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Subject: Re: Transient Perfect Crossover's  
Posted by [Wayne Parham](#) on Mon, 13 Oct 2003 09:00:26 GMT  
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The MTM configuration is an example of what I'm talking about. The goal of the MTM speaker is to use null angles from carefully chosen vertical spacing to create a specific pattern. I like to use directional sound sources which have patterns limited within the null angles. In both cases, summing at vertical angles within the null angle is coherent. As the off-axis angle is increased, the phase angle increases because of the different path lengths. At the null angle, the phase is destructive causing a cancellation notch to form. That's why I like using horns with vertical coverage angles set within the nulls. About the order of crossover components, some circuits configurations can be rearranged, and others can't. Series circuits can always be rearranged and so can parallel, but series-parallel cannot always be rearranged. Look up Kirchoff's laws, and Thevin and Norton circuits in an electronics textbook.

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