

Public Address System

PAVA7000 Integrated Public Address & Voice Alarm System EN54-16



User Manual

Thank you for choosing our product. For a better user experience, please read the user manual carefully prior to use.

Canscorp Engineers Pvt. Ltd.

<https://www.canscorp.com/>

This page is left blank for users to take notes.

About the User Manual

The user manual is available and effective upon completion of the development of the device. The user manual includes product description, safety precautions, system connection instructions, operating instructions, and technical specifications of the device. Please read this manual carefully before connection, installation and use, and follow the corresponding instructions in the manual.



The instructions marked with this symbol on the rear panel of the machine are all matters that must be noted, and be sure to follow these instructions when using or operating the machine.

Please keep the user manual properly for unexpected needs.

Warning

To prevent potential personal injury, equipment damage, and property loss to the user and others, be sure to follow the basic precautions outlined below.



This symbol indicates what is “prohibited”.

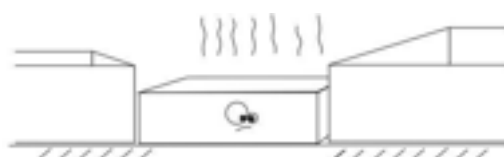


This symbol indicates what is “required”.

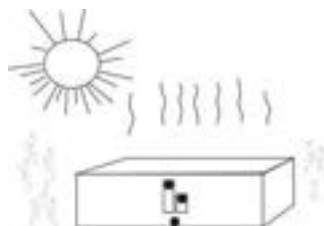
■ Check whether the power cord is damaged. Do not pull the power cord but hold the plug directly to remove the plug, otherwise it may cause electric shock, short circuit or fire.



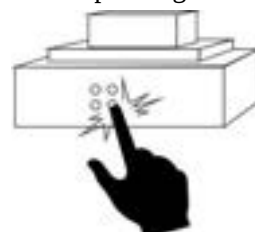
■ Do not block the vents during operation. All vents should remain unobstructed to prevent overheating.



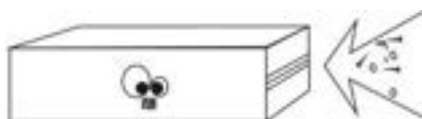
■ Do not place the equipment in an environment that is dusty, frequently vibrating, extremely cold or hot.



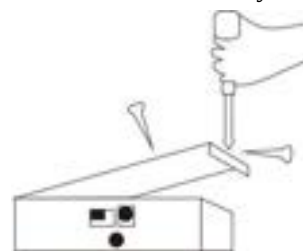
■ Do not place something heavy on the equipment. Do not use excessive force when operating switches or buttons or connecting external audio equipment.



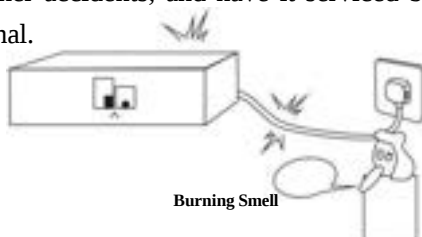
■ Do not allow any external objects (such as paper and metal) to enter any gaps or openings of the equipment. If this happens, disconnect the equipment from the power grid immediately.



■ Do not attempt to disassemble or modify the internal parts of the equipment in any way.



■ If the equipment suddenly breaks down or emits an abnormal odor or smoke during use, unplug it immediately in case of electric shock, fire or other accidents, and have it serviced by a professional.



■ If the equipment is not in use for a long time, unplug the AC power cord or turn off the wall outlet for zero power consumption.



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About the Manual

The manual contains detailed installation and operating instructions for all equipment of this system. It mainly includes function description, interface description, connection diagram, system settings and operating instructions, safety precautions and technical indicators for all equipment of this series. Please read the manual carefully before installation and use for proper operations.

Please keep this manual for future reference.

The functions listed in the manual are all functions of the whole system, including 8-zone amplifier host with main/backup switching function, 8-zone expansion amplifier with main/backup switching function, 4-zone expansion amplifier with main/backup switching function, remote paging microphone, fireman microphone and PC-based control software. The corresponding models and names are as follows:

PAVA7000 (8-Zone Amplifier Host with Main/Backup Switching Function)

PAVA7000E (8-Zone Expansion Amplifier with Main/Backup Switching Function)

CNS9425E (4-Zone Expansion Amplifier with Main/Backup Switching Function)

CNS7008 (Remote Paging Microphone)

CNS7008E (Remote Paging Microphone Expansion Keyboard)

CNS7500 (PC-Based Sub Control Software)

CNS9009 (Fireman Microphone)

CNS9002 (Network Control Terminal)

1. System Overview

1.1 Overview

The EN54-16 fire emergency broadcasting system provides manual operation and timing programming, and gives priority to the former over the latter; supports real-time monitoring of equipment operating status and recording of operating logs. It meets the relevant standard of “EN54-16 Voice Alarm Control and Indicating Equipment”. The broadcasting system can be used for fire emergency broadcasting, daily service broadcasting and background broadcasting; this system is positioned as a small emergency broadcasting system, mainly used in small shopping malls, small office buildings and exhibition halls, etc.

1.2 System Functions

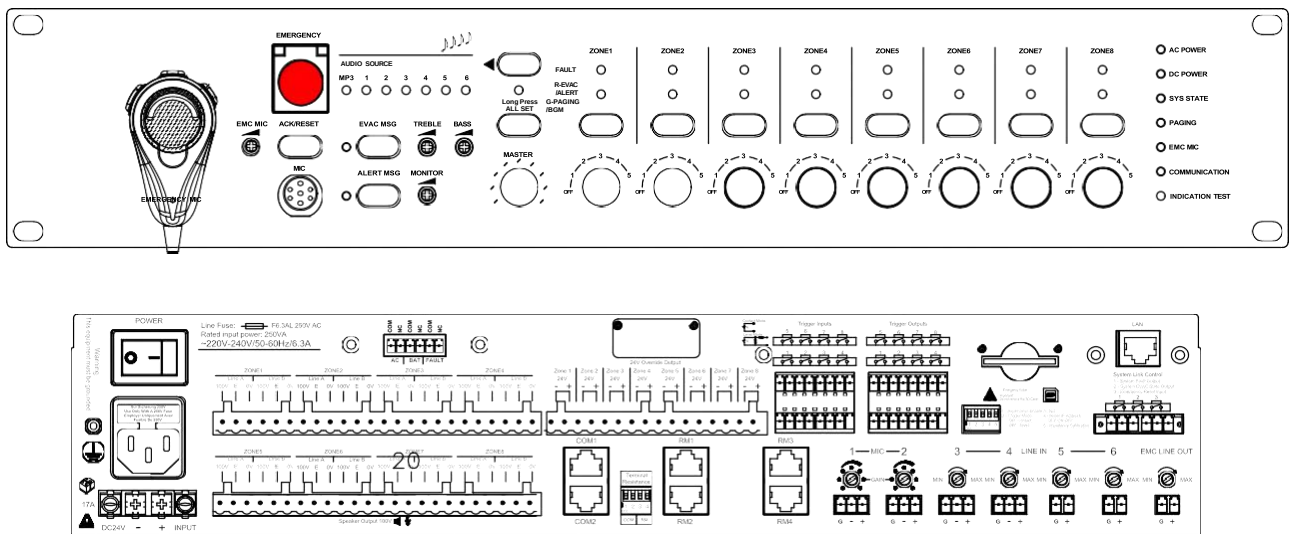
- Comply with the functional requirements of the European standard EN54-16 Voice Alarm Control and Indicating Equipment.
- With one-button alarm and two editable alarm voices, with EMC MIC for on-site guidance in case of emergency.
- Support automatic fault diagnosis, data backup, line redundancy and fault status recording.
- With LED display and buzzer to indicate the system connection status and fault status with sound and light.
- With zone programming, the system can enable manual or automatic zone and group operations.
- Support visual human-machine interface operation and control, while allowing simultaneous login and control through the human-machine interface on multiple Windows, and can work offline after system configuration.
- Support automatic playback and timing functions to enable timed fixed-point and fixed-area track playback and unattended operation.
- Support dual audio output for remote paging broadcasting and background broadcasting, which do not interfere with each other.
- Support remote zone paging, group broadcasting, and keyboard expansion.
- With a built-in backup amplifier unit for amplifier hot backup. Support zone expansion.
- Support seamless switching of the standby power hot backup.
- Can be integrated with third-party systems, such as the fire alarm system, through the dry contact input.
- With dry contact and override power output for providing the trigger signal source for third-party systems.
- Can be connected to 19 8-zone expansion amplifiers with main/backup switching function or 30 4-zone expansion amplifiers with main/backup switching function, 8 remote paging microphones or remote fireman microphones, up to 160 extended zones.
- With monitoring function.
- With built-in 64GB memory for storing audio files, recording files, configuration data, log files, etc.
- With 6 external audio input interfaces and 1 balanced output interface.

2. PAVA7000 Host / PAVA7000E Expansion Amplifier

PAVA7000 is an 8-zone amplifier host with main/backup switching function in the EN54-16 system, and is designed to be 2U high, with backup amplifier, timed audio sources, 2 microphone inputs, 4 analog inputs, 1 line output and a fire emergency broadcast panel; supports the total power of up to 500W; holds 8 zone outputs, with the total power of 500W for all zones.

PAVA7000E is an 8-zone expansion amplifier with main/backup switching function in the EN54-16 system, and is designed to be 2U high, with backup amplifier, 2 microphone inputs, 4 analog inputs and 1 line output; supports the total power of up to 500W; holds 8 zone outputs, with the total power of 500W for all zones.

2.1 Host Display



PAVA7000 8-Zone Amplifier Host with Main/Backup Switching Function

2.2 Host Features

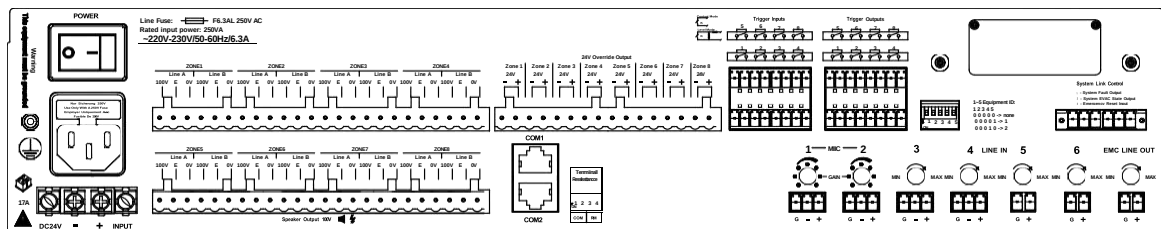
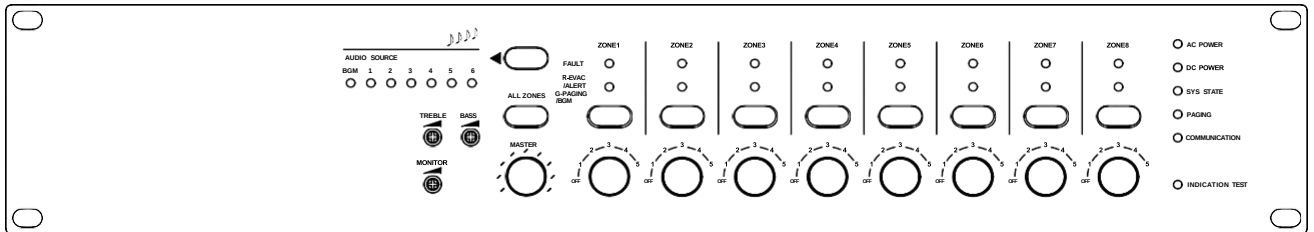
- Designed with a standard 2U chassis, made of high-end oxidized blackened aluminum alloy with a frosted panel, revealing a premium look and high-class quality.
- With one-button alarm and two editable alarm voices, with EMC MIC for on-site guidance in case of emergency.
- With EVAC voice message and Chimes management, allowing for a maximum of 10 customized emergency voice program sources.
- With 2 built-in 500W digital power amplifiers for automatic switching and backup as well as BGM broadcasting.
- With AB line speaker output for 8 zones, with independent switch and volume control for each zone, with master volume and treble/bass adjustment, with an output of 500W for each zone and a total power of no more than 500W for 8 zones.
- With 8-zone on/off function, including on/off buttons for independent zones and all zones (press and hold the button to open all zones of the system).

- Support 6 external inputs, including 2 balanced microphone inputs, 4 balanced line inputs for fire audio input and background music broadcasting; and 1 line output for external expansion or recording backup.
- With built-in audio source playback (mp3, wav).
- Featuring dual bus RJ45 network ports and CAN bus transmission, the host and expansion amplifier are cascaded hand-in-hand or looped. If the host is connected to a single expansion amplifier, it can support a maximum transmission distance of 600 meters; if connected to expansion amplifiers in a centralized manner, it can support up to 19 PAVA7000E expansion amplifiers, with a total of 160 zones, or up to 30 CNS9425E expansion amplifiers, with a total of 128 zones.
- Support automatic playback and timing functions to enable timed fixed-point and fixed-area track playback and unattended operation.
- With 4 RJ45 network ports for paging microphones, it supports remote microphone paging and zone/group broadcasting, and can be connected to up to 8 units.
- With 8 trigger inputs (with dry contact and level optional), 8 dry contact trigger outputs, and 8 24V override outputs.
- Support remote computer detection and control, audio priority settings, operating records review, and impedance detection parameters settings.
- Support speaker line detection (grounded, open circuit, short circuit) and system detection (expansion amplifier or microphone dropout).
- Support AC power supply and DC24V power supply, which can be identified and switched automatically, with AC power supply as the main power supply normally.
- With AC and DC power connection detection and warning functions.
- With DIP settings for overall system monitoring / trigger mode configuration / host IP address selection / host IP address reset.
- Support system fault detection, emergency output and emergency reset input.
- With multi-function display for device working status: working/fault/normal.
- With an external SD card slot for expanding 64G storage space to store external audios, recordings, logs, built-in EVAC voices, etc.
- With monitoring function, built-in recording function, and built-in timed programming function for timed programming of dry contacts to control the on/off of the power sequence controller.
- Support simultaneous output of dual audio, support remote paging for any single or multiple zones while broadcasting background music, without interrupting background music broadcasting of other zones. In this mode, the emergency broadcast remains the highest priority and will be broadcast to all zones forcibly, followed by the paging broadcast, and the background music channel will act as a backup to the emergency broadcast channel.
- The host local handheld microphone supports single track recording and loop playback.
- Audio source priority level: Host EMC MIC > Fireman MIC > Host or Fireman MIC EVAC or ALERT Broadcasting > Fire Alarm Dry Contact Trigger > Remote Paging Microphone > Timed Point Broadcasting > Recording and Broadcasting Function of Handheld MIC on Host Panel > Local BGM Player = 1-6 External

Inputs.

Note: A CAT5e or above network cable is required to connect the dual bus RJ45 network ports and paging microphone RJ45 network ports for ensured transmission distance.

2.3 Expansion Amplifier Display



PAVA7000E 8-Zone Expansion Amplifier with Main/Backup Switching Function

2.4 Expansion Amplifier Features

- Designed with a standard 2U chassis, made of high-end oxidized blackened aluminum alloy with a frosted panel, revealing a premium look and high-class quality.
- Work with the amplifier host PAVA7000, and can be combined with the expansion amplifier CNS9425E for emergency broadcasting and background music broadcasting.
- With a built-in local customized alarm or voice signal player, and 4MB storage space (in MP3 format, the storage length of the program source is determined by the sampling rate and storage space) to store up to 10 different program sources, which can be changed via the MICRO USB interface. Trigger settings for input dry contacts can be completed via a PC sub control software.
- With 2 built-in 500W digital power amplifiers for automatic switching and backup as well as BGM broadcasting.
- With AB line speaker output for 8 zones, with independent switch and volume control for each zone, with master volume and treble/bass adjustment, with an output of 500W for each zone and a total power of no more than 500W for 8 zones.
- With 8-zone on/off function, including on/off buttons for independent zones and all zones.
- Support 6 external inputs, including 2 balanced microphone inputs, 4 balanced line inputs for fire audio input and background music broadcasting; and 1 line output for external expansion or recording backup.
- Featuring dual RJ45 network ports and CAN bus transmission, the host and expansion amplifier are cascaded

hand-in-hand or looped. If the host is connected to a single expansion amplifier, it can support a maximum transmission distance of 600 meters; if connected to expansion amplifiers in a centralized manner, it can support up to 19 PAVA7000E expansion amplifiers, with a total of 160 zones, or up to 30 CNS9425E expansion amplifiers, with a total of 128 zones.

- Work with the host to realize automatic playback and timing functions, enabling timed fixed-point and fixed-area track playback and unattended operation.
- Work with the host to realize remote microphone paging and zone/group broadcasting.
- With 8 trigger inputs (with dry contact and level optional), 8 dry contact trigger outputs, and 8 24V override outputs.
- Support remote computer detection and control, audio priority settings, operating records review, and impedance detection parameters settings.
- Support speaker line detection (grounded, open circuit, short circuit).
- Support AC power supply and DC24V power supply, which can be identified and switched automatically, with AC power supply as the main power supply normally.
- With AC and DC power connection detection and warning functions.
- With 5-digit DIP address settings.
- Support system fault detection, emergency output and emergency reset input.
- With multi-function display for device working status: working/fault/normal.
- With monitoring function, it can work with the host for dry contact programming output.
- Support simultaneous output of dual audio, support remote paging for any single or multiple zones while broadcasting background music, without interrupting background music broadcasting of other zones. In this mode, the emergency broadcast remains the highest priority and will be broadcast to all zones forcibly, followed by the paging broadcast, and the background music channel will act as a backup to the emergency broadcast channel.
- Priority level: Bus Emergency Audio (output from the host data audio bus to each expansion amplifier, play Host EMC MIC EVAC or ALERT depending on the host priority) > Fire Alarm Dry Contact Trigger > Bus BGM Audio (output from the host data audio bus to each expansion amplifier) = 1-6 External Inputs.

Note: A CAT5e network cable is required to connect the dual bus RJ45 network ports for ensured transmission distance.

2.5 Front Panel

1—Emergency Voice Switch

- ◆ Flashing Red - The current system is working in emergency mode.
- ◆ Off - The current system is working in normal mode.
- ◆ When the LED is off, press the switch to enable the emergency mode, and then the LED indicator light flashes red. At this time, all zones of the whole system are forcibly opened and not allowed to be operated by the local zone button and PC control software to execute corresponding zone status commands.
- ◆ When the LED is flashing, press the switch to disable the emergency mode, and at the same time, the emergency voice broadcast will be stopped and the zone status will be restored.

2/3—Line Audio Source Indication / Selection Button

- ◆ Mainly used for displaying the audio output of the current zone.
- ◆ The MP3 playback of the host corresponds to the audio of the SD card on the rear panel, while the BGM of the expansion amplifier corresponds to the background music audio of the host.
- ◆ Channel 1-6 correspond to the 6 external line input audios mentioned in the item 14, 15 and 16 on the rear panel.

Note: The line audio source selection button is used to switch audio sources among MP3/BGM and 6 external lines, with the LED indication status synchronized, which can be displayed on the control interface of the software CNS7500 where the audio output of the current zone can be changed.

4—ZONE FAULT / Zone Working Status Indicator

- ◆ Off - The zone is normal.
- ◆ Green - The zone is open-circuited.
- ◆ Flashing Green - The zone is lightly loaded.
- ◆ Yellow - The zone is short-circuited.
- ◆ Flashing Yellow - The zone is overloaded.
- ◆ Red - One of the zone lines is connected to the ground, that is, the amplifier is grounded.

5—R-EVAC/ALERT&G-PAGING/BGM / Zone Service Type Status Indicator

- ◆ This indicator light is both for zone on/off indication and zone service type status indication, off for zone off, on in any color for zone on.
- ◆ Normally Red - EVAC/ALERT voice message broadcasting, fire dry contact triggering, EMIC or fireman MIC paging.
- ◆ Normally Green - BGM background music playing.
- ◆ Green Strobe - PAGING normal remote paging broadcasting.

6—Green REC Button

Press this button twice consecutively (press and hold it for the third time) to start recording, and then the handheld microphone recording indicator lights up to enable the voice recording function. If the recording function is enabled again, the old recordings will be overwritten automatically, and only the latest recordings will be saved and broadcast.

7—Black PTT Paging Button

Press and hold the PPT paging button for emergency voice broadcast, which forcibly turns on all the system zones and DC24V output on the rear panel, and switches the audio source to EMC MIC. Release the button to turn off the emergency voice broadcast and restore the original zone status. If triggered by EVAC/ALERT, it will continue to broadcast the alarm voice.

8—Green PLAY Button

Press the button to play the recorded audio repeatedly.

9—Microphone Pickup Window

10—Recording Indicator

When you press and hold the REC button, this indicator light lights up normally red; when you release the REC button, this indicator light goes out.

11—Handheld Emergency Paging Microphone Holder

When the microphone is not in use, put the hook on the back of the microphone into this holder.

12—Emergency Microphone Output Sensitivity Control

13—Multi-function Reset Button

- ◆ Respond to the system status.
 - a. If the device is working normally or if the button is pressed once after an abnormality is diagnosed in the system and pressed again when the “SYS STATE” indicator light is normally on, the device will have no other response.
 - b. If an abnormality is diagnosed in the device, the “SYS STATE” indicator light will flash intermittently. After pressing this button, the “SYS STATE” indicator light will be normally on and no longer flash,

indicating the device fault status, and the buzzer will stop unless a new abnormality is diagnosed in the system.

- c. When the system is executing a timing point, press this button to disable the current timing point.

14—Circular Connector

Note: It is mainly used to connect and fix the emergency microphone.

15—EVAC Voice Message Button and Status Indicator

- ◆ When the EMERGENCY indicator light is flashing, press this button and then the indicator light will light up. If the ALERT MSG indicator light is on, press this button and then the ALERT broadcast will be stopped, the ALERT MSG indicator light will go out, and the EVAC alarm voice will be broadcast.
- ◆ When the EMERGENCY indicator light goes out, press this button and it does not work.
- ◆ Green - The current “EVAC MSG” voice message is being broadcast.
- ◆ Off - The current “EVAC MSG” voice message is not broadcast.
- ◆ Yellow - The current “EVAC MSG” voice message is lost or the SD card is faulty.

16—ALERT Voice Message Button and Status Indicator

- ◆ When the EMERGENCY indicator light is flashing, press this button and then the indicator light will light up. If the EVAC MSG indicator light is on, press this button and then the EVAC broadcast will be stopped, the EVAC MSG indicator light will go out, and the ALERT alarm voice will be broadcast.
- ◆ When the EMERGENCY indicator light is off, press this button and it does not work.
- ◆ Green - The current “ALERT MSG” voice message is being broadcast.
- ◆ Off - The current “ALERT MSG” voice message is not broadcast.
- ◆ Yellow - The current “ALERT MSG” voice message is lost or the SD card is faulty.

17/19—Audio Treble/Bass Control

18—Monitor Volume Control

20—Master Zone Output Volume Control

21—ALL ON/OFF and Status Indicator

- ◆ Green - Forcibly turn on all zones in the system (please note that it refers to the entire system, not limited to the local device).
- ◆ Off - Restore the state of zones in the system before the forced-open operation.
- a. When all zone output indicator lights of the machine are currently off, press this button to turn on the output of all zones of the machine.
- b. When all zone output indicator lights of the machine are currently on, press this button to turn off the output of all zones of the machine.
- c. When the Long Press ALL SET indicator light of the machine is currently off, long press this button for 1 second to turn on the output of all zones of the whole system.
- d. When the Long Press ALL SET indicator light of the machine is currently on, short press or long press this button for 1 second to restore the original output state of all zones.

Note: All are two-color lights except for the LINE CONTROL and Long Press ALL SET indicators.

22—Zone Output Volume Control

Note: There are 6 gears in total.

23—Zone ON/OFF Button

- a. When the output indicator light of the current zone is off, press this button to turn on the output of the zone.
- b. When the output indicator light of the current zone is on, press this button to turn off the output of the zone.

24—System Host / Expansion Amplifier AC Power Indicator

- ◆ Green - Indicates that the current system host / expansion amplifier AC power supply is normal.
- ◆ Yellow - Indicates that the current system host / expansion amplifier AC power supply is faulty.
- ◆ Yellow 1-Second Strobe - The AC power fuse is faulty.

25—System Host / Expansion Amplifier DC24V Backup Power Indicator

- ◆ Green - Indicates that the backup power supply of the current system host / expansion amplifier is powering the equipment.
- ◆ Off - Indicates that the backup power supply of the current system host / expansion amplifier is normal or not configured.
- ◆ Yellow - Indicates that the backup power supply of the current system host / expansion amplifier is faulty.
- ◆ Yellow 1-Second Strobe - The DC power fuse is faulty.

Note: The host backup power supply is configured in the system control software interface.

26—System Status Indicator

- ◆ Yellow 1-Second Strobe - The system equipment is faulty.
- ◆ Normally Yellow: If ACK is received for a system fault, this indicator light will light up normally yellow.
- ◆ Off - Each module is working normally or the master detection switch is not turned on.

Note: When the host detects the number of online devices is less than the number of devices set in the PC, the SYS STATE indicator turns yellow and strobes every 1 second, and when no ACK is received, it is flashing, and when the fault is not eliminated, the ACK can shield buzzer and turns the SYS STATE indicator normally yellow.

27—Remote Pager Connection Status Indicator

- ◆ Green - Indicates that a pager is currently working.
- ◆ Off - Indicates that the system pager is connected normally.
- ◆ Yellow - Indicates that the pager is not logically or physically connected to the system host.

Note: Please configure according to the actual number, address and type.

28—Emergency Microphone Status Indicator

- ◆ Green - Indicates that the microphone is working.
- ◆ Off - Indicates that the current microphone is normal and not working.
- ◆ Yellow - Indicates that the microphone is faulty.

29—System Host / Expansion Amplifier Connection Status Indicator

- ◆ Green - Indicates that the current device is connected normally.
- a. Host: Indicates that the current host is logically or physically connected to the PC sub control software,

and logically or physically connected to the expansion amplifier or paging microphone.

b. Expansion Amplifier: Indicates that the current device is logically or physically connected to the host.

◆ Off - Indicates that the current host is connected normally, while the current expansion amplifier is connected abnormally.

a. Host: Indicates that the current host is not logically or physically connected to the PC sub control software, but logically or physically connected to the expansion amplifier or paging microphone.

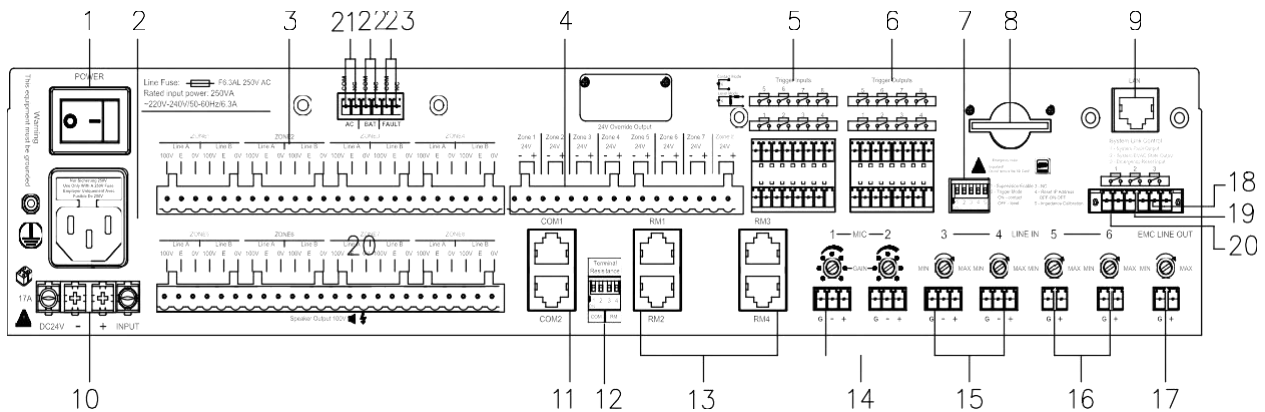
b. Expansion Amplifier: It is not logically or physically connected to the system host.

