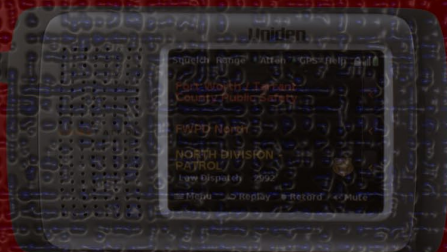
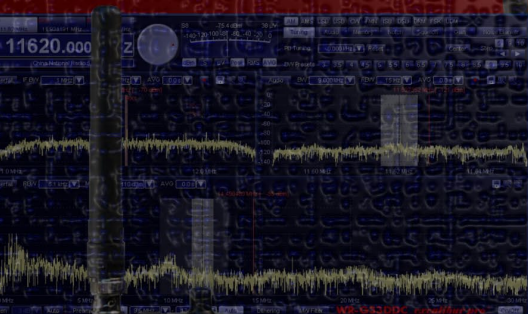
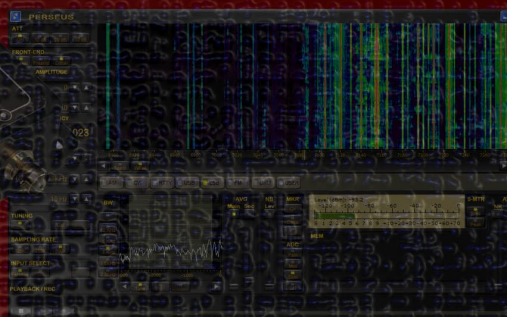


# GROVE

**THE WORLD OF RADIO,  
RIGHT INSIDE!**



**2011-2012**

**A special supplement to Monitoring Times**

# AOR Presents Two New Wide Coverage Professional Grade Communications Receivers



## AR2300 "Black Box" receiver

*It's a new generation of software controlled black box receivers! Available in professional and consumer versions, the AR2300 covers 40 KHz to*

*3.15 GHz\* and monitors up to three channels simultaneously.*

*Fast Fourier Transform algorithms provide a very fast and high level of signal processing, allowing the receiver to scan through large frequency segments quickly and accurately. All functions can be controlled through a PC running Windows XP or higher. Advanced signal detection capabilities can find hidden transmitters. An optional external IP control unit enables the AR2300 to be fully controlled from a remote location and send received signals to the control point via the internet. It can also be used for unattended long-term monitoring by an internal SD audio recorder or spectrum recording with optional AR-IQ software for laboratory signal analysis.*

## AR5001D performs with accuracy, sensitivity and speed

*Developed to meet the monitoring needs of security professionals and government agencies, the AR5001D features ultra-wide frequency coverage from 40 KHz to 3.15 GHz\*, in 1Hz steps with 1ppm accuracy and no interruptions. Up to three channels can be monitored simultaneously. Fast Fourier Transform algorithms provide a very fast and high level of digital signal processing, allowing the receiver to scan through large frequency segments quickly and accurately. Controlled through a PC running Windows XP or higher, it is available in both professional and consumer versions. With its popular analog signal meter and large easy-to-read digital spectrum display, the AR5001D is destined to extend the legend of the AR5000A+3.*



*The exceptional performance of both these wide coverage professional grade receivers makes them perfect for use by federal, state and local law enforcement agencies, the military, emergency managers, diplomatic service, news-gathering operations, and home monitoring enthusiasts.*



Authority on Radio  
Communications

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\*Cellular blocked for US consumer version. Unblocked version available to qualified purchasers with documentation. Specifications subject to change without notice or obligation.

**The Serious Choice in  
Advanced Technology  
Receivers**

It's hard for me to believe that an entire year has gone by since our previous Grove catalog was put together. During this interval quite a number of events around the world -- not all good -- have encouraged monitoring.

Our government and military clients contact us on an on-going basis to learn more about the new products that we have which provide high performance at low cost.

Their interest is primarily to keep an ear open on unfriendly communications, both here and abroad. The gradual transition from analog to digital communications means updated equipment.

Last year's introduction by Uniden of the popular HomePatrol scanner, and WiNRADiO's Excalibur digital receiver have now been upgraded to the new HomePatrol software and the WiNRADiO Excalibur PRO.

GRE has risen to the fore as well with their popular PSR-800 hand-held scanner. Like its rival, the Home Patrol, it comes with an exhaustive, nationwide frequency collection and is menu-driven for ease of use. Both the HomePatrol and the PSR-800 can be updated regularly on line.

While the shortwave bands have still not fully recovered from the sunspot low, we still regularly receive loggings from our Monitoring Times readers. Nighttime reception on the lower frequencies is clear except during summer electrical storms, and daytime global reception reports extend upwards to 18 MHz or so. Winter should be better.

As I write this catalog welcome, I'm listening on my ICOM R8500 to HF USB aeronautical comms loud and clear, and a DX pileup on 20 meters reminds me that shortwave radio is far from dead!

With more and more major agencies switching to digital trunking systems, this is a good time for scanner monitors to upgrade. Prices have dropped as competitors

<b>Scanners .....</b>	<b>4</b>
<b>Receivers.....</b>	<b>10</b>
<b>WiFi Radios .....</b>	<b>15</b>
<b>WiNRADiO .....</b>	<b>16</b>
<b>Antennas.....</b>	<b>25</b>
<b>Tuners, Preamps, Filters, Multicouplers .....</b>	<b>35</b>
<b>Speakers &amp; Recorders.....</b>	<b>37</b>
<b>Test Equipment &amp; Power Supplies .....</b>	<b>38</b>
<b>Books .....</b>	<b>41</b>
<b>Software .....</b>	<b>41</b>

vie for their place in this busy market.

As always, Grove Enterprises will provide the best choices for your needs, and our technical department will give you the support you need. We look forward to hearing from you!

*Bob & Judy Grove*

## GOVERNMENT, MILITARY, and PROFESSIONAL CLIENTS

Our web site is the primary source of information for our many government and professional clients. Full-frequency-coverage scanning receivers, high-end reception equipment, accessories, test equipment, and other products for eligible agencies will be found at [www.grove-ent.com](http://www.grove-ent.com).

• Due to rapidly-fluctuating changes in the international economy, printed prices are subject to change without notice.

# SCANNERS

Hand-Held Base/Mobile Wide Frequency Coverage

## THE UNIDEN HOMEPATROL! BREAKTHROUGH TECHNOLOGY!

The most astounding advance in scanner technology since digital reception now self loads at any location in the U.S. or Canada! Simply enter a zip code or city name or even attach your GPS receiver for automatic loading of police, sheriff, fire, ambulances, highway patrol, and more!

No more touchy banks, systems, groups, or even frequency entry (unless you want to). A large (3-1/2") color touch screen responds to your commands and reads out information you need.

Monitor conventional trunked radio systems, analog or P25 digital, and AM or FM modes for CB, aircraft, hams, public safety, business, government, and military communications in the 25-54, 108-512, 758-960 MHz ranges (less cellular).

Get online updates with the USB port. Record up to 4 minutes of received messages. Select the S.A.M.E. emergency weather alarm for vital bulletins in your area.

Automatically loads frequencies for any U.S. or Canadian location! Simply enter a zip code or city name – or let your GPS do it!

- Easy capture of conventional and trunked radio systems, analog and P25 digital, AM and FM modes for CB, aircraft, hams, public safety, business, government, and military communications!

- Large color touch screen responds to your commands and reads out the information you want!

- Computer control: USB for PC updates and audio feed (cable included), RS232 for GPS control

POWER REQUIRED: 4 x AA size; AC 120V 60Hz 9V 800mA  
Regulated, DC 12V to DC 9V 800mA Regulated)

WEIGHT: 10.6 oz (300g) (Without batteries and antenna)

DIMENSIONS: 3.3 in H x 5.9 in W x 1.5 in D



**Note from Bob Grove:** The new HomePatrol scanner is selling by the thousands, and because it utilizes software-defined circuitry, it can be updated continually for improved performance as user suggestions come in. 99% of the changes customers are requesting (hundreds per day!) involve tweaking the location data to better match to the area the channels are intended to cover. A database administrator then verifies your submission and applies the update.

**Accessories included:** AC Adapter (9V 800mA DC Out),

DC Adapter (9V 800mA DC Out – Cigarette Lighter type), AA size NiMH Rechargeable Battery (2300mAh X 4), Rubber antenna (SMA type), USB cable (USB A to USB Mini B Type) (2GB), Desk Use Bracket (Stand Type) AC adapter/charger, DC adapter, desk Stand; USB cable; 4 NiMH rechargeable batteries (AA); quick reference guide.

ADP33 - BNC FEMALE TO SMA MALE ADAPTER .....	\$3.99
CBL18 - BWZY1227001 SERIAL CABLE .....	\$14.95
BRK05 - WBHP1 Windshield Mounting Kit for Homepatrol .....	\$39.95
BRK04 - mobile mounting bracket kit .....	\$11.95
GPSKIT - GARMIN GPS18XPC KIT.....	\$109.95

**Order SCN55  
Only \$499.95**

## Uniden BCD396XT Handheld Trunk Tracker

TrunkTracker IV with Control-Channel Only scanning and I-Call monitoring: Tracks voice traffic on P25, Motorola, EDACS, and LTR Trunked systems / APCO25 Digital Audio decoding / Support for P25 Conventional channels that include NAC and TGID user differentiation (P25 One-Frequency Trunk) / EDACS ESK support / Close Call RF Capture

**Supplied Accessories:** RS-232 PC Cable, Wrist Strap, AC Charger/Power Supply, 3 AA NiMH, Belt Clip, SMA Antenna, SMA-BNC Adapter.

### Suggested Accessories:

CAS09 - Universal nylon carrying case w/strap .....	\$19.95
CAS13 - Hard leather case w/ swivel clip .....	\$29.95
CAS14 - Hard Leather Case w/ belt loop .....	\$19.95
CBL14 - Uniden USB-1 USB Cable .....	\$24.95
ANT50 - Procomm CD144MBN Mobile Antenna ...	\$19.95
DCC03 - DC to DC Universal Adaptor .....	\$12.95
DCC19 - Uniden UA-72 DC Power Cord .....	\$19.95

\*Motorola® Astro®, SMARTNET®, SMARTZONE®, and PRIVACY PLUS®, M/A-COM Private Radio Systems Inc. EDACS® Wide, Narrow, and SCAT, and E.F. Johnson Co. LTR systems.\*



**Order SCN53  
Only \$469.95**

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Technical Questions? (828) 837-9200 or tech@grove-ent.com. Due to high call volume, technical calls will be limited to 3 minutes.

## Uniden BCD-996XT Mobile Trunking Scanner

TrunkTracker IV with Control-Channel Only scanning and I-Call monitoring: Tracks voice traffic on P25, Motorola, EDACS, and LTR Trunked systems / APCO25 Digital Audio decoding / Support for P25 Conventional channels that include NAC and TGID user differentiation (P25 One-Frequency Trunk) / EDACS ESK support / Close Call RF Capture / Coverage: 25.0000 - 512.0000, 758.0000 - 823.9875, 849.0125 - 868.9875, 894.0125 - 960.0000, 1240.0000 - 1300.0000 MHz

**Supplied Accessories:** Serial Programming Cable, AC Adaptor, DC Cord, 3 Wire Harness, Mounting Bracket w/ screws, Whip Antenna, User Manual, on CD, DIN / ISO In-Dash Mounting with included DIN-E sleeve.



**Order SCN21  
Only \$469.95**

### Suggested Accessories:

ANT50 - Procomm CD144MBN Mobile Antenna ..... \$19.95  
SFT19 - Scancat Lite ..... \$29.95  
CBL14 - Uniden USB-1 USB Cable ..... \$24.95  
DCC03 - DC to DC Universal Adaptor ..... \$12.95

## Uniden BC-355

The BC355C comes with 6 Service banks for monitoring police, fire/emergency medical services, marine, air, weather, and CB frequencies. In addition, the BC355C has 13 separate band searches.

You can also save up to 300 frequencies that are scanned along with the preset frequencies. So whenever you encounter a newly activated local frequency for any service category, you can add it to the bank for that category. This gives you quick access to the frequencies you want to hear.



Banks: 7 banks total (6 Service banks / 1 Private bank)

Police (PD): 1,769 Pre-programmed plus 100 programmable channels shared with Fire/Emergency Services

Fire/Emergency (FD/EMG): 280 Pre-programmed plus 100 programmable channels shared with Police

Air (AIR): 1,520 Pre-programmed. (Plus 100 programmable channels shared with Marine)

Marine (MRN): 51 Pre-programmed. (Plus 100 programmable channels shared with Air).

Weather (WX): 10 Pre-programmed (7 for NOAA weather service and 3f or Canada Marine).

CB: 40 programmed.

PRIVATE: 100 channels fully user-programmable.

Search Band: 13 searchable bands

Scan Rate: 50 channels/second

Search Rate: 60 steps/second 180 steps/second (5kHz steps band only)

Scan Delay: 2seconds

**Order DS-BC355C  
Only \$99.95**

## Uniden BC346XT

Some of the new features on the BC346XT that weren't on the BC246T are: EDACS ESK support / Control Channel Data Output - allows the analysis of control channel data without the need to perform invasive modifications to the scanner / GPS Support for location-based scanning, location alerts, and crows-flight navigation / Independent GPS Control of Sites and Channel Groups / Fire Tone Out Alert / Fire Tone Out Search - built-in frequency counter displays the received tones / Band Scope - gives a graphic representation of signal activity / Multi-Site support / Temporary Lockout / Startup Configuration / System, Channel Number Tagging - provides rapid access to a specific system or channel.

**Supplied Accessories:** RS-232 PC Cable, Wrist Strap, AC Charger/Power Supply, 3 AA NiMH, Belt Clip, SMA Antenna, SMA-BNC Adapter.

### Suggested Accessories:

ANT14 - Austin Condor Antenna ..... \$34.95  
CAS08 - Nylon carrying case w/belt clip ..... \$21.95  
CAS11 - Hard Leather Case w/swivel Clip ..... \$16.95  
CAS12 - Hard Leather Case w/belt loop ..... \$9.95  
CBL14 - Uniden USB-1 USB Cable ..... \$24.95  
SFT19 - Scancat Lite ..... \$29.95  
DCC19 - Uniden UA-72 DC Power Cord ..... \$19.95  
DCC03 - DC to DC Universal Adaptor ..... \$12.95



**Order SCN45  
Only \$214.95**

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Technical Questions? (828) 837-9200 or tech@grove-ent.com. Due to high call volume, technical calls will be limited to 3 minutes.

## Uniden BCT8

The BCT8 is a state-of-the-art Trunk Tracking Scanner with BearTracker technology which will alert you when the highway patrol is within approximately a 3 mile radius. It can store 250 frequencies such as police, fire/emergency, marine, railroad, air, amateur, and other communications into 5 banks of 50 channels for a total of 250 channels. add: 25-54; 108-174; 400-512; 806-956 MHz (less cellular)



### FEATURES

- Pre-programmed for: Local Police and County Sheriffs; Fire and Emergency Medical Service; News Media; Weather (continuous NOAA weather and Canadian Coast Guard broadcasts); CB Radio; Aircraft; Railroads; Marine Band; Department of Transportation
- Trunk Tracking – Follow VHF High Band UHF 800MHz trunked public safety and public service systems just as if conventional two-way communications were used.
- PC Programmable – Allows you to easily program all frequencies and Trunking Talk Groups into your BCT8 through Uniden BCT8 Scanning software running on your PC. (RS232C cable not included)

**Supplied Accessories:** AD 140U-AC Adapter, DC Power Cord, CD007 Cigarette Lighter Adapter Plug, Telescopic Antenna, Window Mount Antenna, Operating Guide, Trunk Tracker Frequency Guide, BCT 8 Software V 1.0 (OS W98SE, ME, 2000, XP)

### Suggested Accessories:

SFT19 - Scancat Lite ..... \$29.95  
ANT50 - Procomm CD144MBN Mobile Antenna ... \$19.95

**Order SCN08  
Only \$162.95**

## Uniden BCT-15X

TrunkTracker III for Motorola Type I 800, Motorola Type II 800, 900, UHF, VHF (including rebanded 800 MHz systems), EDACS Wide (standard), Narrow, SCAT (including systems that use an EDACS System Key), LTR / State-by-State Preprogrammed Channels - let you easily keep up with activity on local police, Department of Transportation, and Highway Patrol frequencies when you travel, without having to program any channels. / Close Call, with Close Call Do Not Disturb, Close Call Priority (or Primary), and Close Call Temporary Store.

**Accessories included:** Serial Programming Cable, AC Adaptor, DC Cord, 3 Wire Harness, Mounting Bracket w/screws, Whip Antenna, User Manual on CD.



### Suggested Accessories:

ANT50 - Procomm CD144MBN Mobile Antenna ..... \$19.95  
CBL14 - Uniden USB-1 USB Cable ..... \$24.95  
DCC03 - DC to DC Universal Adaptor ..... \$12.95

**Order SCN31  
Only \$219.95**

## GRE PSR-800

Finally, a wide-frequency-coverage, hand-held scanner with just about every feature you'll need! Easy programming from its own USA/Canada database; automatic loading and tracking of all major trunking systems; P-25 digital voice decoding; database and CPU firmware updating from the Internet; computer control or stand-alone operation; spectrum sweeper to instantly receive and display nearby unprogrammed signal frequencies; S.A.M.E. weather alert; built-in recording of received frequencies; informative multi-line LCD display; standard BNC connector for external antennas; and much, much more!

- Easy to understand Media Player User Interface - The simplified keypad and display with familiar Play, Pause and Navigation controls make EZ Scan Digital intuitive to use.

- Complete USA Database on a MicroSD Card - The entire USA database is stored on a MicroSD Card included with the EZ Scan Digital, giving the user the most comprehensive radio data available... all without connecting EZ Scan Digital to a computer or Internet a GRE First!

