

PDASP2SA1 is a complete solution dedicated to 2-way or 3-way self-powered loudspeakers. Designed to meet different applications, it provides 3 channels with output power of 500W@4Ω. In addition it offers a full set of value adding features such as on board DSP. To guarantee maximum reliability, the **PDASP2SA1** includes a highly efficient switch mode power supply with PFC (Power Factor Correction) which provides power to the 3 output channels. The output stage uses the Class D module - full bandwidth PWM modulator obtaining ultra low distortion, high dynamic range and also equipped with a full set of circuit protections. The **PDASP2SA1** 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]. Processes as Noise Gate, crossover filters, parametric EQs per input and output sections, alignment delay, all in all everything needed to optimize a self-powered loudspeaker. Moreover the RMS Compressor function per channel provides output monitoring to prevent speaker damage with gentle gain reduction at threshold, in addition to the efficient heat dissipation system and Over-Heat protection which themselves ensure uncompromised reliability. 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+500W+500W@4Ω
- Switched-Mode Power Supply with 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 equalization on input channel selected as Hi-Shelving, Bell and Lo-Shelving Variable Q
- 3 band parametric equalization on Output SUB, selected as Bell
- 7 band parametric equalization on Output A/B, selected as Bell, Low/High Shelving variable Q

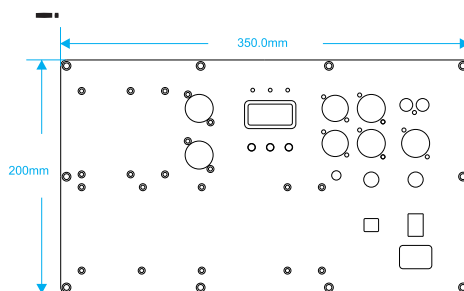
- Crossover filters with slopes from 6dB/Octave up to 24dB/Octave including Butterworth, Bessel, Linkwitz-Riley
- Output channel features a precision dynamic range controller

- Adjustable Delay time up to 40 ms for input and 20 ms for output.

- Input channel includes a Noise Gate function
- Output RMS Compressor

Direct PC/Network Connection & Control

- USB connection for system setup, monitoring and control via fully manageable remote PC software
- Up to 16 Preset Selection
- Security Lockout



Power & Amplifier Function

Number of Channels	-----3
Max Output Power @ 4 ohms	-----500W+500W+500W @4Ω
Output Circuitry	-----Class D - full bandwidth PWM modulator with ultra low distortion
Output Voltage	-----70 Vp / 140 Vpp (unload) / Bridged 140 Vp / 280 Vpp (unloaded)
THD+N	-----<0.01%
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, 1 kHz and below)
Power Supply	-----Switch mode power supply with PFC and integral standby converter
Operating Range	-----Universal Mains, 85-268V (dual voltage auto selection)
Protections	-----Over-Current, Over/Under Voltage, Output DC and Over-Temperature
Maximum Input/Output Level	-----+12 dB

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 accumulation registers, 96 bit precision intermediate processing data
Parametric Equalization	-----5 filters on input channel, selected as Bell, Low/High-Shelving variable Q 3 filters on output SUB channel, selected as Bell 7 filters on output A/B channel, selected as Bell, Low/High-Shelving variable Q
Filter Type	-----Bell, Low/High Shelving variable Q
Filter Gain	-----Input from -12dBu up to +12dBu by 0.5dBu resolution steps Output from -18dBu up to +18dBu by 0.5dBu resolution steps
Center Frequency	-----Selectable with a 1HZ resolution step from 20 Hz up to 20 kHz
Filter Q/BW	-----Type Bell: Q from 0.5 up to 10 by 0.1 resolution steps Type Shelv: Q from 0.5 up to 3 by 0.1 resolution steps
Crossover section HPF/LPF	-----Butterworth 6/12/18/24dB per octave Bessel and Linkwitz-Riley 12/24dB per octave Filter resolution 1Hz
Output RMS Compressor	-----Threshold from -18dBu up to +12dBu Knee: 0~100%; Ratio: 2:1~100:1 Release time from 40ms up to 1000ms; Attack time from 5ms up to 100ms
Output Routing	-----In1, In 2, In 1+2
Delay	-----up to 40ms for each input, and up to 20ms for each output, with step of 10.4us
Ground Noise	-----86dBu

General

User Preset	-----16
Panel	-----Green LED (Power); Yellow LED (Limit); Blue LED (Signal presence) 2 x XLR female connector (Input) 2 x XLR male connector (Link Output) 1 x XLR (MIC Input) 1 x USB Connection 2 x Neutrik® Speakon NL4 (Speaker) 1 x 2 * 8 LCD 2 x RCA (Line Input) 1 x Ground-lift toggle Switch 1 x Line Gain Controller 1 x MIC Gain Controller 1 x Locking PowerCON® 20A: AC Link (blue) 1 x IEC C13 16A connector; On/Off Power Switch
Dimensions	-----13.78" x 3.15" x 7.88" (350 x 80 x 200 mm)
Weight, Net / Shipping	-----6.09 lbs (2.76 Kg) / 8.83 lbs (4 Kg)