

Digital Audio Power Amplifiers

DA2300

DA4300



User Manual V1.2

2015.08

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EXPLANATION OF SYMBOLS



The intent of the lightning flash with arrowhead symbol in a triangle is to alert the user to the presence of un-insulated "dangerous" voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to humans.



The intent of the exclamation point within an equilateral triangle is to alert the user to the presence of important safety, and operating and maintenance instructions in this manual.



IMPORTANT SAFETY INSTRUCTIONS



WARNING!: TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.

- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with a dry cloth.
- Do not block any ventilation opening. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- The appliance coupler, or the AC Mains plug, is the AC mains disconnect device and shall remain readily operable after installation.
- Adhere to all applicable, local codes.
- Consult a licensed, professional engineer when any doubt or questions arise regarding a physical equipment installation.



FCC Statement



NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

RoHS Statement

The Tendzone DA2300 and DA4300 amplifiers are in compliance with European Directive 2002/95/EC – Restriction of Hazardous Substances (RoHS).

The Tendzone DA2300 and DA4300 amplifiers are in compliance with “China RoHS” directives. The following chart is provided for product use in China and its territories:

Tendzone DA2300, DA4300 Class D Audio Amplifiers						
部件名称 (Part Name)	有毒有害物质或元素 (Toxic or hazardous Substances and Elements)					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(vi))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
电路板组件 (PCB Assemblies)	X	O	O	O	O	O
机壳装配件 (Chassis Assemblies)	X	O	O	O	O	O

O : 表明这些有毒或有害物质在部件使用的同类材料中的含量是在 SJ/T11363_2006 极限的要求之下。
(O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in SJ/T11363_2006.)

X : 表明这些有毒或有害物质在部件使用的同类材料中至少有一种含量是在 SJ/T11363_2006 极限的要求之上。
(X: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in SJ/T11363_2006.)

Introduction

Built for system integrators, the DA series amplifiers provide Standard and professional audio input/output interface, support bridged function within two channels. With OVP、UVP、OCP、OTP and DCP protection, it ensures security and reliability. With advantages of advanced intelligent fan speed control technology、completed indicator of function and device status、flexible and practical volume control mode, it helps the DA series amplifiers to work more efficiently. With advanced active PFC technology, it makes sure high utilizable ratio of power and reduce contamination to digital electricity grid from high-power machine. With advanced switching power technology, it allows bigger range of power supply and it ensures enough power consumption of the next level CLASS-D amplifier.

DA2300-2 Channel Each Channel 300W@8Ω ; Or 2 Channel Each Channel 600W@4Ω;
Two Channel Bridged Power 1200W@8Ω.

DA4300-4 Channel Each Channel 300W@8Ω ; Or 4 Channel Each Channel 600W@4Ω;
Two Channel Bridged Power 1200W@8Ω.

