

**NASA**

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Association

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Volume XXXI, Number 4  
April, 1991

# Japan Radio NRD-535D Communications Receiver



Japan Radio Co., Ltd.



## SPECIFICATIONS

Dimensions	13" x 5 2" x 11 25"
Weight	20 Lbs (24 Lbs ship)
Frequency Range	90 30000 kHz
Power	100/120/220/240 VAC 50/60 Hz 35VA max 12 VDC 25W max
Antenna Impedance	50 or 600 ohm
Selectivity (6dB)	AUX (12 kHz) WIDE 6 kHz INTER 2 kHz NARR 1 kHz [FM] >12 kHz
Sensitivity	5 µV 1.6 30 MHz SSB/CW S+N/N-10dB
Image Ratio	>70 dB (1.6 30 MHz)
Dynamic Range	106 dB (@300Hz BW)
IF Rejection	>70 dB (1.6 30 MHz)
Frequency Accuracy	± 10 x 10 s or better
Frequency Stability	± 2 PPM per hour after 1 hour
Intermediate Freqs	1st IF = 70 45390 MHz 2nd IF = 455 kHz 3rd IF = 97 kHz
BFO Vanabon Range	455 KHz ± 2 kHz
PBS Vanabon Range	± 1 kHz or more
Notch Attenuation	40 dB or more
Audio Output	1 W at 4 Ohms
Digital Interface	4800 baud (8,N,1)

With the introduction of the NRD-535D, Japan Radio Company once again "re-writes" the standard by which other advanced receivers are measured. The NRD-535D has all the features shortwave listeners have been waiting for. General coverage reception from 90 to 30000 KHz in AM, USB, LSB, CW, RTTY, FAX and narrow FM modes. A new triple conversion superheterodyne circuit is employed to provide superb sensitivity and image rejection. Japan Radio has designed a special high speed 1 Hz step PLL synthesizer to provide you with 1 Hz tuning resolution never before available (display resolution is 10 Hz).

Japan Radio's reputation for extreme stability continues with only ±2 PPM drift (after 1 hour) making the NRD-535 the inevitable choice for the demanding non-voice modes such as Morse code, RTTY and FAX. Four independent filter positions are available. The WIDE position features a 6 KHz (@ -6dB) filter. The INTERmediate position features a 2 KHz (@ 6dB) filter. The NARROW position features the CFL-233 1 KHz filter. The AUXiliary position is not fitted, a ±12 kHz bandwidth results. The AUXiliary positions can be used to mount the CFL-218A, CFL-231, CFL-232 or CFL-251. Any filter may be used with any mode (except FM). This is an exceptional feature that offers maximum flexibility to the listener.

The ergonomic keypad features both MHz and KHz input. The dual-width noise blanker can be used to reduce or eliminate impulse noise (like auto ignition or the "woodpecker"). Other front panel controls include SQUELCH, AF and RF GAIN and TONE. An AGC button permits the selection of AGC FAST, SLOW or OFF. The DIMMER button offers four brightness levels. A built-in 24 hour clock timer is provided. The TIMER permits unattended listening/recording. The receiver can be programmed to be turned on at a particular time (on a set frequency, mode, bandwidth, etc.) and then turn off at a programmed time. A timer-out terminal connection is provided on the back of the set to activate a tape recorder. The NRD-535D contains a built-in RS-232 computer interface (4800 baud, 8, N, 1). Cable and software are not supplied.

The NRD-535D offers Pass Band Shift (PBS). This effective control varies the apparent intermediate frequency for the IF filter by ±1 KHz without changing the receiving frequency. This function provides a powerful means of eliminating or reducing troublesome adjacent channel interference. Because of the overcrowded nature of today's HF spectrum, annoying heterodynes can be found with increasing regularity. The Notch Control permits the listener to go into the signal and sharply "slice-out" the offending tone with little loss in fidelity to the desired station. Notch attenuation is >40 dB.

The NRD-535D includes the CFL-243 Bandwidth Control Option. You can adjust this control to narrow the IF filter in 10 Hz steps without varying its center frequency, ensuring effective interference rejection. This control functions in the SSB and CW modes. It is a powerful tool to extract a desired signal from the crowded passband. Perhaps the most exciting feature in the NRD-535D is the CMF-78 Exaltad Carrier Selectable Sideband (ECSS) circuit. Often when receiving an AM signal you will encounter interference from an adjacent station. The interference will manifest itself on either the upper or lower sideband of the signal you are trying to hear. The ECSS feature will select the sideband that is not affected and deliver the signal to you with high tonal quality.

The Japan Radio NRD-535D is designed to meet the exact needs of the most demanding broadcast or utility DXer. One year limited warranty. Universal is a factory authorized dealer for Japan Radio Co.

## OTHER OPTIONS

Order#	Price	Item
◆ 0063	\$109.95	Japan Radio CMH-530 RTTY Demodulator
◆ 2308	59.95	Japan Radio 6ZCJD00139 Printer Cable
◆ 0851		Japan Radio 6ZCJD00150 Serial Cable
◆ 0852	179.95	Japan Radio NVA-313 Speaker/Audio Filter
◆ 1225	139.95	Japan Radio CFL-218A Filter 1800 Hz -6dB
◆ 0193	139.95	Japan Radio CFL-231 Filter 300 Hz -6dB
◆ 0290	139.95	Japan Radio CFL-232 Filter 500 Hz -6dB
◆ 1225	139.95	Japan Radio CFL-251 Filter 2400 Hz -6dB
◆ 1223	79.95	Japan Radio CGD-135 High Stability Crystal Oscillator

## SUPPLIED OPTIONS

- Japan Radio CFL-243 Bandwidth Control
- Japan Radio CMF-78 ECSS Unit
- Japan Radio CFL-233 1000 Hz Filter

## PRICING

NRD-535D List Price ..... \$1995.00

NRD-535D Discount Price

Order #1535 ..... \$1699.00

Shipping/Handling/Insurance ..... \$13.00

► The NRD-535D is expected 04/1991. We are accepting orders now. Specifications subject to change.

**Universal Radio**  
1280 Aida Drive DEPT. NASW  
Reynoldsburg, OH 43068  
Toll Free: 800 431-3939  
In Ohio: 614 866-4267

# NASWA Notes



**Bob Brown**  
238 Cricklewood Circle  
Lansdale, PA 19446  
CompuServe 74756,1557

**A**nother Winter SWL Festival has now past and as usual, it went way too fast. It was great fun and I'm already looking forward to the big 5th Fest next year. We had 178 in attendance this year. The highlights included a very interesting banquet presentation by NASWA member David Alpert about his adventures to Nicosia, Cyprus to monitor SW during the war for ABC News. Gerry Dexter received a special NASWA award commemorating his 40 years of service to the SW hobby. Gerry also was on the receiving end of a roast by our own Dr. DX and a late(!?) verification from GOA which was awarded by the gang from NU/FT. Charlie Hoffman of Lancaster, PA was the lucky recipient of the R-5000 receiver. Thanks to all of you who helped make another successful Fest weekend!

## Tropical Band Survey

Rufus Jordan received a letter from the Danish Shortwave Clubs International concerning the new 19th edition of the Tropical Band Survey. In the letter DSWCI Chairman Anker Petersen says, "Our 18th Edition of the TBS was edited by our Dutch member Hans van den Boogert who actually left for China for Chinese studies so he was not able to edit our 1991 edition. We found, however, a very experienced Argentine member, Julian Anderson in Buenos Aires, and he is now busy in editing the 19th edition. We hope it will be ready from the press sometime at the end of May 1991 when we advise you to buy it directly from our headquarters. The price will be unchanged from the 18th edition, 9 IRC's airmail or 7 IRC's seamail."

The Tropical Band Survey is a very important reference for my DXing. It covers all broadcasting stations in the frequency range of 2000 - 5900 kHz and their transmission

## Calendar Of Events

**April 16** - N.E. Ohio SWLers. Cuyaboga County Library, 9089 Brecksville Rd., Brecksville, OH (Rt. 21, just South of Rt. 82). 7:00 PM. Mike Fanderys (216)661-2443

**April 19** - Meeting of the Boston Area NASWA Chapter, GTE Labs, Waltham, Mass. Please contact Paul Graveline (508) 470-1971 for additional information.

**April 19** - Phila. Area NASWA Chapter. Montgomery Elementary School cafeteria, Montgomeryville, PA 7:30 PM. Dan Cashin (215)446-7831.

**April 21** - Morton Kasday will host a get-together of the New York City and metro area DXers. For information send an SASE to Box 6624, Jersey City, NJ 07306.

**April 27** - Washington Area NASWA Chapter. Second quarterly meeting. Hunan Gate restaurant, Arlington, VA. 2:00PM contact Mike Stone (703) 534-0342

**May 17, 18** - "Conrad Family Re-union". A weekend for SWLs and DXers to get together to meet and have some fun. To be held at the Days Inn, two blocks from downtown Wisconsin Dells, WI. (608)254-6444. Mention "Conrad Family Re-union" for special rates. Contact Jim Conrad, 545 Kirkwood Ave. Waterloo, IA 50701

Members are invited to submit items to be included in this calendar to Bob Brown.

**FLASH! -- The price on the NRD535D from Universal Radio as seen on the preceeding page has been reduced \$100 to \$1589!**

times and powers when known. It is compiled using monitoring information provided by DSWCI members and other DX bulletins published throughout the world. The address for ordering is: The Danish Shortwave Clubs International, Tavleager 31, DK-2670 Greve Strand, Denmark.

## SWL Tours

Spectrum Tour Services of Lutz, Florida is promoting a series of custom designed travel experiences for SWLs and radio amateurs. Their inaugural tour is a deluxe escorted tour of the BBC and Radio Netherlands and will take place July 23-31, 1991. Owner John Flood tells me that he soon hopes to have a full schedule of travel events for DX'ers which will range from European sites to the South Pacific. Further information from Spectrum Tour Services, 228 Kayak Cove, Lutz, FL 33549-6743 (813)949-4617 or (800)393-DXER.

## Local Chapters and Gatherings

It's great to see the interest growing in this area. In this month's calendar you'll see a notice for the "Conrad Family Re-union". This is the second such gathering, the first was held the second weekend of Sept. 1990

in Milwaukee. Jim Conrad writes: "The name was given to it by Evelyn Hampton, since I'd originally intended it for those who lived within a days drive of the meeting place and it was basically those of us who get together at conventions anyway. However, anyone else who'd like to attend for an informal, nearby chat session is most welcome. There will be a hospitality room, so after you get settled in your room, ask for the Conrad Hospitality Room and stop by for diet drinks, chips, and chat. Hopefully, we'll have a DX-pedition this time." Contact Jim directly at the address listed for more details.

### ANARC SWL Ham Net

Tune in Sunday mornings at 10 A. M. Eastern Time on 7240 LSB for the latest in shortwave listening, DX tips, and up to the minute hobby news. Contributors share their DX tips via their own amateur radio stations or by telephoning a "gateway" station who then broadcasts the relayed tips. Net Controls Bob Brown KW3F and Dave Kirby N8JQX host an always lively gang of DX monitors. (Best heard in the eastern half of NAM)

## Mallbag

Bill Peake of Buffalo Center, IA. writes - "I have 2 friends locally that have recently purchased SW radios. I'd like to introduce them to NASWA. Would it be possible to get some sample copies of the *Journal* to share with them? I have lent a few issues of mine but don't like parting with my *Journal* library - I hope you understand my hesitance! One high school junior who recently moved to my town is very interested. He spent an evening with me and he got hooked. He is planning to buy my old DX-440 and I gave him my copy of the '91 Passport which I won from SWL Digest. He was in a car accident last December which kept him home from school for a couple of weeks. In the process of x-rays and such they found a benign tumor that ran from the base of his brain down the back of his nasal passage and into his throat. He had massive surgery and just last week was able to return to school. Since returning from the hospital he's been listening on my DX-440. Another local lady had a letter read on KOL Israel. I gave her a call and think she would also enjoy NASWA. My circle of SW friends is growing and sharing NASWA can only bring depth to their enjoyment of listening. Next week I'll be sharing my hobby with an eager group of 4H kids. Its great! My 9 year old son also recently sent his 1st reception report to RCI with a little help from dad. You should have seen his face when the packet came back. I should have taken a picture. If possible I'd like to contact Iowa and southern Minn. NASWA's. Could I get a printout of names and addresses? I'd like to organize a local chapter if possible." - *I'll get you the list ASAP Bill! Thanks for the nice note and keep up the good work!*

R. C. Watts of Louisville, KY. writes - "Just watched the local TV news. 'Electronic Devices' were banned from the NCAA regional tournament play here in town according to WHAS-TV.

That means someone who wants to scan (or listen on a radio) the event won't be able to. A lot of other hobby use of radios is being effected by this. I am going to EDXC-91 and probably won't be able to take a portable radio.

"Really, I think ANARC and the clubs need to approach this situation. Most of my years in the USAF were in Explosive Ordnance Disposal (EOD) or 'Bomb Disposal' and let me tell you that a clandestine explosive device can be built into any container - even a pack of cigarettes or the infamous 'letter bomb,' as an example. Electronics are just convenient containers.

"However, the instance of the Lockerby, Scotland bombing crash is not a good reason for the over-reaction in current vogue. The situation is sort of like firearms control in that the legitimate user takes the rap while the determined criminal or terrorist is not deterred.

"I traveled extensively during my Air Force years and always found it desirable to have a SW portable with me. It now looks like this piece of travel gear will be denied in public transportation and perhaps accommodation and I don't like it. Just wanted to voice my concern and let the club think about it." - *I recently traveled by air to the west coast and hand carried on a SW portable, a video camera, a 2 meter handheld, and a portable CD player. All had batteries installed and went through the detector with no questions asked. I thought for sure that they would be examined by hand. You figure it out!*

Joseph Norcott of Attleboro, MA. writes - "I have been a NASWA member for over a year. Presently there is a local chapter of NASWA near Boston which is about one hour from me. I would like to start a local chapter of NASWA on the SW Mass. and Rhode Island area. Attleboro is located on the Rhode Island border about 9 mile from Providence.

"There has been a lot of increased interest in SWL. A local radio station WICE 550 AM has been broadcasting the BBC World News three times a day. There have also been local articles in the Attleboro Sun Chronicle and Providence Journal. The local stores are actively promoting the sale of SW radios from \$24.95 to \$300. Many people I know have been asking me for information on radios and how to tune in broadcasters.

"I have experience running a club. I helped start and then became president of an Apple Computer Club with over 100 members. Maybe there is something I can do for NASWA and The Journal. - *You'll be getting that listing this week Joe and thank you for your offer to help get something going. Members in the area can contact Joe at (508)222-3942.*

Bruce Winkelman AA5CO of Tulsa, OK writes - "WOW!! What a difference in NASWA. I recently received a copy of the Journal and am flabbergasted at the changes from my most recent membership in NASWA. What a great publication, at least judging from the March 1990 sample copy.

