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Oliver, Jr.

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(54) **AUDIO ALARM SIGNAL INITIATION DEVICE**

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(58) **Field of Search** 340/328, 384.7, 340/384.71

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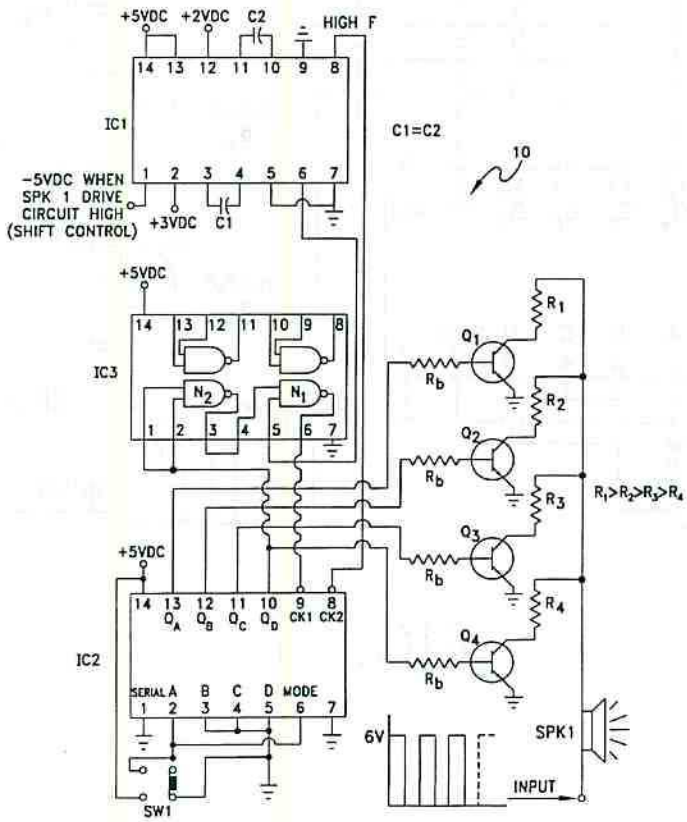
(57) **ABSTRACT**

A device and method, which progressively and sequentially increases the volume of the alarm signal upon the initiation of the alarm, is provided. The disclosed device includes a multiple voltage-controlled oscillator, at least two dual-input positive-NAND gates, a shift register and a plurality of transistors and resistors, which are configured to sequentially include the resistors into the alarm circuit. The method includes sequentially and progressively increasing the volume of an initiated audio alarm signal by sequentially including one of the plurality of resistors into the alarm circuit to vary the volume of the alarm signal emanating from an alarm speaker. The resistors are included into the alarm circuit by sequentially switching on the corresponding one of the plurality of transistors. The transistors are switched on in response to outputs received from a shift register, which is shifted in response to an output received from a first NAND gate. Once the lowest value resistor is included into the alarm circuit, the alarm volume is maintained at its highest, unmodified level by providing the last output to become switched on of the shift register as an input to a second NAND gate and providing an output of the second NAND gate as a second input to the first NAND gate, thus causing the output of the first NAND gate to remain constant for the duration of the alarm signal.

11 Claims, 2 Drawing Sheets