



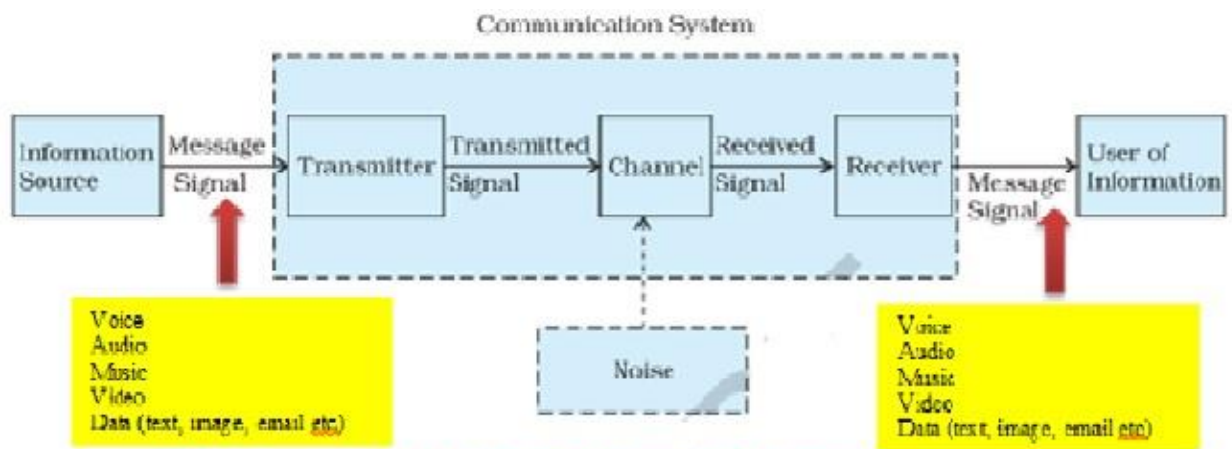
GANDHI SCHOOL OF ENGINEERING, BHABANDHA, BERHAMPUR

# TEACHING LEARNING MATERIAL OF ANALOG & DIGITAL COMMUNICATION

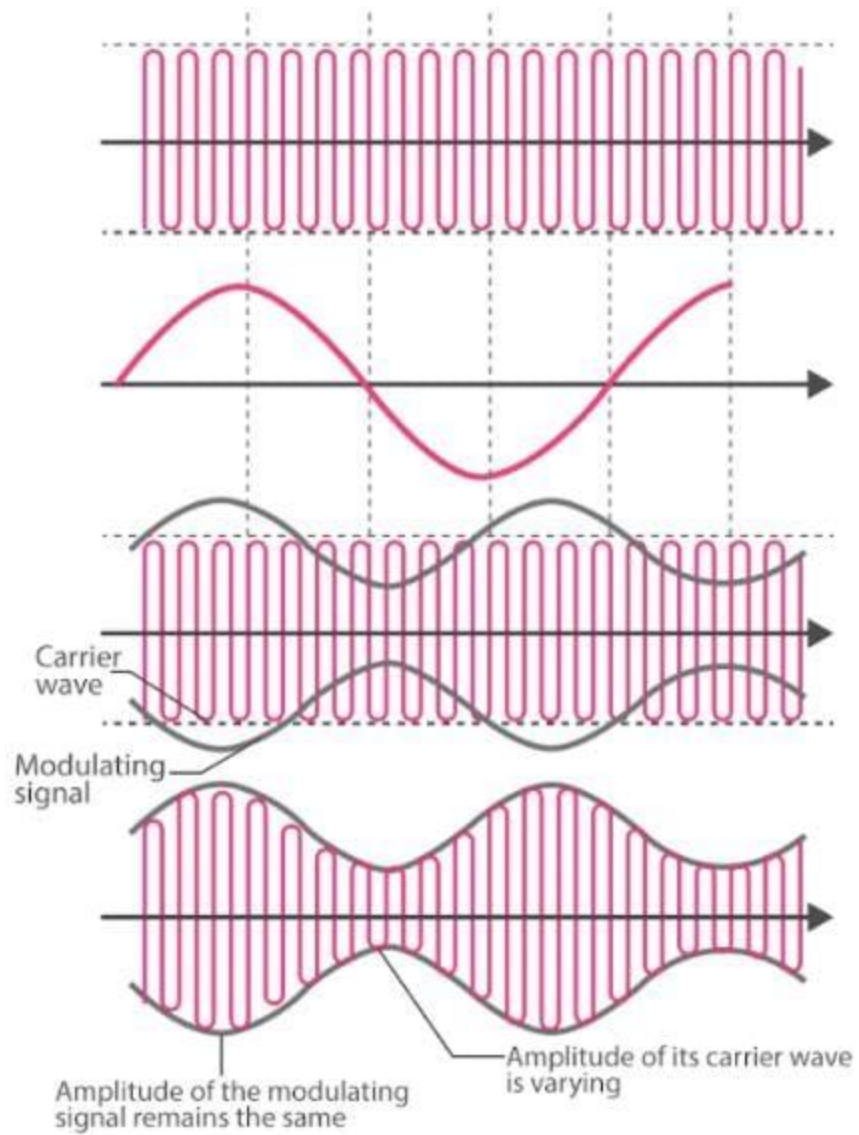
## ELEMENTS OF COMMUNICATION



## BLOCK DIAGRAM OF COMMUNICATION

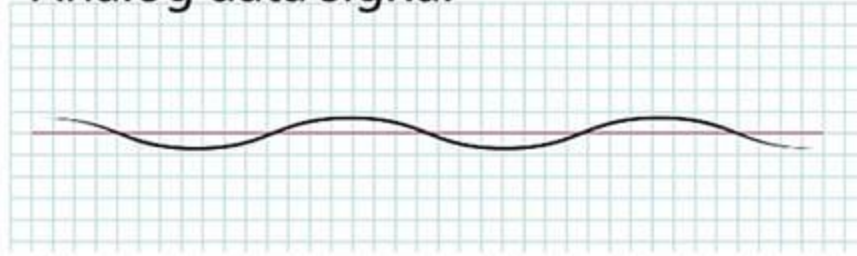


