Subject: Re: 3 Pi Modifications
Posted by Wayne Parham on Mon, 05 Apr 2010 21:04:19 GMT
View Forum Message <> Reply to Message

The reflex tuning is slightly overdamped, which is characteristic of most of my designs. It provides a response curve that is similar to sealed, in that rolloff is gradual and smooth. But you gain the benefits of a vented cabinet, mainly increased LF and reduced excursion. I believe this is the best overall solution because it provides the highest degree of cone control without resorting to a huge basshorn. A basshorn would also open up another whole other can of worms, because they have their own set of problems for home hifi use, in my opinion. So to me, the reflex cabinet is king for hifi bass.

Don't forget that in a home sound environment - indoors, in a room - everything below the Schroeder frequency (around 150Hz or so) is smeared by boundary reflections. If you think about it, the best thing you can do is actually to provide some "jitter" in the reflections, decorrelating them or moving them around a little bit in time to average out the sound field. This goes in the opposite direction of what we would want outdoors or in a very large auditorium. Indoors, I want a point source above 150Hz, but I want multiple source positions and tunings below 100Hz. Between those ranges, I want transition where the multiple distributed sound sources gradually fade to a single source around the Schroeder frequency.

airspeed problems with it. There isn't a lot of displacement, really. I suppose if one were to pump a lot of content through them under 30Hz they would probably chuff, but that would be a problem anyway, since that's below the passband and the woofer would be unloaded. One would want to high-pass them at 30Hz in that scenario, really, sort of a prosound situation.

for his home theater and main stereo system. He leans on 'em pretty hard, to tell the truth. He's definitely not your triode kind of guy, more like 300 wpc, loves to play stuff like Nine Inch Nails which is real hard on woofers. No high-pass, he runs 'em wide open. If anything would make them chuff, that would. But I've never heard any sign of turbulence, so I think port size is adequate.