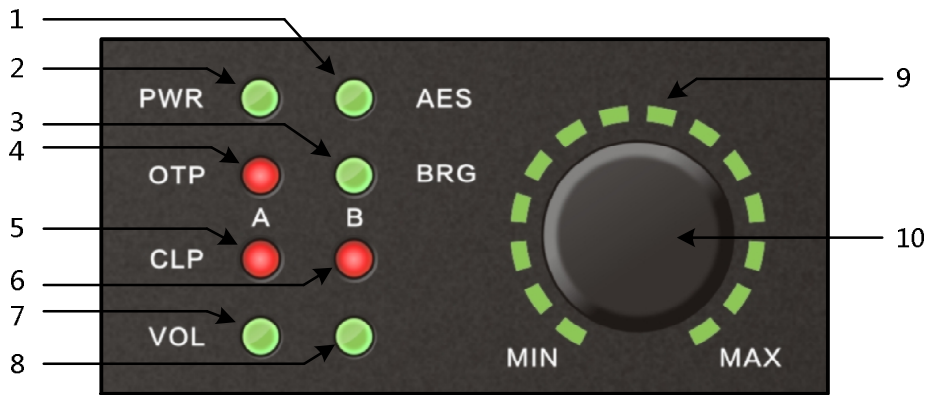
Unpacking

Package Contents

1. User Manual V1.2 ×1
2. Digital Amplifier ×1
3. AC Power Cord ×1
4. Warranty Card ×1

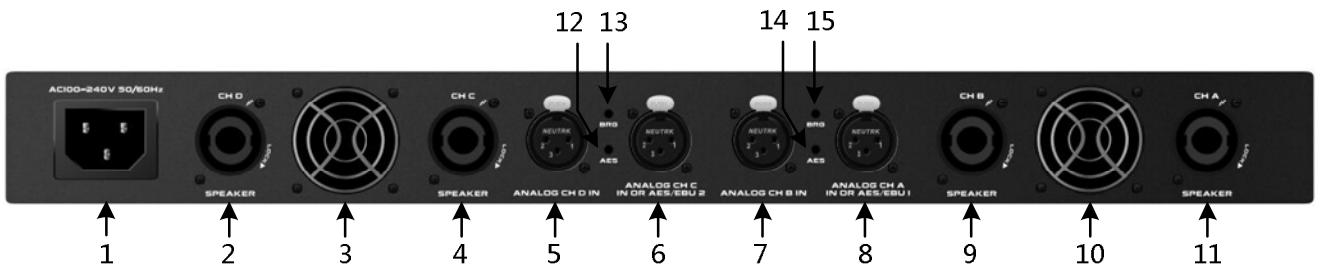
Features

Front Panel of Amplifier



- | | |
|--|--|
| 1. AES Digital Signal Input Indicator (Green) | 6. Channel B Signal/Clipping Indicator (Green/Red) |
| 2. Power Indicator (Green) | 7. "NO USED" |
| 3. Bridged Mode Indicator (Green) | 8. "NO USED" |
| 4. Over Temperature Protect Indicator (Red) | 9. Channel Gain Indicator (Green) |
| 5. Channel A Signal/Clipping Indicator (Green/Red) | 10. Gain Rotary Knob |

