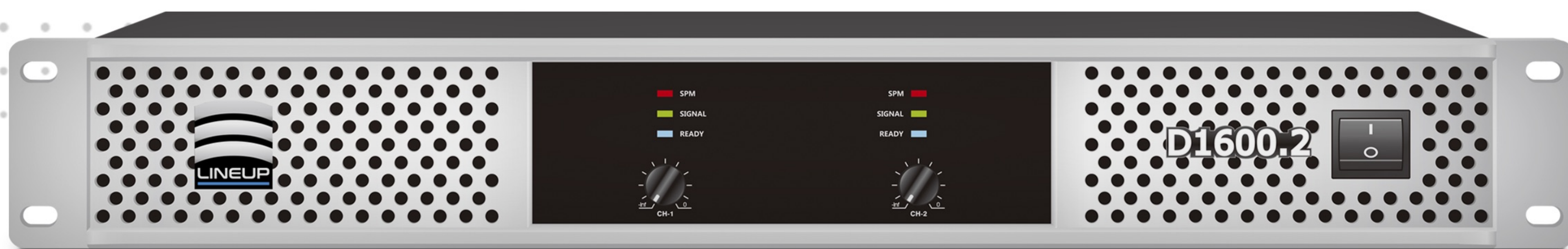


# CLASS **D** AMPLIFIERS



# **D**1600.2 OWNER'S MANUAL



# CLASS D AMPLIFIERS

## D1600.2

### 1. PRODUCT INTRODUCTION

Thank you for your purchase of the CLASS D audio amplifier!

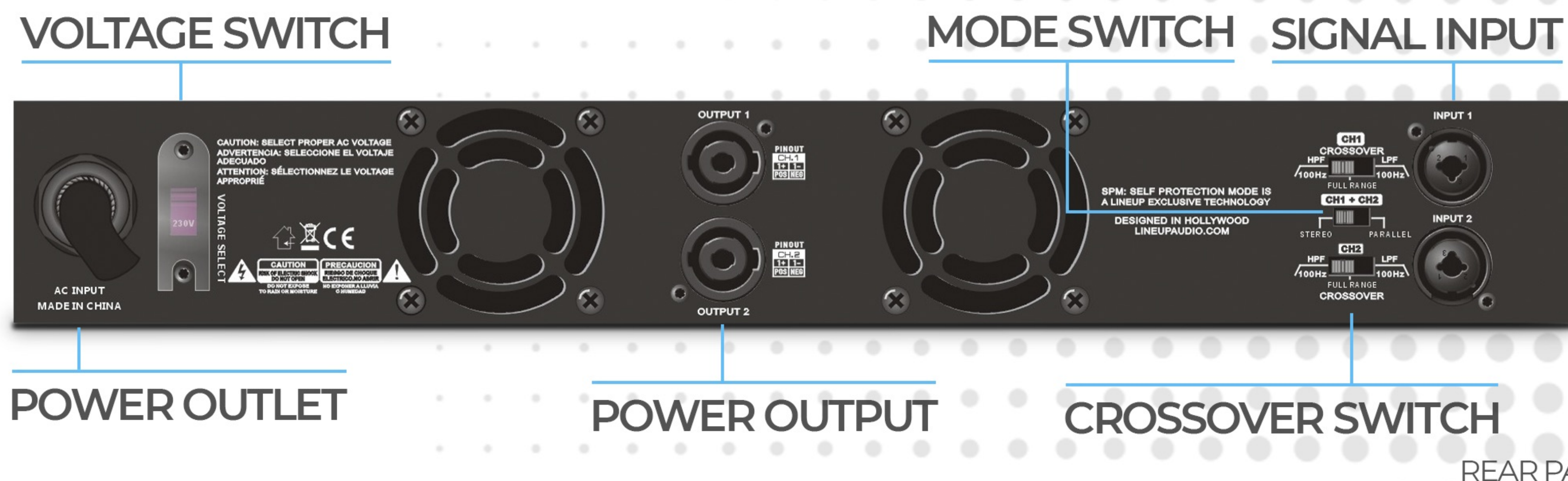
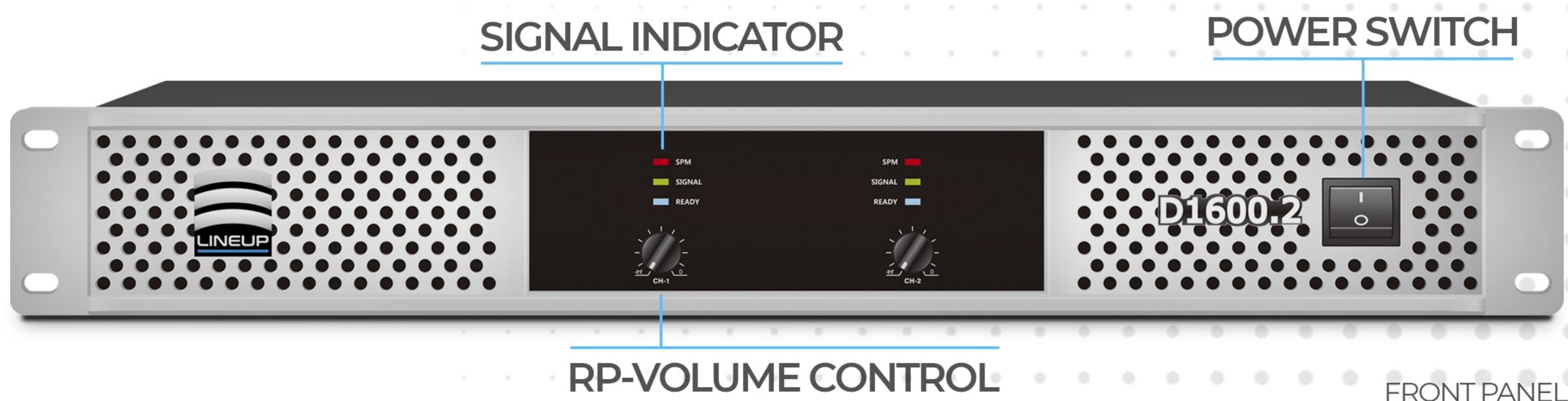
In applications that require high power and long-term reliability, no other amplifier can match its performance. This series of power amplifiers can greatly reduce the heat output and equipment weight without sacrificing output power, and can be used in a large number of sound amplification applications, such as opera house, movie theater, church and theme park.

