Electronic Devices and Circuit Theory (8th Edition)

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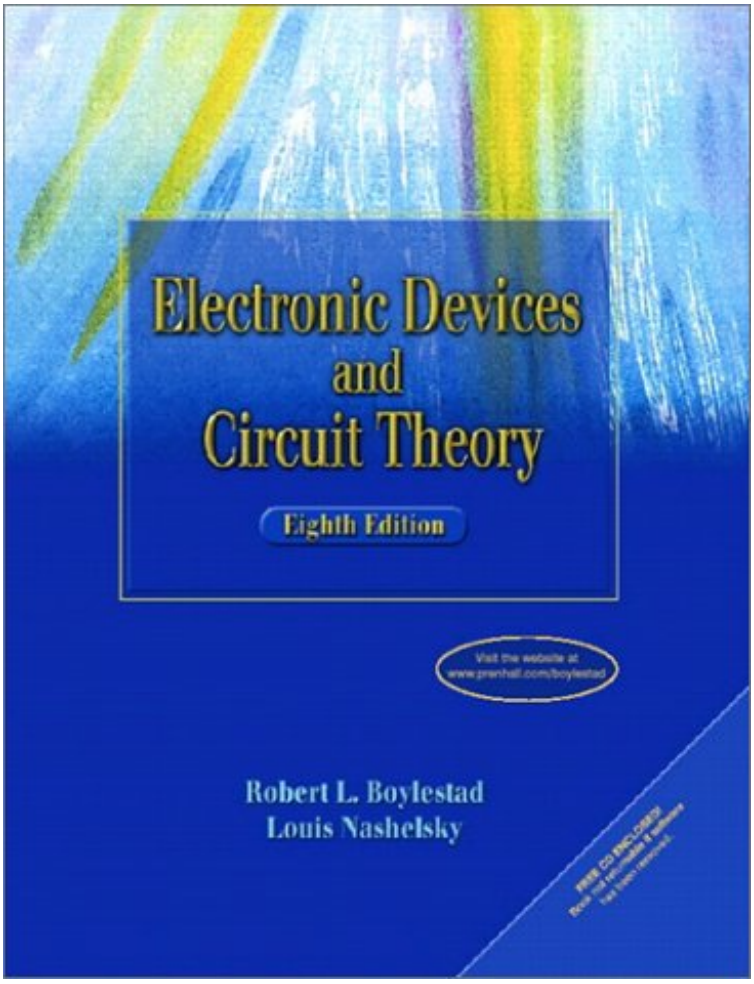

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Robert L. Boylestad, Louis Nashelsky : Electronic Devices and Circuit Theory (8th Edition) before purchasing it in order to gage whether or not it would be worth my time, and all praised Electronic Devices and Circuit Theory (8th Edition):

1 of 1 people found the following review helpful. Very Detailed and comprehensiveBy Gary KThis is no General theory book but is surely Meat and Bones advanced study. Having used this book in College I found it to be one of two essential books for the study of Transistors and Amplifiers as well as other Devices. I would also recommend Malvino's Electronic Principles which uses a separate and different approach in analyzing and calculating circuits. Actually if you are wanting to choose one to settle down with I'd highly recommend making your decision based upon whichever method your Electronics program uses. For example this publication allows you to take a fact sheet on an electronic device and use the published data in order to calculate the circuit. Malvino's approach though is more an approximation and many find that method more preferable than the more complex and detailed methods that are

required by this publication. Both are excellent books and very thorough and certainly this book is for advanced students.13 of 15 people found the following review helpful. Boylestad is a Master TeacherBy Let's Compare Options PreptorialIf you could only afford one electronics text, this is it! I've reviewed over 40 texts for our library acquisition clients, who can afford only 4 in many cases. Boylestad always makes the top three, and with this 11th edition, I can say with confidence that ALL the kinks have been worked out. Most every other text starts out WAY too fast, and still has numerous, frustrating errors.But that's not the major plus. Boylestad is a master teacher and storyteller. The picture of that lonely copper electron sitting out in it's own shell with gangs of family members in the adjacent shell will never leave you! While other texts are grinding you through integrals, Bob is gently explaining in PRACTICAL ENGLISH and with hundreds of illustrations and pictures, how and why it all works. His 12th edition of circuit analysis, for example, starts at the High School or tech level, yet still gives enough technical detail for use in Engineering courses (Introductory Circuit Analysis (12th Edition)).If you are at MIT working on your PhD in Electronics Engineering, you'll not find a lot of matrix calculus, linear algebra and dynamic systems analysis using differential equations, because Boylestad targets his teaching to both self study and technology courses, and assumes you're starting at the beginning. However, if you ever want to teach, you should still study this, because his approach is a model for explaining difficult concepts with wonderful examples that you finally "get" at a gut level. I guarantee (as an Engineer myself), you'll grasp concepts more intuitively here even if you are very advanced.Perhaps the best and most unique feature are the two authors' ability to describe, step by step, what a circuit is doing and why. You learn early on that voltage is a type of information signal, and you can extend the detailed descriptions to many other circuits almost immediately, because you REALLY GET the basics. They spend a lot of time on timers and op-amps, for example, as backbones of many IC strategies. Every page you go: "AHA! So THAT'S why that component is there!!" Highly recommended.Library Picks reviews only for the benefit of shoppers and has nothing to do with , the authors, manufacturers or publishers of the items we review. We always buy the items we review for the sake of objectivity, and although we search for gems, are not shy about trashing an item if it's a waste of time or money for shoppers. If the reviewer identifies herself, her job or her field, it is only as a point of reference to help you gauge the background and any biases.5 of 5 people found the following review helpful. Content is good, but not as good as FlloydBy RJ HallAs I've said in the title, The test is good, but I prefer Floyds texts better, guess Its just personal preference. The text is thorough however, so if you want to learn transistors JFETS, op amp basics, etc, its a decent text.

