Subject: Horn lens causing 1k bump?
Posted by RyanH on Fri, 17 May 2002 02:50:53 GMT
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I just got my Selenium D205ti comp drivers and my on sale PE horns (sorry dont have the # right now, but they are the cast sale ones similar to the h290) and did a quick measurement. I screwed the driver to the horn and faced them up on the carpet, towards the ceiling (8 ft). I then held the mic overhead and took the measurement. I tried this on my other computer too with the same mic, but used a stand for it and still got the same thing: a hump cenetered at about 1.1 kHz. This is not evident in the Selenium literature (where its mounted on a diff horn), but the 6k dip is still there. I was wondering if this hump could be from the horn lens itself. I havent tested a driver sans horn, but if you guys think I should I will. Here's my measurement, it came out the same pretty much no matter what I did.--Ryan

Subject: Maybe the horn? Microphone? Measurement environment? Could be lots of things.
Posted by Wayne Parham on Fri, 17 May 2002 06:49:15 GMT
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Try the measurement with a different horn flare. Try it with a different microphone. Try it with a different compression driver. And try it in different locations and from different measuring positions. Some trends will arise, and they will give an indication of what is causing what in the response.

Subject: Re: Maybe the horn? Microphone? Measurement environment? Could be lots of things.
Posted by RyanH on Fri, 17 May 2002 13:59:33 GMT
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I'll try and take some measurements outside and use 3 different mics. I'll also mount it in the box (when done) and take some measurements. Unfortunately I don't have any other flares I can test with, but I will measure some other speakers with a published curve (non horn, I have some 7" Stryke fiberglass cone woofers) and see if there is a hump there also. Thanks for the info on all

the different variables and I'll try and minimize all of them.--Ryan

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Subject: Re: Maybe the horn? Microphone? Measurement environment? Could be lots of things.
Posted by str8aro on Mon, 20 May 2002 18:11:26 GMT
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What kind of mic(s) are you using?Are you using Speakerworkshop? If so, did you measure the pulse response and and then set your time window to exclude the reflections that showed up? It looks like you did a gated measurement so you need to recognize that the result of that is only really 'valid' down to a certain frequency and the low end will kind of be smoothed out. That big bump around 1khz might really be lots of little peaks... If you're using SW (it's just what I'm familiar with), you might try doing a measurement without gating, using 1/16th octave smoothing on it, and then looking at how that compares to what you're seeing with your current measurements. I usually get pretty good correlation between types of measurements when I have a decent measuring setup.Also, how far away from the mouth of the horn was your mic? You can measure some weird things when the mic is too close... I would suggest around 1 meter away for normal size high frequency horns.Setting the horn on the floor might not be the best setup, depending on the size of the horn. I usually just set the horn where I'm going to put it to listen to it. Obviously this won't work well if you set it right next to a wall, but then again, that will usually screw up the sound anyway.John

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