**FIGURE** Block diagram of a generalised communication system.

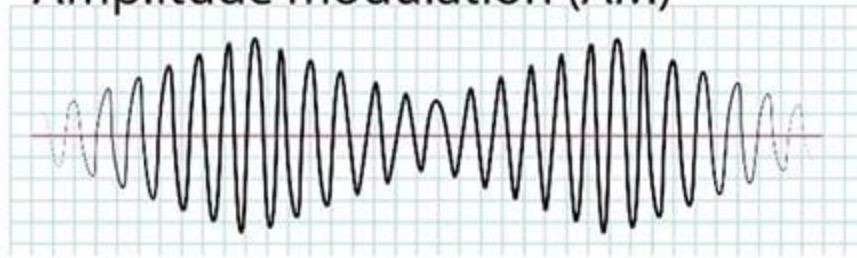


## AMPLITUDE MODULATION

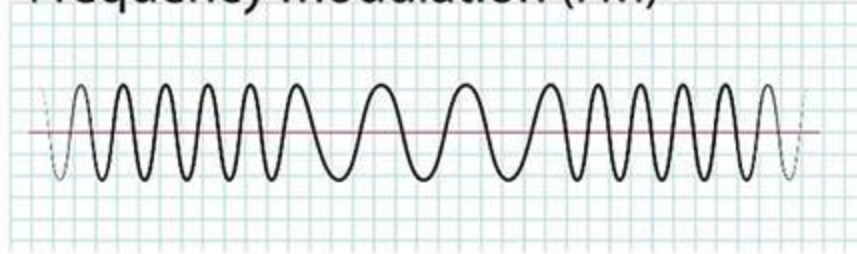
Analog data signal



Amplitude modulation (AM)



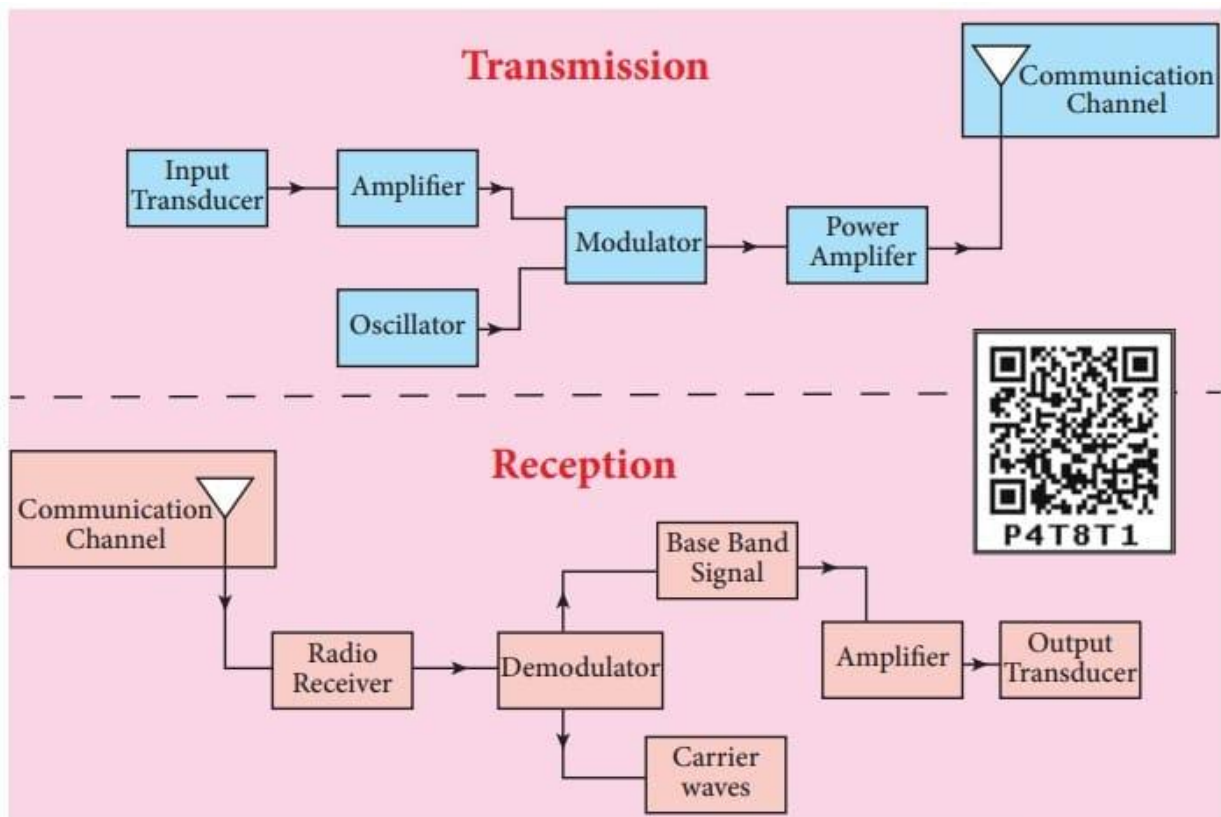
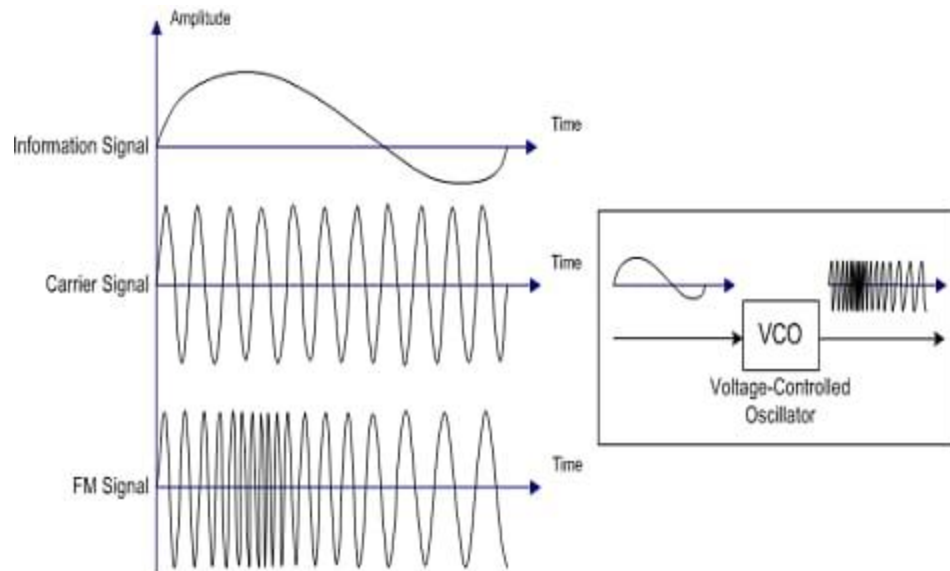
Frequency modulation (FM)



