Devoted Entirely to

Remote Operating for Amateur Radio ARRL Publications & Products Spring/Summer 2010

> mming ners

Amateur Radio





ARRI TATAL

R ARRL The national association for AMATEUR RADIO" WWW.arrl.org/shop

Operating

ARRL's VHF Digital Handbook

Steve Ford, WB8IMY Order No. 1220 - \$19.95

Everything you need to get started in digital radio applications. You'll understand how to setup and operate your equipment and software, and make the best use of your VHF digital station. Includes Packet Radio, APRS, D-STAR, digital applications in public service and emergency communications, and much more!

DIGITA IDBOO



Getting Started with HAM RADIO



ARRL's HF Digital Handbook

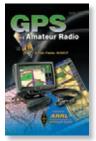
4th Edition Steve Ford, WB8IMY Order No. 1034 - \$19.95

Your guide to understanding the most active HF digital communication modes in use today. Expanded setup information, varieties of PSK, new content on Olivia, DominoEX, HF digital voice and image modes, Automatic Link Establishment and more!

Getting Started with Ham Radio

Order No. 9728 - \$19.95

Get on the air now! A guide to your first Amateur Radio station. Select radios and antennas, explore operating modes, and assemble your station.



GPS and Amateur Radio

Walter Fields, W4WCF Order No. 9922 – \$18.95 With this book, you'll explore GPS: its history,

how it works, and navigating with a GPS receiver. You'll also learn how Amateur Radio operators have made use of GPS technology for direction finding and public service.

FCC Rules and Regulations for the Amateur Radio Service

2nd Edition

Order No. 1173 - \$5.95

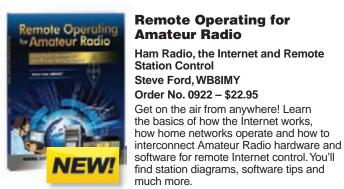
Includes the complete Part 97 rules from Title 47 of the Code of Federal Regulations Now including: The FCC Rules and You.



Low Profile Amateur Radio

2nd Edition Order No. 9744 - \$19.95 Includes all the information you need to operate

your station under many types of restrictive situations. Provides details for many real-life examples and techniques for a variety of low profile circumstances.



VoIP: Internet Linking for Radio Amateurs

2nd Edition Jonathan Taylor, K1RFD Order No. 1431 - \$21.95

Your complete guide to the most widely-used VOIP systems used by hams; with particular attention to EchoLink and and the Internet Radio Linking Project, or IRLP.

The ARRL Software Library for Hams

Amateur Radio

CD-ROM, version 3.0 Order No. 1424 - \$19.95

Quick access to utilities, applications and information: software for contesting, digital voice, HF digital (PSK31, MFSK16, MT63, and RTTY), meteor scatter and moonbounce, book excerpts and more! Also includes programs for APRS, Winlink 2000, packet radio and satellite tracking. Requires Microsoft® Windows®.

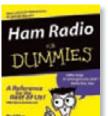


Amateur Radio on the Move

-from Your Car or RV. Boat. Airplane, Motorcycle or Backpack! Order No. 9450 - \$19.95

Expert advice for radio operating on the go! Mobile radios, installation, antennas, operating tips, software and more.



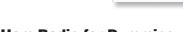


Ham Radio for Dummies

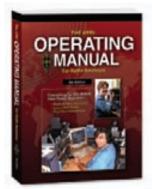
Ward Silver, NØAX Order No. 9392 - \$21.99

Here's the scoop, including licensing requirements and how to set up a station. And if you're already licensed, this book will help you start

sounding (and feeling) like a pro! See page 13 for more Dummies titles.



Operating 1



The ARRL Operating Manual 9th Edition

Order No. 1093 – \$29.95 The ARRL Operating Manual is the most complete book about Amateur Radio operating. It was written to help guide you through the dozens of ways hams communicate with each other. It contains information that every ham needs:

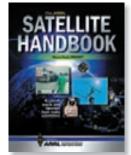
Beginners – explore the broad range of ham radio activities. Intermediate hams – sharpen your skills and earn awards. Experienced hams – find new references, details on new technology, and new ways to enjoy your favorite activities. Contents:

- Amateur Radio All About Operating
- VHF/UHF FM, Repeaters, Digital Voice and Data, SSB and CW
- Emergency Communications
- Traffic Handling Getting the Message Through
- DXing Contacting Those Faraway Places
- Contesting Competitive Wireless
- HF Digital Communications
- Image Communications
- Amateur Satellites
- The FCC Rules and You Operating Legally, Safely, and Appropriately
- Operating Awards
- References Call Sign Prefix List, Antenna Bearing Maps, Abbreviations, and much more.

The ARRL Satellite Handbook

Steve Ford, WB8IMY Order No. 9857 – \$24.95

Bring the thrill of satellite communications within your reach! Filled with understandable descriptions and illustrations, this book includes all the tools you need to participate in this exciting field.





Storm Spotting and Amateur Radio

Order No. 0908 - \$22.95

A resource for Amateur Radio operators who volunteer as trained storm spotters. Includes information on training, equipment, safety, storm spotter activation procedures, developing a local storm spotter manual, and the experiences of storm spotters from around the country.

The ARRL Repeater Directory® 2010-2011 Edition



Over 21,500 listings for VHF/UHF repeaters across the U.S. and Canada.

Includes:

- Frequency Coordinator contact information
- Tips for handling interference
- D-Star and APCO 25 repeaters
- IRLP, WIRES-II, and EchoLink (Internet linked) nodes
- Emergency Message Handling procedures
- Transceiver Memory Log and much more.
 Desktop Edition Pocket-sized

Order No. 0861 – \$15.95 Order No. 0854 – \$10.95





Pocket-sized (3.75 x 5.25 inches)

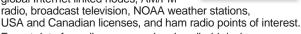
Desktop Edition Easy-to-Read Size (6 x 9 inches)

TravelPlus for Repeaters™

CD-ROM, version 14.0 Order No. 0878 – \$39.95

Locate repeaters along your travel route. Feature-Packed CD-ROM:

- Map your travel route and tune in. Supports GPS.
- View and print maps and repeater lists.
 Access The ARRL Repeater DataBase, global Internet linked nodes, AM/FM
 radio broadcast tolovision NOAA wooth



Export data for radio programming, handheld devices, and more.

Requires Microsoft Windows[™] XP or Vista. GPS feature requires a GPS device. Upgrade available for previous customers. Contact ARRL for details.

More ARRL Operating Publications

- YASME Order No. 8934\$24.95



Marine Amateur Radio

Order No. 9723 – \$12.95

Use ham radio for coastal, high-seas, or worldwide communications. Select, install, and operate an inexpensive and completely dependable ham radio system on any boat, power or sail. *Produced by United States Power Squadrons*.



2 Technical

The ARRL Handbook 2010 Edition

Softcover Book and CD-ROM.

Order No. 1448 - \$49.95

The Handbook is the single most authoritative reference on practical communications topics. For generations it's been a core resource for radio amateurs, hobbyists, engineers, and scientists.

Introducing the 2010 Edition – the biggest update in years!

- Technical accuracy. Over 70%
 NEW or completely revised content.
- Innovation. More projects to enjoy, including new design software on the book's CD-ROM. (version 14.0)
- Value. Over 1,250 pages make this the biggest Handbook...ever.

NEW Table of Contents:

INTRODUCTION

What is Amateur (Ham) Radio?

FUNDAMENTAL THEORY Electrical Fundamentals Analog Basics Digital Basics

PRACTICAL DESIGN AND PRINCIPLES

RF Design Techniques Computer-Aided Circuit Design Power Supplies Modulation Oscillators and Synthesizers Mixers, Modulators and Demodulators RF and AF Filters Receivers Transmitters Transceivers DSP and Software Radio Design Digital Modes RF Power Amplifiers Repeaters

The BIGGEST Handbook EVER.

ANTENNA SYSTEMS AND RADIO PROPAGATION

Propagation of Radio Signals Transmission Lines Antennas

EQUIPMENT CONSTRUCTION AND MAINTENANCE

Component Data and References Circuit Construction Station Accessories Test Equipment and Measurements Troubleshooting and Repair Electromagnetic Compatibility and Direction-Finding

STATION ASSEMBLY AND MANAGEMENT

Safety Assembling a Station Space Communications Digital Communications Image Communications



ARRL's Hands-On Radio Experiments

Ward Silver, NØAX Order No. 1255 – \$19.95

Over 60 short electronics experiments from the pages of QST. Step-by-step Silver expertly leads you through each experiment–and you'll make discoveries along the way.

- Radio and Electronic Fundamentals
- Semiconductor Basics
- Building Block Circuits
- Power Supplies
- Filters
- Oscillators and Buffers
- Transmission Lines & Matabias
- Impedance Matching
 Workshop & Design
- Workshop & Design Techniques

Includes a complete parts list!

Experimental Methods in RF Design



Revised 1st Edition Order No. 9239 – \$49.95

experiments yourself!

Hands-On Radio

Order No. 1255K - \$79.95

Use the parts kit to build the

Kit and book sold separately.

Parts Kit

Explore wide dynamic range, low distortion radio equipment, the use of direct conversion and phasing methods, and digital signal processing. Use the models and discussion to design, build and measure equipment at both the circuit and the system level. Laced with unpublished projects and illustrated with CW and SSB gear.

CD-ROM included with design software, listings for DSP firmware, and supplementary articles.

Contents:

- Basic Investigations in Electronics
- Amplifiers, Filters, Oscillators, and Mixers
- Super-heterodyne Transmitters and Receivers
- Measurement Equipment
- Direct Conversion Receivers
- Phasing Receivers and Transmitters
- DSP Components
- DSP Applications in Communications
- Field Operation, Portable Gear and Integrated Stations

L/C/F and Single-Layer Coil Winding Calculator

Order No. 9123 – \$12.95

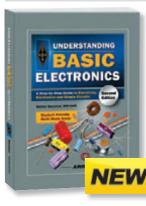
Use this handy slide rule when you're tinkering with filters, oscillators, impedance matching circuits or antenna coils and traps. Quick and easy circuit calculations.





