

# Acoustics Then and Now

by Nick Colleran

It is difficult to see where you are going if you don't know where you've been. So first, a little history:

Fall 1979. The AES show is in New York at the Waldorf. SPARS has its first membership meeting. *Pro Sound News* begins publication. And, the first demonstration of acoustic materials, a patented anechoic wedge foam, is unveiled by the founders of Acoustics First!

In the early days, acoustics were a mystery. It was not uncommon for one production room to have a 5 dB peak and another a 5 dB dip at the same frequency. Certain sounds could amplify greatly or disappear altogether depending upon where the project started and finished. With this condition, it is easy to understand why foam became so popular, under the banner of "no acoustics is better than bad acoustics." Taming sound was starting to get easier.

Once the sound inside diminished, the noise from outside became apparent. With foam having almost no effect on sound transmission, barrier materials such as sheet lead became popular.

As measuring techniques evolved and totally dead rooms proved uncomfortable, rear wall diffusion, based upon the work of Dr. Manfred Schroeder, entered the picture. This technique is like acoustical "crowd control", designed to scatter rather than eliminate the sound.

Control rooms evolved to "Live End—Dead End." More people became aware that getting the sound correct while it was in the air, by thinking of acoustics first, saved in the long run.

In an earlier decade, absorption was created by installing fiberglass batts and stretching burlap over them. Lesser degrees of absorption were obtained by gluing school band room acoustical tile or carpet to the walls, for some reason orange shag seemed the usual choice. Some folks covered the room with egg cartons, a real fire hazard not to mention the cholesterol danger from eating all those eggs!

Diffusion was added primarily by "build your own polys." These items, polycylindrical diffusers, were a common fixture in fifties studios and on scoring stages. (Check out the pictures of Elvis in RCA's New York studios.) They fell out of favor due to the time and labor required. It took several people to hold the plywood while another fastened it. If it slipped something or someone flew across the room.

When Disco came along, floating floors became mandatory to keep the "lead" foot on the kick drum out of the live acoustic piano. One method was to have a drum platform (made massive with sand filling) rest on tires to de-couple it from the studio floor.

Now that the children of the sixties are the homeowners of the nineties, the demand for better sound has come home with them. At the same time there is less tolerance for industrial looking materials at home, even in the band practice room.

Which brings us to the present and the mission of Acoustics First®: to make "materials that look as good as they sound." And to make it easy as well.

Our acoustical panels are manufactured to order and covered in a variety of standard and custom fabrics. (No more itching and stretching.) The polycylindrical diffuser which doubles

as a bass trap (our "Double Duty Diffuser") is an off-the-shelf item made to match the panels. (No more getting three friends to hold the plywood while the bend is locked in place.) Neoprene replaces tires. (No more tread marks.) Sound Channels replaces wall carpet. (And meets fire codes.) In an effort to "get the lead out" mass loaded vinyl is the new barrier material of choice. (No more crinkled lead foil.) And, for its 20th anniversary, traditional acoustical foam is now available in new colors of burgundy and hunter green.

As our company enters the next decade (see I didn't use the "M" word), looking good and being easy will extend to new products: The patented Art® binary array diffuser is available ready to install in 7 different woods and a variety of painted finishes. A stackable, nesting version of the "Cutting Wedge™" acoustical foam allows increased absorption at any time by add-on rather than replacement. The author's personal favorite, a field tunable corner bass trap (patent applied for), is expected in the spring.

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