

What's NEW

Tell them you saw it in *Monitoring Times*

The ARRL Handbook for Radio Communications – The Comprehensive RF Engineering Reference

The 2010 ARRL Handbook for Radio Communications is the biggest handbook ever. Since it was first published in 1926, the handbook has been a mainstay for the radio electronic experimenter. A core resource for radio amateurs, hobbyists, engineers and scientists, the ARRL Handbook is the single most authoritative reference on practical communications topics. It is both reference book and tutorial, woven together with practical applications and solutions.

The 2010 Handbook, the 87th edition, is both a useful introduction to radio communication and features the most current material on electronics and amateur radio.

More than 60 authors and reviewers contributed over 70 percent new or completely revised content, making this the biggest Handbook ever (over 1,250 pages). New material includes all-new treatments of digital communications technology, solid-state RF power amplifiers and switch-mode power supplies.

According to the ARRL, when editors H. Ward Silver, N0AX, and Mark Wilson, K1RO, dove into preparing this 87th edition, they kept in mind what F. E. Handy, W1BDI (author of the first edition) wrote in that book: "Written first of all for the beginner, such an amount of useful and up-to-date information has been added that the handbook in its present form is equally valuable as a compendium of information for the experienced brass-pounder and the beginner alike."

For 2010, *The ARRL Handbook for Radio Communications* has been reorganized into five major sections, making it easier than ever to find exactly what you are searching for: Fundamental Theory, Practical Design and Principles, Antenna Systems and Radio Propagation, Equipment Construction and Maintenance, and Station Assembly and Management.

In this edition of the handbook there is a new table of contents: Electrical Fundamentals, Analog Basics, Digital Basics, 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, Propagation of Radio Signals, Transmis-

sion Lines, Antennas, Component Data and References, Circuit Construction, Station Accessories, Test Equipment and Measurements, Troubleshooting and Repair, Electromagnetic Compatibility and Direction-Finding, Safety, Assembling a Station, Space Communications, Digital Communications, and Image Commu-

"Each chapter has been designed to be either an 'encyclopedia' (providing descriptive overviews of current practices and technology) or 'practical handbook' (focusing on techniques, designs and projects)," Silver explained. "In either case, Mark and I tried to ensure that there was enough introductory material to get the newcomer started, as well as plenty of in-depth discussion the experienced amateur will expect."

Nearly every chapter has been rewritten or reworked, with many projects making their first appearance in the handbook. Here are some of the new topics you will find:

A full suite of new or revised chapters address the burgeoning digital modes: Modulation (by Alan Bloom, N1AL); DSP and Software Radio Design (also by N1AL), Digital Modes (by Scott Honaker, N7SS, and Kok Chen, W7AY), and Digital Communications (by Steve Ford, WB8IMY). There's also a new section on D-STAR digital repeaters by Pete Loveall, AE5PL and Jim McClellan, N5MIJ.

The popular chapter on RF Power Amplifiers has been thoroughly refreshed by experts John Stanley, K4ERO (vacuum tube technology) and Dick Frey, K4XU (solid-state amplifiers). You'll find new software, expanded design examples, and a new 250 W solid state amplifier project to get you started toward that bigger signal.

Power Supplies is a chapter that every ham turns to regularly. It received the attention of world-class authority Rudy Severns, N6LF. As a result, there is a detailed introduction to switch-mode power conversion, arguably the most common power supply technology in the world and whose coverage was long overdue in the handbook.

Some of the other new projects you will find in the handbook include: variable-voltage bench supply using switch-mode modules; an extended double-Zepp, multi-band horizontal loop; and inexpensive Yagis for VHF/UHF.

Station accessory projects include a high-power 160/80 meter matching network for 43 foot verticals, and a 100 W Z-match antenna tuner and transmitting chokes.

If you're learning electronics from the handbook, as many do, the Fundamental Theory section sports reworked and expanded chapters on basic electronics and analog design, including analog-digital conversion and microprocessor interfacing.

New resources for experimenters include a chapter on Computer-Aided Circuit Design by Dave Newkirk, W9VES. The Component Data

and References chapter received needed updates to the information on component characteristics and surface mount devices by Paul Harden, NA5N.