◆ Yellow - Indicates that the current host is not logically or physically connected to the expansion amplifier or paging microphone.

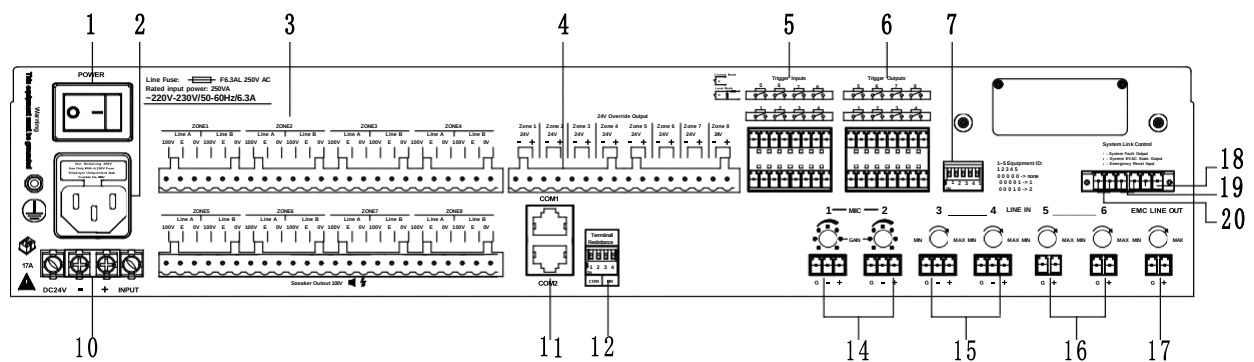
30—System Equipment LED Test (Mainly test the LEDs on the panel of the host and expansion amplifier as well as remote pager)

Note: If the system is configured with an expansion amplifier and remote pager, press this button to enter the LED test mode synchronously, and the LEDs on the panel will light up sequentially from red to green to yellow.

2.6 Rear Panel



PAVA7000 8-Zone Amplifier Host with Main/Backup Switching Function



PAVA7000E 8-Zone Expansion Amplifier with Main/Backup Switching Function

1— Power Switch

2—AC220V-240V Power Input Interface

3—8 Channels of Speaker A&B Loop Output Interfaces

- ◆ If the detection function is enabled, the line open-circuit, short-circuit or ground fault will be alarmed accordingly based on the device enabling settings on the PC control software.
- ◆ If the detection function is disabled, no loop detection will be performed and all zones are in normal state.
- ◆ It can be connected to external constant voltage speakers.
- ◆ Output voltage: 0~100V.

4—8 Channels of DC24V Output Interfaces

- ◆ In EMC mode (host EVAC/ALERT, host EMC MIC, fireman microphone ECAV/ALERT, fireman microphone EMC MIC, fireman FUNCTION 1-6, fire dry contact trigger), the DC24V output is forcibly enabled. The timing point can allow you to select whether to enable DC24V output or not.
- ◆ It can be connected to external four-wire sound control.
- ◆ The rated output current is 0.2A per channel.

Note: The total power of 8-channel outputs shall not exceed 38W.

5—8 Channels of Programmable Input Contact Interfaces

- ◆ It can be configured in two ways: dry contact input and level input. When configured as a dry contact input, no polarity should be distinguished; when configured as a level input, the left one of two terminal blocks is the positive end, and the right one is the negative end when facing the rear panel, with the input voltage of 3.3-24V.

6—8 Channels of Programmable Dry Contact Output Interfaces

- ◆ The timed output of any dry contact can be programmed and configured.
- ◆ The triggered output of any dry contact can be configured for a fire alarm input signal.

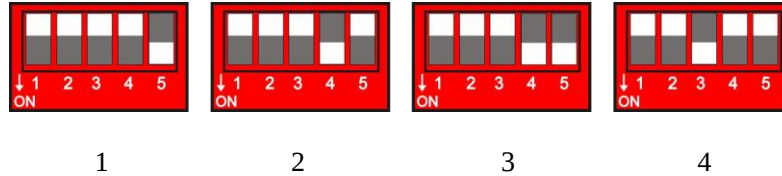
7—System Host / Expansion Amplifier Module Configuration Switch (Down for “Enabled”, Up for “Disabled”)

- ◆ System host:
 - “1” - indicates the master detection switch of the system, “enabled” for monitoring the working status of each module of the system, otherwise “disabled”.
 - “2” - indicates trigger mode configuration switch, “enabled” for short-circuit triggering, “disabled” for level triggering.
 - “3” for none.
 - “4” - indicates default value resetting of the host IP. IP address: 192.168.199.250; port number: 10086.
 - “5” - indicates impedance detection modeling. Dial the switch down and immediately dial it up to trigger a modeling action.

Note: The CNS9425E needs to be restarted after the modeling is completed.

◆ Expansion amplifier:

“1~5” indicates the IDs for device connection. The following devices are connected with the IDs as shown below (that is, the binary value of the device ID1~5, dialed down for “1”, dialed up for “0”). Note: The silk screen printing “1” on the DIP switch is the highest binary bit, and “5” is the lowest binary bit. For the correspondence between the device address order and the binary value, please refer to the “Attached Table: Comparison Table of Zone Address and Dialing Code Settings”.



8—SD Card

- ◆ Used for recording real-time device detection.
- ◆ Used for storing recording files.
- ◆ The SD card cannot be inserted or removed during power-on, and the host can be started normally only if the SD card is inserted.

9—Ethernet Connection Port

- ◆ Mainly used for connecting the software CNS7500.
- ◆ Used for remote upgrade of system firmware.

Notes:

- 1) Device default IP address: 192.168.199.250; communication port number: 10086.
- 2) If the IP modified by the software CNS7500 is forgotten, the default IP address can be restored by dialing down the 4th digit mentioned in the item “7” and then dialing up it again.
- 3) The host PAVA7000 can be directly connected to the PC via this port and automatically identify TIE/EIA-568B and TIE/EIA-568A standards. In order to unify the interface, it is recommended to use the TIE/EIA-568B standard connection method.

10—Backup DC24V Power Input Interface

- ◆ It is an external battery interface and the capacity of the battery is configured according to the actual usage requirements.

11—CAN Bus Data Dual-Channel Audio Bus Interfaces

- ◆ With dual RJ45 interfaces, the host can be connected to up to 19 8-zone expansion amplifiers or 30 4-zone expansion amplifiers hand in hand.

12—System Host / Expansion Amplifier Bus Communication Termination Resistor Configuration Switch (Down for “Connected”, Up for “Disconnected”)

- ◆ System host:

“1” “2” (these two dip switches are in parallel) - indicates the communication bus termination resistor with the expansion amplifier, dialed down for connecting the communication bus termination resistor, so as to ensure that the host side and the last expansion amplifier of the communication bus of the host and expansion amplifier are connected to the termination resistor in the whole system.

“3” “4” (these two dip switches are in parallel) - indicates the communication bus termination resistor with the remote paging microphone, dialed down for connecting the communication bus termination resistor, so as to ensure that the host side and the last remote paging microphone of the communication bus of the host and remote paging microphone are connected to the termination resistor in the whole system.

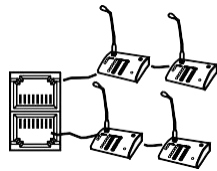
◆ Expansion amplifier:

“1” “2” (these two dip switches are in parallel) - indicates the communication bus termination resistor with the host, dialed down for connecting the communication bus termination resistor, so as to ensure that the host side and the last expansion amplifier of the communication bus of the host and expansion amplifier are connected to the termination resistor in the whole system.

Note: The host is terminated with this resistor by default, which can be determined according to the actual communication situation.

13—Powered Data Audio Bus Interfaces

- ◆ With four RJ45 ports, the system can be connected to up to 8 devices (remote paging microphones or fireman microphones) hand in hand.
- ◆ Connected with a network cable in a star connection mode.



Star Connection Mode

14—MIC1-2 Two Microphone Balanced Input Interfaces

- ◆ With $\pm 2.5\text{mV}$ input sensitivity and independent volume control.

15—LINE1-2 Two Line Balanced Input Interfaces

- ◆ With $\pm 500\text{mV}$ input sensitivity and independent volume control.

16—LINE3-4 Two Line Single-Ended Input Interfaces

- ◆ With 1000mV input sensitivity and independent volume control.

17—LINE OUT Single-Ended Output Interface

- ◆ With 1000mV input sensitivity and independent volume control.

18—System Fault Output Interface

- ◆ When the system is faulty, the output interface is disconnected, otherwise it is closed.

19—System Voice Alarm State Output Interface

- ◆ When the system is working in the fire alarm state, the output interface is closed, otherwise it is disconnected.

20—Fire Alarm Reset Input Interface

- ◆ When the current device is working in fire alarm mode, the interface can be used to reset and switch to normal mode.
- ◆ When the current device is working in normal mode, no operation is required.

21—AC Dry Contact Output

When there is no mains power or auxiliary power failure, the AC power indicator turns yellow. This output is

used in conjunction with the CNS7003 to detect continuity of the dry contact wiring. When the AC dry contact output switch is set to ON, it indicates that a 4.7 k Ω terminal resistor has been connected.

22—BAT Dry Contact Output

When there is no battery or the battery is under-voltage, the battery indicator turns yellow, and no output voltage is available on G1 to G6. This output is used in conjunction with the CNS7003 to detect continuity of the dry contact wiring. When the AC dry contact output switch is set to ON, it indicates that a 4.7 k Ω terminal resistor has been connected.

23—FAULT Dry Contact Output

In the event of a charging fault, the charging indicator turns yellow and the controller fault indicator also turns yellow. When charging is complete or no charging is in progress, the charging indicator is off. This output is used in conjunction with the PAVA7000 to detect continuity of the dry contact wiring. When the AC dry contact output switch is set to ON, it indicates that a 4.7 k Ω terminal resistor has been connected.

Note: When installing the equipment into the rack and routing the cables, the signal input and power output of the expansion amplifier can not be bundled together. If bundled, it may cause the amplifier to self-oscillate, potentially leading to amplifier damage.

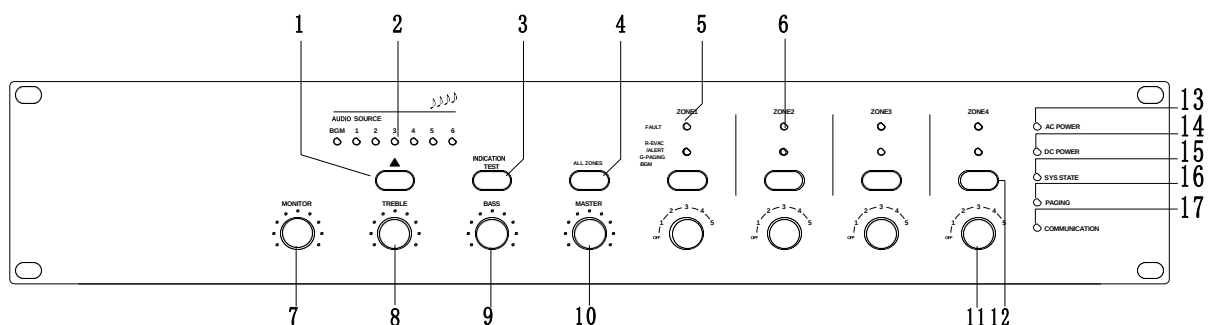
2.7 Specifications

Model		PAVA7000	PAVA7000E
Rated Output Power		$\geq 500W$ (100V)	
Input Sensitivity	EMC MIC	20mV 600 Ω	—
	MIC	5 $\pm$ 0.5mV 10k Ω	
	LINE	1000 $\pm$ 100mV 10k Ω	
Harmonic Distortion	EMC MIC	<1% 1kHz	—
	MIC	1%1khz	
	LINE	<1% 1kHz	
Frequency Response	EMC MIC	80Hz-15kHz ($\pm$ 3dB)	—
	MIC	1%1khz	
	LINE	50Hz-18kHz ($\pm$ 3dB)	
S/N Ratio	EMC MIC	>75dB (A-Weighted)	—
	MIC	1%1khz	
	LINE	>80dB (A-Weighted)	
EMC Line Auxiliary Output	Output Voltage	1000mV	1000mV
	Frequency Range	80Hz-15kHz ($\pm$ 3dB)	80Hz-15kHz ($\pm$ 3dB)
	Harmonic Distortion	<1% 1kHz	<1% 1kHz
System Connection Control Contact Output/Input	System Fault Relay Output		Short circuit, no voltage
	Emergency Mode Relay Output		Short circuit, no voltage
	Fire Reset Input		Short circuit, $t \geq 0.5S$, no voltage
	8-Channel Dry Contact Output		Short circuit, no voltage
	8-Channel Dry Contact	Short Circuit Mode	Short circuit input, no voltage
		Level Mode	3.3V~24V
Voice Message	Data Format		WAV
	Storage Type		SD card
	Retention Time		>10 years
Working Power	AC		AC220V-240V/50-60Hz
	DC		DC 24V/17A
Package Dimensions (L*W*H)		635 $\times$ 565 $\times$ 175mm	
Machine Dimensions (L*W*H)		483*430*88mm	
Gross Weight		14kg	13.3kg
Net Weight		12.05kg	11.75kg

Specifications are subject to change without notice.

- Featuring dual RJ45 network ports and CAN bus transmission, the host and expansion amplifier are cascaded hand-in-hand or looped. If the host is connected to a single expansion amplifier, it can support a maximum transmission distance of 600 meters; if connected to expansion amplifiers in a centralized manner, it can support up to 19 PAVA7000E expansion amplifiers, with a total of 160 zones, or up to 30 CNS9425E expansion amplifiers, with a total of 128 zones.
- Work with the host to realize automatic playback and timing functions, enabling timed fixed-point and fixed-area track playback and unattended operation.
- Work with the host to realize remote microphone paging and zone/group broadcasting.
- With 4 trigger inputs (with dry contact and level optional), 4 dry contact trigger outputs, and 4 24V override outputs.
- Support remote computer detection and control, audio priority settings, operating records review, and impedance detection parameters settings.
- Support speaker line detection (grounded, open circuit, short circuit).
- Support AC power supply and DC24V power supply, which can be identified and switched automatically, with AC power supply as the main power supply normally.
- With AC and DC power connection detection and warning functions.
- With 5-digit DIP address settings.
- Support system fault detection, emergency output and emergency reset input.
- With multi-function display for device working status: working/fault/normal.
- With monitoring function, it can work with the host for dry contact programming output.
- Support simultaneous output of dual audio, support remote paging for any single or multiple zones while broadcasting background music, without interrupting background music broadcasting of other zones. In this mode, the emergency broadcast remains the highest priority and will be broadcast to all zones forcibly, followed by the paging broadcast, and the background music channel will act as a backup to the emergency broadcast channel.
- Priority level: Bus Emergency Audio (output from the host data audio bus to each expansion amplifier) = Fire Alarm Dry Contact Trigger > Bus BGM Audio (output from the host data audio bus to each expansion amplifier) = 1-6 External Inputs.

3.3 Front Panel



1/2—Line Audio Source Selection Button / Indication

- ◆ Mainly used for displaying the audio output of the current zone.
- ◆ The MP3 playback of the host corresponds to the audio of the SD card on the rear panel, while the MP3 of the expansion amplifier corresponds to the background music audio of the host.
- ◆ Channel 1-6 correspond to the 6 external line input audios mentioned in the item 13, 14 and 15 on the rear panel.

Note: The line audio source selection button is used to switch audio sources among MP3/BGM and 6 external lines, with the LED indication status synchronized, which can be displayed on the control interface of the software CNS7500 where the audio output of the current zone can be changed.

3—INDICATION TEST Button

Press this button to enter the LED test mode synchronously.

4—ALL ZONES / ALL ON/OFF Button

- a. When all zone output indicator lights of the machine are currently off, press this button to turn on the output of all zones of the machine.
- b. When all zone output indicator lights of the machine are currently on, press this button to turn off the output of all zones of the machine.

5—ZONE FAULT / Zone Working Status Indicator

- ◆ Off - The zone is normal.
- ◆ Green - The zone is open-circuited.
- ◆ Flashing Green - The zone is lightly loaded.
- ◆ Yellow - The zone is short-circuited.
- ◆ Flashing Yellow - The zone is overloaded.
- ◆ Red - One of the zone lines is connected to the ground, that is, the amplifier is grounded.

6—R-EVAC/ALERT&G-PAGING/BGM / Zone Service Type Status Indicator

- ◆ This indicator light is both for zone on/off indication and zone service type status indication, off for zone off, on in any color for zone on.
- ◆ Normally Red - EVAC/ALERT voice message broadcasting, fire dry contact triggering, EMC or fireman MIC paging.
- ◆ Normally Green - BGM background music playing.
- ◆ Green Strobe - PAGING normal remote paging broadcasting.

7—Monitor Volume Control

8/9—Audio Treble/Bass Control

10—Master Zone Output Volume Control

11—Zone Output Volume Control

Note: There are 6 gears in total.

12—Zone ON/OFF Button

- a. When the output indicator light of the current zone is off, press this button to turn on the output of the zone.

- b. When the output indicator light of the current zone is on, press this button to turn off the output of the zone.

13—System Host / Expansion Amplifier AC Power Indicator

- ◆ Green - Indicates that the current system host / expansion amplifier AC power supply is normal.
- ◆ Yellow - Indicates that the current system host / expansion amplifier AC power supply is faulty.
- ◆ Yellow 1-Second Strobe - The AC power fuse is faulty.

14—System Host / Expansion Amplifier DC24V Backup Power Indicator

- ◆ Green - Indicates that the backup power supply of the current system host / expansion amplifier is normal.
- ◆ Off - Indicates that the backup power supply of the current system host / expansion amplifier is normal or not configured.
- ◆ Yellow - Indicates that the backup power supply of the current system host / expansion amplifier is faulty.
- ◆ Yellow 1-Second Strobe - The DC power fuse is faulty.

Note: The host backup power supply is configured in the system control software interface.

15—System Status Indicator

- ◆ Yellow 1-Second Strobe - The system equipment is faulty.
- ◆ Normally Yellow: If ACK is received for a system fault, this indicator light will light up normally yellow.
- ◆ Off - Each module is working normally or the master detection switch is not turned on.

Note: If the master detection switch of the system is turned off, this indicator light will go out, but it does not mean that all modules are normal.

16—Remote Pager Connection Status Indicator

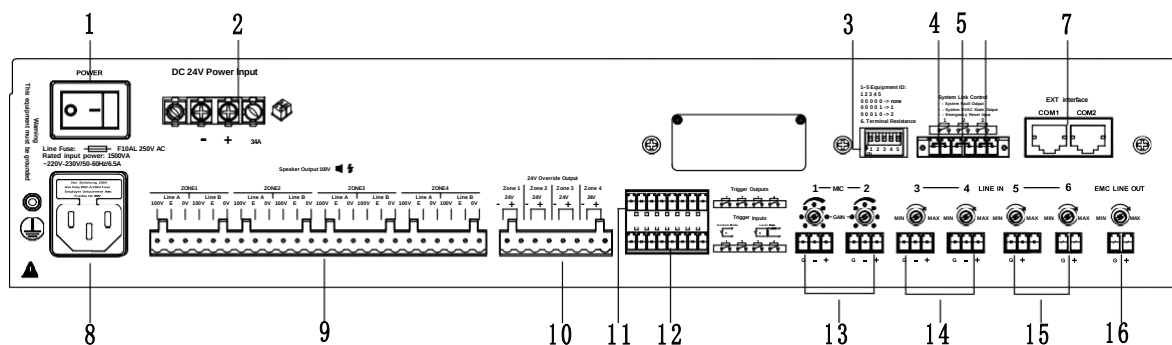
- ◆ Green - Indicates that a pager is currently working.
- ◆ Off - Indicates that the system pager is connected normally.
- ◆ Yellow - Indicates that the pager is not logically or physically connected to the system host.

Note: Please configure according to the actual number, address and type.

17—System Host / Expansion Amplifier Connection Status Indicator

- ◆ Green - Indicates that the current device is connected normally.
 - a. Host: Indicates that the current host is logically or physically connected to the PC sub control software, and logically or physically connected to the expansion amplifier or paging microphone.
 - b. Expansion Amplifier: Indicates that the current device is logically or physically connected to the host.
- ◆ Off - Indicates that the current host is connected normally, while the current expansion amplifier is connected abnormally.
 - a. Host: Indicates that the current host is not logically or physically connected to the PC sub control software, but logically or physically connected to the expansion amplifier or paging microphone.
 - b. Expansion Amplifier: It is not logically or physically connected to the system host.
- ◆ Yellow - Indicates that the current host is not logically or physically connected to the expansion amplifier or paging microphone.

3.4 Rear Panel



1— Power Switch

2—Backup DC24V Power Input Interface

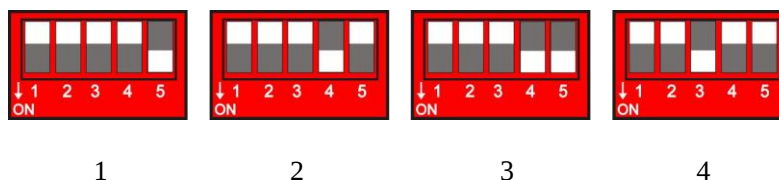
- ◆ It is an external battery interface and the capacity of the battery is configured according to the actual usage requirements.

3— Expansion Amplifier Module Configuration Switch (Down for “Enabled” or “Connected”, Up for “Disabled” or “Disconnected”)

- ◆ Expansion amplifier:

“1~5” indicate the IDs for device connection. The following devices are connected with the IDs as shown below (that is, the binary value of the device ID1~5, dialed down for “1”, dialed up for “0”). Note: The silk screen printing “1” on the DIP switch is the highest binary bit, and “5” is the lowest binary bit. For the correspondence between the device address order and the binary value, please refer to the “Attached Table: Comparison Table of Zone Address and Dialing Code Settings”. Dial down “6” to access to the communication bus termination resistor, so as to ensure that the host side and the last expansion amplifier of the communication bus of the host and expansion amplifier are connected to the termination resistor in the whole system. Generally, the host is terminated. The host is terminated with this resistor by default, which can be determined according to the actual communication situation.

(Note: The equipment calibrates the impedance of the speaker circuit through the DIP switch “5” on the rear panel of the host. Dial it down and dial it up to calibrate the impedance.)



4—System Fault Output Interface

- ◆ When the system is faulty, the output interface is disconnected, otherwise it is closed.

5—System Voice Alarm State Output Interface

- ◆ When the system is working in the fire alarm state, the output interface is closed, otherwise it is disconnected.

6—Fire Alarm Reset Input Interface

- ◆ When the current device is working in fire alarm mode, the interface can be used to reset and switch to

normal mode.

- ◆ When the current device is working in normal mode, no operation is required.

7—CAN Bus Data Dual-Channel Audio Bus Interfaces

With dual RJ45 interfaces, the host can be connected to up to 19 8-zone expansion amplifiers or 30 4-zone expansion amplifiers hand in hand.

8—AC220V-240V Power Input Interface

9—4 Channels of Speaker A&B Loop Output Interfaces

- ◆ If the detection function is enabled, the line open-circuit, short-circuit or ground fault will be alarmed accordingly based on the device enabling settings on the PC control software.
- ◆ If the detection function is disabled, no loop detection will be performed and all zones are in normal state.
- ◆ It can be connected to external constant voltage speakers.
- ◆ Output voltage: 0~100V.

10—4 Channels of DC24V Output Interfaces

- ◆ In EMC mode (host EVAC/ALERT, host EMC MIC, fireman microphone ECAV/ALERT, fireman microphone EMC MIC, fireman FUNCTION 1-6, fire dry contact trigger), the DC24V output is forcibly enabled. The timing point can allow you to select whether to enable DC24V output or not.
- ◆ It can be connected to external four-wire sound control.
- ◆ The rated output current is 0.2A per channel.

Note: The total power of 4-channel outputs shall not exceed 19W.

11—4 Channels of Programmable Dry Contact Output Interfaces

- ◆ The timed output of any dry contact can be programmed and configured.
- ◆ The triggered output of any dry contact can be configured for a fire alarm input signal.

12—4 Channels of Programmable Input Contact Interfaces

- ◆ It can be configured in two ways: dry contact input and level input. When configured as a dry contact input, no polarity should be distinguished; when configured as a level input, the left one of two terminal blocks is the positive end, and the right one is the negative end when facing the rear panel, with the input voltage of 3.3-24V.

13—MIC1-2 Two Microphone Balanced Input Interfaces

With $\pm 2.5\text{mV}$ input sensitivity and independent volume control.

14—LINE1-2 Two Line Balanced Input Interfaces

With $\pm 500\text{mV}$ input sensitivity and independent volume control.

15—LINE3-4 Two Line Single-Ended Input Interfaces

With 1000mV input sensitivity and independent volume control.

16—LINE OUT Single-Ended Output Interface

With 1000mV input sensitivity and independent volume control.

Note: When installing the equipment into the rack and routing the cables, the

signal input and power output of the expansion amplifier can not be bundled together. If bundled, it may cause the amplifier to self-oscillate, potentially leading to amplifier damage.

3.5 Specifications

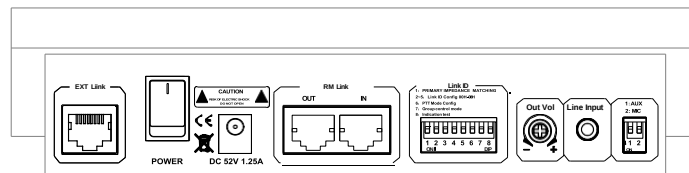
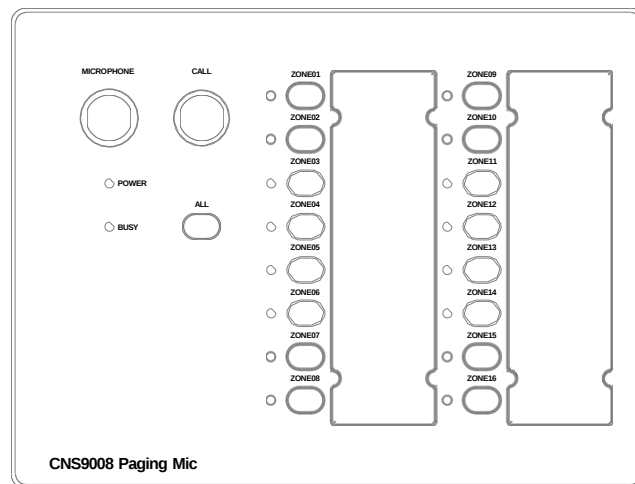
Model			CNS9425E
Rated Output Power			≥1000W (100V)
Input Sensitivity	EMC MIC		——
	MIC		5±0.5mV 10kΩ
	LINE		1000±100mV 10kΩ
Harmonic Distortion	EMC MIC		<1% 1kHz
	MIC		1%1khz
	LINE		<1% 1kHz
Frequency Response	EMC MIC		80Hz-15kHz (±3dB)
	MIC		1%1khz
	LINE		50Hz-18kHz (±3dB)
S/N Ratio	EMC MIC		>75dB (A weighted)
	MIC		1%1khz
	LINE		>80dB (A weighted)
EMC LINE AUX OUT	Output Voltage		1000mV
	Frequency Range		80Hz-15kHz (±3dB)
	Harmonic Distortion		<1% 1kHz
System Connection Control Contact Output/Input	System Fault Relay Output		Short circuit, no voltage
	Emergency Mode Relay Output		Short circuit, no voltage
	Fire Reset Input		Short circuit, t≥0.5S, no voltage
	4-Channel Dry Contact Output		Short circuit, no voltage
	4-Channel Dry Contact Input	Short Circuit Mode	Short circuit input, no voltage
		Level Mode	3.3V~24V
Working Power	AC		AC220V-240V/50-60Hz
	DC		DC 24V/34A
Package Dimensions (L*W*H)			635×565×175mm
Machine Dimensions (L*W*H)			483*430*88mm
Gross Weight			14kg
Net Weight			12.05kg

Specifications are subject to change without notice.

