



15CX-CP Coaxial Loudspeaker



APPLICATIONS

Stadiums / Arenas
Educational Facilities
Convention Centers
Race Tracks
Dance Clubs

FEATURES

Coaxial, Horn-loaded
Two-Way Passive
LF Device: 15 in. (381.0mm)
HF Device:
Exit: 1.4 in. (35.6mm)
Voice Coil Diam: 3 in. (76.2mm)
60° H x 60° V Coverage
Bracket Attachment Points
Epoxy Mastic Finish
4-Position Terminal Strip

GENERAL DESCRIPTION

Clair Brothers 15CX-CP loudspeaker has been designed as an ultimate hi-fidelity, large-format point source speaker. Like many commercially available ceiling speakers, the frequency response is full range, 38Hz–16,000Hz, allowing for use for speech and music reproduction. A stand-out feature of 15CX-CP is its innovative horn technology. A coaxial horn arrangement provides conic constant directivity pattern control to both the 15" woofer as well as the 3" voice coil diameter compression driver.

The 15CX-CP also features a unique combination of two horns. One horn responsible for directing low frequencies is a precision-machined solid birch plywood horn, measuring 35.5" at the mouth. The high frequency horn is comprised of three sections. The first section is a solid exponential throat followed by a conic constant directivity geometry made of heavy gauge perforated steel. The perforation patterns are geometrically optimized to allow proper crossover region behavior over the 60° polar coverage area between the upper midrange frequencies of the woofer with the compression driver. This technology solves the common problem of horn shadowing with prior coaxial designs. The high frequency horn seamlessly joins with the low frequency horn as it extends toward the mouth.

The 15CX-P family consists of two versions, 15CX-P & 15CX-CP, being acoustically similar but mechanically different.

The 15CX-P (not pictured) is designed with a curved perforated steel grille and is well suited for outdoor or exposed installations. 15CX-P features versatile mounting options from 20 integrated points.

The other, 15CX-CP (pictured), is intended for use in commercial installation applications where an exterior grille is unnecessary as it may be installed above finished ceilings. 15CX-CP is outfitted with two attachment points for an optional mounting bracket.

The 15CX-CP is well suited for down-firing applications in particular, such as large convention centers or high ceiling commercial spaces. A recommended installation height is approximately 18 feet (5.5m). This will cover a 14' x 14' area. Please contact Clair Brothers for more information regarding coverage area planning and simulation.

OPTIONS

15CX-C – Indoor, Active Model [no grille]
15CX-P – Outdoor, Passive Model with Grille
15CX – Outdoor, Active Model with Grille
15CX-MB – Mounting Bracket for 15CX-C & 15CX
Custom Rigging Yokes / Custom Colors

15CX-CP Coaxial Loudspeaker



AUDIO SPECIFICATIONS

Loudspeaker Type	Passive ¹	Coaxial, Horn-loaded Ceiling Loudspeaker
Frequency Response (+/- 2dB)		38Hz–16kHz
Recommended Power Amplifier		1000–1200W @ 8 Ohms
Sensitivity (1 Watt @ 1 Meter) ²	LF	105 dB SPL
	HF	111 dB SPL
	Passive	106 dB SPL
Maximum Output	LF	132 dB SPL
	HF	133 dB SPL
	Passive	132 dB SPL
Drivers	LF	(1) 15 in. (381mm)
	HF	(1) Exit 1.4 in. (35.6mm); VC diameter 3 in. (76.2mm)
Nominal Impedance	LF	8 Ohms
	HF	8 Ohms
Power Handling	LF	400W Program / 800W Peak
	HF	80W Program / 160W Peak
Dispersion		60° H x 60° V (Conic)
Input Connections	Standard	(1) 4-Position Terminal Strip
	Optional	(2) EP-4 Connectors (1 Male, 1 Female)

