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# United States Patent [19]

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Taylor et al.

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[54] WIRELESS RADIO MODEM WITH MINIMAL INTER-DEVICE RF INTERFERENCE

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0631398 12/1994 European Pat. Off. .

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[73] Assignee: Research In Motion Limited, Waterloo, Canada

[21] Appl. No.: 488,695

[22] Filed: Jun. 8, 1995

### Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 337,841, Nov. 14, 1994, Pat. No. 5,619,531.

[51] Int. Cl.<sup>6</sup> ..... H04L 5/16; H04L 27/10

[52] U.S. Cl. .... 375/222; 375/274; 455/73

[58] Field of Search ..... 375/222, 295, 375/298, 308, 261, 219, 316, 340, 274, 336, 305, 329, 279; 379/93.01; 455/73, 88, 86; 332/103, 100; 329/300, 304

Primary Examiner—Tesfaldet Bocure  
Attorney, Agent, or Firm—Jones, Day, Reavis & Pogue; Charles B. Meyer

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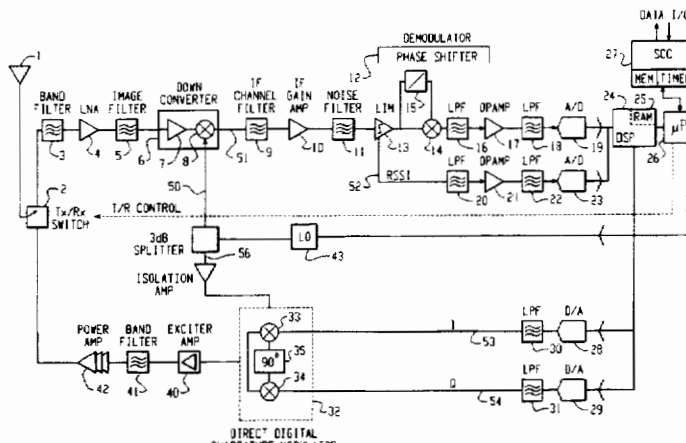
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### [57] ABSTRACT

A wireless radio modem that may be incorporated into a host system or connected through a PCMCIA or similar port to a host system includes radio frequency modulation/demodulation circuitry employing electronic device elements that operate in a frequency range that minimizes the RF interference between the radio modem and the host system. Radio modem power conservation is maximized by 1) simplifying signal modulation processing by use of a two-point waveform transition table, thereby reducing processing requirements; and 2) incorporating a "sleep mode" feature in which all non-timer circuitry is powered-down when not in use.

12 Claims, 8 Drawing Sheets



LC Ex 1014

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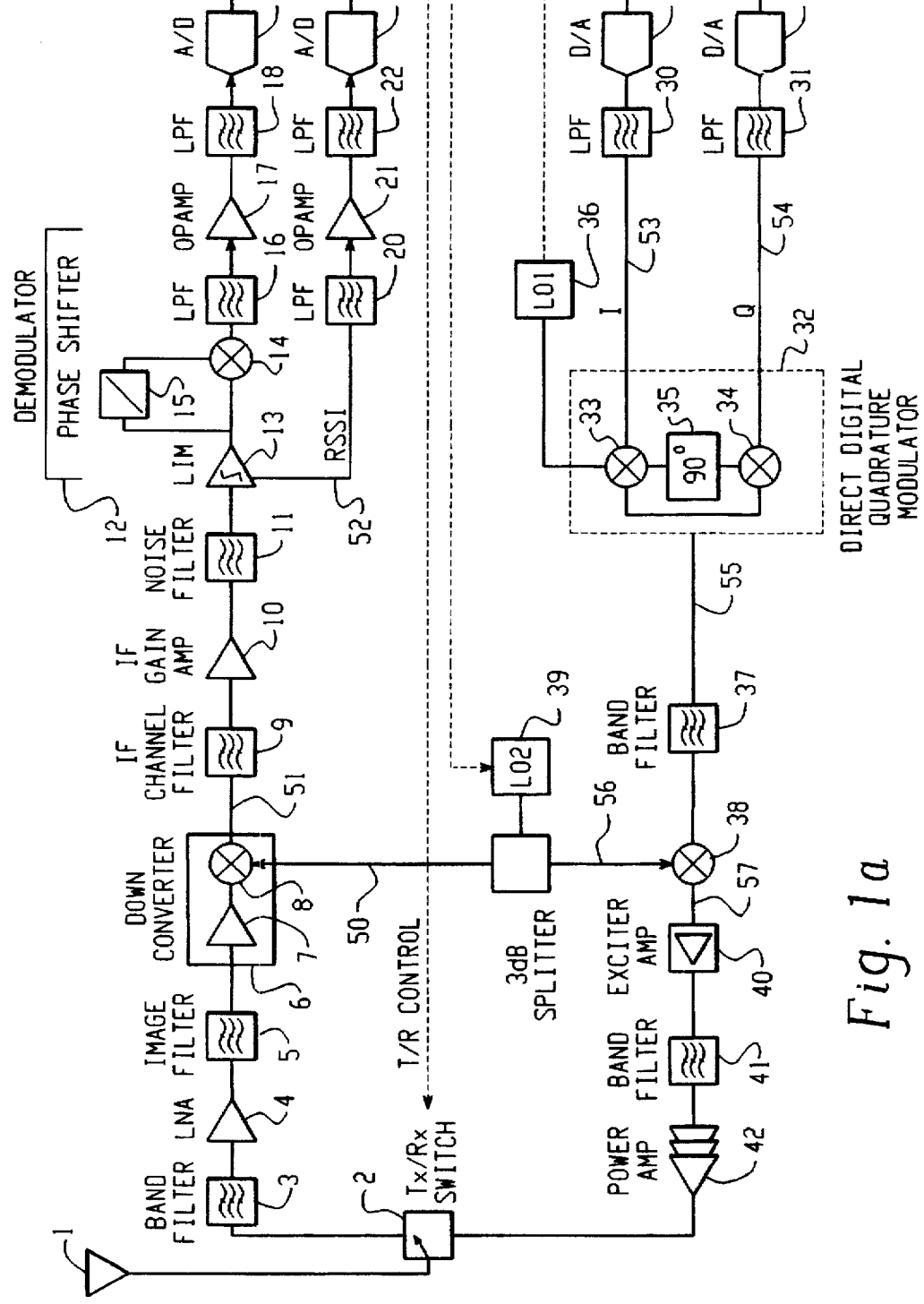


