Matrix Array Series

APG9000

Long Throw High Power System

Four-way, tri-amped (two cabinets)
6 x 15" cone drivers (4" ventilated coil)
3 x APG ISOTOP™ drivers

Features

Colinear layout
Horizontal and vertical directivity control
Compactness and ease of handling
Matrix configuration capability

Applications

Very high power long throw systems
Large stacks and clusters
Long range applications

Specifications

7 000 W AES
106 dB SPL @ 1W à 1m
33.5" x 29.5" x 30.7" (850 x 750 x 780 mm)

45 Hz - 19 kHz (9000LO + 9000HI)
65 Hz - 19 kHz (9000HI wideband mode)
60° H x 15° V

9000LO : 2 x 4 Ohm
9000HI : 4 Ohm (Lo-mid),16 Ohm (mid-Hi)

Three way amplification
Processor 9000SP mandatory
Optional infra bass subwoofers

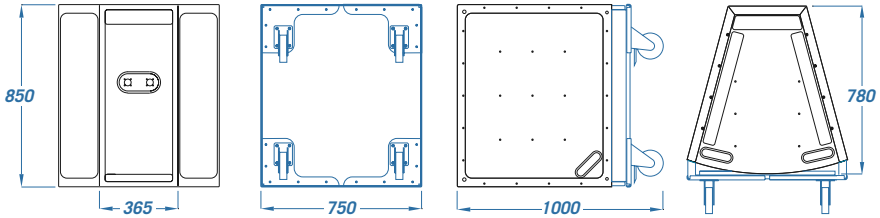
The APG9000 is formed by two externally identical enclosures resulting in a 4-way collinear set up.The 9000LO speaker is equipped with four 15" PHL Audio cone drivers, loaded by a dual interactive chamber. The low/mid section of the 9000HI speaker includes two 15" PHL Audio drivers, loaded by a dual horn. The mid/high section uses a collinear arrangement constituted by a vertical network of 3 mid/high drivers, each including a PHL Audio coaxial 6,5" cone transducer and a 1" HF unit, providing a 3,5° vertical opening. This device is loaded by an exclusive APG ISOTOP™ waveguide.These drivers feature an efficiency of 108dB within a bandwidth of 450Hz to 19kHz and provide constant coverage of 60° horizontal and 15° vertical.
The exclusive APG ISOTOP™ wave guide uses an isophase annular horn providing impedance adaptation, which allows the achievement of efficiency comparable to traditional compression chambers, but with noticeably lower distortion and increased bandwidth and power handling.
The use of the 9000SP processor is mandatory.
The subwoofer TB218S allows to extend the frequency response down to 25Hz.

APG 9000 System : 9000HI and 9000LO speakers

The APG Matrix Array technology includes the APG4000, APG6000 and the APG9000 systems.
The APG9000 is designed for high power and long range FOH applications. The dynamic capacity of this system makes the APG9000 a world reference in terms of SPL-to-size ratio.The exceptionally homogeneous features of the system allow the use of the APG9000 in the largest outdoor events as well as in the smallest venues.The collinear technology of the Matrix sytems is the foundation of the Matrix concept i.e. the capacity of creating very homogeneous and coherent configurations thanks to the simultaneous control of horizontal and vertical coverage. The installed power is minimized for a maximized performance in terms of acoustic pressure, coverage and throw.
The APG4000 and APG9000 systems are perfectly compatible and complimentary: They both use the same internal components and technologies. They have in common the same horizontal dispersion angles, the same installation principles and the same connectors and flying systems. A standard APG9000 FOH setup is composed of 4 x APG9000 systems (4 x 9000LO speakers and 4 x 9000HI speakers), 1 x 9000SP processor.
APG recommends the use of 2 x 9000RACK steel racks for the amplifiers.
It requires four amplifiers to be powered, each of them delivering a minimum of 2 x 2400W into 2 Ohm.
The infra bass requirement for a APG9000 kit is composed by a minimum of four SUBTB218S.

