Subject: My Advice About DIY Line Arrays
Posted by FredT on Tue, 29 Nov 2005 20:31:31 GMT
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People often express interest in my diy line arrays because they are really kewl looking, inexpensive to build, and sometimes they don't sound too bad either. But I don't want anyone to get the impression that a $250 line array will provide anything approaching "high end" sound. Folks who know me are aware that I'm retired and build speakers for fun because after 30 years working for big oil I found I can't just watch TV all day. The speakers fall into two categories: 1) Budget speakers (under $500 total) I build as fun projects and then sell to friends to cover my costs and finance the next project, and 2) Serious speakers I build to keep.If you are looking for a project in the first category and they aren't going to be your main speakers a quasi line array (woofer array with a single tweeter) can be a rewarding project, and the final product, even with $4 buyout drivers, will provide sensitivity, dynamics and a soundstage you can't get with most smaller two or three way point source speakers. But almost any speaker built around cheap drivers will display some serious compromises in its octave-to-octave tonal balance (there will be some clearly audible peaks and nulls) and detail resolution. They definitely will not be high end speakers. If you are looking for a pair of speakers in the second category (serious, high end "keepers") a budget line array is not the best choice. My guideline minimum expenditure is $1,000 because that's about the least you will spend for 16 to 20 quality woofers, two ribbon tweeters, and all the other parts plus enclosure construction and finishing costs. If your budget is less than $1K I believe you will get much better sound from a conventional point source two or three way pair using good quality $30-$60 drivers like GR Reserach M130 woofers, Dayton Audio RS series drivers, and many others. Also, if you don't have testing equipment it's impossible to design and tweak a crossover that will provide the sound a good quality set of drivers is capable of achieving, and it's best to get a speaker "kit" from one of the non mainstream companies who offer them, like Selah Audio, GR Reserach, RAW Acoustics, Pi Speakers, etc. With their designs the drivers have been selected by knowledgable people and the crossovers have been competently designed and tested.