Subject: Re: HF Horn-Woofer phase at crossover
Posted by Wayne Parham on Thu, 01 May 2003 16:32:14 GMT
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In addition to the other good replies you've received, I'd like to encourage you to search this forum for posts concerning "phase" and "baffle spacing." If you enter either of those into the search feature here, the system will show you a list of posts on the subject.In a nutshell, I try to reduce nulls in the crossover region within the desired dispersion angle. The ways to limit the crossover region involve using high slope filters. The ways to limit acoustic interaction between subsystems are to use narrow dispersion, at least in the axis where adjacent subsystems combine. Measurement tools available today are pretty inexpensive and can help in this regard, making your job much easier. As you've said, you will look for response anomalies, with flat response through the crossover region being your goal.Some call this "time alignment" but it is not. It is done to reduce response anomalies in the crossover region at the target listening position. Alignment on-axis at the crossover frequency centers the coverage window so that any anomalous artifacts occur off-axis and away from the crossover frequency, towards the stop-band of one of the two adjacent subsystems. A well-formed system is one that has fairly wide windows of operation where nulls are avoided or suppressed. If dispersion is controlled to limit overlap and the crossover also limits overlap, then the anomalous regions can be minimized.