Subject: Re: Pro's and con's of mounting two woofers horizontally?
Posted by Wayne Parham on Thu, 17 Jul 2008 17:47:41 GMT
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In general, horizontal spacing is OK for woofers and subs, but not for midrange or tweeters.As an example, a couple of 8" midrange drivers side-by-side used at 1.5kHz will create nulls around 35° left and right of the forward axis, a 70° arc between nulls. That's if you have the drivers physically close, the further apart you space them the narrower the null angle will be.I would strive to maintain constructive summing through a 90° horizontal arc, so those nulls are spaced a bit close for my tastes. Another complication is the fact that a 1.5kHz crossover isn't going to be a brick wall filter, so there will be acoustic energy up to about 3kHz, depending on crossover filter slope. That will cause some cancellation above 1.5kHz at narrower angles which may affect overall system response in the octave above crossover.You could lower the crossover point slightly or use smaller mids closer together. This may get the results you want. I think you could make it work pretty well with some practical optimizations.Another suggestion is to stack your midrange drivers vertically. A wide horizontal pattern is useful for room coverage, but a much narrower vertical pattern is preferred. You don't want the energy directed at the floor or ceiling. So it is desirable to limit the vertical directivity to 40° or 50°. It would be pretty easy to dial in the nulls to be outside this narrow of a pattern in the vertical plane. You will probably find an MTM arrangement has convenient baffle spacing to make this possible.