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# United States Patent [19]

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**Dingsor**

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[54] **APPARATUS, METHOD AND ARTICLE OF MANUFACTURE FOR THE DYNAMIC COMPENSATION OF FM DEVIATION IN A FM RADIO RECEIVER**

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[21] Appl. No.: **683,478**

### [57] ABSTRACT

[22] Filed: **Jul. 18, 1996**

Described is a method, apparatus, and article of manufacture to minimize radio data modem receive errors when a base station keys up. It applies to an intermittently keyed, multiple base station, single frequency reuse, FM modulated, radio data network such as the ARDIS network. Compensation is provided for the fact that each base station in the network may have a different transmit FM deviation level. Since these networks typically use the same base station to transmit to any one radio data modem over periods of time, and since the modem receiver can measure and remember the FM deviation level of each base station, a modem can compensate by using the FM deviation value of its "present" base station as the starting value for its automatic deviation control algorithm. By seeding the algorithm with the actual value for the "present" base station, receive data errors are reduced during the critical time when the base station is keying up. As the geographical position of the modem changes, or as radio conditions vary, the network may select a different base station to transmit to a modem. The modem will detect this change, and dynamically change its compensation to match the new "present" base station.

[51] Int. Cl.<sup>6</sup> ..... **H04B 1/38; H04L 5/16**

[52] U.S. Cl. .... **375/222; 455/557; 455/75**

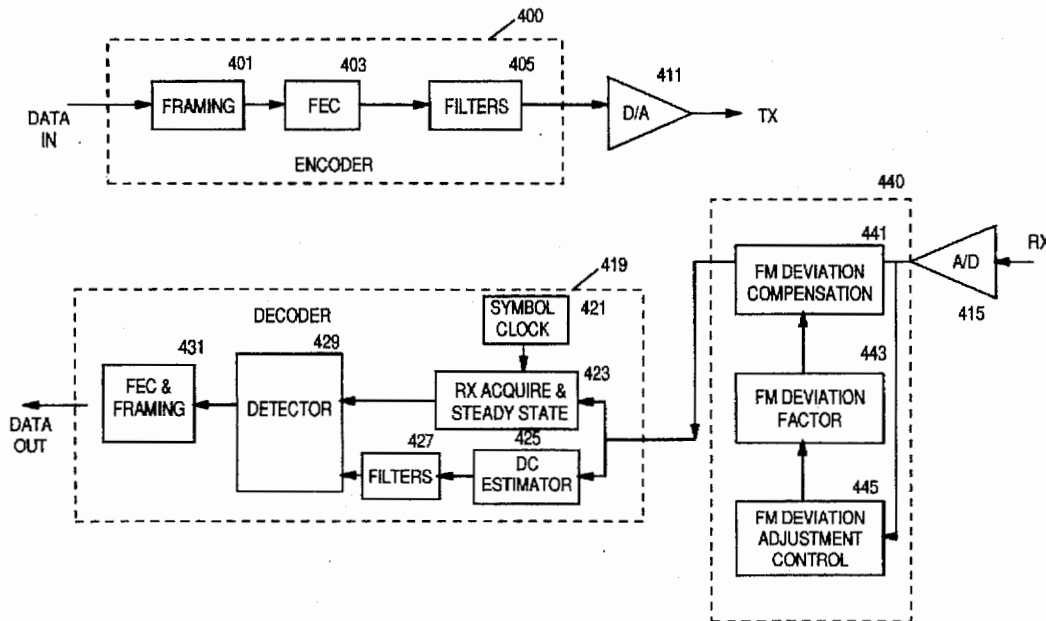
[58] Field of Search ..... **375/222; 329/315, 329/123; 455/557, 558, 75**

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**19 Claims, 10 Drawing Sheets**



