M

Stage monitors

d&b
audiotechnik

Contents

S^r

loudspeakers amplifiers signal processors networking software accessories

finance

service support distribution network education technical information

d&b System reality

As the name implies a d&b audiotechnik system is not just a loudspeaker. Nor is it merely a sum of the components: loudspeakers, amplifiers, accessories and software. Right from the outset the d&b audiotechnik approach was to build integrated sound reinforcement systems that actually are more than the combination of parts: an entirety where each fits all. Every element is tightly specified, precisely aligned and carefully matched to achieve maximum efficiency. For ease of use, all the user-definable parameters are incorporated, allowing the possibility of adjustment, either via remote control surfaces or directly on the amplifiers. Neutral sound characteristics leave the user all the freedom needed to realize whatever the brief. At the same time d&b offers finance, service and support, a knowledgeable distribution network, education and training as well as technical information, so the same optimal acoustic result is achieved consistently by every system anywhere, at any time. In reality: the d&b System reality.

d&b **Stage monitors** can seriously enhance the performance of the artist and the success of a production. That's why d&b has always maintained that there should be no difference in the quality of sound between front of house and the stage. Consequently the d&b Stage monitors have not only a low profile cabinet design for use in visually senstitive situations, but also remarkable vocal presence and clarity and more than adequate power. With the well defined dispersion control the systems guarantee a high feedback stability realizing an efficient tool and a neutral platform for the engineer and artist alike.

The Stage monitors

The 2-way passive **MAX2** features a 15" driver with a coaxially mounted 1.4" compression driver. The MAX2 is a stage monitor with remarkable vocal presence and clarity; a neutral, balanced sound; high feedback stability and sound pressure level capabilities. The MAX2 monitor is passively crossed over, and can be driven in dual channel mode using the specific setup in a d&b amplifier or by any other appropriate linear power amplifier. Specially designed runners prevent unwanted movement when used as a stage monitor, while the integrated pole mount makes the MAX2 suitable for small PA applications.

MAX2 monitor

The **M6** and **M4** are low profile 2-way high performance stage monitors employing an integrated 12"/1.3" and 15"/1.3" exit coaxial driver respectively, with a CD horn and passive crossover network. The M6 and M4 distinguish themselves through a remarkable midrange presence, the M4 additionally through a dry and deep low end. Combined with excellent feedback stability, high sensitivity and discreet designs they line up perfectly with the d&b M2 state of the art monitor.

M6 monitor   **M4 monitor**

The **M2** is the d&b definitive actively crossed over reference stage monitor system. The bass-reflex enclosure is optimized for minimal air compression and houses two 12" LF drivers. The 1.4" exit HF compression driver operates into a very low distortion horn with a waveguide oriented design. This remarkable cabinet achieves a constant directivity of 45° x 60° (h x v) above the unusually low frequency of 600 Hz, resulting in substantial feedback stability and a very direct voice reproduction. Finally, its peak sound pressure level of 143 dB at 1m will satisfy even the unhealthiest of SPL requests.

M2 monitor

d&b remote software creates a flexible user interface for the d&b user. The **R1** Remote control software provides all features, functions and controls available on the front of d&b amplifiers, which can be remotely controlled and monitored. Service functions enable firmware updates of the amplifiers as and when these are available, whilst monitoring tools such as System check verifies that the system performs within a predefined condition. R1 Remote control software incorporates the equalizer of each d&b amplifier channel within the software, to make adjustments at any position.

d&b amplifiers are specifically designed for use with d&b loudspeakers, and are at the heart of the d&b system approach. These devices contain extensive Digital Signal Processing capabilities to provide comprehensive loudspeaker management and specific switchable filter functions to precisely target the system response for a wide variety of applications. The four channel **D80** and **D40** amplifiers are intended for mobile applications requiring the highest Sound Pressure Levels. The four channel **D20** amplifier is specifically designed for mobile events comprising small to medium sound reinforcement solutions. The installation specific four channel **30D** and **40D** amplifiers are intended for rider driven live performance spaces which require medium to high Sound Pressure levels. These d&b amplifiers all provide four truly independent channels as well as extensive user-definable equalization containing two 16-band equalizers with parametric, notch, shelving and asymmetric filters.

The d&b Audio network bridges interface between audio transport networks and AES3 digital audio signals while also providing distribution of Ethernet control data. The **DS10** supports Dante networks, while the **DS20** is used for the open standards-based Milan protocol.

D80 amplifier

D40 amplifier

D20 amplifier

40D amplifier

30D amplifier

DS10 Audio network bridge

DS20 Audio network bridge

The MAX2 monitor

MAX2 monitor

The 2-way passive MAX2 loudspeaker houses a 15" LF driver and a coaxially mounted 1.4" HF compression driver and achieves 75° conical constant directivity dispersion.
The driver arrangement uses a single magnet assembly, allowing for a compact cabinet design with a low profile for strict visual demands.
The MAX2 can be driven by any appropriate linear power amplifier, but for maximum performance and protection a d&b amplifier is required. The MAX2 provides a broad variety of deployment possibilities, whether used individually as a stage monitor; as a stand-alone full range system or, when combined with d&b subwoofers, as a drumfill.
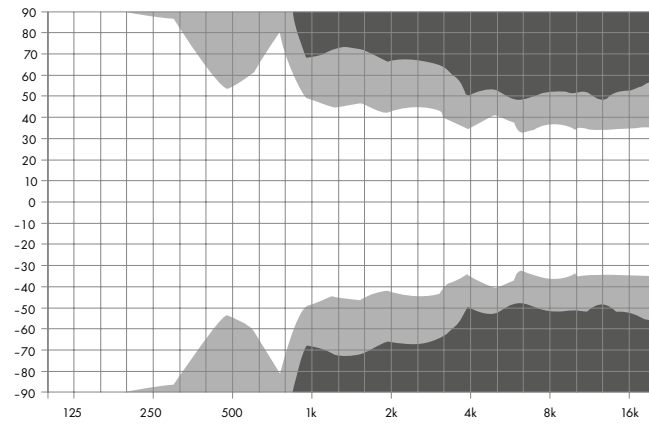The loudspeaker cabinet is constructed in marine plywood with an impact resistant paint finish. Four M10 threaded inserts allow connection to a flying bracket. The cabinet incorporates a pair of recessed grips for handling, while the front is protected by a rigid metal grill backed with an acoustically transparent foam. A pole mount is incorporated into one of the side panels. Two runners recessed in the bottom panel protect the cabinet from scratching and prevents movement.

System data

Frequency response (–5 dB).................................. 55 Hz - 20 kHz
Max. sound pressure (1 m, free field)[1] ....
with D6/10D .... 131 dB
with D20/30D/40D .... 135 dB
with D40/D80 .... 135 dB

Loudspeaker data

Nominal impedance...8 ohms
Power handling capacity (RMS/peak 10 msec) .....250/1600 W
Nominal dispersion angle (conical) ....75°
Components...................................... 15" driver with ferrite magnet
.... coaxial 1.4" exit compression driver
....passive crossover network
Connections ....2 x NLT4 F/M
.... optional 2 x NL4
Weight.. 23 kg (50 lb)

MAX2 dispersion characteristics[2]

← 580 [22.8] →   Front view

← 496 [19.5] →   354 [14]   Side view

528 [20.8]   Bottom view

Rear view
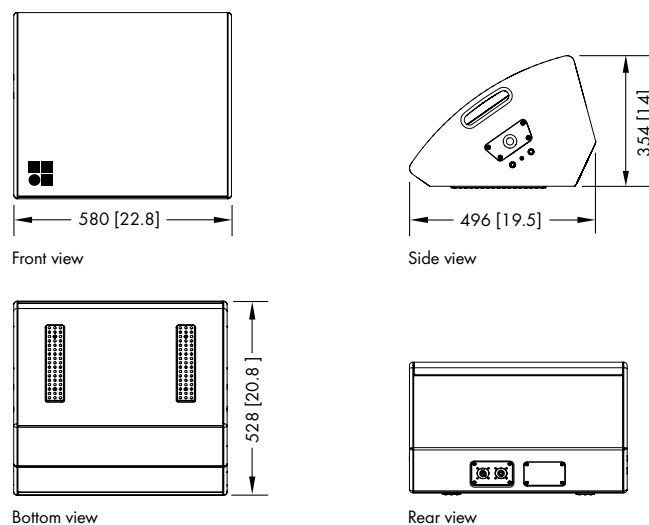
MAX2 cabinet dimensions in mm [inch]

[1] Broadband measurement, pink noise, crest factor 4, peak measurement, linear weighting
[2] Dispersion angle vs frequency plotted using lines of equal sound pressure (isobars) at –6 dB and –12 dB

The M6 monitor

M6 monitor

The M6 is a 2-way high performance stage monitor employing an integrated 12" LF and 1.3" exit horn loaded HF coaxial driver design that utilizes neodymium magnets. The constant directivity dispersion of 50° x 80° (h x v), which this unique horn provides, delivers an accurately defined coverage area on stage. The M6 can also be operated in 2-Way Active mode.
When the cabinet is used in an upright position the M6 serves as a powerful PA loudspeaker with a 80° x 50° dispersion suitable for a variety of applications. For dedicated installation applications the dispersion characteristics of the M6 driver assembly can be rotated.
The M6 cabinet is constructed from marine plywood, which incorporates the handles, has an impact resistant paint finish, M10 threaded inserts and a socket to accept loudspeaker stands. The front of the loudspeaker cabinet is protected by a rigid metal grill backed with an acoustically transparent foam. Two runners recessed in the bottom panel protect the cabinet from scratching and prevents movement.

