

L45 FLAIR

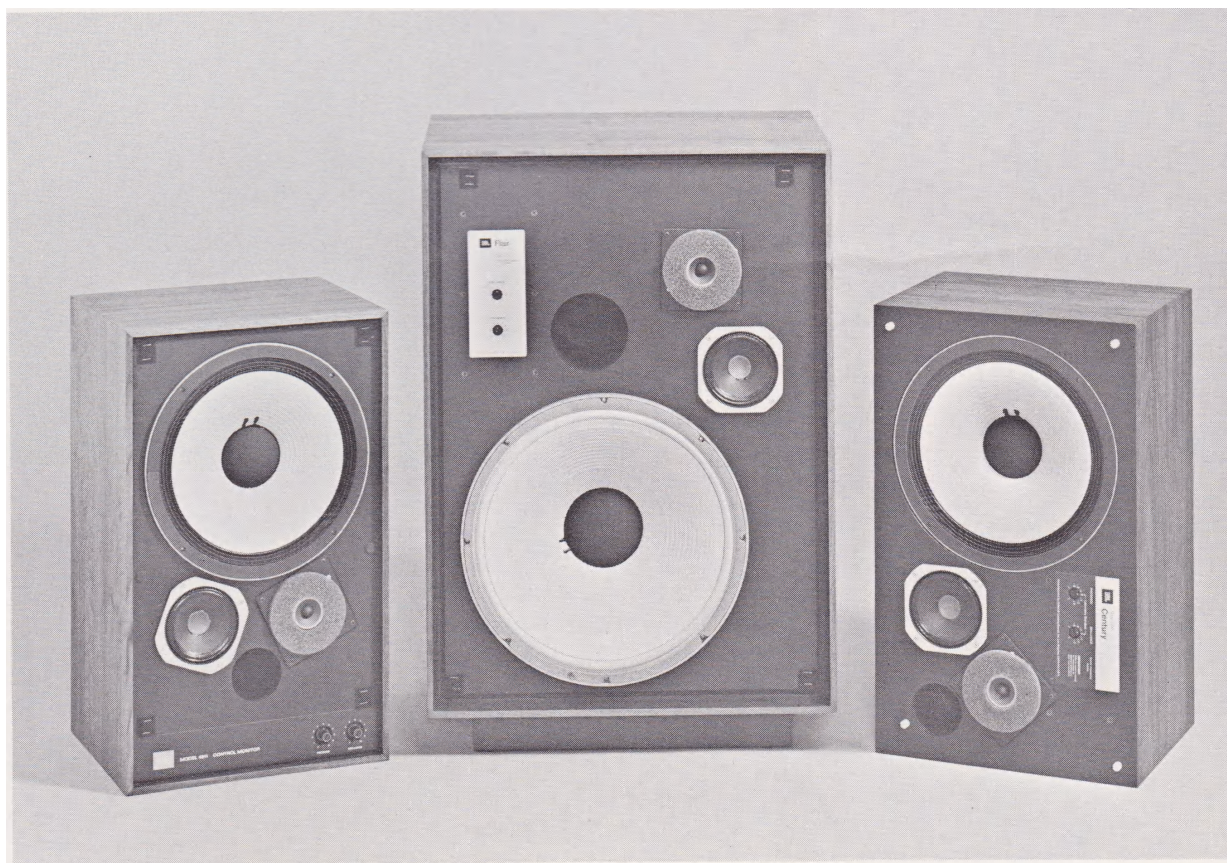


**THE BEGINNING-
PROFESSIONAL ORIGINS**

In late 1968, a major recording studio asked us to build a number of monitor loudspeakers for their control rooms. They wanted everything a big JBL studio monitor could offer: high efficiency, high power handling capacity and unusually clean, wide-range sound that reproduced instruments and voices with complete accuracy. But they wanted that performance in a small system no larger than two cubic feet. In response, JBL designed the 4310 Control Monitor—a shelf-sized loudspeaker that met all their requirements with room to spare.

