

# ISF/HAA Seminar Helps Maximize Home Theater Performance

Home Acoustics Alliance and Imaging Science Foundation certify training in audio and video calibration equipment at a hands-on four-day training school sponsored by Sencore. BY MARK FLORIAN

**T**hey say you never stop learning... especially when it comes to the latest technologies in audio and video. Long known to those in the professional broadcast and electronic equipment repairing worlds, Sencore, Sioux Falls, S.D.-based manufacturers of electronic test equipment, has put together a four-day training seminar focusing on both audio and video calibration.

This new seminar, entitled "Maximizing Home Theater Performance," is aimed squarely at those who install custom high-end home theater systems on a regular basis. By encompassing both audio and video calibration, the company's goal is to enable installers to give their clients the best possible audio and video experience. Among the tasks covered in the sessions are analysis, calibration, selection criteria, comparison of products, and most importantly, sales techniques.

Upon Satisfactory completion of two tests, one each for the audio and video classes, attendees receive certification from the Imaging Science Foundation (ISF) for video calibration and the Home Acoustics Alliance (HAA) for audio calibration. In addition, attendees also receive a factory-training certificate from Sencore for the particular instruments.

## Learning video calibration with ISF

Many are familiar with Joe Kane and Joel Silvers' work as the "dynamic duo" behind the ISF. Since 1994 they have offered ISF training to installation companies and video component manufacturers in hopes of getting the best possi-



Mark Florian of West End Audio recommends the Sencore-sponsored A/V calibration seminar.

ble picture from direct view CRTs, front- and rear-projection sets and new technologies such as LCDs, plasma screens and DLP devices. Because of the foundation's efforts, many manufacturers have listened and given integrators better chassis that are easier to calibrate and more capable of delivering a superior picture. ISF-certified calibrators are able to show their customers an easily discernable difference when their sets or projectors are calibrated. The result is not only a better looking product but a truer picture as well. The ISF can be found on the Web at [www.imagingscience.com](http://www.imagingscience.com).

The two-day ISFD seminar I attended included a huge amount of information on the history of our television broadcast system, how television systems produce a picture, an in-depth examination of the National Television Standards Committee (NTSC) system, setting the front panel controls using SMPTE test patterns, the CIE color space, how our eyes see color, how the

color of light and furnishings affects the displayed image, de-interlacing, the difficulties in transferring film-based sources to video, resolution, the new HDTV system, advantages/disadvantages of various projection systems and technology and what factors to consider in choosing a projection screen. The rest of the time was devoted to analysis, calibration and comparison of different CRT television sets that were present. Because the class size is limited to 25 participants, each person is given the opportunity to practice using the Sencore calibration tools and gain hands-on experience in properly setting up a television.

Upon completion of the course, attendees are trained on Sencore's CP288 and 290 ColorPro color analyzers and the VP300 VideoPro Multimedia Generator. These sessions also give participants the opportunity to make white balance and gray scale adjustments, evaluate linearity and convergence and learn the process for performing color balance on direct view sets. Throughout the course, Silvers performs many demonstrations using several video sources and display devices. By comparing sets of different manufacturers against each other, clear differences in picture quality emerge. Each participant is given a copy of the Avia test DVD, a package of red, green and blue filters, a notebook containing a 146-page ISF reference guide, an 81-page discussion of DTV originally presented by Jim Burns and a full-color C.I.E. chromaticity diagram printed on glossy paper.

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# Guest Editorial

## **Learning audio calibration with HAA**

Not so familiar is the recently formed Home Acoustics Alliance (HAA). Its Web address is [www.acousticsalliance.com](http://www.acousticsalliance.com). The HAA is an organization formed by Sencore and Gerry Lemay, president and founder of Quest Acoustical Interiors. Its stated goal "is a professional training organization dedicated to home acoustics. Its purpose is to promote the correct and most effective use of acoustical design and calibration techniques specifically for the home...the HAA brings together manufacturers, home theater professionals and consumers in the pursuit of excellence. It is a melting pot for ideas and techniques for achieving great sound through training."

Forming the HAA made sense according to Lemay, who says "both Quest and Sencore sell equipment and materials that are useless unless people are trained to properly use them." In addition, both companies saw an industry need for competent and well-trained installers.

The desired acoustical results are dialogue clarity, front soundstage focus at all angles, diffuse surround sound field, smooth and wide frequency response, wide dynamic range and no bad seats! To achieve this end result, you have to start from the beginning with a thorough understanding of home theater acoustics: sound, loudness, room modes, reverberation and ambient noise. Each of these is covered in detail with actual examples demonstrated to reinforce learning. Next design strategies and techniques are discussed to achieve the critical acoustic goal of uniform modal distribution. Defining the space, soundproofing, equipment and seating layout,

subwoofer placement, acoustical treatments and video integration are all discussed extensively.

After discussing the design phase, Lemay presents a step-by-step approach to acoustical calibration. Highlights are speaker set-up, ambient noise levels, a detailed reverberation analysis, properly setting up an equalizer, performing a real-time analysis of the system and finally the importance of using a resonance sweep to "de-rattle" the installation and eliminate those pesky noises and buzzes. To document the effects of this stage, Lemay handed out spreadsheet software that can be used to generate an acoustical calibration report. Not only does it organize a lot of information, but it also provides an easy means to explain to your client the effects of calibration on the overall sound. Of course, the ultimate test is when the customer sits down and becomes "captured by the moment," unaware of everything but the movie he or she is watching.

Finally, Lemay presented strategies for selling acoustics to your clients. Often clients are unable to understand the benefit of acoustics until they hear the effects of it. Talking "English" to them is important so you don't "blow them away" with technical jargon, resulting in more confusion. Its effects are summed up well with this quote, "Among the elements that distinguish your company from the competition, the effective presentation of professional acoustical expertise is unrivaled in its impact." If your clients don't understand your presentation on acoustics, then it wasn't effective.

In this audio calibration part of the course, extensive use is made of the

SP295 SoundPro Audio Analyzer. Details of these instruments, as well as the video calibration tools, can be found online at [www.sencore.com](http://www.sencore.com).

## **Take the seminar!**

I found the demonstrations throughout the two days of audio calibration very effective. Several of the Sencore SP295 audio analyzers were on hand so that each student was able to become familiar with its features and use. In addition, students were able to see in real time the effects of parametric equalization using the SP295 when setting the subwoofer level. We also had a long discussion of real-world rooms; those oddballs that each of us has encountered that make us wonder, "How do I configure and set-up this room?" Each participant came up and presented his current job or most recent nightmare for all to offer suggestions. This brainstorming session was a great idea for everyone and gave us all a chance to work on hitting curveballs. Also included was a detailed 96-page workbook of the class presentation notes and acoustical reports generated by the software.

I highly recommend this seminar. I think it's a great idea to present audio and video calibration methods together. It just makes sense because in home theater, you never have one without the other. [CE Pro]

*Mark Florian is owner of West End Audio in Austin, Texas. He can be contacted at [mflorian@wans.net](mailto:mflorian@wans.net). For future seminar dates and locations, contact Steve Jackson at Sencore, 1-800-736-2673 ext. 232.*