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**Kaukovuori et al.**

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(54) **METHODS OF RECEIVING AND RECEIVERS**

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(51) **Int. Cl.**  
**H04B 1/26** (2006.01)

(52) **U.S. Cl.**  
USPC ..... **455/323; 455/334; 455/550.1; 375/324**

(58) **Field of Classification Search** ..... 455/313, 455/323, 324, 334, 339-341, 550.1; 375/324  
See application file for complete search history.

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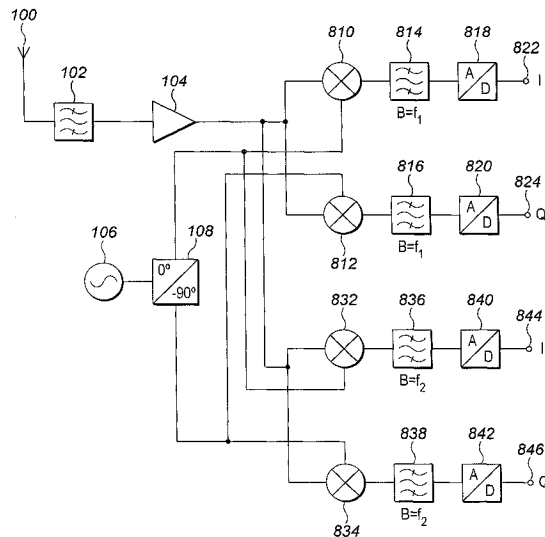
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(57) **ABSTRACT**

Data transmitted via a combination of radio frequency RF signals using carrier aggregation CA is received, each RF signal occupying a respective RF band, the bands being arranged in two groups separated in frequency by a first frequency region, the first of the two groups occupying a wider frequency region than the second group. Inphase and quadrature components of the RF signals are filtered using a first bandpass filter bandwidth to give first bandpass filtered components and filtered using a second bandpass filter bandwidth, different from the first bandpass filter bandwidth, to give second bandpass filtered components. A reconfigurable receiver is configurable to a first mode to receive the combination of RF signals, and is also configurable to at least a second mode. A filter is configured, in different modes, to use a first or a lowpass bandpass filter bandwidth.

**20 Claims, 18 Drawing Sheets**



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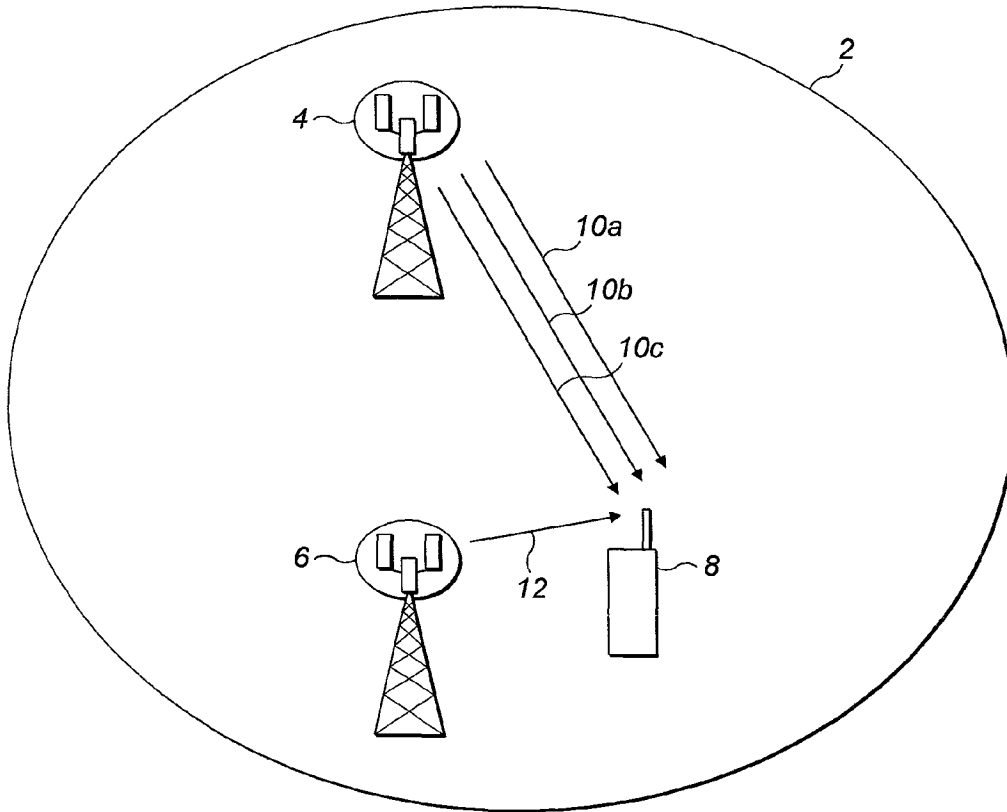