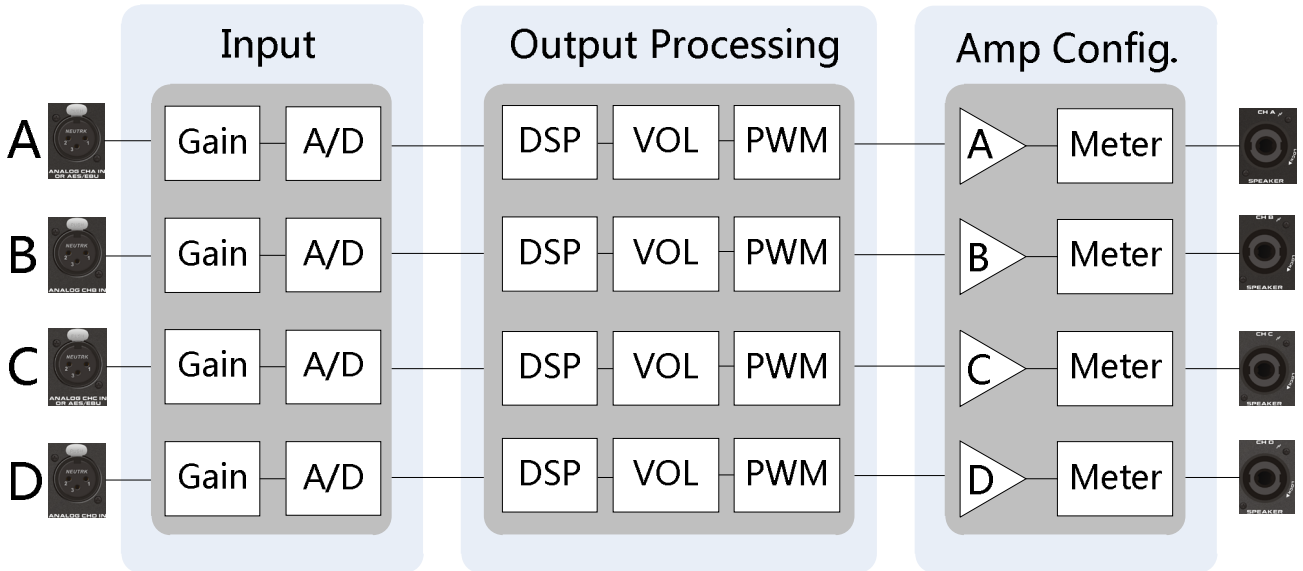
Rear Panel of Amplifier



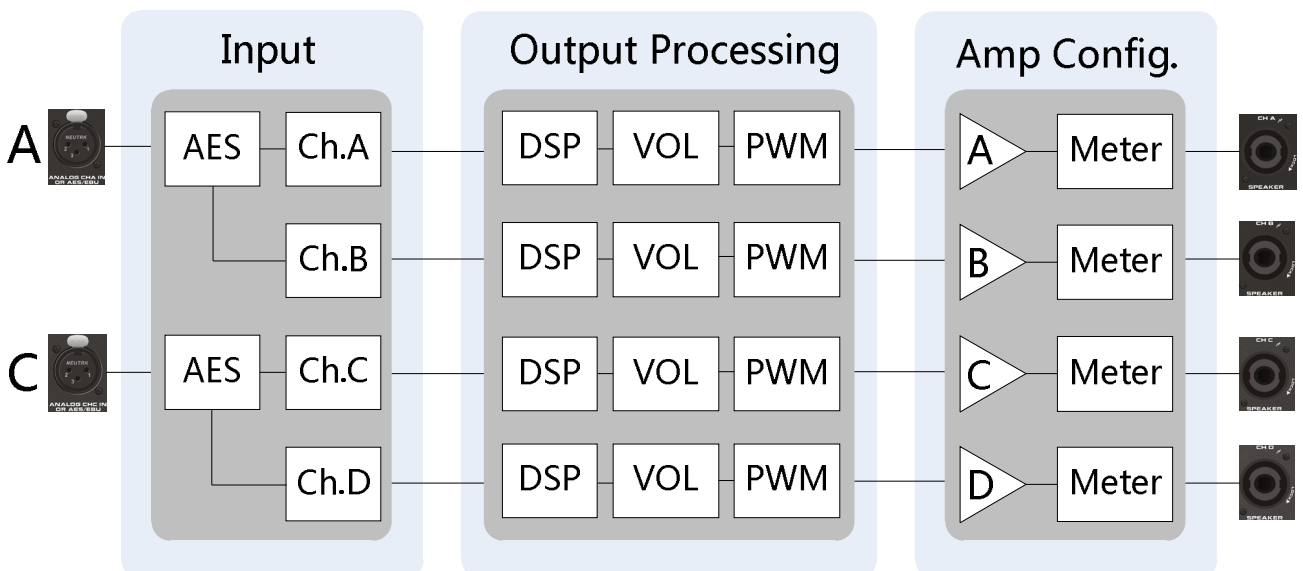
- | | |
|----------------------------------|--|
| 1. AC Power Connection(5A Fuse) | 9. Channel B Output Connector |
| 2. Channel D Output Connector | 10. Cooling Fan |
| 3. Cooling Fan | 11. Channel A Output Connector |
| 4. Channel C Output Connector | 12. Input Selection Button -Channel C/D-Analog/AES |
| 5. Analog Input of Channel D | 13. Mode Selection Button -Channel C/D-ST/Bridged |
| 6. Analog/AES Input of Channel C | 14. Input Selection Button -Channel A/B-Analog/AES |
| 7. Analog Input of Channel B | 15. Mode Selection Button -Channel C/D-ST/Bridged |
| 8. Analog/AES Input of Channel A | |

