

J-SUB

Manual (1.3EN)



Symbols on the equipment

Please refer to the information in the operating manual.

WARNING!
Dangerous voltage!

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General Information

J-SUB Manual

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Keep this manual with the product or in a safe place so that it is available for future reference.

When reselling this product, hand over this manual to the new customer.

If you supply d&b products, please draw the attention of your customers to this manual. Enclose the relevant manuals with the systems. If you require additional manuals for this purpose, you can order them from d&b.

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Safety precautions



WARNING!

Information regarding use of loudspeakers

Never stand in the immediate vicinity of loudspeakers driven at a high level. Professional loudspeaker systems are capable of causing a sound pressure level detrimental to human health. Seemingly non-critical sound levels (from approx. 95 dB SPL) can cause hearing damage if people are exposed to it over a long period.

In order to prevent accidents when deploying loudspeakers on the ground or when flown, please take note of the following:

When setting up the loudspeakers or loudspeaker stands, make sure they are standing on a firm surface. If you place several systems on top of one another, use straps to secure them against movement.

Only use accessories which have been tested and approved by d&b for assembly and mobile deployment. Pay attention to the correct application and maximum load capacity of the accessories as detailed in our specific "Mounting instructions" or in our "Flying system and Rigging manuals".

Ensure that all additional hardware, fixings and fasteners used for installation or mobile deployment are of an appropriate size and load safety factor. Pay attention to the manufacturers' instructions and to the relevant safety guidelines.

Regularly check the loudspeaker housings and accessories for visible signs of wear and tear, and replace them when necessary.

Regularly check all load bearing bolts in the mounting devices.

CAUTION!

Loudspeakers produce a static magnetic field even if they are not connected or are not in use. Therefore make sure when erecting and transporting loudspeakers that they are nowhere near equipment and objects which may be impaired or damaged by an external magnetic field. Generally speaking, a distance of 0.5 m (1.5 ft) from magnetic data carriers (floppy disks, audio and video tapes, bank cards, etc.) is sufficient; a distance of more than 1 m (3 ft) may be necessary with computer and video monitors.

J-SUB

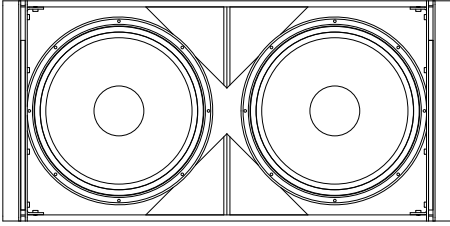


Fig. 1: J-SUB loudspeaker

The J-SUB is the cardioid subwoofer for the J-Series. It can be used to supplement J8 and J12 cabinets in various combinations, either flown or ground stacked. When the J Flying Frame is used J-SUB cabinets can be flown in columns of up to 16 cabinets or inserted on top of a J8/J12 line array column.

The J-SUB cabinet is an actively driven 2-way bass-reflex design housing three long excursion neodymium 18" 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 D12 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.

Its frequency response extends from 32 Hz to 100 Hz.

The J-SUB cabinet is constructed from marine plywood and has an impact and weather protected PCP (Polyurea Cabinet Protection) finish. The front and rear of the loudspeaker cabinet are protected by a rigid metal grill. The side panels incorporate eight handles.

J-Series rigging components

J-Series arrays

Cabinets are mechanically connected using the rigging strands at both sides of the cabinet front and a central strand at the rear of the cabinet. All necessary rigging components are mounted to the cabinet and folded or slid out when needed.

A detailed description of the J-Series rigging components is given in the J-Series Rigging manual which is provided with the J Flying frame.

A detailed description of planning and designing J arrays is given in the technical information "TI 385 J-Series and Q-Series system design, d&b ArrayCalc" which is also provided with the J Flying frame.

The d&b ArrayCalc array calculator can be downloaded from the d&b website at www.dbaudio.com.

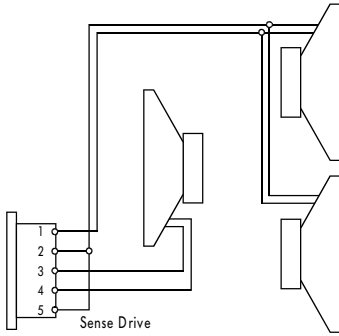


Fig. 2: Connector wiring

CAUTION!

IMPORTANT!

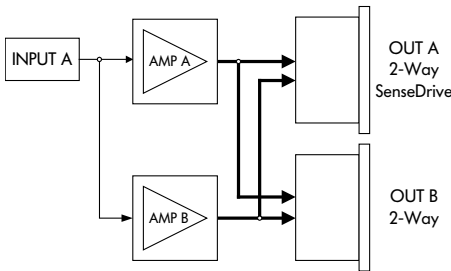


Fig. 3: D12 Input/Output routing 2-Way Active mode

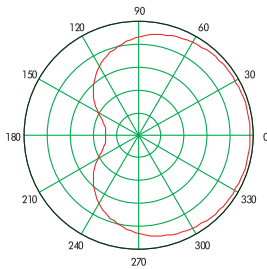


Fig. 4: Cardioid polar pattern

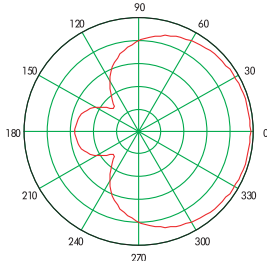


Fig. 5: Hypercardioid polar pattern

Connections

The J-SUB cabinet is fitted with a single EP5 connector. It uses the pin assignments 1/2 for the front drivers. Pins 3/4 drive the rear driver. Pin 5 is used for SenseDrive for the front drivers.

The J-SUB can be supplied with an NL8 connector as an option. Pin equivalents of EP5 and NL8 connectors are listed in the table below.

	LF + Front	LF - Front	LF + Rear	LF - Rear	SenseDrive Front
EP5	1	2	3	4	5
NL8	1+	1-	4+	4-	3-

Operation with D12

Only operate J-SUB loudspeakers with a d&b amplifier configured for the J-SUB, otherwise there is a risk of damaging the loudspeaker components.

When "2-Way Active" and J-SUB mode are selected, the D12 amplifier drives a single J-SUB cabinet.

The input signal is fed to INPUT A, while the input signal is routed (linked) to INPUT B internally.

To enable SenseDrive the loudspeaker cabinet has to be connected to output A of the D12 amplifier.

In its standard mode the J-SUB can be used as subwoofer for the d&b J- and Q-Series systems (CUT mode). In this mode the two channels of the system are tuned to create a cardioid dispersion pattern thus providing maximum rejection to the rear. It can be used in flown or stacked combinations with a minimum distance of 60 cm (2 ft) between adjacent columns of cabinets.

Controller settings

INFRA circuit

If the INFRA circuit is selected, the upper operating frequency of the system is reduced from 100 Hz to 70 Hz. The J-SUB can now be used to supplement d&b J- and Q-Series systems operated in full range mode.

HCD circuit

Selecting HCD (Hypercardioid) optimizes the tuning of front and rear channels for a maximum rejection at the left and right sides behind the cabinet providing a hypercardioid dispersion pattern. This characteristic is particularly useful for a setup with subwoofers stacked at the left and right sides of a stage providing minimum interference onstage.

HCD mode can be used either freely radiating or in front of walls. The minimum distance to rear walls is provided by the wheels on the cabinet back. Even in HCD mode adjacent columns of J-SUBs have to be at least 60 cm (2 ft) apart.

Technical specifications

J-SUB system data

Frequency response (-5 dB standard).....32 Hz ... 100 Hz
 Frequency response (-5 dB INFRA mode).....32 Hz ... 70 Hz
 Max. sound pressure (single cabinet, 1 m, free field).....138 dB
 (SPLmax peak with music program)

J-SUB loudspeaker

Nominal impedance front/rear.....4/8 ohms
 Power handling capacity front (RMS / peak 10 ms).....800/3200 W
 Power handling capacity rear (RMS / peak 10 ms).....400/1600 W
 Components.....3 x 18" driver
 Connections.....1 x EP5
(optional 1 x NL8)

Pin assignments

EP5.....1: Front+/2: Front-/3: Rear+/4: Rear-/5: SenseDrive front
 NL8.....1+: Front+/1-: Front-/4+: Rear+/4-: Rear-/3-: SenseDrive front
 Weight.....106 kg (234 lb)

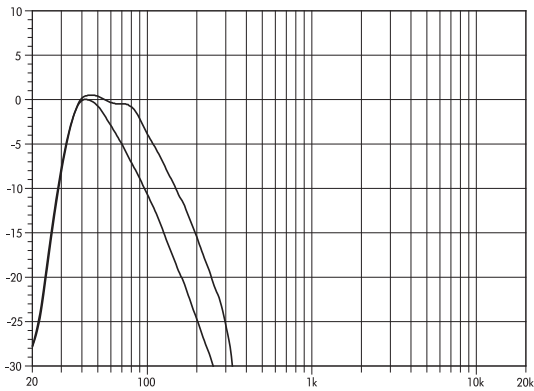


Fig. 6: J-SUB frequency response, standard and INFRA settings

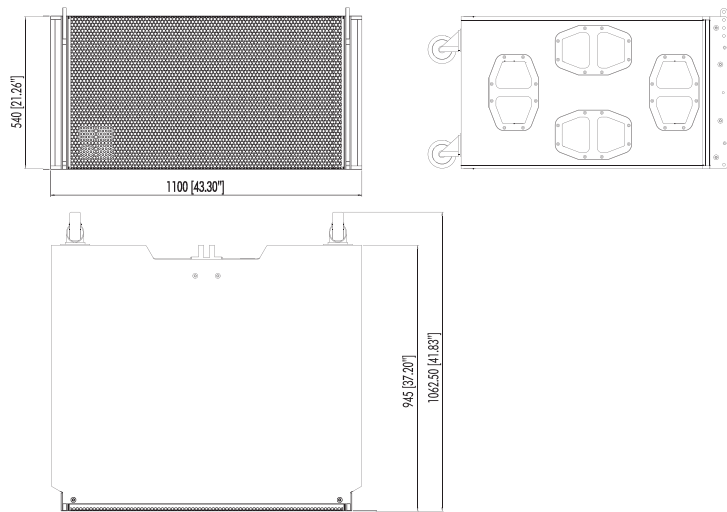


Fig. 7: J-SUB cabinet dimensions in mm [inch]

Manufacturer's Declarations



EU conformity of loudspeakers (CE symbol)

This declaration applies to

- **J-SUB loudspeaker** **Z0660**

manufactured by d&b audiotechnik GmbH.

All production versions of this type are included, provided they correspond to the original technical version and have not been subject to any later design or electromechanical modifications.

We herewith declare that said products are in conformity with the provisions of the respective EC directives including all applicable amendments.

A detailed declaration is available on request and can be ordered from d&b or downloaded from the d&b website at www.dbaudio.com.

WEEE Declaration (Disposal)

Electrical and electronic equipment must be disposed of separately from normal waste at the end of its operational lifetime.

Please dispose of this product according to the respective national regulations or contractual agreements. If there are any further questions concerning the disposal of this product please contact d&b audiotechnik.

