

JBL

L15

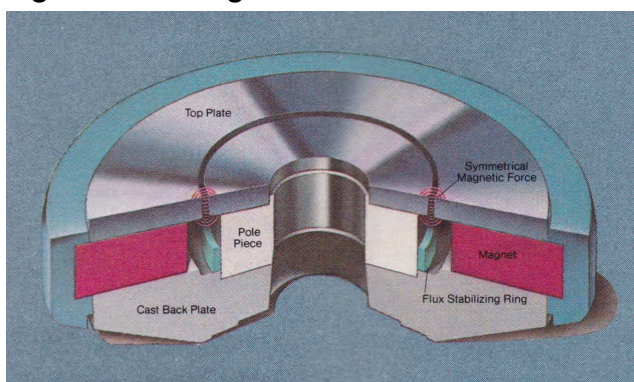


The most accurate musical reproduction possible: that is the goal of every JBL loudspeaker design. And at JBL, accuracy means much more than flat frequency response. Accuracy also is wide dynamic range. Accuracy is three-dimensional stereo imaging. Accuracy is low distortion. And only JBL gives equal attention to all these requirements.

High Efficiency Plus Accurate Bass

By carefully designing the loudspeaker elements to work together, JBL has given the L15 high efficiency as well as solid bass; an amplifier or receiver with as little as 10 watts per channel can drive the L15 to high volume levels. The L15 combines this efficiency with high power handling, giving the system the dynamic range to reproduce even the most demanding of program materials, including the best digital and wide-range analog recordings. You can safely employ a high-powered amplifier or receiver with the L15 (see specifications section).

The woofer itself features JBL's unique SFG (Symmetrical Field Geometry) magnetic structure, an engineering breakthrough that reduces second



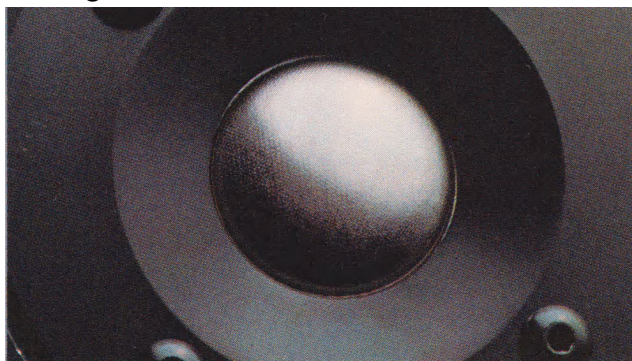
harmonic distortion to levels dramatically below those of conventional designs. The SFG structure reduces this distortion over the driver's whole bandwidth; because this extends to 2500 Hz in the L15, you hear the improvement as both purer midrange and clear, tight bass.

A ducted port tunes the system to proper response, improving low-frequency power handling. The enclosure is constructed from dense, 3/4-inch compressed wood, a material acoustically superior to solid wood. A fiberglass lining damps unwanted internal acoustical reflections.



Superior Materials and Construction

The woofer and the dome radiator both benefit from JBL's years of research into materials and construction techniques. A loudspeaker cone or dome must meet several potentially conflicting criteria. It must be rigid enough not to flex, even when driven to



high volume levels, because flexing will add distortion. The diaphragm must be of the proper combination of stiffness and damping so as to not resonate at any of the frequencies it reproduces, because such resonances will degrade the sound. And the diaphragm must also be light enough in weight to allow rapid movement, for accuracy and good transient response. In our laboratories we have conducted exhaustive tests on every conceivable material that might meet these criteria. The materials we chose for the L15 offer the exact performance we desire. The woofer cone is coated with Aquaplas, an exclusive formulation which creates a laminated construction with ideal damping characteristics.

The effect is a woofer with less a sound of its own—one that is a more transparent "window" of the sound. The cone is suspended in a die-cast frame that offers greater rigidity and allows much more precise construction than a stamped frame. (High precision is especially important in achieving high efficiency.) To meet different requirements, the high frequency dome is formed of a lightweight phenolic material. Despite its extremely low mass, the dome is quite rigid. This hard dome construction gives exceptionally smooth response with higher efficiency and higher acoustic output than a comparable soft dome.



