RENKUS-HEINZ

GIVE YOURSELF THE ADVANTAGE

IC Live

steerable portable powerful

ENGINEERED FOR LIVE SOUND

ICONYX

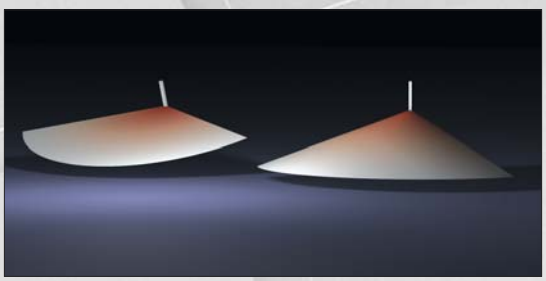
DIGITALLY STEERABLE LINE ARRAYS

Engineered For Live Sound

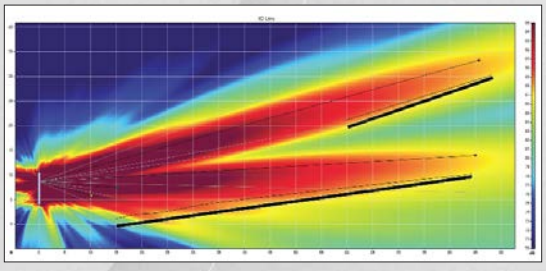
IC Live can be used anywhere music and intelligible speech are critical: Corporate Events, Live Concerts, Political Rallies, Theatrical Productions, Museums, Lobbies, Galleries, Resorts, Theme Parks, Clubs...

Individual driver control maximizes the acoustical advantages of this design. The result is unsurpassed vertical pattern control – essential for delivering intelligible speech in reverberant spaces. These benefits make IC Live suitable for not only the corporate AV rental market but for the installed sound market as well.

STEERABLE



Compared to a passive column array (left) Iconyx delivers an "Umbrella" of sound (right).



BeamWare lets you program array coverage and shape it to the audience before you load the truck.

Taller Arrays + Closer Spacing = Wideband Control

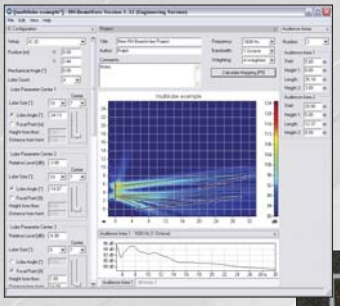
All sound systems must control the energy they produce in order to work properly. "Up close and personal" communication happens when sound arriving directly from the loudspeaker is much louder than sound that's reflected off the walls, windows, floor and ceiling.

Digital Steering

Back in 1957, Harry F. Olson showed that linear arrays can control sound – and the frequencies they can control are limited by the height of the array (on the low end) and the spacing between drivers (on the high end). IC Live has the same drivers you'll find in typical "mini" line arrays. A single IC Live is about twice as tall, so it controls an octave lower. With all the drivers in one enclosure, not three, they're as close together as possible, so digitally steered IC Live arrays can control higher and lower frequencies more effectively.

Ordinary line arrays can shape vertical dispersion, but they produce conventional "balloon" polar patterns. Sidewall reflections in particular are not affected by curving or tilting a conventional line array. IC Live line arrays use digital steering, which produces an "umbrella" polar: the steering works in all directions, not just along the main lobe's axis. The amount of energy bouncing off the sidewalls is greatly reduced, and it's aimed downwards, so reflections aren't aimed directly at the audience. The end result is more direct sound and less reflected energy: the classic recipe for superior intelligibility.

POWERFUL



BeamWare 2 (RHAON) Complex mathematical calculations behind an intuitive GUI.

