

# introduction to electronic warfare artech house radar library

Introduction to Electronic Warfare Artech House Radar Library: Exploring the Foundations and Future of EW Technologies

**introduction to electronic warfare artech house radar library** opens the door to a fascinating world where cutting-edge technology meets strategic defense applications. For professionals, students, and enthusiasts eager to understand the complexities of electronic warfare (EW), the Artech House Radar Library offers a treasure trove of resources that combine technical depth with practical insights. This comprehensive guide aims to navigate the essentials of electronic warfare as presented through the rich collection of literature in the Artech House Radar Library, highlighting its significance, core concepts, and evolving trends.

## Understanding Electronic Warfare: The Basics

At its core, electronic warfare involves the use of electromagnetic spectrum to disrupt, deceive, or disable enemy electronic systems while protecting friendly assets. This spectrum-centric battlefield spans radar, communication, and navigation systems—making EW a critical component in modern military strategy. The Artech House Radar Library captures this multidimensional field by delivering detailed explorations of radar principles, signal processing, and countermeasure development.

## The Role of Electronic Warfare in Modern Defense

Electronic warfare is no longer confined to simple jamming or interception; it has evolved into a sophisticated discipline that integrates artificial intelligence, cyber capabilities, and advanced signal analysis. The Artech House collection reflects these advancements by showcasing how EW systems are designed to detect threats, analyze signals in real-time, and deploy countermeasures with precision. Learning from these resources provides a clear understanding of how electronic warfare shapes the outcome of conflicts and safeguards critical assets.

## Why the Artech House Radar Library Stands Out

When diving into the study of electronic warfare, the quality of information sources matters immensely. The Artech House Radar Library is renowned for its authoritative and up-to-date content authored by leading experts in radar and EW technologies. This makes it a trusted reference for:

- Engineers developing next-generation radar and EW systems
- Military strategists seeking to enhance operational tactics

- Academics and students pursuing research in electromagnetic systems

The library's focus on a range of topics—from radar waveform design to electronic counter-countermeasures—ensures a holistic grasp of the subject matter.

## **Comprehensive Coverage of Radar and Electronic Warfare**

One of the key strengths of the Artech House Radar Library is its extensive coverage of radar technology, which is inherently linked to electronic warfare. Radar systems serve both as tools and targets in EW scenarios. The library provides in-depth discussions on radar signal processing techniques, low probability of intercept (LPI) radar, and electronic attack methods such as jamming and deception. Understanding these elements is essential for grasping how electronic warfare tactics are executed and countered.

## **Key Concepts Explored in the Electronic Warfare Resources**

The introduction to electronic warfare artech house radar library materials delves into several foundational concepts that are vital for anyone interested in the field:

### **Electronic Attack (EA)**

EA involves offensive measures aimed at degrading or neutralizing enemy electronic capabilities. This includes techniques like noise jamming, barrage jamming, and deceptive jamming. The library elaborates on the physics behind jamming, the design of effective jamming signals, and how to optimize power usage to maximize disruption.

### **Electronic Protection (EP)**

EP strategies focus on safeguarding friendly electronic systems from enemy interference. This involves the use of frequency hopping, spread spectrum techniques, and adaptive filtering. The Artech House radar books explain how these methods enhance system resilience and contribute to maintaining communication and radar integrity in contested environments.

### **Electronic Support (ES)**

ES deals with the detection, interception, and analysis of electromagnetic emissions to gather intelligence. It plays a crucial role in situational awareness and threat assessment. Resources within the library detail signal identification, direction finding, and electronic intelligence (ELINT)

methodologies that underpin successful ES operations.

## Emerging Trends and Technologies in Electronic Warfare

The landscape of electronic warfare is continuously shifting, influenced by advancements in technology and changing geopolitical dynamics. The Artech House Radar Library keeps pace with these trends, offering insights into:

- Integration of machine learning and AI in EW systems for faster threat detection and response
- Development of cognitive electronic warfare that adapts in real-time to evolving threats
- Miniaturization and increased mobility of EW equipment for deployment in unmanned systems and smaller platforms
- Cyber-electromagnetic activities (CEMA) that blend cyber operations with traditional EW tactics

These topics underscore the importance of staying current with literature that not only explains existing technologies but also anticipates future challenges and capabilities.

