books reviewed

Engineering Economy (3d ed.)

By Clarence E. Bullinger. Published (1958) by McGraw-Hill Book Co., 330 W. 42 St., New York 36. 379 pp. Tables, graphs. 6 in. by 9 in. Price $7.00.

Professor Bullinger's book is intended to be used as a textbook.

The author's objective is explained in the Preface: "The engineer in industry has been accustomed to study problems assigned to him and to arrive at a functional design for their solution. More and more, the engineer is asked to participate in decision making by the study of the economic aspects of projects given to him for functional solution."

The author has observed that since World War II because of the effectiveness of operations research projects, management is expanding the study of engineering projects to include not only the technical or functional solution but also the economic solution. It is pointed out that management decisions include not only the functional feasibility analysis and the economic analysis which may be made by engineers but the intangibles and the necessary financial arrangements.

The textbook provides an engineer with the techniques of engineering project analysis necessary for an understanding of the economic aspects of projects. It provides a comprehensive coverage of all cost factors incurred from the conception of an idea through the development and design phases, to the design of the factory to produce it, and then the operation of the factory.

Material covered in this book is sufficiently condensed yet comprehensive enough to make it a valuable reference book for engineers engaged in the planning and design of products for manufacture. Project or design engineers who are familiar with the principles and techniques covered in this book are better equipped to integrate their product design activities with the planning of general management. An understanding of the economic factors will enable design engineers to consider many factors which have a bearing on the successful manufacture and sale of products, which they have a tendency to overlook, if they do not understand the overall problem of designing, manufacturing, and selling products profitably.—*M. C. Batsel*, Radio Corp. of America, Engineering Products Dept., Bldg. 10-7, Camden, N.J.

Technique of Film and Television Make-up

By Vincent J-R Kehoe. Published (1958) by Hastings House Publishers Inc., 41 E. 50 St., New York 22. 263 pp. Illus. 5½ by 8½ in. Price $9.00.

This book is the most thorough treatment on the methods of make-up, both black-and-white and color, which has come to this reviewer's attention. Here the amateur cinematographer can find clear, simple directions for glamorizing the girl next door, or the professional make-up artist can review the more complex procedures of making up for age, racial types or character delineation. I was especially delighted to find Mr. Kehoe stressing the important requirement for integrating make-up with lighting, wardrobe and set design.

Mr. Kehoe opens his book by building a firm foundation for his subject, explaining why make-up is used and what it can do. A consideration of facial anatomy and a comprehensive list of the tools of make-up are then presented, followed by detailed discussions of straight and corrective make-up, character make-up, and methods of creating the illusion of age. All of these discussions are well illustrated.

Problems of period and historical make-up are also considered with examples of how to make up Cleopatra, Julius Caesar, Helen of Troy or Attila the Hun, to name a few. Mr. Kehoe covers the fundamental differences from century to century, and even

shows the tricks of make-up for non-human types such as witches, devils or the animal men from *The Wizard of Oz*. Fantasy types such as fairies and elves, and even horror types such as Dracula and Frankenstein's monster are not neglected. And if you want to make up a pirate, or perhaps a clown, or even a doll, you are told how to accomplish that too.

An outstanding feature of the book is a discussion of techniques such as the making of face masks, prosthetic noses, eyes, scars, double chins and hair goods; and this is a how-to-do-it discussion, not merely a description of what should be done.

Mr. Kehoe is obviously an experienced make-up artist who knows what he is talking about, as a glance at his many and impressive credits clearly indicates. I consider his book a valuable addition to my library, and anyone interested in make-up will almost certainly find it interesting and useful. For a professional make-up artist it is a veritable handbook.—*Wilton R. Holm*, E. I. du Pont de Nemours & Co., Parlin, N.J.

Mr. Holm is Editor of SMPTE's Elements of Color in Professional Motion Pictures, *published in 1957.*

The Care and Conservation of Motion-Picture Film

By W. D. Korowkin. Published (1954) Fachbuchverlag, Leipzig, East Germany. 68 pp. 40 illus. 6 tables. 6 by 9 in. Paper bound.

