Subject: Re: Xover question
Posted by akhilesh on Wed, 10 May 2006 14:05:01 GMT
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HI Shane,Well, one can look at natural rolloffs of driver-box configurations & design crossovers with slopes that augment certain criteria (like flat response, unifrom sound energy, etc). In my experience the more nuanced your analysis, the less the return ( a lot of the nuanced design stuff becomes less audible and in my experience is inaudible) and the more room dependent the speaker becomes (a speaker designed to sounds great in a anechoic chamber can sound pretty terrible in some rooms). Several very experienced speaker designers have pet metrics they like to optimize, and often come up with pretty terrible sounding systems because they sacrifice so much to optimize that one particular metric they think drives good sound (and often it doesn't). My approach is more seat of the pants: Get multiple driver/box systems, and use a line level 24 db/octave crossover to cut off at levels that leave around an octave or so spare head room between the systems. THus, my mid can play an poctave below the corssover point. THe sub can play close to an octave above. SAme with the tweeter & mid. I find this makes for the best sounding system. Is the freq curve the flattest...not really! Are crossover points optimized? nope. Does it sound fine? Yes. The alternative is to painstakingly design the optimal passive crossover for that room/driver config, which is costly. Since I also believe in letting one wide band driver do the work from 70/80/90 hz to at least 1500 and upto 3500 hz, i find that the lack of optimalty in crossover design at those crossover points does not bother me at all, sonically. IN fact, the actve Xover gives us the ability to really tune the system to the room  by changing the crossover frequencies without thrtowing an equalizer in the mix( which is another ball of wax). I like to look for a 3 way stereo crossover. Most pro models have all the adjustment you'll ever need. Hope this helps. -akhilesh