

DATA SHEET

DESONO™

DX-IC6

TWO-WAY 6.5-INCH HIGH EFFICIENCY CEILING MOUNT LOUDSPEAKER



FEATURES

- Zoom Certified
- High intelligibility with exceptional uniform coverage
- Fast installation with SpringLock™ mounting clamps
- Consistent, wide dispersion up to 16 kHz
- Attractive edgeless magnetic grille design
- Conduit knock-outs on the input cover meet Chicago plenum air space requirements

TECHNICAL SPECIFICATIONS¹

Operating Mode	Passive with DSP		
Operating Environment	Indoor		
Operating Range (-10dB) ²	90 Hz to 20 kHz		
Nominal Beamwidth (H x V)	140°, conical		
Transducers	LF 1 x 6.5" (165 mm) HF 1 x 1.0" (25 mm) exit compression driver		
Sensitivity ³	95 dB (2.83 V)	94 dB (1 W at rated impedance 6.5 Ω)	
Nominal Continuous Power Handling ⁴	Passive	28 V (120 W @ 6.5 Ω)	
Nominal Maximum SPL ⁵	Passive	Peak 120 dB	Continuous 114 dB
Rated Continuous Voltage ⁶	Passive	22.4 V (27 dBV)	
Rated Maximum SPL ⁷ (Processed)	Passive	Peak 124 dB	Continuous 112 dB
Autoformer	70 V: 60 W, 30 W, 15 W, 7.5 W; 100 V: 60 W, 30 W, 15 W		
Recommended Amplifiers	Passive	120 W - 240 W into 8 Ω, (31 V - 44 V)	
Crossover Frequency	1.2 kHz		
Required Accessory	65 Hz, 12 dB/oct. high pass filter		

APPLICATIONS

Conference Rooms · Houses of Worship
Theaters · Sports Facilities · Health Clubs
Convention Centers · Auditoriums
Malls · Airports · Corporate Meeting Rooms

DESCRIPTION

Available in standard white or black finish, the powerful and versatile Desono DX-IC6 provides high quality paging and musical performance suitable numerous applications where the importance of sonic quality cannot be ignored. Particularly effective when supported by the DX-IC10SUB, a DX-IC6 system is capable of meeting demanding needs at a cost usually associated with much smaller loudspeakers. It installs quickly and provides exceptionally uniform coverage with excellent sonic properties.

Uniform voicing among the Desono DX product family makes for an easy match to the other models in the series, while a host of design innovations set the DX-IC6 apart from other products in its size and price range. Featuring genuine coaxial design with separate magnets for the LF and HF drivers, the DX-IC6 exhibits reduced distortion and industry-leading sensitivity permitting 3 dB to 6 dB greater output level, while requiring half the amplification power of competing products.

Patent-pending SpringLock™ clamps allow single-handed placement to speed installation and reduce labor time. The SpringLock spring-loaded clamps support the back can on the included tile rails and snap-on C-ring, so that the installer can just tighten the clamps, securing it in the ceiling.

A magnetic grille and front-face wattage selector switch enables quick adjustment of 70V/100V tap levels. A variety of installation accessories are available to accommodate different ceiling materials. Typical applications include paging, and background music in many venues.

PHYSICAL

Input Connection	4-position Euroblock connector
Controls	Front-face wattage / low impedance selector switch
Mounting Provisions	3 SpringLock mounting clamps with 2.5-inch grip range
Certifications	ETL listed to comply with UL1480A, UL2043 and CSA62368-1 Suitable for use in air handling spaces per NFPA 70 and NFPA 90
Dimensions W x D	291 mm x 171 mm (11.46" x 6.75")
Weight	3.63 kg (8.0 lbs)
Finish	Refer to the Technical Drawing (page 3)
Accessories (included)	C-Ring supporting plate, tile support bridge rails, grille, paint mask, cut-out template
Models (order by grille color)	DX-IC6-W - loudspeaker with White grille DX-IC6-B - loudspeaker with Black grille

