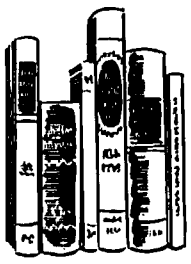
Marvin B. Jacobs has opened a laboratory at 3954 Glenfeliz Blvd., Los Angeles, Calif. 90039, which will specialize in fixed focal length and zoom lens repair. Mr. Jacobs was formerly Optical Engineer for ABC-TV.

Cinema Associate Productions, Inc., P.O. Box 727, Lansing, Mich., has announced that it supplies complete creative planning and production of 16mm motion pictures including science, educational and medical films and TV features. The films can be silent or sound and in black-and-white or color.

Gas lasers, developed by Radio Corp. of America, that produce intense beams of ultraviolet light continuously for up to 1,000 hr, are now available commercially, according to recent announcement. The new laser uses the same design structure as the RCA argon laser. The "heart" of the new device is a sealed quartz tube resembling a common fluorescent light. The tube is filled with neon gas. Within the tube are many graphite discs, each having a small center hole. During operation the neon gas is ionized by an electric current that passes through the tube. The excited ions emit light as they change from one energy state to another. This ultraviolet light is amplified and emitted as a pencil-thin laser beam through an arrangement of special optical windows and mirrors. Because organic substances such as dyes, photographic emulsions, biological materials and human skin are especially susceptible to ultraviolet light, it is expected that the new laser will be used in various scientific applications and may be used in research relating to the "code of life" thought to be carried by the DNA molecule in the human cell. Other applications may include optical recording on materials that are insensitive to visible light, in contact printing, and in the chemical processing industry where ultraviolet light is used to initiate oxidation, polymerization and decomposition reactions.

Francis I. du Pont II has been appointed Field Sales Manager for x-ray and motion-picture markets in the Midwestern District (Chicago) of the Du Pont Photo Products Dept. Mr. du Pont joined the Du Pont Company in 1953 as a student operator at the company's textile fibers plant in Kingston, N.C. He held a number of positions in the company and was appointed an x-ray planning assistant in the Photo Products Dept. in April.

Robert R. Goodspeed has been appointed Product Manager, Broadcast Equipment, for Philips Broadcast Equipment Corp., 299 Route 17, Paramus, N.J. 07652. He was formerly with Radio Corp. of America as Rocky Mountain regional sales and engineering representative. Earlier, he was employed by Red Skelton as Director, Technical Operations and Studio Manager for Skelton Studios & Research Laboratories where he directed production, engineering and sales operations.

