

**An anthology of
reprinted articles
on stereophonic
techniques**



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preface

Stereophonic recording and playback dominate the commercial media of records, tapes, and FM broadcasting, and it is to the credit of both our technology and our binaural hearing capabilities that a single pair of channels can produce auditory perspectives so convincingly.

In the days before loudspeakers and amplifiers, headphones and carbon microphones were used to transmit stereo from the stage of the Paris Opera to listeners in an adjoining space. This was over 100 years ago, and the dream of auditory perspective for the consumer was not to be fulfilled until Walt Disney's "Fantasia" appeared in 1939. Later, in the 1950s, Cinerama and Cinemascope gave most consumers their first hearing of stereophonic sound.

Through the medium of reel-to-reel magnetic tape, two-channel stereo reached into the consumer's home in the mid-1950s. But it was the stereo LP record and FM stereo that really launched the format in a big way. Today, in any serious playback environment, it is assumed that stereophonic sound is the norm.

Since its inception, the *Journal of the Audio Engineering Society* has published significant contributions to the art and science of stereo, and an anthology of papers drawn solely from the pages of past *Journals* would have been sufficient. In producing this anthology, we have gone beyond the *Journal* and have included significant papers from other sources in order to make the anthology a complete survey of the subject.

The first section of the anthology presents a number of historical documents, along with some recent papers

that cover certain historical aspects of the subject. Included here is B. Hertz's description of Ader's historic stereo transmissions from the stage of the Paris Opera in 1881. Welch and Reed's description of the Columbia Multiplex Grand phonograph is included, since it was undoubtedly the first instrument which could actually record stereo. Further historical papers cover the work of Blumlein—truly the father of stereo—and the many engineers at Bell Labs.

The second section of the anthology deals with analysis and experimentation in stereophonic phenomena. Included are basic studies in stereophonic localization, signal transmission, and signal processing.

Perhaps of greatest interest to AES members is the section dealing with stereo recording techniques. Here, we find a joining of laboratory analysis with the empiricism and aesthetic judgments required in the studio.

Broadcast stereo is covered in great detail in the pages of the *Journal*. We have chosen those significant papers which relate to audio signal processing, excluding those which deal more with radio frequency hardware concepts.

A final short section deals with the home listener interface.

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John Eargle
1986 March

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