

QUIET CHIRP

Author(s): **Motorola TDB****Mark A. Barros****Rami C. Levy**IP.com number: **IPCOM000008828D**Original Publication Date: **September 1, 1998**IP.com Electronic Publication: **July 17, 2002**

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QUIET CHIRP

by Mark A. Barros and Rami C. Levy

WHAT IS QUIET CHIRP?

As the demand for smaller paging devices increases, it is of paramount importance that solutions be procured to consolidate and remove unnecessary hardware. Since input devices contribute significantly to the overall size of the pager, it seems appropriate that this area be addressed first.

Current input devices used in the paging industry consume precious pager real estate in order to provide the necessary inputs required for operation. The main attraction to traditional buttons is the tactile feedback they provide. Other methods of input, such as "touch screen" and "solid state", require less space, and in some cases may be more desirable, if not for their lack of tactile feedback. Audible key "click" response is one possible solution to this problem, but it prevents the user from discreetly reviewing his or her messages.

Quiet Chirp eliminates the lack of tactile feedback associated with solid state, touch screen, and certain buttons, by providing the user with a silent, vibratory, "chirp-like" response to key presses. This short vibratory alert provides the user with physical feedback to keypad entry while requiring no additional hardware or mechanical buttons. This is achieved by briefly turn-

ing on the pager's existing motor via software during each key press. The duration of the vibration should be long enough to provide sufficient feedback to the user, yet short enough to avoid slowing down the pager's operation. A vibratory alert duration in the range of 1/4 to 1/32 seconds is suggested.

ADVANTAGES OF QUIET CHIRP

- Provides the user with a silent response to button presses.
- Allows a quiet alternative to key clicks.
- Eliminates the need for mechanical buttons as Quiet Chirp provides an equivalent level of tactile feedback.
- Facilitates the use of "solid state" or "touch screen" buttons, allowing them to be a more desirable alternative to traditional input devices.

QUIET CHIRP FLOW

