Recently published books and new periodicals may be submitted for review to the Book Reviews Editor, Dr. Francis P. Mathur, College of Engineering, Bioengineering and Advanced Automation Program, University of Missouri-Columbia, Columbia, MO 65201.


This book provides an introduction to the subject of digital logic circuits and digital systems. Emphasis is placed on analysis techniques as opposed to synthesis techniques. No specialized background is required—hence it could be used as a text in an introductory undergraduate course in logic circuits. However, the lack of adequate problem sets detracts from such a use. On the other hand, the book could be used effectively as a text in a second course devoted to a study of digital subsystems such as counters, registers, and other frequently encountered circuits. These points will be developed in the following paragraphs.

The writing style of the author and the level of the presentations make the book easy to read. Numerous examples are given to illustrate the points under discussion. Hence, the book could be effectively used for self-study by those needing a review of logic circuits or by those wanting to learn the subject outside a classroom situation.

Chapters 1 and 2 provide an introduction to the concept of digital (vs. analog) circuits and binary (vs. decimal) number systems, respectively.

Basic logic operations, gates, and functions are presented in Chapter 3. Boolean algebra is described in Chapter 4.

Chapter 5 is devoted entirely to algebraic simplification of Boolean expressions. The coverage of algebraic simplification techniques is generally good. However, an example (pp. 137-141) first given with 19 steps and later with 10 steps can also be easily performed in 5 steps.

Karnaugh map techniques are covered in Chapter 6. There are several objectionable aspects to the presentations in this chapter. First, decimal numbering of map cells is based on the Gray code to decimal equivalents instead of the more conventional binary to decimal equivalents. Second, no rules are given for selecting a minimal set of covering terms from the map after the minterm groupings have been identified. Third, maps are...