

$f_m=1\text{Hz}$, $f_s= 10 \text{ sample/sec}$, $f_s > 2f_m$

$f_m=1\text{Hz}$, $f_s= 1.5 \text{ sample/sec}$, $f_s < 2f_m$

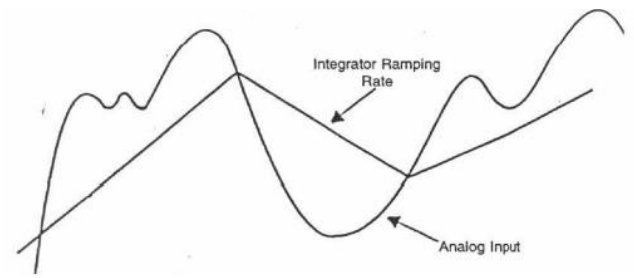


Figure 3.4 Information Loss due to Rapid input Changes

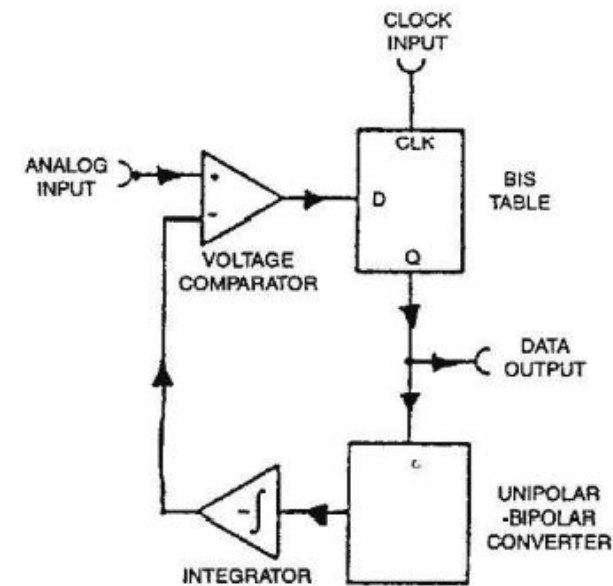
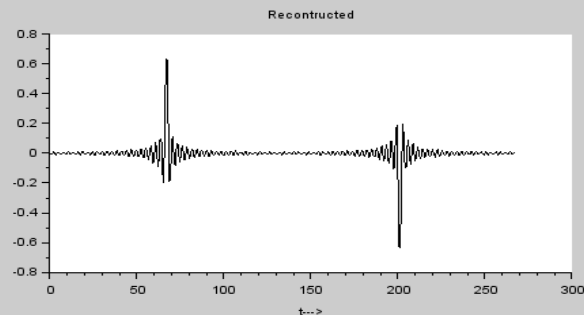
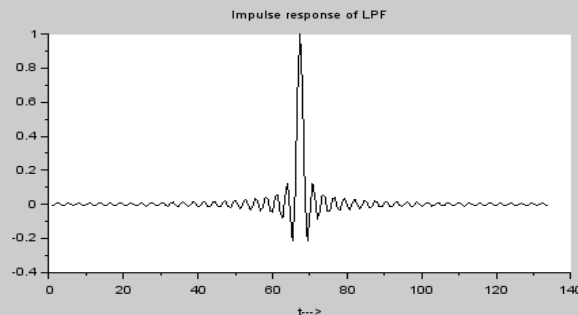
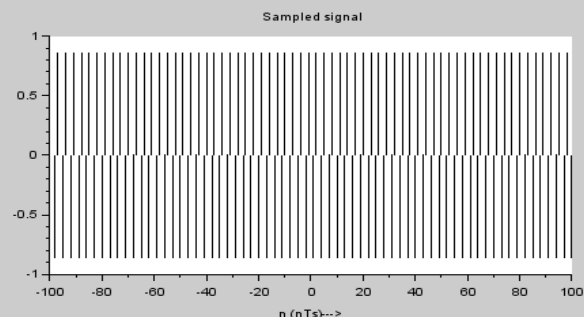
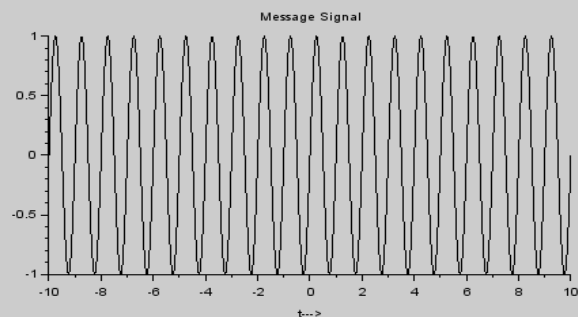