For upper-level courses in devices and circuits, at 2-year or 4-year engineering and technology institutes.Highly accurate and thoroughly updated, this text has set the standard in electronic devices and circuit theory for over 25 years. Boylestad offers students a complete and comprehensive survey, focusing on all the essentials they will need to succeed on the job. This very readable presentation is supported by strong pedagogy and content that is ideal for new students of this rapidly changing field. Its colorful, student-friendly layout boasts a large number of stunning photographs. A broad range of ancillary materials is available for instructor support.

From the PublisherA new edition of this highly-successful text! As it has for the past quarter-century, Electronic Devices and Circuit Theory offers students a complete and comprehensive study of the electronic devices and circuits they need to understand for success on the job. The authors take a systems approach to their subject, covering topics in a "building block" fashion that ensures students comprehend fundamental concepts such as diodes and transistors before they tackle such advanced topics as compound configurations, power supplies, and oscilloscopes. For each device examined, the text covers most configurations and applications. Included are discussions of the full range of related topics typically addressed in the course, with clear, precise explanations and plenty of examples to back them up. A color format highlights and defines important concepts, while line drawings present circuits and devices as they appear in the "real world."From the Back Cover As the leading text of its kind, this valuable classic has set the standard for 30 years. Now in its eighth edition, it retains the same measure of excellence as it continues to provide the most current and comprehensive coverage of electronic devices and circuit theory available. Following are only a few of the features integrated throughout this outstanding text: a systems approach, enabling the reader to become adept in the application of packaged systems troubleshooting, necessary for a complete understanding of real-world situations hands-on applications utilizing PSpice and Electronics Workbench elaborate use of problem sets and examples to reinforce basic concepts This is a core text for an upper-level course in devices and active circuits, appropriate for two- and four-year colleges, universities, and schools of technology. Included with each copy of the text-is a CD-ROM containing Electronics Workbench Version 5 and Electronics Workbench Multisim circuit files, as well as CircuitMaker circuit files and Student Version software. In addition, the following ancillaries are available: Laboratory Manual, ISBN 0-13-092213-7 Prentice Hall Test Manager, ISBN 0-13-092211-0 Instructor's Resource Manual, ISBN 0-13-092212-9 PowerPoint Transparencies, ISBN 0-73-092278-8 Instructor's Supplement CD, ISBN, 0-1,3-093264-7 CourseCompass, ISBN 0-13-062304-0 WebCT, ISBN 0-13-062305-9 Blackboard, ISBN 0-13-062303-2 Of added benefit to the reader is the Study Guide on the Companion Website, found at http://www.prenhall.com/boylestad. This content enables the user to conveniently practice self-tests that measure progress. Excerpt. Reprinted by permission.

