Subject: Guys, help me design a smokin' midrange horn...
Posted by Adam on Sat, 06 Dec 2003 21:41:41 GMT
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The guys at work are getting all down about horns and how they are just loud and can't sound good. I want to show them how wrong they are! I could show them with my Eminence 2-ways, but I'd like to go the full monty and show them with a midrange horn as well.The base platform is the Seas Excel W18EX. If you guys arent' familiar with this driver, it's is wildely considered one of the best midrange drivers in the world. They are less renouned for midbass performance, but I've foudn they sound increidble in that area as well, in the right box. I have four spare ones right now, waiting for a use.My goals are wide band operation and flat frequency response over effeciency. I'd like something that will do around 200 Hz to 1.5 kHz, to couple with a PSD-2002 for the top end. a 1/8th space, 1/4 wavelength horn should be fine. If 1/2 wavelength will greatly improve things, I'll do it though.I'd like to do a traxic or an exponential. I also have Sound Easy, so I can measure and tweak the final results. It has horn design implimented, I'm just not comfortable with it yet.I've done a fair bit of helping on this board I think, so I'm cashing in a favour ;) I need a really wicked design. I'll have the measurement capabilities to fine tune.T/S specs for the Excel:RE = 6.1 ohmsLE = 0.4 mHFS = 31 HzSD = 125 sqcmVAS = 37 litres (1.3 cuft)QMS = 2.00QES = 0.27QTS = 0.24Here is the data sheethttp://www.seas.no/excel_line/excel/E0017.PDFYou can consider response between 1 kHz and 100 Hz flat, even though it steps down. The reduction is caused by baffle step.Thanks guys, I'd really apprecaite something!!!!Adam