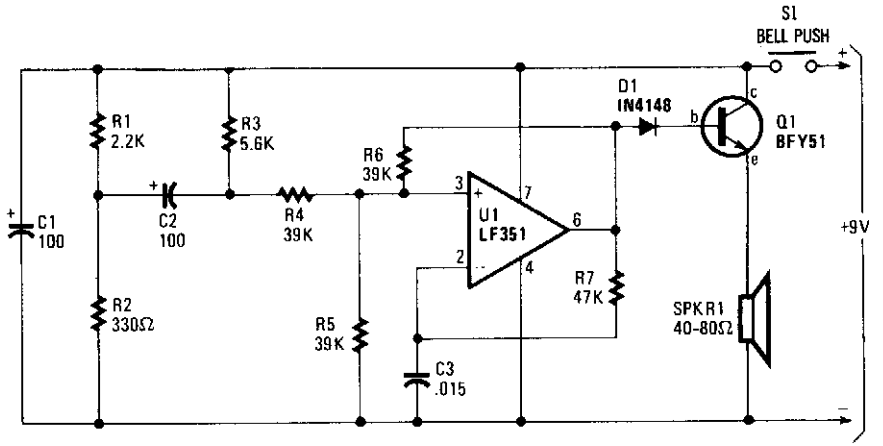
ELECTRONIC DOOR BUZZER

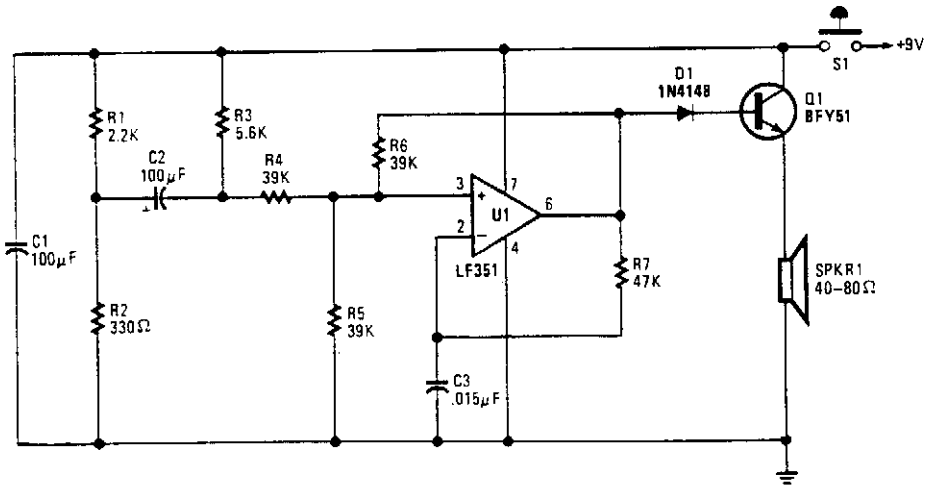


HANDS-ON ELECTRONICS

Fig. 3-1

When S1 is depressed, an initial positive voltage is placed on C2 and the noninverting terminal of U1. The circuit oscillates at a low frequency. As C2 charges up through R3, a rapid increase in frequency of oscillation results, producing (at SPKR1) a rapidly rising pitched sound. This sound is easily recognized over ambient noise.

DOOR BUZZER

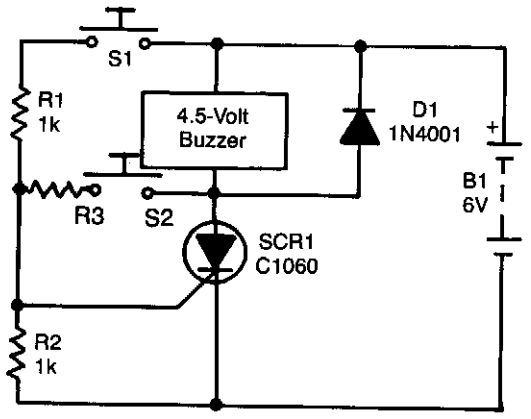


POPULAR ELECTRONICS

Fig. 3-2

An LF357 functions as a swept-tone oscillator, driving Q1 and SPKR1. A 9-Vdc supply is required.

