

Installations & Applications

- Place of worship
- Atriums
- Museums
- Lectern application
- Reverberant spaces

Smartvox-II is a vertical loudspeaker array that uses a linear spaced speaker arrangement in combination with passive phase shifting, passive power shading and filtering, to obtain a constant directivity index for multiple frequencies (Concept is based on the Messenger linear spaced line-arrays with patent algorithm). The fixed Azimuth angle of -12 degrees, allows for the unit to be placed vertical against any surface, resulting in more clarity, lower reverberant field and therefore a much higher 'direct-to-reverb' ratio, leading to a higher intelligibility figure (STI).

Ordinary line-arrays radiates a cylindrical wave front that moves in a straight line from its source. Due to this a normal column need to be tilted forward to obtain good coverage of the listening area (figure 1). This is needed to focus the soundwaves in forward direction into audience area trying to avoid annoying reflections from

other surfaces. Loudspeakers in general are not only producing sound forwards but also backwards especially for the lower frequencies. These soundwaves are reflected by the backwall to which the array is fixed. These waves are mirrored according to the mounting angle of the array and will fill the environment with un-wanted artificial reverberation energy, leading to lower direct-to-reverb ratio and to poor intelligibility.

By "aiming" the beam of a loudspeaker electronically using passive phase-shifting, power-shading and filtering technique for constant directivity, you can keep the column placed vertical against its surface (figure 2) minimising any additional energy to the reverberant field, resulting in more clarity and a much higher intelligibility.

The **Smartvox-II** distinguishes itself through its precise sound direction pattern in the vertical plane, independent of the frequency. Due to constant sound pressure over long distances fewer columns are needed, through which less indirect sound is produced.

INTELLIGENT ACOUSTIC SOLUTIONS



Figure 1

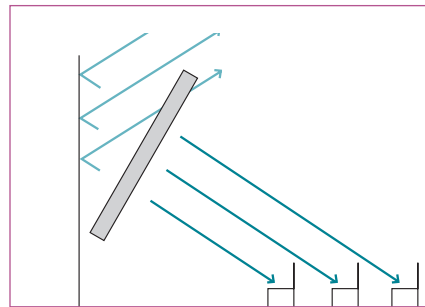
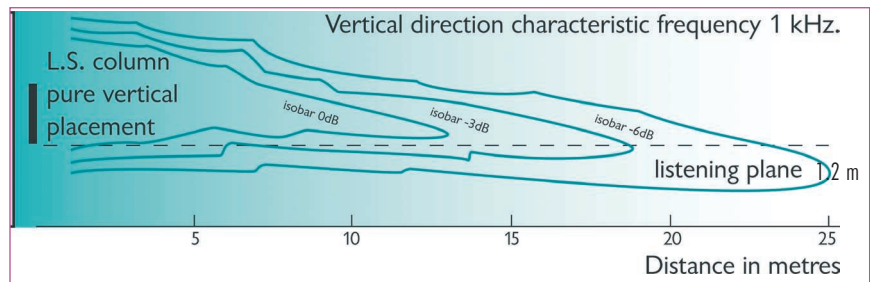
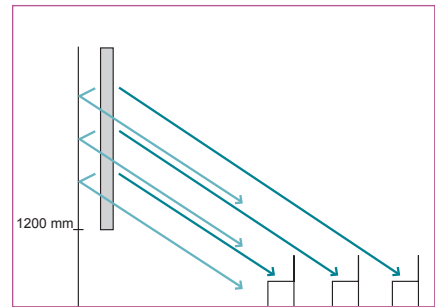


Figure 2



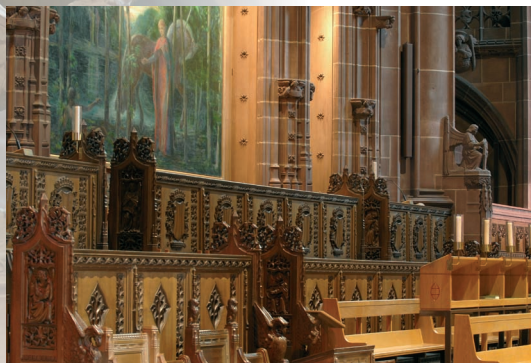
KEY FEATURES

- Filtering based on Messenger Patent algorithm concept
- Wide dispersion
- Linear spaced speakers
- Constant sound level
- Lower reverberant field.



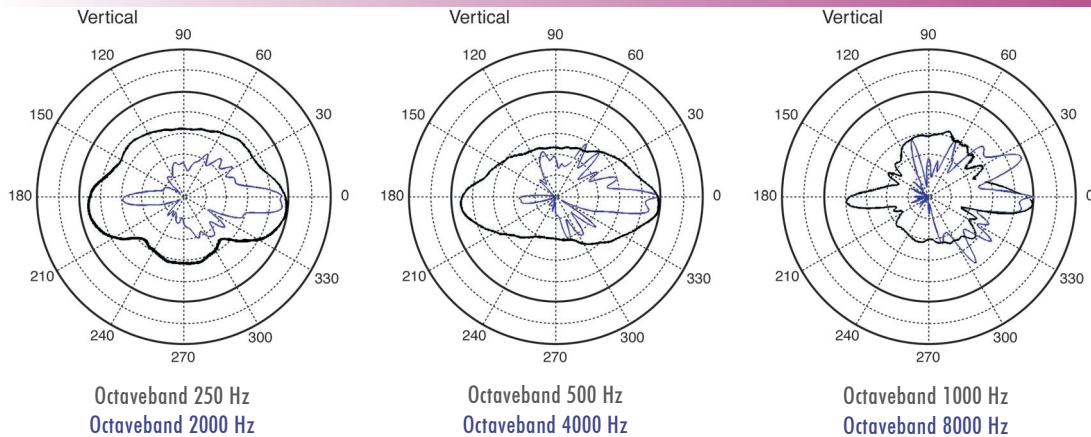
VERTICAL LOUDSPEAKER ARRAY 50 W/100 V

SMARTVOX II®



INTELLIGENT ACOUSTIC SOLUTIONS

Vertical polair diagrams



TECHNICAL SPECIFICATIONS

Maximum power rating	50 Watt
Mximum operation voltage	50 / 70 / 100 Volt
Frequency response	200 Hz - 12 kHz
Horizontal coverage	120°
Azimuth angle	-12°
Q Factor / Directivity index (dB)	14,1 / 11,5 dB
SPL 1 kHz, 1W, 1m	93.5 dB
Standard colour	Snowwhite
Loudspeaker tappings	6, 12, 25, 50 Watt
Measurements	1560 mm height, 90 mm width, 110 mm depth

