Air Array

Key features:

- Visually striking appearance for style-led environments
- Fibreglass composite construction
- 14 discrete proprietary drive units
- Integrated suspension and mounting system
- Ground stack on low frequency enclosures
- Optional ground stack stand or suspension bracket
- Standard red finish, optional custom colours

Applications:

- High impact nightclub
- Indoor and outdoor dance events
- Live music venues

The Air Array is the mid-high element of the Incubus system with radical looks that are not just for show. Its shape is specifically designed to fuse each section together, forming a coherent radiation pattern over its stated dispersion angles. Line source behavioural conditions allow both frequency and power shading to be used within a single enclosure so the sound pressure level in the near field is attenuated and matched with that at greater distances, while HF absorption is corrected with linear frequency shading. By employing a line source configuration, this is the only mid-high enclosure that can provide constant SPL at all distances with all frequencies arriving at the same time, wherever you are within its coverage.

The low-mid section consists of two hyperbolic horns fed from a split manifold, driven by four very high power 12" transducers – each featuring a heatsink cooling system to reinforce reliability and reduce power compression levels, for exceptional output with the highest definition. Four newly developed 3" exit compression drivers handle the mid-range frequencies, each driven by a 6" diaphragm to comfortably reproduce frequencies down to 500 Hz. Path length compensation devices are applied to the waveguides to seamlessly combine their outputs, eliminating all destructive interference and ensuring constant output within the stated coverage angles. The high frequency section uses six compression drivers with 1" throat waveguides, positioned on a physical arc to create a virtual common feed point.

This configuration reduces all forms of destructive interference, maintaining an even frequency response within every degree of the stated coverage angles. Path length compensation devices housed within the waveguides marry with the extended upper response of the compression drivers, allowing the HF to extend up to 26 kHz.

The Air Array can either be stack-mounted using a custom steel box frame stand, or flown with the proprietary load tested flying system. The Void visual signature is evident via the standard gloss red finish and weight-saving fibreglass composite structure.

Version 1.0

Air Array

Architectural specifications

The loudspeaker shall be an active three-way system with independent dedicated amplification consisting of four high power 12" (304.8 mm) horn loaded low frequency (LF) transducers, a mid frequency section consisting four 3" (76.2 mm) mid frequency (MF) compression drivers with attached waveguides and six 1" (25.4 mm) high frequency (HF) compression driver mounted on a waveguide to allow constant directivity.

Two hyperbolic horns fed from a split manifold and driven by the four LF transducers shall provide the low frequency section. Each LF transducer shall be enclosed in an independent moulded fibreglass enclosure featuring a heatsink cooling system to reduce power compression levels. Mid frequency transducers are in a sealed enclosure mounted in a V baffle configuration for a more coherent radiation pattern over frequency range. HF transducers shall be arranged in a line source configuration positioned on a physical arc, providing a virtual common feed point, resulting in an improved directivity pattern control and higher SPL over the high frequency range. Line source behavioural conditions are met by all sections hence allowing frequency and power shading within a single enclosure.

The LF transducers shall be constructed on a cast aluminium frame, with a treated paper cone, 101.6 mm (4") voice coil, wound with copper wires on a high quality voice coil former and neodymium magnets, for high power handling and long term-reliability. Each 3" MF transducer shall have a 6" diaphragm reproducing frequencies down to 500 Hz, and shall be mounted on a high standard waveguide with path length compensation for a better directivity pattern control over the frequency spectrum. The HF transducers shall project sound through a high precision planar waveguide 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 90 Hz to 26 kHz (±3 dB), with an average 45° directivity pattern on the vertical axis and 90° on the horizontal one (-6 dB down from on-axis level) from 1 kHz to 12 kHz; maximum SPL of 146 dB peak measured at 1 m using IEC268-5 pink noise. Power handling shall be 3600 W AES for the LF section at a rated impedance of 2 x 4 Ω, 800 W AES for the MF section at a rated impedance of 2 x 4 Ω and 320 W AES for the HF section at a rated impedance 2 x 5.3 Ω. The system shall be powered by its own dedicated power amplification modules with DSP management, from which crossover points will also be set. The wiring connection shall be via two Neutrik speakON™ NL8. The left NL8 shall be used to power the LF section and the right one shall power the MHF section.

The enclosure shall be of a fibreglass composite with a smooth cellulose finish of any RAL colour. The system shall be stack mounted with a dedicated stand or can also be flown with a load tested suspension system. The external dimensions of the enclosure shall be (W) 944 mm x (H) 1240 mm x (D) 813 mm (37.2" x 48.8" x 32"). Weight shall be 144.8 kg (319.2 lbs) including stand.

The loudspeaker shall be the Void Acoustics Air Array.

Specifications

Frequency Response	90 Hz - 26 kHz ±3 dB
Efficiency[1]	LF: 111 dB 1W/1m, MF: 114 dB 1W/1m, HF: 116 dB 1W/1m
Crossover Points	Preset via dedicated processor
Nominal Impedance	LF: 2 x 4 Ω, MF: 2 x 4 Ω, HF: 2 x 5.33 Ω
Power Handling[2]	LF: 3600 W AES, MF: 800 W AES, HF: 320 W AES
Maximum Output[3]	143 dB cont, 146 dB peak
Driver Configuration	4 x 12" LF, 4 x 3" MF compression driver, 6 x 1" HF compression driver
Dispersion	90°H x 45°V
Connectors	2 x 8-pole speakON™ NL8
Weight	144.8 kg (319.2 lbs) including stand
Enclosure	Fibreglass composite
Rigging	Stack mounted or proprietary suspension system
Finish	Smooth cellulose

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