
Subject: Crossover nulls

Posted by [Adrian Mack](#) on Sat, 16 Aug 2003 05:37:32 GMT

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Hey Wayne, In the post Baffle spacing, phase angles and time alignment, revisited, you post Linkwitz's method of showing where the out of phase nulls will occur. And on the Pi Speakers example, $a = 19^\circ$ or $2a = 38^\circ$ (arc between nulls). In terms of crossover overlap, we should calculate at these points too. At about 12db attenuation, the driver is just about offline, so should we calculate the nulls at the crossover frequency, and also the point or points (if bandpass filter) where its 12db down? It seems that the closer the center-to-center spacing of the drivers is, the nulls occur as a far greater off axis position, which is a good thing. Using the formula's, a higher crossover frequency puts the null at a less-off-axis position, which we could therefore compensate by placing the drivers closer to each other (such as within $1/4$ wavelength), and moving the null further off axis. Is this right? BTW: Probably a dumb question, a null is just a major dip, right? I know its crap stuff that we dont want, anyway :P Thanks!
