

Introduction

The ESP1000 is a four channel rack mountable power amplifier specifically designed for optimised performance with KV2 Audio's ESD Cube / ESD1.10 subwoofer system. The unit contains four separate 250 watt amplifiers, two independent power supplies (two channels running off each power supply), four signal paths, inputs and outputs as well as limiting and equalization for given passive loudspeaker / subwoofers. Six independent configurations are selectable and it can be used to power any ESD units and other ranges of passive loudspeakers.

Features

The ESP1000 will mount in a standard 19" rack system. Integral rear mounting rack ears are also provided for additional support. It is important that you do not rely on fixing and mounting the ESP1000 using just the front panel as the support. Use eight screws and washers to mount the amplifier to the equipment rack rails, (four for the fronts and four for the rear).



Application

Primarily designed to drive and control the ESD Cube loudspeaker system and ESD range speakers with superior sound quality.

- Fixed installations
- Portable PA

Product code **KVV 987 394 (250V)**

KVV 987 393 (230V)

KVV 987 392 (115V)

System Acoustic Performance

-1dB Response	3Hz to 50kHz / Flat Setup
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	4
Total Output Power	1000W
Minimum load impedance per channel	4Ω
Out. Power 8Ω - 1 channel / 2 channels loaded	150W / 140W (RMS)
Out. Power 4Ω - 1 channel / 2 channels loaded	250W (RMS)
Out. Power 16Ω - bridged	300W (RMS)
Out. Power 8Ω - bridged	500W (RMS)

Signal Input

Input Channels	XLR
Input Sensitivity	1.55V
Input Impedance	20kΩ (balanced)
Signal Output	XLR Through

Speaker Output

Speaker Output	Neutrik Speakon®
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Features

Level Control	-∞ to 0dB
Equalization	Flat or according to the setup
RMS Limiter	YES
Indicators	Power ON/Thermal, RMS Limiter, Signal

Power Requirements

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	10A 115V 5A 230V 5A 250V
Soft Start	YES
Protection	Thermal breaker
Cooling	2x temperature controlled fans

Physical Dimensions

Height	88 mm (3.5"), 2RU
Width	483 mm (18.95")
Depth	496 mm (19.5")
Weight	17,8 kg (32.24 lbs)

Architectural Specifications

The Power Amplifier shall provide four individual application specific electronic channels of amplification for ESD Cube 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 250W RMS @ 4ohms. The Power Amplifier-Controller shall have an operating bandwidth of 3Hz to 50Khz (-1db) and an operating distortion factor of less than <0.005% 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™.

The front panel controls will have 4 individual channel Attenuation knobs. A single 6-position switch will provide selectable system configurations.

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 10A @ 115V, 5A @ 230V, 5A @ 250V.

2x Temperature controlled variable speed fans will assist internal convection cooling systems. The Amplifier chassis and enclosure shall have dimensions of 88 mm / 3.5" 2RU x 483 mm / 18.95" x 496mm / 19.5".

The total weight will not exceed 17,8 kg / 32.24lbs.

The Power Amplifier-Controller shall be the KV2 Audio ESP1000.

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

Dimensional Drawings

