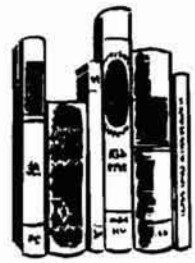
In the past fifty years Mr. Clerc has written no less than twenty books on several different fields of photography. Some of these books have been translated into several languages. He is probably best known for his authoritative work, *La Technique Photographique*, first published in two volumes in 1926 and since appearing in five other editions, three of which were translated into English in 1930, 1937 and 1954. He has published extensively in many photographic magazines over a long period of years.

It has been the privilege of very few men to have contributed so effectively and lastingly in as many fields of photographic science during their lifetime as has Louis Philippe Clerc. In so doing, he has honored his country and he continues to labor faithfully for the advancement of photography throughout the world.—*Glenn E. Matthews (adapted from PSA Journal, p. 581, Oct. 1952).*



books reviewed

TV Stations

By Walter L. Duschinsky. Published (1954) as part of the Progressive Architecture Library by the Reinhold Publishing Co., 430 Park Ave., New York 22. 136 pp., incl. 5 appendices, bibliography, glossary of TV terms and index. Numerous illus. 9 × 12 in., Price $12.00.

The author has been responsible for the basic planning and layout of the broadcasting and telecasting facilities for the United Nations' Building in New York and he has been associated with several architectural firms as well as a management consultant firm.

This book is intended to serve as reference material for architects, engineers, TV station managers and program production men. It contains a great deal of information which will be of interest to persons who are inexperienced in TV broadcasting or to students who are studying it.

The material is well organized and indexed and is presented in three parts.

Part 1 devotes 35 pp. to the "Master Plan" for a TV station and a method of making an analysis of a future station's requirements. It does not purport to explain how a neophyte should accomplish this complex task, but it does make a strong point that professional advice is desirable during the initial planning stages. It advocates a number of surveys and studies covering such factors as audience potential, revenue expected, time factors, transmitter site selection, and operating expense. It also describes space utilization and traffic flow in studio buildings and relationships between various TV departments.

An organization chart is shown for a very large TV station or a network operation. This chart will be awesome to the prospective small market TV station owner, but it serves a purpose in describing a complex organization.

A brief description is given to TV technical equipment and its usage and this section is illustrated with typical photographs taken in TV stations.

The Summary of this section contains a number of helpful suggestions for reducing costs of operation by improved planning. It also reviews a number of factors of UHF propagation.

Part II deals with general information relating to personnel functions and job descriptions, factors affecting employees' morale, market surveys, TV site and facilities, antenna towers, TV coverage, programming, audience ratings, and network affiliation and its advantages.

It also deals briefly with film facilities, and production requirements for live talent programs, the advantages of various control-room arrangements, and requirements for large live talent studios.

Studio lighting considerations are given only very brief mention, as are acoustical treatment, sound isolation and the reduction of noise in ventilating systems. This is unfortunate in this reviewer's opinion, since it has been his experience that architects and their engineers as a whole are not well informed on these subjects.

One of the best parts of this section of the book deals with the factors relating to UHF vs. VHF competition in the same market. The author's statements have been proven by the experiences of UHF failures in mixed TV markets.

Appendix 1 is a typical example of "Master Plan" study for a new UHF station. It will be helpful reading for

persons who contemplate being involved in a competitive FCC hearing. It also presents the UHF vs. VHF factors in a clear and concise manner.

Appendix 2 is principally excerpts from the NARTB film manual, and it provides conclusions which are based upon operating stations' data. Appendix 3 relates to transmitter and antenna combinations for various effective radiated power. Appendix 4 is brief mention of color TV requirements. This is excusable since the book was written prior to when color TV equipment was available. Appendix 5 is a union directory. A short bibliography and a glossary of terms used in television complete the book.

The author of this book has attempted to cover a tremendous field within 136 pp. and he has done the job creditably. The book will be valuable to anyone embarking on a career in television broadcasting or its related fields. It fills a need for a management guide in TV station planning and it will be useful for an architect's reference file.—*R. A. Isberg*, Consulting TV Engineer, 2001 Barbara Dr., Palo Alto, Calif.

Proceedings of the National Electronics Conference—Vol. 10

Published (1955) by National Electronics Conference, 84 E. Randolph St., Chicago, Ill. 808 pp. incl. numerous charts, diagrams and tables, + 24 pp. cumulative index, + 20 pp. subject and author index. 6 × 9 in. Price $5.00

The National Electronics Conference has been held annually since 1944 with the exception of one break in 1945. Volume 10 of the Conference Proceedings records the complete texts of all papers, technical and otherwise, given at the 1954 conference. This special anniversary volume contains a complete index by authors and subjects of all prior Proceedings, and several commemorative papers relating the historical background of the Conference.

