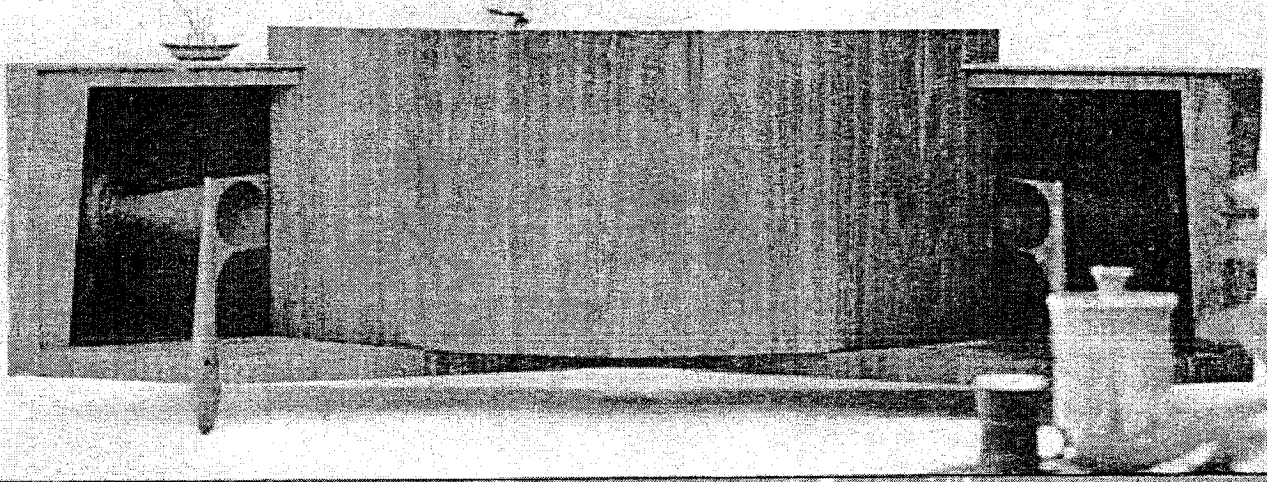
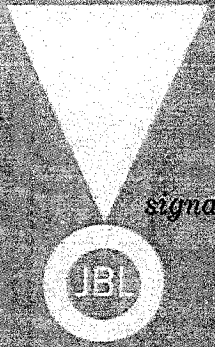
JBL-RANGER PARAGON INTEGRATED STEREOPHONIC REPRODUCER*

JBL Model 4000



full-field stereophonic sound of unsurpassed quality

*Patent Pending



signature

The JBL-Ranger *Paragon* Integrated Stereophonic Reproducer (JBL Model 44000) was developed by the James B. Lansing Sound, Inc., organization in association with Colonel Richard H. Ranger, Academy Award winner and winner of the Samuel L. Warner Award in 1967, for major contributions to the improvement of sound in motion pictures.

The research project which is here culminated began over ten years ago. Its original aim was to provide a master monitor for laboratory use in perfecting techniques of stereo recording. Due to the increasing interest in the stereo medium and the growing supply of source material, both on tape and disks, this precision reproducer is now made available to talented non-professional listeners in a size and styling suitable for the home music center.

SOUND IN PERSPECTIVE

The new dimension introduced by stereophonic reproduction is *depth*. Contrary to a common misconception, three-dimensional realism cannot be achieved simply by connecting two speaker systems to a stereo source. As in the case of three-dimensional photography, two distinct images are reproduced and—as in the optical analogy—specialized "viewing" apparatus is required. The ear cannot merge a divided solo performance, separated by the width of a room, any more than the unaided eye can merge the two views on a stereo slide. The JBL-Ranger *Paragon*, like the optical viewer, brings the third dimension into clear focus without making the listener conscious of two separated sound sources.



The fact that sound is refracted near a solid surface is well known and has been previously applied to another JBL development—the acoustic lens. If two sound sources are projected along a curved surface, the sound waves will tend to follow the curvature. The interaction results in the radiant dispersion of both wave trains over a wide field. Such a stereo reproducer is capable of pinpointing individual sound sources at any point on the curved refractor, depending on the phase and amplitude characteristics of the two primary signals. A complex three-dimensional sound source actually exists across the full width of the acoustic refractor. The ear is not called upon to "fill in" the orchestra between the sources. Moreover, a true stereo effect is perceived at any point within a large listening area.

