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Ue et al.

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(45) **Date of Patent: Aug. 26, 2003**

(54) **RADIO COMMUNICATION APPARATUS AND TRANSMISSION RATE CONTROL METHOD**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **10/083,553**

(22) Filed: **Feb. 27, 2002**

(65) **Prior Publication Data**

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Related U.S. Application Data

(63) Continuation of application No. 09/424,843, filed as application No. PCT/JP99/02077 on Apr. 19, 1997.

(30) **Foreign Application Priority Data**

Apr. 17, 1998 (JP) 10-107300

(51) **Int. Cl.**[7] **H04B 7/00**
(52) **U.S. Cl.** **455/69**; 455/67.4; 455/63
(58) **Field of Search** 455/522, 69, 63, 455/67.4

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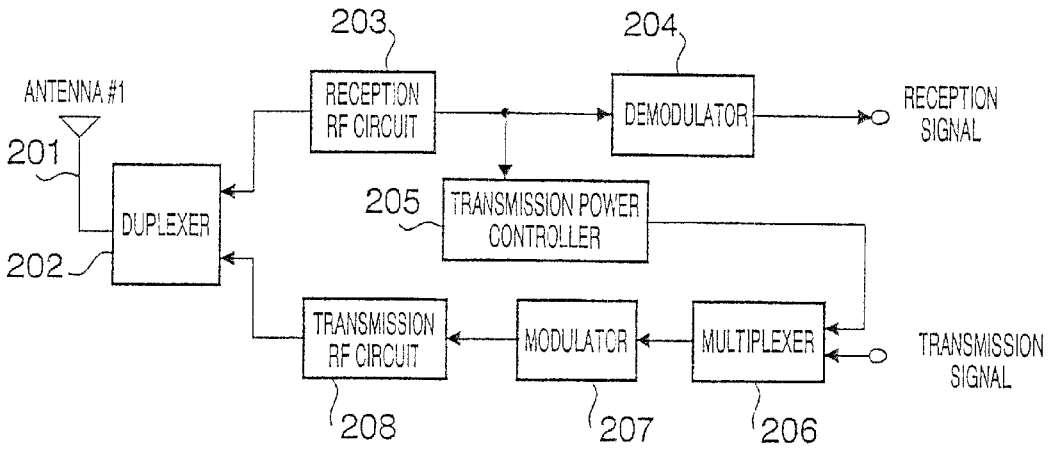
Primary Examiner—Thanh Cong Le
Assistant Examiner—Alan T. Gantt

(57) **ABSTRACT**

The communication terminal apparatus measures reception quality and reports the measurement result to the base station apparatus, and the base station apparatus switches the transmission rate based on the reported result of the reception quality. In this way, the transmission rate is switched starting at the point in time at which the reception quality of the communication terminal apparatus deteriorates. Furthermore, the transmission rate is switched so that the amount of interference with others is within the allowable range according to the channel condition between the communication terminal apparatus and base station apparatus.

11 Claims, 15 Drawing Sheets



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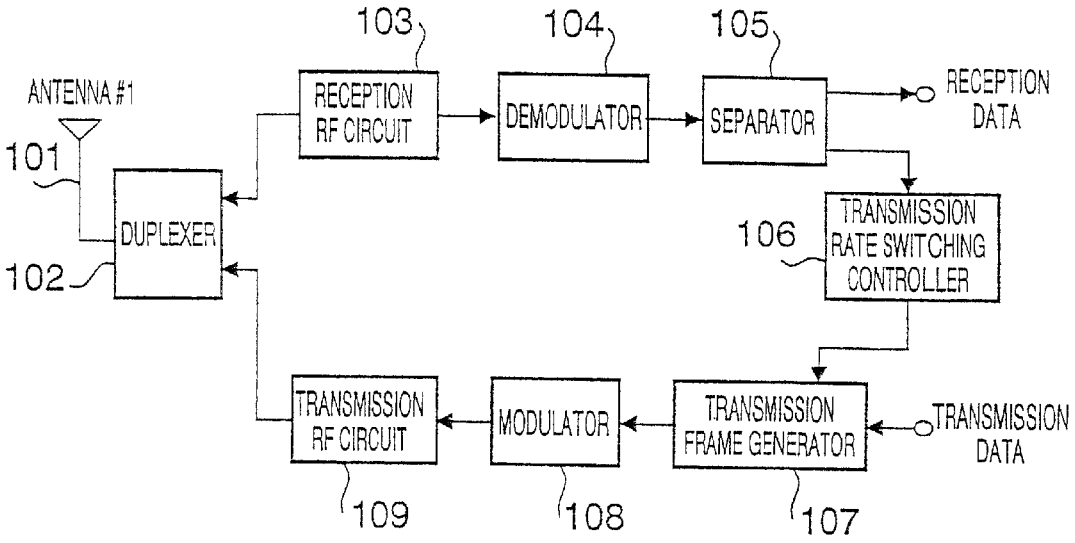

