

itC PROFESSIONAL POWER AMPLIFIERS OWNER'S MANUAL



TA-2500/TA-2700/TA-2900/TA-21200

PROFESSIONAL POWER AMPLIFIER

NOTES

- Please avoid using this equipment in the following places:
 - Exposed to the splashing oil spray, steam, for example, places near the cooker, humidifier, etc.
 - Unstable surface, such as rocky desktop or oblique plane.
 - Exposed to overheating environment, such as car with window closed or places with direct sunlight.
 - Exposed to high moist environment or places with lots of dust.
 - Please do not put the power cables near the heater. Otherwise it will lead to melt, cause fire or electric shock.
 - Please seize the plug when pull out the plug from the AC power socket. Please do not pull the cables directly. Otherwise the power cable will be damaged, to cause fire or electric shock.
 - Please do not touch the power plug with wet hands, otherwise it will cause electric shock.
 - There are vent holes on the front and rear panel of this equipment, to avoid the internal high temperature. Please do not obstruct these vent holes. Otherwise it will cause fire. Please note, DO NOT:
 - Put this device side or upside down.
 - Put this device on poorly ventilated places, such as built-in wardrobe or cupboard bookcase (rather than installing on the matched holder)
 - Cover this device with tablecloth, or put on carpet or in bed.
 - Please reserve enough space around this device to keep normal Ventilation. The space should be reserved: 5 cm on two sides, 10cm on the backside, 10 cm on the top. If there is no enough space to keep air flowing, internal temperature of device will rise, and may cause fire.
 - If you need to Move the position of this devise, please pull out the power plug from AC power socket, and pull out all the cables connecting. Otherwise it will damage the cables, and cause fire or electric shock.
 - Please do not put this device on the places where may exposed to corrosive gas or salt fog. Otherwise it will cause breakdown.
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———— OPERATION ————

- Please use special speaker cable when connect the speaker to amplifier output. It may cause fire if use other cables.
- Please power off all other instruments, audio device and speakers. And use the correct cables to connect accordingly.
- Please adjust the volume control to minimum before turning on the power of this device. Otherwise sudden outbreak of voice may damage your hearing.
- Please do not use this amplifier for any other purpose except driving the speaker.
- Please pull out the AC power socket in case of fire when the device is in idle for a long period.

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Thank you very much for choosing an ITC PRECISION SERIES amplifier. We are sure it will give you many years of satisfying performance.

ITC power amplifiers of the PRECISION SERIES meet the stringent requirements of tough touring applications. They are protected against over-temperature, overload, shorted outputs, radio frequency interference and DC faults. The power transistors are protected from damage from reverse feeding of electrical energy by means of an additional special protective circuit. For the so-called soft-start, the power outputs are switched on delayed via relays. An inrush current limiter circuit prevents the mains fuses from being blown.

Maximum precision is also guaranteed as regards mechanical construction and finish. The robust steel chassis features remarkable torsion resistance and is specially designed to cope with the tough wear and tear associated with going on tour. Thermal stability is guaranteed by several low noise 3-stage fans which also means that they can be used inside the studio. Comparator circuits constantly compare the power amplifiers' input and output signal and control the limiters under nonlinear operating conditions. They protect the loudspeakers from overload due to power stage clipping. The PRECISION SERIES power amplifiers feature excellent transmission properties. The power amplifier topology also makes for extremely low distortion rates. Distortion factor (THD), intermodulation distortion (SMPTEIM) and transient intermodulation distortion (DIM 30 and DIM 100) are so low that they are only detectable with the most sophisticated measuring equipment. Generously dimensioned power supplies with low-leakage toroidal core transformers provide considerable headroom well above the nominal ratings. V/I foldback limiter circuits were deliberately not included in the PRECISION SERIES power amplifiers to facilitate operation at complex loads up to a phase angle of +/- 90.