From the start, the 4310 was a runaway best seller. So much in demand that it was styled for home use: the same great sound in a beautiful walnut enclosure with a unique acoustically transparent foam grille. This was the Century L100, destined to become the most successful loudspeaker JBL ever produced.

Since the sound of any loudspeaker system is the sum of its components, let's review the outstanding transducers found in both the L100 and the current model of the Control Monitor. The first is a powerful 12-inch low frequency loudspeaker (6.75 pounds of precisely machined iron and Alnico V in its magnetic structure) providing bass response that easily recreates the lowest octave of human hearing—and honest definition of all instruments whose fundamental tones lie in this region. Impeccable midrange transient response and smooth, open voice reproduction are achieved by a 5-inch transducer featuring a 2.75- pound magnetic structure. For the treble, a 1.4-inch direct radiator disperses high frequencies over an extremely wide angle; and by virtue of its high efficiency, at extra loud listening levels, this powerful device maintains sharp definition throughout its entire range, up to the limits of human hearing. In combination these low, mid and high frequency components provide some of the most accurate reproduction you're likely to hear.



Three generations of a pure professional sound.

Was it possible to get even more of that same great sound but with higher overall efficiency and more powerful handling capacity? Could JBL build a super L100?

Our engineers' reply was an emphatic "YES," but since the Century was already 100 pounds of sound in a 51-pound box, the only way its basic sound could be retained, with an increase in power handling capacity and efficiency, would be to incorporate several primary changes.

First, the L100's 12-inch low frequency loudspeaker must grow to 15 inches; its voice coil diameter must expand from three inches to four; and the magnetic assembly demanded almost a 100% increase to a total of 12 pounds. Then, the midrange driver needed slightly greater acoustic output to balance with the larger, more efficient 15-inch bass loudspeaker. Lastly, the whole package called for an enclosure large enough to allow the big 15-inch driver plenty of breathing room. Unquestionably, the L100 is a hard act to follow, but JBL was determined to produce such a loudspeaker and work began immediately. Our transducer lab's first success was the new low frequency driver. To say that their efforts were supremely rewarded is, in all modesty, an understatement. Performance was so outstanding that, after it was confirmed for the "super L100" project, it was selected for use in JBL's 4350 studio monitor, a five-transducer, bi-amplified system, designed for the world's finest recording studios.

Increasing midrange efficiency was less critical because the L100's midrange unit already had a considerable margin of acoustic reserve. By moderately boosting magnet strength, it matched perfectly with the 15-inch bass loudspeaker.

The high frequency driver was more than a match for the low frequency and midrange units and could be used without modification.

At this point, to effect smooth transition between low, mid and high frequency loudspeakers, a frequency dividing network featuring precision, close-tolerance components was built. It complements the exact electrical and acoustic characteristics of each loudspeaker. The mid and high frequency loudspeakers each have a variable level control which balances their output for different rooms and listening tastes.

