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TUNING SYSTEM FOR A DIGITAL SATELLITE RECEIVER
WITH FINE TUNING PROVISIONS

Abstract

An economical tuning system for a digital satellite television receiver includes a phase locked loop (PLL) tuning control IC (921) of the type which is normally used in a tuning system of a conventional terrestrial broadcast or cable television receiver to control the frequency of the local oscillator (LO) (911). Unfortunately, the PLL IC (921) is only capable of changing the frequency of the LO (911) in relatively large steps. As a result, the operation of a carrier recovery loop (1111) which demodulates the digitally encoded IF signal produced by the tuner may be interrupted during a fine tuning mode because the carrier recovery loop (1111) may not be able to track frequency changes of the LO (911). To reduce such possibility, the integrator filter associated with the PLL IC (921) is modified to decrease the rate of change of the LO frequency during the fine tuning mode.

Figure 1