FIRE ALARM

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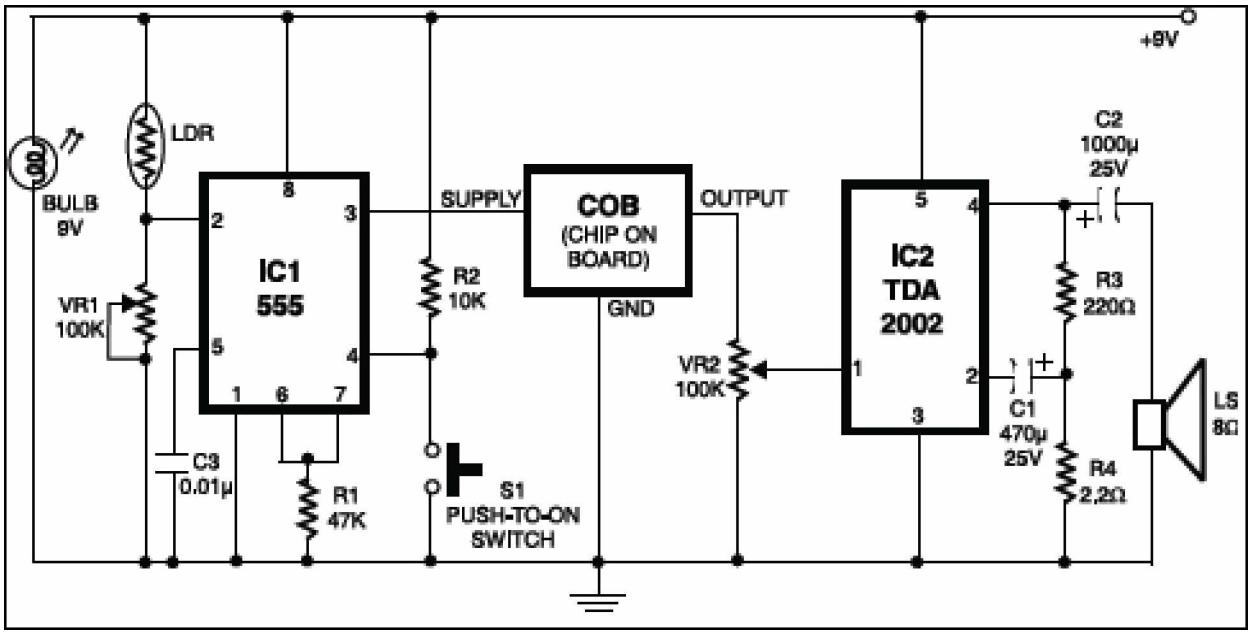
With the onset of summer, chances of fire accidents increase. Such fire accidents can be prevented if timely alarms are available. The circuit presented here warns the user against such fire accidents. The circuit should be placed in fire-prone areas such as a kitchen.



Everyone is aware that when anything catches fire, smoke is produced. When this smoke passes between a bulb and an LDR, the amount of light falling on the LDR decreases. This causes the resistance of LDR to increase and the voltage at pin 2 of IC 555 goes below 1/3 Vcc. thus triggering IC 555 which is used here in bistable mode. As a result the voltage of pin 3 goes high. This high voltage (approximately +9V) completes the supply to the COB (chip-on-board).

Different COBs are available in the market to generate different sounds. However, one may select a COB which generates sound such as ‘aag lag gai hai’. The signal generated by COB is amplified by an audio amplifier. In this circuit, the audio power amplifier is wired around IC2 TDA 2002.

The sensitivity of the circuit depends on the distance between bulb and LDR as well as setting of preset VR1. Thus by placing the bulb and the LDR at appropriate distances, one may vary preset VR1 to get optimum sensitivity.

Reset switch S1 is provided in the circuit to switch off the alarm after the fire has been noticed by the user.