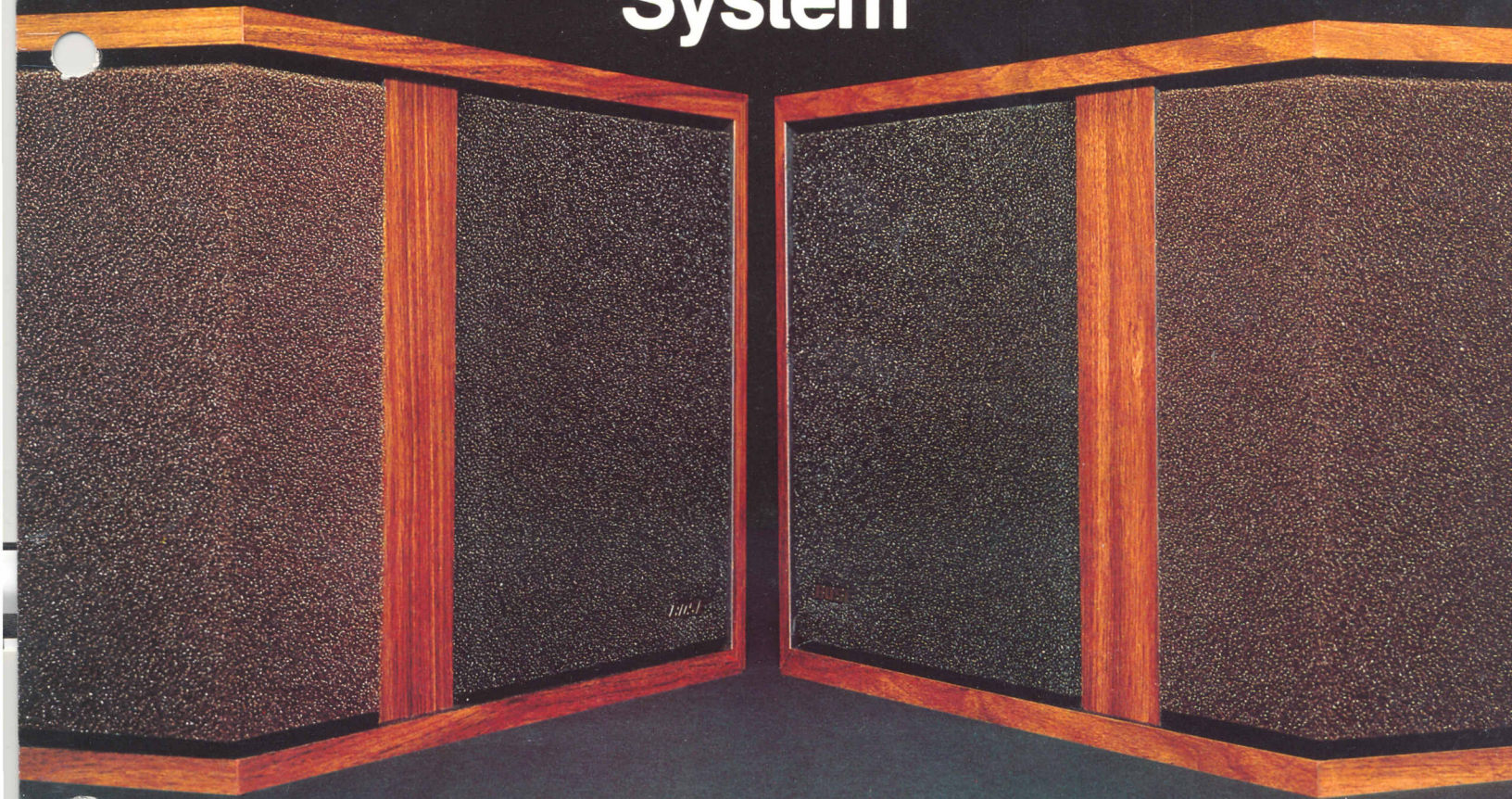


BOSE[®]

