

# The Illustrated Dictionary of Electronics

Seventh Edition

*Stan Gibilisco*  
*Editor-in-Chief*

LIBRARY  
VT TECHNICAL COLLEGE  
RANDOLPH CTR VT 05061

**McGraw-Hill**

New York San Francisco Washington, D.C. Auckland Bogotá  
Caracas Lisbon London Madrid Mexico City Milan  
Montreal New Delhi San Juan Singapore  
Sydney Tokyo Toronto

Gibilisco, Stan.

The illustrated dictionary of electronics / Stan Gibilisco.—7th ed.

p. cm.

ISBN 0-07-024186-4 (pbk.)

1. Electronics—Dictionaries. I. Title.

TK7804.G497 1997

621.381'03—dc21

97-9081

CIP

**McGraw-Hill**



*A Division of The McGraw-Hill Companies*

Copyright © 1997 by The McGraw-Hill Companies, Inc. All rights reserved. Printed in the United States of America. Except as permitted under the United States Copyright Act of 1976, no part of this publication may be reproduced or distributed in any form or by any means, or stored in a data base or retrieval system, without the prior written permission of the publisher.

1 2 3 4 5 6 7 8 9 0 FGR/FGR 9 0 2 1 0 9 8 7

ISBN 0-07-024186-4

The sponsoring editor for this book was Scott Grillo, and the production supervisor was Pamela Pelton. It was set in Bookman by Lisa Mellott through the services of Barry E. Brown (Broker—Editing, Design and Production).

Printed and bound by Quebecor/Fairfield.

McGraw-Hill books are available at special quantity discounts to use as premiums and sales promotions, or for use in corporate training programs. For more information, please write to the Director of Special Sales, McGraw-Hill, 11 West 19th Street, New York, NY 10011. Or contact your local bookstore.

Information contained in this work has been obtained by The McGraw-Hill Companies, Inc. ("McGraw-Hill") from sources believed to be reliable. However, neither McGraw-Hill nor its authors guarantees the accuracy or completeness of any information published herein and neither McGraw-Hill nor its authors shall be responsible for any errors, omissions, or damages arising out of use of this information. This work is published with the understanding that McGraw-Hill and its authors are supplying information but are not attempting to render engineering or other professional services. If such services are required, the assistance of an appropriate professional should be sought.



This book is printed on acid-free paper.



recording systems. It was once commonly used in manual telephone-switching applications.

**patch up** 1. To replace faulty or damaged parts in an electronic system with roughly appropriate surrogates to restore operation quickly (usually under emergency conditions). Also see DOCTOR. 2. To wire a circuit quickly using patch cords for preliminary test and evaluation.

**patent** 1. A document awarded by a government body, giving to an inventor the exclusive right to exploit an invention for a specified number of years. Formally called *letters patent*. 2. The monopoly granted by a document, as defined in 1.

**path** 1. The route over which current flows. 2. In radio and navigation, the imaginary line extending directly between transmitter and receiver (or target). 3. In a computer program, the logical order of instructions.

**pathometer** A form of lie detector that indicates changes in the electrical resistance of the human body.

**pattern** 1. An established sequence of steps in a process. 2. An arrangement of terms in a matrix. 3. The graphical representation of a varying quantity (e.g., an alternating-current wave pattern). 4. The image on the screen of an oscilloscope, or the record traced by an oscillograph. 5. The graphic polar representation of the radiation field of an antenna. 6. The arrangement of bits in a word or field.

**pattern recognition** In machine-vision systems, a method of identifying an object or decoding data according to geometric shape. Optical character recognition (OCR) is an example. The machine recognizes combinations of shapes, and deduces their meanings via a computer program.

**pause editing** In the editing of audio tape recordings, the use of a "pause" switch to temporarily stop the tape when necessary.

**PAV** Abbreviation of PHASE-ANGLE VOLTMETER.

**pawl** In a mechanical stepping device, as in a nonelectric clock, a device made to engage the sloping sprockets on a wheel to ensure shaft rotation in one direction only.

**PAX** Abbreviation of PRIVATE AUTOMATIC EXCHANGE.

**pay-per-view** Abbreviation, PPV. Television service in which each subscriber pays only for individually selected programs.

**pay TV** See SUBSCRIPTION TV.

**Pb** Symbol for LEAD.

**P band** A radio-frequency band extending from 225 to 390 MHz.

**PBX** Abbreviation of PRIVATE BRANCH EXCHANGE.

**PC** 1. Abbreviation of PERSONAL COMPUTER. 2. Abbreviation of PRINTED CIRCUIT. 3. Abbreviation of PHOTOCELL. 4. Abbreviation of POSITIVE COLUMN. 5. Abbreviation of POINT-CONTACT.

6. Abbreviation of PERCENT (also, pct.). 7. Abbreviation of PROGRAM COUNTER.

**pc** 1. Abbreviation of PICOCOULOMB. Also, pC (preferred). 2. Abbreviation of PICOCURIE. Also, pCi (preferred). 3. Abbreviation of PARSEC.

**pC** Abbreviation for PICOCOULOMB.

**PCB** Abbreviation of PRINTED-CIRCUIT BOARD.

**PC board** See PRINTED-CIRCUIT BOARD.

**PC diode** See POINT-CONTACT DIODE.

**p-channel JFET** See P-CHANNEL JUNCTION FIELD-EFFECT TRANSISTOR.

**p-channel junction field-effect transistor** Abbreviation, PFET. A junction-type FET in which the gate junction has been formed on a bar or die of p-type semiconductor material. Compare N-CHANNEL JUNCTION FIELD-EFFECT TRANSISTOR.

**p-channel MOSFET** A metal-oxide semiconductor field-effect transistor in which the channel is composed of p-type silicon. Also see DEPLETION-TYPE MOSFET, DEPLETION-ENHANCEMENT-TYPE MOSFET, and ENHANCEMENT-TYPE MOSFET.

**pCi** Symbol for PICOCURIE.

**PCL** Abbreviation of PRINTED-CIRCUIT LAMP.

**PCM** Abbreviation of PULSE-CODE MODULATION.

**PCM-FM** Pertaining to a carrier that is frequency modulated by information that is pulse-code modulated. Also see FREQUENCY MODULATION and PULSE-CODE MODULATION.

**PCM-FM-FM** Pertaining to a carrier that is frequency modulated by one or more subcarriers that are frequency modulated by information that is pulse-code modulated. Also see FREQUENCY MODULATION and PULSE-CODE MODULATION.

**PCM level** In a pulse-code-modulated signal, one of several different possible signal conditions.

**PCM-PM** Pulse-code modulation that is accomplished by varying the phase of the carrier wave.

**PC relay** See PRINTED-CIRCUIT RELAY.

**PC transistor** See POINT-CONTACT TRANSISTOR.

**PD** 1. Abbreviation of PLATE DISSIPATION. 2. Abbreviation of PULSE DURATION. 3. Abbreviation of PROXIMITY DETECTOR. 4. Abbreviation of POTENTIAL DIFFERENCE.

**Pd** Symbol for PALLADIUM.

**PDA** Abbreviation of *predicted drift angle*.

**PDAS** Abbreviation of *programmable data acquisition system*.

**P display** See PLAN POSITION INDICATOR.

**PDM** Abbreviation of PULSE-DURATION MODULATION.

**PDM-FM** Pertaining to a carrier that is frequency modulated by one or more subcarriers that are frequency modulated by pulses that are pulse-duration modulated. Also see FREQUENCY MODULATION and PULSE-DURATION MODULATION.