## SUBSONIC FILTER

I need a subsonic filter for my tereo system. I would like to insert it in the tape monitor loop or between the preamp and power amp. A very sharp cutoff below 20 or 25 Hz is required.—Joseph Hance, Richmond, IN.

A. A fifth-order, high-pass filter is shown

in the figure. It has a cutoff free rancy of 25 Hz and a rolloff of 30 dB ( r octave. I hope that's steep enough for your application. Passive components should have tight tolerances—no more than 5%. Op amps such as the 741 or LM318 are suitable. Be sure to connect the op amps to a low-ripple, regulated bipolar dc supply at about ±9 volts.

