Subject: Re: Array Theory
Posted by Jim Griffin on Tue, 25 Oct 2005 18:19:32 GMT
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Goskers,I would like to reply on your reference to the John Meyer's magazine article. First of all, the 'cylindrical waves' statement is true to a degree. But in the near field the vertical wavefront (created from overlapping outputs from the drivers) is concentrated between the ends of the array--very little energy impinges from the floor and ceiling surfaces. The near field energy flow radiates parallel to these surfaces versus the normal spreading flow from a point source. Furthermore, Meyer's own data does support an average of 3 dB per doubling of distance sound falloff if you look at his data in Table 1 for the 4 and 8 meters distances (practical in-home near field distances unless you live in a castle). Furthermore, John's concerns about high frequency extension are difficult to mitigate for a high power pro sound line array but can be easily overcome via readily available small ribbons and such. Bottom line is that pro sound and in-home line array design/usage are vastly different issues. John's article is good magazine material for a pro sound line array audience but can be a misleading interpretation for an in-home near field array. My work has been focused toward the use of a line array within a typical home situation.Jim