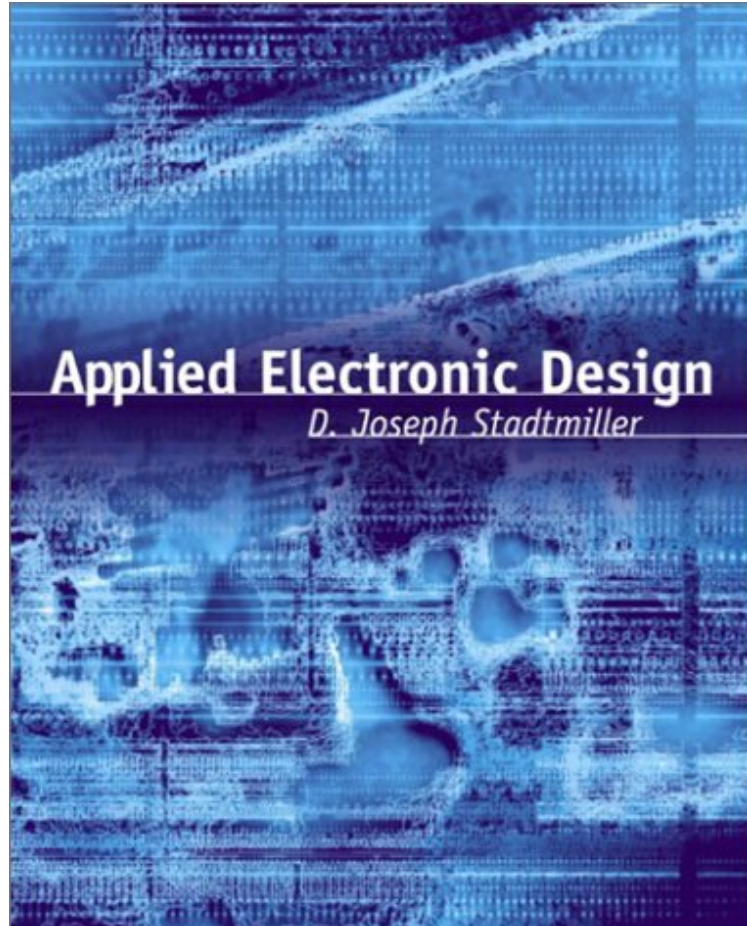


(Download pdf ebook) Applied Electronic Design

Applied Electronic Design

D. Joseph Stadtmiller

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D. Joseph Stadtmiller : Applied Electronic Design before purchasing it in order to gage whether or not it would be worth my time, and all praised Applied Electronic Design:

For Electronic Capstone, Senior Project, Design and Applied Design Courses. To better prepare students for the fast paced world of electronics, this text presents unique discussions of the design process and issues relating to a wide range of electronic applications. It reviews the general design process in a concurrent engineering setting and focuses on manufacturability, quality service, and customer criteria. These concepts are then applied to the design of power supplies, amplifiers, oscillators, control circuits, digital design and telecommunications.

From the Back Cover General in nature, Applied Electronic Design covers various design projects in the areas of analog electronics, digital electronics, and telecommunications. The text applies the theoretical information taught

during the first two years of most electronics technology/electrical engineering technology programs and examines the design process as it relates to many common electric circuits. Topics include the design process from inception to completion, creativity, circuit board layout, and testing. This text provides very practical material that is unavailable from any other single source. Applied Electronic Design will be an invaluable tool for preparing students for future employment. Excerpt. Reprinted by permission. All rights reserved. The purpose of this book is to better prepare students to enter the fast-paced world of electronics by applying the theoretical knowledge learned in their foundation courses on analog and digital electronics. It is a continuation of the premise that prompted my first book, *Electronics: Project Management and Design*, which discussed all the facets of a design project as completed in a business environment. Applied Electronic Design offers a different perspective as it discusses the design process and issues relating to a wide range of electronic applications. Following are the underlying strategies of the book: Expose students to the design perspective from a wide range of electronic applications Discuss the Six-Step design process, the development of design specifications, and the importance of concurrent engineering concepts Emphasize general design issues, such as manufacturability, quality, reliability, ease of use, and serviceability Show methods for dealing with ambient temperature variations, EMI radiation, and noise immunity The book's main theme is the application of basic analog and digital electronics concepts to actual design problems. This experience will promote a deeper understanding of electronics, better problem-solving skills, and the development of design skills for electronics students. I developed this text by combining my industrial and academic experiences. Also, comments and reviews from my first book, *Electronics: Project Management and Design*, indicated that there is a general need for capstone-oriented texts and more specifically that a book with a design focus is highly desirable. ers of the early Applied Electronic Design manuscript helped to refine the approach used and the topical coverage of the final product. The book is targeted as a textbook for applied electronics, design, electronic design, senior-project, and electronic project courses. It could also be used as a supplementary text for any electronics program. It is most applicable to the third and fourth year of four-year electronic programs but can also be used in the second year of many two-year electronics programs. It is designed to function completely on its own or side by side with *Electronics: Project Management and Design*. The book can be segmented into two areas: Chapters 1 through 5 present the design process, and Chapters 6 through 12 cover seven different areas of electronic circuit applications. The coverage of the design process includes defining the design problem, overall design considerations, beginning the design, selecting components, and printed circuit board design. The last seven chapters comprise the following topics: power supplies, amplifiers, oscillators/clock circuits, control circuits, digital logic circuits, embedded systems, and telecommunications. Each of these chapters can be considered a mini-handbook on the topic covered. Every attempt has been made to simplify the information presented in the book. The book is intended for use at many levels, but a basic knowledge of circuit theory and both analog and digital electronic components is assumed. Each subject area is discussed to a depth that promotes a broad understanding of the underlying design issue. Each chapter starts with an introduction that highlights the topics to be covered. Examples are provided wherever practical, and each chapter concluded with a summary and exercises. Applied Electronic Design will surely help electronic students take the all-important first step into their professional careers by introducing design problems and applications that represent the major application areas in the electronics field. In many cases, it might also help students determine initial career directions.