

Professional

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PA26608

PA23308

PA21608

PROFESSIONAL POWER AMPLIFIER

User Manual



DEAR CUSTOMERS:

Please carefully read and strictly follow the user's manual when you use PA series professional amplifier. If you have any questions, please contact the local dealer.

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1、 NOTES

- ⚠ High voltage inside this equipment. Do not open the cover. Ask for help from service professional if the amplifier requires servicing.
- ⚠ Please do not expose the equipment to rain or moisture.
- ⚠ Keep adequate ventilation, do not block the port.
- ⚠ Be sure the voltage of this equipment complies with the local industrial voltage.
- ⚠ Please put off the power plug if unused for a long time.
- ⚠ Please connect the correct speaker impedance loads.

■ Symbols:

- The equilateral triangle with lightning bolt warns the user of dangerous voltage levels inside the amplifier.
- The triangle with the exclamation mark means an important operation.

2、 FEATURES

PA series amplifier performs well in demanding audio applications.

- 1> Big power, great performance ;
- 2> Innovative heat sink technology ensures long term reliable performance;
- 3> Speed of Fan is automatic. Automatic load and temperature sensing circuitry continuously protects the amplifier.
- 4> Low distortion;
- 5> High slew speed, outstanding sound quality and high transparency;
- 6> Low noise: S/N > 108dB(A Weight);
- 7> Frequency response 20Hz-20kHz < +0/-0.25 dB; wide frequency band;
- 8> Dimension 2U rack mount.

3、 PARAMETERS-PA21608

Rated Power	Stereo mode	8Ω	200W
		4Ω	300W
	Parallel mono mode	8Ω	200W
		4Ω	300W
	Bridged mono mode	16Ω	400W
8Ω		600W	
THD	<0.05%(10%Rated power)		
Intermodulation distortion	<0.1%(60Hz/7kHz,10%Rated power)		
Frequency response	20Hz~20kHz(+0/-0.25dB)		
Phase difference	<±15°		
Damping factors	>800(8Ω/100Hz)		
Channel Separation	>75dB		
S/N	>108dB(A-Weight)		
Total gain	32±0.5dB		
Difference of Channel gain	<0.25dB		
Input sensitivity	1V		
Slew speed	>50V/μs		
Input impedance	Unbalanced input 10kΩ ,Balanced input 20kΩ		
Input connectors	Three pin XLR/6.35mm		
Output connectors	Binding post,NL4 speakon		
Cooling	Four fans, stepless shifting, Cooling airflow from front to back		
Controls on front panel	Switch of AC,Gain controlling knob for channel A and B		
Controls on rear panel	Parallel/Stereo/Bridge, LF cutting,Grounding,Limit		
Indicator on front panel	Yellow-Bridge,Red-Overload,Green-Signal		
Amplifier protection	Short Circuit, DC, Overload, Overheat ,Etc		
Dimensions	483×310×88mm		
Net weight	11kg		
Power supply	AC 220-240V,50/60Hz,300VA		
Environment Temperature	Working temperature: -10℃~40℃ Storing temperature: -25℃~80℃		
Environment humidity	≤90%		

