

PX1000
PX2000
PX3600+
PX5000+



CE
PX Series
USER MANUAL
Professional Power Amplifier

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IMPORTANT PRECAUTIONS



1. Read all documentation before operating your equipment. Retain all documentation for further reference.
2. Mains voltage must be correct and the same as that printed on the rear of the unit. Damage caused by connection to improper AC voltage is not covered by any warranty.
3. Always operate the unit with the AC ground wire connected to the electrical system ground. Precautions should be taken so that the means of grounding of a piece of equipment is not defected.
4. After connected to power supply, Standby LED illumed, some components inside already electrified.
5. Output port at bridge status of the amplifier links with oscillograph is prohibited, or it would cause damage to the amplifier and the equipment.
6. The output level of the amplifier does not exceed the marked sensitivity.
7. Do not run the output of any amplifier channel back into another channel's input. Do not parallel or series connect an amplifier output with any other amplifier output.
8. In system setup, amplifier's output power must be greater 50%-100% than the loaded loudspeaker's rated power.
9. Make sure the signal correctly connect to the amplifier's input channel at current input mode.
10. Please turn off the power switch, when pull off the power cord and signal cable or select the input mode switch.
11. In typical use, Please set the volume to -0dB position.
12. Sometime, one signal to more than one amplifier, suggest use signal distributor.
13. If needs to supply power for more than one unit power amplifiers, to eliminate the big surge current interfere to the electricity net and cause the voltage fluctuate abnormal thereby lead to amplifiers and other equipments with same line defective while switch on the amplifier, we recommend you use the Sequence Power.
14. Do not obstruct the air entrance and exit.

Safety instructions

Read all safety instructions before operating amplifier

Install equipment as follows:

- Install in a flat place, not bending or curved.
- Do not install near water and moisture.
- Place power amplifier away from heat sources, such as radiators or other heat source.

Keep in mind the following when connecting amplifiers:

- Read the user manual before connecting the amplifier.
- Connect each connection of the amplifier perfectly. If not, it may cause hum, damage, electric shock in case of disconnection.
- To prevent electric shocks, do not open top cover.
- Connect the power cord with safety after check the AC power.



CAUTION

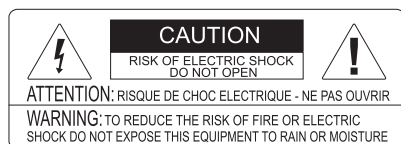
Warning: with dangerous voltage non insulation components inside enough to cause electric shock. do not open. return to authorized service center or repaired by specified people if failed.
to reduce the risk of fire or electric shock do not expose this equipment to rain or moisture.

Function description

- 1.This product applies for brand-new tunnel heat-sink cooling system, which guarantees higher heating radiation efficiency and lower working temperature, make products more stable and reliable.
- 2.The amplifier module adopts class H circuit, increased the total efficiency to be 70%,make it supply as much as possible power to the speakers in the limited spaces. Plus the product equipped with DC, short circuit, VHF, over-current and soft-start protection, greatly increased the stability and reliability of the products.
The best loading condition for this series amplifier is at 8 ohm.
- 3.It adopts the latest power automatic limit circuit. When the amplifier is loaded at 2 ohm, the amplifier will adjust the output power to make sure that the amplifier is working under the rated power so as to avoid the risk of damage because of over-loading.
- 4.This product matched with advanced switching power supply as the power supply system for the whole equipment, standing out the small volume and light weight compared with same power products, favorable to save transportation charges and reduce loading difficulties.
- 5.The output stage circuit adopts transistor collector output mode, makes the transistors with stronger loading ability. It is good for product stability

