



emaacoustics

TECHNICAL DATA SHEET

HALO-CS

COMPACT FLYABLE SUBWOOFER

The HALO-CS is the dedicated subwoofer for the HALO Compact system, designed to fulfill requirements for a wide range of professional audio applications. At 36kg (79.2lbs) in weight and only 492mm wide (19.4"), HALO-CS is a truly compact solution – yet as it is capable of continuous sound pressure levels in excess of 126dB it is an ideal solution for small-to-medium theatres, houses of worship, theme parks, conference venues and corporate A/V and even small to medium scale live sound reinforcement. Any application where size and weight are critical concerns yet high SPLs are required is a perfect fit for the HALO Compact system.

FEATURES AND BENEFITS

- Extremely robust 15" neodymium LF drive unit offers usable low frequency performance from a compact enclosure
- Small enclosure footprint and low weight ensure discreet system that is easy to rig
- High power-to-size ratio
- Lightweight plywood enclosure offers significantly less panel flexure than plastic designs
- Intuitive, safe rigging system for both flown and ground stacked systems

APPLICATIONS

- Small-to-medium theatre and touring events
- Small-to-medium live sound reinforcement
- Houses of worship
- Conference and corporate A/V
- Theme parks

The concept behind the HALO-CS was to create a compact subwoofer which would add usable low frequency information both in flown and ground-stacked configurations. As such, a powerful, high excursion 15" (381mm) neodymium drive unit was used to allow the HALO-CS to comfortably respond down to 40Hz. For larger systems, the HALO-CS can be used to add low frequency weight to the flown array with larger subwoofers providing more information in the lower octaves.

The HALO-CS enclosure is the same width as the HALO Compact, and is the equivalent height of two flown or ground-stacked HALO Compact elements. As such, flight casing and truck packing are simple tasks, as cases for HALO-CS subwoofers can easily be made the same height and width as cases with pairs of HALO Compact enclosures.

HALO-CS subwoofers are supplied with a similar rigging system to that on the HALO Compact – a four-point design made from ultra-high tensile Domex steel. This system is rated to support 24 HALO-C enclosures, or a combination of HALO-C and HALO-CS enclosures where one HALO-CS is equivalent to two HALO-C enclosures. As such, up to 12



HALO-CS subwoofers can be flown as a column if required. For ground stacking, the process is blissfully easy – simply turn the HALO-CS upside down and the rubber feet on the top of the enclosure rest on the floor to prevent the enclosure moving. Additional HALO-CS subwoofers or HALO-C elements can then be linked to the HALO-CS directly without the use of flying grids. Location holes are provided on the rigging hardware so that the first HALO-C enclosure in the array or ground stack can have either positive or negative angle – for example in a flown configuration, the first HALO Compact can be set at 5°, 4°, 3°, 2°, 1.5°, 1° or 0.5° uptilt, 0° or 1° - 10° down-tilt in 1-degree increments. An M20 threaded pole mount adapter is provided so that when the HALO-CS sits on its rubber feet, HALO-C or other full range enclosures can be mounted from a distance pole above.

The HALO-CS enclosure is constructed from premium 15mm (5/8") multi-laminate Birch plywood – rebated, screwed and glued together. Intelligent bracing design minimises panel flexure, thereby reducing unwanted resonance whilst still keeping the enclosure weight low. The enclosure is also supplied as standard with rubber feet on the top (for

ground stacking when inverted), matching stacking recesses in the bottom of the enclosure as well as an M20 threaded pole mount adapter, and two flush routed bar handles in the sides. The flying hardware is manufactured from ultra-high-tensile Domex steel, finished in a polyester powder coat with aircraft-grade ball lock pins to ensure swift yet safe array assembly. A perforated stainless steel grille backed with acoustically transparent black fabric finishes the enclosure with a sleek but stylish appearance. Two Neutrik® speakON™ NLT4 tour-grade connectors are provided on the rear of the enclosure for input and link.

The enclosure is finished in impact and weather resistant black or white textured polyurethane as standard, however RAL colour matching and enhanced weather protected outdoor options are also available.

The HALO-CS requires a single amplifier channel, and external DSP for active high/low pass filters and limiters. As such, it is recommended to be used with EM Acoustics' range of Advanced System Amplifiers. It is however possible to use other DSP-enabled amplifiers, or conventional amplifiers with external DSP. Suitable DSP settings are provided on the EM Acoustics website. The amplifier channel should be capable of delivering 1000-1200W RMS into an 8-ohm load.

