J

Contents

S^r loudspeakers amplifiers accessories software technical information education distribution network support service finance

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.

The **J-Series** line array system is designed specifically for use in large-scale sound reinforcement applications. The crystal clear and detailed audio performance, smooth and even frequency response over distance, high dynamic bandwidth, power and headroom capabilities all make it a suitable choice for the far reaching reinforcement of any sound genre. Control of dispersion behaviour, as well as keeping the size and weight of systems to an absolute minimum, are both areas in which the J-Series excels.

All the components needed to suspend the loudspeakers within the bespoke three point J-Series flying system are integrated into the cabinets ensuring speedy deployment providing incredibly quick and easily configurable array solutions in all the intended large-scale sound reinforcement applications, even in the most arduous situations.

The J-Series

The **J8** and **J12** loudspeakers are acoustically matched and constructed to be mechanically compatible sharing the same vertical directivity, size, footprint, weight, rigging and driver complement. The 3-way design featuring two 12" LF drivers, one hornloaded 10" MF driver and two 1.4" exit HF compression drivers with 3" voicecoils mounted to a dedicated waveshaping device. The symmetrical dipolar arrangement of the neodymium LF drivers around the centrally mounted coaxial MF and HF components allows a smooth overlap of the adjacent frequency bands in the crossover design. The 80° horizontal constant directivity dispersion pattern of the J8 is maintained down to 250 Hz and its high output capability can cover a distance range of over 100 m (330 ft), depending on the climatic conditions. The J12 has a wider horizontal dispersion pattern of 120° maintained down to 250 Hz.

J8, J12 loudspeaker

The **J-SUB** shares the same width as the J8 and J12 loudspeakers and is equipped with compatible flying fittings. The bass-reflex design uses three 18" high excursion drivers, one of which radiates to the rear to produce cardioid or hypercardioid subwoofer performance to avoid unwanted energy behind the system.
The **J-INFRA** extends the bandwidth of a J-Series system down to 27 Hz as well as increasing its headroom and is intended only for ground stacked setups. The bass-reflex design uses three 21" high excursion drivers, one of which radiates to the rear to produce cardioid or hypercardioid subwoofer performance to avoid unwanted energy behind the system.
Both the J-SUB and J-INFRA can be deployed in conventional left and right ground stacked setups as well as in distributed sub arrays to achieve an even venue specific coverage pattern.

All J-Series loudspeakers are finished with a PCP (Polyurea Cabinet Protection) coating that provides resistance for mobile systems to the adverse effects on cabinets in changing ambient outdoor conditions.

J subwoofer

J-INFRA subwoofer

The d&b software offering aides the entire system setup process, from the simulation and planning of the loudspeaker systems, to the remote control and monitoring of the system functions during the event, followed by service functionality to verify system performance prior to de-rigging. The **ArrayCalc** simulation software allows the virtual optimization of loudspeaker line arrays, point source and column loudspeakers as well as subwoofers and their adjustment to venue conditions. The complete system configuration simulated in ArrayCalc is assimilated by the **R1** Remote control software into an intuitive graphical user interface to manage the amplifiers, and loudspeakers, from anywhere in the venue. Service functions enable firmware updates of the amplifiers as and when these are available.

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** amplifier is intended for both mobile and installation applications requiring the highest Sound Pressure Levels. The installation specific four channel **30D** amplifier is intended for permanent integration within venues which require medium to high Sound Pressure Levels. These amplifiers all provide extensive user-definable equalization containing two 16-band equalizers with parametric, notch, shelving and asymmetric filters as well as delay capabilities of up to 10 seconds.

The **DS10** Audio network bridge provides 16 AES3 outputs and interfaces between the Dante audio transport protocol and the d&b amplifiers.

D80 amplifier

30D amplifier

DS10 Audio network bridge

The J8 loudspeaker

J8 loudspeaker

The J8 loudspeaker is a line array module designed for long throw applications. Its 3-way design uses an active crossover between the low and mid and a passive crossover between the mid and high frequencies. J8 is completely symmetrical horizontally with two 12" neodymium low frequency drivers placed to the outsides in a dipolar arrangement. Its hornloaded coaxial mid and high frequency section is mounted in the centre of the loudspeaker. The mid frequency horn uses a 10" driver, while the high frequency section consists of two 1.4" exit HF compression drivers with 3" voicecoils mounted to a dedicated waveshaping device. The cylindrical wave segments produced couple coherently in the vertical plane. This results in an exceptional 80° horizontal constant directivity dispersion control nominally being maintained down to 250 Hz.

The mechanical and acoustical design enables flown vertical columns of up to twenty-four loudspeakers to be suspended using vertical splay angles between them of 0° to 7° with a 1° resolution. The J8 is acoustically and mechanically compatible with the J12 loudspeaker. It can be used in columns of purely J8 loudspeakers or combined with J12s and/or with J-SUBs.
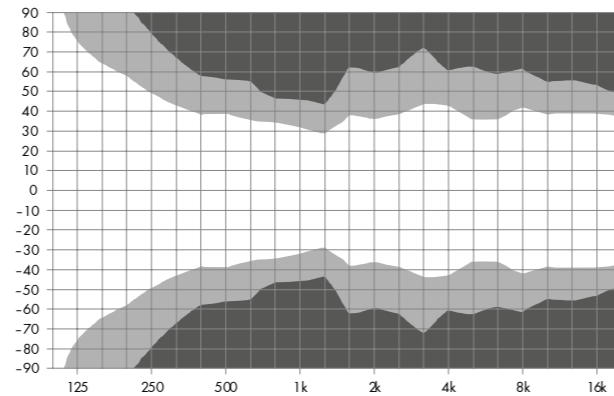
The J8 cabinet is constructed from marine plywood and has an impact and weather protected PCP (Polyurea Cabinet Protection) finish. The front of the loudspeaker cabinet is protected by a rigid metal grill and the side and rear panels incorporate four handles.

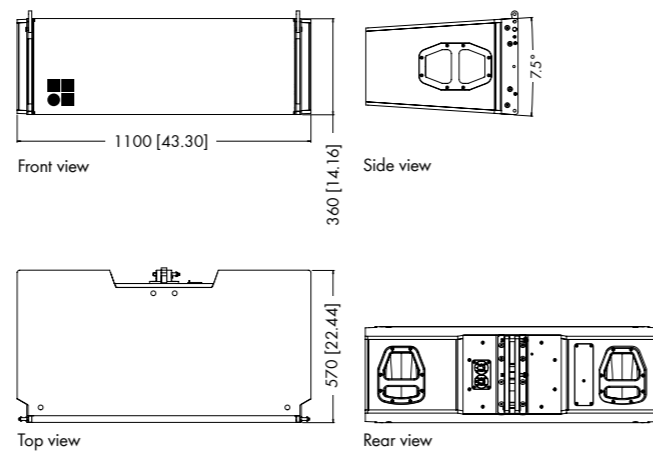**J8 horizontal dispersion characteristics[2]**

J8 cabinet dimensions in mm (inch)

Front view — 1100 [43.30]
Side view — 7.5° — 360 [14.16]
Top view
Rear view — 570 [22.44]

System data

Frequency response (–5 dB standard) .... 48 Hz - 17 kHz
Frequency response (–5 dB CUT mode) .... 85 Hz - 17 kHz
Max. sound pressure (1 m, free field)[1] ....
with D12/30D .... 145 dB
with D80 .... 145 dB

Loudspeaker data

Nominal impedance LF/MHF ....6/12 ohms
Power handling capacity LF (RMS/peak 10 msec) . 500/2000 W
Power handling capacity MHF (RMS/peak 10 msec) 200/800 W
Nominal dispersion angle (horizontal) ....80°
Splay angle settings .... 0 - 7° (1° increment)
Components .... 2 x 12" driver/1 x 10" driver
.... 2 x 1.4" exit compression driver
.... passive crossover network
Connections .... 2 x NLT4 F/M
.... optional 2 x EP5 or 2 x NL8
Weight .... 60 kg (132 lb)

The J12 loudspeaker

J12 loudspeaker

The J12 loudspeaker is a line array module designed for long throw applications. Its 3-way design uses an active crossover between the low and mid and a passive crossover between the mid and high frequencies. J12 is completely symmetrical horizontally with two 12" neodymium low frequency drivers placed to the outsides in a dipolar arrangement. Its hornloaded coaxial mid and high frequency section is mounted in the centre of the loudspeaker. The mid frequency horn uses a 10" driver, while the high frequency section consists of two 1.4" exit HF compression drivers with 3" voicecoils mounted to a dedicated waveshaping device. The cylindrical wave segments produced couple coherently in the vertical plane. This results in an exceptional 120° horizontal constant directivity dispersion control nominally being maintained down to 250 Hz.

