Subject: box stuffing and tuning freq. changes
Posted by Sam P. on Thu, 25 Jul 2002 12:08:50 GMT
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I had promised to develope some data, and here it is: Empty box volume 2.9 cu.ft. 4972 cu.in.(about 2.5 cu.ft. NET VOLUME) Ports(2) are 3.0 i.d. x 1.5 long (14 sq. inches x 1.5) Fl 28Hz./39.8ohms Fh 88Hz./37.3ohms Fc 75Hz./56.0ohms calculated Fb 53.9Hz. box plus 0.73 cu.ft. R19 (just a 24x15x3.5 applied to rear wall) Fl 27Hz./40.0ohms Fh 83Hz./34.0ohms Fc 71Hz./51.4ohms calculated Fb 50.8Hz. box plus 1.83 cu.ft. R19 (above piece, plus 3 more 16x8x3.5, one on each side of woofer, one at top between horn and woof...close to 75% fill...TOO MUCH?) yeah, this must be overdamped. Fl 25.5Hz./34.0ohms Fh 79Hz./20.0ohms Fc 68Hz./37.3ohms calculated Fb 47.61Hz. Those who are not concerned about this just need to run some numbers in Boxplot, and visualize/simulate what happens when your Fb is +/-3Hz. from "ideal". Sam oh yeah, and it appears that the chart in Weems book correlates BEST with an EMPTY 2.5 cu.ft. BOX, second test correlates with box ~3.0cu.ft., and third case tests correlates with 3.5cu.ft. box on his chart. augsburger's calcs when compared to this empirical data also imply a larger box volume than actual physical size must be considered when determing port tuning. don't think 0.5 cu.ft. matters with Vb?...again, run sims...