
Subject: Thanks for asking good questions

Posted by [Danny Richie](#) on Sat, 03 May 2008 23:26:08 GMT

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JPH>"However being a non pro and just a beginner I wonder how important it is to compensate for delays and what is the sounding distortion that results from unadjusted lines delays ?"The result of drivers not being in phase very well is not distortion in the traditional sense, though one could consider it a distortion of the input signal as output levels no longer resemble the input level. I am speaking metaphorically here. If you can put two and two together you can get this. Follow along. I will lay a trail of bread crumbs that you can follow and along the way, you'll get it. Lets take some normal two way mini-monitor and lets measure a bunch of them in the vertical off axis. This will be just like measuring a line source in the horizontal off axis. If we move one direct we get closer to the tweeter and in the other direction we get closer to the woofer. Most horizontal measurements are made at 0 (on axis), 10, 20, 30, and 40 degrees off axis. We are not even going to go that far with these mini-monitors in the vertical off axis. Measurements will be on tweeter axis at 1 meter. Then the microphone will be moved vertically only 4" at a time. Again, this is far less than typical horizontal off axis measurements so keep that in mind. Percentage wise this is a little less then 6 degrees per measurement. So the degree of vertical off axis angles are only 6, 12, and 18 degrees off axis. So this is like taking a horizontal off axis measurement on a line source at 0 (on axis), 6, 12, and 18 degrees off axis. Lets look at those measurements now of some well know mini-monitors. There are two pages of measurements. Check the vertical off axis measurements. <http://www.stereomojo.com/Small%20Speaker%20Shootout%202007/StereomojoSmallSpeakerShootout2007Measurements.htm> and <http://www.stereomojo.com/Small%20Speaker%20Shootout%202007/StereomojoSmallSpeakerShootout2007MeasurementsPart2.htm> Can you tell by these measurements which one had a lower crossover point? I'll give you a hint. It is the one with the least amount of cancellation in the vertical off axis. JPH>"I do get some boxiness in female voices and sometimes in male voices , where do I have to look for the problem and correction ?"The heart of the mid-range is in the 300 to 500Hz range and is likely completely covered by your woofers. So the crossover region is not as likely to be the problem or cause of the boxiness. Some metal cone drivers exhibit this problem, and you just can't fix it. It can be caused by the damping material, or lack there of, and its ability to absorb standing waves in the box. It could also be caused by a panel resonance that is added its own coloration. Bracing and resonance control materials like No Rez might be the answer if that is the culprit. JPH>"Why dont you have your LS6 and LS9 on your site ? soon I'll be interrested in the LS9 !!!"I had a pretty good handful of people interested in those so had to offer kits to all that were wanting them and had been wanting them. I did so for a short period only then directed everyone else to AV123 for completed speakers. I actually sold out of them pretty quickly and still have a few people waiting on more drivers to arrive so that they can purchase kits. I have enough drivers coming to fill those orders and about a dozen or so more. When those are gone, they are gone. Again I will direct everyone else to AV123 for completed speakers. If you want to get on the list then you should do so quickly before they are all gone. LS-6 kits are \$1,995 and LS-9 kits are \$2,695.