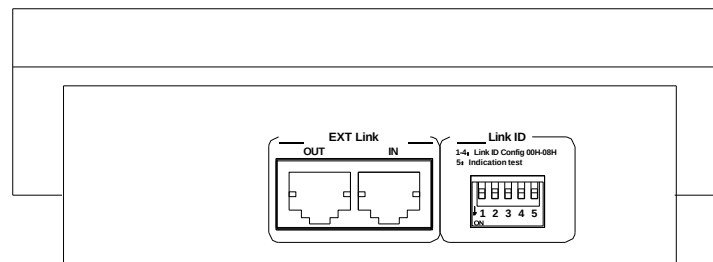
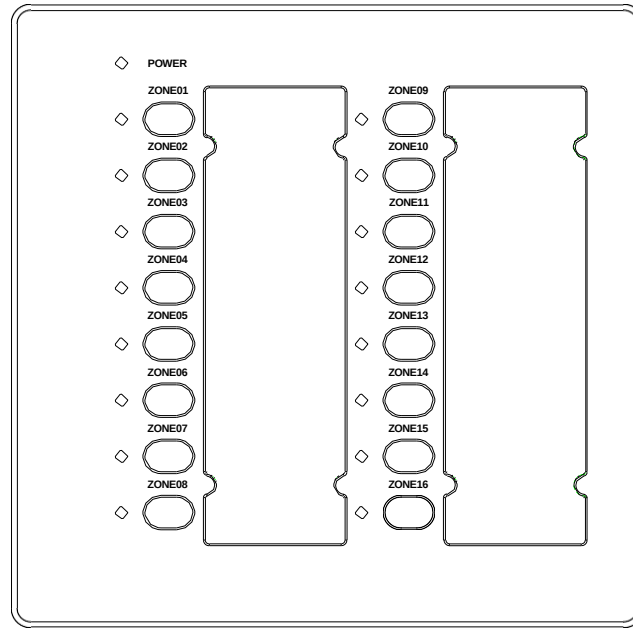
4. CNS7008/CNS7008E Remote Paging Microphone & Expansion Keyboard

CNS7008/CNS7008E Remote Paging Microphone / Expansion Keyboard is used to page each zone of the host PAVA7000.

4.1 Product Display



CNS7008 Remote Paging Microphone



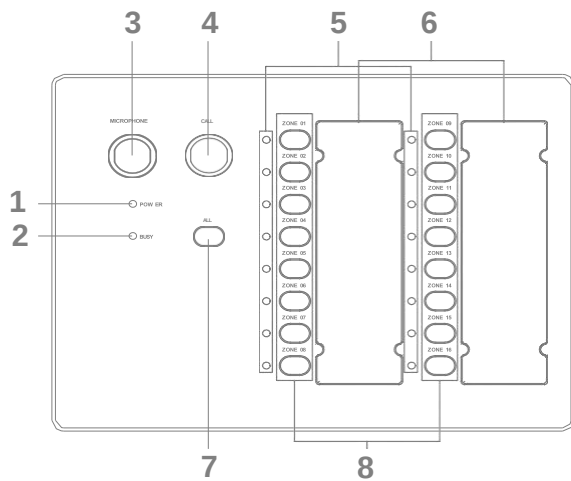
CNS7008E Remote Paging Microphone Expansion Keyboard

4.2 Features

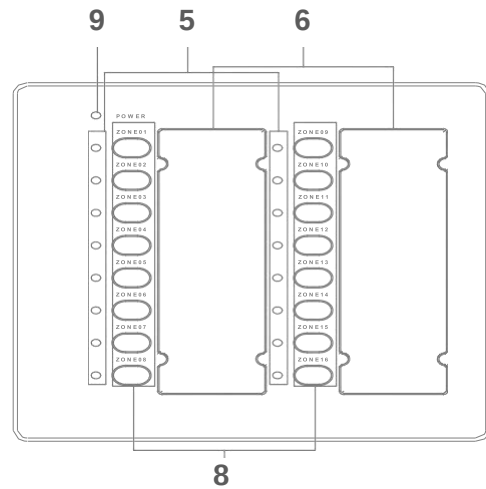
- Support 16-zone paging, single- or multi-zone paging, group paging and all-zone paging.
- With DIP address settings.
- Powered by bus and DC48V.
- With 1 AUX IN for paging signal input.
- With 2-digit DIP switches for selecting AUX or Local MIC IN.
- Support redundant wiring of lines.
- The system can support up to 8 devices (remote paging microphones or fireman microphones). With RJ45 ports, these microphones are powered by bus communication port and connected hand in hand.
- Support self-defined group functions for buttons.
- If the host is connected to a device via a single port, it can support a maximum transmission distance of 600 meters. The host can be cascaded to up to three devices via a single port, with a maximum transmission

distance of 300 meters.

4.3 Front Panel



CNS7008 Remote Paging Microphone



CNS7008E Expansion Keyboard

1—Power Indicator

- ◆ On - Indicates that the device is powered normally.
- ◆ Off - Indicates abnormal power supply.

2—Equipment “Busy” Indicator

- ◆ When the indicator light is on, the equipment is busy, and please wait.

3—Microphone Rod Connector

- ◆ When the LED indicator of the microphone is red, it indicates that it is allowed for paging.

Note: 

4—Paging Activation Button

- ◆ MIC paging control button.

Notes:

- ①. After selecting zones, press this button to start paging (speaking is allowed after the microphone indicator is on).
- ②. When paging, press this button to end the current paging.
- ③. When the MIC is working in PPT mode, it is required to keep pressing this button for paging, otherwise the paging will be ended (please refer to the instructions on the rear panel for PPT mode).
- ④. If no zones are selected, paging cannot be activated.

5—Zone/Group Selection and Working Status Indicator

- ◆ Green - The button function has been executed.
- ◆ Off - The button function has ended.
- ◆ Flashing - Indicates that the zone is currently selected by the user.

6—Remarks on Zone/Group Information

- ◆ The zone/group information remarked by the user, such as the current zone name and group number.

7—Select All Button

- ◆ When the MIC is not paging,

- ①. If all zones are flashing, press this button to cancel the selected state of all zones.
- ②. If only some of the zones are selected, press this button to select all zones, and press this button again to cancel the selected state of all zones.

- ◆ When the MIC is paging,

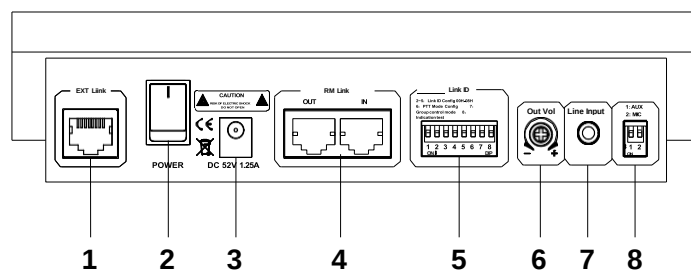
- ①. When it is working in zone mode,
 - a. If all zones are normally on, press this button to cancel the selected state of all zones.
 - b. If only some of the zones are selected, press this button to select all zones, and at this time up to 16 zones can be selected.
- ②. When it is working in group mode,
 - c. If all groups are normally on, press this button to cancel the selected state of all groups.
 - d. If only some of the groups are selected, press this button to select all groups, and at this time up to 16 groups can be selected.

8—Zone/Group Selection Button

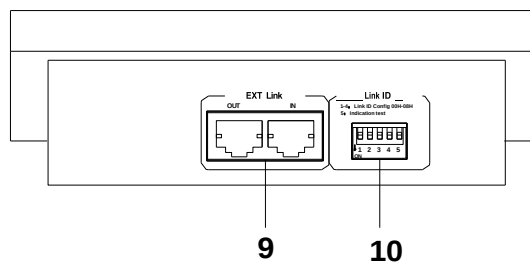
- ◆ When the MIC is not currently paging and the LED indicator is off, press the corresponding button, and then the corresponding indicator light will be flashing, indicating that the corresponding zone is selected.
- ◆ When the MIC is currently paging and the LED indicator is normally on, press the corresponding button, and then the corresponding indicator light will go out, indicating that the corresponding zone is deactivated.

9—Power Indicator

4.4 Rear Panel



CNS7008 Remote Paging Microphone



CNS7008E Expansion Keyboard

1—Remote Paging Microphone Expansion Keyboard Connection Port

- ◆ Used to connect the remote paging microphone expansion keyboard to expand zone control; used for RS485 serial port communication.

2—Paging Microphone Power Switch

- ◆ Used to turn on or off the working power of the remote paging microphone / remote paging microphone expansion keyboard.
- ◆ The remote paging microphone expansion keyboard should be connected to CNS7008 first, that is, the port “9” of the CNS7008E should be connected to the port “4” of the CNS7008.

3—DC24V Power Supply Interface

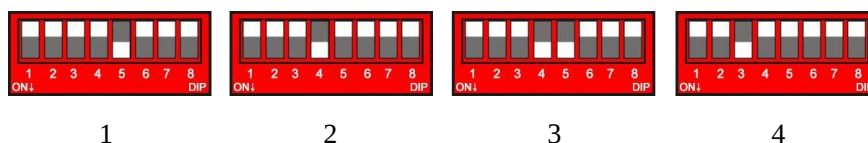
4—Powered Data Audio Bus Interfaces

With two RJ45 ports, the system can be connected to up to 8 devices (remote paging microphones and fireman microphones) hand in hand.

5—Equipment ID Configuration Switch

“1” is used to set the end matching resistance, dialed down for enabled.

“2~5” indicate the IDs for device connection. The following devices are connected with the IDs as shown below (that is, the binary value of the device ID2~5, dialed down for “1”, dialed up for “0”). Note: The silk screen printing “2” on the DIP switch is the highest binary bit, and “5” is the lowest binary bit. For the correspondence between the device address order and the binary value, please refer to the “Attached Table: Comparison Table of Zone Address and Dialing Code Settings”.



If “6” is dialed up, the MIC will be working in normal mode; if dialed down, the MIC will be working in PPT mode, in which the “Paging Activation Button” should be pressed all the time for paging broadcasting.

“7” is the group mode switch. If it is dialed down, the remote paging microphone will be in group mode; if not, it will be in zone mode.

“8” is used to test the “LED” indicators on the panel of the remote paging microphone (it is dialed up normally). If it is dialed down, all the “LED” indicators on the panel will be lit up “Red”→“Green”→“Yellow” once and then automatically return to the normal display state, which is mainly used to test whether the “LED” indicators are normal.

6—Remote Paging Microphone Output Audio Sensitivity Control

7—MIC External Line Audio Input Interface

The audio from this interface shares the same output channel with the audio from the item “3” on the front panel, and the audio from the item “3” has priority over Line. Please note that it is a 3.5 audio interface.

8—Audio Selection DIP Configuration Switch (Down for “Enabled”, Up for “Disabled”)

- ◆ “1” is used to enable the line input.
- ◆ “2” is used to enable the local microphone.
- ◆ Dialed down for enabled. When “1” and “2” are dialed down, the audio will be mixed for output, and when dialed down simultaneously, both will be closed.

9—Equipment Connection Port

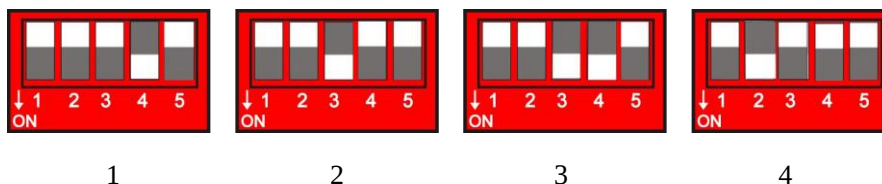
- ◆ Used to connect the remote paging microphone CNS7008 or the previous/next expansion keyboard

CNS7008E.

Note: When it is used to connect the expansion keyboard CNS7008E, there is no primary or secondary difference between these two ports, and one CNS7008 can be connected to up to 8 CNS7008E.

10—Equipment ID Configuration Switch

“1~4” indicate the IDs for device connection. The following devices are connected with the IDs as shown below (that is, the binary value of the device ID1~4, dialed down for “1”, dialed up for “0”). , Note: The silk screen printing “1” on the DIP switch is the highest binary bit, and “4” is the lowest binary bit. For the correspondence between the device address order and the binary value, please refer to the “Attached Table: Comparison Table of Zone Address and Dialing Code Settings”.



“5” is used to test the “LED” indicators on the panel of the remote paging microphone expansion keyboard (it is dialed up normally). If it is dialed down, all the “LED” indicators on the panel will be lit up “Red”→“Green”→“Yellow” once and then automatically return to the normal display state, which is mainly used to test whether the “LED” indicators are normal.

4.5 Specifications

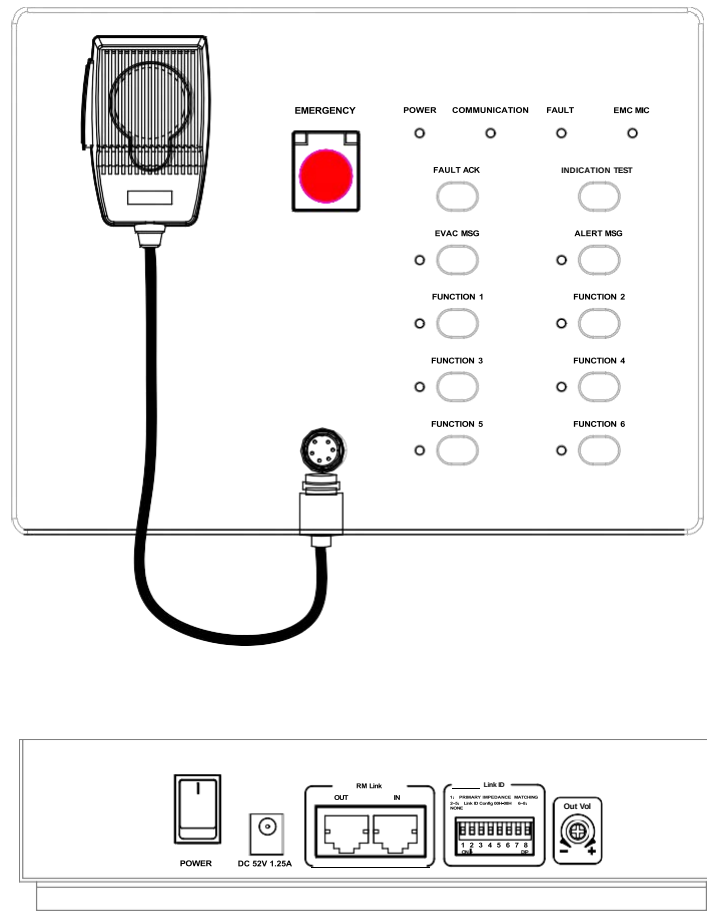
Model	CNS7008	CNS7008E
Microphone Input Sensitivity	30mV 600Ω	
Line Input Sensitivity	1000mV 10kΩ	
Frequency Response	80Hz~15kHz (±3dB)	
Distortion	<1%	
S/N Ratio	>75dB (A-Weighted)	
PoE Power	(48±3)V/0.1A	
Phantom Power		(12~24)V/0.1A
Interface	RJ45	
Package Dimensions	415×306×116mm	355×266×116mm
Machine Dimensions	166×220×54mm	166×161×54mm
Gross Weight	1.7kg	1.3kg
Net Weight	1.25kg	0.8kg

Specifications are subject to change without notice.

5. CNS9009 Fireman Microphone

CNS9009 Fireman Microphone is used to page each zone of the host PAVA7000 or control its EVAC voice triggering.

5.1 Product Display



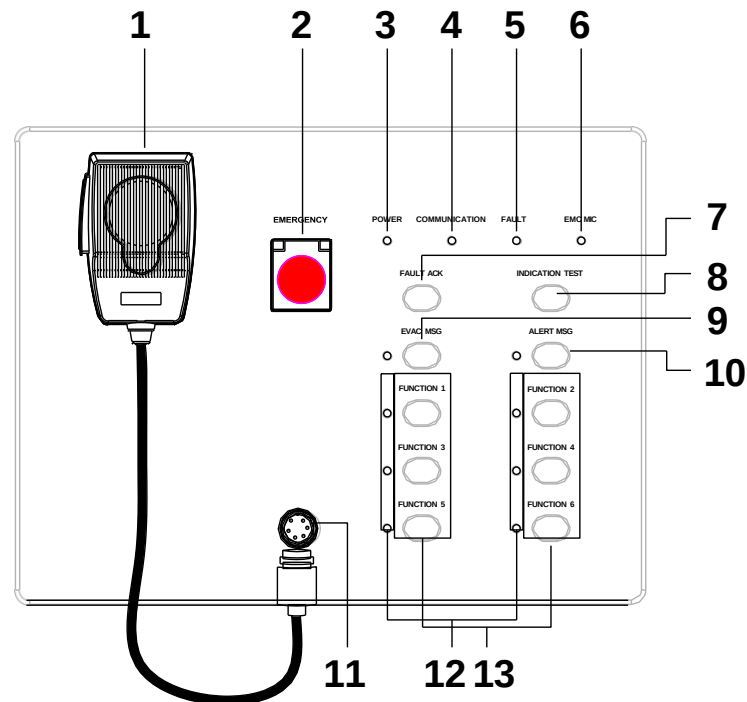
CNS9009 Fireman Microphone

5.2 Features

- With one-button alarm and two editable alarm voices, with EMC MIC for on-site guidance in case of emergency.
- With 8 programmable buttons for self-defined program sources and broadcasting zones.
- Control EVAC.
- Powered by bus and DC48V.
- The system can support up to 8 devices (remote paging microphones or fireman microphones). With RJ45 ports, these microphones are powered by bus communication port and connected hand in hand.
- Support redundant wiring of lines.

- If the host is connected to a device via a single port, it can support a maximum transmission distance of 600 meters. The host can be cascaded to up to three devices via a single port, with a maximum transmission distance of 300 meters.

5.3 Front Panel



CNS9009 Fireman Microphone

1—Handheld Emergency Paging Microphone Holder

When the microphone is not in use, put the hook on the back of the microphone into this holder.

2—Emergency Voice Switch

- ◆ Flashing Red - The current system is working in emergency mode.
- ◆ Off - The current system is working in normal mode.

3—Power Indicator

- ◆ On - Indicates that the device is powered normally.
- ◆ Off - Indicates abnormal power supply.

4—System Host / Fireman Microphone Connection Status Indicator

- ◆ Green - Indicates that the current device is connected normally.
- ◆ Yellow - Indicates that the current device is not logically or physically connected to the system host.

5—System Fault Status Indicator

- ◆ Off - Indicates that all modules of the system equipment works normally. (If the master detection switch of the system is disabled, this indicator light will go out, but it does not mean that all modules are normal.)
- ◆ Normally Yellow - Indicates that the current device fault has been solved.

- ◆ Flashing Yellow - Indicates that there is a new device fault.

6—Emergency Microphone Status Indicator

- ◆ Green - Indicates that the microphone is paging.
- ◆ Off - Indicates that the current microphone is normal and not working.
- ◆ Yellow - Indicates that the microphone is faulty.

7—Multi-function Reset Button

- ◆ Respond to the system status.
 - a. If the device is working normally or if the button is pressed when an abnormality is diagnosed in the system and the “FAULT” indicator light is not flashing, the device will have no other response.
 - b. If an abnormality is diagnosed in the device, the “FAULT” indicator light will flash intermittently. After pressing this button, the “FAULT” indicator light will be normally on and no longer flash, indicating the device fault status, and the buzzer will stop unless a new abnormality is diagnosed in the system.

8—Equipment LED Test

- ◆ Press this button to test the LEDs, and the LED indicator lights on the panel will light up sequentially from red to green to yellow, and then press this button again to cancel the test (which is used to test whether the LEDs on the panel of the machine are normal).

9—EVAC Voice Message Button and Status Indicator

- ◆ When the EMERGENCY indicator light is flashing, press this button and then the indicator light will light up. If the ALERT MSG indicator light is on, press this button and then the ALERT broadcast will be stopped, the ALERT MSG indicator light will go out, and the EVAC alarm voice will be broadcast.
- ◆ When the EMERGENCY indicator light is off, press this button and it does not work.
- ◆ Green - The current “EVAC MSG” voice message is being broadcast.
- ◆ Off - The current “EVAC MSG” voice message is not broadcast.
- ◆ Yellow - The current “EVAC MSG” voice message is lost or the SD card is faulty.

10—ALERT Voice Message Button and Status Indicator

- ◆ When the EMERGENCY indicator light is flashing, press this button and then the indicator light will light up. If the EVAC MSG indicator light is on, press this button and then the EVAC broadcast will be stopped, the EVAC MSG indicator light will go out, and the ALERT alarm voice will be broadcast.
- ◆ When the EMERGENCY indicator light is off, press this button and it does not work.
- ◆ Green - The current “ALERT MSG” voice message is being broadcast.
- ◆ Off - The current “ALERT MSG” voice message is not broadcast.
- ◆ Yellow - The current “ALERT MSG” voice message is lost or the SD card is faulty.

11—Circular Connector

Note: It is mainly used to connect and fix the emergency microphone.

12—Function Button Status Indicator

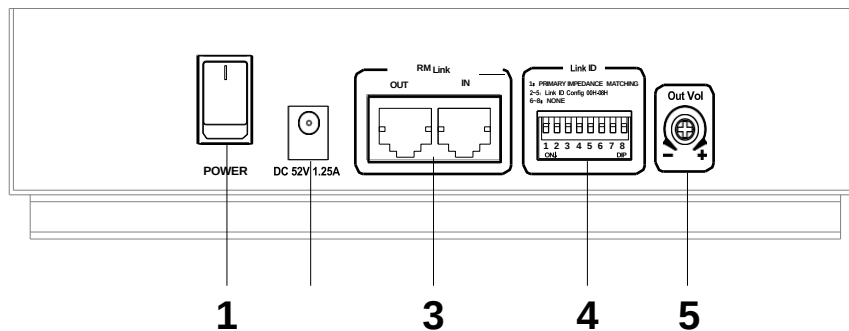
- ◆ Green - The current shortcut operation function is working.
- ◆ Off - The current shortcut operation function is not working.

13—1-6 Self-defined Function Buttons

- a. When the indicator light is on, the corresponding configuration operation is executed.

- b. When the indicator light is off, the corresponding configuration operation is disabled.
- c. Set 6 common paging modes Key1-Key6 on the PC side (please refer to the software operating instructions for the setting method).
- d. At this time, the user can press the corresponding shortcut operation button on the panel of the fireman microphone to open the configured zones of the corresponding host or the corresponding zones and play the corresponding 8 built-in program sources or external line input audios synchronously.
- e. When the EMERGENCY indicator light is off, press this button and it does not work.

5.4 Rear Panel



1—Paging Microphone Power Switch

- ◆ Used to turn on or off the working power of the fireman microphone.

2—DC24V Power Supply Interface

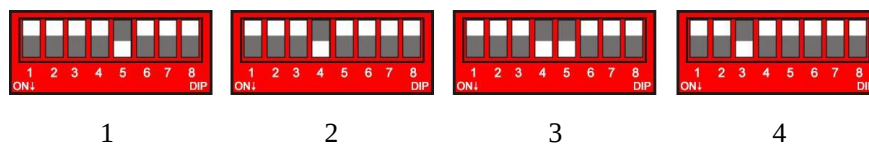
3—CAN-Powered Data Audio Bus Interfaces

With two RJ45 ports, the system can be connected to up to 8 devices (remote paging microphones or fireman microphones) hand in hand.

4—Equipment ID Configuration Switch

“1” is used to set the end matching resistance, dialed down for enabled.

“2~5” indicate the IDs for device connection. The following devices are connected with the IDs as shown below (that is, the binary value of the device ID2~5, dialed down for “1”, dialed up for “0”). Note: The silk screen printing “2” on the DIP switch is the highest binary bit, and “5” is the lowest binary bit. For the correspondence between the device address order and the binary value, please refer to the “Attached Table: Comparison Table of Zone Address and Dialing Code Settings”.



“6-8” is N/A.

5—Emergency Microphone Volume Control

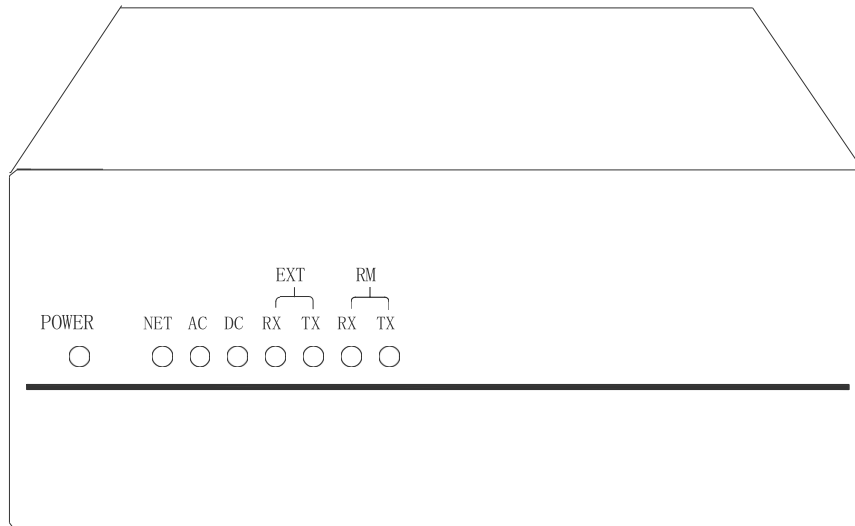
5.5 Specifications

Model	CNS9009
Microphone Input Sensitivity	5mV 600Ω
Frequency Response	80Hz~15kHz (±3dB)
Distortion	<1%
S/N Ratio	>75dB (A-Weighted)
PoE Power	(48±3)V/0.1A
Interface	RJ45
Package Dimensions	370×220×115mm
Machine Dimensions	220*166*50mm
Gross Weight	2.2Kg
Net Weight	1.7Kg

Specifications are subject to change without notice.

6. CNS9002 Network Control Terminal

6.1 Product Display



6.2 Product Description

The CNS9002 network control terminal supporting the EN54-16 system is used to connect the PAVA7000 amplifier host, PAVA7000E expansion amplifier, CNS9425E expansion amplifier, CNS7008 remote paging microphone (16 zones), and CNS9009 fireman microphone through the network for LAN broadcasting.

