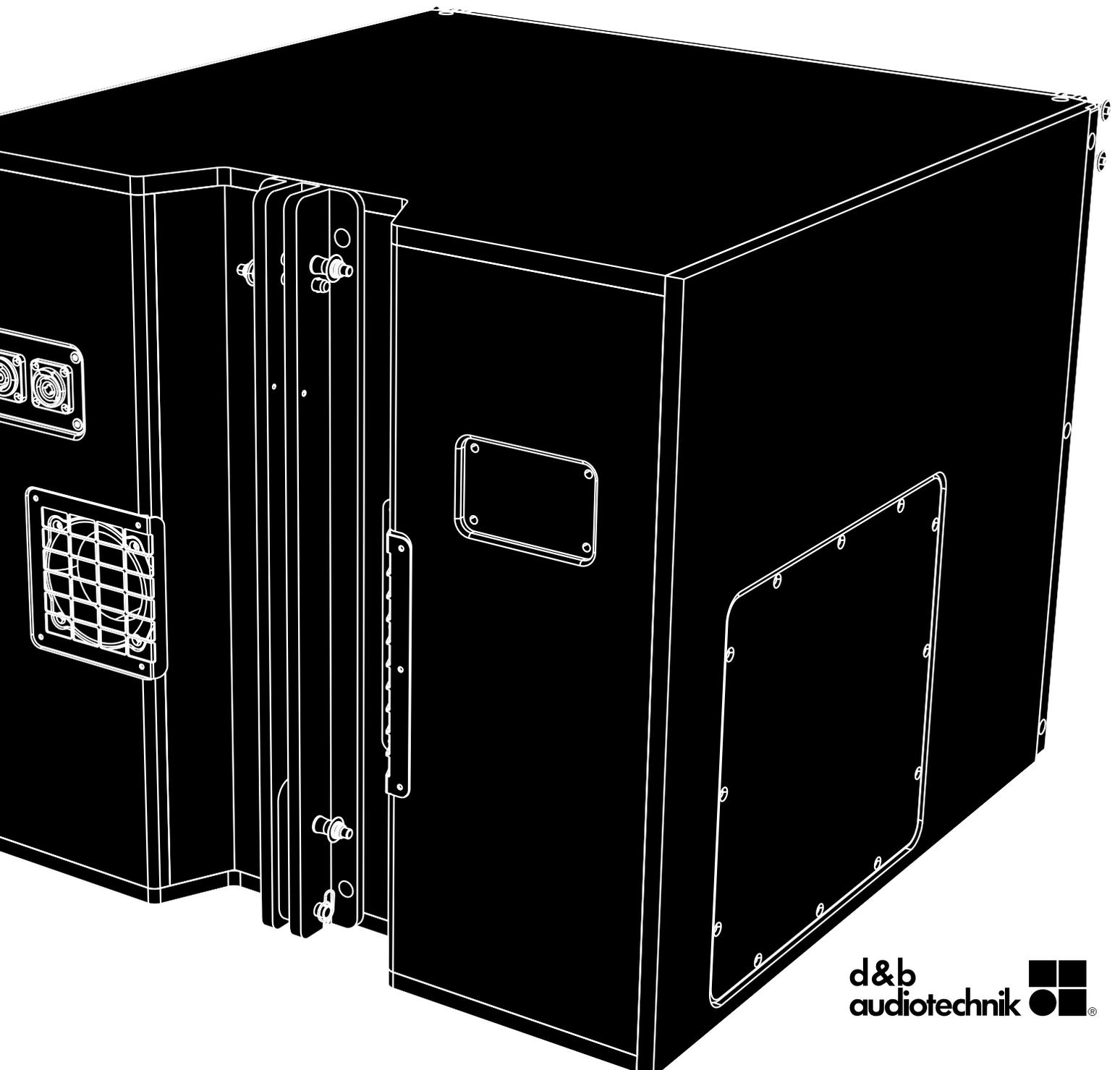


# V

## Vi-SUB Manual 1.4 en



## **General information**

Vi-SUB Manual

Version: 1.4 en, 10/2018, D2707.EN .01

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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.

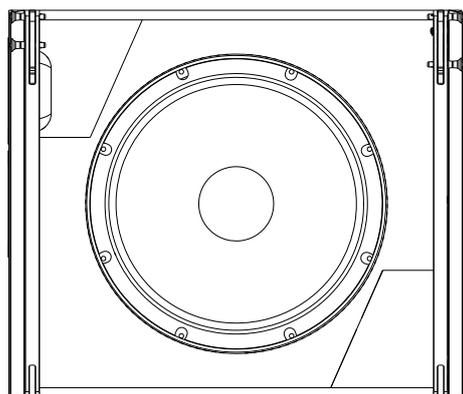
In order to prevent accidents when deploying loudspeakers on the ground or when flown, please take note of the following:

- 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.

