



厦门盈德兴磁电科技有限公司  
Xiamen Dexing Magnet Tech. Co., Ltd.

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# User Manual

## High Voltage Power Amplifier

### Model DXAM-2KV



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## Be Careful of High Voltage★★★

The high voltage amplifier converts the input voltage into high voltage and outputs a waveform; At present, the demand for high-voltage amplifiers is increasing and has become an indispensable tool in research, developing, testing, and integrating a system for these fields, such as electronics, physics, biology, chemistry, medical and other industries. DEXINMAG produces various high-voltage amplifiers to meet customers' requirements for functional material testing.

### 1. Overview

DXAM-2KV is an ideal single channel high-voltage amplifier that can amplify AC and DC signals. Differential output of 1600Vp-p ( $\pm 800\text{Vp}$ ) high voltage, capable of driving high-voltage loads. The voltage gain can be adjusted by numerical control, and commonly used settings can be saved with one click, providing convenient and concise operation options. It can be used in conjunction with mainstream signal generators to achieve signal amplification.

### 2、Main Advantages and Features

- Four quadrant output is used to drive capacitive loads;
- Closed loop circuit system achieves high precision;
- Short circuit protection function is used for equipment protection;
- Stable output for programmable power applications;
- Low output noise ensures ultra-high precision output;
- Strong stability;



### 3、 Main Application Scope

Accelerator, piezoelectric ceramics, piezoelectric thinning, ion implantation, capacitor charging, electron beam, ion implantation, etc. At present, it has become an indispensable tool for research and development in universities and high-tech enterprises, and integrates a system for the development and testing of these fields, such as electronics, physics, biology, chemistry, medical and other industries.

### 4、 Technical Parameter Indicators

- Output voltage range:  $0 \sim \pm 2000\text{V}$  DC or peak AC
- Output current range:  $0 \sim \pm 10\text{mA}$  DC or peak AC
- Input voltage range:  $0 \sim \pm 10\text{V}$  DC or peak AC
- Input impedance:  $10\text{k} \ \Omega$
- DC voltage amplification factor:  $200\text{V}/\text{V}$
- DC voltage amplification accuracy: better than 0.5% of full range
- DC bias voltage: below  $\pm 2\text{V}$
- Output noise: below 50 mV rms
- Conversion rate (10%~90%): better than  $100\text{V}/\mu\text{s}$
- Stable time ( $\sim 1\%$ ): less than  $50 \ \mu\text{s}$  (from 0V to 2kV)
- Large signal bandwidth: DC~better than 20kHz
- Small signal bandwidth ( $-3\text{dB}$ ): DC~better than 50kHz
- Drift over time: below 300ppm/hr, non cumulative
- Drift with temperature: below 180ppm/ $^{\circ}\text{C}$
- DC accuracy: better than 2% of full scale
- DC bias voltage: below  $\pm 2\text{V}$
- Output noise: below 10V rms; Output impedance:  $47 \ \Omega$



## 5、Instrument specifications:

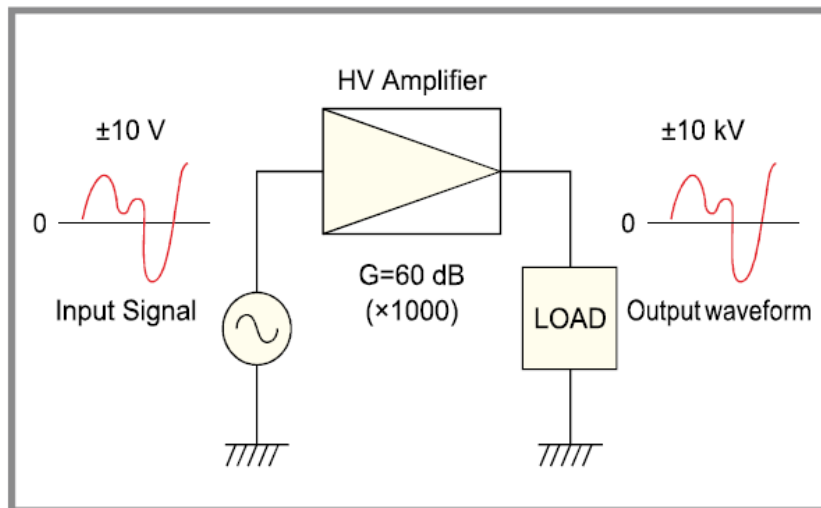
- Proportion: 1/200 of the high-voltage output signal
- Weight: 5 kg
- High voltage interface: Alden high voltage interface