MECHANICAL SPECIFICATIONS

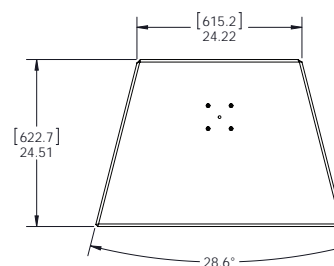
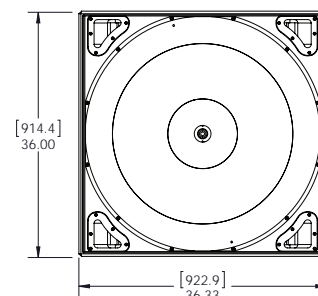
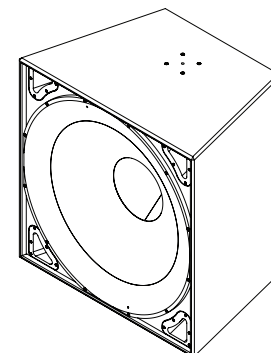
Enclosure	Shell	18mm Baltic Birch
	Finish	Black Epoxy Mastic
Grille		16 Gauge, Perforated Steel
Dimensions	Height	36.00 in. (914.4mm)
	Width	36.33 in. (922.9mm)
	Depth	24.51 in. (622.7mm)
Weight	Passive	190 lbs. (86.2kg)
	Active	183.3 lbs. (83.1kg)
Shipping Weight	Passive	205 lbs. (93.0kg)
	Active	198.3 lbs. (89.9kg)

¹ Standard product is Passive. [Active model may be ordered as an option.]

² Sensitivity measured in half space, average SPL over rated bandwidth.

Note: All wattage figures are calculated using the rated nominal impedance.

Clair Brothers products are designed to perform optimally by utilizing factory recommended proprietary DSP settings.



15CX-CP Terminal Strip Configuration

Terminal Color	Use
Black	Low (-)
Black	High (-)
White	High (+)
Red	Low (+)

15CX-C Terminal Strip Configuration

Left to Right	Use
Black	Low (-)
Red	Low (+)
Black	High (-)
White	High (+)

ARCHITECT AND ENGINEER SPECIFICATIONS

The loudspeaker shall be a two-way passive, or optionally active, system featuring a total of two (2) drivers. The low frequency section shall consist of one 15" driver capable of handling 400 watts of pink noise with a 6 dB crest factor for eight hours (as per EIA RS-426-A standard). The 15" woofer shall be horn-loaded onto a conic horn constructed wholly of solid birch plywood, structurally designed to minimize resonances in the device pass-band. The low frequency horn shall provide controlled directivity defined by -6dB at coverage angle to approximately 400Hz. The high frequency section shall consist of a 3" voice coil diameter compression driver with a 1.4" exit mounted on a 60°H x 60°V horn. The high frequency horn shall provide complete pattern control over the bandwidth. The high frequency horn shall be a constant directivity conic profile featuring acoustic lowpass boundary sections whose lowpass function varies according to the angle relative to the low frequency transducer behind it. The driver is capable of handling 80 watts (1 kHz to 10 kHz) of pink noise with a 6 dB crest factor for two hours (as per AES-1984 and ANSI S4.26-1984 standards). The enclosure shall be trapezoidal in geometry, constructed with 18mm, 13-ply Baltic birch and covered with a durable black epoxy mastic finish. The dimensions shall be 36.00" high, 36.33" wide, and 24.51" deep. The 15CX-CP enclosure shall incorporate two (2) integral rigging plates on the flat sides of the cabinet, each with one (1) 3/8"-16 thread for mounting bracket attachment. The passive system weight shall be 190 lbs. (86.2kg) [183.3 lbs. (83.1kg) for active]. The loudspeaker system shall be the Clair Brothers 15CX-CP, or 15CX-C, loudspeaker.

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Due to constant research, development and improvements all specifications are subject to change without notice.