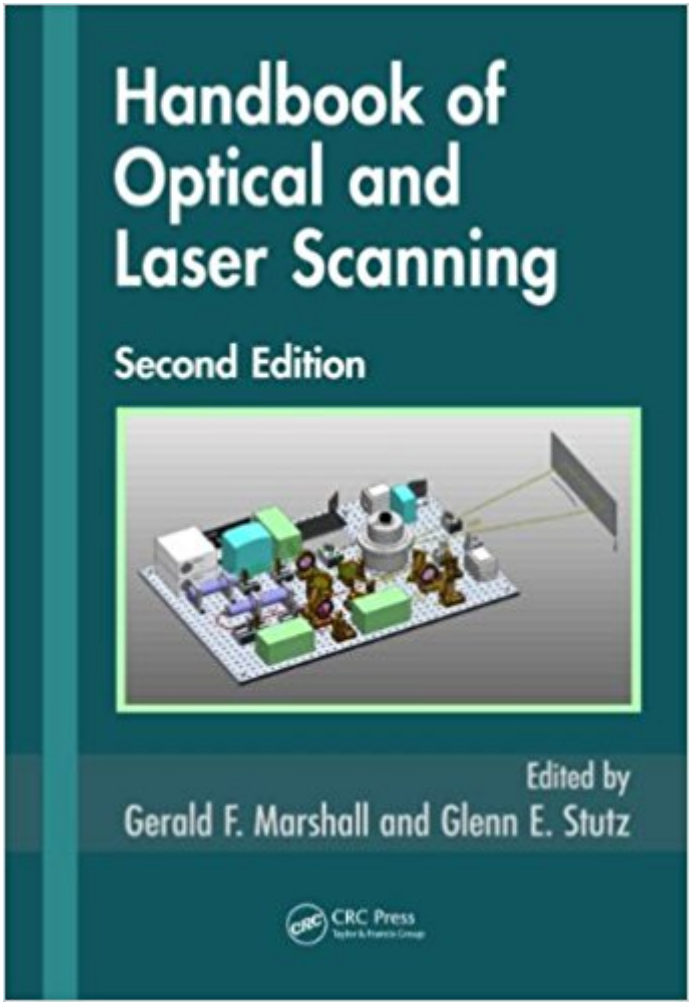
Handbook Of Optical And Laser Scanning, Second Edition (Optical Science And Engineering)



Synopsis

From its initial publication titled Laser Beam Scanning in 1985 to Handbook of Optical and Laser Scanning, now in its second edition, this reference has kept professionals and students at the forefront of optical scanning technology. Carefully and meticulously updated in each iteration, the book continues to be the most comprehensive scanning resource on the market. It examines the breadth and depth of subtopics in the field from a variety of perspectives. The Second Edition covers: Technologies such as piezoelectric devices Applications of laser scanning such as Ladar (laser radar) Underwater scanning and laser scanning in CTP As laser costs come down, and power and availability increase, the potential applications for laser scanning continue to increase. Bringing together the knowledge and experience of 26 authors from England, Japan and the United States, the book provides an excellent resource for understanding the principles of laser scanning. It illustrates the significance of scanning in society today and would help the user get started in developing system concepts using scanning. It can be used as an introduction to the field and as a reference for persons involved in any aspect of optical and laser beam scanning.

Book Information

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Customer Reviews

Praise for the Previous Edition "This is a tremendous compendium of material, covering a relatively specialized field at a very considerable depth. It has 14 ’chapters’ written very authoritatively by 27 authors from the US, the UK and Japan. It contains current and up to date technology, and was

edited by Gerald Marshall (also the author of Chap. 7), who is well known as one of the top experts in this field. "The Handbook's extensive coverage of the entire range of topics would seem to include almost every aspect of the field of optical scanning. Here, one can find anything one might possibly want to know about scanners and scanning. As a few examples of the completeness of this book, there are sections on laser beam quality, lens design, bar codes, air bearings, Gaussian diffraction, and much, much more. Even the table of contents only hints at the extent of its coverage. "The level of the book is high. Each chapter seems to be written by an expert in a specific sector of the field for an expert in the field. For example, I was very impressed by Chapter 2, 'Optical Systems for Laser Scanners' by Sagan. It can only be described as terrific. Even as an extremely experienced (60 years) lens designer, I enjoyed the many useful insights in Sagan's work. His chapter is very expert and very well written. "Even in its very specialized field, the book is so wide-ranging that I doubt that any one individual can competently criticize all of the book; I certainly know that I can't. The book is overwhelming in the completeness and depth of its coverage. "Surprisingly, I found something of interest, useful, and valuable in every chapter. Each is written for, if not exactly an expert, at least someone competent in the general broad field of which the chapter is a part, and it's written by someone who is obviously extremely competent in the specialty represented by the chapter. The material is basic, but it's far from being 'dumbed down'; one has to work to get the full benefit of the text. Appropriately enough, most chapters assume that the reader has a basic knowledge of the field. The chapters that I am competent to critique are excellent, well and expertly written." â •Warren J. Smith, Chief Scientist Emeritus, Kaiser Electro-Optics "There are not many handbooks available in optical and laser scanning that contain the up-to-date research work in this field. This handbook is a timely addition to the current literature on optical and laser scanning. Editor Gerald F. Marshall has done a great job inputting together the excellent work of specialists, in the field of optical and laser beam scanning, from around the worldâ |Each chapter has a good number of supporting figures as well as an extensive reference list at the end. The books language is simple and easy to understand the complexity of the subject. Readers will find this book as a useful introduction source to the rapid changing field of optical and laser scanning. This handbook can be a good addition to the academic as well as professional libraries and can serve as a valuable reference for those involved in the optical and laser scanning." â •E-Streams, Vol. 8, No. 6/7, June/July 2005"It covers every conceivable aspect of optical and laser scanning and much moreâ |.Optics, mechanics and electronics are presented clearly and comprehensively. References are included at the end of each article. An index appears at the end of the book, together with a short glossary of 60 of the most important terms in the field. Among the several

