Subject: Re: Answer and more questions (Hi Wayne)
Posted by cddeluca@telocity.com on Fri, 18 Oct 2002 15:22:42 GMT
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I'm trying to figure all this out myself, so anything I might have by way of answer is mostly speculation. Nonetheless, as far as I can tell the volume in a reflex box virtually doesn't load the driver cone. Now I'm sure it does to some degree, but I think that for relatively low/modest excursion drivers at reasonable peak levels (110 dB or so) fooling with numbers makes me believe the situation is akin to an infinite baffle arrangement. What the driver is doing with the port is exciting a resonance, and the port is the outlet (the "speaker") for that resonating air mass. But the contribution from the port appears to roll off very sharply as you move away from that resonance. So in the end, what matters is mach number in the port. If the port is large enough that the moving air velocity is relatively low at the resonant frequency (when the port is acting) then you're good to go.What prompted the question is some old lit I saw somewhere once that said, in effect, that the port area ought to be a very large fraction of the driver area (like half or better). That's all I remember (and this was something from the 50's or 60's), but as far as I can tell that would be the only "rule of thumb" that would drive you toward a port tube, assuming baffle space was no object (assuming velocity was not an issue).Or maybe not....