Technical 3

ARRL "Basic" Book Series



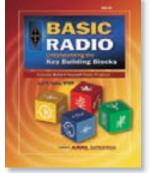
Understanding Basic Electronics

2nd Edition Order No. 0823 – \$32.95 ARRL Member Price! \$29.95*

Your gateway into the exciting world of electricity and electronics! This book is written in a friendly, easy-to-understand style that beginners and nontechnical readers will enjoy. Real-world examples and clear illustrations

make the study of electronics interesting and fun!

Basic Radio



BASIC

ANTENNAS

Understanding the Key Building Blocks Joel Hallas, W1ZR

Order No. 9558 – \$29.95 This is an introduction to radio for everyone. Reveals the key building blocks of radio: receivers, transmitters, antennas, and propagation. Includes simple, build-it-yourself projects to turn theory into practice.

Basic Antennas

Understanding Practical Antennas and Design

Joel Hallas, W1ZR

Order No. 9994 – \$29.95 A comprehensive introduction to antennas. Includes basic concepts, practical designs, and details of easy-to-build antennas. You'll learn how to make antennas that *really* work!



The ARRL RFI Book

3rd Edition Order No. 0915 – \$29.95

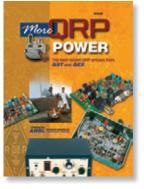
Step by step interference solutions covering telephones, power lines, computers and audio equipment. Resources for addressing new realities of digital cable TV and satellite systems, over-the-air TV signals, troubleshooting, and hybrid and all-electric automobiles.

ARRL'S PIC Programming for Beginners

Order No. 0892 – \$44.95 ARRL Member Price! \$39.95*

Your guide to understanding PIC design and development. Written in a building block approach, this book provides readers a strong foundation on the subject. As you explore the potential of these powerful devices, you'll find that working with PICs is simple, educational and most importantly fun.





More **QRP** Power

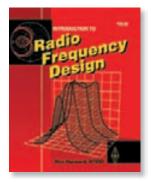
Order No. 9655 – \$19.95 Here are *more* projects and articles for low power radio operating, from the pages of *QST* and *QEX* magazines: construction practices, transceivers, transmitters, receivers, accessories, and antennas.

Introduction to Radio Frequency Design

1st Edition, 4th Printing Wes Hayward, W7ZOI Order No. 4920 – \$39.95

The fundamental methods of radio frequency design using mathematics as needed to develop intuition for RF circuits and systems. Simple circuit models are used to prepare you to actually design HF, VHF and UHF equipment.





RF Exposure and You

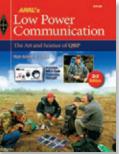
Order No. 6621 – \$22.95 Meet the FCC RF exposure regulations! It's not complicated! Learn how to operate your station safely and legally using simple step-by-step ARRL worksheets and tables.



ARRL's Low Power Communication The Art and Science of QRP

3rd Edition Rich Arland, W3OSS Order No. 1042 – \$19.95

Welcome to the world of QRP! Explore the excitement of low power radio operating with equipment and station accessories, antennas, operating strategies, emergency communication, surplus military equipment and more. Includes the complete assembly manual for the M



complete assembly manual for the MFJ Cub Transceiver Kit. Kit not included.

Get the book with the kit!

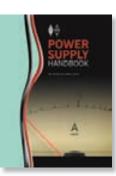


Order No. 1042K – \$99.95

ARRL's Low Power Communication with 40-meter CW Cub Transceiver Kit. Build the kit in just a few hours, and you'll be working the world with low-power fun!

Order No. 0018 – \$89.95

20-meter CW Cub Transceiver Kit. Book not included.



Power Supply Handbook

John Fielding, ZS5JF Order No. 9977 – \$29.95

Gain the knowledge and confidence you need to understand and make power supplies of all types. Explains how power supplies work, selecting each component, building and modifying, measuring the finished supply, and more.

Digital Signal

Processing

Technology

Digital Signal Processing Technology

Doug Smith, KF6DX Order No. 8195 – \$44.95 \$34.95

The book begins with basic concepts, details digital sampling including fundamental and harmonic sampling, aliasing and mechanisms at play in real data converters and other current topics.

The ARRL UHF/Microwave Projects CD

Order No. 8853 - \$24.95

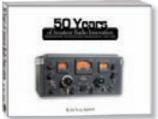
Practical projects, design and construction ideas. Assemble a high performance antenna or transverter without a room full of special test

equipment and machine tools. Includes Volume 1 (1994) and Volume 2 (1997) of *The ARRL Microwave Projects Manuals*.

50 Years of Amateur Radio Innovation

Transmitters, Receivers and Transceivers: 1930-1980 Joe Veras, K9OCO

Order No. 0228 – \$39.95 This guided tour of more than 400 legendary radios from 1930 to 1980,



depicts the "golden age" of American radio technology. Each photo includes a brief description, the year the radio was introduced and its selling price at the time.



ARRL's Vintage Radio

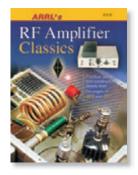
Order No. 9183 – \$19.95 QST articles about the lure of vintage Amateur Radio gear: equipment, techniques, personal experiences, restoration, and classic QST ads. Includes "Old Radio" QST columns by John Dilks, K2TQN and other articles published between 1977 and 2003.

ARRL's RF Amplifier Classics

Order No. 9310 - \$19.95

Hints &Kinks

Two-dozen projects and articles to help shorten your discovery work. There are amps for HF, MF, VHF and microwave. Build safe and reliable amplifiers. Produce loud and clean signals!



Hints and Kinks for the Radio Amateur 17th Edition

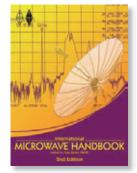
Order No. 9361 – \$17.95

The best of Amateur Radio tips and techniques from the pages of QST —antennas, weekend projects, shack accessories and operating. Now including articles from the columns **The Doctor is IN** and **Hands-On Radio**.

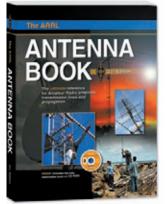
International Microwave Handbook

2nd Edition Order No. 0330 – \$29.95

Learn the fundamental principles to designing and constructing equipment for the microwave bands. Includes operating techniques, system analysis and propagation, microwave antennas, transmission lines and components, semiconductors and valves, and more.







The ARRL Antenna Book — 21st Edition

The ultimate reference for Amateur Radio antennas, transmission lines and propagation Order No. 9876 – \$44.95

The ARRL Antenna Book is THE SOURCE for current antenna theory and a wealth of practical, how-to construction projects. Extensively revised, and featuring antenna designs enhanced by the latest advances in computer modeling. Design, build and install any imaginable type of antenna from the most simple wire varieties, to specialized or highly optimized arrays.

Fully searchable CD-ROM included!

Bundled with this edition is the fullysearchable book on CD-ROM and additional software utilities*. The CD-ROM

supports Windows[™] and Macintosh systems. At your command is the entire book—every word and every page—PLUS pages of band-by-band propagation tables for locations around the world! Uses the widely popular Adobe® Acrobat® Reader® software (included) to **view, navigate, search and print from all chapters**.

*CD-ROM System Requirements: Microsoft Windows 98 or later for PCs. Publication PDF files can be viewed on any Apple Macintosh computer that has Preview or Adobe Reader ver. 7 or 8 loaded. Additional software utilities are included, for Windows and DOS only.

The CD-ROM contains additional utility programs, including:

YW – Yagi for Windows

TLW – Transmission Line for Windows

HFTA – HF Terrain Assessment for Windows

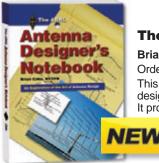
Range-Bearing - compute range/bearing or latitude/longitude

Arrayfeed1 - designing phased-array feed systems

EZNEC-ARRL – antenna modeling for Windows

Includes a comprehensive glossary and index.

All you need to design your own complete antenna system!



The ARRL Antenna Designer's Notebook

Brian Cake, KF2YN Order No. 1479 – \$34.95

This book is certain to open a window into the mind of the antenna designer as the design is imagined, perfected, and finally constructed. It provides a thorough description of new components of antennas – such as the FZ element and the C-pole – and practical antennas made from them. **CD-ROM included!**

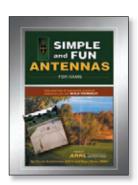
Contents:

- Safety First
- Antenna Fundamentals
- The Effects of GroundAntenna Modeling
- and System Planning Loop Antennas
- Low-Frequency Antennas
- Multiband Antennas
- Multielement Arrays
- Broadband Antenna Matching
- Log Periodic Arrays
- HF Yagi Arrays
- Quad Arrays
- Long Wire and Traveling Wave Antennas
- Direction Finding Antennas
- Portable Antennas
- Mobile and Maritime Antennas
- Repeater Antenna Systems
- VHF and UHF Antenna Systems
- Antenna Systems for Space Communications
- Antenna Materials and Accessories
- Antenna Products Suppliers
- Antenna Supports
- Radio Wave Propagation
- Transmission Lines
- Coupling the Transmitter to the Line
- Coupling the Line to the Antenna
- Antenna and Transmission-Line Measurements
- Smith Chart Calculations

Simple and Fun Antennas for Hams

Order No. 8624 - \$22.95

More than 70 well-tested, fun and entirely useful projects. Hundreds of photos and illustrations. Build your first VHF or HF antenna. Explore dipoles, verticals, beams and more. These antennas work!





International Antenna Collection

Volume 1 Order No. 9156 – \$19.95

Volume 2 Order No. 9465 – \$21.95 Collections of antenna designs

from around the world—from 136 kHz to 1.3 GHz, receiving and transmitting, fixed and mobile designs.



6 Antennas

The ARRL Antenna Compendium Series

Volume 1

Order No. 0194 – \$20 The premiere volume includes articles on a multiband portable, quads and loops, baluns, the Smith Chart, and more.



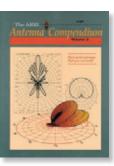
Volume 2

Order No. 2545 – \$14 Covers a wide range of antenna types and related topics, including innovative verticals, an attic tri-bander, antenna modeling and propagation.

