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(65) **Prior Publication Data**

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(51) **Int. Cl.⁷** **H04L 25/49**

(52) **U.S. Cl.** **375/297; 330/149; 455/114.3**

(58) **Field of Search** **375/296, 297;**
330/149, 151; 455/114.2, 114.3

There is disclosed a pre-distortion adjustment circuit for use in an RF transmitter that adjusts the actual adjacent channel power (ACP) noise profile of an RF power amplifier to fully use the ACP profile allowed under the applicable RF communication standard. The pre-distortion adjustment circuit pre-distorts selected components of the input signal to the RF power amplifier so that the actual output ACP profile appears similar to, if not the same as, the ACP profile under the standard. The distortion required is determined based on information extracted from the input signal, the output signal, and the standard ACP profile. The pre-distortion adjustment circuit allows significant overdrive of the RF power amplifier while maintaining the ACP noise in the RF output below the levels allowed under the standard.

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20 Claims, 5 Drawing Sheets



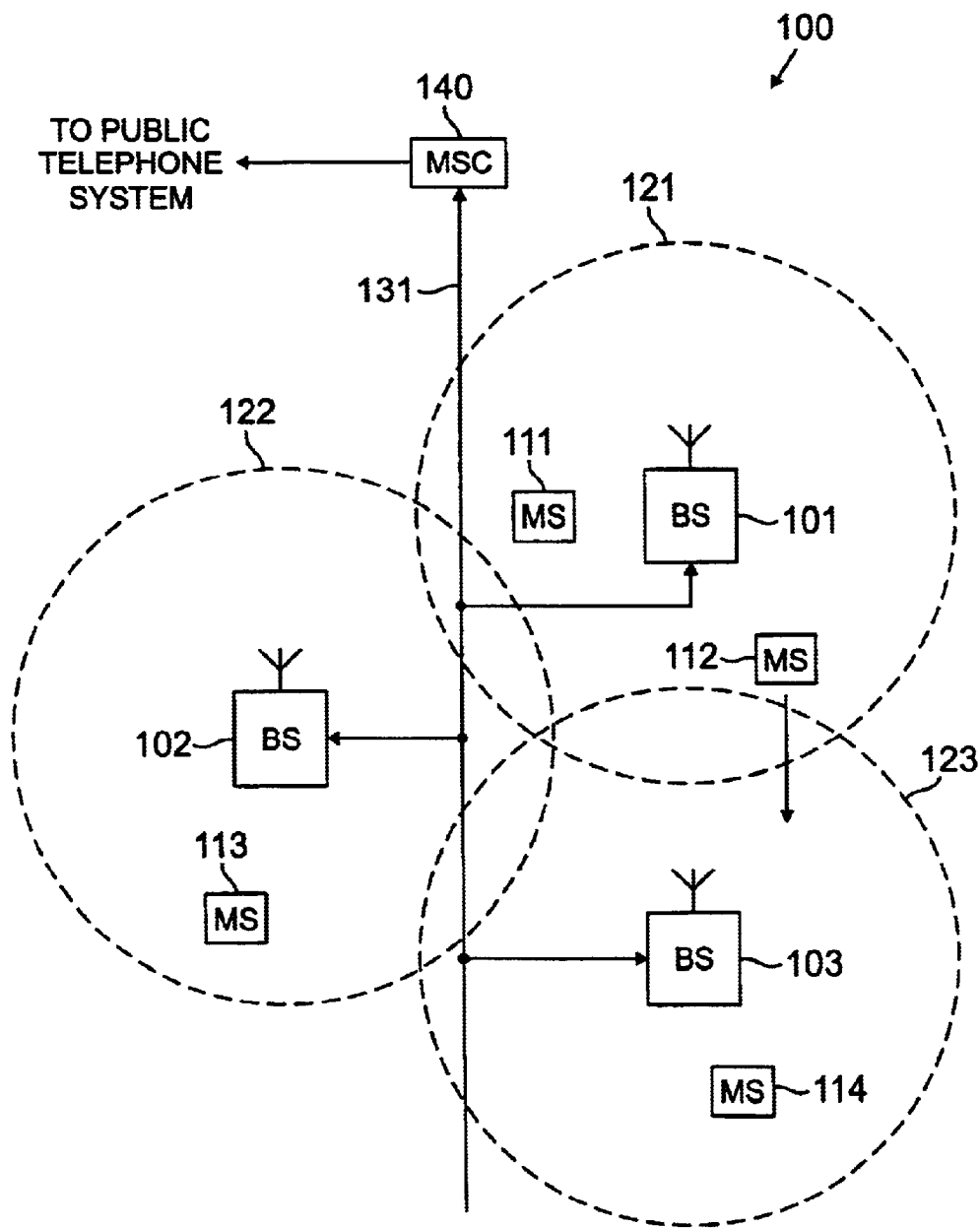


FIG. 1

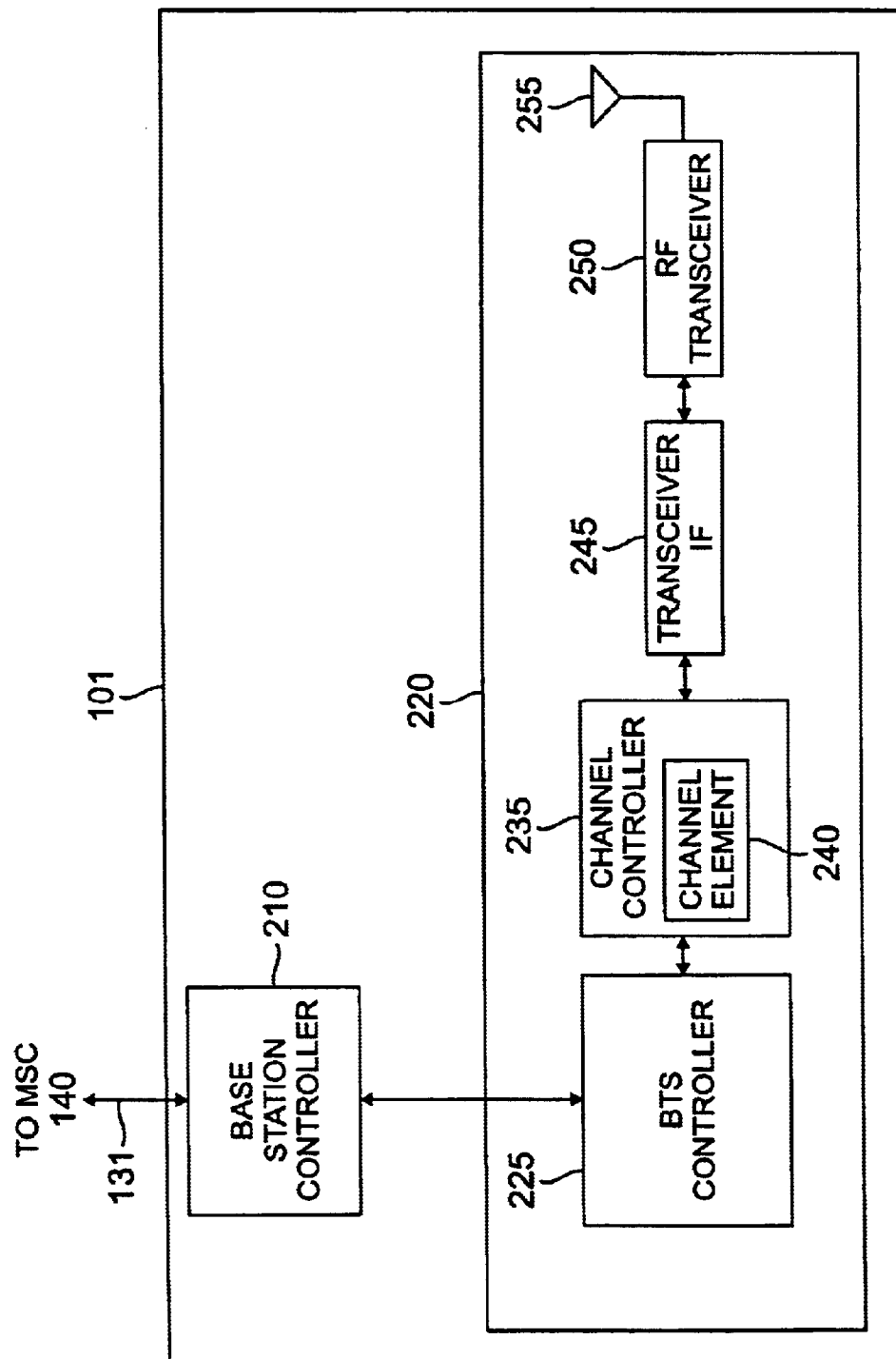


FIG. 2

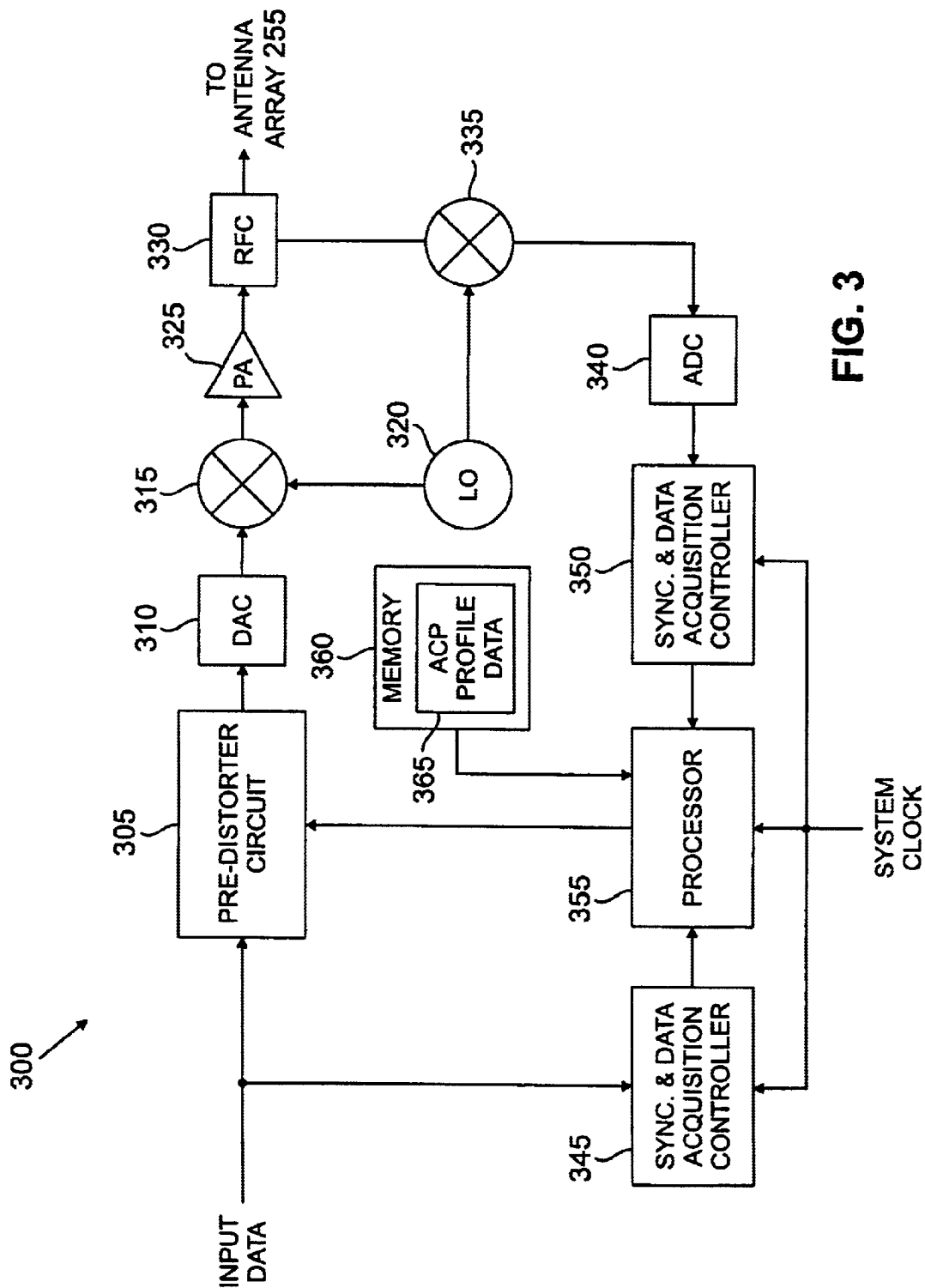
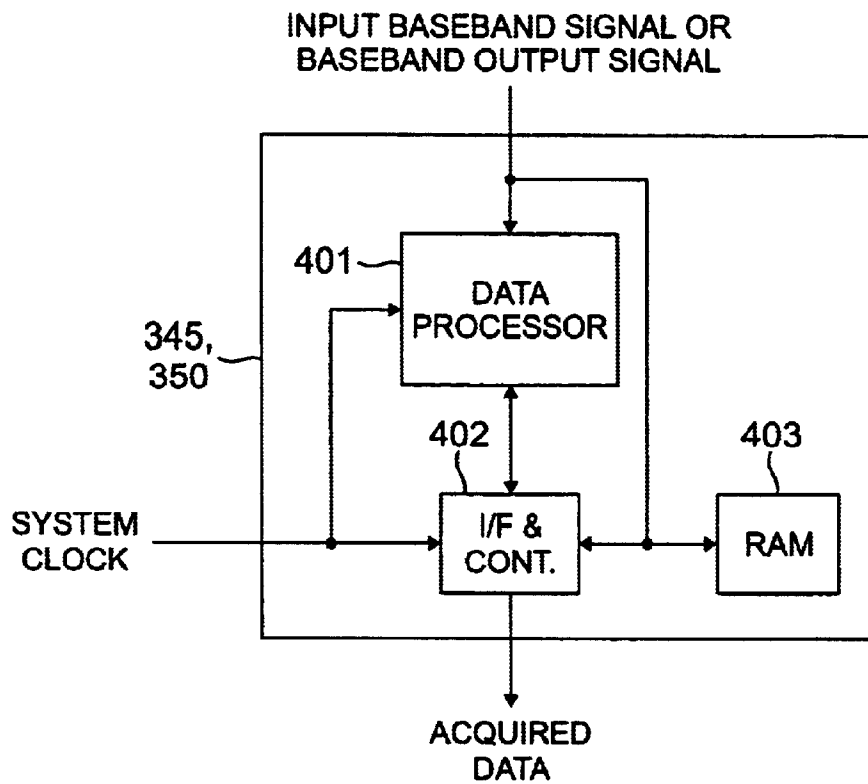


FIG. 3

**FIG. 4**

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