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(71) Applicant: QUALCOMM INCORPORATED [US/US];
5775 Morehouse Drive, San Diego, CA 92121 (US).

(72) Inventor: MALDONADO, David; 1889 Cabernet Drive,
Chula Vista, CA 91913 (US).

(74) Agents: WADSWORTH, Philip R. et al.; Qualcomm Incorporated, 5775 Morehouse Drive, San Diego, CA California 92121 (US).

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(54) Title: DUAL BANDWIDTH PHASE LOCK LOOP FILTERS FOR MULTIMODE RADIOS

(57) Abstract: An apparatus and method for filtering a signal in a phase lock loop is disclosed. An typical apparatus for filtering a phase error signal comprises a first filter subcircuit receiving a phase error signal from a phase comparator and filtering the error signal when enabled, a second filter subcircuit receiving the phase error signal from the phase comparator and filtering the error signal when enabled and first and second enable switches which are activated in combination to control filtering of the error signal. The first filter subcircuit is enabled by activating a first combination of the enable switches and the second filter subcircuit is enabled by activating a second combination of the enable switches. A fast acquisition subcircuit can also be used to temporarily underdampen the filter and improve overall performance of the phase lock loop circuit. The filter can be used to obtain multimode operation in a cellular radio.



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