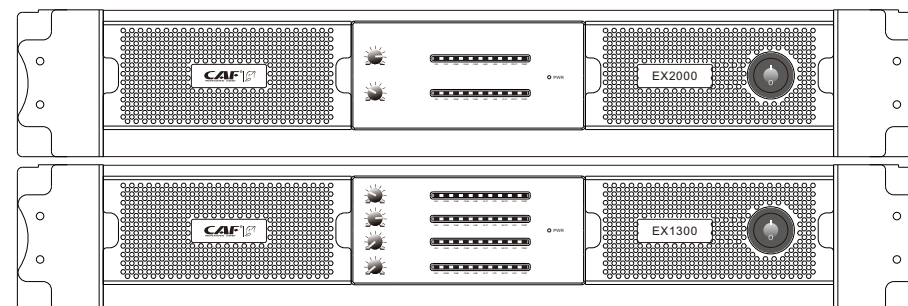


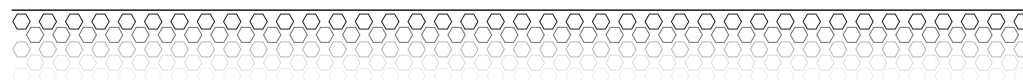


# EX Series Power Amplifier

## PROFESSIONALSOUND SYSTEM



User Manual



## Important Safety Instruction and symbol description

1. Read these instructions.
2. Keep this user manual.
3. Pay attention to all the notice.
4. Comply with these instructions.
5. Clean with soft cloth, or blow with hyperbaric air.
6. Warning: Avoid the formation of hot air circulation. Installation as suggested way.
7. Do not install near heat, make sure the application temperature is below 35°C.
8. Ensure that the grounding is valid, floating ground is not recommended.
9. Protect the wire from being trampled or extruded, especially the plug, socket and the connector of it.
10. Make sure the startup and turnoff procedure: Pre-amp - Amplifier (Power on) Power amplifier (off) - Pre-amp.
11. Power supply voltage must be in accord with the requirement of the equipment before use it.
12. Signal distributor is advised to be used when the input signal paralleled with more than 3 amplifiers, to ensure the input signal without distortion.
13. Don't connect the output interface of one channel to the input interface of another channel in the power amplifier. Don't connect one power amplifier to another one by connecting their output in series or parallel connection.
14. When equip the audio equipments, the power of the power amplifier should be 50%-100% more than the loudspeaker power. Be careful when in bridged mode.
15. When maintenance, don't connect the probe of the oscilloscope to the output interface under bridge mode in case of damaging the power amplifier and the oscilloscope.
16. Suggestions:
  - 1) Good quality NI4 Speakers screw plug is advised.
  - 2) Power distribution system should ensure the safety of applications of more than one amplifier.



The exclamation point triangle is used to alert the user to important operating or maintenance instructions.

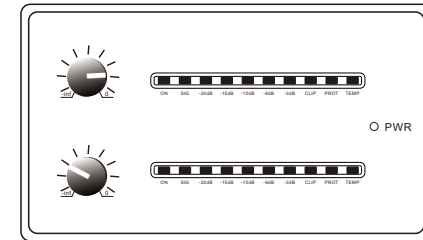
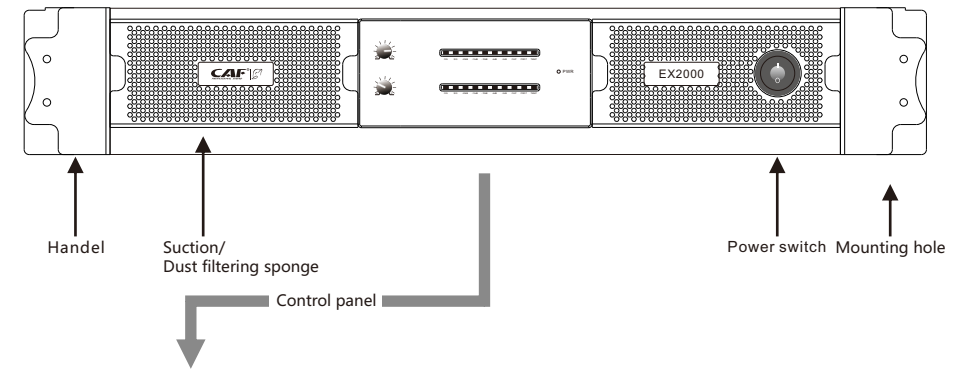


