Subject: Re: Some simple Array questions
Posted by Jim Griffin on Sat, 08 Apr 2006 19:01:12 GMT
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Eric,You might try my near field line array white paper for some pointers on line arrays. Your room and placement are both issues with your current speakers. First, with your elevated ceiling you are living in an echo chamber. Any point source type speaker will radiate upward and out and then reflect from the distant walls/ceiling/floor and create reflections into the echo range of the ear. The ear reacts so that sounds within a 5 to 45 ms range are perceived as one sound provided that any reflected sound is lower in amplitude. Reflected sounds (from the ceiling, plus side and rear walls) in your room can be greater than 50 ms in your room so the ear perceives those as echos--that is not good. The placement issue is that if you have bipolar speakers like the DefTech's placed within 12 inches from a wall then you have serious reflections from the front wall which are likely about the same amplitude as you directly radiated sound. Bipolar speakers need to be at least 4 or more feet away from the front wall for this reason as they radiate as much sound rearward as they do forward. The goal is to lower the front wall reflected energy. Any speaker--even monopolar ones--sound their best if spaced away from walls so I would say that even monopolars would work best if at least a couple of feet away from walls. For a near field line array (see my white paper to be aware as to what that means) would radiate so so that the sound propagates parallel to the floor and ceiling while in the near field. Hence, you mitigate any floor and ceiling reflections which would help your sound to be better in your room. You still may need side and rear wall treatments--ficus or other plants, bookshelves, drapes, etc. to lower the side wall reflections for any kind of speaker in your room.The Linus 2 array that Rick Craig (www.selahaudio.com) and I designed is likely the lowest cost near field array that fits your under budget. They use Vifa TC14WG-08 mid-range drivers and Silver Flute YAG20-1 planar tweeters. The drivers are available from Madisound and with crossover components would run in the $1250/per pair range. I can provide plans of the Linus 2 if you are serious about them. For even better sound Selah Audio (Rick Craig) can provide a kit and plans for the Linus 3 for about $2400 which uses Dayton RS midranges and Fountek NeoCD2.0 ribbon tweeters. Both of the Linus designs need to work with subwoofers for the lowest bass ocatve or so in your room--I like stereo subs and given your room size you'll need them.Photos of the Linus 2 and 3 arrays are available at these links:http://www.selahaudio.com/sitebuildercontent/sitebuilderpictures/linus2.jpghttp://www.selahaudio.com/sitebuildercontent/sitebuilderpictures/linus3c.jpgThanks,Jim