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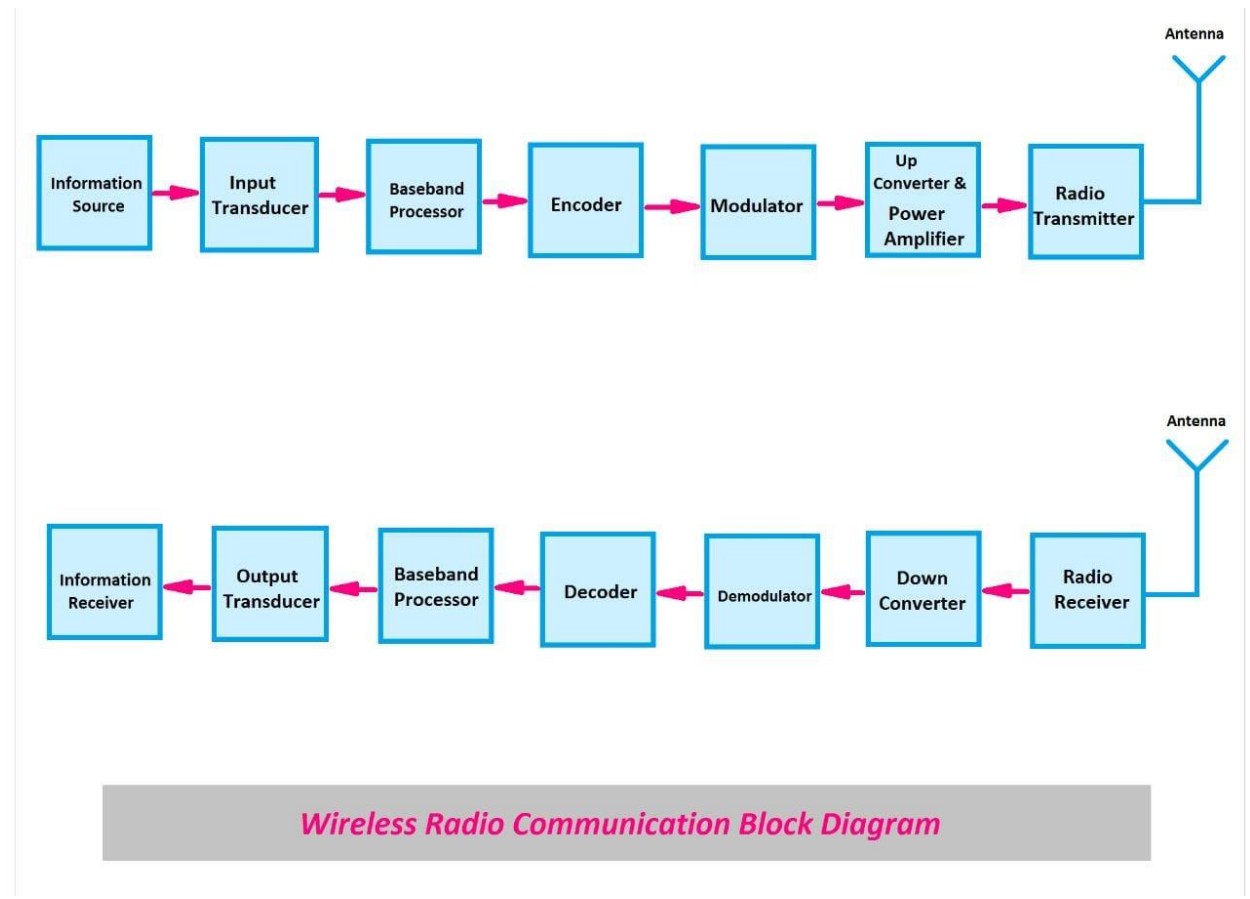
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**FREQUENCY MODULATION**

