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Sanielevici et al.

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[54] **MULTI-LEVEL MIXER ARCHITECTURE FOR DIRECT CONVERSION OF FSK SIGNALS**

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[73] Assignee: **Wireless Access**, Santa Clara, Calif.

[21] Appl. No.: **08/715,442**

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

[51] Int. Cl.⁷ **H03D 3/00; H04L 27/14**

[52] U.S. Cl. **375/334; 375/335**

[58] Field of Search **375/334, 335; 329/302, 306; 455/302**

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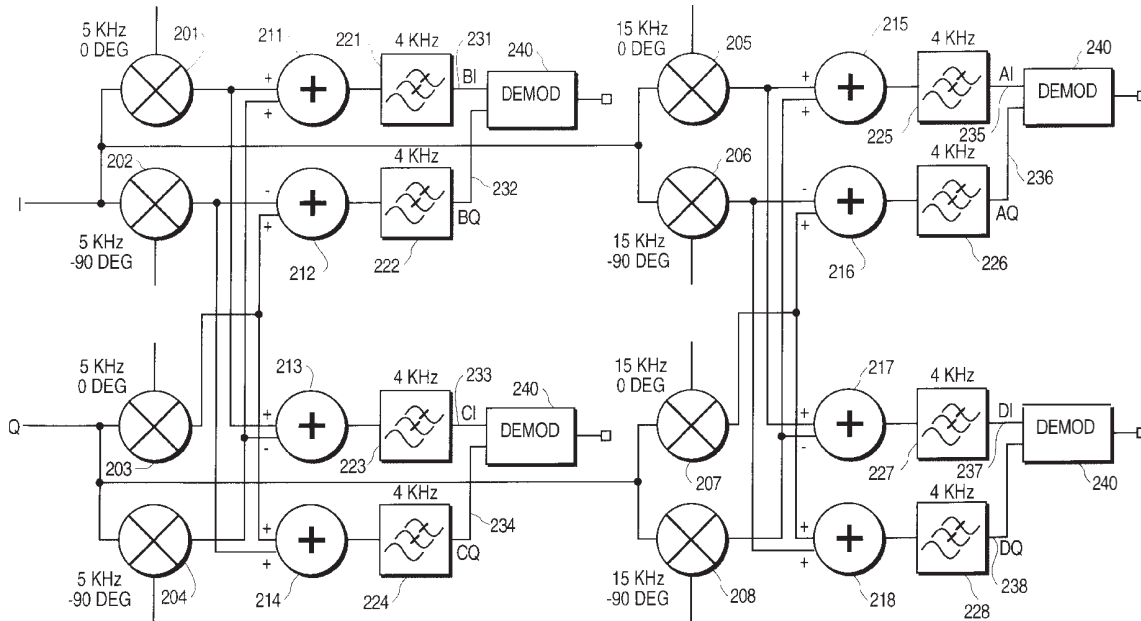
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[57] ABSTRACT

A multi-level quadrature (I/Q) mixer for use in a communication system such as a paging device, where the mixer includes first and second I/Q downconversions followed by demodulation. The first I/Q downconversion converts an I/Q signal pair to a first IF, and the second I/Q downconversion converts an I/Q signal pair to a second IF. The first IF may or may not be the center frequency depending on the number of subchannels in the single channel being downconverted.

20 Claims, 8 Drawing Sheets



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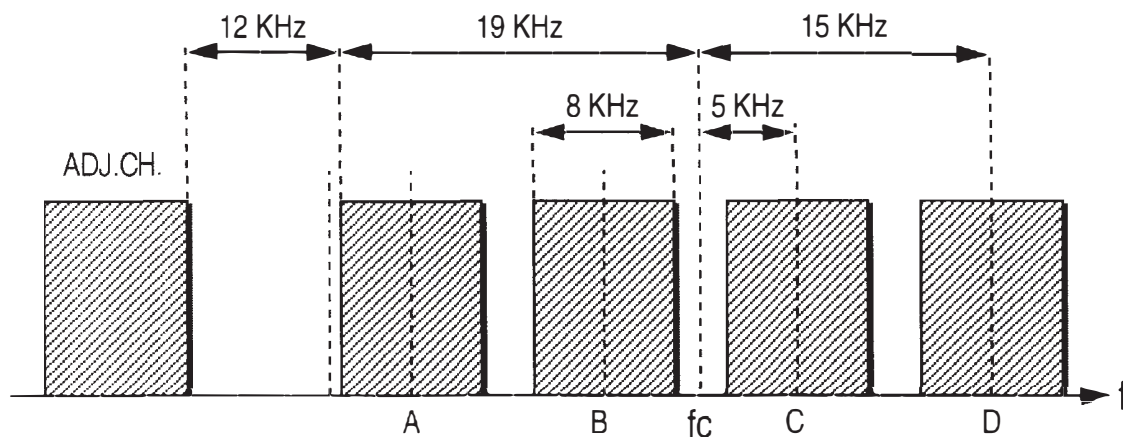


