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| Digital Modulation | | | |
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| What is Modulation? The process of superimposing high-frequency carrier signals with low-frequency message signals resulting in a modulated wave.  In modulation, one of the three parameters of the carrier wave is changed i.e. amplitude, frequency or phase according to the amplitude of the message signal at a given time instant. It is an important technique used to increase the range of communication, increase the [signal-to-noise ratio](https://www.geeksforgeeks.org/signal-to-noise-ratio-formula/), and decrease the size of the antenna. |  | | Digital modulation There are three types of digital modulations:   1. ASK 2. FSK 3. PSK   1.ASK (Amplitude shift keying)   * Each symbol in the message signal gives a unique amplitude to the carrier wave. * In ASK, each symbol in the message signal corresponds to a unique amplitude level of the carrier wave. For example, logic 1 might be associated with a certain amplitude (e.g., 12V), while logic 0 corresponds to a different amplitude (e.g., 0V).     2. FSK (Frequency shift keying)  - FSK changes the frequency of the carrier wave to represent different symbols. Logic 1 might be associated with one carrier frequency, and logic 0 with another.    3.PSK varies the phase of the carrier wave. Each symbol corresponds to a specific phase shift (e.g., 0° or 180°). |
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