AWC159

All-Weather Compact 2-Way Coaxial Loudspeaker with 15” LF

Professional Series



Key Features:

- Highly weather-resistant IP56 rating.
- Consistent 90° x 90° broadband pattern control.
- Components:
  - 380 mm (15 in) woofer with Kevlar-reinforced cone and 75 mm (3 in) voice coil.
  - 38 mm (1.5 in) exit compression driver with unique patented design and high temperature polymer diaphragm.
- Extraordinary clarity for speech, with extended frequency response for music.
- Advanced high-slope crossover network for constant coverage and smooth, natural midrange.
- 500 Watt power handling (average continuous pink noise) with high sensitivity provides high SPL capability.
- High-power passive crossover network.
- Overload protection.
- 52 Hz – 20 kHz frequency response.
- 300 Watt 70V/100V multi-tap (built-in transformer) or direct 8Ω low-impedance.

Applications:

The AWC159 is a compact, coaxial-driver, 2-way, highly weather-resistant full-range loudspeaker system which is ideal for speech and music in a wide variety of applications, including sports facilities, racetracks, stadiums, fairgrounds, rodeos, skating rinks, themed entertainment venues, water parks, outdoor background music/paging systems, swimming pools, and a wide variety of other outdoor or indoor venue types.

The AWC159 is comprised of a high-power coaxial 380 mm (15 in) low frequency driver and 38 mm (1.5 in) high frequency compression driver. The co-axial design utilizes a unique tapered polepiece design and transitions to the cone of the low frequency driver as a large diameter pattern control horn for the high frequencies, both eliminating high-frequency beaming which is common among this category of speaker and extending pattern control to the lowest possible frequencies. The result is a coaxial speaker with wide, extremely consistent 90° coverage on a broadband basis.

Component features include a Kevlar-reinforced low frequency cone for reliability, well-damped surround for smooth frequency response, high temperature 75 mm (3 in) voice coil and a reduced distortion design through saturated-gap magnet geometry. The high frequency compression driver features a unique patented design, high temperature polymer diaphragm, and fluid-cooling for high output levels with low distortion.

The paintable enclosure is constructed of thick ABS plus fiberglass and is heavily braced to maximize low-frequency performance. The corrosion-resistant zinc-rich extra-thick powder coated steel grille is backed with open cell foam and high thread-count mesh, providing excellent protection in the harshest environments. The system is rated IP-56, per IEC529 when installed at minimum 5° down-tilt.

The system is equipped with a 300W 70V/100V multi-tap transformer. Connection is made via outdoor-rated terminals in a recessed terminal cup. A protective terminal compartment cover is included, along with gland nut, which forms a water-tight seal with round-jacketed cable having The high frequency compression driver features a unique patented design, high temperature polymer diaphragm, and fluid-cooling for high output levels with low distortion.

A heavy-duty weather-capable zinc-rich, thick powder coated U-type mounting bracket is included.

Specifications:

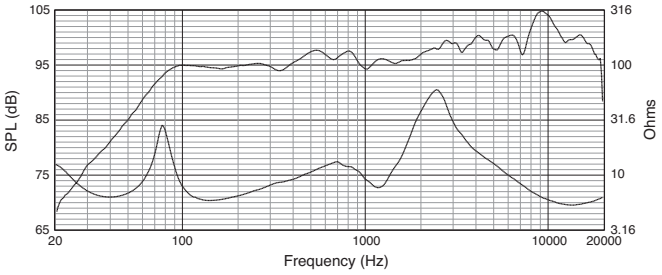
System:	
Frequency Range (-10 dB)[1]:	52 Hz – 20 kHz
Frequency Response (±3 dB)[1]:	80 Hz – 20 kHz
Coverage Pattern[2]:	90° x 90°
Directivity Factor:	11.1 (1 k – 16 kHz)
Directivity Index (DI):	9.7 dB (1 k – 16 kHz)
Long-Term System Power Rating (IEC)[3]:	500 W (2000 W peak), 2 hrs. 300 W (1200 W peak), 100 hrs
Sensitivity (2.83V @ 1m):	98 dB (Ave. 80 Hz – 20 kHz)
Maximum SPL[4]:	Direct 8Ω: 125 dB (peaks of 131 dB) 300 W Tap: 123 dB (peaks of 129 dB)
Crossover Network:	1.5 kHz, 4th order (24 dB/oct) high-pass plus conjugate to HF, 2nd order low-pass to LF
Nominal Impedance:	8 ohms
Transformer Taps:	70V: 300W, 150W, 75W, 38W 100V: 300W, 150W, 75W
Transducers:	
Low Frequency Driver:	Kevlar-reinforced cone with weather treatment, 75 mm (3 in) voice coil.
High Frequency Driver:	2408H-2 38 mm (1 in) diaphragm and voice coil diameter, patented high-temperature annular polymer diaphragm, copper-clad aluminum coil, fluid-cooled.
Physical:	
Enclosure:	ABS with Glass enclosure, heavily braced
Attachment:	Two M10 (fine-thread) points for included U-bracket. Reference torque 15 ft·lb (20 N·m). M6 secondary safety attachment point on back panel.
Grille:	Corrosion-resistant zinc-rich extra-thick powder coated steel grille, 3-layer assembly with foam and woven poly mesh backing.
Input Connection:	CE-compliant covered barrier strip terminals. Barrier terminals accept up to 8 mm outside 4 mm inside open-lug (#6 or #8) plus bare wire up to 2.5 mm2 (12 AWG) wire or spade lugs. Terminal compartment cover equipped with gland nut that forms water-tight seal with round-jacketed cables with outside diameters between 4.0 mm (0.16”) and 9.0 mm (0.36”).
Environmental:	IP56 per IEC529, with a minimum 5° downward aiming angle. Exceeds Mil Spec 810 for humidity, salt spray, temperature & UV, and ASTM G85 for acid-air/salt-spray (336 hrs).
Dimensions:	486 x 486 x 479 mm (19.1 x 19.1 x 18.8 in), cabinet 507 mm (19.9 in) depth including gland nut 546 mm (21.5 in) including bracket extending to back
Colors:	Available in gray (similar to Pantone 420C) and black (-BK)
Net Weight:	20.6 kg (45.5 lb), 23.4 kg (51.5 lb) with U-bracket
Shipping Weight:	27.7 kg (61.0 lb)
Included Accessories:	U-bracket, matches loudspeaker color (gray or black), zinc-rich extra thick powder coated, steel.

