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Subject: Re: Martin King Horn Theory

Posted by [Wayne Parham](#) on Wed, 13 Oct 2004 18:52:28 GMT

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Hi Martin, I took an hour today to read your horn theory papers, and I was really impressed. That's not nearly enough time to study the papers properly, more like just a brief scan. But I printed the documents and can spend more time with them in the days to come. One of the things I was most impressed with was your study of horns with circular mouths and of rectangular mouths having various aspect ratios, in particular of their acoustic impedance. I am anxious to focus on your derivations when I have more time. You also describe the radiation pattern, both at high frequency where the horn has good control of directionality and at low frequency where it doesn't. I didn't see any mention of the transition range in between, which is of particular interest. Single slot diffraction is often cited as a reason for dispersion behavior in the transition region, which makes a great deal of sense. But I did see that you mentioned length differences at different angles, and perhaps alluded to dispersion behavior in the transition region. So I may have missed it in my first pass. Your work in this field is really outstanding, Martin. You contribute so much of your time, and so much work of value. I can't tell you enough how impressed I am with the work you've done in loudspeakers, made available for all to understand and digest. It's one thing to write papers like this for advancement in university, to defend a thesis or something. It's another thing to write for publication in peer-reviewed journals. But it is another thing altogether to make such works available to all, and for the benefit of all. The goodwill that you generate is outstanding. Thanks, Wayne

Martin King Horn Theory Article

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