Subject: Different Helmholtz frequency
Posted by Wayne Parham on Tue, 28 Aug 2001 21:30:12 GMT
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The flare at the end serves to reduce turbulence at high airspeeds. If the airflow through a port gets high enough, it will start to make a chuffing sound, and the flare helps to reduce that. This particular application doesn't need a flared end, because the port is large enough for the woofer's displacement so airspeed never gets high enough to cause any problems.The flare will tend to raise the Helmholtz frequency. If it's 4" long overall but flared at the end, it will act like it's slightly shorter, which will raise the Helmholtz frequency a little. On some speakers, this might be a problem. It might be best to know the exact tuning frequency on speakers with tight tuning tolerance requirements. In this case, the speaker is slightly overdamped and tuned low, so it is pretty forgiving of minor changes in tuning. I like them this way because it makes them forgiving of environmental factors and electro-mechanical parameter shift.Overall, I don't think the flared end is going to help anything in this speaker because airspeed is low. On the other hand, it probably won't hurt anything either because the cabinet alignment is fairly tolerant of minor changes.