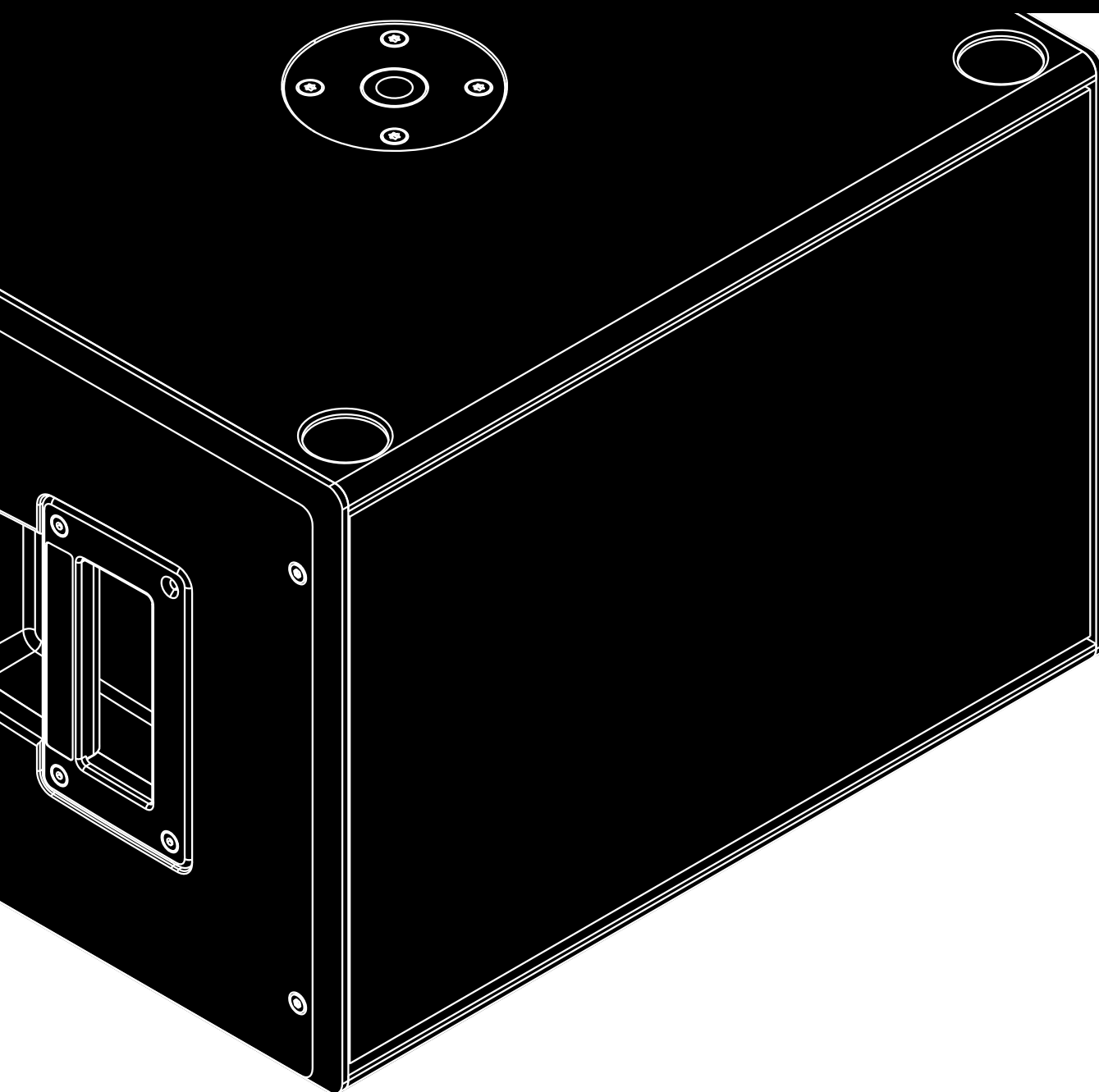


# E

## E12X-SUB Manual 5.2 en



## **General information**

E12X-SUB Manual

Version: 5.2 en, 10/2018, D2073.EN .05

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

We recommend you to regularly check the d&b website for the latest version of this document.

