

[54] DOOR OPERATION CONTROL APPARATUS

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[52] U.S. Cl. .... 364/167.01; 49/28; 49/25; 318/266; 318/466; 340/539; 340/825.72; 364/178; 364/400

[58] Field of Search ..... 364/167, 148, 178, 179, 364/513, 400; 318/266, 281, 282, 286, 469, 16, 466, 467, 468, 636; 49/28, 26, 139, 25, 31; 340/696, 825.72, 825.69, 539, 534

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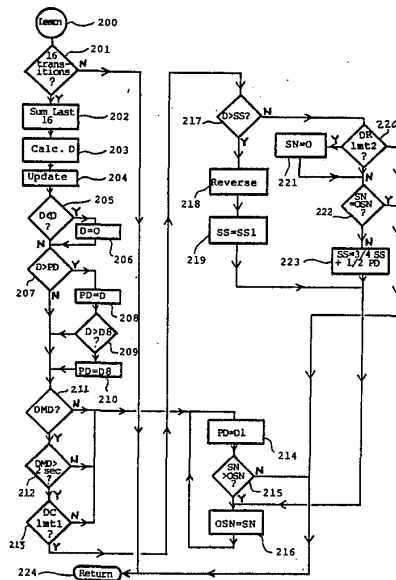
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Attorney, Agent, or Firm—Pennie & Edmonds

[57] ABSTRACT

A door controller for roller type doors is disclosed incorporating a microprocessor control system. The microprocessor measures and stores the door speed over segments of the door travel to generate a door speed travel characteristic. This characteristic enables the door controller to accurately assess obstruction conditions by comparing a real time characteristic with a stored characteristic. The microprocessor also stores electronically the upper and lower limits of door travel. The microprocessor monitors electric motor duty cycle to avoid overheating of the motor and possible burnout while also controlling locking of the drive mechanism when the motor is inoperative. The microprocessor is also used to set the radio control signal code used to activate the door drive mechanism, the setting procedure allows for immediate verification of the set code.

