



United States Patent [19] Shull

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[54] RECEIVED SIGNAL STRENGTH DETERMINATION METHODS AND SYSTEMS

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[73] Assignee: **Ericsson Inc.**, Research Triangle Park, N.C.

[21] Appl. No.: **08/942,645**

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[51] Int. Cl.⁶ **H04B 17/00**

[52] U.S. Cl. **455/226.2; 455/226.4**

[58] Field of Search **455/226.2, 226.4; 375/227, 317**

FOREIGN PATENT DOCUMENTS

| | | | |
|-----------|--------|-------------------------|-----------|
| 505072-A2 | 9/1992 | European Pat. Off. | 455/226.2 |
| 0 601 987 | 6/1994 | European Pat. Off. . | |
| 639901-A2 | 2/1995 | European Pat. Off. | 455/226.2 |
| 0 755 133 | 1/1997 | European Pat. Off. . | |
| 0785 640 | 7/1997 | European Pat. Off. . | |
| 405063663 | 3/1993 | Japan | 455/226.2 |

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Attorney, Agent, or Firm—Myers Bigel Sibley & Sajovec

[57] ABSTRACT

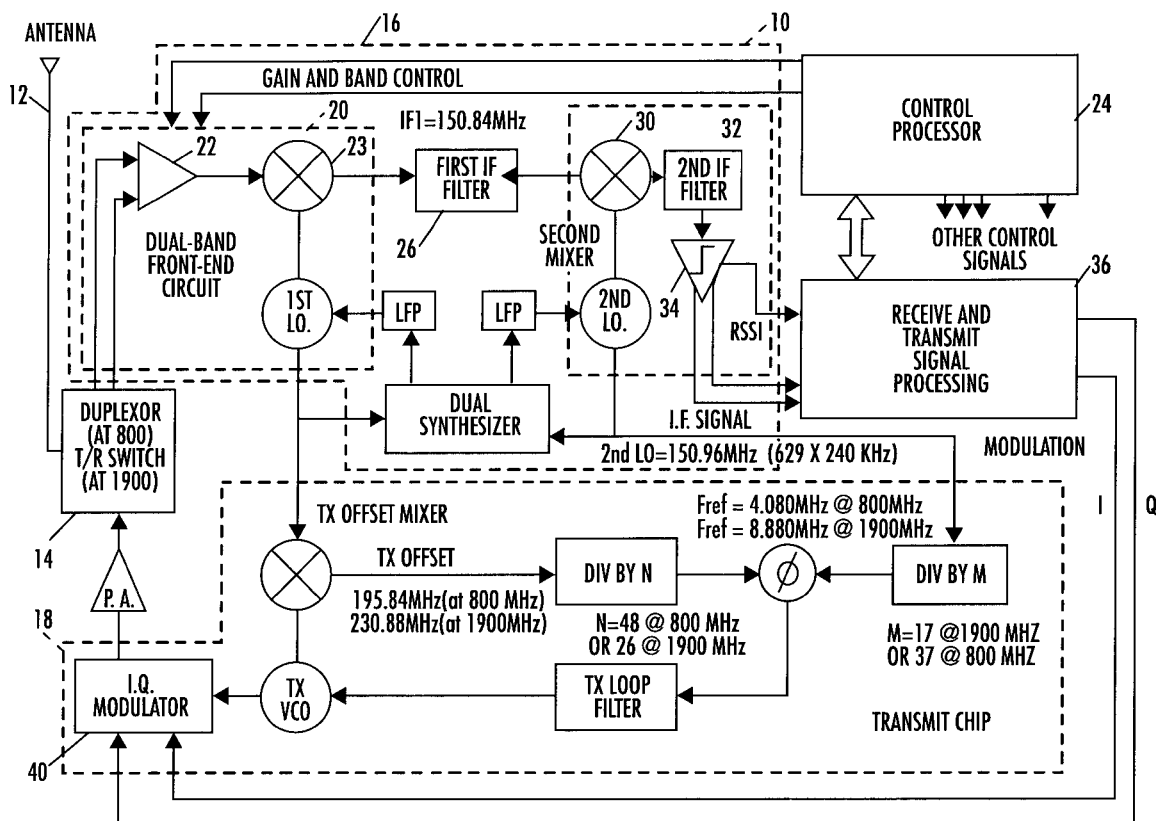
A signal strength for a received signal such as a radio signal transmitted over a communication network is determined. The signal strength measurement is compensated for non-linear characteristics of the receiver. The compensation is provided by taking two signal strength readings with the receiver set at two different, known, gain levels. The difference between the expected change in the signal strength and the change actually measured by the receiver is used to generate a compensated signal strength measurement. A table of compensation factors is generated for each signal strength which is also utilized in generating the compensated signal strength measurement. The compensated signal strength measurement reading is transmitted to the communication network for use in mobile assisted handover.

