

flexible

coherent

efficient

scalable



T4805 VERTICAL TANGENT ARRAY MODULE

PRODUCT FEATURES

Optimized for high power vertical tangent arrays.

0.01° precision logarithmic array assembly system is engineered to maintain adequate safety factors when supporting curved vertical arrays.

Unique LF section uses paired front- and rear-firing 8 inch woofers, processed with advanced DSP algorithms to produce a cardioid pattern from 70 Hz to 250 Hz.

High power, long excursion neodymium 8 inch woofer delivers full range output from compact enclosures.

Patent-pending Hyperboloid Reflective Wavesource allows the 5° T4805 to be arrayed tangentially

Directivity Phase Device enhances line source coupling in vertical arrays.

Configurable Directivity Device sets dispersion in the non-coupling plane to 90°.

GEO T SERIES APPLICATIONS

Mobile or installed sound reinforcement for arenas, stadia, A/V, theater and themed attractions.

High output paging/emergency warning applications for large public spaces: transport hubs, outdoor venues, theme parks, etc.



GEO T Series Tangent Array Modules

▶ 4805 Vertical

T2820 Horizontal/Vertical

CD18 Hypercardioid Subbass

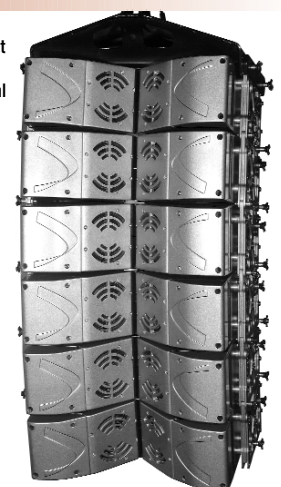


NX241 Digital TDC Controller

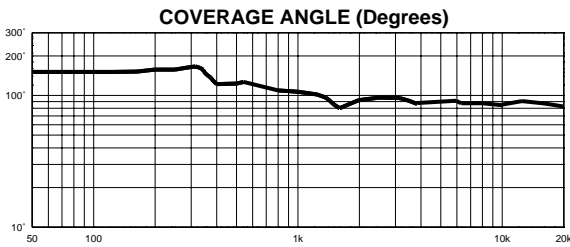
The GEO T4805 is a compact, extremely high output array module designed for use in vertical tangent arrays. The Hyperboloid Reflective Wavesource allows multiple GEO loudspeakers to radiate tangent wavefronts with coherent output. The 5° wavesource is optimized for the construction of curved vertical arrays that deliver equal power to equal coverage areas for consistent SPL from front to rear of the audience area.

The GEO T & S Series are the result of a three year intensive R&D project that has produced three fundamental patent applications in loudspeaker technology. The performance advantages produced by GEO innovations are easily measurable and clearly audible. With two full range tangent array modules and a hypercardioid subbass, the T Series offers total flexibility to design and deploy horizontal or vertical tangent arrays with coherent output. From high-definition musical reproduction to high output paging systems, GEO Technology delivers optimal performance in venues of all shapes and sizes.

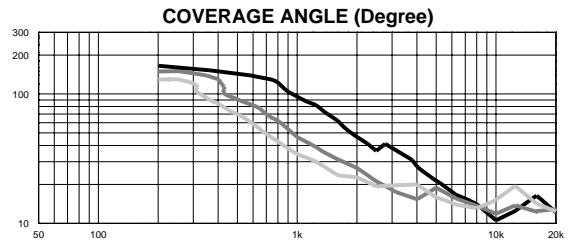
GEO T Series Tangent Array Modules can be used in horizontal or vertical arrays, with or without the CD18 Controlled Directivity Subbass



