

LE8T LINEAR EFFICIENCY 8-INCH EXTENDED RANGE LOUDSPEAKER



The JBL Model LE8T is a full-range, eight-inch diameter, *Linear Efficiency* loudspeaker with a flatness of response that has no precedent in a unit of this size. The LE8T mounted in a small enclosure delivers full bass by employing a small cone specially mounted to permit very long linear excursions. A larger cone would require a larger enclosure and limited cone travel would cause bass distortion.

Massively constructed, assembled with the utmost precision and incorporating many advanced design concepts, the LE8T provides accurate bass, mid-range reproduced with the comprehensive detail essential to the establishment of presence and highs that are vivid, pure and transparent.

The magnet assembly alone weighs 6½ pounds. Frame is a rigid aluminum casting. The voice coil is two inches in diameter. A silver impedance-controlling ring is an integral part of the magnetic assembly. The cone is suspended with JBL Lans-a-loy and damped with Lans-a-plas—materials which contribute immeasurably to the LE8T's exceptionally smooth response.

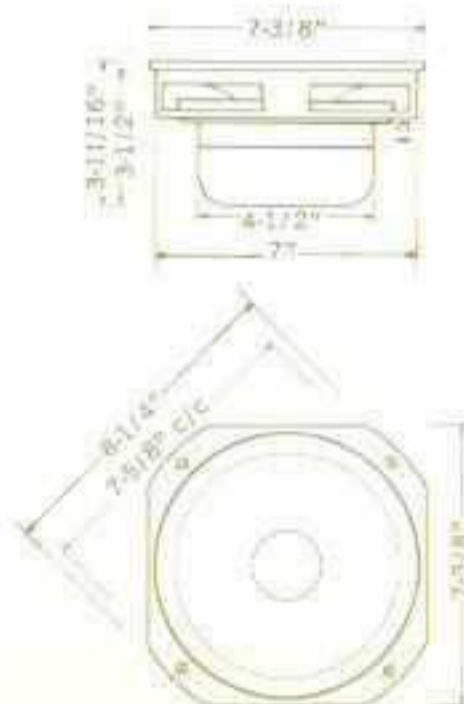
Intense listening levels in a large room can be provided by a few watts of power. Amplifiers rated at 20 watts allow ample reserve for delineation of intense transients. Higher power amplifiers may be used with little danger of overloading the LE8T.

The JBL LE8T is a remarkable new full-range transducer of unique design.

Smallest of JBL Linear Efficiency cone loudspeakers, the LE8T delivers verbatim reproduction of the audio spectrum.

The LE8T is specifically designed for small enclosures or infinite baffle mounting.

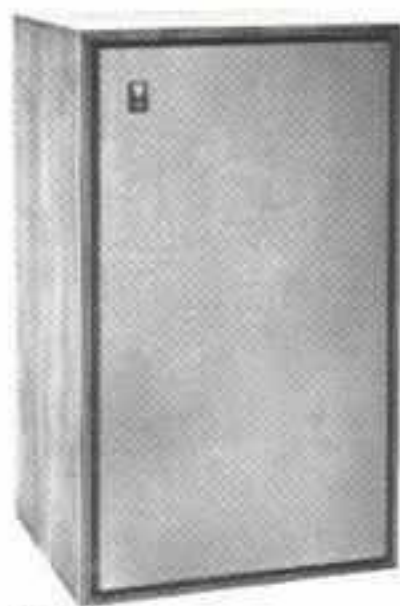
The performance of the LE8T in an enclosure of only one cubic foot cannot be matched by any other single speaker ever produced.



SPECIFICATIONS

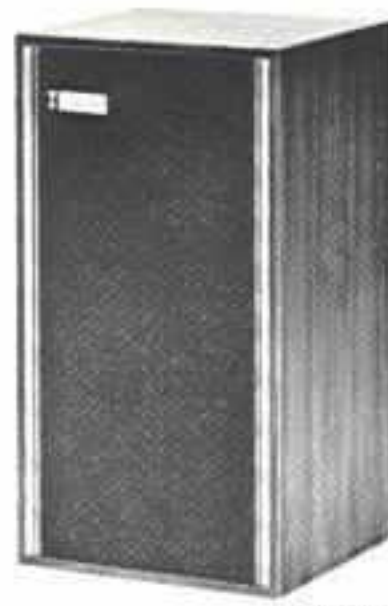
Impedance	8 ohms
Voice coil diameter	2"
Flux	200,000 Maxwells
Power capacity	20 watts cont. program
Free air cone resonance	35 cps
Frame	rigid cast aluminum
Baffle hole diameter—front mtg.	7-1/16"
—rear mtg.	6-3/4"
Shipping weight	11 lbs.