## How to Make the Most of the Artech House Radar Library for Electronic Warfare Studies

For those eager to deepen their knowledge, the Artech House Radar Library can be both an educational and practical asset. Here are some tips to effectively utilize this resource:

- **Start with foundational texts:** Before exploring advanced topics, build a solid understanding of radar fundamentals and electromagnetic theory.
- **Focus on specialized volumes:** Identify books or papers that specifically address electronic attack, protection, and support techniques to target your learning.
- **Leverage case studies:** Many works include real-world examples that illustrate how EW concepts are applied in operational contexts.
- **Stay updated:** Electronic warfare evolves rapidly; regularly check for new editions or publications that reflect the latest technological progress.

By following these approaches, readers can transform the introduction to electronic warfare artech house radar library materials into a practical toolkit for both academic and professional growth.

## **The Intersection of Radar and Electronic Warfare in the Library's Collection**

Radar technology and electronic warfare are intertwined like two sides of the same coin. The Artech House Radar Library highlights this synergy by bridging the gap between theory and application. Radar systems are constantly challenged by electronic warfare tactics, which aim to degrade target detection and tracking. Conversely, radar engineers develop counter-countermeasures to ensure system reliability.

Books in the collection often provide equations, simulation models, and experimental data that reveal the delicate balance between radar performance and EW threats. This dual focus helps readers appreciate the complexity of safeguarding radar operations in hostile electromagnetic environments.

## **Practical Applications and Future Outlook**

Understanding the content presented in the introduction to electronic warfare artech house radar library is not just an academic exercise—it has tangible impacts on defense capabilities worldwide. Governments and defense contractors rely on these insights for designing systems that can operate effectively under electronic attack. Furthermore, as autonomous and networked warfare platforms gain prominence, the need for robust EW knowledge becomes even more critical.

The research and technical details contained in this library also support innovation in civil applications such as aviation safety, spectrum management, and communications security.

Exploring the Artech House Radar Library's offerings on electronic warfare equips readers with a comprehensive perspective that bridges theoretical concepts, technological advances, and operational realities. Whether you are an engineer, analyst, or enthusiast, engaging with these materials provides a pathway to mastering the electromagnetic battlespace of the future.

## **Frequently Asked Questions**

### **What is the book 'Introduction to Electronic Warfare' from the Artech House Radar Library about?**

'Introduction to Electronic Warfare' provides a comprehensive overview of electronic warfare (EW) principles, techniques, and technologies, focusing on radar systems and countermeasures. It serves as a foundational resource for understanding EW concepts within the context of modern radar applications.

## **Who is the target audience for 'Introduction to Electronic Warfare' in the Artech House Radar Library?**

The book is aimed at engineers, researchers, military professionals, and students interested in radar systems, electronic warfare, and defense technologies, offering both introductory and technical perspectives suitable for both beginners and experienced practitioners.

## **What key topics are covered in 'Introduction to Electronic Warfare' by Artech House?**

Key topics include fundamentals of electronic warfare, radar signal detection and jamming techniques, electronic support measures (ESM), electronic attack (EA) strategies, countermeasures design, and the impact of EW on modern radar systems.

## **How does 'Introduction to Electronic Warfare' address modern radar challenges?**

The book discusses evolving threats and technologies in radar and EW, such as digital radio frequency memory (DRFM) jamming, stealth technology, adaptive countermeasures, and the integration of EW tactics with network-centric warfare.

## **Is 'Introduction to Electronic Warfare' suitable for those new to the field?**

Yes, the book is designed to introduce foundational concepts in an accessible manner while gradually progressing to more advanced topics, making it suitable for newcomers as well as professionals seeking a refresher.

## **What makes the Artech House Radar Library a reputable source for EW materials?**

Artech House is well-known for publishing authoritative and technically rigorous books on radar and electronic warfare, authored by experts in the field, ensuring reliable and up-to-date content for academic and professional use.

## **Are there practical examples or case studies included in 'Introduction to Electronic Warfare'?**

Yes, the book includes practical examples, illustrations, and case studies to demonstrate real-world applications of electronic warfare concepts and radar countermeasure techniques, enhancing comprehension and practical understanding.

## **Additional Resources**

Electronic Warfare and the Artech House Radar Library: A Professional Overview

**introduction to electronic warfare artech house radar library** unveils a specialized domain within defense technology literature, crucial for professionals, researchers, and enthusiasts aiming to comprehend the complexities of modern electronic warfare (EW). As electronic warfare continues to evolve rapidly, the need for authoritative sources that encapsulate the technological, strategic, and operational facets has never been more pressing. The Artech House Radar Library stands out as a definitive resource, meticulously curating knowledge on radar systems, signal processing, and electronic countermeasures that underpin EW capabilities today.

