

CREATING A

HOME RECORDING ENVIRONMENT

PLAYING THE HAND YOU'RE DEALT



Recording environments in large, dedicated facilities as well as in-home project studios have the same basic requirements to control sound and eliminate noise.

By Nick Collieran

Is the Problem Isolation?

You can't block sound with acoustical foam or "fuzzy stuff." Porous materials prevent sound from bouncing but pass it through with little loss of energy. Blocking sound requires mass. If you are building a room, multiple layers of drywall can add that mass. Care should be taken to seal behind electrical outlets and other holes in the wall. The wall should be insulated, not because fiberglass blocks sound but it keeps the walls from acting like a drum by trapping the air.

If the room is already built, a layer of mass-loaded vinyl will provide the required mass. (It's heavy as lead but only one-eighth of an inch thick.) The black vinyl can be dressed up with an acoustical wall carpet, leaving a wall you won't have to take down to keep the landlord happy when you move to another apartment.

The sandbox isn't just for Brian Wilson*, it can provide isolation, not just inspiration. Low frequencies, such as "kick" drum and those produced by a bass amplifier, are directly coupled to the structure and travel through its beams and plumbing. If floating the entire room isn't an option,

you can float the instruments. A platform filled with sand and floated on vibration pads will de-couple the instruments from the structure. (The author once employed nine used truck tires to isolate the platform for disco drums next to an acoustic grand piano.) Of course, if you want to write a surf song, you can leave an opening to run your toes through the sand while composing.

Getting "The Sound"

A box will sound "boxy." A vocal booth has its place but if you build your own don't make it a cube. Equal dimensions will cause the sound to reinforce in certain ranges and cancel in others. The better, commercially available units are trapped to overcome some of this.

Use the internal acoustics. The kitchen sounds different from the bedroom and, it might actually be good to sing in the shower. Rooms color the sound in ways that help make hit records and cannot be duplicated with electronics. Use microphones, near and distant combined, to create a natural doubling. If you record bass direct, try it mixing in a microphone.

Move around the microphone. One violin overdubbed is not the same as a whole section of

*For those folks coming in during the middle of the movie (post-sixties), Brian Wilson—singer, composer, producer and leader of the Beach Boys—wrote songs at the grand piano in a sandbox in his home, for inspiration.

them playing the same note. The slight variations in pitch, intensity, and bowing create a bigger sound. It's the same way for vocals. If you must create the chorus by overdubbing, set the microphone on "omni" and move a quarter-circle around it for each layer. If you have four singers, apply the same technique around one microphone.

What's Real Doesn't Sound Right

What you hear, and what you think you hear, are not the same. You may think a record has lots of bass when really it has a lot of bass player and no really low frequencies. This is often done to translate to the playback environment of a car or television. Forget your favorite speaker and listen on many monitors in different acoustical environments. If you are selling your voice, learn how the buyer will be hearing it and mix for it.

Listen. Many of the great recordings of the sixties had to be monitored on headphones (the ultimate in "near field" monitoring") because the studio's control room acoustics were either so bad or provided no point of reference to what was standard in the industry, meaning New York and Los Angeles. Some cities, thought of as great for recording, were





actually known for great records (more a result of the songwriters, performers, and producers found around the country than their studios). In some cases, the anomalies of these rooms added a regional character that has disappeared today. Now, not only do the drums sound the same everywhere, they're the same drums (samples).

Monitor. Today, achieving a useable playback environment is no longer a mystery. Avoid cubic rooms. Pad the walls and other surfaces that might provide a reflection before the sound gets to the listener (absorption). Scatter the sound behind the mixing position (diffusion). Trap the bass to avoid its cancellation and keep the room large to give it space to develop. Leave the back door open to the rest of the house to "vent" the bass. Closing the space will often diminish what you hear, especially in the low end, while the neighbors still get "ripples" in their coffee. ■

Nick Colleran spent the first decade of his professional life as a performing artist and followed that with two decades managing a large-scale recording and post-production facility. He now leads a "quiet life" at Acoustics First Corporation, helping clients avoid the mistakes he's already made.