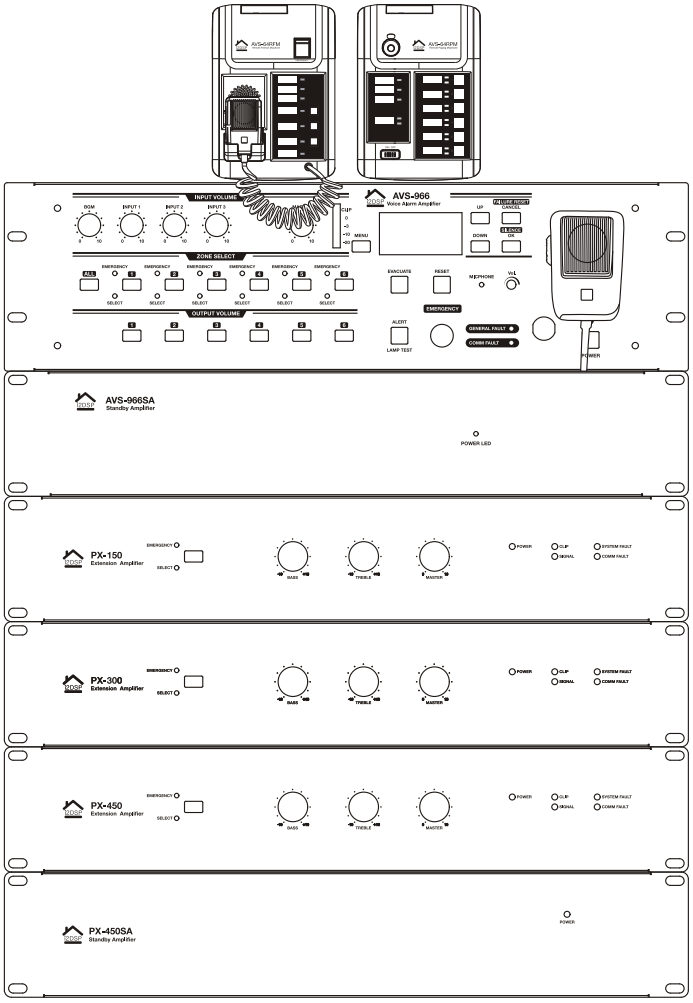
AVS-966S
Voice Alarm System
User Manual



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SAFETY RELATED SYMBOLS

The symbol is used to indicate that some hazardous live terminals are involved within this apparatus, even under the normal operating conditions.

The symbol is used in the service documentation to indicate that specific component shall be only replaced by the component specified in that Documentation for safety reasons.

⏚ Protective grounding terminal.

~ Alternating current /voltage.

ϟ Hazardous live terminal .

ON: Denotes the apparatus turns on.

OFF: Denotes the apparatus turns off, because of using the single pole switch, be sure to unplug the AC power to prevent any electric shock before you proceed your service.

WARNING: Describes precautions that should be observed to prevent the danger of injury or death to the user.

Disposing of this product should not be placed in municipal waste and should be separate collection.

CAUTION: Describes precautions that should be observed to prevent danger of the apparatus.

WARNING

- **Power Supply**

  Ensure the source voltage matches the voltage of the power supply before turning ON the apparatus.

  Unplug this apparatus during lightning storms or when unused for long periods of time.

- **External Connection**

  The external wiring connected to the output hazardous live terminals requires installation by an instructed person, or the use of ready-made leads or cords.

- **Do not Remove any Cover**

  There are maybe some areas with high voltages inside, to reduce the risk of electric shock, do not remove any cover if the power supply is connected.

  The cover should be removed by the qualified personnel only.

  No user serviceable parts inside.

- **Fuse**

  To prevent a fire, make sure to use fuses with specified standard (current, voltage, type). Do not use a different fuse or short circuit the fuse holder.

  Before replacing the fuse, turn OFF the apparatus and disconnected the power source.

- **Protective Grounding**

  Make sure to connect the protective grounding to prevent any electric shock before turning ON the apparatus.

  Never cut off the internal or external protective grounding wire or disconnect the wiring of protective grounding terminal.

- **Operating Conditions**

  This apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on this apparatus.

To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.

Do not use this apparatus near the pound. Please install the device in accordance with the manufacture`s instructions. Do not install near any heat environment .Such as radiators, heat registers,stoves, or other apparatus(including amplifiers) that produce heat.Do not bolck any ventilation openings.

No naked flame sources, such as lighted candles, should be placed on the apparatus.

IMPORTANT SAFETY INSTRUCTIONS

- Read these instructions.
- Follow all instructions.
- Keep these instructions.
- Heed all warnings.
- Only use attachments/accessories specified by the manufacturer.

- **Power Cord and Plug**

Do not defeat the safety purpose of the polarized or grounding type plug.

A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

- **Cleaning**

When the apparatus needs a cleaning, you can blow off dust from the apparatus with a blower or clean with rag etc.

Don't use solvents such as benzol, alcohol, or other fluids with very strong volatility and flammability for cleaning the apparatus body. Clean only with dry cloth.

- **Servicing**

If the machine is damaged or the following conditions occurred:

-Power cord or plug is damaged
-Some objects including liquids and solids fall into the machine
-The machine is wet by the rain
-The device can not work due to the moist or the device was destroyed;

Please find the professionals to check out. If you are not professionals, do not fixed it by yourself.

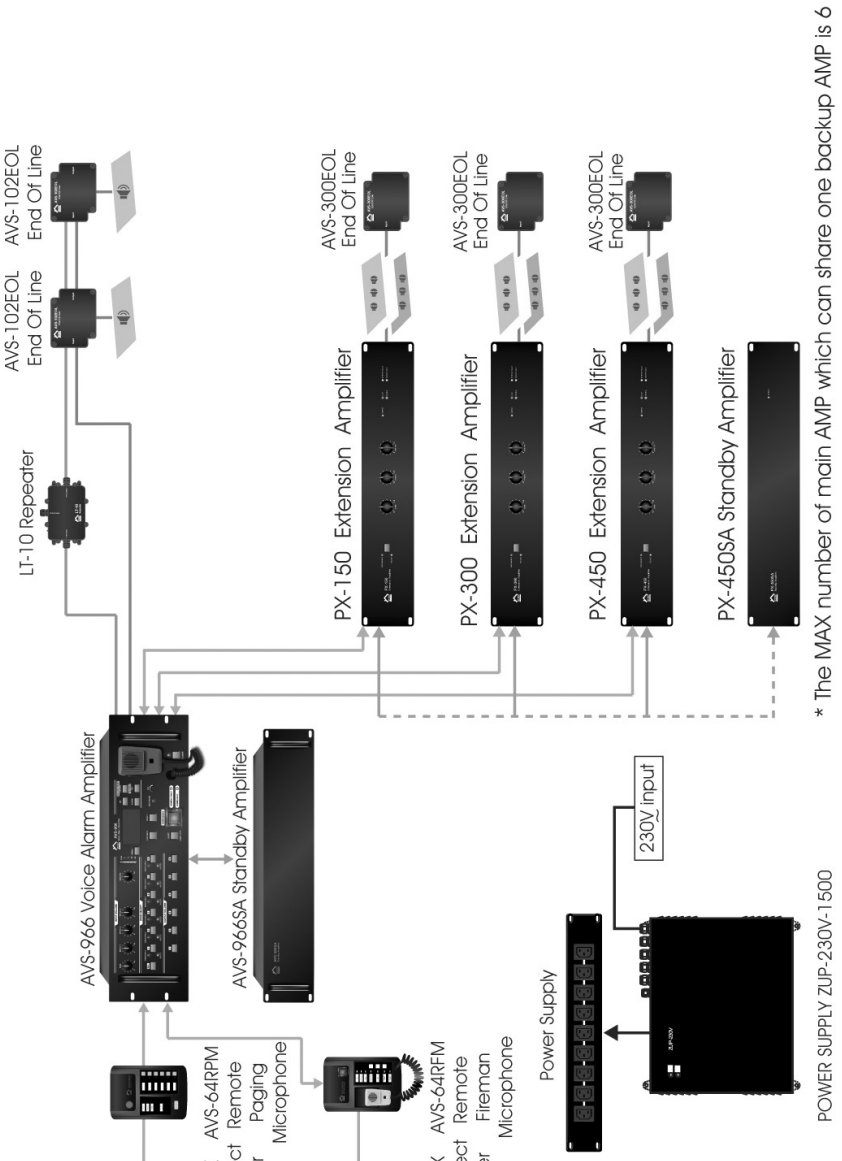
PRECAUTIONS

1. Please read the entire of user manual carefully before using the products and process related steps or configuration according to the instruction of manual in order to ensure the device and run normally.
2. Device maintenance only can be carried our by professions and various functions of the device should be inspected every year in order to ensure the device runs normally,
3. Maintenance personnel are not allowed to dismantle the internal wiring of the equipment at will, Once the equipment fails and not caused by human error, please contact the dealer.

SYSTEM COMPONENTS AND EQUIPMENT DETAILS

AVS-996S	Voice Alarm System
AVS-966	Voice Alarm Amplifier
AVS-966EX	Extension Amplifier
AVS-966SA	Standby Amplifier
PX-150	Extension Amplifier
PX-300	Extension Amplifier
PX-450	Extension Amplifier
PX-450SA	Standby Amplifier
AVS-64RFM	Remote Fireman Microphone
AVS-64RPM	Remote Paging Microphone
AVS-64EX	Zones Select Expander
LT-10	Repeater
AVS-102EOL	End of Line
AVS-300EOL	End of Line

SYSTEM CONFIGURATION



GENERAL DESCRIPTION

AVS-966S System is developed as a Fire Emergency Broadcasting System which is given with high reliability, high sound-quality and cost -effective features. The system has been certificated by Eroupe EN54-16 standard. Also it can be usuallly operated as paging bro adcasting , background music and emergency notice. By virture of powerful function, flexible configuration and system extension based on IP network protocol. The system can bring you extremely reliable and superior sound quality experience. It is not only used in large-sized area where complex voice information management & large voice communication required such as airport, train station, But also in small and medium -sized public areas such as supermarket, school, factory, etc.

AVS-966S System Host

-The host AVS-966S can connect more extension amplifier by network made through IP technology. Finally form larger applications system.
-Each AVS-966S has 6 outputs which can connect to 6 AVS966EX or 12 AVS-966EX extension amplifier, It is suitable for large and medium-sized application.
-For AVS-966S system (only one master AVS-966) can be expanded up to maximum 42 zones.
-Each AVS-966 and AVS-966EX can be expanded up to maximum 6 zones.
The 360W Class-AB power amplifier is build-into the AVS-966/AVS-966EX.
-The master AVS-966 have 6 PA ports, each PA port can be connected with one AVS-966EX or two PX-serial amplifier.
-Emergency broadcasts can be made even during power failures if a Emergency Power Supply is connected(for example, the ZUP-230V-1500 from MERAWEX).

The whole AVS-966S system can select different zone extension amplifier according to different applications.

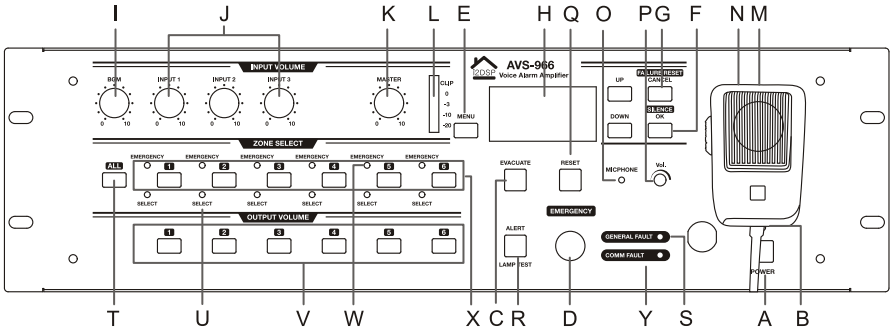
- 360W power and 6 zone outputs applied on AVS-966EX extension amplifier
- PX series extension amplifier includes 150W /300W/450W three different power and single-zone outputs.

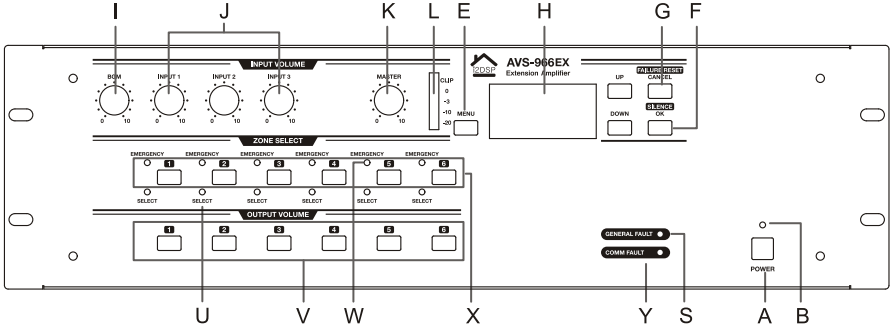
The whole AVS-966S sytem can select different peripheral equipment configuration accor ding to different applications.

-AVS-64RFM Remote Emergency Microphone
-AVS-100RVC Volume Controller
-AVS-102EOL End of Line Module (Horn-line Detection Module)
-AVS-300EOL End of Line Module (Loop-line Detection Module)

HARDWARE FUNCTIONS

1. The front panel introduction of AVS-966/AVS-966EX





A. Power Switch

-Press to enter standby mode, Press and hold it for 3 seconds or use external broadcast trigger to wake up the unit automatically.

B. Power Indicator

-Once the power is connected, this indicator remains lit always.

C. Evacuation announcement/ Evacuation indicator[EVACUATE]

-This key can only be used while in emergency broadcast mode. When the evacuation activated. The key LED will light up and simultaneously it will playback ,record and preset the evacuation annoucement. To stop an evacuation announcement, please hold down this key for 3 seconds or more until the indicator lights out.

D. Emergency Activation Swtich/ Emergency Indicator [EMERGENCY]

-Pressing the switch to enter emergency broadcast mode, and the Emergency Indicator would light up. When an emergency broadcast is activated by a control input other than this switch or by the Fireman's Microphone. the switch indicator will flash and buzzer sounds. Pressing this switch would cause the indicator to stay lit and stopping the buzzer and enabling front panel operation. In any case, this switch goes out once the emergency broadcast is reset.

E. Menu Key[MENU]

-During emergency or general broadcast , this key can be used.

-Press [MENU] to display menu page.

F. OK Key[OK]

-During failure indication, Stops the buzzer when a failure is detected by the surveillance function (Only for AVS--906)

-In other status: Functions as a confirmation key

G. Cancel Key[CANCEL]

-Returns the display to the previous screen during settings.

-Pressing this switch when a failure to reset failure status.(only for AVS-966)

H. LCD

-During emergency or general broadcast, It displays operation and failure information.

-In other status it displays the operation information.

I. BGM Volume Control[BGM]

-Adjust the BGM input volume .

J. Control For Input PIN [1-3]

-Adjust input volume of pin 1-3

K. Master Volume Controls[MASTER]

-Adjust the master vlume in general mode.

L. Level Indication

-Display the output level of amplifier.

M. Emergency Microphone

- Only used in Emergency broadcast mode. Press the Talk key located on side of the microphone to broadcast emergency announcement.

[Note: This operation requires L2 level or above]

N. Monitor Speaker

-Buzzer tone is audible from this speaker when the emergency mode is activated by external equipment or when any failure occurs.

O. Emegency Microphone Indicator

- Emergency Microphone Indicator lights when the front panel-mounted emergency microhpone is used.

Q. Reset Key [RESET]

-During emergency or general broadcasts, Reset the broadcast and returns operation to the default general mode.

R. Alert Announcement Start Key[ALERT]

-In emergency mode, Press this key to play recorded Alert announcements and the key led would light up, Holding down this key for 3 seconds stops the broadcasting.

S. Fault Indicator (yellow)[GENERAL FAULT]

- It flashes when a fault occurs.

-Press the [OK] key to stop the buzzer and switches the indicator from flashing to steady ON. Failure details are displayed on the LCD.

-Failures are not displayed on the LCD when in setting mode. Failure are displayed after exiting the setting mode. Also, if any failure occurs during general or emergency broadcasts, The operation status and failure display are alternately shown on the LCD.

T. All-Zone Call Selection Key[ALL]

-Selects all speaker outputs for general and emergency broadcasts, Press again to reset the selection.

-Lights when an all-zone call is initiated,

U. Selected Zone Indicators(green)[SELECT]

-Indicate the speaker outputs for emergency broadcasts.

V. Speaker Output Volume Control Key[OUTPUT 1-6]

-Press down these keys to enter the volume control menu.

W. Emergency Broadcast outputs Indicators (red)[EMERGENCY]

- Indicate the speaker outputs for emergency broadcasts.

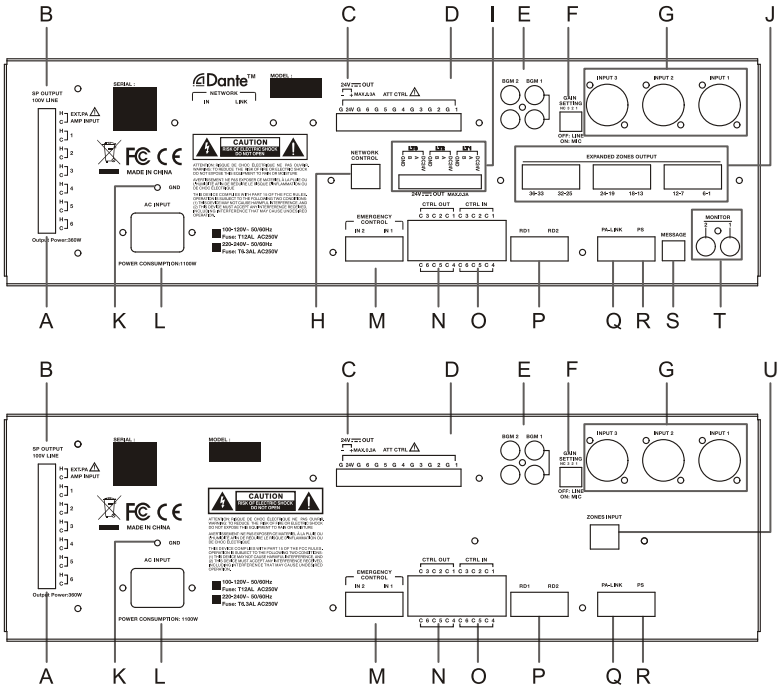
X. Output Selection Keys

-Select corresponding speaker output.

