



Circuit : Rev. Thomas Scarborough

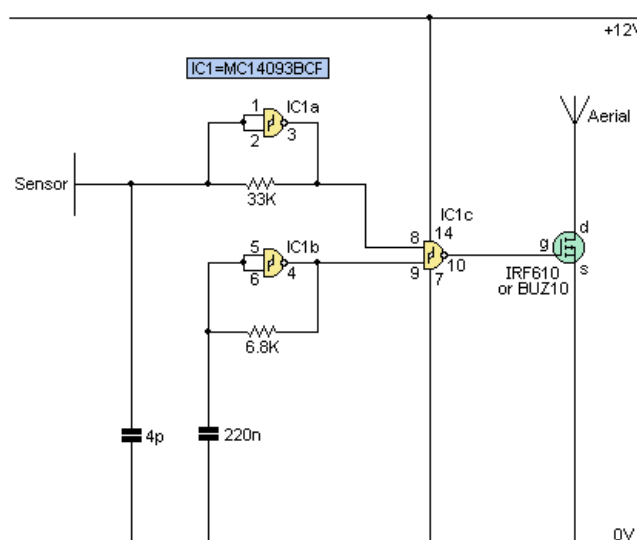
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Description:

This simple circuit is sure to have the police beating a path to your door- however, it has the added advantage of alerting you to their presence even before their footsteps fall on the doormat.

Radio Wave Alarm

by Rev. Thomas Scarborough



Circuit Notes

The circuit transmits on Medium Wave (this is the small problem with the police). IC1a, together with a sensor (try a 20cm x 20cm sheet of tin foil) oscillates at just over 1MHz. This is modulated by an audio frequency (a continuous beep) produced by IC1b. When a hand or a foot approaches the sensor, the frequency of the transmitter (IC1a) drops appreciably.

Suppose now that the circuit transmits at 1MHz. Suppose also that your radio is tuned to a frequency just below this. The 1MHz transmission will therefore not be heard by the radio. But bring a hand or a foot near to the sensor, and the transmitter's frequency will drop, and a beep will be heard from the radio.

Attach the antenna to a multiplug adapter that is plugged into the mains, and you will find that the Medium Wave transmission radiates from every wire in your house. Now place a suitably tuned Medium Wave radio near some wires or a plug point in your house, and an early-warning system is set up.

Instead of using the sheet of tin foil as the sensor, you could use a doorknob, or burglar bars. Or you could use a pushbutton and series resistor (wired in series with the 33K resistor - the pushbutton would short it out) to decrease the frequency of IC1a, so activating the system by means of a pushbutton switch. In this case, the radio would be tuned to a frequency just below that of the transmitter.