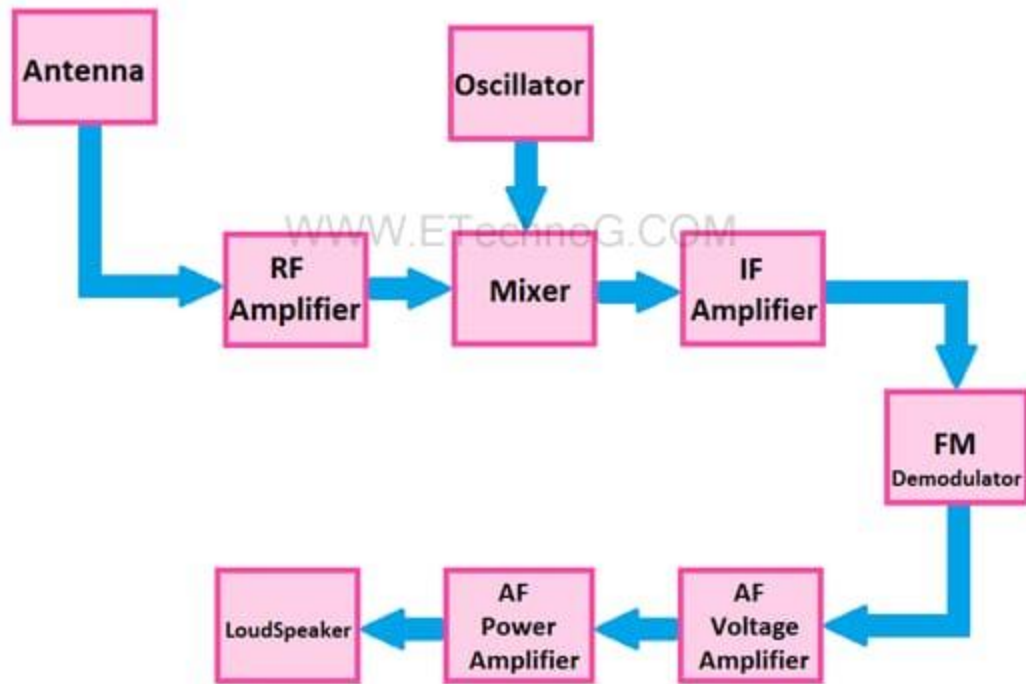


**Figure 10.4** Block diagram of transmission and reception of voice signals

## TRANSMISSION AND RECEPTION

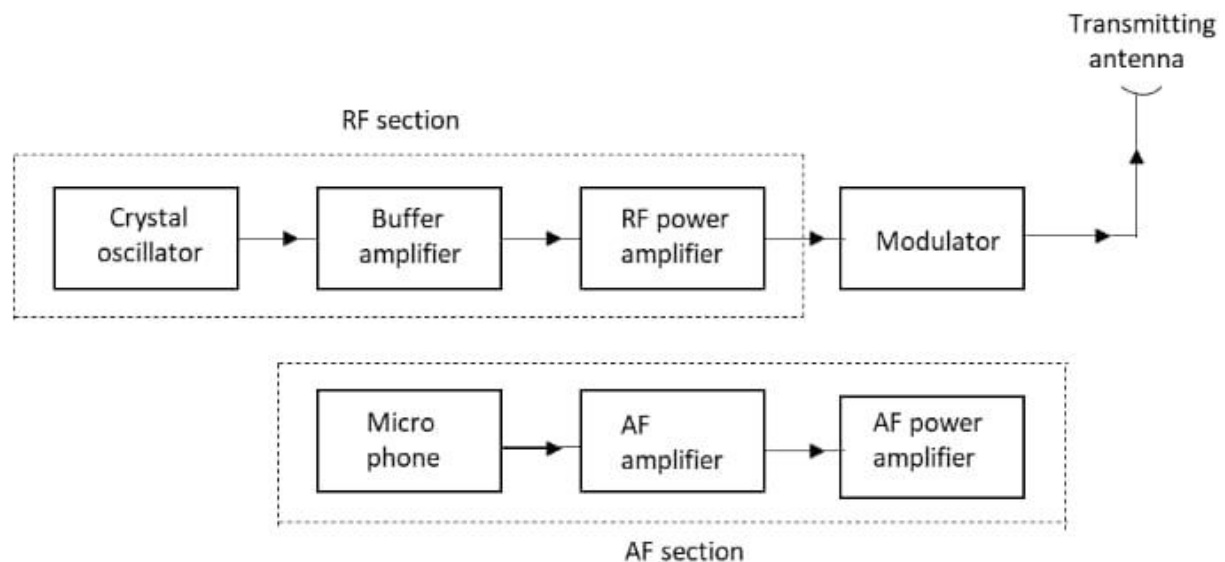


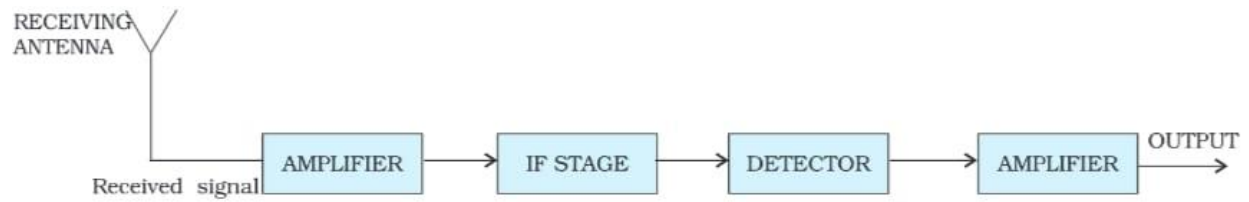
## BLOCK DIAGRAM OF RADIO COMMUNICATION



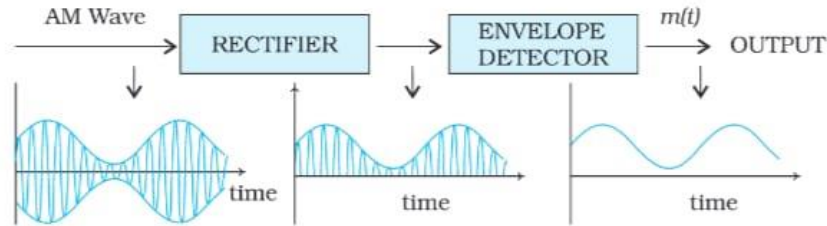
FM Receiver Block Diagram

