
Subject: Re: Cool.

Posted by [Adrian Mack](#) on Mon, 15 Sep 2003 06:22:16 GMT

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Hey Wayne, So it seems that the sealed box shifts resonance upward. The resonant frequency of the box/woofer system is F_o . But does this shift F_s upward too..... ? I'd assume that any ringing will occur at F_o too, where the electrical impedance peak is. If the box shifts F_s up to form box resonance F_o , then we can say that $F_s = F_o$ in a sealed box. So f_s may be 20Hz free air, f_s may be shifted to say 40Hz in a sealed box. All motors are more uncontrolled near resonance. If the new F_s is 40Hz, that's pretty bad because instead of being uncontrolled at 20Hz, it's now uncontrolled at 40Hz, which is much higher, and it's also the sealed box resonant so that means it will be more uncontrolled and also ring at the same time more and sealed box resonance is usually in the passband too which makes it even worse. The vented cabinet has the Helmholtz resonator too, and it's this frequency where any ringing is. Does the vented box shift F_s at all? If it doesn't, then that's good because it may be that neither F_b or F_s is in the passband. But if a sealed box shifts F_s upward to box resonance so that $F_s = F_o$, that means the motor is uncontrolled at higher freq, and the box is also making it ring here too and usually in the passband. Is this correct? Half correct? The "Frequencies of interest" post says the bass reflex cab has F_o too, I thought it was only on a sealed, unless we block the port. It says however the enclosed woofers resonant freq in a vented box is F_o , and is near F_h , which indicates that the vented box might shift F_s up to near F_h . Or something :P Maybe I'm being too picky. Thanks! Adrian
