Subject: Re: First speakers - a little ambitious - curved array
Posted by Marlboro on Thu, 22 Oct 2009 17:52:44 GMT
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Villain3g,

To find where the basic level of comb filter distortion starts, you divide the distance of the speakers in inches from the speed of sound in inches per second. This gives you the frequency where comb filter distortion may start. For example 13560 inches per second/3.5 inches center-to-center = 3874 hz. In this example comb filter distortion will start at 3874hz, and you really can't cross your 3.5 inch center to center midranges much above 3874. If your mid ranges were 5.25 c-to-c, then it would be 13560/5.25= 2582hz, where your cross can't come in higher than 2582.

The center to center distance between your mid ranges can't be any further apart than 2.75 inches to cross at 5000hz. and you would do well to remember that the distance between the highest mid in the lower group and the lowest mid in the higher group is way above that number.

Your planar needs to go on the side of the mid line array. However I've seen a lot of arrays, including Fred's ART array that put a tweeter in the center between the two smaller lines. I don't know what this does.

All this said, I'm not 100% sure how much you can hear comb filter distortion, as long as you sit in one spots and don't move your ears vertically.

Marlboro