



US005438519A

**United States Patent** [19]

DiGiulio

[11] **Patent Number:** **5,438,519**[45] **Date of Patent:** **Aug. 1, 1995**

[54] **ELECTRONIC POSTAGE METER HAVING  
MEMORY WRITE ACCESS SECOND  
CHANCE HARD TIMER MEANS**

[75] Inventor: **Peter C. DiGiulio**, Fairfield, Conn.

[73] Assignee: **Pitney Bowes Inc.**, Stamford, Conn.

[21] Appl. No.: **989,673**

[22] Filed: **Feb. 10, 1993**

[51] Int. Cl.<sup>6</sup> ..... **G06F 15/20**

[52] U.S. Cl. .... **364/464.02; 371/62;  
364/915.52; 395/550**

[58] **Field of Search** ..... 371/12, 7, 10.1, 21.1,  
371/16.3, 16.4, 61, 62, 68.3; 395/575, 725, 375,  
550; 364/941.5, 960.4, 464.02, 921.8, 934,  
918.52, 950, 950.4

[56] **References Cited****U.S. PATENT DOCUMENTS**

4,584,647	4/1986	Eckert	364/464
4,701,856	10/1987	DiGiulio et al.	364/464.02
4,710,882	12/1987	DiGiulio et al.	364/464
4,742,469	5/1988	Haines et al.	364/466
4,837,702	6/1989	Obrea	364/466
4,998,203	3/1991	DiGiulio et al.	364/464.02
5,260,900	11/1993	Muller	365/189.01

*Primary Examiner*—Beausoliel, Jr. Robert W.

*Assistant Examiner*—Dieu-Minh Le

*Attorney, Agent, or Firm*—Charles G. Parks, Jr.; Melvin J. Scolnick

[57]

**ABSTRACT**

A postage meter control system includes a microcomputer having a programmable microprocessor. The microcomputer is in communication with a decoder integrated circuit (Decoder IC). The Decoder IC has a first write control flip-flop and a second write control flip-flop, as in the preferred embodiment there are redundant non-volatile memories. Each control flip-flop has an output to a respective AND gate. The Decoder IC includes a dual timer which has an output to the control flip-flops. As a result, when the microcomputer enters write routine, the timer releases the control flip-flops to allow the system to be write enabled. If the write routine encounters an error, resulting in the timer timing out, the timer resets the control flip-flop and communicates with the microcomputer to try a retry. A more detailed description, and other features and advantages will become apparent in conjunction with the detailed description of the preferred embodiment.

**1 Claim, 22 Drawing Sheets**

