xD

Installation
Amplifiers
Software

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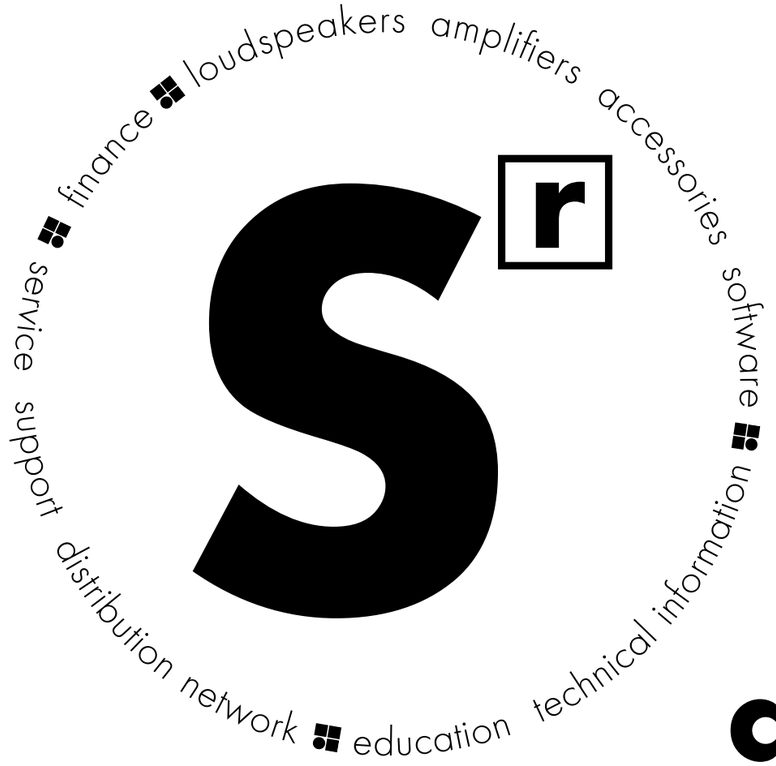


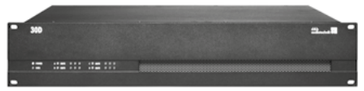
d&b System reality

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 integrated to achieve maximum efficiency. For ease of use, all the user-definable parameters are integrated, 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 realise whatever the brief. At the same time d&b offers integrated 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 d&b workflow

d&b ArrayCalc simulation software

d&b R1 Remote control software



d&b amplifiers

d&b loudspeakers

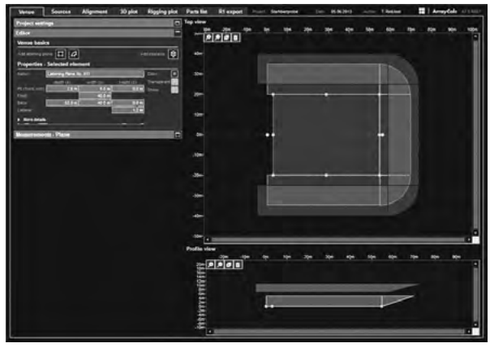
The integrated **d&b workflow** improves efficiency all the way from the start of a project through planning and simulation to control of the final result. Venue data is used to create a model in the d&b ArrayCalc simulation software. The choice of the loudspeakers, placement, levels and configuration is also entered into this room model. The effect of the scheme can be simulated, carefully checked and optimised, until the desired performance is achieved. When the mechanical array settings have been finalized, the optional ArrayProcessing function within ArrayCalc applies powerful filter algorithms to optimize the level and tonal balance of a line array over the entire audience area. ArrayCalc then generates rigging plans and parts lists for the final proposal. Once ready, the complete system configuration can be opened in the R1 Remote control software. A graphical user interface is generated automatically for the complete system and applies all the defined settings to the amplifiers. The R1 Remote control software is used to make adjustments and monitor the system in as much detail as needed to ensure the sound is in line with the original intention.

The d&b ArrayCalc simulation software

The d&b ArrayCalc simulation software is the prediction 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 OSX[2] (10.6 or higher) operating systems. In combination with the d&b Remote network, this can significantly reduce setup and tuning time in mobile applications and allows for precise simulations when planning installations. Listening planes can be defined in the venue tab, creating a three dimensional representation of any audience area in a given venue. This can also include balconies, side stalls, arenas, in the round scenarios or festivals. Special functions assist in obtaining accurate dimensions with laser distance finders and inclinometers.

