APS-120W Amplifier Station
User Guide
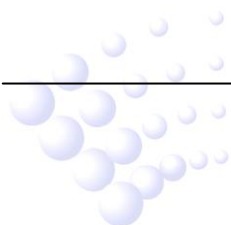
（Ver1.1，2008.11)

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1 General

To meet the requirement of Voice Alarm (VA) system, GST designed the APS-120W Amplifier Station, which can be integrated into GST Intelligent Fire Alarm System. The system is designed in accordance with BS5839-8 and BS EN 60849:1998. With the built-in pre-recorded messages and microphone, it can suit most of small and medium projects. Together with GST intelligent fire alarm control panel, the messages can be played automatically into pre-defined destinations in case of fire condition. It is an indispensable device in fire protection system. The panel has features as below:

➢ Easy wall mount installation
➢ 220VAC power supply
➢ Self-contains backup battery with charger
➢ 4 minute pre-record messages, Alert and Evac
➢ Emergency microphone
➢ Speaker line monitored
➢ Internal function monitored on message, microphone and trigger input.

2 Technical Specifications

Operation Voltage	220VAC±10%
Backup Battery	24VDC, 17AH
MIC Input	775mV
Output Voltage	100V (Optional 75V)
Frequency Range	80 ~ 8kHz (80V ~ 120V)
Distortion	<5%
End of Line Resistor	30kΩ, 1/2W
Environment Temperature	0~40°C
Relative Humidity	20%~95%
Dimension	560mm × 400mm × 178mm