- Upgradeable CPU Firmware and Library - Keep EZ Scan Digital current with the enhancements and updates as they become available through provided PC Software Application
- Powerful PC Software Application - Modify or add your own Scanlist with the easy to use EZ Scan Digital software application.
- SKYWARN Store Spotter Functionality - Instant access to frequencies used by storm spotter networks. Monitor storm conditions as they occur, and learn about dangerous conditions before the media or emergency management officials announce them to the general public.
- SAME and All Hazards Weather Alerting -EZ Scan Digital features a Dedicated SAME Weather Alert Receiver mode, alerting users to severe weather and other hazards in the specific area(s) that they select. EZ Scan Digital can check local NOAA weather frequencies periodically, even while scanning, and provide an alert when an All Hazards alert occurs.
- Multi-System Digital and Analog Trunking - Scans digital and analog trunked radio system signaling formats, including Project-25, Motorola Type I/II/Hybrid, EDACS, and LTR systems.

**Included Accessories:** USB data cable, antenna, 2GB Micro SD memory card, rotating belt clip, CD media



**Order SCN57  
Only \$449.95**

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Technical Questions? (828) 837-9200 or tech@grove-ent.com. Due to high call volume, technical calls will be limited to 3 minutes.

## PSR-100/200U SCANNER!

Available as a hand-held (PSR-100) or desktop/mobile (PSR-200U) configuration, this low-cost scanner provides top performance at a bottom price for rural areas with traditional communications requirements. Frequency coverage 29-54, 108-174, and 380-512 MHz for land mobile and aircraft monitoring.

200 memory channels scannable at 45 channels per second; 10 digit channel and frequency display with function icons; priority; SAME weather alert with Skywarn function; up/down search; 2 second delay; manual frequency tuning; key-press tone; back-lit LCD; PC programmable and cloning. Includes whip antenna, AC adaptor and manual.

PSR-100 also includes belt clip, 2 battery holders; 4 AA cells required.



PSR-100



**PSR-100**  
**Order SCN16**  
**Only \$89.95**

**PSR-200U**  
**Order SCN17**  
**Only \$89.95**

## PSR-310/410 SCANNER!

Available in a hand-held (PSR-310) or desktop/mobile (PSR-410) configuration, these mid-range scanners provide top performance with a wide frequency range at a low price. Frequency coverage: 25.00000-54.00000 MHz, 108.00000-136.99166 MHz, 137.00000-174.00000 MHz, 216.00250-299.93750 MHz, 300.00000-

512.00000 MHz, 764.00000-960.00000 MHz, 1240.00000-1300.0000 MHz (less cellular). 1500 memory channels, New 700MHz coverage and Upgradeable CPU firmware for future rebanding, Multi trunking of Motorola (type I, II and hybrid analog system), EDACS wide and LTR. PSR-310 Accessories include Rubber antenna, Owner's manual, Non-Rechargeable Battery holder, Re-charge Battery holder and Belt clip.



**PSR-310**  
**Order SCN22**  
**Only \$179.95**

**PSR-410**  
**Order SCN23**  
**Only \$179.95**

## GRE PSR-500/600 SCANNER!

Available either as a hand-held (PSR-500) or desktop/mobile (PSR-600) configuration, this top-of-the-line scanner sets new standards in the industry! With 25-54, 108-174, 216-512, 764-960 (less cellular) and 1240-1300 MHz frequency coverage, this is the pick for new narrow-band, spectrum-reformed scanning!

Customize your scan list's 37,800 memory channels for up to 1800 conventional or trunking entries without object limits; on-screen programming assistance; upgradable free software as available from GRE; follow trunking from Motorola, LTR, P25 9600 baud, and EDACS wide/SCAT/narrow networks in any land-mobile band; third-party-software remote controllable; tri-color LED alarm/alert custom-programmable.

Adaptive digital tracking instantly compensates for multipath or fading distortion; digital AGC provides even-level audio regardless of mode; DSP subaudible squelch in DCS and CTSS eliminates squelch tail; high-speed USB cloning; Spectrum Sweeper Latches on to nearby transmissions; signal strength indicator; 4 rows of 16 characters each on high-contrast LCD display; SAME/hazards weather alert with single-button access to storm spotter frequencies.

This triple-conversion scanner has selectable 20 dB attenuation for overload situations; multiple priority channels; scan at 55 channels per second; service and frequency search at 90 channels per second; backlit LCD and keypad. Includes whip antenna, AC adaptor and manual.

PSR-500 also includes belt clip, 2 battery cases; 4 AA cells required.

PSR-600



PSR-500



**PSR-500**  
**Order SCN18**  
**Only \$399.95**

**PSR-600**  
**Order SCN19**  
**Only \$399.95**

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Technical Questions? (828) 837-9200 or [tech@grove-ent.com](mailto:tech@grove-ent.com). Due to high call volume, technical calls will be limited to 3 minutes.

## GRE PSR-700



The EZ Scan-SD is an exciting new way to enjoy the hobby of scanning police, fire, EMS, amateur, government and other two-way analog radio communications. The EZ Scan-SD provides a simple and easy to understand user interface in a powerful and feature-rich state of the art analog scanning receiver. The EZ Scan-SD is a professional-quality scanning receiver, yet it is designed to provide ease of use, especially for beginners.

The EZ Scan-SD is equipped with the entire USA RadioReference database in a special on-board Library, giving you instant access to the frequencies and systems used by public safety, local government and business all over the United States. Use the EZ Scan-SD PC application (included) to keep your scanner's RadioReference Library and firmware up to date. Please take a few moments to read this manual carefully before using your EZ Scan-SD.

**Accessories Included:** Quick start guide, rubber antenna, cd (full users manual), USB interface cable.

### **Suggested Accessories:**

PWR12 - power supply/charger with a USB cable connector ..... \$9.95  
DCC06 - 2-port USB car charger ..... \$9.95

**PSR-700  
Order SCN56  
Only \$189.95**

## AOR AR8200 Mk III

The AR8200 Mark III leaves others behind, with a Temperature Compensated Crystal Oscillator that maintains frequency stability without regard to changing ambient temperatures. A new keyboard layout, improved illumination allow easy operation in a variety of conditions and new telescopic antenna included for better reception.

### **FEATURES:**

- Frequency coverage 500kHz-3GHz (Cellular Blocked)
- All mode reception with Super narrow FM plus Wide and Narrow AM in addition to the standard modes
- True carrier re-insertion in SSB modes
- Detachable MW bar aerial with negative feedback
- Tuning steps programmable in multiples of 50Hz in all modes, 8.33kHz Airband step correctly supported
- Versatile band scope with save trace facility & Twin frequency readout with bar signal meter
- Arrow 4-way side rocker with separate main tuning dial
- Configurable keypad beep / illumination & LCD contrast
- Programmable scan & search including LINK, FREE, DELAY, AUDIO, LEVEL, MODE
- Computer socket fitted for control, clone & record, Flash-ROM memory (no battery required)

**Supplied Accessories:** Telescoping Antenna , Belt clip, Battery spacer, Hand strap, Battery pack\* (BP-206), AC adaptor\*(BC-149A/D)

### **Suggested Accessories:**

ACC24 - CT8200 CTCSS decoder ..... \$99.95  
ACC25 - AOR TE8200 Tone Eliminator ..... \$64.95  
ACC27 - AOR EM8200 Extended Memory ..... \$94.95  
ANT12 - AOR MA500 Wideband Whip ..... \$109.95  
ANT39 - AOR SA7000 Base/Portable Ant..... \$249.95  
CAS21 - Hard leather case LC8200 ..... \$21.95  
CAS25 - Soft leather case SC8200P ..... \$16.95  
CBL07 - AOR CR8200 Tape Recording Cable ..... \$67.95  
CBL08 - Computer control lead CC8200..... \$104.95  
CBL13 - AOR IF-8200 Data Cable ..... \$20.00  
PWR24 - AOR AA8000 AC Adaptor ..... \$25.00



**Order SCN51  
Only \$669.95**

**Government agencies order  
SCN51-G Only \$669.95**

## ICOM R20

### **FEATURES:**

Frequency coverage 150KHz - 3.3 GHz (less cellular)  
Modes of SSB/CW/AM/FM/WFM  
Dual watch capability in specific bands  
IC audio recorder built-in with selectable recording times of 1, 2 or 4 hours.  
CTCSS/DTCS/DTMF decode  
1250 memory channels: 1000 memory, 25 scan edge, 200 auto-write scan  
Pre-programmed TV Audio channels  
Voice Scan Control  
Auto squelch function  
AND MORE.....

### **Suggested Accessories:**

BAT04 - BP-206 Li-Ion Battery Cell Assembly ..... \$51.95  
DCC18 - CP-18A DC cord/Cigarette Lighter Cable ..... \$24.95  
CAS07 - LC-158 carrying case ..... \$29.95  
SFT13 - CS-R20 cloning sw + OPC-1382 cable (USB) ..... \$49.95



**Order SCN20  
Only \$539.95**

**Government agencies order  
SCN20-G Only \$539.95**

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## Alinco DJ-X7T

### Wide Band Communication Receiver

Put the power of a desktop receiver into your pocket!

- 0.100 - 1299.995MHz continuous (cell blocked)
- AM, FM, WFM
- Five scan modes are available including preset frequencies, VFO, memory scan, programmed scan or tone scan to search for unknown CTCSS tones.
- Pre-set bands make operation easy
- Easy to program memory banks Managing 1000 memories

**Order SCN03**  
**Only \$179.95**



## Alinco DJ-X11T

### Wide Band Communications Receiver

Listen to the world with this pocket-size multi-mode receiver!

- 2VFO simultaneous RX
- Main-band coverage: 0.05-1,299.99995MHz all mode AM/FM/WFM/SSB/CW (BFO for SSB/CW receive. An external antenna required for practical HF monitoring. Internal bar antenna for AM broadcast reception and earphone antenna feature inclusive.)

**Order SCN24**  
**Only \$329.95**



## ICOM R6

### 100 kHz – 1309.995 MHz\* wideband coverage

While the IC-R6 receives an ultra wideband frequency range, the radio provides superior sensitivity and receiver characteristics that is insusceptible to interference. Amateur stations, AM, FM, short wave broadcasts, TV audio\* and a variety of utility communications can be caught and listened to. Frequency range depends on version. Analog TV audio only. Cannot decode digital TV audio.

### 100 channels per second high speed scan

The IC-R6 has 100 channels per second high speed scan capability\*. This superior scanning power allows the utmost efficiency when search over 1300 MHz of spectrum!

VFO mode scanning.

### 15 hours of continuous receive capability\*

The IC-R6 is energy-efficient, designed to provide many hours of listening enjoyment on a single charge. At 50 mW output using external speaker.

### 1300 memory channels with 22 memory banks

With 1300 alphanumeric memory channels, 50 scan edges and 200 auto write memories, the IC-R6 gives you flexible scanning. Use the bank link scan feature to choose from and connect any of the 22 memory banks.

### VSC (Voice Squelch Control)

The VSC opens the squelch only when a modulated signal is detected and ignores unmodulated beat noise. It is a handy feature for those listeners who are scanning for talk, news and music, but not data bursts or beacons.

**Supplied accessories:** Ni-MH cells\*, AC adapter BC-196DA/SD\* Hand strap, Antenna, Belt clip\* depending on version

### Suggested Accessories:

ACC03 - OPC-478 Computer Interface.....	\$34.95
ACC05 - USB Interface OPC-478U.....	\$49.95
ADP33 - BNC female to SMA adaptor.....	\$3.99
CAS20 - Soft Case LC146A.....	\$21.95
SFT57 - CS-R6 Cloning Software.....	\$42.95

**Order SCN54**  
**Only \$199.95**

**Government agencies order**  
**SCN54-G Only \$199.95**

## Ramsey ABM1 Aircraft Monitor



Monitor the entire 118-137 MHz civilian aircraft band at once, and there's no oscillator that could cause navigational interference on an aircraft! High sensitivity brings in all VHF aircraft signals within miles with no visible antenna (the ear bud cord is its antenna)! Adjust the volume to comfortable listening; set the squelch to limit distance; wear the inconspicuous monitor on a belt or in your pocket. Ideal for air shows, airline trips, air traffic monitoring.

Measuring only 2-1/2" x 4-1/2", the Ramsey ABM1 Aircraft Monitor runs off a 9-volt battery (not included); full operational/technical manual and privacy ear buds are supplied.

**Order SCN05**  
**Only \$149.95**

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Technical Questions? (828) 837-9200 or [tech@grove-ent.com](mailto:tech@grove-ent.com). Due to high call volume, technical calls will be limited to 3 minutes.

# RECEIVERS

## ICOM R-2500 Mobile/Base Receiver

Dual watch capability The IC-R2500 has dual watch receive capability\*1, allowing you to receive two bands simultaneously. It covers 0.01–3299.999 MHz (less cellular on consumer model) in AM, FM, WFM, SSB, CW, DV\*2 and P25\*3 modes on the main receiver, while the sub-receiver covers 50–1300MHz in AM, FM and WFM modes\*4.

\*1 Two antennas are required for dual watch receive.

\*2 Optional UT-118 required.

\*3 Optional UT-122 required.

\*4 Frequency range differs depending on version.

Diversity receive capability The diversity receive\* mode is useful for mobile operation where the received signal changes continuously. It compares the signal strength and chooses the antenna with the better signal to maintain good sound and receive quality.

**Wide LCD display** for independent band control The wide LCD display shows both main/sub receiver settings in an easy-to-read symmetric side-by-side layout. The controller provides separate tuning, volume, squelch knobs and function buttons for the left (Main) and right (Sub) receivers. The LCD backlight color is selectable between amber and green for your preference.

**Digital mode reception** The optional UT-118 D-STAR digital unit and UT-122\* P25 digital unit provide the latest digital mode reception. Catch the action in digital communications!

**1000 alphanumeric memory channels** With Icom's Dynamic Memory Scan, DMS, you have a versatile memory channel management system at your command. The 1000 memory channels can be arranged by service or personal preference in the 21 memory banks. Selectively link the channels together to scan depending on your needs. Programming the memory channels and 6 character memory names is simple with your PC.

**Supplied Accessories:** AD-113A/E\* USB cable and antenna, Software CD, Controller head and cable, (3.4m; 11.2ft) \*Depending on version

### Suggested Accessories:

ACC16 - ICOM UT-106 DSP Unit .....	\$139.95
CBL12 - ICOM OPC-441 Speaker Extension Cable .....	\$32.95
DCC12 - ICOM CP-12L DC Power Cord .....	\$29.95
ACC07 - ICOM UT-122 P-25 digital unit .....	\$219.95

**Order RCV52  
Only \$929.95**

**Government agencies order RCV52-G Only \$1019.95**

## PERSEUS SDR

Measuring only 4-1/4"W x 1-1/2"H x 7-1/4"D, and weighing a mere 13 ounces, the software-defined Perseus is high-performance, 0.39 uV sensitivity, 10 kHz-30 MHz, all-mode communications receiver with +31 dBm IP3, 100+ dB dynamic range, and 90 dB image rejection for overload immunity.

It features a lab-grade spectrum analyzer function with a span of up to 800 kHz (1600 kHz software upgrade expected soon) and a resolution bandwidth adjustable from 0.4-800 kHz. Optional frequency extenders for VHF and UHF are being released as well.

Other spectrum-displaying receivers show signals pop up on your spectrum display, then disappear before you can tune them in. But like the powerful surveillance receivers used by government and military intelligence agencies, the Perseus can actually perform pre-detection recording, saving to your hard drive all the signals in a swath of spectrum in real time for you to tune, monitor and analyze later with the Perseus advanced software!

Ideal for broadcast and utility DXing, SETI research, contesting, propagation studies, SIGINT and serious signals surveillance as well.

Its 14 bit 80 MS/s A/D converter, high-performance FPGA-based down-converter, and high-speed 480 Mb/s USB2.0 PC interface operate under Windows 2000, XP, or Vista. Audio is via the PC soundcard or on-board audio. A universal 120/240 VAC 50/60 wall adaptor is included. The antenna connector is a BNC.

**Order RCV57  
Only \$1199.00**

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Technical Questions? (828) 837-9200 or [tech@grove-ent.com](mailto:tech@grove-ent.com). Due to high call volume, technical calls will be limited to 3 minutes.

## ICOM R-75

### FEATURES

- DSP (Digital Signal Processing) The IC-R75 is capable of AF-DSP with a factory installed DSP plug-in module. It offers noise reduction, and auto notch filter capabilities.
- Coverage: 0.03 - 60 MHz (0.1-29.99 and 50-54 MHz guaranteed)
- Modes: AM, S-AM, FM, USB, LSB, CW, RTTY
- Triple conversion superheterodyne receiver
- The IC-R75 sports cutting edge technology for today's serious DX'er, yet it is easy and affordable enough for casual listener use.
- Get PC control of the IC-R75 with optional RS-R75 software on CD ROM. Runs on Windows® 95; or Windows® 98 and comes with the necessary connection cable.
- With its superior dynamic range of > 104 dB, twin passband tuning (PBT) controls, and a large front mounted speaker, the IC-R75 offers unparalleled receive quality.
- Selectable RF gain/squelch control / Attenuator / 1 Hz tuning resolution / 2 level preamp / Selectable AGC / Three timer functions: sleep, power OFF, power ON / Noise blanker / Single touch controls / 12 V DC Power (120 V AC adapter included) / Voice synthesizer (optional)



**Supplied Accessories:** AC adapter cable or DC power cable (depending on version), Spare fuse

### Suggested Accessories:

ANT08 - Par Shortwave Antenna .....	\$74.95
ANT15 - LF Engineering H-800 Skymatch Active Antenna ...	\$149.00
ANT27 - LF Engineering H-900 Gain Probe Antenna.....	\$189.00
SFT24 - ICOM RS-R75 Remote Control Software .....	\$79.95
SPK08 - ICOM SP-23 base speaker .....	\$194.95

**Order RCV32  
Only \$669.95**

*MT was instrumental in inspiring me to obtain my ham license (now extra) after I picked up a copy to help me get my new Sony SW7600GR going back in May.*

*Merry Christmas and best regards,*

*-Jim M.*

## AOR AR5001D

The long-standing, highly-respected AR5000 has been replaced by the new AR5001D. Is there much difference? You bet there is – the AR5001D is like an AR5000 on steroids! With continuous frequency coverage from 40 kHz-3150 MHz (3.15 GHz), this new receiver can search or scan 2000 alphanumeric memory channels at a lightning-fast speed of up to 1000 channels per second! It can receive up to three different frequencies simultaneously, and can show real-time signal activity on its built-in spectrum display with a span up to 15 MHz wide!



