

# **C7-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**

C7-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.

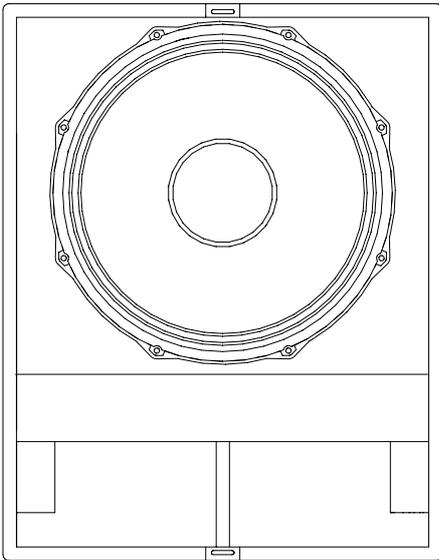
Technical specifications, weights and dimensions should always be confirmed with d&b audiotechnik AG prior to inclusion in any additional documentation.

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## C7-SUB



The C7-SUB is a bass-reflex design employing a long excursion 18" driver. The large, specially shaped reflex port enables the C7-SUB to achieve high sound pressure levels with minimal power compression and breathing effects.

The C7-SUB cabinet is constructed from marine plywood, fitted with two pairs of steel handles, and has an impact resistant paint finish. The front of the loudspeaker cabinet is protected by 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 E7916. Mounted on the rear panel are two Speakon NL4 or EP-5 connectors wired in parallel and four heavy duty wheels. An M20 threaded flange in the top panel accepts the d&b Z5013 loudspeaker stand for the deployment of full range cabinets.

Designed to be actively driven using the P1200A mainframe, the C7-SUB covers the 44 Hz to 140 Hz or 44 Hz to 100 Hz frequency band, depending on the controller setting.

The C7-SUB is the largest and most powerful C-Series subwoofer principally designed to supplement the C7-TOP loudspeaker. The C7-SUB may however be used to provide bass support for other d&b systems like C6 or MAX (controller CUT setting selected in each case).

Only operate C7-SUB loudspeakers with a d&b P1200A mainframe fitted with C7-SUB controller modules otherwise there is a risk of damaging the loudspeaker components.

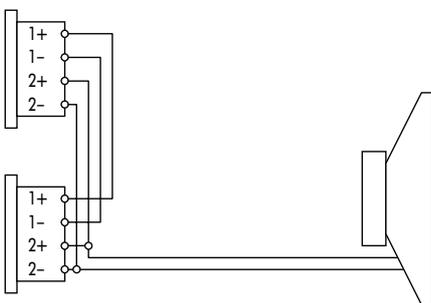
### CAUTION!

### Connections

The C7-SUB cabinet is fitted with a pair of Speakon-NL4 connectors. All four pins of both connectors are wired in parallel. The C7-SUB uses the pin assignments 2+/2-. Pins 1+/1- are designated to C and E-Series full range systems. Using one connector as the input, the second connector allows for direct connection to additional loudspeakers.

The C7-SUB can be supplied with EP-5 output connectors as an option. Pin equivalents of Speakon-NL4 and EP-5 connectors are listed in the table below left.

Up to two C7-SUB's can be driven by each P1200A power amplifier channel. Fitting one C7-SUB-CO and one C-Series TOP controller module allows a single mainframe to drive two C7-SUB and two mid/high cabinets. All cabinets can be linked together locally and fed by a single four-wire cable from either mainframe output connector.



Connector wiring

EP-5	1	2	3	4	5
NL4	1+	1-	2+	2-	n.c.

Speakon- NL4 and EP-5 pin assignments

## C7-SUB controller module switches

### 100Hz switch & indicator

If the 100Hz switch is selected (yellow 100Hz LED illuminated), the upper operating frequency of the system is reduced from 140 Hz to 100 Hz. This switch setting allows the C7-SUB to supplement TOP cabinets in full range mode (i.e. CUT not selected).

The 100Hz mode may also be used with TOP cabinets in CUT mode to compensate for room resonances often found in the 125 Hz band.

## Mainframe controller configuration

A P1200A mainframe in a mixed configuration, i.e. one TOP and one SUB controller module, can deliver a higher peak power at its SUB output than at either output in a SUB-SUB or Mono-SUB configuration where SUB's are driven on both channels. Hence two mixed configuration mainframes will achieve the maximum low frequency output for a system requiring the use of two TOP and two C7-SUB channels.

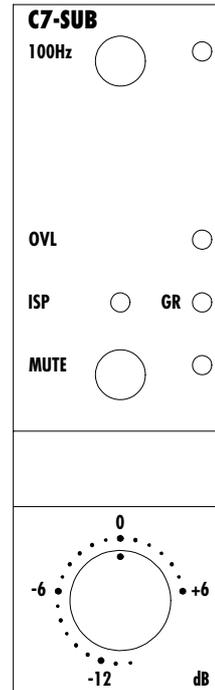
## Operation with E-PAC (only possible with E-PAC version 3 with display)

To drive C7-SUB cabinets the E-PAC has to be configured to C7-SUB mode.

