Subject: Re: One other thing.....
Posted by Wayne Parham on Wed, 14 May 2003 17:26:20 GMT
View Forum Message <> Reply to Message

The compression horn is attenuated just as the response chart indicates - most attenuation occurs below 4kHz. That's where the horn is most efficient because mass rolloff starts around 4kHz. Above 4kHz, attenuation is gradually removed at 6dB/octave rate, providing compensation for mass rolloff. Compression drivers on 90x40 horns are usually about 106dB/W/M below mass rolloff, so with a 10dB attenuator, you have overall output of 96dB/W/M. This doesn't change your dynamic range, it just shifts the operating point to match that of the LF subsystem.By the way, there is another rolloff point caused by voice coil inductance, generally around 16kHz to 18kHz on modern 1" exit drivers. This begins a 12dB/octave slope. The front chamber forms a third pole, usually also around 16kHz to 18kHz, so response drops like a rock above that. You can expect nice flat response up to 16kHz or 18kHz or so using 6dB/octave augmentation, but when inductance and front chamber rolloffs come in, that marks the end of usable response.