



Sophisticated acoustical analysis for sound system designers.



Modeler® sound system software is a sophisticated, predictive acoustical analysis program that helps designers determine the recommended configuration and location of loudspeakers for any venue. With this technology, designers can create an acoustical model of the facility, lay out a sound system, and predict system performance in key acoustic dimensions including tonal balance, loudness, localization and the audibility of reflections. In addition, a proprietary algorithm allows for accurate predictions of speech intelligibility using industry standards such as the Speech Transmission Index (STI) and STIPA. Modeler® Plus software builds on the capability of Modeler® software with algorithms that enable auralization with the Auditorer® playback system. These powerful tools let designers and customers

around the world actually hear how their system will sound in the room prior to installation. With the portable Auditorer playback system, simulations can be heard where it is most convenient – from the designer’s work space to the customer’s office.

The foundation is an accurate computer model of the room.

First, designers create an accurate geometric and acoustical representation of the room with easy-to-use drawing tools. Then materials, and their absorptive and reflective characteristics, can be assigned to the various surfaces in the model. In addition, other parameters that impact sound quality, such as seating locations and audience size, background noise, temperature and humidity, can be entered into the program.

In Modeler® software, algorithms optimize the acoustical parameters of surface materials to match predicted reverberation times with measured ones, which ensures accurate predictions of sound quality. Realistic background noise also can be mixed – all from within the program – into the Auditorer system simulations so that designers and customers can hear the effects of HVAC noise, crowd noise or other venue-specific audio imprints.

Designing the sound system to meet acoustical demands.

With Modeler® software, loudspeakers can be visually placed in the room model. Designers have the ability to adjust loudspeakers in the same way they do in the actual acoustic space, adjusting parameters such as aiming, phase, signal delays, equalization and gain.

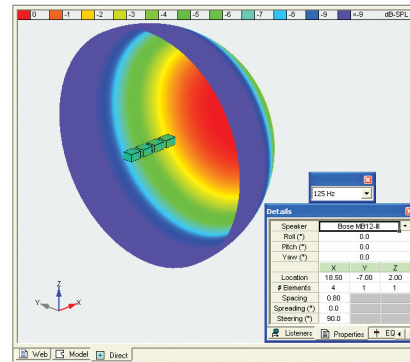
Modeler® software offers an array design tool that allows designers to quickly design even complicated bass arrays. A unique interface offers real-time displays of the array's directional performance, based on properties such as number of boxes, spacing, steering direction and spreading parameter. End-fire arrays, broadside arrays and compound arrays can be created in a few quick steps.

Reviewing performance with visual maps.

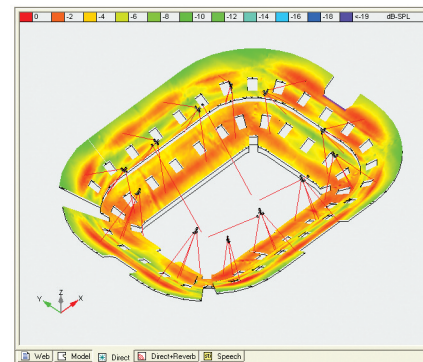
Modeler® software's direct field coverage map helps designers ensure consistent sound coverage. The Direct + Reverberant map lets designers examine the overall loudness of the sound system and easily adjust equalization. Modeler® software also calculates speech intelligibility for any listening position within the model, according to the Speech Transmission Index. This predictor is translated to other important indices such as STIPA, phonetically balanced word scores and %ALcons. The software provides the option to calculate STI based on the latest 2003 STI standard, or the previous 1988 standard. When design changes are made, Modeler® software quickly calculates and displays the new results in any coverage map.

Hear the results with Modeler® Plus Software and the Auditorer® Playback System.

Modeler® Plus software and the Auditorer playback system provide a combination of objective numeric data and subjective listening tests that allow designers and customers to hear how the proposed system will sound before it is installed. As a result, designers and clients can evaluate the right sound systems solutions for the project and the available budget.



Cluster View: sample of end-fire array



Room View: direct field coverage map

For more information:
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