SCR CIRCUIT WITH SELF-INTERRUPTING LOAD



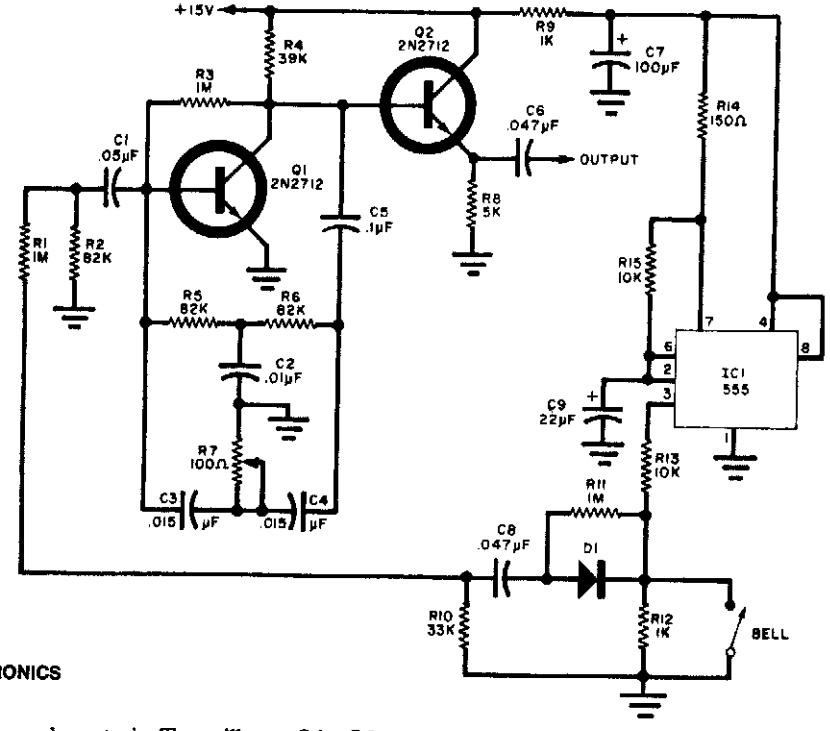
RADIO-ELECTRONICS

Fig. 3-3

A self-interrupting device connected to a voltage source functions as a switch that repeatedly opens and closes; therefore, the circuit does not latch in the normal way, so the alarm operates only as long as S1 is closed. Because of the inductive nature of that type of load, a damping diode (D1) must be wired across it.

The circuit can be modified to provide a self-latching action simply by wiring a 470-Ω resistor in parallel with the alarm. The circuit latches because the anode current of the SCR does not fall to zero when the alarm self-interrupts, but to a value that is determined by the value of the R3. The circuit can be unlatched by pressing S2, thereby enabling the anode current to fall to zero when the alarm self-interrupts.

ELECTRONIC BELL

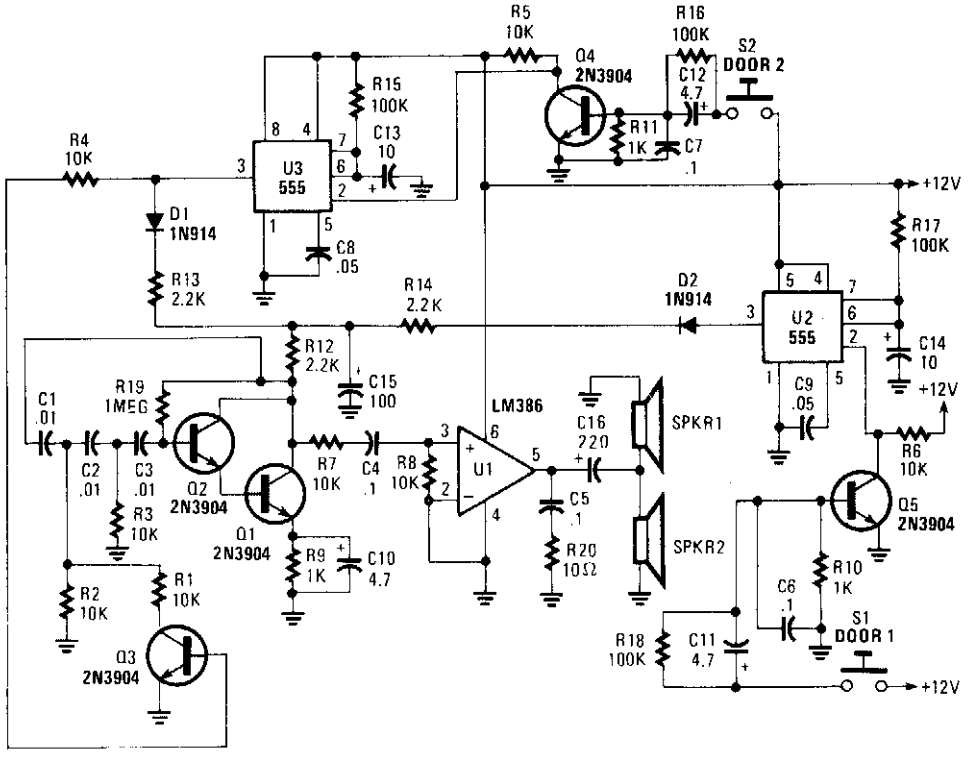


POPULAR ELECTRONICS

Fig. 3-4

A 555 timer pulses twin-T oscillator Q1. Q2 acts as an output buffer. R7 adjusts the frequency of oscillator Q1.

TWO-DOOR ANNUNCIATOR



POPULAR ELECTRONICS

Fig. 3-4

When the pushbuttons at either door are depressed, this circuit generates a different tone for each door. Tones are generated by phase-shift oscillator Q1/Q2. Q3 provides tone frequency change by changing the phase-shift network. U2 and U3 are timers for the tones and Q4/Q5 interface the timers with the pushbuttons.