APG

APG9000
Technical Specifications



Features	9000LO	9000HI	
		lo mid	mid/high
Frequency range 4 way mode (± 3 dB)	45 - 160 Hz	160 - 800 Hz	0,8 - 19 kHz
Frequency range 3 way mode (± 3 dB)	-	65 - 800 Hz (1)	0,8 - 19 kHz
Sensitivity @1W 1m	106 dB SPL	106 dB SPL	108 dB SPL
Maximum continous level at 1m	141 dB SPL	139 dB SPL	
Peak Level at 1m	144 dB SPL	144 dB SPL	
Directivity, -6 dB points	-	60° H x 15° V (2)	60° H x 15° V (2)
Nominal impedance	2 x 4 Ohm	4 Ohm	16 Ohm
Components			
Transducers	4 x 15"	2 x 15"	3 x 6,5" + 3 x 1" HF coaxial driver
Coil diameter	100 mm (4")	100 mm (4")	50 mm et 45 mm (2" and 1.75")
Type of load	2 x interactive double tuned	Eliptical Horn	ISOTOP and eliptical Horn
Power			
Recommanded amps	2 x 2000 W into 4 Ohm	2000 W into 4 Ohm	600 W into 16 Ohm
Peak	2 x 4000 W	4000 W	1200 W
AES (3)	2 x 1600 W	1600 W	450 W

Construction and characteristics	
Cabinet	18mm Finnish birch plywood included in an external 4 mm iron squeleton
Finish	Black, impact resistant aquaurethane coating
Protection grill	Acoustically transparent perforated steel, 1.5mm thick
Front face	Black, 15mm acoustic foam
Connectors	2 x SPEAKON NL8MP (4)
Handles	7 x integrated handles
Rigging	8 x rigging points (5)
Wheelboard	18mm Finnish birch plywood, 4 mm iron corners, 3,9" (100 mm) casters with brakes
Dimensions (H, W, D)	33.5" x 29.5" x 30.5" (850 x 750 x 780 mm)
Net unit weight	252lb (102 kg) 300lb (122 kg)
Castor plate weight	58lb (24 kg)

Options	
9000RACK (5)	Steel rack for amplification of 9000 and 4000 systems : 19", 8u, 1 x CO2U9000
9001RACK (5)	Steel rack for amplification of 9000 and 4000 systems : 19", 8u, 1 x CO2U9001
9002RACK (5)	Steel rack for amplification of 9000 and 4000 systems : 19", 8u, 1 x CO2U9002
CO2U9000 (6)	Connection panel for 9000 and 4000 mono amplification rack, 19", 2u
CO2U9001 (6)	Connection panel for 9000 and 4000 stereo amplification rack, 19", 2u
CO2U9002 (6)	Connection panel for 9000 and 4000 mono amplification + sub rack, 19", 2u

Flying System

APG9000 and APG4000 systems use the same flying system. It is composed with following specific pieces : 9TRUSS (hanging truss) ; 9RAAV and 9RAAR (front part and rear part for horizontal coupling) ; 9RCAV and 9RCAR (front part and rear part for vertical coupling) ; 9QRP (Quick lock Pin).

Signal Processing

The 9000SP processor is designed to operate in conjunction with the APG9000, optimizing equalization, filtering, protection and distribution of signals. Each channel comprizes a crossover, an EQ stage, an alignment delay and a dynamic protection circuit. A mono Sub output allows the use of additional infra bass subwoofers.

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(1) The 9000 Hi cabinet can be used alone when a low frequency cut off of 65 Hz and a limited acoustic power in low frequencies are acceptable.

(2) Dispersion is controlled from 500 Hz. The angles given here are irrelevant below this frequency.

(3) The acceptable AES power handling corresponds to a 2 hour test using pink weighted noise (peak factor of 6dB) through a frenquency range.

(4) The SPEAKON connectors are wired as follow : hot LO1 pin 1+, cold LO1 pin 1-, hot LO2 pin 2+, cold LO2 pin 2-, hot LOMID pin 3+, cold LOMID pin 3-, hot MID-HIGH pin 4+, cold MID-HIGH pin 3-.

(5) 9000RACK steel rack is fitted with 1 mono male P17 32A rear socket opening on 3 female 16A sockets, 1 CO2U9000 (for mono)
(5)9001RACK identical to the 9000RACK but with 1 CO2U9001 (for stereo).
(5)9001RACK identical to the 9000RACK but with 1 CO2U9002 (for mono + subwoofer).

(6) Connection panel CO2U9000 is made up of 4 SPEAKON NL8MP, 3 female XLR3, 3 male XLR3, 1 female XLR7 and 1 male XLR7.
(6) Connection panel CO2U9001 is made up of 4 SPEAKON NL8MP, 6 female XLR3, 2 female XLR7
(6) Connection panel CO2U9002 is made up of 2 SPEAKON NL8MP, 2 SPEAKON NL4MP,4 female XLR3, 4 male XLR3, 1 female XLR7 and 1 male XLR7.

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