"I dropped my NASWA membership nearly 3 years ago when I became disgusted with FRENDX...the only column of any interest was Glenn Hauser's Listeners Notebook. The rest seemed aimed at the total neophyte to the SWL hobby...nothing to interest those who have heard R. Moscow, R. Prague and R. Australia many times on many bands. Don't get me wrong...the SWL hobby needs the neophyte and needs a publication to encourage and educate these newcomers. NASWA is the place for that information, but the club needs to give the more experienced DXers (listeners and hard-core DXers alike) some substance...looks like the Journal has gone a long way toward meeting those needs. My congratulations!! My check for NASWA membership is on its way to Levittown in the morning and I'm looking forward to my membership in what appears to be a new, rejuvenated NASWA." - *Thanks for the kudos Bruce. Our primary goal is to serve our entire membership, newcomers and experienced DXers alike. We seem to be balancing the scale pretty well now, I think. We have to be very careful to not scare away the newcomers with too much hard core DX info and I think we can prevent this through education. I would like to see more of our experienced DXers consider this and jump in with some features to teach our new members. Also, a good portion of our members are not really interested in DXing but are more interested in the "Easy Listening" aspect of SW. Richard Cuff is developing that area of The Journal very nicely and I encourage all members who like this aspect of the hobby to contact Richard and participate. Participation is the key Bruce, and I am encouraged by the increase within NASWA.*

## Welcome to the following new NASWA members -

Marco Antonio Abarca, Oxnard, CA  
Douglas G. Adams, Albuquerque, NM  
Dr. George Berg, Pittsburgh, PA  
William M. Bindas, Oak Ridge, NJ  
Robert H. Blum, Syracuse, NY  
Dwight Brown, Austin, TX  
Milton N. Brown, Hilton Head Island, SC  
Al Buckalwe, Los Angeles, CA  
Tim W. Cadden, Overland Park, KS  
Robert Cohen, Riverside, RI  
John Henry Cook PHD, Omaha, AR  
Edward Cosme, Brooklyn, NY  
David E. Coursey, Dallas, TX  
James Curran, Minnetonka, MN  
David Datko, Huntington Beach, CA  
Sam Decker MD, Peoria, IL  
Russell DeRose, Joppa, MD  
Steven R. Friedberg, Cincinnati, OH  
Michael V. Garl, Portland, ME  
Robert E. Garrett, Binghamton, NY  
Robert Godlewski, Yorktown Heights, NY  
Don Hanloin, Westminster, CO  
Robert G. Hawker, Chatham, ONTARIO  
Danny M. Henderson, Chattanooga, TN  
Donald B. Hoover, Elizabethtown, PA  
E. D. Jerigan, Chickasha, OK  
William L. Johnson, Woodinville, WA  
Phillip R. Johnson, Boalsburg, PA  
Gregory L. Jones, Manitowadge, ONTARIO  
Karin Kasten, Palmerton, PA  
Kevin Richard Kepes, Pittsburgh, PA  
Yale H. Klein, Reisterstown, MD  
David J. Klinge, Port Byron, IL  
William L. Larson, Akron, OH  
Ken Lewis, Alameda, CA  
T. J. Liddell, Cartersville, IL  
Tim Lovewell, Concord, CA  
Charles Lucy, Granger, IN  
Joe Marshall, Miami Lakes, FL  
Jane A. McEwen, Presque Isle, ME  
David W. McLaren, Sheffield, IL  
Steve McLaughlin, Santa Ana, CA  
Richard Milanowski, Mosinee, WI  
Dr. Howard J. Moskowitz, Toledo, OH  
Rick D. Nason, Byron, IL  
Hy Nguyen, Radcliff, KY  
Jeff Nleman, Columbus, OH  
Robert E. Novak, Mountain View, CA  
Richard Page, Austin, TX  
John Pepper, Port Jervis, NY  
Ed Pickard, Hollywood, FL  
Lloyd P. Prevatte, Jackson, TN  
Frederick H. Richenburg, Islington, MA  
David T. Riedel, Providence, RI  
William Earl Robbins, Greensburg, IN  
Raymond Roberts, San Marcos, TX  
Lee M. Rothman, Half Moon Bay, CA  
John C. Rugee, Sacramento, CA  
Michael B. Ryder, Oregon, IL  
Doug Schaber, Tucson, AZ  
Sid Schaefer, Ann Arbor, MI  
John H. Shute III, Conway, AR  
Georg U. Simon, Glenside, PA  
Dr. Jerry L. Smith, Houston, TX  
William D. Starkey, Wilmington, NC  
Ed Steele, Gladstone, OR  
John Steidl, Philadelphia, PA  
Paul Strong, Hidden Hills, CA  
Lloyd H. Swart Jr., Dayton, OH  
Shawn S. Sylvester, APO New York, NY  
Len Thompson, Mars, PA  
Lelf Thomsen, Hamilton, ONTARIO  
William D. Tilley, Swartz Creek, MI  
Ellilo Tro, Tampa, FL  
Frederick J. Trescher, Philadelphia, PA  
Craig Troescher, Cincinnati, OH  
Robert E. Tucker Jr., Savannah, GA  
Wilbur T. Vaclavick, Old Ocean, TX  
Ann L. Walnes, Chillicothe, OH  
Lance Ward, East Orange, NJ  
David L. Weinrich, Fargo, ND  
James T. Whiting, Lake Shore, MN  
Kenneth Whitsitt, Decatur, IL  
Greg Wilder, Lexington, KY  
Bruce Winkelman AASCO, Tulsa, OK  
Chuck Wolski, Inwood, NY  
George V. Zeolla, Mississauga, ONTARIO

# DXer's Forum

**Kevin Atkins**  
6165 Lakeside Drive  
Pinson, AL 35126  
Compuserve 71021.3212



As those who follow the monthly Log Report know, David Clark has a great deal of experience DXing at sunset. He has managed a number of loggings of rare Southeast Asian stations during this period. This month and next, David will share some of his expertise as we conclude our propagation series with a look at:

## Tropical Band Enhancements Associated With The Sunset Terminator

by David M. Clark with John H. Bryant

In the first two installments of this series, we focused on propagation of tropical band signals from East & South Asia and the Pacific and some of the geophysical factors which may account for the marked enhancement of these signals at dawn-sunrise at our receivers.

We went on to outline the basis for our speculative conclusion that optimal *seasonal* "max dawn" reception of signals from one region or another of Asia is *not* directly associated with the great circle linkage of transmitter and receiver along the grayline itself. Rather, we suggested that there is a propagational "sweet spot" which is associated with the formation of a zone of ionospheric irregularities (spread F) during the early Tropical evening. This zone of ionospheric turbulence tends to trail the sunset terminator by approximately one to three hours. We have observed that our very best "dawn enhancement" DX catches tend to occur when the transmitter is located in the Tropical "sweet spot" at just the same time as "max dawn" passes our receivers.

### Introducing Sunset-Related Enhancements

We now shift our primary focus to examine the patterns of tropical band

reception associated with a variety of sunset-related enhancements when:

- the DX signal is being launched from a sunset twilight zone and arriving when full darkness prevails at the receiver (and by way of comparison, the converse when the signal is launched from a sunrise-dawn twilight zone and reaches the receiver during full darkness)
- the DX signal is propagating within the grayline zone and arriving at the receiver during the sunset period
- the DX signal is being launched from a total darkness zone and arriving during the sunset period at the receiver.

We will conclude with a summary of our discussions, and in so doing invite comment from other hobbyists concerning those unresolved "issues" which continue to intrigue us all.

### Characteristics of Sunrise and Sunset Enhancements

In our earlier discussions we dealt at some length with what we believe to be the significance of 'what's going on in the ionosphere at the transmitter' as the real clue to the mystery of the *seasonal* aspect of dawn enhancement...and that still holds! But the daily changes that take place in the structure and composition of the ionosphere with the approach of sunrise or sunset *at the receiver* are of fundamental

importance in making these twilight enhancement phenomena possible in the first place. To point up the dramatic potential for enhanced tropical band signal levels centered around local sunrise and sunset at our receivers, the illustration in Figure 1 is quite telling. This is the record of a 24-hour period of reception of WWV on 5 MHz as recorded at the Cosmic Terrestrial Research Laboratory of M.I.T., Needham, MA on December 10, 1945. In those days, the WWV transmitter was located at nearby Lanham, MD. Notice the short, sharp peak in field strength of the signal at about 7 AM and, interestingly enough, a progressive build-up to an even

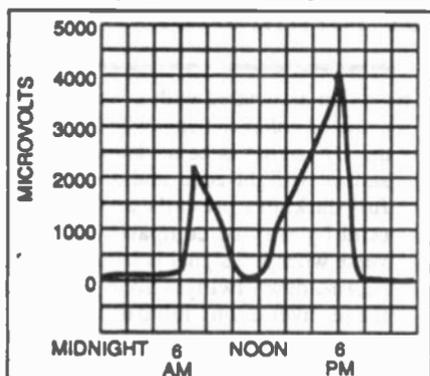


FIGURE 1. Daily Variation of WWV's 5 MHz Signal Dec. 10, 1945 [1]

stronger peak at 6 PM local time (EST).

Dr. Harlan True Stetson, then the director of the laboratory, wrote: "Low reception during the night hours is followed by an abrupt increase following sunrise as the increasing number of ions in the F2-layer produces better reflection of the waves in the 60-meter band. Thereafter, as the sun attains higher altitudes with more penetrating radiations, ionization builds up in the lower E-layer, increasing the absorption and therefore the attenuation of these waves, causing a drop in field intensities until the noon hour. With the declining sun in the afternoon recombination of the ions in the E-layer diminishes the absorption, and field intensities again rise until about 6 pm. Thereafter, following sunset, recombination sets in for the ionized F-layer. Poorer reflection results, and field intensi-

ties drop rapidly toward the low night values. This curve, typical of the winter months of 1945, can change materially with the sunspot cycle." [1]

For greater certainty, we would add that the gradual build-up of the D-layer after sunrise (together with the E-layer) is responsible for the absorption which cuts off skywave propagation at tropical band frequencies. Notice, however, the gradual increase in the measured field strength during the afternoon hours, well before local sunset. This is because D- and E-layer ionization in mid-winter is not nearly as intense as during the northern hemispheric summer when the sun is much higher in the sky for an extended number of hours. And so, recombination begins (and lower-layer absorption decreases) early in the afternoon during the short winter days.

The ascendancy to a very strong peak in field strength followed by a surprisingly precipitous decline soon after sunset surely is significant. Figure 1 suggests that for the best DX possibilities, the tropical bands (not unlike mediumwave) should be thought of primarily as dawn and dusk bands when the delicate equation between lower-layer absorption and higher-layer refraction is most optimal.

As Dr. Stetson suggested, the solar cycle will have some bearing on DX propagation, especially during the twilight periods. At sunspot minima, daytime MUF's and the intensity of D-layer absorption will be less than at sunspot maxima; accordingly, dawn/dusk enhancement at tropical band frequencies is likely to be more reliable during years of relatively low sunspot activity.

But this illustration and the real-life experience of many DXers tell us that the events occurring within relatively limited timeframes at sunrise and sunset are far more complex and dramatic than would be implied simply by the generalized and gradual changes in the refractive index of the ionospheric layers. As we noted in the first installment, there must be other geophysical factors coming into play which cause the signals to be "scraped off the ceiling" and "dumped down" to our receivers.

For example, we know that ionospheric "tilts" are caused by a transitional (upward) movement in the height of the F-layer during these periods. Figure 2 is characteristic of the pattern in our temperate mid-latitudes. Notice that the increase in the *beginning* altitude of the layer ( $Z_0$ ) exhibits a greater change at sunset than at sunrise. This just happens to parallel the pattern of field strength peaks in Figure 1! Many experts would concur that ionospheric tilts contribute to the dumping or ray focusing mechanism at receiver sunrise or sunset.

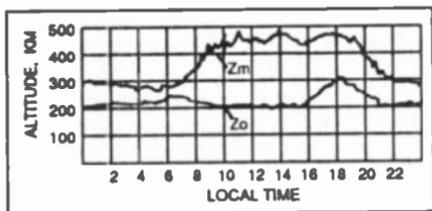


FIGURE 2. Diurnal Variation In Altitude of Beginning ( $Z_0$ ) and Maximum ( $Z_m$ ) of Mid-Latitude F-2 Region [2]

This general observation should be qualified, given the presence of an aspect known as the "mid-latitude anomaly" which is characterized by significant horizontal gradients or differences in the refractive index of the F2 layer. The effective tilt may cause rather different focusing of signals on given frequencies at various receiving latitudes, even within the same time-zone. For example, in comparing notes of reception on specific days with Forum editor Kevin Atkins, I have found that Kevin may have heard difficult Indonesian "RPD's" at dawn enhancement whereas at my location, the only evidence of these signals might have been weak hets; conversely, there have been cases when I have experienced good reception of Southeast Asians at sunset yet these signals were not heard at Kevin's QTH.

John and I feel that the actual reality of sunrise and sunset enhancement may be less reciprocal than is often supposed. For instance, the previously mentioned ionospheric turbulence (spread F) which seems to influence seasonal enhancement of Asian and Pacific signals *at dawn* is an

evening-only phenomena in equatorial latitudes and occurs on most magnetically quiet days. Conversely, enhanced reception of Asian and South American signals *at dusk* is most often associated with the onset of magnetically active conditions.

In summary, we can generalize about the phenomena which may commonly contribute to dawn or dusk enhancements but for any number of reasons, conditions will not likely be the same at dawn and dusk or at your location and mine on any given day.

## Comparing Sunrise and Sunset-related Enhancements

As evidenced by Figure 1, there does seem to be a correspondence between certain transitional geophysical changes occurring in the ionosphere during the sunrise and sunset intervals, and the manner in which the refraction, or "conduction", of electromagnetic waves is affected during those periods. The rapid changes in the refractive index and virtual height of the layers which contribute to "ionospheric tilts" during twilight periods are probably the most important.

Thus, it is hardly surprising that reception of tropical band signals tends to be enhanced, not only during our own sunrise/sunset periods, but also when the signal from the transmitter is being propagated into a twilight ionosphere. Ionospheric tilts are thought to be a necessary condition for launching the signal into a "chordal hop" mode whereby multiple reflections along the signal path in the F-layer occur without lossy intermediate ground hops. We have referred to these as "sunrise (or sunset)-at-the-transmitter" enhancements, recognizing that the location where these signals are being received will be in full darkness at the time.

Figure 3 illustrates the point very clearly. Scandanavian DXer Anker Peterson prepared graphical records of the results of his 1969 year-long survey of 60 meter propagation to which we referred in Part 2. Notice that the incidence of reception from Southeast Asia in his native Denmark is heavily concentrated near receiver sunset (RSS), and then again near transmitter sunrise (XSR). While it is fair

## SOUTHEAST ASIA

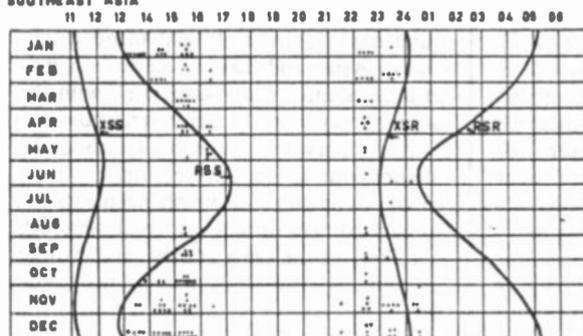


FIGURE 3. Survey of Reception Pattern of Southeast Asians on 60 Meters during 1969 near Copenhagen, Denmark. The number of stations heard during a given hour/month is shown by the number of dots within the box; the vertical position of the dots is indicative of relative signal strength. [3]

to say they weren't too many "all-niters" to be heard from Southeast Asia, note the virtual absence of signals throughout the period after RSS and before XSR when the entire signal path is in total darkness. This chart also tends to support the tropical band "sweet spot" proposition quite nicely! (Dusk reception in Europe equates with dawn reception here in North America, trailing transmitter sunset by several hours in each case.)

We should point out that in plotting the seasonal migration of the sunrise and sunset lines on the time scale, Mr. Peterson assigned their positions relative to the "first reflection point" which was assumed to be about 2,000 miles along the path from the transmitter and the "last reflection point", about 2,000 miles before completion of the circuit at the receiver (he was assuming a conventional F2 multi-hop propagation mode). As we have explained, however, we believe the multi-hop model is flawed because maximum enhancement co-relates more precisely with sunrise or sunset directly "overhead" at the transmitter or receiver, as the case may be.

To "re-position" RSS accordingly, mentally shift the line about one hour *later* (to the right on the illustration) and shift the XSR line about one hour *earlier* (to the left). It can then be seen that the greatest incidence of reception corresponds very well indeed with local sunset at the receiver and again at local sunrise at the transmitter, especially during the prime DXing months between October and April. We think that's pretty conclusive.

Generally, we observe that sunrise or

sunset enhancements *at the receiver* are usually *stronger* than the corresponding sunrise or sunset enhancements at the transmitter for the *same* transmitter's signals. In addition, the commencement of a major ionospheric disturbance may result in an anomalous form of twilight-related enhancement—more about that to follow.

