

Britain, is a highly emotional matter indeed, especially when the animal is as pretty and furry as a fox. Fox-hunting, or blood sport, is a subject at least as dangerous to handle as the execution of murderers . . . "(This was) a film of total impartiality (yet) it was a highly emotional work. (The film) did not go off in search of a global view . . . it remained firmly rooted in the English countryside in rather bleak weather and its central figures were the huntsmen (and women), their dogs, their horses and the fox. Nor did anyone speak directly to the camera — though there was at least one moment when the fox seemed to be about to do so — but were openly interviewed by Alan Whicker in (a) sharp provocative manner."

Adult education is discussed in the chapter on Television and General Knowledge where the author points out that "two of television's enormous advantages as a communicator of general knowledge (are that) it can command the services of those men and women who are recognized leaders in their own spheres, and it can offer them an audience which is literally thousands of times larger than that obtainable in any other medium."

In the concluding chapter the author asks, "Is it too much to hope that television might eventually remedy its most conspicuous deficiency — its failure to realize its full potentiality as an international medium of communication?" And he comments, "It is sad to think that there are probably more international exchanges in the other media of the press, radio and the cinema than in television (the most powerful communicator of them all)."

This is a most rewarding book and deserves a place not only with the literature of television but among the more thoughtful discussions of man in the late 20th century.—*Edit.*

Manual of Photogrammetry (3rd Ed.)

Ed. by Morris M. Thompson (Assoc. Ed.), Robert C. Eller, William A. Radlinski and Julius L. Spreet. Published (1966) American Society of Photogrammetry, 105 N. Virginia Ave., Falls Church, Va. 22046. In two vol. 600 (approx.) pp. each. Illus. Price (2-vol. set) \$22.50.

This is a comprehensive work covering all aspects of photogrammetry, including mathematics, optics, theory, instrumentation, techniques, planning, practical applications, automation and education. The chapter headings are:

- I. An Introduction to Photogrammetry
- II. Basic Mathematics of Photogrammetry
- III. Elements of Photogrammetric Optics
- IV. Aerial Cameras
- V. Aerial Photography
- VI. The Photographic Process
- VII. Planning and Executing the Photogrammetric Project
- VIII. Field Surveys for Photogrammetry
- IX. Mechanical Methods of Phototriangulation
- X. Analytical Photogrammetry
- XI. Stereoscopes
- XII. Paper-Print Plotters
- XIII. Double-Projection Direct-Viewing Plotting Instruments

- XIV. Plotting Machines With Optical Trains
- XV. Automation of Stereocompilation
- XVI. Transformation and Rectification
- XVII. Aerial Mosaics and Photo Maps
- XVIII. Mapping From Oblique Photographs
- XIX. Terrestrial Photogrammetry
- XX. Various Applications of Photogrammetry
- XXI. Combinations of Radar and Photogrammetry Techniques
- XXII. Photogrammetry in the Space Age
- XXIII. Training, Education and Professional Status
- XXIV. Definition of Terms Used in Photogrammetry
- XXV. References and General Information

This edition has not been prepared simply to bring the Second Edition up to date. With new material, the *Manual* now contains more than 800 illustrations (photographs and diagrams).—*Edit.*

The Measurement of Audio Signals in Motion Picture Sound Recording Equipment (in Russian)

By V. V. Rakovsky. Published (1962) by Cultural Publications, Moscow. Price \$1.50.

This publication is a complete and thorough study of the theories and methods used in the measurement of audio signals. The first several chapters deal with the mathematics and science of sound recording and various measurement techniques used in the production of motion-picture films in the USSR.

The author has given special attention to methods of measuring nonlinear distortion of optical or photographic sound records and discusses at some length techniques encompassing white noise, a sawtooth form of sound in which the higher frequencies get successively less in amplitude.

The book, approximately 400 pages with over 400 illustrations, would be of interest to anyone working with motion-picture sound measurement problems. The final chapter is a reference bibliography containing 410 listings of pertinent papers and articles.—*A.E.A.*

Motion Picture Printing Equipment (in Russian)

By N. D. Bernstein, U. C. Golod and C. M. Provorov. Published (1962) by Cultural Publications, Moscow.

The publication, about 325 pages, is one of the most complete and thorough works on the theory and design of printing equipment for motion-picture films. The authors have covered the subject of printer design from not only the mechanical concept but also both mathematical and optical theories. Every phase of the dissertation is illustrated with numerous diagrams, formulas and photographs.

