



fulcrum
ACOUSTIC®

product specification

US212

Dual 12 inch Direct-Radiating Subwoofer

prophile[™]
SERIES



Overview

The US212 is a dual 12 inch, ultra-compact, direct radiating subwoofer that is designed to provide gut churning impact and solid musicality. Its 4 inch voice coils, strong neodymium magnets, and innovative low-turbulence ports permit an optimal tuning to be achieved in an enclosure that is unusually small for a dual 12 inch subwoofer.

For overhead suspension, fourteen M10 suspension points allow either horizontal or vertical orientation. For ground stacking, the supplied vibration isolators may be threaded into any three M10 mounting points to prevent spurious vibrations and “walking”. When stacking enclosures, the vibration isolators nest in recesses surrounding the mounting points in the cabinet below. The input is mounted on a chamfer at the rear of the enclosure, allowing cable access without requiring additional space between the enclosure and a wall or stage.

The US212 is perfectly suited for highly dynamic live performance venues and nightclubs, A/V screening rooms, and low frequency effects in theme parks. And, its small size allows it to be used under stages or built into small cavities.

Performance Specifications¹

Operating Mode

Single-amplified w/ DSP

Operating Range²

35 Hz to 152 Hz

Nominal Beamwidth

Spherical within operating range

Power Handling @ Nominal Impedance³

75 V / 1400 W @ 4 Ω

Nominal Sensitivity @ Input Voltage⁴ (half / whole space)

102 dB / 96 dB @ 2.00 V

Nominal Maximum Continuous SPL (half / whole space)

134 dB / 128 dB

Equalized Sensitivity @ Input Voltage⁵ (half / whole space)

96 dB / 90 dB @ 2.00 V

Equalized Maximum SPL⁶ (half / whole space)

128 dB / 122 dB

Recommended Power Amplifier

1400 W to 2800 W @ 4 Ω

Recommended Limiter Threshold Voltage

≤ 106 V rms

Physical Specifications

Connections

(2) Neutrik NL4 Speakon

Pin 1+/-: LF1

Pin 2+/-: LF2

Mounting / Suspension Points

(16) M10 eye bolt angle points

Dimensions (H x W x D)

351 x 610 x 533 mm / 13.8 x 24.0 x 21.0 in

Add 20 mm / 0.79 in to height or width dimension when isolation feet are used.

Weight

31.3 kg / 69.0 lb

Finish

Black or white, textured

Options

Terminal strip input

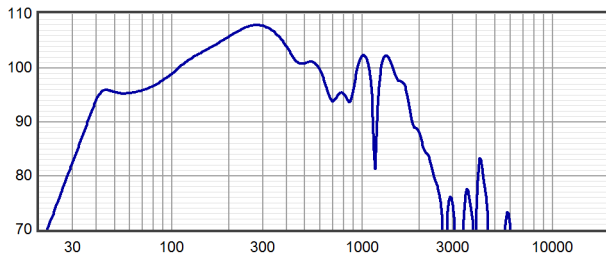
Custom color finish

Weather-resistant (WR) enclosure

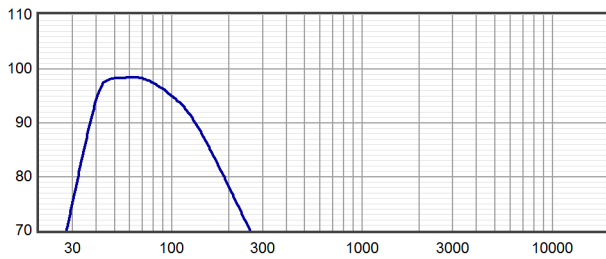


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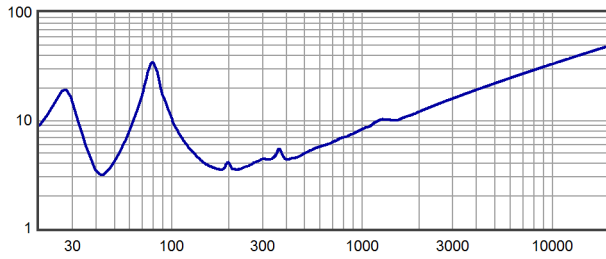
Axial Sensitivity (dB SPL, 2.00 V @ 1 m, half space)^{7,8}



Axial Processed Response (dB, half space)^{7,9}



Impedance (ohms)





Technologies

The 12 inch woofers in the US212 have 4 inch voice coils, unusually strong neodymium magnet structures, and dual silicone impregnated spiders for high excursion and long term stability. This allows the pair of woofers to handle 1400 watts of long term power, and provides the motor strength required to operate effectively in such a small enclosure.

The enclosure shell is constructed of Baltic birch plywood, while the ports are constructed of curved plywood. The port design makes use of all available frontal area, minimizes turbulence, and smoothly guides the air flow around the woofers' magnet structures.

The specially-selected vibration isolators are much more effective than conventional loudspeaker feet. They are constructed of high-compliance neoprene for a high coefficient of friction, with a special shape that allows up to 4 mm of lateral displacement.

The net result is a subwoofer that provides low frequencies with a very authoritative character in a package that is less than half the size and weight of most competitive products.

Notes

¹ **Performance Specifications** All acoustic specifications rounded to nearest whole number. External DSP with Fulcrum Acoustic-provided settings is required to achieve the specified performance.

² **Operating Range** The frequency range within which the processed response is within 10 dB of the average.

³ **Power Handling** Based on the AES power handling of the transducers.

⁴ **Nominal Sensitivity** The 1-meter-referenced SPL produced by a 1 watt band limited pink noise signal, with no processing applied.

⁵ **Equalized Sensitivity** The 1-meter-referenced SPL produced when an EIA-426-B signal is applied to an equalized loudspeaker system, at a level which produces a total power of 1 watt, in sum, to the loudspeaker subsections.

⁶ **Equalized Maximum SPL** The 1-meter-referenced SPL produced when an EIA-426-B signal is applied to an equalized loudspeaker system, at a level which drives at least one subsection to its rated power.

⁷ **Resolution** All response graphs are subjected to 1/6 octave cepstral smoothing with a gaussian weighting function.

⁸ **Axial Sensitivity** The SPL plotted against frequency for a 1 watt swept sine wave, referenced to 1 m with no signal processing.

⁹ **Axial Processed Response** The axial magnitude response with recommended signal processing applied.