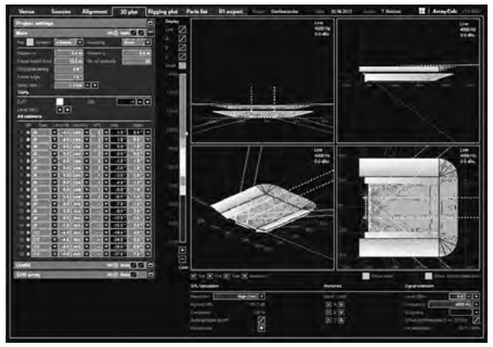
Simulation

Up to fourteen flown arrays or subwoofer columns can be defined in a project file as single hangs or in pairs within the source tab. A selection of d&b point source loudspeakers can also be fully integrated as well as a ground stacked SUB array consisting of up to fifty one positions. All can be freely positioned according to their intended application, for example as main hang, outfill, nearfill or delay. Position, orientation, aiming and coverage details are displayed. Level over distance is calculated for each source with high resolution in real time, for either band limited or broadband input signals. The comprehensive simulation precisely models the actual performance of the system, taking into account input level, all system configuration options (such as CUT, CPL, HFC or INFRA), limiter headroom and air absorption. Acoustic obstacles, such as video screens, can be added to a model. Acoustic shadowing, whether by these obstacles, or a balcony overhang, is taken into consideration. The load status of all array rigging components is calculated accurately and displayed to determine whether a given array is within the load tolerance. Subwoofer array design is assisted by coverage and polar plot prediction. A specialized algorithm allows the user to specify subwoofer positions and a coverage angle, which is then converted into appropriate delay settings that result in the desired dispersion. The alignment tab enables different sources to be time aligned to one another, as well as showing arrival times and Sound Pressure Levels at a freely definable reference point on one of the audience areas. For alignment of the flown system with the ground stacked SUB array, the phase response of both



Venue editor

Alignment



3D Plot quad

the SUB array and a selectable flown source is calculated at a definable reference point. Both simulations reflect changes in delay time to the single sources in real time, greatly obviating the need for time consuming acoustic measurements to that end.

Prediction

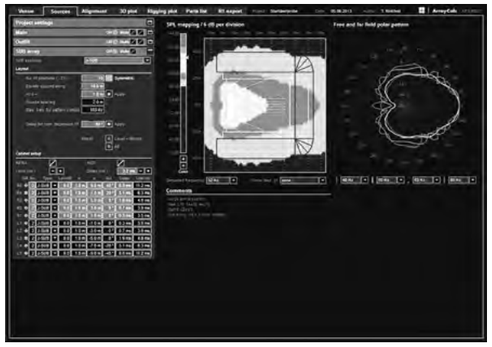
The level distribution resulting from the interaction of all active sources can be mapped onto the previously defined audience areas in a three-dimensional view, which can also be zoomed, rotated and exported as a graphics file. EASE and DXF data export capabilities are also available. Up to four different configurations and their mappings can be temporarily stored for comparison. A comprehensive rigging plot with all necessary coordinates, dimensions and weights of arrays is generated for export and printing and a parts list, detailing all the loudspeakers and rigging components required.

ArrayProcessing

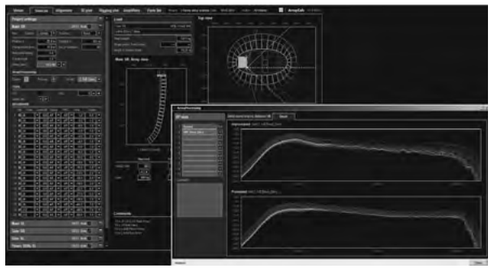
The optional ArrayProcessing function applies powerful filter algorithms to optimize the tonal (spectral) and level (spatial) performance of a line array column over the audience area defined by its mechanical vertical coverage angle. Within the d&b ArrayCalc simulation software, spectral and level performance 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.

R1 Remote control software

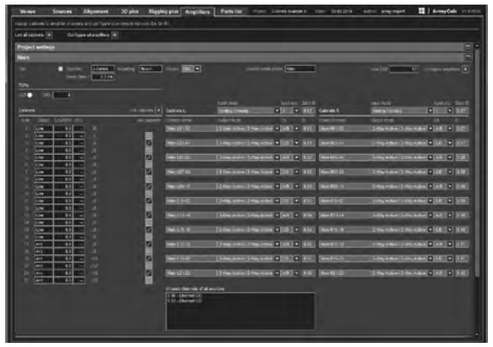
R1 uses the data defined in ArrayCalc to generate an intuitive graphical user interface including complete details of the simulated system, loudspeakers, amplifiers, remote IDs, groups, ArrayProcessing data and all configuration information. This workflow removes the need to manually transfer data from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



Sources, SUB array



ArrayProcessing



Amplifiers

[1] Microsoft Windows is a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries

[2] Mac OS is a trademark of Apple Inc., registered in the U.S. and other countries

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 ArrayCalc simulation 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 or higher) and Mac OS X[2] (10.6 or higher) 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.

