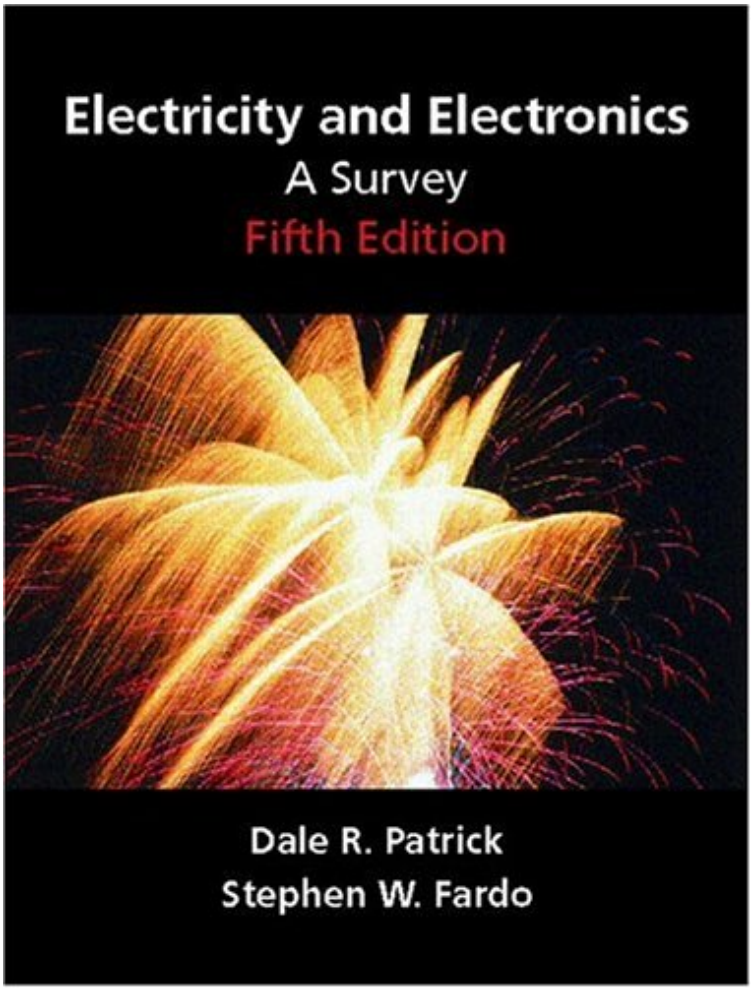
# Electricity and Electronics: A Survey (5th Edition)

*Dale R. Patrick, Steven W. Fardo*




#2231529 in Books 2001-03-26Original language:EnglishPDF # 1 10.40 x 1.32 x 9.22l, 3.57 #File Name: 0130195642686 pages | File size: 17.Mb

**Dale R. Patrick, Steven W. Fardo : Electricity and Electronics: A Survey (5th Edition)** before purchasing it in order to gage whether or not it would be worth my time, and all praised Electricity and Electronics: A Survey (5th Edition):

0 of 0 people found the following review helpful. Pleased customerBy CustomerThe item was exactly as described.0 of 0 people found the following review helpful. Five StarsBy RiniFast delivery, exactly what it says it is0 of 0 people found the following review helpful. I promise this book will change the way you look at lifeBy z. diodeIf you don't believe me just read it. This book blew my mind. the ideas and theories behind how electricities and electronics work is incredible. If it weren't for this book I would probably still be living and thinking like the average joe. But the fact is I'm not. If you want to be ready for what the world throws at you during your lifetime, this is a must have. Dale's a great guy, w00t!

For Introduction to Electronics, Basic Electricity, Basic Electronics, and Electricity and Electronics courses. Patrick and Fardo's introductory survey explores electricity and electronics using a highly accessible "systems" approach to enhance understanding of basic concepts. The Fifth Edition is divided into two sections--one touching the basics of electricity, the other an overview of electronics--both featuring several new content additions that reflect the most recent developments in the field.

