Subject: Re: md2001 only speced to 12 kHz?
Posted by Wayne Parham on Thu, 15 Nov 2001 06:36:37 GMT
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In truth, compression drivers are only flat up to about 4kHz, where mass rolloff begins. Used with horns that cause collapsing directivity, their on-axis response can measure flat a couple octaves higher than that. But the driver itself rolls off 6dB/octave starting about 4kHz. That's what the top-octave companesation circuit is for - It provides EQ for compression drivers when used on horns that provide constant directivity.The next rolloff point is caused by voice coil inductance. This usually occurs somewhere between 10kHz and 20kHz on 1" exit drivers. This increases the rolloff slope to 12dB/octave. Of course, when 6dB/octave (acoustic or electronic) EQ is provided, this knee marks the beginning of a 6dB/octave rolloff slope.I've seen some crossovers that use a tank circuit tuned just above this point, to extend the HF range even further than what the 6dB/octave EQ provides. I've never been comfortable with that. I prefer what I consider to be a

necessary level matching, provides damping and top-octave compansation all at the same time. This approach is robust and tends to lock in the response, being insensitive to parameter shifts due to changes in temperature from increased power, variations between drivers, manufacturing tolerances, etc.