FIG. 1

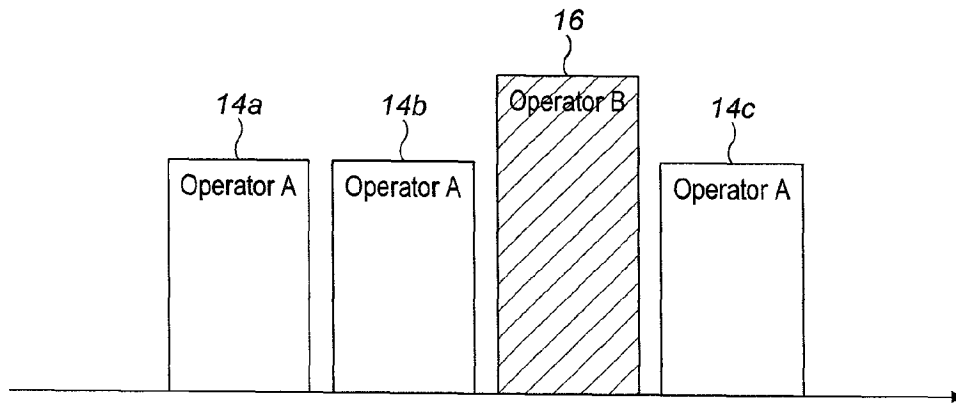


FIG. 2

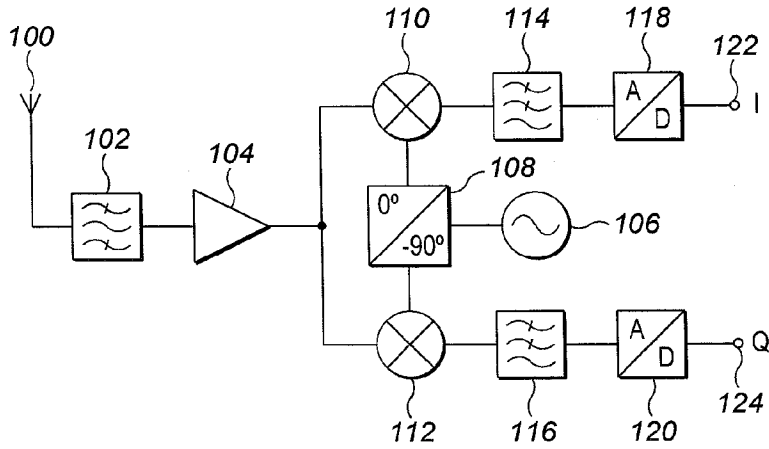


FIG. 3

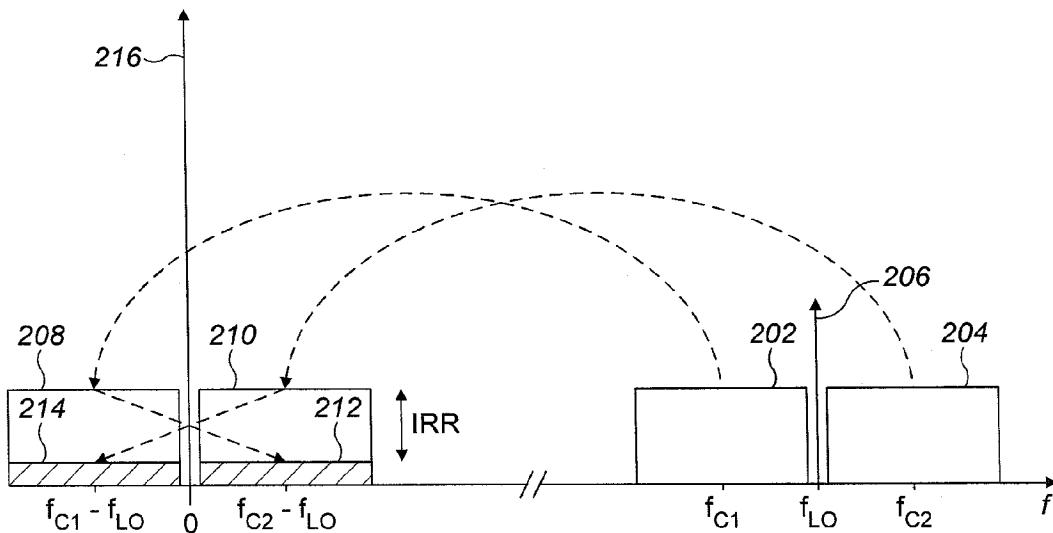


FIG. 4

