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SYSTEM AND METHOD FOR CALIBRATING A CORNER FREQUENCY OF A TUNABLE FILTER EMPLOYED IN A READ CHANNEL OF A DATA STORAGE SYSTEM

ABSTRACT OF THE DISCLOSURE

A system and method provides for calibrating a corner frequency of a tunable filter coupled to a read channel of a data storage system to a desired frequency. A signal having a frequency equal to the target corner frequency is generated. A gain of the signal is adjusted to a gain threshold. The gain of the signal is then increased from the gain threshold by a pre-established amount, such as by 3 dB. The corner frequency of the signal is shifted until the gain of the signal is substantially equal to the gain threshold, at which point the corner frequency of the tunable filter is calibrated to the desired frequency. The signal generated is a peak-detectable signal. The corner frequency of a tunable filter may be a low or high corner frequency appropriate for filtering a data signal or a servo signal. The corner frequency calibration circuitry may be implemented *in-situ* the read channel circuitry of a data storage system.

Figure 6