FIG. 1

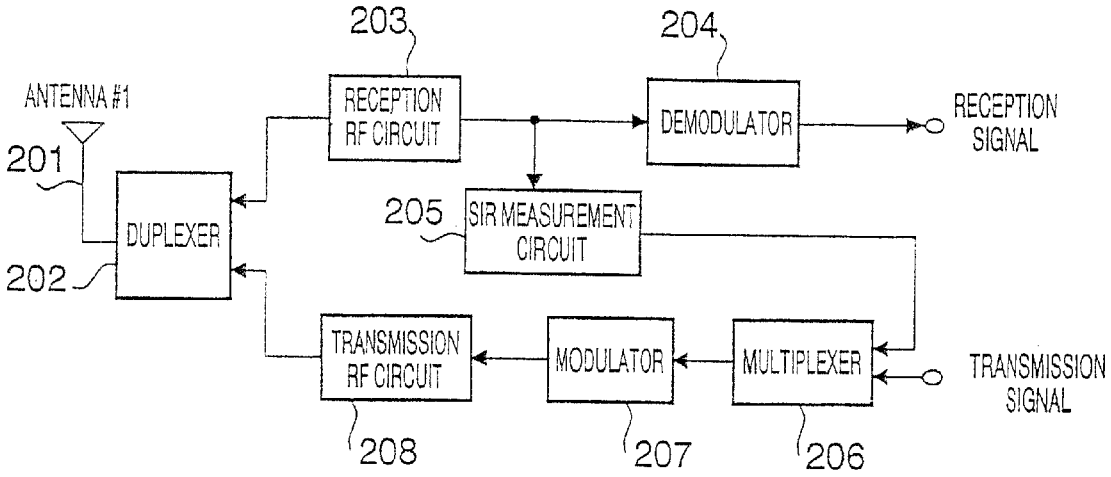

FIG. 2

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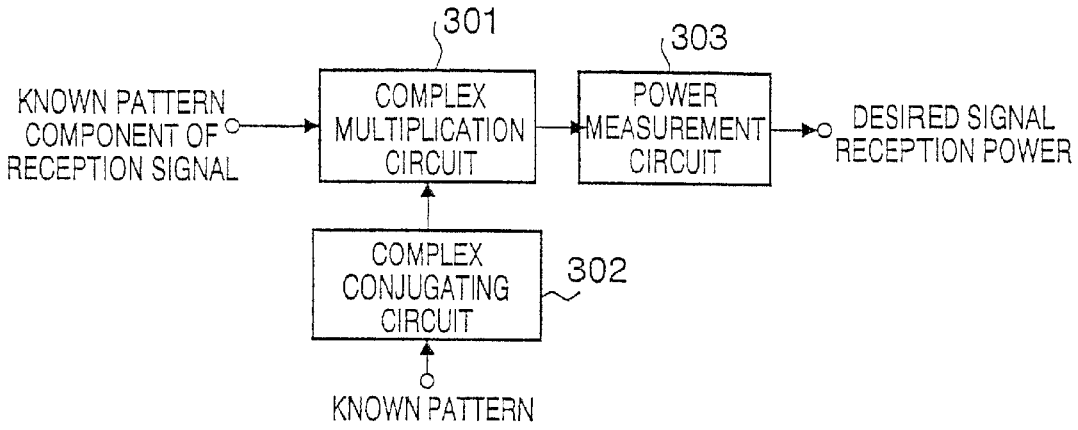