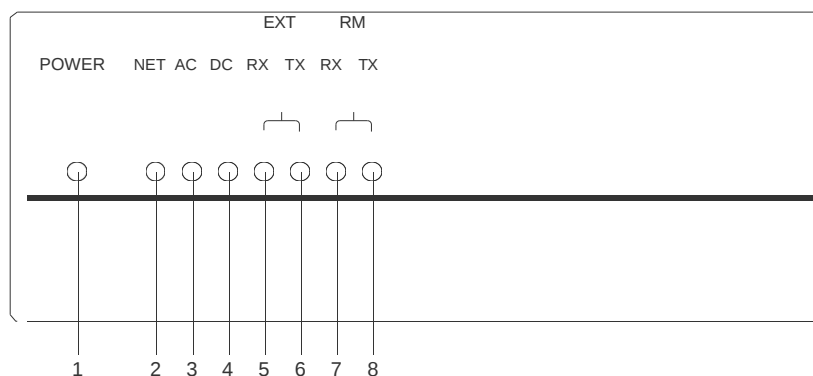
6.3 Features

- Adopt an aluminum alloy molded chassis and acrylic panel. The optional rack accessory (CNS9002S) allows 1-4 terminals to be combined into a 1U height rack-mounted device.
- With a RJ45 network interface for LAN connection.
- With DIP switch settings for easy binding with other devices and mode selection.
- With 8 RJ45-CAN bus interfaces, arranged in four groups with two adjacent ports per group. Among them, EXT1 TX and EXT2 TX for host sending mode interfaces (including CAN data bus and two balanced outputs); EXT1 RX and EXT2 RX for expansion amplifier receiving mode interfaces (including CAN data bus and two balanced inputs); RM1 TX and RM2 TX for remote paging microphone sending mode interfaces

(including CAN data bus and one balanced output); RM1 RX and RM2 RX for host microphone receiving mode interfaces (including CAN data bus and one balanced input). A single port supports cascading of up to 3 devices (300m stable transmission). When a single port is connected to one device, it can support a maximum transmission distance of 600m.

- Support remote paging microphone sending mode and unicast mode, can cross network segments, can be connected to a single device separately or connected to 4 devices each port simultaneously, with the entire system accommodating up to 8 microphone devices when used with network terminals.
- Support expansion amplifier receiving mode, compatible with LAN and can cross network segments, with a single unit supporting the connection of 1-30 expansion amplifiers.
- Support host sending mode and multicast mode, only compatible with LAN, with a single-stage delay of 75ms from the host to the expansion amplifier (actual delay may be affected by the network environment). The system supports connecting 1-30 expansion amplifiers. The host sending and receiving modes can work simultaneously.
- Support host microphone receiving mode and unicast mode, compatible with LAN.
- Support main and backup power supply with automatic switching.
- Support device management via PC client with password login (reinstalling the software resets to the default password, so the software installation package needs to be properly managed). Allow modification of IP information (with one-click reset), device names (with one-click reset), and terminal program upgrades.

6.4 Front Panel



1. Power Indicator

When it is normally yellow, it indicates DC24C standby power failure.

2. Network Status Indicator

When it is normally yellow, it indicates network failure; when it is off, it indicates normal network.

3. AC Power Status Indicator

When it is normally yellow, it indicates mains power failure.

4. DC Power Status Indicator

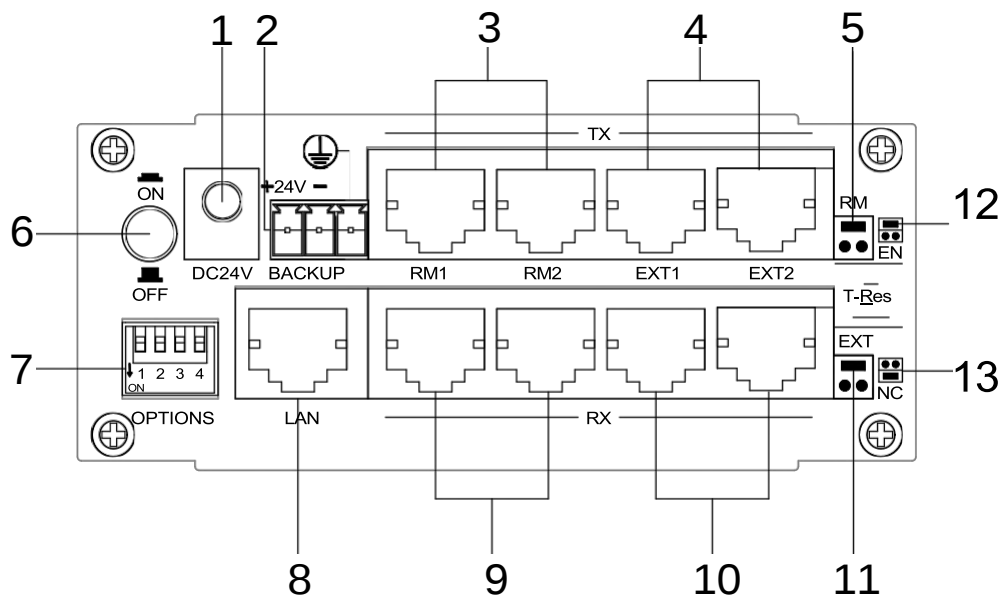
5. Expansion Amplifier Receiving Mode Green Indicator

6. Host Sending Mode Green Indicator

7. Host Microphone Receiving Mode Green Indicator

8. Remote Paging Microphone Sending Mode Green Indicator

6.5 Rear Panel



1. DC24V Power Input Connector

➤ Connect the power adapter with capacity configurable based on actual usage requirements.

2. DC24V Backup Power Input

3. RM1 TX and RM2 TX Remote Paging Microphone Sending Mode Interfaces (Including CAN Data Bus and One Balanced Output)

4. EXT1 TX and EXT2 TX Host Sending Mode Interfaces (Including CAN Data Bus and Two Balanced

Outputs)

5. Terminal Resistor Connected to the RM Interface

6. Power Switch

- When the power is turned on, the power indicator on the front panel lights up blue.

7. Interface Communication Protocol Switch (DIP Switch)

- **Dial down DIP1:** The RX indicator light for EXT lights up, indicating that the unit is in expansion amplifier receiving mode (**i.e., expansion amplifier mode**).

Connection method: Connect the EXT RX to the COM interface of the expansion amplifier.

- **Dial down DIP2:** The TX and SIG indicator lights for RM light up, indicating that the unit is in remote paging microphone sending mode (**i.e., remote paging microphone mode**).

Connection method: Connect the RM TX interface to the bus input of the remote paging microphone.

Note: The TX interfaces for RM1 and RM2 are DC+48V±5V powered interfaces. (Note: When not connecting an expansion keyboard, a maximum of 8 remote paging microphones can be supported.)

- **Dial down DIP1 and DIP2:** The EXT TX and RM RX indicators light up, indicating that the unit is in host sending mode (**i.e., host mode**).

Connection method: Connect the EXT TX interface to the CAN interface of the host and the RM RX interface to the MIC interface of the host.

- **Dial down DIP3:** After powering on, if you dial the DIP switch down and then back up, all the indicator lights on the front panel will flash five times, followed by the NET indicator light lighting up for about 3 seconds before turning off.
- **Dial down DIP4:** When you dial the DIP switch down, and both AC and DC power sources are connected, the AC and DC indicator lights on the front panel will not light up, indicating that the power sources are connected. When the indicator lights are on, it indicates that the power sources are not connected. When you dial the DIP switch up, AC and DC power supply detection is disabled. (Note: The AC indicator light refers to the adapter power input, and the DC indicator light refers to the 3-pin Phoenix connector input.)

8. RJ45 Network Interface (for LAN connection)

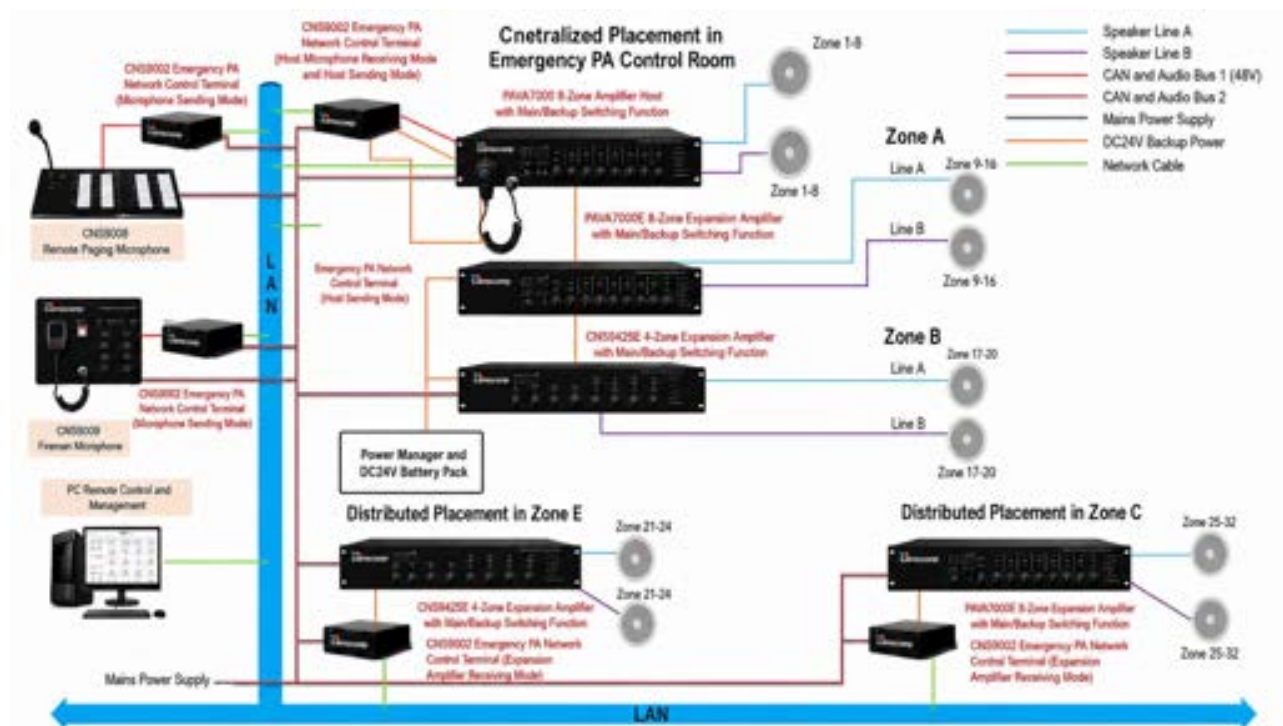
- When connected to the network, both green and yellow indicator lights flash simultaneously.
- By connecting to a switch, you can use the CNS9002 network control terminal software on a computer to view all online terminals, modify terminal IP addresses, subnet masks, gateways, and multicast groups (different groups must be set if multiple CNS7500 systems are connected in the same LAN), and change the

software login password (default login password is 123456).

9. RM1 RX and RM2 RX Host Microphone Receiving Mode Interfaces (Including CAN Data Bus and One Balanced Input)
10. EXT1 RX and EXT2 RX Expansion Amplifier Receiving Mode Interface (Including CAN Data Bus and Two Balanced Inputs)
11. Terminal Resistor Pin Connected to the EXT Interface
12. Connected to the Terminal Resistor
13. Not Connected to the Terminal Resistor

Note: RM or EXT bus connections must use CAT5e or higher cables to ensure adequate transmission distance.

6.6 CNS9002 System Architecture



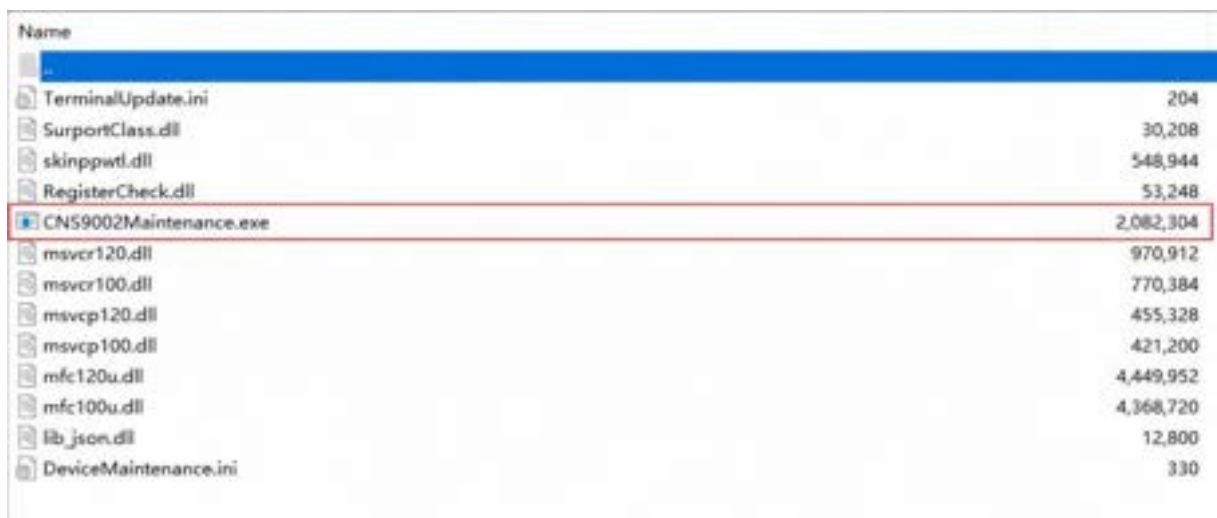
6.7 Software Operation

6.7.1 Software Installation

- (1) Installation environment: Win7/Win8/Win10 system; double-click on the compressed folder  first.
- (2) Navigate to the interface as shown below, double-click the folder to extract it.



- (3) After extracting, navigate to this interface, select and double-click the file marked with a red box in the figure below.



- (4) Navigate to the software login interface. At this point, the network is offline, and you need to configure the network.



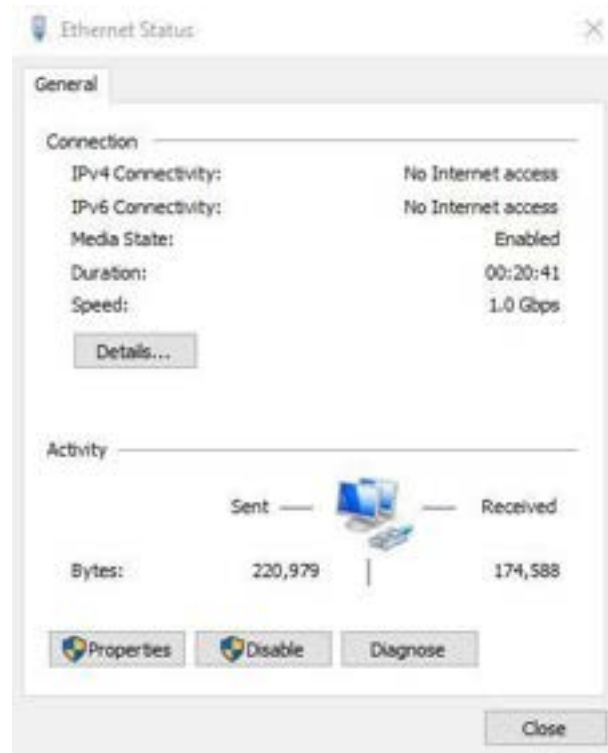
6.7.2 Software Running

1) IP Address Modification

Before logging into the CNS7500 software, it is recommended to ensure that the computer running the software and the CNS9002 network control terminal are on the same network segment.

Note: If the user's computer does not have an IP address in the same network segment as the CNS9002 network control terminal, you should manually add an IP address in the same segment to perform the terminal upgrade. The steps are as follows:

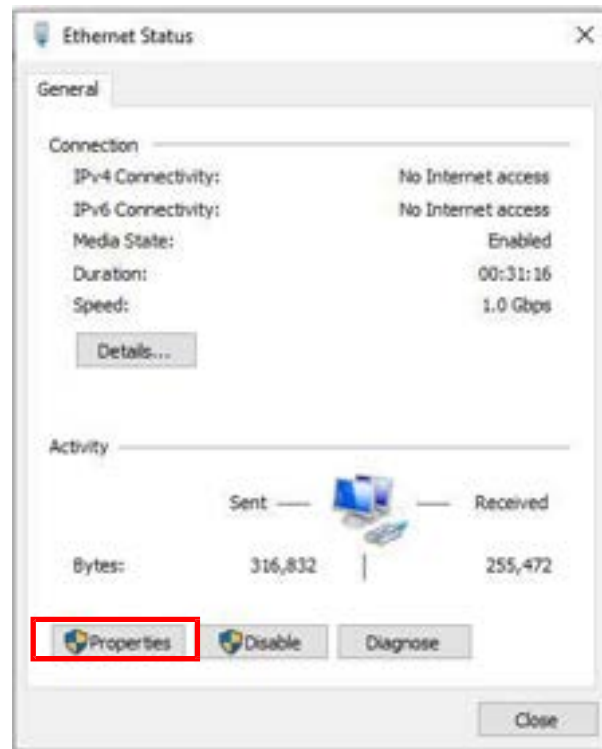
Step 1: Click the “” button in the lower right corner of the computer to open the network status interface. As shown below, click “Open Network and Sharing Center” at the bottom.



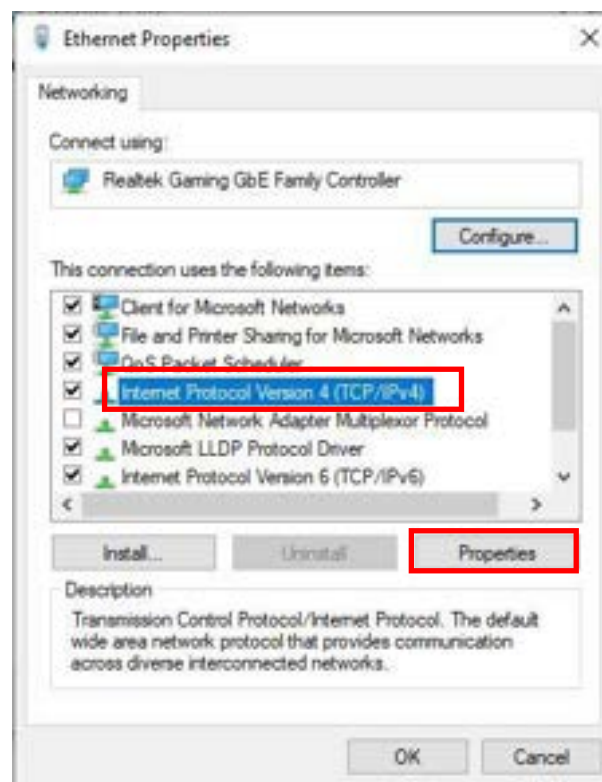
Step 2: Enter the interface as shown below, find “Properties” and click on it.



Step 3: Enter the local connection status interface, and click “Properties”.



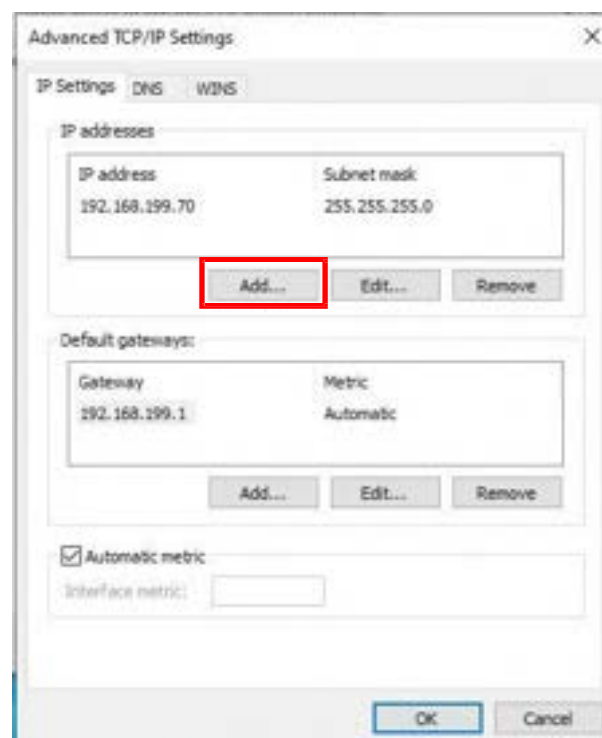
Step 4: Enter the interface as shown below. Double click “Internet Protocol Version 4 (TCP/IPv4)” marked with a red box or click the “Properties” button to enter the next interface.

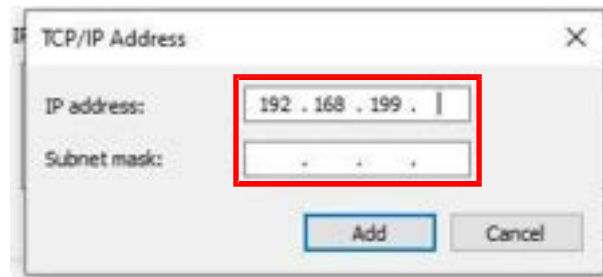


Step 5: Click “Advanced” to enter the advanced TCP/IP settings interface.



Step 6: Then click the “Add” button to enter the IP in the same network segment as the device, and the selected network segment should be interference-free for the work of the current system. For example, 192.168.199.XXX.





2) Login

If you log in to the interface for the first time, directly enter the default password 123456 and click OK.



Login Interface

After a successful login, you will enter the CNS9002 network control terminal interface. In this interface, you can set the password. Click “Password” to change the password.

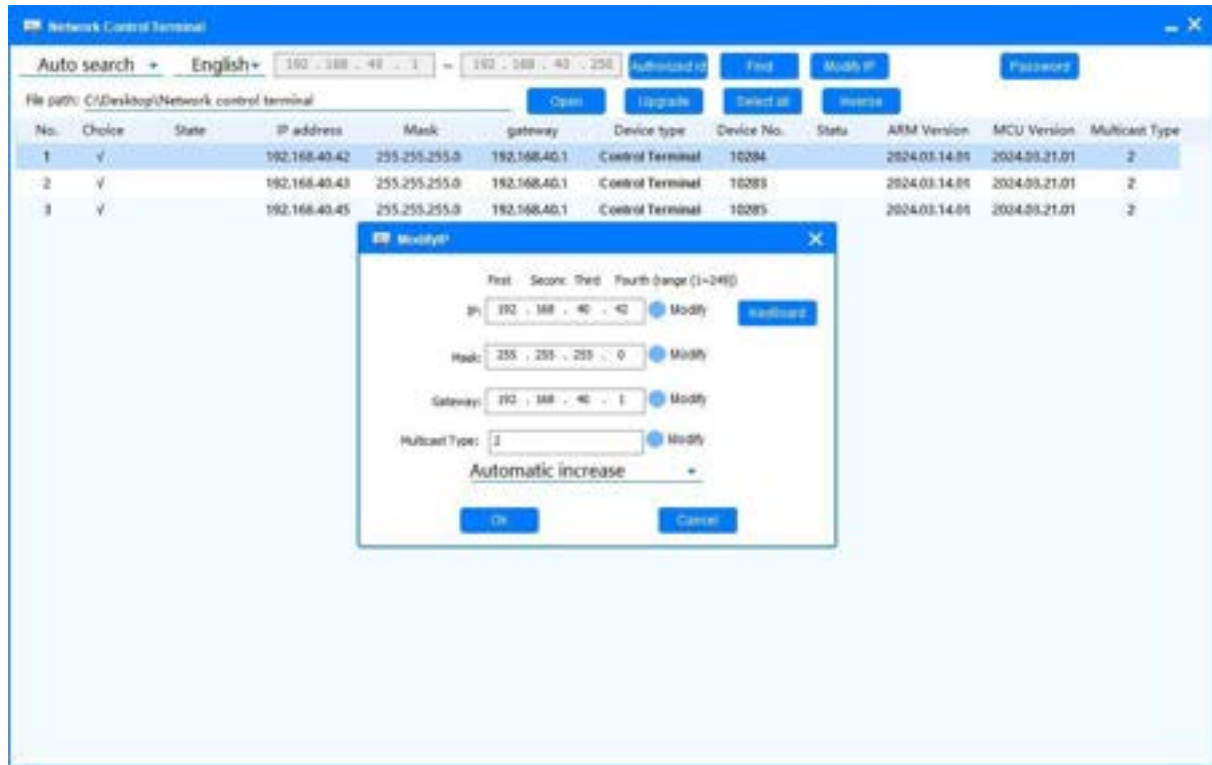


After changing the password, click “Auto Search” or “Specify IP”, and click “Find”, and then you will see the device type of control terminal on the interface.

No.	Choice	State	IP address	Mask	gateway	Device type	Device No.	Status	ARM Version	MCU Version	Multicast Type
1	✓		192.168.40.42	255.255.255.0	192.168.40.1	Control Terminal	10284		2024.03.14.01	2024.03.21.01	2
2	✓		192.168.40.43	255.255.255.0	192.168.40.1	Control Terminal	10285		2024.03.14.01	2024.03.21.01	2
3	✓		192.168.40.45	255.255.255.0	192.168.40.1	Control Terminal	10285		2024.03.14.01	2024.03.21.01	2

Modify IP: In the case of a terminal IP conflict:

Select “Auto Search” or “Specify IP”, and then click “Find”. Once the terminal IPs appear, choose one of the devices, then click “Modify IP” to open the corresponding dialog box. Enter the new IP address while keeping the subnet mask, default gateway, server IP address, and backup server IP address unchanged. Check “Modify” for the parameters that need to be changed and click “OK” to apply the changes, as shown in the figure below.



6.8 Specifications

Model	CNS9002	
Remote Paging Microphone - Network Control Terminal	Remote Paging Sending Mode Interface (sending audio signals to the host)	TX RM1-2 (TX RM green indicator light on the front panel is on)
	Input Sensitivity (RJ45 Interface)	±3000mV (±300mV)
	RM Bus Power Supply	DC48V (±5V)
Expansion Amplifier - Network Control Terminal	Expansion Amplifier Receiving Mode Interface (receiving audio signals from the host)	RX EXT1-2 (RX EXT green indicator light on the front panel is on)
	Input Sensitivity (RJ45 Interface)	±1500mV (±150mV)
Host - Network Control Terminal	Host Receiving Mode	RX RM1-2 (RX RM green indicator

	Interface (receiving audio signals from the remote paging microphone)	light on the front panel is on)
	Input Frequency Response	100Hz~12kHz (±3dB)
	Sending Mode Interface (sending audio signals to the expansion amplifier)	TX EXT1-2 (TX EXT green indicator light on the front panel is on)
	Input Frequency Response	50Hz~16kHz (±3dB)
Distortion (Within Frequency Response)	<1%	
S/N Ratio A-Weighted	≥76dB	
Operating Voltage Range	DC21V-28V	
Power Supply	Rated power supply DC24V/2.5A (±3V), backup power supply DC24V/2.5A	
Host Sending Mode Interface Output Level (RJ45 Interface)	±1500mV (±150mV)	
Host Sending Mode Microphone Interface Output Level (RJ45 Interface)	±3000mV (±300mV)	
Adapter Operating Power	AC110V-240V 50/60Hz	
Operating Temperature	-20°C~+50°C	
Operating Humidity	20%~80% relative humidity, non-condensing	
Package Dimensions	295*241*115mm	
Machine Dimensions	165*115*55mm	
Gross Weight	2.0kg	
Net Weight	0.65kg	

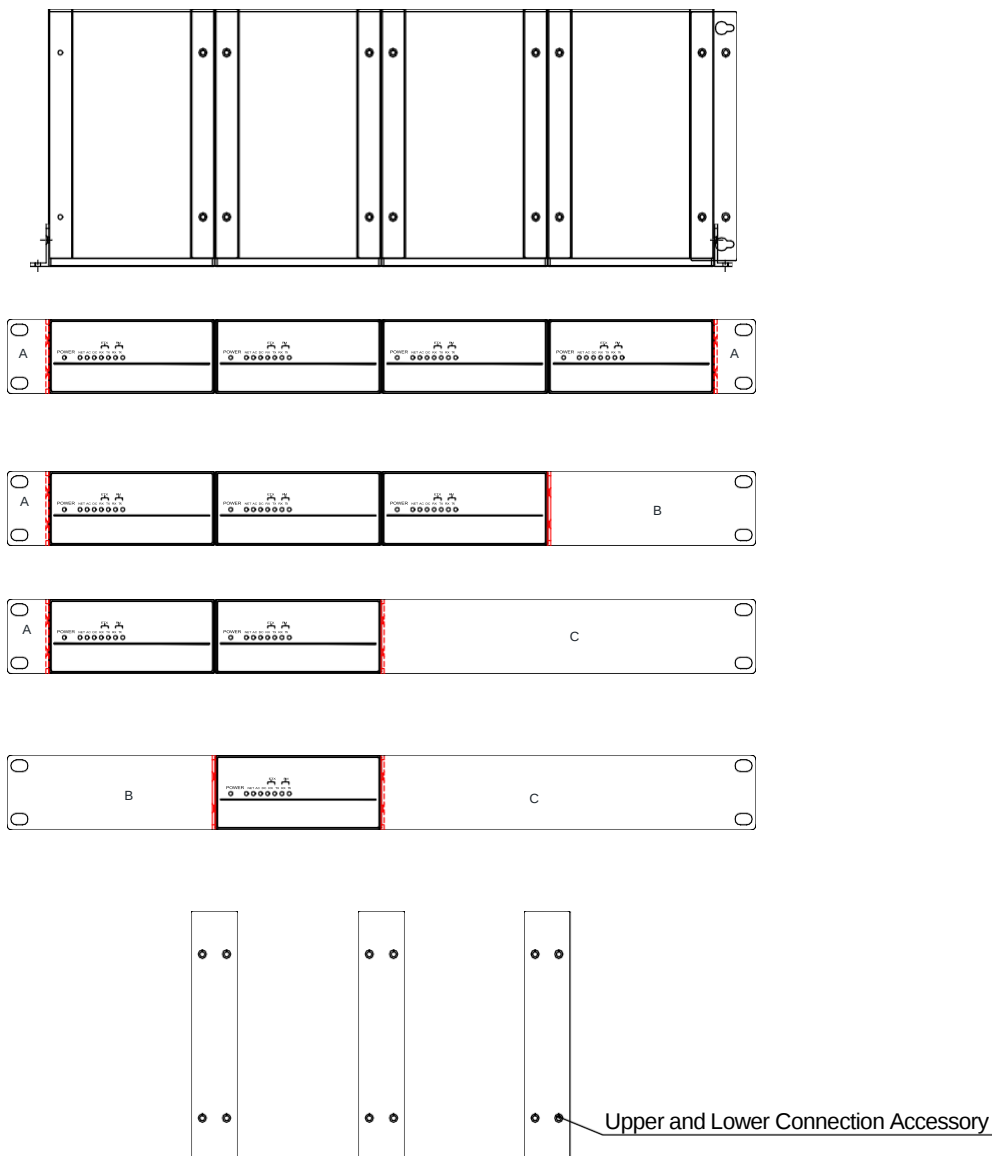
Specifications are subject to change without notice.