DA Amplifier Signal Flow

Analog Signal Input [Stereo]

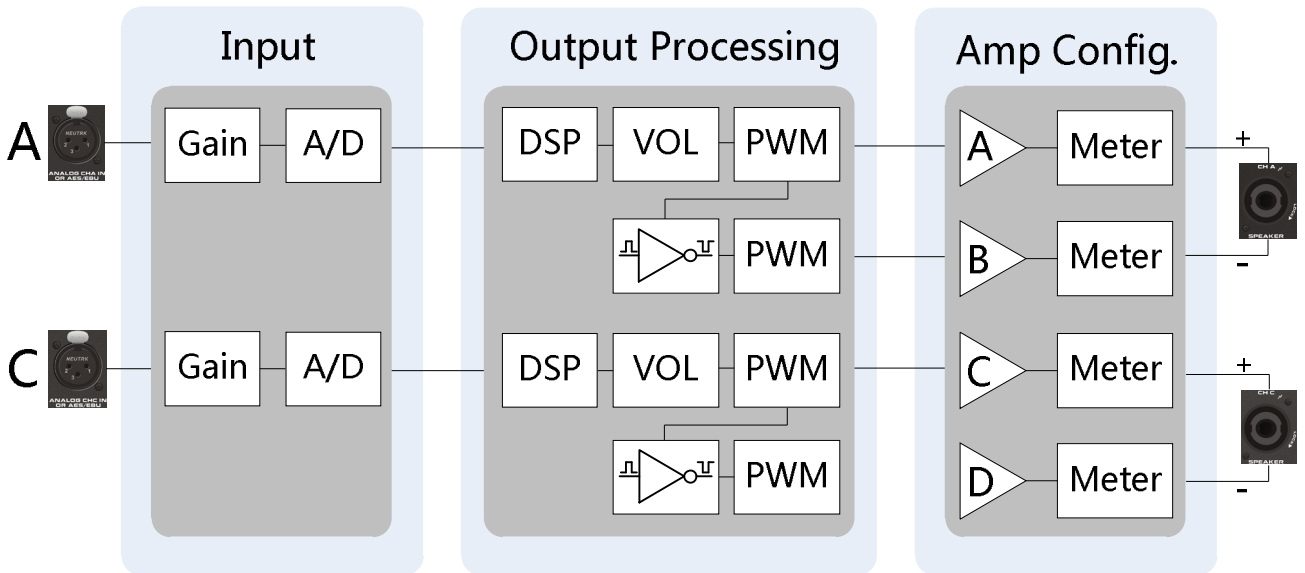


AES Signal Input [Stereo]

