GLOSSARY
OF
THE
Electronics
Laboratory
TOM,
Electronic
Terms

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bias. Amplifier biasing control that refers to the maximum value of a signal, voltage, or current during a single cycle of a waveform.

computer. A machine that automatically performs calculations, analyzes data, and can execute a wide range of tasks.

core. A computer component that stores data temporarily until it is needed by the processor.

diode. A semiconductor device that allows current to flow in only one direction.

digital. Relating to data that is represented in a binary format, using only two states: 0 and 1.

diode. A device that allows current to flow in only one direction, commonly used in electronic circuits.

The glossary of electronics terms was designed to be used in conjunction with the articles in this issue.

Definitions were prepared with the assistance of:

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The Indiana University

Howard W. Bean, 1980, Distributed by Device-Smart, Inc., Indianapolis.

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linear controller. A device for continuously varying the properties of sound, typically used with a control head. (See, R. A. Moog Company, fingerprints are moved along gold wire contact wires to vary electrical current.)

magnetic tape. A strip of magnetic material on which tapes are used in magnetic recordings. Standard widths are one-quarter, one-half, and one inch.

mixer. A device for combining several inputs by algebraically summing their instantaneous amplitudes.

modulation. The process in which a characteristic of a waveform (usually periodically) varies. (See, amplitude modulation; also, frequency modulation.)

monitor. A device used to display audio signals, usually during the recording process.

music concrete. Music that is constructed from recorded sounds or structures.

muting. The transformation of sound by radical change.

noise. Unwanted sound. (See, white noise.)

oscillator. (See, audio oscillator; also, audio generator.)

oscilloscope. An instrument that reproduces on the screen of a cathode-ray tube a graphical representation of voltage as a function of time. Used to determine amplitude, frequency, and other waveform characteristics.

output. A signal that comes out of a circuit or device.

parameter. A variable quantity that can be measured.

partial. A frequency component, not necessarily harmonic.

patch cord. A cord with a plug at both ends used to establish a temporary connection between two jacks, usually between an output and an input. Small.

peak. The maximum value of amplitude, or a momentary value of the average amplitude. Usually measured.

permutation. The alteration or changing of variables in sounds or structures.

pitch. Successive, the consecutive sounding of two or more tones.

potentiometer. A device used for the precise measurement of voltages by comparison of an unknown voltage with a reference voltage. Often commonly used to control a volume control on audio equipment (e.g., "pot.")

programming. The directions for the sequential behavior of the electronic equipment, a computer, or other device.

punched paper tape programmer. An instrument that stores information by means of coded holes in a paper tape.

quarter-track recorder. A tape recorder that uses one-quarter-inch tape, usually with two tracks.

reverberation unit. A device that artificially produces reverberation. Repetitions of sound that are so closely spaced in time that they cannot be distinguished individually. The effect produced by multiple overlapping echoes in a room or concert hall. (See, echo.)

reverbereation unit. A device that artificially produces the effect of reverberation upon signals passed through it.

ring modulator. An analog multiplier circuit used to generate sounds in a way that the output consists of sums and differences of all the input frequency components.

sawtooth wave. A signal consisting of a fundamental frequency component.

series of events with voltage-controlled equipment. (See, sequencer.)

sequencer. A device that is used to produce a preset voltage sequence for the purpose of controlling a series of events with voltage-controlled equipment.

signal. Electrical-analog of sound.

signal generator. The source of sound; an oscillator or, less commonly, a modulator.

sing winding. The waveform corresponding to a single frequency oscillation.

source. The properties of sound are frequency, amplitude, duration, and timbre. (See, steady-state.)

steady-state. That portion of a sound or signal that lacks significant perceived variations.

temporarily. Concerning the use of a signal or device as a substitute for other components.

transient. A signal or device that is used to produce a preset voltage sequence for the purpose of controlling a series of events with voltage-controlled equipment.

tape deck. The transport and heads of a tape recorder. The device on which magnetic material is recorded or reproduced. The playback head "reads" the results of such a recording.

transistor. A device made from semiconductor materials that can act as an electrical insulator or conductor, depending on the electrical charges placed upon it. Transistors are used in amplification and oscillation as a substitute for vacuum tubes.

variable speed unit. A device used to control the speed of a tape recorder motor. Professional variable speed units are driven by a synchronous motor whose speed is dependent upon the frequency of the oscillator within the variable speed unit. Most variable speed units consist of an oscillator that furnishes a frequency between, roughly, 30 and 40 Hz, causing the motors to vary from this mean value to a level of 117 volts at a power sufficient to drive the motor. Variation of the oscillator within this frequency range will move the motor over a three to one range, usually without ill effects.

variable. A variable AC transformer, sometimes used to control the speed of a tape recorder motor by reducing the 117-volt line voltage. This method will usually shorten the life of the motor.

variable audio Amplifier. An amplifier whose gain may be varied by means of a change in a control voltage.

voltage. The shape of a wave in the sense of a graphological representation showing variations in amplitude versus time.

white noise. By analogy with light, a signal that may be considered to contain all audible frequencies, with amplitude and frequency distribution random. By analogy, is noise in which a band (or band of) frequencies is supported. The most obvious effect of white noise is like that of escaping steam.

wye (Y) connector. A device having the appearance of the letter Y. All three heads are connected in parallel at the intersection. Should not be used for mixing signals, but only for dividing a signal to send it to more than one place.

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