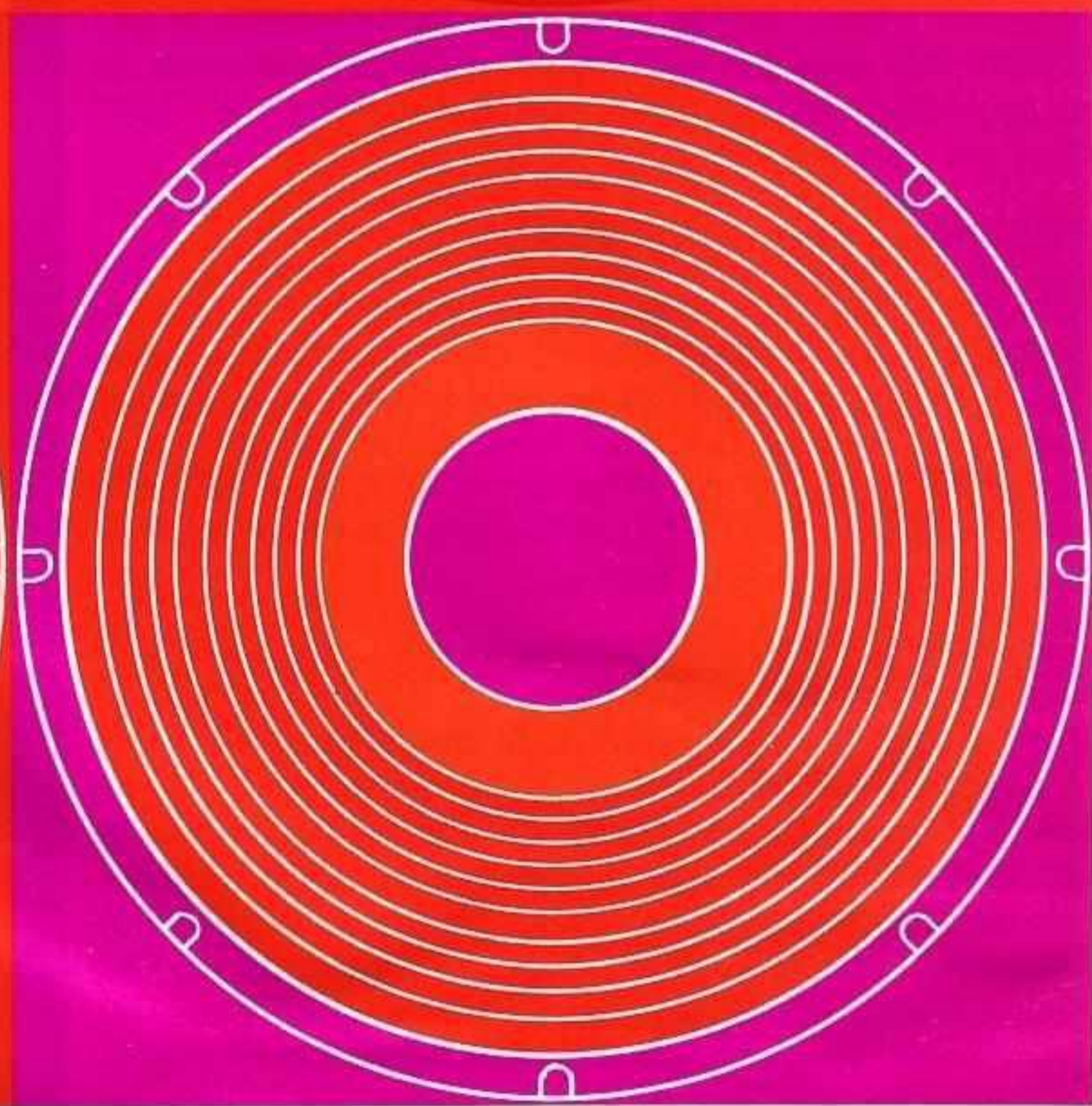


# Musical Instrument Loudspeakers



**JBL**

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## Musical Instrument Loudspeakers

The hungry embrace of a driving bass guitar rhythm. A heavy lead guitar run that weaves itself around the diminished seventh cry of an electronic organ. The sawtoothed call of a melody played on fuzz. Intricate instrumental harmonies that speak languages a new generation understands. Music that says what has to be said.