In addition to the historical papers, and certain specialized papers relating to management, there are 82 technical papers covering the gamut from antennas to television. The major emphasis is on military applications, with 25 of the papers directly sponsored by military contracts or establishments. The treatment is generally at a highly theoretical level — ten of the papers were sponsored by colleges and universities; seven others are parts of Ph.D. theses.

Only three of the papers are devoted specifically to television. The topics covered are "Home Design Considerations for Triode System of TV Picture Tube Guns," "A Linear Color Television Receiver" and "Cathode Ray Tube Deflection System Using Transistors." The last is of some specialized interest because the advantages and limitations of transitors are described, when used in this application. A number of the other papers provide information which could be useful to the television engineer. Among these might be noted several papers, on the use of Stripline components as microwave transmission elements, one on "Modulation Wideband Splatter of VHF and UHF Transmitters," and one on an "Electronic Filter for Very High Voltage D-C Power Supplies". (This last describes an interesting circuit for reducing the amount of capacity necessary to obtain a specific ripple factor, resulting in an overall cost and volume saving.)

The heterogeneous nature of the material in this volume makes it impossible to do justice to any specific subject in the course of a brief review, or even to list all subject categories. This book is neither a complete general reference text, nor an exhaustively complete treatment of any one topic. Still in combination with the previous volumes of the series, it makes an excellent source of current information on a host of subjects. The typography is good, and the illustrations are clear and well placed relative to the text. Variations in notation and terminology are surprisingly few, considering the large number of authors involved.—*Sol Sherr*, General Precision Laboratory Inc., Pleasantville, N.Y.

Graphics in Engineering and Science

By A. S. Levens. Published (1954) John Wiley and Sons, 440 Fourth Ave., New York 16. 696 pp. 817 illus. 6½ × 9½ in. Price $7.00

This text book, intended for use of engineering and science students in college, could also serve as a reference book in post-college years. It deals with the graphical presentation of ideas, objects and problems in many branches of science, both applied and theoretical.

Part I presents the principles and applications of graphical projection. Although titled "Orthogonal," it covers oblique and perspective projection, as well as the various forms of what is more commonly called orthographic projection. Multiplanar projection, the standard method used on engineering drawings, is analyzed and extensively illustrated. Special applications such as developments, intersections, angle problems, and the so-called pictorial types. isometric, dimetric and trimetric are treated in separate chapters.

Part 2, on "Technical Drawing Practice," contains conventional chapters on sectional views, threads and fasteners, gears, cams and dimensioning practices. There is, in addition, some material not found in older manuals. The extensive work done in the field of lock-nuts and lock-washers is partially illustrated and discussed. Also, a little more than the usual emphasis is placed on the necessity for correct dimensioning and tolerancing of drawings, a very weak link in the training of most engineers and draftsmen. The precepts of this section however are not well followed in other parts of the book. The gear drawings, for example, do not control the accuracy of the gears by showing proper tolerances. Much of the material on gears, cams and locking devices could be left out, since it is more properly a part of books on machine elements. It is somewhat inconsistent to include design data on gears and cams but not on bearings, linkages, pulleys and so on.

Part 3, "Graphical Solutions and Computations," is unique. Although some of the material can be found even in the old classic, French's *Engineering Drawing*, it is unusual to find so much space allotted to the application of graphics in mathematical, engineering, and even anatomical problems. The author aptly points out that some problems may be solved with sufficient accuracy for design purposes and much more quickly than by analytical methods. In fact, the analytical solution of some problems, such as determining the amount of involute interference in a defective gear mesh, would be so involved as to be completely impractical.

The book as a whole tends to be somewhat bulky. Although it is not represented as a text for the professional draftsman, it contains almost everything that may be found in standard text books on drafting, even to the usual lengthy appendix. In fact, the 166 pp. of appendixes in this book might even be a record. The inclusion of so much conventional drafting material apparently evolves from the author's admission that even an engineer should have "a reasonable proficiency" in the use of drafting instruments. His haste to add the thought that greater emphasis should be placed on the development of freehand sketching reminds the writer of the advice recently given the freshman class at an Eastern engineering college to avoid drafting jobs lest they be "stuck on the board." The "board" is apparently becoming the sign of a lower caste, and not the indispensiable tool of the design engineer. In spite of Professor Levens' plea for more extensive use of graphics in engineering and science, he gives the impression that he also believes that although the engineer should be able to "talk with a pencil" he should do most of his thinking with a slide rule.

In spite of the book's size, there are two noteworthy omissions, rather surprising considering the broad scope of the title. First, no mention is made of the extensive use of graphical symbols in electronic or structural engineering nor is any space given to the drafting techniques of the drawings peculiar to these fields. Secondly, there is no explanation of the function or technique of the design layout, which is the basis for any set of manufacturing drawings. From the author's remarks on freehand sketching, and the exercises under dimensioning practice, the engineer's job appears to be that of supplying fully dimensioned pictorial sketches to the draftsman for redrafting into multiview orthographic form. The interesting graphical process by which the shape, size and number of parts are developed by the designer or design engineer in the layout is not treated. On Professor Levens' side, however, it should be noted that most texts on engineering drawing, for some unknown reason, also omit any discussion of the design layout.—*John C. Duffy*, General Precision Laboratory Inc., Pleasantville, N.Y.