## 6、Operating Environment (working conditions)

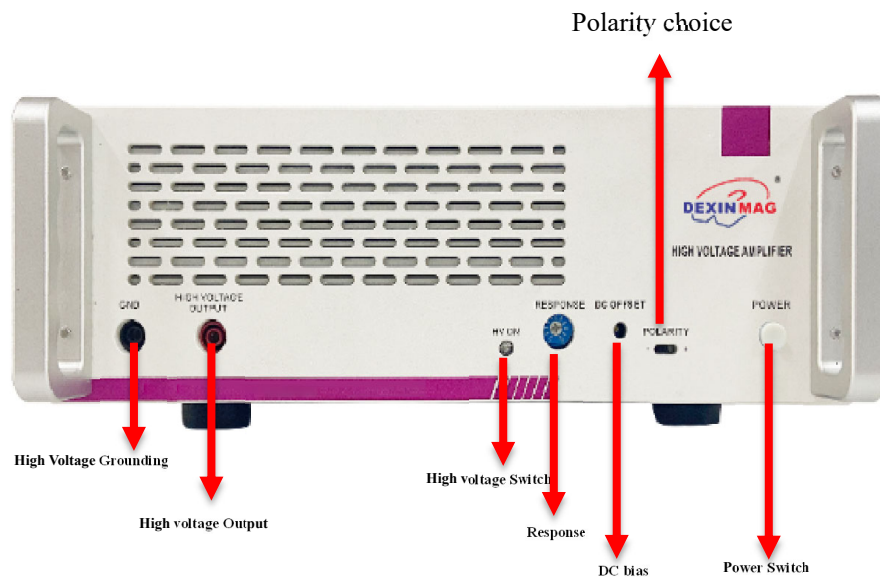
- Temperature: 0 °C~40 °C (32 ° F~104 ° F)
- Relative humidity:~85%, non condensing
- Power supply: 220V
- Power: Maximum 500VA

## 7、Work Principle

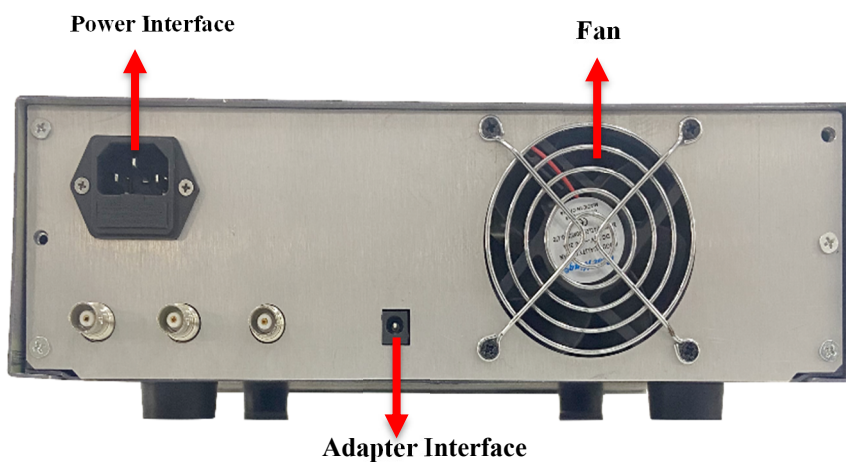
Schematic diagram of DXAM-2KV High Voltage Power Amplifier



## 8、Front and Back Panel Indication Diagram



**Firstly, connect the ground wire and power cord: check the connection wires of each device before use;**





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## 9. High voltage attention ★★★:

Remember not to operate high-voltage switches repeatedly;

**Caution!**

## 10. Equipment Maintenance

- Regularly maintain the cleanliness and hygiene of equipment and computers.
- Prevent high temperature, excessive humidity, dust, corrosive media, water, etc. from entering the interior of equipment or computers.
- Regularly inspect and maintain the integrity of parts and components.