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Subject: Need Help Tuning Vintage Electro Voice Cabinets.

Posted by [Ed White](#) on Thu, 14 Dec 2006 10:21:12 GMT

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Here's my thought. I have a pair of REALLY nice looking 1966 Speakers with Barzilay cabinets. The cabinets have an Electro Voice SP15, a T-25, and a T-35 horn. The cabinets are sweet, but are not exactly tuned, I think..or am maybe wrong. There is an aproximately 4 by 10 inch hole in the bottom, functioning as a port(?)What I want to know, given the size of the cabinets of 29 high, 22 wide, and 18 1/2 deep, and no bracing inside, can I tune the box to the sp15 and put appropriately sized ports in either the back or the bottom. Of course, I'm limited to the size of the box, as they are sweet looking, and my wife would absolutely maim me if I messed them up. So, given the parameters of an Electro Voice SP15, and this size box, is there a way to seal the hole,(easy) and design an appropriately sized port to maximize the the box for the woofer. Maybe a brace, as well. The case is thick and heave partical board, with veneer on both sides. Here are the

photos:<http://img2.freeimagehosting.net/image.php?79c08589cc.jpg><http://img2.freeimagehosting.net/image.php?f95a34e331.jpg><http://img2.freeimagehosting.net/image.php?55e3994cb9.jpg><http://img2.freeimagehosting.net/image.php?783a5c8c2e.jpg>Thanks!!Ed White

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Subject: Re: Need Help Tuning Vintage Electro Voice Cabinets.

Posted by [Bill Wassilak](#) on Fri, 15 Dec 2006 17:09:24 GMT

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Hard to tell since we don't have T/S parameters for the SP15, but the way the box is now, it's tuned to around 62hz and the Fs for the SP15 is 25Hz so your slightly over damped. If it dosen't sound boomy I'd just leave it alone. Other wise just build a bunch of 10x4 frames about 1/4 to 1/2" thick and keep adding them in there to lower the Fb of the cabinet.HTH Bill W.

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Subject: Re: Need Help Tuning Vintage Electro Voice Cabinets.

Posted by [Dr Mark Carter](#) on Tue, 19 Dec 2006 12:21:32 GMT

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Dear Ed, I did find the parameters for your driver. I have done some calculation for the size box you have. It would help me to know whether your dimensions are internal or external, and what the thickness of the walls are. This box does not need a vent tube. I assumed the cabinet had 3/4 inch walls and that your dimensions were external. If those assumptions are not correct, then these numbers need recalculating. A whole 4.5 X 4.5 inches gives optimal tuning and will give you an F3 of 50 HZ. You could also make this a closed box. You would need heavy fill in this case. The ported enclosure needs very light fill by the way. The F3 of the closed box would be 78Hz. However the roll off of the vented box is 24db per octave and the closed is 12db per

octave. It ends up being a wash. However the closed box design can be equalized without adding greatly to bass distortion. Therefore with EQ you would get more and deeper bass from the closed box. A vented box does not take to bass equalization well at all. The driver is efficient and has good power handling and watts are cheap. I would try the closed box with heavy fill and add an Eq of plus 12db per octave starting at 80 Hz. In other words, +12 db at 40 Hz and +24 db at 20 Hz. I would brace the cabinet, as well as add fill. I think you might be quite surprised at the sound of the equalized closed box solution. If you are interested in pursuing this let me have more accurate dimensions. Regards, Mark.

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