Computer control this receiver through its RS232 or USB 2.0 ports, and record signal contents on an SD card! Reveal NTSC or PAL wireless surveillance cameras by attaching an appropriate analog monitor to the AR5001D video output jack. Select IF bandwidths from 200 Hz-300 kHz, and process the signal with an automatic notch filter, noise reduction and noise blanking, and even a speech inversion descrambler (not available on consumer model).

### Suggested Accessories:

ACC08DS - P25-2300 APCO25 decoder .....	\$204.95
ACC31DS - IQ-5001 I/Q interface w/control software.....	\$569.95
ACC32DS - GP-5001 External GPS and interface unit.....	\$429.95
ACC33DS - ARL2300 External IP control unit (Static IP address required) .....	\$899.95

**Order RCV68  
Only \$4199.95**

**Government agencies order  
RCV68-G Only \$4199.95**

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## AOR AR2300 BLACK-BOX RECEIVER

The AR2300 communications receiver from AOR is ideally suited for radio and spectrum monitoring in various commercial and government applications, as well as for use in radio investigation services.

All functions of the AR2300 can be used with a lap-top or desktop PC that runs under Windows XP or higher OS.

The AR2300 can be controlled remotely through an optional LAN controller.

Lightweight net-book PC can be used as control head for the AR2300. (PC not included.)

Digital signal processing: 45MHz of the 3rd intermediate frequency is directly digitized for digital signal processing for demodulation and spectrum display by a PC. No automatic gain control (AGC) is employed in the analog circuitry to allow accurate level monitoring across the IF bandwidth.

High performance analog front-end: The analog RF front-end is carefully designed and by CAD to gain optimum performance across the entire receiving frequency range of 40KHz to 3150MHz.

### Suggested Accessories:

ACC08DS - P25-2300 APCO25 decoder .....	\$204.95
ACC31DS - IQ-5001 I/Q interface w/control software .....	\$569.95
ACC32DS - GP-5001 External GPS and interface unit .....	\$429.95
ACC33DS - ARL2300 External IP control unit (Static IP address required) .....	\$899.95



**Order RCV60  
Only \$3699.95**

**Government agencies order RCV60-G, only \$3699.95**

## AOR 8600 MkII

Wideband, compact, multimode—all in one versatile package! Redesigned for improved sensitivity, dynamic range, internal rejection and audio quality. The AR8600 Mk II covers 100 kHz to 3000 MHz (less cellular on consumer models), and can be used mobile, base, or trans-portable. All-mode receive capability is combined with enormous operational flexibility, including computer control capability.

- Frequency coverage 100 kHz-3000 MHz no gaps (Cellular blocked) • All-mode reception of AM (wide and narrow), FM (wide, narrow, and super-narrow), USB, LSB, CW • High-stability TCXO-SSB with true carrier re-insertion • Versatile band scope with save-trace facility, Twin frequency readout with bar signal meter • Improved front end with VHF preselection • Detachable MW bar aerial • On/off display dimmer • Tuning steps programmable in multiples of 50 Hz in all modes • Noise limiter & attenuator • Write protect & keypad lock • Programmable scan & search • RS232 computer socket, Flash-ROM memory (no battery required) • Slot card sockets for AOR accessory upgrades



**Order RCV11  
Only \$939.95**

Flash-ROM memory (no battery required) • Slot card sockets for AOR accessory upgrades

### Suggested Accessories:

ACC22 - AOR P25-8600 APCO 25 Decoder .....	\$204.95
ACC24 - CT8200 CTCSS decoder .....	\$99.95
ACC25 - TE8200 tone eliminator .....	\$64.95
ACC27 - EM8200 extended memory card .....	\$94.95
ADP09 - F to BNC adaptor .....	\$2.99
ANT39 - AOR SA7000 Base/Portable Ant .....	\$249.95
BRK01 - Mobile Mounting Bracket MM8600 .....	\$94.95
DCC01 - DC8600 DC cigarette lighter cable .....	\$12.95
FTR02DS - Collins Mechanical Filter (2.5kHz) .....	\$109.00
FTR04DS - Collins Mechanical Filter (6.0kHz) .....	\$109.00
PWR01 - AOR AA8600 AC Power Supply .....	\$43.00

**Government agencies order RCV11-G**

## Grundig G3 Shortwave Portable



Measuring only 6-1/2" x 4", this PLL-stabilized, dual-conversion powerhouse covers AM broadcast through 30 MHz, and FM (stereo with included earphones!) with fine-tuned SSB reception as well! Store your favorite frequencies in 700 memory channels with alpha identification; use the digital clock with world zone settings for timing and alarm. Display is backlit for night viewing. Direct-entry keypad assures accurate frequency selection; tune continuously with the adjustment knob, or press the auto-search key to scan or step manually. Includes AC adaptor for continual use or to recharge your NiMH batteries (not included); accepts AA alkalines as well! Handy, durable leatherette pouch included.

**Order RCV65  
Only \$149.95**

ANT 45 - Grove Flex-Tenna™ .....	\$14.95
CBL09 - F Male ~ F Male Coax (3') .....	\$1.25
ADP05 - F FEMALE TO MALE 1/8" MINI ADAPTER .....	\$2.99

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## Eton S350DL Deluxe SW Portable

This professionally-styled portable provides great reception at a rock-bottom price! Measuring 13" by 7" and sporting a gutsy 4" speaker, the superior audio is contoured by separate bass and treble controls. Output jacks are provided for line-level stereo output to your sound system. Frequency coverage of AM, FM and 3-28 MHz shortwave is accomplished by concentric fast-and slow-tuning knobs. Sharp selectivity separates those closely-spaced stations! Powered by your choice of AA or D cells (and an AC wall adaptor is included), the S350DL sports a clock alarm, large backlit frequency display, telescoping whip, internal AM ferrite antenna, and external antenna connections for long-distance FM and SW reception.



**Order RCV04**  
**Only \$99.95**

## Grundig Satellit 750

### AM/FM-Stereo/Shortwave/Aircraft Band Radio with SSB (Single Side Band)

When you want full shortwave capabilities and a classic design, choose the Satellit 750. A 360-degree rotating AM antenna enhances the radio's ability to pull in weak AM signals. You can listen to AM, FM, SW, LW, SSB and aircraft band frequencies, and you can program in up to 100 of your favorites for each band. You can also connect your MP3 player for even more listening choices. Hear what you want to hear.



**Order RCV58**  
**Only \$299.95**

## Kaito KA801

This radio gives you high quality sound and excellent reception. AM/FM/SW bands with an mp3 Player and voice recorder for taking notes in an instant! It records from radio stations too. It's the smallest radio combined with all these features all in one. Don't miss your favorite radio show, the KA801 will record it and play it back for you with ease.

### Supplied Accessories:

- AC/DC 4.5V/200mA Adaptor
- User manual
- Earphones
- User manual
- Built in back stand

**Order RCV61**  
**Only \$79.95**



## Kaito 1121

Single sideband and dual-conversion technology compares to the best portables on the market. Cutting-edge technology combines an MP3 recorder/player with a multiband receiver for 10 hours of high quality recording--hundreds of songs! Plug in any audio out and play on this amplified speaker for the device like iPod or MP3 players. All seven NOAA weather channels are clearly receivable.

Program station names and frequencies from a .txt file and load it into the radio's memory

A smart rechargeable system is included for rechargeable batteries which operate the radio and the MP3 device.



**Order RCV37**  
**Only \$149.95**

ANT 45 - Grove Flex-Tenna™ .....	\$14.95
CBL09 - F Male ~ F Male Coax (3') .....	\$1.25
ADP05 - F FEMALE TO MALE 1/8" MINI ADAPTER .....	\$2.99

## Kaito KA-1103

Kaito's latest entry into the multiband portable market may look like an analog-dial radio, but it's actually a precision PLL circuit with 1 kHz steps and digital LCD readout! It tunes 76-108 MHz FM and also continuous 522-29900 kHz AM and shortwave—and it has infinite clarifying SSB as well!

This powerful, dual-conversion portable also has 190 memory channels (10 pages of 19) + 1 page for SSB to store your favorite stations, and runs off 4 Ni-MH AA rechargeable batteries (included) and AC; an automatic charger/adaptor is provided.



**Order RCV55**  
**Only \$89.95**

ANT 45 - Grove Flex-Tenna™ .....	\$14.95
CBL09 - F Male ~ F Male Coax (3') .....	\$1.25
ADP05 - F FEMALE TO MALE 1/8" MINI ADAPTER .....	\$2.99

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## GRUNDIG G6 AVIATOR



AM/FM-stereo/Aircraft Band (117-137 MHz) and LW-Shortwave (150-29999 KHz) / Dual conversion / Digital tuning with digital frequency readout (LCD) / 700 memories with 4 character page naming / Full-featured world time zone: clock, sleep timer / Dimensions: 4.92" x 3" x 1.14" (W x H x D) / Weight: 7.3 oz., 207 g / **Accessories:** owner's manual, warranty card, AC adaptor, ear buds, protective pouch

**Order RCV59  
Only \$99.95**

ANT 45 - Grove Flex-Tenna™ ..... \$14.95  
CBL09 - F Male ~ F Male Coax (3') ..... \$1.25  
ADP05 - F FEMALE TO MALE 1/8" MINI ADAPTER ..... \$2.99

## GRUNDIG G8 TRAVELER

The Grundig G8 Traveler II covers longwave, medium wave, Shortwave and FM bands. Shortwave coverage is: 3190-3450, 3850-4050, 4700-5100, 5700-6300, 7080-7600, 9200-10000, 11450-12200, 13500-13900, 15000-15900, 17450-17900, 18850-19100 and 21430-21950 kHz. The G8 has an Analog Circuit with Digital display. It features a 24-hour clock with alarm that can wake you to a buzzer or to your favorite radio station. Other features include: key lock function, Backlit display (momentary on), fast or slow tuning, longwave disable function, daylight savings time adjust and 9 or 10 kHz AM band step. There is also an extensive Memory system that may be filled manually or automatically (ATS). The capacity is: 100 FM, 100 AM, 100 longwave and 200 shortwave frequencies. There is a built in ferrite bar antenna for longwave and medium and a telescopic whip for FM and shortwave. This radio even employs DSP-Digital Signal Processing to improve reception.



**Order DS-G8  
Only \$49.95**

## Sangean ATS909X

- 406 Presets (FM 3 Pages: 27 Presets / LW 1 page: 9 Presets / MW 2 Pages: 18 Presets / SW 39 Pages: 351 Presets) + 1 Priority Preset
- Five Tuning Methods: Direct Frequency Tuning, Auto Scan, Manual Tuning, Memory Recall and Rotary Tuning
- ATS (Auto Tuning System) Auto Scan and Preset Priority Signal Strength in FM / MW / LW Bands
- FM RDS / RBDS with PS, PTY, RT and CT Features
- DSP IF Decoder
- Large LCD Screen with Bright White LED Backlight
- Automatically Searches for Strongest Signal Station within SW Station Pages
- Alarm: Radio or HWS (Humane Wake System) Buzzer



**Order RCV67  
Only \$259.95**

## Sangean ATSS505P

Sangean's most recent ATSS505P is a dual-conversion portable with continuous coverage from 150 kHz-30 MHz as well as 88-108 MHz FM (stereo with earbuds, included), with AM and USB/LSB reception, and even includes an AC power supply and reel antenna. 45 scannable memories allow automatic sampling of saved frequencies, while auto preset determines which signals are the strongest for reception. Frequencies may be entered directly with the keypad, or continuously adjusted with the tuning dial.

Illuminated display shows frequency, 12/24 hour time, adjustable sleep/timer offers gradually-increasing alarm level; entire panel may be locked out to prevent misadjustments.



**Order RCV07  
Only \$109.95**

ANT 45 - Grove Flex-Tenna™ ..... \$14.95  
CBL09 - F Male ~ F Male Coax (3') ..... \$1.25  
ADP05 - F FEMALE TO MALE 1/8" MINI ADAPTER ..... \$2.99

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fax: (828) 837-2216 email: order@grove-ent.com web: www.grove-ent.com  
Technical Questions? (828) 837-9200 or tech@grove-ent.com. Due to high call volume, technical calls will be limited to 3 minutes.

## AOR SDU5600

The AOR SDU5600 is a compact LCD spectrum display unit for spotting and capturing brief transmissions within 10 MHz of the tuned frequency. Designed as a companion for the AR 5000+3 receiver, the SDU 5600 can also be used with any receiver with an IF output between 6-15 MHz. Functions include step size selection for direct channel sampling, and continuous spectrum mode (with choices of peak, max, average). On-screen support is provided for AR5000, AR5000+3, AR3000A, ICOM® IC-R7100, IC-R8500, IC-R9000 and "Others."

Other receivers equipped with a 10.7 MHz IF output can provide signals to the SDU5600 but the sweep span could be limited depending on the IF characteristics of the chosen receiver.

- High resolution 5 inch color TFT display

Graphics are clear, crisp and sharp.

- Built-in "waterfall" display function
- FFT signal processing and analysis
- Wide input level range: 0 ~ -90dBm
- High dynamic range: 60 dB



**Order TST10DS  
Only \$1,599.95**

Supplied with: 1 Control cable for the AR5000 models (DB-9 type male), 1 BNC patch cable for IF connection, 1 Instruction manual, 1 120 V AC adapter

## WIFI RADIO

Now you can listen to more than 16,000 streaming radio stations from around the world! Famous networks like the BBC and NPR; international shortwave stations; talk show and music broadcasters of every imaginable kind; even scanner traffic like police, fire and EMTs from metropolitan action centers! Simply plug any of these units into your Internet phone line, or invisibly join your wireless network from anywhere in your home or office—no computer needed.

### SANGEAN WFR-1 AND WFR-20 WiFi INTERNET RADIO

The Sangean WFR-1 offers the ultimate in Internet Radio listening. Load your favorite stations into memory; play your MP3 music files through its high-quality stereo system; listen to virtually every music mode from around the globe; monitor police communications, fire emergencies, even aircraft communications as more and more become available—all in clear, static-free sound!

- High Quality Full Range 3" Stereo Speakers in Acoustically Designed Wooden Cabinet
- Stereo Headphone Jack
- FM tuner with RDS (**RCV56 only**)
- Aux In/Line Out
- Remote Control
- 12.7 W x 4.2 H x 8.2 D, Weight: 6.4 lbs.

**RCV56 - \$299.95**  
**RCV40 - \$249.95 (No FM)**



## GRACE WIFI RADIOS



The new Grace Wi-Fi Internet radio is the 1st Internet radio to allow complete control of your Pandora stations directly from the front of the radio, the remote control or the Free iPhone remote control app. In addition to Pandora listen to over 50,000 other radio stations. Including: NPR on Demand, BBC, and iheartradio.

**Grace Pandora GDI-IR2550P - \$139.95**



The Innovator III Wi-Fi radio is an all in one advanced tablet radio. Over 30,000 internet radio stations, podcast and on demand content – no computer needed.

Listen to your favorite local station with no fading or static. Explore thousands of international radio stations from around the world. If we don't have your station, you can add! Music is fun again.

**Grace Innovator III GDI-IR2500 - \$129.95**

Play Internet radio, music services, iTunes and Windows Media player in any room of your house

The new Grace Wi-Fi Stereo Micro System (GDI-IRMS300) is perfect for your apartment, den or office. Listen to and create Pandora stations, NPR, Rhapsody, your local and international AM, FM and HD radio stations, iheartradio and even Sirius XM Internet radio without a satellite dish. Direct from your broadband DSL or cable internet connection. No computer needed.

**Grace Wi-Fi Micro System GDI-IRMS300 - \$199.95**



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Technical Questions? (828) 837-9200 or [tech@grove-ent.com](mailto:tech@grove-ent.com). Due to high call volume, technical calls will be limited to 3 minutes.

## WR-G31DDC 'EXCALIBUR'

This sturdy, compact, die cast package is the size of a paper-back novel, accessorized with a USB computer interface (cable provided), an SMA antenna connector (an SMA/BNC adapter is included); and a 12VDC jack (an AC adapter is also included).

Covering a continuous 9 kHz (and lower) to 50 MHz spectrum, detection modes include AM, synchronous AM, USB, LSB, CW, FM, FSK, UDM (user defined mode), and even DRM (optional).

The screen is a powerful signal processing and analysis tool. Three spectrum displays reveal the presence, frequencies, and relative amplitudes of signals. Simply press and step the zoom icon for larger magnification.

View the spectrum as a conventional spectrum analyzer, or as a colorful waterfall presentation adding the time dimension for signal activity up to two minutes of recording and display, all adjustable from full 50 MHz wide in real time down to a few kilohertz for signal analysis.

Do predetection recording like the intelligence agencies and play it back later for analysis and monitoring of any signals as they transmit within 2 megahertz bandwidth.

Drag the cursor with your mouse across the spectrum display to select and monitor signals instantly, or type the frequency in directly with 1 Hz accuracy. A display tells you the service authorization for that frequency (broadcasting, amateur radio, maritime mobile, etc.).

Three separate receivers may be monitored independently or simultaneously, provided they are within a 2 MHz spread. Passband tuning and digital IF shift remove adjacent channel interference.

PC requirements are Windows XP, Vista, or 7, with a 2 GHz dual core CPU and 1 GB RAM. The display should be SVGA and only 20 MB hard drive space is required. The G31 will work with slower computers with some sacrifice in selectivity and DDC bandwidth.

This is radio signal acquisition like you've never experienced before!

