

 **Collins** • DICTIONARY

Electronics

DEFINITIONS FOR THE DIGITAL AGE

This edition published 2007 by
Collins, an imprint of
HarperCollins Publishers
77-85 Fulham Palace Road
London W6 8JB

www.collins.co.uk

First published 1988
Second edition published 2004

© Ian Sinclair 1998, 2004

Reprint 10 9 8 7 6 5 4 3 2 1

ISBN 13 978 0-00-780083-4
ISBN 10 0-00-780083-5

A catalogue record for this book is available from the British Library

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Typeset by Davidson Pre-Press Graphics Ltd, Glasgow

Printed and bound in Great Britain by Clays Ltd, St Ives plc.

accelerometer a device that senses or measures the ACCELERATION applied to it, usually with an electrical output.

acceptable quality level (AQL) a figure derived from a graph of probability of batch acceptance plotted against actual percentage defects in a batch. This allows a producer to calculate the risk that a batch will be rejected; the risk fraction (usually expressed as a percentage) is $1/AQL$.

acceptance angle the maximum angle, measured relative to the optical axis of a PHOTOCELL, at which light can strike the cell and still cause a useful output.

acceptance testing a scheme for checking that an electronics system will perform as intended. A large and elaborate system, whose cost may amount to many millions of pounds, cannot simply be put in place and switched on. It is extensively tested with the type of inputs that will eventually be used with it. During the time of this testing, the operators of the system will also undergo training in its use.

acceptor a P-TYPE material for DOPING a pure semiconductor that accepts electrons into its structure, thus releasing positive charges (HOLES) in the semiconductor. Contrast DONOR.

acceptor atoms atoms that possess three electrons in their outer shell, and can accept another electron, creating a HOLE. Chemically, acceptor atoms are of TRIVALENT ELEMENTS.

access control (in a security system) the method of ensuring that only authorized personnel can have access to a building, but providing easy exit in case of emergency.

access delay for a PACKET SWITCHED NETWORK, this is the time for which a DATA PACKET may be delayed before a suitable time gap appears.

access protocols for a satellite data system, the factors of acceptable transmission delay, data rate, acceptable message failure rate and message format.

access time 1. see MEMORY ACCESS TIME.
2. for a computer HARD DRIVE, the time

required to start reading from or writing to a selected TRACK on a PLATTER.

AC circuit analysis a description of a circuit in terms of impedance and frequency for a continuous wave input.

AC coupling any method of transferring a signal between stages that blocks DC, such as a capacitor or a transformer.

accumulator 1. the main REGISTER of a microprocessor. Each of the operations of addition, subtraction, AND, OR and XOR will affect a byte in the accumulator and a byte taken from memory. The result of the action is then stored back in the accumulator. 2. see LEAD-ACID CELL.

accuracy, meter the percentage figure of error for a METER on a given range.

AC/DC (of electric motors and electronic equipment) being able to operate on either ALTERNATING CURRENT or DIRECT CURRENT supply. The term originally denoted radios and TV receivers that could be connected direct to the supply mains and which used no transformers. Nowadays the term usually denotes equipment that can be operated either from mains AC, using a transformer, or from low-voltage DC, such as a car battery.

ACE head the audio and control signal head of a VIDEO CASSETTE RECORDER. During fast search actions, the tape is lifted away from the rotating head into a loop that makes contact with the ACE head so that signals such as those indicating the start of a recording can be found.

AC erase the use of a high-frequency sine wave signal to supply the erase head of a tape recorder in order to demagnetize the tape.

acetone a volatile liquid used for cleaning or as a solvent. Acetone is a fire and toxicity hazard.

AC feedback connection of an output terminal to an input terminal through a path that blocks DC. Either POSITIVE FEEDBACK or NEGATIVE FEEDBACK may be used.

AC generator any device or circuit that generates ALTERNATING CURRENT. The term