

This is the book to get if you want to understand the science of radio. Along the way of learning the inner workings of radio, you'll enjoy the historical side of this fascinating subject, which is provided by the author as he weaves between theory, practice, and history.

A Note to Professors. Solution to an Old Problem. Pre-Radio History of Radio Waves. Antenna as Launchers and Interceptors of Electromagnetic Waves. Receiving Spark Transmitter Signals. Mathematics of AM Sidebands. First Continuous Waves and Heterodyne Concept. Fourier Series and Their Physical Meaning. Convergence in Energy of the Fourier Series. Radio Spectrum of a Spark-Gap Transmitter. Physical Meaning of the Fourier Transform. Multiplying by Squaring and Filtering. Squaring and Multiplying with Matched Nonlinearities. Analytic Signals and Single-Sideband Radio. Resonance in Electrical Circuits. Differential and Operational Amplifiers. Order of Integration and Differentiating an Integral. Table of Fourier Transforms. Indexes Review Text From the reviews: The notes and problems at the end of each chapter are very helpful. There are many quotable passages In the final analysis, the book is definitely worth owning It is an extremely well written - but unusual - book that I highly recommend for all physicists. It does a good job not only of teaching the underlying theory of radio, but also of entertaining readers. The 21 chapters are divided into four sections, sprinkled with humorous cartoons to pique reader interest The work contains many fascinating ideas Upper-division undergraduate; faculty; professional. He never talks down to the reader an elegant vocabulary is used and seldom will a reader be bored.

Chapter 2 : The Science of Radio - Paul J. Nahin | calendrierdelascience.com

The Science of Radio explains the working and charts the development of the ordinary AM radio receiver, which has become an integral part of our lives in the 80 years since its invention. As well as showing the reader the growth of technology in this century, the story of AM radio can provide a.

However, the book is very strange. It is part textbook, part amateur history, part popularization. In the end what it lacks is any coherent overview of how radio actually works. It could benefit greatly from an overview summary chapter of this nature. Such a summary could explain in detail how all the apparent wanderings and diversions throughout the book fit into a coherent picture. As it is, the text wanders through the history of radio and delves into a bunch of historical oddities not used since the s. The text is full of strange digressions often, for example, attacking Marconi. Then suddenly the author seems to remember he is supposed to be explaining the "science" of radio, so he throws out a bunch of poorly explained equations. The book is also disorganized, partly due to the digressions. Here is an example, in chapter 5, we are supposed to be told how a simple crystal receiver works. He shows the circuit diagram straight off. Then he wanders into a 4 page diatribe about Marconi. Oh, then he remembers the circuit: What do you mean , tuned, how is it tuned? This little "detail" is left out. Now, I know that it is tuned by a variable capacitor. Apparently you are supposed to already know what the circuit diagrams mean, and therefore what the circuit components do.. If you know this stuff, he adds little. But, it was very poorly done. He constantly leaves out anything he assumes you should know but would be helpful to explain the background of what he is saying much more helpful than ramblings on obscure century old patents. However, I expect it would mostly be of interest to Electrical engineers That definitely is NOT what this book provides.

Chapter 3 : calendrierdelascience.com: Customer reviews: The Science of Radio

In The Science of Radio, Paul J. Nahin charts the development of the ordinary superheterodyne AM radio receiver for the specific purpose of providing an introduction to fundamental physics and engineering.

Chapter 4 : The Science of Radio: With Matlab(r) and Electronics Workbench(r) Demonstrations by Paul J.

The Science of Radio As well as showing the reader the growth of technology in this century, the story of AM radio can provide a unique insight into the basics of electrical engineering, making the primary concepts and applications visual and comprehensible.

Chapter 5 : - The Science of Radio by Paul J. Nahin

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Second Edition The Science of Radio with MATLAB® and ELECTRONICS WORKBENCH® Demonstrations Paul J. Nahin University of New Hampshire Durham, New Hampshire.

Chapter 8 : The Science of Radio : Paul J. Nahin :

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By Paul J. Nahin. ISBN ISBN The technology of Radio explains the operating and charts the improvement of the standard AM radio receiver, which has develop into a vital part of our lives within the eighty years considering that its invention. in addition to exhibiting the reader the expansion of know-how during this century, the tale of AM radio gives you a.

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It does a good job not only of teaching the underlying theory of radio, but also of entertaining readers." CHOICE MAGAZINE "Intended as a companion for students familiar with college physics and calculus and studying electrical engineering using AM radio theory, Nahin's work takes a unique teaching approach.