

# DX-IC6LP

## TWO-WAY 6.5-INCH HIGH EFFICIENCY LOW-PROFILE CEILING MOUNT LOUDSPEAKER



### APPLICATIONS

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

### DESCRIPTION

Available in standard white, the powerful and versatile Desono DX-IC6LP provides high quality paging and musical performance suitable numerous applications where the importance of sonic quality is paired with the need for a low profile installation. The DX-IC6LP 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-IC6LP apart from other products in its size and price range. Featuring a genuine coaxial, acoustically-aligned driver set with separate magnets for the LF and HF drivers that minimize distortion. Additionally, the integrated HF waveguide provides the widest and most consistent coverage in its class, ensuring all listeners are in the "sweet spot".

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.

### FEATURES

- Low profile, shallow design - only 3.91" (100 mm) deep
- High intelligibility with exceptional uniform coverage
- Fast installation with SpringLock™ mounting clamps
- Attractive edgeless magnetic grille design
- Conduit knock-outs on the input cover meet Chicago plenum air space requirements

### TECHNICAL SPECIFICATIONS<sup>1</sup>

Operating Mode	Passive with DSP		
Operating Environment	Indoor		
Operating Range (-10dB) <sup>2</sup>	63 Hz to 20 kHz		
Nominal Beamwidth (H x V)	145°, conical		
Transducers	LF 1 x 6.5" (165 mm) treated paper cone HF 1 x 1.0" (25 mm) treated soft dome driver with waveguide		
Sensitivity <sup>3</sup>	87 dB (2.83 V)	87 dB (1 W at rated impedance 8 Ω)	
Nominal Continuous Power Handling <sup>4</sup>	Passive	22 V (60 W @ 8 Ω)	
Nominal Maximum SPL <sup>5</sup>	Passive	Peak 109 dB	Continuous 103 dB
Rated Continuous Voltage <sup>6</sup>	Passive	21.9 V (27 dBV)	
Rated Maximum SPL <sup>7</sup> (Processed)	Passive	Peak 115 dB	Continuous 103 dB
Autoformer	70 V: 60 W, 30 W, 15 W, 7.5 W, 3.75 W 100 V: 60 W, 30 W, 15 W, 7.5 W		
Recommended Amplifiers	Passive	60 W - 120 W into 8 Ω, (22 V - 31 V)	
Crossover Frequency	2.5 kHz		
Required Accessory	65 Hz, 18 dB/oct. high pass filter; DSP preset for ALC or Tesira		

### PHYSICAL

Input Connection	4-position Euroblock connector
Controls	Front-face wattage / low impedance selector switch
Mounting Provisions	3 SpringLock™ mounting clamps with 33 mm (1.3") 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	341 mm x 99 mm (13.41" x 3.91")
Weight	4.9 kg (10.8 lbs)
Finish	Refer to the Technical Drawing (page 3)
Accessories (included)	C-Ring supporting plate, tile support bridge rails, grilles, paint masks, cut-out template, wire strain-relief fittings
Model	DX-IC6LP-W - loudspeaker with White grille

### OPTIONS

Accessories	New Construction Brackets (SPA-NC500) High Humidity Grilles (SPA-GHH500) Black Grilles (SPA-GRB500) 48" Tile Rails (SPA-RAIL48)
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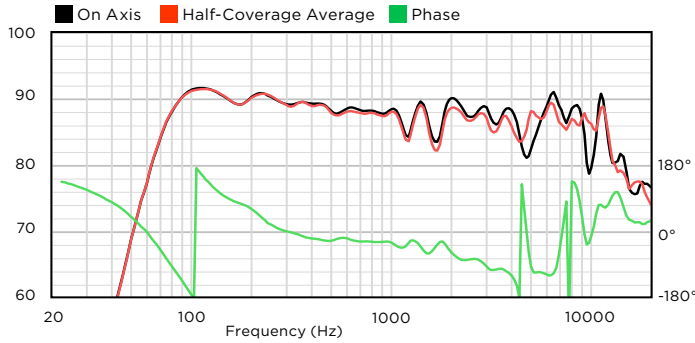
*Biamp strives to improve its products on a continual basis. Specifications are therefore subject to change without notice.*

