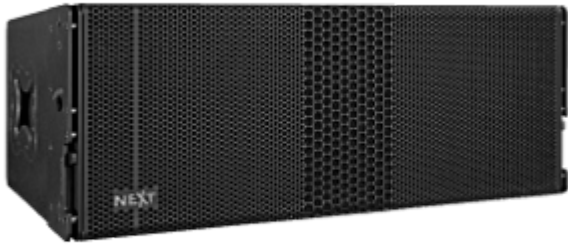


LA212X

3-Way Fully Horn Loaded Line Array Element



- Fully horn-loaded, axially symmetric, Line array
- Extreme SPL and throw capability
- Uniform dispersion and great coverage control
- Horizontal Coverage maintained down to 280 Hz
- Easy and fast rigging system with variable splay

OVERVIEW

The LA212x is a 3-way, horn-loaded, axially symmetric line array element providing 90-degree horizontal constant dispersion control. The symmetric design results in virtually identical acoustic sound patterns on the right and left, affording easy, accurate alignment.

The bass section makes use of two 12" neodymium woofers with 3" voice coils that are strategically placed on either side of the speaker in a dipolar horn arrangement. The horn mouths are horizontally separated by a "tuned" distance that uses the Tuned Dipolar Array effect to achieve exceptional low frequency horizontal dispersion control with the nominal angle being maintained down to 280 Hz.

The mid and high frequency sections, also horn-loaded, are coaxially mounted in the center of the cabinet, extending lower vocal directivity control and providing smooth mid/high transition. The mid-frequency horn uses a 10" driver mounted coaxially behind the HF drivers, loaded by a mathematically complex, directivity control device that eliminates the HF section acoustic "shadow." Due to the physical diameter of 10" driver it is impossible to achieve interference-free, close coupling of wave sources at the frequencies necessary to crossover with HF drivers, so a proprietary Wave Splitter device was developed.

The Wave Splitter causes the 10" driver to behave as twin adjacent 5" drivers mounted at half the physical distance. The distance between these adjacent virtual drivers is close enough to couple coherently in the vertical plane extending the upper frequency limit for line source behavior, projecting sound waves farther than traditional systems with a more evenly distributed sound output pattern.

In addition, the mid-frequency section employs a Correction Phase Device which equalizes speaker cone's

acoustical path lengths and thereby minimizes high-frequency cancelation and distortion caused by phase differences, greatly increasing the speaker's ability to produce clear, accurate and "vocals-in-the-face" realistic sound. This device and the associated horn are optimized to create a high compression ratio which rises conversion efficiency to reach a sensitivity of 115 dB at 1W/1m full space.

The high-frequency section consists of two 1.4" exit HF compression drivers with 2.5" voice coils mounted to a dedicated wave-shaping device. This unit is carefully designed so that each path-length from the throat to any part of the mouth is precisely identical, which provides accurate high frequency summing and the generation of a flat, isophasic wavefront.

The wave then exits by a diffraction slot to a constant directivity wave guide that spreads out evenly across the horizontal plane, producing a cylindrical wave that couples coherently, with minimal lobing, in the vertical plane while uniformly disperses on the non-coupling, horizontal plane. To preserve the acoustical integrity and the natural warmth, all the horns, wave guides and phase correctors are made of low resonance plywood or acoustically neutral polymers.

TECHNICAL SPECIFICATIONS

Technical Data	
Speaker Type:	Horn-Loaded 3-Way Line Array Element
Acoustical Data	
Frequency Response (-6dB):	60Hz - 19.000Hz
Low Frequency Extension (-10dB):	52HZ
Sensitivity (1W@1m) LF:	106dB (Full-Space)
Sensitivity (1W@1m) MF:	112dB (Full-Space)
Sensitivity (1W@1m) HF:	114.5dB (Full-Space)
Calculated Max. SPL (Cont/Peak):	138dB/144dB (Full-Space)
Calculated Max. SPL (Cont/Peak) LF:	138dB/144dB (Full-Space)
Calculated Max. SPL (Cont/Peak) MF:	139dB/145dB (Full-Space)
Calculated Max. SPL (Cont/Peak) HF:	138dB/144dB (Full-Space)
Coverage Angle -6dB (HxV):	90° (Down to 280Hz) x 8°
Drivers	
Low Frequency:	2 x 12" (300mm)/3" (76mm) VC, Neodymium, B&C custom speaker
Mid Frequency:	1 x 10" (250mm)/2.5" (65mm) VC, B&C custom speaker
High Frequency:	2 x 1.4" (36mm) exit/3" (75mm) VC, B&C custom compression driver
Electrical Data	
Program/Peak Power LF:	1600W/3200W (10ms)
Program Power/Peak MF:	500W/1000W (10ms)
Program/Peak Power HF:	440W/880W (10ms)
Nominal Impedance LF:	2 x 8
Nominal Impedance MF:	16
Nominal Impedance HF:	16
Recommended Amplifier:	LA RACK
Crossover frequency/Type (LF to MF):	350Hz Linkwitz-Riley 24dB/oct
Crossover frequency/Type (MF to HF):	1050Hz, 48dB/oct Linkwitz-Riley
Recommended High-Pass Filter:	75Hz, 24dB/oct Linkwitz-Riley
Connectors:	2 x Neutrik NL8
Enclosure	
Construction:	15mm multi-laminate birch plywood
Finish:	Textured black semi-matte coating
Protective grill:	Black perforated steel
Fittings:	Adjustable (0° to 8°) rigging system
Handles:	1 on each side, 2 on the back
Dimensions (WxHxD):	1020 x 380 x 501 mm
Net Weight:	66 kg
Shipping Weight:	69.1 kg