Subject: Re: OS waveguides
Posted by Earl Geddes on Fri, 03 Jun 2005 12:49:40 GMT
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HiGlad that you could get something out of my paper. The book, which is updated and written ten years after the paper, does a far better job at explaining things.You are pretty much correct that a compression driver can actually create a flat planar wavefront. The first source that we tried however was a flat honeycomb piston rom Panasonic. Worked just as expected. A conical diapragm does not give a flat wavefront at the troat and as such the waveguide deos not work well without a phase plug. A dome is an axisymmetric source, but not planar, as such it will not work as well as the flat piston.When the source is not planar then the performance is very hard to predict since the non-planar aspects will excite the detrimental higher order modes.I should also point out that current phase plug designs do not really give flat planar wavefronts either. Thats because of an error in the design asumptions made by Bob Smith from whose work the current phase plug designs originate. I have a patent pending on a correction to the design which would achive a lat wavefront. I also have a patent pending on the use of interchangable phase plugs in a compression driver. I've been doing a lot of work in this area in the last couple of years. I think that my speakers can attest to the benifits of that work.Earl