3 Panel Instruction

3.1 Appearance and Structure

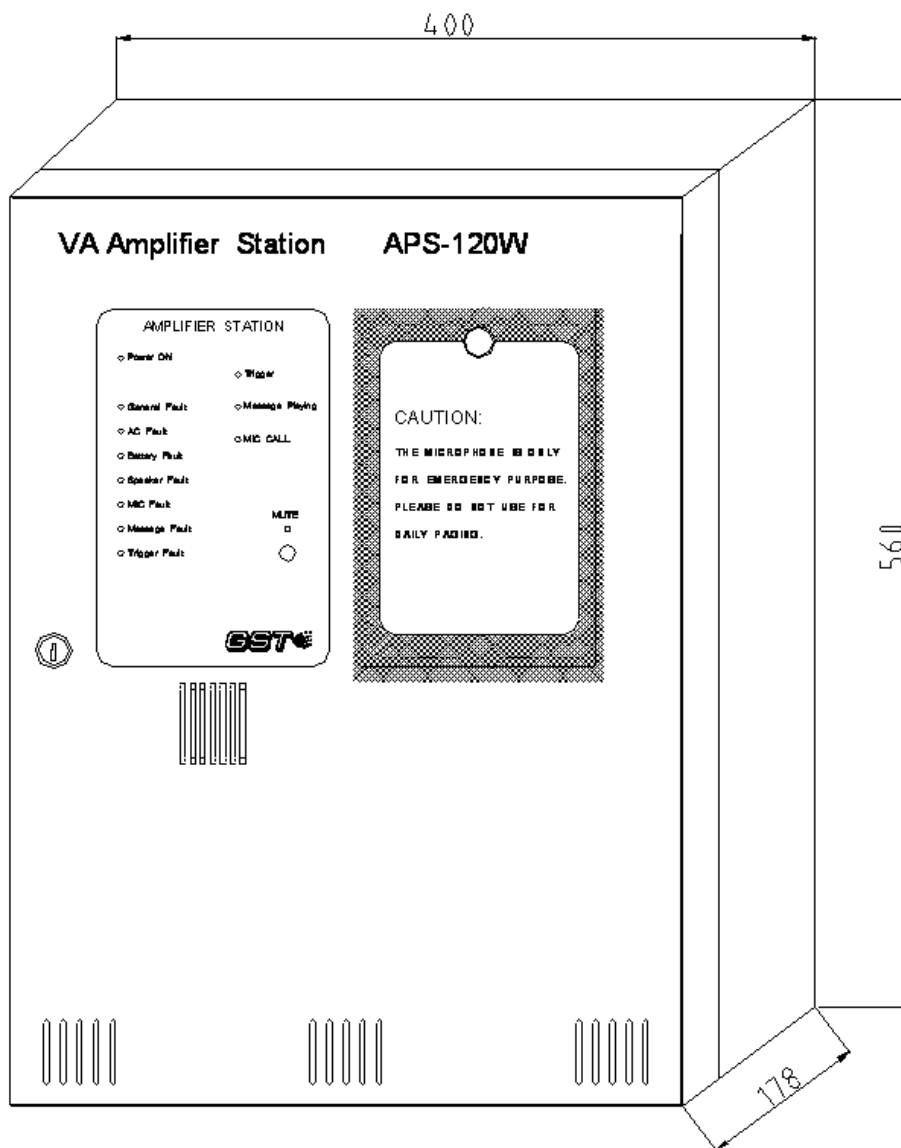The amplifier station is wall mount type. The appearance is shown in Fig.3-1
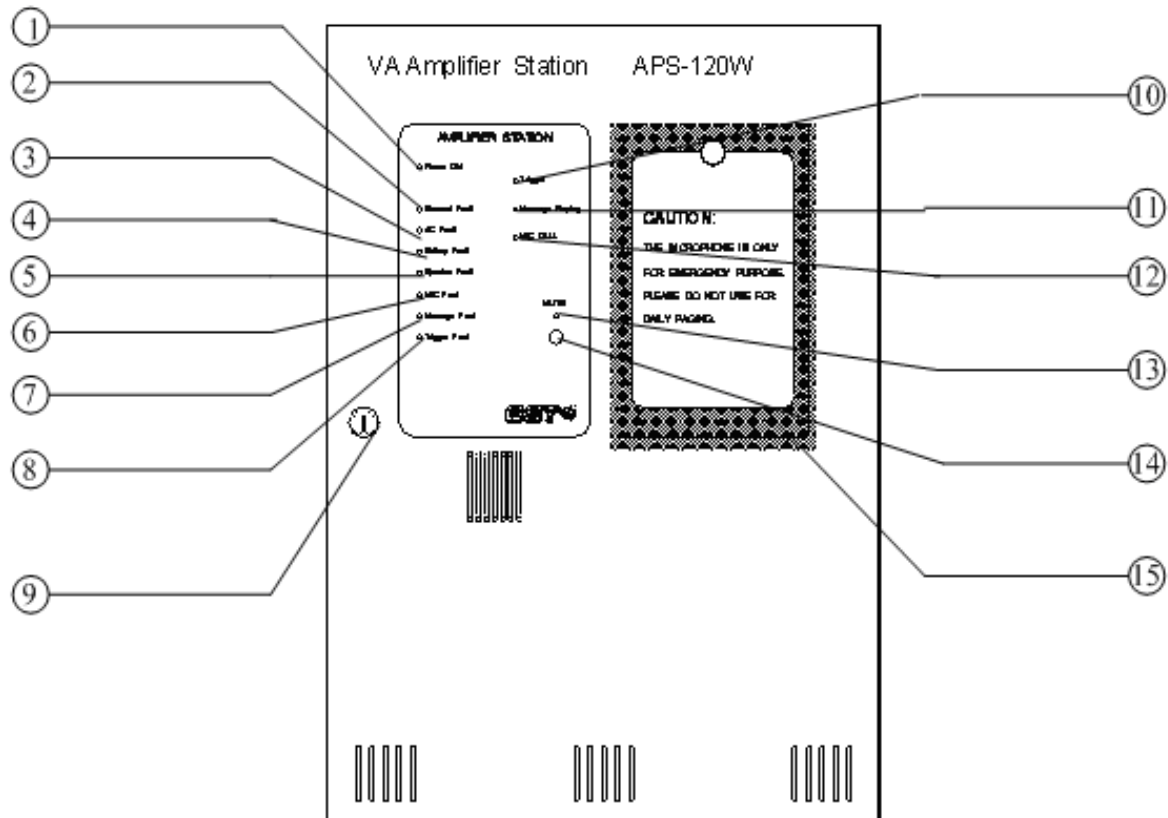

Fig.3-1

3.2   The front surface

Fig. 3-2

Indicators and Functions

1) **Power ON**:   Lit anytime when amplifier powered
2) **General Fault**:   Lit when any fault occurs to the amplifier
3) **AC Fault**:   Lit when AC power failure
4) **Battery Fault**:   Light when backup battery low voltage or disconnected
5) **Speaker Fault**:   Open Circuit (OC) or Short Circuit (SC) occurs on the speaker line output
6) **MIC Fault**:   Microphone disconnected or with fault
7) **Message Fault**:   The message storage and play circuit failure
8) **Trigger Fault**:   The cable of trigger in terminal is broken or not connected
9) **Lock**:   Door Lock
10) **Trigger**:   Lit when received trigger signal from fire alarm system. The pre-record messages will be played to the speaker line automatically.
11) **Message Playing**:   Lit when message(s) is playing.
12) **MIC CALL**:   Lit when the Push-To-Talk button on the emergency microphone

is pressed.