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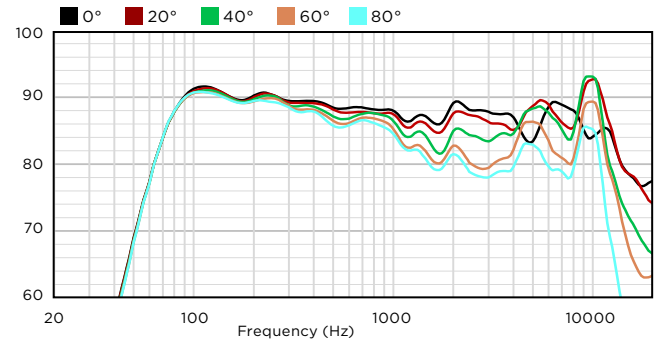
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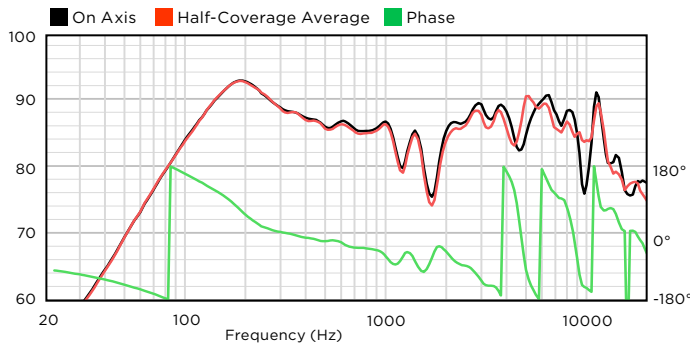
## AXIAL PROCESSED SENSITIVITY (dB SPL)<sup>8</sup>



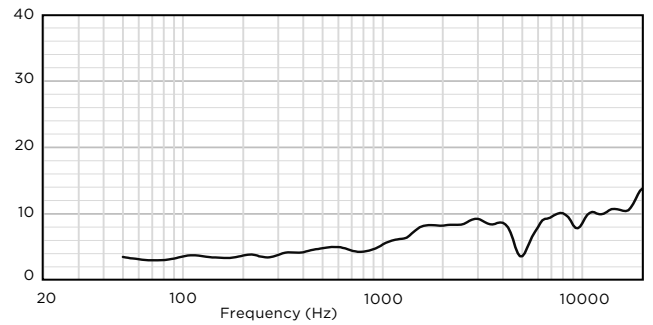
## OFF-AXIS RESPONSE (dB SPL)<sup>9</sup>



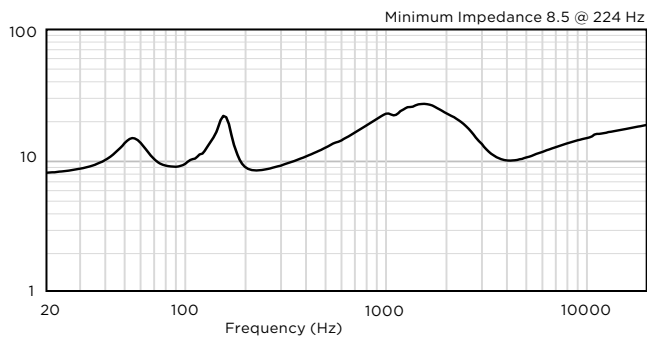
## AXIAL SENSITIVITY (dB SPL)<sup>8</sup>



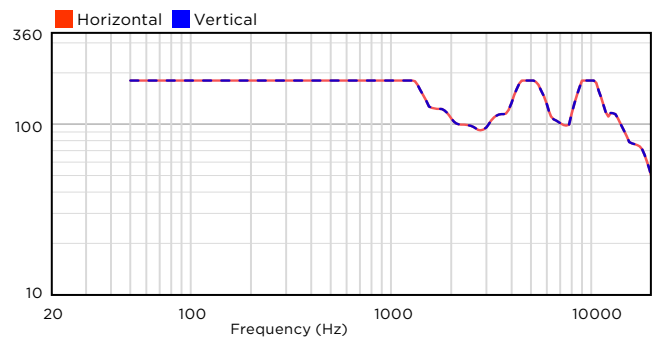
## DIRECTIVITY INDEX (dB)<sup>10</sup>



## IMPEDANCE (Ω)



## BEAMWIDTH (degrees)<sup>11</sup>



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## TECHNICAL DRAWING / DIMENSIONS / FINISH

W (bezel diameter) x D

341 mm x 99 mm (13.41" x 3.91")

Cutout Diameter

310 mm (12.20")

Unit Weight

4.9 kg (10.8 lbs)

Shipping Weight (shipped in pairs)

13.8 kg (30.42 lbs)