Figure 3.1 Delta Modulator

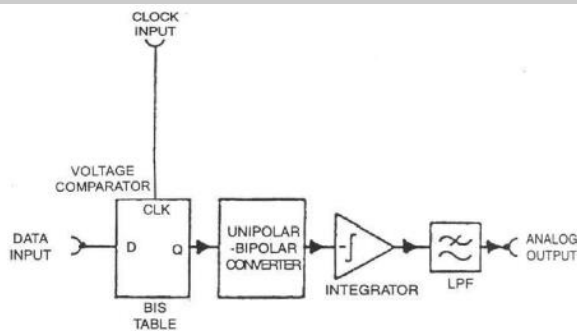


Figure 2.2 Delta Modulator

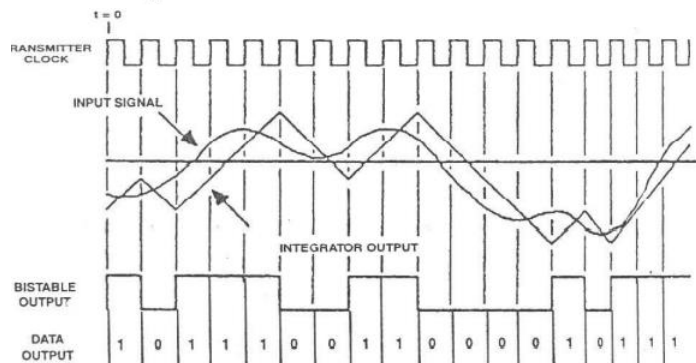


Figure 2.3 Technique of Delta Modulation

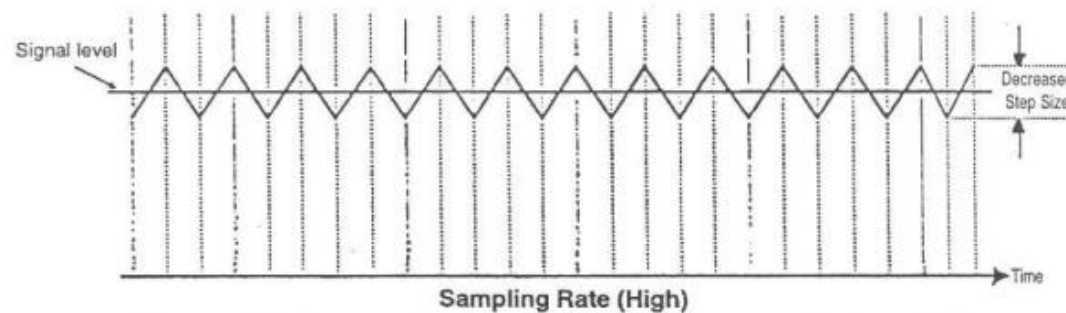
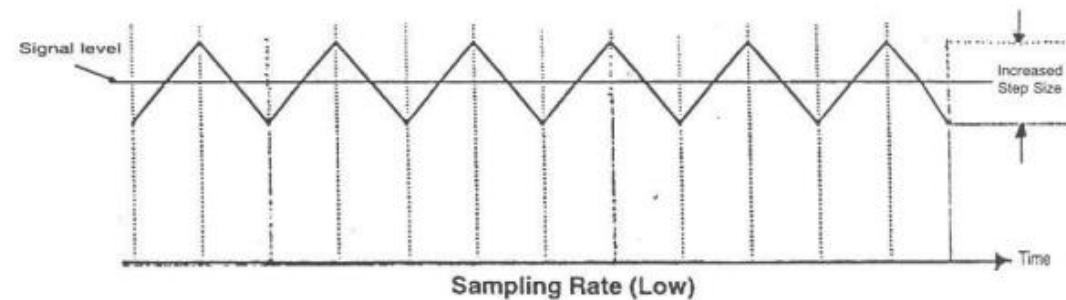
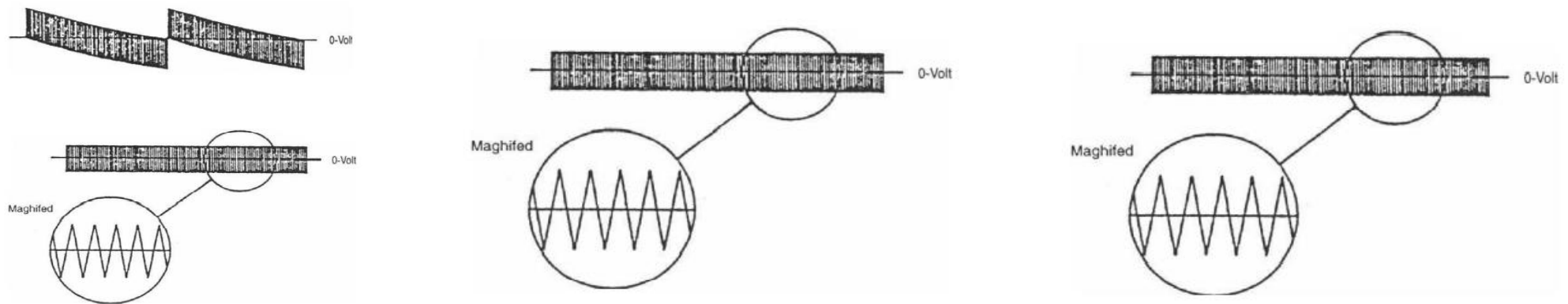


