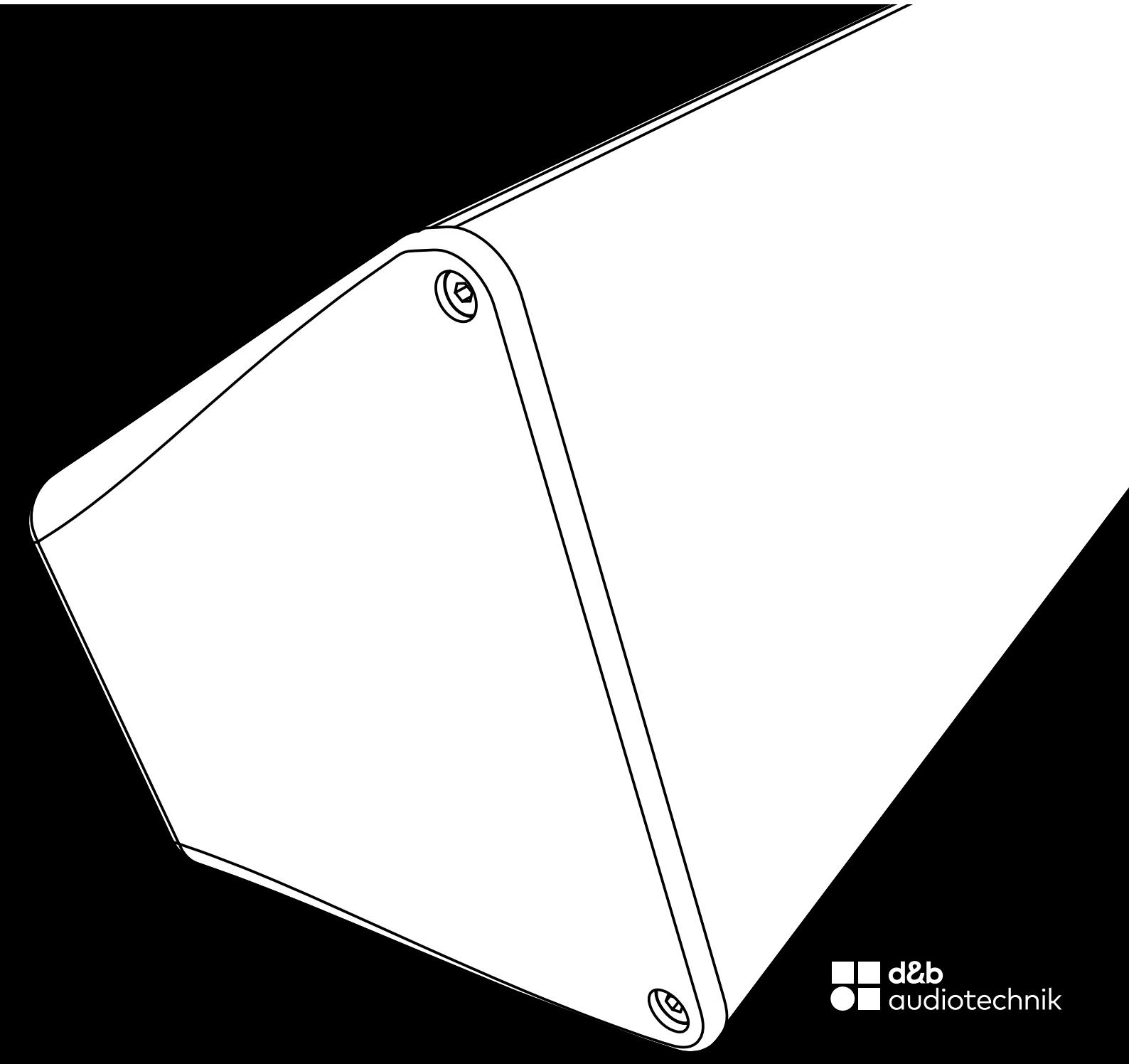
xS

44S
Manual 1.3 en



d&b audiotechnik

Notes on document version
All previous versions of this document are hereby no longer valid.

Version 1.3:
Revised edition with newly structured amplifier specification.

