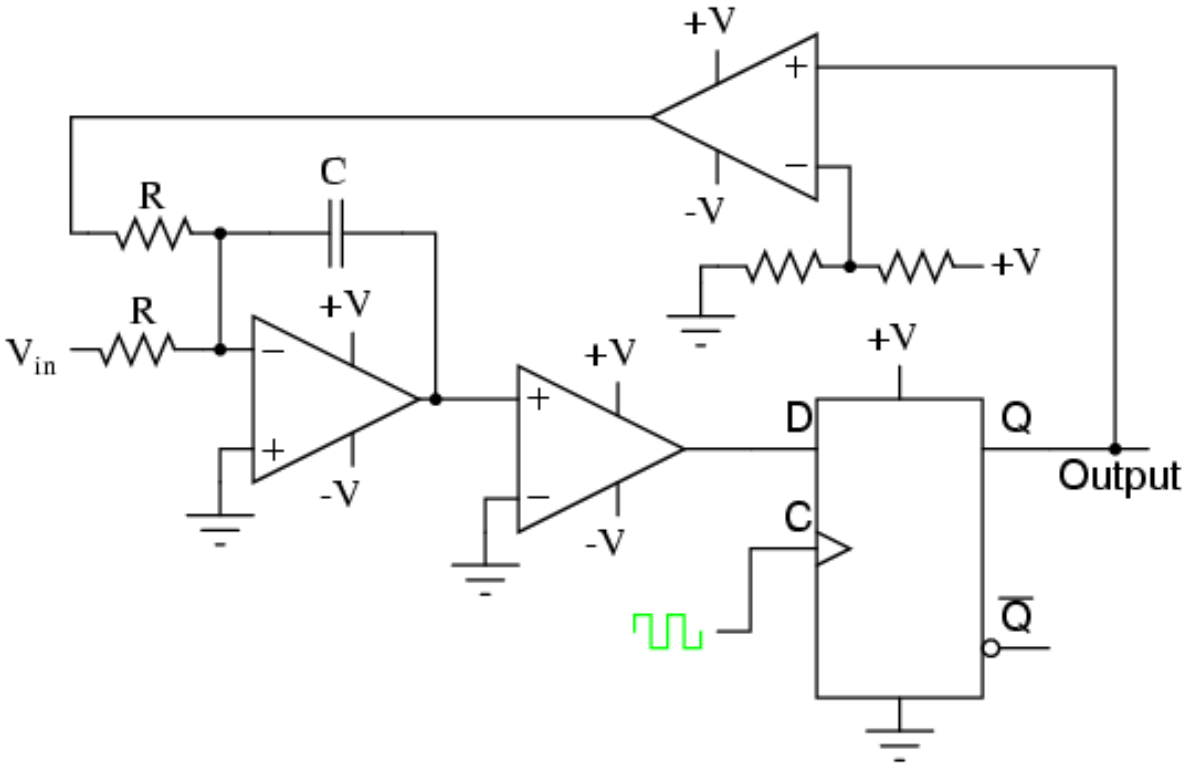
Sigma-Delta ADC



ΔΣ converter operation with 0 volt analog input

Flip-flop output

0 1 0 1 0 1 0 1 0 1 0 1 0 1

Integrator output

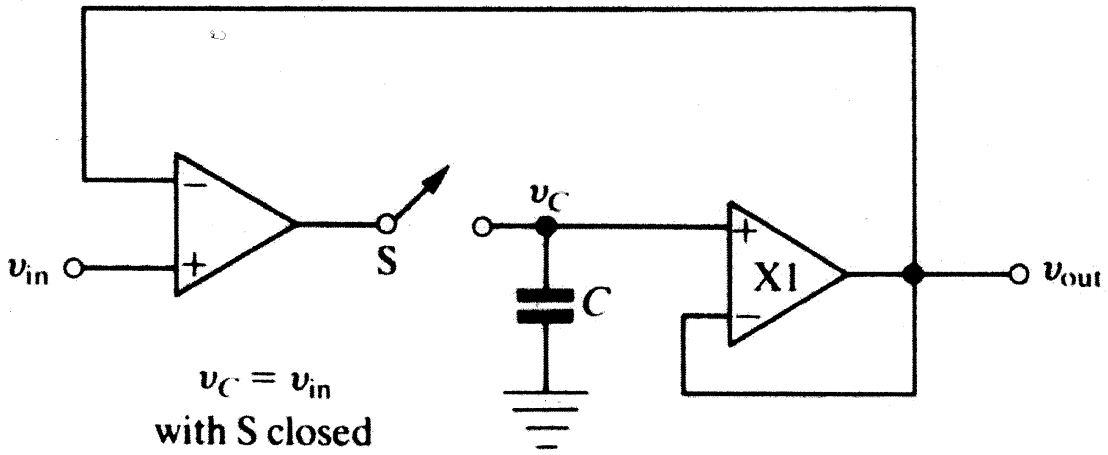
ΔΣ converter operation with large negative analog input

Flip-flop output

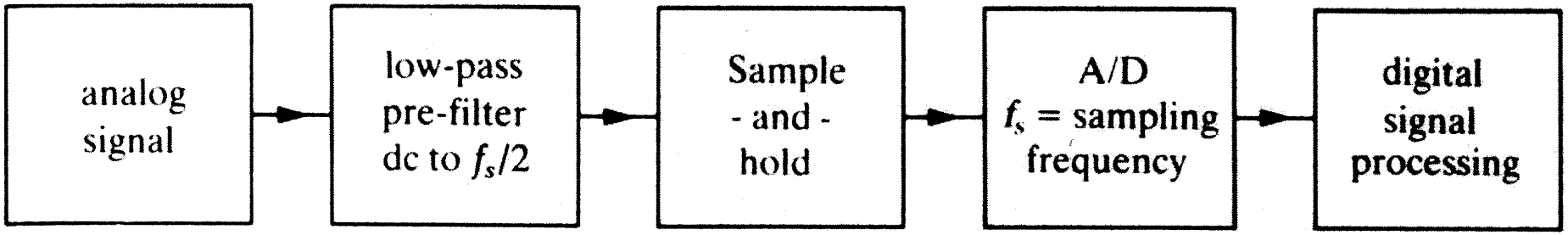
0 1 0 1 1 0 1 1 1 0 1 1 0 1

Integrator output

Sample and Hold



General ADC



$f_s > 2 f_{max}$ where f_{max} = highest-frequency Fourier component of analog input