

DATA SHEET



DESONO™ COLS81

TWO-WAY 8 x 2-INCH COLUMN LOUDSPEAKER



FEATURES

- IP66 rated for outdoor applications such as patios or concourses
- High speech intelligibility coupled with full-range music reproduction
- Stylish yet subtle design; blends well in many environments
- Tap switch allows for 70V/100V or 16Ω low impedance operation

APPLICATIONS

Houses of Worship · Retail Outlets · Hotels
Bars and Restaurants · Courtrooms ·
Auditoria · Theaters · Museums · Airports

DESCRIPTION

The Desono COLS81 two-way 8 x 2" column loudspeaker is an excellent choice when sonic clarity and predictable directional control are required from an unobtrusive loudspeaker designed to blend in with the background.

The highly-focused dispersion pattern and improved speech intelligibility of the COLS81 enables it to excel in reverberant environments like houses of worship and auditoria, while it's weather-resistant construction allows it to be used in outdoor applications such as patios or concourses

The COLS81 utilizes a 4-position switchable transformer ranging from 3W to 30W with low-impedance bypass for constant-voltage operation, making it an excellent choice for large areas of BGM.

The Desono COLS81 is an excellent choice for both indoor and outdoor distributed audio applications that need speech intelligibility and background music reproduction.

TECHNICAL SPECIFICATIONS¹

Operating Mode	Passive	
Operating Environment	Indoor/Outdoor	
Operating Range ² (-10dB)	185 Hz to 22 kHz	
Nominal Beamwidth (H x V)	120° x 15°	
Transducers	LF 8 x 2" (51 mm) coated paper cone HF 1 x 1" (25 mm) soft dome	
Continuous Power Handling @ Nominal Impedance ³	22V	30W @ 16Ω (120W peak)
Nominal Sensitivity @ 1m ⁴	@ 1W 89 dB	@ 2.83V 86 dB
Nominal Maximum SPL @ 1m ⁵	Peak 110 dB	Continuous 104 dB
Transformer	70V: 30W, 15W, 7.5W, 3W 100V: 30W, 15W, 7.5W	
Recommended Amplifiers	30W - 60W @ 16Ω (22V - 31V)	

PHYSICAL

Input Connection	Multi-position pass-through, screw-down terminal block
Controls	None; select transformer tap or low impedance input via terminal block wiring
Mounting Provisions	Adjustable tilt L-bracket
Environmental	IP66 per IEC 60529
Dimensions H x W x D	24.2" x 2.6" x 2.6" (614 mm x 66 mm x 66 mm)
Weight	6.4 lbs (2.9 kg)
Finish	Refer to the Technical Drawings (page 3)
Accessories (included)	L-brackets and 2x IP66 water-tight gland nuts

OPTIONS

Accessories	COLSBRA: pan/tilt mounting bracket
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Biamp strives to improve its products on a continual basis. Specifications are therefore subject to change without notice.

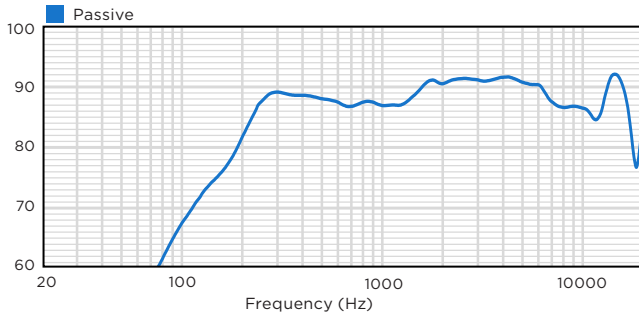
Data presented on this spec sheet represents a selection of the basic performance specifications for the model. These specifications are intended to allow the user to perform a fair, straightforward evaluation and comparison with other loudspeakers. For a detailed analysis of this loudspeaker's performance,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



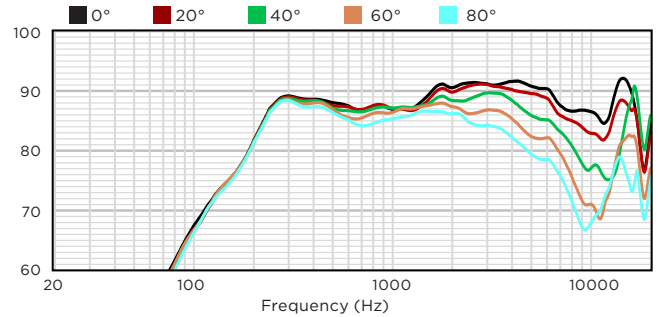
DESONO COLS81

TWO-WAY 8 x 2-INCH
COLUMN LOUDSPEAKER

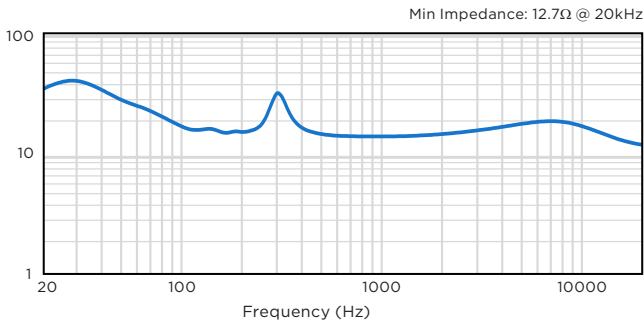
AXIAL SENSITIVITY⁶ (dB SPL)