Figure 3.5 Effect of Sampling Rate on Quantization Noise & Step-



Case A: Bipolar output – Positive level = Negative level Case B: Bipolar output – Positive level < Negative level Case C: Bipolar output – Positive level > Negative level



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DELTA, ADAPTIVE DELTA & DELTA SIGMA
MODULATION / DEMODULATION TRAINER

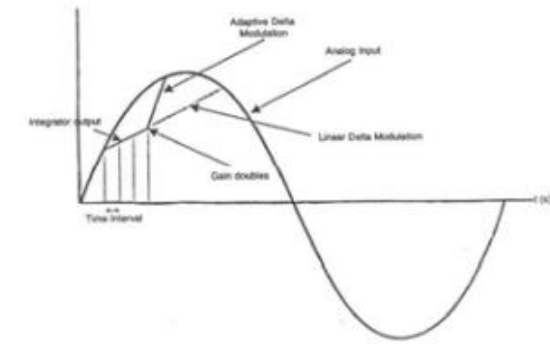
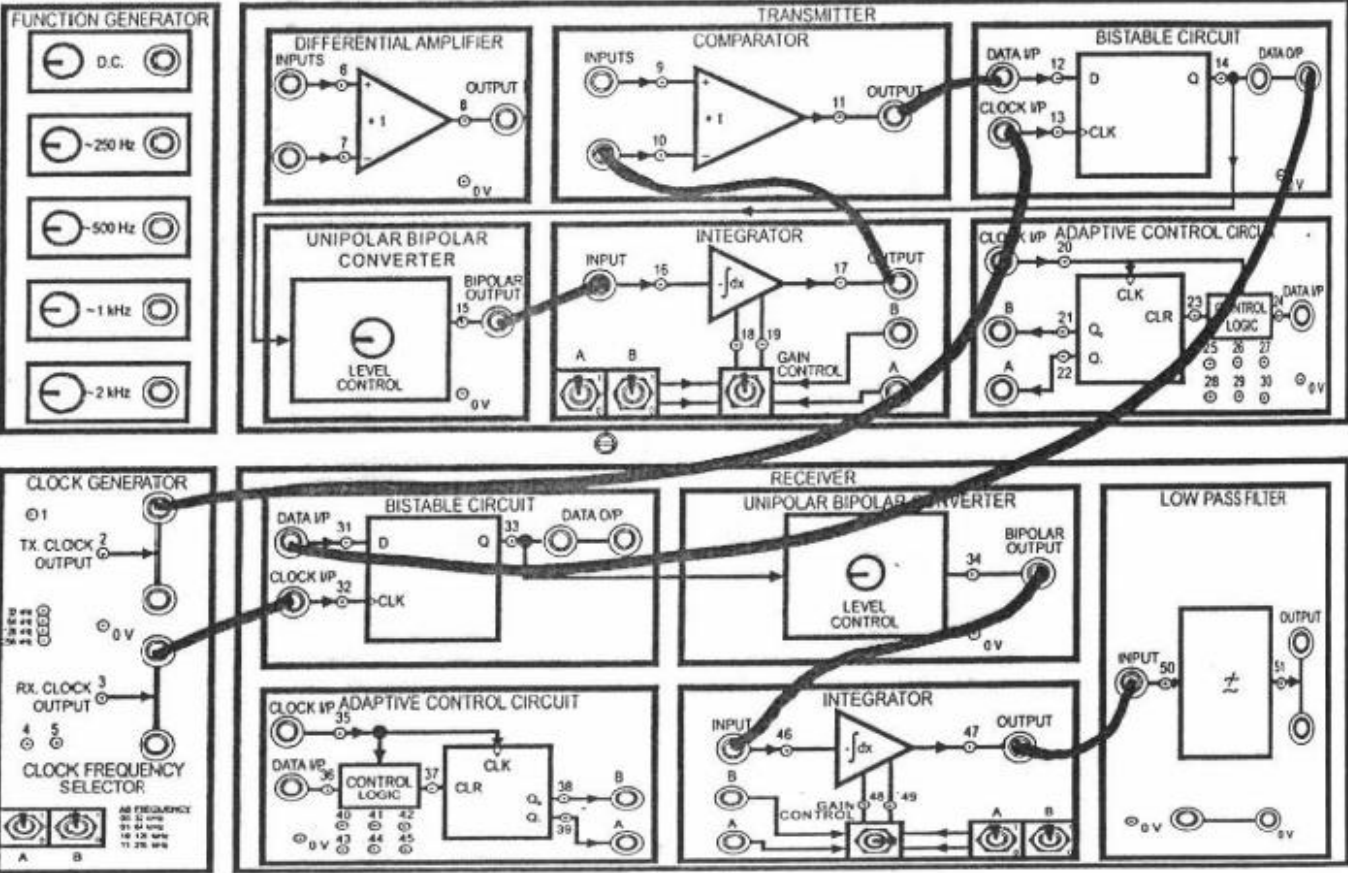


