
Subject: JBL sub1500 corner horn?

Posted by [rick](#) on Wed, 29 Dec 2004 18:38:39 GMT

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Hello:I got one of the JBL1500 sub speakers when they were on sale at PE and I'm wondering if they were implemented in a box like the pi corner horns would that be an enhancement to a typical sub box? Would there be more output per watt with the corner placement in a sealed box? I would like to integrate it with my pi-4's and wondered if this could be a way to increase output for that purpose. But would having a sub in a corner interfere with overall integration? Over at the Lansing heritage forum, I read people putting them in just about anything from small cubes to large vented boxes. But I'd like to stay away from a bigger vented box. Thanks.Rick

Subject: Re: JBL sub1500 corner horn?

Posted by [Wayne Parham](#) on Wed, 29 Dec 2004 20:12:39 GMT

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That is a nice woofer. It works well in sealed cabinets, and is not underdamped (peaky) in even very small boxes, down to 0.5ft³. However, bass response isn't good unless the cabinet is made larger than at least 1.0ft³, where f₃ is 60Hz. In my opinion, the speaker is best suited for vented cabinets between 1.0ft³ and 4.0ft³, tuned to 30Hz. Response extends almost a full octave deeper in this configuration, with f₃ of 35Hz in a 2.5ft³ box tuned to 30Hz. Just as a point of fact, I'd like to clarify something. There is absolutely no difference in the characteristics of a ported box and a sealed box that has equalization applied to extend response to match. If response is the same, then transient response and group delay are too. Please see the posts in the thread called "Resonance," which was an earlier discussion about this. A good T/S reference is the "Vented Speaker Systems" article written by Brian Davies. So you might consider these things when deciding on your implementation. As for corner woofer placement, Dr. Floyd Toole describes the strengths and weaknesses nicely in his paper, "Loudspeakers and Rooms - Getting the Bass

width of the cabinet. It's actually a simple mod that amounts to the removal of one side wall to gain a little bit of extra length, and it works very well. Those that have done it have been very

increases efficiency. Another thing is that midrange and treble reflections are controlled because every sound source is horn-loaded, delivering energy into the room and away from the walls. Floor bounce and wall reflections are minimized and the directivity of all sound is equal. Most speakers have omnidirectional bass and as frequency rises, it becomes more directional. There are often breaks where the pattern becomes more narrow as a driver becomes directional, and then at a crossover point, the pattern becomes wide again. This causes a non-uniform

their sound is good everywhere in the room.

Subject: Re: JBL sub1500 corner horn?
Posted by [rick](#) on Thu, 30 Dec 2004 17:54:17 GMT
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Thankyou Wayne: I trust your judgement, because the 4 pi's I made are so nice. Actually the discussions at lansing were rather confusing to me with all the different sizes and tunings and on and on. Your explanation makes sense to me. The paper by Dr. Toole is good too, though I must admit my limited pre-hansle mind of technical literature makes my eyes cross after a few paragraphs. But I follow instructions pretty good. Any chance of obtaining the professional 7 pi plans and the means to augment the tuning vent for this beast? Thanks.Rick

Subject: You've got mail!
Posted by [Wayne Parham](#) on Thu, 30 Dec 2004 18:24:49 GMT
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Subject: Re: You've got mail!
Posted by [Frode](#) on Thu, 30 Dec 2004 20:16:00 GMT
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I'm also interested. I've got two corners and two SUB1500.Frode

Subject: Re: You've got mail!
Posted by [Wayne Parham](#) on Thu, 30 Dec 2004 20:40:08 GMT
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I've sent you the plans too.

Subject: Thanks! (nt)
Posted by [Frode](#) on Thu, 30 Dec 2004 21:09:10 GMT
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Subject: Re: JBL sub1500 corner horn?

Posted by [Robert](#) on Wed, 09 Feb 2005 21:30:27 GMT

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Rick,I have one of these as well and this is my setup. My box is 3.6 cu. ft. Sealed WITH 3- Scan Speak AP vents. It is an aperiodically damped ENCLOSURE(NOT AP'd WOOFER). There is a big difference in overall performance going from sealed to ap! HUGE! I am eq'ing with a DBX DRIVERACK PA with a 1100watt CROWN amp. The overall efficieantcy went up and all the box resonances went away while power handling or volume if you will INCREASED. Front firing sub woofers will ALWAYS sound better. Any sub on the planet needs eq in your living room versus mine.... Sub bass is hugely affected my the room(nodes, etc). My "sub box" disappeared acoustically when I ap'd it and only smooth, accurate, great bass was left.Thanx!

Subject: Re: You've got mail!

Posted by [TommyR](#) on Thu, 24 Mar 2005 04:23:59 GMT

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Wayne, I have some 1500's, too. Would you send me the corner horn plans? Thanks,Tommy
