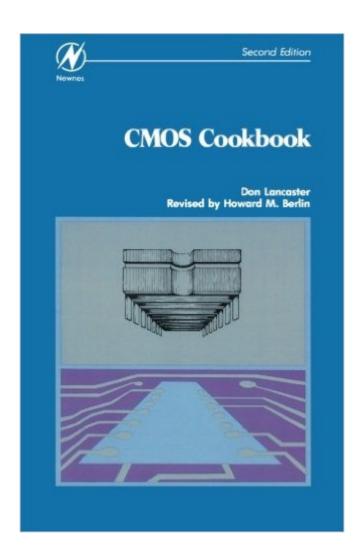
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# **CMOS Cookbook, Second Edition**





### **Synopsis**

The CMOS Cookbook contains all you need to know to understand and successfully use CMOS (Complementary Metal-Oxide Semiconductor) integrated circuits. Written in a "cookbook" format that requires little math, this practical, user-oriented book covers all the basics for working with digital logic and many of its end appilations. Whether you're a newcomver to logic and electronics or a senior design engineer, you'll find CMOS Cookbook and its examples helpful as a self-learning guide, a reference handbook, a project-idea book, or a text for teaching others digital logic at the high school through university levels. In the pages of this revised edition, you'll discover: \*What CMOS is, who makes it, and how the basic transistors, inverters, and logic and transmission gates work\*CMOS usage rules, power-suppy examples, and information on breadboards, state testing, tools, and interfacing\*Discussions of the latest CMOS devices and sub-families, including the 74C, 74HC, and 74HCT series that streamline TTL and CMOS interfacing\*An in-depth look at multivibrators - including astable, monostable, and bistable - and linear techniques\*Clocked-logic designs and the extensive applications of JK and D-type flip-flops\*A helpful appendix featuring a TTL-to-CMOS conversion chart

#### **Book Information**

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#### **Customer Reviews**

If you're interested in digital design, this book is a must-read. In very little time, you will gain an intuitive feel for digital hardware design, and understand how to design useful circuits. I first read this

book in high school, about 20 years ago. Since then, I completed an EE degree at Cornell, and have practiced as an engineer. Nothing I ever read was a useful as this book, and I still regularly refer to it.

My brother had copies of CMOS cookbook and TTL cookbook in 1980s and I read most of them when I was 12-14 years old (he is a year older). After that each of us designed our own digital clock. My brother used 7 segments while I used LEDs for an analog representation of clock. Finding the ICs from the market was a bit difficult in Iran (where I lived) at the time but we eventually built many circuits and even produced and sold some. Years later I started my undergraduate studies in electronics engineering and almost all the time I was the top student in digital, logic and microprocessor courses. Being a computer science researcher now, I think this book and a few others achieved their purpose by creating extreme interest to electronics, digital circuits and computers in me and thousands of others. Thank you Mr. Lancaster.

I loved the book. I am replacing my original copy because it has fallen apart. Pratical circuits and tricks. The best non textbook I have on cmos.

...This was just an easier way of expressing my opinion. This book has been absolutely crucial to my GCSE and A Level studies, as its simplified datasheets and useful information aboout how to use the ICs are exactly what you need for designing small circuits on the component level. Although, yes, you can get all this and more for free on the internet, the book is smaller than a computer, and is right by you with all the information in one place. It certainly has its place in my library.

I have both the TTL and CMOS cookbooks.. If you are going to buy only one of them, I'd say the CMOS Cookbook would be the smarter purchase since CMOS packages are what you'll find more often still being used out there, TTL is very dated/obsolete(although later versions of CMOS mimic TTL, but with the advantages of CMOS). Both books are very similar and sometimes you'd swear they were the same books at a glance.. the application of digital design between the two are almost identical.. some pages are verbatim between the two books.Lancaster does well in explaining how a transistor works> how the transistors build logic gates> binary/hex/BCD code > clock signals & waveforms > flip flops, buffers/drivers, etc. and how they all come together to do something useful. Granted, there are not a whole lot of useful or even worthwhile example circuits actually in the book and even at that, most of the circuits are mainly block charted.. leaving you to figure out the actual

schematic. One quarter of the book is data sheets for older CMOS devices as reference.. but once you get the hang of his explanations, you can put the information together in this book to build your own circuits/schematics.I feel this is still a book that will be very useful for sometime.. I have use for it to build interfacing circuits to embedded MPU's. I found it easier to go thru this book to get a grip on digital basics, then tackle assembly language programming.. then go back to this book to provide interfacing for the MPU.I got my book for around \$5 and feel it's worth every penny spent.. The TTL book I paid the same, but it doesn't get open much at all, if ever again after a quick browse thru it... yet I'll keep it on hand as reference.

Although this book is about 30 years old, the amount of theory and practical info cramed into its pages makes it a book you will use often.

Practical,down to earth,easy to understand,and well written. Yet detailed enough for an experienced user. It's an often consulted reference book. The author even explains the CMOS quirks and gotchas, inherent in ANYthing manmade. I would love to see a Cookbook Two, adding the newest, updates, spec. sheets, and especially ,many more practical circuit examples/designs. All written in his unbeatable manner.

A good source of information but I was disappointed, given that it was a second edition and I presume updated, for it to compare the 3130 CMOS Op Amp with the 741 that was certainly superseded by scores of better amplifiers by 1977 when the book was first published. I used to own the original edition back in the 1970's and was a little disappointed. It's still a good source of information but I am knocking off one star!

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