in the back of the microphone must correspond to it, otherwise it cannot be recognized. If an error is found after the microphone is connected, the button microphone and all FM LEDs will flash together to prompt the user. For TM, the user will be prompted through the UI interface;

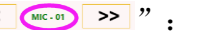
4. "Priority" is used to configure the priority of microphones, mainly used to indicate who has priority when different microphones control the system partition simultaneously. The "Busy" LED on the microphone panel or interface that cannot perform paging operations will be lit to remind users;

5. "MIC chime" is used to configure the prompt sound configuration before microphone paging, and its meaning is the same as that of the microphone on the host panel;

6. "Programmable keys" are used to configure microphone button functions:

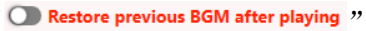
(1) "Total keys" are less than or equal to 12 for business microphones, 4 for firefighter specific microphones, and 40 for touch microphones;

(2) "Work mode" is used to configure the working mode of the "

" key of the current microphone "

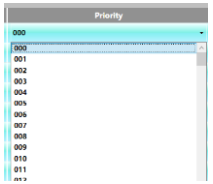
" :

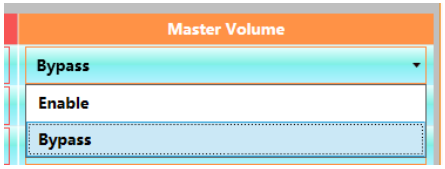
① Selecting "Paging" mode: indicates that this button is only for group selection. The corresponding partition contained in the button can be configured through "" below, and meaningful names can be entered through "Key name:" to facilitate user operation;

② After selecting "BGM play", select the audio source through the drop-down list box of "BGM type". If it is "Build in music", you need to specify the song index and playback mode to achieve "one click play", "

" Used to configure the restoration of the previously played background music state after the microphone button finishes playing background music;;

(6) "Priority Setting" is used to configure the output priority level when the system outputs different audio simultaneously (FIFO and LIFO are used for selecting audio processing methods with the same priority level)



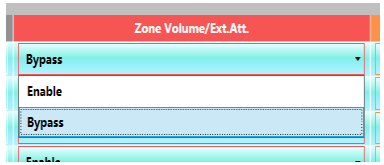



Figure 1 Figure 2 Figure 3

Figure 1: Used to select audio priority, the higher the value, the lower the priority level;

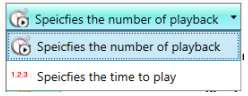
Figure 2: Used to select whether the total volume switch on the host or expansion host panel should skip the volume knob switch: 'Bypass' indicates skipping, that is, the total volume switch on the panel is invalid, and' Enable 'indicates it is effective;

Figure 3: Used to control the rear three line voice control strong cut output, which is consistent with Figure 2;

(7) “Fire Alarm” configuration: (Rear contact configuration for the host or expansion host)

1. The EN-8500 system allows users to use three alarm methods:

(1) "All Zone" - When the rear contact of the host or expansion host detects an alarm signal, it will activate all zones to play the specified alarm information after a specified delay time;

(2) Neighboring mode - When the rear contact of the host or expansion host detects an alarm signal, it plays the "EVAC" message (which can be played according to the time or frequency) on the current detected partition after a specified delay time, and then plays the "Alert" message in the neighboring 

layer (Up to 4 adjacent layers are determined by “ +(0~4) 01 -(0~4) 01 ”), And so on, until all partitions play "EVAC" information and stop neighboring layers;

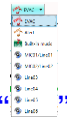
(3) "Specify Zone" - When the rear contact of the host or expansion host detects an alarm signal, it will activate the pre configured zone to play alarm information after a specified delay time;

Explanation:

1. Each mode can set a delay of 0-300 seconds from detecting the alarm signal to initiating the alarm, and manually confirm whether the alarm signal is truly detected. Double safety is used to improve system reliability. When there is no human intervention, the alarm will automatically start when the time is up “ Delay start time(0~300s) 0 ”;

