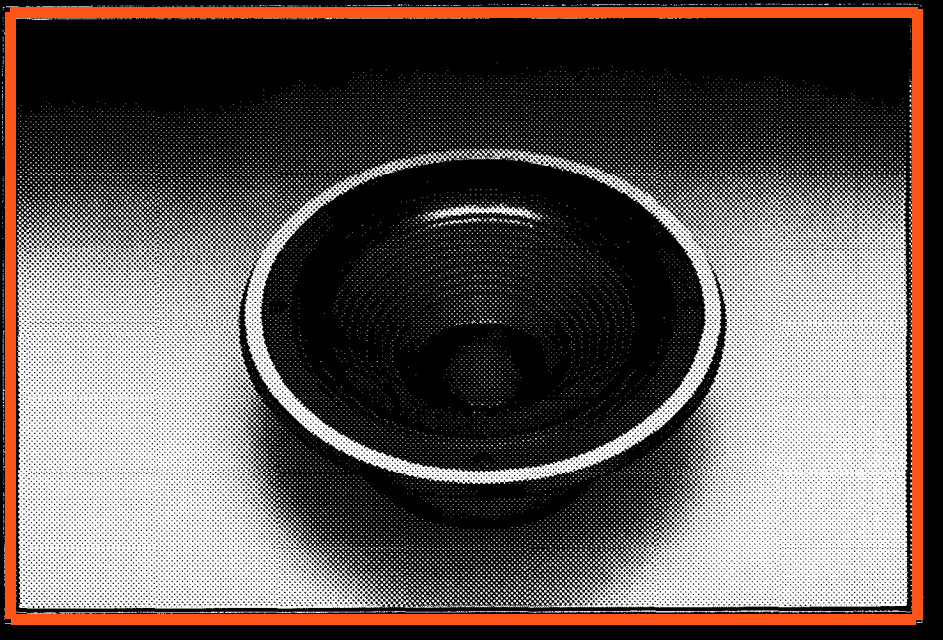
2118H/J

200 mm (8 in) MIDRANGE/ LOW FREQUENCY TRANSDUCER



FEATURES:

200 W continuous program power capacity

51 mm (2 in) copper voice coil

70 Hz-7 kHz response

97 dB sensitivity, 1 W, 1 m

The JBL Model 2118H and 2118J provide smooth, low-distortion midrange output for high quality sound reinforcement and studio monitor applications. Additionally, a single unit is capable of usable low frequency output to 70 Hz when mounted in a 14 L (0.5 ft^3) enclosure. The two units are identical in performance; the only difference is the impedance, which is 8 ohms for the 2118H and 16 ohms for the 2118J.

Features of the 2118H/J include a die-cast aluminum frame that is manufactured to extremely tight tolerances. The 51 mm (2 in) diameter voice coil operates in a magnetic field of 1.05 T (10,500 gauss). The SFG (Symmetrical Field Geometry) magnetic structure reduces second harmonic distortion to inconsequential levels. The use of new adhesive and materials technology provides high power handling and efficiency from a transducer of small size. Like all JBL loudspeakers, the Model 2118H/J is noted for its clean, crisp response and incisive reproduction of transients. Built to traditional JBL standards of precision, it will continue to deliver exceptional performance year after year, without special care or attention.

2118H/J

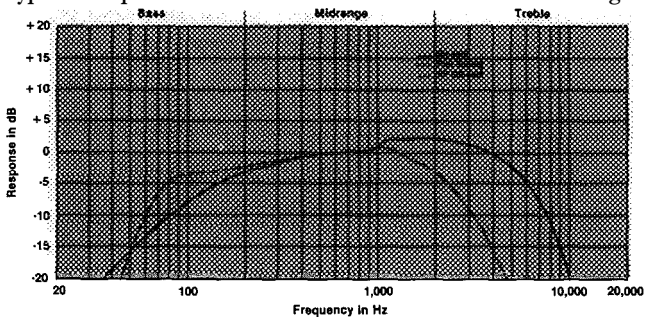
ARCHITECTURALSPECIFICATIONS:

The low frequency transducer shall have a nominal diameter of 225 mm (8 in), overall depth not greater than 98 mm (3 7/8 in). and weigh at least 3.9 kg (8 9/16 lb). The frame shall be of cast aluminum to resist deformation. and the magnetic assembly shall utilize a ferrite magnet and produce a symmetrical magnetic field at the voice coil gap. In addition, an aluminum ring encircling the pole piece shall act to reduce flux modulation. The voice coil shall be 50 mm (2 in) in diameter and shall be made of two-layer round-wound copper operating in a magnetic field of not less than 1.05 T (10.500 gauss).