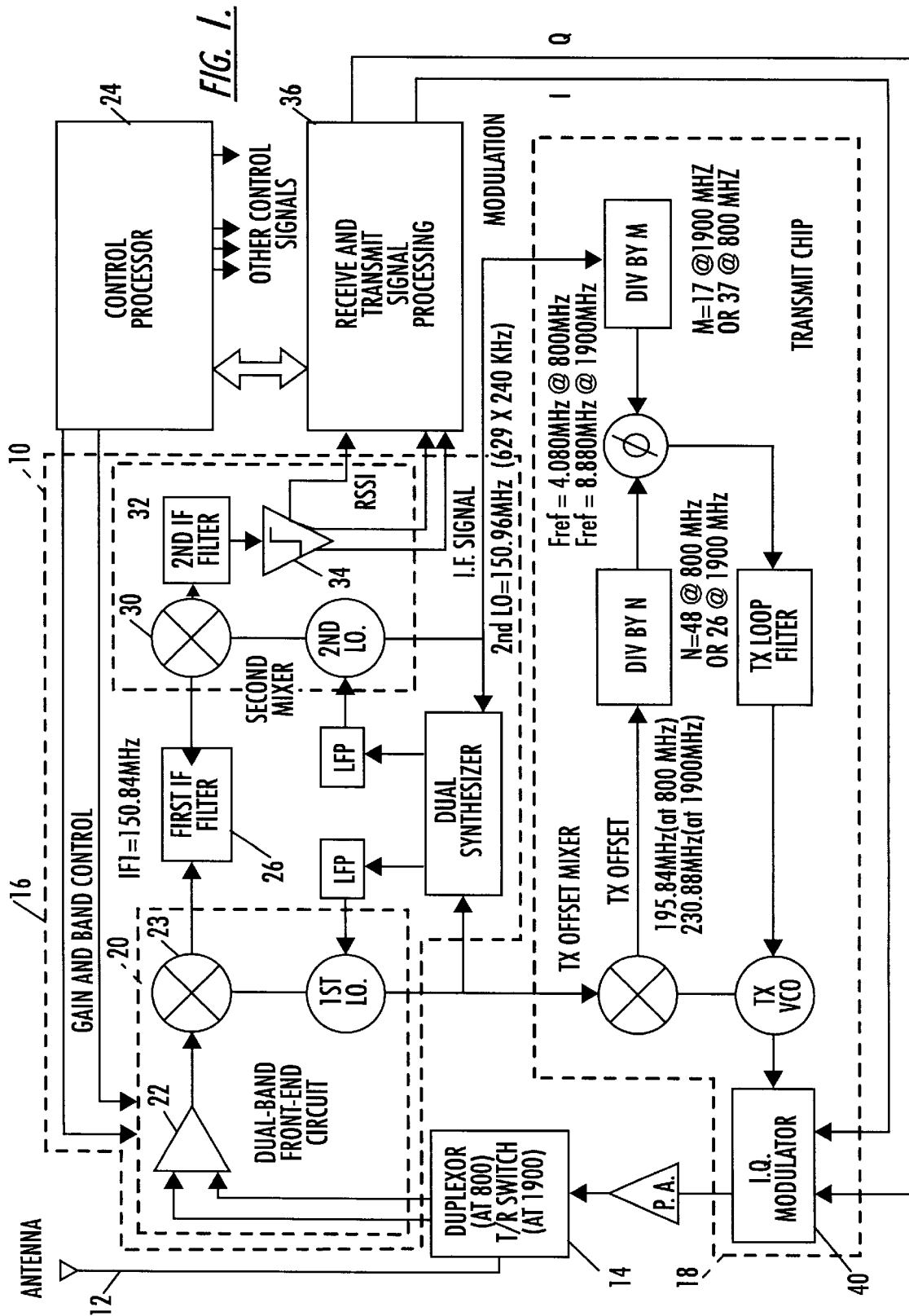
[56] References Cited

U.S. PATENT DOCUMENTS

| | | | |
|-----------|---------|---------------------|-----------|
| 4,479,253 | 10/1984 | Daniel, Jr. | 455/226.2 |
| 4,578,820 | 3/1986 | Highton | 455/226.2 |
| 4,580,287 | 4/1986 | Richards, Jr. | 455/226.4 |
| 4,619,002 | 10/1986 | Thro | 375/317 |
| 5,390,365 | 2/1995 | Enoki et al. | 455/553 |
| 5,408,696 | 4/1995 | Hofverberg | 455/226.2 |
| 5,701,601 | 12/1997 | Tomoe et al. | 455/226.2 |
| 5,875,390 | 2/1999 | Brehmer et al. | 455/226.2 |

