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Hear Ye: Call Dr. Bonnie!

By JOAN TYOR CARLSON

And then he sat down to play . . .without a sound.

It was a small dinner party, by design for women only. Bonnie and I started talking. While she is divorced and has two grown children, Bonnie can best be described as a slip of a girl, slim with shimmering long blonde hair. I thought that she looked like one of the new breed of attractive career women with a smidgen of the long time graduate student or professor about her.

Thus I was doubly intrigued when she told me that she was an acoustic expert who started out as a math major and worked as a mechanical engineer involved in the vibrations of the engine rooms of tankers and then moved on to underwater acoustics and geophysical signal processing which involves classified information for NATO, monitoring for nuclear explosions. You get the idea. Not your usual neighbor next door.

Speaking of neighbors. The second reason that I was so interested in Bonnie is because I live smack on a busy highway next to a popular deli. It's almost as noisy as 60th street near Madison where I used to live. When I told her my situation she volunteered to help me. It's changed my domestic life.

Bonnie came to the house with her spectrum analyzer, looked over the situation, took readings and then went back to work magic on her computer. She returned with good news and devised a quick remedy for the worst of the street noise. I am now one of the committed, who, like many knowledgeable architects and builders who know the answer to your annoying, embarrassing, sleep depriving noise problems is: "Call Dr. Bonnie."

That's acoustic expert Bonnie Schnitta, Ph.D., She travels all over the country fixing deafening restaurants, echoing auditoriums, and unacceptable industrial plants and offices.

Only in the past eight years has she broadened her scope to include residential projects, opening South Fork Technological Consultants of East Hampton in 1991. Builders like Telemark and Ben Krupinski have been enthusiastic users of her services, often routinely acoustically correcting entire luxury houses.

"It started when architect Frank Greenwald asked me to make sure that the acoustics were correct in a media room on an estate in Montauk. This installation was in a small grandfathered house on the property, set near the boundary. I found there was another problem there, the sound was going to go right out to the neighbors. So, we put in a SoundSense barrier - a special loaded vinyl on the interior walls and the noise was contained. Now, architects and builders use my services frequently, often having me look at the acoustic

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design of a house before it's built," says Dr. Schnitta.

This is not seat of the pants technology. A spectrum analyzer which registers the decibel level of sound at various frequencies and looks remarkably like a laugh meter is held by Dr. Schnitta as she sounds out the entire area and then takes her findings back to her computer where she simulates the noise and possible solutions on special programs she designed. This is easy for her as she has B.S. degrees in mathematics and mechanical engineering as well as a Ph.D. in signal processing.

While the SoundSense barrier is the major tool in this fight to stop noise, there are other noise-busters also involved. Often a clear SoundSense barrier is placed inside twin lattices for use in gardens today.

While most zoning doesn't allow us to use an 8 foot fence, we can get the equivalents by increasing the width of the fence so that a pair of 6 foot high stockade fences with a barrier insert, can give the same noise reduction, explains Dr. Schnitta. "I was called in to get rid of the noise at the Gingerman Speedway in Michigan. There was a lot of land to work with so a black barrier was dug into the ground in the middle of a berm 8 feet high and 24' wide. This was planted on top with shrubs for noise absorption. Tall trees were placed behind to stop the kind of big acoustic waves which lob into the air and travel around the area. The neighbors had wanted to shut the place down but we were able to satisfy their complaints. And, yes, we could do the same thing with the Bridgehampton track so that neighbors, near and far, would not hear anything," she asserts.

For a client with a hearing problem, she lined the engine box of his boat with a composite of barrier material and melamine foam used as an absorber with a Mylar coating to counteract the heat.

People don't realize that there are many common problems that we can solve today. For instance, reverberation is the persistence of sound in a room after a sound has stopped. Noise problems arise in a room that has many reflective surfaces, such as glass, sheet rock or finished wood, since these materials cause the room to be highly reverberant. This tends to make conversation difficult for people with normal hearing and nearly impossible for people with hearing problems but we can fix it. Special 2'x2' acoustic tiles, the real thing, are glued to the ceiling as one of the solutions. These tiles are available in many patterns including a tin roof look. And, in the HVAC ducts where sound always travels, we can line them with a fiber free rigid foam liner. Do not substitute a foam which is not Class A Fire Rated," stresses the expert.

. . . "It broke my heart to see homes being built with so little regard to acoustics". . .

Raising the volume on a TV set can cause high reverberation in a room from sets placed in armoires or cupboards, which hinder the sound. Lining the TV area so that the sound shoots out in a pure wave can solve the problem and inhibits the sound from 'jumping' into the wall and traveling to adjacent rooms.

For jobs on existing structures, Dr. Schnitta frequently works with Eric Lovelace, a Sag Harbor contractor, because he understands the importance of using the materials correctly and does the job in the most cost-effective manner. Naturally, it is easier and cheaper to plan acoustic control before construction begins. "All new homes should have a SoundSense barrier put down floor to floor on top of the plywood on the upper floors. Everyone should use this," states Dr. Schnitta.

"I started doing residential work which is not as lucrative as commercial projects, because it broke my heart to see homes being built with so little regard to acoustics when it affects our daily lives so drastically. My biggest fans are homeowners who may have only done a partial acoustic application and hear or 'feel' the enormous difference between the treated and untreated portions of their house. I am sometimes called in before land is purchased to determine possible acoustic problems and to do a site examination. I also have done an estimate for owners who had their house on the market for several months in a noisy area. I detailed an acoustic solution that showed how the situation could be fixed for $8000. The house sold within three weeks," she adds.

Every homeowner and contractor who has worked with Dr. Bonnie asks the same question, "How come I never heard about this before?"

"Two reasons really," says Dr. Schnitta. "Because most qualified acoustic consultants concentrate only on lucrative commercial projects. Also because the solutions have been very costly in the past. I have found and developed less expensive applications which are suitable for the residential market and, just now, luxury market homeowners are responding." ■