The book conveys some elementary technical information and practical experiences, the knowledge of which is necessary to be a "progressive" projectionist in the Soviet orbit.

Listed as main characteristics, which influence the wear and tear of prints, are folding, abrasion resistance and shrinkage properties.

As a second set of requirements, to keep prints from being damaged and to obtain high quality theater performances, are mentioned adherence to the standards of film width, longitudinal and transverse pitch, film thickness and to a so-called checker-board-like displacement of the perforations (we call it squareness), given in this order of importance. It is interesting to note that size of perforations is not mentioned anywhere.

For gaging equipment the recommendations sound strange. Film width is to be measured at several locations of the print and at every splice, with calipers — to an accuracy of 0.0002 to 0.0004 in. Pitch uniformity and average pitch are supposed to be measured either with a comb-type gage, or a steel ruler. For more complete information it is suggested to use a gage. This last gage is manufactured by the "Workshop for Inspection Instruments" in Moscow. Film thickness is measured with a micrometer. Squareness error is established with the foldback gage. Its magnitude is determined with the aid of a grating in an eye loop.

The recommended protective treatment of prints consists of waxing, tanning or lacquering. Concerning lacquering, the book mentions that in spite of the many patents, this method is still not practical to use. It does mention, however, that at

present the "Scientific Research Institute for Cinematography and Photography" is trying to find a reasonable method for lacquering.

By inference it can be deduced that there are still a large number of nitrate prints in circulation. One remark lets one believe that recently about 20 tons of prints were destroyed within 3 minutes by fire.

Formulas of four recommended film cleaners are given. These are mixtures of carbon-tetrachloride, benzin, toluol and/or butyl alcohol.

The importance of not letting prints dry out, even in theaters, is emphasized at great length. It is requested that theaters keep the prints between performances in special storage cabinets at between 59 and 68F and 60 to 70% R.H. For storing color prints 65–70% R.H. and temperatures between 55 and 63F are requested.

Concerning the final use of prints, it was found under ordinary working conditions that progressive projectionists were able to project a print on stationary projectors 1,250 times, or 700 times on portable equipment, before any damage occurred. Contrary to this the "utilization standard of theater prints" is set at 600 for theaters with stationary equipment and 400 when used on portable equipment.

It is interesting to read this rather enlightening remark: "Occasionally damage occurs with qualified projectionists too. But that happens only when operation of the equipment was left to apprentices, which at the time, were not yet qualified to operate independently."

As main reasons for damage to prints are mentioned: (1) unsatisfactory surface conditions on projector parts; (2) improper tensions; (3) high rail and gate pressures; (4) defective rewinds; (5) faulty rewinding technique; and (6) lack of humidity.

The elimination of these causes will guarantee that the print will remain uninjured.

It is not permitted to show a print which was previously not checked. For that reason the exchange has to deliver the prints wound emulsion out with the start of the picture at the core end. With each print goes a "Print accompanying defect card." In case the check differs from the entries on this card, a report has to be made out in triplicate. In cities the report has to be signed by projectionist, technical leader and the manager of the house. In villages by the projectionist and by the Chief of the District Cine Department, or by a member of the "Collective Management." These reports then should be forwarded by registered mail, or special messenger to the exchange.

Special overhaul requirements of prints and projectors are listed:

The first-class splice should have a width of 0.08 in. and the second class 0.16 in. A good splice should withstand, 24 hours after it was made, a pull of 44 lb over its entire width.

Film tension in the projector gate should not exceed 300 to 350 g. On new or freshly overhauled projectors, oil should be changed after 20 hr. On old projectors the oil should be changed every 100 hr of operation. Internal inspection of the projector has to be undertaken every 200 hours.

When showing new prints the first time, film chutes with chamois or velvet inserts are to be used. The normal pulldown force on stock rolls should be between 60 and 100 g. When any worn parts are replaced on a projector, the new part should be broken in for 30 or 40 min. Then, if after 100 runs of a test loop, no mechanical defects or noticeable wear on the perforations, or on the surface of the test loop, are visible, the equipment can be released for use.

