

# MIDRANGE MR8N301

Professional Low Frequency Transducer

PART NUMBER **11100006**

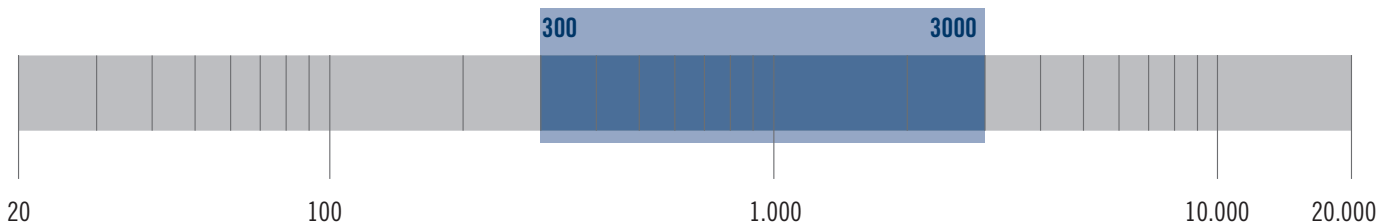
The MR8N301 is a high efficiency, high power midrange specially designed to provide superior sound pressure level in a very compact size. The total weight is reduced to less than half of a comparable ceramic midrange thanks to an incredibly powerful neodymium magnet assembly. The unique sealed basket design doesn't require a back sealing chamber, simplifying the cabinet design and improving heat dissipation. Every detail of this speaker has been optimized to offer maximum linearity and perfect control to the midrange and mid-high frequencies.

## Features

- 3-inch Inside/outside voice coil, high BL neodymium design
- 500 Watt Continuous program power handling
- Very high sensitivity (107 dB/1w in horn loaded application), very high BL factor
- Frequency range: 300 Hz - 3 kHz (mid and mid-high frequencies)
- Unique aluminum sealed basket featuring vented fin heat dissipation design
- Calibrated back volume for a perfect time domain transient reproduction

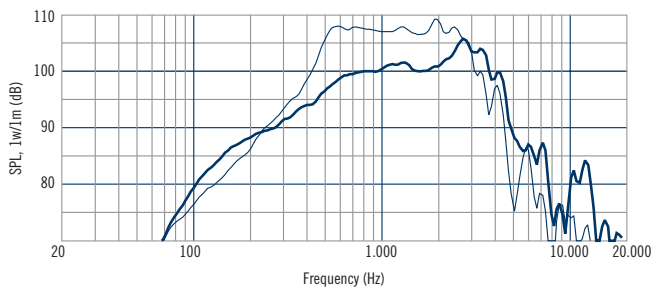
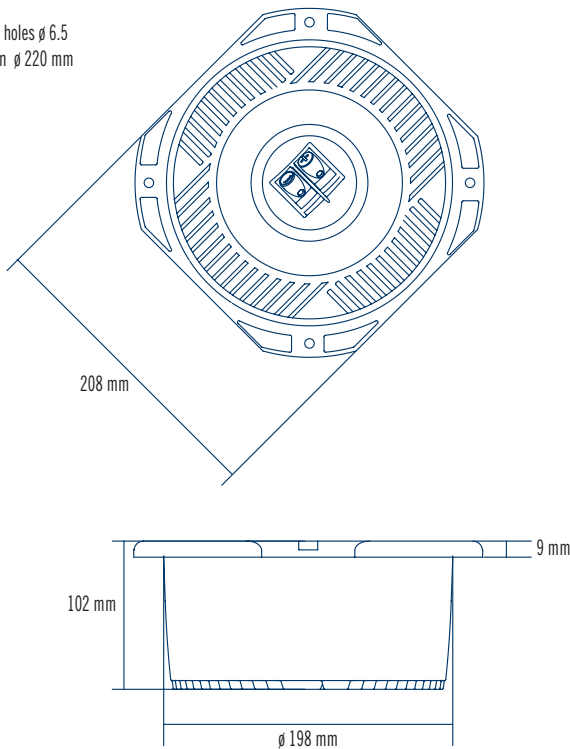
## Applications

The MR8N301 is especially designed for horn-loading and line array configurations. The ideal range of application are mid and mid-high frequencies. The combination of the 3" voice coil, the neodymium motor and the heat sink basket design makes this driver the ideal solution for the most demanding applications.

