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Subject: Aren't we

Posted by [mollecon](#) on Fri, 12 Sep 2003 10:59:58 GMT

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Is it that complicated? As far as I know, ANY reflexbox will have a phase shift at 180 at -3dB point - & ANY closed box a phase shift at 90 at -3dB...Impulse behaviour at resonance; A closed box with a Q close to 1 will have a ringing of a cycle or so at resonance, & a -3dB point 20% below

also the -3dB point. A closed box with a Q at 0.5 will show very little ringing - & you pay for that having the bass down -6dB at resonance. A reflex box with a so-called B3 alignment (showing a 18dB/oct drop below resonance) will show a ringing almost similar to a closed box with Q at 1 - & the standard B4 alignment will be 'worse' in that respect. You can surely have reflex alignments that ring less than this - use a bigger box &/or lower the tuning...The fact remains that there are pro's & con's for both reflex & closed box. The reflex box is a way to get better efficiency &/or deeper bass + reduced diaphragm excursion, with added smaller distortion at any given output, AND a higher output, up to 5.5dB compared to the closed box of similar size & bass response. BUT you pay with more ringing at bass resonance. And A LOT of variables goes into determining which to prefer, including the listener! The fact that most high efficiency enthusiasts use basreflex (when not horns in the bass - but those bastards are REALLY big) is no wonder - just look at what it offers compared to the closed box, WHEN you have high efficiency as a priority...With the danger of being accused of heresy, I would like to mention that it is possible to get a reasonably high efficiency with a closed box - a fairly large one that is! Put the Eminence Beta 15 in a box of approx. 170 liters (~6 cu.ft.), & you will get a Q at 1, -3dB at 48Hz - & I bet it'll be tube friendly, too, considering the magnet size on those (running away before Wayne comes with his baseball bat). Just my (pretty long) two cents.