Concerning the protection of 16mm prints in the projector, the regulations are: After every 36,000 ft the projector has to be tested with a 5-ft long loop. The loop should be run 100 times and then remain free of streaks and scratches. When parts were changed, the projector should be broken in for 30 to 40 min. Then a 15-ft loop after 600 runs should not show any streaks or scratches.

On 16mm projectors the gate tension should not exceed 50 to 90 g. For a 360-ft roll of film, the unwind tension should be 15 g at the start and 50 g at the end of the roll. The take-up tension should be 50 g at the start and 10 g at the finish. For 1800-ft rolls, the unwind tension should average 100 g and the take-up 180 g.

The need for a planned preventive maintenance is greatly emphasized (even parts from a speech by Malenkov are quoted). Maintenance schedules are based on multiples of 550 hr of operation.

As was previously seen in Soviet publications, again it is pointed out how important it is for every projectionist to assume "certain specified socialistic duties" (which are to be checked daily by a superior). At the

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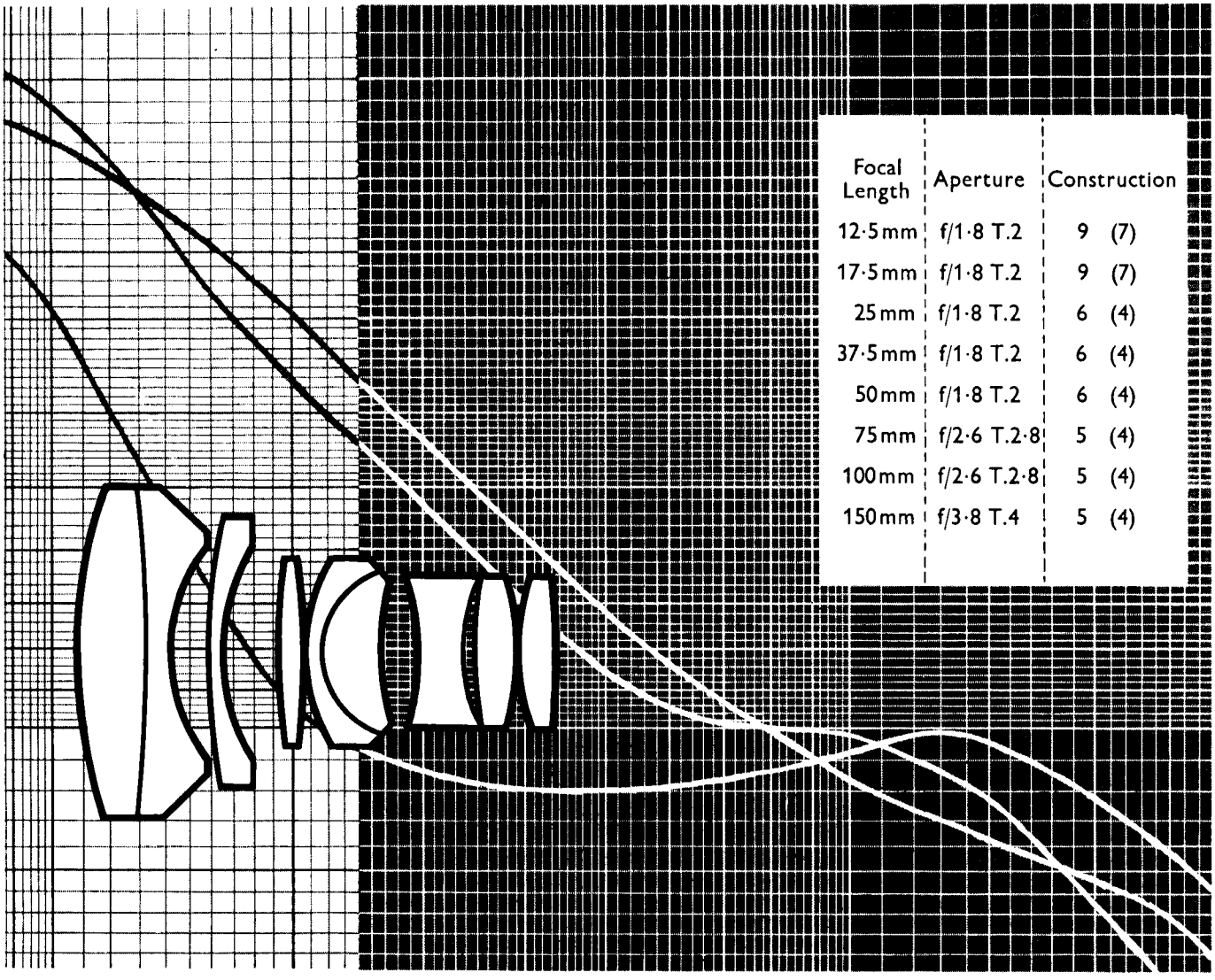

