

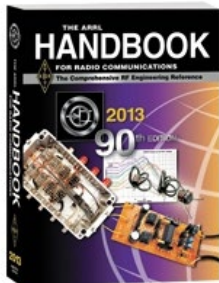
What's NEW

Tell them you saw it in *Monitoring Times*

Larry Van Horn, *New Products Editor*

ARRL Handbook 2013 – 90th Edition

The *ARRL Handbook for Radio Communications* is widely recognized as being the standard reference among radio amateurs and other technologists – experimenters, engineers and students. The fields of radio and electronics are constantly evolving, and no other publication provides as accurate a snapshot of the state of the art as *The Radio Amateur's Handbook*.



Dozens of contributing experts and technical editors have helped fill these pages with essential information from across the expanse of radio communication fundamentals and practical applications. Clear and thorough explanations cover nearly every aspect of radio and antenna design, equipment construction, and station assembly.

A lot has changed since this annual handbook was first published in 1926. What was said of the ninth edition can also be said of this 90th edition: Anyone who is at all interested in the technical side of radio can ill afford to be without *The Radio Amateur's Handbook*.

Here are just a few of the new projects and new content included in this latest edition:

- New antenna projects, including a Low-band Quad, Delta Loops, Coaxial Dipoles for VHF or UHF, and a Skeleton Slot for 14-30 MHz.
- New material on power supply polarity protection circuits.
- 144 MHz band-pass filter for reducing harmonics.
- Updated Pebble Crusher QRP transmitter construction project.
- Design software on CD-ROM, including Elsie™ filter and Pi-EI matching networks

This edition of the ARRL Handbook includes a CD-ROM with fully searchable text and illustrations in the printed book, as well as expanded supplemental content, software, PC board templates and other support files. (System Requirements: Windows® 7, Windows Vista®, or Windows® XP, 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.

The 90th edition of this handbook (ISBN: 978-0-87259-419-7) is 1320 pages (8 3/16 x 10 7/8 inches) in both hardcover and soft cover editions and sells for \$60.

The ARRL Operating Manual for Radio Amateurs – 10th Edition

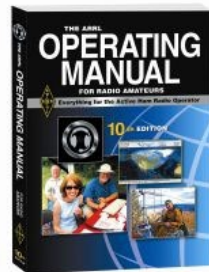
There's nothing quite like the excitement of getting on the air. But, navigating the dozens of ways ham radio operators communicate with each other (and all of the technology, procedures, and jargon) can make you dizzy.

The ARRL Operating Manual for Radio Amateurs is the most complete guide to Amateur Radio operating. For decades, this ARRL flagship title has been recognized by radio amateurs as the trustworthy source of everything you need to know about ham radio operating from exploring the broad range of activities and technology, to sharpening your on-air skills. It's filled with the information every ham needs, from newcomers looking for basic operating techniques to more experienced hams looking for new things to do with their gear.

Whether your interests are more technical or public service oriented, you'll turn to the *Operating Manual* for information on what to operate, where to operate and how to operate.

Every chapter of this 10th Edition has been updated to reflect the most current information, including a brand new chapter on remote station control over the Internet.

This 352 page, 8 3/16 x 10 7/8 inches, soft cover book (ISBN: 978-0-87259-596-5) sells for \$35. The two books mentioned above are available from the ARRL, 225 Main Street Newington, Connecticut 06111-1494, toll free 860-594-0200/ Fax:860-594-0259 or via their website at www.arrl.org.



WiNRADiO WR G33EM Marine Receiver

The WiNRADiO WR-G33EM is a high-performance receiver specially developed for marine applications. It covers the HF frequency range to 30 MHz, and contains a number of decoding facilities including HF Fax, NAVTEX, DSC and TELEX, as well as classical AM, SSB and CW radio modes.

A GPS option is also available which integrates the receiver with a high-resolution global mapping facility.

This high-performance marine receiver is extremely sensitive and optimized to work with relatively short antennas, typically found in a marine environment, yet featuring a respectable

dynamic range making the receiver resistant to strong signal overload.

