

[54] PHASE-COHERENT TDMA QUADRATURE RECEIVER FOR MULTIPATH FADING CHANNELS

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[52] U.S. Cl. 375/83; 375/96; 329/112

[58] Field of Search 375/1, 115, 96, 39, 375/77, 83; 364/604, 728, 819; 329/104, 112, 110; 370/104

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[57] ABSTRACT

A method and apparatus for phase-coherently demodulating a multipath-impaired time division multiple access QPSK data timeslot is disclosed. A quadrature separator generates multipath-impaired intermediate signals which, during a predetermined synchronizing sequence for the timeslot, are applied to a pair of synchronizing correlators to generate quadrature multipath profiles. These profiles then are used to modify subsequently received QPSK timeslot signals at the separator outputs to coherently construct multipath compensated I and Q channel data.

14 Claims, 5 Drawing Sheets

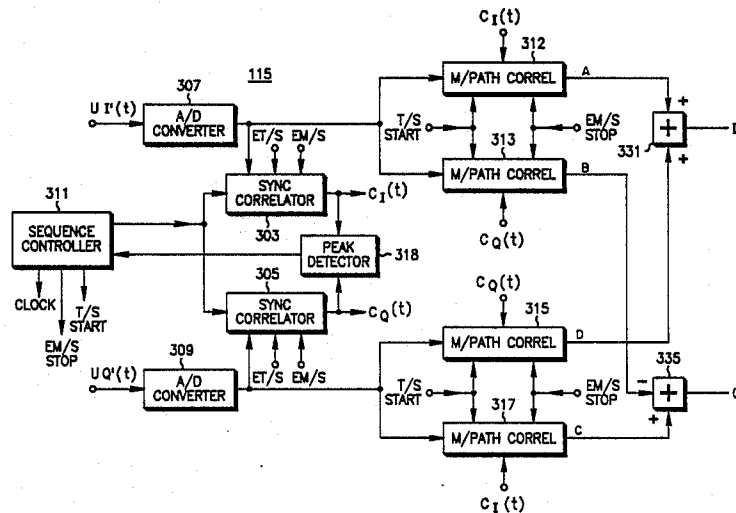
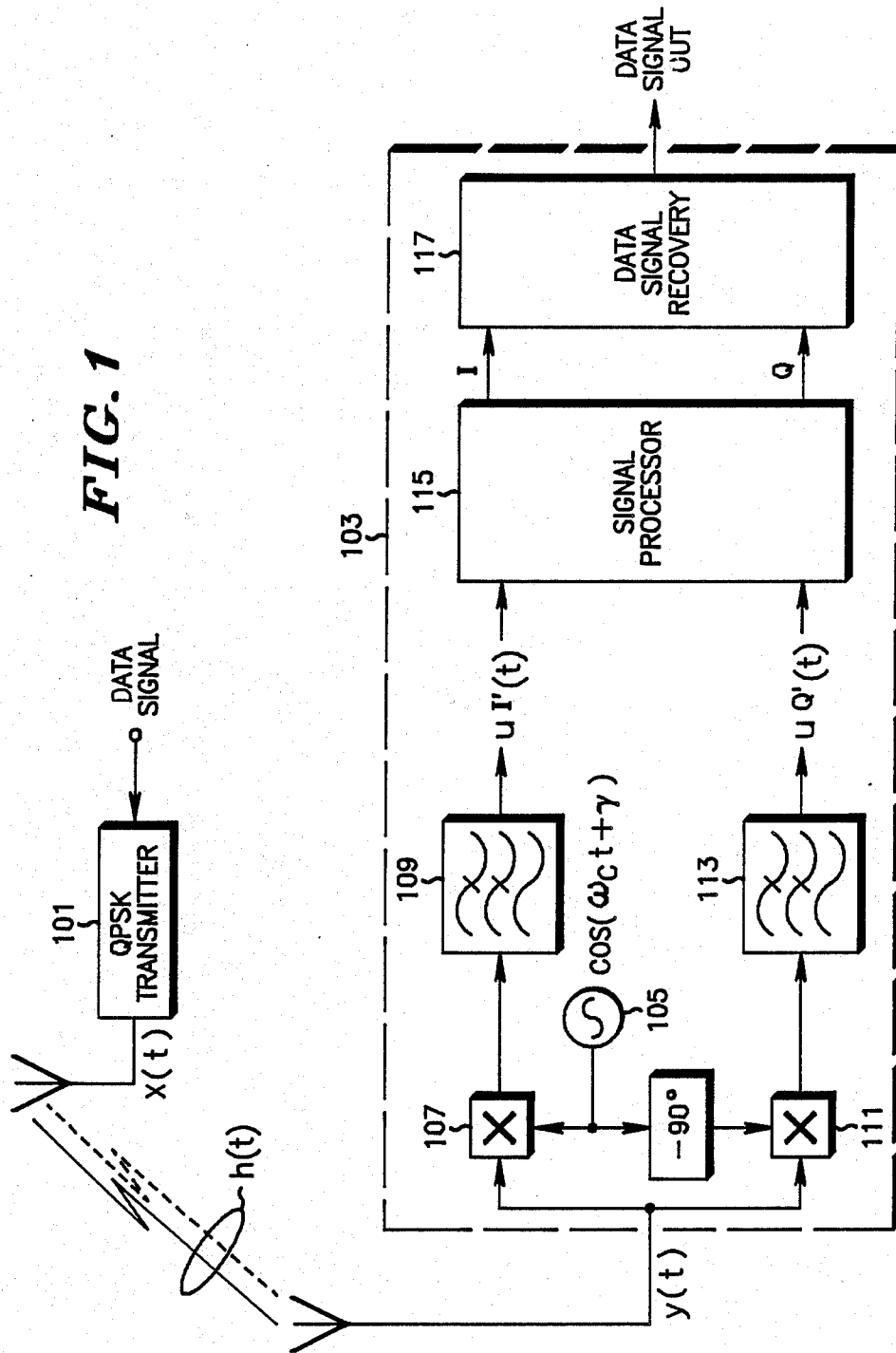


FIG. 1



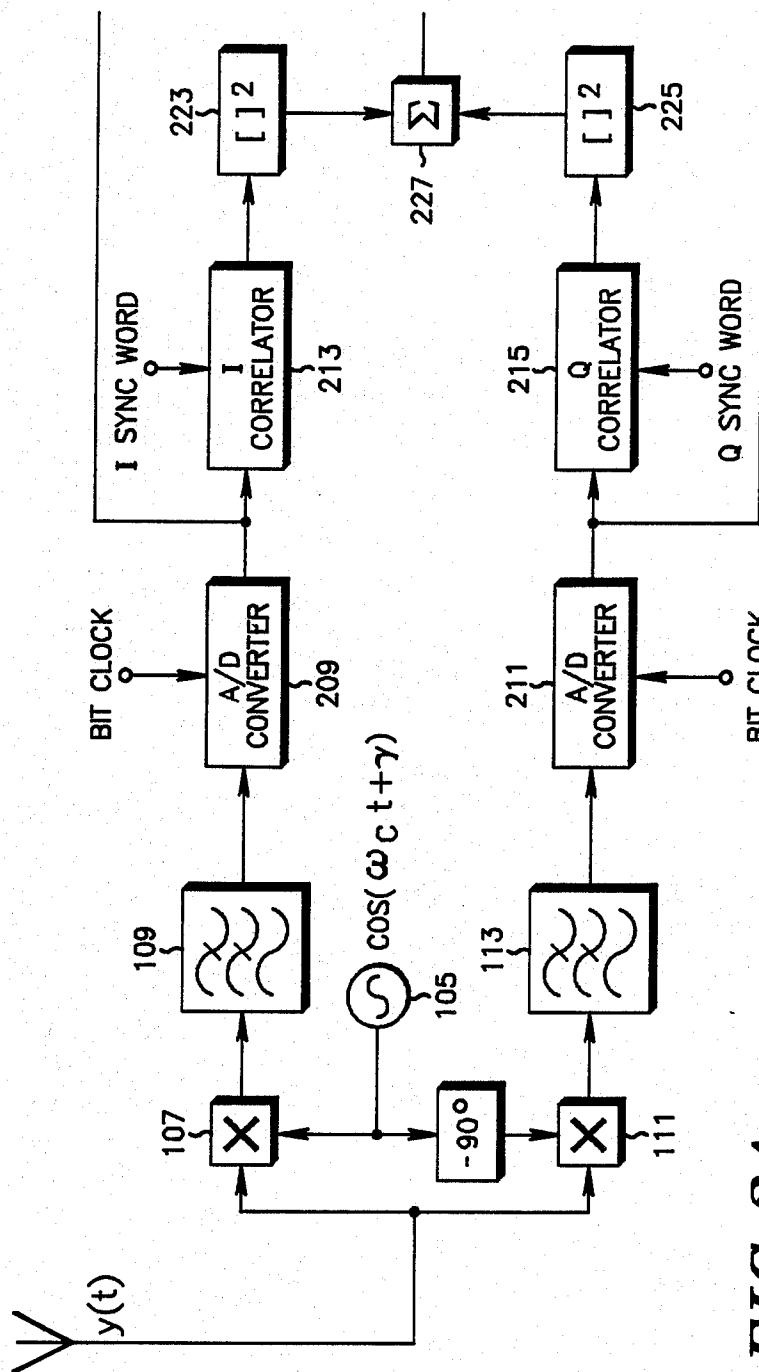
