

WILEY ELECTRICAL AND ELECTRONICS ENGINEERING DICTIONARY

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A JOHN WILEY & SONS, INC., PUBLICATION

INTEL 1408

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Published by John Wiley & Sons, Inc., Hoboken, New Jersey.

Published simultaneously in Canada.

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Library of Congress Cataloging-in-Publication Data is available.

Kaplan, Steven M.

Wiley Electrical and Electronics Engineering Dictionary

ISBN 0-471-40224-9

Printed in the United States of America.

10 9 8 7 6 5 4 3 2 1

transfer functions, and the number of sound sources and their locations, are taken into account. Used, for instance, in designing surround-sound systems, and in formulating audio compression techniques.

psychogalvanometer A device which measures galvanic skin response.

pT Abbreviation of **picotesla**.

Pt Chemical symbol for **platinum**.

PTC Abbreviation of **positive temperature coefficient**.

PTFE Abbreviation of **polytetrafluoroethylene**.

PTFE resin Abbreviation of **polytetrafluoroethylene resin**.

PTH Abbreviation of **plated-through hole**, or **pin-through hole**.

PTM Abbreviation of **pulse-time modulation**.

PTT Abbreviation of **push-to-talk**, or **press-to-talk**.

PTT operation Abbreviation of **push-to-talk operation**, or **press-to-talk operation**.

PTT switch Abbreviation of **push-to-talk switch**, or **press-to-talk switch**.

Pu Chemical symbol for **plutonium**.

public-address amplifier An amplifier specially designed for use in a **public-address system**. The features of such an amplifier may include multiple microphone inputs, and muting of all other inputs when telephone paging.

public-address system A system, such as that utilized in airports or shopping centers, which serves convey voice messages through a distributed group of speakers powered by one or more amplifiers. Its abbreviation is **PA system**.

public carrier A telecommunications entity, such as a telephone company, that provides services to the general public. Public carriers are usually regulated by the appropriate authorities, such as governmental agencies. Also called **common carrier**, **carrier (3)**, **commercial carrier**, or **communications common carrier**.

public data network A communications network which is established and operated by a telecommunications entity such as a public carrier. Its abbreviation is **PDN**.

public-domain software Software which has been given or otherwise relinquished to the public, and which has no protections such as a copyrights. Its abbreviation is **PD software**.

public file A file available to the public in general, as opposed to a **private file**, which is not.

public folder In a communications network, a folder available to the public in general, as opposed to a **private folder**, which is not.

public key In public-key encryption, the key which is utilized to encrypt, and which is available to the public in general. The **private key** is used for decryption, and is only intended for the recipient.

public-key cryptography Same as **public-key encryption**.

public-key encryption An encryption method which uses two keys for successful encryption and decryption of messages. The first key is used to encrypt and is public, as most anyone can look it up. To decrypt, the second key is necessary. This key is private, as only the recipient knows it. Since it is not necessary to send the decryption key in any message, this method eliminates the vulnerability inherent in its being sent to the recipient. Also called **public-key cryptography**, or **asymmetric encryption**.

Public-Key Infrastructure A system in which entities such as certification authorities issue digital certificates, or their equivalent, in order to authenticate, use, and manage cryptographic keys. Such an infrastructure helps provide a secure environment for communications and transactions using a public network such as the Internet. Its abbreviation is **PKI**.

public switched network Its abbreviation is **PSN**. 1. Same as **public switched telephone network**. 2. Any public network providing switching, which includes telephone networks and public data networks.

public switched telephone network Its abbreviation is **PSTN**. The multiple interconnected telephone networks in place worldwide, which enable most any phone to dial most any other phone around the globe. POTS is the basic service a PSTN provides. Such a network may also be used for data services, such as dial-up Internet access. Also called **public telephone network**, **public switched network (1)**, or **switched telephone network**.

public telephone network Same as **public switched telephone network**.

public Web site A Web site which can normally be accessed by any user. The term is utilized to contrast with a **private Web site**.

puck The pointing device of a digitizing tablet. It is similar to a mouse, but is much more accurate, because its location is determined by touching an active surface with an absolute reference. Also called **cursor (4)**, **pen (1)**, or **stylus (1)**.

pull 1. Same as **pull technology**. 2. To receive information utilizing **pull technology**.

pull-down menu In a GUI, a menu which is always available in the active window, but whose contents are revealed only when a user selects said menu with a mouse or keyboard command. Once selected, the menu choices are presented in a vertical array below the menu title. Also called **pop-down menu**, or **drop-down menu**.

