## LINEAR VOLTAGE CONTROLLED OSCILLATOR

This oscillator is very similar to the triangle square wave oscillator shown on this page, except that this one is voltage controlled. The integrator and Schmitt trigger action are the same as before, but the feedback has been altered. The input voltage Vin, is applied differentially to the integrator via the resistor network. The larger the value of Vin, the faster the integrator ramps up and down. Thus the frequency of the operation is determined by an external positive control voltage. The frequency is linearly proportioned to this control voltage.

When the output of the Schmitt is low, Q1 is off and all the input voltage is applied to the inverting input. Half of the input voltage is always applied to the non-inverting input. Therefore the integrator's output ramps downward until the Schmitt flips into its positive state. Now, Q1 is switched on and the voltage at the inverting input is negative with respect to the non-inverting input. Hence the integrator now ramps upwards.