Volume 3

Order No. 4017 - \$14

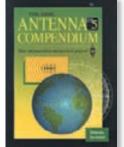
Quench your thirst for new antenna designs, from Allen's Log Periodic Loop Array to Zavrel's Triband Triangle. Discover a 12-meter quad, a discone, modeling with MININEC and VHF/UHF ray tracing.



Volume 4

Order No. 4912 – \$20 38 articles covering a wide range of topics.

Includes simple, practical antenna projects, and heavy-duty, theoretical treatments of complex arrays.



Volume 5

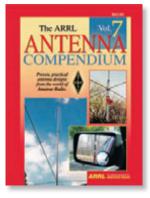
Order No. 5625 – \$20 —Includes software Enjoy excellent coverage of baluns, an HF beam from PVC, low-band Yagis, quads and verticals, curtain arrays, and more!

Volume 6

Order No. 7431 – \$22.95 —Includes software

All new articles covering low-band antennas and operating, 10-meter designs, multiband antennas, propagation and terrain assessment. CD-ROM included with propagation prediction software!





The ARRL Antenna Compendium Volume 7

Order No. 8608 - \$24.95

Proven, practical antenna designs from the world of Amateur Radio. **Hooray for antennas!** This is the seventh in the very popular **ARRL Antenna Compendium** series.

Inside, you'll find articles covering a very wide range of antenna-related topics:

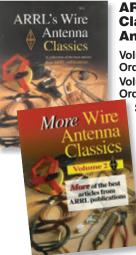
- 30, 40, 80 and 160-Meter Antennas
 Measurements and Computations
- Multiband Antennas
- Special Antennas
- Tuners and Transmision Lines
- Wire Antennas
- Practical Tips
- Propagation and Ground Effects
- Vertical Antennas
- Yagi Antennas

- Mobile Antennas
- Quad Antennas
- Stealth Antennas
- VHF/UHF Antennas
- And, this volume includes even more articles on low-band antennas and operating, and great designs for operating on the road—from cars, vans or motor homes.

Full of practical antenna designs and other antenna-related topics.

FRIC

The Classics



ARRL's Wire Antenna Classics and More Wire Antenna Classics

Volume 1 Order No. 7075 – \$14 Volume 2

Order No. 7709 - \$17.95

So many wire antenna designs have proven to be first class performers! Here are two volumes devoted to wire antennas, from the simple to the complex. Includes articles on dipoles, loops, rhombics, wire beams and receive antennas—and some time-proven classics!

> ARRE's VHF/UHF Antenna Classics



Order No. 5218 – \$12 Vertical antennas are everywhere-on

Vertical Antenna Classics

cell phones, broadcast towers, portable radios and vehicles. And for good reason! Here are the best articles from ARRL publications in one book. Vertical antenna theory and modeling, VHF and UHF, HF, directional arrays, radials, product suppliers and more.

More Vertical Antenna Classics

Order No. 9795 – \$17.95

This second edition includes updated material on the art and science of the vertical antenna. Designs for a variety of operating preferences and bands, ground systems, portable antennas, phased vertical arrays, and more.

ARRL's Yagi Antenna Classics



Yagis, Quads, Loops and other Beam Antennas Order No. 8187 – \$17.95

Includes some of the very best articles written about beam antennas, from ARRL publications. The antennas covered in this book will provide the reader with a historical perspective, new and ambitious ideas, and computer-optimized designs for all-around best performance.

ARRL's VHF/UHF Antenna Classics

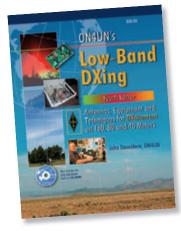
Build portable, mobile and fixed antenna designs

Order No. 9078 - \$14.95

Ground planes, J-poles, mobile antennas, Yagis and more. Build a better antenna for your hand-held radio. Construct a 2-meter Yagi that will rival similar commercial antennas. Build a dual-band vertical for 146 and 445-MHz. The results will be rewarding! Includes

projects gathered from the 1980 to 2003 issues of QST.

Practical designs and construction details from the pages of QST.



ON4UN's Low Band DXing – 4th Edition

Antennas, Equipment and Techniques for DXcitement on 160, 80 and 40 Meters John Devoldere, ON4UN

Order No. 9140 - \$39.95

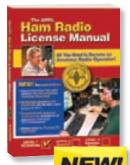
Includes antenna designs, operating guidelines, and an insider's scoop on low-band DXing. There's something in here for every active low-band operator, contester, and DX chaser! This edition is thoroughly updated with entirely new material on low-band antennas and high-gain transmitting arrays. Includes new insights and new design techniques for receiving antennas and vertical arrays. **CD-ROM included!** Bundled with the fully searchable and complete book on CD-ROM for *Windows*[®] and Macintosh[®] systems. (Also contains additional **ON4UN software** and over 2000 quality photographs.)



Level 1 – Technician

The ARRL Ham Radio License Manual

All you need to become an Amateur Radio Operator!



2nd Edition

Order No. 0830 - \$24.95

Ham radio's most popular license manual! Organized in easy-to-understand "bite-sized" sections, every page includes information you will need to pass the exam and become an effective operator.

- 35-guestion Technician test (Element 2) Includes the latest question pool with
- answer key for use July 1, 2010 to June 30, 2014.

Designed for self-study and for classroom use.

Includes a bonus guide for Choosing the Right Radio!

The ARRL Ham Radio License Manual is the *most popular introduction into the* world of Amateur Radio.

ARRL's Tech Q & A

Your Quick & Easy Path to your FIRST Ham Radio License!

5th Edition

Order No. 0847 - \$17.95

Don't be surprised on exam day! Review questions & answers from the entire Technician question pool.

- Includes the latest question pool with answer key, for use July 1, 2010 to June 30, 2014.
- Brief, clear explanations for all questions.



Level 2 - General

Upgrade from Technician

ARRL General Class Course for Ham **Radio Licensing**

Book with CD-ROM

Order No. 1387 - \$74.95

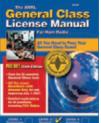
With your ARRL General Class Course you get:

- CD-ROM with all course material and a Practice Exam Tool.
- The ARRL General Class License Manual - Sixth Edition. Use it with the CD-ROM as a reference or to review important points!

CD-ROM Features:

- Each topic is divided into bite-sized lessons. You learn at your own pace!
- Visual animations, colorful illustrations and audio.

Take short on-screen quizzes – and help reinforce your learning. Requires Microsoft Windows® Vista/XP/2000/NT/98 or Apple OS X.



The ARRL General Class License Manual 6th Edition

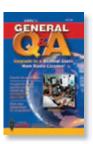
Order No. 9965 - \$24.95

- 35-question General test (Element 3)
- All the exam Questions with Answer Key, for use through June 30, 2011.
- Detailed explanations for all questions, including FCC Rules.

ARRL's General Q&A 3rd Edition

Order No. 9957 - \$17.95

- Includes the latest question pool with answer key, for use through June 30, 2011.
- Brief, clear explanations for all questions.



Level 3 – Amateur Extra

Upgrade from General



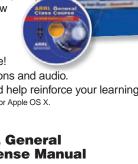
The ARRL Extra Class License Manual 9th Edition

- Order No. 1352 \$24.95
- 50-guestion Extra test (Element 4)
- All the exam Questions with Answer Key, for use through June 30, 2012.
- Detailed explanations for all questions, including FCC Rules.



ARRL's Extra Q&A 2nd Edition Order No. 1379 - \$17.95 Includes the latest question pool with answer key, for use through June 30, 2012.

Brief, clear explanations for all questions.



General Class



Licensing 9

Conversio

ARRL Licensing References

The ARRL Instructor's Manual for Technician and General License Courses

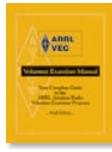
4th Edition

Order No.1263 - \$19.95

Designed for use with *The ARRL Ham Radio License Manual 1st Edition* and *The ARRL General Class License Manual 6th Edition.* Includes:

- Lesson plans for Technician and General Class courses
- CD-ROM with classroom graphics and other visual resources
- Practice tests and more...

To become an Instructor visit: www.arrl.org/license-instructor-registration



ARRL/VEC Volunteer Examiner Manual

Order No. 1328 - \$10

9th Edition

Your Complete Guide to the ARRL Amateur Radio Volunteer Examiner Program. Whether you have ever thought about becoming a Volunteer Examiner or you are a seasoned VE, this book is packed with everything ARRL VEs need to know.

Includes:

- Becoming a Volunteer Examiner
- The Volunteer Examiner Team
- Preparing for the Test Session
- Form 605
- Conducting the Test Session
- Session Report and Returning Documents
- FCC Part 97 Rules ...and more

For ARRL VE patches or to become a VE visit: www.arrl.org/volunteer-examiners



ARRL Recommended! ACE your Test!

Ham University

Quiz yourself using this feature packed easy-to-use software for exam training. Includes three years of free upgrades from the date you activate it. *Microsoft Windows* compatible.

Includes The Latest Question Pools!

- Technician/General Class Edition Order No. 8956 – \$24.95
- Extra Class and Morse Code Edition Order No. 1048 – \$24.95
- Complete Edition (Tech, Gen, Extra, and Morse code) Order No. 8735 – \$39.95

Flash and Pass Card Sets

Flashcards are absolutely the fastest most efficient way to learn! You get the actual test questions that will appear on the exam. Simply read the question, decide on an answer, and flip the card over for the correct answer. The flashcards allow you to break up the learning task into smaller, more manageable segments.



Save time by focusing only on the questions you don't know. When you've mastered all of the cards, you're ready to take the test!

- Technician Class Flash Card Set Order No. 1345 – \$24.95
- General Class Flash Card Set Order No. 1357 – \$39.95
- Extra Class Flash Card Set Order No. 1366 – \$39.95



HamTestOnline[™]

Web-based online training for the Amateur Radio written exams. Covers all questions and study materials for a period of 2 years. Presents concepts in logical order, tracks your progress for each question, and uses "intelligent repetition" to focus on your weak areas.