Home

Remote in Configuration mode

Open views

[1] Microsoft Windows is a registered trademark or trademark of Microsoft Corporation in the United States and/or other countries
[2] Mac OS is a trademark of Apple Inc., registered in the U.S. and other countries

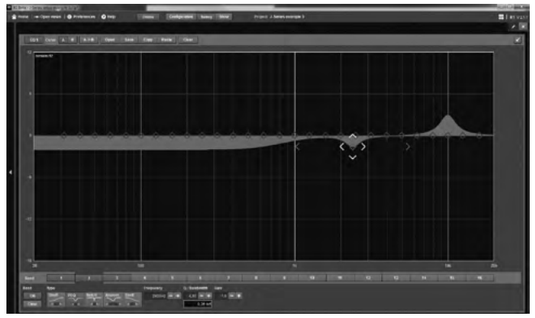
Each user definable Remote view can be populated with control functions of the system and can be optimized for different screen resolutions, either for large monitors or for smaller tablet devices.

Equalizer

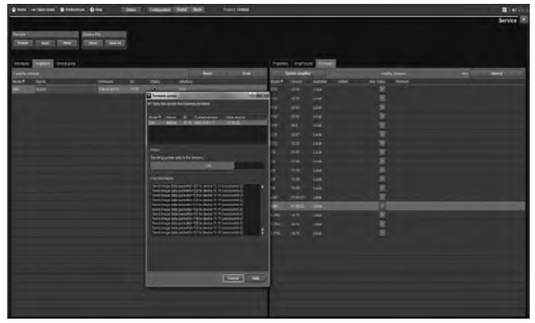
The R1 Remote control software provides enhanced equalization functionalities for the d&b amplifiers, via an easy to use and efficient user interface. R1 accesses the 4-band equalizer in both channels of the D6 and D12 amplifiers, or the two 16-band equalizers in each of the four channels of the 10D, 30D, D20 and D80 amplifiers. The system technician can use one 10D/30D 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 and D12 equalizer includes parametric and notch filters types, while the 10D and 30D 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.



10D / 30D 16-band equalizer



Service, Firmware update

d&b Remote network topology

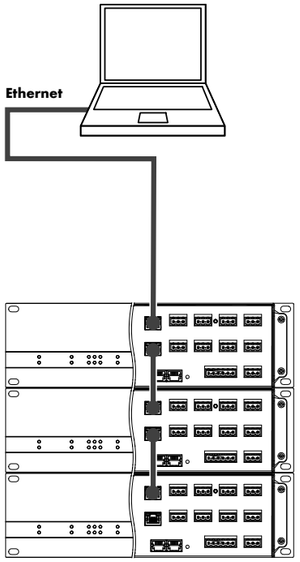
The 10D and 30D amplifiers can be remote controlled using the industry standard OCA protocol via Ethernet and through the established CAN-Bus. These devices can be combined with other d&b amplifiers within the Remote network; the 10D, 30D, D20 and D80 amplifiers offer both OCA and CAN-Bus protocols whereas the D6 and D12 are only accessible using CAN-Bus. d&b amplifiers are controlled using the d&b R1 Remote control software, which is available on both Windows and MAC operating systems. This Remote user interface can control the 10D, 30D, D20 and D80 amplifiers via Ethernet (OCA) and the D6, D12 and E-PAC amplifiers through CAN-Bus networks simultaneously. Additionally, the 10D, 30D, D20 and D80 amplifiers can also be controlled via a browser window with the integrated web interface. Alternatively, individual 10D and 30D amplifiers can be controlled via a browser window using the web interface.

d&b Remote network – OCA via Ethernet

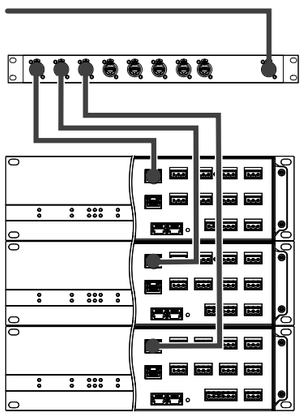
The 10D, 30D, D20 and D80 amplifiers can be remotely controlled via a standard Ethernet network, providing higher bandwidth and quicker response compared to the CAN-Bus network. This latest generation of d&b amplifiers are all fitted with a dual Ethernet port, allowing simple networks to be set up without requiring an extra switch. The industry standard Open Control Architecture (OCA) protocol is used, created by the OCA Alliance of which d&b is a founding member. For further information please refer to the d&b TI 310 Ethernet networking, which is available for download at www.dbaudio.com.