The inputs are electronically balanced on XLR connectors. (Isolation transformers can be retrofitted). Direct Outs in the form of XLR connectors (male), to loop the signal through, are also standard features. The modes DUAL/Stereo can be selected via the Input Routing Switch. Furthermore, the PRECISION SERIES power amplifiers can also be operated in "Bridged" mode.

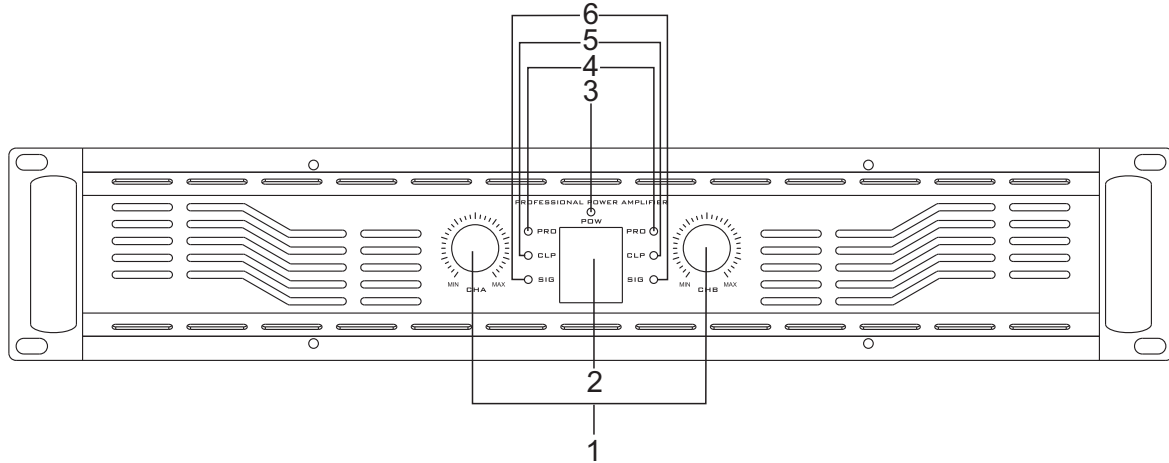
The front panel accommodates the dB-calibrated input Gain controls which are designed as especially precise and safe-to-operate detented potentiometers. The LED display provides information about the power amplifiers' operating status. For the two channels, they demonstrate readiness to operate, whether there is a signal at the input or output, when the Limiters have been activated and whether one of the protective features has been triggered. The power outputs Channel A, Channel B and Bridged Out are available on Speakon connectors. The rear side of the unit accommodates the ON/OFF switches for the integrated Hi and Lo cut filters, a groundlift switch which separates the housing from the circuit ground thus helping to prevent hum loops and the operating modes selector to mono bridged operation. They also feature extremely quiet fans with front-to-rear airflow, facilitating operation in large and narrow amplifier racks.

This Owner's Manual is meant to help you familiarize yourself with all the PRECISION SERIES' other features. Please read it through carefully and we guarantee that your new power amplifier of the PRECISION SERIES from ITC will give you great pleasure.

Function and Features:

1. Industrial modeling steel professional panel, solid and durable, washable panel with dust screen.
2. Soft start to prevent high current power absorbing and interfere with other electrical equipment.
3. Intelligent forced cooling design, with low fan noise, high heat dissipation and other features.
4. Built-in intelligent limiter system to control the power module and the speakers work safely.
5. Built-in 30Hz / 50Hz high-pass filter.
6. Multiple modes: stereo, bridge and parallel.
7. Plentiful reserve power, with 2R low-impedance output, high-fidelity sound which can perfectly restore audio quality to allow the actors to play incisively and vividly;
8. High-quality low-impedance transformer and large capacity electrolytic filter to ensure working in large dynamic range;
9. H-class efficient power amplifier, complete and reliable security protection measures and working status indication (short circuit, overload, DC and overheating protection, transformer overheating protection) to allow users relieved operating.

Front panel(2U):



1. Level Control

Potentiometer controls amplifier's input level, clockwise rotation to increase the volume, whereas the volume decreases.

