

# ESP2000D Technical Data Sheet

## Introduction

### ESP2000D Amplifier with Control & Diagnostics Tool

The ESP2000D is a two channel rack mountable power amplifier. The unit contains two separate 1000 watt amplifiers, two independent power supplies, (each channel running off each power supply), two signal paths, inputs and outputs as well as limiting and low frequency enhancement on each of the two channels within a two rack unit chassis. It can be used to power any range of passive loudspeakers as well as being specifically designed for optimised performance with KV2 Audio's ESD Series. ESP2000D is now configurable via the front panel or remotely using KV2 Control & Diagnostics Tool.



**Product code:** KVV 987 412 (250V)  
KVV 987 411 (230V)  
KVV 987 410 (115V)

## 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
- Configurable via the front panel or remotely using KV2 Control & Diagnostics Tool

## Application

**Designed to drive the ESD and ESM range of passive loudspeaker units with superior sound quality featuring KV2 Control & Diagnostics Tool**

- Portable PA
- Fixed installations

System Acoustic Perfomance	
-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	1.55V
Input Impedance	20kΩ (balanced)
Signal Output	XLR Through
Speaker Output	
Speaker Output	Neutrik Speakon®, 2x Binding posts
Features	
Level Control	-24 to +6 dB
Loudness bass enhancement	+6dB @ 60Hz
RMS Limiter	On / Off
Indicators	Power ON/Thermal, Signal/Limiter
Network	Ethernet: SMNP, Webserver
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	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	482.6 mm (19.00")
Depth	456.5 mm (17.97")
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 <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™ accompanied by two double Binding posts for bare wire connections.

The front panel will have display and Rotation encoder with Enter push-button.

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.

The Power Amplifier-Controller shall have a Ethernet connector supporting Ethernet standard (RJ45, T-658B wiring).

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" 2RU x 482,6mm / 19.0" x 456,5mm / 17.97".

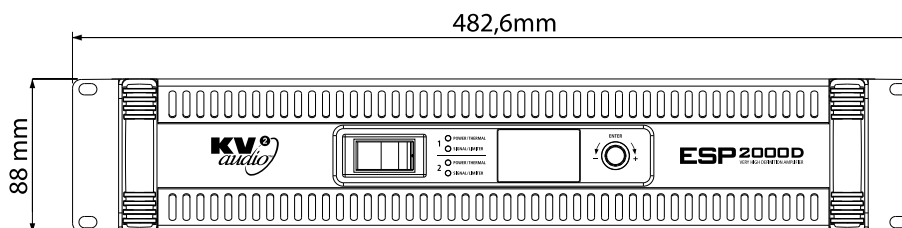
The total weight will not exceed 16 kg /35.27lbs.

The Power Amplifier-Controller shall be the KV2 Audio ESP2000D.

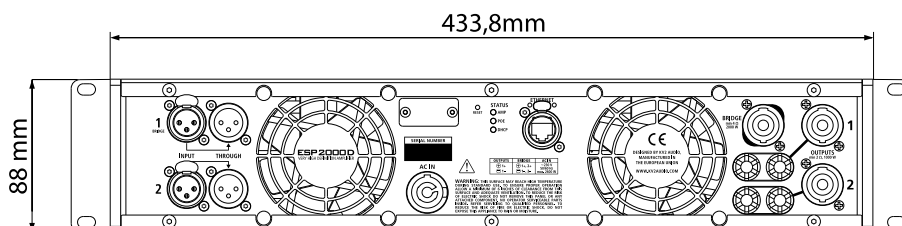
The Power Amplifier-Controller shall be specifically for the ESD range of Loudspeaker units and third party passive loudspeakers.

## Dimensional Drawings

Front Panel:



Rear Panel:



Side Panel:

