Subject: Re: Full range drivers in line array?
Posted by Jim Griffin on Fri, 20 Jan 2006 19:54:21 GMT
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Tom,If you haven't read my Near Field Line Array White Paper, you need to do so. It is located at the link below. This paper will explain what happens to a line of drivers as you approach center to center spacing of a wavelength and greater. Essentially, the comb lining starts to impact your performance but the worst of it is that the array gain (or sensitivity of the array) begins to decrease. For most drivers in the 4 to 6 inch diameter--spaced so that they touch--this is usally in the 2000-3000 Hz area. Hence, the sensitivity starts to be reduced and only via heavy equalization can you overcome this reduction. Bottom line when you space a line of drivers (even the very best full range drivers) close together they interact such that their performance is governed by the array spacing properties and not by their individual frequency plots. Darren Kuzma of Parts Express built an array a couple of years ago with 2.25" square flange size Tang Band full range drivers.
See:http://www.partsexpress.com/projectshowcase/Kuze3201/Kuze3201.htmlLook at his performance plots and observe the unequalized sensitivity reduction as you go into the 5000-10,000 and 10,000 to 20,000 Hz octaves. Larger drivers will have performance impact even lower in frequency.Jim
Near Field Line Array White Paper