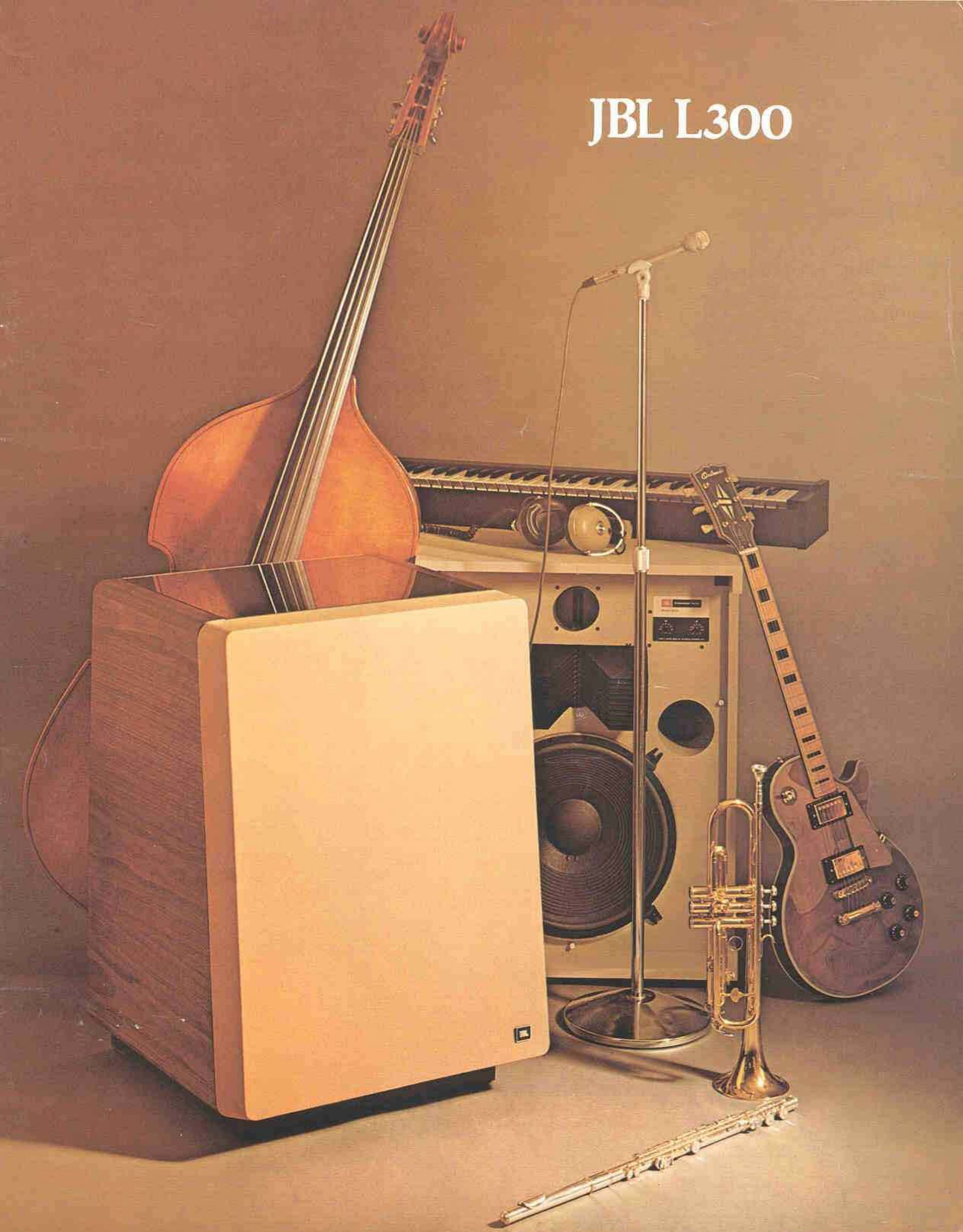
JBL L300

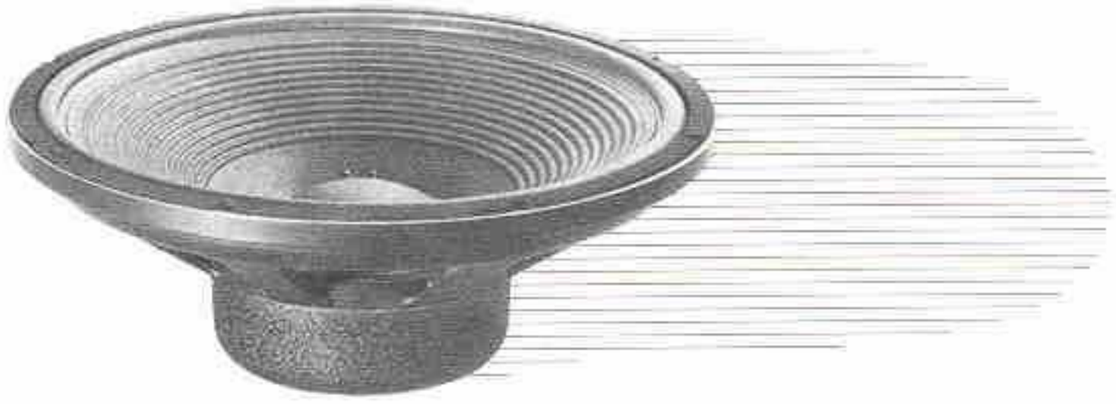


The L300 is the home entertainment version of the 4333 Studio Monitor—one of the most successful loudspeaker designs JBL has produced for the recording industry.

In its working dress at the studio, or in its decorous expression for the home, the acoustical performance is identical: engineered to provide the mighty reserves of sound power, broad bandwidth and undistorted response demanded by the professional producer and the discriminating amateur alike.



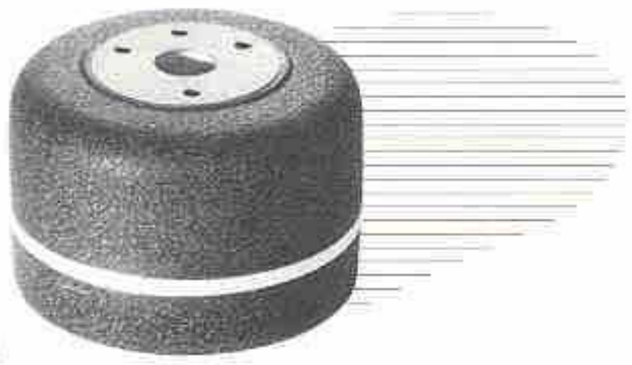
compressed into the horn through the concentric channels of a phasing plug. The long horn causes these waveforms to expand at a controlled rate. The slant plate lens alters their propagation to form a dispersion pattern of 120° horizontal by 40° vertical.



