
Subject: Port Location Question for Towers

Posted by [GarMan](#) on Fri, 07 Nov 2003 13:14:02 GMT

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I'm having some problem deciding where my port should go on the Pi Towers. Wayne has mentioned that it doesn't matter whether its on the front or back, so long as there's room to breath.If the port is cut on the rear baffle, how far away will the speaker need to be from the wall. Due to the Tower's size, I'd like to be able to place the speaker as close to the wall as possible. Feedback from owners of "stock" Towers?If the port is cut on the front, would it be a problem if it's cut in mid-baffle (approx 6" below woofer)? I'd want the option to put things in front of the speakers.thanks,gar.

Subject: Re: Port Location for Towers

Posted by [Wayne Parham](#) on Fri, 07 Nov 2003 13:30:56 GMT

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Both front and rear port placement options are fine. The thing that's important on the towers is the vertical position. Do not move the vertical position of either the port or the woofer because that would change where standing wave nodes line up. The positions chosen minimize response abberations from internal standing waves.The port is fairly large and so velocity is rather low. But I'd still suggest six inches of unobstructed area surrounding the port. That said, I've got mine shoved clear back against the wall, with exactly two inches between the rear baffle and the wall. It sounds just fine like that.

Subject: Would you say . . .

Posted by [Tightwad](#) on Fri, 07 Nov 2003 16:29:21 GMT

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. . . rear-firing makes the speaker more sensitive to room placement? I've got Paradigm Minimonitors with rear-firing ports, and placement is always a compromise between bass (i.e. closer to wall) and clarity/imaging/etc (i.e. more into the room). I didn't notice such a distinction with my previous speakers which had front-firing ports.That is, does rear-firing make it easier to get more bass by using boundaries?

Subject: Re: Port Location Question for Towers
Posted by [Tightwad](#) on Fri, 07 Nov 2003 16:31:00 GMT
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Top-firing?

Subject: Re: Would you say . . .
Posted by [Wayne Parham](#) on Fri, 07 Nov 2003 17:20:01 GMT
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Assuming resonance around 50Hz, wavelength at the Helmholtz and fo frequencies is around 20 feet, so distances that are less than about 5 feet are pretty insignificant, acoustically. At this scale, the distance between a room boundary and the woofer is about the same as the distance between the boundary and the port; The difference is probably less than 5 feet. So the room boundary should act the same on sound coming from the woofer and from the port. I'm sure there are some applications where the two are decoupled; I've seen a few designs where the port doubles as part of a Helmholtz resonator and also as a sort of truncated horn. But in general, the woofer and port are treated as forming a system and their inter-relationships are intimately combined. Certainly, midrange output from the cone acts differently in relationship to room boundaries than does the bass output from the port. But the bass output from the cone and the bass output from the port - within an octave of each other - interact with the room in pretty much the same way.

Subject: Double Ports Okay?
Posted by [GarMan](#) on Fri, 07 Nov 2003 18:12:20 GMT
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Wayne, so long as I keep the total areas of the port(s) the same, would I be able to split the one large port into two smaller one?

Subject: Yep!
Posted by [mollecon](#) on Fri, 07 Nov 2003 18:43:19 GMT
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No problem - as long as you maintain same total area & depth (the latter being of little point here,

since the depth is determined by baffle thickness).

Subject: Re: Port Location Question for Towers
Posted by [Wayne Parham](#) on Tue, 30 Dec 2003 06:35:30 GMT
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Is that driver a JBL 2115 or Fostex?
