

M210

Hybrid Horn Loaded System Data Sheet

NEXO



Hybrid Horn Loaded module,
with variable dispersion.

The M210 is the heart of the Alpha+ system, offering high-output and long throw in an easy to deploy format.

M210 main features

- Extremely Powerful (148 dB peak) main module of the Alpha+ system.
- Lightweight (53 kg / 117 lbs) design using custom made 15 mm bent plywood of Birch and Poplar.
- Unique articulated HF waveguide to adjust vertical directivity.
- Continuously changing horizontal directivity from 120° (bottom) to 60° (top), tunable with optional magnetic flanges.
- Mid-frequency horn ensure maximum radiating surface and high efficiency.

The NEXO Alpha+ Hybrid Horn Loaded system is a unique approach among current sound reinforcement systems.

Unique acoustic design

The M210 is built around a 15 mm custom made bent plywood shell, offering an exceptionally good sound quality, a very robust enclosure and a light weight.

This two-way active main module uses two lightweight pure MF neodymium 10" drivers horn loaded, coaxially mounted with four 3" neodymium HF compression driver mounted on an innovative articulated waveguide.

The result is an Hybrid system, combining the ease of use of a point source with the throw of a line-array.

Adjustable vertical directivity

The vertical directivity can be switched between (-20°/+20°) and (-20°/0°) by physically changing the angle between the four HF waveguide.

While the (-20°/+20°) is recommended for most applications, the (-20°/0°) can be used to obtain a further throw or to couple two M210 modules upside down for even larger applications.

Adaptive horizontal directivity

Unless other systems using discrete changes of horizontal directivity along the line, the M210 allows to have a constantly evolving horizontal directivity from a wide 120° in the lower part to a narrow 60° in the upper part.

Moreover, through optional magnetic flanges the bottom directivity can be narrowed to 60° while the top directivity can be broaden to 90°.

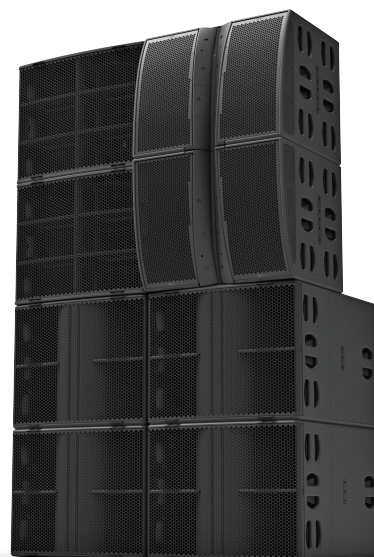
Premium DSP Processing

The M210 takes also advantage of several new algorithms developed by NEXO R&D team.

Thus the horizontal coverage has been optimized with FIR filters by adapting the phase between MF and HF on a wider frequency range than the traditional unique crossover frequency point.

A particular care has been taken also to adjust the group delay of the Alpha+ system ensuring a tight sound over the whole spectrum while keeping the ease of use of interoperability with other NEXO products.

Finally, The *Advanced Dynamic Processing* optimizes the match between the M210 maximum output with the NXAMPmk2 output voltage capacity. The result is a highly dynamic sound while preventing to trigger the thermal limit of the driver.



Two M210 modules used upside down with other Alpha+ modules (bottom L20 sub, left B218 bass)

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NEXO is one of the world's leading sound reinforcement loudspeaker manufacturers. Founded in 1979, the company is dedicated to crafting practical solutions with solid engineering. Each new design begins with a proprietary sophisticated computer simulation process that allows every parameter to be extensively modeled and simulated, leading to breakthrough cost and performance gains. NEXO's comprehensive product line includes loudspeakers, analogue and digital control electronics and amplification; all designed to deliver consistent sound quality and long term reliability for a broad range of applications.