Refer to:
⇒ Chapter 2.1 “Intended use” on page 5
and
⇒ Chapter 2.5 “Technical specifications” on page 10

General information

44S Manual

Version: 1.3 en, 11/2026, D2632.EN .01

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

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Potential risk of personal injury

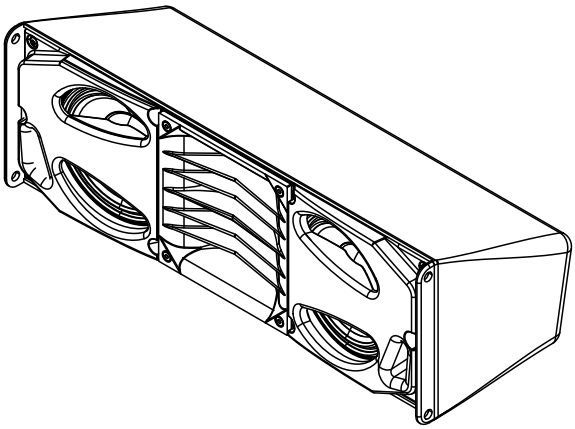
Never stand in the immediate vicinity of loudspeakers driven at a high level. Professional loudspeaker systems are capable of causing a sound pressure level detrimental to human health. Seemingly non-critical sound levels (from approx. 95 dB SPL) can cause hearing damage if people are exposed to it over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



2.1 Intended use

NOTICE!

Only operate d&b loudspeakers with correctly configured d&b amplifiers, otherwise there is a risk of damaging the loudspeaker components and the directional characteristics of the system cannot be achieved.

Recommended amplifiers:
D90/D80/D40/D25/5D/5DM/25D/40D

Product description
The 44S is a highly directive ultra compact loudspeaker with an asymmetric cabinet shape. In horizontal orientation, the 44S can be used as a frontfill loudspeaker.

The passive 2-way design houses two 4.5" neodymium LF drivers built into a bass-reflex design and two 1.25" HF dome tweeters mounted on a rotatable CD horn thus providing rotatable dispersion characteristics (h x v) of 90° x 30° and 30° x 90° respectively.

The frequency response extends from 90 Hz to 17 kHz.
The loudspeaker can be used as a stand-alone system or supplemented by actively driven d&b subwoofers.

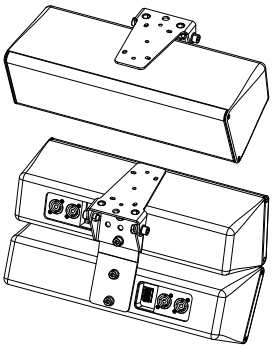
The enclosure is injection molded with an impact resistant paint finish. The front of the cabinet is protected by a rigid metal grill.

Two M8 threaded inserts are incorporated in the back panel to connect to different rigging accessories.

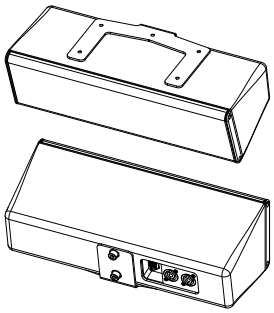
Different brackets enable mounting to walls, under ceilings or balconies or any other suitable surfaces such as floors as a single unit (Z5423/Z5424) or in closely coupled clusters of two cabinets (Z5423 with Z5425).

Using the swivel bracket (Z5426), it can be used as a main or fill system, flown or mounted on a high stand.

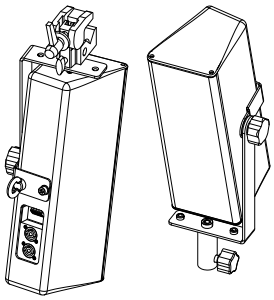
Mounting examples



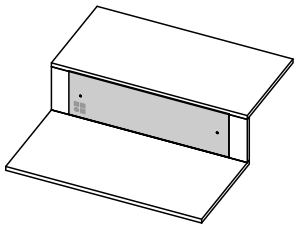
Z1650 44S loudspeaker with:
- **Z5423** 44S Mounting bracket
- **Z5425** 44S Cluster bracket