The mechanical and acoustical design enables flown vertical columns of up to twenty-four loudspeakers to be suspended using vertical splay angles between them of 0° to 7° with a 1° resolution. The J12 is acoustically and mechanically compatible with the J8 loudspeaker. It can be used in columns of purely J12 loudspeakers or combined with J8s and/or with J-SUBs.
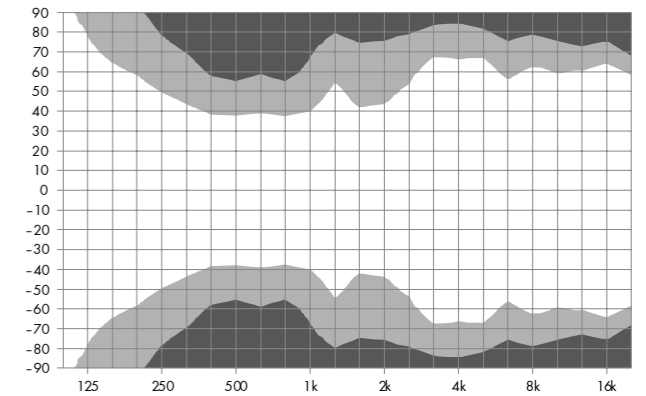
The J12 cabinet is constructed from marine plywood and has an impact and weather protected PCP (Polyurea Cabinet Protection) finish. The front of the loudspeaker cabinet is protected by a rigid metal grill and the side and rear panels incorporate four handles.
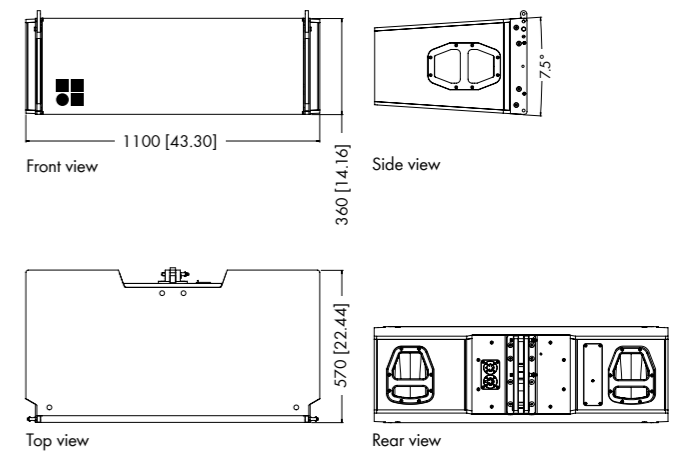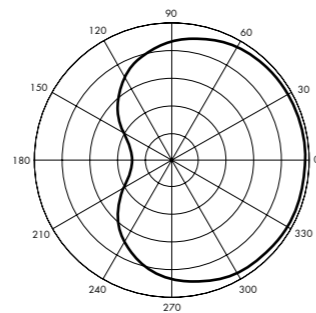
J12 horizontal dispersion characteristics[2]

J12 cabinet dimensions in mm (inch)

Front view — 1100 [43.30]
Side view — 7.5° — 360 [14.16]
Top view
Rear view — 570 [22.44]

System data

Frequency response (–5 dB standard) .... 48 Hz - 17 kHz
Frequency response (–5 dB CUT mode) .... 85 Hz - 17 kHz
Max. sound pressure (1 m, free field)[1] ....
with D12/30D .... 143 dB
with D80 .... 143 dB

Loudspeaker data

Nominal impedance LF/MHF ....6/12 ohms
Power handling capacity LF (RMS/peak 10 msec) . 500/2000 W
Power handling capacity MHF (RMS/peak 10 msec) 200/800 W
Nominal dispersion angle (horizontal) ....120°
Splay angle settings .... 0 - 7° (1° increment)
Components .... 2 x 12" driver/1 x 10" driver
.... 2 x 1.4" exit compression driver
.... passive crossover network
Connections .... 2 x NLT4 F/M
.... optional 2 x EP5 or 2 x NL8
Weight .... 60 kg (132 lb)

[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 J subwoofer

J subwoofer

The J-SUB is the subwoofer for the J-Series. It is an actively driven 2-way bass-reflex design housing three long excursion neodymium 18" drivers, two drivers face to the front and one driver to the rear. The cardioid dispersion pattern resulting from this arrangement avoids unwanted energy behind the system that greatly reduces the excitation of the reverberant field at low frequencies and provides the greatest accuracy of low frequency reproduction.

The J subwoofer can be used to supplement J8 and J12 loudspeakers in various combinations, ground stacked or flown, either integrated on top of a J8/J12 array or as a separate column. Cabinets are mechanically connected using the rigging links on both sides of the cabinet front, and with a central rigging link at the rear of the cabinet.

The J-SUB cabinet is constructed from marine plywood and has an impact and weather protected PCP (Polyurea Cabinet Protection) finish. The front and rear of the loudspeaker cabinet are protected by a rigid metal grill and the side panels incorporate eight handles. Four 100 mm wheels are mounted at the rear.

System data

Frequency response (–5 dB standard) .... 32 - 100 Hz
Frequency response (–5 dB INFRA mode) .... 32 - 70 Hz
Max. sound pressure (1 m, free field)[1] ....
with D12/30D .... 138 dB
with D80 .... 139 dB

Loudspeaker data

Nominal impedance front/rear .... 4/8 ohms
Power handling capacity (RMS/peak 10 msec) ....
Front .... 800/3200 W
Rear .... 400/1600 W
Components .... 3 x 18" driver
Connections .... 1 x NLT4 F
.... optional 1 x EP5 or 1 x NL8
Weight .... 106 kg (234 lb)

Standard cardioid polar pattern

Hypercardioid polar pattern

Front view — 1100 [43.30] — 540 [21.26]
Side view
945 [37.20] / 1062.50 [41.83]
Top view
Rear view
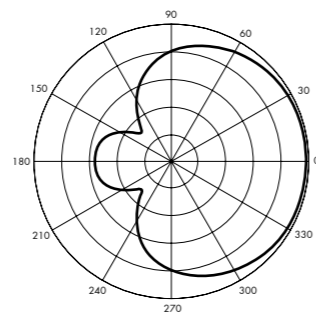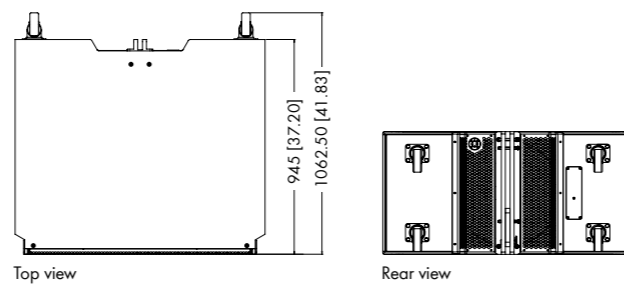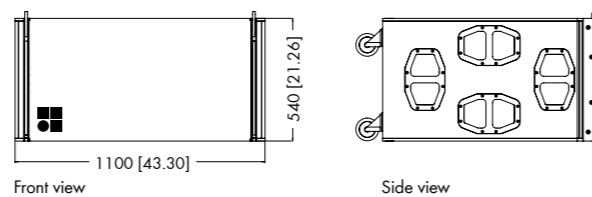
J-SUB cabinet dimensions in mm (inch)

The J-INFRA subwoofer

J-INFRA subwoofer

The J-INFRA is the INFRA subwoofer for the J-Series. It is an actively driven 2-way bass-reflex design and extends the frequency response of a J-Series system down to 27 Hz. It has two bass-reflex chambers containing three 21" drivers, two facing forward and one facing backwards. The cardioid dispersion pattern resulting from this arrangement avoids unwanted energy behind the system that greatly reduces the excitation of the reverberant field at low frequencies and provides the highest accuracy of low frequency reproduction.

The J-INFRA can only be used in ground stacked configurations in conventional left/right setups as well as arranged in a subwoofer array.
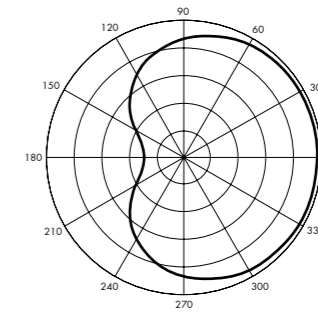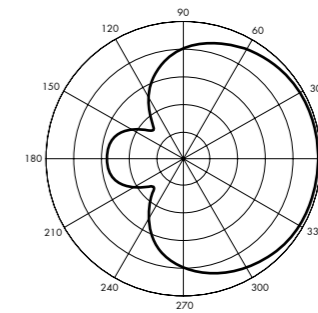
The J-INFRA cabinet is constructed from marine plywood and has an impact and weather protected PCP (Polyurea Cabinet Protection) finish. The front and rear of the loudspeaker cabinet are protected by a rigid metal grill and the side panels incorporate eight handles. Four 100 mm wheels are mounted at the rear.