Multiple presets easy selection

Powerful Algorithms, Intuitive Interface

The software algorithms that digitally shape and steer the output of an IC Live are complex, but the user interface is intuitively simple. Our BeamWare Windows application lets you model the audience area, then drag and drop beams until coverage is optimized. BeamWare then calculates a set of FIR (Finite Impulse Response) filters that control the array. Before loading the arrays onto the truck, simply download the full set of FIR filters from your computer to the IC Live modules over Ethernet. At the venue, the vertical array sets up quickly and easily. With optimized coverage, everyone from the front rows to the rear of the audience enjoys consistently articulate and musical sound at comfortable listening levels.

Multiple Presets, Easy Selection

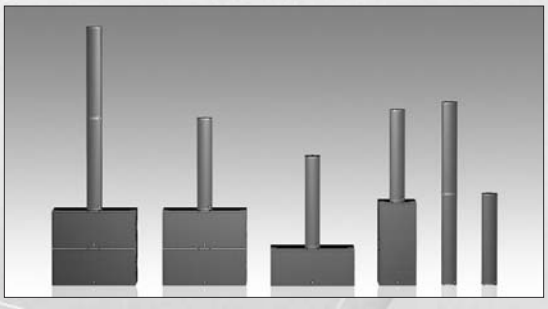
The fast pace of live event production doesn't always permit a computer based design process using BeamWare. With IC Live, you can make sound for many typical applications in minutes, without ever touching a computer. Nine presets (four factory and five custom) can be stored in memory, ready for selection from the rear panel. Simply scroll through them using the Up/Down buttons and indicator LEDs on the rear panel to find the right one for any given room and audience, and you're ready to go.

Portable, Modular Systems = Return On Inventory

As a system engineered for live event production, IC Live is built to earn its keep. You know as well as we do that rental equipment generates income only when it's making sound (preferably the kind of sound that makes loyal clients). The more jobs on which a system can excel, the greater the return on the initial investment.

IC Live's digital steering technology makes it extremely flexible: with up to eight beams (IC Live Dual) of acoustic energy under your command, it's possible to tailor the array's coverage to almost any audience. Because IC Live uses DSP intelligence rather than brute force to control sound, the physical arrays are always compact and visually discrete. IC Live can remain vertical while the sound is aimed up or down using multiple beams to cover a balcony and a main floor with one unit.

IC Live creates six array configurations for anything from a small hotel meeting to a live concert for thousands of people, all from just two inventory items. The basic IC Live module can be used alone or combined with one or two IC215S subwoofers for added low frequency impact. The IC215S dual 15" bandpass subwoofer supplies the extra bass impact needed for high level music. Two IC Lives arrayed "horn to horn" form a taller, higher output array that can be used alone, or supported by one or two IC Live subwoofers. Any of these array configurations assembles in minutes with interlocking hardware system.



IC Live offers six array configurations from just two inventory items.

Any of array configurations assembles in minutes with interlocking hardware system.

Programmable Presets = Versatile Performance

The conventional line array depends on mechanical alignment to control its acoustical energy balloon. You have to build a new multi-enclosure array for every project: first setting the angles between enclosure and then tilting the entire array. The hardware that accomplishes this is complicated, expensive and can be time-consuming to set up.

With digital steering, the process is simple. Decide whether you need one IC Live, or two. Determine whether you need IC215S subwoofers. For most situations, you'll then simply pick a preset beam of 20°, 25° or 30° vertical coverage and an aiming angle of ± 0 – 30°. Because you steer the beam digitally, the array is always vertical. This makes the hardware much simpler, easier and faster to set up.

Digitally steered arrays can adapt to a wider range of audience sizes and shapes, because individual control of every driver gives you much more precision and a wider range of patterns. Using BeamWare, you can define and aim up to four beams of sound from each IC Live array module. Each can be separately shaped and steered.

