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id junction; converter; (AP/ANT) [35], [84]  
**ion system** A modu-  
 in which the carrier and  
 that after modulation  
 sidebands without the  
 (AP/ANT) 145-1983s  
 ch, at the oscillator fre-  
 the tank circuit are at  
 een either end and their  
 opposite in phase. *See*

5-1983s, 182A-1964w  
 h symmetrical currents  
 a system having sym-  
 anced polyphase load"  
 o currents having the  
 value and differing in  
 plied when it is con-  
 e) system having volt-  
 mean-square value. *See*  
 (T&D/PE) [10]

a system in which both  
 cal. *See also:* alternat-  
 (T&D/PE) [10]

that is approximately in  
 and dynamic forces.

(EEC/REE) [87]  
 ree-phase synchronous  
 of the sum of the  
 are values of the fun-  
 harmonics to the root-  
 ad voltage wave.

(PE) [9]  
 rk having two output  
 impedance to ground  
 so: network analysis.  
 (MTT) 146-1980w  
 e system in which no  
 ed to the neutral point  
 m; alternating-current  
 (T&D/PE) [10]

a balanced line) Volt-  
 ductors of a balanced  
 ne, are equal in mag-  
 (MTT) 146-1980w  
 voltages between cor-  
 t (voltages at a trans-  
 relative to which the  
 (IE) [43]  
**ion** One whose two  
 trical with respect to  
 is commonly used to  
 r only by chance.

(PE) 599-1985w  
 er that is used for the  
 the direction indica-  
 (EEC/PE) [119]

omparing the magni-  
 ote: The balance may  
 netic forces on a com-  
 netomotive forces in  
 nilar means, such as  
 G/PE) C37.100-1992  
 taken to enable a rotor  
*See also:* rotor.

(PE) [9]  
 ses in each path of a  
 aracteristics.  
 (LM/C) 802.7-1989r

(2) (analog computer) (of an operational amplifier) The act  
 of adjusting the output level of an operational amplifier to  
 coincide with its input reference level, usually ground or zero  
 voltage, in the "balance check" computer-control state. This  
 operation may not be required in some amplifiers, and there  
 may be no provision for performing it. (C) 165-1977w

**balancing network** An electric network designed for use in a  
 circuit in such a way that two branches of the circuit are made  
 substantially conjugate; that is, such that an electromotive  
 force inserted in one branch produces no current in the other  
 branch. *See also:* network analysis. (PE) 599-1985w

**ballast (1) (fluorescent lamps or mercury lamps)** Devices that  
 by means of inductance, capacitance, or resistance, singly or  
 in combination, limit the lamp current of fluorescent or mer-  
 cury lamps to the required value for proper operation, and  
 also, where necessary, provide the required starting voltage  
 and current and, in the case of ballasts for rapid-start lamps,  
 provide for low-voltage cathode heating. *Note:* Capacitors for  
 power-factor correction and capacitor-discharge resistors may  
 form part of such a ballast. (EEC/LB) [95], [94]

(2) (fixed-impedance type) (reference ballast) Designed for  
 use with one specific type of lamp that, after adjustment dur-  
 ing the original calibration, is expected to hold its established  
 impedance through normal use. (EEC/LB) [96], [97]

(3) (variable-impedance type) An adjustable inductive re-  
 actor and a suitable adjustable resistor in series. *Note:* These  
 two components are usually designed so that the resulting  
 combination has sufficient current-carrying capacity and  
 range of impedance to be used with a number of different  
 sizes of lamps. The impedance and power factor of the re-  
 actor-resistor combination are adjusted, or rechecked, each  
 time the unit is used. (EEC/LB) [96], [97]

(4) (illuminating engineering) A device used with an elec-  
 tric-discharge lamp to obtain the necessary circuit conditions  
 (voltage, current, and wave form) for starting and operating.  
 (EEC/IE) [126]

(5) (electric power systems in commercial buildings) An  
 electrical device that is used with one or more discharge  
 lamps to supply the appropriate voltage to a lamp for starting,  
 to control lamp current while it is in operation, and, usually,  
 to provide for power factor correction. (IA/PSE) 241-1990r

**ballast factor (illuminating engineering)** The fractional loss  
 of task illuminance due to use of a ballast other than the  
 standard one. (EEC/IE) [126]

**ballast leakage** The leakage of current from one rail of a track  
 circuit to another through the ballast, ties, earth, etc.  
 (EEC/PE) [119]

**ballast resistance** The resistance offered by the ballast, ties,  
 earth, etc., to the flow of leakage current from one rail of a  
 track circuit to another. (EEC/PE) [119]

**ballast section (railroads)** The section of material, generally  
 trap rock, that provides support under railroad tracks.  
 (NESC) C2-1997