System data

Frequency response (–5 dB standard) .... 27 - 60 Hz
Frequency response (–5 dB 70 Hz mode) .... 27 - 70 Hz
Max. sound pressure (single cabinet, 1 m, free field)[1] ....
with D12/30D .... 141 dB
with D80 .... 144 dB

Loudspeaker data

Nominal impedance front/rear .... 3/6 ohms
Power handling capacity (RMS/peak 10 msec) ....
Front .... 800/3200 W
Rear .... 400/1600 W
Components .... 3 x 21" driver
Connections .... 1 x NLT4 F
.... optional 1 x EP5 or 1 x NL8
Weight .... 152 kg (335 lb)

Standard cardioid polar pattern

Hypercardioid polar pattern

Front view — 1180 [46.46] — 685 [26.97]
Side view — 1040 [40.95] / 1158 [45.59]
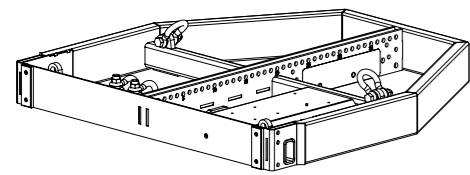Top view
Rear view
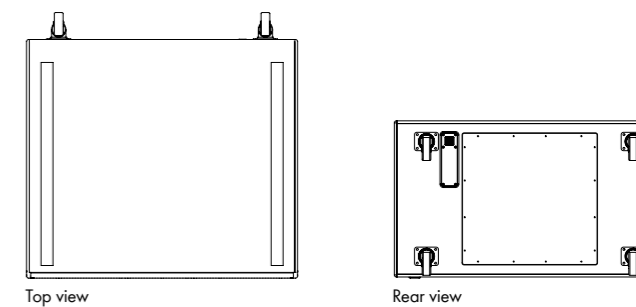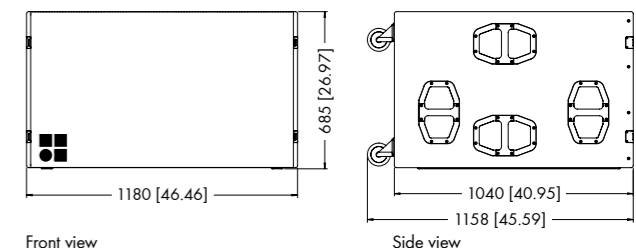
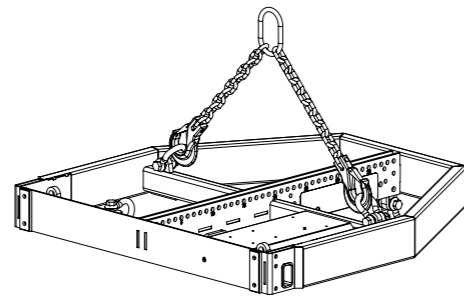**J-INFRA cabinet dimensions in mm (inch)**

The J-Series rigging system

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).
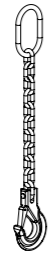
Z5300
J Flying frame
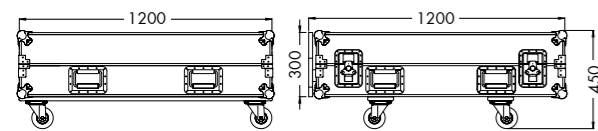For twenty-four J8/J12 loudspeakers
or fourteen J subwoofers maximum

Z5300 J Flying frame
supplied with
Z5303 J Safety chainset
2 x J Load adapter
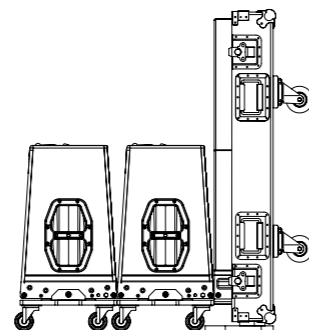2 x J Front links
2 x Locking pinsets 10 mm
1 x Locking pinset 11 mm

Z5303
J Safety chainset

Z5305
J Hoist connector chain

1200
1200
300
450

E7441 Touring case 1 x J Flying frame

**J-Series rigging with
E7441 Touring case**

The J-Series rigging examples

These rigging examples are for illustration only. For further information please refer to the TI 385 d&b Line array design and J-Series Rigging manual, which are available for download at www.dbaudio.com.
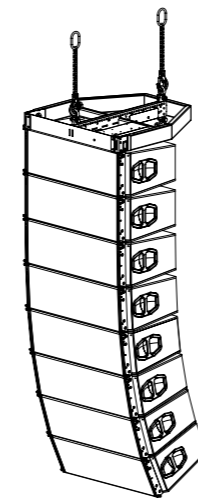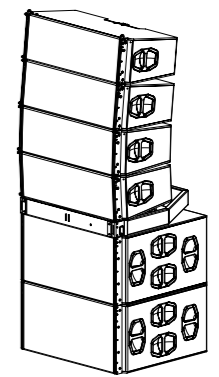
**J8/J12 array with
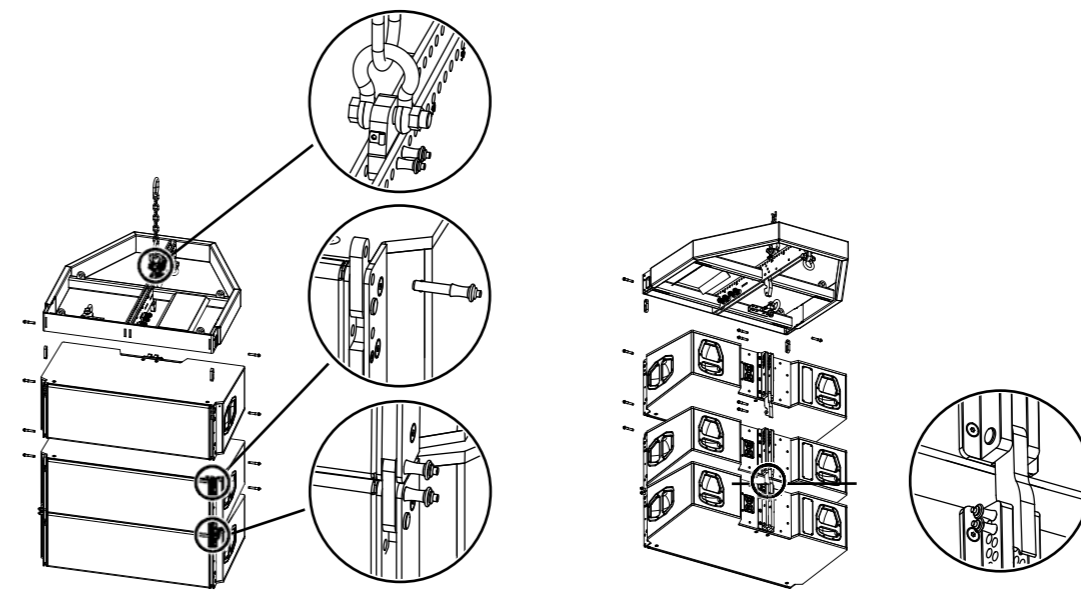Z5300 J Flying frame
2 x Z5305 J Hoist connector chains**
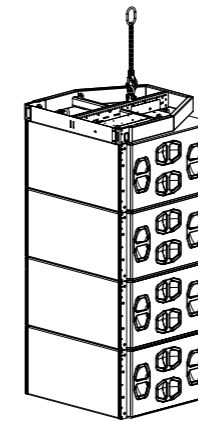
**J-SUB array with
Z5300 J Flying frame
Z5305 J Hoist connector chain**
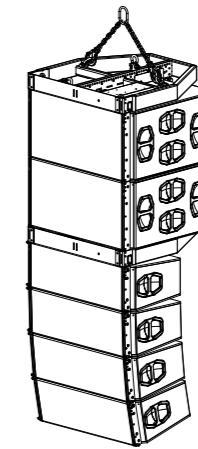
**J-Series mixed array with
2 x Z5300 J Flying frames
Z5303 J Safety chainset**

**J-Series ground stack with
Z5300 J Flying frame**

**J-Series rigging system**

The d&b ArrayCalc simulation software

The d&b ArrayCalc simulation software is the simulation tool for d&b line arrays, column and point source loudspeakers as well as subwoofers. This is a comprehensive toolbox for all tasks associated with acoustic design, performance prediction, alignment, rigging and safety parameters. For safety reasons d&b line arrays must be designed using the d&b ArrayCalc simulation software. d&b ArrayCalc is available as a native stand-alone application for both Microsoft Windows[1] (Win7 or higher) and Mac OS X[2] (10.6 or higher) operating systems. Listening planes can be defined in the venue tab, creating a three dimensional representation of any audience area in a given venue. All sources can be time aligned, additionally the phase response of a flown system and a ground stacked SUB array can be calculated at a definable reference point. The level distribution resulting from the interaction of all active sources can be mapped onto the previously defined audience areas in a three-dimensional view, which can also be zoomed, rotated and exported as a graphics file. The Remote ID for all devices can be managed in the amplifier tab. EASE and DXF data export capabilities are also available.

The ArrayProcessing function applies powerful filter algorithms to optimize the tonal (spectral) and level (spatial) performance of a line array column over the audience area defined by its mechanical vertical coverage angle. Within the d&b ArrayCalc simulation software, spectral and level performance targets over the listening areas can be defined while specific level drops or offsets can be applied to certain areas, to assign reduced level zones. ArrayProcessing applies a combination of FIR and IIR filters to each individual cabinet in an array to achieve the targeted performance, with an additional latency of only 5.9 ms. This significantly improves the linearity of the response over distance as well as seamlessly correcting for air absorption. In addition, ArrayProcessing employs the same frequency response targets for all d&b line arrays, to ensure all systems share a common tonality. This provides consistent sonic results regardless of array length or splay settings. The resulting coverage is enhanced with spectral consistency and defined level distribution, achieving more linear dispersion and total system directivity to cover longer distances or steep listening areas effectively.