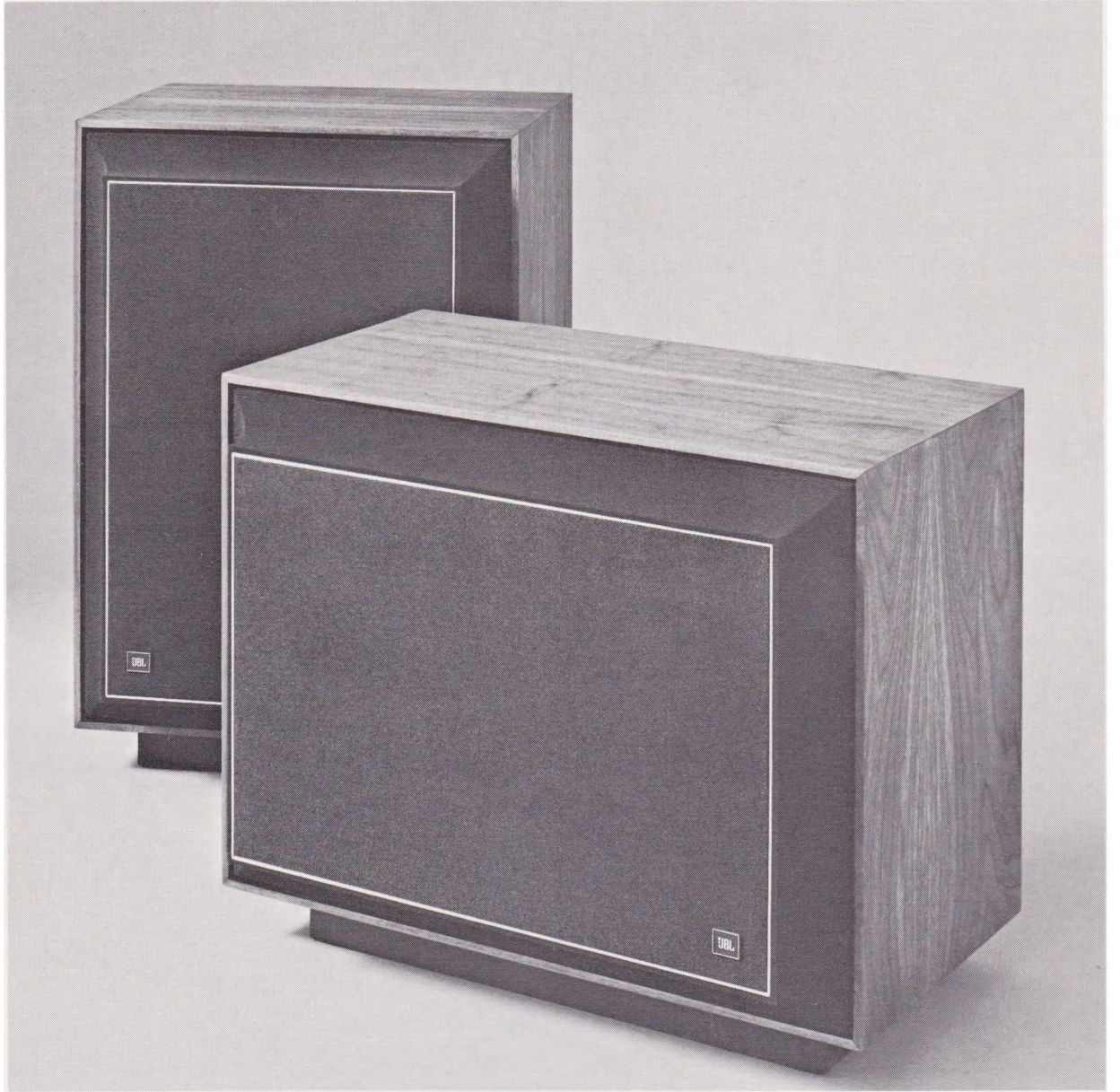
Finally, an acoustically correct enclosure was devised to guarantee that the system would deliver best performance. When it was settled that the optimum dimensions would be 22" x 30" x 18", weighing over 95 pounds, it certainly was no longer in the bookshelf category. But scores of laboratory and critical listening tests revealed it's well worth every cubic inch; the "super-L100" was lost to the bookshelf world and emerged as a floor model triumph.



Only a part of the sophisticated laboratory equipment used in developing the Flair. The final analysis, however, is in the hearing.

