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The Daniel and Florence Guggenheim Foundation, 120 Broadway, New York 5, which annually grants Fellowships for studies in Jet Propulsion at Princeton and the California Institute of Technology, and in Flight Structure at Columbia University, has announced that applicants should file their credentials with the University of choice by March 1, 1960. Up to 18 Fellowships are awarded annually to qualified science or engineering students who are prepared for graduate study and who have outstanding technical ability and qualities of leadership; deep interest in rockets, jet propulsion, flight structure or astronautics, and an intention to follow one of these fields as a career. Applicants must reside in the United States or Canada.

Biographical Note



Edwin C. Fritts

Dr. Fritts retired on January 1, 1960, after being associated with Eastman Kodak Co. for 37 years. At the time of his retirement he was supervisory physicist in the apparatus research and development department of Eastman Kodak Co. Prior to his joining Eastman Kodak in 1923—the same year in which he received the degree of Ph.D. in Physics from the University of Illinois—he had been employed on a part-time basis during the summers of 1920 and 1921. In 1920 he invented the Kodak Autofocus Enlarger, one of the first amateur automatic focusing enlargers.

Recently Dr. Fritts has been associated with the development of the Eastman 16mm Projector, Model 25, and its counterparts for television use, Models 250 and 275. Since 1953 he has worked on various problems related to television and aerial photography. Earlier, he developed special apparatus, particularly for Cine-Kodak processing, and in cooperation with the Research Laboratories, he developed the Sound Kodascope Special. A Fellow of this Society, he has served for several years on the Television Committee and has published a number of papers in the *Journal*. One of his more recent papers is "A 16mm Projector for Operation With TV Film-Chain on Partial Storage Basis," (*Journal*, pp. 567-577, Oct. 1955). He is a member of Sigma Xi (honorary scientific fraternity), Photographic Society of America, and the Rochester Section of the American Optical Society.

books reviewed



Principles of Cinematography, 2d ed.

By Leslie J. Wheeler. Published (1958) by Fountain Press, 46-47 Chancery Lane, London W.C. 2. 472 pp. Illus. Published in the U.S. (1959) by Macmillan Co., 60 Fifth Ave., New York 11. Price \$12.75.

This book is a second edition of the book published in 1953. The publisher's jacket comments that, "The author explains in a wealth of detail all the processes and equipment used in present-day motion picture production and exhibition," and "The work comes right up to date." However, careful examination of the 1958 edition shows it to be an exact duplicate of the 1953 edition in all sections with no revisions or inclusions of the many recent developments. Faster black-and-white films of four years ago are not included, and color photography is excluded completely along with wide-screen and anamorphic systems.

The chapters covering General Photographic Principles, Cameras, Processing Equipment, Printing, Projection, Sound Recording, etc., are started with excellent historical and technological background material on each subject. The volume is well written and illustrated and contains a good bibliography although it has no recent reference additions.

The book provides an excellent reference for most phases of the technology and history of cinematography until ten years ago and would be a valuable source book for the library of anyone in the field.—*Earl W. Kage*, Eastman Kodak Co., Research Laboratories, Rochester 4, N.Y.

Kinotechnische Bücherei: Bildtechnik, by Helmuth Schering; **Elektrotechnik**, by Fritz Trommer; **Tontechnik**, by Fritz Trommer; **Vorführerätetechnik I**, by A. R. Schulze; **Vorführerätetechnik II**, by Gerhard Pierschel; **Störungsdienst-Kontrolle und Wartung**, by A. R. Schulze.

Ed. A. R. Schulze. Published (1959) by Fotokinoverlag, Halle (Saale), Germany. Paper covered. Approx. 70 pp. each. Illus. 5½ by 8 in. Prices DM 3.30 (\$0.79), 4.80 (\$1.15), 4.80 (\$1.15), 4.60 (\$1.10), 4.80 (\$1.15), 4.60 (\$1.10).

These six German booklets are part of a useful set of 14 motion-picture booklets issued by Fotokino Publishing Company in Halle, (East) Germany. The other eight publications are titled as follows: *Lichttechnik* (Lighting Technique); *Projektions-*

technik (The Technique of Projection); *Licht-und Magnetontechnik* (Optical and Magnetic Sound Technique); *Verstärker-technik* (Amplifier Technique); *Bildwerr-ferraum* (The Projection Room); *Akustik* (Acoustics); *Zuschauerraum* (The Auditorium); *Stromversorgung* (The Electric Supply). They provide a quick and convenient reference to each of the subjects.

The price appears to be low, about \$0.80 to \$1.15. The 6 by 8-in. soft-bound size is a handy format for this type of publication. Each contains a subject index which appears to be more complete in some of the booklets than in others.