3、PARAMETERS-PA23308

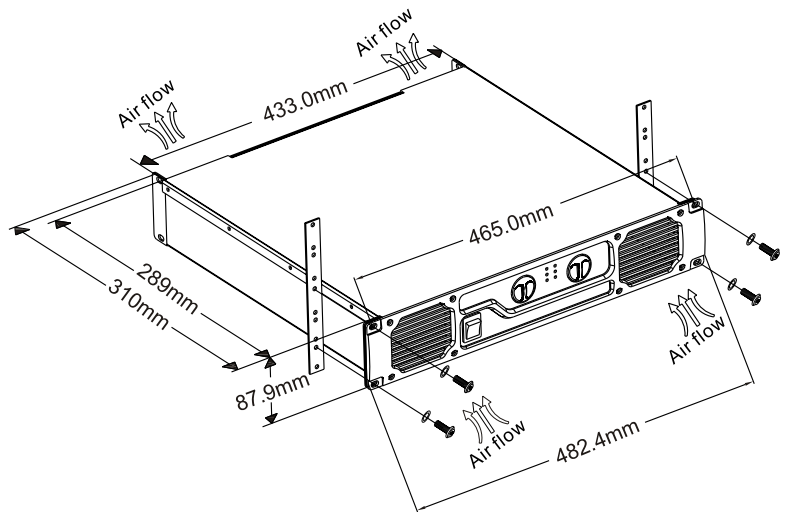
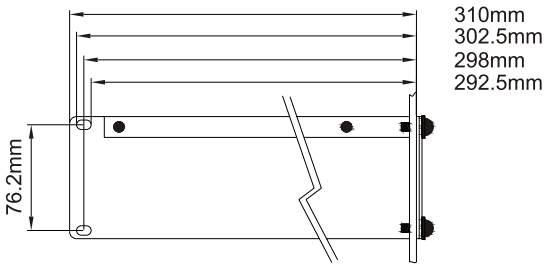
Rated Power	Stereo mode	8Ω	330W
		4Ω	500W
	Parallel mono mode	8Ω	330W
		4Ω	500W
	Bridged mono mode	16Ω	660W
8Ω		1000W	
THD	<0.05%(10%Rated power)		
Intermodulation distortion	<0.1%(60Hz/7kHz,10%Rated power)		
Frequency response	20Hz~20kHz(+0/-0.25dB)		
Phase difference	<±15°		
Damping factors	>800(8Ω/100Hz)		
Segregation	>75dB		
S/N	>108dB(A-Weight)		
Total gain	34±0.5dB		
Difference of Channel gain	<0.25dB		
Input sensitivity	1V		
Slew speed	>60V/μs		
Input impedance	Unbalanced input 10kΩ ,Balanced input 20kΩ		
Input connectors	Three pin XLR/6.35mm		
Output connectors	Binding post,NL4 speakon		
Cooling	Four fans, stepless shifting, Cooling airflow from front to back		
Controls on front panel	Switch of AC,Gain controlling knob for channel A and B		
Controls on rear panel	Parallel/Stereo/Bridge, LF cutting,Grounding,Limit		
Indicator on front panel	Yellow-Bridge,Red-Overload,Green-Signal		
Amplifier protection	Short Circuit, DC, Overload, Overheat ,Etc		
Dimensions	483×375×88mm		
Net weight	15kg		
Power supply	AC 220-240V,50/60Hz,500VA		
Environment Temperature	Working temperature: -10℃~40℃ Storing temperature: -25℃~80℃		
Environment humidity	≤90%		

