

ASK-PSK-FSK

In amplitude shift keying when the input sequence is 1 the output is message signal and when input is 0 output is 0.

The message signal may be $m(t) = A_m \sin(2\pi ft)$

$$s(t) = \begin{cases} m(t), & \text{input} = 1 \\ 0, & \text{input} = 0 \end{cases} \quad (1)$$

In phase shift keying when input sequence is 1 the output is message signal and when input is 0 there will be a phase shift.

$$s(t) = \begin{cases} m(t), & \text{input} = 1 \\ -m(t), & \text{input} = 0 \end{cases} \quad (2)$$

In frequency shift keying when input sequence is 1 the output is message signal at same frequency and when input is 0 the output is message signal at double the frequency.

$$s(t) = \begin{cases} A_m \sin(2\pi ft), & \text{input} = 1 \\ A_m \sin(4\pi ft), & \text{input} = 0 \end{cases} \quad (3)$$

For an input of [1 0 1 0 1] the following are the plots

