

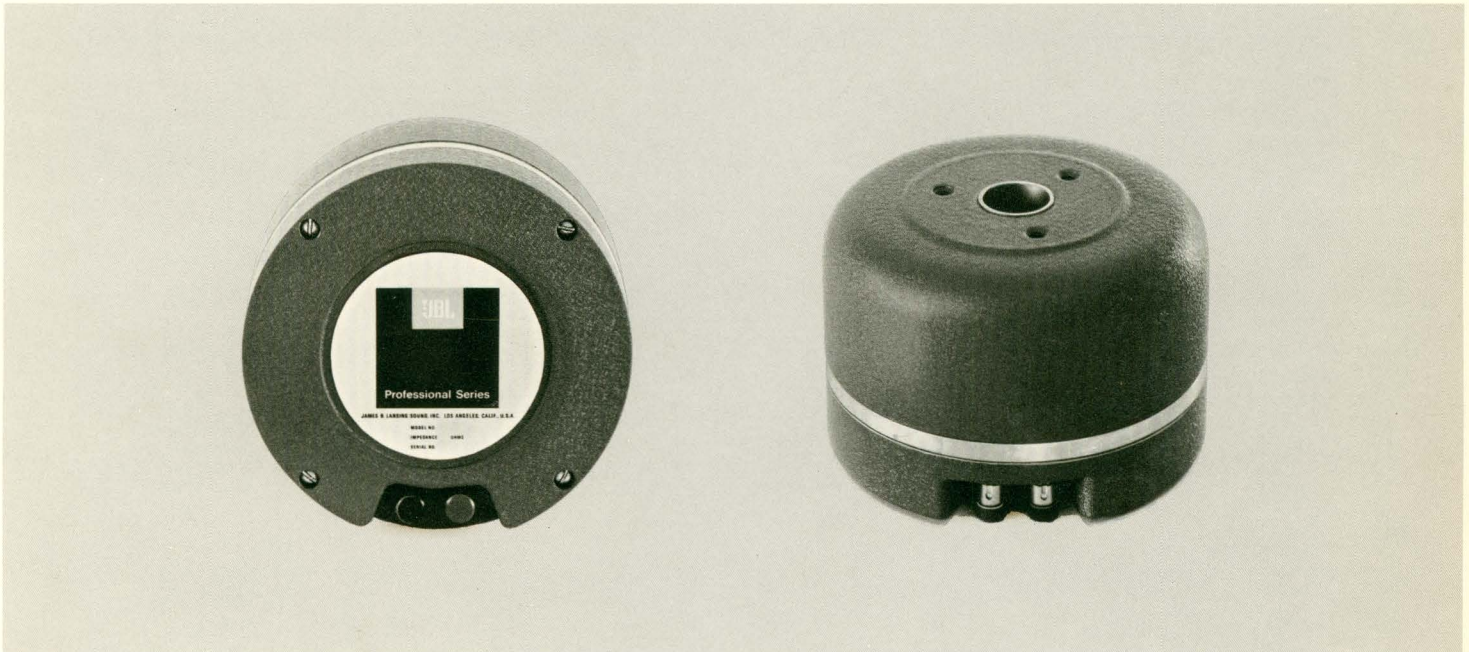
Professional Series

Model 2470

Compression Driver

Silver plated pole piece
1 $\frac{3}{4}$ " edgewound ribbon voice coil
High efficiency
Flat response
60 watts—continuous program

Professional audio consultants and engineers are invited to compare the JBL 2470 with other loudspeakers, both on the basis of acoustical measurements and extended listening tests.



Model 2470 is a professional quality compression high frequency driver capable of generating high sound pressure levels, while at the same time providing clear, crisp, natural reproduction of speech or music. It is built to typical JBL standards of precision. Mathematically determined phasing plugs are machined concentric exponential horns to eliminate phase cancellations. Magnetic assemblies are cast and machined to hold tolerances considered impractical by industry standards. Diaphragms of phenolic impregnated linen are virtually indestructible. A ring machined of pure silver is added to the pole piece to increase efficiency at high frequencies, so that this

phenolic diaphragm exhibits a frequency response superior to competitive aluminum diaphragms. After manufacture, the frequency response of each driver is tested, and a peak or dip means it is rejected.