pull-in current Same as **pickup current**.

pull-in voltage Same as **pickup voltage**.

pull switch A switch that is actuated by pulling. Such a switch, for instance, may use a cord that is pulled in case of an emergency.

pull technology Data distribution, such as that over the Internet, in which users receive information by requesting it. For example, a user requesting the download of a given page by entering its address or by clicking on a desired hyperlink. In **push technology**, material is delivered whether the user wants it or not. Also called **pull (1)**.

pulling 1. A variation in the frequency of a circuit, especially that of an oscillator, caused by an external circuit, device, or factor, such as a variation in load impedance. Also called **frequency pulling**. 2. An effect in which a component, circuit, or device induces another to change from a desired value. 3. A technique used for cultivating crystals, in which a growing crystal is slowly withdrawn from a molten solution of the crystal. Also called **crystal pulling**.

pulsar A neutron star which emits sharp and brief pulses of energy, as opposed to the usual steady stream of radiation. Pulsar pulse rates have been observed ranging from around one millisecond, to approximately 5 seconds.

pulsating current A current which passes through regular cycles, and whose average is not zero. Such a current may result, for instance, from the sum of an alternating current and a direct current. Also called **undulating current**.

pulsating DC Abbreviation of **pulsating direct current**. A DC which passes through regular cycles. While the polarity of such a current never changes, its amplitude does.

pulsating direct current Same as **pulsating DC**.

pulse For a quantity which is normally constant, a well-defined variation which increases from a steady value to a maximum, then back to or near the original value, all in a comparatively short time. Pulses may be desired or unwanted. Applications of intentionally-generated pulses include clock pulses, gate pulses, dial pulses, radar pulses, blanking pulses, and certain light pulses. Undesired pulses include noise pulses, spikes, and certain light pulses. A

pulsed laser A laser whose output consists of short bursts of light. Certain very powerful lasers, for instance, can generate pulses nearly in the zeptosecond range, and may be utilized to study activities in atomic nuclei.

pulsed light Light which is emitted in pulses, such as that produced by a pulsed laser.

pulsed operation A mode of operation in which circuits, devices, equipment, or systems utilize discrete pulses.

pulsed oscillator Same as **pulse oscillator**.

pulsed radar A radar which transmits pulses of RF energy. This contrasts with a **continuous-wave radar**, in which RF energy is emitted continuously. Also called **pulse radar**.

pulser Same as **pulse generator**.

pulses per second A unit of pulse repetition frequency, expressing the number of pulses produced or detected per second. For instance, the rate at which a laser delivers pulses, per second. Its abbreviation is **PPS**.

pulsing circuit A circuit serving as a **pulse generator**.

pump 1. In a parametric amplifier, an oscillator which varies a parameter, such as the capacitance or reactance, of the main oscillator. The resulting energy from this pumping action enables amplification of the input signal. Also called **pump oscillator**. 2. The signal provided by a **pump** (1). Also called **pump signal**. 3. To apply a **pump signal**. 4. In a laser, to excite electrons, molecules, or ions to higher energy levels, so as to initiate and sustain lasing action. Also, such to provide such excitation in a maser. Also, a device which provides such pumping.

pump frequency In a device such as a laser or parametric amplifier, the frequency at which pumping is provided. Also called **pumping frequency**.

pump laser A powerful laser utilized to drive an optical amplifier, or for other optical signal amplification.

pump oscillator Same as **pump** (1).

pump signal Same as **pump** (2).

pump voltage In a parametric amplifier, an alternating voltage provided by a **pump** (1).

pumping 1. In a laser, the excitation of electrons, molecules, or ions to higher energy levels, so as to initiate and sustain lasing action. Common methods utilized are the application of light, an electrical discharge, or through the effect of a chemical reaction. Also called **laser pumping**. 2. **Pumping** (1) in another device, such a maser or parametric amplifier.

pumping frequency Same as **pump frequency**.

punch 1. A tool utilized for stamping a design onto a surface, forcing an object or material into or out of a hole, or that pierces or cuts materials or objects. 2. A device which punches holes in **punched cards**.

punch-through In a bipolar junction transistor, a destructive discharge occurring when the collector-base voltage is sufficient for the collector space charge region to spread over the entire base region, coming in contact with the emitter region. Also spelled **punchthrough**.

punch-through voltage The voltage at which **punch-through** occurs. Also spelled **punchthrough voltage**.

