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United States Patent [19]

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Irvin

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[54] HAND-HELD CELLULAR TELEPHONE WITH POWER MANAGEMENT FEATURES

FOREIGN PATENT DOCUMENTS

[75] Inventor: **David Rand Irvin**, Raleigh, N.C.

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

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[*] Notice: This patent issued on a continued prosecution application filed under 37 CFR 1.53(d), and is subject to the twenty year patent term provisions of 35 U.S.C. 154(a)(2).

Pratt, Richard E. and Fitzgibbons, Thomas; "RF Power Configuration Method for Battery Equipped Portable Radios;" Motorola; vol. 24; Mar. 1995; pp. 75,77.
"The GSM System;" Radio Resource Management; 1993;pp. 342-346.

[21] Appl. No.: **08/850,913**

Primary Examiner—Lee Nguyen
Attorney, Agent, or Firm—Coats & Bennett, PLLC

[22] Filed: **May 2, 1997**

[57] ABSTRACT

[51] Int. Cl.⁷ **H04B 1/40**

[52] U.S. Cl. **455/571; 455/69; 455/127; 455/522**

[58] Field of Search 455/522, 69, 569, 455/571, 572, 573, 574, 115, 116, 126, 127

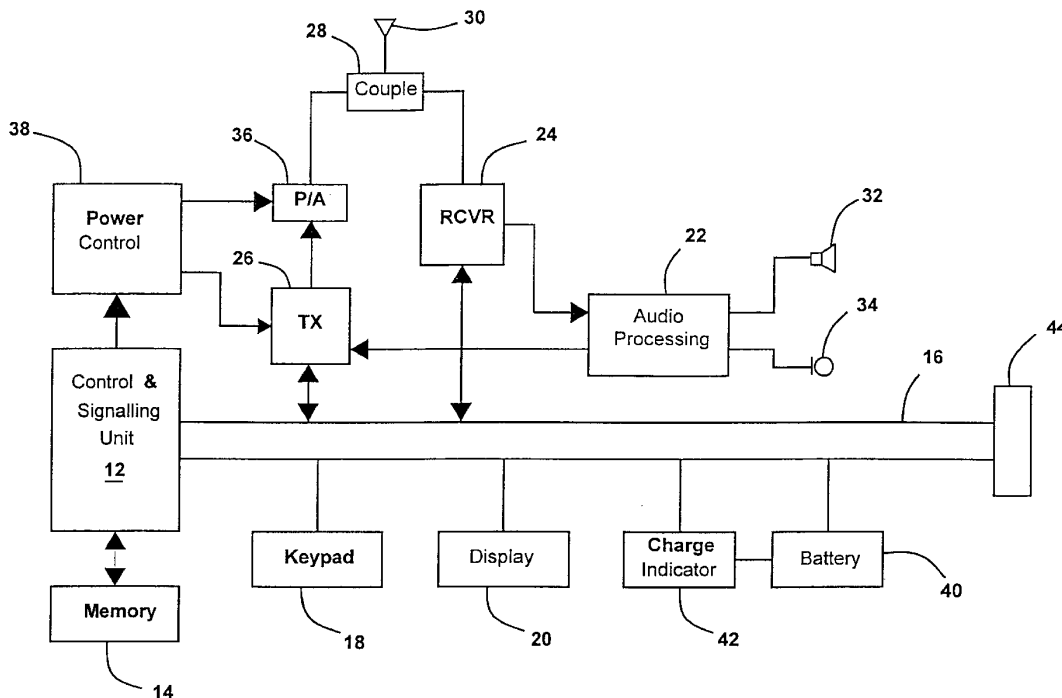
A mobile terminal includes power control logic which limits the maximum transmit power of the mobile radio telephone to conserve battery power when it is operated in a hand-held mode. The mobile radio telephone includes power control logic which sets the transmit power in response to power control codes received from a base station. The power control codes transmitted from the base station correspond to designated power levels. A signal is generated to indicate whether the mobile radio telephone is operated in a hand-held mode. When the mobile radio telephone is operated in a hand-held mode, the power control logic sets the power level at a maximum hand-held power level which is less than the maximum transmit power level.

