

ELECTRONICS

Digital Power Amplifier

Audio-Performance AP2500 & AP5000

The AP2500 & AP5000 digital amplifiers represent an industry first. Never before has the installation industry been offered a premier line of shallow 2U rack mounting power amplifiers with this level of flexibility and power density. It is now possible to buy "off the shelf" a product that integrates light-weight power supplies and high power sonically transparent class D amplifiers with full system monitoring and a fully featured networked 24 bit 96KHz DSP processing platform provided onboard as standard.

The AP2500 & AP5000 are designed to provide a solution rather than be just a component in a system.

Above all AP2500 & AP5000 digital amplifiers sound superb, and this is not just our opinion. We realise that innovative designs and production techniques are of little value if audio performance is compromised. Sonics are the heart of AP's philosophy and we set extremely high standards for ourselves.

The AP2500 contains two 1'250W channels of class D amplification and the AP5000 four channels.

Each pair of amplifier channels contains a complete 96KHz digital loudspeaker management and control subsystem.

Although significant expertise was required to miniaturise the DSP and supporting electronics, the amplifier DSP platform is in no way compromised, containing as it does an extremely powerful state-of-the-art floating point SHARC based DSP engine. Critical components in the audio path, so important to the sound quality, have been selected with great care and after extensive listening tests.

A simple PC connection allows customers to manipulate DSP parameters so as to optimise the performance and develop settings for particular applications.

These settings are stored in the amplifier so a PC is not necessary for operation.

The amplifier also has the capability to recall up to four different sets of settings by the means of rear panel contact closure inputs. This can be particularly important in voice evacuation applications where, for example, it may be required to mute the current source of audio, switch to an alternate input carrying an evacuation message and broadcast it with different level and EQ settings.

All amplifier models are networkable as standard; there are no expensive options to purchase. AP's widely used PodWare PC application provides real-time control and monitoring functions to either single units or whole networks of products. Sophisticated micro-processor controlled amplifier protection systems continuously monitor all aspects of performance to assure the unit and drivers are always working within their safe operating areas.

FEATURES

Two or Four 1'250W
Bridgable Channels

2 Ohm and 70V/100V
Line Capability

96KHz DSP with Real-
Time Monitoring

Live Networked Control
& Monitoring

Extremely Rugged with
Abuse Logging



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AP 2500 & AP 5000 Specifications

AUDIO

Input Impedance	10K Ohm balanced, 6.7K Ohm unbalanced
Max. Input Level	+ 20 dBu
Frequency response	10Hz - 20KHz, +/- 0.25dB, 5Hz - 30KHz, +/- 1dB
Output noise	-110dB A weighted, Ref max output, 22KHz BW
Distortion	< 0.05% - 1KHz, -3dB output, 22KHz BW

PROTECTION

Over Current	Initially limiters applied, persistent over current causes shutdown.
Temperature	Limiteurs applied, persistent over temperature causes shutdown.
Brownout	Automatic protection & recovery
Mains	Inrush current limiting
DC fault	Shut down power cycle to recover

INDICATORS

Per Channel	Signal, -10dB, Limit
Per Channel pair	Power, Protect, Bridge, Remote, User DSP defeat

CONTROLS PER CHANNEL PAIR

Front panel	DSP defeat (can be disable), Power switch
Rear panel	Two contact closure inputs

Monitoring facilities	Input signal level, Output signal level, Output current level, Temperature, Limiteur operation, Protection system operation, Driver impedance.
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AMPLIFIER SECTION

Number of channels	Two or Four
Output power (RMS program)	1'250W RMS / ch 20Hz-20KHz, all channels driven into 2 Ohms
Slew rate	> 80V/us
Damping factor	120 ref 8 Ohms
Efficiency	> 90% typical

POWER SUPPLY

Type	High current, high frequency switching mode.
Input Voltage	115V / 230V nominal +/- 10%
Input voltage selection	Automatic

PHYSICAL

Height	2U, 88mm
Width	19", 483mm
Depth	14", 360mm (behind rack ears)
Weight	7 Kg

CONNECTIONS

Mains	Neutrik POWERCON
Audio Input	XLR female 3 pin
Audio Link	XLR male 3 pin
Output (per channel)	Neutrik SPEAKON NL4
Network Input & Link	RJ45
Auxiliary facilities	RJ45