Electronic warfare encompasses the strategic use of the electromagnetic spectrum to detect, deceive, and disrupt adversarial forces while protecting friendly assets. The Artech House Radar Library, a collection of expert-authored volumes, delves into these multifaceted technologies, providing readers with rigorous analytical frameworks and technical insights. This article aims to dissect the scope and relevance of the introduction to electronic warfare Artech House Radar Library, exploring its key features, content depth, and practical applications within the defense and aerospace sectors.

## Understanding the Scope of the Artech House Radar Library

The Artech House Radar Library is renowned for its comprehensive treatment of radar and electronic warfare topics. It serves as a bridge between academic research and applied military technology, offering detailed discussions on radar theory, system design, signal processing techniques, and the latest EW tactics.

### Core Areas Covered in the Library

At its essence, the library covers several pivotal areas:

- **Radar System Fundamentals:** Including waveform design, antenna theory, and propagation models critical for EW operations.
- **Electronic Countermeasures (ECM) and Electronic Support Measures (ESM):** Techniques for jamming, deception, and signal intelligence gathering.
- **Signal Processing:** Advanced algorithms for target detection, tracking, and classification under contested electromagnetic environments.
- **Emerging Technologies:** Insights into cognitive radar, stealth detection, and cyber-electronic warfare integration.

By integrating these themes, the library offers a well-rounded foundation that supports both theoretical understanding and practical implementation of EW concepts.

# **Why the Introduction to Electronic Warfare Artech House Radar Library Matters**

The introduction section of any technical library sets the tone for the reader's journey, and the introduction to electronic warfare Artech House Radar Library is no exception. This segment is pivotal in framing the complexities of EW within the broader context of modern defense systems.

## **Bridging Theory and Application**

The introduction thoughtfully contextualizes electronic warfare as not just a technological challenge but a strategic imperative in contemporary conflicts. It emphasizes the interplay between radar systems and EW tactics, illustrating how advances in radar technology can both enhance and complicate electronic countermeasures. This approach is particularly valuable for military analysts and engineers who must design adaptable systems capable of operating in dynamic, contested environments.

## **Highlighting the Evolution of Electronic Warfare**

Another key theme in the introduction is the historical and technological evolution of EW systems. From rudimentary jamming techniques used in World War II to sophisticated digital signal processing and artificial intelligence-driven electronic attacks today, the introduction traces this progression. This historical lens is crucial for understanding how legacy systems inform current capabilities and future developments.

## **Technical Features and Advantages of the Library**

The introduction to electronic warfare Artech House Radar Library is not merely descriptive but also highlights several technical features that distinguish it from other literature in the field.

## **Authoritative Content Authored by Experts**

Each volume within the Radar Library is penned by recognized experts in radar and EW disciplines. This ensures that the information is not only accurate but also reflects the latest research trends and operational experience. The introduction underscores this credibility, which is a significant advantage for readers seeking reliable knowledge.

## **Comprehensive and Modular Structure**

The library's modular approach allows readers to access specific topics independently while

maintaining a holistic understanding. The introduction outlines how chapters and sections are structured to facilitate progressive learning—from fundamental principles to advanced applications.

## **Integration of Case Studies and Real-world Examples**

To enhance practical understanding, the introduction notes the inclusion of case studies and scenario analyses. These real-world examples demonstrate how theoretical concepts are applied in operational contexts, such as radar jamming during military exercises or electronic surveillance in contested airspaces.

## **Comparative Insights: Artech House Radar Library vs. Other EW Resources**

In the vast landscape of electronic warfare literature, the Artech House Radar Library distinguishes itself through depth and specificity. Compared to general defense technology books, it offers more technical granularity and radar-centric content.

### **Versus Academic Textbooks**

While academic textbooks provide foundational knowledge, they often lack the applied focus that the Artech House Radar Library delivers. The introduction to electronic warfare Artech House Radar Library emphasizes practical system design and operational considerations, making it more suitable for defense practitioners and engineers.

### **Versus Military Manuals**

Military manuals tend to be classified or narrowly focused on specific platforms or doctrines. The Radar Library, in contrast, presents a broader, technology-driven perspective that transcends particular national doctrines, appealing to a global audience of EW professionals.