The R1 Remote control software uses the data defined in ArrayCalc to generate an intuitive graphical user interface including complete details of the simulated system, including loudspeakers, amplifiers, remote IDs, groups, ArrayProcessing data and all configuration information. This workflow removes the need to manually transfer data from one software program to the other.
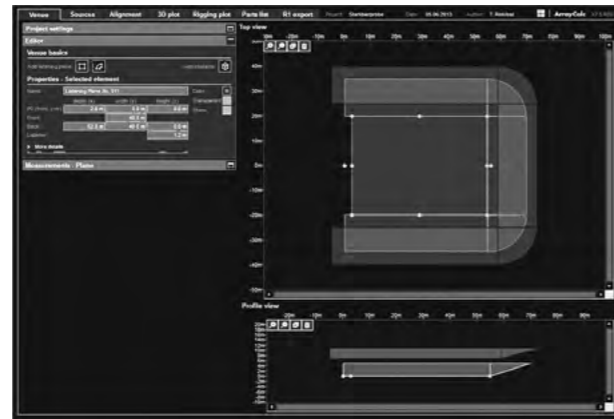
Venue editor
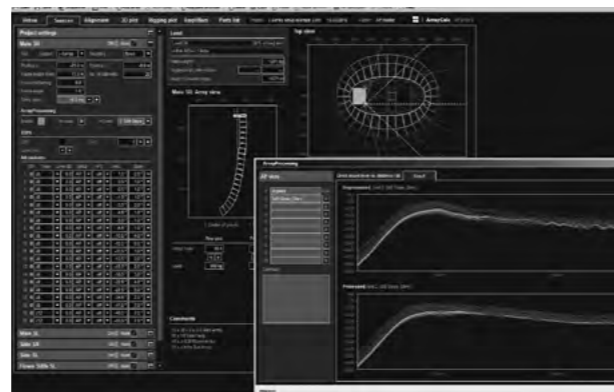
ArrayProcessing
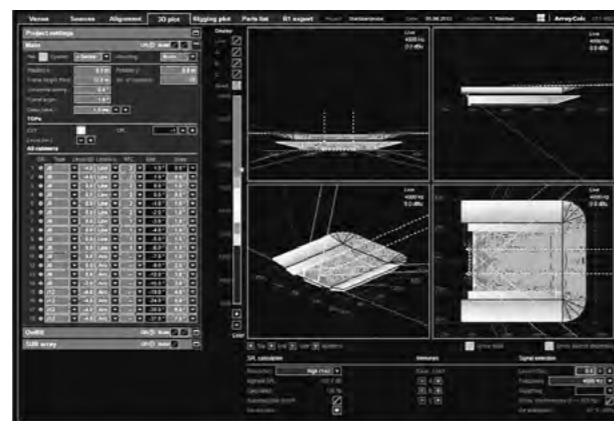
3D Plot quad

The 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 computer in the control room, at the mix position, or on a wireless tablet 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 a typical user workflow, the d&b Remote network takes settings optimized in the ArrayCalc simulation software and applies these to all the amplifiers within the network. The importation of settings from ArrayCalc allows the system configuration to be quickly accomplished, providing more time for verification and fine tuning.

All features, functions and controls available on the front panel of d&b amplifiers may be remotely controlled and/or monitored using R1 Remote control software. This 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, power ON/OFF, MUTE, as well as loudspeaker specific function switches such as CUT/HFA/HFC and CPL. An offline mode is provided for preparation in advance of an event, without the amplifiers being present or connected.

For mobile applications, d&b System check verifies that the system performs within a predefined condition. Extensive facilities for storing and recalling system settings are provided allowing these to be repeated, as and when required. Project files can be easily adjusted for use with a different set of equipment at another location.

In installation projects system integrators can configure the d&b Remote network to offer access to different levels of control, tailored to the operational demands. For example, power ON/OFF for daily use, or more complex functionality for detailed control. Password protection is available to restrict access. Input and Load monitoring allow installation operators to ensure optimum performance at all times.

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 touch screen, mouse and keyboard and runs on both Microsoft Windows[1] (Win7 or higher) and Mac OS X[2] (10.6 or higher) operating systems.

Further information is provided in the d&b Amplifier and Software brochure which is available for download at www.dbaudio.com.

Home

Remote in Configuration mode

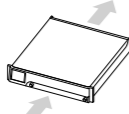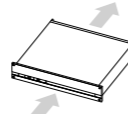
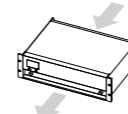**Open views**

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	30D	D12
User interface	Encoder/colour TFT touchscreen	LED indicators	Encoder/LC display
Output channels	4	4	2
Input channels	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
Latency	0.3 msec	0.3 msec	0.3 msec
User equalizers (per channel)	2 x 16-band	2 x 16-band	4-band
Delay	10 sec/3440 m	10 sec/3440 m	340 msec/116.9 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 800 W into 8 ohms 4 x 1600 W into 4 ohms	2 x 800 W into 8 ohms 2 x 1600 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
Output connectors	NL4/EP5 plus central NL8	Phoenix Euroblock	NL4/EP5/NL8
GPIO connector, 5 ports	No	Phoenix Euroblock	No
Cable compensation	LoadMatch	LoadMatch	SenseDrive
Power supply	Autosensing switched mode power supply with active PFC	Universal range switched mode power supply with active PFC	Autosensing switched mode power supply
Mains voltage	100 - 127/208 - 240 V, 50 - 60 Hz	100 - 240 V, 50 - 60 Hz	115/230 V or 100/200 V, 50 - 60 Hz
Weight (kg/lb)	19/42	10.6/23.4	13/28.7
Dimensions	2 RU x 19" x 530 mm	2 RU x 19" x 435 mm	3 RU x 19" x 353 mm
Remote	OCA via Ethernet/CAN	OCA via Ethernet/CAN	CAN
Airflow			

Amplifier controller setups

Arc and Line mode
The Arc mode is used for line array loudspeakers when used in curved array sections with splay angles between 2° and 7°. The Line mode is used for long throw array sections with three or more consecutive splay settings between 0° and 1°. Compared to the Arc mode, the upper mid range is reduced to compensate for the extended near field.

CUT mode
Set to CUT, the cabinet low frequency level is reduced and it is now configured for use with the d&b J subwoofer.

HFC mode
Selecting the HFC (High Frequency Compensation) mode compensates for loss of high frequency energy due to absorption in air when loudspeakers are used to cover far field listening positions. HFC has two settings which should be used selectively, HFC1 for cabinets covering distances larger than 40 m (130 ft) and HFC2 for those covering distances larger than 80 m (260 ft). This can be used to achieve the correct sound balance between close and remote audience areas allowing all amplifiers driving the array to be fed from the same signal source. Thus the whole array performs with comparable headroom.

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 2 kHz, with the maximum attenuation below 100 Hz, providing a balanced frequency response when J-Series cabinets are used in arrays of five or more. The CPL function can be set in dB attenuation values between –9 and 0.

INFRA mode
Selecting the INFRA mode restricts the J-SUB frequency response to a narrow 32 Hz - 70 Hz range. The J-SUB can now be used to supplement d&b J-Series systems operated in full range mode.

HCD mode
Depending on the application requirements, the dispersion pattern of the J-SUB and J-INFRA cabinets can be modified electronically to achieve the best sound rejection where it is most effective. In standard cardioid mode the amplifier J-SUB and J-INFRA setup provides the maximum rejection directly behind the cabinet, whilst selecting HCD (hypercardioid) optimizes the tuning for a maximum rejection to the rear left and right sides. The HCD mode is particularly useful for applications with subwoofers stacked on the left and right sides of the stage to provide the minimum low frequency energy onstage.

70 Hz mode
Selecting the 70 Hz mode extends the J-INFRA frequency response to a 27 Hz - 70 Hz range. The J-INFRA can now be used to supplement d&b J-Series systems operated in full range mode.