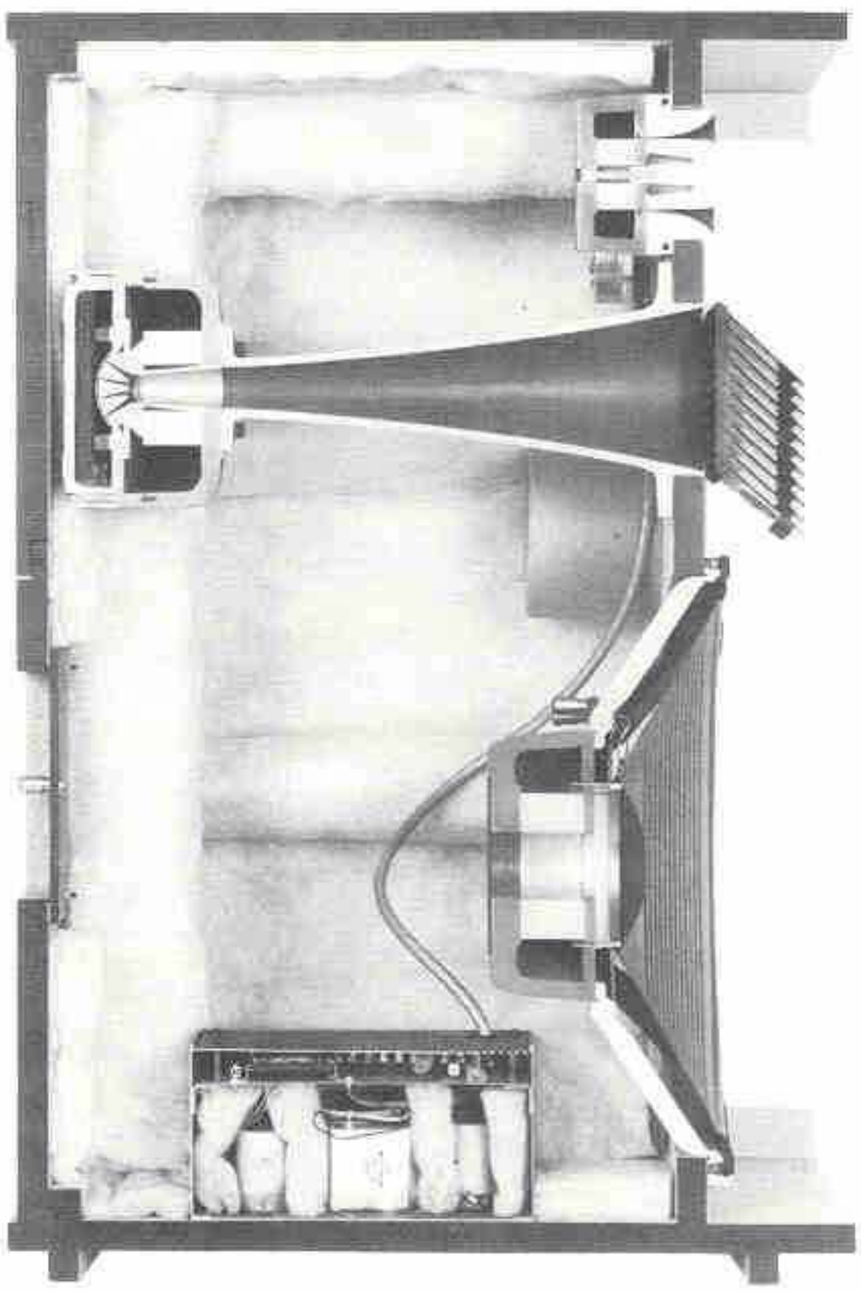
LOW FREQUENCY

Deep, tight bass is assured by the new 15-inch, 136A low frequency transducer. An extremely stiff, ribbed cone is driven by a 4-inch diameter edgewound ribbon copper voice coil, immersed in a 12-pound magnetic assembly with Alnico V magnet. Optimum weight and stiffness of the cone/voice coil assembly is assured through use of the JBL Mass Controlling Ring.* The cone is suspended in a die cast aluminum frame to eliminate any possibility of warpage and subsequent misalignment of the coil in the magnetic gap. As with all JBL loudspeakers, the 136A is hand-assembled and carefully tested for optimum accuracy, efficiency and transient response.

MIDRANGE



The middle octaves of program material, which include most of the vocal range, are reproduced by a compression driver and new horn/lens combination. The driver (LE85) is a massive 11-pound structure with an aluminum diaphragm attached to a 1-3/4 inch edgewound aluminum ribbon voice coil. Waveforms from the diaphragm are

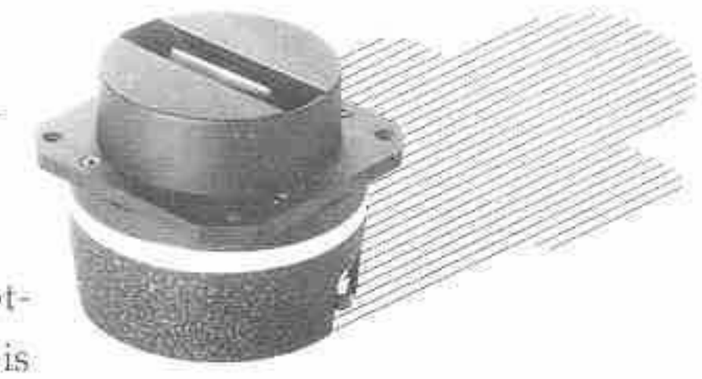


THE INSIDE STORY

Although the enclosure shapes differ
cutaways reveal that the low freque
network components are identical. T
monitor—except another 4333 monit