6.9 CNS9002S Accessory

6.9.1 Installation Instructions

The installation shown below adopts the 1U rack configuration with combinations of 1 CNS9002 terminal, 2 CNS9002 terminals, 3 CNS9002 terminals, or 4 CNS9002 terminals. This setup

requires the inclusion of upper and lower connection accessories (3 pieces) and a rack-mounted fixing panel accessory (1 piece).



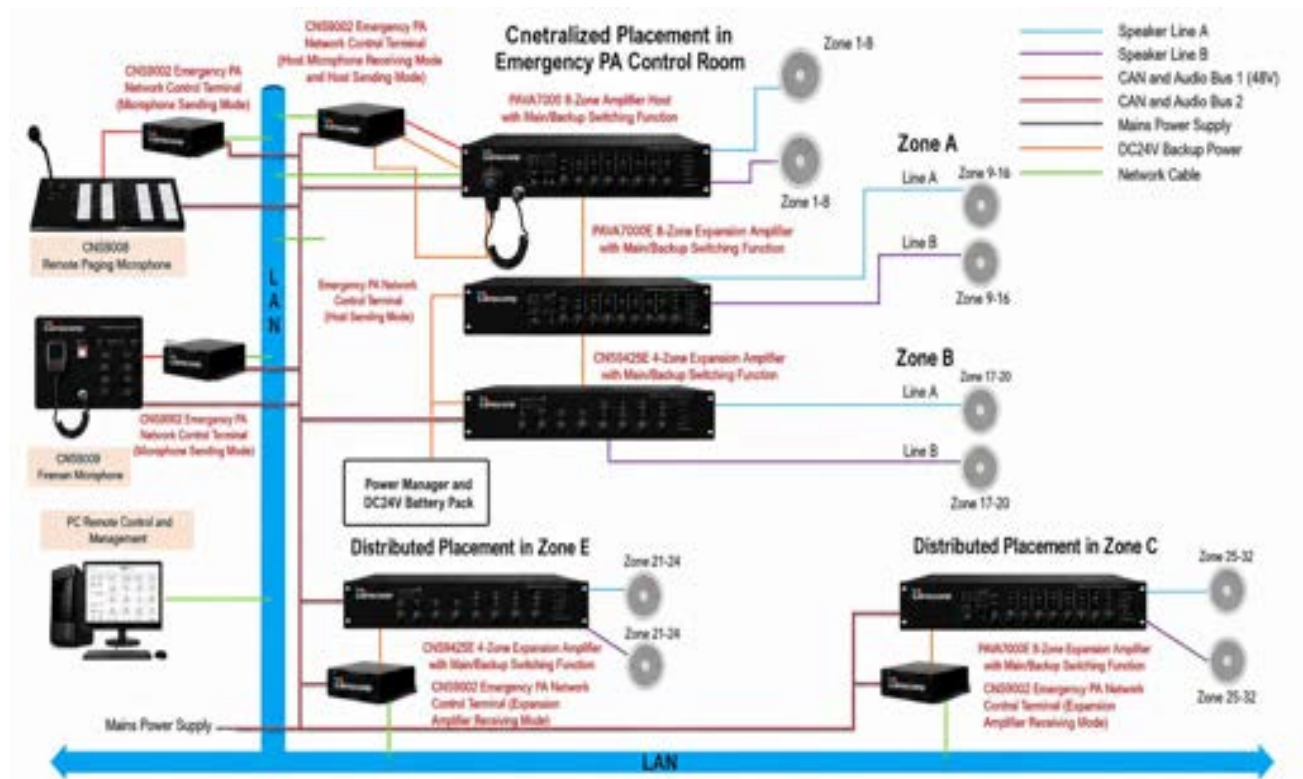
Rack-Mounted Fixing Panel Accessory

6.9.2 Specifications

Model	CNS9002S
Package Dimensions	260×45×71mm
Machine Dimensions	
Gross Weight	
Net Weight	

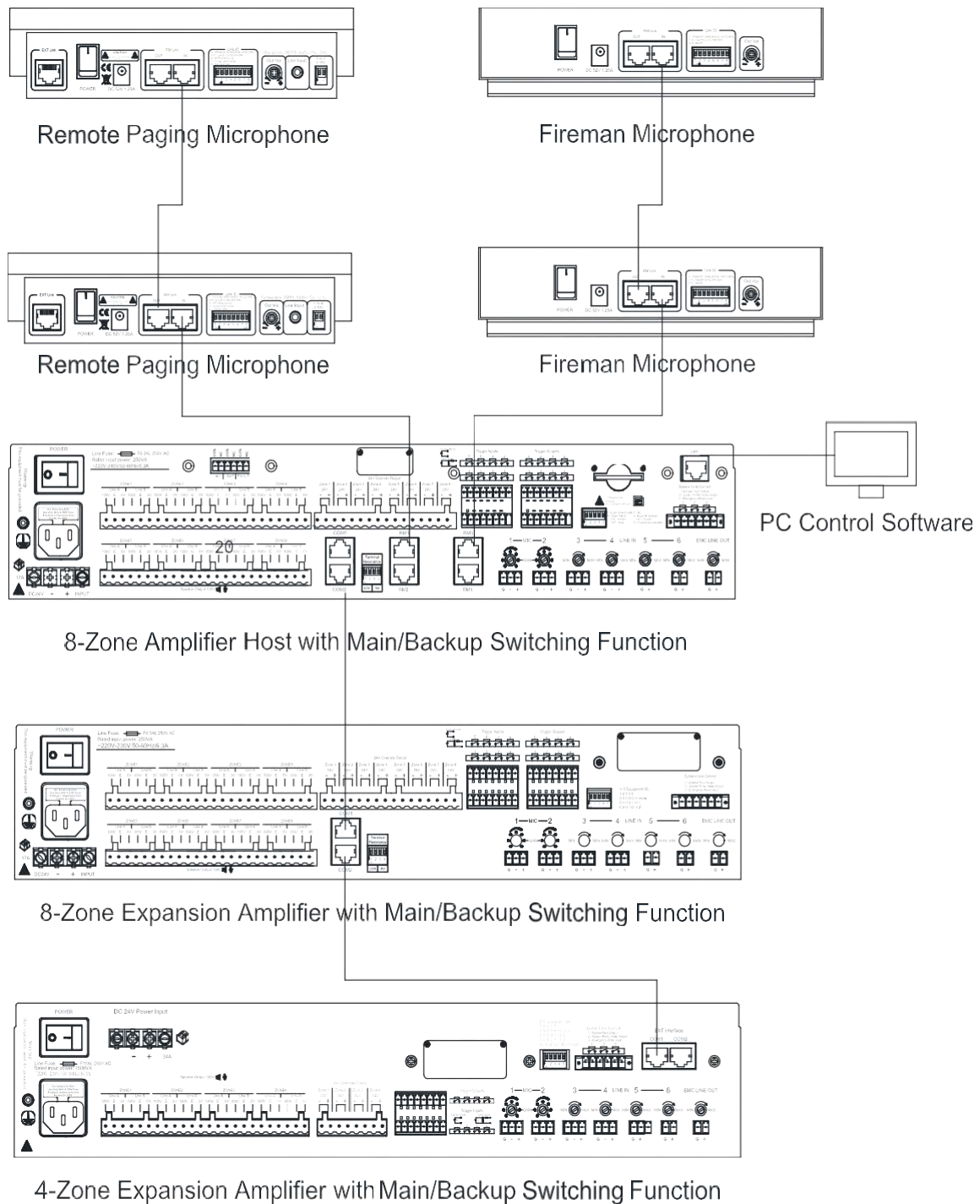
7. System Architecture Diagram

7.1 EN54 System Architecture Diagram



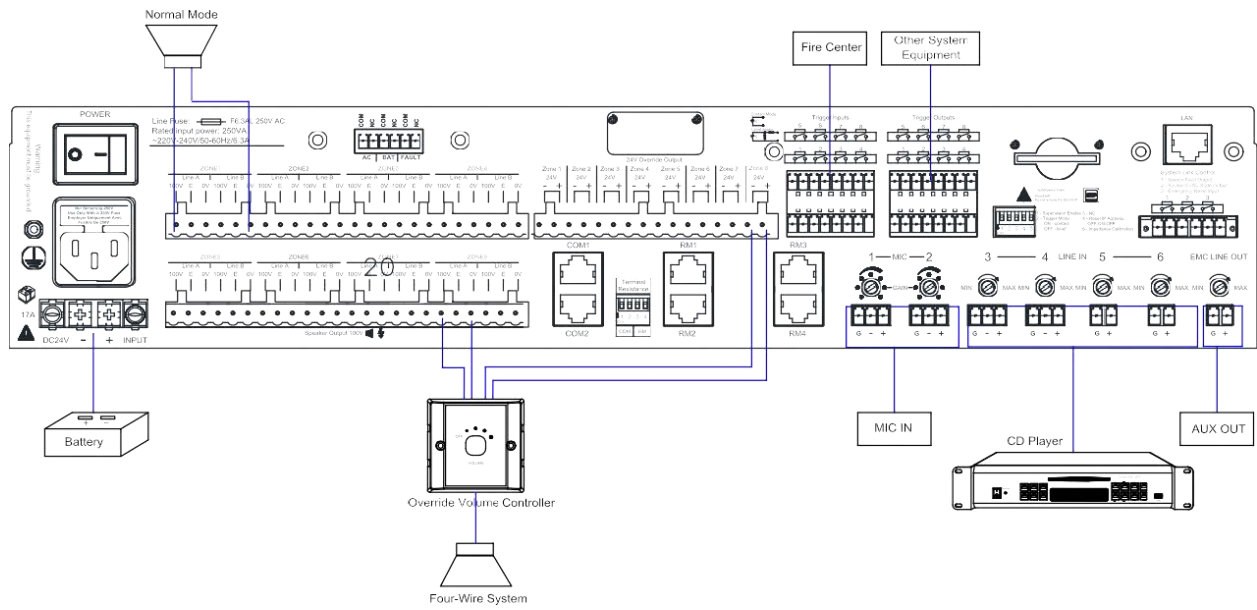
Note: The EN54 system is comprised of the system host PAVA7000, expansion amplifier PAVA7000E, PC sub control software CNS7500, remote paging microphone CNS7008/CNS7008E, fireman microphone CNS9009. The equipment data and audio are controlled and transmitted through the CAN bus. The host and expansion amplifier are cascaded hand-in-hand or looped. If the host is connected to a single expansion amplifier, it can support a maximum transmission distance of 600 meters; if connected to expansion amplifiers in a centralized manner, it can support up to 19 PAVA7000E expansion amplifiers, with a total of 160 zones, or up to 30 CNS9425E expansion amplifiers, with a total of 128 zones.

7.2 EN54 System Connection Diagram



Note: If the host is connected to a single expansion amplifier, it can support a maximum transmission distance of 600 meters; if connected to expansion amplifiers in a centralized manner, it can support up to 19 PAVA7000E expansion amplifiers, with a total of 160 zones, or up to 30 CNS9425E expansion amplifiers, with a total of 128 zones.

7.3 Host and Expansion Amplifier Interface Connection Diagram



8. Operational Guidelines

After the EN54 system is set up, the electrical connection is guaranteed to be correct for normal operation. The MP3, line input audio, EVAC voice and handheld paging microphone of the host can be output from the zones of the host and expansion amplifiers simultaneously.

8.1 Manual Playback of Host Input Audio

1. Select a line audio

——Press the button below the regular triangle “▲” on the panel of the machine PAVA7000 or PAVA7000E to switch the input audio of “MP3” and external lines “1-6”. When one of the indicator lights is on, it indicates that the input audio corresponding to the current channel is selected.

2. Select output zone

——The buttons below “ZONE1-ZONE8” are used to control the switches of the corresponding zones, and the “ALL ZONES” button is used to turn on or off all the zones with one key. When the “BGM” indicator light of the corresponding zone of the machine PAVA7000 or PAVA7000E is on, it indicates that the zone is playing the currently selected external line audio or MP3.

8.2 Manual Playback of EVAC Voice

1. Enter the “EMERGENCY” mode

——Press the red “EMERGENCY” button on the host PAVA7000 or the fireman microphone CNS9009, the indicator light of the button lights up and flashes rhythmically.

2. Select output zone

——The method is the same as that mentioned above in section 7.1 Manual Playback of Host Line Audio.

3. Select EVAC voice mode for output

——Turn on the emergency voice switch and press the “EVAC MAG” or “ALERT MAG” button on the host PAVA7000 or fireman microphone CNS9009 to light up the corresponding LED indicator light, and at this time the “EVAC/ALERT” indicator light of the selected host output zone lights up in red, and the system provides the corresponding voice.

4. Exit the “EMERGENCY” mode

——There are 3 methods (to execute the same function):

- Method 1. Press the “EMERGENCY” button again to turn off its LED indicator light.
- Method 2. Press the “EMERGENCY” button on the panel of fireman microphone CNS9009 to turn off its LED indicator light.
- Method 3. Input a voltage-free relay short-circuit signal greater than or equal to 0.5S through the CIE reset input contact at the back of the host.

8.3 Automatic Triggering of EVAC Voice

- The user can efficiently configure the contacts of the host or expansion amplifier via PC software.
- If not configured with PC software, the system defaults to simultaneous output for all zones of the host and expansion amplifiers.

8.4 Paging with Emergency Microphone

1. Turn on the handheld microphone switch

—Press the handheld microphone switch on the host PAVA7000 (press the button twice continuously, and hold it for the third time) or fireman microphone CNS9009 at any time to perform paging (if the user has enabled the prompt ringtone, the host will automatically play the prompt ringtone when the paging handle is pressed, and the paging can be performed only after the playback is completed. After paging, the host will play the end prompt ringtone when the paging handle is released).



Host Handheld Microphone



Fireman Handheld Microphone

2. Select paging zone

—The user can manually turn off or on a zone during paging. By default, all zones in the system are turned on.

8.5 CNS7008 Paging Microphone Operation

1. Select output zone/group

—The buttons below each zone/group on the panel of the paging microphone are control switches for the zones, and the “ALL SEL” button is used to turn on or off all the zones/groups with one key. Select one or more zones/groups to be paged, and then the indicator light corresponding to the selected zone will be flashing green, and the indicator light of unselected zones will be off.

2. Press the green “CALL” button

—When the indicator light of the “CALL” button lights up, the paging can be performed (if in PPT working mode, please hold the “CALL” button).

3. End paging

—Press the paging “CALL” button again (if in PPT working mode, please release the “CALL” button).

9. Software Operation

9.1 Software Installation

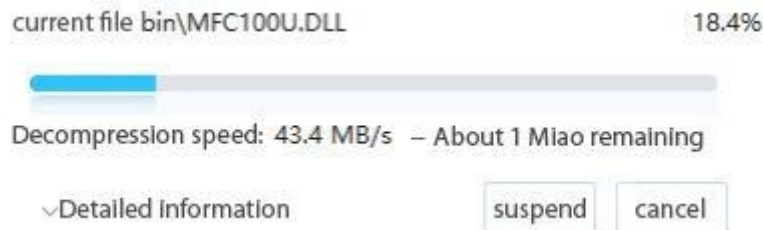
- (1) Installation environment: Win7/win8/win10 system; double-click on the compressed folder  first.
- (2) Then double-click the “bin” folder as shown below.



- (3) Jump to the interface as shown below, select the one marked with a red box and double-click on it.



- (4) Unzip the software, and then enter the software login interface. At this point, the network is offline, so it is required to set the network.



9.2 Software Running

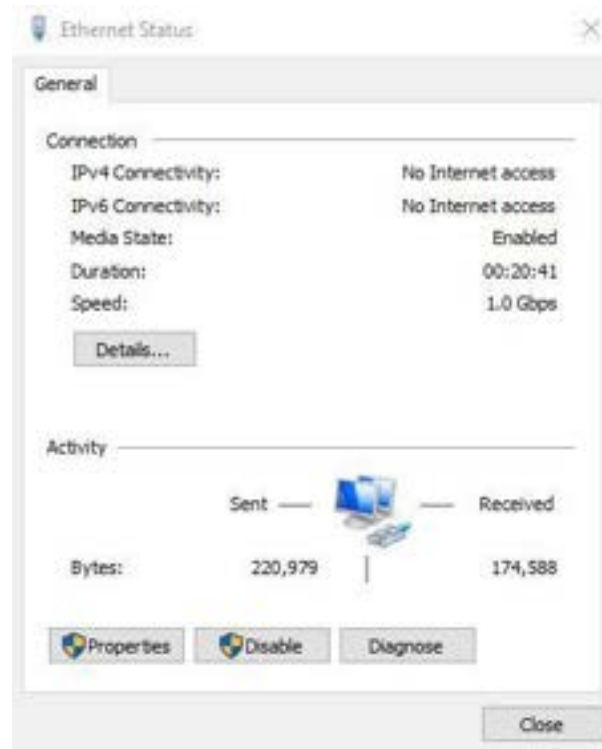
1) IP Address Modification

The PC running the software should be kept on the same network segment as the system host before logging in to the software CNS7500. The default network parameters of the host are as follows:

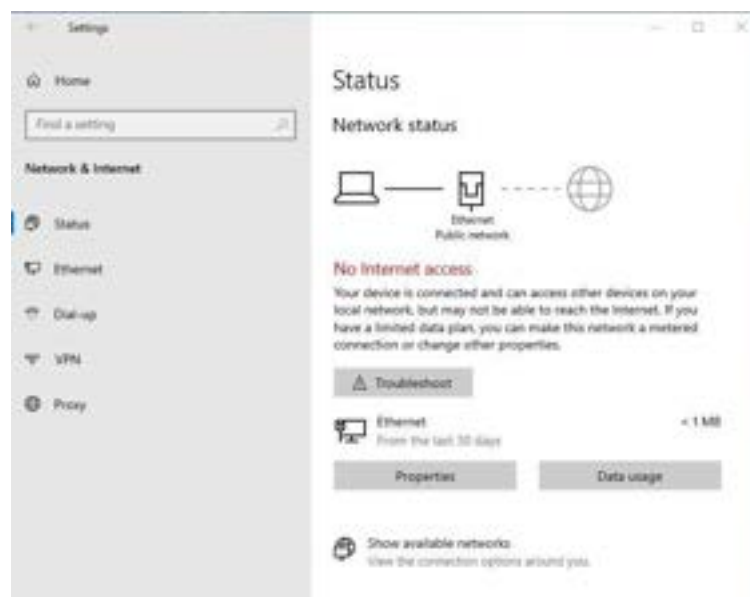
- Default IP address: 192.168.199.250.
- Gateway: 192.168.199.1.
- Subnet mask: 255.255.255.0.

Note: If there is no IP address on the network segment 192.168.199.X on the user's PC, the IP address on the same network segment should be added manually for PC-based software operation on the PC. The steps are as follows:

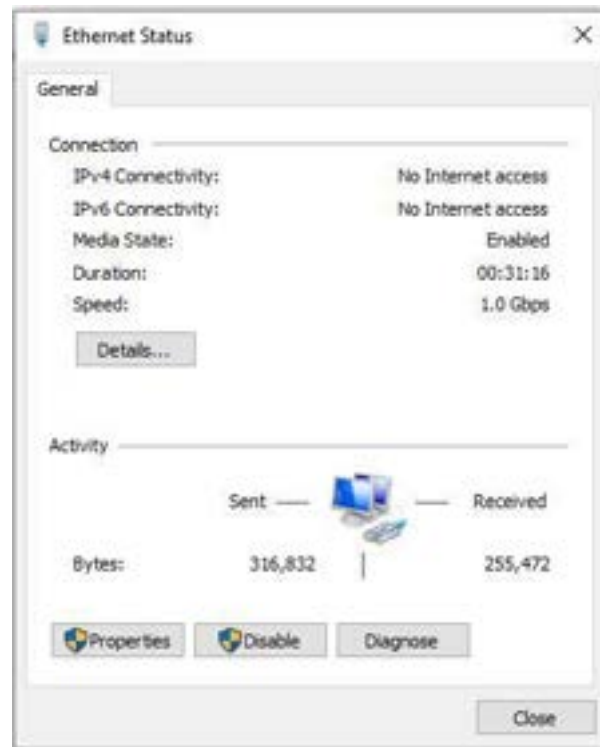
Step 1: Click the “” button in the lower right corner of the PC to open the network status interface. As shown below, click “Open Network and Sharing Center” at the bottom.



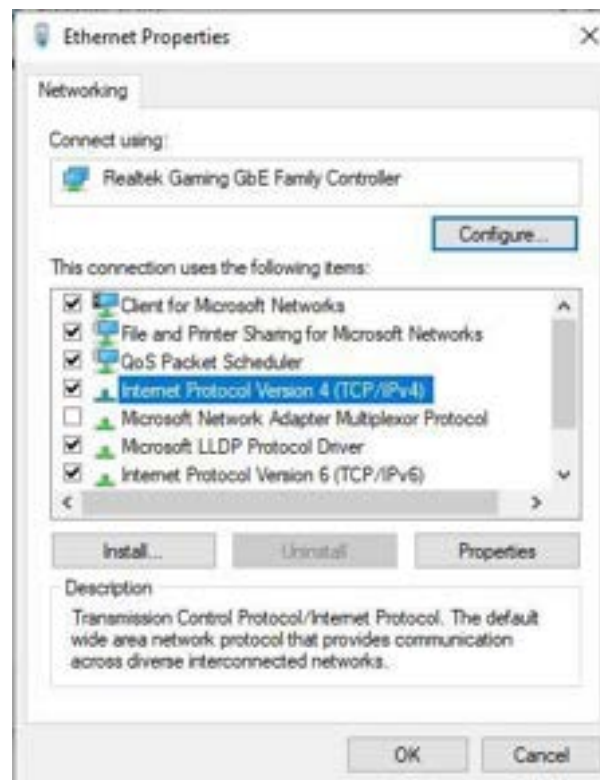
Step 2: Enter the interface as shown below, find “Properties” and click on it.



Step 3: Enter the local connection status interface, and click “Properties”.



Step 4: Enter the interface as shown below. Double click “Internet Protocol Version 4 (TCP/IPv4)” marked with a red box or click the “Properties” button to enter the next interface.



Step 5: Click “Advanced” to enter the advanced TCP/IP settings interface.

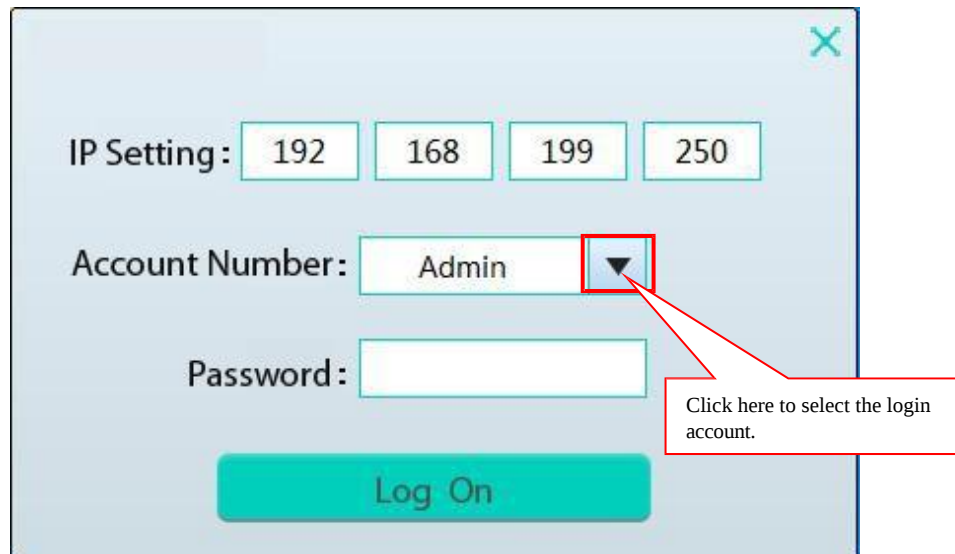


Step 6: Then click the “Add” button to enter the IP on the same network segment as the device, and the selected network segment should be interference-free for the work of the current system. For example, 192.168.199.XXX.



2) Login

If you log in to the interface for the first time, set the IP address (factory IP: 192.168.199.XXX, user name: Admin,factory password: Admin), and then click the “Login” button to enter the main interface.



The screenshot shows the login interface with the following fields and elements:

- IP Setting:** Four input boxes containing the values 192, 168, 199, and 250.
- Account Number:** An input box containing the text "Admin". To its right is a dropdown arrow icon, which is highlighted by a red box and a callout.
- Password:** An empty input box.
- Log On:** A large teal button at the bottom.
- Callout:** A red box with a white border containing the text "Click here to select the login account." with an arrow pointing to the dropdown arrow icon.

Login Interface

Notes:

1. The login password can be modified in “User Settings” under the “System Settings” directory after login.
2. The system supports simultaneous login of up to 10 users, including the administrator and normal users.

