Through the ages, man has erected classic monuments ...

ICOM R-8500

The monumental 100 kHz-1999.99 MHz communications receiver of your dreams! Reserve yours today—see p. 13.

UPS 2nd Day Shipping at Ground Rates on all Products We Sell!
If you are interested in electronic communications, the Grove Communications Expo is your event of the year! Expo '96 in Atlanta, to be held Oct. 18-20, unites you with hundreds of like-minded communications enthusiasts who assemble to exchange information, introduce new products, and offer technical help. This is an outstanding opportunity for you to move into the information age! This year's expanded program includes over 50 seminars, forums, demonstrations and events in the following areas:

- Computers and the Internet
- Shortwave and scanner monitoring
- Satellite communications
- Radio astronomy

As in recent years, the Expo will feature exhibits by top-name vendors, a hands-on listening post, club booths and prizes. Tours will be conducted to the Delta Communications Center, Atlanta Fire Communications, Atlanta/Fulton County Communications Center and more.

Keynote speaker at this year's banquet will be Ron Parise, NASA astronaut and astronomer. Parise, WA4SIR, has made two trips into space aboard the shuttle and operated the shuttle's amateur radio experiments (SAREX). Several special workshops, forums and exhibits will be sponsored this year by the Society of Radio Astronomers (SARA), which will be conducting their fall conference in conjunction with the Expo!

Grove is also sponsoring a one-day educator's forum to demonstrate to classroom teachers the myriad uses—and educational values—of radios and computers in our society.

This year's scheduled exhibitors include AMSAT, Bearcat Radio Club, Cellular Security Group, Computer Aided Technology, Dallas Remote Imaging Group, Electronic Distributors (EDCO), Grove Enterprises, OptoElectronics, Radio Astronomy Supplies, Radio Progressive, Satscan Electronics, Scan Master, Signal Intelligence, Sony, Swagar Enterprises, and Transel Technologies.

Atlanta Airport Hilton
October 18-20, 1996

Registration is $55 per person (take $10 off if you bring a first-time registrant with you). Rooms at the Airport Hilton available at the convention rate of $76 per night, single or double occupancy. Call 1-800-Hiltons.

For more information and schedules, set your web browser to http://www.grove.net/rimpexpo.html, e-mail us at expo96-info@grove.net, phone us at 1-800-438-8155, or fax us at 1-704-837-2216.
Growing EXPOnentially ...

The Dayton Hamvention is always an eye opener! Each year, some 30,000 eager amateur radio enthusiasts of all ages, cultures, sizes, and descriptions cram Dayton's (Ohio) Hara Arena, pushing, shoving, and having a great time seeing all the new products for radio hobbyists. The flea market is a spectacle in itself with 10 acres of humper-to-humper bargains. Some fun.

Seeing this conclave of conventionees reminds us that the Grove Communications Expo isn't that far off. Have you made your reservations yet? I would strongly urge you to do so. We have not put up much effort into doing so much in our history, and it's going to be an experience!

I'm looking forward to meeting astronaut Ron Parise, our banquet speaker; his contributions and awards of numerous, and his is highly covered on the lecture circuit. His insights into the space program should be both informative and entertaining. We have invited Atlanta area educators as well, offering them an opportunity to attend special seminars on radio and computer technology in the classroom. Meet with them afterward and share your knowledge and wisdom as well; they will appreciate your good will.

This issue of the Grove Buyer's Guide institutes a new help, our blue ribbon, best-buy tag. These are strategically placed to assist your in making the best decision based upon value, performance, and reputation. We have tried to select these best buys at various pricing levels.

As you read through this issue, you will discover an unusual addition: the Clarity hearing instrument. Virtually all men suffer gradual high-frequency hearing loss with age; I know I do. When I tested this inconspicuous device, I was startled to hear the improvement in my recognition of sounds that I had forgotten with time. Even more amazing was its low cost, a tiny fraction of the inflationary charges demanded by our competitors. If you have hearing loss, give the Clarity a try; you have nothing to lose, and so much to gain!

The summer months are often the best time to buy merchandise (including Grove Enterprises) know that sales are slower during the hot months, and rare bargains are likely to appear. A look through our pages will reveal good examples of competitive pricing!

As always, we are here to serve you. If you need assistance on selecting the product which best suits your needs, call our skilled technical experts at (704)-837-7081.

Bob and Judy Grove

JUDY's SPECIAL

ICOM R-8500: Here's the New Standard-Bearer

One of the most exciting products shown at Dayton is Icom's astounding IC-R8500 wide-coverage communications receiver. I remember when Icom engineers visited us nearly three years ago, asking us to maintain confidentiality in sharing with them our expertise and experience as they designed this new radio. It is very gratifying to know that we were part of the planning team resulting in this spectacular piece of equipment.

While other companies offer promises of yet-unreleased products, Icom plans to deliver their product in July, and it's a beauty! Featuring continuous (less cellular) frequency coverage from 100 kHz through 2000 MHz, the R8500 is the new standard of comparison.

Drawing experience from the previous, and awesome, R9000, the R8500 is compact, easy to use, and powerful with its loads of features and high performance specifications. Take a look at this receiver in our new Buyer's Guide; I think you will be as impressed as we are!
Clarity Hearing Instruments

Why pay more than $1,000 for a hearing aid, when this top-quality unit can be yours for less than half the price?

Crystal-clear hearing restoration, exclusively from Grove Enterprises!

An exclusive agreement between Grove Enterprises and a high-tech aerospace manufacturing firm allows us to bring you unexcelled in-the-ear canal hearing enhancement at a dramatically low price! This revolutionary hearing aid is designed to aid the majority of people with hearing loss, from mild to moderately severe. The Clarity CL 2000 offers ultra-low distortion and minimal feedback, and is inconspicuous and comfortable to wear. The Clarity CL 2000 comes with a carrying case, cleaning tool, four batteries and a one year warranty against manufacturing defects.

For an exceptional value buy 2 and save $63.00.

Order CHI 2000
Only 4799 ea. or 89595 for two
PLUS $6.50 2nd Day UPS or First Class Mail Shipping in U.S.

Satisfaction Guaranteed!

Comes with batteries, pouch, cleaning tool and user guide.

Your order for a Clarity Hearing Instrument will be processed and shipped immediately after we receive the signed and dated “Waiver to Medical Evaluation Requirements” contained on this catalog’s order form, page 48.

You Can Order from Grove With Total Confidence

Grove Enterprises prides itself on offering quality products at reasonable prices AND outstanding technical support. In the rare event you should experience some kind of problem with any of the products we manufacture or sell, or should you have a complaint, please call us first at 1-800-438-8155 and we’ll do everything we can to keep you as a satisfied customer. (ALL PRICES ARE SUBJECT TO CHANGE!)

Occasionally a customer will order a product that turns out not to be what they expected. Simply call our toll-free number, 1-800-438-8155 within thirty (30) days of shipping and we will gladly credit your future purchases, or we’ll issue you a refund (less shipping charges)—your choice!

ALLreturned items must have a return authorization number or the return is SUBJECT TO A RESTOCKING FEE BASED ON THE INVOICE VALUE: $0 - $500 = $15; $501 - $1,000 = $25; $1,000 - $1,500 = $35.

BE SURE TO REQUEST A RETURN AUTHORIZATION NUMBER FROM A CUSTOMER SERVICE REPRESENTATIVE!

Any product returned in non-as-new condition will be assessed a fair refurbishing charge. Be sure to include the authorization number as a restocking fee must be assessed (see above) for products returned without authorization. Special order items cannot be returned.

Limited Warranty:

All equipment manufactured by Grove Enterprises is warranted to the original purchaser to be free from defects in materials and workmanship for a period of one (1) year from the date of purchase as shown on the purchaser’s receipt. Grove Enterprises may, under this warranty, either repair or replace (at our option) any part which proves defective in material or workmanship, provided the unit has not been modified in any manner or field repairs attempted. Please call us at 1-800-438-8155 for a return authorization number and shipping instructions before returning any item for warranty repair.

Grove Enterprises assumes no responsibility for damages or penalties incurred resulting from the use of this product in a manner or location other than that for which it is intended.

All customer-owned equipment repaired by Grove Enterprises is warranted for a period of 90 days from the date shown on the customer receipt. The warranty is not transferable. Modifications to the equipment may void the original manufacturer’s warranty.

Shipping Damages:

Should you receive a damaged shipping carton, ask the UPS driver to wait while you inspect the contents. If there is damage, refuse the package and immediately call your local/regional UPS office.

Canadian Shipments:

All Canadian shipments are subject to duties and GST tax. These charges are the responsibility of the purchaser and not Grove Enterprises.

Radio Shack® Equipment:

Should any equipment manufactured by Radio Shack® and sold to you through Grove Enterprises fail within a period of one year from the shipping date, the unit must be returned to Grove Enterprises for warranty repair. Please call us at 1-800-438-8155 for return instructions.

Other Warranties:

On items not manufactured by Grove Enterprises or Radio Shack®, (ICOM, Uniden, Sony, etc.), please check your service manual for instructions or call us at 1-800-438-8155 for the name, address or telephone number for the repair center nearest you.
This is a full-featured radio for the serious shortwave listener—with a reputation of distinction among the "powerful portables." Synchronous detection allows interference-free reception on many stations difficult to hear on other radios. Narrow/wide selectivity switching; clock/timer allows up to 4 automatic on/off cycles per day for frequencies and times of your choice; 10-step LED signal strength meter, audio tone selection for speech or music, and 32 station direct-access keyboard combine to make this Sony product a remarkable value for beginners or seasoned SWL's.

Frequency range includes 150 kHz-30 MHz, 76-108, and 116-136 MHz. See pp. 20-21 for more detailed specifications. Requires 3D/2AA cell batteries.

---

Incredible! Imagine compressing the popular functions of the mighty Sony ICF2010 into a shirt-pocket radio! This tiny titan offers continuous 150 kHz-30 MHz and 76-108 MHz FM frequency ranges, Sony's famous synchronous detection, USB/LSB reception, 100 Hz tuning steps, 50 memory presets, 24 hour clock/timer, world time computer, station name display, illuminated LCD, and much, much more.

AC adaptor, stereo earphones, active antenna, soft carrying case, station directory, and full instruction manual included at no extra charge! Two AA batteries required.

See detailed specifications on pp. 20-21.

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The new Sony ICF-SW77 has all of the features of the popular ICF-2010 (except air band), plus: front panel tuning dial, separate bass and treble controls, 162 non-volatile memory channels, stereo FM (headphones), station name display, 30 Hz fine tuning steps, broadcasting time display, 24 hour/local time clock, and 5-event timer. It comes complete with an AC adaptor, stereo earphones, ear pads, carrying belt, compact antenna, external antenna adaptor/plug, and SW handbook.


---

For those who have been looking for the next step up, it's here!
Shortwave Receivers

SONY ICF-SW7600G

HIGH SENSITIVITY PLUS SYNCHRONOUS DETECTION!

It was inevitable. The early compact models have been replaced by a tiny marvel with synchronous AM detection, SSB, and even FM stereo coverage! Measuring just over 7 inches wide and weighing 22 ounces, the SW7600G is loaded with features! D/V/ local switch reduces "pumping" on strong SSB signals; power switch lock prevents accidental battery depletion during transport.

Continuous 150 kHz-29.995 MHz frequency coverage plus 87.6-108 MHz FM headphone stereo, pushbutton tuning, tone control, external antenna jack, clock timer with sleep function, tilt bracket, keyboard lock, direct-entry keypad, and 22 scannable memory channels keynote the high-tech features of this potent portable! See pp. 20-21 for more details. Requires 4 AA cell batteries.

Retail $149.95

Order RCV 11

Only $189.95

Shipping $9 UPS

$14 US Priority Mail

$16 Canadian UPS

$15.50 Canadian APP

ACCESSORIES

ANT 22 Select-A-Tenna

$65.95

ANT 31 Grove Skywire Antenna

$349.95

ANT 32 Kiwa Pocket Loop Antenna

$119.95

BAT 1 AA alkaline bat.

$7.95

PWR 9 AC adaptor

$19.95

SPK 11 Naval HTS speaker

$29.95

TUN 4A Grove TUN 4A Mini Tuner Plus

$99.95

Grove discount price only $679.95

Order RCV 19

Shipping $14 UPS

$23.50 US Priority Mail

$21 Canadian UPS

$26 Canadian APP

ACCESSORIES

ANT 22 Grove Skywire Antenna

$39.95

ANT 3 Grove Mini Skywire Antenna

$29.95

ANT 24 Dyrek active antenna

$179.95

SPK 13 Grove Sound Enhancer

$199.95

TUN 4A Grove TUN 4A Mini Tuner Plus

$99.95

For improved CW or sideband listening, use your R8-A with the Grove SP-200 speaker, sold separately.

43x27

R8-A Communications Receiver

The successor to the famous R8 is here—Why pay more when the best costs less?

The Drake R8 has been internationally respected for its excellent audio, frequency agility (100 kHz-30 MHz, expandable to 33-55 and 108-174 MHz with optional converter), friendly control panel, synchronous detection, noise blanker, passband tuning, preamp/attenuator selection, universal power supply, dual clock timers, giant display, five filter bandwidths, and six receiving modes. Now Drake has added over a dozen important improvements to their legend R8 receiver, including:

- Single-keypress mode and bandwidth selection
- Alphanumeric display of station identification
- Improved overload immunity
- 440 memory records
- Rapid scanning
- Enhanced tone control
- Tighter frequency stability
- Strong metal tilt bail
- Expanded-function RS 232 computer control
- Removable/replaceable line cord

Not only continuous coverage 500 kHz-30 MHz, but 87-108 MHz FM broadcast (stereo at headphone jack) and 116-136 MHz aircraft as well! Standard and synchronous detection AM, upper and lower sideband on medium and shortwave, direct frequency entry keypad, 0.5 microvolt sensitivity, dual 6/4 kHz selectivity on AM, sharp 2.3 kHz selectivity on SSB. Up-conversion eliminates images while +10 dB intercept point suppresses intermod. Also, now includes an amplified whip antenna on all frequencies.

The SW 8 runs wide 11" wide by 5\frac{1}{4}" high and weighs a scant 10 pounds, the SW 8 runs standard on optional internal batteries or its supplied AC adaptor. High-contrast, backlit LCD display provides 100 Hz tuning accuracy. Dual-mode clock timer and 70 scannable memories round out the key features of this welcome receiver.

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**GRUNDIG**

**Yacht Boy 400**
Portable Shortwave Receiver

It's always a pleasure to offer a really good, low-cost product—and that's just what Grundig's YB-400 is. With AM/FM stereo and continuous shortwave frequency coverage from 1.7-30 MHz in 5 or 1 kHz tuning increments, SSB, infinite fine tuning, FM broadcast reception, and battery or AC power convenience, the 400 also offers 40 scannable memories and simple pushbutton tuning.

A giant, backlit LCD shows frequency, dual-zone 24 hour clock, battery condition, even a bargraph for received signal strength! Dual bandwidth selectivity allows sharp rejection of adjacent frequency interference, while high sensitivity assures weak signal reception, even with the convenient telescoping whip. Requires 6 AA cell batteries.

This compact marvel is ideal for dependable backup during power outages and as a suitcase companion during that next trip.

**GRUNDIG**

**Luxury Portable SATELLIT 700**

**RCV 23**
Only $499.95

Grundig's decades of quality radio manufacturing culminate in the Satellit 700, a high performance portable at an affordable price! Separate bass and treble controls coupled with the large internal speaker produce the best audio we've heard in any contemporary shortwave portable!

Continuous frequency coverage 160-333 kHz longwave, 528-30,000 kHz medium and shortwave, 57.5-108 MHz FM broadcast. USB/LSB selection on utilities, with 100 Hz tuning steps and infinite-resolution RIT (clarifier) for fine tuning. Straightforward keyboard entry makes frequency selection a snap!

Wide and narrow filters provide excellent audio quality and adjacent channel interference rejection, while synchronous detection with automatic USB/LSB tracking improves single-signal response.