d&b Remote network – CAN-Bus

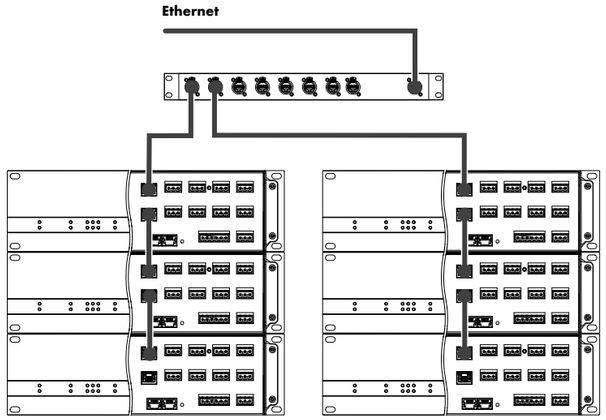
The d&b amplifiers can be integrated within the CAN-Bus network and are fitted with two REMOTE/CAN connectors (RJ 45) to link the CAN-Bus signal and enable daisy chaining. The network may contain any combination of up to a total of 504 devices. It is connected to a PC or MAC running R1 Remote control software V2, using R60 USB to CAN, or R70 Ethernet to CAN interfaces. While the CAN-Bus network covers distances up to 600 m the Ethernet connection to the R70 can be made using standard Ethernet technologies, including wireless or fibre optic networks. For further information please refer to the TI 312 d&b Remote network, which is available for download at www.dbaudio.com.



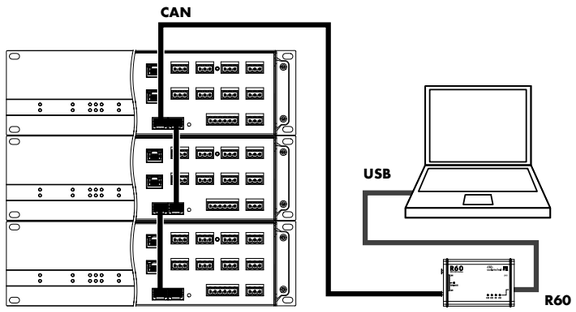
Daisy chain topology for a maximum of three devices



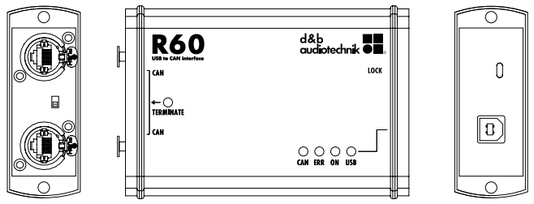
Star topology



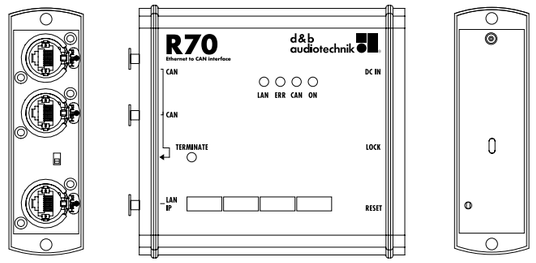
Combined topology



Daisy chain topology with R60 USB to CAN interface



Z6118 R60 USB to CAN interface



Z6124 R70 Ethernet to CAN interface

The 10D and 30D amplifiers

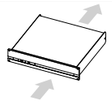
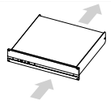
The d&b amplifiers are designed specifically to power d&b loudspeakers and are the beating heart of the d&b System reality. As such, they incorporate Digital Signal Processing for comprehensive loudspeaker management, switchable filter functions, remote capabilities and user-definable controls, to fulfil the exact needs of each application.
Every loudspeaker configuration combines comprehensive system limiting, 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 and 2-Way Active mode, 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. d&b amplifiers offer extended, user-definable equalization and delay capabilities, eliminating the need for external processing devices in the signal chain.
Sophisticated protection circuits modelling thermal and mechanical driver behaviour are provided, resulting in the sustained reliability of d&b systems. These amplifiers also have the functionality to enable system status monitoring and protection features, increasing the longevity of d&b systems. A password protected LOCK function prevents unauthorized changes.
A powerCON[1] mains connector socket is fitted on the rear panel. The switch mode power supply of each amplifier incorporates mains overvoltage protection, inrush current limiting and loudspeaker protection at start up. Temperature and signal controlled fans cool the internal assemblies. d&b amplifiers offer analog and digital AES/EBU signal inputs with link outputs. The AES/EBU link output carries a refreshed signal, while a power fail relay is incorporated to prevent interruption of the signal chain, in the event of a power failure. 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.
Firmware updates containing new loudspeaker configurations or additional functions can be loaded to the amplifiers via the d&b Remote network.