In recognition of the growing range of operating modes and activities, you'll find updated and expanded chapters on Space Communications (satellites by Steve Ford, WB8IMY, and EME by Joe Taylor, K1JT) and Image Communications (ATV by Tom O'Hara, W6ORG, and SSTV by Dave Jones, KB4YZ).

The book's accompanying CD-ROM inside the back cover once again includes a searchable PDF version of the entire book, including graphics. Construction information and PC board templates for all projects are included, as are the original QST articles, if that was the project's source. Jim Tonne, W4ENE, has again generously provided his powerful filter design and analysis software, Elsie, as well as other useful applications. Recognizing that the printed Handbook and CD-ROM support a dynamic activity, a webpage has been created to provide links and supplemental information that may change with time.

The CD-ROM is fully-searchable book and operates on the following operating systems: Windows® XP, Windows Vista® or Windows® 7, as well as Macintosh® systems, using Adobe® Acrobat® Reader® software. The Acrobat Reader is a free download at www.adobe.com. PDF files are Linux readable.

Available in softcover (hardcover has sold out), the softcover includes book and CD-ROM. ARRL Order No. 1448 (ISBN 0-87259-144-1) \$49.95 plus shipping.

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For more than eight decades, hams, hobbyists, engineers and scientists have used *The ARRL Handbook for Radio Communications* for both practical solutions and as a teacher to open doors of understanding. Whether you use it at the radio, on the workbench or in the library, this is one reference that belongs in your radio shack.

Scancat -Lite-Plus

Are you tired of having a different software program for



each of your scanners? Are you tired of retyping all your data into one software program to another? Then maybe you're ready for Scancat-Lite-Plus.

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Plus supports all the most popular scanners on the market with one single, easy to use interface, and the list of supported radios continues to grow. Scancat-Lite-Plus for Windows supports the memory programming for Radio Shack and Uniden Scanners at a price that is

very affordable.

While their Scancat-GOLD supports both memory programming and scanning from the PC, Scancat-Lite-Plus is targeted to those radio owners who need to program the radio's memories, but do not need the additional scanning control.

In the tradition of other Scancat products, all radios supported are available in one software product. This means if you have any of the radios supported by Scancat-Lite-Plus, you only need to buy the one software program. If you have more than one radio that is supported, you can use the same databases from any of the radios (to the limits of their frequency coverage and features, of course).

It is easy to use Scancat-Lite-Plus. Just pick the radio from the radio selection list and "plug it in." The program supports both programming the radio's memories and (if supported by the radio) downloading from the radio the frequency information already programmed. So you can download from one radio and send the same frequency information to a second or third radio.

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The following radios are currently covered by Scancat-Lite-Plus software:

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PRO-82/2018 PRO-83/84 PRO-89
PRO-93/2053 PRO-94 (B) PRO-95
PRO-96/2096 PRO-97/2055 PRO-99
PRO-106/197 PRO-135/136 PRO-137
PRO-160/162 PRO-163/164 PRO-528/433
PRO-2019 PRO-2051 PRO-2052 PRO-2054
PRO-404 PRO-405

Uniden Scanners

BC-95XLT BC-895 BC-245 BC-246T
BC-780 BC-250D BC-785D BC-296D
BC-796D BCT-8 BCT-15 BCT-15X BC-898T
BCD346XT BC-396T BCD396XT BC-996T
BCD996XT BR-330 SC-230

It should be noted that the PRO-92 and the PRO-2067 are not supported, and the SC-200 is no longer supported.

Scancat-Lite-Plus works on Win 95/98/98SE, Windows 2000, Windows ME/XP, Vista and Windows 7. The program is available as a download from www.scancat.com/ or on CD-ROM. The manual is included on the CD-ROM in an Adobe Acrobat PDF file. The cost is US\$29.95.

If you just need some software to help you program the scanners in your shack, Scancat-Lite-Plus is an affordable and powerful alternative to most of the software packages in the radio hobby marketplace today.

Books and equipment for announcement or review should be sent to What's New, c/o Monitoring Times, 7540 Highway 64 West, Brasstown, NC 28902. Press releases may be faxed to 828-837-2216 or emailed to Larry Van Horn, larryvanhorn@monitoringtimes.com

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