The power amplifier using CLASS D technology has high efficiency, which can reduce heat dissipation and provide higher efficiency for the sound box. The typical operating efficiency of the output stage is 97%, and only 3% of the input energy is consumed. This makes it possible to build smaller, lighter and less power-consuming power amplifiers.

Traditional amplifier can achieve the peak efficiency only when output in the maximum rated power, and the power of CLASS D amplifier has little relation with the output level. The average power density of music is 40% of its peak. It means that under the same sound pressure level, other power amplifiers (non-class D) can be 10 times as hot as this series.

This series of power amplifier can bring clear high frequency and compact, pure low frequency, is the most accurate reproduction of audio signal. In the application, ultra-low THD, optimized frequency response, high efficiency bandwidth and damp modulus can be ensured.

### 2. FRONT PANEL / REAR PANEL FUNCTION INDICATOR DIAGRAM



## D1600.2

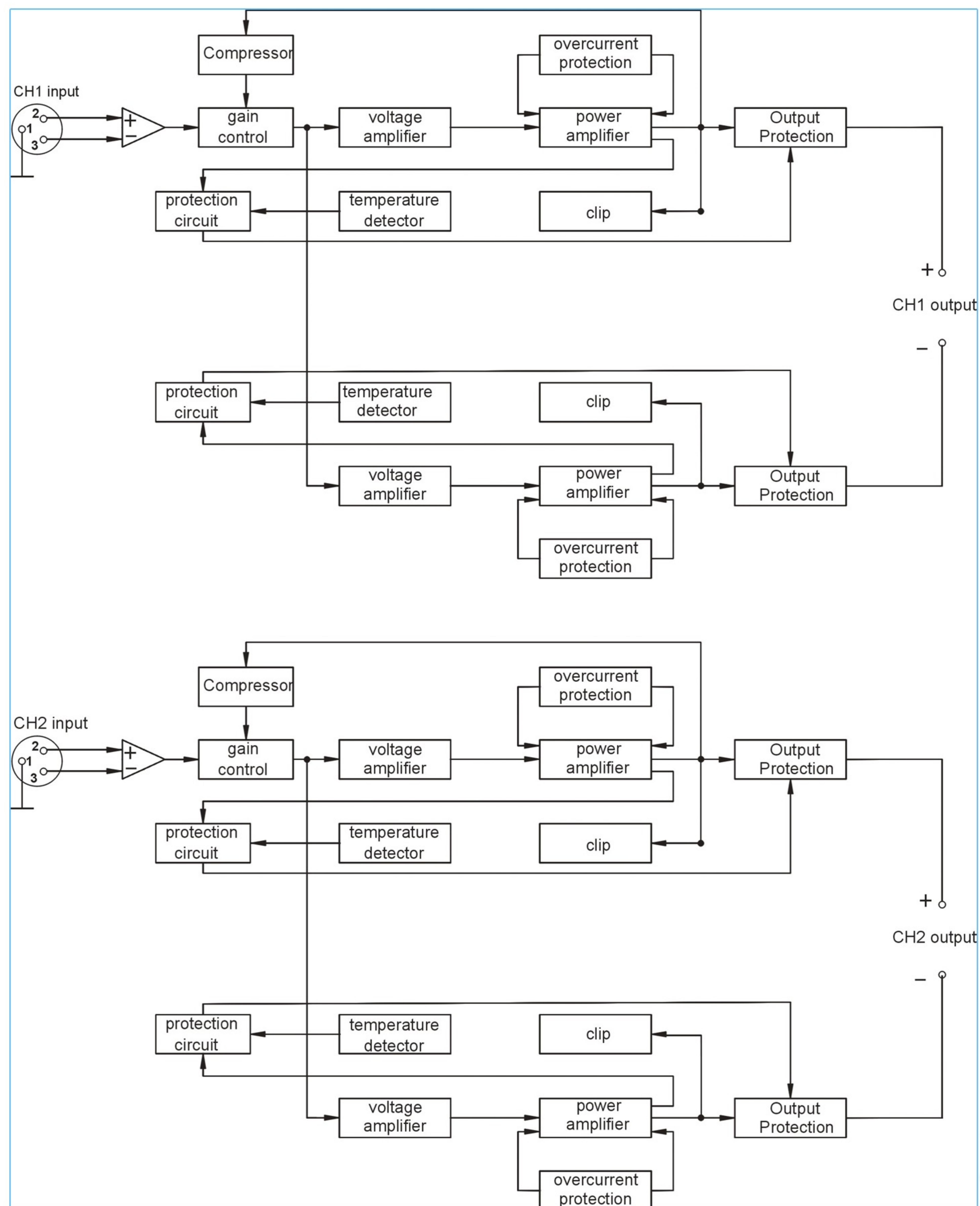
### Power control

This series power amplifier support power output control: according to the panel setting power, the connected speaker can be operated safely and reliably within the power requirements.

### Temperature protection

Perfect temperature protection sampling, monitor the temperature of power amplifier heat sink and power supply at the same time. When the heat sink working temperature exceeds the specified temperature, the output power will be limited. When the power supply working temperature exceeds the specified temperature, the output will be closed, when the temperature is restored to the limit value, it will be restarted automatically.

