

TESTER FOR REMOTE CONTROL



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Here is a simple tester for checking the basic operations of an infrared remote control unit. It is low-cost and easy to construct.

The tester is built around infrared receiver module TSOP1738. Operation of the remote control is acknowledged by a tone from the buzzer. The circuit is sensitive and has a range of approxi-

mately five metres. The integrated IR receiver detects, amplifies and demodulates IR signals from the remote control unit. The piezobuzzer connected at its output sounds to indicate the presence of signal from the remote control unit.

As shown in Fig. 1, output pin 3 of IR receiver module TSOP1738 (IRX1) normally remains high and the piezobuzzer is in silent mode. When the

IR module IRX1 receives an infrared signal, its output goes low and, as a result, the piezobuzzer sounds to indicate the reception of sig-

nal from the remote (such as TV remote control unit).

Power supply for the circuit is derived from the mains using a capaci-

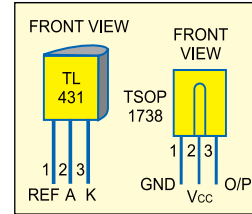


Fig. 2: Pin configuration of TL431 and TSOP 1738

tive potential dropper, a half-wave rectifier, a shunt regulator and associated components. Make sure that capacitor C1 is of X2 type. Use a suitably small enclosure to make the unit handy.

Assemble the circuit on a general-purpose PCB and enclose in a cabinet. Make sure that the IR receiver module is placed on the front panel of the cabinet so that it can receive the IR signals easily. Before soldering/connecting the shunt regulator and IR module, refer Fig. 2 for the pin configuration. ●

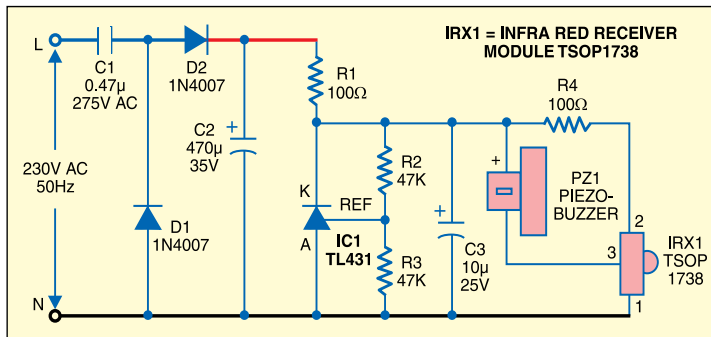


Fig. 1: Circuit diagram of remote tester