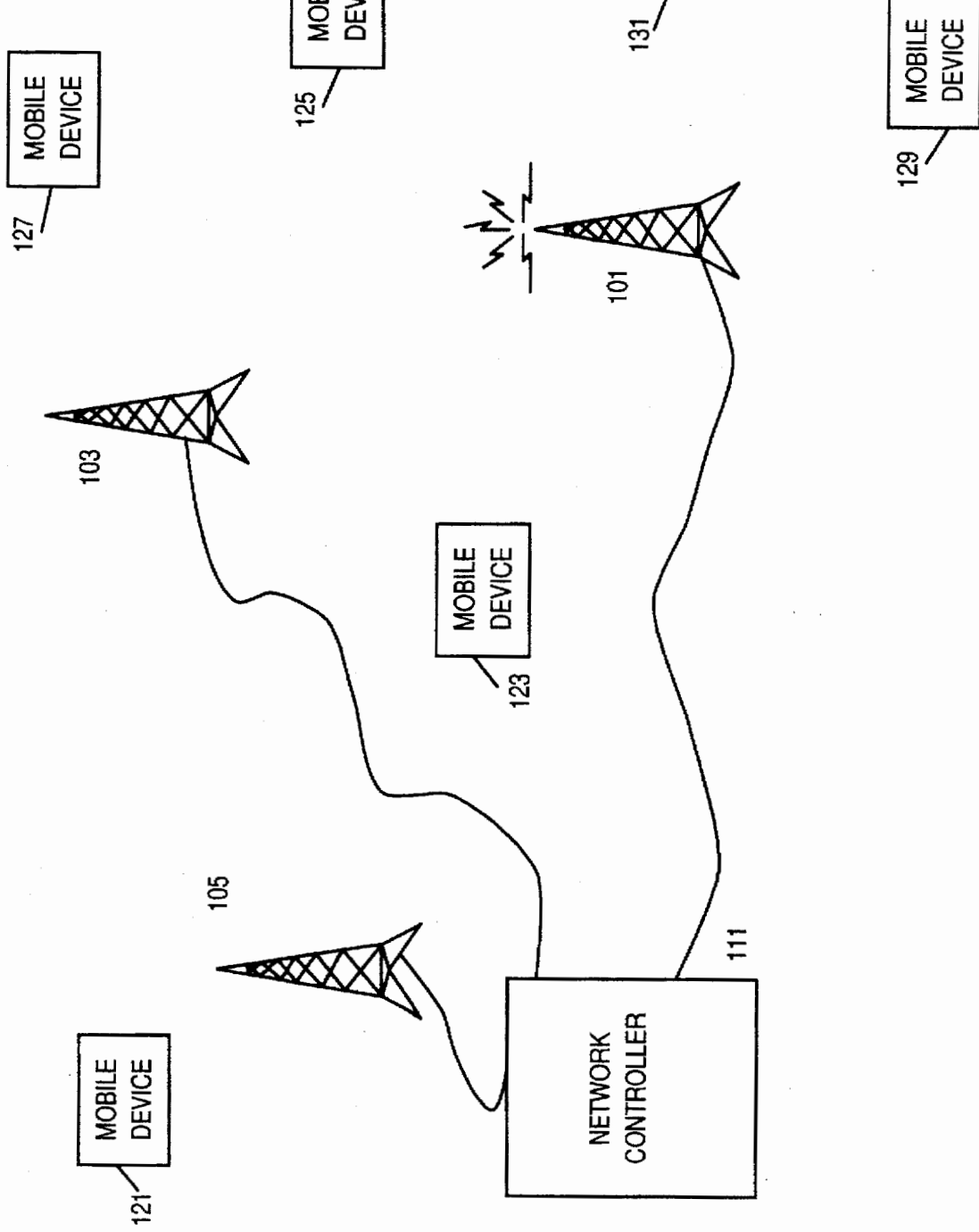


FIG. 1

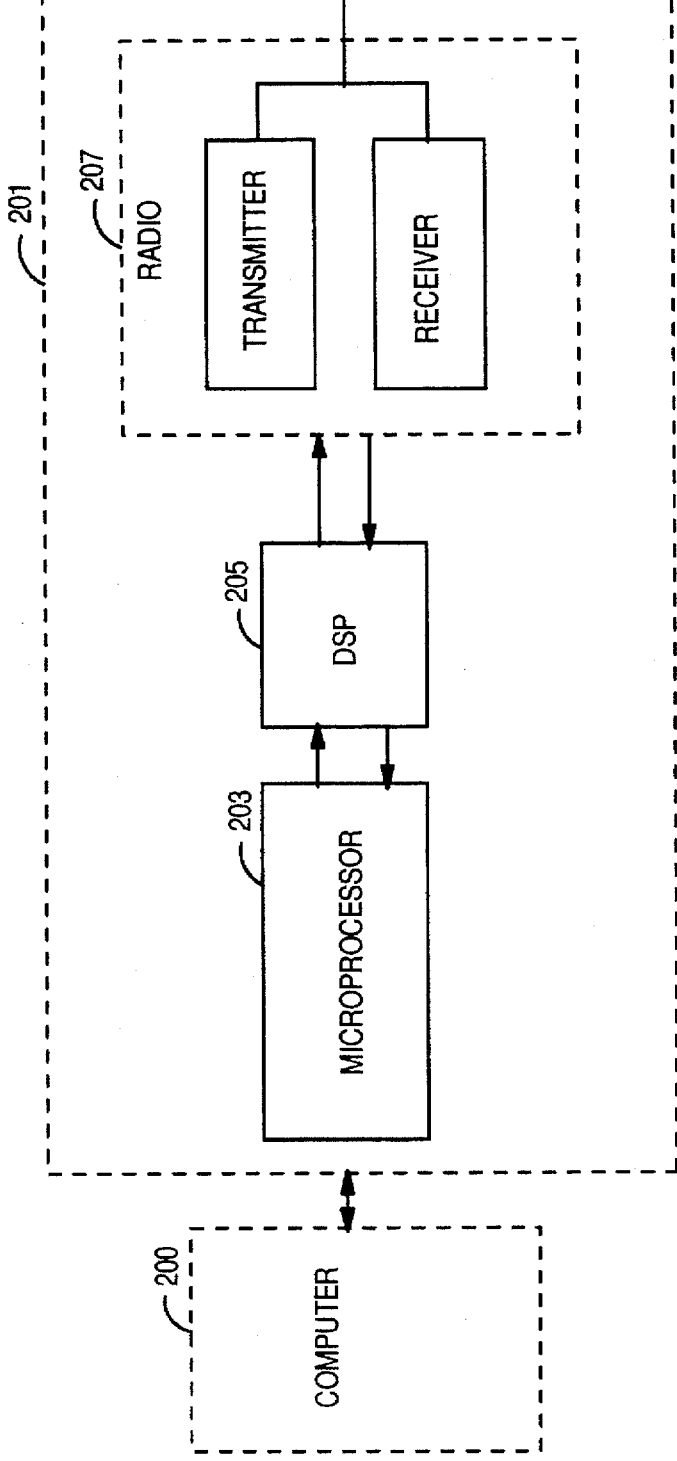


