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Subject: Re: line arrays questions and stuff

Posted by [Wayne Parham](#) on Wed, 07 Jan 2004 20:52:54 GMT

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Good stuff, and well written. Have you received other replies in other forums? If so, bring 'em on back here because I don't think there are many forums specifically addressing array speakers. And this is a new one that hasn't received much traffic yet so it could use the exposure. It's a clean slate. Arrays are a requirement for large-scale venues and have been used for decades. Advances in technology, particularly digital processing, have allowed them to be configured similarly to antennas in that beam steering is used. This is no simple task, when you consider the bandwidth of audio is high, that the highest frequencies are 1000 times that of the lowest. Beam steering techniques for radio antennas don't have to deal with a wide frequency spread like this. And that's undoubtedly the hardest thing to do with an array. Midrange wavelengths span from feet to inches, but bass is dozens of feet and treble is fractions of an inch. Fresnel and Fraunhofer diffraction then are complicated issues. If we were talking about a frequency spread of say 20% or maybe even 100%, that would be one thing. But we're talking about a 1000-fold difference between wavelengths in the range.

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