
Subject: Re: Pi Speakers!

Posted by [Adrian Mack](#) on Sat, 05 Jul 2003 13:10:44 GMT

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Hey Wayne, Thanks for th like a 4pi. Specs are as follows: $F_s=42\text{Hz}$ $R_e=5\text{ohm}$ $Q_{ms}=5.36$ $Q_{es}=0.28$ $Q_{ts}=0.27$ $V_{as}=131\text{L}$ $M_{ms}=125\text{g}$ $S_d=900\text{cm}^2$ $BL=24.2$ $T_{mLe}=2.15\text{mH}$ $X_{max}=5.5\text{mm}$ (length - gap height /2 method). $P_e=700\text{Wrms}$ (pink noise tested). Has 4" VC. Its designed for use from 30Hz to 2Khz, but they have reccomended max frequency of 800Hz (probably because of cone breakup modes). The graph provided by them with the driver in a 125L box tuned to 50Hz shows response flat to about 1.5Khz then drops off heaps, and on the other end it shows flat down to about 200Hz then gradually goes to -8db at 50Hz. A better box would give more bass extension of course. There are other models like the 15W1200 with actual reccomended max limit of like 1.8KHz, but have smaller x_{max} , ~3mm, but other t/s specs essentially pretty similar. It has two copper rings (DDR, Doudble Demodulating Rings) for decreased harmonic and intermodulation distortion, and also DSS (double silicone spider) for increased linearity. Power compression is 3.4db @ 700w. It has heaps of cooling through channels between the basket and magnetic faceplate, and also more air vents in the back plate. I actually use the 18" 18LW1400 Eighteen Sound driver in a bass reflex box for my sub, and it is very good. Do you think the 15LW1401 or 15W1200 above is suitable for something like the Professional Series 4pi speakers? The great thing is I can get these Eighteen Sound parts for great prices from Active Audio, less than what an Omega costs here in Australia (then again 99% of US-made speakers cost HEAPS more in Australia). Wouldn't crossing at, for example 1.6KHz present rather severe cone breakup modes on the 15" woofer? Like, I know these high quality parts present less of a problem, but the fact would still remain. So I guess my qustion is, is there an audible artifact of cone breakup near the crossover frequency using these sorts of 15" drivers, or is it not noticable? BTW: I've heard the word "parallax" being thrown around heaps. What does it actually mean? Thanks! Adrian