Subject: 2Pi Tower dampening
Posted by wasteh202 on Wed, 17 Mar 2004 22:47:32 GMT
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I have a question for you. When I crank up the volume to about 95+db's, I start to get allot of clutter in the sound. It seems that it could be some distortion. But, I am wondering how much the sound waves inside the cabs are contributing towards this. I already did some test by moving the insullation in one cab from the top to the bottom, and also from the front to the back(Ileft the side alone). This seems to have helped to some degree. And I will likely leave it as is and change the other box as well. The boxes are made from 3/4" plywood(HD quality)I seemed to have lost some bass by making this change. It is perceived to my ears that I also lost some SPL... but the meter says differently, no loss. What little bass I did loose, I gained in midrange clarity... and I prefer it. Wayne, what should I expect if I dampen all of the inside of the box walls with insulation ? Do you have another solution for this problem ? How about dampening the baskets of the mid/wofers ?

Subject: Re: 2Pi Tower dampening
Posted by wasteh202 on Wed, 17 Mar 2004 23:19:57 GMT
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I did some more searching and this post from Bill seems to address what change I made in the insulation.
http://www.audioroundtable.com/PiSpeakers/messages/13006.html

Subject: Re: 2Pi Tower dampening
Posted by Matts on Thu, 18 Mar 2004 01:31:50 GMT
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I dampened the basket of the woofer in my 2Pi's and the tweeter as well with Dynamat Xtreme. It gave a little more clarity to the sound, mostly in the mids.

Subject: Re: 2Pi Tower dampening
Posted by Wayne Parham on Thu, 18 Mar 2004 04:37:23 GMT
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Out of curiosity, what amplifier are you running? I probably should remember, but I don't.

Subject: Re: 2Pi Tower dampening
Posted by Adrian Mack on Thu, 18 Mar 2004 06:21:40 GMT
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Sounds like you are absorbing a lot of the standing waves inside the cabinet. I usually put the lining material on all walls though.... to absorb more of the standing waves and prevent the rear wave from coming back through the cone with potential cancellations.

Subject: Re: 2Pi Tower dampening
Posted by wasteh202 on Thu, 18 Mar 2004 12:39:09 GMT
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Wayne... good questionCurrently I have the speakers being pushed by an older Sherwood Reciever(mid eighties, 105wpc @8ohms). It is not the best SS amp... but not the worst either. It actually can push pretty decent. I have pushed my Magnepan MMG's with it and it can keep up with my 1975 Sansui 9090DB(wtihout distorting those speakers). I will do some listening again with some other SS amps when I get the chance. I don't have a good tube amp right now, I am having some Heathkit W4-AM monoblocks rebuilt and modified right now and should have them back in about 6 weeks. That may be a good time to give a listen again to what I am hearing.

Subject: Re: 2Pi Tower dampening
Posted by Wayne Parham on Thu, 18 Mar 2004 17:05:25 GMT
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Good idea to swap things around to try and isolate the cause of what you're hearing. I know that I have a couple of powerful amps that drive my tower two's nicely all the way up to their limits, which is quite loud. I also have a couple of amps that clip below 100 watts, and naturally, you can

they also sound pretty good to me with inexpensive solid state gear, as long as it isn't overdriven and starts clipping. I rather like the system with a little $400.00 Harman Kardon HK3470 receiver - It sounds better than it has a right to.Give this a try too. Take the tweeter apart and inspect it, removing any dust, lint or debris that you find inside. It's easy to disassemble these tweeters by removing the three screws from the back. It not uncommon to find sawdust accidentally dropped into the mouth during assembly, and then debris is trapped between the diaphragm and the phase plug. So you might check to make sure that your tweeters are clean.

