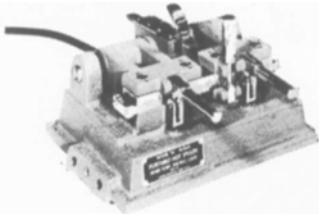


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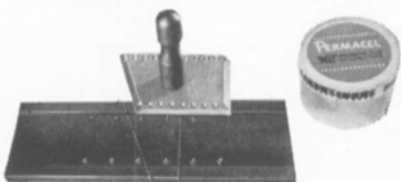
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books reviewed



Principles of Color Sensitometry 2d, Revised Edition

Published (1963) by the Society of Motion Picture and Television Engineers, 9 East 41st St., New York, N.Y. 10017. 102 pp. Illus. 5½ by 8½ in. Bound in cloth. Price \$4.00 (discounts to members, libraries, large-lot purchasers).

First published in 1950, this became a standard reference which has now been brought up to date by a subcommittee of the Society's Color Committee. Under Chairman Francis H. Gerhardt the members were J. E. Bates, A. J. Derr, Frank P. Herrfeld, H. F. Nitka, K. H. Schadlich, J. Paul Weiss and W. T. Wintringham. Special assistance was received from Gordon A. Chambers, Oran E. Miller and W. F. Stolle, and from Alf M. Glasoc who contributed a section of new material.

In the introduction of the book there is this statement: "Color photography is an exacting endeavor... It is work with little tolerance of trial and error..." The intent of this book is to provide the basis for diminishing error as much as possible.

Programs '63: A Guide to Programed Instructional Materials Available to Educators by September 1963

Ed. Lincoln F. Hanson. Compiled and produced (1963) by the Center for Programed Instruction, Inc., 365 West End Ave., New York, in cooperation with the Department of Health, Education and Welfare. (Available from the Superintendent of Documents, Government Printing Office, Washington 25, D.C.) 814 pp. illus. 6 by 9 in. Paperbound. Price \$2.50.

Programed instruction, the newcomer in the field of educational media has one advantage: because of its relative newness it is still possible to make very thorough listings of all the offerings which are available. With very creditable foresight the Center for Programed Instruction, Inc., in cooperation with the U.S. Office of Education has worked out a strong program to keep their information on availabilities up to date.

This is actually a continuation of work they began earlier. The first catalog to make its appearance was Programs '62. This was followed by a related publication which was a survey of the use being made of programed instruction.

But Programs '63 should not be considered as a mere listing of titles. The book, which runs over 800 pages, includes sample pages from each of the programs

listed. These same programs were chosen by the publisher.

In addition to the listings and the sample pages which will be of greatest value to the educator, the publication also includes a statistical summary and appendixes — selection of programs.

An item in the statistical summary which would be of special interest to members of the Society of Motion Picture and Television Engineers discusses trends with respect to the text programs versus machine programs. The following excerpt discusses this point:

"Figure three shows the availability of machine *versus* programed formats, with growth in *exclusive* use of either format the principle change from last year. A far smaller proportion of programs is produced in both machine *and* text format. Over three-fourths of this larger crop of programs are available in text forms; more than half are available *only* in text form. A substantial 40 percent of programs are available in machine format (again almost half of them for machines *only*), while last year's 62 per cent 'Available In Both Forms' has shrunk this year to 22 per cent."

Another significant item in watching the developments of this media is the following excerpt taken from the introduction: "... however, more short units or programed segments of courses, representing smaller initial investment are now available and will permit greater experimentation by teachers with limited budgets."

If the Center for Programed Instruction and the Office of Education are able to keep pace with the growing use of programed instruction, they will be providing a most valuable service to the media which they serve.—*Steve Knudsen*, Film Production Unit, Alice Norton House, Iowa State University, Ames, Iowa.

Television Deflection Systems

By A. Boekhorst and J. Stolk. Translated from the German edition by P. J. Arthern. Published (1962) by Centrex Publishing Co. Eindhoven, the Netherlands. 232 pp. 142 illus. 6 by 9 in. Price \$5.85. (This volume is one of a series included in the Philips Technical Library.)