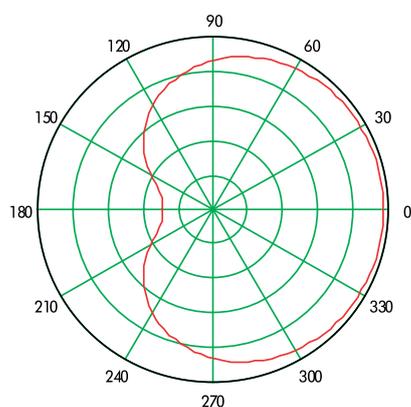
### Potential risk of material damage

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 Vi-SUB loudspeaker



Vi-SUB loudspeaker



Cardioid dispersion pattern

### 2.1 Product description

The Vi-SUB is a compact high performance cardioid subwoofer for use with d&b Vi-TOP cabinets.

The Vi-SUB houses two long excursion neodymium drivers in an integrated cardioid setup: a 18" driver in a bass-reflex design facing to the front and a 12" driver in a two chamber bandpass design radiating to the rear. The arrangement and tuning provide a cardioid dispersion pattern using a single amplifier channel.

Its frequency response extends from 37 Hz to 115/95 Hz.

The cabinet is constructed from marine plywood and has an impact and weather protected PCP (Polyurea Cabinet Protection) finish. The front of the loudspeaker cabinet is protected by a rigid metal grill backed by an acoustically transparent foam.

### Vi rigging components and arrays

Cabinets are mechanically connected using the rigging strands on 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 fold out or slide out when needed. The rigging components are also intended to interconnect and secure Vi-SUB cabinets in ground stack applications.

A detailed description of the Vi rigging components is given in the Vi Rigging manual which is provided with the Z5387.xxx Mounting frames.

A detailed description of planning and designing V arrays is given in the technical information "TI 385 d&b Line array design, ArrayCalc" which is provided with the V Flying frame.

The d&b ArrayCalc simulation software can be downloaded from the d&b website at [www.dbaudio.com](http://www.dbaudio.com).

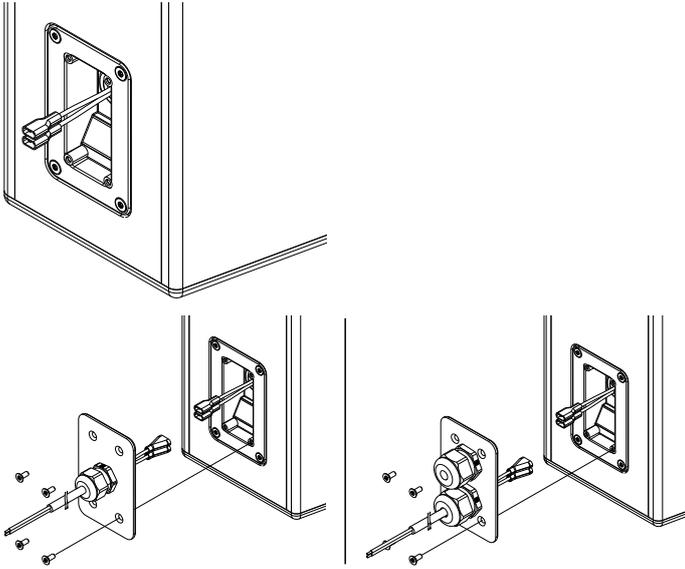
### Cardioid dispersion

Cardioid dispersion avoids unwanted energy behind the system and greatly reduces the reverberant field at low frequencies providing highest accuracy in low frequency reproduction. The subwoofers can be used as stand-alone solutions or in stacked combinations with a minimum distance of 60 cm (2 ft) between adjacent cabinets or between the cabinets and a side wall. When set up in front of walls, the minimum distance to rear walls should be 30 cm (1 ft).

### 2.2 Connections

The cabinet is fitted with a pair of NL4 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 the Vi8 or Vi12 loudspeakers. Using one connector as the input, the second connector allows for direct connection to a second cabinet.

NL4 M	1+	1-	2+	2-



**Faston type connector, male single PG (standard), dual PG (optional)**

### WR option (Weather Resistance)

A number of d&b loudspeakers are available in special options suitable for different types of installed applications and environmental conditions. The following options are available:

- Weather resistant (WR): This option is suitable for outdoor use. The cabinets have an impact and weather protected black PCP (Polyurea Cabinet Protection) finish.

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.

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### NOTICE!

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The WR option enables operation of loudspeakers in changing ambient conditions, however it is not intended to enable permanent, unprotected operation of loudspeakers outdoors.

- Provide an additional cover over the loudspeakers.
  - Aim the cabinets either horizontally or with a downward tilt.
- 

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

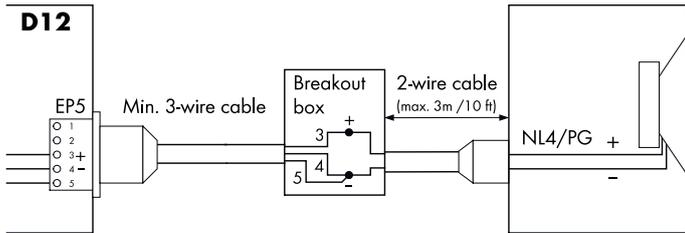
**Tools required:** Screw driver (#T20).

