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Based on the popular Artech House classic, Digital Communication Systems Engineering with Software-Defined Radio, this book provides a practical approach to quickly learning the software-defined radio (SDR) concepts needed for work in the field. This up-to-date volume guides readers on how to quickly prototype wireless designs using SDR for real-world testing and experimentation. This book explores advanced wireless communication techniques such as OFDM, LTE, WLA, and hardware targeting. Readers will gain an understanding of the core concepts behind wireless hardware, such as the radio frequency front-end, analog-to-digital and digital-to-analog converters, as well as various processing technologies. Moreover, this volume includes chapters on timing estimation, matched filtering, frame synchronization message decoding, and source coding. The orthogonal frequency division multiplexing is explained and details about HDL code generation and deployment are provided. The book concludes with coverage of the WLAN toolbox with OFDM beacon reception and the LTE toolbox with downlink reception. Multiple case studies are provided throughout the book. Both MATLAB and Simulink source code are included to assist readers with their projects in the field.

A comprehensive introduction to the fundamentals of design and applications of

wireless communications **Wireless Communications Systems** starts by explaining the fundamentals needed to understand, design, and deploy wireless communications systems. The author, a noted expert on the topic, explores the basic concepts of signals, modulation, antennas, and propagation with a MATLAB emphasis. The book emphasizes practical applications and concepts needed by wireless engineers. The author introduces applications of wireless communications and includes information on satellite communications, radio frequency identification, and offers an overview with practical insights into the topic of multiple input multiple output (MIMO). The book also explains the security and health effects of wireless systems concerns on users and designers. Designed as a practical resource, the text contains a range of examples and pictures that illustrate many different aspects of wireless technology. The book relies on MATLAB for most of the computations and graphics. This important text: Reviews the basic information needed to understand and design wireless communications systems Covers topics such as MIMO systems, adaptive antennas, direction finding, wireless security, internet of things (IoT), radio frequency identification (RFID), and software defined radio (SDR) Provides examples with a MATLAB emphasis to aid comprehension Includes an online solutions manual and video lectures on selected topics Written for students of engineering and physics and practicing engineers and scientists, **Wireless Communications Systems** covers the fundamentals of wireless engineering in a

clear and concise manner and contains many illustrative examples. Respond to the call of ham radio Despite its old-school reputation, amateur radio is on the rise, and the airwaves are busier than ever. That's no surprise: being a ham is a lot of fun, providing an independent way to keep in touch with friends, family, and new acquaintances around the world—and even beyond with its ability to connect with the International Space Station! Hams are also good in a crisis, keeping communications alive and crackling during extreme weather events and loss of communications until regular systems like cell phones and the internet are restored. Additionally, it's enjoyable for good, old-fashioned tech geek reasons—fiddling with circuits and bouncing signals off the ionosphere just happens to give a lot of us a buzz! If one or more of these benefits is of interest to you, then good news: the new edition of Ham Radio For Dummies covers them all! In his signature friendly style, longtime ham Ward Silver (Call Sign NØAX)—contributing editor with the American Radio Relay League—patches you in on everything from getting the right equipment and building your station (it doesn't have to be expensive) to the intricacies of Morse code and Ohm's law. In addition, he coaches you on how to prepare for the FCC-mandated licensing exam and tunes you up for ultimate glory in the ham radio hall of fame as a Radiosport competitor! With this book, you'll learn to: Set up and organize your station Communicate with people around the world Prep for and pass the FCC exam Tune into

the latest tech, such as digital mode operating Whether you're looking to join a public service club or want the latest tips on the cutting edge of ham technology, this is the perfect reference for newbies and experts alike—and will keep you happily hamming it up for years!

High-Speed Circuit Board Signal Integrity, Second Edition

The ARRL RFI Book

Design for the Internet-of-Things (IoT) and Cyber-Physical Systems (CPS)

The ARRL Antenna Book

Basic Radio

Wireless Communications Systems

Here's a new approach to passing the Technician Class test. The test is multiple choice and the other study guides take you through the 426 possible questions including all four answers for each question. But three out of the four answers are WRONG! You are reading 1,278 wrong answers and that is both confusing and frustrating. The Easy Way focuses only on the right answers. All Ham and no Spam. The first part is an narrative of the author's ham radio experience. Every question and answer is woven into the story and identified in bold print. The second part is a 40-page Quick Summary. It gives every question and answer, with hints and cheats to help you remember.