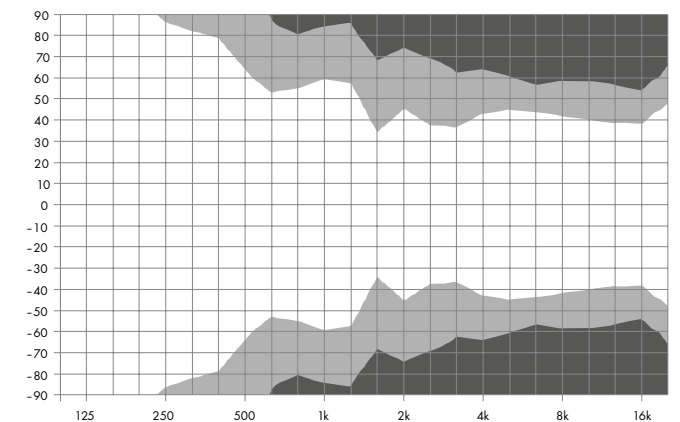## System data, passive mode • 2-Way Active mode

Frequency response (–5 dB).................................. 65 Hz - 17 kHz
Max. sound pressure (1 m, free field)[1] ....
with D6 passive mode.. 132 dB
with 10D ....132 • 133 dB
with D20/30D/40D ....135 • 138 dB
with D40/D80...135 • 138 dB
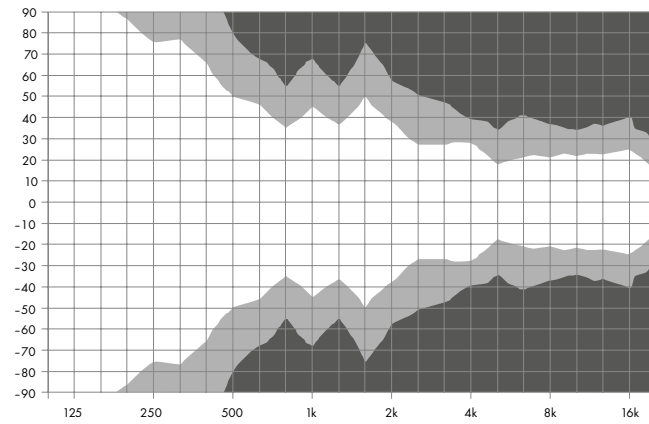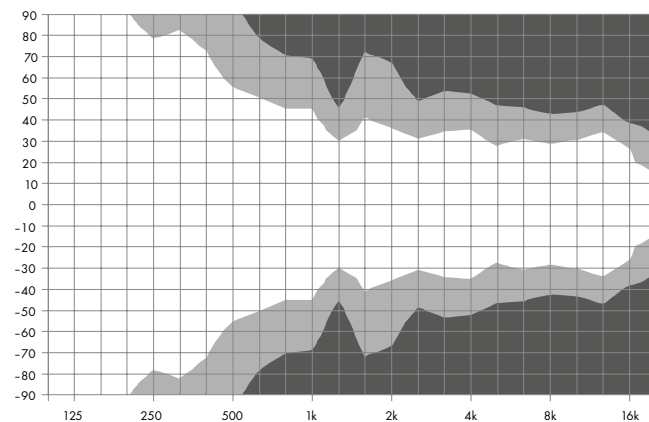
Loudspeaker data

Nominal impedance...8 ohms
Power handling capacity (RMS/peak 10 msec) .....400/1600 W
Nominal dispersion angle (h x v) .... 50° x 80°
Components..............................12" driver with neodymium magnet
......coaxial 1.3" exit compression driver with 3" coil and CD horn
....passive crossover network
Connections ....2 x NLT4 F/M
.... optional 2 x NL4
Weight.. 16 kg (35 lb)
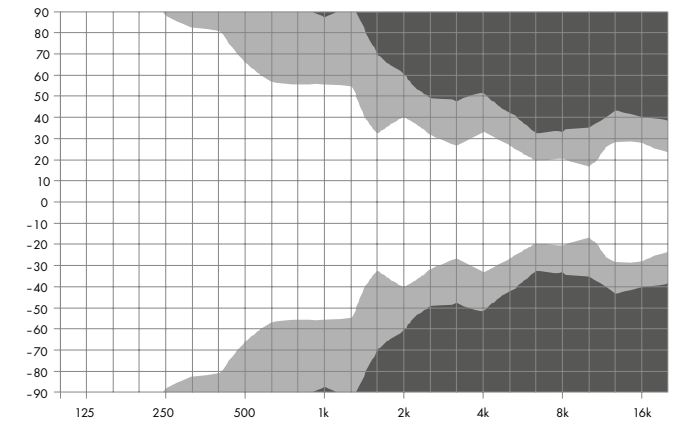
M6 horizontal dispersion characteristics[2]

M6 vertical dispersion characteristics[2]

← 486 [19.1] →   473 [18.6]   Front view

← 455 [18] →   322 [13.1]   Side view

455[18]   Bottom view

Rear view
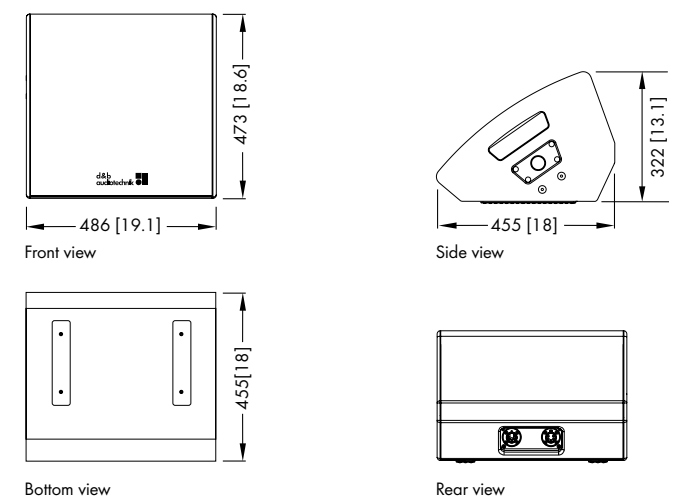
M6 cabinet dimensions in mm [inch]

[1] Broadband measurement, pink noise, crest factor 4, peak measurement, linear weighting
[2] Dispersion angle vs frequency plotted using lines of equal sound pressure (isobars) at –6 dB and –12 dB

The M4 monitor

M4 monitor

The M4 is a 2-way high performance stage monitor employing an integrated 15" LF and 1.3" exit horn loaded HF coaxial driver design that utilizes neodymium magnets. The constant directivity dispersion of 50° x 70° (h x v), which this unique horn provides, delivers an accurately defined coverage area on stage. The M4 can also be operated in 2-Way Active mode.

When the cabinet is used in an upright position the M4 serves as a powerful PA loudspeaker with a 70° x 50° dispersion suitable for a variety of applications. For dedicated installation applications the dispersion characteristics of the M4 driver assembly can be rotated in 45° increments.

The M4 cabinet is constructed from marine plywood, which incorporates the handles, has an impact resistant paint finish, M10 threaded inserts and a socket to accept loudspeaker stands. The front of the loudspeaker cabinet is protected by a rigid metal grill backed with an acoustically transparent foam. Two runners recessed in the bottom panel protect the cabinet from scratching and prevents movement.