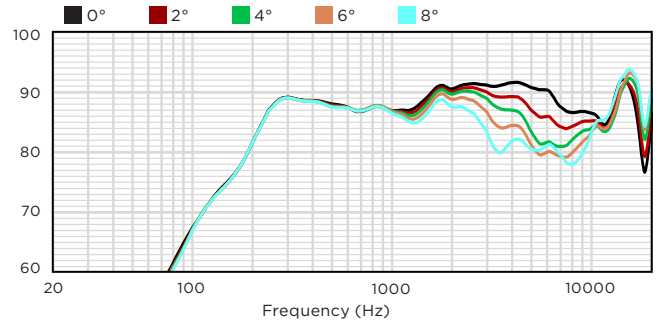
HORIZONTAL OFF-AXIS RESPONSE⁷ (dB)



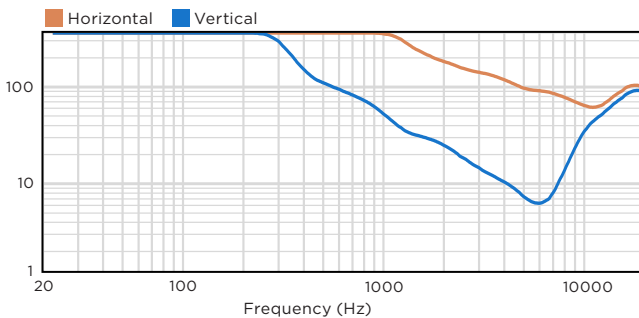
IMPEDANCE (Ohms)



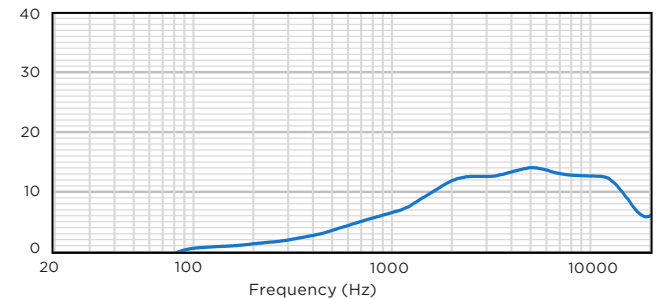
VERTICAL OFF-AXIS DOWN RESPONSE⁷ (dB)



BEAMWIDTH⁸ (Degrees)



DIRECTIVITY INDEX⁹ (dB)



¹ All measurements are taken indoors using a time windowed and processed signal to eliminate room effects, approximating an anechoic environment. All acoustic specifications are rounded to the nearest whole number. An external DSP using settings provided by Biamp is recommended to achieve further performance gains.

² The frequency range in which the on-axis processed response remains within 10dB of the average SPL.

³ Maximum continuous input voltage (and the equivalent power rating, in watts, at the stated nominal impedance) that the system can withstand, without damage, for a period of 2 hours using an EIA-426-B defined spectrum; with recommended signal processing and protection filters.

⁴ Averaged SPL over the operating range with an input voltage that would produce 1 watt at the nominal impedance and the averaged SPL over the operating range with a fixed input voltage of 2.83V, respectively; swept sine wave axial measurements with no external processing applied in whole space, except where indicated.

⁵ Calculated based on nominal / peak power handling, respectively, and nominal sensitivity; exclusive of power compression.

⁶ The on-axis variation in acoustic output level with frequency for a 1 watt swept sine wave, referenced to 1 meter with no signal processing. 1/6 octave Gaussian smoothing applied.

⁷ The loudspeaker's magnitude response at various angles off-axis, with recommended signal processing applied in the operating mode which utilizes the largest number of individually amplified pass bands. 1/6 octave Gaussian smoothing applied.

⁸ The angle between the -6dB points in the polar response of the loudspeaker when driven in the operating mode which utilizes the largest number of individually amplified pass bands. 1/6 octave Gaussian smoothing applied.

⁹ The ratio of the on-axis SPL squared to the mean squared SPL at the same distance for all points within the measurement sphere for each given frequency; expressed in dB. 1/6 octave Gaussian smoothing applied.

DESONO COLS81

TWO-WAY 8 x 2-INCH
COLUMN LOUDSPEAKER

TECHNICAL DRAWING / DIMENSIONS / FINISH

H x W x D
24.2" x 2.6" x 2.6"
(614 mm x 66 mm x 66 mm)

Unit Weight
6.4 lbs (2.9 kg)

Shipping Weight
7.3 lbs (3.3 kg)

Grille:
Aluminum
White (RAL 9016) finish

Enclosure / Finish
Aluminum, matte finish, White

