Subject: Constrained spatial loading
Posted by Adrian Mack on Mon, 26 Jan 2004 15:14:54 GMT
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Hey Wayne,Been looking over your post "Room Corner Characteristics" today. Where it says, "Expansion from corner, starting at the the wall-wall junction and moving horizontally into the room up to 8 feet" does it mean, when the person walks away up to 8feet away from the corner, or is it a table showing what happens when the ceiling is from 1 to 8 feet high? Or is it a table showing what happens for wavelengths up to 8 feet ("For wavelengths shorter than 8 feet, the ceiling is a reflector and not a source launch boundary."). Where it shows the increasing directivity with decreasing freq, it looks like that by 30Hz the equivalent pyramidal horn flare angle would be very small, something like 10 degrees! Does it mean the greater than 1/8th space loading is then limited to a 10degree angle by 30Hz? Or does it just represent the increase in SPL because of increasing directivity, at all area's within the wall's 90degree flare? What happens to directivity when wavelength is longer than the longest room dimension? Can the walls on the other side of the room contribute as part of the flare or making a more constrained condition? Is it +3db gain with every doubling of increase in spatial condition? eg: 1/4th to 1/8th space, 1/8th space to 1/16th space, etc.At this website, The placement of one or several subwoofers it says that the reflections off a boundry will be in phase with the direct radiation when the driver in the subwoofer is placed within 1/8 wavelength from the boundry. It talks about it in terms of reflections though, though the wall is not a reflector at low frequencies. I guess I'm trying to see how much of a contribution 1/16th space will be to a basshorn, and also approximate what frequency the transition is for a given size room, and also what happens to dispersion after reading your other post. What do you think? Thanks!Adrian