The lightning bolt triangle is used to alert the user to the risk of electric shock. non-professional qualified technicians do not open TOP OR BOTTOM COVERS for maintenance

**WARNING**  
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

## Front panel functions

### Front Panel



CH1-CH2 → Gain Controller Knob  
300° volume knob from 0 to -80dB.  
Stereo/Paralle Mode: volumes of CH1 and CH2 control independently.  
Bridge Mode: CH1 knob controls both volumes.  
Ch1 stops working.  
For normal operation, please keep the controller at max (0 dB).

TEMP → Illuminates when amplifier temperature higher than set protection range.  
PROT → Illuminates when either protection circuit action.  
CLIP → Illuminates when compressor / limiter is protecting the amplifier from input overload.  
-3dB → Illuminates when output signal around -3dB than full power.  
-6dB → Illuminates when output signal around -6dB than full power.  
-10dB → Illuminates when output signal around -10dB than full power.  
-15dB → Illuminates when output signal around -15dB than full power.  
-20dB → Illuminates when output signal around -20dB than full power.  
SIG → The signal light  
ON → Illuminates when the amplifier start.

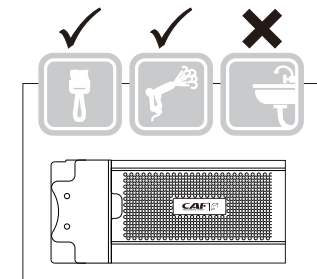
### Cleaning guide of the dust filter



The first time cleaning of the strainer mesh should be right after installation. Recommend to clean the strainer mesh quarterly.

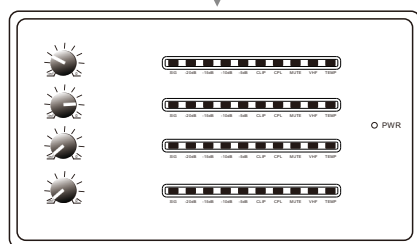
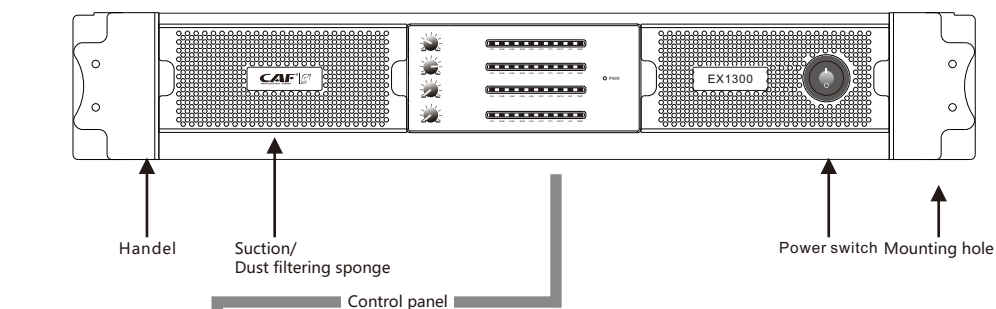
Please do not run the product without the dust filter, or it makes the service life of the product shorten.

**Such condition will be considered as no warranty.**



## Front panel functions

### Front Panel



TEMP → Illuminates when amplifier temperature higher than set protection range.

MUTE → Illuminates when either protection circuit action.

VHF → Light on when comes with continues high frequency signal.

CLIP → Illuminates when compressor / limiter is protecting the amplifier from input overload.

CPL → Light when the peak current is beyond the scope of security protection

-5dB → Illuminates when output signal around -5dB than full power.

-10dB → Illuminates when output signal around -10dB than full power.

-15dB → Illuminates when output signal around -15dB than full power.

-20dB → Illuminates when output signal around -20dB than full power.

SIG → Illuminates when output signal around +6dB(2V).