Thorough Research, Unprecedented Versatility

Offering smooth and accurate sound, the JBL L15 brings the JBL design philosophy to a uniquely flexible two-way system, adaptable to any home environment. The L15 delivers much of the high performance of JBL's larger systems, providing superb musical accuracy.

Only JBL's engineering expertise could have produced the L15. Computer modeling simulations enabled us to conduct exacting research on the enclosure, identifying the ideal balance between flat response, power handling, and efficiency. Techniques such as laser holography give us a better under-

standing of driver behavior under all conditions. Extensive listening sessions supplement the laboratory tests. The result: optimum performance, a system | even greater than the sum of its parts. |

High Frequency

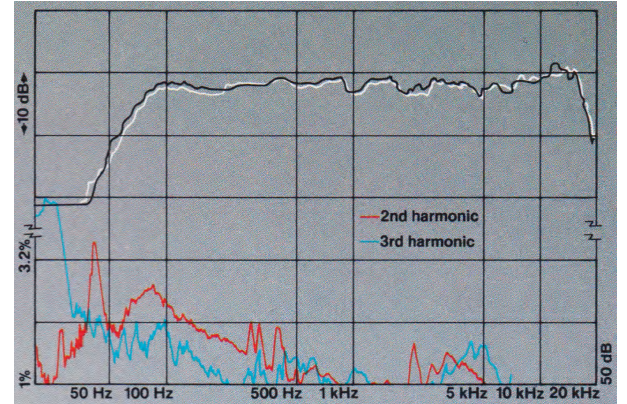
At the upper midrange frequencies, a dome radiator takes over. Another product of our advanced research methods, the dome offers very smooth, extended response. Dispersion is excellent, as is transient response (the driver's ability to respond accurately to dynamics such as the initial onset of a musical note). Heard on the L15, good recordings retain the full spatial characteristics of the original source, including the front-to-back depth that gives the sound a lifelike three-dimensional quality.

A Network That Brings It Together

Our engineers designed a high resolution dividing network that takes full advantage of the inherently excellent transient response of the L15 drivers, allowing them to achieve their full potential. The network makes use of polypropylene bypass capacitors (typically found only in active high frequency electronics) for better resolution of complex transient waveforms, and therefore clearer, more accurate sound. The sophisticated circuitry of the L15 network controls the drivers throughout their full operating ranges, rather than only at the crossover frequency, giving the system a very coherent sound.

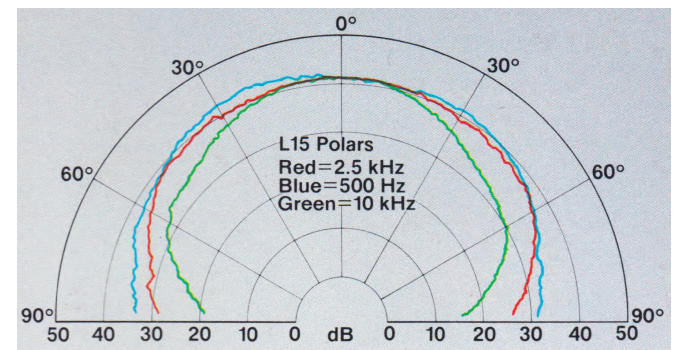
Performance Data

Although the ultimate test of a loudspeaker is in the listening, the laboratory test results can be informative as well. The graphs published here show the results of tests run on the L15.



Frequency response of the L15 at 1-watt and 10-watt input levels. There are only very minor differences between the curves. These graphs illustrate the flat frequency response (lack of power compression) of the L15 at any input level. Many loudspeakers that are accurate at low volume levels become less accurate as the levels increase. The 1-watt input produces an average output level of 88 dB. Music at this volume level is loud enough to be heard easily over conversation. The 10-watt input produces an average output level of 98 dB, twice as loud.

The lower curves are second and third harmonic distortion measurements. The low distortion percentages are the direct results of JBL's unique SFG magnetic structure.