System data, passive mode • 2-Way Active mode

Frequency response (–5 dB).................................... 55 Hz - 17 kHz
Max. sound pressure (1 m, free field)[1] ....
with D6 passive mode... 134 dB
with 10D ....134 • 135 dB
with D20/30D/40D ....138 • 140 dB
with D40/D80...138 • 140 dB

Loudspeaker data

Nominal impedance...8 ohms
Power handling capacity (RMS/peak 10 msec) .....400/1600 W
Nominal dispersion angle (h x v) .... 50° x 70°
Components.............................15" driver with neodymium magnet
......coaxial 1.3" exit compression driver with 3" coil and CD horn
....passive crossover network
Connections ....2 x NLT4 F/M
.... optional 2 x NL4
Weight.. 20 kg (44 lb)

M4 horizontal dispersion characteristics[2]

M4 vertical dispersion characteristics[2]
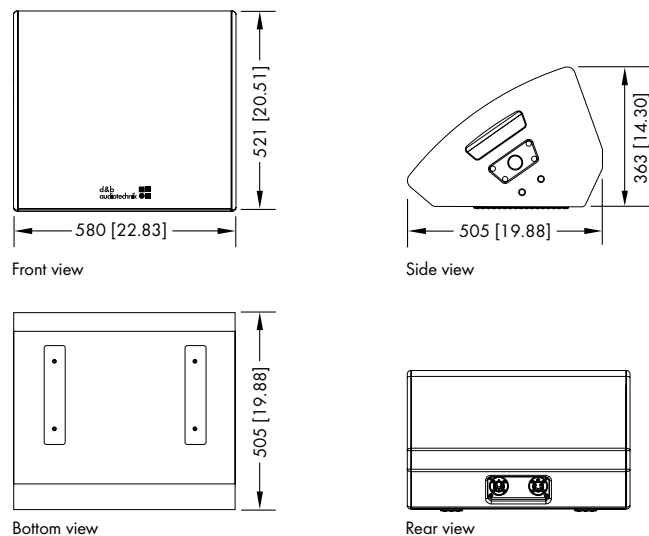
Front view — 580 [22.83] — 521 [20.51]
Side view — 505 [19.88] — 363 [14.30]

Bottom view — 505 [19.88]
Rear view

M4 cabinet dimensions in mm [inch]

The M2 monitor

M2 monitor

The M2 is the definitive high performance loudspeaker for stage monitoring purposes. The bass-reflex enclosure is optimized for minimal air compression and houses two 12" LF drivers. It is actively crossed over and powered by both channels of an appropriate d&b amplifier. The 1.4" exit HF compression driver has a compact but strong neodymium magnet assembly operating into a very low distortion waveguide oriented horn, optimized for monitor applications. The component configuration permits the use of an low profile cabinet which achieves a constant directivity from an unusually low frequency of 600 Hz upwards with a nominal dispersion of 45° x 60° (h x v). Together with a cabinet baffle angle of 40° to the floor, this dispersion offers a realistic artist listening area starting directly above the cabinet and ranging quite far upstage.
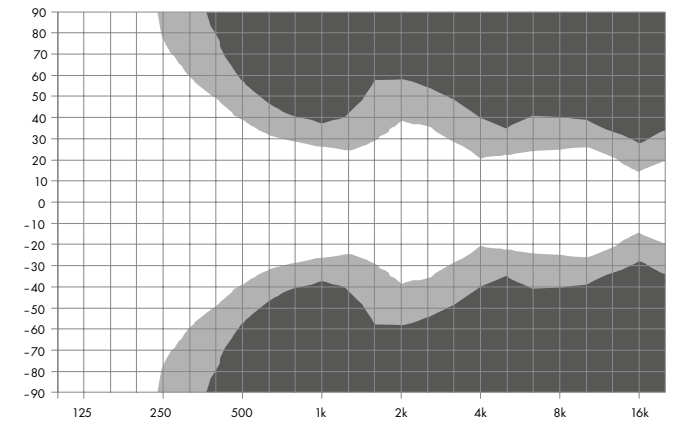
The M2 bestows its full dynamics across the entire frequency range without compromising the solo voices or instruments, which always stay clearly and audibly in front of the mix.

The M2 cabinet is constructed from marine plywood and has an impact resistant paint finish. The cabinet is protected by a rigid metal grill backed with an acoustically transparent foam. Two fittings that accept the Flying pin 10 mm are located on both sides of the cabinet allowing quick and flexible rigging.
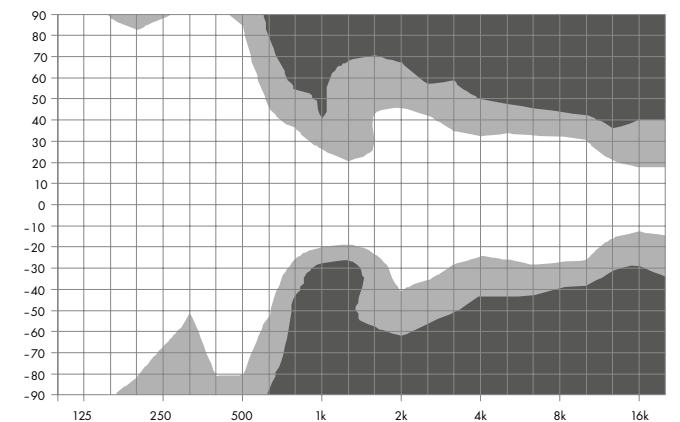
System data

Frequency response (–5 dB).................................... 50 Hz - 17 kHz
Max. sound pressure level (1 m, free field)[1].....................................
with 30D .... 143 dB
with D80 .... 143 dB

Loudspeaker data

Nominal impedance LOW/HIGH .... 4/8 ohms
Power handling capacity LOW (RMS/peak 10 msec).....................
....500/2000 W
Power handling capacity HIGH (RMS/peak 10 msec) ....
....50/200 W
Dispersion characteristics (h x v) .... 45° x 60°
Components... 2 x 12" driver
.... 1.4" compression driver with CD horn
Connections ....2 x NLT4 F/M
.... optional 2 x NL8
Weight.. 38 kg (83 lb)

M2 horizontal dispersion characteristics[2]

M2 vertical dispersion characteristics[2]
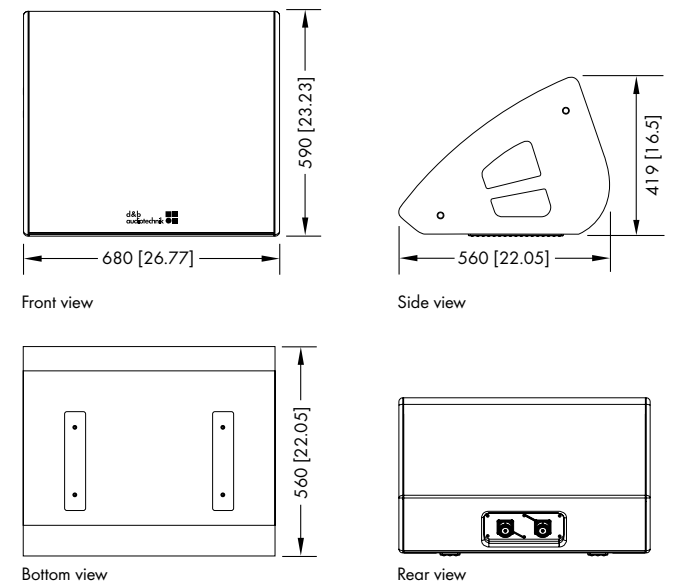
Front view — 680 [26.77] — 590 [23.23]
Side view — 560 [22.05] — 419 [16.5]

Bottom view — 560 [22.05]
Rear view

M2 cabinet dimensions in mm [inch]

