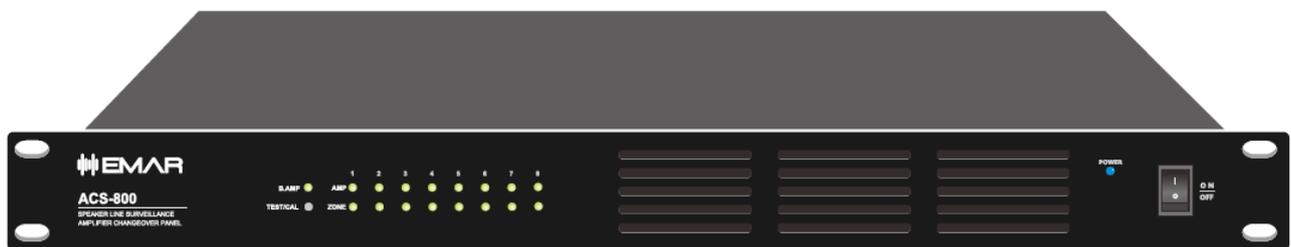


INSTALLATION AND OPERATION MANUAL

ACS-800

Amplifier Fault Changeover with Speaker Line Surveillance



Caution: Please read this manual carefully before operating
Damage caused by misuse is not covered by the warranty



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- **About this Manual**

Dear user:

Thank you for choose this product, before use ACS-800, please read the attached user manual, so you can know how to user our device, please keep the user manual safety so you can check it again if any questions during the operation

- ❖ Purpose

- Offer help to Install, config and operate this ACS-800

- ❖ Target people

- ACS-800 user or installation

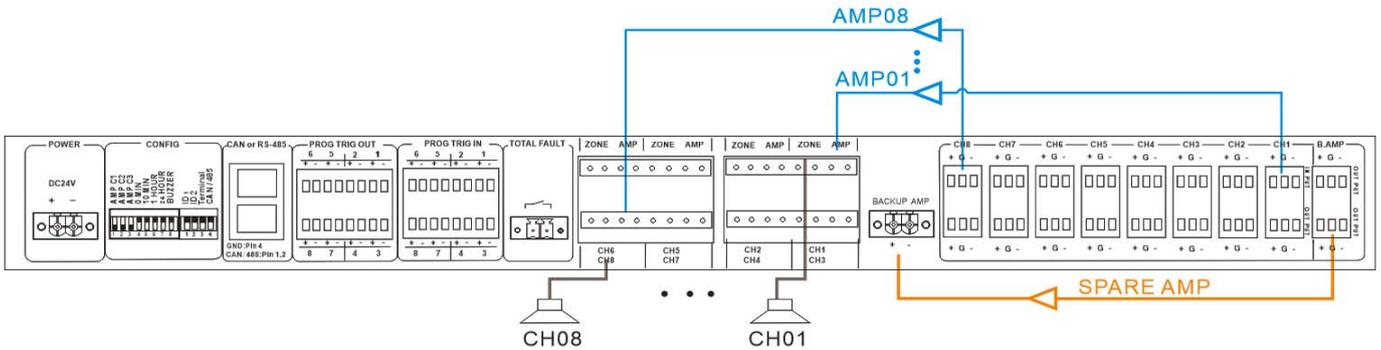
- **Over view**

ACS-800 is a equipment which integrated amplifier detection, automatic change over and speaker supervision, it can provide the third party programming on-line and with SDK protocol interface. It is an ideal choice for the intelligent PA system,

