Subject: Group Build Line Array Project
Posted by FredT on Thu, 12 Oct 2006 20:41:10 GMT
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Everybody I know who has heard a good line array playing at a room filling level has been impressed by the power and majesty of the sound. The Absolute Sound reviewers were so overcome by the Epiphany 12/12 they bowed in reverence. Then you look at the $,$$$ or $$,$$$ price tag and realize a pair of line arrays in your listening room is about as likely as a new Mercedes S-series in your driveway and a two carat diamond on the Mrs' finger. Or maybe not.Wayne and I are cooking up plans for a group build line array project. We haven't drawn the plans yet, but we have agreed on some general guidelines. These are oriented toward the objective of designing an array that's easy to build, very affordable, tube friendly, uses readily available drivers (no "buyouts" that won't be available later), reasonably sized, and sounds good. Here are the specifics:Easy to build - can be built by a person with no previous woodworking experience using a circular saw, a jigsaw and an electric drill.Very affordable - Target cost to build is $300-$400. This will require the use of inexpensive midwoofers (but better than NSB quality) and a single point source tweeter at the center of the array. (The single tweeter is a compromise, but it's the only option with our target price). The target price also requires that each enclosure can be built from a single 4X8 sheet of mdf or plywood. Tube friendly - Eight ohm or higher nominal impedance, 94dB or greater sensitivity.Readily available drivers - We've already decided on the midwoofers because the Parts Express 5-1/4" classic is on sale for $11, and I ordered a bunch of them. We're leaning toward the Vifa DX25 tweeter because it's one of the few that will cross over low enough and has the needed sensitivity. Reasonably sized - Not too much over 5' high with a reasonably narrow baffle. Line arrays can't be Bose size, but no 7' monsters either. Sounds good - Of course that's very subjective, but the sound quality should be comparable to or better than some of the single woofer two-way's others have built using PE classic and similar quality drivers and good crossover parts - much better than most of the speakers at the big box stores. We're also planning to use a ported enclosure whose bass extension will make a subwoofer unnecessary/optional.The plan is for me to build the enclosures, install the drivers, and get them to Wayne, who will do the final tuning and design the crossover. I plan to document the enclosure construction on my smugmug photo site for others to use in building their arrays. I've already chosen the Parts Express #295-301 midwoofers based on size and cost limitations. They're regularly $13.60 in quantities of four, currently on sale for $11.00, and we hope to negotiate that sale price for others who participate in the group build. I plan to use eight per speaker to achieve the needed sensitivity, 16 ohm impedance, and reasonably small interior volume. Comments and suggestions about any other aspects of this project are welcomed. Now's the time before I start pushing wood throught the saw in November.