

ESP2000 Technical Data Sheet

Introduction

The ESP2000 amplifier incorporates KV2's SLA design principles, delivering very low distortion characteristics, even under extreme operation. Equally at home as a reference amplifier in a high-end recording studio or driving a large-scale live audio system, the ESP2000 is a sonically superb unit. Improving on the common Class A design, this superb Class H amplifier is built with an easy to clean filter system. The ESP2000 incorporates the same cooling system as other KV2 amplifiers where only the heat sinks are exposed protecting the internal electronics. Robust enough for the harshest touring or installation environments the ESP2000 will provide years of trouble-free performance, delivering absolutely pristine audio.



Features

- Very high definition
- 2 channel rack mountable power amplifier
- 2 x 1000W / 2Ω
- Separate power supplies ensure increased reliability and continuous delivery of full power
- Two shock mounted fans move air across the fins but never directly across the electronic components. Minimises maintenance cycles and improves the components lifespan and reliability

Application

Designed to drive the ESD and ESM range of passive loudspeaker units with superior sound quality

- Portable PA
- Fixed installations

System Acoustic Performance	
-1dB Response	3Hz to 40kHz
Channel Crosstalk	>70dB
Signal to Noise Ratio	>115dB
Total Harmonic Distortion	<0.005% (1W) / <0.01% (clip -1dB)

Output Channels	
Amplifier Type	High Efficiency, Emitter coupled
Number of Channels	2
Total Output Power	2000W
Max. Output Voltage	78V (peak) per channel
Max. Output Current	48A (peak) per channel
Minimum load impedance per channel	2Ω
Out. Power 16Ω - 1 channel / 2 channels loaded	175W / 160W (RMS)
Out. Power 8Ω - 1 channel / 2 channels loaded	340W / 300W (RMS)
Out. Power 4Ω - 1 channel / 2 channels loaded	600W / 500W (RMS)
Out. Power 2Ω - 1 channel / 2 channels loaded	1000W / 800W (RMS)
Out. Power 16Ω - bridged	600W (RMS)
Out. Power 8Ω - bridged	1000W (RMS)
Out. Power 4Ω - bridged	1500W (RMS), 2000W short term

Signal Input	
Input Channels	XLR
Input Sensitivity	1.0V RMS
Input Impedance	20kΩ (balanced)
Signal Output	XLR Through

Speaker Output	
Speaker Output	Neutrik Speakon®, 2x Binding posts

Features	
Level Control	-∞ to 0dB
Loudness bass enhancement	+6dB @ 60Hz
RMS Limiter	On / Off
Indicators	Power ON/Thermal, Signal/Limiter

Power	
Power Connector	Neutrik PowerCon®
Operating Voltage	115V / 230V / 250V
Operating Voltage Range	100 to 120V@60Hz 205 to 240V@50Hz 225 to 260V@50Hz
Recommended Amperage	20A 115V 10A 230V 10A 250V
Soft Start	YES
Protection	Thermal breaker
Cooling	2x temperature controlled fans

Physical Dimensions	
Height	88 mm (3.5"), 2RU
Width	483 mm (19.00")
Depth	496.4 mm (19.54")
Weight	16 kg

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Architectural Specifications

The Power Amplifier shall provide two individual application specific electronic channels of amplification for ESD Loudspeaker enclosures, with internal loudspeaker protection, filter networks and equalization using SLA Technology - (Super Live Audio).

The output Topology shall be a High Efficiency Emitter Coupled design.

The input sensitivity shall be 1.55V RMS, the input Impedance shall be 20Kohm. The Maximum Power Outputs of each channel shall be 1000W RMS @ 2ohms. The Power Amplifier-Controller shall have an operating bandwidth of 3Hz to 40 KHz (-1db) and an operating distortion factor of less than <math><0.005\%</math> across all output channels.

The Power Amplifier-Controller shall have electronically balanced XLR input connectors, with XLR thru and insert connectors. Loudspeaker Output connectors shall be Neutrik Speakon™ accompanied by two double Binding posts for bare wire connections.

The front panel controls will have 2 channel Attenuation knobs, Limiter ON/OFF Push Button switch and Bass EQ Push Button switch.

The Power Amplifier-Controller shall have front panel indicators for Power/Thermal and Signal/Limiter. A large Thermal Breaker switch shall be used for switching on/off.

The Power Amplifier-Controller shall have a Neutrik PowerCon connector for mains supply, with an operating voltage range of 100 to 120V @ 60Hz, 205 to 240V @ 50Hz and 225 to 260V @ 50Hz. A soft start circuit will limit inrush power.

The Power Amplifier-Controller shall have recommended Amperage of 20A @ 115V, 10A @ 230V, 10A @ 250V.

2 x Temperature controlled variable speed fans will assist internal convection cooling systems.

The Amplifier chassis and enclosure shall have dimensions of 88 mm / 3.5" 2U x 483mm / 19.0" x 496.4mm / 19.54".

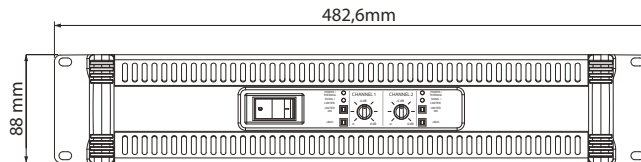
The total weight will not exceed 16 kg / 35.27lbs.

The Power Amplifier-Controller shall be the KV2 Audio ESP2000.

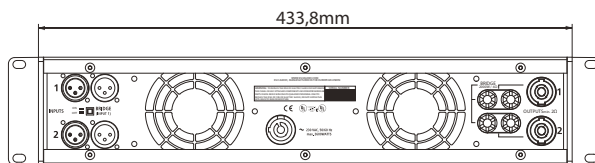
The Power Amplifier-Controller shall be specifically for the ESD range of Loudspeaker units and third party passive loudspeakers.

Dimensional Drawings

FRONT PANEL



REAR PANEL



SIDE PANEL

