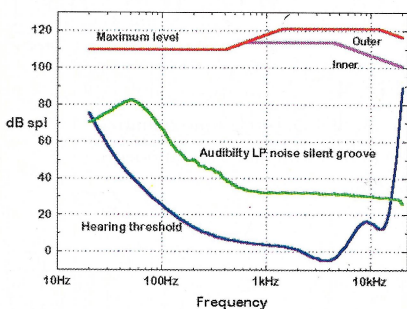
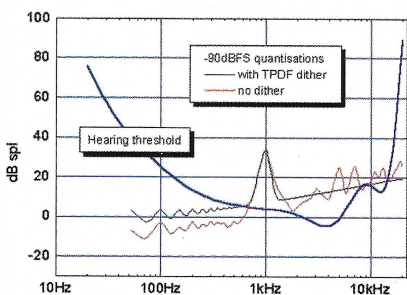


**Fig. 7**—Dynamic range of FM radio.



**Fig. 8**—Dynamic range of LP phonograph records. Maximum levels are plotted for both inner and outer grooves.



**Fig. 9**—Audible significance of dithered and undithered 16-bit, 44.1-kHz quantization of a 1-kHz tone at -90 dBFS (50 dB SPL, assuming 0 dBFS equals 120 dB SPL).

Figure 5 shows the base noise level for 44.1-kHz sampling in 16-, 18-, and 20-bit channels. The noise is plotted, however, not in terms of spectral density ( $-137$  dBFS/Hz with 16 bits) but in terms of audible signif-