

B2-SUB

Manual (3.1 EN)



Symbols on the equipment

Please refer to the information in the operating manual.

WARNING!
Dangerous voltage!

Contents

Safety precautions.....	3
Information regarding use of loudspeakers.....	3
B2-SUB.....	4
Connections.....	4
Operation with D12.....	5
Operation with A1.....	6
Technical specifications.....	7
Manufacturer's declarations.....	8
EU conformity of loudspeakers (CE symbol).....	8
WEEE Declaration (Disposal).....	8

General Information

B2-SUB Manual

Version 3.1 EN, 07/2008, D2091.E .03

Copyright © 2008 by d&b audiotechnik GmbH; all rights reserved.

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

When reselling this product, handout 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.

d&b audiotechnik GmbH
Eugen-Adolff-Strasse 134, D-71522 Backnang, Germany
Telephone +49-7191-9669-0, Fax +49-7191-95 00 00
E-mail: docadmin@dbaudio.com, Internet: www.dbaudio.com

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.

B2-SUB

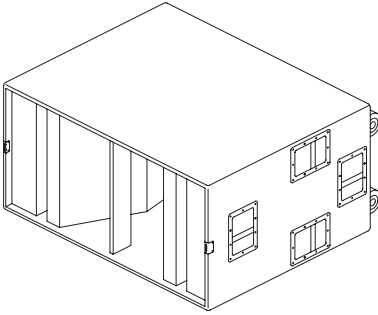


Fig. 1: B2-SUB

The B2-SUB is an actively driven subwoofer which uses a pair of 18" LF drivers mounted in a bandpass horn cabinet.

The B2-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, and fitted with catches to the top and bottom for securing an optional transport lid E7911. The cabinet incorporates four steel handles and on the rear panel, four heavy duty wheels.

NOTICE: Only operate B2-SUB loudspeakers with a correctly configured d&b amplifier, otherwise there is a risk of damaging the loudspeaker components.

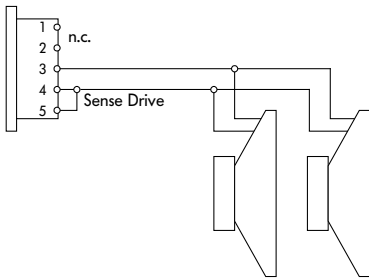


Fig. 2: Connector wiring

Connections

The B2-SUB cabinet is fitted with a single EP5 connector and uses the pin assignments 3/4 and 5 (Pin 5: SenseDrive - D12 in conjunction with 5-wire cables). The B2-SUB can be supplied with a single NL8 connector as an option.

Pin equivalents of EP5 and NL8 connectors are listed in the table below.

The B2-SUB can be supplied with a single CACOM connector as an option to drive the B2-SUB cabinet with the d&b A1 mainframe. SenseDrive is also available when the B2-SUB is driven by the A1 mainframe.

EP5	1	2	3	4	5 (SenseDrive)
NL8	/	/	1+	1-	3- (SenseDrive)

Operation with D12

Select the controller setup B2-SUB.

This is available in "Dual Channel" and "Mix TOP/SUB" mode and enables a single B2-SUB cabinet to be driven by the respective channel.

Controller settings

In standard mode the B2-SUB can be used as subwoofer for the d&b C- and Q-Series systems (CUT mode). The upper cut-off frequency of 100 Hz (like Q-SUB) is lower than the cut-off frequency of an A1 mainframe with B2 Controller, which was tuned for the use with the d&b F2 system.

INFRA

Selecting the INFRA switch restricts the B2 frequency response to a narrow, 32 Hz – 68 Hz range (-5 dB). This transforms a B2 into an infrabass system for use with d&b C- and Q-Series loudspeakers.

CSA

CSA (Cardioid Subwoofer Array) is a method to combine three or multiples of three subwoofer cabinets to form an array with exceptional directivity at low frequencies.

A B2-SUB cabinet driven in CSA mode eliminates the energy radiated to the rear of the two front radiating B2-SUB cabinets (CSA not selected).

CSA decreases the low end diffuse sound field, significantly improving the direct-to-diffuse energy ratio in the audience areas.

Please note that all other settings of the amplifiers driving a CSA have to be identical (input signal, level, INFRA, EQ, delay). Do not use this mode with any other configuration of B2-SUB systems.

Please refer to d&b TI 330 (d&b code D5330.E), which describes the setup in detail. The TI can be downloaded from the d&b website at www.dbaudio.com.