POWER → Illuminates when the amplifier start.

CH1-CH2-CH3-CH4 → Gain Controller Knob.

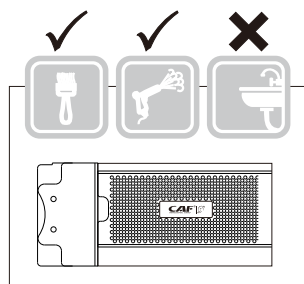
### Cleaning guide of the dust filter



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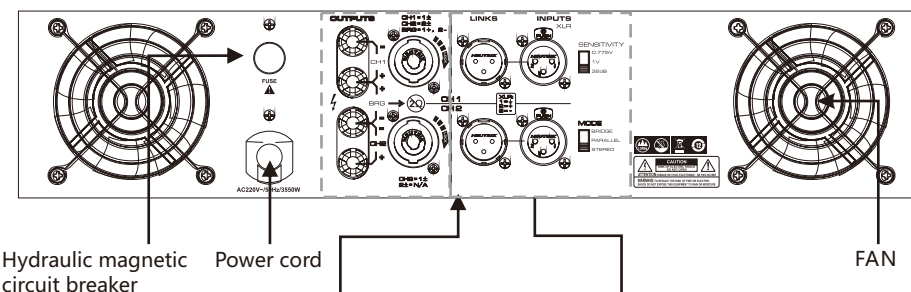
Please do not run the product without the dust filter, or it makes the service life of the product shorten.

Such condition will be considered as no warranty.



## Rear panel functions

### Rear Panel



### The speaker connector

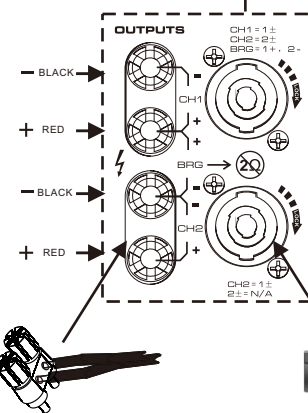
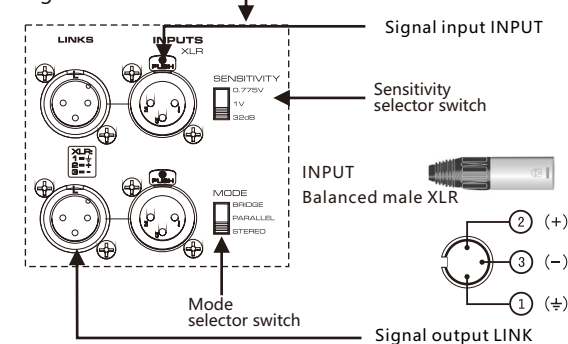


It can work from 2-16ohm in stereo or parallel mode. It can work good from 4ohm to 16ohm In bridge mode



We don't suggest you use the amplifier under 4ohm bridge mode for a long time, it will short its normal use life or have some unnecessary failure.