Recommended amplifiers for mobile applications

	J8	J12	J-SUB	J-INFRA
D80	x	x	x	x

Recommended amplifiers for installation applications

	J8	J12	J-SUB	J-INFRA
D80	x	x	x	x
30D	x	x	x	

Maximum loudspeakers per amplifier channel

	J8	J12	J-SUB	J-INFRA
D80	4	4	2	2
30D	4	4	2	2

Available controller settings

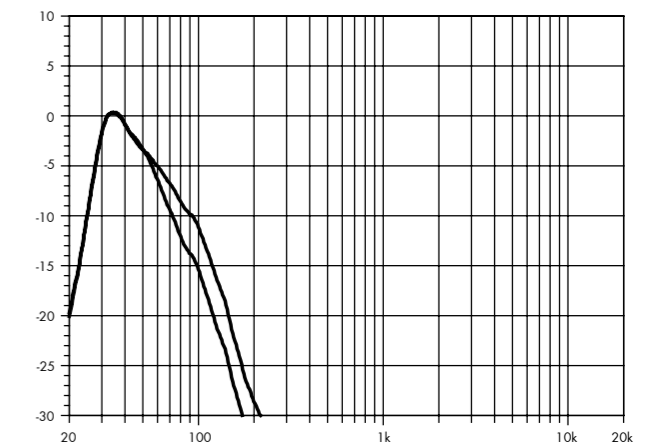|	J8	J12	J-SUB	J-INFRA
Arc/Line	x	x		
CUT	x	x		
HFC	x	x		
CPL	x	x		
INFRA			x	
HCD			x	x
70 Hz				x
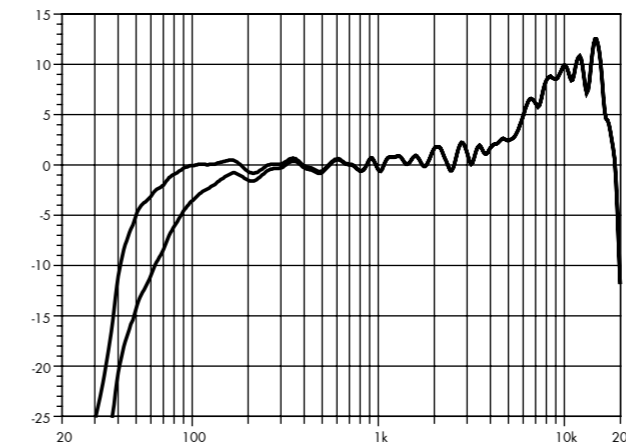
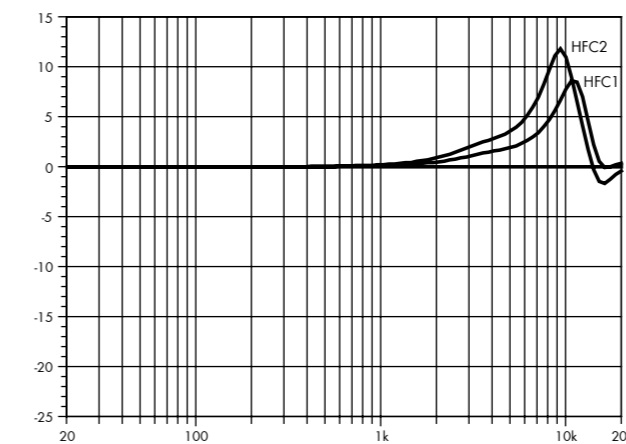J8 standard and CUT (single cabinet)
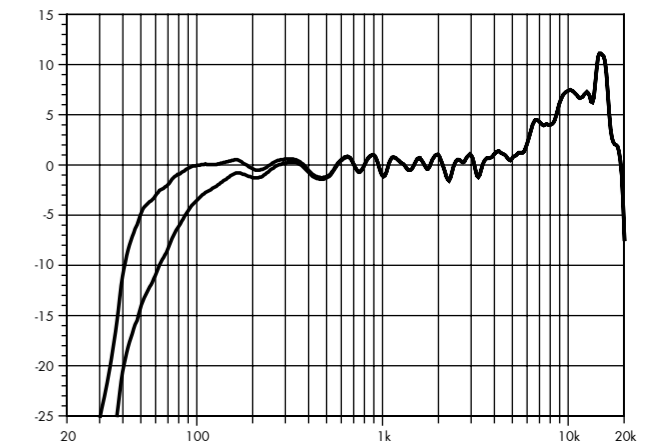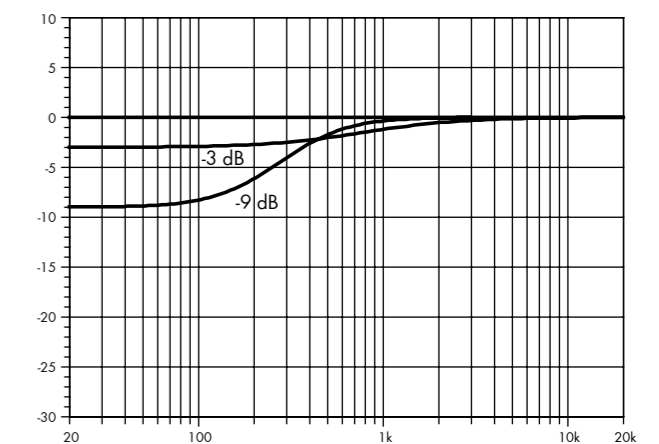

J12 standard and CUT (single cabinet)
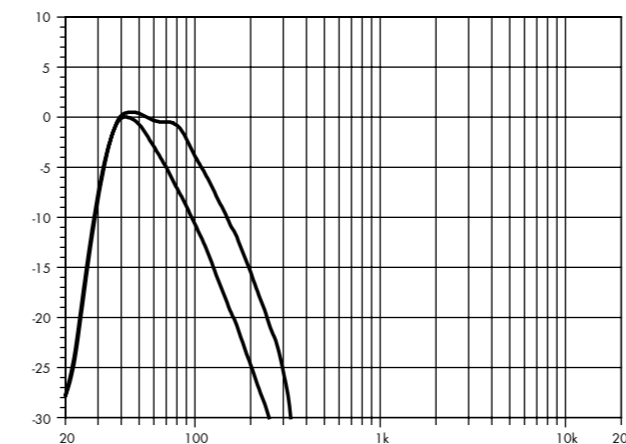
J-SUB standard and INFRA
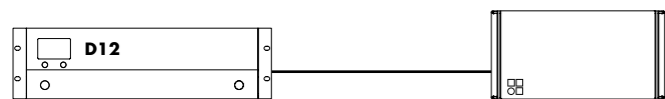

J-INFRA standard and 70 Hz

Correction of HFC
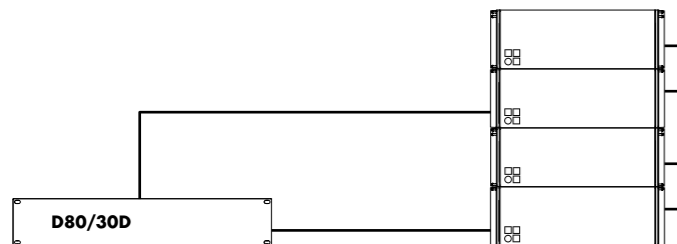

Correction of CPL
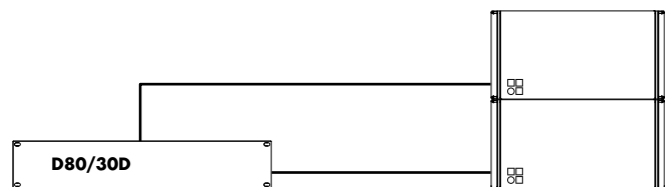
The d&b amplifier output modes

D12 amplifier in 2-Way Active mode for J8 or J12

D12 amplifier in 2-Way Active mode for J-SUB or J-INFRA

D80/30D amplifier in 2 x 2-Way Active mode for J8 and/or J12

D80/30D amplifier in 2 x 2-Way Active mode for J-SUB and/or J-INFRA

The 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 in both mobile and installation environments. Each unit can deliver up to sixteen Dante network channels via AES3 digital signal outputs. The AES3 channel streams from the DS10 carry meta data with Dante channel labels and cabling information to the four channel d&b amplifiers. 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. This extensive switch flexibility provides extended connectivity for a laptop to control the d&b amplifiers using the R1 Remote control software via the OCA (Open Control Architecture) protocol. Using the DS10 Audio network bridge, audio signals and remote control data can be combined using a single Ethernet cable.
The DS10 features a power supply suitable for mains voltages 100 V – 240 V, 50 – 60 Hz, with Overvoltage protection of up to 400 V.

Control and indicators

BYPASS/NETWORK.. Toggle switch
Switch port modes/Audio loss................................... LED indicators
SYNC ERROR ....Red LED indicator
SUBSCRIBED (RX Subscription) .... Green LED indicator

Connectors

DIGITAL IN...3 pin XLR female AES3
Input sampling ....32 - 192 kHz
Input synchronization........................ Sample Rate Converter (SRC)
DIGITAL OUT ....3 pin XLR male AES3
Output sampling .... 48/96 kHz
Output synchronization ....Dante network
Network ....etherCON[1]
.... built-in 5-port Ethernet switch
.... 100/1000 Mbit

