

Book Reviews

Van Nostrands Scientific Encyclopedia, 5th Ed.

Editor-in-Chief Douglas M. Considine. Published (1976) by Litton Educational Publishing Inc., 135 W. 50 St., New York, NY 10020. 2370 pp. 9½ × 12 in. Price \$67.50.

Recently this imposing book came across my desk and its sheer volume inspired immediate awe. How can one write a review of a reference book containing more than 7200 editorial entries; over 8000 cross references; 2450 diagrams, graphs, and photographs; and over 550 tables; all on 2370 well-filled pages? Reviewing in a fair way, such a wealth of information, might take an amount of time in proportion to the heft (about 13 lb) of the book. So, this review decided to take a look at topics related to motion-picture and television technology, and other topics related to the interests of the readers of the *SMPTE Journal*. And indeed, the harvest was most impressive.

Starting at "a" with acoustics, one finds a voluminous main entry taking up about two full pages, with well-written explanations of: *physical acoustics, geometrical acoustics, architectural acoustics, psychological acoustics, physiological acoustics, electro-acoustics, irreversible transducers, reversible transducers, electromechanical coupling, and transducer design*. Cross-references have titles including: Hearing and the Ear, Microphone, Cavitation, Flow Measurement, Musical Sound, and Sonar. The literature references include 20 works by outstanding experts in the field. Eleven further entries and their cross references refer to other acoustic topics. This example is a good illustration for the thoroughness with which this Encyclopedia as a whole has been compiled.

The entry Motion Picture Camera is referenced to Photography, where we find a main entry taking up from page 1766 through 1773 (about 7½ printed pages). Three quarters of a page, approximately, are dedicated to the motion-picture camera, giving certainly all the basic information the user of an encyclopedia of this type may be

seeking. Even the two basic types of photo-optical soundtracks (variable density and variable area) are described in this entry, and the principles of sound playback are also explained. This is certainly more than what one would expect under the heading Motion Picture Camera.

The basics of television are described in a 4-page entry which contains illustrations of the scanning process of a television picture, a block diagram of the complete television transmitting and receiving system, sectional views of the image orthicon and the vidicon, and a simplified diagram of a 3-way beam-splitter color television camera.

Digital Computer, Digital-to-Analog Converter, Analog-to-Digital Converter, Encoder, and others are entries of special interest at the present time, when sound and video recording are steering away from analog technologies and toward digital modes.

Color, Electricity, Holography, Illumination Light Sources (including Metal Halide Lamps), Laser, Optical Topics (such as Geometrical Optics, etc.), Vari-Focal or Zoomar Lenses are other topics of immediate interest. According to the publisher's notice, "The Fifth Edition is fully updated, with less than 20 percent of its text and illustrations preserved from the earlier edition . . . Nearly 200 specialists have contributed to this edition in an effort to cover a wide spectrum of science and technology."

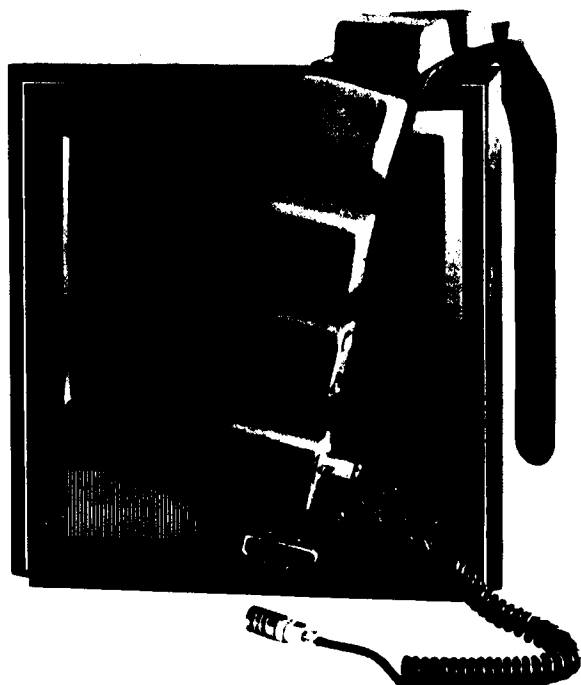
Main guidelines for the organization of the book include: Earth and Space Sciences, Life Sciences, Mathematics and Information Sciences, Energy Technology, Material Sciences (including many engineering topics), Physics, and Chemistry. Certainly, this is a book to have at hand, when one needs quick and succinct information and a pointer to reference books on any scientific subject one is less familiar with. For the technical writer or editor it is especially helpful and valuable. — *Pablo Weinschenk-Tabernero*

Programming Programmable Calculators

By Harold S. Engelsohn. Published (1978) by Hayden Book Company, Rochelle Park, NJ 07662. 224 pp. Illus. 7½ × 9¾ in. Paper. Price \$9.95

Unlike the users' manuals that accompany most new calculators, this book starts at the beginning. It is a jargon-free introduction to programming the popular "algebraic logic" programmable calculators, which means that anyone whose programmable calculator has an "equals" sign can learn more quickly and more thoroughly what can be done with these remarkable "handheld computers." Some of the more important chapter headings include: Introduction to Computing - An Overview; Developing Simple Algorithms and Programs; Branches, Loops, and Decisions; Programming Flags and IF Decisions with the SR52; and Subroutines and Advanced Programming. Specific sample programs are given with explanations for a good number of problems; they can be run directly on various Texas Instrument machines (the SR52, SR56, TI57, TI58, and TI59) as well as the Commodore PR100 and the APF Programmable. A number of exercises are included for the beginner to work out. This is a painless and practical — rather than confusing and frustrating — introduction to handheld computing.

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