OPTIONS

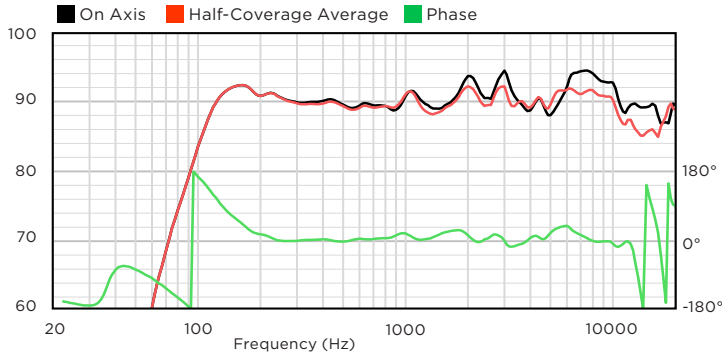
Accessories	New Construction Brackets (SPA-NC400) Trim Rings (SPA-TR400) High Humidity Grilles (SPA-GHH400) 48" Tile Rails (SPA-RAIL48)
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Biamp strives to improve its products on a continual basis. Specifications are therefore subject to change without notice.

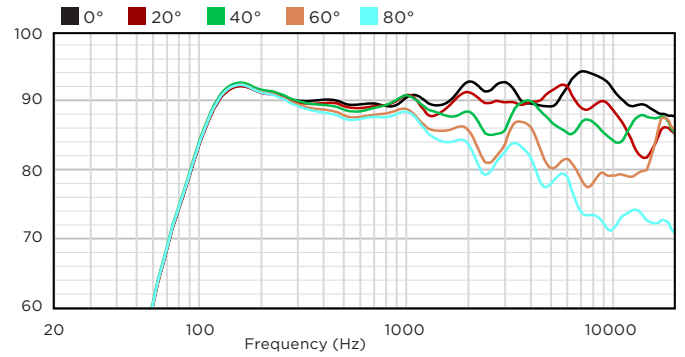
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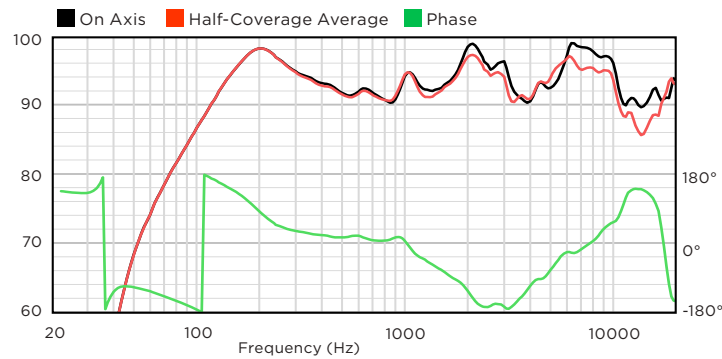
AXIAL PROCESSED SENSITIVITY (dB SPL)⁸