120 factory preset frequencies with station names on the giant LCD display allows instant selection of favorite stations. Automatic bandscanning searches for active frequencies. Requires 4 D cell batteries.

**GE Superadio III**

Premium Portable for Medium Wave DX'ing

The GE Superadio series has been a popular receiver for AM/FM DXers for years. The smooth vernier dial features tuned RF on both AM and FM, while a ceramic IF filter and 7 tuned IF circuits provide outstanding selectivity. The two-way speaker system with separate bass, treble and loudness controls assures solid, clean sound, and the drift-canceling, automatic frequency control (AFC) circuit can be switched out for weak-signal hunting. The internal AM loop and FM whip antennas provide convenient portability, while external antenna jacks accommodate your long-distance antennas.

Expertly designed and handsomely crafted, the GE Superadio III is powered by 120 VAC or six internal D cells (optional) with over 400 hours battery life!

**Order RCV 5**
Only $59.95

**UPS 2nd Day Air at Ground Rates on ALL PRODUCTS!**
Shortwave Receivers

AR5000
WIDE-COVERAGE
COMMUNICATIONS
RECEIVER!

AOR has scooped the market with their new AR5000 extended-frequency coverage receiver, tunable from 10 kHz through 2600 MHz (less cellular) and offering 650 memory channels in 65 10-channel banks. Imagine listening to 60 kHz time signals, VLF naval communications, international shortwave broadcasting, worldwide single-sideband communications, civilian and military aeronautical transmissions, as well as VHF/UHF public safety radio, ham repeaters, microwave earth satellites, and much, much more! All on one receiver!

This triple-conversion luxury receiver offers outstanding sensitivity (0.15 microvolt SSB, 0.3 microvolt VHF/UHF, 0.6 microvolt AM), blurring 50-channel-per-second scan/search speed, programable tuning steps from 1 Hz to 1 MHz, all mode reception (AM/FM/LSB/USB/CW), selectable IF bandwidths (3/6/15/40/110/220 kHz), superb frequency stability (+/-1 ppm, 0-50 deg. C.), and mobile or fixed power (12 VDC/120 VAC).

Fully computer-controllable, multiple antenna inputs front-panel or computer-acceptable; compact (8-1/2"W x 3-1/2"H x 10"D) and lightweight. Options include dual rack mount, 0.5 kHz CW filter, and 220 VAC 50/60 Hz AC adapter.

Limited supplies may delay shipping, so order now!

Order RCV 12
Only $1849.95

Super Value and Performance from SANGEAN

Top-of-the-line Sangean with or without Built-In Cassette Recorder

ATS-818
Order RCV 7
Only $149.95

Retail $249.95

ATS-818CS
w/cassette recorder
Order RCV 9
Only $219.95

Imagine—record your favorite programs automatically with the dual-zone clock timer on any frequency from 150 kHz through 30 MHz, 87.5-108 MHz FM as well! This impressive portable has SSB and CW reception, 45 memory channels, wide/narrow filter selectivity, signal strength indicator, AC wall adapter and more! See detailed specifications on pp. 20-21.Requires 4 D cells.

receivers are the same, excluding the tape recorder specifications.

NEW!

Sangean ATS909
MULTIBAND RADIO!

...Nice things come in small packages!

Once in a great while a low cost radio with outstanding features comes along—such is the compact ATS808. Features 150 kHz-30 MHz continuous tuning, 87.5-108 MHz FM reception (stereo earphones included), dual AM selectivity, direct keyboard frequency entry, continuous tuning dial, scan and search modes, 45 memory channels, 24 hour dual-zone clock/timer, and distance/local sensitivity selection. A soft pouch and pocket shortwave guide are included at no additional cost.

Order RCV 13
Only $129.95

Shipment
$9 UPS
$14 US Priority Mail
$15.50 Canadian APP
$16 Canadian UPS

Accessories
ANT 3
Grove Mini Skywire Antenna $29.95
ANT 21
Select-A-Tenna $65.95
ANT 32
Kiwa Pocket Loop Antenna $119.95
BAT 1
AA Alkaline Batteries $7.95
2 required for memory; 4 more for portable operation
PWR 10
AC adapter $9.95
TUN 4A
Grove TUN4A MinutinerPlus $99.95

This compact, new PLL-synthesized, portable receiver sets a new standard for Sangean. Features include continuous coverage longwave, mediumwave and shortwave reception plus FM (stereo earphones), alphanumeric display for station identification, 106 channel memory, USB/LSB mode with AGC, S-meter, 29 memory banks with automatic search, world time for 42 cities, three independent timers, signal strength indicator, wide/narrow filter selection, RF gain and tone control.

Order RCV 8
Only $299.95

Shipment
$9 UPS
$16.50 US Priority Mail
$20.50 Canadian APP
$18 Canadian UPS

Accessories
ANT 3
Grove Mini Skywire Antenna $29.95
ANT 21
Select-A-Tenna $65.95
ANT 32
Kiwa Pocket Loop Antenna $119.95
BAT 2
D cell alkaline bat. $1.19 ea
SPK 11
Naval HTS speaker $29.95
TUN 4A
Grove TUN4A MinutinerPlus $99.95
NEW! Low-Cost Magellan GPS Position-Determining Receivers

These compact Magellan navigational satellite receivers earned their renown for reliability during Desert Storm. Now this accurate position-determining instrument can be yours at a fraction of its original cost. Ruggedly built and waterproof, yet barely more than 6" high and weighing only 10 ounces, this pocket precision receiver homes in on 1.2-1.5 GHz global positioning satellites, using their signals to establish your exact location within a few feet in as little as 2-1/2 minutes from a cold start (35 seconds warm start), even your altitude, and allows you to plot and track your motion as well, so you can find your way back if necessary.

Ideal for pinpointing campsites, fishing holes, boating, travelers, trailheads, map locations, landmarks. Selectable graphic screens assist you in tracking and plotting where you’ve been, where you’re going, and where you ought to be going! Shows distances, directions, times, speed, course corrections, latitude/longitude coordinates, all on a backlit LCD display.

Up to 17 hours of continuous use on one set of standard alkaline AA cells. Operates over a 14 to 140 degree Fahrenheit temperature range. Lanyard strap included.

All these features make the GPS 2000 Satellite Navigator an incredible value. Or select the upgraded GPS 3000 and get two additional navigation screens, a data port (RTCM 104 in, NMFA out), OSGB coordinates, 100 additional waypoints, 5 more routes, external antenna capability, celestial calculations, swivel mounting bracket, batteries, manuals, and a carrying case.

STONER-DYMEK
Shortwave/Longwave Active Antenna

If a large, outside dipole is out of the question, choose the Dymek DA-100E, the best 50 kHz-50 MHz active receiving antenna available! High sensitivity, low noise, wide dynamic range, step-selectable attenuator, static-discharge-protected, weatherproof remote amplifier whip assembly.

Includes AC power supply, indoor control unit, 50 feet RG-58/U coax, remote amplifier, 4' stainless-steel whip, receiver-interconnect cable, and full instructions.

Order ANT 24
Only $179.95
SHIPPING
$3 UPS
$6 US Priority Mail
$10.50 Canadian APP
$15 Canadian UPS

ORDER GPS 2000
Only $199.95
ORDER GPS 3000
Only $249.95

ACCESSORIES FOR BOTH
ACC 13 INSTR VIDEO FOR 2000 $14.95
ACC 14 INSTR VIDEO FOR 3000 $14.95
CAS 7 CARRYING CASE $9.95
BAT 1 AA ALKALINE BATTERIES $2.75
BAT 12 AA ENERGIZER BATTERIES $2.75

GP 3000 EXTRA ACCESSORIES
ACC 11 POWER/DATA MODULE AND EXTERNAL ANTENNA KIT, 20 COAX $149.95

Icom GP-22
Global Positioning System with Interface

Huge 60% Discount!

The superb ICOM GP-22 receiver alone has sold for $499.95 for nearly two years, but now Grove is offering the receiver PLUS an accessory kit valued at $506 for only $399.95—thats a $605 discount off the regular combined price of $1,005.95! The included OPK-4 kit includes an external antenna, antenna mounting bracket and computer interface.

The GP-22 uses the same precision satellites that helped us win the Gulf War. This tiny (2-1/2" x 5-1/4", 11 oz.) earth station fits in the palm of your hand! The easy-to-read digital display reveals bearing information from up to five earth-orbiting satellites, providing your latitude and longitude to within 300 feet (limited by the Department of Defense)—even your altitude!

Easy to use. Track your direction or return to a precise location. Create a route. Confirm your waypoints. Compute estimated time of arrival (ETA). Display bearing, speed, bearing and range. Computer world and local time.

Powered by rechargeable battery pack. Includes carrying case, cigarette lighter power cord, AC wall adaptor/charger, illustrated instruction book. Prices subject to change due to yen fluctuations.

Order GPS 22
Only $399.95
SHIPPING
$14 UPS
$18 US Priority Mail
$20 Canadian APP
$21.50 Canadian UPS

ACCESSORIES
BAT 1 AA Alkaline Batteries $2.75
BAT 13 Rechargeable Nicad Batteries $2.75

UPS 2nd Day Air at Ground Rates on ALL PRODUCTS!
Shortwave Decoders/Antennas

M-400 Universal Decoder

Access an entire dimension of coded communications signals.

NEW VERSION 2! Now with Super POCSAG, 1200 baud, simple, pushbutton mode selection, this self-contained, compact, menu-driven decoder, when connected to your scanner's or VHF/UHF receiver's external speaker jack, will reveal CTCSS (PL) sub-audible tones, DCS (DPL) squelch tones, POCSAG and GOLAY digital paging messages, DTMF (Touch Tone<sup>®</sup>) telephone numbers, even air-to-ground ACARS digital aircraft messages!

Connected to your shortwave receiver (SSB mode), you can read RTTY, SITOR, FEC-A, SWED-ARQ, and even FAX pictures when used with a printer! There is no Morse code or packet capability. A jack is included to attach an external speaker so that you can still listen if your internal speaker is disconnected when using the M-400.

Input jacks provided for either audio or discriminator interconnect. AC wall adaptor, full manual and pair of 1/8" (3.5 mm) plugs included. Parallel printer allows full page hardcopy.

---

THE GROVE SKYWIRE

Outdoor dipole provides worldwide shortwave reception!

High performance and low cost—an unbeatable combination! Why restrict your frequency coverage with the gaps found in expensive trap dipole antenna or unpredictable random wire when you can get unsurpassed full-frequency reception with the Grove Skywire?

Grove Skywire comes assembled with Budwig center connector ready for your PL-259 (UHF male) equipped coaxial cable (50 or 75 ohm, see page 29); includes two professional porcelain end insulators and complete instructions.

ATTENTION HOME EXPERIMENTERS: Build your own SW dipole! Order ACC101 (Budwig center connector) for only $9.95 and add your own wire to construct a SW dipole!

HAMS! Ideal for transmitting when used with a transmatch. (1.8-30 MHz at up to 250 watts)

---

SHORrWAVE ANTENNA

Grove Mini-Skywire is perfect when space is limited!

This new, low-cost receiving antenna is an excellent choice for restricted space. Its unique, 40-foot, double-dipole design allows full 3-30 MHz frequency coverage and may be used in vertical, horizontal, sloper, or inverted V or L configurations.

Grove Mini-Skywire comes fully assembled, including high-quality Budwig center insulator for your PL-259 coax connector. See P. 29 for cable and adaptors. To avoid signal overload, especially on portable radios, use the AT&T-1 attenuator (also, see page 28).

---

Order DEM 9
Only $399<sup>95</sup>

Order ANT 2
Only $399<sup>95</sup>

Order ANT 3
Only $299<sup>95</sup>
Universal Reel Antenna for Shortwave Portables

Whether you have a Sony, Sangean, Realistic®, Grundig, or other whip-portable shortwave radio, this 23-foot, reel-out antenna can be firmly attached for better reception. When not in use it can be conveniently stored in a pouch or even your pocket!

Comes with whip clip and 1/8" (3.5 mm) standard antenna adaptor.

Order ANT 16
Only $14.95

Shipping:
$6 UPS
$4.50 US Priority Mail
$6.50 Canadian APP
$10 Canadian UPS

KIWA Pocket-Loop Antenna

This highly efficient signal grabber is 12" across when deployed, yet collapses to a tiny pocket size for transport! Designed to receive and amplify signals from 330 kHz through 20 MHz in four bands, no antenna jack on your portable radio is needed; it space-couples to your radio's existing whip and internal ferrite rod!

Order ANT 32
Only $119.95

Shipping:
$15 UPS
$25 US Priority Mail
$30 Canadian APP
$23 Canadian UPS

Are you looking for an antenna that will improve medium wave reception on your communications receiver? Then look no more—this unique 12-inch, circular air-core antenna provides improved weak signal reception of medium wave broadcast signals and its electronically balanced circuitry minimizes pickup of electrical interference. Some of the other high performance features of the Kiwa loop include:

- Full 330-1705 kHz MW frequency coverage
- May be precisely rotated and tilted for maximum signal pickup and nulling of interfering stations.
- Equipped with local/DX pre-amp switch, variable output attenuator, and dual output amplifiers.
- May be powered by a low-noise AC supply, included, or by battery.
- Stands 17 inches (43 cm) high and weighs 16 pounds (7.25 kg).

Order ANT 31
Only $349.95

Shipping:
$17 UPS
$29 US Priority Mail
$25 Canadian APP
$35.50 Canadian APP

JPS Noise Canceller/Active Antenna

Enjoy Crystal Clear Sound!

Imagine, just connect this simple device between your receiving antenna and shortwave receiver or transceiver, and null out locally-generated interference of virtually any kind! Computer hash, line noise, TV synch buzz—they all go away when the ANC-4 is adjusted to your receiver to receive 100 kHz-80 MHz!

Use the attachable whip (provided) or, even better, a second external antenna to sample local noise. A simple adjustment from the front panel reduces or even eliminates virtually any electrical noise interference you are likely to encounter! The new ANC-4 can even be used as a frequency-selective active antenna/signal booster! Whip, random wire antenna, DC plug and full instructions provided. Requires 12 VDC @ 300 mA power.

Order ACC 21
Only $174.95

Shipping:
$6.50 UPS
$5.50 US Priority Mail
$7 Canadian APP
$10 Canadian UPS

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Order ACC 21
Only $174.95

Shipping:
$6.50 UPS
$5.50 US Priority Mail
$7 Canadian APP
$10 Canadian UPS

UPS 2nd Day Air at Ground Rates on ALL PRODUCTS!
Shortwave Antennas

What you need to know about: Shortwave Antennas and Accessories

While it is true that any length of wire will pick up signals, a well planned antenna installation will pick them up better. The greatest efficiency of an antenna occurs when its electrical length matches that of the incoming radio wave (resonance). For a given length this only occurs at one frequency and odd multiples. It is the job of the antenna designer to come up with the best combination of characteristics for wide frequency coverage.

The “bigger the better” concept has its limitations. Once an antenna is large enough to hear signals above the noise generated by the receiver’s own circuitry, further strength is unnecessary. For most applications 20-75 feet is plenty long enough; in fact, doubling the length of a matched antenna will improve signals by only 3 decibels—half an S unit and barely discernible.

Impedance matching (standing wave ratio—SWR) may be important for transmitting, but is of virtually no concern in receiving. While a perfect match between an antenna and receiver will deliver the greatest signal strength, the background atmospheric noise (hiss and static) will increase proportionately. The net result will be a high S-meter reading, but no better signal readability above the noise.

A wire antenna may be thick or thin, made of any metal, insulated or uninsulated, stranded or solid; it will hear all signals the same. Choose your wire for strength, solderability and corrosion resistance.

An antenna should be as high as possible and away from large metal surfaces and electrical power lines to avoid electrical noise pickup and shock hazard. Indoor antennas often pick up noise from household appliances, although loop antennas may be rotated for minimum interference.

TUN-4A MINITUNER PLUS

Back by popular demand—and improved! Our indoor/outdoor shortwave antenna system!