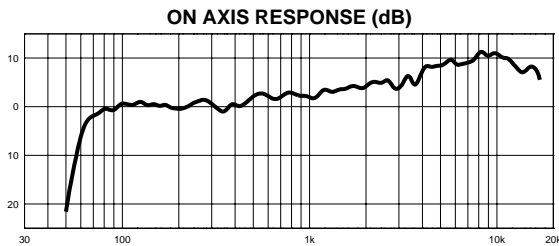
T4805 VERTICAL TANGENT ARRAY MODULE



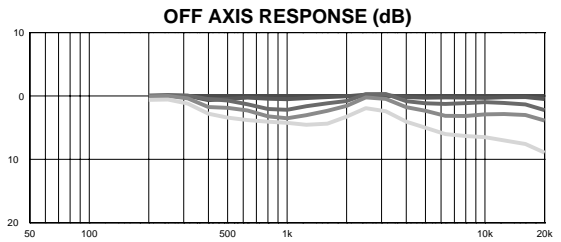
Total coverage (degrees between -6 dB points) in the non-coupling plane of the 90° flange.



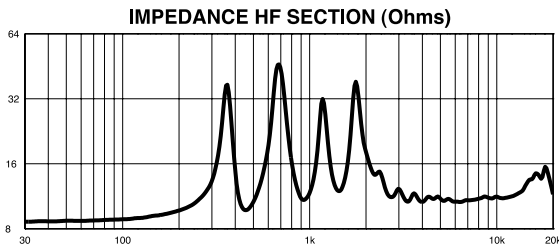
Total coverage (degrees between -6 dB points) in the coupling (vertical) plane. Dark to light: 1, 2 & 3 boxes.



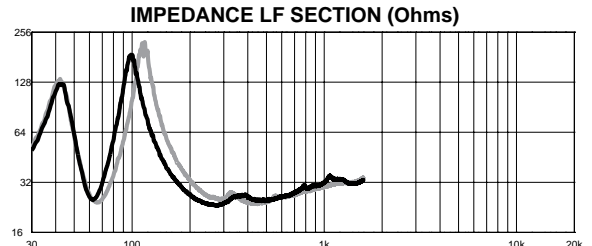
dB vs. frequency on axis: 3 T4805's at 0.31° angles. Actual bandwidth depends on NX241 settings.



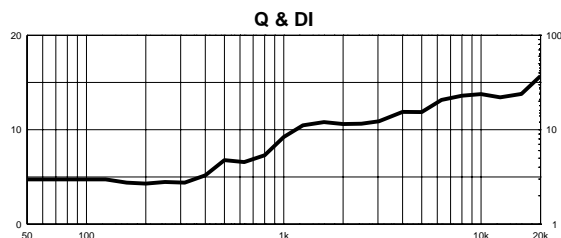
Off-axis response of the 90° flange. Dark to light: 0°, 10°, 20°, 30° & 40° off axis.



Impedance of the HF drivers in Ohms.



Impedance of the front (dark) and rear (light) LF drivers in Ohms.



Directivity Index (in dB, left hand scale) and Q (directivity factor, right hand scale)

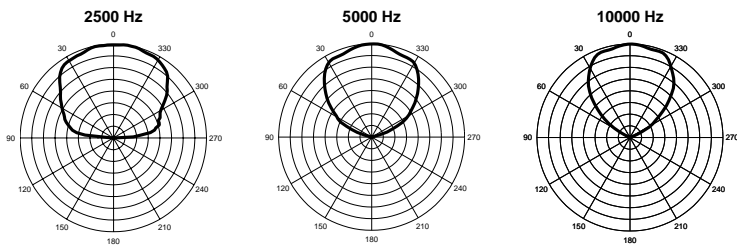
All measurements made with dedicated NX program. Measurements conditions: far field, half space below 400Hz; anechoic above 400Hz. Directivity Index and factor: computer synthesized from coverage. Coverage: 1/3 octave band synthesized from FFT measurements.