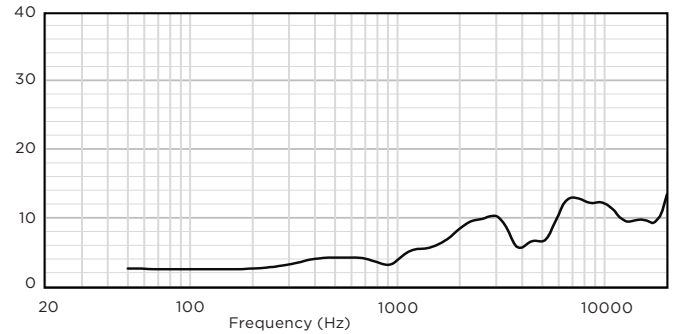
OFF-AXIS RESPONSE (dB SPL)⁹



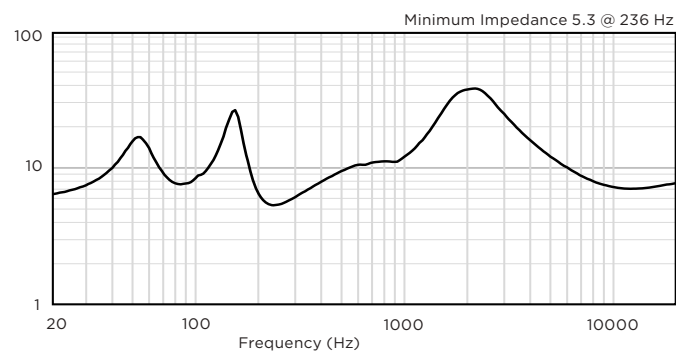
AXIAL SENSITIVITY (dB SPL)⁸



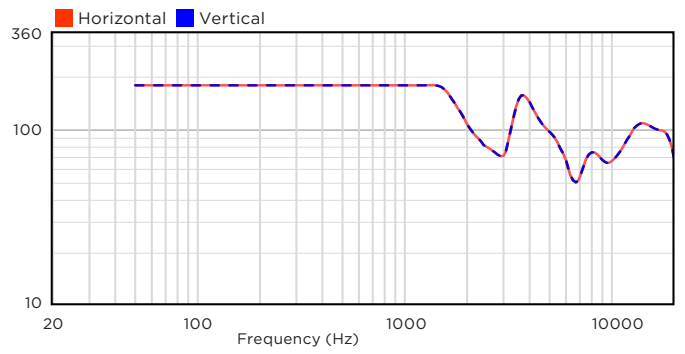
DIRECTIVITY INDEX (dB)¹⁰



IMPEDANCE (Ω)



BEAMWIDTH (degrees)¹¹



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TECHNICAL DRAWING / DIMENSIONS / FINISH

W (bezel diameter) x D

291 mm x 171 mm (11.46" x 6.75")

Cutout Diameter

260 mm (10.25")

Unit Weight

3.63 kg (8.0 lbs)

Shipping Weight (shipped in pairs)

13.75 kg (30.32 lbs)

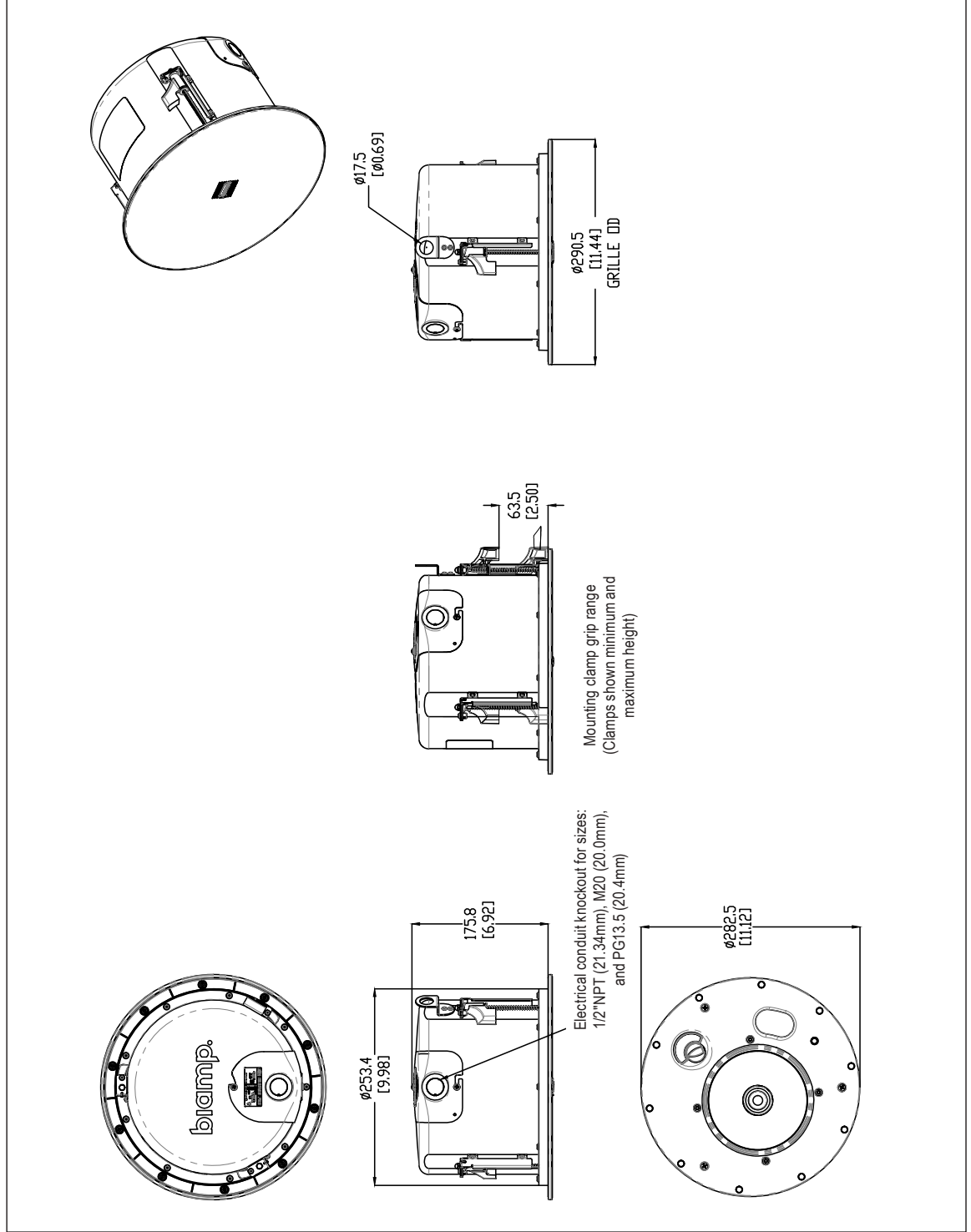
Grille:

Powder-coated perforated steel backed with color-matched woven fabric with safety line. White or Black finish.

Enclosure / Finish

Back Can: Black, Matte finish Steel

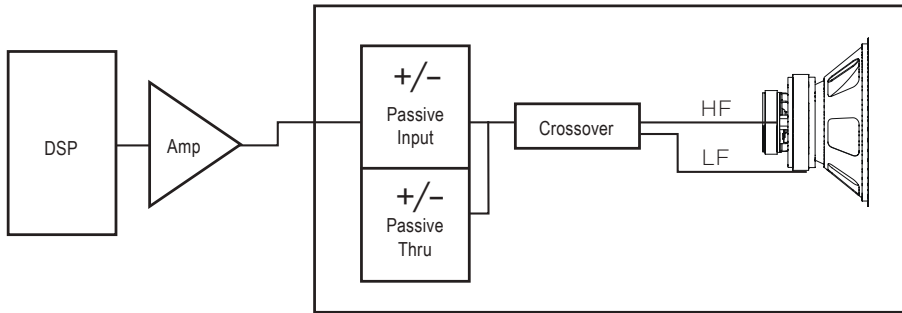
Face: UL 94V-0 rated ABS plastic, paintable Black finish.



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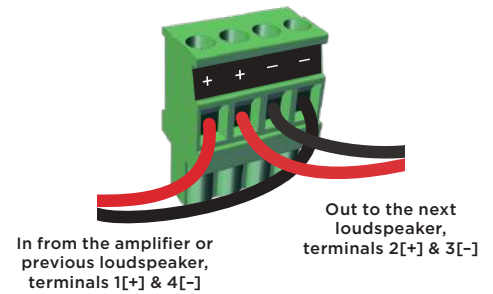
CONNECTION DIAGRAMS



Single amp



Tap Switch (on face)



Input

NOTES

- 1. PERFORMANCE SPECIFICATIONS** All measurements are performed using a time-windowed impulse response to eliminate reflections, approximating an anechoic environment, at a distance of at least 6.0 m. All acoustic specifications are rounded to the nearest whole number. An external DSP using settings provided by Biamp is required to achieve the specified performance; further performance gains can be realized using the FIR loudspeaker optimization presets available in Biamp's Community Amplified Loudspeaker Controllers (ALC SERIES).
- 2. OPERATING RANGE** The frequency range over which the on-axis equalized/processed response remains within 10 dB of the rated sensitivity, in accordance with IEC 60268-5.
- 3. SENSITIVITY** The broadband SPL of the loudspeaker when pink noise is applied (band limited to the loudspeaker's Operating Range) at an input voltage of 2.83 V, in accordance with IEC 60268-5. Also listed for a voltage that would produce 1 watt into the nominal impedance. Measured in whole space with no external processing applied, except where indicated.
- 4. NOMINAL CONTINUOUS POWER HANDLING** The maximum continuous nominal input voltage at the rated impedance that the system can withstand, without damage, for a period of 2 hours using an IEC 60268-1 defined spectrum with recommended signal processing and protection filters.
- 5. NOMINAL MAXIMUM SPL** The SPL produced when an IEC 60268-1 signal is applied, at the nominal input voltage, to the equalized/processed loudspeaker system. Referenced to a distance of 1 meter. The peak SPL represents the 2:1 (6 dB) crest factor of the IEC 60268-1 test signal.
- 6. RATED CONTINUOUS VOLTAGE** The maximum continuous rated input voltage for the system that results in no more than a 3 dB change in the system's response during operation.
- 7. RATED MAXIMUM SPL** The SPL produced when a typical program material signal is applied to the equalized/processed loudspeaker system, at a level which drives at least one subsection to its rated continuous voltage limit. Referenced to a distance of 1 meter. The peak SPL represents the 4:1 (12 dB) crest factor of the program signal.
- 8. AXIAL (PROCESSED) SENSITIVITY** The variation in acoustic output level with frequency for a swept-sine measurement signal. The Processed measurement uses the recommended signal processing for the loudspeaker system. The other sensitivity measurements use no additional external processing. All data are referenced to 1 meter. The on-axis magnitude and phase responses, as well as the average magnitude response, calculated over one-half of the nominal coverage angles, are shown. The responses have 1/6 octave smoothing applied.
- 9. HORIZONTAL / VERTICAL OFF-AXIS RESPONSES** The loudspeaker's magnitude response at various off-axis angles using the recommended signal processing in the operating mode which utilizes the largest number of individually amplified pass bands. The responses have 1/3 octave smoothing applied.
- 10. DIRECTIVITY INDEX** The ratio of the on-axis SPL to the mean SPL at the same distance for all points within the measurement sphere for each given frequency; expressed in dB. The response has 1/3 octave smoothing applied.
- 11. BEAMWIDTH** The included angle between the -6 dB points in the polar response of the loudspeaker when driven in the operating mode which utilizes the largest number of individually amplified pass bands. The responses have 1/3 octave smoothing applied.

