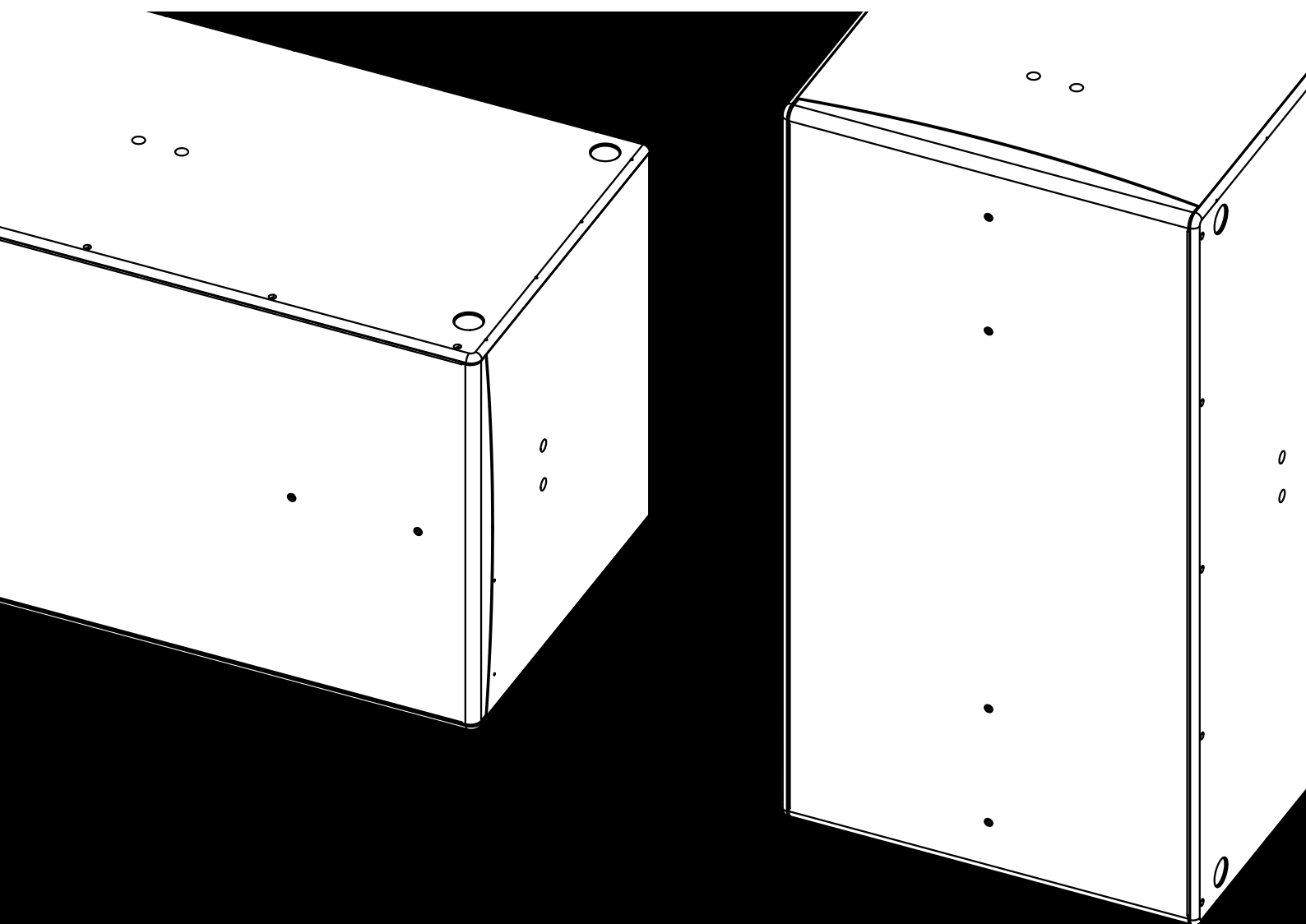


XS

21S-SUB
Manual 1.3 en



General information

21S-SUB Manual

Version: 1.3 en, 10/2018, D2625.EN .01

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1.1 Information regarding the use of loudspeakers