Subject: Re: 2Pi Tower dampening
Posted by wasteh202 on Thu, 18 Mar 2004 20:24:07 GMT

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Thanks WayneI do not have the model HK reciever that that you mention... I have heard that those old models are good ones.I do have a newer HK HT SS amp and I will give it a try... as well as my Sansui Reciever... and the Heathkits when they are returned to me. Wayne... what can I expect if I dampen all sides of the Tower boxes ? Will I loose the low bass response ? will I loose SPL ? Will I gain anything ? I know that you recomend to inuslate the front baffel and not the back of the speaker.. but, this seemes to sound better to me.I know that I can just keep trying things. But, everytime I open these boxes I reseal them and it gets tedious.Thanks

Subject: Re: 2Pi Tower dampening
Posted by Wayne Parham on Thu, 18 Mar 2004 20:38:08 GMT
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The HK 3470 is actually a modern receiver. I bought one from Crutchfield a year or two ago, just to see what it sounded like. Seemed like a good entry-level system for use with small two-way

afraid that you might make the speaker a bit boomy. If you add too much insulation material, it will increase the virtual size of the cabinet. So if you're using R13, I suggest you only line the front, top and one side.

Subject: Re: 2Pi Tower dampening
Posted by wasteh202 on Thu, 18 Mar 2004 20:55:02 GMT
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Hmmmmm... I must me thinking of another model of vintage HK.Amyway... about the insulation. I am using R-13. What if I thin it down(the insulation) so as not to make the virtual size of the cabinet smaller ? Would that work ?Sorry to bug ya Wayne... I am just trying to learn and find a solution.Thanks again.

Subject: Re: 2Pi Tower dampening
Posted by Wayne Parham on Thu, 18 Mar 2004 22:08:23 GMT
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Sure can't hurt to try. The insulation is inexpensive and easy to install.

Subject: Increase virtual size?
Posted by Dean Kukral on Fri, 19 Mar 2004 11:57:49 GMT
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It is counter-intuitive that adding too much insulation will increase the virtual size of the cabinet, rather than decrease it.Would you please explain what is going on?My understanding is that the insulation is there to minimize the possibility of standing waves. Somehow, I guess, the waves get damped by the insulation; random phase shifts, if you will. Is this correct?TIA.

Subject: Re: Increase virtual size?
Posted by Wayne Parham on Fri, 19 Mar 2004 17:04:11 GMT
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The addition of the insulation acts as a resistance and also changes the speed of sound in the areas it occupies. So this has the same effect as if the box were made larger.

Subject: Re: 2Pi Tower dampening
Posted by wasteh202 on Sat, 20 Mar 2004 01:24:11 GMT
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OK... I will do the math hahahahahah

Subject: Depends on material?
Posted by GarMan on Sat, 20 Mar 2004 15:15:09 GMT
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But Wayne, doesn't this depend on the material used for damping? I read that fibreglass insultation has the effect of increasing effective volume, but other types of foam takes up volume.Gar.

Subject: Re: Depends on material?
Posted by Wayne Parham on Sun, 21 Mar 2004 04:08:51 GMT
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I've read that too. But my experience has been to always use R11/R13, so all my stuff goes up in virtual volume when you add insulation.

Subject: Re: 2Pi Tower dampening
Posted by Wayne Parham on Sun, 21 Mar 2004 04:10:11 GMT
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Subject: Re: 2Pi Tower dampening
Posted by ports on Thu, 25 Mar 2004 12:35:06 GMT
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Hi there...I was wondering exactly what is this "DYNAMAT XTREME" stuff -how does it work,where do you get it,how much is it ?Any info would be appreciated.thanx...ports.

Subject: Re: 2Pi Tower dampening
Posted by Matts on Thu, 25 Mar 2004 23:29:01 GMT
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Dynamat Xtreme is made for car stereo systems to dampen the metal in the car. It's a constrained layer product, with some type of polymer and a layer of aluminum over it. I've got mine at Pep Boys, in the car stereo section. I get a pack with 2 10"x10" squares for about $20. There is a regular Dynamat that's more of an asphalt, I wouldn't use that. There's a website for it with more info. Also, if you have a CD player that's doesn't have a tank for a case, it helps tremendously in there. Really cleans up the sound a lot.
