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Subject: Re: 4pi Dinner Theater Update

Posted by [Wayne Parham](#) on Tue, 18 Sep 2012 05:50:09 GMT

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It's hard to say just by looking. But there are a few generalizations that I think may apply to you.

One is the larger the room, the smoother it is. Room modes get shifted down below the passband (and so don't exist) at some point. And reflections are further away, so they're more attenuated.

Another is slanted or gabled ceilings tend to increase ceiling slap, since they direct it like a parabolic reflector. That and hard floors can be a killer, so limited verticals are your friend. Then again, once the ceiling is high enough, it stops being a problem. Or if it is well damped, that helps too.

One quick and easy test is to clap your hands in the room. This creates a pretty good "signal" to tell you what to expect from the room. If the sound is primarily just the direct sound from your hand slap, with maybe a little bit of ambience, your room is probably going to sound pretty good. If it sound too lively, sort of a ringing like tinnitus, the sound you hear in your ears after a loud concert, then the room needs more absorbent material. On the other hand, it can be too dead. If you hear nothing at all from the room, no reflections, just the initial clap that sounds more like a thud without much "slap", then the room may be so absorbent that it sounds somewhat dead.

Walk around the room giving a sharp clap from time to time and listen to the room decay. It may be different in different places in the room, especially with a gabled ceiling. That will give you a quick feel for room acoustics.