- Technician Class Edition Order No. 0132 – \$24.95
- General Class Edition Order No. 0141 – \$29.95
- Extra Class Edition Order No. 0150 – \$34.95



ARRL SHOP DIRECT or call for a dealer near you. PUBLICATIONS

ONLINE WWW.ARRL.ORG/SHOP ORDER TOLL-FREE 888/277-5289 (US)

License Study Materials

Technician Class		Ham Radio License Manual
Exam: 35-question Technic NEW! The ARRL Ham Rad	ian test (Element 2) io License Manual—2nd Edition.	A PROPERTY OF
Ham radio's most popular lic	cense manual! Organized in	1
easy-to-understand "bite-siz	ed" sections, this is all you need	and the second second
	io operator. Now including a bonus	
guide for Choosing the Right	t Radio! \$24.95	AND THE REAL
NEWI APPL's Tech O & A	— 5th Edition. Order No. 0847	\$17.95
Ham University Technicia	n/General Edition	
Order No. 8956		\$24.95
HamTestOnline [™] . Technic	ian Class. Order No. 0132	\$24.95
	Order No. 9392	\$21.99
	nual for Technician and General on. Order No. 1263	¢40.05
	ard Set. Order No. 1263	
		φ24.33
General Class	(upgrade from Technician)	General Class
Exam: 35-question General	test (Element 3)	License Manual
	se for Ham Radio Licensing. The	Allow distances in the
fastest way to General Class		
	terial and The ARRL General Clas	s 🔚 🕅 🖓
License Manual. Pass your	exam – Guaranteed!	TERC -
ARRL General Class Licer		Nert) and did
		\$24.95
ARRL's General Q & A-3r	d Edition. Order No. 9957	\$17.95
HamTestOnline [™] . General	Class. Order No. 0141	\$29.95
General Class Flash Card	Set. Order No. 1357	\$39.95
Extra Class	(upgrade from General)	Extra Class
Exam: 50-question Extra tes	t (Element 4)	License Manual
ARRL Extra Class License		Endering and
	Amateur Radio licensing! Our	- C
	ou through all of the knowledge you	
need to pass the exam.	\$24.95	THE REAL
Order No. 1352		THE OWNER
ARRL's Extra Q & A-2nd	Edition.	\$47.0E
	ass. Order No. 0150	
	t. Order No. 1366	
Ham University. Extra Cla		
		\$24.95

Operating and Reference

	•	
OPERATING	The ARRL Operating Manual—9th Edition. The MOST COMPLETE book about Amateur Ra Operating. It contains everything you need to exp activities, lean new skills, find new references, an Order No. 1093 NEW! ARRL Repeater Directory®—2010/2011 Pocket-sized (3.75" x 5.25"), Order No. 0854 Desktop Edition (6" x 9"), Order No. 0861 NEW! TravelPlus for Repeaters"—2010-2011 E	blore new nd more. \$29.95 Edition. \$10.95 \$15.95
	CD-ROM, version 14.0. Order No. 0878	\$39.95
The ARRL DXCC I	List. May 2009 Edition. Order No. 8256	\$5.95
The ARRL DXCC	Handbook. Order No. 9884	\$19.95
DXing on the Edg	e—The Thrill of 160 Meters.	
Order No. 6354		\$29.95
RF Exposure and	You. Order No. 6621	\$22.95

RF Exposure and You. Order No. 6621	\$22.95
50 Years of Amateur Radio Innovation. Order No. 0228	\$39.95
Hints & Kinks. 17th Edition. Order No. 9361	\$17.95
Low Profile Amateur Radio. 2nd Edition. Order No. 9744	\$19.95
FCC Rules and Regulations. 2nd Edition. Order No. 1173	\$5.95
Getting Started with Ham Radio. Order No. 9728	\$19.95
The ARRL Software Library for Hams. CD-ROM, version 3.0	
Order No. 1424	\$19.95
Amateur Radio on the Move. Order No. 9450	\$19.95
NEW! Storm Spotting and Amateur Radio. Order No. 0908	\$22.95
ARRL's Vintage Radio. Order No. 9183	\$19.95
Your Introduction to Morse Code. Order No. 8314	\$12.95
Two-Way Radios & Scanners for Dummies. Order No. 9696	\$21.99
Passport to World Band Radio. 2009 Edition. Order No. 0339	\$22.95
2010 Super Frequency List on CD-ROM. Order No. 0143	\$44.95
2010 Shortwave Frequency Guide. Order No. 0135	\$59.95
Pocket Ref (by Glover). Order No. 1148	\$12.95
NEW! Remote Operating for Amateur Radio. Order No. 0922	\$22.95

The Radio Amateur's World Atlas. Order No. 5226 ARRL Map of North America. 27 x 39 inches. Includes grids!	\$12.95
Order No. 8977	\$15
ARRL Map of the World (Azimuthal). 27 x 39 inches. Order No. 7717 ARRL Map of the World (Robinson). 26 x 34.5 inches.	A 45
Order No. 7717 ARRL Map of the World (Robinson). 26 x 34.5 inches.	\$15
Order No. 8804	\$15
ARRL Worked All States (WAS) Map. 11 x 17 inches.	¢0
ARRL Frequency Chart on reverse side. Order No. 1126 Marine Amateur Radio. Order No. 9723	
Shortwave DX Handbook. Order No. 9953	\$34.95
RSGB IOTA Directory. Order No. 0112 RSGB 6 Metre Handbook. Order No. 0340	
RSGB LF Today. 2nd Edition. Order No. 0220	
RSGB The Low Frequency Experimenter's Handbook.	
Order No. RLFS RSGB Radio Orienteering. Order No. 0131	
RSGB Prefix Guide. Order No. 1136	
NEW! RSGB Morse Code for Radio Amateurs. Order No. 0221	\$15.95

Antennas and Transmission Lines

The ARRL Antenna Book—21st Edition.	
The ultimate reference for Amateur Radio antennas,	
transmission lines and propagation. Fully-searchable	
CD-ROW Included (IOF WINdows and Wacintosh).	****
Softcover. Order No. 9876 Basic Antennas, Order No. 9994	. \$44.95
International Antenna Collection.	. \$29.95
Volume 1. Order No. 9156	¢40.05
Volume 1. Older No. 9156	
NEW! The ARRL Antenna Designer's Notebook. Order No. 1479	
ON4UN's Low-Band DXing. Fourth Edition. Order No. 9140	
ARRL's Yagi Antenna classics. Order No. 8187	
Simple and Fun Antennas for Hams. Order No. 8624	¢22.05
ARRL's Wire Antenna Classics. Order No. 7075	
More Wire Antenna Classics. Volume 2. Order No. 7709	
More Vertical Antenna Classics. Order No. 9795	
Vertical Antenna Classics. Order No. 5218	
ARRL's VHF/UHF Antenna Classics. Order No. 9078	\$14 95
ARRL Antenna Compendium. Vol. 1. Order No. 0194	
ARRL Antenna Compendium. Vol. 2. Order No. 2545	
ARRL Antenna Compendium. Vol. 3. Order No. 4017	\$14
ARRL Antenna Compendium. Vol. 4. Order No. 4912	\$20
ARRL Antenna Compendium. Vol. 5. Order No. 5625	\$20
ARRL Antenna Compendium. Vol. 6. Order No. 7431	
ARRL Antenna Compendium. Vol. 7. Order No. 8608	
RSGB Practical Wire Antennas. Order No. R878	\$17
RSGB Practical Wire Antennas 2. Order No. 9563	\$24.95
RSGB HF Antennas for All Locations. Order No. 4300	
RSGB Antennas for VHF and Above. Order No. 0501	
RSGB Building Successful HF Antennas. Order No. 0800	
RSGB The Antenna Experimenter's Guide. Order No. 6087	
RSGB HF Antenna Collection. Order No. 3770	
RSGB Antenna Toolkit 2. Order No. 8547	
RSGB Backyard Antennas. Order No. RBYA	
RSGB Radio Propagation - Principles and Practice. Order No. 9328	. \$29.95
Antennas: Fundamentals, Design, Measurement. 3rd Edition.	
Order No. 0320	\$99
Tower Climbing Safety & Rescue. Order No. 1108	. \$29.95
Electronic Applications of the Smith Chart. Order No. 7261	\$75
Radio-Electronic Transmission Fundamentals. Order No. RETF	
Transmission Line Transformers. Order No. TLT4	
Transmission Line Transformers. CD-ROM. Order No. 9088	\$129

CD-ROM Collections

2009 Periodicals on CD-ROM. Order No. 1486	\$24.95			
2008 Periodicals on CD-ROM. Order No. 9406	\$24.95			
2007 Periodicals on CD-ROM. Order No. 1204	\$19.95			
2006 Periodicals on CD-ROM. Order No. 9841	\$19.95			
2005 Periodicals on CD-ROM. Order No. 9574	\$19.95			
2007 Periodicals on CD-ROM. Order No. 1204 2006 Periodicals on CD-ROM. Order No. 9841 2005 Periodicals on CD-ROM. Order No. 9874 2004 Periodicals on CD-ROM. Order No. 9396	\$19.95			
	\$19.95			
2002 Periodicals on CD-ROM. Order No. 8802				
2003 Periodicals on CD-ROM. Order No. 9124 2002 Periodicals on CD-ROM. Order No. 8802 2001 Periodicals on CD-ROM. Order No. 8632 2000 Periodicals on CD-ROM. Order No. 8632	• • • •			
2000 Periodicals on CD-ROM. Order No. 8209				
1999 Periodicals on CD-ROM. Order No. 7881				
1998 Periodicals on CD-ROM. Order No. 7377	• • • •			
1997 Periodicals on CD-ROM. Order No. 6729				
1996 Periodicals on CD-ROM. Order No. 6109				
1995 Periodicals on CD-ROM. Order No. 5579				
NEW! Callbook CD-ROM. Summer 2010 Edition. Order No. 0126				
HamCall [™] CD-ROM. Order No. 8991				
	φ-3.33			

SHOP DIRECT or call for a dealer near you. ARR PUBLICATIONS

ONLINE WWW.ARRL.ORG/SHOP ORDER TOLL-FREE 888/277-5289 (US)

Practical Circuits and Design



The ARRL Handbook—2010 Edition. THE Standard in applied electronics and communications. Includes fundamental theory, practical designs and principles, antenna systems and radio propagation, equipment construction and maintenance, and station assembly and management. With over 70% NEW or completely revised content and more new projects to enjoy this is The BIGGEST Handbook EVER! CD-ROM Included! (version 14.0).