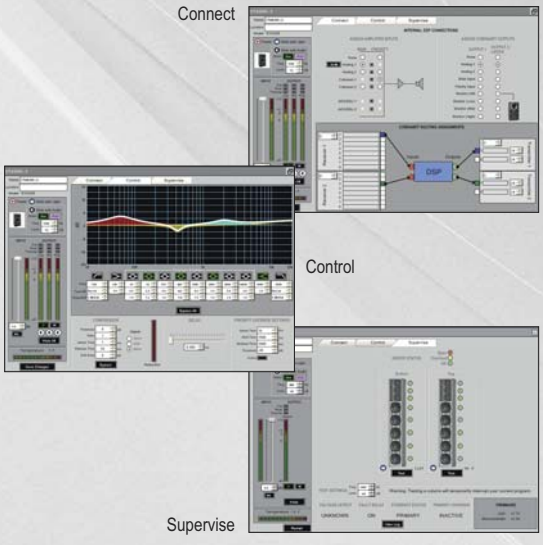
Nine presets (four factory and five custom) can be stored in memory, ready for selection from the rear panel.

RHAON (Renkus-Heinz Audio Operations Network) is the culmination of more than 20 years experience integrating electronics with loudspeakers. RHAON makes it easy to connect multiple IC Live arrays with other Renkus-Heinz powered loudspeakers using standard Ethernet cabling and switches. On the network, you can distribute multi-channel digital audio with Cobranet, control array-specific DSP functions, and supervise the entire system from a computer at the mix position or any other location.
RHAON gives you Maximum Control of:

• Real time digital audio distribution over standard Ethernet: proven CobraNet technology delivers up to 64 channels of high quality digital audio over a single CAT 5e cable.

• A powerful DSP inside each IC Live array on the network. Adjust eight bands of parametric EQ, high and low frequency shelving filters, input level control, muting, dynamics and 340 milliseconds of delay in real time.

• Monitoring and supervisory functions. RHAON tracks critical operating parameters such as signal clipping, amplifier output voltage and current and temperature with automatic alert functions.



Technical Specifications

ICL-R

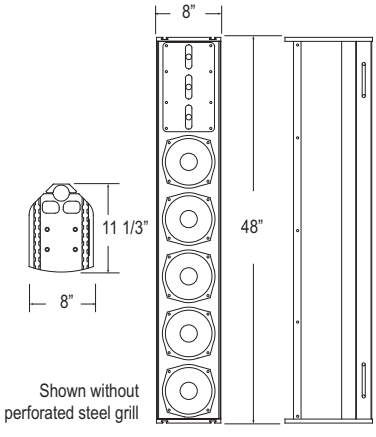
Sensitivity: 1.0 V (for rated power output)
Freq. Range: 80 Hz to 20 kHz
Max SPL: 102 dB pgm, 105 dB peak, @ 100 Ft. (30.5 meters);
(3-octave bandwidth centered at 2 kHz)
Horiz. Dispersion: 150° up to 3 kHz; 120° above 3 kHz
Vert. Dispersion: 20°, 25° and 30°; 5°, 10°, 15° and 20° when stacked
Aiming Angle: Adjustable from -30° to +30°
Typical Throw: 66 Ft. (20 meters), 132 Ft. (40 m) when stacked
Beam Control: Effective down to 800 Hz, 400 Hz when stacked
№. Transducers: 5 (five) 6.5-inch cone transducers with Neodymium magnets,
3 (three) 1-inch HF Titanium Nitride compression drivers
№. Amp. Channels: 8 per module
Dimensions (HxWxD): 48" x 8" x 11 1/3" (122 cm x 20.3 cm x 28.7 cm)
Weight: 61 Lbs (27.7 Kg)
Power Required: Universal 90/260 VAC 50/60Hz
29VA Idle, 500VA @ Rated Power Output
(250 ma Idle, 4.2 Amps @RPO at 120 V per module)
Hanging Method: AeroQuip Fly-Track
Enclosure: Finnish Birch with Aluminum end caps and
Perforated Steel Grill; suitable for outdoor use
Inputs: Analog Audio Inputs: Looping XLR (female in, male out)
and Phoenix 6-pin (looping 3-in, 3-out)
CobraNet: Dual RJ45 connectors (for CAT 5e copper cable)
AES/EBU: Phoenix connector
Controls (Rear Mounted): Mute button, Up & Down Output Level push buttons
10 dB Input pad (on Analog 1 input),Power On/Off,
Push-To-Reset circuit breaker, Configuration PreSet Selector
Computer Controls: Gain, Mute, On/Standby, Input Selection
Compression, 9-Band Parametric EQ, Shelving & Rolloff
Filters, Delay, Configuration Preset Readout
Status Indicators: Power, Signal, Overdrive, Thermal, Mute
Input Pad, Failure, Preset Configuration
Power Connector: Powercon locking connector
Finish: Black paint
Network Digital Format: 16, 20 or 24 bit PCM; 48 or 96 kHz sample rate;
selectable network latency