Other study guides take over 200 pages. Which would you rather study: 40 pages of right answers or over 200 pages with three quarters of the answers wrong? Instructors: This book is perfect for review or weekend courses. Have the students read the narrative before class, then go over the concepts with them rather than slogging through all those wrong answers. You'll be done in no time and the students will be fully prepared to take their tests.

This handbook has everything you need to design your own complete antenna system. This 23rd edition describes hundreds of antenna designs - wire, vertical, portable and mobile, and new high-performance VHF/UHF Yagi designs

Learn from the past. Understand the present. Explore the future. “ . . . Present Future is a fascinating, expert look at the history of the key technological advances affecting life today, and preparation for the exponential leaps yet to come. . . . ” –BILL MARIS, Founder and First CEO of Google Ventures, Founder of Calico, Founder of
Section 32 “With the context of an economic historian and the on-the-ground insights of an active technology investor, Perelmuter’s Present Future brings readers to the bleeding edge of the science and technologies poised to revolutionize the 21st century. Comprehensive and yet enthralling, the book is a must-read for anyone who has an intellectual or commercial interest in what the future may hold.”

–PETER HEBERT, Co-Founder and Managing Partner, Lux Capital “. . . Perelmuter draws upon his own experiences as a successful tech entrepreneur and investor, and the writings of dozens of other experts, to highlight the most important implications of multiple emerging technologies. Recommended!” –BEN CASNOCHA, Co-Author of the #1 New York Times best seller The Start-up of You “A comprehensive survey of action across the entire frontier of advanced technologies is daunting in concept and even more so in execution. Guy Perelmuter has pulled it off, providing an accessible yet historically informed review from the world of algorithms to the world of genomic analysis by way of just about every field of science in between. Most important: He avoids the hype-ridden cheerleading that all too often accompanies accounts of breakthrough innovation. . . ” –BILL JANEWAY, Venture Capitalist, Economist, Author of Doing Capitalism in The Innovation Economy: Reconfiguring the Three-Player Game Between Markets, Speculators and the State

Under an Ionized Sky
The Thrill of 160 Meters
The ARRL Handbook for Radio Communications
It's Not How, It's Why?
Software-Defined Radio for Engineers
Understanding Basic Electronics

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Any 160-meter enthusiast will tell you that operating on Topband, as it is called, is challenging, exciting and intriguing. Author Jeff Briggs, K1ZM, well known as a Topband expert, has compiled a book that will appeal to diehard 160-meter operators as well as those who have always wondered what goes on down there on the frequency spectrum. Indeed, the 160-meter aficionado is a special breed of operator. How do you know when you're a True-Blue 160-meter fan? One clue might be that you're finding yourself actually enjoying listening to static crashes... And you suspect you're on the edge when you wake up just before dawn for three months, just trying to make that seemingly impossible Topband DX QSO with Hong Kong or maybe Bangladesh! K1ZM has written this book as a fond dedication to one of the true pioneers on 160 meters, Stew Perry, W1BB, who is lovingly remembered by many people still on the air. DXing on the Edge chronicles W1BB's many accomplishments on Topband, plus those of numerous other early operators. Aside from detailed historical information, the author describes many practical antennas and operating techniques that can lead to success on 160. Like most of the ham bands, hearing the DX is the most challenging part of operating—and hearing well on Topband requires superior receiving antennas. Successful DXing can be accomplished even from a city lot, however, and the book includes lots of neat tricks and hints that will help you work the rare ones.

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The Chromebook Classroom gives you a fast, clear road map for turning a new fleet of Chromebooks into rich learning tools for a single classroom or an entire district! The Chromebook Classroom is the perfect companion for educators just getting started with Chromebooks - or looking for new ways to boost their students' learning through technology.

Amateur Radio

Ham Radio License Manual

The Chromebook Classroom

Antenna Physics

The ARRL Antenna Compendium

Communications Receivers, Fourth Edition

Storm Spotting and Amateur Radio

Basic Radio reveals the key building blocks of radio: receivers; transmitters; antennas; propagation and their applications to telecommunications; radionavigation; and radiolocation. This book includes simple, build-it-yourself projects to turn theory into practice--helping reinforce key subject matter. Embedded System Interfacing: Design for the Internet-of-Things (IoT) and Cyber-Physical Systems (CPS) takes a comprehensive approach to the interface between embedded systems and software. It provides the principles needed to understand how digital and analog interfaces work and how to design new

interfaces for specific applications. The presentation is self-contained and practical, with discussions based on real-world components. Design examples are used throughout the book to illustrate important concepts. This book is a complement to the author's Computers as Components, now in its fourth edition, which concentrates on software running on the CPU, while Embedded System Interfacing explains the hardware surrounding the CPU. Provides a comprehensive background in embedded system interfacing techniques Includes design examples to illustrate important concepts and serve as the basis for new designs Discusses well-known, widely available hardware components and computer-aided design tools

"Practical cures for radio frequency interference"--Cover.