All rights reserved. In this edition we have written additional practical examples and summaries at the end of each chapter, and have expanded coverage of computer software. The chapter on IC construction was deleted and replaced with a well-written description of the process that first appeared in Smithsonian Magazine. It has some stunning photographs and content that is excellent for the new students of this rapidly changing field. Over the years we have learned that improved readability can be obtained through the general appearance of the text, so we are committed to the format you find in this and recent editions of the text. We hope you agree that it makes the text material appear "friendlier" to the broad range of students using the text. As in the past, we continue to be committed to the strong pedagogical sense of the text, accuracy, completeness, and a broad range of ancillary materials that support the educational process. PEDAGOGY ers and current users appear to be quite satisfied with the manner in which the content lends itself to a typical course syllabus. The improved pedagogy of the last two editions seems to support the instructor's lecture and helps students build the foundation necessary for future studies. The number of examples continues to grow, and isolated boldface statements continue to identify important concepts and conclusions. Color continues to be employed in a manner that helps define important regions of characteristics, or identifies important regions or parameters of a network. Icons at the top of the page, developed for each chapter of the text, facilitate referencing a particular area of text as quickly as possible. Problems which have been developed for each section of the text, progress from the simple to the more complex. The title of each section is repeated in the problem section to identify the problems associated with a particular subject matter. SYSTEMS APPROACH There is no question that the growing development of packaged systems requires that the student become aware at the earliest opportunity of a "systems approach" to the design and analysis of electronic systems. Isolated no-load networks are first discussed in Chapters 8 and 9 to introduce the important parameters of any package and develop the important equations for the configuration. The impact of a source or load impedance on the individual package is then defined in Chapter 10 on a general basis before examining specific networks. Finally, the impact of tying the individual packages together is examined in the same chapter to establish some understanding of the systems approach. The later chapters on op-amps and IC units further develop the concepts introduced in these early chapters. ACCURACY The goal of any educational publication is to be absolutely free of errors. There is nothing more distressing to a student than to find that he or she has suffered for hours over a simple printing error. In fact, after all the hours that go into preparing a manuscript and checking every word, number, or letter there is nothing more distressing to an author than to find that errors have crept into the publication. Based on past history and the effort put into this publication, we believe you will find the highest level of accuracy obtainable for a publication of this kind. SUMMARIES In response to current users, summaries are added at the end of eactl chapter, reviewing the salient concepts and conclusions. To emphasize specific words and phrases, boldface lettering is used in much the same manner as a student would use a highlighting marker. The list of equations appearing with each summary was limited to those an instructor realistically hopes the student will bring away from the course. PRACTICAL EXAMPLES While the text now has over 80 practical examples, over 40 were added to this edition and they appear in their own sections. They provide an understanding of the design process that is normally not available at this level. Practical considerations associated with using the electronic devices introduced in this text are discussed as experienced by professionals in the field. The level of coverage is well beyond the surface description of the operation of a particular product. Networks are reduced for clarity and equations are developed to explain why specific response levels are obtained. An effort was made to give some idea of the range of application for each device introduced. Too often the student believes that each electronic device serves a particular purpose, and that's it. In general, the authors are pleased with the results of this demanding effort and invite your comments and suggestions so that the content can be improved upon in the future. TRANSISTOR MODELING BJT transistor modeling is an area that can be approached in a variety of ways. Some institutions employ the re model exclusively, while others lean toward the hybrid approach or to a combination of the two. This edition will emphasize the re model with sufficient coverage of the hybrid model to permit a comparison between the results obtained with each approach. An entire chapter (Chapter 7) has been devoted to the introduction of the models to ensure a clear, correct understanding of each and the relationships that exist between the two. EQUATION DEVELOPMENT For years the development of the equations for small-signal BJT and JFET networks avoided the impact of the output parameter ro. In addition, results were often provided with no idea how they were obtained. Further, approximate equations were provided with no idea what conditions had to be satisfied to permit use of the equations. For these reasons, and probably others, the details of each derivation are provided in this text. The effect of ro was separated for each development to first permit a less complex development. The effect of ro was then demonstrated and the conditions under which the effect of ro can be ignored were introduced. In most cases, the derivations are unique to any publication of this type. They were the result of extensive hours searching for the best path for the analysis. However, the result is a complete development of each equation that we hope will remove any doubt as to their validity. COMPUTER SOFTWARE In recent editions, both PSpice and Electronics Workbench examples were included. For this edition Mathcad was added to demonstrate the versatility of the package for an area such as electronics. Not only can it be used to quickly solve simultaneous equations, but also long series of calculations can be placed in storage for retrieval when a particular configuration is encountered. Numerous examples appear throughout the text, and we

believe the student and instructor will find them quite interesting. The detailed coverage of PSpice was expanded slightly, but there is a larger expansion of the coverage of Electronics Workbench due to its growing popularity. For all the software packages there is no requirement that the student become versed in their use to proceed through the text. Although sufficient detail is provided for each application to permit a student to apply each to a variety of configurations, there is no requirement that the packages actually be used. TROUBLESHOOTING Troubleshooting is undoubtedly one of the most difficult subjects to discuss and develop in an introductory text. A student is just becoming familiar with the characteristics and operation of a device and now is asked to find an answer to an unexpected result. It is an art that has to develop with experience and exposure. The content of this text is essentially a review of situations that frequently occur in the laboratory environment. Some general hints as to how to isolate a problem are introduced along with a list of typical causes. ANCILLARIES The range of ancillary material is quite extensive, including a laboratory manual to which new experiments have been added. There is also an instructor's resource manual, which contains solutions to the in-text problems and the laboratory experiments as well as a test item file. PowerPoint transparencies and a Prentice Hall Test Manager are also available. The CD-ROM included with every copy of the book contains Electronics Workbench Version 5 and Multisim circuit files and CircuitMaker Student Version Software and circuit files. Circuits appearing on the CD-ROM are designated in the text by a special icon next to the selected illustration. Additional support for the student can be found at www.prenhall.com/boylestad in the form of an online student study guide. CourseCompass and Blackboard complete the supplements package. USE OF THE TEXT In general the text is divided into two main components: the do analysis and the ac or frequency response. For some schools the do section is sufficient for a one-semester introductory sequence, while for others the entire text may be covered in one semester by picking and choosing specific topics. In any event, the text is one that "bolds" from the earlier chapters. Superfluous material is relegated to the later chapters to avoid excessive content on a particular subject early in the development stage. For each device the text covers a majority of the important configurations and applicationsthe text is very complete! By choosing specific examples and applications the instructor can reduce the content of a course without losing the progressive building characteristics of the text. Then again, if an instructor feels that a specific area is particularly important, the detail is provided for a more extensive review. Robert L. Boylestad Louis Nashelsky