E12-SUB

Manual (4.0E)

d&b audiotechnik

References in the manual

WARNING! **This refers to a potentially dangerous situation which may lead to personal injury.**

CAUTION! **This refers to a potentially dangerous situation which may lead to damage to the equipment.**

IMPORTANT! **This refers to a situation which may cause the equipment to malfunction.**

Symbols on the equipment



Please refer to the information in the operating manual.



WARNING!
Dangerous voltage!

General Information

E12-SUB Manual

Version 4.0E, 10/2003, D2073.E.04

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The information contained in this manual has been carefully checked for accuracy, at the time of going to press, however no guarantee is given with respect to the correctness.

d&b audiotechnik AG accepts no responsibility for any errors or inaccuracies that may appear in this manual or the products and software described in it.

Technical specifications, dimensions, weights and properties do not represent guaranteed qualities.

As manufacterers we reserve the right to make alterations and modifications within the framework of legal provisions, as well as changes aimed at improving quality.

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Safety precautions

Before you use our products, read the manual carefully and observe all the safety precautions. They will protect you and help to avoid equipment failures.

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

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

Information regarding use of loudspeakers

WARNING!

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.

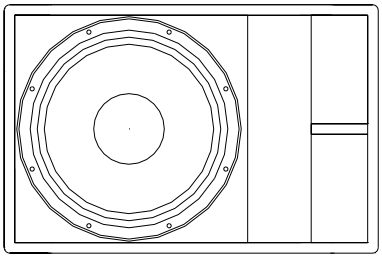
Regularly check the loudspeaker housings and accessories for visible signs of wear and tear, and replace them when necessary.

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.

E12-SUB



The E12-SUB is a compact bass-reflex design employing a high excursion 12" driver. The large, specially shaped reflex port enables the E12-SUB to achieve high sound pressure levels with minimal power compression and breathing effects.

The E12-SUB cabinet is constructed from marine plywood and has an impact resistant paint finish. The front of the loudspeaker cabinet is fitted with a rigid metal grill covered with a replaceable acoustically transparent foam. The cabinet incorporates a steel handle in one side and on the top panel is an M20 threaded flange to accept the Z5013 Loudspeaker stand for the deployment of a single cabinet weighing 10 kg (22 lb) or less.

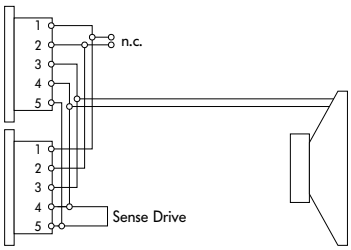
WARNING!

To ensure sufficient stability the maximum permissible weight of the cabinet mounted on top of the loudspeaker stand must not exceeded 10 kg (22 lb).

CAUTION!

Only operate E12-SUB subwoofers with a d&b D12 or E-PAC amplifier in E12-SUB mode, otherwise there is a risk of damaging the loudspeaker components.

Connections



Connector wiring

The E12-SUB cabinet is fitted with a pair of EP5 connectors. All pins of both connectors are wired in parallel.
The E12-SUB uses the pin assignments 3/4 and 5 (Pin 5: SenseDrive - D12 only and in conjunction with 5-wire cables).
Pins 1/2 are designated to d&b full range systems.

Using one connector as the input, the second connector allows for direct connection to additional cabinets.

The E12-SUB can be supplied with NL4 output connectors as an option using the pin assignment 2+/2–. Pins 1+/1– are designated to d&b full range systems.

Pin equivalents of EP5 and NL4 connectors are listed in the table below.

EP5	1	2	3	4	5 (SenseDrive SUB)
NL4	1+	1–	2+	2–	n.c.

EP5 and NL4 pin assignments

Operation with D12

Selecting E12-SUB mode in the D12 enables up to two E12-SUB cabinets to be driven by each channel. In applications with low continuous levels and low ambient temperatures up to three cabinets per channel may be connected.

When the D12 is operated in "Mix TOP/SUB" mode E12-SUB cabinets and respective full range systems can be linked together locally and fed by a single 4-wire cable from either amplifier output connector.

IMPORTANT!

To apply SenseDrive for the subwoofer, EP5 connectors and 5-wire cables have to be used. When operated in "Mix TOP/SUB" mode subwoofers have to be fed from the output B connector of the D12 amplifier.

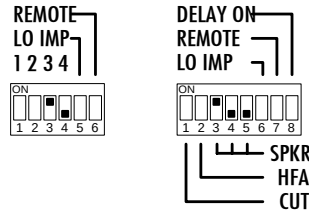
Controller settings

For acoustic adjustment the 140 Hz setting can be selected.