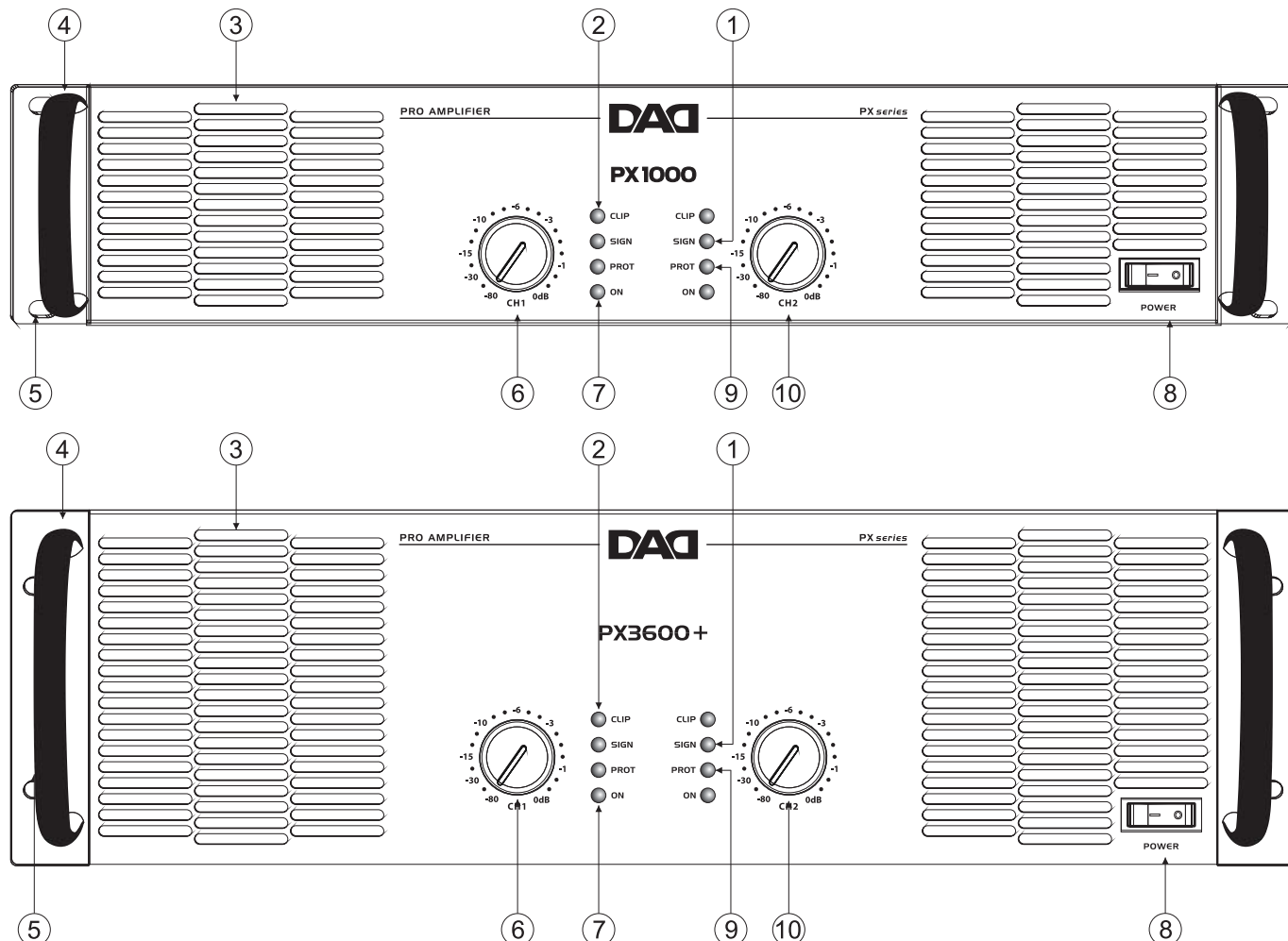
Ex-factory setting

- 1.All the volume adjustment button was set at "-80dB".
- 2.The power switch was set at "OFF".
- 3.Working mode selector switch was set at "STEREO".
- 4.Sensitivity selector switch was set at "0.775V"