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9 Claims, 6 Drawing Sheets



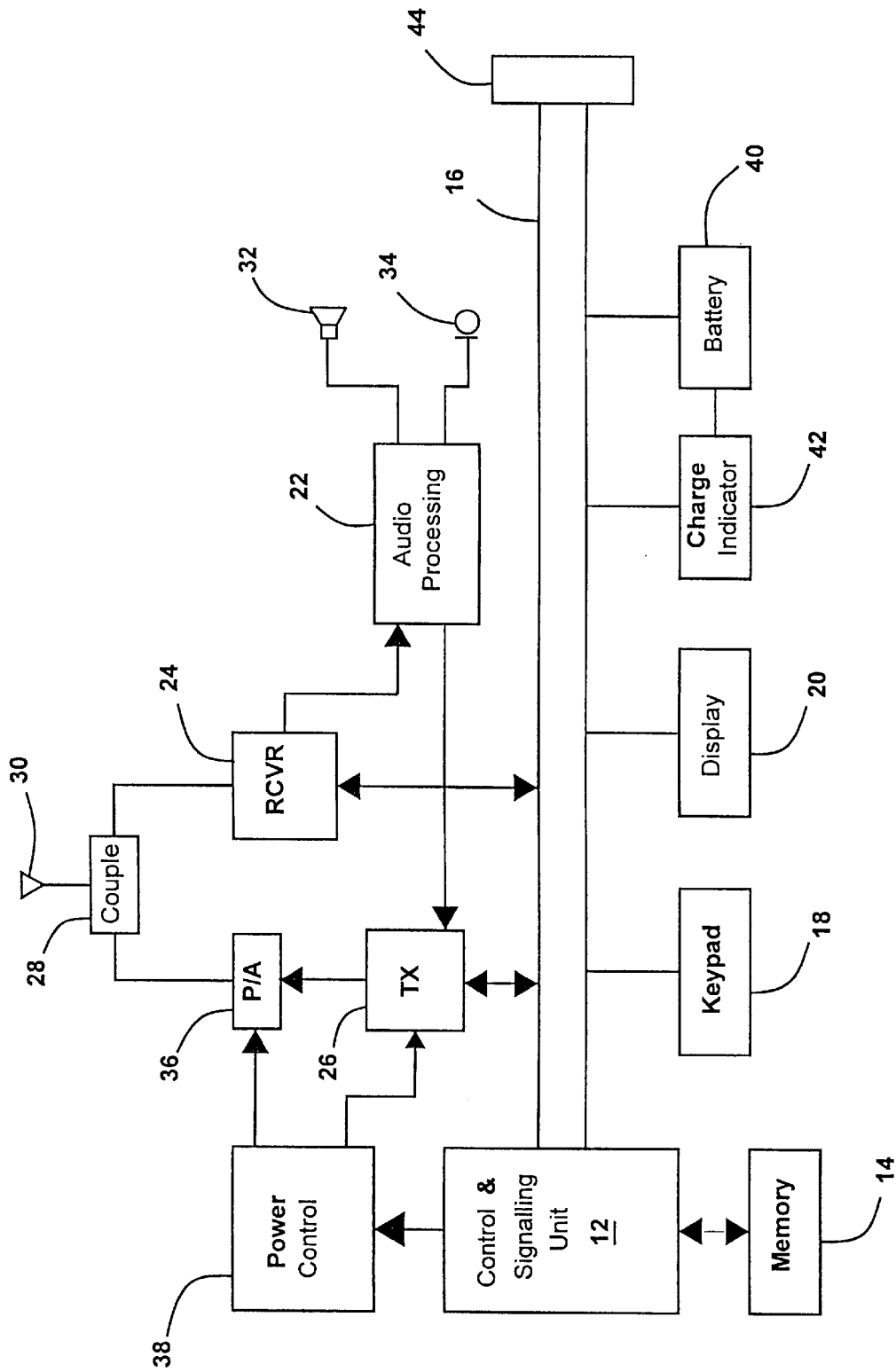


Figure 1

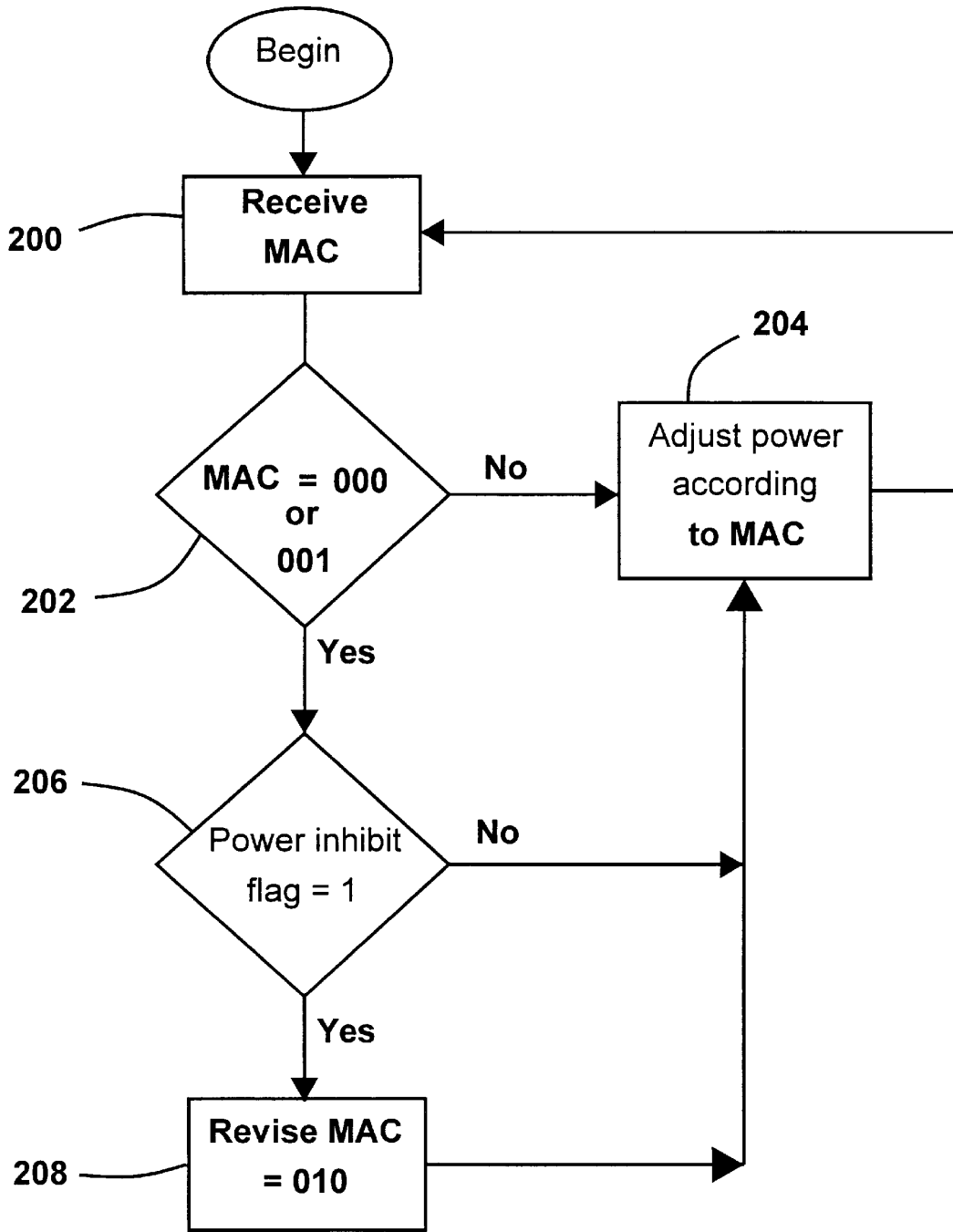


Figure 2

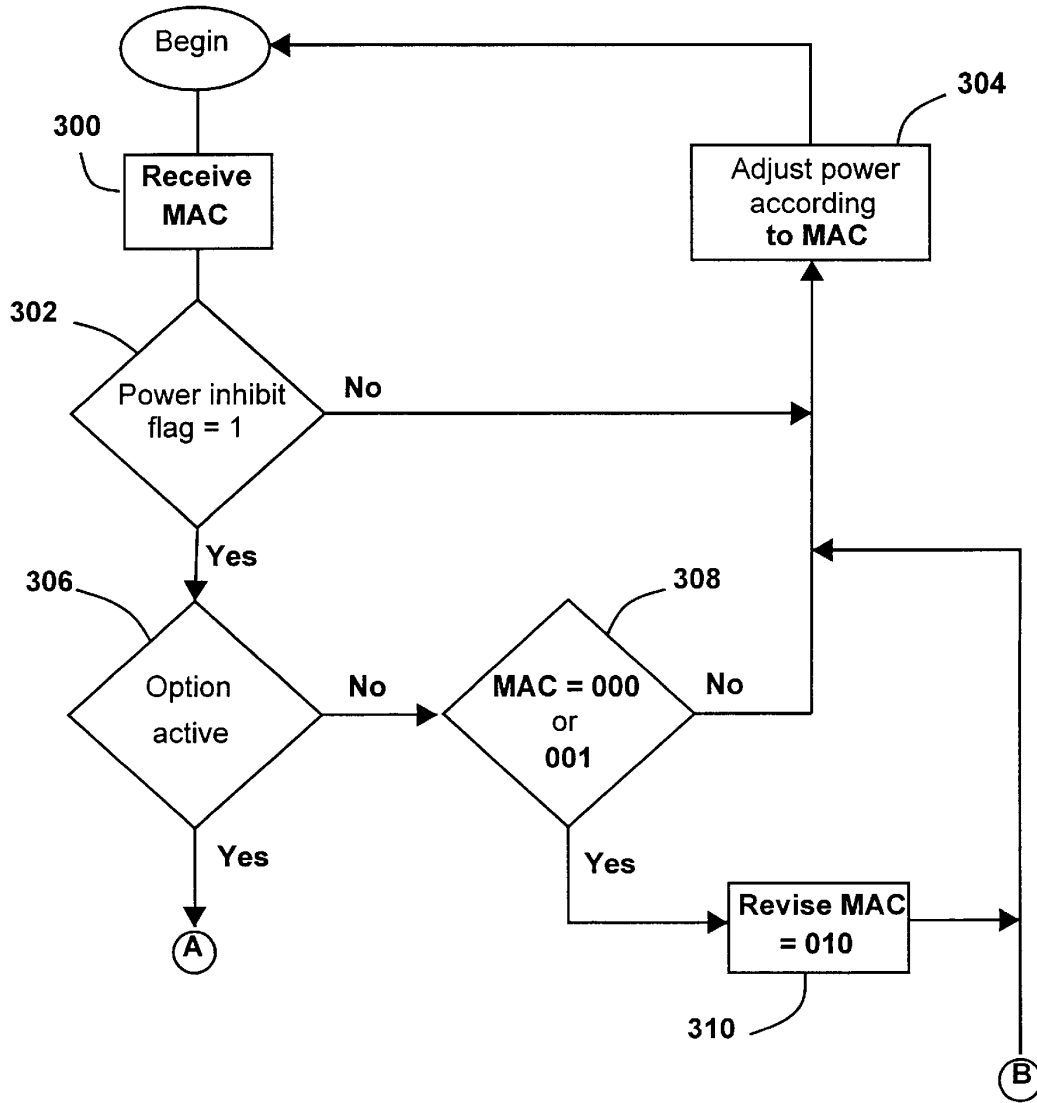