2010 ARRL Handbook (Softcover Book and CD-ROM).

2010 ARRL Handbook (Soncover Book and CD-ROW).	***
Order No. 1448	\$49.95
NEW! Understanding Basic Electronics. 2nd Edition.	
Order No. 0823 ARRL Member Price \$29.95	\$32.95
Basic Radio—Understanding the Key Building Blocks.	
Order No. 9558	\$29.95
Digital Signal Processing Technology.	
Order No. 8195\$34.95	\$44.95
ARRL's Hands-On Radio Experiments. Order No. 1255	
Hands-On Radio Parts Kit. Order No. 1255K	
NEW! The ARRL RFI Book. 3rd Edition. Order No. 0915	
Experimental Methods in RF Design. Revised 1st Edition.	
Experimental Methods in RF Design. Revised 1st Edition. Order No. 9239	\$49.95
NEW! ARRL's PIC Programming for Beginners.	
Order No. 0892 ARRL Member Price \$39.95	\$44.95
L/C/F and Single-Layer Coil Winding Calculator. Order No. 9123	\$12.95
Introduction to Radio Frequency Design. Order No. 4920	\$39.95
ARRL's RF Amplifier Classics. Order No. 9310	
More QRP Power. Order No. 9655	
QRP Romps. Order No. 0160	
ARRL's Low Power Communication. 3rd Edition. Order No.1042	
ARRL's Low Power Communication with Cub CW Transceiver Kit.	
Order No.1042K	
MFJ 20-meter CW Cub Transceiver Kit. Order No. 0018	\$89.95
Do-It-Yourself Circuitbuilding for Dummies. Order No. 0015	
Electronics for Dummies. 2nd Edition. Order No. 0196	
Electronics Projects for Dummies. Order No. 9944	
Practical Digital Signal Processing. Order No. 9331	
Power Supply Handbook. Order No. 9977	
Electromagnetic Compatibility Engineering. Order No. 0192	
Discrete-Signal Analysis and Design. Order No. 0140	
RF Components and Circuits. Order No. 8759	\$50.95
Practical Radio Frequency Test & Measurement. Order No. 7954	
Communications Receivers. Order No. CR3E	
Radio Receiver Design. Order No. RRCD	
HF Radio Systems & Circuits. Order No. 7253	
Build Your Own Low-Power Transmitters. Order No. 9458	\$54.95
AC Power Interference Handbook. Order No. 1103	
Power Supply Cookbook. Order No. 8599.	
Instruments of Amplification. Order No. 9163	
RSGB Radio Communications Handbook. Order No. 0360	
RSGB Low Power Scrapbook. Order No. LPSB	
NEW! RSGB International QRP Collection. Order No. 0020	
RSGB Weekend Projects for the Radio Amateur. Order No. 0123	

Digital and Image Communications

VHF Digital Handbook—1st Edition.	
Everything you need to get started in digital radio applications.	VHF DIGITAL HANDBOOK
Includes Packet Radio, APRS, D-Star, digital applications in	HANDBOOK
public service and emergency communications, and more!	
Order No. 1220\$19.95	
ARRL's HF Digital Handbook. 4th Edition.	A NO
Order No. 1034\$19.95	
VoIP: Internet Linking for Radio Amateurs. 2nd Edition.	and the second
Order No. 1431\$24.95	
GPS and Amateur Radio. Order No. 9922	\$18.95
The ARRL Image Communications Handbook.	
Order No. 8616\$19.95	
NEW! RSGB RTTY/PSK31 for Radio Amateurs. Order No. 032	9 \$15.95
Nifty E-Z Guide to PSK31 Operation. Order No. 0370	\$12.95
Nifty E-Z Guide to D-STAR Operation. Order No. 0125	\$13.95
Digital Communication Systems Using SystemVue.	
Order No. 1084	\$49.99
802.11 Wireless Networks: The Definitive Guide.	
Order No. 9715	
Building Wireless Community Networks. Order No. 9147	\$29.95

The national association for AMATEUR RADIO[™] SHOP DIRECT or call for a dealer near you. ONLINE WWW.ARRLORG/SHOP ORDER TOLL-FREE 888/277-5289 (US)

Public Service and Emergency Communications

The ARRL Digital Technology for Emergency Communications Cours CD-ROM, version 1.0 Order No. 1247	
The ARRL Emergency Communications Handbook. Order No. 9388	
The ARRL Emergency Communication Library. CD-ROM, version 1.0	
Order No. 9868	\$19.95
ARES Field Resource Manual. Order No. 5439	\$12.95
Emergency Power for Radio Communications. Order No. 9531	\$19.95
Amateur Radio Emergency Communications Course Book Level 1.	
Order No. 8462	
PR-101 Course on CD-ROM. Order No. 0133	\$19.95

Space and VHF/UHF/Microwave Communications

The ARRL Satellite Handbook. Order No.9857	\$24.95
NOVA for Windows. CD-ROM. Order No. 8754	\$59.95
RSGB Amateur Radio Astronomy. Order No. 9928	\$32.95
RSGB Radio Nature. Order No. 0240	\$24.95
The ARRL UHF/Microwave Projects CD. Order No. 8853	\$24.95
International Microwave Handbook. 2nd Edition.	
Order No. 0330	\$29.95
RSGB VHF/UHF Handbook. 2nd Edition. Order No. 1229	\$29.95
RSGB Microwave Projects. Order No. 9022	\$29.95

History and Adventure

The Secret Wireless War— Softcover Edition. The Story of MI6 Communications1939-1945 (World War II). This is an extraordinary story that includes hams among those patriots that undoubtedly helped the allied war effort. Order No. 0262. \$39.95 Edgar Harrison. Order No. 0270. \$29.95 YASMEThe Danny Weil and Colvin Radio Expeditions. \$24.95	
Hiram Percy Maxim. Order No. 7016	
200 Meters and Down. Order No. 0011	
The Gil Cartoon Book. Order No. 0364	
The Story of W6RO and the Queen Mary. DVD Order No. 1344	
Crystal Clear. Order No. 0353	\$58.50
Don C. Wallace: W6AM, Amateur Radio's Pioneer.	
Order No. 0016	\$29.95
World War II Radio Heroes: Letters of Compassion.	
Order No. 1268	\$15.95
Perera's Telegraph Collector's Guide. Order No. 1277	
Perera's Telegraph Collectors Reference CD-ROM. Order No. 12	282 \$15
The Story of the Enigma CD-ROM. Order No. 1296	
Keys II: The Emporium. Order No. 1372	\$16
Keys III: The World of Keys. Order No. 1381	\$18
Full Circle: A Dream Denied, A Vision Fulfilled.	
Order No. 0152	\$13.95

Ordering Information

For a complete publications listing or to place an order, please contact us:

 To order or obtain the address of an ARRL Dealer near you, call foll-free (US):
 1-888-277-5289 (non-US call 860-594-0355) 8 AM-5 PM Eastern time, Monday-Friday. 2. Fax 1-860-594-0303 24 hours a day, 7 days a week

3. By mail to: ARRL, 225 Main St, Newington CT 06111-1494

4. Visit our World Wide Web site: http://www.arrl.org/shop

Shipping and Handling Rates: Add the following amounts to your order to cover shipping and handling (S/H). US orders will be shipped via a ground delivery method. Orders outside of the US will be shipped via an international delivery service. Express delivery options and other specialty forwarding services are available. Please call, write or email for more information.

Order Value	US	International Economy 2-4 weeks delivery	Sales Tax: CT add 6% state sales tax (including
Up to \$20.00	\$7.50	\$15.00	S/H). VA add 5% sales tax (excluding
\$20.01 to \$50.00	\$10.50	\$25.00	S/H). Canadian Provinces NS, NB and NL add 13%
\$50.01 to \$250.00	\$12.50	\$35.00	HST (excluding S/H), all other
Single CD-ROM	First Class Mail \$2.75	n/a	Provinces add 5% GST (excluding S/H).
Over \$250	Contact ARRL for shipping options and rates: orders@arrl.org		0/11/.

We accept the following major credit cards: American Express, MasterCard, Visa and Discover. Prices and product availability are subject to change without notice.

12 Marketplace



Transmission Line Transformers

4th Edition Order No. TLT4 – \$75 Tremendous coverage of the subject of broadband transmission line transformers. Guanella and Ruthroff as well as hundreds of real transformers.



CD-ROM tutorial Order No. 9088 – \$129

Practical Digital Signal Processing

Applications of DSP, from process control to communications. Covers implementation issues, tricks and pitfalls.

Order No. 9331 - \$52.95



Tower Climbing Safety & Rescue

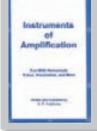
4th Edition Order No. 1108 – \$29.95

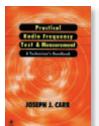
Essential for Tower Riggers and Technicians, Radio Amateurs, Supervisors and Project Managers. Includes environmental hazards, structure hazards, tools and tasks, safety equipment, rescue and more.

Instruments of Amplification

Order No. 9163 – \$19.95

Fun with homemade tubes, transistors, and more. Hands-on details for constructing an amazing array of homebrew amplifying devices.





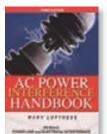
Practical Radio Frequency Test & Measurement

est & measuremen

Order No. 7954 – \$66.95 Learn the basics of performing tests and measurements used in radio-frequency systems installation, proof of performance, maintenance, and troubleshooting.

AC Power Interference Handbook

3rd Edition Marv Loftness, KB7KK Order No. 1103 – \$34.95 All About: **POWER-LINE** and **ELECTRICAL INTERFERENCE** with New Insights into Causes & Effects, and Locating & Correction of Interference Sources.



Antennas: Fundamentals, Design, Measurement

3rd Edition Order No. 0320 – \$99

For anyone seeking solid grounding in the basics of antenna design and performance. Covers antenna principles, concept design, performance analysis, and measurements. **CD-ROM included!**



Discrete-Signal Analysis and Design

William E Sabin, WØIYH Order No. 0140 – \$125

An introduction to discrete-time and discretefrequency signal processing. Includes concepts and practical uses, for communications and radio engineers. **Includes CD-ROM** of Academic Mathcad Program, v. 14.0.

