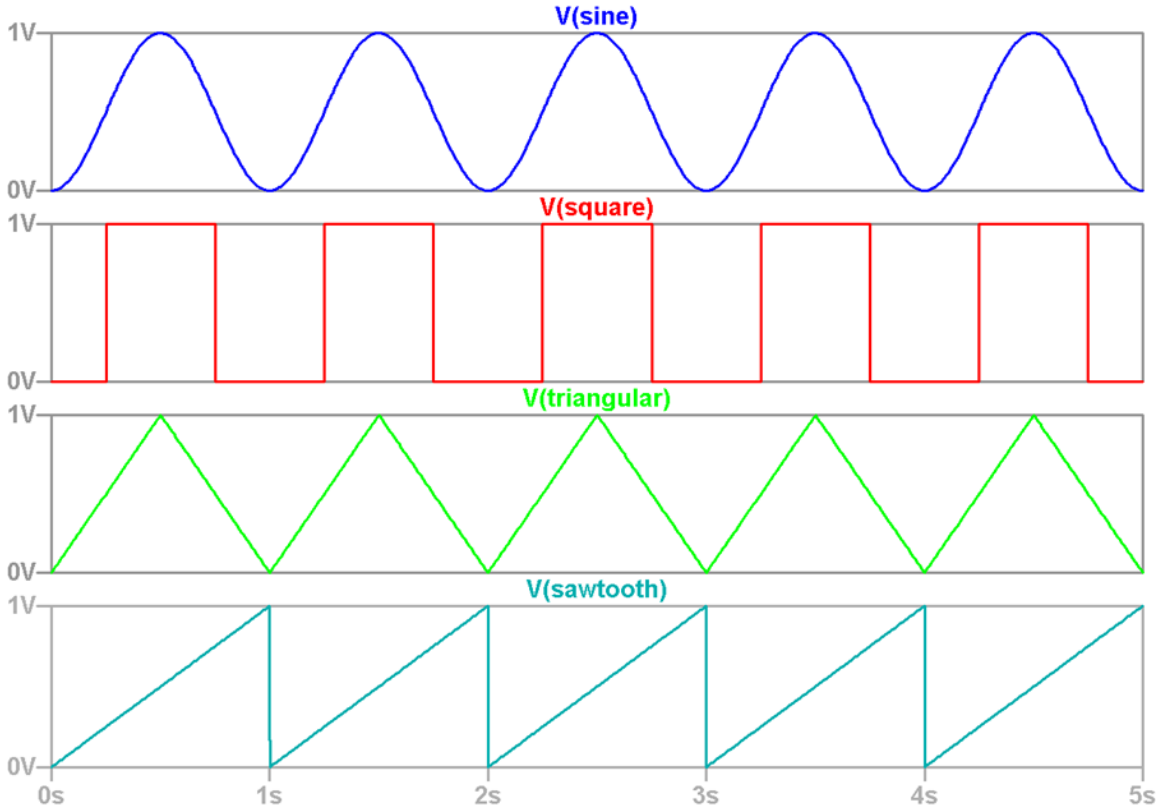
what is Electronic Signal

Electronic signal is an electrical or magnetic variation that carries information. It can be in the form of voltage, current, or electromagnetic waves.

Electronic Signal: Some shape to the information conveyed or to the signal received.

Such a shape of the signal when formed according to a certain variation, can be given different names, such as sinusoidal signal, triangular signal, saw tooth signal and square wave signal etc.