Y. Communications Failure Indicator(yellow)[COM FAULT]

- Flashes when failures are detected in communications.

2. The rear panel introduction of AVS-966/AVS-966EX



A.Speaker Output Terminals 1-6 [SP OUT 100 VLINE 1-6,H,C]

-Connect speakers to these outputs.

B. External Amplifier Input [EXT.PA AMP INPUT]

-Audio input terminals from standby amplifier AVS-966SA.

C.DC 24V Output Terminal

- Supply 24V DC outputs, the max 0.3A.

D.Forced interpolation control of external volume

-Connected to forced interpolation control of external volume.

E. BGM Inputs Terminals

-Connected to the BGM sound source.

F. Gain Control Switch.

G. Audio Input Terminals 1-3

- Optional LINE or MIC outputs can be selected.

H. Network Control Interface

- Process the configuration of PC software after connected to computer. When DANTE module used, it can communicate with PC only through network interface , If none

DANTE module used, the interface can be used to communicate with PC.

I. LT Terminal(1-3)

- Using LT1 and LT2 to connect with LT device. LT3 is used to connect to the fire center.

J. Expanded Zone Outputs (total 6 terminals)

-Used to connect with extension amplifier , One single system can be expanded up to 42 zones.

-If PA-OUT terminal used to connect with AVS-966EX, Each terminal only can be connected to 1 AVS-966EX.

-If PA-OUT terminal used to connect with extension amplifier PX series , Each terminal only can be connectted up to 2 PX series amplifiers.

K. Functional Ground Terminal

L. AC Input

-Hum noise may be generated when external equipment is connected to the unit. Under this case please try to connect the terminal to the functional GND terminal of the external quipment in order to reduce hum noise level.

- Connects to an AC outlet using the supplied AC power cord,

M. Emergency Control Input Terminals 1-6 and Status Output Terminals.

-Connect to an automatic fire alarm system and activate emergency broadcasts. playback/stop automatic emergency announcements and reset emergency broadcasts.

-Provide the following status outputs, Emergency status output/failure status output.

N. Control Output Terminals 1-6

-Control output terminals for general broadcasts.

O. Control Input Terminals 1-6

-Control input terminals for general broadcasts/

P. Remote Microphone Link Connectors [RD1/RD2]

-Connect to AVS-64RFM or AVS-64RPM or AVS-100RVC, etc.

Q. Standby Output

-Connected to standby amplifier.

R. Backup Power Status Outputs

-Connected to AVS-100PS

S. Voice Message

-Connected to a computer with a USB cable. Turn on the unit, Click the menu enter system settings →flash memory(store the voice message into the mode you selected)

-Three optional modes means Emergency, General and Timing.

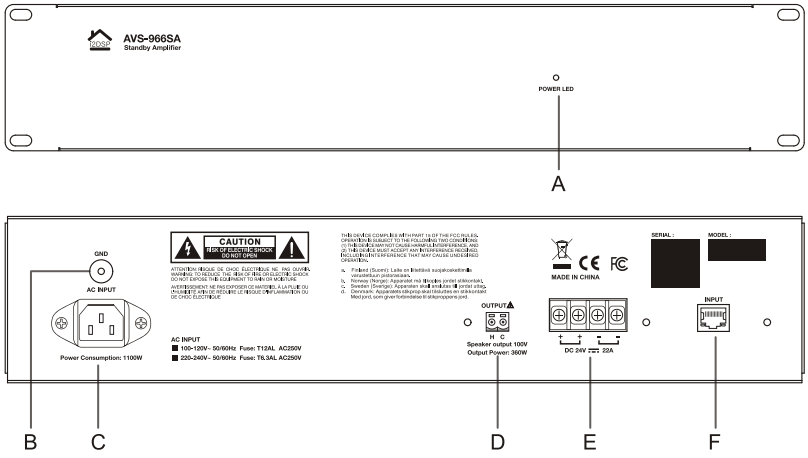
T. Moniting

-Monitoring Audio signal output such as emergency, audio, timing message and so on.

U. ZONES INPUT

- connected to the expanded-zone output port of the master. for communication transmission and control.

3. AVS-966SA Standby Amplifier



A. Power Indicator

-Lights green when power is supplied to the unit.

B. Functional Ground Terminal

-Hum noise may be generated when external equipment is connected to the unit. Under this case please try to connect the terminal to the functional GND terminal of the external quipment in order to reduce hum noise level.

C. Power Input

- Connected to power input with the AC power provided.

D. Amplifier Output

- Connect the output of standby amplifier to the master.

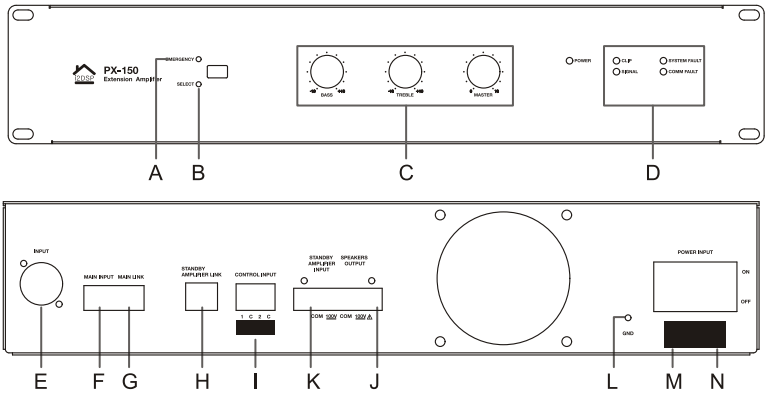
E. 24V DC Output [24V , + , -]

-Provide pre-stage direct output signal.

F. Input

-Connected to the host amplifier and detect current status.

4. PX-150/300/450 Extension Amplifier



A.Emergency Indicator
- The LED will be lit when emergency status happen.

B.Zone Selection
- The function has been enabled when the key is pressed and lit .

C. Volume Control
-To adjust the volume size based on treble/bass/master volume.

D. Status Indicator
- Display power/clip/signal /the system fault/communication fault status.

E. Local Input
-LINE input.

F. Main control input
- Connected to the expanded-zone output port of the master.

G. Main control connection
-Linked to the next PX amplifier.

H.Standby amplifier connection
- Connected to standby amplifier.

I. Control Input
-Control the input port of general broadcasting.

J. Speaker Output
- Signal is connected to speaker.

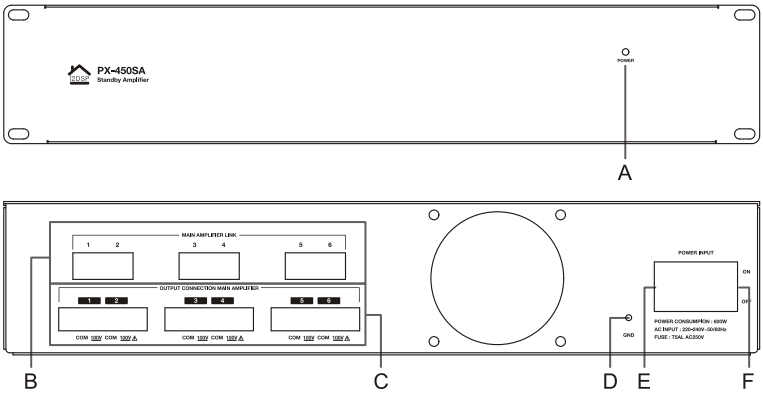
K. Standby Amplifier Input
-Signal input port for standby amplifier.

L. Functional Ground Terminal
-Hum noise may be generated when external equipment is connected to the unit. Under this case please try to connect the terminal to the functional GND terminal of the external quipment in order to reduce hum noise level

M. Power Input
-Connected to power input with the AC power provided

N. Power Switch
- To power on/off the unit.

5. PX-450SA Standby Amplifier



A. Power Indicator

-Lights green when power is supplied to the unit.

B. Main Amplifier Input

- The signal input from PX amplifer and process status detection.

C. Main Amplifier Output

- Signal output of standby amplifer.

D. Functional Ground Terminal

-Hum noise may be generated when external equipment is connected to the unit. Under this case please try to connect the terminal to the functional GND terminal of the external quipment in order to reduce hum noise level.

E. Power Input

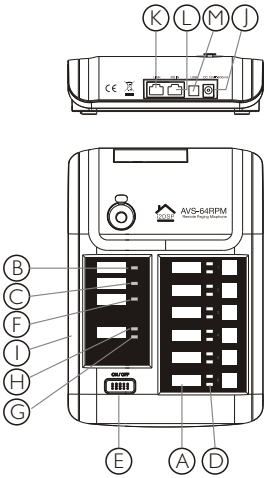
- Connected to power input with the AC power provided.

F. Power Switch

-To power on/off the unit.

6. AVS-64RPM Remote Paging Microphone

The AVS-64RPM Remote Paging Microphone connects to the AVS-906 or AVS-906EX for the purpose of making general broadcast announcements. It communicates with the AVS-906 or AVS-906EX through its RS-485 interface. Zone selection or message announcement start can be assigned to the function key using the PC software. No emergency broadcasts can be made with this microphone.



A. Indication Label Holder

- Write the name, purpose, etc. of the indicator and key on a label and stick the label on the holder .

B. Power Indicator led

- Lights when power is supplied to the unit.

C. Communication Failure Indicator (yellow)

- Flashes when a failure is detected in communications.

D. Broadcast Zone /general message broadcast Announcement Start Indicators led.

- Key function assigned to each key is determined by PC software settings.

E. Talk Key

This key is used for general broadcast microphone announcements. Pressing the Talk key after zone selection allows microphone announcements to be broadcast over the selected zone.

F. General Fault led

-A blinking yellow light indicates a system failure, and a steady yellow light indicates no sound during the failure.

G. MIC status Indicator(Green)

Blinking means the broadcast is suspended, and steady light means the microphone is broadcasting.

H. Emergency Microphone Indicator Description

- This green light is flashing, indicating that the host emergency microphone is broadcasting.
- This green light is solid, indicating that this microphone can broadcast.

I. AVS-64EX Connector (on the bottom) [Extension]

- Connect the AVS-64EX Remote Microphone Extension to this connector.

J. Power input connector

- When the cable from the last AVS-64RFM or AVS-64RPM to AVS-906 or AVS-906EX is larger than 100 meters, you need to input power through this port.

K. Link Connector (RJ45 Connector)

- Connects to the next equipment.

L. RD In

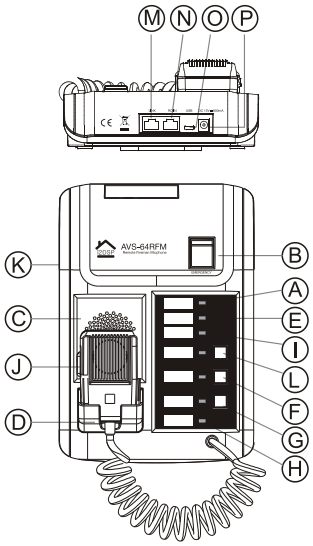
- Conneted to AVS-906 or Previous equipment

M. Message update interface

-Replacing the internal message of the machine through this port.

7. AVS-64RFM Remote fireman's Microphon

This microphone is designed to be used exclusively for emergency broadcasting made by firemen or other persons when instructing building occupants to evacuate in emergency situations. It can activate the emergency announcements, reset emergency signals, and make live microphones, reset emergency signals, and make live microphone annoucements in emergency situations.



A. Power Indicator (green)

-Lights when power is supplied to the units.

B. Emergency Activation Button/Emergency Indicator (red)

- Press this button can set the system to emergency mode. When the external device activates the emergency mode, the indicator light flashes. In this case, if the emergency start is confirmed by pressing the switch, it will change from blinking to steady state.

C. Buzzer

- Sounds when a fault is detected or when an external device activates emergency mode, and sounds when the light is on.

D. Microphone Holder

-Holder for the emergency microphone

E. Communication Failure Indicator

- The yellow will flash when failure is detected during communication.

F. Alert Announcement Start Key/Lamp Test Key

-Press the key to play the Alert announcement when in emergency mode. Pressing this key without first selecting the zones automatically makes an all-zone call . To stop the Alert announcement , hold down this key for 3 seconds, Pressing this key during general broadcast mode allows a lamp test to be conducted.

G. Emergency Reset Key

-Reset emergency broadcasts to return to general mode.

H. Emergency Microphone In-Use Indicator (green)

-Emergency Microphone is illuminated green when used for broadcasting.

I. Fault Indicator

-A blinking yellow light indicates a system fault, and a steady yellow light indicates to mute the failure.

J.Emergency Microphone

-After the emergency mode is activated, pres the Talk key located on the side of the microphone to make an all-zone call or emergency broadcast over the selected zones . [Note: This operation requires L2 level or above]

K. Zone-selection expander link port (bottom)

-Used to connect with the next equipment.

L. Evacuation announcement button

-The button is usually only used in emergency broadcasting mode. Once the button is enabled, the button indicator will light on. Press down the button to playback the recorded evacuation announcement via the output of speaker which is selected with output -selection button. During broadcasting, please press and hold the button for 3 seconds or more to stop or withdraw announcement.

M. Linkage

-Connect to next equipment.

N. Rd In

-Connect to AVS-966 or Previous Equipment.

O. USB

-Used to update voice message.

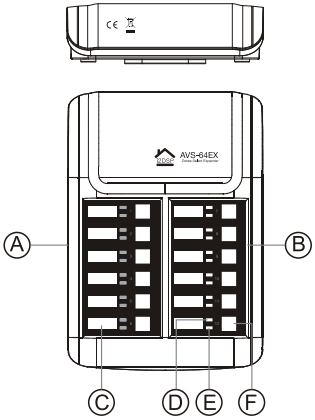
P. Power Supply Input Connector

-When the cable distance from the last AVS-64RFM or AVS-64RPM or AVS-966 or AVS-966EX is greater than 100 meters, you need to input power through this port.

8. AVS-64EX Zones Select Expander

The AVS-64EX is an expansion unit for the AVS-64RFM and AVS-64RPM. Up to 3 Expansion Units can be added, expanding the available function keys to up to 36 per unit.

Just suggest to add or remove some zone-selection expander under the power-off status in order to avoid any wrong operation.



A. Connection Cable (on the bottom)

-Connector 1: Used for connection to the AVS-64RFM or AVS-64RPM or previous AVS-64EX

B. Connection Cable (on the bottom)

-Connector 2: Used for connection to next AVS-64EX

C. Indication Label Holder

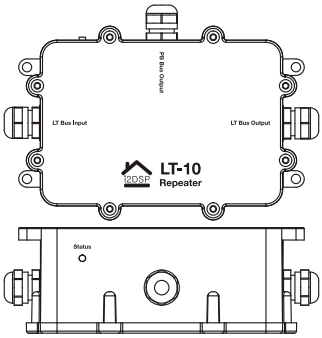
-Write the name, purpose, etc. of the indicator and key on a label and stick on the Label Holder

D. Broadcast Zone Indicators Led

- Light to indicate the corresponding selected zone.

F. Selection key

9. LT-10 Repeater



a. Bus Input

- Connect to the LT1 port of the host based on KS-485 communication protocol.

b. PB Bus Output

-Connect to sub-device horn-detection module.

c. Bus Output

- Link to multiple LT-10 devices.

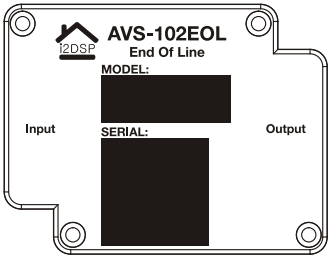
10. AVS-102EOL End of Line Module Single-point detection

a. Input

-Connect to PB bus output and EOL output terminals.

b. Output

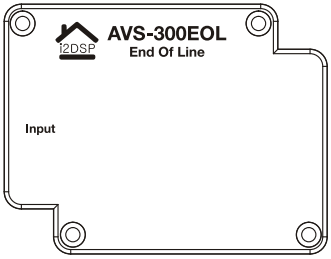
-Signal output to the horn port.



11. AVS-300EOL End Of Line Module

a. Input

-Connected to the end of horn line.



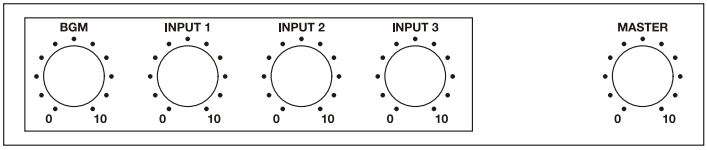
Routing General input of AVS-966 or AVS-966EX to SP outputs of AVS-966 or AVS-966EX

Step 1 : Enable or disable the general input with PC software and set up deference priority for the general inputs if necessary.

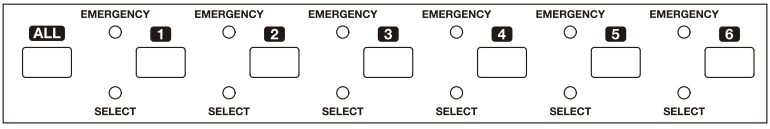
Audio Input		Name	Priority
Input1	☐	Input1	1
Input2	☐	Input2	1
Input3	☐	Input3	1
BGM	☐	BGM	1
Network Audio 1	☐	Network Audio 1	1
Network Audio 2	☐	Network Audio 2	1
Network Audio 3	☐	Network Audio 3	1
EV Message		EV Message	1

Step 2: If Input 1-3 or BGM enable. Please adjust the volume of Input 1-3 or BGM to the correct position of rear panel for AVS 966 or AVS-966EX.