Given the desirable relationship between enhanced signal launch or reception and the incidence of sunrise or sunset at one end of the circuit or the other, it is quite understandable that a grayline condition along the entire path-length has conventionally been considered to be the "ideal" state for signal-enhancement. The extent to which that is true, however, does not match *consistently* with the listening experiences of ourselves and other tropical band DXers.

Let's take a closer look at sunrise and sunset-related "at-the-transmitter" enhancements, as well as the grayline situation:

#### (a) SUNRISE-DAWN:

We have noted that dawn enhancement at our receivers is associated with the best reception of South Pacific and East & South Asian signals generally oriented on great circle paths to the west and north of the receiver location in North America. Reference has also made to sunrise "at-the-transmitter" enhancements...not to be confused with our own dawn enhancement. Here are two examples:

This form of *sunrise*-related enhancement can occur in Eastern and Central North America at mid-winter when it is sometimes possible to log signals from

South-Central Asia for a brief period corresponding to the approach of sunrise at-the-transmitter. By this time, post-sunset darkness will have fallen up two hours and more earlier at the receiver. Typical examples include: Indian Regionals on 4860, 4940, 4960 & 4990 - opening variously between 0000 and 0030; Nepal-3230 from 0015 s/on; and, the various language services of Xinjiang PBS at Urumqi in the western interior of China on 4220, 4500, & 4735 - from 2300 s/on. We would hasten to add, however, that signals seldom approach the levels that are attained during dawn enhancement on good "sub-continental mornings".

Signals following east>west paths from Africa are noted throughout North America during the mid- and late-evening hours when numerous Africans can be heard signing on near their local dawn. Note that the slope of the terminator favours reception of East Africans during the spring, rather than during our winter months. The Africans will typically hold up for some while past their local sunrise since the first so-called "reflection point" in the ionosphere will remain in darkness longer for east>west paths than for south>north paths. South Americans heard during pre-dawn receiver darkness just seem to drop out quickly at transmitter sunrise, without any apparent enhancement.

DXers have also come to notice that the commencement of an ionospheric or geomagnetic disturbance often brings a day or two of enhanced reception of tropical band signals originating in (or transversing) the equatorial zone. This is a fascinating and reasonably well-known (yet largely unresolved) phenomenon that is no less true for Africans than for Latins, or even for certain Asians, and may result in dramatically better reception. In these circumstances, late evening African reception (sunrise at the transmitter) often seems to be more obviously enhanced than the period corresponding to sunset at the receiver (contrast this with the discussion which follows concerning South America and Southeast Asia).

Reflecting back a few years, a memorable example occurred on February 20th,

1986. On this date, Radio Rwanda was noted from 0257 with their interval signal at a very strong level over-riding the CHU time signal station on 3330 kHz. That was the tip-off. Switching to USB mode and tuning up from 3330, the relatively rare 4 kW Radio Comoros (now regrettably off the air) on 3330.7 was logged from 0310 until 0355 fade with an outstanding signal, peaking around 0330, already 25 minutes after 0305 sunrise at the transmitter. Indeed, Comoros was even briefly stronger than Rwanda, bearing in mind that CHU's audio is concentrated in the upper side-band! On this particular date, the geomagnetic field was at storm levels, featuring high 'A' and 'K' index values.

#### (b) SUNSET-DUSK:

Sunset at our receivers again raises the prospect of enhanced tropical band reception from South America, Africa and even Southeast Asia. The lesser-known phenomenon of reception of certain Asians near dusk in North America is almost exclusively confined to receiving locations east of the Mississippi and also very much contingent upon solar-terrestrial activity. We will examine those enhancements specifically associated with sunset-dusk at the receiver in the next section of our discussion.

Just as we identified sunrise-related "at-the-transmitter" enhancements (from South-Central Asia and Africa) which are quite removed from dawn at the receiver, there are also sunset-related "at-the-transmitter" enhancements which occur when the receiver is in total darkness. Again, there are several different possibilities to be aware of.

In Part 2, John mentioned the exciting prospect of DXing "sunset-at-the-transmitter" clear across the Pacific on both tropical bands and Medium Wave from a West Coast location. On the tropical bands, this phenomenon can be experienced, albeit in less spectacular fashion, even by DXers living in Eastern North America. In the small hours of the morning, with reception usually best around the spring and fall equinoctial periods, one can sometimes hear Pacific targets such as Tonga-5030, Solomons-5020, and New Zealand-3945

fading up very quickly at their local sunset. (New Caledonia-3355 and Marshall Islands-4940 were other examples but they, sadly, have become casualties within the past several years.) These are soon-followed by Australia-4920 and the Northern Territories channels (on 60 meters until 0830, thereafter on 90 meters), as well as the numerous Papua New Guinea outlets (3385 being the most reliable at 0800+).

An azimuthal-equidistant map centred on one's own location is a valuable tool for recognizing short and long great circle paths and possible tropical band propagation circuits either along the terminator or within the darkness zone. Figure 4 is an example of an "azi-equal" map and shows the location of the daylight and darkness zones as defined by the grayline at an optimal time for "sunset-at-the-transmitter" enhancement of 'PNG's'. The DX signals usually can be expected to propagate on a great circle (short path) bearing to any receiving location in North America.

As the sunset terminator continues its westward course into Indonesia, reception of Javan stations is sometimes possible

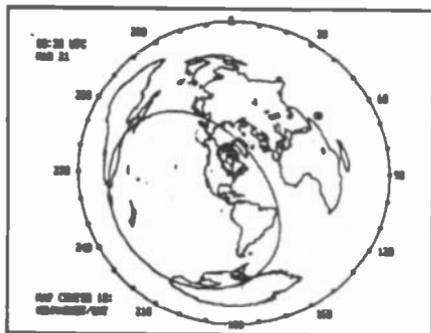


FIGURE 4. Illustration of the Position of the Terminator at 0820 UTC (Sunset: Port Moresby, PNG) at the Spring Equinox, created with registered DXAID (version 2.0) software. The map centre of this azimuthal-equidistant projection is Newmarket, Ontario. Note that all of North America is in total darkness.

here in North America for a brief period co-inciding with their sunset at approximately 1100 (RRI Jogjakarta-5046.3 being one such example). At mid-winter in Eastern North America, this is still nearly two hours prior to local sunrise and thus is

totally unrelated to the usually more pronounced period of dawn enhancement yet to follow.

In all of the above cases (even on the West Coast as best as we can tell), these Asia-Pacific "sunset-at-the-transmitter" enhancements have a typical duration of about one-half to one hour following transmitter sunset, and thereafter the signals typically wither away. Their subsequent reappearance several hours later will then be governed by the period of dawn enhancement at the receiver which—depending on the season—ideally coincides with the post-sunset spread F "sweet spot" at the transmitter.

To repeat an important point: generally speaking throughout most of North America, "sweet spot/max dawn" signal enhancement is an order of magnitude greater than these "sunset-at-the-transmitter" enhancements. At least, that is the case for signals originating from Asia and the Pacific. An exception to this generalization can be made for the West Coast where, for example, the 0800+ PNG sunset enhancement usually brings the most reliable reception, whereas the Indonesians are more likely to predominate at dawn.

Directing our attention southward to Latin America, a "sunset-at-the-transmitter" enhancement can sometimes result in superior reception. In the particular case of Bolivia, a favourite target for many Latin DXers, mid-winter sunset does not occur until shortly after 2300 at La Paz. This is because of the NW-SE slope of the terminator, whereas at my location near Toronto, Ontario, sunset is much earlier at about 2142. The sunset-dusk period between 2300 and 0000 sometimes brings unusually good signals from the low-powered Bolivians, Radio Padilla-3473v being a case in point. Thereafter, more often than not, the signals will fade down appreciably. Comparative tests using Beverage antennas confirm the DX signals are propagating close to a great circle path from the twilight zone at the transmitter into the darkness zone in Eastern North America.

An especially interesting observation here is that best reception during this sunset-at-the-transmitter interval is often associated with the early stages of a solar

disturbance, just as we noted with reference to the Africans. This point will surface yet-again when we examine afternoon (receiver-sunset) enhancement of Southeast Asian signals in Eastern North America.

While not strictly sunset enhancement, we should note the winter reception of low-powered tropical band Brazilians in eastern North America. This occurs during midwinter between approximately 2300 and 0100 UTC. When we consider that mid-winter sunset at Rio, for example, occurs at 2130, soon followed within 15 minutes at my location, we have the ingredients for a grayline reception path. But when do the signals peak up? One to two hours later! Co-incidently, this just happens to correspond with the period of active formation of equatorial spread F, together with a rapid rise in the virtual height of the F layer in the tropical zone from whence the signal is originating. Surely this is not mere coincidence. (That "sweet spot", again!)

Writing in *Proceedings 1989*, Brazilian expert John Fisher comments: "I have not noted enhanced reception conditions during graylines between my Ontario QTH and Brazil...reception conditions to southern Brazil will often be enhanced for up to 1 hour after my local sunset, but by this time the Brazilian stations have been in darkness for several hours." [4]

### (c) GRAYLINE:

As readers of the earlier parts of this series will appreciate, true grayline paths intersecting North America can be associated with tropical band reception targets in Asia (where our sunrise roughly corresponds with Asian sunset, or vice-versa) and South America. Those signals whose indicated path might fall entirely within the twilight zone will of course vary according to the solar season. Please note that signals originating from the Pacific and Africa laying generally to the west and east can never be the implied beneficiaries of a true grayline path since they must cross the darkness side of the earth to reach our receivers. There is no such thing as a "partial" grayline!

Based on our actual listening experience,

it has been most interesting to observe the relative rarity of enhanced reception which might reasonably be equated with a true grayline path. In his book *Low-Band DXing*, John Devoldere, ON4UN, also makes reference to the paucity of DX contacts along the terminator and finds that most of those which do occur tend to span great distances by following a long path route—a point worth noting. [5]

We have already cited the rarity of short path, true graylining into or through the Asian tropics at dawn in North America. In that regard, our disappointment with true grayline DX results stemmed from the fact that reception of "predicted" grayline targets did not co-relate with well-established seasonal reception patterns which we have observed for a decade or more.

Consider the case of Bhutan-5023 kHz. This semi-difficult station is best-heard throughout North America at dawn enhancement during the months of December/January—the classical "sub-continental" season. Certainly reception before November or after February would have to be considered "rare". Utilizing the ON4UN software, the following table of relevant UTC sunrise/sunset times can be developed:

	JAN 1	FEB 1	MAR 1	APR 1
Bhutan Sunset.....	1118	1141	1201	1218
Newmarket Sunrise.....	1252	1236	1156	1101
Stillwater Sunrise.....	1339	1330	1300	1216

It is clear that there is a lengthy period of full darkness following Bhutan sunset before that DX signal is heard with the approach of sunrise on January 1st in Eastern or Central North America. Contrast that with the almost "perfect" grayline which overlays the short great circle path from Newmarket (Ontario) on March 1st or from Stillwater (Oklahoma) on April 1st. When John or I manage a respectable morning logging of Bhutan along the true grayline, Forum readers will be the first to know!

But we can't entirely discard graylining into the Indian Sub-Continent. Asian Destinations editor Mitch Sams relates an observation which he has made for the past



# Radio St. Helena

THE DX EVENT OF 1990

*By Richard A. D'Angelo*

As the QSLs began to roll in during late February and early March, the international hobby scene began to realize that the great DX event of 1990 was now complete. Almost six months earlier, the Stora-Tuna DX Klubb of Borlange, Sweden held the 1990 Nordic DX Championship with arrangements made to have mediumwave broadcaster Radio St. Helena relayed by the local Cable and Wireless affiliate for the benefit of the shortwave hobby community. Not since the African medium-wave station Radio Syd was relayed by Gambia's Cable and Wireless Company in 1984 has such an event taken place.

## How It Came About

In August, 1990, the Stora-Tuna DX Klubb announced it was holding the Nordic DX Championship on 5-7 October 1990. News of the event reached North America the following month leaving very little time for prospective competitors to sign up with the event organizers in Sweden. The Stora-Tuna group attempted to arrange special programs and broadcasts for the occasion. Earlier in the year inquiries were sent to St. Helena, Gibraltar (Gibraltar Broadcasting Corporation and the British Forces Broadcasting Service), Brunei, Western Samoa and Pitcairn Island (VP200PI) with the hope that a non-shortwave country could be activated for the contest. Negative responses were received from all. Stora-Tuna member John Ekwall contacted Cable and Wireless in London and slowly arrangements to activate St. Helena fell into place. A recent addition of a satellite linking the United Kingdom to St. Helena helped facilitate communications with the island. Word of the special transmission began filtering out through the North American DX community. The various weekly DX newsletters and DX programs provided timely dissemination of the news as the short lead time precluded the monthly DX press from spreading the information.

On 6 October 1990 the anxiously-

awaited transmission finally took place. Listeners tuning in 11092.5 kHz at 2000 UTC in lower sideband mode heard a relay of the BBC World News. After some local announcements listeners were treated to the usual Saturday night feature of "Anything Goes." The program, hosted by Joy Lawrence, featured popular music and live phone calls from shortwave listeners in Europe and North America. There were numerous references to the special shortwave arrangements and special "shortwave identifications" for the event such as "You are listening to Radio St. Helena in the South Atlantic Ocean in the medium wave and shortwave bands." The shortwave transmission ended at 2100 UTC as reception conditions peaked. When the broadcast was completed, 336 shortwave listeners (including 63 from North America) sent in reception reports for this "once in a lifetime" opportunity.

The station was grateful to the Stora-Tuna DX Klubb for making the arrangements with Cable and Wireless, Ltd., and 336 DXers were grateful to everyone involved!

## The Island

This British island lies about 1200 miles southwest of the African coast and 700 miles southeast of Ascension Island in the South Atlantic. Although initially discovered by the Portuguese, the island has belonged to Britain since 1673. It serves as the administrative center for other British islands in the southern part of the Atlantic Ocean such as Ascension Island and Tristan da Cunha.

St. Helena is rough, mountainous island of volcanic origin. Its area is approximately 47 square miles. Barren cliffs rise 1,000 feet above sea level, and less than a third of the island is suitable for agriculture. The chief crop is New Zealand flax, while the grasslands support cattle and sheep grazing. The capital of Jamestown, situated at the mouth of a mountain stream near James Bay, serves as the only village

and port on the island. The population of around 5,000 consists mainly of Europeans, East Indians and Africans.

St. Helena has no airport, and is served only by the RMS St. Helena, which calls on the island every six weeks during her regular Cardiff, U.K. to Ascension Island to Capetown, South Africa trip. The vessel makes another stop on the Capetown-to-Cardiff return route. Thus mail must be routed through the United Kingdom, Ascension Island or South Africa to reach the station. Plans are being developed to run an inter-island ship between Ascension, which has an airport, and St. Helena, which would speed up mail service.

### Radio St. Helena

Radio St. Helena is owned and operated by the St. Helena government. It commenced operations on 25 December 1967. The station has a very small budget and employs only a handful of people. Station Manager Tony Leo has been in charge of operations for the last 16 years. He is assisted by Producer/Presenter Joy Lawrence, who organizes the studio operations, and by a clerk, Zena Henry. In addition, the station has six Voluntary Producers who come in and present programs on a regular basis.

Normally, the station operates exclu-

sively on 1546 kHz mediumwave with only 450 watts from 1800-2300 UTC (local time = UTC) Monday-Friday, and from 1900-2230 Saturday-Sunday. On Monday and Thursday there is a special "lunchtime" broadcast from 1130-1330. The station plans to upgrade its transmitter facilities to 1 kW during 1991.

According to Tony Leo, the way of life on St. Helena is very British and the station's programming reflects the British domestic radio scene. They broadcast news, interviews, features, various types of music, dramas, religious services, competitions, phone-ins and anything else of a topical nature. Although the station produces many of its programs locally, a number of the programs are purchased from the BBC Transcription Services. When the new transmitter goes into service, the station plans to increase staff, daily airtime, and program variety. Unfortunately, there are no plans for a permanent shortwave service.

