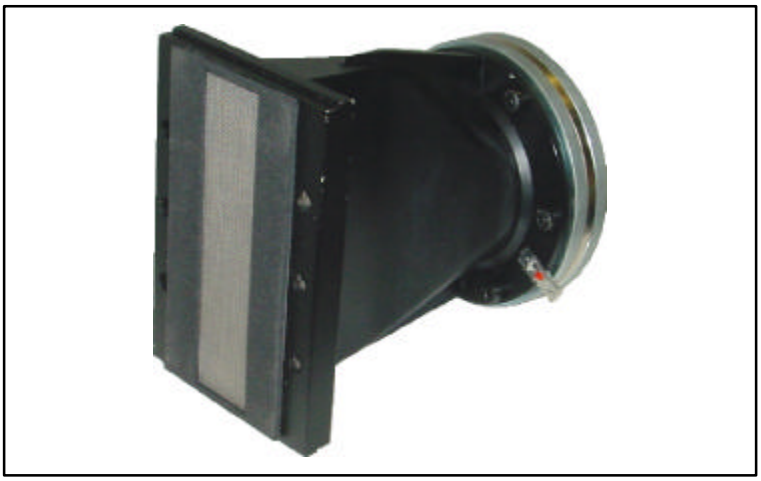
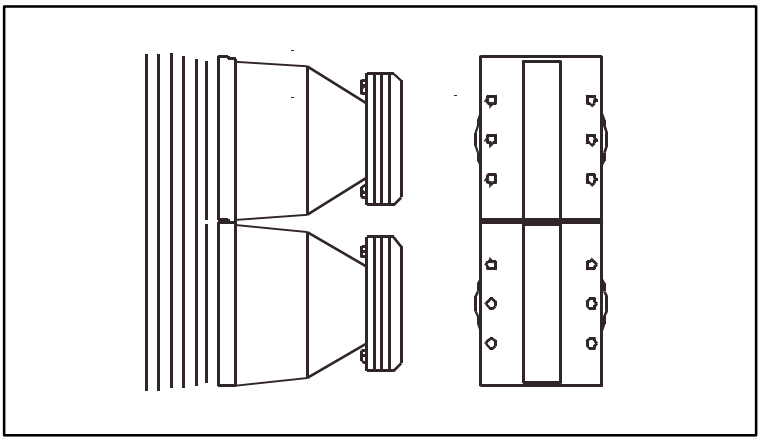
H 4510 ND

Compression Driver

4“ NEODYMIUM PLANAR WAVE DRIVER





- **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**
- **1 kHz crossover**
- **Extended high frequency response up to 20 kHz**

Introduction:

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 wave guides providing extremely high sensitivity

The 4510ND is optimized for 10° vertical dispersion and allows a horizontal coverage from 60° to 120° depending on the wave guide 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 20 kHz. 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 wave guides 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.

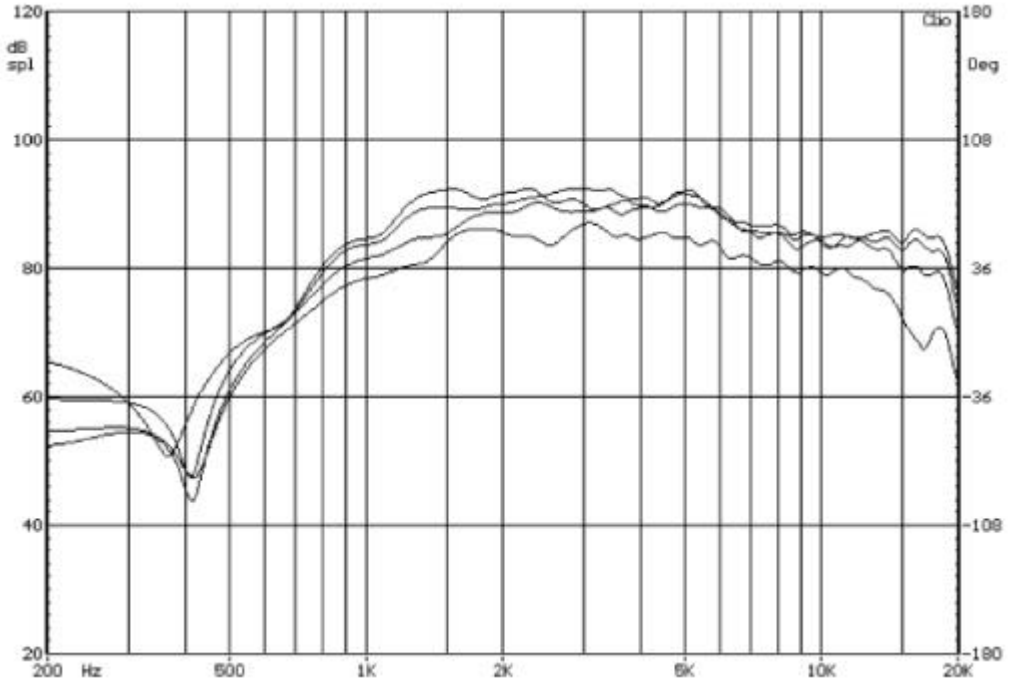
Engineers are using different horn design techniques such as pipes with an integrated vertical slot to reshape the compression driver’s spherical wave front into planar wave front . Such long, small aperture wave guides increase distortion causing a typical resonant CD horn sound.