### BLOCK DIAGRAM OF FM RECEIVER





(a)



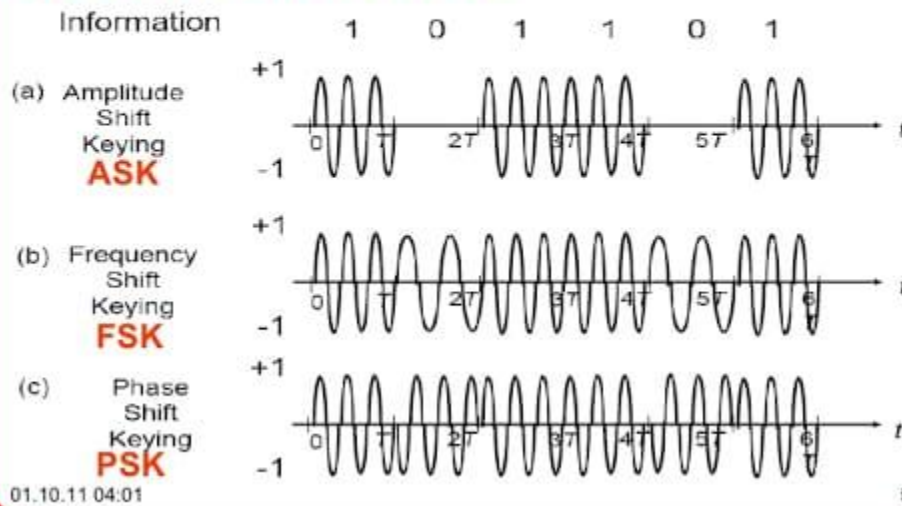
(b)

### BLOCK DIAGRAM OF AM RECEIVER

## Analog Transmission

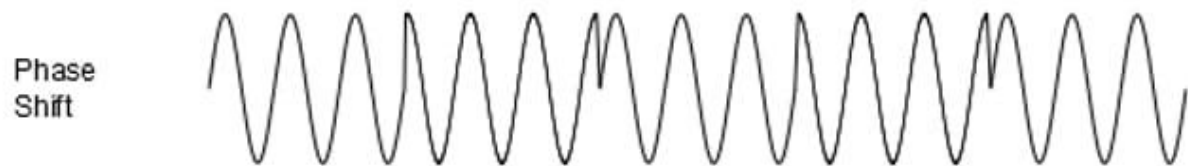
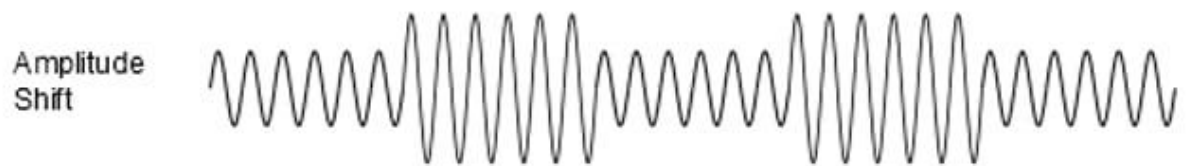
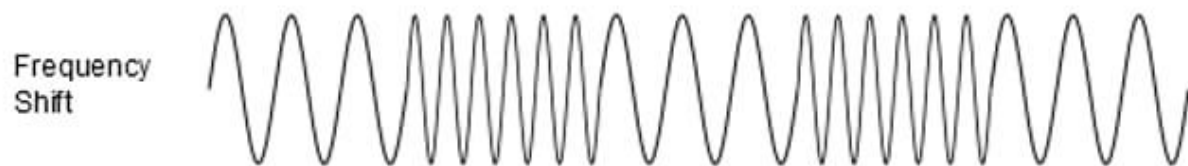
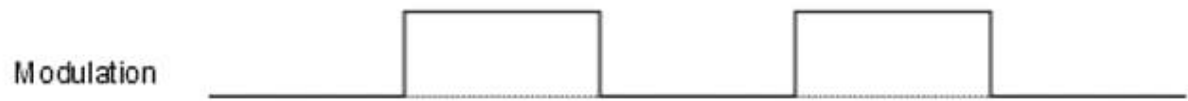
### Digital - to - Analog Conversion