13) **MUTE**:   Lit when panel sound notification is muted

14) **Mute Key**:   The panel will give sound notification when fault occurs or triggered. Press the MUTE key to stop the sound. The notification will resume when new condition comes.

15) **Emergency Microphone**: The emergency microphone is stored behind the glass door. The microphone can be reached by pulling down the glass.
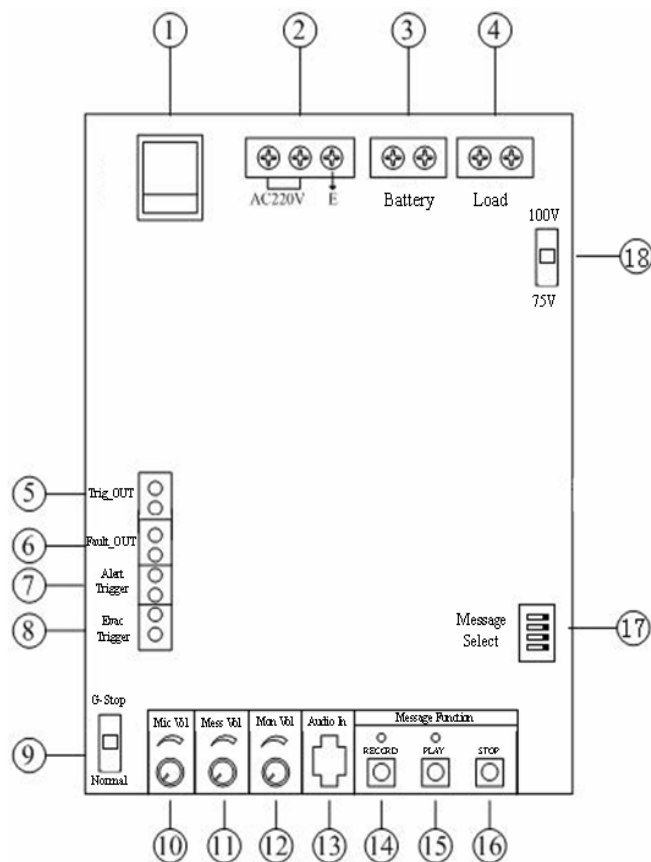
3.3   The terminals

Fig. 3-3

1) **AC Switch**:   Main Power Switch
2) **AC IN**:   Mains in (from filter)
3) **Battery**:   Backup battery, 24VDC
4) **Load**:   Amplifier output connecting speakers or modules. 30k end of line resistor is required for cable monitoring.
5) **Trigger_Out**:   N/O contact. Activated when amplifier triggered
6) **Fault_Out**:   N/C contact. Activated when fault occurs
7) **Alert Trigger**:   Start Alert message
8) **Evac Trigger**:   Start Evac message

9) **G-Stop:** Manually stop the operation of the amplifier

10) **MIC Volume**: Adjust microphone volume

11) **Message Volume**: Adjust message(s) playing volume

12) **Monitor Volume**: Adjust volume of the internal monitor speaker

13) **Audio Input:** Connecting with audio playing application like computer or MP3, for messages recording

14) **Record Button:** Record messages and Chime tone. Operation mentioned in 4.2.1.

15) **Play Button:** Press to play the message manually to check the message recording

16) **Stop Button**: Stop the message recording or playing

17) **Message Select**: Choose the Alert, Evac message or Chime to be recorded or play

18) **100V/75V Switch**: Select output voltage according to the speakers.

4 Functions and Operation

4.1   Functions

➢ The amplifier keeps in power saving standby mode in normal status. When trigger input activated, it will startup immediately and play the pre-record message(s) to the speaker line. In co-operating with fire alarm system, the Voice Evacuation can be achieved.

➢ The system is fully monitored in standby mode. Any type of fault including power fault, trigger fault, microphone fault, message fault and speaker line fault will be indicated by LED and sound notification.

➢ Emergency microphone is combined. When microphone calling out, the message playing volume will be forced down to make the announcement clear.

➢ Local monitor speaker provided.

➢ Self contains backup battery and battery charger. Battery is properly protected for low voltage and over-charging. Charging time is 48 hours, and work for 48 hours in standby mode. In battery operation status, the amplifier will stop work if battery voltage is lower than 19V.