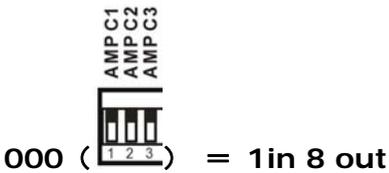
- **System feature**

- ❖ Channel amplifier fault changeover with speaker line surveillance
- ❖ 19" rack mount design in 1U height
- ❖ One standby amplifier to backup 8 amplifier/7 amplifier/ 6 amplifier.../1 amplifier within 1 second
- ❖ 8 speaker line supervision for open circuit, short circuit and impedance fluctuation
- ❖ Each speaker zone detection time within 2 seconds, Each channel could detect 3W-1000W speaker load.
- ❖ The amplifier and speaker line fault will be reminded by indicator, buzzer, fault out and RS485 out
- ❖ 8 amplifier indicator, standby amplifier indicator and 8 speaker line indicator
- ❖ With calibrate button on front panel to initialize or calibrate each amplifier and speaker line setting
- ❖ With 8 balanced line inputs and 8 balanced line outputs with 24V overriding relay
- ❖ With 8 amplifier 100V inputs and 8 zone 100V outputs
- ❖ Dipswitch for 8 zone enable or disable the monitoring
- ❖ 10% and 20% two speaker impedance monitoring options
- ❖ Expandable from 8 zones to max 192 zones
- ❖ 24V DC operation system
- ❖ Support CAN and RS-485

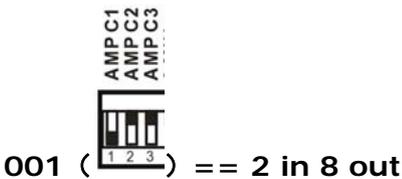
- **Device connection**



Clarification: Above setting is 8 in 8 out, CH ID1~CH ID3 set as '111' means 8 channels.



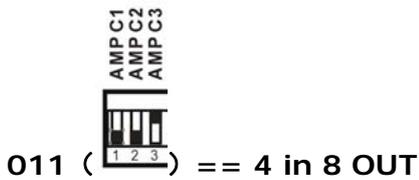
1pcs main amplifier host speaker output connect to AMP port of CH1, audio signal input to CH1 input, then connect amplifier audio input to CH1 output. Amplifier signal output from CH1~8 zone output.



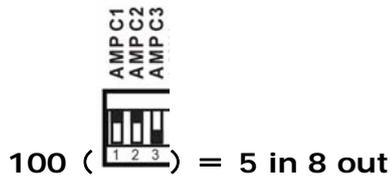
2pcs main amplifier host speaker output connect to AMP port of CH1 & CH4, audio signal input to CH1&CH4 input and CH1& CH4 output to amplifier audio input.,
 First amplifier signal output from zone output of CH1,2,3,4. Second amplifier signal output from zone output of CH5,6,7,8.



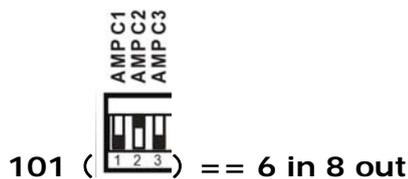
3pcs main amplifier host speaker output connect to AMP port of CH1,CH3 & CH5, audio signal input to CH1&CH3&CH5 input and CH1& CH3& CH5 output to amplifier audio input, First amplifier signal from zone output of CH1,2. Second amplifier signal output from zone output of CH3,4. Third amplifier signal output from zone output of CH5,6,7,8



4pcs main amplifier host speaker output connect to AMP port of CH1,CH3 & CH5,CH7, audio signal input to CH1&CH3&CH5&CH7 input and CH1& CH3& CH5&CH7 output to amplifier audio input, First amplifier signal from zone output of CH1,2. NO.2 amplifier signal output from zone output of CH3,4. NO.3 amplifier signal output from zone output of CH5,6. NO.4 amplifier signal output from zone output of CH7,8.



5pcs main amplifier host speaker output connect to AMP port of CH1~ CH5, audio signal input to CH1~CH5 input and CH1~CH5 output to amplifier audio input, NO.1~NO.4 amplifier signal from zone output of CH1~CH4. NO.5 amplifier signal output from zone output of CH5~CH8.