TECHNICAL SPECIFICATIONS

ENCLOSURE TYPE:

DIMENSIONS (HxWxD): :

NET/SHIPPING WEIGHT:

FREQUENCY RESPONSE¹:

SENSITIVITY²:

DISPERSION³:

DRIVE UNITS:

LOUDSPEAKERS PER AMPLIFIER (maximum for full loudspeaker SPL)

LOUDSPEAKERS PER AMPLIFIER (recommended absolute maximum)⁴

POWER HANDLING:

MAXIMUM SPL⁵:

NOMINAL IMPEDANCE:

CROSSOVER:

CONNECTORS:

ENCLOSURE:

RIGGING & HARDWARE:

GRILLE:

OPTIONS:

ACCESSORIES:

PARE PARTS:

Compact flyable reflex subwoofer

438 (17.2) x 492 (19.4) x 600 (23.6) mm/(ins) - enclosure only

438 (17.2) x 524 (20.6) x 600 (23.6) mm/(ins) - extremities of rigging/pins

36/38kg (79.2/83.6lbs)

40Hz – 120Hz ±3dB

95dB

Omnidirectional

15" (381mm) neodymium LF cone drive unit

DQ6: 1 per channel, DQ10: 1 per channel, DQ20: 2 per channel

Di06: Not recommended, Di10: 2 per channel, Di20: 3 per channel

DQ6: 2 per channel, DQ10: 3 per channel, DQ20: 4 per channel

Di06: 1 per channel, Di10: 2 per channel, Di20: 3 per channel

600W RMS, 1200W program

126dB continuous, 134dB peak

8 ohms

External active, recommended below 100Hz

2 x Neutrik® speakON™ NLT4

15mm (5/8") multi-laminate Birch plywood – rebated, screwed and glued.