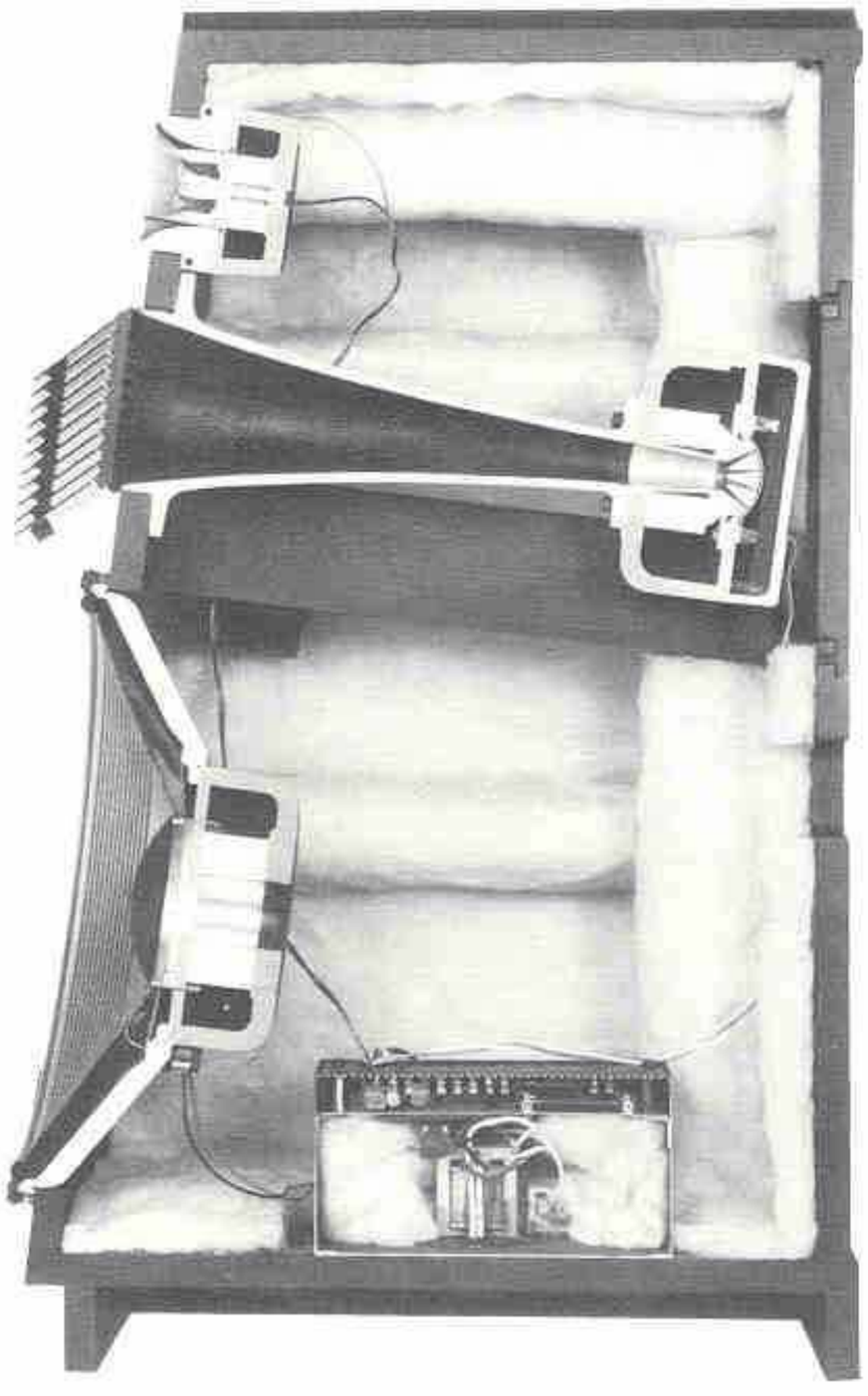
*Patent Pending.

HIGH FREQUENCY



Bright, transparent, distortion-free highs are dispersed by the 077 ultra-high frequency slot-loaded ring radiator. This unique driver combines the ideal attributes of very high efficiency and extraordinary power handling capability. It provides wide, controlled dispersion at extremely high frequencies and a frequency response which extends beyond human hearing.

The 077 consists of a 3-1/4 pound Alnico V magnetic assembly and an annular aluminum diaphragm coupled to a slotted exponential/diffraction horn. The horn assembly is cast of solid aluminum with a transparent acrylic internal dispersion element. The horn's design achieves a controlled rectangular dispersion pattern of 130° horizontal by 40° vertical at 15 kHz; even at 20 kHz, the very upper end of audibility, 077 achieves 110° horizontal dispersion.



the L300 (right), and the 4333, the
y, midrange, high frequency and
L300 is the closest thing to a 4333
.

NETWORK

The tolerances of JBL network components are much more stringent than normal industry practices. A properly designed network goes beyond the distribution of low, midrange and high frequency information to each speaker in the system; critical to the sound balance of a loudspeaker system is precise control of the drivers through the transition frequencies. The network of the L300 is designed to maintain a smooth response curve from the lowest to highest frequencies reproduced.

