Looking For High-Tech?
Talk Into Satellites...Page 16!

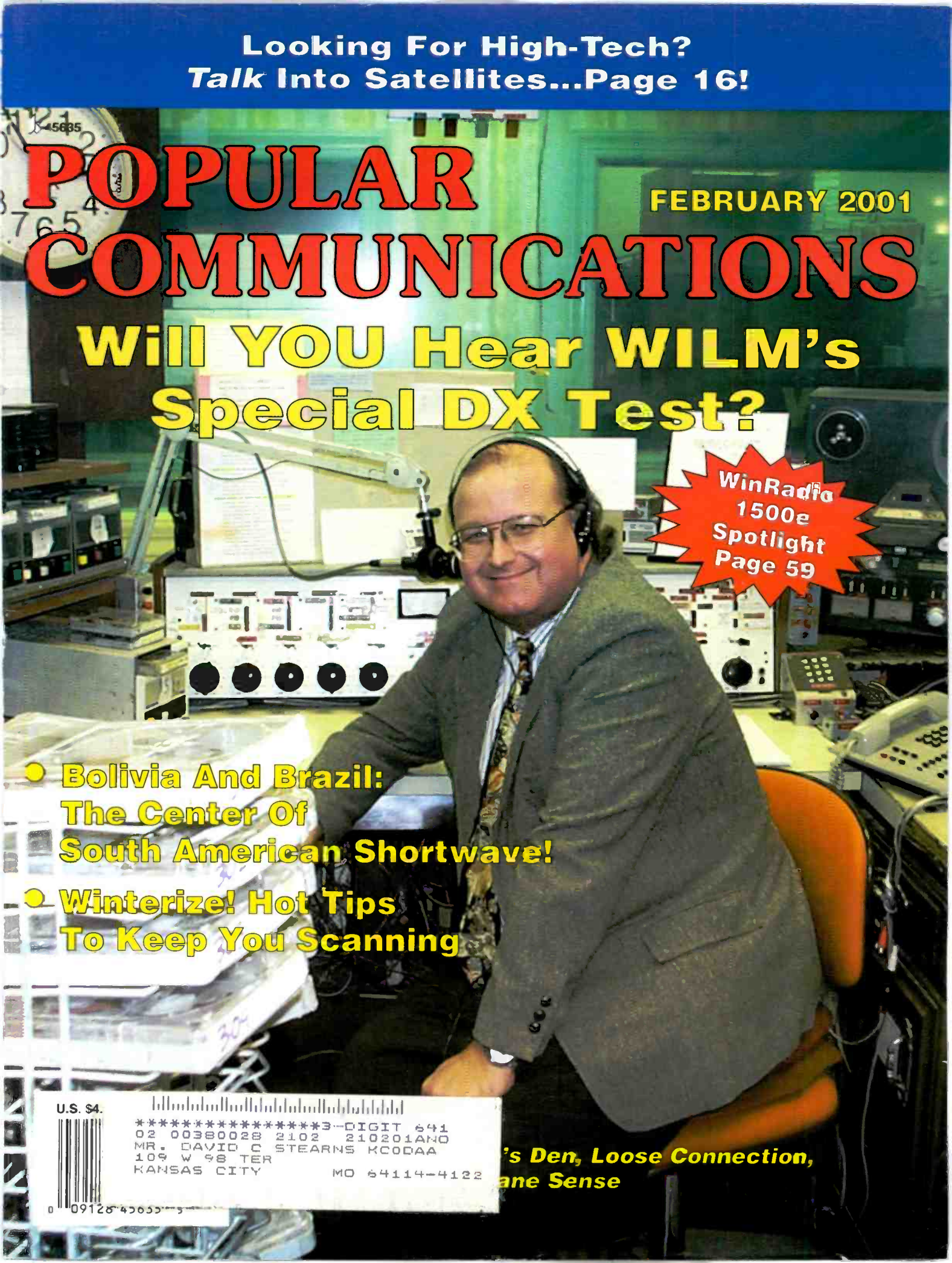
POPULAR COMMUNICATIONS

FEBRUARY 2001

Will YOU Hear WILM's Special DX Test?

WinRadio 1500e Spotlight Page 59

- Bolivia And Brazil: The Center Of South American Shortwave!
- Winterize! Hot Tips To Keep You Scanning



's Den, Loose Connection,
ane Sense

Tomorrow's Technology - Today.

THE PROFESSIONAL STANDARD

The compact desk-top VR-5000 is Yaesu's most versatile Communications Receiver ever! With ultra-wide frequency coverage and a host of operating features, you'll be on top of the monitoring action with the VR-5000!

● CONTINUOUS FREQUENCY COVERAGE: 100 kHz ~ 2.6 GHz!

The VR-5000 provides continuous coverage from 100 kHz to 2599.99998 MHz (cellular frequencies are blocked) on all popular operating modes: LSB, USB, CW, AM-Narrow, AM, Wide AM, FM-Narrow, and Wide FM. The "Auto Mode" feature automatically presets the operating mode and frequency steps for the frequency range you have chosen!

● 2000 MEMORY CHANNELS!

The extensive memory capability of the VR-5000 includes 100 Memory Groups, allowing you to partition the Memories for easy recall. And you can add an Alpha-Numeric label to both Memories and Memory Groups, to make channel identification easy and quick!

● DUAL RECEIVE!

When monitoring on the "Main" displayed frequency, you can simultaneously listen to a second station (on the AM and FM modes) operating within 20 MHz of the Main frequency. This can be especially helpful while monitoring public safety communications.

● DIGITAL SIGNAL PROCESSING (OPTION)!

The optional DSP-1 Digital Signal Processing Unit provides leading-edge selectivity, and it includes (1) a Bandpass Filter for razor sharp selectivity on SSB/AM/FM, (2) a Noise Reduction Filter, (3) a seeking Automatic Notch Filter to eliminate heterodynes, and (4) a narrow CW Peaking Filter, for weak signal reception of Morse Code signals.

● REAL-TIME SPECTRUM SCOPE!

To aid in finding band activity, the VR-5000's Real-Time Spectrum Scope will sweep the band in user-defined steps, displaying the received signals graphically according to frequency and signal strength.

● WORLD CLOCK WITH UTC/LOCAL SETTINGS!

The World Clock feature of the VR-5000 includes an atlas with 66 geographical references, and it also provides a Program Timer (with automatic switching to a designated frequency), an Alarm Timer (wake up to a Shortwave Broadcast), and a Sleep Timer (drift off listening to your favorite FM station).

● PRESET SHORTWAVE BROADCAST STATION MEMORY BANK!

Featuring a handy world map showing station locations, the special Shortwave Broadcast Station Memory Bank includes several different operating frequencies for a number of popular shortwave stations, including Voice of America, the BBC, Radio Japan, and the Voice of Russia. The operating frequencies may be changed by the owner, to keep up with changing station schedules!

● EXTENSIVE SCANNING CAPABILITY!

Scan the band, the memories, or a band segment with the VR-5000's versatile scanning system. And Yaesu's exclusive Smart Search™ system will scan the band, looking for activity, and will automatically load active channels into a special Smart Search™ memory bank!

AND MUCH, MUCH MORE. . .

● "RF Tune" Front-end Preselector (1.89-1000 MHz). ● 20 dB Attenuator for strong signal environments. ● IF Noise Blanker. ● DVS-4 Digital Voice Recorder (option) with two memories of up to 8 seconds each. ● FVS-1A Voice Synthesizer (option) for audible announcement of the operating frequency. ● 10.7 MHz IF Output Jack. ● Field Strength Meter. ● Audio Tone Control. ● All-Mode Squelch Control for silent monitoring. ● Password-protected Panel and Dial "Lock" feature. ● Display Dimmer/Contrast Control. ● Clone Capability for copying memory information from one VR-5000 to another.● Personal Computer Interface Port (4800/9600/57600 bps). ● Two Antenna Ports. ● Audio Wave Meter provides display of incoming signal's wave characteristics.

COMMUNICATIONS RECEIVER

VR-5000

0.1~2599.99998MHz*
LSB/USB/CW/AM-N/AM/
WAM/FM-N/WFM
*Cellular blocked

Enjoy the wide world of communications monitoring with the action-packed VR-5000, available from your Yaesu Dealer today!

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Tap into *secret* Shortwave Signals

Turn mysterious signals into exciting text messages with the MFJ MultiReader™!

Plug this self-contained MFJ *MultiReader*™ into your shortwave receiver's earphone jack.

Then *watch* mysterious chirps, whistles and buzzing sounds of RTTY, ASCII, CW and AMTOR (FEC) turn into exciting text messages as they scroll across an easy-to-read LCD display.

You'll *read* interesting commercial, military, diplomatic, weather, aeronautical, maritime and amateur traffic . . .

Eavesdrop on the World

Eavesdrop on the world's press agencies transmitting *unedited* late breaking news in English -- China News in Taiwan, Tanjug Press in Serbia, Iraqui News in Iraq -- all on RTTY.

Copy RTTY weather stations from Antarctica, Mali, Congo and many others. Listen to military RTTY passing traffic from Panama, Cyprus, Peru, Capetown, London and others. Listen to hams, diplomatic, research, commercial and maritime RTTY.

Listen to maritime users, diplomats and amateurs send and receive *error-free* messages using various forms of TOR (Telex-Over-Radio).

Monitor Morse code from hams, military, commercial, aeronautical, diplomatic, maritime

-- all over the world -- Australia, Russia, Japan, etc.

MFJ-462B **$179.95**

Printer Monitors 24 Hours a Day

MFJ's exclusive *TelePrinterPort*™ lets you monitor any station 24 hours a day by printing transmissions on an Epson compatible printer.

Printer cable, **MFJ-5412**, $9.95.

MFJ *MessageSaver*™

You can save several pages of text in an 8K of memory for re-reading or later review.

High Performance Modem

MFJ's high performance *PhaseLockLoop*™ modem consistently gives you solid copy -- even with weak signals buried in noise. New threshold control minimizes noise interference -- greatly improves copy on CW and other modes.

Easy to use, tune and read

It's easy to use -- just push a button to select modes and features from a menu.

It's easy to tune -- a precision tuning indicator makes tuning your receiver easy for best copy.

It's easy to read -- the 2 line 16 character LCD display with contrast adjustment is mounted on a brushed aluminum front panel for easy reading.

Copies most standard shifts and speeds. Has MFJ *AutoTrak*™ Morse code speed tracking.

Use 12 VDC or use 110 VAC with MFJ-1312B AC adapter, $14.95. 5¼Wx2⅛Hx5¼D inches.

No Matter What™ One Year Warranty

You get MFJ's famous one year *No Matter What*™ limited warranty. That means we will repair or replace your MFJ *MultiReader*™ (at our option) *no matter what* for one full year.

Try it for 30 Days

If you're not completely satisfied, simply return it within 30 days for a prompt and courteous refund (less shipping). Customer must retain dated proof-of-purchase direct from MFJ.

Super Active Antenna

"World Radio TV Handbook" says MFJ-1024 is a *"first-rate easy-to-operate active antenna ...quiet... excellent dynamic range... good gain... low noise... broad frequency coverage."*

Mount it outdoors away from electrical noise for maximum signal, minimum noise. Covers 50 KHz-30 MHz.

MFJ-1024 **$139.95**

Receives strong, clear signals from all over the world. 20 dB attenuator, gain control, ON LED. Switch two receivers and auxilary or active antenna. 6x3x5 inches. Remote has 54 inch whip, 50 feet coax. 3x2x4 inches. 12 VDC or 110 VAC with MFJ-1312, $14.95.

Indoor Active Antenna

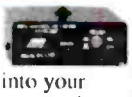
MFJ-1020B **$79.95**

Rival outside long wires with this *tuned* indoor active antenna. *"World Radio TV Handbook"* says MFJ-1020B is a *"fine value... fair price... best offering to date... performs very well indeed."*

Tuned circuitry minimizes intermod, improves selectivity, reduces noise outside tuned band. Use as a preselector with external antenna. Covers 0.3-30 MHz. Tune, Band, Gain, On/Off/Bypass Controls. Detachable telescoping whip, 5x2x6 in. Use 9 volt battery, 9-18 VDC or 110 VAC with MFJ-1312, $14.95.

Compact Active Antenna

MFJ-1022 **$49.95**



Plug this *compact* MFJ all band active antenna into your receiver and you'll hear strong, clear signals from all over the world, 300 KHz-200 MHz including low, medium, shortwave and VHF bands.

Detachable 20 inch telescoping antenna. 9 volt battery or 110 VAC MFJ-1312B, $14.95. 3⅛x1¼x4 in.

Eliminate power line noise!

MFJ-1026 **$179.95**

New! ***Completely*** eliminate power line noise, lightning crashes and interference *before they get into your receiver!* Works on all modes -- SSB, AM, CW, FM, data -- and on all shortwave bands. Plugs between main external antenna and receiver. Built-in active antenna picks up power line noise and cancels undesirable noise from main antenna. Also makes excellent active antenna.

MFJ Antenna Matcher

MFJ-959B **$99.95**

Matches your antenna to your receiver so you get maximum signal and minimum loss.

Preamp with gain control boosts weak stations 10 times. 20 dB attenuator prevents overload. Select 2 antennas and 2 receivers. 1.6-30 MHz. 9x2x6 in. Use 9-18 VDC or 110 VAC with MFJ-1312, $14.95.

Dual Tunable Audio Filter

MFJ-752C **$99.95**

Two separately tunable filters let you peak desired signals and notch out interference at the same time. You can peak, notch, low or high pass signals to eliminate heterodynes and interference. Plugs between radio and speaker or phones. 10x2x6 in.

High-Gain Preselector

MFJ-1045C **$99.95**

High-gain, high-Q receiver preseletor covers 1.8-54 MHz. Boost weak signals 10 times with low noise dual gate MOSFET. Reject out-of-band signals and images with high-Q tuned circuits. Push buttons let you select 2 antennas and 2 receivers. Dual coax and phono connectors. Use 9-18 VDC or 110 VAC with MFJ-1312, $14.95.

CW, RTTY, ASCII Interface

MFJ-1214PC **$149.95**

Use your computer and radio to receive and display brilliant full color FAX news photos and incredible WeFAX weather maps. Also RTTY, ASCII and Morse code. Frequency manager lists over 900 FAX stations. Auto picture saver.

Includes interface, easy-to-use menu driven software, cables, power supply, manual and *JumpStart*™ guide. Requires 286 or better computer with VGA monitor.

High-Q Passive Preselector

MFJ-956 **$49.95**

High-Q passive LC preselector boosts your favorite stations while rejecting images, intermod and phantom signals. 1.5-30 MHz. Preselector bypass and receiver grounded positions. Tiny 2x3x4 inches.

Super Passive Preselector

MFJ-1046 **$99.95**

New! **Improves** any receiver! Suppresses strong out-of-band signals that cause intermod, blocking, cross modulation and phantom signals. Unique Hi-Q series tuned circuit adds super sharp front-end selectivity with excellent stopband attenuation and very low passband attenuation and very low passband loss. Air variable capacitor with vernier. 1.6-33 MHz.

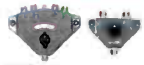
Easy-Up Antennas

MFJ-38 **$16.95**

How to build and put up inexpensive, fully tested wire antennas using readily available parts that'll bring signals in like you've never heard before. Antennas from 100 KHz to 1000 MHz.

MFJ Antenna Switches

MFJ-1704 **$64.95**



MFJ-1702C **$24.95**

MFJ-1704 heavy duty antenna switch lets you select 4 antennas or ground them for static and lightning protection. Unused antennas automatically grounded. Replaceable lightning surge protection. Good to 500 MHz. 60 dB isolation at 30 MHz. **MFJ-1702C** for 2 antennas.

World Band Radio Kit

MFJ-8100K **$69.95** *kit*
MFJ-8100W **$89.95** *wired*

Build this regenerative shortwave receiver kit and listen to signals from all over the world with just a 10 foot wire antenna. Has RF stage, vernier reduction drive, smooth regeneration, five bands.

21 Band World Receiver

MFJ-8121 **$39.95**

MFJ's new 21 Band World Receiver lets you travel the world from your armchair! Listen to BBC news from London, live music from Paris, soccer matches from Germany and more! Covers 21 bands including FM, Medium Wave, Long Wave and Shortwave. *Sony*® integrated circuit from Japan, multicolored tuning dial, built-in telescopic antenna, permanent silkscreened world time zone, frequency charts on back panel. Carrying handle. Operates on four "AA"s. Super compact size!

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Pop'Comm's World Band Tuning Tips

February 2001

This listing is designed to help you hear more shortwave broadcasting stations. The list includes a variety of stations, including international broadcasters beaming programs to North America, others to other parts of the world, as well as local and regional shortwave stations. Many of the transmissions listed here are not in English. Your ability to receive these stations will depend on time of day, time of year, your geographic location, highly variable propagation conditions, and the receiving equipment used.

AA, FF, SS, GG, etc. are abbreviations for languages (Arabic, French, Spanish, German). Times given are in UTC, which is five hours ahead of EST, i.e. 0000 UTC equals 7 p.m. EST, 6 p.m. CST, 4 p.m. PST.

UTC	Freq.	Station/Country	Notes
0000	9630	Radio Aparecida, Brazil	PP
0000	11915	Radio Gaucha, Brazil	PP
0000	11930	Radio Jordan	AA
0000	15630	Voice of Greece	GG
0030	4960	Radio Villa, Dominican Republic	SS
0030	9835	Voice of Islamic Republic of Iran	
0030	10330	All India Radio	unid
0030	15395	Radio Thailand	
0100	3280	La Voz del Napo, Ecuador	SS
0100	4911.5	Radio Barahona, Dominican Republic	SS
0100	4965	Christian Voice, Zambia	
0100	4985	Radio Brazil Central, Brazil	PP
0100	6458.5	Armed Forces Radio, Puerto Rico	SSB
0100	7345	Radio Prague, Czech Republic	
0100	9440	Radio Slovakia Int'l, Slovakia	
0100	9655	Radio Austria Int'l	GG
0100	13770	Radio Finland Int'l	Finnish
0115	17675	Radio New Zealand Int'l	
0130	4914	Radio Cora, Peru	SS
0130	9570	Radio Havana Cuba	
0130	9905	Swiss Radio Int'l, via French Guiana	SS
0130	15115	HCJB, Ecuador	
0130	15250	Voice of America relay, Sri Lanka	
0130	9735v	Radio Nacional, Paraguay	SS
0145	9675	RAI Int'l, Italy	II
0145	15425	Sri Lanka Broadcasting Corp.	
0200	5025	Radio Rebelde, Cuba	SS
0200	6135	BBC, via Seychelles Islands	
0200	6956.5	La Voz del Campesino, Peru	SS
0200	7270	Radio Tirana, Albania	
0200	9400	Radio Bulgaria	
0200	9795	Wales Radio Int'l, via England	
0200	11585	Kol Israel	
0200	11600	Adventist World Radio, via Slovakia	unid
0200	11700	Radio Bulgaria	
0200	11710	Radio Argentina al Exterior	
0200	15375	Voz Cristiana, Chile	SS
0215	3320	South African Broadcasting Corp.	Afrikaans
0230	4052.5	Radio Verdad, Guatemala	SS
0230	6673	Radio Andina, Peru	SS
0230	7160	Radio Tirana, Albania	
0230	9495	Radio Sweden	
0230	9635	Radio Nacional, Colombia	SS
0230	9835	Radio Budapest, Hungary	
0230	9900	Radio Cairo, Egypt	AA
0230	10320	Armed Forces Radio, Hawaii	USB
0230	13620	All India Radio	Pashto
0230	15160	Radio Exterior de Espana, Spain	SS
0230	15400	UAE Radio, Dubai	AA
0230	15760	Reshet Bet, Israel	HH
0245	3300	Radio Cultural/TGNA, Guatemala	SS
0250	7305	Vatican Radio	
0300	4835	Radio Tezulutlan, Guatemala	SS
0300	4980	Ecos del Torbes, Venezuela	SS
0300	5020	Ecos del Atrato, Colombia	SS
0300	7125	Voice of Russia	
0300	7180	Voice of Russia, via Moldova	
0300	9855	Radio Vilnius, Lithuania, via Germany	
0300	12000	Voice of Russia	
0300	9780v	Republic of Yemen Radio	AA
0330	3380	Radio Malawi	
0330	4820	La Voz Evangelica, Honduras	SS
0330	5500	Voice of Eritrea	unid
0330	9640	Radio Ukraine Int'l	
0330	9705	Radio Mexico Int'l	SS
0330	9795	Voice of Vietnam, via Canada	
0330	9820	Radio Havana Cuba	
0330	12050	Radio Cairo, Egypt	AA
0330	13615	Voice of Islamic Republic of Iran	AA
0345	7215	Trans World Radio via South Africa	unid
0400	7150	RAI Int'l, Italy	
0400	9435	Kol Israel	
0400	11940	Radio Romania Int'l	
0400	17600	Voice of Turkey	TT
0400	17770	Qatar Broadcasting Service	AA
0430	6010	Radio Mil, Mexico	SS
0430	12045	Radio Rossii, Russia	RR
0500	6250	Radio Nacional, Equatorial Guinea	SS
0500	72555	Voice of Nigeria	
0515	15170	Broadcasting Svc of Kingdom of Saudi Arabia	AA

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Communications Receiver For Computer
- Covers .01-1300MHz.
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- Employs Band-Tracking RF Filters.
- Connects to Your PC Exter.

PCR100, Similar to PCR1000 Less SSB $199.95 SALE
UPS Included

IC-R10
- Wideband, All Mode Receive Capability From 100 kHz to 1300 MHz.
- 1000 Memory Chan. With 8-Character Alphanumeric Names.

Many Other Features!

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Communications Receiver
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- Many Features Similar to IC-R10

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$579.95 UPS Inc.

NEW IC-R75 HF Receiver
- Receives .03-60MHz, AM/FM/SSB/CW/RTTY
- Triple Conversion Receiver
- Synchronous AM detection
- Twin Passband Tuning
- Automatic Notch Filter
- Front Mounted Speaker
- Optional Digital Signal Processing
- Up to Two Optional Filters

IC-R2
Ultra Compact, Super Wide Band

$189.95 UPS Inc.
- The New Mini-Sized Scanner From ICOM is Now Available.
- 500kHz-1.3GHz (Less Cellular) AM/FM/WFM.
- Loud And Crisp Audio. Back-lit LCD.
- Triple Conversion, Built-In Attenuator.
- 400 Memories, 8 Banks of 50 Chan.
- CTCSS Tone Squelch and Tone Search.
- Includes 2 AA Size Ni-Cd Batteries and Charger.
- PC Programmable (Software and Connection Cable Optional).
- More!

IC-R3
$479.95
- Wide Band RX (.5-2450MHz)
- 2 Inch TFT Display
- Lithium Ion Battery
- PL Decode/Scan
- Computer Programmable
- 450 Mem. 6 Char. Alpha-Num
- BNC Connector
- More!!

YAESU

VR-500
High Performance Miniature Communications Receiver
- Freq Range: 100khz to 1300 MHz
- All-Mode! AM/WFM/NFM/ LSB/USB/CW
- 1000 Memory Channels
- 8 Character Alpha Numeric Display.
- Direct Keypad Freq. Entry
- Dual Watch/Band Scope
- Much More!

Call For Availability and Pricing!

VR-5000
All-Mode Wideband Receiver

$889.95
- 100kHz-2599.99 MHz (less cellular)
- CW, LSB, USB, AM, FM, WFM.
- 2000 Memory Channels.
- Real-Time Band Scope.
- More!

Pending FCC Type Acceptance.

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$129.95 UPS Incl.
- New Low Priced Shortwave Receiver with SSB Capability!

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DJ-X2T
- Mini Size Multi-Mode Wide Band Comm Receiver
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- 700 Memories
- Freq Coverage .5-1000MHz Less Cellular

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Wide Range Receiver
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- AR7030 Plus
- SDU5500
- ARD-2

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BC245XLT
Handheld "TrunkTracker II"

$219.95 UPS Included

BC780XLT
Trunktracker III

NEW!
- 500 Channel; 10 Banks, 10 Priority Channels
- Continuous Band Coverage; 25MHz to 1.3GHz
- Tracks EDACS™, Motorola, E.F. Johnson
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- CTCSS/DCS
- AM/FM/WFM Modes
- Base/Mobile Design
- More!

$349.95

SC180 $174.95
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UPS included

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R8B (new)	$1159.95 + $14UPS
SW1	$199.95 + $7 UPS
SONY	
ICF-2010	CALL$$
ICF-7600G	CALL$$
ICF-SW07	CALL$$
ICF-SW77	CALL$$
MAGNUM	
MAGNUM 257 30W 10 Meter Mobile	$199.95
RANGER COMMUNICATIONS	
RCI-2950 10 Meter Mobile	$269.00
RCI-2970 10 Meter Mobile, 100W	$399.00
RCI-2950DX 10/12 Meter Mobile	$279.00
RCI-2970DX 10/12 Meter Mobile	$419.00
RCI-2980 10 Meter Base	$429.00
RCI-2990 10 Meter Base, 100W	$599.00
RCI-6300 FTB 10 Meter Mobile	$419.00
RCI-6900 FTB 10 Meter Mobile, SSB	$449.00
TR-296 FDX CB Mobile, AM/SSB, 5-Digit Counter, All Chrome	$209.95

GRUNDIG Shortwave

NEW! Grundig Satellit 800
$499.95
$15 UPS
Call for Availability

Yacht Boy 400PE
$199.00
UPS Included

Yacht Boy 205 Analog Shortwave
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POPULAR COMMUNICATIONS
Volume 19, Number 6 February 2001

Departments

On The Cover

Family owned station WILM, 1450, Wilmington, Delaware's annual DX test is just around the corner. For details check out page 77, and for more great winter DX news read Broadcast DXing on page 20. Photo of Allan Loudell, Program Manager, courtesy of Caroline Large at WILM Newsradio.

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SANGEAN
ATS-909

Free SR-1BC
requires purchase of ATS-909

FREE FREE FREE
Sangean SR-1BC
AM/FM Mini Radio

The **ATS-909** is the flagship of the Sangean line, covering all LW, AM and shortwave frequencies plus FM. Features include: wide-narrow, single side band, 5 tuning methods, 307 alphanumeric presets, 3 event clock timer and illuminated LCD. Requires four AA cells (not supplied). Includes: AC adapter, case and roll-up antenna plus a **free** SR-1BC AM/FM mini radio (a $29.95 value!). *#:909* **$239.95**

COMMUNICATIONS RECEIVERS

YAESU AOR DRAKE JRC ICOM

Universal Radio carries an excellent selection of new and used communications receivers. JRC NRD-545 shown.

GRUNDIG

YB-300PE & YB-400PE

The **Grundig YB-300PE** provides affordable AM, FM and shortwave reception (2.3-7.3 and 9.5-26.1 MHz). Enjoy keypad entry, 24 memories, backlit digital display, clock. With AC adapter, stereo earphones and case. New with one year warranty. *#0300* **$99.95**
Reconditioned. Save $30 *#2300* **$69.95**

The deluxe **Grundig YB-400PE** covers all LW, AM, FM and SW frequencies. It features two bandwidths, SSB, 40 memories, clock and keypad. With AC adapter, stereo earphones, wind-up antenna and case. New with one year warranty. *#0400* **$199.95**
Reconditioned. Save $60 *#4073* **$139.95**

Reconditioned radios have the same warranty and supplied accessories as new.

WIDEBAND RECEIVERS & SCANNERS

YAESU SONY ALINCO AOR uniden Bearcat ICOM

Universal carries an extensive line of scanners and wideband receivers from all major manufacturers including AOR, Alinco, ICOM, Sony, Yaesu and Uniden-Bearcat. The AOR AR8200 is shown. All major ham lines are also stocked.

COMMERCIAL RECEIVERS

TEN-TEC

The Ten-Tec RX-340 is *the* ultimate receiver! Advanced D.S.P. at under $4000.

UNIVERSAL M-450v1.5

The **Universal M-450v1.5** reader displays: **RTTY, SITOR, FEC-A, ASCII, SWED-ARQ** and **Weather FAX** (to the printer port) plus the **ACARS** aviation teletype mode. DTMF, CTCSS and DCS are also supported. Features a big two-line, 20 character LCD and parallel port. Operates from 12 VDC or with the supplied AC adapter. No computer or monitor is required. Made in U.S.A. *#0450* **$399.95**

Please visit our website for other specialized amateur and shortwave products.

RADIO BOOKS

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TUNING IN

An Editorial

Penetrating The Wall — With Or Without A "Police Scanner"

Time and time again we hear instances where our nation's law enforcement and firefighters are let down by inadequate or what the communications industry would have you believe is state-of-the-art systems. Now, granted, when these computer-controlled trunked systems work, they work well. And keep in mind, not all municipalities or states are trunked, but many are going **digital**. Why? Because digital is clearer they say, and of course trunked systems are spectrum efficient. But that little voice in the recesses of my mind keeps saying, "If the darned thing works, sometimes it's best to leave it alone." And so it should be in many cities. Of course the older VHF systems weren't very spectrum efficient and the handhelds were affectionately known as bricks. But for the most part, these now-antiquated systems worked and served our public servants well. But all that is changing, and fast!

We get lots of letters from public safety officials — some clearly concerned about their officers' safety out in the trenches of everyday police life. Fact is, the patrol units in the field are performing yeoman service from Oregon to Florida and all points between — many with inferior *new* communications systems. Fact is, many communities in good old America have been sold some dirty laundry radio systems that puts lives — the officers, yours and mine — in serious jeopardy.

An officer is married to his or her radio, so why is it that the industry is so blind? Actually, they're not. They see very clearly. It's all about money, you know. Each of these new digital systems is a multi-million dollar ticket that comes at a price — safety. The bottom line is that it's great that technology can let an officer send and receive fingerprints, mug shots and all kinds of data from the patrol car, including instant retrieval of driver's license and vehicle registration information from any state in the country. But it's also a serious problem when a simple handheld radio call doesn't penetrate a brick wall, buildings, or even reach the dispatch center!

"Anything less than openness, on the airwaves and otherwise, only feeds the vicious cycle of mistrust."

There are many reasons given for *going* digital. Reception is clearer — or so the industry says. Its inability to be heard on a "police scanner," and automatic unit-calling identification are touted as pluses. Why *shouldn't* a city go digital? There may be far too many dead spots in the city, and among other reasons, the average citizen with a scanner can't help law enforcement, because they can't listen. Some time ago I spoke with a Nevada police chief who said, "I think law enforcement has been pretty effective with millions of scanners out there. I question if there is truly a need to ban them, and if so, who is going to enforce it?" He continued, "The ability to scramble is being used effectively."

That was only a couple of years ago. Of course who needs scrambling when a system goes digital? I'll take scrambling any day of the week. And so it goes. With more and more communities going digital, ditching older, in many cases, tried and proven good, solid comm systems, we all lose. Frankly cops may lose their lives when seconds count. And we all lose the right to know — in what's supposed to be a free, open society. It appears that public service is becoming less about serving and protecting and more about protecting privacy — a poor gameplan resulting in a vicious circle of police mistrust and uncertainty at a time when law enforcement needs us the most.

It's naive to eliminate a perceived evil by layers and layers of anti-monitoring laws, and using digital as a means to

(Continued on page 77)

BY HAROLD ORT, N2RLL, SSB-596

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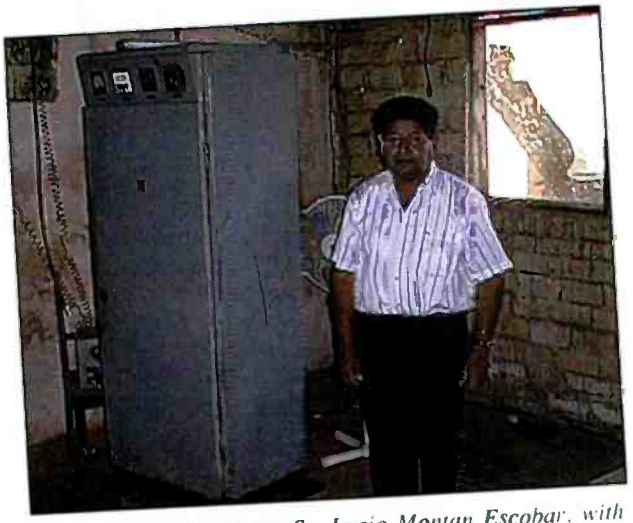

Radio Mamoré's owner, Sr. Lucio Montan Escobar, with the transmitter.

Sra. Teresa Araujo on the air at Radio Mamoré announcing our visit.

Radio Mamoré's Sra. Teresa Araujo on the air.

DX Awaits You From Guayaramerín, Bolivia And Guajará-mirim, Brazil

By Walt Fair, Jr. KE5WJ

In developed countries, like the United States, radio seems to be mainly a form of entertainment. Indeed most Americans don't even think about shortwave radio, much less listen to it. Instead, shortwave radio seems reserved for hobbyists. In less developed countries, however, shortwave radio is a much more important part of daily life, filling a need for communication and education, as well as entertainment. This became very apparent on a recent trip to the center of South America, where I had the opportunity to visit several shortwave broadcasters who fill such a need.

To put things in perspective, my trip began in Santa Cruz, Bolivia, a dynamic city of over 1 million people. Santa Cruz is a bustling, busy city, the center of Bolivia's oil industry. However, the outer two-thirds of the city has no paved streets. From Santa Cruz we traveled overnight by bus to Trinidad, then took a smaller bus from Trinidad to Guayaramerín in the department of Beni.

I was assured that the trip was easy now that a "carretera" (highway) has been built across Beni. In fact the "highway" had not yet been paved, but was mostly a narrow dirt road. It took two days to get from Trinidad to Guayaramerín, a distance of about 200 miles. Along the way we had to get out of the bus and walk across several muddy areas due to the fear that the bus might turn over. We also made four river crossings on wooden barges, either hand-pulled or guided by a small motor boat. Along the way the countryside was full of hawks, eagles, and alligators, with the landscape varying from open fields to swamps to dense jungle. For me, it was an interesting adventure. For the people who live there, it is a way of life.

Guayaramerín is a bustling city of about 20,000 in the north of Departamento Beni, Bolivia, on the banks of the Mamoré River, which forms the border with Brazil. About one-fourth of the roads are paved inside the city. There is a small airport with daily flights to Riberalta, Cobija, La Paz, and Trinidad, but there is no daily newspaper or Internet. There are a few automobile taxis — the primary means of transportation, as in most of rural Bolivia, is the motorcycle. The city is a center for trade with Brazil and thrives mainly by supplying the farms and ranches in the area. Guayaramerín is also home to 3 tropical band shortwave broadcasters, which provide an important service to the surrounding area.

A five-minute ride across the Mamoré River lies Guajará-mirim in the state of Rondonia, Brazil. Guajará-mirim is also a city of about 20,000, but has a much better infrastructure, with paved streets and a daily newspaper. Although there is a train

Radio Paititi's logo.

Radio Paititi's owner, Sr. Carlos Arteaga Tacana.

and a partly-paved highway, the city is very isolated from the rest of Brazil. Unfortunately, the Brazilian economic crisis has had an effect on the area. Guajará-mirim was nearly dead compared to the bustle of activity on the Bolivian side of the border. Guajará-mirim also has a tropical band shortwave broadcaster that provides an important service to the surrounding area.

Radio Mamoré

Radio Mamoré, CP147, is located in a small single story building in Guayaramerín a few blocks from the Mamoré River. When my wife and I visited the station, the staff were so surprised to have a foreign visitor that they announced it over the air, then put on some music and dropped everything to talk with us and show us around.

According to the owner, Sr. Lucio Montan Escobar, it is the oldest shortwave broadcaster in the area, on the air since 1967 and officially licensed in 1971. It broadcasts daily from 6 a.m. to 1 p.m. and 5 p.m. to 10 p.m. local time (1000–1700 and 2100–0200 UCT) on **4815 kHz** (down sometimes to **4802 kHz**) The antenna is a drooping folded dipole, with the center about 20 feet above the ground. Due to the proximity to the airport, a larger or higher antenna cannot be used. Their broadcasts are also carried locally on 95.1 MHz FM. All programs on Radio Mamoréare in Spanish.

Nominally, Radio Mamoré uses 500 watts, but the transmitter is always run at lower power to conserve the transmitting tubes. The transmitter, which has been totally rebuilt by a Brazilian technician, is in a back room of the station building. The back of the transmitter is open and a fan is blowing on the equipment to keep it cool, since there is no air conditioning. When I listened to the station on my portable receiver, I noticed a rapid frequency variation. When I saw the transmitter, I realized that it is probably due to the coils in the transmitter wobbling in the breeze. It produces a very unique effect!

Sr. Montan also explained that the station had been off the air several times due to personal obligations and due to a lack of transmitting tubes. When he travels to take care of business obligations, his wife and a one-person staff do their best to maintain operations, but with little income, the situation is often difficult. He especially asked me to help him find a ready source of 813 transmitting tubes.

The announcer, Sra. Teresa Araujo, explained that they are quite proud of their programming — especially for women in the area. She feels that they provide an important service in disseminating information on nutrition, health, and family issues. In addition, messages are routinely broadcast for people in the area along with the distinctive tropical Bolivian music. Sra. Araujo also mentioned that it is very difficult for them to get information on producing and running a radio station.

Interestingly, Radio Mamoré is not mentioned in the 1999 or 2000 editions of either *WRTVH* or Passport to *World Band Radio*. The station has received several reports from Europe over the years, but only rarely from the U.S. Sr. Montan assured me that he will verify reception reports and is very interested in hearing from foreign listeners. The address is Radio Mamoré, Direc. Beni y Mamoré, Guayaramerín, Beni, Bolivia. With the low power and low antenna, this would make a fine catch for the current DX season.

After my trip, I discussed the Radio Mamoré situation by E-mail with a friend in the U.S. who decided to try to help out with their tube problems. It took several phone calls to get a secure shipping address and confirm the exact tube types. In the meantime, a plea over the Internet for a source of 813 tubes found a ham in Latvia willing to donate several Russian-made equivalent tubes. It seems he had maintained a regular schedule with a Bolivian ham in Guayaramarin for many years and was happy to help out. In a few weeks, the tubes arrived safe-

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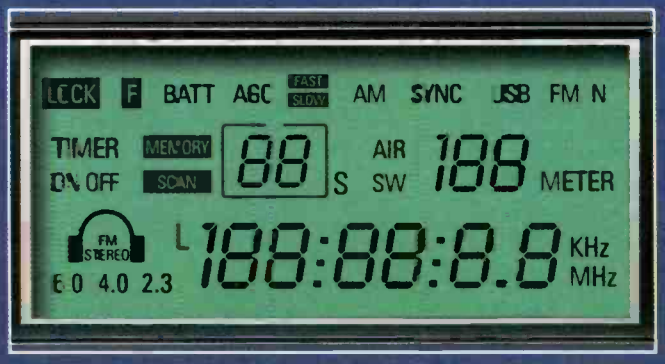

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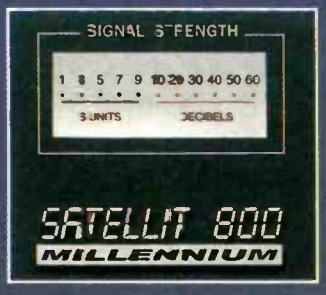

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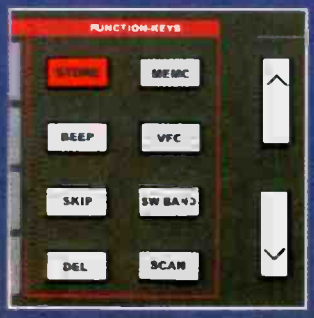

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Radio Educadora sound production studio.

ly in Guayaramarin, were installed, and the transmitter was readjusted slightly. Reception in Venezuela confirmed that they were indeed audible on **4802 kHz** and Sr. Montan reported that their signal had picked up in most of Beni as well. So, although still a difficult DX target, Radio Mamoré should be a little easier to catch, thanks to the efforts of hobbyists in the U.S. and Latvia.