### Signal connection

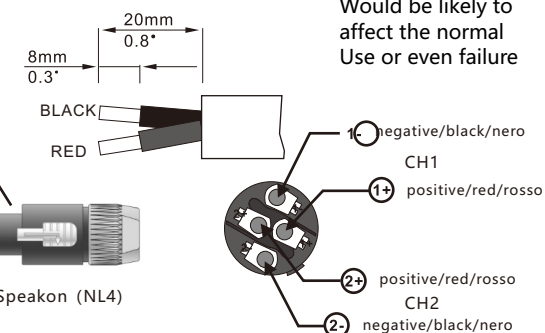


Direct connection without plug

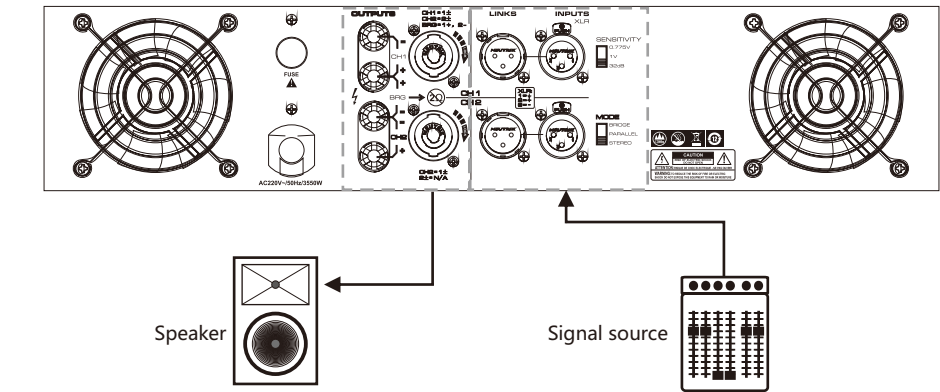
Speakon (NL4)



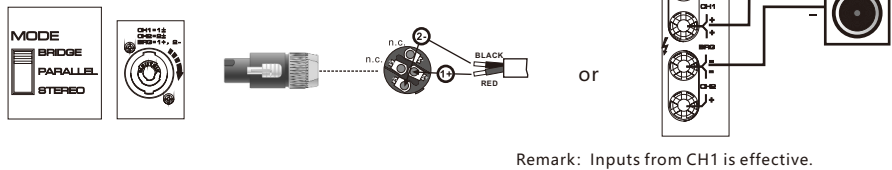
The quality of your soldering is very important. Virtual welding or soldering errors, Would be likely to affect the normal Use or even failure



