

10M600

Very High Output Midrange Transducer

Key Features

- 102 dB SPL 1W / 1m average sensitivity
- 75 mm (3 in) Interleaved Sandwich Voice coil (ISV)
- 400 W AES power handling
- Excellent transient response
- Improved heat dissipation via unique basket design
- Ideal for direct radiating or horn loaded midrange systems



General Description

The 10M600 is a top performance 10" ferrite midrange driver which offers high power handling capability with exceptional sensitivity over the middle frequency band. It is suitable for either direct radiating or horn loaded applications as part of a 3 or 4-way auditorium, touring, or outdoor festival sound system. It is the result of an intensive development program which aimed to produce the best 10" ferrite midrange driver available.

The smooth curvilinear paper cone has a special high strength wood pulp composition and has been designed to achieve the best possible linearity within the middle frequency range and to control bell-mode resonances around the cone circumference. The cone is carried by a double half-roll suspension composed of a material which is more resistant to aging and fatigue than traditional materials, providing the correct damping and excursion control.

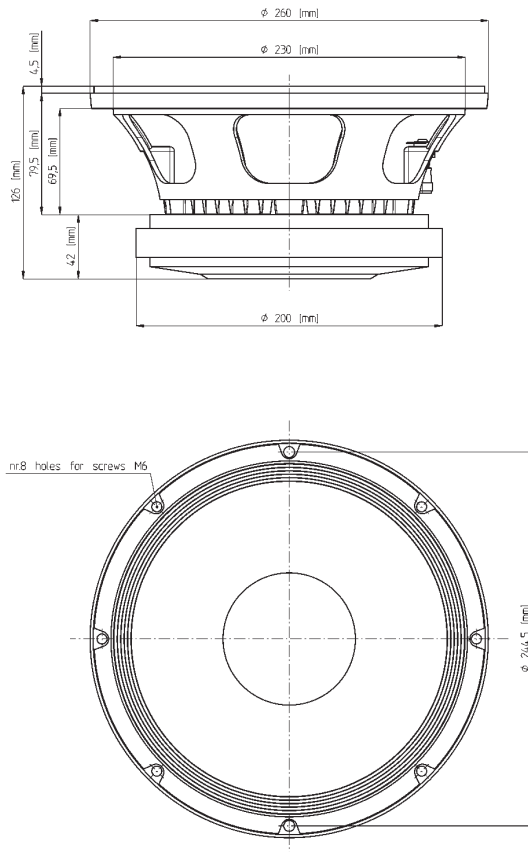
The 75 mm state-of-the-art voice coil assembly incorporates a fine edge-wound aluminum wire together with a strong fiberglass former to get the necessary force factor, mass lightness and high power handling.

The voice coil is cooled using airways between the chassis back plate and the magnet face plate, which allow heated air from the voice coil and gap to be channeled away and dissipated by the chassis basket. This technology is another product of 3D CAD resource application by our engineers.

The magnetic structure has also been optimized using our in-house FEA CAD resource which has maximized the flux density in the voice coil gap.

A special treatment is applied to both the top and back plates making them more resistant to the corrosive effects of salts and oxidation. This treatment is more effective than any other treatment in use today.

0221087210 8 Ohm



FERRITE LF-MB-MF TRANSDUCERS

10M600

Very High Output Midrange Transducer

GENERAL SPECIFICATIONS

NOMINAL DIAMETER	260 mm (10 in)
RATED IMPEDANCE	8 Ohm
AES POWER	400 W
PROGRAM POWER (1)	500 W
PEAK POWER (2)	1200 W
SENSITIVITY (3)	102 dB
FREQUENCY RANGE (4)	80 ÷ 5200 Hz
POWER COMPRESSION @-10DB (5)	0,5 dB
POWER COMPRESSION @-3DB	1,6 dB
POWER COMPRESSION @FULL POWER	2,3 dB
MAX RECOMM. FREQUENCY	3000 Hz
RECOMM. ENCLOSURE VOLUME	5 ÷ 30 lt. (0,18 ÷ 1,09 cuft)
MINIMUM IMPEDANCE	6,4 Ohm at 25°C
MAX PEAK TO PEAK EXCURSION	16 mm (0,63 in)
VOICE COIL DIAMETER	75 mm (2,95 in)
VOICE COIL WINDING MATERIAL	aluminum
SUSPENSION	M roll, polycotton
CONE	Curvilinear, Paper

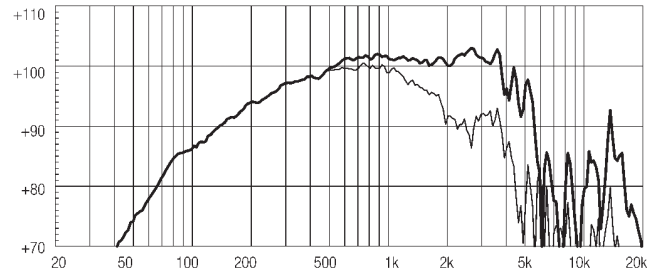
THIELE SMALL PARAMETERS (6)

Fs	70 Hz
Re	5,2 Ohm
Sd	0,035 sq.mt. (54,25 sq.in.)
Qms	4,5
Qes	0,25
Qts	0,23
Vas	25,6 lt. (0,9 cuft)
Mms	32 gr. (0,07 lb)
BL	17,6 Tm
Linear Mathematical Xmax (7)	± 4 mm (±0,16 in)
Le (1kHz)	1,28 mH
Ref. Efficiency 1W@1m (half space)	97,7 dB

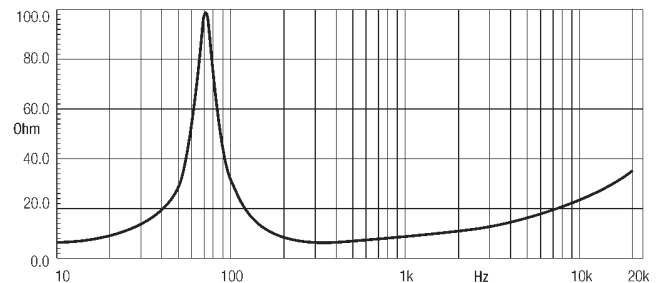
MOUNTING INFORMATION

Overall diameter	260 mm (10,24 in)
N. of mounting holes	8
Mounting holes diameter	7,15 mm (0,28 in)
Bolt circle diameter	244,5 mm (9,63 in)
Front mount baffle cutout ø	232 mm (9,13 in)
Rear mount baffle cutout ø	232 mm (9,13 in)
Total depth	126 mm (4,95 in)
Flange and gasket thickness	14,5 mm (0,57 in)
Net weight	7,35 kg (16,23 lb)
Shipping weight	7,8 kg (17,22 lb)
CardBoard Packaging dimensions	275 x 275 x 164 mm (10,83 x 10,83 x 6,46 in)

FREQUENCY RESPONSE CURVE OF 10M600 MADE ON 30 LIT. CLOSED ENCLOSURE 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) Program power rating is measured in 30 lit closed enclosure using a 70 - 2000Hz band limited pink noise test signal with 50% duty cycle, applied for 2 hours.
- (2) 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.
- (3) 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.
- (4) 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.
- (5) Power compression represents the loss of sensitivity for the specified power, measured from 50-500 Hz, after a 5 min pink noise preconditioning test at the specified power.
- (6) Thiele - Small parameters are measured after the test specimen has been conditioned by 400 W AES power and represent the expected long term parameters after a short period of use.
- (7) 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.