Musicians, audio engineers and others with a taste for unmodified reality have overwhelmingly shown a preference for the JBL precision transducers used in the JBL-Ranger *Paragon*. These are the same professional-quality drivers found in the famous JBL *Hartsfield* system. Crisp bass notes generated by two JBL 150-4C's are transmitted through a pair of meticulously flared horns. The renowned JBL 375 Drivers radiate clean-cut midrange and high notes into the acoustic refractor, and the most remote harmonics are precisely articulated by two JBL 075 Ring Radiators. Play the system from a monaural source as well as in stereo. Either performance will be the finest which can be obtained in the present state of the art.

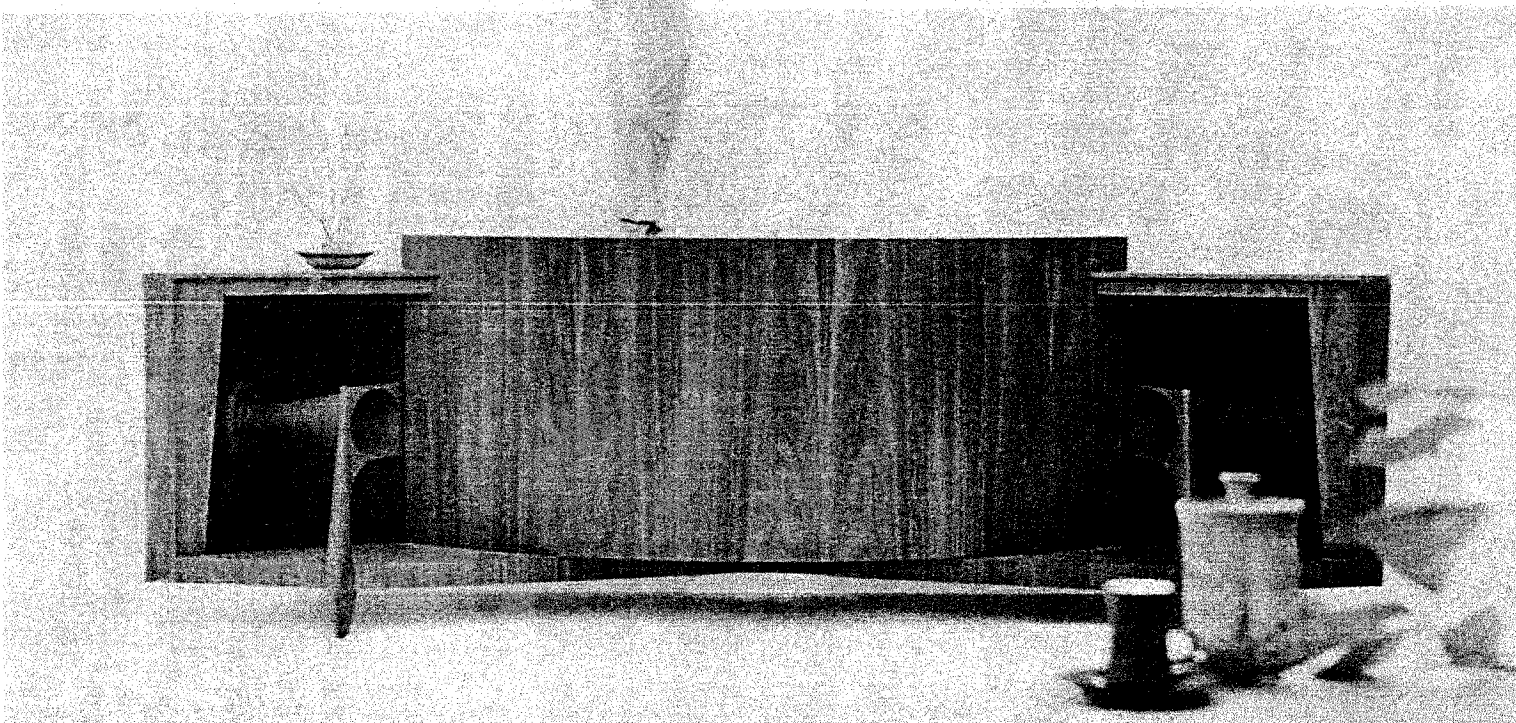
NEW VISTAS FOR THE MUSIC LOVER

As in any new technical development, there have been imperfections in stereo reproduction which were annoying to the more critical listeners. It has been a common practice to use two matched monaural systems, spaced more or less by guesswork. When the two systems were played in balance, the stereo effect could be perceived on the midline between them. But a listener in a less fortunate position might hear only that half of the performance which came from the nearest system. Even at the mid-point, there was an unnatural double-source effect which gave the impression that a soloist was divided into two halves.



