

# Professional Series

## Model 2420

### Compression Driver

30 Watts continuous program  
1 1/2" edgewound aluminum ribbon voice coil  
1 1/2" aluminum alloy diaphragm  
1" horn throat diameter  
Silver plated pole piece



Model 2420 is a professional quality high frequency compression driver which has an exceptionally wide range and flat response. It is built to typical JBL standards of precision. The mathematically determined phasing plug consists of machined concentric exponential horns to eliminate phase cancellations. The magnetic assembly is cast and machined to tolerances considered impractical by industry standards. The aluminum alloy diaphragm is pneumatically drawn to shape in order to eliminate stresses that cause fatigue. A

machined ring of pure silver surrounds the pole piece to counteract the inductance of the voice coil at high frequencies. After manufacture, the frequency response of each driver is tested for conformity to rigid performance standards.

The 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. The peak-free response of the 2420 allows greater system gain without acoustic feedback.

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# 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" aluminum 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 1 mW 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  $10.3 \times 10^6$  dynes/abampere. Frequency response, measured on a terminated tube, shall be flat within  $\pm 5$  dB from 800 Hz to 15 kHz. On a 2350 horn, response shall be  $\pm 3$  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.

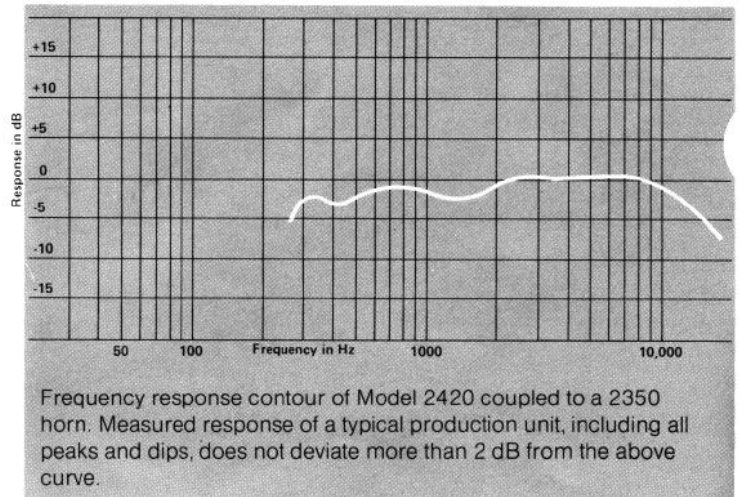
## Specifications

Horn Throat Diameter	1 inch	2.5 cm
Nominal Impedance	16 ohms	
Power Capacity <sup>1</sup>	30 Watts continuous program	
Sensitivity <sup>2</sup>	118 dB SPL	
Frequency Range	500 Hz to 20 kHz	
Recommended Crossover <sup>3</sup>	800 Hz or higher	
Diaphragm	0.002" (0.05 mm) aluminum alloy	
Voice Coil Diameter	1.75 inches	4.4 cm
Voice Coil Material	Edgewound aluminum ribbon	
Flux Density	19,000 gauss	
BI Factor	$10.3 \times 10^6$ dynes/abampere	
Dimensions	5 $\frac{3}{4}$ " (14.6 cm) diameter, 3 $\frac{7}{8}$ " (9.8 cm) depth	
Net Weight	11 lbs	5.0 kg
Shipping Weight	12 lbs	5.4 kg

<sup>1</sup>Continuous program power is defined as 3 dB greater than continuous sine wave power (RMS). It is a conservative expression of the transducer's ability to handle normal speech and music program material.

<sup>2</sup>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 (0.126 volts into 16 ohms) warbled from 500 to 2500 Hz.

<sup>3</sup>A 2420 can be used to 500 Hz, however power capacity will be reduced to 10 Watts continuous program in the region between 500 and 800 Hz.



JBL Professional Products are not intended for household use.

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