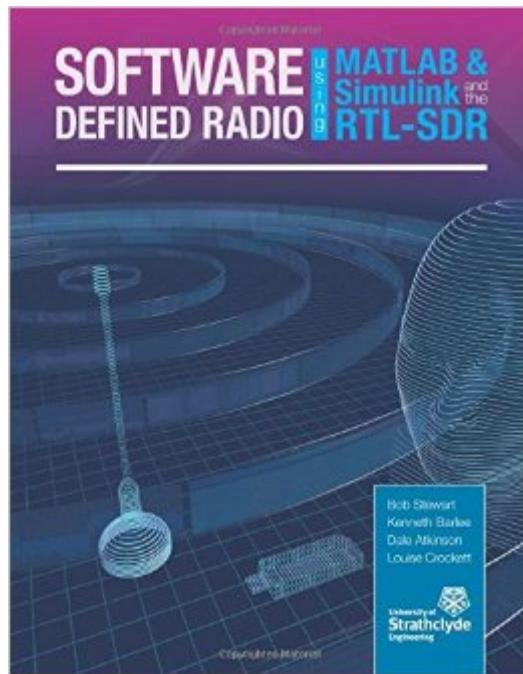


The book was found

Software Defined Radio Using MATLAB & Simulink And The RTL-SDR



Synopsis

The availability of the RTL-SDR device for less than \$20 brings software defined radio (SDR) to the home and work desktops of EE students, professional engineers and the maker community. The RTL-SDR can be used to acquire and sample RF (radio frequency) signals transmitted in the frequency range 25MHz to 1.75GHz, and the MATLAB and Simulink environment can be used to develop receivers using first principles DSP (digital signal processing) algorithms. Signals that the RTL-SDR hardware can receive include: FM radio, UHF band signals, ISM signals, GSM, 3G and LTE mobile radio, GPS and satellite signals, and any that the reader can (legally) transmit of course! In this book we introduce readers to SDR methods by viewing and analysing downconverted RF signals in the time and frequency domains, and then provide extensive DSP enabled SDR design exercises which the reader can learn from. The hands-on SDR design examples begin with simple AM and FM receivers, and move on to the more challenging aspects of PHY layer DSP, where receive filter chains, real-time channelisers, and advanced concepts such as carrier synchronisers, digital PLL designs and QPSK timing and phase synchronisers are implemented. In the book we will also show how the RTL-SDR can be used with SDR transmitters to develop complete communication systems, capable of transmitting payloads such as simple text strings, images and audio across the lab desktop.

Book Information

Paperback: 672 pages

Publisher: Strathclyde Academic Media (September 11, 2015)

Language: English

ISBN-10: 0992978718

ISBN-13: 978-0992978716

Product Dimensions: 8.5 x 1.4 x 11 inches

Shipping Weight: 3.6 pounds (View shipping rates and policies)

Average Customer Review: 4.5 out of 5 starsÂ See all reviewsÂ (2 customer reviews)

Best Sellers Rank: #623,908 in Books (See Top 100 in Books) #134 inÂ Books > Computers & Technology > Computer Science > Computer Simulation #254 inÂ Books > Crafts, Hobbies & Home > Crafts & Hobbies > Radio Operation #278 inÂ Books > Engineering & Transportation > Engineering > Telecommunications & Sensors > Radio

Customer Reviews

Great book, all around! But if your pockets are shallow like mine and you can live with reading an

electronic copy then you can download it for free from the Mathworks website.

Good Book ; problem is just that there was no note for the needed Receiver RF set to order to have the whole set! In order now from

[Download to continue reading...](#)

Software Defined Radio using MATLAB & Simulink and the RTL-SDR The Hobbyist's Guide to the RTL-SDR: Really Cheap Software Defined Radio MATLAB - Programming with MATLAB for Beginners - A Practical Introduction to Programming and Problem Solving (Matlab for Engineers, MATLAB for Scientists, Matlab Programming for Dummies) Ham Radio: Ultimate Ham Radio Beginners To Expert Guide: Easy Step By Step Instructions And Vital Knowledge To Start Using Your Ham Radio Today! (Ham Radio, Ham ... Radio License Manual, Ham Radio For Dummies) Ham Radio Guide Quick Start Ham Radio Guide- From Beginner To Advanced: (Ham Radio Study Guide, Dummy Load Ham Radio) (Home Ham Radio, Ham Radio Book) RTL-SDR for Everyone: Second Edition 2016 Guide including Raspberry Pi 2 Modern Control Systems Analysis and Design Using MATLAB and Simulink Digital Communication Systems Using MATLAB and Simulink, Second Edition Advanced Electric Drives: Analysis, Control, and Modeling Using MATLAB / Simulink Dynamic Simulations of Electric Machinery: Using MATLAB/SIMULINK Ham Radio: The Ultimate Guide to Learn Ham Radio In No Time (Ham radio, Self reliance, Communication, Survival, User Guide, Entertainments) (Radio, guide, reference books, how to operate Book 1) MATLAB/Simulink for Digital Signal Processing RTL Hardware Design Using VHDL: Coding for Efficiency, Portability, and Scalability SDN and NFV Simplified: A Visual Guide to Understanding Software Defined Networks and Network Function Virtualization Ham Radio: The Ultimate Ham Radio Guide - How To Set Up And Operate Your Own Ham Radio Station (Survival, Communication, Self Reliance) Ham Radio: The Ultimate Ham Radio QuickStart Guide - From Beginner To Expert (Survival, Communication, Self Reliance, Ham Radio) Ham Radio: Ultimate User Guide 2016 (Survival, Communication, Self Reliance, Ham Radio, ham radios, ham radio for beginners, self reliance) Ham Radio: Advanced Guide (Ham radio, Self reliance, Communication, Survival, User Guide, Entertainments, Radio, guide, reference books) Digital Design with RTL Design, VHDL, and Verilog Spectral Methods in MATLAB (Software, Environments, Tools)

[Dmca](#)