

# **B2-SUB**

## **Data Sheet**

## **Safety precautions**

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 loading capacity of the accessories as specified in our "Rigging accessories" manual.

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.

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.

**WARNING!**

**CAUTION!**

## **General Information**

B2-SUB Data Sheet

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The information presented in this document is, to the best of our knowledge, correct. We will however not be held responsible for the consequences of any errors or omissions.

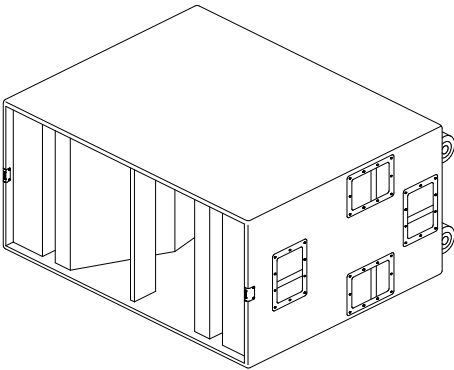
Technical specifications, weights and dimensions should always be confirmed with d&b audiotechnik AG prior to inclusion in any additional documentation.

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## 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 cabinet is constructed from marine plywood coated with an impact resistant paint. Fitted each side of the cabinet sides are four recessed handles and, on the rear panel, four heavy duty wheels. On the front is a rigid steel grill with a replaceable acoustically transparent foam cover. Catches to secure an optional protective transport cover are also fitted to the top and bottom front edges of the cabinet.

The width and height of the B2-SUB front panel is identical to that of two side-by-side C4 cabinets making it particularly easy to stack an array of B2-SUBs and C4 cabinets. The B2-SUB can be operated standing vertically or placed on its side horizontally.

The frequency response of the B2-SUB extends from 37 Hz to 125 Hz (-5 dB) with a peak sound pressure level of 139 dB-SPL. The B2 system is therefore ideal for use with the F2 system to provide high SPL coverage in large venues.

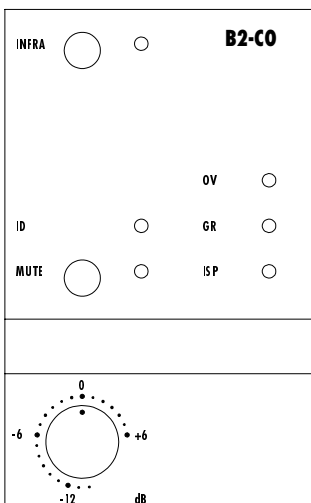
### B2-CO - Controls & indicators

#### INFRA switch and indicator

A single configuration switch (INFRA) is located on the top left of the module front panel. A yellow LED next to the switch illuminates when it is selected. Selecting the INFRA switch restricts the B2 frequency response to a narrow, 32 Hz to 68 Hz range (-5 dB). This transforms a B2 system into an infrabass system for use with the C4 system. B2-SUBs can also be used as an infrabass system when C4-SUBs are used along with C6 or F2 cabinets.

#### Controller module rear panel

A single 8-pin CA-COM 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 system is used as an infrabass system for C4-SUBs. In the event of a power or mainframe failure, a bypass relay in the B2-CO controller module will connect 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 systems.



**B2-CO controls**

## Using the C4-OUT socket to drive C4-SUBs

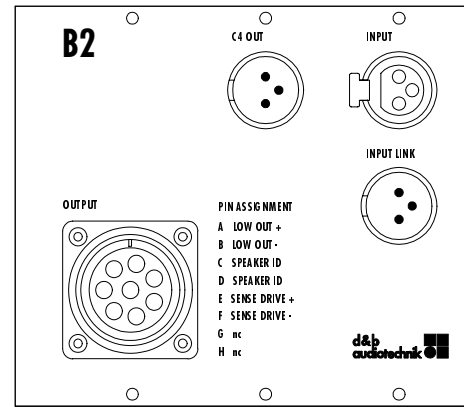
Although the C4-SUB operates very effectively down to 50 Hz (-5 dB), in some applications the ability to reproduce frequencies below this cut-off frequency can be an advantage. Using the B2 subwoofer, not only provides the desired LF extension, but also improves the low frequency headroom of the combined system.

Selecting the INFRA switch on the B2 controller module front panel configures the B2 system to operate around 50 Hz covering a one octave band from 32 Hz to 68 Hz (-5 dB). Used in INFRA mode, a B2 system, with just a single cabinet, delivers enough low-end bass to match the output of four C4-SUB cabinets. When C4-SUBs and B2-SUBs are operated together in an identical acoustic environment and their controllers set to the same level, the low frequency limit of the combined system is 37 Hz (-5 dB).

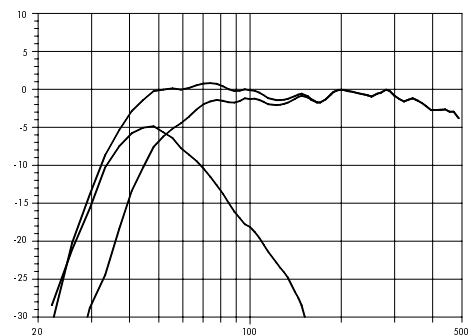
With fewer than four C4-SUBs per B2 cabinet, the headroom of the C4 system can be increased by altering the crossover point between the two bass systems simply by driving the C4-SUB systems from the C4-OUTPUT provided on the rear panel of the B2-CO controller.

