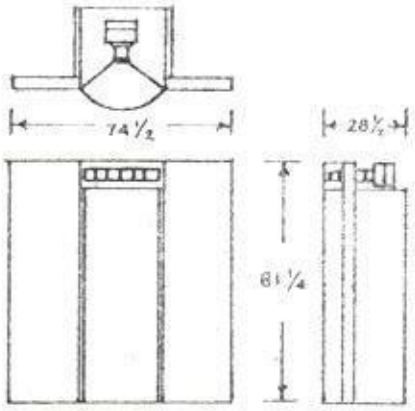
JBL
CINETRON
LOUDSPEAKER
SYSTEMS

BULLETIN CA 904



JBL

D14S20 CINETRON IV THEATER LOUDSPEAKER SYSTEM

The versatile proportions and outstanding performance of this completely new JBL theater loudspeaker system make it an ideal choice for modern stereophonic sound installations.

The JBL Cinetron IV is designed to meet the need for a professional theater loudspeaker system capable of reproducing the full frequency and dynamic range of modern optical or magnetic recordings and distributing all frequencies uniformly over a very wide area.

* Transducers arranged in a vertical line source for optimum dispersion characteristics.
* Professional 2-way loudspeaker components. Horn-loaded high frequency assembly with JBL 375 driver. Two specially designed long-throw low frequency drivers. Two special passive radiators for greater bass efficiency and power-handling ability.
* High frequency and low frequency transducers loaded by a single continuous baffle for smooth response through crossover region and freedom from diffraction effects at higher frequencies.
* Shallow depth of system (only 28-1/2 inches) reduces wasted space behind screen.
* All components electrically and physically coordinated to work together as a single integrated system.
* Power-handling capacity: 60 watts continuous sine wave, more than 125 watts average program material.

(over)

James B. Lansing Sound, Inc., 3249 Casitas Ave., Los Angeles 39, Calif.

JBL D14S20 (cont.)

The JBL Cinetron IV is the first theater loudspeaker system to provide a smooth, level response characteristic which remains unchanged whether the listener is on the axis of the system or located as much as 70° off axis. This is especially important in multi-channel stereophonic installations where realism depends upon each member of the audience receiving the same sound blend. Uniform dispersion also is maintained through 60° in the vertical plane. This allows the full audience area to be covered without having to adjust the axis of the high frequency assembly.

Frequencies above 500 cps are reproduced by the JBL 375 driver and a new H61 wide angle horn designed specifically for the Cinetron IV. No other compression driver approaches the smoothness of response, the complete freedom from coloration, and the dynamic range of the 375.

Low frequencies are fed to a pair of JBL 140B specially designed bass loudspeakers. These units combine high conversion efficiency with long cone travel and high power-handling capacity. Because the 140B's are front-mounted to a large flat baffle and arranged in a vertical line, their directional characteristics also are uniform through 140° horizontal and 60° vertical angles. Reproduction is completely natural and free from the "chesty" resonances which accompany other types of low frequency loading.

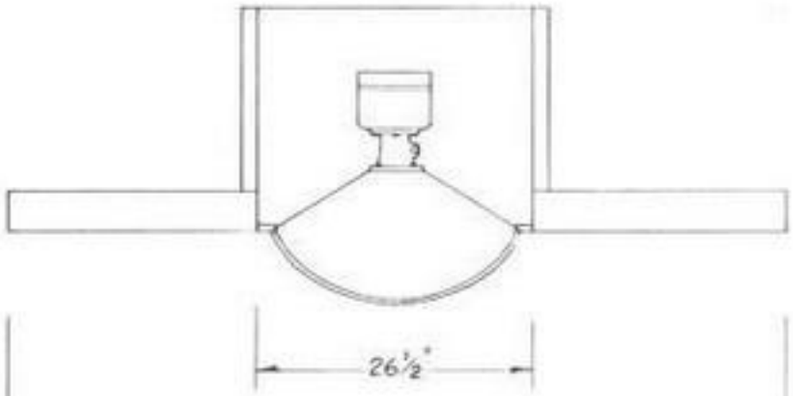
The effective low frequency radiating area is doubled by a pair of JBL PR15 passive radiators. These operate as sophisticated acoustical phase inverters, making use of sound energy inside the enclosure which would otherwise be wasted. The passive radiators are responsible for greatly increased bass efficiency, greater power-handling ability, and smoother performance well up into the mid-range.

