Subject: Maximum SPL charts
Posted by Wayne Parham on Mon, 12 Sep 2005 13:40:47 GMT
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A bass-reflex speaker is unloaded below the Helmholtz frequency. A transmission line is unloaded below its quarter-wave frequency. And a horn is unloaded below its flare frequency. This is particularly true for back-loaded horns, which act very much like bass-reflex cabinets or transmission lines in this regard. In each of these cases, excursion goes up rapidly when frequency drops below their passbands.As for your comments about maximum SPL, here's a chart that will help quantify matters. Below is an SPL chart based on Fostex specs. Add 6dB for

of course assumes that X-max is not an issue and that there is no compression. In other words, the maximum SPL listed here is rather optimistic.[Model][size][SPL at 1W/1M][Max power][Max SPL at 1M][Max SPL at 10 feet][Max SPL at 15 feet]==========F83E 3" 88dB 10watts 98.00dB 88.25dB 84.75dBF120A 5" 89dB 30watts 103.75dB 94.00dB 90.50dBF200A 8" 90dB 80watts 109.00dB 99.25dB 95.75dBFE87E 3" 89dB 15watts 100.75dB 91.00dB 87.50dBFE103E 4" 89dB 15watts 100.75dB 91.00dB 87.50dBFE107E 4" 90dB 15watts 101.75dB 92.00dB

5" 93dB 45watts 109.50dB 99.75dB 96.25dBFE127E 4.7" 91dB 45watts 107.50dB 97.75dB 94.25dBFE166E 6" 94dB 65watts 112.15dB 102.40dB 98.90dBFE167E 6" 94dB 65watts 112.15dB

100.25dBFE206E 8" 96dB 90watts 115.50dB 105.75dB 102.25dBFE207E

120watts 117.75dB 108.00dB 104.50dBFF125K 4.5" 92dB 50watts 109.00dB 99.25dB 95.75dBFF165K 6.5" 94dB 70watts 112.50dB 102.75dB 99.25dBFF225K 8" 96dB 100watts 116.00dB 106.25dB 102.75dB