Radio Paititi

Radio Paititi, CP 185, is located in a small two-story building opening into a market place near the center of Guayaramerín. The staff was very surprised to have a foreign visitor and also made a special point of announcing our visit on the air. They very cordially showed us around and answered my questions.

The staff informed us that Radio Paititi broadcasts daily with 500 watts on **4682.4 kHz** from 6 a.m. to 10 p.m. (1000–0200 UTC). It recently celebrated 30 years of tropical band broadcasting and six years on 100.1 MHz FM. The antenna is a folded dipole at about 40 feet. Most of the daily broadcasts consist of Bolivian tropical music. All programming is in Spanish.

The name of the station reflects its tropical Bolivian heritage. According to legend, when the Spanish conquered the Incas in Bolivia and Peru, a group of Incas fled from the mountains into the jungle in the Beni area and established a city of gold. The Spanish name for the city is El Dorado, but the Inca name is Paititi. The city has never been found and there is debate among archeologists on whether it actually existed or not. At any rate, both Paititi and Radio Paititi are uniquely a part of this historic area of Bolivia.

According to the owner, Sr. Carlos Arteaga Tacana, Radio Paititi's transmissions cover all of Beni and serve as an important communications link for the area. In fact the station was started primarily as a message service, with other programming as a sideline. While we were there, several people dropped off messages to family and friends for broadcast over the air. Such messages range from "Happy Birthday" to "I made it to town and will come home tomorrow." The station charges a modest fee (Bs 2 or about $0.40) for broadcasting the messages.

According to the staff, they have received quite a few reception reports from Europe over the years, but only a few from the U.S. The station indicated that they will verify reports. The station's address is Radio Paititi, Casilla No. 167, Guayaramerín, Beni, Bolivia.

Radio Galaxia

In addition, Sr. Arteaga showed me the transmitter for Radio Galaxia, CP218, located in the same building as Radio Paititi. Although Radio Galaxia is listed in both *WRTH* and *Passport*, it has not been on the air recently. Final arrangements were in progress and Sr. Arteaga expected to begin broadcasting with 500 watts on **5160 kHz**. R. Galaxia is NOT on the air yet, although all of the equipment has been ready and tested for over a year. He told me that they are waiting on the license documentation from the government and it will probably take about six more months.

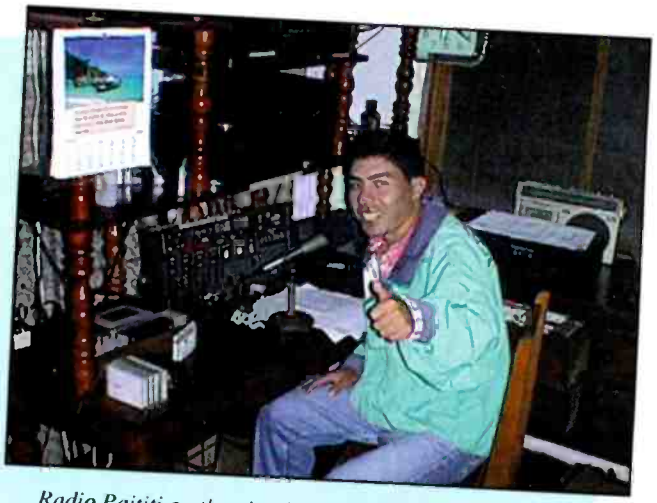
The station slogan is "La Joven Sintonia" (The Young Sound) and will target a younger audience with tropical music. If you hear it, send a report to the same address as Radio Paititi.

Radio Educadora

Radio Educadora's studios are located in a single story building facing a square on the Brazilian side of the Mamoré River in Guajará-mirim. When we visited the station, the staff was surprised to see foreign visitors with an interest in the station and cordially received us. They proudly showed us the studios, record library, and the station's original equipment. We were also invited to witness the first test television broadcasts from the station.

Radio Educadora broadcasts with 5 kW on **3375 kHz** from 9:30 a.m. to 12 noon and 8:30 p.m. to 10 p.m. local time (1330–1600 and 0030–0200 UTC). The transmitter is located about 5 km outside of town. The station also broadcasts on FM and now also relays television broadcasts received by satellite. All broadcasts are in Portuguese.

The station is part of the Radio Educadora system, which is supported by Fundacao Dom Rey, a part of the Catholic Church. The station director, Father Isidoro José Moro, explained that they are dedicated to educating the natives who live in the surrounding region. For that reason, the station logo shows a native in the jungle speaking into a microphone. Programming con-



Radio Paititi on the air with announcer Jesus Salguero.

Radio Educadora's staff in front of the studio.

Station director Father Isidoro Jose Moro and new TV transmitter.

sists of educational and religious programs with a fair amount of tropical music. The station is quite proud of its music library, which is the largest in the entire area.

Although the station has much better equipment than the stations on the Bolivian side of the border, it still faces challenges. As the staff explained, their main problem in starting up the TV broadcasts is keeping condensed moisture out of the antenna and transmission system. In addition, they proudly showed pictures of the staff working to install guy wire anchors, raise the TV antenna tower and satellite dish — all done manually by volunteers over the previous weekend.

The staff said that they will verify reception reports, which should be sent to Radio Educadora, Praca Mário Correa 90 — Centro, CEP 78957-000, Guajará-mirim, Rondonia, Brazil. They indicated that they had received reports from all over the world, including some from the U.S. This station should be a moderately difficult catch, but not impossible. Best time to listen in the U.S. is probably in the evening before sign-off.

In conclusion, it is apparent that the tropical band stations in both Guayaramerín and Guajará-mirim provide an important service for their local areas. Besides entertainment, the educational and communication aspects of their broadcasts are important for the area. In addition, it is difficult not to be impressed with the hard work and dedication of the station owners and staff. Considering the efforts required keeping a station on the air in the face of equipment and economic problems, a more dedicated and sincere group of broadcasters would be hard to find anywhere in the world. ■

The Three-Minute Tip

Helpful Words On Learning To Increase Code Proficiency

By Arthur R. Lee

When I was asked by our then ham club president, Leon Fletcher, AA6ZG, to kick off one of our monthly club meetings with a short, three-minute tip, I thought of the many problems all hams grapple with. The topics of antennas, propagation, DX, rig selection TVI and others came to mind. One topic was of particular interest to me: the use or disuse of CW. I wondered how many of our 100 club members actually *use* CW. (One night's show of hands came to about an amazing 25 percent!)

As a former instructor at our local community college, I taught radio classes as a part of the AA degree in electronics. Most students achieved the minimum code speed of five words per minute early in the 17-week semester. With many fun-filled hours of in-class practice on code practice oscillators, we were able to carry on conversations and pass message traffic between us. Students composed their own messages, using standard operating procedures. Fortunately, the college had its own ham radio station so students got on the air as soon as they were capable. With the recent license restructuring, access to high frequency (HF) bands for worldwide communications only requires 5-wpm CW capability. Undaunted, many hams are still determined to *increase* their code proficiency!

Once armed with the license permitting the use of CW, new hams are faced with the awesome and somewhat frightening prospect of actually getting on the air! Key fright is a common malady most of us experienced early in the hobby. The use of voice seems to not help. Some new hams have even found it to be a trap and abandoned the code altogether. This doesn't have to be!

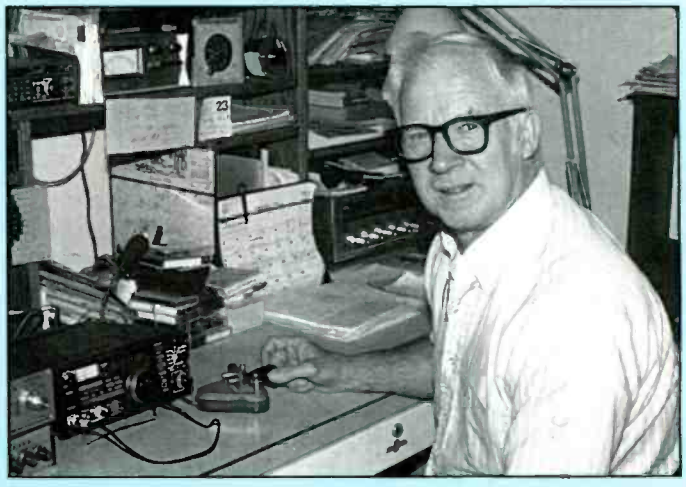
"Once armed with the license permitting the use of CW, new hams are faced with the awesome and somewhat frightening prospect of actually getting on the air!"

Leon and I were having lunch at a golf course clubhouse and had the following conversation: "Do you play golf," he asked. "No," was my first answer, then I changed it to "Well, I have played the game, but never got good enough to really enjoy the game." We agreed that it was the case for both of us, and so it is for any skill, especially CW.

A New Skill For Everyone

Morse code is a new language for all of us when learning it for the first time. Once learned, it is like walking or running, but one must first crawl. In advancing from the "crawl" stage to walking, we usually begin by pulling ourselves shakily up to a standing position, then totter from place to place, sometimes

Author's wife, Donna, AB6XJ, practices CW to increase her code speed to 20 wpm.



The author copies code from ARRL station W1AW.

"Morse code is a new language for all of us when learning it for the first time."

taking a tumble in the process. The only way we eventually learn to walk is to keep at it, absorbing the falls and bumps along the way. If we are discouraged with our progress and give up, we don't succeed. It's the same with learning CW.

Let's say that after a normal amount of hard work we learned to "crawl," that is, we can copy code at 5 wpm. We will stay at that speed or lose it if we don't practice. Increasing our ability to copy and send code at higher speeds simply will not happen by itself. Most classes bring the student up to the minimum speed to pass the code test. After that, they are left to their own devices. Those devices were usually the pre-taped QSOs available through the commercial market. The tapes were handy and portable, but had the major drawback of being easily memorized. Worse, they are a passive method of learning and require no output from the student. Computerized CW programs on disk are now in widespread use and are a giant step up from tapes. Computer chip code practice devices have been marketed in the past by AEA and Heathkit and can sometimes be found in ham flea markets. MFJ Enterprises, Inc. offers a battery-operated Pocket Morse Tutor for mobile use.

"The old maxim 'you learn by doing' is still true. Yet, getting on the air is a traumatic experience for most of us, at least at first."

Practice: Get On The Air

The old maxim "you learn by doing" is still true. Yet, getting on the air is a traumatic experience for most of us, at least at first. Hams that have never been on the air on CW or have never used CW can come up with an amazing number of reasons why they aren't on the air. Here are a few good ones:

- I'm too slow.
- People will laugh at my mistakes.
- I'm supposed to be better than I actually am (I passed the test, didn't I?)
- I can't copy a single letter (Yes, you did pass the test!)
- I forgot my numbers, punctuation, etc.
- I don't know what to say!
- I don't know the format (RST, QTH, MY RIG IS, etc.)
- Others (make up your own)

Just Do It!

Forget all the above excuses: just tune up and fire away. You say it's like jumping into a swimming pool after you've barely learned to tread water? Maybe so, but here are a couple of ways to wear a radio lifejacket:

- Find a nice CW friend — someone you are comfortable with — someone like yourself who may not have built up enough CW confidence yet.

- Next, set up a schedule, using any Novice frequency. Locally, we use 10-meters at low power. It is usually clear and we can operate on the ground wave and not disturb anyone.

- Then, send anything — a series of Vs, your callsign, your friend's callsign. Send something as elementary as "Hi, can u copy me?" It will get you started. Your friend will come back with something as equally important such as, "Yes, I can hear you!"

- Pick up the telephone and say, "Did you copy that? Wasn't it great?" If your friend agrees that it really was great, you're on your way. Send a line or two out of your morning paper, your favorite poem or magazine articles, personal messages — anything! You now have made the first and most important stride. Later, when your nerves have calmed down a bit and you're feeling brave, thrown in a few telephone numbers out of the phone book or some callsigns.

Answer A CQ!

Find someone struggling along at your speed, and then answer. Here are a few openers that you can use if you can't think of your own:

- "Hi, this is my first time on the air and I've been a ham for 10 years!"
- "Hi, I'm nervous, scared, and my code is terrible because my knees are knocking so badly."
- "Hi, I forgot my name, QTH, etc., but I should remember them before this QSO is over."
- "I don't know what to say, you say something!"

Or, heaven forbid, make up something of your own!

Quick Results

Here's what you can expect to happen.

1. You'll actually *remember* your code; after all you really did pass the test.

2. Your shaking knees will give you some much-needed exercise and those sweaty palms will eventually dry out.

3. Those strange sounds known as dits and dahs will actually begin to fall in place and make sense.

4. Real words will form on the paper you're writing on. OK, it may not be until after the QSO is over, but what the heck, we're only having fun.

5. You'll feel relieved when you send your final "CL" or "SK."

The first few shaky contacts will be a bit ragged in spots with lots of errors, yet, as in the case of a new rider who falls off a horse, you have to get right back on. Rack up another QSO, then another. Keep a log. One day soon, you will find yourself actually relaxing and enjoying the QSO on a conversational level. ■

Editor's Note: *Arthur Lee retired from the U.S. Navy with the rank of Commander. He sailed in aircraft carriers, sail and powerboats in waters off California, Hawaii, Japan, Guam, and Vietnam. Art has taught Aviation Maintenance Management at Embry-Riddle Aeronautical University; Aeronautics, amateur radio communications and magazine article writing at Cabrilllo College. He graduated with a BA degree in Business Management and a Masters degree in Public Administration from San Jose State University.*

GRUNDIG Best in Technology

Yacht Boy 400 Professional Edition (YB 400PE)

The most powerful compact Radio AM/FM Shortwave Receiver.

"The Best compact shortwave portable we have tested" Lawrence Magne.-Editor in Chief, Passport to World Band Radio.

The Big Breakthrough! Power, performance, and design have reached new heights! The Grundig 400 Professional Edition with its sleek titanium look is packed with features like no other compact radio in the world.

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You can set the alarm to wake up to music or the morning traffic report, then switch to BBC shortwave for the world news.
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• Dual clocks show time in 24 hour format.
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Dimensions: 7.75" L x 4.5" H x 1.5" W

Weight: 1 lb. 5 oz.

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Yacht Boy 300 Professional Edition (YB 300PE)

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Designed for the traveller, the titanium look digital radio provides incredible power and performance for an incredibly low price. Packed with features, this radio is an excellent value, accompanied with 3 AA batteries, AC adapter, earphones, supplementary Antenna and carrying case!

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- Titanium look finish
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- Telescopic antenna

Dimensions: 5.75" L x 3.5" H x 1.25" W

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RADIO RESOURCES

Interesting Thoughts And Ideas For Enjoying The Hobby

Working FM Satellites With The Arrow Antenna

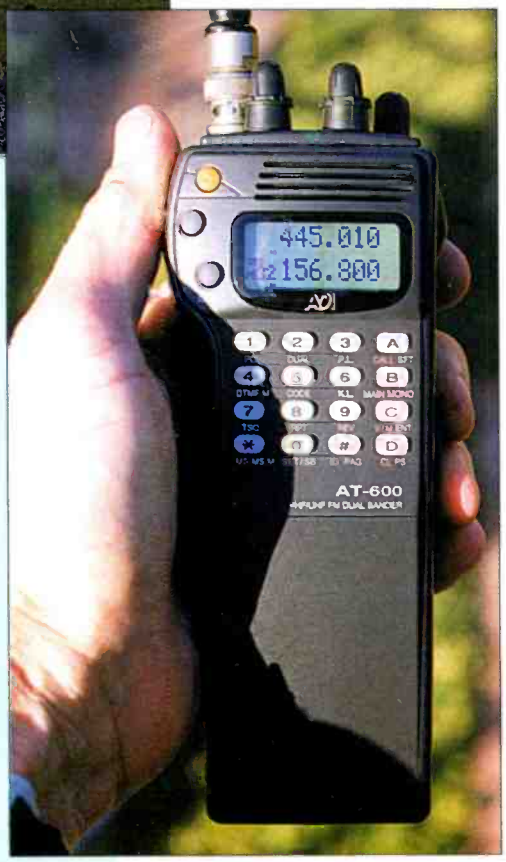
KK5YY shows how to work the satellite with the Arrow antenna.

The Arrow dual-band, handheld portable satellite antenna, along with your dual-band 2-meter/440 MHz HT, puts you into the FM satellite repeater mode for some exciting morning six-minute passes. You can catch the excitement right now! Take out your dual-band or UHF 70-cm handheld, or scanner and scan for the AO-27 satellite on **436.800 MHz** and the UO-14 satellite at **435.070 MHz**. A pull-up telescopic whip will guarantee some morning reception of both of these FM satellites.

The UO-14 and AO-27 satellites may be accessed at least twice in the morning for each satellite with just a little handheld transceiver and a directional dual-band antenna.

AO-27	UO-14
145.850 TX, 436.800 RX	145.975 TX, 435.070 RX

Both satellites are sun-synchronous, and both satellites could provide you with at least 2+2 short operating events in the morning, and sometimes one bonus appearance in the afternoon or evening. Consider them an FM dual-band repeater in the sky; you transmit on 2 meters, and you receive your own voice back on 70 cm. On the 70-cm side, you may need to tune in 5 kHz steps higher or lower than the 70-cm stated frequency to make up for Doppler shift. You won't need to do any re-tuning on the 2-meter side.



Working through the satellite with an FM "handy" requires dual band design. →

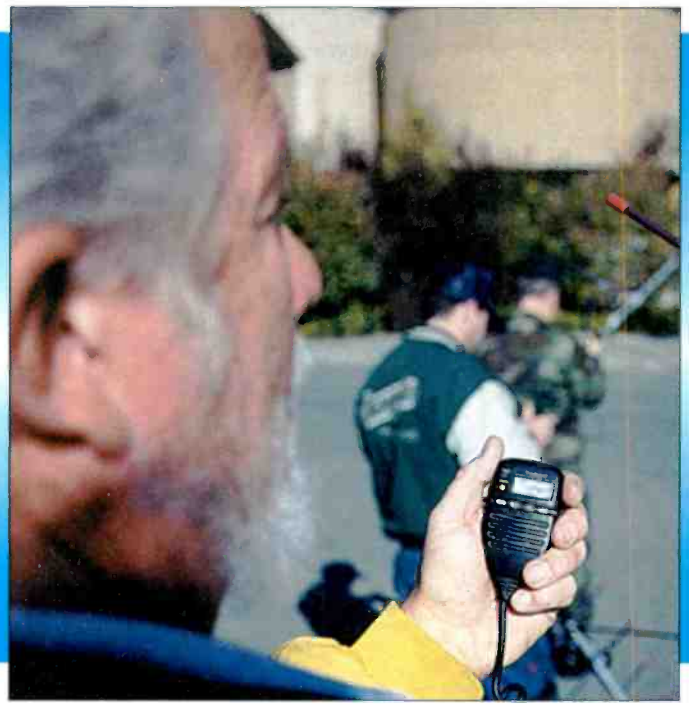
Ideal Handheld?

An ideal ham handheld for FM satellite operation is one that would allow you to simultaneously receive the FM downlink as you transmit on 2 meters. This would be considered a true dual-band handheld; two displays showing where UHF continues to receive simultaneously while transmitting on 2 meters VHF. Here is how I set up the memories:

AO-27	
145.850 TX	436.805 RX
	436.800 RX
	436.795 RX
	436.790 RX
	436.785 RX
	436.780 RX
UO-14	
145.975 TX	435.080 RX
	435.075 RX
	435.070 RX
	435.065 RX
	435.060 RX

As the satellite comes up, it will be approaching you with such velocity that the received 70-cm signal will seem about

BY GORDON WEST, WB6NOA



A remote mike and an earphone is an easy way to operate your FM HT.

A scanner can easily pick up the 70-cm FM satellite signal.

5 kHz or 10 kHz higher than the published frequency. As the satellite is headed away from you, the frequency will begin to shift 5 or 10 kHz lower. This is why you want to preprogram your handheld with the frequencies in memory so you can easily adjust your UHF downlink frequency. As the signal becomes raspy and noisy, adjust your downlink frequency 5 kHz higher or lower. You will be amazed as to how this clears up reception.

"Be prepared to write down several callsigns of stations welcoming you on the FM satellite."

Most of the sun-synchronous satellite passes occur from about 9 a.m. local time to noon. You can go to the AMSAT web page and find out where to buy satellite tracking software at http://www.amsat.org. If you're looking to try this out tomorrow, go to http://www.heavensabove.com.

While it is possible to work the satellite full duplex with just a little rubber duck antenna on your dual-band handie-talkie, your reception of the downlink will be extremely noisy and you could accidentally clobber an ongoing conversation that you might not hear clearly. A telescopic whip would certainly do better, but again, make absolutely sure you can hear voices on the downlink before you quickly say your callsign. Transmitting "in the blind" is unacceptable satellite operation, and since the satellites have extremely hot receivers, your signal could actually capture-out an ongoing transmission that you are not hearing.

The Arrow Antenna!

Gerald Schmitt, KK5YY, "Mr. Satellite Guy" recently demonstrated for me one of the best antennas for portable satellite operation on both of the birds. At recent hamfests in Alaska, KK5YY continued to introduce Alaska hams to this great mode of communications, regularly hooking up from Fairbanks, Alaska, to hams all over the lower 48. His little data handheld computer would regularly sound off as we were driving in the Alaska boondocks, and he would quickly spring into action and be up and running in less than a minute with his dual-band handheld and Arrow antenna.

What kind of an antenna is it? It's called the "Arrow antenna" because it's made up of arrow shafts acting as the directors, driven, and reflector elements. Al Lowe, N0IMW, the brains behind the Arrow antenna, said the antenna has been engineered to provide maximum gain and efficiency in the smallest practical size and weigh only 19 ounces.

We operated the Arrow II antenna that uses cross-polarized elements; a 3-element beam on 2 meters, and a 7-element beam on 70 cm. The two in-line gamma matches are pre-assembled and pre-tuned, and you order the antenna with the duplexer that hides away inside the boom. The duplexer takes both coax inputs and splits them out to a single BNC tipped coax output, offering enough isolation to your little HT that when you transmit on 2 meters, you don't hear any degradation of the received 70 cm satellite signal. The satellite antenna with the cabling and duplexer runs around $135, and may be ordered at your local ham radio dealer as product #146/437-10W. Don't forget the "W" — you really need the duplexer and cabling for a simple single coax out that plugs right into your HT.

For 10 bucks more, they can even give you the antenna where the boom splits. A well-documented set of instructions shows you how to screw in the tapped and threaded Arrow elements. You won't even need to do any tape measurements because the shortest element is the director; the middle length element with a gamma match is the driven element; and the reflector Arrow elements are slightly longer. On the 440-MHz side, all of the elements taper down in length until the last three elements furthest from the reflector are all 4-7/8" long.

They loved putting the satellite antenna together in one of Gordo's scout classes.

The white corn starch powder helps you slide the black rubber grip back onto the shaft.

Attach the coax cables that have been pre-cut so you absolutely can't get them backwards, and enjoy!

How Is It Done?

First, you need to know the predictions. In the morning, the satellites are coming out of the north, and heading to the south. The first pass will be a low horizon shot that may only last for a couple of minutes to the east. An hour and a half later, the pass is well elevated, and an hour and a half after that, it might be straight overhead or even slightly to the west.

First double-check that your handheld is tuned to either AO-27 on **436.800 MHz**, or UO-14 at **435.075 MHz**. You might want to tune the UHF to 5 kHz *higher* to clearly hear the satellite as it pops up over the northwest sky. You aim the Arrow antenna in the general direction of the satellite pass, and begin sweeping it back and forth as you simultaneously rotate the polarization. The satellite is never early, nor never late. It's always right on time, so after one minute of being into most passes, you are going to begin to hear voices coming out of your handheld FM transceiver. For best results, always run with the UHF squelch turned totally off for full background noise reception. I usually use a small Pryme earphone or Pryme headset that will keep my HT from feeding back on itself when I successfully get through to the satellite. Pryme/ADI headsets, earphones, and combo ear/mic assemblies are available at your local dealer to fit any type of amateur handheld transceiver. You must split out your receive speaker and the transmit mic to prevent feedback.

Now wait for the stations to ask for visitors. Or wait for a lull in the conversation. Remember, just like a repeater, you don't talk over an ongoing conversation. Seasoned satellite operators will always ask for anyone new to check into the bird.

OK, here we go. Go to the 2-meter transmit side of your HT, squeeze your external mic or push-to-talk button, and

"You can catch the excitement right now!"

give your callsign while listening for your own voice coming through the satellite. If you can hear yourself, everyone else within the footprint of the satellite can hear you, too. Quickly say your callsign phonetically, your grid square if you know it, and your general location. Be prepared to write down several callsigns of stations welcoming you on the FM satellite. Quickly acknowledge each station, and continue to do the antenna alignment with your free hand as you sweep back and forth for best receive, and constantly change polarization for an improvement of received signal strength and clarity.

You have now made a couple of contacts, and you are about three minutes into the satellite pass. Everybody seems to be coming in strong, but distorted. Have you figured out the problem yet? It's Doppler shift. It's time to switch your HT over to the receive UHF memory mode, and select 5 or 10 kHz lower pre-memorized channels for clear reception.

Switch back to 2 meters! When you next begin to talk, double-check that you didn't accidentally forget and leave yourself on the 70-cm side as you were retuning for Doppler shift. While it's no major harm to accidentally key up on the wrong band, anyone standing within a couple hundred feet of you during the pass with similar equipment will probably scream to get off of the output. But this is all in fun, so no big deal.

But having FM satellites in sun-synchronous orbit is not necessarily just fun and games. For KK5YY, Gerald has been in some remote canyons in Alaska where the only comms out were from the orbiting cross-band FM repeaters in the sky. KK5YY points out that what may be fun and exciting for those of us in the lower 48, might be the only means of communications for a ham in the wilderness with just a small HT and one of these portable Arrow antennas that fold up and easily fit in a fishing rod holder.

I found the satellite operators on these FM repeaters in the sky extremely friendly to those of us just getting started. Most of the operators would go out of their way to cut a regular QSO short and bring in someone new on the satellite, or someone demonstrating the capabilities of this system to kids or a ham club.

Operating satellite from a little FM dual-band handheld and this portable Arrow antenna will also increase your enthusiasm for satellite operation on other bands, too — especially Phase Three D. We hope you will join AMSAT by visiting their web page, and signing up for at least a year's membership.

Once you have your Arrow antenna put together, spend the first couple of passes just listening. It's easy to get a signal into the satellites, but it's an art of Arrow antenna aiming and waving and twisting to clearly hear a signal out, while adjusting your 70 cm downlink frequency for Doppler shift. You will find the Arrow antenna plus the headset or an external mic and external speaker quite necessary for keeping the feedback out, and the excitement up.

All it takes is the no-code Technician class license, a dual-band simultaneous transmit and receive handheld, and the Arrow directional antenna to pull in the FM satellites LOUD AND CLEAR! ■

BROADCAST DXING

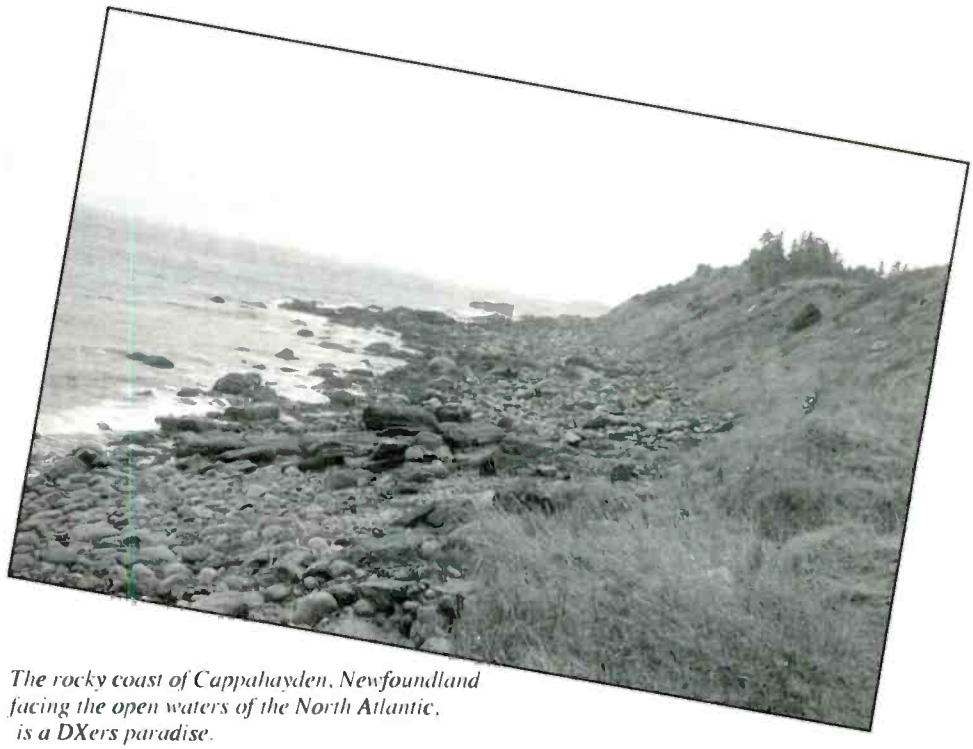
DX, News And Views Of AM And FM Broadcasting

DXers Follow The Path of Marconi

Throughout history explorers have looked to the ocean in search of new worlds and civilizations. Little did early European expeditioners with names like Leif Eriksson, Christopher Columbus, Vasco Nunez de Balboa, and Ferdinand Magellan know what they would find. Today mediumwave DXpeditioners continue to seek out strategic seacoast locations like Sheigra, Scotland; Lemmenjoki, Finland; Victoria, Australia; Grayland, Washington; Rockport, Massachusetts, and Cappahayden, Newfoundland, to explore the world through their headphones and discover exotic signals previously unheard.

It was in Newfoundland where Guglielmo Marconi went on an historic DXpedition of sorts, completing the first successful transatlantic radio communication between North America and Europe in 1901. It was 90 years later when DXers stole the idea out of Marconi's playbook and decided to meet for their first of many Newfoundland DXpeditions. Mark Connelly was one of the organizers of that first DXpedition in 1991. He and four other veteran DXers — Jean Burnell, John Fisher, Neil Kazaross, and Jim Renfrew — just completed the ninth such DXpedition at the Lawlor's Hospitality House in Cappahayden, on Route 10 (the Irish Loop), 70 kilometers south of St. John's.

The antenna installation at these DXpeditions is always impressive. This year was no exception. The two "workhorse" antennas according to Mark were a one-kilometer long Beverage aimed toward Brazil, and a 500-meter Beverage to Europe. A third Beverage, about 500 meters long at a bearing 10 to 20 degrees east of the Brazil antenna was used for African targets. A K9AY antenna configuration was used to provide a steerable cardioid reception pattern. The outstanding location also plays a significant role in the success of this DXpedition. Cappahayden is on the east coast of Newfoundland. Land to the west helps to reduce interference from North American radio stations. Yet the location has nothing but saltwater path to Europe, Africa, and South America.



The rocky coast of Cappahayden, Newfoundland facing the open waters of the North Atlantic, is a DXers paradise.

DX There Is Different!

Mark compares DXing at home to this prime location: "In Massachusetts the transatlantic channels seldom have more than two stations competing for dominance. The openings are usually strongly dominated by signals from Spain, Portugal, France, Morocco, Algeria, Libya, Mauritania, the Canaries, and the Azores. Sometimes a good run toward the Middle East develops. British and Irish stations and the other big northern Europeans (e.g. 1314, 1386, 1422) can be loud, but they're not consistent on a nightly basis. Eastern Europeans are usually poorly represented for the kind of power some of them are running. Something with 500 kW from Russia is at best on par with 5 kW from Spain on the same channel.

In Newfoundland, DX is a bit different. The first signals that come in well before sunset are apt to be **Norway — 1314, Northern Ireland —1341**, and **Kaliningrad —1386** rather than the typical Saudi Arabia —1521 'band opener' noted pre-sunset at shore sites near home. At Cappahayden, once the big guns have been in for a while, the other channels fill up with stations. Rather than the typical one or two stations per channel noted at home, each channel can become a maelstrom of wildly varying dominant stations. The pile-ups often consist of five or more stations and what's on top one minute can be hopelessly buried by something else the next." Undoubtedly plans are already underway for 2001 DXpeditions in Newfoundland and around the world to celebrate the 100th anniversary of Marconi's achievement.

New Resources For MW DXers

The National Radio Club (NRC) has just released the 21st edition of the *NRC AM Radio Log*. The log includes cross-

BY BRUCE CONTI <BAConti@aol.com>

The State of the Art Just Took a Giant Step Forward

Introduces the AR 8600

AOR has just raised your expectations of what a wide-range receiver should do. From the ultra-stable TCXO to the availability of Collins® Mechanical Filters and three optional card slots, the AR 8600 blends precision, performance and technical achievement in an attractive, functional package. The AR 8600 is so revolutionary, its design has been awarded US Patent No. 6,002,924!

- Temperature Compensated Crystal Oscillator (TCXO) stable frequency reference
- Covers 530 KHz ~ 2040 MHz*
- Receive Modes: WFM, NFM, SFM, WAM, NAM, USB, LSB, CW
- New front end and RF stages for superior sensitivity
- 2 VFOs (A/B)
- 1000 memory channels (20 banks X 50 memories/bank)
- 40 search banks
- Up to 37 channels/second search rate
- Add up to 3 optional slot cards. Available cards include: Tone Eliminator, CTCSS, Voice Inversion, Recording, External Memory
- Accommodation for Collins® Mechanical Filters
- RS-232C port
- 10.7 MHz IF output (WFM mode only) can be used with SDU 5500 Spectrum Display Unit
- 12 VDC operation
- BNC antenna connection

From monitoring aircraft to public safety, broadcast, shortwave and beyond, the AR 8600 sets new standards in performance. It's no wonder that many monitoring professionals, including government, newsrooms, laboratories, military users and more rely upon AOR.

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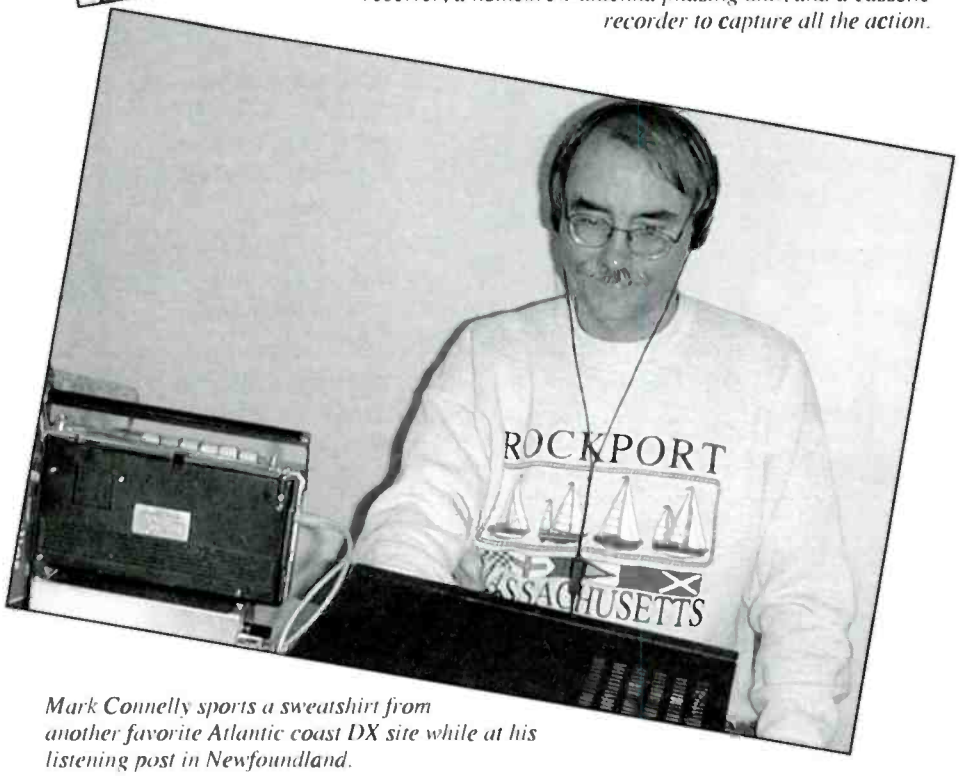
Mark Connelly's equipment includes a Drake R8A receiver, a homebrew antenna phasing unit, and a cassette recorder to capture all the action.



Mark Connelly sports a sweatshirt from another favorite Atlantic coast DX site while at his listening post in Newfoundland.

referenced listings from 530 to 1700 kHz, compiled from both listeners' reports and official sources, making it the most accurate listing of U.S. and Canadian AM stations available. Listings include format information, station slogans and nicknames, local mailing addresses, phone numbers, network affiliations, and hours of operation; information unavailable from any other single source. Combined with the *NRC AM Station Map Book* and the *NRC Nighttime Antenna Pattern Book*, it's the definitive reference for AM radio listeners. Visit the NRC Website at www.nrcdxas.org for more information.

The International Radio Club of America (IRCA) has issued the sixth edition of their Mexican Log. The *IRCA Mexican Log* lists all AM stations in Mexico by frequency, including call letters, state, city, day/night power, slogans, schedule in UTC, formats, networks, and notes. The call letter index gives call, frequency, city, and state. The city index (listed by state, then city) includes frequency, call and day/night power. The log has been completely updated from the 1998 edition and carefully cross-checked by several IRCA members. This is an indispensable reference for anyone who hears Mexican radio stations. For more information, write to the IRCA Bookstore, 9705 Mary Ave NW, Seattle WA 98117-2334 or visit the IRCA Website.

Those interested in radio broadcast history may wish to visit the KDKA Website at www.kdkaradio.com for historical information and station souvenirs. KDKA logo items and slices of "the world's first commercial radio tower" are also available. The station recently celebrated its 80th anniversary.

QSL Information — Patrick Martin's Success QSLing Down Under

1280 KUYL Stockton, California, letter in 47 days, signed Marty Lanser-APD. Address: 3600 Sisk Road, Modesto, CA 93556. (Martin, OR)

1593 88 Country, Christchurch, New Zealand, 2.5 kW, full-data letter in 17 days for taped report, signed Honest John Peterson —CE/GM. Address: P.O. Box 1603, Christchurch NZ. New Zealand QSL #104. (Martin, OR)

1611 2RF Griffith, Australia, 400 watts, full-data QSL card in 17 days, signed John Wright. Address: 4/33 Kerrie Crescent, Peakhurst, NSW 2210, Australia. Australian MW QSL #220. (Martin, OR)

1683 Australia Greek Radio, letter in 45 days for taped report, signed Con Nicolis. Address: Australian Greek Radio Rentals, 1246 Canterburry Rd, Roselands NSW 2196, Australia. He mentions that the call sign is "1683 AM." Interesting. (Martin, OR)

Broadcast Loggings

Listen for some changes coming soon to **1160 AM** in Chicago, the former home of WSCR sports radio. 1160 has been simulcasting WXRT-FM since WSCR moved to **670**. 1160 has been sold to the Christian religious broadcaster that owns WYLL 106.7 FM in Chicago. This month's selected loggings feature highlights from Mark Connelly's DX adventure in Newfoundland. Not to be outdone are Nile Kelly with logs from the southwest, Rich Klingman tuning in the trucker networks, and Patrick Martin reaching for

western Alaska. Two stations commence broadcasting on the expanded band in California as well. All times are UTC.