These are the sounds of now. These are the sounds that today's musician uses to tell his message. These are the sounds of technology molded into an art form. An art form that was born in the awareness of a new age.

The musician of today has at his fingertips more command over the sound of his instrument than ever before in history. At the touch of a switch, he can change the tone, the timbre, the actual characteristic of any given note. With the turn of a dial, he can shape sound energy to suit his every artistic purpose.

Now loudspeakers have been made specifically for the musician. Loudspeakers that will reproduce the signal he creates with verbatim accuracy. Loudspeakers that let him hear everything his instrument has to offer.

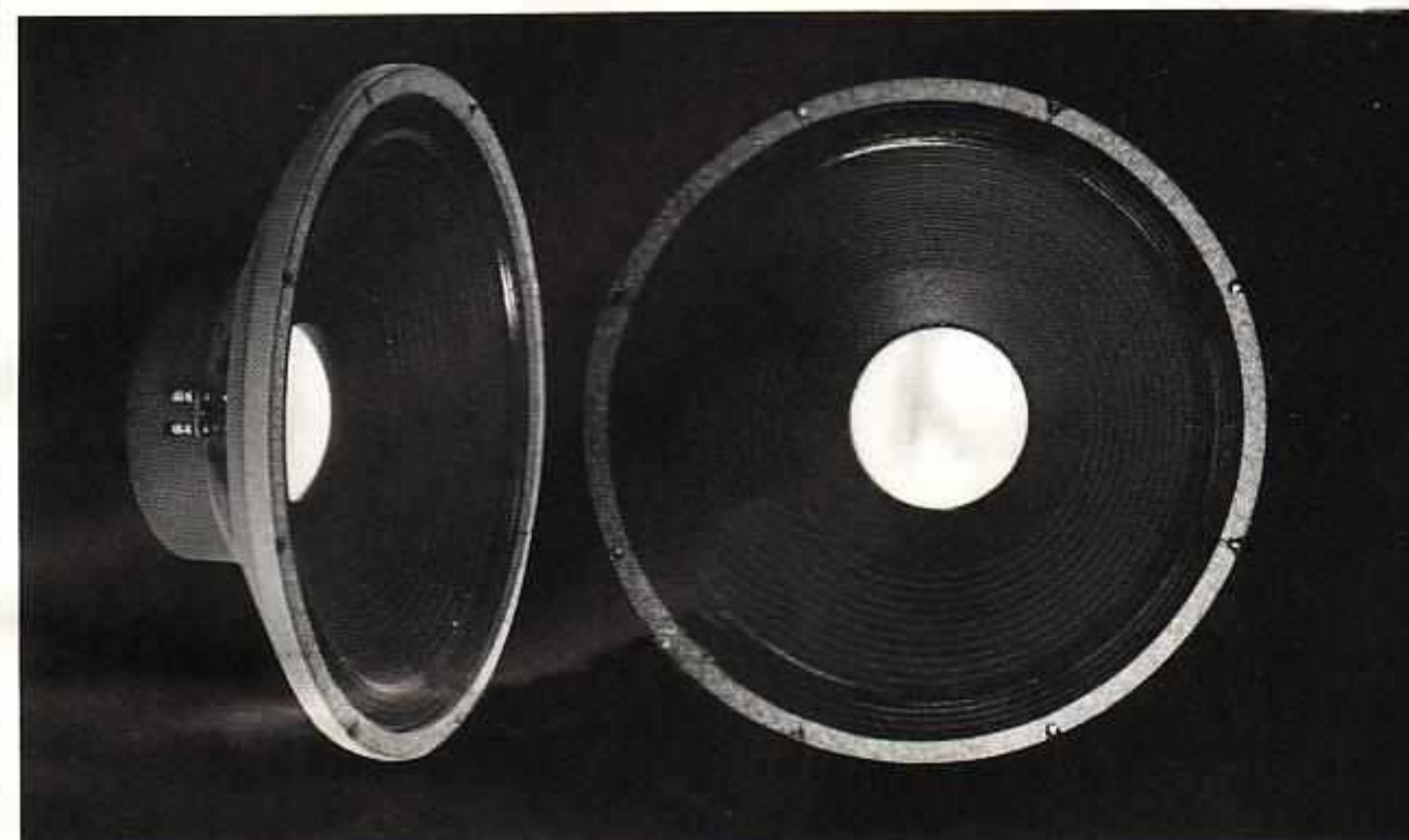
