

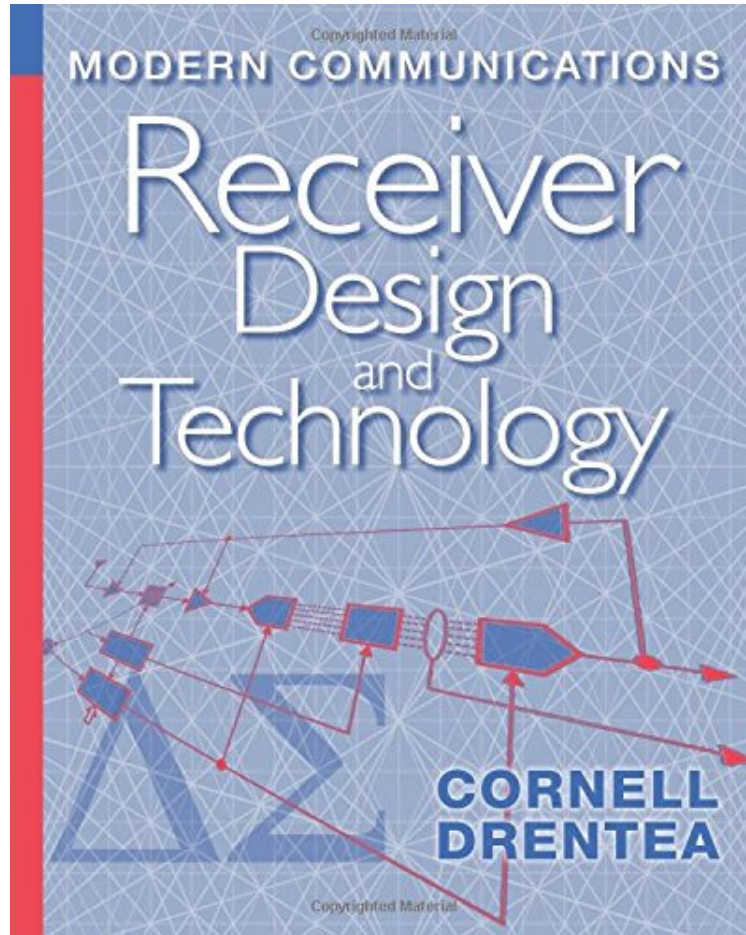
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*Cornell Drentea*

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(Download pdf) Modern Communications Receiver Design and Technology (Artech House Intelligence and Information Operations)

## **Modern Communications Receiver Design and Technology (Artech House Intelligence and Information Operations)**

**Cornell Drentea : Modern Communications Receiver Design and Technology (Artech House Intelligence and Information Operations)** before purchasing it in order to gage whether or not it would be worth my time, and all praised Modern Communications Receiver Design and Technology (Artech House Intelligence and Information Operations):

1 of 2 people found the following review helpful. Old and outdatedBy bipedar darbedarVery outdated trivial stuff. I am so puzzled by the good reviews. You are paying for the weight not for the content. This is the kind of book I would have never bought had I browsed through it in a book store. 's paranoia; one cannot have a good enough view of the book at the time of purchase.4 of 7 people found the following review helpful. Not as instructive as I had hopedBy flowerDrentea covers pretty much all of the technology that goes into high-performance communications receivers, some of it quite thoroughly. For example, he provides useful insight into predicting and avoiding spurious responses.

In other areas, however, he pays only cursory attention to some important developments. For example, in his discussion of mixers he explains the evolution from unbalanced to balanced and double-balanced mixers and includes a diagram of a quadruple balanced mixer, but the quadruple balanced mixer is not mentioned at all in the text. Similarly, his treatment of active FET balanced mixers (H-bridge, etc.) is way behind the state of the art, for a book published in 2010. Finally, he refers over and over again to the receiver design he published in the magazine QEX, to the point that it seems he is just repeatedly patting himself on the back rather than using the design to convey understanding to the reader. The book appears to be reproduced by a fused-toner process rather than real typesetting, which gives the text and, particularly, the diagrams and images a less-than-professional look.

0 of 0 people found the following review helpful. A pleasurable journey of discovery

By Milan Hudecek

Any book that aims to cover this complex field in a single volume of such relatively modest size would necessarily have to be a compromise, or at least assume a great deal of prior knowledge - or so I expected when I ordered Drentea's book, expecting to receive a usable reference book, but not much more. I was pleasantly surprised: This book is much more than a reference; it is thorough, honest, well researched, educational and eminently readable. Drentea's style in fact makes a good bedtime reading, something I could not say with most other technology books on my bookshelves. Drentea writes in an easy-to-read non-nonsense style of someone who is confident of his expertise and does not need to hide behind pretentious verbiage to make himself look knowledgeable. He knows his stuff. He writes not to be admired, but to share. I did not expect - but greatly appreciated! - the historical chapters at the beginning. This is not just a quick lip service to the old giants whose pioneering work made radio possible (an iPhone is also a radio!), but interesting, entertaining material - an appetizer that introduces one to Drentea's informal, friendly writing style and sets the stage for yet more pleasant surprises. Yes, there is mathematics, of course - lots of it! - but even that is provided in a most intelligible form. When Drentea explains, he never intimidates. To illustrate general design concepts and the usage of various design tools, generously provided in his book, Drentea uses specific examples of actual designs, discussed in great detail to illustrate the thought processes and real-world considerations that led to numerous design decisions that had to be made. This engaging narrative contributes to the general impression that the author is taking the reader on an impressive journey of discovery. Much has been written about software-defined radios recently, and many technology readers might be tempted into thinking that they can simply hook up an A/D with a D/A, throw in a little processing between them - and that is today's modern radio. Of course nothing is further from the truth; the devil is, as always, in the detail. Drentea explains painstakingly practical limitations of DSP technologies that impact on practically achieved performance and points a way ahead. I can only highly recommend this book. I was so impressed that I have bought six copies for our engineers (I happen to work in a radiocommunications field). Milan Hudecek

This comprehensive 462 pages textbook and reference on the subject of radio frequency (RF) receiver design presents the concepts, mathematics and design for such systems. Chapters include discussions on superheterodyne receivers, dynamic range, mixers, complex coherent frequency synthesizers, automatic gain control and beat frequency oscillators and additional sections cover advanced topics like digital signal processing (DSP) and software defined radios (SDR) as well as electronic warfare (EW) receivers. Intended for electrical engineering students and engineers, this comprehensive volume contains 360 illustrations including complex block diagrams, photographs and schematics. Drentea is an electrical engineer with fifty years of experience in the field of RF engineering and has worked for the Military Avionics and Corporate divisions of Honeywell and Hughes/Raytheon Systems.

"It's always a pleasure to review a product or publication from a friend of MT, and Cornell's new book is a shining example." "Drentea's work is a scholarly, definitive reference for setting the highest standards of receiver design, coupled with methods to accomplish those standards." -Bob Grove, Monitoring Times Magazine

From the Author  
The Midwest Book