Designed for classroom learning as well as individual at-home study.

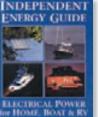
Digital Communication Systems Using SystemVue

An essential guide for anyone wishing to understand digital communication systems through simulations using SystemVue. Ideal for technicians, professionals, and students with a basic knowledge in analog communications. CD-ROM included!

Order No. 1084 - \$49.99



Antenr.@



Independent Energy Guide

Electrical Power for Home, Boat & RV Order No. 8601 – \$19.95

A resource for understanding and managing power systems. Covers fixed, portable, and mobile energy systems including solar, windand water-powered generators, battery chargers, and more.

Build Your Own Low-Power Transmitters

Order No. 9458 - \$54.95

Twenty low-power transmitter projects for the radio experimenter. Complete source information is included to help readers find kits and parts for building these fascinating projects.

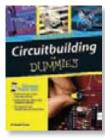


Marketplace 13

Electronics for Dummies

2nd Edition Order No. 0196 - \$24.99

Make something fascinating of electronics. Learn how electricity functions, how to put it to work, what tools you need to build circuits, what you can make with them, and more.



Circuitbuilding for Dummies

Order No. 0015 - \$24.99

A fun and easy way to start building circuits for your projects. Includes all the tools and techniques you need, with illustrated, step-by-step directions.

Two-Way Radios & Scanners For Dummies

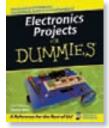
Order No. 9696 - \$21.99

Discover how to choose and operate different types of radios, program a scanner, help out in emergencies and more.



Electronics

DUMMIES



Electronics Projects for Dummies

Order No. 9944 - \$24.99

Build fun gadgets and gain knowledge of how various electronic parts work. Step-by-step directions for ten cool creations - remote control gizmos, talking toys, and more.

RF Components and Circuits

Order No. 8759 - \$50.95

A comprehensive introduction to understanding, designing and building RF circuits, including fault-finding and use of test equipment.



Shortwave DX Handbook

Order No. 9953 - \$34.95

Your gateway to worldwide DXing! Includes long distance radio operating, awards and contests, organizing DXpeditions, and loads of valuable references.

Crystal Clear

Order No. 0353 - \$58.50

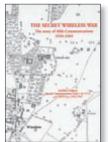
A story of the quartz crystal-from its early days as a curiosity for Amateur Radio enthusiasts to its use by the United States Armed Forces. It was a technology that changed the tide of WWII.











The Secret Wireless War

Softcover Edition Order No.0262 - \$39.95

The most complete book yet written on Britain's secret radio communications during WWII. It's an extraordinary story that includes hams among those patriots that undoubtedly helped the allied war effort.

Edgar Harrison

Soldier-Patriot and Ultra Wireless Operator to Winston Churchill Order No. 0270 - \$29.95

A remarkable story of Edgar Harrison and the adventures he encountered throughout WWII.

Don C. Wallace, W6AM

Order No. 0016 – \$29.95

This book traces the life of Don Wallace, and the early history of Amateur Radio. Through his interest and dedication, Don made a lasting imprint on the Amateur Radio community.

World War II Radio Heroes

Order No. 1268 – \$15.95

A story about ham radio operators alerting families of POWs during a time of war. It features more than 30 letters sent to the author's family in 1943, notifying them of her grandfather's capture.

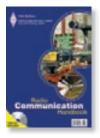
More ARRL Marketplace Publications Build Your Own Test Equipment. Order No. 8604......\$62.95 Electromagnetic Compatibility Engineering. Order No. 0192\$120 Electronic Applications of the Smith Chart. Order No. 7261\$85 Full Circle Order No. 0152.....\$13.95 HF Radio Systems & Circuits. Order No. 7253......\$95 • Hiram Percy Maxim. Order No. 7016\$19.95 International Antenna Collection 1. Order No. 9156..\$19.95 International Antenna Collection 2. Order No. 9465..\$21.95 Keys II: The Emporium. Order No. 1372\$16 Keys III: The World of Keys. Order No. 1381......\$18 • NEW! QRP Romps. Order No. 0160.....\$18 • Power Supply Cookbook. Order No. 8599\$54.95 **QRP Quarterly 1979-2004 DVD.** Order No. 9668.......\$34.95 **QRP Quarterly 1979-2004 CD-ROM.** Order No. 9651\$34.95 Radio-Electronic Transmision Fundamentals. Order No. RETF......\$95 Radio Receiver Design. Order No. RRCD......\$105 Perera's Telegraph Collectors Guide. Order No. 1277..\$19.95 Perera's Telegraph Collectors CD. Order No. 1282......\$15 The Story of the Enigma CD. Order No. 1296......\$15 Transmitter Hunting. Order No. 2701.....\$24.95 • NEW! Your Guide to HF Fun. Order No. 0153\$16



EDGAR HARRISON



$14\,$ RSGB Catalog



RSGB Radio Communication Handbook

10th Edition Order No. 0360 – \$59.95

Now packed with more material than ever before. Includes Surface Mount Technology, Software Defined Radio, The Great Outdoors, LF including the use of higher power limit on 500kHz, Digital Communications, Satellites and Space, and more! **CD-ROM included!** 864 pages.

6 Metre Handbook

Order No. 0340 – \$24.95 Avid 6 meter operators will tell you that nothing is quite like the surprises you'll find on the "Magic Band." Here is the most up-to-date guide to exploring all the excitement. Get in on the action! 176 pages.





Order No. 0240 – 24.95

Radio Nature

This book is a fascinating look at naturally originating radio signals. It includes descriptions of these strange signals, explanations of where they come from, and the proper way to receiving and analyzing them. 256 pages.

Amateur Radio Astronomy

Order No. 9928 - \$32.95

Explore the contributions of radio amateurs to the science of radio astronomy and how to study the signals coming from space. Includes a historical perspective needed to become active, advice on assembling a receiving station, and practical information to put together your own. 320 pages.





HF Antennas for All Locations

Order No. 4300 – \$34.95

Design and construction details for hundreds of antennas, including some unusual designs. Don't let a lack of real estate keep you off the air! 322 pages.

Backyard Antennas

Order No. RBYA - \$34.95

With a variety of simple techniques, you can build high performance antennas. Create compact multi-band antennas, end-fed and center-fed antennas, rotary beams, loops, tuning units, VHF/UHF antennas, and more! 208 pages.



HF Antenna Collection

Order No. 3770 – \$34.95

Articles from RSGB's *RadCom* magazine. Single and multi-element horizontal and vertical antennas, very small transmitting and receiving antennas, feeders, tuners and more. 240 pages.

Practical Wire Antennas 2

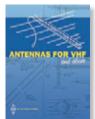
Order No. 9563 – \$24.95

Filled with "how to" information! Complete and easy to understand designs for a wide range of wire antennas: feed lines, dipoles, antennas with tuned feeders, loop antennas, end-fed wires and verticals. 176 pages.

Practical Wire Antennas 1

Order No. R878 - \$17





Antennas for VHF and Above

Order No. 0501 - \$29.95

Discover what can be achieved on the VHF, UHF, and microwave bands. Includes all the details you need for understanding and experimenting with antennas. 144 pages.

Building Successful HF Antennas

Order No. 0800 - \$34.95

Learn what makes an effective HF antenna, how to build one, and how to measure its performance. This book uses real places, so you're able to obtain optimum performance at any location. 224 pages.



Ø R		efix Guid	
		-	5
	>	Ve	

RSGB Prefix Guide

8th Edition Order No. 1136 – \$19.95

Complete guide to call sign prefix identification, DXCC prefix and entity information. References include continent, CQ Zone, ITU Zone, latitude and longitude, and checklists for many awards. 80 pages.

RSGB IOTA Directory

45th Anniversary Edition Order No. 0112 – \$19.95

Celebrating 45 Years of the IOTA (Islands on the Air). Plus, everything you need to enjoy collecting or operating from islands for this popular worldwide program! 128 pages.



RSGB Catalog 5



RSGB RTTY/PSK31 for Radio Amateurs

Order No. 0329 - \$15.95

This book is the most practical guide on the two most popular data modes used today. RTTY and PSK31. It covers a brief history, basic RTTY theory, operating, setting up PSK, contests and more. CD-ROM included! 32 pages.

NEV

ORSE CODE

Morse Code for Radio Amateurs

10th Edition

Order No. 0221 - \$15.95

This book is essential for anyone wanting to widen their horizons by adding Morse code to their skills. It covers the history of Morse code, how to get started, abbreviations and prosigns, increasing your speed and more. Free

dual purpose computer/audio CD-ROM included! 32 pages.

2nd Edition

LF Today

Order No. 0220 - \$24.95

All the information you need to succeed on 136 & 500 kHz. There is advice and techniques for amateurs just starting out, and useful reference information for those with a more technical background or who already have some experience in LF. 160 pages.

Radio Propagation— **Principles & Practice**

Order No. 9328 - \$29.95

A guide to radio propagation from HF to VHF, UHF and beyond, and how to make the most of the right time and band. Practical understanding for radio waves and how they travel, the atmosphere, the Sun, ionospheric propagation, meteor scatter, space communications and more. 112 pages.



VHF/UHF Handbook

2nd Edition Order No. 1229 - \$29.95

Your guide to theory and practice in the VHF and UHF bands. Topics include getting started, antennas, constructing your own equipment, satellite operation, local nets, and specialized modes such as data and TV. 320 pages.

International QRP Collection

Order No. 0020 - \$24.95

A compilation of the art and science of QRP. Contains articles from many Amateur Radio magazines including RadCom, QST, Sprat, Break In, as well as brand new material. There is certain to be something of interest to all lowpower enthusiasts within this book. 176 pages.



QRP Basics

Order No. 9031 - \$29.95

Explore the fun of operating 5 watts and less. Inexpensive and exciting! Improve your QRP station, build a working transmitter or receiver, accessories, and more. 208 pages.



Order No. 0131 - \$19.95

Everything you need to become involved in this great amateur racing sport! Fun for both new and experienced amateurs, competitors use their skills to locate a number of hidden transmitters within a given time limit. 112 pages.

Weekend Projects

Order No. 0123 - \$24.95

Over 60 articles covering a wide variety of projectssomething for everyone! It's ideal for experimenters looking for interesting ideas to construct and for newcomers looking to expand their knowledge of the hobby. 224 pages.





Order No. LPSB - \$19.95

Build it yourself! Low power transmitters, simple receivers, accessories, circuit and construction hints and antennas. Projects from the G-QRP Club's magazine SPRAT. 320 pages.

Microwave Projects

Order No. 9022 - \$29.95

Complete designs and ideas for the microwave experimenter: signal sources, transverters, power amplifiers, test equipment and more. 200 pages.



RadCom Magazine

Subscriptions are available for the UK's biggest and best radio magazine, published by the Radio Society of Great Britain (RSGB). Enjoy 15 monthly issues of RadCom for the price of 12 (new members only). And, Airmail Delivery!

For details, contact ARRL: 1-888-277-5289 • circulation@arrl.org

More RSGB Publications

- The Antenna Experimenter's Guide Order No. 6087...\$34.95
- The Low Frequency Experimenter's Handbook
- Order No. RLFS\$34.95 The RSGB Guide to EMC. Order No. 7350...... \$34.95

Technical Topics Scrapbooks

- All 50 Years Edition. Order No. 0130 \$29.95 **1995-1999 Edition.** Order No. RT95 \$29.95 **1990-1994 Edition.** Order No. 7423...... \$25.95 • 1985-1989 Edition. Order No. RT85\$19.95 RSGB Technical Compendium. Order No. RTCP\$34.95
 - www.arrl.org/shop = 1-888-277-5289





Low Power Scrapbook

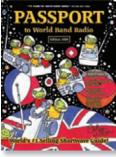
16 Station Resources

Pocket Ref

Thomas J. Glover Order No. 1148 - \$12.95



All the information you need in one essential reference book. The cover is embossed with ARRL's logo and logotype-making this a particularly special edition of this popular guide.



Passport to World Band Radio

2009 Edition Order No. 0339 - \$22.95 With this guide to shortwave frequencies, you have the world at your fingertips.

MINILOG

2010 SHO



Amateur Radio Station Log Book

Order No. 1250 - \$7.95 52 log pages with room for 25 contacts per page (1,300 total log entries). Spiral bound (8.5 x 11")

MINILOG

Order No. 7539 - \$4.95 Wire-bound (6.25 x 4")

Log Sheets Order No. 1265 - \$4

Klingenfuss Publications

2010 Shortwave Frequency Guide 14th Edition

Order No. 0135 - \$59.95

The latest schedules of worldwide broadcast and utility radio stations.

2010 Super Frequency List CD-ROM

Order No. 0143 - \$44.95

More than 40,000 entries cover both broadcast and utility stations. Hundreds of fascinating new digital data decoder screenshots! Requires Windows.



Buckmaster's HamCall™ CD-ROM

Order No. 8991 - \$49.95

Look up hams by call, name, street address, city, state, postal code, county, and country. Over 2,000,000 worldwide call sign listings.

Nova for Windows

Order No. 8724 - \$59.95 An innovative, real-time satellite tracking program.





Radio Amateur Callbook CD-ROM



Summer 2010 Edition Order No. 0126 - \$49.95 Feature-packed! More than 1,600,000 licensed radio amateurs.

Radiograms For Traffic Handlers:

Message Delivery Cards (package of 20) Order No. 1310 - \$2 Message Pad with 70 sheets Order No. 1320 – \$2



Nifty E-Z Guide to **D-STAR Operation** Order No. 0125 - \$13.95

The first comprehensive reference to the world of D-STAR operation!

Nifty E-Z Guide to **PSK31 Operation**

Order No. 0370 - \$12.95 A complete auide for implementing **PSK31**!

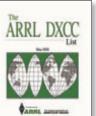


Radio Setup Guides

Condensed step-by-step instructions that simplify setup and operation. Mini-Manuals and Pocket Reference Cards available for select Kenwood, Icom, and Yaesu models. Visit www.arrl.org/shop

The ARRL DXCC Handbook

Jim Kearman, KR1S Order No. 9884 - \$19.95 Worldwide ham radio operating and the ARRL DXCC Award.



The ARRL DXCC List

May 2009 Edition Order No. 8256 - \$5.95 The official source of DXCC awards information.

The Complete DX'er

3rd Edition Bob Locher, W9KNI Order No. 9073 - \$19.95

Covers nearly every aspect of DXing. Learn how to REALLY listen, how to snatch the rare ones out of the pile-ups, the excitement of landing the newone, and the agony of defeat.









ARRL Periodicals on CD-ROM

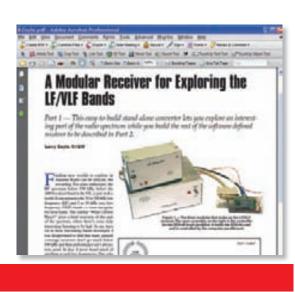
Fully-searchable collections of popular ARRL journals. Every word and photo published throughout the year is included!

SEARCH the full text of every article by entering titles, call signs, names—almost any word. SEE every word, photo (including color images), drawing and table in technical and general-interest features, columns and product reviews, plus all advertisements. PRINT what you see, or copy it into other applications.

Maps

System Requirements:

Microsoft Windows[™]. 1999-2009 editions support Windows and Macintosh systems, using the industry standard Adobe[®] Acrobat[®] Reader [®] software. The Acrobat Reader is a free download at www.adobe.com (included on CD through 2007).



ARRL Periodicals on CD-ROM

Includes all QST, QEX and NCJ issues on one CD.

- 2009 Edition, Order No. 1486 \$24.95
- 2008 Edition, Order No. 9406 \$24.95
- 2007 Edition, Order No. 1204 \$19.95
- 2006 Edition, Order No. 9841 \$19.95
- 2005 Edition, Order No. 9574 \$19.95
- 2004 Edition, Order No. 9396 \$19.95
- 2003 Edition, Order No. 9124 \$19.95
- 2002 Edition, Order No. 8802 \$19.95
- 2001 Edition, Order No. 8632 \$19.95
- 2000 Edition, Order No. 8209 \$19.95
- 1999 Edition, Order No. 7881 \$19.95
- 1998 Edition, Order No. 7377 \$19.95
- 1997 Edition, Order No. 6729 \$19.95
- 1996 Edition, Order No. 6109 \$19.95
- 1995 Edition, Order No. 5579 \$19.95



US Amateur Radio Bands Chart

Order No. 1126 – \$3 Size 11x17 inches. ARRL Worked All States (WAS) map on backside.

The Radio Amateurs World Atlas WORLD Order No. 5226 - \$12.95 Booklet of full-color maps, call-sign prefixes and more. **ARRL World Grid Locator Atlas** Order No. 2944 - \$5.95 Grid Locator (US Grid Squares) Order No. 1290 - \$1 Polar Map (for OSCAR) Order No. 1300 - \$1 **ARRL Map of North America** Order No. 8977 - \$15 27 x 39 inches. ARRL Map of the World Order No. 7717 - \$15 (Azimuthal) 27 x 39 inches. ARRL Map of the World Order No. 8804 - \$15 (Robinson) 26 x 34.5 inches.

For more ARRL products visit: www.arrl.org/shop

18 Emergency Communications

The ARRL Emergency **Communication Handbook**

Order No. 9388 - \$19.95 Includes details on basic emergency communication skills, message handling, ARES, RACES, MARS and other

The ARRL Emergency **Communication Library**

organizations.

CD-ROM, version 1.0 Order No. 9868 - \$19.95 Contains documents and presentations on many aspects of emergency radio communication operating.



ARES Magnetic Sign

Order No. 9413 - \$12.95 Perfect for use at public service and emergency communications support activities. Size 8 x 18 inches.



ARES® Field Resources Manual

Order No. 5439 - \$12.95 A quick trainer and field resource quide for the emergency communicator.

The ARRL Amateur Radio Emergency **Communications Course**

Level 1. Basic Course Order No. 8462 - \$19.95

Self-study manual, provides an introduction to Amateur Radio communications. For use with ARRL online course, www.arrl.org/cep.





Emergency Power for Radio Communications

Michael Bryce, WB8VGE Order No. 9531 - \$19.95

Explore the various means of electric power generation, from charging batteries, to keeping the lights on. This book covers the foundation of any communications installation — the power source.

When all else fails... how will you communicate?



T-shirts, Stickers, Patches and More

These items are a great reminder that Amateur Radio provides immediate, high-quality communications that work every time, when all else fails.

Visit www.arrl.org/shop while supplies last



ARES Pin

Order No. 0241 - \$5.00

This colorful pin will symbolize your involvement in the Amateur Radio Emergency Service (ARES). Wear it proudly! Size 1" round.





The ARRL Digital Technology for Emergency Communications Course

Self-study. CD-ROM, version 1.1

Order No. 1247 - \$49.95

In this course, we will introduce you to all the ways Amateur Radio operators are using digital technology as a valuable emergency communications tool. The topics covered include:

- Packet radio APRS
- Winlink 2000
- IRLP
- EchoLink and WIRES-II
- D-STAR APCO25
- HF sound card modes Automatic Link Establishment ("ALE")
- Illustrations, screenshots, Internet links and audio are used to demonstrate transmission modes and equipment

configurations. Bite-sized learning units make learning interesting and fun!

Requires Microsoft Windows® Vista/XP/2000/NT/98/95 or Apple OS X.

Amateur Radio Emergency Communications Course

Level 1, Basic Course

Introductory course to raise awareness and provide additional knowledge and tools for any emergency communications volunteer. 8 weeks. Requires Amateur Radio License.



- Course Contents:
- Introduction to Emergency Communications
- Amateurs as Professionals The Served Agency Relationship
- Emergency Communication Organizations & Systems
- Served Agency Communication Systems
- Basic Communication Skills
- Introduction to Emergency Nets
- Basic Message Handling
- Net Operating Guidelines
- Equipment Choices for Emergency Communication
- Operations & Logistics
- and much more

Member: \$50/ Non-member: \$85

Course Transcript (optional):

Amateur Radio Emergency Communications Course Level 1, 3rd Edition Order No. 8462 – \$19.95

Antenna Design and Construction

Learn more antenna design theory and experience hands-on construction techniques. The course includes several optional antenna construction projects for HF, VHF, and UHF. 8 weeks. **Member: \$70 / Non-member: \$105**

Antenna Modeling

In the last decade the science of modeling antennas using computer software has advanced by huge leaps and bounds. Learn the ins and outs and the nitty-gritty details of modeling antennas. 16 weeks.