20 Claims, 4 Drawing Sheets





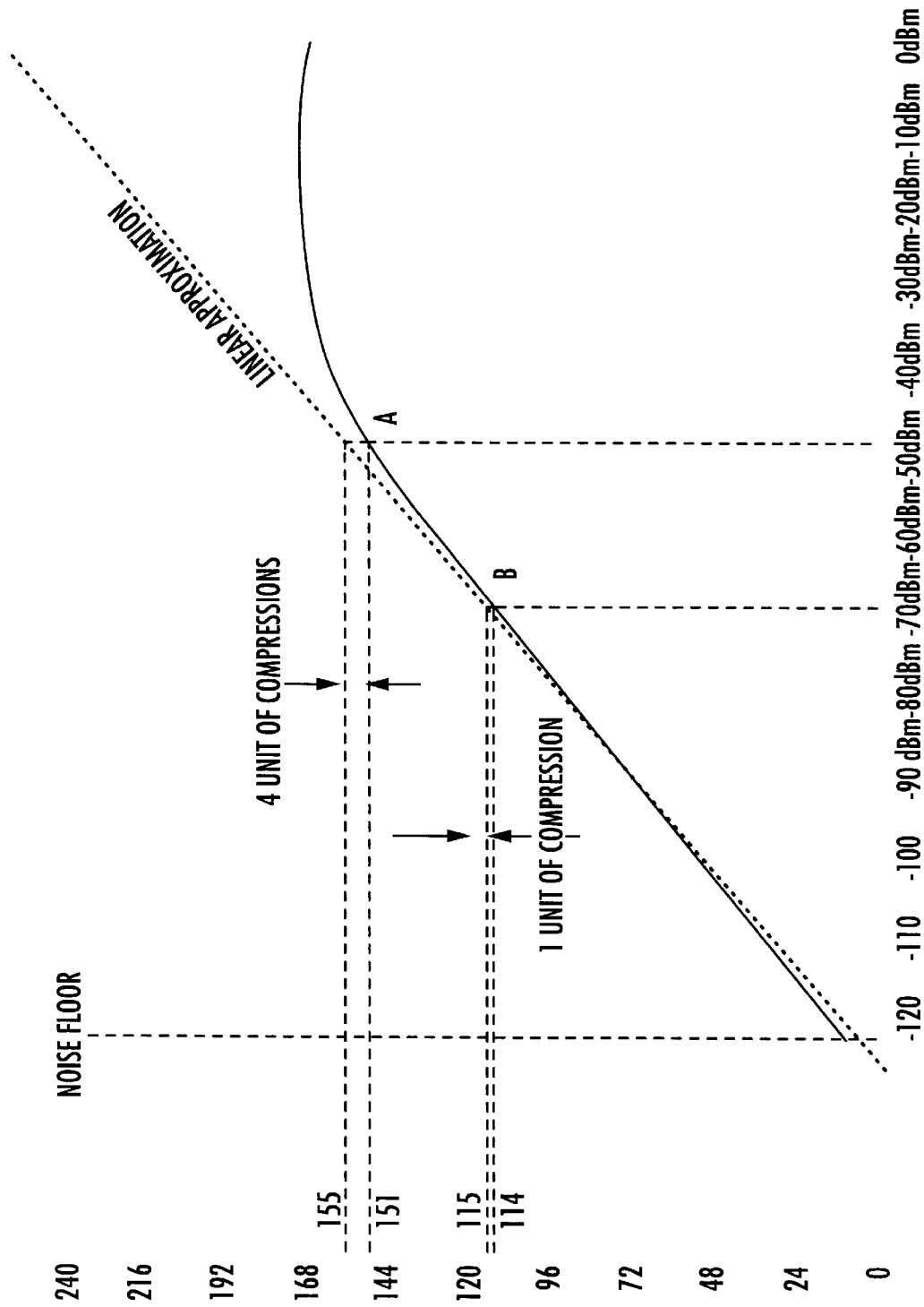


