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# The IEEE Standard Dictionary of Electrical and Electronics Terms

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Sixth Edition



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# **The IEEE Standard Dictionary of Electrical and Electronics Terms**

**Sixth Edition**

**Standards Coordinating Committee 10, Terms and Definitions  
Jane Radatz, Chair**

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closure that closes the opening giving access to the car or to the landing. *See also*: hoistway. (EEC/PE) [119]

**car-door or gate electric contact** An electric device, the function of which is to prevent operation of the driving machine by the normal operating device unless the car door or gate is in the closed position. *See also*: elevator. (EEC/PE) [119]

**car-door or gate power closer** A device or assembly of devices that closes a manually opened car door or gate by power other than by hand, gravity, springs, or the movement of the car. *See also*: elevator. (EEC/PE) [119]

**card path** In a card-processing device, a path along which cards are moved and guided. *See also*: card feed. (C) 610.10-1994

**card-processing device** Any device that can read or write data to punch cards. *See also*: card punch; card reader; card reproducing punch. (C) 610.10-1994

**card-programmed (test, measurement, and diagnostic equipment)** The capability of performing a sequence of tests according to instructions contained in one or a deck of punched cards. (MIL) [2]

**card punch** An output device that produces a record of data as hole patterns in punch cards. *Synonym*: automatic punch. *See also*: card reproducing punch; keypunch. (C) 610.10-1994

**card reader (1) (test, measurement, and diagnostic equipment)** A mechanism that senses and obtains information from punched cards. (MIL) [2]  
(2) An input device that reads or senses hole patterns in a punch card, transforming the data from hole patterns to electrical signals. *Synonym*: punched card reader. *See also*: card hopper; card stacker; card track; paper tape reader. (C) 610.10-1994

**card, relay** *See*: relay armature card.

**card reproducer** *See*: card reproducing punch.

**card reproducing punch** A card-processing device that prepares one punch card, copying all or part of the data from another punch card. *Synonyms*: card duplicator; card reproducer. (C) 610.10-1994

**card row** A single horizontal line of punch positions on a punch card. *Contrast*: card column. (C) 610.10-1994

**card set function generator (analog computer)** A diode function generator whose values are stored and set by means of a punched card and a mechanical card-reading device. (C) 165-1977w

**card sorter** A sorting device that deposits punch cards in pockets selected according to the hole patterns in the cards. (C) 610.10-1994

**card stacker (1) (computers)** An output device that accumulates punched cards in a deck. *See also*: card hopper. (C/MIL) [2], [20], [85]  
(2) The part of a card-processing device that receives the cards after they have been processed. *Contrast*: card hopper. (C) 610.10-1994

**card tester (test, measurement, and diagnostic equipment)** An instrument for testing and diagnosing printed circuit cards. (MIL) [2]

**card-to-disk converter** An input device that converts data from punch cards to disk storage. *See also*: card-to-tape converter; key-to-disk converter. (C) 610.10-1994

**card-to-tape converter** An input device that converts data from punch cards to magnetic or paper tape. *See also*: card-to-disk converter; key-to-tape converter. (C) 610.10-1994

**card track** That part of a card-processing device that moves and guides the card along the card path. (C) 610.10-1994

**car enclosure (elevators)** Consists of the top and the walls resting on and attached to the car platform. *See also*: elevator. (EEC/PE) [119]

**car-frame sling** The supporting frame to which the car platform, upper and lower sets of guide shoes, car safety and

hoisting ropes or hoisting-rope sheaves, or the plunger of a direct-plunger elevator are attached. *See also*: elevator. (EEC/PE) [119]

**cargo vessel (electric installations on shipboard)** A vessel that carries solids or liquids as freight, and no more than twelve passengers. (IA) 45-1983r

**car platform (elevators)** The structure that forms the floor of the car and that directly supports the load. *See also*: hoistway. (EEC/PE) [119]

**car retarder** A braking device, usually power operated, built into a railway track and used to reduce the speed of cars by means of brake shoes that when set in braking position press against the sides of the lower portions of the wheels. *See also*: control machine; master controller; switch machine; trimmer signal. (EEC/PE) [119]

**carriage** The mechanism in a typewriter or other printing device that holds the paper and moves it past the printing position. *See also*: automatic carriage. (C) 610.10-1994

**carriage control tape (A)** A tape that is used to control vertical tabulation of printing or display positions. (B) A tape that contains line feed and form feed control data for a printing device. (C) 610.10-1994