**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.

### d&b LoadMatch

Starting with the D80 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.

In permanent installations, SenseDrive can also be applied to cabinets with NL4 connectors or the fixed cable option (PG). The connection of the negative signal wire (EP5 pin 4 of the respective D12 output) to the SenseDrive wire (EP5 pin 5 of respective D12 output) is made in a breakout box close to the loudspeaker cabinet. For an uncompromising SenseDrive performance the connection should be done not more than 3 m (10 ft) away from the loudspeaker.

## 2.3 Operation

### NOTICE!

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:

30D/D12/D20/D80.

Application	Setup	Cabinets per channel
<b>Vi-SUB</b>	V-SUB	2

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

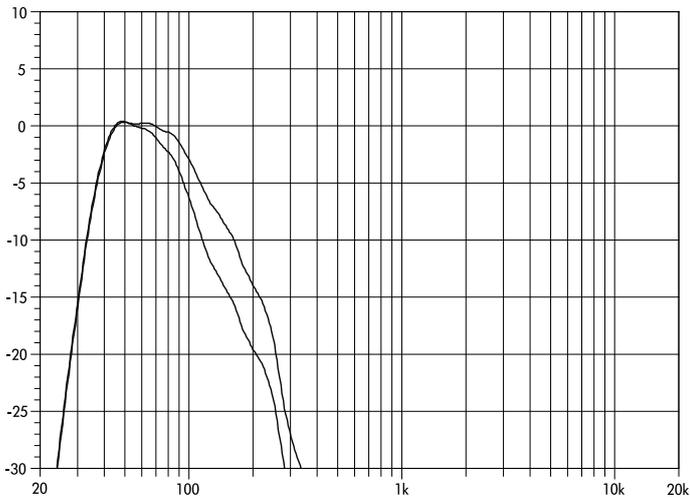
### 2.3.1 Controller settings

For acoustic adjustment the 100 Hz mode can be selected.

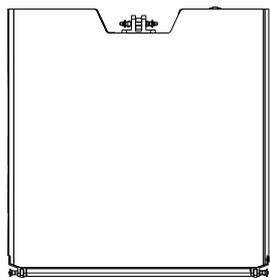
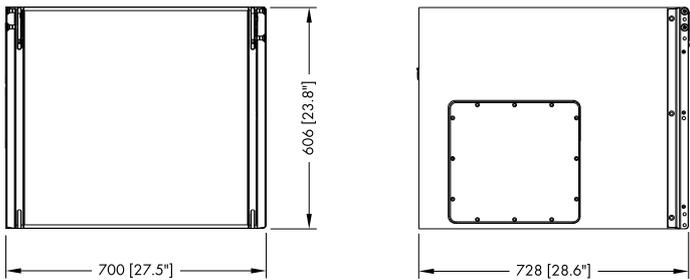
#### 100 Hz mode

With the 100 Hz mode selected, the upper operating frequency of the system is reduced from 115 Hz to 95 Hz.

It can be used when actively driven Vi subwoofers are used to supplement Vi cabinets operated in full range mode. The 100 Hz mode can also be used to compensate for the effect of close coupling between the Vi-SUB and Vi cabinets operated in CUT mode. With Ti cabinets the standard mode is recommended.



**Vi-SUB frequency response, standard and 100 Hz mode**



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

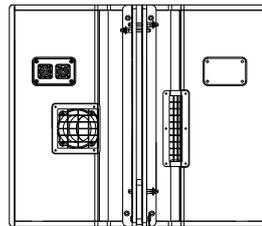
## 2.4 Technical specifications

### Vi-SUB system data

Frequency response (-5 dB standard) .....	37 Hz - 115 Hz
Frequency response (-5 dB 100 Hz mode) .....	37 Hz - 95 Hz
Max. sound pressure (1 m, free field) .....	.....
with D12/D20/30D .....	133 dB
with D80 .....	137 dB
.....	.....(SPLmax peak, pink noise test signal with crest factor of 4)

### Vi-SUB loudspeaker

Nominal impedance .....	8 ohms
Power handling capacity (RMS/peak 10 ms) .....	800/3200 W
Components .....	1 x 18" driver
.....	1 x 12" driver
Connections .....	2 x NL4 M
.....	WR option: Faston type connector (2 x 6.3mm)
Pin assignment .....	NL4 M: 2+ / 2-
.....	WR option: Brown: (+) / Blue: (-)
Weight .....	62 kg (137 lb)





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

This declaration applies to:

#### **d&b Z0538 Vi-SUB loudspeaker**

manufactured by d&b audiotechnik GmbH & Co. KG.

All product variants 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).

### 3.2 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.

**WEEE-Reg.-Nr. DE: 13421928**

