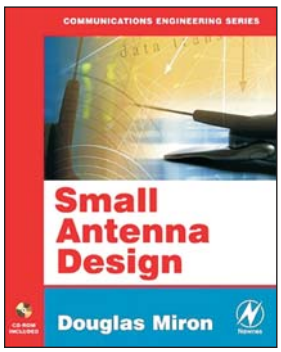
Small Antenna Design

Dr. Douglas Miron
Newnes, 2006 (www.newnespress.com)
ISBN 0750678615
Paperback, 304 pages



This book is an interesting contribution to the engineering literature. It concentrates on electrically small antennas, providing a relatively rare look at antennas for very low frequencies, but also including antennas for modern wireless applications in the GHz range.

The book includes problems and may be used as a teaching text. As such, it includes useful background information on antenna fundamentals. For example, Miron provides an understandable explanation of the principles and practices of electromagnetic modeling of antennas. Additional material on antenna mathematics and general engineering mathematics is targeted to upperclass undergraduate engineering students—providing a good review for working engineers, too.

The book progresses from an introduction (What is small?), through antenna and modeling fundamentals, to discussions of the various classic antenna configurations of open-ended wires and closed loops. A chapter is devoted to receiving antennas, one of the key applications for electrically small antennas. The text concludes with antenna measurements, plus several appendices with valuable additional information. A CD is also provided, supporting some of the computational examples.

The author has done research in the area of *volume loading*, a concept for obtaining maximum efficiency for a small antenna within a given set of physical constraints. This is just one of many concepts presented, but it is one that will be new to many readers.

The book is written in a down-to-earth, conversational style, with many first-person descriptions, historical notes and explanations. The casual language gives way to more formal explanations where appropriate. The effect is that the reader can easily visualize him- or herself in a classroom lecture environment with a knowledgeable and personable professor.

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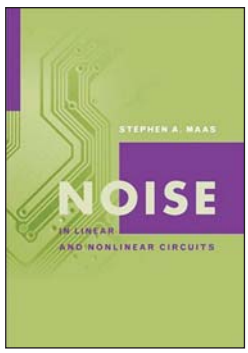
Noise in Linear and Nonlinear Circuits

Dr. Stephen A. Maas
Artech House, 2005 (www.artechhouse.com)
ISBN 1580538495
Hardcover, 294 pages



Dr. Stephen A. Maas, chief scientist and director of technology at Applied Wave Research, has published a new book aimed at helping electronics circuit designers address all aspects of noise analysis in both linear and nonlinear circuits. *Noise in Linear and Nonlinear Circuits* is the first comprehensive book that covers both linear and nonlinear noise analysis from a circuit standpoint. It covers all aspects of noise analysis in linear and nonlinear circuits and optimization of low-noise circuits, in particular amplifiers, mixers, and oscillators. Topics of special interest are linear noise analysis, noise modelling of solid-state devices, and computer analysis of oscillator phase noise.

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