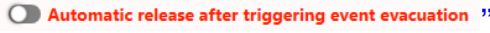
2. "EVAC and Alert message volume setting" is used to preset the sound size for playing EVAC or ALERT messages, with the default maximum volume output;

3. Alarm information:

(1) Designated by “” in full zone or specified partition mode;

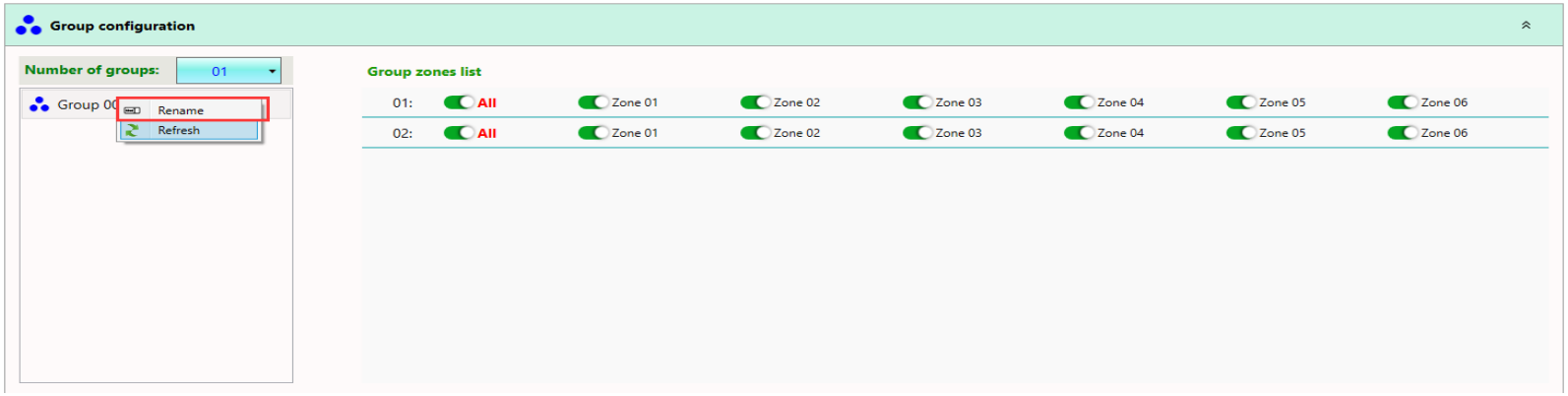
(2) Default to "EVAC" and "Alert" in adjacent layer mechanics;

4. Each contact point is relatively independent and can be specified separately as "Emergency" or "Business" mode: "Business" is only triggered by background music and does not enter emergency mode;

5. “

” Used to configure whether the current triggered contact will automatically exit emergency mode after losing the triggering signal, “” —Indicates automatic exit, “” —Indicates the need for manual reset or CIE for resetting;

(8) “Group configuration” allocation:




Explanation:

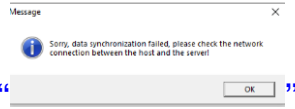
1. This configuration is only used for the server software interface and is convenient for users to operate;

2. Users can choose one group or multiple groups during the operation process, with a maximum of 120 groups configured and group names defined;

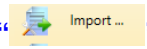
**Attention:**

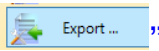
1. All the above configurations must be synchronized with the host but changed from “

” to “” ;

2. During the synchronization process, if communication fails, the system will automatically prompt a message such as "

", Please check if the network or host is working properly;

3. Users can import or export the current system configuration through "

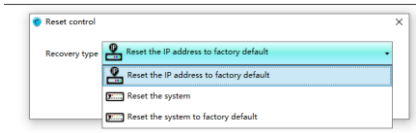
" or "

", making it convenient for the same configuration to be used in different engineering projects;

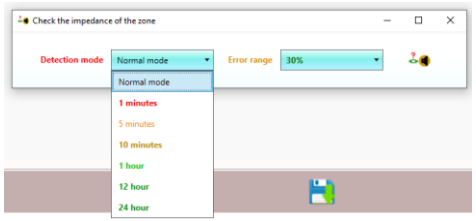
(9) Menu operations:

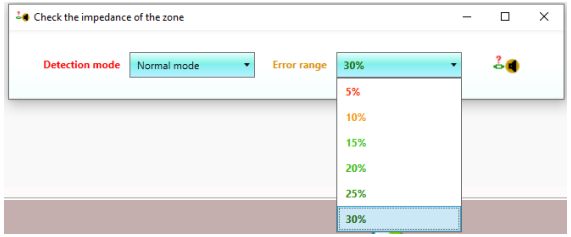
① "Setting" menu operations

1) "Reset control" can reset the system IP address, restart the system, and restore to factory settings (password is the same as user login), as shown in the following figure:：




2)" Check the impedance of the zone ..." Used to set the detection parameters for the speaker circuit (the first and eighth bits of DIP must be enabled), and to manually start the speaker circuit resistance calibration：



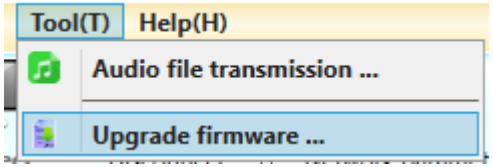




3) "Battery time detection ..." Used to set the EVAC-500BC timer to check the quality of the battery (the battery will gradually age over time and be replaced in case of emergency for backup), it can be set to be tested every 6 hours to 1 month. It starts timing when the EVAC-500BC is powered on, and can also be manually tested at the same time, with a testing cycle of about 10 seconds；

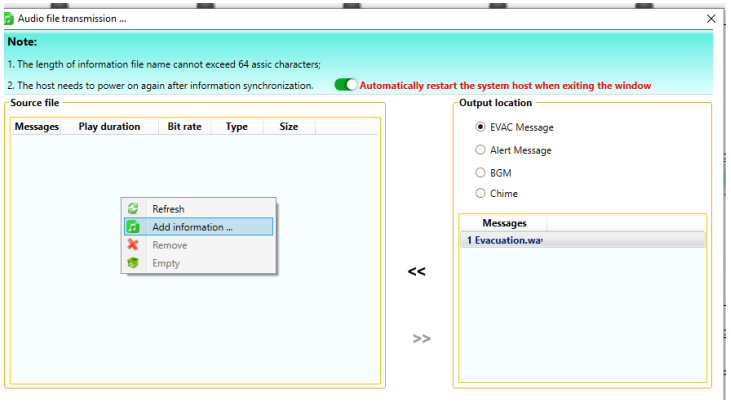
4) "Language" Used to dynamically select server language versions (effective immediately, automatically saved)；

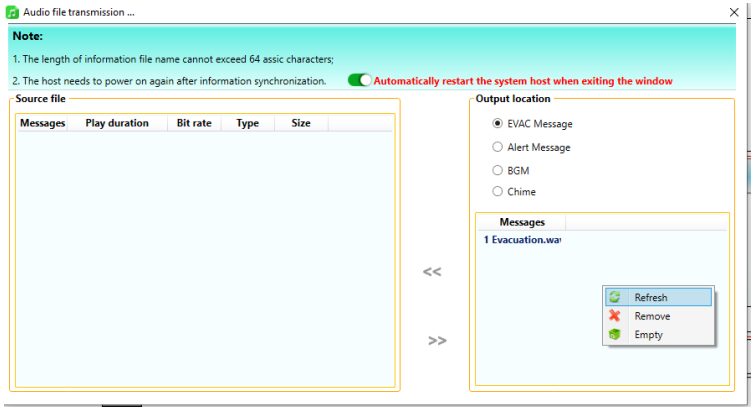
② “Tool” menu operations

1) file transfer:




a. “Audio file transmission ...” Users can upload and download information on SD through this function:




“ Automatically restart the system host when exiting the window ”When downloading information to SD and exiting this interface, it automatically restarts the host to rescan the audio information in the host SD card; (Suggest checking)

✧Upload: Simply right-click "Refresh" on the right side, select the uploaded audio file from the list box, and click "<<" to upload it;