Focal Length	Aperture	Construction
12·5mm	f/1·8 T.2	9 (7)
17·5mm	f/1·8 T.2	9 (7)
25mm	f/1·8 T.2	6 (4)
37·5mm	f/1·8 T.2	6 (4)
50mm	f/1·8 T.2	6 (4)
75mm	f/2·6 T.2·8	5 (4)
100mm	f/2·6 T.2·8	5 (4)
150mm	f/3·8 T.4	5 (4)

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monthly production discussions the fulfillment of these socialistic obligations will be judged and rated.

The last chapter of the book describes the duties of the "Technical Inspectors for Motion Picture Theaters" which is a government job. Their main task is to take action which will preserve film. Trips are planned so that each theater can be checked at least once every three months. When the performance average of the entire group of theaters is high, the work of the inspector can be rated as good. It is, however, not permitted to hide behind the average values, single, poorly performing theaters. The main task of the inspectors should be to improve these enterprises, which possess less good equipment and have less good services.—*E. I. Guttman*, Eastman Kodak Co., Kodak Park B.35, Rochester 4, N.Y.

The Technique of Stage Lighting

By Rollo Gillespie Williams. Published (1958) by Pitman Publishing Corp., 2 W. 45 St., New York 36. 198 (+ xvi) pp.; 71 black-&-white ill., 8 color plates, tables, index. 5½ by 8¾ in. Price $7.50.

The recently published second edition of this standard reference work is notable for bringing up to date a wealth of technical and practical information. Although it is primarily concerned with stage lighting, film and television lighting engineers will find in it much useful material readily adaptable to their own craft.

The personality and background of the author give to the book its unquestionably authoritative nature. Mr. Williams has been for over twenty years one of Britain's and this country's leading theatrical illuminating experts gifted with an unusual artistic insight. He is the inventor of the stage lighting control system known as Rollocolor, and has collaborated on perfecting remote control electronic lighting systems (with Century Lighting Inc., New York).

The book is conveniently divided in four parts, enabling the reader to find quickly the desired section.

The first part deals with the scientific basis of illumination and provides important theoretical information for those concerned specifically with the use of stage lighting. The second part deals in detailed and thoroughgoing fashion with the design and layout of lighting equipment and installation.

Principles of an effective use of light and color in artistic composition are discussed in part three. Its value is derived mainly from the author's many years of successful experience in this field and his extensive contribution to research in the function of color as a dramatic element in staging.

The fourth part offers helpful practical advice for the theatrical producer, while keeping in mind amateur stage directors eager to give to their presentations that glossy professional touch.

Mr. Williams writes in a clear and unencumbered style. His discussion of aesthetics is never condescending to his reader and manages to retain an informal tone. On the technical side, his description of complicated equipment and its uses is thorough while avoiding unnecessary details. Illustrations are well selected and the color plates effectively used. A comprehensive index completes this interesting and useful book.—*George L. George*, Executive Secretary, Screen Directors International Guild, 507 Fifth Ave., New York 17.

TV Distribution Systems and Antenna Techniques

By Jack Beever. Published (1958) by Howard Sams Inc., Indianapolis 5, Ind. (Photofact Publication DSB-1) 167 pp. illus. 5½ by 8½-in. Paperbound. Price $2.95.

It is always a pleasure to read a text prepared by an expert in any field who in addition to his technical competence is able to express himself in readable English. *TV Distribution Systems and Antenna Techniques* falls into this category.

