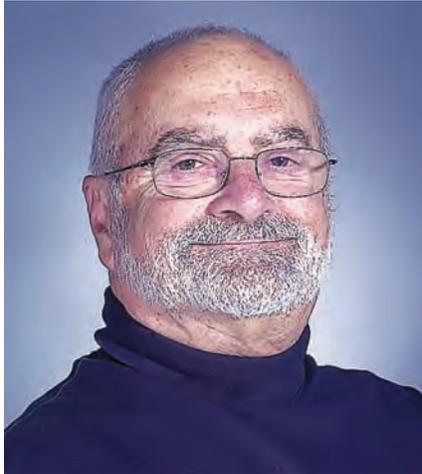


## FROM THE EDITOR

Dick Stern

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Audio recording is a fundamental link in the chain of the preservation of vocal, instrumental, and effects performances. As such it is a creative nexus of audio and acoustical engineering, involving both technical and artistic components. Each of these disciplines can learn from the other and it is in the hope of increased cross fertilization that our guest editor, Marshall Long, has invited a group of talented experts to talk about what they do. The Society is fortunate that they have taken the time to contribute to this issue. To obtain an overall perspective, Marshall has introduced each of the authors in *From the Guest Editor*.

Dick Stern

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## ACOUSTICS OF THE RECORDING ARTS

Marshall Long

To explore the interactions between recording, mixing, editing, and production as well as the acoustics of the spaces in which these activities occur, we have invited several authors to discuss each of the steps involved.

**George L. Augspurger** received a B.A. degree from Arizona State University at Tempe and an M.A. degree from the University of California, Los Angeles (UCLA), followed by postgraduate work at Northwestern University. After working in sound contracting and television production he joined James B. Lansing Sound, where he served as Technical Service Manager and later as Manager of the newly formed Professional Products Division. In 1970 Mr. Augspurger left JBL to devote full time to Perception Inc., a consulting office specializing in architectural acoustics and sound system design.

Mr. Augspurger is a fellow of the Acoustical Society of America, a fellow of the Audio Engineering Society, a mem-



ber of the United States Institute for Theatre Technology, and a member of the National Council of Acoustical Consultants. His name is familiar as the author of numerous articles and technical papers, mostly dealing with loudspeaker design and application. His double-chamber speaker enclosure described in the December 1961 issue of *Electronics World* is still a favorite of amateur speaker builders. Today, there are more than 100 installations of custom monitor loudspeakers designed by Mr. Augspurger in professional recording studios throughout the world.

He contributes regularly to the Patent Reviews published by the *Journal of the Acoustical Society of America*.

**Shawn Murphy** is a well known sound engineer and mixer. He received a BA from San Francisco State University and a MFA from Stanford University. He worked extensively as a Technical Director and Theatrical Sound Designer for

American Conservatory Theater (San Francisco), and the Oregon Shakespeare Festival. As a free-lance mixer and audio supervisor he has worked for the Academy Awards, Boston Pops Television Series (PBS), Great Performances (PBS), and the original audio design and installation at NBC Saturday Night. He has recently worked as a consultant and mixer for the Boston Symphony Orchestra, Pacific Symphony Orchestra, Tanglewood Music Festival and the Hollywood Bowl. Since 1983 he has worked on over 340 feature films, primarily as a recording engineer and mixer. He won an Academy Award for Best Sound for *Jurassic Park* and was also nominated for *Indiana Jones and the Last Crusade*, and *Star Wars Episode I: The Phantom Menace*. Other credits include: *Lincoln*, *The Bourne Legacy*, *The Bourne Ultimatum*, *The Hunger Games*, *Men in Black (I and III)*, *Indiana Jones and the Kingdom of the Crystal Skull*, *Star Wars Episodes I, II, and III*, *Harry Potter and the Prisoner of Azkaban*, *Titanic*, *Saving Private Ryan*, *Jurassic Park*, *Apollo 13*, *Braveheart*, *Schindler's List*, and *Dances with Wolves*. He is a Fellow of the Audio Engineering Society and a Member of the Academy of Motion Picture Arts and Sciences.

**Floyd E. Toole** studied electrical engineering at the University of New Brunswick, and at the Imperial College of Science and Technology, University of London, where he received a Ph.D. In 1965 he joined the National Research Council of Canada, where he reached the position of Senior Research Officer in the Acoustics and Signal Processing Group. In 1991, he joined Harman International Industries, Inc. as Corporate Vice President—Acoustical Engineering. In this position he worked with all Harman International companies, and directed the Harman Research and

Development Group, a central resource for technology development and subjective measurements, retiring in 2007.

His research focused on the acoustics and psychoacoustics of sound reproduction in small rooms, directed to improving engineering measurements, objectives for loudspeaker design and evaluation, and techniques for reducing variability at the loudspeaker/room/listener interface. For papers on these subjects he has received two Audio Engineering Society (AES) Publications Awards and the AES Silver Medal. He is a Fellow and Past President of the AES, a Fellow of the Acoustical Society of America, and a Fellow of CEDIA (Custom Design and Installation Association). He has been awarded Lifetime Achievement awards by CEDIA and ALMA (Association of Loudspeaker Manufacturing & Acoustics International). He is the author of the book, *Sound Reproduction—Loudspeakers and Rooms*.

**Marshall Long** is the guest editor of this issue. He received a B.S.E. from Princeton University in 1965, attended the University of Grenoble in France (1965-66), and the University of Madrid in Spain (1966), and received M.S. and Ph.D. degrees (Distinguished Graduate) from the University of California, Los Angeles (UCLA) in 1971. He held a post doctorate position at UCLA in 1972. Since 1972, he has been engaged in acoustical and audio visual engineering consulting as principal of the firm he founded. His firm has established a national and international reputation, completing over 3,000 projects in architectural acoustics, noise and vibration control, environmental impact assessment, and audio visual design. He is a Fellow of the Acoustical Society of America and author of the engineering textbook, *Architectural Acoustics*.

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