

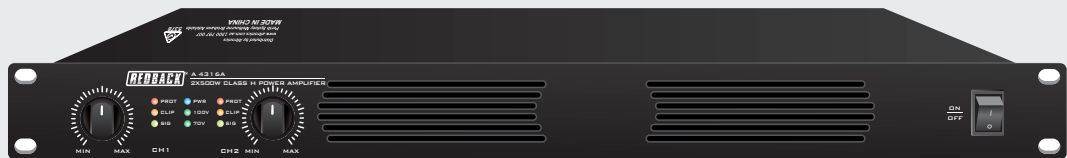
## PUBLIC ADDRESS SYSTEM



# OPERATION MANUAL

**A 4316A**

**2X500W CLASS H POWER AMPLIFIER**



Please follow the instructions in this manual to obtain the optimum results from this unit.  
We also recommend that you keep this manual handy for future reference.

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## 1. SAFETY PRECAUTIONS

- Be sure to read the instructions in this section carefully before use.
- Make sure to observe the instructions in this manual as the conventions of safety symbols and messages regarded as very important precautions are included.
- We also recommend you keep this instruction manual handy for future reference.

### Safety Symbol and Message Conventions

Safety symbols and messages described below are used in this manual to prevent bodily injury and property damage which could result from mishandling. Before operating your product, read this manual first and understand the safety symbols and messages so you are thoroughly aware of the potential safety



### WARNING

Indicates a potentially hazardous situation which, if mishandled, could result in death or serious personal injury.



### CAUTION

Indicates a potentially hazardous situation which, if mishandled, could result in moderate or minor personal injury, and/or property damage.



### WARNING

#### When Installing the Unit

- Do not expose the unit to rain or an environment where it may be splashed by water or other liquids, as doing so may result in fire or electric shock.
- Use the unit only with the voltage specified on the unit. Using a voltage higher than that which is specified may result in fire or electric shock.
- Do not cut, kink, otherwise damage nor modify the power supply cord. In addition, avoid using the power cord in close proximity to heaters, and never place heavy objects -- including the unit itself -- on the power cord, as doing so may result in fire or electric shock.
- Be sure to replace the unit's terminal cover after connection completion. Because high voltage is applied to the speaker terminals, never touch these terminals to avoid electric shock.
- Be sure to ground to the safety ground (earth) terminal to avoid electric shock. Never ground to a gas pipe as a catastrophic disaster may result.
- Avoid installing or mounting the unit in unstable locations, such as on a rickety table or a slanted surface. Doing so may result in the unit falling down, causing personal injury and/or property damage.

#### When the Unit is in Use

- Should the following irregularity be found during use, immediately switch off the power, disconnect the power supply plug from the AC outlet and contact your nearest **ALTRONICS** dealer. Make no further attempt to operate the unit in this condition as this may cause fire or electric shock.
  - If you detect smoke or a strange smell coming from the unit.
  - If water or any metallic object gets into the unit
  - If the unit falls, or the unit case breaks
  - If the power supply cord is damaged (exposure of the core, disconnection, etc.)
  - If it is malfunctioning (no tone sounds.)
- To prevent a fire or electric shock, never open nor remove the unit case as there are high voltage components inside the unit. Refer all servicing to your nearest **ALTRONICS** dealer.
- Do not place cups, bowls, or other containers of liquid or metallic objects on top of the unit. If they accidentally spill into the unit, this may cause a fire or electric shock.
- Do not insert nor drop metallic objects or flammable materials in the ventilation slots of the unit's cover, as this may result in fire or electric shock.

### CAUTION

#### When Installing the Unit

- Never plug in nor remove the power supply plug with wet hands, as doing so may cause electric shock.
- When unplugging the power supply cord, be sure to grasp the power supply plug; never pull on the cord itself. Operating the unit with a damaged power supply cord may cause a fire or electric shock.
- When moving the unit, be sure to remove its power supply cord from the wall outlet. Moving the unit with the power cord connected to the outlet may cause damage to the power cord, resulting in fire or electric shock. When removing the power cord, be sure to hold its plug to pull.
- Do not block the ventilation slots in the unit's cover. Doing so may cause heat to build up inside the unit and result in fire.
- Avoid installing the unit in humid or dusty locations, in locations exposed to the direct sunlight, near the heaters, or in locations generating sooty smoke or steam as doing otherwise may result in fire or electric shock.

