Digital to Analog Conversion →

It is the process of changing one of the characteristics of an analog signal. A Sine wave has 3 characteristics.

1) Amplitude 2) Frequency 3) Phase.

When we vary any one of these characteristics we create a second version of that wave.

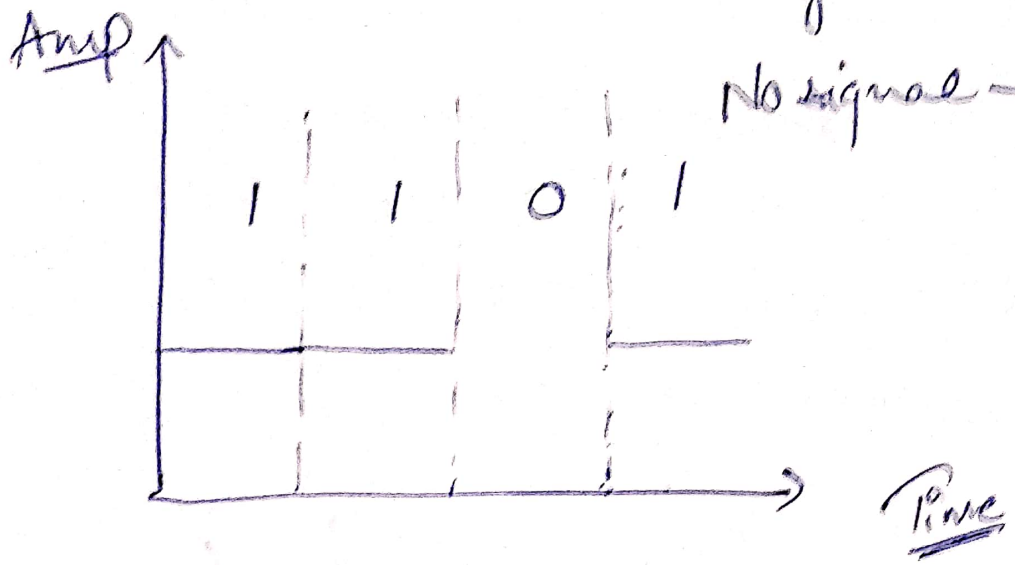
Digital to Analog Modulation

- ASK
- FSK
- PSK

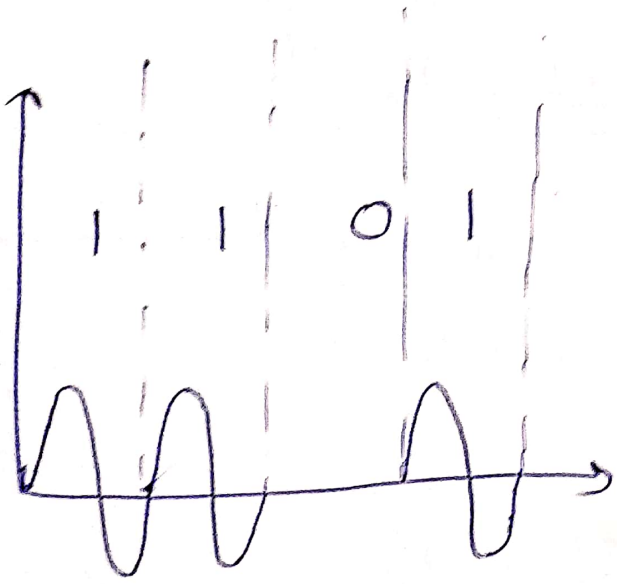
1) Amplitude Shift Keying — (ASK) :- The strength of ~~carrier~~ signal is varied to represent binary 1 or 0. Both frequency & Phase remains constant while the Amplitude changes.

Signal → 1

No signal → 0.



OR.



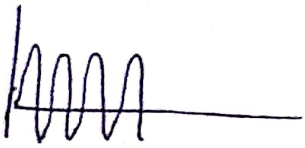
Application → optical fibre.