H 4510 ND

Compression Driver

Specifications	4510 ND
Throat	4” x 1" Planar wave rectangular piston
Nominal impedance	8 or 16 Ohm
Power capacity (AES)	80 W
Peak power	450 W
Sensitivity in:	
CD Horn 90°x10°	112 dB 1W/1m
Maximal SPL (cont.)	133 dB at 80 W
Efficiency	35%
Frequency range	500 - 20.000 Hz
Recommended crossover	1.000 Hz
Voice coil diameter	1,75" (44,4 mm)
Magnet material	Neodymium
Flux density	2,2 T
Voice coil material	Cooper Clad Aluminium
	(2 layers inside and outside of the VC)
Voice coil former	Kapton
Diaphragm material	Polyester
Overall Dimensions	106 x 85 x 118 mm
Net weight	1,7 kg

BMS 4510 ND on small 90° x 10° horn, horizontal 0°, 15°, 30°, 45°



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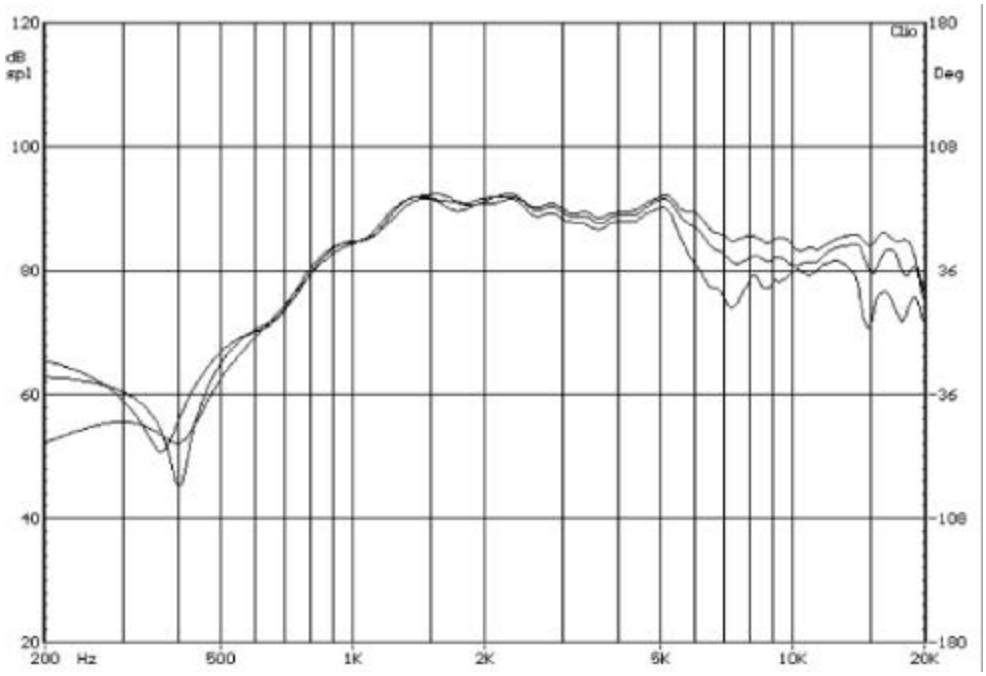
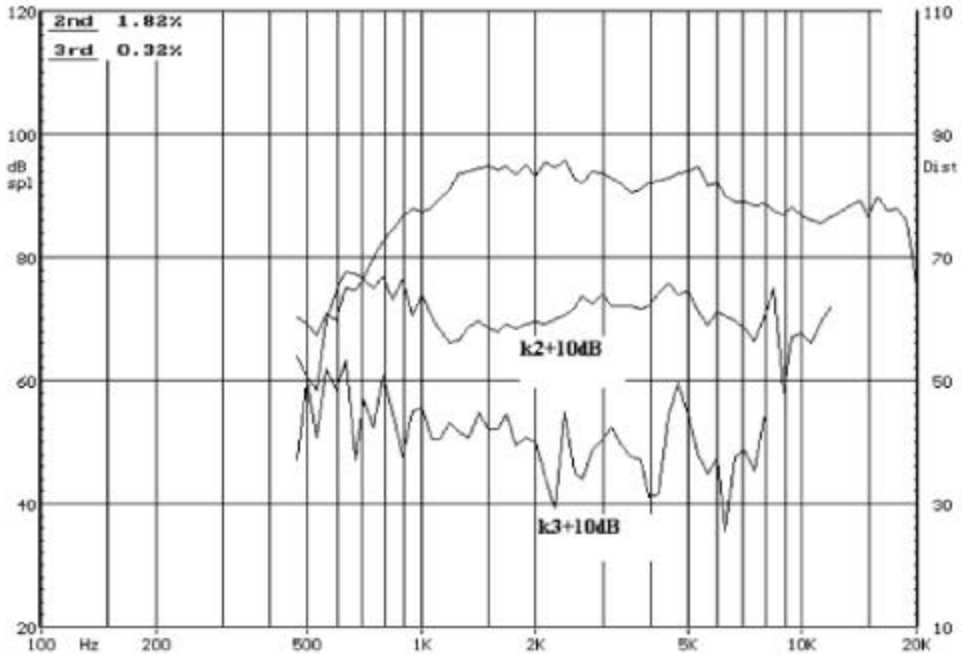
BMS 4510 ND on small 90° x 10° horn, vertical 0°, 5°, 10°



BMS 4510 ND on small 90° x 10° horn, 2nd and 3rd harmonic distortion



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