

S2-CX-P Passive Coaxial Horn-loaded Loudspeaker



S2-SYSTEM

S2-CX-P
S2-B SUB
S2-A SUB



Applications

Live Sound Reinforcement
Dance Clubs
Entertainment Venues
Theaters
Houses of Worship
Cruise Ships

Features

Component of S2-System
Stacks with S2-A Sub | S2-B Sub
Coaxial, Horn-loaded
Two-Way Passive
LF Device: (1) 15 in (381mm)
HF Device:
Voice Coil Diam: 3 in (76.2mm)
60° H x 40° V Coverage
(2) Recessed Handles
(2) Integral Mounting Points
Durable Polyurea Coating
(1) EP-8 Connector
+ (1) 2-Position Terminal Strip

General Description

Clair Brothers S2-CX-P loudspeaker has been designed as a medium Q, hi-fidelity, large-format point source speaker. The frequency response is full range, 50Hz–18kHz, allowing for use for speech and music reproduction. A stand-out feature of S2-CX-P 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 S2-CX-P also features a unique combination of two horns. One horn responsible for directing low frequencies is a precision-machined solid birch plywood horn, measuring 21" at the mouth. The high frequency horn is comprised of multiple sections that form acoustic filters that allow the upper midrange frequencies of the 15" cone to pass through while at the same time remaining acoustically solid to the high frequency component. The perforation patterns are geometrically optimized to allow proper crossover region behavior over the 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.

S2-CX-P is outfitted with two built-in handles on the cabinet sides for straightforward stacking on top of S2-A Sub and S2-B Sub. Integral mounting points (2) 3/8"-16 thread allow the use of a mounting bracket for installation.

S2-System Components

S2-A Sub – 21 in Reflex Subwoofer
S2-B Sub – 21 in Bandpass Subwoofer
S2-CX-P – 2-Way Passive 15 in Coaxial (60°H x 40°V)
S2-CX – 2-Way Active 15 in Coaxial (60°H x 40°V)
S2-CX-MB – Mounting Bracket for S2-CX-P
S2-Rack – (1x) CB-PLM12K44 amp; and (1x) CB-PLM20K44 amp
Proprietary DSP + Amplification Rack Packages

S2-CX-P Passive Coaxial Horn-loaded Loudspeaker



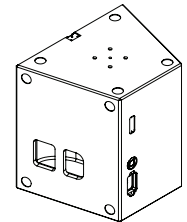
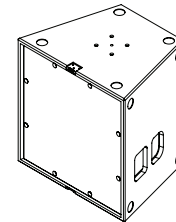
Audio Specifications

Loudspeaker Type	Passive	Coaxial, Horn-loaded Loudspeaker	
Frequency Response		(+/- 2dB) 65Hz–16kHz (-10dB) 50Hz–18kHz	
Recommended Power Amplifiers for S2-System		CB-PLM12K44 and CB-PLM20K44	
Compatible Products		S2-A Sub, S2-B Sub	
Prediction Software		Clair GLL/AFMG Ease Focus™ Array	
Processing, Configuration & System Optimization Software		Lake Controller® with Clair DSP, WiFi System Control	
Sensitivity (1 Watt @ 1 Meter)	LF	103 dB SPL	
	HF	111 dB SPL	
	Passive	106 dB SPL	
Maximum Output	Passive	135.4 dB SPL	
Drivers	LF	(1) 15 in (381mm)	
	HF	(1) Voice coil diameter 3 in (76.2mm); Exit 1.4 in (35.6mm)	
Nominal Impedance	LF	8 Ohms	
	HF	8 Ohms	
Power Handling		<i>AES Power</i>	<i>Peak Power</i>
	LF	400W	800W
	HF	80W	160W
Dispersion		60° H x 40° V	
Input Connections	Standard	(1) EP-8 Connector (1 Male) + (1) 2-Position Terminal Strip	
	<i>*Optional</i>	<i>* (1) NL4 Connector (Option: must spec on order)</i>	

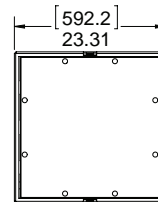
Mechanical Specifications

Enclosure	Shell	18mm Baltic Birch
	Finish	Black Polyurea Coating
Rigging	Integral Mounting Points	(2) 3/8" - 16 Thread
Grille		16 Gauge, Perforated Steel, Acoustically Transparent Fabric Covered
Dimensions	Height	23.54 in (597.9mm)
	Width	23.31 in (592.2mm)
	Depth Cabinet alone	17.93 in (455.5mm)
	Depth with Dolly	23.28 in (591.4mm)
Weight		76 lbs (34.5kg)
Shipping Weight		85 lbs (38.6kg)

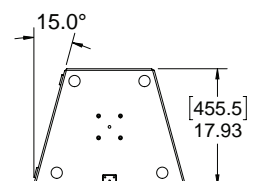
Note: All wattage figures are calculated using the rated nominal impedance.
Clair Brothers products are designed to perform optimally by utilizing factory recommended proprietary DSP settings.



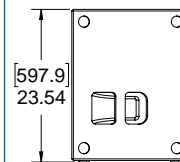
REAR ISO



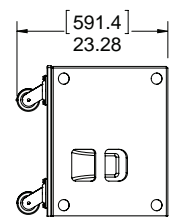
FRONT



TOP



RIGHT SIDE



RIGHT SIDE WITH DOLLY

S2-CX-P EP-8 Pin Configuration			
PIN	USE	PIN	USE
1	SUB A (-)	5	S2-CX-P (-)
2	SUB A (+)	6	S2-CX-P (+)
3	SUB B (-)	7	Wired Thru
4	SUB B (+)	8	Wired Thru

Architect and Engineer Specifications

The loudspeaker shall be a two-way passive 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 passband. 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 40° 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 polyurea coating. The dimensions shall be 23.54" high, 23.31" wide, and 17.93" deep (23.28" deep with dolly board attached). The S2-CX-P enclosure shall feature integral rigging points, providing (2x) 3/8"-16 thread mounting points on the parallel exterior surfaces. The system weight shall be 76 lbs (34.5kg). The loudspeaker system shall be the Clair Brothers S2-CX-P loudspeaker.

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