

# ICE-4000

Power amplifier



PLEASE READ THE INSTRUCTIONS CAREFULLY BEFORE USE

# 1. OVERVIEW

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## ICE-4000

*Professional class TD amplifier – 2 x 2000W @ 2 ohms*

**ICE 4000** is a professional amplifier that features TD class amplification, which combines the efficiency of a digital power supply with the sound clarity of a high-quality analog amplification circuit. Thanks to its design, the amplifier allows the peak power to follow the dynamics of the music program, being able to reproduce – at its peak - up to twice the RMS power without clipping. In terms of performance, ICE 4000 delivers an RMS power of 2 x 1000W @ 8 ohms, 2 x 1500W @ 4 ohms and 2 x 2000W @ 2 ohms, sports a wide range of protections and is very efficient with respect to power consumption.

## *Connectors & back panel controls*

- Power supply connector: Interlock In
- 2 XLR-3/TRS 1/4" inputs
- 2 Speakon speaker outputs
- 2 stereo binding points
- Input sensibility switch: 0.75V, 1.0V & 1.5V
- Mode switch: Parallel, stereo & bridge
- YSProcessing switch

## *Physical*

- Cooling: Two Front-to-back fans, temperature-controlled speed.
- Net Weight: 9.7 kg. / 21.4 lbs.
- Dimensions: 483x361x88.8 mm. / 19x14.2x3.5 in.

## Specifications

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### *Output*

- Output power (8 ohms): 2 x 1000W
- Output power (4 ohms): 2 x 1500W
- Output power (2 ohms): 2 x 2000W
- Output power (Bridge @ 8 ohms): 3000W
- Output power (Bridge @ 4 ohms): 4000W

### *Performance*

- TD Class amplifier
- Input impedance: >10 kOhm
- Frequency Response: 20Hz~20KHz
- Damping factor (1Khz@8 ohms): >800:1
- Signal to noise ratio: >95dB
- YSProcessing: The amplifier adds low-frequency compensation to
- enhance speaker output.
- Protections: Short circuit, open circuit, thermal, RF protection, On/off muting, DC fault shutdown & active inrush limiting.

## 2. SAFETY

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	<b>CAUTION!</b> RISK OF ELECTRIC SHOCK DO NOT OPEN.	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		

### Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. 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.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.

### Explanation of Graphical Symbols

 The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

 The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the product.

12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. 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.

### **WARNING!**

To reduce the risk of electric shock and fire, do not expose this equipment to moisture or rain.