The receiver comes in a small enclosure which connects to an IBM-compatible PC (desktop or laptop) via the supplied USB cable. An external antenna connects to the receiver. Some of the major features of this radio include:

- Frequency range 9kHz to 30MHz
- AM, LSB, USB, DSB, CW conventional modes
- DSC, HF Fax, NAVTEX, TELEX marine modes
- High sensitivity
- Excellent dynamic range
- Real-time spectrum analyzer
- Spot-on tuning in 1Hz steps
- Continuously variable bandwidth
- Automatic scheduling, recording and playback
- GPS option

The WR-G33EM is the first Software Defined Radio specifically designed for marine applications.

A Software Defined Radio (SDR) is one where most of the radio signal processing is performed in software, using digital signal processing methods, rather than using traditional hardware parts, resistors, capacitors, diodes, etc. The received signal is digitized early in the signal processing chain, and any further processing, demodulation and decoding of the digitized signal is then performed entirely in software.



There are many advantages to this approach, especially the flexibility of demodulation modes - new modes can be added easily by simply upgrading software. The G33EM also performs better than a comparable conventional receiver, thanks to advanced signal processing techniques which make it possible to implement sharper selectivity filters, and more accurate demodulators and decoders than conventional hardware.

The performance of Software Defined Radio receivers is also more consistent, stable and reliable because component tolerances and aging do not play such an important role as in a conventional receiver.

The G33EM receiver offers far more features and facilities than a conventional receiver. For example, the real-time spectrum analyzer with continuously variable bandwidth,

graphical notch filter and IF recording are some of the many features which were previously unavailable on a conventional marine radio, in particular at such an affordable price level.

The G33EM is available from Grove Enterprises for \$1000 plus shipping and handling.

GRE-310/410 Scanners Still Available

With GRE Japan closing its doors, current supplies of scanners and related accessories like their popular preamplifier, are low and no replacements will be manufactured. Warranty service and repairs will continue on existing products here in the United States for the foreseeable future. The database updates for the PSR-800 will also continue. A new release containing new P25 firmware is now available.

Two of their more popular scanners that are still available (again availability is limited) are the PSR-310 handheld and the PSR-410 mobile.

The PSR-410 is a new generation of scanner designed for ease of use, yet powerful enough to satisfy the most sophisticated experts. Common data entry, browsing and control methods are used for non-trunked conventional channels, trunking talk groups, search configurations and Spectrum Sweeper setups. This radio grows with you. You can start out with a small, easy to manage configuration, then expand it whenever you need to.

This scanner uses the GRE Intuitive "Object Oriented" User Interface Design. It is easy to use, yet powerful enough to satisfy sophisticated experts. Common data entry, browsing and control methods are used for conventional channels, talk groups, searches and Spectrum Sweeper setups.

You can arrange, group and scan objects according to your preference, with no limit to the number or types of objects in a scan list, and no limit to the number of scan lists an object can be a member of.

Each menu item provides a few lines of help text that provide assistance with programming and using the scanner.

The PSR-410 handles multi-system trunking systems. The 410 scans most common trunked radio system signaling formats, including Motorola, EDACS Standard, EDACS Narrow, and LTR trunked radio systems. Talk group call and individual call monitoring are

supported. It supports trunking operation in virtually any land mobile radio band, including 700 MHz and the new Federal 380 MHz band.

You can use programmable multi-color LED configurations to illuminate or flash when certain objects are active. This provides visual alerts when certain objects are active, e.g., blue can be used to signal activity on a primary police call, red for fire, etc.

Using control channel data streams, the 410 can decode trunking control data to a personal computer for use with popular third party trunking control channel monitoring software. No slicer needed! Also streams NOAA weather radio SAME alert data!

A high speed PC interface operates in full duplex mode at six times the speed of previous scanner models for PC transfer and eight times the speed of previous models for radio-to-radio cloning.

Memory is assigned as objects are created. You can store over 1,800 conventional channels, trunking talk groups, search configurations and Spectrum Sweeper objects in any combination.