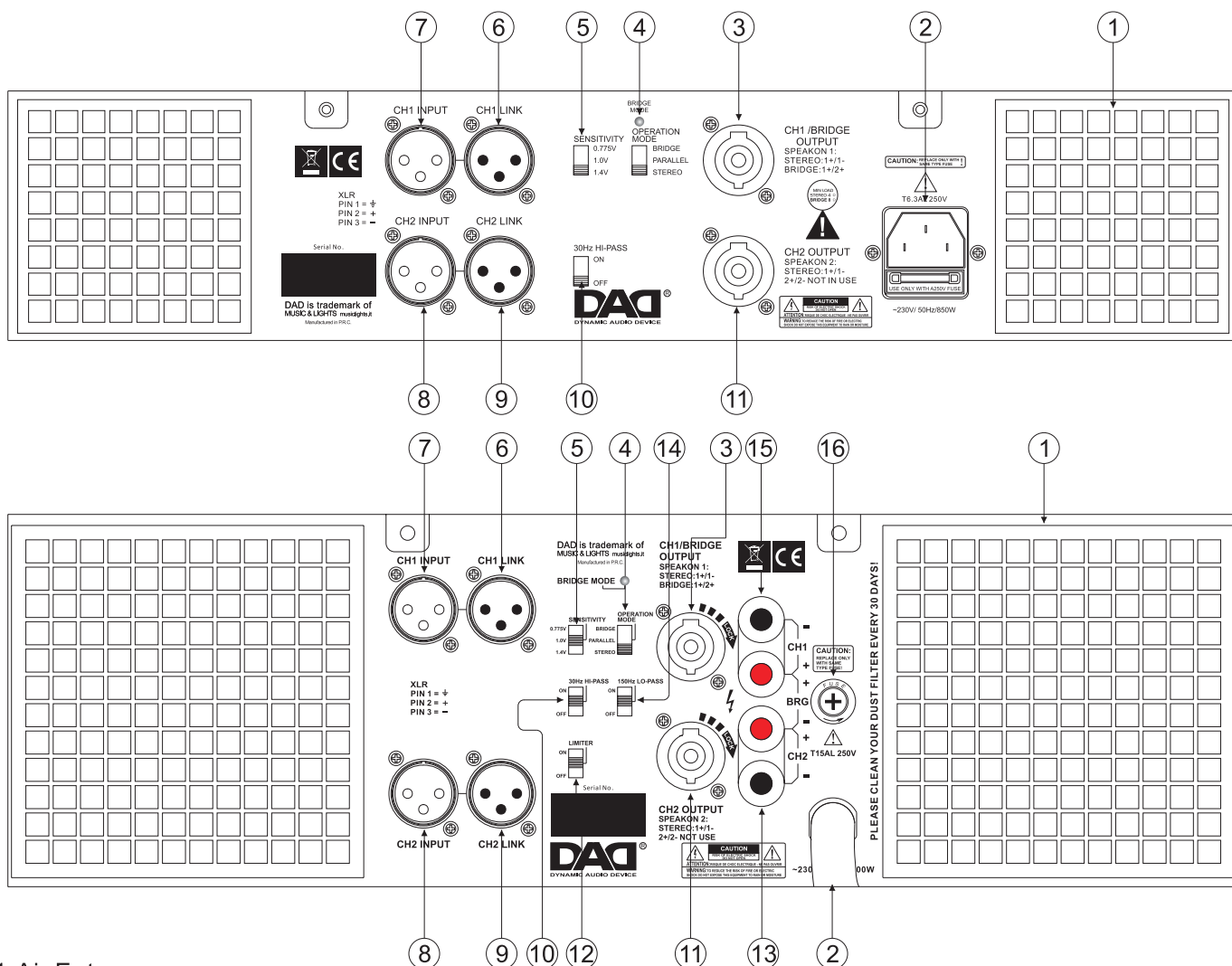
Important direction: Other control functions and adjustment functions that do not introduce in the use's manual, may cause mechanical danger or radiation due to other outside factors.

PX Series front panel function introduce



1. "SIGN" Indicator: illuminates to indicate that a signal (above a minimum threshold) is present at the amplifier input, and that the signal is being amplified.
2. "CLIP" Indicator
Any illumination of the clip indicates a state of over modulation (distortion at extremely high volumes). In this case, check the output signal of your mixer and turn down the input gain control. Please keep in mind that the power amplifier can not correct any distortion.
3. Air Exit: This part is the air exit. Don't obstruct it.
4. Handles: Handles are used for easy transportation.
5. Rack Mounting Ears
Two front panel mounting holes are provided on each mounting ear.
6. CH1 Volume Control
In stereo mode, this potentiometer allows the adjustment of the CH1 input level (left channel).
In bridge mode, this potentiometer allows the adjustment of the two channels at the same time.
7. Power Indicator
When the power amplifier is switched on, the indicator lights.
8. Power Button
Use this button to switch your amplifier on.
9. "PROT" Indicator
When this indicator lights, the power amplifier is in protection mode. Switch off the device and find out what the problem is. The power amplifier is protected against overheating, overload, short circuit, DC.
10. CH2 Volume Control
In stereo mode, this potentiometer allows the adjustment of the CH2 input level (right channel).
In bridge mode, this potentiometer is disabled.

PX Series rear panel function introduce



1. Air Entrance:

This part is the air entrance. Don't obstruct it.

2. AC Socket

Plug the AC power cord into any standard ZC outlet. Before plugging this cord in, be sure the voltage of AC outlet is correct. The fuse is used to protect your power amplifier from different kinds of AC problem. If the power amplifier is "on" and nothing lights, please verify the fuse compartment. If fuse is broken, please read it and change with a new of same size and value. (PX3600+/PX5000+ not have fuse inside)

3. CH1 SPEAKON output

Connect this speakon output to a speaker. The branching is +1,-1(except in bridge mode where the branching is +1,+2)

4. Operation Mode Selector

This switch is used to choose the operating mode of the power amplifier.

Mode stereo: 2 inputs(CH1 and CH2) and 2 outputs are used.

Mode parallel: 1 input(CH1) and 2 outputs are used.

Mode bridge: 1 input(CH1) and 1 output(output1) are used.