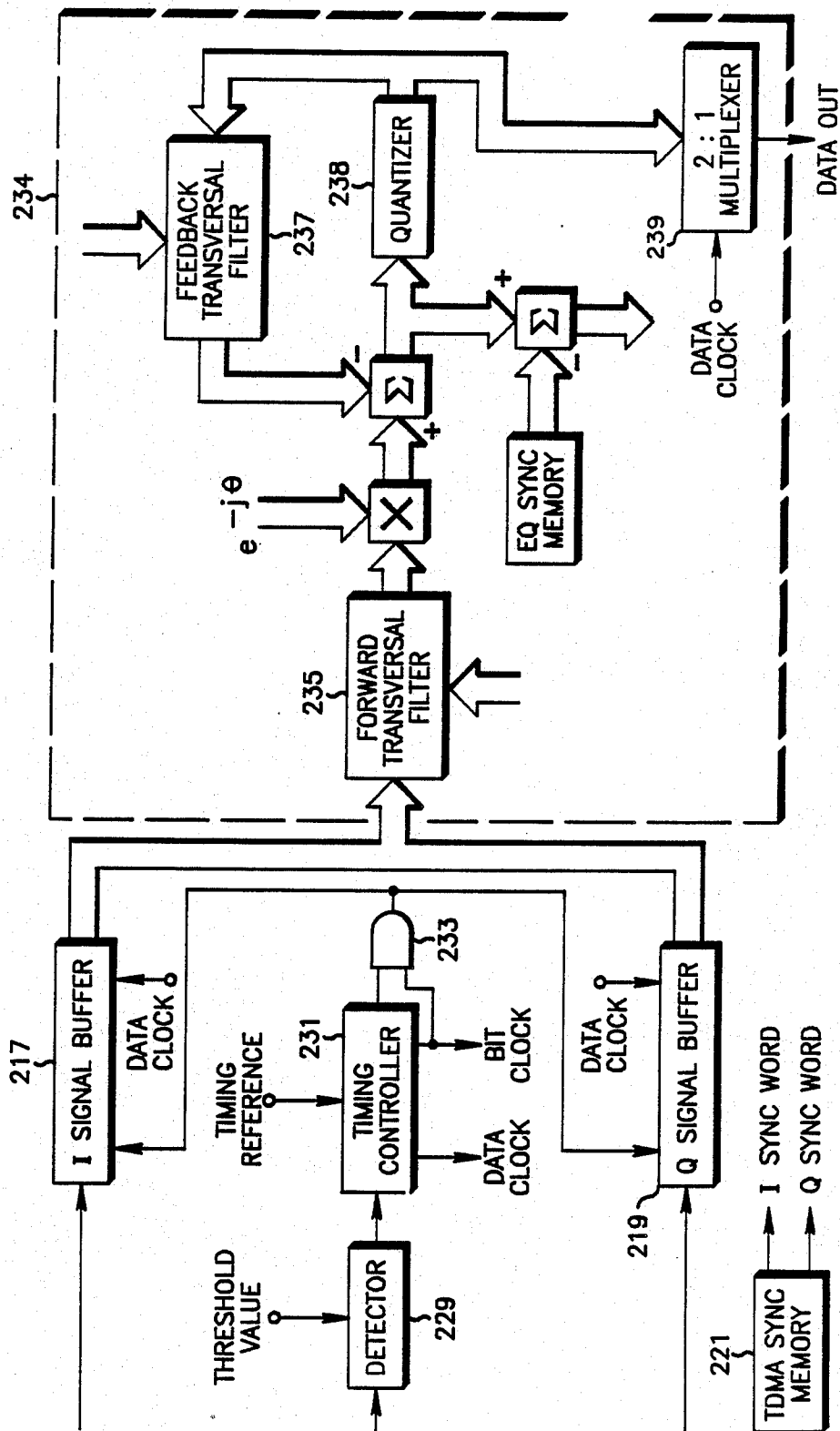


