Subject: horn dessign
Posted by otor4 on Fri, 29 Apr 2005 10:51:48 GMT
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Gentlemans, I'm trying to learn more about bass horn design. I've made several simulations with David McBean Hornresp and I've just found a nice functionality in the program: Hypex designer. I've encoded parameters of Kilomax 18 into it; I've indicated 0.5Pi space and range from 25Hz to 200Hz and the hornresp have given me a very nice looking tractrix horn. It can be folded into a kind of huge 2.5 m3 "cupboard", but this size is ok for my listening room. Is this, IMO theoretically "perfect", model also good for a real word application? Regarding graphs, will I get the same performances in reality? Is it a good idea (sonically) to try to build such a monster (actually two of them) for my 4m x 7m room? Thank you in advance,o'tor

Subject: Re: horn design
Posted by Wayne Parham on Fri, 29 Apr 2005 11:14:05 GMT
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Hornresp is very good at modeling low frequency response, so I think you can expect your physical horn to act like your mathematical model. The model treats the driver as a radiating piston, which is appropriate for low frequencies. At high frequencies, the cone doesn't act as a rigid piston anymore, and it develops greater high frequency energy because parts of the cone become decoupled and act as separate lighter radiating masses. But for a basshorn, this isn't an issue.