

side, bottom curve – the NEO8 without a baffle. It is worthwhile to note that a carefully designed rear enclosure provides additional equalization at the low end of the reproduced frequency spectrum.

Fig.3 shows the Cumulative Decay Spectrum (CDS) plot of the NEO8. Even the best conventional transducers have decay times in the critical midrange region around 1.5 – 2ms (-20dB level drop) extending to 3-4 ms in lower frequencies. The NEO8 has a decay time of about 0.5ms across its entire effective range down to human voice fundamental frequencies. The absence of complex mechanical parts, common for a conventional driver, allows the NEO8 to perform free of delayed spectral contamination. This explains the NEO8's unsurpassed clarity and the superb intelligibility of voice reproduction.

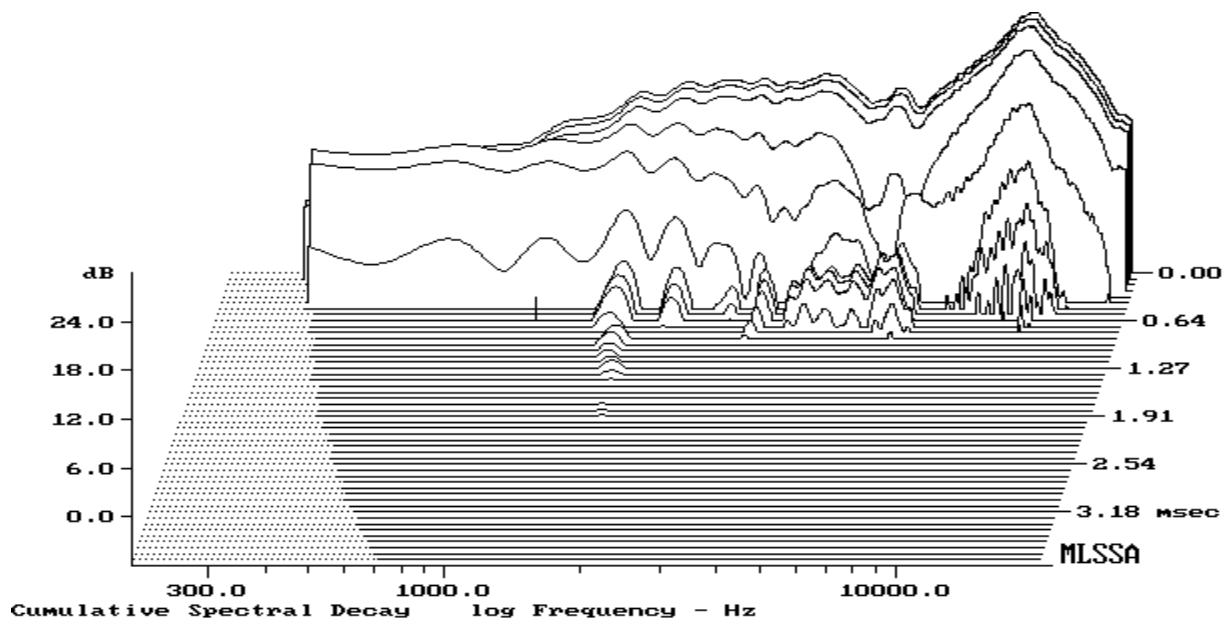


Fig.3 Neo 8 cumulative decay spectrum

The NEO8PDR is a modification of the Neo8 transducer. It incorporates patent pending PDR (progressive drive and radiation) technology allowing for a significantly wider horizontal dispersion above 8 kHz. The PDR technology provides progressively increasing excitation force from the periphery to the center portion of the diaphragm, while creating frequency dependant acoustic dampening and absorption across the diaphragm. This results in retaining of the efficiency in the effective range while dramatically widening high frequency dispersion. The Neo8PDR has slightly lower sensitivity below 500Hz and above 2 kHz (see Fig.4). However if an application does not require operation extended below 400-500 Hz, but instead calls for a wider horizontal coverage at high frequencies, than Neo8 PDR may be a better choice.

Fig.5 shows a family of on and off-axis frequency response curves of the Neo8 PDR, each one scaled down by -5 dB relatively to the previous curve.