Step 3: Rotate the volume knob to the correct position of front panel of AVS966 or AVS-966EX.

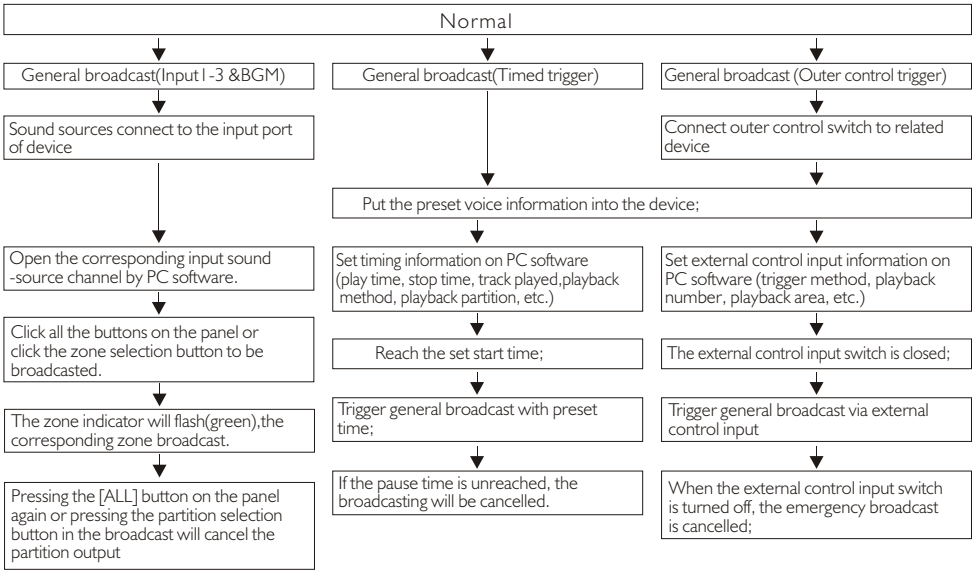


Step4: Press [ALL] key to assign general input to all zones or press [Zone Selection] to select the zone where the general inputs will be assigned.



Making General Broadcast from AVS-966 or AVS-966EX by activating the control inputs

AVS-966 &AVS-966EX Trigger general broadcast process.

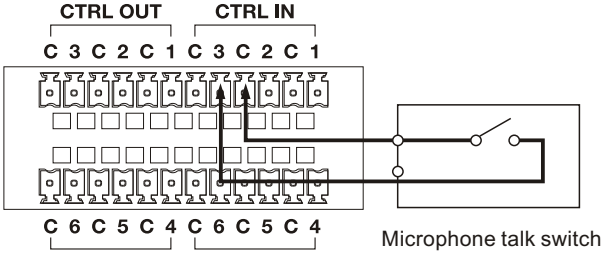


Step1: Set up the Control Input Function and select the broadcasting grouping zones.

Control Input

NO.	Name	Function	Zone Select
1	GENERAL-CI1	EMC M5G-1	1.Zone1
2	GENERAL-CI2	EMC M5G-2	2.Zone2
3	GENERAL-CI3	EMC M5G-3	3.Zone3
4	GENERAL-CI4	EMC M5G-4	4.Zone4
5	GENERAL-CI5	EMC M5G-5	5.Zone5
6	GENERAL-CI6	EMC M5G-6	6.Zone6

Step2: Connecting the outer control switch to control input material.



Step3: Close or open the outer control switch to start or close a general broadcast.

MAKING GENERAL BROADCAST FROM AVS-64RPM

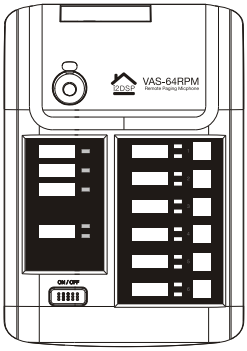
1. Making general MIC broadcast

Step 1: Set up the select key function of AVS-64RPM as "Zone Select" function with PC software

Step 2: Set up the "ON/OFF" key mode: setting "PPT" or "LOCK" Mode with PC software.

Step 3: Press the zone select key to select the broadcast zones

Step 4: Press "ON/OFF" key to start or stop broadcasting

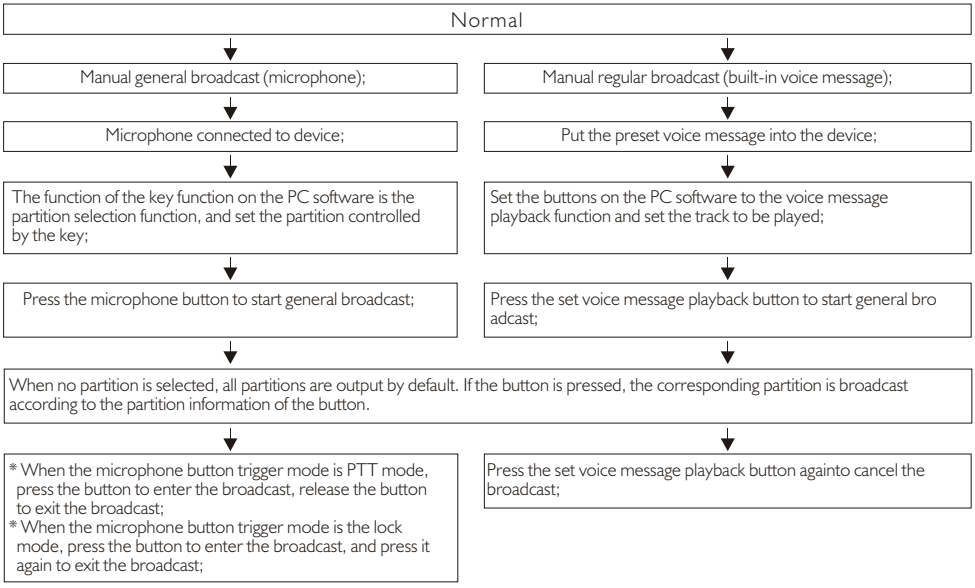


2. Making general recorded message broadcast

Step 1: Set up the select key function of AVS-64RPM as Message Broadcast" function with PC software

Step 2: Press the selection key to make a message broadcast, Press the button again to stop the broadcast.

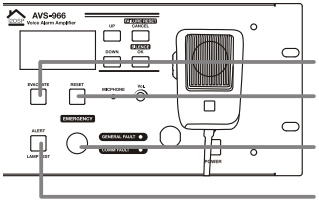
AVS-64RPM General broadcast flowchart

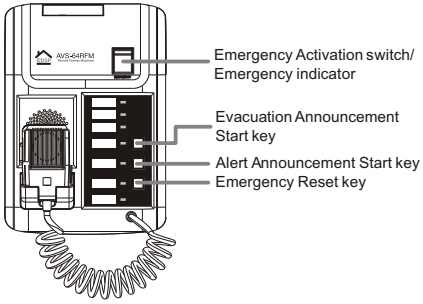


TRIGGERING EMERGENCY BROADCAST

Three methods are used for making emergency broadcast.

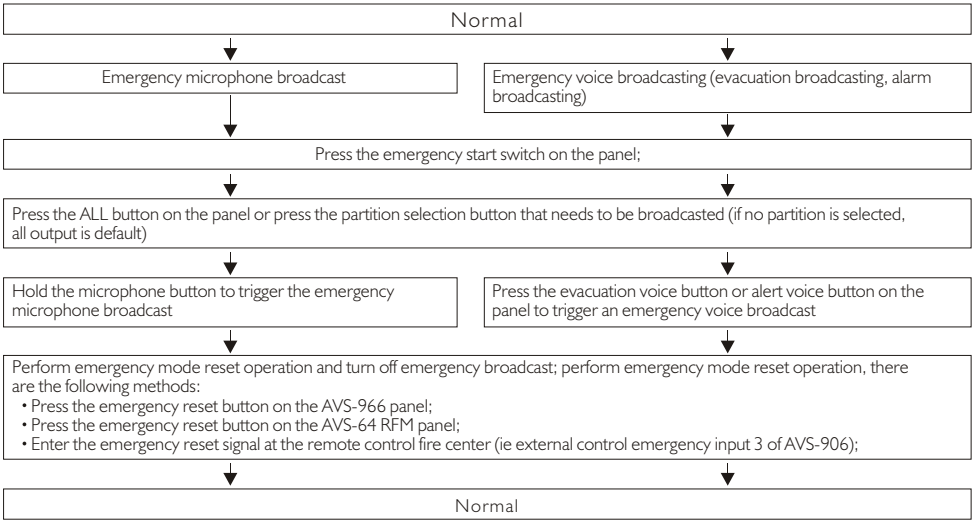
- Press the emergency activation switch on the front panel of AVS-64RFM to initiate the emergency broadcasts.
- Broadcast the automatic emergency announcements using the emergency control input that connected to an automatic fire alarm system or other external equipment.



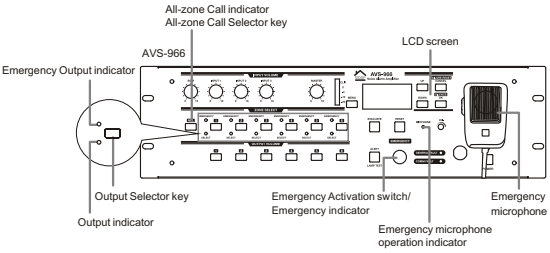


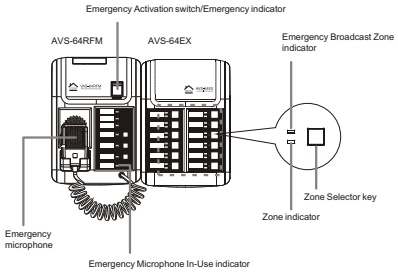
1. Making emergency broadcast with the emergency microphone on AVS-966 or AVS-64RFM

AVS-966 trigger emergency broadcast process



TRIGGERING EMERGENCY BROADCAST





Step 1: Press emergency activation switch to enter emergency mode.

Step 2: Press"ALL"key to select all zones or press the select key to select the broadcast zones

Step 3: make announcement while press the emergency microphone's talk key.

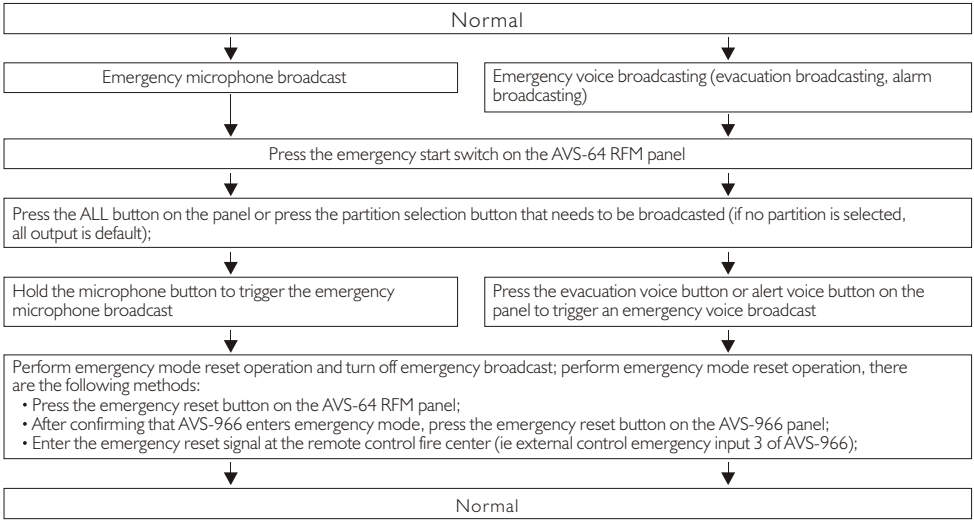
If skip step 2, all the zones would be selected as broadcast zones as default.

Step 4: Reset the emergency mode using the below three methods:

- Press the "RESET" key on the front panel of AVS-966
- Press the "RESET" key on the front panel of AVS-64RFM
- Input a "RESET" signal to the emergency control input of AVS-966 or AVS-966EX

2. ALERT/EVACUATE emergency message announcement broadcasts on AVS-966 or AVS-64RFM.

AVS-64RFM trigger emergency broadcast process



Step 1: Press emergency activation switch to enter emergency mode.

Step 2: Press"ALL"key to select all zones or press the select key to select the broadcast zones

Step 3: press the "EVACUATE"or"ALERT"key to make an announcement. If skip step 2, all the zones would be selected as broadcast zones as default.

TRIGERING EMERGENCY BROADCAST

Step1: Press emergency activation switch to enter emergency mode.

Step2: Press[ALL]key to select all zones or press the selection key to select the broadcasting zones.

Step3: Press[Evacuation Voice] or [Alart Voice] to release announcement. If skip 2, all teh zones would be selected as broadcast zones as default.

Step4: Reset the emergency mode using the below three methods:

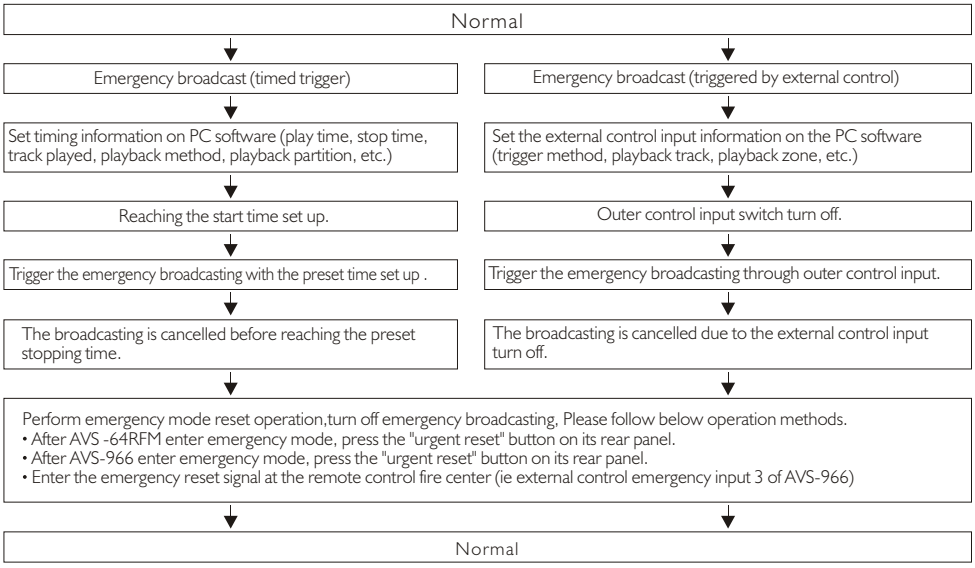
-Press the [RESET]key on the front panel of AVS-966

-Press the [RESET] key on the front panel of AVS-64RFM

-Input a [RESET]signal to the emergency control input of AVS-966 or AVS-966EX.

3. Automatic emergency broadcasting by emergency conctrol input applied on rear panel of AVS-966 or AVS-966EX

Trigger emergency broadcasting with outer control input or timed signal

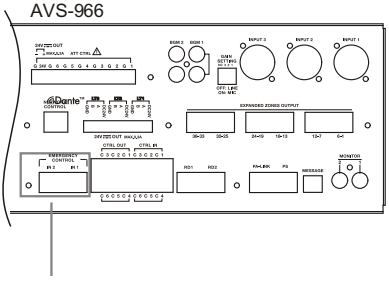


TRIGERING EMERGENCY BROADCAST

Step l : Setup the emergency control input function and select the group zone with PC software

Emergency NO.	Name	Function	Zone Select
1	GENERAL-CI1	EVACUATE(Level)	All zone select
2	GENERAL-CI2	ALERT(Level)	All zone select
3	GENERAL-CI3	Emegency Reset	No zone select
4	GENERAL-CI4	Silence(Pulse)	No zone select
5	GENERAL-CI5	MSG-1(Level)	5.Zone5
6	GENERAL-CI6	MSG-2(Level)	6.Zone6

Step 2: When the fire alarm system is activated , an emergency control signal will output to the fire center.



Step 3: Following following three methods to reset emergency mode:

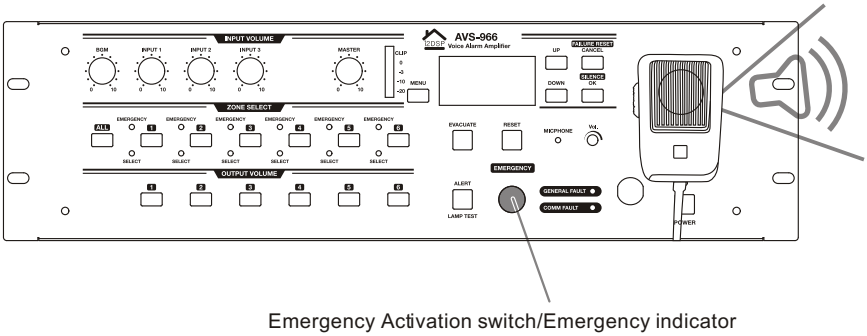
-Press the [RESET] button on the front panel of AVS-966.

-Press the [RESET] button on the front panel of AVS-64RFM.

-Input the reset signal to the emergency control input of AVS-966 or AVS-966EX.

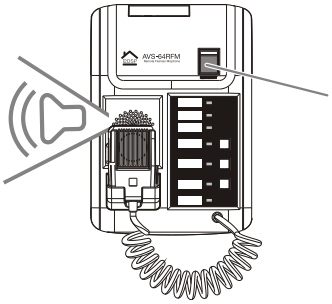
The Equipment status and response when emergency mode is activated by external equipment

1. When the emergency mode is activated by external equipment, Corresponding status and response applied on AVS-966. The emergency indicator flashes and the buzzer sounds. If pressing the emergency switch at this time , the indicator will stop flashing and keep to light up and buzzer will stop too.