FIG. 3

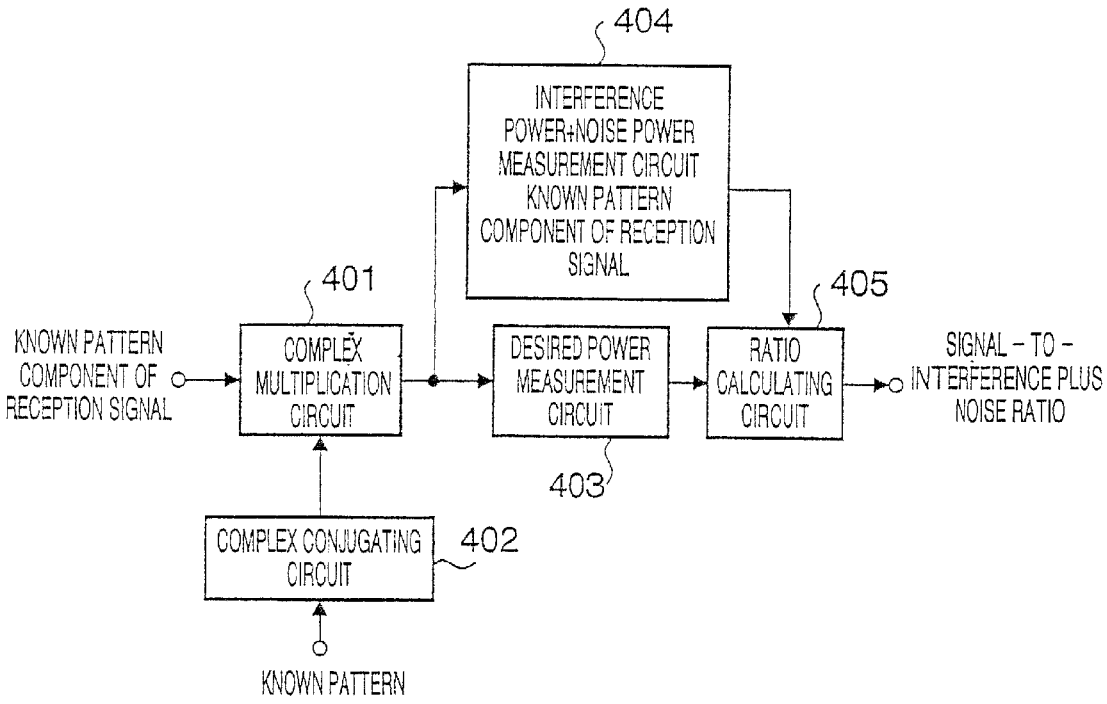

FIG. 4

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FIG. 5

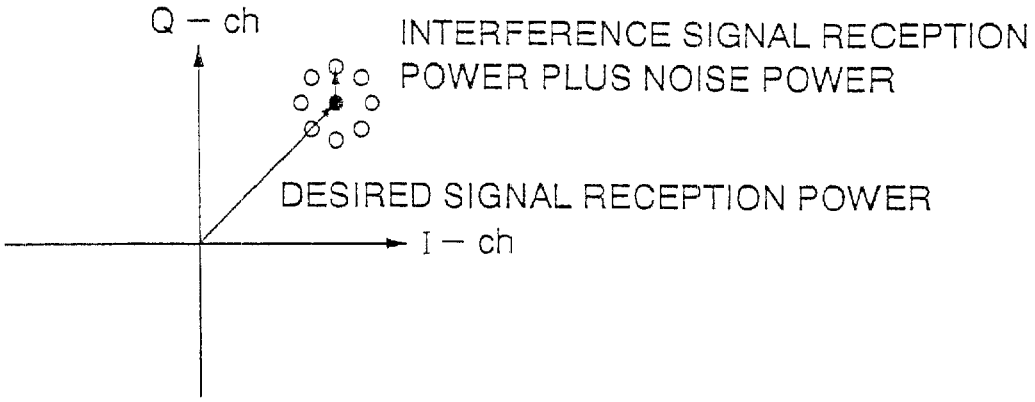
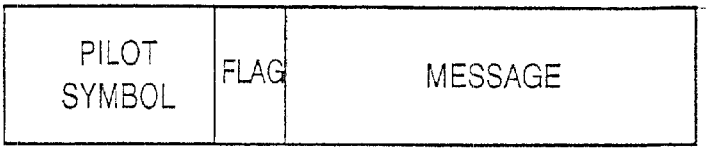
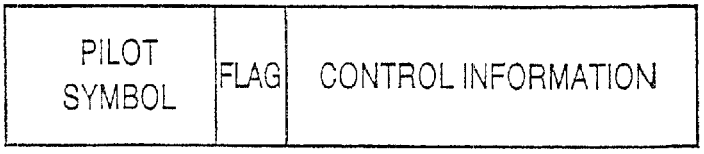


FIG. 6

FIG. 7



(a) WHEN FLAG = MESSAGE



(b) WHEN FLAG = CONTROL INFORMATION

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