

# Professional Series

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## Model 2470

### Compression Driver

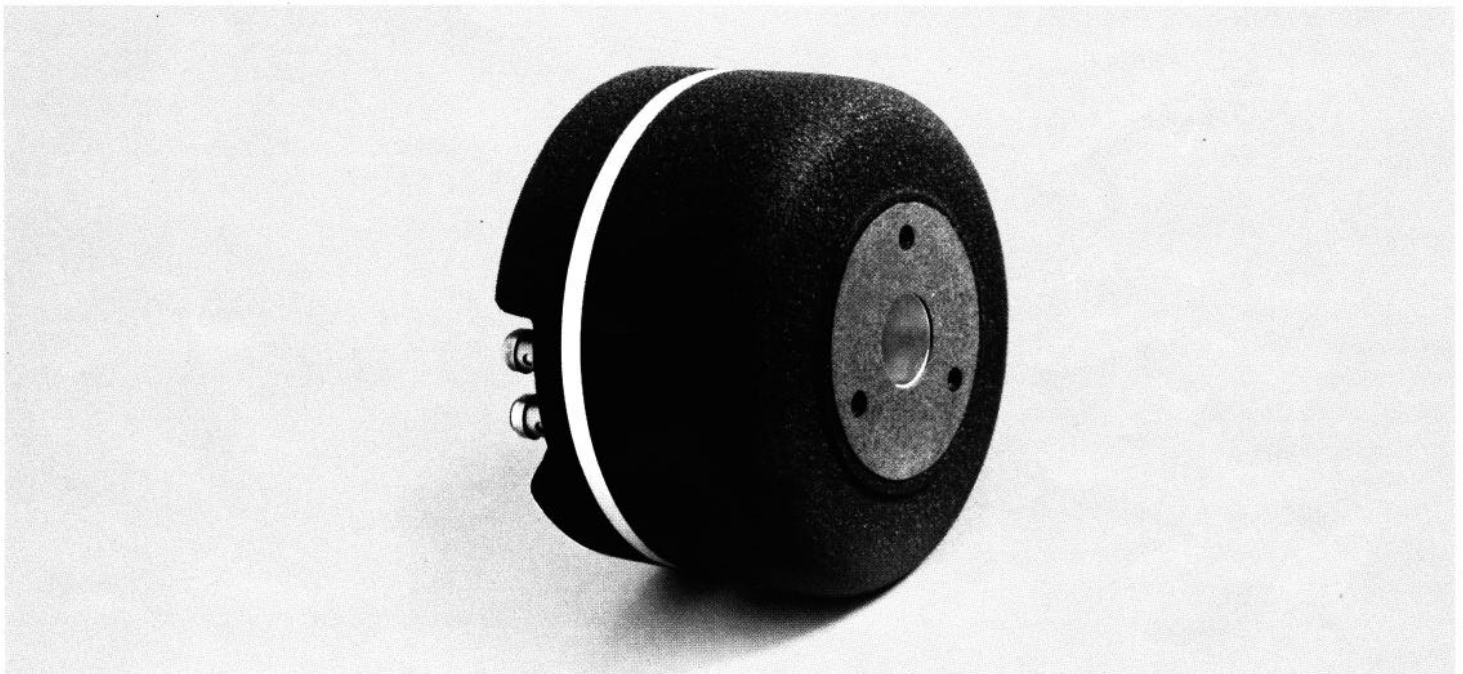
50 Watts continuous program

1 1/4" edgewound aluminum ribbon voice coil

1 3/4" phenolic diaphragm

1" horn throat diameter

Silver plated pole piece



Model 2470 is a professional quality high frequency compression 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. The mathematically determined phasing plug is a machined concentric exponential horn to eliminate phase cancellations. The magnetic assembly is cast and machined to tolerances considered impractical by industry standards. Diaphragms of phenolic impregnated linen diaphragm is virtually indestructible. A ring machined

of pure silver is added to the pole piece to control impedance at high frequencies, so that this unit, with its phenolic diaphragm exhibits a frequency response superior to competitive drivers with aluminum diaphragms. After manufacture, the frequency response of each driver is tested for conformity to rigid performance standards.

Model 2470 is an outstanding all purpose driver. It is smooth and wide-range enough for monitor systems; high powered and efficient enough for the most demanding reinforcement task.

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# 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 greater resistance to fatigue. The voice coil shall be edgewound aluminum ribbon for greater 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:

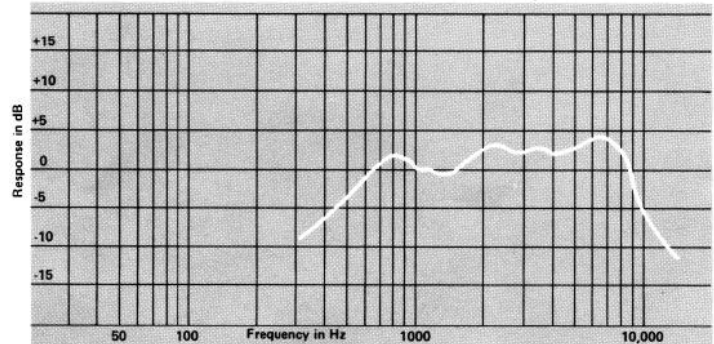
Measured sensitivity at 1 mW on a terminated tube (tube 1 inch in diameter, 3.0 feet long) shall be at least 117 dB. As an indication of electromechanical conversion efficiency, the BI factor shall be at least  $10.3 \times 10^6$  dynes/abampere. Frequency response, measured on a terminated tube, shall be flat within  $\pm 3$  dB from 500 Hz 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  $\pm 1$  dB through this region. On a 2350 horn, response shall be  $\pm 5$  dB from 500 Hz to 10 kHz. Nominal impedance shall be 16 ohms, and power capacity shall be at least 50 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

Horn Throat Diameter	1 inch	2.5 cm
Nominal Impedance	16 ohms	
Power Capacity	50 Watts continuous program	
Sensitivity*	117 dB	
Frequency Range	500 Hz to 12 kHz	
Recommended Crossover	500 Hz or higher	
Diaphragm	0.004" (0.10 mm) phenolic	
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 $\frac{1}{4}$ " (14.6 cm) diameter 3 $\frac{1}{2}$ " (9.8 cm) depth	
Net Weight	11 lbs	5.0 kg
Shipping Weight	12 lbs	5.4 kg

\*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 (0.126 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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