Subject: xover question

Posted by jazzbo on Sun, 25 Nov 2001 19:25:22 GMT

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I am preparing my final parts order from parts express for my pi7, in the making.I'm going with the jbl low frequency and the eminence hf driver. According to the chart, I will need 16 ohm parts for R1 and R2, and a 0.47 uF for C1. Since I will be using only a 10W amp, I am assuming that I will be fine using just single 12W resistors in for R1 and R2? Just curious if 40 watt values are required to operate the speaker at the rated capacity, can the values be pro-rated for lesser levels (ie 4 watts if uing a 60W amp), or am I over-simplifying?

Subject: Crossover components rating
Posted by Wayne Parham on Sun, 25 Nov 2001 21:28:33 GMT
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Resistors R1 and R2 each get about 75% of the voltage applied to the speaker terminals at frequencies above the crossover point. Their resistances are about twice the impedance as the load, so current through them is reduced. This all results in a level that's about 1/3rd that of the input power. In other words, if there's 10 watts input, the most you'd see at R1 and R2 would be about 3 watts, and even then only if the signal was a pure sine above 2kHz.