Fig. 1a

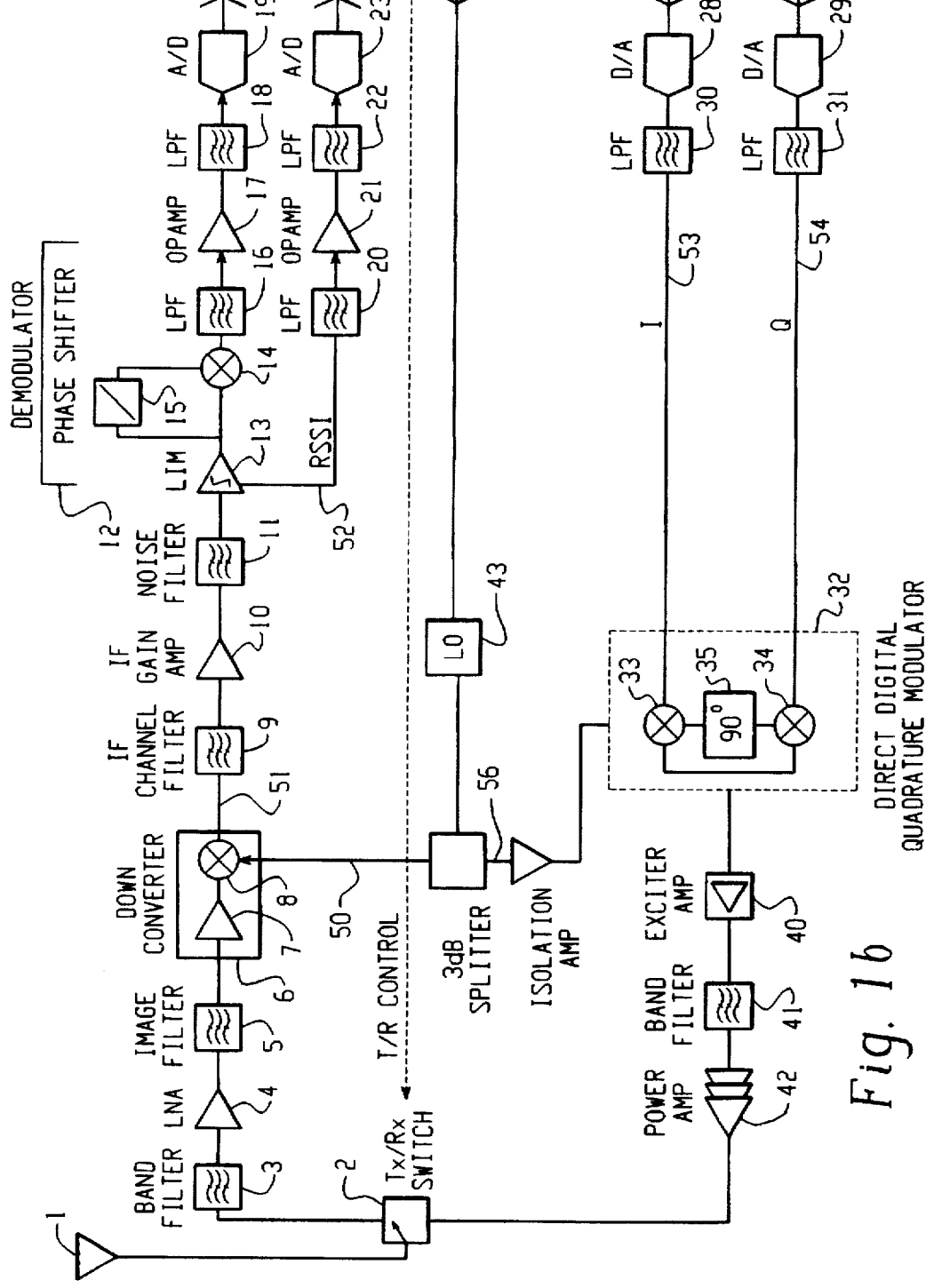


Fig. 1b

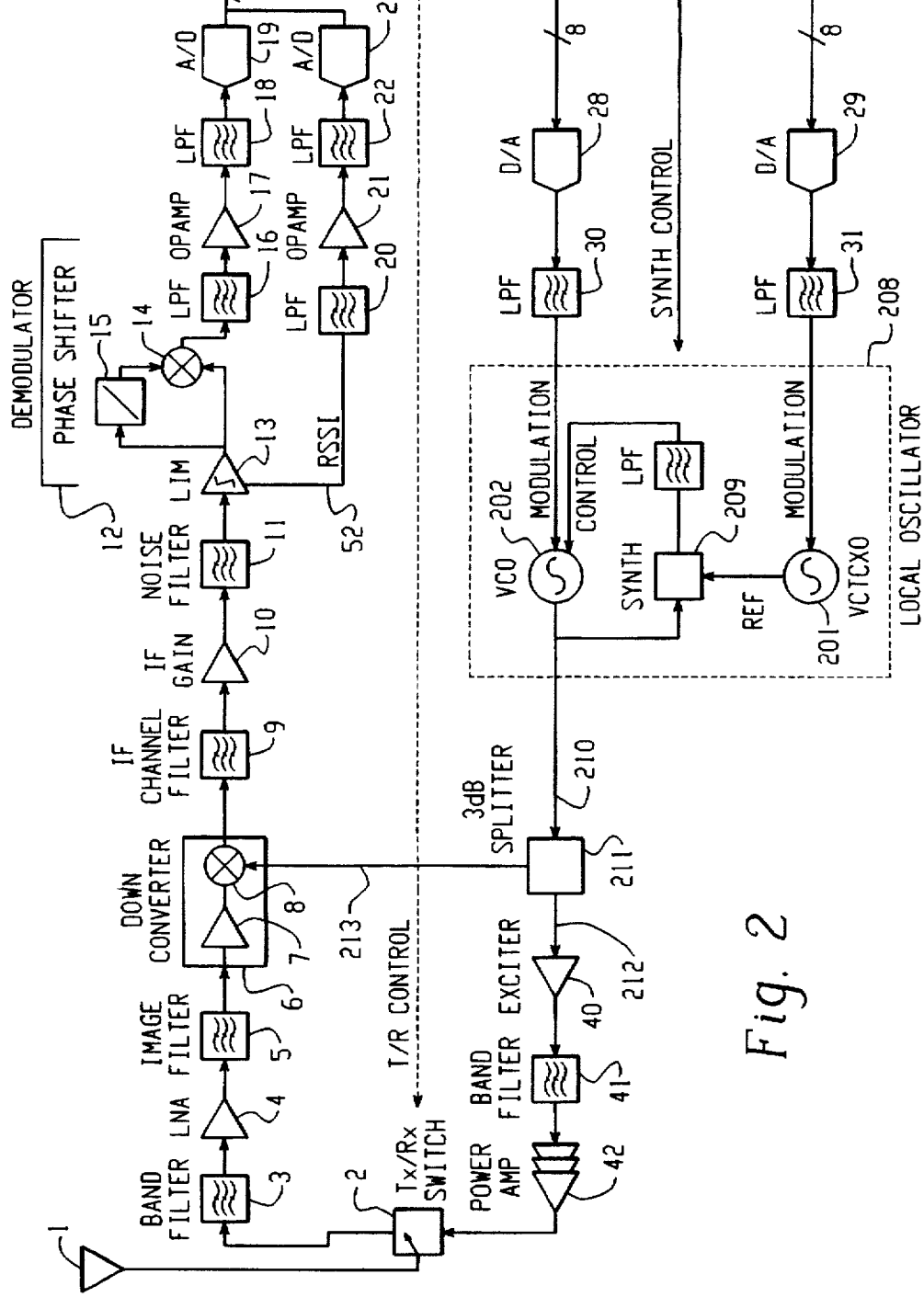


Fig. 2

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