5. Input sensitivity selector: This selector allows to choose the input sensitivity: either 0.775V, 1.0V, 1.4V.

6. CH1 Link Socket: This balanced socket is used to link another amplifier.

7. CH1 XLR Input: This XLR input is a balanced input. Connect this input to the left output of your mixer.

8. CH2 XLR Input: This XLR input is a balanced input. Connect this input to the right output of your mixer.

9. CH2 Link Socket: This balanced socket is used to link another amplifier.

10. High Pass Filter Selector: This switch is used to cut low frequency under 30Hz(infrasound).

11. CH2 Speakon Output: connect this speakon output to an another speaker, The branching is +1/-1.
12. Limiter switch: This switch is used to select on/off of the limiter. Choose it to prevent output clip because of too high input signal, so as to avoid damaging amplifier and the speaker.
13. Channel 2 binding post output: This is the binding post output port. Red color links to positive port of speaker, black color links to negative port of speaker. While bridge, only red color links to positive port of speaker.
14. 150Hz low-pass filter switch
If the system needs to drive the subwoofer, turn the switch to "ON" place. It can filtrate the signal below 150Hz. You can use this amplifier to drive the subwoofers, no need to add an extract electronic crossover.
15. Channel 1 binding post output: This is the binding post output port. Red color links to positive port of speaker, black color links to negative port of speaker. While bridge, only red color links to positive port of speaker.
16. Fuse holder: This fuse holder includes a standard specification fuse inside. It is used to protect amplifier from damages. If the amplifier was connected to power supply but the LED is not illumed, please check the fuse situation. If you found the fuse broken, you must replace with a same specification fuse after trouble shooring.

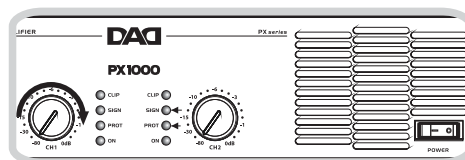
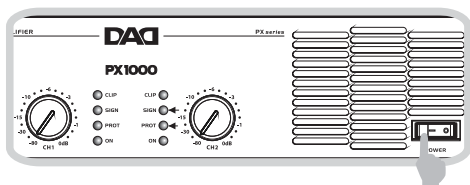
Basic operation

Switch on

While plug to power supply, the equipment inside was electrified, and ready to work.

Switch on : Keep pressing the power button for 2 seconds, amplifier turns on automatically. The stand-by LED was extinct, and the power switch LED "ON" was illumed.

While the amplifier was electrified, and test normally, you can adjust the CH1/CH2 volume control on the front panel to adjust the volume you need.



Notice:

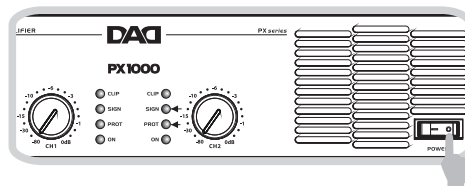
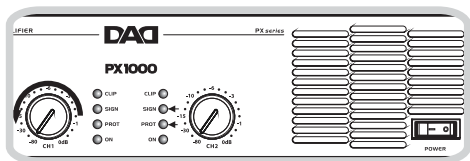
While the equipment inserted to power supply, it means the inside is electrified.

Though the power switch is at OFF place, the whole equipment is standby, if you don't operate it with in three hours, you should pull out the AC power cord.

Switch Off

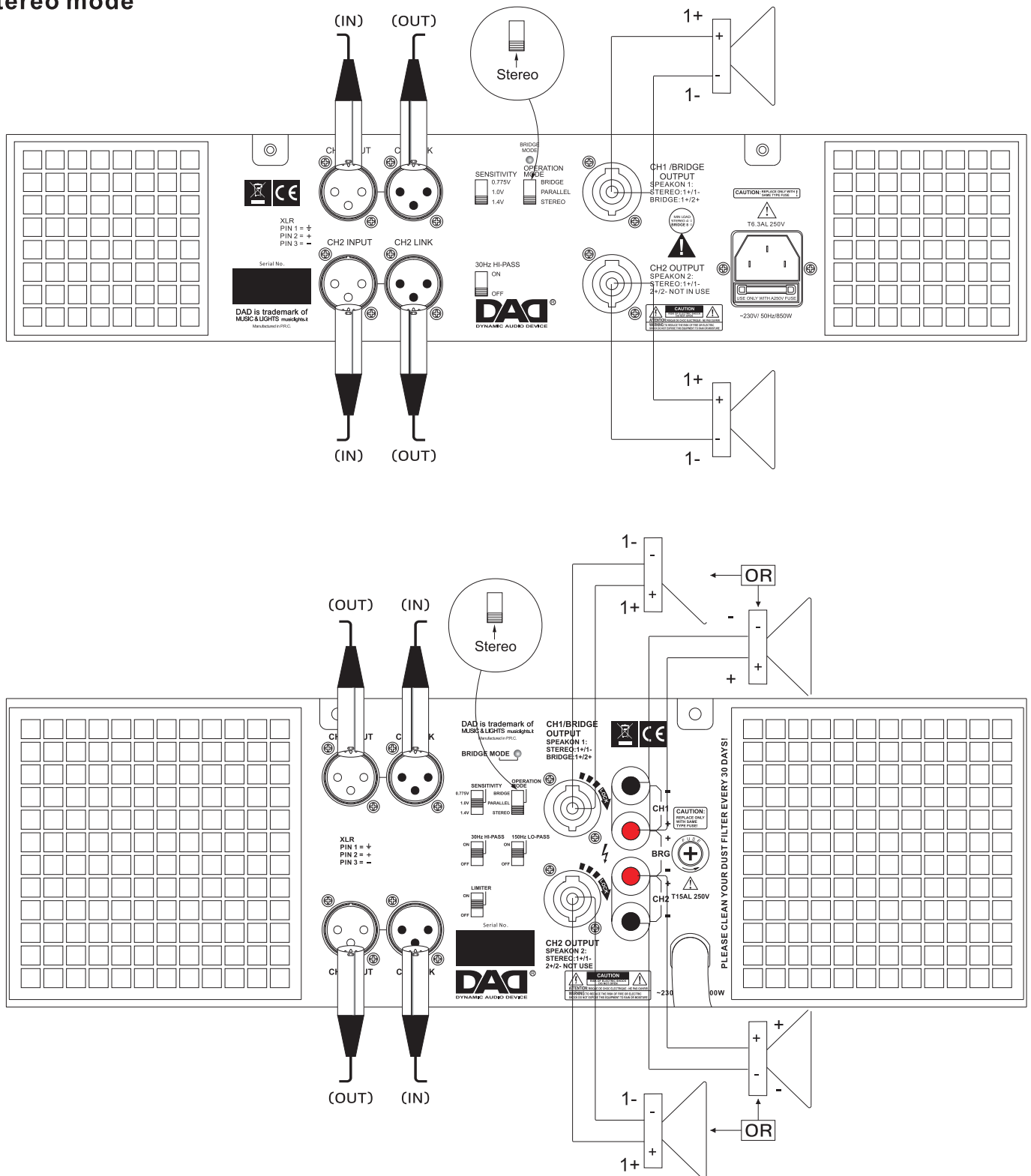
adjust the CH1/CH2 volume control button to the minimum volume(-80),then you can switch off the equipment.