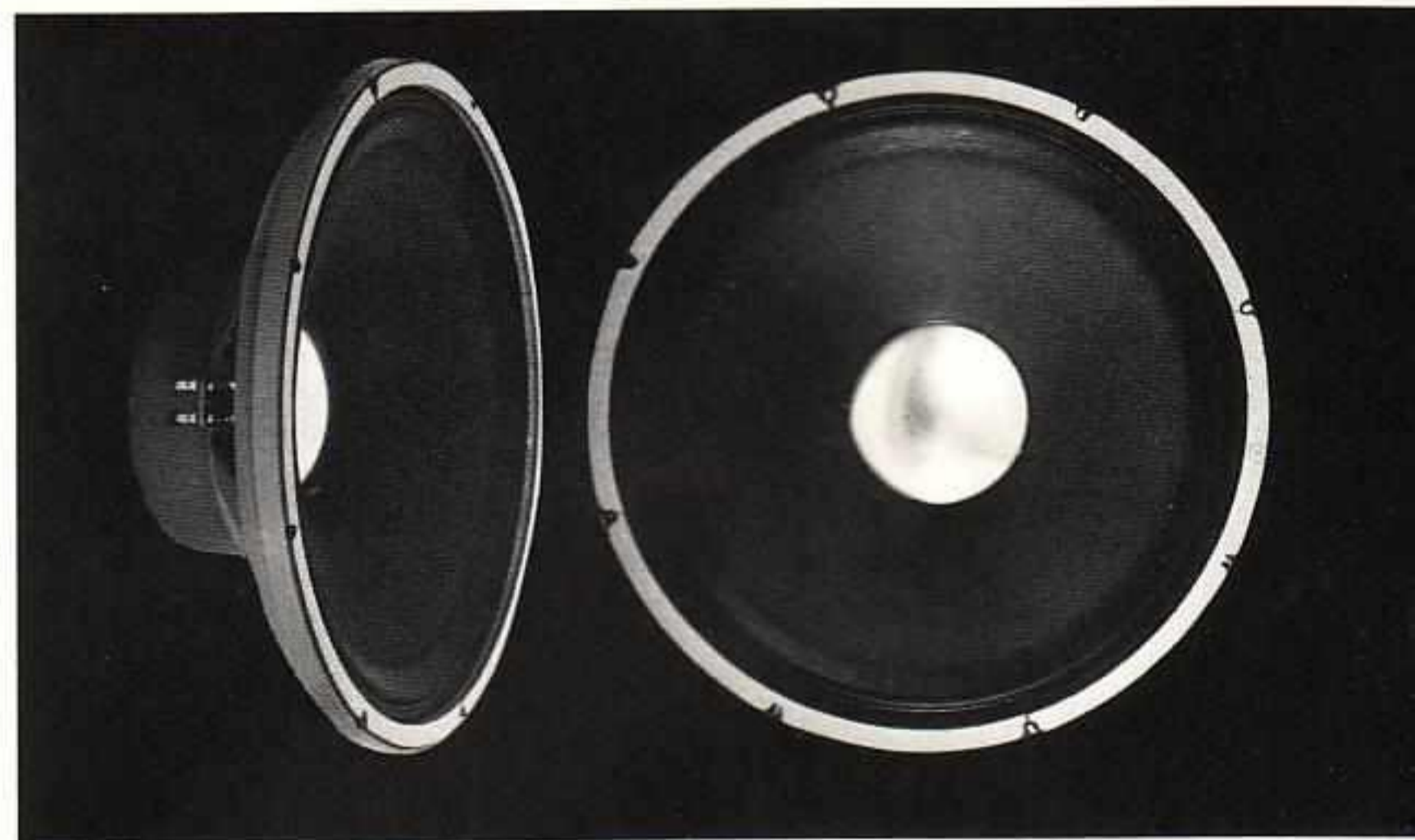
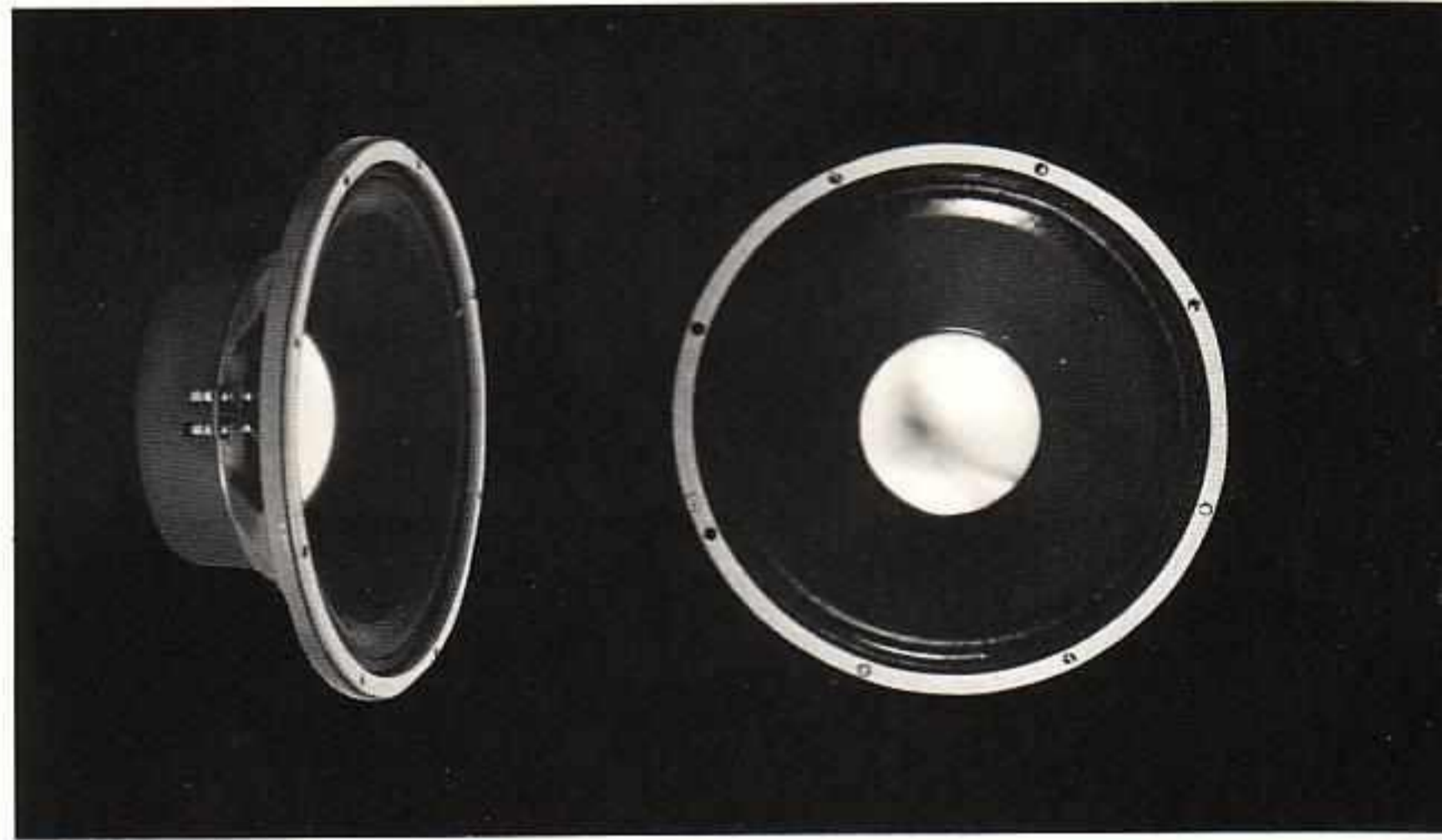
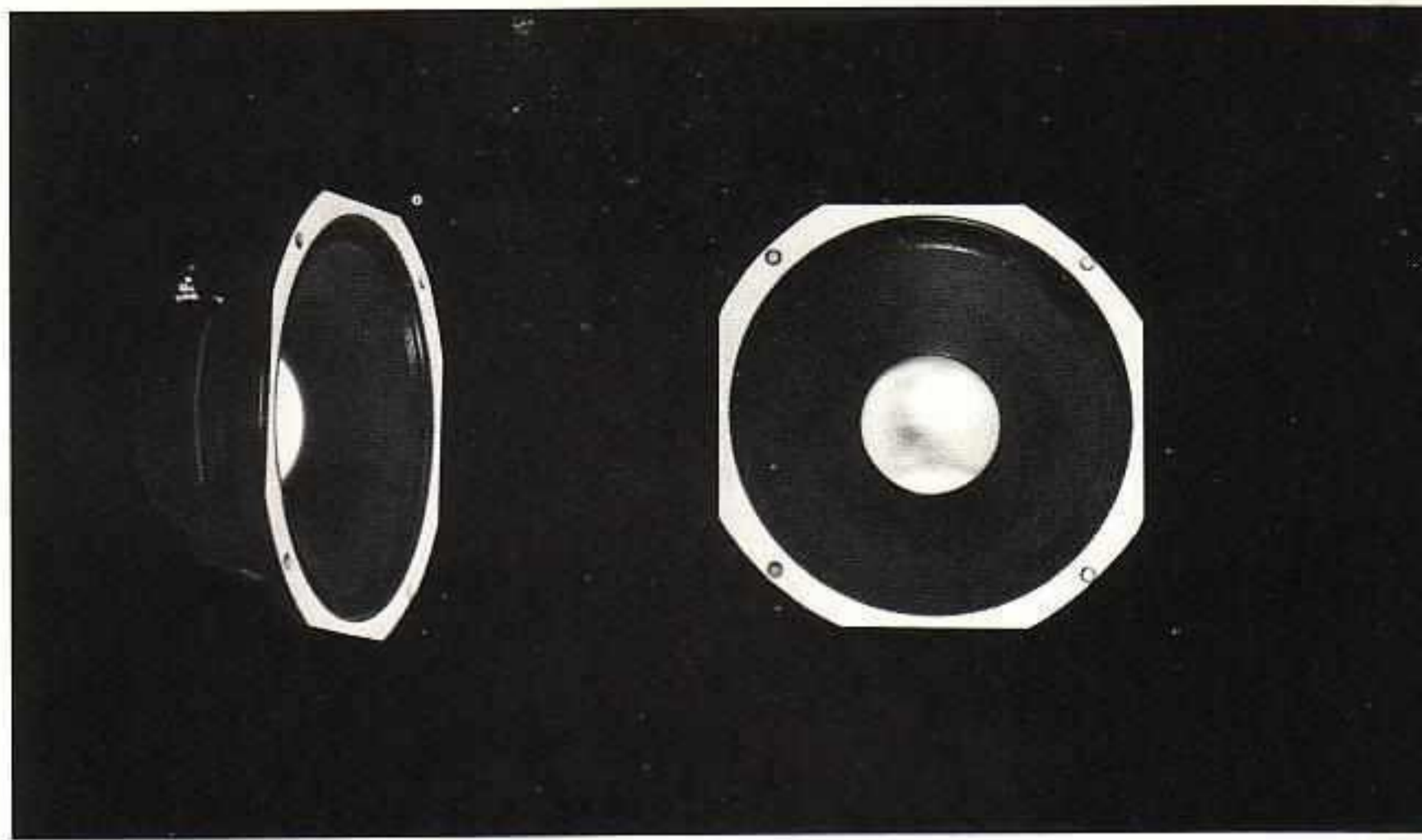
They are known as JBL MUSICAL INSTRUMENT LOUDSPEAKERS, designed and crafted by the Professionals in Sound, JAMES B. LANSING SOUND, INC.