Here’s the shortwave listener’s dream—a high performance, amplified, frequency-tunable antenna system for general coverage shortwave and medium wave monitoring. For indoor use, connect a short length of wire or the popular Grove ANT-6 Hidden Antenna. Connected to an outdoor antenna like the Grove ANT-2 Skywire or ANT-3 Mini Skywire, the TUN-4A MiniTuner Plus provides knockout signal strength and allows frequency preselection as well.

Continuous 400 kHz-30 MHz coverage, -20 to +20 dB gain/attenuation control, dual antenna switch, dual receiver output, amplified/unamplified preselection, band switch, fine tuning, and built-in lightning protection. Full instructions included. Requires 12VDC power (sold separately).

“TUN-4A in permanent line serving my Lowe HF150 and Drake SW8 and it outperforms any of my other “premium” preselectors. Ounce for ounce and inch for inch, the TUN-4A is the best bargain for signal improvement and receiver front end extension that I have encountered...”

—John L. Wagner
SWL’er

Order TUN 4A
Only $99.95

Shipping:
$5.50 UPS
$5.50 US Priority Mail
$7 Canadian APP
$10 Canadian UPS

ACCESSORIES
ADP 6 UHF female to male 1/4" Mini-Plug $5.95
ADP 11 UHF female to RCA male $5.95
ADP 27 Banana Plug $2.00
ADPK15 3foot PL259 Interconnect Cable $2.50
ANT2 Skywire $39.95
ANT7 Mini Skywire $29.95
ANT25 Random Wire Antenna $8.95
PWR 19 12VDC 200 MA Power Supply $7.95
540-1700 kHz Band Reject Filter

30 MHz Low Pass Filter

For scanners and shortwave receivers
INTERFERENCE ELIMINATORS

Reduce or even eliminate strong signal overload from your scanner or general coverage receiver. Increase reception range with these new wavetraps, notch filters and bandpass filters designed exclusively by Grove Enterprises! Attach directly to your antenna cable, no modification required!

Ideal for suppressing overload interference from AM and shortwave broadcasters, CB, aircraft, and more. Reject unwanted signals by 40 dB or more; reduce internal interference by at least 120 dB! Filters can be combined for deeper rejection or multiple frequencies. Simply choose your filter(s) from the list below and specify your antenna connectors.

FTR6
30-2000 MHz Bandpass Filter
$29.95
30-2000 MHz Band Reject Filter
$29.95
540-1700 kHz Band Reject Filter
$29.95
118-137 MHz Band Reject Filter
$29.95

Order ANT 21
Only $69.95

Order ACC 02
Shipping $6.50 UPS
$6.50 US Priority Mail
$7.50 Canadian APP
$10 Canadian UPS

Grove Scanner Filter
Affordably priced Crystal Clear Sound!

Eliminate those aggravating FM and TV broadcasters from interfering with your favorite scanner frequencies!

Select any one additional source of interference in the 100-220 MHz range and reject it as well! Ideal for use with preamplifiers and outdoor scanner antennas!

An adjustable 100-220 MHz 30 dB notch filter allows you to reduce or eliminate single-frequency interference from aircraft, mobile telephone repeaters, paging signals, NOAA weather stations, nearby amateur, or other repeaters.

High-Q microstrip line circuitry features custom-wound inductors for deep interference rejection. A rugged weatherproof enclosure allows masthead mounting. Standard F connectors are provided for convenient interconnection with other adaptors or accessories. Additional adaptor kits available below.

A diode shunt array protects your scanner from nearby lightning strikes and high-powered transmitters. A high-pass filter removes shortwave feedthrough, while band-reject filters remove FM and TV broadcast interference automatically.

Order FTR 5
Only $44.95

Shipping $5.50 UPS
$5 US Priority Mail
$7 Canadian APP
$10 Canadian UPS

Shortwave Accessories

UPS 2nd Day Air at Ground Rates on ALL PRODUCTS!
**Choosing a Scanner**

The consumer electronics marketplace bulges with products competing for your dollar. By following a few simple rules you will make the right choice in buying that new scanner.

**Frequency Range**

The most common frequency ranges monitored by scanner enthusiasts are: 30-50 MHz (VHF low band), 144-174 MHz (VHF high band) and 440-512 MHz (UHF). Most scanners now include the 406-420 MHz federal government land mobile; and 220-450 MHz amateur band as well. These bands all utilize narrow band FM for communications.

The civilian VHF aircraft band (118-136 MHz, AM mode) provides another interesting target for monitoring as does the expanding 806-960 MHz band, sometimes called the cellular band or microwave mobile (806-960 MHz), now in use in all major metropolitan areas. A few scanning receivers include the military UHF aircraft band (225-400 MHz, AM mode).

The prospective scanner buyer should decide which of these aspects of listening are of greatest interest before purchasing a radio.

**Mobile, Base, or Handheld?**

Scanners come in a variety of models to meet the particular needs of the listener. Do a lot of driving? Install a mobile unit. Constantly in and out of the car, office or home? You may prefer a hand-held. Do most of your listening in the office of home? A base unit would be more practical.

Many models are capable of more than one application, accepting power from AC mains as well as mobile battery supply. AC wall adaptors charge batteries in hand-helds and power the scanner when plugged in.

Most hand-held scanners have small speakers which do not compete well in a noisy environment; an earphone or external speaker will solve that problem.

**Technical Specifications**

The terminology used to rate a scanner's performance may be explained simply. Sensitivity refers to the weakest signal voltage that the radio will respond to; the lower the number, the better. Good sensitivity is about 0.2 microvolts.

Selectivity is the radio's ability to reject adjacent frequency interference; the sharper, the better, especially in urban areas. Average selectivity for a scanner would be about 30 KHz (+/-15 KHz at -50 dB).

Dynamic range is the ability of a scanner to handle extremely strong as well as extremely weak signals. Since none of them does it very well, this specification is never given.

Intermodulation ("intermod") is an internally-generated interference produced when strong signals mix together, producing spurious signals. It is often recognizable because of its distorted contents from two or more signals and its appearance at numerous frequencies. Intermod results from inadequate dynamic range.

Images are produced in every receiver. They are recognizable as a duplicate of the legitimate signal, offset by 21.4, 21.6 or 21.7 MHz (twice the intermediate frequency—IF) from the actual frequency, depending upon the scanner. With up-conversion design, image frequencies fall outside the tuning range and aren't a problem.

**Which Scanner is the Best?**

Like answering "Which car is the best?", we must list qualifications. At the present time, programmable scanners are available from Uniden, ICOM, AOR, and Radio Shack.

Most popular scanners have excellent sensitivity and reasonable selectivity (reject adjacent channel interference), but suffer from intermodulation and image interference from strong signal overload, especially when used with an outdoor antenna.

The BC-9000XLT and AR 80000 with their channel-programmable attenuators, are more immune to interference from intermodulation and images, making them excellent choices for strong or weak signal areas like large cities.
New! FROM iCOM

Introducing the Incredible 2000 MHz R-8500 Receiver

Imagine: an affordable, compact, tabletop receiver with continuous 100 kHz-1999.99 MHz frequency coverage (less cellular) in precise 10 Hz steps—longwave, shortwave, VHF/UHF, all services and modes (wide and narrow FM and AM, USB, LSB, CW). Add high sensitivity, IF shift, selectable AGC timing, audio peak filter to automatically enhance modes, built-in RS232C and CI-V for direct computer control, 1000 memory channels in 20 banks, multiple scanning selections with priority function and selectable delay, 3-meter settable squelch, noise blanker, and 12 VDC / 120 VAC operation.

This all-new receiver offers features previously found only on the premium R-9000—which sells to the government for $7,508—but the R-8500 will retail for under $2,000. High stability crystal oscillators combine with automatic frequency control circuitry for outstanding stability. Multiple tuning speeds optimize signal hunting. Alphanumeric display aids in identifying memorized frequencies. Automatic memorizing of search-discovered active frequencies, skipping of unwanted channels, three antenna connectors for optimal choices for frequency ranges, even voice scan to ignore noisy channels, and even optional voice synthesizer and remote control—an incredible array of advanced features!

Call today to reserve your premium iCOM R-8500. Check our site on the World Wide Web for updates on pricing. See pp. 22-23 for detailed specifications.

Order SCN 1

ICOM R1 Supplies Limited!

After you purchase and receive, we can restore the missing 800-900 MHz for only $45 plus parts and $8 shipping.

Imagine, a shortwave and VHF/UHF scanner with continuous 100 kHz-800 MHz and 900-1300 MHz frequency coverage that fits in your shirt pocket! You select the mode—AM, FM wide or narrow—and install up to 100 of your favorite shortwave and scanner frequencies into memory. An edge-lit LCD shows frequency, memory channel, and other settings as well.

Less than 2" wide, the R1 scans, searches and autoloads, has knob tuning, a signal strength indicator, and even a 24-hour clock timer! This high-sensitivity scanner comes with flex whip, rechargeable battery, AC wall charger/adaptor, and belt clip. See detailed specifications on pp. 22-23. Requires 6 AA batteries. Prices subject to change due to yen fluctuations.

Price Reduced! While Current Supplies Last

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<tr>
<th>ACCESORIES</th>
<th>Only</th>
<th>Shipping</th>
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<tbody>
<tr>
<td>ANT 8 Range Extending Telescoping Whip</td>
<td>$16.95</td>
<td>$5 UPS</td>
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<td>BAT 1 AA Alkaline Batteries</td>
<td>$7.9</td>
<td>$12 US Priority Mail</td>
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<td>BAT 11 BP-90 Replaceable AA Battery Pack</td>
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<td>BAT 12 BP-84 Triple Life Battery Pack</td>
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<td>BAT 13 AA Recargable Nicad Batteries</td>
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<tr>
<td>CAS 3 R1 Carrying Case (No Battery Pack)</td>
<td>$21.95</td>
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<td>CAS 4 BP-90 Carrying Case</td>
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<td>CAS 5 BP-84 Carrying Case</td>
<td>$39.95</td>
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<tr>
<td>DCC 5 CP-12 Cigarette Power Cord</td>
<td>$29.95</td>
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<td>HDP 1 Headphones</td>
<td>$19.95</td>
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<td>MAN 3 Service Manual</td>
<td>$45.00</td>
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<tr>
<td>PWR 14 BC-72A Desk Charger</td>
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<tr>
<td>PWR 17 BA12 Battery Charger Adaptor</td>
<td>$23.95</td>
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AR-3000A Professional Desktop Scanner

*After you purchase your AR 3000A, we can restore the missing 800MHz for only $65.

Imagine: a fully-restorable, general coverage shortwave receiver and wide-frequency coverage scanner, in one compact instrument!

The AOR AR3000A offers 100 kHz-2036 MHz (less cellular—restorable) frequency coverage, continuous tuning dial, AM/FM/SSB mode reception, 400 memory channels and 50 channel per second scan/search rate.

High sensitivity and sharp selectivity let you hear signals lesser scanners and shortwave receivers miss.

Operates on 13.6 VDC for compact mobile installations; 120 VAC adaptor included.

See detailed specifications on pp. 22-23.

Order SCN 26

<table>
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<th>ACCESSORIES</th>
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<td>CVR 3 Gre Super Converter</td>
<td>$84.95</td>
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<tr>
<td>SFT 2 ScanCat Gold Software</td>
<td>$34.95</td>
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UPS 2nd Day Air at Ground Rates on ALL PRODUCTS!
Paired with the software listed on page 18 and 19 this unit is full-800 MHz restorable*

With wide frequency coverage—500 kHz-1900 MHz (less cellular, restorable), 1000 memory channels, AM/FM/SSB reception, selectable tuning steps from 50 Hz-999.995 kHz. An oversized, edgelit LCD window holds 44 hold alphanumeric characters.

Autostore, RS232 control, second-radio cloning, power saver, keyboard beep defeat, and selectability-channel display blanking. Dial tunes frequencies and channels. Dual VFOs and 30-channel-per-second scan/search speed.

Each channel may be programmed for frequency, mode, audio or carrier squelch with programmable 1-99 second delay, 10-dB attenuator, step size, channel offset, and channel designator. Any channel priority sampling, LCD, S-meter/spectrum display unit!

Interchangeable NiCd/alkaline batteries (4AA NiCds and charger included), a universal external power jack for mobile use; an internal ferrite antenna for medium-wave reception; illustrated 115-page owner's manual. See detailed specifications on pp. 22-23.

Order SCN 27 Only $599.95

pipeship your equipment to Grove enclosing a check for the modification and return shipping. A five to seven day turnaround time is possible for simple mods requiring no new parts.

- Scan/Search Speed Increase
- S-Meter Addition
- Frequency Restoration (800-900 MHz)
- Improved Headphone Audio
- Lightning Static Protection (Sony 2010)
- Factory Accessory Installation
- Memory Channel Increase
- Scout 40 Reaction Tune Modification

Grove can perform mods on most models from: ICOM, AOR, REALISTIC, SONY (2010 only), AND UNIDEN; call for a complete list.

See our site on the World Wide Web for an up-to-date list of trade-ins. Set your browser to www.grove.net

UNIDEN BCT 7

This tiny scanner has factory-programmed scan banks for law enforcement (state-selectable highway patrol!), firefighting, weather broadcasts, medical emergency teams, highway maintenance crews, and on-scene news reporters! You can even enter up to 100 of your own frequencies for private scanning anywhere from 26.9-27.4 (all 40 CB channels!), 29.7-54, 108-174, 406-512, and 806-956 MHz (less cellular).

Special Feature: The BCT-7 BearTracker flash-alerts you to radar speed patrols up to three miles away by intercepting their mobile extenders! Brightly-backlit LCD display has high visibility, while powerful three-watt audio blasts through the noisiest mobile environment!

Comes ready to go with AC adaptor, DC power cord, cigarette lighter cord, mobile mounting bracket, telescopic antenna, frequency guide, complete instructions, and even a mobile antenna! See detailed specifications on pp. 22-23.

*NOTE: It is unlawful to listen to the contents of radiotelephone conversations.
UNIDEN NEW!

Beartracker
BCT 10

Tiny and inconspicuous, the new Beartracker BCT-10 easily snaps on your vehicle's sun visor, or may be conveniently set on your dashboard, simply touch the STATE button until the appropriate two-letter code (including Canadian provinces) is displayed, then listen for highway patrol communications, including radar traps. A visual and audible warning alarm may be selected to alert you to activity; unwanted channels may be locked out, an LED numerical signals strength meter gives you a relative indication of the distance of radio signals.

The BCT-10 automatically scans through 866 preprogrammed law enforcement frequencies in the 37-46, 118-117, and 423-508 MHz bands with an average sensitivity of 0.4 microvolts. Instant, pushbutton weather access is also provided for all U.S. NOAA and two Canadian Coast Guard channels.

Built-in speaker allows police communications monitoring, or an external speaker may be plugged in for vehicle-filling sound; may be muted for alarm-only function. Status lights identify types of communications being monitored.

Accessories include visor bracket, suction windshield mount, cigarette lighter power plug, DC power cord, stub and wire antenna.

Order SCN 22 Only $179.95

UNIDEN BC230XLT

Update of the fast-moving BC220XLT

Uniden now includes a spare battery and charger with their popular hand-held scanner. Frequency coverage 29-54, 108-174, 406-512, and 806-956 MHz (less cellular), 200 memory channels in 10 banks include 10 priority channels for instant access to important transmissions regardless of monitoring status.

TurboScan and TurboSearch provide 100 channels per second scanning and 300 channel per second searching! Preprogrammed service search affords single-key access to police, fire, emergency, aircraft, marine and weather frequencies! Data skip avoids noisy data transmissions, stopping only on valid communications!

See pp. 22-23 for detailed specifications.

Order SCN 24 Only $239.95

NEW LOW PRICE! Comes with its own battery charger and spare battery.

Order SCN 30 Only $389.95

Uniden BC9000XLT Desktop Scanner

An impressive performer, this improved-design scanner is for serious monitors of the 25-550, 760-1300 MHz (less cellular) spectrum. Featuring 500 memory channels, tuning knob, 16-digit alphanumeric display with adjustable brightness, powerful 2.2 watts of audio, treble-cut tone control, and CTCSS tone squelch option. Just look at the specifications table for its advanced features!

