



emacoustics

## TECHNICAL DATA SHEET

# ST-215

## MEDIUM FORMAT FLYABLE REFLEX SUBWOOFER

**The ST-215 is a compact touring subwoofer, intended to support any product within the EM Acoustics range but is an ideal companion to the HALO-B medium format line array. The feature set is optimised for touring applications however the discreet aesthetics mean the ST-215 is equally at home in installations.**

### FEATURES AND BENEFITS

- Medium format touring-oriented subwoofer
- Four-point touring flying system
- 2 x 15" neodymium high-excursion LF drive units
- Mechanically and acoustically compatible with HALO-B
- Various transport, protection and flying accessories available
- Impact and weather resistant black or white finish as standard
- RAL colour and weather protection options

### APPLICATIONS

- Medium scale live music reinforcement
- Theatre
- Houses of worship
- Conference, corporate and audio-visual
- Theme parks



The ST-215 is a compact touring subwoofer, and whilst it is designed to be mechanically and acoustically compatible with the HALO-B system, it is a standalone product in its own right and can be used to support any EM Acoustics product - either in a flown or ground stack configuration.

The compact enclosure houses a pair of 4" voice coil, 15" (381mm) neodymium drive units, in a reflex design with a single low-velocity port to minimise distortion. The drive units' high motor strength gives the ST-215 excellent transient response, and the moving area of the two high-excursion 15" drive units generate significant low frequency extension and overall output. The enclosure is symmetrical, so in both flown and ground stacked configurations one enclosure in every three can be rotated to create a cardioid array. Such arrays offer exceptional low frequency directivity control and significantly reduce the energy radiating to the rear.

The robust enclosure is constructed from premium 18mm (¾") multi-laminate Birch plywood - rebated, screwed and glued together for maximum strength. The enclosure is finished in an impact and weather resistant black or white textured polyurethane finish as standard, however RAL colour matching and enhanced weather-protected outdoor installation options are also available.

The flying hardware has been built with touring flexibility and reliability in mind. The ST-215 uses a 4-point system, and all rigging components retract flush for transit and ground stack use. The ST-215 is mechanically

compatible with HALO-B systems or can be flown as a standalone array. Ultra-high tensile steel parts form the core of the 4-point system, meaning arrays of up to 9 elements can be safely assembled with above-regulation safety factors. The mechanical package is completed by eight recessed bar handles (four per side), protective stacking runners and mating recesses, an M20 threaded pole adapter and attachment points for the optional castors on the rear. Lastly, a hex-punched stainless steel grille backed with acoustically-transparent mesh protects the drive units from damage, which can be quickly removed for service purposes.

The ST-215 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 3000-4000W RMS into a 4-ohm load. For cardioid arrays, separate amplifier channels are required for the rear-firing subwoofer(s) due to the different processing needed.

Optional accessories include castor sets, multi-enclosure touring wheelcarts, flying grids and padded covers for both single enclosures and multi-enclosure carts.



## TECHNICAL SPECIFICATIONS

ENCLOSURE TYPE:	Medium format flyable reflex subwoofer
DIMENSIONS (HxWxD)	550 (21.7) x 772 (30.4) x 752 (29.6) mm/(ins)
NET/SHIPPING WEIGHT:	73/77kg (161/169lbs)
FREQUENCY RESPONSE <sup>1</sup> :	40Hz – 150Hz ±3dB
SENSITIVITY <sup>2</sup> :	100dB
DISPERSION <sup>3</sup> :	Omnidirectional, cardioid possible when arrayed
DRIVE UNITS:	2 x 4" voice coil 15" (381mm) neodymium LF drive units
LOUDSPEAKERS PER AMPLIFIER (maximum for full loudspeaker SPL):	DQ6: Not recommended, DQ10: Not recommended, DQ20: 1 per channel Di06: Not recommended, Di10: Not recommended, Di20: 1 per channel
LOUDSPEAKERS PER AMPLIFIER (recommended absolute maximum) <sup>4</sup> :	DQ6: 1 per channel, DQ10: 1 per channel, DQ20: 2 per channel Di06: Not recommended, Di10: Not recommended, Di20: 1 per channel
POWER HANDLING:	2000W RMS, 4000W program
MAXIMUM SPL <sup>5</sup> :	133dB continuous, 139dB peak
NOMINAL IMPEDANCE:	4 ohms
CROSSOVER:	External active, recommended below 120Hz
CONNECTORS:	2 x Neutrik® speakON™ NLT4
ENCLOSURE:	18mm (3/4") multi-laminate Birch plywood, rebated, screwed and glued Finished in impact and weather resistant black or white polyurethane
RIGGING & HARDWARE:	4-point system, ultra-high tensile steel. Enclosure hardware rated to 9 elements at 10:1 safety factor. 8 flush bar handles, M20 threaded pole adapter, protective runners and stacking recesses
GRILLE:	Hex-punched stainless steel, backed with acoustically transparent mesh
OPTIONS:	Colours / extended weather protection
ACCESSORIES:	Touring castor set FG-HALO-B master flying grid GS-HALO-B ground stack plate WC-T215 transit wheelcart TC-T215 single enclosure padded touring cover TC-T215-2 dual enclosure padded touring cover TC-T215-3 triple enclosure padded touring cover
SPARE PARTS:	DU-1508 15" (381mm) LF drive unit RFG-S215 replacement grille Pin-0.3125/0.625 ball-lock flying pin

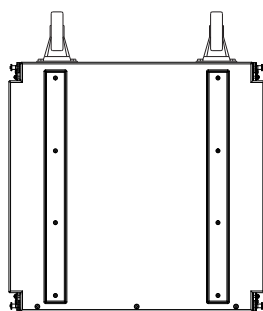
### NOTES ON MEASUREMENT CONDITIONS:

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

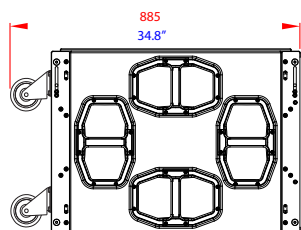
## ENCLOSURE OPTIONS

ST-215 enclosures are available as standard in black or white impact resistant polyurethane finish. Custom RAL colours can be supplied on request; extended lead times and set up costs apply. ST-215 enclosures can also be supplied as an outdoor version (OD), finished in the same weather-resistant polyurethane coating, with weather-resistant connector options and other cabinet details bespoke to the customer's request. Custom RAL colours are also available for outdoor options by specific quote. Please contact your local EM Acoustics representative for details.

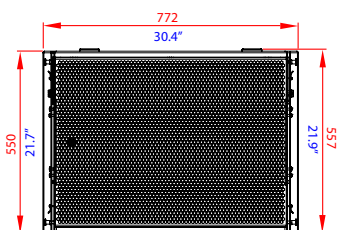
ENGINEERING DRAWING



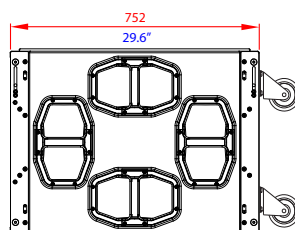
TOP



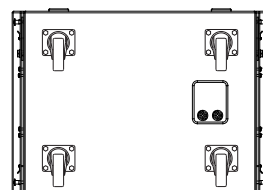
LEFT



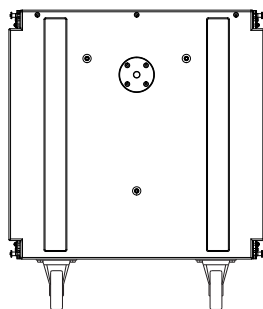
FRONT



RIGHT



REAR



BOTTOM