Subject: Re: Crossovers.....
Posted by Wayne Parham on Mon, 27 Aug 2001 21:12:07 GMT
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The biggest things is to pick the crossover and slope that will provide good summing. This is the job of the frequency-splitting high-pass/low-pass filters. Simple symmetrical slopes work pretty well for some direct-radiating two-way speakers. But this is not always the case with horns. In my experience, I rarely find the best solution is a symmetrical crossover when horns are used, and I have never found a good symmetrical crossover when horns are combined with direct radiators, as in the case of a DI matched two-way speaker like the 3 Pi or 4 Pi speakers.The next most important thing has to do with the tweeter horns used. The power response falls, so you need a conjugate filter in the tweeter circuit. Top-octave compensation is a requirement for CD horns. It's actually pretty simple to do passively, because a good quality direct-radiating midwoofer is generally about 10dB-12dB less sensitive than the tweeter horn. So the top-octave compensation network simply attenuates the tweeter by that amount, and then removes attenuation at 6dB/octave above 4kHz or so, providing HF augmentation.