Anyone concerned with the design of deflection circuits for monochrome television receivers will find this volume of exceptional interest. It was evidently written for the purpose of incorporating in one volume all the information needed to design such circuits on a sound technical basis. It has the particular virtue of providing the necessary theoretical background and its practical application in an unusually concise, clear and complete form. While most of the information in this volume has appeared previously in technical magazines, chapters in technical books concerned with broader subject matter, or in technical handbooks and encyclopedias, it has not been available in such a complete and concentrated form. The mathematical background included as a basis for most of the theoretical material in the book is presented on an easily comprehensible level. Accompanying descriptive information is particularly helpful to those unfamiliar with the basic concepts.



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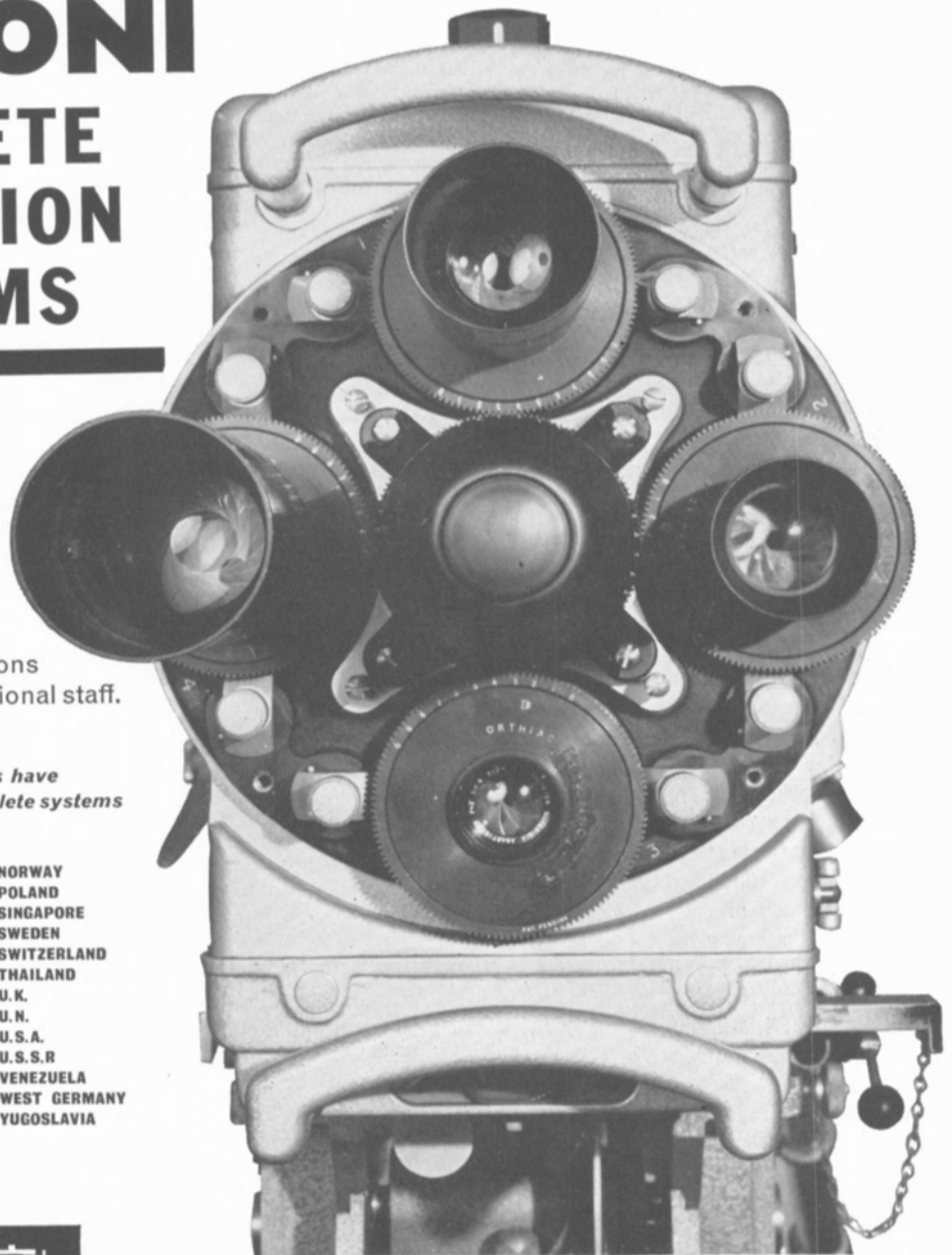
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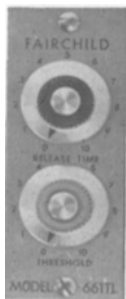
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Nothing essential is omitted and nothing superfluous is included. The authors have accomplished their purpose of providing all the basic information in this field in an unusually systematic and logical manner.