The intuitive layout of the panel makes operating a breeze! An illuminated keypad and rubber-padded tilt feet combine with the large tuning knob for additional comfort during periods of serious signal searching. Search lockout of up to 50 frequencies prevent unwanted interruptions. This scanner means business. See detailed specifications on pp. 22-23.

UNIDEN RADAR/LASER DETECTOR

Winner of Innovations '96 Design & Engineering Award

Why settle for a gimmick with incomplete coverage? Now Uniden has unleashed the award-winning LRD 6399SW, a compact, four band (S, K, Ka, and laser) powerhouse, and it is invisible to law enforcement "radar detector detectors."

Four alarm tones alert you to the type of surveillance aimed at you, while a signal strength meter indicates relative range. Selectable for highway/city, audio/visual alarm, self test, and memory retention. The tiny, lightweight detector is suction-cup mounted on the windshield for greatest range and is equipped with a cigarette lighter power cord.

(Note: Radar detectors may be unlawful in some jurisdictions; check your local and state laws)

Order RAD 1 Only $129.95

Order for only $4.95 when purchased along with RAD 1. See p. 44 of this catalog for details on BOK 75.
Uniden BC-890XLT

This popular, low cost scanner features wide frequency coverage (29-54, 108-174, 216-512, 806-956 MHz—less cellular), 200 memory channels, 100-channel-per-second TurboScan, weather alert, CTCSS (optional), channel activity counter, 10 channel priority, search autostore, tape recorder output, memory channel transfer, and much, much more!

See pp. 22-23 for detailed specifications.

Order SCN 19
Only $269

ACCESSORIES
ACC 95 CTCSS Squelch Decoder $59.95
Installation Fee $20.00
BRK 2 Mounting bracket $15.95
CVR 3 GPE Superconverter $94.95
DCC 4 Cig. Lt. Pwr. Adapt. $9.95

Uniden BC3000XLT

Hand-Held Scanner

Featuring continuous 25-550, 760-1300 MHz (less cellular) frequency range, 400 memory channels, 10 priority channels, 100-channel-per-second TurboScan, automatic storage of search-discovered frequencies, selectable-channel overload attenuator, mode and step selection, data skip, and reduced-internodal design.

Strong audio guarantees crisp reception in noisy environments; up to 50 frequencies may be locked out of the search function to eliminate unwanted interruptions; battery save circuit extends charge life during inactive reception periods; handsome, rugged styling makes this handheld scanner an outstanding choice. See detailed specifications on pp. 22-23.

Order SCN 29
Only $369

ACCESSORIES
BAT 15 Replacement battery pack $31.95
CAS 6 Carrying Case $19.95
DCC 7 Universal D.C. adapter $15.95
PWR 2 Desktop Charger $59.95

PRO-26

Handheld Scanner

Wide Coverage Scan up to 1.3 GHz!

Radio Shack's PRO-26 is feature-packed! Offering nearly continuous coverage, less cellular, from 25 to 1300 MHz, 200 memory channels, 300-channel-per-second search rate, triple up-conversion, high sensitivity, and powerful 250 mW audio, the new PRO-26 is making waves on the scanner scene! Belt clip, flex whip and manual included. See specifications on pp. 22-23.

Order SCN 5
Only $349

ACCESSORIES
BAT 1 AA cells (four required) $1.79 ea
PWR 5 AC adapter/charger $6.95
DCC 6 Cigarette lighter DC cord $12.95
ANT 6 Telescoping whip antenna $16.95
ANT 10 Condor flex antenna $29.95

NEW! OPTOLINX

UNIVERSAL INTERFACE!

This replacement for the popular CX12 computer interface connects your AR8000 or 2700 to a PC for full computer control, decode DCS and CTCSS tones and DTMF telephone digits with the DC440 decoder connected to your AR3000A receiver. It will control the Icom R7000, R7100 and R9000. You can even use the OPTOLINX to receive longitude and latitude coordinates from any GPS or LORAN receiver with NMEA 0183 output. Or connect it to the Opto Scout frequency recorder to download its memory, and use it with the M1 frequency counter and Optelog software for computer controlled data logging of intercepted frequencies.

Order ACC 157
Only $129

ACCESSORIES
SHIPPING
$5 UPS
$10 US Priority Mail
$13 Canadian UPS
$13 Canadian APP

SDU-100
THE GROVE SPECTRUM DISPLAY UNIT

Exclusive, real-time spectrum display—This is the ultimate surveillance tool!

Enjoy the high-tech advantage of counter-surveillance professionals who depend upon spectrum analyzers to find eavesdropping transmitters ("bugs"). As the "spikes" appear on the screen you can tune them in quickly, no need to wait for the slow, hit-and-miss search of a scanner. A "freeze" function allows you to hold and examine all of the signals present at any moment in time!

Your receiver's tuned signal is the center of the screen, with up to 10 MHz (or as narrow as 100 kHz) of spectrum displayed simultaneously! Nail those unknowns as soon as they transmit!

Ideal for locating jammers, identifying sources of radio interference, studying signal propagation, testing antennas, aligning receivers and transmitters, and much more!

Connect the SDU-100 to any TTL monochrome monitor, or order the matching VID-200 high contrast 9" CRT monitor. 12 VDC powered for mobile or field environment; AC adaptor included (the VID-200 is AC powered).

The SDU-100 is configured to operate on receiver intermediate frequencies (IFs) of 8.8 and 10.7 MHz. The IF or receiver model must be specified at the time of order. Designed and manufactured by Grove in the USA!

SDU-100 Spectrum Display Unit $499
VID-200 9" CRT Monitor $149

The SDU-100 is compatible with the following receivers: ICOM R7000, ICOM R7100, ICOM R9000

ACCESSORIES
SDU-100 Display Unit $18 UPS
$22.50 US Priority Mail
$30 Canadian UPS
$35 Canadian APP

SHIPPING
$9 UPS
$16 UPS
$22 US Priority Mail
$30 Canadian UPS
$35 Canadian APP

Catalog Items Only:

10.7 MHz...$1299
8.8 MHz...$1299

Product support for Catalog Items Only: 704-837-7081

Order SCN 19
Only $269

Order SCN 29
Only $369

Order SCN 5
Only $349

Order ACC 157
Only $129

16
NEW! Save $$$ on RAM Upgrades for PCs!

Through a special distributor-direct arrangement, we can offer you for a limited time high-quality RAM expansion at INCREDIBLE savings! Adding 4 mb to your computer's 4 mb RAM will virtually double Windows speed! These 72 pin, double sided, non-parity SIMMs feature gold contacts and offer 70 nanosecond access speed. These are standard replacement units, but check your computer specifications to be sure you can install them before placing your order.

Note: Call for availability of computer interfaces not shown in this catalog!

Universal SCPC-200 Satellite Audio Receiver

Receive Hundreds of SCPC Radio Channels On Your Standard TVRO Home Dish Satellite System!

Replacing the ever-popular SCPC-100, this flexible, new, microprocessor controlled receiver has automatic LNB drift compensation and offers direct frequency tuning with frequency readout on a high contrast LCD, and direct transponder tuning as well. Its large memory bank of 50 channels, wide/narrow bandwidth selection and automatic tuning indicators add to the feature list which also includes digital frequency lock-on, service name readout, and standard 70 MHz baseband output (tunable 50-90 MHz).

High quality audio is available from either a line output or 8 ohm speaker jack; RF input is standard 950-1450 MHz from C and Ku band LNBs. Powered by either 120 VAC, 60 Hz, or 12 VDC @ 500 mA, the SCPC-200 measures 12.5W x 1-3/4"H x 8"D and weighs 8 lbs.

Order RCV 28 Only $399.95

NEW!
SCPC SPLITTER
FOR YOUR SATELLITE DISH!

Now you can use your R7100 and R100 to listen to those single channel per carrier (SCPC) satellite radio broadcasts from major networks—news, music, interviews, sports, religion, international broadcasting, and more! Complete with cables and connectors, connects in seconds between your satellite cable and receiver, then to your R7100 and R100 antenna port, no modification necessary!

Order SPL 2 Only $79.95

Top Quality RAM SIMMS at Truly Unheard-of Prices!

<table>
<thead>
<tr>
<th>RAM</th>
<th>Capacity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>04</td>
<td>4mb (1x32)</td>
<td>$59.95</td>
</tr>
<tr>
<td>08</td>
<td>8mb (2x32)</td>
<td>$109.95</td>
</tr>
<tr>
<td>16</td>
<td>16mb (4x32)</td>
<td>$229.95</td>
</tr>
</tbody>
</table>

Prices include FREE First Class Shipping!

SCANCAT-GOLD

Tech support after the sale from Computer Aided Technology call (318)687-2555.

Use your 640k (or better) computer to control your AOR, Drake, Kenwood, ICOM, Yaesu, JRC, Lowe, WJ, and Radio Shack PRO-2005/6/35/42 with this fast, all-new software program! Operates from the RS-232 port. Just check the features listed below:

For listeners—
- Integrates multiple data sources and removes duplicates
- Search between any two frequencies in any tuning step
- Autolog new active frequencies and create disk files
- Display spectrum analysis on screen or printer
- Scan frequencies from up to 15 disk files and 4500 frequencies
- Import from text formats and virtually any database
- Link up to 15 search banks, output to any printer or disk file
- Automatic "birdie" lockout, rapid DTMF capture/storage with OPTO 456

For commercial users—
- Demographic search for frequency coordination and usage profiling
- ASCII file logging of date, time, signal strength, air time
- Unlimited file sizes
- Macro control by frequency of dwell, hang, resume, threshold, audible alarms
- Unattended on/off times for logging and searching
- Stores terminal control commands in comment field
- 800MHz restorable on AOR AR8000 & PRO-2035/42

Works with any IBM compatible system and Windows 95.

Order SFT 2 Only $94.95

Because software is easily copied, it is not refundable. Defective copies will be replaced at no charge.

UPS 2nd Day Air at Ground Rates on ALL PRODUCTS!
**Computer Software**

**TUNE-IN! Scanner Database**

This is a feature-packed scanner database developed with the listener in mind. Designed to complement today’s high-tech scanners, TUNE-IN provides the user with the easiest way to keep track of the hundreds of frequencies in his scanner with the most organized, manageable and user-friendly interface available. TUNE-IN allows up to 100 channels to be stored in an infinite number of banks limited only by your computer’s hard disk. TUNE-IN allows the data to be printed as handy pocket-sized cards, or as a full-page report listing channel number, frequency, mode, location, description, and comments.*

**Order SFT 6**
Only $24.95

**SFT 13**

**Order SFT 13**
Only $68.95

---

**NEW VERSION!**

**SCAN MANAGER PRO v.1.1**

**Easy Receiver Control!**

Now shortwave listeners and hams can have the same computer control power used by serious scanner enthusiasts by installing this powerful KCAZG! Ham Software. If you have a modern IBM compatible computer equipped with Windows 3.1 or higher, you can edit databases and control all Kenwood, Icom, Drake R8A (R8 not supported) and Yaesu (except FT-767) transceivers and receivers! Display your data in powerful spreadsheet style, controlled and edited by keyboard or mouse.

Your database size is limited only by your hard disk space. Scan at 10 channels per second with selectable delay, choosing any standard mode (AM, FM, USB, LSB, CW, FSK/RTTY) throughout the typical 100 kHz-30 MHz frequency range. You can even select a service (CB, amateur, aeronautical, maritime, AM broadcast, etc.) for automatic hand scanning.

Factory-loaded database lists hundreds of broadcast times and frequencies from dozens of countries worldwide with provision to add, edit and delete listings as schedules change. Colorful world map displays location, national flag, local and universal time.

Scan Manager 1.1 Pro includes SWL Manager 2.0. Both programs are fully integrated for one low price.*

**Order SFT 5**
Only $29.95

---

**The Super DX Edge® Version 2**

The Super DX Edge is the computerized version of the popular DX Edge, the DX operating aid. Super DX Edge contains highly accurate graphic displays of sunrise and sunset times, daylight and darkness areas of the world, best times for long path and Gray Line DX. This is the information you need to determine the best opportunities for long-distance DX.

Also included in this version is a predictor of Maximum Usable Frequency (MUF) to determine the best frequency bands to use between two locations and a Great Circle Bearing calculator to provide you with distance and bearing between any two points in the world.

This program will run best on a computer running DOS with a 386 or 486 processor (will run more slowly on 286). EGA or VGA graphics may be used. See page 36 for original, manual version of DX Edge.*

**Order BOK 101CD**
Only $29.95

**Order SFT 11**
Message Tracker Basic 2.0
Only $99.95

---

**PAGER MESSAGE TRACKER SOFTWARE**

Ideal for law enforcement, Title 18 surveillance of drug trafficking!

Now you can copy standard 512/1200/2400 baud POCsAG and 600 baud GOLAY alphanumeric digital pager messages on your 386 or higher computer. Includes a 200 interface with 1/8" miniplug to DB25 connector cable to connect between your system receiver or scanner and computer to keep track of your messages on a high volume system.

With the Basic Message Tracker your pager system can now monitor, record and recall, display, edit, and time stamp all conventional alphanumeric digital paging messages, monitor only selected messages from a CAP code list, and buffer and display previously-read messages.

Choose the Message Tracker Pro if you would also desire text search capability (looking for key words or numbers), handle groups of up to 100 CAP codes and addresses, or display split screen to display target messages.*

(Note: For non-law-enforcement, this product is legal only for monitoring of your own system)

**Order SFT 12**
Message Tracker 2.0 PRO
Only $139.95

---

*Because software is easily copied, it is not refundable. Defective copies will be replaced at no charge.
The mapping program shows you on a map where your desired station is including major roadways, cities, state and county borders. To operate the mapping program you must have a VGA card, 386 or higher processor, 4 M RAM, 10 M free hard disk space, and a mouse is recommended.

Send in your old version for trade-in and get a new FCC-CD (w/o mapping) for only $49.95

Available on both CD-ROM and High Density Diskette

Grove FCC Database v6.0

ORDER YOURS TODAY!!

Order Line:
1-800-438-8155

Computer Software

Commercial Receiver Control Software

ScanStar Commercial offers all the features of the popular ScanStar Professional edition plus:

- Multi-radio scanning with search/save (handoff) and peer strategies,
- Use any combination of radio type or port, port sharing for GE-V devices
- Graphical User Interface (GUI) command center shows activity, history and status of channels in real time.
- Quickly reconfigure as the action unfolds!
- Priority system with 256 levels and selectable preemption,
- High resolution VGA/SVGA/MS graphics modes
- Mouse support in all screens (text and GUI) for fast, easy operation.
- Independent scan windows allow simultaneous scanning of two programs, four radios!
- Detailed event logging for special applications: repeater usage recording, frequency coordination, etc. Data format and sample G program included.
- 32 bit code for maximum performance on 386, 486 and 586 processors.

Requires IBM PC 386/486/586 with 4 MEG RAM, hard disk, VGA/SVGA, mouse, serial port(s), DOS 5/6 or OS/2 3.0, warps. Windows and 386 not supported. Supports: R7000, R100, RND525, AR3000, AR8000, NRD535, R8, and MR8100 and Optoelectronic's SFT-9 described above, the basic package has no support for the Drake R8 and R8A, JRC NRD535, NRD525, and Kenwood R5000.

Order SFT 9
Only $159.95

Order SFT 10
Only $99.95

Order SFT 7
Only $129.95

1996 Enhanced Grove FCC Database v6.0

Available on both CD-ROM and High Density Diskette

The new Grove FCC Database is a spectacular compendium of all the licensees in the FCC Master File! Public safety, railroad, business, industrial, broadcast, maritime and many, many others. You can sort through fields like city, service, state, callsign, antenna height, output power, county, and many more! This program can also be custom-tailored to fit your specific searching needs using any available information you have.

Simply choose from either CD-ROM or High Density Disk.

Grove FCC Database on CD-ROM offers a unique and useful mapping program. This program shows you on a map where your desired station is including major roadways, cities, state and county borders. To operate the mapping program you must have a VGA card, 386 or higher processor, 4 M RAM, 10 M free hard disk space, and a mouse is recommended.

