

The KSL-SUB loudspeaker



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The KSL-SUB is the cardioid subwoofer for the KSL system. It can be used to supplement KSL8 and KSL12 cabinets, either flown or ground stacked.

When the Z5742 Flying frame set is used, KSL-SUB cabinets can be flown as separate SUB columns or in mixed arrays together with KSL-TOP cabinets using the additional Z5747 KSL-SUB Adapter frame.

The cabinet is an actively driven, 2-way bass-reflex design housing three long excursion neodymium 15" drivers. Two drivers face to the front while one driver radiates to the rear of the cabinet.

Front and rear drivers are driven by separate amplifier channels and operate in independent bass reflex chambers. Through its cardioid dispersion pattern, this setup avoids unwanted energy behind the system and greatly reduces the reverberant field at low frequencies providing highest accuracy in low frequency reproduction. The frequency response extends from 36 Hz to 105 Hz (33 Hz to 75 Hz - INFRA mode).

The cabinet enclosure is constructed from marine plywood with an impact and weather protected PCP (Polyurea Cabinet Protection) finish. The front and rear of the cabinet is protected by rigid metal grills. Each side panel incorporates four handles and mounted on the rear panel are four heavy duty wheels.

Two runners extend from the rear to the front panel of each cabinet protecting the bottom panel against scratching. Two correspondingly shaped recesses are incorporated in the top panel of each cabinet to accept these runners and prevent cabinet movement when stacking.

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 D80 amplifier is recommended to drive the KSL-SUB with the appropriate loudspeaker setup selected.

System data

Frequency response (-5 dB standard)	36 Hz - 105 Hz
Frequency response (-5 dB INFRA)	33 Hz - 75 Hz
Max. sound pressure (1 m, free field) with D80	139 dB
..... (SPLmax: Broadband signal IEC 60268)	

Loudspeaker data

Nominal impedance front/rear	4/8 ohms
Power handling capacity front (RMS/peak 10 ms)	900/3500 W
Power handling capacity rear (RMS/peak 10 ms)	500/2000 W
Components	3 x 15" driver
Connections	1 x NLT4 F
Pin assignment	
.....	1+: Front+/1-: Front- /2+: Rear+/2-: Rear-
Optional front splay	0° or 2°
Weight	82 kg (181 lb)

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KSL-SUB cabinet dimensions in mm [inch]

Features and benefits

- INFRA mode frequency range from 33 Hz to 75 Hz
- Cardioid output pattern rejects the transmission of energy towards the rear
- Up to sixteen KSL-SUB cabinets can be flown in a vertical column
- Exceptional efficiency and system headroom
- Efficient cabling system and amplifier rack assemblies

Applications

- Medium and large scale sound reinforcement applications
- Stadiums and arenas
- Concert halls
- Houses of Worship
- Theatres
- Clubs and live music venues

Architectural specifications

The subwoofer system shall incorporate 3 x 15" neodymium LF drivers, two forward and one rear facing driver to produce a cardioid dispersion patterns. The front and rear drivers of the subwoofer shall be driven by separate channels of a dedicated and compatible amplifier, containing loudspeaker specific configurations and algorithms to provide cardioid behavior. The subwoofer shall exhibit extremely low power compression using very large vents.

The enclosure shall be constructed from marine plywood with an impact resistant and weather protecting PCP (Polyurea Cabinet Protection) finish. The cabinet front shall be protected by a perforated steel grill backed with an acoustically transparent foam. Two runners shall extend from the rear to the front panel of the cabinet protecting the bottom panel against scratching. Two correspondingly shaped recesses shall be incorporated in the top panel of each cabinet to accept these runners and prevent cabinet movement when stacking. The cabinet shall incorporate a three point rigging and shall be capable of suspending the subwoofer as pure SUB column or in mixed arrays with dedicated TOP cabinets below the SUB cabinets. A vertical splay of 2° between the front of adjacent SUB cabinets shall be mechanically adjustable.

The power handling of the forward elements shall be 900/3500 W while the power handling of rear facing element shall be 500/2000 W (RMS/peak 10 ms).

The frequency response (-5 dB) measured on axis shall extend from 36 Hz - 105 Hz in standard mode and from 33 Hz - 75 Hz in INFRA mode with a maximum sound pressure level (SPL_{max peak/1 m}) of at least 139 dB.

The connection panel on the back shall be recessed and fitted with one speakON NLT4 F socket.

The dimensions (W x H x D) shall not exceed 1000 x 450 x 1020 mm (39.4" x 17.7" x 40.2") and shall weigh no more than 82 kg (181 lb).

The loudspeaker shall be the KSL-SUB by:
d&b audiotechnik GmbH & Co. KG.