POWER HANDLING CAPACITY

The specified power handling capacity indicates the continuous program level that can be accepted by a JBL loudspeaker system without damage. Its peak power handling capacity is considerably greater than the continuous rated value, as reflected in the remarkable transient response of JBL loudspeaker system components. The L300 will produce clean sound at comfortable listening levels when driven by an amplifier having an output of as little as 10 Watts RMS per channel. However, for reproduction of the full dynamic range of contemporary recordings at high volume, a quality amplifier delivering up to 150 Watts RMS per channel will provide optimum performance. Such an amplifier has the reserve power necessary for accurate reproduction of transients, which can reach momentary peaks equivalent to ten times the average power level. In almost all cases, the volume level generated by a JBL loudspeaker will become noticeably discomforting to the ear before the loudspeaker can be damaged by excessive power from the amplifier.

ENCLOSURE

The L300 enclosure must be considered one of the finest examples of technology and craftsmanship yet produced at JBL. Assembled from stock up to one-inch thick and rigidly braced, it is the structural equal to the 4333 enclosure in every respect.

The massive, rugged structure is constructed of dense compressed wood, also known as particle board, veneered with American Black Walnut. This material is preferred to solid wood for its acoustic properties. The radiused corners are solid walnut. Observe the precise articulation of the gently sloping grille, the hand-rubbed finish and the dark glass inset. Grilles in black, brown, blue and camel assure an attractive complement to any room arrangement.

SPECIFICATIONS

JBL attributes major importance to the validity of published information. Rather than repeat the ambiguity of most technical specifications, JBL has traditionally refrained from listing data for which no widely accepted test procedure has been established. In the absence of such standards any well-equipped laboratory can legitimately produce a variety of frequency response curves for a loudspeaker, depending on the conditions selected. At JBL the final analyses are comprised of extensive listening sessions. Although laboratory data are an integral part of the process, the trained ear is the ultimate criterion. The success of this philosophy is reflected in the enthusiastic acceptance of JBL systems by recording studio engineers, producers and performers—professionals whose artistic achievements are closely related to the equipment they use.

JBL continually engages in research related to product improvement. New materials, production methods and design refinements are introduced into existing products without notice as a routine expression of that philosophy. For this reason, any current JBL product may differ in some respect from its published description but is always warranted to equal or exceed the original design specifications unless otherwise stated.



James B. Lansing Sound, Inc.,
3249 Casitas Avenue, Los Angeles, California, 90039

Specifications	
Power Capacity[1]	150 Watts continuous program
Nominal Impedance	8 ohms
Crossover Frequencies	800 and 8500 Hz
System Sensitivity	1 Watt input produces 80 dB Sound Pressure Level at a distance of 15'
(Note: 75-80 dB is a comfortable listening level.)	
Low Frequency Loudspeaker	
Nominal Diameter	15 inches 38 cm
Voice Coil	4-inch (10.2 cm) edgewound copper ribbon
Magnetic Assembly Weight	12 pounds 5.4 kg
Flux Density	12,000 gauss
Sensitivity[2]	44 dB SPL
Midrange Compression Driver	
Throat Diameter	1 inch 2.5 cm
Dispersion	120° horizontal, 40° vertical
Voice Coil	1-3/4-inch (4.4 cm) edgewound aluminum ribbon
Magnetic Assembly Weight	10 pounds 4.5 kg
Flux Density	19,000 gauss
Sensitivity[3]	59 dB SPL
Ultra-High Frequency Transducer	
Horn Mouth	3.125 x 0.725 inches 7.9 x 1.8 cm
Dispersion	130° horizontal, 40° vertical at 15 kHz 110° horizontal, 40° vertical at 20 kHz
Voice Coil	1-3/4-inch (4.4 cm) edgewound aluminum ribbon
Magnetic Assembly Weight	3-1/4 pounds 1.5 kg
Flux Density	16,500 gauss
Sensitivity[4]	56 dB SPL
Finish	Oiled Walnut
Grille	Three-dimensional, stretch fabric
Grille Color Options	Blue, Black, Brown, Camel
Dimensions	31-5/8" x 23" x 22-1/2" deep 80 x 58 x 57 cm deep
Shipping Weight	145 lbs. 66 kg

1. Based on a laboratory test signal. See Power Capacity section for amplifier power recommendation.
2. Since the major portion of the energy reproduced by a low frequency loudspeaker lies below 800 Hz, the sound pressure level was measured at 30 feet (9.1 m) using a 1-milliwatt test signal warbled from 100 to 500 Hz, rather than the conventional 1-kHz sine wave test signal on which the EIA sensitivity is based.
3. Averaged sensitivity above 1 kHz, within 1 dB, measured at 30 feet (9.1 m) with a 1-milliwatt input.
4. Averaged sensitivity above 7 kHz, within 1 dB, measured at 30 feet (9.1 m) with a 1-milliwatt input.

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