
Subject: Bill Fitzmaurice - Questions

Posted by [Ralph](#) on Mon, 20 Sep 2004 20:31:51 GMT

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Thanks for sending measurements for the DR200. I have a few questions. 1. What is the port frequency? There was more output below 125Hz so I assume it was 60Hz or thereabouts? 2. How do you decide what frequency to port? Is it mathematical using T/S parameters or is it empirical cut and try? If mathematical, how do you determine how much parameter offset from horn interaction? What I mean is the T/S specs will shift and F_s will drop when installed in the horn, so shouldn't calculations use the shifted T/S values? 3. What measurement system do you use? What software do you use to make your response charts? Thanks, Ralph

Subject: Re: Bill Fitzmaurice - Questions

Posted by [Bill Fitzmaurice](#) on Tue, 21 Sep 2004 16:17:55 GMT

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The F_b was tuned to 80 Hz. I could have gone lower but for PA vocals there's no need for response below 80 Hz. To tune a horn/reflex combination first you measure for the $F_s(h)$, with the driver in place but the rear chamber open to air. That $F_s(h)$ is the lowest frequency you can tune the F_b to, and doing so gives you the lowest extension but also the least sensitivity at the horn F_c . To gain more sensitivity at F_c you can tune higher than $F_s(h)$, with a loss of low end extension; where to go depends on what you want to get. I wanted 80 Hz so that's where I tuned to with DR200. There comes a point where you can't tune any higher, so then you just go sealed. If that gives an F_b that's still unacceptably lower than the F_c then you have to reactance annul by making the sealed box smaller. I measure with a sine wave generator as a source and a Phonic PAA2 doing the measuring; it is accurate and has an unweighted mic setting. I don't have software for my charts, I make them up in a Works spreadsheet.

Subject: Thank you

Posted by [Ralph](#) on Tue, 21 Sep 2004 21:54:04 GMT

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Thank you very much. Your response is most helpful. Ralph