The Stora-Tuna DX Klubb advises that all QSLs for the special shortwave broadcast have been issued. If you did not receive yours, they recommend that you send a cassette tape directly to the station:

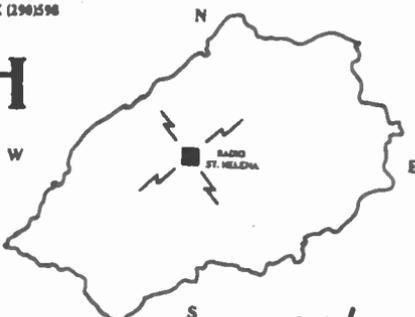
Radio St. Helena  
The Castle  
Jamestown, St. Helena  
(South Atlantic Ocean)

THE CASTLE, JAMESTOWN, ST. HELENA, SOUTH ATLANTIC OCEAN

Telephone 4669 Telex 4282 GOVT HL FAX (290)598



# ZHH



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## Feedback

Many thanks to those who have written in the past month: Alex Batman, Marianne Das, Matthew Gallagher, Hugh Melton, Bob Kallio, John Carson, Joe Norcott, and Baruch Selevan. I won't be able to include all your contributions and suggestions in this month's column, but I will include your contributions over the next two or three months as space permits.

Please continue to send in your program suggestions, commentary, and column suggestions. All contributions will be appreciated. Thanks very much!

## Radio Canada International

You'll probably read more about RCI elsewhere in the *Journal*, but I've taken the liberty to summarize RCI's status here in case you haven't heard it elsewhere.

On "Black Friday", 22 March 1991, RCI informed its employees that RCI's fiscal 1992 budget has been drastically reduced, from \$20 million in fiscal 1991 to \$8 million in 1992. Many personnel will be laid off.

All English and French feature programming produced by RCI has been eliminated, including the English language programming *Spotlight on Science*, *Earth Watch*, *Listeners' Corner*, *L'Attitude*, *Coast to Coast*, *Innovation Canada*, *SWL Digest*, and *North Country*. The only English language programming that will be produced by RCI will be newscasts. This essentially changes RCI's mandate to one of broadcasting chiefly to Canadians abroad.

Five language services have been eliminated altogether, including German, Japanese, Czech, Polish, and Hungarian. Russian programming will be halved, from four daily half-hour releases to two.

The vacated program slots will be filled with programming produced by Canada's public-funded domestic service, CBC Radio. RCI has been broadcasting some of these programs already, including *Double*

*Exposure*, *As It Happens*, *Royal Canadian Air Farce*, *The World at Six*, and *Sunday Morning*. By my calculations, five hours' worth of CBC programming will be added to the RCI schedule to fill the slots vacated by the five eliminated language services. No mention was made of the status of RCI's various relay agreements with broadcasters including the BBC, Deutsche Welle, Radio Korea, Radio Japan, and Radio Austria International.

All this news follows by one week Ian McFarland's resignation from RCI to accept a position with Radio Japan. Ian has accepted a minimum two-year assignment to serve as a "consultant" to Radio Japan as they seek to upgrade their English Language programming. According to ODXA and CIDX members I met at the Winter SWL Festival, Ian will initially be producing English language newscasts. There's no word on Ian's possible role in contributing to any Radio Japan DX/SWL programming.

I was saddened to hear of RCI's cutbacks, as they have always been one of my favorite broadcasters. I'll try to have details on RCI's new program schedule in the May *Journal*.

## The Shortwave Radioguide

ODXAn and NASWAN John Figliozzi has recently completed the second edition of the most comprehensive English Language program guide I've seen, "The Shortwave Radioguide." John has compiled information from most English language broadcasters and has organized detailed program schedules by time of day and day of the week.

John and I will be working together to collect program schedule information for inclusion in the Radioguide, and the Radioguide will be a significant source of information for this column.

John, Bob Brown, and I met during the SWL Festival, and we'll be exploring desktop publishing enhancements and various program list sorting methods for the Radioguide. Look for an announcement in next

month's **Easy Listening** column regarding the Radioguide and its availability through the NASWA Company Store.

## Languages by Radio

NASWA's Matthew Gallagher of Chicago sent me a note in response to last month's inaugural "Languages by Radio" topic. Matthew says his desire to learn foreign languages was one of the reasons he bought his shortwave receiver, and he tipped me off to an item in the March/April 1991 issue of Deutsche Welle's program guide, "Tune In." Deutsche Welle will be starting a new German by Radio course this fall, entitled "German - Why Not?", or, "Deutsch - warum nicht?" Deutsche Welle is offering a free (yes, free!) textbook to accompany the course. Deutsche Welle asks that you send for the book right away if interested, as they'll be sending the books via surface mail to save on postage. Their address: "German - Why Not?", Deutsche Welle English Service, P. O. Box 10 04 44, 5000 Cologne 1, Germany. A word on address notation - the commas shown above should be new lines as you address your envelope. In other words, the address shown above should take up five lines.

If you are already fluent in German, don't forget that Deutsche Welle broadcasts in German nearly 24 hours per day. German language broadcasts are beamed to Central and North America daily from 2200 to 0600 UTC. 15410 kHz was particularly strong one recent evening at 0030 UTC. Thanks to NASWA's Cris Hazzard of Solebury, PA — whom I met at the Winter SWL Festival — for this suggestion.

By the way - Deutsche Welle's "Tune In" is arguably the best no-cost program guide published by an international broadcaster. Just drop Deutsche Welle a note at the address listed above and request your own bimonthly subscription.

I also caught "Romanian by Radio" on Radio Romania International at 0250 UTC on 9570 kHz one recent UTC Monday. I do not know if the program airs weekly or less often.

## Spanish Foreign Radio

Spanish Foreign Radio (SFR) has undergone a name reversion - approximately two

years ago, the service adopted the more unwieldy name "Spanish National Radio - External Service". Apparently enough people either ignored the name change or pressured Spanish National Radio to revert back.

I have been an active SWL'er for more than five years now, and I have always enjoyed SFR. Key reasons: They generally put out an excellent signal with little fading and few neighbors (at least on their higher frequencies), and their announcers spoke in easily audible English.

Most nights begin with 15 minutes of news, first focusing on world news, and later on news of Spain and Spanish-speaking countries. Latin America figures prominently in their coverage.

On weekdays, Panorama follows the news for the remaining 45 minutes of SFR's one-hour broadcast. Daily features include a commentary and a review of the Spanish press. The commentary can reflect the opinion of the station, but often the commentator is an expert on international relations or an expert on Spain itself.

The Shortwave Radioguide shows the following weekend programming schedule:

UTC Sunday - Highlights of the Week, DX Spot  
UTC Monday - Radio Club (Mailbox program)

Cultural Exchanges, within a recent Saturday Panorama, recently had an interview with an American software developer who was installing new newsroom management software for Spanish National Radio. The relaxed interview focused on the American engineer's different perceptions between life in Mexico and Spain.

Easiest catches: 0000, 0100 UTC on 11880 kHz; 0500 UTC on 9630 kHz.

## Fine Arts on Radio

Spanish Foreign Radio includes Arts and Music Review in its Saturday Panorama release. A recent Saturday included a review of a German survey on artists' styles. Apparently a Spaniard was considered one of the most talented artists by survey respondents. UTC Saturdays; see times and frequencies above.

**Radio Australia** offers Arts Roundabout, a look at events in the arts scene in Australia. A recent edition said very little about Australian artists themselves, instead profiling a Chinese playwright and an Indonesian author both with current activities in Australia.

1030 UTC Sundays on 9580 kHz; other airings include Thursdays, 0930, and Saturdays, 0530.

**BBC World Service** offers Meridian as its primary arts review. If you tape programs as I do, a reliable catch is Saturday/Wednesday/Friday at 0630 on 9640 kHz. Other times include 1130 (9515 kHz) and 2030 (15070 kHz).

**Radio Netherlands** offers Images, UTC Wednesdays on 15560, 6165, and 6020 kHz at 0052 UTC; on 9590 and 6165 kHz at 0352 UTC.

## "Mallbag" Programs

These represent one of the most popular categories of showwave broadcast programs. I recall the thrill I felt when I heard my name live on Kol Israel's Calling All Listeners four years ago! The following suggestions come from Baruch Selevan of Brooklyn, NY.

**Radio Canada International** - Had I written this column two weeks ago, I would have included Listeners' Corner, with Judith Sauve and Ian McFarland. Based on what I heard on RCI this evening, Listeners' Corner will disappear given the April 1st funding cuts.

**Radio France International - Club 9516** includes music, letters, a news quiz, and more. Sundays at 1245 UTC. Best frequency here is 21635 kHz.

**Kol Israel - Calling All Listeners**, Sundays at 1900 UTC, repeated Sunday at 2300, Monday at 0100 and 2130, Tuesday at 0000. These are the anticipated times given the upcoming time changes. New spring/summer 1991 frequencies: 9435, 11605, 15640

kHz. The spring/summer schedule states that most regular programming is suspended due to the Gulf War, it appears Kol Israel has returned to its regular program schedule. Calling All Listeners sends you a transcript of the broadcast if they read your letter on the air.

**YLE Radio Finland - Airmail**, Tuesdays at 1105, 1215, 1315 UTC on 15400, 21550 kHz. Baruch says Kate and her partner are "...chatty."

**Christian Science Monitor World Service - Letterbox**, weekdays at 0134 and every two hours thereafter. A new program airs every weekday, hosted by John Parrot. Phone calls with listeners are included on occasion.

**Radio New Zealand International** - Sundays twice a month at 0430 UTC, 17770 kHz.

Baruch also mentions that RNZI and Radio RSA (in its heyday) both notify listeners before their letters are read, so they can hear their letters read on the air. Thanks for the information, Baruch!

## Radio New Zealand International

I've found them an "Easy Listening" catch here in Eastern PA recently, and I've only made a few program notes so far. UTC 0430 Weekdays on 17770 kHz features Checkpoint, an interesting business newsmagazine show targeted to domestic and Pacific region listeners.

## BBC World Service

One quick note - As of April 1st, a second edition of Newshour airs at 1300 UTC. That should be easy to catch here via RCI's transmitters. The 2200 edition of Newshour moves to 2100 UTC. A third daily edition is in the works for 1992.

Until next month,

73 DE Richard

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**FOR SALE:** A complete library of all FRENDX booklets ever issued. This includes every issue of FRENDX from March 1972 through December 1989. All are in fine shape and contain invaluable information on DXing and QSLing over the years from almost every SW station on the air for the past twenty years. There are also many dozens of articles on a wide variety of SW related topics. I am offering this collection to the highest offer over \$100.00. Please add \$12.00 for shipping costs to any offer you might consider. Larry M. Abraham, 3839 Sherman, Bridgeport, MI 48722. Phone (517) 777-4787.

# Listener's Classroom

Dr. Charles A. Wootten  
11424 Great Branch Drive  
Chester, VA 23831-1663  
CompuServe 76476.1556



Continuing with Jim Norris' question begun last issue, radio waves, up until fairly recently, were exclusively expressed in metres. (A metre indicates the length of one complete wave). You may still hear stations announcing the wavelength as 31 metrea, 25 metres, etc. To find the frequency of a given wavelength simply divide 300,000 by the wavelength. To find the wavelength of a given frequency, we divide 300,000 by the frequency. (The speed of propagation is 300,000 kilometres per second).

Ben Mancine wrote back commenting on the February column. He says that when he sends taped reports, he fills the second side with generic U.S. soft-jazz. Ben also said at the last meeting of the local NASWA chapter Michael Fanderya revealed his tactic of filling the second side of the tape with local radio station jingles, IS's and music. Sounds like a good idea!

On the previous subject of mentoring, several letters arrived. You may wish to contact these members. William Peake, who started the discussion here, listens from inside Post Office Box 414, Buffalo Center, Iowa, 50424. (I also lived inside a P.O.Box when I was stationed in Morocco. Absolutely amazing conditions!) Jack F. Nibecker, Ap. Postal 5-606, 45000 Guadalajara, Jal., Mexico, writes to say he is the only known SWL in the area and would appreciate correspondence.

Robert D. Swan, La Vale, MD., writes that he was originally active in the 1950's and allowed life's pressures (job, food, etc.) to lead him astray until recently. The difference this time, he says, is that a friend has also become interested in this fascinating hobby. Now I have someone to talk with about hearing "Lower Slobbovia" last night on shortwave and he can appreciate it. We encourage each other's interest, help each other experiment with different antennas and try to understand propagation and a dozen other puzzling aspects of this engrossing hobby. While our wives might share our interest in the world's events and learning about other cultures, having a friend who is interested in this hobby helps us inspire each other as we try to learn, understand, compete. Of course there are often many unanswered questions. But this is where the different columns of NASWA are helpful. These experienced and knowledgeable people are a very

valuable resource. To each one I want to express my appreciation.

One of our newer members, Adrian Dance, wrote to inquire about the HF band and wasn't quite sure he knew everything there was to know about it. Well, Adrian, tons of books have been written on the subject. Here is just a thumbnail sketch.

Shortwave broadcasting takes place in the High Frequency (HF) band. This portion of the radio spectrum is ideally suited for international broadcasting. This is basically due to the favorable natural laws that guide propagation. As all other portions of the radio spectrum are limited in their range, the shortwave broadcasters have other "competitors" on the air, too. These come in various forms from the military, amateur radio operators, aeronautical and maritime services, and others whom only HAVANA MOON can identify.

Out of all this tremendous range, only a small portion is allocated to broadcasting, and another chunk of that is only allowed for regional, not international, broadcasting. An example would be the 75 metre band, a small range between 3.95 and 4 Mhz, only roughly available for broadcasters in Europe and the Soviet part of Asia. Another example is the 41 metre band, 7 MHz, which is prohibited for broadcasting in North- and South America, but in use for worldwide broadcasting by stations on the other continents.

The 120 metre band (really outside the HF-band), the 90 metre band, and the 60 metre band are earmarked for broadcasting only in the tropical regions of the world. You will often see references to the "Tropical Bands" in the hobby press. They are talking about these ranges. If you try to pick up stations working these various bands you are said to be DX-ing. The letters DX are one of the combinations in a long list of abbreviations formerly used by code operators to shorten the length of their messages. DX means "distance", just like ANT means "antenna", RX means "receiver", and so on. The term "DXer" was gradually adopted by people who searched the bands, trying to catch sounds from far away stations. Dxing, though, is a technique utilized on all bands and in many forms whatever the broadcasting medium. 73's

# Listener's Library

John Bryant, AIA  
Route 5, Box 14  
Stillwater, OK 74704  
CompuServe 74730.2145



Welcome to April's Listener's Library. I owe you and Bill Oliver an apology for the missing column last month. I was really sick with some weird viral cousin of the flu. It was a humdinger and we closed the old Library for darn near 3 weeks! Thanks to that missing column, we've got a real mother lode of goodies for April. Let's head right for...

## THE STACKS

There have been two major book releases recently. The first was another tour de force by George Zeller: *The Pirate Radio Directory-1991 Edition*. The second was the anxiously awaited *Shortwave Listening Guidebook* by Harry Helms. I'll take a crack at reviewing Harry's book and then hand the torch to NASWA and FT co-editor Kirk Allen for a look at the pirates.

## THE GUIDE BOOK

With the publication of the Helms book, Harry author has performed a real service for us and for the world of shortwave in general. The *Guidebook* continues a tradition of general guides to radio begun after WW II by Hank Bennett. I believe that Harry was a co-author in the 1970's of the last edition of Hank's venerable text. Several years ago, Harry authored the excellent, *Shortwave Listening Handbook* published by Prentice-Hall. Unfortunately, that book was allowed to go permanently out of print. Harry had redressed the situation, IN SPADES! I am excited because I believe that this complex hobby and its allied listening hobbies (BCB, FM, TV) desperately need a permanently available basic text! Those of you who are new to the hobby and NASWA and those of you who are enjoying those first thrilling years of shortwave enjoyment--BUY THIS BOOK! All you need is a decent radio, a modest antenna, membership in NASWA and this book for guaranteed years of enjoyment! Bald-headed old guys like me need this book, too. We can pick up more than a few tips between these covers. Most importantly, though, this is the book to loan out to friends who are newly interested in the hobby. There isn't a better ambassador for us anywhere.