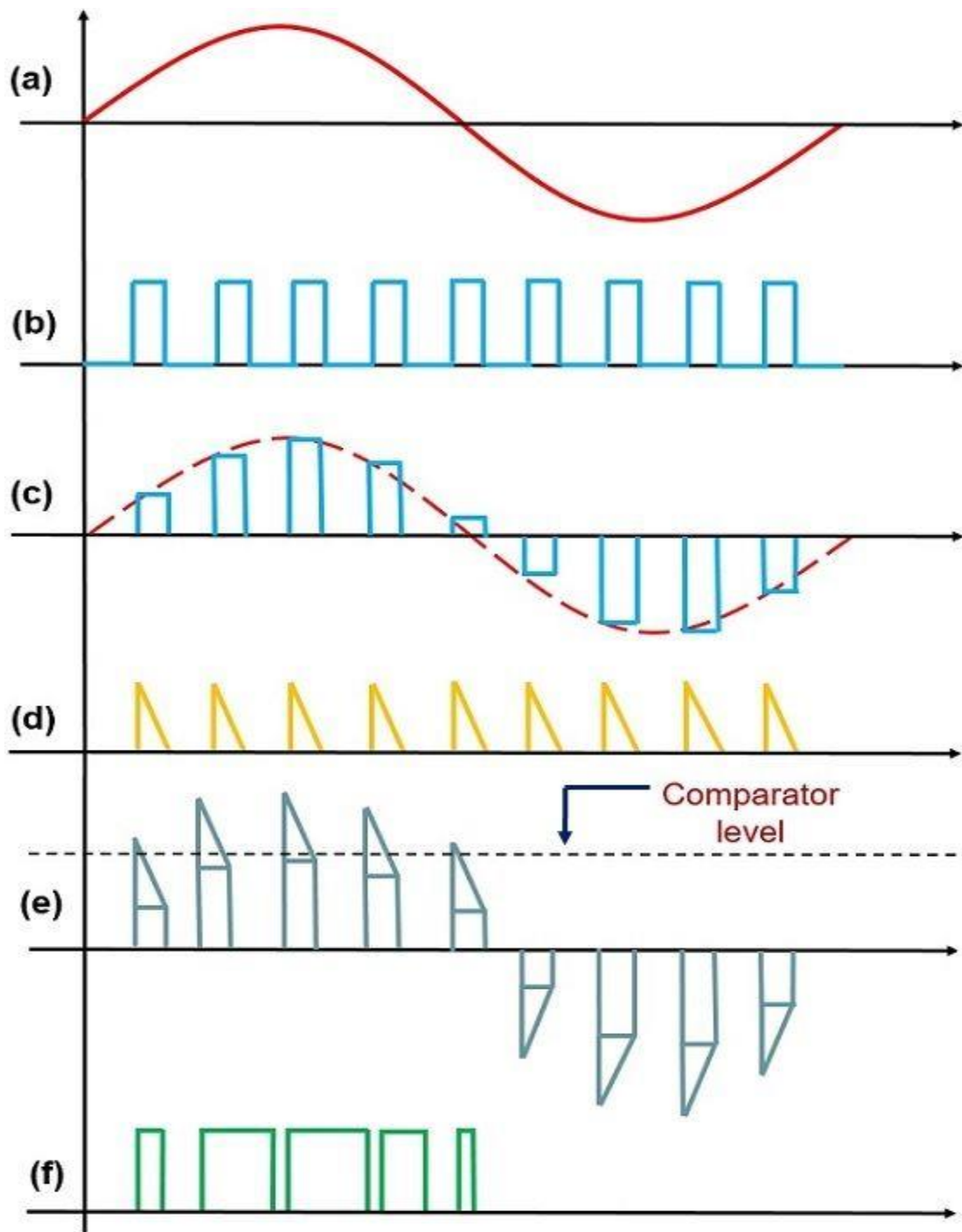
### Types : ASK, FSK, PSK



### ASK,FSK,PSK

Digital Data | 0 | 1 | 0 | 1 | 0 |



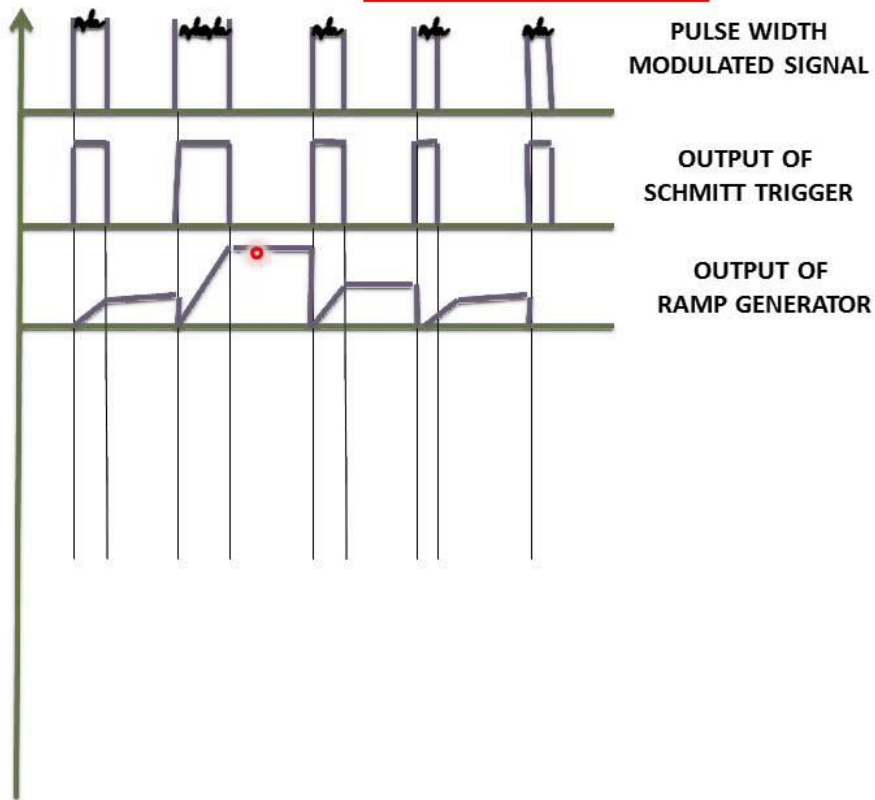


Waveform representation of PWM signal generation

Electronics Coach