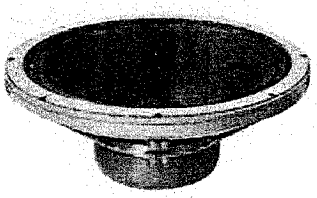
These and other problems are solved with the advent of the JBL-Ranger *Paragon*. The most perceptive of listeners may now have—

- *balanced performance* in depth, *regardless of seating position*
- *merged solo passages at pinpoint positions*
- *a system compatible with the finest monaural performance*



the JBL-Ranger *Paragon* / Model 4100

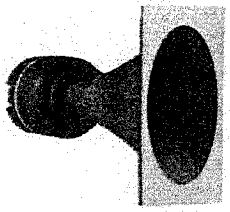
THESE PRECISION COMPONENTS BRING LIFE TO THE JBL-RANGER PARAGON



JBL 150-4C LOW FREQUENCY DRIVER

The high efficiency, smooth response and great power handling reserve of this driver have prompted its use in the world's finest theater sound systems. Fifteen inches in diameter, with rigid straight-sided cone for true piston generation of bass frequencies, the 150-4C gives verbatim reproduction of the lowest musical fundamentals.

(SEE JBL PUBLICATION SB1009)



JBL 375 HIGH FREQUENCY DRIVER

This precision driver has gained recognition among musicians and engineers alike for its reproduction of sharp transients and high-intensity percussive sounds in the vital "presence" range. The 375 reproduces the audible frequencies above 500 cps with ease and clarity approached by no other high frequency unit.

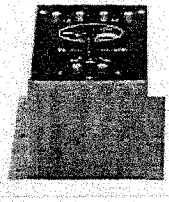
(SEE JBL PUBLICATIONS SB1008, SB1010)

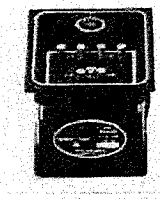


JBL 075 RING RADIATOR

The watchmaker's precision with which this fine transducer has been assembled is indicated by the machined surfaces of the annular horn. The unique ring diaphragm—another exclusive JBL design feature—permits clean articulation of the highest audio frequencies. In the JBL-Ranger Paragon, it operates from 7000 cps to a point beyond the limits of human hearing.

(SEE JBL PUBLICATION SB1003)



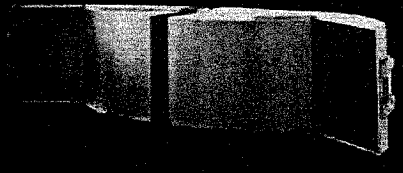


JBL DIVIDING NETWORKS N500H and N7000

JBL Networks are designed and tested by acoustical measurements of the actual loudspeaker systems with which they are to be used. This assures the smoothest and most realistic response possible under actual listening conditions. Each network has a level control for balancing performance to surrounding conditions.

(SEE JBL PUBLICATIONS SB1012 AND SB1013)

BUILT-IN INSTALLATIONS



The JBL-Ranger Paragon is available in unfinished form for studio, laboratory or built-in home use. The JBL Technical Service Department will be glad to cooperate with architects and others wishing to adapt the structure to specific surroundings.

SPECIFICATIONS

Power input capacity 60 watts (each channel)

Height	33¾"
Depth	24½"
Width	106"
Shipping Weight	850 lbs.

(Model D44000 is shipped in three easily-assembled sections)

Available in the following woods and finishes: dark mahogany, light mahogany, ebony, dark walnut, light walnut, limed oak and primavera. It is also possible to arrange for non-standard woods and for a finish to match your sample.

YOUR AUTHORIZED JBL DEALER

signature

JBL