

8NW650

Low Frequency Neo Transducer

Key Features

- 96 dB SPL 1W / 1m average sensitivity
- 65 mm (2.5 in) aluminum edgewound voice coil
- 600 W program power handling
- High excursion design for low frequency clarity and punch
- Weather protected cone and coated plates for outdoor usage
- Ultra lightweight design
- Suitable for line array applications and multiway systems



General Description

The 8NW650 is a 8 inch neodymium woofer. The transducer has been developed in response to a specific market requirement for a light weight design that combines excellent linearity with high power handling capabilities.

The 8NW650 is primarily intended for use as a low frequency driver for line-arrays as well as high quality 2-way or multiway reflex enclosures. The low pass filter might be positioned as high as 2000Hz.

The high grade neodymium magnet assembly assures high flux concentration and low power compression. The levels of force factor and power handling are, as a consequence, at the upper professional level with best power to weight ratio.

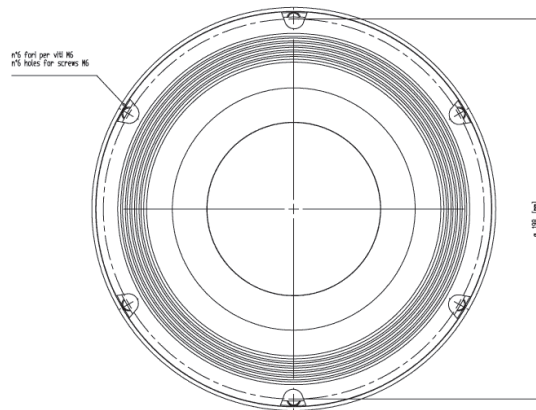
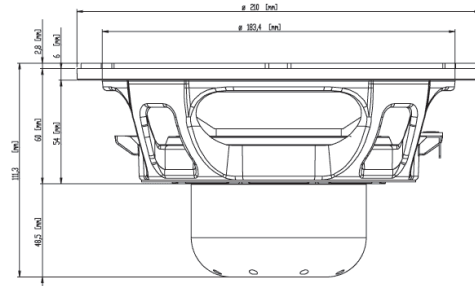
The 65mm Ø edgewound aluminum wire voice coil is wound on a high strength fiberglass former. The voice coil is cooled through airways placed between the chassis back plate and the magnet faceplate and carefully designed ventilation ducts made into the metal back plate.

The curvilinear paper cone is formed using a special high strength wood pulp, designed to achieve the best possible rigidity and stiffness.

The ability to perform in humid environments is an extra key feature of the 8NW650. This is achieved through the application of an exclusively developed membrane treatment which renders the cone humidity repellent while does not increasing the total moving speaker mass. In addition, a special epoxy treatment is applied to the top and back plates making the transducer far more resistant to the corrosive effects of salts and oxidization.

022088N650 8 Ohm
022086N650 16 Ohm

027088N650 R-kit 8 Ohm
027086N650 R-kit 16 Ohm



NEODYMIUM LF-MB-MF TRANSDUCERS

GENERAL SPECIFICATIONS

NOMINAL DIAMETER	200mm (8 in)
RATED IMPEDANCE	8 Ohm
AES POWER (1)	300 W
PROGRAM POWER (2)	600 W
PEAK POWER (3)	1200 W
SENSITIVITY (4)	96 dB
FREQUENCY RANGE (5)	55 ÷ 6300 Hz
POWER COMPRESSION @ -10DB (6)	0,8 dB
POWER COMPRESSION @ -3DB	2,2 dB
POWER COMPRESSION @ FULL POWER	3,0 dB
MAX RECOMM. FREQUENCY	2500 Hz
RECOMM. ENCLOSURE VOLUME	10 ÷ 40 lt. (0.36 ÷ 1.41 cuft)
MINIMUM IMPEDANCE	6,3 Ohm at 25°C
MAX PEAK TO PEAK EXCURSION	26 mm (1.02 in)
VOICE COIL DIAMETER	65 mm (2.5 in)
VOICE COIL WINDING MATERIAL	Edgewound aluminum
SUSPENSION	Triple roll, Polycotton
CONE	Curvilinear weather resistant treated paper