Power supply

Mains connector...powerCON[1]
Rated mains voltage .... 100 - 240 V, 50 - 60 Hz

Dimensions, weight

Height x width x depth................................1 RU x 19" x 232 mm
Weight.. 3.75 kg (8.26 lb)
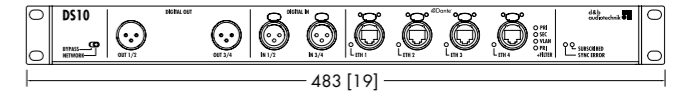
Front view
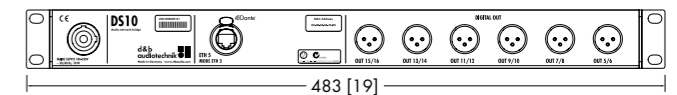
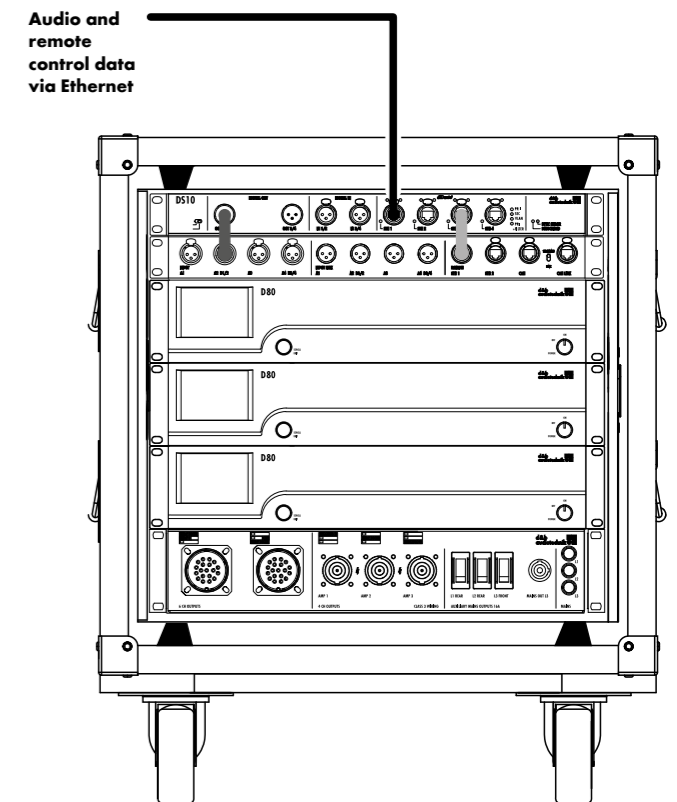

Front view
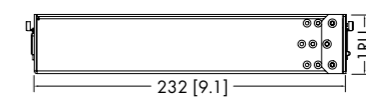
Side view

DS10 Audio network bridge dimensions mm [inch]