Potential risk of personal injury

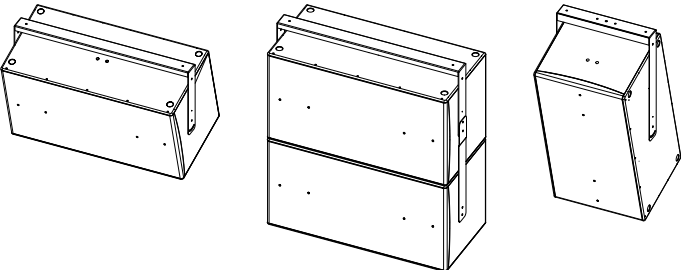
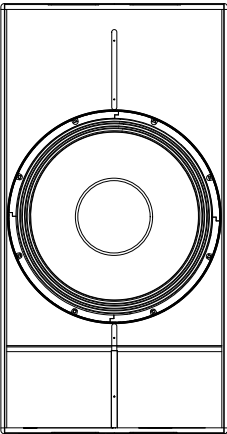
Never stand in the immediate vicinity of loudspeakers driven at a high level. Professional loudspeaker systems are capable of causing a sound pressure level detrimental to human health. Seemingly non-critical sound levels (from approx. 95 dB SPL) can cause hearing damage if people are exposed to it over 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.

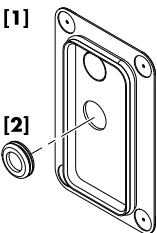
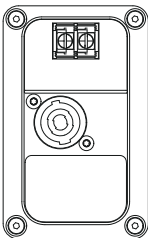
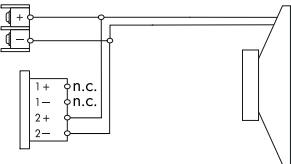
Potential risk of material damage

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.



21S-SUB loudspeaker
Rigging examples:

- 21S-SUB horizontally mounted with Z5555 Horizontal bracket 21S-SUB.
- 2 x 21S-SUB horizontally mounted with Z5556 Bracket extension 21S-SUB.
- 21S-SUB vertically mounted with Z5557 Flying bracket 21S-SUB.



Cover plate and rubber grommet

2.1 Product description

The 21S-SUB is a compact high performance subwoofer for use with d&b xS-Series loudspeakers. The cabinet houses a long excursion 21" neodymium driver in a bass-reflex design. Its frequency response extends from 35 Hz to 105 Hz in standard mode and from 33 Hz to 85 Hz in INFRA mode.

The large, specially shaped reflex port enables the 21S-SUB to achieve high sound pressure levels with minimal power compression and breathing effects.

The enclosure is constructed from marine plywood with an impact resistant paint finish. The front of the cabinet is protected by a rigid metal grill backed by an acoustically transparent foam. Four rubber feet are provided which can be attached to either, the top or side panel by the user to prevent cabinet movement and protect the corresponding panel against scratching.

The cabinet is Ball Impact Resistant according to DIN 18032-3.

Rigging components

The top, bottom and side panels of the cabinet are each equipped with a pair of M10 threaded inserts to connect to different rigging accessories such as:

- Z5555 Horizontal bracket 21S-SUB
- Z5556 Bracket extension 21S-SUB
- Z5557 Flying bracket 21S-SUB

2.2 Connections

The cabinet is fitted with an NL4 M connector using the pin assignment 2+/2- and a two pole screw terminal block (ST).

Pin equivalents of the applicable connector options are listed in the table below.

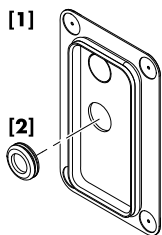
NL4 M	1+ (n.c.)	1- (n.c.)	2+	2-
ST	n.a.	n.a.	+	-

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.

Fixed cable connection

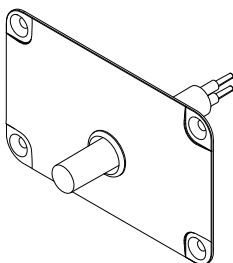
The 21S-SUB loudspeaker is supplied with a cover plate [1] and a rubber grommet feed through [2]. For indoor operation, these items can be used to hide the connector panel, if required. For unprotected outdoor operation, the connector panel must be covered, i.e. both items must be used to achieve an IP degree of protection of IP34.