punched card A card which holds 80 or 96 columns of data, each representing one character, used by computers with card readers. This is a practically obsolete storage medium. Also called **card** (3).

punched card reader A device which reads **cards** (3). Also called **card reader**.

punched card system A computer system in which **cards** (3) are used for input and output. Such systems are practically obsolete. Also called **card system**.

punched tape An obsolete form of data storage consisting of a long strip of paper, or another material, with holes punched.

punchthrough Same as **punch-through**.

punchthrough voltage Same as **punch-through voltage**.

puncture 1. A disruptive electrical discharge through an insulator, dielectric, or other material separating circuits. Also called **breakdown** (2). 2. A hole or depression made by a pointed object. Also, to make such a hole or depression.

puncture voltage The voltage at which a disruptive electrical discharge occurs through an insulator, dielectric, or other material separating circuits. Also called **breakdown voltage** (1).

Pupin coil One of multiple loading coils which are inserted in series with a telephone line, to reduce the effects of line capacitance.

pure color A color in which there is no white component present. Such a color has 100% saturation. Also called **saturated color**.

pure sine wave A sine wave with no distortion nor harmonics.

pure sound Same as **pure tone**.

pure tone A tone, such as that produced by striking a tuning fork, whose acoustic energy occurs at a single frequency. Such a tone would appear on an oscilloscope as a sine wave with little or no harmonic content. Also called **pure sound**, or **simple tone**.

pure wave A wave with no distortion nor harmonic content. An example is a pure sine wave.

purge 1. To remove any gases from an enclosure. 2. To remove any impurities from a substance or material. 3. To remove all data from memory, a storage medium, a file, or the like.

purging 1. The removal any gases from an enclosure. 2. The removal of any impurities from a substance or material. 3. The removal of all data from memory, a storage medium, a file, or the like.

purification The removal of impurities or other undesired constituents.

purify To remove impurities or other undesired constituents.

purity 1. The extent to which a substance, material, or the like, is free from impurities. 2. The extent to which a signal, waveform, data or the like, is free from distortion or errors. 3. The extent to which a color is not mixed with other colors. Said especially of a primary color which is not mixed with other primary colors. Also called **color purity** (2). 4. For a given color, the degree to which all unwanted components are excluded. Such a color only contains the proper proportion of the desired primary colors. Also called **color purity** (1).

purity adjustment The adjustment of the **purity** (4) of the displayed images of a CRT, using, for instance, a purity magnet.

purity coil A coil mounted around the neck of a CRT to adjust the **purity** (4) of the displayed images.

purity magnet A magnet mounted around the neck of a CRT to adjust the **purity** (4) of the displayed images.

purple plague A purplish compound formed when bonding gold to aluminum. The formation of such a compound may cause the failure of semiconductor devices or microelectronic circuits.

push 1. To add an item to the top of a stack. This contrasts with **pop**, which is to remove the first item from the top of a stack. 2. Same as **push technology**. 3. To send data utilizing **push technology**.

push-button Same as **pushbutton**.

push-button dialing Telephone dialing in which buttons are pressed to select numbers. Also spelled **pushbutton dialing**.

push-button switch A switch that is operated by pressing a pushbutton. Also spelled **pushbutton switch**. Also called **button switch**.

push-button tuner A tuner whose selections are made by pressing a button. Also spelled **pushbutton tuner**.

push-down list A data list in which the last item placed is the first item to be retrieved, as in LIFO. Also spelled **push-down list**.

push-down stack A stack in which the last item placed is the first item to be retrieved, as in LIFO. Also spelled **push-down stack**.

push-down storage Data storage in which the last item placed is the first item to be retrieved, as in LIFO. Also spelled **pushdown storage**.

push-pull 1. Same as **push-pull configuration**. 2. Pertaining to a circuit or device with a **push-pull configuration**.

push-pull amplifier An amplification circuit incorporating two identical signal branches which each operate in phase opposition. The active devices may be two transistors or two tubes, and their outputs each comprise half of the combined amplified output. Such an arrangement provides for cancellation of even harmonics, which reduces distortion. Such amplifiers are frequently utilized for class A, class AB, or class B amplification, such as that used in audio high-fidelity systems.

push-pull arrangement Same as **push-pull configuration**.

push-pull circuit A circuit which incorporates two identical signal branches, each operated in phase opposition. Used, for instance in push-pull amplifiers, or push-pull oscillators.