FIG. 1

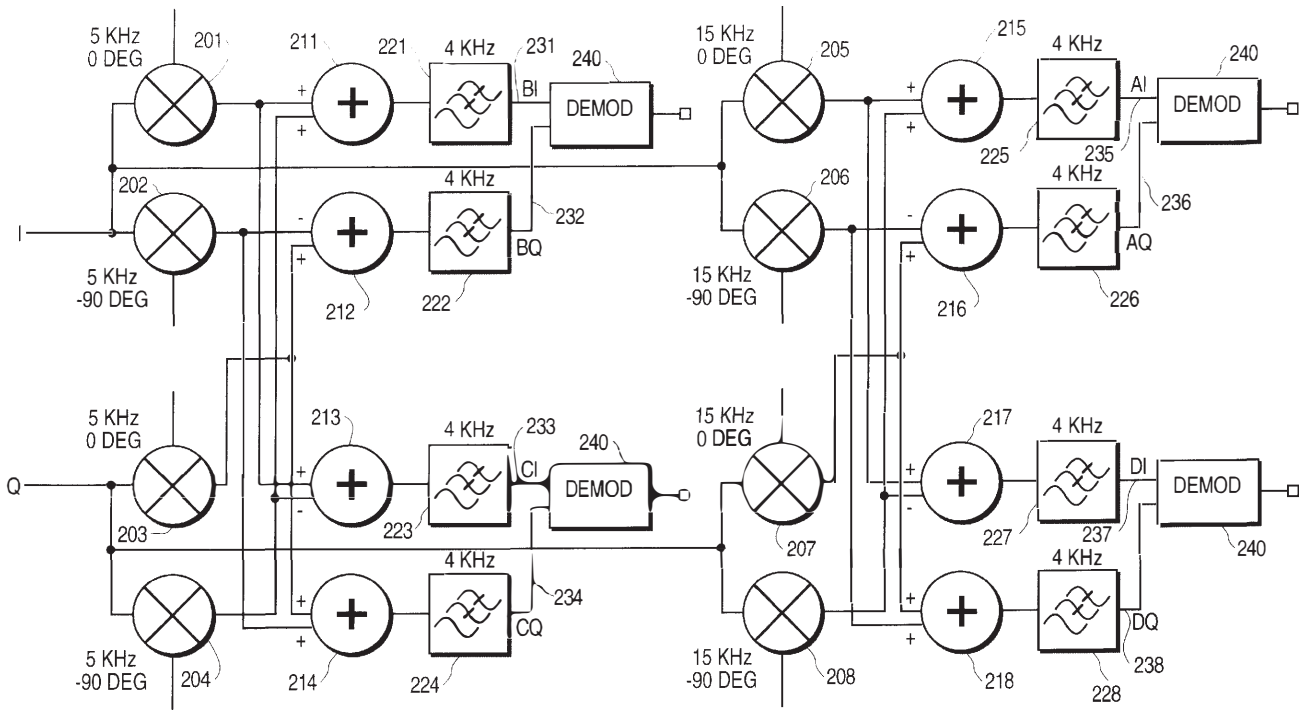


FIG. 2

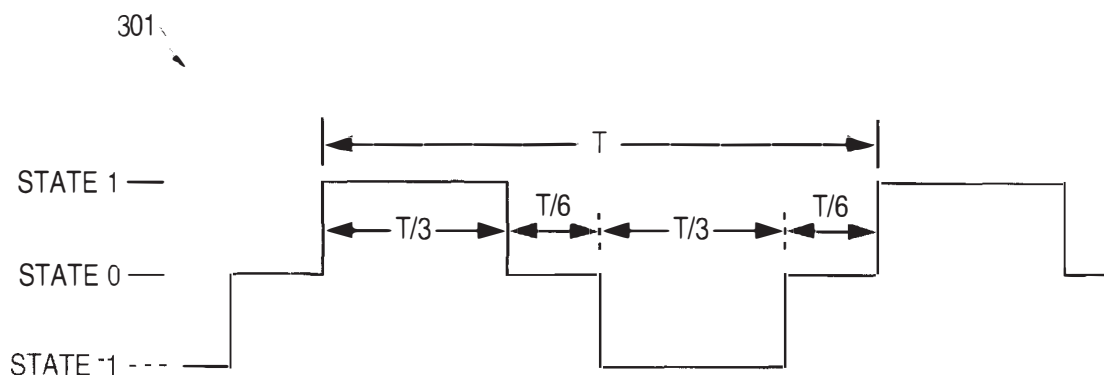


FIG.3

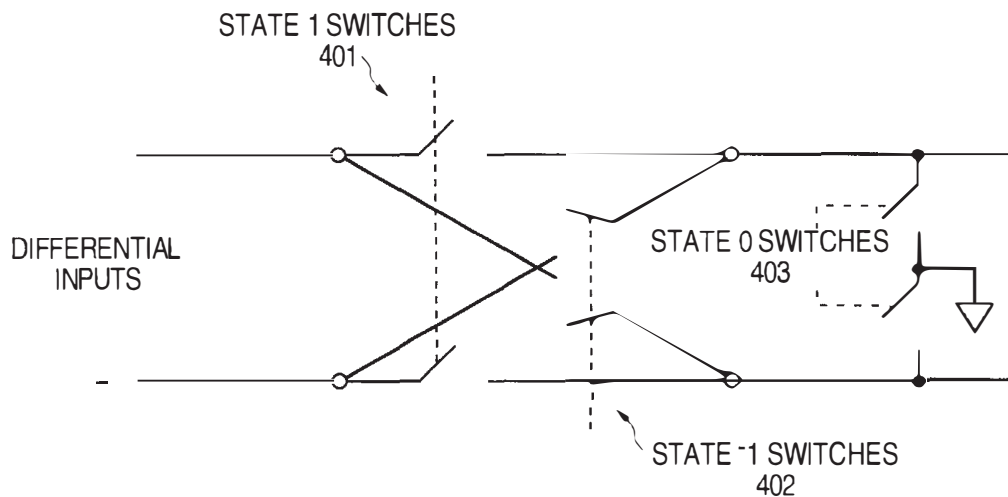