New Features for v6.0

- Updated records
- Faster Search speed
- Comprehensive service codes
- Pop-up windows
- Dynamic prompts
- Improved accuracy

Shipping for both CD-ROM and High Density Disk: $4 First Class Mail

UPS 2nd Day Air at Ground Rates on ALL PRODUCTS!
<table>
<thead>
<tr>
<th>Receiver</th>
<th>AR5000</th>
<th>Drake RGA</th>
<th>Drake SW8</th>
<th>Grundig Sat. 700</th>
<th>Grundig Yt. By. 400</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalog Page #</td>
<td>6</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Grove Order #</td>
<td>RCV 12</td>
<td>RCV 3</td>
<td>RCV 19</td>
<td>RCV 23</td>
<td>RCV 22</td>
</tr>
<tr>
<td>Grove Price</td>
<td>$184.95</td>
<td>$105.95</td>
<td>$679.95</td>
<td>$499.95</td>
<td>$199.95</td>
</tr>
<tr>
<td>Frequency Range</td>
<td>10 kHz - 2600 MHz</td>
<td>100 kHz - 30 MHz (35-55/108-174 MHz with optional converter)</td>
<td>500 kHz - 30 MHz, 87.5-108.118-137 MHz</td>
<td>1.6-30 MHz, 87.5-108 MHz</td>
<td>160 kHz - 30 MHz 87.5-108 MHz</td>
</tr>
<tr>
<td>Keypad Entry?</td>
<td>Yes, plus tuning dial</td>
<td>Yes, plus tuning dial</td>
<td>Yes, plus tuning dial</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Toning Steps</td>
<td>Programmable, 1 Hz - 1 MHz</td>
<td>10/100 Hz</td>
<td>50 kHz FM</td>
<td>1 kHz AM/100 kHz SSB</td>
<td>25 kHz FM</td>
</tr>
<tr>
<td>RIT/Fine Tuning</td>
<td>(Not necessary)</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Display</td>
<td>Backlit LCD</td>
<td>Backlit LCD</td>
<td>Backlit LCD</td>
<td>Backlit LCD</td>
<td>Backlit LCD</td>
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<tr>
<td>Dimmer</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Recommended Use</td>
<td>Wide spectrum mon.</td>
<td>Int. Broadcast/Utilities</td>
<td>AM/SSB, aircraft/FM</td>
<td>Broadcast recep.</td>
<td>Casual SW and FM</td>
</tr>
<tr>
<td>Receiving Modes</td>
<td>AM/NFM/WM/UV/UV/LSB</td>
<td>AM, NFM, USB, LSB, CW, RTTY</td>
<td>AM, AM synch., WM, LSB, UV</td>
<td>AM, AM synch., LSB, USB, WM</td>
<td>AM, LSB, FM, CW, USB</td>
</tr>
<tr>
<td>Memory</td>
<td>650 channels</td>
<td>440 channels</td>
<td>70 channels</td>
<td>120 preset/512 prgmbl.</td>
<td>40 channels</td>
</tr>
<tr>
<td>Scan</td>
<td>50 ch/sec, w/ priority</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Banks</td>
<td>65</td>
<td>10</td>
<td>7</td>
<td>64</td>
<td>No</td>
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<tr>
<td>Search</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Delay</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>5 sec. per step</td>
<td>1 second</td>
</tr>
<tr>
<td>Squelch</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Clock</td>
<td>Yes</td>
<td>Dual time zone</td>
<td>Dual mode</td>
<td>12/24 hr./sleep/progr. rec.</td>
<td>12/24 hr./sleep</td>
</tr>
<tr>
<td>Audio Output Power</td>
<td>1 W</td>
<td>2.5 W @ 4 ohms</td>
<td>2 W @ 4 ohms</td>
<td>3 W</td>
<td>700 mW</td>
</tr>
<tr>
<td>Record Audio Output</td>
<td>Yes</td>
<td>300 mV into 4.7 kHz</td>
<td>300 mV into 4.7 kHz</td>
<td>stereo and mono</td>
<td>No</td>
</tr>
<tr>
<td>Recorder Activator</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Signal Strength Ind.</td>
<td>Analog S-meter</td>
<td>Analog S-meter</td>
<td>Analog S-meter</td>
<td>LCD bargraph</td>
<td>LCD bargraph</td>
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<tr>
<td>Computer Interface</td>
<td>Yes, all functions</td>
<td>RS232C</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Conversion Scheme</td>
<td>Triple (622.2/10.7 MHz, 455 kHz</td>
<td>Double-up</td>
<td>Double up</td>
<td>Double up</td>
<td>Double up</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>0.6 uV or better</td>
<td>0.5 uV 1.5-30 MHz</td>
<td>0.5 uV or better (SSB)</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Selectable Preamp.</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<tr>
<td>Selectable Attenuation</td>
<td>Yes</td>
<td>Yes</td>
<td>20 dB</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>IF Selectivity</td>
<td>3/6/15/40/110/220 kHz</td>
<td>(-6/-60 dB): 6/2/3.18 kHz; 500 Hz</td>
<td>(-6/-50 dB) AM Narrow 4/6 kHz SSB 2.3/4.5 kHz</td>
<td>3.8/6.8 kHz</td>
<td>3.8/6.8 kHz</td>
</tr>
<tr>
<td>Image Rejection</td>
<td>80 dB or better</td>
<td>70 dB or better</td>
<td>70 dB or better</td>
<td>70 dB or better</td>
<td>70 dB or better</td>
</tr>
<tr>
<td>Selectable AGC</td>
<td>Yes</td>
<td>Off/slow/fast</td>
<td>Yes</td>
<td>w/ RF gain control</td>
<td>No</td>
</tr>
<tr>
<td>Dynamic Range</td>
<td>100 dB @ 20 kHz spacing</td>
<td>95 dB or better</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<tr>
<td>Passband Tuning</td>
<td>+/-3 kHz</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<tr>
<td>Noise Blanker/Limiter</td>
<td>Yes</td>
<td>Dual</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<tr>
<td>Adjustable Notch Filter</td>
<td>500-5000 Hz, 40 dB</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<tr>
<td>Tone Control</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Sep. bass/treble</td>
<td>Yes</td>
</tr>
<tr>
<td>Antenna Connector</td>
<td>3, programmable frequency ranges</td>
<td>Dual, switched PL 259</td>
<td>SO-239 (UHF), Push terminals, Integral whip</td>
<td>PAL (supplied)</td>
<td>1/8&quot; mini whip</td>
</tr>
<tr>
<td>Dimensions</td>
<td>8.5&quot; W x 3.5&quot; H x 10&quot; D</td>
<td>13.5&quot; W x 6.25&quot; H x 13&quot; D</td>
<td>11.5&quot; W x 6.25&quot; H x 13&quot; D</td>
<td>12 W/7.5/2.5 D</td>
<td>7.75/4.62/1.75 D</td>
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<tr>
<td>Weight</td>
<td>13 lbs.</td>
<td>10 lbs</td>
<td>4 lbs.</td>
<td>1 lb.</td>
<td>5 oz.</td>
</tr>
<tr>
<td>Power Requirement(s)</td>
<td>13.8 VDC @ 1 A or 120 VAC @ 60 Hz</td>
<td>100/120/240/450VAC/11.16VDC @ 2A</td>
<td>6-9VDC/6 cells</td>
<td>120/240VAC/4D cells</td>
<td>6A cells/9VDC</td>
</tr>
<tr>
<td>Warranty</td>
<td>One year</td>
<td>One year</td>
<td>One year</td>
<td>One year</td>
<td>One year</td>
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<tr>
<td>Accessories Incl.</td>
<td>None</td>
<td>Tele. whip/AC adaptor</td>
<td>Coax conn/AC adpt</td>
<td></td>
<td></td>
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</tbody>
</table>

* Prices (and all other specifications) are subject to change without notice.*
<table>
<thead>
<tr>
<th>Sangean ATS-808</th>
<th>Sangean ATS-818CS</th>
<th>Sangean ATS-909</th>
<th>Sony ICF-SW77</th>
<th>Sony ICF-SW100</th>
<th>Sony ICF-SW2010</th>
<th>Sony ICF-SW7600G</th>
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<tbody>
<tr>
<td>45 channels</td>
<td>45 presets</td>
<td>307 channels</td>
<td>162 channels</td>
<td>50 channels</td>
<td>32 channels</td>
<td>22 channels</td>
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<td>Yes</td>
<td>Yes</td>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>24 hour UTC/local, alarm/timer</td>
<td>Dual time with record</td>
<td>3 separate timers with alarm</td>
<td>12/24 hr.</td>
<td>24 hr./sleep</td>
<td>12/24 hr./alarm/sleep</td>
<td>w/ timer and sleep</td>
</tr>
<tr>
<td>440 mW @ 10 @ THD</td>
<td>600 mW</td>
<td>400 mW</td>
<td>250 mW</td>
<td>380 mW</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<td>Double conversion</td>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Wide/narrow AM</td>
<td>Wide/narrow switch</td>
<td>Wide/narrow AM</td>
<td>Wide/narrow AM</td>
<td>(-6/-50 dB)</td>
<td>Wide 9/18 kHz</td>
<td>Narrow 4/18 kHz</td>
</tr>
<tr>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
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<td>Yes</td>
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<td>1/8' miniplug</td>
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<td>1/8' miniplug</td>
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<td>1/8' miniplug</td>
<td>1/8' miniplug</td>
<td>1/8' miniplug</td>
</tr>
<tr>
<td>7.5/5/1.5/0.5 D</td>
<td>11.25'/W/7.37'/2.75' D</td>
<td>8.5'/W/5'/1.5' D</td>
<td>10.87'/W/6.87'/1.87' D</td>
<td>4.37'/W/2.87'/9.37' D</td>
<td>11.37'/W/6.25'/2.16D</td>
<td>7.27'/W/4.72'/1.25D</td>
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<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>6 DVC @ 300 mA or 6 AA cells</td>
<td>120VAC/4C cells</td>
<td>4C cells</td>
<td>6DVC or 4C cells</td>
<td>120VAC or 2AA cells</td>
<td>120VAC or 2AA cells</td>
<td>120VAC or 4AA cells</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
| UPS 2nd Day Air at Ground Rates on ALL PRODUCTS!
### Grove's Scanner Specification/Comparison Guide
(Use this guide to compare scanners found on page 13-16 of this catalog)*

<table>
<thead>
<tr>
<th>Scanner</th>
<th>AR 3000A</th>
<th>AR 8000</th>
<th>ICOM R1</th>
<th>ICOM R8500</th>
<th>Radio Shack Pro 2x</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catalog Page #</td>
<td>13</td>
<td>14</td>
<td>13</td>
<td>13</td>
<td>16</td>
</tr>
<tr>
<td>Grove Order #</td>
<td>SCN 26</td>
<td>SCN 27</td>
<td>SCN 13</td>
<td>SCN 1</td>
<td>SCN 5</td>
</tr>
<tr>
<td>Grove Price</td>
<td>$1,062.95</td>
<td>$599.95</td>
<td>$399.95</td>
<td>N/A at prestime</td>
<td>$349.95</td>
</tr>
<tr>
<td>Frequency Range</td>
<td>100kHz-824 MHz, 849-869 MHz, 894-2036 MHz</td>
<td>500kHz-1900 MHz (less cellular)</td>
<td>100 kHz-800 MHz, 900-1300 Hz</td>
<td>100 kHz-1999.9999 MHz (less cellular)</td>
<td>25-54, 60-80, 82-170, 180-512, 517-824, 815-869, 879-1300 MHz (less cellular)</td>
</tr>
<tr>
<td>Keypad Entry?</td>
<td>Yes, plus tuning dial</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Tuning Steps</td>
<td>Programmable 50 Hz-999 kHz</td>
<td>0.5/5/8/10/12.5/15/20/25/30/50 kHz</td>
<td>10/50/100 Hz</td>
<td>1/5/10/20/12.5/50 kHz</td>
<td>5/6/12.5/ WFM 200 kHz</td>
</tr>
<tr>
<td>RI, Fine Tuning</td>
<td>Tuning dial</td>
<td>Tuning dial</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Display</td>
<td>Backlit LCD</td>
<td>Backlit LCD</td>
<td>Edgelt LCD</td>
<td>Backlit LCD, alphanumeric display</td>
<td>LCD</td>
</tr>
<tr>
<td>Dimmer</td>
<td>On/off</td>
<td>On/off</td>
<td>On/off</td>
<td>On/off</td>
<td>No</td>
</tr>
<tr>
<td>Recommended Use</td>
<td>Serious wide-spectrum monitor</td>
<td>Gen. purpose wide-freq.</td>
<td>Gen. purpose wide freq.</td>
<td>Serious wide-frequency monitoring</td>
<td>VHF/ UHF</td>
</tr>
<tr>
<td>Receiving Modes</td>
<td>AM/NFM/WFM/LSB/USB/CW</td>
<td>AM/NFM/WFM/LSB/USB/CW</td>
<td>AM, NFM, WFM</td>
<td>AM/NFM, WFM</td>
<td>AM, NFM, WFM</td>
</tr>
<tr>
<td>Memory</td>
<td>400 chan. w/ backup</td>
<td>1000 channels</td>
<td>100 channels</td>
<td>1000 channels</td>
<td>Non-volatile 200 ch.</td>
</tr>
<tr>
<td>Scan</td>
<td>50 channels/sec.</td>
<td>30 channels/sec.</td>
<td>20 channels/sec.</td>
<td>10-20 chan. /sec.</td>
<td>multifunction</td>
</tr>
<tr>
<td>Banks</td>
<td>4</td>
<td>20 (50 channels ea.)</td>
<td>No</td>
<td>20</td>
<td>10 banks/20 chan. ea.</td>
</tr>
<tr>
<td>Channel Lockout</td>
<td>Scan &amp; search chan.</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Any one channel</td>
</tr>
<tr>
<td>Priority</td>
<td>4 channels</td>
<td>Any channel</td>
<td>Yes</td>
<td>Yes</td>
<td>Any one channel</td>
</tr>
<tr>
<td>Search</td>
<td>50 channels/sec.</td>
<td>30 channels/sec.</td>
<td>10 ranges w/ autoload</td>
<td>Yes, with autoromemoy write</td>
<td>300 steps/sec.</td>
</tr>
<tr>
<td>Delay</td>
<td>Yes, variable</td>
<td>Programmable</td>
<td>2 sec/10 sec timed</td>
<td>Yes</td>
<td>Indiv. chan., 2-4 sec.</td>
</tr>
<tr>
<td>Squeal</td>
<td>Yes</td>
<td>Audio/carrier activ.</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Clock</td>
<td>Yes</td>
<td>No</td>
<td>w/ on/off timer</td>
<td>No, sleep timer</td>
<td>No</td>
</tr>
<tr>
<td>Audio Output Power</td>
<td>1.2 W @ 4 ohms</td>
<td>180 mW</td>
<td>150 mW @ 8 ohms W</td>
<td>2W @ 8 ohms</td>
<td>250 mW max</td>
</tr>
<tr>
<td>Record Audio Output</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Recorder Activator</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Signal Strength Ind.</td>
<td>Yes</td>
<td>LCD bargraph</td>
<td>LCD bargraph</td>
<td>S meter with center tuning indicator</td>
<td>No</td>
</tr>
<tr>
<td>Computer Interface</td>
<td>RS232C</td>
<td>RS232 Optional</td>
<td>No</td>
<td>RS232C and CI-V</td>
<td>No</td>
</tr>
<tr>
<td>Conversion Scheme</td>
<td>Triple conv.</td>
<td>Triple up/quad on WFM</td>
<td>Triple conv.</td>
<td>Triple conv.</td>
<td>Triple conv.</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>0.25-0.35uV</td>
<td>0.25-3 uV</td>
<td>0.4-3.2 uV</td>
<td>0.2 uV SSB, 0.5 uV NFM</td>
<td>0.8 uV nom. (NFM)</td>
</tr>
<tr>
<td>Selectable Preamp.</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Selectable Attenu.</td>
<td>Yes</td>
<td>Yes, chan. selectable</td>
<td>No</td>
<td>-10/-20 dB</td>
<td>Yes</td>
</tr>
<tr>
<td>IF Selectivity</td>
<td>(-6/-60 dB)</td>
<td>SSB 2.4/4.5 kHz, AM/NFM 12/25 kHz</td>
<td>SSB (-6/-50 dB) 4/15 kHz, AM/NFM 12/25 kHz, WFM 150 kHz</td>
<td>5.5/12/150 kHz FM, NARROW FM 15 kHz wide filter 150 kHz</td>
<td>(-30 dB) 30 kHz AM/NFM</td>
</tr>
<tr>
<td>Noise Blanker/Limiter</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Antenna Connector</td>
<td>NFC</td>
<td>NFC</td>
<td>NFC</td>
<td>NFC</td>
<td>NFC</td>
</tr>
<tr>
<td>Dimensions</td>
<td>5.5W/3H/7.875”D</td>
<td>6”/2.75/1.5”D</td>
<td>1.875H/4W/1.5”D</td>
<td>11.25”W/4.5H/8.25”D</td>
<td>2.62”W/6.1H/1.62”D</td>
</tr>
<tr>
<td>Weight</td>
<td>2.5lbs.</td>
<td>13 oz.</td>
<td>9.9 oz.</td>
<td>18 lbs.</td>
<td>8.47 oz.</td>
</tr>
<tr>
<td>Power Requirement(s)</td>
<td>9-16 VDC</td>
<td>4AA cells (NiCd supplied)</td>
<td>Internal NiCd</td>
<td>12 VDC/ 120 VAC @ 60 Hz</td>
<td>9 VDC (4AA cells)</td>
</tr>
<tr>
<td>Warranty</td>
<td>One year</td>
<td>One year</td>
<td>One year</td>
<td>One year</td>
<td>One year</td>
</tr>
<tr>
<td>Accessories incl.</td>
<td>Tele whip/AC adapt./DC adapter/Manual</td>
<td>AC adaptor/ whip antenna/cig lighter/record/manual/carrying strap</td>
<td>Flex antenna/AC wall adaptor/charger/belt clip</td>
<td>Manual</td>
<td>Belt clip/ flex whip antenna</td>
</tr>
</tbody>
</table>