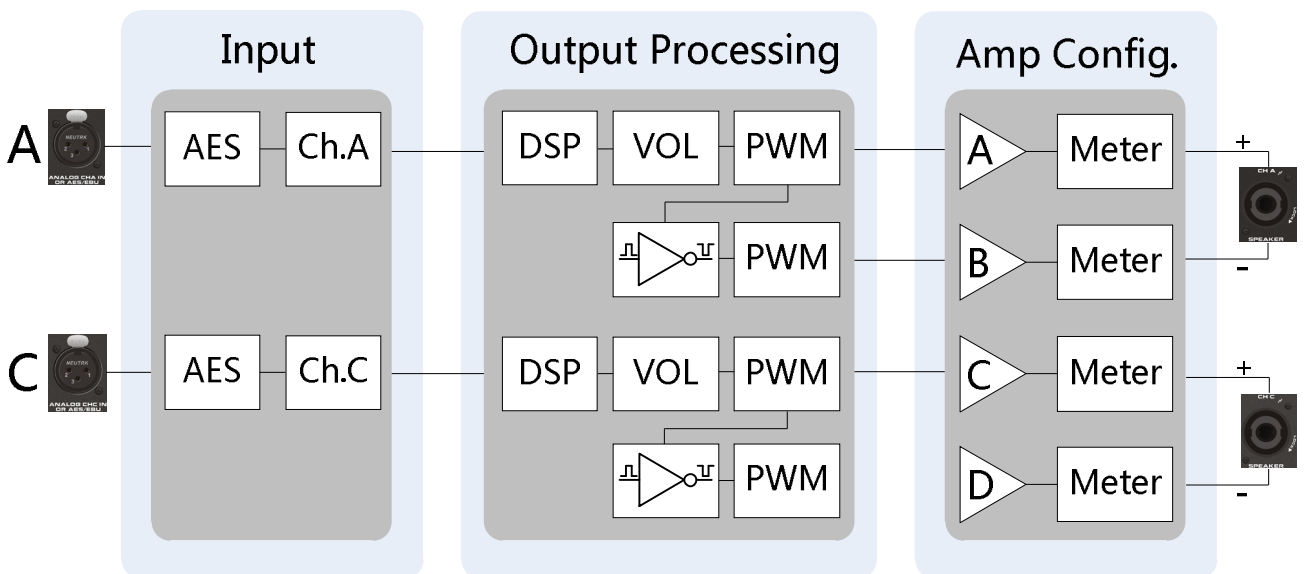


DA Amplifier Signal Flow

Analog Signal Input [Bridged]



AES Signal Input [Bridged]



AES1_L = CHA

AES2_L = CHC

Amplifier Control

AC Power On

After connecting the outputs to the loudspeakers, you may turn the amplifier on.

1. Make sure the output gain settings for all audio-source devices (CD Players, Mixers, Instruments, etc.) at the lowest output (max attenuation);
2. Connect Power Cord and turn the AC Mains power switch on the front of the amplifier to ON;
3. You can now bring up the outputs of your audio sources.

Volume Control

Rotate the encoder to adjust volume. This operation will simultaneous change the volume of channel A/B or C/D.

Input Signal Type Selection

After power off, use a small tool to press the button marked No.6 on rear panel. When the button is up, the channel will change to analog signal input; press down the button , the channel will change to AES signal input. The button marked No.6 on rear panel only will be available when the amplifier is power off.

Bridged Mode

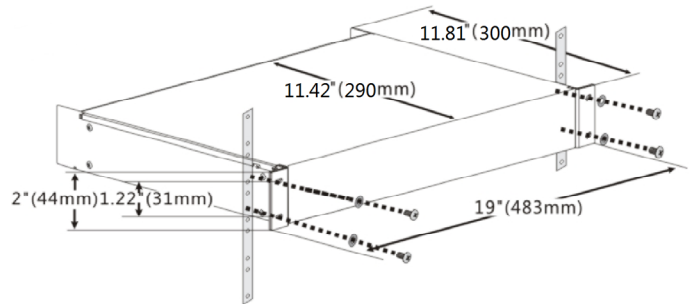
After power off, use a small tool to press the button marked No.7 on rear panel. When the button is up, input mode will change to stereo mode; press down the button , input mode will change to bridged mode. The button marked No.7 on rear panel only will be available when the amplifier is power off.

Installation

The following steps are written in the recommended installation order.

Mount the DA Amplifier

The DA Series amplifiers are designed to be mounted in a standard rack-mount unit. The amplifiers are 2RU high, 290 mm (11.42 in) deep.

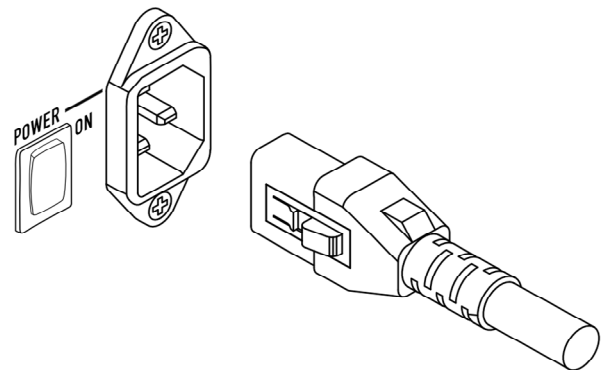


CAUTION! Be sure that nothing is blocking the front or rear ventilation openings, and that each side has a minimum of 2 cm clearance.

