
Subject: Re: 8 Pi Tuning

Posted by [Wayne Parham](#) on Fri, 24 Sep 2004 06:03:17 GMT

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I think it's great you are looking into this in such detail. It is a new design, so I welcome the extra examination. For the front section you've described in part #1, I calculate $26 \times 32 \times 10.34 = 8602 \text{in}^3$. I calculated the rear section you've described in part #2 as two extruded triangles and an extruded rectangle. I combine the triangles to form a rectangle. The two triangular portions are $6 \times 6 \times 32 = 1152 \text{in}^3$. The rectangular portion is $6 \times 14 \times 32 = 2688 \text{in}^3$. Combined, it is 12442in^3 or 7.2ft^3 . The horn, driver, panel wood thickness, braces and brackets all displace volume inside and so must be removed from this figure. I don't recall the displacements right off hand but I remember they were around two cubic feet, and virtual volume increase from insulation adds some of this back. Fortunately, at this size of cabinet, a few hundred cubic inches difference either way doesn't make any difference. As for resonant frequency, I don't know about the accuracy of WinISP. I use the Helmholtz formula to calculate resonant frequency:
