



emacoustics

TECHNICAL DATA SHEET

S-218

HIGH POWER REFLEX SUBWOOFER

The S-218 is a high-power subwoofer system, designed to fulfil the most demanding applications where scalability and single-enclosure use are as important as sonic performance. S-218 subwoofers are inherently scalable – they can be used as single units, or in large numbers for filling arena or stadium shows. The substantial enclosure houses a pair of reflex-loaded 4.5" voice coil, 18" (457mm) neodymium LF cone drive units. Like all EM Acoustics products, headroom is key. Peak-to-peak linear cone travel is 28mm, meaning large amounts of low frequency information can be produced by a surprisingly small and lightweight subwoofer enclosure.

FEATURES AND BENEFITS

- Incredible power density
- Exceptional frequency and impulse response ensure fast, accurate low frequencies
- 2 x 18" neodymium high-excursion LF drive units
- Tour-grade castors included
- Protective floor runners and matching stacking recesses
- Protective cover accessories available
- Impact and weather resistant black or white finish as standard
- RAL colour and weather protection options

APPLICATIONS

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

The robust enclosure is constructed from premium 18mm (3/4") multi-laminate Birch plywood – rebated, screwed and glued together. The enclosure is finished in black impact and weather-resistant polyurethane, or white textured paint as standard, however RAL colour matching as well as weather protection options are available if required. Due to the extremely high cone travel available, enclosure rigidity was key in the design – as such the inside of the enclosure, including the enormous port in the centre – are rigidly braced in all dimensions.

Input is provided via a single NLT4MP connector on the rear. Runners are provided on the bottom of the enclosure and on one end to protect the paint finish when in use either lying down or stood on-end, and recesses on the top of the enclosure allow stable stacking of arrays. Eight flush bar handles and tour-grade castors are also fitted as standard. Lastly a hex-punched stainless steel grille backed with acoustically transparent mesh protects the drive unit from damage which can be quickly removed for service purposes.

ENCLOSURE OPTIONS

S-218 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. S-218 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.



The S-218 requires an active crossover to function correctly – although the choice of filter points is very wide, allowing the user to tailor the response to exactly what is required. Cardioid DSP program settings are also available to create arrays with significant rejection to the rear of the subwoofers.

The S-218 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 3500-5000W RMS into a 2-ohm load. For cardioid arrays, separate amplifier channels are required for the rear-firing subwoofer(s) due to the different processing needed.



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:

ENCLOSURE HARDWARE:

GRILLE:

OPTIONS:

High power reflex subwoofer

550 (21.7) x 1300 (51.2) x 850 (33.5) mm/(ins)

102/108kg (224.4lbs/237.6lbs)

28Hz – 150Hz \pm 3dB

100dB

Omnidirectional

2 x 18" (457mm) neodymium LF cone drive units

DQ6: Not recommended, DQ10: Not recommended, DQ20: 1 per channel

Di06: Not recommended, Di10: Not recommended, Di20: Not recommended

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2500W RMS, 5000W program

137dB continuous, 143dB peak

2 ohms

External active

1 x Neutrik® speakON™ NLT4

18mm (3/4") multi-laminate Birch plywood – rebated, screwed and glued

Finished in impact and weather resistant black or white polyurethane

8 x flush bar handles, touring runners & mating recesses, tour-grade castors

Hex-punched stainless steel, backed with acoustically transparent mesh

Colours / weather protection

NOTES ON MEASUREMENT CONDITIONS:

¹Measured on-axis at 2m in an anechoic environment and referenced to 1m. ²Measured 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

