HALO-A

TECHNICAL DATA SHEET

2-WAY LARGE FORMAT LINE ARRAY ELEMENT

In 2012, HALO Compact marked a huge step forward in sound reinforcement - never before had a modular line array system provided such detail, clarity and such a breathtaking sonic performance. Five years on, and EM Acoustics are proud to reveal HALO Arena - following the same core design intent as the far smaller HALO-C system, but now taking overall SPL capability to a level suitable for much larger applications - both fixed installation and touring.

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 90-degree pattern is maintained down to 250Hz
- 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 Arena is designed to produce the same staggering results as HALO Compact, but in a package more suited to larger events. The same core design principle of the maximum headroom possible means that HALO Arena delivers a consistent performance across all SPL levels. HALO-A has been built for touring - but is equally at home in large format fixed installations.

A single HALO-A exhibits a flat, free-field frequency response from 48Hz to 19kHz (+/-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 250Hz.

Similarly to HALO-C, the high frequency device is a major factor in setting the system apart from its competitors. Unlike HALO-C, which utilises an AMT plane-wave drive unit, HALO-A uses compression drivers due to the much higher SPL required for these applications. However, HALO-A uses a proprietary patent-pending emulation manifold, which combines the energy of four 3.4" (86mm) diaphragm, 1.4" (36mm) exit 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. Viewed from another perspective, if running at the same SPL as a competitor system, HALO-A would run with 3dB less distortion due to the increased overall HF headroom.

Working alongside these four high frequency drivers are a pair of high power 3.5" (88mm) voice coil 12" (305mm) low frequency transducers. These two powerful drive units, combined with optimally-tuned low turbulence porting and generous cabinet volume ensure HALO-A has a low frequency performance to match the stunning highs. Keeping HALO-A 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 Arena 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-A 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-A 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-A requires two amplifier channels and makes use of the latest in FIR DSP technology - as such it must be used with either the DQ20 advanced system amplifier, or the APA-4E8 from XTA Electronics. Using either of these amplifiers a maximum of eight HALO-A enclosures could be driven from a single amplifier, although six is recommended as a maximum for full output.

APPLICATIONS

- Medium to large format touring sound reinforcement for festivals, stadia, arenas and concert halls
- Medium-to-large format fixed installations in concert halls, theatres and sports arenas
- Houses of Worship
- Large format corporate A/V events

EM ACOUSTICS

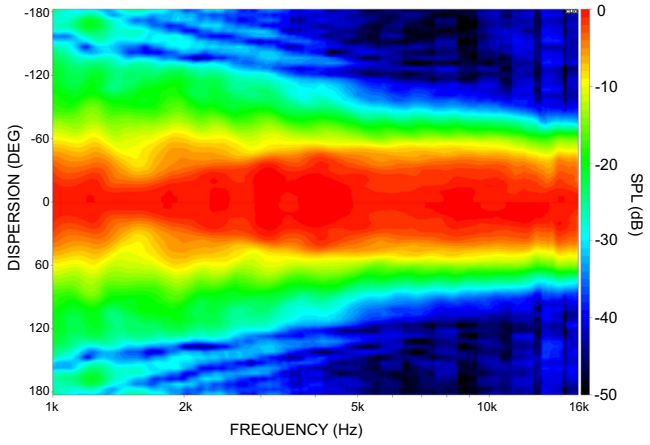
TECHNICAL SPECIFICATIONS

ENCLOSURE TYPE:	2-way reflex loaded line array element
FREQUENCY RESPONSE[1]:	48Hz - 19kHz +/- 3dB
PHASE RESPONSE:	+/- 20 degrees, 150Hz - 18kHz
MAXIMUM SPL[2]:	143dB continuous, 149dB peak
DISPERSION[3]:	90 degrees horizontal
SPLAY ANGLES:	0.25, 0.5, 1, 1.5, 2, 2.5, 3, 4, 5, 6, 7, 8 degrees
DIMENSIONS (HxWxD)	362 x 1020 x 619mm (14.3" x 40.2" x 24.4")
NET/SHIPPING WEIGHT:	66/70kg (145.2/154lbs)
DRIVE UNITS:	LF: 2 x 3.5" (88mm) voice coil neodymium 12" (305mm) HF: 4 x 3.4" (86mm) diaphragm, 1.4" (36mm) exit neodymium HF drive units on bespoke plane-wave manifold
POWER HANDLING:	LF: 1400W RMS, 2800W program HF: 400W RMS, 800W 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 corrosion-resistant steel
OPTIONS:	White and custom colours
ACCESSORIES:	FG-HALO-A master flying grid WB-HALO-A enclosure transit chariot TC-HALO-A quad-enclosure padded touring cover
SPARE PARTS:	DU-1210-16 12" LF drive unit CDU-1405-16 1.4" exit HF drive unit RFG-HALO-A replacement steel grille PIN-0.375/0.813 locking pin (front) PIN-0.5/1.625 locking pin (rear)