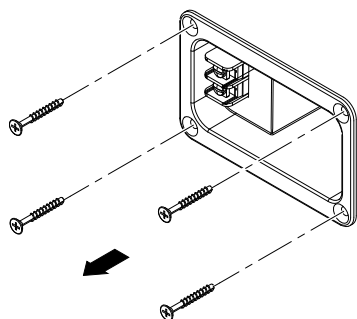
Step 1

To install the fixed cable connection, proceed as follows:

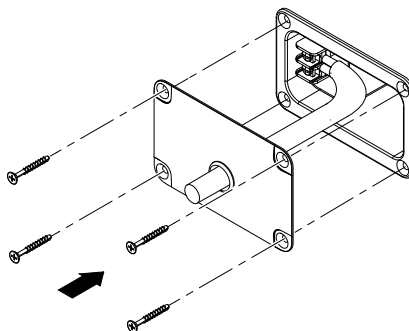
1. Remove the knockout opening in the cover plate **[1]** and attach the rubber grommet **[2]** correspondingly.
2. Insert the connection cable through the rubber grommet.
3. Undo the four screws of the connector panel.
4. Connect the cable wires to the screw terminal.
⇒ Observe the correct polarity!
5. Push the cover plate towards the connector panel until it fits into place.
6. Finally fix the cover plate together with the connector panel using all screws.



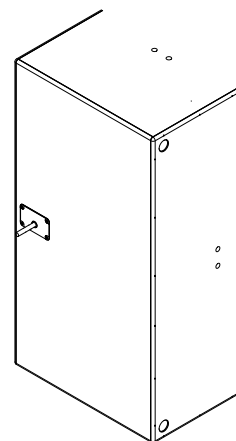
Step 2



Step 3

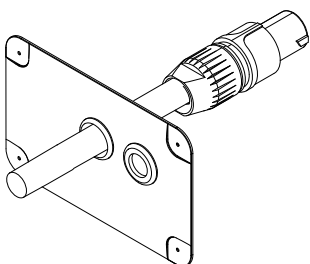


Step 4/5



Step 6

Installing the fixed cable connection



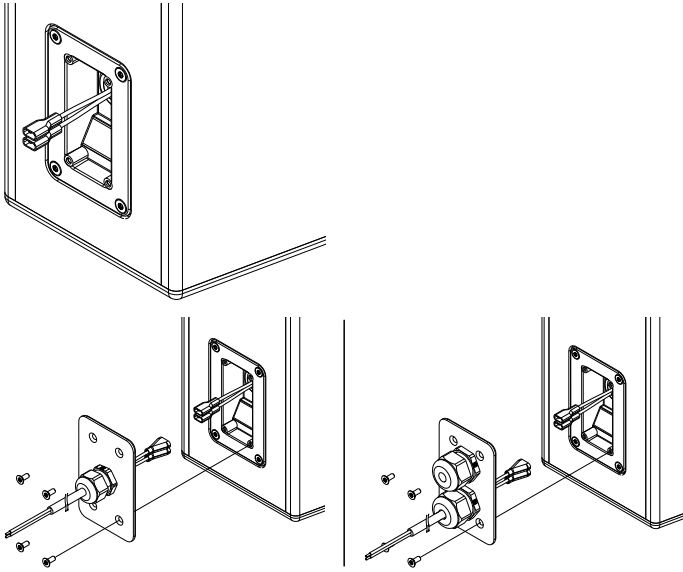
NL4 cable connection with cover plate [1]

NL4 connection with cover plate

The NL4 connector socket of the cabinet's connector panel is located in a recess to allow the use of the cover plate **[1]** together with an NL4 cable connector, as shown in the graphic opposite.

Note: Neutrik NL4FC type connectors must be used for this option.

To use the NL4 connection, proceed in the same manner as described in the previous section.



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 for the 21S-SUB loudspeaker:

- 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.

NOTICE!

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.

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/D20/D80.

