

SOUND ADVICE

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... the sheer pleasure of natural sound

A Great Sound System for Your New Facility



What is the purpose of your new building? If it is to serve as an auditorium, theater, worship center, multi-purpose space, or large meeting room, then a primary concern should be that attendees be able to hear clear, natural, intelligible sound. Unfortunately, often this **primary** concern is relegated to lowest status in the design process: “We’ll see about the acoustics and sound system when we get closer to completion so that we know how much money we have left.” If you approached Christmas shopping by seeing how much money you have left before buying a present for your significant other, how long would that relationship last? If sound is a primary issue, it should be addressed early in the design process.

Certainly the first step in planning for good sound is to make sure the room supports excellent sound by retaining a qualified acoustical consultant. But it is also essential that the design of the sound reinforcement system be properly integrated with the acoustical design of the room. Good sound designers usually do a computer model of the room to optimize the selection, placement, and aiming of the loudspeakers. If the sound reinforcement team is selected early, they can usually make use of the computer model that the acoustical consultant builds, avoiding duplication of costs. Also, the sound reinforcement team needs to provide critical input to the electrical contractor before conduit is placed in a concrete slab, before receptacles are assigned to circuits, and before the breaker panel is specified. There are three ways to successfully ensure that the sound reinforcement system is optimally designed, and that the building owner gets maximum value for the money. The most straightforward is to use an acoustical consultant who is qualified to offer sound system design services as well. In many cases, the same company can also offer video projection/recording system design and performance lighting design as part of the complete technical design package. Using a single company maximizes opportunities for communication and cooperation among those responsible for the various aspects of the tech design.

In some cases, an architect or building owner will choose an acoustical consulting firm that does not offer other technical design services. In these cases, a separate sound/video/lighting consultant can be retained. In either case, the sound/video/lighting designer should begin work by being sure to understand the needs of the users of the facility. Depending upon owner preference, the designer may also assist the owner in selecting a contractor for the installation, inspect the system after a contractor installs it, perform critical system adjustments at installation (**commissioning** the system), and train the personnel who will operate the system for the facility.

Designers and Consultants in loudspeakers, sound systems, and acoustics since 1976.
Members of the Acoustical Society of America.
Members of the Audio Engineering Society.

The third approach is to use a design-build sound/video/lighting company. These companies do more than sell and install sound and other technical equipment; they design the systems, much as an independent sound/video/lighting consultant would. Then they install and commission the system and train operators. It may seem at first to be simpler having a single design-build company rather than have a separate consultant and contractor. This may be the case, but it is true that many contractors only handle a few manufacturers' products; whereas, a consultant can specify any available product to best meet the needs of the venue. Some contractors are lured into stocking a significant product inventory in order to receive advantageous pricing. Then they may feel pressured to sell what they have in stock rather than what the venue really needs. Certainly these shortcomings do not apply to the best design-build contractors, but they often do apply to the lowest bidder.



Note that retail music/pro-sound stores have not been mentioned as a viable option. This is because of the likelihood of unqualified persons (a. k. a. “salespersons”) masquerading as system designers, in addition to the issues mentioned above in connection with contractors. The standard advice is to check multiple references for successful designs and/or installations in facilities similar to the new one being planned. Go listen to the sound in the facility and talk to the owners and tech people there to get a comprehensive assessment of the professional whose services you are considering using. Also, check the formal training of that professional, since both formal training and

successful experience are essential ingredients in reliably designing optimal sound, video, and lighting systems.

Meet us in South Carolina

We will participate in a “CEUpalooza” organized by Carolina Architectural Lighting. The event will be held in Greenville (22nd), Columbia (23rd) and Charleston (24th). Information can be found [here](#). Late in the afternoon of each day, Joe Bridger or Noral Stewart of Stewart Acoustical Consulting, with whom we have collaborated on several projects, will present the Architectural Acoustics class developed by the Acoustical Society of America and registered with AIA. This is a health, safety and welfare credit for AIA members.



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