

## Applied Photographic Optics Sidney Ray

WINNER OF THE 2001 KRASZNA-KRAUSZ PHOTOGRAPHY BOOK AWARD (Technical Photography category) The only definitive book to fully encompass the use of photography and imaging as tools in science, technology and medicine. It describes in one single volume the basic theory, techniques, materials, special equipment and applications for a wide variety of uses of photography, including: close up photography and photomacrography to spectral recording, surveillance systems, radiography and micro-imaging. This extensively illustrated photography 'bible' contains all the information you need, whether you are a scientist wishing to use photography for a specialist application, a professional needing to extend technical expertise, or a student wanting to broaden your knowledge of the applications of photography. The contents are arranged in three sections: - General Section, detailing the elements of the image capture process - Major Applications, describing the major applications of imaging - Specialist Applications, presenting an eclectic selection of more specialised but increasingly important applications Each subject is introduced with an outline of its development and contemporary importance, followed by explanations of essential theory and an overview of techniques and equipment. Mathematics is only used where necessary. Numerous applications and case studies are described. Comprehensive bibliographies and references are provided for further study.

Selected by the American Library Association's 'Choice' magazine as "best technical book", the first edition of this book soon established itself as the standard reference work on all aspects of photographic lenses and associated optical systems. This is unsurprising, as Sidney Ray provides a complete, comprehensive reference source for anyone wanting information on photographic lenses, from the student to the practitioner or specialist working with visual and digital media worldwide. This third edition has been fully revised and expanded to include the rapid progress in the last decade in optical technology and advances in relevant electronic and digital forms of imaging. Every chapter has been revised and expanded using new figures and photographs as appropriate, as well as extended bibliographies. New chapters include details of filters, measurements from images and the optical systems of digital cameras. Details of electronic and digital imaging have been integrated throughout. More information is given on topics such as aspherics, diffractive optics, ED glasses, image stabilization, optical technology, video projection and new types of lenses. A selection of the contents includes chapters on: optical theory, aberrations, auto focus, lens testing, depth of field, development of photographic lenses, general properties of lenses, wide-angle lenses, telephoto lenses, video lenses, viewfinder systems, camera movements, projection systems and 3-D systems.

The tenth edition of The Manual of Photography is an indispensable textbook for anyone who Presetous about

photography. It is ideal if you want to gain insight into the underlying scientific principles of photography and digital imaging, whether you are a professional photographer, lab technician, researcher or student in the field, or simply an enthusiastic amateur. This comprehensive guide takes you from capture to output in both digital and film media, with sections on lens use, darkroom techniques, digital cameras and scanners, image editing techniques and processes, workflow, digital file formats and image archiving. This iconic text was first published in 1890 and has aided many thousands of photographers in developing their own techniques and understanding of the medium. Now in full colour, The Manual of Photography still retains its clear, reader-friendly style and is filled with images and illustrations demonstrating the key principles. We hope that it will not only give you the skills and know-how to take stunning photographs, but will also allow you to fully understand the science behind the creation of great images. This classic resource provides a clear, well-illustrated introduction to the essentials of optical design-from basic principles to cutting-edge design methods.

Basic Betacam and DVCPRO Camerawork explains the operational controls of the latest popular camera formats, illustrating their significance to routine news gathering and basic location recording. Written as a practical guide, the step-by-step instructions take you through everything you need to know from adjusting the camera prior to recording, to information on typical operational controls and the basic production technique required for broadcasting. The book is a combination of technical explanation and practical advice aimed at the less experienced broadcast camera operator or film cameraman converting to video. It is also an ideal text for students on media and television production courses. A world list of books in the English language.

The Manual of Photography is the standard work for anyone who is serious about photography - professional photographers and lab technicians or managers, as well as students and enthusiastic amateurs who want to become more technically competent. The authors provide comprehensive and accessible coverage of the techniques and technologies of photography. The Manual has aided many thousands of photographers in their careers. The ninth edition now brings this text into a third century, as the first edition dates from 1890. Major new updates for the ninth edition include: Coverage of digital techniques - more emphasis on electronic and hybrid media Greater coverage of colour measurement, specification and reproduction - illustrated with a new colour plate section Dealing with the fundamental principles as well as the practices of photography and imaging, the Manual topics ranging from optics to camera types and features, to colour photography and digital image processing and manipulation. The authors write in a reader-friendly style, using many explanatory illustrations and dividing topics into clear sections.