**carriage restore key** *See*: carriage return key.

**(carriage-return)** A character that in the output stream shall indicate that printing should start at the beginning of the same physical line in which the (carriage-return) occurred. The (carriage-return) shall be the character designated by '\r' in the C-language binding. It is unspecified whether this character is the exact sequence transmitted to an output device by the system to accomplish the movement to the beginning of the line. (C/PA) 9945-2-1993

**carriage return (CR) (1) (typewriter)** The operation that causes the next character to be printed at the left margin. (C) [85]

(2) A command or signal sent to a printer to instruct it to move to the beginning of the writing line. *Note*: Often used in conjunction with a line feed to move to the beginning of the next writing line. (C) 610.10-1994

**carriage return character (CR)** A format effector that causes the print or display position to move to the first position on the same line. *Synonym*: new-line character. (C) 610.5-1990

**carriage return key** A control key on a keyboard that initiates a carriage return. *Note*: Often used to terminate a command or to request its execution. *Synonyms*: carriage restore key; enter key. (C) 610.10-1994

**carried traffic (telephone switching systems)** A measure of the calls served during a given period of time. (COM) 312-1977w

**carrier (1) (A) (data transmission)** A wave having at least one characteristic that may be varied from a known reference value by modulation. (B) (data transmission) That part of the modulated wave that corresponds in a specified manner to the unmodulated wave, having, for example, the carrier-frequency spectral components. *Note*: Examples of carriers are a sine wave and a recurring series of pulses. (PE) 145-1993, 599-1985w

(2) (overhead-power-line corona and radio noise) A continuous electromagnetic wave having a repeating variation in time and at least one characteristic that may be varied from a known reference value by modulation. *Note*: Examples of carriers are a sine wave and a recurring series of pulses. (PE/T&D) 539-1990

(3) (semiconductor) A mobile conduction electron or hole. *See also*: semiconductor device. (MIL) [2]

(4) (electrostatography) The substance in a developer that conveys a toner, but does not itself become a part of the viewable record. *See also*: electrostatography. (ED) [46], 224-1965w

(5) (A) A continuous frequency capable of being modulated or impressed with a signal. *Synonym*: carrier wave. (B) An

alternating current that oscillates at a fixed frequency, used to transmit a signal. (C) 610.7-1995

**carrier-amplitude regulation** The change in amplitude of the carrier wave in an amplitude-modulated transmitter when modulation is applied under conditions of symmetrical modulation. *Note:* The term "carrier shift," often applied to this effect, is deprecated. (AP) 145-1983s

**carrier beat (facsimile)** The undesirable heterodyne of signals each synchronous with a different stable reference oscillator causing a pattern in received copy. *Note:* Where one or more of the oscillators is fork controlled, this is called fork beat. *See also:* facsimile transmission. (COM) 168-1956w

**carrier chrominance signal** *See:* chrominance signal.

**carrier-controlled approach system (CCA)** An aircraft carrier radar system providing information by which aircraft approaches may be directed via radio communication. (AE) 172-1983w, 686-1990w

**carrier current** The current associated with a carrier wave. *See also:* carrier. (PE) 599-1985w

**carrier-current choke coil (capacitance potential devices)** A reactor or choke coil connected in series between the potential tap of the coupling capacitor and the potential device transformer unit, to present a low impedance to the flow of power current and a high impedance to the flow of carrier-frequency current. Its purpose is to limit the loss of carrier-frequency current through the potential-device circuit. *See also:* outdoor coupling capacitor. (PE) 43-1974r

**carrier-current grounding-switch and gap** Consists of a protective gap for limiting the voltage impressed on the carrier-current equipment and the line turning unit (if used); and a switch that, when closed, solidly grounds the carrier equipment for maintenance or adjustment without interrupting either high-voltage line or potential-device operation. *See also:* outdoor coupling capacitor. (PE) 43-1974r

**carrier detect** A dc electrical signal presented by a modem to its associated terminal equipment when the modem is receiving a modulatory signal. (PE/SUB) 999-1992

**carrier frequency (1) (A) (data transmission)** (periodic carrier) The reciprocal of its period. *Note:* The frequency of a periodic pulse carrier is often called the pulse repetition frequency in a signal transmission system. (B) (data transmission) (modulated amplifier) The frequency that is used to modulate the input signal for amplification. (PE) 599-1985w