FIG.4

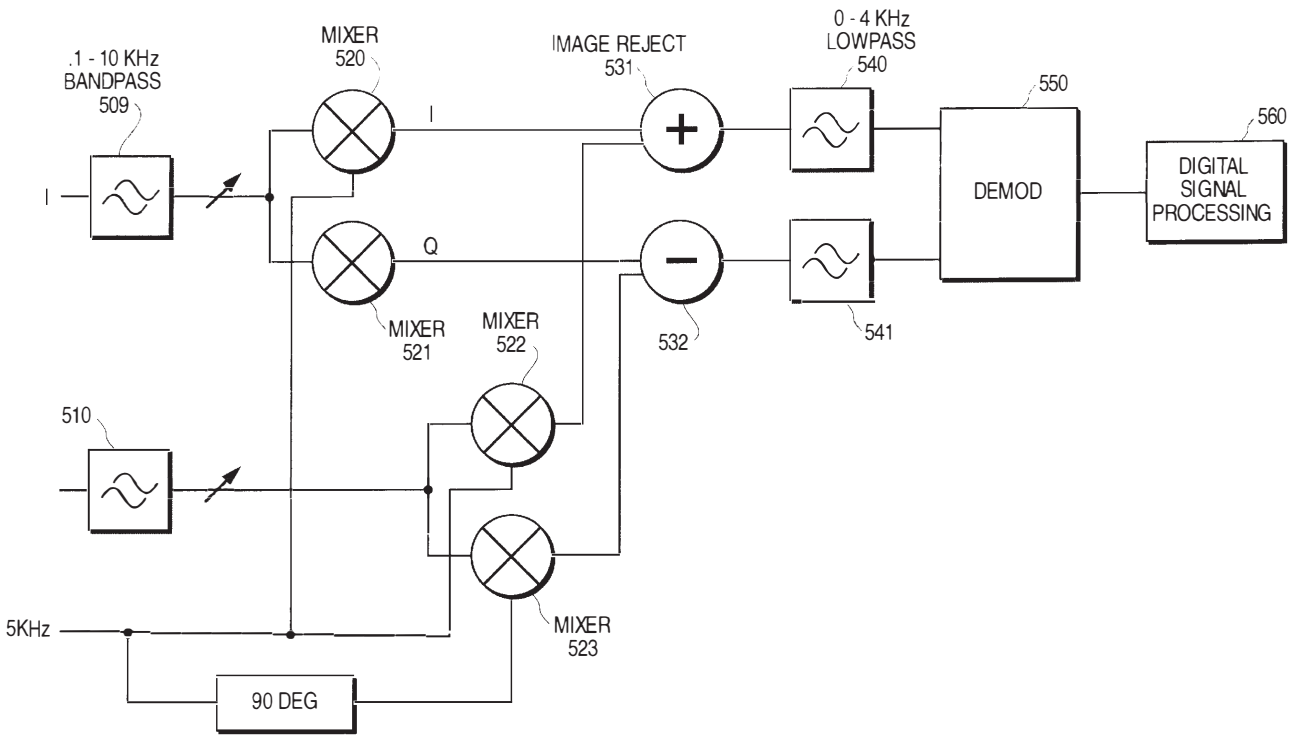


FIG. 5

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