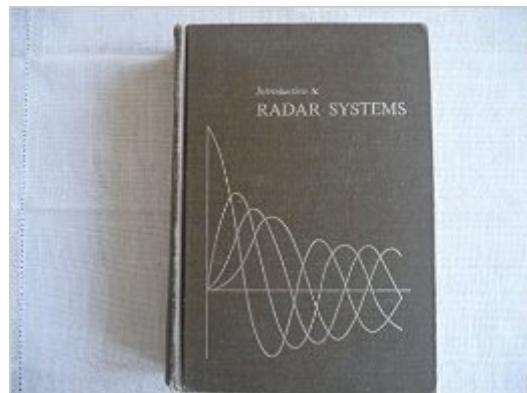


The book was found

# Introduction To Radar Systems;



## Synopsis

This text provides a description of the state of the art in radar systems in 1962. The important aspects of radar systems, techniques and components are discussed from the point of view of the radar systems engineer. -- Part 1 deals with the characteristics of radar, types, and history - Part 2 covers the subsystems and major components of a system. - Part 3 has topics important to radar engineers such as detection of signals in noise and the extraction of information - Part 4 deals with radar systems and their applications, both on earth and in the cosmos.

## Book Information

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Publisher: 1962 (1962)

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Product Dimensions: 9.5 x 6.6 x 1.3 inches

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Average Customer Review: 4.6 out of 5 stars See all reviews (16 customer reviews)

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## Customer Reviews

This third edition is much more readable than the second edition. A vast improvement in the breadth of topics, and also the depth of topics over the second edition. A good introduction to radars and how they work. For the die-hard technical person, however, the Radar Handbook (also by Skolnik) is still king. This book does not get into the detail of the Radar Handbook. However, someone just learning radar would find the extreme detail of the Radar Handbook too confusing. This book is a good starting place. Even if you own the second edition, you might want to upgrade to this one - the format and topics have improved that much.

An excellent, thorough, straightforward introduction to radar technology. A little dated, however. Written on the level of an introductory graduate text. Essential for professionals new to the field and useful as a refresher for veteran radar engineers. Outclasses the competition.

These comments are ref. to the second edition. Simply a great primer for a new Design Engineer. Explains clearly the basic principles and equations used in Radar technology. If you get to know the stuff explained in this book, you will not have any difficulty about the terms used by the Radar gurus,

such as Radar Cross-Section, Radar equations, radar signal returns, received power, fluctuations in Radar Cross-section, S/N ratio of the received signals etc. Virtually everyone that works in a Radar industry would have read at least some sections in this book.

I was in the USAF for 9 years and am now studying for a degree as an electronics technician. While in the service, I worked a variety of radar jammers and receivers and this volume has pieced together very well that is going on at the other end of the radar. While I learned how radars worked, I learned more how to exploit weaknesses, not the ins and outs of how exactly they were supposed to work. This book was very helpful in enhancing my knowledge of radar, and is an invaluable reference in my library.

This is one of the best text books that I have ever read. It is well written, and every once in a while the author's dry sense of humor is showcased. The book is well organized starting with a general overview of radar, its history, and the basic principles behind radars. Each chapter is devoted to a specific aspect of radar design such as clutter, antennae, receivers, etc. The author presents some basic math but is not overly math intensive. The most surprising (and my favorite) thing about the book is that the author presents not only what works in radar design but also what has been tried and doesn't work. He also explains why something does not work without going into details that are outside the scope of the book. This book is well worth the investment.

I found this book to be lacking in specific technical details, but it gave wonderful overview of pretty much all of the areas in which radar systems are used, as well as a pretty comprehensive listing of all of the various radar technologies. Good for a first class, but more advanced books will be required for any real work in radar.

Merrill Skolnik is one of the masters in the field of radar, and his books certainly do not disappoint. If one does not want to be overwhelmed by the level of detail in the Radar Handbook, a newer edition of which has been published, this book, Radar Systems is definitely the place to start. Chapter 2 provides a comprehensive description of the Radar Equation which is the basis for any further understanding of the subject. Chapters 3 & 4 cover MTI/Pulse Doppler Radar and Tracking Radars respectively. Chapter 7 gives a good overview of the topic of Radar Clutter. Clutter from the environment is inherently present in any radar image. Chapter 8 briefly discusses the propagation of radar waves in the atmosphere. If one wants to know more than this chapter provides, one would

have to gain familiarity with Maxwell's Equations and consult an Electromagnetics text. Chapters 9-11 wrap up this edition of Radar Systems by discussing the Radar Antenna, Transmitter, and Receiver respectively. If one actually wants to learn the theory behind radar receivers, I would recommend the mathematically detailed books by Van Trees: Volume I on Detection and Estimation, and Volume III on Radar Signal Processing. For a more introductory overview to Radar Signal Processing, consult the recent book by Mark Richards of Georgia Tech, by the same name.

Not a ton of equations, not a ton of depth, but probably the best, clearest presentation I have ever read on the subject. This guy is a master teacher.

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