This book was written for the benefit of installers of television receivers and of multiple television systems. In consideration of this dual purpose the book divides naturally into two parts. The first five chapters contain discussions in elementary terms of the problems attendant upon the installation of efficient antenna systems. This material is of prime interest to anyone located at extremes of the service range of a broadcasting station. The last six chapters treat the problems attendant upon the distribution of signals from a single antenna to a number of receivers. The author discusses thoroughly both those passive (unamplified) systems which might be used in small apartment houses and motels and the more complicated systems that might be used to distribute signals throughout a single community.

This is a thoroughly practical text intended for the working man in the field.

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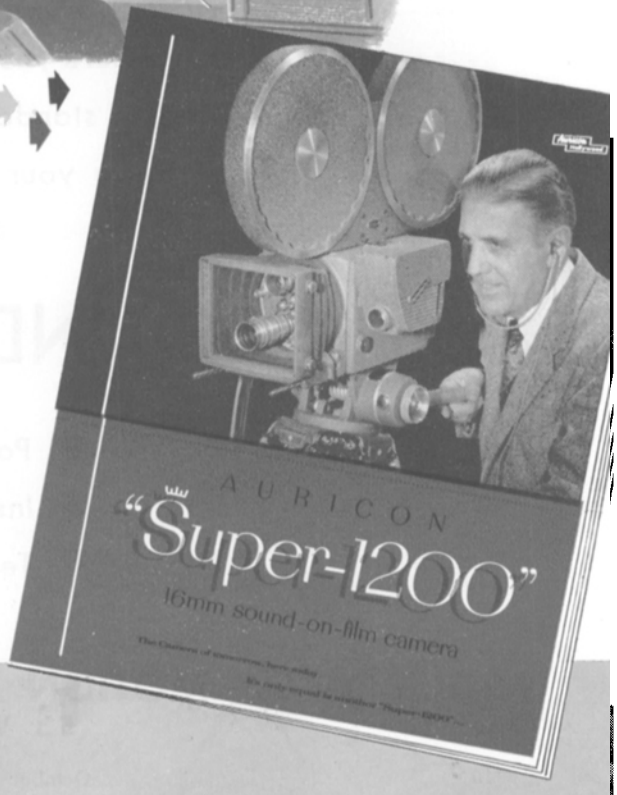

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It contains not more than a minimum of theory and probably would seem to be an abomination to the laboratory engineer.

There would seem to be some inconsistencies between tables T 15.5 and 15.6 for the attenuation of standard coaxial cables. It might have been wise for the author to have pointed out that the attenuation of such cables will stay within the figures quoted only if the material is bought on specifications.—*W. T. Wintringham*, Bell Telephone Laboratories, Murray Hill, N.J.

Elements of Magnetic Tape Recording

By N. M. Haynes. Published (1957) by Prentice-Hall, Inc., 70 Fifth Ave., New York 11. xii + 392 pp. illus. diagrams. 5½ by 9-in. Price $7.95.

Elements of Magnetic Tape Recording is a readable, well-balanced book which assumes no previous knowledge of the subject. From this standpoint, and because it contains many "homely" analogies, it is an excellent volume for anyone who wants to start from the beginning, but does not want to become involved in advanced theory or in mathematics.

About one third of this book is devoted to magnetic recording principles and related subjects. The balance deals with practical aspects of magnetic recording, such as circuits, tape handling mechanisms, maintenance, editing, performance specifications, and typical commercial recorders.

Emphasis is on tape recording for audio. The specialized fields of sprocketed and synchronous recording as practiced by the motion-picture industry are not dealt with; neither are data recording, telemetering, computer, and similar nonaudio applications. However, an understanding of the basic principles of tapes, heads, circuits, and drives is useful also to those who work with special equipment.

The book includes a great deal of up-to-date circuit diagrams, servicing and operating procedure. It is recommended both for its easy-to-understand style, and for its practical coverage of equipment and techniques.—*Marvin Camras*, Physics Research Dept., Armour Research Foundation of Illinois Institute of Technology, 3440 South State St., Chicago.

