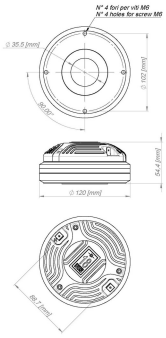
ND3SA 8Ω

HF Drivers - 1.4 Inches



- • Ultra compact design (OD 109mm - 4.3 in)
- • 112 dB SPL 1W-1m average sensitivity
- • 1.4 inch exit throat
- • 240W maximum program power handling
- • frequency response extended up to 20 kHz
- • Next-gen 4-slot metal alloy phase plug
- • Edge-wound 75mm (3 in) CCAW voice coil
- • Aluminum PEN composite diaphragm assembly
- • Neodymium ring magnetic structure
- • Copper ring for reduced distortion and increased output
- • Self-centering d-kit for accurate and fast service
- 16 Ohm version available

Eighteen Sound Srl
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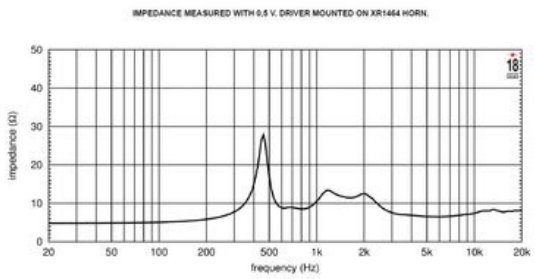
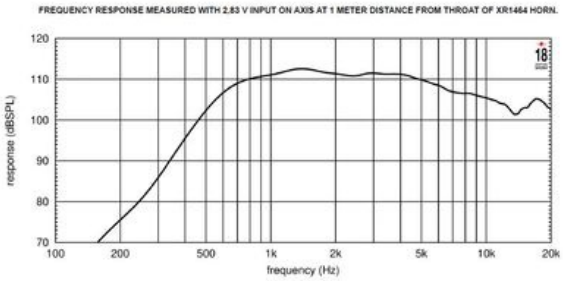
The ND3SA 1.4 inch exit neodymium high frequency compression driver has been designed for high level sound systems application. The unit has been developed to fulfill tight geometrical requirements, thanks to its ultra compact 120mm overall diameter.
The diaphragm assembly is composed by an aluminum dome sandwiched to a proprietary treated PEN (polyethylene naftalate) suspension. This design maintains low resonance and, when compared to the titanium version, lowers the minimum crossover point value at 1000 Hz.
The composite diaphragm assembly is made by an aluminum dome strongly joined to the PEN suspension, in order to assure unmatched transient response. The lower density of the aluminum and PEN structure permits higher levels of sensitivity, especially in the mid-high frequency range. A bended former edge-wound aluminum 75mm voice coil completes the diaphragm assembly.
In comparison with a usual straight former joint, the ND3SA moving assembly design assures extended frequency energy transfer for improved response linearity and unparallel reliability. This feature facilitates proper motion control of the dome in real working conditions. A proprietary treated Nomex former is used as Nomex shows a 30% higher value of tensile elongation at a working operative temperature (200°C) when compared to Kapton. Moreover, this proprietary former material is also suitable for use in higher moisture content environments.
The diaphragm kit self centering design allows high precision mounting and at the same time makes very easy the servicing procedure.
Despite of its compact size, the ND3A neodymium magnet assembly has been designed to obtain 20KGauss in the gap for major benefits in transient response. The motor structure, throughout the precisely coherent metal alloy phase plug with 4 circumferential slots and copper ring on the pole piece, reduces inductance effect and distortion.
The ability to perform properly under inclement weather conditions is a key point of the Eighteen Sound philosophy. Hence, a special treatment is applied to the magnet and the top and back plates of the magnetic structure in order to make the driver more resistant to the corrosive effects of salts and oxidization. This treatment is more effective than any other coating commonly used.





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SPECIFICATIONS[1]

Throat Diameter	36 mm (1.4 in)
Nominal Impedance	8 Ω
Minimum Impedance	6.4 Ω
Nominal Power Handling[2]	110 W
Continuous Power Handling[3]	220 W
Sensitivity[4]	112.0 dB
Frequency Range	0.8 - 20.0 kHz
Recommended Crossover[5]	1.2 kHz
Voice Coil Diameter	75 mm (3.0 in)
Winding Material	Aluminum
Diaphragm Material	Aluminum - Pen
Flux Density	2.1 T
Magnet Material	Neodymium

MOUNTING AND SHIPPING INFO

Overall Diameter	120 mm (4.72 in)
Depth	53 mm (2.09 in)
Net Weight	2.3 kg (5.07 lb)
Shipping Weight	2.4 kg (5.29 lb)
Shipping Box	165x150x65 mm (6.50x5.91x2.56 in)

1. Driver mounted on Eighteen Sound XR1464C horn
2. 2 hour test made with continuous pink noise signal within the range from the recommended crossover frequency to 20 kHz. Power calculated on rated nominal impedance.
3. Power on Continuous Program is defined as 3 dB greater than the Nominal rating.
4. Applied RMS Voltage is set to 2.83 V for 8 ohms Nominal Impedance.
5. 12 dB/oct. or higher slope high-pass filter.