push-pull configuration A circuit in which there are two input signals, each in phase opposition, provided separately to two identical active devices. The output of these two signal branches is combined for the overall output. Such an arrangement is used, for instance, in push-pull amplifiers. Also called **push-pull (1)**, or **push-pull arrangement**.

push-pull currents For the two conductors of a balanced line, currents flowing which are equal in magnitude, but opposite in phase at all points along said line. Also called **balanced currents**.

push-pull operation Operation utilizing a **push-pull configuration**.

push-pull oscillator An oscillator in which two amplifying devices, such as transistors or tubes, are utilized in phase opposition.

push-pull transformer A transformer utilized in a **push-pull circuit**.

push-pull voltages Voltages which are equal in magnitude but opposite in polarity with respect to ground. Also called **balanced voltages**.

push-push amplifier An amplifier with a **push-push configuration**.

push-push circuit A circuit with a **push-push configuration**.

push-push configuration A circuit in which there are two input signals, each in phase opposition, provided separately to two identical active devices, with the outputs of said devices connected in parallel. Such an arrangement cancels odd-harmonics, including the fundamental frequency, and is used, for instance, in push-push amplifiers.

push switch A switch that is actuated by pushing. Such a switch, for instance, may use a pushbutton that is pressed in case of an emergency.

push technology Data distribution, such as that over the Internet, in which users receive information, usually in the form of advertisements, without requesting it. Examples include spam, or banner ads and pop-up ads appearing when a Web page is loaded. **Pull technology** refers to information obtained by a user who requests it. Also called **push (2)**.

push-to-talk Pertaining to, or requiring **push-to-talk operation**. Also called **push-to-talk**. Its abbreviation is **PTT**.

push-to-talk operation Communication in which the talker must push or press a button for voice transmission. Used, for instance, when both ends are utilizing the same frequency. Its abbreviation is **PTT operation**. Also called **press-to-talk operation**.

push-to-talk switch A switch that must be pushed when talking during **push-to-talk operation**. Its abbreviation is **PTT switch**. Also called **press-to-talk switch**.

push-up list A data list in which the first item placed is the first item to be retrieved, as in FIFO. Also spelled **pushup list**.

push-up stack A stack in which the first item placed is the first item to be retrieved, as in FIFO. Also spelled **pushup stack**.

push-up storage Data storage in which the first item placed is the first item to be retrieved, as in FIFO. Also spelled **pushup storage**.

pushbutton A knob, disk, or the like, which is pressed to activate or operate a circuit, device, component, machine, and so on. For instance, a pushbutton may be pressed to activate an electric circuit. A pushbutton may also be virtual, as seen when a computer mouse presses such a button on-screen by clicking the mouse. Also spelled **push-button**. Also called **button (1)**.

pushbutton dialing Same as **push-button dialing**.

pushbutton switch Same as **push-button switch**.

pushbutton tuner Same as **push-button tuner**.

pushdown list Same as **push-down list**.

pushdown stack Same as **push-down stack**.

pushdown storage Same as **push-down storage**.

pushup list Same as **push-up list**.

pushup stack Same as **push-up stack**.

pushup storage Same as **push-up storage**.

pV Abbreviation of **picovolt**.

PV 1. Abbreviation of **petavolt**. 2. Abbreviation of **photovoltaic**.

PV array Abbreviation of **photovoltaic array**.

PV cell Abbreviation of **photovoltaic cell**.

PV device Abbreviation of **photovoltaic device**.

PV material Abbreviation of **photovoltaic material**.

PV module Abbreviation of **photovoltaic module**.

PV panel Abbreviation of **photovoltaic panel**.

PV system Abbreviation of **photovoltaic system**.

PVC 1. Abbreviation of **polyvinyl chloride**. 2. Abbreviation of **permanent virtual circuit**.

pW Abbreviation of **picowatt**.

PW Abbreviation of **petawatt**.

PWM Abbreviation of **pulse-width modulation**.

pwr Abbreviation of **power**.

PX Abbreviation of **private exchange**.

pyramidal horn antenna A horn antenna in which the sides of the radiating element form a pyramid.

pyranometer 1. An instrument which measures solar radiation. 2. An instrument which measures direct solar radiation, along with any other sky radiation, such as that which is diffused or reflected.

Pyrex A variety of borosilicate glass which is highly resistant to chemicals and heat. Used, for instance, in laboratory glassware, and in telescopes.

pyrheliometer An instrument which measures solar radiation. Such an instrument is usually mounted on a base which