(2) A unique frequency of a carrier that is used to carry data. *Note:* It is measured in cycles per second or hertz. (C) 610.7-1995

**carrier-frequency pulse** A carrier that is amplitude modulated by a pulse. *Notes:* 1. The amplitude of the modulated carrier is zero before and after the pulse. 2. Coherence of the carrier (with itself) is not implied. (IM) 194-1977w

**carrier frequency range (transmitter)** The continuous range of frequencies within which the transmitter may be adjusted for normal operation. A transmitter may have more than one carrier-frequency range. *See also:* radio transmitter. (AP/BT) 145-1983s, 182-1961w

**carrier frequency stability (radio transmitters) (transmitter performance)** The measure of the ability to remain on assigned channel as determined on both a short-term (1 second) and a long-term (24 hour) basis. (VT) [37]

**carrier, fuse** *See:* fuse carrier.

**carrier group (data transmission)** The frequency band, 60 kHz to 108 kHz, containing twelve voice channels which serves as the basic building block of a larger system. (PE) 599-1985w

**carrier group alarm** A combination of a carrier failure alarm and trunk conditioning, which is the process of disconnecting any trunk-group connections and making trunks busy. (COM) 1007-1991

**carrier isolating choke coil** An inductor inserted, in series with a line on which carrier energy is applied, to impede the flow of carrier energy beyond that point. (IM) [120]

**carrier modulation (data transmission)** A process whereby a high-frequency carrier wave is altered by a signal containing the information to be transmitted. (PE) 599-1985w

**carrier noise level (residual modulation)** The noise produced by undesired variations of radio-frequency signal in the absence of any intended modulation. (AP) 145-1983s

**carrier or pilot-wire receiver relay (power system device function numbers)** A relay that is operated or restrained by a signal used in connection with carrier-current or direct-current (dc) pilot-wire fault relaying. (PE/SUB) C37.2-1979s

**carrier-pilot-protection** A form of pilot protection in which the communication means between relays is a carrier current channel. (PE/SWG) C37.100-1992

**carrier power output (transmitter performance)** The radio-frequency power available at the antenna terminal when no modulating signal is present. *See also:* audio-frequency distortion. (VT) [37]

**carrier relaying protection** A form of pilot protection in which high-frequency current is used over a metallic circuit (usually the line protected) for the communicating means between the relays at the circuit terminals. (PE/SWG) C37.100-1981s

**carrier sense** In a local area network, an ongoing activity of a data station to detect whether another station is transmitting. (C/LM) 610.7-1995, 802.3u-1995, 8802-3-1990s

**carrier sense multiple access with collision detection** A local area network access technique. When a station wants to gain access to the network, it listens for conflicting traffic and checks to see if the network is free. If the network is not free, it waits for a small amount of time and retries. (C) 610.7-1995

**carrier shift (1) (data transmission)** The difference between the steady state, mark, and space frequencies in a system utilizing frequency shift modulation. (PE) 599-1985w  
(2) *See also:* carrier-amplitude regulation. (AP) 145-1983s

**carrier suppression (radio communication)** The method of operation in which the carrier wave is not transmitted. *See also:* modulation. (AP) 145-1983s

**carrier system (1) (data transmission)** A communication system using frequency multiplexing to a number of channels over a single path by modulating each channel upon a different carrier frequency and demodulating at the receiving point to restore the signals to their original form. (PE) 599-1985w

(2) A means for obtaining a number of channels over a single path, known as a carrier. (C) 610.7-1995

**carrier tap choke coil** A carrier-isolating choke coil inserted in series with a line tap. (IM) [120]

**carrier telegraphy** The form of telegraphy in which, in order to form the transmitted signals, alternating-current is supplied to the line after being modulated under the control of the transmitting apparatus. *See also:* telegraphy. (COM) [49]

**carrier telephone channel** A telephone channel employing carrier transmission. *See also:* channel. (EEC/PE) [119]

**carrier-to-noise ratio (1) (A)** The ratio of the powers of the carrier and the noise after specified band limiting and before any nonlinear process such as amplitude limiting and detection. *Note:* This ratio is expressed in many different ways, for example, in terms of peak values in the case of impulse noise and in terms of mean-squared values for other types of noise. (B) A combination of transmission media and equipment capable of accepting signals at one point and delivering related signals at another point. *See also:* amplitude modulation; information theory. (IT) [7]

(2) (data transmission) The ratio of the magnitude of the carrier to that of the noise after selection and before any non-