Regrettably the book is not in English; however, the more serious equipment designers would find the diagrams and pictures most interesting. It would be our recommendation that the publisher consider releasing an English version for distribution outside of Russia.—*A.E.A.*

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. 47, no. 6, June 1966
"Bat-Matography" or Capturing Batman on Film (p. 384) *Howard Schwartz*
An Eye-Witness Report on Russian Film Technology (p. 394)
A Combination Zoom-Anamorphic Lens for 16mm Filming (p. 412) *R. E. Herold*
- British Kinematography** vol. 48, no. 2, Feb. 1966
Where Are We Going With 8mm Sound? (p. 54) *H. S. Hind*
vol. 48, no. 4, April 1966
Helical Scan Video Recording (p. 108) *Fraser Morrison*
Lighting Grid Techniques (p. 116) *L. Johnson*
vol. 48, no. 3, Mar. 1966
Colour Film for Colour Television (p. 74) *C. B. Wood and F. A. Griffiths*
The Samuelson Collection of Veteran Cameras (p. 82) *David Samuelson*
Marconi Mark V Television Camera (p. 90) *D. Pay*
vol. 48, no. 5, May 1966
Television Aids to Motion Picture Film Making —the Livingston Add-a-Vision & EFS Systems (p. 140) *G. E. Hayden-Pigg*
- Color Eng.** vol. 4, no. 3, May-June 1966
Industrial Use of Instrumentation and Computation for Color Matching and Control (p. 18) *Hugh R. Davidson and Henry Hemmendinger*
- Electronic Age** vol. 25, no. 2, Spring 1966
Lunar Orbiter: Prelude to a Landing (p. 29) *Robert E. Tolles*
- Jour. Optical Society of America** vol. 56, no. 2, Feb. 1966
Measurement of Absolute Wavelength Stability of Lasers (p. 8) *K. D. Mielenz, R. B. Stephens, K. E. Gilliland and K. F. Nefflen*
- Jour. Photographic Science** vol. 14, no. 1, Jan./Feb. 1966
Visual Factors in Projected Picture Quality—II Contrast Threshold Measurements Under Daylight Viewing Conditions (p. 23) *R. L. Porteous and G. F. Doughty*
vol. 14, no. 2, March/April 1966
Quantitative Analysis of Colour Printing by Way of Various Photographic Techniques (p. 87) *H. Corluy and R. Verbrughe*
- Marconi Rev.** vol. XXIX, no. 161, 2d Quarter 1966
A High Stability Oven for Temperature Control of Crystal Oscillators (p. 89) *J. B. Goodacre*
- Photographic Science and Eng.** vol. 10, no. 1, Jan./Feb. 1966
Image Conversion and Recording With a Silver Emulsion-Photoconductor System (p. 30) *L. E. Somers*
Three-Bar Target Modulation Detectability (p. 49) *Frank Scott*
Red-Sensitive Photoplastic Recording Film (p. 60) *J. J. Barifai, V. Ozarow and J. Gaynor*



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Radio and Electronic Eng.

vol. 31, no. 3, Mar. 1966
The Performance of Backward Diodes as Mixers and Detectors at Microwave Frequencies (p. 181) *T. Oxley and F. Hilsden*

SPIE Journal vol. 4, no. 3, Feb./Mar. 1966
Laser Safety Standards (p. 111) *Norman A. Peppers*

Tekh. Kino i Televideniya vol. 9, Nov. 1965
Remote Control of the "Lenar" Objective in Animation Photography (in Russian) (p. 45) *E. V. Ksandrov and V. I. Sivkov*

vol. 9, Dec. 1965
Pull-Down Mechanisms With Power Closure (in Russian) (p. 12) *A. M. Melik-Stepanyan*

vol. 10, Feb. 1966
Optimization of the Characteristics of a Magnetic Tape Transport Assembly (in Russian) (p. 37) *I. V. Grigor'ev, D. G. Luarsabishvili and E. F. Nepomnyashchik*

vol. 10, Mar. 1966
The Use of a 16mm Film in a Rural Professional Cinema Network (in Russian) (p. 18) *Yu. A. Kalistratov*



Silver Recovery for the Photographic Processor is a 12-page illustrated booklet available from E. I. du Pont de Nemours & Co., Photo Products Dept., Wilmington, Del. 19898, that describes in detail the economics of silver recovery and the type of equipment required. In simple, practical terms, the booklet explains what profits can reasonably be expected and provides guidance in selecting and using equipment and selling the recovered silver. It is pointed out that metallic replacement is the simplest and is best suited to the very small processor. Electrolysis is recommended for most other processors. It is pointed out that, in addition to the profits accruing from salvaging and selling silver, benefits of silver recovery include longer fixer life and a more stable photographic image. Also, the scarcity and high price of silver make its recovery from fixing baths important to the national economy. The booklet is illustrated with tables, charts and photographs of equipment. Included is a bibliography and a representative list of refiners and smelters that buy recovered silver. Contents include discussions of: Financial Return; Equipment Cost; Metallic Replacement; Replacement with Steel Wool; Replacement with Zinc Dust; Proprietary Replacement Systems; Chemical Precipitation; Electrolytic Recovery; Nonagitated Units; Agitated Units; Paddle Agitation; Moving Anode; Moving Cathode; External Pumping; Factors Influencing Plating; Chemical Savings From Electrolysis; and Fixer Analysis.

