The Science Behind the Sound: How to Select Loudspeakers and Headphones for Broadcast and Production
Presented by Dr. Sean Olive- Harman Professional Solutions

Since 1985, significant research has focused on listeners' ratings and preferences of loudspeakers based on sound quality. The same standard used to measure end-user preference can be adopted for professional and broadcast monitors, ensuring 100% compatibility between the monitors used for production and reproduction of audio content. In this way, consumers would finally hear what the artist or broadcast producer intended. In the past five years, similar research has evaluated headphone sound quality. The commonality between the headphone and loudspeaker target curve means that broadcast engineers and producers can either use loudspeakers or headphones to evaluate audio content and come to similar conclusions. In this presentation, Sean will summarize the current best practices for measuring the sound quality of loudspeakers and headphones based on recent scientific research. Attend this session to learn the science behind sound quality, so that you can select loudspeakers and headphones that will bring your productions to life.

Dr. Sean Olive- Acoustic Research Fellow at Harman Professional Solutions

Sean is an Acoustic Research Fellow for Harman International, where he directs research focused on the perception and measurement of sound reproduction including loudspeakers, room acoustics, automotive audio, and headphones. Sean received his Masters and Ph.D. degrees in Sound Recording from McGill University and has written over 50 research papers on his research for which he was awarded the Audio Engineering Society (AES) Fellowship Award in 1996, and two Publication Awards (1990 and 1995). He is active in several AES Technical Committees, has co-chaired two AES conferences, and is Past AES President.

Improved Sound System Design and System Commissioning Through Better Measurements Presented by PCB Piezotronics

The microphones typically packaged with acoustic measurement equipment used in the design and commissioning of sound-reinforcement systems are low-cost electret designs. Even though these microphones may come with a calibration chart, this does not necessarily mean they are a true test and measurement microphone. T&M microphones offer significant advantages over low-cost electret microphones. Metal diaphragms provide low-noise measurements, durability, stability and flat responses over varying environmental conditions as compared to plastic electret or non-calibrated designs. ICP® and 48V phantom power designs will be compared and the advantages of measuring beyond 20 kHz will be explored as it relates to accurately characterizing impulse response times and reproduction of transient signals.