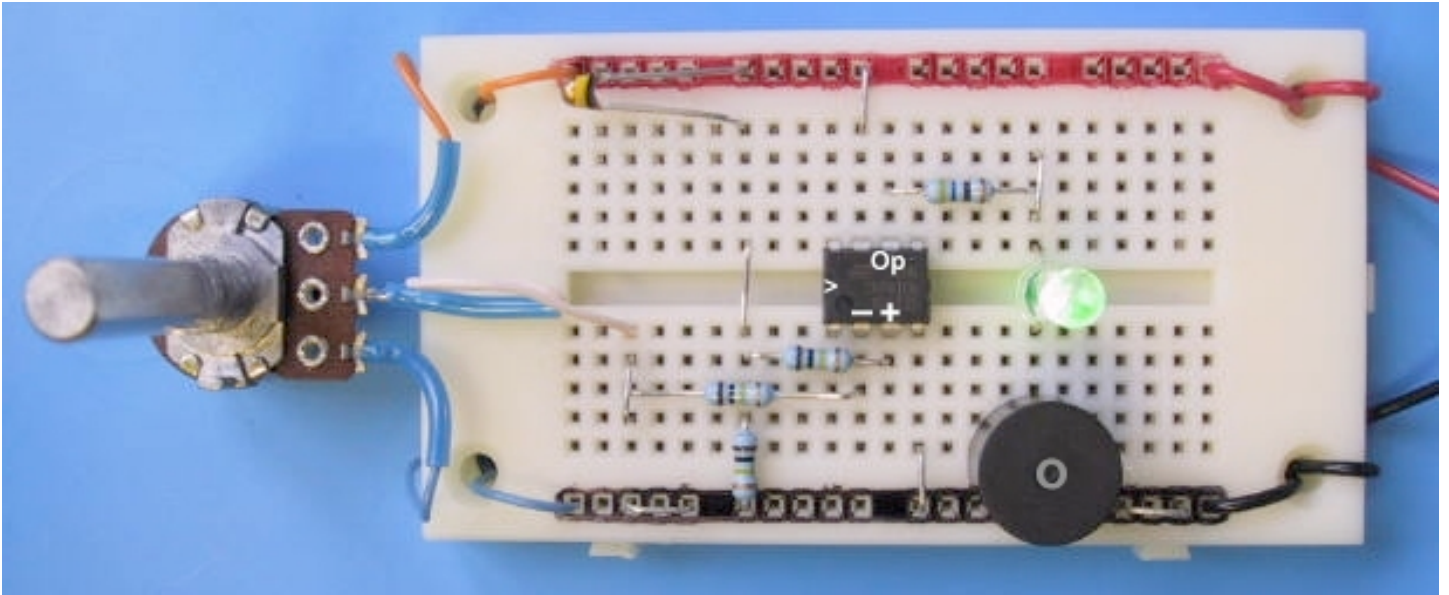
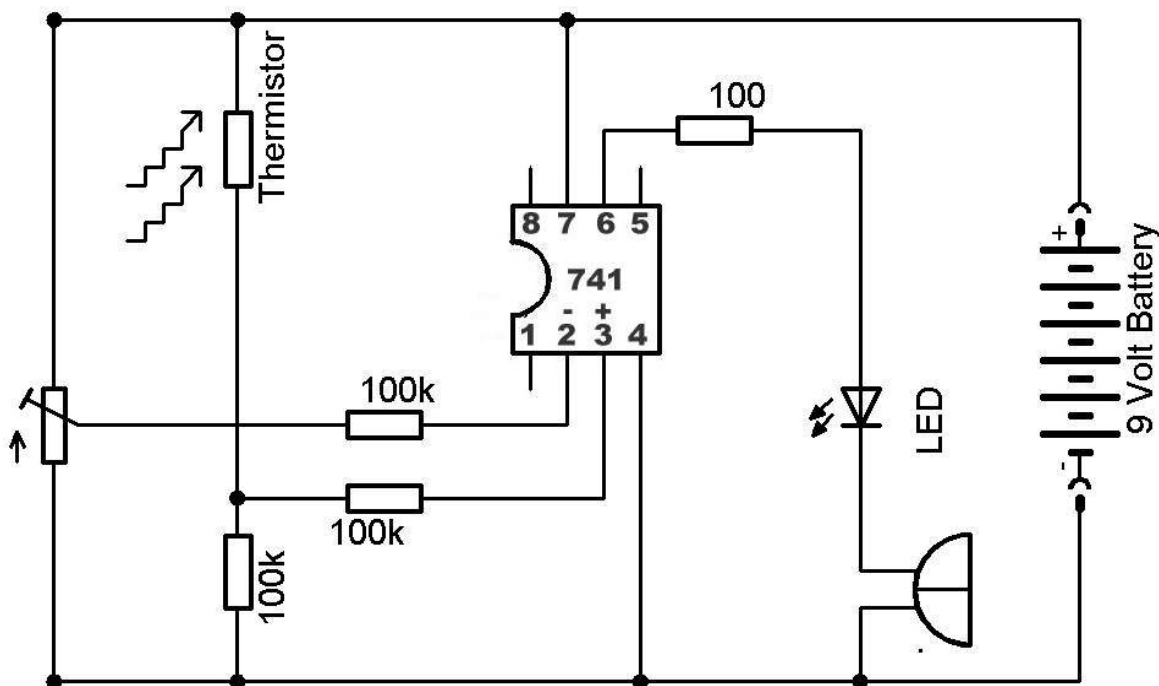


741 Op Amp - Comparator



- Set Up the Comparator Op Amp and adjust the 100k Pot until the alarm is 'just' off
- Place the board in a warmer place and check the alarm goes off
- Modify the circuit to become a LOW temperature alarm
- How can the Output be connected to a relay, Motor or PIC controller ?



- Is this circuit TOO sensitive? What would happen if the temperature changed by a fraction of a degree every few minutes (clouds, cycling of heaters etc)
- Turn the circuit into a Schmidt Trigger by applying Hysteresis in the form of a small amount of POSITIVE feedback from the OP to the Input non inverting (+) input.
- Test with a 1 Meg ohm resistor. What happens if this value is decreased ?
- The term Hysteresis derives from an ancient Greek word $\upsilon\sigma\tau\acute{\epsilon}\rho\eta\sigma\iota\varsigma$, meaning "deficiency", or "lagging behind". It was coined by Sir James Alfred Ewing.
- Why is Hysteresis important in control systems ? (think about relays, motors)