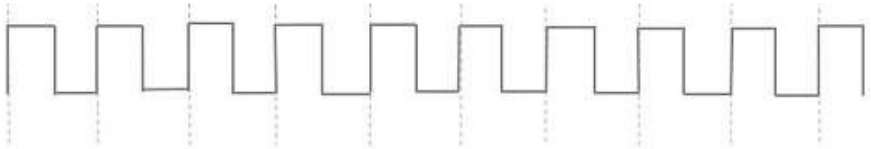


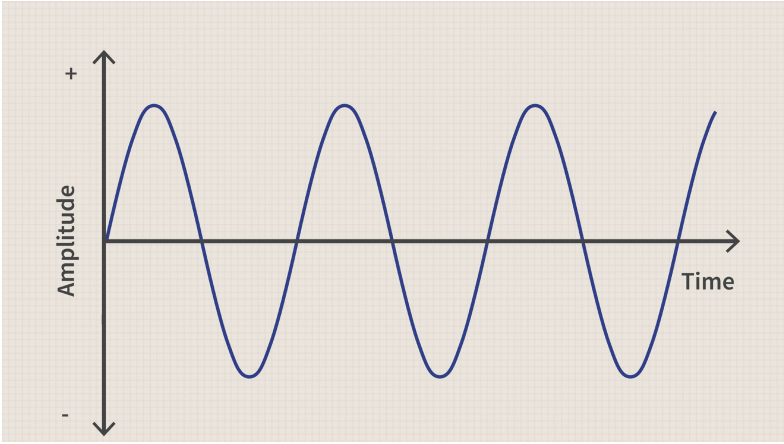
Types of signals

Unidirectional signal: A signal that flows in only one direction, either positive or negative. Example: pulse signal.

Bidirectional signal: A signal that alternates in both positive and negative directions, crossing the zero point. Example: sinusoidal signal.

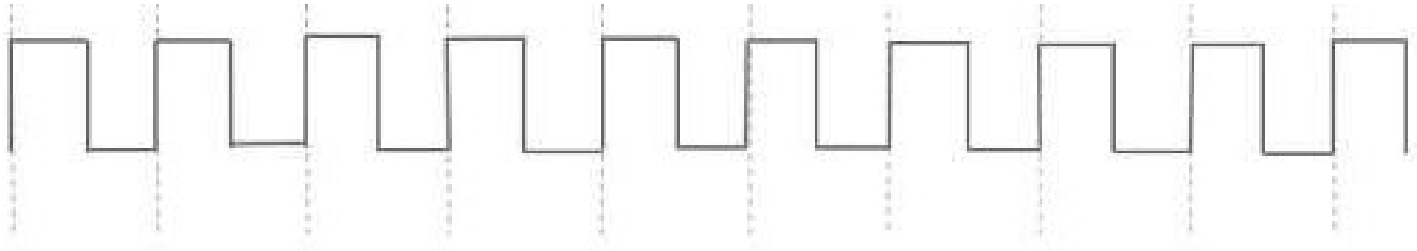
In other words, a unidirectional signal is like a one-way street, while a bidirectional signal is like a two-way street.





what is Pulse Signal

A pulse signal is a binary signal that consists of discrete, short-duration voltage spikes or pulses, typically representing binary 0s and 1s in digital communication systems.



A Series of Pulse train

Pulse Signal

- A Pulse signal is a unidirectional, non-sinusoidal signal which is similar to a square signal but it is not symmetrical like a square wave. A series of continuous pulse signals is simply called as a pulse train.
- Hence a pulse signal indicates ON & OFF of the signal. If an electric switch is given a pulse input, it gets ON/OFF according to the pulse signal given.

Terms Related to Pulse signals

- Pulse width − Length of the pulse
- Period of a waveform − Measurement from any point on one cycle to the same point on next cycle
- Duty cycle − Ratio of the pulse width to the period
- Rise time − Time it takes to rise from 10% to 90% of its maximum amplitude.
- Fall time − Time signal takes to fall from 90% to 10% of its maximum amplitude.
- Overshoot – Said to be occurred when leading edge of a waveform exceeds its normal maximum value.
- Undershoot − Said to be occurred when trailing edge of a waveform exceeds its normal maximum value.
- Ringing − Both undershoot and overshoot are followed by damped oscillations known as ringing.