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United States Patent [19]

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Suzuki et al.

[45] Date of Patent: **May 11, 1999**

[54] **COMMUNICATION METHOD AND RECEIVING APPARATUS**

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[21] Appl. No.: **08/998,386**

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[30] **Foreign Application Priority Data**

Dec. 26, 1996 [JP] Japan 8-384803

[51] **Int. Cl.⁶** **H03D 1/00**

[52] **U.S. Cl.** **375/340; 375/295; 375/308; 370/208; 370/210; 370/335**

[58] **Field of Search** 342/50, 88, 102, 342/357; 370/508, 515, 522; 375/200, 202, 208, 210, 340, 342-343

[56] **References Cited**

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Assistant Examiner—Joseph Roundtree
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[57] ABSTRACT

A reception method of a multicarrier system is one in which a phase-modulated data is transmitted by using each of a plurality of subcarriers, and includes a random data generating step of generating a phase shift data randomly changed, a multiplying step for multiplying each of the received subcarriers with an output obtained in the random data generating step, and a state detection signal generating step for monitoring a state of an output obtained in the multiplying step and for generating a predetermined state detection signal when a predetermined state is detected.

8 Claims, 10 Drawing Sheets

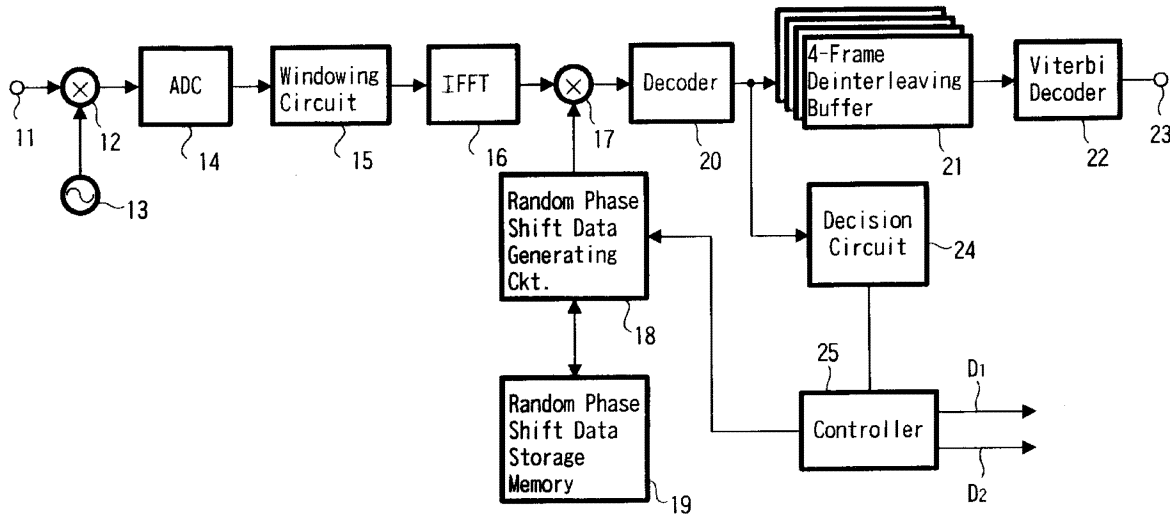
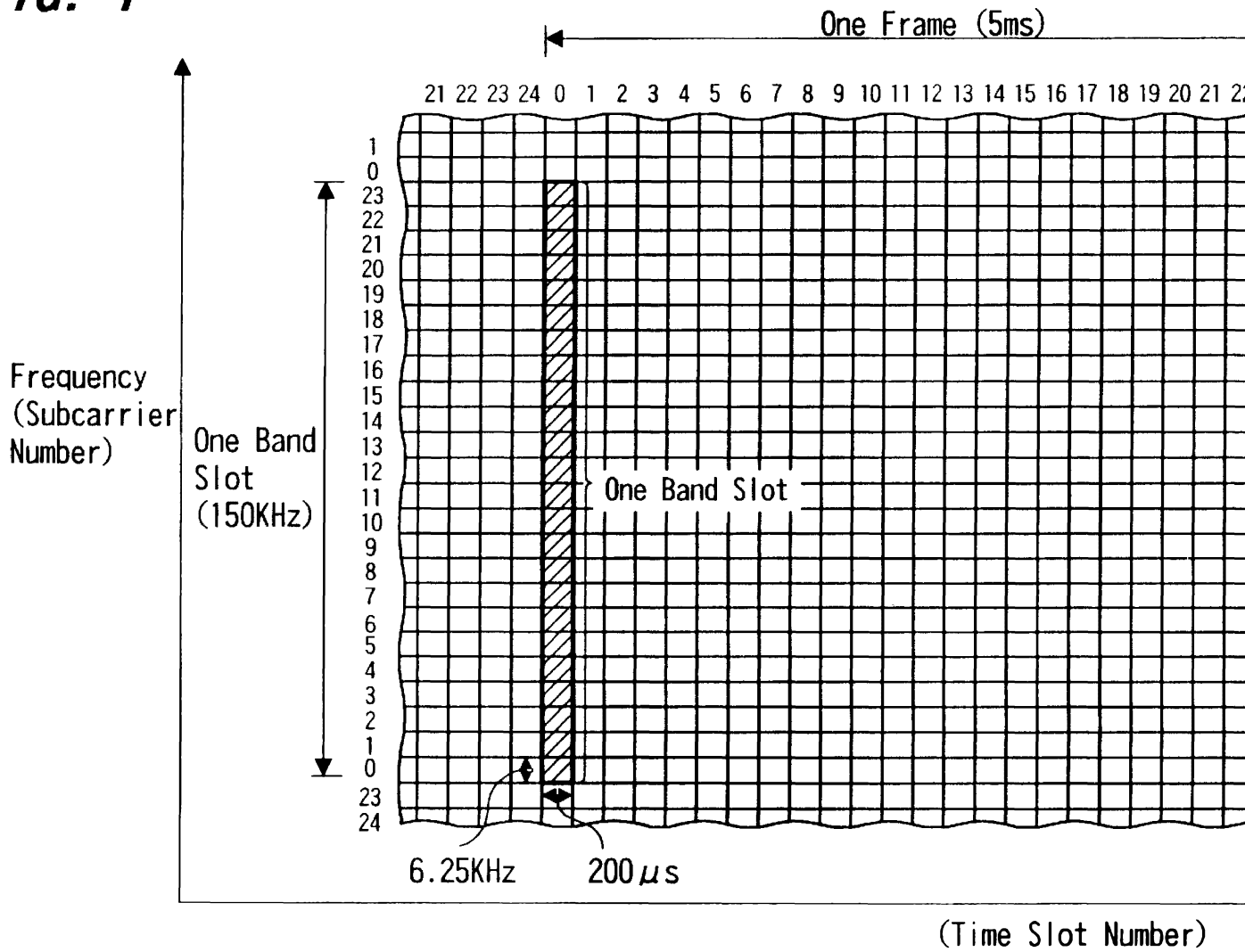