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

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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## 1.1 Information regarding the use of loudspeakers

### Potential risk of personal injury

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.

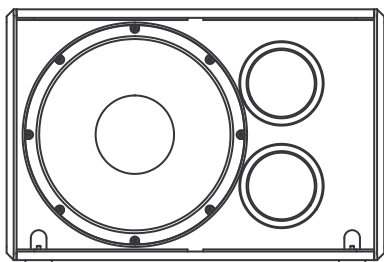
In order to prevent accidents when deploying loudspeakers on the ground or when flown, please take note of the following:

- 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.

### Potential risk of material damage

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.

## 2 E12X-SUB loudspeaker



### 2.1 Product description

The E12X-SUB is a compact, high performance subwoofer for use with d&b E-Series loudspeakers. The cabinet houses a long excursion 12" neodymium driver in a bass-reflex design.

It can be operated actively, driven by its own amplifier channel, without the need for any changes to the cabinet. In active mode, the E12X-SUB can be used to supplement any of the E-Series cabinets.

Its frequency response extends from 45 Hz to 100/140 Hz.

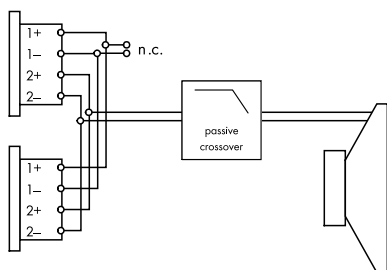
Due to the built-in passive crossover network the E12X-SUB can be operated in parallel to E8 loudspeakers from one amplifier channel, greatly extending the low frequency headroom and bandwidth of the systems.

The enclosure is constructed from marine plywood with an impact resistant black paint finish. The front of the cabinet is protected by a rigid metal grill backed by an acoustically transparent foam. Four rubber feet prevent cabinet movement and protect the bottom panel against scratching. Correspondingly shaped recesses in the top panel of the cabinet prevent cabinet movement when stacking E12X-SUBs.

The cabinet incorporates a handle and an M20 threaded flange in the top panel that accepts the d&b Z5013 Loudspeaker stand for the deployment of E8 or other applicable d&b full range cabinets.

### Cabinet options

The special color (SC) version of the cabinet is available in all colors of the RAL color table. The connector type is NL4.



NLT4 F/M connector wiring

### 2.2 Connections

The cabinet is fitted with NLT4 F/M connectors. All four pins of both connectors are wired in parallel. It uses the pin assignments 2+/2-. Pins 1+/1- are designated to TOP cabinets. Using one as the input, the second connector allows for direct connection to a second cabinet.

Pin equivalents of the connector options are listed in the table below.

NLT4 F/M NL4 M	1+	1-	2+	2-	n.a.
EP5	1	2	3	4	5 (SenseDrive)

### d&b LoadMatch

With the d&b four channel amplifier platform, the LoadMatch function enables the amplifier to electrically compensate for the properties of the loudspeaker cable used without the need for an additional sense wire. For applicable loudspeakers, LoadMatch is therefore independent of the connector type used.

### d&b SenseDrive

The SenseDrive feature within D12 amplifiers enables electrical compensation for the properties of the loudspeaker cable used. SenseDrive requires an additional sense wire. SenseDrive is therefore only available with EP5 connectors and 5-wire cabling for applicable loudspeakers.

**Note:** When the D12 is operated in "Mix TOP/SUB mode", the SenseDrive function is only available at the output B connector.