Emergency Activation switch/Emergency indicator

2. Under emergency mode which is activated by external equipment, the corresponding status and response applied on on AVS-64RFM. The emergency indicator flashes and the buzzer sounds. If pressing the emergency switch at this time , the indicator will stop flashing and keep to light up and buzzer will stop too.



Emergency Activation switch/
Emergency indicator

PRIORITY SETTINGS

1. Priority List

NO.	broadcast Type	Current priority (can't be changed by user)	subpriority(can be set up by user based on the broadcast generated from different broadcast source)
1	External Emergency broadcast (fire alarm system)	1	1-128 (subpriority broadcast)
2	Emergency Microphone broadcast (From AVS-966 or AVS-64RFM).	2	1-128 (subpriority broadcast)
3	Emergency Broadcast (EVACUATE)	3	1-128 (subpriority broadcast)
4	Emergency Message Broadcast (ALERT)	4	1-128 (subpriority broadcast)
5	Emergency Message Broadcast (To select AVS-64RFM)	5	1-128 (subpriority broadcast)
6	Paging Microphone Broadcast (From AVS-64RPM)	6	1-128 (subpriority broadcast)
7	General Message Broadcast(Control Input)	7	1-128 (subpriority broadcast)
8	General Message Broadcast(to select AVS-64RPM)	8	1-128 (subpriority broadcast)
9	Timer General Message Broadcast	9	1-128 (subpriority broadcast)
10	Local Input (input 1-3,BGM digital input,Message)	10	1-8 Priority settings for local input

Noted:

1. Lower number value means higher priority level.
2. In the same broadcast type, If two different broadcasting sources have the same priority, The broadcasting outputs will obey the "first in first out" principle.
3. For the local inputs, If two different broadcasting sources have the same priority, the broadcasting outputs will be mixed.
4. If the Amplifier host (AVS-966 or AVS-966EX) has been set as BGM or paging broadcast mode. The higer priority broadcast wouldn't interrupt the BGM output zones where none broadcast is assigned to.

System Priority	Main Volume	External ATT.
1-5	BYPASS	BYPASS
6-9	BYPASS	BYPASS
10	Enbale	Enable

SURVELLANCE

1. What is the survellance function

The survellance function means keep monitoring the fault status of system. Related items monitored involved as below:

-The most important components inside the system.

- The important linkage among configured components.

- Communication status for the whole system.

Once fault status is detected, Related message will be displayed on the screen, Also general fault indicator or communication fault indicator will flash. All fault message will be saved to the logs of AVS-966 so that user can review these message with PC software.

2. How to use the survellance function

The survellance function can be enabled with below settings.

-The monitoring settings for initallize fire broadcasting amplifier host AVS-966.

-Using PC software to make monitoring settings initialization.

Ensure to peform initialization after system installment & linkage completed.

3. The moinitored components lists for AVS-966 system

- Fire Broadcasting Host AVS-966
- Emergency Message Memory

-Remote Emergency Microphone (AVS-64RPM).

-Battery

-Speaker Line (shorted or opened circuit)

-Speaker Line (GND fault).

-Charging Device

-Emergency Control Terminals

-Remote Paging Microphone

-Zone Extension Amplifier (AVS-966EX)

-Standby Amplifier (AVS-966SA)

Communication connection among equipments

Enable or disable settings for each above device with PC software.

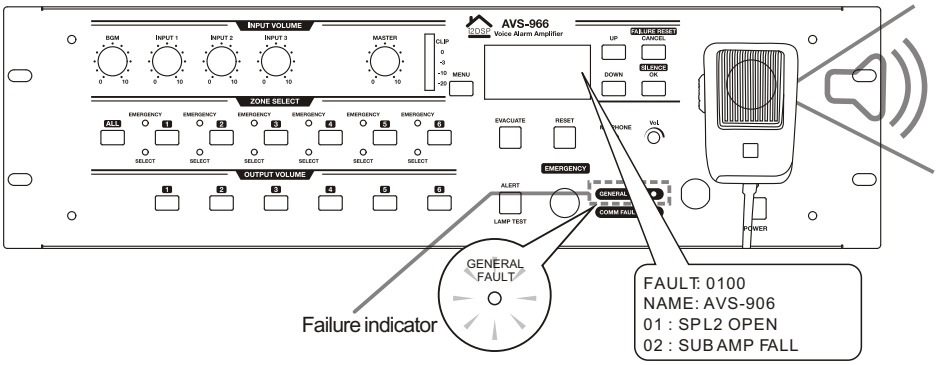
4. Device's Operation & Fault Recovery Under Fault Mode

When the fault is detected by system ,the fault indicator will flash yellow and related fault message will appear on the screen of AVS-966 or AVS-966EX.

Need to operate the device in different way based on different communication error or other faults.

4.1 How to operate when the fault of AVS-966 detected.

Buzzer sounds, Fault indicator flash yellow, Fault message displays on the screen.



In this case, you can find the fault mesage on the screen of AVS-966, press [OK] button to confirm the fault, the indicator will change from yellow blinking to solid yellow lighting. The user can review all fault message by pressing [Upper Page]/[Down Page] button. If the user press [RESET] button to reset the fault, the indicator will light out, However , If the fault can't be solved still, The device will return to fault satus again.

4.3 Fault confirmation

Perform the fault confirmation on AVS-966, After confirmed, the buzzer will stop and the fault indicator of AVS-966 will flash yellow and the fault indicator of AVS -64RFM will be solid lighting.

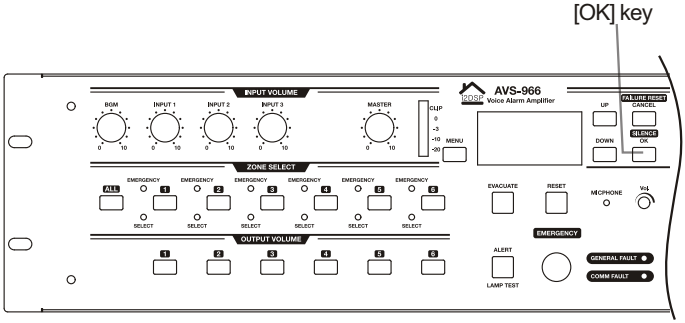
Noted:

-Once the detected fault are confirmed, The fault indicator will change from flashing mode to solid-lighting mode.

-The fault indicator will keep flashing once communication fault is detected.

1). Confim the fault of AVS-966

Press [OK] key to confirm the fault.

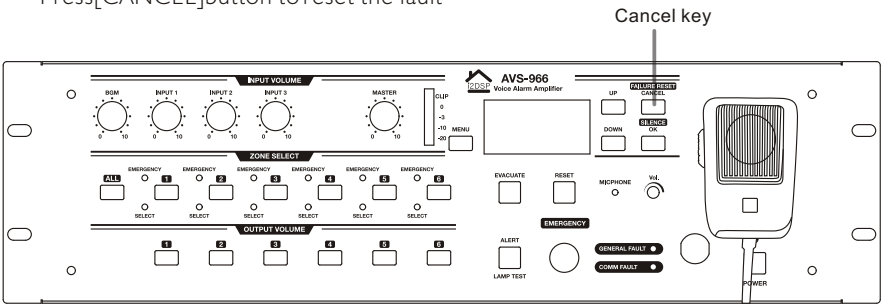


4.4 Fault Reset Operation

The reset operation can be performed on AVS-966 or Outer control input port. After the fault resetet, The current fault indicator (yellow blinking or solid lighting) will light out and make the system recovery to normal status. However, if the fault can't be solved still. The system will return to the fault mode again.

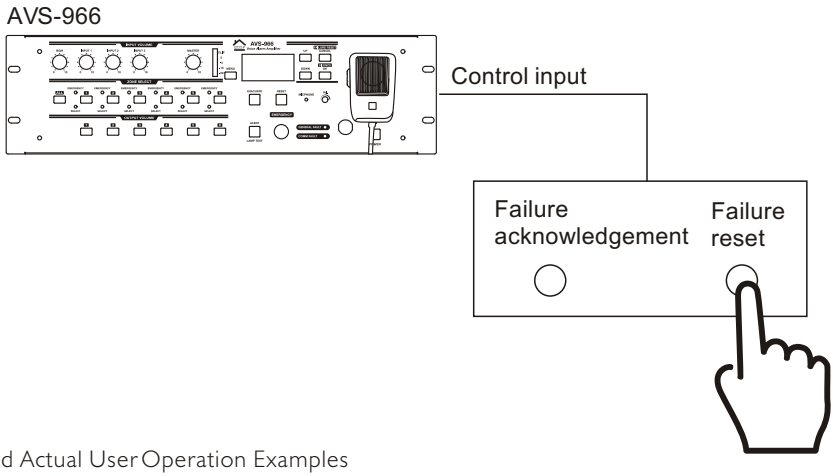
1). Reset the fault happened on AVS-966

Press[CANCEL]button to reset the fault



2). Reset The Fault Through Outer Control Input Port

Using the outer control port applied on AVS-966 or AVS-966EX to reset the fault.

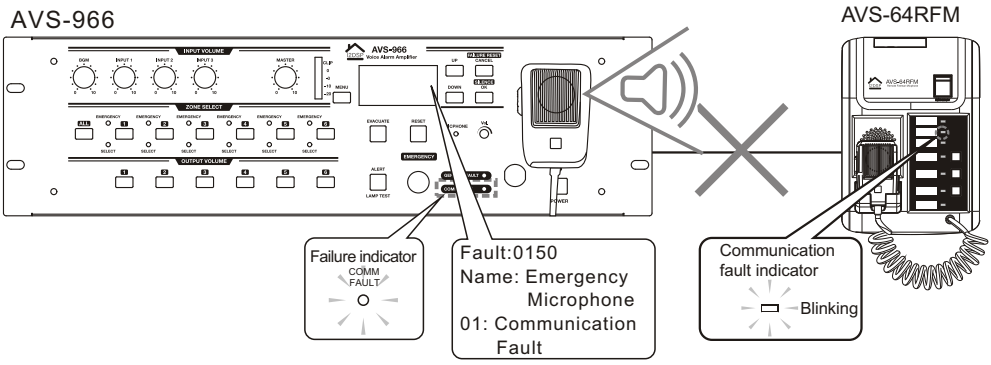


5. Faults And Actual User Operation Examples

5.1 Examples 1 : Communication faults

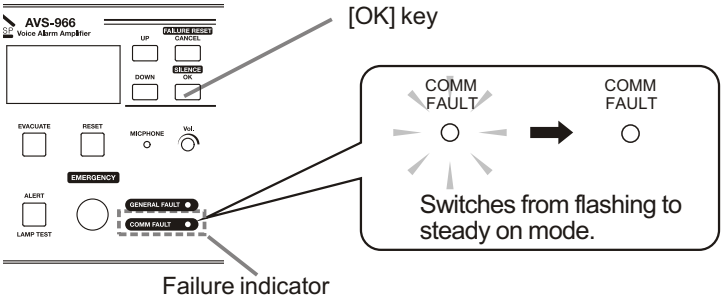
Assuming that the communication is disconnected between AVS966 and AVS-64RFM, Once the fault is detected , The device will run as below:

- The buzzer of AVS-966 sounds, Fault indicator will flash yellow , Related fault messages will be shown on the screen, The fault indicator on AVS-64RFM will falsh yellow too.



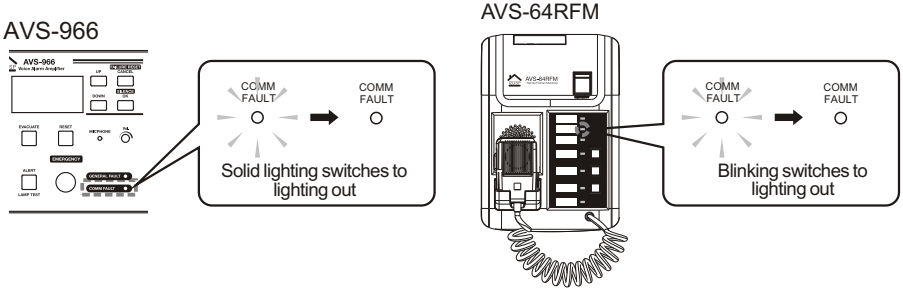
Following below operation methods once communication fault happen:

Step1: press the [OK] key on AVS-966 to confirm the fault, Then buzzer sounds stops, And the fault indicator will change from yellow blinking to yellow solid lighting.



Step2: Analyse the cause and remedy it, Then reconnect these cables between AVS-966 and AVS-64RFM in correct way.

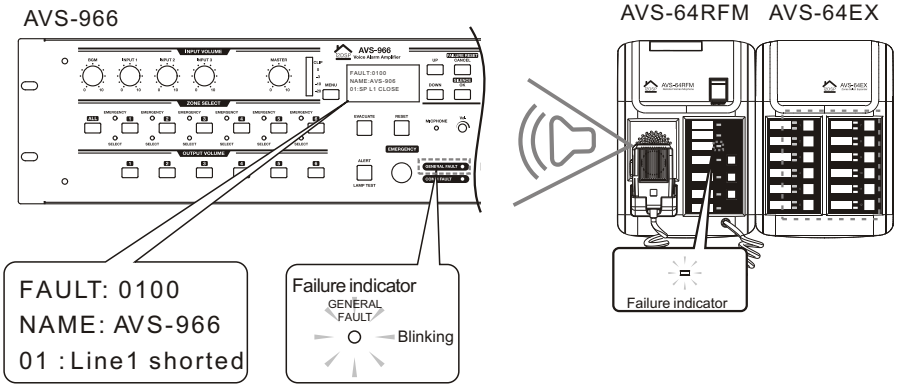
Step3: If the communication recovery , the system will return to previous status automati cally, Simultaneously related fault indicators on AVS-966 and AVS-64RFM will light out.



5. Examples 2: Short-circuit Speaker's Line

Assuming that the speaker's line 1 is shorted connected to AVS-966, Once the fault is detected , The device will run as below:

- The buzzer of AVS-966 sounds, Fault indicator will flash yellow , Related fault messages will be shown on the screen, The AVS-64RFM will sound and its fault indicator will falsh yellow too.

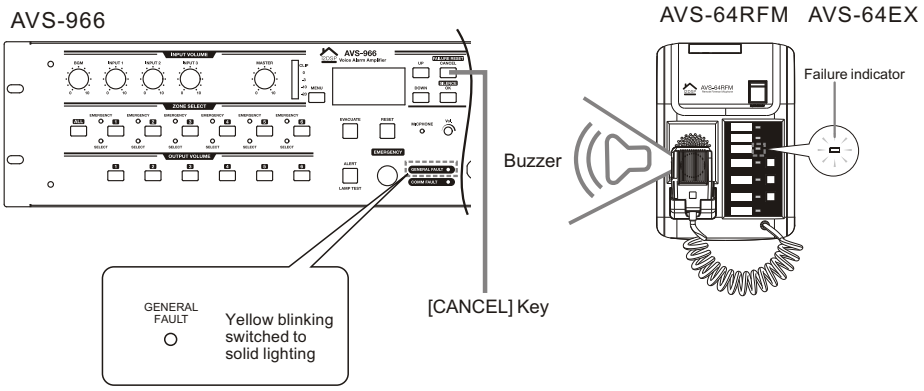


Please follow below operation steps once general faults happen.

Step 1: Press [OK] key on AVS-966 to confirm the fault, Then the buzzer sounds on both AVS-966 and AVS-64RFM will stop, Also the fault indicator applied on AVS-966 and AVS-64RFM will switch from yellow blinking to yellow solid lighting.

Step 2: Analyze and find the cause, If it is unworkable to get the cause by reviewing the fault information displayed on the screen of AVS-966, Please try another way to read related logs with PC software.

Step3: Pressing the [CANCEL] key on AVS-966 to reset the fault, At this time the fault indicator applied on both AVS-966 and AVS-64RFM will light out.



6. Faults displays

Unit ID: 0100 → Faulty device's ID.

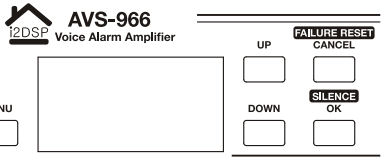
Name: AMP Host → Faulty device's name.

01: GND Faults
02: Fan Faults → Fault info list, Related fault Info will be displayed scrolling on screen by clicking [Upper Page]/ [Down Page].