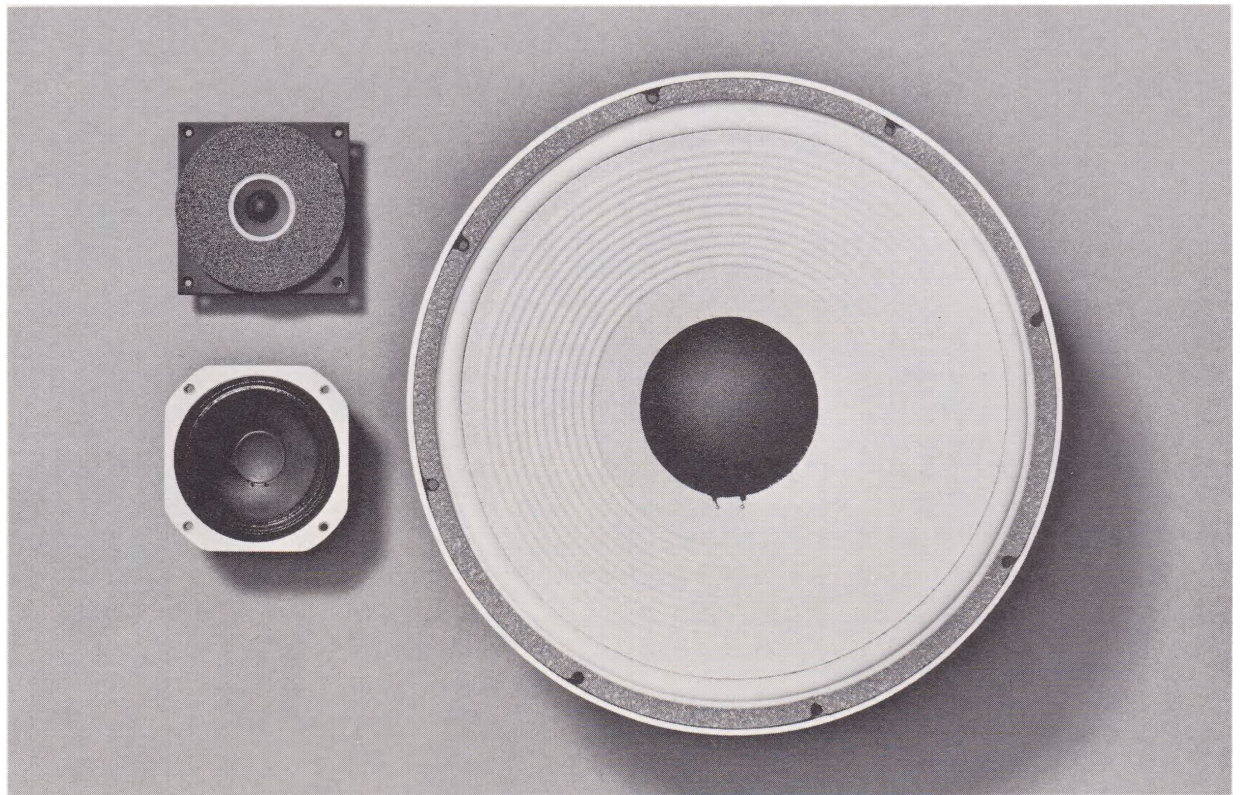
JBL, in its commitment to beauty for the eye as well as the ear of the beholder, designed an enclosure of fresh contemporary design, featuring a dimensional grille of sculptured foam on four sides, which frames a dark, charcoal brown fabric panel neatly accented by a narrow band of brushed aluminum. Since the Flair's controlled proportions allow it to be used either horizontally or vertically, a base is provided for either, as requested.

Most rewarding of all, however, the L100's outstanding sound is still present, but with higher overall efficiency and far greater power handling capacity.



Placed vertically or horizontally, the Flair looks impressive. And inside are the same components featured in two JBL studio monitors.