## **Applications and Relevance of the Electronic Warfare Library**

The practical applications of the knowledge contained within the introduction to electronic warfare Artech House Radar Library span several critical domains:

- **Defense System Development:** Assisting engineers in designing resilient radar and EW systems capable of countering sophisticated threats.

- **Operational Planning:** Enabling military strategists to understand EW capabilities and vulnerabilities for mission planning.
- **Academic Research:** Providing a solid knowledge base for researchers developing new EW theories and technologies.
- **Training and Education:** Serving as a key resource in military academies and technical training programs focused on EW.

These applications underscore the library's role as an indispensable tool in advancing electronic warfare proficiency across multiple sectors.

## Challenges and Considerations

Despite its strengths, the introduction to electronic warfare Artech House Radar Library also implicitly acknowledges challenges inherent in the field. Rapid technological advancements require constant updates, and the complexity of EW systems demands interdisciplinary knowledge spanning electronics, computer science, and military tactics. Readers must approach the library as a living resource, complementing it with ongoing research and operational feedback.

Electronic warfare remains a critical dimension of modern conflict, where dominance over the electromagnetic spectrum can decisively influence battlefield outcomes. The Artech House Radar Library, beginning with its insightful introduction to electronic warfare, equips professionals with the technical acumen and strategic understanding required to navigate this demanding environment. Its detailed analyses and practical orientation make it a cornerstone reference for anyone engaged in the study or application of radar and electronic warfare technologies.

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**introduction to electronic warfare artech house radar library:** **Electronic Warfare in the Information Age** D. Curtis Schleher, 1999 Here's an advanced practitioner's guide to the latest concepts and threats associated with modern electronic warfare (EW). This new book identifies and explains the newest radar and communications threats, and provides EW and radar engineers,

managers, and technical professionals with practical, how-to information on designing and implementing ECM and ECCM systems.

**introduction to electronic warfare artech house radar library:** *Introduction to Electronic Warfare Modeling and Simulation* David L. Adamy, 2006-06-30 First Artech House, Inc. edition 2003.

**introduction to electronic warfare artech house radar library:** *Introduction to Modern EW Systems, Second Edition* Andrea De Martino, 2018-06-30 In answer to great demand, Artech House is proud to bring professionals a newly revised and updated edition of the bestselling book *Introduction to Modern EW Systems*. The Second Edition has been greatly expanded to include a wealth of new material, from remote piloted airborne systems, directed energy weapons, and non-cooperative air surveillance...to EW radar band sensor next generation architectures, real-time data links, and smart jamming. This authoritative resource provides engineers and students with the latest electronic warfare (EW) techniques and technologies related to on-board military platforms. Practitioners gain expert design guidance on technologies and equipment used to detect and identify emitter threats, offering an advantage in the never-ending chess game between sensor guided weapons and EW systems. This unique book provides deeper insight into EW systems principles of operation and their mathematical descriptions, arming professionals with better knowledge for their specific design applications. Moreover, readers get practical information on how to counter modern communications data links which provide connectivity and command flow among the armed forces in the battlefield. Taking a sufficiently broad perspective, this comprehensive volume offers a panoramic view of the various physical domains RF, Infrared, and electronics that are present in modern electronic warfare systems. This in-depth book is supported with over 340 illustrations and more than 450 equations.

**introduction to electronic warfare artech house radar library:** *Introduction to Electronic Warfare Modeling* David Adamy, EW 101 has been a popular column in the Journal of Electronic Defense for a number of years. This compilation of tutorial articles from JED provides introductory level electronic warfare instruction for students of the discipline.

**introduction to electronic warfare artech house radar library:** *Electronic Warfare Target Location Methods, Second Edition* Richard Poisel, 2012 Worldwide growth of space communications has caused a rapid increase in the number of satellites operating in geostationary orbits, causing overcrowded orbits. This practical resource is designed to help professionals overcome this problem. This timely book provides a solid understanding of the use of radio interferometers for tracking and monitoring satellites in overcrowded environments. Practitioners learn the fundamentals of radio interferometer hardware, including antennas, receiving equipment, signal processing and phase detection, and measurement accuracies. This in-depth volume describes the nature of the targets to be tracked by the interferometer, helping to clarify the movement of target satellites and what specific information has to be caught by the interferometer. Additionally, engineers find details on applications to practical cases of satellite tracking, covering different types of interferometers, recent technical developments, orbital monitoring and safety control.