*All specifications, including prices, are subject to change without notice.
Plus pre-programmed police, fire, aircraft, maritime, emergency and weather
Unit must be returned to Grove Enterprises within the first year for any warranty repairs. See page 2 of catalog.
**Realistic Pro 2026** | **Uniden BC-230XLT** | **Uniden BC-890XLT** | **Uniden BC-3000XLT** | **Uniden BC-9000XLT** | **Uniden BCT-7** | **Uniden BCT-10**
---|---|---|---|---|---|---
Not shown | 15 | 16 | 15 | 15 | 14 | 15
SCN 16 | SCN 24 | SCN 19 | SCN 29 | SCN 30 | SCN 21 | SCN 22
$219.95 | $239.95 | $269.95 | $369.95 | $389.95 | $179.95 | $179.95
Yes | Yes | Yes | Yes | Yes | No | No
Fluorescent | Backlit LCD | Backlit LCD | Edgelit LCD alphanumeric | 16-character | Backlit LCD | 2-Digit LED
Mobile/ base | VHF/UHF utilities | VHF/UHF utilities | General purpose | Gen. purpose scanning | Casual Public Service Monitoring | Highway Speed Patrol Detection
AM, NFM | NFM, AM (aero) det. by freq. range | AM, NFM | WFM, NFM, AM (selectable) | WFM, NFM, AM | Pre-programmed by service plus user-selected frequencies | VHF low, VHF high, UHF
100 channels | 200 channels | 200 channels | 400 channels | 500 channels | 100 channels/sec. | 100 channels/sec.
14 channels/sec. | 100 channels/sec. | 100/20 channels/sec. | 100 channels/sec. | 100 channels/sec. | 100 channels/sec. | N/A
5 banks/20 chan. ea. | 10 | 10 | 20 | 20 | 3 banks | N/A
Any one channel | 10 channels | 10 channels | 10 channels | 10 channels | 10 channels | N/A
19 steps/sec. | 300 channels/sec. | 300 channels/sec. | 300 steps/sec. | 300 steps/sec. | 300 steps/sec. | N/A
Indiv. channel | 2 sec. any chan. | 2 sec. all chan. | 2/4 sec. chan.-selectable | 2 sec. chan.-selectable | 2 sec. all channels | 2 sec., all channels
Yes | Yes | Yes | Yes | Yes | No | No
No | No | No | No | No | Yes | No
1.1 W | 180 mW | 2.7 W | 320 mW | 2.2 W | 3 W | 1 W
Yes | No | Yes | Spkr. & earph. jacks | Yes | No | No
No | No | No | No | No | No | No
No | No | No | No | No | No | No
0.7 uV ave. | 0.5 uV nom NFM | 0.75-1.1 uV | N/A | N/A | 0.5-0.7 uV | 0.3-0.5 uV
No | No | No | No | No | No | No
No | No | No | Yes, chan. selectable | No | No | No
(-50 dB) 30 kHz | N/A | N/A | N/A | N/A | N/A | N/A
BNC | BNC | BNC | BNC | BNC | BNC | BNC
6.625"W/1.625"H/7.3-75 D | 6'H/2.5"W/1.7"D | 10.5"W/3.5"H/7.5"D | 7.4"H/2.7"W/1.5"D | 10.5"H/3.38"W/7.5"D | 5.25"Wx1.62"Hx7"D | 3"Wx5.25"Dx1.3"H
2 lbs. 3 oz | 2 lbs | 3 lbs. 14 oz. | 13 oz. | 4lbs. | 1lb. 11 oz | 7 oz.
12 VDC 13.6 VDC | Battery | 120VAC/12 VDC | 6.5 VDC | 12 VDC (AC adapt. incl.) | 12 VDC | 13.8 VDC
One year | One year | One year | One year | One year | One year | One year
Antennas

THE GROVE SCANNER BEAM

Our world-renowned Scannet Beam has been improved to provide unexcelled 30-50 MHz low band reception, 108-137 MHz aircraft, 137-174 MHz high band, 225-400 MHz military aircraft and satellites, 406-512 MHz UHF, and 806-960 MHz microwave mobile.

HAMS NOTE—can be used for transmitting up to 25 watts on 144, 220, and 430 MHz bands. 50/75 ohms nominal impedance.

May be used with inexpensive TV antenna rotator (available on p. 28) for boresight accuracy or fixed in one direction as required for those elusive, distant stations. Local signals still come in loud and clear from all directions.

Balun transformer, offset pipe and all mounting hardware included (requires TV type F connector on your coax—available on p. 29). Approximate size 8'H x 5'W.

Order ANT 1
Only $95

Shipping
$11 UPS
$12.50 US Priority Mail
$13.50 Canadian APP
$18 Canadian UPS

Shipped only in U.S. and Canada

The Grove Hidden Antenna

The Hidden Antenna may be used alone with your scanner for improved signal reception, over your attachable whip or may be connected to the powerful GRE PREI for considerably increased signal strength on scanners and shortwave receivers.

This five-foot, thin-profile, flexible wire antenna can be hung in a corner, behind a drape—just about anywhere out of sight. Comes fully assembled with 20 feet of coax and F male connector, with 3 adaptors for PL259 (UHF), Motorola and BNC connections.

Order ANT 5
Only $95

Shipping
$11 UPS
$12.50 US Priority Mail
$13.50 Canadian APP
$18 Canadian UPS

Shipped only in U.S. and Canada

Professional Wideband Discone

Best Discone on the Market for VHF/UHF Receivers and Transmitters

Order ANT 9
Only $87

Shipping
$8 UPS
$8 US Priority Mail
$10.50 Canadian APP
$15 Canadian UPS

THE SCANTENNA FROM ANTENNACRAFT

This full-frequency, 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! Requires TV type F connector on your coax—available on pg. 29. Approximate size 7-1/2'H x 4-1/2'W.

Order ANT 7
Only $95

Shipping
$11 UPS
$12 US Priority Mail
$11.50 Canadian APP
$18 Canadian UPS

Shipped only in U.S. and Canada

GENESYS G-1 TRANSMITTING/RECEIVING VHF/UHF ANTENNA

Extremely rugged for permanent base installations, this new antenna is designed for dual-band amateur 144-148/440-450 MHz transmitting and receiving, yet works well for scanning the aeronautical and land mobile bands from 118-960 MHz as well. The compact (43") G-1 increases gain by 3 dBi in the 144-147 MHz range, and 6 dBi from 406-470 MHz.

Accepts up to 120 watts transmit power at 50 ohms, fitted with SO-239 (UHF) female connector.

Order ANT 11
Only $89

Shipping
$8 UPS
$12.50 US Priority Mail
$13.50 Canadian APP
$18 Canadian UPS
Whether you are a ham, scanner enthusiast, or two-way commercial or government radio user, nothing has the combined frequency coverage, bandwidth, gain, durability, and performance of the Austin Ferret! A professional antenna made to exacting standards and offering omnidirectional reception from 25-1800 MHz with no gaps, the base model Ferret adds to base installations what the legend Condor adds to hand-held radios.

With frequency centers for lowest SWR ideally placed at 40, 100, 122, 146, 155, 315, 465, 865, and 1280 MHz, the Ferret easily handles transmit powers up to 100 watts for commercial, military and amateur applications. Only 8' long and rigidly enclosed in a sturdy plexiglass radome, the Ferret is easily mounted to your mastpole (bracket hardware not supplied). Terminated with a low loss N connector for maximum signal transfer to your coax.

Order ANT 10
Only $249.95

Grove PRE-5A VHF/UHF Signal Booster

Now Grove has integrated its high-performance preamplifier and control box into one convenient unit, offering improved performance. The new PRE-5A offers wide dynamic range and low noise for weak signal boosting, and improved overload (intermod) reduction unmatched in other 30-1000 MHz preamplifiers.

Single knob operation offers continuous gain control from -10 dB attenuation to +18 dB amplification. Switched off, signals are automatically routed from the antenna directly to the receiver, bypassing the preamplifier. Use the new PRE-5A with up to 100 feet of Grove low-loss coax to your antenna and enjoy improved VHF/UHF reception on scanners, TVs, FM stereos, and other receiving equipment (not to be used for transmitting). Powered by 12 VDC @500 mA; AC adaptor not included.

PRE-5 SPECIFICATIONS:
GAIN: Continuously adjustable -10 dB to +18 dB
FREQUENCY RANGE: 30-1000+ MHz
NOISE FIGURE: 3.2 dB
3RD ORDER INTERCEPT POINT: +27 dBm
DIMENSIONS: 4'W x 2'H x 3'D
WEIGHT: 10 oz.
CONNECTORS: Low-loss type F
POWER REQUIRED: 12 VDC 500 MA (nom.); AC adaptor not included.

Order PRE 5A
Only $89.95

Which Scanner Antenna?

HAND-HELD - The whip antenna included with your scanner is fine for local reception of strong signals, but if you are interested in reaching out further, a larger external antenna is necessary. The Grove ANT-9 adjustable whip and ANT-14 Austin Condor Flex Antenna will increase range on any hand-held scanner or transceiver equipped with a BNC connector (not screwthread).

Hand-held radios may also be connected to mobile and rooftop base antennas as well, provided they are equipped with BNC connectors.

MOBILE - Inside a vehicle, a scanner’s attachable whip is shielded by the vehicle body and an external antennas is recommended. A rooftop location is ideal, providing uniform response in all directions. Mounted elsewhere (fender, trunk, bumper), the pattern will favor the direction of the car body.

The short length and low height of mobile antennas limit their distance, and loading coils restrict their frequency range. 800 MHz coverage is more by accident than design. The mobile scanning enthusiast must be content with local listening.

Most scanner antennas like the popular Grove ANT-4 and new, low-profile ANT-30 come equipped with a Motorola plug or BNC connector and have strong magnetic bases which will not come loose at normal road speeds.

You don’t want a visible antenna on your car? Order the Grove ANT-20 “No-Tenna.” It provides full-frequency-coverage reception by connecting internally to the car body.

The car’s existing AM/FM antenna may be used with a multicoil like the Grove CPL-63 with some compromise in signal strengths. In weak signal areas, a preamplifier like the Grove PRE-5 will boost reception range.

BASE - Many discones advertise 25-1300 (or higher) MHz response. While it is true that any antenna will get some signals at virtually any frequency, most discones have poor response below 100 MHz and erratic response above that. Several discones are extremely well constructed including the Diamond D-130. It is an excellent omnidirectional, VHF/UHF transmitting antenna and performs well for local reception.

Most low-cost base antennas work well for local coverage (25-50 miles distance). Remember, the smaller the dimensions of the antenna, the poorer it will perform on low band (30-50 MHz).

The best nondirectional, all-band scanner antennas on the market are the AntennaCraft ANT-7 Scantenna, sold by Grove, and the Channel Master 5094A Monienna available from Channel Master dealers.

An “omnidirectional antenna mounted within a couple of feet of a metal mast or another antenna becomes directional due to signal reflection. In this case, turn the mast or antenna while listening to signals of interest to determine the best overall position, then tighten it down.

For extended range, a directional antenna like the Grove Scanner Beam, used with an inexpensive TV rotator like the Grove ROT'1, offers gain in its forward direction while receiving local signals all around. VHF and UHF reception in excess of 100 miles under favorable conditions are possible.

UPS 2nd Day Air at Ground Rates on ALL PRODUCTS!
STEALTH Mobile Monitoring Antenna

Thin, black and unobtrusive—like the Stealth aircraft!

A unique design optimizes coverage of the popular 30-30, 118-174, 406-512 and 806-960 MHz bands; this low-profile, magnetic-mount mobile antenna is only 18" high, yet offers performance comparable to much bulkier scanner antennas.

Rugged, stainless-steel whip and strong magnetic base are hermetically sealed for waterproof construction, sleek-black finished for unobtrusive mounting. Includes 14 feet of small-diameter cable and BNC connector.

Order ANT 30
Only $29.95

Shipping:
$7.50 UPS Ground
$7 US Priority Mail
$10 Canadian APP
$15 Canadian UPS

The Grove
No-Tenna™

Turn Your Car into a Giant All-Band Antenna!

Imagine: strong, clear, continuous frequency coverage of shortwave and scanner signals without having to mount an antenna anywhere on your car! No invitation to theft, suspicion, breakage, low overhanges, hole drilling, scraped paint, or cables through doors or windows. No visible antenna whatsoever! The 8" cable mounts in seconds, using your entire car body as a giant, 1-1000 MHz, all-band antenna!

The unique No-Tenna™ was developed exclusively in Grove’s laboratory and extensively road tested under all signal conditions. Ideal for city dwellers, travelers, reporters, investigators—anyone who doesn’t want a visible receiving antenna on his vehicle (not for transmitting).

Connected to a single upholstery screw already in the vehicle, use either the upper, right-hand mouting screw or the adjacent sun visor screw. Spring clip provided for temporary connections to roof or apartment metal window frames, curtain rods and other emergency, makeshift antennas. Full instructions and universal connectors for RCA, BNC and 1/8" (3.5mm) miniplug included. If you own an ICOM R-100 be sure to specify a PL-259 adaptor.

Order ANT 20
Only $19.95

Shipping:
$5 UPS
$5 US Priority Mail
$6 Canadian APP
$6.50 Canadian UPS

See page 29 for adaptors and cables.

MAGNETIC MOUNT MOBILE ANTENNA

For years, mobile scanning enthusiasts have had to settle for compromised reception from antennas designed long ago for limited coverage scanners. Now, Grove offers a high-performance mobile antenna for wide-frequency-coverage scanners.

This sleek, black, 24" fiberglass whip, mounted on a strong magnetic base, assures reception on 30-30 MHz low band, 88-108 MHz FM broadcast, 118-136 MHz aircraft, 136-174 MHz high band, 225-400 MHz military aircraft, 406-512 MHz UHF land mobile, and 806-960 MHz microwave mobile.

Tested to withstand interstate highway speed and equipped with 12 feet of coaxial cable with Motorola and BNC connectors, the ANT-4 will perform where others fail.