The B2-CO controller C4-OUT socket provides a specially tailored signal with a relatively narrow-band level reduction around 50 Hz - the rest of the audio band remains unaffected. It therefore does not matter whether the mid/high cabinets (C4-TOPs or C6) are driven directly or via the C4-OUT - the signal they produce is the same in each case.

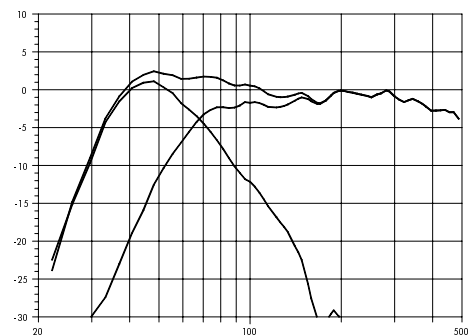
Used with a B2 system and driven from the C4-OUT socket, the low frequency limit of the C4-SUBs is raised to around 60 Hz. This raised crossover frequency is not acoustically critical, and is in fact beneficial, since the band below 60 Hz is more than adequately handled by the B2 system. If most of the C4-SUBs are flown, then due to the loss of ground coupling, the effective (acoustic) LF output of the system is reduced. Despite that, the increased LF headroom using the C4-OUT connection still gives a worthwhile improvement to the LF performance of the combined system.



**B2-CO rear panel**



**C4 and B2-SUBs, 4:1 ratio**



**C4 system driven from C4-OUT and B2-SUB, 2:1 ratio (acoustic)**

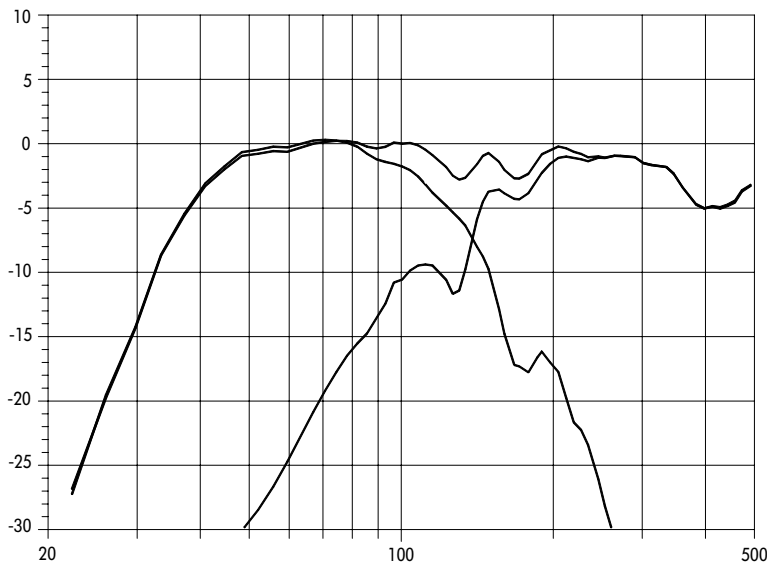
## Technical specifications

### B2-SUB system data (standard/INFRA)

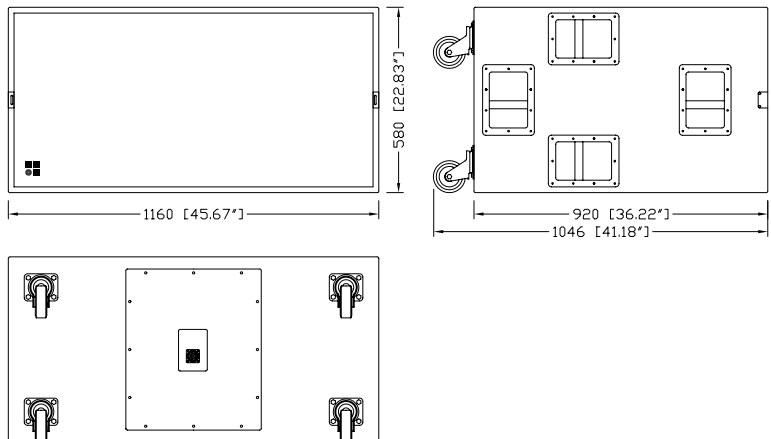
Frequency response (-5 dB)..... 37 Hz to 125 Hz / 32 Hz to. 68 Hz  
 Max. sound pressure (1 m, full space)..... 139 dB / 136 dB  
 (SPLmax peak, test signal pink noise with crest factor 4)  
 Input level for max. sound pressure..... +16 dBu / +14 dBu  
 Input level for 100 dB-SPL / 1 m..... -20 dBu / -19 dBu  
 Polarity to controller INPUT (XLR pin 2: + / 3: -)..... LF: +

### B2-SUB subwoofer

Nominal impedance..... 4 ohms  
 Power handling capacity (RMS / peak 10 ms)..... 600 / 2400 W  
 Connection..... 8-pin CA-COM, female  
 ..... Pin assignments printed on the controller module rear panel  
 Weight..... 102 kg (225 lb)



**B2-SUB/ F2 frequency response**



**B2-SUB cabinet dimensions in mm [inch]**