9.3 Software Operation

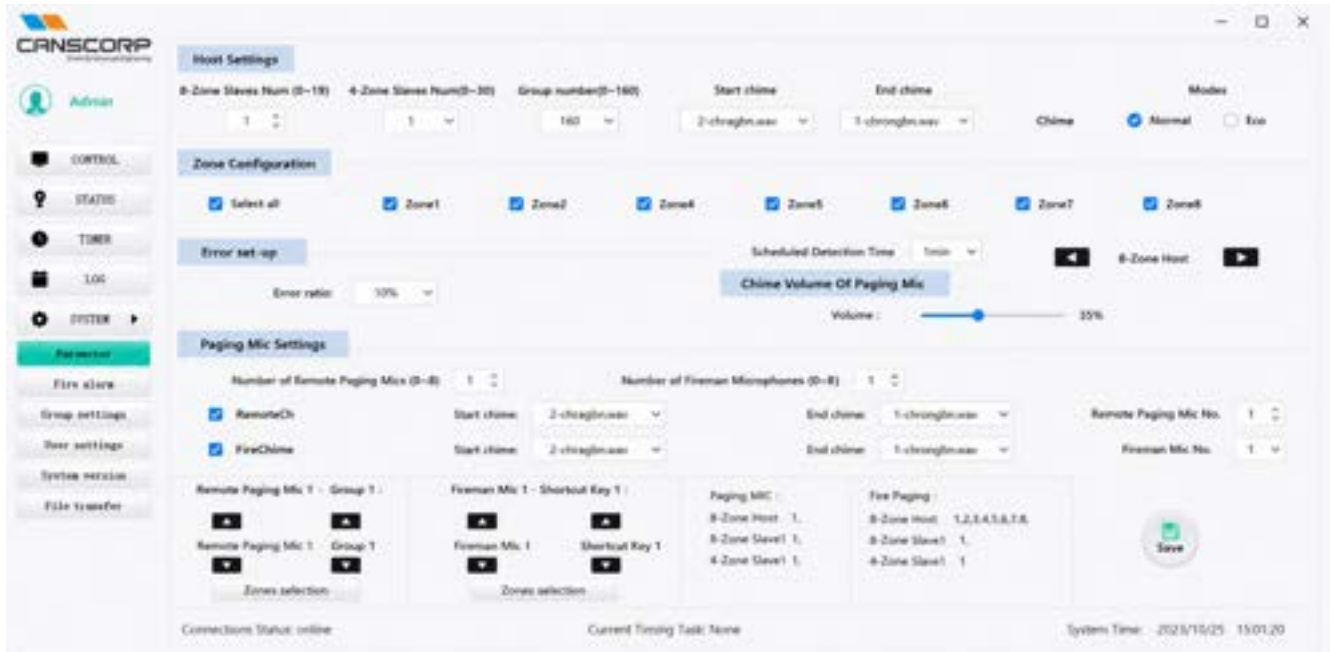
After data synchronization is completed, enter the main interface (as shown below), and set groups for the zones connected to the host first.



Main Interface

1) Group Settings

Before setting groups, configure the number of hosts and groups on the “Parameters Settings” interface under the “System Settings” directory on the main interface, and then click the “Save” button for the changes to take effect.



Parameter Settings Interface

Click the “Group Settings” button under System Settings to enter the interface as shown below.



Group Settings Interface

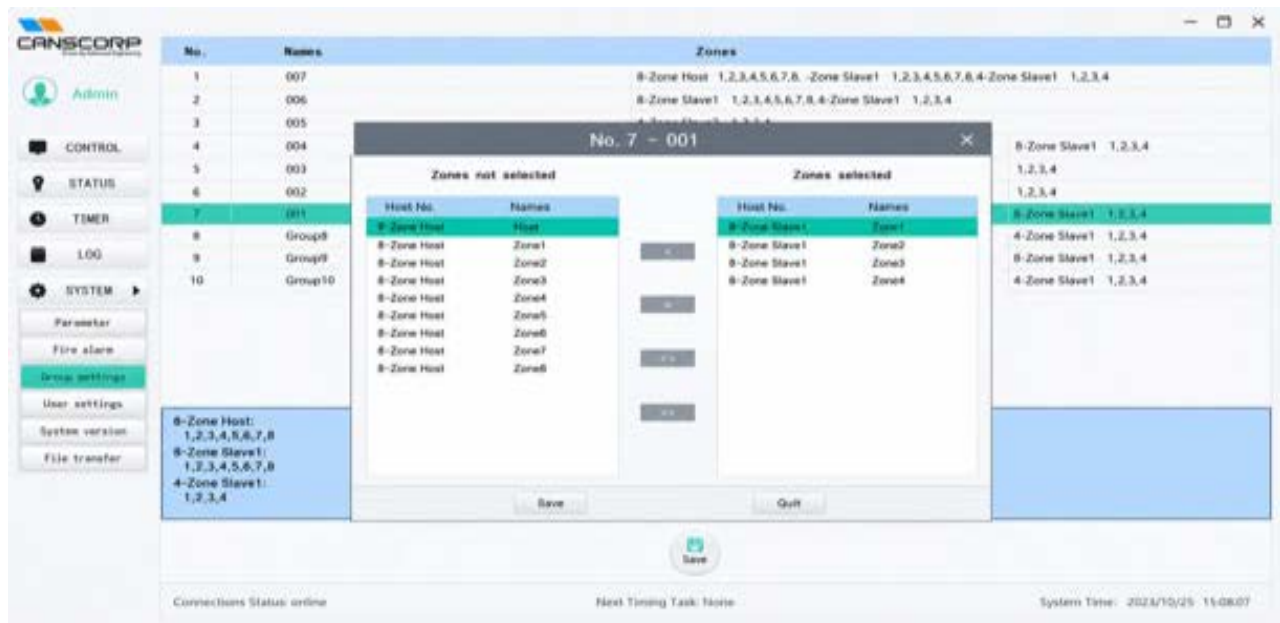
On the “Group Settings” interface as shown above, the serial number, name and working zones are displayed.

- **Set group name:** Double click the name to rename the group.

➤ **Set working zones:** Double click the working zones, and then the interface pops up as shown below, with “Unselected Zones” indicating the list of all host zones that are not selected, and “Selected Zones” indicating the list of all host zones that are selected.

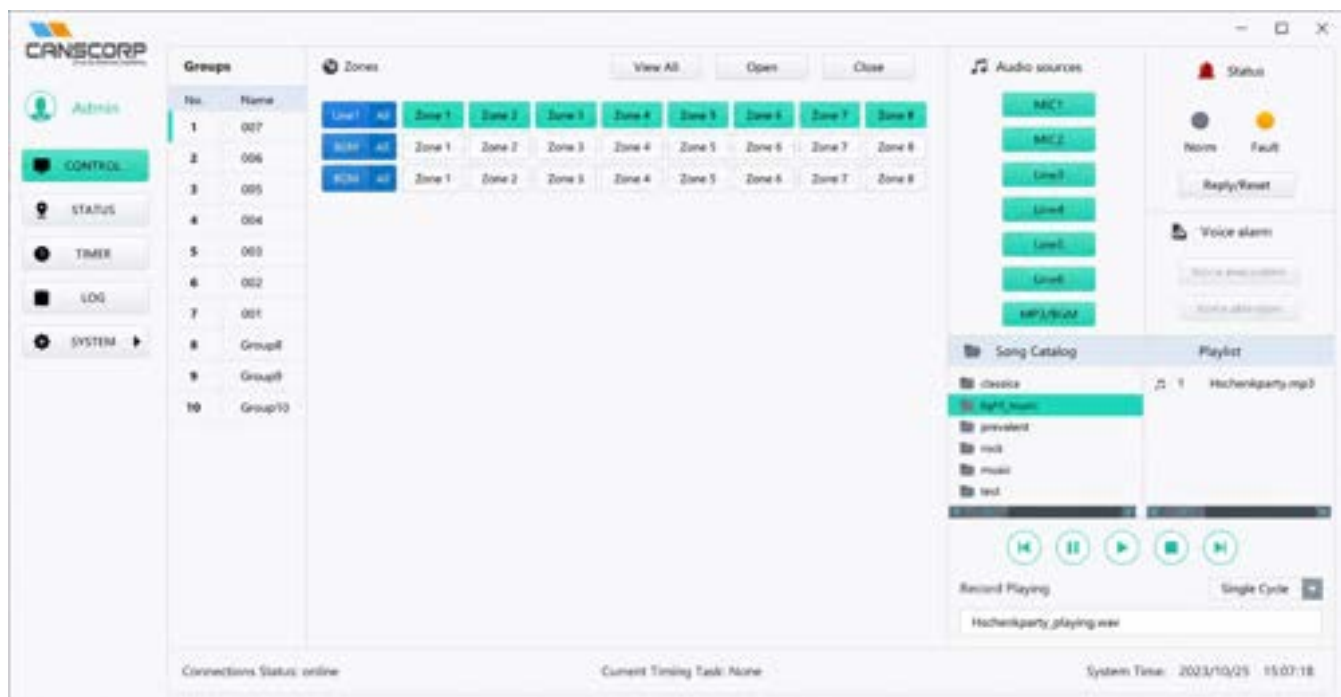
- Click the  button to move a host zone in the “Selected Zones” on the right to the “Unselected Zones” on the left.
- Click the  button to move a host zone in the “Unselected Zones” on the left to the “Selected Zones” on the right.
- Click the  button to move all host zones in the “Selected Zones” on the right to the “Unselected Zones” on the left.
- Click the  button to move all host zones in the “Unselected Zones” on the left to the “Selected Zones” on the right.

Click the “OK” button to set the selected host zones into a group. As shown above, the 8-zone hosts, 8-zone expansion amplifiers, and 4-zone expansion amplifiers are set into Group 1. The group set here will be displayed in the group list on the main interface, and click the “Save” button for the changes to take effect, or click the “Exit” button, indicating that the set group will not take effect and remain as it is.



Group Interface

2) Control Settings



Main Interface

a. The meanings of the icons on the main interface are as follows.

: It indicates the list of groups set manually, displaying the serial numbers and names of groups.

: It indicates the hosts and zones corresponding to each group.

: Click the button to view all groups and zones, click the button / to turn on or off all currently connected hosts or groups/zones with one key.

: Click the on/off of the button to turn on/off all the zones of the current host in the same position.

: This row of buttons corresponds to the 8 zones 1-8 of the 8-zone host.

: This row of buttons corresponds to the 8 zones 1-8 of the 8-zone expansion amplifier.

: This row of buttons corresponds to the 4 zones 1-4 of the 4-zone expansion amplifier.

: Click the zone to make it turn green, indicating selected and enabled, or make it turn gray, indicating unselected and disabled. **(Note: There is only one system host in a system, and the others are expansion amplifiers.)**

: It indicates that the built-in MP3 is selected as the input audio source for the current host zones

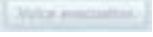
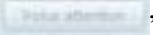
 **Audio sources** : It corresponds to the MIC1-2, LINE 3-6 and MP3/BGM of the host or expansion amplifier.

LINE 3-6 indicates the lines 3-6 are input audio sources. Click the button to make it indicated with a red border, indicating selected, or make it indicated without a border, indicating unselected.

 **Status** : It refers to system alarm prompt and operation.

- The icon “●” above the “Alarm” is synchronized with the indicator light of the emergency voice switch button of the host fireman microphone, and when the indicator light “●” is red, it indicates that the emergency voice broadcast switch is enabled and the emergency voice can be broadcast.
- The icon “●” above the “FAULT” is synchronized with the SYS STATE indicator light of the host or expansion amplifier, and when the indicator light “●” is yellow, it indicates that the system is faulty. When it is faulty, it will emit a fault beep, and at this time click the icon  of the software, which is synchronized with the ACK/RESET button of the host.

 **Voice alarm** : It refers to the emergency broadcast voice selection in “Emergency Broadcast” mode.

- Open the emergency voice broadcast switch button indicator to synchronize the EVAC MSG button of the host / the icon “” of the software, and when the button flashes red, green and blue, indicating selected for playing the emergency voice.
- Open the emergency voice broadcast switch button indicator to synchronize the ALERT MSG button of the host or expansion amplifier / the icon “” of the software, and when the button flashes red, green and blue, indicating selected for playing the emergency voice.

b. Play music for zones or groups, operated as follows.

① **Switch input audio source:** Select the button , then click the blue button “” in “Audio Sources”, and the button “BGM” will be changed to , indicating that the built-in MP3 is selected as the input audio source for the current host zones; the same is true for other audio source switching.

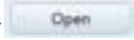
② **Set song and playback mode:**

Select the folder to be played in the “Song Catalog” to import the files. After importing the song list successfully, select the song to be played in the “Playlist” on the right, double click the song or click the button  below to start playing, click the button  to pause playing, and click the button  to stop playing. Click the button  or button  to select the previous or next song, click the inverted triangle behind the icon  to bring up the drop-down box, and choose one of the four playback modes, including single cycle, single play, list loop and random play.

- Single play: It indicates that the selected song is played until it is finished.
- List loop: It indicates that the songs in the selected catalog are played in sequence.
- Random play: It indicates that the songs in the selected catalog are played randomly.
- Single cycle: It indicates that the selected song is played in a loop.

③ **Select and open zone:** Select and open the host zone to play the background music in the following

four ways.

- Open a single zone: Select a single zone with the mouse to make the zone button green, indicating that the zone is opened.
- Open all the host zones: Click the button “” on the main interface with the mouse to open all the zones of the connected host.
- Open a single group: Select a group  and click the button “On” to open all the zones of the current group; click the button “Off” to close all the zones of the current group.

Note: Steps ①②③ are in no particular order.

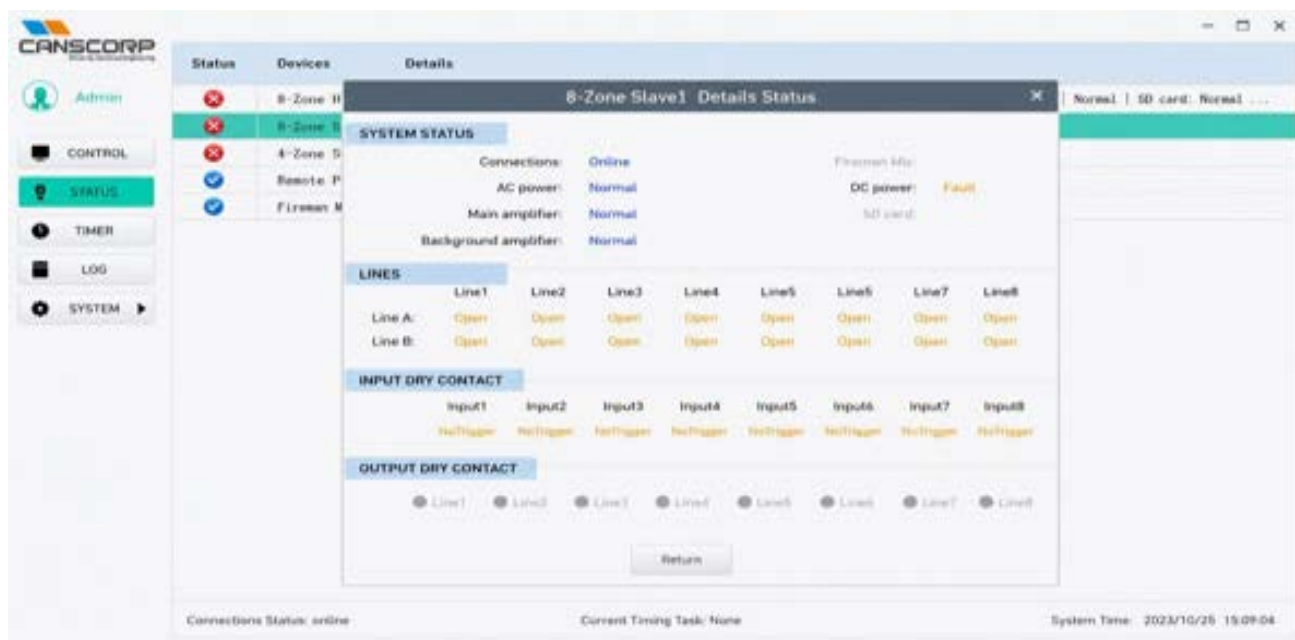
3) Running Status

Click the icon “Running Status” to enter the corresponding interface to view the running status of the device, “”



Running Status Interface

- If the remote/fireman an paging microphone is faulty, please check whether the paging microphone is connected properly, whether the type of the paging microphone is configured correctly, whether the paging microphone is powered on or whether the number and address of paging devices are consistent with the configuration.
- If the host is faulty, double click the status bar to enter the host status interface as shown below.



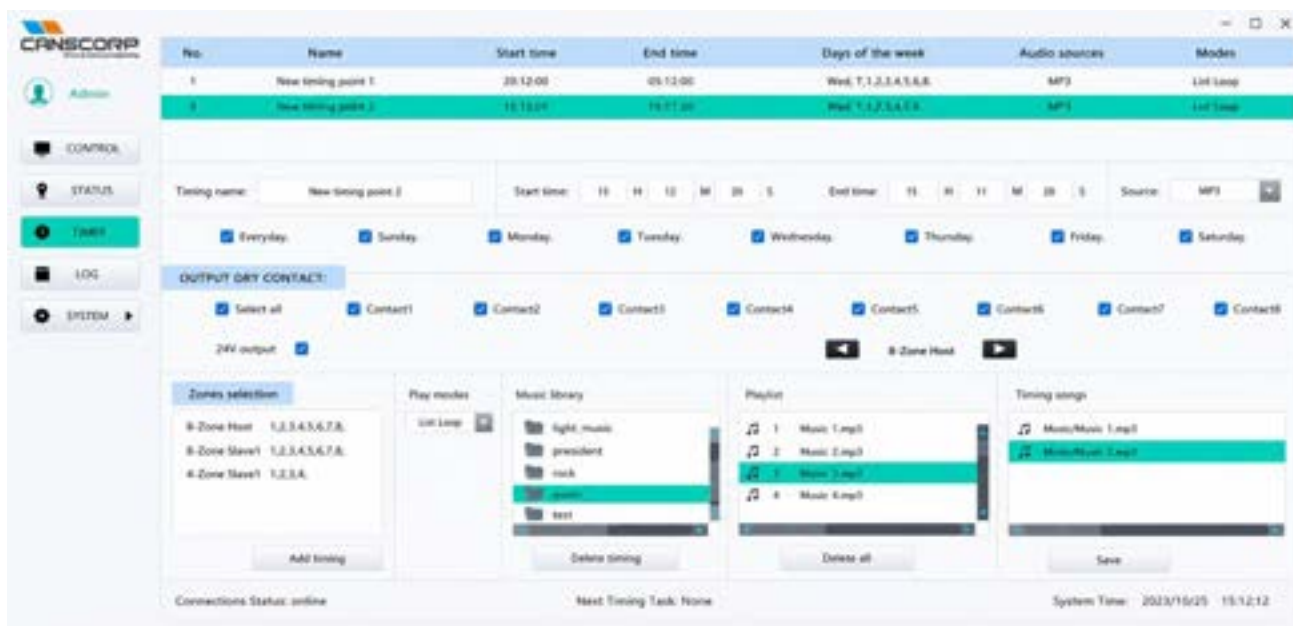
Host Status Interface

On the host status interface, view the running status of the current host or expansion amplifier, with the analysis indicated as follows.

- ❖ “Online” indicates that the PC software is connected to the system host successfully.
- ❖ “Offline” indicates that the device is offline and the PC software is not connected to the system host.
- ❖ “Normal” indicates that the corresponding device module is working normally.
- ❖ “Fault” indicates that the corresponding device module is faulty.
- ❖ “None” indicates that the device has no corresponding enabling configuration.
- ❖ “Open” indicates that the corresponding speaker or CIE detection loop is open-circuited.
- ❖ “Short” indicates that the corresponding speaker or CIE detection loop is short-circuited.
- ❖ “Ground” indicates that the corresponding speaker or CIE detection loop is grounded.
- ❖ If a dry contact output is configured in the fire alarm settings or timing point settings, when an input dry contact or timing point is triggered, the icon  before a certain channel will be displayed in blue, indicating that there is an output from the output dry contact of the channel of the host.

4) Timing Settings

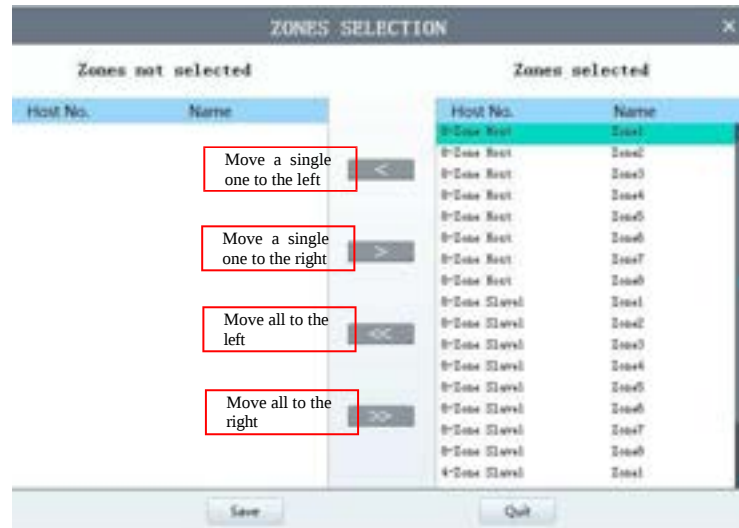
Click the timing settings to enter the interface as shown below.



Timing Point Settings Interface

➤ **Add timing point:**

- ① Click the “Add timing point” button first to bring up a default timing point in the list at the top of the interface.
- ② Click the new timing point name in the list above to rename it, and set the date for the timing point as needed, either by week or day.
- ③ After setting the date, set the start time and end time for the timing point. If the end time is smaller than the start time or the timing point is repeated, the end time above will be displayed in red.
- ④ In the “Audio Source” part on the right, there is a triangle button “▼”, and you can click it to select the MP3, MIC1, MIC2 or LINE3-6 as the input audio.
- ⑤ In “Output Dry Contact”, click the “triangle” button in the “8-Zone Host” to select a currently connected host, and configure the output dry contact and 24V override output for the selected host, and then the icons ☒ before the output contact and behind the 24V override output are on, indicating that it is configured successfully.
- ⑥ Click the “Zone Configuration” to set up self-defined zones for the timing point, and select the zones as needed. (Operation steps: the left part is unselected zones, the right part is selected zones. Select the serial number of a host in the “selected area” and click the “<” button to move the selected host to the “unselected zones” on the left. Similarly, select the host in the “unselected zones” on the left and click the “>” button to move the selected host to the “selected zones” on the right, click “<<” to move all selected hosts on the right to the left, and click “>>” to move all selected hosts of the left to the right.)



⑦ Click the triangle  behind the “Playback Mode” to select one of the four playback modes, including single play, single cycle, list loop and random play, select a folder in the “Song Catalog”, with corresponding song list for each folder, click a folder to be played, and then the song list will be displayed in the “Playlist”, and double click the song (green indicating selected) in the “Playlist” to add the song to the list of timing songs, then click “Save” to bring up the “Synchronize timing points to the host” interface, and click OK to complete the timing point settings.



➤ **Delete timing point / delete all timing points:** Select the timing point above (green indicating selected), click the “Delete timing point / Delete all timing points” button to delete the timing point, and click the Save button, indicating that it is deleted successfully, or if not clicking the Save button, it indicates that it is not deleted.

Note: If the audio source MP3 in the timing point list is displayed in red, it may be caused by the following:
1. When adding the timing point, no song is selected for the timing point; 2. After setting the song for the timing point, the song is deleted from the host, which can be uploaded on the “File Transfer” interface.

5) Log Settings

Click the Log Settings to enter the interface as shown below.

No.	Date and time	Log type	Details
No. 1	2023-10-25 13:54:47	Daily Indicator	No. 101: B-Zone Slave 1 Acc: 1 Open, Acc: 2 Open, Acc: 3 Open, Acc: 4 Open, Acc: 5 Open, Acc: 6 Open, Acc: 7 Open, Acc: 8 Open, BZ power status: Fault
No. 2	2023-10-25 13:54:48	Daily Indicator	No. 109: A-Zone Slave 1 Acc: 1 Open, Acc: 2 Open, Acc: 3 Open, Acc: 4 Open, Acc: 5 Open, BZ power status: Fault
No. 3	2023-10-25 13:54:49	Daily Indicator	No. 100: B-Zone Host Acc: 1 Open, Acc: 2 Open, Acc: 3 Open, Acc: 4 Open, Acc: 5 Open, Acc: 6 Open, BZ power status: Fault
No. 4	2023-10-25 13:54:50	Daily Indicator	No. 101: B-Zone Slave 1 Acc: 1 Open, Acc: 2 Open, Acc: 3 Open, Acc: 4 Open, Acc: 5 Open, Acc: 6 Open, BZ power status: Fault
No. 5	2023-10-25 13:55:15	Daily Indicator	No. 100: B-Zone Host Acc: 1 Open, Acc: 2 Open, Acc: 3 Open, Acc: 4 Open, Acc: 5 Open, Acc: 6 Open, BZ power status: Fault
No. 6	2023-10-25 13:57:14	Daily Indicator	No. 101: Call Init Host: 1 Call Init > No.
No. 7	2023-10-25 13:59:28	Eve Voice	No. 001: Eve Trigger Fire Paging EMC Key BMC
No. 8	2023-10-25 13:59:29	Eve Voice	No. 001: Eve Trigger Fire Paging EMC Key BMC
No. 9	2023-10-25 13:59:37	Eve Voice	No. 005: Eve Salver Fire Paging BMC ALERT ALERT
No. 10	2023-10-25 13:59:37	Eve Voice	No. 001: Eve Salver Fire Paging BMC ALERT ALERT
No. 11	2023-10-25 13:59:38	Remote Paging	No. 121: Paging Start
No. 12	2023-10-25 13:59:40	Remote Paging	No. 121: Paging End
No. 13	2023-10-25 13:59:48	Eve Voice	No. 001: Eve Trigger Fire Paging EMC Key BMC
No. 14	2023-10-25 13:59:48	Eve Voice	No. 005: Eve Salver Fire Paging EMC Key BMC
No. 15	2023-10-25 14:00:26	PTT	No. 109: PTT Start
No. 16	2023-10-25 14:00:28	PTT	No. 100: PTT Start
No. 17	2023-10-25 14:00:50	PTT	No. 100: PTT End
No. 18	2023-10-25 14:01:23	PTT	No. 100: PTT Start
No. 19	2023-10-25 14:02:15	PTT	No. 100: PTT End
No. 20	2023-10-25 14:02:15	PTT	No. 100: PTT Start
No. 21	2023-10-25 14:02:16	PTT	No. 100: PTT End
No. 22	2023-10-25 14:02:20	PTT	No. 100: PTT Start

Connections Status: online Current Timing Task: None System Time: 2023/10/25 16:42:12

Log Settings Interface

Description of each label displayed on the log settings interface.

- 1) **“No.”: It indicates the order of arrangement.**
- 2) **“Date and time”: It indicates the time for the device to perform the operation.**
- 3) **“Log type”: It indicates the log type of the operation.**
- 4) **“Details”: It indicates the detailed content of the current log.**

Ways of log query:

- In the log type, click the button “▼” to select a log type, and click the “Search” button to view logs of the same type.



- When the icon  behind the “Filter by time period” lights up (displayed in blue), it indicates that the search is conducted according to the dates of the set start time and end time. When it is unchecked, it indicates that the search is conducted from the default start time of the system to the current time.

