Subject: Re: Is possible "near field" bass response using only 4 drivers ?
Posted by Jim Griffin on Sat, 19 Aug 2006 01:27:00 GMT
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Renato,I will disagree somewhat with Bill on his answer. Under the proper conditions, I think that the bass array will work well with your line arrays as I explain in my Near Field Line Array white paper at the link. For a 1.8m array height and if you are in an average residence, you likely will be using your bass arrays so that the floor and ceiling will reinforce and extend the effective length of the bass array. My rule of thumb for bass arrays is that the ceiling and floor reinforcement will extend the array by a factor of 3 (think of an array with a ghost image from the ceiling and from the floor). Hence, your array is three times longer that its normal height. The equation that I use for near field extension (distance d is the near/far field transition distance) is d = 1.5 x f x h2 where f is the frequency in kHz and h is the height in meters. Thus for a h = 1.8 m array its effective length is modified to be 3 x 1.8 = 5.4 m. Thus at 0.100 Khz (100 Hz) the near field distance extends to 4.37 m. You can use the equation to scale to your situation and specific frequency. Frankly, if I were you in a typical home listening situation, I would use stereo subs (don't have to be bass arrays) below 100 Hz. Then transition to your line arrays above that point. Jim
Near Field Line Array White Paper