From the PublisherPatrick and Fardo's introductory survey explores electricity and electronics using a highly accessible "systems" approach to enhance understanding of basic concepts. The Third Edition is divided into two sections--one touching the basics of electricity, the other an overview of electronics--both featuring several new content additions that reflect the most recent developments in the field.From the Back Cover Electricity and Electronics: A Survey explores many aspects of electricity and electronics in a basic and easy-to-understand way. The key concepts in this introductory text are presented using the "big picture" or systems approach that greatly enhances student learning. Many application, testing procedures, and operational aspects of equipment and devices are discussed. The use of mathematics is discussed through applications and illustrations. This fifth edition has been improved with the addition of the following features: The use of color brings life to the book and clarifies content Improved illustrations and photos New material on batteries; communications advances such as cellular phones, lasers, and fiber optics; and a brief history of electronics A new supplement package accompanying the text consists of: Laboratory Manual with CD-ROM to accompany the main text (ISBN 0-13-091889-X) Instructor's Manual with CD-ROM (ISBN 0-13-091365-0) PH Test Manager (ISBN-0-13-092225-0) Excerpt. Reprinted by permission. All rights reserved. Electricity and Electronics: A Survey is an introductory text that explores many aspects of electricity and electronics in a basic and easy-to-understand manner. The key concepts are discussed using a "big picture" or systems approach that greatly enhances student learning. Many applications, testing procedures, and operational aspects of equipment and devices are" discussed. Mathematics is used to support concepts, practical applications, and calculator use. Electrical safety is stressed throughout the text. Several additions have been made since the first edition, making this edition even more comprehensive than previous editions. This fifth edition has been improved through the following features. Improved and updated text content: Although the text organization remains the same, new topics have been added and content has been updated and revised to reflect changes in the field of electronics. The text has continually been updated through quality checks to ensure technical accuracy and clarity. Expanded content includes a brief history of electronics; new material on batteries (drastic changes to this technology have been brought about by computer applications and portable equipment); and communications advances such as cellular phones, lasers, and fiber optics. Improved illustrations and photos: Numerous photos and illustrations have been updated to reflect changes in the field. Illustrations have been improved through the use of color. The second color has been added to show implied movement of electrical current and to add emphasis to figures. Two-color text: The planned use of color adds life to the book and clarifies content. The second color emphasizes headings, provides distinct break points in text, makes figures with multiple parts easier to understand, and highlights review questions and problems at the end of each chapter for easy reference. Updated and improved ancillary package: Supplements have been updated and improved to provide the students with a complete learning package. The accompanying Laboratory/Activities Manual now includes a CD-ROM with simulation labs. The Instructor's Resource Guide now includes a CD-ROM with PowerPoint illustrations. A Test Item File has been developed using Prentice-Hall Test Generator software. We have continued to consider the needs of both students and instructors in preparing this comprehensive text. Chapter headings and the instructional order of chapters are the same as in previous editions to avoid confusion. Numbered sections provide a clear order of presentation. Technical reviewers have checked all example problems and end-of-chapter problems for accuracy. ORGANIZATION OF THE TEXT The book is divided into two main parts. Part I (Chapters 1 to 8) deals with the basics of ELECTRICITY, including electrical fundamentals, direct-current (dc) circuits, alternating-current (ac) circuits, and electrical applications. Part II (Chapters 9 to 18) deals with the basics of ELECTRONICS, including electronic devices, electronic circuits, and electronic systems applications. Figure I shows the organizational framework of the text. The chapters are organized as follows to aid in student understanding: Objectives Introduction Important Terms Major Content Student Activities Important terms are defined at the beginning of each chapter. The review section at the end of each chapter helps the students review and check their understanding of the major topics covered. The student activities stress the practical applications and problem solving used in the study of electricity and electronics, and are easy to understand. Equipment cost required for the laboratory activities is kept to a minimum. Most of the activities are low- or no-cost activities that can be done in a school laboratory or at home. The analysis sections are intended to provide thought provoking problems and questions that are specifically focused on important topics in the chapter. Answers to all end-of-chapter questions and problems are provided in the Instructor's Resource Guide. Answers to odd-numbered questions are found at the back of the book. The appendices are an important pedagogical feature, which make this book an excellent resource. Appendix A provides a comprehensive glossary of electronic terms. Appendix F stresses the importance of using a calculator to solve electrical circuit problems. Other appendices include a comprehensive list of electronic symbols, information on

soldering techniques and electronic tools, and acronyms and abbreviations. ANCILLARY PACKAGE The comprehensive textbook and the following supplements provide a complete learning package for the study of electricity and electronics. Laboratory/Activities Manual to accompany the text (0-13091889-X): This accompanying manual stresses the practical applications of electricity and electronics, parallels the content of each chapter in the main text, reinforces the text material, and directs the learning process. To facilitate learning, activities are presented in a single-concept approach and require a short time to assemble and make the necessary measurements. The exercises involve some manipulative or hands-on activity that deals with circuit construction, testing operations, calculations, instrument use, and component identification. Equipment cost is kept at a minimum, and a few of the activities do not require any lab equipment. The lab/activities manual contains over 150 activities, including approximately 50 new simulation labs using Electronics Workbench (EWB) software. The EWB activities provide the students with the option of using circuit simulation to understand electronic concepts. The lab/activities manual has a CD-ROM with the Electronics Workbench (EWB) simulation activities. Through this method, instructors can choose lab activities for simulation or hands-on activity for students. Labs with accompanying simulation are identified. Each experimental activity is organized as follows: Introduction. Approximately one to two paragraphs: the first contains an overview of the activity and practical applications; the second gives the purpose of the activity and observations that the students should make. Objective. Outlines what the students are expected to learn when the experiment is completed. Equipment. Lists equipment and materials needed to perform the experiment. Procedure. Provides logical step-by-step sequence to complete the learning activity. Charts and tables are provided to aid in data recording.