

# ***IR Remote Control Tester***

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This small circuit is ideal for checking the basic operation of an infrared remote control unit. The circuit is based on the brilliantly simple idea of connecting a

piezo buzzer directly to an IR receiver IC. This method is almost as simple as connecting a photodiode directly to the input of an oscilloscope, but has the advantage that no oscilloscope is needed: the compact unit is always ready to use and

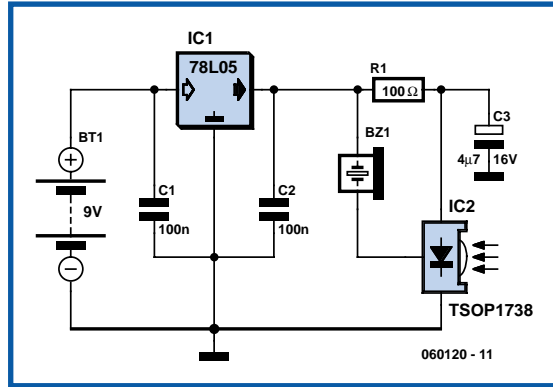
much easier to carry around than bulky test equipment.

Operation of the remote control is indicated by the buzzer making a chattering noise. The circuit is very sensitive and has a range of several metres.



The TSOP1738 integrated IR receiver accepts, amplifies and demodulates the IR signal from the remote control, producing an output with a frequency of around 700 Hz. The piezo buzzer is connected to its output, rendering the signal audible.

All the other components are simply concerned with producing a stable 5 V power supply from the 9 V PP3-(6F22) type battery. Instead of the TSOP1738 similar



devices from other manufacturers can be used, and of course carrier frequencies other than 38 kHz can be used. The circuit still works if there is a mismatch between the nominal carrier frequencies of the transmitter and receiver IC, but range is reduced. It is still, however, adequate for determining whether a remote control is producing an IR signal or not.