Arduino for Ham Radio

Your Guide to Using Ham Radio's First Language

ARRL's HF Digital Handbook

Ham Radio Study Guide

Morse Code Operating for Amateur Radio

Embedded System Interfacing

□Be a reason for your success.□ We all think to earn a lot of money, a large house to live, a luxury car, a lavish lifestyle, and to earn name and fame. So, as long as we are thinking anyway, why not think big? With various upcoming theories, concepts and too many directions, today's youth seems to chase □how

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to be successful? than realizing why should they be successful? It's not how, it's why draws on simple personal experiences to stimulate and strengthen an individual's desire to be successful and develop a greater sense of inner confidence and worth. This is a clear, down-to-earth book filled with 9 interesting reasons to tap the unseen potentials of an individual who is longing to achieve prosperity in all aspects of life.

This handy pocket reference offers essential data on radio frequency interference (RFI) for advanced ham radio operators, wireless engineers who troubleshoot interference problems, and technicians. It is difficult to believe that our planet has been weaponized before our very eyes, but that is exactly what has happened. First, we were seduced by the convenience of a wireless world; then, atmospheric weather experimentation in the guise of carbons climate change converted the air we breathe into an antenna. Now, the geo-engineering we've been subjected to for two decades is being normalized as the Star Wars Space Fence rises around and within us. Is this the Space Age we were promised?

Army MARS at 90

Pass Your Amateur Radio Technician Class Test the Easy Way 2014-2018

Present Future

A Social History

The A.R.R.L. Antenna Book

Commerce Reports

There's an obscure agency in the Defense Department with the unique distinction of costing the taxpayers nothing for its national security role. The members wear no uniforms, don't carry weapons and work from home. They

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are specially-licensed amateur radi

This title has everything readers need to pass the general class written exam. Readers will find easy-to-understand theory and rules; the latest General class question pool (Element 3) with answer key, and detailed explanations for all questions, including FCC rules.

Frequency describes the number of waves that pass a fixed point in a given amount of time. It also measures how often trouble finds Harrie McKinsey.

Harrie McKinsey Mystery #3

ARRL's Hands-On Radio Experiments

From Chemtrails to Space Fence Lockdown

The ARRL Extra Class License Manual for Ham Radio

The Art of Electronics

Business, Science, and the Deep Tech Revolution

The premiere volume includes articles on a multiband portable, quads and loops, baluns, the Smith Chart, and more.

"Pass the 50-question Extra Class test; all the exam questions with answer key, for use beginning July 1, 2008 to June 30, 2012; detailed explanations for all questions including FCC rules"--Cover.

This thoroughly updated leading-edge circuit design resource offers the knowledge

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needed to quickly pinpoint transmission problems that can compromise the entire circuit design. This new edition demonstrates how to apply EM theory to solve signal integrity problems with a practical application-oriented approach. Discussing both design and debug issues at gigabit per second data rates, the book serves as a practical reference for projects involving high-speed serial signaling on printed wiring boards. Step-by-step, this book goes from reviewing the essentials of linear circuit theory, to examining practical issues of pulse propagation along lossless and lossy transmission lines. It provides detailed guidelines for crosstalk, attenuation, power supply decoupling, and layer stackup tradeoffs (including pad/antipad tradeoffs). Other key topics include the construction of etched conductors, analysis of return paths and split planes, microstrip and stripline characteristics, and SMT capacitors. Filled with on-the-job-proven examples, this hands-on reference is the book that engineers can turn to time and again to design out and troubleshoot circuit signal loss and impedance problems.

An Introduction

Research Anthology on Recent Trends, Tools, and Implications of Computer Programming

ARRL's Low Power Communication

The ARRL Extra Class License Manual

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A Step-by-step Guide to Electricity, Electronics and Simple Circuits

Introduces basic electronics, discussing analog and digital electronic circuits, Ohm's Law, and resonant circuits.