#### When the Unit is in Use

- Do not place heavy objects on the unit as this may cause it to fall or break which may result in personal injury and/or property damage. In addition, the object itself may fall off and cause injury and/or damage.
- Make sure that the volume control is set to minimum position before power is switched on. Loud noise produced at high volume when power is switched on can impair hearing.
- Do not operate the unit for an extended period of time with the sound distorting. This is an indication of a malfunction, which in turn can cause heat to generate and result in a fire.
- Contact your **ALTRONICS** dealer as to the cleaning. If dust is allowed to accumulate in the unit over a long period of time, a fire or damage to the unit may result.
- If dust accumulates on the power supply plug or in the wall AC outlet, a fire may result. Clean it periodically. In addition, insert the plug in the wall outlet securely.
- Switch off the power, and unplug the power supply plug from the AC outlet for safety purposes when cleaning or leaving the unit unused for 10 days or more. Doing otherwise may cause a fire or electric shock.

An all-pole mains switch with a contact separation of at least 3 mm in each pole shall be incorporated in the electrical installation of the building.

Due to product upgrades, while some of the features and specification in the user manual does not match the actual functions, sorry for any inconvenience and thanks for your kind understanding!

## 2. PRODUCT DESCRIPTION

This power amplifier combine of high-performance switching power supply and H class amplifier, adopts 1U cabinet design, with the features of high efficiency, light weight and nice appearance.

## 3. FEATURES

1. Standard cabinet design(1U), with sophisticated technology, greatly show the high-grade temperament.
2. Support single/dual channel balanced TRS line/ balanced XLR Mic input socket.
3. Support single/dual channel balanced XLR cascade output.
4. The panel with adjustment knob of channel volume.
5. The rear panel with "Grounding" line suspension switch, it can effectively eliminate the loop noise caused by "Grounding" line connection of multiple devices.
6. With automatic protection of short circuit, overload, overheating.
7. Mode of power output: constant voltage, 100V, 70V.
8. The location reservation of 24V module.

## 4. FRONT AND REAR PANEL FUNCTIONS



1. Volume Gain Size Adjustment Knob: Adjusts the sound output to the speaker.

Turn right Turn the volume up, and turn it to the left to mute it.

2. PROT: protection indicator.

3. SIG: signal indicator.

4. CLIP: pressure limit indicator.

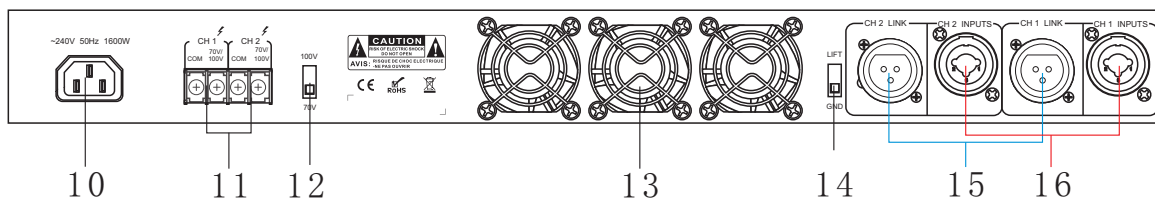
5. 70V: The light is on to indicate the output is 70V.

6. 100V: the light on that the output is 100V state.

7. PWR: power indicator.

8. Fan inlet.

9. Power switch.



10. AC POWER INPUT.

11. SPEAKERS output terminal.

12. 100V and 70V selector switch.

13. Fan outlet.

14. "Ground" suspension switch.

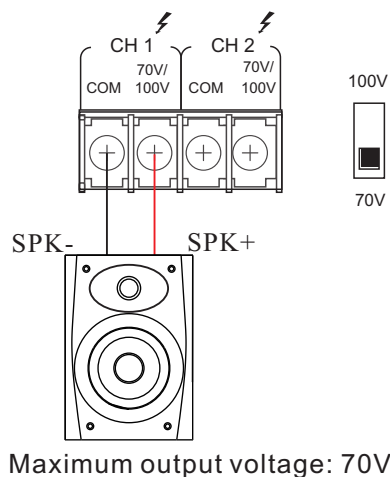
15. CH1 / CH2 channels – Line Outputs for balanced XLR cascade LINK.