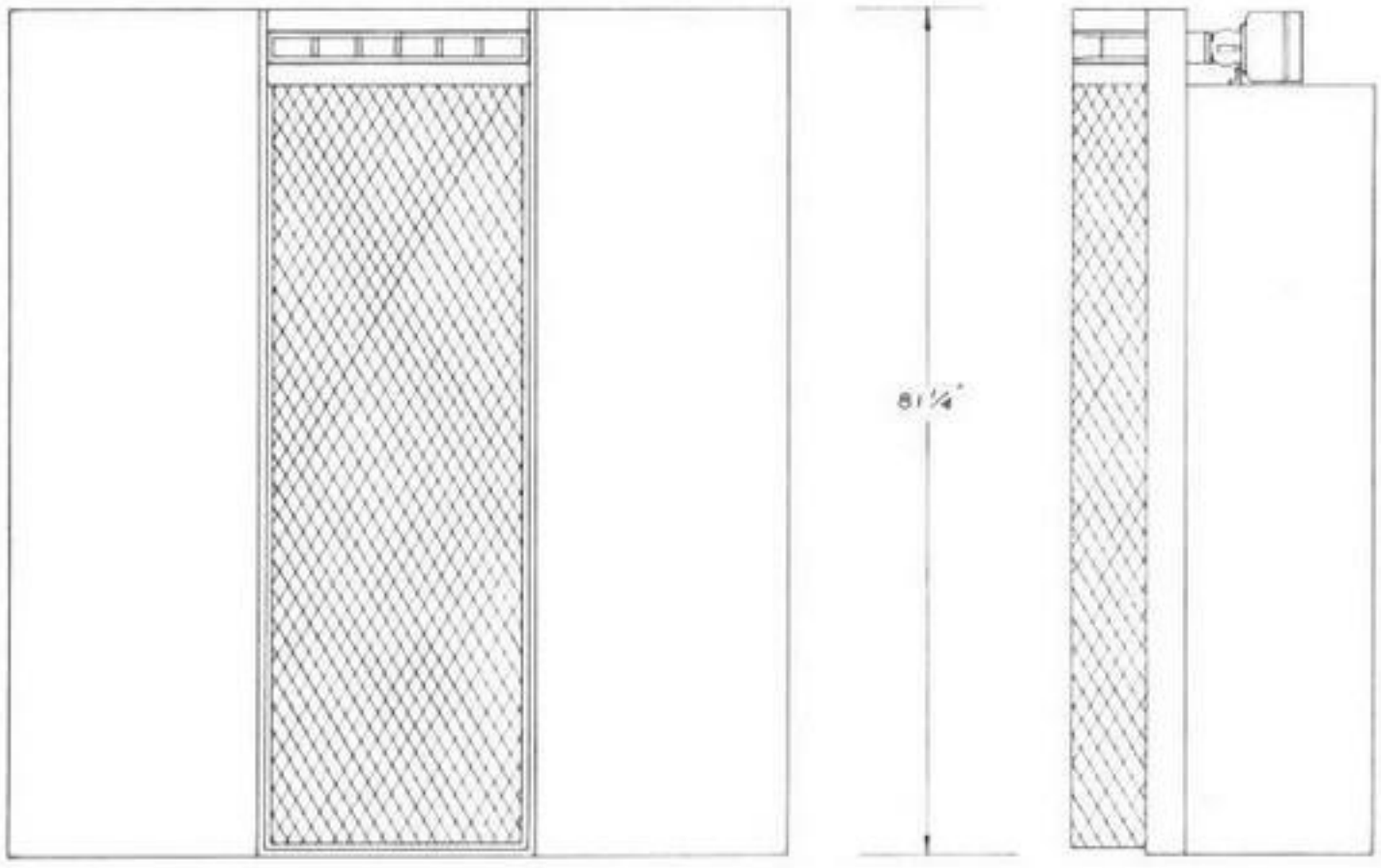
The system is further refined by coordinating the circuit of the special N900 crossover network with the physical relationship of the transducers. Suitable electronic delay is introduced so that sound from the two sources emanates from the same virtual plane. The transition from one to the other through the crossover region is completely imperceptible, even when listening close to the loudspeaker system. Transient response is clean and incisive.