1. Use the proper fastening hardware (not included) to secure the amplifier in the rack. The DA series amplifiers have two front mounting tabs.

AC Mains

WARNING! When the AC Power is on, there is a potential of having dangerous voltage at the output terminals on the rear of the amplifier. Use caution not to touch these contacts. Turn off the AC Mains disconnect switch prior to making any connections.



The DA amplifiers have a Universal power supply 100 – 240 VAC, 50 – 60 Hz.

1. Connect AC cable between the amplifier rear AC connector and the AC source.

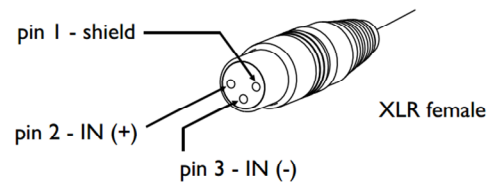
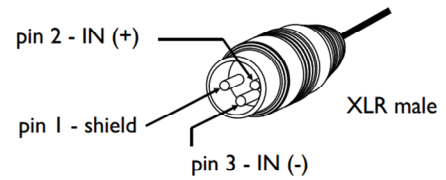
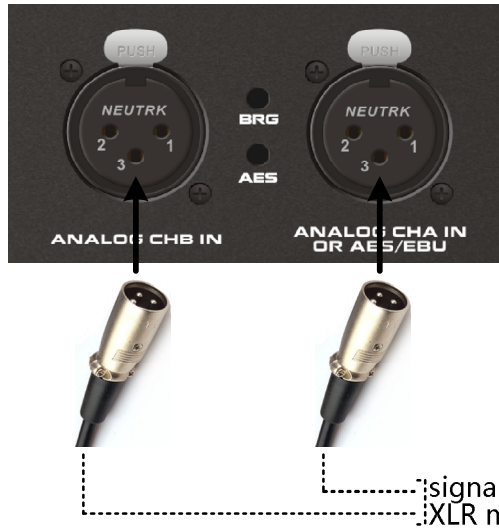
AC Power

NOTE: When you remove power from the amplifier, then re-apply the power, the amplifier returns to its last state.

Inputs

Connect the Audio Inputs

Signal input 3-pin-XLR-male connector



XLR Pin Explanation :