**The Bose[®] 301[™]
Direct/Reflecting[®]
Loudspeaker
System**

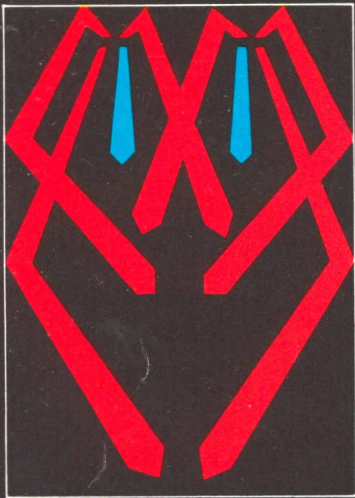


More spacious from the world's only Direct/Reflecting

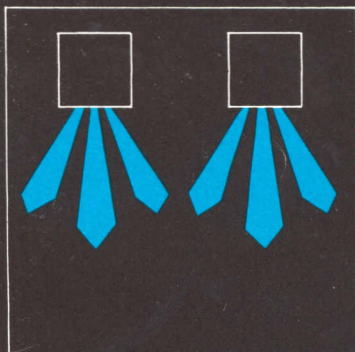
Reflected and Direct Sound

The Bose® 301™ loudspeaker is a contemporary-styled, compact bookshelf speaker system that offers exceptionally lifelike sound and excellent adaptability to listening rooms of varying shapes and sizes.

Like the other Bose Direct/Reflecting® speaker systems, the 301 speaker is designed to capture the unique character of live music by reflecting the sound off the walls of your living room in carefully determined patterns.



At a live performance, the audience hears both reflected and direct sound. The high proportion of reflected sound gives live music its richness, depth and spaciousness.



Unlike live music, the sound radiated by conventional speakers is almost totally direct. And full stereo can only be heard in front of, and between the speakers.

Providing the proper balance of reflected and direct sound similar to what you would hear during a live performance, the 301 speaker gives you lifelike, spacious sound without the shrillness so characteristic of conventional high fidelity. And, unlike conventional speakers, the Bose 301 Direct/Reflecting® speaker system provides balanced stereo in a wide range of listening positions, not just in a small area in front of and between the speakers.

The result of a totally integrated combination of unique design concepts, the 301 speaker offers a dimension of performance that often astounds first-time listeners.

Demonstrated against conventional speakers, the open, spacious sound of the 301 speaker expands the con-

finer of the listening room, creating a larger space, and then filling it with beautiful music. Experiencing the spatial realism of a Bose Direct/Reflecting® speaker system is like discovering music all over again.

