

E0

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

E0 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.

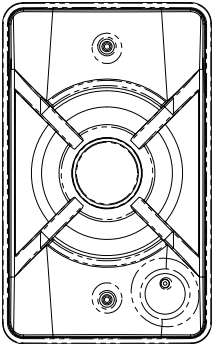
Technical specifications, weights and dimensions should always be confirmed with d&b audiotechnik AG prior to inclusion in any additional documentation.

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E0



The E0 is a compact, coaxial 2-way loudspeaker fitted with a 5" LF driver and 1" dome tweeter and has a maximum sound pressure level of 116 dB SPL. With a frequency response that covers the 80 Hz to 20 kHz band and a 100° conical dispersion, the E0 will display an identical response whether deployed horizontally or vertically, making it extremely versatile for use in near field applications such as delay and surround sound systems where a discreet yet distortion free reproduction of speech and music is required. For applications requiring bass extension the E0 can be combined with the d&b E12 subwoofer.

The E0 is housed in a cleverly shaped strong polyamide cabinet containing magnetic shielding of the LF driver, and has a rigid metal grill that protects the front of the loudspeaker. Recessed into the rear is a quad push connector and self-locking ball joint with integrated mounting arm that incorporates an M10 female thread. Along with a selection of d&b rigging accessories the E0 can be deployed quickly and easily in a variety of configurations.

Whilst the loudspeaker components are shielded against magnetic radiation, we advise a minimum distance of 15 cm between the E0 and susceptible equipment (e.g. PC and video monitors).

The E0 loudspeaker can only be operated with a d&b E-PAC power amplifier controller (display version only) configured for the E0 otherwise there is a risk of damaging the loudspeaker.

CAUTION!

Connections

The E0 has two pairs of push connectors wired in parallel facilitating quick connection to additional loudspeakers and the E-PAC.

We recommend a loudspeaker cable with minimum Cross Sectional Area (CSA) of 0.5 mm. The minimum CSA required for a single cabinet can be calculated from:

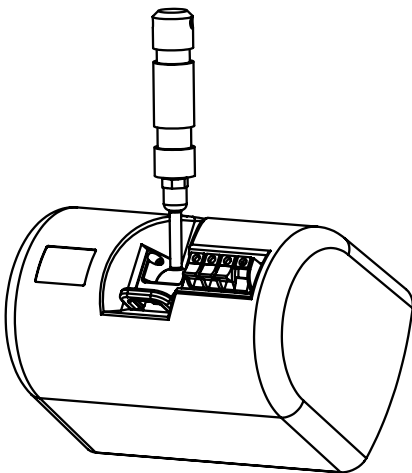
$$\text{cross-section [mm}^2\text{]} = \text{single length of cable [m]} / 50$$

Where multiple E0 loudspeakers are connected in parallel the minimum CSA required is obtained by multiplying the above result by the number of cabinets.

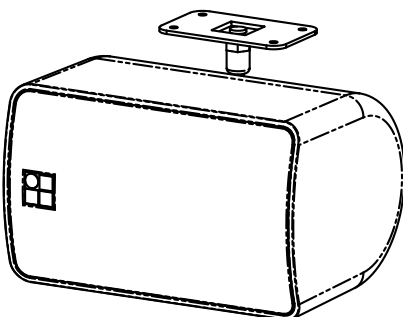
Operation with E-PAC

Selecting E0 mode in the E-PAC enables two E0 loudspeakers to be driven at full power. LO IMP mode configures the E-PAC to drive a maximum of four E0 loudspeakers with a 6 dB reduction in input level to the speakers.

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



E0 with TV spigot



E0 with wall mount adapter

CUT circuit

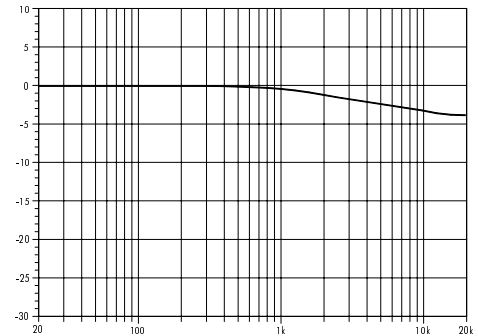
Set to CUT, a high pass filter with a 120 Hz cut off frequency is inserted in the controller signal path. The E0 is now configured for use with d&b C and E-Series active subwoofers.

HFA circuit

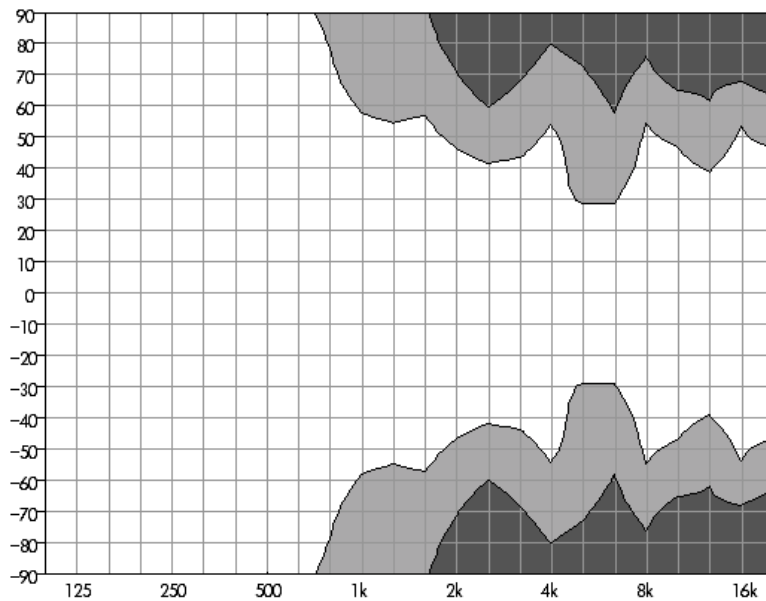
The HFA (High Frequency Attenuation) mode rolls off the HF of the E0 to provide a balanced frequency response when a unit is placed close to listeners in near field or delay situations. HFA begins gradually at 1 kHz, dropping by approximately 3 dB at 10 kHz. This roll off mimics the decline in frequency response experienced when listening to a system from a distance in a typically reverberant room or auditorium.