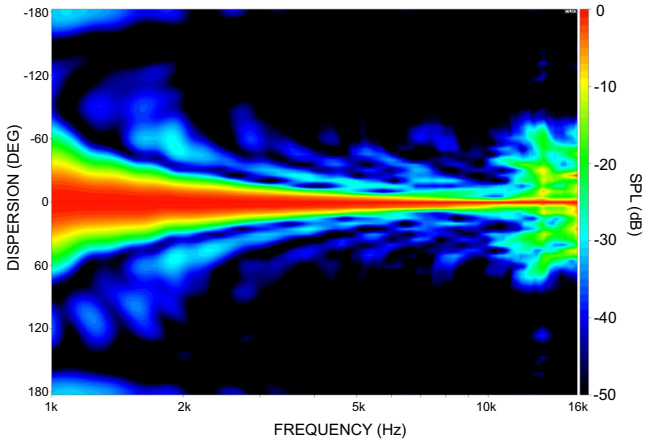
NOTES ON MEASUREMENT CONDITIONS

[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



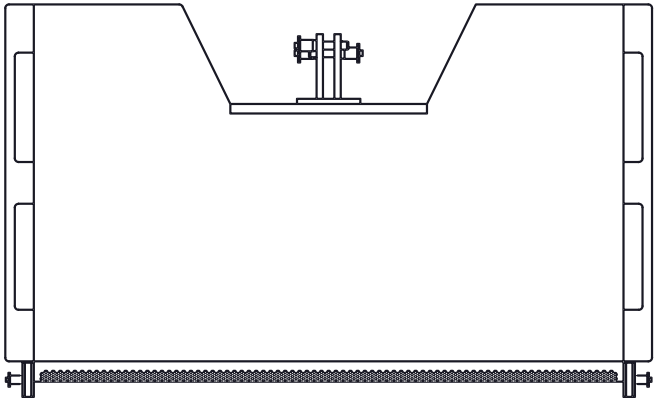
HORIZONTAL



VERTICAL

EM ACOUSTICS OPERATES A CONTINUOUS POLICY OF RESEARCH AND DEVELOPMENT AND AS SUCH RESERVES THE RIGHT TO ALTER SPECIFICATIONS WITHOUT NOTICE.

ENGINEERING DRAWING



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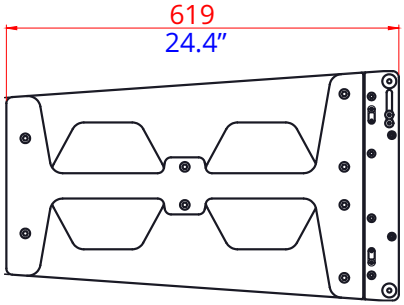

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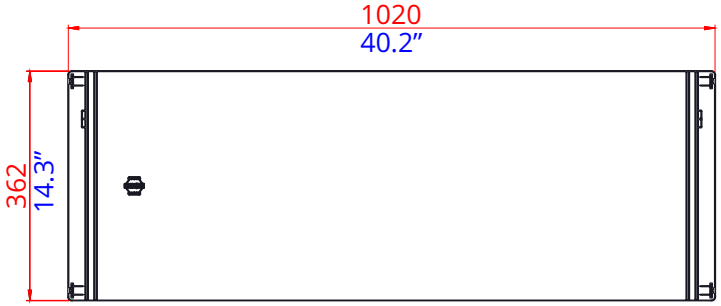

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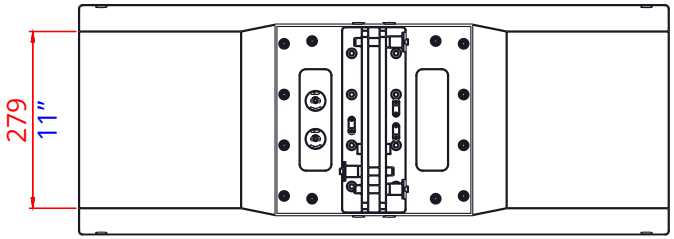

REAR