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M210 WITH NEXO PROCESSING

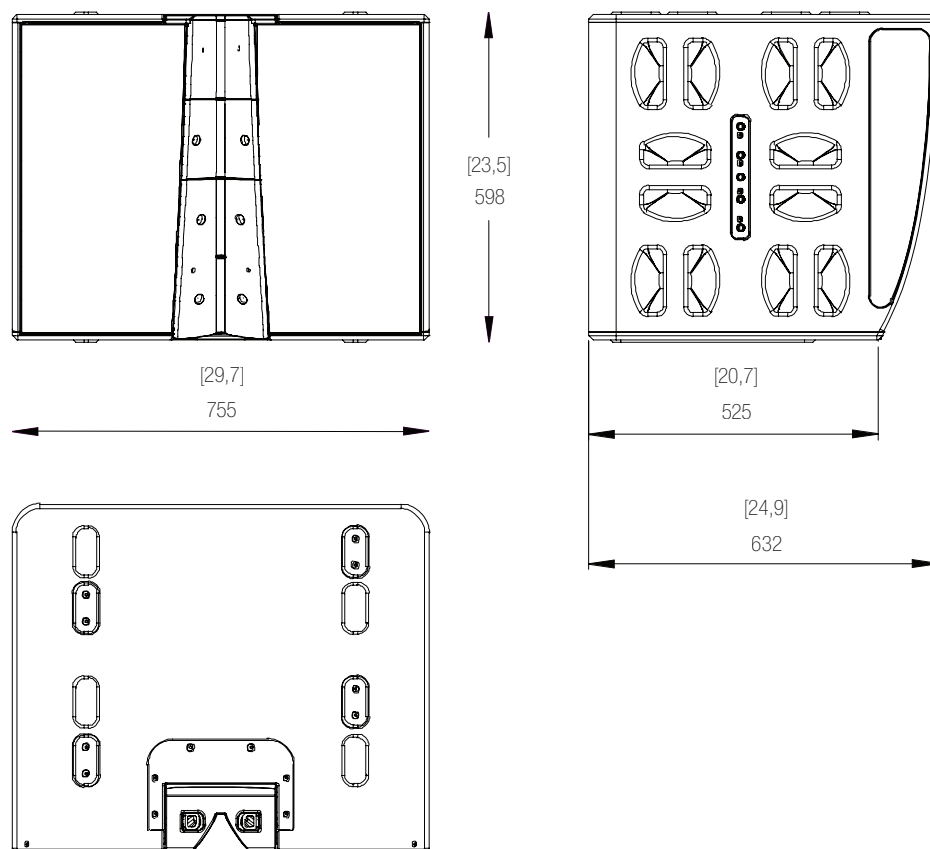
Frequency Response @-6 dB	160 Hz to 20 kHz
Peak SPL@1m	148 dB Peak
Operating Voltage	45 Vrms (150 Vpeak)
Crossover Frequency	500 Hz to 1500 Hz overlap, optimized with proprietary software NEXO Polar Combiner
Vertical Dispersion	Adjustable (-20°/+20° Default mode) or (-20°/+0° Long Throw mode)
Horizontal Dispersion	120° (Bottom) to 60° (Top) continuously
Nominal Impedance	4 Ω + 4 Ω

PRODUCT FEATURES

MF Components	2 x High-efficiency pure medium neodymium 10" 8 Ohms
HF Components	4 x Neodymium 3" voice coil 1.4" throat driver on a BEA/FEA optimized Wavesource
Connectors	2 x NL4, 4 poles connectors
Rigging points	2 x universal accessory fit (on each side) + 1 x universal accessory fit on the back
Material	Custom made bent plywood of baltic birch and poplar
Finish	Black or White structural paint
Front Finish	Magnelis® Steel front grille
Height x Width x Depth	598mm x 755mm x 632 mm (23.5" x 29.7" x 24.9")
Weight: Net	53 kg (117 lbs)
Operating temperature range	0°C - 40 °C (32° F - 104° F)
Storage temperature range	-20 °C - 60 °C (-4 ° F - 140° F)

SYSTEM OPERATION

Recommended powering solution	NXAMP4x4mk2 Powered TDcontroller: Up to 2 x M210 (MF/HF) on 2 x channels
Optional powering solution	NXAMP4x1mk2 Powered TDcontroller (Bridged): Up to 2 x M210 (MF/HF) per amplifier NXAMP4x2mk2 Powered TDcontroller: 1 x M210 (MF/HF) on 2 x channels



LIMITED WARRANTY

NEXO loudspeakers and electronics are covered against defects in workmanship or materials for a period of five (5) years from the original date of purchase. At the option of NEXO the defective item will be repaired/replaced with no charge for materials/labor. The item is to be adequately packaged and dispatched, prepaid, to a NEXO authorized distributor/service Center. Unauthorized repair shall void the warranty. The NEXO warranty does not cover cosmetics or finish and does not apply to any items which in NEXO's opinion have failed due to used abuse, accidents, modifications or any type of misuse. All images and text herein are the property of NEXO SA, and deemed accurate, although specifications are subject to change without notice.