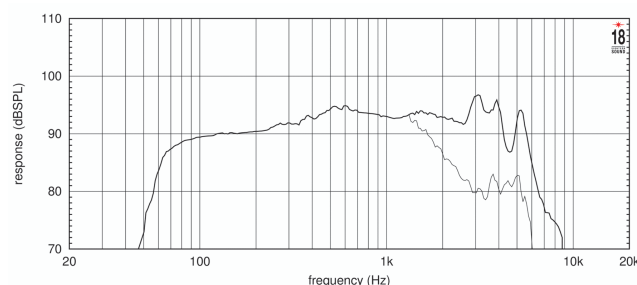
THIELE SMALL PARAMETERS (7)

Fs	63 Hz
Re	6,1 Ohm
Sd	0,0227 sq.mt. (35,19 sq.in.)
Qms	3,70
Qes	0,27
Qts	0,25
Vas	17,8 lt. (0.63 cuft)
Mms	26 gr. (0.06 lb)
BL	15,2 Tm
Linear Mathematical Xmax (8)	± 5.5 mm (±0,22 in)
Le (1kHz)	0,71 mH
Ref. Efficiency 1W@1m (half space)	94,0 dB

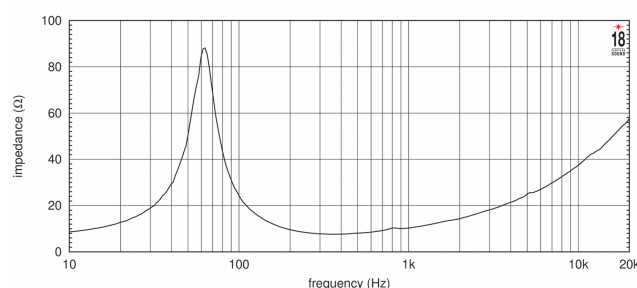
MOUNTING INFORMATION

Overall diameter	210 mm (8,3 in)
N. of mounting holes	6
Mounting holes diameter	6 mm (0,24 in)
Bolt circle diameter	195-198 mm (7,68-7,8 in)
Front mount baffle cutout ø	185 mm (7,28 in)
Rear mount baffle cutout ø	185,5 mm (7,3 in)
Total depth	111,3 mm (4.38 in)
Flange and gasket thickness	8,8 mm (0,35 in)
Net weight	2,2 kg (4,85 lb)
Shipping weight	2,5 kg (5,51 lb)
CardBoard Packaging dimensions	235 x 235 x 150 mm (9,25 x 9,25 x 5,91 in)

FREQUENCY RESPONSE CURVE OF 8NW650 MADE ON 25LIT. ENCLOSURE TUNED 65HZ IN FREE FIELD (4PI) ENVIRONMENT. ENCLOSURE CLOSES THE REAR OF THE DRIVER. THE THIN LINE REPRESENTS 45 DEG. OFF AXIS FREQUENCY RESPONSE



FREE AIR IMPEDANCE MAGNITUDE CURVE



NOTES

- (1) AES power is determined according to AES2-1984 (r2003) standard
- (2) Program power rating is measured in 25 lit enclosure tuned 65Hz using a 70 - 700 Hz band limited pink noise test signal with 50% duty cycle, applied for 2 hours.
- (3) The peak power rating represents the maximum permitted instantaneous peak power level over a maximum period of 10ms which will be withstood by the loudspeaker without damage.
- (4) Sensitivity represents the averaged value of acoustic output as measured on the forward central axis of cone, at distance 1m from the baffle panel, when connected to 2,83V sine wave test signal swept between 500Hz and 2500Hz with the test specimen mounted in the same enclosure as given for (1) above.
- (5) Frequency range is given as the band of frequencies delineated by the lower and upper limits where the output level drops by 10 dB below the rated sensitivity in half space environment.
- (6) Power compression represents the loss of sensitivity for the specified power, measured from 70 up to 700 Hz, after a 5 min pink noise preconditioning test at the specified power.
- (7) Thiele - Small parameters are measured after the test specimen has been conditioned by AES power and represent the expected long term parameters after a short period of use.
- (8) Linear Math. Xmax is calculated as $(Hvc-Hg)/2 + Hg/4$ where Hvc is the coil depth and Hg is the gap depth.

Eighteen Sound engages in research and product improvement. New materials and design refinements can be introduced into existing products without notice.