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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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