**THE FLAIRS
STANDARD SYSTEM**



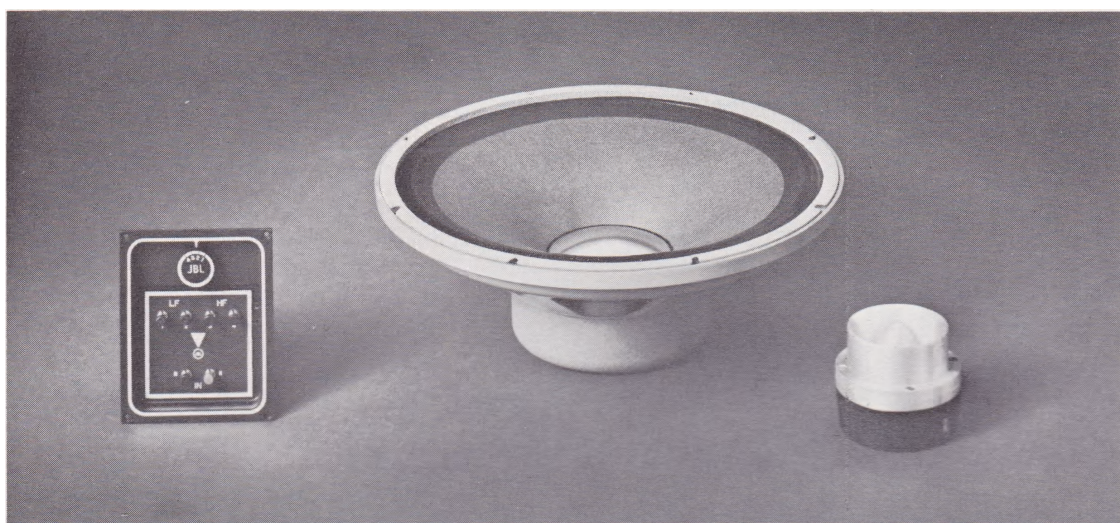
Three great performers: a 15-inch low frequency driver, 5-inch midrange transducer and 1.4-inch direct radiator.

In addition to its standard system, the Flair enclosure can be ordered with these alternative JBL systems.

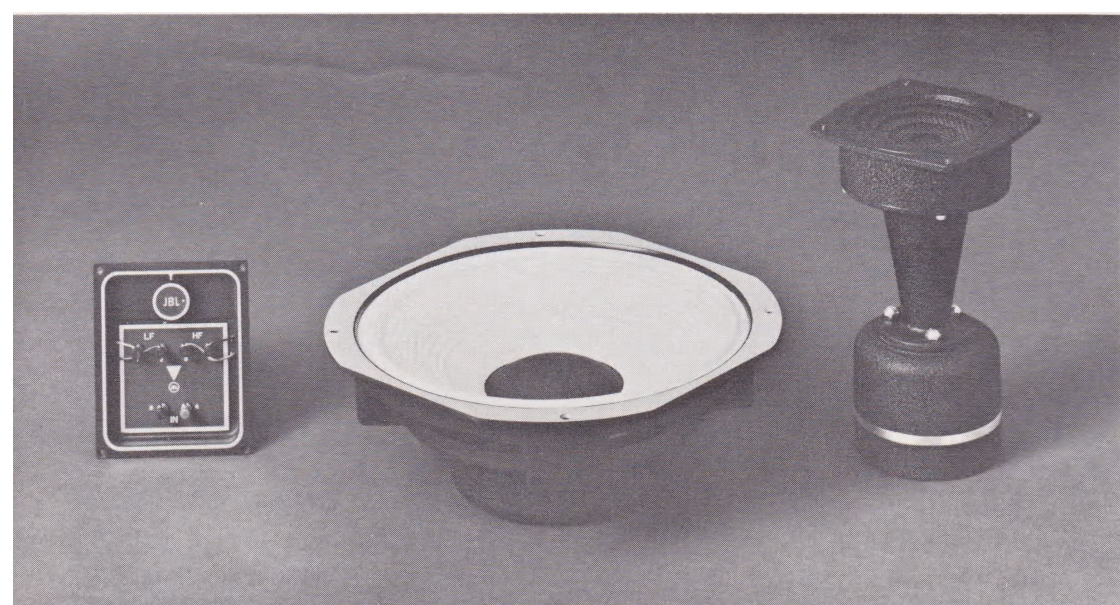
**OPTIONAL SYSTEMS•
SOME FORMORE
SOME FOR LESS**