Production of Motion Pictures in Color Using Eastman Color Films, Appendix B, is an 8-page leaflet that lists the certification and sources of supply of the chemicals used in processing Eastman color films. The chemicals are divided into four groups: (1) chemicals manufactured by Eastman Kodak Co.; (2) chemicals which

can be obtained from various sources of supply but which should meet certain specifications; (3) chemicals which may be obtained from various sources of supply but are not covered by specifications; and (4) chemicals required for the preparation of the reagents used in chemical control tests. Appendix C (4 pages) gives formulas for processing solutions. Both leaflets are available from Motion Picture and Education Markets Div., Eastman Kodak Co., Rochester, N.Y. 14650.

A new Camera and Sound Log has been developed by WRS Motion Picture Laboratory, 210 Semple St., Pittsburgh, Pa. 15213. The form provides space for the pertinent information that should be recorded during filming and/or sound recording. Its three parts include an original for the producer, a laboratory copy and an editing or sound studio copy. A supply of the forms is available to accredited producers without charge upon request to the Laboratory.

The Palmer Television Film Recorder is described in literature available from Tele-Measurements Inc., 145 Main Ave., Clifton, N.J. 07014, which includes a reprint of "Novel Shutter and Intermittent for Video-Recording Camera," by W. A. Palmer, from the March 1962 issue of the *Journal*, plus two illustrated leaflets. One leaflet describes the console model and the portable model is described in the other leaflet. The leaflets include detailed specifications for each recorder.

A new 60-page operating and service manual is available from D. B. Milliken Co., 131 N. Fifth Ave., Arcadia, Calif. 91006. The manual contains instructions for Series C and D 16mm high-speed motion-picture cameras, Model F-26A 1,200-ft magazine and Model M-29A rackover. Photographs, diagrams, schematics and tables are included to clarify operating and service procedures. The manual is priced at \$12.50.

Pinhole Array Camera for Integrated Circuits is a 19-page report describing a camera developed by the Army Electronics Command for the fabrication of integrated circuits. The camera is said to be useful for the rapid production of new circuit patterns provided that line resolution smaller than 0.0005 in. is not required. The apparatus consists of an array of precisely positioned uniform diameter pinholes and a vacuum back to hold the film or plate. It is designed to replace the step-and-repeat camera method of producing multiple images. The report (AD-628 485) is available from Clearinghouse, U.S. Department of Commerce, Springfield, Va. 22151, at a price of \$1.00 (microfiche 50 cents).

Data sheets describing the Newtek Lens Analyser System are available from Traid Corp., 777 Flower St., Glendale, Calif. 91209. The sheets are illustrated and give the specifications of the system and its components. The system (LAS) is designed to measure automatically the sine wave modulation transfer function (MTF) of a

lens with a precision of $\pm 2\%$, producing in 4 min a continuous and complete curve that requires no interpolation. LAS will accept lenses with apertures from $f/1$ to $f/100$, focal lengths from 0.5 to 20 in., and provide MTF curves for any point in the field of the lens from 0° to 45° .

Extremely Low-Distortion Lenses for Precision Mapping and Imaging is the title of a 4-page illustrated folder available from Perkin-Elmer Corp., Electro-Optical Div., Main Avenue, Norwalk, Conn. The folder describes Ross-Perkin-Elmer mapping and imaging lenses for astronomy, ballistic cameras, and optical data processing.

A 4-page illustrated booklet describing the Model 723 Modified Twyman-Green Interferometer used for optical component and subassembly inspection is available from Perkin-Elmer Corp., Astro-Optical Div., 2930 Bristol St., Costa Mesa, Calif. The unit is designed to check refractive inhomogeneities in glass, measure prism angles and surface flatness of plane parallel surfaced components and can be used in studies of other transparent media. A gas laser light source is available in place of the standard mercury vapor source for the study of thick or dense materials.

A 4-page illustrated folder describing the VI/SCAN III, AN/FSH-6 (XB-3), a magnetic tape data storage/analyzer system, is available from S. Himmelstein and Company, 2500 Estes Ave., Elk Grove Village, Ill. 60007. The folder lists various uses such as transient analysis, SNR enhancement, correlation analysis and speech compression. A general description of the equipment is presented, including systems specifications, scanning subsystem characteristics, standard headwheel parameters, scanning reproduced electronics specifications and data on the transport system.

Ampex Magnetic Tape Trends Bulletin No. 11, available from Ampex Corp., Mail Stop 7-14, 401 Broadway, Redwood City, Calif., gives information on tape reels for instrumentation, computer, video and audio recording. The bulletin is illustrated and gives dimensions and tolerances for various types of reels. The bulletin points out that, "the prime function of a reel is to protect the tape. This protection must be effective under shipping conditions, storage, use and 'normal' abuse. A reel is not designed to hold or control the tape pack, in fact flanges should never contact the tape."

Bulletin V-070, also available from Ampex, gives features and specifications of the VR-1200 high-band color video-tape recorder for broadcast use.

Interference Reduction Guide, Vol. 1 (AD 619 666N) and **Vol. 2** (AD 619 667N) are available from Clearinghouse, U.S. Department of Commerce, Springfield, Va. 22151. Vol. 1 is priced at \$7.00 and Vol. 2 at \$7.50. The 2-volume work is intended to provide the engineer with the necessary background and techniques to enable him to minimize the interference generation and interference susceptibility