

# Operating Specification



User's Manual



## Professional audio power amplifier

## POWER AMPLIFIER

The Company reserves the right of final interpretation of this manual and reserves the right to modify the technical rules without prior notice and reserves the right to modify this manual without prior notice if the contents stated in this use manual are inconsistent with your product, the manufacturer reserves the right to modify the technical product specifications without prior notice

TECHNOLOGY FROM U. S. A

## Setting up and operation of the system

- Signal input / output plug connection mode!

Card balanced input / output:      Cannon unbalanced input / output



- Output plug connection mode
- Stereo link

1 + horn + end  
1 - horn - end



- bridge connections

1 + horn + end  
2+ horn - end



## ▲▲▲ Special instructions

### Mono mode CH 1-2:

Signal input from the CH 1 input,  
Output is CH1OUTPUT & CH2OUTPUT output,  
wiring is 1 +, 1-, to connect 2 professional plugs  
Or only CH1 OUTPUT output, wiring is 1 +, 1-, is for CH 1 output:  
wiring 2 +, 2-, is for CH 2 output, only a professional plug

### stereo mode CH 1-2:

signal input from CH 1 & CH 2 input.  
Output is CH1 OUTPUT & CH2 OUTPUT output,  
wiring is 1 +, 1-, to connect 2 professional plugs!

### Bridging mode CH 1-2:

signal input from CH 1, CH1 OUTPUT Output,  
the wiring is 1 +, 2 +, and only use a professional plug

## Technical index of product of 4-channels

MODEL	HD-1500.4
8 Ω of stereo sound power	4X1000W
4 Ω of stereo sound power	4X1500W
2 Ω of stereo sound power	CN
8 Ω bridging acoustic power	2X3000W
4 Ω bridging acoustic power	CN
voltage gain	41dB
Output-stage circuit type	Class H
frequency response	20Hz-20KHz
Total harmonic distortion (THD%)	<0.05%
slew rate	≥25V/μs
camping coefficient	≥400
dynamic range	≥95dB
noise-signal ratio	105dB (typical value of A-weighted)
sensitivity	0.775V/1.0/1.4
input impedance	Balance equilibrium 20K / 10K
defensive function	Pressure limit, overheating, short circuit, DC, zero impact of switch machine
Radiation airflow direction	Air suction from the power amplifier panel to the backplane
Power supply voltage / frequency	~220V ± 10% / 50Hz
net weight	26kg
rough weight	28.05kg
Machine size: W * D * H	482mm*530mm*88mm
Packaging dimensions: W * D * H	645mm*545mm*150mm



There are dangerous voltage non-insulated part of the machine, enough to get an electric shock!

Warning; dangerous high voltage devices in the machine, do not open the cover, maintenance must be repaired by professional personnel!

## Important guidance

1. Please read all the documents before using the equipment, and keep all the documents for further reference;
2. The power supply consistent with the nominal voltage of the backplane must be used. The ground wire of the equipment must be connected together, and the ground wire of the equipment must be connected to the ground supply is truly connected to the earth. Equipment will cause damage;
3. The ground wire of the equipment and the ground wire of the power supply must be connected together, and it must be confirmed that the ground wire of the power supply is the real ground wire connected to the ground
4. It is prohibited to connect the output end of the amplifier to the oscilloscope probe in a bridging state, otherwise it will cause damage to the amplifier and testing equipment;
5. The input level of the power amplifier should not exceed the nominal sensitivity value;
6. Do not connect the output of one sound channel of the power amplifier to the input of another channel. Do not use the output of the power amplifier in parallel or in series to another power amplifier;
7. When configuring the power amplifier, the power of the power amplifier must be 50% -100% greater than the nominal power of the speaker;
8. The current use state of the power amplifier is consistent with the setting of the input mode;
9. Unplug the power cord, signal line, dial the input mode selection switch, limiter switch, sensitivity switch
10. The volume knob of the power amplifier is usually set at -80dB;
11. When a signal needs to be divided into multiple power amplifier, it is recommended to use a signal distributor to match it.
12. Do not block the air inlet and outlet of the amplifier.