Switch Off: Keep pressing the power button for 2 seconds, amplifier turns off automatically. The power switch LED "ON"was extinct, the stand-by LED WAS illumed



Set up connection mode for PX series

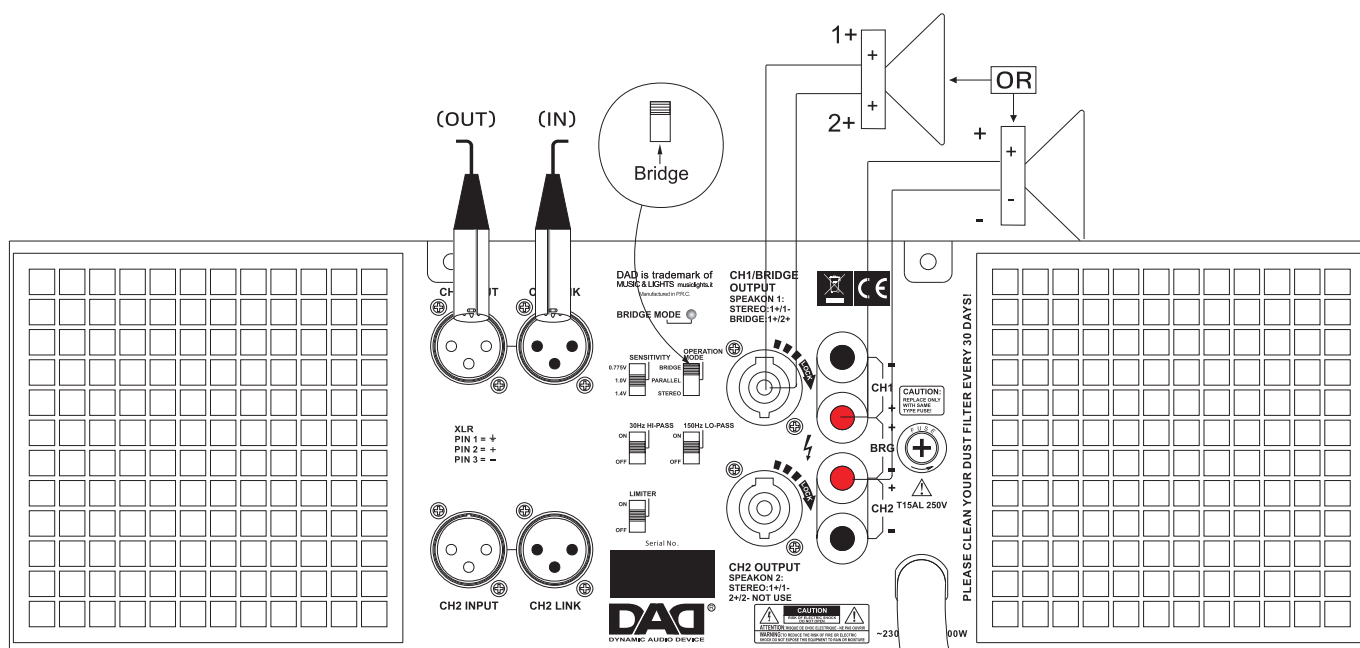
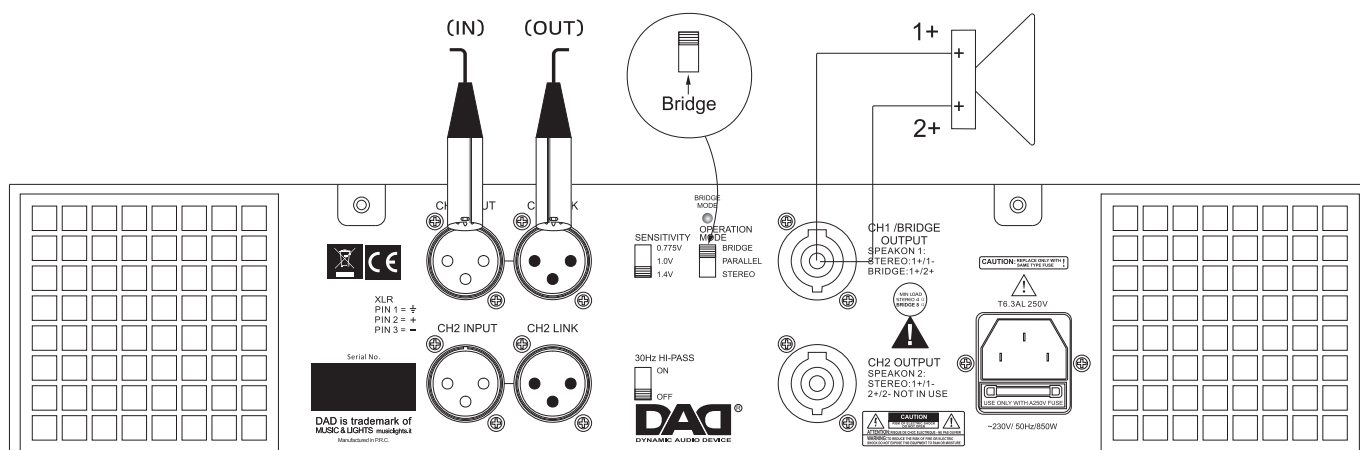
Stereo mode



