

C12-i Line Array



Applications

Performing Arts Centers
Houses of Worship
Stadiums/Arenas
Theaters
Night Clubs
Cruise Ship Venues

Features

Three-Way (Bi-Amp)
LF Devices: (2) 12 in (304.8mm)
MF Devices: (2) 3.5 in (89mm)
HF Devices: (2)
Exit: 1.4 in (35.6mm)
Voice Coil Diam: 1.75 in (44.5mm)
Max Output 147 dB
90°H x 10° V (Standard)
Horizontal Dispersion Options:
60 to 140°H in 10° increments
Clair TrueFit
Integral Bimodal Rigging
Epoxy Mastic Finish
(2) EP-8 Connectors

General Description

The C12-i is Clair Brothers latest innovation in line array technology for permanent installations. It incorporates an advanced transducer technology for both midrange and high frequency reproduction, both of which join a common waveguide. At least two amplifier channels are required, one for low freq., one for mid/hi which is coupled via an internal passive crossover network.

The centrally located mid/high module provides 10° vertical coverage and variable horizontal coverage. The horizontal pattern may be altered to optimize coverage within the context of the application. The horizontal coverage angle may be defined symmetrically or asymmetrically by standard angles between 60° and 140° in 10° increments or may be custom configured with continuously variable Clair TrueFit custom waveguides. The horn and waveguides are constructed, as all Clair waveguides are, with CNC machined Baltic birch plywood. This is symmetrically flanked by the C12-i low frequency sections. Each 12" low frequency driver is front loaded in its own tuned reflex chamber.

C12-i enclosures are equipped with integrated bimodal rigging including adjustable rear rigging for a variety of installation applications. The rear rigging device allows the speaker array to be adjusted from 0° to 10° at 0, 2.5, 5, 7.5 or 10° increments when the line array is flown or stacked.

Increased angular resolution at 0.25° increments is

available using Bimodal Incremental Rigging Disc (BIRD) accessories (0.5°, 0.75°, 1.0°, and 1.25° increments - for use in compression rigging mode only).

Clair Brothers combines amplification, and proprietary DSP processing in permanent or portable racks for all C12 systems. Custom cabling for systems is available as well and can be pre-wired, labeled and installed.

EASE GLL files are available upon request for C12 90° and 120° cabinets.

As with all Clair Brothers speaker products, the C12-i is constructed with the finest Baltic birch plywood. The enclosure is finished with a durable epoxy mastic coating to withstand the most demanding conditions. The speaker grille is constructed of high-grade 14 gauge perforated steel and finished with a commercial grade powder coat finish.

Options & Accessories

C12-i-90 – Standard 90° H x 10° V Dispersion

C12-i-#° – Optional #° Horizontal Dispersion
[60° to 140° H in 10° increments]

C12-M – Mobile Model (-90 and #° options)

C12-TrueFit – Custom Configured
Variable Waveguides



Proprietary DSP + Amplification Rack Packages
Ground Stack Rigging | Soft Cover | Transport Dolly
Bimodal Incremental Rigging Discs (BIRD)

C12-i Line Array



Audio Specifications

| | | |
|--|---------------------|--|
| Loudspeaker Type | Line Array Element | Three-Way Active (Bi-Amp with Passive Mid/Hi) |
| Frequency Response | Single Cabinet | 45Hz–20kHz (+/- 2dB) (-10dB) 28Hz–22kHz |
| Recommended Power Amplifier | | CB-PLM12K44 or CB-D120:4L |
| Maximum Array ¹ | | 20 C12-i ¹ |
| Compatible Subs | | iS218-i, CS218 |
| 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 | 99 dB SPL |
| | MF/HF | 121.8 dB SPL |
| Maximum Output | | 147 dB SPL |
| Drivers | LF | (2) 12 in (304.8mm) |
| | MF | (2) 3.5 in (89mm) |
| | HF | (2) Exit 1.4 in (35.6mm); VC diameter 1.75 in (44.5mm) |
| Nominal Impedance | LF | 2 x 8 Ohms |
| | MF | 16 Ohms |
| | HF | 16 Ohms |
| | | Integrated Passive Crossover Network |
| Power Handling | | <i>AES Power</i> <i>Peak Power</i> |
| | LF | 1800W 3800W |
| | MF | 300W 1000W |
| | HF | 320W 640W |
| Dispersion | Standard | 90° H x 10° V |
| | Optional Horizontal | 60° – 140° H (10° increments) |
| | Custom Horizontal | Clair TrueFit: Custom Tailored Continuously Variable |
| Input Connection | | (2) EP-8 Connectors (1 Male, 1 Female) |