RCV66 WR-G31DDC ..... \$899.95

## WR-G33DDC EXCALIBUR PRO

The WINRADiO WR-G33DDC 'EXCALIBUR Pro' is a high-performance, low-cost, direct-sampling, software-defined, shortwave receiver with a frequency range from 9 kHz to 49.995 MHz. It includes a real-time 50 MHz-wide spectrum analyzer and 4 MHz-wide instantaneous bandwidth available for recording, demodulation and further digital processing.

This product is an advanced version of the award-winning WR-G31DDC receiver offering the following additional features and improvements:

- 4 MHz instantaneous processing bandwidth
- Low-noise preamplifier
- Configurable preselection filters
- Filter bandwidth adjustable down to 1 Hz
- 0.5 ppm frequency stability
- Test and measurement functions

The receiver's superior performance results from its innovative, direct-sampling, digital down-conversion architecture along with the use of leading-edge components and design concepts. These all result in a very high IP3, wide dynamic range, high sensitivity, and accurate tuning. These key features create a receiver in a class of its own, with wide application potential, at a very affordable price.

The entire 4 MHz DDC (digitally-down-converted) bandwidth is available for recording and demodulation. Three demodulators allow the simultaneous reception of three signal frequencies within the 4 MHz bandwidth.

### Features

- 9 kHz to 49.995 MHz continuous frequency range
- Direct sampling
- Digital down-conversion
- 16-bit 100 MSPS A/D converter
- 50 MHz-wide, real-time spectrum analyzer
- 4 MHz recording and processing bandwidth
- Continuously adjustable filter bandwidth down to 1 Hz
- Three parallel demodulator channels
- Waterfall display functions
- Audio spectrum analyzer
- Audio and IF recording and playback
- Recording with pre-buffering



### COMING SOON! The WR-G39DDC!

The WINRADiO WR-G39DDC 'EXCELSIOR' is a high-performance HF/VHF/UHF/SHF software-defined receiver with a frequency range from 9 kHz to 3500 MHz, two independent channels of 4 MHz wide instantaneous bandwidth available for recording and further digital processing, plus a 16 MHz wide real-time spectrum analyzer.

RCV62 WR-G33DDC ..... \$1649.95

## WiNRADiO PC-based Receivers, G315 Series

This receiver is intended for government, military, security, surveillance, broadcast monitoring, industrial and demanding consumer applications.

G3

The WiNRADiO WR-G315i is a software-defined high-performance VHF/UHF receiver (9 kHz to 1800 MHz, extendable to 3500 MHz using an optional downconverter) on a PCI card.

The receiver offers an unparalleled flexibility given its SDR architecture, respectable dynamic range, and high sensitivity. Many useful features complement the receiver, making it capable of filling not only the role of a monitoring receiver but also that of a measuring receiver, such as the calibrated S-meter showing the received signal levels in dBm,  $\mu$ V or S-units, down to the -140 dBm noise floor, several spectrum analyzers, and many other features not usually found on receivers of this price.

The hardware and software package consists of the receiver card, Windows-based software, a start-up antenna and a user's manual.

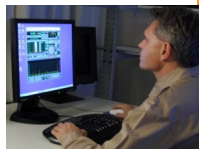
RCV54 WR G315i..... \$CALL  
RCV54-G WR G315i (government/professional version)..... \$CALL

The receiver connects to an IBM-compatible PC via the USB port. Several receivers can be controlled by a single PC to form a multi-channel HF receiver system.

The receiver has its own on-board DSP, and does not rely on the PC sound card for the signal input; the digitization is done in the receiver itself, using a high-performance analog-to-digital converter. As the DSP performs the final stage IF filtering and all demodulation, this receiver is entirely software-defined, which means that additional demodulation or decoding modes can be easily added by a mere software change. (For example, an optional DRM decoder/demodulator is also available.)

Easily installed to any modern computer with the USB interface, this receiver represents an excellent mobile solution for VHF/UHF listening and monitoring.

RCV64 WR G315e..... \$CALL  
RCV64-G WR G315e (government/professional version)..... \$CALL



## WiNRADiO PC-based Receivers, G313 Series

The G313 Series receivers are professional, software-defined shortwave receivers, for demanding monitoring and surveillance applications.



This is an internal model, where the entire high-performance shortwave receiver (9kHz-30MHz) is contained on a PCI card, extremely well shielded against the effects of PC-generated interference. The demodulation is performed by an on-board DSP, which makes it possible to use multiple receivers in a single computer. Numerous functions and facilities include recording and playback (both audio and IF spectrum), IF shift, notch filter, noise blanker, and numerous test and measurements facilities including several spectrum analyzers. There are also numerous hardware options, factory-installed at the time of order. Simple "Plug and Play" installation.

RCV31 WRG313i..... \$1149.95



The WiNRADiO WR-G313e is a software-defined high-performance HF receiver (9 kHz to 30 MHz, optionally extendable to 180 MHz) with a USB interface, an external version of the acclaimed WR-G313i receiver.

The receiver connects to an IBM-compatible PC via the USB port. Several receivers can be controlled by a single PC to form a multi-channel HF receiver system.

The receiver has its own on-board DSP, and does not rely on the PC sound card for its performance. As the DSP performs the final stage IF filtering and all demodulation, this receiver is entirely software-defined, which means that additional demodulation or decoding modes can be easily added by a mere software change.

RCV31E WRG313e..... \$1149.95

## G3 Modifications

OPTIONS ARE FACTORY INSTALLED AND WILL TAKE 4-6 WEEKS FOR DELIVERY. To order a receiver with any of the options, simply add the option code(s) to the receiver model number. For example, for a 180MHz receiver with external reference oscillator, the model number will be G313i/180/XR. Options can be mixed together (except the IF options where only one can be selected, i.e. IF1 and IF4 cannot be selected at the same time).

MOD04 - Frequency Extension Option (G313/180) ..... \$249.95  
MOD05 - External Reference Oscillator Option (G313/XR) ..... \$199.95  
MOD06 - Reference Oscillator Output Option (G313/RO) ..... \$199.95  
MOD07 - Intermediate Frequency Output Option 10.7 MHz (G313/IF1) \$249.95  
MOD08 - Intermediate Frequency Output Option 45 MHz (G313/IF4) \$199.95

## WiNRADiO G305 Series

**Convert your desktop PC into a most sophisticated radio monitoring station! The WiNRADiO WR-G305i is a software-defined PC-based wideband scanning receiver covering a frequency range from 9 kHz to 1800 MHz (optional down-converter to 3.5 GHz available).**



The "G3" stands for "the third generation": As the original, award-winning, first-generation WiNRADiO WR-1000i receiver was the world's first commercially available wide-band receiver on a PC card when launched over a decade ago, the newly introduced WR-G305i is the world's first commercially available software-defined VHF/UHF receiver on a PCI bus card.

This Software Defined Radio (SDR) offers demodulation and last IF (intermediate frequency) processing entirely in software. Usually this means using a DSP, but in the case of the G305i, this processing is done on a personal computer using a sound card (most modern PCs are now faster and more powerful than many DSPs were only a few years ago). So, if you own a PC, the chances are that you already own an important part of a software defined radio receiver!

In addition to the flexible and friendly user interface, with its numerous functions and facilities not normally available on any conventional receiver, the WiNRADiO G305i receiver excels particularly by the ability of its demodulators.

While the Standard Demodulator provides performance of a highly respectable scanning receiver including synchronous AM demodulation and a real-time spectrum scope, the optional Professional Demodulator offers even more: continuous IF filter bandwidth adjustment (in 1Hz increments), interactive block diagrams with two additional audio spectrum scopes, and even inbuilt THD and SINAD measurement capability.

### G305i

Frequency range from 9 kHz to 1800 MHz (except cellular bands where required by law), Software-defined demodulation, Extraordinary sensitivity, Tracking front-end filters, Excellent strong signal handling, Real-time spectrum analyzer, Spot-on tuning in 1Hz steps, Accurate signal strength indicator, Fast scanning speed, Multiple squelch modes, Very low phase noise, DRM decoder option, Standard PCI interface, 3.5 GHz down-converter option, Plug and Play installation



RCV53 ..... \$519.95  
Government Agencies Order RCV53-G

### G305e

The G305e represents an external version of the WR-G305i receiver, with equivalent performance. The PC-based receiver is USB-controlled and compatible with modern desktop and laptop computers with USB interface.



RCV63 ..... \$619.95  
Government Agencies Order RCV63G

### G305i/PD

The amazing G305i with the Professional Demodulator. The many additional features include: Continuously variable IF bandwidth 100 Hz - 15 kHz, user adjustable filter selectivity, WiNRADiO Digital Bridge™ compatibility, built-in test and measurement instrumentation, interactive block diagrams with two additional audio spectrum scopes, and even inbuilt THD and SINAD measurement capability.



RCV53P ..... \$619.95  
Government Agencies Order RCV53P-G

### G305e/PD

The amazing G305e with the Professional Demodulator. The many additional features include: Continuously variable IF bandwidth 100 Hz - 15 kHz, user adjustable filter selectivity, WiNRADiO Digital Bridge™ compatibility, built-in test and measurement instrumentation, interactive block diagrams with two additional audio spectrum scopes, and THD and SINAD measurement capability.



RCV63P ..... \$719.95  
Government Agencies Order RCV63P-G

MOD09 – Wide FM option available for ALL G305 receivers.....\$149.95.

This option is factory installed and requires 4 – 6 weeks for delivery.

## 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.



RCV16/GPS WR-G33EM/GPS ..... \$999.95

RCV16 WR-G33EM.... \$849.95

## WiNRADiO WR-G33WSM

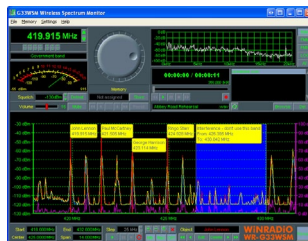
This receiver contains a number of specialist features tailored to audio engineering. Its wide frequency range covers all standard wireless microphone and other VHF/UHF frequencies used in stage production, including the FM broadcast band and point-to-point communications.

Highly sensitive, easy to interface with standard laptops and PCs and optimized to work with short VHF/UHF antennas, the receiver is also simple to install and intuitive to use.

Its fast scanning facilities make it possible to map the radio spectrum environment of a particular location, quickly determine available frequencies and allocate wireless microphones to the available channels.

The entire spectrum environment of each venue can be saved and recalled later, to save time during the next visit.

Each performer's microphone signal peak is clearly visible in the scanned spectrum, and can be marked with a user-defined description. All this information, too, can be saved.



RCV28 W-G33WSM ..... \$999.95

RCV28-G Government Model..... \$999.95

## WiNRADiO Accessories

*Add-on software such as demodulators and decoders, trunking applications, digital signal processing software, frequency databases and other software accessories are available by direct download from the Winradio web site.*

ACC02 - WR-USB USB ADAPTOR .....	\$39.95
ACC13* - WR-AMFE-3500 ANTENNA MULTIPLEXER AND FREQUENCY EXTENDER for G315 receivers.....	\$1195.00
ACC14D - CLIENT/SERVER OPTION FOR G313 SERIES.....	\$129.95
ACC15* - WR-BT-650 HF/VHF POWER INJECTOR (BIAS T).....	\$99.95
ACC20* - WR-CMC-30 COMMON-MODE CHOKE .....	\$49.95
ACC28 - WR-PCA PCMCIA OPTION.....	\$89.95
ACC29* - WR-BT-3500 VHF/UHF POWER INJECTOR (BIAS T) .....	\$99.95
ACC34* - WR-AMFE-8600 ANTENNA MULTIPLEXER AND FREQUENCY EXTENDER for G315 and third party receivers .....	\$2,495.00
ACC37 - WR-MAC-SC-01 MACINTOSH SERIAL CABLE .....	\$17.95
ACC71 - WR-AC-MC-01 MOUNTING CLAMPS.....	\$14.95
ADP35 - WR-LWA-0130 LONG-WIRE ANTENNA ADAPTOR.....	\$39.95
BRK02 - WR-G3E-WMB WALL-MOUNT BRACKET FOR G3 SERIES .....	\$19.95
CBLO3 - WR-RCA-03 CABLE FOR 1500/3000 RECEIVER "DATA PORT" .....	\$9.95
CVR02 - WR-DNC-3500 FREQUENCY DOWNCONVERTER.....	\$219.95
DEC01 - WR-UNIFSK DECODER .....	\$449.95
PRE03 - WR-LNA-3500 LOW NOISE AMPLIFIER.....	\$199.95
PWR09 - G3 Portable Power Source Option .....	\$189.95
SFT15 - DIGITAL SUITE .....	\$74.95
SFT15U - DIGITAL SUITE UPGRADE.....	\$74.95
SFT20 - G303 PROFESSIONAL DEMODULATOR .....	\$119.95
SFT23 - TRUNKING OPTION .....	\$74.95
SFT38* - WR-EM-GPS G33EM GPS OPTION .....	\$189.95
SFT40 - G305 PROFESSIONAL DEMODULATOR.....	\$179.95
SFT42 - APCO P25 Decoder for G305 Receivers .....	\$89.95
SFT56 - WR-ATO-G305 ADVANCED TRUNKING OPTION .....	\$179.95
TST06 - ERD-1500 ELECTROMAGNETIC RADIATION DETECTOR.....	\$49.95

*\*special order items require 4 - 6 weeks for delivery*

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*Stream this, app that: From offbeat to mainstream, the Internet has opened up global radio like never before. Yet there's still plenty of active spectrum your Web browser can't cover!*

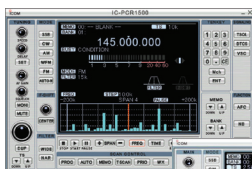
*Hear more of what's going on. No matter if it's just around the corner or clear across the globe, you'll catch more with an Icom black box receiver. Plug it in to your PC or control it with the plug 'n play remote control head. Don't miss the action!*



## IC-R2500



- 0.1 ~ 3299.99 MHz\* (Main)  
50 to 1300 MHz\* (Sub)
- AM, FM, WFM, CW, SSB
- Dual Wideband Receiver
- Mobile or PC Controlled
- Optional APCO 25 and D-STAR
- Dual Receiver Diversity



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# Expanding Your World of Possibilities with Icom's Ultimate Wide Band Receiver!

## IC-R9500 Icom's Ultimate Wide Band Receiver

We've raised the bar with our super performance, multiple function wide band "measuring" receiver. The IC-R9500 has normal and wide spectrum scope functions. With five roofing filters before the first amp, two independent 32-bit floating point DSP processors, and 7-inch wide color TFT LCD, this is something to get excited about!



### Features:

- 0.005 - 3335.000 MHz\*
- USB, LSB, CW, FSK, FM, WFM, AM
- 1020 Alphanumeric Memories
- P25 (Option UT-122)
- Five Roofing Filters
- Dual DSP
- Digital IF Filter
- Multi-function Spectrum Scope
- 7-inch TFT LCD Display
- Noise Blanker
- Noise Reduction
- Multi-scan Functions
- Voice Synthesizer
- Digital Voice Recorder
- USB Connector
- Receive Assist Functions

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with Icom's Handheld Receivers

Whether you're having a great weekend at the track, on the road for business, or at home enjoying some quiet time, get a better listening experience with Icom's wideband receivers. Icom brings the world to you.

## IC-R20 ADVANCED OPS

- RX: 0.150-3304.999MHz<sup>1</sup>
- AM, FM, WFM, SSB, CW
- 1250 Alphanumeric Memory Channels
- Dualwatch Receive
- 4-hour Digital Recorder

Your interests. Your hobbies.  
All in the palm of your hand.



## IC-R6 SHIRT-POCKET COMPACT

- RX: .100-1309.995MHz<sup>1</sup>
- AM, FM, WFM
- 1300 Alphanumeric Memory Channels
- 100 Ch/Second High Speed Scan
- Computer Controllable<sup>2</sup>



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<sup>1</sup>Frequency specs may vary. Refer to owner's manual for exact frequency specs. <sup>2</sup>Optional CT-17 required.

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**ICOM**

**Icom Bases - Receive at home or on the job!**



## IC-R75

### Low Noise Floor, Medium Size, and High Value!

Discriminating shortwavers and other listening enthusiasts love Icom's R75. It's a great way to enjoy the hobby without breaking the bank. The R75 is compact enough for a small tabletop. Yet it's big enough to offer a well laid out front panel, a direct frequency entry keypad, and plenty of easy to use controls. User-friendly menu system and memory channel management, too. For great selectivity, great size, and a great price, get your R75 from Grove today!

- 0.03 - 60 MHz\*
- USB, LSB, CW, RTTY, AM, FM
- 99 memory channels
- Optional DSP
- Dual passband tuning
- Automatic notch filter
- Noise blanker with dual preamps
- Built-in attenuator and RF gain control
- Internal clock with ON/OFF, sleep timer



## IC-R8500

### Professional Grade.

### Export or Government Approved Users Only

The R8500 is a handsome DC-to-daylight receiver, offering a superb design, remarkable performance, and first-rate build quality.

- 0.01 - 2000 MHz\*
- SSB (USB, LSB), AM (wide, normal, narrow), FM (normal, narrow), WFM. Optional CW (normal, narrow)
- 1000 memory channels
- 10Hz resolution
- Built-in high quality crystal
- IF shift
- Audio peak filter
- S-meter squelch
- RS-232C interface
- 3 Antenna connectors

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*Just downloaded the August issue, saved it in iBooks, and have read about half. Looks \*great\* on the iPad. This is definitely the way to go....*

*-Scott D.*

# VHF/UHF BASE ANTENNAS

## Grove Scanner Beam III!

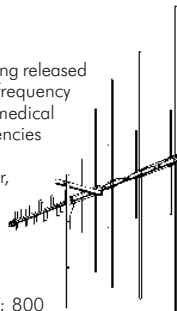
Grove's highly-regarded Scanner Beam has been improved with higher gain, and is being released at a special introductory price! Mount it high and in the clear for full-spectrum VHF/UHF frequency coverage from 30-1000 MHz! Hear law enforcement agencies, firefighters, emergency medical teams, aircraft, marine radio, trains, FM and TV broadcasting, business band, federal agencies and more—up to 100 miles away!

