

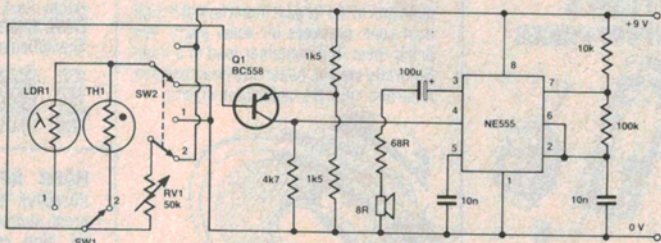
Versatile alarm

This versatile alarm circuit can be set to trip on light/dark/hot/cold, as an 'under' or 'over' alarm. **Justin Roff-Marsh of Oonoonba in Queensland** submitted the idea.

An LDR and a thermistor provide the appropriate sensing, selected by switch SW1. Switch SW2 sets the sensors to trip the relay as an 'under' or 'over' alarm. If SW2 is set to position 2, and SW1 to position 1, the alarm will trip when sufficient light falls on LDR1, reducing its resistance so that it provides bias to the base of Q1, via RV1 — the sensitivity control. With SW2 still on position 2 and SW1 on position 2,

the thermistor is selected and the alarm will be tripped when the thermistor reaches sufficient temperature to lower the resistance and provide enough bias to Q1 to turn it on. When SW2 is on position 1, bias is robbed from the base of Q1 when the light is above a preset level or the temperature is above a preset level, depending on which sensor is selected. When the light or temperature falls below the preset level — determined by RV1 — then Q1 turns on and the alarm sounds.

When Q1 turns on, it sets the 555, which commences to oscillate, its output driving the 8 ohm speaker, providing the alarm sound.



LDR1 = ORP12 OR SIMILAR
TH1 = SMALL DISC THERMISTOR
RV1: SENSITIVITY VALUE CAN
BE CHANGED TO SUIT NEEDS
Q1: ANY GENERAL PURPOSE PNP
TRANSISTOR SHOULD DO

SW2: 1 - UNDER ALARM; 2 - OVER ALARM