Subject: Ah, I figured most of it out
Posted by Adrian Mack on Mon, 15 Sep 2003 06:40:04 GMT
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Hi Wayne,I just re-read your Electrical, mechanical and pneumatic properties post. The sealed box modifies the speakers mechanical properties and it raises Fs and changes its Qts. It does that by changing its spring stiffness and resistance because of the air pressure in the box. Therefore we can say that Fs=Fo, right? So the question is: All motors are more uncontrolled near Fs. Because the sealed system shifts Fs upward by modifying its spring stiffness, does that mean its now uncontrolled at the shifted frequency instead of the lower free air Fs. I think it might not, because the motor strength is not changed and is helping damp the driver. I would think the new boxed-Fs is more controlled than free-air Fs because the box would lower the drivers Qms. That seems like the reason its different, but doesn't make it worse, only better which I guess is how sealed system damping works, in a basic way. The vented box has a port, so I'd assume it does not modify its spring stiffness/resistance and therefore a driver in a vented box won't change Fs. The Helmholtz resonator tunes the system instead. Does it change any of the drivers Q pameters like the sealed box does? I guess not either. Thanks!Adrian