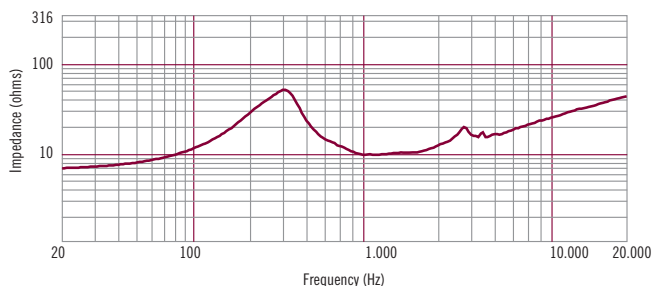




4 holes  $\phi$  6.5  
on  $\phi$  220 mm



Frequency response curve of the loudspeaker taken in a hemispherical, free field environment and mounted on IEC panel (darker curve) and on a 80 x 60 horn (lighter curve).



Impedance magnitude curve measured in free air.

## General Specifications

Nominal Diameter	200/8	mm/inch
Rated Impedance	8	ohm
Program Power <sup>1</sup>	400	Watts
Power handling capacity <sup>2</sup>	200	Watts
Sensitivity <sup>3</sup>	102	dB
Frequency Range	300 - 3000	
Effective Piston Diameter	168/6.6	mm/inch
Max Excursion Before Damage (peak to peak)	15/0.6	mm/inch
Minimum Impedance	9.8	ohm
Voice Coil Diameter	76/3	mm/inch
Voice Coil Material	Aluminium	
Voice Coil Winding Depth	11/0.4	mm/inch
Number of layers	2	
Kind of layer	inside/outside	
Top Plate Thickness	8/0.3	
Cone Material	No pressed pulp	
Cone Design	Curved	
Surround Material	Polycotton	
Surround Design	Triple - roll	

## Thiele - Small Parameters <sup>4</sup>

Resonance frequency	Fs	310	Hz
DC resistance	Re	6.6	ohm
Mechanical factor	Qms	3.45	
Electrical factor	Qes	0.41	
Total factor	Qts	0.37	
BL Factor	BL	17.8	T - m
Effective Moving Mass	Mms	10.1	gr
Equivalent Cas air load	Vas	1.65	liters
Effective piston area	Sd	0.021	m <sup>2</sup>
Max. linear excursion (mathematical) <sup>5</sup>	Xmax	3.5	mm
Voice - coil inductance @ 1KHz	Le1K	1.16	mH
Half-space efficiency	Eff	12.8	%

## Mounting Information

Overall Diameter	238/9.4	mm/inch
Bolt Circle Diameter	220/8.7	mm/inch
Bolt Hole Diameter	6.5/0.3	mm/inch
Front Mount Baffle Cut-out	202/8,0	mm/inch
Rear Mount Baffle Cut-out	182/7.2	mm/inch
Depth	101.5/4.0	mm/inch
Volume occupied by the driver <sup>6</sup>	2/0.07	liters/ft <sup>3</sup>

## Shipping Information

Net Weight	3.5/7.7	Kg/Lbs
Shipping Weight	4.0/8.8	Kg/Lbs

## Notes to Specifications

<sup>1</sup> Program Power is defined as 3 dB greater than AES power. - <sup>2</sup> AES standard. - <sup>3</sup> Sensitivity measurement is based on a 500-2000 Hz pink noise signal with input power of 2.83V @ 8 Ohms. - <sup>4</sup> Thiele-Small parameters are measured after a 2 hour warm up period running the loudspeaker at full power handling capacity. - <sup>5</sup> The maximum linear excursion is calculated as:  $(Hvc - Hg)/2 + Hg/4$  where Hvc is the voice coil depth and Hg the gap depth. - <sup>6</sup> Calculated for front mounting on 18 mm thick board.