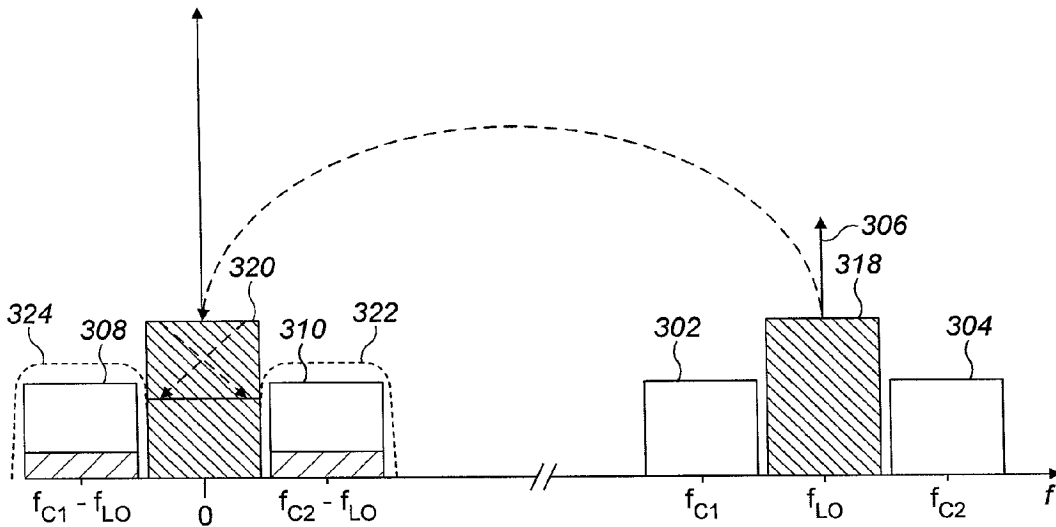


FIG. 5

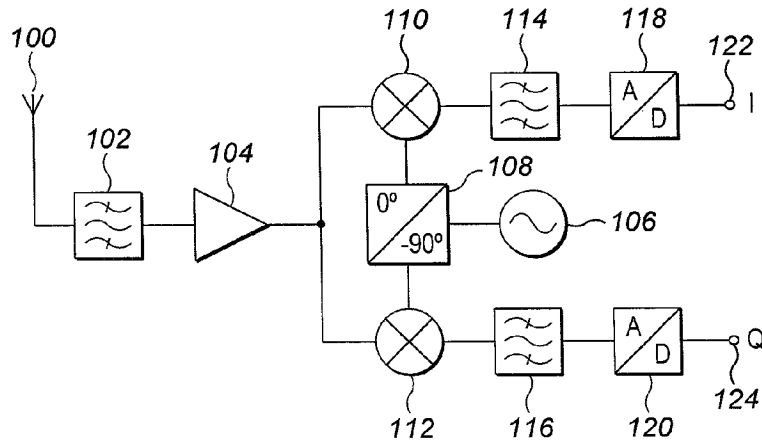


FIG. 6

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