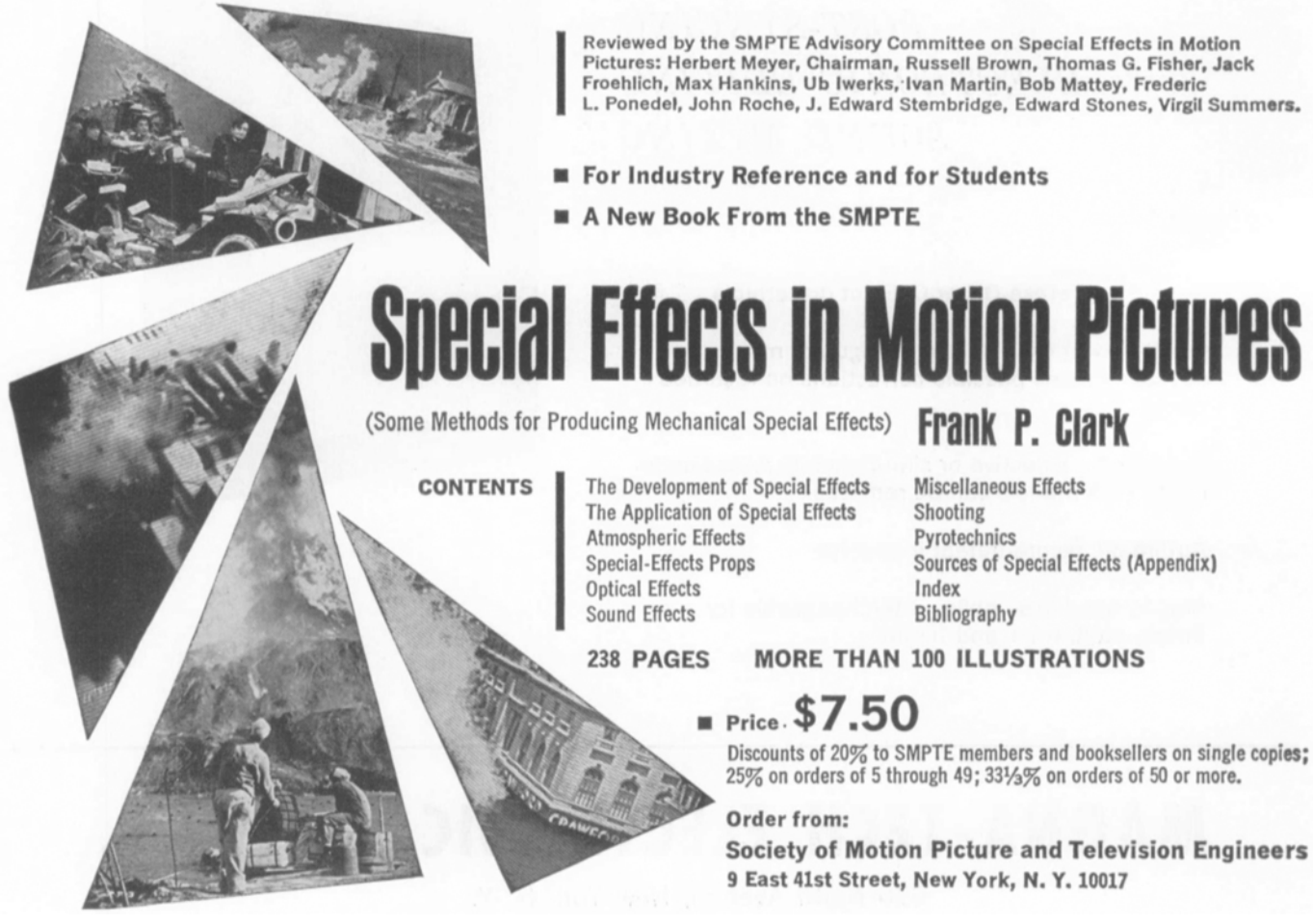


books reviewed

Television Film Engineering

By Rodger J. Ross. Published (1966) by John Wiley & Sons, Inc., 305 Third Ave., New York, N.Y. 10016, 507 + xvii pp. incl. appendixes, index. Illus. Diagrams. 6 by 9 in. Price $15.

This is an excellent book and it will, undoubtedly, contribute greatly to better communications among communications experts. One purpose of the book, according to the author, is that of helping to correct "the widespread misunderstanding between motion picture and television groups." This goal, we believe, will be achieved with great success for all attentive readers of the book. In a precise and clear manner the author gives easily understood explanations of all the fundamentals involved, but the book is not limited to bare essentials. Some prior knowledge of the matters treated will help the reader, but such is not an indispensable prerequisite.



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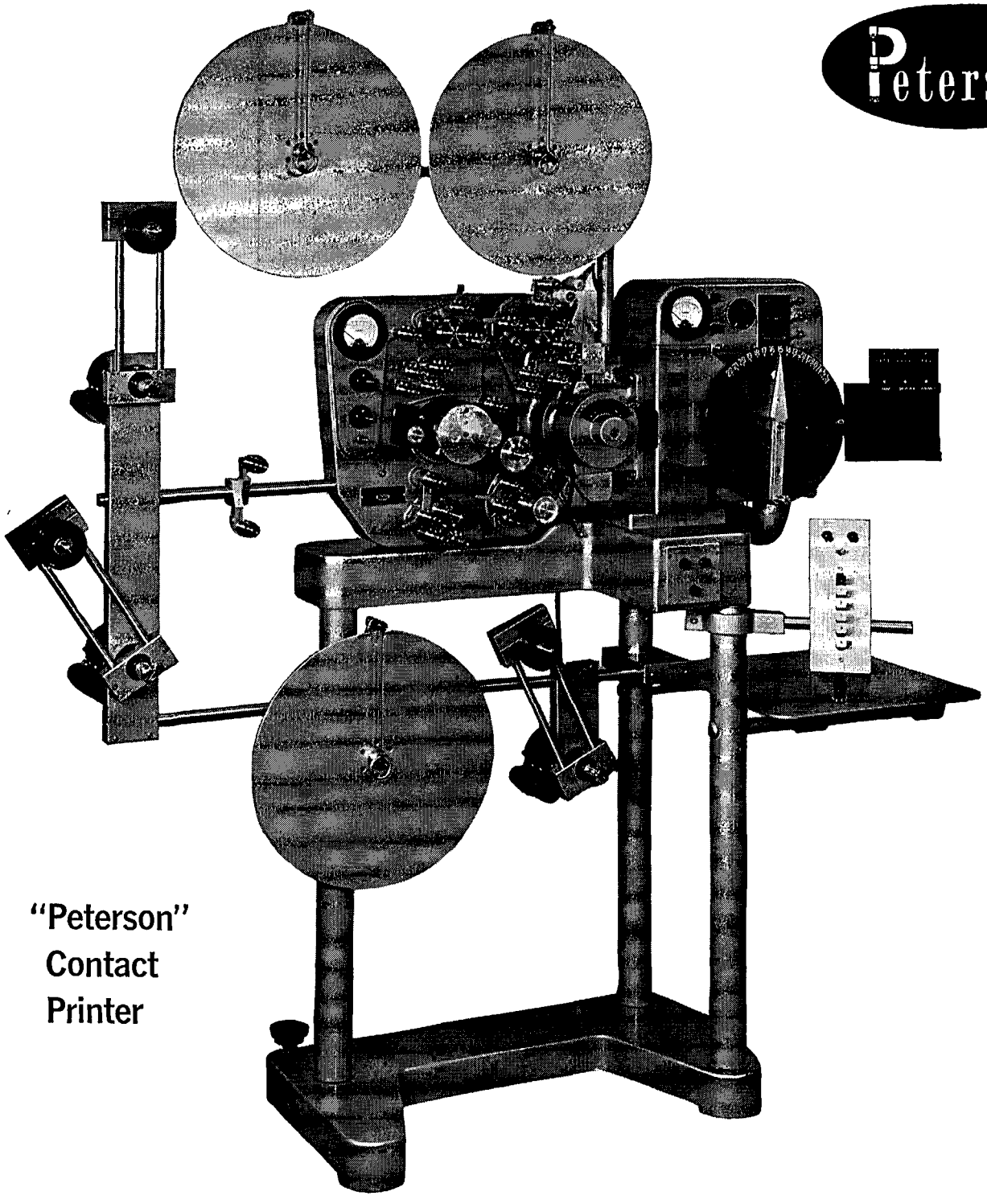