FIG. 2

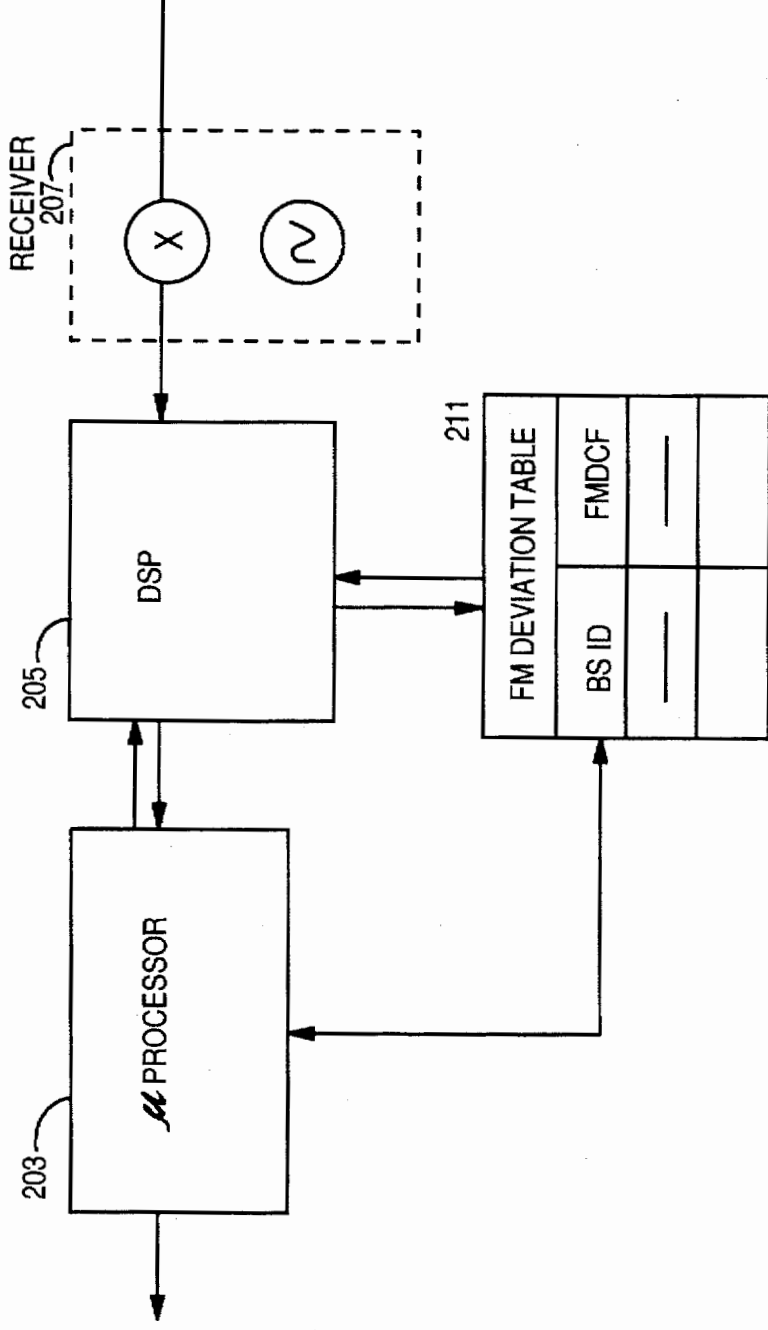


FIG. 3

