Subject: Yes, but
Posted by Bill Fitzmaurice on Mon, 23 Aug 2004 13:06:37 GMT
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assuming that you don't care about high-frequency extension (as in a sub horn) you can overcome the throat distortion problem. The majority of the distortion occurs at the power level beyond which the driver motor is unable to overcome the acoustic impedance load of the horn; as more power is applied instead of that power resulting in higher cone excursion the cone motion is clipped, resulting in classic square wave nastyness. The cure is to go with a higher driver Bl, which allows the motor to maintain control over the cone at higher power levels. There is a downside, and that is in the lowered Qts that accompanies higher Bl. The lowered Qts results in a loss of sensitivity at lower frequencies at low power, so there is a choice to be made- maximum LF extension/sensitivity at low power or maximum output/minimal distortion at high power.