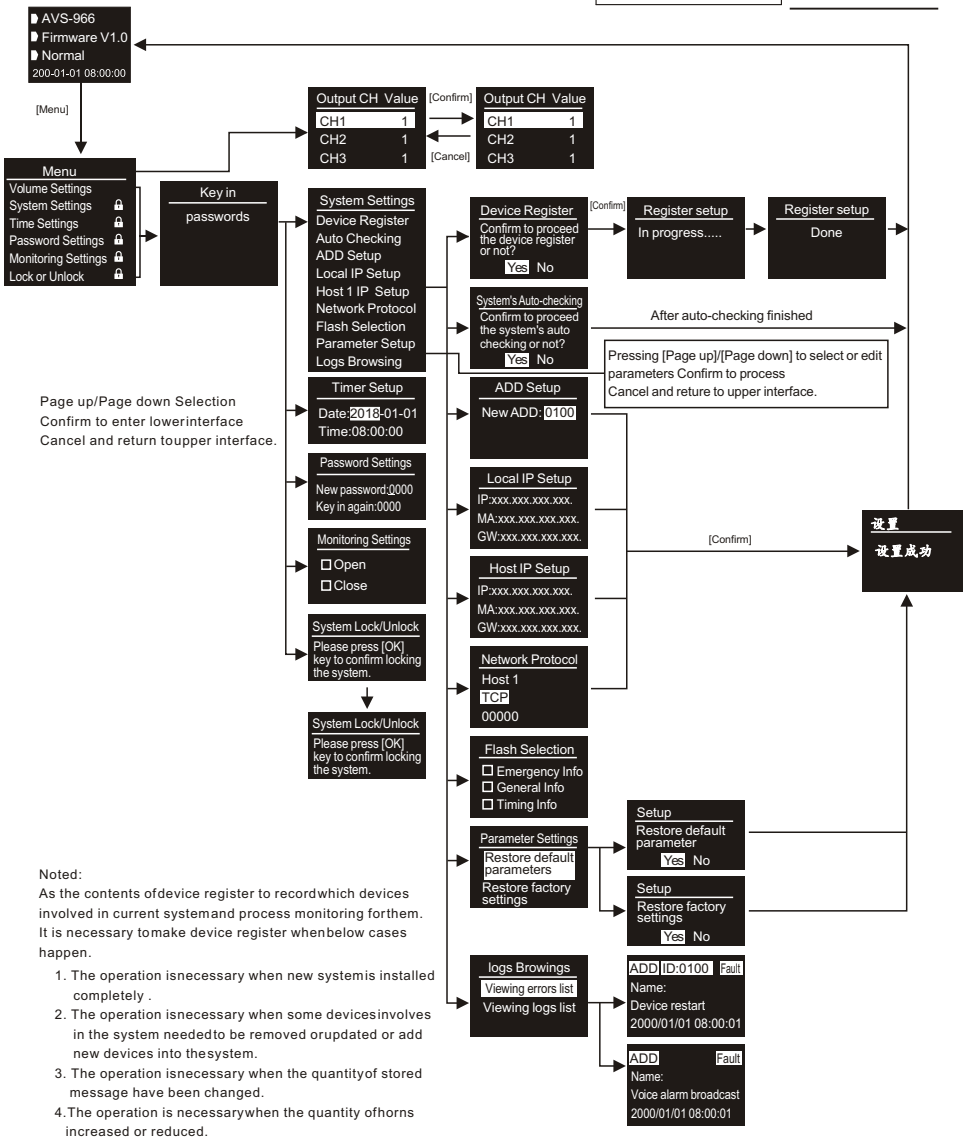
Once faults happens, The related fault info will appear on the front-panel screen of AVS-966 and AVS-966EX.

SETTINGS

1. Keys used for settings



2. Setting Hierarchical Chart



Noted:
As the contents ofdevice register to recordwhich devices involved in current systemand process monitoring forthem. It is necessary tomake device register whenbelow cases happen.

1. The operation isnecessary when new systemis installed completely .
2. The operation isnecessary when some devicesinvolves in the system neededto be removed orupdated or add new devices into thesystem.
3. The operation isnecessary when the quantityof stored message have been changed.
4. The operation is necessarywhen the quantity ofhorns increased or reduced.

Errors Info	Description
GND Fault	GTN0次
Zone X Opened (X=1～6)	None speaker is connected to Zone X or horn line is opened (X=1～6)
Zone X Shorted (X=1～6)	The horn line is shorted in Zone X (X=1～6).
Zone X Loading Error (X=1～6)	The loading value on the horn lines of Zone X is different from the one registered for device.
Measuring Amplifier Faults	The faults happened in the measuring amplifier inside device.
Main Amplifier Faults	The faults happened in the main amplifier inside device.
Standby Amplifier Faults	Standby AMP is failed or no line here
Microphone Line Opened	Microphone isn't connected or opened circuit
Microphone Line Shorted	Microphone Line is shorted
Built-in Message error	The quantity of voice message built-in device is different from the one registered for device
AC Power Faults	AC power inputs abnormally
Power Undervoltage	Input power <-187V
Communication Faults	Communication Faults between device and AVS-966
DSP Faults	DSP Defaults
General Input X Opened (X=1～6)	Opened-circuit issue happen in general control input line X(X=1～6)
General Input X Shorted (X=1～6)	Shorted-circuit issue happen in general control input line X(X=1～6)
Emergency Input X Opened (X=1～6)	Opened-circuit issue happen in emergency control input line X(X=1～6)
Emergency Input X Shorted (X=1～6)	Shorted-circuit issue happen in emergency control input line X(X=1～6)
Fan Faults	Fan can't run or failed
Logs list is full	The logs records reach the upper limits, Need to clear logs list in PC software
Things list is full	The fault records reach the upper limits, Need to clear logs list in PC software
Connection Faults	The quantity of AVS-64EX isn't equal to the one registered for the device.
Backup-AMP Fan	Standby amplifier's fan is failed
Speaker disconnected	As what is detected that the speaker is disconnected from the line.
Speaker line opened	As what is detected that the horn line is opened
PSx main-power faults (X=1～2)	Main power X is failed (x=1～2)
PSx backup-power faults(X=1～2)	Backup power X is failed(x=1～2)
MCU2 Faults	MCU2 is failed
MCU3 Faults	MCU3 is failed
Bootloader Faults	Bootloader is failed

3. Updating Message

The numbering of stored message is according to the sequence when files are put into device. So just suggest to update voice message by following below steps.

Step 1: Edit the name of message in PC software in below way:

xx_name.wav or xx_name.mp3

XX must be consecutive number , For example 01,02.03....

Step2: The device is connected to PC with a USB cable

Step3: Seleting the voice message needs to be updated from "Menu-System settings-Flash Selection", Press [OK] key to confirm flash, Then a USB disk will be generated on PC.

Step4: Copy all message files into a USB disk.

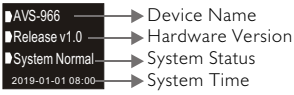
Step5: Once updates finished, remove the USB cable from PC.

Noted:

For updating message each time, It is necessary to copy all message files into a new folder in PC. Then deleting all files in USB disk. After editing all files stored in new folder, All files should be copied into USB disk.

4. Firmware Version updates

The firmware version can be found on the default page.



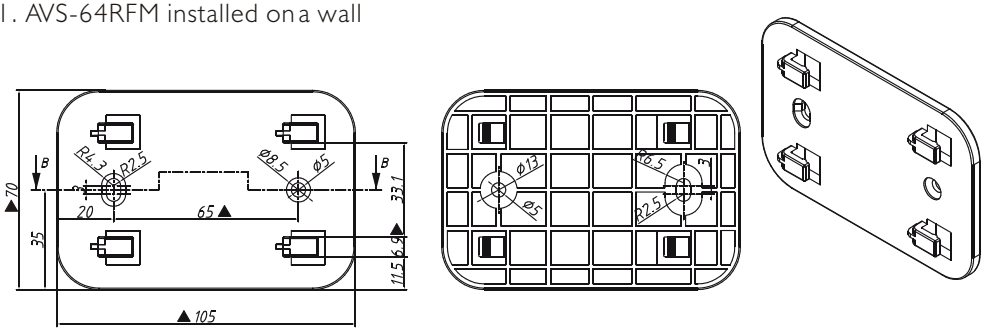
5. PC Software settings

Following functions can be only setup with PC software, Please refer to the software manual of Fire System for more details.

1. Setup the device's ID ADD
2. For AVS-966 and AVS-966EX
   - General input priority
   - Control input function
   - Control output function
   - System's sub-priority
   - Device Name
   - Zone settings
   - DSP settings
   - Timer message settings
3. AVS-64RFM
   - Zone Settings
   - Buttons' function Settings
   - Buttons's message Settings
4. AVS-64RPM
   - Zone Settings
   - Buttons' function Settings
   - Buttons's message Settings

INSTALLATION

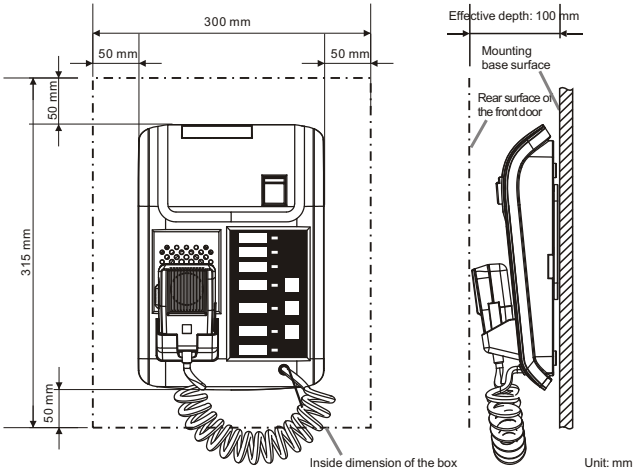
1. AVS-64RFM installed on a wall



WARNING!

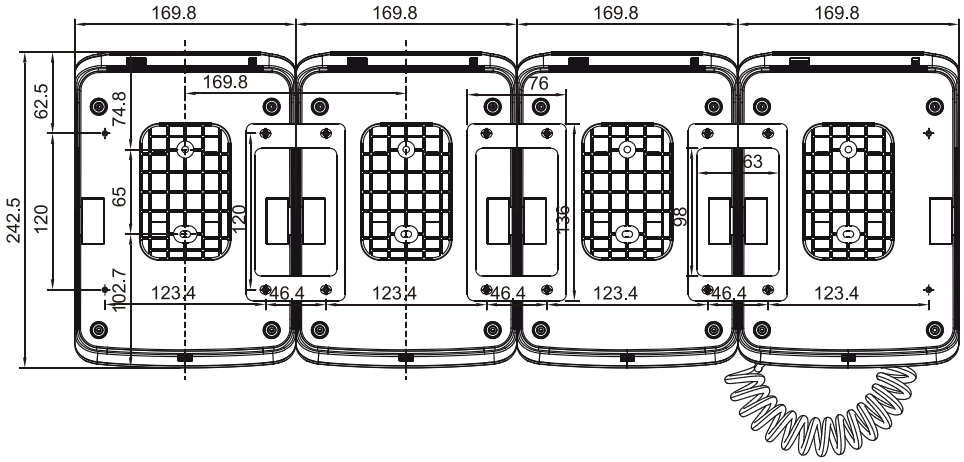
- Install the unit only in a location that can structurally support the weight of the unit and the mounting bracket. Doing otherwise may result in the unit falling down and causing personal injury and/or property damage.
- Be sure to install the bracket on the wall using 2 screws.

When the AVS-64RFM is installed in a wall box (prepare separately), the box should measure at least 300 mm wide x 315 mm high as illustrated below.

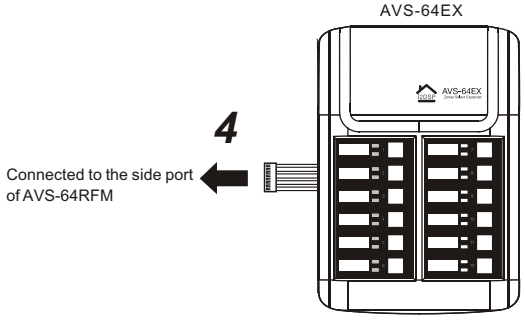


2. Installing the AVS-64EX on a Wall for AVS-64RFM extension

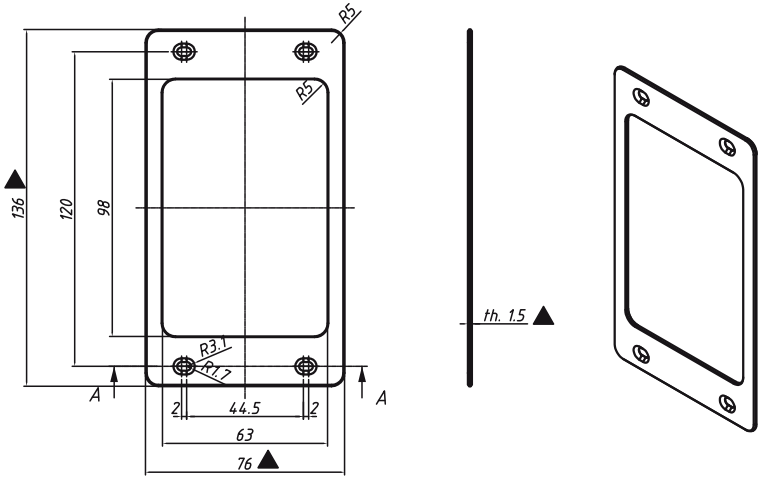
The installing methods is the same as AVS-64RFM's. The position dimensions of the AVS-64RFM and AVS-64EX should be corresponded as below.



Before installed into the bracket, It is necessary for AVS-64EX to be connected to the side port of AVS-64RFM.



3. AVS-64RPM installed on the desk

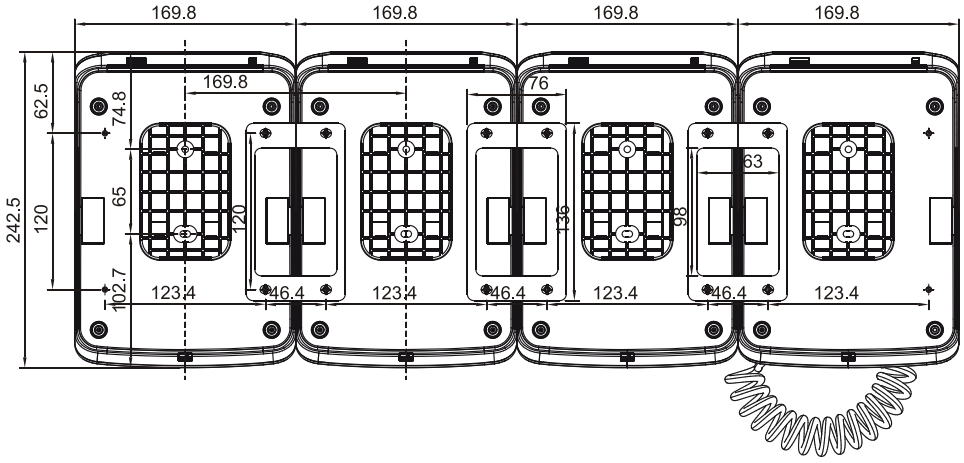


WARNING!

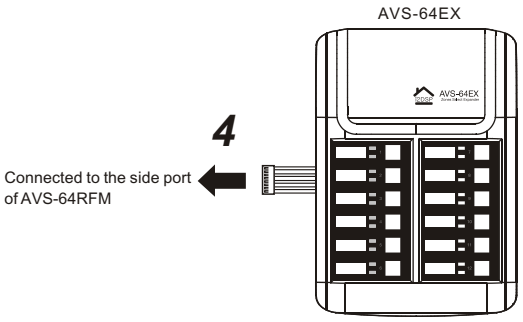
- Install the unit only in a location that can structurally support the weight of the unit and the mounting bracket. Doing otherwise may result in the unit falling down and causing personal injury and/or property damage.

4. Installing the zone expander AVS-64EX on a Desk where AVS-64RPM amounted

Using the same installation method as AVS-64RPM's to install AVS-64EX. The position dimensions of the AVS-64RFM and AVS-64EX should be corresponded as below.



Before installed into the bracket, It is necessary for AVS-64EX to be connected to the side port of AVS-64RFM.



5. Creating the name labels for the Remote Microphone

1) Prepare and copy by manual the"hand-writing pattern paper " on the next page. After writing a name, cut out the pattern paper aligning it with the cutting guidelines.

2) Using a PC or word processor to prepare and print according to the instructions given in the "Dimensional diagram for printing devices." Then cut out it according to the instructed size.

Please refer to Index A to get more details about the hand-writing Pattern paper and Dim ensional diagram for printing devices.

CONNECTION

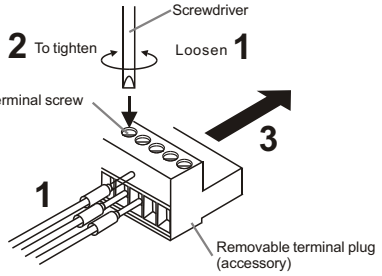
1. How to fix removable terminals

Please follow below steps to fix the removable terminals with screws:

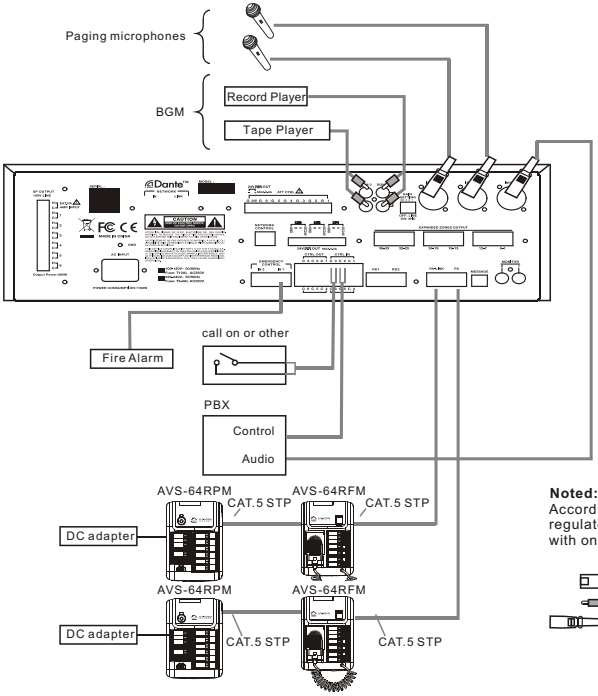
Step1: Loosen the screws located on terminals and then plug the corresponding wires into terminals.

Step2: Tighten the screws and try to pull each inserted wires by hand to ensure each wire enter the terminal house completely. If some wire is pull out, please repeat above steps until it snaps into place.

Step3. After terminals' assembly completed, Plug it into the corresponding holder located on rear panel.



2. Audio & Control Control examples



Noted:
According to the requirement of EN64-46 regulators that each RD port only can connect with one AVS-64RMP.