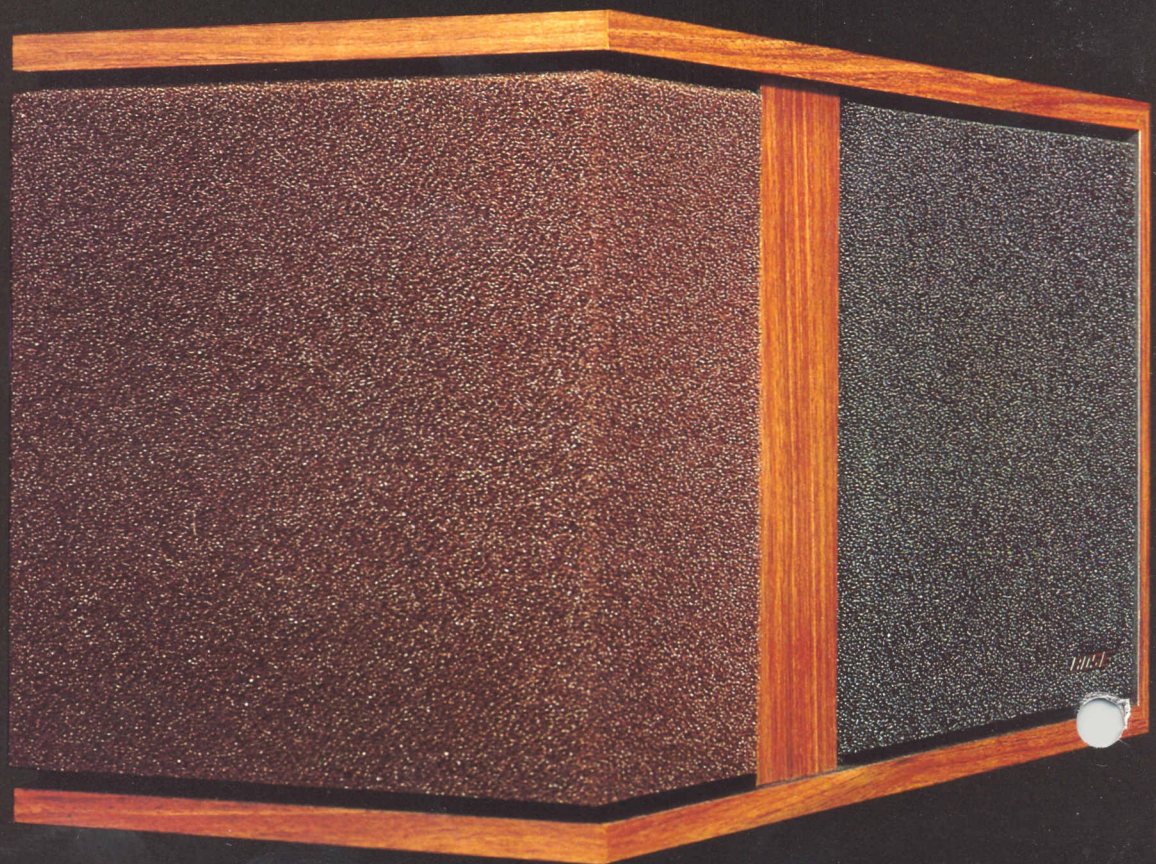
Flat Power Radiation

Conventional loudspeaker frequency response measurements are carried out in special echo-free rooms called anechoic chambers. This procedure simplifies loudspeaker measurement by eliminating the contribution of reflections from room walls. However, this type of measurement ignores the fact that it is reflected sound which gives live performance music its open, spatial qualities.

Bose Direct/Reflecting® loudspeakers are measured



A proper balance of reflected and direct sound provides the spatial realism of the performance.



, lifelike sound Reflecting[®] bookshelf speaker.



in special rooms which include reflected sound in the measurement. In accordance with this sophisticated approach, each part of the system is designed so that the total energy radiated into the listening room is the same at every frequency. This flat power radiation design criterion results in accurate reproduction of instrumental timbre by maintaining the correct balance between all frequency bands in an actual listening environment.

Asymmetrical Design

Conventional loudspeakers, radiating sound directly forward, produce a symmetrical sound image. This symmetry, however, is actually necessary only for monaural reproduction with a single speaker.

The design of the 301™ speaker utilizes a forward-

facing woofer, a side-facing tweeter angled toward the side wall of the room. This asymmetrical design, with left and right sound patterns being mirror-images of each other, creates a correctly balanced sound pattern of reflected and direct sound that fills the room. The result is symmetrical stereo reproduction, expansion of the sound field beyond the spacing of the speakers, and accurate placement of the sound of instruments across the entire breadth of the listening room.

Direct Energy Control

The Direct Energy Control is an adjustable deflector in front of the tweeter which varies the balance of reflected and direct sound at high frequencies. The Direct Energy Control maintains proper tonal balance in the

listening room for various speaker placements; it provides the optimum spatial properties for each type of program material; and it provides optimum dispersion when the speaker is placed vertically.

For most kinds of music, and in rooms with reflecting side walls, you can set the Direct Energy Control at the normal (intermediate) position.

If you like a more open, spacious sound, you can set the control to a more outward position. For a tighter, more intimate sound, set the control more inward, which aims more high frequency sound to the inside of the room.

Each speaker can be adjusted individually, giving the 301 system wide versatility in placement possibilities.

ound, similar to that found in a live perfor-
301 speaker system.



The Direct Energy Control adjusts the spatial properties of the 301 speaker by controlling the radiation pattern of the side-angled tweeter.

The Tweeter

The tweeter design for the 301™ speaker is the result of a 3-year program at Bose® to develop a tweeter of outstanding performance characteristics. This tweeter offers extended midrange response for exceptionally smooth crossover, combined with extended high-frequency response and spatial properties that allow the controlled dispersion of sound. Computerized quality control produces a tweeter of such exceptional consistency of performance, that this tweeter is also incorporated in more expensive Bose speaker systems.

The 301 tweeter is mounted at the outside front corner of each enclosure facing outward. It directs sound off the walls of the listening room, expanding the sound image and creating the open, spacious sound which is characteristic of Bose Direct/Reflecting® speaker systems.

A unique feature of the 301 speaker is a built-in tweeter-protection circuit which guards against tweeter burnout.

The Woofer

The 301 high-performance woofer is mounted on the front of each enclosure, facing forward. In addition to superior deep-bass performance the 301 woofer has a specially extended midrange response so it radiates the portion of direct energy needed to create a lifelike balance of reflected and direct sound in the critical midrange frequencies.