Data presented on this data sheet represents a selection of the basic performance specifications for the model. These specifications are intended to allow the user to perform a fair, straightforward evaluation and comparison with other loudspeaker spec sheets. For a detailed analysis of this loudspeaker's performance, please download the GLL file and/or the CLF file from our website: www.biamp.com

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Desono DX-IC6 A&E Specifications

DX-IC6: The loudspeaker system shall be a two-way, full-range ceiling mount system with a 6.5-inch (165mm) low frequency transducer and a coaxially mounted 1-inch (25mm) exit high frequency compression driver. The drivers shall be connected to an integral crossover with a crossover frequency of 1.2 kHz, with a self-resetting solid state circuit breaker for driver protection. The loudspeaker baffle shall be constructed of UL 94V-0 rated ABS material and include two patent-pending SpringLock™ mounting clamps with 2.5-inch (64 mm) grip range to support the back can on the included tile rails and snap on C-ring, so that the installer no longer needs to hold the can against the tile while tightening the clamps. A powder-coated perforated steel grille backed with color matched woven fabric shall be included.

The system shall have an operating range of 90 Hz to 20 kHz and a low impedance (6.5 ohm) input capability of 28V. The sensitivity on-axis, referenced to a distance of 1 meter, and an input voltage of 2.83V shall be 95dB. The loudspeaker system shall have a conical coverage pattern of 140 degrees. The nominal system impedance shall be 6.5 ohms (in low impedance setting).

The system shall be equipped with a 60W high performance autoformer for use in 70.7V or 100V distributed audio systems, with 60W, 30W, 15W and 7.5W taps available in 70.7V distributed systems (60W, 30W and 15W taps available in 100V distributed systems). An easily accessible front-face tap selector switch located on the front baffle, which is concealed by the supplied removable grille, shall be available for selecting autoformer and low impedance settings.

A snap-on C-Ring supporting plate and two tile support bridge rails shall be included. The loudspeaker system shall have a bezel diameter of 11.46 inches (291mm), a can depth of 6.75 inches (171mm) and weigh 8.0 lbs (3.63 kg). There shall be an available optional Trim Ring for retrofit installations of the loudspeaker system into an existing larger industry back can or into an existing but oversized ceiling hole up to 11 inches (279 mm) in diameter, and an optional New Construction Bracket for installing the loudspeaker system in new construction before drywall or plaster is put into place. An optional pair of 48-inch (1219 mm) tile rails shall also be available to mount the loudspeaker in larger ceiling grids. Optional accessories also include a black grille for black ceiling installations or a high humidity grille for coastal installations.

The system shall be ETL listed to comply with UL1480, UL2043 and CSA62368-1 and suitable for use in air handling spaces per NFPA70 and NFPA90. The loudspeaker system shall be a Desono DX-IC6.