



SECRET BELL

■ D. MOHAN KUMAR

Many people move through the corridors and steps in multistoried buildings. As most of them are strangers for the inhabitants of the flats, it becomes necessary to verify the identity of the visitor before opening the door as he can be a burglar.

This circuit helps you identify the members of your family. It is basically

a switchless musical bell that activates with a single puff of breath. The condenser mic fitted inside the existing door-bell switch box will trigger the bell on detecting air-pressure changes following the breath. As only the members of your family know the secret of the bell and hence puff out before the hole for the switch box, the door can be opened without fear.

The front end of the circuit is a condenser mic amplifier with fixed sensi-

tivity. Transistor T1 amplifies the signal received from the condenser mic through capacitor C1. When transistor T1 conducts, a short negative pulse triggers the monostable wired around IC1. The monostable time is decided

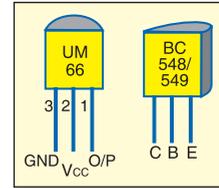


Fig. 2: Pin configuration of UM66 and BC548/549

by resistor R7 and capacitor C5. Reset pin 4 of IC1 is made stable by R6 and C3. Resistor R5 acts as a pull-up resistor for trigger pin 2 of IC1 to keep the trigger pin high in the standby mode.

The high output from IC1 is used to power IC UM66 (IC2). IC2 gener-

ates a soft melody on receiving 3 volts at pin 2. Transistor T2 amplifies the music notes. A zener diode maintains the power for IC2 at a safer level of 3 volts.

Assemble the circuit on any general-purpose PCB and enclose in a suitable cabinet. The condenser mic should be connected to the circuit using a single-core shielded wire to reduce noise interference. Drill a 1mm hole in the cover of the existing bell switch box and fix the mic inside the box with adhesive. The front side of the mic should face the hole. ●

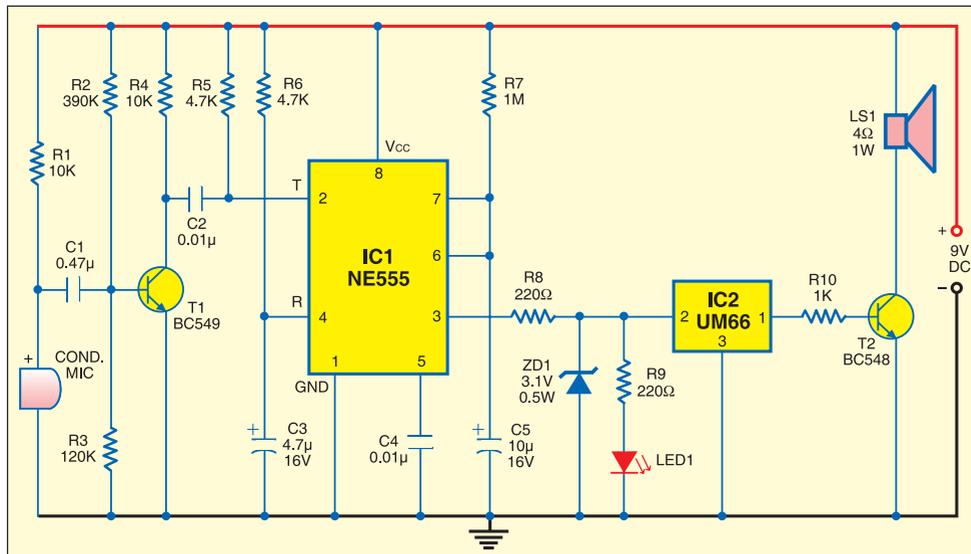


Fig. 1: Secret bell circuit