

Speaking of Speakers

By Norman Eisenberg

The Bose 901 speaker system, introduced some eight years ago, has been a subject of much discussion and some imitation, or shall we say an inspiration for other systems. In addition to the usual attributes of a first-class speaker—wide-range response and dynamics, uncolored natural sound and balanced tonal range, etc.—the Bose 901 produced a unique spatial effect. By its dispersion of sound from rear and front, it set up a high ratio of reflected-to-direct sound that lent a convincing sense of ambience to the presentation. Somehow the stereo became more stereophonic; it took on a more realistic combination of breadth and depth while at the same time preserving stereo imaging and “directional clues” in the program material. Each system of a stereo pair contained nine identical drivers; four facing out from angled panels at the rear and one facing forward from the front panel. In addition, the system used an active equalizer that was patched into the sound system just before the power amplifier section. The arrangement of the drivers in each box lent the system its spatial effect, and the equalizer contoured the extreme ends of the audio response.

The 901 was fairly critical of room placement; it produced its spatial effect best when located at special distances from rear and side walls. It also was fairly power-hungry and while it could be used with modestly powered amplifiers or receivers it really blossomed out when driven by high-powered units.

In an effort to help overcome these limitations and to improve performance generally, Bose is about to introduce the new 901 (known as Series III). It looks very much like the former 901 and indeed it still uses nine drivers in the “rear-eight/front-one” pattern. But everything inside the box has been changed, and the equalizer too has been redesigned. The new drivers,

made at the Bose plant and using some highly innovative and arcane coil-winding techniques, are considerably more efficient than the former drivers. They can produce equivalent sound levels for about three times less power. I verified this myself, monitoring the power fed to the old 901s and comparing it with the power driving the new ones for similar sound levels; the amounts were 48 watts as compared to 16 watts.

To permit the new drivers to produce full output, especially in the bass, with less excursion and lower distortion, the speakers are rear-loaded with reactive air columns that terminate in three rear openings (one each for the two groups of four drivers facing the rear, and one for the lone front driver). The acoustic energy from these openings at deep strong bass tones is very real—you can see a lighted match get blown out during a strong bass passage. The middles and highs are not slighted either; they sound full, clean, and well-aired.

The circuitry in the old equalizer would be all wrong for the new drivers, and so this unit also is new. More complex circuits have been designed to provide more precise equalization and at more frequency portions of the range. There is now a deep bass control, a midbass control, and a treble control. The last two are continuously variable and handle tones from 80 Hz to 280 Hz, and upward from 4,000 Hz, respectively.

The changes make the 901 suitable for a much wider choice of equipment than before. It will now perform admirably with low-powered receivers as well as with super-amplifiers. It also is less critical of precise location in a room—the distances recommended for the bounce-and-spread effect have more leeway than in the past, and the equalizer controls are more help in contouring the response to suit different room acoustics. This piece of cake, in short, tastes better and will fit more audio menus.