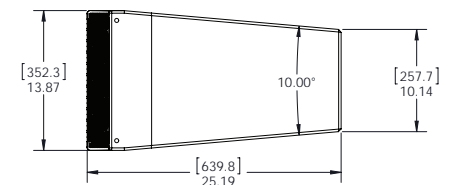
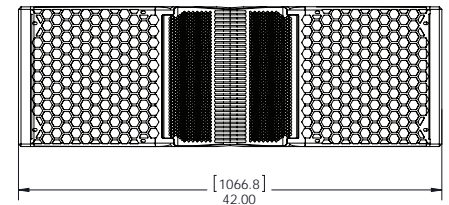
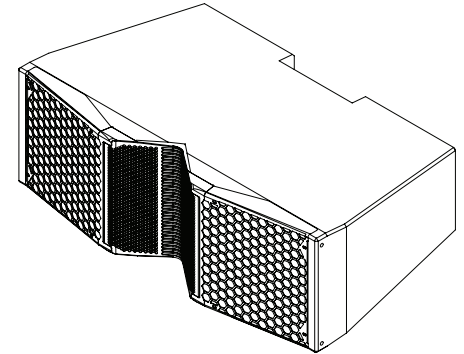
Mechanical Specifications

| | | |
|-----------------|--------------|----------------------------------|
| Enclosure | Shell | 18mm Baltic Birch |
| | Finish | Black Epoxy Mastic |
| Grille | | Powder Coated Steel, Foam Backed |
| Dimensions | Front Height | 13.87 in (352.3mm) |
| | Rear Height | 10.14 in (257.7mm) |
| | Width | 42.00 in (1066.8mm) |
| | Depth | 25.19 in (639.8mm) |
| Weight | | 153 lbs (69.4kg) |
| Shipping Weight | | 171 lbs (77.6kg) |

1) Refer to C12 Rigging Manual for Configuration Limits vs. Modes of Use.

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.



| C12-i EP-8 Pin Configuration | | | |
|------------------------------|-----------|-----|------------------|
| PIN | USE | PIN | USE |
| 1 | Low 1 (-) | 5 | Mid/High Top (-) |
| 2 | Low 1 (+) | 6 | Mid/High Top (+) |
| 3 | Low 2 (-) | 7 | Mid/High Bot (-) |
| 4 | Low 2 (+) | 8 | Mid/High Bot (+) |

Architect and Enginer Specifications

The loudspeaker system shall be a three-way active, line array element cabinet built for permanent installation. The system shall have an amplitude response of 45Hz to 20,000 Hz (+/- 2 dB), 28Hz to 22,000 Hz (-10 dB). The loudspeaker system shall be symmetrically loaded with two 12" low frequency transducers. The low frequency drivers shall be 12" nominal diameter capable of combined handling 1800W of power as per AES Standard. The low frequency drivers shall each be mounted in independent reflex tuned vented chambers. The mid/high frequency horn section shall be centrally located within the enclosure and shall feature 2x 1.4" exit / 1.75" voice coil diameter compression drivers that are each capable of 160W(AES) and midrange drivers shall be 2x 3.5" nominal diameter each capable of 150W(AES) mounted to a waveguide and horn assembly that provides 10° V dispersion. The horizontal directivity system shall consist of a pair of interchangeable acoustic waveguide lenses that permit installation of waveguides between 60° and 140° in 10 degree increments. The rigging shall be structurally integrated into the enclosure construction and shall permit the deployment of the cabinet into typical line array configurations. The loudspeaker enclosure shall be 18mm, 13-ply Baltic birch plywood. The cabinet shall be finished using black epoxy mastic finish. The front of the enclosure shall be fitted with a 14 gauge perforated steel grille backed with foam. The loudspeaker shall be 13.86" H (front) x 10.07" H (rear) x 42.00" W x 25.19" D and weigh 153 lbs (69.4kg). The loudspeaker system shall be the Clair Brothers C12-i speaker.

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

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