FIG. 1



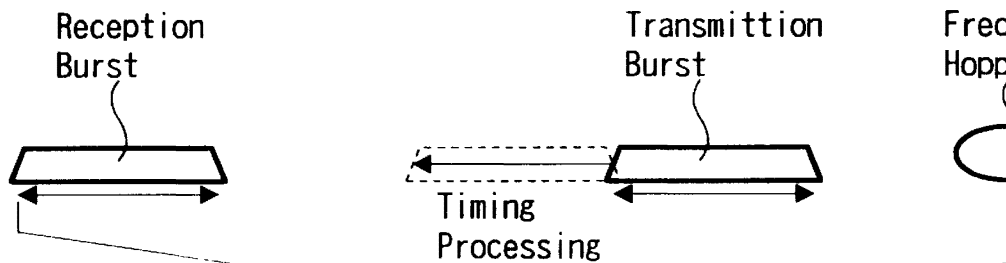


FIG. 2G



FIG. 2F



FIG. 2E



FIG. 2D



FIG. 2C



FIG. 2B



FIG. 2A

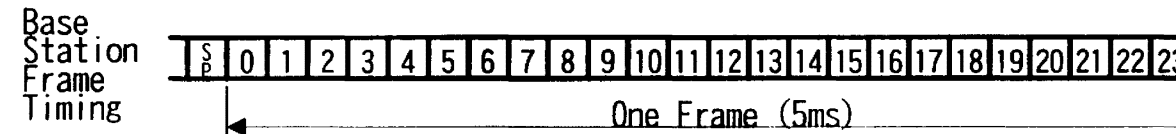


FIG. 3A

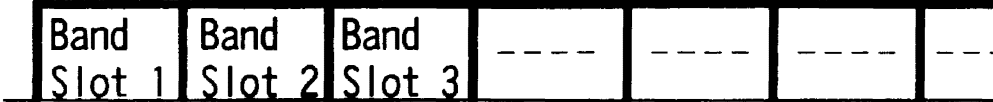
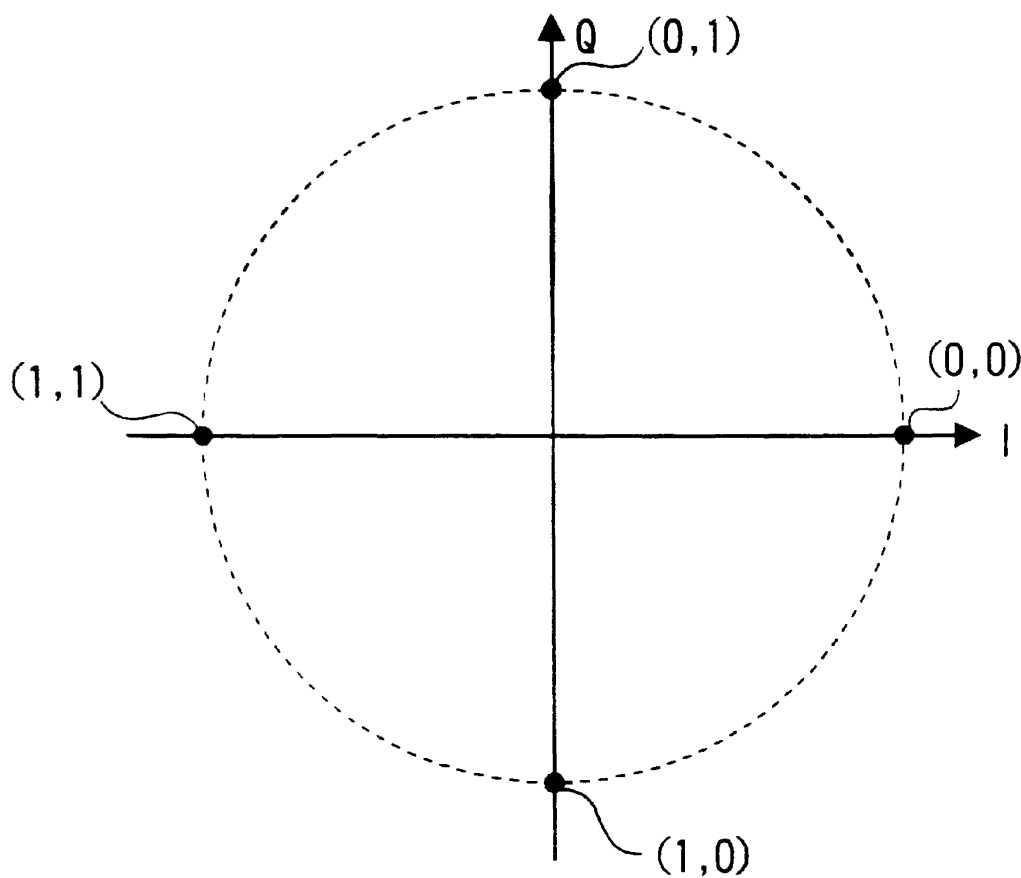


FIG. 3B



FIG. 4
(PRIOR ART)



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