2) Frequency Shift Keying

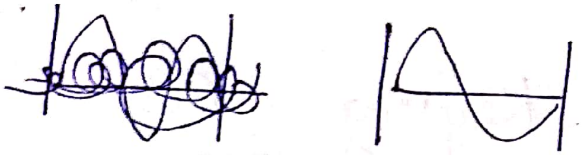
The frequency of the carrier signal is varied to represent binary 1 or 0.

The frequency of the signal during each bit duration is constant. Both peak amplitude and phase remain constant.

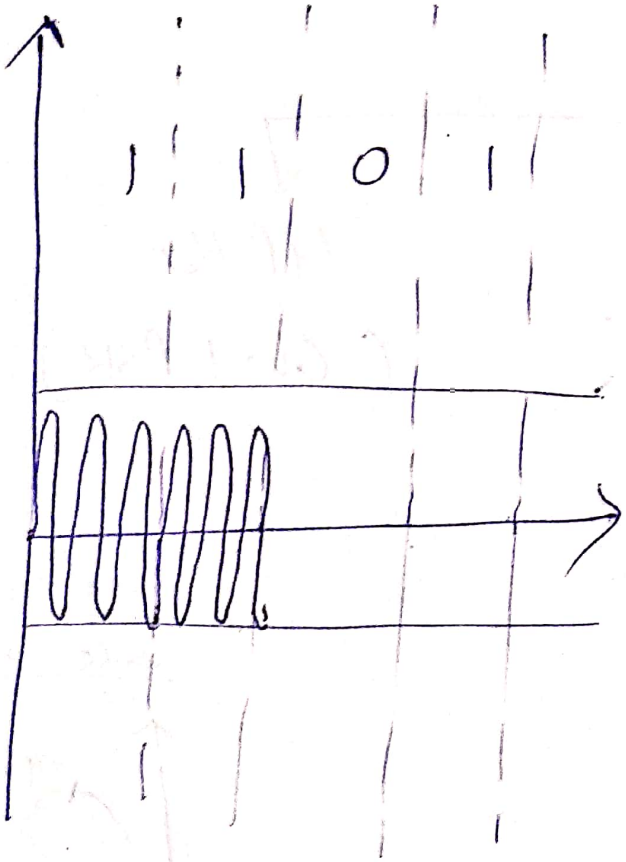
1 →

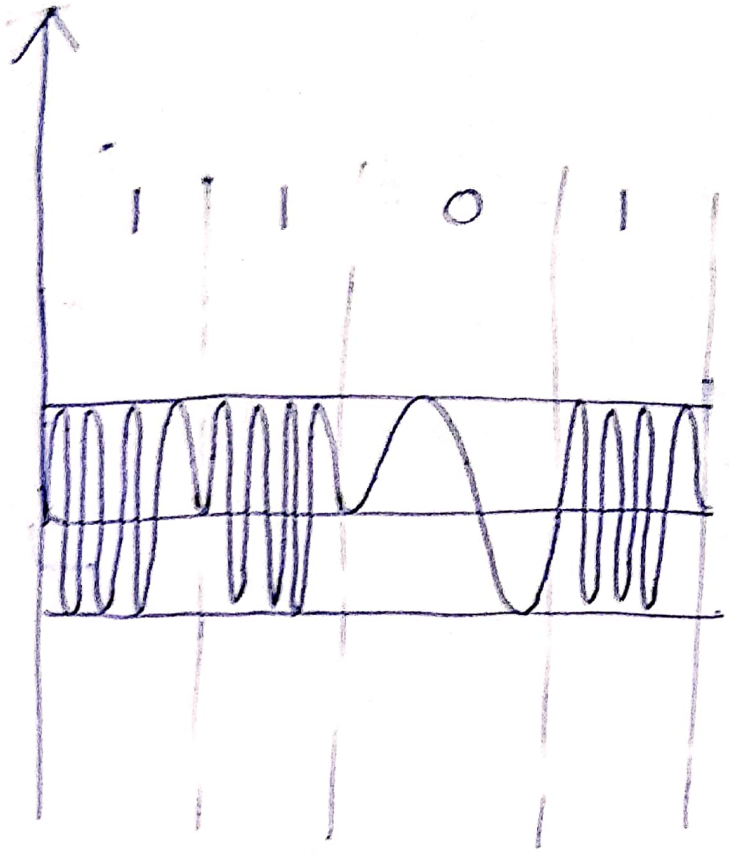