140 Hz

If the 140 Hz setting is selected, the upper operating frequency of the system is increased from 120 Hz to 140 Hz. This setting allows the E12-SUB to operate with up to four E0 loudspeakers.

Operation with E-PAC



E-PAC version 1, E-PAC version 2
E-PAC Configuration for E12

To drive E12-SUB cabinets the E-PAC has to be configured to E12-SUB mode.

For an E-PAC version 1 or 2, the configuration is selected by setting the appropriate DIP switches on the rear panel. The configuration E12-SUB on E-PAC version 2 is identical to configuration SUB on E-PAC version 1.

For an E-PAC version 3, the configuration is set via the encoder in conjunction with an LCD. Selecting E12-SUB mode enables a single E12-SUB cabinet to be driven at an output power of 300 Watts. We do not recommend that two E12-SUB cabinets are driven in LO IMP mode as the 6 dB reduction in input level to the loudspeakers results in no gain in acoustical output.

The 140 Hz setting is available on version 3 (Firmware version 3.13 and higher). The characteristics of the 140 Hz setting is explained under the previous section "Operation with D12 - Controller settings".

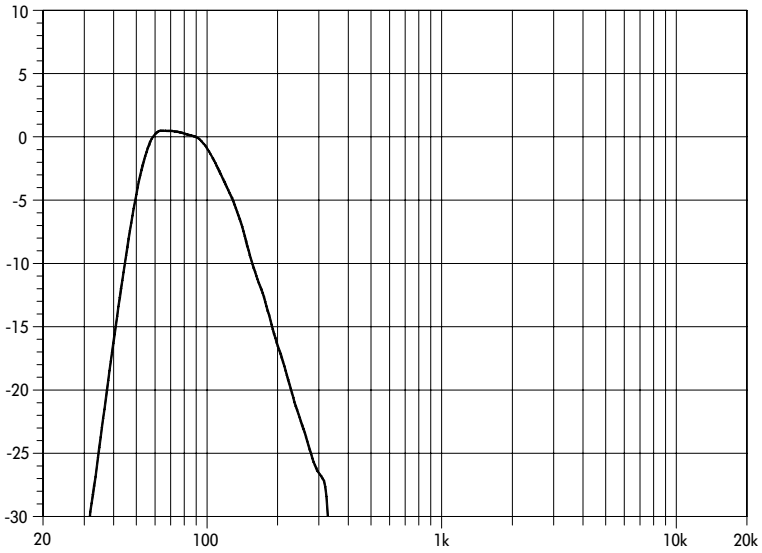
Technical specifications

E12-SUB system data

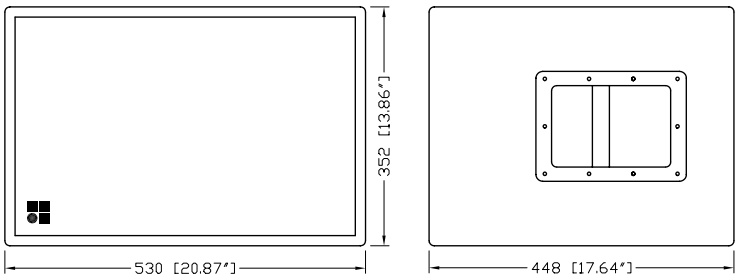
Frequency response (–5 dB) ..... 50 Hz - 120 Hz
Max. sound pressure (1 m, free field) with D12 ..... 129 dB
Max. sound pressure (1 m, free field) with E-PAC ..... 125 dB
(SPLmax peak, pink noise test signal with crest factor of 4)
Input level (100 dB SPL / 1 m) ..... –8 dBu
Polarity to controller INPUT (XLR pin 2: + / 3: –) ..... LF: +

E12-SUB Subwoofer

Nominal impedance ..... 8 ohms
Power handling capacity (RMS / peak 10 ms) ..... 200 / 800 W
Connections ..... 2 x EP5
Pin assignments ..... 3/4 and 5 (Pin 5: SenseDrive - D12)
optional ..... 2 x NL4
Pin assignments ..... 2+ / 2–
Weight ..... 20 kg (44 lb)



E12-SUB frequency response



E12-SUB cabinet dimensions in mm [inch]

EU declaration of conformity (CE symbol)

CE

EU conformity of loudspeakers

This declaration applies to loudspeakers manufactured by d&b audiotechnik AG and includes the types listed in the table below:

– **E12-SUB Z0200**

All production versions of these types 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 following EC directives including all applicable amendments:

– **89/336 Electromagnetic Compatibility**

The following standards have been applied:

– **DIN EN 55013:08-1991**
– **DIN EN 55020:05-1995**
– **DIN EN 50082-1:03-1993**

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