Subject: Re: Mysteries of Port behavior and design
Posted by Wayne Parham on Fri, 24 Dec 2004 18:33:43 GMT
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Hi Ron,Group delay is a function of frequency and rolloff slope. So if your bass response extends down very low, group delay will be higher than a speaker with higher cutoff. Most would prefer less group delay, but it is important to realize what it is. I'd rather have 30Hz response with its attendent group delay than 80Hz cutoff with less group delay.Airspeed through a loudspeaker port is directly related to radiator displacement and port area. So if you are not running a lot of power, you can use a smaller port. The Helmholtz formula doesn't address the issue of port area and air velocity, so it doesn't take into account cases where the port becomes excessively restictive. But unless you're considering very small ports, I wouldn't be concerned with the low power levels you're talking about. This is just a seat of the pants estimate, but I don't think you would have problems with any port size larger than 1/2" if you're only running 1 watt. It's easy enough to check and confirm. There just isn't enough power to generate displacements that would cause you problems.Wayne