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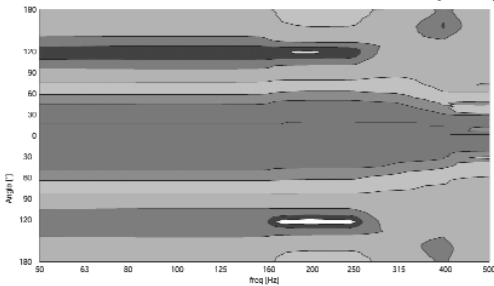
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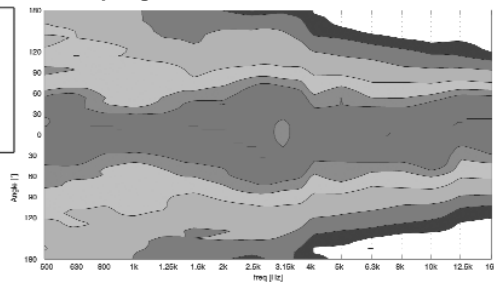
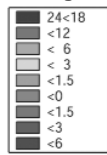


Polar plots in the non-coupling (horizontal) plane – 90° nominal: 3 dB/division.

SPL vs. Frequency vs. Angle: Non-Coupling Plane

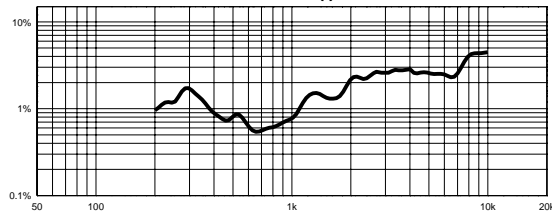


50 – 500 Hz SPL (color) vs. Frequency (horizontal) & Angle (vertical)

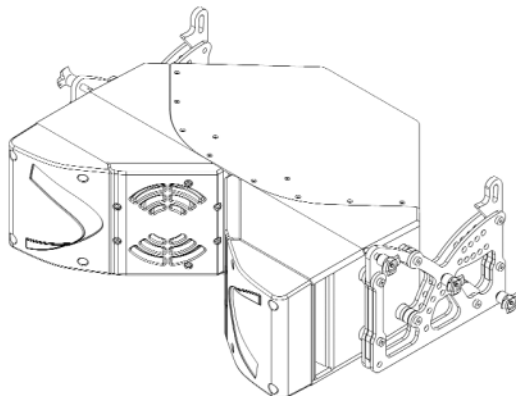


500 Hz – 16 kHz SPL (color) vs. Frequency (horizontal) & Angle (vertical)

THD + N (%)



Total Harmonic Distortion + Noise, percent for 110 dB SPL @ 1m



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PRODUCT FEATURES

Components	HF: 1 x 3" voice coil, 1.4" throat neodymium 16 Ohm driver on a Hyperboloid Reflective Wavesource. LF front section: 2 x 8" (20cm) neodymium hi-flux 16 Ohm drivers in series. LF back section: 2 x 8" (20cm) neodymium hi-flux 16 Ohm drivers in series.
Height x Width x Depth	Enclosure: 250 x 750 x 627 mm (9 7/8" x 29 9/16" x 24 11/16") Array Module: 286 x 903 x 627 mm (11 1/4" x 35 1/2" x 24 11/16")
Shape	5° Trapezoid.
Weight: Net	50 kg (109 lbs) including flying system.
Connectors	1 x AMPHENOL EP6 6 pole socket In, 1 x AMPHENOL AP6 6 pole cable + connector Through.
Construction	Baltic birch ply finish with structured black coating for the main structure. Metal box for the rear section black coating.
Front Finish	Injected polyurethane flange gray coating.
Flying Points	Integral flying system. Intercabinet angle adjustments = 0.125° to 5° (logarithmic steps).

SYSTEM SPECIFICATIONS GEO T with NX241 TDController

Frequency Response [a]	60 Hz – 19 kHz ± 3 dB
Usable Range @-6dB [a]	56 Hz – 20 kHz
Sensitivity 1W @ 1m [b]	109 dB SPL nominal – 107 dB SPL wideband
Peak SPL @ 1m [b]	137 to 140 dB Peak for a single cabinet. Configuration dependant when arrayed [d].
Dispersion [c]	Coupling plane: not usable alone. Configuration dependant [d]. Non-coupling plane: 90°.
Directivity Index [c]	DI = 12 Nominal (freq > 1.5 kHz) for a single cabinet. Configuration dependant when arrayed [d].
Crossover Frequencies	250 Hz & 1.3 kHz active
Nominal Impedance	MF/LF (front and rear): 32 Ohms. HF: 16 Ohms.
Recommended Amplifiers	HF: 3000 Watts into ~3 Ohms/6 cabinets. MF/LF (front section): 6000 Watts bridged mono into ~6 Ohms/6 cabinets. LF (rear section): 6000 Watts bridged mono into ~6 Ohms/6 cabinets.