[1] powerCON® is a registered trademark of the Neutrik AG, Liechtenstein

10D amplifier

30D amplifier

Comparison of the 10D and 30D amplifiers

	10D	**30D**
Output channels	4	4
Input channels	4 AES and 4 analog	4 AES and 4 analog
Latency	0.3 msec	0.3 msec
User equalizers (per channel)	2 x 16-band	2 x 16-band
Delay	10 sec/3440 m	10 sec/3440 m
Configurations	Current d&b loudspeakers and linear mode except J-Series, V-Series, M2 and B2-SUB	Current d&b loudspeakers and linear mode
Maximum output power (THD+N < 0.5%, 12 dB crest factor)	4 x 350 W into 8 ohms 4 x 700 W into 4 ohms	4 x 800 W into 8 ohms 4 x 1600 W into 4 ohms
Output routing	Dual Channel, Mix TOP/SUB 2-Way Active	Dual Channel, Mix TOP/SUB 2-Way Active
Output connectors	Phoenix Euroblock	Phoenix Euroblock
GPIO connector, 5 ports	Phoenix Euroblock	Phoenix Euroblock
Fault contact	Phoenix Euroblock	Phoenix Euroblock
Cable compensation	LoadMatch	LoadMatch
Power supply	Universal range switched mode power supply with active PFC	Universal range switched mode power supply with active PFC
Mains voltage	100 - 240 V, 50 - 60 Hz	100 - 240 V, 50 - 60 Hz
Weight (kg/lb)	10.6 / 23.4	10.6 / 23.4
Dimensions	2 RU x 19" x 435 mm	2 RU x 19" x 435 mm
Remote	OCA via Ethernet/CAN	OCA via Ethernet/CAN
Airflow		

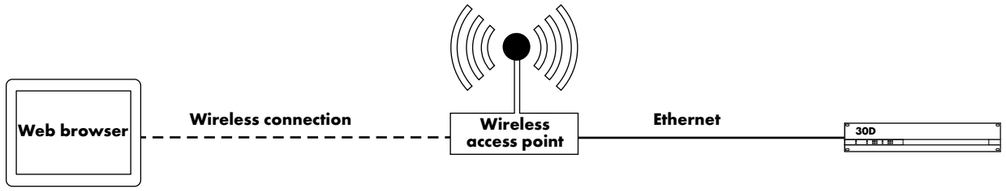
Functionality of the 10D and 30D amplifiers

Input routing
The 10D and 30D amplifiers provide four analog inputs, four digitial AES/EBU channels through two inputs as well as separate analog and digital links, all on Euroblock connectors. The digital input pairs contain independent Sample Rate Converters. Each input features a separate input gain, meaning sources with various input sensitivities can be used without requiring an external mixing device. All eight individual inputs can be used simultaneously, then summed and routed to any of the four outputs.

System status monitoring
d&b amplifiers incorporate specific functions to check, monitor and control a d&b system in a specific installation scenario. The System check feature can verify the status of a complete reinforcement system by measuring the impedance of the connected loudspeakers. Each driver in the system is checked and compared to the default impedance values for each particular cabinet. This calibration ensures that each loudspeaker performs within a tolerance band, and indicates possible damage to system components. The Input monitoring function can detect an incoming pilot signal regardless of whether this input is routed to an output. The Load monitoring function can detect a possible loudspeaker malfunction. This feature automatically checks load impedance to calculate individual driver status and report any failure.

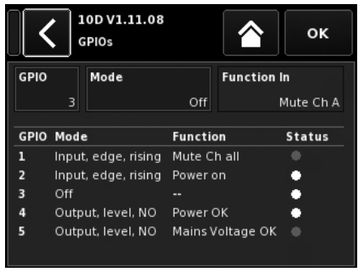
GPIO and General Fault Contact
The d&b installation amplifiers incorporate separate Euroblock connectors for General Purpose Input / Output (GPIO) and a fault contact. The GPIO connector offers five pins providing additional digital control lines which can be configured to be either an input or output. This enables the use of external devices to control and detect certain functionalities within the 10D and 30D amplifiers. The GPIOs can be configured to Power the device, mute individual or all channels, change the AmpPreset or to check the Mains Voltage, Power or individual channel status. The separate fault contact allows a general device error to be remotely indicated.

Integrated web interface
The 10D and 30D amplifiers can be controlled via the integrated web interface, which enables the Remote control of a single device using a browser window. Once the amplifier is connected to the d&b Remote network, an intuitive user interface becomes available after the IP address of the device is entered into the address bar of a web browser. Each amplifier in a system is managed individually, meaning that a new window or tab will be required for each device. The amplifiers can be accessed using a mobile device if the network features a wireless access point.



Application controlled via web browser for small setups

Input gain



GPIOS

The 10D amplifier

The installation specific four channel 10D amplifier is intended for permanent integration with applications that require lower Sound Pressure Level (SPL) capabilities. The 10D shares the same Digital Signal Processing platform as the latest generation of d&b amplifiers, providing a linear mode as well as configurations for smaller d&b loudspeakers. For larger applications comprising the J-Series, V-Series, the M2 monitor and systems which require peak SPL output, the 30D installation specific amplifier is required.