279 Asgabat, Turkmenistan, at 0005 **parallel 5015** shortwave at sign-on, first targeted by Neil Kazaross. (Connelly, NF)

670 KDLG Dillingham, Alaska, at 0650 old rock music, "My Sweet Lord" by George Harrison, and weather for western Alaska, fair mixing with KBOI. (Martin, OR)

700 WLW Cincinnati, Ohio, at 0400+ the Truckin' Bozo and country music. (Klingman, NY)

702 Banská Bystrica and Presov Slovensky Rozhlas, Slovakia, at 0222 **parallel 1098 kHz** with "Bohemian Rhapsody" by Queen, at 0345 pips. Slavic talk, woman mentioned "slovensko." (Connelly, NF)

720 Kalallit Nunaata Radioa, Simiutaq, Greenland, at 1955 Greenlandic talk by a woman, then speech by man, probably a city council or town meeting. Basement acoustics, paper shuffling and folding-chair noises evident. (Connelly, NF)

760 WJR Detroit, Michigan, at 0400+ the Midnight Cowboy truckers' country music program. (Klingman, NY)

760 Yemen Radio and Television Corp., Mukalla, Yemen, at 2038 female Arabic vocal; poor, only audible on Euro Beverage, Brazil won on the other Beverage antennas. (Connelly, NF)

764.97 ORT du Sénégal/RTS, Dakar, Senegal, at 2035 Arabic talk by man; over Switzerland on African Beverage. (Connelly, NF) This used to be a powerful "DX beacon" for Africa until power was reduced considerably, making it a rare catch today.

864 TransWorld Radio, Yerevan/Kamo, Armenia, at 0030 sign-on with TWR interval signal; over France and Egypt. (Connelly, NF)

870 WWL New Orleans, Louisiana, at 0400+ with the Road Gang on the road trucker show. (Klingman, NY)

891 TRT-1 Antalya, Turkey, at 1933 parallel 1017 and **954 kHz** with Middle East female vocal; over growl from other signals. (Connelly, NF)

909 VOA Selebi-Phikwe, Botswana, at 2058 parallel VOA Sao Tome on 1530 kHz with U.S. dance-rock music; over others. (Connelly, NF)

910 KECR El Cajon, California, at 0542 under KBIM and in local KFYI null, with religious commentaries and inspirational music. (Kelly, AZ)

930 KTKN Ketchikan, Alaska, at 0738 fair on top of CJCA with rock music and "930 KTKN" ID. (Martin, OR)

954 TRT Trabzon, Turkey, at 2305 parallel 1017 and 1062 kHz with Turkish anthem at sign-off; excellent, over Spain. (Connelly, NF)

1000 KKIM Albuquerque, New Mexico, at 0150 clear sunset skip with religious music and talk about families. (Kelly, AZ)

1026 Radiostantsiya Mayak, Arkhangelsk, Russia, at 2055 parallel 1143 kHz with jazz/cocktail oldies including "Just One of Those Things" by Louis Armstrong; over/under Spain. (Connelly, NF)

1030 WBZ Boston, Massachusetts, from 0000–0200 the David Brudnoy show, local talk. (Klingman, NY)

1130 ZYJ460 R. Nacional, Rio de Janeiro, Brazil, at 0204 slogan "Radio Nacional de Rio" way over WBBR and Venezuela. (Connelly, NF)

1152 R.Clyde/Clyde 2, Glasgow, Scotland, at 0202 Glasgow mention, then "Through the night, the night shift's

Pending

New Call	Location	Freq.	Old Call
WWJK	Moncks Corner, SC	950	WMCJ
KSMJ	Shafter, CA	97.7	KRME

Changes

New Call	Location	Freq.	Old Call
KHTE	England, AR	1530	KLEC
WSWK	Adel, GA	1690	WAXD
WLTS	Garyville, LA	1010	WCKW
KRJO	Monroe, LA	1680	KBJE
WPLC	Silver Spring, MD	1050	WKDL
WHNP	E.Longmeadow, MA	1600	WPNT
WSCG	Greenville, MI	1380	WPLB
WCHO	Henderson, NC	700	WMXV
WINX	Murfreesboro, NC	1080	WWDR
WPNT	Charleroi, PA	940	WOGI
WBGG	Pittsburgh, PA	970	WWSW
KHEY	El Paso, TX	1380	KTSM
KTSM	El Paso, TX	690	KHEY
WKDL	Alexandria, VA	730	WBZS
KUTI	Yakima, WA	1460	KMWX
WTDR	Talladega, AL	92.7	WEYY-FM
KCMT	Oro Valley, AZ	101.9	New
KOWS	Ashdown, AR	103.9	KHSP-FM
KHTE-FM	England, AR	96.5	KHTE
KFYX	Texarkana, AR	107.1	KQIX
KMXN-FM	Garden Grove, CA	94.3	KMXN
KCCL-FM	Shingle Springs, CA	101.9	KRRE
KRRE	Davis, CA	104.3	KHZZ
WHGN	Crystal River, FL	91.9	WXJC
WIFL	Inglis, FL	104.3	WHGN
WMXV	Canton, GA	105.7	WGST-FM
WLDA	Peachtree City, GA	96.7	WMKJ
WCNL	Chillicothe, IL	94.3	WKSO
WSSM	Granite City, IL	106.5	WKKX
WMLL	Jerseyville, IL	104.1	WXTM
WDQX	Morton, IL	102.3	WFXF
WZPW	Peoria, IL	92.3	WBGE
KMXW	Newton, KS	92.3	KOEZ
WZZP	Hopkinsville, KY	97.5	WTNK
KYLC	Lake Charles, LA	90.3	New
WSCG-FM	Lakeview, MI	106.3	WPLB-FM
WRLN	Red Lake, MN	94.1	New
KVBD	Cabool, MO	89.9	New
KFTK	Florissant, MO	97.1	KXOK-FM
WKZA	Lakewood, NY	106.9	New
WBBG	Niles, OH	106.1	WNCD
WNCD	Youngstown, OH	93.3	WBBG
KWCO-FM	Chickasha, OK	105.5	KTUZ
KTUZ-FM	Okarche, OK	106.7	KCLI-FM
WXXO	Cambridge Spgs., PA	104.5	WAQM
WJST	Ellwood City, PA	92.1	WKST-FM
WKST-FM	Pittsburgh, PA	96.1	WPHH
WLTS-FM	Mill Hall, PA	98.7	WZRZ
WIDI	Quebradillas, PR	99.5	WQQZ
KTAA	Big Sandy, TX	90.7	KBAU
KHPT	Conroe, TX	106.9	KZJZ
KLMO-FM	Dilley, TX	98.9	KMOA
WWOD	Hartford, VT	104.3	WGLV
WGLV	Woodstock, VT	91.5	WCMK
WCMK	Putney, VT	91.7	WCKP
WXYM	Tomah, WI	96.1	WUSK
CJET	Smith Falls, ON	92.3	New

choice . . ." into Duran Duran "Hungry Like the Wolf;" mixed with Romania. (Connelly, NF)

1161 R. Tay, Dundee, Scotland, at 2142 "Radio Tay AM" jingle, then a Diana Ross song. Mixed with Egypt and a second UK station. (Connelly, NF)

1233 RTBF R. Trafic Plus, Rocourt, Belgium, at 0120, a 200 watt(!) traffic info station relaying 1125 kHz at this time. (Connelly, NF)

1233 Eesky Rozhlas synchros, Czech Republic, at 2151 parallel **1287 kHz**, woman with Czech talk about Russia; excellent signal. (Connelly, NF)

1260 KVSF Santa Fe, New Mexico, at 0300 coming clear out of the pileup, Talk America program ending with list of affiliates, ID, and CNN Radio News. (Kelly, AZ)

1296 Radio XL, Birmingham/ Langley Mill, England, monitored at 0312 jingle "Your Favorite Asian Music and more, 1296 AM," then Indian music. (Connelly, NF)

1300 KTWK Colorado Springs, Colorado, at 0607 with adult standards including John Denver, ex-KVOR. (Kelly, AZ)

1422 Latvijas Radio, Rêzekne and Valmiera, Latvia at 1859 parallel **1350 kHz** with female Latvian vocal; under Germany. (Connelly, NF)

1430 IRIB Esfahan, Iran, at 1835 **parallel 15084** shortwave with news by woman; 1 kHz het against 1431 kHz Euros, WXKS blended in a bit later. (Connelly, NF)

1440 BSKSA Ras-as-Zawr/ Damman, Saudi Arabia, at 0321 parallel 1521 kHz with Koran; under Luxembourg, and at 2221 **parallel 9870** shortwave with pop Arabic music; over WJAE. (Connelly, NF)

1540 XEHOS Hermosillo, Sonora, Mexico, at 0228 playing Spanish pops in a jumble with two other XEs, but dominant with phonetic ID and "La Poderosa" slogan. (Kelly, AZ)

1566 County Sound Radio, Peasmarsh, England, at 1943 ID "County Sound Radio, 1566 Medium Wave." (Connelly, NF)

1600 WLUZ R. Luz, Bayamón, Puerto Rico, monitored at 2113 Radio Luz ID and "compleanos" (birthday) greetings to listener; atop WUNR and Brazil. (Connelly, NF)

1670 KAZT Redding, California, at 0859 testing with 10 kW (presumed) as S9+20 dB with ESPN Sports and ID, "Your sports leader in Redding is KNRO, AM 600" into more sports talk. Fantastic signal, stronger than any other x-bander tonight! (Martin, OR)

1680 KAVT Fresno, California, logged here very strong after 2300 with ID, "Radio Disney for our valley, 1680 KAVT Fresno." When I logged them it was still broad daylight outside, must have been on with 10 kW. (Martin, OR) At 0043, they were indeed in here with a hot signal. (Griffith, CO)

Thanks to Mark Connelly, Patrick Griffith, Nile Kelly, Rich Klingman, and Patrick Martin. 73 and good DX! ■

RADIO & THE INTERNET

Pop'Comm's Cyber Sleuth Checks Out Online Resources

Offshore Radio Site, And "Scanner Nuts"!

Remember, all online resources and contacts appearing monthly in Pop' Comm *are available at the Quick Links site, http://www.dobe.com/ql/.*

I'm smiling as I write this paragraph because I'm about to mimic one of those TV ads in "selling" you something that hasn't been made yet. At least that's my reasoning for those long delivery times — they use your money to pay for manufacturing the gizmos or whatever. Then, if enough of 'em aren't sold, they just refund your money and are out only the initial advertising costs instead of sitting on an expensive inventory PLUS the ad costs. Slick marketing! Anyway, I recently listened to and recorded another super radio program with Harold Ort, our main man and colorful editor, as the featured guest.

This time Harold was featured on the Omega Radio Network "World's [WWCR-Shortwave, World Wide Christian Radio] Communications and Technology Talk Magazine Program: Spectrum." Hosted by Mark Emanuele and Marty Ruszala, the approximately one-hour program aired at 11 p.m., November 4, 2000 on **5070 KHz**. So, grab a cup of coffee, kick off your shoes, and enjoy as Harold, Emanuele, Marty, and a host of callers chat about *Popular Communications* magazine. Getting back to the TV ad reference, what I have to do by the time you read this is obtain permission from the copyright holder to "publish" the recording and create a web page with the streaming media file for you to access. If can't pull it off (obtaining permission to publish would be the only hang-up) I'll have something good waiting for you at the URL below regardless. We'll make that my (just in case) refund. Check out http://www.dobe.com/ql/radiobc/.

Offshore Radio

Here's a diamond of a site for Offshore Radio enthusiasts. With nearly 150 Megabytes of files "The Offshore Radio Guide" is the source for exploring this fascinating sector of communications. There you will find the latest news, extensive photo galleries, streaming media "broadcasts" of offshore radio transmissions, pointers to other resources, and, MUCH, much more! You'll find something new and exciting almost every time you visit. Don't miss it at http://www.offshore-radio.de/.

Scanner Nuts!

Don't let the name fool you. Dan Browning's (KYL4P) "Scanner Nuts" is one serious site for scanner enthusiasts! Dan dedicates his site to "Hard Core Scanner Nuts like me" but regardless of your scanning experience, you'll find an abundance of QUALITY information and resources. "Scanner Nuts" is one of the most content rich scanner sites I've visited. If you want to get the most out of your scanning, this is one resource you'll visit often. While visiting, be sure to follow the "About K4LYP" link and meet "BUZ." "Scanner Nuts" is definitely a don't miss and must bookmark site at http://www.webdeals.net/kd4lyp.htm.

While we're on scanning, the **Quick Links** site now makes it possible to provide you with information that couldn't (realistically) be printed here due to the

News, Gallery, Links, Israel, Offshore 98, Veronica, RNI, Caroline —You'll find it ALL here!

Don't let the name fool you. This is ONE serious site for scanner enthusiasts! →

BY ERIC FORCE <eric@dobe.com>

length of the URLS — in this case, one of them is over 100 characters long! Just visit the Quick Links page for February where you'll find an Extended Coverage (EC) listing for several SUPERB scanner related documents written by Bob Parnass, AJ9S. For those familiar with Bob's writing, they're the same ones found in the FAQs for rec.radio.scanner, alt.radio.scanner and rec.radio.info newsgroups. The titles are: "Introduction to Scanning," "How to Find Scanner Frequencies," "Buying a Used Scanner Radio," and "Improve the Squelch in Your Monitor Receiver." All of them are outstanding works so be sure to check 'em out.

Old Time Radio

The "Old Time Radio" site, by Louis V. Genco, is truly an entertaining and educational resource. Reference materials, FAQs, audio clips (huge!), trading post and resource links are but a few of the many exciting areas to be explored. Since 1994, "Old-Time Radio" has continually advanced in terms of Internet and Web technology but, nonetheless, (somehow) maintained that warm feeling one experiences while reminiscing and listening to the sounds of radio's Golden Age. Visit, bookmark and enjoy this outstanding resource. Check out http://www.old-time.com/.

Canada's Spectrum Management And Telecommunications Website

New and improved, Canada's "Spectrum Management and Telecommunications" Website is a gold mine of information and resources. Under the "Broadcasting" heading you'll find detailed information and data covering: broadcasting database, certification and engineering bureau, committees and conferences, data on private radio and TV broadcasting industry in Canada, digital radio broadcasting, digital television, direct broadcast satellite, and multipoint distribution television broadcasting. Check out "Radiocommunication" and you'll find sections on auctions — apectrum, amateur radio service ,committees and conferences, emergency telecommunications, family radio devices, local multipoint communications systems, multipoint communications systems, new party cellular services, personal communications services, satellite services and spectrum licensing. And that's just the beginning. Additional main categories include: consumer information, gazette and public notices, official publications, references and utilities. All in all, this is a site that's easy to navigate and chock full of, formerly hard to find, data and information. Take a peek at http://strategis.ic.gc.ca/sc_mrksv/spectrum/engdoc/spect1.html.

A personal comment: Looking at the data structure of the Canadian databases made me think of the FCC's latest (May, 2000) move to their (new and improved?) relational CDBS (Consolidated Database System) for the Mass Media Bureau. Wow! What a quagmire for the hobbyist! From an outsider's perspective, it sure seems a waste of time and money to fix something that wasn't broke! And in the process, make it quite difficult (for the hobbyist) to use without proper software. Of course, the "inside" view may be entirely different and the change a result of required system upgrades. Regardless, it's one bowl of spaghetti from my vantage point. Also, 60 lashes with a wet noodle to the mental giant who assembled that 20-page PDF version of the "CDBS Engineering Data Description" in alphabetical order given the data is not ordered that way.

A "tip" of the old Sleuth's hat, however, to the person who created a README.TXT file that does present the data sequenced properly. I suppose it's typical though — require the reading and cross referencing of two documents to get the information that could have been easily incorporated in one. That's our government and reminds me of the old joke "How many people does it take to change a light bulb?" Answer: Two! One to hold the light bulb and one to turn the ladder.

If any of you are struggling with the CDBS databases, drop me an E-mail describing what information you are trying to extract and I'll try to help. I'm in the process of writing some DOS-based utilities to handle the new format so, by the time you read this, I may have already done what you are trying to do and would be happy to share the fruits of my efforts with you.

Search Tool For Newsgroups

A couple of nice things about the current crop of 21,000+ Usenet newsgroups are the diversity of themes and volume of subscriber comments. However, those same "plus" factors can turn negative when you're actually trying to find something specific — even when the newsgroup itself is supposed to be specific. That's where Deja.com's Usenet Discussion Service comes in. In addition to daily indexing and archiving of all Usenet messages (folks we're talking BIG numbers here), Deja.com provides an extremely user-friendly interface to those "groups" and messages. You can QUICKLY and EASILY search the entire Usenet message base with an extensive array of searching and sorting options. Here's a real example: Since I'm thinking about buying an ICOM PCR-1000 I wanted to know what others had to say about it. At the Deja.com search screen I Typed: PCR-1000, clicked "Search in All" (you have a choice of recent, past, or all), clicked OK and BAM! In less than five seconds 500 hits, with short descriptions, in four different newsgroups. Every "hit" was linked so I could just click on those links I wanted to view. You also have the option of narrowing your search to a specific newsgroup(s).

I could probably go on for at least another couple of paragraphs describing this marvelous resource but just checking it out yourself will do more than I could ever write. Bottom line? Forget your browser's "built-in" newsgroup capability and instead bookmark and use Deja.com. Once you do you'll never turn back. Be sure to checkout their FAQ (Frequently Asked Questions) resource while there. You'll find an interesting history dating back to 1979 plus some good info on how best to use their system. Here's a definite MUST visit and bookmark site at http://www.deja.com/usenet/.

Note: Internet "old-timers," and those who've read my previous columns, already know this about newsgroups (and the Internet in general) but I'll mention it again for those of you just beginning your journey into cyber space. On the Internet, anyone can be a brain surgeon so temper what you read with that knowledge. Spend some time exploring newsgroup postings. Of the frequent "contributors," it won't take long for you to figure out who's blowing smoke, who's not, and who the real "gurus" are. It will be time well spent! Outdated and/or inaccurate data and information are commonplace on the 'net. So, before betting the farm, be sure to verify it. This is particularly true when dealing with financial or health matters. If you're offered a "once in a lifetime" opportunity that sounds too good to be true, it almost certainly IS! When con-

Here's an absolutely entertaining and educational site: "Tune In Your Brain To Programs From Radio's Golden Age."

Visit the Canadian counterpart of the U.S. Federal Communications Commission — it's new and improved!

fronted with one of those offers, add a little power, back pressure, rudder and aileron and take up a heading 180 degrees from your current course!

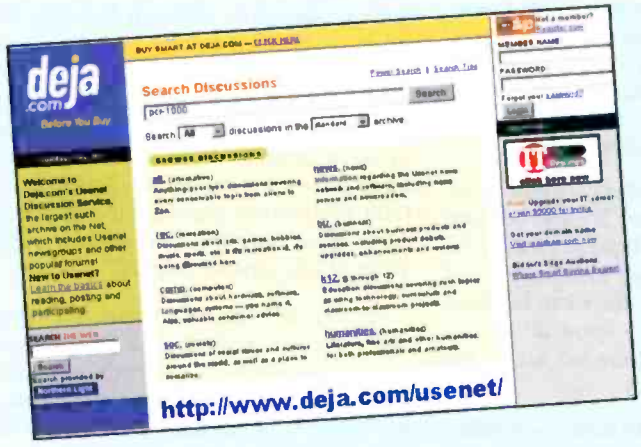
Graph Paper And More

If you're like me, you never have the right piece of graph paper handy when you need it. If you've ever tried to "roll your own," perhaps in a program like CorelDRAW!™ or Adobe Illustrator™ you'll instantly recognize the value and usefulness of Graph Paper Printer by Philippe Marquis. With it, you can easily create just about any type of graph, lined, or patterned paper you'll ever need. And, best of all, it's FREE. So what's the catch? Nothing more than some rotating advertising banners appearing at the top of the application window. These banners are similar to what you see at many Websites and do NOT interfere, in the slightest, with the program's functionality or usability. To make it easier for folks on this side of the Atlantic to obtain Graph Paper Printer, I've mirrored Philippe's site, located in France, at my Website in California. Get all of the details and download your FREE copy at http://www.dobe.com/ql/gpp/.

Web Browser Tip

Having trouble reading that small print? If so, and you're using the Netscape™ browser, then help is but a couple of keystrokes away. To enlarge the text, hold your Control key (Ctrl) down and press the Right Bracket (]) key. Repeat as necessary until you have a comfortable text size. To reduce the text size, just use Ctrl- [. (Ctrl + LEFT Bracket). I'm not aware of a comparable Internet Explorer™ function so if you know of one, let me know and I'll make note of it at the Quick Links site.

Well, that's about it for this month. Remember to keep those comments and suggestions coming and don't forget to visit the Quick Links site at http://www.dobe.com/ql/ for easy access to all the resources noted here and the *Pop' Comm* Website at http://www.popular-communications.com/ for the latest greatest. See you next month. ■



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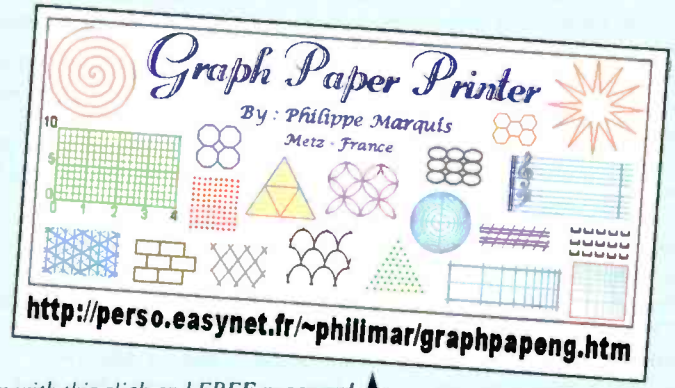

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THE HAM COLUMN

Getting Started As A Radio Amateur

Propagation: Getting Your Signal From Here To There

Now that you're a recently upgraded General Class ham, what do you *really* know about radio wave propagation on HF? You remember from endless days listening to shortwave signals from around the world that certain frequencies propagate - refract off the ionosphere - better than others, but of course it all depends on many factors. This month we'll discuss some popular HF amateur bands and how to work *with* them to get your signal around the world.

First, let's talk about the ionosphere, the electrically charged region in our upper atmosphere that's responsible for keeping hams - and shortwave listeners - happy. In fact, without the ionosphere, there'd be little to hear except stations a couple hundred miles distant - not quite DX! Signals that hug the curvature of the earth are called **ground waves**. Fact is, the lower frequencies travel further along the earth than higher frequencies. Extremely low frequencies (below 300 kHz) can be heard further even without the ionosphere. (Even standard broadcast band stations near, for example 600 kHz at the lower end of the MW band, can be heard via ground wave at greater distances using less power than stations at the opposite end of the MW dial).

Skywaves - signals traveling upward from the transmitting antenna and striking the ionosphere - enable us to talk hundreds or thousands of miles using flea power (there's a thought, instead of firing up that huge foot warmer!). It's not uncommon for skywaves to achieve multiple hops off the ionosphere. Keep the basics about shortwave listening in mind. During the daytime signals on *higher* frequencies - approx. 15 MHz and up are stronger, and after sunset, signals from about 10 MHz and below come booming in like they're next door, is the key to success. Now for sake of argument about the specifics, the current sunspot cycle has just peaked, which means some outstanding DX opportunities for hams! Right now sunspot numbers are relatively high, and the ionosphere is super-charged, meaning those higher HF frequencies are HOT! (These shorter wavelengths reflect (or refract) better right now!). When those sunspot numbers decline later in the cycle look at the lower frequencies for DX opportunities; the 80 meter band, for instance.

A Good HF Roadmap

1.8-2.0 MHz or 160 meters - Located just below the standard AM broadcast band, these frequencies exhibit similar characteristics; daytime contacts are basically limited to ground wave coverage, but it's another story at night. Worldwide DX is possible, but be aware that the band is highly susceptible to manmade noise and naturally occurring static; computer hash, electrical power line noise and lightning static prove to be formidable challenges. Right now in the dead of winter is the perfect time for 160 meters in North America!

3.5-4.0 MHz or 80 meters - Shortwave listeners recognize this is area of the spectrum as the tropical band; super nighttime DX is possible - again, better during the winter months. It's possible for some outstanding daytime DX as frequent high-angle penetration into the E and F layers of the ionosphere, along with ground waves combine to give us 300-mile distant comms. At night, you're looking at worldwide comms!

7.0-7.3 MHz or 40 meters - One of my favorite bands, and I'm sure it will be yours. During the day you'll typically reach out about 500 miles with some short distance skip from the good old ionosphere. There's a lot less noise on 40 meters, either manmade or natural, and even when it's present, ham signals tend to rise over the noise level. Forty meters is a good band for year-round work, regardless of the sunspot cycle, and nighttime DX is certainly worldwide.

10.1-10.15 or 30 meters - Right at the approximate point where it's a good band for both day and night! Typically during the day you'll reach out about 2,000 miles, and at nighttime, get ready for some fantastic DX. Thirty meters is a good all-around band, regardless of where we are in the sunspot cycle.

14.0-14.35 MHz or 20 meters - Another favorite band, 20 meters works during the day for worldwide comms, and right now it's open for worldwide DX at night. Remember shortwave DXing? You heard Tahiti and Europe at night just above 15 MHz!

18.068-18.168 or 17 meters - Look to this band right now for outstanding DX in the daytime and into early evening. As the sunspot cycle declines this band will generally lose DX shortly after sunset.

21.0-21.45 or 15 meters - This one is open well into the night and frequently gives outstanding daytime DX as well, especially during the current sunspot cycle. Generally, though, as the solar cycle declines this band is best during the daytime hours.

24.89-24.99 MHz or 12 meters - Catch it before sunset during years of minimal solar activity. During the day it's currently a good all-around band to low and middle latitude, and open well after sunset right now because of the current cycle. You'll also experience some good Sporadic-E in a couple of months, from late spring through the summer.

28.0-29.7 or 10 meters - If you've been around radio for a while you'll recognize this band being close to the CB, 11-meter band. Operators there, especially during years of high sunspots, work fantastic worldwide DX with just three watts - sometimes less! It's typically open from sunrise to a few hours after sunset, but during minimal sunspot activity there's little worldwide propagation, although Sporadic-E is fairly common, enabling comms beyond 2500 miles. Since this band exhibits similar characteristics to VHF - (remember the old VHF-low public safety comms coming in on the scanner from a thousand miles away?) why not try some meteor scatter (500-1400 miles) and other techniques for some great long-distance comms during years of low sunspot activity?

As you DX the ham bands, remember that it's not a perfect world; what works today may not work perfectly tomorrow. But isn't that what makes this such an exciting hobby? Let me know your DX results, please. Send your QSL cards, letters, questions and comments to me at Popular Communications, 25 Newbridge Road, Hicksville, NY 11801. ■

BY KIRK KLEINSCHMIDT, NTØZ

Affordable World Class DX

12 and 10 Meter Bands

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The new RCI-2950DX (25W PEP) and RCI-2970DX (150W PEP) offer a unique opportunity for operators to own a two band/multi-mode transceiver at a price anyone can afford. Tech Plus waiting to upgrade? This rig can get you started on HF!

Whether your interests are in contests, DX, 10-meter FM repeaters or digital modes, this radio will give you many hours of enjoyment while leaving extra money for that special antenna you've been wanting. The affordable 2950DX is less than $300, while the value-priced 2970DX is under $430.

The redesigned receiver front-end, extensive shielding and improved stability, combine to offer a 2-band rig that excels where many of the multi-band radios begin to lose performance.

As a stand-alone or companion to your existing rig, the RCI-2950DX or RCI-2970DX can easily go from your shack to your car in minutes. Field day or supplemental club station, these rigs will help you get the most of our recent band openings on 12 and 10 meters.

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401 West 35th Street National City, CA 91950

CB SCENE

27 MHz Communications Activities

Four Watts, Worldwide, Cross Mode: Nonsense, Or Is It?

As you may recall from the September 2000 "CB Scene," Michael Bartholemew, of Newbury, England, was proclaimed the first runner up in our quest to find the perfect CB antenna. Nobody won the contest because the antenna we were looking for had to be extremely stealthy and very powerful. Bartholemew missed first prize only because his antenna looks like very much like an ordinary omni-directional and therefore did not meet the stealth qualification. As for being powerful, Bartholemew's antenna not only met, but exceeded the test.

Bartholemew's claim to fame is that he has developed a grounding system that allows him to regularly communicate with stations hundreds or thousands of miles away using only four watts. Not only that, but the signal he generates allows him to talk with people operating in *AM* mode while he is operating in *FM*. That is right; he has a completely legal station that lets him talk skip cross mode! Impossible you say? I did too, but not any more. Since Bartholomew's story came out both he and I have received numerous questions and confirmations about the legitimacy of his claims.

One of the first and most exemplary responses I received was from Phil Karras, KE3FL. Ke3fl@arrl.net, who like many, seriously doubts Bartholemew's claims. "To some degree," he writes, "an FM/AM transmission can be heard on an AM/FM receiver. This is because no transmitter or receiver is perfect. However, to say it is possible to hear and understand Mr. Bartholemew, or for him to say his grounding system is what makes AM/FM cross receive possible is just plain bunk. Get one of the wide band scanner/receivers that covers all modes of radio. Transmit with your CB and listen to it in FM mode, what do you here? Not much you can understand I'll bet. (I've done it listening to an FM broadcast station using AM mode on my scanner. I can hear something and understand it to some degree, but it is drastically reduced in volume. I haven't yet tried the other way round.)

"That said, I will say that I have a CB I'm in the process of fixing which is doing some FMing. This is because as I transmit, the radio takes too much current. This causes the voltage to drop, which causes the oscillator to shift, thus creating a sort-of FM signal. If this guy is for real, I can monitor 27.325 MHz in FM mode with my scanner and see if I can hear him. Unfortunately I'm at work most days at the times specified. I'd think it would be better to actually listen for each other with the correct equipment, in the U.S. a scanner set to FM mode, in GB use a scanner set for AM mode. This reminds me of the Novices in the '50s and '60s. These folks had to use crystals to transmit, and then had to tune around the novice band to hear someone responding to the CQ."

"A good ground system is always a benefit for effective communications, CB or ham,..."

"His ideas about the take-off angle of the radiation are correct. A vertical dipole will have a low take-off angle and any good antenna design software will be able to show this. A good ground system is always a benefit for effective communications, CB or ham, and his sounds superb! As for getting from GB to NY with five watts of output power, QRP (low power) hams do it all the time in CW and SSB so I don't find that hard to believe even for FM or AM modes when conditions are good. I will listen when I can but if this guy is for real, why didn't he FAX you any QSL cards proving his statements? Or give you the names of some of his contacts here in the states? Do they have a QSL card from him?"

Thank you, Phil, for your insight. I must admit that, like you, I found Bartholemew's claims far fetched at best — at least initially. It should not work, at least not as well as he claims. However, since the article was published I have been hearing from people who say that they have indeed been hearing and heard by Bartholemew. And while anecdotal at best they do seem to confirm his claims. The one that I found most convincing comes from someone that I know — at least I have worked with this gentleman on an unrelated project. Douglas (last name withheld to prevent prosecution), Eagle Eye — SSB128h — 158 NorthWest, Georgia. Here is his note:

Could Be That Mountaintop 50-Foot Radio Tower!

"I am a regular reader of *Pop'Comm*. (If you notice, I am also one of the area reps for USCOBA, that is where I know Douglas from, a true and active member since the beginning). In the September issue of *Pop'Comm*, you wrote an article about the perfect antenna. Toward the end you wrote about an individual that is known as TC 26. You wanted to know if his claims were true and the only way to know for sure is confirmation. I monitor channel 32 quite often, usually with a large group of locals. My local range consists of Cleveland, Tennessee; Atlanta, Georgia; Murphy, North Carolina; and parts of Alabama. Oh how GOD blessed the North Georgia mountains. Granted I am on one of them with a 50-foot tower. Everyone accuses me of running power from my base, but this is not true. I don't need it.

"Sometimes when the channel starts to quiet down you can hear skip contacts. I enjoy hearing these. I have made contact with TW 26 two or three times within the last few months. I was amazed when he told where he was from. I also wondered if he was running legally. I have heard him many other times, but received no answer. Granted his signal is usually weak and at times garbled. That explains the FM part. If you catch it right he sounds fine. I've

BY ED BARNAT <Edbarnat@global2000.net>

noticed other FM operators who could talk and receive just fine with the AM crowd. This is an amazing story and I am pleased to be able to confirm this operators efforts."

I have received other confirmations as well, including one from Dale, an amateur operator in Florida whose full name and call sign I will withhold to prevent prosecution. Dale writes, "As you have asked, yes I have heard him, and not just in the early hours but at our normal time frame here around 2 p.m.

I am in Tampa, Florida and use a low band CB. It is a Cobra 7 plus and K-40. I have heard him about three times and all but once was it kind of static. We can receive and talk to the UK at most days its around 1–2 p.m. and then around dusk times so it is not to hard to believe him. I don't use power amps or filters. I am also a ham, and at times I have scratched my head thinking about how I was able talk to the UK with such a low power radio. Well, it can be done and as we look at how the ozone and weather changes that, the chance of it is great."

Bartholemew's Comments

I took the liberty of forwarding these and other notes that I received to Bartholemew. Here is what he had to say.

"Many thanks for forwarding the e-mail you received from Douglas, Phil, and the others. Confirmation and questions of this type are very much appreciated. Yes, I have spoken to Douglas on the radio. Douglas does not believe that I am in England. During the summer months my radio signals into the States are normally weak but readable, but during the winter months they are at times very strong, 30db plus at times. Confirmation over a period of many years has shown that I can be heard stateside almost daily all-year round. I find that somewhat puzzling because there are CB stations here in England that are known to be using 500 watts plus, that are not being heard in the States during the summer months. There is much that others and I simply do not understand about this thing, but there is one thing I am sure of — it works, and it works very well. If you wish to do a follow-up on it I will give you all the help I can.

"It appears that the majority of stateside CBers operate illegally. (it's very much the same here in the UK) I have E-mails that I have been asked not to for-

ward to anyone stateside, and with good reason. Two of them contain details of RF outputs of 1.5 kilowatts. It's easy to see why they would not want to see this kind of detail in print. I had expected hams to try and challenge my claims, but they have done just the opposite. I have had E-mails from stateside hams asking for advice. That is one for the book.

"Those CBers I have spoken to on the radio say they enjoyed the article. The majority of conformation has come from the radio, but I have received E-mails from Long Beach, California; El Paso, Texas; Springfield, Illinois; and a guy from Seattle, Washington. He would rather I did not forward his E-mail, but he tells me it would be fine if I were to tell you his name and call sign. He also tells me that he is well known on the radio stateside. His name is Frank, call sign, the 144. Frank is an interstate truck driver. He tells me that when mobile from east side to west side, he his able to hear me on the radio. Check this one out, Ed. On 5/8/2000 UK time 7:20 p.m., made a brief contact with a 229 division, Heard Island."

Well, Michael, to be heard on Heard Island is quite a feat! For those of us who are not familiar with Heard Island (and I wasn't) it is off of Southern Africa, in the Indian Ocean, about two-thirds of the way from Madagascar to Antarctica. Well, Michael, congratulations! I'll be listening for you stateside and watching the mail for further confirmations.

January And February CB Mixers

If you are looking for a little chatter on the CB be sure to make plans to attend the next, regularly-scheduled, on-air CB mixer. They are held, wherever your are, on the last Saturday of the month. The next two will be on the 24th of February and the 31st of March from 9 p.m. until 10 p.m. local time. SSB operators work channel 36 LSB. AM operators work channel 23.

Well, that is it for now. Thanks for writing me here at the magazine or via the Internet where my address ed@barnat.com . And as always, if you can (especially on February 24 and March 31) catch me on the radio! 73 ■

OUR readers SPEAK OUT...

Each month, we select representative reader letters for our "Pop'Comm P.O." column. We reserve the right to condense lengthy letters for space reasons and to edit to conform to style. All letters submitted must be signed and show a return mailing address or valid E-mail address. Upon request, we will withhold a sender's name if the letter is used in "Pop'Comm P.O." Address letters to: Harold Ort, N2RLL, SSB-596, Editor, *Popular Communications*, 25 Newbridge Road, Hicksville, NY 11801-2909, or send E-mail via the Internet to <popularcom@aol.com>.

Tauzin's Fault

Dear Editor:

The issue of whether cellular phones should be outlawed in moving vehicles would be hilarious if the threat were not so real. The fact that it is even being introduced into various levels of legislation is disturbing.

No, I do not work in or own a business that would be affected by the demise of the "modern day mobile convenience." But I do have a cell phone in my car. I also have a CB, 2-meter ham, and a VHF two-way police radio that I use in my work as a program manager for a state juvenile justice multi-county office. Oh, and yes, I also have an AM/FM radio! None of these electronics has ever caused me to have an accident. I have taught myself how to use them in such a second nature manner that they do not interfere with my concentration on the road. "WHOA!," you say! "What type of device is that? Is it simplex? Duplex? Type accepted by your favorite legislator?" Nope. It's much too simple to discuss and WAY too simple to comprehend. Again, it's called — concentration.

My only accident occurred in 1977 when I was 17. I had worked 14 hours in a fast food restaurant kitchen. It was the heat of summer in South Georgia (August). I picked up a popsicle known as an "Iceberger" from the freezer as I left. I got in my car and headed out. I started in on the treat when I noticed a grease smudge on the windshield. I maneuvered the 'scicle with one hand while I wiped the windshield with a napkin with the other. The process took my eyes off of the road all of three seconds. When my eyes refocused on the road, I was at 50 MPH fifty feet from a stopped car waiting to turn left. I instinctively hit the brakes and slid right into the back of her as a light mist was falling. It was my fault without the aided excuse of any type of electronic device to blame it on. Instead, I had to blame it on — gulp — ME and my lack of concentration. What a novel concept! (Apparently Congress caught wind of the incident as that particular restaurant no longer sells "icebergers!" What a shame!)

So, if the powers that be are going to ban electronic devices that MAY distract a driver, which include the possibility of two-ways and regular broadcast receivers, then I suggest they also ban other potentially dangerous activities while driving such as:

- eating anything
- drinking (soft drink, that is)
- talking to others in the vehicle
- reading signs along the road
- glancing at drivers going by
- daydreaming
- blinking your eyes

The list goes on as all of these activities can have just as much of a devastating consequence as the improper use of a cell phone. And don't give me the bull about hands free. Most folks will only have one hand on the steering wheel at any given time anyway!