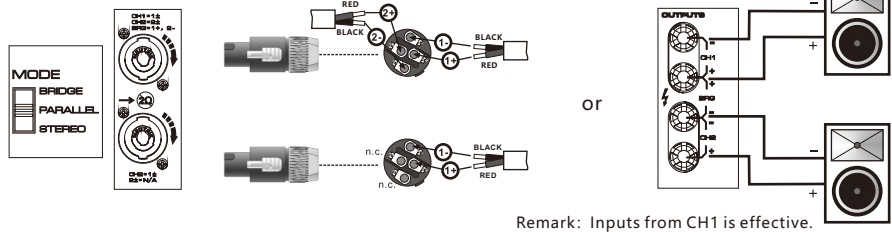
System connection cases



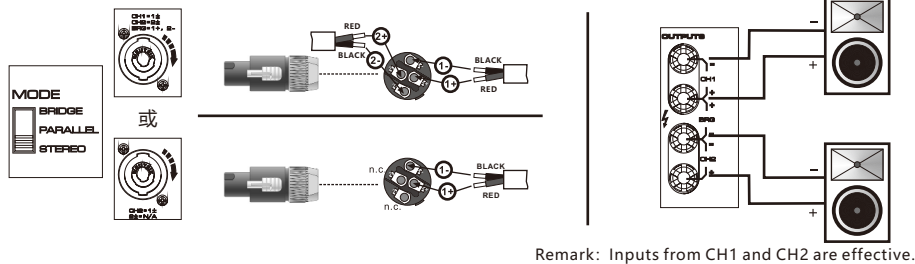
Bridge mode



Parallel mode

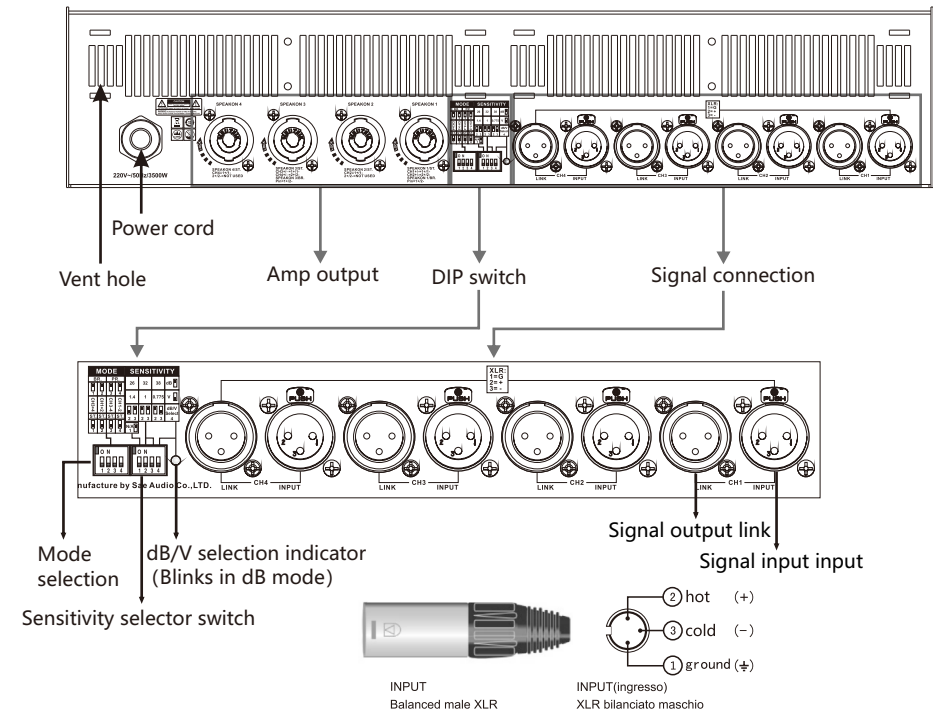


Stereo mode

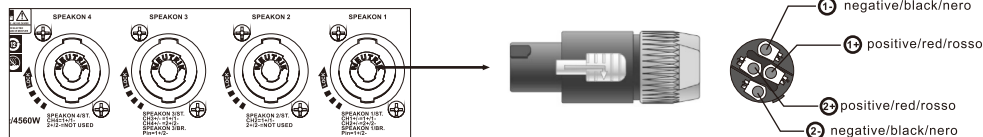


Rear panel functions

Rear Panel



Speakon output

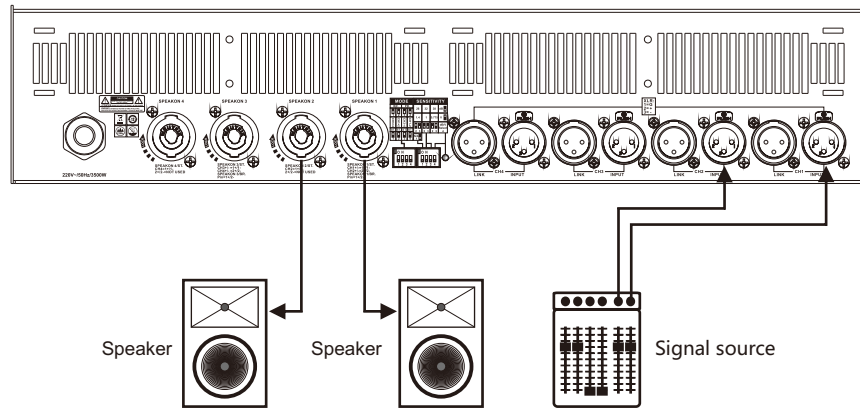


It can work from 2-16ohm in stereo or parallel mode.  
It can work good from 4ohm to 16ohm in bridge mode.

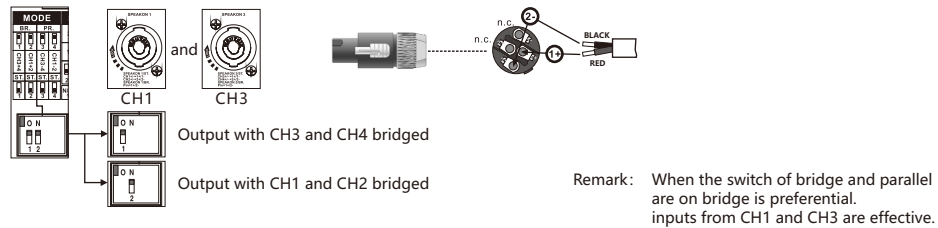
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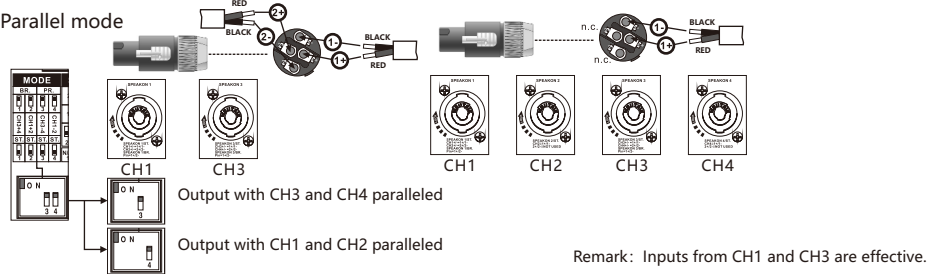
## System connection cases