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**introduction to electronic warfare artech house radar library:** *Introduction to Electronic Warfare Modeling and Simulation* David Adamy, 2003 This unique, new book covers the whole field of electronic warfare modeling and simulation at a systems level, including chapters that describe basic electronic warfare (EW) concepts. Written by a well-known expert in the field with more than 24 years of experience, the book explores EW applications and techniques and the radio frequency spectrum, with primary emphasis on HF (high frequency) to microwave.

**introduction to electronic warfare artech house radar library:** *Introduction to Electronic Defense Systems* Filippo Neri, 2018 Over the past decade, new cutting-edge technologies have drastically changed the way radar and electronic warfare systems are implemented. This extensively

revised and expanded edition of an Artech House bestseller delivers the most up-to-date overview of electronic defense systems. Bringing practitioners up-to-speed with the latest technological advances, the Third Edition details a completely new method of implementing these modern systems. Moreover, this edition is packed with updated illustrations of key assets, including aircraft, ships, and radars. Readers get a solid understanding of how sophisticated electronic warfare weapon systems work, and how these weapons can be intercepted and electronically jammed. From search and tracking radar, IR systems, and communication systems... to electronic intercept systems, countermeasures, and counter-countermeasures, the book explores a broad spectrum of defense equipment. It explains how these systems operate, the advantages and drawbacks of each system, and the theories on which these systems are based. This authoritative resource includes 180 illustrations and 400 equations that support key topics throughout the book -- Provided by publisher.

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**introduction to electronic warfare artech house radar library:** Introduction to LabVIEW FPGA for RF, Radar, and Electronic Warfare Applications Terry Stratoudakis, 2021-01-31 Real-time testing and simulation of open- and closed-loop radio frequency (RF) systems for signal generation, signal analysis and digital signal processing require deterministic, low-latency, high-throughput capabilities afforded by user reconfigurable field programmable gate arrays (FPGAs). This comprehensive book introduces LabVIEW FPGA, provides best practices for multi-FPGA solutions, and guidance for developing high-throughput, low-latency FPGA based RF systems. Written by a recognized expert with a wealth of real-world experience in the field, this is the first book written on the subject of FPGAs for radar and other RF applications.

**introduction to electronic warfare artech house radar library:** **Introduction to RF Equipment and System Design** Pekka Eskelinen, 2004 An excellent resource for engineers and technicians alike, this practical design guide offers a comprehensive and easy-to-understand overview of the most important aspects and components of radio frequency equipment and systems. The book applies theoretical fundamentals to real-world issues, heavily relying on examples from recent design projects. Key discussions include system design schemes, circuits and components for system evaluations and design, RF measurement instrumentation, antennas and associated hardware, and guidelines for purchasing test equipment. The book also serves as a valuable on-the-job training resources for sales engineers and a graduate-level text for courses in this area.

**introduction to electronic warfare artech house radar library:** Basic Radar Analysis, Second Edition Mervin C. Budge, Shawn R. German , 2020-04-30 This highly-anticipated second edition of an Artech House classic covers several key radar analysis areas: the radar range equation, detection theory, ambiguity functions, waveforms, antennas, active arrays, receivers and signal processors, CFAR and chaff analysis. Readers will be able to predict the detection performance of a radar system using the radar range equation, its various parameters, matched filter theory, and Swerling target models. The performance of various signal processors, single pulse, pulsed Doppler, LFM, NLFM, and BPSK, are discussed, taking into account factors including MTI processing, integration gain, weighting loss and straddling loss. The details of radar analysis are covered from a mathematical perspective, with in-depth breakdowns of radar performance in the presence of clutter. Readers will be able to determine the noise temperature of a multi-channel receiver as it is used in active arrays. With the addition of three new chapters on moving target detectors, inverse synthetic aperture radar (ISAR) and constant false alarm rate (CFAR) and new MATLAB codes, this expanded second edition will appeal to the novice as well as the experienced practitioner.

**introduction to electronic warfare artech house radar library:** **EW 104: Electronic Warfare Against a New Generation of Threats** David L. Adamy, 2015-02-01 The fourth book in the bestselling Artech House EW 100 series is dedicated to reviewing legacy threats and discussing new threats which have arisen since Y2K in communications, radar, and IR threats. Like its predecessors, EW 104 presents a series of highly informative and easy-to-comprehend tutorials, along with insightful introductory and connective material that helps you understand how each

aspect fits together. This reference starts with a review of the generalities of legacy threats, from the technical point of view, with a focus on what makes the new threats more challenging. Readers are provided with details of threats in three major areas -Communications, Radars, and IR Threats.