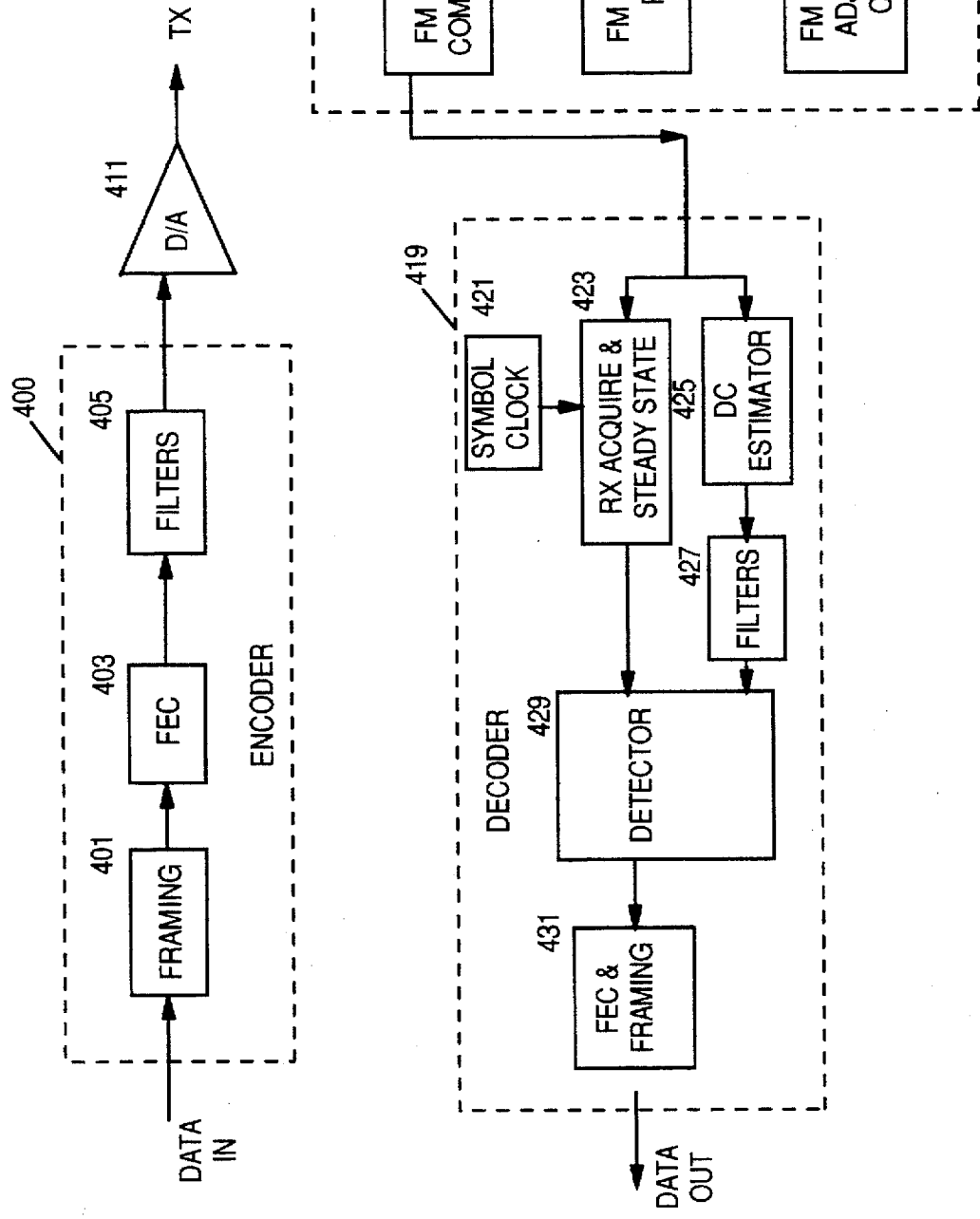


FIG. 4

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