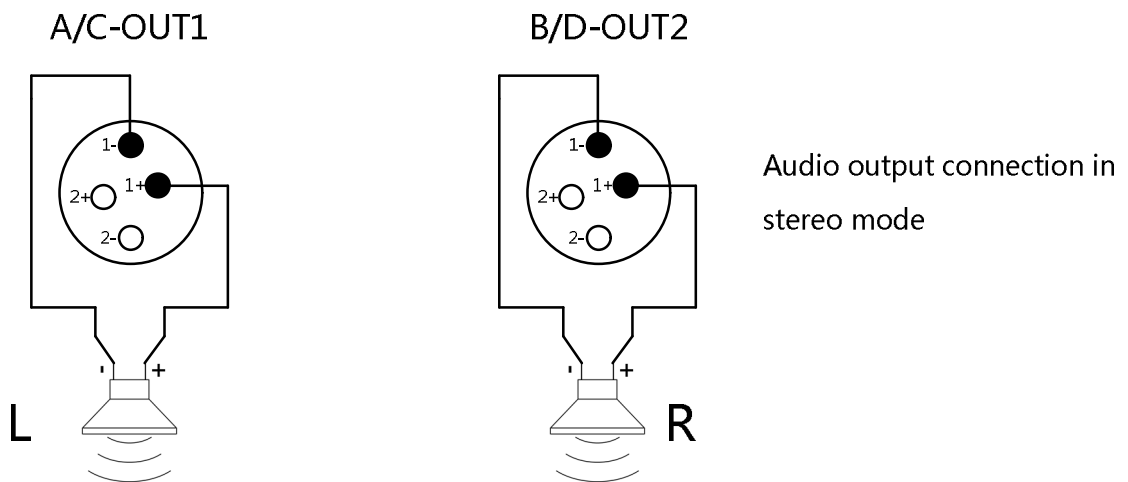
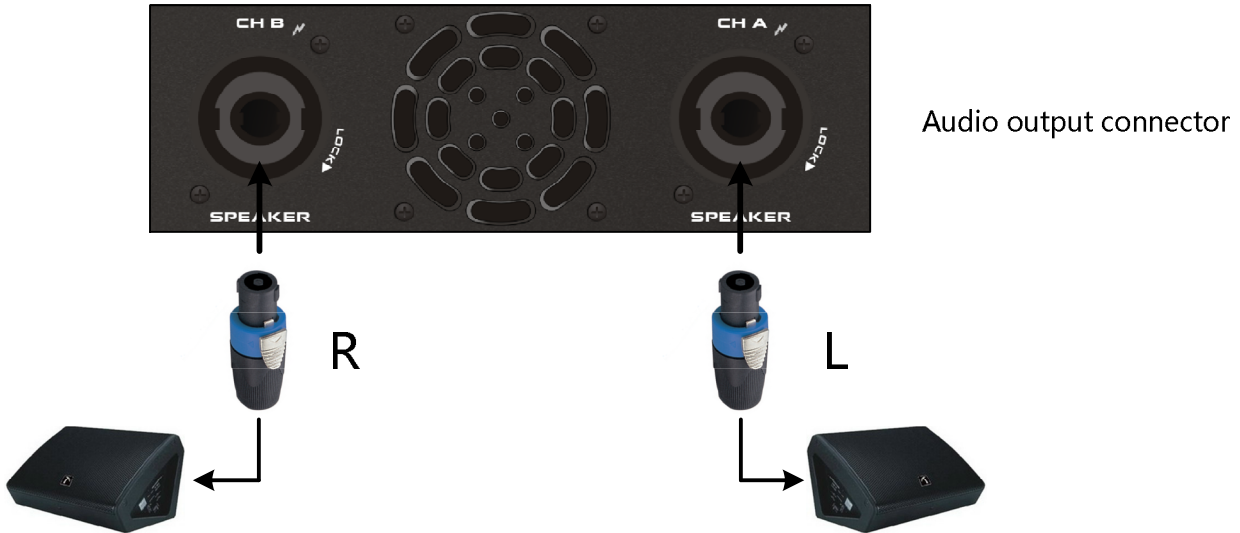
XLR Pin number	Assigned to
1	shield (Ground)
2	hot (+) 【Positive +】
3	cold (-) 【Negative -】

**NOTE: Only channel A/C supports AES signal input;
Under bridged mode, only input channel A/C is available.**

Stereo Outputs

Speaker ST Outputs

All output ports should be connected by Neutrik® speaker connectors.



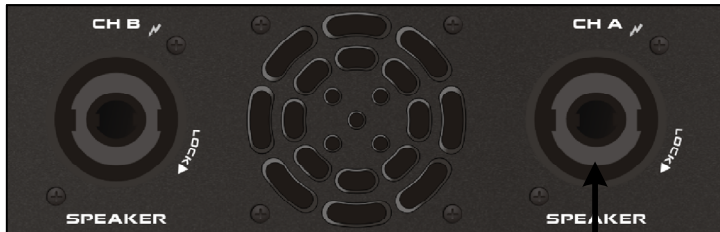
WARNING!: When the AC Power is on, there is a potential of having dangerous voltage at the output terminals on the rear of the amplifier. Use caution to not touch these contacts. Turn off the AC Mains disconnect switch prior to making any connections.