Performance specifications of a typical production unit shall be as follows: Measured sensitivity (SPL at I m (3.3 ft) with I W input. swept 500 Hz-2.5 kHz) shall be at least 97 dB on axis and 94 dB 45 degrees off axis. As an indication of electromechanical conversion efficiency, the BI factor shall be at least 11(H), 15(J) newtons per ampere. The half-space reference efficiency shall be 2.1%. Usable frequency response shall extend from 70 Hz to 7 kHz. On-axis response, measured at a distance of 1.8 m (6 ft) or more under free-field conditions. shall be ± 3 dB from 200 Hz to 4 kHz. Acoustic loading shall further extend the low frequency response. Nominal impedance shall be 8(H). 16(J) ohms. Rated power capacity shall be at least 200 watts normal program material.

The transducer shall be the JBL Model 2118H/J. Other loudspeakers will be considered for equivalency provided that submitted data from a recognized independent test laboratory verify that the above performance specifications are met.

Typical Response Curve Enclosure Volume and Port Tuning



Frequency response of the 2118H/J in a closed box of 14 L (0.5 ft^3) internal volume. Measured response of a typical production unit, including all peaks and dips, does not deviate more than 2 dB from the above curve. The dashed curve represents the response with a 30 cm^2 (5 in^2) port, 8 cm (3 in) long, tuning the enclosure to 70 Hz.

JEL continually engages in research related to product improvement New materials, production methods, and design refinements are introduced into existing products without notice as a routine expression of that philosophy For this reason. any current JBL product may differ in some respect from its published description. but will always equal or exceed the original design specifications unless otherwise stated

SPECIFICATIONS:

Nominal Diameter,	200 mm (8 in)
Rated Impedance:	
2118H:	8 ohms
2118I:	l6ohms
Power Capacity[1]:	200 W continuous program
Sensitivity[2]:	97 dB SPL, 1 W, 1 m
Frequency Range:	70 Hz - 7 kHz
Highest Recommended Crossover Frequency:	3 kHz
Recommended Enclosure Volume.	14 - 28 L (½ - 1 ft^3)
Effective Piston Diameter:	167 mm (6 9/16 i in)
Maximum Excursion Before Damage:	19 mm (¾ in peak-to-peak)
Minimum Impedance:	6.2 ohms ± 10% @ 25°C (H) 12.0 ohms ± 10% @ 25°C (J)
Voice Coil Diameter:	50 mm (2 in)
Voice Coil Material:	Two-layer round-wound copper
Voice Coil Winding Depth:	14.0 mm (0.55 in)
Magnetic Gap Depth:	7.1 mm (0.280 in)
Magnetic Assembly Weight:	2.6 kg (5¾ lb)
Flux Density:	1.05 T (10,500 gauss)
BI Factor.	11 N/A (H), 15 N/A (J)
Effective Moving Mass:	0.017 kg
Positive voltage on black terminal gives forward diaphragm motion	
Thiele-Small Parameters:	
f_s:	85 Hz
R_e:	5.5 ohms (H), 10.3 ohms (J)
Q_o:	0.35
Q_{ms}:	2.4
Q_{es}:	0.40
V_{as}:	14 L (0.5 ft^3)
S_D:	0.0218 m^2 (33.8 in^2)
X_{max}:	3.0 mm (0. 12 in)
V_D:	65 cm^3 (4.0 in^3)
L_e:	0.6 mH (H), 0.85 mH (J)
no (half space):	2 . 1 %
P_e (Max):	100 W continous sine wave
Mounting Information:	
Overall Diameter,	229 mm (9 in)
Bolt Circle Diameter:	194 mm (7 ⅜ in)
Baffle Cutout Diameter Front or Rear Mount:	179 mm (7 1/16 in)
Typical Volume Displaced by Driver When Mounted in Enclosure:	1.5 L (0.05 ft^3)
Depth:	98 mm (3 ⅞ i in)
Net Weight:	3.9 kg (8 3/16 llb)
Shipping Weight:	4.3 kg (9 ⅜ lb)

Continuous program power is defined as 3 dB greater than continuous sine wave power and is a conservative expression of the transducer s ability to handle typical speech and music program material.

[2]The sensitivity rating of JBL midrange loudspeakers is based on a signal swept from 500 Hz to 2.5 kHz. rather than the conventional 1 kHz single frequency test signal Usable sensitivity of the 2118H/J may be substantially greater than that of loudspeakers with higher published ratings The half-space reference efficiency percentages will give a consistent method for comparison of E Series, Professional Series, and competitive loudspeakers in low-frequency applications

JBL

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