(ANT 4W is the whip antenna alone for your 3/8" x 24 TPI threaded mount)

Order ANT 4
Only $49.95

Order ANT 4W
Only $12.95

Shipping:
$7.50 UPS
$7 US Priority Mail
$10 Canadian APP
$15 Canadian UPS

See page 29 for adaptors and cables.

Product support for Catalog Items Only: 704-837-7081
Windshield Mount Scanner Antenna

No holes and no magnets, this 22" Valor Glascaster is designed for today's wide-frequency-coverage mobile scanners, 30-1200 MHz (not for transmitting). Simply clean an area on your rear window (cleansing pad included) and stick the antenna base to the glass. A companion coupler on the inside of the window does the rest!

15' of cable with BNC and Motorola connectors included—no assembly required.

Retail $35

Order ANT 13
Only $29.95

SHIPPING
$7 US Priority Mail
$7.50 UPS
$10 Canadian APP
$15 Canadian UPS

ACCESSORIES
ACC 94 Adhesive re-mount kit $ 4.95

See page 29 for adaptors and cables.

MOBILE ANTENNA MULTICOUPLER

Use Your AM/FM Car Antenna for Scanner Reception Too!

How would you like to enjoy excellent 30-960 MHz mobile scanner reception using your existing AM/FM auto antenna? That's right, no holes, no magnets, no scratched paint, or clumsy cables going through doors and windows. Ideal for low-profile monitoring installations where a separate scanner antenna is desirable.

The Para Dynamics PDC 63 Mobile Multicoupler takes only seconds to install and allows simultaneous use of your AM/FM car radio as well as your mobile scanner. Comes equipped with your choice of Motorola or BNC connector.

Order CPL-63M (Motorola) Only $14.95
Order CPL-63B (BNC) Only $16.95

SHIPPING
$5.50 UPS
$5 First Class Mail
$4.50 Canadian APP
$10 Canadian UPS

High Performance Flex Antenna

For years we have been looking for a replacement "rubber duck" that really makes a difference on handheld scanners. It's here! The 12" Santronic "Condor" is guaranteed to improve weak signal scanner reception—on all frequency ranges—when compared to the original scanner antenna.

Order ANT 14
Only $29.95

Order ANT 14B (w/BNC right-angle conn.)
Only $34.95

Order ANT 14N (w/ right-angle conn.)
Only $36.95

SHIPPING
$6.50 UPS
$5.50 US Priority Mail
$5 First Class Mail
$6.50 Canadian APP
$10 Canadian UPS

From Max Systems:

High Gain 800 MHz Portable Antenna

The Max Systems antenna will make a tremendous improvement in 806-960 MHz reception over the whip provided with your handheld or desktop scanner! (Not usable in other frequency ranges.)

Equipped with standard BNC connector, rugged ground-plane construction for optimum performance. Only 7-1/2" tall. Ideal for use with GRE converters.

Order ANT 22
Order ANT 23
Only $29.95 Only $34.95

With straight connector With right-angle connector for desktop use

SHIPPING
$7 UPS
$7 US Priority Mail
$6.50 US Priority Mail
$11.50 Canadian UPS
$15 Canadian APP

Range-Extending Window Clip for Hand-held Radio Antennas!

Dramatically increase your mobile range with a hand-held scanner or two-way radio without resorting to a permanent or magnetic whip. Simply slip this unobtrusive, durable custom bracket on a side window and roll it up! Equipped with standard BNC connector to accommodate most compact whips.

Order BRK 9
Only $28.95

SHIPPING
$5.50 UPS
$5.50 US Priority Mail
$5 First Class Mail
$7 Canadian UPS

UPS 2nd Day Air at Ground Rates on ALL PRODUCTS!
Switch your scanner, shortwave receiver, ham transceiver, or any other radio device operating at frequencies as high as 1000 MHz with this superb, die-cast, waveguide-cavity antenna switch. Handles up to 2500 watts PEP for transmitting, VSWR under 1:2, insertion loss only 0.2 dB, and port-to-port isolation 60 dB. Automatically grounds unselected port. Standard UHF (SO-239) connectors mate with PL-259 and other adaptors.

**Order SWC 1**

Only $25.50

**SHIPPING**

$3 UPS

$4.50 US Priority Mail

$10 Canadian UPS

$6.50 Canadian APP

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**Heavy Duty Antenna Rotator**

Perfect for use with our Scanner Beam or your directional VHF/UHF, TV or FM antenna!

Ideal for the Grove Scanner Beam, amateur VHF/UHF antennas, TV and FM antennas, this new rotator features a heavy-duty motor with high torque (tested through 70 MPH winds) with brake pads to protect the drive train.

Two synchronized motors give precise station location; extra-strength machine gears break through ice loads without binding. Mounts on masts up to 2" diameter. Requires 3 conductor cables (optional). Fast and easy installation.

**Order ROT 1**

Only $59.50

**SHIPPING**

$7.50 UPS

$11.50 US Priority Mail

$14.50 Canadian UPS

**ACCESSORIES:**

CBL 2 50 feet 3-conductor cable $5.95

CBL 3 100 feet 3-conductor cable $8.95

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**GRE SUPER CONVERTER**

RECEIVE CONTINUOUS 800-1000 MHz ON YOUR PROGRAMMABLE SCANNER!

Looking for the best way to get uninterrupted 800-1000 MHz coverage in your desktop scanner? Whether your scanner doesn't have that range now, or is one of the models with certain 800 MHz frequencies factory-censored, these high-sensitivity converters from GRE will fill in the gap!

Simply install a nine-volt battery (not supplied) or AC adaptor (optional), BNC connectors are provided to interconnect with your scanner. Use an 800 MHz-capable external antenna or attach a whip adjusted to about 4" (or 12" for gain) like the Grove ANT-19 ($14.95) or ANT-8 ($16.95).

When you tune 406-512 MHz on your scanner, you will be receiving 806-912 MHz! Just add 400 to the frequency displayed on your scanner, and you'll know your receive frequency when the scanner is switched on. A handy bypass switch allows you to restore normal operation of your scanner without having to remove the converter.

**Order CVR 3**

Only $84.95

**SHIPPING**

$6 UPS

$7 US Priority Mail

$8.50 Canadian APP

$10 Canadian UPS

**ACCESSORIES:**

ANT 22 High gain 800 MHz portable antenna $29.95

PWR 13 Universal power supply $9.95

BAT 4 9volt battery $2.25

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**Variable Attenuator Reduces Overload Interference!**

Reduce scanner and shortwave intermod and desensitization with this variable attenuator. Adjustable from 0 to 20 dB attenuation from 0-1000 MHz or higher! Can also be used to reduce distortion when connected between a radio's audio output and your tape recorder! Equipped with F connectors; adaptors available from list below.

**Order ATT 1**

Only $99.50

**SHIPPING**

$6.50 UPS or Priority Mail

$6.50 Canadian APP

$7 Canadian UPS

**Adaptor Kits**

ADPK 1 PL-259 (UHF) $9.95

ADPK 3 BNC $9.95

ADPK 8 Motorola/BNC $9.95

ADPK 9 N $12.95

ACC 176 1/8" cable interconnect for tape recorder (2 provided) $6.95

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**Lightning/EMP Protector For Scanners and Shortwave Receivers**

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 and high-powered transmitters from burning out your equipment!

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-tenth of a second 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, VCRs, TVs, satellite receivers, FM stereo systems, and more. May be used with transmitters up to 100 watts.

**LAR1F (with F conn) $19.95**

**LAR1B (with BNC conn) $24.95**

**LAR1P (with PL-259 UHF conn) $24.95**

**LAR1M (with Motorola conn) $29.95**

**GRE Super Amplifier for Handhelds**

Would you like more range out of your hand-held scanner? Try the GRE Super Amplifier with built-in battery and 20 dB (adjustable) gain from 100-1000 MHz!

BNC connectors allow the Super Amplifier to be mounted between the scanner and antenna; a bypass switch permits the unit to be disabled without having to remove it.

A 9-volt alkaline 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 PRE 1**

Only $49.95

**SHIPPING**

$6.50 UPS or Priority Mail

$10 Canadian UPS

$7.50 Canadian APP

**ACCESSORIES:**

ANT 22 High gain 800 MHz portable antenna $29.95

PWR 13 Universal power supply $9.95

BAT 4 9volt battery $2.25

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28
Dual Scanner MULTICOUPLER

Would you like to connect two scanners (or one scanner with separate antenna jacks) to one antenna cable? The Grove CPL-SC universal multicoupler is the answer! Insertion loss only 3dB maximum; port isolation typically 25 dB; impedance 50-75 ohms.

Consisting of a wide-frequency-coverage splitter (25-1300 MHz or more) and three output cables with adaptors for UHF (PL-259), Motorola, T, and BNC connectors (input and output), you'll be set for any combination.

Order CPL-SC
Only $29.95

Order ACC 168
Only $1.95

Premium Low-Loss RG6-U Cable with 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!

RG 59U
Order CBL 25
(25 feet w/adaptors) Only $9.95
Only $5.50 UPS
$5.50 US Priority Mail
$10. Canadian UPS
$6.50 Canadian APP

RG 6U
Order CBL 50
(50 feet w/adaptors) Only $14.95
$7. UPS
$7.50 UPS
$5.50 US Priority Mail
$8 Canadian APP
$12 Canadian UPS

RG 6U
Order CBL 100
(100 feet w/adaptors) Only $19.95
$9 UPS
$9.50 UPS
$7.50 US Priority Mail
$9 Canadian APP
$13 Canadian UPS

Weather-Proof Flex-Tape!

Ideal for securely wrapping coax couplings and splices without heat or mess. Forms a tight, flexible, waterproof seal for wiring, plumbing, automotive, marine, and other hostile environments. Easy to apply; remains pliable for years without leaving a sticky residue like putty sealants. Resists water immersion, sunlight, abrasion, impact, and most chemicals. 22-foot roll.

Order ACC 168
Only $1.95

ADAPTORS AVAILABLE

ADP 1 UHF Female to F male
ADP 2 F Female to PL259 Male
ADP 3 F Female to N Male
ADP 4 F Female to Male 1/8" Mini-Plug
ADP 5 UHF Female to BNC Male
ADP 6 UHF Female to Male 1/4" Mini-Plug
ADP 7 UHF Female to N Male
ADP 8 F Female to BNC Male
ADP 9 UHF Female to BNC Male
ADP 10 UHF Female to BNC Male
ADP 11 UHF Female to RCA male
ADP 12 BNC female to N male
ADP 13 BNC/BNC (right angle elbow)
ADP 14 F Female to RCA male
ADP 15 N Female to F male
ADP 16 BNC Female to Male
ADP 17 BNC female to F male
ADP 18 F Female to 2 wires
ADP 19 UHF Female to 2 wires
ADP 20 UHF Female to PL259 male
ADP 21 BNC Female to N Male or Female
ADP 22 Motoroal female to BNC male
ADP 23 UHF Female to UHF female barrel
ADP 24 UHF Female to PL259 male
ADP 25 Female to F Male Male
ADP 26 Female to F Female Male
ADP 27 Banana Plug
ADP 28 BNC Female to PAL Female
ADP 29 3.5mm Female to 3.5mm Female
ADP 30 Dual BNC Fema to BNC Male
ADP 31 UHF Female to BNC Male
ADP 32 BNC Female to BNC Male
ADP 33 BNC Male to BNC Male
ADP 34 BNC Male to BNC Male

Unless otherwise specified, adaptors may be ordered separately for $4.95 each. Free shipping if ordered with other products, $2.50 for one or more shipped alone.

If you are unsure which adaptor is needed, call Chanel or Sue at 704-837-7081 tech@grove.net for assistance.

UPS 2nd Day Air at Ground Rates on ALL PRODUCTS!
Accessories

NEW! DESKTOP STAND/CHARGER

FOR HANDHELD SCANNERS AND HTs!

Looking for a way to use your handheld transceiver or scanner as a desktop unit, powering or charging it from the AC line? Two cables are provided to fit the majority of radios which require 12 VDC, center pin positive (+). A second charge jack allows powering an accessory or second radio simultaneously at up to 350 mA current drain.

Ideal for popular 12-volt-charged radios from Uniden, Icom, AOR, Yupiteru, Trident, Radio Shack, and more. Sturdily constructed with adjustable tilt support, AC switch and illuminated indicator.

Order PWR 2 Only $59.95

NEW! UNIVERSAL POWER CONVERTER

Imagine being able to use your AC operated equipment anywhere in the world when you travel-scanners, ham rig, shortwave radio, computer, audio-visual equipment, TV, appliances, heaters, shavers, irons, power tools, and more! This handsome, compact power converter set comes with a heavy duty, 1600 watt transformer and five wall adaptors for any 50 or 60 Hz, 120 or 240 VAC outlet. A convenient, color coded, country selection chart is included.

Order PWR 20 Only $34.95

Power Pocket
Extended Life Battery

No more inconvenient power loss while using your handheld scanner or two-way radio. Ideal for emergencies, hiking, camping, field day, search and rescue missions, power outages, cycling, sports events, and more.

The Power Pocket is a sealed, rechargeable, lead/acid battery which provides 12 volts at 2 ampere-hours for rugged, extended-life applications!

Encased in a secure pouch with a belt loop and shoulder strap provision, a completely discharged Power Pocket can be recharged in only 6-8 hours and will hold a useful charge for up to half a year! You can expect 3 to 5 years lifetime from this compact powerhouse which comes complete with cigarette lighter receptacle to fit a variety of Grove power adaptors. AC charger included at no additional cost.

Order BAT 16 Only $59.95

Professional Power Supply

Adjusts to the voltage you need for mobile & portable accessories!

Operating from 100-115 volts AC, this rugged, compact (5"W x 3½"H x 5"D) lab power supply is ideal for powering those mobile and portable, battery-operated scanners, shortwave radios, CB rigs, and other equipment. Adjustable from 9 to 15 volts and provides up to 5 amps DC. Over-current protected. Includes binding posts as well as cigarette lighter jack for powering your accessories. Large meter accurately shows voltage and current. Regulated for less than 1% voltage fluctuation or 3 mV ripple. Weighs 5 pounds.

Order PWR 3 Only $59.95

Mobile Cigarette Lighter Power Adapter

Simply plug the Grove DCC 4 into your vehicle's cigarette lighter to charge the batteries or any other mobile accessory, including radar detectors, which use a 12 volts DC, center pin positive, 2.1 mm barrel connector. This power adaptor has an internal, replaceable 3A fuse.

Order DCC 4 Only $9.95

Including First Class Shipping
PORTABLE POWER STATION

Emergency Power!

A rugged, battery power source that can actually run your high-powered monitoring equipment and a few other accessories when needed. Imagine powering your stereo, mobile scanner, ham rig, portable TV, cassette player, CD player, spotlight, or even an AC inverter to operate your shaver, camping refrigerator, power tools, and coffee pot as well. Wouldn't it be great if the unit even had enough reserve to start your car if that battery was dead?

It's here and it includes a 120 VAC charger with automatic full-charge cutoff, built-in voltmeter, and cigarette lighter jacks for charging and high-power output.

The Power Station is a compact powerhouse built around a 12 volt, 7 ampere-hour, rechargeable gel cell contained in a rugged ABS carrier. You can choose 3, 6, 9 or 12 volts output. Dimensions 7lbs, 8½ x 7 x 4.5.

Order PWR 1
Only $59.95

Order PWR 12
Only $49.95

Order PWR 19
Only $79.95

Save $33 on our Universal Power Supply/Charger

Our universal AC adaptor is especially rugged, capable of switching to your choice of 3, 4.5, 6, 7.5, 9 or 12 volts DC at a current of 500 milliamps (1/2 amp)! Another switch lets you choose + or - polarity.

An array of plugs on its interconnect cord assures proper mating to any electronic accessory. Plugs into standard house current (120 VAC, 60 Hz).

A $15 dollar value!
Order PWR 13
Only $9.95

Save on Low-Current AC Wall Adaptors!