The truth is this: America loves to blame others for our own faults. In this case, it is an inanimate object that has stolen the attention of the road from the

Pop'Comm February 2001 Survey

	Circle Reader Service #
46. Most of my scanning is done:	
At home using a base scanner	75
At home using a portable scanner	76
On the road with a portable/mobile scanner	77
Only on weekends or vacations	78
As part of my amateur hobby with a wideband transceiver	79
As part of my profession; I'm a police officer, firefighter, or EMT	80
47. I've been an active radio enthusiast since:	
Grade school	81
High school	82
College	83
I retired	84
A friend got me interested in the hobby	85
A close relative got me interested in the hobby	86
Joining the military	87
Hearing about the hobby in another non-radio publication	88
48. I use (or have the capability to use) emergency 12-Vdc power at my station	
Yes	89
No	90
49. I'm more interested in articles about using emergency 12-Vdc power	
Yes	91
No	92
50. I prefer articles in Pop'Comm that:	
Are about the length you currently have with good photos	93
Have more photos, but less text	94
Are mostly photos	95
Are submitted by readers; their monitoring posts, experiences, etc.	96

driver — oh, but only if the driver allows it to! "WHOA, AGAIN!," you say. "You can't say that! That's almost like you're taking responsibility for your own actions!" Wow, again, what a novel idea — taking responsibility for your own actions. Unfortunately, that's one idea that Congress historically has never accepted — especially when it comes to their own actions!

Brian A. Blount, KF4NMH
Waycross, GA

Dear Brian,

You've said a mouthful! (And I couldn't resist ribbing Tauzin again just for kicks. We really are like close brothers, you know). This issue goes far beyond using radios or cell phones in moving vehicles, as you've observed. I heard a TV commentator recently observe that we've become a nation of blamers; it's much easier — albeit the low road — to deny wrongdoing and shift fault to anyone but ourselves. Sadly, in the same regard, we've also become the Litigation Nation. Surely we must be the laughing stock of foreign countries on many levels.

Thanks, Gordo!

Dear Editor:

Yet another ham operator joins the world of amateur radio. Thanks to your materials I was able to join in the fun. Upgrading soon. Thanks again, Gordon.

Jack R. Cleavenger Jr.
USN (Ret.)
KD5ILA

Dear Jack,

Thank you for your letter and congratulations! A special thanks to Gordon West for his superb books and tapes, and for being one of America's all-time hobby radio advocates!

Still Keeping Track Of Indiana's Cops

Dear Editor:

I just read your editorial in the September issue. I live in New York State and for several years carried a scanner in the car to monitor 2-meter repeater sites on my way to hamfests, check weather radio stations, and to scan the CB frequencies on trips across the state. Only when checking the state government files on motor vehicle law after an accident did I discover that this was illegal. At the accident scene, I even considered giving the scanner to the police officer there for safekeeping!

If you want your readers to get active about this problem, you should publish the information about which states have such anti-scanner laws and even quote the laws themselves. Ignorance of the law is no excuse and it is the responsibility of the press to keep the public informed about these laws.

Mike Csontos

Dear Mike,

Thanks for your letter. Yes, you're correct, it's the press' responsibility, and we're planning a piece on that very subject, but it's a gigantic task — more research than one might imagine. Please know that it's also incumbent on travelers (beyond what any media prints or doesn't print) to be aware of these laws for themselves as much as humanly possible, much like you'd find out about city speed limits in areas where it isn't always posted, right-turn on red laws, and laws regarding mandatory use of windshield wipers in the rain. But stay tuned — we're looking at this volatile, ever-changing, confusing issue.

Mobile Hamming And Scanning

Dear Editor:

As a ham and a long time (16 years) subscriber to your fine magazine, I would like to respond to portions of your editorial in the September 2000 issue, hopefully in a factual manner. You state: "I personally don't agree with states and municipalities having asinine laws on the books exempting HAMS from laws prohibiting mobile scanner use. There is nothing holy about hams, including their service during disasters that should give them special status."

That is not the issue. The issue is federal preemption. Let me illustrate. Before I retired, I enjoyed hamming on the local 2 meter and 440 meter repeaters during my 54-mile round trip commute every workday. All my equipment was purchased in the '80s and now needs to be replaced. I can choose from Kenwood, ICOM, Yaesu, Alinco, etc., as homebrewing UHF is beyond my soldering abilities.

But there is a problem with any purchase as pertains to these state and local laws. Every one of those transceivers on the market today is capable of receiving police frequencies. Wide band receivers are the norm. Therefore, these stupid state laws as originally enacted (and still stupid) unknowingly gave local police chiefs the power to regulate amateur radio insofar as mobile operation is concerned. And that authority is federally preempted. There is much confusion as to what the various state laws say. A friend of mine living in eastern Massachusetts with family in Buffalo, New York, got himself a ham license solely so that he could legally carry his scanner in his car while driving in New York state. But as I read the New York statute (no, I am not an attorney), he is still in violation. The New York law does not allow him (or me) to carry a scanner per-se. It only exempts amateur radio transceivers that incidentally are capable of receiving police frequencies. I don't know what the Indiana or Kentucky statutes say in that regard, but that is the intent of the FCC preemption.

73,
Allan Dunn, K1UCY
Holbrook, MA

Dear Allan,

See what I mean about confusing?

Questionman's Views

Dear Editor:

This is in regard to Questionman's query on why there are operators in the ham community who look down on Freebanders. Why do some hams look down on freebanders? Because operation on the so-called "freeband" is against the law. It's not that hams are better operators or even better human beings, but most of them do have a certain respect for this country's laws including those governing radio operation. Anyone can put a radio on the air who has a mind to. It doesn't take a lot of skill or specialized knowledge, but it legally does require a license to operate on most frequencies using any real power levels. Hams are just people like everyone else who have accomplished the skills and requirements to become licensed. You may find some hams operating on the "freeband" illegally. It still doesn't make it right. These hams should be held accountable because they know better than anyone else does that they are breaking the law. You might be the most courteous, kind, and considerate radio operator on the band, but if you're not licensed to be there, it doesn't mean much.

D. Sparks, AK4P

WASHINGTON BEAT

FCC Actions Affecting Communications

Washington's 3G Spectrum Initiative, And Local Control Of 11-Meters Passes The House

The White House has announced a search for additional radio spectrum to accommodate so-called "3G" or Third Generation wireless technology. 3G, designed for high speed broadband communications such as Internet access, is the coming wave of mobile commerce tools which will put a handheld access device in everyone's pocket. Unfortunately, the United States has so far failed to designate any radio frequency spectrum for the operation of these devices, unlike countries such as Finland, Japan, Britain, and the Netherlands. The current bands being studied for possible use by 3G include those occupied by cellular telephones, law enforcement, broadcasting, and the Department of Defense, though the most likely spectrum will be in the UHF or microwave bands. Allocation of space for 3G devices may well push some users around under what the government likes to call "reallocation." At this point it's anyone's guess who will fall victim, though the government and National Telecommunications and Information Administration (NTIA) should identify 3G spectrum by July 2001, with auctions to start in September of 2002.

Local Control Of 11-Meter CB Radio Passes House

The U.S. House of Representatives recently passed a measure designed to give states and local governments jurisdiction over 11-meter Class D CB radio. H.R. 2346, introduced by Rep. Vernon Ehlers of Michigan. It will allow individual states as well as local municipalities authority to enforce FCC regulations related to CB radios. The bill will also allow them to add their own local regulations where needed. Ehlers introduced this bill in response to complaints he received from constituents about the use of high power amplifiers and stations interfering with telephone and televisions signals. Penalties for the illegal use of a CB are to be determined on the local level on a case-by-case basis. This measure may not make it through the Senate because of the coming recess, but will probably be introduced again next year, if needed.

California Ham Antenna Bill Vetoed

Remember SB 1714, the California bill that would have required "any ordinance regulating amateur radio antenna structures to reasonably accommodate amateur radio service communications?" Well, you'd better forget it. Just when we were about ready to applaud a good piece of legislation, Governor Gray Davis vetoed it, stating that although it would "encourage local officials to accommodate the needs of amateur radio operators when adopting ordinances," the cost of the bill was not included in the 2000 Budget Act. He also said it was a local rather than a state issue, which means we probably won't see this one presented at the state level again anytime soon.

Crackdown Businesses Invade Ham Bands

Unlicensed activity on the ham bands involving businesses is the latest target of FCC Special Counsel for Amateur Radio Enforcement Riley Hollingsworth. In September of 2000, the FCC sent a Warning Notice to Friendly Tree Services of Orange, New Jersey, accusing them of using 144.085 MHz to conduct business communications. Ham operators told the FCC that the company was operating a base station on the frequency and communicating with four of its company trucks. Amateurs drove to an address they heard mentioned over the air and discovered a company truck at the location.

Also in September, the FCC sent a missive to Inland Materials Inc. of Casselberry, Florida, reprimanding them for allegedly conducting unlicensed transmissions on 438.537 MHz. The FCC's Hollingsworth said that he advised both companies that unlicensed operation is in violation of federal law and could earn them a fine of up to $10,000 and possible loss of any FCC licenses they may hold.

Also receiving letters were AT&T Wireless PCS in Newport News, Virginia, and Citipage Plus in Las Vegas, Nevada. Both have been accused of causing harmful interference to amateur repeaters and were asked to find a suitable solution.

Bad Boys

Pay up or give up. That's the bottom line for Robert L. Meyers, N5WLY. The Texas amateur was facing $8000 in fines until he agreed to give up his amateur radio license for five years. Technician class licensee Meyers, and General licensee Paul E. Holcombe, K4TOF, were charged with violating §97.101(d) and §97.119 of the FCC's Amateur Service rules by causing malicious interference on a local repeater and failing to identify themselves. Meyers demonstrated to the FCC that he was financially unable to pay his fine, prompting the agreement, which cost him his license. The case against Holcombe, however, is proceeding.

More Spectrum For Wireless Services

The FCC has allocated 50 megahertz of additional spectrum to be used for fixed and mobile commercial wireless services. Located in the 3650–3700 MHz band, the frequencies have been transferred from

BY LAURA QUARANTIELLO <LauraQ@cti.com>

government use under provisions in the Omnibus Budget Reconciliation Act of 1993 and the Balanced Budget Act of 1992. The Commission also proposed pairing this part of the spectrum with 50 MHz of spectrum already available in the 4940–4990 MHz band.

Congressman Supports Amateurs Fighting CC&R's

Who would have thought it could happen? A Connecticut congressman has come to the aid of amateur radio operators, asking FCC Chairman William Kennard to urge a favorable resolution to the ARRL's PRB-1 extension efforts. The limited federal preemption known as PRB-1 does not currently include CC&R's, also called restrictive covenants or deed restrictions, which are considered to be private contracts. This is a problem for ham operators who often run into roadblocks from homeowner's associations when they attempt to install outdoor amateur antennas. The FCC recently denied the ARRL's request to extend PRB-1 to include CC&R's. This inclusion would help hams by allowing them to negotiate reasonable provisions with homeowner's associations. Second District Representative Sam Gejdenson weighed in with his support, saying "as the number of planned residential communities continues to grow, it is imperative that the FCC provide thoughtful guidance that affords amateur radio operators reasonable accommodation in dealing with CC&Rs while recognizing the legitimate concerns of homeowner associations." The FCC is collecting information from amateurs who have been denied permission to erect antennas because of CC&R's. If you have a story relating to this, you can write a one page narrative with name, call sign, and address at which you were denied the opportunity to put up an antenna, and the basis for denial. Also helpful is a copy of the contract language and copies of any denial letters from a homeowners' association. Send these to Antennas, c/o Steve Mansfield, N1MZA, American Radio Relay League, 225 Main St, Newington, CT 06111 or E-mail smansfield@arrl.org.

Captain Truth Gets His License Pulled

The man the FCC believes was responsible for "malicious interference and jamming" on 20 and 75 meters, has had his Amateur Extra class license cancelled. John M. Yount (formerly K4QIJ) of Newton, North Carolina, lost his ticket after failing to appear to retake his examinations. Yount, known as "Captain Truth," became the FCC's number one suspect in an interference case in 1999 after Commission radio direction finding led to his Amateur station. FCC Special Counsel for Amateur Radio Enforcement Riley Hollingsworth said that Yount was advised by letter of the evidence against him, and said Yount has not been heard on the air since. Hollingsworth wrote again in July of 2000, asking for more information from Yount regarding the investigation. Another letter followed requesting Yount retake his license examination before September 1st. "I never heard from him again," Hollingsworth said. ■

Also included in the MAP 330 are one user-defined grid system and nine coordinate systems. In addition, there are 72 map datums, and one user-defined map datum, for worldwide navigation capability.

Of the unit's 16 MB of memory, 8 megabytes of memory are available for downloading detailed street maps, waypoints and routes from Magellan's new MapSend Streets™ CD-ROM, sold separately. MapSend Streets provides detailed street maps of the entire United States. Its many features include tools for creating and managing waypoints and routes for installation into the MAP 330. The MapSend Streets software is compatible with Windows® 95 or 98.

Magellan's MAP 330 ships with a wrist strap, a user manual/quick reference guide, and a PC cable. Additional accessories are available to enhance the functionality of the MAP 330. Optional accessories include leather and canvas carrying cases, mounting brackets for vehicles and bikes, PC and vehicle power-adapter cables, a GPS Topo guide and the MapSend Streets CD-ROM.

As a special introductory offer, customers will receive a free MapSend Streets CD-ROM, valued at $50, with the purchase of each MAP 330. For a limited time only, each MAP 330 box will include a coupon for the free software redeemable from Magellan Corp.

Magellan Corporation, headquartered in Santa Clara, Calif., is a broad-based satellite access technology company specializing in positioning, navigation, communications, and guidance products. Magellan is a pre-public company with a majority of stock held by Orbital Sciences Corporation (NYSE; ORB), one of the world's largest, most diversified commercial space products and services companies. For more information about Magellan, visit www.magellangps.com.

Klingenfuss And WAVECOM Product Prices Falling

Joerg Klingenfuss' latest news release reminds customers in America, Britain, Denmark, Japan, Scandinavia, Southeast Asia, and elsewhere that, "after the latest collapse of that artificial currency "EUR" against your real money — there was another drastic fall in prices of Klingenfuss and WAVECOM products and services."

Joerg reports that he's working on four new products for 2001:

- *2001 Super Frequency List on CD-ROM*
- *2001 Guide to Utility Radio Stations*
- *2001 Shortwave Frequency Guide*
- *2001/2002 Guide to Worldwide Weather Services.*

He says, "Our products are compiled from REAL RADIO MONITORING. By consequence, your cooperation would be highly appreciated if you're able to supply some new frequencies and stations. We're beyond Joerg's requested timeframe for listener-supplied material, but if you'd like to contact him, write to Klingenfuss Radio Monitoring, Klingenfuss Publications, Hagenloher Str. 14, D-72070 Tuebingen, Germany or phone ++49 7071 62830, FAX ++49 7071 600849 or E-Mail klingenfuss@compuserve.com. Also, visit the Klingenfuss Website at http://ourworld.compuserve. com/homepages/Klingenfuss.

SCAN TECH

Trunking, Tips, Techniques, And Mods

Winter Scanning And The SWL Winterfest!

By the time you read this, the winter season will be in full force. That light you think you see at the end of the tunnel is in fact an end to the cold and snow for many parts of the country, but also the beginning of the severe storm season. Either one can make for interesting scanning.

Since the cold season is upon us, let's start there. Those of you in more temperate climates can skip to the next section. You'll have to suffer through these months listening to the same boring things you listen to all the time. I realize that's not a big deal for you, but it's some consolation for the rest of us while you run around in your shirt sleeves all year. Besides, those jacket pockets give us more places to carry scanner stuff.

If you're located someplace like Pearl Harbor, you won't have to worry much until the hurricane season hits in the spring. For the rest of us, however, being prepared for winter scanning is a good idea!

A lot of what's interesting in severe weather is boring the other 364 days of the year. Here's where a scanner with lots of banks comes in handy, or even multiple scanners. A computer-controlled, or computer-programmable radio would also be convenient so you can have those seldom used but highly-interesting frequencies ready at a moment's notice. At a minimum, you should have a written list of what's normally in your scanner and a frequency plan for severe weather emergencies. Note that it may take more than one if the area you're in is subject to different kinds of weather emergencies.

One of the first things to do is to think about what kinds of weather conditions are likely in your area and who would be likely to respond to that condition. If you're in a state where severe snowstorms are likely, you'll need one set of agencies. If you're only likely to get tornadoes and or hurricanes, then another set of agencies is likely to respond to these disasters.

Snow: Being Prepared

Severe snow is one of the few disasters that we get much advance notice of where the problems will be — everywhere it snows. But street and highway departments do make an effort to get salt or sand (or some other chemical who's main purpose is to erode the finish of my car) on the streets beforehand. With tornadoes and hurricanes, there is likely to be an intense effort to find the storms and track their severity, but little preparation is done by the public safety agencies involved until the damage is done. Besides, with those types of storms, you should probably be boarding up your own house, or moving your scanners to the safest part of the house.

A good example of the not terribly interesting is the highway department. (Not that I don't appreciate the job those fine folks are doing all year.) If it wasn't for them, I'm not sure who would do the work of harvesting those orange barrels that seem to pop up incessantly every summer. I'm quite happy that they clear those things out of the way in the fall, but I don't really want to listen to that operation either. However, when the clear-to-partly-cloudy forecast turns out to require shoveling, I'm very interested in what they might have to say.

One added benefit of listening to the highway department in the St. Louis area, and probably other areas too, is that they have their own weather forecast information, and announce it over the air a couple of times a day — more if severe weather is on the horizon. And of course, when they're clearing snow, the drivers are busy chatting about road conditions and what they have and have not gotten to. Sometimes it's amusing just to listen to the drivers complain about things not working on their trucks or snowplows.

Snowstorms are also one of the only severe weather events that it can be amusing to listen to while it's in progress. A tornado or hurricane doesn't stick around long enough and is far too destructive to let you do anything but get out of the way. But snowstorms don't do a lot of real damage, and in fact, listening from a safe warm radio shack is one of the best places to ride out a winter snowstorm. Of course, if you're on the road or in severe climates where survival can be an issue, you need to make sure

BY KEN REISS <armadillo1@aol.com>

you have taken adequate precautions. A well-programmed radio might not hurt, but warm clothes, emergency food, and heat would be much more useful if you have vehicle problems enroute.

Your local police/sheriff and fire services might also be of interest in a severe weather emergency, depending on the weather. In typical winter storms, police are usually about the last folks left on the road, and frequently discuss conditions. This can take place either on the dispatch channel to update the station and command officers, or on the car-to-car channel to comment on how crazy it is to be out there in the first place. Also, of course, there will be numerous accidents and possibly road closures before everyone gets smart enough to stay home and listen to their scanner.

Fire services will be responding to those accidents as well as downed wires and other dangerous conditions resulting from extreme snow or ice storms. Depending on the severity of the storm, the fire department's calls might be your best source of information for how widespread the damage is and where it's located.

Finally, you might be interested in utility company traffic. After the event has passed through, it's likely to be the utility companies that have the biggest job to do. Wires down and power outages affect a lot of people over a large area. Sometimes you can at least get an idea where they're working and how many people are affected so you'll know if your power is going to be restored anytime soon. You did charge those batteries for the scanner didn't you?

Severe Storms

Most severe storms, hurricanes, and tornadoes occur in the early spring through late fall, but they can occur at any time. So just about the time you put the snow blower away, you could be in for more activity. It's not nearly as much fun to listen to this stuff if it's coming your way, but being well prepared is your best defense.

One of the first things you should do, if you haven't already, is to join your local Skywarn program and get trained on the types of emergencies that are likely to strike your area. One of the things that you'll learn in that training can keep you safe. Some of the preparedness rules have changed since the days of ducking under your desk or following the teacher out into the hallway.

If you're in an area that is prone to tornadoes in particular, there is a great need for volunteer spotters. Radar has come a long way in identifying likely areas for tornadoes to occur, but only a trained spotter can tell for sure if there's actually one there, and if it's in the air putting on a fascinating, but mostly harmless, display, or if it is in contact with the ground destroying almost everything in its path.

One major advantage of handheld receivers with AA batteries is how easy they are to replace if you can't get to a charger, or the charger doesn't have power for several days. Make sure you have backup power available for lights, radios, and anything else you might need in a severe storm.

Ham radio is the primary communications method for a lot of Skywarn activities, although not in all areas. You should try to find out what's in use in your area, and what frequencies it operates on. Put those in your scanner and lock them out until you need them. Unless you're interested in ham radio, you'll find the constant day-to-day activity of the repeaters ties up your scanner so you miss the good stuff.

In the St. Louis area, and a couple of other locations that I have lived in the past and am familiar with, once a severe storm watch or warning is issued, the Skywarn program kicks into action. Policies on how and when the network is activated and what activities go with what level of watch or warning vary, but you can bet that someone will be monitoring the situation. As conditions worsen, these volunteer networks spring into action. They are often the best source of accurate and up-to-date weather and storm information.

You'll also want to listen to police and fire channels in these events as well. The police are likely to be primary weather observers and are positioned all over town. Anything out of the ordinary will be reported quickly.

Once the storm has struck, police and fire services will be pressed into action quickly. Medical emergencies will be their first priority followed closely by fire control and rescue operations. There may also be a need to set up trauma centers or patrol areas to keep visitors or looters from a severely damaged area. In severe storms, outside assistance may be brought in, however if the damage is widespread, other communities may not be able to assist. It can take some time to mobilize federal disaster teams and National Guard units and get them to the afflicted areas. Activity of local agencies attempting to cope with the situation and assess the need for outside assistance can be nothing short

The SWL Winterfest 2000 banquet was well attended.

This is noted columnist and pirate radio guru George Zeller being presented with a box of wire as a special award at the 13th annual Winterfest. The story is that George went to retrieve his antenna at the end of a DXpedition but rolled up someone else's wire instead — so they decided to just give it to him as a prize.

of pandemonium. By joining your local Skywarn or emergency services volunteers, you'll also be more likely to know where you can volunteer to help in a meaningful way if you're lucky enough to be unaffected by the disaster.

The utility companies will also be busy in these areas. Once again, wires down and power problems will be their priority depending on how well they can travel to the affected areas. You may need those batteries you didn't use for the snowstorm if one of these big disasters hits near you.

Frankly, I'll take dull and boring traffic stops any day compared to the destruction that one of these type storms can ravage in such a short time. I hope that none of us has anything to report at the end of the 2001 storm season, but being prepared is your best plan in case something strikes near you.

Plan Now To Attend The 2001 Winter SWL Fest!

March 9 and 10 marks the official dates of the SWL Winterfest held each year about this time in Kulpsville, PA. The hotel has changed from a Holiday Inn to a Best Western, but it's at the same location on Sumneytown pike just off the northeast extension of the Pennsylvania turnpike. Official activities don't begin until Friday, but there's always a few folks there by Thursday evening.

It was first held in 1988 in the Pancho Villa room at the Fiesta Motor Inn in Willow Grove, PA. The following year the fest moved to its much-improved location where it has met since. Every year at midnight local time, 0400 UT the Voice of Pancho Villa has made an appearance on many frequencies. This

860.7125 — A Popular Frequency

Results from our 860.7125 frequency survey have come in and it seems to be in wide use in many areas of the country. Many of you pointed out that it is part of a trunked system in your area, and that is exactly correct. It can also be used as a conventional frequency if desired, but if you're hearing activity on this one, you should have a look around and see if there might not be a trunked system data channel nearby. Here are a few samples of what you found:

Indiana state police, trunked
Elwood City, IN, conventional
Dubuque County, IA, Callsign WPKY375
Unified School District Police, Sacramento County, CA (conventional)
Ozaukee County, WI, EDACS trunked
King County, WA, trunked
Portland, OR, trunked
Virginia Beach, VA, trunked
Commonwealth of MA, trunked
Chicago Airport (O'Hare), Chicago, IL, trunked

A couple of interesting letters also came in from people who couldn't identify what they were hearing. Paul wrote "Nothing but data bursts heard," and Michael wrote "What a variety of stuff on this frequency . . . I have heard fire department traffic, law enforcement, traffic, data transmission sounds, regular voice although not both sides of the conversation, and what sounded like a telephone interconnect."

While I don't have firsthand knowledge of either of the cities where these two readers are listening, I'd be willing to bet that both of them have stumbled into a trunked system of some type. It might be worth a look at a reference guide like *Police Call* to see if you can identify more of what's going on if you're interested in listening to that system.

Jean from Brazil sent in this unusual report. "I had monitored 860.7125 MHz on my recent trip . . . I was at Baia de Guanabara (Guanabara's Bay), praia do lamengo(Flamengo's Beach), and Rio de Janeiro, RJ, from Sept 17 to Sept 23. Then I went to Vitoria (island) and Vila Velha (beach), Espirito Santo (ES), from Sept 24 to Sept 27(500Km nor-northeast of Rio de Janeiro). Now I'm in Bento Goncalves, Rio Grande do Sul (RS), near 100Km nor-northwest of Porto Alegre. I have not listened to any signal on this frequency in Porto Alegre. Hope you enjoy this info."

That sounds like quite a vacation Jean! Interesting report, although hopefully next time you decide to wander the country we'll have a more active frequency for you to monitor!

And finally, Jim sent this detailed report on the O'Hare airport at Chicago. He says,"As you probably know, they use a Motorola Type I system, fleet map E1P4. The full list of their freqs is as follows:"

857.7625
858.7625
859.7625
860.7625
856.7625
859.7125
860.7125

low-power pirate radio station provides great entertainment and intrigue to fest goers. Will he appear again this year? Only Pancho himself knows the answer to this mystery.

While billed as the Winter SWL fest, there are other radio interests represented, including the official "scanner-scum," a reference to a friendly rivalry on either side of the 30-MHz barrier. You simply can't attend this event and not have a good time, or come away without learning something new.

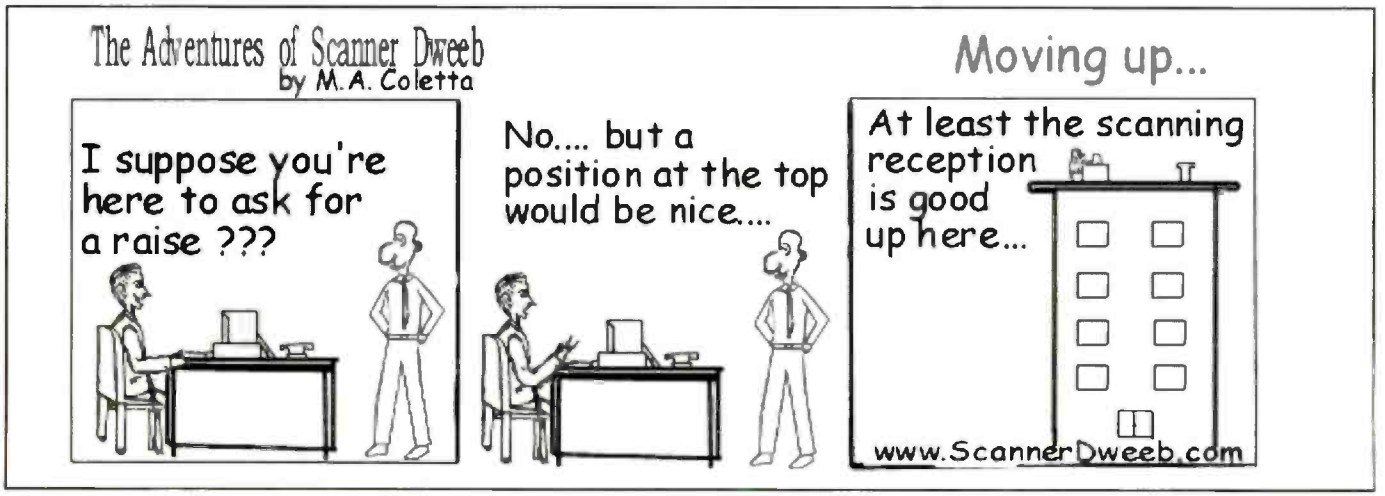
This is the 14th annual event. Its prime purpose is none other than getting a bunch of radio folks together for a weekend to simply "talk radio." Approximately 200–250 people make this annual event a huge success.

Frequency Of The Month

This month, our frequency is **152.485**. This frequency has been in the radio news lately, so let's see what you can hear. When we publish the findings, I'll tell you why it's been in the news, if you aren't already aware. Let me know what you hear, either via E-mail at armadillo1@aol.com, or traditional methods at Ken Reiss, 9051 Watson Rd. #309, St. Louis, MO 63126. Be sure to mark the frequency on the envelope or E-mail subject so it gets entered for our one-year subscription quarterly drawing!

Your Input Needed

While you're sending in your notes for this month's frequency, let me know what you're interested in seeing in future issues of "ScanTech," or *Popular Communications* for that matter! Or send along your questions! You can use either of the addresses listed above! Until next month, good listening! ■



THE RADIO CONNECTION

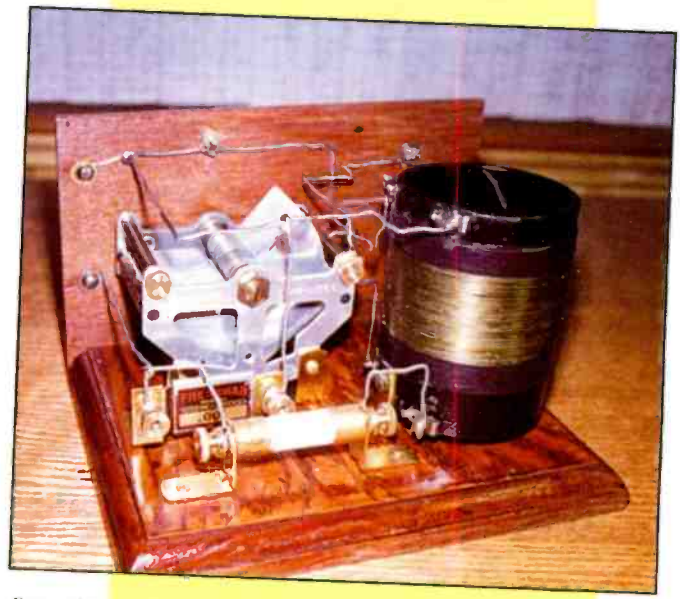
A Look Behind The Dials

More On Zenith Tube Trans-Oceanic Radios

Last month reader Tony Kriwokulski asked about protecting the filaments in a Zenith Trans-Oceanic radio from over-voltage transients — a condition that could damage the expensive tubes used in these sets. I'd suggested using a 10-volt, 50-watt Zener diode across the filament supply to clamp any dangerous voltage spikes. Zener diodes normally fail in a shorted condition, not open, thus sacrificing themselves instead of the tube filaments in case of a severe mishap. It's all too easy to inadvertently short the filaments to the high-voltage supply when probing around in the set's wiring with the slip of a meter probe. An inexpensive diode is cheap insurance against such mishaps. A few readers commented that the 50-watt rating I suggested was excessive, and I agree. A two- or five-watt device should be more than adequate. Some restorers use a 9-volt Zener; which may be fine for radios that are only operated from the AC line. But, the sets were designed to operate with filament supply voltages as high as 9.6 volts — as would be supplied from a fresh A battery pack. A 9-volt Zener will try to regulate the low-impedance battery power source — definitely not good. Now that inexpensive DC-to-DC inverters are being sold to allow these early tube Zenith Trans-Oceanics to run entirely from a bank of "D" cells since attempting to limit the A battery voltage to 9-volts can be risky. (Note: I can't find my TO schematic, but it might be possible to place the Zener on the AC side of the battery changeover switch. The tube filaments would only have the Zener protection when operating on AC line voltages in this example.) **Figure 1** shows a sketch of how a Zener would be used to protect the filaments in your set. Consider the drawing to be a generic, rather than radio specific, example of how this is done.

Beside the risk of the 50A1 ballast tube shorting, a recent thread in the Rec.Antique.Radio+Phono newsgroup brought to light another potential filament hazard for these sets: leakage currents in the multisection filter capacitor zapping the delicate filaments before you realize what is happening! It was reported that one section of this capacitor is used to provide some additional ripple filtering on the filament voltage side of the power supply. The failure mechanism involves current leakage paths developing between the filter capacitors in the multisection electrolytic capacitor. As the leakage grows, the voltage levels on the filaments increases until the tubes glow like Christmas tree bulbs. Ouch! Usually one of the tube filaments in the series string will fail almost immediately after this happens. This reinforces what I've been suggesting all along: always replace those old wax paper and electrolytic capacitors to avoid problems down the road!

Front view of the Mystery Crystal Set. Not many knobs are needed to make this set work! The large knob is for tuning.



Rear view of the set. Brass corner brackets mount the homemade fixed detector, phone condenser, and the antenna coil to the oak baseboard. Two additional brass corner brackets provide additional support at the rear of the 500-mmf tuning condenser.

Building The Mystery Crystal Set

Figure 2 is the redrawn schematic for Proton's Mystery Crystal Set. Hopefully this will be a bit clearer and easier to understand than the reprint of the original newspaper article we

BY PETER J. BERTINI <RadioConnection@juno.com>

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Uniden® SCANNERS

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Bearcat 248CLT 50 ch. base AM/FM/weather alert scanner	$89.95
Bearcat Sportcat 200 alpha handheld sports scanner	$169.95
Bearcat Sportcat 180B handheld sports scanner	$149.95
Bearcat 80XLT 50 channel handheld scanner	$99.95
Bearcat 60XLT 30 channel handheld scanner	$74.95
Bearcat BCT7 information mobile scanner	$139.95
AOR AR8200 Mark II Wide Band handheld scanner	$539.95
AOR AR16BQ Wide Band scanner with quick charger	$209.95
ICOM ICR8500 wideband communications receiver	$1,469.95
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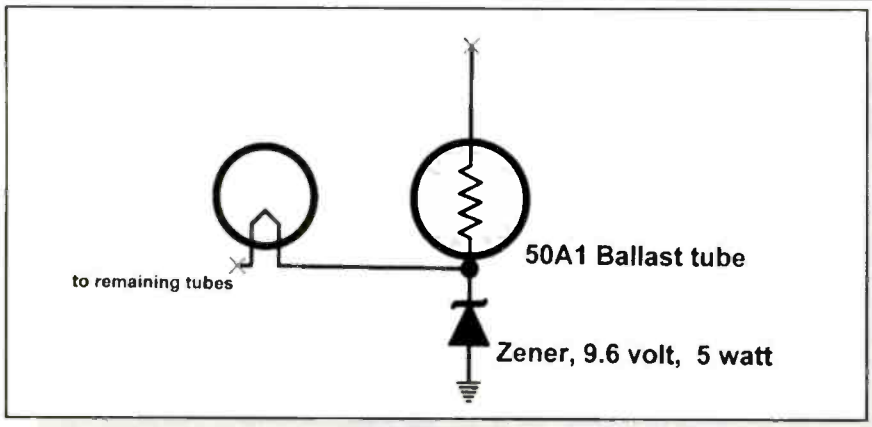


Figure 1. Adding a 10-volt two- or five-watt Zener can fend off disaster in your Zenith tube Trans-Oceanic radio.

ran earlier. **Table 1** lists the materials, and I've also included a list of suppliers.

The tuning coil is the heart of this radio, and its construction and implementation are very unusual. The coil is wound solenoid fashion on a three-inch diameter form measuring about four inches in length. Proton had used 50 turns of 24-gauge double-cotton-covered wire for the tuned primary winding and 25 turns of 29-gauge double-cotton-covered wire for the secondary winding in the detector circuit. Unless you've worn knickers and high-button shoes, chances are you've never seen a new spool of double cotton-covered wire! It's probably much easier to use 22-gauge enamel magnet wire for both windings, unless you insist on keeping the set original and have a source for the original materials. If you're so inclined, white celanese-covered wire is available from Antique Electronic Supply, in both 24- and 26-gauge sizes, and the celanese insulation can be dyed. For example, the 50-turn primary could be done with 24-gauge red-dyed wire, and the 25-turn secondary wound with 26-gauge green dyed wire to produce a colorful, vintage looking coil. I reused some green single cotton-covered wire from a vintage TRF set coil; and used it for the 50-turn primary winding. A spool of 22-gauge magnet wire from RadioShack (left over from the Boy's First Receiver project) was used to wind the secondary. The Mystery Crystal Set's performance was probably determined by the capacitance between the two windings. To some extent, the capacity would be determined by the dielectric (the cotton insulating cover on the wires) and the distance between the wires (again, determined by the insulation thickness). So, deviating from the original wire characteristics may somehow influence how a modern version of this classic will perform.

The celanese-covered wire is sold by the foot, so you will need to calculate how much is needed before ordering. For our three-inch diameter coil form, each full winding would use about 9.5-inches of wire. Thus, the 50-turn winding will use about 42 feet of wire (allowing some extra), and around 21 feet of wire will be needed for the 25 turn secondary winding. My coil form is a length of cardboard tubing. The tube was spray painted black, and once the paint was dry I added a few coats of clear plastic spray. This gives the coil a vintage lacquered look, and also seals the cardboard against moisture. Old TRF radio set coils are plentiful, and many are of the proper dimensions for this set. If you have one, simply remove the old windings, and rewind the coil as described below.

Winding the coil is a challenge, but I know my readers don't want easy projects! Begin by winding about 12.5 turns of the primary winding at one end of the coil form. Keep the adjacent windings close, with no gaps, so the windings are neat and even appearing. Once 12.5 turns are in place, use a few drops of a cyanocrylate-based instant adhesive (SuperGlue™, etc.) smeared over the windings to lock them in place. Be careful not to glue your fingers to the coil in the process.

Once the glue has fully cured, the winding process can continue. Now, this is the tricky part! We need to continue winding another 25 turns for the primary winding, while also winding the 25-turn secondary. This is done by winding both wires onto the form at the same time, while being careful to keep both wires from twisting over each other (overlapping turns). We want both wires wound tightly, lying side-by-side, and with no spacing between them. Once the 25-turn dual winding is finished, use more instant adhesive to secure the windings in place. Once the adhesive has set, continue and finish winding the final 12.5 turns for the 50-turn primary coil. Glue and secure when finished.

For clarity, I've omitted a few steps while describing the coil winding technique. The coil leads are brought into the coil form through tiny holes punched through the form with a large sewing needle or fine stainless steel pick. I used small Fahnestock clips for securing the wire ends, and to connect to the coil terminals.

The Vintage Detector

We showed how to build a replica of a vintage fixed galena detector using a renewable link fuse in the December issue. Antique Electronic Supply carries a few adjustable crystal detector stands, as well as cats whiskers and mounted galena crystals. Or, you can mount a 1N34A germanium diode between two Fahnestock clips for an even simpler detector arrangement. As shown in the photos, my fixed detector has the Little Devil paper label in place.