Applied Photographic Optics Lenses and Optical Systems for Photography, Film, Video, Electronic and Digital

## ImagingFocal Press

Provides information on creating and using AV materials, discusses equipment and recording techniques, and covers production schedules, storyboards, graphics, sound, editing, and presentation

A genuine introduction to the subject, *The Science of Imaging: An Introduction* keeps the mathematics to a minimum and is copiously littered with examples. It takes the reader on a grand tour of imaging. Starting with the fundamentals of light and basic cameras, the authors journey through television and holography to advanced scientific and medical imaging. Topics such as digital recording of images, the photographic process, and film development are dealt with in an informative and entertaining manner.

Abstracts of journal articles, books, essays, exhibition catalogs, dissertations, and exhibition reviews. The scope of ARTbibliographies Modern extends from artists and movements beginning with Impressionism in the late 19th century, up to the most recent works and trends in the late 20th century. Photography is covered from its invention in 1839 to the present. A particular emphasis is placed upon adding new and lesser-known artists and on the coverage of foreign-language literature. Approximately 13,000 new entries are added each year. Published with title LOMA from 1969-1971.

Edited and expanded to keep pace with the digital revolution, the new edition of this highly popular and critically acclaimed work provides a comprehensive exploration of imaging science. Brilliantly written and extensively illustrated, *The Science of Imaging: An Introduction, Second Edition* covers the fundamental laws of physics as well as the cutting-edge techniques defining current and future directions in the field. Improvements to this Edition Include: A new chapter on astronomical imaging A larger format with a wealth of illustrations Major revisions in the areas of digital imaging and modern technology Updated references with links to a wealth of online resources—including teaching material and expanded information This accessible introduction to the subject takes students on a grand tour of imaging. Starting with the fundamentals of light and basic cameras, the author journeys through television and holography to advanced scientific and medical imaging. He highlights essential formulas, while keeping the complex mathematics to a minimum. Copiously illustrated with a wealth of examples and a 16-page color insert, the text covers optics, imaging systems, materials, and image interpretation and creation in a manner that makes it easy to understand. Praise for the critically acclaimed First Edition: It's the best book I have read on the subject at this level. —Ron Graham, RPS Journal ... every student should read it, every photographer should own it, and every lecturer and journalist should know its contents inside out. —Jon Tarrant, British Journal of Photography

First Published in 2002. Routledge is an imprint of Taylor & Francis, an informa company.

The first edition of *Applied Photographic Optics* established itself as the standard reference work on all aspects of photographic lenses and their applications. This second edition of this highly acclaimed book has been expanded and updated to take into account the rapid progress in optical technology and electronic imaging in the last decade. It now includes all contemporary lenses and optical systems and many chapters have been rewritten, including those on

autofocus, video lenses, video optics, and optical technology. Relevant aspects of electronic imaging have been integrated throughout, and there are more details on aspherics, ID glasses, lens manufacture and coating, video projection, image stabilizing, and diffractive optics.

The purpose of this book is to explain the basic principles of optics and image formation particular to such lenses and optical systems. Much importance is placed on clear and detailed diagrams of contemporary equipment, and graphs of performance characteristics. The book begins with an explanation of visual perception, followed by sections on basic optics and image formation by representative systems; the design, the manufacture and testing of lenses and optical systems; optical attachments, including filters and converters; the optics of a number of different types of camera; the projection of images; the anicllary and auxillary systems associated with image capture; and related optical and optp-electronic systems including fibre optics, LEDs and LCDs. The book is intended as a compact source of useful data, for anyone concerned with the visual communications industry, from secondary school pupils to professional camera users and equipment specialists. Sidney F Ray is Principle Lecturer in Photographic Sciences and Electronic Imaging at the University of Westminster. His other book for Focal Press, Applied photographic Optics has been acclaimed as the definitive work on the subject. he is also the co-author of The Manual of Photography. compact source of information fully illustrated simple clear explanations

Offering top-to-bottom coverage of this rapidly developing field; this book encompasses breakthrough techniques and technologies for both components and systems reliability testing; performance evaluation; and liability avoidance. --

This eighth edition of a work first published almost 100 years ago, provides a major revision of this technical reference source for photographers. New chapters include autofocus systems, metering systems in cameras, still video cameras and archival aspects.

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