Lightweight and compact, all parts are included—balun transformer with F connector, offset boom, U-clamp. No assembly required—just rotate and latch the elements into place. Point it in any direction for maximum reception, or aim it with an inexpensive TV rotator.

### Specifications:

**DIMENSIONS:** Main boom 5' 10" Longest element 8' 4" Number of elements: 14

**GAIN:** 30-50 MHz, 0 dBd (unity); 100-200 MHz, 4-6 dBd; 400-500 MHz, 6-8 dBd; 800



### Suggested Accessories:

CBL25 - 25' F to F RG6U cable .....\$14.95

CBL50 - 50' F to F RG6U cable .....\$19.95

CBL100 - 100' F to F RG6U cable .....\$24.95

SWC01 - Antenna Switch .....\$19.95

ADPKIT - 10 PIECE ADAPTER KIT .....\$29.95

No standard 2nd day shipping due to weight. Call for rates.

**Order ANT03**

**Our Price: \$69<sup>95</sup>**

**Shipped only in U.S. & Canada**

## Grove OMNI II

Designed by Bob Grove, this exclusive Grove product offers 25-1300 MHz coverage for modern scanners; lightweight, compact design, high performance, and low cost! Designed especially for wide-area metropolitan listeners, the 68" Omni can be mounted on a mast, in an attic crawl space, against a wall—just about anywhere convenient.

**BONUS FEATURE!** Although the Omni is essentially non-directional, a metal mast gives it useful directional properties. Overload interference from paging transmitters, weather stations, FM or TV broadcasters, or other sources may be reduced or eliminated when positioning the antenna on the mast at the time of installation! Similarly, a distant, weak signal may be peaked by the same technique!

Balun transformer with F connector, offset pipe, mounting hardware and full instructions included.



### Suggested Accessories:

CBL25 - 25' F to F RG6U cable .....\$14.95

CBL50 - 50' F to F RG6U cable .....\$19.95

CBL100 - 100' F to F RG6U cable .....\$24.95

SWC01 - Antenna Switch .....\$19.95

ADPKIT - 10 PIECE ADAPTER KIT .....\$29.95

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**Order ANT05**

**Our Price: \$29<sup>95</sup>**

**Shipped only in U.S. & Canada**

## Scantenna

**Includes 50' of coax cable plus BNC connectors!**

This omnidirectional scanner antenna will equal or outperform any competitor on the market. Its dipole-cluster design utilizes broadband techniques to provide continuous frequency coverage from 25-1300 MHz, offering superb reception of public safety, civilian and military aircraft, hams, personal communication devices, maritime, CB— anything in its frequency range! Size 7-1/2"H x 4-1/2"W.

If more than 50' of cable is needed, order the ADP26 (F/F barrel connector) along with CBL50 or CBL100.



**Order ANT07 - Our Price: \$49<sup>95</sup>**

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Technical Questions? (828) 837-9200 or [tech@grove-ent.com](mailto:tech@grove-ent.com). Due to high call volume, technical calls will be limited to 3 minutes.

## Super-M Classic Multiband Base Antenna

Imagine improving your VHF/UHF base station communications or scanner monitoring by substituting one low-profile (17" H), multi-element antenna system on your antenna line! Its patented, tilted, three-element design uses harmonic patterning to improve VHF/UHF reception and transmission without retuning! Ideal for modern, 25-1300 MHz, wide-coverage scanners, and for 100 watt commercial, amateur, and government transceivers operating in the 140-174 and 406-512 MHz ranges.

Its broadband design accepts modern repeater splits, cross-band, and wideband spread spectrum. Unique sloped elements reduce picket fencing. Stainless-steel whips with turn screws fit securely into an NMO aircraft aluminum base fixture. The antenna assembly clamps securely to your tower or mast pipe and is equipped with an SO-239 connector to match your PL-259-equipped coax cable.

**Order ANT10MBS - Our Price: \$99<sup>95</sup>**

**ANT61MBS - Super-M Ultra Base Station - 25-6000 MHz, more elements - \$189.95**



## WiNRADiO AX-71C UHF Antenna

The AX-71C antenna is a compact VHF/UHF omni-directional receiving and transmitting antenna for professional and consumer surveillance and monitoring applications.

The antenna covers the frequency range of 25-3000+ MHz offering a typical VSWR figure of less than 1.5:1.

While designed to be entirely general-purpose, the WiNRADiO AX-71C Wideband Discone Antenna is especially suitable for the WiNRADiO range of VHF/UHF receivers.

Its durable construction from high-grade stainless steel, alloy and aluminum will ensure trouble-free operation for many years. The antenna was designed for rapid and easy assembly.

### **Suggested Accessories:**

ACC71 - Mounting clamps .....	\$14.95
CBL25 - 25' F to F RG6U cable .....	\$14.95
CBL50 - 50' F to F RG6U cable .....	\$19.95
CBL100 - 100' F to F RG6U cable .....	\$24.95
SWC01 - Antenna Switch .....	\$19.95
ADPKIT - 10 PIECE ADAPTER KIT .....	\$29.95



**Order ANT01**

**Our Price: \$89<sup>95</sup>**

## WiNRADiO AX-31C Active UHF Antenna

The AX-31C antenna is a compact VHF/UHF log-periodic directional antenna, a successor to the popular AX-31B antenna, with improved performance and reduced weight and dimensions, as well as additional packaging options: an outdoor mount-version and a hand-held one.

This antenna is constructed on a high-quality fibre-glass substrate, with an integrated low noise amplifier. The user can also specify antenna versions without the inbuilt amplifier, which does not require any power to operate. Versions without the amplifier can be also used as low power transmit antennas.

The AX-31C antenna covers a frequency range of 290 to 2200 MHz (a wider frequency range can be still received with reduced gain) and is ideally suited for reception of point-to-point communications where its directional characteristics can significantly improve rejection of interfering signals. The directionality is especially significant above 400 MHz; under 400 MHz the directionality gradually declines to the point when the antenna acts as a non-directional dipole.

While designed to be entirely general-purpose and performing well with any third-party equipment, the WiNRADiO AX-31C antenna is especially suitable for WiNRADiO G3 Series of VHF/UHF receivers, in both professional and consumer applications.

## WiNRADiO AX-31C

**Order ANT58 - Our Price: \$169<sup>95</sup>**

Base board only, no enclosure, with preamplifier, receive only, 9V battery power.

**NOTE: In the AX-31C and AX-37A series, these suffix letters indicate the options:**

**H:** Hand Grip **M:** Mast Mounting **P:** Preamplifier **X:** Transmit

**WiNRADiO AX-31CP** Base board only, no enclosure, with preamplifier, receive only, 12V battery power.

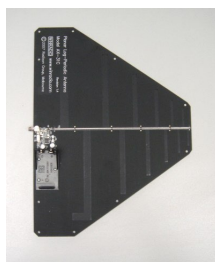
**WiNRADiO AX-31CX** Base board only, no enclosure, no preamplifier, receive and transmit.

**WiNRADiO AX-31CH** Ruggedized enclosure with hand grip, with preamplifier, receive only, external 12V DC power.

**WiNRADiO AX-31CHX** Ruggedized enclosure with hand grip, no preamplifier, receive and transmit.

**WiNRADiO AX-31CM** Ruggedized enclosure for outdoor mast-mounting, with preamplifier, receive only, external 12V DC power.

**WiNRADiO AX-31CMX** Ruggedized enclosure for outdoor mast-mounting, no preamplifier, receive and transmit.



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Technical Questions? (828) 837-9200 or [tech@grove-ent.com](mailto:tech@grove-ent.com). Due to high call volume, technical calls will be limited to 3 minutes.

## WiNRADiO AX-81S Active HF Antenna

The AX-81S antenna is a compact active HF antenna, ruggedized to suit harsh outdoor environments, and particularly suitable for marine environments. While it has been designed primarily as a marine antenna, it can be useful anywhere where good HF performance and reliability are required, and where space is at premium. The antenna is receive-only, and is suitable for professional as well as consumer applications.

The antenna covers the frequency range of 2 to 30 MHz, or 300 kHz to 50 MHz with somewhat reduced (but still excellent) performance.

The principal elements of the antenna are constructed of a low-carbon austenitic stainless steel that contains molybdenum. Austenitic (chromium and nickel content) stainless steels have high ductility (i.e. ability of a metal to plastically deform without breaking or fracturing), low yield stress and high ultimate tensile strength, when compared to a typical carbon steel. The 316L grade as used for the AX-81S antenna also offers an especially high degree of resistance to corrosion. The choice of materials and the durable construction of the AX-81S antenna will ensure trouble-free operation for many years.

The antenna was designed for rapid installation, with an easy-to-follow installation procedure supplied with the antenna.



**Order ANT51 - Our Price: \$189<sup>95</sup>**

*The WiNRADiO G33EM receiver supplies power for the AX-81S antenna at its antenna input, and no external power supply is needed. For any other applications we recommend using a WiNRADiO SF-41 Low-noise Linear Power Supply together with the WiNRADiO WR-BT-650 Power Injector.*

## The Mighty Condor!

Looking for a suitable rubber duckie scanner antenna to replace the factory issue? Try this one which has become the standard of the industry. Made for the two-way communications community, the 12" Austin Condor is guaranteed to improve weak signal scanner reception throughout the 100-1300 MHz frequency ranges compared to your original scanner antenna.



**Order ANT14B w/right-angle BNC Connector - Our Price - \$39<sup>95</sup>**

## Grove Flex-Tenna™ VU



The 48 inch Model VU Flex-Tenna™ is a thin and inconspicuous, flexible-wire antenna designed to provide continuous 25-2500 MHz reception on scanners. Since it's a narrow length of clear-insulated cable, it is an excellent choice for low-visibility installations. Has an F connector. Make sure to choose the correct adaptor for your needs.

### **Suggested Accessories:**

CBL25 - 25' F to F RG6U cable .....	\$14.95
CBL50 - 50' F to F RG6U cable .....	\$19.95
CBL100 - 100' F to F RG6U cable .....	\$24.95
CBL09 - F Male ~ F Male Coax (3') .....	\$1.25
ADPKIT - 10 PIECE ADAPTER KIT .....	\$29.95

**Order ANT46 - Our Price - \$9<sup>95</sup>**

## VHF/UHF WIDEBAND ANTENNAS

### AOR DA3200 Extended-Range Discone

For continuous-coverage 25-3000 MHz VHF/UHF receivers and scanners, and even 100 watt transmitters on most VHF-HI and UHF frequencies, you can't beat this rugged discone! Stainless steel tubing combines light weight with rough-weather durability. Includes 50 feet of low-loss coax with BNC connector, two U clamps, TNC connector at antenna end, and tough 2-1/2" mast mount.



**Order ANT62 - Our Price: \$199<sup>95</sup>**

## WiNRADiO AX-24B Discone Antenna

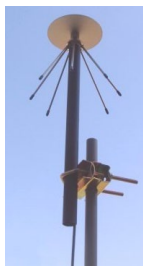
The AX-24B antenna is a compact UHF/SHF omni-directional receiving antenna for professional surveillance and monitoring applications.

The antenna covers the frequency range of 400 to 4000 MHz.

While designed to be entirely general-purpose, the WiNRADiO AX-24B UHF/SHF Discone Antenna is especially suitable for use with the WiNRADiO G3 series of VHF/UHF receivers, especially for the G315 receivers working in conjunction with the AMFE™ Antenna Multiplexer and Frequency Extender.

Its durable construction from high-grade stainless steel, alloy and aluminum will ensure trouble-free operation for many years. The antenna was designed for rapid and easy assembly.

**Order ANT63 - Our Price: \$349<sup>95</sup>**



## AOR DA5000 UHF Discone Antenna

The DA5000 is a very high performance, commercial grade UHF Discone receive antenna. The frequency coverage is 700 to 3000 MHz and the DA5000 equipped with a N connector. The maximum antenna gain is 2.5 dB.

### Specifications:

Overall length: 1 foot

Radials: 5.7 inches

Horizontal elements: 3.2 inches

Weight: 1.6 lbs

Impedance: 50 ohms

*Note: To get the maximum performance from this antenna, you must use with a low loss coaxial cable (not included).*

**Order DS-DA5000 - Our Price: \$349<sup>95</sup>**



## AOR SA-7000 Super-Wide Receiving Antenna

Designed for wide-frequency-coverage receivers and scanners, the SA-7000 base antenna is rigidly constructed of stainless steel and aluminum. Engineered to provide a 50 ohm match, the SA-7000 is 72 inches tall and mounts on a mast up to 2-1/4" diameter. Complete passive system brings superior low noise and free of cross / intermodulation.

### Specifications:

Receiving Range: 30 kHz - 2GHz

Height: 72 in

Wind Load: Withstands in excess of 100 MPH

Supplied With: Coaxial cable 50' RG-58/U with PL-259 on antenna end and BNC connector on receiver end.

**Order ANT39**

**Our Price: \$249<sup>95</sup>**



## Diamond D3000N

The Diamond D3000N boasts 25-3000 MHz reception capability, with transmit capability from 50-1200 MHz. Transmit power is 200 watts from 144 - 1200 MHz, and 20 watts FM, 50 watts SSB on 50-54 MHz. Built like its rugged, well-respected D130J, the D3000N extends its upper frequency ranges into the Wi-Fi band. Overall height is 67". An N connector provides lowest loss at the UHF frequencies.

**Order ANT70 - Our Price: \$119<sup>95</sup>**

Only ships to U.S. and Canada

No standard 2nd day shipping due to weight. Call for rates.



**For cables and adaptors, see page 34**

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Technical Questions? (828) 837-9200 or [tech@grove-ent.com](mailto:tech@grove-ent.com). Due to high call volume, technical calls will be limited to 3 minutes.

## Diamond Wide Frequency Coverage Discone Antenna

The discone antenna is used by government and military agencies worldwide because of its wide bandwidth characteristics and non-directional coverage. Diamond offers this professional-grade discone at a popular price.

Designed for use with wide-frequency-coverage VHF/UHF scanners and receivers, the Diamond D130J discone consists of 16 rugged, stainless-steel elements and is capable of transmitting up to 200 watts in the amateur 50, 144, 220, 432, 900, and 1200 MHz bands.

The elements are arranged on a 24-inch support pipe equipped with two strong mounting brackets to accommodate any standard mast-pipe (1" to 2-1/8" diameter).

Requires PL-259 Adaptor.



**Order ANT09**

**Our Price: \$99<sup>95</sup>**

### Suggested Accessories:

ADP02 - F FEMALE TO PL259 "UHF" FEMALE ADAPTER .....	\$3.99
CBL25 - 25' F to F RG6U cable .....	\$14.95
CBL50 - 50' F to F RG6U cable .....	\$19.95
CBL100 - 100' F to F RG6U cable .....	\$24.95
SWC01 - Antenna Switch .....	\$19.95

## Icom AH-8000 Antenna

Continuous frequency coverage from 100MHz-3300MHz (3.3 GHz) is ideal for the new wide-frequency coverage receivers from ICOM, AOR, WiNRADiO, ALINCO and scanners, too! Use it for transmitting up to 200 watts on ham\*, government, military, aircraft and commercial bands as well!

Compact (36") and lightweight (2.1 lbs.); 1"-2" mast mount hardware included. Rapid deployment with factory-cut elements--no adjustments required! Comes with 49' of coax with type N connectors.

\* Best impedance match for amateurs on 144, 430, 1200 and 2400 MHz band

Recommended accessory: N/BNC adaptor



**Order ANT54 - Our Price - \$269<sup>95</sup>**

## WiNRADiO AX-37A Series Planar, Log-Periodic Antennas

Designed to work with all UHF receivers including the WiNRADiO 3000 series, the AX-37A is a compact, directional, planar, log-periodic, UHF directional antenna. Etched on a high-quality fiberglass substrate, it includes a surface-mount, 20 dB preamplifier, a standard 9V battery holder, power switch and an LED indicator.

Suitable for indoor monitoring, surveillance and point-to-point communication (receive only), its directivity can substantially null co-channel interference. Its small footprint (the size of a sheet of typing paper), light weight and thin profile invite concealed installation, quickly accomplished with double-sided adhesive tape.

### TECHNICAL SPECIFICATIONS

Frequency range: 300-3000 MHz (wider with reduced gain)

Antenna Forward Gain: 6.0 dBi (free space)

Amplifier Gain: 23 dB @ 1 GHz, Amplifier Noise Figure: 2.0 dB

Amplifier IP3: +27 dBm, Primary Sensitivity: E-field

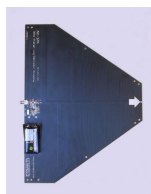
Polarization: Horizontal or vertical (depending on mounting)

Impedance: 50 ohm (Nominal)

Power: 9W @ 40 mA (standard PP3 battery), Connector: SMA

Front-to-back ratio: 18 dB min (180 degrees from main lobe)

VSWR: 1.3:1, Size: 11.5" x 8.4", Weight: 5 oz



### WiNRADiO AX-37A

**Order ANT28 - Our Price: \$389<sup>95</sup>**

Base board only, no enclosure, with preamplifier, receive only, 9V battery power.

### WiNRADiO AX-37AM

**Order ANT29 - Our Price: \$499<sup>95</sup>**

Ruggedized enclosure for outdoor mast-mounting, includes preamplifier, receive only, external 12V DC power.

**NOTE: In the AX-31C and AX-37A series, these suffix letters indicate the options:**

**H:** Hand Grip    **M:** Mast Mounting    **P:** Preamplifier    **X:** Transmit

**WiNRADiO AX-37AP** (special order) Base board only, no enclosure, with preamplifier, receive only, 12V battery power.

**WiNRADiO AX-37AX** (special order) Base board only, no enclosure, no preamplifier, receive and transmit.

**WiNRADiO AX-37AHX** (special order) Ruggedized enclosure with hand grip, no preamplifier, receive and transmit.

**WiNRADiO AX-37AH** (special order) Ruggedized enclosure with handgrip, includes preamplifier, receive only, external 12V DC power.