✧Download: Right click on "Add information..." in the left list box to add information, then right-click on ">>" to complete the process;

b. “Upgrade firmware ...” System firmware upgrade (assuming there is already an upgraded firmware):

① Click to “ Select the firmware file... ”select the firmware file (xxxxx. bin);

② Select the host and click ">>" to add it to the right list bar;

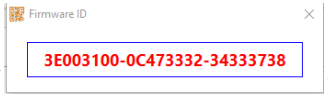
③ Click “  ” to start the download. After the download is completed, the host and software will automatically restart and enter normal working mode without human intervention (the buzzer will open during the host upgrade and automatically close after the upgrade is completed);

Description:

- ❖ Unable to power off during the upgrade process;
- ❖ The host must be in idle mode - that is, it is not currently in emergency mode or playing background music;

**Method for obtaining host firmware:**

Enter the "Upgrade firmware..." interface and right-click on the current host in the left list box “ 

” click “HOST ID ...” Pop up the “ 

” 96 digit globally unique ID number and send it to the corresponding sales manager to obtain the upgraded firmware;

(10) “Other” allocation:

① “Server network attributes”: mainly used by users to select the network card to connect to the host when selecting the current network card. If the user's computer only has one network card, it can be ignored directly;

1) "Network adapter" lists the network cards currently enabled on the computer (the " “  ” " icon on the right is dynamically displayed);
2) "Mul Address" is the current server software and host multicast address and port display, which cannot be modified by the user;
3) ‘IP address’ is displayed as the current computer IP address and cannot be modified by the user;

② “Host network attributes”: Mainly used to view the IP address of the configured host ("DHCP" is controlled by the 5th bit of the DIP switch in the back row of the host and automatically synchronized);

1) "DHCP" is determined by the 5th position of the DIP switch in the back row of the host. If it is "", it indicates that the current host IP address is in DHCP mode, while "" is in static mode. In this mode, the IP address can be modified;

2) After configuration, be sure to synchronize: click " " to make it grayed out;

3) In general, please use DHCP mode and do not modify it;

③ "Advanced" :

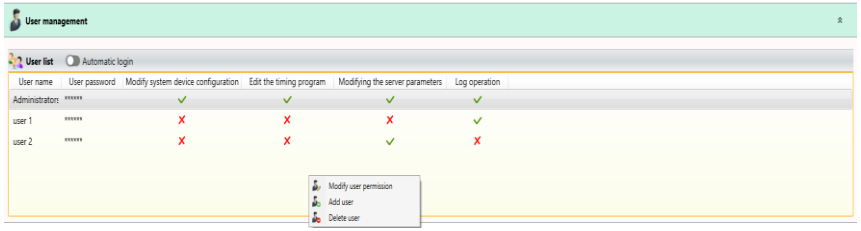
1) " SNMP time(4~100S) 6 " Used to configure the timeout time for server detection hosts. The smaller the data, the better the timeliness, but it also leads to excessive waste of network bandwidth. Please modify it carefully and protect the default value;

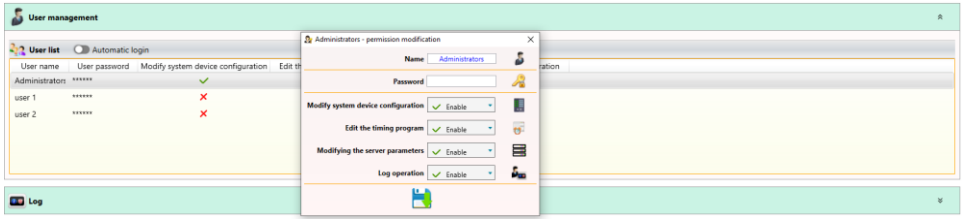
2) " Automatic timing of main engine 23:59:59 " Used to set server software timing for host calibration and manual calibration;

3) " Enabling user general operational records " Used to configure whether server software records user modifications to key parameters;

