

b u l l e t i n

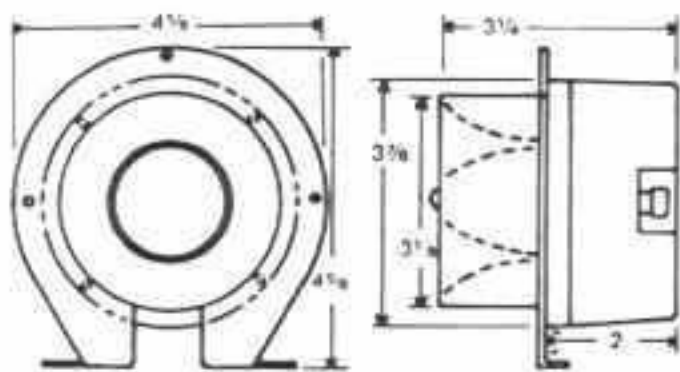
Model
075
HF
radiator

Number SB1003

DO NOT REMOVE
OFFICE COPY



- *Introduces ring radiator for smoothest highs*
- *Distributes uniformly at all listening angles*
- *Distortionless, smooth response from 2500 cps. up*
- *Matched performance with Signature extended range speakers*



SPECIFICATIONS

Physical dimensions

Voice coil diameter.....	1 3/4"
Baffle hole diameter.....	3 3/16"
Bolt circle diameter (bracket).....	4 3/16"
Shipping weight.....	6 lbs.

electrical

Power input.....	20 watts above 2500 cps
Impedance.....	16 ohms
Field.....	Permanent Alnico V Magnet

acoustical

Dispersion.....	90°
-----------------	-----

The JBL *Signature* Model 075 High Frequency Ring Radiator is designed to reinforce extended range speakers in the high frequency band, adding brilliance and dimensionality to their performance. It radiates efficiently and without resonances from 2500 cps to beyond the limit of audibility. In complementing the performance of JBL extended range speakers, such as Models D130, D123 and D131, it is recommended that the 075 HF Radiator be connected through the JBL N2600 Dividing Network, which has a crossover point at 2500 cps. This combination of top quality components makes it possible for critical listeners who are restricted by a limited budget to enjoy the realism which only a matched pair of precision transducers can create. That the traditional quality of JBL transducers has not been sacrificed to price economy can be demonstrated simply by holding the Model 075 in the palm of the hand. Its compact massiveness and its precisely machined surfaces testify to the watchmaker's precision with which the entire unit has been assembled.

Unwilling to reduce standards of quality, the James B. Lansing Sound organization turned its back some time ago on immediate market demands for a "super tweeter" and went back to re-examine some of the fundamental assumptions on which the present-day techniques of sound generation are based. Careful research was rewarded by a fresh set of concepts. Months of experimental work and careful planning confirmed a new approach to the special problems which exist at the high end of the audio band.

*every note
a perfect quote!*

signature



sound

JAMES B. LANSING SOUND, INC. • 3249 CASITAS AVE. • LOS ANGELES 39, CALIF.

CONSTRUCTION

the ring radiator

Unlike conventional generating elements, the ring possesses an extremely simple two-dimensional geometry. Its modes of partial vibration can be analyzed and controlled with relative ease. It couples integrally with a large voice coil, contributing a minimum of inertia to the dynamic system. Provided with stiffening strength in its plane, it remains in phase at all points of its surface. Since it radiates directly into the throat of the horn, this property is transmitted to the acoustic vibrations — or sound waves. This adds up to piston action and — given the skilled touch of true artisans — results in crisp, accurate and trouble-free reproduction.

electrodynamic components

The voice coil follows the proved James B. Lansing Sound theory associating electrodynamic efficiency with the diameter of the winding. In this case, the diameter of the aluminum ribbon-wound coil is $1\frac{3}{4}$ inches. In the intense field of the massive magnet, the extremely light coil responds instantaneously to difficult transient wave forms.

the horn

The throat of the horn is a narrow annular slit, corresponding to the radiating surface of the ring. Cross sections through the longitudinal axis of the unit reveal that the entire area of the ring diaphragm is loaded by a true exponential horn, precisely machined to the optimum flare for transmitting the frequencies of interest. The centerline between the flared surfaces, when revolved, describes a cone. Thus, the high frequencies are dispersed through a wide solid angle.

mounting hardware

A clamp ring with an L-profile is furnished with Model 075. This permits mounting in a baffle hole or securing the unit to a flat supporting surface. The unit is held in the bracket by a tangential screw and may be adjusted along its axis.

PERFORMANCE

The JBL Model 075 operates efficiently and without perceptible peaks and dips from a 2500 cps crossover point to a point well beyond the limits of human hearing.

The unique diaphragm structure, coupled with the efficient acoustic loading of the exponential horn, produces a response which is smooth and clean all the way. The Model 075 also possesses that remarkable characteristic which has drawn critical praise to other units in the JBL *Signature* line — the ability to articulate the most fleeting transient sounds. This is the essence of high fidelity. It is the striving for this effect which has motivated such JBL innovations as the 4-inch voice coil, the acoustic lens, the HARTSFIELD enclosure — and the ring radiator.

TWO-WAY SYSTEMS

Model N2600 Dividing Network

The JBL *Signature* Model N2600 Dividing Network is designed to provide proper matching and balancing between Model 075 and JBL extended range speakers. Crossover is at 2500 cps, which restricts each unit to its band of optimum performance. Impedance at the output terminals can be adjusted to match single- or multiple-speaker installations. This simplifies the problem of building up a system without discarding components. An attenuator which adjusts the power input to Model 075 makes it possible to balance two-way performance. Model N2600 is fully described in JBL Publication SB1011.

Model D130 Extended Range Speaker

The standard JBL two-way system 030 consists of this famous 15-inch speaker combined with Model 075 and N2600. Two D130's perform with Model 075 in System 040. Model D130 is fully described in JBL Publication SB1002.

Model D131 Extended Range Speaker

This is the 12-inch version of Model D130. Recommended with Model 075 in JBL Systems 031, 032 and 033. Fully described in JBL Publication SB1006.

Model D123 Extended Range Speaker

From one to four of these 12-inch speakers can be balanced with Model 075. System kits 002, 026 and 004 include one, two and four D123's respectively. Model D123 is fully described in JBL Publication SB1001.

For complete description of all JBL *Signature* units, write for latest catalog.



signature **JBL** sound

JAMES B. LANSING SOUND, INC. • 3249 CASITAS AVE. • LOS ANGELES 39, CALIF.

PRINTED IN U.S.A.