**WiNRADiO AX-37AMX** (special order) Ruggedized enclosure for outdoor mast-mounting, no preamplifier, receive and transmit.

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fax: (828) 837-2216 email: [order@grove-ent.com](mailto:order@grove-ent.com) web: [www.grove-ent.com](http://www.grove-ent.com)

Technical Questions? (828) 837-9200 or [tech@grove-ent.com](mailto:tech@grove-ent.com). Due to high call volume, technical calls will be limited to 3 minutes.

## Create Log-Periodic Beam

The log-periodic dipole array (LPDA) is respected for its wide bandwidth, constant impedance, and high gain. Measuring 6'8" boom length, the CLP-5130-1N (ANT16) offers 50-1300 MHz bandwidth for transmitting and receiving, with an average forward gain of 10-12 dBi. The CLP-5130-2N (ANT17) offers 100-1300 MHz bandwidth for transmitting and receiving, with an average forward gain of 11-13 dBi. Ruggedly constructed of solid aluminum for lightweight durability. Fitted with an N connector for your low-loss coax.

Transmit gain: Same as reception gain. 11-13 dBi (about 9-11 dBd) from 50-1300 MHz.

Range: Depends upon frequency, height, length and type of coax, mode and bandwidth, power of transmitter, amount of background hiss you are willing to tolerate, weather, and terrain. As a rule with most VHF equipment, figure 50-75 miles for VHF and 25-50 miles for UHF.

**Order ANT16 - Our Price - \$439<sup>95</sup>**

**Order ANT17 - Our Price - \$319<sup>95</sup>**



## VHF/UHF MOBILE ANTENNAS

### Procomm CD144MBN

HIGH PERFORMANCE, LOW PROFILE, MOBILE SCANNER ANTENNA

We have replaced our popular Stealth antenna with this mechanically improved model that features a tight hold, wind resistant, chrome finish, 3.25" magnetic base built to withstand high road speeds. The 20" stainless steel whip can receive 25-1000 MHz (best above 100 MHz) and makes a great 2 meter transmit/receive antenna, or you can shorten it to resonance on any VHF-HI or UHF band of your choice (Allen wrench included). 12 feet of RG58/U coax cable (not the usual, lossy RG-174/U) is terminated with a BNC connector for your scanner or transceiver.



**Order ANT50 - Our Price: \$19<sup>95</sup>**

### AOR MA500

For mobile applications, this magnetic-base, center-loaded, 24" trap-loaded whip provides superior VHF/UHF reception from 30-2000 MHz, and can be used for transmitting as well on VHF-HI and UHF land mobile frequencies. Includes 25 foot RG58U cable with BNC and PL-259 connectors.



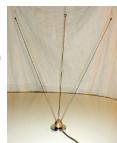
**Order ANT12 - Our Price: \$109<sup>00</sup>**

## Super-M Classic Superior Mobile Antenna

Unique, tilted, three-element design uses harmonic patterning to improve VHF/UHF reception! Ideal for modern, wide-coverage scanners, 25-1300 MHz, and for 100 watt commercial, amateur, and government transmitters between 140-174, 216-225, and 406-512 MHz without retuning!

Its broadband design accepts modern repeater splits, cross-band, and wideband spread spectrum. Unique sloped elements reduce picket fencing. Stainless-steel whips with turn-screws fit securely into an aircraft-aluminum base fixture, waterproof-sealed by a rubber gasket.

A rigid-grip magnetic mount with 12' low-loss cable and a BNC connector are provided.



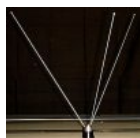
**Order ANT10 - Our Price: \$94<sup>95</sup>**

**ANT61 - Super-M Ultra Mobile Antenna - 25-6000 MHz, more elements - \$124.95**

## Super-M Classic Antenna with NMO Base

This high-performance, low profile (17" H) mobile replacement antenna is guaranteed to improve multiband mobile communications over other whips! Its patented, tilted, three-element design uses harmonic patterning to improve VHF/UHF reception and transmission without retuning! Ideal for modern, 25-1300 MHz, wide-coverage scanners, and for 100 watt commercial, amateur, and government transceivers operating in the 140-174, 216-225, and 406-512 MHz ranges.

Its broadband design accepts modern repeater splits, cross-band, and wideband spread spectrum. Unique sloped elements reduce picket fencing. Stainless-steel whips with turn screws fit securely into an aircraft-aluminum base fixture. Fitted with a standard NMO base adaptor for existing 3/4" Motorola mobile mounts.



**Order ANT10NMO - Our Price: \$79<sup>95</sup>**

**ANT61NMO - Super-M Ultra Mobile with NMO Base - 25-6000 MHz, more elements - \$109.95**

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fax: (828) 837-2216 email: [order@grove-ent.com](mailto:order@grove-ent.com) web: [www.grove-ent.com](http://www.grove-ent.com)

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GROVE (800) 438-8155



## Range-Extending Mobile Mag Mount!

Extend the range of your hand-held radio--simply attach your BNC whip and snap this rugged magnetic mount to the top of your vehicle or even an indoor metal surface (file cabinet, etc.)! Great for scanners, handy-talkies, law enforcement and commercial hand-held transceivers, government/military portables.

The heavy-duty, low-profile, magnetic mount is made of high-grade steel with rubber weatherproofing. It won't come loose at highway speed, yet it's instantly removable for security or storage. Includes 12 feet of RG-58/U coax with BNC connector.

**Order ANT48 - Our Price - \$27<sup>95</sup>**

# HANDHELD SCANNER ANTENNAS

## The Mighty Condor!

Looking for a suitable rubber duckie scanner antenna to replace the factory issue? Try this one which has become the standard of the industry. Made for the two-way communications community, the 12" Austin Condor is guaranteed to improve weak signal scanner reception throughout the 100-1300 MHz frequency ranges compared to your original scanner antenna.

**Order ANT14 - Our Price - \$34<sup>95</sup>**

## Diamond SRH77CA Dualband HT/Scanner Antenna

High quality, high gain + receive up to 900 MHz HT antenna. Increase the performance on your handheld or wideband scanner with a Diamond® SRH Series antenna.

### Specifications:

- Bands 2m/70cm + receive up to 900 MHz
- \*Gain (relative): +6dB
- Watts 10
- Height 15"
- Connector SMA

**Order ANT67 - Our Price: \$21<sup>95</sup>**

## Grove Universal Telescoping Whip

For ham and commercial handie-talkies as well as hand-held scanners, the Grove rugged, chrome, telescoping whip features a swivel BNC base, allowing the whip to be used straight or turned to a right angle for those special applications between 100 and 1000 MHz.

Adjustable length from 6" to 29" allows frequency optimization. Quarter-wave resonance at VHF hi band, 3 dB gain or more over rubber duckies at UHF.

**Order ANT06 - Our Price: \$14<sup>95</sup>**

## WINRADIO AX-07B Flexible VHF/UHF Antenna



The AX-07B is a rugged antenna designed for reception and low-power transmission in the 100-900 MHz range.

The flexible antenna is encapsulated in a weatherproof rubber sheath resistant to chemical corrosion, abrasion, ozone, salt water and ultra violet radiation, making it ideal for outdoor applications.

**Order ANT47 - Our Price - \$27<sup>95</sup>**

## Diamond RH77CA HT/Receiving & Scanner Antenna

WIDEBAND FLEX ANTENNA FOR HT'S AND SCANNERS! Designed for multiple-frequency transmitting as well as wideband receiving, this 16" flexible whip is equipped with a standard BNC connector to fit most portable VHF/UHF radios. Transmit frequencies in the 144-160 and 430-470 MHz ranges, as well as excellent general-purpose reception in the 90-900 MHz range (usable down to 30 MHz with reduced performance), make this a very popular antenna for hams, scanner listeners, and commercial two-way users.

**Order ANT64 - Our Price: \$21<sup>95</sup>**

# HF OUTDOOR ANTENNAS

## Grove Flex-Tenna™ HVU

The 24-foot Model HVU Flex-Tenna™ is a thin and inconspicuous, flexible-wire antenna designed to provide continuous 10 kHz-2500 MHz reception on shortwave receivers, wide-frequency-coverage receivers and scanners with only one antenna connector. Since it's a narrow length of clear-insulated cable, it is an excellent choice for low-visibility installations. HF male connector. Choose correct adaptor for your receiver and scanner needs.



### Suggested Accessories:

CBL25 - 25' F to F RG6U cable .....	\$14.95
CBL50 - 50' F to F RG6U cable .....	\$19.95
CBL100 - 100' F to F RG6U cable .....	\$24.95
CBL09 - F Male ~ F Male Coax (3') .....	\$1.25

**Order ANT45 - Our Price: \$14<sup>95</sup>**

## WiNRADiO WR-LWA-0130 Long Wire Antenna Adapter

Often referred to as Long Wire Balun, this device is used to match the impedance of a long wire HF antenna to a 50 ohm input impedance of a receiver. Such impedance matching usually results in a significant signal strength increase (up to 17dB in some cases, and approximately 5dB on average), compared to the long wire antenna connected directly to the antenna input of the receiver.

The WiNRADiO WR-LWA-0130 Long Wire Antenna Adapter is designed to work on medium and short wave bands, covering a frequency range from 0.1 to 30 MHz. It is especially suitable for use with WiNRADiO shortwave receivers, such as the WR-G303i receiver.



Unlike most conventional antenna adapters, the WiNRADiO WR-LWA-0130 Long Wire Antenna Adapter employs a dual broadband transformer technique which offers an improved performance over single-transformer devices. Requires BNC adaptor/connector.

ADP09 - F Female to BNC Male .....	\$2.99
CBL25 - 25' F to F RG6U cable .....	\$14.95
CBL50 50' - F to F RG6U cable .....	\$19.95
CBL100 100' - F to F RG6U cable ..	\$24.95

**Order ADP35 - Our Price: \$39<sup>95</sup>**

## PAR HIGH-PERFORMANCE "END FEDZ" SHORTWAVE ANTENNA!

The PAR End Fedz 45-foot, commercial-quality, end-fed receiving antenna is made of virtually-indestructible Flex Weave, covered by a protective black polyethylene jacket. Impedance-matched by a 9:1, binocular-core transformer in a weather- and UV-resistant ABS housing, the wire element is firmly attached by stainless steel hardware. You may custom-configure the shorting bar for grounding the antenna. A silver/Teflon SO-239 coax connector is ready to receive the PL-259 on your coax cable.

Mount this beauty outdoors, in the attic, or any other preferred spot for unsurpassed, 1-55 MHz reception! Instructions include patterns for horizontal or slope mounting.



CBL25 - 25' F to F RG6U cable .....	\$14.95
CBL50 50' - F to F RG6U cable .....	\$19.95
CBL100 100' - F to F RG6U cable .....	\$24.95
ADP02 - F to PL259 adaptor .....	\$3.99

**Order ANT08 - Our Price: \$74<sup>95</sup>**

# HF INDOOR ANTENNAS

## MFJ 1020C ACTIVE SHORTWAVE ANTENNA

If you can't use an outdoor shortwave antenna, the popular MFJ 1020C is the way to go. Featuring 300 kHz-40 MHz frequency-selectable coverage, and including its own 20-inch telescopic whip, the 1020C may be used as a preselector for outdoor antennas as well. Controls include gain, band, tuning, and bypass. Rear-panel SO-239 connectors are provided. Only 6-1/2"W x 2-1/2"H, the 1020C operates either from an internal 9V battery (not supplied) or an optional 9-12 VDC AC adaptor; a red LED lets you know the unit is on.



### Suggested Accessories:

PWR04 - AC Adaptor.....	\$14.95
CBL11 - 3' PL-259/PL-259 Interconnect Cable ..	\$4.99

**Order ANT19**

**Our Price: \$89<sup>95</sup>**

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Technical Questions? (828) 837-9200 or tech@grove-ent.com. Due to high call volume, technical calls will be limited to 3 minutes.

## WiNRADiO AX-17C Indoor Active HF Antenna

The AX-17C is a miniature indoor active HF antenna suited for applications where it is not possible to use conventional large outdoor antennas, and where loop antennas are either not available or not practical due to their large size.

Frequency range..... 0.1 to 30 MHz  
Output impedance ..... 50 Ohm



**Order ANT60 - Our Price: \$199<sup>95</sup>**

## Grundig AN200 Loop Antenna

For AM broadcast band (540-1700 kHz) portables, nothing peeps up a portable's reception like an external loop antenna.

Place the AN200, a low cost, 9" diameter, tunable loop alongside any radio with a built-in ferrite loop antenna and tune it for dramatically magnified reception.

For direct connection to a radio's external antenna jack, a 3" shielded lead with a stereo phone plug on one end and tinned wires on the other is provided



**Order ANT59 - Our Price: \$29<sup>95</sup>**



## AOR LA-390

A rotating loop antenna is very directional. Depending on the loop's orientation, you can peak an incoming signal depending on its direction, or decrease an interfering signal. The loop element features a 5 position band switch and a High-Q poly-variable capacitor (only active for switch positions 1 to 4) to tune and peak the wanted frequency, while achieving maximum rejection of unwanted out of band signals. This provides valuable additional selectivity for your receivers front end stages.

**Supplied Accessories:** LA-390 Control box with loop, AC power supply, BNC-BNC Coaxial patch lead (1m)

**Order ANT55 - Our Price: \$389<sup>95</sup>**

## Grove SW Pocket-Tenna



Pocket Shortwave Antenna for Wideband Handheld Receivers. Remarkably improved shortwave/longwave reception over the factory whip. Just attach the cable, run the flexible antenna wire out a window or up to a tie point, and enjoy worldwide reception! (20' foot RG174/U cable with BNC connector.) Recommended for Icom, AOR, Yaesu, Alinco wideband, handheld receivers.

**Suggested Accessories:**  
ADP33 - SMA Adaptor

\$3.99

**Order ANT25 - Our Price: \$19<sup>95</sup>**

## LF Engineering H-900 Gain Probe Antenna

LF Engineering has appointed Grove to be the exclusive distributor of the enhanced-performance, H-900 Gain Probe active antenna, with additional gain for weak signal reception, and increased dynamic range to withstand strong-signal overload and avoid desensitization from close-by transmitting antennas!

Includes integrated active antenna, 50 feet of RG174U w/ RCA coax lead-in, control box, 36" jumper with RCA plug; {adaptors to fit your receiver listed below} and AC adaptor.

### SPECIFICATIONS:

Dimensions: 25" long, 1" diameter

Frequency coverage: 10 kHz through 60 MHz (-3 dB)

Equivalent performance: 100' dipole

Integrated amplifier: MOSFET / Gain: Up to 12 dB / Additional gain switch: 10 dB

Connectors: RCA Phono jacks

Remote cable: 50' RG-174/U (extendable to 250' by user-provided cable)

ADP32 - RCA Female to PL259 Male ..... \$2.99

ADP25 - RCA Female to Male 1/8" Mini-Plug ..... \$2.99

ADP01 - RCA Female to BNC male ..... \$2.99



**Order ANT27 - Our Price: \$189<sup>00</sup>**

## H800 Skymatch Active Antenna

The H-800 Active Antenna covers the full LF/HF/VHF spectrum from 10kHz through 50 MHz. A proprietary low noise amplifier (2 wire feed) insures ample gain throughout the operating spectrum. The output impedance on the H-800 is 50-100 ohms, and is designed to match most receivers in use today. The Receiver Coupler may be powered by two 9 volt batteries for operation. An external 120 vac / 12 vdc power supply is included for continuous operation.

The sealed antenna probe consists of impedance matching electronics and amplifier which transform its internal short length wire antenna into a 100 foot "long wire" equivalent. The H-800 has very high E field sensitivity with the advantage of good BC intermodulation rejection. The H-800 is compact and totally sealed (no whip) providing the advantage of reduced EMI interference.

Dual source power design: Internal 9 volt battery (x2) or external 120 vac / 12 vdc supply included. **Includes integrated active antenna, 50 feet of RG174U w/ RCA coax lead-in, control box, and AC adaptor. Equipped with RCA jack and additional adaptors maybe required for use with receivers.**



ADP32 - RCA Female to PL259 Male ..... \$2.99

ADP25 - RCA F to M 1/8" Mini-Plug ..... \$2.99

ADP01 - RCA Female to BNC male ..... \$2.99

**Order ANT15 - Our Price:**

## Grove's Hidden Flex-Tenna

The Hidden Flex-Tenna is easily installed in an attic crawl space and provides continuous 10 kHz-2500 MHz reception for wide-frequency-coverage receivers and scanners! When an outdoor antenna is not an option, the Hidden Flex-Tenna will provide optimum indoor reception.

Measuring 24 feet in length (the longwave/shortwave elements) and supporting a short hanging pair (VHF/UHF elements), the flexible Hidden Flex-Tenna may be conveniently suspended from the roof trusses. A convenient F connector allows connection to your coax down-lead.

### Suggested Accessories:

CBL25 - 25' F to F RG6U cable ..... \$14.95

CBL50 - 50' F to F RG6U cable ..... \$19.95

CBL100 - 100' F to F RG6U cable ..... \$24.95

CBL09 - F Male ~ F Male Coax (3') ..... \$1.25

**Order ANT49 - Our Price: \$19<sup>95</sup>**

# ANTENNA ACCESSORIES

## Premium Low-Loss RG6-U Cable

All Grove RG-6 /U coaxial cable is 100% shielded, providing low loss (see description below). It comes with easy-to-adapt F connectors on both ends, fitting our wide range of adaptors.

Have you had trouble finding the right coaxial adaptors for linking your antenna and receiver? We can help! Simply tell us what adaptors you need, or what antenna and radio you will be using. We will provide you with a cable which is ready to attach between your antenna and receiver! 25, 50 & 100 ft. length, comes with 2 adaptors at no extra charge (specify from list above when placing order)

Cable Loss Per 100 ft.: 1.6 dB @ 50 MHz; 2.6 dB @ 170 MHz; 4.6 dB @ 450 MHz.

