Subject: 2-Pi Tower floorbounce
Posted by Wayne-o on Sat, 05 Sep 2009 02:36:19 GMT
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Does the floorbounce effect the 2-Pi tower??? thanks.

Subject: Re: 2-Pi Tower floorbounce
Posted by Wayne Parham on Sat, 05 Sep 2009 04:24:02 GMT
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Yes, it does. You can correct it with flanking subs, otherwise, it's there. You can't have a midwoofer up off the ground without having a self-interference notch. All the single driver speakers, mini-monitors on stands and tower speakers have it. The only way to smooth it is by blending other sound sources in the upper modal range.

Subject: Re: 2-Pi Tower floorbounce
Posted by Wayne-o on Sat, 05 Sep 2009 11:46:53 GMT
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Around what frequency is the notch at ??? Thanks.

Subject: Re: 2-Pi Tower floorbounce
Posted by Wayne-o on Sat, 05 Sep 2009 12:08:54 GMT
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I Forgot ,Let me rephrase the question . At 8 feet where would the notch be at ? As always Thanks

Subject: Re: 2-Pi Tower floorbounce
Posted by Wayne Parham on Sat, 05 Sep 2009 14:22:16 GMT
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That's key - Floor bounce interference manifests itself not only by the distance from midwoofer to ground but also the distance from source to listener. At 6-8 feet, it's around 150Hz.

The thing is, while you could smooth the notch with multiple sound sources, in practice, this is rarely done. The tower has such full bass, almost nobody considers adding subs. They would have to be blended, low-passed at 120Hz or so to be effective in smoothing floor bounce. It really

after all, and I suppose if you're willing to consider upgrading to add flanking subs, it makes more

used in a secondary system for office or bedroom.

Subject: Re: 2-Pi Tower floorbounce
Posted by Wayne-o on Sat, 05 Sep 2009 16:44:16 GMT
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Does this 150 hz notch affect the 100 hz region very much ???

Subject: Re: 2-Pi Tower floorbounce
Posted by Wayne Parham on Sat, 05 Sep 2009 17:44:11 GMT
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No, it's a pretty narrow notch.

Subject: Re: 2-Pi Tower floorbounce
Posted by Wayne-o on Sun, 06 Sep 2009 05:15:51 GMT
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Is there a loss in bass on the pi-tower because of the woofers height Vs. the woofer being mounted closer to the floor ? Thanks again.

Subject: Re: 2-Pi Tower floorbounce
Posted by Wayne Parham on Sun, 06 Sep 2009 14:58:09 GMT
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No loss of bass at all. This speaker sounds very full and powerful.

Subject: Re: 2-Pi Tower floorbounce
Posted by Wayne-o on Fri, 20 Aug 2010 15:59:24 GMT
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Does the 150hz notch add or take away from 150 hertz ? Thanks

Subject: Re: 2-Pi Tower floorbounce
Posted by Wayne Parham on Fri, 20 Aug 2010 18:12:56 GMT
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It's a narrow notch, a reduction in amplitude from self-interference, much like the notch from vertical nulls. In fact, it's there for a very similar reason, except the second source is a reflector, not a radiator.

Subject: Re: 2-Pi Tower floorbounce
Posted by Wayne-o on Sat, 21 Aug 2010 04:43:26 GMT
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Does not this floor bounce show up in the recording with the microphone also ?

Subject: Re: 2-Pi Tower floorbounce
Posted by Wayne Parham on Sat, 21 Aug 2010 15:08:48 GMT
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Oh, yes, you'll see it in measurements. If you lay the speaker on it's side, the notch is gone because the midwoofer is closer to the ground, shifting the self-interference notch up in frequency. Of course, you see anomolies at higher frequency when you do that.

You can do a real ground plane measurement, in a pit facing upward with the front baffle flush with the ground. Then there is no self-interference. I do this sometimes using sheets of plywood "wings", sort of raising the ground up to the baffle level. But these are all academic exercises, arguably somewhat pointless, because the speaker will never be used in an environment like this.

The way to solve the problem, in my opinion, is to provide smoothing from other sound sources. The multisub approach accomplishes this. Of course, in this situation, a lower midrange floor bounce, the smoothing woofers will have to be run fairly high in frequency to blend in and smooth the notch. They have to be placed fairly close, just down at the feet of the towers.

Another approach is just to live with the floor bounce notch. That's what 99% of people do. I know many people that put monitors on stands or have tower speakers, and in each case, the

floor bounce notch is created. It is definitely measurable, and you can hear it too if you A/B with a setup that has no notch. But without an A/B comparison, most people don't notice it.