By making use of exclusive JBL advances in transducer design, the Cinetron IV achieves high conversion efficiency through the full frequency range, yet offers a substantial reduction in overall size. It delivers as much or more sound intensity per watt of electrical input as much larger, much more directional theater loudspeaker systems.

JBL

REVISIONS				
ZONE	LTR.	CHANGE	DATE	BY
	A	NEW DRAWING	11-5-65	R.K.





SALES MODEL NO.	DWG. NO.	NO. REQ'D.	DESCRIPTION
C14	31163	1	BASIC ENCLOSURE
C14-2	31164	1	WINGS
H-61	31085	1	HIGH FREQ. HORN
28A	23041	1	HORN ADAPTOR
375	22035	1	HIGH FREQ. DRIVER
D140B	31083	2	LOW FREQ. DRIVERS
PR15	29993	2	PASSIVE RADIATORS
N500	10417	1	NETWORK

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

TOLERANCES UNLESS NOTED
.000 ± .010
.00 ± .030
FRACT ± 1/32
ANGULAR
DIMENSIONS IN INCHES
SCALE
WEIGHT

MATERIAL
TREATMENT
FINISH

SALES MODEL NO. D14S20 | SALES MODEL DWG.

DRAFTSMAN	CHECKED	ENGINEER	APPROVED	PRG. REL	PARTS MODEL	NEXT ASSEM.
H.B. 10-28-65	H.B. 10-28-65	[illegible] 11-1-65	[illegible] 11-29-65			

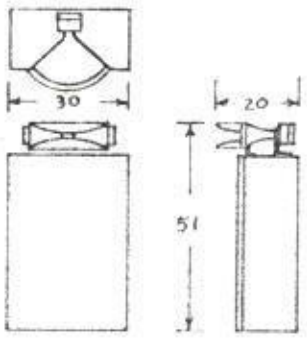
CINETRON IV — NAME

31158 A — DRAWING NUMBER

JBL

D16S21 CINETRON II THEATER LOUDSPEAKER SYSTEM

A compact professional two-way loudspeaker system ideally suited to multi-channel theater installations.



The JBL Cinetron II is an efficient two-way loudspeaker system capable of handling 30 watts of continuous sine wave power, or more than 60 watts average program material. Uniform sound coverage is maintained through 90° horizontally and 40° in the vertical plane.

* Uniform frequency response and spatial distribution through the full frequency range of modern optical or magnetic recordings.
* Professional two-way loudspeaker components. Horn-loaded high frequency assembly with JBL LE175 driver. Special long-throw LE14A-5 fourteen-inch low frequency loudspeaker, plus PR14 fourteen-inch passive radiator.
* Exclusive JBL passive radiator gives clean, solid bass and increased power-handling capacity.
* Shallow depth of system (only 20 inches) reduces wasted space behind screen.
* Trouble-free operation even under severe performance conditions.

(over)

James B. Lansing Sound, Inc., 3249 Casitas Ave., Los Angeles 39, Calif.

JBL D16S21 (cont.)

The JBL Cinetron II is a compact theater loudspeaker system intended primarily for use in multi-channel stereophonic theater sound installations. The very shallow depth of the system conserves space behind the screen, making the Cinetron II well-suited to high quality installations even in small theaters. The wide spatial distribution of the Cinetron II means that each member of the audience hears the same sound balance from all loudspeaker systems. This feature is of prime importance in stereophonic installations where the proper stereo blend must be projected uniformly through the full audience area.

Frequencies above 1200 cps are reproduced by the JBL LE175 driver and a massive cast aluminum horn. The horn distributes high frequencies smoothly through 90° horizontally and 40° vertically. Unlike multi-cell designs, the horn maintains full spatial distribution all the way down through the crossover region, so that a listener hears the same sound balance whether located on-axis or substantially off the axis of the system.