**FREE SHIPPING in the US if ordered with antenna!**

CBL25 25' F to F RG6U cable ..... \$14.95

CBL50 50' of low-loss RG6-U cable ..... \$19.95

CBL100 100' of low-loss RG6-U Cable ..... \$24.95

### ADAPTORS:

ADP01 RCA Female to BNC male adapter ..... \$2.99

ADP02 F Female to PL259 "UHF" Male adapter ..... \$3.99

ADP03 F Female to N Male adapter ..... \$3.99

ADP04 BNC Female to N Male adapter ..... \$3.99

ADP05 F Female to Male 1/8" Mini adapter ..... \$2.99

ADP07 UHF Female to F male adapter ..... \$2.99

ADP09 F Female to BNC Male adapter ..... \$2.99

ADP13 BNC Right Angle adapter ..... \$2.99

ADP17 BNC Female to F Male adapter ..... \$2.99

ADP25 RCA Female to 3.5mm Male adapter ..... \$2.99

ADP26 F Female to F Female Barrel adapter (qty 2) ..... \$1.99

ADP32 RCA Female to PL259 "UHF" Male adapter ..... \$2.99

ADP33 BNC Female to SMA Male adapter ..... \$3.99

CBL04 3' cable, BNC to BNC ..... \$4.95

CBL09 3' cable, F Male to F Male ..... \$1.25

CBL11 3' cable, PL259 to PL259 ..... \$4.99

CBL15 Through-window/door flat cable ..... \$9.95

**Orders for adaptors only will be shipped first class mail in US.**

## 10 PIECE ADAPTER KIT

Every common type for scanners, shortwave portables, communications receivers, transceivers, and handy-talkies -- F, BNC, N, UHF(PL-259), and SMA! Interconnect for unusual combinations!

ADP02 (2), ADP03, ADP04, ADP05, ADP07, ADP09 (2), ADP17, ADP33

**Order ADPKIT - Our Price: \$29<sup>95</sup>**

7540 Highway 64 West Brasstown, NC 28902 (800) 438-8155 (828) 837-9200

fax: (828) 837-2216 email: order@grove-ent.com web: www.grove-ent.com

Technical Questions? (828) 837-9200 or tech@grove-ent.com. Due to high call volume, technical calls will be limited to 3 minutes.

## Variable Attenuator

Adjust this attenuator in your antenna line to reduce nearby strong-signal interference on. Reduces all signals from DC-1000 MHz from 0 to 20 dB! Two F connectors provide convenient coax attachment

**Order ATT01 - Our Price: \$19<sup>95</sup>**

## Lightning Arrestor/Surge Protector

While nothing can withstand a direct lightning hit, the Grove LAR-1 connects between your antenna cable and radio to prevent induced voltages from nearby lightning strokes, high powered transmitters and other massive energy surges from burning out your equipment (will not prevent AC power line surges).

Not a flimsy spark gap or simple diode shunt, the Grove LAR-1 uses state-of-the-art gas discharge technology, proven in government tests to be the best deterrent against lightning and electromagnetic pulse (EMP) surges.

Responds in one ten-millionth of a second to short-circuit bursts of 250,000 volts and currents of 5000 amps, while allowing normal signal voltages (and even control voltages up to 50 volts AC or DC) to pass undisturbed! Extremely low signal loss-0.2 dB at 1500 MHz! Ideal for protecting scanners, shortwave receivers, CB and ham equipment, VCR's, satellite systems, and more. May be used with transmitters up to 100 watts.

The tiny protector measures only 3/4"D x 1 1/2"L and comes equipped with standard F connectors.

Select an adaptor from the list below **{no extra charge}** to accommodate your receiver or scanner.

ADP02 - F Female to PL259 "UHF" Male adapter

ADP09 - F Female to BNC Male adapter

ADP03 - F Female to N Male adapter

ADP17 - BNC Female to F Male adapter

ADP05 - F Female to Male 1/8" Mini adapter

ADP07 - UHF Female to F male adapter

**Order LAR1F - Our Price: \$19<sup>95</sup>**



## Scanner Antenna Splitter

Now you can run two receivers or scanners from one antenna with full 1-1000 MHz frequency coverage! This antenna splitter comes with two three-foot cables for your side-by-side scanners and adaptors for F and BNC connectors.

**Order SPL02 - Our Price: \$29<sup>95</sup>**

## DC-2 GHZ ANTENNA SWITCH

Now you can select between two antennas for your receiver, scanner, or low-power transceiver—or you may choose either of two radios to connect to your antenna!

This high-quality, die-cast, waveguide construction assures low-loss performance up through at least 2 GHz (2000 MHz)!

**Comes with two 3' cables, your choice of 3 connectors listed below (specify when placing order), 2 mounting screws and two-sided tape.**

ADP02 - F Female to PL259 "UHF" Male adapter

ADP07 - UHF Female to F male adapter

ADP03 - F Female to N Male adapter

ADP09 - F Female to BNC Male adapter

ADP05 - F Female to Male 1/8" Mini adapter

ADP17 - BNC Female to F Male adapter



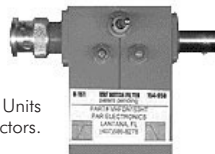
**Order SWC01**

**Our Price: \$19<sup>95</sup>**

# TUNERS, PREAMPS & MULTICOUPLERS

## Par Intermod Filters

Now you can restore quiet monitoring on your scanner or VHF/UHF transceiver, drastically reducing that incessant "bleep bleep" interference from local paging transmitters! Simply specify whether the interference is from a 152, 158, or 462 MHz pager, and we'll send you a unit that knocks down that interference by 35 dB! Units may be cascaded for additional interference reduction. Equipped with BNC connectors. Filters are drop-shipped from manufacturer.



**FTR152DS FTR158DS FTR462DS FTR-FMDS FTR-162DS**

**\$69<sup>95</sup>**

152MHz

**\$69<sup>95</sup>**

158MHz

**\$69<sup>95</sup>**

462MHz

**\$69<sup>95</sup>**

88-108MHz

**\$69<sup>95</sup>**

162MHz NOAA Weather

**\* DS suffix on product code means item is drop shipped from manufacturer. Please allow 10-14 days for delivery.**

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## PAR HIGH/LOW PASS FILTERS

The BCST-HPF is a 7th order elliptic high pass filter designed to severely attenuate AM broadcast stations below 1700 KHz. The elliptic topology yields a very fast transition from band pass to band stop region.

The BCST-LPF is a 5th order elliptic filter designed to eliminate AM broadcast from interfering with LF and VLF listening. The elliptic topology yields a very fast transition from band pass to band stop region.

The BCST-HPF/LPF has a 50 Ohm design impedance, so if your antenna is a random wire, we suggest a 9:1 or 10:1 transformer be inserted between the random wire and the filter. In addition, grounding at the filter end can be very important to filter efficacy.

The filter is housed in a heavy wall die cast aluminum enclosure. Connectors are silver/Teflon® SO239. A miniature toggle switch allows the user to instantly switch the filter in and out of line.



### Order FTRLPFDS

**Our Price: \$69<sup>95</sup>**

### Order FTRHPFDS

**Our Price: \$69<sup>95</sup>**

## PAR BANDPASS FILTERS

Our bandpass series of filters are designed to shape the spectrum for specific band segments. These filters feature very fast roll off to significantly attenuate signals outside the desired passband.

Note that our insertion loss is typically 3dB less in the passband and that our stop band loss is much higher - particularly in the troublesome commercial FM broadcast band- the major offender to aero band monitoring. The UHFBP(225-400) utilizes an overlapping low pass and high pass filter topology to yield extremely low insertion loss in the milcom spectrum while providing significant attenuation to signals both above and below this band; including VHF and UHF digital television, pagers, cell phone, FM broadcast, 2 way users.

Dimensions (HxWxD): 2 1/4 X 2 1/2 X 1.4  
Passband: 225 - 400MHz  
Stop Band: DC-210MHz and 410MHz to 1GHz  
Standard Connector: F/F gold/Teflon BNC  
Connector Options: F/F SMA F/F type N for \$10  
DC Passive: No  
Housing: Die Cast Aluminum



### Order FTRUHFBP (225-400)

**Our Price: \$74<sup>95</sup>**

### Order FTRVHFBP (116-137)

**Our Price: \$74<sup>95</sup>**

## Ramsey Wide-Band Preamplifier

If your scanner reception needs a little boost, this is the preamp to do it! Providing high gain at low noise, and operating continuously over 1 GHz of spectrum, this signal booster can really make a difference in weak signal areas! Equipped with BNC connectors, no adjustment is necessary; just plug your antenna cable into the preamp, and run the 3' BNC/BNC cable (provided by Grove at no extra charge) to the antenna connector on your scanner—that's it! A 120 VAC/12 VDC wall adaptor is included at no extra charge!

### SPECIFICATIONS:

Frequency Range: 1-1000 MHz  
Average Gain: 23 dB @ 1-450 MHz, 15 dB @ 450-1000 MHz  
Power Required: 10-12 V AC or DC @ 50-75 mA; 120 VAC adaptor included



### Order PRE02

**Our Price: \$59<sup>95</sup>**

## GRE Super Amplifier **Boost the range of your hand-held scanner.**

The GRE Super Amplifier has 20-dB (adjustable) gain from 100-1000 MHz. BNC connectors allow the unit to be mounted between the scanner and the antenna; a bypass switch permits the unit to be disabled without having to remove it. A 9-volt battery (not supplied) will provide up to 24 hours of continuous operation; a convenient external power jack permits the unit to be used continuously from a 9 V DC wall adaptor (not supplied).



### Order PRE01 - **Our Price: \$53<sup>95</sup>**

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fax: (828) 837-2216 email: order@grove-ent.com web: www.grove-ent.com

Technical Questions? (828) 837-9200 or tech@grove-ent.com. Due to high call volume, technical calls will be limited to 3 minutes.

GROVE (800) 438-8155

## AOR LN4000 Low-Noise VHF/UHF Preamplifier

For the discriminating scanner user who needs the best possible weak-signal amplification without amplifying the noise as well, this tiny (1" square) preamp is the answer!

The LN4000 offers 20 dB (typical) signal amplification from 100-4000 MHz (-3 dB), at a low noise figure of only 4.5 dB. It is powered by any convenient 5 to 12 VDC, 30 mA (typical), center pin positive, power supply (available as an accessory).

Includes 10" coaxial receiver/scanner interconnect cable with SMA connectors and BNC adaptors. A 10' power supply cable with DC connector is also provided for remote mounting.

NOTE: Antenna preamplifiers increase the strength of strong signals as well as weak. If you experience strong-signal overload, a filter for the offending frequencies is recommended.



### Suggested Accessory:

PWR24 AOR AA8000 120 VAC Adaptor \$25.00

**Order PRE04 - Our Price: \$189<sup>95</sup>**

## AOR ABF128 INLINE AIRBAND PASS FILTER W/BNC

The ABF128 is a receive (only) bandpass filter especially designed to improve strong signal handling characteristics of receivers for VHF commercial Airband listening. The ABF128 is suitable not only for AOR receivers, but also for most airband and wideband receivers on the market. The addition of ABF128 will provide additional selectivity, and allow the receiver's circuitry to cope much more easily with strong interfering signals such as Band-2 Stereo or Shortwave broadcast transmissions.



**Order FTR07 - Our Price: \$74<sup>95</sup>**

## Stridsberg Multicouplers

### 2-8 ports, 100kHz-1GHz, active and passive.

Operate multiple receivers or scanners from one antenna; amplified (active) and passive models. Designed for rigid military, government, and commercial monitoring and surveillance applications requiring high intermod rejection, low noise. Die-cast aluminum cases (4-3/8" L x 2-3/8" W x 1-1/4" H) EMI/RFI shielded and fitted with BNC connectors. 120VAC / 12VDC power supplies included with active models. Five-year warranty; (DS=drop-shipped directly to you from the manufacturer.)

CPL06 - 2 port passive, 100kHz-500MHz .....\$69.95  
CPL08 - 2 port passive, 10MHz-1GHz .....\$69.95  
CPL07 - 4 port passive, 100kHz-500MHz .....\$94.95  
CPL09 - 4 port passive, 10MHz-1GHz .....\$94.95

CPL03 - 4 port active, 25MHz-1GHz .....\$184.95  
CPL01 - 4 port active, 100kHz-50MHz .....\$184.95  
CPL02 - 8 port active, 100kHz-50MHz .....\$334.95  
CPL04 - 8 port active, 25MHz-1GHz .....\$334.95



## MFJ 1045C Preselector - 1.8-54 MHz

Boost weak signals and reject out-of-band interference and images from 1.8-54 MHz. Boost weak signals up to 20 dB with low-noise, dual-gate MOSFET and bipolar transistors. Choose between two antennas and two receivers from the front panel. Powered by any 9-18 VDC supply.

### Suggested Accessories:

PWR04 - MFJ 1312D AC Adaptor .....\$14.95  
CBL11 - Cable with PL259 on both ends ....\$4.99



**TUN01 - Our Price: \$82<sup>95</sup>**

## Timewave DSP-599zx Noise & QRM Filter

Featuring a bright LCD display, new high-speed CPU and DSP processor, pushbutton function selection, and continuous fine-tuning optical encoders, the DSP-599zx offers unparalleled performance as well as field upgradability for future features.

For voice and music, a continuously-adjustable optical encoder can be tuned up to 5000 Hz. Lo/Hi pass voice filters from 200-5000 Hz or CW/data filters from 10-600 Hz may be selected as well. Filter skirts are razor-sharp without ringing.

The Data filters support RTTY, AMTOR, PACTOR, G-TOR, HF Packet, SSTV, WEFAX, SITOP, and Clover. For transceiver use, the RTTY Remodulator mode detects and regenerates the mark and space tones going to your Multi-Mode Controller (KAM, PK-232, MFJ-1278, Etc.), giving it the benefits of a DSP front-end. The RTTY Modem mode provides a complete RTTY Terminal Unit when used in conjunction with a PC and appropriate software.

Additional functions include a manual notch tone eliminator, two-tone audio sine-wave generator (20 Hz-10 kHz), true rms (peak, dBV, and dBm) millivoltmeter (20 Hz-10 kHz, 1 mV sensitivity), and CTCSS ("PL") tone encoder/decoder with squelch-switched output to activate a tape recorder or other auxiliary device.



**FTR05 - Our Price: \$399<sup>95</sup>**

7540 Highway 64 West Brasstown, NC 28902 (800) 438-8155 (828) 837-9200

fax: (828) 837-2216 email: order@grove-ent.com web: www.grove-ent.com

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## SPEAKERS & RECORDERS

### GAP "HEAR IT" DSP SPEAKER

This compact speaker system utilizes powerful digital signal processing (DSP) to suppress annoying background hiss and static, revealing crisp, clean audio for shortwave reception, scanner monitoring, ham radio transceivers, CB installations, maritime mobile, noisy recordings, and other sources of crackly, hiss-ridden audio. Unlike competitive models which produce harsh, distorted audio with distracting DSP artifacts, the "Hear It" reveals up to 2-1/2 watts of clean, undistorted sound. Controls are provided for volume and DSP level.

Measuring a mere 4-1/3" W x 2-1/2" H x 2-1/2" D and weighing only 7 ounces, The "Hear It" is designed to be used in compact mobile installations and includes a mounting bracket, 8' input cord with 1/8" (3.5 mm.) mini plug, a fused DC power cord, and an instruction booklet. The unit's standard 2.1 mm. power jack will accept 12-28 VDC at approximately 500 mA, making it universally applicable to fixed, mobile, and even aeronautical configurations. The small internal speaker is ideally suited to voice frequencies; for more demanding sound requirements, an external speaker or headphones may be plugged into the 1/8" jack provided.



**SPK05 - Our Price: \$168<sup>95</sup>**

### Workman Model 712 Noise Cancelling Mobile Speaker

Whether your mobile listening needs are for scanner, shortwave, ham radio, CB, or professional two-way communications, this mobile accessory speaker will improve audio reception. A simple push of a button reduces pulse ignition noise and background hiss. Enjoy improved audio with the rugged, 4-inch, 10-watt-rated speaker. Mount the adjustable, steel bracket to your vehicle, plug the 10-foot cord into the 1/8" (3.5 mm) external speaker jack on your radio, and you're ready to go!

Power Rating: 10 watts  
Impedance: 8 ohms.



**SPK07 - Our Price: \$8<sup>95</sup>**

### Timewave ANC-4 RF Noise Canceller

The ANC-4 is an RF device that eliminates or reduces power line noise, computer noise, TV-generated interference, and other types of electrical noise. The ANC-4 unit connects right to the antenna connector of the receiver or transceiver to cancel locally generated noise before it gets into the receiver and affects the receiver AGC circuits. Reception of signals well below the noise level of the local interference is possible.

To cancel locally generated interference, the ANC-4 detects the interfering signal and adjusts its phase and magnitude so that it matches the offending interference at the receiver input, but is 180 degrees out of phase, effectively canceling the interference. This scheme is particularly effective at reducing local power line noise or other locally generated noise types.



**ACC40 - Our Price: \$199<sup>95</sup>**

### C Crane Long-Play Versacorder

Now you can listen to your favorite shortwave, talk radio, music broadcast, scanner activity, anytime you want by pre-recording the transmissions—at normal tape speeds or up to four hours on one side of a standard 120 minute cassette (a tape and tri-plug patch cord are provided)!

Excellent as well for preserving conferences with its built-in microphone, and for recording important telephone conversations with an optional patch cord (a beep tone can be activated to remind other telephone callers that a recording is being made).

A six-event timer allows you to automatically turn the recorder on at a pre-arranged time and day. You can use the voice activation to economize tape during periods of audio inactivity, or even remote- or manually activate the recorder. The large internal speaker provides quality sound at high playback levels.

Runs on (4) optional "C" batteries or the included AC adapter.

Weight: 2 lbs. 6 ozs. Size: 10" W x 2.625" H x 6.5" D.

Made by Sangean.