[1] Full-space (free-field)
[2] Average 1 kHz to 10 kHz
[3] IEC standard, full bandwidth pink noise with 6 dB crest factor.
[4] Calculated based on power rating and measured full-space sensitivity.

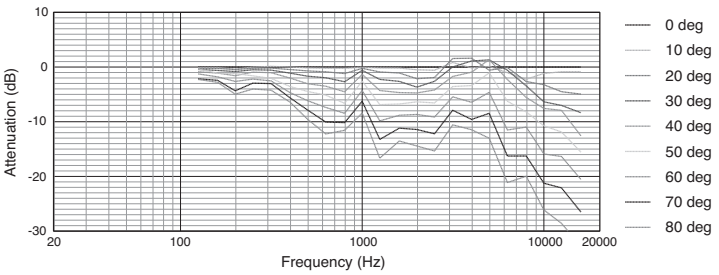
JBL continually engages in research related to product improvement. Changes introduced into existing products without notice are an expression of that philosophy.

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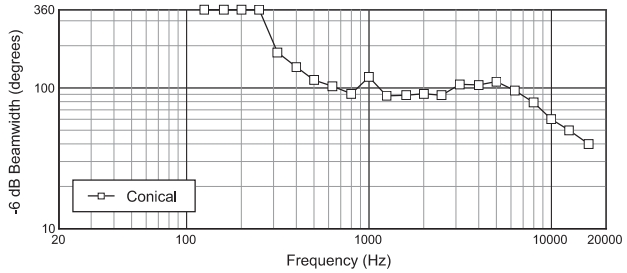
Frequency Response and Impedance



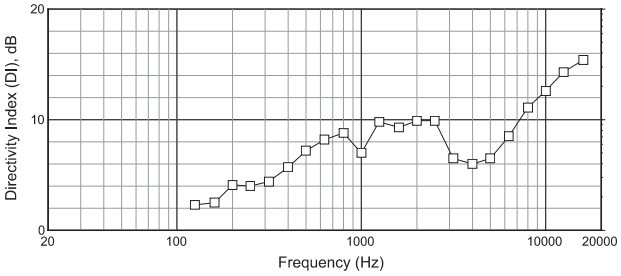
Off-Axis Frequency Response



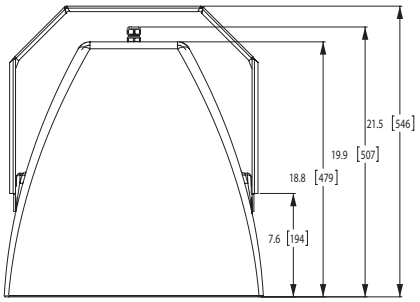
Beamwidth

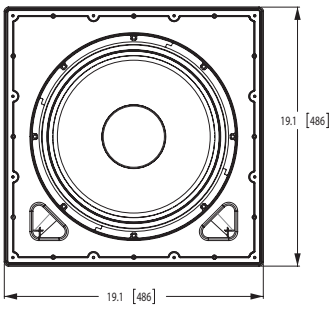


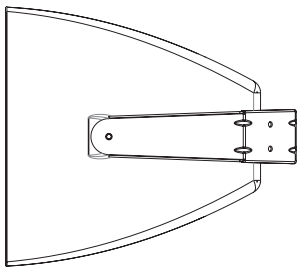
Directivity Index



Dimensions

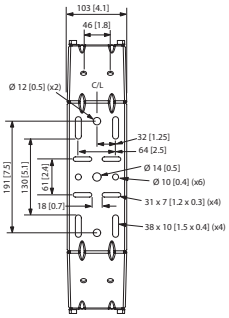


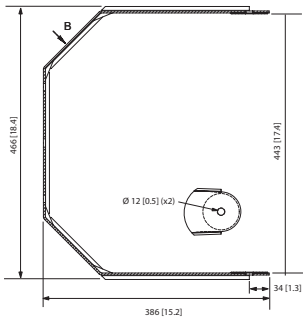




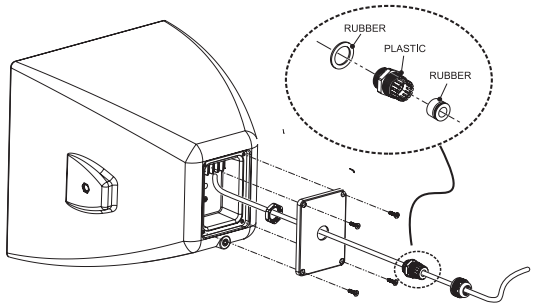
Dimensions in IN" [mm]

Attaching U-Bracket to Cabinet





Terminal Compartment



Gland nut for round jacketed cable between 4.0mm (0.16") and 9.0mm (0.36") O.D.

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