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(54) Title: METHOD AND APPARATUS FOR TUNING CHANNELS FOR CATV AND TELEVISION APPLICATIONS

(57) Abstract

A method of tuning channels for television and community antenna television (CATV) devices includes the step of receiving a radio frequency input (RFI) signal having at least one carrier signal at frequency f_S associated with a selected broadcast channel. The RFI signal is up-converted by m to a first intermediate frequency wherein the carrier signal is located at $f_S + m$. The first intermediate frequency is filtered. The filtered first intermediate frequency is down-converted by n to a second intermediate frequency wherein the second intermediate frequency includes the carrier signal at $f_S + m - n$. Additional methods for improving the reception of the selected channel include the step of varying m and n in order to avoid frequency-dependent anomalies within the pass band of the filter. For digital communications, m and n are varied in accordance with an error rate of the digital communications in order to reduce the error rate of the digital communications.