### PRECISION JBL CRAFTSMANSHIP

The requirements for making a perfect musical instrument loudspeaker are complex and exacting. Only JBL Musical Instrument Loudspeakers meet these requirements. Engineering and assembly specifications are followed with incredible exactitude to bring you an altogether new breed of electronic instrument reproducers... unquestionably the finest available, both in performance and reliability.

Each part of a JBL Musical Instrument Loudspeaker is carefully machined and hand-assembled. Each unit is tested and retested throughout every stage of assembly, assuring that JBL's demanding production specifications are met before the unit is released. Each loudspeaker is virtually custom-made by master craftsmen who take sincere pride in their work. These are some of the reasons JBL offers this unique warranty with every JBL Musical Instrument Loudspeaker: "Because we believe that a fine musical instrument loudspeaker, like any fine musical instrument, should last a lifetime, JBL will, at its option, repair this product free of charge during its entire normal life if factory inspection discloses a defect in original workmanship or material."

It takes a lot of confidence to offer a warranty like that. At JBL, that confidence is built into every JBL Musical Instrument Loudspeaker.



**D110F** . . . A 10" loudspeaker manufactured by JBL expressly for use with electronic musical instruments. Absorbs more power and delivers more sound output than any other 10" loudspeaker made. The D110F can be used in single or multiple configurations for a wide variety of sound amplification needs. Because of its dynamic presence in the midrange, it is also an excellent choice for sound reinforcement applications. Directly interchangeable with any standard 10" musical instrument loudspeaker.

**D120F** . . . A massively constructed 12" full range loudspeaker with an eleven pound magnetic assembly. Features greater power handling ability than most 15" units. Low frequency performance that really satisfies; dramatic midrange reproduction, the heart of the sound spectrum; sparkling highs that cut through with vibrant clarity. The D120F replaces any standard 12" musical instrument loudspeaker for improved performance and power capacity.

**D130F** . . . Ruggedly built to withstand intense performance conditions, the total sound of the D130F is unapproachable by any other 15" musical instrument loudspeaker. Accepted as a standard of excellence by professional musicians throughout the world. The clean, spacious reproduction of the D130F makes it ideal for lead and rhythm instruments. Where space permits, the D130F is preferable to smaller units because of its larger cone area and greater sound output in the low frequency region.

**D140F** . . . This 15" behemoth is capable of delivering thunderous bass fundamentals without breakup or distortion. Designed specifically for the bass guitarist or organist, the D140F combines a specially-designed cone and voice coil with a mighty magnetic assembly. Greater efficiency and power handling capacity than any other bass musical instrument loudspeaker on the market. The low frequency characteristic of the D140F is crisp, solid and accurate, never contributing coloration of its own to mask the waveform supplied by the instrument itself.

## DYNAMIC ASSEMBLY

JBL Musical Instrument Loudspeakers use massive magnetic structures cast from a special high magnetic conductance alloy. All of the energy supplied by the heavy Alnico V magnet in each unit is directed to the one place where it contributes most to performance — the voice coil gap. Wasteful stray fields are positive indications of lost magnetic energy, and they are simply non-existent in JBL Musical Instrument Loudspeakers. This can be easily verified by holding a small metal object to the rear of a JBL magnetic assembly and noting that virtually no attraction occurs.

Edgewound ribbon voice coils are another unique feature found on every JBL Musical Instrument Loudspeaker. By using ribbon wire wound on its edge, efficiency is raised, range is greatly increased and the speaker is able to handle tremendous momentary overloads without damage. Edgewinding is the most costly and time-consuming method of constructing a voice coil . . . but it is by far the best. That is why they are made that way at JBL.

The cones of JBL Musical Instrument Loudspeakers are made of material carefully calculated for optimum mass, density and stiffness. A specially treated compliance is affixed to the outer edge of each cone and then cemented to a rigid cast aluminum loudspeaker frame, permitting the cone assembly to undergo long excursions with perfect linearity.

The centerdome in each JBL Musical Instrument Loudspeaker is made of dural aluminum alloy, precisely drawn to shape by hydropneumatic pressure. Attached directly to the voice coil, the centerdome produces highs that are crisp and brilliant. Slides and complex runs are cleaner, more spacious. Each note has all the bite and body needed for even the most demanding compositions.

The end result of the exacting techniques and demanding production tolerances used by JBL is a series of musical instrument loudspeakers that provides unparalleled accuracy. Loudspeakers that put out exactly what the musician puts in.

JBL Musical Instrument Loudspeakers don't make great musicians. But they do make great musicians sound as great as they really are.

## ENCLOSURE REQUIREMENTS

JBL Musical Instrument Loudspeakers are designed to be used in enclosures as small as 3.5 cubic feet internal volume. However, cabinets with 4.5 cubic feet or more will assure optimum low frequency performance and power handling. For detailed instructions on proper enclosure construction for JBL Musical Instrument Loudspeakers, write to JBL's Technical Service Department and request a copy of JBL publication CF707. Please enclose 50¢ in coin to cover the cost of printing and handling.

