
Subject: Damping H290C horn

Posted by [vandevoordekoen](#) on Sat, 01 Jun 2013 14:12:58 GMT

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Hello,

Recently, I built a pair of 4Pi speakers, that sound wonderful to me!

However, I read in a review (on this site) that the horns have to be damped to avoid the "plastic" treble sound. Is there a way to damp the H290C horn? I read a lot about rope caulk, but in Europe we don't use that. Would flashing tape help to damp the horn?

Or is there another way?

Thank you very much!

(Sometimes, it feels like the low frequencies of the 4pi's are a little bit too present. Especially when you hear voices in movies. I live in a little apartment, would it hurt to attenuate the bass a little bit?)

File Attachments

1) [4Pi_speakers.jpg](#), downloaded 4686 times

Subject: Re: Damping H290C horn

Posted by [Wayne Parham](#) on Sat, 01 Jun 2013 14:52:07 GMT

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Bill Epstein is a big fan of using rope caulk to surround the horn. Some people do that to other horns too, and it sure doesn't hurt anything. If you don't have rope caulk, use modeling clay. Rope caulk is pretty similar stuff.

As for the bass, did you line the cabinet with fiberglass insulation? More importantly, did you put a sheet on the braces, spanning the cross-section, separating the woofer and tweeter? This is an important step, putting the damping material in the cabinet properly.

If you have done that, the problem is probably room interactions. I would suggest running flanking subs. It may seem counterintuitive that adding bass speakers would help smooth the bass, but it does. And the flanking sub approach in particular smoothes the range where you hear the lowest part of male voices and things like that. I notice it most in male voices, sometimes female too, acoustic guitar, cello and piano.

Room modes, multisubs and flanking subs

Helper Woofer Location

Subject: Re: Damping H290C horn
Posted by [vandevoordekoen](#) on Sat, 01 Jun 2013 16:28:33 GMT
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Thank you! I will try to damp the horns with the modelling clay.

There is an insulation sheet between the high and the low section of the speaker (hanging across the brace). But it isn't high quality insulation, however thick enough.

If the quality of the insulation isn't an issue, then room modes are the problem I guess?
What subwoofer is used in the pi-sub?

Thank you!

Subject: Re: Damping H290C horn
Posted by [Wayne Parham](#) on Sat, 01 Jun 2013 17:21:01 GMT
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which have a LAB12 woofer in them. But you can use a smaller sub, perhaps one that doesn't give as much extension, if you're worried about bothering the neighbors. The idea is to blend them to provide modal smoothing.

Subject: Re: Damping H290C horn
Posted by [vandevoordekoen](#) on Sun, 02 Jun 2013 15:29:57 GMT
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ok, thank you!
