Synopsis
Here it is--a collection of Forrest Mims's classic work from the original Popular Electronics magazine! Using commonly available components and remarkable ingenuity, Forrest shows you how to build and experiment with circuits like these: analog computers, color organs, digital phase-locked loops, frequency-to-voltage and voltage-to-frequency converters, interval timers, LED oscilloscopes, light wave communicators, magnetic field sensors, optoelectronics, pseudorandom number generators, tone sequencers, and much, much, more!

Book Information
File Size: 10654 KB
Print Length: 153 pages
Page Numbers Source ISBN: 1878707485
Publisher: Newnes; 1 edition (September 30, 2000)
Publication Date: September 30, 2000
Sold by: Digital Services LLC
Language: English
ASIN: B00EXOTY1K
Text-to-Speech: Enabled
X-Ray: Not Enabled
Word Wise: Not Enabled
Lending: Not Enabled
Enhanced Typesetting: Not Enabled
Best Sellers Rank: #934,376 Paid in Kindle Store (See Top 100 Paid in Kindle Store) #10 in Kindle Store > Kindle eBooks > Engineering & Transportation > Engineering > Electrical & Electronics > Superconductivity #78 in Books > Engineering & Transportation > Engineering > Electrical & Electronics > Superconductivity #114 in Kindle Store > Kindle eBooks > Engineering & Transportation > Engineering > Electrical & Electronics > Electronics > Microelectronics

Customer Reviews
I purchased this book based on others previously written by Mr. Mimms. My old collection consisted of his 1980 edition of the Engineer's Notebook series and the Integrated Circuit Projects mini books previously available from Radio Shack. There always seems to be some overlap with his books. I was attempting to update my library since I had not been involved in circuit building for a while. I DO regret purchasing this book. As the title implies, this book should have remained his scrapbook. It
contains typos, incomplete info and contradictions with his other published books while using some of the same IC’s and circuits. As a result, some circuits don’t work properly or not at all. One such example on page 129, the schematic of the general purpose amplifier. He has pin 1 of the 741 op amp as the output to the 386 chip. It should be pin 6 on the 741 chip (output). I attempted the circuit with his pinout and it would never work. Pin 1 is the offset null. Pin 6 is the output of the op amp. Other books of his state the 741 can use a single polarity power supply for non voice purposes and yet this same circuit uses such. He states the same circuit can be used with several type microphones or sensors etc. If used with a condenser mike it cannot be used without additonal parts.

Forrest Mims is surely the master for explaining things to the average electronics hobbyist. His hand-sketched drawings and list of interesting applications are a delight to view. I highly recommend this book. However, there are a number of things within it that are simply outdated. For example, I couldn’t find one circuit that used a single microcontroller. There are also some obselete projects, such as stop watches that use numerous old logic IC’s. In such cases, microcontrollers would be a better approach. Aside from this fact, there is a lot that can be learned from this book.

This little book is full of very interesting little circuits that are reminicent of Don Lancaster’s various cookbooks published in the early 1980's. Chapter one on analog circuits contains information you just don’t see anymore on how to build various circuits based on op amps. I also really loved the section on test equipment including how to build a very simple solid-state oscilloscope. Every chapter has something "fun" in it, especially the chapter on experimenter and game circuits, such as the simple wind speed indicator. Chapter six, on digital circuits, has the most basic designs. Since the onset of COTS and modular electronics, the typical electrical engineer just no longer gets to have the kind of fun you’ll have with these interesting electronic designs. The content is very detailed with complete construction details. I subtract a single star from my rating due to a few errors I found in some of the instructions. However, the errors are pretty obvious to anyone familiar with electronics.

Open this book anywhere and you are likely to find something interesting. I am a Forrest Mims fan. In this book he covers a wide range of subjects including circuits you can build to explore them further.
My problem with this book is that I have not been able to get any of the circuits to work. I have been doing electronics for a while and I don't think it is all my fault.

A collection of circuits and projects that demonstrate usage of several solid-state devices, mostly ICs. Discussion of principles is very scant, however. That would require more in-depth background than a book appealing to hobbyists could provide.

If you are interested in electronics, I would highly recommend reading this book. Despite the fact that technological components have surpassed many of the circuits contained in various chapters, the significance is the description of the circuit themselves. The "how and why" a particular circuit operates. The author is quite straightforward in the description and operation of electronics. I highly recommend this scrapbook of electronic circuits and schematics. I have placed this book on the shelf with other favorites and it has become a reference by providing the ground work for circuit development.

Unfortunately this book now seems too dated to be of much practical use.

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