➢ Automatic broadcast voice before microphone voice.

4.2 Operation：

4.2.1 Message Recording

4 minutes total, divided into 3 parts, the fires is about 1 minute and 55 seconds of pre-alarm message, the second is also about 1 minute and 55 seconds of fire alarm message, and the third is 7 seconds of microphone pre message. The message can be recorded locally. The sound source can be computer or other media player like MP3.

4.2.2 Instruction of Recording

1) File in computer or MP3 can be used. Connect the player to the Audio In port by the provided audio cable. (*Attention! The device should not be in pre or alarm state while recording or broadcasting. Recording Operation could not be affected by any fault except Message Fault*) Hold the recording key, the indicate lit, means remove the formal message. Put off it ,and then press the key, it start to record now. You can refer to the fig. below

	Choice of Recording			
	DIP4	DIP3	DIP2	DIP1
Pre-Alarm	OFF	OFF	OFF	OFF
Fire Alarm	OFF	OFF	OFF	ON
Pre-voice	OFF	OFF	ON	OFF
Remove all	ON	X	X	X

4.2.2.1 The Recording of Pre-Alarm(the first part):

Choose prepared pre alarm file in computer, and all DIP is OFF, Press and hold the "RECORD" key for 5s, when red LED starts flashing, it goes into preparing status, put off it, play the file until the voice can be heard. Stop file and start it again, start the player at the same time, the audio will be recorded into the amplifier. Normally the player volume should be adjusted to max. Stop the record anytime by press STOP button

4.2.2.2 Replay of the Pre Message：

Verify the message by playing back. If not satisfied, repeat the steps 4.2.2.1、4.2.2.2.

4.2.2.3 Fire Message Recording(the second part)：

Choose prepared fire file in computer, and all DIP is OFF except DIP1, Press and hold the "RECORD" key for 5s, when red LED starts flashing, it goes into preparing status, put off it, play the file until the voice can be heard. Stop file and start it again, start the player at the same time, the audio will be recorded into the amplifier. Normally the player volume should be adjusted to max. Stop the record anytime by press STOP button.

4.2.2.4 Replay of Fire Message：Verify the message by playing back. If not satisfied, repeat the steps 4.2.2.3、4.2.2.4.

4.2.2.5 Pre mic. Voice Recording (the third part):

Choose prepared mic. voice file in computer, and all DIP is OFF except DIP2, Press and hold the "RECORD" key for 5s, when red LED starts flashing, it goes into preparing status, put off it, play the file until the voice can be heard. Stop file and start it again, start the player at the same time, the audio will be recorded into the amplifier. Normally the player volume should be adjusted to max. Stop the record anytime by press STOP button.

4.2.2.6 Replay of mic. Message：Verify the message by playing back. If not satisfied, repeat the steps 4.2.2.5、4.2.2.6.

4.2.2.7 Remove All：

When DIP4 is ON for about 5 seconds , all message is gone.

4.2.3 Pre Alarm Broadcast

After receive the pre alarm signal from panel, the device will broadcast pre alarm voice automaticly. Volume can be adjust by "Message Volume" key , and fan is started, and it will stop delay. The broadcast can be stop by G=STOP.

4.2.4 Pre Alarm Monitor：

The Pre Alarm message can be monitored when there no any trigger signal from panel. After record message, All DIP is made off. Message can be monitored. The PLAY, STOP and Monitor Volume key can be used.

4.2.3 Fire Alarm Broadcast:

After receive the fire alarm signal from panel(ignore the pre alarm signal), the device will broadcast fire alarm voice automatic. Volume can be adjust by "Message Volume" key , and fan is started, and it will stop delay. The broadcast can be stop by G=STOP.

4.2.4 Fire Alarm Monitor：

The fire Alarm message can be monitored when there no any trigger signal from panel. After record message, All DIP is made off except DIP1 is on. Message can be monitored. The PLAY, STOP and Monitor Volume key can be used.