The A.R.R.L. Antenna BookARRL's HF Digital HandbookAmerican Radio Relay LeagueThe ARRL Antenna BookFor Radio Communications

During the first fifty years of the twentieth century, ham radio went from being an experiment to virtually an art form. Because of the few government restrictions and the low monetary investment required, the concept of ham radio appealed to various people. More than just a simple hobby, however, ham radio required its operators to understand radio theory, be able to trace a schematic and know how to build a transmitter and receiver with whatever material they might have available. With the advent of World War II and the increased need for cutting-edge communications, the United States government drew upon the knowledge and skill of these amateur ham radio operators. This book explores the history of ham radio operators, emphasizing their social history and their many contributions to the technological development of worldwide communications. It traces the concept of relays, including the American Radio Relay

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League, from contacts as close as 25 miles apart to operators anywhere in the world. The book highlights the part played by ham radio in many of the headline events of the half century, especially exploration and aviation "firsts". The ways in which these primarily amateur operators assisted in times of disaster including such events as the sinking of the Titanic and the 1937 Ohio River flood, are also examined.

Understanding the Key Building Blocks : Includes Build-it-yourself Radio Projects!

Murder on Frequency

For Radio Communications

The World of Ham Radio, 1901-1950

Ham Radio For Dummies

Dxing on the Edge

State-of-the-art communications receiver technologies and design strategies This thoroughly updated guide offers comprehensive explanations of the science behind today's radio receivers along with practical guidance on designing, constructing, and maintaining real-world communications systems. You will explore system planning, antennas and antenna coupling, amplifiers and gain control, filters, mixers, demodulation, digital communication, and the latest software defined radio (SDR) technology. Written by a team of telecommunication experts, Communications Receivers: Principles and Design, Fourth Edition, features technical illustrations, schematic diagrams, and detailed examples. Coverage includes:

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• Basic radio considerations • Radio receiver characteristics • Receiver system planning • Receiver implementation considerations • RF and baseband techniques for Software-Defined Radios • Transceiver SDR considerations • Antennas and antenna coupling • Mixers • Frequency sources and control • Ancillary receiver circuits • Performance measurement

Programming has become a significant part of connecting theoretical development and scientific application computation. Computer programs and processes that take into account the goals and needs of the user meet with the greatest success, so it behooves software engineers to consider the human element inherent in every line of code they write. Research Anthology on Recent Trends, Tools, and Implications of Computer Programming is a vital reference source that examines the latest scholarly material on trends, techniques, and uses of various programming applications and examines the benefits and challenges of these computational developments. Highlighting a range of topics such as coding standards, software engineering, and computer systems development, this multi-volume book is ideally designed for programmers, computer scientists, software developers, analysts, security experts, IoT software programmers, computer and software engineers, students, professionals, and researchers. Think all Ham Radio study guides are the same? Think again! With easy to understand lessons and practice test questions designed to maximize your score, you'll be ready. You don't want to waste time - and money! - retaking an exam. You want to accelerate your education, not miss opportunities for starting your future career! Every year, thousands of people think that they are ready for the Ham Radio test but realize too late when they get their score back that they were not ready at all. They weren't incapable, and they certainly did their best, but they simply weren't studying the right way. There are a variety of methods to prepare for the Ham Radio test...and they get a variety of results. Trivium Test Prep's Ham Radio study guide provides the information, secrets, and confidence needed to get you the

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score you need - the first time around. Losing points on the Ham Radio exam can cost you precious time, money, and effort that you shouldn't have to spend. What is in the book? In our Ham Radio study guide, you get the most comprehensive review of all tested concepts. The subjects are easy to understand, and have fully-explained example questions to ensure that you master the material. Best of all, we show you how this information will be applied on the real exam; Three practice exams are included so that you can know, without a doubt, that you are prepared. Our study guide is streamlined and concept-driven so you get better results through more effective study time. Why spend days or even weeks reading through meaningless junk, trying to sort out the helpful information from the fluff? We give you everything you need to know in a concise, comprehensive, and effective package.

Manual for Technician Class, General Class, and Amateur Extra Class

How to Deploy, Manage and Use Chromebooks in the K-12 Classroom

Radio Frequency Interference Pocket Guide

The ARRL General Class License Manual

The Radio Amateur's Handbook

A Radio Amateur's Guide to Open Source Electronics and Microcontroller Projects