16. CH1 / CH2 channels – Mic/Line Inputs for combination socket balanced XLR/TRS.

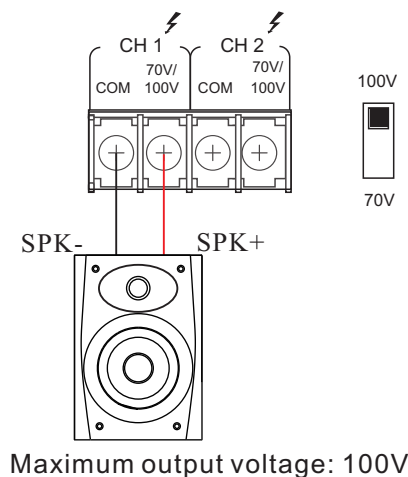
## 5. OPERATION

### 1. Connect the speakers:

① When the 100V and 70V selector switch to 70V position, as shown below:



② When the 100V and 70V selector switch to 100V position, as shown below:



#### Note:

1. Before connecting the speakers, please make sure that the equipment is powered off. In the case of power on, may have the risk of electric shock.
2. Please make sure there are no applied load to the speaker cables.
3. During the installation of speakers, please make sure that the sum of the rated input power of the speakers to be connected is less than rated power of equipment.

### 2. Connect external devices:

- ① Please make sure this amplifier and other equipment to be connected are turn off.
- ② Please use the correct cable to connect with external equipment.

### 3. Connect the power cord and turn on:

- ① Please make sure the power switch is off when connect the equipment.
- ② Turn the volume knob to the left.
- ③ Connect the power cord with AC IN interface, turn on the power switch.
- ④ Turn on the other equipment firstly (CD player. etc), then turn on this amplifier.



#### Note:

1. Please check carefully to make sure the correct connection before turning on power.
2. Please turn off this amplifier firstly, and then turn off other equipment.

### 4. Connecting Microphones:

- ① Turning the volume knob to the left for minimum volume. Plug the microphone into the microphone connector of the pre-amplifier, and then connect the OUTPUT of the pre-amplifier into the Line INPUT connector on the rear panel of the amplifier - CH1 or CH2.
- ② Turning the volume knob in the right position.
- ③ Speak loudly into the microphone and turn the volume knob anticlockwise (to the left), until the output signal no longer distorting. If input is high but output is low, then increase the volume by turning the volume knob on the amplifier clockwise (to the right). If the speaker volume is very high, then reduce the volume by turning the knob to the left.

### 5. Shut down the system:

- ① Turn the amplifier volume knob anticlockwise until in the minimum position.
- ② Press the amplifier panel power switch to the off position. Then switch off the connected processor equipment and audio source equipment.