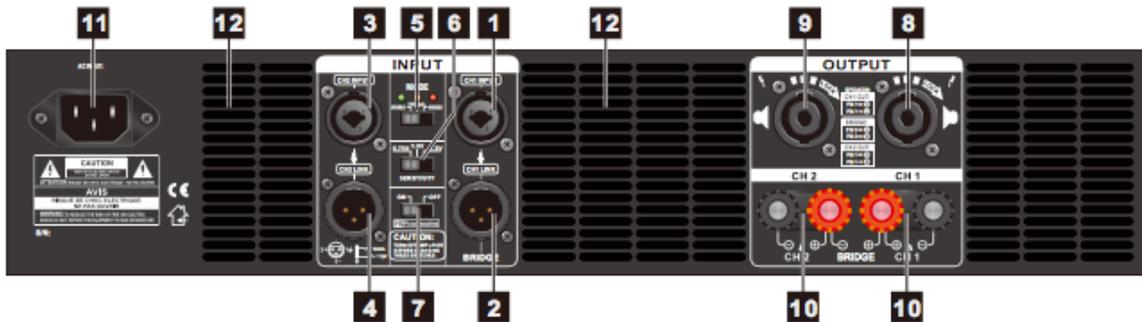
# 3. CONTROLS AND FUNCTIONS

## Front panel



- 1. POWER switch and indicator** Press to toggle the power on or off. The POWER indicator lights up green when the power is ON.
  - 1). Position I: ON (Green LED indicator).
  - 2). Position O: STBY / OFF (Orange LED).
- 2. Power source indicator** POWER indicator light up when unit is turn on the power amplifier is connect with power and will be running works within 3-5 seconds.
- 3. Power source indicator Volume control knobs** Each control knob adjusts the volume of the corresponding channel from -00 dB to 0 dB.
- 4. SIGNAL indicator** Lights up green when the corresponding channel's output level exceeds 5 Vrms (equivalent to 3 W into an 8Ω load, or 6 W into a 4Ω load).
- 5. CLIP indicator** Lights up red when the output signal distortion on the corresponding channel rises above 1%-indicating that "Clipping" has occurred because the signal level is too high.
- 6. Protect indicator** Lights up red to indicate that protection is in effect. Specifically, lights up if the heat sink overheats, or if a DC voltage is detected at the amplifier outputs. Also lights up for about 5 seconds at time of power-on, as the amp gets ready to operate. To provide protection, the unit will not output any sound from the speakers while this indicator is lit up. When start-up is completed or the problem is corrected, the indicator goes off and normal operation resumes.
- 7. LCD display** LCD display working state of the power amplifier
  - A. display input supply voltage.
  - B. power amplifier working temperature display.
  - C. power amplifier level display.
  - D. fan work status display.
- 8. The amplifier** uses forced-air cooling. The cooling fans draw air in from the front and exhaust it through the rear. Please be sure that you do not block the air intakes or exhaust vents.
- 9. Install the security cover** When install 19"inch (2RU) rack mounting, please use the #10 or 6mm screws from amplifier.

## Rear panel



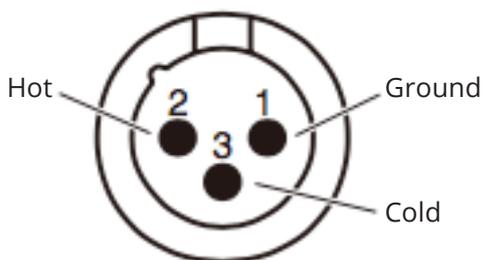
1. **Channel 1 XLR Input** This XLR input is a balanced input. Connect this input to the left output of your mixer.
2. **Channel 1 Link Socket** This balanced socket is used to link another amplifier.
3. **Channel 2 XLR Input** This XLR input is a balanced input. Connect this input to the left output of your mixer.
4. **Channel 2 Link Socket** This balanced socket is used to link another amplifier.
5. **Operation Mode Selector** This switch is used to choose the operating mode of the power amplifier: *Mode stereo*: 2 inputs(channel 1 and 2) and 2 outputs are used. *Mode parallel*: 1 input(channel 1) and 2 outputs are used. *Mode bridge*: 1 input(channel 1) and 1 output are used.
6. **Input Sensitivity Selector** This selector allows to choose the input sensitivity: either 0.75V, 1.0V, 1.5V).
7. **ON/OFF Switch** **YSProcessing** If you set this switch ON, the amplifier adds low- frequency compensation so as to enhance speaker output. The results (the actual change in the low-frequency balance) will vary according to the speaker type.
8. **Channel 1 Turn Lock Output** Connect this turn lock output to a speaker. The branching is +1,-1(except in bridge mode where the branching is +1,+2 ).
9. **Channel 2 Turn Lock Output** Connect this turn lock output to a speaker. The balance is +1,-1.
10. **Wiring Terminal** According each output mode , connect with split plug or bare wire to Out 1,Out 2 , BRIDGE .
11. **AC Cord** Plug this cord into the power supply socket. (Before using the power amplifier, check if the power supply is 220V).
12. **Air Entrance Speakon connector** This part is the air entrance. Don't obstruct it.

# 4. WIRE CONNECTIONS

## INPUT jacks

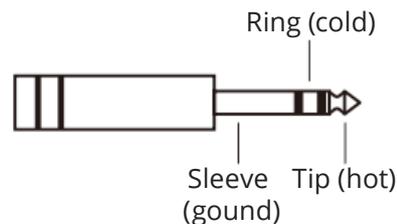
### XLR-3-31 jack

The XLR-3-31 input jacks are wired as shown below.



### Phone jack

Phone jacks are wired as follows.



