Subject: Re: You Are Correct
Posted by GM on Wed, 13 Apr 2005 17:11:24 GMT
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Greets!I don't remember what dims I posted, but the basic T/S max flat comes closest to what you built though the vent is 1.5" diameter x 1.125", not 1" diameter, which dramatically lowers Fp so LF output should be minimal. I assume it sounded 'muddy' because the driver/vent was being severely overdriven at even modest SPLs. With no damping there's also some comb filtering with the vent up beyond 1 kHz.With the recommended vent there's much more mid bass, but less LF extension, and the comb filtering is much higher in amplitude with no damping.With a 2" x 6" vent, Fp is down where the 1" x 1.125" vent put it, though it's better damped due to the greater vent air mass and now the comb filtering is truly excessive due to its length so little wonder it sounds 'clear', what with the high amplitude 'spiked' harmonics. Like BB opined, accurate reproduction it ain't, but you seem to need to hear the kind of dynamics that separates a speaker system from sounding 'accurate' to one that sounds more 'live'. To get both requires a much more serious system than a couple of small FR drivers.....Anyway, based on your apparent performance preferences, an optimized (but unstuffed) Voigt pipe may be the 'best conclusion' for this speaker project.WRT the Tuba, I have a super slow dial-up so didn't wait for the link to load, but I gather it's a folded radial design with too small a mouth, like Tom Danley's LABhorn. If so, then without a corner or at least a wall/floor junction to load it, then significant EQ will probably be required to shape its FR. Also, the long pathlength will probably require digital TD to get it ~in step with the mains.Still, with the advent of small, high linear excursion drivers, reasonably compact upper LF/midbass horns can be realized, so assuming you're more interested in a 'fast' upper LF/mid-bass system to fill in below a FR system rather than a true sub system, then I imagine the Tuba will get the job done. 'Thump test'? Do you mean 'click' test? If so, it's just a little 1.5V battery powered ckt. using a DC rated SP-DT toggle switch to make/break the driver. With a typical minimally lined or stuffed vented cab it can still be somewhat underdamped (peaking at Fb, or worse, higher up if severely underdamped) so when the driver is switched it will tend to 'boom' (AKA 'ring') to some extent. Damping the vent till all you hear is just an amplified 'click' means it's critically damped, i.e. make it somewhat aperiodic, so any more just rolls it off more (overdamped). Note that a resistor equal to whatever the amp's output resistance is required between the switch and speaker for best results. I don't know who originated it, I first saw it in a mid '60s DIY speaker building book written by a couple of Altec employees. GM