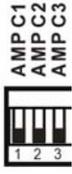


6pcs main amplifier host speaker output connect to AMP port of CH1~ CH6, audio signal input to CH1~CH6 input and CH1~CH6 output to amplifier audio input, NO.1~NO.5 amplifier signal from zone output of CH1~CH5. NO.6 amplifier signal output from zone output of CH6~CH8.



110 () == 7 in 8 out

7pcs main amplifier host speaker output connect to AMP port of CH1~CH7, audio signal input to CH1~CH7 input and CH1~CH7 output to amplifier audio input, NO.1~NO.6 amplifier signal from zone output of CH1~CH6. NO.7 amplifier signal output from zone output of CH7~CH8.

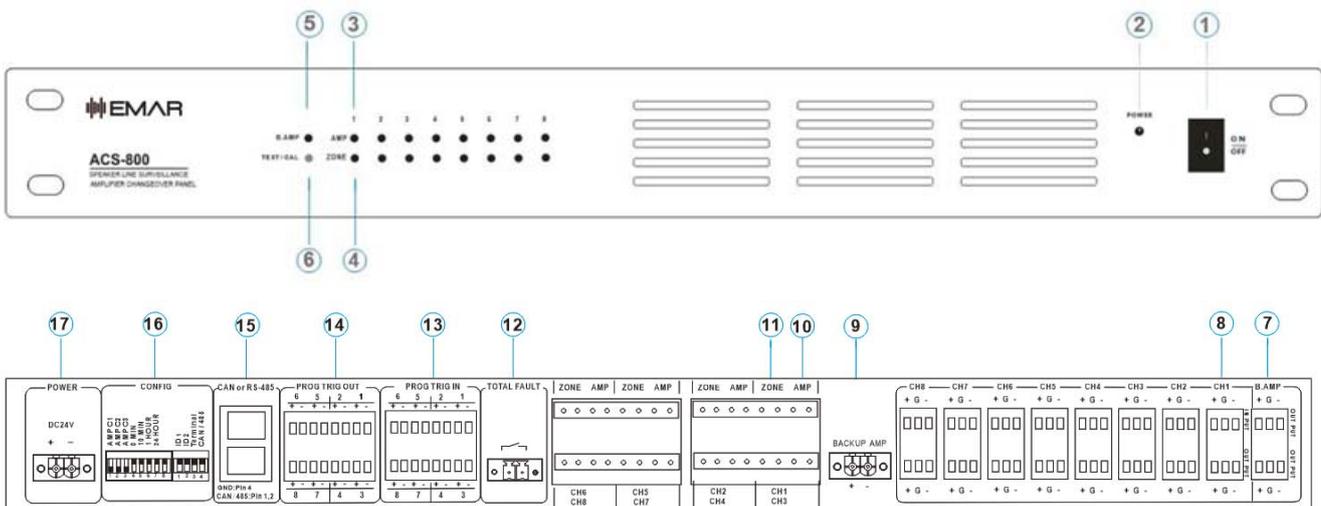


111 () == 8 in 8 out

8pcs main amplifier host speaker output connect to AMP port of CH1~CH8, audio signal input to CH1~CH8 input and CH1~CH8 output to amplifier audio input, NO.1~NO.8 amplifier signal from zone output of CH1~CH8.

Equipment Introduction.

1.1. Front Panel/ Rear Panel



- ① — Power switcher
- ② — Power Led Indicators
- ◆ Blue — Normal power supply;
- ◆ Off — Power failure;

- ③ — Main Amplifier channel status indicator
- ◆ Yellow — Amplifier Failure;

- ◆ Off—Amplifier not in configuration or not exciting;
- ◆ Red—Main Amplifier change over to standby Amplifier;
- ◆ Green—Normal working;

④ —Speaker zone indicator Led

- ◆ Yellow—Failure;
- ◆ Off—Normal working;
- ◆ Red—Earthing;

⑤ — Indicator of standby amplifier

- ◆ Yellow—Standby amplifier Failure;
- ◆ Green—Normal working;
- ◆ Other undefined;

⑥ — Speaker loop impedance checking; keep press 5 seconds then release, this is speaker loop impedance checking, press 1 second then release, this is 8 lines real-time impedance detection.