WARNING!: Must avoid Pins Short-circuits among Positive, Negative.

Bridged Output

Speaker BRIDGED Output

All output ports should be connected by Neutrik® speaker connectors.

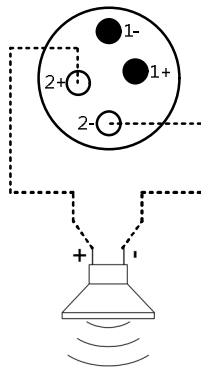
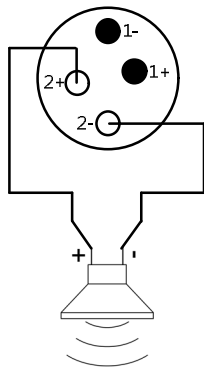


Audio output connector



A/C-OUT1

B/D-OUT2



Audio output connection in bridge mode

NOTE : Connection in bridged mode output only can be conneted by "2+ 2-" connectors of channel **A or B** (C or D).



WARNING!: When the AC Power is on, there is a potential of having dangerous voltage at the output terminals on the rear of the amplifier. Use caution to not touch these contacts. Turn off the AC Mains disconnect switch prior to making any connections.

WARNING!: Must avoid Pins Short-circuits among Positive, Negative.

Specifications

General	DA2300			DA4300		
Number of channels	2			4		
Output power	stereo mode		bridged mode	stereo mode		bridged mode
EIAJ Test Standard, 1 kHz, 1% THD	4 Ω/ch	8 Ω/ch	8 Ω/ch	4 Ω/ch	8 Ω/ch	8 Ω/ch
	600W	300W	1200W	600W	300W	1200W
Max output voltage / current	70V _{peak} / 17.5A _{peak}					
AC Mains Power						
Power supply	Universal, regulated switch mode with PFC (Power Factor Correction)					
Operating voltage	100-240 V ±10%, 50/60 Hz					
Power factor cos (φ)	>0.95 @ >50 W					
Consumption / current draw	@ 230 V			@ 230 V		
Idle	34W		0.15A	68W		0.30A
I/4 of max output power @ 8Ω	184W		0.80A	368W		1.60A
Environmental operating temperature	0° - 45° C / 32° - 113° F					
Audio						
Frequency response	20 Hz - 20 kHz (1W @ 8 Ω, ±0.5dB)					
S/N ratio (amplifier section)	>92dBA (20 Hz - 20 kHz, A weighted)					
THD+N	<0.3% from 1W to full power (typically <0.1%)					
IMD	1%					
Damping factor @ 8 Ω	>500 @ 20-200 Hz					
Crosstalk separation	> 70dB @ 1 kHz					
Slew rate	50 V/μs @ 8 Ω					
Input Impedance (Analog)	20 k Ω balanced					
Input Impedance (AES)	100 Ω balanced					
Input Sensitivity (Analog)	1.24V _{RMS} (+4dBu)					
Max input level (Analog)	7.80V _{RMS} (+20dBu)					
Gain	32dB					
A/D converter	Dual 24bit 96 kHz with 127dBA of dynamic range and THD <0.005% (20 Hz - 20 kHz)					
AES input level	200mV – 2000mV @ 100 Ω					
Digital audio input (AES)	16 - 24bit 96 kHz					
Input Sensitivity (AES)	-20dBFS					
Front Panel						
Indicators	8LEDs: Power / AES / OTW / Bridged / CHx level / CHx					
Controls	EC11 encoder					
Construction						
Dimensions	W 483 mm / 19" , H 44.5 mm / 1U , L 295mm					
Weight	6.5kg			7.5kg		



TENDZONE



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National after-sales hotline
400-065-0605



After-sales working time (except National
Holiday)

Weekday 9:00 ~ 20:00

Weekend 9:00 ~ 18:00



National after-sales QQ numbers
1115320851 2386107090