16 Claims, 10 Drawing Sheets



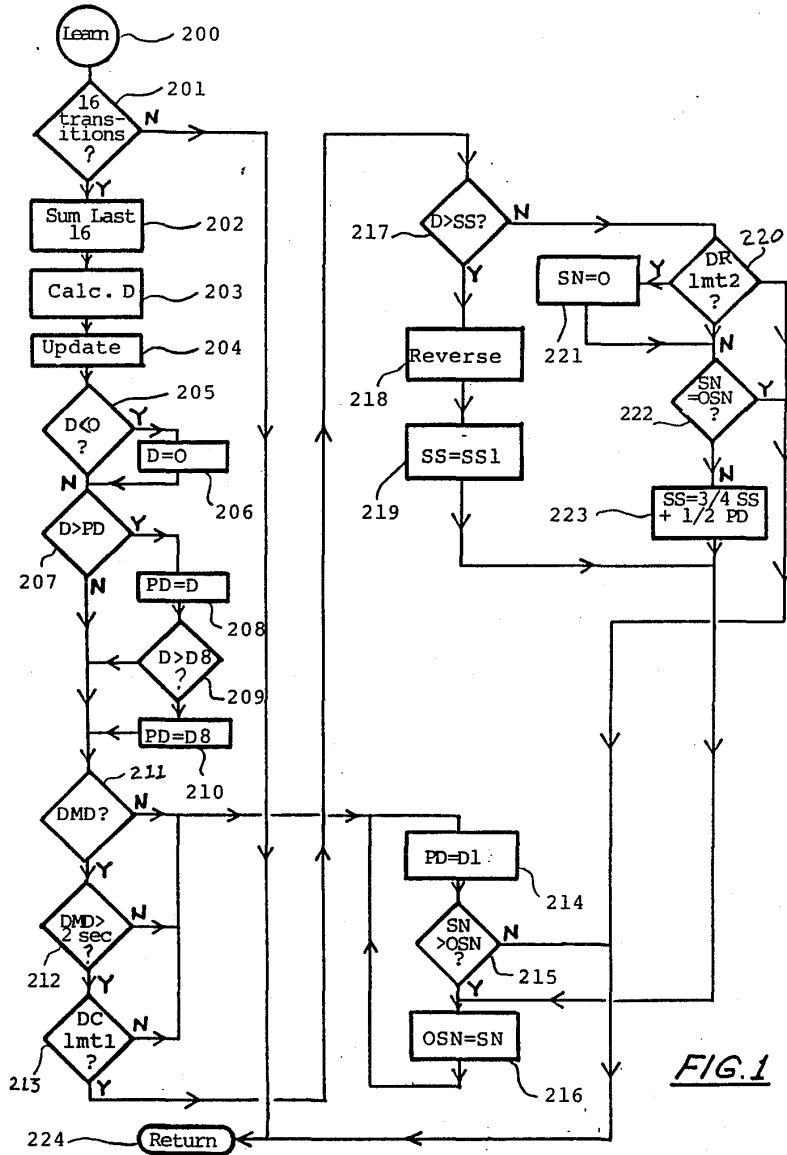


FIG. 1

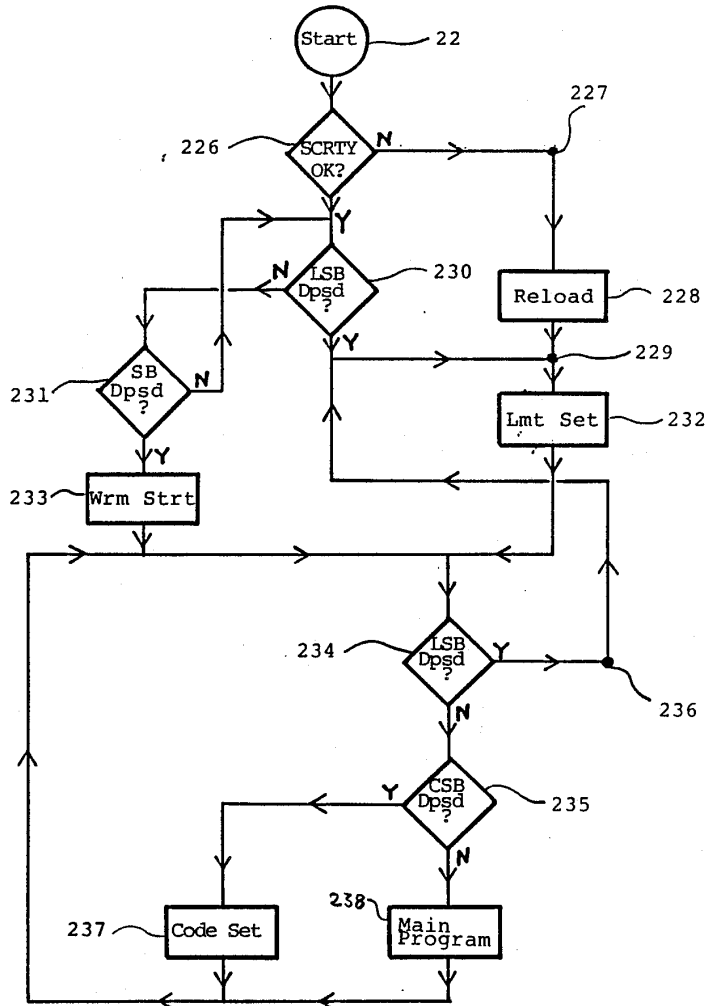


FIG. 2

