

# Coaxial Neodymium planar wave driver 4507ND

6.5" dual diaphragm coaxial planar wave driver



#### Features:

- Dual diaphragm coaxial planar wave design
- Rectangular piston of 6.5" x 3/4" (162 x 19 mm)
- Neodymium magnet assembly
- Perfect acoustical coupling of individual units to create a virtually continuous line source
- Extended bandwidth (400 22000 hz)
- With two subsystems in one, each driver covers a smaller frequency range for increased power handling, high dynamic and extremely low distortion
- Excellent phase coherence
- Perfect time alignment without problems of multi-source interference
- Ultra light weight and small size
- 8 or 16 ohm

The BMS 4507ND dual diaphragm coaxial planar wave driver radiates a coherent planar wave front form a rectangular piston without internal diffraction for superior dispersion control and high fidelity sound.

The driver is in fact a 2-way system employing two concentric annular ring diaphragms. Each driver covers a smaller frequency range for increased power handling, high dynamic and extremely low distortion.

This distinctive new transducer was engineered to work with 6.5-inch (162 mm x 19 mm) rectangular throat waveguides providing extremely high sensitivity.

The patented design of the BMS 4507ND is a result of extensive dedicated research and development providing dramatic improvement in dynamic response, clarity and transparency. The larger annular midrange diaphragm covers the frequency range between 400 and 6500 Hz with a smooth, linear response.

The high diaphragm excursion of max. +/- 0.8 mm results in high output and increased power handling up to 1300 W peak.

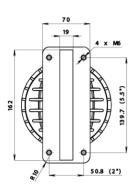
The ultra light annular diaphragm for the high range offers exceptional transient response with very high efficiency from 6 to 22 kHz.

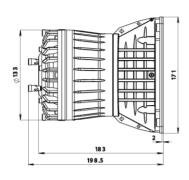
The voice coils may be driven in conjunction with a passive crossover or driven individually from an active crossover.

The unique voice coil technology employs a light weight Copper clad Aluminum wire wound inside and outside of the Kapton™ former to improve the heat dissipation, dramatically increasing the acoustic output and reliability of the driver while minimizing the power compression. The use of high grade Neodymium magnets provide improved performance while significantly reducing transducer weight

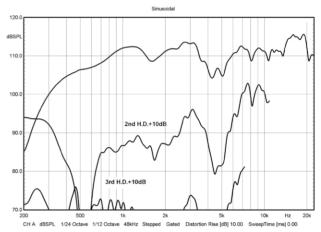
The 4507ND is optimized for  $0\,^\circ$  to  $15\,^\circ$  vertical dispersion and allows a horizontal coverage up to 120° depending on the waveguide used.

The unique design of the 4507ND dual diaphragm planar wave driver allows perfect acoustical coupling of individual units with excellent phase coherence and perfect time alignment to create virtually continuous line source.





BMS 4507ND-16,  $90^{\circ}$  x  $10^{\circ}$  horn+ passive crossover 2nd + 3rd harmonic distortion raised 10 dB, SPL 1 W / 1 m

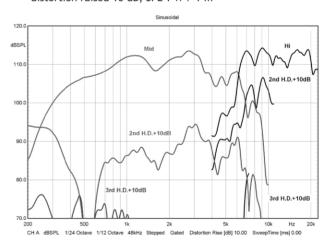


## **SPECIFICATIONS**

Throat diameter	162.5 x 19 mm
Nominal impedance	8 or 16 Ohm
Power capacity	
Middle range (AES)	150 W above 400 Hz
peak	1000 W peak above 500 Hz
High range (AES)	80 W
peak	320 W
Sensitivity 1 W / 1 m	112 dB on 90° x 10° Horn
Frequency range (Hz)	400 - 22000 Hz
Recommended crossover (mid)	400 Hz
Middle frequency range	400 - 7000 Hz
High frequency range	6000 - 22000 Hz
Middle / High crossover	6300 Hz
Voice coil high-range	1.75" (44.4 mm)
Voice coil mid range	3.5" (90 mm)
Magnet material	Neodymium
Flux density (Tesla) mid range	1.95
Flux density (Tesla) high range	2.2
Efficiency	35% (400 - 5000 Hz)
Voice coil material	Cooper clad Aluminum
	(2Layers in-and outside of the VC)
Voice coil former	Kapton™
Diaphragm material	Polyester

MOUNTING INFORMATION	
Overall dimensions	171 x 133 x 198.5 mm (+/- 0.3 mm)
Net weight	3.45 kg
4x M6 holes on	139.7 x 50.8 mm (5.5" x 2")

BMS 4507ND-16,  $90^{\circ}$  x  $10^{\circ}$  horn, 2nd + 3rd harmonic distortion raised 10 dB, SPL 1 W / 1 m



### BMS 4507ND-16, Impedance