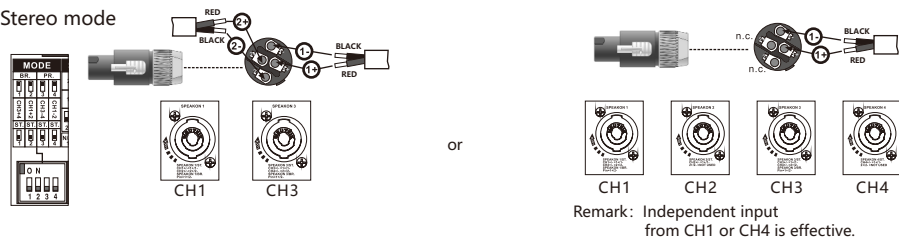
### Bridge mode



### Parallel mode



### Stereo mode



## Power Level adjustment

### Procedure

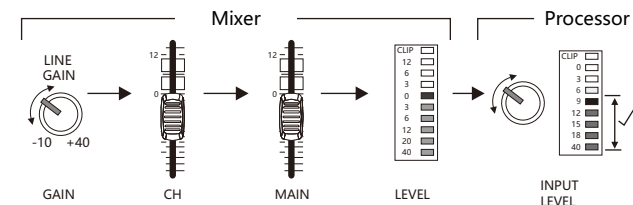
#### Power On

Source — Sound console — Peripheral devices — Power Amplifier

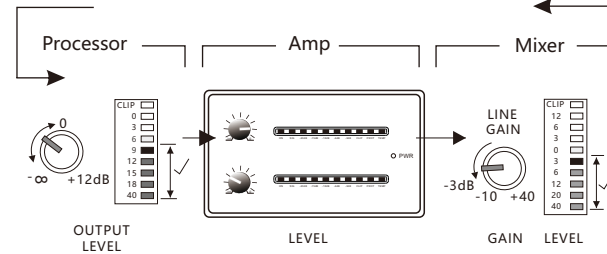
#### Power Level Adjustment

Power amplifier should be in the condition of no load in the following adjustment process:

Process:



- Input the stable pink noise
- Adjust input gain
- Put the line output to 0dB
- Put the main output to 0dB
- The main output amplitude set should be displayed as: 0 db
- Adjust the input level of processor like the above picture



- Adjust the output level of processor, the range like the above picture shows
- Adjust the volume knob and make the output level within the range as above picture shows.
- Then adjust the input gain to make the main output less 3dB.
- This setting is to ensure twice power.

### Music Audition

Adjust the volume from very small to loud slowly, after you confirm the sound is normal then make it more louder. When the speaker output is close to its limit, the CLIP light will lights up and you should turn down your volume now, don't let the CLIP lights on long time, it means over load, may damage the system.



For high power system, the Power-on order is very important, not in the order is likely to damage the equipment. Therefore we suggest that you use the sequence power device.



This is a normal step to adjustment, for more professional adjustment you should have a professional person to do that.



This step should operated by professional person, if you don't know how to do, please be careful!

