Subject: Predicting room boundary reinforcement
Posted by laoye on Thu, 26 Sep 2002 00:42:45 GMT
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Hi Wayne,I understand that speaker response will vary depending on proximity to room boundaries such as floors and walls.For a given distance of a driver to a boundary at a given frequency, how do I calculate the amount of reinforcement? Is the driver to boundary distance measured from the center of the driver or from its closest edge?Also, I've read that boundary reinforcement is 6db of sound pressure vs. 3db of sound power. What is the difference? Which would you expect corresponds to the db-calibrated volume control my preamp?Thanks!- Ken

Subject: Re: Predicting room boundary reinforcement
Posted by Wayne Parham on Thu, 26 Sep 2002 02:23:21 GMT
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Basically, a room boundary sets radiating angle if it is within a 1/4 wavelength. If a room boundary is further than that, it acts as a reflector instead. The goal is to take advantage of these boundary conditions, and to avoid situations that will cause cancellation nulls to form.I'd suggest Chapter 2 of George Augsperger's "JBL Professional Sound System Design Manual." Chapters 5 and 6 also contain excellent reference material for things like reflected energies, the reverberent field and room equalization. A good discussion about room placement and treatments was written by Siegfried Linkwitz in his website article called "Room acoustics." Another excellent reference article is "Loudspeakers and Rooms for Multichannel Audio Reproduction," by Dr. Floyd Toole.Loudspeakers and Rooms for Multichannel Audio Reproduction, Part 1Loudspeakers and Rooms for Multichannel Audio Reproduction, Part 2Loudspeakers and Rooms for Multichannel Audio Reproduction, Part 3