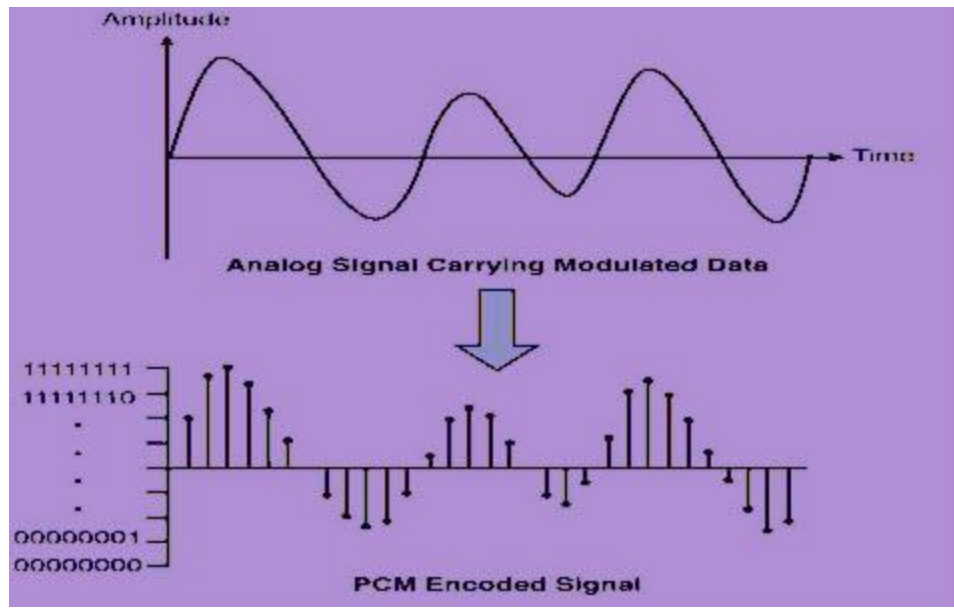
## PULSE WIDTH MODULATION

## **DEMODULATION OF PULSE WIDTH MODULATION SIGNAL (PWM)**

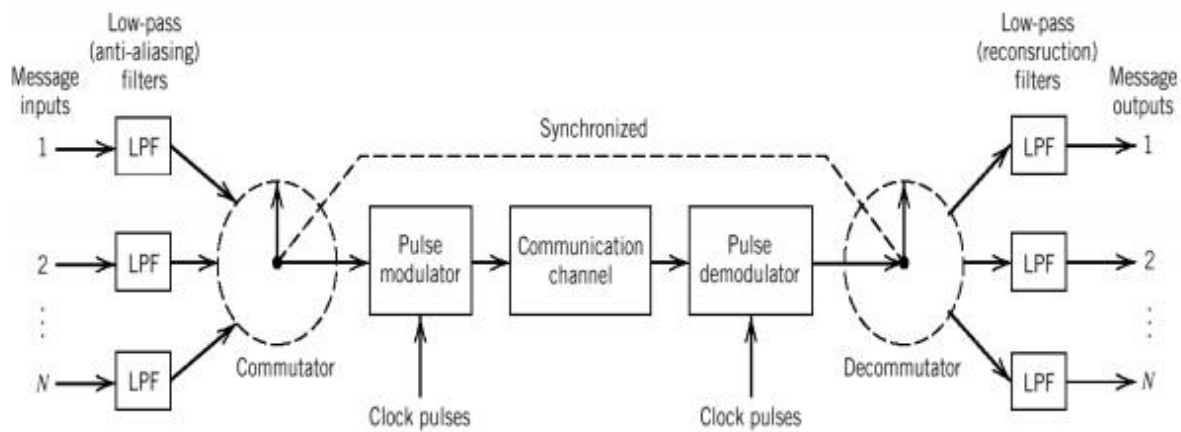


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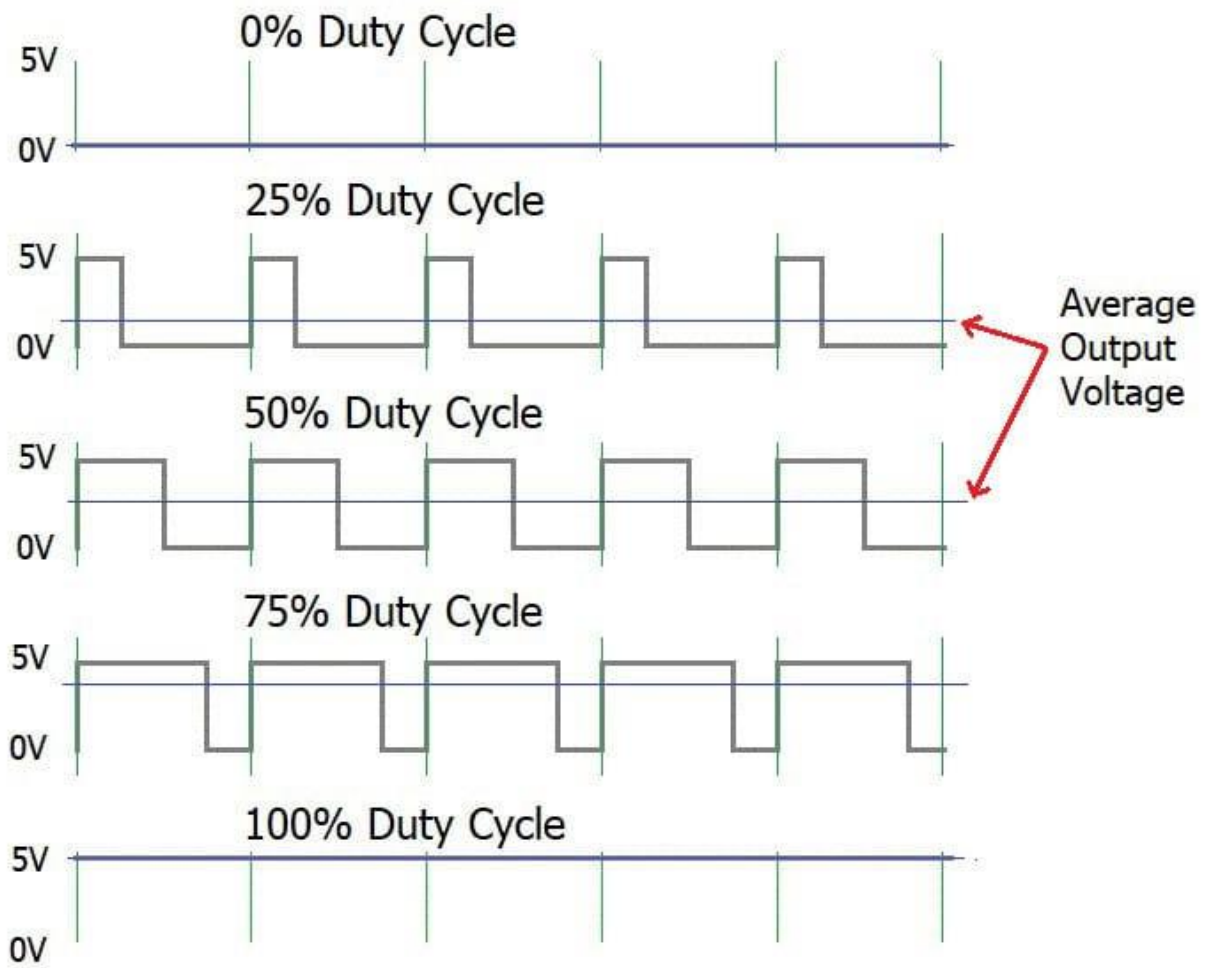