## Power Level of adjustment

### Procedure

Power On

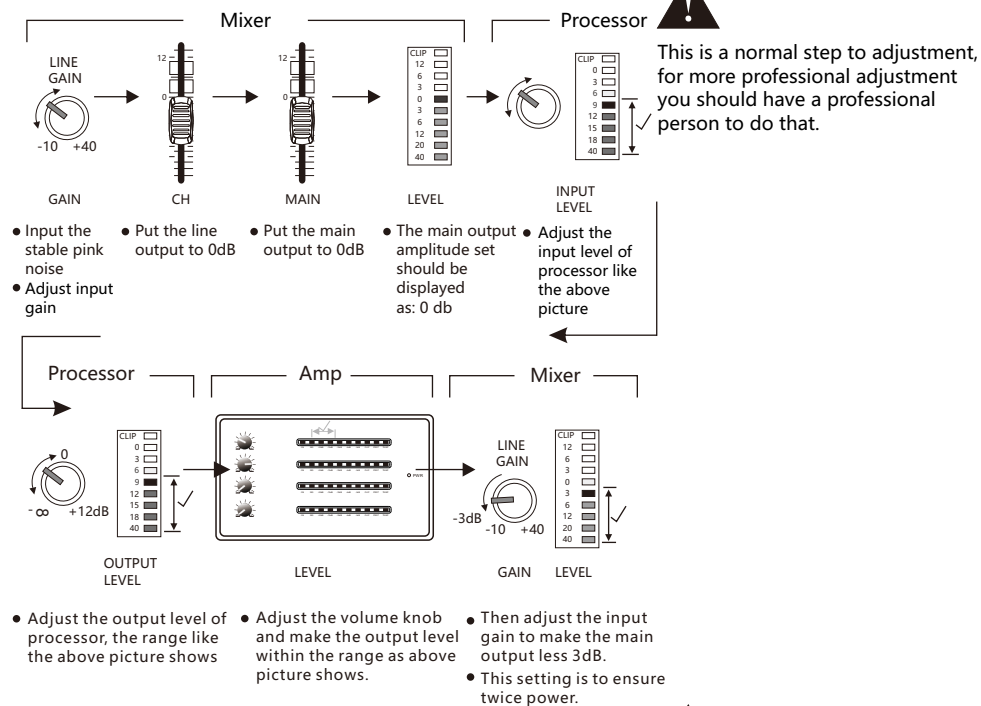
Source — Sound console — Peripheral devices — Power Amplifier

Power off

Power Level Adjustment

Power amplifier should be in the condition of no load in the following adjustment process:

Process:



### Music Audition

Adjust the volume from very small to loud slowly, after you confirm the sound is normal then make it more louder. When the speaker output is close to its limit, the CLIP light will lights up and you should turn down your volume now, don't let the CLIP lights on long time, it means over load, may damage the system.

## Specifications

Model	EX1300	EX2000
Output power		
8Ω stereo*	1300Wx2	2000Wx2
4Ω stereo**	2100Wx2	3500Wx2
2Ω stereo**	2500Wx2	4600Wx2
8Ω bridge**	4200Wx2	7000W
Other Specifications		
Frequency response	20Hz-20KHz: +1dB	
THD+N	≤0.05%	
Signal-to-noise ratio	≥100dB	≥105dB
Damping coefficient	≥600dB	≥600dB
Crosstalk	≥70dB	≥70dB
Slew rate	≥35V/μs	≥30V/μs
Input sensitivity	0.775V/1V/1.4V/38dB/32dB/26dB	0.775/1.0V/32dB
Input impedance(bal/unbal)	20K/10K(Balanced/Unbalanced)	
Line category	TD	
Output circuitry	Class I™	
Cooling	Air flow from front to rear	
Protection	Soft start, VHF, DC, short circuit, over load, clip limit, over heat, progressive volume	
Connection		
Input	Balance input XLR-F, Balance output XLR-M	
Output	Two red and black Binding posts, NI4 SPEAKON	
Function		
Front panel	Front panel indicator: Working indicator, Signal/Clip/Protection/Power on/-3db/-6db/-10db/-15db/-20db / volume control knob	
Rear panel	Sensitivity selection switch, stereo/parallel/bridge/Cross-over selection switch	
Dimensions/Weight		
Product Dimension(mm)	483x480x88	
Packaging Dimension(mm)	610x565x160	
G.W.	16.5kg	16kg
AC	220V 50/60Hz	

Remark: 1. \*,The power is tested under EIA standard.

2. \*\*,The power is tested under the condition of 40ms burst,1kHz sine wave and 1% THD