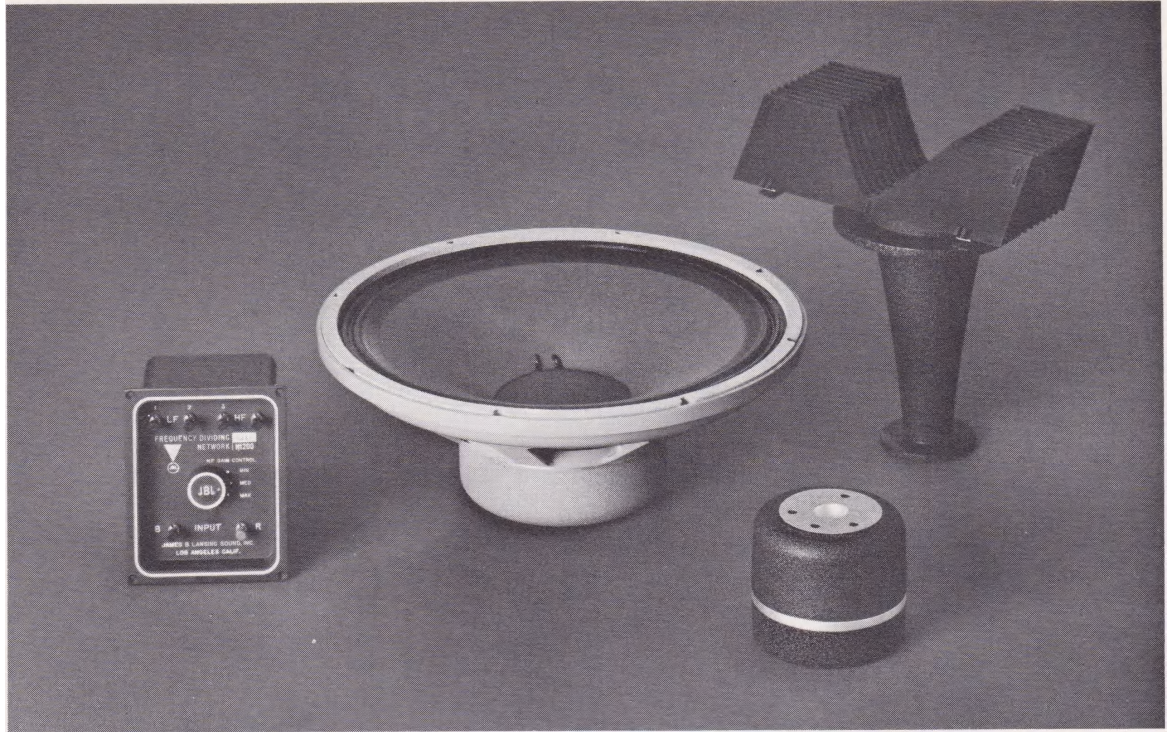
001 System—Features the 130A low frequency loudspeaker, LE175DLH driver/horn/lens assembly and N1200 dividing network.