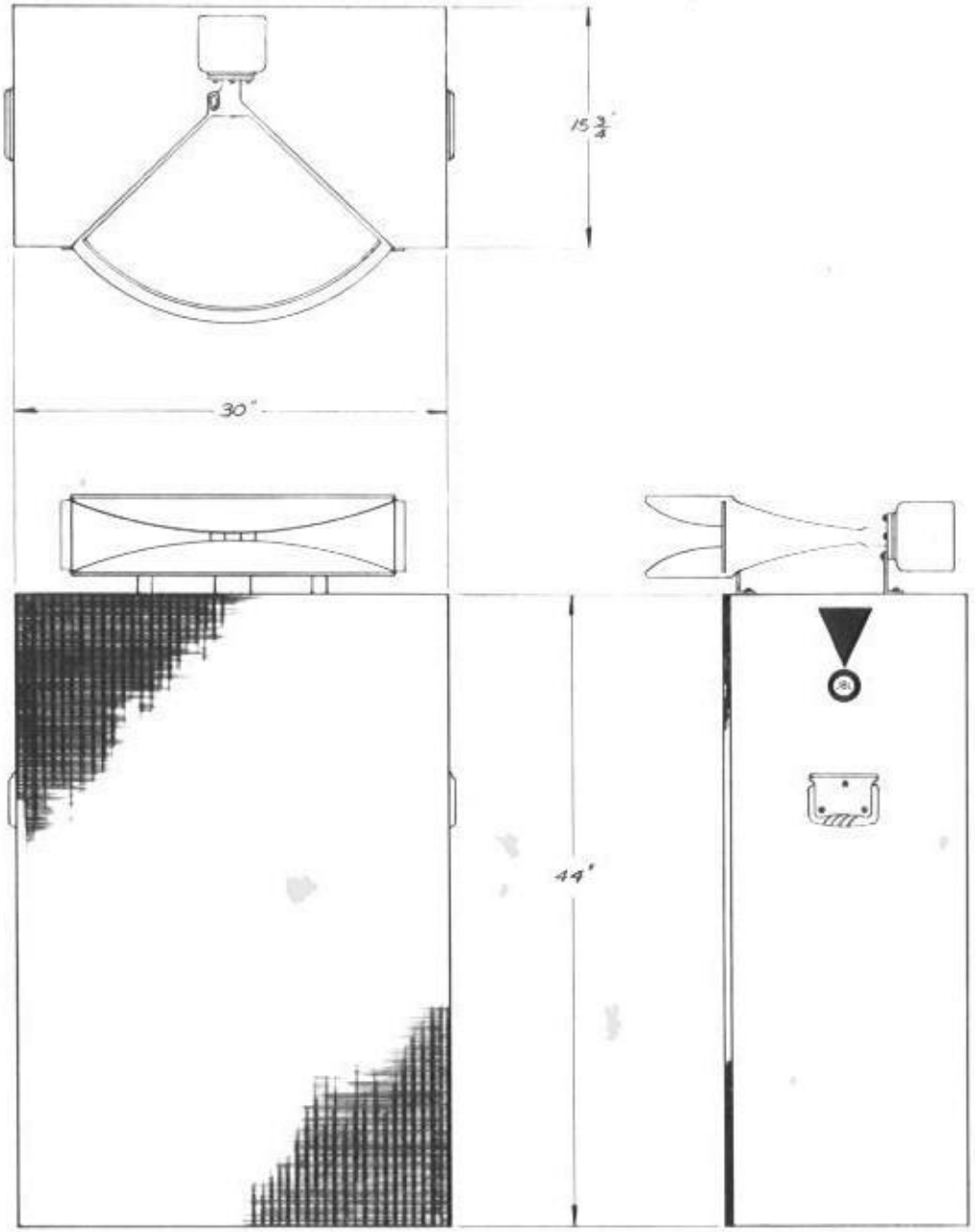
Low frequencies are reproduced by a specially designed JBL LE14A-5 bass loudspeaker operating in conjunction with a PR14 passive radiator. The passive radiator effectively doubles the radiating area of the LE14A-5 by making use of sound energy inside the enclosure which would otherwise be wasted. The result is greatly increased bass efficiency, greater power-handling ability, and smoother performance well up into the mid-range.