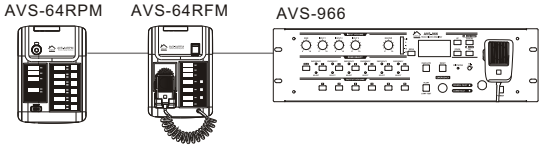
-- RJ45 male connector
-- RCA plug
-- XLR type female connector

3. Connected to AVS-64RPM and AVS-64RFM

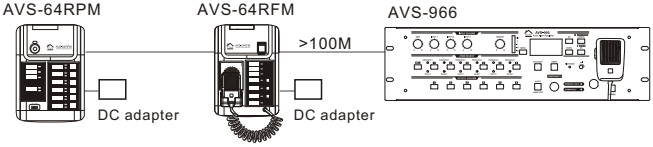
1) Total 4 AVS-64RFM or 4 AVS-64RPM can be connected to the extension amplifier, Each RD port can support 2 remote microphones (only 1 AVS-64RFM can be supported.)

2) The Power supply for AVS-64RFM or AVS-64RPM

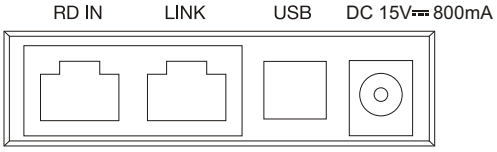
The each RD port applied on AVS-966 or AVS-966EX only can supply power supply for 2 AVS-64RFM or 2 AVS-RPM.



3) It is necessary to prepare external power for each remote microphone when the connection distance is more than 100. Details as below images:

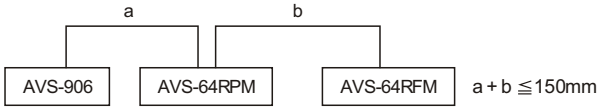


4) The AVS-64RFM or AVS-64RPM is equipped with RD In/link connectors, RD In port is for connecting to AVS-906 or AVS-906EX or previous AVS-64RFM or AVS-64RPM. Link port is for connecting to next AVS-64RFM or AVS-64RPM



5) The cable length between the last AVS-64RFM or AVS-64RPM and the AVS-966 or AVS-966EX is less than 150m, Also the external power will be needed if the cable length is more than 100m.

Cable Spec requried: During professional wiring engineering, It is recommended to use CAT.5 cable or higher Twisted-shielded wire (CAT.5E SFTP.etc.), The total cable length (a+b) can't be more than 150m.

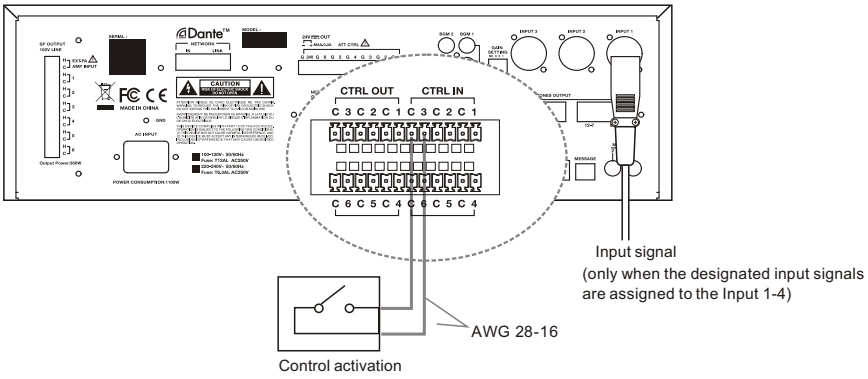


4. General Control Input Terminal

1) Control the function which is assigned to the general control input terminal by external equipments. (Please refer to software manual of AVS-966 series for more details about the function assignment).

-Input 1-3: The broadcasting area where the general brodcasts outputs can be specified.

-Message 1-6: The pre-recorded general announcement can be output from specified broadcasting area.



Noted: There are three trigger ways to proceed outer control input.

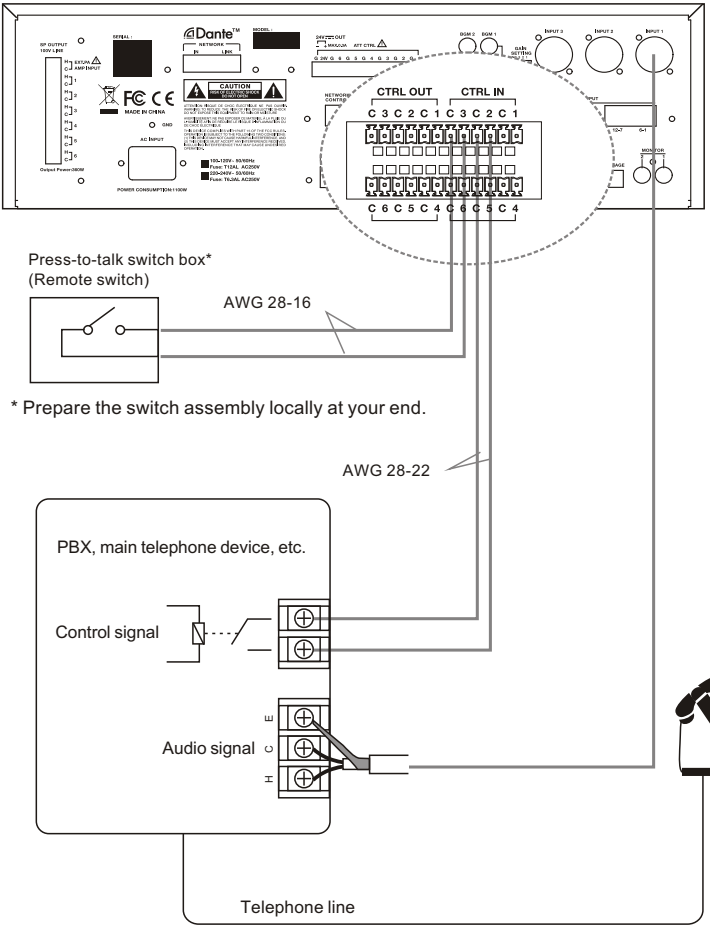
Level Trigger: Turn on the switch to activate inputs, Turn off the switch to disable inputs.

Pulse -Recycle: Keep the switch closed for 3 seconds to activate inputs, After inputs enables, The switch can be disconnected an no need to keep the switch closed always. To disable the input, it is necessary to keep the switch closed for 3 seconds again. During broadcasting inupts, the voice broadcasting will keep playing repeatly.

Pulse-Single: Keep the switch closed for 3 seconds to activate inputs, Then it can playback voice broadcasting , When music is end or keep the switch closed for 3 seconds again, the current broadcasting will stop.

5. General Input Examples

Rear Panel of AVS-966



6. Emergency Input Control Terminal Connection

Following as the fixed configuration applied on the control-input port 1-4 between CIE and VACIE(AVS-966S)

- Control Input 1 (Evacuation Voice): Once input is enable, it will playback the pre-recorded evacuation voice which is saved + inside broadcasting. When input is disable, it will stop broadcasting evacuation voice.
- Control Input2(Alarm Voice): Once input is enable, it will playback the pre-recorded alarm voice which is saved + inside broadcasting. When input is disable, it will stop broadcasting alarm voice.
- Control Input3(Emergency mode reset): Once input is enable, it will exit emergeny mode and reset the system.
- Control Input4 (Mute): Once input is enable, The emergency broadcasting will be mute, however the emergency mode of system isn't cancelled. User can press the [CANCEL] button on rear panel of AVS-966 to cancel mute.

The assignment function applied on the control input description for the control input 5-6 of AVS-966 and the control input 1-6 of AVS-966EX.

- Input 1-3: The general broadcasting can be permitted to input &output in specified area.
- Emergency Message Broadcasting 1-6: The pre-recorded Emergency announcement can broadcast from the specified area automatically.

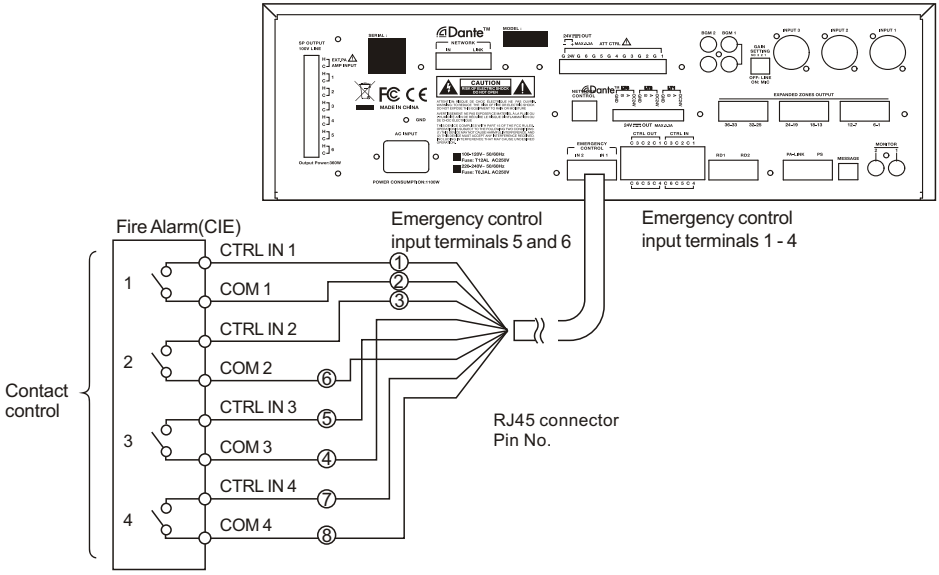
Noted: There are three trigger ways for external control inputs.

- Level Trigger: The switch is closed to enable inputs functions. The switch is disconnected to disable the input function.
- Pulse-Recycle: Keep the switch closed for 3 seconds to activate inputs, After inputs enables, The switch can be disconnected an no need to keep the switch closed always. To disable the input, it is necessary to keep the switch closed for 3 seconds again. During broadcasting inupts, the voice broadcasting will keep playing repeatly.
- Pulse-Single: Keep the switch closed for 3 seconds to activate inputs, Then it can playback voice broadcasting , When music is end or keep the switch closed for 3 seconds again, the current broadcasting will stop.

7. Connected to external emergency control device and status outputs port.

Emergency broadcasting (Evacuation or Alarm) can be activated with external control, For example: Auto fire-alarm start signal, Please press the emergency reset switch to reset emergency status.

CONNECTION

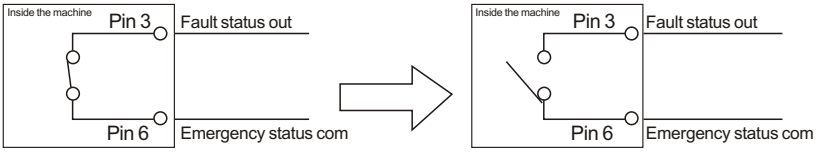


[Terminal assignment to the emergency control inputs]

Connector name	RJ45 Pin Number	Cable color (T568B type)	Cable color (T568A type)	Assignment
EMERGENCY CONTROL IN2	①	Orange/White	Green /White	CTRL IN 1
	②	Orange	Green	COM 1
	③	Green/White	Orange/White	CTRL IN 2
	④	Blue	Blue	COM 3
	⑤	Blue/White	Blue/White	CTRL IN 3
	⑥	Green	Orange	COM 2
	⑦	Brown/White	Brown/White	CTRL IN 4
	⑧	Brown	Brown	COM4
	Shielding	------	------	NC
EMERGENCY CONTROL IN1	①	Green/White	Green /White	CTRL IN 5
	②	Orange	Green	COM 5
	③	Green/White	Orange/White	Fault status out
	④	Blue	Blue	The com terminal for broadcasting output.
	⑤	Blue/White	Blue/White	Broadcasting Status Outputs
	⑥	Green	Orange	The com terminal for fault status outputs
	⑦	Brown/White	Brown/White	CTRL IN 6
	⑧	Brown	Brown	COM 6
	Shielding	------	------	NC

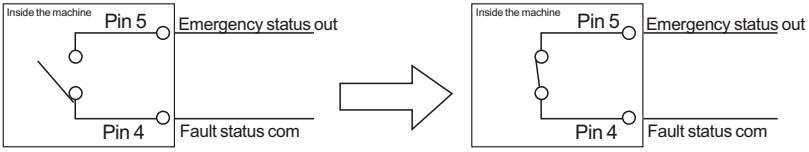
[Operation at failure status output]

When VACIE has a fault status output, CIE will receive a short circuit signal



[Operation at emergency status output]

When VACIE has emergency output, CIE will receive a short circuit signal

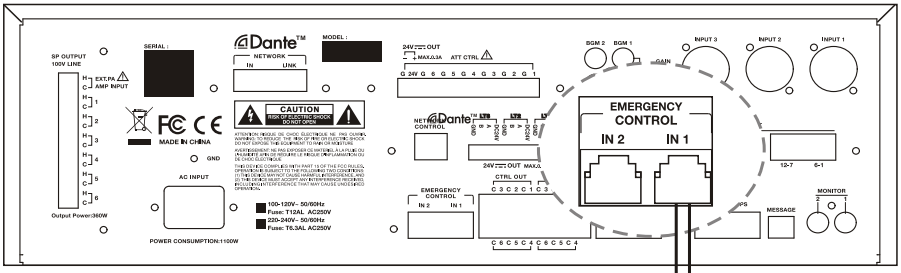


8. Connection-faults inspection for emergency control input line

It enables to inpect the on-line faults for each input control, The input port measured should be setup through software ,(using PC software to boot GPI monitoring)

Rear Panel of AVS-966

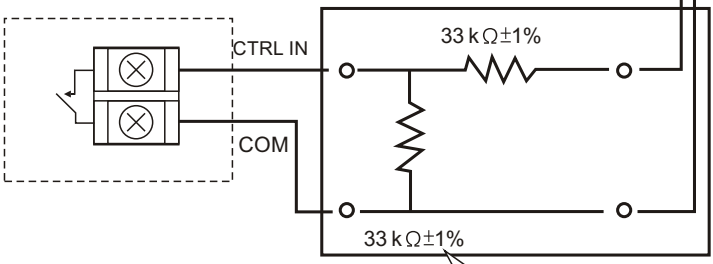
AVS-966 rear



Emergency control input terminals 1 to 5

The terminals which control the outputs of external devices (fire alarm or other control device).

Both lines belong to the inspection range.



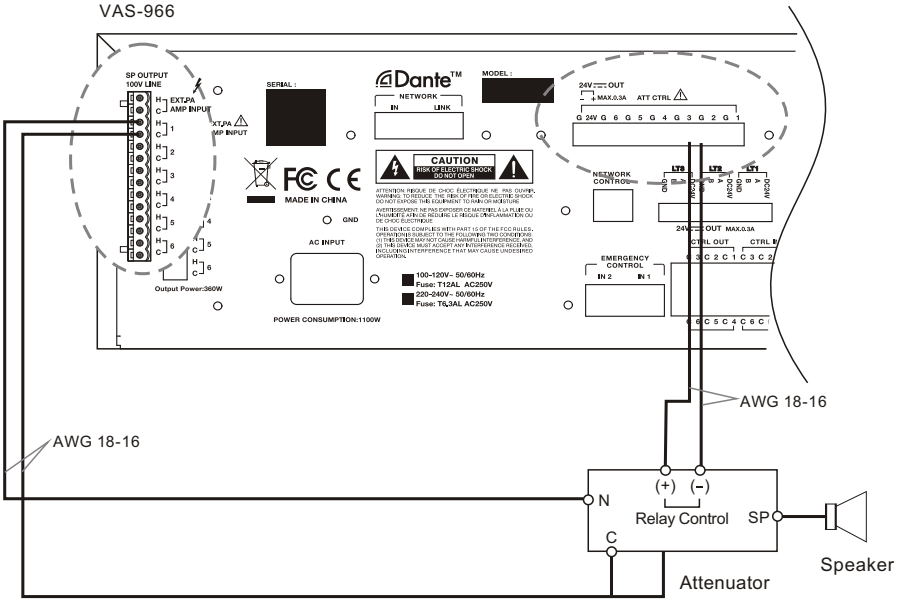
It is necessary to install the part into protection case in order to avoid any exposure.

Noted: When the surveillance settings is initialed, The speaker power on each line need to reach 20W(500Ω) or more. The speaker with lower loading maybe cause detection errors.

