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(54) **Title:** REJECTION OF TRANSMIT SIGNAL LEAKAGE IN WIRELESS COMMUNICATION DEVICE

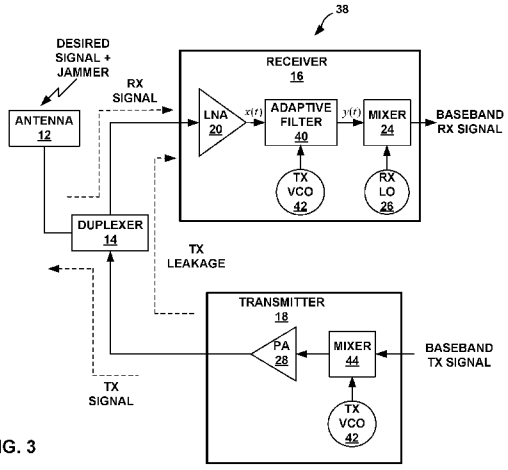


FIG. 3

(57) **Abstract:** This disclosure describes techniques for reducing adverse effects of transmit signal leakage in a full-duplex, wireless communication system. The disclosure describes techniques for reducing adverse effects of second order distortion and cross-modulation distortion of transmit signal leakage from a transmitter via a duplexer. The techniques may be effective in rejecting at least a portion of a transmit leakage signal, thereby reducing or eliminating distortion. The adaptive filter may include an estimator circuit that generates a transmit leakage signal estimate. A summer subtracts the estimate from the received signal to cancel transmit leakage and produce an output signal. The estimator circuit generates the transmit leakage signal estimate based on a reference signal and feedback from the output signal. The reference signal approximates the carrier signal used to generate the transmit signal in the transmitter. The reference signal may be provided by the same oscillator used to produce the transmit carrier signal.

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