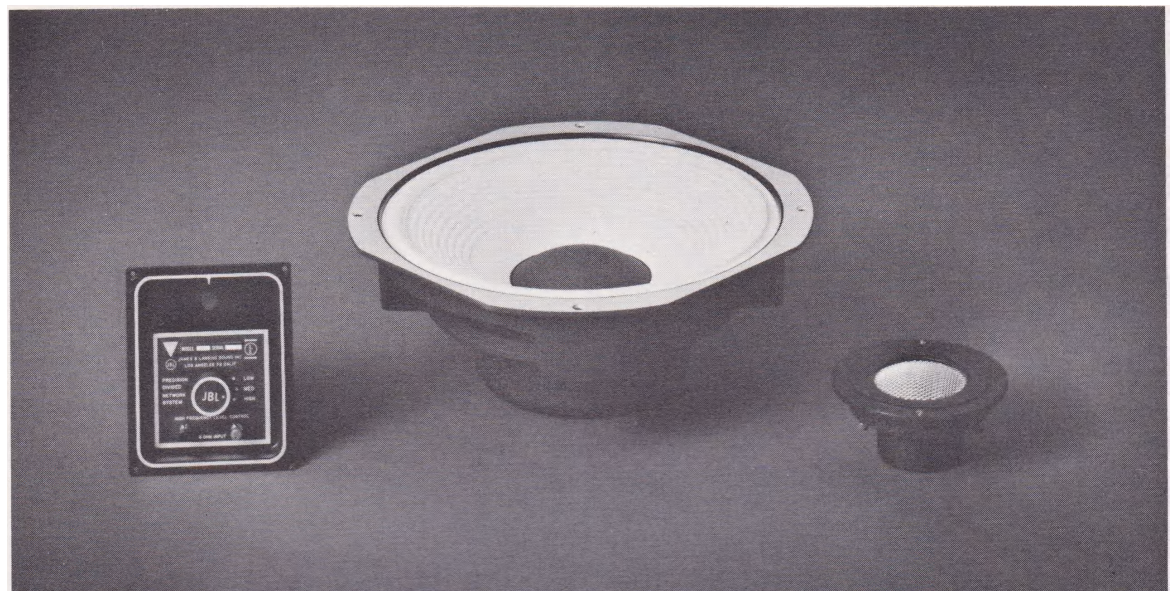
030 System—Consists of the D130 extended range loudspeaker, 075 ring radiator and N2400 dividing network.



Si System—It incorporates the LE14A low frequency loudspeaker, the LE175DLH driver/horn/lens assembly and the LX10 dividing network.



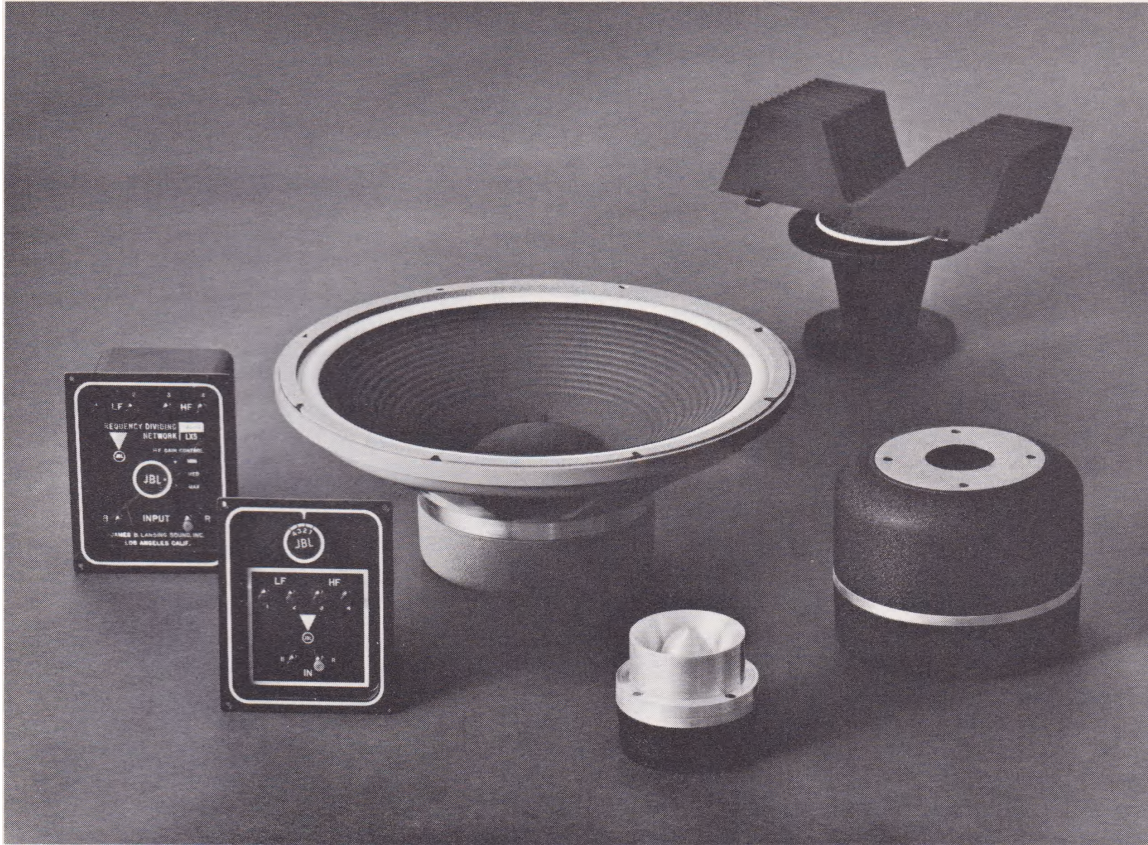
S4 System—Consisting of the same drivers and frequency dividing network as the 001 system, the S4 affords a wider high frequency dispersion pattern by virtue of its L91 acoustic lens.