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[1] Broadband measurement, pink noise, crest factor 4, peak measurement, linear weighting
[2] Dispersion angle vs frequency plotted using lines of equal sound pressure (isobars)
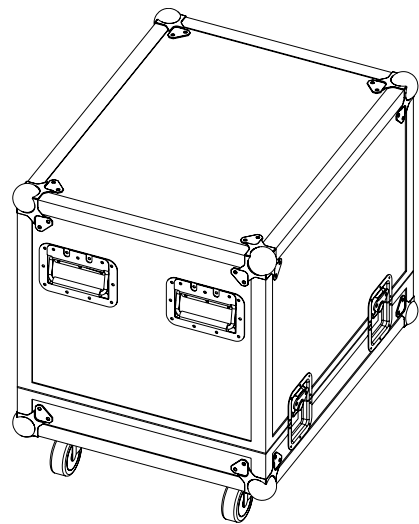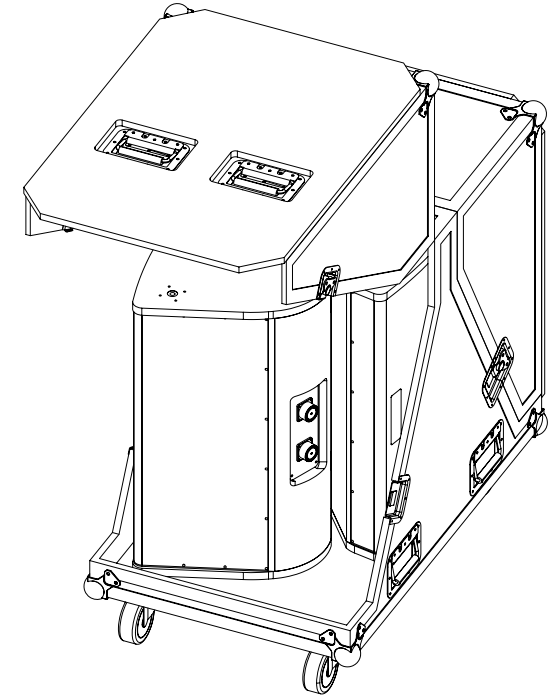   at –6 dB and –12 dB

[1] Broadband measurement, pink noise, crest factor 4, peak measurement, linear weighting
[2] Dispersion angle vs frequency plotted using lines of equal sound pressure (isobars)
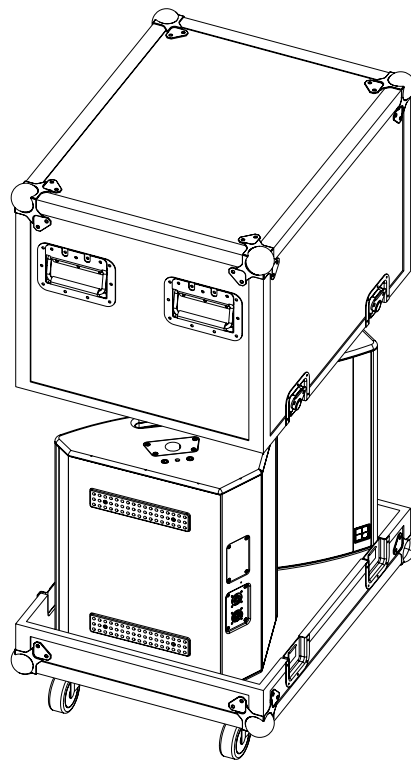   at –6 dB and –12 dB

The Stage monitor cases
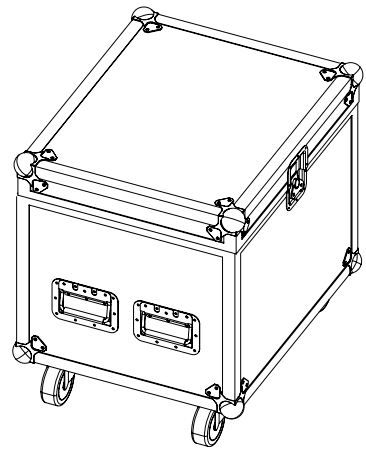
E7437
Touring case 2 x M6
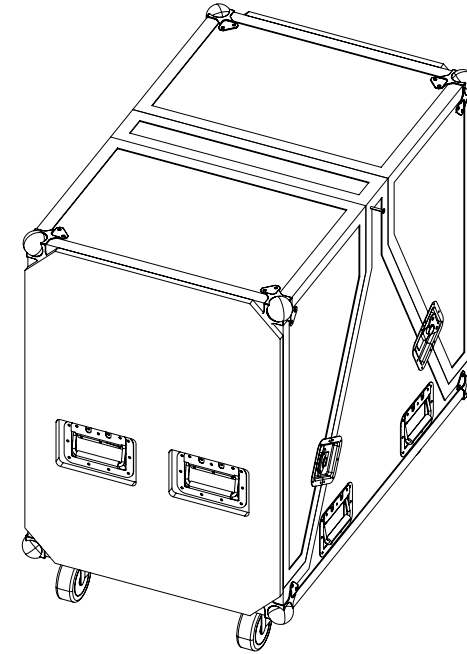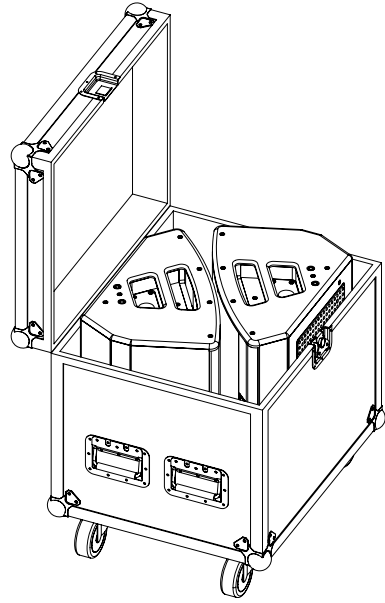
E7425
Touring case 2 x M2

E7467
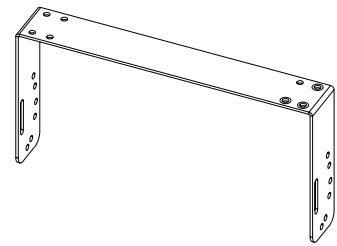**Touring case 2 x MAX2/M4**
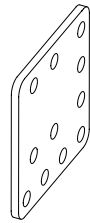
The MAX2 mounting accessories
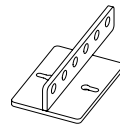
The MAX2 mounting examples

Safety approval

d&b loudspeakers and accessories are designed for setup and
use within situations requiring compliance with the provisions
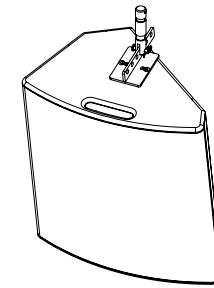and directives of the DGUV regulation 17 (formerly BGV C1).
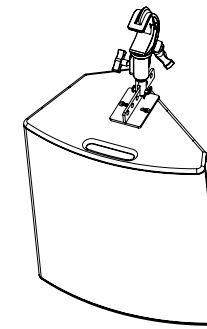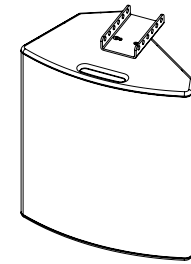
Z5043
MAX Horizontal bracket

Z5044
MAX Bracket connector

Z5020
Flying adapter 02

MAX2 with
Z5020 Flying adapter 02
Z5015 TV spigot 02

Y7P/Y10P with
Z5399 YP Mounting bracket
Z5010 TV spigot with fixing plate
Z5012 Pipe clamp

MAX2 with
Z5025 Flying adapter 03
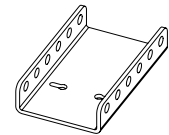
Z5025
Flying adapter 03
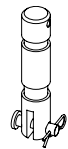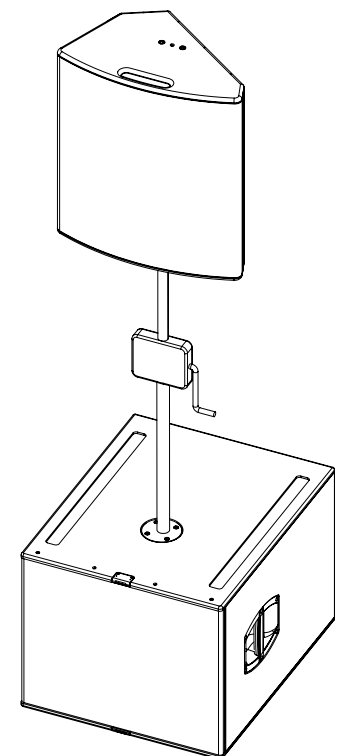
Z5015
TV spigot 02
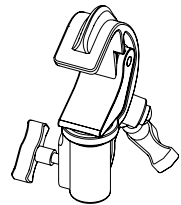
Z5012
Pipe clamp for TV spigot
For a tube diameter up to 70 mm/2.75"
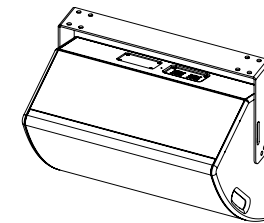
MAX2 with
Z5043 MAX horizontal bracket
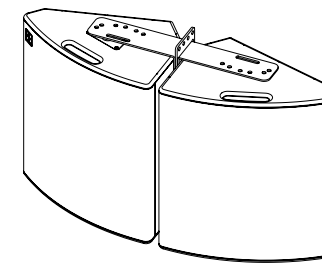
MAX2 array with
Z5043 MAX Horizontal bracket
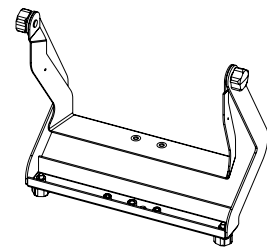**Z5044 MAX Bracket connector**