JBL LE8T



C53-Libra

The LE8T is available in the C53 Libra enclosure and is also used in conjunction with the PR8 passive radiator in the Lancer 44, L80 Caprice, L75 Minuet, and the L57 Carnival/L59 Festival.



Lancer 44

MOUNTING AND BAFFLING

An entirely new frame design enables the LE8T to be mounted from either front or rear. Standard bolt centers and baffle hole diameter allow the LE8T to be easily installed in existing baffles. The LE8T is shallow enough to fit flush in a standard wall, and it can also be installed in the ceiling.

The LE8T can be used in cabinets as small as 0.75 cubic feet; however, 3 to 5 cubic feet will allow for smoother, firmer and more extended low frequency performance. The cabinet must be rigid and non-resonant... no dimension may exceed any other by a 3:1 ratio... interior surfaces should be padded with acoustical fiberglass.

VOICE COIL AND CONE A two-inch edgewound aluminum ribbon voice coil is precisely centered in an intense magnetic field. Integrally stiffened by the application of Lans-a-plas, the LE8T moving assembly behaves as an ideal acoustical radiator throughout the audio range. The moving assembly is rigid, yet extremely light. It is assembled to standards of precision approached by no other manufacturer.

LANS-A-LOY SUSPENSION The outer surround of a loudspeaker cone must not only allow long linear movement, but should critically damp sound waves traveling through the cone. Phenolic cloth or standard sticky coatings cannot compare with new Lans-a-loy edge termination. Lans-a-loy was formulated to computer-determined specifications. It is inert, self-damping, and impervious to changes in temperature or humidity. The free-suspension,

made possible by the development of Lans-a-loy, is one of the most important engineering advances in the design of cone-type loudspeakers.

MAGNETIC CIRCUIT The precisely assembled magnetic circuit of the LE8T weighs 6½ pounds. Uniform flux is maintained over a length of ¾ inch. A pure silver impedance-controlling ring is designed as an integral part of the LE8T magnetic circuit. This ring controls the power drawn by the voice coil at high frequencies, thus helping extend the treble range of the LE8T beyond that of any other 8-inch loudspeaker.

Through advanced basic engineering design, virtually all magnetomotive force in the LE8T is released directly through the voice-coil gap. Unlike ordinary speakers, no stray magnetic attraction exists around the rear pot structure. Such painstaking design is evidenced in every detail of JBL loudspeakers.



MINIMUM VOLUME ENCLOSURE FOR LE8T

The bass loading duct of the above design is rectangular to simplify construction. When the LE8T is installed in the JBL C53 Libra, a removable duct of circular cross-section is used. However, the acoustical properties of both types are identical. Shown above are basic dimensions for a bookshelf enclosure specifically designed to match the LE8T 8-inch loudspeaker. ¼-inch stock is used throughout and all joints must be glued and sealed. Interior surfaces are padded with one-inch acoustical fiber-

glass. Decorative treatment and grille styling may be added to suit the requirements of the builder.

FOR MORE ROBUST BASS: The JBL PR8 passive radiator can be used in conjunction with the LE8T in home or custom built installations for richer bass, greater dynamic range and smoother response up into the mid-range. The enclosure must be completely airtight (no ports) and the internal volume must be between 0.75 and 2.0 cubic feet if the PR8 is to be used. For more information on JBL passive radiators, ask for JBL publications OM23 and SB3.

For information concerning applications of other JBL Linear Efficiency transducers, write to JBL's Technical Service Department and ask for JBL publications SB5, SB6 and SB7. In submitting questions, be sure to provide complete details concerning desired use.

JBL