Microphotography

Photography at Extreme Resolution

By G. W. W. Stevens. Published (1957) by John Wiley & Sons, 440 4th Ave., New York 16. i-xviii + 326 pp + 32 plates. Illus. 8¾ by 5¾ in. Price $8.50.

Only a dedicated person could have been the author of this book. For only such a one could have approached his subject with the meticulous attention to detail that is here displayed, and still have done so with a warm personal approach and occasional sly flashes of humor. The author states that, while most of his knowledge of the subject was gained while at Eastman Kodak Laboratories, some of his opinions may seem unorthodox and that the book should therefore not be regarded as having company endorsement. The author is to be commended for having transcribed accurately, or at least without a single factual error of which the reviewers are aware, the consolidated knowledge of many diverse sciences.

For the worker in the specific field of microphotography, the book provides an outstanding presentation of technique. One who has learned the material presented therein can truly claim to be a skilled craftsman. On the other hand, the instructions are so simple and direct that an amateur or hobbyist should be able to follow them and obtain creditable results. Some of the materials referred to may be difficult to obtain, but the author considers the effort to be justified. One of the reviewers has made a successful 3 by 4 mm copy of a newspaper page by a method which the author describes.

The usefulness of the book is not limited to the technician. In particular, the chapter on Microphotography as a Research Tool will be valuable to the physicist, chemist and biologist.—*Louis P. Raitiere* and *Bernard D. Plakun*, General Precision Laboratory Inc., Pleasantville, N.Y.

International Lighting Vocabulary of the International Commission on Illumination, Vol. I (2d ed.) contains 530 terms with definitions in French, English and German, as well as symbols and formulae. The book, prepared by a working party of the Commission Internationale de l'Eclairage

(C.I.E.), is intended to facilitate communication among scientists throughout the world who are working in the field of illumination. Volume 2 will be published in 1959 and will contain the same terms, without definition, in French, English, German, Danish, Dutch, Italian, Polish, Russian, Spanish and Swedish. A limited number of copies are available from U.S. National Committee, C.I.E., att. T. D. Wakefield, Treasurer, U.S.N.C., Vermilion, Ohio, at a prepublication price of $2.50.

Modern Geometrical Optics by Max Herzberger, published (1958) by Interscience Publishers, 250 Fifth Ave., New York, describes a system which enables modern lens designers to predict the exact performance of a lens, before making a single sample, by the use of a mathematical model. The system, developed during 35 years of optical research, reproduces all details in the optical image. Basically, the author reduces analyses of the lens image from varied errors to five simple types of errors for easier correction. Separate chapters deal with precalculation of optical systems and with the correction of color aberrations. Dr. Herzberger, who is internationally known as an authority on geometrical optics, is a senior research associate at the Kodak Research Laboratories, Rochester, N.Y.

A 56-page data book, *Eastman Motion Picture Films for Professional Use*, and specification sheets have been packaged together by Eastman Kodak Co. to provide comprehensive information on the proper selection of films for 35mm and 16mm motion pictures and procedures for obtaining the best results. The book contains information on the physical and photographic characteristics of various types of film and also discusses filters and processing. The package is available from Kodak dealers at a price of $1.25.

Closed-Circuit Television Systems, an RCA publication, is a 348-page book which explains the fundamentals and techniques of black-and-white and color closed-circuit TV systems. Characteristics and typical applications of various types of commercial equipment are described. Chapters are included on typical industrial applications and technical information prepared originally for the U.S. Air Force. The book is available from the Government Service Dept., RCA Service Co., Camden 8, N.J. It is priced at $4.50.

Magnetic Sound Recording for 16mm Motion Pictures, published by Eastman Kodak Co., is a 68-page booklet which describes the basic principles and techniques of magnetic sound recording and offers practical advice to users of magnetic sound-on-film equipment — such as business men, educators, industrial photographers and advanced amateurs. Sections in the book discuss basic equipment for making sound motion pictures, script preparation, camera techniques when shooting for sound, basic recording techniques, use of the microphone in recording, narrating, requirements of a recording studio, editing for and with sound, obtaining optical prints from magnetic sound films and care and handling of magnetic sound films. The book was written with the assistance of Prof. Glen Turner of Brigham Young Univ., College of Fine Arts. It is available through Kodak dealers at a price of 50 cents.

