TECHNICAL DATA SHEET

HALO-B

2-WAY MEDIUM FORMAT LINE ARRAY ELEMENT

Following on from the highly-anticipated release of the large format HALO Arena system early in 2018, EM Acoustics are proud to announce the third system in the family, HALO-B. Intended to bridge the divide in both physical size and overall system output between HALO-A and HALO-C, HALO-B follows the same design principles as HALO-A to provide consistent, predictable performance in a convenient, compact and flexible package.

FEATURES AND BENEFITS

- Signature EM Acoustics "maximum headroom" design approach ensures consistency of performance regardless of SPL level
- Extremely consistent horizontal dispersion pattern across the operating frequency band - nominal 110-degree pattern is maintained down to 350Hz
- Compact enclosure with low weight means less truck space used and smaller motors required
- Enclosure coated with 3-step polyurethane process - ensuring the cabinets are not only weather resistant but more resilient to impact damage
- Intuitive, simple 3-point flying system, assembled from ultra-high tensile strength steel with Xylan™ coating for enhanced durability.
- Biamplified design for maximum efficiency with amplifier channel count

HALO-B is intended to fulfill three core tasks - be a companion system to the larger HALO-A, be a companion system to the smaller HALO-C, and be a system in its own right. The same core design principle of the maximum headroom possible means that HALO-B delivers a consistent performance across all SPL levels. HALO-B has been built to be equally comfortable in both fixed installation and mobile applications.

A single HALO-B exhibits a flat, free-field frequency response from 65Hz to 20kHz (+/-3dB) and a phase response which is +/- 20 degrees between 150Hz and 18kHz. Due to the unique loading technique applied to the low frequency drivers, combined with the high frequency waveguide, the dispersion pattern control is maintained down to 350Hz.

Similar to HALO-A yet scaled down, HALO-B uses a proprietary emulation manifold, which combines the energy of four 1" (25mm) exit ring-radiatior compression drivers into a plane-wave array. This assembly gives not only a very significant moving area for the high frequency section, but provides twice the headroom of other comparable systems along the same principles as HALO-A. Additionally, the use of ring-radiator compression drivers significantly reduces the 3rd harmonic distortion, resulting in a far smoother and more natural sonic character.

Working alongside these four high frequency drivers are a pair of high power 2.5" (64mm) voice coil 8" (203mm) low frequency transducers. These two powerful drive units, combined with optimally-tuned low turbulence porting and generous cabinet volume ensure HALO-B has a low frequency performance to match the stunning highs. Keeping HALO-B as a two-way system reduces the off-axis parallax issues to a single crossover point, and through tireless research and development this issue has been almost completey eradicated.

The HALO-B enclosure is constructed from premium 15mm and 30mm (⅝" and 1 3/16") multi-laminate Baltic birch plywood - rebated, screwed and glued together for maximum strength. Intelligent internal bracing, combined with the unique low-loss porting structure minimises panel flexure - thereby removing unwanted resonances but still keeping the overall enclosure weight low. The enclosure is finished in a polyurethane coating, which as well as being far tougher than the conventional water-based paints used on other products, offers HALO-B a significant level of weather resistance without any further treatment.

The flying hardware has also been built with touring flexibility and reliability in mind. HALO-B uses a 3-point system, utilising quick-release pins as you would expect. Array angles can be pre-set on individual elements whilst stored on their transit chariots. As the array is lifted the rear links move to their pre-set array angles, and a final pin fixes everything in position. Ultra-high tensile steel parts form the core of the 3-point system, which is coated with Xylan™ - a fluoropolymer coating which contains PTFE for both lubrication and impact resistance. Arrays of up to 24 elements can be safely assembled with above-regulation safety factors.

HALO-B requires two amplifier channels and makes use of the latest in FIR DSP technology - as such it must be used with the DQ Series of advanced system amplifiers. Using these amplifiers a maximum of eight HALO-B enclosures could be driven from a single amplifier (DQ20), although six is recommended as a maximum for full output.

