Arcline 8

Key Features:

- 110° horizontal dispersion
- True cylindrical wavefront
- 2 x 8" mid drivers with phase device
- 2 x 8" horn loaded low frequency drivers
- 2 x 1.4" compression drivers
- Rigging angle pre-selected before you lift the enclosures
- Ground stackable

Applications:

- Indoor and outdoor dance events
- Bar, club, lounge
- Large-scale touring

A host of new technologies dramatically improve the perceived sound quality and definition of the Arcline 8, while an advanced rigging system reduces setup time and the need for more than one person to rig multiple enclosures. Delivering a true 110-degree dispersion results in a highly uniform polar pattern, allowing the whole audience to experience uniform sound quality across the entire sound field. The high efficiency, horn loaded low-mid section assists with low-mid projection.

Traditional high frequency driver spacing and path length compensation among line source enclosures has almost always meant a compromise in high frequency performance, so a new design of high frequency horn was developed for the Arcline 8. Extensive FEA modelling was used both to evaluate and optimise the waveguide. A new phase shading device has also been implemented to allow multiple Arcline 8 enclosures to form a true cylindrical wavefront by splitting two acoustic sources into four, with the acoustic centre positioned optimally for coupling in both the horizontal and vertical planes.

The lightweight 15 mm (5/8") birch plywood enclosure is finished in a textured 'TourCoat' polyurea finish, and features a unique flying system that allows rigging angles to be pre-selected before flying the system. Two Neutrik speakON™ NL4 connectors provide input and link through connections.

Specifications

Frequency response	110 Hz - 20 kHz single enclosure, 90 Hz - 20 kHz three enclosures
Efficiency[1]	LF: 97 dB (100 dB referenced to 1 W) | MF/HF: 103 dB (106 dB referenced to 1 W)
Nominal impedance	2 x 16 Ω
Power handling[2]	LF: 500 W AES, HMF: 500 W AES
Maximum output[3]	128 dB cont, 145 dB peak
Driver configuration	2 x 1.4" compression drivers 2 x 8" mid drivers with phase device 2 x 8" horn loaded low frequency drivers
Dispersion	110°H x 12°V
Protection	Internal electronic control
Connectors	2 x 4-pole speakON™ NL4
Weight	39 kg (86 lbs)
Enclosure	15 mm multi-laminate plywood
Rigging	Rigging angle pre-selected before you lift the enclosures Ground stackable A4 stainless steel
Finish	Textured 'TourCoat' polyurea
Grille	Perforated steel with foam filter

[1] Measured in half space [2] AES2 - 1984 compliant [3] Calculated

Version 1.0

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Architectural specifications

The loudspeaker shall be a two way active, three-way line array module system consisting of two high power 8" (203.2 mm) direct radiating reflex loaded low frequency (LF) transducer, two high power 8" (203.2 mm) direct radiating reflex loaded mid frequency (MF) transducer and two 1.4" (35.6 mm) exit high frequency (HF) compression transducers on a proprietary planar wave tube mounted in a birch plywood enclosure.

The low and mid frequency transducers shall be constructed on a cast aluminium frame, with a treated paper cone, 50.8 mm (2") voice coil, wound with copper wires on a high quality Kapton voice coil former, for high power handling and long-term reliability. The high frequency transducer shall project its sound through an elliptic horn with a 150 mm (6") baffle diameter to achieve pattern control and low distortion.

Performance specifications for a typical production unit shall be as follows: the usable on-axis bandwidth shall be 110 Hz to 20 kHz (±3 dB) for a single enclosure and 90 Hz – 20 kHz for three enclosures; shall average 110° directivity pattern on the horizontal axis and 12° on the vertical one (-6 dB down from on-axis level) from 1 kHz to 12 kHz; maximum SPL of 145 dB peak measured at 1 m using IEC268-5 pink noise bursts. Power handling shall be 500 W AES at a rated impedance of 2 x 16 Ω; crossover point at 1.2 kHz using a 2nd order filter (24 dB per octave). The wiring connection shall be via two Neutrik speakON™. One for input and one for loop-out to another speaker, to allow for pre-wiring of the connector before installation.

The enclosure shall be constructed from 15 mm multi-laminate birch plywood finished in a textured polyurea and shall contain fixture points for a pressed weather-resistant steel powder coated grille with foam filter. The integral rigging system shall allow for inter cabinet angles of 1,2,3,4,5,6,7,8,9 and 10 degrees with stowage positions for transport. The cabinet shall have two handles (one per side) for efficient manual handling. External dimensions of (H) 285 mm x (W) 881 mm x (D) 470 mm (11.2" x 34.7" x 18.5"). Weight shall be 39 kg (86 lbs).

The loudspeaker system shall be a Void Acoustics Arcline 8.