FIG. 2.

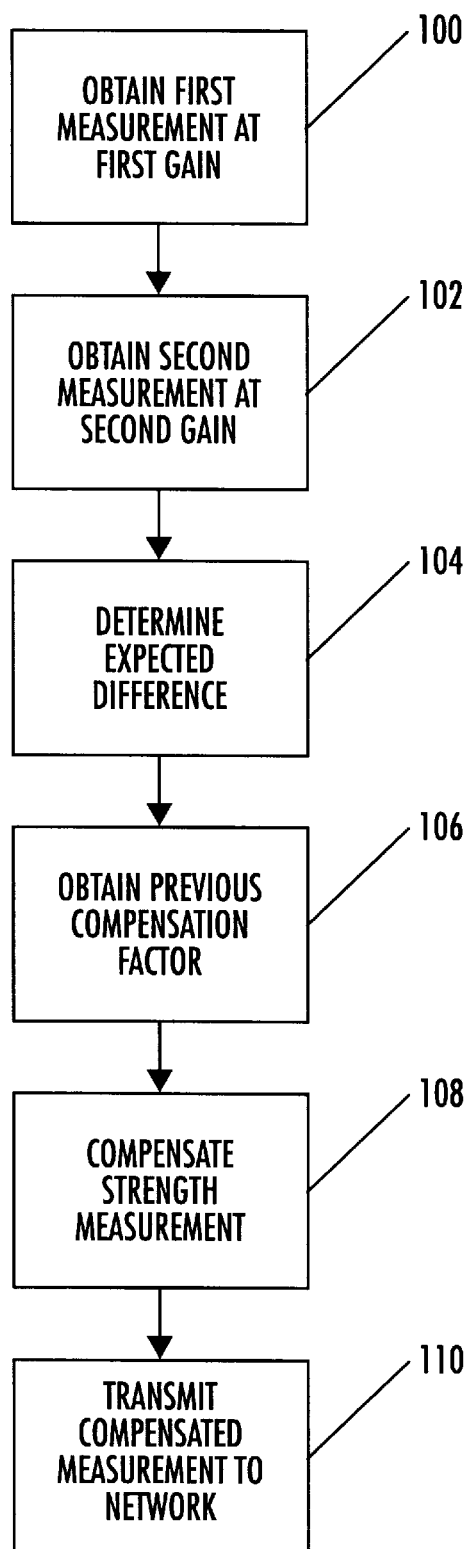


FIG. 3.