6) System Settings

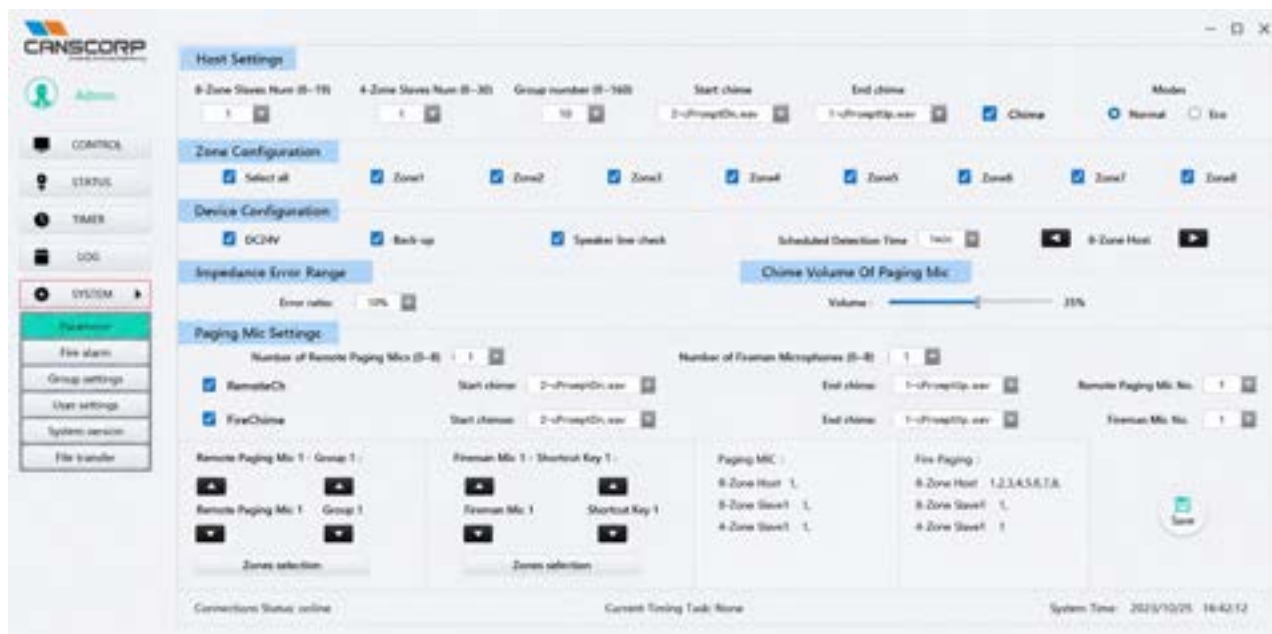
System settings have 6 functions: Parameter settings, fire alarm settings, group setting, user settings, system version and file transfer.

- Parameter settings: Mainly used for system host device enabling configuration and paging device settings.
- Fire alarm settings: Set the fire alarm rule for the device and the audio priority for dry contact triggering.
- Group settings: Set self-defined groups for host zones.
- User settings: Set the IP address, user password, display language of the PC software, etc.

- System version: View the firmware version and ID address of the device.
- File transfer: Transfer files between the host and local and upgrade the host firmware.

Note: Click “Save” when you finish the modification, otherwise your settings will not be able to fulfill your expected functions on the corresponding devices.

a. Parameter Settings



Parameter Settings Interface

Click the Parameter Settings icon to enter the corresponding interface.

➤ Host Settings

Number of hosts/groups: Used to configure the number of the 8-zone expansion amplifiers or 4-zone expansion amplifiers. When the number of 8-zone expansion amplifiers or 4-zone expansion amplifiers actually connected is inconsistent with the set number on the PC software, the system will prompt a fault, and you can set the number in the “Host Settings” above to be consistent with the number of hosts actually used; the number of groups corresponds to the number of groups below the group list on the main interface, which can be set as needed.

Normal mode or Eco mode can be selected.

Note: The system working mode is the working mode for the system if it automatically switches to the standby power when the system main power is disconnected or malfunctioned.

1. Normal mode: It indicates that the system is working in normal mode, and the system functions are not deleted.
2. Eco mode: When the system enters the eco mode, only the emergency microphone, fireman microphone, EVAC/ALERT, and remote paging microphone of the system work normally, and the background music cannot be played.

➤ Zone Configuration

The user can enable and disable the zones of the host and expansion amplifiers according to the actual situation (It defaults to enable all zones). Click the triangle button of the “8-Zone Host”, and select the host to be configured (8-zone host, as shown above) to set

the selected zones (select all or zones 1-8, as shown above)

➤ **Device Configuration**

The user can enable DC24V, main and backup amplifiers, speaker circuit and scheduled detection time as needed. If necessary, tick ☒ before the settings to indicate that it is selected.



- **Impedance error ratio:** It is mainly used to set the speaker loop impedance detection error, which can be set to 10%, 20%, 30%, 40% and 50%.

➤ **Paging Prompt Tone Volume**

Volume adjustment: Adjust the slider to set the volume of the prompt tone for paging.

➤ **Paging MIC Settings**

Settings for Number of remote/fireman paging microphones: Used to set the paging microphones. When the number of remote paging microphones or fireman paging microphones actually connected is inconsistent with the set number on the PC software, you need to set the number in the “Number of Paging Mics” above to be consistent with the number of the paging microphones actually used; otherwise the paging microphone will not be connected, and the system fault indicator light will light up with the buzzer beeping. (Note: Up to 8 paging microphones are supported.)

Paging prompt tone settings: Tick ☒ before the prompt tone switch, indicating that the prompt tone is set for the start and stop of the paging of the handheld microphone on the panel, with 4 chimes available. You can import audio and modify the name of the audio.

Prompt tone switch: Can set the prompt tone for every remote paging microphones. For example, on the parameter settings interface, first select the serial number of the paging microphone, tick ☒ before the prompt tone switch, and then click the inverted triangles  behind the start chime and end chime to select the prompt tone sound source; both the start chime and end chime have 4 audio sources available.

Fire prompt tone switch: Can set the fire prompt tone for every fireman paging microphones. For example, on the parameter settings interface, first select the serial number of the paging microphone, tick ☒ before the prompt tone switch, and then click the inverted triangles  behind the start chime and end chime to select the prompt tone sound source; both the start chime and end chime have 4 audio sources available.

➤ **Paging MIC Groups Settings**



As shown by the icon of the remote/fireman paging microphone parameter settings interface, the icon  above/below the remote/fireman paging microphone indicates the previous/next one. The triangle button  above/below the group 1 is used to select the zone/group of the remote paging microphone, the triangle button  above and below the shortcut key 1 is used to select the 6 self-defined button of the fireman paging microphone.

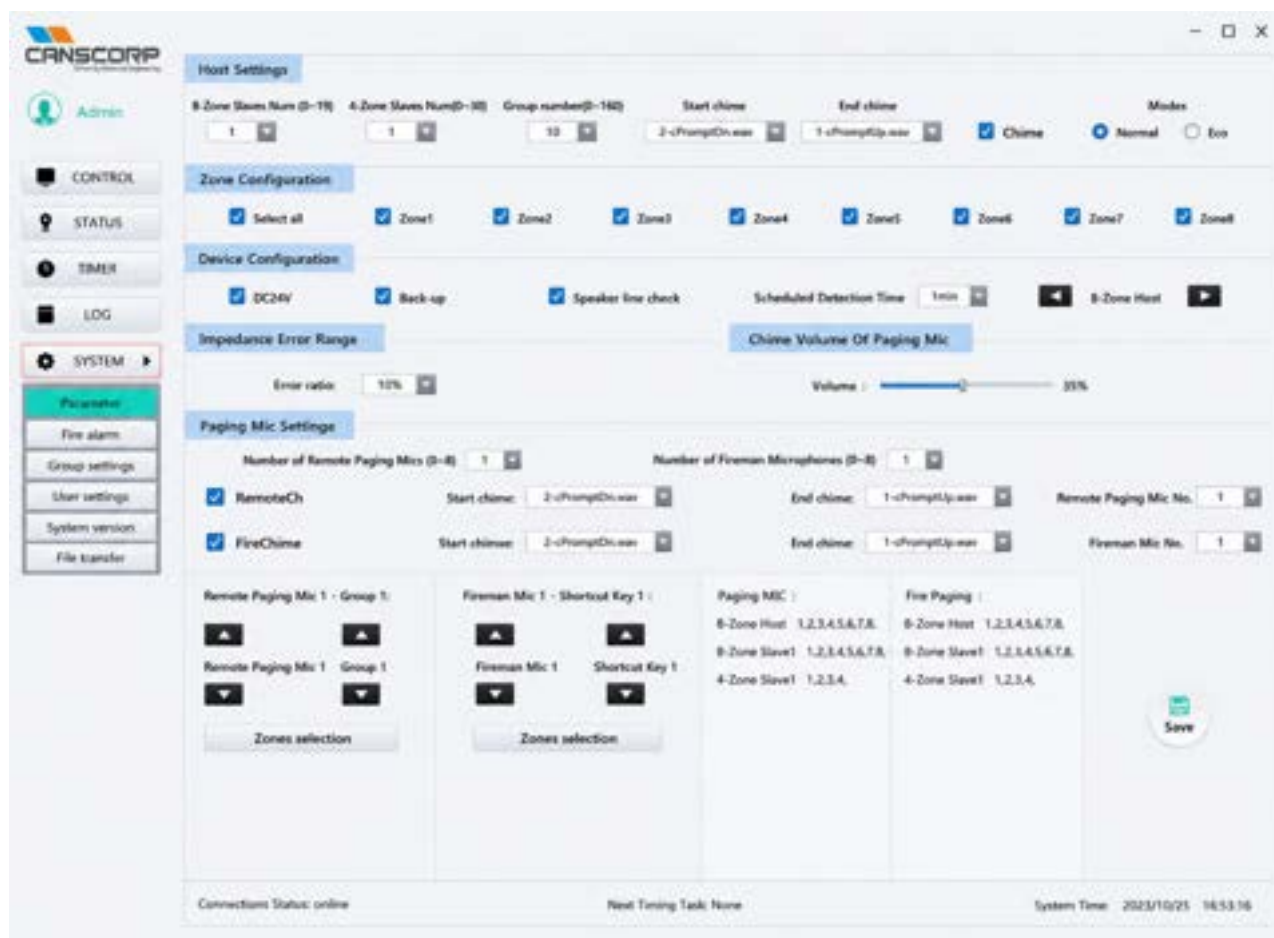
When the remote paging microphone is selected:

- The triangle button  above/below the group 1 is used to select the group of the remote paging microphone. Each remote paging microphone can be set with 16 groups, and the 16 group buttons correspond to the 16 selection buttons on the panel of the remote paging microphone. At this time, click the “Zone Selection” button to bring up the interface as shown below. The triangle button  on the interface is used to select the currently connected host. Tick  before the zone, indicating that the zone is selected from the currently connected host/expansion amplifier to configure the group, and finally click the “OK” button to set it successfully.
- There are 16 groups.
- The parameters can be changed.



Paging MIC Group Settings Interface

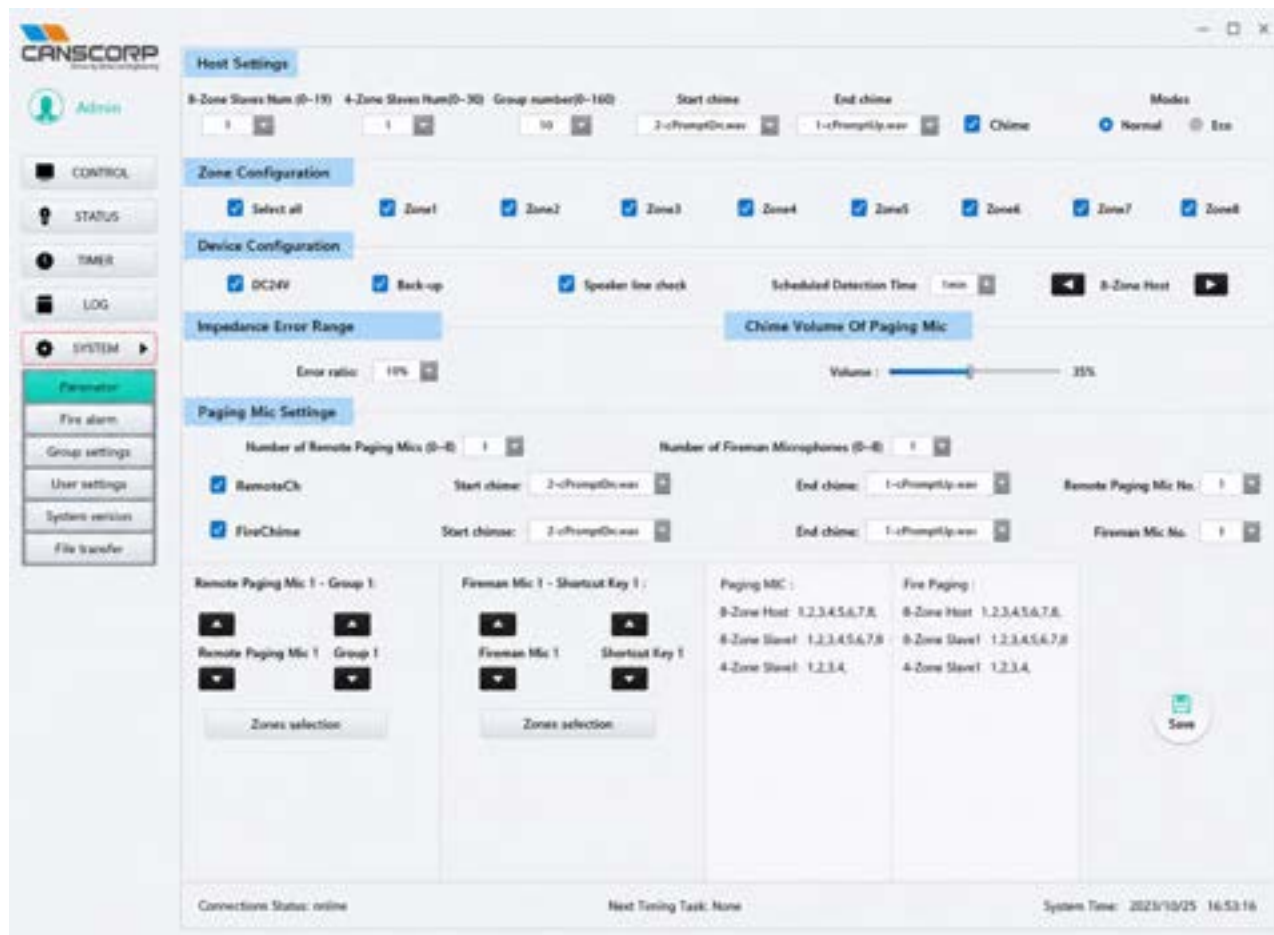
- “8-zone host: 1, 2, 3, 4, 5, 6, 7, 8; 8-zone expansion amplifier 1: 1, 2, 3, 4, 5, 6, 7, 8; 4-zone expansion amplifier 1: 1, 2, 3, 4” displayed in the group display box as shown below indicate that the shortcut operation button includes zones (1-8) of the 8-zone host, zones (1-8) of the 8-zone expansion amplifier, and zones (1-4) of the 4-zone expansion amplifier. That is to say, if the user sets the group mode for the paging microphone 1 in the paging microphone address settings, when the group 1 is pressed on the panel of the paging microphone for paging, each zone of the above hosts/expansion amplifiers will be selected simultaneously for paging.



Paging MIC Parameter Settings Interface

When the fireman paging microphone is selected:

- The triangle  above/below the shortcut key 1 is used to select the shortcut operation button of the fireman paging microphone. Each fireman paging microphone can be set with 6 shortcut operation buttons, and the 6 shortcut operation buttons correspond to the 6 self-defined function buttons on the panel of the fireman paging microphone. At this time, click the “Zone Selection” button to bring up the interface as shown below. The triangle button  on the interface is used to select the currently connected host/expansion amplifier. Tick  before the zone, indicating that the zone is selected from the currently connected host/expansion amplifier to be opened by the shortcut key, click the button  below the input audio source and select the input audio source to be configured for the shortcut operation button from the drop-down box, and finally click the “OK” button to set it successfully.
- “8-zone host: 1, 2, 3, 4; 8-zone expansion amplifier 1: 1, 2, 3, 4, 5, 6, 7, 8; 4-zone expansion amplifier 1: 1, 2, 3, 4” displayed in the group display box as shown below indicate that the shortcut operation button includes zones (1-8) of the 8-zone host, zones (1-8) of the 8-zone expansion amplifier, and zones (1-4) of the 4-zone expansion amplifier. That is to say, if the user presses the corresponding shortcut button on the panel of the fireman paging microphone, the zones of the corresponding host/expansion amplifier will be opened and the configured audio sources of the corresponding zones will be played.

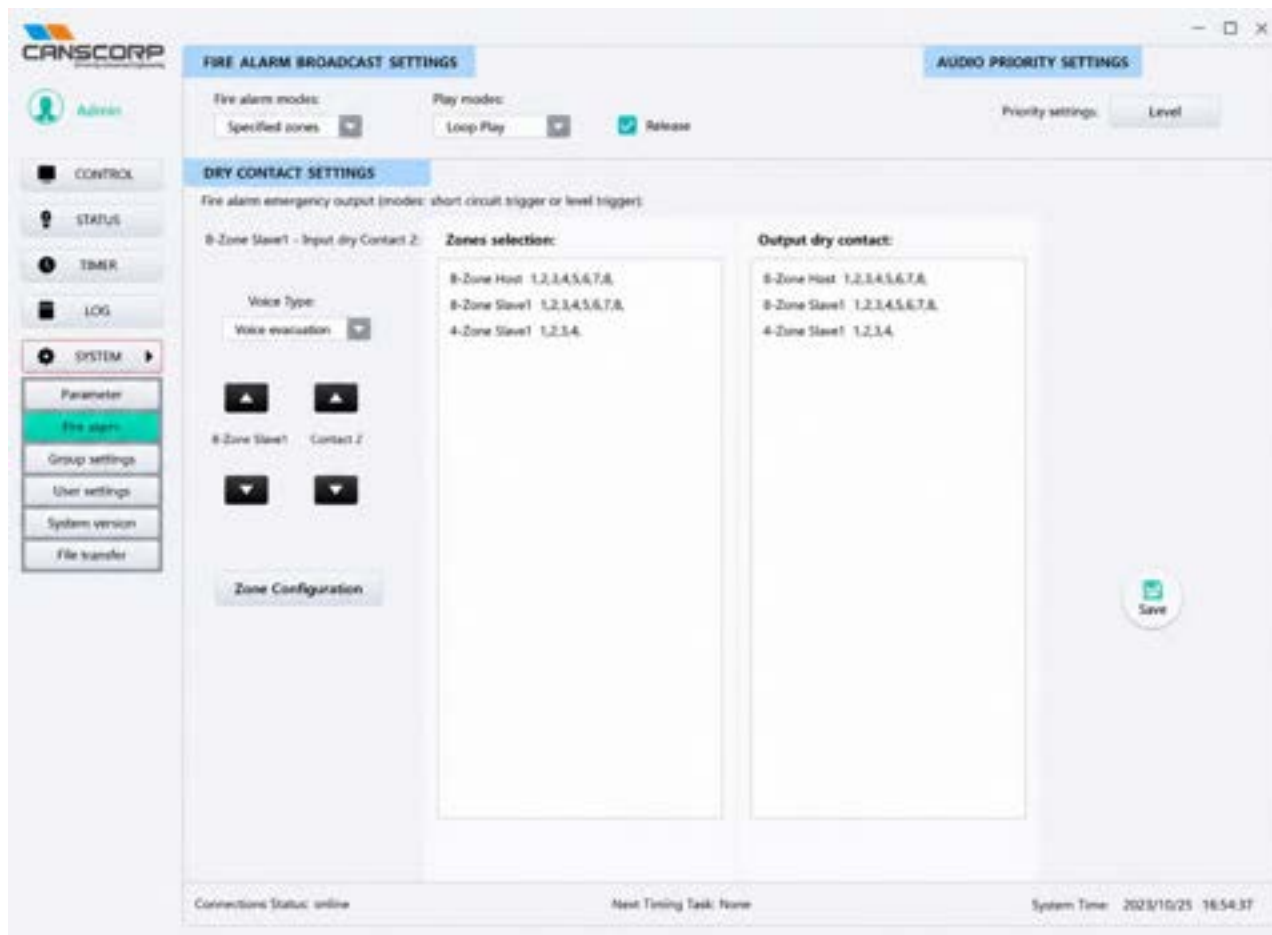


Paging MIC Parameter Settings Interface

Note: After the setting is completed, click the button  for the changes to take effect!

b. Fire Alarm Settings

- Set the rules to execute the fire alarm.
- Set the input/output dry contact, host output zone, and audio priority for dry contact triggering.



Fire Alarm Settings Interface

Click the Fire Alarm Settings icon to enter the corresponding interface.

➤ Fire alarm broadcast settings

In the figure above:

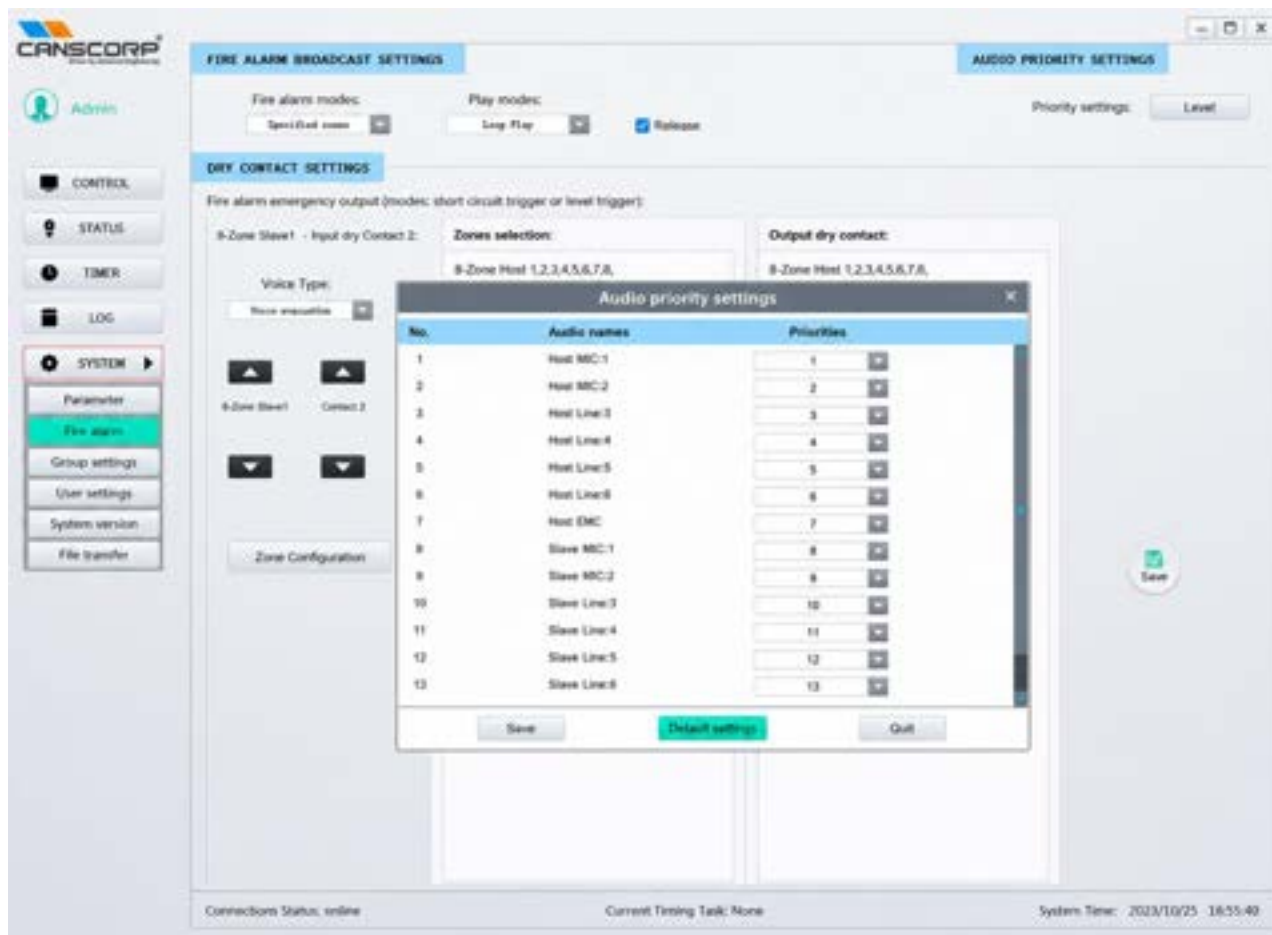
- The user can select “Specified zones” or “All zones” from the drop-down list box on the right of “Fire alarm mode”.
 - 1) “Specified zones” indicates that when the system detects an input alarm signal from the host or expansion amplifier, it will only output and play the voice message to the specified zones of the corresponding dry contact and the output dry contacts set in the list box of “Dry Contact”.
 - 2) “All zones” indicates that once there is an input alarm signal from the host or expansion amplifier, the system will open all zones of the corresponding dry contact and all output dry contacts and play the voice message.
- **“Release”:** If the function is enabled, it indicates that after the dry contact trigger signal ends, the dry contact trigger will automatically end; if the function is not enabled, it indicates that after the dry contact trigger signal ends, the dry contact trigger will continue to be executed, and it needs to be ended manually.
- **“Audio source priority settings”:**

Priority settings: Click the “Level” button to bring up the audio priority settings interface as shown below,

where you can set the priority for 14 audio sources, including MIC1-2, 4 lines and EMC of the host/expansion host; click the button  behind each audio source to set the priority level from 1-14, with 1 having the highest priority, and so on. You can also click “Default settings” to configure the default priority of audio sources, and then click the “Save” button for the audio priority settings to take effect.

After setting the priority for the input audio source, the playback order of the prompt tone triggered by each dry contact is determined by its priority level.

- ✧ When the next dry contact is triggered, if its input audio source of the same type has a lower priority than the current dry contact triggered audio source, the current dry contact triggered audio source will be played. (for example, host MIC 2 < host MIC 1, so the MIC 1 will be played.)
- ✧ When the next dry contact is triggered, if its input audio source of the same type has a higher priority than the current dry contact triggered audio source, the corresponding zones triggered by the two dry contacts will be superimposed, and the current dry contact triggered audio source will be played.
- ✧ When the next dry contact is triggered, if its input audio source of a different type has a higher priority than the current dry contact triggered audio source, the dry contact triggered audio source with a higher audio priority level will be played. (for example, host MIC 1 > host LINE 3, so the host MIC 1 will be played.)
- ✧ When the first dry contact is triggered and the second dry contact is triggered, if two dry contacts triggered audio sources of the same type and same level are input, the first dry contact triggered audio source will be played. (for example, if the host MIC 1 has priority level 2, and the host MIC 3 has the priority level 2, and the host MIC 1 is triggered before the host MIC 2, the host MIC 1 will be played first.)



Audio Priority Settings Interface

➤ **Dry contact settings**

- **Input/output dry contact settings:** Set the zone to output the trigger alarm for the dry contact, the selected audio source, and the corresponding input dry contact.

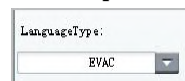


As shown by the buttons in the figure above, the triangle button ▲ or ▼ on the left is used to select the currently connected host, the triangle button ▲ or ▼ on the right is used to select the host input dry contact. Click “Zone contact configuration” to enter the interface as shown below. The triangle



buttons of ▼ are used to select the 8-zone host/8-zone expansion amplifier 1/4-zone expansion

amplifier 1. After selecting, click “Save” and click the triangle button of ▼

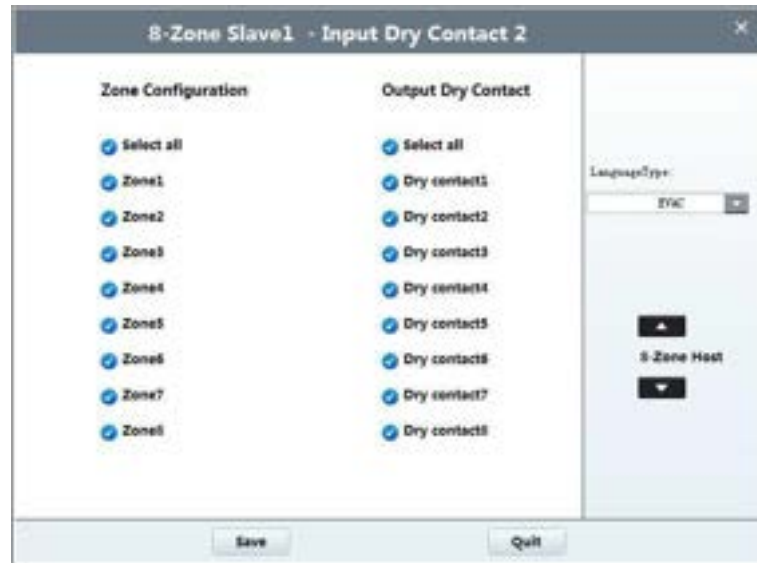


to select the input dry contact.

