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- (71) Applicant (for all designated States except US): **SILICON LABORATORIES INC.** [US/US]; 4635 Boston Lane, Austin, Texas 78735 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **KHOINI-POORFARD, Ramin** [IR/US]; 5800 Brodie Lane, Apt. 1011, Austin, Texas 78745 (US). **KRONE, Andrew W.** [US/US]; 12101 Edwards Hollow Run, Austin, TX 78739 (US).
- (74) Agent: **PETERMAN, Brian W.**; 1101 Capital of Texas Hwy. So., Building C, Suite 200, Austin, Texas 78746 (US).

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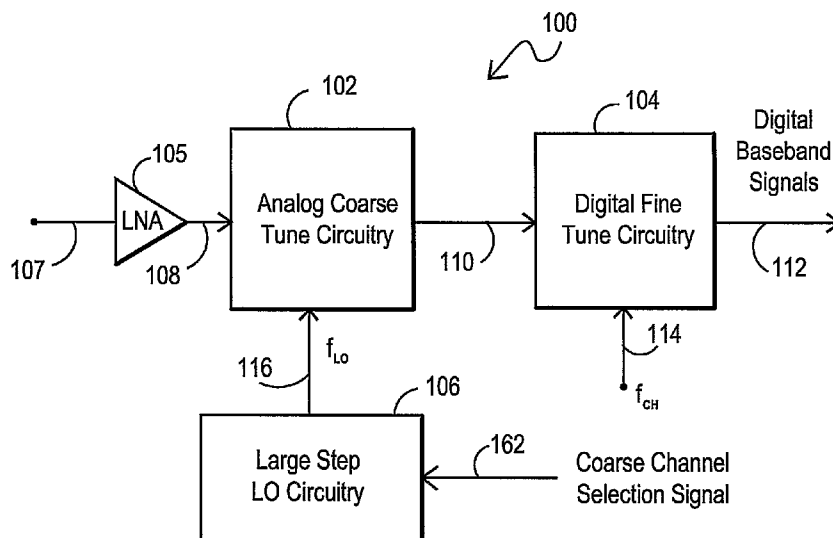
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(54) Title: RECEIVER ARCHITECTURES UTILIZING COARSE ANALOG TUNING AND ASSOCIATED METHODS



(57) Abstract: Receiver architectures and associated methods are disclosed that provide initial analog coarse tuning of desired channels within a received signal spectrum, such as a set-top box signal spectrum for satellite communications. These architectures provide significant advantages over prior direct down-conversion (DDC) architectures and low intermediate-frequency (IF) architectures, particularly where two tuners are desired on the same integrated circuit. Rather than using a low-IF frequency or directly converting the desired channel frequency to DC, initial coarse tuning provided by analog coarse tuning circuitry allows for a conversion to a frequency range around DC. This coarse tuning circuitry can be implemented, for example, using a large-step local oscillator (LO) that provides a coarse tune analog mixing signal. Once mixed down, the desired channel may then be fine-tuned through digital processing, such as through the use of a wide-band analog-to-digital converter (ADC) or a narrow-band tunable bandpass ADC.

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