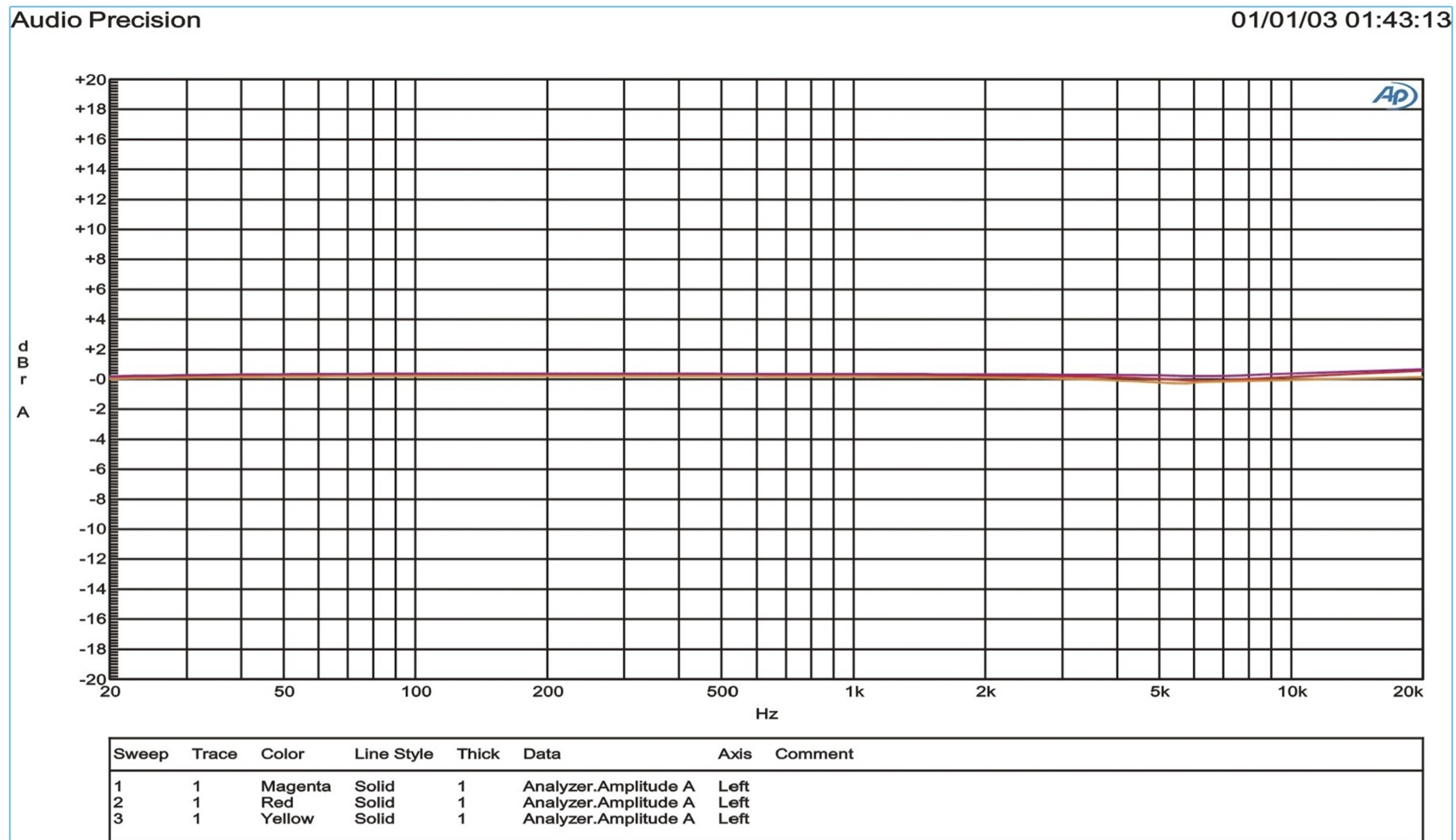
## 5. BLOCK DIAGRAM



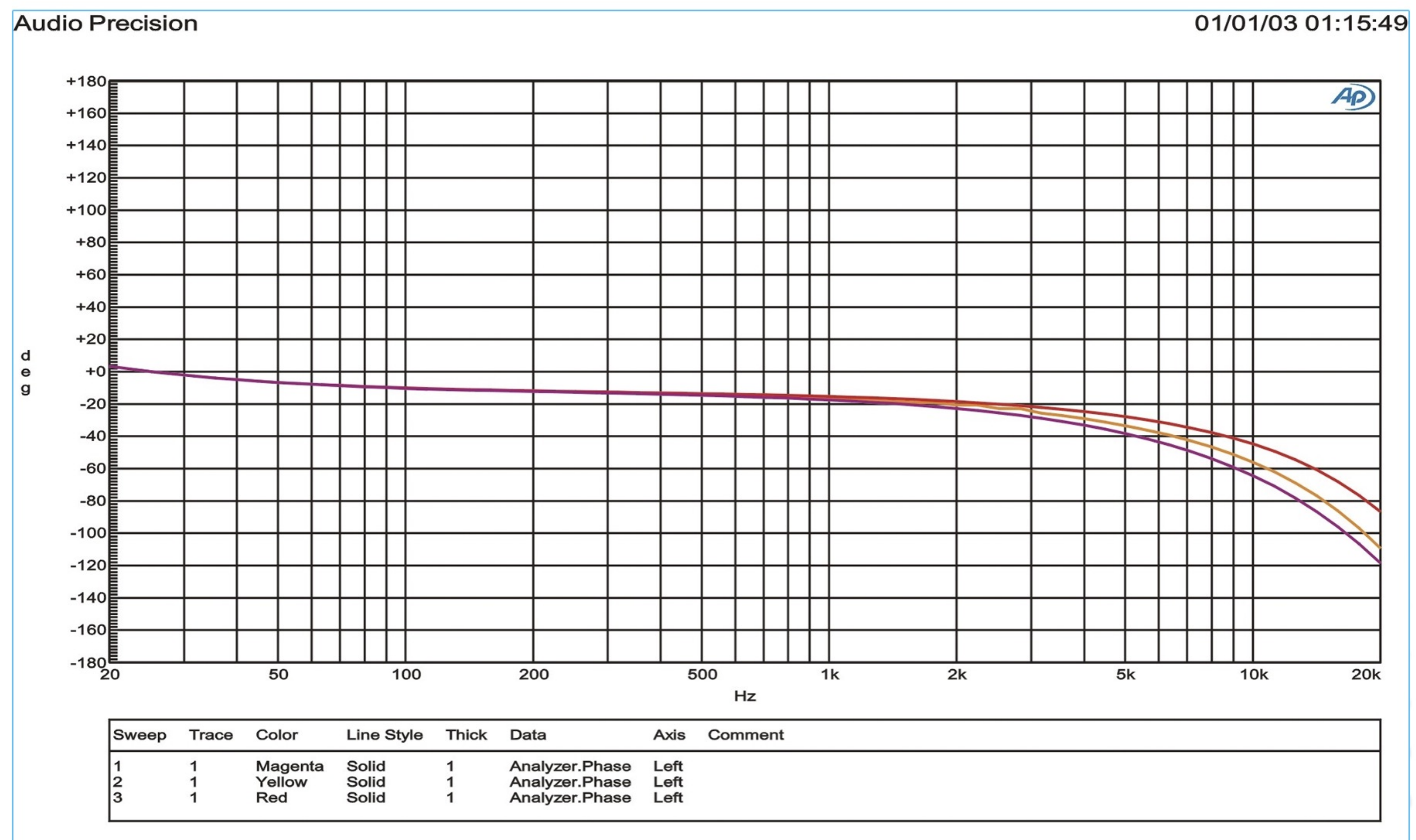


## D1600.2

### 6. TYPICAL CURVE



### 1. FREQUENCY RESPONSE: 4 Ohm(Yellow) - 8 Ohm(Red) - Open load(Magenta)

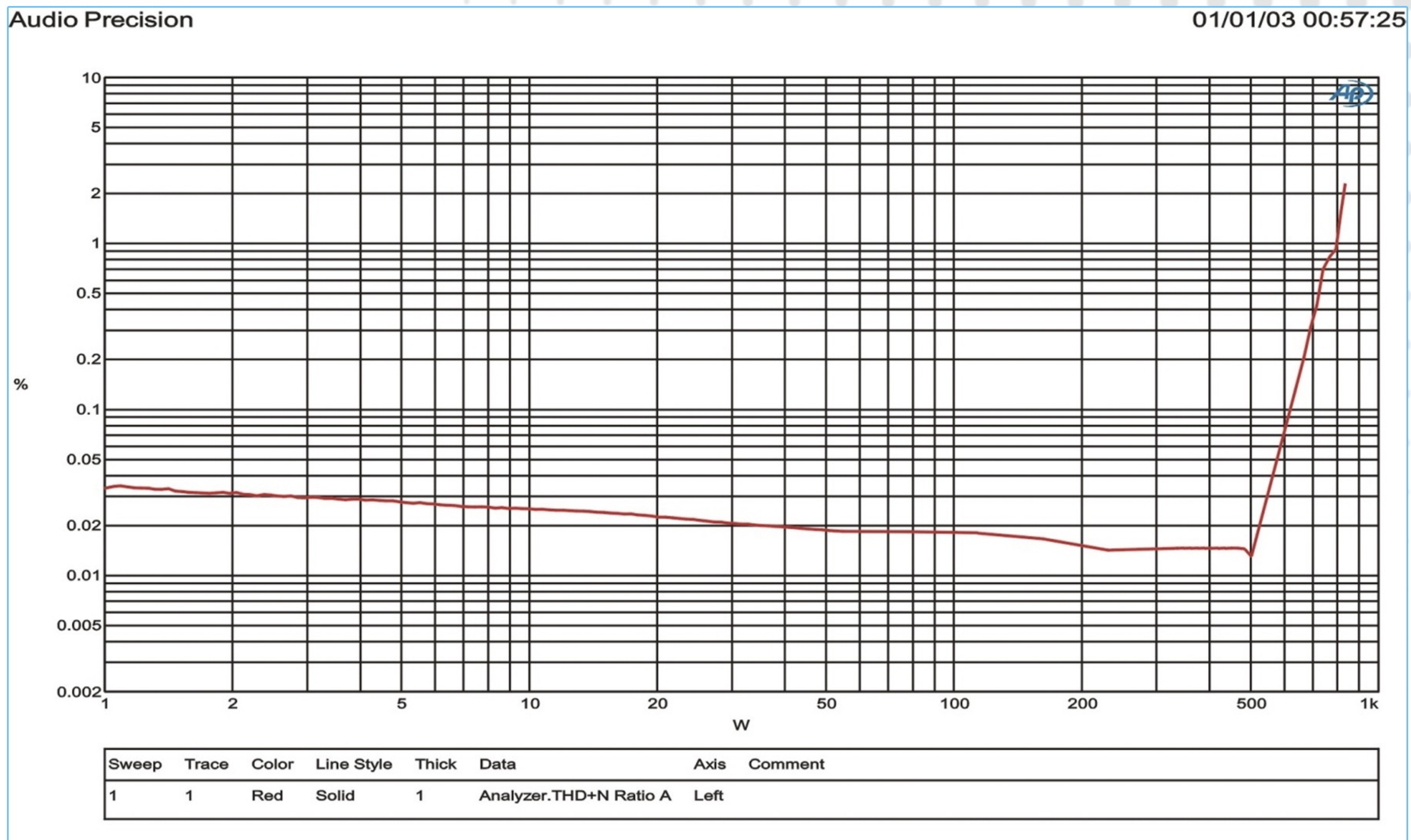