The first few chapters provide essential background information including brief descriptions of the scanning process, the general characteristics of picture tubes as well as external accessories such as focusing and centering magnets.

The basic process of deflecting an electron beam in the normal type of cathode-ray tube is analyzed including a derivation of the equations fundamental to this process. The various kinds of distortion inherent in the usual deflection system are described in detail together with possible methods for minimizing or compensating for such defects. A short but comprehensive chapter on deflection coils is followed by a thorough consideration of the associated deflection circuits. Almost half of the book is devoted to the problems involved in designing practical and efficient horizontal deflection circuits. This includes the design of the output transformer with provisions for the picture tube high voltage supply. The problem of selecting the output tube and determining optimum operating parameters is thoroughly investigated. The final chapter provides a brief but thorough consideration of the basic principles that must be considered in the design of the vertical deflection circuit.

While this volume would be a valuable addition to the technical library of any television engineer it has a few limitations that should be mentioned. These are all relatively minor and in no way detract from its superior qualities. It may be noted from the title that this volume was prepared primarily for use in European countries. This means that the American reader will find relatively slight differences from usual practices and nomenclature in the United States. Fortunately the standards for the horizontal scanning rates established for TV broadcasting here and in the major part of Europe are almost identical. Two minor disappointments are that there is no material on transistorized deflection circuits or on circuits for color receivers.

However it can be hoped that eventually another volume in this series will become available which will provide this additional information with the same thoroughness and clarity. The fact that the volume just reviewed was originally issued in a German edition should not in the least be considered a shortcoming. There is even a considerable likelihood that the translation process resulted in a net improvement.—*W. J. Poch*, Radio Corp. of America, Astro-Electronics Div., Princeton, N. J.

American Institute of Physics Handbook (2d ed.)

Coordinating Editor, Dwight E. Gray. Published (1963) by McGraw-Hill Book Company, 330 W. 42nd St., New York 36. 2,058 pp. illus., index, 6 by 9 in. Price \$29.75.

The title *Physics Handbook* suggests almost encyclopedic possibilities, and one can

wonder how it may be compressed into one volume. Obviously the editor has had to be very selective—but it is surprising how much material he has been able to include. The work is a second edition, which “reflects recent trends in research, with special chapters on computers, a new section on solid-state physics, new emphasis in the acoustics section on liquids, and on magnetic materials.” Other sections have been updated and expanded.

These nine major sections are on aids to computation, mechanics, acoustics, heat, electricity and magnetism, optics, atomic and molecular physics, nuclear physics, and solid-state physics.

Obviously the motion-picture and television engineer will have specialized interest in only a few of these fields. In optics he will find a number of items, including fundamental definitions, photometric units (though the “nit”—candle per square meter—is omitted), geometrical optics, colorimetry, etc., but for filters he is advised to consult commercial catalogs. There is an extensive section on acoustics edited by Leo L. Beranek. There is only a small amount of material on communication, in the section on electricity and magnetism—presumably reflecting the existence of a number of separate handbooks in that field. There is, curiously, a 23-page section on “Electrical Power Practices,” including much material on motors. This probably indicates how much nowadays is dependent on electric power.

There is considerable material for browsing—though a handbook is not an ideal medium for this activity. In many places where the lack of space prevents inclusion of specific material, there is an extensive bibliography to suggest where the reader can find it.

The price of the book, and its being more than doubled as compared with the first edition, will undoubtedly restrain its purchase in the case of many engineers. Otherwise, it could readily be recommended as a general reference where one can find many things that are not usually easily available.—*Pierre Mertz*, Consultant, Lido Beach, L.I., N.Y.

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