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Subject: Horn throat+SPL meter arrived. Measuring methods?

Posted by [Mike.e](#) on Wed, 31 Dec 2003 14:32:42 GMT

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Okay!

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Subject: More notes

Posted by [Mike.e](#) on Wed, 31 Dec 2003 15:13:29 GMT

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1) This is the car il test my bass SPL in with my meter(as soon as i get a battery for the meter)!2) The preview button is very important!3) This will be interesting!4) ordering lab12 woofer very soon-or should i get 350watts first?(as i have enough money)

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Subject: pic

Posted by [Mike.e](#) on Wed, 31 Dec 2003 15:13:50 GMT

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oops forgot the pic :P

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Subject: Re: Horn throat+SPL meter arrived. Measuring methods?

Posted by [Wayne Parham](#) on Wed, 31 Dec 2003 20:27:06 GMT

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Hi Mike!You've described one of the problems with measurement of SPL, particularly from sound sources that are physically large. I'd measure your horn from a distance, and then calculate what this translates to at 1 meter. That will reduce sound source position error.Check out George Augspurger's "JBL Sound System Design Reference Manual." It has a lot of good information that I think you'll find helpful.Wayne

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Subject: slow sine + dont lose your hearing :-P

Posted by [Mike.e](#) on Thu, 01 Jan 2004 01:56:08 GMT

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Hi waynel used sinewaves, but they are 5 seconds long with no pause to let u switch range! i didnt realise it took so long to read display, change it if need be and write it down before the next tone :P125db at the horn mouth like this^^

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Subject: Re: Horn throat+SPL meter arrived. Measuring methods?

Posted by [Adrian Mack](#) on Thu, 01 Jan 2004 02:00:32 GMT

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If your just doing freq response measurements in SW, then no jig is required. What you will need to do is the electronics mods on the SPL meter. As for the mic capsule, the stock mic in the RS meter is fine for bass readings. It's only in the mid and high frequencies where its linearity is poor. I used the Panasonic WM-60AY in mine. Go to RS SPL METER (33-2050) MODIFICATIONS for the electronics and microphone mods on the analogue RS SPL meter. I'd probably do what Wayne suggests, measure it from a distance and then convert it back. The other problem though is standing wave modes, having the mic positioned on a node will be different to when its at an anti-node, so you'd probably be best off measuring from your listening position as thats what matters most. Use sine waves for your measurements at various frequency intervals, then make a freq vs amplitude graph of the results. The more intervals, the better. Or use Speakerworkshop as an even better (and much quicker) option. All you need is a couple of cables, I'll let you know on MSN how to setup SW if you need any advice. About the front chamber your talking about. It isn't really that important considering your doing a basshorn. I ran the numbers for your basshorn and the front chamber volume you've choosen isn't critical. All it does is control the upper cutoff. Your using a lowpass filter below 100Hz too, so it definitely won't matter as the front chamber isn't modifying the passband response at all. If you were doing a mid or high frequency horn then I would place a large amount of emphasis on it, but for a subwoofer-basshorn, it doesn't matter. Just make sure you have the right throat size, and forget about sizing up the front chamber volume.

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Subject: Re: slow sine + dont lose your hearing :-P

Posted by [Mike.e](#) on Thu, 01 Jan 2004 02:01:12 GMT

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i forgot to apply the calibration numbers..and dont have them handy :-)

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Subject: Re: Horn throat+SPL meter arrived. Measuring methods?

Posted by [Mike.e](#) on Thu, 01 Jan 2004 02:14:50 GMT

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Just make sure you have the right throat size, and forget about sizing up the front chamber volume. Exactly :-))i wasnt concerned with the VOLUME .so is SW real easy/?i gota go to town now fix my bank up...also find out the # for livesound,to order my lab12! (Big xmas paycheck)Cheers BROlook112db at listening position 4.5metres away..not too bad.~118db /1metre? with 20watts supposedlyll take it to tech-and measure it there.video-at listneing position listening to Prodigy :-)) and no,my 10watt per channel main speakers wont be contributing much haha..il measure their max output ,proly 105db or something :P  
<http://homepages.paradise.net.nz/quadroph/bs/loud.WMV>

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Subject: Re: Horn throat+SPL meter arrived. Measuring methods?  
Posted by [Adrian Mack](#) on Thu, 01 Jan 2004 08:42:51 GMT  
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Sure, SW is very easy. You might not need to use it though, if all you want is a couple of SPL readings at various freqs. SW would be great to see how your room is creating the boost at the low freqs, it could help you in your sub positioning (or seat positioning, seeing as its a cornerhorn so its limited to that area). I checked out the video you did. Nice to see you put it under a folder called "bs" in your FTP :P Anyway, next time use sine waves, and also set it to the "Slow" setting. I got no doubt that its loud (being a basshorn), but you need to do this so its accurate. Can't wait to see your LAB12 horn!Finally my internet and email and stuff is back up working today. I paid for my internet four days ago, the slack guys at my ISP couldn't be bothered updating accounts over the christmas break :@ Over the four days I had accumulated 130 spam mails in my inbox too, so I had a lot of deleting to do today :P

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Subject: Re: Horn throat+SPL meter arrived. Measuring methods?  
Posted by [Mike.e](#) on Thu, 01 Jan 2004 12:31:28 GMT  
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Cooledit measuring the SPL meter.and yes.. it does clip when u go above about +4dbthe sinewaves look pure.as you would expect as such low SPL...it is 1am!

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