#### **Note:**

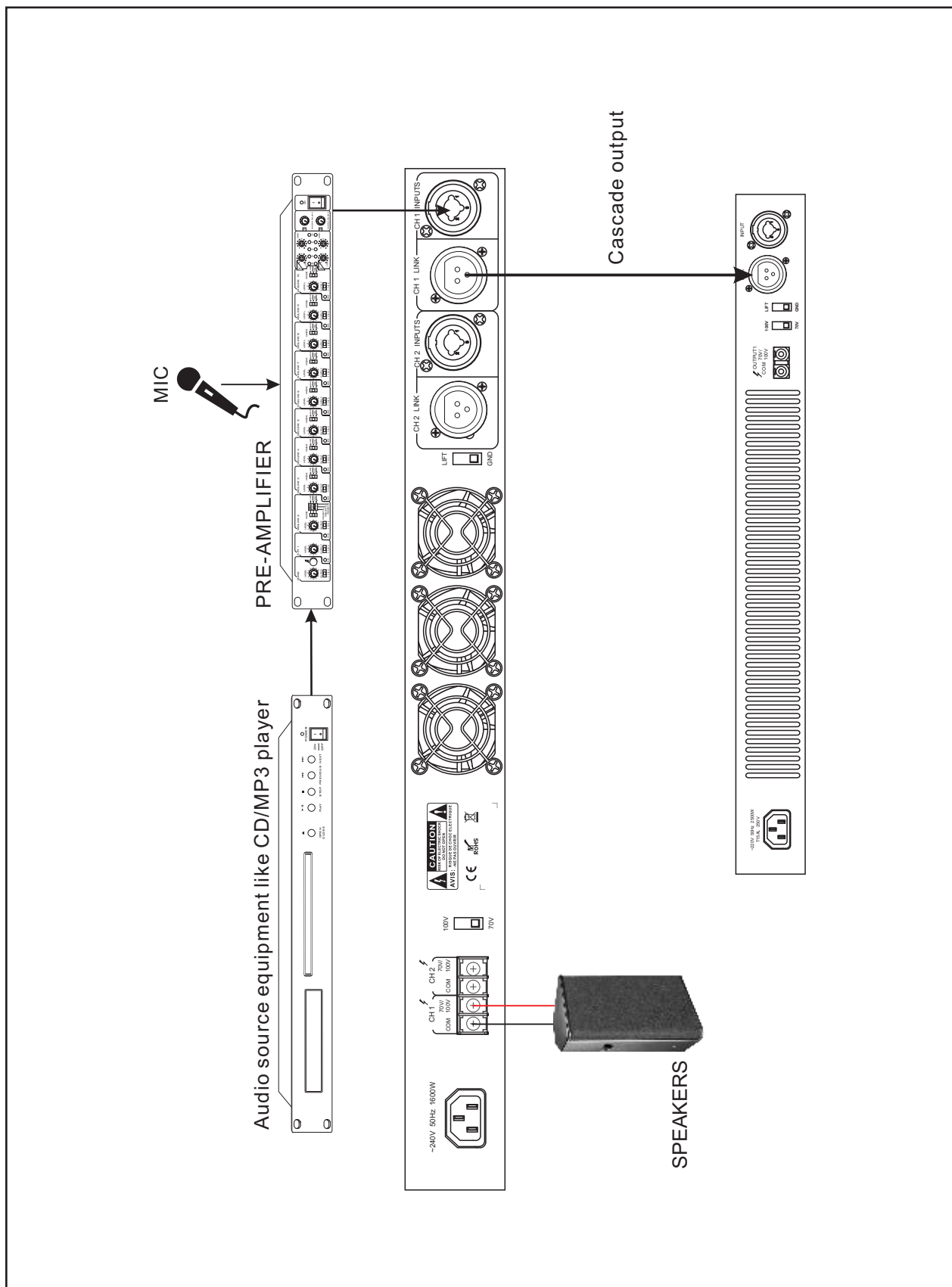
1. After turning off the power switch, please wait about 5 seconds before turning it on again. Repeated and frequent turning the power switch on and off may result in equipment failure.
2. When the power switch is off, a little current will remain in the equipment.
3. If the amplifier is not going to be used for an extended period, please unplug the power cord from the wall AC mains socket.

