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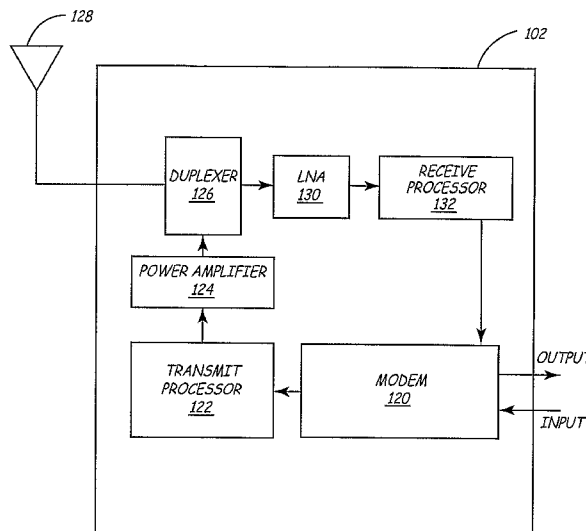
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(54) Title: HIGH LINEARITY LOW NOISE AMPLIFIER



(57) **Abstract:** A feedforward nonlinearity cancellation scheme is used to improve the linearity of a low noise amplifier (LNA). An LNA incorporates a main amplifier and an auxiliary amplifier couple to receive the same input. The outputs of the main amplifier and the auxiliary amplifier are also coupled. The auxiliary amplifier may be implemented as a very low power auxiliary amplifier having a very low linearity. The output of the auxiliary amplifier contains third-order intermodulation (IM3) products that are of similar amplitude, but opposite phase, to the IM3 products generated by the main amplifier. With the outputs of the main amplifier and the auxiliary amplifier coupled, their respective IM3 products are summed together and effectively cancel each other out. As a result, the output of the LNA contains substantially no IM3 products, and the linearity of the LNA is substantially improved.

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