DS10 sending audio and remote control data to D80 amplifiers
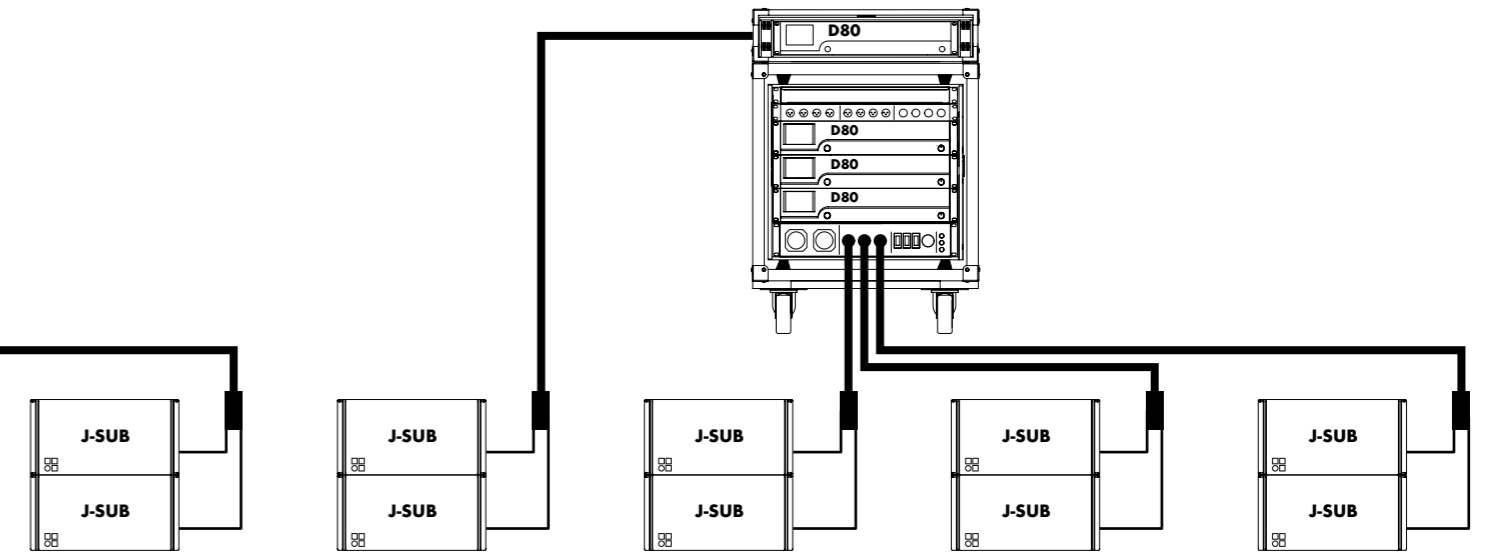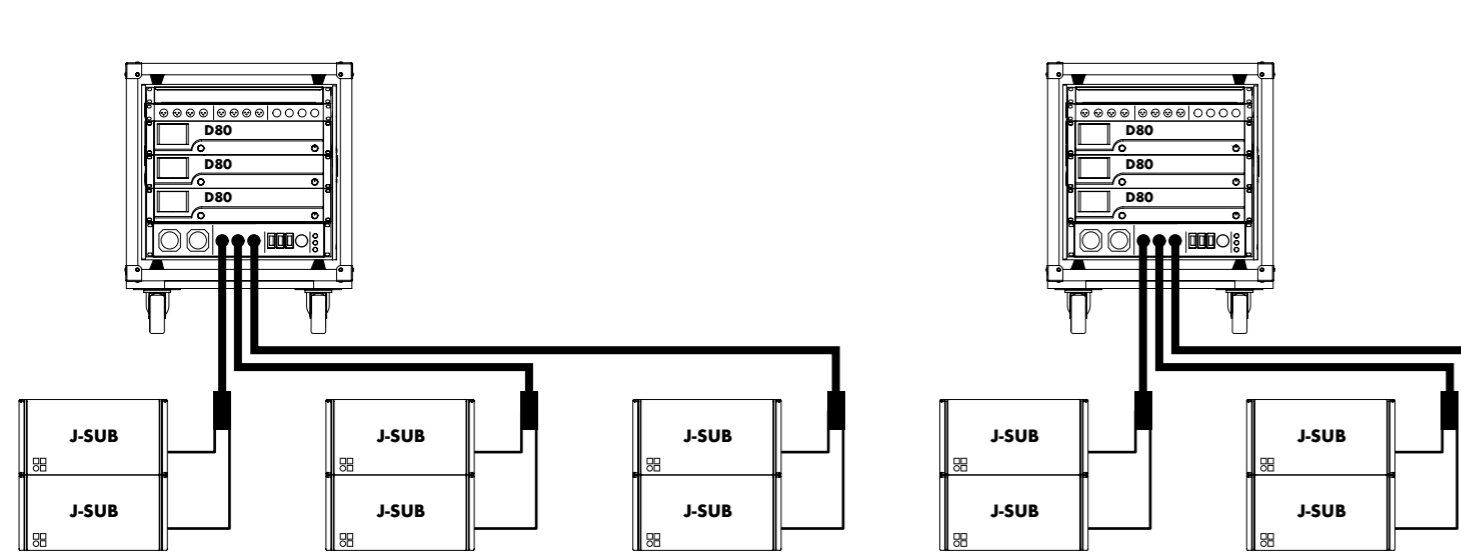
The J-Series configuration examples
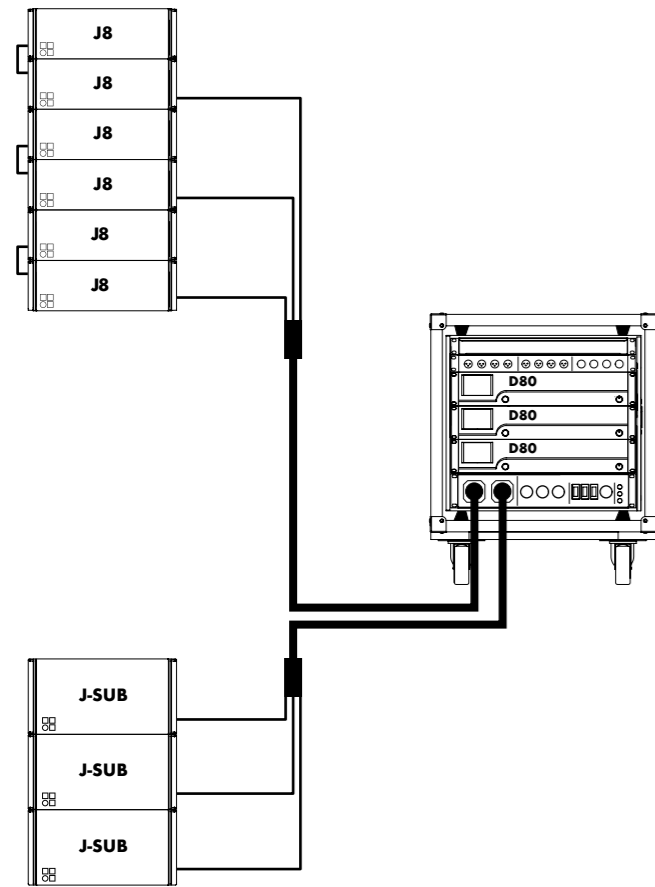
J-Series configuration with J8 flown line array and ground stacked J-SUBs with a D80 Touring rack
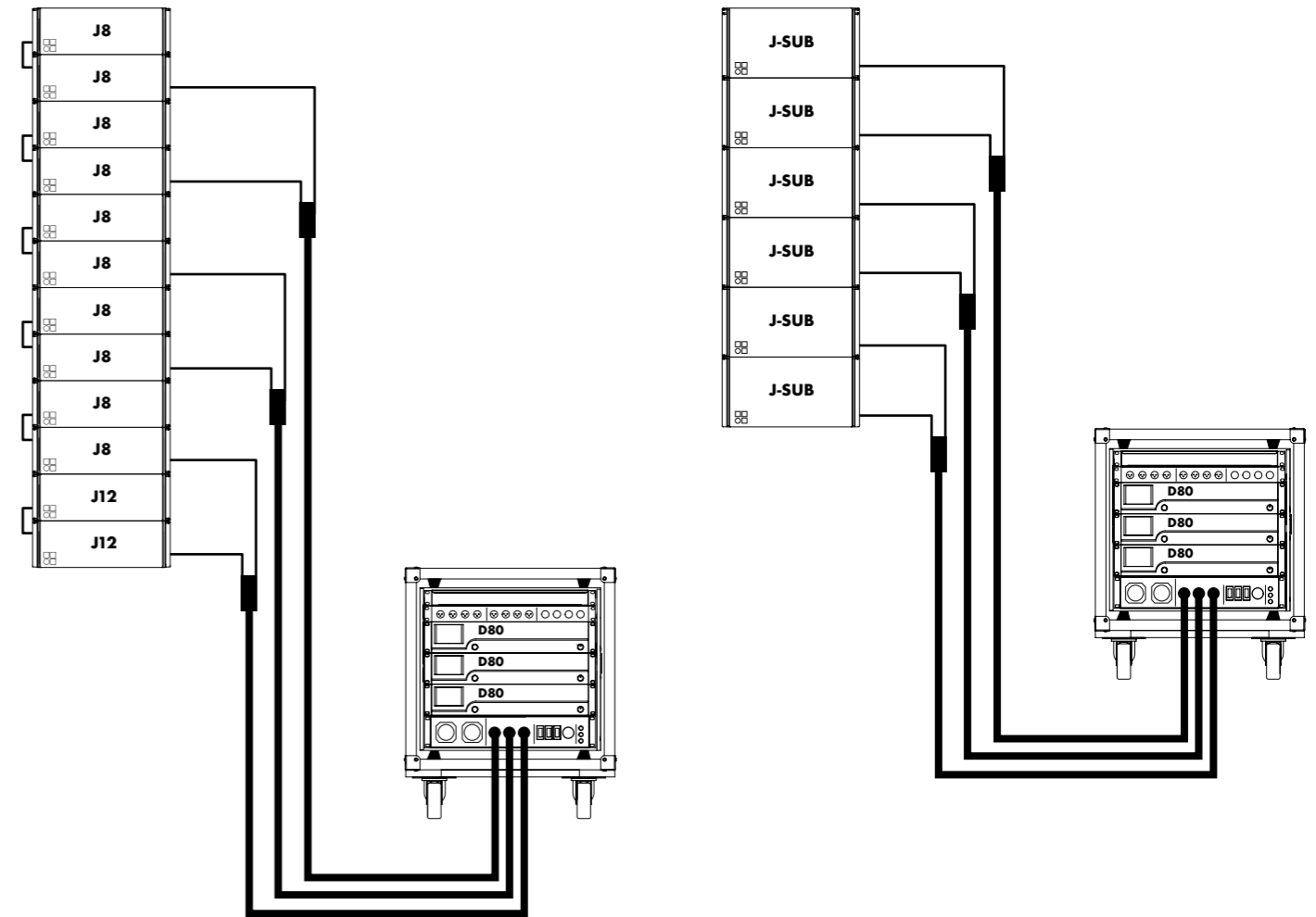
J-Series configuration comprising J8/J12 mains, a flown J-SUB column along with ground stacked J-SUBs and J-INFRAs and Y7Ps as nearfills with D80 Touring racks
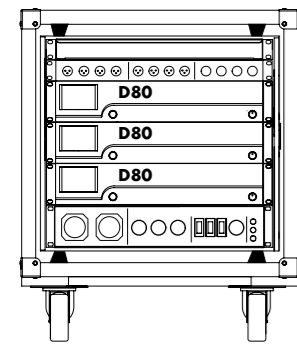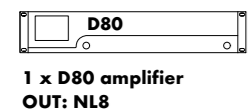
The J-Series configuration examples
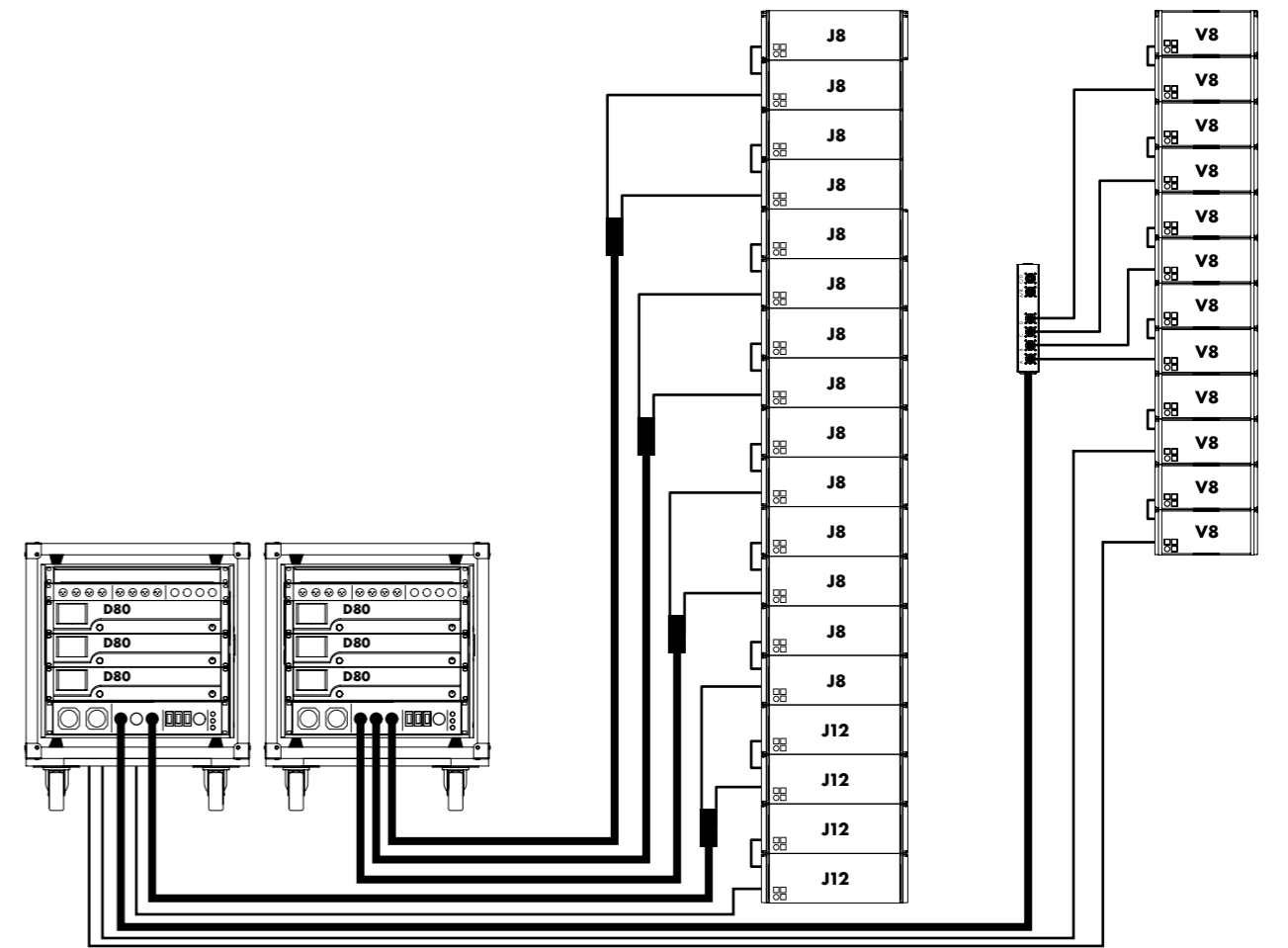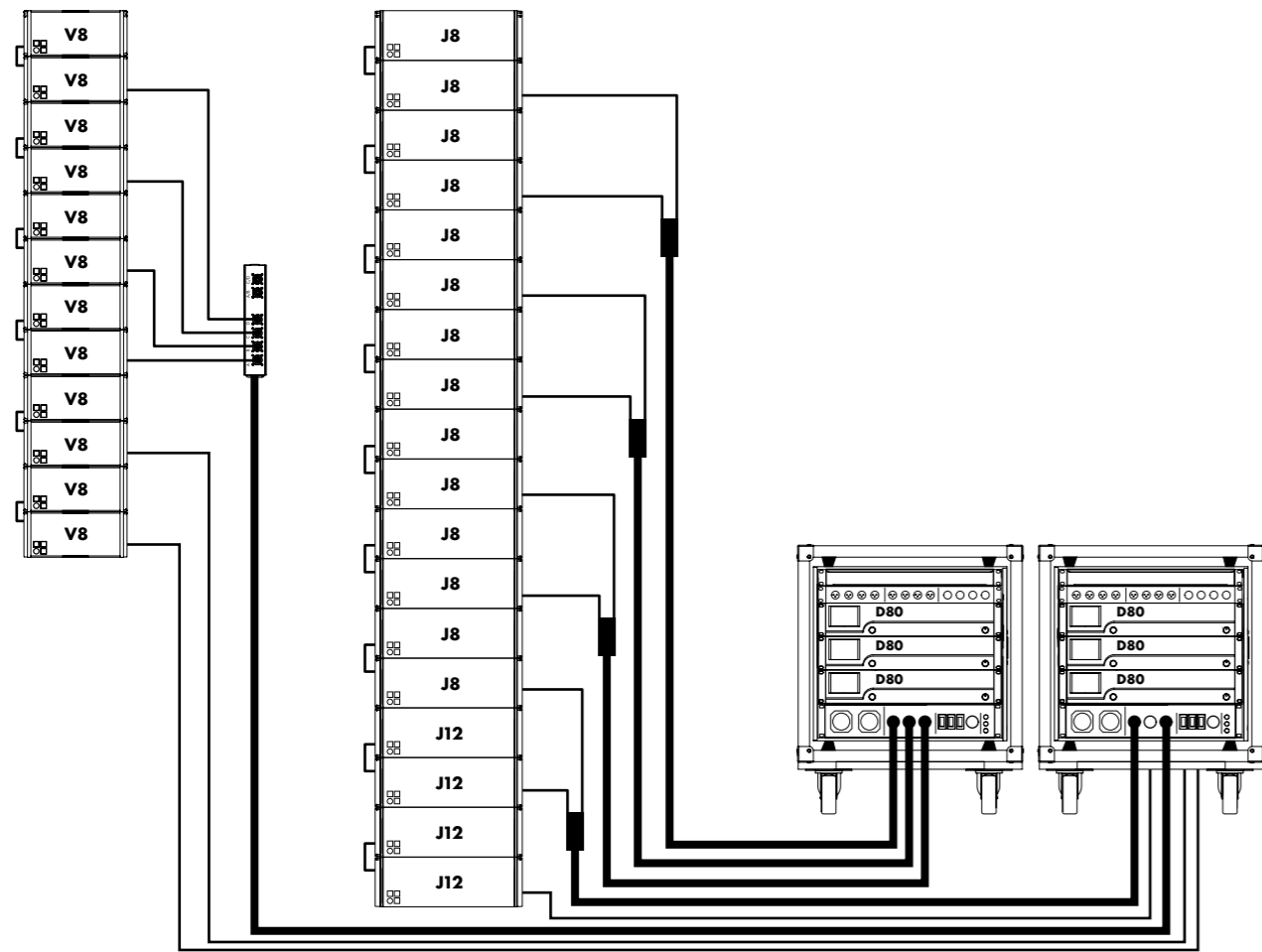
J-Series configuration comprising J8/J12 mains and V8 outfill arrays along with ground stacked J-SUBs with D80 Touring racks and a single D80 amplifer