The DSP integrated within the 10D incorporates comprehensive loudspeaker management, switchable filtering functions as well as user definable equalization and delay capabilities. This includes two 16-band equalizers, providing optional parametric, asymmetric, shelving or notch filtering and up to 10 s (= 3440 m/11286 ft) signal delay, all of which can be applied independently to each channel.

The 10D is accessible via the d&b Remote network, either via Ethernet using the Open Control Architecture protocol (OCA) or CAN-Bus. The 10D is controlled using the integrated web interface, which enables access via a browser, or using the d&b R1 Remote control software. The device itself contains LEDs to display power, input, data and mute status.

The LoadMatch function integrated within the 10D amplifier electrically compensates for the properties of loudspeaker cable used. The 10D incorporates Class D amplifiers utilizing a power supply with active Power Factor Correction (PFC) suitable for mains voltages 100 V/127 V, 50 – 60 Hz and 208 V/240 V, 50 - 60 Hz and maintains a stable output when used with weak or unstable mains supplies. Input and output connectors are all Euroblock sockets. The 10D integrates with the d&b Remote network using either the OCA via Ethernet protocol or CAN-Bus using RJ 45 connectors.

Control and indicators

POWER ..... Mains power switch
ISP, GR, OVL A/B ..... LED indicators

Digitial Signal Processing

Equalizer ..... 2 x 16-band PEQ/notch/shelving/asymmetric
Latency analog and digital inputs ..... 0.3 msec
Delay setting ..... 0.3 - 10000 msec
Configurations ..... current d&b loudspeakers and linear mode
..... except J-Series, V-Series, M2 and B2-SUB
Function switches ..... d&b loudspeaker specific circuits
Frequency generator ..... Pink noise or Sine wave
Sampling rate ..... 96 kHz/27 Bit ADC/24 Bit DAC

Connectors

INPUT ANALOG (A1 - A4) ..... 3-pin male Phoenix Euroblock
ANALOG LINK (A1 - A4) ..... 3-pin male Phoenix Euroblock
INPUT DIGITAL (D1 - D4) ... 3-pin male Phoenix Euroblock, AES 3
DIGITAL LINK (Output) ..... 3-pin male Phoenix Euroblock, AES 3
Sampling Digital AES/EBU ..... 48 kHz/96 kHz
SPEAKER OUTPUTS A/B/C/D ..... 4-pin Phoenix Euroblock female
CAN ..... 2 x RJ 45 parallel
ETHERNET ..... 2 x RJ 45, 10/100 Mbit Ethernet
GPIOs 1 - 5 and GND (6) ..... 6-pin Phoenix Euroblock male
FAULT contact ..... 3-pin Phoneix Euroblock male
Mains connector ..... powerCON[1]

Data (linear setting with subsonic filter)

Maximum output power per channel (THD + N < 0.5 %, both channels driven) .....
CF = 6 dB at 4/8 ohms ..... 2 x 700/350 W
CF = 12 dB at 4/8 ohms ..... 2 x 700/350 W
S/N ratio (unweighted, RMS)
Analog input ..... 101 dBr
Digital input ..... 103 dBr

Power supply

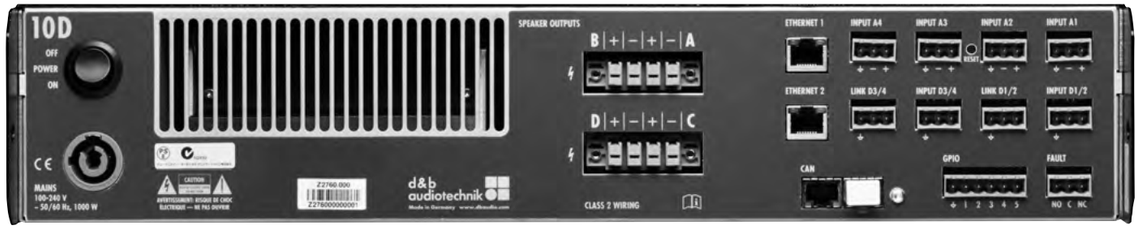
Universal range switched mode power supply with active Power Factor Correction (PFC) .....
Rated mains voltage ..... 100 - 240 V, 50 - 60 Hz