I like the fact that Harry covers all of the listening hobbies before focusing in on SWBC.

Harry begins with sections on amateur radio, utilities, medium wave DXing, FM/TV DXing, as well as basic coverage of the SWBC hobby (and right in that section on SWBC is a cover from the NASWA Journal as an illustration--see page 27!) Chapter 2 covers the shortwave bands giving a very readable guided tour of the activities found in the various segments of the HF Spectrum. Harry's Chapter 3 is the best discussion of "selecting a shortwave receiver" that I have ever read. Period. Chapter 4 on Antennas and Accessories gives equally frank and good advice. He is obviously in the business of giving good advice rather than selling gee-whiz technology. The chapter on propagation is equally straight forward stuff that should support anyone's hobby well for the first decade.

The latter half of the book focuses on what can be heard on the bands. Chapter 6 highlights a number of the major SWBC stations (BBC, Nederland, HCJB, etc.) while Chapter 7 covers domestic SWBC around the world on a region by region basis. That is followed by excellent 20-page discussions of utility stations, more on MW, TV and FM DXing, and a super chapter on Clannies, Pirates, Numbers Stations and various things that go bump in the night. The concluding Chapter 11 is a broad discussion of the organized hobby of SWBC DXing, QSL's, clubs, on-line BBS services and conferences. Harry has also provided several handy appendices including one listing the major clubs and characterizing each club's services. The citation of NASWA reads "Covers SW broadcast only, through a monthly bulletin. Currently, this is the best bulletin of any club; membership is essential if you're interested in SW broadcasting." THANK YOU, HARRY! (I told you he was perceptive and nonsense).

Although only three quarters of an inch thick, the *Shortwave Listening Guidebook* contains 316 pages of high quality bright white paper. The type face and size are well chosen for legibility and the book is very nicely illustrated with SWBC QSL cards. It is published by High Text, San Diego, and is now available from most hobby outlets.

And now over to the flip side to Kirk Allen:

## PIRATES GALORE!

For the third year in a row, pirate DXpert George Zeller has shared his expertise by writing *The Pirate Radio Directory--1991 Edition*. The greatly expanded 1991 edition discusses techniques for finding and QSL'ing pirate stations and lists information sources that are now available for current pirate data.

The majority of the directory is devoted to listing, reviewing, and profiling pirate broadcasting stations that were reported by North American listeners in 1990. The book proclaims the "Virtually every North American pirate that was widely heard in 1990 is listed..." Believe me, there's plenty to read...with approximately 165 stations featured! According to George, this is a 49% increase over the 1989 broadcasting activity. Each station profile includes station IDs, formats, frequency tendencies, QSL addresses (where known), QSL'ing reliability, and details.

Scattered all through the book, you'll find many reproductions of pirate verifications with improved reprint quality over the previous editions. Almost every page in the profile section is decorated with diverse free radio station QSL's. You've just gotta check out the "Many Faces of Ian" (McFarland) QSL from WLIS on page 66...it's a real beaut!

The directory ends with a new feature: a list of currently inactive stations that were profiled in the '89 and '90 editions. I'd certainly recommend this year's directory for any DX'er who holds any degree of interest in the free radio scene. Once again, a real class act from George Zeller. The *Directory* is available for \$8.95 + \$2 s/h from Tiare Publications, PO Box 493, Lake Geneva, WI 53147. The '89 and '90 editions are still available in limited quantities. You get '89 for \$6.95 plus \$2 s/h; the '90 for \$7.95 plus \$2 s/h; BOTH can be had for only \$15 including s/h. Check it out!

Thanks a lot Kirk for a very well done review.

## IT'S A LONELY PLANET

Chris Hazzard of New Hope, PA wrote in with an excellent suggestion: "I read *Across Forbidden Frontiers* which was featured in Listener's Library recently and it was excellent. After reading that, I found a book published by Lonely Planet called *West Asia on a Shoestring*. I've also bought other Lonely Planet books on Ecuador, Peru, Nepal and Tibet. These guidebooks are oriented toward the backpacker/budget traveller and provide a different insight into other countries than that found in the Fodor's type books.

Chris continues: "In my reception report, I like to include interesting local information (strange attractions or problems of the station's city or area) that I find in these books. They seem to have every town listed, whether a cultural center or one-street mining town, and I usually get a lot of goodies when the return letters come, eventually. I strongly recommend the Lonely Planet series if you are beginning to specialize your listening and wish to become VERY familiar with it. These books offer a great deal of information in an easy, readable style. The address for the extremely friendly office is: Lonely Planet Publication, Embarcadero West, 112 Linden St., Oakland, CA 94607. They will give you a free subscription to their newsletter for the asking--they did for me, at least. They also have books on Indonesia and most of Asia."

Thanks very much for the tip, Chris. I, too, have recently become a fan of Lonely Planet. Gordon Darling of Papua New Guinea loaned me several to review. The Lonely Planet "Survival Kit" series of guides is published in Australia and is similar to the wonderful Moon Handbooks published in this country. Both series have over 50 titles and both are excellent "tell it like it is" books for folks who travel. Right now, I have the Indonesian Guides from both publishers. They are very comparable and both excellent. When I take my trip to Indonesia, both will go along!

## AND THEN, HEAVEN!!!

Scott Edwards of Los Angeles did us (but not our wallets) a favor when he recently sent in a catalogue from "The Literate Traveller, a Unique Selection of Travel Books." It is the finest non-radio-oriented catalogue that I've seen. The Literate Traveller has put together a beautiful catalogue of over 500 travel-oriented titles featuring all parts of the world, both well known and obscure. Most of the books in the catalogue have a brief mini-review as well as the usual bibliographic information. The catalogue is organized by area of the world and is brimming with exciting material at moderate prices. Here are some samples: *Riding the Iron Rooster* (\$4.95), *Seven Years in Tibet* (\$8.95), *A Passage to India* (a classic for \$6.95!), *Mr. Raja's Neighborhood* (\$9.95), *The Old Patagonian Express: By Train Through Latin America* (\$9.95), *A Guide to Ancient Mayan Ruins* (\$14.95), *A Traveler's Guide to El Dorado and the Inca Empire* (\$14.95), *Voices of Marrakesh* (\$6.95), and *Letters from Africa, 1914-1931* (another classic for \$10.95).

The Literate Traveller also has almost all titles of almost every travel guide series: Fodor's Travel Guides, Phaidon Cultural Guides, Baedeker's Guides, Michelin Guides,

the previously mentioned Lonely Planet and Moon Guides, as well as the scholarly/cultural Insight Guide series and many others. The price of the catalogue is \$3.00, but \$2.00 is refunded with your first order. The other \$1.00 goes to the American Forest Association's Global Relief Program's Heritage Forest Effort. The address is The Literate Traveller, 8306 Wilshire Blvd, Suite 591, Beverly Hills, CA 90211. The phone number is 213-398-8781, and they do take Visa and Mastercard. If you like travel books, you really ought to get this catalogue.

A GOLD STAR to Scott Edwards for this tip!

## AUTOMATED TRANSLATION (?)

Chris Hazzard and several others have written asking about the new PC software which will translate a document for you. Chris said "There are actually two different programs for the IBM compatible machines. They are called the French and Spanish Assistant. The \$80 price tag (each) puts them well out of my reach (I'm a college student), but according to the description, these programs analyze the document sentence by sentence, translate words, conjugate verbs, provide gender and number agreement, and work with the word order of the sentence. They also include a Random House bilingual dictionary, grammar help, a verb conjugator and an accent entry utility. Obviously, these programs would be a very powerful tool to use with the Language Lab series. They are produced by MicroTac Software and requires DOS 2.0 or higher, 512K, and a hard disc. They were in the Selective Software catalogue available by calling 1-800-423-3556."

Thanks to Chris, and others who have suggested giving this software a try as an aid to preparing reception reports. Has ANYBODY out there done this?

## BEHIND THE TUBE

*Behind the Tube: A History of Broadcasting Technology and Business* is a recently published book by Andrew F. Inglis. It retails for \$37.95 and is over 500 pages. NASWAN Elton L. Byington, N2KXT. I've abridged Elton's review slightly to fit our space. Here is our closing number from Elton:

"Did you ever read a book and say to yourself, 'I wish I'd written this book'? That's how I felt I got as I read *Behind the Tube*.

Broadcast consulting engineer Andrew F. Inglis, formerly head of the Broadcast Equipment Division of RCA Corp., has

written a history of the broadcasting business from the inside -- and with a twist: the book not only recounts technological advancements, but also the economic forces behind them.

Beginning with the invention of the telegraph and progressing in a grand sweep to the latest developments in high definition television, Inglis paints a vivid picture of broadcasting and its myriad machines, as it was, as it is, and as it may be in the future.

This book is fun! Take, for instance, this passage about the development of color TV:

"On February 2, 1953, the NTSC published the Revised NTSC Color Field Test Specifications.... Some final phases of the tests continued, however, and it was during this period that RCA's Chief Engineer George Brown surreptitiously painted a banana in a test scene blue, completely frustrating the technical crew as it tried to adjust the system to make it yellow."

I can see the sweat on the brows of the RCA engineers and technicians as they tried in vain to correct a problem they all knew was impossible! Blue bananas, indeed!

This story is but a tiny part of the technical, financial and political story of the color TV wars, not to mention those involving AM, FM and today's HDTV. They're all chronicled here and in great detail. The cast is worthy of Hollywood: Marconi, DeForest, Armstrong, Sarnoff, Paley, Fessenden, Farnsworth, Goldmark, duMont.... All were major players in the game to build a major industry.

From Emile Berliner's flattening of Edison's phonograph cylinder to Japan's "flattening" of the American TV manufacturing business, this is a grand story, told in a grand manner.

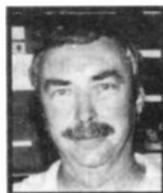
I had one small quibble with the author. He recalls how Zenith steadfastly refused to abandon hand wiring in its early color TV sets, when more reliable printed circuit boards would make assembly much simpler.

So I wrote to Andy Inglis and described the charred, cracked PC boards I'd had to repair as a result of the heat produced by the vacuum tubes of the day. I received a very nice reply, saying that I was right about those early boards and that he'd make a change in subsequent editions. He closed his letter by saying that, although he wasn't a Ham Radio operator, he'd "presume to close with ... 73."

To which I'll reply: The honor, Andy, is mine! Here's my 73 in return -- and thanks for *Behind the Tube*, it's a wonderful book!"

# NASWA Portraits

Jerry Klineck  
43 Lein Road  
West Seneca, NY 14224



**H**i again and welcome to another Portraits column. This month we visit a DXer who has actually done what many of us have threatened to do.... buy a house for better DX. Before we journey to Whidbey Island, I have a request. We are very appreciative of the letters to this column but when you submit your profile, if at all possible a photo of yourself and you equipment should accompany it. As the wise man once said; "A picture is worth a thousand words" and this has never been truer than here. Thanks!

Now, off we go to Whidbey Island in beautiful Washington State, and our visit with Peter Tutak...

"I'm 36, and my occupation is that of a Network Planning Consultant for the Digital Equipment Corporation. I specialize in fiber optic LAN design for the company's clients from Oregon to Alaska.

"I originally began SWLing back in 1965, at the controls of a Lafayette HE-30 that was a hand-me-down from my two older brothers. That HE, and a homebrew (dad was an itinerant ham) dipole on the roof of a two-story row house in Jersey City brought me an entirely new world for exploration. My father taught me how to keep a log and how to put together a reception report for QSLing. Soon the wall above my desk began to look like those of other listeners I had seen in Popular Electronics. My first one was from Swiss Radio Int., followed by ETLF-Addis Ababa, HKJBS-Amman, Radio Americas, R. Peking and the over-sized 'world exploration' card from Lisbon. Unfortunately (for back then), so did the 'little red books' containing the wisdom of Chairman Mao as well the anti-American stuff from Havana. (Pretty heady stuff for an 11-year old. The nuns at my grammar school were a little shocked when I brought them in for 'show and tell'...they began referring to me as 'that little Communist'.)

"However, my SWLing interests were gradually supplanted by baseball, music and girls. (YOUTOO? -ed) By 1966 the HE was packed away, as were my QSLs. The former is still in

my dad's basement. The latter unfortunately fell prey to a spate of moms' spring cleaning.

"In 1980, the bug bit again while I was in engineering school. I hauled out the hum and buzz laden HE and set up shack. A ham friend of my dad's gave (yes, GAVE) me his wonderful old HQ180AC soon after and I was finally set with a good rig. I joined NASWA in late '81 and, except for a considerable personal hiatus from 1987 to 1990, I've been at it since, from New Jersey to Seattle, using an R70 and now an NRD525 with the HQ180AC as a backup.

"Earlier this year I finally got fed up with city-DXing, so I bought a house on a quiet couple of acres here on Whidbey Island in order to better enjoy peace, solitude and DX-ing my favorite target areas: Africa, SE Asia and Oceania. The current antenna "farm" consists of a 'snake' 480' long, a 60 meter halfwave dipole, a 450' longwire and a 90 meter full wave horizontal loop. Future plans call for shooting a delta loop up into the cedars.

"The house is small but warm and there's always coffee on... so if you're ever in the area, give me a call (I'm in the book) and stop by."

Thanks for the offer Peter, if we ever are we surely will! And thanks for the most interesting story. I'm sure many DXers have considered the hobby to varying degrees when moving or thinking about it. I know that I personally have been grappling with the decision to move or remodel, and the biggest plus for moving was a yard big enough for some beverages. Alas, remodeling won out for this year, but there's always tomorrow!

If you've sent in a profile and have not yet seen it here, rest assured you will. I still have a backlog of 4 or 5 and am doing them in the order which they were received here. Again, thanks to all who have contributed and, if you haven't yet; please send us your story, with a photo, so the members can get to know you better. And now, as another chapter in shortwave radio history - the Gulf War - draws happily to a close, till next time, Happy Easter and great DXing!

# Company Store

Richard A. D'Angelo  
2216 Burkey Drive  
Wyomissing, PA 19610



Due to the explosion in shortwave listening interest created by the Gulf War, I thought it appropriate to start this month's column off in a different fashion. NASWAN Steve Price of Conemaugh, PA was quoted extensively in USA Today in early February. I asked Steve about it. Here is his story: "Not only was I interviewed by USA Today, I was interviewed also by the following papers and had articles in them: The Detroit Free Press, Fort Worth Texas Star Telegram, Houston Texas Chronicles, New Hampshire Manchester Union Leader, The News Tribune in Woodbridge New Jersey.

"On January 21, 1991 I received the ultimate phone call from CNN News in Amman, Jordan. Yes, Amman, Jordan! I talked with the satellite engineer Jay Ayer and an Arab man who translated some Arabic announcements from Radio Baghdad that I read to him. CNN in Jordan wanted all the information I ever knew about Radio Baghdad. I gave them some new frequencies that RB opened up just that day. Also, CNN News in Atlanta, GA called me later and I hooked up my receiver to the phone so they could hear Baghdad Radio. I also was interviewed by CBS 60 Minutes and CBS News and, of course, I appeared in the local newspapers as well. They even did a story about CNN Amman, Jordan calling me. All this publicity was not that I knew the right people, it is just that the right people knew me." Apparently so Steve. Nice work and thanks for sharing the story with the membership.

## WINTER SWL FESTIVAL

This month's column was completed prior to the Winter SWL Festival. We hope to report about the FEST over the next few months. Members Dave Erali and Eric Johnson have indicated a desire to help man the Company Store table which should enable Turnick and D'Angelo to goof off more than usual.