The circuit of the dividing network is coordinated with the physical placement and the transfer characteristics of the low and high frequency transducers. Suitable electronic delay is introduced so that sound from the two sources emanates from the same virtual plane.

The performance of the Cinetron II is completely natural and free from the disagreeable cavity resonances which characterize other types of theater loudspeaker systems. The response of the two transducers is so carefully integrated through the crossover region that the transition from one to the other is completely imperceptible, even when listening close to the loudspeaker system.

JBL

REVISIONS				
ZONE	LET	CHANGE	DATE	BY
	A	NEW DRAWING	[illegible]	[illegible]



DESCRIPTION	SALES MODEL NO.	DWG. NO.
BASIC ENCLOSURE	C16	31160
HI FREQUENCY HORN	2345	21156
HI FREQUENCY DRIVER	LE175	21646
LOW FREQUENCY SPEAKER	LE14A-5	22024
PASSIVE RADIATOR	PR14	31159
NETWORK	N900	12575

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

TOLERANCES UNLESS NOTED	
.000	± .010
.00	± .030
FRACT	± 1/32
ANGULAR	
DIMENSIONS IN INCHES	
SCALE	—
WEIGHT	—

MATERIAL —
TREATMENT —
FINISH —

SALES MODEL NO. D16S21

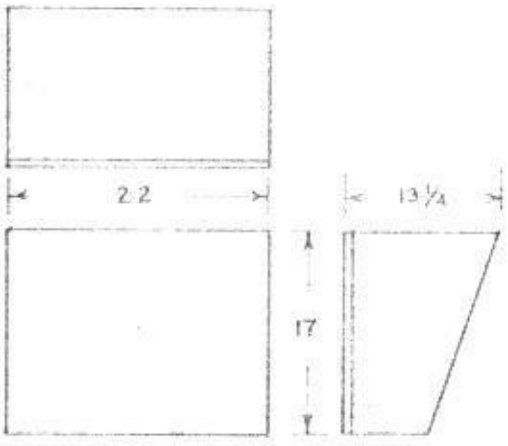
DRAFTSMAN	CHECKER	ENGINEER	APPROVED
I.B.M. 10-29-62	H.E. 10-29-62	HD's 10-29-62	[illegible]

CINETRON II
NAME

SALES MODEL DWG.

NO. REQ.	MODEL	NEXT ASSEM.
	31151	A

DRAWING NUMBER



The JBL Cinetron I is a small loudspeaker system incorporating the JBL D123 full-range twelve-inch loudspeaker. The clear, bright mid-range and remarkable dynamic range of the Cinetron I guarantee clear, undistorted sound even at high intensity levels. This system is recommended for any application where a relatively small, inconspicuous loudspeaker system of professional quality is needed.

- Wide dynamic range and high efficiency give clean sound at any loudness level.
- Unobtrusive proportions and angled back panel ideally suit the Cinetron I to wall mounting.
- JBL D123 full-range transducer covers the full frequency range with wide spatial distribution.
- Ruggedly constructed for trouble-free operation.
- Power-handling capacity: 15 watts continuous sine wave, more than 30 watts average program material.

(over)

James B. Lansing Sound, Inc., 3249 Casitas Ave., Los Angeles 39, Calif.

JBL

D15123 CINETRON I THEATER LOUDSPEAKER SYSTEM

The unobtrusive appearance and small size of this system belie its full-bodied performance. Designed specifically for use as a remote or surround speaker in multi-channel theater sound installations.

JBL

JBL D15123 (cont.)

The JBL Cinetron I is intended primarily for use as a remote or surround speaker in multi-channel stereophonic theater sound installations. The enclosure is styled to be as unobtrusive as possible, and has an angled back panel so that when the system is wall-mounted, the axis of the loudspeaker is directed downward at an angle of 20 degrees. The enclosure is heavily constructed and braced, with lock-mitred joints for utmost structural integrity. The interior is heavily padded with absorptive material to eliminate unwanted mid-range reflections.