## Speakon Connector

1. Turn off the POWER switch.
2. Insert the Neutrik NL4FC plugs into the Speakon connector on the rear of the amplifier, and turn clockwise to lock.



### CHANNEL 1

Stereo or Parallel

1+	Out1+
1-	Out1-
2+	Out2+
2-	Out2-

Bridge

1+	Out1+
1-	-
2+	Out2+
2-	-

### CHANNEL 2

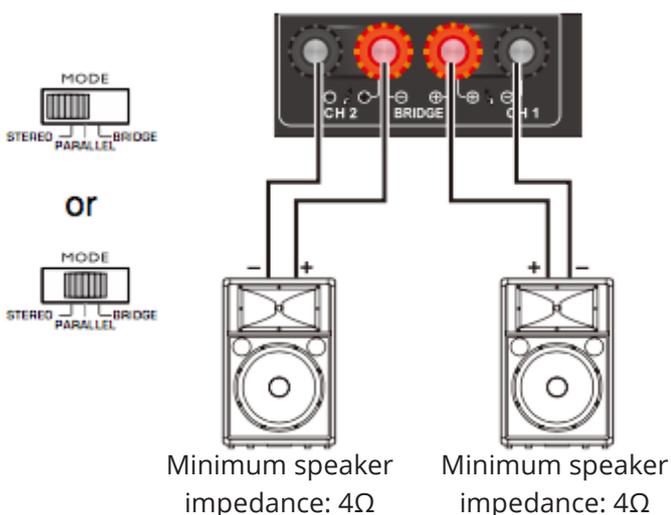
1+	Out2+
1-	Out2-
2+	-
2-	-

# 5. SPEAKER CONNECTIONS

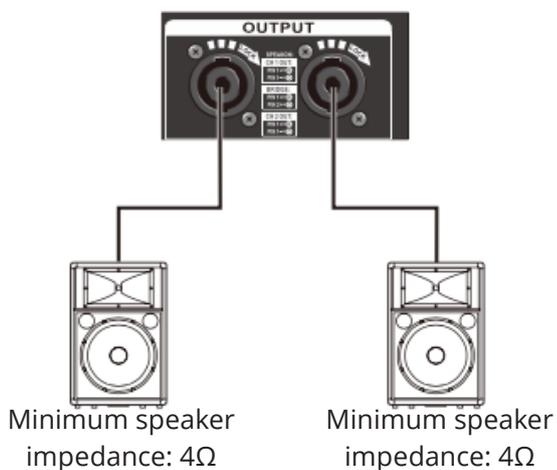
Speakers can be connected to the amplifier as shown below. Note that speaker impedance will vary according to the connection Method and the number of speakers. Please be sure that your speaker's impedance is not less than the relevant minimum value indicated below.

## Connection configurations or STEREO and PARALLEL modes

When using 5-way binding post output jacks

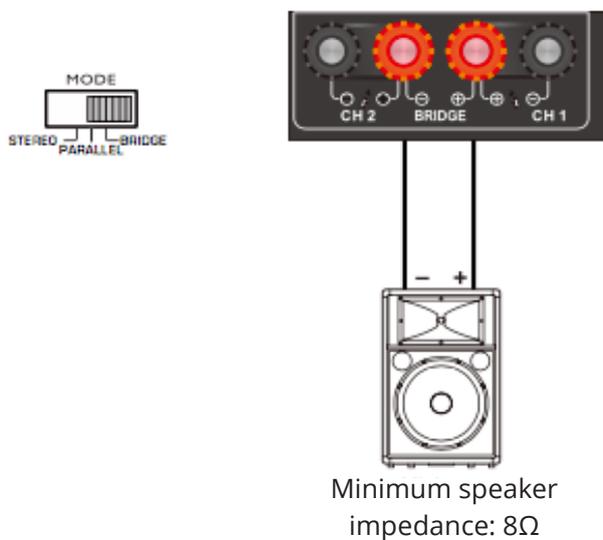


## When using Speakon connector



## Connection configurations or BRIDGE mode

When using 5-way binding post output jacks



## When using Speakon connector

