

Ci-SUB

Manual (2.1 EN)



Symbols on the equipment

Please refer to the information in the operating manual.

WARNING!
Dangerous voltage!

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General Information

Ci-SUB Manual

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

When reselling this product, hand over 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.

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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.

Ci-SUB

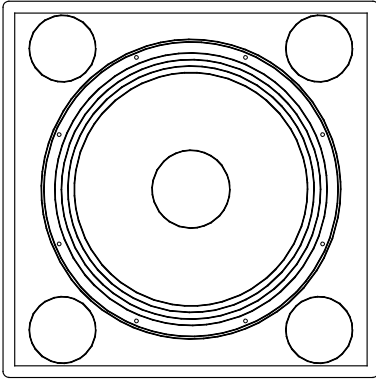


Fig. 1: Ci-SUB loudspeaker

The Ci-SUB is the dedicated subwoofer for the Ci-Series loudspeakers for flown array situations. The Ci-SUB employs a single 18" driver. The compact bass-reflex design extends the low frequency response down to 44 Hz.

The Ci-SUB cabinet is constructed from marine plywood and has an impact resistant paint finish. The front of the loudspeaker cabinet is protected by a rigid metal grill, covered with an acoustically transparent foam. Four M12 and four M16 threaded inserts are provided for attaching installation hardware.

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

NOTICE: **Weather resistant (WR) option**
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.

Cabinet design

Component	Description
Cabinet	Plywood to DIN 68705 Part III. Equivalent to flame spread class 3. Temperature range from -200° C to +100° C.
Wood joints	Bonded waterproof to stress class D4
Cabinet paint	Two component PU paint (seaworthy, chemical resistant and temperature resistant to 110° C).
Screws	Stainless steel (VA).
Driver cones	Impregnated with silicone spray or coated.
Driver components/ Crossover network	The coil and pole plate are also treated with silicone. The crossovers are sprayed with silicone on both the solder and component sides.

Connections

Ci-SUB cabinets are fitted with a single NL4 connector and are driven using pins 2+/2-.

Installation loudspeakers with the weather resistant option are supplied with a fixed cable (PG).

Cable type: H-07-RN-F 2 x 2.5 mm²/AWG 13
Standard length: 5.5 m (18 ft)

Pin equivalents of NL4 connectors and fixed cable option (PG) are listed in the table below.

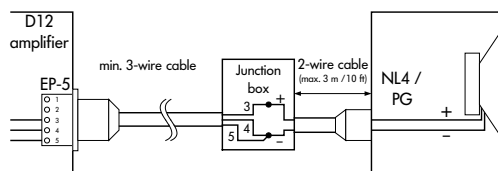
NL4	1+	1-	2+	2-
PG			Brown (+)	Blue (-)

Connecting D12 EP5 outputs to installed loudspeaker cabinets (SenseDrive)

To apply SenseDrive for the subwoofer D12 amplifiers with EP5 connectors have to be used.

When the D12 is operated in "Mix TOP/SUB mode" the SenseDrive function is available on the output B connector only.

In permanent installations SenseDrive can also be applied to cabinets with NL4 connectors or fixed cable option (PG). The connection of the negative signal wire (EP5 pin 4 of respective D12 output) to the SenseDrive wire (EP5 pin 5 of respective D12 output) is made in a junction 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.



Operation with D6 or D12

Select the controller setup C7-SUB.

Within the D12 amplifier this is available in "Dual Channel" and "Mix TOP/SUB" mode.

Up to a total of two Ci-SUB loudspeakers can be driven by each D6 or D12 amplifier channel.

In applications with low continuous levels and low ambient temperatures up to three cabinets can be connected to a D12 channel.

Controller settings

For acoustic adjustment the 100 Hz function can be selected.

100 Hz

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

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

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

Selecting C7-SUB mode enables the E-PAC to drive one Ci-SUB loudspeaker.

The 100 Hz setting is available. The characteristics of the 100 Hz setting are explained in the previous section "Operation with D6 or D12 - Controller settings".

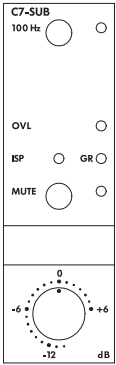


Fig. 2: Controls on C7-SUB controller module



Fig. 3: Ci-SUB frequency response, standard and 100 Hz settings

Operation with P1200A

Up to two Ci-SUB cabinets can be driven by each P1200A power amplifier channel fitted with a C7-SUB controller module. Fitting one C7-SUB and one TOP controller module allows a single mainframe to drive two Ci-SUB and two mid/high cabinets.

The 100 Hz setting is available. The characteristics of the 100 Hz setting are explained in the previous section "Operation with D6 or D12 - Controller settings".

Technical specifications

Ci-SUB system data

Frequency response (-5 dB).....	44 Hz -140 / 100 Hz
Max. sound pressure (1 m, free field) with D12.....	133 dB
Max. sound pressure (1 m, free field) with D6.....	129 dB
Max. sound pressure (1 m, free field) with P1200A.....	131 dB
(SPLmax peak, pink noise test signal with crest factor of 4)	
Input level (100 dB SPL / 1 m).....	-13 dBu

Ci-SUB loudspeaker

Nominal impedance.....	8 ohms
Power handling capacity (RMS / peak 10 ms).....	400 / 1200 W
Connections.....	1 x NL4
.....optional fixed cable (H-07-RN-F 2 x 2.5 qmm/AWG 13)	
Pin assignments.....	NL4: 2+/2-
.....Fixed cable: Brown + / Blue -	
Weight.....	39 kg (86 lb)

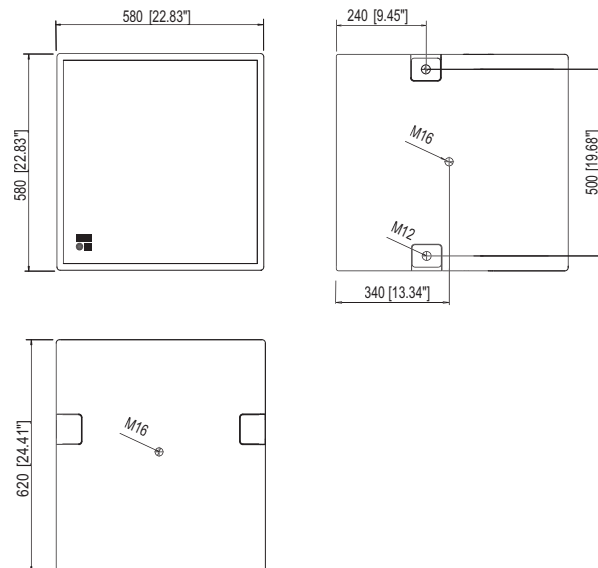


Fig. 4: Ci-SUB cabinet dimensions in mm [inch]

Manufacturer's declarations



EU conformity of loudspeakers (CE symbol)

This declaration applies to

- Ci-SUB Z1404

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.