## Safety precautions

Read this safety guide carefully before starting the amplifier:

- Must be installed in a flat place, not inverted
- not in water or wet places
- Keep the power amplifier away from the heat source, such as radiation or other heat source
- please do not put other items on the top cover of the fuselage in the connection, please remember:
- Read this manual carefully before connecting to the power amplifier
- Please carefully connect each interface of the power amplifier. Otherwise, there may cause noise, failure or elect

**Perfect reliability protection function:**

This product has perfect reliability protection measures, which can protect the power amplifier from damage and protect the horn system connected to it. The protection functions are provided as follows: When the input signal is greater than the input sensitivity of the amplifier, the amplifier output peak cutting signal, in order to prevent the dangerous peak cutting signal from damaging the horn system, the amplifier built-in peak cutting limit device, so that the large input signal is automatically limited, will not produce peak cutting phenomenon; Power amplifier is working within the rated temperature range. If the ambient temperature is too high or the user does not operate properly, when the device detects that the internal temperature exceeds the specified value, the output will be automatically restricted until the power amplifier temperature is reduced to the rated value; When a short circuit occurs in the external load system (the protection threshold is set to less than 2 ohms), the power amplifier will limit the output, and the output will be automatically restored after the short circuit fault is removed. Long-term output power limit in long-term input of continuous non-musical signal, in order to prevent damage to the amplifier and horn, the amplifier automatically attenuates the input signal to limit the output work; If the output signal has a large DC voltage, in order to protect the horn from damage, the machine is equipped with a protection to limit the DC output;

1. If the faulty insurance pipe is fused, the same insurance pipe must be replaced after the fault is removed.

Here are some simple ways to check if the power amplifier is damaged: If the signal indicator light is lit, then there is no problem with the power amplifier, please check whether the SPEAKON has a good contact;

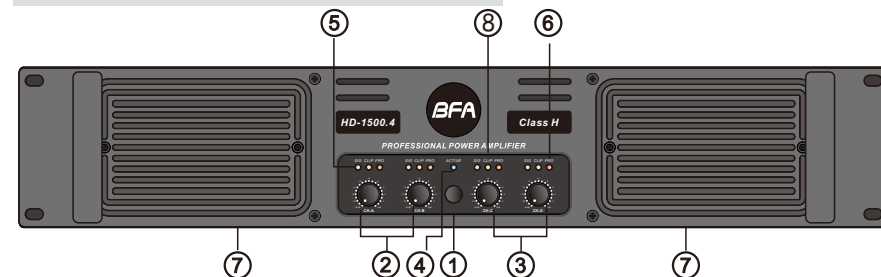
2. Small signal output
  - 1) If the signal indicator is lit, and the peak shifting and pressure limit indicator is also lit, please check whether the output of the power am
  - 2) If the input voltage of the mains is too low, it will cause undervoltage protection of the power amplifier, with a minimum input of AC180V;
  - 3) Through the above inspection, the phenomenon of the power amplifier still exists

At this point, the amplifier needs to be returned to the supplier or a local professional repair point;

**Attention: If the amplifier is still under warranty, please keep the chassis intact and do not disassemble any mechanical parts of the amplifier, otherwise warranty service will not be fulfilled!!!**

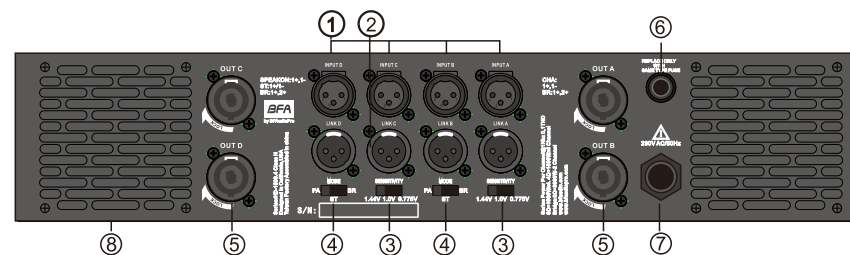
Users need to clean the amplifier regularly (about 1 month) by using a high-pressure air pump (about 0.8-1.0 cubic meters) to blow inside through the air inlet of the panel or the air outlet of the back panel. Of course, do not turn the amplifier upside down (i.e. the cover is facing bottom) at this time.

**4-channel front panel function introduction**



- ① mains switch
- ② CH.A CH.B Volume Knob
- ③ CH.C CH.D Volume knob
- ④ power supply indicator light
- ⑤ Channel signal indicator lamp
- ⑥ DC output protection indicator lamp (fault lamp)
- ⑦ vent
- ⑧ distortion indicator light

**4-channel front panel function introduction**



- ① CH.A/B/C/D Channel Canon input
- ② CH.A/B/C/D channel connected to the machine output
- ③ CH.A/B CH.C/D input sensitivity selection
- ④ CH.A/B CH.C/D stereo / parallel / bridging selection
- ⑤ CH.A/B CH.C/D four-core small seat output
- ⑥ insurance seat
- ⑦ Power supply input
- ⑧ air outlet