Selected References on Audio-Visual Publications (S-10), an Eastman Kodak publication, is highly recommended to anyone interested in the audio-visual field. Titles of books and articles on specialized fields, production, and projection and utilization with a brief description of their contents are included in the 28-page booklet which also lists general reference sources. Other Eastman booklets on audio visual subjects include *Foundation for Effective Audio-Visual Projection* (S-3), *Slides and Opaques for Television* (S-5), *Legibility Standards for Projected Material* (S-4), *Artwork Size Standards for Projected Visuals* (S-12) and *Making Black-and-White Transparencies for Overhead Projection* (S-7). These booklets are available without charge from Eastman Kodak Co., Sales Service Div., Rochester 4, N.Y. The request should include title and code number of the desired booklet.

The 27th edition of *Television Factbook* (Fall-Winter 1958–1959) is now available. Published semiannually by Television Digest, Wyatt Bldg., Washington 5, D.C., it is a standard reference work containing worldwide information on the TV industry. Included in the new edition is a complete list of the 3073 counties in the United States with the number of homes in each with TV and the percentage of saturation. The book is divided into approximately 70 sections which contain reference material on all areas of the television industry, including station ownership and personnel, equipment manufacturers, community antennas, consulting engineers, Congressional Committees, and many others. The 496-page book is priced at $5.00. A TV wall map, 34 in. by 22 in., showing cities and networks is included.

Kodak Pamphlet D-21, an 8-page booklet on *Getting the Most Out of Your 8mm Films*, tells the amateur cameraman how to use his films, how to handle the magazine and how to determine if it is half or completely exposed. The booklet also offers exposure and filter information. It is available without charge from Eastman Kodak Co., Sales Service Div., Rochester 4, N.Y.

Film en Televisie Gids Voor Nederland (*Film and Television Guide for the Netherlands*) published (1958) by Stichting Instituut Voor Filmdocumentatie, Amsterdam, has been revised and expanded from the 1954 edition of *Film and Television Guide for the Netherlands*. Although the book is in the Dutch language, it contains much of interest for readers unacquainted with the language. Considerable help is afforded by a five-language vocabulary, and the listing of the addresses of Dutch firms, producers, publications and associations is especially useful. The book is paperbound, 340 pp., and is illustrated.

Registered owners of the *Pocket Photo Data Book* will receive 18 pages of supplementary material without charge, according to a recent announcement by Morgan & Morgan Inc., Publishers, 101 Park Ave. New York 17. The pages, punched to fit the Pocket Photo binders, include changes and additions made in film and exposure data, etc., since the book was published early this year. The supplementary pages will also be included in new copies of the book. Planned as a guide to practical working data needed in general or studio photography, it is priced at $3.95 for the Standard Blue Vinyl binder edition, and at $4.95 for the Deluxe Cordovan Brown Vinyl binder edition.

Inter-Society Color Council has announced publication of *Bibliography on Color*. The 377-page volume represents the work of many years and many hands. The material has been assembled and arranged by Margaret N. Godlove from the bibliographies on color published in ISCC Newsletters during 1936–54 under the editorship of I. H. Godlove. Dr. Godlove had planned to prepare a subject index for this bibliography and at the time of his death some preliminary work had been accomplished. Mrs. Godlove, with the assistance of several Council members, carried on the project to its completion.

Priced at $3.75, the Bibliography may be ordered from ISCC-Godlove Bibliography, c/o Braden Sutphin Ink Co., 3650 E. 93 St., Cleveland 5.

current literature

The Editors present for convenient reference a list of articles dealing with subjects cognate to motion-picture engineering published in a number of selected journals. Photostatic or microfilm copies of articles in magazines that are available may be obtained from The Library of Congress, Washington, D.C., or from the New York Public Library, New York, N.Y., at prevailing rates.

American Cinematographer vol. 39, Jan. 1958
New Arri "35" 1000-ft Blimp (p. 30) *F. Foster*
The Science of Process Photography (p. 36) *J. Henry*

vol. 39, Mar. 1958
Dissolve-Lapse—New Technique in Interval Photography (p. 162) *L. Chaney*
A Practical Cine-Voice Conversion (p. 164) *B. Landrum*
A Report on High-Speed Infrared Film (p. 170) *B. R. Kantor*
How and When to Frame a Scene (p. 174) *J. V. Mascelli*
Zoom Lens for 16mm Cameras (p. 177) *J. Henry*

vol. 39, Apr. 1958
Dissolve-Lapse—New Technique in Interval Photography (p. 226) *L. Chaney*
Design Improvements in High-Wattage Filament Lamps Respond to Studio Needs (p. 228) *G. Howard*
Motion Pictures of "UFO's" *M. B. Miller* and *N. S. Kossuth*

vol. 39, May 1958
Syncing Camera With Tape Recorder (p. 302) *D. Blumgart*
Ten Methods for Making Color Prints (p. 304) *J. Henry*
Professional Titling With an Animation Stand (p. 306) *V. W. Palen*
Equipment for Filming UFO's (p. 309) *M. B. Miller* and *N. S. Kossuth*

vol. 39, June 1958
Theatre Screen Your Best Textbook If You Want to Learn Lighting (p. 364) *J. V. Mascelli*
Economy and Speed With Single-Double-System Sound (p. 372) *G. J. Yarbrough*

Bild und Ton vol. 11, Apr. 1958
Der 16-mm-Lichtton auf mehrschichtigem Farbfilm bei Behandlung nach dem Restsilberverfahren (p. 91) *O. Grabke*
Magnetische Bildaufzeichnung nach dem Ampex-Verfahren (p. 93) *K. O. Frielinghaus*
Die Breitwandwiedergabe (p. 95) *A. R. Schulze*
Proposed German Standards:
DIN 15 531 Rohfilmkerne
DIN 15 822 Doppel-8-Tageslicht-Aufnahmespule

British Kinematography vol. 32, Feb. 1958
Printing Motion-Picture Films Immersed in a Liquid (p. 40) *J. G. Stott, G. E. Cummins* and *H. E. Breton*

vol. 32, Mar. 1958
The Xenon Lamp for Film Projection (p. 59) *E. J. G. Beeson, W. A. Bocock, A. P. Castellain,* and *F. A. Tuck*

vol. 32, May 1958
Colour Kinescope Recording on Embossed Film (p. 123) *A. Tarnowski*
The Xenon Arc Lamp (p. 138)

Electronics vol. 31, June 20, 1958
Relay System Diplexes Audio and Color Video (p. 64) *T. G. Custin* and *J. Smith*

Film Technikum vol. 9, Apr. 1958
Optische Trick-Umkopiermaschine (p. 103)
Xenosol—die Xenonlampe von Zeiss Ikon (p. 104) *H. Ulffers*
Das Anamorphoten-Programm von Möller (p. 106)
10 Jahre Kinotechnische Fertigung bei Frieseke & Hoepfner (p. 108)

vol. 9, May 1958
Die Kinotechnische Industrie in Hannover (p. 138)
Rationalisierung im Filmtheater (p. 142)
FT-Gespräch mit Friedrich Wollenberg über das Thema Rationalisierung (p. 144)
Rationalisierung durch Vorführautomatik: [Die Wirkungsweise der Zeiss Ikon-Vorführ-Automatik (p. 148)

International Photographer vol. 30, July 1958
Mathematical Features of Various Motion Picture and TV Lenses (p. 9) *L. W. Physioc*

International Projectionist vol. 33, Apr. 1958
Basic Screen-Light Terms (p. 5)
New Micronic Light Control for Super Cinex Arclamp (p. 13) *C. S. Ashcraft*

vol. 33, May 1958
Machine Vibration and Image Steadiness (p. 5) *R. A. Mitchell*

vol. 33, June 1958
Optics of the Motion-Picture Projector (p. 5) *R. A. Mitchell*
Focus-Drift (p. 10) *J. J. Finn*

vol. 33, July 1958
Sprockets and Film Perforations (p. 5) *R. A. Mitchell*