4.2.5 Microphone

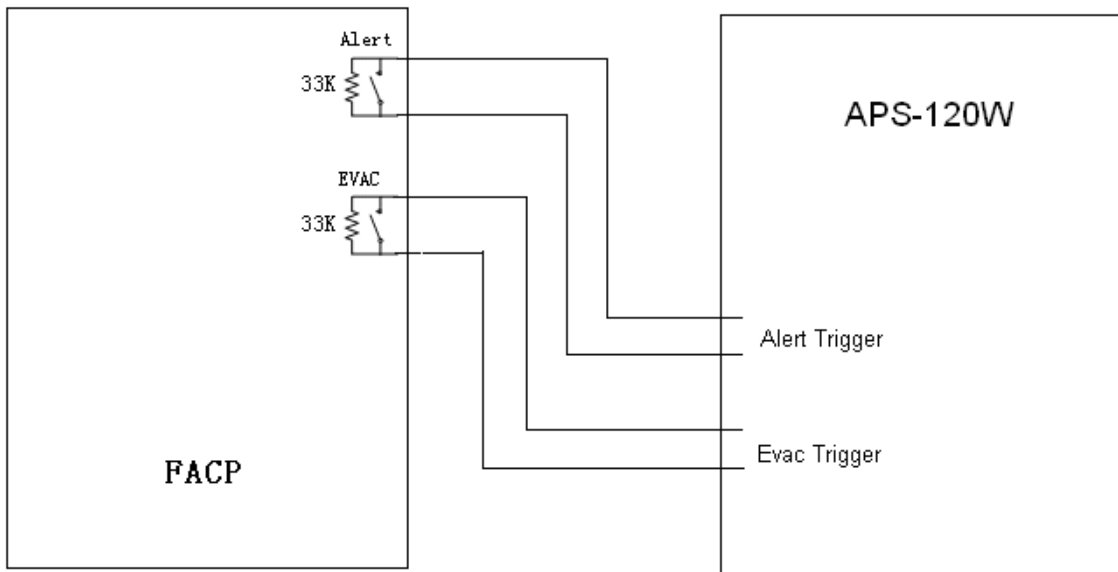Start the device, take out mike, press the key, any state can be change into mike state. Broadcast Pre voice if have recorded. Then the mike can work.. And the mike have the priority. It can not be back to the formal state until the mike state stop.
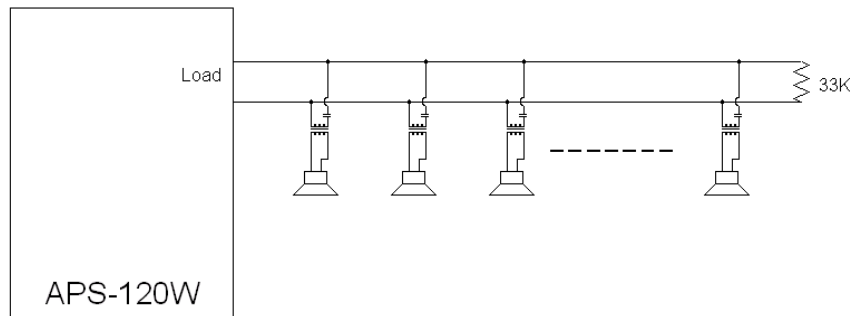
5. Attention

5.1 Connection：

5.1.1 Trigger signal

The trigger signal is from FACP. The end of line resistor (33K 1/8W) is for monitoring of open circuit. Minimum 2-core 1.0mm^2 fire cable is required.

5.1.2 Output:

The 30kΩ 1/2W resistor is requested for cable monitoring. Or else it won't show output fault.

5.2 Store： Store in dry and stable place.

5.3 Transport：Avoid hitting.

5.4 Operation：Under strict test, must follow the manual。

5.5 Attention：AC220V，be far away form the device except specialist avoiding being hurt.

6. Maintenance

6.1 Maintenance：

Operator should operate the device after read the manual carefully ,and strictly follow the manual in order to make it work well. Maintenance should be put in act by specialist on time. Inner connection should not be move until contact our company.

6.2　Toubleshooting：

No.	Fault	Reason	Solution
1	Power indicator not lit	Power connection	Check power cable
		Fuse break up	Replace fuse
2	No monitor voice	Volume lower	Turn up
		Speaker broken	Replace new speaker
		Speak mode	In microphone mode, no monitor voice
3	No voice output	connection	Check cable
		Output speaker	Check out speaker
		Output calbe	Check if short or break

7. Attachment List

7.1 Attachment A: Two 2A fuses, two 3A fuses, a cable, a black mic.two keys.

7.2 Attachment B: a manual。

GST warrants that the product will be free from defects in design, materials and workmanship during the warranty period. This warranty shall not apply to any product that is found to have been improperly installed or used in any way not in accordance with the instructions supplied with the product. Anybody, including the agents, distributors or employees, is not in the position to amend the contents of this warranty. Please contact your local distributor for products not covered by this warranty.

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