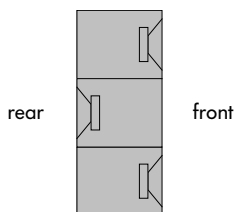


Fig. 3: CSA Stack (Example)

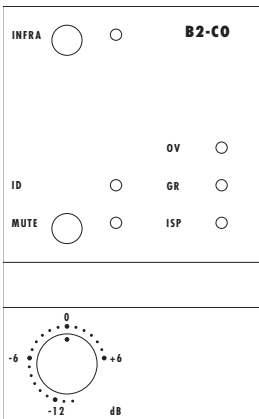


Fig. 4: Controls on B2-SUB controller module

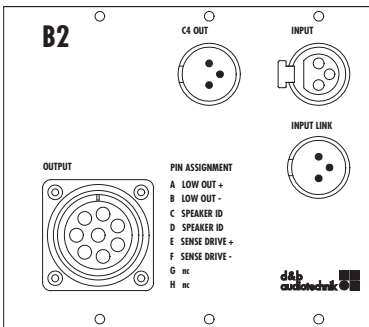


Fig. 5: B2-SUB controller rear panel

Operation with A1

One B2-SUB cabinet can be driven by a single A1 mainframe fitted with a B2-SUB controller module.

In standard mode the A1/B2 system is dedicated for the use with d&b F2 systems.

INFRA

The INFRA setting is available. The characteristics of the INFRA setting are explained in the previous section "Operation with D12 - Controller settings".

Controller module rear panel

A single 8 pin CACOM output socket is fitted to the module rear panel. An additional balanced XLR output marked C4-OUT is also provided on the module rear panel. The C4-OUT signal can be used to drive C4-SUB controller inputs when a B2 is used as an infrabass system for C4-SUBs. In case of a power or mainframe failure, a bypass relay in the B2 controller module connects the pins of the C4-OUT socket directly to those of the module INPUT socket allowing the continued operation of the C4-SUB and TOP cabinets.

Technical specifications

B2-SUB system data (standard/INFRA)

Frequency response (-5 dB) D12.....	37 Hz - 100 Hz / 32 Hz - 68 Hz
Frequency response (-5 dB) A1.....	37 Hz - 125 Hz / 32 Hz - 68 Hz
Max. sound pressure (1 m, full space) D12 or A1.....	139 dB / 136 dB (SPLmax peak, test signal pink noise with crest factor 4)
Input level for 100 dB SPL / 1 m.....	-20 dBu / -19 dBu

B2-SUB subwoofer

Nominal impedance.....	4 ohms
Power handling capacity (RMS / peak 10 ms).....	600 / 2400 W
Connections.....	1 x EP5
Pin assignments.....	3/4 and 5 (Pin 5: SenseDrive - D12)
optional.....	1 x CACOM Pin assignments printed on the controller module rear panel
Weight.....	102 kg (225 lb)

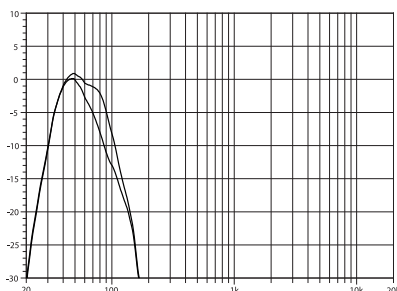


Fig. 6: B2-SUB frequency response, standard and INFRA mode

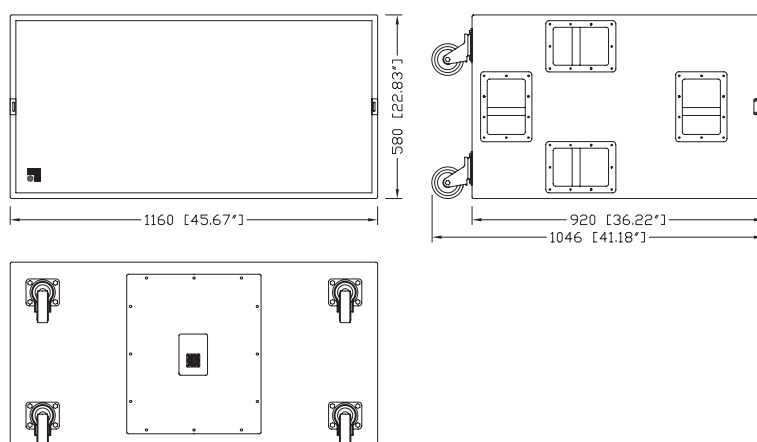


Fig. 7: B2-SUB cabinet dimensions in mm [inch]

Manufacturer's declarations



EU conformity of loudspeakers (CE symbol)

This declaration applies to

- B2-SUB Z0056

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.