0 →



Eg

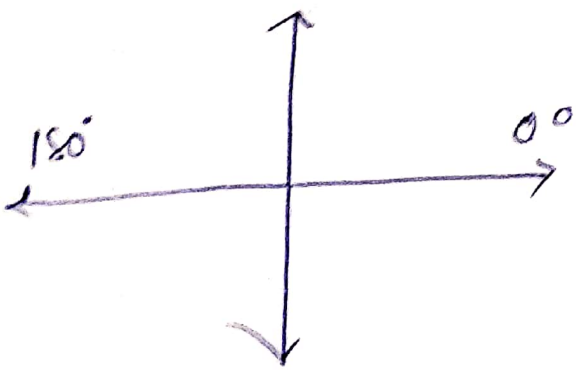




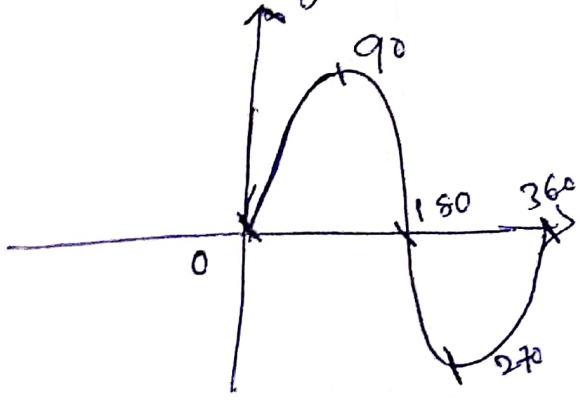
3) Phase Shift Keying (PSK)

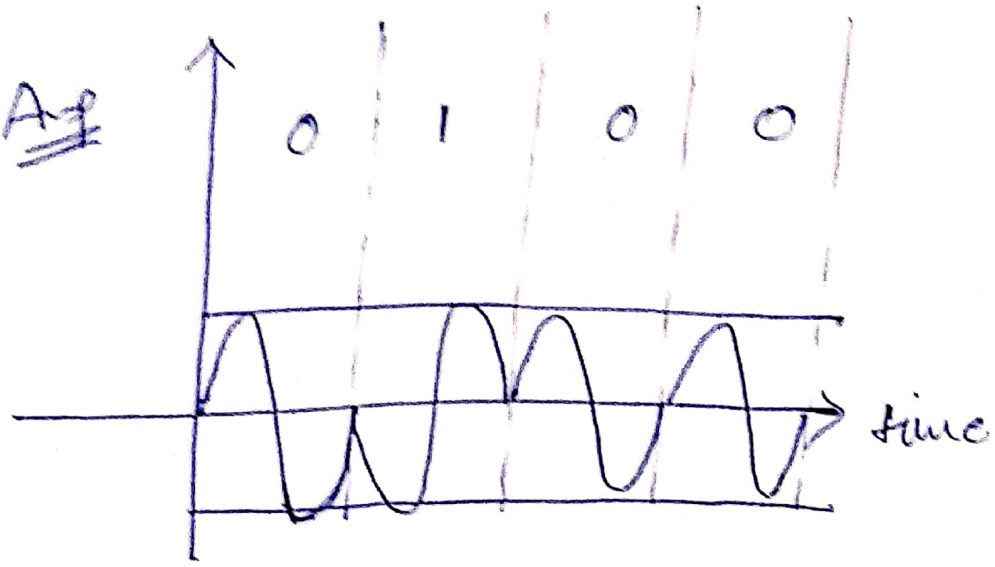
- 2PSK (Binary PSK)
- 4PSK (Quad PSK)

Constellation Diagram



Reference signal





Quadrature Phase Shift Keying –

→ Constellation Diagram