Figure 4.1 Principal of Adaptive Delta Modulation

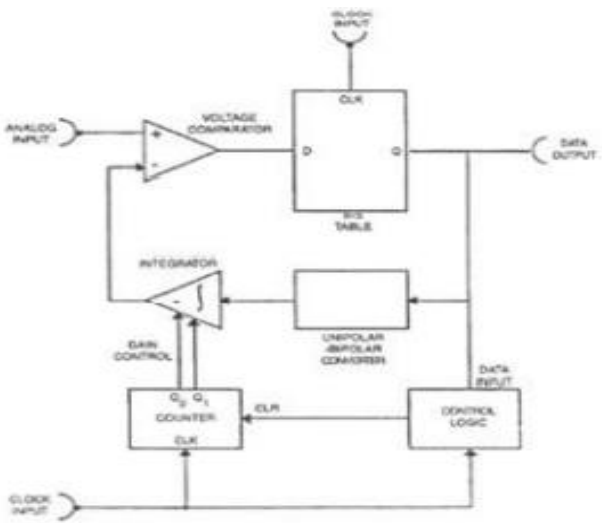


Figure 4.2 Adaptive Delta Modulator

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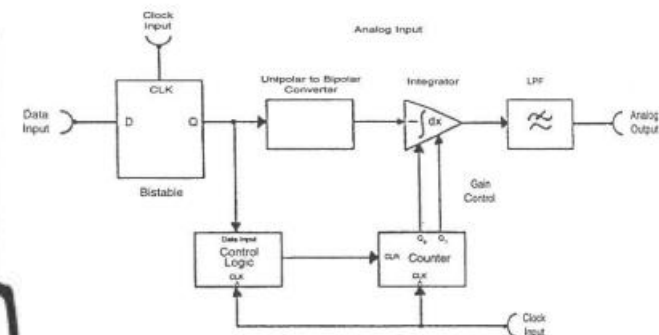
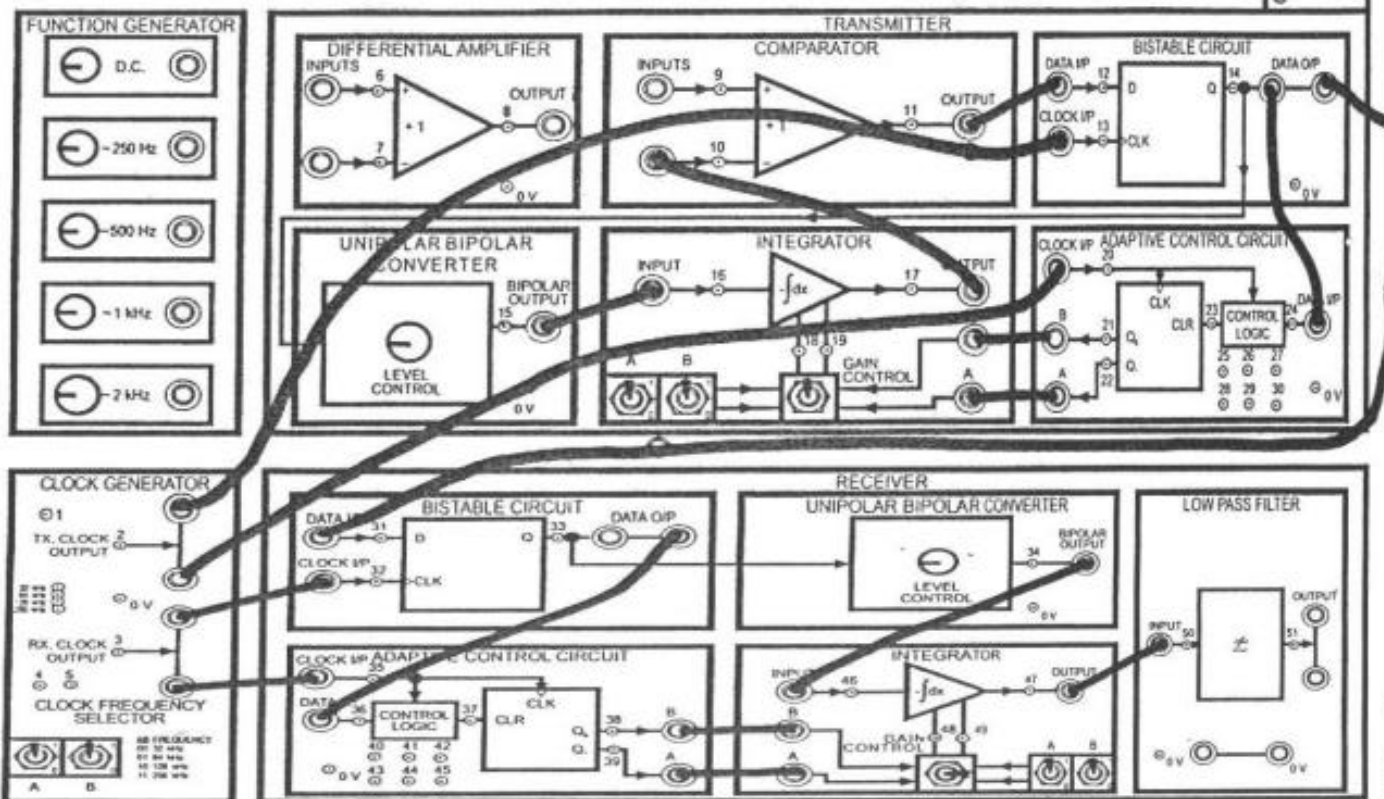