Z1650 44S loudspeaker with:
- **Z5424** 44S L-mount adapter

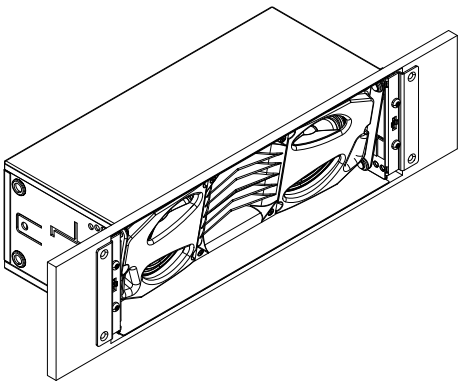


Z1650 44S loudspeaker with:
- **Z5426** 44S Swivel bracket



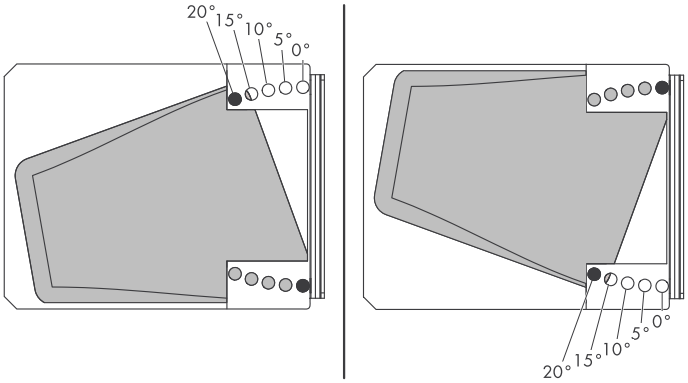
Z1650.500 44S loudspeaker, Flushmount with:
- **Z5427** 44S Backbox
- **Z5428** 44S Backbox grill

Note: Please refer to the respective mounting instructions.

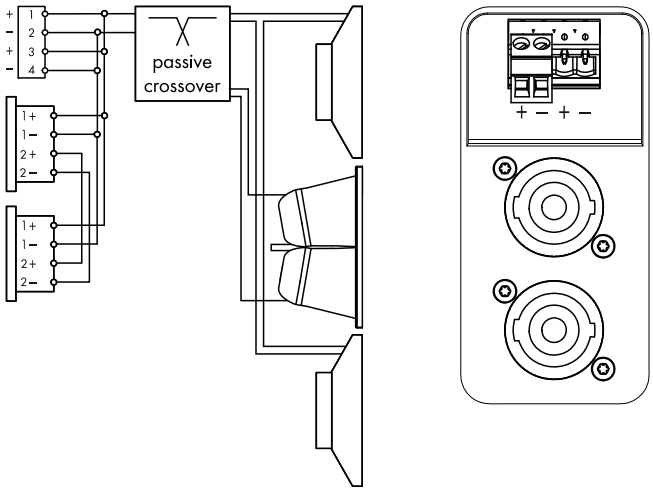


Z5427 44S Backbox option

The optional d&b Z5427 44S Backbox is a solution for flush mounting the loudspeaker into ceilings or walls, either in horizontal or vertical position. The back box is just 140 mm high making it an ideal solution for in-stair mounting.
Within the back box, the loudspeaker can be aligned by 20° in 5° increments.



Note: Please also refer to ⇒ Chapter 2.5 "Technical specifications" ⇒ "Flush mounting" on page11, as well as to the Z5427 Mounting instructions which are supplied with the 44S Backbox.



Connector wiring

2.2 Connections

The cabinet is fitted with a pair of NL4 M connectors and a 4-pin Phoenix Euroblock terminal block (cross-section up to 2.5 mm^2/AWG 13).
Corresponding 2-pin Phoenix plugs (Phoenix MSTB 2,5/ 2-ST-5,08) are enclosed with the cabinet.

All four pins of both NL4 M connectors are wired in parallel. The cabinet uses the pin assignment 1+/1–.
Pins 2+/2– are designated to applicable d&b subwoofers.

2.3 Operation

Amplifier output mode(s): Dual Channel or Mix TOP/SUB		
Application	**Setup**	**Cabinets per amplifier channel**
44S	44S	4

2.3.1 Controller settings

For acoustic adjustment the functions CUT, HFA and CPL can be selected.