This comprehensive enclosure construction manual covers such topics as materials, bracing, porting, acoustical padding and includes drawings and measurements of typical enclosures. For those concerned with getting the best possible performance from their instrument, this booklet is invaluable.

## SPECIFICATIONS

	D110F	D120F	D130F	D140F
<b>Nominal Diameter</b>	10 inches	12 inches	15 inches	15 inches
<b>Magnetic structure</b>	6 pounds	11 pounds	11 pounds	11 pounds
	8 ohms	8 ohms	8 ohms	8 ohms
<b>Power Capacity"</b>	100 watts	100 watts	100 watts	150 watts
<b>    ill diameter</b>	3 inches	4 inches	4 inches	4 inches
<b>    coil m</b>	Edgewound Aluminum Ribbon	Edgewound Aluminum Ribbon	Edgewound Aluminum Ribbon	Edgewound Copper Ribbon
<b>Flux den</b>	10,200 Gauss	12,000 Gauss	12,000 Gauss	11,500 Gauss
<b>Total Flux</b>	170,000 Maxwells	275,000 Maxwells	275,000 Maxwells	260,000 Maxwells
	4-1/4"	4-5/8"	5-11/16"	5-9/16"
<b>Shipping Weight</b>	8.75 lbs	10.25 lbs	14.75 lbs	17.25 lbs
<b>Baffle hole dla.</b>				
<b>    rear mounting-</b>	8-3/4"	11-1/16"	13-1/2"	13-1/2"
	9"	11-1/16"	* 14-1/4"	*14-1/4"

### POWER CAPACITY\*\*

The power capacity of any loudspeaker is dependent on a number of variable factors, such as enclosure loading, the quality of the signal being generated by the amplifier, special effects that the loudspeaker is asked to create and the frequency range being reproduced. The rated power capacity of JBL Musical Instrument Loudspeakers refers to the amount of **continuous program material** the speaker can absorb under recommended conditions without damage. Their peak power capacities are considerably greater. For example, instantaneous peaks may reach many times the average power level, and such peaks will be faithfully reproduced by JBL Musical Instrument Loudspeakers.

The incomparable power capacity of JBL Musical Instrument Loudspeakers is the result of advanced engineering and space age technology. Each edgewound ribbon coil is backed by a coil form made of material that is virtually indestructible. This material is insensitive to climatic changes, highly heat resistant, retains its shape ten times better than standard voice coil paper and provides unequalled sound transmission. The coil, coil form, cone and spider are "super-cured" on intricate devices specially designed and built by JBL. Exotic compounds and adhesives are used to bond the component parts of the cone assembly together by this exclusive JBL time-cycled curing process.

Because of the unique materials and manufacturing processes used only by JBL, a JBL Musical Instrument Loudspeaker is more dependable under a wider variety of performance conditions than any other musical instrument loudspeaker on the current market. This simply means that the musician can really get into his axe without worrying about blowing his speaker in the middle of a performance.

JBL Musical Instrument Loudspeakers are built to take it.

\*If these units are installed from the front of the baffle panel, an MA15 kit is required. MA15 kits may be ordered directly from JBL at a cost of \$3.90 per kit (one required for each front-mounted 15" speaker). Please enclose your check or money order for the full amount with your request.

### NEED SPECIAL HELP?

In most instances, JBL Musical Instrument Loudspeakers will be used to replace existing loudspeakers in standard amplifier cabinets. However, these fine units are also adaptable for special installations to meet specific needs. For example, a professional musician may want a very small, high quality extension speaker for monitoring. Or an organist may want to build a large speaker system to bring out the full potential of his instrument. Or a group may wish to put together an effective sound reinforcement system for vocal and miked instrument amplification.

JBL wants to help. For this reason, we maintain a staff of technical experts who will be happy to supply additional information and assistance on the proper use of JBL Musical Instrument Loudspeakers. If you have any questions or problems, please feel free to write directly to: Technical Service Department, James B. Lansing Sound, Inc., 3249 Casitas Avenue, Los Angeles, California 90039. A full description of your requirements will assure a complete and accurate response to your inquiry.

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