For an E-PAC version 3, the configuration is set via a front panel digital rotary encoder in conjunction with an LCD.

The 100 Hz setting is available. The characteristics of the 100 Hz setting are explained on the previous page under the section "C7-SUB controller module switches".

The E-PAC can drive a single C7-SUB cabinet at an output power of 300 watts. We do not recommend that two C7-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.



Controls on C7-SUB controller module

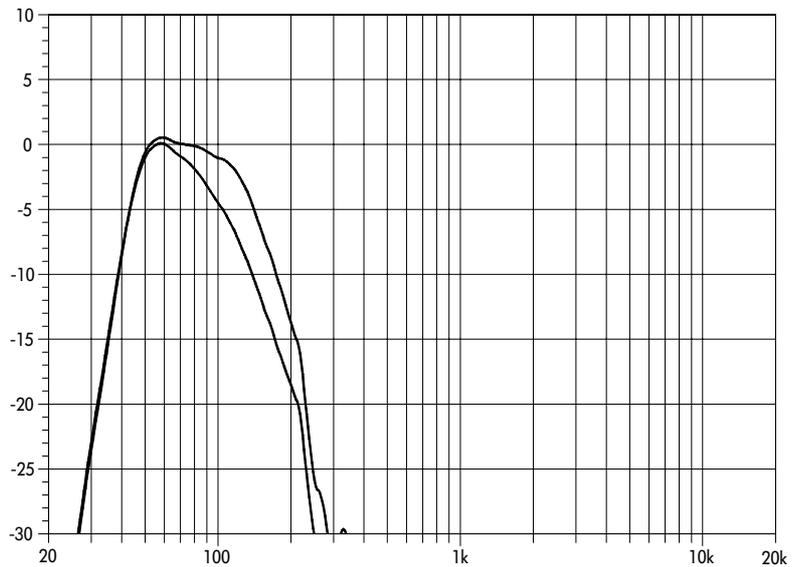
## Technical specifications

### C7-SUB system data

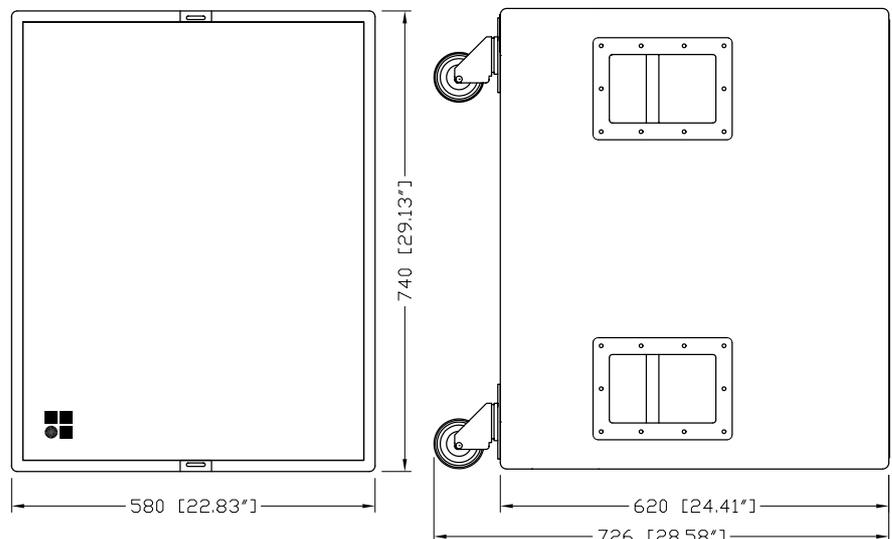
Frequency response (-5 dB).....	44 Hz ... 140 / 100 Hz
Max. sound pressure (1 m, free field) with P1200A.....	133 dB
Max. sound pressure (1 m, free field) with E-PAC .....	131 dB
(SPLmax peak, pink noise test signal with crest factor of 4)	
Input level (SPLmax).....	+17 dBu
Input level (100 dB-SPL / 1m) .....	-13 dBu
Polarity to controller INPUT (XLR pin 2: + / 3: -) .....	LF: +

### C7-SUB loudspeaker

Nominal impedance .....	8 ohms
Power handling capacity (RMS / peak 10 ms).....	400 / 1200 W
Connections .....	2 x Speakon-NL4
..... (optional 2 x EP-5)	
Pin assignments .....	2+ / 2-
..... (EP-5: 3 / 4)	
Weight .....	49 kg (108 lb)



C7-SUB frequency response, standard and 100Hz switch settings



C7-SUB cabinet dimensions in mm [inch]

