MDA2-2500P is a highly flexible, powerful and intelligent 2-Channel power amplifier delivering up to a total of 2x2000W @ 4 ohms. Designed to meet the most demanding portable and fixed installation sound systems, it provides a full set of value added features such as high output power, efficient cooling system, on board DSP and USB/Ethernet networking for monitoring and control via PC software. MDA2-2500P includes a highly efficient Switch Mode Power Supply, which provides power to the output stages. The 2 output stages use the well-proven Pascal Class D XPRO-1 module-full bandwith PWM modulator obtaining ultra low distortion, high efficiency and also equipped with a full set of circuit protections. Furthermore the Clip/Limiter function 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. MDA2-2500P is more than just an amplifier. It is also a capable and sophisticated loudspeaker processor, thanks to its powerful M716 DSP running 96kHz/24bit [96 bits precision for the internal intermediate processes] and high performance 24bit AD/DA Converters. It offers 2 channels of slope up to 48dB/Oct IIR HP/LP crossover filters, or up to 512 taps FIR filters [FIR Coefficients can be imported as .txt file from external applications], RMS compressor, parametric Eqs, alignment delay and white/pink noise internal generator, everything needed to optimize a loudspeaker system. Moreover, MDA2-2500P allows a 12dB headroom process. User can also set the parameters, select input source, load presets, etc with the extraordinary touchscreen LCD in front panel. Apart from regular analog and digital source input, DANTE is also optional.

Features

Outstanding Performance

High power output: 2 x 2000W @ 4 Ohm
Highly efficient Switch-Mode Power Supply with PFC
Pascal Class D Amp module-full bandwith PWM modulator with ultra low distortion
Excellent sonic performance with 24bit high end converters coupled with 96kHz sample rate
Full protection circuitry including Over-Current, Over/Under-Voltage, Output DC and Over-Temperature
Support DANTE audio (optional)
Warm Backup is available, by setting source priority and activating "Autoswitch" function in PC SW

Top-Grade DSP Engine

12 band parametric equalization per input channel
4 band parametric equalization per output channel
Each band can be switched to Bell, Low/High Shelving variable Q
FIR or IIR Filters for X-Over:
The X-Over can be implemented both by FIR filters or IIR HP/LP, selectabl in the dedicated PC software

FIR: Crossover filter can be created by the user selecting from 256 up to 512 taps, the FIR type and the

Out Band attenuation [FIR Coefficients can be imported as .txt file from external applications]
IIR: Crossover filter with slopes from 6 ~ 48 dB/Octave, including Butterworth, Bessel, Linkwitz-Riley and customized topologies
Each output channel is equipped with a precise Peak Limiter with selectable ratio, attack/release time
Adjustable Delay time up to 500.998ms for input channel, and 340.998ms for output channel
Each input channel includes a Pink/White noise internal generator, noise gate function, RMS compressor with variable knee, and powerful 12-band PEQ

Direct PC/Network Connection & Control

Front panel USB connector for direct PC communications
Ethernet interface for system setup, monitoring and control via manageable remote PC software
Front panel interactive touchscreen LCD display for parametric setting, input source selection, preset loading and so on
Simultaneous control up to 32 units via PC software
50 Preset Selection

Designed in Italy Assembled in China

MDA2-2500P

Power & Amplifier Sections

Number of Channels	2
Max Output Power per Channel	2000W @4 ohms load
Output Circuitry	Pascal Class D Amp Module- full bandwith PWM modulator with ultra low distortion
Output Voltage	142 Vp / 286 Vpp (101Vrms)
THD @ Rated power 4Ω (1kHz)	<0.01% (20 Hz - 20 kHz, 8Ω load, 1dB below rated power)
Signal To Noise Ration	105 dB (A-weighted, AES-17 filter)
Damping Factor	>1000 (8Ω load, 1kHz and below)
Power Supply	Switch mode power supply with PFC (Power Factor Correction) 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	+13 dB

Audio

Analog Input	2 x XLR electronically balanced, +13dBu
Frequency Response (DSP)	20 Hz - 20 KHz; -0.5dBu at 20 Hz and 20 kHz

DSP & Processing

DSP Engine	MARANI M716: 24 x 32 bit filter processing, 54bit accumulation registers, 96 bit precision on intermediate processing data
Parametric Equalization	12 band PEQ per input, 4 band PEQ per output, filter gain range from -15 to +15dBu
Filter Type	Bell, Shelving, HP/LP, Band Pass, Notch Filter, All Pass
FIR for Phase Correction	Asymmetrical 512 Taps, allowing also FIR latency Adjustment/reduction. Coefficients can be generated by Pc Sw embedded Wizard tool, imported by external third party applications, and exported to third parties applications
Center Frequency	Selectable with a 0.5dBu resolution step from 20Hz up to 20kHz
Filter Q/BW	Bell: Q from 0.4 up to 128, steps: 100
	Shelving: Q from 0.1 up to 5.1, steps: 100
	Bandpass/Notch: Q from 4 up to 104, steps: 100
Input&Output Gain	-12dB ~ +12dB, resolution: 0.1dBu
IIR Crossover section HPF/LPF	Butterworth 6/12/18/24/36/48dB per octave; Bessel 12/24dB per octave; Linkwitz-Riley 12/24/36/48dB per octave.
FIR Crossover section HPF/LPF	Hp/Lp/Bp filters, Taps from 256 up to 512, Attenuation up to -120dB, Window type as Rect / Sinc / Keiser / Hanning / Hamming / Blackman / Nuttal / Sine
Noise Generator	Type: White/Pink Noise; Level: -40dBu ~ 0dBu
Input RMS Compressor	Threshold from -16dBu up to +14dBu; Ratio: 2:1~32:1; Knee: 0~100%; Attack time from 5ms up to 200ms; Release time from 0.1sec up to 3sec
Output Peak Limiter	Threshold from -16dBu up to +14dBu; Attack time from 1ms up to 900ms; Release time from 0.1sec up to 5sec
Headroom on Internal Overflow Process	12dB
Delay	Each input has up to 500.998ms delay, each output has up to 340.998ms delay
Routing	Full matrix mixing mode
Ground Noise	-86 dBu

General

User Preset	50
Front Panel	LCD display with Touchscreen Function
	1 x Red LED (Power)
	1 x Rotary encoder push button switches
	USB type B connector
Real Panel	3 x XLR female connector (Input)
	2 x Neutrik® Speakon NL4 (Output)
	1 x Ethernet 10/100 TCP-IP (PC Control)
	2 x Ethernet 10/100 TCP-IP (Dante Audio Signal; Optional)
	1 x Locking PowerCON® 20A: AC Power Cord (Blue)
	1 x 80*80 mm 24V FAN
Dimensions	482X314.5X88mm
Weight, Net / Shipping	14.80 Kg / 15.00 Kg

Specifications subject to change without notice