Figure 3A

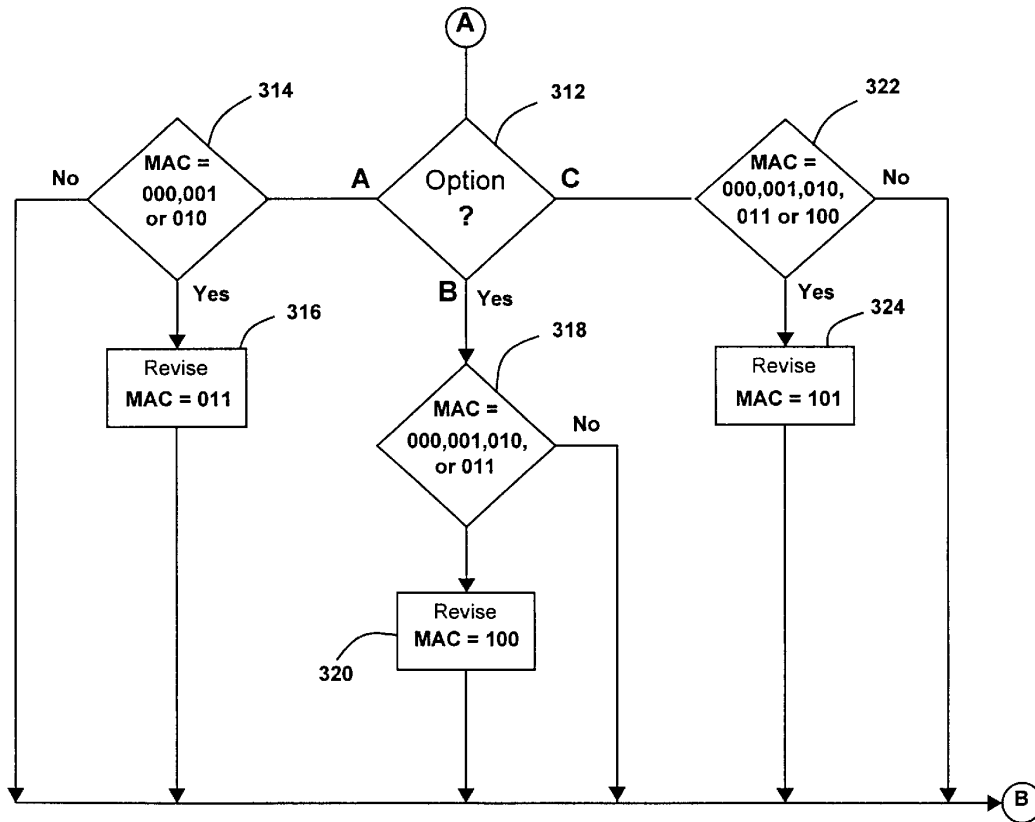


Figure 3B

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