MAX2 with
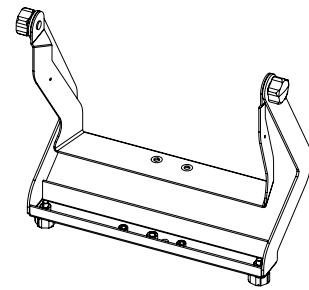**M20 pole with winder**

The M6/M4/M2 mounting accessories

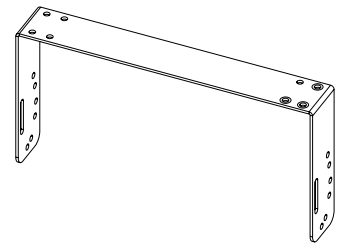## The M6/M4/M2 mounting examples

Safety approval

d&b loudspeakers and accessories are designed for setup and use within situations requiring compliance with the provisions and directives of the DGUV regulation 17 (formerly BGV C1).
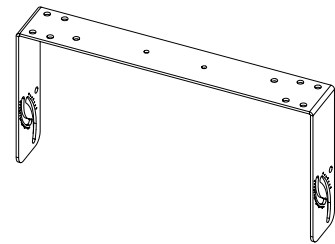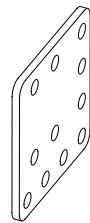
Z5057
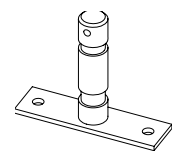**M6 Flying bracket**

Z5056
M4 Flying bracket

M6/M4 with
Z5057/Z5056 M6/M4 Flying brackets
Z5010 TV spigot with fixing plate
Z5012 Pipe clamp for TV spigot
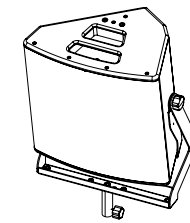
M6/M4 with
Z5057/Z5056
M6/M4 Flying bracket
Z5024 Loudspeaker
stand adapter

M6/M4 with
Z5047 MAX12 Horizontal bracket/
Z5175 Qi Horizontal bracket
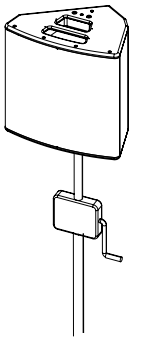
M6/M4 with
Z5009 Loudspeaker
stand with winder or
M20 pole with winder

Z5047
MAX12 Horizontal bracket

Z5175
Qi Horizontal bracket

Z5044
MAX Bracket connector
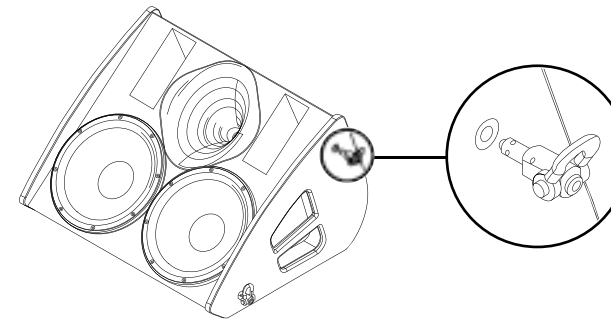
M2 monitor with Z5048 Flying pin 10 mm
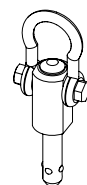
Z5010
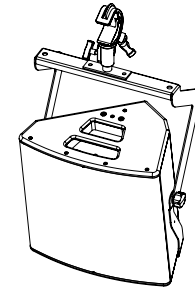**TV spigot with fixing plate**

Z5012
Pipe clamp for TV spigot
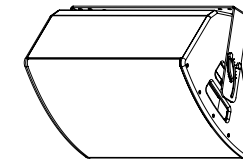For a tube diameter up to 70 mm/2.75"

Z5024
Loudspeaker stand adapter

Z5048
Flying pin 10 mm

The d&b Remote network

d&b Remote network

The remote control capability of the d&b Remote network enables central control and monitoring of a complete d&b loudspeaker system from anywhere in the network, be it from a laptop in the control room, at the mix position, or on a wireless tablet computer in the auditorium. This central access to all functions through the d&b Remote network, to controls as well as detailed system and device diagnostics information, unlocks the full potential of the d&b system approach. In the typical user workflow, the d&b Remote network takes settings optimized in the software and applies these to all the amplifiers within the network. In mobile situations R1 provides extensive functionalities for storing and recalling system settings, enabling setups to be repeated as and when required. Project files can be adjusted for use with different equipment at another location. d&b System check verifies that the system performs within a predefined condition. For permanent installations, system integrators can configure the d&b Remote network to allow access to different levels of control, according to the operational needs of the venue. R1 Remote control software enables d&b amplifiers to be remotely controlled, using both Ethernet and CAN-Bus in parallel. The software is optimized for use with touchscreen, mouse and keyboard and runs on both Microsoft Windows[1] (Win7 64-bit or later) and Mac OS X[2] (10.12 or later) operating systems. Password protection is available to restrict access.
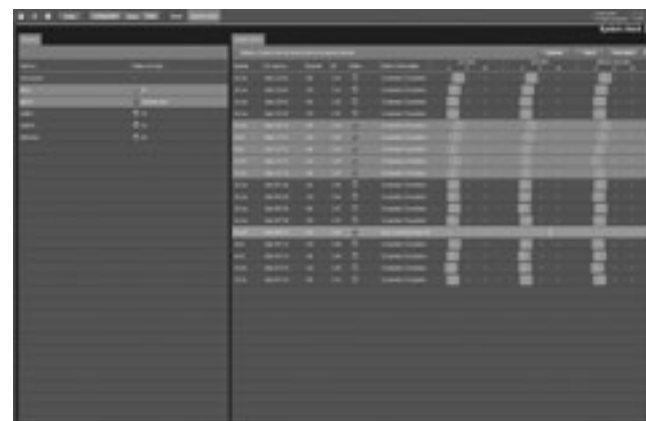
R1 Remote control software

The R1 Remote control software provides a flexible workplace for the d&b user. All features, functions and controls are accessible via the front panel of d&b amplifiers, which can be remotely controlled and/or monitored using R1 Remote control software. It allows each channel of the amplifier to be controlled and enables the creation of groups of loudspeakers. When grouped together, a button or fader can control the overall system level, zone level, equalization and delay, system power ON/OFF, MUTE as well as loudspeaker specific function switches, such as CUT/HFA/HFC, CPL and ArrayProcessing. An offline mode is provided for preparation in advance of an event, without the need for amplifiers being present or connected.

The Home view provides an overview of all views in R1 and access to all user defined remote views. The Home button featured on each view returns directly to the Home view. The Open views bar offers quick navigation to any open view. Each user definable Remote view can be populated with control

R1 home screen

R1 in configuration mode

System check in R1

functions of the system and can be optimized for different screen resolutions, either for large monitors or for smaller tablet devices.

Equalizer

The R1 Remote control software provides enhanced equalization functionalities for the d&b amplifiers, via an easy to use and efficient user interface. R1 accesses the 4-band equalizer in both channels of the D6 amplifier, or the two 16-band equalizers in each of the four channels of the D20 and D80 amplifiers. The system technician can use one D20/D80 16-band equalizer, lock it, and offer the second EQ to the visiting sound engineer for artistic adjustments. The R1 software enables an instant A/B comparison of two different equalizer curves. The D6 equalizer includes parametric and notch filters types, while the D20 and D80 equalizers also incorporate shelving and asymmetric filters. All filters available in the d&b amplifiers can be manipulated in R1 for fine adjustment; simple and intuitive control, via touchscreen or mouse and keyboard.

Service functions

R1 enables the simultaneous firmware update of multiple amplifiers from a central location. The software will automatically search the d&b website and on demand, downloads the latest available amplifier firmware versions and R1 Remote control software updates. Defined settings can be created, saved on a computer and loaded into amplifiers, for example to ensure that configuration switches are set to a known status, or the user definable equalization is set flat. Settings can be copied to additional or spare amplifiers. A Wink function is included to provide an effective method of locating specific amplifiers; this flashes the amplifier display. For service purposes, information may be read from an amplifier, concerning its condition during operation and errors reported. When additional support is required, the error report can be saved and sent to the d&b service departments for further assessment and diagnosis. The R1 Remote control software V2 and video tutorials are available at www.dbaudio.com.

