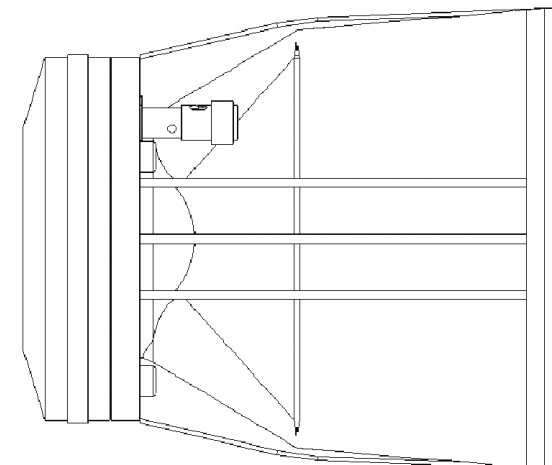
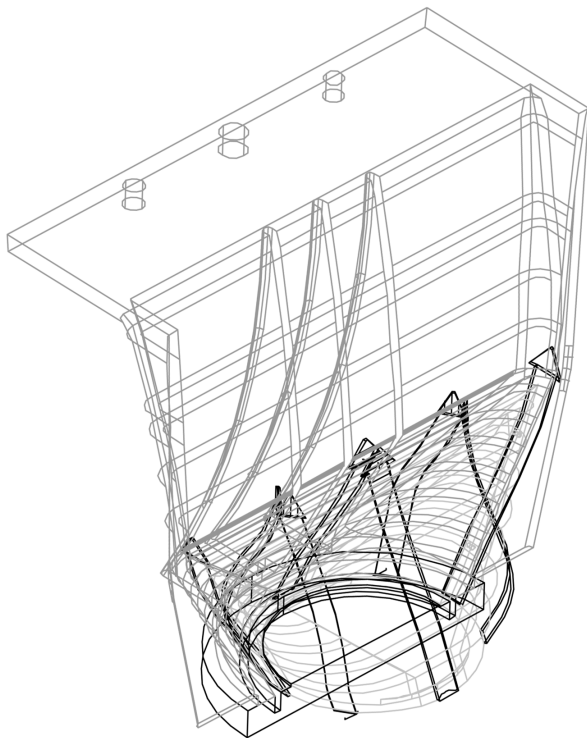


Unique BMS 4" Neodymium Planar Wave Driver



The new BMS 4510ND Planar wave driver radiate a coherent planar wave front from a rectangular piston without internal diffraction for superior dispersion control and high fidelity sound. This distinctive new transducer was engineered to work with 4-inch (4"x1") rectangular throat waveguides providing extremely high sensitivity.

The 4510ND is optimised for 10° vertical dispersion and allows a horizontal coverage from 60° to 120° depending on the waveguide used.

The unique design of the 4510ND planar wave driver allows perfect acoustical coupling of individual units to create virtually continuous line source. The driver contains a high energy neodymium magnet system and a unique annular ring diaphragm. The ring diaphragm works similar as a wound 140 mm long ribbon diaphragm providing linear frequency response up to 20kHz. The unique planar wave phase plug provide a coherent planar wave front without internal diffraction.

### History

All kinds of 1", 2" or 1,5" compression drivers are designed to produce a spherical wave front coming out from a circular throat. The very first waveguides were round and it was reasonable to make compression drivers with round throat to produce a spherical wave front. It hasn't been changed until today. Usually this works good together with conical wave guides to create a spherical wave front. The requirements of speaker systems today are enormous increased. Precise directivity of different horizontal and vertical angles are needed. Horizontal coverage of 90° by 40° vertical or more extreme 90° / 120° by 10° for line arrays.

Engineers are using different horn design techniques such as pipes with an integrated vertical slot to reshape the compression driver's spherical wave front into planar wavefront. Such long, small aperture waveguides increase distortion causing a typical resonant CD horn sound.