The Tuning Capacitor

In October I briefly mentioned the fine quality 475-pF single-section variable capacitors being offered by Fair Radio. I

Parts Suppliers

Antique Electronics Supply
6221 South Maple Avenue
Tempe, AZ 85283
Phone: 602-820-5411
FAX: 602-820-4643 and 800 706-6789
http://www.tubesandmore.com

Play Things of Past
3552 West 105th St.
Cleveland, OH 44111
Phone: 216-251-3714
http://www.oldradioparts.com

Fair Radio Sales
1016 East Eureka
P.O. Box 1105
Lima, OH 45802
Phone: 419-227-6573
FAX: 419-227-1313
http://www.fairradio.com

Table 1 Mystery Crystal Set Parts List

5 each	Binding posts or Fahnestock clips
4 each	Fahnestock clips, for coil terminals (see text)
1 each	Tuning knob, 3 inch
1 each	.001 mfd vintage mica phone condenser
1 each	365 to 500 mmf (pF) vintage tuning condenser
1 each	fixed galena crystal detector, see text
1 each	three-inch diameter coil form, 4" long
1 each	wood base
1 each	front panel, Bakelite or plywood
72 feet	22-gauge magnet wire (see text)
Several feet	12- or 14-gauge tinned bus wire, round or square stock
Misc.	Brass corner brackets, brass screws, and hardware

hope my readers grabbed a few for their junk boxes, since this is the capacitor of choice for the Mystery Crystal Set. I'm probably going to use one for our upcoming Night Hawk four or three-tube receiver project later this year. This capacitor is a WWII era part. If you want to use something more representative of the 1930s, I suggest you contact Play Things of Past and purchase their latest catalog, or check their offerings on the web. I have a good selection of vintage battery and crystal set parts, so finding a nice vintage tuning capacitor for my set wasn't much of a challenge. The good news is that the early 1920s vintage parts are cheap, cheap, cheap. You can buy a good 1920s tuning capacitor for less than what many vendors charge for the newer styled 365-pF variables. The tuning capacitor should have a maximum tuning capacity between 365 and 500 mmfd (pF).

Large Tuning Knob Needed!

Since a single-tuned crystal set tunes broadly, a vernier dial drive isn't needed to reduce the tuning speed. A large three-inch diameter tuning knob works just fine. These knobs are very plentiful and cheap, since millions were made for the early three-dialer TRF battery sets that were popular during the 1920s.

My crystal set is constructed on an oak board base with a fancy router-cut edge. The front-panel is made from thin plywood often used for drawer bottoms. The open oak grain was filled and sanded before the coats of lacquer were applied, and rubbed down to produce a very smooth finish.

The original Mystery Set used a switch to select the "Broad" and "Sharp" tuning positions, but it's just as easy to use two binding posts for this purpose; allowing the operator to simply move the antenna wire to the terminal of choice. You will need five binding posts; two are for the antenna connections, one for the ground connection, and the last two for the headphone connections. You can buy replica or used nickel-plated early style binding posts from Play Things of Past or Antique Electronic Supply; or use Fahnestock clips to cut costs. Either of these suppliers can supply 90 percent of the parts used in the Mystery Crystal Set.

The Phone Capacitor

I've read that in theory a crystal set will not operate without a phone capacitor in the circuit. While I've never noticed any benefit from having the capacitor in any of my crystal sets, I do remember reading in the Yahoo!™ Crystal Set Club archives that in effect the inter-winding capacitance of the headphone coils serves the purpose. I confess that I am not fully versed in the theory behind these revelations; so if one our more knowledgeable readers can provide the answers I would be pleased to share them in a future column. Anyway, author Proton insisted that the phone capacitor made a noticeable improvement in the Mystery Crystal Set, so one is included in keeping with the original plans. A .001 mfd (1000 pF) capacitor is called for. Proton would have used a .001 mfd mica capacitor. My set sports a late 1920s NOS (New, Old Stock) Freshman "noiseless" .001-mfd mica capacitor, only because it was the prettiest capacitor that surfaced while stirring the junk box.

Wiring It Up

The set can be wired using regular insulated hookup wire. But, I suggest using 12- or 14-gauge tinned bus wire, with squared off wiring angles between the connections. This wiring is both visually appealing and representative of the construction practices of the era. The wiring technique can be copied from the photos in this issue, or

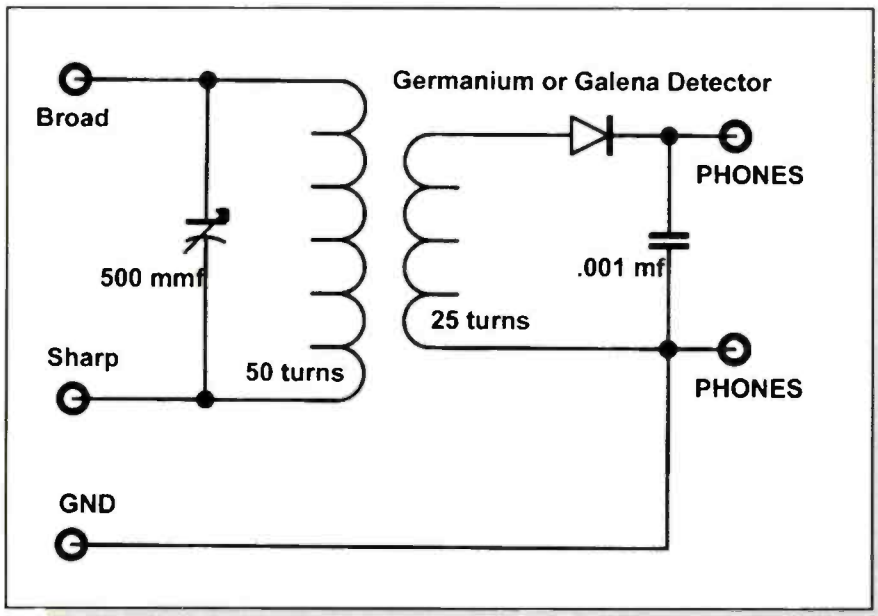
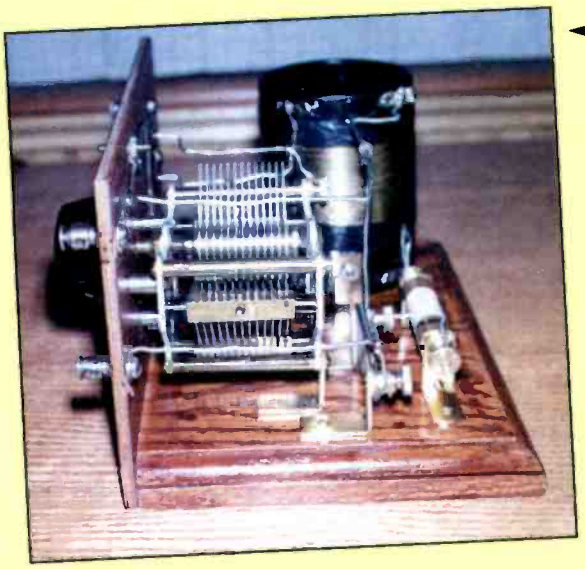
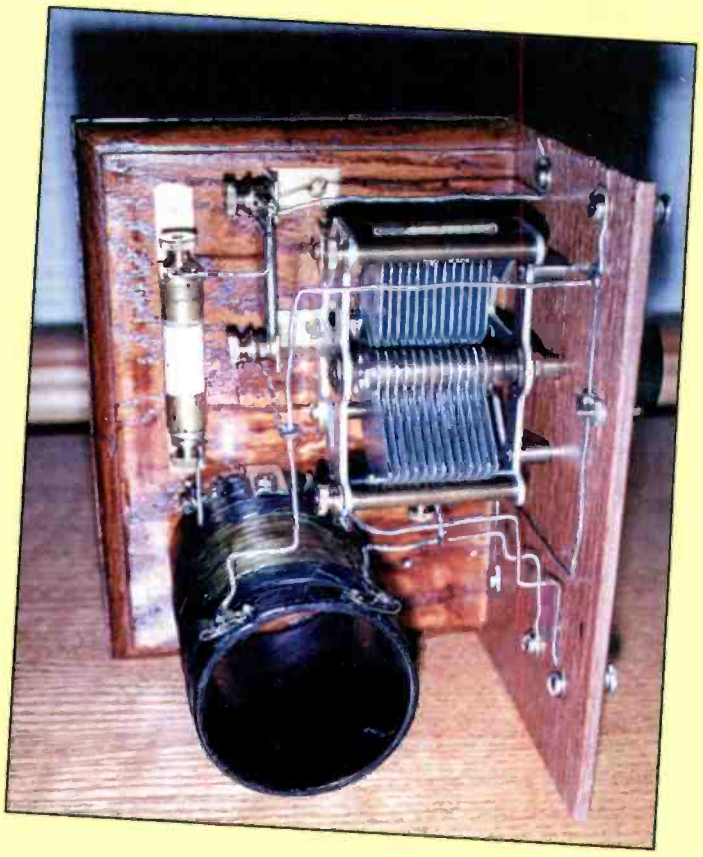


Figure 2. The schematic for the Mystery Crystal Set.



This side view shows the four miniature Fahnestock clips used to make connections to the antenna coil's dual windings.



A tinned bus bar is used for the squared-off wiring. This was a very popular construction practice during the '20s and early '30s. Done neatly, it adds to the set's aesthetics and vintage appeal.

by studying the wiring in Ray Creighton's set featured in the November issue. I'm basically cheap, so I stripped the PVC insulation off of some 14-gauge house wiring, and tinned it myself using a large, hot soldering iron and some 60/40 electronic grade solder. Vintage square bus wire costs only about 22 cents a foot from Antique Electronic Supply, and spending a few bucks will get you a better-looking product for less effort.

Using The Mystery Crystal Radio Set

Several posters on the Yahoo!™ Crystal Set Club forum have built and commented on the Mystery Crystal Set's performance. Most builders noted the set had surprisingly good selectivity, and that it worked best when used with a relatively short antenna. By short, we are talking about an outside wire that's about 25-feet long. There was also confusion that the original Broad and Sharp tuning positions may have been reversed in Proton's original newspaper drawing. This is easily verified by simply trying the antenna on both connections, and noting the differences as you tune across strong stations. Use a good ground. An outside ground rod will work. If you have city water and metal (not plastic!) piping, attach the ground lead to the nearest water pipe. Use a good pair of sensitive 2000-ohm headphones for best results.

Why the set works is another matter. As I opined earlier, I suspect a circuit was wired in error by a tired Proton late one eve, it worked, and Proton then capitalized on the mistake by running the unusual design in the *Our Wireless Circle* newspaper column. The untuned secondary winding provides selectivity through the turns reduction between the tuned primary and the secondary detector winding, in effect a step-down transformer for both voltage and impedance. It's a variation of the same technique used in sets that tap down the detector pick off point on the antenna coil to reduce the detector loading on the antenna coil, thereby improving the circuit Q.

What's really weird is how one connection — the antenna — is made to only one side of the primary winding, while the ground connects to the secondary winding. The two windings interact due to stray capacitive coupling, and that's how the free primary lead is coupled into the circuit. The Mystery Crystal Set owes its selectivity to the light coupling between the detector and tuned primary circuits, and to the ground coupling which is limited by the stray capacitance between the two windings. Why the set works as well as it does is indeed a mystery, and it must have been just as baffling to Proton and his readers 70 years ago as it appears to us today!

I had several photos from readers that I wanted to run, but they will have to wait for a future issue. If you build a Mystery Crystal Set, send in your comments and photos. This wraps up the crystal set projects for the near future. We will begin a new tube receiver project this year. ■

How I Got Started

Congratulations To Matthew Phillips Of South Carolina!

Popular Communications invites you to submit, in about 150 words, how you got started in the communications hobby. Entries should be typewritten, or otherwise easily readable. If possible, your photo (no Polaroids, please) should be included.

Each month, we'll select one entry and publish it here. Submit your entry only once; we'll keep it on file. All submissions become the property of *Popular Communications*, and none will be acknowledged or returned. Entries will be selected taking into consideration the story they relate, and if it is especially interesting, unusual, or even humorous. We reserve the right to edit all submitted material for length, grammar, and style.

The person whose entry is selected will receive a one-year gift subscription (or one-year subscription extension) to *Popular Communications*. Address all entries to: "How I Got Started," *Popular Communications*, 25 Newbridge Road, Hicksville, NY 11801 or E-mail your entry to popularcom@aol.com, letting us know if you're sending photos. If you're E-mailing photos, please send them in a separate E-mail with your name in the "subject" line.

Our February Winner

Reader Matt Phillips sends along his story, "My interest in radios began when I was about four years old. The first radio I had any contact with was an old clock radio. I don't remember what kind it was, but I remember listening to it constantly. It was in my parent's room and my mom kept it on all the time. Later, I got my own radio. It was a small AM/FM radio which I carried around with me.

Then at 10 years old, I got my first CB. I had it for about two years. It was not until a few years ago that I got my first scanner. I'm 32 now. It's a RadioShack scanner with 200 channels. One of these days, I'd love to do the ham radio thing. I have to say that the first radio I had — that old clock radio — did get me in trouble. My little brother and I decided one day to put things like coins, toothpicks, and anything we could find that would fit into the hole in the back of the radio. I thought I was putting stuff on the air. I guess I thought I was giving things to the broadcasters. Believe it or not, the radio still worked. I was punished for doing that, however. I'm a faithful *Pop'Comm* reader. I read the Braille edition every month. Keep up the good work." ■

PLANE SENSE

Your Link To Aviation Communications

Using The Canadian "Green Book"

It's been a unique last couple of weeks. I have just renewed my membership in the Civil Air Patrol, transferring from my squadron to Florida Group 8 Headquarters as the Public Affairs Officer. I'm also writing this not knowing if Harold mentioned it in the January issue (this is being written in early November, just 47 shopping days 'til Christmas and 17 shopping days 'til my birthday) that I just upgraded my ham license. I found out four weeks ago that there was testing just four days later. I crammed all weekend for General and tested for both General and Extra. I was confident about the General test, but had no clue about Extra. I did pass the General test and now have the callsign of KG4KGC. I did try the test for Extra. I knew it was a crapshoot at best. It was also two days before the Florida Lotto! I told everyone there that if I was lucky enough to pass the Extra exam without studying, then I was lucky enough to blow $100 on the weekly lottery and win the 8 or so million. Obviously I didn't get either. (And no, I didn't donate that $100 to the Florida lottery on that Wednesday.)

It's also two weeks after the election. We still don't know who won, or what the still unknown President-elects beliefs are about our communications hobby. Only time will tell.

One of the first articles I did last year was on the "green books," the U.S. flight supplements. I have not forgotten about the Canadians and this article deals with the Canadian "green book". You notice I said *book*, not books. Unlike the U.S., there is only one book that covers all of Canada, and it is not cheap. The cost for one copy is $27 Canadian, and a one-year subscription (seven issues) is $93 Canadian. That is $17.60 and $60.63 U.S. respectively, as of November 8, 2000. You can order a subscription from Canada Map Office, Natural Resources Canada, 615 Booth Street, Ottawa ON K1A 0E9. All orders must be prepaid. Be advised that there is also a $25 to $30 Canadian handling charge ($16.30 to $19.56 U.S.) for each subscription plus 7% GST as well as Provincial sales tax. But most airport-fixed base operators in Canada as well as U.S. aviation bookstores may handle them. See also aero.NRCan.gc.ca online for more ordering info. And as I said last year when I described the U.S. Flight Supplement, there is no need to run out every eight weeks to buy a new one. Unless you are a professional pilot only one copy every year or two will suffice. And fortunately only one book is needed for the whole county. If you're driving from Prince Edward Island up to the Northwest Territories the one copy of the Flight Supplement will cover each airport you pass.

Unlike the U.S. green book, which is primarily for civilian use, the Canada Flight Supplement is a joint civilian/military publication. Both military as well as civilian airdromes are published. Much of the information found is similar to that found in the U.S. Flight Supplement. What separates the two is the format, which in my opinion is somewhat easier to use and understand, even though I've been using the U.S. supplement for over 28 years.

It's Complete With Airport Layouts

The U.S. supplement has been adding basic airport layouts over the last few issues. Each issue adds a few more airport layouts. The Canadian supplement is complete with airport layouts. The more complex the airport, the larger the map. Some airport charts take up over half the page they are printed on. Whole pages are devoted to larger areas of airspace.

"Virtually any frequency used in aviation can be found on the pages."

Virtually any frequency used in aviation can be found on the pages. With each airport is a block labeled COMM. At the various airports, frequencies may be shown for remote radio operations with Flight Service. Emergency frequencies monitored are listed as (V) for **121.5** MHz, (U) for **243.0 MHz** and (E) for both. Also if bilingual services are available (for those of us in the U.S. they use English and French in Canada) it is noted as (bil). Other frequencies listed are rather obvious to those who monitor aviation: ATIS, GND (ground control), TWR (local control), ARR (arrival), DEP

BY BILL HOEFER <flacap388@prodigy.net>

New/changed frequencies

Changed:
Dawson/Madison, MN (DXX)
NDB — was 227 kHz — now 341 kHz

New:
Cibeque, AZ (Z95)
CTAF — 122.9 MHz
Marana Northwest Regional, AZ (AVQ)
AWOS-3 — 245.0 MHz
Plattsburgh International Airport (PBG)
Unicom/CTAF — 122.975 MHz

(departure), etc. Some may not be obvious. MF means Mandatory Frequency. MF is "... for use at selected uncontrolled aerodromes or aerodromes that are uncontrolled between certain hours. Aircraft operating within the area in which MF is applicable. . .on the ground or in the air, shall be equipped with a functioning radio capable of maintaining two-way communication, and specified reporting procedures shall be followed."

It continues, "An MF area will be established at an aerodrome if the traffic volume and mix of aircraft traffic at that aerodrome is such that there would be a safety benefit derived from implementing MF procedures. There may or may not be a ground station in operation at the aerodrome for which the MF area has been established."

In addition to the VHF/UHF frequencies indicated, HF may also be available and is shown in four digits in kHz. Like the U.S., the Air Route Traffic Control Centers (centers) have low and high sectors. Those aircraft operating at low altitudes are shown in light type while bold type indicates high altitude frequencies.

This is only a cursory article of what is available in the Canadian Flight Supplement. No one monitoring aviation in Canada should be without one.

VHF/UHF Emergency Locator Transmitter Satellites To Be Phased Out

In addition to the "black boxes" found in many aircraft, there is one emergency item that is required in all general aviation aircraft regardless of size, capacity, or price. It is the emergency locator transmitter (ELT). This box is designed to activate upon impact when an aircraft crashes. It transmits on 121.5 MHz or 243.0 MHz. (You do notice the harmonics.) When an aircraft ELT activates, a warbling is heard on one and hopefully both frequencies. There is a specific time period each hour when ELTs may be tested, normally during the first five minutes of each hour. Both frequencies are monitored at each flight service station and air route traffic control center. Many towers and approach controls monitor at least one of the frequencies.

The Civil Air Patrol reported in the October 2000 issue of the Civil Air Patrol News that "(t)he usefulness of ELTs in actual missing-aircraft searches in the United States has declined from 22.9 percent in 1986 to less than 1 percent in 1999.

More than 99 percent of the emergency signals CAP members chase every day are false alerts."

It is not uncommon that an aircraft lands so hard that the pilot activates the ELT without knowing it. For example, in Orlando in 1994, I monitored the CAP attempting to track down an ELT that was believed to be in the back of a home-built aircraft. The alleged pilot had apparently landed hard and set off the ELT. His home-built aircraft had folding wings, and was small enough to be towed home behind his truck. I monitored the CAP flying up and down Interstate 4 looking for a moving ELT. To this day I don't know if the ELT was found or even confirmed to be in a home-built aircraft. Also here on the West Coast of Florida another aircraft landed hard enough to set off the ELT without the pilot's knowledge. The aircraft was towed into a hangar and it was extremely difficult to find that particular aircraft as the ELT signal was bouncing all throughout the hangar and of course out of the windows and doors. Eventually the ELT was found and de-activated. It is also not uncommon to have ELTs triggered by non-beacon devices like pizza ovens, copiers, etc.

"In 1982 the former USSR launched the first satellite capable of receiving and repeating the signals from ELTs."

In 1982 the former USSR launched the first satellite capable of receiving and repeating the signals from ELTs. The U.S. launched their first satellite in 1983. Five years later, four countries, the U.S., the USSR, Canada, and France signed the International Cospas-Sarsat Programme Agreement which had each of the countries satellites notify the others in the event an ELT signal was received. Unfortunately, this did nothing to stop the false alerts from ELTs. The U.S. alone now receives over 100,000 satellite alerts every year and is unable to respond to all of them.

The official policy of the Air Force, which activates the Civil Air Patrol, and the Coast Guard, is to wait to react to an ELT received by satellite until there have been at least two or three polar satellite passes to confirm the ELT. This procedure

"The official policy of the Air Force, which activates the Civil Air Patrol, and the Coast Guard, is to wait to react to an ELT received by satellite until there have been at least two or three polar satellite passes to confirm the ELT."

can take two or more hours. The one exception is if there has been a report of a missing aircraft, etc. Rescue forces are deployed earlier at this point resulting in, hopefully, quicker searches.

Because of many false signals from ELTs, all of the Cospas-Sarsat nations recommended in June of 2000 the phase-out of 121.5 and 243.0 MHz satellite alerting by February 1, 2009. The ground/airborne use of ELT direction finding will not be affected.

The new ELTs will be operating on **406 MHz**. These will transmit, when activated, a 5-watt digital burst every 50 seconds. These bursts have an encoded individual beacon ID that will allow national authorities to track down the beacon owner via telephone to turn off the offending ELT, thus avoiding the alerting and launching of search forces for false alerts.

The FCC, FAA, and Coast Guard can levy penalties if the owners of the aircraft or boats fail to register them. Some of the new 406 MHz ELTs may be equipped with an internal GPS receiver, which will provide instant location information. These new ELTs will also transmit on 121.5 MHz to allow CAP and other rescue forces to "home in" on the ELT.

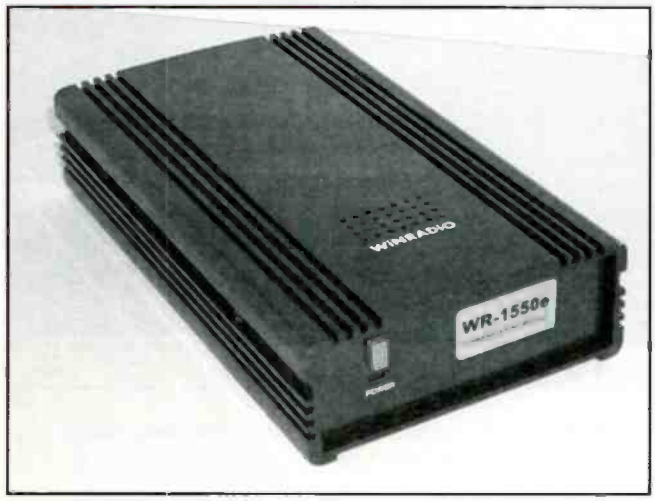
And as long as there are planes and pilots the Civil Air Patrol will be there looking for ELTs. This is one area where we cannot afford to ignore any false alerts. As equipment is improved and false echoes are eliminated, more lives will be saved.

Keep the letters and questions coming in. If you may have sent me an E-mail over the last couple of weeks I may have lost it as my E-mail account took a major dump and I lost over 200 messages. So if you haven't gotten a response directly or seen one in my column, please re-send it. Thanks and 73's. See you in March and Happy Valentine's Day! ■

PRODUCT SPOTLIGHT

Pop'Comm Reviews Products Of Interest

The WinRadio 1500e



The external WinRadio 1550e doesn't feature many controls on its front panel. A simple on-off switch is all you need. The real control is in the software.

I can't remember a radio that has created more stir in the radio community than the WinRadio. From the time it was first announced, to this very day, mention of WinRadio is a sure way to spark a discussion. I bought one of the original WinRadios at a Dayton Hamvention some years back not too long after they first came out. It's a neat radio, with some pretty cool software. So you can imagine my excitement when I got an offer to review the new 1550e!

One of the first things that struck me when I saw the WinRadio 1500 announced, and later the upgraded 1550e is that it's in an external box. This makes use with a laptop and other temporary settings possible. All by itself, this greatly improves the usability of the radio in my opinion. And in fact, that's exactly what I've found.

The WinRadio 1550e features wide coverage, 150 kHz to 1500 MHz (less cellular, of course on the U.S. model). Memories are controlled by the computer, but each memory set can contain as many as 1,000 frequencies. You're only limited by the amount of hard disk space as to how many sets of memories you'd care to store. Like all PC-based receiver systems, this quick and easy management of memories makes reconfiguring the radio a snap!

Physically, the WinRadio external receivers are well camouflaged. On the front panel is a single power switch and the label for the model of radio. Of course, if you need real stealth, you could opt for one of the internal models and nobody would be able to tell that there was a receiver in the room.

On the rear panel are connections for the required inputs and outputs. Power, of course (12V coaxial, so it's easy to use other adapters and supplies), antenna (BNC) and computer connections are the minimum required. There are two ways to connect the computer. A standard DB-9 connector can be used by any serial port, which most computers have available. A standard cable works just fine, so there are no tricks to getting it hooked up. A cable is supplied if you don't have one of your own.

You can also hook up the 1550e with a PCMCIA card from your laptop. While we did not get to try this option (but hope to at some future time and we'll get back to you), my understanding is that the PCMCIA connection can communicate with the receiver faster, and thus allow faster scan speeds and more efficient communications. Plus, it leaves your serial port free for other gadgets.

An external speaker and data jacks round out the rear panel outputs. The data out port provides discriminator output for packet and other applications if you're interested, but you may find that you don't need it much. Many common modes are handled directly by the WinRadio's optional software packages.

Great Software!

The software application is really where the control is at for a PC-based receiver, and the WinRadio software system really shines. It's been through several versions in response to user feedback, and many useful and convenient features have been added. As a case in point, let's talk about the scanning controls.

Many users will buy the WinRadio to use as a second receiver and the software will dictate the functions available. Many great functions are available on WinRadio's software application directly from the manufacturer, and many more "plug in"

The rear panel is where the connections are. Note the two connectors for PCMCIA (left) and RS-232 (right).

BY KEN REISS <Armadillo1@aol.com>

modules can be downloaded from the WinRadio Website.

Each memory can be assigned a call sign and comments (alphanumeric label) that will appear on the display when the memory is active. Each memory can also have it's own squelch setting stored — a feature that many scanner enthusiasts have been wanting for a long time, and shortwave fans have been after for years! Each memory can also be assigned to one of 16 "groups" which operate sort of like banks, but with a twist.

The groups do not have to be in adjacent memory locations. And you do not have "fixed" banks that have to be scanned or not scanned together. You can select any range of memory channels; 554–876, for instance to scan. Within that range, you can also tell it to only scan channels that are stored in a particular mode. Or you can tell it to scan only channels belonging to a particular group or groups — any of the 16.

As a result, organizing and grouping memory channels on the WinRadio is really only necessary for convenience and for pre-arranged sets that you might want to have. (i.e. you might want to have a set stored on your hard drive all ready to go for snowstorms, for instance, and another set for ham operations, or air scanning when you wanted to pursue that option). However, you can easily tag and untag groups in your main scanning file to allow for a lot of flexibility.

One of the few issues I had with the software related to entering frequency data into memory. It works just like entering memories on a receiver. You have to enter the frequency into a VFO, then store it, and then set the comments and other special features later. I soon found out, however, that a wonderful couple of plug-ins are available from the WinRadio Website which correct this in an excellent way. One plug-in Memory Manager, makes working with memories just like working with a spreadsheet. It's quick and easy to enter data in a hurry, or you can even import CSV and dBase files from other applications.

The main window of the WinRadio software presents all of the necessary controls in a "radio" format that's easy to understand.

Another plug-in called "Advanced Memory" provides a central database for all of your frequency records. In here, you can create groups of memories by dragging and dropping. You might want to download both of these handy utilities and see which works best for you.

Receiver Performance

One of the great concerns with PC-based receivers in general, and particularly with WinRadio receivers that go inside the computer has been performance and noise. WinRadio does an amazing job of shielding the internal receivers and as a result, the performance is quite adequate. One of the purposes of the 1550e was to enhance performance over its predecessor, and the company has indeed succeeded.

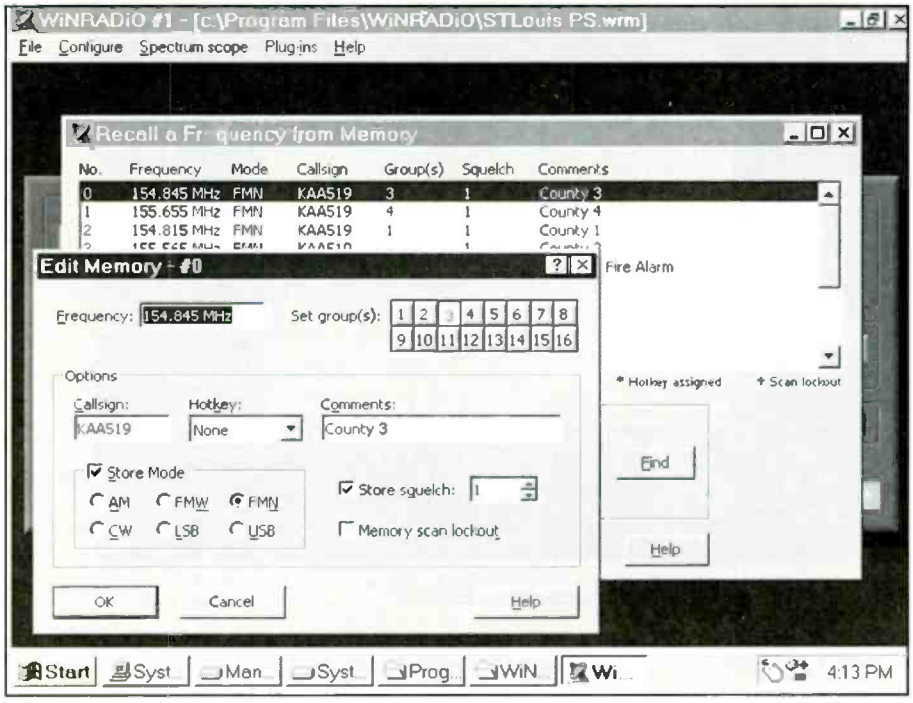
Like many wideband receivers, some areas of frequency coverage are better served than others. The HF range might turn out to be the strong suit for this receiver. Even with a moderate length unshielded wire I was able to get quite impressive results in both AM and SSB modes. Sensitivity ratings in the 3–30 MHz range are identical with many dedicated HF communications receivers.

WinRadio's own specifications put sensitivity in the VHF/UHF scanner range in the .4 microvolt range. While I do not have test instruments to measure this, it seems about right; not as sensitive as some, but adequate to the job for a general-purpose receiver.

There is an issue on the external receiver with PC noise getting into the antenna connection. This in turn can affect the sensitivity, or perceived sensitivity of the receiver. In fact, I wonder if this is partially why I believe the .4 microvolt sensitivity figure instead of something slightly better, which has been measured in the lab. The BNC connector and PC RS-232 connector are located right on top of each other on the back panel — in fact so close

WinRadio's Sensitivity Chart

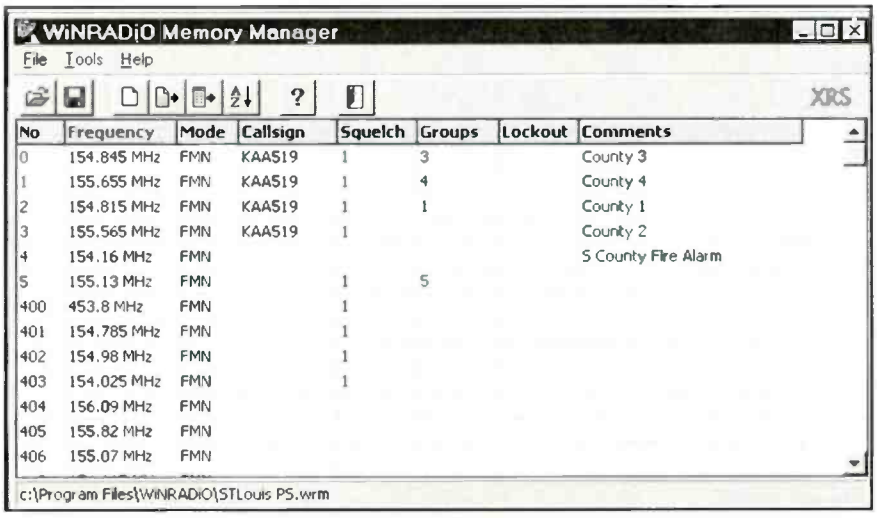
Mode	0.15–1.5 MHz	1.5–30 MHz	30–1000 MHz	1–1.5 GHz
AM	25µV	1µV	1µV	1.9µV
SSB	0.9µV	0.3µV	0.3µV	0.4µV
FMN	0.4µV	0.4µV	0.4µV	0.4µV
FMW	-	-	1.0µV	1.0µV



The main program's memory editing window is quick and easy once the frequencies are entered into menory. Note the groups option top right of the edit window (about center of the picture). This allows one frequency to belong to more than one group or "virtual bank."

that with my large hands, I found it a bit difficult to get the BNC connector to click into place if the PC connector was already in place.

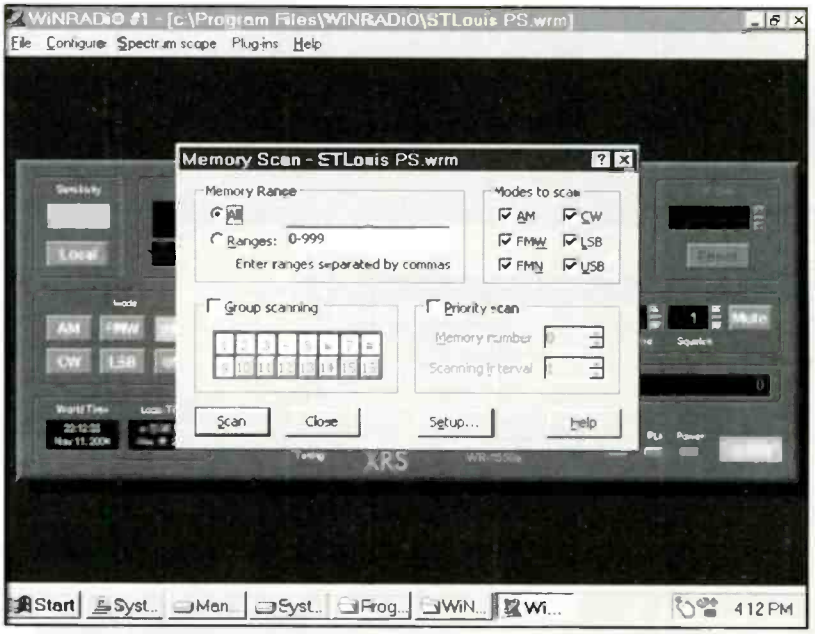
WinRadio recommends a large torroid coil placed along the antenna lead (preferably two-inches in diameter or more) with many turns of the coax run through it. This helps to suppress the noise getting in through the antenna jack, and thus allows the AGC of the receiver to respond to radio signals rather than noise from external sources. I was not able to find a two-inch coil (although I'm



A free downloadable plug-in module called MemManager makes entering and importing data a snap. You'll want this one to help manage memory files.

going to continue looking) but did use some one-inch forms available through RadioShack. It does help, and I believe that a larger coil with more turns might in fact be an answer.

The sensitivity, or perceived sensitivity issue is my only reservation about the performance of the receiver. And this may be just as much related to my location and installation as the receiver, but unfortunately I was not able to thoroughly investigate this possibility. In all other areas, it does well. I found no instances of intermod or overload type distortion. The audio is clean and relatively strong, particularly when run through an external speaker. Remember that the speaker-out jack is a stereo jack — either get an adapter or don't plug a mono connector in all the way and it works great. The software for receiver control is much better than most PC-based receivers that I have used — at least for software that comes with a receiver from the manufacturer.

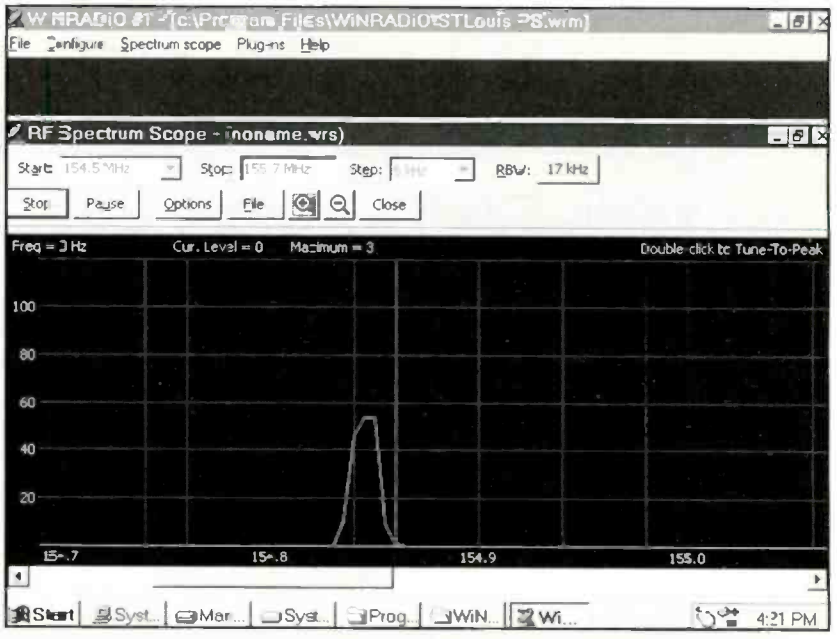


The scanning setup screen offers a wide variety of scanning options suitable for both HF and VHF/UHF type scanning

Check It Out!

The WinRadio 1550e seems to make an excellent HF receiver, and even has many scanning options that will work on HF. It also features many options for scanning VHF/UHF. In addition, several optional software enhancements are available to support many modes of operation including trunking and many digital modes, ACARS and FAX, and packet operation for hams. This convenience might be one of the strongest endorsements for the WinRadio all by itself. Yet it makes an interesting package, particularly for the enthusiast interested in HF reception with VHF/UHF capability.

The price on the street seems to be about $549 as of this writing. If you have an interest in PC-controlled reception, particularly for HF as your primary interest, you owe it to yourself to check this receiver out at a dealer near you. ■



A spectrum scope feature is also available if you prefer to see activity graphically. Another plug-in module extends this to a waterfall display, which is quite impressive to watch.

UTILITY RADIO REVIEW

News, Information, And Events In The Utility Radio Service Between 30 kHz And 30 MHz

Your Utility Loggings: A How-To Guide — And 260+ Loggings THIS Month!

This month I'm going to be looking something very fundamental for good monitoring; the process of making a log report. As we've seen the number of logs has increase significantly. Let me say right now — thank you to everyone who has contributed. However there are lots of people who would like to contribute but still feel a little hesitant to do so.

I have been checking around to find out why, and in most cases it is due to the simple fact that people look at the loggings that are published here and say to themselves "I will never be able to do that. It is too complicated." Or, "there is nothing interesting about my logs — all I am hearing is routine traffic." Please, don't let those attitudes get in the way. There is nothing too complicated about logging, nor is there such a thing as a "routine" log — each and every one contributes something of value.