D20/D80 16-band equalizer in R1
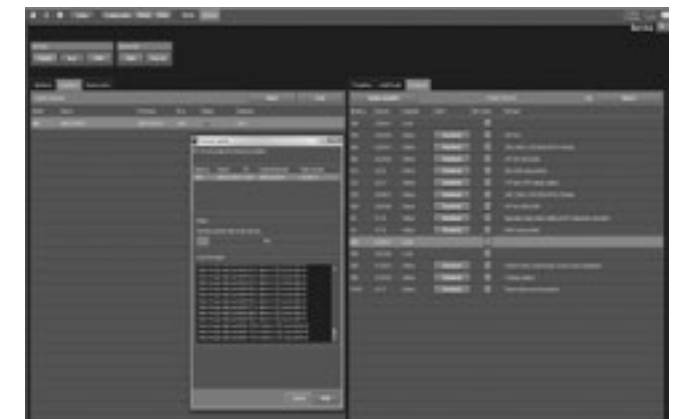
Service, Firmware update
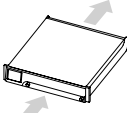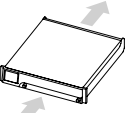
The d&b amplifiers

The d&b amplifiers are designed specifically to power d&b loudspeakers and are the beating heart of the d&b System reality. As such, they incorporate Digital Signal Processing for comprehensive loudspeaker management, switchable filter functions, remote capabilities and user-definable controls, to fulfil the exact needs of each application.
Every loudspeaker configuration combines comprehensive system limiting, and equalization and crossover settings to ensure consistent results and optimal performance. d&b amplifiers offer

different output configurations for different loudspeaker setups, including Dual Channel mode, for passive setups, Mix TOP/SUB mode, in which two channels are driven through a single output connector, and 2-Way Active mode, which also sends the output of two channels down one connector to drive appropriate loudspeakers actively.
The d&b switch functions provide selected filters to precisely tailor a wide variety of setups to their applications. Examples of these switch functions are the CSA (Cardioid Subwoofer Array)

and HFC (High Frequency Compensation) modes. CSA increases low frequency directivity control by minimising energy transmission towards the rear while HFC compensates for air absorption for loudspeakers covering far field listening positions. In addition to these 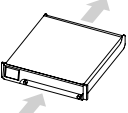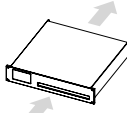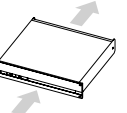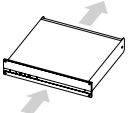functions, d&b amplifiers offer a comprehensive set of specific filters such as CUT, a cut mode for TOP loudspeakers when used with d&b subwoofers; CPL, to compensate for the coupling effect between loudspeakers in close proximity to other loudspeakers or hard objects and HFA

mode, to attenuate the high frequencies of a loudspeaker to mimic the effect of far field listening.
These devices offer extended, user-definable equalization and delay capabilities, eliminating the need for external processing devices in the signal chain. All d&b amplifiers integrate with the d&b Remote network to enable the remote control and management of systems from anywhere within a network.
Further information is provided in the d&b Amplifier and Software brochure which is available for download at www.dbaudio.com.

Comparison of the d&b amplifiers

	D80	D40	D20	40D	30D	10D
User interface	Encoder/colour TFT touchscreen	Encoder/colour TFT touchscreen	Encoder/colour TFT touchscreen	Colour TFT touchscreen	LED indicators	LED indicators
Output channels	4	4	4	4	4	4
Input channels	4 x AES3 or 4 x analog or 2 x AES3 and 2 x analog	4 x AES3 or 4 x analog	4 x AES3 or 4 x analog or 2 x AES3 and 2 x analog	4 x AES3 and 4 x analog	4 x AES3 and 4 x analog	4 x AES3 and 4 x analog
Latency	0.3 msec	0.3 msec	0.3 msec	0.3 msec	0.3 msec	0.3 msec
User equalizers (per channel)	2 x 16-band	2 x 16-band	2 x 16-band	2 x 16-band	2 x 16-band	2 x 16-band
Delay	10 sec/3440 m	10 sec/3440 m	10 sec/3440 m	10 sec/3440 m	10 sec/3440 m	10 sec/3440 m
Maximum output power (THD+N < 0.5%, 12 dB crest factor)	4 x 2000 W into 8 ohms 4 x 4000 W into 4 ohms	4 x 2000 W into 8 ohms 4 x 2400 W into 4 ohms	4 x 800 W into 8 ohms 4 x 1600 W into 4 ohms	4 x 2000 W into 8 ohms 4 x 2400 W into 4 ohms	4 x 800 W into 8 ohms 4 x 1600 W into 4 ohms	4 x 350 W into 8 ohms 4 x 700 W into 4 ohms
Output routing	Dual Channel, Mix TOP/SUB 2-Way Active	Dual Channel, Mix TOP/SUB 2-Way Active	Dual Channel, Mix TOP/SUB 2-Way Active	Dual Channel, Mix TOP/SUB 2-Way Active	Dual Channel, Mix TOP/SUB 2-Way Active	Dual Channel, Mix TOP/SUB 2-Way Active
Output connectors	NL4/EP5 plus central NL8	NL4 plus central NL8	NL4 plus central NL8	Phoenix Euroblock	Phoenix Euroblock	Phoenix Euroblock
GPIO connector	No	No	No	Phoenix Euroblock 12 ports	Phoenix Euroblock 5 ports	Phoenix Euroblock 5 ports
Cable compensation	LoadMatch	LoadMatch	LoadMatch	LoadMatch	LoadMatch	LoadMatch
Power supply	Autosensing switched mode power supply with active PFC	Autosensing switched mode power supply with active PFC	Universal range switched mode power supply with active PFC	Autosensing switched mode power supply with active PFC	Universal range switched mode power supply with active PFC	Universal range switched mode power supply with active PFC
Mains voltage	100 - 127/208 - 240 V, 50 - 60 Hz	100 - 127/208 - 240 V, 50 - 60 Hz	100 - 240 V, 50 - 60 Hz	100 - 127/208 - 240 V, 50 - 60 Hz	100 - 240 V, 50 - 60 Hz	100 - 240 V, 50 - 60 Hz
Weight (kg/lb)	19/42	13,8/30,4	10.8/23.8	13.3/29.3	10.6/23.4	10.6/23.4
Dimensions	2 RU x 19" x 530 mm	2 RU x 19" x 465 mm	2 RU x 19" x 460 mm	2 RU x 19" x 465 mm	2 RU x 19" x 435 mm	2 RU x 19" x 435 mm
Remote	OCA via Ethernet/CAN	OCA/AES70 via Ethernet	OCA via Ethernet/CAN	OCA/AES70 via Ethernet	OCA via Ethernet/CAN	OCA via Ethernet/CAN
Airflow						

Amplifier controller setups

Passive and 2-Way Active operation
The D6, D20, D40, D80, 10D, 30D and 40D amplifiers can drive the MAX2, M6 and M4 passively. The D20, D40, D80, 10D, 30D and 40D can also drive the M6 and M4 in 2-Way Active mode. The M2 can only be driven in 2-Way Active mode with the D80 or 30D amplifiers.

CUT mode
Set to CUT, the cabinet low frequency level is reduced and is configured for use with d&b active subwoofers.

HFA mode
In HFA mode (High Frequency Attenuation), the HF response of the system is rolled off. The 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.

CPL function
The CPL (Coupling) function compensates for coupling effects between closely coupled cabinets by reducing the low and mid frequency level. CPL begins gradually at 1 kHz, with maximum attenuation below 400 Hz (for M2 250 Hz), providing a balanced frequency response when monitors are used in pairs. The CPL function can be set in dB attenuation values between –9 and 0, or a positive CPL value which creates an adjustable low frequency boost around 65 Hz (0 to +5 dB).

MAX2 operation with other amplifiers
The MAX2 may be driven by any high quality linear power amplifier provided the output power does not exceed 800 Watts into 8 ohms and an additional subsonic filter (25 Hz and 12 dB/octave) is used.

