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Subject: Re: Other Drivers and stuff

Posted by [Wayne Parham](#) on Thu, 01 Apr 2004 15:04:12 GMT

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Do you have any references to test data handy? I was hoping for maybe some test results that quantified the onset of air-compressibility non-linearity distortion. I'm not sure if it's the same thing as throat distortion or not, but it is from air passing through the cooling vent. This question is purely because of the fact that Jerry's analysis made a 0.75" diameter port possible, and some of us were discussing how much effect this might have. Jerry said he would test them and find out. About motor distortion, I've always been impressed with the performance of flux stabilized motors. They provide about -15dB improvement in 2HD, and it's not just a figure - I find it immediately obvious. You can walk into a room with a sound system and immediately hear whether the woofers are flux stabilized or not. It just sounds cleaner. Back when the LAB12 was first being made, I wondered why it wasn't built with flux stabilization. I think you and I discussed this back then. I got the impression you weren't interested in a better magnetic structure, but maybe I misunderstood you. In any case, that's the point I wanted to make. The motor is responsible for most of the 2HD in the entire system, so to me, it makes sense to make flux as symmetrical as possible if high-output and high-quality are the goals. Since the improvement from flux stabilization is 10dB to 15dB reduction in 2HD, it amounts to a significant improvement around the same magnitude as horn loading. That's like 10x to 35x and sometimes more - Certainly nothing to sneeze at. So I questioned the decision not to use shorting rings in the original LAB12. The Magnum was already in the works, so I wondered why the LAB12 wasn't made with flux stabilization. And here lately, I just thought I'd ask Chris at Eminence about it. In hindsight, I don't know why it hadn't been done before now. But I guess there were cost concerns. Jerry tells me that the flux stabilized woofer is being readied now for testing. If you are expecting such a woofer in a week, then I can only assume that the woofers we've been discussing here are going to be sent to you. Perhaps you will be able to take advantage of them in your BDEAP device as well then.

Flux stabilized LAB12 thread