2. Power Switch

After the switch is turned on, POWER lamp is lit and you can hear the "Tap" sound of the relay pull-in in the machine.

3. Power Indicator

The power is turned on when indicator is lit.

4. Protect Indicator

When the machine appears overheating protection of amplifier and transformer, the indicator will show red. If machine is in protection status for a long time after turning on, the machine is faulty, please contact your dealer.

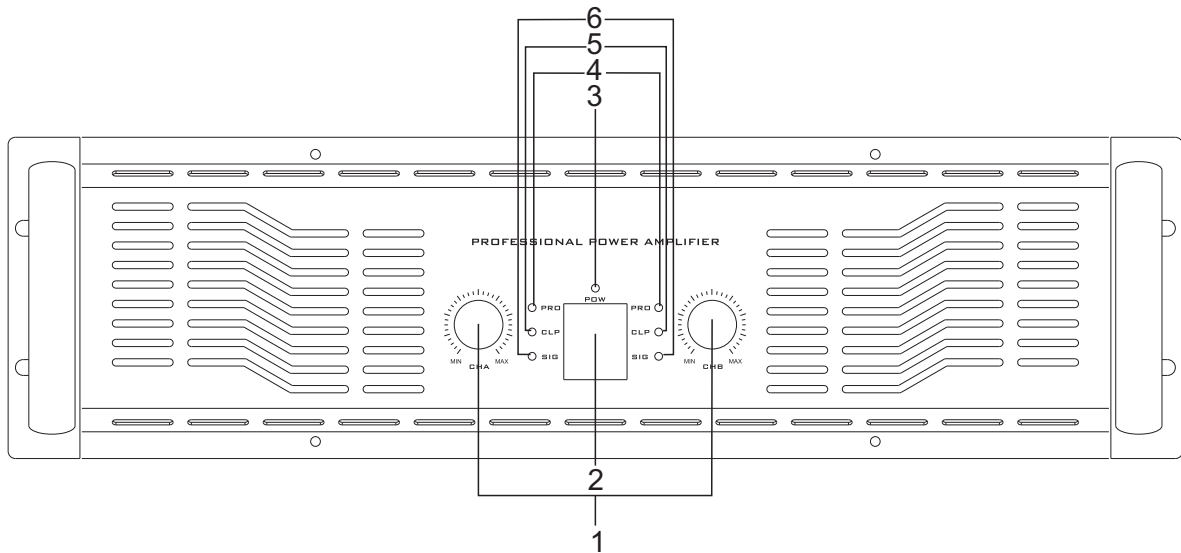
5. Clipping Indicator

When the (yellow) indicator is lit by signal, the output signal has been distorted, indicating that the input signal is too large, please reduce the input signal.

6. Signal Indicator

When the (green) indicator is lit, the input signal is normal. When the machine fails or the input signal is not correct, the (green) light is not on.

Front panel(3U):



1. Level Control

Potentiometer controls amplifier's input level, clockwise rotation to increase the volume, whereas the volume decreases.

2. Power Switch

After the switch is turned on, POWER lamp is lit and you can hear the "Tap" sound of the relay pull-in in the machine.

3. Power Indicator

The power is turned on when indicator is lit.

4. Protect Indicator

When the machine appears overheating protection of amplifier and transformer, the indicator will show red. If machine is in protection status for a long time after turning on, the machine is faulty, please contact your dealer.