Recommended amplifiers

	MAX2	M6	M4	M2[1]
D20	x	x	x	
D40	x	x	x	
D80				x

Maximum loudspeakers per amplifier channel in passive mode

MAX2	M6	M4
2	2	2

Maximum loudspeakers per amplifier in 2-Way Active mode

	M6	M4	M2[1]
D20	4	4	
D40	4	4	2
D80	4	4	4
30D	4	4	2
40D	4	4	2

Available controller settings

	MAX2	M6	M4	M2[1]
CUT	x	x	x	x
HFA	x	x	x	
CPL	x	x	x	x
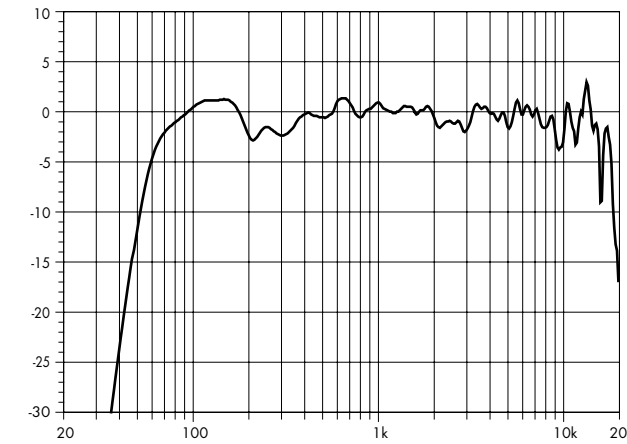
MAX2 configuration standard (floor coupling)
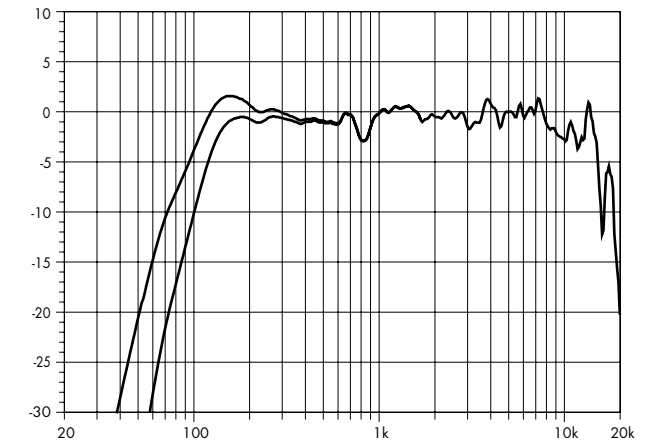
MAX2 linear setup standard and CUT (free field)
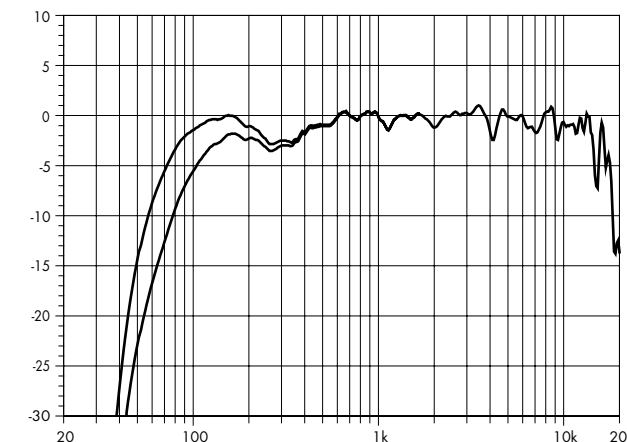
M6 standard and CUT (floor coupling)

M4 standard and CUT (floor coupling)

M2 standard

[1]   Only D80 and 30D for M2

The d&b amplifier output modes

D6 amplifier in Dual Channel mode for MAX2, M6 and/or M4

10D/30D/40D/D20/D40/D80 amplifier in Dual Channel mode for MAX2, M6 and M4

10D/30D/40D/D20/D40/D80 amplifier in mixed configuration with Dual Channel mode for MAX2, M6, M4 and 2-Way Active mode for M6 and M4

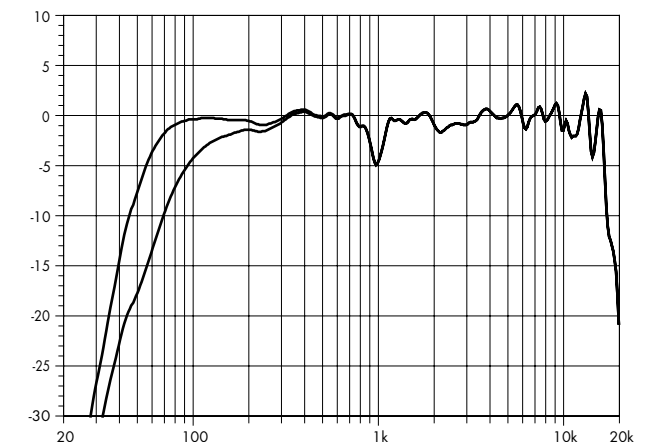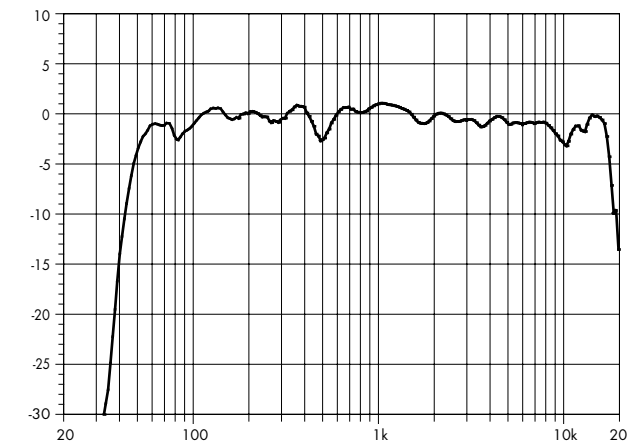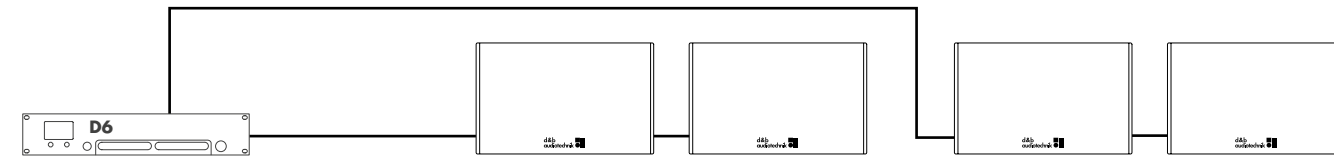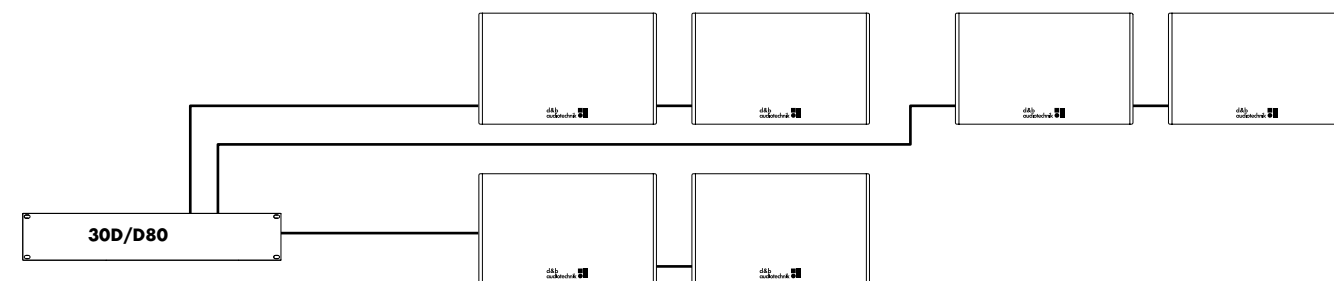**30D/D80 amplifier in mixed configuration with Dual Channel mode for MAX2, M6, M4 and 2-Way Active mode for M6, M4 and M2**

The DS10 and DS20 Audio network bridges

DS10 Audio network bridge

The DS10 Audio network bridge interfaces between Dante networks and AES3 digital audio signals, while also providing distribution of Ethernet control data. Positioned within the signal chain in front of the amplifiers, this 1 RU device expands the d&b system approach. Each unit can deliver up to sixteen Dante network channels via AES3 digital signal outputs. Additionally, four AES3 input channels provide access to the Dante audio network for applications such as a break-in from a Front of House console. The DS10 incorporates an integrated 5-port switch, offering a primary and redundant network for the Dante protocol, as well as advanced functions such as Multicast Filtering and VLAN modes. Using the DS10 Audio network bridge, audio signals and remote control data can be combined using a single Ethernet cable.

DS20 Audio network bridge

The DS20 Audio network bridge supports the open standards-based Milan protocol rather than Dante. Milan (Media integrated local area networking) is a high level interoperability solution based on Audio Video Bridging (AVB) technology. The main advantages are deterministic behaviour (zero network congestion); improved reliability; optimum synchronization and hassle free network setup, as no special settings, such as QoS, need to be set within the switches to ensure delivery.

