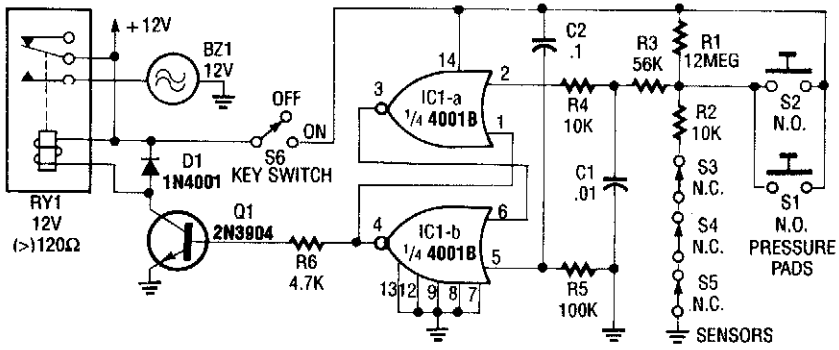
## SELF-LATCHING BURGLAR ALARM



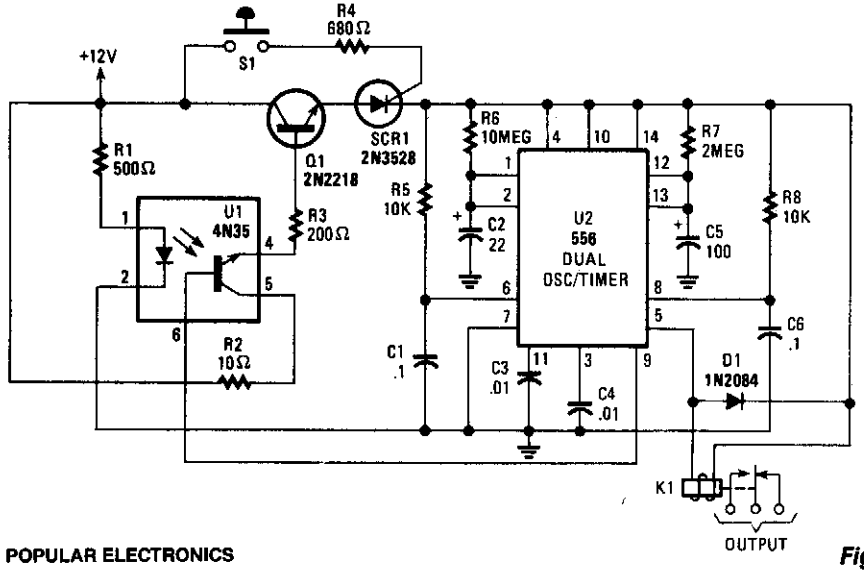

A SIMPLE SELF-LATCHING BURGLAR ALARM.

RADIO-ELECTRONICS

*Fig. 16-1*

This alarm uses IC1A and IC1B as a latch. When sensors S1 through S5 activate, IC1A turns on and forces IC1B to cut off. Q1 drives RY1.

## BURGLAR ALARM WITH TIMED SHUTOFF



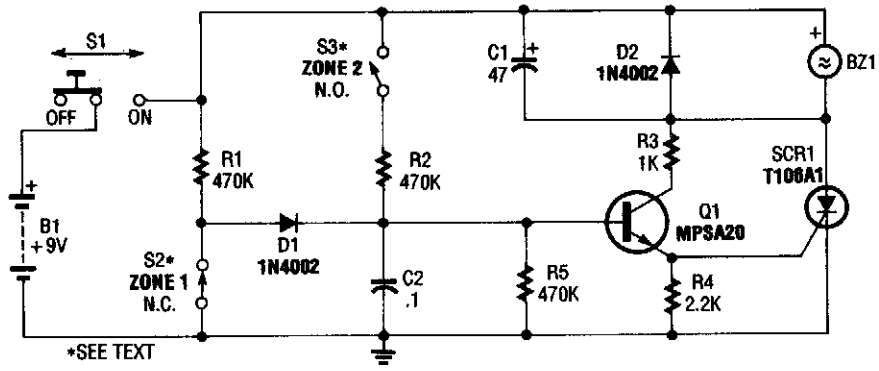

POPULAR ELECTRONICS

*Fig. 16-2*

When S1 (sensor) is closed, power is applied to U2, a dual timer. After a time determined by C2, C1 is energized after a predetermined time determined by the value of C5, pin 9 of U2 becomes low, switching off the transistor in the optoisolater, cutting anode current of SCR1 and de-energizing K1. The system is now reset. Notice that $(R_6 \times C_2)$ is less than $(R_7 \times C_5)$. The ON time is approximately given by:

$$(R_7 \times C_5) - (R_6 \times C_2) = t_{ON}$$

## SIMPLE BURGLAR ALARM

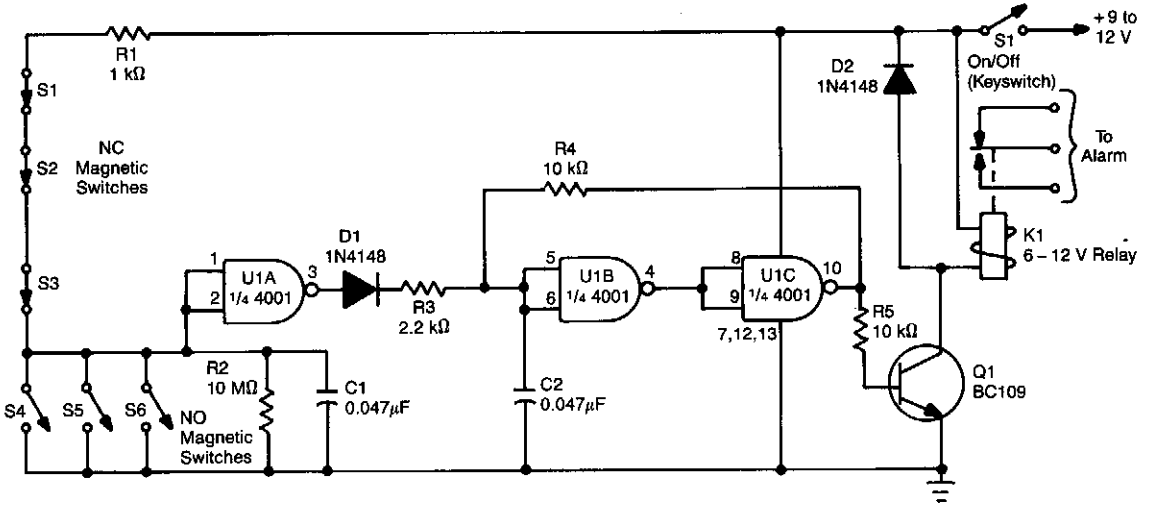



POPULAR ELECTRONICS

*Fig. 16-3*

A simple circuit using either NO or NC sensors uses an RC delay circuit (R2/C2 or R1/C2) to drive emitter-follower Q1, switching SCR1 and buzzer (or bell) BZ1. S1 is used for activation and reset.

## SIMPLE BURGLAR ALARM

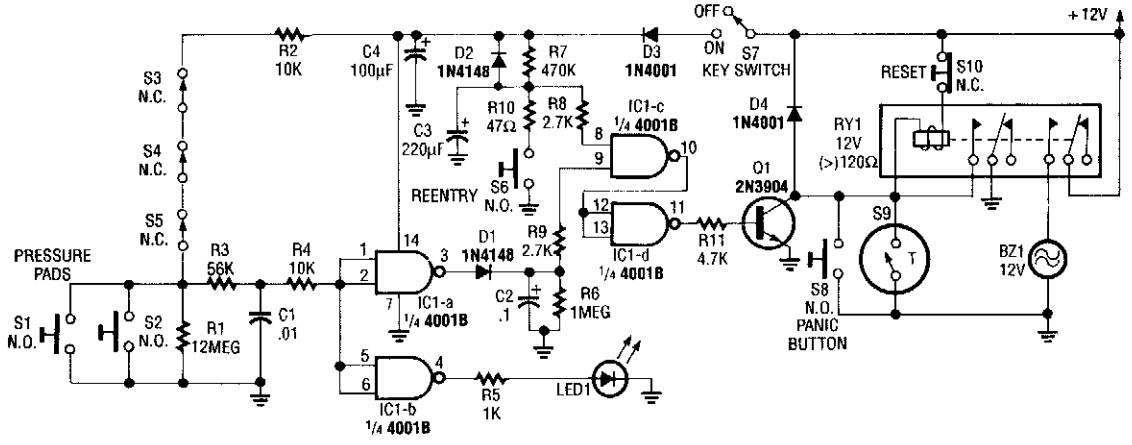



POPULAR ELECTRONICS

*Fig. 16-4*

Using one IC and a driver transistor, this simple alarm uses either NO or NC sensors. When a sensor operates, the input to U1A goes low, causing U1A to go high, U1B low, and U1C high. This biases Q1 ON and activates relay K1. On/off is via keyswitch S1.

## HOME SECURITY SYSTEM

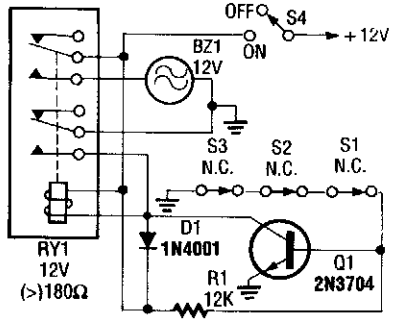



RADIO-ELECTRONICS

*Fig. 16-5*

This alarm circuit activates when S1 through S5 are activated. This lights LED1 and activates Q1 via IC1C and IC1D. RY1 is wired to self latch. S10 is used to reset. When key switch S1 is activated or when re-entry buttons at S6 are depressed, IC1C is deactivated until RC network R7/C3 charges.

## SIMPLE BURGLAR ALARM WITH NC SWITCHES

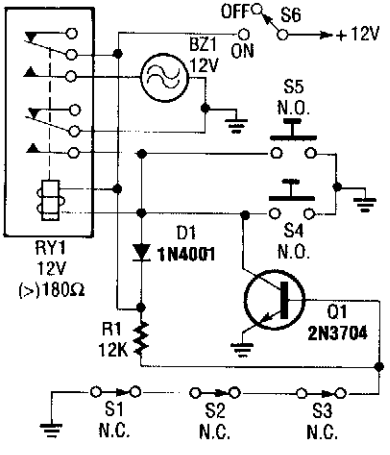



RADIO-ELECTRONICS

*Fig. 16-6*

This relay draws 1 mA of idling current. Q1 detects open switch and energizes RY1.

## BURGLAR ALARM WITH NC AND NO SWITCHES




RADIO-ELECTRONICS

*Fig. 16-7*

This circuit uses both NC and NO sensors. Series NC sensors allow Q1 to activate RY1. NO sensors directly activate RY1.