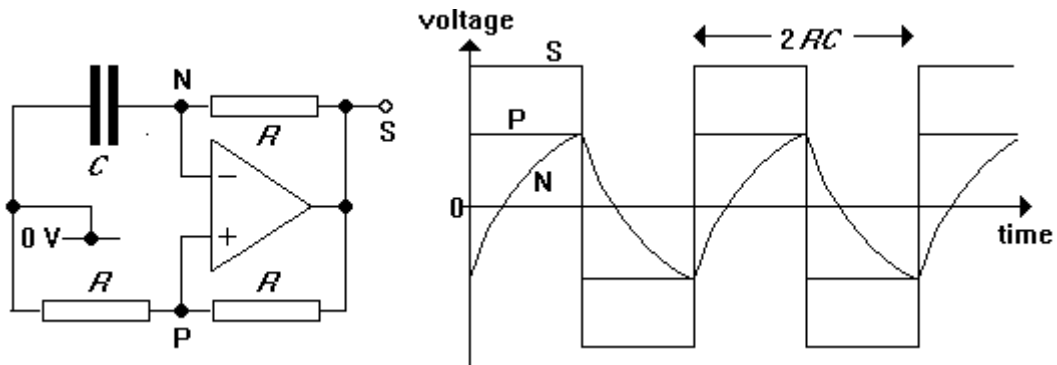


### A relaxation oscillator

1. Design a 500 Hz relaxation oscillator which employs an op-amp and a 100 nF capacitor. The circuit diagram is shown below.



2. Assemble the oscillator. Use a CRO to measure its frequency. Study the waveforms at the plus and minus inputs of the op-amp.
3. By trial and error, determine the highest frequency at which your oscillator will work.
4. Replace the negative feedback resistor with an LDR. Your oscillator should now have a frequency which depends on the amount of light which hits the LDR. Add a push-pull follower and a speaker as shown below.