Dimensions, weight

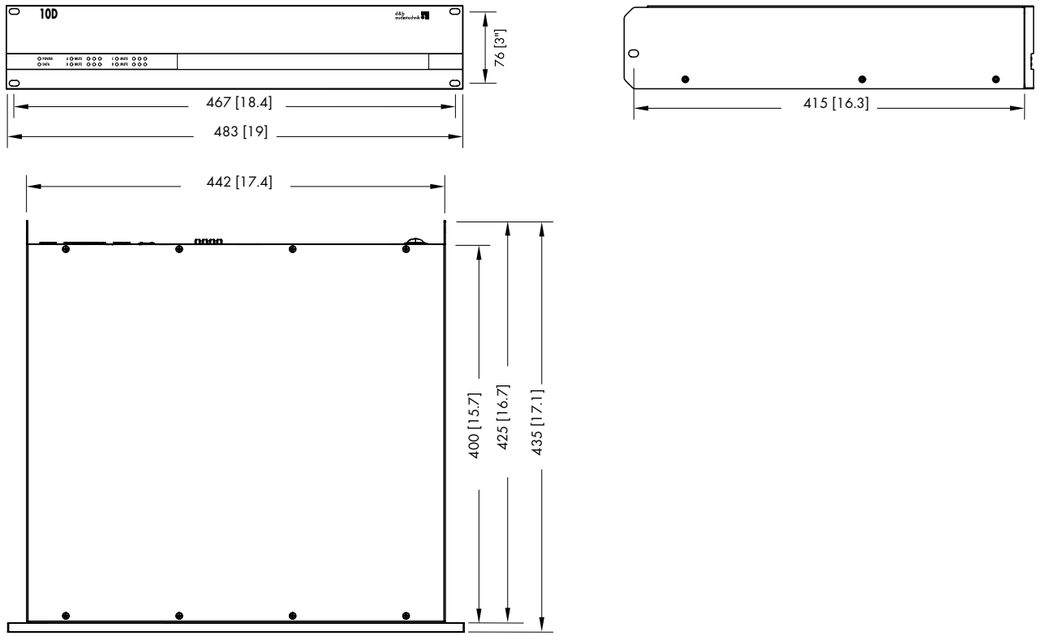
Height x width x depth ..... 2 RU x 19" x 435 mm/17.1"
Weight ..... 10.6 kg/23.4 lb

[1] powerCON® is a registered trademark of the Neutrik AG, Liechtenstein

The 10D amplifier front view



The 10D amplifier rear view



10D amplifier dimensions in mm [inch]

The 30D amplifier

The installation specific four channel 30D amplifier is intended for permanent integration with applications that require medium to high Sound Pressure Level (SPL) capabilities. The 30D shares the same Digital Signal Processing platform as the latest generation of d&b amplifiers, providing a linear mode as well as configurations for all d&b loudspeakers. Applications which demand the highest Sound Pressure Levels may require the higher output power of the d&b D80 amplifier.
The DSP integrated within the 30D incorporates comprehensive loudspeaker management, switchable filtering functions as well as user definable equalization and delay capabilities. This includes two 16-band equalizers, providing optional parametric, asymmetric, shelving or notch filtering and up to 10 s (= 3440 m/11286 ft) signal delay, all of which can be applied independently to each channel.
The 30D is accessible via the d&b Remote network, either via Ethernet using the Open Control Architecture protocol (OCA) or CAN-Bus. The 30D is controlled using the integrated web interface, which enables access via a browser, or using the d&b R1 Remote control software. The device itself contains LEDs to display power, input, data and mute status.
The LoadMatch function integrated within the 30D amplifier electrically compensates for the properties of loudspeaker cable used. The 30D incorporates Class D amplifiers utilizing a power supply with active Power Factor Correction (PFC) suitable for mains voltages 100 V/127 V, 50 – 60 Hz and 208 V/240 V, 50 - 60 Hz and maintains a stable output when used with weak or unstable mains supplies. Input and output connectors are all Euroblock sockets. The 30D integrates with the d&b Remote network using either the OCA via Ethernet protocol or CAN-Bus using RJ 45 connectors.

Control and indicators

POWER ..... Mains power switch
ISP, GR, OVL A/B ..... LED indicators

Digitial Signal Processing

Equalizer ..... 2 x 16-band PEQ/notch/shelving/asymmetric
Latency analog and digital inputs ..... 0.3 msec
Delay setting ..... 0.3 - 10000 msec
Configurations ..... current d&b loudspeakers and linear mode
Function switches ..... d&b loudspeaker specific circuits
Frequency generator ..... Pink noise or Sine wave
Sampling rate ..... 96 kHz/27 Bit ADC/24 Bit DAC

Connectors

INPUT ANALOG (A1 - A4) ..... 3-pin male Phoenix Euroblock
ANALOG LINK (A1 - A4) ..... 3-pin male Phoenix Euroblock
INPUT DIGITAL (D1 - D4) ... 3-pin male Phoenix Euroblock, AES 3
DIGITAL LINK (Output) ..... 3-pin male Phoenix Euroblock, AES 3
Sampling rate ..... 48 kHz/96 kHz
SPEAKER OUTPUTS A/B/C/D ..... 4-pin Phoenix Euroblock female
CAN ..... 2 x RJ 45 parallel
ETHERNET ..... 2 x RJ 45, 10/100 Mbit Ethernet
GPIOs 1 - 5 and GND (6) ..... 6-pin Phoenix Euroblock male
FAULT contact ..... 3-pin Phoneix Euroblock male
Mains connector ..... powerCON[1]