3、PARAMETERS-PA26608

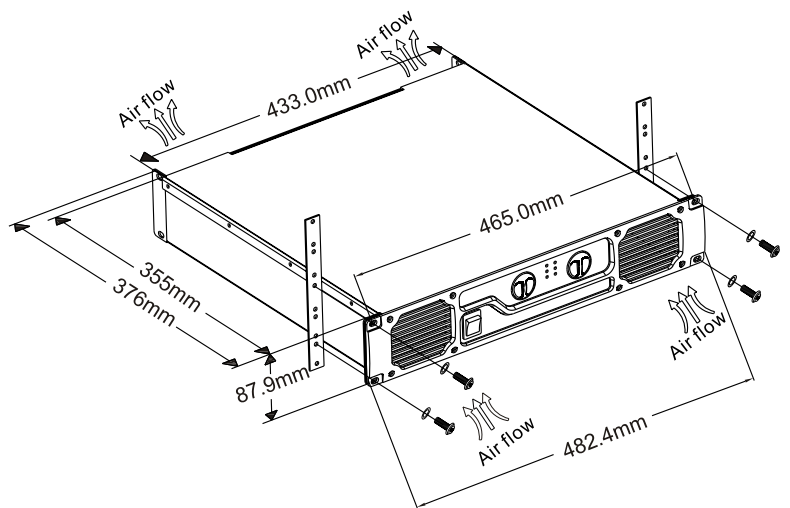
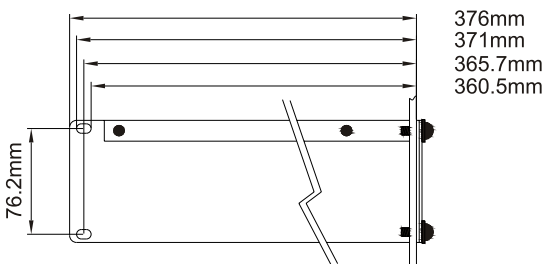
Rated Power	Stereo mode	8Ω	660W
		4Ω	1000W
	Parallel mono mode	8Ω	660W
		4Ω	1000W
	Bridged mono mode	16Ω	1330W
8Ω		2000W	
THD	<0.05%(10%Rated power)		
Intermodulation distortion	<0.1%(60Hz/7kHz,10%Rated power)		
Frequency response	20Hz~20kHz(+0/-0.25dB)		
Phase difference	<±15°		
Damping factors	>800(8Ω/100Hz)		
Segregation	>75dB		
S/N	>108dB(A-Weight)		
Total gain	37.3±0.5dB		
Difference of Channel gain	<0.25dB		
Input sensitivity	1V		
Slew speed	>80V/μs		
Input impedance	Unbalanced input 10kΩ ,Balanced input 20kΩ		
Input connectors	Three pin XLR/6.35mm		
Output connectors	Binding post,NL4 speakon		
Cooling	Four fans, stepless shifting, Cooling airflow from front to back		
Controls on front panel	Switch of AC,Gain controlling knob for channel A and B		
Controls on rear panel	Parallel/Stereo/Bridge, LF cutting,Grounding,Limit		
Indicator on front panel	Yellow-Bridge,Red-Overload,Green-Signal		
Amplifier protection	Short Circuit,DC, Overload, Overheat ,Etc		
Dimensions	483×375×88mm		
Net weight	18kg		
Power supply	AC 220-240V,50/60Hz,1000VA		
Environment Temperature	Working temperature: -10℃~40℃ Storing temperature: -25℃~80℃		
Environment humidity	≤90%		

4、 INSTALLATION

PA21608:

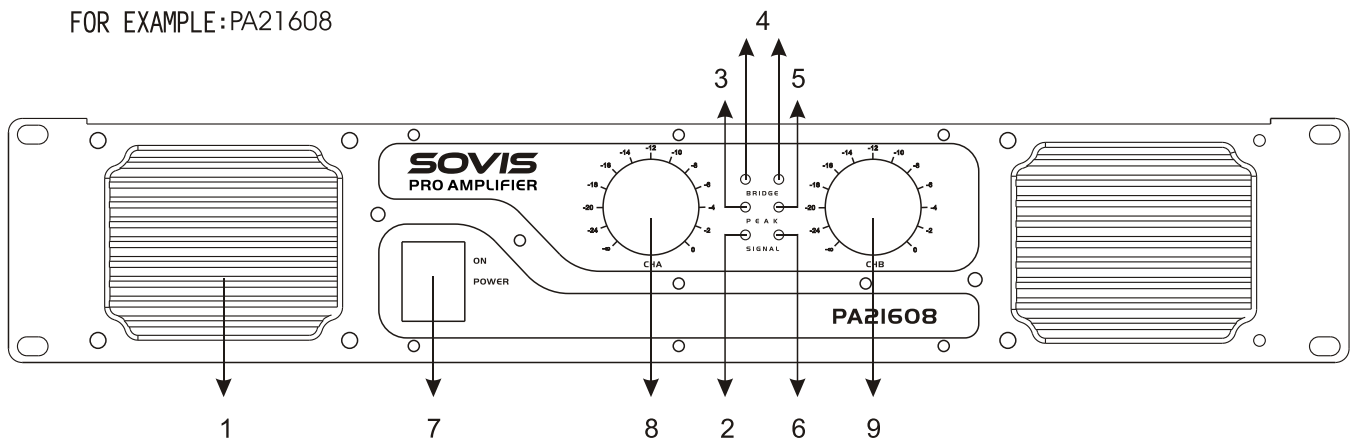


PA23308/PA26608:



5、 FRONT PANEL

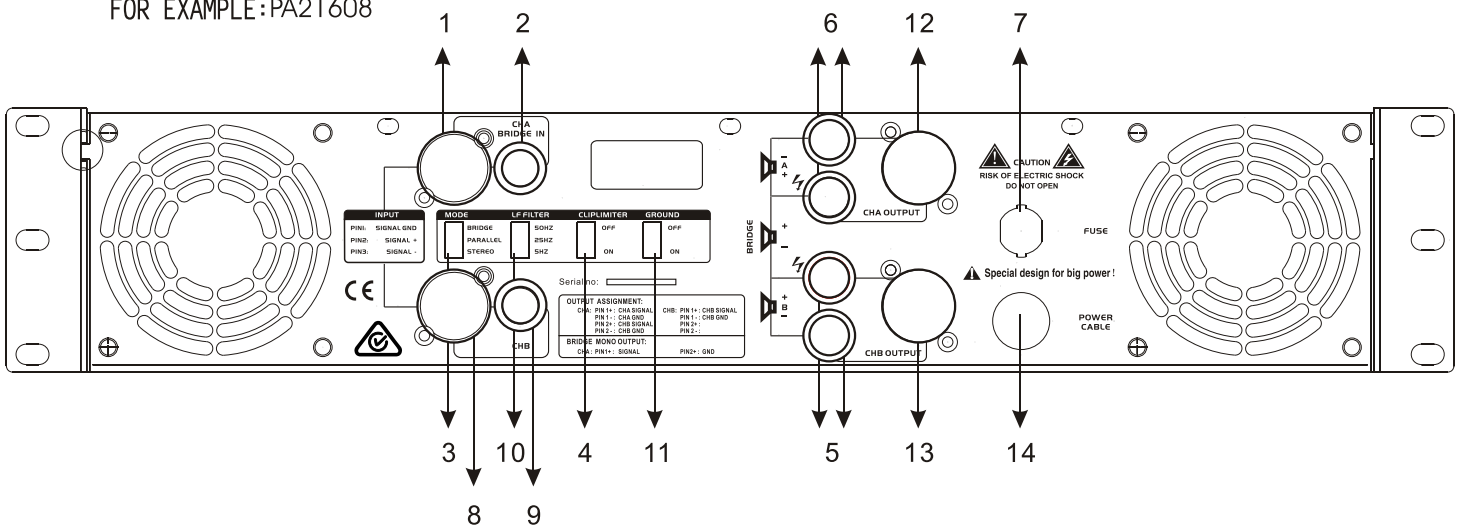
FOR EXAMPLE:PA21608



- | | |
|---------------------------------|-------------------------------|
| 1、 air input grill | 6、 signal indicator channel B |
| 2、 signal indicator channel A | 7、 power switch |
| 3、 overload indicator channel A | 8、 gain adjustment channel A |
| 4、 bridge indicator | 9、 gain adjustment channel B |
| 5、 overload indicator channel B | |

6、 REAR PANEL

FOR EXAMPLE:PA21608



- | | |
|--|--|
| 1、 signal input channel A(XLR JACK) | 8、 signal input channel B(XLR plug) |
| 2、 signal input of channel A(1/4" jack) | 9、 signal input channel B(1/4" jack) |
| 3、 switch of working modes | 10、 filter switch |
| 4、 limiters | 11、 grounding switch |
| 5、 signal output channel B(binding post) | 12、 signal output channel A(NL4 Connector) |
| 6、 signal output channel A(binding post) | 13、 signal output channel B(NL4 Connector) |
| 7、 fuse | 14、 Power cable |

7、 POWER SUPPLY

- ▲ Please ensure the local voltage complies with the voltage indicated on rear panel before connecting power supply (AC 220-240V,50/60Hz);
Please ensure the cable and the power connector is not damaged before connecting to the power supply; Turn off the power before disconnecting the power connector.