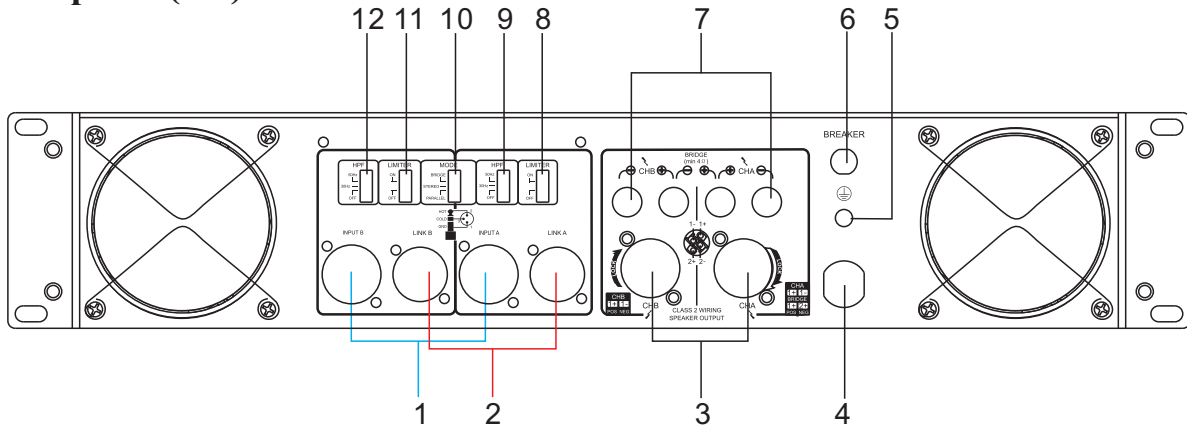
5. Clipping Indicator

When the (yellow) indicator is lit by signal, the output signal has been distorted, indicating that the input signal is too large, please reduce the input signal.

6. Signal Indicator

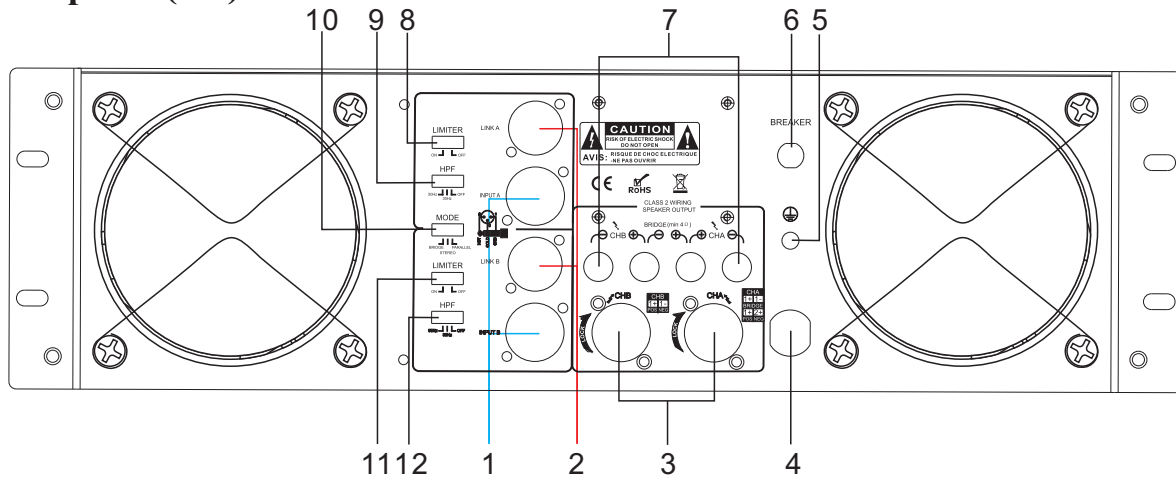
When the (green) indicator is lit, the input signal is normal. When the machine fails or the input signal is not correct, the (green) light is not on.

Rear panel(2U):