4) " A pop-up window prompts when the server loses connection with the host " Used to configure whether to prompt a dialog box when the server software detects that the host is offline. Note that this dialog box is blocked, meaning that confirmation from the user is required before proceeding with subsequent processing。

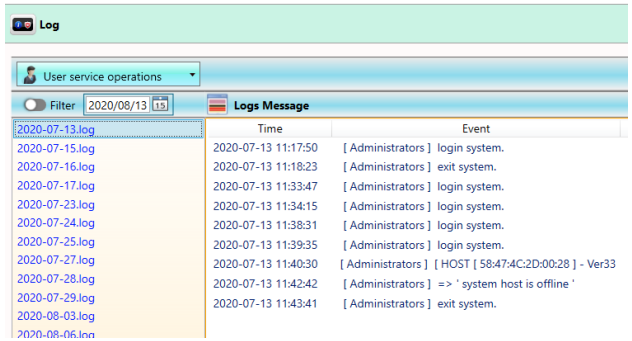
④ "User management" :You can add one or more users and specify their corresponding permissions to ensure that unintentional errors by others prevent the system from running properly:

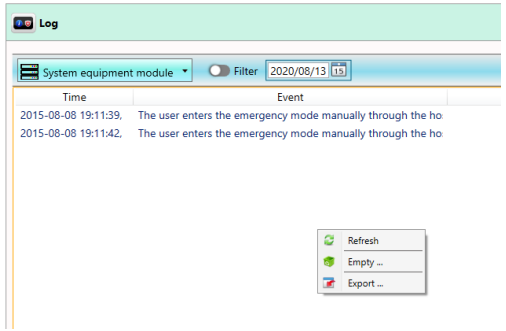



⑤ "Log" :The software can record key user operations and system module working status records, and can also be saved

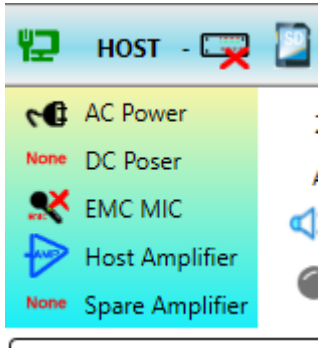
as a backup in the form of a spreadsheet:

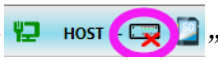


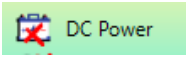



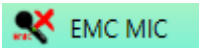

## 五、“State and Control” Status and Control:

1. Status Description: A red "X" in the bottom right corner of the icon indicates a malfunction, No indicates normal operation, such as:

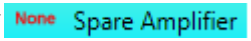



(1) In the figure “  ” indicates a fault in "HOST";

(2) In the figure “  ” indicates DC power failure;

(3) In the figure “  ” indicates a fault “  ” on the host panel;

(4) In the figure “  ” indicates that the host SD card is working properly;

(5) In the figure “  ” indicates that no backup power amplifier is configured;

(6) “  ” indicates corresponding partition short circuit/open circuit/normal;

(7) “  ” the partition LED indicator light indicates the current partition operation information except for "EVAC" or "Alert", and the red color indicates that the output is "EVAC" or "Alert" information;