S12 System—The S12 is made of the LE14A low frequency loudspeaker, the LE20 high frequency direct radiator and the LX8 dividing network.



S7 System—Includes the LE15A low frequency loudspeaker, LE85 driver, HL91 horn/lens assembly and the LX5 dividing network.



S8 System—The ultimate in JBL component systems, the S8 features the LE15A low frequency loudspeaker, 375 driver with the HL93 horn/lens, 075 ring radiator, the LX5 and N7000 dividing networks.

The specified power handling capacity indicates the continuous program power 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 L45 Flair will reproduce 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.

POWERCAPACITY

The L45 enclosure is tuned to complement the acoustic characteristics of each loudspeaker system. It utilizes a ducted port to provide the proper resistive load on the loudspeaker cone for improved efficiency and dynamic range. To achieve maximum strength and resistance to vibration, all panels are constructed of 3/4-inch stock, side and back panels are lined with acoustic padding, and all joints are hand fitted, lock mitered and wood welded.

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 analysis consists 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.

Power Capacity*	75 Watts continuous program
Nominal Impedance	8 ohms
Dispersion	90° horizontal and vertical
Crossover Frequencies	1200 and 7500 Hz
Efficiency	1 Watt input produces 80 dB Sound Pressure Level at a distance of 15'
<i>(Note: 75-80 dB is a comfortable listening level.)</i>	
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**	44 dB
Midrange Transducer	
Nominal Diameter	5 inches 13 cm
Voice Coil	7/8-inch (2.2 cm) edgewound copper ribbon
Magnetic Assembly Weight	1.6 pounds 0.7 kg
Flux Density	15,000 gauss
Sensitivity (Averaged 1 to 3 kHz)	46 dB
High Frequency Direct Radiator	
Nominal Diameter	1.4 inches 3.6 cm
Voice Coil	5/8-inch (1.6 cm) copper
Magnetic Assembly Weight	1.6 pounds 0.7 kg
Flux Density	15,000 gauss
Sensitivity (Averaged above 2 kHz)	47 dB
Finish	Oiled Walnu
Grille	Sculptured foam and Charcoal Brown Fabric
Dimensions (without base)	21 3/4" x 29 5/8" x 17 3/4" deep 55 x 75 x 45 cm deep
Base	2 1/4:" (6 cm) high
Shipping Weight	108 lbs 49 kg

Based on a laboratory test signal. See Power Capacity section for amplifier power recommendation.

*Since the major portion of the energy reproduced by the low frequency loudspeaker lies below 800 Hz, this specification has been developed by using a test signal warbled from 100-500 Hz, rather than the conventional 1-kHz sine wave test signal on which the EIA sensitivity rating is based.

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.



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JBL

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SERVICE

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OF OUR TEAM WILL BE WITH
YOU SHORTLY.

Or press finger HERE