Subject: Re: Acoustic treatment and the nearfield Question
Posted by Jim Griffin on Tue, 07 Nov 2006 22:16:08 GMT
View Forum Message <> Reply to Message

I would guess that the nearfield extends about 10 or 12 feet from a line source speaker, whereas it extends about 5 or 6 feet from a point source speaker. This is strictly a SWAG (so correct me, Jim!).Duke,Thanks for the insight and answers. As always you are right on in your comprehension of line arrays. Comments below: 1. Duke said: "I would guess that the nearfield extends about 10 or 12 feet from a line source speaker, whereas it extends about 5 or 6 feet from a point source speaker. This is strictly a SWAG (so correct me, Jim!)."Essentially a point source will have a near field that extends just inches from it while a near field line array extends its near field over most of the listening space in a normal room application. In my white paper I have the equation and a graph for those less mathematically inclined. 2. Duke said: "Anyway Marlboro, I would still want to diffuse or (if necessary) absorb the first sidewall reflections, as they are the ones most likely to be detrimental to imaging. The floor and ceiling bounce are usually the reflections most likely to cause tonal coloration, but the directional properties of a line source take them out of the picture."Yes, a near field line array will have very little radiation that impinges off of the floor and ceiling surfaces. Thus if you are listening in an imperfect room such which might have a valulted or built-up ceiling or a reflective floor then a near field line array will offer benefits. 3. Duke said: "Something else a line source gives you - a wider sweet spot. The loudness discrepancy between the two speakers is less for off-axis listeners, so you get good soundstaging across a wider listening area."Yes, the image space is greater with a near field line array as the sound decreases just 3 dB per doubling of distance from the source vs. 6 dB for a point source. Thus the line array image area and soundstage are wider than you may have grown to anticipate from point sources. Jim