### 2. PHASE RESPONSE: 4 Ohm(Magenta) - 8 Ohm(yellow) - Open load(Red)

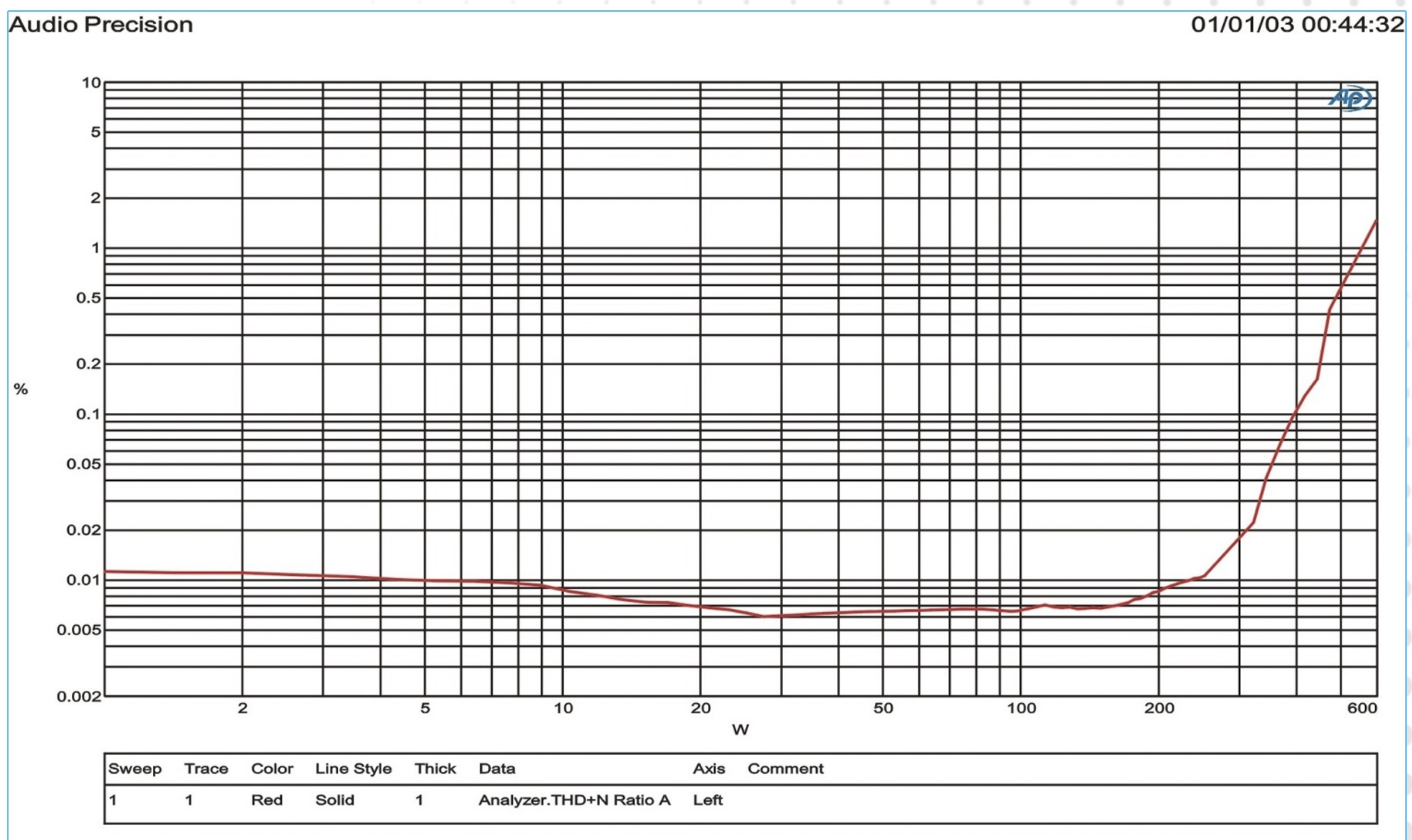


# CLASS D AMPLIFIERS

## D1600.2



### 3. THD+N vs Po 100Hz@4 Ohm(Red)



### 4. THD+N vs Po 100 Hz@8 Ohm(Red)



## D1600.2

### 7. TECHNICAL SPECIFICATIONS

Model	D1600.2