Most people I find are just at the point of wanting to send in their logs, such as the person who wrote the following letter:

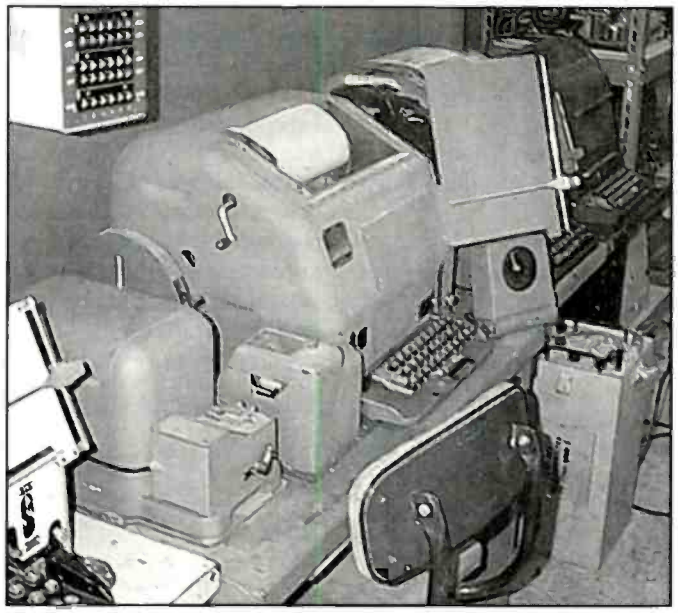
Joe,

What are your requirements, formats, etc., for sending monitoring log info to you for publication in your column in *Popular Communications*?

Regards,
J. Hall

This month let me outline what would make a good log suitable for publication. I also want to add a little reward for all the good work that goes into a log, so please check out the special announcement at the end of the column.

And speaking of logs, wait until you see what we have this month! There really have been some excellent contributions, and it is really worth your while to go through them line by line. That is why this month I'm going to focus on the logs. Don't worry, I've been doing lots of research on many UTE topics, and during the upcoming months I am going to be covering a lot of interesting topics, including military, the space program, more rescue and emergency radio services, as well as having more guest writers.



Classic "Green Keys" on display at the North America Data Communications Museum at Fallbrook, CA. Visit their Website at http://www.nadcomm.com.

I also ask each and every one of you reading this column to send in your suggestions for future topics. Likewise if you wish to make a contribution on a topic or two, please send along your ideas. Don't worry about being a perfect writer — I'll help smooth off the rough edges.

So, enough of the housekeeping — lets get on to outlining how to do a good log.

Good Logging Practice

One of the important features of living in a democracy is that we live in an open society. What that means is that while each of us has the right to personal privacy, anything that happens in public is open to scrutiny. In the same way that you can walk out onto any public area and listen in on conversations, or take a photograph of anyone without their permission, so it is that you can listen to any radio station using the publicly-owned radio spectrum.

But just in the same way that you cannot do whatever you want with that photograph or that private conversation, the same applies to the monitoring of radio transmissions. There are reasonable restrictions on what you do with the information that you hear during your radio monitoring sessions — particularly in the case of utility services.

The primary way in which radio monitoring is defined in the United States is through two pieces of legislation; the Communications Act of 1934 and the Electronic Communications Privacy Act of 1986.

While there are restrictions in place regarding the monitoring of specific services (for example — mobile telephone, wireless data, and paging), it is permissible to monitor many services. Examples of these are:

Amateur Radio
Citizens Band
Broadcasting
Federal Government
State Government
Local Government
Police Services
Fire Services
Civil Defense
Medical Services
Marine Services
Aeronautical Services
Some types of pagers
Really any and all radio transmissions

BY JOE COOPER <ur-review@provcomm.net>

that you can hear on your radio which are not forbidden for open reception by the ECP Act of 1986 is a permissible target for monitoring. However, there is only one real restriction that must be respected. You cannot reveal the full contents of a message you have intercepted through radio monitoring to anyone else, particularly if that radio message was not intended for you in the first place.

As long as the monitoring of radio transmissions is done for educational and entertainment purposes only, and the full contents of the transmission are kept confidential, then you have not breached the law. Likewise you cannot use the information that you have heard during your monitoring for personal or financial gain.

A guide to what information is not permissible in a log that will be made available to the public could be:

A complete transcript of the monitored transmission
The full names of the people making the transmission
Details that would compromise national security
Details that would compromise law enforcement activity
Details that would compromise the personal security of a private citizen
Names of people involved in an accident or medical emergency
Names of people who have died as a result of a tragedy
Identities of minors
Trade secrets or the movement of shipments of goods
Times of departures or arrivals, particularly for military ships, vehicles, or aircraft

The point of the matter is if you wish to listen for these types of details within radio transmissions you are free to do so. However, in the "wrong hands" any of the information listed above could contribute to a serious breach of security, privacy, or public safety.

What has come to be permissible to share within the hobby of radio monitoring is basic information about where you found the station in the radio spectrum and anecdotal information about what you heard in order to identify the type of service it represents. That is what a good log should contain, and this should be done in a good consistent format.

Having said all that — how do you format what you hear into something acceptable for publication here, and in other radio monitoring magazines?

Formatting Your Logs

The format used in this column, and followed by others, is not carved in stone. You do have a certain degree of flexibility in your reporting. I like to keep it that way because every time you come up with a "perfect" way of logging a station, something comes along that will not fit that model.

In general though, the following is the minimum amount of information required for a utility log, and the order in which it should appear:

Frequency (in kHz)
Station ID (or unidentified)
Location (city and country)
Summary (use standard short forms)
Mode of transmission (AM, CW, SSB)
Time (always Zulu)
Personal Comments (optional)
ID of person who logged (Initials)

Here is an example log using that format:

0000: STATION, Anytown, USA, summary of traffic heard in MODE at 0000, personal comments here (JC)

Please do me a favor when you send in your logs by bolding your frequency as shown and place a colon just to the right of it. This helps people quickly find the range of frequencies they like to monitor. Also note that the station ID is in uppercase, along with the mode used.

Likewise when writing summaries please use standard short forms in order to keep the information brief and to the point (see **Table 1** for a list of some of the short forms commonly used). You can be more conversational in your personal comments, but remember to use short forms here as well.

If you look at the logs presented in this column, you will see that they all follow the proscribed format and use short forms extensively. The reason for that is that I often "clean up" the logs that are sent to me as part of my editorial duties.

Let me say right now that if you send me your "raw" logs I will re-format them into the standard format, but I won't make major changes in content unless I find it violates one of the guidelines I've outlined above. Please, follow the guidelines that I have outlined here in order to help me out. The less time I spend on formatting and editing logs the more I can spend on researching interesting topics.

The best way to learn how to do a good logging is by seeing how others have written down their logs, with the best examples being the ones found in the column. What is even better is to practice good logging by doing your own and getting them into me. If you do have any questions regarding the best way to do a log, please E-mail or write to me. I'll be happy to hear your opinions or forward your ideas to the readers of this column.

Table 1 — Some common short forms used in loggings

A	Approximate Frequency
AA	Speaking Arabic
AB	Air Base
ACD	Automatic Call Distribution
ADT	Airborne data terminal
AF	Air Force
AFB	Air Force Base
AFCC	Air Force Communications Center
ALLOC	Allocation
AM	Amplitude Modulation
ANG	Air National Guard
ANT	Antenna
ARQ	Automatic Request
ARR	Arrive
ATC	Air Traffic Control
BC	Broadcast
CALL TAPE	Repeated Recording
CH	Channel
Comms	Communications
CONUS	Continental U.S.
CW	Continuous Wave
DCS	Defense Communications System
DEP	Depart
DSB	Double Sideband
DX	Distance
EE	Speaking English
ETA	Estimated Time of Arrival

f/in	Fade in
f/out	Fade out
FAA	Federal Aviation Administration
FAX	Facsimile
FEC	Forward Error Correction
FF	Speaking French
FREQ	Frequency
FSK	Frequency Shift Keying (RTTY)
GMT	Now UTC
H	On the hour
H+	Minutes past hour
HF	High Frequency
HQ	Headquarters
IAP	International Airport
ID	Identification
KW	Kilowatts
LA	Latin America
M	Meters (measure)
MAP	Municipal Airport
MARS	Military Auxiliary Radio Service
MEDEVAC	Medical Evacuation
METEO	Meteorological (Weather) Mystic Star Air Force 1 and 2 communications
NA	North America
NASCOM	NASA communications
NBRS	Numbers
NDB	Non-directional Beacon
NG	National Guard
NTM	Notice to mariners
NX	News broadcast
OPR	Operator
OPS	Operators
PP	Speaking Portuguese
PT	Plain text
PX	Program
QSL	Verification card
QTH	Home base
R	Radio Station
RDO	Radio
RPTNG	Repeating
RF	Radio Frequency
RS	Receiving station
RTTY	Radio Teletype
RX	Receiver
s/on	Sign-on
s/off	Sign-off
SAR	Search and Rescue
SEC	Secondary Frequency
SITOR	Error corrected RTTY
SKED	Schedule
SS	Speaking Spanish
SSB	Single Side Band
TACOM	Tactical Communications
TFC	Traffic Communications
TX	Transmitter
UNID	Unidentified station
USAF	United States Air Force
USB	Upper Side Band
UTC	Co-ordinated Universal Time
VY	Very
W/	With
WKG	Working (talking to)
WPM	Words per minute (CW or RTTY)
WX	Weather
XMTR	Transmitter
Z	Same as UTC

Reader's Letters

It is always a pleasure to receive letters and E-mails from you. I read everything that is sent to me, and try to respond to each and every item as best I can. One thing that I encourage is suggestions for changes or improvements. The following letter is one that I would like to get other people's opinions on as well.

Dear Mr. Cooper,

I am an avid radio enthusiast. My main interests in the radio hobby are DXing non-directional beacons (LWCA member), utility, and AM radio listening.

In the past I have sent various loggings and QSL copies to Mr. Baker for his utility column in *Popular Communications*.

I would be interested in receiving your list of utility radio logging requirements complete with reporting formats to be used and the terms to be employed.

I always enjoy seeing utility station addresses when they are presented in the magazine. It can be frustrating when you have logged a unique station only to see that your address source is five years old and you wonder if they have moved by now!

Perhaps an area of the column can be dedicated to showing the latest QSL addresses and Websites that contributors and editors have compiled in reference to various utility stations.

Occasionally a particular service could be highlighted: address for NDB sites, maritime (radio telephone ship to shore stations) U.S. and worldwide Coast Guard and rescue stations, aeronautical stations, and rescue stations.

I'm looking forward to reading the future editions of "Utility Radio Review" and I thank you for your attention to my requests.

Sincerely,
Allen Renner

Allen included a list of utility stations that he needs some addresses for, and I'm going to see what I can do to get them. However, I'd like to remind Allen and everyone else that one of the best sources for this information are the publications put out by Joerg Klingenfuss (such as his *2000 Guide to Utility Stations*). However, the idea of a lost-and-found for QSL addresses has merit. What do you think? Should this type of service be included in the column?

If there is enough interest I will certainly look into starting something like this, but in order to be successful I will need to have lots of reader feedback and assistance. People have been great with helping to build up the logs, now how about addresses? I'm waiting to hear from you.

Reader's Logs

Note: All frequencies in kHz.

0000: STATION, Anytown, USA, summary of traffic heard in MODE at 0000 UTC, personal comments here (JC)

2182: S/V Mistral, no location, wkg USCG Mayport Group USB re crewman with acute appendicitis. (RK)

2299: UNID, Presumed Cheju R., South Korea, sending "Ode to Joy" mkrs between PPs in USB at 1255. First time I've ever encountered Beethoven's 9th symphony on this freq. Only Cheju R., CW stn is listed in Klingenfuss Guide. (TY)

2460: HLP, Pusan R., South Korea, "Ode to Joy" mkrs between PPs in USB at 1100. (TY)
2500: BPM, Xian TS, China, w/clear time pips and CW ID in AM at 1305. (TY)
2507: HLN, Kunsan R., South Korea, "Ode to Joy" mkrs between PPs in USB at 1259. (TY)
2598: VCM: Canadian Coast Guard St. Anthony 0107 USB w/MIB. (MADX)
2605: UFL, Vladivostok R., Russia, w/Sitor and CW ID at 1305. (TY)
2670: NMF2: USCG Group Woods Hold 1017 USB w/MIB. (MADX)
2670: NMG2: USCG Group New Orleans 1035 USB w/MIB. Weak but readable. (MADX)
2749: YARMOUTH CG radio w/ wx forecast in french and EE at 0159. 4.372.0 USN radio net at 0224 UTC. Sailor asked other op how long his ship would be on cruise. Reply was three days. (JD)
2932: Tokyo Aeradio, Japan, wkg Philippine 103 in USB at 1430. (TY)
3019: Unid stn IGAE sending callsign over and over in CW at 1245. Also hrd stn on 3044.0: and 3047.2 kHz. (TY)
3195: UNID. Russian single letter HF CW channel Mkr R, Izhevsk, MX at 1347. (TY)
3210: JJZ26, Japanese Self Defence Force, wkg JJX3 hand-sent CW at 1000. (TY)
3235: XSP2, Shantou R., China, Sending CQ-Mkr in vy rapid CW at 1305. (TY)
3320: UNID, North Korean female nbrs, V15, in AM at 1500, also on 6400kHz, using Pyongyang Broadcasting System's transmitter. Started with "March of the Guerrila Army," followed by nmbrs. Rare nmbrs transmission on these freq. (TY)
3537.2: UNID stn L9CC rptng "V CP76 DE L9CC" in CW at 1920, also on 7045.5kHz (TY)
3658: SLHFM-V, non-stop V, MXV, Khiva, Russian Navy, in CW at 1845. (TY)
3757: The PIP, XP, in faint CW at 2112. (TY)
4270: PCD2, Israeli Mossad, E10, in USB at 2130. (TY)
4372: USN radar tracking net at 0228z several station ex. papa 8 echo comms about medevac evidently a drill because no medical symptoms. (JD)
4377.8: UNID: Unknown, two men talking about boat maintenance in USB. 0228 UTC (JD)
4500: SHARES 00-3 exercise net, callsigns including USAF Mars stations. (RRM)
4522: 022NHQCAP: Civil Air Patrol National HQ 0347 MIL-STD 188-141A w/sounding call. Also on 5711 kHz. (MADX)
4560: c/s AFA1 MH, USAF mars station in comms w/ king21 a/c for radio check plus aborted phone patch w/ king ops (Moody AFB) at 0323 z. (JD)
4625: The Buzzer, Russia, S28, in faint AM at 2114. (TY)
4769.2: UNID stn L4FC rptng "V IBES DE L4FC" over and over in CW at 1415. (TY)
4780: MIW2, Israeli Mossad, E10, in USB at 2215. (TY)
4882: Ohio National Guard HF net w/roll call of stations; at 1856z Ng camp Perry "November Gulf" ng Hamilton, ng Portsmouth ng Kettering plus other army guard units in o.h.air guard units c/s alpha November Gulf. (JD)
5000: YVTO: time station Caracas Venezuela 0102 AM w/SS announ. Each minute. (MADX)
5031: JSR, Israeli Mossad, E10, in USB at 2130. (TY)
5154: SLHFM-C and K, MXC, Moscow and Peteropavovsk Kamchatsky, Russia, CW 1839. (TY)
5170: MIW2, Israeli Mossad, E10, in USB at 2115, also on 6370 kHz. (TY)
5230: MIW2, Israeli Mossad, E10, in USB at 2215, also on 4780, 6912 kHz. (TY)
5236: SHARES 00-3 exercise net, numerous callsigns USAF Mars stations. (RRM)
5245: Weak comms hrd here. USB 2 OM/SS with many mentions of "Puerto Vacha" and "Coca" (Possibly smugglers). (RK)
5257.4: FDI22: French AFN Arbonne 0334 BAUDOT 50/360 w/test tape. (MADX)
5261: UNID: French military 0508 USB Thomson CSF System 3000 in both STANAG 4285 PSK and with 8-TONE MFSK (ALE/Synch) mode. (MADX)
5371: The CIA Counting nbrs, E5, heard in USB at 1900, also on 8125 kHz. (TY)
5432: The Lincolnshire Poacher nbrs, E3, British MI6 and SIS, Cyprus, heard in USB at 1900, also on 6485: Unable to find out one more LP lady. (TY)
5435: ART, Israeli Mossad, E10, heard in USB at 1900. (TY)
5466: SLHFM-R, MX, Izhevsk, Russia in CW at 1507. (TY)
5645: UNID stn 4XML rptng "VVV BFR7 DE 4XML" in CW. Also on 6908 kHz. (TY)
5696: 1719: USCG HC-130H7 (CGAS Clearwater) 0931 USB wkg CAMSLANT w/flight ops normal. (MADX)
5696: CAMSPAC uscg in contact w/cg a/c 1790 re/ radio check/position report. (JD)
5696: CG a/c 1504 in comms w/CAMSLANT re 7 prob destination Airsta E. City , NC from Airsta Borinquen, P.R. All in USB. (JD)
5711: SRB recovery boats *FREEDOM STAR* and *LIBERTY STAR* comms with Booster Recovery Director (BRD). (AS)
5746: The Lincolnshire Poacher nbrs, E3, British MI6 and SIS, Cyprus, heard in USB at 2200, also on 6959, 9251 kHz. (TY)
6215: Presumed South Korean female nmbrs in distorted AM at 1530. Started w/Korean pop song, followed by nmbrs. Ended w/"That's all. Thanks." in Korean. This is a worldwide maritime distress and safety frequency. (TY)
6370: MIW2, Israeli Mossad, E10, in USB at 2115, also on 5170 kHz. On another day VLB2, also Mossad, E10, in USB at 2145, parallel to 8465, 10125 kHz. (TY)
6379: 4XZ, Haifa, Israeli Navy, sending V-mkr in CW at 2129. (TY)
6400: North Korean female nmbrs, V15, in AM at 1500, also on 3320 kHz. Rare nmbrs transmission on this freq. (TY)
6468: CC/YL nbrs, V9, Guangzhou, in powerful AM at 1500. YL opr rptng "All stns, this is Guangzhou. We are waiting for your messages." in Mandarin Chinese. (TY)
6485: The Lincolnshire Poacher nbrs, E3, British MI6 and SIS, Cyprus, heard in USB at 1500, also on 5432: Unable to find out one more LP lady tonight. (TY)
6498: Unid stn LVFC rptng "V IBEH DE LVFC" over and over in chirpy CW at 1932. (TY)
6513: VFF: Canadian Coast Guard Iqaluit 0110 USB w/MIB. (MADX)
6628.5: North Korean CW nmbrs, M40, at 1430. Frequently rptng "VVV CQ113.574" in powerful MCWcc. (TY)
6697: MKL: RAF Kinloss 0122 USB wkg N0Z: unid. "Standby for new RATT message" then into 75/850 LINK-14. (MADX)
6697: MKL: RAF Edinburgh USB. The caller identified himself as "Dagger 88" message was "take off 1605z destination LICZ and ETA 2000z please relay/forward to IDR" (PP)
6697: QUOTABLE 0137 USB w/end of EAM. At 0138, up with 27-character (not 26) EAM (GPH2P3). (MADX)
6751: *USS Taylor*, CAPE OSBOURNE wkg FISHER (Cape Radio Mission c/s). (AS)
6765: HSW, Bangkok Meteo, Thailand, w/wx info in EE, Thai, and USB at 1207. (TY)
6810: UNID: C/S. American net 0802 UTC USB with 2 OMs in SS. (IJ)
6849: Christian Radio Missionary Fellowship net Papua New Guinea 0840 in USB with OM and YL organizing a helicopter airdrop, for the next day. (IJ)
6866: The Cuban Cut CW nmbrs, M8a, in progress at 1220. Vy weak. (TY)
6897: SRB recovery boats *Freedom Star* and *Liberty Star* comms with Booster Recovery Director (BRD). (AS)
6912: MIW2, Israeli Mossad, E10, in USB at 2215, also on 4780, 5230 kHz. On another day KPA2, also Mossad, E10, in USB at 1900. (TY)
6912: E10: Mossad numbers station 0119 w/KPA2. QRT at 0120. (MADX)
6912: E10: Mossad numbers station 0418 AM w/KPA2. (MADX)
6912: E10: Mossad numbers station 0216 AM w/KPA2. (MADX)
6959: The Lincolnshire Poacher nbrs, E3, British MI6 and SIS, Cyprus, heard in USB at 2200, also on 9251, 11545 kHz. (TY)
6960: The CIA Counting nmbrs, E5, in USB at 2200. (TY)
6977: CFARS NET, Canadian forces amateur radio net at 2323 Zulu ops talking about computers, RTTY and new movie about the capture of the German enigma cipher machine. WW.II cfars callsigns cw628, cw6524. (JD)
6980: S16: Swedish Consulate St. Petersburg 0210 MIL-STD 188-141A wkg S00: MFA Stockholm. (MADX)
6980: S00: Swedish MFA 2346 MIL-STD 188-141A w/sounding call. (MADX)
6982: The Cuban Cut CW nmbrs, M8a, in progress at 1214. Using ANDUWRIGMT standing for 1 through 0, sending 5-digit numbers. (TY)
6986: ART, Israeli Mossad, E10, in USB at 2100. (TY)
7039: SLHFM-C, MXC, Moscow, in CW at

1840. On another day F-Mkr, Vladivostok, at 1221. (TY)

7054: UNID stn L9CC rptng "V CP76 DE L9CC" over and over in CW at 1915. On another day same stn heard on 7074.5kHz at same time. (TY)

7358: FTJ, Israeli Mossad, E10, in USB at 2100. (TY)

7419.5: WWJ40N: Federal Highway Administration (Acting NCS) 2242 USB w/call for check-ins for Coast Guard Auxiliary and Federal Highway Administration Net. (MADX)

7455: SYN2, Israeli Mossad, E10, in USB at 1845. (TY)

7535: NORFOLK SESEF: 1655 USB wkg Inport Navy Unit.(MADX)

7540: JSR, Israeli Mossad, E10, in USB at 1900. (TY)

7583: The Cuban Cut CW nbrs, M8a, in progress at 1025. (TY)

7605: VLB2, Israeli Mossad, E10, in USB at 1945. (TY)

7614.2: Unid stn L4FC rptng "V IBES DE L4FC" in vy chirpy CW at 1015. (TY)

7710: VFF: Canadian Coast Guard Iqaluit 1120 FAX 120/576 w/chart. Moderate fading but title of chart appeared to be Marine Wind Prognosis. At 1125 into new chart. Transmitted via Resolute site? (MADX)

7757: Unid: C/S. American net 0655 UTC USB with OM in SS calling. (IJ)

7762: RGH77: Arkhangelsk Meteo 0423 FAX 120/576 w/weak signal then end of chart, into new chart (60/576) at 0426. Too weak to get good read on charts. (MADX)

7863: The Cuban Cut CW nmbrs, M8a, in progress at 0825. (TY)

7887: V2A: The Counting Station 0209 AM YL/SS/5FGs already in progress. (MADX)

7889: The Cuban Cut CW nmbrs, M8a, in progress at 1215. (TY)

7969: HR: unid Algerian MOI 0328 MIL-STD 188-141A w/sounding call.(MADX)

8025: Abnormal Mossad transmission, ClO2, Israeli Mossad, E10, in USB at 1540 with callup only for over 90 mins. So-called ClO2 Marathon. (TY)

8050: FC8FEM: FEMA District 8 2149 MIL-STD 188-141A w/sounding call. (MADX)

8050: CIP46: unid Mexican Navy 2217 MIL-STD 188-141A clg CIP30: unid Mexican Navy. At 2223, CIS201: unid Mexican Navy clg CIP30: unid Mexican Navy. Despite the Canadian callsigns, this is reportedly a Mexican Navy net. (MADX)

8085: E5: The Counting Station 0409 AM w/564 and 1-10 counts. At 0410, 10 tones then "group count 71" and into msg. (MADX)

8093: BIS: National Guard Bismarck ND 0438 MIL-STD 188-141A w/sounding call. (MADX)

8094.5: FDC: French AF Metz 0440 CW w/call tape. (MADX)

8125: The CIA Counting nmbrs, E5, in USB at 1900, also on 5271 kHz. (TY)

8136: The Cuban Cut CW nmbrs, M8a, in progress at 1121. (TY)

8150: PBB: Dutch Navy Den Helder 0158 BAUDOT 75/810 w/CARB. (MADX)

8176: VIT, Townsville R., Queensland, Australia, w/wx info in USB at 1035. (TY)

8308: Unid stn 4XML Rptng "VVV BFR7 DE 4XML" rpt in hand-sent CW at 1052. Also on 5645, 10822 kHz. (TY)

8375: CC/YL nbrs, Beijing, V22, in powerful AM at 1500. Rptng "All center stations, this is Beijing speaking" in Mandarin Chinese for app. 5 min. (TY)

8392.5: UDFY: TK Marshal Vasilevskiy 0150 SITOR-A 100/170 checking messages with unid shore station. (MADX)

8450: 5AB: Benghazi Radio 0407 CW w/call tape. (MADX)

8453: RFFME: French Navy Paris 0409 BAUDOT 75/850 w/call tape. (MADX)

8463: CKN: CANFORCES Lazo 0412 BAUDOT 75/810 w/call tape. (MADX)

8464: The Lincolnshire Poacher nmbrs, E3, British MI6 and SIS, Cyprus, in USB. (TY)

8465: VLB2, Israeli Mossad, E10, in USB at 2245. Also on 10125 kHz. (TY)

8478.5: FUF: French Forces Fort de France 0414 BAUDOT 75/810 w/call tape. (MADX)

8496: CLA: Havana Radio 0416 CW w/call tape. (MADX)

8551.5: CTP: NATO Lisbon 0421 BAUDOT 75/850 w/call tape. (MADX)

8573: CLA: Havana Radio 0424 CW w/call tape. (MADX)

8625.3: GYU: Royal Navy Gibraltar 4-channel VFT w/CARB in BAUDOT 75/200 on Ch. 1 (8625.9 kHz). (MADX)

8636: VNG, Sydney TS, New South Wales, Australia, strong time pips with phone ID in AM at 1105 also on 12984, 16000 kHz. Broadcasting UTC time. (TY)

8670: IAR: Rome Radio 0503 CW w/call tape. (MADX)

8680: The Backward Music station, XM, in powerful AM at 0900. (TY)

8698: 7TF: Boufarik Radio 0508 CW w/call tape. (MADX)

8737: 5BA 62, Cyprus Radio, Nicosia, Cyprus, rptng "This is Cyprus Radio, Radiotelephone Monitoring Service" in EE, Hebrew, and USB at 2035. (TY)

8764: CG STATION, NMN in contact w/ Dutch F/v Lomeer Bigei re/injured crewman. Op tells them nearest asset is 120 miles away and that they should proceed to curacao.f/v told to qsy 2.182.0 to contact officials. (JD)

8764: NMN, Coast Guard Master Station Atlantic USB w/computerized voice weather.

8805: PCD, Israeli Mossad, E10, in USB at 1530. (TY)

8971: HUNTER 01 (RAF Nimrod) wkg FIDDLE (USN TSC Jax) with req for wx at several northern Florida airfields and passing an ops normal report for OCTOPUS 02. (RRM)

8971: OCTOPUS 02 (probable RAF Nimrod) wkg FIDDLE (USN TSC Jax) with ops normal report and spare groups throughout the day. (RRM)

8971: Numerous callsigns including TRIDENT (USN P-3), OCTOPUS (probable RAF Nimrod), wkg HIGH VOLTAGE (unknown ground station, probably at NAS Jax) to pass

spare groups and ops reports. Apparent multi-national ASW/Patrol exercise. (RRM)
8971: LL42 wkg LL45 (both USN P-3, VP-30) with initial contact in the red followed by green comms (ANDVT). (RRM)
8971: WAVERUNNER-803: 0536 USB clg WESTERN SKY. (MADX)
8983: RESCUE 6026: USCG HH-60J (CGAS Elizabeth City) 1635 USB wkg CAMSLANT w/flight ops and position: 3451N 07727W. (MADX)
9005.4: HABITAT: COMPATWING10 Whidbey Island 0045 USB wkg unid. "Are you flight ops normal?". . ."Understand, you are in the area." (MADX)
9016: STANWICK: 1341 USB wkg unid w/rdo check. (MADX)
9017: STP: National Guard St. Paul, MN (NGB34) 0434 MIL-STD 188-141A clg IND: National Guard, Indianapolis (NGB25). (MADX)
9064: The Cuban Cut CW nmbrs, M8a, in progress at 0705. (TY)
9070: The CIA Counting nmbrs, E5, in USB at 2200. (TY)
9122.5: LRBHF1: USACE Buffalo, NY, 0015 MIL-STD 188-141A w/sounding call. (MADX)
9122.5: MVDHF1: USACE Vicksburg (WUG) 1413 MIL-STD 188-141A clg MVNHF1: unid USACE. At 1437, LRBHF1: unid USACE w/sounding call. (MADX)
9123: CENTR5: Romanian MFA Bucharest 0458 MIL-STD 188-141A clg HOL: unid Romanian embassy. (MADX)
9152: The Cuban Cut CW nmbrs, M8a, in progress at 1225. (TY)
9158: UNID: Telecom Pacific Islands 0652 UTC USB with OM in a Pacific language. (IJ)
9183.5: SU1: FBI Salt Lake City 0037 MIL-STD 188-141A clg SUP03: unid FBI, then into weak FSK (300bd possible). (MADX)
9219: The CIA Counting nmbrs, E5, in USB at 2200, also on 10527 kHz. (TY)
9239: The Cuban Cut CW nbrs, M8a, in progress at 1105. (TY)
9251: The Lincolnshire Poacher nbrs, E3, British MI6 and SIS, Cyprus, heard in USB at 2200, also on 6959, 11545 kHz. (TY)
9270: VLB2, Israeli Mossad, E10, in USB at 1445. (TY)
9323: The Cuban Cut CW nmbrs, M8a, in progress at 1005. (TY)
9323: V02A: Atencion Numbers station 0421 AM w/YL/SS/5FGs. (MADX)
9331: The Cuban Cut CW nmbrs, M8a, in progress at 1227. (TY)
9340: RCH72: Tashkent Meteo 2259 FAX 60/576 w/strong signal. (MADX)
8526.4: KFS: Globe Wireless Palo Alto 0419 CW w/call tape and free idle. (MADX)
9930: WWJ40N: Federal Highway Administration (Acting NCS) 2250 USB w/call for check-ins for Coast Guard Auxiliary and Federal Highway Administration Net. (MADX)
10000: BPM: Time Station Xi'an 2229 AM w/CW id. (MADX)
10000: EZ2: unid 0006 MIL-STD 188-141A clg 11: unid. At 0110, EZ2 clg SA1VA1: unid and SA1PA1: unid. (MADX)
10000: FMFPED001: unid Fleet Marine Force unit 2202 MIL-STD 188-141A clg NAVPED000: unid U.S. Navy unit. Idents are tentative. (MADX)
10125: VLB2, Israeli Mossad, E10, in USB at 2245, also on 8465 kHz. (TY)
10126: The Cuban Cut CW nmbrs, M8a, in progress at 1105. (TY)
10236: The Cuban Cut CW nmbrs, M8a, in progress at 1030. (TY)
10320: AFRTS, Pearl Harbor, Hawaii, USA, in USB at 0635. (TY)
10346: The Cuban Cut CW nmbrs, M8a, in progress at 1108. (TY)
10352: Abnormal Mossad transmission, ClO2, Israeli Mossad, E10, w/callup only for over 90 mins in USB at 1740. So-called ClO2 Marathon. (TY)
10352: E10: Mossad Numbers Station 0150 AM w/ClO2. (MADX)
10423: The CIA Counting nmbrs, E5, in USB at 2200, also on 12187kHz. (TY)
10446: The Cuban Cut CW nmbrs, M8a, in progress at 1107. (TY)
10527: The CIA Counting nmbrs, E5, in USB at 2200, also on 9219 kHz. Similar but non-parallel tx heard on 9090 kHz (TY)
10780: Cape Radio, passing mission freqs to all participants. Also air-air for CLEARANCE 1 (USCG Acft) and RELAY 1 (Norfolk VAW-121 prob E-2C) (AS)
11119.3: UNID USAF/USN 0432 BAUDOT 75/810 w/KAWN wx tfc. (MADX)
11157: S49: Swedish Embassy Riyadh 0034 MIL-STD 188-141A clg (MADX)
11157: S48: Swedish Embassy Damascus. (MADX)
11158: BIS: Unid 1320 MIL-STD 188-141A w/sounding call. Again at 1416. (MADX)
11175: REACH 928 wkg SALINAS for phone patch to NAS Rota, Spain with arrival and cargo information for early arrival; followed by patch to Rota Metro. (RRM)
11175: DARK 43 (B-1B, 78th BW Barksdale AFB, LA) USB wkg MUDBUG (Barkdsdale CP) via Offutt re landing time (RK)
11175: BUFF 56 (B-52) USB wkg unid stn via Offutt re number of inert devices on board.
11175: DOOM 89 (B-52, 2nd BW, Barksdale AFB) USB wkg MUDBUG re bird strike on windshield — were declaring IFE (in-flight emergency) and landing at Plattsburgh AFB. (RK)
11175: DUKE 38 (F-111, Cannon AFB, NM) USB wkg private residence with morale call — pilot called his mother to wish her a happy birthday. (RK)
11175: DECOY 93 (C-130, 117 TRW AL Ang # Birmingham) USB wkg LONE WOLF with RRTTY Bursts (RK)
11200: FRANCEVILLE: prob Gabonese Railway Franceville Gabon 2007 MIL-STD 188-141A w/sounding call. At 2016, MILOLE: prob Gabonese Railway Milole clg BB113: unid. (MADX)
11239: Unid: 0129 USB w/voice scrambler. Resembled French and Spanish systems. No clear speech to id with. (MADX)
11253: MVU: RAF Volmet 2144 in USB YL/EE w/aviation wx. (MADX)
11432: The Cuban Cut CW nmbrs, M8a, in progress at 1103. (TY)
11440: *HEREDIA*: Cherokee-class Patrol Craft RM72 "Pedro de Heredia" 0144 MIL-STD 188-141A w/sounding call. (MADX)
11453: IMB: Rome Meteo 0037 BAUDOT 50/850 w/meteo tfc. (MADX)
11454: Unid bagpipe sounding signals at 10 second intervals AM *(any suggestions as to its ID — Editor)* (RK)
11491: V5: The Counting Station 0318 AM w/YL/SS/5FGs (3/2) already in progress. (MADX)
11492: 0000006138: poss Iranian 0106 MIL-STD 188-141A clg 0000006137: poss Iranian. (MADX)
11495: 0000001220: unid Iranian military 0002 MIL-STD 188-141A w/sounding call. (MADX)
11500: Unid: 0140 VFT Barrie BR-6028 7x75/170. (MADX)
11545: The Lincolnshire Poacher nbrs, E3, British MI6 and SIS, Cyprus, heard in USB at 2100, also on 6959, 9251 kHz. (TY)
11556: 0000001220: poss Iranian military 0052 MIL-STD 188-141A w/sounding call. (MADX)
11565: EZI, Israeli Mossad, E10, in USB at 2200, also on 6840, 9130 kHz. (TY)
11636: M14? 0051 CW w/5FGs at 30wpm, cut 0's (T). QRT at 0055 w/307 307 165 165 00000 (3T7 3T7 165 165 TTTTT). (MADX)
12134: 005: Iranian Military 0157 MIL-STD 188-141A clg 001111: Iranian military. (MADX)
12134: 0000006666: Iranian military 0237 MIL-STD 188-141A w/sounding call. (MADX)
12135: Unid: 0014 USB jammer 8-tones with slightly varying pitch. (MADX)
12186: OWG: Danish Air Force Grazzanise 0022 MIL-STD 188-141A clg OWE: Danish Air Force Kanup. At 0024, OWG clg OWP: Danish Air Force (loc?). (MADX)
12186: OWG: Danish AF Grazzanise AFB Italy 0355 MIL-STD 188-141A clg OWE: unid Danish AF. (MADX)
12197: The CIA Counting nmbrs, E5, in USB at 2200, also on 10423 kHz. (TY)
12225: S94: Swedish Embassy Guatemala City 0038 MIL-STD 188-141A w/sounding call. (MADX)
12226: S00: Swedish MFA 0131 MIL-STD 188-141A clg S73: Swedish Embassy Lagos. (MADX)
12597.5: UFN: Novorossiysk Radio 0440 CW w/call tape. (MADX)
12709: A9M, Halma R., Bahrain, w/CQ-Mkr in CW at 1446. (TY)
12747: ClO2, Israeli Miossad, E10, in USB at 1345, also on 10352kHz. (TY)
12950: Abnormal Mossad transmission, ClO2, Israeli Mossad, E10, w/callup only for over 90 mins in USB at 1740. So-called ClO2 Marathon. (TY)
12984: VNG, Sydney TS, New South Wales, Australia, w/strong time pips and phone ID in

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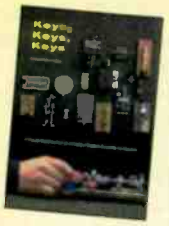

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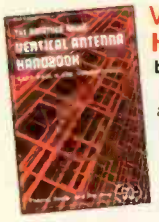

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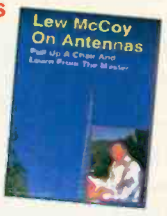

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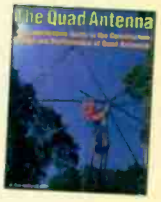

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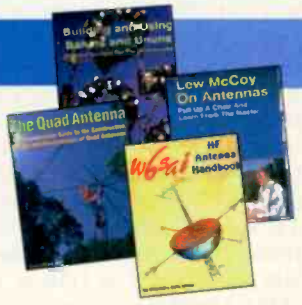

