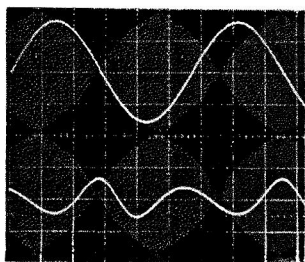
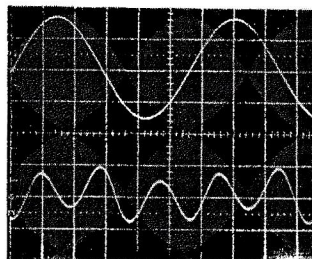


Fig. 2—THD in tantalum electrolytics as a function of corner frequency in a high-pass filter, various connections.

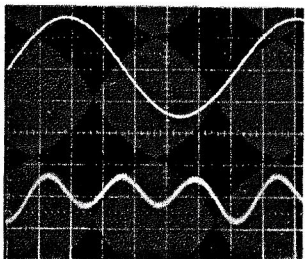
Fig. 3—Output vs. distortion photos for tantalum capacitors in a high-pass filter, various connections. For each photo, top is filter output; bottom is distortion products. Setup conditions as in Fig. 1b.



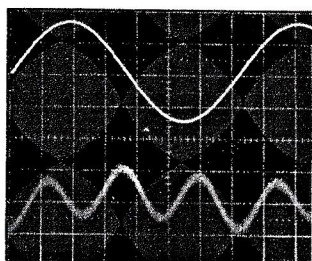
Condition A: $f_c = 35$ Hz, distortion about 0.2 percent.



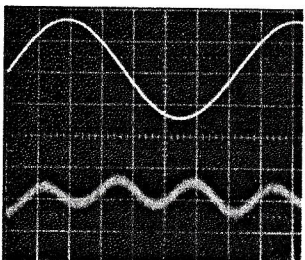
Condition B: $f_c = 18$ Hz, distortion about 0.075 percent.



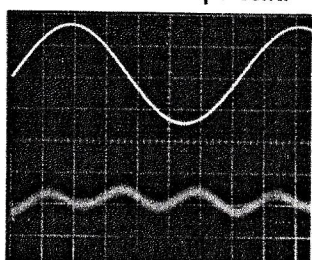
Condition C: $f_c = 70$ Hz, distortion about 0.025 percent.



Condition D: $f_c = 70$ Hz, distortion about 0.01 percent.



Condition E: $f_c = 70$ Hz, distortion about 0.005 percent.



Condition F: $f_c = 70$ Hz, distortion about 0.003 percent.

As the LP data show, distortion is produced well below the corner frequency, which in this case is 1800 Hz. The data shown are corrected, so the THD 100 percent set level follows the LP roll-off. Even as such, however, the higher harmonics are attenuated, and this data may be a pessimistic representation. An IM test might show even worse performance for this LP filter. Figure 5 shows the nature of distortion in 5a; as can be noted, it is third harmonic. By contrast, a