8、 INPUT/OUTPUT CONNECTORS

■ Input connectors

- The XLR connector and 1/4"jacks are in parallel;
- Using either connector allows for loop through to another amplifier.
- Please do not connect the signal from two connectors in same channel at the same time.

■ Output connectors

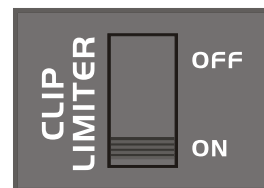
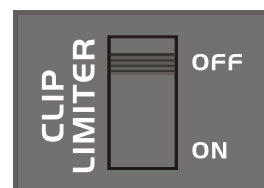
- The binding post and NL4 of the same channel are paralleled;
- Do not connect loads to the two connectors at the same time;
- The red binding post is connected with the positive of the speaker, the black is connected with the negative of speaker;
- Make sure the speaker impedance is correct before connecting the speaker outputs.

9、 FUNCTION SETUP AND CABLE CONNECTING

1> Limiter setup:

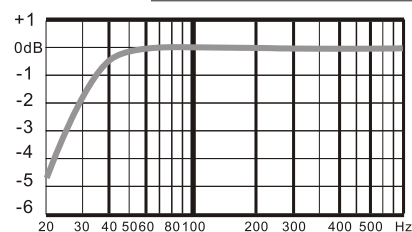
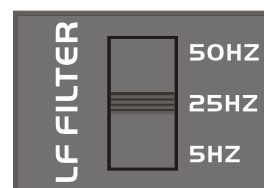
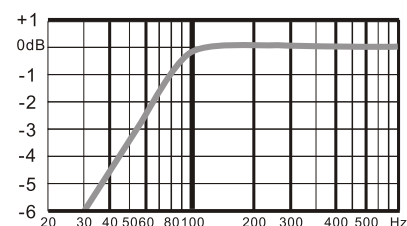
As the drawing shows when switch is OFF, the limit is off.
If the input signal is too great the output will go into clip and may damage your speaker.

When the switch is in the ON position the limiter is on. If the input signal is too great the limit circuit will control the gain and reduce the distortion and also control the average output power.
Note: Usually set to the "ON" position.



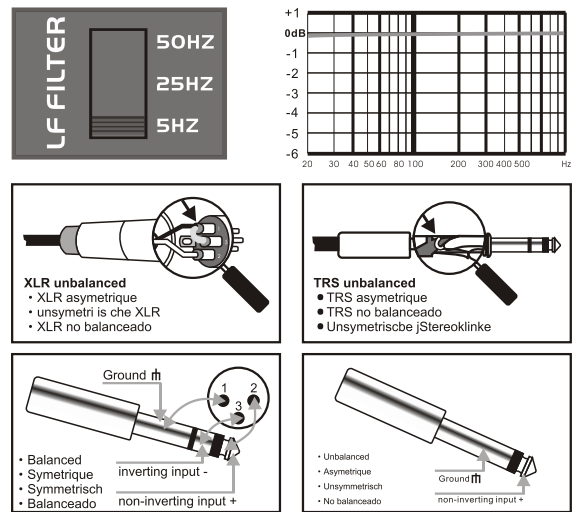
2> LF filter:

When the LF filter is on it activates a high pass filter on the input.
See diagram on the right for examples.



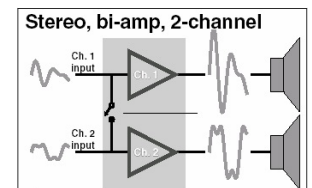
FUNCTION SETUP AND CABLE CONNECTIONS

Connector wiring diagram.