**REC01 - Our Price: \$99<sup>95</sup>**

With the optional Telephone Patch Cord, you can record directly from the telephone.

CBL10 Versacorder Phone Patch Cord..... \$9.95



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# TEST EQUIPMENT & POWER SUPPLIES

## WiNRADiO EMR Detector

This tiny, pocket accessory is ideal for detecting the presence of radio and electric fields in your proximity. With a continuous frequency response from 50 Hz to above 1 GHz, and an average sensitivity of 25  $\mu\text{V}/\text{cm}$ , this new EMR Detector from WiNRADiO is a very handy gadget!

**Order TST06 - Our Price: \$49<sup>95</sup>**



## MFJ 886 Frequency Counter

The shirt-pocket MFJ-886 offers 1 MHz-3 GHz frequency range, a 100 MHz sensitivity of 0.8 mV and readout to 0.1 Hz, all from a large (3/4"H), 10-digit LCD!

A sensitive bargraph signal strength meter, an accurate 1 ppm time base which can be calibrated externally, rechargeable batteries (included, up to six hours operation), are all part of this rugged, anodized-aluminum-encased pocket instrument which measures only 2-3/4"W x 3-1/4"H x 1-1/4"D, and comes with an AC adaptor/re-charger and telescoping BNC whip antenna at no extra cost!



**Order TST07 - Our Price: \$114<sup>95</sup>**

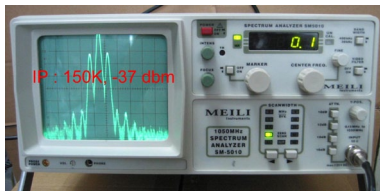
## MEILI SM5010 1000 MHz spectrum analyzer

The SM5010 spectrum analyzer is indispensable for viewing an entire block of radio spectrum, revealing unknown signals. Choose small segments under 1 MHz wide, or step sequentially up to a giant swath of more than 1 GHz, observing all signals in the spectrum.

Connect the SM5010 to an antenna to analyze radio systems, detect radio frequency interference, search for unknown signals, and determine spectrum use in your area. Plug in earphones or a speaker to monitor signal contents. Connect a test probe to track and measure signal distribution in transmitters, receivers, computers, and other analog and digital instruments.

### Technical Specifications

Frequency Range: 0.15 to 1050 MHz  
Center Frequency Display Accuracy:  $\pm 100\text{kHz}$   
Marker Accuracy: 0.1% span + 100kHz  
Resolution of Frequency Display: 100kHz (4.5 digit LED)  
Frequency Scan width Accuracy:  $\pm 10\%$   
Frequency Stability: Better than 150kHz / hour  
IF Bandwidth (-3dB): 400kHz and 20kHz  
Video-Filter when selected: 4kHz  
Sweep Rate: 43 Hz  
Amplitude Range: -100dBm to +13dBm  
Screen Display Range: 80dB (10dB/div.)  
Reference Level: -27dBm to +13dBm (in 10dB steps)  
Reference Level Accuracy:  $\pm 2\text{dB}$   
Average Noise Level: -90dBm (20 kHz bandwidth)  
Distortion: < -55dBc of 2nd and 3rd harmonic  
Third Order Intermodulation: -70dBc (two signals > 3MHz apart)  
Sensitivity: Better than -90dBm  
Log Scale Fidelity:  $\pm 2\text{dB}$  (without attenuation) @ 500MHz  
Input Attenuator: 0 to 40dB (Four 10dB steps)  
Input Attenuator Accuracy:  $\pm 1\text{dB}/10\text{dB}$   
Max. Input Level: +10dBm,  $\pm 25\text{V DC}$  (0dB attn) +20dBm (40dB attn.)  
Span (Scan Width): 100kHz/div. to 100MHz/div in 1-2-5 steps; and 0Hz/div.



**TST22 - Our Price: \$1149<sup>95</sup>**

*Many thanks... from a lapsed subscriber. Its good to be back (my name was actually in an issue about a year ago...). Like many other users, I download the .pdf version of the Mag into iPad and open it with iBooks. Works nicely.*

*- Craig P.*

## Jetstream JTPS30M power supply

- Adjustable 9-16 VDC
- 30 Amp Surge / 25 Amp Continuous
- Internally switchable AC input voltage, 110 or 220 Vac
- Over voltage protection and over current protection
- High current jacks on the back, quick connectors on the front for low current accessories
- Lighter plug on the front
- Light Weight, only 5 lbs!
- Compact, only 7.5" x 2.75" x 7"



**Order DS-JTPS30M - Our Price: \$109<sup>95</sup>**

## Jetstream JTPS28 power supply

- 13.8 VDC
- 28 Amp Surge
- 25 Amp Continuous
- Light Weight, only 4 lbs!
- Compact, only 7" x 2.25" x 8"
- Five way binding post for high current radios
- Quick connectors for low current accessories
- Over voltage protection
- Over current protection
- Quiet internal cooling fan with "fan on" LED
- Switchable AC input voltage, 110 or 220 Vac
- AC line fuse (5 amps)



**Order DS-JTPS28 -**

**Our Price: \$84<sup>95</sup>**

## Jetstream JTPS30MB power supply

- Variable 4-16VDC
- 30 Amp Surge
- 25 Amp Continuous
- Light Weight, only 3 lbs!
- Compact, only 5" x 2.375" x 6.125"
- High current jacks on the back
- Switchable volt/current meter
- Over voltage protection
- Over current protection
- Switchable AC input voltage, 110 or 220 Vac



**Order DS-JTPS31MB -**

**Our Price: \$84<sup>95</sup>**

## Mastech MS8209 Multimeter

Ideal for gardening, environmental monitoring, and test bench functions. Applications include rare plant growing, photography, filming, video taping, OSHA measurements, auditorium acoustics control, classroom design, church sound systems and performance halls for acoustics control.

The multimeter's rugged, rubberized enclosure resists splashing and provides durability. A rear-hinged prop can stand the meter for convenient viewing. A backlight allows the unit to be clearly read in low light conditions.

A high-quality, zippered, nylon bag is provided, containing pockets to securely hold the meter—battery included-- and rubberized test leads.



**Order TST01 - Our Price: \$89<sup>95</sup>**

## AOR AR-STV

The AR-STV is a wireless camera receiver designed to detect wireless video surveillance cameras. With its 2.5 inch color LCD display, still picture recorder and sensor that captures video signals in real-time, the AR-STV is a valuable addition to any security operation. Its built-in clock allows images to be time stamped and an optional 4 GB SD memory card can be used to store up to nearly 2000 images.

- Receives and displays analog video signals on L-band (1.2 GHz) or S-band (2.4 GHz)
- 2.5 inch color LCD display
- Still picture recorder
- Can be set for continuous search between 900 ~ 2800 MHz.
- Detects NTSC, PAL, CCIR, EIA or scrambled (reverse polarity) video signals
- Captures video signals in real-time
- Built-in clock
- Captured images can be time-stamped
- USB connector makes it easy to download stored images into a computer
- Easy to operate
- Powered by four AA size batteries or external DC power
- NiMH batteries, belt clip and battery charger included
- Rubber duck antenna
- Optional 4 GB SD memory card can store nearly 2000 images



**Order TST21 - Our Price: \$879<sup>95</sup>**

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fax: (828) 837-2216 email: [order@grove-ent.com](mailto:order@grove-ent.com) web: [www.grove-ent.com](http://www.grove-ent.com)

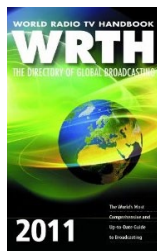
Technical Questions? (828) 837-9200 or [tech@grove-ent.com](mailto:tech@grove-ent.com). Due to high call volume, technical calls will be limited to 3 minutes.

# BOOKS

## World Radio TV Handbook, 2012 Edition

This information packed reference for professional monitoring stations and serious short-wave listeners bulges with station information, staff listings, contact information, worldwide mediumwave and shortwave frequencies, and schedules for programs in all languages.

Available December, 2011  
**BOK03-12 - \$29<sup>95</sup>**



# SOFTWARE

## Grove's Frequency Master File

THIS INFORMATION-PACKED CD LISTS MILITARY, FEDERAL AND SHORTWAVE SERVICES BY THE THOU-

SANDS! Search by frequency, location, call sign, agency or other key words, all in convenient PDF!

**Military:** NORAD, CAP, aerial refueling, National Guard, FAA control centers, VHF/UHF military aircraft and base trunking systems, Navy Fleet Control, training ranges, tactical satellite links, DOD worldwide air/ground frequencies, overseas bases, and more.

**Shortwave:** Worldwide airlines, maritime and coastal station networks, US Coast Guard, domestic and foreign international broadcasting, navigational beacons; diplomatic and government worldwide, press HF links, spy networks transmissions, amateur and CB band plans, Air Force, Army and Navy networks globally, business, scientific, and private communications, long wave beacons, Travelers Information Stations and more.

**Federal:** From 2-420 MHz, this is the largest and most accurate listing available outside classified government files. Air Force, Navy, Coast Guard, Army, NASA, U.S. Marshals, United Nations, Customs, White House Communications, FBI, Border Patrol, IRS, Secret Service, FAA, National Strike Force, DEA, Post Office, TVA, U.S. Capitol Police, Social Security, NSA, Forest Service, FEMA, Indian Affairs, and dozens of other agencies.

Additional chapters describe federal radio systems, frequency assignment procedures, and a comprehensive by-agency table of HF (2-30 MHz) nationwide frequencies. A glossary of agency abbreviations is included.

**SPECIAL BONUS!** The comprehensive National Telecommunications and Information Agency (NTIA) Manual of Regulations and Procedures for Radio Frequency Management, as well as the NTIA color chart of the electromagnetic spectrum (3 kHz-300GHz)!

Compiled in 2004.

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## Grove Radio/Television Broadcast Directory on CD-Rom

This 750-page, PDF directory of broadcasting stations in North, Central and South America, all on one CD-ROM, is authored by Monitoring Times assistant editor Larry Van Horn includes Adobe Acrobat, allowing search by frequency, call sign, location or any combination of key word(s).

Shown are the AM broadcasters for North, Central and South America as well as FM and TV-VHF and UHF listings for the U.S., Canada and Mexico. Listings include frequency, call sign, antenna configuration, location, power output for time of day/night, service designators, and station class listings and license status. A handy reference section lists informative Internet sites for radio clubs and additional station information.

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*I don't think this is any big news, but I wanted to pass this info along so I'd have a chance to say how much I really enjoy MT & all the GREAT info ya'll put out for us every month! Keep up the excellent work! I love this radio stuff! J My radio hobby enjoyment has increased tremendously since I found MT as a resource.*

*- Kenneth K.*

## RADIOCOM 6.0 Premium Control/Decoding Software



RadioCom 6.0 is a new leap forward after the successful predecessor RadioCom 5. It is able to control several radios and significantly improve sound quality. RadioCom6 transmits and receives data (SSTV, PSK31, RTTY, Weather fax, Synop, Navtex, CW and more) and from the Internet [www.meteoserver.net](http://www.meteoserver.net) (world wide satellite pictures) in one program. Two Radios can be connected simultaneously to 1 sound card only. You can run and operate several decoders at the same time. The Digital Sound-Processor (DSP) of the sound card is used. That is why the quality is better than anything compatible. The moment RadioCom starts, some of the foremost changes are in plain view: it is distinctive and eye-catching. Colors are subtler and the overall looks are just magnificent, never seen before.

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Dual Radio Control with RadioCom 6 is now able to control two radios simultaneously. The supplied Bonito Switchbox features radio control for more than 100 radios without the need for additional hardware since the switchbox includes level converters for ICOM, YAESU, Kenwood, TenTec, and others. New USB-controlled radios are also supported of course. The Frequency Slider and the possibility to use the mouse wheel for tuning signals significantly increases user comfort. This is also true for the completely new flexible user surface.

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## RADIOCOM 4.52 Universal Control/Decoding Software



FEATURES: decoding of digital and analog signals from a radio. In addition, it significantly improves the sound quality in a way that was previously reserved to DSP-receivers. An audio cable delivers the signal directly via the soundcard into the computer. The radio can also be controlled via the COM-port. The received signal is filtered and made audible through the computer speaker.

RadioCom 4.52 contains Radio Control, Equalizer-Filter-Analyzer, Audio Recorder, RTTY-, CW-, WFX-, SatFax, SSTV-, PSK- and Time Signal Decoding, Frequency- and Schedule-Manager, as well as Sat Tracking. There is also a Frequency Scanner and Result Viewer to view images and text of the received signal. Additionally, RadioCom uses a download service for program resources and satellite images.

This means: You have EVERYTHING in one program and don't have to contemplate which software may be necessary for which operating mode. The supplied Bonito switchbox allows you to control the radio without the need for additional, expensive hardware.

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## RadioCom 4.52PRC, for ICOM R/PCR1500/2500 only

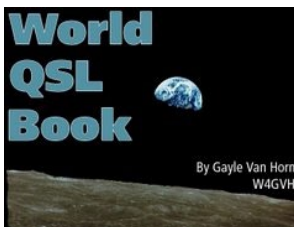
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## **WORLD QSL BOOK by Gayle Van Horn on CD-Rom**

Shortwave listeners now have a single, exhaustive CD source to identify the call signs and IDs heard in the busy 2-30 MHz global spectrum. More than 500 pages cover every aspect of collecting QSL cards and other acknowledgments from stations heard in the HF spectrum. Guidance on collecting, displaying and preserving QSLs is included.

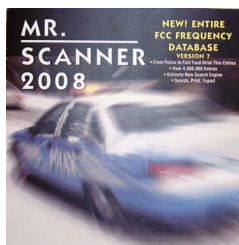
This self-loading, easy-to-use reference begins with a comprehensive tutorial on how to submit a verification report generally as well as specific details and addresses for querying international broadcasters. Successive chapters cover hams and utilities like military and Coast Guard, clandestine and pirate broadcasters, shipping and cruising industries.

A list of call signs for major communications users makes IDing simple, and a quick-check reference page features a handy table of frequency allocations for the shortwave spectrum.



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## **MR. SCANNER FCC DATABASE - Latest Version!**



This information-packed CD features official FCC records of licensees by state in the 25-1300 MHz range. Includes police, fire, ambulance, hospital, railroads, business, airports, AM/FM/TV broadcasting, armored express, paging, press, public transportation, common carrier, microwave relay, and public utilities. Trunk-Tracker IDs and ten codes are also listed. Data fields which may be searched independently include frequency, city, county, call sign, and service code; includes latitude and longitude as well. Export your records by ASCII or DBase. System requirements: Pentium 133 or faster, Works best with Windows 2000 or higher, 128 meg minimum memory, 4x or faster CD-Rom drive

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## **"ASK BOB" Anthology**

For more than two decades, Bob Grove's popular "Ask Bob" monthly column has been a favorite among Monitoring Times readers. Now you can enjoy reading hundreds of the most informative questions and answers submitted by readers over the years, specially chosen for this edition based upon timeliness, general appeal and importance.

Whether your interests are in antennas, scanners, shortwave, basic theory, or all these and more, this is one fascinating and informative CD you won't want to stop reading!

The Ask Bob CD contains 5 videos explaining the basics of Selectivity, Trunking, Repeaters, Dynamic Range and AC Adaptors. These videos feature Bob Grove, owner of Grove Enterprises, and Publisher of Monitoring Times magazine. System requirements to run the videos are: Pentium 400 or higher processor, 8mb video card, CD-ROM or DVD-ROM drive.

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## **International Callsign Handbook, 2nd Edition**

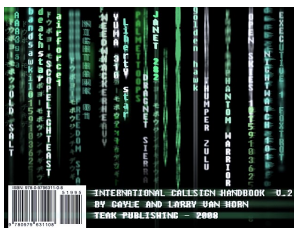
After over a decade absence, radio monitors once again have a single, exhaustive publication to help them identify radio signals on the various radio bands.

This new CD-ROM ebook from Teak Publications, has been expanded from the print first edition and covers various callsigns and other types of radio transmission IDs used throughout the HF, VHF and UHF radio bands.

This giant 1,100 page plus callsign reference uses the Adobe Acrobat platform. All text is fully searchable and can be printed by the user.

The ten chapters in this book cover various identification types including internationally assigned callsigns (including ships), airline calls, ship and coastal maritime mobile service identification (MMSI) numbers, ALE addresses, selected aircraft selcalls, selected ICAO24 aircraft codes, and introductory material. The single largest chapter of this book has an extensive listing of tactical call words and IDs used by civilian, military, and government agencies.

This is a self-loading, easy-to-use CD-ROM ebook, and it is a must have for the active HF or scanner radio enthusiast.



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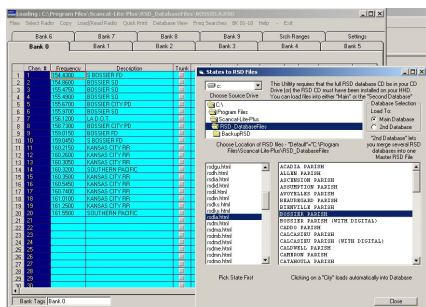
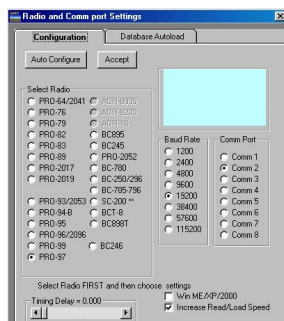
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If you do not have the frequencies for your area, the program supports the files created on the Mr. Scanner CD or downloads from the National Communications web site. Contact National Communications for both the Mr. Scanner Public Safety CD and Mr. Scanner CD ROM. You can also cut and paste from Excel. Either way there is little typing involved and in a matter of a few minutes your radio will be up and running - programmed with all your local frequencies. Remember all radios can use the same database (to the limits of their frequency coverage and features).



**SFT19 - \$29<sup>95</sup>**

*Many thanks. I am blind and have long envied comms hobbyist friends who've been reading MT over the years. I look forward to getting a taste of my first issue.*

*Many thanks for making MT available in an accessible format.*

*Best Regards  
- Ron M.*

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