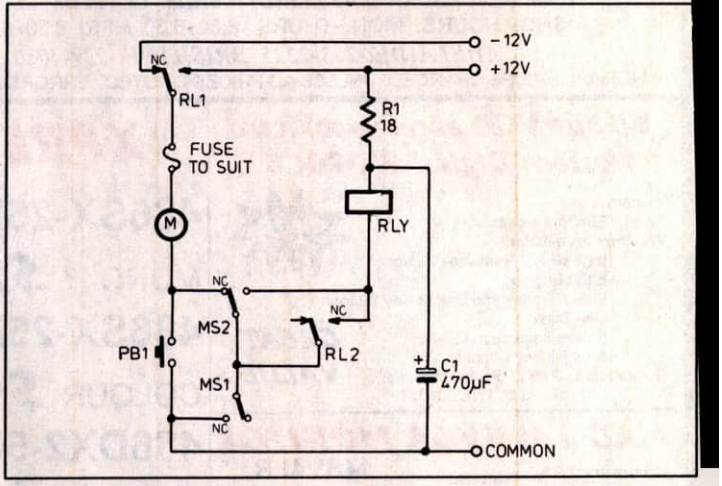
Garage door circuit

The complexity of the garage door opener described in Circuit & Design Ideas in January 1994 has prompted me to forward a copy of my own design. The system uses a dual polarity power supply, with a microswitch at the top and bottom of the door, and a DPDT relay to reverse the motor.

The circuit shows the conditions with the door closed. When the operate button is pressed, the motor starts, raising the door and thus operating the lower microswitch MS1. This switch closes and keeps the motor powered when the pushbutton is released. The door continues to rise until it trips the upper microswitch MS2, which removes supply from the motor and energises the relay. The relay is latched on by contact A2. Contact A1 swaps the polarity of the DC supply to the motor, in readiness to close the door. When the button is pressed again, the door starts to close, causing MS2 to change state. When the door is closed, MS1 is operated, isolating the motor and causing the relay to drop out, returning the circuit to its original condition.



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