available books devoted to scanning, this one is certainly the most complete." â •Optics & Photonics News, April 2006

Gerald F. MarshallÂ is a Consultant in Optical Design and Engineering, Niles, Michigan. Specializing in optical scanning and display systems, his extensive experience includes senior positions with Kaiser Electronics, San Jose, California; Energy Conversion Devices, Troy, Michigan; Axsys Technologies (formerly Speedring Systems), Rochester Hills, Michigan; and Medical Lasers, Burlington, Massachusetts. Previously he was engaged as a Senior R&D Engineer for airborne navigational display systems at Ferranti Ltd., Edinburgh, Scotland, and as a Physicist with Morganite International Ltd., London, England. The author of many papers, he holds a number of patents and is the editor of two internationally recognized reference books, Laser Beam Scanning and Optical Scanning (both titles, Marcel Dekker, Inc.). He is a Fellow of The Institute of Physics, the Optical Society of America, and SPIE-The International Society for Optical Engineering, of which he is a former director. He received the B.Sc. degree from London University, England.

Working in optics, I purchased this book to get a wider scope of scanning techniques and possible optical schemes. The book is thick, up to eight hundred pages, and expensive. So, I expected a variety of optical schemes for laser/optical scanning. But I was disappointed with a great amount of topics, filling this book, which do not relate to scanning. For example, the chapters about M2 model, optical disk technology, image quality for scanning, are interesting in general but have rather distant relation to scanning. The chapter about motors and controllers is interesting, presenting the state-of-art of this technology, but it is overfilled with large, up to a page size, pictures which do not contain any information. For example, several pictures of printed-circuit boards with a great number of indistinguishable electronic components could be easily removed without any harm to the book. Also I doubt that pictures of standard diamond turning center, thin film deposition chamber, and other conventional industry technology are of any interest for professionals. At the same time such topics as infrared imaging scanners, reconnaissance systems, MEMS scanning/switching devices are completely ignored, as well as the rotating wedges technology. Summarizing, the size of this book could be made much smaller and the price lower without any loss of information.

User’s Handbook (Macmillan Series in Optical and Electro-Optical Engineering) Sonography Scanning: Principles and Protocols, 4e (Ultrasound Scanning) Image Formation in Low-Voltage Scanning Electron Microscopy (SPIE Tutorial Text Vol. TT12) (Tutorial Texts in Optical Engineering) Electro-Optical Displays (Optical Science and Engineering) Confocal Laser Scanning Microscopy (Royal Microscopical Society Microscopy Handbooks) Laser Moose and Rabbit Boy (Laser Moose and Rabbit Boy series, Book 1) Laser Moose and Rabbit Boy: Disco Fever (Laser Moose and Rabbit Boy series, Book IEC/TR 60825-3 Ed. 1.0 b:1995, Safety of laser products - Part 3: Guidance for laser displays and shows Laser Interaction and Related Plasma Phenomena (Laser Interaction & Related Plasma Phenomena) NEW! PICOSURE MEDICAL LASER TATTOO REMOVAL SYSTEM: FINALLY A NO B.S. GUIDE TO THE WORLD’S NEWEST/LATEST MEDICAL LASER TATTOO REMOVAL SYSTEM Regenerative Laser Pain Therapy: Low-Level-Laser-Therapy Freezing Colloids: Observations, Principles, Control, and Use: Applications in Materials Science, Life Science, Earth Science, Food Science, and Engineering (Engineering Materials and Processes) Theory and Practice of Scanning Optical Microscopy Scanning Electron Microscopy: Physics of Image Formation and Microanalysis (Springer Series in Optical Sciences) Optical Scanning (Occupational Safety and Health) Resolution Enhancement Techniques in Optical Lithography (SPIE Tutorial Texts in Optical Engineering Vol. TT47) Optical Design for Visual Systems (SPIE Tutorial Texts in Optical Engineering Vol. TT45) Elements of Polymer Science & Engineering, Second Edition: An Introductory Text and Reference for Engineers and Chemists (The Elements of Polymer Science and Engineering)