IC215S-R

Sensitivity: 1.4 V (for rated power output)
Freq. Range: 43 Hz to 100 Hz
Max SPL: 133 dB program, 136 dB peak,
№. Transducers: Two model SSL15-11, 15" cone woofers
800 Watts program @ 4 Ohms (each)
Dimensions (HxWxD): 44 1/2" x 20" x 24" (113 cm x 50.8 cm x 61 cm)
Weight: 206 Lbs (93.4 Kg)
Power Required: 90/136 V or 180/260 V AC, 50/60Hz. 13 Amps @ 120 V,
6.5 Amps at 240 V
Hardware: AeroQuip Fly-Track, Handles, Casters
Enclosure: Finnish Birch, Perforated Steel Grill
Inputs: Analog Audio Input 1: Looping XLR (female in, male out)
Analog Audio Input 2: Phoenix 6-pin (looping 3-in, 3-out)
CobraNet: Dual RJ45 connectors (for CAT 5 copper cable)
AES/EBU: Phoenix connector
Controls (Rear Mounted): Power On/Off, Push-To-Reset circuit breakers
Mute button; Up & Down Output Level push buttons;
10 dB Input pad (on Analog 1 input)
Computer Controls: Gain, Mute, On/Standby, Input Selection; Compression
9 - Band Parametric EQ, Shelving & Rolloff Filters, Delay
Status Indicators: Power, Signal, Overdrive, Thermal, Mute, Input Pad
Power Connector: Powercon locking connector
Finish: Black paint
Network Digital Format: 16, 20 or 24 bit PCM; 48 or 96 kHz sample rate;
selectable network latency

PM-2LR AMPLIFIER

Type: Class D amplifier/DSP processor
Power Rating: 2 x 850 Watts RMS, 950 Watts Program
THD Distortion: < 0.05% typical
Hum & Noise: <100 dB (A weighted)
Damping Factor: 135 @100 Hz
Power Requirements: 90/136 V AC or180/260 VAC, 50/60 Hz
13 Amps @ 120 V, 6.5 Amps @ 240 V
Idle Current: 380 mA @ 120 V, 190 mA @ 240 V
Max Inrush current (soft start): 14.5 Amps @ 120 V, 7.3 A @ 240 V



Shown without perforated steel grill

IC Live - DSP/AMPLIFIER

Type: 8-channel, Class D amplifier/DSP processor
Power Rating: 100 Watts RMS per channel, 150 Watts Burst
Freq. Range: + 3, - 3 dB, 80 Hz to 20 kHz
THD Distortion: < 0.05% typical
Hum & Noise: <100 dB (A weighted)

Also available non RHAON and fixed installation versions.

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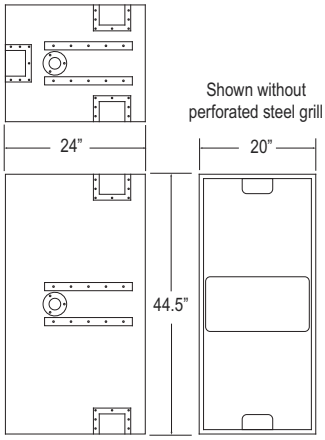

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