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Also, the book is intended, as stated in the Foreword by Dr. Walter Clark, "to assist the scientist, technologist, engineer, teacher or other user in the wise selection of his materials and methods, . . ." This intent, judging from the reviewer's long teaching experience, is achieved. The book is especially valuable as a reference book for the technological instructor. One would have to review, at a great expense of valuable time, a huge number of separate specialized works in the fields of motion-picture and television technology to match the broadness of concept of this book and the multiplicity of topics it contains. As a matter of fact, this book constitutes a ready-made program, not only for one, but for a great number of training courses within the fields it covers. A great value is the list of literature references at the end of each chapter.

Another point in favor of the author and his book is that he valiantly invites "comments and criticisms by readers." It is this reviewer's firm conviction that books which invite open and frank discussions of methods, proposed for future general adoption, are fruitful in that they stimulate inventiveness on the part of the reader and also aid in bringing about clarification of terms as well as development of new methods. This book will, undoubtedly, stimulate development in many related areas.

The format of the book is very good and generally practical. However, this reader would have liked to have found a table of contents at the beginning of the book, listing the 275 subheadings within the 12 chapters. Although this might have added somewhat to the cost of the book it would have provided for easier and faster locating of any given topic of specialized interest. However, the alphabetic index at the end of the book serves somewhat the same purpose.

One of the highlights of Chapter 1 is the very apt discussion of 16mm emulsion position and problem (1.10 and 1.11). Chapter 2 is of particular interest for the motion-picture specialist who enters, for the first time, the realm of television. We find there a very interesting illustration of the monochrome television signal waveform, which reveals one of TV's mysteries for the benefit of the cinematographer. Also of special interest is the section on television signals from film (2.26) and the one on vidicon telecine (2.27). Chapter 3, on film use in television broadcasting, is also very useful because it contains much practical advice of immediate usefulness and applicability. The chapters on sensitometry, characteristics of film materials, film speed and exposure control, and control of film processing are most instructive, explicit and up-to-date.

The section (6.17), measurement of scene luminance, is of special interest to this reviewer because he started using this type of measurement as long ago as 1948 and used it many years in the successful photographing of feature negatives of a very uniform density and general quality, with development to fixed gamma. The instrument used was the SEI brightness meter, and this reviewer warmly endorses the use, proposed by the author, of such an instrument as, for instance, the Pentax Spot Exposure Meter Model II. This instrument has been used with excellent results. Mention of standard ASA PH2.12-1961 general-purpose photographic exposure meters (photoelectric type) might perhaps have found a place in this chapter. Processing techniques employed by the motion-picture laboratory are explained in a very straightforward way in Chapter 7. Perhaps a few words to the effect that fixing time should equal twice the clearing time could have been added.