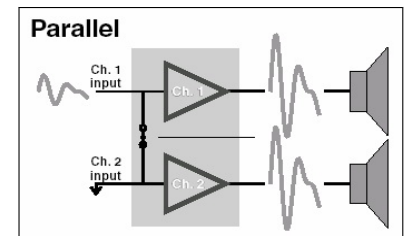
A、 Stereo connecting mode:

Switch to stereo mode as the diagram on the right: Stereo mode, the signal on channel A and channel B is independent, the signal to channel A is just for channel A, the signal to channel B is only for Channel B. Diagram on the right:



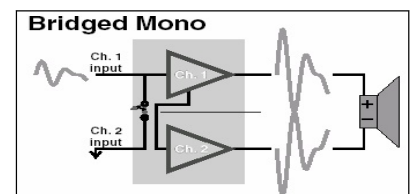
B、 Mono paralleled mode:

Switch to PARRALLEL mode as the diagram on the right: Mono parallel input mode, the input signal from channel A will connect to channel B within the amplifier. Do not connect inputs to both channels A and B at the same time. Diagram on the right:



C、 Bridged mode:

Switch to BRIDGE mode as the diagram on the right: Bridge input mode, the input signal from channel A only. Speaker outputs are connected Positive Channel A (red) and Negative Channels B (black) Diagram on the right:



Please note that in bridge mode this amplifier outputs very high volts and could cause an electric shock. Before changes are made please power down the amplifier.

10、 OPERATION

Please follow the steps when using the equipment

1> Start

- a、 Setup the function and connection according to the above setup and connections
- b、 Check output cable for short circuit and the load is correct;
- c、 Check if the local voltage complies with the user's manual;
- d、 Be sure the power supply switch is at "0" and the volume is at minimum;
- e、 Connect the power supply, turn on the equipment of sound source, pre and effect equipment and insure this equipment is working correctly;
- f、 Turn on the power switch supply (put it at "1" position);
- g、 Adjust the volume knob clockwise to right position.

2> Off

- A、 Adjust the volume knob anti-clockwise to the minimum;
- b、 Turn off the Adjust the volume knob anti-clockwise to the minimum on the front panel (put it at "0");
- c、 Turn off the pre and effect sound source equipments;

11、 INDICATORS ON FRONT PANEL

1> If signal indicator flashes, it means there is signal output in two channels;

2> If peak indicator flashes, it means that the input voltage is too high. You should turn down the volume;

3> If the peak indicator is always on it means there are faults. Either the load is low, short circuit or high temperature. You should check after power is turned off. Turn on again if no abnormality

4> If bridge indicator lights, it means the amplifier is in the bridged mode.

12、 PROTECTION FUNCTION

Protection function can prevent damage to the amplifier and speaker caused by short circuit and output DC and overheating.

1> Short circuit protection: when the load at the output end is in short circuit, the equipment will cut the signal and protect the equipment;

2> Output DC protection: when the equipment has faults and there is DC in output signal, the equipment will cut output automatically and avoid damage to the speaker caused by DC;

3> Overheat protection: If the temperature of heat sink is over the allowed temperature, the sensor will cut the output, to avoid damage caused by high temperature and protect the amplifier.

13、 TROUBLE SHOOTING

Trouble	SN	Trouble shooting
No sound, Power indicator lights off	1	Check if the power plug and jack are connected well.
	2	If the power jack corresponds with AC 220-240V,50/60Hz.
	3	Check if the fuse on rear panel is blown.
No sound, Power indicator Lights, Signal indicator Light off	1	Check if the signal cable is connected .
	2	Check if the power of music source is turned on and the volume is turned on.
	3	If the volume pots is turned on.
CLIP indicator flashing on, sound is abnormal	1	If the music source output is too big.
	2	If the CLIP LIMITER is at the "ON"position.
	3	Check if there is any short circuit in output connectons and if the load is correct. Then restart.
The bass is not sufficient	1	If the LF FILTER on rear panel is at the LF 50Hz or at LF 25Hz, setup the switch at appropriate place.
No sound on one channel under paralleled mono mode	1	Check if the MODE switch on rear panel is in the PARALLEL,please put it in PARALLEL if it not at the position.
Bridge output is too low	1	Check the input signal can comply with voltage, please enhance the input signal if not sufficient.
	2	Check if input SIGNAL voltage is suited, please enhance the input SIGNAL if not sufficient.
Blowing the fuse when start	1	Check the local voltage is same as the voltage of the equipment.
Others	1	Check if the setup and connection are in accordance withthe user manual.

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