Out Power (8Ω)	1000W x 2
Out Power (4Ω)	1600W x 2
Out Power(bridge) (8Ω)	-----
Output Circuit Type	CLASS D
Input Impedance	10K <sup>Ω</sup>
Frequency Response	20Hz-20K Hz
Thd 20hz~20khz(8 Ω)	0.1%
Slew Rate	40V/usec
Hum And Noise	100dB
Damp Modulus (8Ω)	>200
Radiator	High/Low Automatism Cortrol
Sateguard	DC Safeguard/out Overloading/Chancroid Sgartup/Boot-Strap Short Test
Weight (kg)	5.75Kg
Dimension (mm)	483 x 328 x 64 (1.5U)
Power Range	(115V/230V) Can offer different voltage according client's requirement.

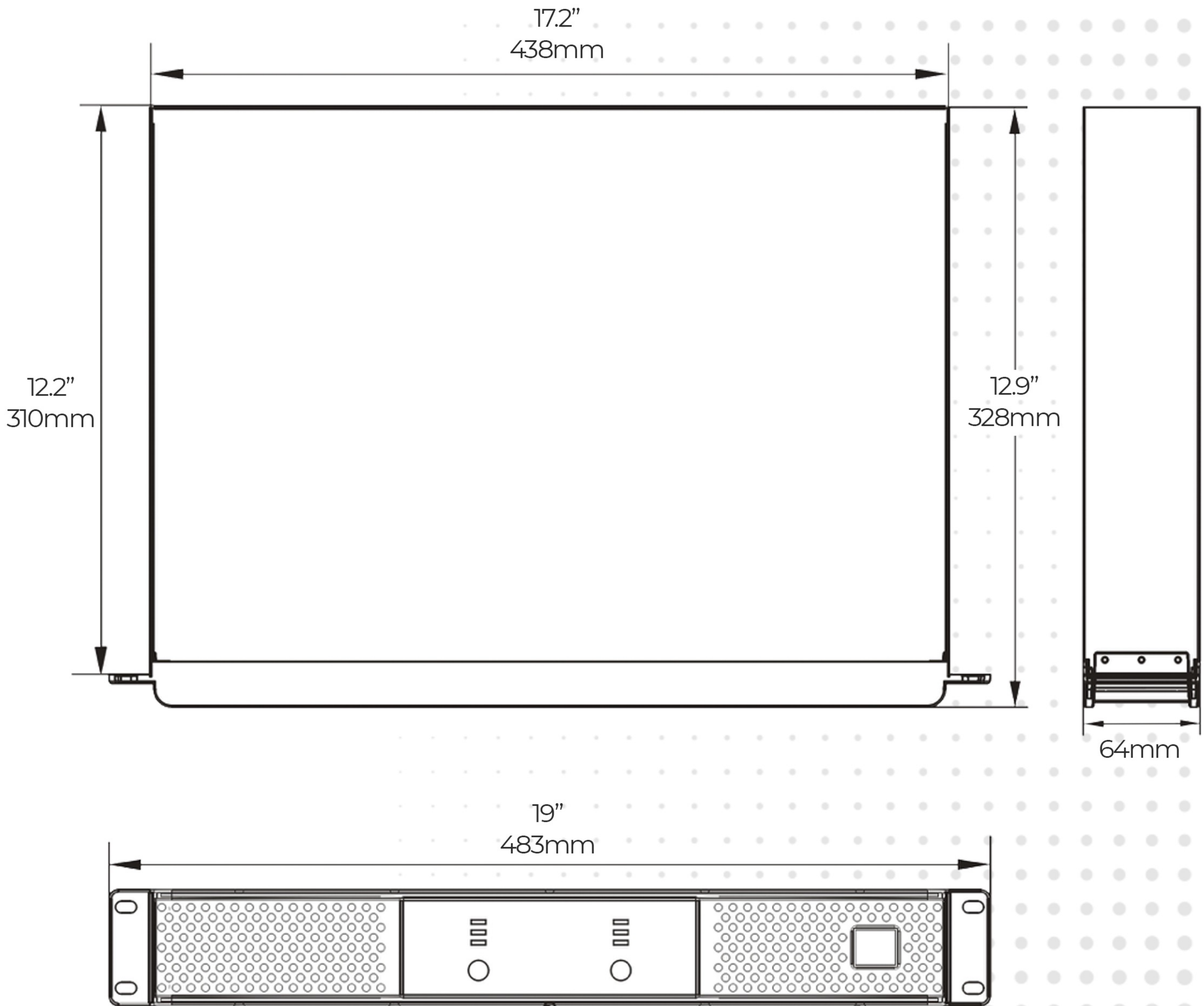
The specifications above are correct at the time of printing of this manual. For improvement purposes, all specifications for this unit, including design and apperance, are subject to change without prior notice.