Figure 4.3 Adaptive Delta Demodulator

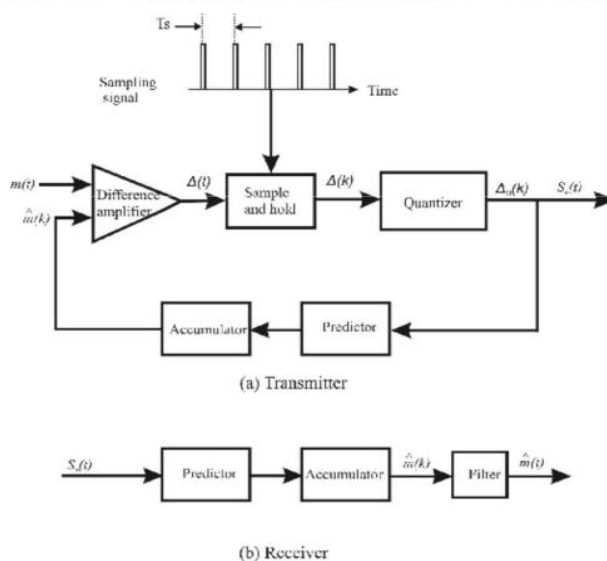
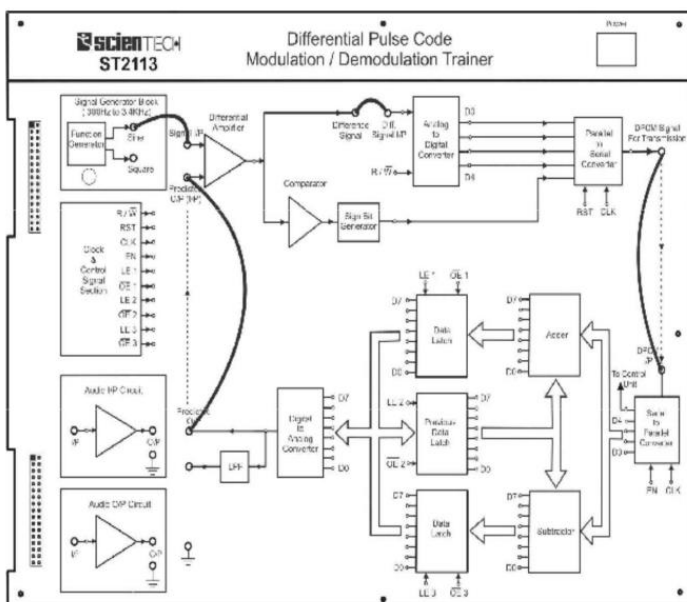


Figure 5.1 DPCM Transmitter / Receiver

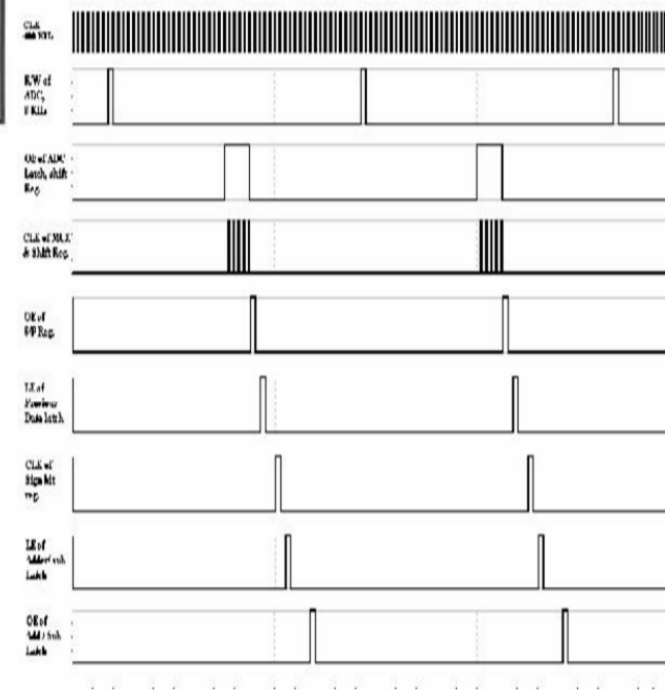


Figure 5.3 Timing Diagrams