APPLICATIONS

- Small-to-medium format touring sound reinforcement for festivals, stadia, arenas and concert halls
- Delay, outfill & infill applications for larger shows
- Small-to-medium format fixed installations in concert halls, theatres and sports arenas
- Houses of Worship
- Corporate A/V events

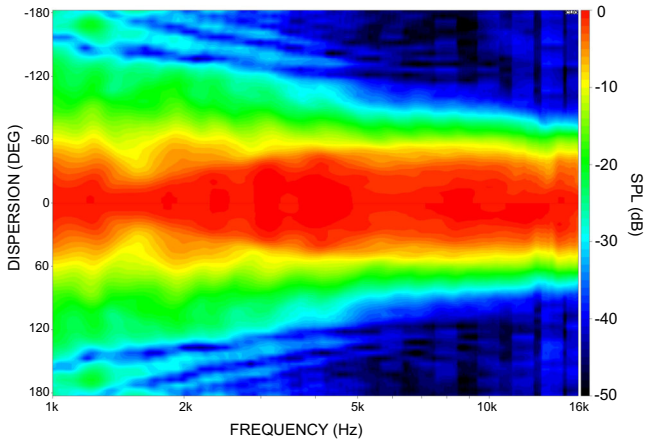
TECHNICAL SPECIFICATIONS

ENCLOSURE TYPE:	2-way reflex loaded line array element
FREQUENCY RESPONSE[1]:	65Hz - 20kHz +/- 3dB
PHASE RESPONSE:	+/- 20 degrees, 150Hz - 18kHz
MAXIMUM SPL[2]:	135dB continuous, 141dB peak
DISPERSION[3]:	110 degrees horizontal
SPLAY ANGLES:	0.25, 0.5, 1, 1.5, 2, 2.5, 3, 4, 5, 6, 7, 8, 9, 10 degrees
DIMENSIONS (HxWxD)	262 x 772 x 464mm (10.3" x 30.4" x 18.3")
NET/SHIPPING WEIGHT:	29/32kg (63.8/70.4lbs)
DRIVE UNITS:	LF: 2 x 2.5" (64mm) voice coil neodymium 8" (203mm) HF: 4 x 1.5" (38mm) voice coil, 1" (25mm) exit ring-diaphragm neodymium HF drive units on bespoke plane-wave manifold
POWER HANDLING:	LF: 600W RMS, 1200W program HF: 140W RMS, 280W program
NOMINAL IMPEDANCE:	LF: 8 ohms HF: 16 ohms
CONNECTORS:	2 x Neutrik SpeakON™ NLT4MP
ENCLOSURE:	15 & 30mm (⅝" and 1 3/16") multi-laminate Birch plywood - rebated, screwed and glued together. Finished in polyurethane textured finish.
RIGGING & HARDWARE:	3-point system, ultra-high tensile steel. Enclosure hardware rated to 24 elements at 10:1 safety factor.
GRILLE:	Powder coated stainless steel backed with acoustically transparent fabric
OPTIONS:	White and custom colours
ACCESSORIES:	FG-HALO-B master flying grid CG-HALO-B compact flying grid PB-HALO-B pullback/underhang frame WC-HALO-B enclosure transit wheelcart
SPARE PARTS:	TC-HALO-B eight-enclosure padded touring cover DU-807-16 8" LF drive unit CDU-1006-16 1" exit HF drive unit RFG-HALO-B replacement steel grille PIN-0.313/0.625 locking pin (front) PIN-0.375/0.813 locking pin (rear)