### **WR option (Weather Resistance)**

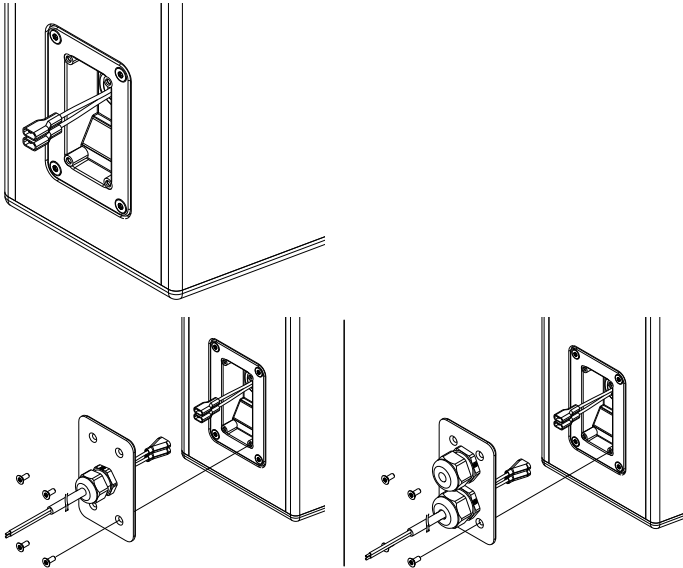
WR cabinets are equipped with a recessed connector panel including a Faston type connector (2 x 6,3 mm, female). A cover plate which accepts single or dual PG cable glands (Type PG13.5 for cable diameters from 6 - 12 mm) is enclosed, as shown in the graphic opposite.

To install the fixed connection cable, please proceed as follows:

**Tools required:** Screw driver (T20).

**Note:** Observe the correct polarity of the cable  
Brown (+) / Blue (-).

1. Insert the connection cable through the PG screwing and connect the male connector to the female connector.
2. Push the cover plate towards the connector panel until it fits into place.
3. Fix the cover plate to the connector panel using the four countersunk screws.



### **2.3 Operation**

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#### **NOTICE!**

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

#### **Applicable d&b amplifiers:**

D80/D20/D12/D6/10D/30D.

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**Tab. 1: Standard operation**

<b>Application</b>	<b>Setup</b>	<b>Cabinets per channel</b>
<b>E12X-SUB</b>	E12-SUB	2

Within applicable d&b amplifiers, the controller setup is available in Dual Channel or Mix TOP/SUB mode.

**Tab. 2: Passive operation**

<b>Application</b>	<b>Setup</b>	<b>Combination per channel</b>
<b>E12X-SUB</b> with <b>E8</b>	E8-X	3

In Dual Channel mode, the "X" setup can be selected to drive the cabinet in combination with the E8 loudspeaker on the same channel.

The setup provides a dedicated correction for the combined frequency response of the system.

### **2.3.1 Controller settings**

For acoustic adjustment the 140 Hz mode can be selected.

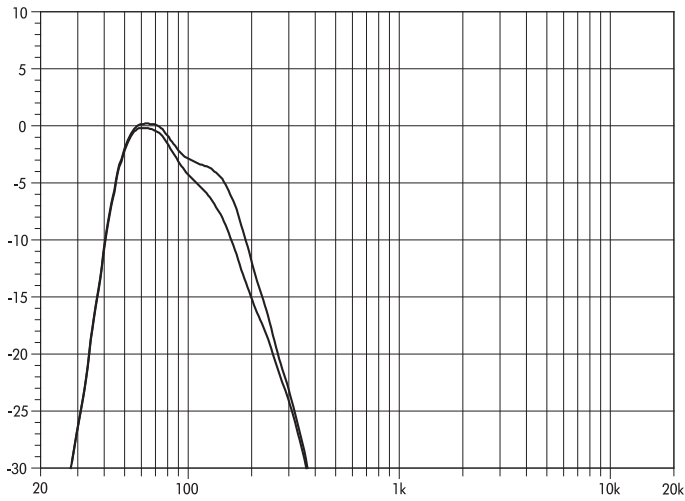
#### **140 Hz mode**

If the 140 Hz mode is selected, the upper frequency of the system is raised from 100 Hz to 140 Hz. It can be used to supplement E-Series cabinets in CUT mode when the coupling of the systems requires more energy in this frequency band.

