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Subject: Swapping mid and high  
Posted by [hornT](#) on Wed, 10 Mar 2010 07:56:24 GMT  
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Has anyone ever tried swapping the mid- and tweeterhorn on the 7PI?  
My speakers are 11.5' apart and I'm sitting 12.5' away - center axis. The reason why I'm asking is that when I move a bit up and forward it gives me a much desired treble lift.  
Is it possible to swap the mid- and tweeter and get a good result or am I just not in the right sweetspot...?

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Subject: Vertical directivity  
Posted by [Wayne Parham](#) on Wed, 10 Mar 2010 14:04:37 GMT  
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When sound sources are stacked vertically, there are interactions between them that change with movement along the vertical plane. Their positions are as important, if not more so, than the vertical coverage patterns of the individual sources, because as path lengths change, so change the phase relationships between sound sources. Ultimately, these relationships set the shape of the forward lobe and the positions of vertical nulls.

More information:Pi horn design philosophies  
Phase angles, crossovers and baffle spacing  
Baffle spacing, phase angles and time alignment, revisited  
Matching directivity in the vertical and the horizontal planes  
DI-matched two-way loudspeakers  
Crossover optimization for DI-matched two-way speakers  
Imaging, placement and orientation  
Corner Horn positioning "Sweet Spot" for listening  
Making speakers "disappear"  
Recommended toe in

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