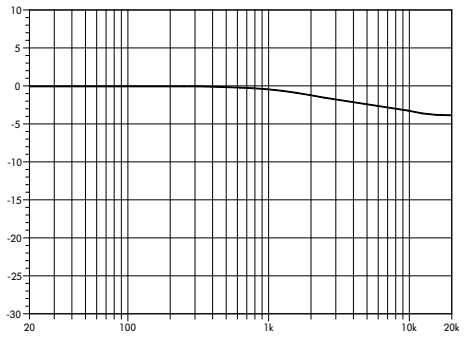
CUT mode

Set to CUT, the cabinet low frequency level is reduced. The cabinets are now configured for use with applicable d&b subwoofers.

HFA mode

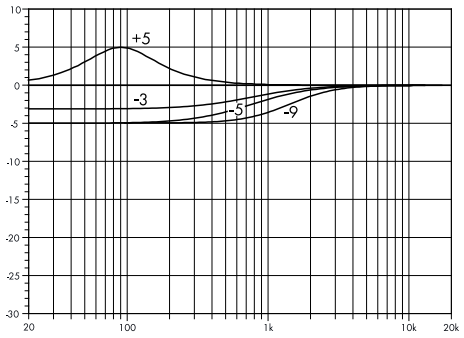
In HFA mode (High Frequency Attenuation), the HF response of the system is rolled off. HFA provides a natural, balanced frequency response when a unit is placed close to listeners in near field or delay use.

High Frequency Attenuation begins gradually at 1 kHz, dropping by approximately 3 dB at 10 kHz. This roll off mimics the decline in frequency response experienced when listening to a system from a distance in a typically reverberant room or auditorium.



Frequency response correction in HFA mode*

*schematic diagram



Frequency response correction of the CPL function*
*schematic diagram

CPL function

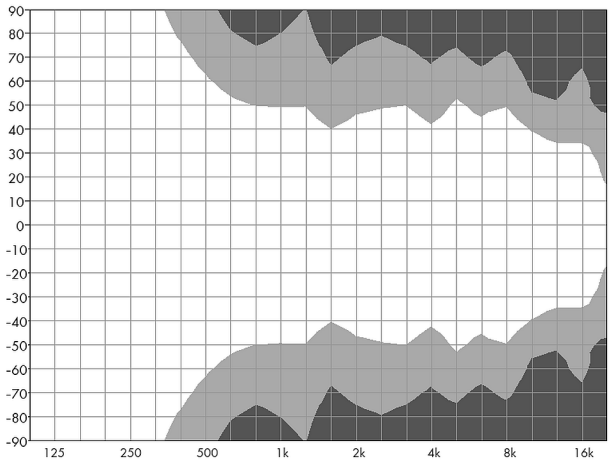
The CPL (Coupling) function compensates for the different acoustic properties depending on whether the loudspeaker is freely positioned or flush-mounted.

At attenuation values of up to –5, CPL begins gradually around 1 kHz and reaches the maximum attenuation below 200 Hz. At higher values of up to –9, the filter corner frequency gradually shifts to higher frequencies while an attenuation of 5 dB is maintained.

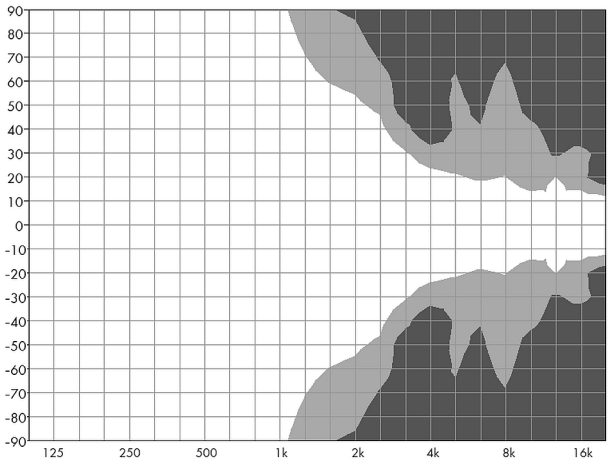
Positive CPL values create an adjustable low frequency boost (0 to +5 dB) at around 90 Hz and can be set when the system is used in full range mode without subwoofers.