8-zone host: The corresponding input dry contacts are: 1, 2, 3, 4, 5, 6, 7, 8.

8-zone expansion amplifier 1: The corresponding input dry contacts are: 1, 2, 3, 4, 5, 6, 7, 8.

4-zone expansion amplifier 1: The corresponding input dry contacts are: 1, 2, 3, 4.



Contact Group Settings Interface

- **“Output dry contact”:** Used to set the output zone and output dry contact for each dry contact of the current device when an alarm occurs, that is 1 shortcut operation, which merges multiple operations into 1 operation to facilitate users to respond to the emergency quickly. It is similar to the group configuration and operation of the microphone, with the difference lying in the following:
 - (1) Grouping requires manual operation, while contacts are mostly used for linkage with the third-party system in cases of uncertainty or emergencies.
 - (2) The group operation does not include the output of the dry contact, while contacts include the output of the dry contact, making it easy to control the third-party system for linkage.
- **“Voice type”** is used to select the type of EVAC voice message to be broadcast, which can be “EVAC”, “ALERT”, 2 microphone inputs, 4 line inputs and host built-in alarm (message1-message8).

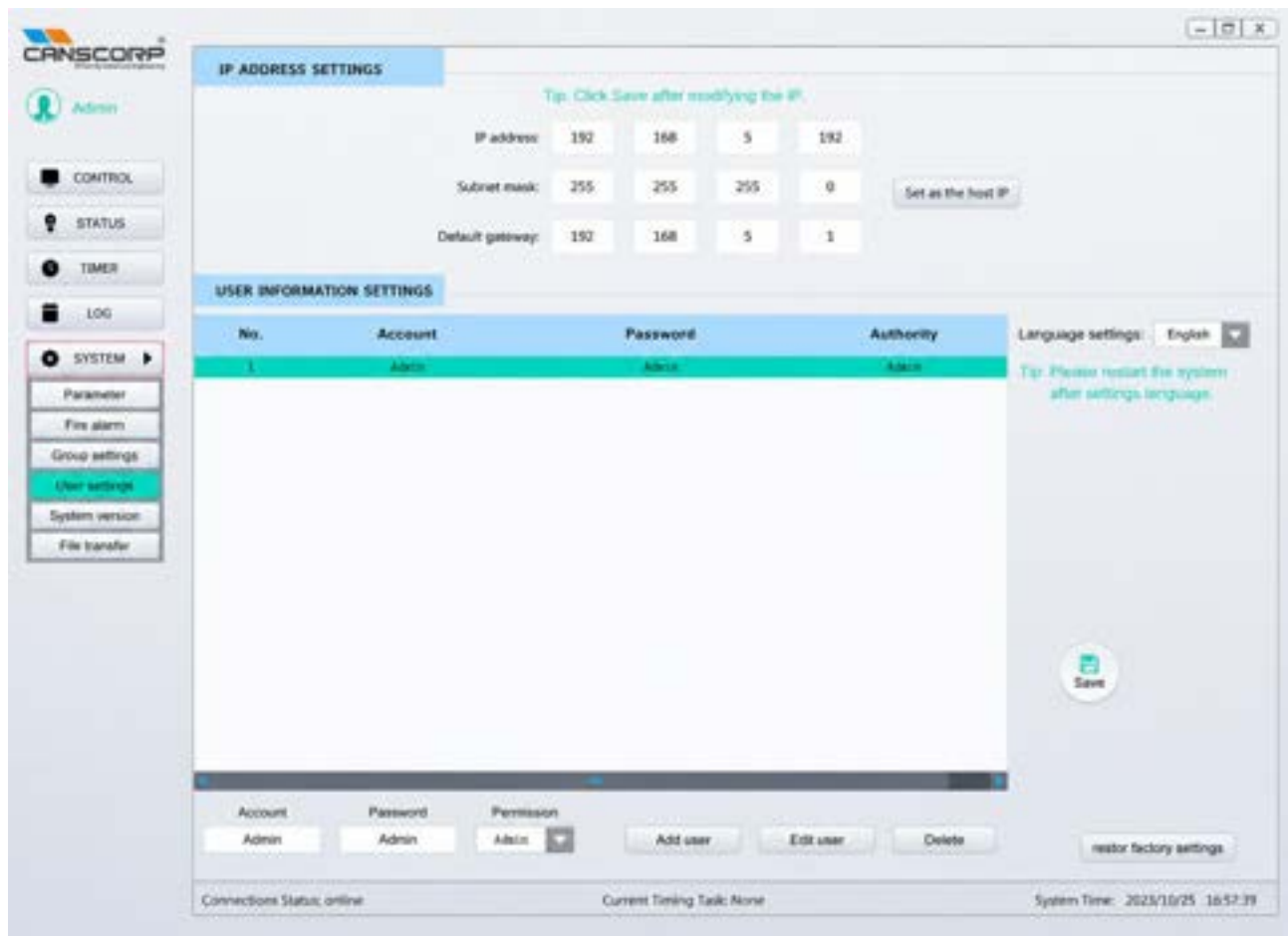
After the setting is completed, click the button  for the changes to take effect.

c. User Settings

Click the User Settings icon to enter the corresponding interface.

- **IP settings:** Can set the IP address, subnet mask and local gateway parameters. After modification, click the “Set as the host IP” (edit and modify suffix) button, and click the “OK” button in the pop-up dialog box. At this time, the system will be offline and the software should be restarted for normal operation (Note: enter the new IP address on the re-login interface).
- **User information settings:** Enter the account name and password, select the administrator or normal user, and then click “Add User” to add the new user information. A maximum of 9 normal users can be set, and there must be 1 administrator user; select an item below the user information list, click the “Edit user” button to modify the user information in the account, password and permission at the bottom of the interface, and click the “Delete” button to delete the selected user information.
- **Language switching settings:** Available in Chinese/English. After selecting a language, restart the software to make it take effect.

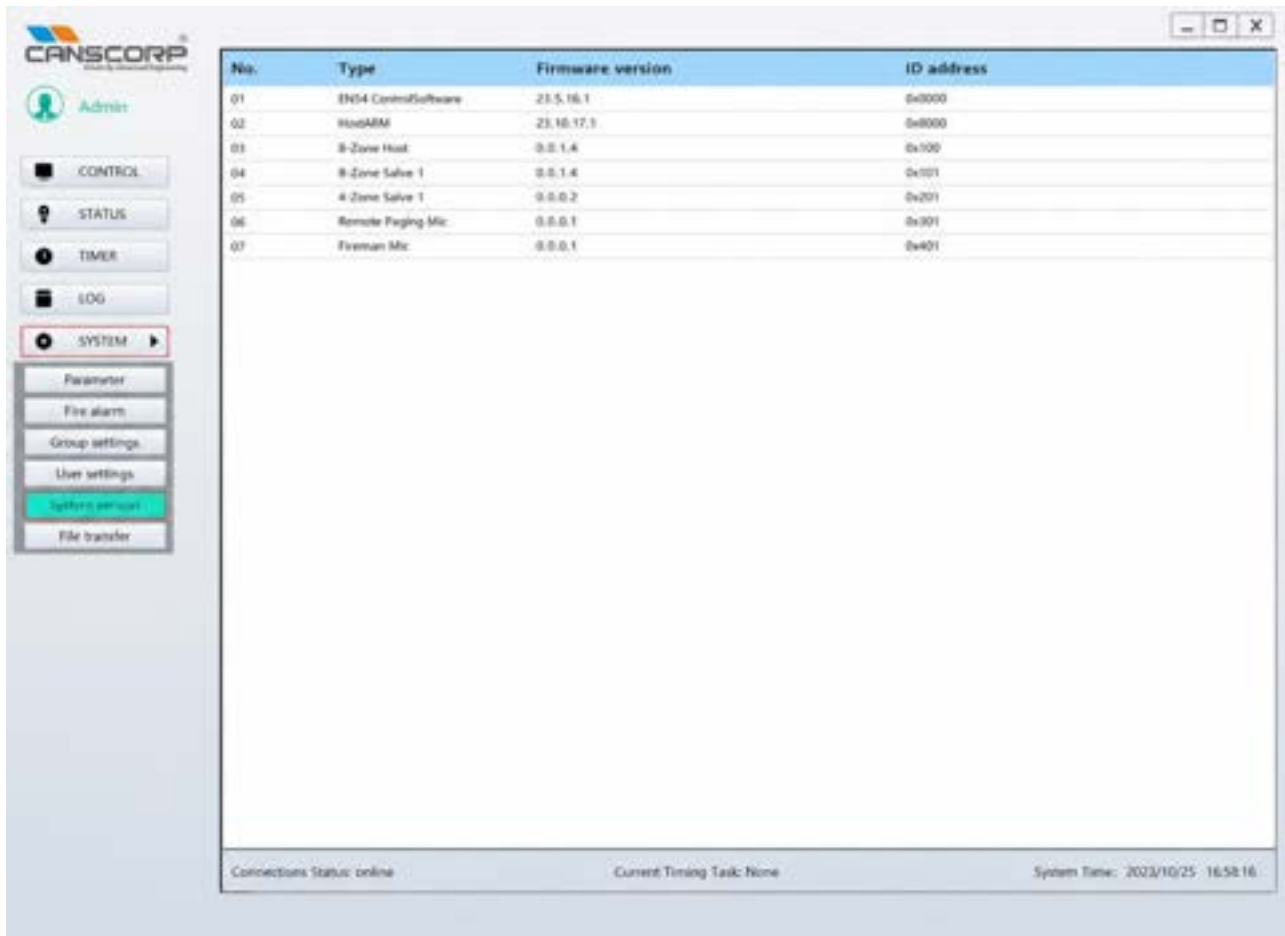
- After the configuration is completed, click the “Save” button to bring up the dialog box “Are you sure to synchronize the user information to the host?”, and click “OK”.
- **Restore Factory Settings:** Click the “Restore Factory Settings” button, and when a prompt of “The factory settings have been restored” pops up, you need to manually restart the host and software, and then it will pop up like this, “Are you sure to restore factory settings?” and then click OK to restore factory settings. When operating “Restore Factory Settings”, if you access other interfaces or click other buttons, a warning of “The EN54 host is restoring factory settings. Please do not perform any other operation.” will pop up on the interface until the factory settings are restored. When the operation of “Restore Factory Settings” is completed, a prompt of “The factory settings have been restored” will pop up!



User Settings Interface

d. System Version

Click the System Version icon to enter the corresponding interface to view the firmware version and ID address of the device.



System Version Interface

e. File Transfer

Click the File Transfer icon to enter the corresponding interface.

Song catalog: It corresponds to the song folder on the host, in the format of MP3 or wav.

Firmware upgrade directory: It corresponds to the firmware upgrade folder on the host, in the format of bin.

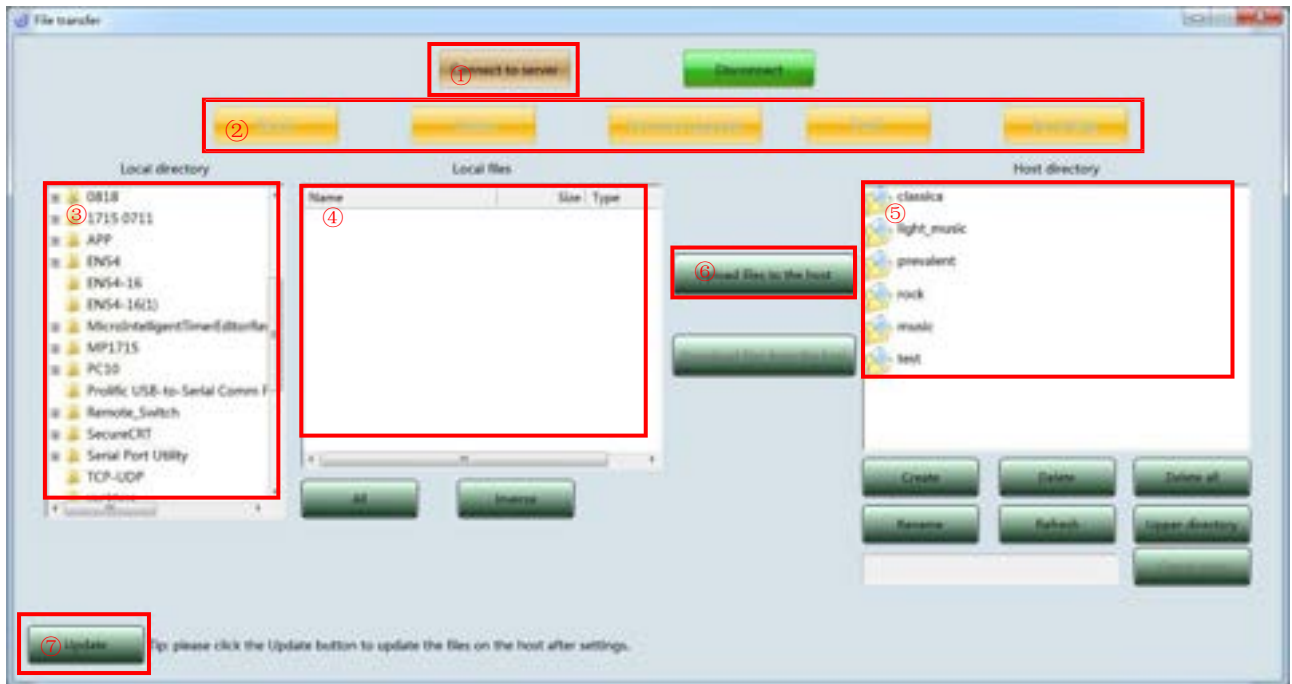
EVAC directory: It corresponds to the EVAC voice folder on the host, in the format of wav.

Prompt tone directory: It corresponds to the prompt tone folder on the host, in the format of wav.

Recording directory: It corresponds to the recording folder on the host, in the format of wav.

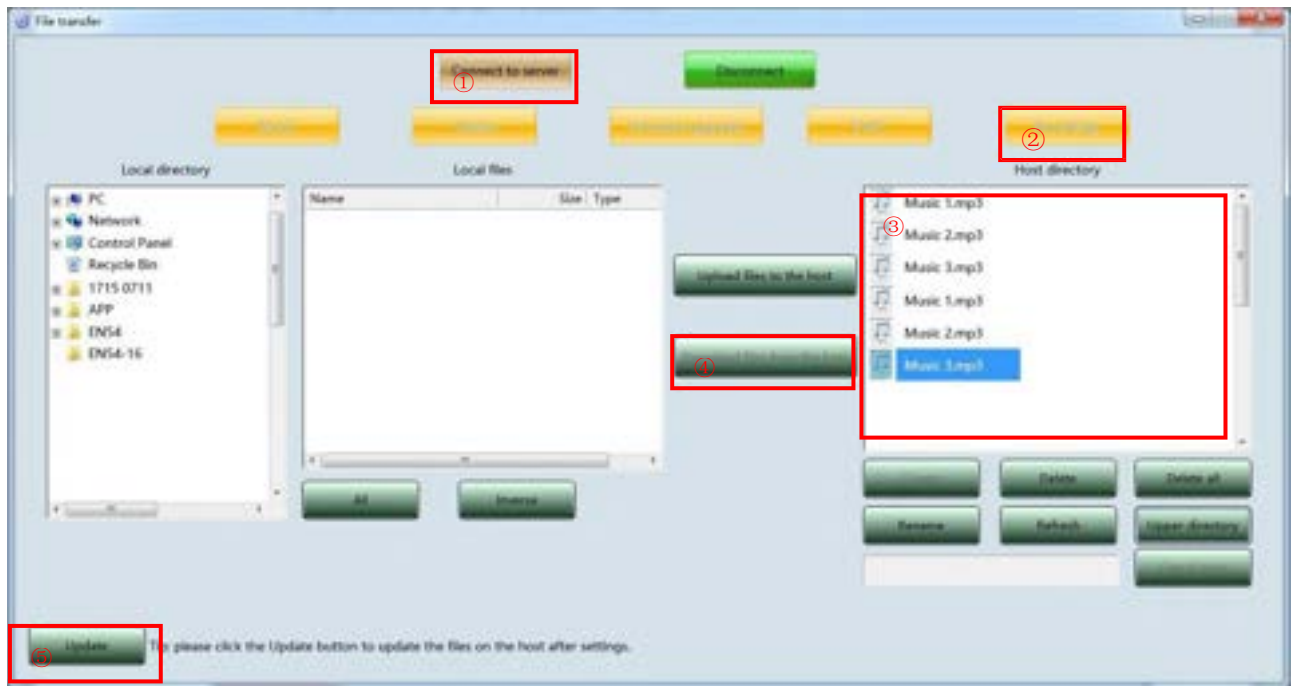
- **Upload files to the host:** Only available for the song catalog, firmware upgrade directory, EVAC directory and prompt tone directory. The steps are as follows.
 - ① Open the “File Transfer” interface and click the “Music” button.
 - ② Click the “Connect to server” button (yellow indicating selected) to connect the server successfully.
 - ③ Select the folder of the file to be uploaded under “Local directory”.
 - ④ Then tick before the file to be uploaded to the host under “Local files”, or click the “All” or “Inverse” button.
 - ⑤ Select and double click the target folder under “Host directory” (**files can be transferred normally only in the next directory of the folder**).
 - Click the “Rename” button to name the selected folder.
 - Click the “Create” button to create a new folder.

- Click the “Delete” button to delete the selected folder or file.
 - Click the “Delete all” button to delete all folders or files on the current page.
 - Click the “Upper directory” button to return to the previous directory.
 - Click the “Refresh” button to refresh the page under “Host directory”.
- ⑥ Finally, click the “Upload files to the host” button. At this time, you will see the status of “Uploading files...” in the display box before “Cancel copy”. Click “Cancel copy” to stop uploading files.
 - ⑦ After the file transfer is completed, it is required to click the “Update” button to update the content on the host.



File Transfer Interface

- **Download files from the host:** Only available for **recording directory**. The steps are as follows.
- ① Open the “File Transfer” interface and click the “Recording” button.
 - ② Click the “Connect to server” button to connect the server successfully.
 - ③ Select the target folder under “Host directory”, and double click to enter and select a single file.
 - Click the “Rename” button to name the selected folder.
 - Click the “Create” button to create a new folder.
 - Click the “Delete” button to delete the selected folder or file.
 - Click the “Delete all” button to delete all folders or files on the current page.
 - Click the “Upper directory” button to return to the previous directory.
 - Click the “Refresh” button to refresh the page under “Host directory”.
 - ④ Click the “Download files from the host” button to download it successfully.
 - ⑤ At this time, click the “Open catalogue” button to open the local folder where the recording was downloaded.
 - ⑥ After the file transfer is completed, it is required to click the “Update” button to update the content on the host.



File Transfer Interface

10. How to Troubleshoot Common System Faults

1. For the “STATE” indicator light on the host or expansion amplifier.

- When it is normally on yellow, it indicates that the zone short circuit fault is disabled.
Solution: Check whether the zone load is well contacted.
- When it is flashing yellow, it indicates that the zone is open-circuited, overloaded or lightly loaded.
Solution: Check whether the zone load is maintained within $20\Omega\sim 2k\Omega$.

2. When the “DC POWER” indicator light of the host or expansion amplifier lights up yellow, with the solution as follows.

- Check whether there is DC power input.
- If there is no standby power input, set DC24V to be disabled (that is, not configured) in the enabling configuration on the PC software.

3. When the “COMMUNICATION” indicator light of the host is off, it indicates that the network connection with the PC is abnormal, with the solution as follows.

- Check whether the network cable between the device and the PC is connected properly.
- Check whether the local IP address of the PC software and the IP address of the host are on the same network segment.

4. When the “COMMUNICATION” indicator light of the expansion amplifier is off, it indicates that the network connection with the host is abnormal, with the solution as follows.

- Check whether the network cable between the device and the PC is connected properly.
- Check whether the number of hosts set on the PC software is consistent with the number of units actually connected.
- Check whether the ID address of the DIP switch exceeds the number of hosts set on the PC software.

5. When the “PAGING” indicator light of the host or expansion amplifier lights up yellow, with the solution as follows.

- Check whether the network cable between the device and the PC is connected properly.
- Check whether the number of hosts and paging microphones set on the PC software is consistent with the number of units actually connected.
- Check whether the ID address of the DIP switch exceeds the number of hosts on the PC software.

6. When the “SYS STATE” indicator light of the host or expansion amplifier lights up yellow, it indicates that the system is detected to be faulty, with the solution as follows.

- Check whether all device cables are connected properly.
- Check whether the number of hosts and paging microphones set on the PC software is consistent with the number of units actually connected.

7. When the “EMG MIC” indicator light of the host lights up yellow, with the solution as follows.

- Check whether the handheld microphone is connected properly.

Precautions for Use

1. Safety Precautions

- Do not connect the equipment to the power grid before the system is connected properly.
- Make sure that the voltage input to the equipment is completely consistent with the required voltage of the equipment, otherwise the equipment may be burned out.
- There is a dangerous voltage inside the machine, which can cause electric shock. Do not open the case without authorization in case of electric shock.
- When the power switch of the equipment is in the “off” state, the machine is not completely disconnected from the power grid. For the sake of safety, unplug the power cord from the power socket when the equipment is not in use.
- Do not place the equipment in a place that is extremely cold or hot.
- Make sure that the equipment is operating in a well-ventilated environment, so as to avoid damage to the equipment caused by overheat and high temperature during operation.
- Unplug the power cord on rainy and wet days or during extended periods of inactivity.
- Unplug the power cord to ensure that the equipment is completely disconnected from the power grid before removing or reinstalling any parts of the equipment, disconnecting or reconnecting any electrical plugs or others of the equipment.
- When the equipment is faulty, do not open the case for maintenance without authorization to avoid accidents or aggravated damage to the equipment.
- Do not place any corrosive chemicals near or on the equipment.

2. After-sales Service Precautions

- The Company provides a three-year free warranty service (including free replacement of parts) over quality issues within the normal use range as from the date of purchase, provided that the equipment is installed and used in accordance with requirements specified in this manual.
- For warranty, the user are required to present the warranty card, the self-retained copy by user and the sales invoice of the equipment as supporting documents.
- The following situations are not covered by the free warranty:
 1. The product is damaged due to improper installation, use or handling;
 2. The product is damaged due to abnormal conditions (such as excessive power supply voltage or ambient humidity);
 3. The product is damaged due to unexpected events such as natural or man-made disasters;
 4. The product serial number is converted, altered or removed;
 5. The product has been repaired or modified by an unauthorized technician.
- Please keep the user manual and warranty card properly.
- For issues or precautions not mentioned in this manual, when necessary, please contact the dealer or visit our website at <https://www.canscorp.com/>.
- During the warranty period, if the equipment is faulty, please contact our service technician (or the dealer) for maintenance. If the damage is caused by unauthorized disassembly or maintenance by an unauthorized technician, the Company will not be responsible for free warranty.

Packing List

PAVA7000/ PAVA7000E Packing List:

No.	Product Name	Quantity
1	PAVA7000 Amplifier Host / PAVA7000E Expansion Amplifier	1 piece
2	Acoustic Handheld Microphone (Only available for the host PAVA7000)	1 piece
3	3.81MM 2P Green Plug	3 pieces
4	3.81MM 3P Green Plug	4 pieces
5	3.81MM 6P Green Plug with Lock	1 piece
6	3.81MM 6P Green Plug (Only available for the host PAVA7000)	1 piece
7	3.81MM 8P Green Plug	4 pieces
8	5.08MM 6P Green Plug	8 pieces
9	8-Pin Green Plug Connector	2 pieces
10	RJ Connector (Crystal Head)	2 pieces
11	SY1196 Cable / 1500MM	1 piece
12	Power Cord	1 piece
13	Cross Recessed Raised Countersunk Head Screw	4 pieces
14	Plastic Washer	4 pieces
15	User Manual (Only available for the host PAVA7000)	1 copy

CNS9425E Packing List:

No.	Product Name	Quantity
1	CNS9425E Expansion Amplifier	1 piece
2	2P Green Plug	3 pieces
3	3.81MM 3P Green Plug	4 pieces
4	3.81MM 6P Green Plug with Lock	1 piece
5	3.81MM 8P Green Plug	2 pieces
6	5.08MM 6P Green Plug	4 pieces
7	8-Pin Green Plug	1 piece
8	RJ Connector (Crystal Head)	2 pieces
9	Network Cable	1 piece
10	Power Cord	1 piece
11	Cross Recessed Raised Countersunk Head Screw	4 pieces
12	Plastic Washer	4 pieces

CNS7008 Packing List:

No.	Product Name	Quantity
1	CNS7008 Remote Paging Microphone	1 piece
2	Crystal Head	2 pieces
3	SY534 Cable/400MM/8-Pin Network Cable	1 piece
4	Microphone Cap	1 piece
5	Microphone Rod	1 piece
6	Power Adapter (Optional)	1 piece

CNS7008E Packing List:

No.	Product Name	Quantity
1	CNS7008E Remote Paging Microphone Expansion Keyboard	1 piece
2	Cross Recessed Countersunk Head Screw	4 pieces
3	Connector	2 pieces

CNS9009 Packing List:

No.	Product Name	Quantity
1	CNS9009 Fireman Microphone	1 piece
2	SY534 Cable/400MM	1 piece
3	RJ Connector (Crystal Head)	2 pieces
4	CB100	1 piece
5	Power Adapter (Optional)	1 piece

CNS9002 Packing List:

No.	Product Name	Quantity
1	Connection Accessory	2 pieces
2	24V Adapter	1 piece
3	3.81MM 3P Green Plug	1 piece
4	Cross Recessed Countersunk Head Screw	8 pieces

Attached Table: Comparison Table of Zone Address and Dialing Code Settings

Address	Dial Code	Address	Dial Code	Address	Dial Code	Address	Dial Code
0	00000	8	01000	16	10000	24	11000
1	00001	9	01001	17	10001	25	11001
2	00010	10	01010	18	10010	26	11010
3	00011	11	01011	19	10011	27	11011
4	00100	12	01100	20	10100	28	11100
5	00101	13	01101	21	10101	29	11101
6	00110	14	01110	22	10110	30	11110
7	00111	15	01111	23	10111	31	11111

Address	Dial Code	Address	Dial Code
0	0000	8	1000
1	0001	9	1001
2	0010	10	1010
3	0011	11	1011
4	0100	12	1100
5	0101	13	1101
6	0110	14	1110
7	0111	15	1111

CAUTION

- When the power switch of the equipment is in the “off” state, the machine is not completely disconnected from the power grid. For the sake of safety, unplug the power cord from the power socket when the equipment is not in use.
- The equipment can not be exposed to water droplets or splashes and objects filled with water such as vases can not be placed on the equipment.
- Do not open the cover of the machine in case of electric shock. If necessary, have it repaired by a certified professional.
- The terminals marked with the symbol ⚡ on the equipment are hazardous live parts, and the connection of these terminals must be completed by an instructed technician.
- The equipment is connected to the power grid through a power cord. When the equipment is faulty or dangerous, it can be disconnected from the power grid by unplugging the power cord. Therefore, it is required to place the power socket in a place where it is convenient to plug and unplug the power cord.

Canscorp Engineers Pvt. Ltd.