Polar response of the L15 at low, mid, and high frequencies. The graph illustrates the dispersion characteristics of the L15; it is a visualization of the loudspeakers energy distribution at the indicated frequencies. The loudspeaker is at the center of the circle and aimed at the 0° mark. Speakers that do not have good dispersion, that do not distribute energy evenly at different frequencies, produce accurate sound only on axis (directly in front of the speaker). JBL speakers are designed for wide dispersion, to distribute each frequency evenly over a wide range of listening positions.



A Fine Furniture Finish

The enclosure of the L15 typifies the fine furniture design that has made JBL a leader in the audio industry. The L15 makes a strong visual statement: materials are skillfully selected and carefully prepared; joints are expertly closed; scratches, dents, and gluelines are non-existent. The grille is stretch material that is acoustically transparent. The L15 is finished in oiled American black walnut veneer, hand-rubbed to bring out the grain structure of the wood. Our cabinet-making expertise makes our enclosures the equals of the finest furniture built anywhere.

Crafted In The U.S.A.

Every step in the design and construction of the L15 is done at our Northridge, California facility. We make every effort to ensure that every speaker we build matches the quality and sound of our engineering design. Incoming materials are carefully inspected, and subassemblies are inspected and tested. We give every finished product both an audio test and a thorough visual inspection before it is packed.

The enthusiastic acceptance of JBL speakers by audio professionals



around the world attests to the quality of our approach. Building loudspeakers for the home requires different but equally demanding design parameters, and JBL excels at them as well. Our home systems enjoy an outstanding international reputation. In fact, in Japan, some of the most quality-conscious people in the world have made JBL the number one imported loudspeaker there. Through the years, JBL speakers have become classics of acoustic and visual design.

At JBL, we still think quality is important. That's why we make JBL loudspeakers the way we do.



James B. Lansing Sound, Inc.
8500 Balboa Boulevard, P. O. Box 2200,
Northridge, California 91329 U.S.A.

¹JBL /harman international

Specifications

System

Minimum Recommended Amplifier Power	10 watts per channel
Maximum Recommended Amplifier Power	100 watts per channel ¹
Nominal Impedance	8 ohms
Crossover Frequency	2.5 kHz
System Sensitivity	87 dB SPL, 1 W, 1 m [3.3 ft]

Low Frequency Loudspeaker

Nominal Diameter	6 1/2 in [162 mm]
Voice Coil	1 1/2 in [38 mm] copper
Magnetic Assembly Weight	3 lb [1.3 kg]
Flux Density	0.95 tesla [9500 gauss]
Sensitivity ²	89 dB SPL, 1 W, 1 m [3.3 ft]

High Frequency Dome Radiator

Nominal Diameter	1 in [25 mm]
Voice Coil	1 in [25 mm] copper
Magnetic Assembly Weight	1 1/4 lb [0.68 kg]
Flux Density	1.4 tesla [14,000 gauss]
Sensitivity ³	89 dB SPL, 1 W, 1 m [3.3 ft]

General

Finish	Oiled walnut
Grille Color	Brown
Dimensions	14 7/8 in x 9 3/8 in x 7 3/16 in 375 mm x 238 mm x 183 mm
Shipping Weight ⁴	35 lb [16 kg]

1. A more powerful amplifier may be used, as the L15 can handle instantaneous peaks of over 250 watts. Care should be taken not to drive the L15 into audible distortion, and we recommend use of a subsonic filter with a high-power amplifier.
2. Averaged from 100 Hz to 500 Hz, within 1 dB.
3. Averaged above 3 kHz, within 1 dB.
4. Two L15s are packed in a single carton.

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 this philosophy. For this reason, any current JBL product may differ in some respect from its published description but will always equal or exceed the original design specifications unless otherwise stated.

SSL15/5-82 Printed in U.S.A., C649

Loud and Proud

HIFIGOTEBORG.se a

JBL

WANT TO RELAX TO BEAUTIFUL
MUSIC

WELCOME

WE HAVE GOOD HIFI AT YOUR
SERVICE

PLEASE WAIT HERE & A MEMBER
OF OUR TEAM WILL BE WITH
YOU SHORTLY.

Or press finger HERE