At this mode, link both two channels input port to the output port of sound source (such as mixer, CD, etc), set amplifier's working mode to the "STEREO" position, adjust the volume control to a proper place, link the two SPEAKON socket to two speakers.

⚠ Note: Amplifier allows minimum loading!

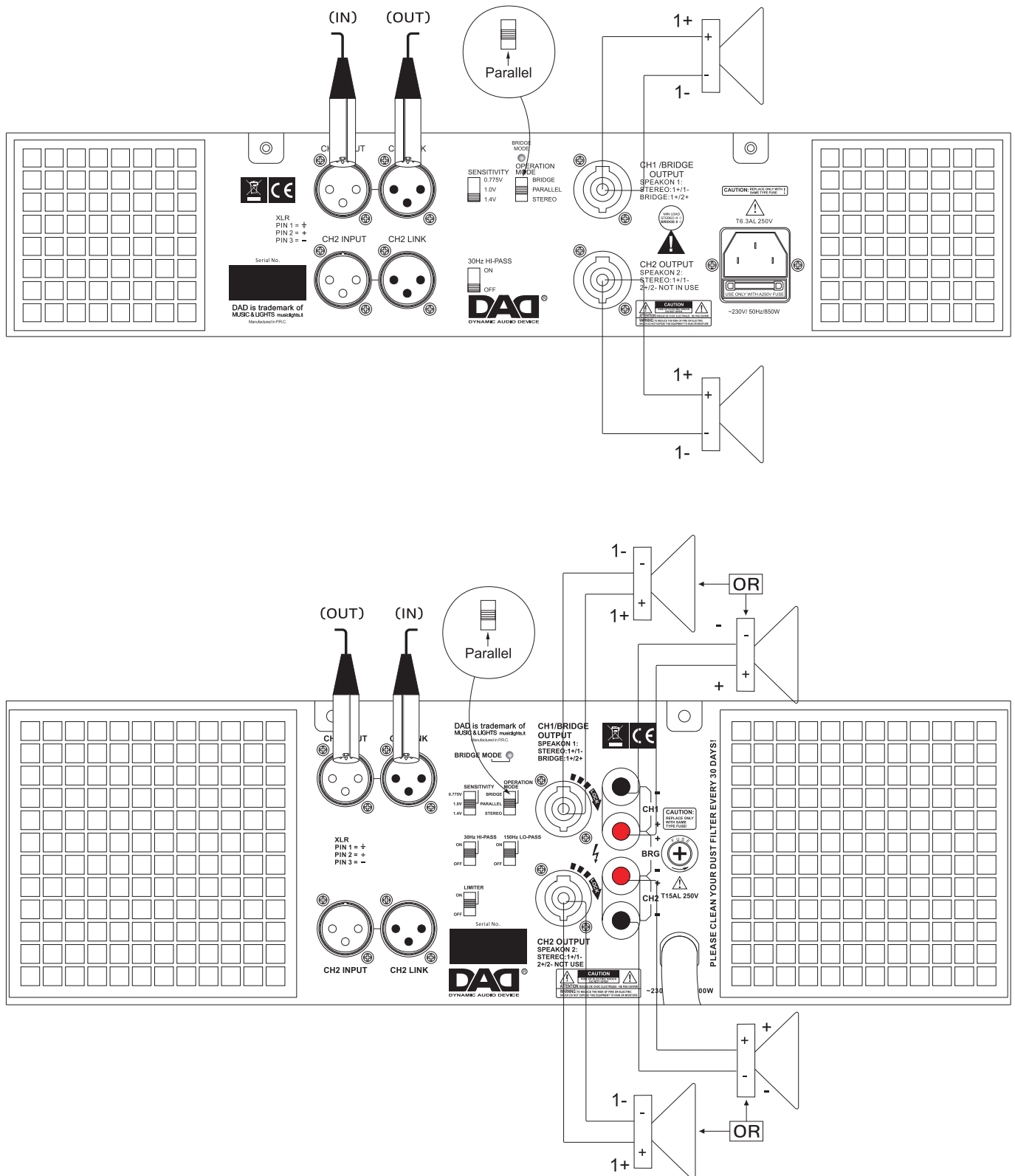
Bridge mode:



At this mode, link channel 1 input port to the output port of sound source (such as mixer, CD, etc), set amplifier's working mode to the "BRIDGE" position, adjust channel 1 volume control to a proper place, link channel 1 SPEAKON socket to a speaker.

⚠ Note: Amplifier allows minimum loading! Furthermore, at this moment, the SPEAKON connect mode is different. Method is: speaker positive port links to 1+, speaker negative port links to 2+.

Parallel mode



At this mode, link channel 1 input port to the output port of sound source (such as mixer, CD, etc), set amplifier's working mode to the "PARALLEL" position, adjust channel 1 volume control to a proper place, link channel 1 SPEAKON socket to a speaker.

! Note: Amplifier allows minimum loading!

Maintenance

Use circumstance

1. The room temperature shall be kept around 25 degree while use at indoor. It can't be used at too high temperature environment or it may cause components damage because of over-heat.
2. If use at outdoor, it should avoid sunshine insolation and rain damped, or it will shorten the equipment's life.
3. a. Environment temperature: -10° C~40° C;
b. Relative humidity: Less than 90%;
c. Air pressure: 80kPa~106kPa.

Replacing a fuse

If the equipment appears low-grade defective and burnt the fuse, after the problem solved, replace a fuse of the same type and specification. If the equipment appears severe damage and caused fuse exploded, burst, you cannot replace the fuse, or more severe effect might be happened. Then you shall return the equipment to your dealer to repair.

Maintenance and troubleshooting

Below is some simple methods to check the equipment is damaged or not:

1.No output

If the signal LED is illumed, then the amplifier shall be fine, please check whether the SPEAKON output connection port is well connection or not.

2.Low signal output

If the signal LED is illumed and clip LED also lit, then please check whether the output port is short-circuit or not. If the signal LED is illumed, and the protect LED is also lit, then the amplifier shall be at protection status. There are two possibilities: one maybe over-heat protection, another maybe VHF protection.

Cancel the signal, then you can test whether it is VHF protection or not. If the amplifier casing temperature is very high, that shall be over-heat protection.