Film Manual 1955

Published (1955) by National Association of Radio and Television Broadcasters, 1771 N St., N.W., Washington, D.C. 36 pp. 8½ × 11 in. Paper covered. Available to those not eligible for NARTB membership at $1 a copy.

Film Manual 1955 is the second of the annual studies published by the National Association of Radio and Television Broadcasters on film use in television stations. The expressed aim of these Manuals is to pass on to all stations, both new and old, those procedural patterns which have been developed by experience in the field of station film operations; they represent a highly practical guide for station management.

The first part of the present Manual gives comparative data collected from over 100 stations on film programming hours and costs. It is noteworthy that this survey supports last year's findings as to the importance of film programming as an integral part of all local programming — the report indicates 29 hr and 24 min of local film programming as compared with 18 hr and 26 min of local live programming.

In the second part five film department case histories are presented, providing information on film policies and procedures developed by specific local stations in various geographic areas. Emphasis is on television film operations in the relatively smaller markets. Each case history covers film purchasing, personnel, film equipment, film facilities, operational procedure and programming, specifications and engineering.

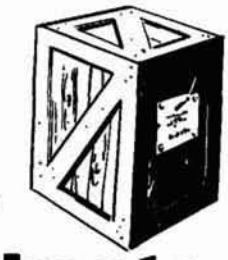
The last section of the Manual consists of a feature article on "Television Operation Procedures" supplied through this Society, at the request of NARTB, by SMPTE member Louis J. Climent.

Closed Circuit Data Book

By Leonard Spinrad. Published (1955) by Leonard Spinrad, 511 E. 20 St., New York 10. 72 pp. 8½ × 11 in. Paper covered. Price $10.00.

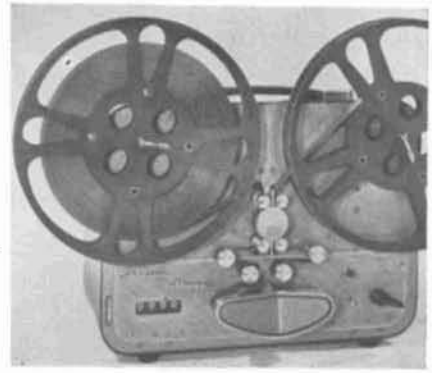
A growing industry which now has behind it well over 200 closed-circuit telecasts is the basis for the data in Mr. Spinrad's compilation which includes listing of the personnel of every active closed-circuit production company, details of all available closed-circuit projection equipment and a full directory covering this TV medium such as rates, available cities for both black-and-white and color, labor unions and descriptions of the various types of closed-circuit operations. There is a review of the position of the government regarding channels for closed-circuit telecasting, which is of special interest in connection with current TV special-channel applications pending before the Federal Communications Commission.

The chronology of telecasts is indexed by subject, arranged by date and also indexed by sponsor's and producer's organization names. The number of closed-circuit telecasts is reported as doubling from year to year making a future industry for which this Data Book is a good introduction.—*V.A.*



new products (and developments)

Further information about these items can be obtained direct from the addresses given. As in the case of technical papers, the Society is not responsible for manufacturers' statements, and publication of these items does not constitute endorsement of the products or services.



The Model S6 system is a new line of professional magnetic film equipment recently announced by Stancil-Hoffman Corp., 921 North Highland Ave., Hollywood 38. A chief aim of the new design was to make portable recording systems that can be operated from normal a-c sources or batteries.

The studio production unit consists of three cases 10¾ × 14½ × 6 in., one case containing a two-channel microphone preamplifier mixer with announce microphone and buzzer system, the second case containing the recording amplifier, playback amplifier and power supply, and the third case containing the film transport or sprocket drive and being the heaviest of the three, weighing 24 lb and having a film capacity of 1000 ft.

One of the S6 systems is complete within a single case, using a subminiature printed circuit automatic volume-control amplifier.

The S6 system is designed about a 24-v battery supply because of the practical availability of such. A full line of inverters and converters is reported available for any camera and recorder combination. There are also may accessories for use with the system which is for 16mm or 17½mm film.

The Intervalometer has been designed to enable the flight engineer to select a basic rate for pulsing cameras which record flight data, with either additional single-frame operation or pre-set cine rates. Called the Gordent 15, this model provides a preset pulse duration of from 100 msec to 1 sec, and a normal pulse frequency of from one pulse each ½ sec to one pulse every 60 sec, in steps of ½ sec. When a pulsation from a