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AM at 1105, also on 8638, 16000 kHz. (TY)
13098: 5BA 62, Cyprus R., Nicosia, Cyprus, rptng "This is Cyprus Radio, Radiotelephone Monitoring Service" in EE. Hebrew and faint USB at 1 340. (TY)
13190: VLB2, Israeli Mossad, E10, in USB at 1445. (TY)
13244.2: AFA3HY: USAF MARS 1630 PACTOR-1 200/200 wkg KGD34-based SHARES BBS. (MADX)
13362: AFRTS, Guam, w/news and music in USB at 0625. (TY)
13434: WWJ40J: Federal Highway Administration net control 2238 w/call for check-ins for Coast Guard Auxiliary and Federal Highway Administration Net. Wkg WWJ40D and WWJ40N. At 2240 QSY to 7419.5 kHz. (MADX)
13436: V2A: Atencion Numbers Station 0134 AM w/YL/SS/5FGs already in progress. (MADX)
13446: FC8FEM: FEMA District Eight 2348 MIL-STD 188-141A w/sounding call. (MADX)
13452: V05: The Counting Station 0101 AM w/056 and 1–10. (1/Nov/00)(MADX)
13475: MONTECANO: Venezuelan Military 2321 MIL-STD 188-141A clg CDDA: Venezuelan military. (MADX)
13486: Unid: 0023 unid 110/170. (MADX)
13528: SLHFB-F, K and S, Vladivostok, Peteropavovsk Kamchatsky, and Alkhangelsk , MXC, in CW at 0952. (TY)
13530: COTAR1: unid 0240 MIL-STD 188-141A clg ENODAL: unid. At 0252, GACIER: unid clg ENODAL. At 0253, GACIER clg SALOPI: unid. At 0334, GACIER clg SOSIMO: unid. At 0339, GACIER clg PEYOCU: unid.(MADX)
13530: BARRANCA: Colombian Navy Training Facility Barranquilla 1642 MIL-STD 188-141A clg RADGENABU: unid Colombian Navy. (MADX)
13530: COTAR1: unid Colombian Navy 2231 MIL-STD 188-141A clg PESIMA: unid Colombian Navy. (MADX)
13555: The CIA Counting nmbrs, E5, in AM at 14000, also on 15732kHz. (TY)
13865: CENTR5: Romanian MFA 2111 MIL-STD 188-141A wkg VRO: unid Romanian Embassy. No follow-on signals detected. (MADX)
13865: Unid commercial fishing stations, QLD Australia 2118 UTC USB 2 OMs with a chit-chat. Mentioned about Cairns and having engine problems. (IJ)
13879: DEPN: Moroccan MOI 0026 MIL-STD 188-141A w/sounding call. (MADX)
13900: DEPT: Moroccan MOI 0042 MIL-STD 188-141A w/sounding call. (MADX)
13906: The CIA Counting nmbrs, E5, in AM at 12000, also on 15732 kHz. (TY)
13907: C03: unid U.S. customs 2039 USB wkg service center. Request reload on C03, tail #0740. Followed by over-the-air re-keying and then PARKHILL enciphered speech. (MADX)
13956.5: Unid prob MFA Tunis 1210 SITOR-B w/5LGs. (MADX)
13998: KZN508: Sailmail Inc. Rockhill, SC 1620 PACTOR II w/tfc then CW ident. (MADX)
14350.5: JZQ: unid 0055 MIL-STD 188-141A w/sounding call. At 0056, OKC: Q-3/VQ-4 Tinker AFB w/sounding call. (MADX)
14446.3: prob RFV1: French Forces Le Port 0110 ARQ-E3 100/380 idle. (MADX)
14487: The Lincolnshire Poacher nbrs, British MI6 and SIS, E3, in USB at 1300, Also on 15682, 16084 kHz.
13530: PESIMA: unid 1704 MIL-STD 188-141A wkg COTAR1: unid w/AMD msg "ALFA SIERRA ESPERE QUE VENGA EL OPERR." At 1801, GACIER: unid clg ENODAL ANO: unid. At 1928, GACIER: unid clg MEJETO: unid. (MADX)
14577: The CIA Counting nmbrs, E5, in AM at 1200, also on 16198 kHz. (TY)
14739: The CIA Counting nmbrs, E5, in AM at 1200, also on 16198 kHz (TY)
14750: CIO2, Israeli Mossad, E10, in USB at 1345, also on 12950, 17170 kHz. (TY)
14814: LUA: poss British Military Detachment Luanda Angola 2331 MIL-STD 188-141A w/sounding call. (MADX)
14931: 8BY, French Intelligence, Saint Assise near Paris, France, M16, sending "VVV 8BY followed by 3FG's separated by a slant bar" in CW at 1345. (TY)
15034: CHR: Trenton Military 0120 USB w/aviation wx report for 0100Z. (MADX)
15682: The Lincolnshire Poacher nbrs, British MI6 and SIS, E3, in USB at 1400, also on 14487, 16084 kHz.
15732: The CIA Counting nmbrs, E5, in AM at1400, also on 13555 kHz. (TY)
15980: EZI, Israeli Mossad, E10, in USB at 1200, also on 17410 kHz. (TY)
16000: VNG, Sydney TS, New South Wales, Australia, w/strong time pips and phone ID in AM at 1105, also on 8638, 12984 kHz. (TY)
16084: The Lincolnshire Poacher nbrs, British MI6 and SIS, E3, in USB at 1200, also on 14487, 15682 kHz. (TY)
16105: S84: Swedish Embassy Washington DC 0039 MIL-STD 188-141A wkg S93: Swedish Embassy Havana in ALE and QPSK Modem. (MADX)
16318: UNID: net the Philippines 2125 UTC USB OM and YL in Tagalog and some EE. "Copy . . . Standby." (IJ)
16198: The CIA Counting nmbrs, E5, in AM at1200, also on 14577 kHz. (TY)
16270: VKF: poss Australian military 2333 MIL-STD 188-141A clg VKC JKC: poss Australian military. (MADX)
16280: OWG: unid Danish Military 1323 MIL-STD 188-141A clg OWD: unid Danish military. (MADX)
16322: SLHFM?S_CAlkhangelsk, MXC, in CW at 1112. (TY)
16326: ECVHF1/WUC6007: unid USACE Vessel/Site? 2206 MIL-STD 188-141A+ USB voice clg POAHF1/WUJ5: USACE Anchorage AK. Sent "Hello are you there" in ALE and called using "WU" callsigns. (MADX)
16326: MVDHF1: USACE Vicksburg (WUG) 1647 MIL-STD 188-141A w/sounding call. (MADX)
16341.3: prob MFA Algiers 1350 COQUELET-8 short burst . . . sounded like selcal mode repeated over and over. No tfc noted. (MADX)
16706.5: UNID Russian MV 1144 SITOR-A 100/170 w/ship's report in RR. No c/s seen, but msg signed by KM Bajdin. (MADX)
17170: CIO2, Israeli Mossad, E10, in USB at 1345, also on 12950, 14750 kHz. (TY)
17404: Unid: 2355 CW w/MIB. Weak but readable with EE storm warnings and wx info for an undetermined area. (MADX)
17410: EZI, Israeli Mossad, E10, in USB at 1200, also on 15980kHz. (TY)
17499: The Cherry Ripe nbrs, British MI6 and SIS, E3a, Guam, in USB at 1100, also on 23461 kHz. (TY)
17520: Unid British Mil 1648 PICCOLO encrypted. (MADX)
17550.9: RTFJ: French Forces Dakar 2220–2347 ARQ-E3 192/380 on ckg AFL w/several CdV and 5LG msgs. (MADX)
18296.7: RFQP: French Forces Djibouti 1952 ARQ-E3 100/380 w/CdV on ckt DJI. (MADX)
18415: 8BY, French Intelligence, Saint Assise near Paris, France. M16, sending "VVV 8BY followed by 3FG's separated by a slant bar" in CW at 0740. (TY)
18426: 4XZ,Israeli Navy, Haifa, M22, sending V-Mkr in CW at 1120. (TY)
18594: Unid U.S. customs 2218 USB w/"ok, let's go back to scan and I'll link with you."(MADX)
18666: SJ1: FBI, San Jose 2350 MIL-STD 188-141A clg CO1: FBI Columbia. (MADX)
18758: Unid: prob Algerian MFA 1959 MIL-STD 188-141A LSB w/text only msg: "CMD CRC 2574" sent twice. (MADX)
19131: ATLAS: DEA-contracted Comms Center Cedar Rapids 1653 USB wkg 933 w/pp to FLINT400. (MADX)
19425: Unid poss FAPSI 1314 FSK-MORSE w/fast letters. (MADX)
20048: SLHFM-S, Alkhangelsk, MXC, in CW at 0948. (TY)
20584: S32: Swedish Embassy, Kuwait City 1438 MIL-STD 188-141A w/sounding call. (MADX)
20602: ASI: poss British mil Ascension Island 0112 MIL-STD 188-141A w/sounding call. At 0119, LUA: poss British Contingent Luanda w/sounding call. (13/Oct/00) (MADX)
20631: 100455: C-5A #70-0455 1330 MIL-STD 188-141A clg HIK: Hickam AFB. (MADX)
20942: S31: Swedish Embassy, Algiers 1216 MIL-STD 188-141A wkg S00: MFA Stockholm w/ALE and 2400bd serial modem. (MADX)
20946: 8BY, French Intelligence, Saint Assise near Paris, France, M16 sending "VVV 8BY followed by 3FG's separated by a slant bar" in CW at 0740. (TY)
21866: The Cherry Ripe nmbrs, British MI6

and SIS, E3a, Guam, in USB at 1300, also on 17499 kHz. (TY)
23461: The Cherry Ripe nmbrs, British MI6 and SIS, E3a, Guam, in USB at 1000, also on 17499 kHz. (TY)
23526: S76: Swedish Embassy, Lagos 1321 MIL-STD 188-141A w/sounding call. At 1322, S78: Swedish Embassy Tunis w/sounding call. (MADX)
23529: S86: Swedish Embassy, Mexico City 1308 MIL-STD 188-141A wkg S91: Swedish Embassy Lima then into 2400bd serial modem. (MADX)
23584: S32: Swedish Embassy, Kuwait City 1316 MIL-STD 188-141A wkg unid then into 2400bd serial modem. (MADX)
23914: RFFEDC: French Army Bordeaux 1928 ARQ-E 72/390 w/5LG msg (201 groups) on ckt UAF. (MADX)
24644: The Cherry Ripe nbrs, British MI6 and SIS, E3a, Guam, in USB at 2200, also on 17499 kHz. (TY)
26134: 9MG, Georgetown R., Pinang Island, Malaysia, w/Sitor and CW ID at 0905. (TY)

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Thanks again to everyone for their excellent UTE contributions. Your efforts are appreciated!

Great Rewards!

As mentioned at the beginning of the column I would like to reward people for their contributions to the logs. So I will be providing a certificate suitable for framing for even one log. All I ask is that you indicate to me in your correspondence that you wish to have one and then provide me with your mailing address.

After that it gets to be fun. Once you have your certificate I will be keeping track of how many logs you do and I will be sending you endorsement stickers. These will be for 10, 25, 50, 75, and 100 logs. Anyone who reaches the 100-log level will be eligible for a book related to radio monitoring. I'll be providing a list of these later on.

If reader response proves to be good I may even be able to offer some equipment as a reward. Let's see what happens with the certificate first. I'll keep everyone posted on how things are progressing with this. Once things get going I'll refine how it is done. Remember this is not a contest, but rather a reward system.

Next month I will be looking at NASA and the frequencies that you can monitor when a space launch or mission takes place. With the new International Space Station now in operation we will be seeing a lot more activity taking place on the airwaves. There are a lot of interesting frequencies to monitor, but the trick is to know when and where to do so.

And don't forget to get your suggestions into me regarding the topics you would like to see covered here. There is a lot of action taking place on the air right now, particularly with the sunspot cycle being what it is, not to mention rapidly changing world events. We are in one of the best periods to be able to catch some rare DX, so let us know what is out there.

So until next month, may all of your monitoring sessions be successful and rewarding for you. ■

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THE LISTENING POST

What's Happening: International Shortwave Broadcasting Bands

High Adventure Ministries On From Liberia?

Christian Voice, active from Chile and Zambia, should be more or less fully functional from Darwin, Australia, by now. Initial frequencies used for testing included **6010, 9875, 13755, 13780, 15165, 15185, 17645, 17775** and **21680**.These are the obvious starting points if you're going to hunt for this one. Some of the initial programming will include feeds of their service to Africa. There are six high-power transmitters at Darwin and even though the service from this site is largely intended for Asia, we shouldn't have much trouble hearing this one in North America, once everything is up and running.

It's anybody's guess as to when it will happen, but look for High Adventure Ministries to open up a shortwave station in Liberia; replacing the one they had to close in Lebanon after things turned nasty there. Liberia seems a strange choice, given its two or three civil wars and other unrest over the past decades and the accompanying volatile, often-dangerous broadcasting scene there. It's chancy. If High Adventure does appear from Liberia, it'll use the same frequencies it used from Lebanon: **6280** and **11530**.

For those of you who like the challenge of hunting Latins on oddball frequencies on 6 MHz and below, here are some new **Peruvian** stations to chase: Radio La Voz de Abancay, Abancay, Apurimac Department, is active on **5235** with just 250 watts and runs from 0900 to 0000. Radio Uripa, Uripa in Chincheros province is on **6292** and a fraction. It operates from 1000–1600 and 1900–0100.

Radio Croatia has had to discontinue its relays from Julich, Germany, due lack of resources. This, so far as we know, does not affect Croatian Radio (which is a different operation), which continues active on this schedule: 0400–2100 on **6165** and **13830**; 0800–1500 on **7185**; and 0400–1730 on **7365** and **9830**.

Radio Prague, Czech Republic, is again using the Slovakian transmitter site at Rimavska Sobota, which they had to discontinue some years back due to budget constraints. In the interim they were restricted to their site at Litomysl. Both transmitter sites were once within the former Czechoslovakia.

UN Radio Shortwave frequencies/transmitters/schedules

Language	Transmitter Site	Frequency	Transmission Time (GMT/UTC)
French	Meyerton	6120kHz	17h00-17h15
French	Meyerton	21490kHz	17h00-17h15
French	Skelton	17580kHz	17h00-17h15
English	Wooferton	15265kHz	17h30-17h45
English	Meyerton	6125kHz	17h30-17h45
English	Ascension	17710kHz	17h30-17h45
Arabic	Skelton	17565kHz	18h30-18h45
Arabic	Wooferton	15265kHz	18h30-18h45

Updated 03/10/00

UN Radio is back on shortwave after a long absence. Here's their current schedule.

The single sideband broadcasts of Rikisutvarpid, Iceland's official radio, are always a fun target. And where else are you going to here what Icelandic sounds like? Here's the latest schedule: to Europe **15775** at 1215–1300 and **13865** from 1755-1825. To North America from 1410–1440 and 1835–1905 on **13860** and 2300–2330 on **11402**.

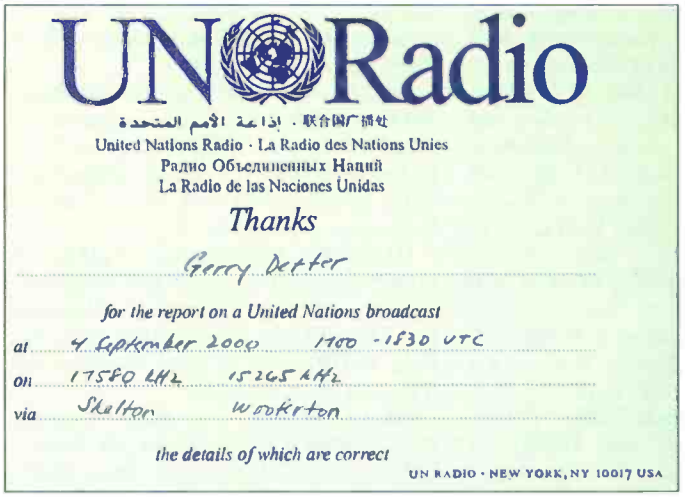
This month's book winner is Stewart MacKenzie of Huntington Beach, California, a longtime DXer and SWL who is well known for his many years as head honcho of the American Shortwave Listener's Club. We're delighted to have Stewart as a regular "Listening Post" reporter! Stewart has received a 2001 edition of *Passport to World Band Radio* from CRB Books — the Radio and Electronics Hobby Bookstore. They offer more radio and related titles than you probably have shelf space for! Check their website at www.crbbooks.com or call 516-543-9169 to get a catalog. You can also request a catalog via regular mail by writing to CRB Books, P.O. Box 25, Commack, NY 11725.

Photos, illustrations, copies, pictures, QSLs, photocopies, — no matter what you call 'em — we need 'em! Whether the subject is a station transmitter, building, antenna, studio, employee, operating schedule or even (gasp!) a picture of you and your listening post, it's more than welcome here. And the more the merrier!

Of course, your reception logs are always wanted, too. We make every effort to use most, if not all, of the logs sent in, so don't be shy or feel yours aren't good enough. They are! Just be sure to list your logs by country and leave enough space between them so we can navigate scissors easily. Logs are cut into strips and then sorted by country, so be sure to use only one side of the paper or some of your logs won't survive. Also include your last name and state abbreviation after each logging. As always, thanks so much for your continued interest and participation.

Here are this month's logs. All times are in UTC, which is five hours ahead of

BY GERRY L. DEXTER



UN Radio

United Nations Radio · La Radio des Nations Unies
Радио Объединенных Наций
La Radio de las Naciones Unidas

Thanks

Gerry Dexter

for the report on a United Nations broadcast

at 4 September 2000 1700 - 1730 UTC

on 17580 kHz 15265 kHz

via Skelton Woofferton

the details of which are correct

UN RADIO · NEW YORK, NY 10017 USA

UN Radio's QSL is blue lettering on light green stock.

One of many QSL styles issued by Radio Taipei International. (Thanks David Weronka, NC)

EST, i.e.0000 UTC equals 7 p.m. EST, 6 p.m. CST, 5 p.m. MST, and 4 p.m. PST. Double capital letters are language abbreviations (FF = French, AA = Arabic, SS = Spanish, etc.). If no language abbreviation is included the broadcast is assumed to have been in English.

ALASKA — KNLS, **12105** in RR with IS, ID at 1702. (Miller, WA)

ALBANIA — Radio Tirana, **7160** at 0147 with domestic news, music. Also 0230 with schedule, frequencies, ID, news. (Burrow, WA) 0240 with variety of topics. (Weronka, NC) 0235 with economic news. **7260** from 0220. "This is Radio Tirana" at 0230. (Brossell, WI)

ALGERIA — Radio Algiers Int'l., **15160** at 2003 with music, ID, news. (Jeffery, NY)

ARGENTINA — Radio Argentina al Exterior, **11709** at 0203 with mailing and Internet addresses, FAX numbers for reception reports, QSL policies, and into news. (Burrow, WA)

ASCENSION ISLAND — Radio Japan via Ascension, **15220** at 2205 and 2250 in JJ. (MacKenzie, CA) BBC relay, **6005** with English by Radio at 0718. Off at 0719. **15400** to West and Central Africa at 1957 with "Talkback" and "Newshour." **21630** at 1815 in FF. (Jeffery, NY) **17830** at 1950. (MacKenzie, CA)

AUSTRALIA — Radio Australia, **5995//6080** heard at 1505 with news. (Burrow, WA) **6020** with "In Conversation" (with Robin Williams) at 1140. Also at 1220 with country/western. (Brossell, WI) **9580** at 1118 with news. (Jeffery, NY) 1631. (Miller, WA) **21740** at 2155. (Watts, KY)

AUSTRIA — Radio Austria Int'l., **9655** at 0120 in GG. (Newbury, NE) **15240** at 1617 in GG. (Brossell, WI) 1630 in EE. (Burrow, WA)

BELGIUM — Radio Vlaanderen Int'l., **15565** via Bonaire 0400 with news of Belgium, current events. (Burrow, WA) 2230 with "This is Brussels Calling." (Brossell, WI) 2231. (Miller, WA)

BRAZIL — Radio Aparecida, **9630.1** with nice music, canned ID at 0006, talks in PP, echo effects. (Montgomery, PA) Radio Gaucha, **11915** at 0240 in PP with mostly music. (Brossell, WI)

BULGARIA — Radio Bulgaria, **9400** at 0210, **9475** at 1624 and **11700** at 2350, all EE. (Miller, WA) **9400//11700** at 0245. "Time Out for Music" and "Bulgaria Calling." Also **17500** in SS and 1600. (Burrow, WA) **11700** at 0205. (Brossell, WI) **9400//11700** at 0235. **9400//11710** at 0125. (Newbury, NE)

CANADA — Radio Japan NHK relay, at 0037 with various news and feature items. (Newbury, NE) CBC Northern Service, **9625** with "The Arts Today" at 0222. (Miller, WA) Radio Canada Int'l., **5960** at 0140 and **15325** at 2045. (Newbury, NE) **9640** at 1259 with news items. (Weronka, NC) **11855** at 1230 in FF, **17870** at 2036. (Northrup, MO) **21570** in FF at 1809. (Jeffery, NY)

CHILE — Voz Cristiana, **15375** with religious talks in SS at 0220. (Brossell, WI) 2013 in SS. (Miller, WA) **21550** at 1500 in SS. (Newbury, NE)

CHINA — China Radio Int'l., **7165** at 0525. Off in mid-sentence at 0530. (Montgomery, PA) **7405** at 1404 with news. **9570** via Cuba at 0135. (Newbury, NE) **9670** at 1700, **9870** at 1623. (Miller, WA) **7820** in RR at 1304, **11675** to SE Asia at 1250, **11980** at 1242. (Becker, WA) **11825** in CC at 1200 and **11875** in CC at 1210. (Northrup, MO) **9690** (via Spain) at 0340. (Weronka, NC) **15440** in CC at 2100. (MacKenzie, CA) Central People's Broadcasting Station, **11630** in CC at 1200. (Brossell, WI)

COLOMBIA — Ecos del Atrato, **5020** at 0230 in SS with many mentions of Colombia and ID as "Radio Atrato." ID again at 0238. (Montgomery, PA) 0315 with news and promos for "Radionet," promos, commercials, jingles, mentions of Colombia. (Alexander, PA) Radio Nacional de Colombia, **9635** in SS at 0221. (Miller, WA)

COSTA RICA — RFPI on new **6969** at 0420. Complete ID at 0431 with phone numbers and address. (Montgomery, PA) **15050** with full ID at 0227. (Brossell, WI) **21815** USB at 1834. (Jeffery, NY) 1925 and 2225. (MacKenzie, CA)

CROATIA — Croatian Radio, **9925** at 0108. (Newbury, NE)

CUBA — Radio Rebelde, **5025** in SS with music and talks at 0215. (Brossell, WI) Radio Havana Cuba, **6000** at 0400. (Weronka, NC) **9820** at 0325, **13660** USB at 2110. (MacKenzie, CA) **11760** in SS at 1205. (Northrup, MO)

CZECH REPUBLIC — Radio Prague, **7345** at 0124 with discussion on the Internet. (Newbury, NE) **15545** at 2140 with book review. (Burrow, WA) **15549** with tri-lingual ID at 2228. (Miller, WA) **21745** at 1141 with ID, and sports. (Montgomery, PA)

DENMARK — Radio Denmark, **15735** via Norway in DD at 1530. (Miller, WA) **17505** via Norway at 1530. (Burrow, WA)

DOMINICAN REPUBLIC — Radio Barahona, **4911.5v**, 0105 with baseball, commercials, jingles, ID. Strong but very distorted. (Alexander, PA) Radio Villa (presumed), **4960** in SS at 2350 with music. (Jeffery, NY)

ECUADOR — HCJB, **9745** at 0110 with "DX Party Line." (Newbury, NE) **11960** in SS at 1200 and **12005** in EE at 1200. (Northrup, MO) **15115** at 0110 with "DX Party Line." (MacKenzie, CA) 0149. (Wilden, IN) **17660** at 1950 with "Inside HCJB." Radio Buen Pastor, **4814** at 2329 in SS with music, talk by man, more music. (Jeffery, NY) *(That's a very rare one — Ed.)*

EGYPT — Radio Cairo, **9900** at 0116. Two men talking and AA pops. Garbled. (Newbury, NE) 0230. Poor signal and modulation with a lot of splatter. (Brossell, WI) **12050** to North America at 0345 with AA music. (Becker, WA) 0505 in AA. (MacKenzie, CA) 2235 in AA. (Miller, WA)

ENGLAND — World Beacon via Merlin transmitters on **17665** at

UN Secretary General Kofi Annan is interviewed on UN Radio.

1815. Parallel 15558. (Watts, KY) BBC, **6005** via Ascension at 0403, **15310** via Oman at 1507, and **17830** via Ascension at 2032. (Miller, WA) **9515** (via Canada) at 1215, **9740** (via Singapore) at 1210 and **11835** at 1210. (Northrup, MO) **12095** at 0450. **15400** at 2153. (MacKenzie, CA) Wales Radio Int'l., via Merlin transmitter, **9795** at 0216. Off at 0230. (Miller, WA)

EQUATORIAL GUINEA — Radio Africa, **15185** at 2223 with religious programming, ID as Radio Africa, more religious programming. (MacKenzie, CA)

FINLAND — YLE/Radio Finland, **13770** at 0010 with Finnish items. (Newbury, NE) **15400** at 1437 in Finnish. (Miller, WA)

FRANCE — Radio France Int'l., **15015** monitored at 1600. *(That has to be some sort of frequency punch-up error — Ed.)* Also **12015** at 1605 *(via Gabon — Ed.)* 1559 with IS, news. Also **15440** via Japan at 1522 in unidentified language. (Miller, WA) **15210** at 1601 with news. (Newbury, NE) 1617 with news, ID, sports. (Jeffery, NY) **15210//17850** at 1611. (Burrow, WA)

GABON — Radio Japan relay, **15355** in SS to Europe at 0509. (Becker, WA) Africa Number One, **9580** in FF at 2133. (Miller, WA)

GERMANY — Deutsche Welle, **11795** in GG at 0640. (Newbury, NE) **11810** *(via Canada — Ed.)* at 0300 with "Newslink." (Weronka, NC) **15275** in GG at 0154 *(via Rwanda — Ed.)* (Wilden, IN) 1453 in GG. (Newbury, NE) **17810** at 2123 via Antigua. (Miller, WA)

GREECE — Voice of Greece, **9420** in GG at 0330. (Weronka, NC) 0211. Also **15455** via Delano at 1524, **17565** via Delano at 2116 and **17705** via Delano at 1955, all GG. (Miller, WA) **15455** at 1619 in EE. (Newbury, NE) **15630** in GG at 0020 and **17705** via Delano in GG at 1955. (MacKenzie, CA) Voice of America relay, **15355** at 1723 with "News Now" format. (Jeffery, NY)

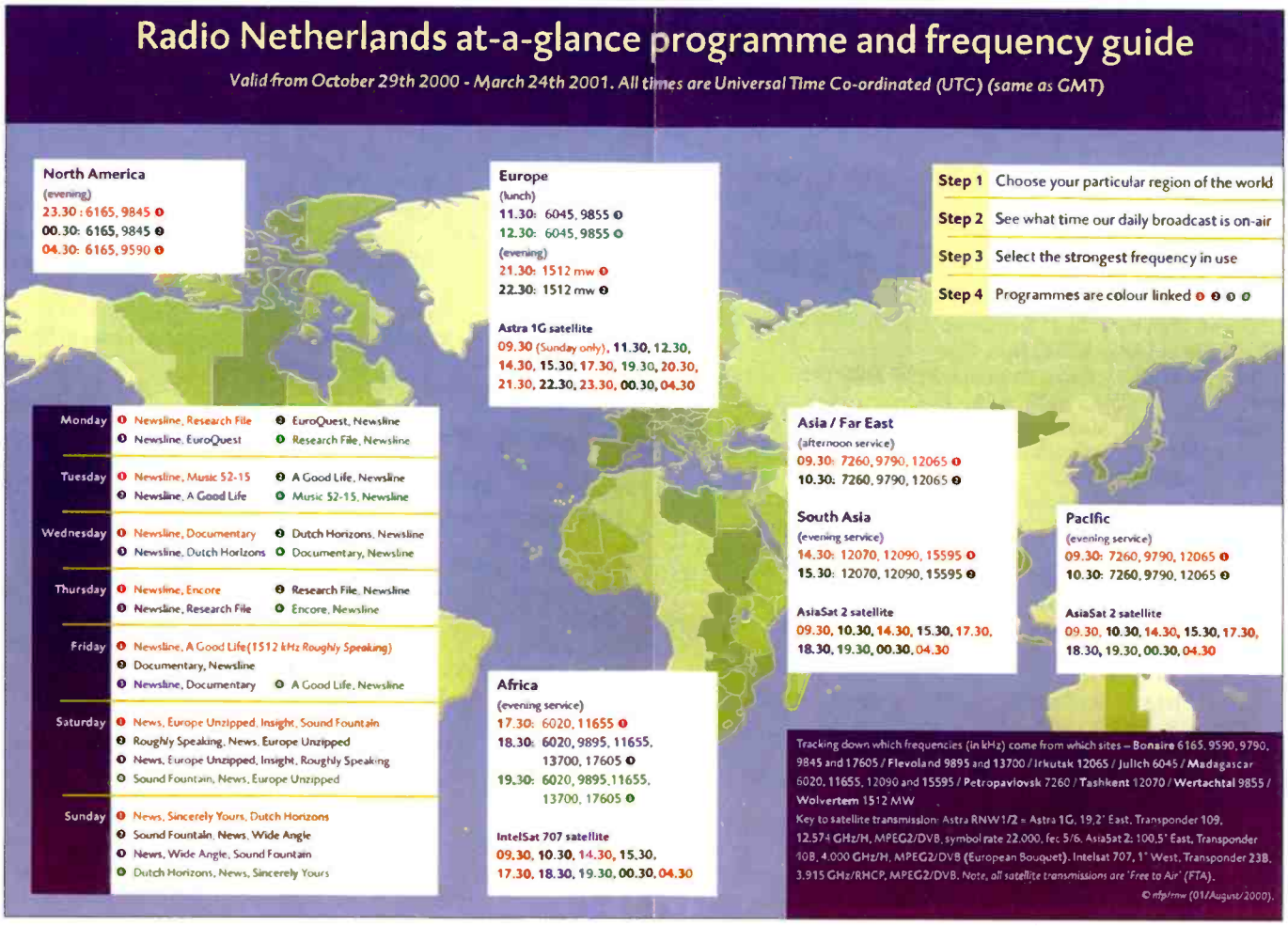
GUAM — KTWR/Trans World Radio, **15195** at 2220 with sermon in Indonesian. (MacKenzie, CA) KSDA/Adventist World Radio, **11560** with religious programming at 1715. (Miller, WA) **15225** at 2210 in Indonesian. (MacKenzie, CA)

GUINEA — RTV Guinenne, **7125** at 2340 to 0000 close. Afro-pops, FF talk, mentions of Conakry, ID, off with anthem. (Alexander, PA) 2354–0000 in FF with music. (Ziegner, MA) **15310** in FF at 1729. (Jeffery, NY) *(Listed as irregular – Ed.)*

GUATEMALA — Radio Cultural/TGNA, **3300** with music and talk in SS at 0235. (Brossell, WI) Radio K'ekchi, **4845** at 1130 with music and clear ID in SS. (Brossell, WI) Radio Verdad, **4452.48** at 0230 to 0305 close. Mostly continuous religious music, SS talks. Off with long national anthem. (Alexander, PA) Radio Tezulutlan, **4835** at 0346 in SS. (Miller, WA)

HAWAII — KWHR/World Harvest Radio, **17510** at 2129 in CC with ID in CC/EE, continued in CC. (MacKenzie, CA)

HONDURAS — La Voz Evangelica, **4820**



The current time/frequency schedule for broadcasts from Radio Netherlands.

with SS religious broadcast monitored at 0344. (Miller, WA)

HUNGARY — Radio Budapest, **9835** at 0227 with multi-lingual ID, news. (Burrow, WA) 0243 on banking and privatization. (Newbury, NE) **17690** with news in HH at 2003. (Miller, WA)

INDIA — All India Radio, **7410** at 2214 with news in EE. 2219 ID "This is a broadcast from All India Radio." Strong but heavy hum, overmodulated and adjacent channel QRM. (Montgomery, PA) **10330** in Hindi at 0149. (Miller, WA) **13750** at 1905 with print media commentaries. (Burrow, WA) **15140** at 1634 in GG to Eastern Europe. (Newbury, NE)

IRAN — Voice of the Islamic Republic of Iran, **15084** in presumed Farsi at 0225 with music and announcements. (Brossell, WI) **13615** at 0355 in AA. Rapidly fading out and gone by 0359. (Becker, WA) **13745** with EE ID at 2200, talk about policies of Iran, political commentary. Low modulation. (Montgomery, PA)

IRELAND — Radio Telefis Eireann, **13725** via Canada and **21630** via Ascension at 1830 with ID as "RTE Radio One," news and sports. (Burrow, WA)

ISRAEL — Kol Israel, **9390** in HH at 0414, **15640** in unid. language at 1527 and **17545** in HH at 1927. (Miller, WA) **9435** in EE at 0407 with news, review of morning papers, weather. Into HH and off at 0414. **15640//17535** at 0405 with news, sports, press review. (Burrow, WA) **9345//11585** at 0210 with American oldies. (Brossell, WI) **17535** with news and interviews in EE at 1600. (Howard, KS) **11959** in SS and off by 2002. (MacKenzie, CA) **17545** in HH at 1634. (Newbury, NE) 1724. (Becker, WA)

ITALY — RAI Int'l., **7150** monitored at 0425 with ID as "Italian Radio and Television Network," frequencies and news. (Burrow, WA) **9675** at 0118 with QRM from China Radio Int'l. (Miller, WA) 0145 and **//11800**. (Newbury, NE)

JAPAN — Radio Japan/NHK, **11815** in JJ at 1205. **11880** at 1145 in CC? No ID. (Northrup, MO) **11910** in JJ at 2000. (Miller, WA) **13650** in Thai at 2255 and **13680** in JJ at 2245. (MacKenzie, CA)

JORDAN — Radio Jordan, **11910** in AA at 0000 with music, news. (Ziegner, MA)

KUWAIT — Radio Kuwait, **11990** in EE monitored at 2030 with Western pops, ID with schedule and frequencies. Off at 2058. (Burrow, WA) **15110** at 1510 in AA with Mid-East music. (Miller, WA) **15495** at 0505 in AA, **//15505**. (Becker, WA) **2146** in EE with comments and AA music. (Mackenzie, CA) 2225. (Brossell, WI)

LIBYA — Radio Jamahiriya/Voice of Africa, **15435** with AA prayers at 1521. (Miller, WA) 1655 in AA. (Newbury, NE) **17725** at 1715 with call to prayers in progress. (Becker, WA) Voice of Africa EE times continue to vary from day to day. Noted on day from 1727–1732, 2038–2045. Next day it was 1740–1745 and 2041–2048. Good level but the usual muddy audio. (Alexander, PA) 2030 with EE ID as "Voice of Africa — Radio Jamahiriya." (Burrow, WA)

LITHUANIA — Radio Vilnius, **9855** (via Germany) at 0047 with "Crimes of Communism." (Ziegner, MA)

MALAWI — Radio Malawi, **3380** with man reading letters in EE and other languages, news items, African music at 0332. Off in mid-tune at 0335. (Montgomery, PA)

MALAYSIA — Radio Malaysia, **7295** at 1523 with "Jazz From Radio Four." 1640 with dedications to people in Kuala Lumpur. (Burrow, WA)

MALI — China Radio Int'l. relay, **15500** in GG at 2145. (MacKenzie, CA)

MALTA — Voice of the Mediterranean, **7150** *(via Italy — Ed.)* with various features. Goodbye and ID at 0628, guitar interlude and carrier off at 0630. (Montgomery, PA) **12060** via Russia in AA at 2100. (Ziegner, MA)

MAURITANIA — Radio Mauritanie, **4826.7v**. Off their nominal 4845 again and drifting up at the rate of about 20 Hertz per minute. Local AA music and talk, phone talk, Korean and off with anthem at 0101. (Alexander, PA) Tentative in AA at 1536. (Miller, WA)

MEXICO — Radio Mil, **6010** in SS at 0434. (Miller, WA) **0722** with music, ID, music. (Jeffery, NY) **1130** with clear ID at 1140. (Brossell, WI) Radio Educacion, **6185** in SS at 0409. (Miller, WA) **0723** with show tunes. (Newbury, NE) Radio Mexico Int'l., **9705** in SS at 0325 with Mexican pops. (Newbury, NE) SS ID at 0403. (Burrow, WA) **11770**, apparently news at 2352 in EE with Mexican music. (Miller, WA)

MOLDOVA — Voice of Russia relay, **7180** with news in EE at 0205 and 0230. (Brossell, WI)

MONGOLIA — Voice of Mongolia, **12085** at 1458 in EE with IS, multi-lingual ID, schedule and talk. (Burrow, WA)

MOROCCO — RTV Marocaine, **15345** in AA at 1613. (Newbury, NE) 1940. (Ziegner, MA) VOA relay, **7195** at 0540, **//6080**. (Newbury, NE) **9865** in AA at 0230. (Brossell, WI) **15445** at 2148. (MacKenzie, CA) **17895** at 1955, **//15580**. (Newbury, NE)

NEW ZEALAND — Radio New Zealand, **17675** at 0115 with "Cadenza" (Jeffery, NY) 0335. (Newbury, NE) 2000. (Miller, WA)

NETHERLANDS ANTILLES — Radio Netherlands Bonaire relay, **9590** in DD at 0417. **9845, //6165** in EE at 2358. (Miller, WA) **9845** at 2335. **15315** in DD at 2158. (MacKenzie, CA)

NICARAGUA — Radio Miskut, **5770** at 0000 with SS ballads, off at 0009 with national anthem, followed by presumed state anthem. (Alexander, PA)

NIGERIA — Voice of Nigeria, **7255** at 0528 with drums and pipe. (Newbury, NE) 0629 with news. (Miller, WA) 0641 "News About Nigeria." Cricket news at 0654. (Montgomery, PA) Radio Nigeria, Ibadan, **6049.9** at 2248 with ID, pop tunes. Good to 2300 when 6055 started splattering. (Montgomery, PA)

NORTH KOREA — Radio Pyongyang, **6574//9335//11710** at 1550 in EE. Revolutionary talks, ID, schedule, and frequencies. End of EE at 1555. (Burrow, WA)

Abbreviations Used in Listening Post

AA	Arabic
BC	Broadcasting
CC	Chinese
EE	English
FF	French
GG	German
ID	Identification
IS	Interval Signal
JJ	Japanese
mx	Music
NA	North America
nx	News
OM	Male
pgm	Program
PP	Portuguese
RR	Russian
rx	Religion/ious
SA	South America/n
SS	Spanish
UTC	Coordinated Universal Time (ex-GMT)
v	Frequency varies
w/	With
WX	Weather
YL	Female
//	Parallel Frequencies

RVI IN ENGLISH - BRUSSELS CALLING

As a public broadcaster we endeavour to carry objective news and extensive information on all aspects of our society.
Besides programmes in Dutch, we offer broadcasts in 3 other languages: English, French and German.

We can be heard on shortwave (see schedule) and WRN (World Radio Network), via medium wave and the Astra and HotBird satellites in Europe, and via cable-FM in Flanders. Brussels Calling is also available in RealAudio on the Internet :
via the website of RVI (www.rvi.be)

We keep closely in touch with all our listeners. All letters are answered.
We wish you happy listening and look forward to hearing from you.

UTC	DAYS	TARGET	kHz	mb	Via	DIR.
0400	daily	America (N,C,S)	11985	25	Bonaire	320°
0800	daily	Europe	5985	49	Jülich	295°
1130	daily	East Asia	9865	31	Petropavlovsk	244°
1230	daily	Europe	9925	31	Waver	157°/10°
1830	daily	Europe	5910	49	Waver	163°
		Europe (SW)	9925	31	Waver	197°
		Europe (SE) & Middle East	13710	21	Jülich	115°
		Europe	1512	198	Wolvertem	OMNI
2030	daily	Europe	1512	198	Wolvertem	OMNI
2230	daily	America (N,C,S)	13660	21	Bonaire	350°

Radio Vlaanderen International's current schedule of broadcasts from Belgium.