Of very great interest is section (7.17), constant-density film process. This sets forth an unusual approach to control systems which can be employed to maintain a uniform process; however, it would have been interesting to have it compared with the longstanding fixed-gamma process. Both process control parameters (fixed density and fixed gamma) are of utmost importance for the maintenance of a stable process, and correct replenishment rates may be established best by taking into account both of these. Constant density and/or fixed-gamma processes shift the responsibility for obtaining a satisfactory and uniform negative entirely to the photography director's capability of achieving and maintaining 100% correct exposure. This is one of the reasons why these systems have been considered by many directors of photography as a mixed blessing, although they are now standard procedures for color processing.

Part three of the book, "Linking the Motion Picture Process With the Television System," contains, in some of its five chapters, the author's proposals for "systems yet to be adopted and put into practical use on a large scale," as announced in his Preface. Here also we find a very instructive treatise on the art of motion-picture sound recording (10.1) followed by invaluable information on television recording on film, and some very pertinent considerations about color film and color television.

The author has aptly stated the main problem at the beginning of section (9.1), quality control in motion-picture making, as follows: "To many — one might say most — motion-picture makers, the idea of a standard film process in which timing cannot be permitted is likely to appear rather farfetched; an idealized concept with little or no possibility of being achieved in practice. Considering the conditions under which motion picture makers normally work, this attitude is understandable." As a matter of fact, this reviewer has found that, almost always, the great artists among motion-picture photographers tend to show some sort of contempt for mere technicalities, but it is equally true that the best technicians are often not up to the artist's exigencies. Very rare indeed is the combination artist-technician, for whom technique does not hamper art, nor art smother mere technique. We should always remember that such geniuses as Albrecht Durer or Leonardo Da Vinci were both great technicians, engineers and theoreticians of their time, and simultaneously they were exceedingly great artists. Thus, we should attempt, as is done successfully by the author of this book, to combine more technical knowledge with the basis of art of creating moving pictures. The problem — probably to be with us for a long time — may best be stated in the

Published Daily, S
New York, N. Y., and

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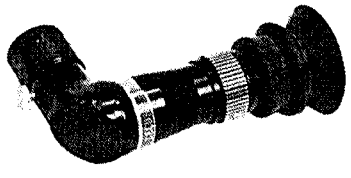

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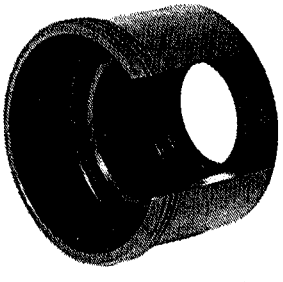

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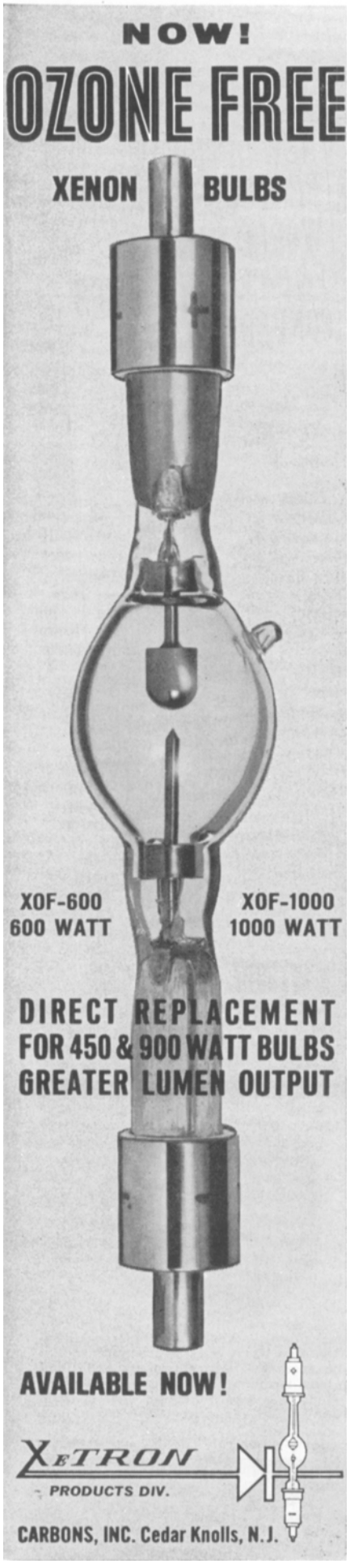

words of Hurter and Driffield, as cited by the author:

"While we quite realized that the artist will always make the best picture, we contended that the scientist will produce the best negative."—*Pablo Weinschenk-Tabernero*, Supervisor of Instruction, Movielab In-Plant School, Movielab, Inc., 619 West 54th St., New York, N.Y. 10019.

