Subject: They don't
Posted by Wayne Parham on Thu, 30 Oct 2003 17:19:02 GMT
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This refers to the acoustic loading and how it is reflected back as electrical impedance. Both horn and vented systems unload at a specific low frequency, and this is where they are most vulnerable. Above this frequency, both are limited by the dissipation ability of the motor. If it's the same motor in each cabinet, then the power limit is the same. The impedance may be different though, which then means that the voltage limit is also different.Some make the case that horn loading increases efficiency, so more power is converted to acoustic energy leaving less to be wasted as heat. I don't agree with this because while it is true in theory, in practice even the most efficient horns dissipate a great deal of heat, usually more than 50%. And since most speakers remove heat via venting, the reduced excursion from horn loading limits their ability to cool the voice coil. Where power handling is concerned, the reduced excursion is a two-edged sword. Mechanical limits are increased but thermal limits aren't; In fact, the reduced excursion may reduce thermal limits in some cases.