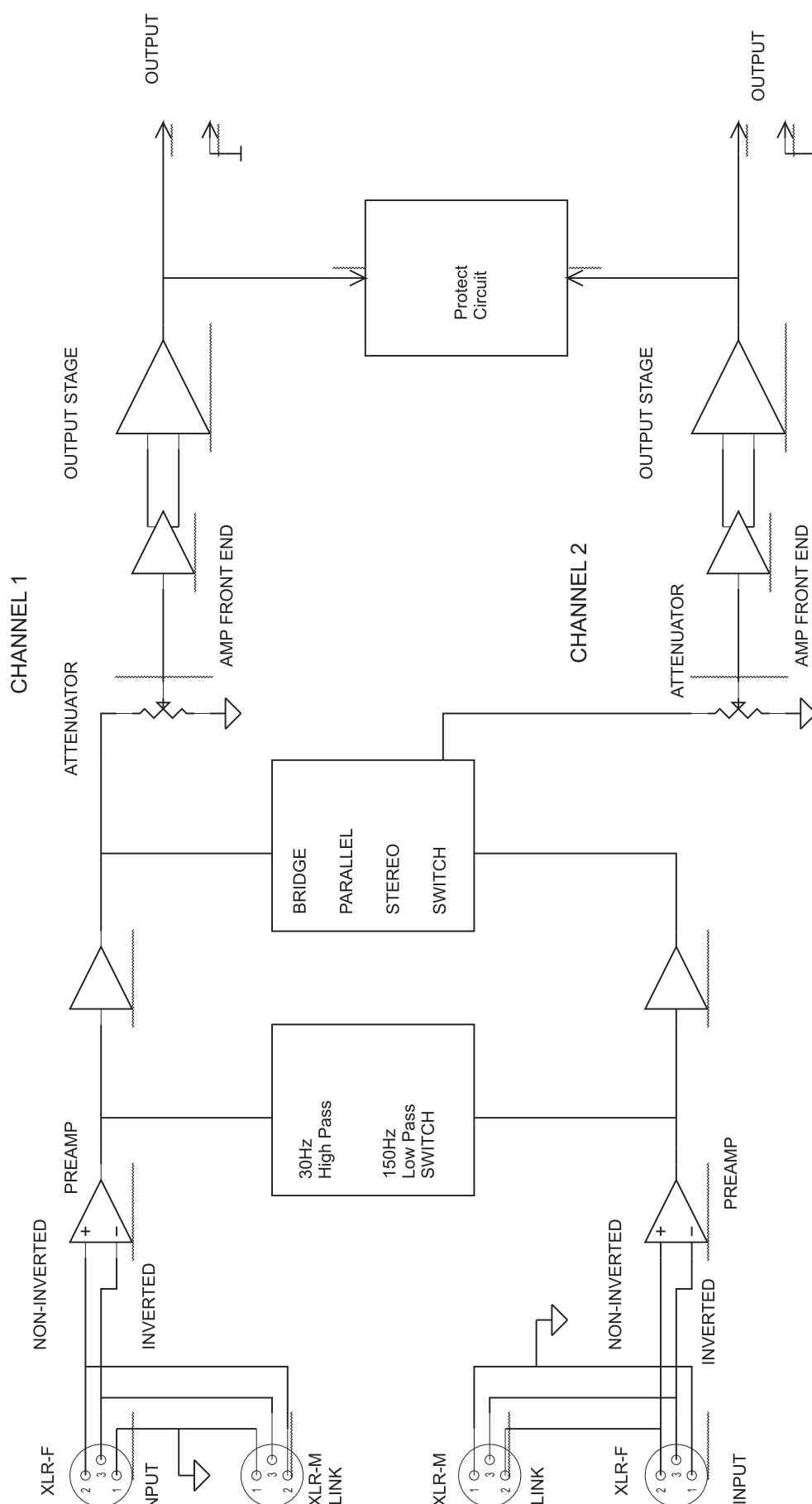
3.If upon above check-up, the failure is still not solved, please return the equipment to the authorized service agent

Regular maintenance

Users shall clear the amplifiers regularly, about one month one time. The way is to use a high voltage pump about 0.8-1.0CBM blows from air entrance on front panel or air exit on rear panel to the inside.

Please note that you cannot turn over the amplifier. That is cover side cannot at bottom place.

Schematic diagram



Specifications

	PX1000	PX2000	PX3600+	PX5000+
Power(Stereo Mode both channels driver)				
8 ohm power*	250W	550W	800W	1300W
4 ohm power*	450W	950W	1275W	2025W
2 ohm power**	650W	1300W	1700W	2700W
Power(Bridge Mono Mode)				
8 ohm power*	900W	1900W	2550W	4050W
4 ohm power **	1350W	2800W	3400W	5400W
Frequency Response (8 ohm)	20Hz-20KHz, -0.5dB (+/-0.5dB)			
Other specifications				
S/N Rate	>80dB	>80dB	>80dB	>80dB
THD+N (8 ohm 1kHz In 1/4 Outpower)	<0.1%	<0.2%	<0.1%	<0.1%
Damping Factor (8 Ohm 1k)	>100	>100	>300	>300
Slew Rate	>10v/us	>10v/us	>20v/us	>20v/us
Input Sensitivity	0.775V/1.0V/1.4V			
Output topology	Class AB		3 Steps Class H	
Cooling	Front to rear air flow			
Connectors&Protection				
Input Connectors	XLR		3 pin-XLR/RCA/TRS	
Output Connectors	Sepakon		Sepakon & touch-proof binding posts	
Amplifier Protection	DC/Short/Temp/Limit/Softstar		DC/Short/Temp/VHF/Limit/Softstar	
Dimensions(cm)&weight(kg)				
Width	483	483	483	483
Depth(From front panel to rear panel)	432	432	432	432
Height	2U	2U	3U	3U
G.W(±2.5Kg)	27Kg	29Kg	38Kg	41Kg

Note:

*, The power are tested under EIA standard. **, The power are tested under the condition of 1KHz, 1%THD, 40ms burst.
Saechina reserves the right to make changes in specifications without prior notice!