2.4 Dispersion characteristics

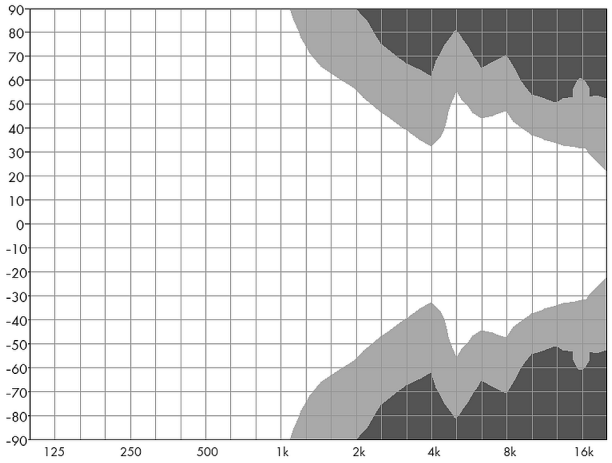
The following graphs show dispersion angle over frequency of a single cabinet plotted using lines of equal sound pressure (isobars) at –6 dB and –12 dB.



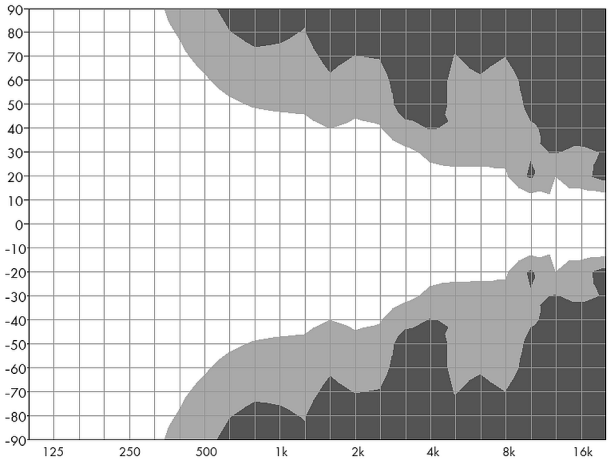
44S Isobar diagram horizontal



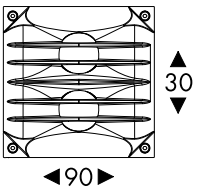
44S Isobar diagram vertical

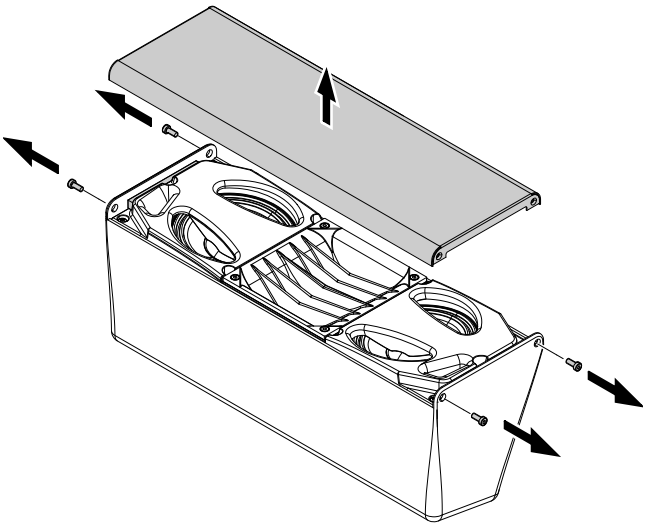


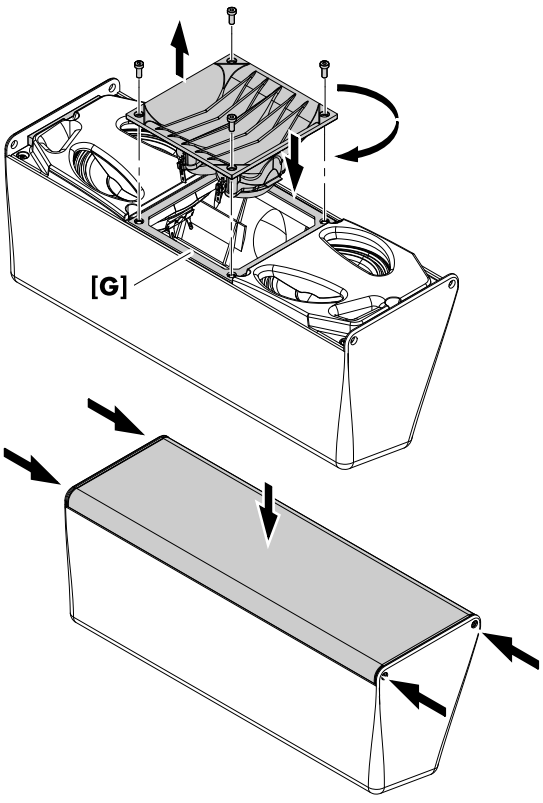
44S Isobar diagram horizontal



44S Isobar diagram vertical







Altering the HF horn dispersion

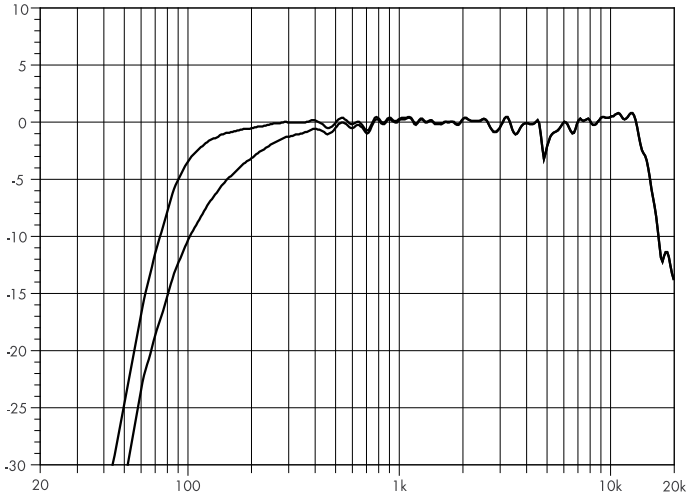
Depending on the application (horizontal or vertical setup of the cabinet), the HF horn can be rotated through 90°.

To rotate the HF horn, proceed as follows:

Tools required:

- Allen hex torque wrench 2.5 mm.

1. Place the cabinet on its back panel.
2. Depending on the cabinet variant, first undo the four Allen hex screws holding the front grill and remove the front grill.