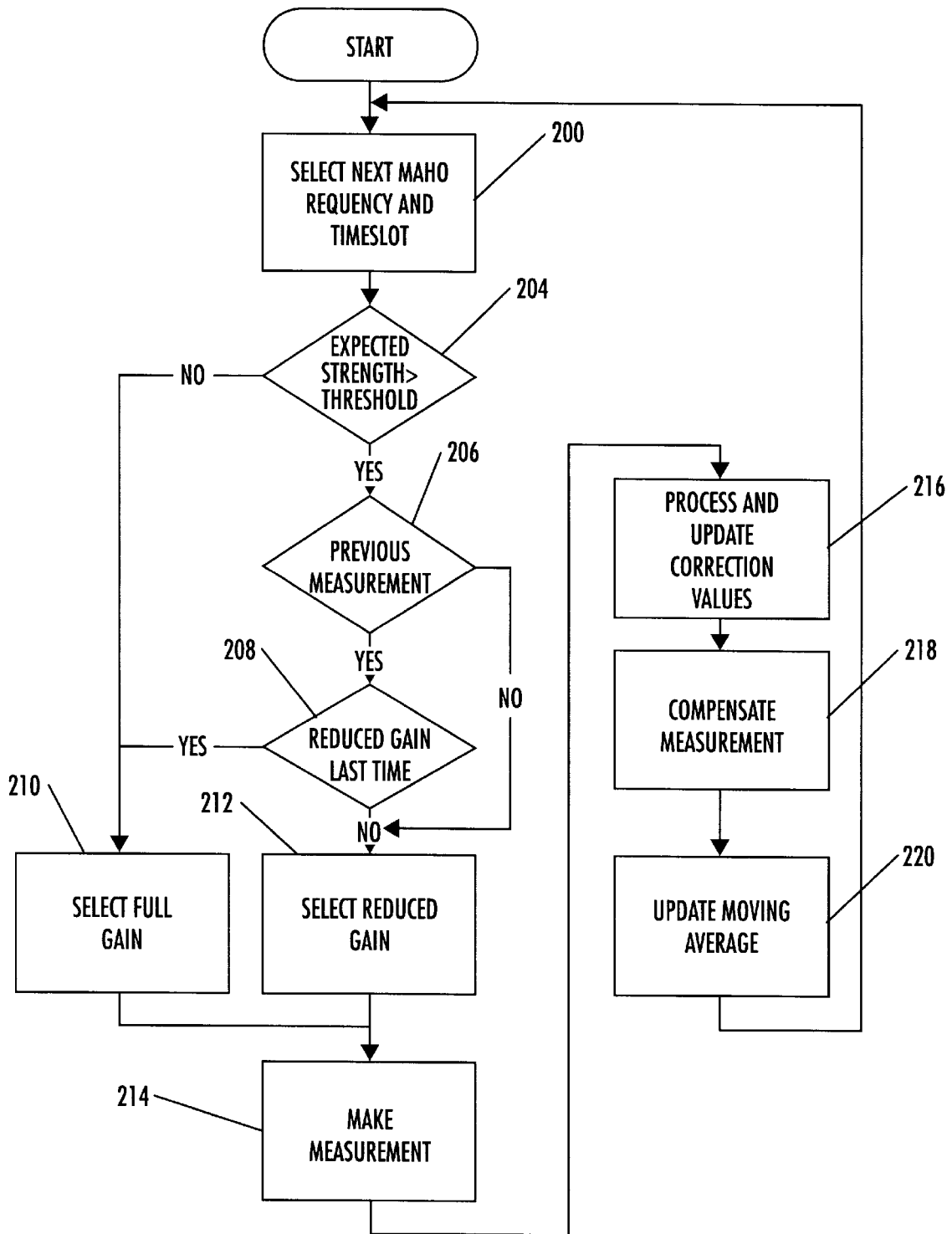


FIG. 4.

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