## REMINDER: NEW PRICES FOR CLOTHING LINE

As mentioned in last month's column, effective 1 March 1991 new prices are in effect for the entire clothing line available through the Company Store. Here's the story:

T Shirt (S, M, L and XL) - US\$12.00  
Sweatshirt (S, M, L and XL) - US\$21.00  
Poplin Cap with Leather Strap - US\$8.50  
Nylon Windbreaker Jacket with Lining (S, M, L and XL) - US\$26.00

Each garment is available in extra, extra large (XXL) for an additional charge: the T Shirt for US\$1.00; the Sweatshirt for US\$3.00; and the Nylon Windbreaker Jacket with Lining for US\$4.00. The Lined Windbreaker Jacket is also available in XXXL and XXXXL for the same additional US\$4.00 charge.

However, there is some good news because of some new arrangements with our supplier. Now the Company Store can now pass along a US\$1.50 savings per garment on multiple orders. For example, if you order a T Shirt and Sweatshirt which normally costs US\$33.00, if purchased individually, you can now purchase those items together for only US\$31.50. That helps take the sting out of higher prices. In fact, if you order the entire clothing line, in the standard sizes of S through XL, the total tab comes to the same US\$63.00 with the new prices as it did with 1989's prices. Orders to metropolitan areas in Canada still require an additional US\$4.00 per order for shipping.

## IN MEMORANDUM

In February, NASWAN Gary Gears passed away at the age of 46. Besides his regular visits to the Company Store, Gary was a frequent participant in the NASWA and SPEEDX Award Programs and host of the SPEEDX Report on HCJB's DX Party Line program. I always enjoyed talking to Gary. He was a fun guy to know. He will be missed. My condolences to his family.

73 - RAD

Make checks payable to either Richard D'Angelo or The NASWA Company Store

# NASWA Awards

Richard A. D'Angelo  
2216 Burkey Drive  
Wyomissing, PA 19610



African Continental DXer (50 Different African Broadcast Radio Countries)  
Terry Palmershein, Puyallup, WA

Arab World DXer (15 Shortwave Broadcast Radio Countries That Use Arabic As The Major Language)  
Stephen J. Price, Conemaugh, PA

Asian Continental DXer (30 Asian Radio Broadcast Countries)  
Gregory A. Hart, Live Oak, FL

Australian DXer (7 Different Australian Shortwave Broadcast Transmitter Sites)  
Gregory A. Hart, Live Oak, FL

European Senior DXer (25 Different European Broadcast Radio Countries)  
Michael Fanderys, Parma, OH  
Stephen J. Price, Conemaugh, PA

Senior Ecclesiastic DXer (25 Religious Oriented Shortwave Broadcasters)  
Steven R. Lare, Holland, MI

Master European DXer (35 Different European Broadcast Radio Countries)  
Terry Palmershein, Puyallup, WA

Master DX Centurion (200 Different Shortwave Broadcast Radio Countries)  
Terry Palmershein, Puyallup, WA

Master Papua New Guinea DXer (15 Shortwave Broadcast Stations in 5 Broadcast Radio Countries Controlled By Papua New Guinea)  
Terry Palmershein, Puyallup, WA

## Awards Tidbits

Steve Lare mentions that he is only one or two QSL's away from qualifying for some more awards. Greg Hart reports sending a "Thank You Lab" (M-1 in the Reprint Service Catalogue - US\$2.00) note to Radio Centro in Ecuador and having an ongoing correspondence with V/S Luis A. Gamboa the Director.

The St. Helena verifications began arriving in North America in late February. I received a number of phone calls from enthusiastic recipients. Unfortunately my QSL arrived after all those phone calls so I had some trouble sharing the excitement at that time. Thanks to John Ekwall and the Stor-Tuna DX Klubb for making the arrangements. Radio St. Helena's 1,500 watt transmission will bring down some of those "QRP" totals.

Interested in a full line of Pirate Awards? Check out John T. Arthur (RD #1 Box 15A, Belfast, NY 14711, USA) and the A\*C+E Awards Program! An SASE will get you a write up about the program which is open to non-members of A\*C+E. Included are awards for number of stations verified and countries verified. Also, a couple of Clandestine awards are in the works. This is the first program in the world to specifically address pirate station awards. These guys beat us to it! Nice job John! I am unaware of any other awards programs among the ANARC clubs at this time. If you know of one, why not write to me with the details.

Remember, each award costs only US\$2.00 in North America and US\$3.00 overseas (additional overseas awards applied for at the same time cost only US\$2.00 each). Endorsement stickers are available for US\$0.50. International Reply Coupons (IRC's) at a rate of US\$0.50 are also acceptable. Remember to watch the JOURNAL for an announcement about the updated and expanded Country List / Awards Program booklet.

73 - RAD

NASWA Awards Program: Have you sent in an application lately?

# Asian Destinations

Mitch Sams  
P.O. Box 780075  
Wichita, KS 67278



## A Quick Analysis of Shortwave Radio and the Gulf War

Like many of you I watched a lot of network TV news and listened to a lot of shortwave news broadcasts during the Gulf war. News came fast and furious during this very short war and I found myself spending time watching CNN. I mean, how could shortwave compete with live images from the very frontlines of the battle? One cannot deny the incredibility of seeing TV images of live Scud attacks, or the first allied troops to "officially" re-enter Kuwait City (actually behind the advancing front-line of the western media, or so it seemed-ha!). However, even in this day of advanced technology, the star of WWII - shortwave - still had it's niche that no other media could fill. Shortwave held a vital, but unheralded, role in the war. Yet, at times it was the only direct way to communicate with westerners hiding out in occupied Kuwait City. It was the only way the allies could get their point of view directly to the huge audience of Arabs, which included several pro-Iraqi groups vital to Saddam's support plan. Later, in the final days of the war, it was Saddam's last outlet to the rest of the world. And, incredibly it was the ONLY voice from home for the most northerly front-line US troops, and this was documented by the media pool over there.

If you knew how to "read between the lines", shortwave offered important new information. For example, a quick scan of the evening shortwave news broadcasts from several of the key coalition nations often gave the listener a fairly accurate understanding of who was in line and who might be wavering. When there were questions about Syria's willingness to stay with the allies if Israel retaliated against Iraqi Scud attacks, it was evident through Radio Damascus shortwave broadcasts that they would indeed remain faithful. China and the Soviet Union provided shortwave listeners with important information on where they stood policy-wise through every twist and turn of the war, even while others in the news media were speculating.

Now, yes it is true that the rest of the news media monitors shortwave news broadcasts themselves, and uses that information in their reports- so what can we be missing? Just simply, the entire unedited story from the source.

Israel Radio was a broadcaster worth listening to during the war. Their commentaries were cautious, but still interesting. Scud alerts and gas mask instructions were carried live on several occasions. One station that disappointed me was UAE Radio in Dubai. Their coverage of the war was practically useless, when I had thought it might be informative. But, it may have just been their way of laying low.

I got the first hints from Deutsche Welle and Radio Japan that Bonn and Tokyo were willing to support the allies financially or otherwise. Later in the war I heard surprisingly frank commentaries which were apologetic about the amount of support granted thus far.

Radio Baghdad was of course an interesting story in itself. In the early stages of the conflict Baghdad filled the airwaves with threats, propaganda, clandestine broadcasts, and jamming. But, as the air war progressed the effectiveness of allied bombing was directly reflected by Baghdad's decreasing activity on the bands. First, the major Iraqi transmitter sites went out one by one. Soon all that could be heard were the sites in occupied Kuwait as well as a couple of lower powered feeder frequencies in Iraq. The

fact that Baghdad was down to mostly Kuwaiti sites indicates the trouble the allies went to in preserving Kuwait as much as possible. But, in the last days of the ground war Iraq was silenced on shortwave completely. It had to be silenced because shortwave is such a powerful tool in the mideast. One can see why many governments consider such information as transmitter locations to be guarded military secrets. Oh, and another thing, I guess we'll never know if the secret messages broadcast openly over Radio Baghdad were in fact meant for terrorists, or just a psychological ploy.

One of the most influential shortwave stations in the Arab-speaking community of the middle east is the BBC's Arabic Service. It has been highly trusted and regarded throughout the region for years. There was an interesting program on the BBC World Service about a month ago which went through the history and background of the BBC's Arabic Service. The Arabic Service has millions of listeners worldwide and receives thousands of letters from listeners each year. The British continue to handle this influence and reputation with responsibility, which as a result has left their position in the Arab world unscathed. One official for the BBC said during the show that "...we've such a reputation for honesty that we've become an unwilling propaganda weapon". I would say this was very true in this war since it probably took the BBC's Arabic Service to convince many pro-Iraqi Arabs of what Hussein was up to and then finally of what the result of the war actually was.

The same can be said for the BBC's English Service. I have a new appreciation for the BBC. After so many hours of TV news, which at times contained a bit of wild speculation or irritating hype, the BBC was like a breath of fresh air - just the simple facts. And speaking of the BBC, I hope you got to see the "60 Minutes" story about the BBC's monitoring service in Caversham Park, UK. Very interesting to say the least.

The past few months have peaked the interest somewhat of the general public towards shortwave. I know that, myself, I got a dozen or more phone calls from people who knew me, or of me, and were just interested in tuning into BBC, or if possible Radio Baghdad. And shortwave portables sold like hotcakes, it was difficult to find them on store shelves. CNN interviewed the folks at Barry Electronics in NY (they advertise in WRTH & PWBR) and they said they were overwhelmed with orders. I know that several hobbyists - including Gerry Dexter, Bob Brown, and Ed Kusalik - were featured in local papers or TV. It will be interesting to see what impact this exposure will have on the hobby.

#### **And Finally.....**

Thanks to a letter from Steven Lare in Michigan for correcting my mistake in my last column concerning who's in the south and who's in the north of Vietnam. To clear it up I've gone back to the January 1989 "DXers Forum" in NASWA for a reprint of that list of regionals:

**NORTH:** Lai Chau, Son La, Hoang Lien Son, Ha Tuyen, Cao Bang, Bac Thai  
**SOUTH:** Binh Tri Thien (Hue), Nghia Binh, Gia Lai-Kon Tum, Lam Dong

# Listener's Notebook

Dan Ferguson  
P.O. Box 2604  
Dale City, VA 22193  
CompuServe 76702,771

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All times, dates, and days of the week are UTC (GMT), dates are MM/DD or MM/DD/YY.

**ALBANIA** - Tirana heard well in New Zealand with its European transmission in English at 1830. (AC/RNZI 3/3, via Mike Fern)

Wolf Herent, of R.Austria Intl, forwarded a copy of a telex from Radio Tirana. Budget cuts have forced the cancellation of Swedish, Indonesian and Farai about 3/1, after dropping Spanish and Portuguese to Latin America in mid-Feb. All European languages are being reviewed; cuts are being made based on audience feedback (i.e. mail). Biggest audience support is for German, followed by English, so cuts to those programs may be less severe. (RNMN 3/7, via Mike Fern)

**ALASKA** - KNLS, Anchor Point, on 11880 kHz from 2000-2100 with poor signals after R.Australia leaves the frequency. RCI opens on 11880 before 2100. (AC on DXPL 2/16 via Mike Fern)

KNLS will use the following frequencies for English starting in March: 0800-0900 on 11715 kHz; 1500-1600 on 9615; from 1800-1900 on 11945 kHz; 2000-2100 on 11910 kHz (AC on RNMN 2/21 via Mike Fern)

**ANGOLA** (Clandestine) Voice of the Resistance of the Black Cockerej, hrd on new 17890 since 2/13 from \*2055 18, mx & Portuguese news, NA to 2232\*; for Angolans in Portugal. Sked: We/Fr/Su; ex 15500, not // 7100. VRBC on 7100 hrd 2/9 from 2200 in Port to 2340\*.

**AUSTRALIA** - 2RPH, Sydney, operates on both 1629 and 1539 kHz on a 24 hour schedule. 1629 kHz will be shut down shortly. (AC/DXPL 3/10, quoting Ian Stanley, Australia, via Mike Fern)

4AVA, Gold Coast (word indistinct) College, on 1656 kHz is operating 24 hours with one watt. It has been heard in Victoria, Australia. (AC/DXPL 3/10, quoting Ian Stanley, Australia, via Mike Fern)

**AUSTRIA** - Shortwave Panorama will resume on Radio Austria's English service starting March 3, at 1130 and 1430 on 6155 and 13730 kHz (among others). (JM & (Wilf Harens?), RAI, on RNMN 2/28, via Mike Fern)

**BAHRAIN** - On 2/19, the government-run Radio Bahrain began rebroadcasting VOA's Arabic service programs, called "Around the Gulf." Officials in Bahrain have agreed in principle to record and rebroadcast two hours each evening of VOA's Arabic programming minus newscasts. These will be carried over all Bahraini home service transmitters. So will live Presidential press conferences from Washington as they occur. The VOA already has a 50 kw mw transmitter on 1350 kHz which relays VOA English five hours each day. The Bahrain relay means that the VOA has a usable mw signal that can reach Iraqi troops in Southern Iraq. (RNMN 2/21 via Mike Fern)

The VOA Arabic relay on 1350 kHz has been heard in Finland when propagation is favorable. (RNMN 2/28, via Mike Fern)

**BANGLADESH** - R.Bangladesh External Service in Bengali heard 1/31 at 1655 on new 13615 [he uses a Yaesu FT-757DX transceiver; WRTH 91 says 13620--mf] with talks and popular or traditional vocals; fair to good signals. (Dennis Herner on RBDX 2/15 via Mike Fern)

**BELGIUM** - The French-speaking shortwave service, Radio 4 Internationale closed for good on Sunday, March 10. The principal reason was a lack of funds for the RTBF as a whole. The RTBF's board of directors looked into methods of saving the service, including (apparently) private and provincial grants-in-aid, but could not find enough money to keep the service alive. RTBF's history goes back to the station operated at Leopoldville (now Kinshasa, Zaire) by Belgium's World War II government-in-exile. The Flemish-speaking BRT may take over the two transmitters at Wavre, near Brussels. Radio 4 Internationale carried a half-hour daily program from Belgium's German-language network. RTBF will absorb the R4I employees after they are retrained. (JM & Andre Moens, RTBF, on RNMN 3/7, via Mike Fern)

Brussels BRT heard from 0030-0055 in English on 13720 MF // 13685 kHz; 15540 also heard in English at 1920. [15540 English not in WRTH 91--mf] (AC/RNZI 3/1, via Mike Fern)

BENIN - Cotonou, 4870 kHz, heard with local music and announcements 0530-0615 (not continuously). No clear ID, but Cotonou mentioned in a spot or news item. Weak to fair signals, but QRM from a U.S. military net on the same frequency. (Mike Fern 3/13)

BOLIVIA - R. San Miguel, Riberaita, 3310 kHz, very reliable in Quito, any time from 0030-0300 sign off. [WRTH says 0900-1800, 2000-0300--mf] (QLB/DXPL 3/2, via Mike Fern)

R. Feria del Acre, Cobiya, 4600 kHz, heard at 0039. A common ID is "Radio Noventa y Uno", referring to their FM frequency of 91 MHz; clear ID with all frequencies at 0043. [WRTH 91 says 1100-0300--mf] (QLB/DXPL 3/2, via Mike Fern)

R. Santa Ana, Santa Ana de Yacuma, 4649 kHz puts a half-decent signal into Quito evenings; try around 0050. [WRTH 91 says 1100-1800, 2100-0230--mf] Heard at 0057 with 'comunicados', accordion music, and dedications. (QLB/DXPL 3/2, via Mike Fern)

R. Padilla, Padilla, on 3474 kHz, heard briefly at 0032. (QLB/DXPL 3/2, via Mike Fern)  
R. Abaroa, Riberaita, 4720 kHz, heard briefly at 0110. (QLB/DXPL 3/2, via Mike Fern)

BRASIL - Radio Nacional do Brasil, 15265 kHz, in German at 2045 1/31 with fair to good signals [WRTH 91 has German at 1900-2000--mf] (Dennis Herner, RBDX 2/15 via Mike Fern)

R. Cultura Araraquara, 3365 kHz, heard at 0020 with fair to good signals. One ID with a fanfare and frequencies. (QLB/RXPL 3/2, via Mike Fern)

BULGARIA - Sofia broadcasts to the Pacific from 0730-0800 on 11765, 15160 and 17825 kHz. 17825 is by far the best signal in New Zealand. (AC on RNZIM 2/17 via Mike Fern)

