Subject: Combing
Posted by Bill Fitzmaurice on Thu, 02 Sep 2004 11:33:59 GMT
View Forum Message <> Reply to Message

If you do space further apart than what is considered by some to be ideal you will get a combed vertical radiation pattern close to the drivers, where their individual radiation patterns don't allow them to integrate into a single coherent wavefront at the radiating plane. But as long as the actual spacing between the individual radiating planes is kept to a wavelength or less those individual radiation patterns will integrate into a single wavefront within a wavelength of the baffle plane.Even when that 1 wavelength distance is exceeded at the highest frequencies passed by the tweeters the individual patterns will still integrate eventually. If they don't do so until even 6 wavelengths out that still will occur five inches or so from the baffle plane at 15kHz. Simply put, vertical combing at six inches from the array is an almost moot point; it's what the soundfield looks like six feet or more out where you're actually listening to it that counts.Don't alter the tweets; cross them over at 5 to 6kHz, and make the crossover at least 3rd order to adequately protect the tweets, minimize the driver overlap zone and quell the response bump of the woofers at 7kHz. Space all the drivers as tight as you can get them with your construction techniques, but don't sweat what the radiation pattern will look like six inches out at 5kHz, or 15kHz for that matter, unless you plan on sitting that close to your lines.