Subject: Re: Contemplating a change
Posted by Wayne Parham on Fri, 09 Sep 2011 16:07:11 GMT
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I probably wouldn't change your box at all, except to cut a hole for the tweeter. Don't change port size or reposition it. If you have to do that, I'd start from scratch and build as shown in the plans.

As I said, the whole deal with cabinet dimensions and midwoofer/port placement is these determine where standing wave pressure nodes line up. You don't want them to be lining up in a way that causes ripples in response, which is a difficult problem because cabinets this size tend to have standing wave modes in the 100Hz to 200Hz region. This is low enough the insulation doesn't do a very good job of absorbing those waves. That's why I always put a sheet inside that spans the cross-section in addition to the sheets that line the walls.

My suggestion would be to either build new boxes as shown in the plans or leave your cabinets as they are, and just cut a hole where the tweeter should go. Put it close to the woofer, just an inch above or so. At least that way, you'll have the same bass and lower midrange response you're used to. The difference will be from about 1kHz up. The new setup will be matched in the horizontal plane, and will limit the HF vertical dispersion at large angles, so you won't have any ceiling slap. It will put vertical nulls out about 20° above and below the speaker, outside the HF angle.