

INSTRUCTOR

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General Electronics

TOPIC NAME:

**The Features Of Signals
and Spectra.**

Signal:

A signal in electronics is a time-varying voltage, current, or electromagnetic wave that carries information. Signals can be analog or digital, and they are used in many applications, including computing equipment, data transmission, and telecommunications.

Analog signals:

These signals are continuous in values and time, and are often used to convey complex information like voice, image, and video. Analog signals are subject to distortion and noise, so they are not used as often as digital signals. They are mainly used in microphones and some mobile phones.

Digital signals:

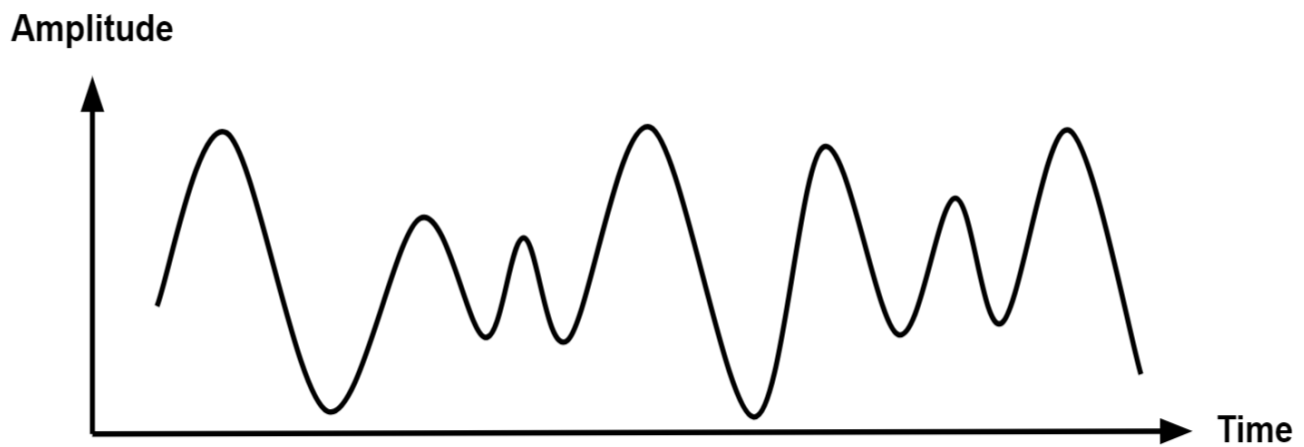
- Answer:

These signals are discrete in values and time, and are represented in binary form (0s and 1s). Digital signals are more robust against noise than analog signals. They are used in all digital electronics, notably computing equipment and data transmission.

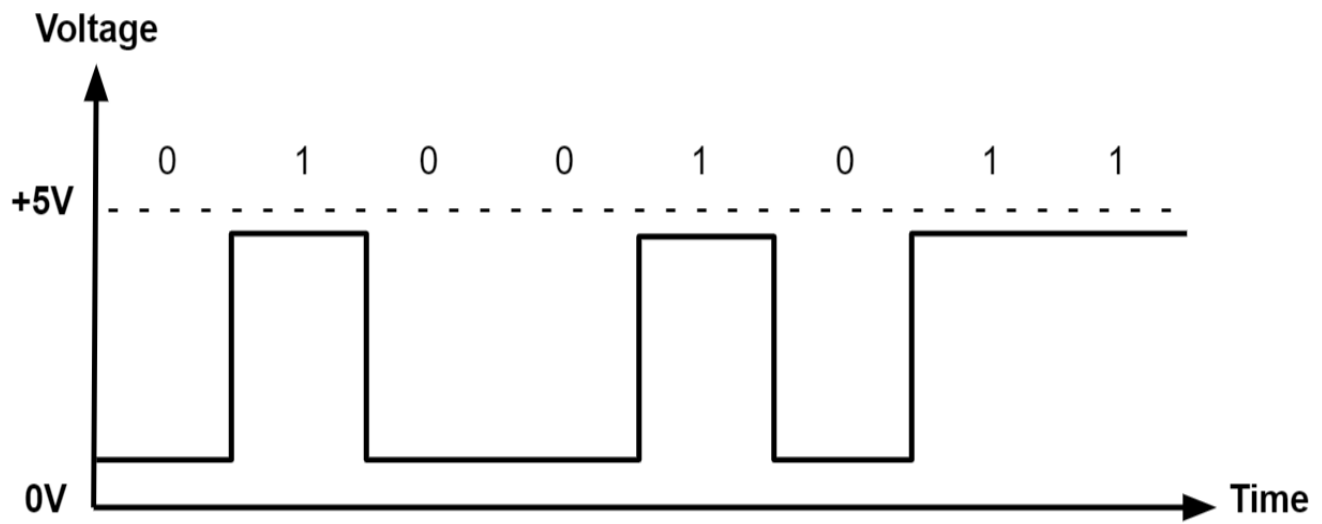
Any Question?