FIG. 2A

FIG. 2B



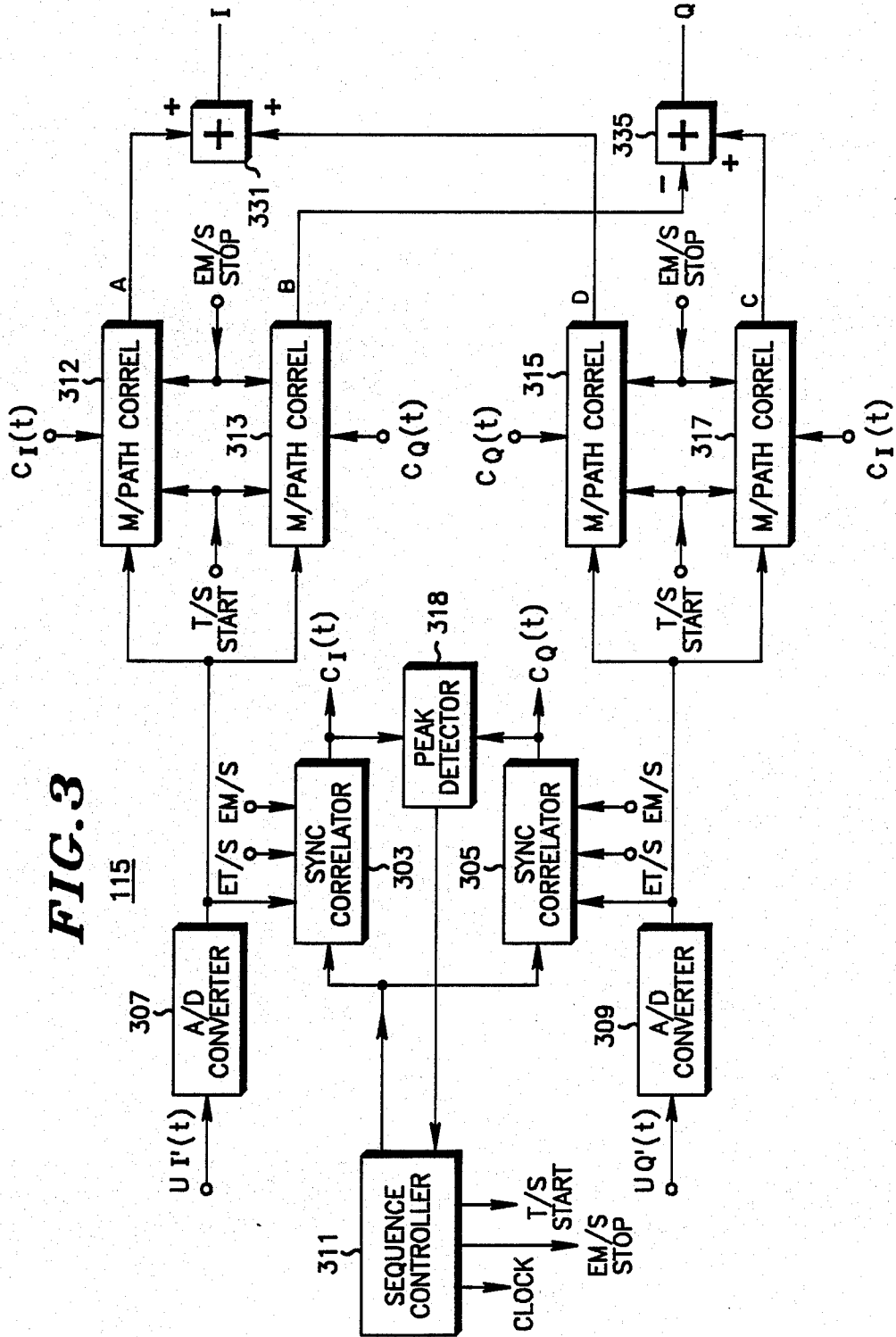


FIG. 3

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