Installed in the enclosure is a JBL D123 extended-range loudspeaker. The D123 uses a shallow cone assembly driven by a 3-inch voice coil of edgewound aluminum ribbon. The shallow configuration gives wide angular distribution of high frequencies, while the edgewound aluminum ribbon voice coil achieves much greater efficiency and dynamic range than more conventional wirewound coils.

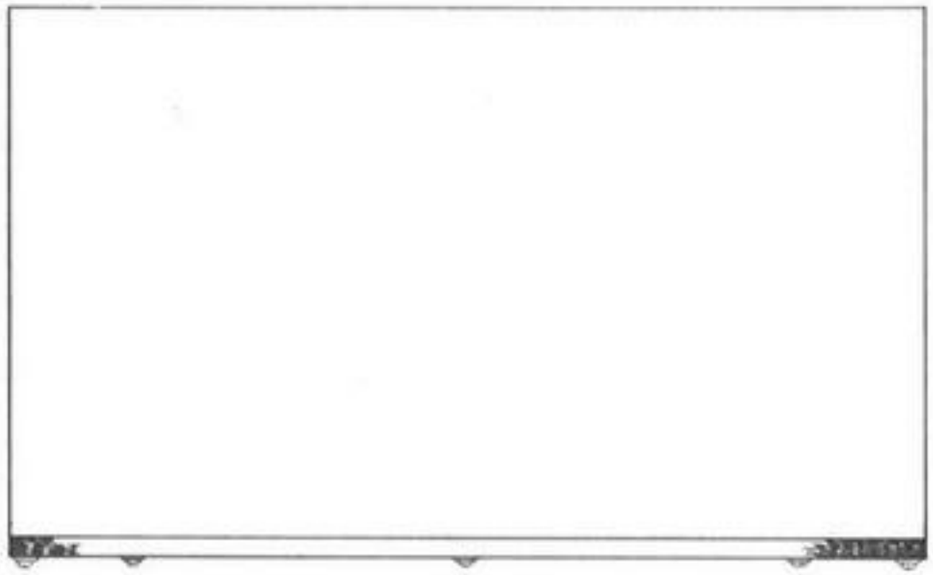
High frequencies are reproduced by an aluminum center dome drawn to shape by dydraulic pressure. No part is thinner, heavier, or more compliant than any other part. As a result, the dome adds no coloration to reproduced sound. High frequency performance is clear and natural.

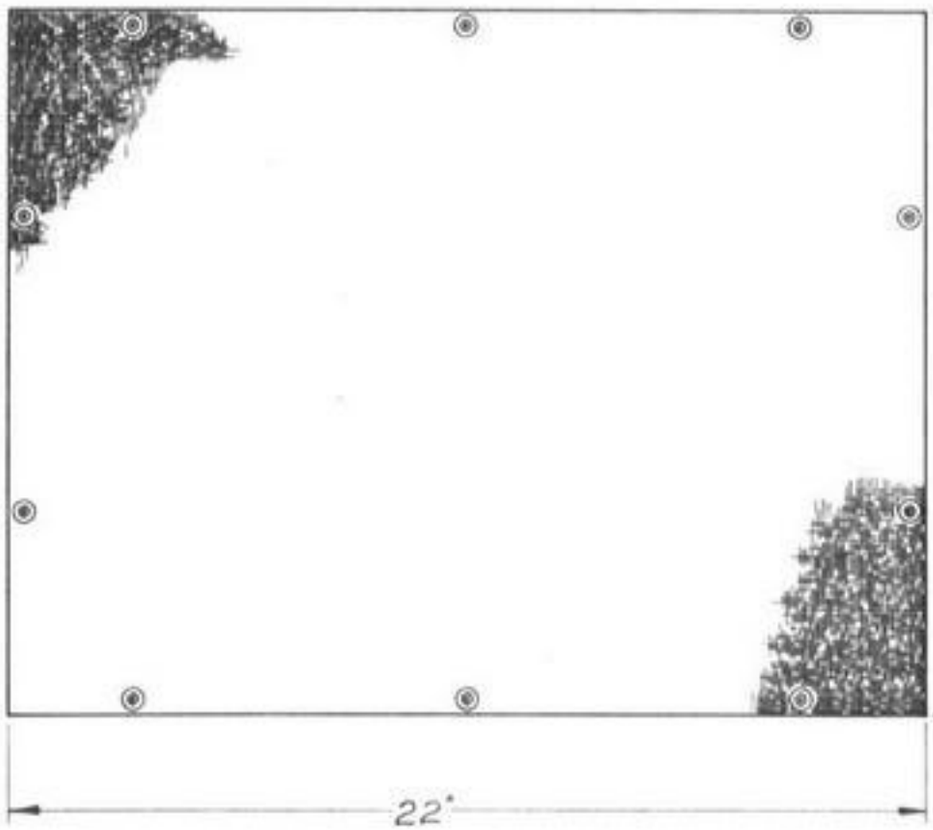
The massive pot structure is completely functional. No decorative cover is employed. All of the magnetic lines of force are conducted to the voice coil gap, where they contribute directly to the performance of the loudspeaker. There are no wasteful stray fields. Moreover, because of the extremely small clearance between the moving voice coil and the fixed magnetic pole pieces, a total magnetic field in the gap of 160,000 maxwells is achieved. The resulting tight electro-mechanical coupling means that the cone assembly follows the waveform of the input signal with high accuracy. The vital mid-range is clear and natural. Transients are reproduced with verbatim accuracy.

