

# Book Reviews

## A History of Motion Picture Color Technology

By Roderick T. Ryan. Published (1978) by Focal Press, 10 E. 40 St., New York, NY 10016. 278 pp. Illus. Tables. Diagrams. 5 × 9½ in. Price \$49.95.

At the start of the twentieth century, the techniques of black-and-white still photography were well established, and motion pictures were in their infancy. It had been known for about fifty years, at that time, that white light is composed of three additive primaries, red, green and blue, and that subtractive primaries cyan, magenta and yellow are each obtained by withdrawing, separately, each of the additive primaries from the white light beam. This knowledge, coupled with the public's extraordinary interest in motion pictures, prompted many people to dream up ideas of ways to reproduce live scenes in color. Many systems were developed, using the basic theory of the three separate primaries, either additive or subtractive. All of the systems had some merit when they were set forth. Some systems succeeded temporarily, then gave way to others. Some systems failed after first showing great promise, without yielding any usable theater footage. The story of this multifaceted cavalcade of color systems is fascinating, especially to those in motion-picture color technology today.

Dr. Ryan has undertaken a huge task, to sort out, classify and describe the complex and simultaneous series of events which make up *A History of Motion Picture Color Technology*.

Describing the many processes, some in great detail, some briefly, the author includes topical sidelights, touching on commercial as well as technical and mechanical considerations.

Following the opening chapter, which covers the nature of color, there is a chapter which discusses tinting and toning, i.e., black-and-white images printed on black-and-white raw stock with a tinted base available, at that time, in various colors; there was also chemical tinting and chemical toning. Two complex commercial toning processes which were of significance are described in detail.

Tinting and toning, however, are merely artificial methods of altering the appearance of black-and-white to bring some form of color to the screen. The real interest was in so-called "natural color," and the rest of the volume is given to a description of the many color systems in 2-color and 3-color methods. These are subdivided into additive systems, using two, three and even four negatives, rotating discs in projectors, and multi-image formats on the print film.

A section on Lenticolor additive processes includes a discussion of a 1928 Eastman process called Kodacolor and describes an Eastman embossed color kinescope recording film.

Early subtractive processes include the Colorgraph process invented in 1912, and a 2-color Kodachrome process invented by Capstaff, of Eastman, in 1913 and used as late as 1929 by the Fox Film Corporation.

The Technicolor process is described, beginning with the introduction in 1916 of a 2-color additive system, and continuing with subsequent developments up to the 3-color Technicolor beam splitter, including a Kodachrome type used to produce a 20th Century Fox picture in 1944.

A chapter on subtractive processes using bipack photography discusses Prizma Color, Color Film Process, Vita Color, Sennett Color, Coloratura, Magna Color, Multi Color, Cinecolor and others including Tru Color, by Republic Pictures. Multi-layered subtractive processes include Kodachrome original invented by Mannes and Godowski, Kodachrome print film, Kodachrome Commercial, Ansco Color and Ansco Chrome and even a negative and print system by Dupont.

A description and chronology of Eastman Color Type 5247 introduced in 1950 is naturally the high point of the volume and is provided in great detail. The same chapter includes a description of the Ektachrome processes, including ECO 3 and ME4 and also CRI, but, unfortunately, omits any reference to the VNF products and the present 5243-7243 films.

Chapter IX covers color film products, recently or currently being supplied by foreign manufacturers, such as Fuji, Agfa-Gevaert and Ferrania. These included 35mm and 16mm negative positive, and reversal 16mm systems.

The Rehalogenation Process includes such undertakings as Gaspar Color, Pola Color, and Pana Color, the last of these a print process utilizing black-and-white film printed from separation negatives. The book contains a glossary of terms and an addendum which contains interesting reprints of Kinema Color material, publicity and various instructions to cameramen. In addition to adding a nostalgic touch, it provides an insight to an inspiring period in the history of our industry. —*Paul A. Kaufman*, Du Art Film Laboratories, Inc., 245 West 55 St., New York, NY 10019.

## Photographic Light Measurement and Sensitometry

By Jozsef Hefelle and Laszlo Gloetzer. Published (1978) by Muszaki Konyvkiado, Budapest, Hungary. 257 pp. 5 color plates. Diagrams. 6½ × 9 in.

This fine publication, regrettably published only in Hungarian at the moment, is a complete thesis on the measurement of light and its properties. The subject is thoroughly handled in 14 chapters: Basic Optics; Light Sources; Theory of Tone Reproduction; Introduction to Sensitometry; Sensitometric Exposure; Processing of Sensitometric Samples; Optical Density of the Developed Image; Representation of Sensitometric Results; Determination of Sensitivity; Theory of Photographic Light Measurement; Light Measurement in Photography; Exposure Meters; Calibration of Exposure Meters; and Measurement of Color Temperature in Photography.

Each chapter covers its subject quite fully, having been written with the collaboration of some ten of our leading specialists.

Plans are being formalized to publish this book in German, French and, hopefully, English. — *Alex E. Alden*.

## A Dictionary of Microcomputing

Ed. Phillip E. Burton. Published (1976) by Garland Publishing, Inc., 545 Madison Ave., New York, NY 10022. 190 pp. 5½ × 8½ in. Price \$14.50.

The computer has a variety of names that begin to suggest how ubiquitous it is — micro-computer, small-business computer, hobby computer, personal computer, home-computer, etc., etc. Only a few years ago it was inconceivable that an individual or a small business could own a computer costing between \$500 and \$5000. The computer-on-a-chip has made this possible. Millions of these valuable new tools are being sold each year and it is being discovered by the prospective new users that using the microcomputer and getting the most out of it requires learning a new and specialized vocabulary. Whether one is a manager of a small business who wants to handle billing and inventory control by computer, or is one who merely wants to talk with other computer hobbyists, the *Dictionary of Microcomputing* is an invaluable aid in getting to know the territory. — *Edit*.

## BBC Handbook 1978

Published (1978) by the British Broadcasting Corp., 35 Marylebone High St., London W1M 4AA, England. 374 pp. Illus. 5½ × 8 in. Price £2.00.

The *BBC Handbook 1978*, an extraordinarily informative report covering all the activities of the British Broadcasting Corporation during 1977, is arranged in three parts, (I) Annual Report and Accounts 1976-77, (II) Programme Review, and (III) Reference. The book, as a whole, is a delight to read for its impeccable English and its lively style.

The somewhat paternalistic attitude of the BBC toward its employees is evidenced in the report on Personnel Policy: "In addition to maintaining contact with such of the BBC's 6000 retired staff as are in need of support, the Welfare Unit continues its counseling service to staff who have domestic or personal problems . . . The Unit runs an accommodation bureau which is much used — especially now that rented accommodation is so hard to find in the London area."

Although it is somewhat unfair to a book or a report to take a quotation out of context, the quotation appealed especially to this reviewer, indicating, as it does, a human warmth in the BBC approach to personal problems in this age of nonhuman computers.

The Programme Review section contains 66 pages of color illustrations (photographs) of moments in the various broadcasts, with brief comments on each program together with a list of actors or participants.

The Reference section contains brief descriptions of BBC's ongoing research projects as well as an interesting report on Digital Systems.

The *Handbook* contains so much information, presented succinctly and clearly, that it should, most certainly, be acquired by all persons who are interested in any aspect of the many accomplishments of the British Broadcasting Corporation. — *Edit*.