Processor

Type LP

Dynamic speaker processor
2 way stereo + sub mono
Internal/external “sub” control (aux. input)

Features
Double equalization near-field and far-field
Active protections by analogue simulation
Push button keypad of the subwoofer type
Alignment and system phasing

Applications
High power
“Live”
F.O.H or stage monitor

Specifications
Input nominal level +4dBu
Harmonic distortion <0.01% (+4dBu, 1 kHz)
Output maximum level +21dBu

Inputs
- 2 way wideband
- 1 way external sub

Outputs
- 2 way Hi or wideband
- 1 sub output (mono summation or external line)

9 real time active protections

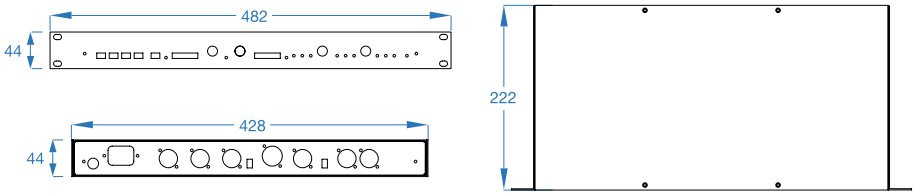
The “LP” type APG processors are specifically dedicated to process signal transmitted to the loudspeakers. They integrate a set of electronic functions, allowing to optimize the frequency response, the active protection of the loudspeakers and the main phasing functions of different system typologies.
These processors provide control to a 2-line stereo and 1-line “sub” mono system. The signal sent to the subwoofers is the addition of the left and right signals, or is issued from an external source.
A system check can easily be carried out by pressing the hi-line “Mute” key. Each of the stereo lines integrate the following: a resonating high-pass filter, a low-pass filter, a 4th order Linkwitz Riley high-pass filter with “sub” mode, a 3-band parametric equalising system, a shelving type filter and three protection cells.
The “sub” line integrates a resonant high-pass filter, a 4th order Linkwitz Riley low-pass filter (24 dB/octave) and three active protection cells.
The nine active protections act in parallel and in real time by simulating the loudspeakers’ limiting parameters: coil temperatures, cone displacement and amplifier saturation.
Each processor is specific to a speaker model or system. The subwoofer type choice is open thanks to the selection keyboard.

LP Processor

The “LP” processors combine all filtering, equalizing, dynamic protection and signal distribution functions in one audio system, which includes Dispersion, Beam and Sector series speakers and associated optional subwoofers.
They also integrate the dynamic control of the three destructive parameters of the loudspeakers in real time, which allows us to utilise the speakers to their full power potential with sound reproduction quality and optimal reliability.
Two equalising curves are available: the first for near-field applications, on-stage applications, and distributed sound or indoor, the second for far-field, outdoor or high power applications. A “shelving” potentiometer allows to act on the clarity sound index to modify the system’s spectral balance, depending on surrounding acoustics and coupling effects.
The speakers’ low-clipping frequency is adapted following their 40 to 65 Hz type in wideband mode. Frequency crossover between the speaker and subwoofer in Local or Distant mode (from 80 to 135Hz) depends on the physical distance between the tops speakers and the subwoofers. Phasing is carried out with the help of temporal alignment switches, depending on the offset of the speaker/subwoofer diffusion plans.
We can choose an operation with or without sub thanks to a switch.
The “sub” line’s source is managed either internally by mono addition of the two inputs, or externally via an auxiliary line connected to the third input.

APG

Type LP
Technical Specifications



Technical Specifications

Inputs	2 stereo channels + Sub Mono
Impedance	20 kOhm balanced
Nominal Input Level	+4 dBu
Outputs	2 stereo channels + Sub Mono
Impedance	100 Ohm balanced
Maximum Output Level	+21 dBu
THD	< 0.01% (+4 dBu, 1 kHz)

Connector

Audio Input	XLR-female 3 pins, Earth pins 1
Audio Output	XLR-male 3 pins, Earth pins 1
Power socket	IEC 3 pins

Hardware Specifications

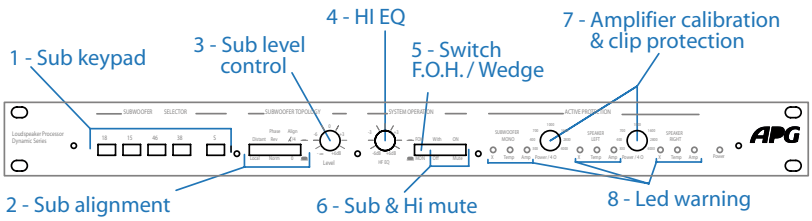
Power consumption	220/240 VAC 15VA
Dimensions (H, W, D)	1.7" x 19" x 8.7" (44 x 482 x 222 mm)
Weight	9.9 lb (4.5 kg)

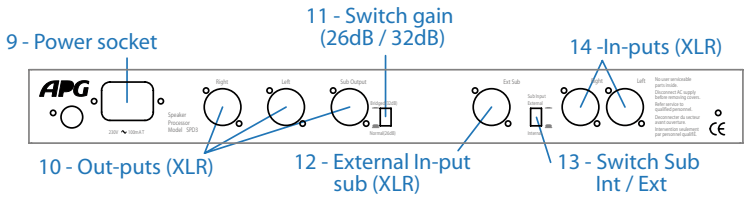
Crossover frequency speakers/subwoofers

	Local Position (1)	Distant Position (2)
Speakers	Frequency crossover	
Micro & Micro Axial	110Hz 24dB/octave	130Hz 24dB/octave
DS8, DS12S	110Hz 24dB/octave	130Hz 24dB/octave
DS15, DS15S	80Hz 24dB/octave	95Hz 24dB/octave
3000C	80Hz 24dB/octave	95Hz 24dB/octave

Dynamic Protection Control

X	Cone driver displacement (3)
Temp	temperature of moving coil (4)
Amp	Clip of Amplifier (5)





The Local / Distant key offers the possibility of modifying the cut off frequency depending on the relative position of the subwoofer to the speakers.

(1) When the speaker is placed directly on top of the subwoofer or less than 1.5 metres from the ground, this key should be set to "Local" position.

(2) While the speaker is installed to more than 1.5 metres above the ground on a speaker stand , the "Distant" position should be activated (key pressed). The dynamic protection system of "LP" type APG processors take the main operational parameters of the loudspeakers into consideration.

(3) Membrane displacement is controlled by using a high-pass filter that limits the amplitude of the low frequencies that can damage or destroy the loudspeaker.

(4) Temperature protection is guaranteed by a component that simulates thermal dissipation of the mobile coil and by controlling a limiter.

(5) Power limit control (saturation or clipping) of the amplifiers is constantly carried out. As soon as the saturation threshold is reached, a clipper reacts to attenuate signal amplitude.

5 YEARS WARRANTY "A five years warranty covers passive filters, transducers and compression drivers. The warranty does not cover cosmetic damages and damages due to misuse, improper installation, or damages caused by alterations.

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