Record Nr. UNINA9910449844003321 Autore Adamy David Titolo EW 102: a second course in electronic warfare // David L. Adamy Pubbl/distr/stampa Boston:,: Artech House,, ©2004 [Piscatagay, New Jersey]:,: IEEE Xplore,, [2003] **ISBN** 1-5231-1715-X 1-58053-687-5 Descrizione fisica 1 online resource (290 p.) Collana Artech House radar library Disciplina 623.043 Soggetti Electronics in military engineering Information warfare Electronic books. Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references (p. 259-262) and index. Nota di contenuto Table of contents: Preface xv: 1 Introduction 1: 1.1 Generalities About EW 3; 1.2 Information Warfare 5; 1.3 How to Understand Electronic Warfare 6: 2 Threats 9: 2.1 Some Definitions 9: 2.2 Frequency Ranges 13; 2.3 Threat Guidance Approaches 15; 2.4 Scan Characteristics of Threat Radars 17; 2.5 Modulation Characteristics of Threat Radars 22; 2.6 Communication Signal Threats 26; 3 Radar Characteristics 33; 3.1 The Radar Function 33; 3.2 Radar Range Equation 36; 3.3 Detection Range Versus Detectability Range 42; 3.4 Radar Modulation 48; 3.5 Pulse Modulation 48. 3.6 CW and Pulse Doppler Radars 543.7 Moving Target Indicator Radars 58; 3.8 Synthetic Aperture Radars 63; 3.9 Low Probability of Intercept Radars 67: 4 Infrared and Electro-Optical Considerations in Electronic Warfare 77; 4.1 The Electromagnetic Spectrum 77; 4.2 IR Guided Missiles 82; 4.3 IR Line Scanners 87; 4.4 Infrared Imagery 90; 4.5 Night-Vision Devices 94; 4.6 Laser Target Designation 98; 4.7 Infrared Countermeasures 101; 5 EW. Sommario/riassunto Annotation Serving as a continuation of the bestselling book EW 101: A

First Course in Electronic Warfare, this new volume is a second installment of popular tutorials featured in the Journal of Electronic Defense. Without delving into complex mathematics, this book gives

engineers, defense contractors, managers, and government procurers a basic working knowledge of the technologies deployed in today's electronic warfare (EW) systems. Organized into chapters with new introductory and supplementary material from the author, this unique book includes tutorials on radar characteristics, infrared and electro-optical systems, signal jamming, spectrum spreading, satellite communications, and emitter location systems. A thorough and challenging problem set for each class of EW technology covered in the book, complete with solutions, helps readers to evaluate EW systems and their applications.