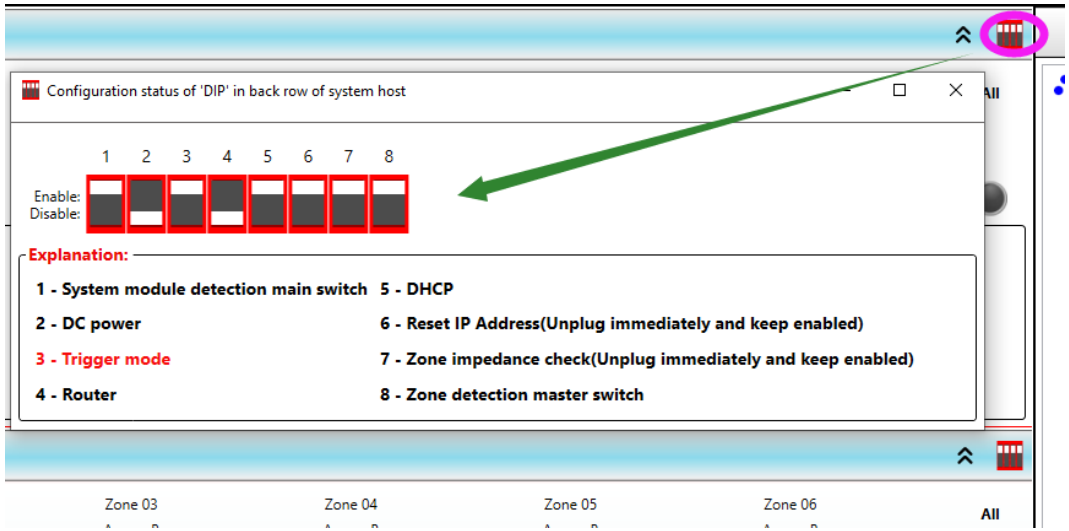
(8) “  ” click the mouse to open or close the partition;

(9) “ / / / ” indicates that the corresponding contact input is normal/open/short circuited/fire signal detected;

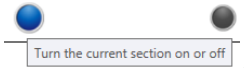
(10) “ 

” The corresponding indicator light is green to indicate "working", and yellow to indicate "faulty";

(11) Monitoring of DIP status at the beginning of the rear row of the host or expansion host:

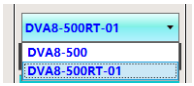



2. Control:

1. Manually turning on or off a single partition: hover the mouse over the corresponding device partition area（At this point, the button turns blue “

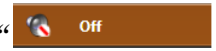
” Simultaneously provide prompts）, Click the corresponding partition button to proceed（The LED on the corresponding partition turns green to indicate it is on, and gray to indicate it is off）;

2. The method of manually turning on or off all partitions of the corresponding host is the same as above;

3. Manually turning on or off audio（For the expansion host, select it through “

”, and the drop-down list will display synchronization with the system through "Parameter setting"）:

① Click "MIC01/Line01~Line6" in the above figure to turn off the output (at this time, the partition is not closed, only the sound source is turned off);

② “

” Close all partitions and audio output;

4. There are two methods to manually play the host's line 2 to all system partitions:

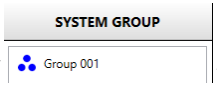
Method 1:

(1) Turn on the left LED light of “

”;

(2) Click on “

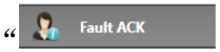
” to proceed;

Method 2: The difference from Method 1 lies in using grouping to replace "(1)" in Method 1, that is, selecting a grouping in the “

” list (which must include all partitions);

Description:

1. When the system enters emergency mode, it can be reset through the emergency button in the upper right corner, but it cannot enter emergency mode through this button;

2. When the system malfunctions, the fault can be reset through the " “

” " button in the upper right corner, which is the same as the "ACK" button on the host panel;

# ● Points for attention

1) Do not install the system equipment in direct sunlight or near the heating element, as the equipment may deform, fade, or come to a protective state due to high temperature and stop working;
2) Do not install or store system equipment in dusty or damp areas, otherwise it may cause stability or intermittent faults in the operation of the system equipment;
3) System equipment should be kept as far away from strong magnetic field equipment as possible to prevent high electromagnetic interference from affecting the normal operation of system equipment;
4) When multiple devices are installed in the same cabinet in the system configuration, please leave corresponding space between the devices for ventilation and good heat dissipation;
5) The remote microphone provides a 24V phantom power supply. When the panel indicator light becomes dim or cannot work properly, please shorten the length of the wire (tested 600 meters, Class 5 wire works normally, pay attention to the entire loop length, not a single device of 600 meters);
6) The main equipment lines of the system have backups, please wire them according to actual needs. If a serious malfunction occurs that prevents normal operation, please contact our company's after-sales staff for repair and handling. Do not disassemble or repair the built-in parts without authorization to prevent permanent damage to the equipment or modules and avoid electric shock accidents;
7) To ensure reliable operation of the equipment, please ensure good grounding.