Function:

Analog signal:



Digital signal:

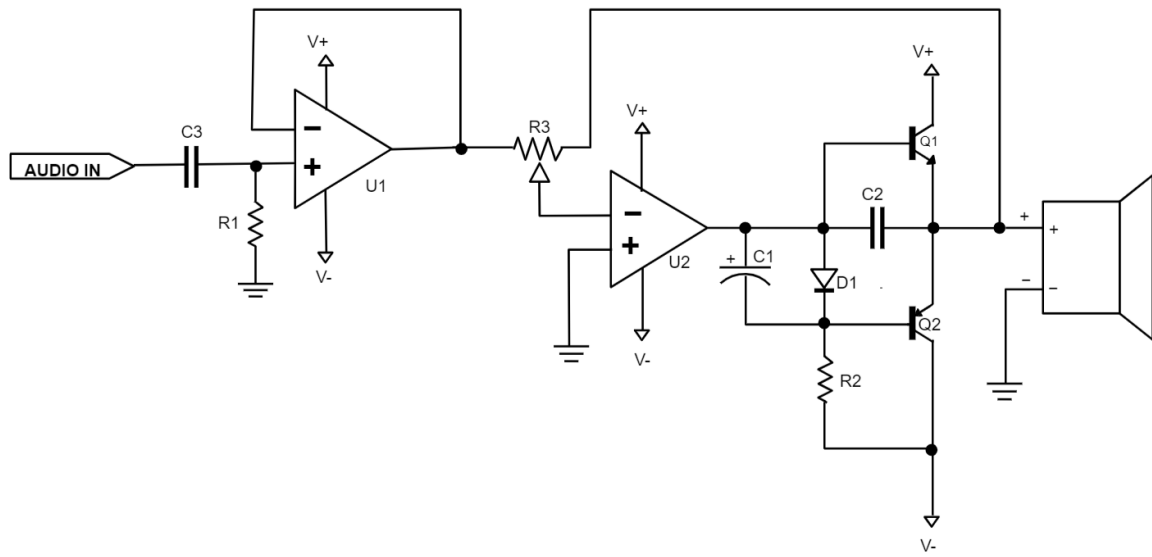


Any Question ?

Analog Electronics:

Most of the fundamental electronic components — resistors, capacitors, inductors, diodes, transistors, and **operational amplifiers** (op amps) — are all inherently analog components. Circuits built with a combination of these components are analog circuits.

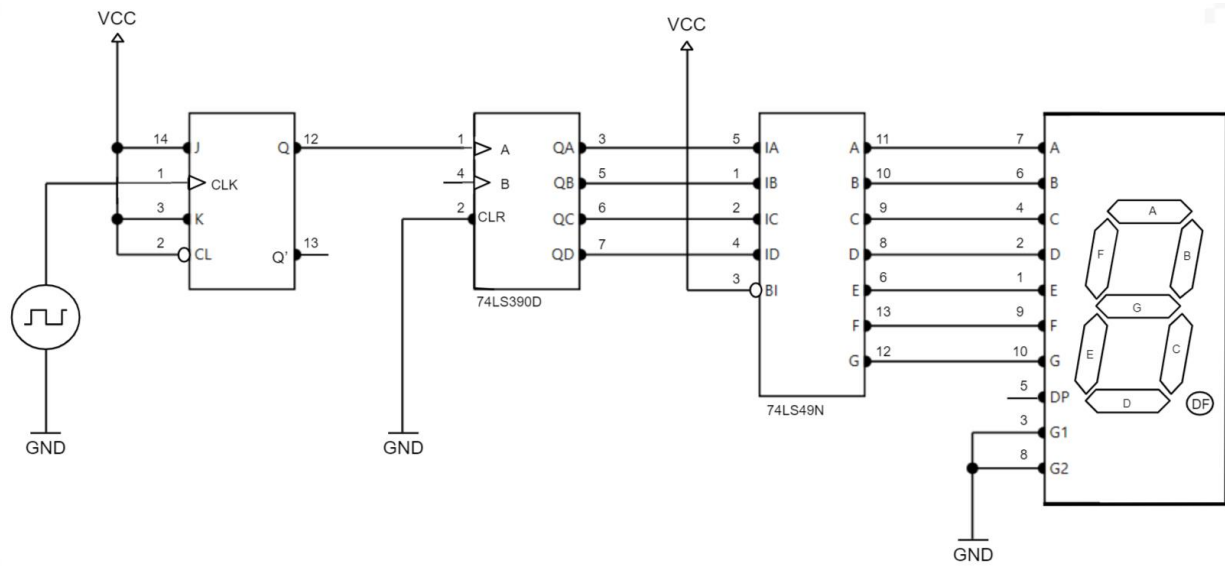
Analog Electronics:



Digital Electronics:

Digital circuits implement components such as logic gates or more complex digital ICs. Such ICs are represented by rectangles with pins extending from them.

Digital Electronics:



Thank You All.