9. Outer Attenuator Connection (4-line system)

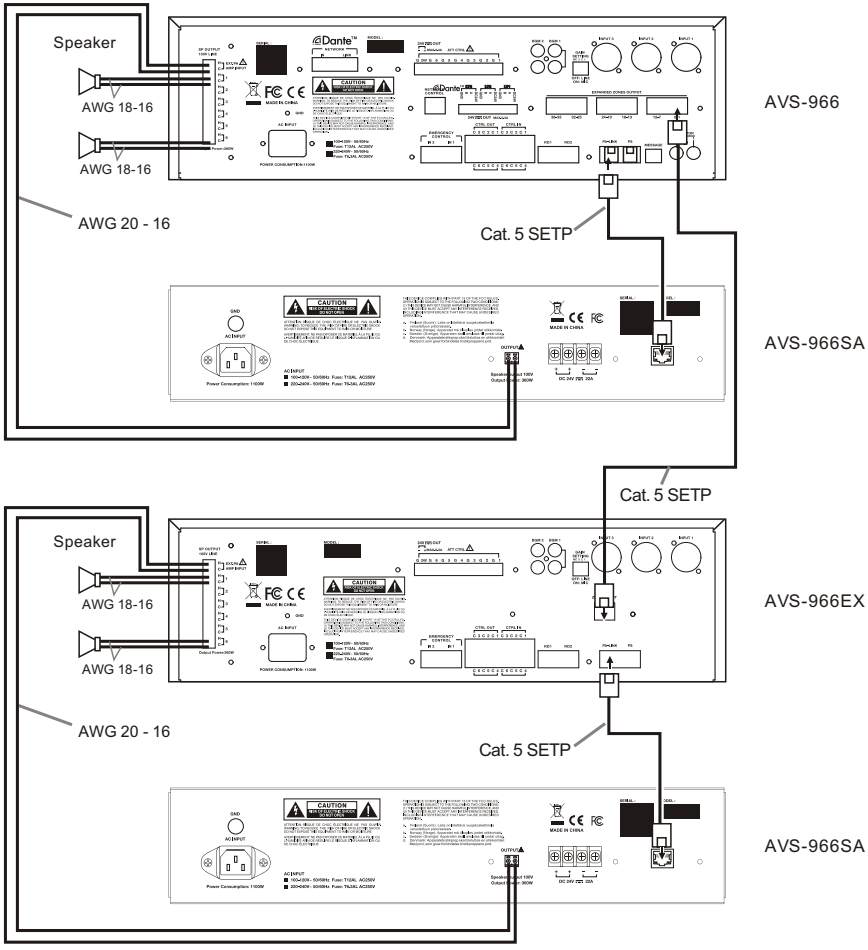
Operation status of AVS-966 and operation of corresponding attenuation

Running status of Amplifier	Attenuator operation
Under the normal mode or Emergency mod	Normal operation
Priority 1 or 2 broadcast	Skipping



9. BGM/Paging System and Standby Amplifier Connection

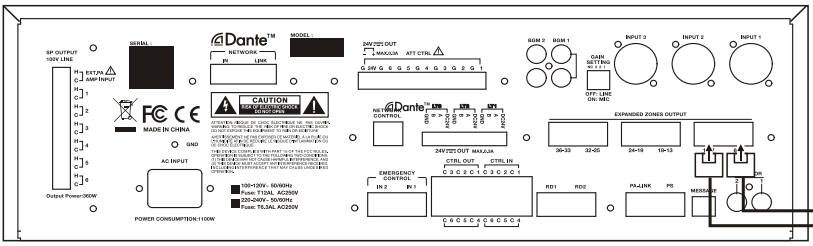
Remark: see schedule 2 for more cable datasheet.



10. Connected to AVS-966 and AVS-966EX

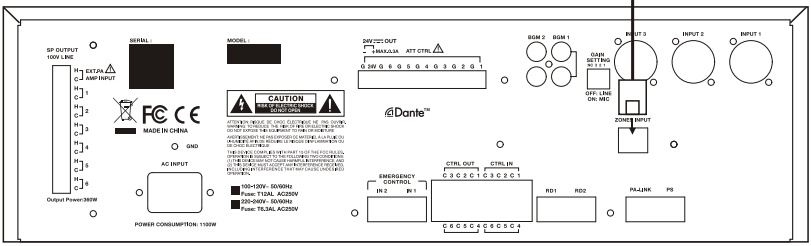
Remark: See schedule 2 for more details of cable parameter

AVS-966



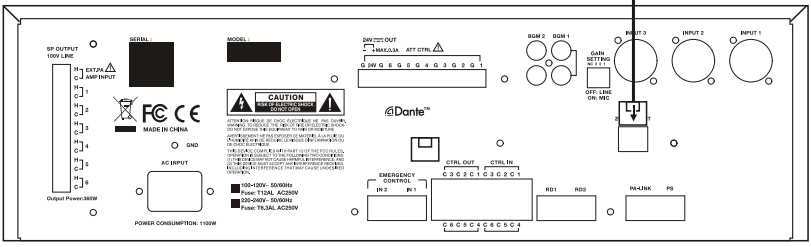
Cat. 5 SETP

AVS-966EX

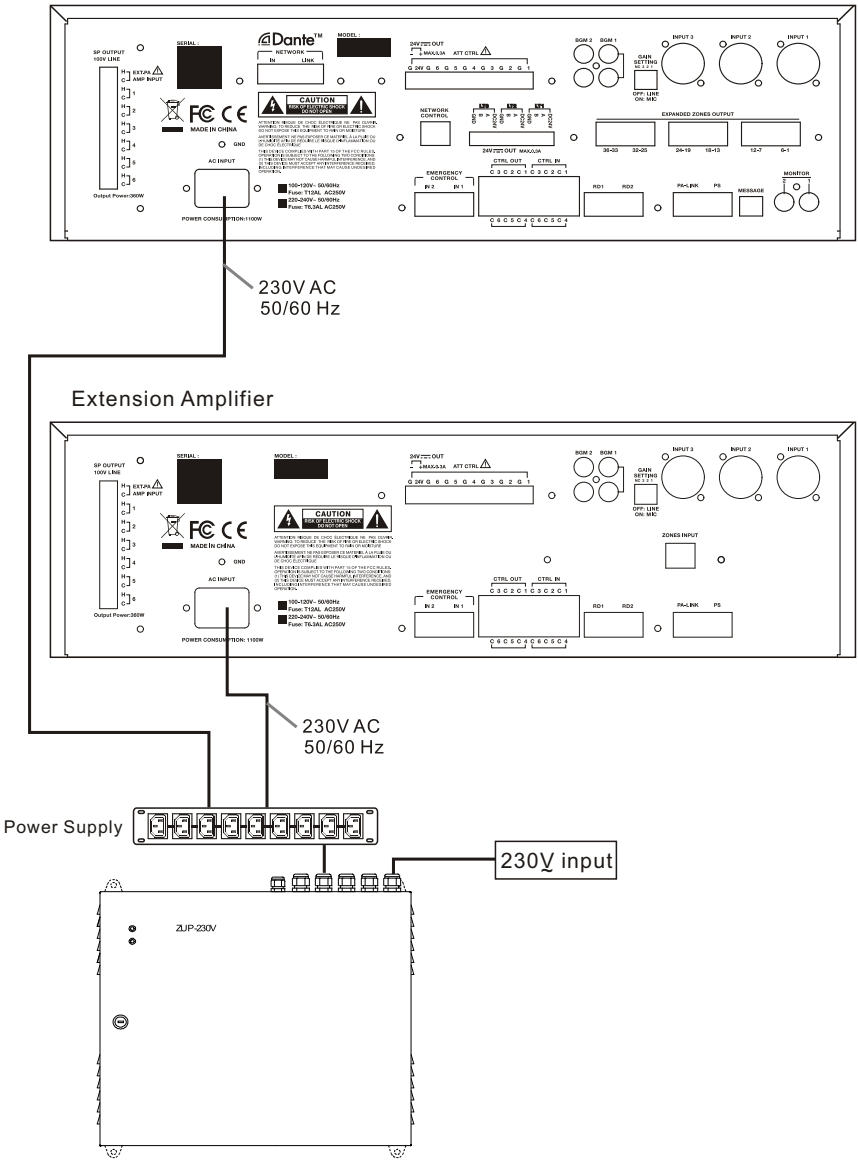


Cat. 5 SETP

AVS-966EX



11. Connected To Power Devices



DATASHEET

1. AVS-966 Voice Alarm Amplifier

Power Supply	220-240V ~50/60Hz
Power Consumption	1100 W
Fuse	See schedule 1 for details
Related Power	360 W
Frequency Response	100 Hz-15kHz, ±3 dB (at 1/3 rated output)
THD	2% or less (at rated output, 1 kHz)
SNR	65 dB or more
Audio Input/Output Feature	Sampling frequency: 48 kHz A/D D/A converter: 24 bit
Input	Input 1-3:-35 dB*(MIC) /-4 dB*(LINE) (changeable), 600Ω BGM 1-2:-10 dB*, 10 kΩ External AMP Input: 100 V line
Output	Speaker output 1-6: Max. (180 W) per output Speaker output 1-6: Total within 360W
Remote Control Device Port	RD1/RD2 port: Connected to AVS-64RFM/AVS-64RPM, The Max distance for RJ45 female connector: The distance up to 150m between the unit and AVS-64RFM/AVS-64RPM. Cable Spec: catagory 5 shielded twisted-pair straight cable (CAT.5E-SFTP).
DANTE Network Port	10BASE-T/100BASE-TX, RJ45 Female Connector. The Max Distance: Up to 100m between the unit and switch Cable Spec: catagory 5 shielded twisted-pair straight cable (CAT.5E-SFTP)
Backup Output	Connecting the AVS-900SA, RJ45 female connector Maximum distance: 2m Link cable: Category 5 Shielded Twisted-Pair straight cable (CAT5-STP)
General Control Input/ Output Emergency Control Input/ Output	To connect with standby amplifier , RJ45 female connector. The max distance: 2 meters. Cable Spec: catagory 5 shielded twisted-pair straight cable (CAT.5E-SFTP).
Outer Volume Forced Interpolation Control	Input 1-6: No-voltage contact input ,Shorted current: 2mA or less Output 1-6: Isolated relay output, Operation Current: 10mA or less.
Zone Output	To connect with standby amplifier , RJ45 female connector. The max distance: 3 meters. Cable Spec: catagory 5 shielded twisted-pair straight cable (CAT.5E-SFTP).
LTI-3 Port	Terminals: Male The Max Distance: 1000m Cable Spec: 1mm2 twisted-pair cable
Operation Temperature	-5℃ to +45℃
Dimension	440 (w) x 130 (h) x402(d) mm
Weight	17 kg

2. AVS-966EX Extension Amplifier

Power Supply	220-240V ~50/60Hz
Power Consumption	1100 W
Fuse	See schedule 1 for details
Related Output	360 W
Frequency Response	100 Hz-15kHz, ±3 dB ((1/3 power output)
THD	2% or less (Related Output 1KHz)
SNR	65 dB or more
Audio Input/Output Feature	Sampling frequency: 48 kHz A/D D/A converter: 24 bit
Input	Input 1-3: -35 dB* (MIC) /-4dB* (LINE) (changeable), 600Ω BGM 1-2: -10 dB*, 10 kΩ, unbalanced External AMP Input: 100 V line
Output Zone	Speaker output 1-6: Max. (180 W) per output Speaker output 1-6: Total within 360 W
Remote Control Device Port	Remote control device port: Connected to AVS-64RFM/AVS-64RPM, The Max distance for RJ45 female connector: The distance up to 150m between the unit and AVS-64RFM/AVS-64RPM. Cable Spec: catagory 5 shielded twisted-pair straight cable (CAT.5E-SFTP).
Dante Network Port	10BASE-T/100BASE-TX, RJ45 Female Connector. The Max Distance: Up to 100m between the unit and switch Cable Spec: catagory 5 shielded twisted-pair straight cable (CAT.5E-SFTP).
Backup Output	To connect with standby amplifier, RJ45 female connector. The max distance: 2 meters. Cable Spec: catagory 5 shielded twisted-pair straight cable (CAT.5E-SFTP).
Normal Control Input /Output Emergency Input /Output	Input 1-6: No-voltage contact input, Shorted current: 2mA or less Output 1-6: Isolated relay output, Operation Current: 10mA or less.
Outer Volume Forced interpolation Control	Relay's contact points 1-6 , 24V DC total less than 3A
Backup DC 24V Input	Backup DC 24V: Connected to external power (operation range: 20-40VDC) Battery Distance: 11mm
Operation Temperature	-5℃ to +45℃
Dimensions	440 (w) x 130 (h) x 402 (d) mm
Weight	17 kg

3.AVS-966SA Standby Amplifier

Power Supply	220-240V～50/60Hz
Power Consumption	1100 W
Fuse	See schedule 1 for details
Related Output Power	360 W
Frequency Response	100 Hz -15kHz, ±3 dB (1/3 related output)
THD	2% or less (related output 1KHz)
SNR	65 dB or more
Operating Temperature	-5°C to +45°C
Dimensions	419 (w) x 85.5(h) x 334.7 (d)mm
Weight	13 kg

4. AVS-64RFM Remote Fireman Microphone

Power Source	24 V DC(operating range: 15-40V DC, supplied from the AVS-900 system)
Current Consumption	120 mA (AVS-64RFM), 320 mA(with 5 AVS-64EX connected)
Frequency Response	200 Hz-15 kHz
Distortion	1% or less
S/N Ratio	55 dB or more
Volume Control	Microphone volume control, buzzer volume control
Maximum Cable Distance	Category 5 Shielded Twisted-Pair straight cable, RJ45 connector , Total 150 m
Communication protocol	RS485 communication, the baud rate is 57600;
No. of Connectable AVS-64EX	Max.5 units
Operating Temperature	-5°C to +45°C
Dimensions	242 (L) x 170 (W) x 79(H) mm
Weight	0.72kg

5. AVS-64RPM Remote Paging Microphone

Power Source	24 V DC (operating range: 15-40 V DC, supplied from the AVS-900 system)
Current Consumption	120 mA (AVS-64RPM), 320 mA (with 5 AVS-64EX connected)
Frequency Response	200 Hz-15 kHz
Distortion	1% or less
S/N Ratio	55 dB or more
Volume Control	Microphone volume control, buzzer volume control
Maximum Cable Distance	Category 5 Shielded Twisted-Pair straight cable, RJ45 connector , Total 150 m
Communication protocol	RS485 communication, the baud rate is 57600;
No. of Connectable VAS-64EXs	Max. 5 units
Operating Temperature	-5℃ to +45℃
Dimensions	242.5 (L) x 169.8 (W) x 53 (H) mm
Weight	0.66 kg

6. AVS-64EX Zones Select Expander

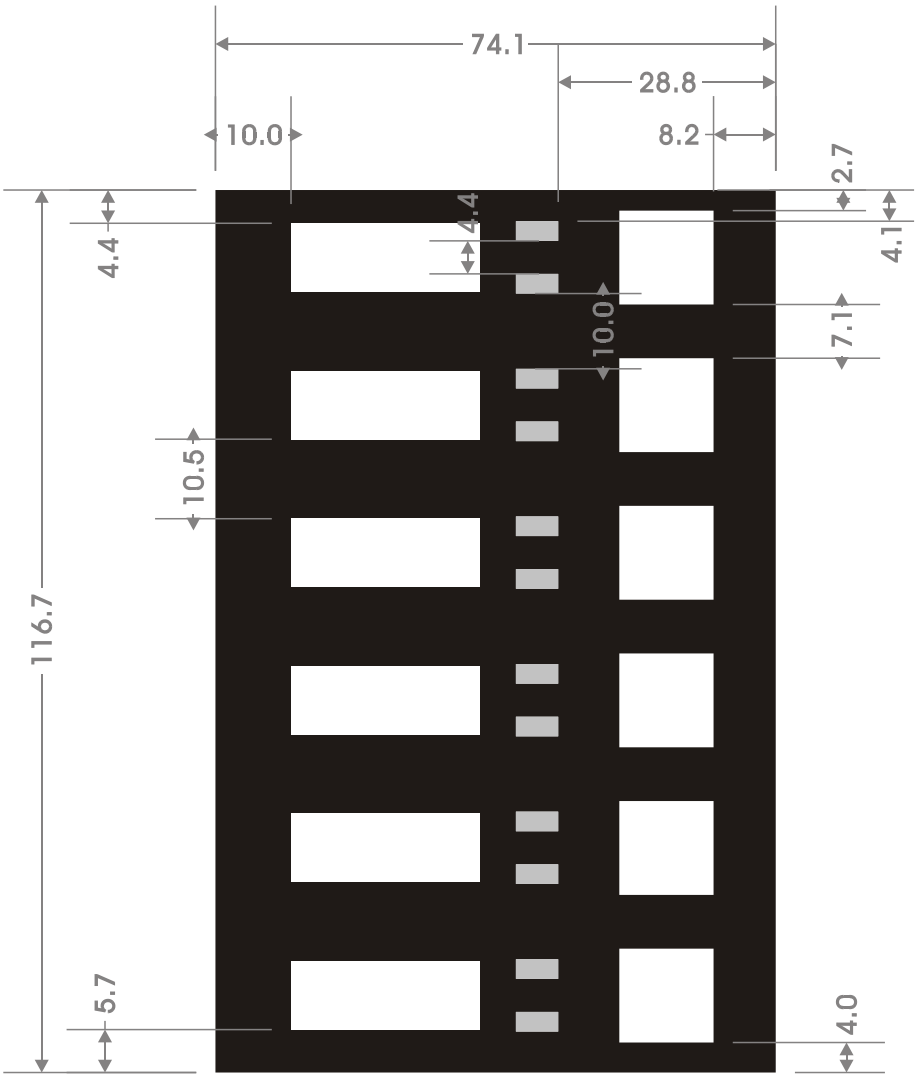
Current Consumption	30 mA max.
Connection	Connection to AVS-64EFM or AVS-64RPM
Number of Function Keys	12
Operating Temperature	-5℃ to +45℃
Dimensions	242.5 (L) x 169.8 (W) x 50 (H) mm
Weight	0.43 kg

7. End Of Line Module

Speaker Line Input	Removable terminals, Max. load: 100W. Note: only for 100V speaker line.
Contact Output	Connected to AVS-966 or AVS-966EX Cable Spec: twisted pair cabel (shielded type is recomm ended) screw connecto. Suitable Cable Diameter: AWG24 or AWG 19.
Operating Temperature	-5℃ to +45℃
Dimensions	60 (L) x 30 (W) x 14(H) mm
Weight	100 g

