Subject: Re: Favorite flavors
Posted by Earl Geddes on Wed, 26 Jan 2005 16:08:15 GMT
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I am not speculating.Directionality, to me, implies that sound waves are free to propagate in any direction and a sources directionality defines the level of sound waves that propagate in an arbitrary but particular direction.Room modes are quite different in that they can only propagate in a single specific direction. A sound wave that is exciting a mode does not travel freely but is fixed in the direction defined by the mode. To talk about the directionality of sound waves in the modal situation is a misnomer IMO. At a mode ALL sources, monpoles, dipoles, horns, whatever, have the exactly the same directionality. Does it make any sense to talk about directionality of the source in this case?"If the room is small, room modes will dominate." True in ALL rooms at some frequency. The room modes dominate up at and somewhat past the Schroeder Frequency (if you don't know that term look it up). Above that ALL rooms act the same and modes are no longer relavent. This is fundamental room acoustics (See Kutruff "Room Acoustics" or my own texts).I can get a clean measurement in any room, above a frequency defined by the first reflection. The smaller the room the higher the frequency. In fact, some recent studies have shown that it is possible to go much lower in frequency than this traditional limit implies, but that is another topic. But at no time can one use a corner for a "clean" measurement. 1/2 space is sometimes used but this too has its problems. The only really clean measurement is a gated free field one, which can be done, within limits, in any room.Are you trying to learn something here or is this just a challenge? I will attempt to educate, but I will not accept a challenge.