Bildtechnik (Picture Technique) by Hel-muth Schering. (48 pp., 17 illus., 6 tables)

This booklet discusses the factors which influence the viewing of the projected image: the dimensional proportions of the image; the optical conditions; the kind of illumination; and the projector. With the introduction of the "wide screen" the movies are attempting to show a picture which simulates to a large extent the impression of reality. How this is achieved, which conditions have to be maintained and which shortcomings still remain in the projection, are discussed in the first part. In the second part the different projection schemes are compared; also the current existing image and film sizes are discussed. All ideas are treated from the projectionist's viewpoint. Some of the ideas are further developed in the booklets, *The Projection Technique* and *Lighting Technique*.

Elektrotechnik (Electrical Technique) by Fritz Trommer. (80 pp., 37 illus.)

The basic principles of electrical and magnetic techniques are discussed in this booklet, as it is necessary for the technician to understand how sound is reproduced in motion-picture theaters. Because of space limitations a detailed explanation of the physical theories was not always possible. Instead, on many subjects only the important facts are given.

Tontechnik (Sound Technique) by Fritz Trommer. (71 pp. 36 illus.). This booklet is intended for the projectionist and for the inspector, to furnish basic knowledge on servicing the entire sound system of motion-picture theaters. The information contained in this booklet is needed to understand optical and magnetic sound as applied to motion-picture theaters. Only the facts, without the detailed theoretical explanations, are given. The subject matter can be considered as the continuation of the booklet on electrical technique. The knowledge of its contents is presupposed. The emphasis is on detailed description of occurrences in a-c circuits for electroacoustics and treatment of basic principles of electroacoustical transmittance as it occurs in theaters. The important construction elements needed to transmit sound are also discussed.

Membership Certificates (Active and Associate members only). Attractive hand engrossed certificates, suitable for framing for display in offices or homes, may be obtained by writing to Society headquarters, at 55 West 42nd St., New York 36, Price: \$2.50.

Vorführerätetechnik I (Technique of Presentation — I Stationary Projectors) by A. R. Schulze. (64 pp., 55 illus., 6 tables).

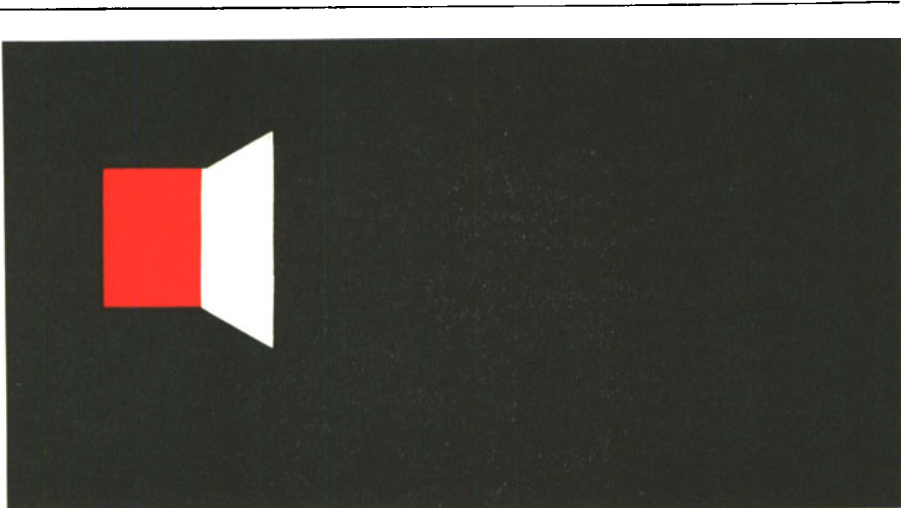
Stationary projectors for 35mm and 16mm film made by Askania Berlin, Eugen Bauer-Stuttgart, VEB Kinowerke-Dresden, Zeiss Ikon-Stuttgart, Frieske and Hoepfner-Erlangen, German Philips-Hamburg are discussed. Film base, film dimensions, perforation types and film spools are treated briefly. Specifications for projectors, circuit load requirements and circuit designs are enclosed.

Vorführerätetechnik II (Technique of Presentation — II Portable Instruments) by Gerhard Pierschel. (70 pp., 43 illus., 2 tables).

The projectors discussed are Sonolux T10 Bauer-Stuttgart, FP3 by German Philips-Hamburg, TK35 and TK16 by GEB Carl Zeiss-Zena, P8 Weimar by VEB Precision Instrument Works-Weimar. General arrangement of subject matter is somewhat similar to that of Part I.

Störungsdienst — Kontrolle und Wartung (Servicing of Troubles — Supervision and Maintenance) by Alfred Schulze. (72 pp., 13 illus.)

