Subject: Dialog on MLTL using F127e continues [Re: You Are Correct]
Posted by lon on Wed, 13 Apr 2005 18:48:53 GMT
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I reposted this whole message as a dialog: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.--Dims are given at FRDF.I was just going through my hand notes on that stuff... lessee:my hole borer is 1.5 inches and that was the port I played with. I re-measured and it's 1.5 diameter with various lengths tested. What would moving the port do-- front, back? --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.....-- No doubt. Playing at low levels all the time might be a problem too and the 'listening room' leaves much to be desired.I had stuff 'dry clamped' for quite a while and can hear slightdifferences now that the glue-up is complete. Inside seams are caulked, no special wire. The 2x6 ports are not glued in. I can still monkey with that as needed.One of the problems I'm dealing with may be solid state amplificationequipment and source material that varies widely. Or I might be going deaf.
--Anyway, based on your apparent performance preferences, an optimized (but unstuffed) Voigt pipe may be the 'best conclusion' for this speaker project.-- I yes, I've wanted cut a Voigt for almost a year: toolsand materials preventing a lot of progress: I want to do Poplarcarcass. And I bought 2 of those full range Rolands from Ebay.Those are 8 in. I want to put those in Voigts. Nobody over at FRDFhas made specs for those but the magnets are pretty small.--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.-- I started that project yesterday. It's something I can do with what I have in tools and material costs. I wanted the experience of doing this construction. Do you have an opinion on SonoTube sub woofer constructions?--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.--Yes, I'm thinking that is ideal. Low level and almost nearfield listening is the way this setup looks. Not looking for seat-shakers.The driver used for the Tuba has the highest excursion I'm aware of:16mm. It's the MCM #55-2421 8" : Claimed Fs of 25hz, Qts .18, Vas 39 ltr, SPL 87db, 120 w power rating and 16mm Xmax. Link below... but the unit is out of stock.--'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.-- That must be it. I couldn't imagine rapping my knuckles near the driver to get any sort of result. The only battery test I've used is for polarity.Thanks for answering all my (maybe inane) questions. I mentioned toBill that what I have to work with is the equivalent of a quote fromthe Time Portal episode of orginal Star Trek which said "I'm working with stone knives and bearskins." We've spoken of comb filtering which is (from my recently purchased "Speakerbuilding 201" book) are dips and peaks very close together which look like the tines of a comb. But what does this represent as audio reproduction? What do my deaf ears hear? Lastly, it may be time to learn some measuring techniques. I know there's a measuring forum on here at ART, but what would you say is a good minimal measuring setup? lon-- GM MCM 55- 2421