"Radio Varna" transmits in Bulgarian to Bulgarian ships around the world via Radio Sofia on 15330 kHz between 1430-1500. R. Varna has its own QSL card and will accept reports in either English or German, to: Radio Varna, International Service, 9000 Varna, Bulgaria. (DXPL 3/2, quoting Rumén Pankov, Bulgaria, in "Onda Corta", Argentina, via Mike Fern)

The Radio Varna transmission for seaman is at 1400-1500 on 15330 kHz. (Andy Sennitt, quoting Bulgarian DX Club, on RNMM 3/7, via Mike Fern)

Sofia's domestic service in Bulgarian is relayed on sw at 1000-1902 on 11660, and 0400-2200 on 7670 kHz. (WBI 3/8)

CAMBODIA - Current schedule for the Cambodian external service, the Voice of the People of Cambodia, on 1938 kHz is: 1200-1215 English; 1215-1230 French; 0000-0015 English; 0015-0030 French. Reports are welcome. (Dario Monferini, Play-DX, quoted in DXPL 2/16, via Mike Fern) [WRTH 91 says Thai at H+30, Laotian at H+45, Vietnamese at H+60; also try 9695.--mf]

English is heard at 1200 on 11937 kHz, a woman announcer reading news; at 1213 English music; at 1217 a male speaker in French, and news follows; a rather weak signal in New Zealand. (AC/RNMM 3/13, via Mike Fern)

CANADA - Ian MacFarland will be working the next couple of years in Tokyo for Radio Japan as a consultant for English programs. There has been speculation that he might appear on the Radio Japan DX program, but I've seen nothing on that other than speculation. Computer networks can be wonderful rumor mills & the rumors were flying after Ian's announcement, concerning what other well known shortwave personalities might be changing stations, including speculation as to who would replace Ian on SWLD. I suspect the rumors might quiet down after word of the RCI budget out gets around:

Earlier indications of a final RCI budget in the C610-13 million range seem now to have come to pass. RCI has announced cuts of nearly half its staff. A number of languages will be canceled. French and English programming will consist of relays of the CBC domestic services, except for what will apparently be a small number of newscasts by RCI staff for specific target areas. There will be no reduction of frequency hours & apparently no change in the normal transmission schedule. With CBC domestic programming replacing deleted languages, the relay exchanges with various broadcasters will presumably continue. (from conversations with a number of Canadians at the SWL WinterFest near Philadelphia 3/22-24)

RCI's programs for the Middle East are (were) being carried by Deutsche Welle on 9555 kHz // Austrian Radio on 11925. The current schedule is: 0300-0330 French, 0330-0400 Arabic, 0400-0430 English, 0430-0500 Arabic. (AC on RNMM 2/21 via Mike Fern)

RCI has dropped all of its 13-MHz. frequencies. Cushen does not know the reason. These were 13650 13670 and 13720. (AC/RNZI 3/3, via Mike Fern)

CHINA - Giansu PBS, Lanzhou, on 4865 heard at 1500-1530 with local program in Chinese; SINPO 44333. (Valentin (Polichanov), Tver, USSR, on RBDX 2/15 via Mike Fern)

COLOMBIA - Ondas del Orizaba, Florencia, 4976 kHz, heard at 1202 with music; excellent signals. (QLB 2/16 via Mike Fern) [WRTH 91 says 1000-0300.--mf]

Ecós del Combeima, Ibagués, on 4785 kHz, heard very well in Quito Friday with news, time check, and "Hora Super", meaning they are on the Colombian "Super Radio" network, news headlines, and many, many ads at \*1215\*. (QLB 2/16 via Mike Fern)

**CONGO** - Brassaville is heard only on 6115 kHz at present, apparently because of transmitter maintenance problems. 6115 is erratic. (Richard Ginbey on RNMN 3/13, via Mike Fern)

**COSTA RICA** - Adventist World Radio will begin testing shortly on 13750 kHz; the exact times are not known. (Andy Sennitt, quoting Harold Cole, San José, on RNMN 3/7, via Mike Fern)

**CYPRUS (?)** - British Forces BC Svc on 15670 USB 1400-2100\*v; also from 0500. BFBS & R.Five pgms; BBC H8 news on hour; fair since 2/15. What site? (Ernie Behr)

**CZECHOSLOVAKIA** - Radio Prague Int'l is using only two frequencies in its transmission to New Zealand, 0730-0800 in English on 17840 and 21705 kHz. (AC/RNZI 3/3 via Mike Fern)

**DEMARK** (via Norway) R.Norway, on 17755 & 21730 at 1630-1655\*, on 17760 & 21730 at 1730-1755\*, all USB, 2/21. Many other RD & RN bcsts also USB, but some are AM. (Ernie Behr)

**DIEGO GARCIA** - The Armed Forces Radio Service transmitter on 1485 kHz can be heard in Sri Lanka between \*1700-0030\* with war news and other programs. (Sarat Varkan (?), Sri Lanka, filling in for Victor Oonettilleke, whose telephone was not working, on RNMN 2/28, via Mike Fern)

**DOMINICAN REPUBLIC** - R. Amanecer Internacional, 6025 kHz, heard at \*0149\*. (D.Maspero, Milano, Play-DX, on DXPL 2/16 via Mike Fern) [WRTH 91 says 1000-0300, but in 1990 R. Amanecer had English from 0300-0400.--mf]

**ECUADOR** - HCJB, heard Feb. 15/16: 15015 kHz, mixer product of HCJB on 15155 and 15290 kHz. Very long Spanish prayer service Friday, went right through the 0500 and 0530 time signals. Saturday was in part direct broadcast from Ecuador Congress. Only identified Friday because of intermittent music from the English service on 15155. Weak to fair signals (810 253 to 354).

HCJB has added regular spots in English (and Spanish) about precautions to be taken during the current cholera epidemic in Latin America. (Mike Fern)

HCJB in English 0530 3/6 heard on 15050, 15071, 15092, 15113, 15134, 15145, 15155, 15165, 15176, 15197, 15218, 15239 - all strong & ruining most of the band. HCJB is one of the worst polluters on the air. Their transmitters are defective, but nobody seems to care about this mess. I hope somebody at HCJB reads this & takes some action soon. (Ernie Behr)

HCJB will hold a second phone-in on Saturday, May 25. The phone-ins are part of HCJB's 60th birthday celebrations. The January call-ins were scheduled during the 0700 and 0230 releases of Studio Nine. (DXPL 2/23, via Mike Fern)

R. Luz y Vida, Loja, 4851v, back in full swing after a few months of sporadic activity on sw. Hrd each night the week of 2/14-21 around 0300 with rel. programming and messages (called "comunicados") to friends and family in the listening area. Very good signals in Quito. (QLB/DXPL 2/23, via Mike Fern) [WRTH 91 says 1000-0330, longer at weekends.--mf]

R. Baha'i Otavalo, 4950 kHz, heard in Quito at 1205; exc lvl but terrible modulation; tk by man & Ec music. (QLB 2/16 via Mike Fern) [WRTH 91 says 1200-1500, 0000-0200.--mf]

R. Catolica Nacional, Quito, 5030 kHz, back on the air; heard 2/15 at 1157 with religious programming in Spanish. (QLB 2/16 via Mike Fern)

La Voz de Los Caras, from Bahía de Caraquez, 4795 kHz, heard with excellent signals around 0500 UTC 3/3 with remembrances (Peruvian oldies) and asking for requests by phone or letter. (Rich McVicar QLB/DXPL 3/10, via Mike Fern)

R. Gonzanama, Loja, 0151-0300 Sat 3/3 with political speech. This on 4271 irregularly. Lots of IDs; later, some Ec pop music. (Rich McVicar QLB/DXPL 3/10, via Mike Fern)

Radio Jesus del Gran Poder has returned to the air on 5050 kHz; heard at 1155. (QLB/DXPL 2/23, via Mike Fern)

**EL SALVADOR** - Quoting El Diario de Hoy, San Salvador, in Spanish, 2/23, BBC MS says the government of El Salvador will soon begin operating a 50 kw sw station with news, music & messages from El Salvador to the US. Station has directional antennas that will be oriented toward places with large concentrations of Salvadoran residents. (WBI 3/1) [No frequencies or date of commencement given - df]

**ESTONIA** - Talinn transmits weekly half-hour programs in Swedish at 2100 and in English at 2130 on Mondays. These programs are repeated Tuesdays at 0900 and 0930. The frequencies are 1035 and 5925 kHz, from Tallinn; 5980 kHz on the Tuesday morning transmissions and 9560 kHz in the evening are transmissions from Moscow with low power. Tallinn does QBL; the address is: Estonian Radio, Tallinn 200100, Estonia. (Sergei Nikishin, Moscow, USSR, on DXPL 2/23, via Mike Fern)

**Radio Tallinn** has an English program at 2130 Mondays UTC on 5925 and 1035 mw. The shortwave signal is not as good as that from Riga. (RNMN 3/7, via Mike Fern)

**ETHIOPIA - Voice of Ethiopia.** Addis Ababa: 1200-1300 Somali to Afr on 7165, 9560; 1300-1400 Afr to Afr on 7165; 1400-1500 Arabic to ME/Afr on 7165, 9560; 1500-1600 English to Afr on 7165, 9560; 1600-1700 Amharic on 7165, 9560; 1700-1800 French on 7165, 9560; and 1900-1930 English to Afr (an AHC presentation) on 9565. (WBI 2/22)

**FINLAND - R. Finland** on 9560 kHz with English from 0700-0755, beamed to Europe. SRI takes over the frequency at 0800. (AC on DXPL 2/16 via Mike Fern)

**GABON - Africa No. 1:** at 0500-0655 on 9580; to 2000 on 15475; to 2300 on 9580. (WBI 2/22)

**GERMANY - Deutsche Welle** is now issuing QSL cards that specify which of DW's five transmitter sites in Germany a listener has heard. (DXPL 3/10 quoting British DX Club "Communication" via Mike Fern)

**GUATEMALA -** At the Quaker Theological Seminary in Sicimula, Guatemala, plans are under way for an educational and spiritual radio station on shortwave. They already have the studios, but lack a transmitter. Toward that end, they are selling a set of 24 cassette tapes with sermons about the Book of Revelations. Sale price is \$100 U.S., and proceeds will go towards the transmitter purchase price. The Quaker group currently produces a weekly radio program which is celebrating its 25th anniversary in Central America. It is carried by several AM and FM stations and one shortwave station (but the original source did not say which one). (Ken MacHarg/DXPL 3/2, quoting a newsletter (I came in late), via Mike Fern)

**La Vox de Nahuala** on 3360 kHz heard at 0256 with marimba music and sign-off. Fair signals in Quito. (Rich McVicar/DXPL 3/2, via Mike Fern)

**HUNGARY -** Hungary will cut back from six frequencies to three on their transmission to the South Pacific after June 30. (AC/RNMI 3/3, via Mike Fern)

**ICELAND -** Since Feb. 13 Herrmanns has heard Reykjavik on 6218 regularly in the evenings and early mornings; also heard [date not given] on // 9268 kHz. Steenstra asked Rikitsautvarpild why they were using shortwave 24 hours a day on three channels, 3295, 6218, and 9268. Iceland's long wave transmitter on 207 kHz broke down in a fierce gale about a week ago. Until it is fixed, the station needs to reach the Icelandic fishing fleet, particularly with weather and shipping forecasts. When the long wave transmitter is repaired, the shortwave signals will disappear. 9268 is quite strong in Hilversum around 1400. (Julius Herrman & Willem Steenstra, Holland, on RNMN 2/21, via Mike Fern)

**INBE,** hrd on 9268 & 6218 USB from 2100 past 0700, probably 24 hours. Directional bcsts have now returned; hrd 2/21 on 13855 & 15770 USB at \*1935-1408\* & \*2300-2330\*v, but separate pgm, not // 9268 & 6218. (Ernie Behr)

**INDIA - All India Radio,** 15110 kHz, at 0022 with music; QRM from a very loud Quito local. (QLB/DXPL 2/16 via Mike Fern)

- AIR in English to New Zealand from 1000-1100 on 15335, 17387, and to Northeast Asia on 15050, 17865, and 21735 kHz. [same as WRTH 91--mf] AIR in English to New Zealand from 2045-2230 on 9910, 11715 and 15265 kHz. [same as WRTH 91--mf] AIR in English to the United Kingdom [from 2045-2230] on 7412, 9665 MF and 11620 kHz. [WRTH 91 has 7412, 9730, 11620 --mf] (AC on DXPL 2/16 via Mike Fern)

- AIR on 15110 kHz heard with English at 0100. (AC/RNMI 3/3 via Mike Fern)

**INDONESIA - Radio Republik Indonesia** was heard in Japan Jan. 22 from 1300-1400 on 11760 kHz with fair signals. The program was Indonesian from the station's National Program. Kato says 11760 is rather new and is variable. (Yoshinori Kato on RJDXC 2/17, via Mike Fern)

**INDONESIA - Unid,** 4003 kHz, at 1215 with Holy Koran and instrumental music that sounded subcontinental. Woman announcer. No "Song of the Coconut Islands" at 1200, which made McVicar think it was not Indonesia; bit of music followed by (he thinks) news. He first thought it might be RRI Padang, but he doesn't know. No other Indonesians readable at the time, but a barely audible signal on 4753 kHz (Rich McVicar, QLB/DXPL 2/16, via Mike Fern)

4003 kHz solid here, 810 444, between 1435-1445 the same day and it was Padang; poor audio, but a definite ID at 1435, comedy record at 1440. That Islamic music can fool you. I heard Bukittinggi playing it on 3232, looked in WRTH, and thought I had Nepal until I zero-beat the frequency. (Mike Fern 2/15-16)

**IRAN - (Anti-Iran clandestine) - Radio Iran Tollers,** a station that used Radio Afghanistan transmitters, has left the air. (BBCMS via RNMN 3/21 via William Dvorak on Prodigy)

IRAQ - BBCM says Iraqi domestic radio can be heard on only two frequencies, 681 kHz m.w. and 3980 kHz shortwave. 8350 kHz and 756 kHz mw were last heard on Feb. 12. (SCDX 2/19)

Radio Baghdad is using 4600 khs. as of 15 February; this is parallel to 3980 and 8350 khs. There is no jamming at all as of today [207]. (Victor Coonstilleke on RNMN 2/21, via Mike Fern) Radio Baghdad is currently [i.e. Feb. 26-27] heard on 3980 and 4600 MF. The old channel of 8350 kHz. seems to have moved to 7350 NF. (Richard Measham, BBCMS, on RNMN 2/28, via Mike Fern)

Iraq is heard on 1224, 1431 and also 1197 kHz. The program can't be heard but the jammers on the channel can. (Sarat Varkan7, Sri Lanka, RNMN 2/28, via Mike Fern)

R. Baghdad restored its 8350 kHz frequency on 3/2. On 3/3 Bennitt logged both 7350 and 8350.3. So 7350 is not a replacement for 8350. 3980 and 4600 are still in use. (Andy Bennitt on RNMN 3/7, via Mike Fern)

R. Baghdad has replaced 8350.3 with 6540 kHz, parallel 4600 and 3980, for its home service. (Andy Bennitt on RNMN 3/21, via William Dvorak on Prodigy)

Couple of typos in March LN, page 35 & 36: Frequency twice shown as 11900. (Ernie Behr) Thanks. Should have been 11990. [df]

(Clandestine) Voice of Free Iraq on 9570, 15600 & 17960, hrd 2/26 from 2100 in Arabic to 0114\* w/WA, during liberation of Kuwait. (Ernie Behr)

- The following anti-Iraqi clandestines are active: Voice of Free Iraq 17960, 15600, 9995, 9570 kHz; Voice of Rebelious Iraq (Shiite and southern Kurds, claiming to transmit from Basrah) 7097 kHz at 0430, 1230, 1730; Voice of the People of Kurdistan, 7030 and 3960 kHz in Kurdish and Arabic. (Andy Bennitt and BBCMS on RNMN 3/21)