3. Undo the four Allen hex screws of the HF horn.
4. Carefully pull out the HF horn and turn it clockwise by 90°.
5. Refit the horn as follows:
   1. Make sure the gasket **[G]** is seated properly.
   2. Refit the horn and tighten the screws with a maximum torque of 2 N·m.
6. Recheck your work and refit the front grill.



44S frequency response, standard and CUT modes

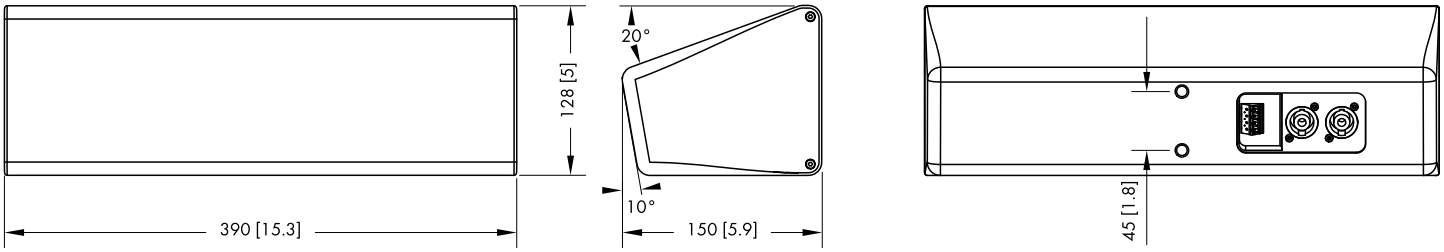
2.5 Technical specifications

System data

Frequency response (–5 dB standard) ..... 90 Hz - 17 kHz
Frequency response (–5 dB CUT mode) ..... 150 Hz - 17 kHz
Frequency response (–10 dB standard, IEC60268) ..... 74 Hz - 18 kHz
Frequency response (–10 dB CUT mode, IEC60268) ..... 100 Hz - 18 kHz
Max. SPL (Peak, 1 m, free field, pink noise with crest factor 4) .....
with 10D ..... 121 dB
with D90/D80/D40/D25/D20/5D/5DM/25D/30D/40D ..... 123 dB