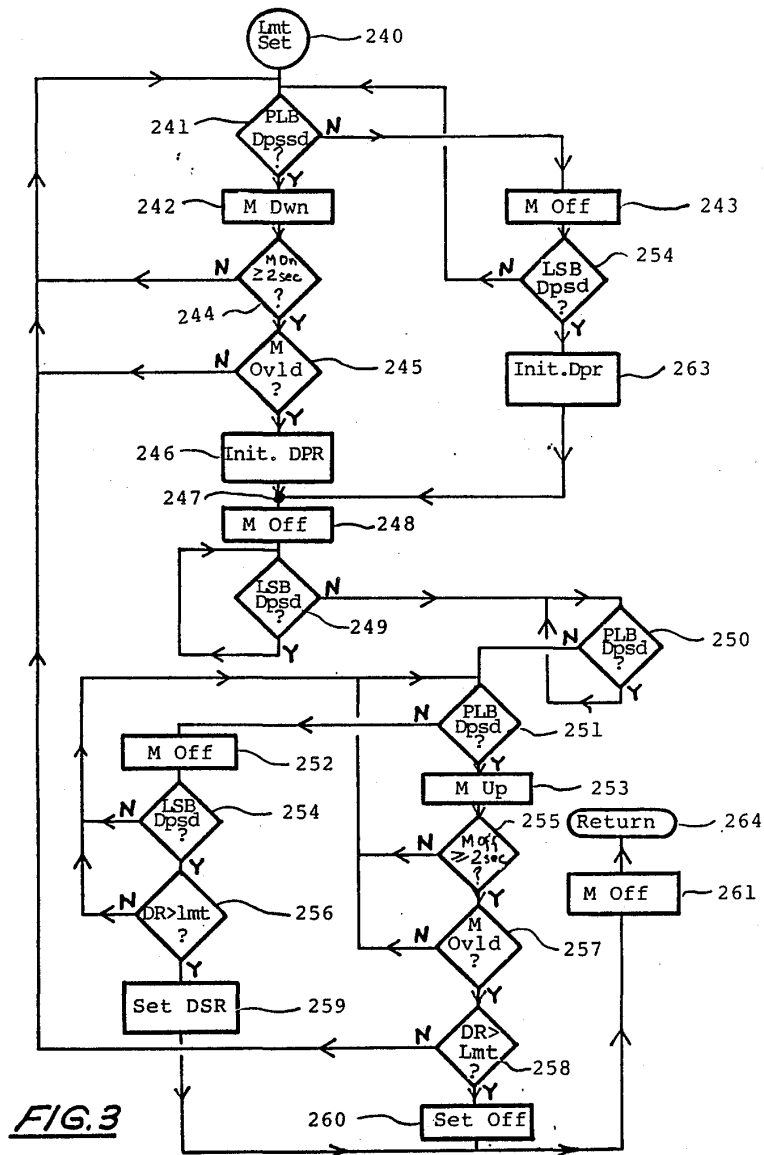


FIG. 3

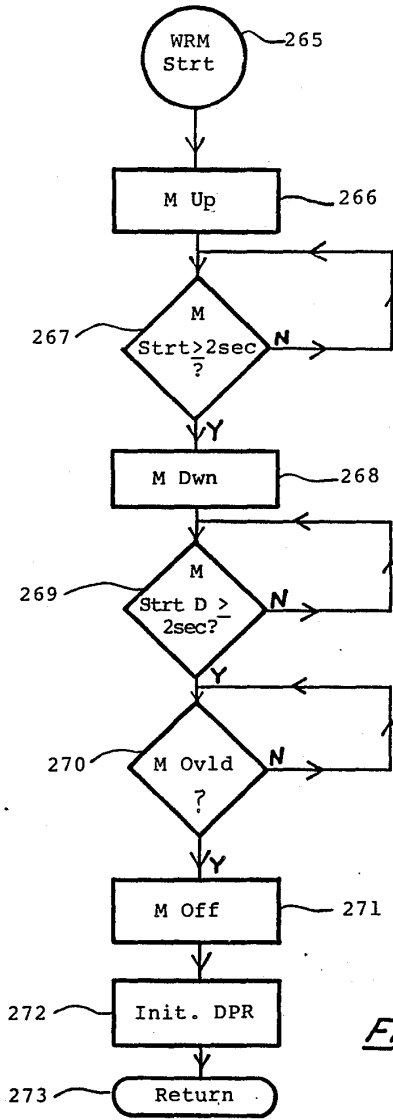


FIG. 4

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