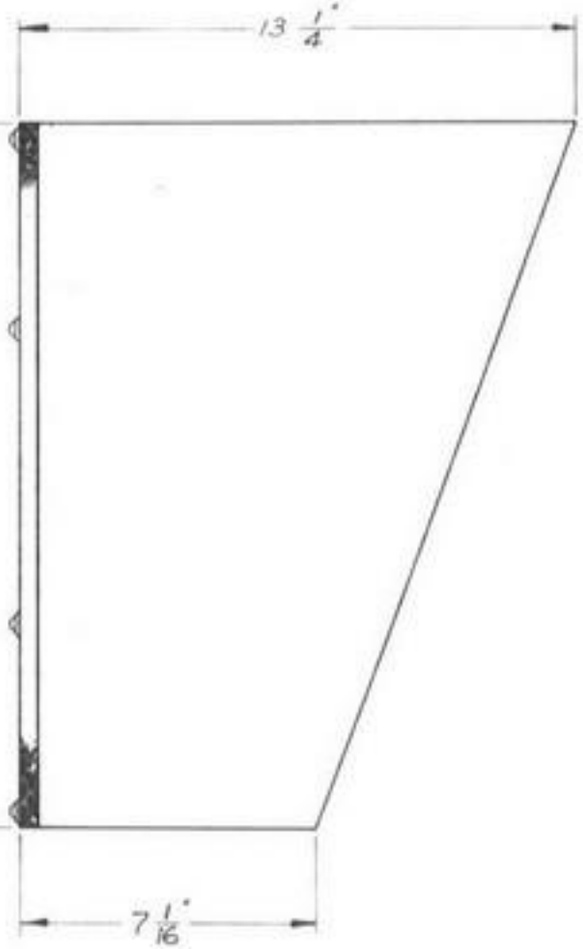
JBL

REVISIONS				
ZONE	LET.	CHANGE	DATE	BY
	A	NEW DRAWING	10-29-65	

ENCLOSURE TAKES ONE 12" D123
EXTENDED RANGE SPEAKER MFD. ITEM No 21010.
CABINET SALES MODEL No. C15 DWG No. 31161







JAMES B. LANSING SOUND, INC. 3249 CASITAS AVE. LOS ANGELES 39, CALIFORNIA	TOLERANCES UNLESS NOTED .000 ± .010 .00 ± .030 FRACT ± 1/32 ANGULAR DIMENSIONS IN INCHES SCALE WEIGHT	MATERIAL TREATMENT FINISH	SALES MODEL NO. D15123				SALES MODEL DWG.	
			W.P. 10-29-65	H.B. 10-28-65	[illegible] 10-29-65	[illegible] 10/29/65		
			DRAFTSMAN	CHECKER	ENGINEER	APPROVED	No. REQ.	MODEL / NEXT ASSEM.
			JBL CINETRON I				31156	A
			NAME				DRAWING NUMBER	