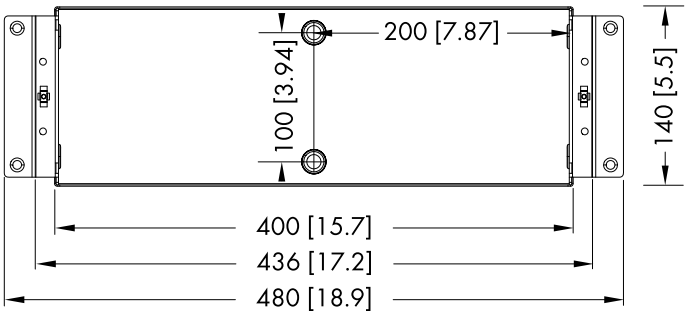
Loudspeaker data

Nominal impedance ..... 16 ohms
Power handling capacity (RMS/peak 10 ms) ..... 150/500 W
Dispersion angle (h x v) ..... 90° x 30°
Components ..... 2 x 4.5" driver with neodymium magnet
..... 2 x 1.25" dome tweeter mounted on CD horn
..... Passive crossover network
Connections ..... 4-pin Phoenix Euroblock and 2 x NL4 M
..... Phoenix plug type: MSTB 2,5/ 2-ST-5,08
Pin assignment ..... Phoenix: 1: + / 2: – / 3: + / 4: –
..... NL4 M: 1+/1–
Weight loudspeaker ..... 3.6 kg (8 lb)
Dead weight Backbox ..... 2.6 kg (5.7 lb)
Weight loudspeaker with Backbox ..... 6.2 kg (13.7 lb)

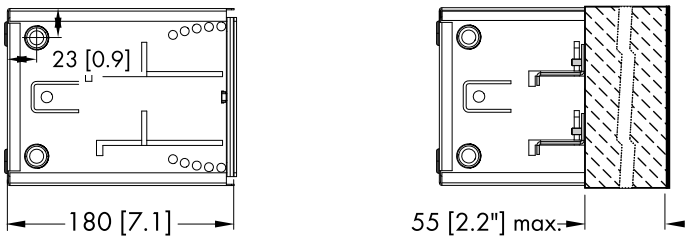


44S cabinet dimensions in mm [inch]

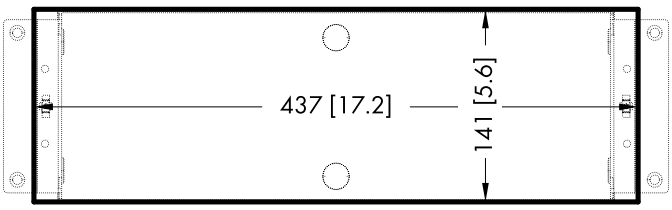
Flush mounting



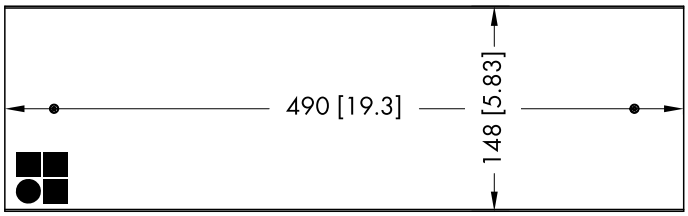
Z5427 44S Backbox front view, dimensions in mm [inch]



Z5427 44S Backbox side view and max. wall thickness, dimensions in mm [inch]



Z5427 44S Backbox cut out dimensions in mm [inch]



Z5428 44S Backbox grill (cover grill), dimensions in mm [inch]

Note: Please also refer to the Z5427 Mounting instructions, which are supplied with the 44S Backbox

3.1 Conformity of loudspeakers

This declaration applies to:

- **d&b Z1650 44S loudspeaker**

by d&b audiotechnik GmbH & Co. KG.

All product variants 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 directives including all applicable amendments.

Detailed and applicable declarations are available on request and can be ordered from d&b or downloaded from the d&b website at www.dbaudio.com.

3.2 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.

WEEE-Reg.-Nr. DE: 13421928

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