Grove's PWR 12 Universal power supply plugs into 120V AC wall socket and provides 3, 4.5, 6, 7.5, 9 and 12 volts DC switchable polarity, at up to several hundred mA (intermittent use). Has six different plugs for virtually every accessory. List price $12.95.

Order PWR 12
Only $4.95

The PWR 19 provides 12VDC at 200 mA from standard 2.1 mm coax plug (center +). UL and CSA approved.

Order PWR 19
Only $7.95

Great Deals on Quality Alkaline Batteries

Industrial ALKALINE AA, C, D, and 9V Batteries!

These high power, long-life, industrial quality Eveready Energizers™ are unavailable in stores. Ideal for radios, flashlights, clocks, cassette players, remote controls, electronic accessories, motorized tools and toys, and any other application requiring a high-current, long life battery. Choose from individually packed AA, C, D or single 9V batteries.

Order BAT 13
Only $2.75 ea.

Radio Shack® Rechargeable AA NiCd Batteries

650 Millamp High capacity AA NiCds for use with many handheld scanners.

Order BAT 13
FREE SHIPPING w/ PURCHASE OF ANY OTHER BATTERIES!

UPS 2nd Day Air at Ground Rates on ALL PRODUCTS!
Over the years, MetroWest has introduced a number of innovative accessories for handheld scanners, but none is more welcome than their double-life battery pack for the popular Uniden BC200XLT hand-held scanner.

The "Pro-Pack 1200" is numbered for its 1200 mAh charge capacity, twice that of the original equipment. The replacement look-alike slips right on the scanner to replace the original.

About 1/4" taller and slightly fatter than the Uniden pack, the Pro-Pack 1200 does not allow the top strap of the Uniden case to button over the top as it did before, but is still may wrap around the front or back securely.

Because the charger pack on the battery pack had to be relocated due to battery density, the scanner must be removed from its holster before it can be recharged. The user may wish to punch a second hole at the new location for plug-in convenience. An AC wall adapter/charger is included.

Some fascinating experiments are being conducted in the study of changing magnetic and electric fields which surround us. Other than the power lines (which are detected by the TST-1), investigators are studying how solar radiation affects the electric fields which surround the earth; Seismologists are looking into apparent connections between earthquake activity and ELF signals (0.5-10 Hz), parapsychologists are investigating electric field anomalies claimed to be associated with "ghost busting" events; even Ufologists report that electric and magnetic fields change in the presence of strange aerial phenomena. All of these claims could be corroborated—or denied—by the TriField TST-2.

The TST-2 is so sensitive it will respond to the electric disturbance produced by someone—or something—moving in an adjacent room! A built-in tone provides audible indication of these phenomena.

Calibrated sensitivity of the instrument is an incredible 1 microtesla in the magnetic mode; simply turning it in the earth's natural magnetic field produces a full-scale deflection of the meter! Similarly, in the electric mode, it responds to fluctuations as low as 1 volt per meter, easily detecting the approach of distant thunderstorms, solar geomagnetic storms, and lightning discharges.

In the radio/microwave mode, the unit makes a dandy field strength meter, responding to transmitted energy as low as 0.01 watts per square meter, anywhere in the spectrum between 100 kHz and 3 GHz! Laboratory instruments capable of such measurements cost thousands of dollars, but Grove now brings you this multimode field detector at incredible savings!

Concerned about electromagnetic radiation and its effect on your body? The TriField Environmental Monitor takes readings of home appliances, computers, microwave ovens, TV sets, electric blankets, fluorescent lights, power transformers, power lines, residential and industrial wiring, cellular and cordless telephones, VHF and UHF transceivers, and other sources of electromagnetic energy.

Operating for 10 or more hours from a standard 9-volt battery (supplied), the TriField meter will read up to 100 milligauss of magnetic field intensity from 60-100,000 Hz, up to 100 kilovolts per meter electric field intensity, and up to 1 milliwatt per square centimeter (as high as 3 GHz) radio/microwave power density. An excellent explanatory guide and full instructions are included.

Accessories

Long Life Battery Pack For BC200XLT, BC205XLT, and BC100XLT

Drop-In Charger

Charge your high-capacity MetroWest battery like the pros with this drop-in charger (not for original Bearcat battery pack). Automatic circuit provides a full charge in just seven hours, yet prevents over-charging! Powered by your 12 VDC wall adaptor or from the Grove DCC cigarette lighter cord.

Trifield Electric/Magnetic Field Detector

Order TST 2 Only $199

Order PWR 15 Only $49

Order BAT 14 Only $39

Order BAT 9 Only $79

TRIFIELD ENVIRONMENTAL MONITOR

Order TST 1 Only $119

ORIGINAL REPLACEMENT UNIDEN BC200XLT BATTERY PACKS

(Also fits BC100XLT, BC205XLT, Regency 4030).

Order BAT 14 Only $39

Order BAT 9 Only $79

Product support for Catalog Items Only:
704-837-7081
Ideal for radios, accessories and beverages!

NEW! DELUXE MOBILE ORGANIZER FOR VANS AND TRUCKS!

Order BRK 7
Only $12.95

Order BRK 1
Only $9.95

Compact Mounts

How many times have you wished for your hand-held scanner or handy-talkie on a table, ledge or car seat, just to have it fall over? That problem is solved with our handy holders. The BRK 1 holds one hand-held, while the BRK 7 holds two (or one scanner and a beverage container)—with a handy compartment in the middle for other accessories!

Their sturdy jaws do an excellent job of supporting your radio—even with cables and antennas connected —on a desk or table top or even the bumpy environment of a vehicle, plane or boat. The two outer compartments of the BRK 7 even adjust to provide a snug fit for any hand-held unit.

Cushion pads are provided for an even better grip, especially on small hand-helds like the ICOM R-1 and Realistic® PRO-26.

LEATHERMAN® POCKET TOOL

"I carry mine everywhere, and use it almost daily." - Bob Grove

You've seen the legendary Swiss Army knife, but you've never seen a quality, multipurpose pocket tool like the Leatherman®.

Full-size needle-nose/regular pliers, wire cutters, knife blade, ruler, can/bottle opener, large and small screwdrivers, Phillips screwdriver, metal/wood file/saw, awl/punch—all in a sturdy, 4", stainless steel frame!

Comes with leather belt case and 25 year warranty! An incredible, American-made value.

Order TOL 1
Only $39.95

Made in the U.S.A.

NEW! HAND-HELD RADIO CADDY

This universal, compact, hand-held radio caddy attaches to your vehicle window, allowing secure and convenient access to your handy-talkie, cell phone or hand-held scanner. Rubber-padded base rest and adjustable straps allow custom configuration for your radio. May also be used to support the radio in an upright position on a desktop. Pen/pencil holder and even a pull-drawer to hold a notepad (included)! They've thought of it all to make your mobileing more pleasurable.

Order BRK 11
Only $79.95

Cassette Tapes of the 1995 Grove Expo
Great Gifts for the Radio Buff!

These professionally-recorded audiocassettes place you at the expert's podium! Order today!

Order by Code
Add $2.25 shipping per tape (not to exceed $5) or $5 shipping for the entire set.

UPS 2nd Day Air at Ground Rates on ALL PRODUCTS!
**Accessories**

**NAVAL HTS-3 COMPACT AMPLIFIED SPEAKER**

Includes Tape Recorder Activator and Cigarette Lighter Power Cord

Designed for handheld walkie talkies and scanners, this amplified speaker puts out a resounding one watt of audio in noisy locations!

Powered by AA nicads or alkalines, battery saver automatically shuts off power when no sound is present. It activates a tape recorder whenever sound is present (1/8", 3/32" cables included!)

Compact (2-3/4" W x 4-1/2" H x 2-1/4" D) and lightweight (10 ounces), this amplified speaker can be snugly placed on your radio desk or stuck by Velcro to your vehicle's dashboard. LED signal light, audio level adjustment and amplifier bypass switch are included!

Order SPK 11 Only $29.95

**Clip-On Studio Microphone**

Ideal for video presentations, tape recording, Internet Phone or lecturing. Standard 600 ohm line impedance, and 100-12,000 kHz frequency response assure crisp, clean audio. Removable tie clip, breath screen, at least 10' of shielded, flexible cord with 1/8" (3.5 mm) plug included. Compare at $29.95.

**Sub-Compact Extension Speaker**

Measuring just 3-1/4" in diameter, this tiny extension speaker with its black textured styling and chrome accents is ideally suited for mobile mounting. A swivel base allows proper positioning, while its 7" extension cable with standard 1/8" (3.5 mm) miniplug will reach anywhere in the listening area.

Order SPK 14 Only $49.95

**Optimus Speaker Offers Great Sound in a Small Package**

**Switchable Stereo-Mono Headphones**

Imagine—an ear-cushioned headset with adjustable volume controls for each earpiece and a stereo/mono switch built in! These new phones have a power-handling capacity of 0.5 watts, frequency response of 20-18,000 Hz, sensitivity of 105 dB, and 32 ohm impedance to match all external speaker/earphone jacks.

Perfect for any audio application—stereo systems, communications receivers and scanners. Coil cord with 1/4" plug and 1/8" adaptor included.

**Clip-On Mini Speaker For Handheld Radios**

This tiny (2" square), lightweight (2-3/4 oz.) speaker plugs into any standard 1/8" (3.5 mm) earphone jack and provides excellent, concentrated sound when clipped to a lapel or collar. Ideal for crowded or noisy locations where you don't want your scanner blaring and don't want the confinement of an earphone.

Order SPK 9 Only $10.95

**A Solid Value for the Radio Listener!**

**While Supplies Last**

Order MIC 3 Only $9.95

**ACCESSORIES**

Order SPK 4 Only $49.95

plus $3 shipping

**ACCESSORIES**

Order HDP 1 Only $19.95

ADP 29 3/32" (2.5 mm) mini adaptor $1.50

ADP 29 3/32" (2.5 mm) sub-mini adaptor $1.50

SHIPPING $6.50 UPS $7 US Priority Mail $10 Canadian UPS or APP

SHIPPING $5.50 UPS $4.50 US Priority Mail $5 Canadian UPS $5 Canadian APP

SHIPPING $5.50 UPS $5.50 US Priority Mail $7.50 Canadian UPS $9 Canadian APP
NEW! Sun Visor Mobile Speaker

Clever, convenient, and barely 1-1/4" thin; simply slide this 5-1/2" x 3" dual speaker on your vehicle's sun visor for high quality, concentrated sound. Ideal for noisy environments. Includes 6' cord with 1/8" (3.5 mm) mini-plug.

Order SPK 15
Only $16.95

SHIPPING
$5.50 UPS
$4.50 US Priority Mail
$2 Canadian UPS
$5.50 Canadian APP

Audio Adaptor for Scanners, Portable CD Players, etc.

Play almost any audio source through your home or car audio system and dramatically improve sound quality!

Listen to your scanner over your car or home stereo! Imagine—any electronic component that you own with an audio output jack (including your scanner or shortwave receiver) can be played directly through your home stereo system, portable "boom box," auto stereo or any other cassette player to provide full, rich sound! Shaped like a normal cassette, this adaptor slides into your cassette player. Your scanner or audio device then attaches to the adaptor with a 1/8" (3.5 mm) stereo or mono plug (included with flexible cord). Dramatically improves scratchy or tinny-sounding audio when used with today's full-range systems.

Order ACC 79
Only $9.95

SHIPPING
$2.50 First Class
$4 UPS
$5.50 Canadian APP
$6 Canadian UPS

NEW! Noise Cancelling Mobile Speaker

Great for base units, too!

This low-cost mobile and base speaker is ideal for scanners, CBs, mini-portables, and other communications accessories that would benefit from an external speaker. A pushbutton high-frequency-rolloff switch reduces crackling, pulse noise. Measuring approximately 4" square, this compact accessory speaker is rated at 10 watts and comes with 10' cable and 1/8" (3.5 mm) mini-plug. Hinged mobile mounting bracket included.

Order SPK 6
Only $16.95

SHIPPING
$5.50 UPS
$4.50 US Priority Mail
$2 Canadian UPS
$5.50 Canadian APP

NEW! VOICE IT™
CREDIT-CARD VOICE RECORDER!

Imagine, record up to 60 voice messages as you wish—up to four minutes' worth—without a bulky tape recorder. The revolutionary Voice It utilizes cutting-edge micro-chip memory and long-life lithium cells to give you unprecedented convenience. How often have you been driving along and thinking of an idea you would like to jot down. Just lift the Voice It from your convenient sun visor clip (included) or shirt pocket, and dictate your thoughts!

The REC-2 measures a scant 1/2" thick! Or, if you can say want you want in 1-1/2 minutes, choose the featherweight, 1/4"-thick, REC-1 at even better savings! Both units allow pushbutton single-message or all-erase, skip forward or back, and include fresh batteries.

REC 1 (1-1/2 minutes) .... $4.95
REC 2 (4 minutes) .......... $6.95

SHIPPING
$5.50 UPS
$4.50 US Priority Mail
$5.50 Canadian APP
$9 Canadian UPS

"I take my Voice It everywhere I go; many new ideas are born while I drive or bike—all dictated into this incredibly tiny voice recorder"—Bob Grove

Order Line:
1-800-438-8155

UPS 2nd Day Air at Ground Rates on ALL PRODUCTS!
**CHANNEL ORGANIZERS**

Carry a complete list of your 200 or 400 scanner channels, frequencies and agencies in this handy, shirt-pocket, data management packet. These 3" x 4-1/2" professional forms are plastic protected, and bound with a durable ring for easy flip-access. Enter the data just as you have it programmed on your scanner for speedy reference. Extra replacement cards included.

**Order CHT 8**

$15.95

400 channels, 20 frequencies per page

**Order CHT 7**

$12.95

200 channels, 20 frequencies per page

**SHIPPING**

$3 First Class Mail
$4 UPS
$5 50 Canadian APP
$6 Canadian UPS

**DX EDGE**

Your “Edge” in Shortwave Monitoring

Plan your listening around the most productive times and frequencies using this valuable, simple-to-use shortwave tool. Share the secret of successful hams and professionals alike who know the advantages of “grayline propagation.” Just line up the proper date line on your location and it’s ready to use. Sturdy map chart, perpetual monthly overlays and easy instructions included.

**Order CHT 3**

Only $24.95

**SHIPPING**

$5.50 UPS and Priority Mail
$6.50 Canadian UPS
$7 Canadian APP

**Color Wall Chart of the Radio Spectrum**

Grove offers this incredible 30” x 40”, full color, fold-out wall chart of the United States radio spectrum!

Printed on heavy gloss paper, the chart of the spectrum shows both government and non-government frequency allocations from 9 kHz through 300,000 MHz (300 GHz)—the entire radio spectrum (last updated 9-1-95)!

30 services are shown in separate colors: land mobile, aeronautical, maritime, space, fixed, amateur, radio and TV broadcasting, and more. No other low-cost publication provides so much band allocation detail at a glance as this handsome, professional wall chart.

**Order CHT 1**

Only $9.95

**SHIPPING**

$6.50 UPS
$7.50 2nd Day Air
$12 Canadian UPS
$12 Canadian APP

**Caller ID for Your Phone—Now Available Nationwide!**

No longer will you be pestered by annoying calls. The Bell-Tronics’ AD100 intercepts unwanted or unidentified calls and even displays the name and phone number of the caller on a giant LCD! And just look at these advanced features:

- **Call Reject:** You may reject up to 100 unwanted phone numbers; when these come in, the AD100’s computerized voice will inform the caller politely that the call will not be accepted!

- **Block Buster:** If a caller has blocked his identity, the AD100 informs him that his call will not be accepted!

- **Call Screening:** Shows incoming name and phone number immediately for you to see.

- **Automatic Logging:** Memorizes and displays last 100 incoming calls for your reference.

Attractive off-white color; compact (5.3” x 3.4” x 2.1”). Requires 9-volt alkaline battery; low battery indicator on screen. Stand-up or wall-mount capable; telephone cord included.

**Order PHN 04**

Only $79.95

**SHIPPING**

$7 UPS
$9 US Priority Mail
$12 Canadian APP

**ACCESSORY**

BAT 4 9 Volt alkaline battery $2.25

*Not affiliated with any former Bell System entity.*
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