1. Channel A/B balanced and unbalanced input
(Note: When using BRIDGE or PARALLEL mode, only the jack of channel A is effective).
2. Channel A/B balanced LINK output.
3. Amplifier channel A/B SPEAKER jacks
Neutrik NL4FCSPEAKON is used as an output connection jack.
4. AC power input
Before connected to main grid, please check if the voltage is consistent with the marked.
5. GND Terminal
This is a screw-type ground terminal. If you are having a problem with “hum” or noise, please use this terminal to ground or connect to the chassis of the mixer, preamp, or other device.
6. Over-current protection device
7. Channel A/B binding post output jack
The output of the loudspeaker is connected between the red and black binding posts of each channel, while it will be connected between two red binding posts when bridging.
8. Channel A voltage limiting switch
9. Channel A high-pass filter trigger
10. Working modes selector switch
 - ①STEREO mode: Channel A and Channel B are autonomous working. The input signal of channel A will be output by its output jack. The input signal of channel B will be output by its output jack.
 - ②PARALLEL mode: The input signal of channel A will be output by the output jacks of channel A and channel B. The output jack of channel B does not work and the volume of channel A and channel B can be autonomously adjusted.
 - ③BRIDGE mode: The input signal of channel A will be output via BRIDGE output jack. If the volume is needed to be adjusted, the volume control knob of channel A has to be used and the volume control knob of channel B will be out of run.
11. Channel B voltage limiting switch
12. Channel B high-pass filter trigger

Rear panel(3U):



1. Channel A/B balanced and unbalanced input
(Note: When using BRIDGE or PARALLEL mode, only the jack of channel A is effective).
2. Channel A/B balanced LINK output.
3. Amplifier channel A/B SPEAKER jacks
Neutrik NL4FCSPEAKON is used as an output connection jack.
4. AC power input
Before connected to main grid, please check if the voltage is consistent with the marked.
5. GND Terminal
This is a screw-type ground terminal. If you are having a problem with “hum” or noise, please use this terminal to ground or connect to the chassis of the mixer, preamp, or other device.
6. Over-current protection device
7. Channel A/B binding post output jack
The output of the loudspeaker is connected between the red and black binding posts of each channel, while it will be connected between two red binding posts when bridging.
8. Channel A voltage limiting switch
9. Channel A high-pass filter trigger
10. Working modes selector switch
 - ①STEREO mode: Channel A and Channel B are autonomous working. The input signal of channel A will be output by its output jack. The input signal of channel B will be output by its output jack.
 - ②PARALLEL mode: The input signal of channel A will be output by the output jacks of channel A and channel B. The output jack of channel B does not work and the volume of channel A and channel B can be autonomously adjusted.
 - ③BRIDGE mode: The input signal of channel A will be output via BRIDGE output jack. If the volume is needed to be adjusted, the volume control knob of channel A has to be used and the volume control knob of channel B will be out of run.
11. Channel B voltage limiting switch
12. Channel B high-pass filter trigger

Connection methods:

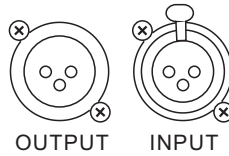
XLR connector is the connector for balancing transmission signal.

The definition of each input pin is:

PIN 1: Ground

PIN 2: Signal Hot End

PIN 3: Signal Cold End



For unbalanced input method, PIN 1 and PIN 3 are short-circuiting. Input sensitivity is 1V.

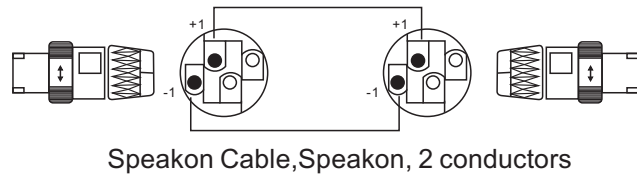
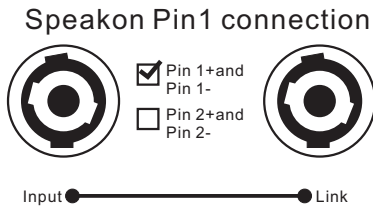
Amplifier output connector:

SPEAKON speaker connected dedicated connector, bridging CHA SPEAKON available, Bridged output, use binding post

Connection method is as follows:

+1; +2 Output;

-1; -2 is the ground wire.