**introduction to electronic warfare artech house radar library:** *Surveillance in Action* Panagiotis Karampelas, Thirimachos Bourlai, 2017-11-14 This book addresses surveillance in action-related applications, and presents novel research on military, civil and cyber surveillance from an international team of experts. The first part of the book, Surveillance of Human Features, reviews surveillance systems that use biometric technologies. It discusses various novel approaches to areas including gait recognition, face-based physiology-assisted recognition, face recognition in the visible and infrared bands, and cross-spectral iris recognition. The second part of the book, Surveillance for Security and Defense, discusses the ethical issues raised by the use of surveillance systems in the name of combatting terrorism and ensuring security. It presents different generations of satellite surveillance systems and discusses the requirements for real-time satellite surveillance in military contexts. In addition, it explores the new standards of surveillance using unmanned air vehicles and drones, proposes surveillance techniques for detecting stealth aircrafts and drones, and highlights key techniques for maritime border surveillance, bio-warfare and bio-terrorism detection. The last part of the book, Cyber Surveillance, provides a review of data hiding techniques that are used to hinder electronic surveillance. It subsequently presents methods for collecting and analyzing information from social media sites and discusses techniques for detecting internal and external threats posed by various individuals (such as spammers, cyber-criminals, suspicious users or extremists in general). The book concludes by examining how high-performance computing environments can be exploited by malicious users, and what surveillance methods need to be put in place to protect these valuable infrastructures. The book is primarily intended for military and law enforcement personnel who use surveillance-related technologies, as well as researchers, Master's and Ph.D. students who are interested in learning about the latest advances in military, civilian and cyber surveillance.

**introduction to electronic warfare artech house radar library:** *Computer Simulation of Aerial Target Radar Scattering, Recognition, Detection, and Tracking* Yakov D. Shirman, 2002 Here's a ground-breaking new book that provides you with the knowledge you need to perform effective computer simulation of scattering for the real targets and conditions of radio wave propagation. By replacing field tests with the computer simulation methods presented in this unique resource, you save time and money in the early stages of research and development. Supplemented with 283 equations and 121 illustrations, you get practical guidance in estimating the effect of various signatures of new radar with target recognition; evaluating and comparing the effectiveness and complexity of recognition algorithms before they are actually introduced into radar; formulating requirements to radar subsystems and evaluating their tolerances; and predicting future radar performance. What's more, the book helps you perform initial simulation of the recognition algorithm in various conditions, where the practical receiving of experimental data is restricted. Other key discussions include the theory of target recognition, results of studying various recognition methods, and simulation in radar detection and tracking.

**introduction to electronic warfare artech house radar library:** *Techniques and System Design of Radar Active Jamming* Guangfu Tang, Yifeng Cai, Rongbing Gan, Yaodong Zhao, 2023-02-20 This book serves as a handbook for radar active jamming system designers, in which design principles and methods are introduced in detail. The book starts from the basic concept and then discusses requirements analysis, type selection, key indicators description, and design methods of radar active jamming system and each subsystem step by step. The content is expressed in an intelligible way, and hence, it is easy to follow even for beginners in this area. Since the authors of this book are all experts and have designed plenty of real systems, their book certainly helps new engineers deal with different kinds of problems encountered while designing a radar active jamming system.

**introduction to electronic warfare artech house radar library:** Modern Radar Systems

Hamish Meikle, 2001 This one-of-a-kind book features 536 illustrations (drawn in Maple V) that offer a greater understanding of various waveforms, and other two- and three-dimensional functions, to help you more accurately analyze radar system performance. The effects of pulse shaping on transmitter stability and spectra are discussed ? a topic which is becoming more and more important in the age of electromagnetic compatibility. The book addresses the importance of low attenuation and reflection between the main radio frequency blocks, including the use of oversized waveguides for long runs.

**introduction to electronic warfare artech house radar library: *Fundamentals of Short-range FM Radar*** Igor V. Komarov, Sergey M. Smolskiy, 2003 Here's a unique new resource that offers you a solid understanding of the fundamental theory, operation principles and applications of short-range frequency modulated continuous wave (FM CW) radar. You learn how to choose the structural scheme of short-range FM radar, and determine the optimal algorithm of useful signal processing necessary for ensuring the technical characteristic of radar. Moreover, this practical reference shows you how to ensure the minimum level of radar signal parasitic amplitude, calculate modulation signal distortion, and compensate for nonlinear distortion.

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