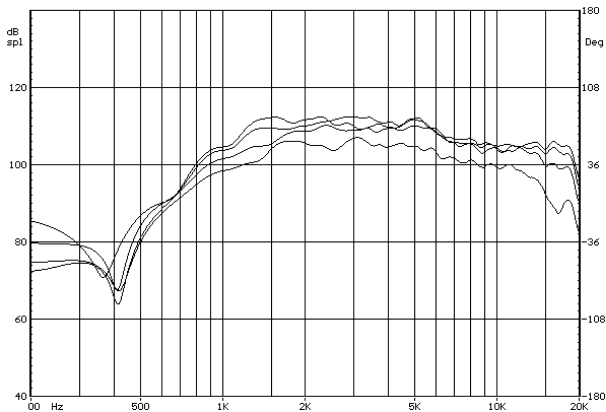




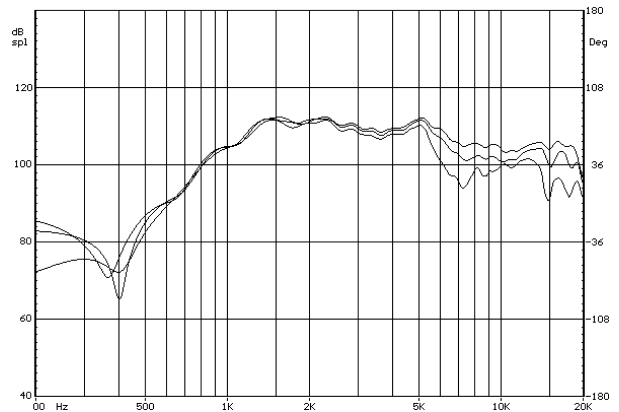
**Features:**

- Unique Planar wave design (patent pending)
- Neodymium magnet assembly
- perfect acoustical coupling of individual units to create virtually continuous line source
- 112 dB sensitivity 1W / 1m
- 1kHz Crossover
- Extended high frequency response up to 20 kHz

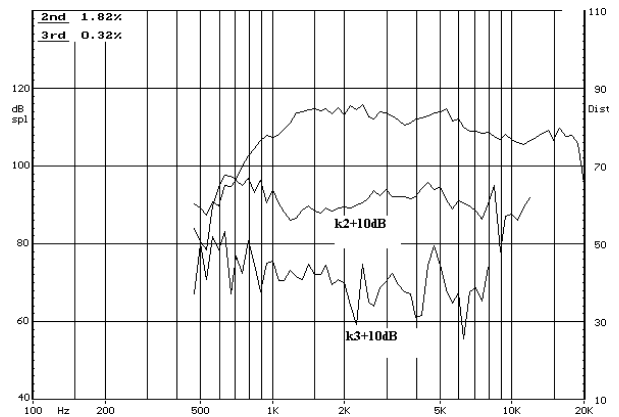
BMS 4510ND on small 90°x10° horn, Horizontal 0°, 15°, 30°, 45°



BMS 4510ND on small 90°x10° horn, Vertical 0°, 5°, 10°.



BMS 4510ND on small 90°x10° horn, 2nd and 3rd harmonic distortion.



**SPECIFICATIONS**

Throat diameter	4"x1" (101.6 x 25.4 mm)
	rectangular piston
Nominal impedance	8 or 16 Ohm
Power capacity (AES)	80 W
Peak Power	450 W
Sensitivity in:	
CD Horn 120°x10°	112 dB 1W/1m
max. SPL (cont.)	133 dB at 80 W
Frequency range	500 - 20000 Hz
Recommended crossover	1000 Hz
Voice coil diameter	1.75" (44.4 mm)
Magnet material	Neodymium
Flux density high-range	2.2 Tesla
Voice coil material	Copper Clad Aluminium
	(2 layers inside and outside of the VC)
Voice coil former	Kapton™
Diaphragm material	Polyester
<b>Mounting information</b>	
Overall Dimensions	160 x 85 x 118 mm
Net weight	1.3 kg
4x M6 holes, 90° on 101.6 mm, 4" diameter	

BMS 4510ND on small 90°x10° horn, Impedance