## 6. TROUBLESHOOTING

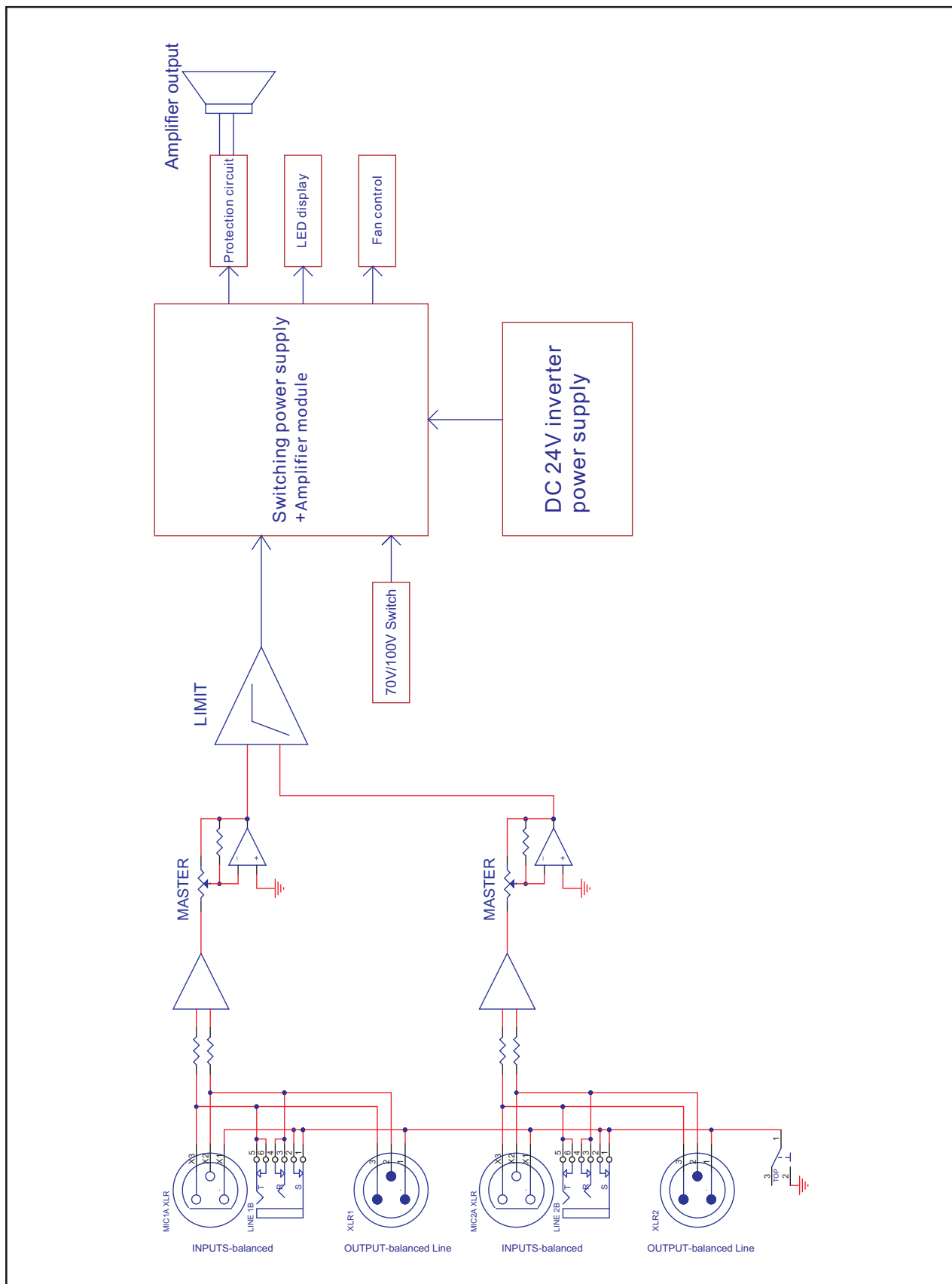
Failure phenomena	Failure cause
1. Power switch is not opened	<ol style="list-style-type: none"><li>1. Power line is cut off</li><li>2. The protection function of the equipment is not activated</li></ol>
2. All lines are connected, but there is no sound.	<ol style="list-style-type: none"><li>1. The power switch is not opened or the power plug is bad contacted.</li><li>2. The fuse is burnt</li><li>3. The volume knob is not opened or turned down to a extra low level</li><li>4. There is no audio signal input</li><li>5. There is short-circuit in the speaker line.</li><li>6. The amplifier is set to high-impedance, but is connected to a speaker using a low impedance input, or is connected to too many loudspeakers in series.</li></ol>
3. The sound suddenly disappears in normal status.	<ol style="list-style-type: none"><li>1. The equipment temperature is very high and thermal protection status has engaged.</li><li>2. The connection wire to the speaker has a bad contact.</li></ol>
4. Low sound	The equipment is set to low impedance, but the speakers connected are high impedance rating.
5. Sound is distorted	The input level of Mic or external equipment is too high
6. The protection indicator light is on	The internal temperature of the device is too high

## 7. APPLICATIONS

### REAR PANEL CONNECTIONS



## 8. BLOCK DIAGRAM



## 9. SPECIFICATIONS

Model	A 4316A
Rated power output	2×500W
Speaker output	70V/100V
Input sensitivity & input impedance	±385mV/10KΩ, balance XLR 775mV/10KΩ, balanced TRS input terminals
Output sensitivity & output source impedance	±385mV/10KΩ, balance XLR 775mV/10KΩ, balanced TRS output terminals
Frequency response	80Hz-16KHz(+1dB, -3dB)
THD	≤1%
SNR	≥98dB
Heat dissipation	Forced air cooling from front to back
Protection	There are overload, over temperature, short circuit, high frequency, overvoltage, undervoltage and other protection
“Ground”switch	Signal “ground” optional chassis or suspension
Storage temperature	-20℃~+70℃
Relative humidity	<95%(Without condensation)
Supply voltage	~240V 50Hz
Power loss	1600W
Weight	4.3Kg
Dimension	484×320×44mm

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