Modern Lecture Theatres

Ed. by C. J. Duncan. Published (1966) by Oriel Press Ltd., 27 Ridley Pl., Newcastle upon Tyne I, England. 300 pp. + pp. A-1–A-40. Illus. Diagrams. 12 by 8 in. Price 75/- ($11.25).

It might be said that in the field of lecture hall design we have very rapidly expanded our technical vocabulary at the expense of our grammar. The subject book takes a major step toward closing this gap.

The contents of the subject publication are mostly the result of a course held in Manchester several years ago on "Designing and Equipping Modern Lecture Theatres and Teaching Rooms." To the papers and discussion records of the conference have been added several articles, details of some thirty or more completed modern lecture theaters, illustrations of currently available equipment and a number of other items of interest in this field. The book begins intelligently with several papers giving a statement of the problems, only following which the various specialisms are examined in detail; and from the point of view of the lecturer as well as the observer.

The volume is a work far more useful than published thus far in this area. In familiarizing the reader technically with specific elements of lecture hall design, its usefulness far exceeds the Educational Facilities Laboratories publications available in this country which report interestingly but generally on specific projects. And, by weight of the engineering competence of its contributors, it stands in sharp contrast to the widely-circulated reports of the architectural research staff at Rensselaer Polytechnic Institute. The work is clearly *not* that of newcomers to the field re-inventing the wheel. Proper use has been made of previous efforts in the field. Existing knowledge has been decently researched and its foundation built upon.

The fact that some areas of interesting and useful study already published might have been added is easily justifiable insofar as the publication is by no means intended to be exhaustive or final. Further, major factors in all significant disciplines have been treated sufficiently to give basis to the reader's further research.

It might also be observed that some contributors have gone into overly refined detail on items previously well developed. However, this point is also not crucial since some such weighting is expected from authors according to their own experience, research and interest.

The latter two observations may also partially be the result of differences in historic emphasis, value structure and in technological development in Britain and Europe relative to America. For instance, rear-screen projection specifically and screen characteristics generally are not treated in depth, while legibility and preparation of projected material have been covered with admirable comprehensiveness. The difference in emphasis, however, is stimulating and broadening, although cited standards of performance and cost must be examined generally to match the accepted standards of various localities.

In any case, it is worth noting the high degree of attention directed toward the field of lecture hall design by design professionals and academic scholars outside the U.S. as evidenced by this book. Such approach stands in relief to our own technical development which seems to have thus far rested primarily on the efforts of manufacturers and suppliers. This quality gives to this publication a conceptual comprehensiveness not so far matched elsewhere.

To repeat, this is a compilation not a digest, and not an exhaustive study in each discipline involved in lecture hall design. It, of course, does not purport to substitute for experience in drawing together the many facets of expertise involved in the subject. To the reader, however, who wishes to study this field, it is the most useful beginning point available to date. By reading the individual papers a fundamental understanding can be gained of all vital aspects. By reading the transcribed discussions that follow, the valuable experiences and viewpoints of directly-experienced and analytical observers can be gained. With this as a beginning point, it is possible to expand research into the many references given throughout the papers and bibliography.

For the reader already experienced in this field, there are fresh viewpoints, useful confirmations of concepts independently formed, and some very valuable new contributions.

Subjects covered include statements of the basic problems, acoustics, lighting, ventilation, seating, and presentation of visual information including optical projection, non-projected aids, closed-circuit television, the demonstration bench and numerous others.

The comprehensiveness of this work brings to the surface two areas needing further treatment. One of these is illumination; specifically determination during design of the incident light to be expected on the screen with various types and levels of lighting. Analytic studies of the geometry of sight lines also seem to be called for. Some of these areas have been traditionally, and continue to be, treated rather empirically.

In addition, one should note that the subject matter of the book is directed to the design of large halls. This suggests one other area to be explored; namely, the possibilities within existing technology of teaching large groups in the form of many small subgroups or even in individual study spaces.

In the final analysis, this volume is a very worthy contribution, fitting appropriately in its form the state of the art and reflecting its still rapidly expanding state. The material in this book and its references, if expanded as new knowledge and viewpoints are uncovered and published, can soon provide the basis of a comprehensive, interpretive text or handbook-digest.—*J. Karl Justin*, Fordyce & Hamby Assoc., 717 Fifth Ave., New York, N.Y. 10022.