Data (linear setting with subsonic filter)

Maximum output power per channel (THD + N < 0.5 %, both channels driven) .....
CF = 6 dB at 4/8 ohms ..... 2 x 1000/800 W
CF = 12 dB at 4/8 ohms ..... 2 x 1600/800 W
S/N ratio (unweighted, RMS)
Analog input ..... 104 dBr
Digital input ..... 106 dBr

Power supply

Universal range switched mode power supply with active Power Factor Correction (PFC) .....
Rated mains voltage ..... 100 - 240 V, 50 - 60 Hz

Dimensions, weight

Height x width x depth ..... 2 RU x 19" x 435 mm/17.1"
Weight ..... 10.6 kg/23.4 lb

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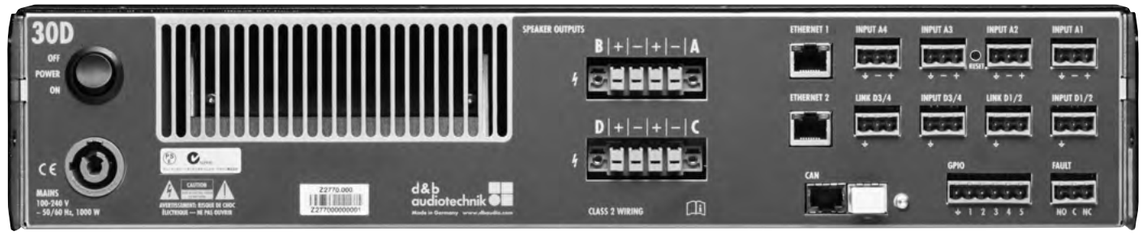
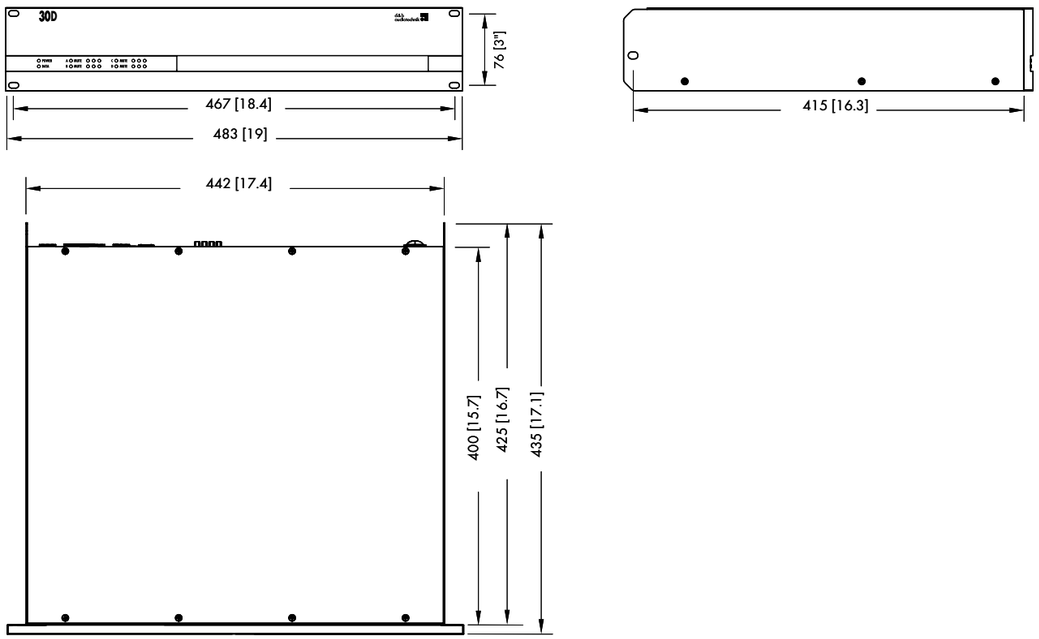
The 30D amplifier front view



The 30D amplifier rear view



30D amplifier dimensions in mm [inch]

Amplifiers and Software product overview

Amplifiers	Z2760.000	**10D Amplifier**
	Z2760.400	**10D Amplifier China**
	Z2760.500	**10D Amplifier USA**
	Z2770.000	**30D Amplifier**
	Z2770.400	**30D Amplifier China**
	Z2770.500	**30D Amplifier USA**
Amplifier accessories	Z2622.000	**Accessory kit for 10D/30D** Euroblock Phoenix connectors

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**

[1] available as a download at www.dbaudio.com

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