**DEMODULATION OF PULSE WIDTH MODULATION**

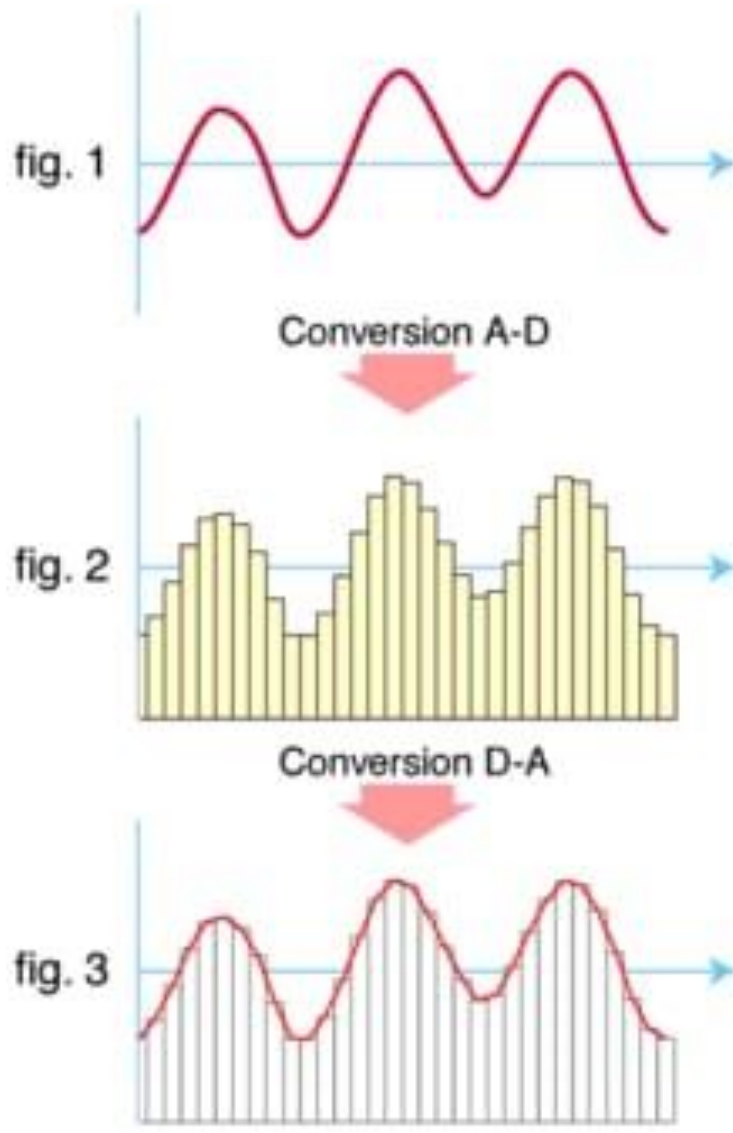


## PULSE CODE MODULATION



## TIME DIVISION MULTIPLEXING





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### ANALOG TO DIGITAL CONVERSION