

# WILEY ELECTRICAL AND ELECTRONICS ENGINEERING DICTIONARY

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**emphasizer** 1. An electric network which serves to provide emphasis (1). 2. An electric network which serves to provide emphasis (2). Also called **preemphasis network**.

**empiric** Same as **empirical**.

**empirical** Based on, or depending upon observation, experience, or experimentation, as opposed to theory. Also spelled **empiric**.

**empty band** 1. A band which is not in use. 2. A band which is not occupied. 3. An energy band which is not occupied by any electrons.

**EMR** Abbreviation of **electron magnetic resonance**.

**EMS** 1. Abbreviation of **electromagnetic susceptibility**. 2. Abbreviation of **Expanded Memory Specification**. 3. Abbreviation of **event-management system**.

**emu** Abbreviation of **electromagnetic system of units**.

**emulation** 1. The use of an emulator. 2. The function of an emulator.

**emulation mode** A hardware and/or software operation mode in which another device and/or software is being emulated. For instance, a printer which emulates another printer, so as to be compatible with existing software.

**emulator** Computer hardware and/or software which is designed to work exactly like another. Seen, for instance, in printer emulation, so that a printer made by one manufacturer is able to work with the software intended for a printer of a different manufacturer. Another example is the design of a computer to run on software intended for another.

**EMV** Abbreviation of **electromagnetic vulnerability**. Same as **electromagnetic susceptibility**.

**enable** To turn on, or to put into operation. May refer to a component, device, circuit, piece of equipment, function, program, or system.

**enable pulse** An pulse that turns on, puts into operation, or prepares for a subsequent action. May refer to a component, circuit, device, piece of equipment, function, program, or system.

**enabled** Turned on, or operating. May refer to a component, circuit, device, piece of equipment, function, program, or system.

**enamel** A glass-like coating utilized to provide a hard and/or glossy finish. May be used, for instance, for insulation and/or corrosion protection.

**enameled wire** Wire which has a baked-on enamel film, which provides insulation. May be used, for instance, in coils.

**encapsulant** That which serves to **encapsulate** (2). For instance, a wax, a plastic, or a ceramic.

**encapsulate** 1. To embed or incorporate into something else. 2. To encase or embed in a surrounding mass or enclosure which houses and protects. For instance, an electronic component may be encapsulated in plastic, to insulate and protect from moisture. Such a plastic would usually be in a molten state when applied to the component, then let solidify for a snug fit.

**Encapsulated PostScript** A file format for importing and exporting Postscript files. Its abbreviation is **EPS**.

**encapsulation** 1. The process of applying an **encapsulant**. May be accomplished, for example, by dipping a component or device in molten glass, then letting cool. 2. In object-oriented programming, the hiding of the implementation details of an object. The services the object provides are defined and accessible, but their internal workings are not. Also called **information hiding** (2). 3. A technique which enables a network to send data utilizing one protocol, through another network using different protocol. It does so by encapsulating packets using one network protocol within packets being transmitted through the other network. Also called **tunneling** (2).

**encipher** Same as **encode** (2).

**enclosure** 1. That which serves to house something else. For instance, a cabinet which holds an apparatus. 2. A cabinet designed to house one or more speaker units. Two common designs are acoustic reflex and acoustic suspension. Within a speaker system, a specialized speaker such as a woofer or tweeter may have its own enclosure, helping enhance performance. Also called **speaker enclosure**, or **loudspeaker enclosure**. 3. Same as **email attachment**.

**encode** 1. To express information utilizing a code. 2. To scramble information, such as data, in a manner which only those with a key can decipher. Usually used for security purposes. Also called **encrypt**, **encipher**, **code** (4), or **scramble** (1). 3. To write a set of computer instructions.

**encoded** Also called **coded**. 1. Information, such as data, which is in the form of a code. Also called **encrypted** (1). 2. Information, such as data, which has been scrambled in some manner. Also called **encrypted** (2). 3. Programs or program instructions which have been written.

**encoded data** Data which has been **encoded**. May be used, for instance, where privacy or security is a concern. Also called **coded data**, or **scrambled data**.

**encoded signal** A signal which has been **encoded**. May be used, for instance, where privacy or security is a concern. Also called **coded signal**, or **scrambled signal**.

**encoded speech** Speech which has been **encoded** (2), so that it can only be understood with a receiver with the proper circuits and settings. May be used, for instance, where eavesdropping is a concern. Also called **coded speech**, or **scrambled speech**.

**encoder** 1. A circuit, device, piece of equipment, program, system, or method utilized to **encode**. For instance, computer hardware and/or software used for such a purpose. 2. In a TV transmitter, a circuit or device which transforms the separate red, green, and blue camera signals into color-difference signals, and combines these with the chrominance subcarrier. Also called **color encoder**, or **matrix** (3). 3. An electromechanical device, such as a shaft-position encoder, which converts the rotations of a shaft into pulses. 4. A device which converts an analog quantity into a digital signal. 5. A device or piece of equipment which prints characters in a certain font and places them in specific locations, so as to facilitate being read by optical character recognition devices.

**encoding** That processes performed by an **encoder**.

**encrypt** Same as **encode** (2).

**encrypted** 1. Same as **encoded** (1). 2. Same as **encoded** (2).

**encryption** The coding of information so that only the intended recipients can understand it. It is an extremely efficient method to achieve data security, and a code, or key, is used to convert the information back to its original form. Public-key encryption and secret-key encryption are the two most common types.

**encryption algorithm** A set of mathematic formulas utilized to scramble information, such as data, in a manner which only those with a key can decipher.

**encryption key** A series of binary digits or characters that are incorporated into data to encrypt it.

**end bell** 1. In a rotating motor, the part of the housing which supports the bearing and guards the rotating parts. Also called **end bracket**, or **end shield**. 2. A cable clamp which is affixed to the back of a plug or receptacle.

**end bracket** Same as **end bell** (1).

**end cell** In a storage battery, a cell which may be connected with the others, so as to adjust the overall voltage.

**end device** Same as **end instrument**.

**end effect** In an antenna, an effect due to capacitance at the ends of the radiators. Capacitive coupling with the sur-