In well-organized tables, the test methods, test instruments (as used in East Germany), frequency of inspection, and list of spare parts are given. The contents are valid for 35mm, 16mm and 18mm equipment. This compilation of the possible troubles, their causes and remedies



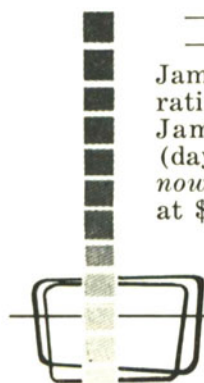
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should be of particular interest to professional or amateur projectionists.—*E. I. Guttman*, Eastman Kodak Company, Kodak Park, Bldg. 35, Rochester 4, N.Y.

Film-Licht-Farbe:

Ein Handbuch für Kameralente

By Hilmar Mehnert. Published (1959) by Fotokinoverlag, Halle (Saale), Germany. 252 pp. 85 illus. tables 5½ by 8 in. Price DM 25.80 (about \$6.50).

This book is intended for the professional photographer or serious amateur. It is concerned exclusively with matters of film and photographic technique. As the author states, it is not a textbook but rather a reference work which provides concise answers to many specific questions.

The first part is 50 pages of tables and graphs having to do with sensitometry and light control. This should satisfy some of the experts, but the last part is a 200-page dictionary of phototechnology especially for the benefit of less sophisticated workers. Described here are the German equivalents of such terms as additive color mixture, back light, Callier coefficient, diopter, exposure index, etc. The book then ends with a 3-page English glossary of relevant light and color terms. A number of helpful line drawings and several interesting photographic illustrations are included.

This compact compilation is a valuable source of technical information for German

"camera people" both professional and amateur. Were it not for the language difficulty, many Americans would also consult it.—*Sidney M. Newhall*, Eastman Kodak Co., Color Technology Div., Rochester 4, N.Y.

Tape Recorder Manual, Vol. 5, published by Howard W. Sams, Inc., 1720 E. 38 St., Indianapolis 6, Ind., is a service manual (160 pp., 8½ by 11-in.) presenting detailed information on popular brand tape recorders, including assembly and disassembly details. It is priced at \$2.95 and is available from electronics parts distributors. Another recent publication is *101 Ways to Use Your Audio Test Equipment* by Robert G. Middleton. This is an addition to the series, "101 Ways Test Equipment Library." The book contains 144 pages, measures 5½ by 8½ in., and is priced at \$2.00. It may be ordered from the publisher by specifying catalog number TEM-5 and is also available from electronic parts distributors.

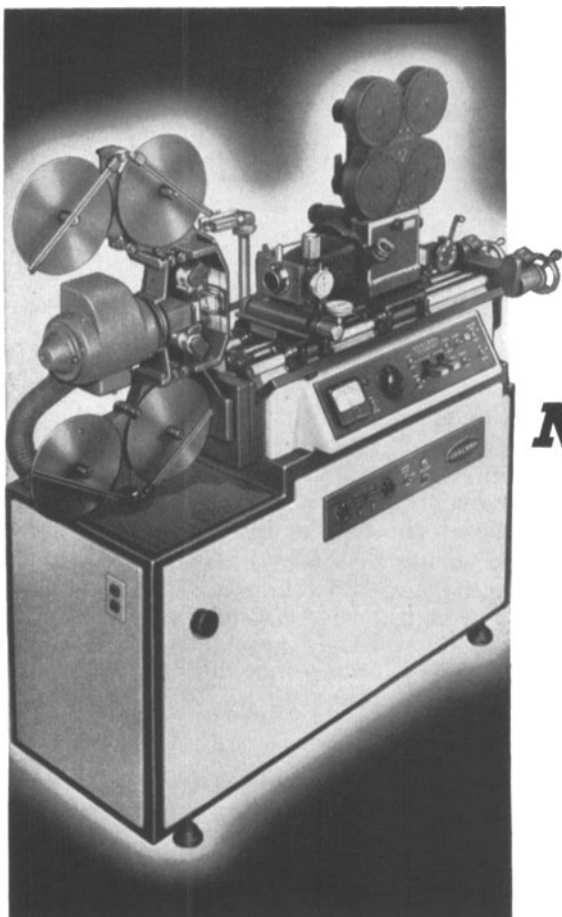
Compilation of Standards on Electrical Insulating Materials D-9 is published by the American Society for Testing Materials, 1916 Race St., Philadelphia 3. This edition (792 pp., 6 by 9-in., priced at \$8.75) contains 108 standards of which 46 are new, revised or have had their status changed since the previous edition was published in 1957.

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. 40, Oct. 1959
 Fog Maker (p. 606)
 Clouds Made to Order (p. 611) *C. G. Clarke*
 A Black-&-White Traveling Matte Process (p. 612) *R. L. Hoult*
 Importance of "Reference White" in Films for TV (p. 614) *J. Stott*
 Color in Motion Pictures and TV (p. 616) *R. A. Mitchell*
 Simplifying the Sync Problem (p. 620) *J. D. Jones*
- vol. 40, Nov. 1959
 New Fast Reversal Color Film (p. 660)
 Seven Screens for Moscow (p. 670) *H. A. Lightman*



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