**ballast tube (ballast lamp)** A current-controlling resistance de-  
 vice designed to maintain substantially constant current over  
 a specified range of variation in the applied voltage or the  
 resistance of a series circuit. (EEC/PE) [119]

**ball bearing (rotating machinery)** A bearing incorporating a  
 peripheral assembly of balls. *See also:* bearing. (PE) [9]

**ball burnishing** Burnishing by means of metal balls. *See also:*  
 electroplating. (EEC/PE) [119]

**ballistic deficit (germanium gamma-ray detectors)** The loss  
 in signal amplitude that occurs when the charge collection  
 time in a detector is a significant fraction of the amplifier's  
 differentiating time constant. (NPS) 325-1996

**ballistic focusing (microwave tubes)** A focusing system in  
 which static electric fields cause an initial convergence of the  
 beam, and the electron trajectories are thereafter determined  
 by momentum and space charge forces only. (ED) [44]

**ballistic munition** Any munition that follows a ballistic tra-  
 jectory. (DIS/C) 1278.1-1995

**ball lightning** A type of lightning discharge reported from vi-  
 sual observations to consist of luminous, ball-shaped regions  
 of ionized gases. *Note:* In reality ball lightning may or may  
 not exist. *See also:* direct-stroke protection. (T&D/PE) [10]

**balun (1)** In networking, a passive device with distributed elec-  
 trical constants used to couple a balanced system or device  
 to an unbalanced system or device. For example, a trans-  
 former used to connect balanced twisted-pair cables to un-  
 balanced coaxial cables. *Note:* Derived from "balance to un-  
 balance" transformer. (C/CHM) 610.7-1995, [51]

(2) A network for the transformation from an unbalanced  
 transmission line or system to a balanced line or system, or  
 vice versa. (IM/HFIM) [40]

**BAM** *See:* basic access method.

**banana plug** A single-conductor plug with a spring metal tip  
 that somewhat resembles a banana in shape. (IM) [120]

**band (1)** A group of circular recording tracks, on a moving  
 storage device such as a drum or disc. *See also:* channel.  
 (C/MIL) [2]

(2) (data transmission) Range of frequency between two de-  
 fined limits. (PE) 599-1985w

(3) A group of tracks on a magnetic drum or a magnetic disk  
 which are read or written as a group. (C) 610.10-1994w

**band I** The frequency band 5 Hz to 2 kHz.  
 (EMC) 1140-1994r

**band II** The frequency band 2 kHz to 400 kHz.  
 (EMC) 1140-1994r

**band-edge** The highest or lowest frequency passed for a defined  
 range of frequencies. The band-edge frequencies are normally  
 identified to be the half power points of a frequency band.  
 (LM/C) 802.7-1989r

**band, effective** *See:* effective band.

**band-elimination filter (1)** A network designed to eliminate a  
 band or frequencies. Its frequency response has a single pass  
 band bounded by two attenuation bands. (CAS) [13]

(2) (signal-transmission system) A filter that has a single  
 attenuation band, neither of the cutoff frequencies being zero  
 or infinite. *See also:* filter; rejection filter.  
 (SP/PE) 151-1965w, 599-1985w

**band gap (charged-particle detectors) (in a semiconductor)**  
 The energy difference between the bottom of the conduction  
 band and the top of the valence band.  
 (NPS) 325-1996, 300-1988r

**banding insulation (rotating machinery)** Insulation between  
 the winding overhang and the binding bands. (PE) [9]

**band of regulated voltage (synchronous machines)** The band  
 or zone, expressed in percent of the rated value of the regu-  
 lated voltage, within which the excitation system will hold  
 the regulated voltage of an electric machine during steady or  
 gradually changing conditions over a specified range of load.  
 (PE/EDPG) 421-1972s, 421.1-1986r

**band-pass (broadband local area networks)** A range of fre-  
 quencies that express the difference between the lowest and  
 highest frequencies of interest. The band-pass frequencies are  
 normally associated with frequencies that define the half  
 power points. (LM/C) 802.7-1989r

**band-pass filter (1) (data transmission)** A wave filter that has  
 a single transmission band, neither of the cutoff frequencies  
 being zero or infinite. *See also:* optical filter.  
 (PE) 599-1985w

(2) (broadband local area networks) A filter that allows  
 passage of a desired range of frequencies and attenuates fre-  
 quencies outside the desired range. (LM/C) 802.7-1989r

**band-pass tube** *See:* broadband tube.

**band pressure level** For a specified frequency band, the sound  
 pressure level for the sound contained within the restricted  
 band. The reference pressure must be specified. *Note:* The  
 band may be specified by its lower and upper cutoff frequen-  
 cies or by its geometric center frequency and bandwidth. The  
 width of the band may be indicated by a modifying prefix,