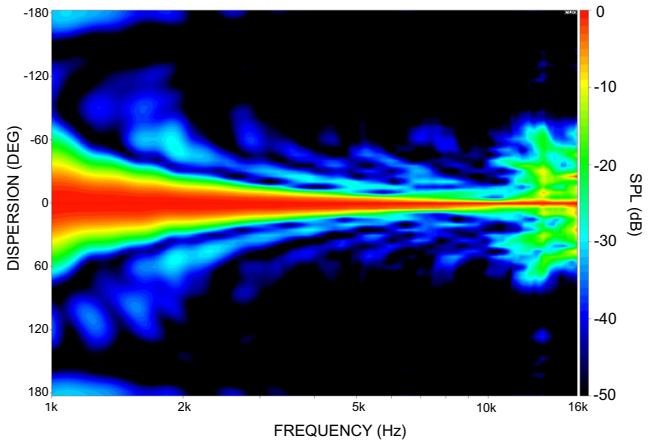
NOTES ON MEASUREMENT CONDITIONS

[1] Measured on-axis at 2m in a free field environment and referenced to 1m. [2]Calculated and verified by subjective listening tests of familiar program material. [3]Nominal dispersion, measured in a semi-anechoic environment and averaged over stated bandwidth.

DISPERSION PATTERN



HORIZONTAL



VERTICAL

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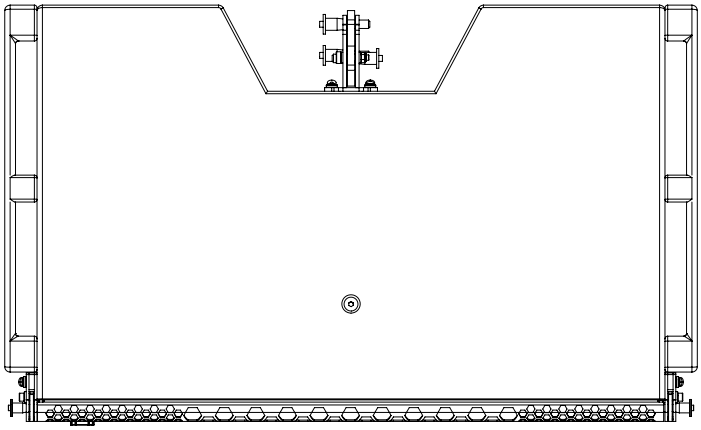
ENGINEERING DRAWING



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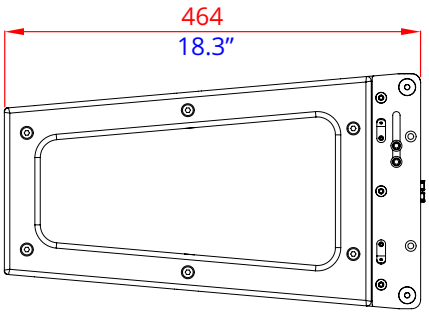

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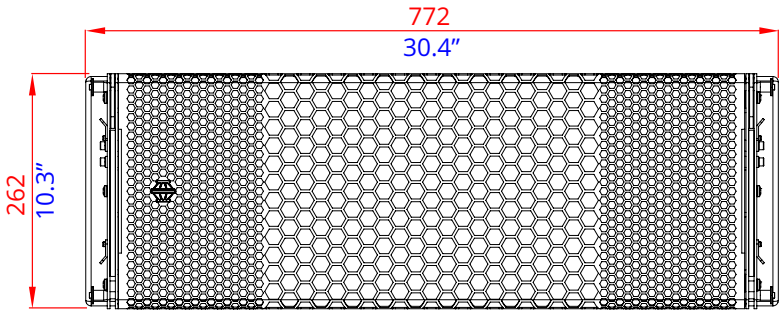

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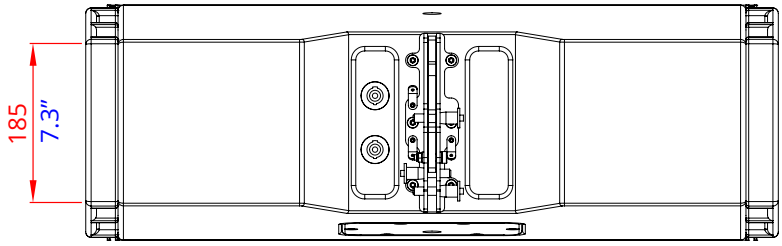

REAR