Dispersion characteristics

Due to the coaxial driver design, the horizontal and vertical dispersion characteristics of the E0 are identical. The diagram below shows dispersion angle versus frequency plotted using lines of equal sound pressure (isobars) at -6 dB and -12 dB.



Frequency response correction of HFA circuit



Isobar diagram E0

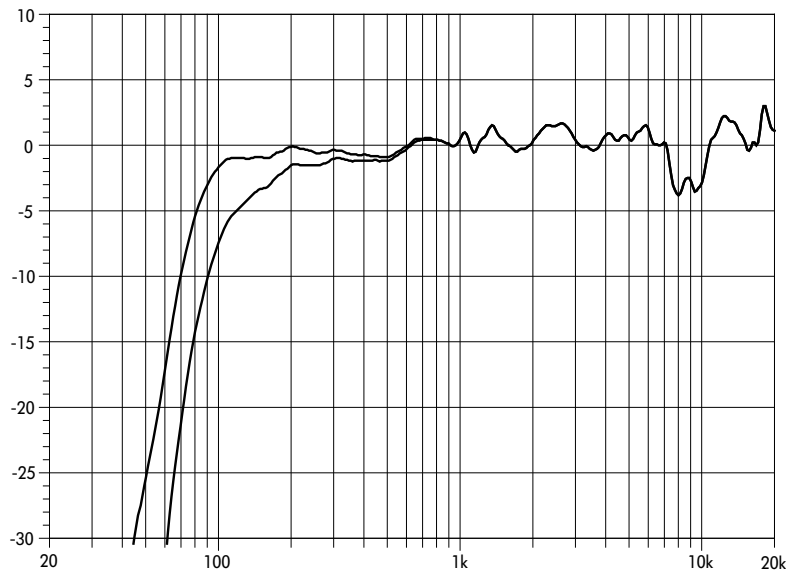
Technical specifications

E0 system data

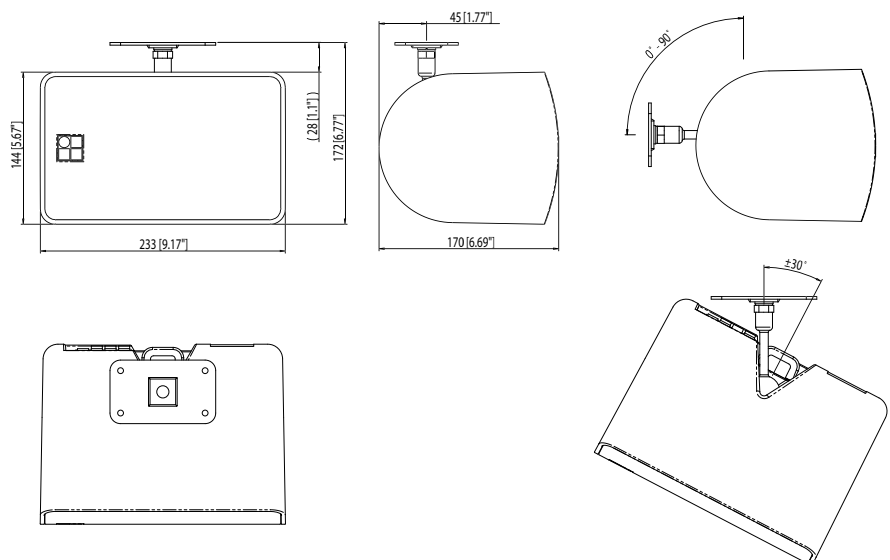
| | |
|---|--|
| Frequency response (-5 dB)..... | 80 Hz ... 20 kHz |
| Max. sound pressure with E-PAC (1 m, free field)..... | 116 dB SPL (SPLmax peak, pink noise test signal with crest factor of 4) |
| Input level (SPLmax)..... | +9 dBu |
| Input level (100 dB-SPL / 1 m)..... | -4 dBu |
| Polarity to controller INPUT (XLR pin 2: + / 3: -)..... | LF: + / HF: - |

E0 loudspeaker

| | |
|---|-----------------|
| Nominal impedance..... | 16 ohms |
| Power handling capacity (RMS / peak 10 ms)..... | 50 / 400 W |
| Nominal dispersion angle..... | 100° conical |
| Weight..... | 2.5 kg (5.5 lb) |



E0 frequency response, standard and CUT setting



E0 dimensions in mm [inch]