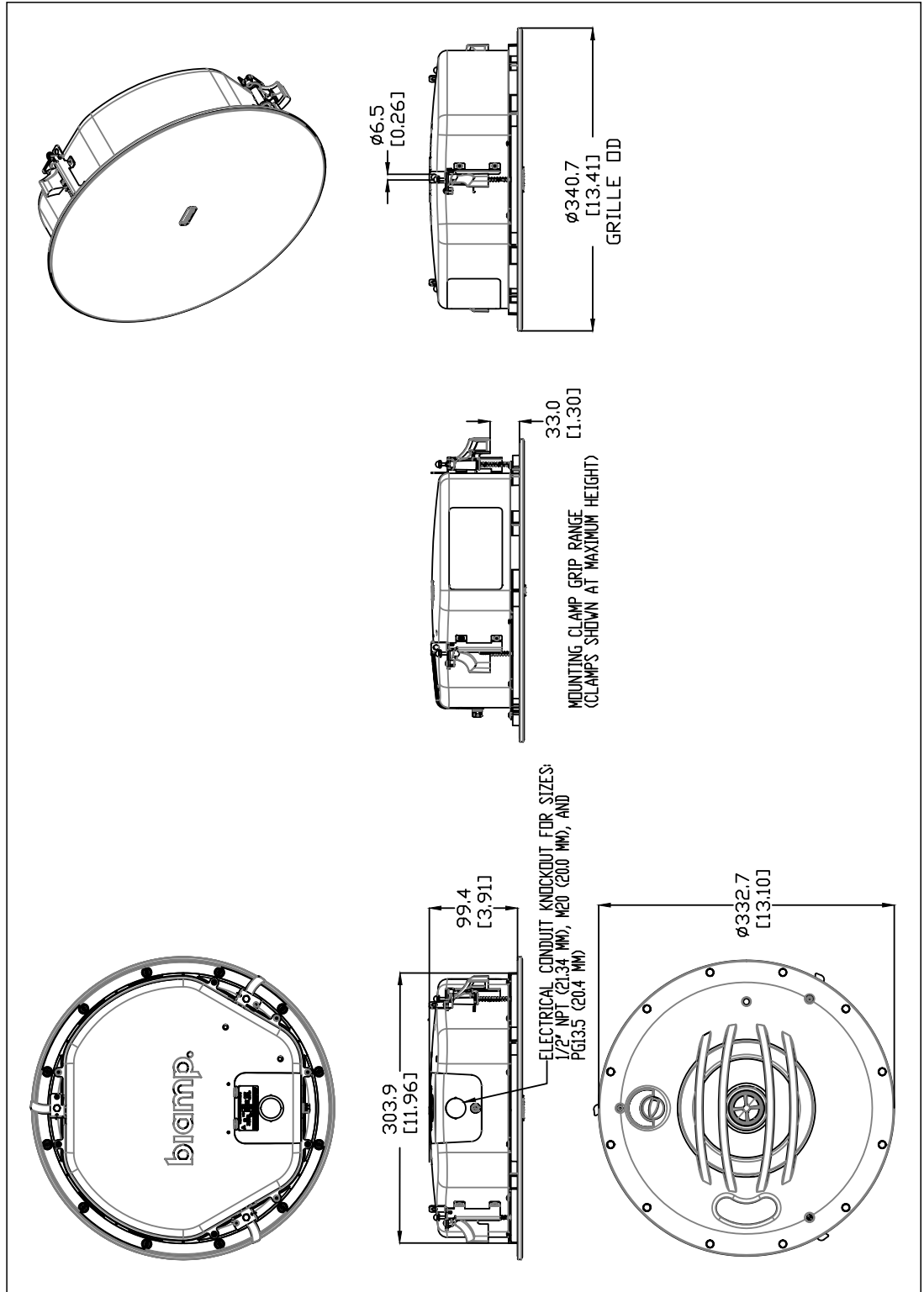
### Grille:

Powder-coated perforated steel backed with color-matched woven fabric with safety line. White finish (RAL9016).

### Enclosure / Finish

Back Can: Black, Matte finish Steel

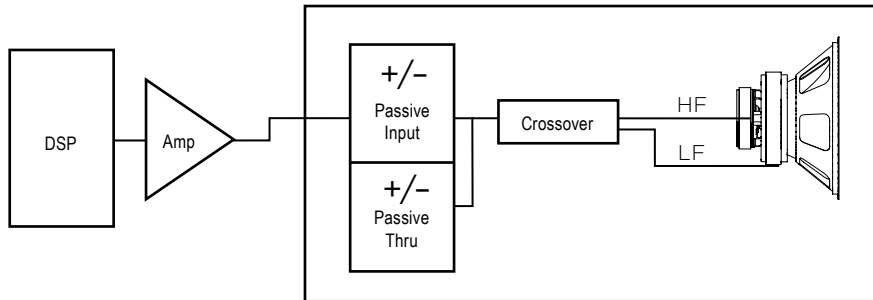
Face: UL 94V-0 rated ABS plastic, paintable Black finish.



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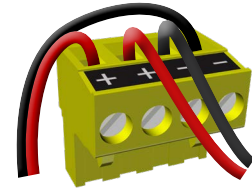
## CONNECTION DIAGRAMS



Single amp



Tap Switch (on face)



In from the amplifier or previous loudspeaker, terminals 1[+] & 4[-]

Out to the next loudspeaker, terminals 2[+] & 3[-]

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 using an IEC 60268-1 defined spectrum with recommended signal processing and protection filters.
- 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](http://www.biamp.com)