Please notice:

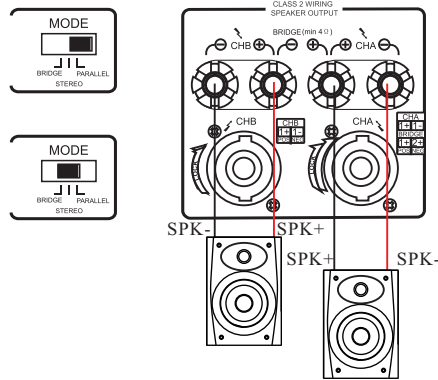
To avoid the fan hole of the machine is blocked which caused the machine over-heat, please tear down the dust screen from the panel on a regular base to clean it.

Cleaning method: tear down the four screws form the panel and pick out the dust screen. After the dust screen is cleaned and dried, put it back.

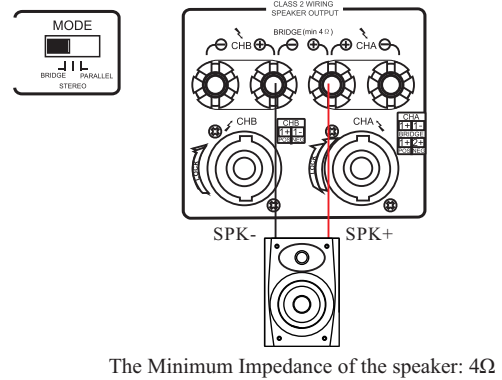
The impedance of the speaker:

Connect the speaker as shown below:

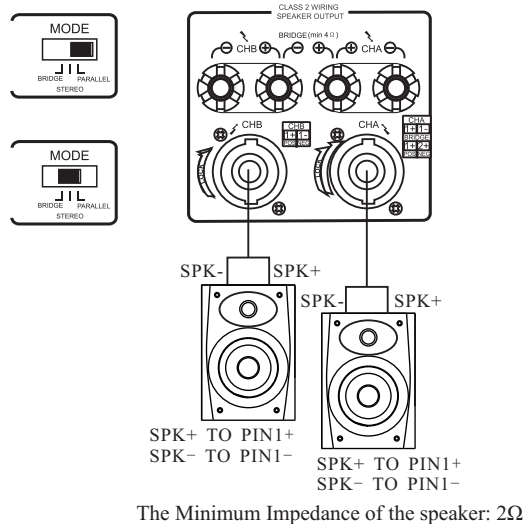
- ① Under the STEREO and PARALLEL mode to connect the configuration, when use the binding post socket:



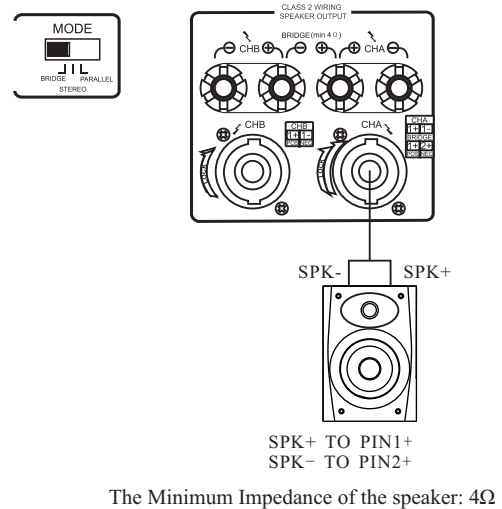
- ② Under the BRIDGE mode to connect the configuration, when use the binding post socket:



- ③ Under the STEREO and PARALLEL mode to connect the configuration, when use the SPEAKON socket:



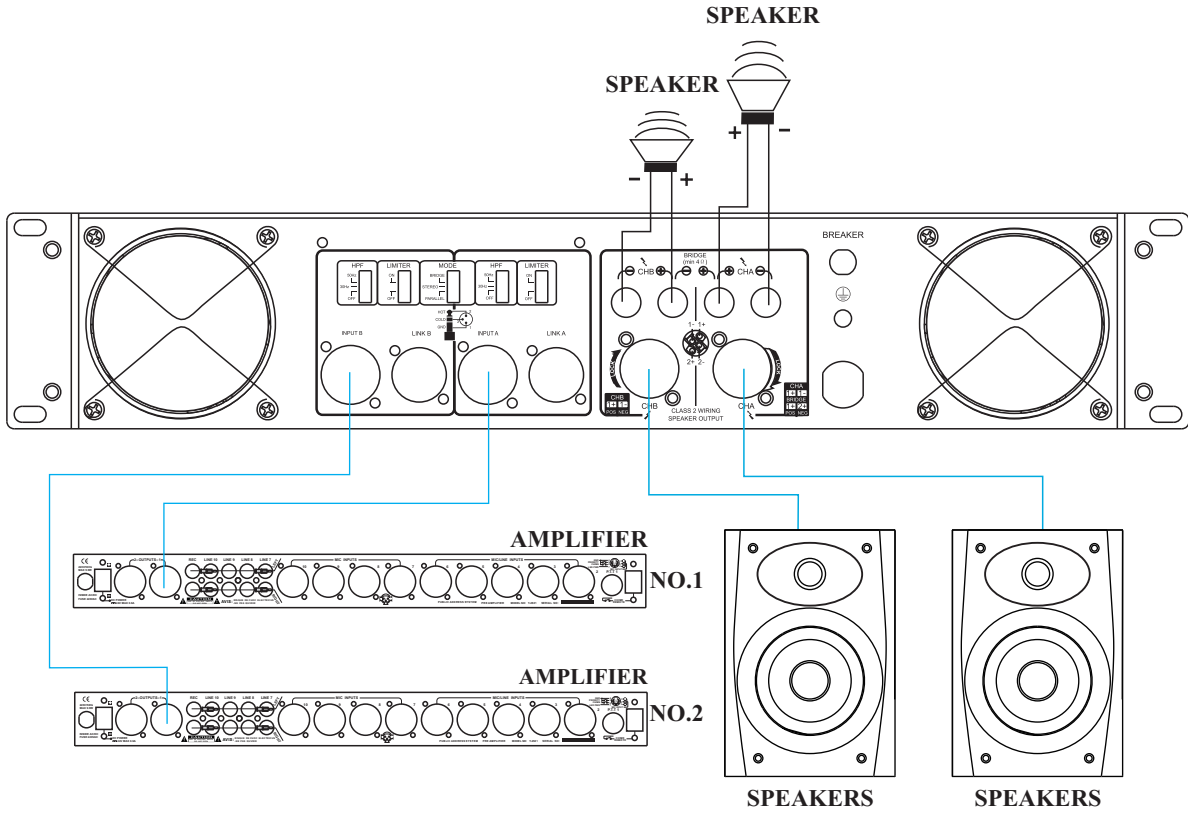
- ④ Under the BRIDGE mode to connect the configuration, when use the SPEAKON socket:



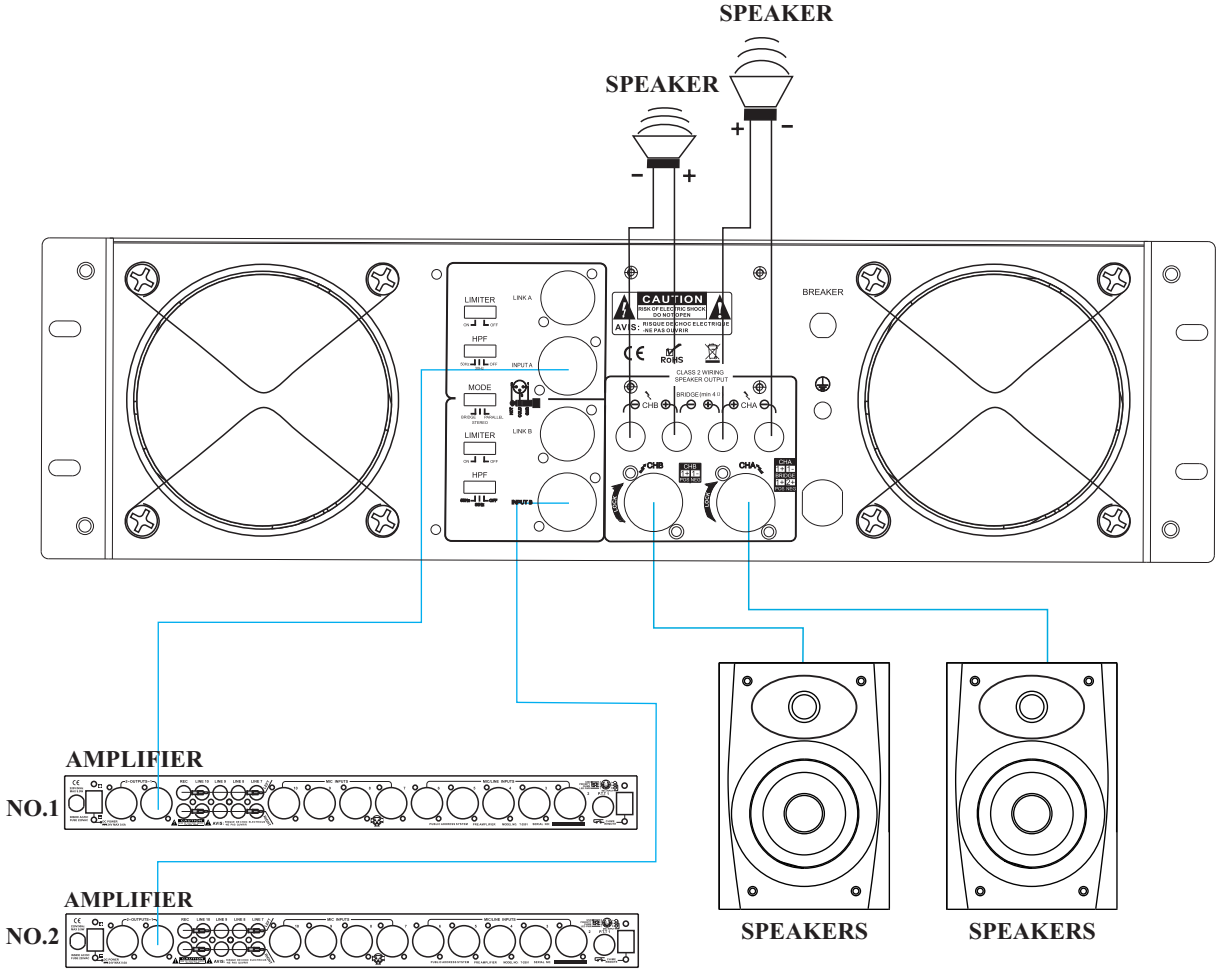
Please notice:

The impedance of the speaker changed along with the connection way and the sets of the speaker. Please make sure that the impedance will not lower than the minimum value as shown above.

Rear panel wiring diagram(2U):



Rear panel wiring diagram(3U):



Technical parameters :

Output Power	TA-2500	TA-2700	TA-2900	TA-21200
Stereo/Parallel 8R	500W*2	700W*2	900W*2	1200W*2
Stereo/Parallel 4R	750W*2	1050W*2	1350W*2	1800W*2
Stereo/Parallel 2R	1100W*2	1550W*2	2000W*2	2700W*2
Bridge Connection 8R	1500W	2100W	2700W	3600W
Bridge Connection 4R	2200W	3100W	4000W	5400W
Frequency Response	20Hz-20KHz(+0 dB /-3 dB)			
Input Sensitivity	0dBu(1V)			
Input Resistance	20KOhms			
THD+N	≤0.03%			
SNR (A-weighted)	≤-100dB			
Resolution (@1KHz)	>75dB			
Damping Factor (@1KHz)	>200			
Size (mm)	484×490×88		484×530×132	
Weight	18.5Kg	27.5Kg	30.5Kg	34Kg



**PROFESSIONAL POWER AMPLIFIERS
PRECISION SERIES**

■ This manual Specifications and descriptions are for reference only.
The Company reserves the right to change products or specifications at any time without notice.