Model 2470 is the finest all purpose driver in the industry. It is smooth and wide-range enough for monitor systems; high powered and efficient enough for the most demanding reinforcement task. It may also be used with a 300 Hz high pass filter for speech only applications.



Model 2470—Compression Driver

Architectural Specifications

The compression driver shall consist of an Alnico V magnet encased in a cast iron return circuit. All magnetic assembly parts shall be machined from cast or extruded billet stock. No stamped or ceramic parts shall be used. The phasing plug shall be assembled of machined concentric exponential horns to eliminate phase cancellations, and it shall be further coupled to a tapered throat, the mouth of which shall be one inch in diameter. The back cover shall be cast aluminum with reinforcing ribs to prevent ringing resonances which cause peaks in response. The diaphragm shall be phenolic impregnated linen for great resistance to fatigue. The voice coil shall be edgewound aluminum ribbon for great frequency response, not less than 1.75 inches in diameter, operating in a magnetic field of not less than 19,000 Gauss. An impedance controlling ring, machined of pure silver, shall be affixed to the pole piece in order to increase efficiency at high frequencies and extend flat response.

Performance specifications of a typical production unit shall be as follows:

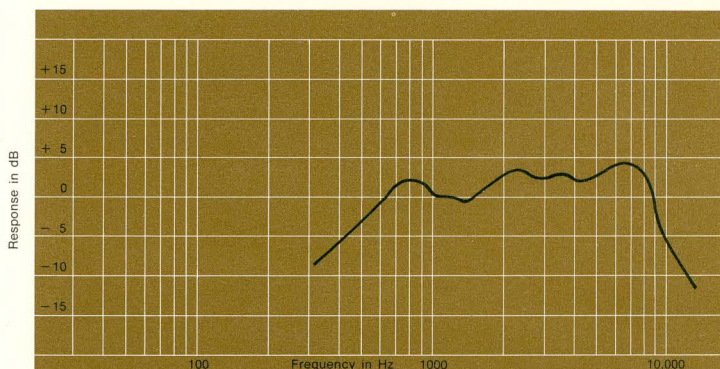
Measured sensitivity at 1mw on a terminated tube (tube 1 inch in diameter, 3.0 feet long) shall be at least 117 dB. As an indication of electromechanical conversion efficiency, the BL factor shall be at least 10.3×10^6 dynes/abampere. Usable frequency response shall be from 500 to 12 kHz. Frequency response, measured on a terminated tube, shall be flat within ± 3 dB from 300 to 4.5 kHz. From 4 kHz to 10 kHz, response shall roll off at the rate of 3 dB/octave, and shall be flat within ± 1 dB through this region. On a 2350 horn, response shall be ± 5 dB from 500 Hz to 10 kHz. Nominal impedance shall be 16 ohms, and power capacity shall be at least 60 watts normal speech or music program material.

The Compression driver shall be JBL Model 2470. Other drivers will be considered for equivalency provided that submitted data from a recognized independent test laboratory verify that the above performance specifications are met.

Specifications

Nominal impedance	16 ohms
Power capacity	60 watts Continuous Program
Sensitivity*	117 dB
Frequency Range	300 to 12 kHz
Voice Coil Diameter	1.75 inches
Voice Coil Material	Edgewound aluminum ribbon
Flux Density	19,000 Gauss
Diaphragm	Non-Fatiguing Phenolic
BL factor	10.3×10^6 dynes/abampere
Recommended Crossover	300 Hz or higher
Dimensions	5 3/4" diameter and 3 7/8" deep
Horn throat diameter	1 inch
Net Weight	11 lbs.

*NOTE: As specified by recognized standards organizations, sensitivity is measured with the driver coupled to a terminated tube. The JBL rating represents the SPL in a one-inch diameter tube with a one milliwatt input signal (1.26 volts into 16 ohms) warbled from 500 to 2500 Hz.



Frequency response contour of Model 2470 coupled to a 2350 horn. Measured response of a typical production unit, including all peaks and dips, does not deviate more than 2 dB from the above curve.

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