Application	Setup	Cabinets per channel
21S-SUB	21S-SUB	1

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

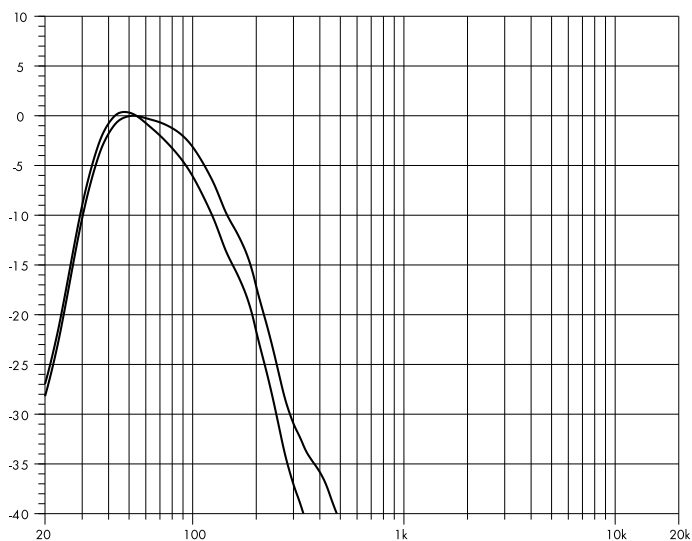
2.3.1 Controller settings

For acoustic adjustment the INFRA mode can be selected.

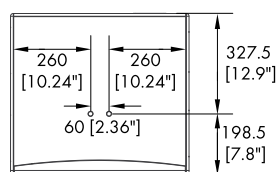
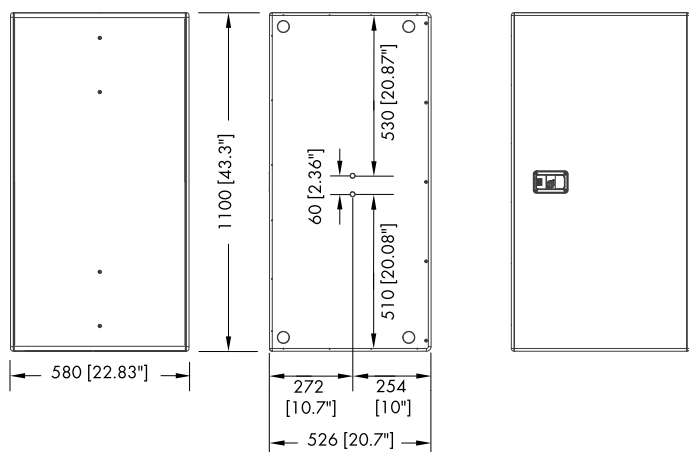
INFRA mode

With the INFRA mode selected, the upper operating frequency of the system is reduced from 105 Hz to 85 Hz. The 21S-SUB can now be used to supplement applicable d&b loudspeaker systems operated in full range mode.

It can be used when actively driven 21S-SUB subwoofers are used to supplement TOP cabinets operated in full range mode, for example in a distributed sound system. The INFRA mode can also be used to compensate for the effect of close coupling between the 21S-SUB and TOP cabinets operated in CUT mode.



215-SUB frequency response, standard and INFRA modes



215-SUB cabinet dimensions in mm [inch]

2.4 Technical specifications

215-SUB system data

Frequency response (-5 dB standard)	35 Hz - 105 Hz
Frequency response (-5 dB INFRA mode)	33 Hz - 85 Hz
Max. sound pressure (1 m, free field)	
with 30D/D20	134 dB
with D80	135 dB
	(SPLmax peak, pink noise test signal with crest factor of 4)

215-SUB loudspeaker

Nominal impedance	4 ohms
Power handling capacity (RMS/peak 10 ms)	650/2600 W
Components	1 x 21" driver
Connections	1 x NL4 M
	1 x screw terminal (ST - up to 4 mm ² /AWG 11)
	WR option: Faston type connector (2 x 6.3mm)
Pin assignment	NL4 M: 2+/2-
	WR option: Brown: (+) / Blue: (-)
Weight	54 kg (119 lb)



3.1 EU conformity of loudspeakers (CE symbol)

This declaration applies to:

d&b 21S-SUB loudspeaker, Z1613

manufactured by d&b audiotechnik GmbH.

All production versions of these types 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.

3.1.1 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.

