

SOUND-OPERATED SWITCH FOR LAMPS

■ PRADEEP G.

This inexpensive, fully transistorised switch is very sensitive to sound signals and turns on a lamp when you clap within 1.5 metres of the switch. One of its interesting applications is in discotheques, where lights could be turned on or off in sync with the music beats or clapping.

The condenser microphone senses the sound and converts it into electrical variations. The electrical signals are amplified by the two-stage direct-coupled (DC) amplifier formed by transistors T1 and T2 and fed to the switching circuit. The switching circuit comprises transistors T3,

T4 and T5, which conduct only when the circuit senses sound signals. Transistor T5 supplies sufficient gate voltage to the triac to drive the 230V lamp.

The regulated 12V DC power supply for the circuit is derived from AC mains by using resistor R14, diode D1 and zener diode ZD1. The circuit can be assembled on any general-purpose PCB. ●

