

# Professional Series

## Model 2440

### Compression Driver

4" aluminum diaphragm  
4" edgewound ribbon voice coil  
Highest efficiency  
Flat response  
60 watts—continuous program

*Professional audio consultants and engineers are invited to compare the JBL 2440 with other loudspeakers, both on the basis of acoustical measurements and extended listening tests.*



Model 2440 is the most massive professional quality compression driver in the industry. It has a four inch voice coil, and an Alnico magnetic structure weighing more than 25 pounds. It can take the most explosive transients in stride, and reproduce them at thunderous levels with flawless accuracy. Model 2440 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 crystal stresses that cause fatigue. After manufacture, the frequency response of each driver is tested and a peak or dip in response means it is rejected.

Model 2440 is ideally suited for critical sound reinforcing applications in large rooms. Its high efficiency and power capacity permit unparalleled dynamic range. Its ruler-flat response means that greater gain before acoustic feedback can be attained.



SYNTHÉ SOUND  
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ELKINS PARK, PA. 19117



# Model 2440—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 flared throat, the mouth of which shall be 2 inches 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 0.003 inch duraluminum alloy pneumatically drawn to shape to prevent stresses. The voice coil shall be edgewound aluminum ribbon of not less than four inches in diameter, operating in a magnetic field of not less than 20,500 Gauss.

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

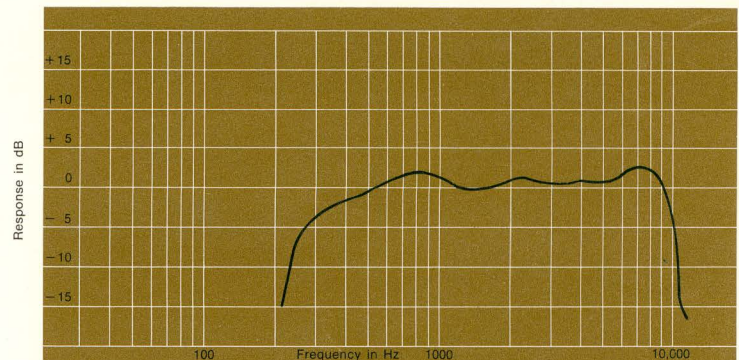
Measured sensitivity at 1 mw on a terminated tube basis (tube of 1 inch diameter, 3.0 feet long) shall be at least 118 dB. As an indication of electromechanical conversion efficiency, the BI factor shall be at least  $1.9 \times 10^7$  dynes/abampere. Frequency response, measured on a terminated tube, shall be flat within  $\pm 5$  dB from 500 to 9.5 kHz. On 2350 horn,  $\pm 3$  dB from 500 to 10 kHz referred to 1 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 2440. Other drivers will be considered for equivalency, provided submitted test data from a recognized independent test laboratory verify that the above performance specifications are met.

## Specifications

Normal Impedance	16 ohms
Power Capacity	60 watts continuous program
Sensitivity*	118 dB
Frequency Range	500 to 12 kHz
Voice Coil Diameter	4 inches
Voice Coil Material	Edgewound aluminum ribbon
Flux Density	20,500 Gauss
Diaphragm	0.003" duraluminum alloy
BI factor	$1.9 \times 10^7$ dynes/abampere
Recommended Crossover	500 Hz or higher
Dimensions	7" diameter x 5 1/4" deep
Horn Throat Diameter	2 inches
Net Weight	25 1/2 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 2440 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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