### **2.3.2 Operation with E-PAC**

Selecting E12-SUB mode enables the E-PAC to drive one E12X-SUB loudspeaker.

The 140 Hz mode is available. The characteristics of the 140 Hz mode are explained in the previous section.



**E12X-SUB frequency response, standard and 140 Hz modes**

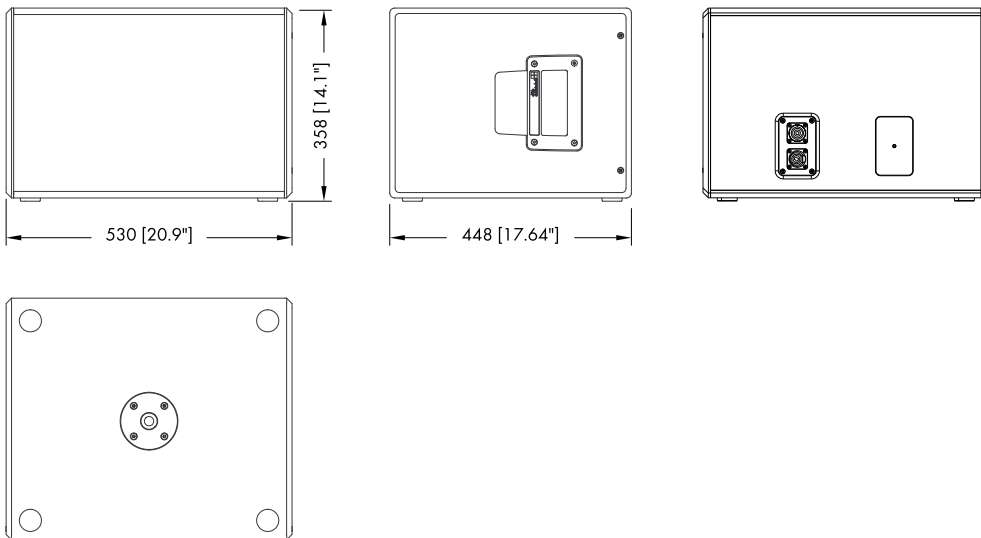
## 2.4 Technical specifications

### E12X-SUB system data

Frequency response (-5 dB standard) .....	45 Hz - 100 Hz
Frequency response (-5 dB 140 Hz mode) .....	45 Hz - 140 Hz
Max. sound pressure (1 m, free field) .....	.....
with D6/10D/E-PAC .....	124 dB
with D12/D20/30D .....	127 dB
with D80 .....	127 dB
.....	(SPLmax peak, pink noise test signal with crest factor of 4)

### E12X-SUB loudspeaker

Nominal impedance .....	8 ohms
Power handling capacity (RMS/peak 10 ms) .....	300/1600 W
Components .....	1 x 12" driver
.....	Passive crossover network
Connections .....	2 x NLT4 F/M
.....	optional: 2 x EP5
.....	SC option: 2 x NL4 M
....WR option: Fixed cable 5.5 m / 18 ft (H07-RN-F 2 x 2.5 mm <sup>2</sup> /AWG 13)	
Pin assignments .....	NLT4 F/M and NL4 M: 2+ / 2-
.....	EP5: 3:+ / 4:-, SenseDrive pin 5
.....	Fixed cable: Brown + / Blue -
Weight .....	18 kg (40 lb)



**E12X-SUB cabinet dimensions in mm [inch]**





### 3.1 EU conformity of loudspeakers (CE symbol)

This declaration applies to:

#### **d&b E12X-SUB loudspeaker, Z0210**

manufactured by d&b audiotechnik GmbH.

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 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](http://www.dbaudio.com).

#### **3.1.1 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.



