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Subject: Re: Ten happy years with the 3pi... Time for the Pi 3 subs!

Posted by [Wayne Parham](#) on Sat, 26 Apr 2025 14:39:02 GMT

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Yes, you can change the position of the vent.

You (or others) may have seen me comment about concerns with changing dimensions, port or driver positions.

I am always leery of cabinet modifications to my full-range loudspeaker designs. This is a potential concern for any full-range loudspeakers, particularly those with large cabinets and especially if they have a midwoofer - a driver used for bass and midrange frequencies.

Most two-way loudspeakers have a midwoofer driver - one that generates bass and midrange frequencies. So the cabinet is exposed to a fairly wide range of frequencies. In such a cabinet, internal standing waves will develop. If the cabinet is large, those standing waves can fall in the lower midrange, which is not well damped by stuffing along cabinet walls. This makes cabinet dimensions and the positions of the midwoofer and port somewhat important, because you don't want them aligning with an anti-node, which could be audible.

None of this is true in a subwoofer with all dimensions less than about three feet. A cabinet smaller than that is what is sometimes called "acoustically small." No standing waves can develop in a cabinet this size. In fact, many manufacturers don't even include damping material inside.

All that makes positions of the driver and port relatively unimportant. You just don't have any internal standing waves to worry about.

Now then, one caveat: Do remember that flanking subs do "kiss lightly" into the midrange. So while I wouldn't be concerned with positions of the woofer or the port, I would include internal damping material in a flanking sub. I've run 'em both ways, and I don't hear any anomalies without damping material. But it sure doesn't hurt to add.