Finished in impact and weather resistant black or white polyurethane

Four-point integral flying system, tested to 12 elements at 10:1 safety factor

secured with aircraft-grade ball-lock pins

Direct interface to HALO-C enclosures either flown or ground stacked

Perforated stainless steel backed with acoustically transparent fabric

Custom Colours / enhanced weather protection

CASE-HALO-CS single element touring flightcase

FG-HALO-C master flying grid

DU-1507 15" drive unit

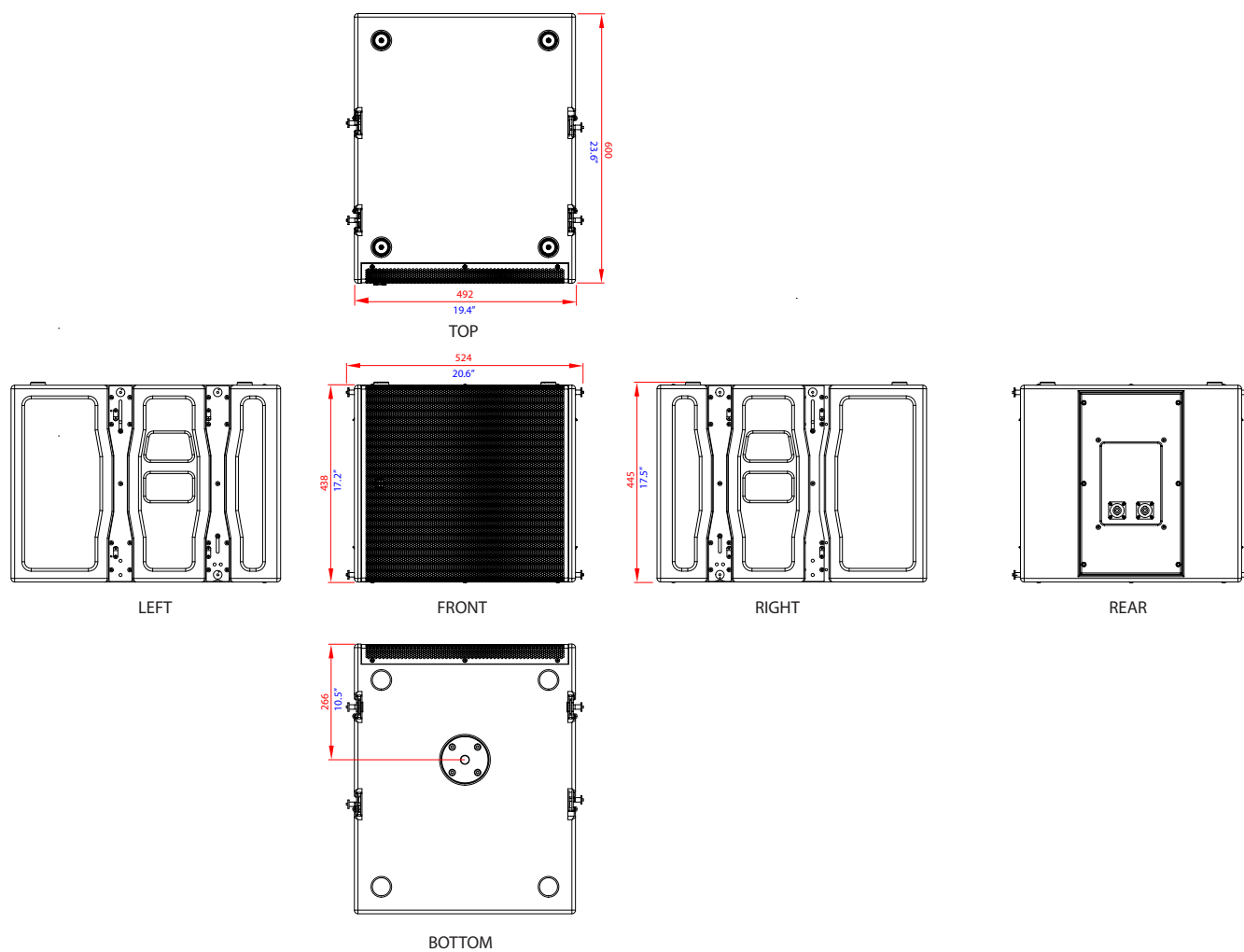
Pin-0.5/0.625 replacement locking pin

RFG-HALO-CS replacement grille/fabric

NOTES ON MEASUREMENT CONDITIONS:

¹Measured on-axis at 2m in an anechoic environment and referenced to 1m. ² Measured in half space at 2m with 4W sine wave input and referenced to 1m. ³Nominal dispersion, measured in an anechoic environment and averaged over stated bandwidth. ⁴These loudspeaker quantities are the recommended maximum, and will not drive the loudspeaker to full output. ⁵Calculated and verified by subjective listening test of familiar program material.

ENGINEERING DRAWING

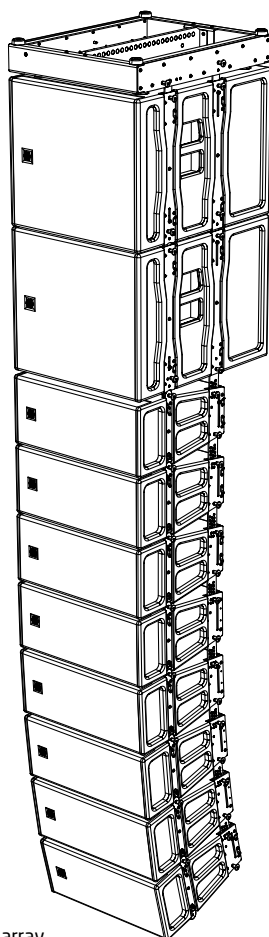


ENCLOSURE OPTIONS

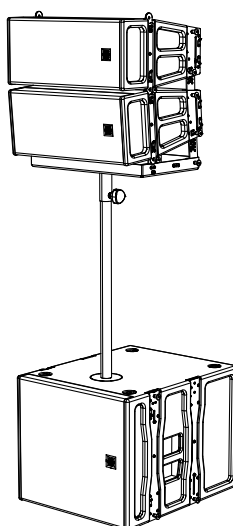
HALO-CS loudspeakers are available as standard in black or white impact and weather resistant polyurethane. All other colours are treated as custom; extended lead times and set up costs apply. HALO-CS is already inherently weather resistant, with a stainless steel grille and IP54 rated connectors. For permanent outdoor use, alternative connector options can be specified as well as cabinet modifications to customer requirements. Please contact your EM Acoustics representative for details.

RIGGING EXAMPLES

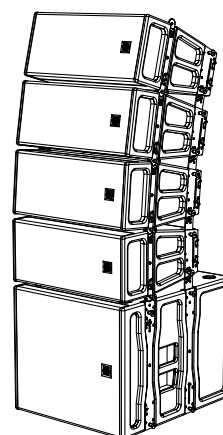
A wide variety of accessories are available for rigging HALO-CS enclosures both in flown and ground stacked configurations. Please consult the separate rigging hardware datasheet for more information on these different options.



Flown array
with FG-HALO-C



Pole mount array
SM-HALO-C on HALO-CS



Ground stacked array
with HALO-CS