The DS10 Audio network bridge front view

The DS10 Audio network bridge rear view

The DS20 Audio network bridge front view

The DS20 Audio network bridge rear view

The Stage monitors cables and adapters

Amplifiers in Dual Channel mode

D80
1 x D80 amplifier NL4/EP5

D20
1 x D20 amplifier NL4

D6
1 x D6 amplifier NL4

**Z5340.xxx
MC4 Cable NLT4 F/M**

**Z2299.xxx
MC 2.5 Cable NL4 F/F**

D80
1 x D80 amplifier
OUT: NL8

D20
1 x D20 amplifier
OUT: NL8

D6
D6
2 x D6 amplifier
OUT: NL4

**Z5345.001
Adapter 4 x NL4 to NLT8M**

**Z5343.xxx
MC8 Cable NLT8 F/M**

**Z5347.001
Breakoutbox NLT8 F/M
to 6 x NL4**

**Z5340.xxx
MC4 Cable NLT4 F/M**

**Z2299.xxx
MC 2.5 Cable NL4 F/F**
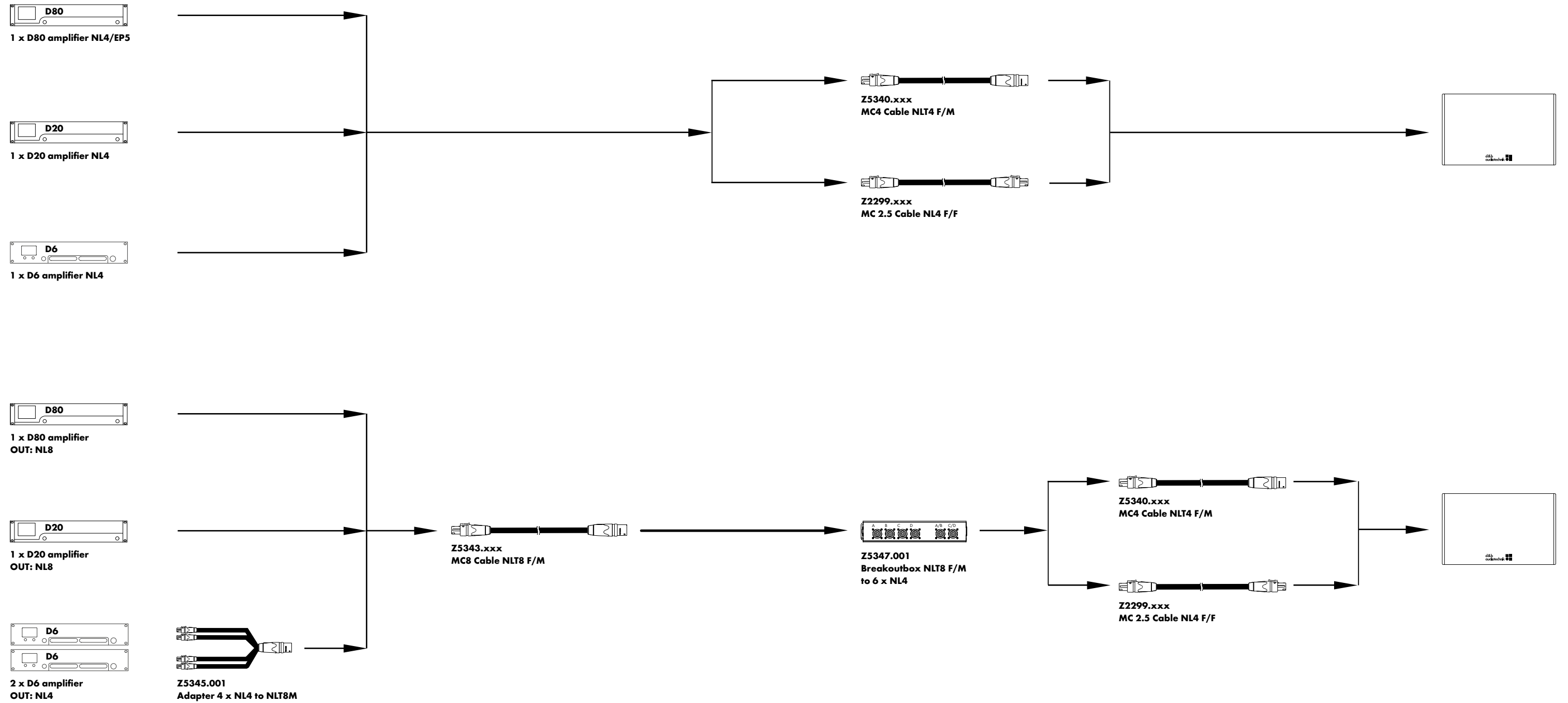
The Stage monitors product overview

Loudspeakers	Z1120.001	**MAX2 Monitor NL4** connector
	Z1120.002	**MAX2 Monitor NLT4 F/M** connector
	Z0820.001	**M6 Monitor NL4** connector
	Z0820.002	**M6 Monitor NLT4 F/M** connector
	Z0800.001	**M4 Monitor NL4** connector
	Z0800.002	**M4 Monitor NLT4 F/M** connector
	Z0061.600	**M2 Monitor NL8** connector
	Z0061.002	**M2 Monitor NLT4 F/M** connector
Loudspeaker cases	E7467.000	**Touring case 2 x MAX2/M4** sleeve, moulded speaker profile, wheels
	E7437.000	**Touring case 2 x M6** tray, wheels
	E7425.000	**Touring case 2 x M2** door, moulded speaker profile, wheels
Accessories	Z5043.000	**MAX Horizontal bracket**
	Z5044.000	**MAX Bracket connector (supplied in pairs)**
	Z5057.000	**M6 Flying bracket**
	Z5056.000	**M4 Flying bracket**
	Z5175.000	**Qi Horizontal bracket**
	Z5020.000	**Flying adapter 02**
	Z5025.000	**Flying adapter 03**
	Z5010.000	**TV spigot with fixing plate**
	Z5015.000	**TV spigot** for flying adapter 02
	Z5012.500	**Pipe clamp** for TV spigot
	Z5009.000	**Loudspeaker stand with winder**
	Z5013.000	**M20 pole with winder**
	Z5024.000	**Loudspeaker stand adapter**
	Z5048.000	**Flying pin 10 mm**
Remote network	Z6118.000	**R60 USB to CAN interface**
	Z6124.000	**R70 Ethernet to CAN interface**
Audio networking	Z4010.000	**DS10 Audio network bridge**
	Z4011.000	**DS20 Audio network bridge**
	Z5563.000	**DS10 Rack upgrade kit**
	Z5339.000	**Multichannel extension cable**

Amplifiers	Z2710.xxx	**D80 Amplifier**[1]
	Z2850.xxx	**D40 Amplifier**[1]
	Z2750.xxx	**D20 Amplifier**[1]
	Z2830.xxx	**40D Amplifier**[2]
	Z2770.xxx	**30D Amplifier**[2]
	Z2760.xxx	**10D Amplifier**[2]
Amplifier rack assemblies	Z5560.000	**D20 Touring rack assembly CEE 32A 5P, NL4**[3]
	Z5561.000	**D20 Touring rack assembly CEE 32A 5P, NL4, DS10**[3]
	Z5330.xxx	**D80 Touring rack assembly, NEMA L21-30 (120V devices)** on request
Amplifier racks	E7480.000	**D20 Touring rack 2 RU 19"** SD, shock mounted, handles, window
	E7468.000	**D80 Touring rack 2 RU, 19"** SD, shock mounted, handles, window
Cables	Z5343.xxx	**MC8 Cable NLT8 F/M**
	Z5345.001	**Adapter 4 x NL4 to NLT8M**
	Z5344.002	**Adapter NLT8F to 4 x NLT4M**
	Z5344.001	**Adapter NLT8F to 4 x NL4**
	Z5347.001	**Breakoutbox NLT8 F/M to 6 x NL4**
	Z5340.xxx	**MC4 Cable NLT4 F/M**
	Z2299.xxx	**MC 2.5 Cable NL4 F/F**
	Z5348.002	**Adapter NLT8F to 2 x NLT4M**
	Z5348.003	**Adapter NLT8M to 2 x NL8**

[1] The complete list of mobile amplifier versions is available in the D Amplifier and Software brochure

[2] The complete list of installation amplifier versions is available in the xD Installation Amplifier and Software brochure

[3] Further information is available in the D Amplifier and Software brochure

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