# CLASS D AMPLIFIERS

## D1600.2

### 8. STRUCTURAL MOUNTING DIMENSIONS



ALL DIMENSIONS ARE IN INCHES AND MILLIMETERS.



# CLASS D AMPLIFIERS

## D1600.2

### 3. IMPORTANT SAFETY INSTRUCTION

Warning: in order to reduce the electric shock, please do not attempt to open the internal parts, the device contains no user-serviceable parts. If it damage, have it inspected by qualifier service personal.

To reduce fire and electric shock, do not expose the device to rain, use in near water or in damp or wet condition, objects with liquid, such as vases, must not be placed on the equipment.

When fully disconnect the device from AC, disconnect the power cord from the ac socket.

The power plug of the power cord must be always available.

Precaution: power supplies can help perform many useful functions. This equipment design and production department has fully considered the safety factors, can ensure your personal safety. Improper use may result in potential electric shock or fire .To avoid this, follow the instructions below when installing, using, and maintaining.

Read these instructions.

Keep these instructions.

Heed all warnings.

Follow all instructions.

Do not use this apparatus near water.

Clean only with dry cloth.

Do not block any ventilation openings.

Install in accordance with the manufacturer' instructions.

Do not install near any heat sources such as radiators, stoves, or other apparatus (such as amplifiers) that produce heat.

The apparatus shall be connected to the power outlet of the power grid with the protected earthing connection.

Do not defeat the safety purpose of the polarized or grounding-type plug.

Protect the power cord from being walked on or pinched, particularly at plugs, power outlet, and the connector of the equipment.

Only use attachments/accessories specified by the manufacturer.

Unplug this apparatus during lightning storms or when unused for long periods of time. Refer all maintenance servicing to qualified service personnel. Servicing is required when the apparatus

### 4. PROTECT FUNCTION

#### Overload Protection

This series amplifier has output current protect function:

When the amplifier channel output current exceeds its specified peak current output, the current will be limited by the protector to work within the specified range;

When the amplifier channel current output exceeds its specified peak current output, such as: Output short circuit. In this occasion, amplifier will be disabled (mute) for 1000ms, automatically re-start after short circuit state disappears.

#### Over voltage protection

When the working voltage exceeds the maximum working voltage or lower than the minimum working voltage, power enters in protection mode, and turn off the power supply.

Note: working over 240VAC voltage for a long time may cause power damage.