

The XSL12 loudspeaker



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The XSL12 is a line array loudspeaker for small to medium-scale sound reinforcement applications. It also serves as a supplement to other SL-Series systems for fill and/or delay purposes. The cabinet is a 3-way design, housing 2 x 8" neodymium forward LF drivers, 2 x 6.5" neodymium side firing LF drivers, one horn-loaded 6.5" MF driver and 2 x 1" exit HF compression drivers with 2" coils mounted to a dedicated wave shaping device. The cylindrical wave segments of each cabinet couple without gaps and sum up coherently. Splay angles between adjacent cabinets can be set in the range from 0° to 14° in 1° increments. The cabinet is driven by two channels of the applicable d&b amplifier which provides dedicated processing functions for the front LF and passively crossed-over side LF and MF/HF sections. All components are arranged symmetrically around the center axis of the cabinet to produce a perfectly symmetrical dispersion pattern. This setup allows for a very smooth crossover design with a well defined overlap of adjacent frequency bands resulting in a very consistent and accurate horizontal dispersion. Due to the arrangement of the forward and sideward LF drivers in combination with their processing functions, the directivity is maintained across the entire frequency range. The frequency response extends from 60 Hz to above 18 kHz.

The cabinet enclosure is injection molded (ABS polycarbonate) and has an impact and weather protected 2K finish. The front and side panels of the cabinets incorporate a rigid metal grill backed by an acoustically transparent and water repellent fabric. Each side panel incorporates a handle while two additional handles are provided at the rear.

d&b amplifiers

The d&b audiotechnik loudspeaker range is designed exclusively for operation with d&b amplifiers. These provide power as well as comprehensive control and protection functions tailored to achieve the performance, reliability and longevity associated with the d&b system approach.

The d&b D40 amplifier is recommended to drive the XSL12 loudspeaker with the appropriate loudspeaker setup selected. The d&b D80 and 30D amplifier can also be used.

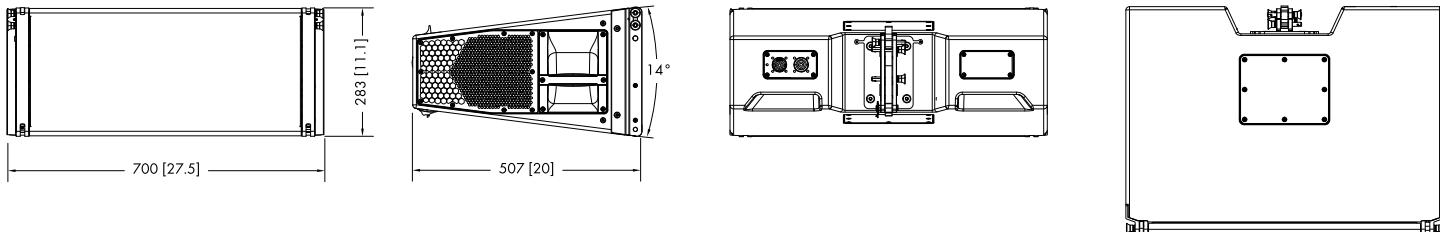
System data

Frequency response (-5 dB standard)	60 Hz - 18 kHz
Frequency response (-5 dB CUT mode)	90 Hz - 18 kHz
Max. sound pressure (1 m, free field)	
With D40/D80	140 dB
With 30D	137 dB
	(SPLmax: Broadband signal IEC 60268)

Loudspeaker data

Nominal impedance front LF	8 ohms
Nominal impedance side LF/MF/HF	8 ohms
Power handling capacity front LF (RMS/peak 10 ms)	
	400/1200 W
Power handling capacity side LF/MF/HF (RMS/peak 10 ms)	
	300/850 W
Nominal horizontal dispersion angle	120°
Splay angle setting	0 ... 14° (1° increment)
Components	
	2 x 8" front LF driver
	2 x 6.5" side LF driver
	1 x 6.5" MF driver
	2 x 1" exit compression driver with 2" coil
	Passive crossover network
Connections	NLT4 F/M
Pin assignment	
	1+: Front LF+/1 -: Front LF-
	2+: Side LF/MF/HF+/2 -: Side LF/MF/HF-

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XSL12 cabinet dimensions in mm [inch]

Applications

- Small and medium scale sound reinforcement applications
- Concert halls
- Houses of Worship
- Theaters
- Clubs and live music venues

Features and benefits

- Constant directivity behavior over the entire operating range using cardioid techniques in the lower range
- Exceptional broadband headroom
- Patented SL-Series rigging hardware and method enables rapid deployment of arrays directly from a touring cart in either compression or tension rigging modes
- Requires only two amplifier channels; one channel drives the front facing LF drivers, while the other amplifier channel drives the passively crossed over side firing LF drivers, the MF section and two HF drivers
- ArrayProcessing optimizes the level and tonal balance over the complete audience listening area
- For short arrays where ArrayProcessing is not required, two XSL loudspeakers can be linked and driven in the Line/Arc mode
- Efficient cabling system and amplifier rack assemblies
- Effective transport solutions

Architectural specifications

The loudspeaker system shall consist of two forward 8" LF neodymium drivers in a vented enclosure radiating to the front, two sideward 6.5" LF neodymium drivers, one hornloaded 6.5" midrange driver and two coaxially mounted 1" exit compression drivers with 2" voicecoils coupled to a waveshaping device.

The loudspeaker system shall be 3-way, actively driven between the forward LF drivers and the sideward LF driver with mid/high sections. Passive crossovers shall be used between the sideward LF driver and the mid/high sections.

The loudspeaker shall only be operated by a dedicated, compatible controller amplifier.

The loudspeaker shall produce a cylindrical wave segment suitable for use as an element in a line array and maintain an extremely accurate horizontal dispersion pattern of 120° over its entire operating bandwidth.

The enclosure shall be injection molded (ABS polycarbonate) with an impact resistant and weather protecting 2K finish. The cabinet front and side shall be protected by a perforated steel grill backed with acoustically transparent and water repellent fabric.

Each side panel shall incorporate a handle while on the rear two additional handles shall be provided.

The cabinet shall incorporate a three point rigging system for the assembly of vertical line source arrays of up to 24 cabinets in connection with a dedicated flying frame.

The power handling of the forward LF section shall be 400/1200 W while the power handling of the sideward LF drivers and MF/HF section shall be 300/850 W (RMS/peak 10 ms).

The frequency response (-5 dB) measured on axis shall extend from 60 Hz - 18 kHz with maximum sound pressure level (SPL_{max} peak/1 m) of at least 140 dB. The horizontal dispersion shall be 120°, while the vertical splay angle shall be adjustable in a range of 0° - 14° in 1° increments.

The connection panel on the back shall be recessed and fitted with speakON NLT4 F/M sockets.

The dimensions (W x H x D) shall not exceed 700 x 283 x 507 mm (27.5" x 11.1" x 20") and shall weigh no more than 39 kg (86 lb).

The loudspeaker shall be the XSL12 by:
d&b audiotechnik GmbH & Co. KG.