Speaker system: 'so realistic!'

By Clifford Barnes

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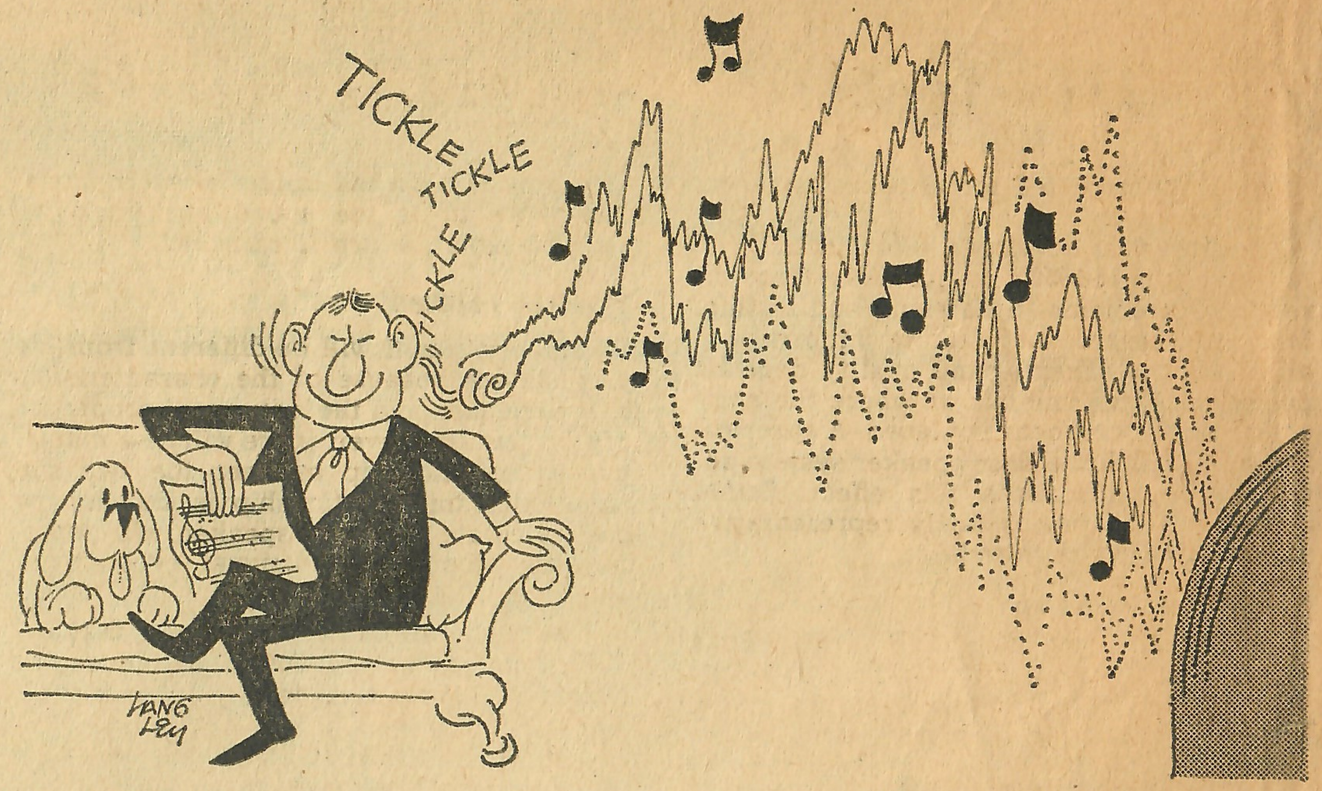
"The sound is so realistic you begin to feel it, instead of just hearing it."

"That's the most natural sound reproduction I've ever experienced."

When technology goes to work for the musician, comments like these from music lovers can be expected. The engineer is Dr. Amar Bose, professor of electrical engineering at Massachusetts Institute of Technology and inventor of a unique loudspeaker-amplifier system. Ten years of research and listening experiments with members of the Boston Symphony Orchestra and other professional musicians have resulted in a commercial product designed to satisfy the ears of the musician, not just the sound engineer.



Tape recording played

Computer technology has made it possible for Dr. Bose to come as close as possible to producing the kind of sound made by what engineers refer to as an "ideal pulsating sphere." He has hit a new high in hi-fi. The next problem is to improve recording techniques so they will match this new standard of sound reproduction. He explains it this way:

"The frequency response is boosted on recordings to compensate for the inexpensive loudspeakers that are on the market. Manufacturers want to make their records sound good on low-priced sets. The middle range is left unchanged, but the lows and highs are raised in volume. The tapes are given to an audio-recording man who adjusts knobs to control this frequency response."

Dr. Bose played a tape recording made with the help of some members of the Boston Symphony. Two mikes were placed on the same line as the conductor in relation to his orchestra, and there was no gain control. The result in listening puts you on the conductor's podium.

Still, recording technique presents as cital, you would hear only a small percentage of the sound directly. Approximately 90 percent reaches your ears indirectly, from all parts of the auditorium. Stereo has been an attempt to imitate this through two speakers. Too often the listener is aware of two sound sources, and recordings play up this stereo gimmick.

The Bose Acoustical Transducer System fills the room with sound, yet you are not aware of two speakers. I heard it demonstrated on two different occasions in different locations. There was clarity and presence for each instrument and voice. The quality was even throughout the entire range, from highest treble to very low bass, with no boom. I stood in every part of the room, even directly over the speaker. The volume level was constant, and the balance was the same.

The system is called the Bose 2201. It is the first version of an array of 22 loudspeakers. They are the kind used for tweeters. Together they function as woofers. Each unit is in a walnut cabinet 25 inches high at the back corner. The front covering is hand-loomed Tussah raw silk from India.

Dr. Bose studied violin when he was younger, and he is a great music lover. He is delighted that the Boston commercial outlet for his speakers is run by a graduate of the New England Conservatory of Music. The system has just been put on the market and can be heard at Stereo Designs, 30 Boylston Street, Cambridge. The Bose Corporation should soon be outgrowing its present plant at 17 Erie Drive, in Natick.