PSR-410 supplied accessories include an AC adaptor, DC cable, mount bracket kit, and telescopic antenna. The PSR-310 handheld has basically the same feature set as its mobile/desktop cousin. Its supplied accessories include an alkaline battery holder, rechargeable battery holder, rubber antenna, and AC adaptor

The PSR-310 and PSR-410 each sell for \$170 plus shipping and handling, and a limited stock of each of these scanners is still available from Grove Enterprises at press time.



Grace Wi-Fi Ethernet Tuner GDI-IRDT200

Plug it in, turn it on and enjoy a world of music. This new Grace Wi-Fi tuner provides digital audio direct from the Internet to your home stereo. Listen to your personal music collection, over 30,000 Internet radio stations, podcast and on demand Wi-Fi radio content or online music services like Pandora, Live365 and Sirius/XM.

If enjoying Wi-Fi Internet radio music on your home stereo is your pleasure, this Grace Tuner is for you.



The unit has a high contrast, adjustable 4-line, backlit LCD display that makes it easy to view your selections, adjust your audio settings or display song title and artist details.

With the unit's full-function remote control you'll be able to choose one of your 10 preset stations, search for new stations, skip songs, and give feedback on Pandora from any location in your room.

The Grace remote control application allows you to go where no IR remote has gone

before. Control one or more of your Grace Internet radios from you iPhone or iPod Touch. You can change the volume, turn it on or off, find stations and set presets or even set any one of your five alarms

If you already own stereo or powered speakers and want to play Internet radio direct from the Internet or music stored on your PC or MAC, then this Grace receiver will be a welcome accessory to your existing system. The tuner provides the ultimate in connectivity with RCA, Toslink and coax digital outputs.

GDI-IRDT200 Feature Set

- Listen to over 50,000 Radio Stations, Podcast, and on demand content.
- Supports online music services: Pandora, Live365 and Premium Sirius Internet radio.
- Compatible with the Grace iPhone /iTouch remote control application. Also includes a full function remote with 10 presets and a 99 station folder.
- Two line backlit display with large font that displays station, song title and artist information. Has 30 backlight brightness settings.
- Built in FM radio receiver.
- Connectors: 1/4-inch stereo headphone jack, high quality RCA analog audio connectors, Toslink digital audio connector, coax digital audio connectors, an FM antenna connector and a built-in Ethernet jack.
- Supported audio formats: AIFF, AIFC, WAVE, CAF, NeXT, ADTS, MP3, AAC, Ogg Vorbis, FLAC, and WMA.
- Supported playlist formats: ASX, M3U and PLS.
- Supported streaming protocols: HTTP, HTTPS, RTSP, WSMP, and Shoutcast.
- Built in media player streams your audio files from your PC or MAC.
- Built in dual band equalizer.
- Up to 24bit /96K sampling rate via digital outputs.
- Play music on your SD card. Up to 4 gig support.
- True 802.11g wireless connectivity and works with all 802.11b/g/n routers. Supports WPA Personal, WPA2-AES, and 64/128-bit WEP encryption.
- 12 or 24 hour clock with date and the clock is auto synched via the internet.
- Five individual alarms, awake to buzzer or music.
- Set each alarm for daily, weekly, weekend, week days or one time and a sleep timer with 30 seconds to 23 hours setting.
- 12 Language Menu: English, French, German, Italian, Spanish, Portuguese, Dutch, Danish, Finnish, Swedish, Norwegian, and Japanese.

Accessories include the GDI-IRDT200 Wi-Fi tuner, a remote control and batteries, an FM antenna, AC power adapter and manual.

This Grace Wi-Fi radio is available from Grove Enterprises for \$210 plus shipping and handling. You can learn more this product or order via the Internet at www.grove-ent.com, or calling during business hours 828-837-9200 or toll free for orders 800-438-8155.

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. When ordering or inquiring about the products mentioned in this column, be sure to tell them that you saw it in the pages of *Monitoring Times* magazine.