The J-Series cables and adapters

Amplifiers in 2-Way Active mode

Z5330.xxx
D80 Touring rack assembly
OUT: 3 x NL8

1 x D80 amplifier
OUT: NL8
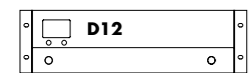
2 x D12 amplifier
OUT: EP5
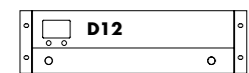
2 x D12 amplifier
OUT: NL4

Z5346.000
Adapter 4 x EP5M to NLT8M

Z5345.001
Adapter 4 x NL4 to NLT8M

Z5343.xxx
MC8 Cable NLT8 F/M

Z5348.002
Adapter NLT8F 2-way to 2 x NLT4M

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

Z5348.003
Adapter NLT8F 2-way
to 2 x NL8

Z5348.000
Adapter NLT8F 2-way
to 2 x EP5F

Z5347.000
Breakoutbox NLT8 F/M
to 6 x EP5

Z5340.xxx
MC4 Cable NLT4 F/M

Z5343.xxx
MC8 Cable NLT8 F/M

Z2297.xxx
MC4SD Cable EP5

Z5330.xxx
D80 Touring rack assembly
OUT: 2 x LKS19

Z5320.xxx
MC12SD Cable LKS19 F/M

Z5321.002
Adapter LKS19M to 3 x NLT4M

Z5321.000
Adapter LKS19M to 3 x EP5F

Z5323.000
Adapter LKS19M to 3 x NL8

Z2293.100
MC4SD Cable NL8, 1m
Speaker link

The J-Series product overview

Loudspeakers	Z0650.002	**J8 Loudspeaker NLT4 F/M** connector
	Z0650.000	**J8 Loudspeaker EP5** connector
	Z0650.010	**J8 Loudspeaker NL8** connector
	Z0651.002	**J12 Loudspeaker NLT4 F/M** connector
	Z0651.000	**J12 Loudspeaker EP5** connector
	Z0651.010	**J12 Loudspeaker NL8** connector
	Z0660.002	**J Subwoofer NLT4 F** connector
	Z0660.000	**J Subwoofer EP5** connector
	Z0660.010	**J Subwoofer NL8** connector
	Z1000.002	**J-INFRA Subwoofer NLT4 F** connector
	Z1000.000	**J-INFRA Subwoofer EP5** connector
	Z1000.010	**J-INFRA Subwoofer NL8** connector
Cases	E7441.000	**Touring case 1 x J Flying frame**
Lids	E7919.000	**J Wheelboard**
	E7910.000	**J-SUB Wooden lid**
	E7920.000	**J-INFRA Wooden lid**
Accessories	Z5300.000	**J Flying frame** (supplied with Z5303 J Safety chainset)
	Z5303.000	**J Safety chainset**
	Z5305.000	**J Hoist connector chain**
Remote network	Z3010.000	**R1 Remote control software**[1]
	Z6118.000	**R60 USB to CAN interface**
	Z6124.000	**R70 Ethernet to CAN interface**
	Z6116.000	**RJ 45 M Terminator**
	Z6122.000	**Bopla mounting clamp**
	Z6123.000	**Bopla mounting clamp upright**
Amplifiers	Z2710.xxx	**D80 Amplifier**[2]
	Z2770.xxx	**30D Amplifier**[3]
	Z2600.xxx	**D12 Amplifier**[2]
Audio networking	Z4010.000	**DS10 Audio network bridge**
	Z5563.000	**DS10 Rack upgrade kit**
	Z5339.000	**Multichannel extension cable**

Amplifier rack assemblies	Z5310.000	**D12 Touring rack assembly EP5**[4]
	Z5310.001	**D12 Touring rack assembly NL4**[4]
	Z5330.001	**D80 Touring rack assembly, CEE 32A 5P**[4]
	Z5562.001	**D80 Touring rack assembly, CEE 32 A 5P, NL4, DS10**[4]
	Z5330.xxx	**D80 Touring rack assembly, Nema L21-30 (120V devices)** on request[4]
Amplifier racks	E7468.000	**D80 Touring rack 2 RU, 19"** SD, shock mounted, handles
	E7419.000	**Touring rack 3 RU, 19"** DD, shock mounted, handles, window
	E7420.000	**Touring rack 6 RU, 19"** DD, shock mounted, handles, window, wheels
Cables	Z5343.xxx	**MC8 Cable NLT8 F/M**
	Z5346.000	**Adapter 4 x EP5M to NLT8M**
	Z5345.001	**Adapter 4 x NL4 to NLT8M**
	Z5320.xxx	**MC12SD Cable LKS19 F/M**
	Z5347.001	**Breakoutbox NLT8 F/M to 6 x NL4**
	Z5347.000	**Breakoutbox NLT8 F/M to 6 x EP5**
	Z5340.xxx	**MC4 Cable NLT4 F/M**
	Z2297.xxx	**MC4SD Cable EP5**
	Z2293.100	**MC4SD NL8 Cable 1m**
	Z5348.002	**Adapter NLT8F 2-way to 2 x NLT4M**
	Z5438.003	**Adapter NLT8F 2-way to 2 x NL8**
	Z5348.000	**Adapter NLT8F 2-way to 2 x EP5F**
	Z5321.000	**Adapter LKS19 M to 3 x EP5 F**
	Z5321.002	**Adapter LKS19 M to 3 x NLT4 F/M**
	Z5323.000	**Adapter LKS19 M to 3 x NL8**

[1] available as a download at www.dbaudio.com
[2] the complete list of mobile amplifier versions is available in the D Amplifier and Software brochure
[3] the complete list of installation amplifier versions is available in the xD Installation Amplifier and Software brochure
[4] further information is available in the D Amplifier and Software brochure

d&b
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