SYSTEM OPERATION

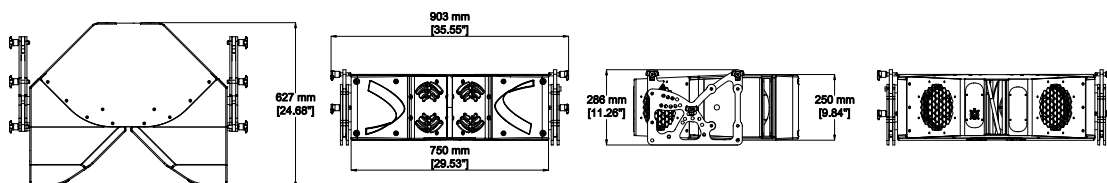
Electronic Controller	The NX241 Digital TDController presets are precisely matched to the GEO T Series cabinets and include sophisticated protection systems. Using GEO T Series cabinets without a properly connected NX241 Digital TDController will result in poor sound quality and can damage components.
HF Dispersion Configuration	The HF flanges are configured for 90° dispersion in the non-coupling plane.
Array Design	Via GEOSoft compiled Matlab application or EASE/CATT .dll (latest version available at www.nexo-sa.com).
Subbass	CD18 Supercardioid Subbass (requires two NX241 outputs and two amplifier channels).
Speaker Cables	HF: wired 3+/- . LF front section: wired 2+/- . LF back section: wired 1+/- .
Rigging System	Please refer to the GEO user manual before any operation.

SHIPPING & ORDERING

Packaging	T4805s are packaged individually. Order as GEO T4805 (includes 4x BLGEO12-30 quick release pins).
Shipping Weight & Volume	1x T4805 = 53.5 kg (117 lbs), 0.15 cu m (5.3 cu ft)

As part of a policy of continual improvement, NEXO reserves the right to change specifications without notice.

[a] Response curves and data: anechoic far field above 200 Hz, half-space anechoic below 200 Hz. [b] Sensitivity & peak SPL: will depend on spectral distribution. Measured with band limited pink noise. Refers to the specified +/- 3 dB range. Data are for speaker + processor + recommended amplifier combinations. [c] Directivity curves and data: 1/3 octave smoothed frequency response, normalized to on-axis response. Data obtained by computer processing of offaxis response curves. [d] Please refer to the GEO T User Manual. Usable range data: frequency response capability with TD crossover slopes removed.



LIMITED WARRANTY

Nexo loudspeakers and electronics are covered against defects in workmanship or materials for a period of two (2) 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 shipped, pre-paid, to a Nexo authorized distributor/service center. Unauthorized repair shall void the warranty. This Nexo warranty does not cover cosmetics or finish and does not apply to any items which in Nexo's opinion have failed due to user abuse, accidents, modifications or any type of misuse.

NEXO is a world leader in the design and manufacture of loudspeaker systems for sound reinforcement. Since 1979 we have pursued practical solutions by addressing problems at fundamental levels. Each new design is generated using proprietary computer simulation software. Extensive modeling and simulation of critical parameters enables us to translate conceptual breakthroughs into significant cost and performance gains.

Nexo's comprehensive line includes the breakthrough GEO T & S Series, based on fundamental wavesource patents, the compact, versatile PS Series, the world standard Alpha System and the Alpha^e Series. Loudspeakers, analogue and digital control electronics and amplification are all designed to deliver **Sonic Innovation That Works.**

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