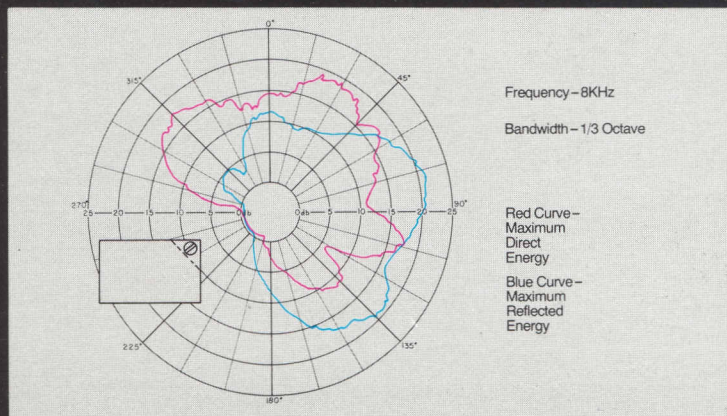
Specially designed for operation in a moderate-size

ported enclosure, the woofer offers higher efficiency than is possible with acoustic suspension designs. It produces excellent performance with amplifiers as small as 10 watts RMS.

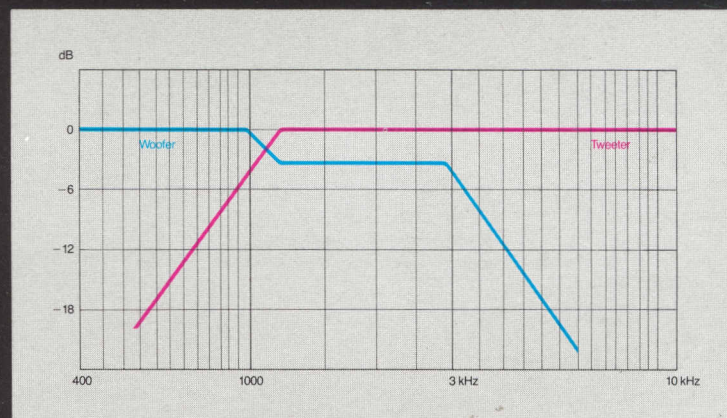
Another advantage of the ported design is the reduced excursion of the woofer cone at the lowest bass frequencies. This results in exceptionally low bass distortion and improves the ability of the woofer to handle large amounts of power. The 301 speaker delivers low-distortion operation with amplifiers rated up to 60 watts RMS per channel.

Dual Frequency Crossover™ Network

The 301 speaker has an innovative Dual Frequency Crossover™ network that precisely adjusts and balances (in both phase and amplitude) the distribution of signals from the amplifier to the tweeter and woofer across a wide range of frequencies. In fact, the Dual Frequency Crossover™ network allows both drivers to operate simultaneously over more than a full octave in the middle frequency range. This overlap helps to provide exceptionally smooth midrange response, with an unusually open, spatial quality.



Polar characteristics of the 301 speaker for two settings of the Direct Energy Control.



Characteristics of the Dual Frequency Crossover™ network.

Specifications

Spatial Characteristics:

Asymmetrical design utilizing side wall reflections. Tweeter set at 45° angle toward side walls; woofer directed forward. Direct Energy Control used with side-directed tweeter. Left and right speakers supplied in mirror-image pairs.

Direct Energy Control:

Adjusts ratio of reflected to direct sound of tweeter above approximately 3 kHz.

Woofer: 8-inch high-efficiency design in ported enclosure. Uniform high-frequency response to over 3 kHz for use with Dual Frequency Crossover™ network. Heavy duty suspension for use with amplifiers up to 60 watts RMS.

Tweeter: 3-inch high sensitivity design. Response to 1200 Hz for use with Dual Frequency Crossover™ network. Flat power radiation to over 15 kHz.

Dual Frequency Crossover™ Network: One inductor, two resistors and one mylar film capacitor. Woofer transition frequency 3 kHz. Tweeter transition frequency 1200 Hz.

Impedance: 8 ohms.

Amplifier Power: 10 watts RMS minimum into 8 ohms. Maximum recommended amplifier power 60 watts RMS per channel.

Cabinet: Walnut grain vinyl, polyurethane foam grille, enclosure 17" wide x 10½" high x 9½" deep.

BOSE

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