Note: When the speaker loop impedance was changed, check at least once (the change means increase or decrease the speaker)

⑦ — Standby power amplifier balanced signal output (external power amplifier balanced input interface, pay attention to external unbalanced input interface, "+" connect to "+", "-" connect "G" first then connect unbalanced "G", which will lead to signal reduce to half)

⑧ — Main amplifier 01 ~ 08 balanced signal output interface (external power amplifier balanced input interface):

⑨ — External power amplifier (standby) 100V input interface;

⑩ — External main function 01 ~ 08 amplifier 100V input interface;

⑪ —Zone output, connect to speakers (please note speaker is 100V);

⑫ —Device fault output interface

- ◆ When the device's zone speaker line has open circuit, short circuit, ground, or main amplifier , standby power amplifier is fail, the relay output is open, if normal working, the relay is closed;

⑬/⑭ —Programmable I / O interface (protocol-based)

⑮ —CAN or RS485 interface

⑯ — System Configuration

AMP C1, AMP C2, AMP C2 is configuration of quantity of amplifiers.

0 MIN, 10MIN, 1HOUR, 24HOUR is detection time--No detection/ detect every 10 minutes/ 1 hour, /24 hours.

ID1, ID2 are the online network address.

Terminal is network termination resistor, when the device is at the end of network, unplug this switch.

CAN / RS485 optional:

Down--→: CAN: (CAN_B, 29)

On--→: RS485; (9600, n, 9,1)

⑰ — Power supply terminal

Specification:

Model	ACS-800
Description	8 Channel Amplifier Fault Changeover with Speaker Line Surveillance
Channel	8 Channels
Connector	Eight balanced line inputs by phoenix connector Eight balanced line outputs with 24V relay by phoenix connector Eight Amplifier 100V inputs by phoenix connector Eight Speaker 100V outputs by phoenix connector One fault contact output by phoenix connector & One RS485 output by RJ45
Configuration	Auto or manual monitoring dipswitch; Enable or disabled 8 zone monitoring dipswitch Expandable to 192 zones ID dipswitch; 10% or 20% monitoring speaker line fluctuation
Input Sensitivity/Impedance	1V, 10K Ohm
Pilot Tone Frequency	20 KHz ($\pm 5\%$)
Detection Line	50V/70V/100V Speaker line
Detection Level	50V rms min
Amplifier Detection Time	< 1 Second
Speaker Line Detection Time	< 2 Seconds per speaker zone
Changeover Time	< 1 Second
Failure Detection Time	5-15 Seconds
Failure Reset Time	20 Seconds Max.
Zone Loading Capacity	500W /100V Line Max.
Max Loading Current	8A
Measurement Sensitivity	$\pm 10\%$ of Speaker line impedance
Power Supply	DC24V by phoenix connector Max. 2A
Dimension	482(W)x368(D)x44(H) mm
Weight	4.3kg

- **Attention**

- 1) Do not install the system equipment in direct sunlight or near the heating element, because the device may be deformed, faded or due to high temperature into the protection state and stop working;
- 2) Do not install the system equipment or stored in dusty, humid place, otherwise it will cause the stability of the system equipment or intermittent failure;
- 3) To prevent the equipment was affected from the high electromagnetic, the equipment should be as far away from the strong magnetic field equipment as possible.

SERVICE

Ensure the problem is not related to operator error, or system devices that are external to this unit. Information provided in the troubleshooting portion of this manual may help with this process. Once it is certain that the problem is related to the product contact your warranty provider as described in the warranty section of this manual.

WARRANTY

Warranty terms of global three years. While the term and warranty may vary by country and may not be the same for all products. Terms and conditions of warranty for a given product may be determined first by locating the appropriate country which the product was purchased in, then by locating the product type.

Specifications may change without pre-notice.