8. AVS-100RVC Volume Control

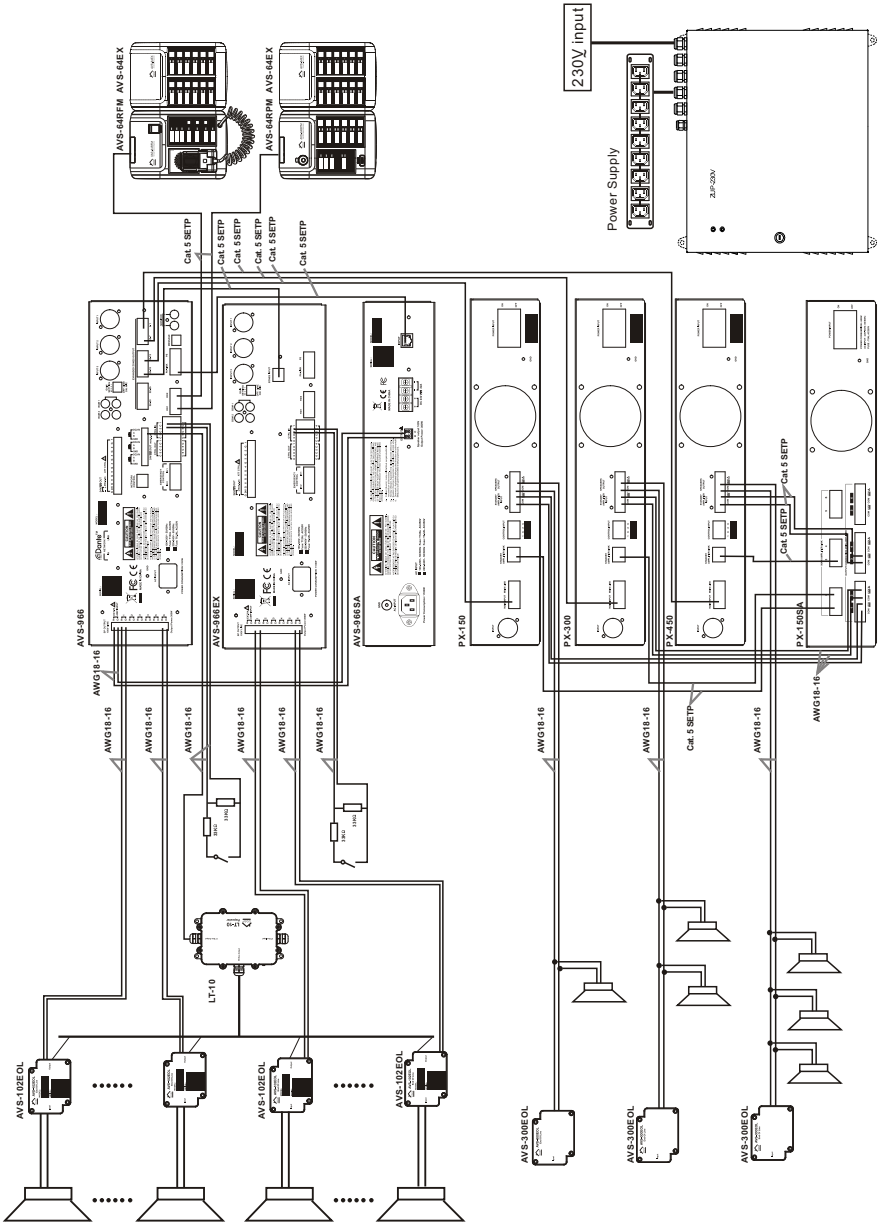
DC Power Supply	24Vdc (for AVS-966 or Outer Input)
Power Consumption	3.6W
Max network connecting distance	150m
Max connecting Quantity	6PCS
Dimension	H:45mm,W: 115mm, L: 150mm
Weight	0.286kg
Operation Temperature	-40℃ ~70℃


74.1
28.8
10.0
8.2
2.7
4.1
4.4
4.4
10.0
7.1
10.5
116.7
5.7
4.0

SYSTEM HOOKING DIAGRAM

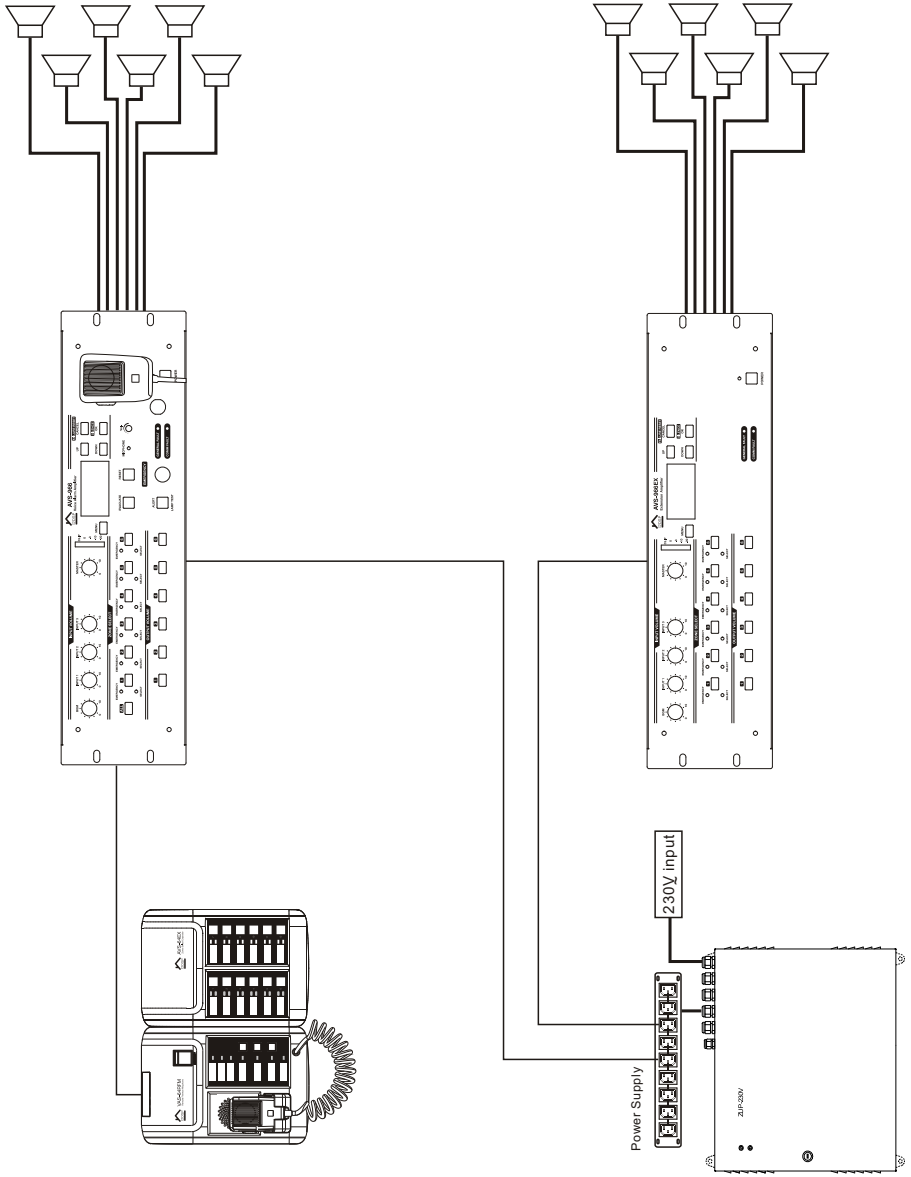
1. System Hooking Diagram 1

Remark: See schedule2 for more details about cabel's parameter

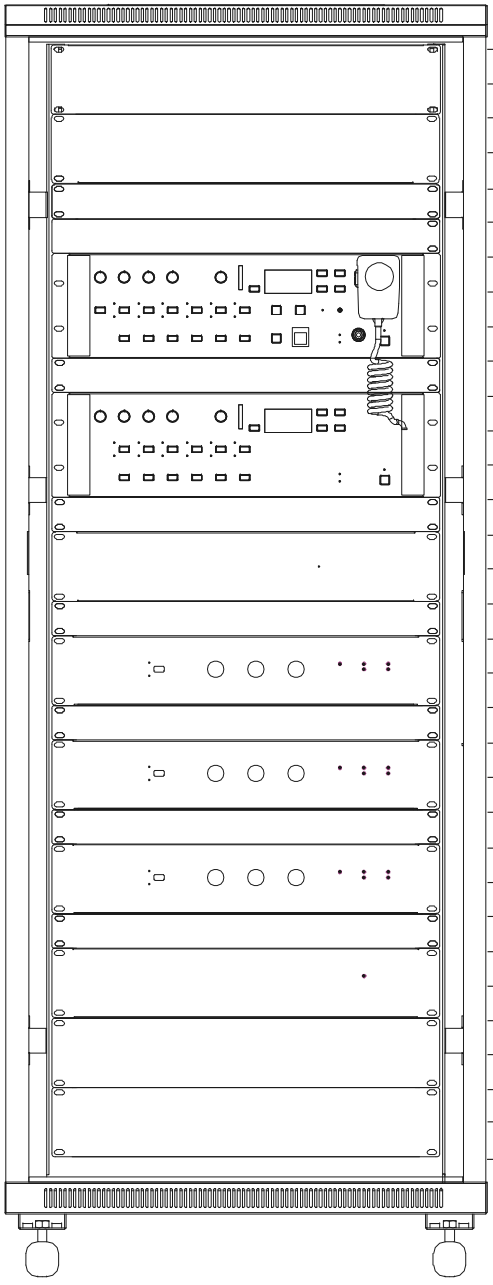


SYSTEM HOOKING DIAGRAM

Remark: See schedule2 for more details about cabel's parameter



CABINET LAYOUT



32	logo
31	
30	2U lronplate
29	
28	1U lronplate
27	1U lronplate
26	AVS-966
25	
24	
23	1U lronplate
22	AVS-966EX
21	
20	
19	1U lronplate
18	AVS-966SA
17	
16	1U lronplate
15	PX-150
14	
13	1U lronplate
12	PX-300
11	
10	1U lronplate
9	PX-450
8	
7	1U lronplate
6	PX-450SA
5	
4	2U lronplate
3	
2	2U lronplate
1	

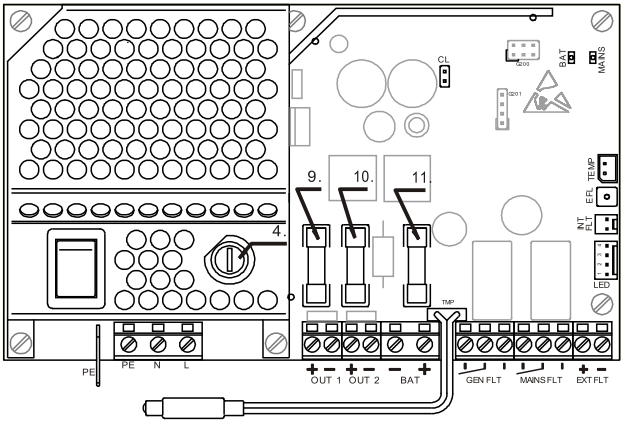
SCHEDULE 1

AVS-966 Series' Fuse Datasheet

PCB P/N	PCB Name	Fuse Specification	Fuse Location
HB05401	AC Pre-AMP	T6.3AL 250V Ø5.2*20mm CCEE/CSA/S/UL/VDE	F1
HB05074	Amplifier	T3AL 250V Ø5.2*20mm CSA/T/UL	F2
HB05074	Amplifier	T32AL 400V Ø 6*32mm UL/CE(SCHURTER)	F1
AVS-200BGM	AC Holder	T32AL 250V Ø 5.2*20mm CSA/S/UL/VDE	AC Holder
PX-150	AC Holder	T3AL 250VØ 5.2*20mm CSA/S/UL/VDE	AC Holder
PX-300	AC Holder	T3.15AL 250V Ø 5.2*20mm CSA/S/UL/VDE	AC Holder
PX-450	AC Holder	T5AL 250V Ø 5.2*20mm CSA/S/UL/VDE	AC Holder
PX-450SA	AC Holder	T5AL 250V Ø5.2*20mm CSA/S/UL/VDE	AC Holder

POWER SUPPLY ZUP-230V-1500

position in table	Fuse description	Value
4	Mains fuse	1.6AT
9	Output fuse	6.3AF
10	Output fuse	6.3AF
11	Battery fuse	8.0AF



SCHEDULE 2

Cable's Reference Datasheet

AVS-966

Connecting Device		Cable Type			Connected device		
Port name	Device Name	Port plug	Cable parameter	Port plug	Device Port	Port Name	Device Type
AC input	3P Plug	3P Female Connector	AC power cable	3P European	AC,230V 50/60Hz		
Control Input	Screw Terminals	Normal Cable	18-16AWG	———	———	———	Other control unit
Control Output	Screw Terminals	Normal Cable	18-16AWG	———	———	———	Other control unit
Standby Output	RJ45(Female)	RJ45(male)	CAT.5E STP	RJ45(male)	RJ45(Female)	Input	AVS-966SA
Standby Input	RJ45(Female)	RJ45(male)	CAT.5 SFTP	Screw Terminals (Female)	Screw Terminals (male)	Status Output Port	AVS-100PS
Backup Power Input	RJ45(Female)	RJ45(male)	CAT.5 SFTP	RJ45(male)	RJ45(Receptacle)	———	Other control unit/Fire center
Emergency Control	RJ45(Female)	RJ45(male)	CAT.5 SFTP	RJ45(male)	RJ45(Receptacle)	Network Interface	PC/Router/Other AVS-966 System
Network Interface(Input)	RJ45(Female)	RJ45(male)	CAT.5 SFTP	RJ45(male)	RJ45(Receptacle)	Network Interface	PC/Router/Other AVS-966 System
Network (Linkage)	RJ45(Female)	RJ45(male)	CAT.5 SFTP	RJ45(male)	RJ45(Receptacle)	Input	AVS-64RFM AVS-64RPM AVS-10RVC
Remote Control Device Interface	RJ45(Female)	RJ45(male)	CAT.5 SFTP	RJ45(male)	RJ45(Receptacle)	Zone Input Main Ctrl Input	AVS-966EX PX-150/PX-300 PX-450
Expanded Zone Output1-36	Screw Terminals (male)	Screw Terminals (Female)	18-16AWG	Screw Terminals (Female)	Screw Terminals (male)	Bus Input	LT-10
LT Port (LT-1/ LT-2/LT-3)	RJ45(Female)	RJ45(male)	CAT.5 SFTP	RJ45(male)	RJ45(Receptacle)	Network Interface	PC/Router

AVS-966EX

Connecting Device		Cable Type			Connected Device		
Port Name	Device Name	Port plug	Cable parameter	Port plug	Device Port	Port Name	Device Type
AC input	3P Plug	3P Female Connector	AC Power Cable	3P European	AC,230V 50/60Hz		
Control Input	Screw Terminals	Normal Cable	18-16AWG	———	———	———	Other Control Unit
Control Output	Screw Terminals	Normal Cable	18-16AWG	———	———	———	Other Control Unit
Standby Output	RJ45(Female)	RJ45(male)	CAT.5 SFTP	RJ45(male)	RJ45(Female)	Input	AVS-966SA
Backup Power Input	RJ45(Female)	RJ45(male)	CAT.5 SFTP	Screw Terminals (Female)	Screw Terminals (male)	Status Outputs Port	AVS-100PS
Emergency Control	RJ45(Female)	RJ45(male)	CAT.5 SFTP	RJ45(male)	RJ45(Female)	———	Other Control Unit
Remote Control Device Interface	RJ45(Female)	RJ45(male)	CAT.5 SFTP	RJ45(male)	RJ45(Female)	Input	AVS-64RFM AVS-64RPM AVS-10RVC
Zone Input	RJ45(Female)	RJ45(male)	CAT.5 SFTP	RJ45(male)	RJ45(Female)	Expanded Zone Output1-36	AVS-966

SCHEDULE 3

AVS-966SA

Connecting Device		Cable Type			Connected device		
Port Name	Device Name	Port plug	Cable parameter	Port plug	Device Port	Port Name	Device Type
AC input	3P Plug	3P Female Connector	AC power cable	3P European	AC,230V 50/60Hz		
Input	RJ45(Female)	RJ45(male)	CAT.5 STP	RJ45(male) with shielding	RJ45(Female)	Backup Output	AVS-966 AVS-966EX
AMP Output	2P Screw Terminals (male)	2P Screw Terminals (female)	18-16AWG	2P Screw Terminals (female)	———	Outer AMP Input	AVS-966 AVS-966EX

PX-150/PX-300/PX-450

Connecting Device		Cable Type			Connected device		
Port Name	Device Name	Port plug	Cable parameter	Port plug	Device Port	Port Name	Device Type
AC input	3P Plug	3P Female Connector	AC power cable	3P European	AC,230V 50/60Hz		
Control Input	Screw Terminals	Normal Cable	18-16AWG	———	———	———	Other Control Unit
Backup AMP Connection	RJ45(Female)	RJ45(male)	CAT.5 STP	RJ45(male)	RJ45(Female)	Main AMP Input	PX-450SA
Main- Control Linkage	RJ45(Female)	RJ45(male)	CAT.5 STP	Screw Terminals (Female)	RJ45(Female)	Main Input	PX-150 PX-300 PX-450
Main-control Input	RJ45(Female)	RJ45(male)	CAT.5 STP	Screw Terminals (Female)	RJ45(Female)	Expanded Zone Output1-36	AVS-966

PX-450SA

Connecting Device		Cable Type			Connected device		
Port Name	Device Name	Port plug	Cable parameter	Port plug	Device Port	Port Name	Device Type
AC input	3P Plug	3P Female Connector	AC power cable	3P European	AC,230V 50/60Hz		
Input connected to the main AMP	RJ45(Female)	RJ45(male)	CAT.5 STP	RJ45(male)	RJ45(Female)	Standby AMP Connection	PX-150 PX-300 PX-450

CE
1008

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Manufacturing plant
Dongguan Jingheng Electron Co. Ltd.
Shenshan Industrial Zone, Hengli Town, Dongguan City,
523465 Guangdong P.R. China

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1008-CPR-XXXXX

EN 54-16:2008
Voice alarm control and indicating equipmemt
for fire detection and fire alarm systems
AVS-966S
Provided options:

7.3 Audible warning
7.6.2 Manual silencing of the voice alarm condition
7.7.2 Manual reset if the voice alarm condition
7.9 Vocie alarm condition output
8.3 Indication of faults related to the transmission path to the CIE
8.4 Indication of faults related to voice alarm zones
10 Voice alarm manual control
12 Emergency microphone(s)
13.14 Redundant power amplifiers
Technical data: see document AVS-966S instruction Manual

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