Member: \$90 / Non-member: \$125

How it works:

Each self-study online course has been developed in segments — learning units with objectives, informative text, student activities and quizzes. Courses are interactive, and some include direct communications with a Mentor/Instructor. Students register for a particular session that may be 8, 12 or 16 weeks (depending on the course) and they may access the course at any time of day during the course period, completing lessons and activities at times convenient for their personal schedule. Mentors assist students by answering questions, reviewing assignments and activities, as well as providing helpful feedback. Interaction with mentors is conducted through email—there is no appointed time the student must be present—allowing complete flexibility for the student to work when and where it is convenient.



PR-101 Course on CD-ROM

Order No. 0133 - \$19.95

This course is designed to give hams a quick course in public relations activities. It uses the skills of experts in various aspects of public relations to provide volunteer Public



Information Officers with the basic skills and expectations that a PIO needs to know. Covers basic news release, Web sites, video work, and more.

Radio Frequency Propagation

Explore the science of RF propagation on a practical, hands-on level so that you'll know how to use it every day. You'll learn about the properties of Electromagnetic waves, the atmosphere and the ionosphere, the sun and sunspots, ground waves and sky waves, and propagation modes including aurora and meteor scatter that provide special challenges for VHF operators. Now including NVIS (Near Vertical Incidence Skywave) propagation with a whole lesson introducing you to the practical problems involved in using this mode. 12 weeks.

Member: \$70 / Non-member: \$105

Analog Electronics

Intermediate level course. Learn about the use of instrumentation, how to analyze circuits, diodes, rectifier circuits, bipolar and field effect transistors, various amplifier configurations, filters, timers, op-amps, and voltage regulators. Some algebra involved. Knowledge of basic electrical circuits and electronic components recommended. 12 weeks.

Member: \$70 / Non-member: \$105

Digital Electronics

Intermediate level course. Students learn about basic logic operations and truth tables, gates, flip-flops, counters and shift registers, latches, buffers and drivers, encoders and decoders, parallel interfaces, serial interfaces and input devices. Knowledge of basic electrical circuits and electronic components recommended. 12 weeks.

Member: \$70 / Non-member: \$105

Mentors assist students by answering questions, reviewing assignments and activities, as well as providing helpful feedback.

Learn when and where it's convenient for you!

Register online! www.arrl.org/cep

Online course available for a limited time.

Member Benefits & Services

Benefits that keep you On the Air!

"Exclusively for ARRL Members"

ARRL's QST Archive and Search

ARRL members can now access the online *QST* magazine archive. Fully downloadable digital copies of all *QST* articles from December 1915 through December 2004 are available. View and print your favorite articles and projects, or just browse past issues.

The ARRL Periodicals Archive and Search is a service of the ARRL Technical Information Service.

ARRL "Special Risk" Ham Radio Equipment Insurance Plan

Here's the protection you need from loss or damage to your station equipment and antennas by theft, accidents, fire, flood, tornado, hail and other natural disasters. More than 4,000 members are protected!

Administered by Marsh Affinity Group Services, a service of Seabury & Smith.



The ARRL Visa[®] Card

Choose the credit card that supports ARRL with every purchase. You receive valuable benefits each time you use it and every purchase helps ARRL continue to extend its reach in areas of public service, advocacy, education,



technology and membership. It's easy to apply!

The creditor, issuer and service provider of the credit card is U.S. Bank National Association N.D.

MetLife[®] Auto, Home, Renters, Boaters and Fire Insurance

As an ARRL member you could enjoy special group rates, hassle-free payment options, and coverage for your personal property and liability insurance needs. You may also qualify for additional savings of up to 20% from MetLife Auto and Home based on your years of membership with ARRL.

More Benefits for ARRL Members



ARRL Technical Information Service

Problem-solving knowledge for all of your technical questions!

QST Product Reviews

ARRL produces informative and hard-hitting product reviews of the newest radios and accessories from handheld and mobile radios, to home-station transceivers, antennas and even shortwave radios.



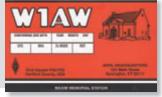


Operating Awards

ARRL sponsors the most popular operating awards. You can increase your operating proficiency and station performance—all while having fun on-the-air!

QSL Bureau

Let us be your mail carrier and handle your overseas QSLing chores. The savings you accumulate through this service alone can pay your membership dues many times over.



For even MORE Member benefits, visit www.arrl.org/membership



Membership Application

Membership options (circle your choice/s)

	1 Year	2 Years	3 Years		for subscription to QST. Memberships
Regular	\$39	\$76	\$111	Monthly QST via standard mail for US members	and QST cannot be separated. Dues subject to change without notice and are
Canada	\$49	\$93	\$132	Monthly QST via standard mail for Canadian members	nonrefundable.
Intl QST	\$62	\$118	\$167	Monthly QST via air mail for international members	If you are 21 or younger a special rate may apply. Contact ARRL for more
Intl CD	\$39	\$76	\$111	Annual CD-ROM (QST, NCJ and QEX) for international members	details.
Blind	\$8	\$16	\$24	No QST delivery, all other member benefits apply	Additional membership options available online at www.arrl.org/join.
Family	\$8	\$16	\$24	Reside at the same address as the primary member, no additional QST. Membership dates must correspond with primary member.	avanable offine at www.affl.org/join.

Name		Call Sign			
Street		City	Stat	e	ZIP
E-mail		Birth Date			
Family Member Name		Call Sign ((if any)		
Payment Options			□ Total enclosed payable	to ARRL \$	
□ Visa □ MasterCard □ Amex	□ Discover	□ Check Enclosed	If you do not want your non-ARRL related maili		
Card Number	Exp	piration Date	- Join Now ONLINE: www.arrl.org		NE: 1-888-277-5289 (US)

*Cardholder's Signature

Phone: 860-594-0338 • FAX: 860-594-0303

CAT 4/2010

Order Form

	mbershij □ 1 Year' \$39	□ 2 Years ² \$76		\$111	and handling (S/ delivery method. an international d	g am H). U Order deliver orwarc	ounts to your or S orders will be s outside of the y service. Expres ling services are	der to cover shippi shipped via a grou JS will be shipped s delivery options a available. Please c		
¹ 1-vear membershir	dues include \$15 for	DD YYYY a 1-year subscription to QST. ear rates include \$45 for a 3-yi	² 2-vear membership	o dues include DST Life Blind	Order Value		US	International Economy 2-4 weeks delivery		
International, First C	Class QST and Youth I	Memberships available at spec	cial rates. Contact AF	RL for details.	Up to \$20.00)	\$7.50	\$15.00		
ARRI Sub	oscrintio	ns for one y	ear (US	rates):	\$20.01 to \$50.0	00	\$10.50	\$25.00		
	-	-	-	ratesp	\$50.01 to \$250.	.00	\$12.50	\$35.00		
□ QEX=Forum f (non-ARRL m □ NCJ=National	embers \$36)	itions Experimenters	s, \$24		Single CD-RO	M	First Class Mail \$2.75	n/a		
		lαι, φ20			Over \$250			RL for shipping es: orders@arrl.org		
Name				Call		Sal	es Tax:			
Address				Apt#		СТ	add 6% state sale			
City State ZIP _					(Including 5/H). VA add 5% sales tax			adian residents of unswick and 4% HST, all other		
Order I Shipping		ations:						r by credit card:		
				Call		Toll-free: 1-888-277-5289 Mon-Fri, 8 AM to 5 PM ET				
NameCall AddressApt;								www.arrl.org/shop		
•							Thanl for your			
Item Number	Quantity		Title or	Item Name			Price Eac	h Total		
							1			

arrl.org/shop

Thank you your order!

e Each Total CAT 4/2010 Subtotal Enter Shipping and Handling fee (see fee schedule) Check here if you do not wish your name and address made available for non-ARRL mailings. Delivery to CT, VA and Canada, add applicable tax (see note) If joining ARRL or subscribing to QEX or NCJ, please insert total here \$ Total Method of payment: Check/Money order payable to ARRL \$ _____ _____
MasterCard
Visa
Discover
American Express (must be in US funds drawn on a US bank) Credit Card Number: ____ MM/YY Expiration ____ / ___ / Your Signature Daytime Phone_

Mail your order to: ARRL, 225 Main Street, Newington, CT 06111-1494 USA



Discover the Excitement of Ham Radio.



NEW! Second Edition

The ARRL Ham Radio License Manual

Use this book to study for your first license exam-you'll be on the air in no time! It will guide you as you select your equipment, set-up your first station and make your first contact. You'll turn to it again and again as you begin your journey into the exciting world of Amateur Radio.

NEW! Fifth Edition

ARRL's Tech Q&A

Earning your FIRST Amateur Radio license is quick and easy with this study guide and the convenient question and answer format. Brief explanations follow each question, allowing you to review for the exam with confidence.

Additional licensing and upgrade materials available!

See page 9 for details.

Quick order: www.arrl.org/shop

Call Toll free 1-888-277-5289 (US) or visit your local ARRL dealer



Discover the Excitement of Ham Radio

<text><text><text><text><text><section-header><text><list-item><list-item><text><text>

ARRL

NEW! Second Edition

The ARRL Ham Radio License Manual

Use this book to study for your first license exam-you'll be on the air in no time! It will guide you as you select your equipment, set-up your first station and make your first contact. You'll turn to it again and again as you begin your journey into the exciting world of Amateur Radio.

NEW! Fifth Edition

ARRL's Tech Q&A

Earning your FIRST Amateur Radio license is quick and easy with this study guide and the convenient question and answer format. Brief explanations follow each question, allowing you to review for the exam with confidence.

Additional licensing and upgrade materials available!

See page 9 for details.

Quick order: www.arrl.org/shop

Call Toll free 1-888-277-5289 (US) or visit your local ARRL dealer