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Subject: Help me troubleshoot freaky cabinet-tuning issue?

Posted by [Fritz Bogott](#) on Thu, 08 May 2014 01:16:04 GMT

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I have a pair of JBL 2225Hs in 3ft3 3/4" MDF cabs tuned to 40Hz.

Using Room EQ Wizard as a real-time analyzer, I can see that one cabinet drops off sharply at 110Hz, the other at 60Hz. (I'm not moving the mic; it's sitting on a tripod about ten feet back and midway between the two cabs.) There shouldn't be a (major) directivity issue with mid-woofers, should there?

Swapping the drivers (oof, heavy) has no effect on this-- the 110Hz rolloff follows the cab not the driver.

In order to reduce the number of variables, I yanked the port tubes from both cabs. Weirdly, the rolloff points of both cabs did not change. (D'oh!) Still 60Hz and 110Hz. (Huh? I don't see how this can be possible?)

What's left to look at? As far as I can see, the cabs have identical cross-bracing and identical amounts and placement of R11 insulation. I sealed all the joints in both with silicone...

Ever run into anything like this before? Seems completely impossible / unbelievable to me. What should I look at next?

Thanks,

-Fritz

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Subject: Re: Help me troubleshoot freaky cabinet-tuning issue?

Posted by [steve f](#) on Thu, 08 May 2014 01:32:49 GMT

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If the cabinets were plywood, I would suspect a void. I think there is a glue up error. Check all of your bracing. Make sure there aren't any gaps in the structure.

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Subject: Solved: Gnarly room modes.

Posted by [Fritz Bogott](#) on Thu, 08 May 2014 01:58:18 GMT

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D'oh. It was a mic-placement / room modes issue. Now I have the room modes to deal with, but at least I know it's not the cabs.

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Subject: Re: Help me troubleshoot freaky cabinet-tuning issue?

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Posted by [Fritz Bogott](#) on Thu, 08 May 2014 02:00:36 GMT

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Thanks, Steve. It turns out I was controlling for the wrong variables entirely. The rolloff had to do with the placement of the speakers in the room and the placement of the mic relative to the speakers.

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Subject: Re: Help me troubleshoot freaky cabinet-tuning issue?

Posted by [steve f](#) on Sun, 11 May 2014 17:03:31 GMT

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Hi Fritz,

For some reason, I thought you had eliminated speaker positioning as a problem area. Rooms can cause havoc. I'm happy you've discovered the problem. Best of luck & be patient. It can take a while to get it right.

Steve

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