

Plate Amplifiers

for Active Speakers - PDA515P

PDA515P is a complete solution dedicated to 1-way or 2-way self-powered loudspeakers. Designed to meet different applications, it provides 2 channels with output power of 500W+150W@4 Ohm. Moreover the 2 channels can be bridged into a powerful single channel in order to drive i.e. Subwoofers or Multiple Ways



set of added value features such as on board DSP and RS485 connection for monitoring and control via dedicated PC software. To guarantee maximum reliability, the PDA515P includes a highly efficient universal switch mode power supply with PFC (Power Factor Correction) which provides power to the 2 output channels. The 2 output stages use the Class D module. The PDA515P includes a set of sophisticated processes for loudspeaker, implemented by the powerful MARANI® DSP running 96kHz/24bit (96 bits precision for the internal intermediate processes) and high performance 24bit AD/DA Converters. Processes as Noise Gate, crossover filters, parametric EQs per input and output sections, RMS compressor, alignment delay are available, all in all everything needed to optimize a self-powered loudspeaker. Moreover the Clip/Limiter function per channel provides output monitoring to prevent speaker damage with gentle gain reduction at clip threshold, in addition to the efficient heat dissipation system and Over-Heat protection which themselves ensure uncompromised reliability. Furthermore the PDA515P is also equipped with a Dynamic Loudness function and an useful Pink/White noise generator. All setup parameters for input mixing, DSP features and the limiter setting are accessible by using the remote PC software.

Features

Outstanding Performance

- High power output: 500W + 150W @ 4Ω
- Switched-Mode Power Supply with PFC and auto voltage sensing
- Class D Amp Module - full bandwidth PWM modulator with ultra low distortion
- Full protection circuitry including Over-Current, Over/Under-Voltage, Output DC and Over-Temperature
- Excellent sonic performance with 24bit high end converters coupled with 96kHz sample rate

Top-grade DSP Engine

- 5 band parametric equalization per input channel
- 5 band parametric equalization per output channels
- 2 filter can be switched to Bell, Low/High Shelving, per channel
- Low/High Shelving, can be selected as variable Q response
- Crossover filters with slopes from 6dB/Octave up to -48dB/Octave including Butterworth, Bessel, Linkwitz-Riley
- Output features a precision dynamic range controller

composed of a RMS Compressor with selectable ratio and variable knee Input features a precision dynamic range controller composed of a RMS Compressor with selectable ratio, variable knee and Hold Time. Adjustable Delay time up to 20ms for input and output channels

Input channel includes a Noise Gate function, Pink/White noise generator, sophisticated Dynamic Loudness function, a High-Pass filter with slopes from 6dB/Octave up to -48dB/Octave including Butterworth, Bessel, Linkwitz-Riley

Network Connection

Rs485 connection for system setup, monitoring and control via fully manageable remote PC software

Control

- Simultaneous control up to 32 units via PC software
- 8 Preset Selection by using rotary encoder switch
- Security Lockout

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Power & Amplifier Sections

Number of Channels -----	2
Max Output Power @ 4 ohms-----	500W+150W
Output Circuitry -----	Class D - full bandwidth PWM modulator with ultra low distortion
Output Voltage -----	+/-70V (SE Mode unloaded) / Bridged +/-140V (BTL Mode unloaded)
THD +N -----	<0.01% (20 Hz - 20 kHz, 8Ω load, 3dB below rated power)
Signal To Noise Ratio -----	>102 dB (A-weighted, 20 Hz - 20 kHz, 8Ω load)
Frequency Response -----	20 Hz - 20 kHz ± 0, 15 dB (8Ω load, 1 dB below rated power)
Damping Factor -----	>1000 (8Ω load, 1kHz and below)
Power Supply -----	Switch mode power supply with PFC (Power Factor Correction) and integral standby converter
Consumption / Current draw and ---	10.2W / -A / 38.3 BTU/h (Idle)
Thermal dissipation @ 230 V -----	153W / -A / 143.4 BTU/h (1/8 max. power@4Ω)
Operating Range -----	Universal Mains, 85-265V
Protections -----	Over-Current, Over/Under Voltage, Output DC and Over-Temperature
Maximum Input/Output Level -----	+12dB

Audio

Analog Input -----	1 x XLR electronically balanced, +12dB
Analog Output -----	1 x XLR electronically balanced (Link)
AD & DA Converters -----	24bit

DSP & Processing

DSP Engine -----	MARANI® DSP
DSP Resolution -----	24bit (data) x 24 bit (coeff.), 54 bit accregisters, 96 bit precision on intprocessing data
Parametric Equalization -----	5 filters per input channel; 5 filters per output channel
Filter Type -----	Bell, Low/High Shelving variable Q
Input Filter Gain -----	From -12dBu up to +12dBu by 0.5dBu resolution steps
Output Filter Gain -----	From -18dBu up to +18dBu by 0.5dBu resolution steps
Center Frequency -----	Selectable with a 1Hz resolution step from 20Hz up to 20kHz
Bell Filter Q/BW -----	Q from 0.5 up to 10 by 0.1 resolution steps
Low/High ShelvingFilter Q-----	Q from 0.5 up to 3 by 0.1 resolution steps
internal Noise Generator-----	White/Pink Noise; -40dB~0dB
Crossover section HPF/LPF-----	Butterworth 6/12/18/24/48dB per octave; Linkwitz-Riley 12/24/36/48dB per octave; Bessel 12/24dB per octave. Filter resolution 1Hz
	Sophisticated Dynamic Loudness function and additional High-Pass filter per input section
OutPut RMS Compressor -----	Threshold from -18dBu up to +12dBu; K
	Attack time from 5ms up to 100ms; Release time from 40ms up to 1000ms (10ms resolution).
Input RMS Compressor-----	MakeUp from -12 to +12dBu; Threshold from -18dBu up to +12dBu;
	Knee 0~100%; Ratio from 2:1 to 100:1;
	Attack time from 5ms up to 500ms; Release time from 40ms up to 1000ms.
	Input Hold-Time up to 10sec.
DLF-----	Input: On/Off; Output: On/Off, Attenuation: -6dB~0dB, 0.1 steps
Delay -----	20 ms 10.4us increment/decrement steps per channel
Ground Noise -----	-86 dBu

General

User Preset-----	8
Dimensions -----	355x70x155mm
Weight, Net / Shipping -----	6.61 lbs (3 Kg) / 8.82 lb (4 Kg)