

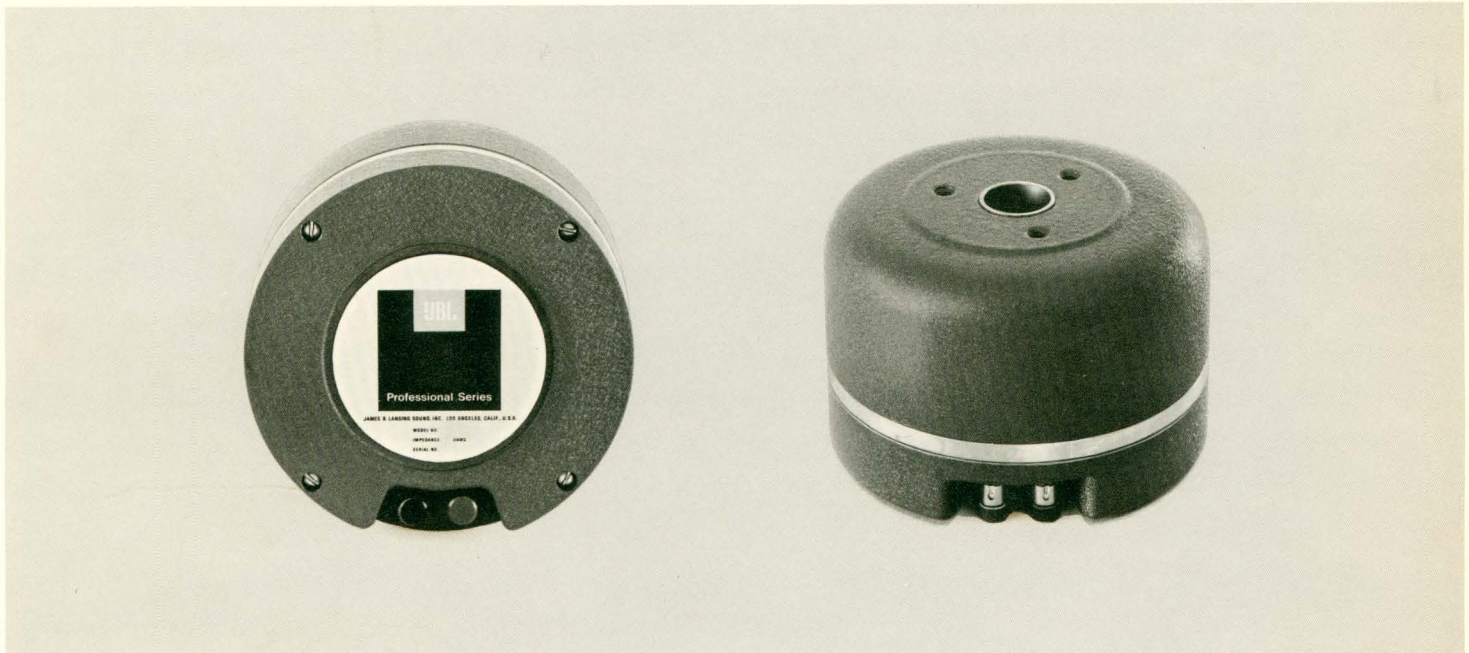
Professional Series

Model 2420

Compression Driver

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

Professional audio consultants and engineers are invited to compare the JBL 2420 with other loudspeakers, both on the basis of acoustical measurements and extended listening tests.



Model 2420 is a professional quality compression high frequency driver which has the widest range of flat response in the industry. 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 duraluminum alloy are pneumatically drawn to shape to eliminate stresses that cause fatigue. A ring machined from pure

silver is added to the pole piece to counteract the inductive component in the voice coil at high frequencies. After manufacture, the frequency response of each driver is tested, and a peak or dip means it is rejected.

Model 2420 is ideally suited for critical playback systems or reinforcement systems of the highest quality. Its high efficiency and power capacity permit great dynamic range. Its peak-free response means that greater gain before acoustic feedback can be attained.



Model 2420—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 1 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 0.002" duraluminum alloy pneumatically drawn to shape to prevent stresses. The voice coil shall be edgewound aluminum ribbon of 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 maintain flat response.

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

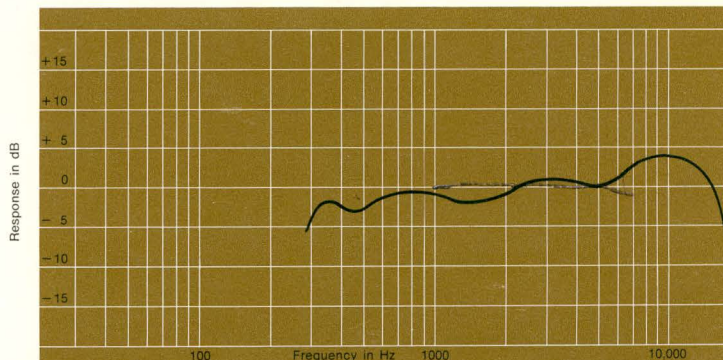
Measured sensitivity at 1mw on a terminated tube basis (tube of 1 inch diameter, 3.0 feet long) shall be at least 118 dB. As an indication of electromechanical conversion efficiency, the BI factor shall be at least 10.3×10^6 dynes/abampere. Usable frequency response, measured on a terminated tube, shall be from 500 to 15 kHz. On a 2350 horn, response shall be ± 3 dB from 500 Hz to 17 kHz. Nominal impedance shall be 16 ohms and power capacity shall be at least 30 watts normal speech or music program material.

The compression driver shall be JBL Model 2420. 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	30 watts continuous program
Sensitivity*	118 dB
Frequency Range	500 to 20 kHz
Voice Coil Diameter	1.75 inches
Voice Coil Material	Edgewound aluminum ribbon
Flux Density	19,000 Gauss
Diaphragm	0.002" duraluminum alloy
BI factor	10.3×10^6 dynes/abampere
Recommended Crossover	500 Hz or higher
Dimensions	5 3/4" diameter 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 2420 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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