NORTHERN MARIANAS — VOA relay, Tinian, **13625** in CC at 2055. (MacKenzie, CA) KFBS/Far East Broadcasting Company, Saipan, **9465** with religious broadcast in RR at 1620. (Miller, WA)

PAKISTAN — Radio Pakistan, **11570** at 1557 in EE with music, pops and news at 1600. **15100** at 1601 with news, ID and off at 1615. (Burrow, WA) **17525** at 1100 with three pips, ID, news ending at 1104 and into language. (Montgomery, PA)

PAPUA NEW GUINEA — Radio East New Britain, **3385** at 1016 with talks and sports, pops. Does not appear to be **//4890**. (Montgomery, PA) NBC, **4890** at 1340 with EE music. (Miller, WA)

PERU — Radio San Francisco, **4750.1**, continuous Peruvian music, just above noise floor and falling off around 1035, shortly after tentative SS ID at 1031. (Montgomery, PA) La Voz del Campesino, **6956.55v** at 0004 with SS talk, IDs, Peruvian folk music, off at 0301 with national anthem. (Alexander, PA) Radiodifusora Huancabamba, **6536.1**, 0135 to 0201 close. SS talks, Peruvian folk music, ID and abrupt sign-off. (Alexander, PA) Radio Andina, **6673.06** at 0230 in SS with talk, Peruvian folk music, SS ballads, ID, and off with national anthem. (Alexander, PA) La Voz de la Selva, **4824** at 2334 in SS with talk by man, woman. (Jeffery, NY) Radio Cora, **4914** at 2345 with news in SS, ID, announcements. (Jeffery, NY)

PHILIPPINES — Radio Veritas Asia, **9505** with EE ID at 1227 and off 1228. (Brossell, WI) **9660** at 1445 in RR. (Newbury, NE) Voice of America relay, **9890** at 1150 with EE lessons. (Brossell, WI) **17820** at 2304 with news format. (Jeffery, NY) Radio Filipinas, **11720//15190//17720** at 1756 with phone-in program in possible Tagalog, with much hilarity. (Burrow, WA) **15190** at 1926. (Miller, WA) Far East Broadcasting Company, **9475** at 1205 in CC. (Northrup, MO) **15175** at 2235 in Indonesian. (Mackenzie, CA)

POLAND — Radio Maryja, **12010**, via Samara, Russia, in Polish. (Miller, WA)

PORTUGAL — RDP Int'l., **9715** with news in PP at 2300. (Ziegner, MA) **21655//21800** at 1822 with live sports event in PP. (Jeffery, NY)

PUERTO RICO — Armed Forces Radio, **6458.5** USB at 0120 with sports and public service announcement inserts. (Newbury, NE)

QATAR — Qatar Broadcasting Service, **17770** in AA at 0435 with news or announcements with drums between each. (Becker, WA) **17895** in AA at 1945. (MacKenzie, CA)

ROMANIA — Radio Romania Int'l., **9690** with EE at 2300–2359. The other frequencies in use were not audible, which seems to be a seasonal thing here in NE Ohio. (Silvi, OH) **11775** at 2354 with EE sign-off, **//9570**. (Miller, WA) **11940** at 0225 with music and features. (Weronka, NC) 0403 with news and commentary. (Burrow, WA)

RUSSIA — Voice of Russia, **7125** at 0320 with news and features. **7180** at 0300 with news. (Weronka, NC) **12000** at 0327. **15425** at 0353. (Miller, WA) **17595** at 0125 and **17690** at 0320. (Newbury, NE) Radio Rossi, **12045** in RR at 0455. (MacKenzie, CA)

RWANDA — Deutsche Welle relay, **15275** in GG with classical music at 2243. (Jeffery, NY)

SAO TOME — Voice of America relay, **6080** at 0540 with news. (Newbury, NE)

SAUDI ARABIA — Broadcasting Service of the Kingdom of Saudi Arabia, **15170** in AA at 0505 with call to prayer. **17760** in presumed Somali at 0439. (Becker, WA)

SEYCHELLES ISLANDS — Far East Broadcasting Assn., **15445** at 1500 with IS and sign-off. (Miller, WA) BBC relay, **6135** at 0210 with news reports. (Brossell, WI)

SINGAPORE — Radio Singapore, **6150** at 1253 with music program of local hits, **//9590**. (Newbury, NE) BBC relay, **7135** at 1213 with plug for BBC's website to close at 1215. (Brossell, WI) **15360** to South Asia at 0138. (Jeffery, NY)

SLOVAK REPUBLIC — Radio Slovakia Int'l., **9440** at 0115 with talks. **//5930, //5930, 7230**. (Newbury, NE) Adventist World Radio, **11600** with ID, into unid. Language at 0200. (Brossell, WI) **17525** with EE to India at 1430. (Watts, KY)

SOUTH AFRICA — South African Broadcasting Corp., **3320** at 0230 in presumed Afrikaans. (Brossell, WI) Channel Africa, **9525** at 1617 with news reports and financial markets. **17860** at 1709 with African news, ID. (Burrow, WA) Trans World Radio, **7215** at 0359 in unid language, hymn to 0400 close. (Miller, WA) Adventist World Radio, **12105** in Yoruba to Nigeria at 2035. (Watts, KYT)

SOUTH KOREA — Radio Korea Int'l., **5975** at 1554 with ID. **15575** at 0208 with news, ID, comment. (Burrow, WA) **11715** at 1030 with news. (Weronka, NC) **12010** at 1316 in KK. (Miller, WA)

SPAIN — Radio Exterior de Espana, **9540** in SS at 0258. (Weronka, NC) 9765 (Costa Rica) at 0245 with SS ID, talk. (Burrow, WA) **15110** (Costa Rica) at 2055 in SS with IS. (Miller, WA) **15160** with SS sports at 0230. (Brossell, WI) **17715** in SS at 1719. **21570, //21610, 21700** in SS at 1652. (Becker, WA) **21700** in SS at 1935. (MacKenzie, CA)

SRI LANKA — Sri Lanka Broadcasting Corp., **15425** with ID at 0100, frequencies. "Welcome to My World," greetings to various people. **//9770**. Six time pips and ID at bottom of the hour. (Montgomery, PA) 0146 with religious program, ID, news. (Jeffery, NY) Voice of America relay, **15250** at 0128 with news format. (Jeffery, NY)

SWEDEN — Radio Sweden, **9495** at 0216 in SS. (Miller, WA) 0235 with "Sixty Degrees North." (Burrow, WA) 0250 "Spectrum of the Arts." (Brossell, WI) 0253 with music. (Weronka, NC)

SWITZERLAND — Swiss Radio Int'l., **9900** *(9905? — Ed.)* at 0131 with jazz, E-mail, regular mail, and website URL. Into SS. (Wilden, IN)

SYRIA - Radio Damascus, **12085//13610** at 2011 with news, ID monitored at 2018 "Damascus Radio," music, political commentary, more IDs. (Burrow, WA) **13607** at 2023. (Ziegner, MA)

TAIWAN — Radio Taipei Int'l., **5950** via Florida, 0215 with "Jade Bells and Bamboo Pipes" program. 0750 with CC lesson. (Newbury, WA) 0710. (Jeffery, NY) **9610** (direct) at 1213 with suggestions on how to shop for the best shrimp salad. (Brossell, WI) **9695** (FL) with mail to 0129 close. (Wilden, IN) **15600** via FL. at 2135 in GG. (MacKenzie, CA) 2205. (Burrow, WA)

THAILAND — Radio Thailand, **11904** at 0135 with woman singing, unid. language. (Northrup, MO) **15395** at 0036 with news. (Ziegner, MA) Voice of America relay, **7260** at 1145 with EE lessons. (Brossell, WI)

TURKEY — Voice of Turkey, **11665** at 0310 with news. (Weronka, NC) 0343 with feature, music, and ending EE with schedule and frequencies, IS and off 0348. (Burrow, WA) **11885** in TT at 2234. (Miller, WA) **15350** in TT at 1210. (Brossell, WI) **15515** in GG at 1750. (Ziegner, MA) **17600** in TT at 0447. (Becker, WA)

UKRAINE — Radio Ukraine Int'l., **9640** at 0352 with music, ID, schedule and frequencies, net address, and off at 0359. (Burrow, WA)

UNITED ARAB EMIRATES — UAE Radio, Dubai, **13675//15395//21605** at 1618 with Western pops and ID as "Dubai — FM Number One," news, ID, and into AA at 1633.

This striking view is on the face of another Radio Taipei International QSL.

(Burrow, WA) **15400** in AA at 0235 with Koran recitations. (Brossell, WI) UAE Radio, Abu Dhabi, **15315** at 1505 with AA prayers. (Miller, WA)

VANUATU — Radio Vanuatu, **4960** with man in EE monitored at 1018, music at 1019, country/western, tentative ID at 1052. (Montgomery, PA)

VATICAN — Vatican Radio, **7305** in EE at 0250. (Weronka, NC) **9605** at 0352. (Newbury, NE) **13765** at 1550. (Burrow, WA)

VIETNAM — Voice of Vietnam, **9797** (via Canada) news in SS at 0606. (Miller, WA) 0348. (Burrow, WA)

ZAMBIA — Christian Voice, **4965** at 2245 to past 0150, EE talks, ID 2250, variety of religious music and local African choral music. (Alexander, PA)

And that empties the in-basket for this month. A mighty round of applause for the good folks who took the trouble to do the good thing this month: Robert Brossell, Pewaukee, Wisconsin; David Weronka, Benson, North Carolina; Michael Miller, Issaquah, Washington; Bruce Burrow, Snoqualmie, Washington; Mark Northrup, Gladstone, Missouri; Dave Jeffery, Niagara Falls, New York; R.C. Watts, Louisville, Kentucky; Pete Becker, Clarkson, Washington; Tricia Ziegner, Westford, Massachusetts; Sue Wilden, Nobelsville, Indiana; Lee Silvi, Mentor, Ohio; Stewart MacKenzie, Huntington Beach, California; Brian Alexander, Mechanicsburg, Pennsylvania; Lee Howard, Galena, Kansas; Ed Newbury, Kimball, Nebraska, and Robert Montgomery, Levittown, Pennsylvania. (*Iowa, where were you?*) Thanks to each one of you!

Until next month, good listening! ■

Tuning In

(from page 4)

ensure privacy for law enforcement. As we've said before, we pay the salaries, we live in the community, and we have a right to know what's going on around us. Anything less than openness, on the airwaves and otherwise, only feeds the vicious cycle of mistrust. And we all know what happens in American cities and towns when law enforcement and the public are at odds.

Speaking Of Mistrust

Honestly I get so tired of hearing the ARRL — The Aging Ranting Radio League — beat up on CBers. We all know that back in August the FCC denied Alan Dixon's petition (RM-9807) requesting the FCC to remove the 155-mile communications limit on 11-meters. And we all know that Alan has again petitioned the FCC asking for a Partial Reconsidera-tion regarding the distance of communications as it relates to emergencies. That aside, as this is being written, I received a copy of the November *QST*, and there it is on page 73 — more ranting about RM-9807 from the ARRL.

We've spelled it out recently for them about how they've got their nose where it doesn't belong — in CBer's business. I say again: the ARRL is out of their league talking about CB operators when they can't seemingly fix their own side of the radio house. They continue to fly high the FCC's flawed decision in denying RM-9807 as if it's Connecticut's new state flag, saying "The FCC agreed with the ARRL and said it did not intend to create a service paralleling the Amateur Service when it authorized the Citizens Radio Service." Hallelujah, and Praise Be Unto Newington? Hardly. Get real.

"The ARRL is out of their league talking about CB operators when they can't seemingly fix their own side of the radio house."

For those at the ARRL and FCC on the slower, "local" brain train, this is *precisely* what the FCC did, and now they have to deal with the situation at hand and answer an intelligent public's questions, or ignore CB. Given the FCC's track record, it's likely they'll choose the road with least resistance. ■

WILM DX Test

Allan Loudell, WILM Program Manager informs us that Delaware's only news station will be conducting another DX test the first weekend in February: Sunday morning February 4, 2001 from 12:06 a.m. until 2 a.m. Eastern Standard Time (0506–0700 UTC) on their graveyard frequency **1450 kHz**. In the past WILM has received confirmable reception reports from as far away as Quebec, Ontario, Michigan, Indiana, Alabama, and the Caribbean nation of Jamaica.

The station operates 1,000 watt day and night on their 1450 kHz graveyard frequency. In the U.S. these graveyard frequencies include dozens of stations. Except for reception of a local station within about 10 to 15 miles, the usual result at night is an often-unintelligible muddle of signals, although one station or another may fade up from time to time. Trouble is — without a DX test — it's often difficult to positively ID that distant station on a graveyard channel!

WILM's DX test will consist of Morse Code IDs, sirens, repetitive voice IDs, and certain readily identifiable songs with elements, which could conceivably pierce through the interference. WILM 1450 will confirm all correct reception reports with a new station QSL, with full verification details, commemorating the station's Quarter Century anniversary as an all-news and information station. You will also receive a personal letter of verification and other goodies. Program details should include at least a few elements with exact times. Send your report to Allan R. Loudell, Program Manager, 1450 WILM Newsradio, 1215 French Street, Wilmington, DE 19801. Return postage is appreciated.

WILM is a CBS and Wall Street Journal affiliate; a Westwood One affiliate overnight; and rebroadcasts Deutsche Welle weekday nights from 8–8:30 p.m.

THE PIRATE'S DEN

Focus On Free Radio Broadcasting

Ground Zero Radio: From A Missile Silo?

Dear Screamers,
Just a quick notice to let you know that The Scream of the Butterfly will be doing a SPECIAL test transmission on WBCQ, "The Planet", 7415 kHz on Saturday, September 23, 4pm EDT (2000 UTC). We will be issuing a ONE-TIME only QSL card for this broadcast, and giving away two Doors videos to two listeners who submit taped reception reports. Hope you can tune in!

JR. 85 - EEK!

JohnnyRockin'
The Scream of the Butterfly

P.S. We hope to add WBCQ to our schedule permanently at some future date, but our weekly broadcasts will continue on WRMI, 7385 kHz, Sundays, 0400 UTC (0500 after Daylight Savings Time ends.)

Tim Taylor got this QSL from Scream of the Butterfly.

News From "Scream Of The Butterfly"

The Scream announces it has joined the regular program lineup on WBCQ, "The Planet." Their first broadcast was November 3 at 7 p.m. Eastern on **7415 kHz.** According to the Scream of the Butterfly note, they'll air every week at that time (Sundays, 12 midnight Eastern Time, 0400 UTC, 0500 after the return to Standard Time). The WRMI broadcasts have been sponsored by Universal Radio for more than a year.

Their release said, "We believe this additional broadcast will give our listeners throughout North America the opportunity to hear the Scream with a good signal at the most convenient time, regardless of their location. WBCQ's signal will also give European DXers a chance to receive The Scream at a reasonable hour when conditions permit." They continued, "Our policy of occasional European relays via Radio 510/IRRS in Milan, Italy, will also continue and we QSL 100 percent of the postal reception reports we receive. Our mailing address is The Scream of the Butterfly, P.O. Box 1994, Rancho Cordova, CA 95741-1994 USA. Please enclose $1 U.S. or two IRCs for postage and printing."

Signed, Johnny Rockin', The Scream of the Butterfly.

Pirate activity, or at least your receptions and reports, continue to be on the thin side. We will have checked some holidays off the calendar by the time you read this — and holidays always seem to generate lots of pirate activity — so perhaps there's an upsurge in the offing. Anyway, here's what the "in" basket has:

KIPM, 6955 USB from 0308 to 0326 with ID, mentions of Illuminati, Prima Materia. Gave the address for reception reports as P.O. Box 24, Lula, Georgia, 30544. Alan Maxwell went into one of his "stories" and then off the air at 0326. (Tim Taylor, PA) 6950 from 0345 tune-in to 0400, ID, mention of "ages of the illuminati." Great signal and modulation. The QSL address was given as Box 69, Elkhorn, NE 68022. The program was all talk about the illuminati and the New World order, with strange sounding background music. Mentioned they'd be on the air at the same time next week and also that they have a full-color QSL card. (Tim Nebout, La Marque, Texas) *(Glad to have you join us, Tim!)*

Radio.Com heard on 6955 USB from 0421 tune to 0429 with country-western music, ID and operator talking about having been on the air in the mid-'90s. Jazzy type music and then off the air at 0429. (Taylor, PA)

Radio Three, 6950 USB heard from 0114 to 0140, with several IDs, talk about free radio tactics, mention of the A*C*E bulletin and the address for subscriptions (P.O. Box 1, Belfast, NY 17411. Statio also aired a mention of Sal Ammoniac. Then a song and ID at 0140 when I tuned out. (Taylor, PA)

Cell Phone Radio, 6950 at 0232 to 0239 with ID, explicit sexual conversation over a cellular phone frequency. Possibly a similar conversation at 0239. Suddenly off at 0239. (Taylor, PA)

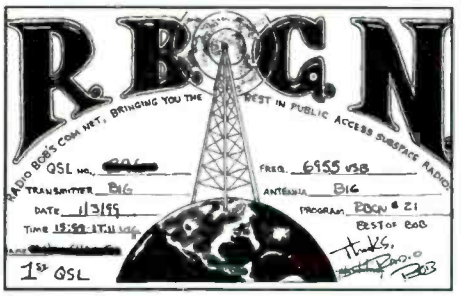
WHYP, 6955 USB from 2245 to 2253. James Brownyard with his Northeast weather report and Beastie Boys music. Then a parody of the song "When I'm 54." Off at 2253. (Taylor, PA)

Ground Zero Radio, 6950 USB from 0101 to 0112 with ID, said the broadcast was being transmitted from a missile silo. Then music by AC/DC and mention of "This is pirate radio." There was a discussion about Sky Tel Communications and the announcer said there could be a mail drop soon. Also played some G & R music. Off at 0112. (Taylor, PA)

Psycho Radio, 6955 USB from 0158 to 0209. (This may also be spelled "Pycko" Radio) Played a tune called "The Sprit of Radio" by Rush. Played "Communication Breakdown." Also a mention of "This is Dead End Radio." Then a grungy rock tune. Tune out at 0209. (Taylor, PA) 6955 at 1356–1441 with many IDs and music. Also heard from 0131 to past 0147. And it was heard another time from 0320 to past 0353. (Silvi, OH)

Radio Free Euphoria, 6955 USB from 0615 tune with ID, Cheech and Chong song as well as a comedy sketch by them. Song "What if God Was One of Us?" Mention of station ID mailing address given (P.O. Box 1, Belfast, NY 14711) and off at 0645. (Taylor, PA)

BY EDWARD TEACH



Tim recently had a possible log on RBCN.

Voice of Shortwave Radio, 6955 from 2328 to 2339, with a parody song. Off suddenly at 2339 or 2340. Good signal but the audio suffered — maybe transmitter problems? (Taylor, PA)

Possible RBCN, 6955 USB at 0051 — 0058 with both Jimmy the Weasel and John T. Arthur mentioned. Song parody called "Hotel JTA." Off at 0058.

Radio Neptune Universal Service, 6955 USB to sign-off at 0505. Programming included "Going Mobile" by The Who and "English Boy" by Pete Townshend, the latter played for a Steve Kent (?) in the United Kingdom and "hopefully we can get him to produce a couple of shows for us here and we'll shoot 'em out over the transmitter." Mail drop P.O. Box 109, Blue Ridge Summit, PA 17214 (Jon Heckman — no state noted) (Welcome, Jon!)

Anarchy 1? or Fake Radio 3? 6955 at 0300 with mentions of Radio 3 and Radio Twee but also mention of what sounded like "You are tuned to Anarchy 1 . . . " (Silvi, OH)

Unidentified — 6955 at 2130 to 2142 sign-off, sounded like announcer "Exotica 2000?" at sign-off. Rooster crowing. ID just before sign-off was preceded by a gong. (Silvi, OH)

Unidentified — 6955 from 0140 to 0154 with a mention of 92.5 FM with oldies, song "It's the End of the World" by REM and announcer said "I'll play any music I want to play." Then "When I Saw Her Standing There" by the Beatles and "Let's Go To the Hop." Off at 0154. (Taylor, PA)

I will include unidentifieds when there's space and when there are enough details to differentiate the station from something else — i.e. partial IDs, announcer names, song titles, etc.

And that'll do it for this month. Please continue to let me know what pirates you're picking up, either via letter to my attention *Pop'Comm's* Hicksville HQ or to head editor Harold Ort at Popularcom@ aol.com. I look forward to hearing from you! ■

ADVERTISERS' INDEX

THE LOOSE CONNECTION

Radio Communications Humor

Bill's *Unpopular* Communications

My computer is down. I've got no E-mail and 'til it's restored, I'll be holding my breath. Yeah, I've got a ham license, and a CB, and a pair of FRS transceivers. Not one of them will reach our fearless editor reliably and allow me to submit this column — at least not in a way that Dear "Uncle Charlie" would endorse. Besides, our fearless editor, Harold "What's this knob do?" Ort isn't quite up to my code speed, and I don't do packet, so if you find this page hastily glued into the back of the magazine, it's because it arrived late.

Actually, my computer is "up and running." It's my Internet Service Provider, (DROP.COM) who just realized that my prepaid account has expired. It's not as if their service is superior to anyone else, but I stayed with them because I paid a few years in advance because of a deal they offered "way back when" to raise some quick cash. I guess it didn't work out for them, because the company who got my money "sold me" twice since then. This latest provider has been "down" so much that it took me a month to realize they'd closed my account. They'd prefer me paying for next year in advance. I'd prefer a provider whose bandwidth wasn't a function of the relative humidity.

During this little mid-life crisis (I have so many) I pondered the cost of "things," such as my monthly internet access bill, ham radio equipment, computers, and electronic gadgets in general. It has been said, and rightly so, that if the automobile industry had kept up with the electronics industry, a Maseratti would cost about fifty cents and get 1,000 miles to the gallon. Even in my present job, I see "old" equipment like an electromechanically tuned C-band satellite receiver, which will cost $5,000 to repair, but only $2,000 thousand to replace. You young folks who are getting ready for me to say "Why, back when I was a kid . . . " will have to bear with me or turn to the technical pages while I reminisce with our "senior readers" for a while.

When CB radio first appeared, and I wore out the pages in my Allied Catalog, I pondered the prices intently. They were several weeks' take-home pay. I wondered if I could afford six channels with crystals, or maybe we should just settle for two or three. I never did buy my own back then, but my dad watched as the Laffin Yet Comstat 25 became almost affordable as CB radio sales set new records every month. Today, I can find brand new CB radios for 29 bucks, and — while they won't heat your living room — the darned things work pretty well! At this rate, I expect that by 2009 (about August, I think) CB radios will sell for a buck-fifty. Of course, bread will be four or five dollars a loaf by then.

As my youth zipped by (about 1970), four-function electronic calculators appeared on the market for $199. The displays were either green fluorescent, or red LED. They ate batteries, had bad circuit boards, failed frequently, but they could fit in a (large) shirt pocket and could multiply and divide with the stroke of a single key! Prior to that, there was no "consumer-grade" adding machine, which could multiply and divide, except via tedious addition or subtraction. I had drooled over these mathematical marvels for weeks, and eventually asked my long-time friend and office-supply maven Jimmy North if he could get me a deal on a four-function machine through his store.

"Sure, but I won't do it!" he said. He saw my puzzled look and added, "Mark my words — twelve months from today, they'll be selling for $4.99 and have 20 functions! I won't sell one to anyone I'll run into on the street next year."

One year later, I was working in the developing "electronics" department of a discount store when our sale items came in for the Christmas season. Jimmy had been right! A 20-function "scientific" calculator with a holiday sale price of $4.99! Jimmy's wisdom guides me today in a simple phrase he muttered while he re-assembled a manual typewriter while I looked on. "Never," he said, "tighten the first screw in a sheet-metal case until the last screw is started." He said that while loosening about 20 screws so that he could get the holes to line up, so that he could start the last screw. On-the-spot logic.

How many of you remember the price of VCRs when they first hit the market? Yeah, a dog by today's standards cost about $1200. Today, you can get a "baker's dozen" for that kind of money.

Solid state walkie-talkies? Remember $39.95 each for *100mw* handies in the '60s? That was a week at minimum wage for some folks. Today, just check the toy department in any discount store.

And here's a scary thought. Anyone still have a Sinclair ZX-80 computer? Membrane keyboard, 16K plug-in RAM. Yes, I said "K." That was a $400 package once, but I got mine for $14.99 as the computer world grew exponentially — as it's still doing today. While I tried desperately to type on that thing, I browsed some aftermarket accessories designed specifically for that little wonder. Hold on to your Gigabits now — there was a 1meg outboard hard drive — yes, ONE MEG — for just $1999. What a steal.

So today, I have moved forward, embracing change, loving technology, and typing happily on my recently acquired Pentium 100 with Windows 95! No more second rate systems for this guy, no sir.

I still have my trusty 486-66, but alas, I must find a way to load my old pal, WordPerfect 5.1 (be still my heart — I remember upgrading from 5.0), into my Pentium, because for a touch-typist, it's still the fastest word processor going. I still use it on a 286 laptop, and because it runs in DOS, it's faster than any whizzy-wig, or fizzy-gig, or thingamajig, and I don't have to stop typing to look for my mouse!

Pretty soon I'll be upgrading my printer to a new (well, used) 24-pin model with "near-letter-quality" print. Won't Harold be surprised! Now if I can just find an Internet provider for $7.50 a month. . . ■

BY BILL PRICE, N3AVY

UTC	Freq.	Station/Country	Notes
0530	5047	Radio Lome, Togo	FF
0530	7195	Voice of America relay, Sao Tome	
0600	7150	Voice of Mediterranean, Malta, via Italy	
0600	7210	ORTB, Benin	FF
0700	6070	CFRX, relay CFRB, Canada	
0700	6185	Radio Educacion, Mexico	SS
0700	7110	RTV Tunisienne, Tunisia	AA
0730	3290	Radio Guyana	
0730	7120	Italian Radio Relay Service	
0730	9870	Trans World Radio, Monaco	
0800	9965	KHBN/High Adventure Ministries, Palau	
0900	6574	Radio Pyongyang, North Korea	KK
1000	3385	Radio East New Britain, Papua New Guinea	
1000	4960	Radio Vanuatu, Vanuatu	
1000	6135	Radio Santa Cruz, Bolivia	SS
1000	12020	Voice of Vietnam	
1030	4750	Radio San Francisco, Peru	SS
1030	11715	Radio Korea Int'l, S. Korea	
1100	17525	Radio Pakistan	EE, other
1130	4890	National Broadcasting Corp., Papua New Guinea	
1130	7260	VOA Relay, Thailand	
1130	9595	Radio Tampa, Japan	JJ
1130	11590	Kazak radio	vern.
1130	11904	Radio Thailand	unid
1200	6150	Radio Singapore	
1200	7135	BBC, via Singapore	
1200	9475	Far East Bc. Corp., Philippines	CC
1200	9505	Radio Veritas Asia, Philippines	
1200	9525	Voice of Indonesia	II
1200	9625	CBC Northern Service, Canada	
1200	11630	Central Peoples Broadcasting Station, China	CC
1200	11650	Radio Australia	
1200	11815	Radio Japan/NHK	JJ
1200	12085	Voice of Mongolia	unid
1200	15350	Voice of Turkey	TT
1230	9610	Radio Taipei Int'l	
1230	11855	Radio Canada Int'l	FF
1230	11980	China Radio Int'l	
1300	9640	Radio Canada Int'l	
1300	12010	Radio Korea Int'l, S. Korea	KK
1330	13640	Radio Sultanate of Oman	AA
1330	15295	Radio Tashkent, Uzbekistan	
1400	7405	China Radio Int'l	
1400	21620	Vatican Radio	
1430	11690	Radio Jordan	AA
1430	11730	RTV Tunisienne, Tunisia	AA
1430	15275	Voice of Germany	GG
1430	15400	Radio Finland Int'l	Finnish
1430	17525	Adventist World Radio, via Slovakia	
1445	9660	Radio Veritas Asia, Philippines	RR
1500	15110	Radio Kuwait	AA
1500	15310	BBC, via Oman	
1500	15315	UAE Radio, Abu Dhabi	AA
1500	15445	Far East Bc. Assn, Seychelles Islands	unid
1500	17770	Channel Africa	
1530	15735	Radio Denmark, via Norway	DD
1530	17505	Radio Denmark, via Norway	DD
1545	13765	Vatican Radio	
1600	9465	KFBS, Saipan	RR
1600	9525	Channel Africa, South Africa	
1600	12015	Radio France Int'l, via Gabon	
1600	15100	Radio Pakistan	
1600	15210	Radio France Int'l	
1600	15240	Radio Austria Int'l	GG
1600	21605	UAE Radio, Dubai	
1630	15140	All India Radio	GG
1630	17545	Kol Israel	HH
1700	11560	KFBA/Adventist World Radio, Guam	
1700	12105	KNLS, Alaska	RR
1700	17505	Radio Norway Int'l	NN
1700	17715	Radio Exterior de Espana, Spain	SS
1700	17860	Channel Africa, South Africa	
1730	15255	Voice of America relay, Greece	
1800	15345	RTV Marocaine, Morocco	AA
1800	15475	Africa Number One, Gabon	FF
1800	21655	RDP Int'l, Portugal	PP
1815	17665	World Beacon, USA, via England	
1830	13725	Radio Telefis Eireann, Ireland, via Canada	
1900	13750	All India Radio	
1900	15190	Radio Filipinas, Philippines	
1930	17705	Voice of Greece, via USA	GG
1930	17895	Qatar Broadcasting Service	AA
1930	21700	Radio Exterior de Espana, Spain	SS
1930	11787v	Radio Baghdad, Iraq	
2000	15160	Radio Algiers Int'l, Algeria	
2000	17690	Radio Budapest, Hungary	HH
2000	17725	Radio Jamahiriya/Voice of Africa, Libya	AA/EE
2015	12085	Radio Damascus, Syria	
2030	11734	Radio Tanzania, Zanzibar	vern.
2030	12105	Adventist World Radio, via South Africa	vern.
2030	13625	Voice of America, N. Marianas	CC
2100	12060	Voice of the Mediterranean, Malta, via Russia	AA
2100	13660	Radio Havana Cuba	SSB
2100	15495	Radio Kuwait	
2100	17510	KWHR/World Harvest Radio, Hawaii	CC
2100	17810	Voice of Germany, via Antigua	GG
2100	15475v	Radio Nacional Archangel, Antarctica	SS
2130	9580	Africa Number One, Gabon	FF
2130	15315	Radio Netherlands, via Bonaire, Neth. Antilles	DD
2130	15445	Voice of America relay, Morocco	
2130	15545	Radio Prague, Czech Republic	
2200	9870	Broadcasting Svc of Kingdom of Saudi Arabia	AA
2200	11885	Voice of Turkey	TT
2200	13745	Voice of Islamic Republic of Iran	
2200	15185	Radio Africa, Equatorial Guinea	
2200	15195	KTWR/Trans World Radio, Guam	Indonesian
2200	21740	Radio Australia	
2230	5985	Radio Congo, Brazzaville	FF
2230	6050	Radio Nigeria, Ibadan	
2230	9505	Radio Record, Brazil	PP
2230	13650	Radio Japan/NHK	Thai
2230	15275	Voice of Germany, via Rwanda	GG
2230	15565	Radio Vlaanderen Int'l, Belgium, via Bonaire	
2300	9645	Radio Bandeirantes, Brazil	PP
2300	9715	RDP Int'l, Portugal	PP
2300	12579	Armed Forces Radio, Diego Garcia	SSB
2330	5770	Radio Miskut, Nicaragua	SS
2330	7125	RTV Guineenne, Guinea	FF
2330	11775	Radio Romania Int'l	

BY HAROLD ORT AND R.L. SLATTERY

PRODUCT PARADE

Review Of New, Interesting And Useful Products

Batt Pack Stores Those Cells

Remember your last trip with all those electronic gadgets? Your portable CD player died in the middle of your favorite tune and your scanner pooped out halfway into the trip — and you forgot extra batteries! In today's battery-driven world, having enough batteries on hand can be a challenge. The Batt Pack storage case, designed with you in mind, helps place the responsibility of having enough batteries for those devices right in your hands.

Available in blue, black, and red, the Batt Pack holds up to 8 "AA" batteries and is a convenient way to keep spares on hand for portable devices. The Batt Pack has a spring ring for easy attachment to book bags or purses and a belt loop if you prefer to keep a supply of batteries on your side on camping trips, sailing on the weekend, or a day trip to the zoo. Designed with an easy open zipper, it has individual internal holders to keep the batteries from rolling around in the pack. "We've all been there either as a parent or a child when the portable radio batteries die and there never seems to be a spare set of batteries available," said Marianne Barry, Marketing Director for ReSource, Inc.

The Batt Pack is available at a variety of retail locations and through catalogs. Founded in 1998, Resource, Inc. has a full line of battery storage products including Battery Rack 40 with tester, Battery Rack 20 with tester, Batt Pack storage case and the Battery Traveler with tester. For more information, contact Resource, Inc. at 23 Acorn Street, Providence, RI 02903 or phone 401-273-7508. You can also visit them online at www.batteryrack.com. Tell them you read about it in *Popular Communications* magazine!

Magellan's new GPS, the Map 330™.

Magellan Map 330™ GPS

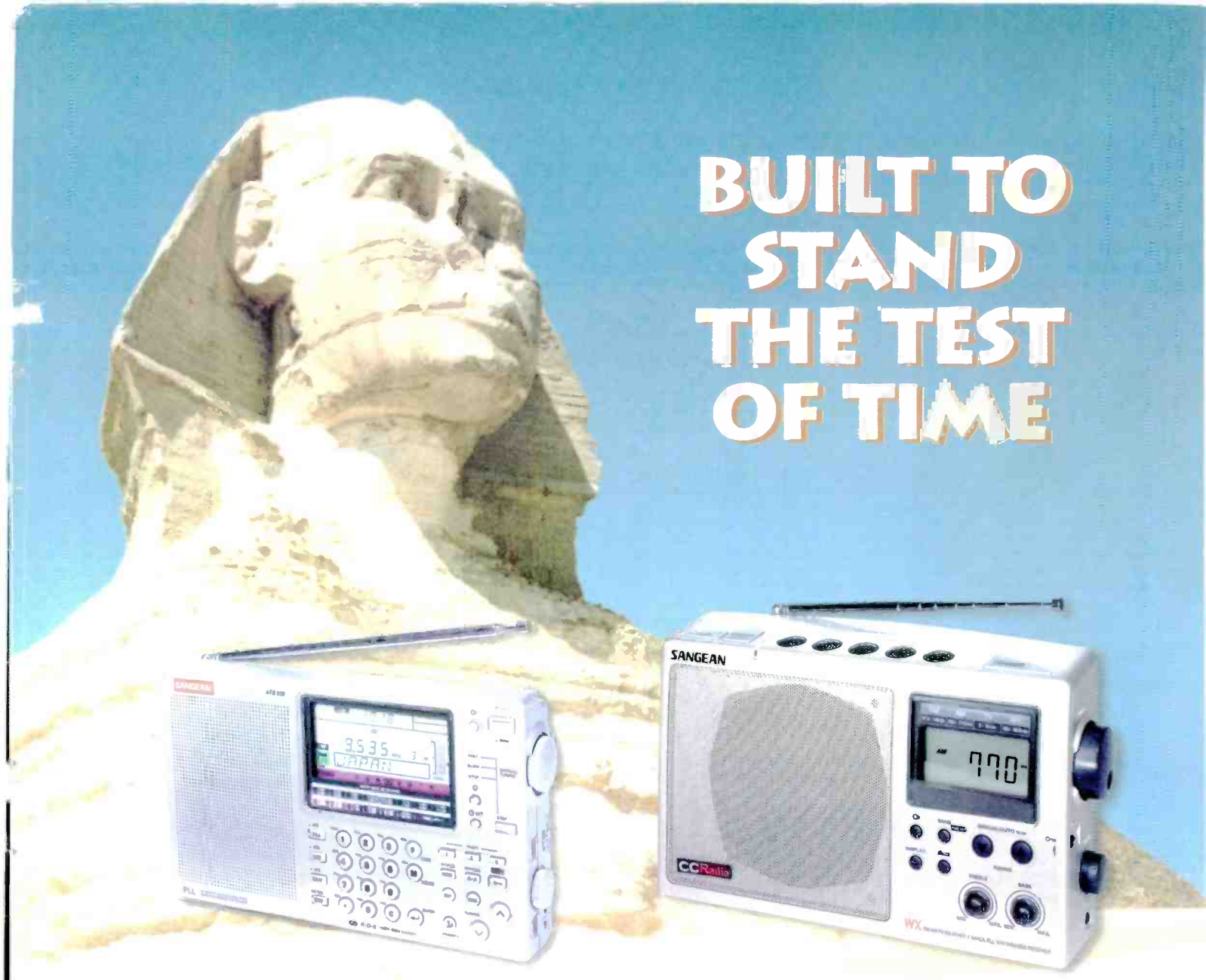
Magellan Corporation, a leading manufacturer of Global Positioning System (GPS) products and maker of the first handheld GPS receiver, announces the release of its most powerful, PC-compatible, handheld product, the MAP 330™, the only receiver in its class with 16 MB of built-in memory, Magellan's MAP 330 offers the most detailed database of street maps on the market. Its built-in database contains worldwide political boundaries, U.S. cities, highways, major roads, national parks, waterways, and railways. From the car, to the boat, to the backpack — across town or cross-country — the MAP 330 is the ideal navigation solution for outdoorsmen and mobile professionals alike.

"The versatility of this new product is the start of an exciting transition for Magellan from the outdoors into the city," said Jeff Cable, vice president of worldwide marketing. "With the new MAP 330, consumers now have a single, portable navigation device they can use for business or recreation. It really is the best of both worlds — whether you're traveling in the city or the wilderness, in the air or on water, on or off road."

Carrying a suggested retail price of just $249.99, the MAP 330 is small, lightweight and rugged. Its 12-parallel channels and sensitive quadrifilar antenna enable GPS satellite lock-on in harsh environments and fast position fixes with up to 10-meter accuracy. The MAP 330 has a wrap-around rubber grip and weatherproof housing that is suited for all outdoor conditions. It even floats. The MAP 330s high-resolution, EL backlit display and keypad allow users to navigate with confidence during the day or night.

The unit's four customizable graphic navigation screens direct the user toward the destination while displaying bearing, heading, distance, speed, remaining time to destination, cross-track error, and more. An advanced map database search function quickly locates landmarks, cities and roads from the unit's 8 MB of built-in maps. The MAP 330 also records up to 500 user-entered locations and 20 reversible routes with up to 30 legs each, all in non-volatile memory so information is saved even if the unit loses power.

Other features include anchor, arrival and cross track alarms as well as a resettable trip odometer. Two other useful features are the sunrise and sunset calculator and the best hunting and fishing time calculator. Magellan's new waypoint messaging feature allows users to create notes with each landmark they save while a backtracking feature records the user's path to create easily retraceable routes.



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Discover the Unknown

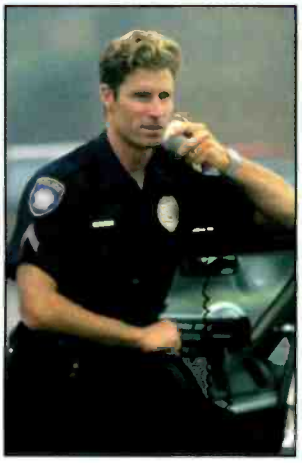
The Xplorer Test Receiver is a handheld nearfield receiver that locks onto the strongest signal in the nearfield in one second.

With its sensitive front end, the Xplorer is capable of locking onto a 5 watt UHF signal from as far away as 800 feet.

Once locked to a signal the Xplorer demodulates the FM audio and decodes any CTCSS, DCS, LTR or DTMF tones present.

US Patent # 5,471,402

Xplorer comes supplied with TA100S antenna, rapid charger, PC interface cable and software for memory download.



A unique feature of the Xplorer is its ability to lock out or lock in up to 10 different frequency ranges, like FM broadcast stations.

With 500 memories and an automatic time and date stamp you'll know exactly when the frequency was captured.

The Xplorer Test Receiver, ideal for checking out two-way radios or checking out the nearfield action.

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