ISRAEL - BBCM tells us that the Voice of Israel's English broadcasts have returned to their normal schedule. The Arabic language service, Network D, is operating around the clock. It can be heard on these frequencies: 5900, 7480, 12077, 15100, and 15480 kHz, as well as the regular outlets on 9815 kHz, mw and FM. (SCDX 2/19)

Israeli Defense Forces Radio, Galed Zahal, heard on 17545 kHz Jan. 22 and later, from 1100-2000. (IDF Radio has been a prompt verifier. Cuts Q8L card shows an announcer with a microphone for a head--Rich McVicar.) (DXPL 2/16 quoting L Battofiora in Play-DX)

Kol Israel home svc in Hebrew hrd on 17545 1400-1930\*, //15617 to 1945\*, since 2/16. Never hrd IDF's Galed Zahal on 17545, as rptd on BWLD 2/16. KI hrd on 15640, 15650, 17575 & 17590, from #0532 in strange lang. E.Afr type mx, from 0600 in Spanish, 2/17. What lang at 0532? (Ernie Behr) Israel Forces Radio on 17545; this channel is understood to be operating from 1100-2000; best in New Zealand at 1100 and after 1900. (AC/RNMN 3/13, via Mike Fern)

ITALY - Italian Radio Relay Service on 9815 kHz heard at 0558 UTC Sat. Mar. 3 using 88B with reduced carrier. Address was given in English. (QLB/DXPL 3/10, via Mike Fern)

JAPAN - Radio Japan switched its 1500-1600 transmission to the U.S. from 9505 to 11865 kHz on March 3 (at least). (Mike Fern)

JORDAN - Radio Jordan, on 9560 kHz signing off at 2205, well after its usual close-down in English at 1730. (Richard Lyman7, SCDX 2/19) English programs have been heard on 9560 kHz outside the scheduled times. A few days ago, an English program started at 1856, with news in English on the hour. It might have been a switching error. (Richard Langley, WB, RNMN 2/28, via Mike Fern)

KOREA (S) - R.Korea World News Svc hrd in English on 7275, 1115-1130. This suffers from the External Service; pmg consists of 1/2 hr nx bulletins, 15 min Korean, 15 min English. No sked for this in WRTH since 88 edition. Anmt at start of px said it airs 8 times daily on 5975, 6165, 7275, 9570, 9640, 9870, 11740, 17640 (believe they meant 13670) and 15575 kHz. Exact times & freqs not given. (William Dvorak on Prodigy)

KUWAIT - Yuki Sakagami (of Radio Japan's Arabic Service) tracked down Radio Kuwait's (Matlab al-Ajmi7) by telephone in Dhahran on 2/28. R. Kuwait has already begun investigating the damage to its old transmitters. If all goes well, the mw frequency of 540 kHz may be back on the air with 50 kw about 3/14. R. Kuwait in Exile uses a transmitter at Dhahran from 0300-2400 UTC on 666 kHz and a transmitter in Cairo from 1800-2300 on 1107 kHz. These temporary broadcasts will continue until Radio Kuwait's own facilities are completely restored. Kuwaiti resistance groups have set up a 1 kw transmitter in Kuwait city. (Yuki Sakagami, RJDX, 3/3, via Mike Fern)

BBCM reports that Radio Kuwait is back on the air on FM in Kuwait City. Arabic programming is carried on 87.9 and 92.5 MHz. Shortwave is not yet in use. In some Arabic speaking countries FM is referred to as "ultra short wave", which may be a source of confusion. (Andy Bennitt, RNMN 3/7, via Mike Fern)

**LAOS** - Skeds given by WBI differ somewhat from those in March LM:

Domestic Service from Vientiane on 6130 at 2200-0300, 0400-0700, 0900-1500; Hous Phan at 1255-1425 on 4500 (anncd), 4660 (reported); Luang Prabang on 7000 anncd (7162 rptd) at 0400-0600, 1400-1400 & 2300-0200; Oudomzai on 4250 anncd (4535 rptd) at 1100-1400 & 2300-0200; Pakse on 6600 anncd (6647 rptd) at 0400-0600, 1000-1400, 2300-0200; Savannakhet on 7100 anncd (7385 rptd) at 0100-0130 Sa/Su (unconfirmed), 0430-0600, 1030-1100 Sa/Su (unconfirmed), 1100-1400, 1400-1430 Sa/Su (unconfirmed), and 2230-0100; Xieng Khouang on 4993 at 0430-0600, 1000-1400 & 2300-0200. (WBI 2/15)

The External Service from Vientiane: on 7116v at 2300-0130 with 30 min in Thai, Vietnamese, Cambodian, French, & English; 0400-0630 w/30 min in Camb, Viet, Thai, French, & English; 1130-1400 w/30 min in Thai, Viet, Camb, Fren, Engl; all to Asia. To Europe in French at 1100-1130 on 15420 & 11960 (summer), or 15190 & 11870 (winter). (WBI 2/15)

-(Clandestine) The Radio Station of the Government for the Liberation of the Lao Nation, which broadcasts in Laotian & H'mong on 10200 kHz, is observed to have resumed normal broadcasting since 0700 UTC 2/13. (WBI 2/22)

**LATVIA** - Radio Riga, 5935 kHz, in Russian at 0431; SINPO 44444. (Valentin Polichanov, Tver, USSR, on RBDX 2/13, via Mike Fern) Heard on 5935 kHz with half an hour of English at 1830 Saturday UTC, repeated at 0700 Sunday. The Saturday broadcast has co-channel interference but reception Sunday morning is excellent. (AC/RNWI 2/17, via Mike Fern)

Latvian Radio has announced it is relaying Russia's programs for two hours every day on its second program, on 1079 and 1539 kHz. (SCDX 2/19)

Latvian Radio transmits in English and Swedish on Saturday nights and Sunday mornings. Broadcast times are irregular. The ID is "Radio Riga International." The frequencies are 5920 (Moscow) and 5935 kHz. (Riga). (Both Riga and Tallinn can be heard in Quito around \*0330-0400\*; the Latvian national anthem can be heard at 0400.--Rich McVicar) (Sergei Nikishin, Moscow, USSR, quoted on DXPL 2/23, via Mike Fern)

Radio Riga has English news at 2130 seven nights a week on 5935 kHz. (JM/RNMN 3/7, via Mike Fern)

**LEBANON** - Paul Hunter, of High Adventure Ministries, says Dr. Gene Scott's program on the Voice of Hope is a short 30-minute offering, not a four-hour epic [my words] like those on KVOH and WNCB. (Mike Fern)

**LESOTHO** - The new high-power mw BBC relay is operating on 1197 kHz, carrying the World Service. (AC/RNWI 2/17, via Mike Fern)

**LIBERIA** (cf LM 3/91) When I reported hearing ELWA IS 1/19 on 9625, I was aware that ELWA had been destroyed last July. The IS at 2159 was never heard again & remains a mystery. (Ernie Behr)

**LITHUANIA** - This sked confirmed by monitoring in Japan in mid-February. [I expect it will be superseded when the whole RM World Service changes on March 1 or shortly thereafter.--mf] The domestic transmissions of Radio Vilnius can be heard from 0300-1800 on 666 mw and 9710 shortwave, and from 1800-2400 on 666 and 6100. The English transmissions of its Overseas Service are on the air from 2230-2300 on 666 mw and 6100 and from 2300-2330 on 7400, 9760, 15180, 17690, and 17720. (Tetsuya Kondo & Masafumi Izuide, ABI, on RJDX 2/17, via Mike Fern)

(Media Network Feb. 21 by Sigidas Zilianis, LDXC): The number of Lithuanians who listen to foreign radio was about 60 per cent before the events of 1/13. Since the attack on Radio Vilnius, Zilianis believes the number is even greater. All shortwave receivers were sold out early in January. In mid-February, if a shop receives a shipment of shortwave receivers, they are sold immediately. Both the medium wave transmitter site and the TV Tower transmitter site in Vilnius are still occupied by Soviet troops.

Marks: One thing it's been strange for us in Western Europe to understand is why Radio Moscow continues to relay Radio Vilnius.

Zilianis: Because we are paying for these rebroadcasts, and Moscow wants Lithuania to rebroadcast their TV programs. So we are rebroadcasting their TV programs. Moscow First Program and Moscow Second Program are being seen all over Lithuania, and as an exchange, Moscow rebroadcasts our programs. (via Mike Fern)

Radio Vilnius can be heard beginning its broadcast day with the Lithuanian national anthem "Lithuanian Land of Heroes" on 9710 kHz at \*0400\*. (Sergei Nikishin, Moscow, quoted on DXPL 2/23, via Mike Fern) Radio Vilnius changed freqs for the 2300 UTC broadcast on Sunday, 3/3. It is now heard on 11770, 11860, 15180, 17690, and 17720 kHz. 11860 is the best

channel in Europe. [17690 and 17720 are in the Soviet Far East, I think--mf] (JM/RNMN 3/7, via Mike Fern)

**MALI** - Radio Mali home service on 5995 heard with fair signals from 0600-0620. Mixed Afr high-life and western mx with French annmts. Vernaculars after about 0616. (Mike Fern 3/13)

**MONGOLIA** - Ulan Bataar broadcasting to Australia Tue/Fri 0910-0940 on 11850 and 12015. English 1445-1515 on 9795 & 13780; 1940-2010 on 11850 and 12050. English broadcast from 1200-1230 has been canceled. (AC/DXPL 2/16, via Mike Fern)

**MORTE CARLO** - R. Monte Carlo is broadcasting to the Persian Gulf, relaying its home service in French from 0430-0730 on 11685 kHz over a transmitter normally used by Trans-World Radio. (Andy Sennitt, quoting BRT's Teletext svc on RNMN 3/7, via Mike Fern)

**MOROCCO** - Radio Mediterranee Internationale transmits on 9575 kHz from Nador, Morocco with 2 x 250 kw. transmitters from 0745-2045. [WRTH 91 says 0800-2100, in French and Arabic. Some Middle Eastern sw outlets seem to set their clocks by the rising sun.--mf] (DXPL 3/2 quoting Madrid DX Club via "Onda Corta", Argentina, via Mike Fern)

On 17595 kHz at 1630 with an interval signal, and an announcement in English "This is Radio Morocco International." [WRTH 91 says Mon-Fri 1630-1800, news at 1630; Sat. 1700-1800, news at 1700.--mf] (AC/RNMN 3/3, via Mike Fern)

**MOZAMBIQUE** - Radio Mozambique is testing on 17730 kHz often in place of 11819 kHz. Times vary. (DXPL 2/10 quoting R. Ginbey in BDXC "Communication", via Mike Fern)

**NAMIBIA** - The English service of the NBC is now on shortwave, on 3270 kHz daily from 1600-1900; also Saturdays 0400-0600 and Sundays 0500-0600. 7165 kHz from 0600-1500 weekdays; Saturdays and Sundays 0600-1600. The all-night service is now carried on 3270 kHz from 2200-0400, and Sundays 2200-0500; and Channel Two of the National Service from 1900-2200. [The NBC's own promotional spot was an outrageous piece of big-band hype, which ended with a request for reception reports to Box 321, Windhoek 9000.--mf]

The Independent Broadcasting Corp. of Namibia applied for a license in November to operate a nationwide radio and TV service. The government's response depends on a media bill which hopefully will be adopted this year. According to the National Patriotic Front, the body behind the project, people inside and outside Namibia are ready to contribute financially. (Richard Ginbey & unknown NBC ancr on RNMN 3/13, via Mike Fern)

**NETHERLANDS** - The following changes will take place in the Radio Nederland sked on March 31:

- The English transmission to New Zealand at 0730 will drop 19m, and use 9630 and 9715.
- The transmission at 0830-0855 weekdays will shift to 9770 kHz.
- The boat to Africa at 2030 UTC will add two transmitters in Madagascar for Central and Southern Africa on 9860 and 7285. This program will be heard from three Flevo transmitters on 9895, 11660, & 13700 for West Africa.
- The 0330 transmission to the West Coast of America will drop 11720 for 6165. 9590 remains unchanged. (RNMN 3/13, via Mike Fern)

**NETHERLANDS ANTILLES** - TNR, Bonaire, final sked for M91 (& tentative J91/891):

9515	0655-0940	50 kw	170 deg	PORT to	N.Brazil
9535	0300-0430	50	336	ENGL	NA/Carib
11815	1055-1330	100	327	ENGL	KNA/Carib
11850	0955-1045	50	176	SPAN	SA
11885	0655-0940	100	148	PORT	S.Brazil
	0955-1030	100	172	GERM	So. Cone of SA
11930	0055-0200	100	327	SPAN	Caribbean
	0255-0430	100	327	ENGL	NA/Carib
15345	1055-1330	50	336	ENGL	KNA/Carib
15355	2325-2400	100	160	GERM	So. Cone
	0000-0045	100	160	SPAN	So. Cone
15375	2155-0030	50	167	PORT	N.Brazil
	0030-0215	50	176	SPAN	No.SA
15445	2155-2315	100	160	PORT	S.Brazil

(station)

**NEW CALEDONIA** - Noumea left shortwave several months ago. Now the medium wave frequency of 666 kHz has disappeared, and it is presumed all broadcasts from New Caledonia are now on the FM band. (AC/RNMN 3/13 via Mike Fern)

**NEW ZEALAND - ZLXA.** Print Disabled Radio, Levin, 3935 kHz, has incorporated "Arthur Cushen's Radio World" with program material supplied by Jim Meacham of the New Zealand Assn. of Radio Transmitters. The program, titled "CQ Pacific", is sponsored by CommCenter [probably an equipment store]. The current schedule for ZLXA is: Sun 0530-0800; Mon to Thurs, 0500-0900. After March 17 (end of New Zealand Summer Time) these broadcasts will be heard one hour later. (AC/DXPL 2/16, via Mike Fern)

**RNZI Mailbag** on RNZI's winter schedule will be heard Monday at 0430 on 17770 kHz; Thursday at 0835 on 9700; and Friday at 2005 UTC on 15130. New Zealand returns to standard time on March 17. (AC/RNMM 3/13, via Mike Fern) But 15130 has been replaced by 15120 at 1800-2200, till mid-May, when it will go to 13785 kHz. (Pete Grenier, via CompuServe EMail & Harold Sellers, ODXA)

**RNZI** expanded its news coverage in Pacific languages because of the Gulf War. At 0600 2/21 there was a sequence of five-minute newscasts in Samoan, Cook Islands Maori, Tokelauan, and Tongan. (Mike Fern)

**The Radio Preservation Society of New Zealand** operates station 3XP on 1413 kHz with 100 w every Sunday at 2100-0300. On the first Sunday of every second [even] month, 3XP runs late for DXers. The next special will be on Sunday, 4/7, and will run until 0800. (AC/DXPL 3/10, via Mike Fern)

**NICARAGUA - RICA** hrd on 4928v, from 0200 LA pop songs, many "RICA" IDs & NA to 0317\* 2/15. Strong sig, but weak audio. Also hrd 2/21 & 2/26 till 0205\*. Bcsts not daily. (Ernie Behr)

**NIGER - Niamey**, 5020 kHz, heard with local music and what sounded like replays of high points of local night sports (possibly basketball or soccer) from 0545-0600. (Mike Fern 3/13)

**NORTHERN IRELAND** - Jerry Berg and the Numero Uno/Fine Tuning Special Broadcast Committee arranged a special transmission from the Northern Ireland Relay Service 3/17 to North America on 6273 kHz, as outlined in NASWA Notes (page 2) last month. Word of the transmission was also widely disseminated on the computer networks. The broadcast was longer than expected, coming on a little after 0300 & lasting past 0730. It was heard by several in WA, including John Herkimer, Berg, Chris Lobdell, Dave Valko, Kirk Allen and Dave Clark who "could only get reasonable audio on 1 of 12 antenna choices - a NE beverage! Dave notes propagation on the north Atlantic path was weakened by flare & auroral activity. The loggings column will likely have further details, so I won't repeat them here. (via NU)

**NORTHERN MARIANAS** - This schedule for KHBI, Saipan, has been confirmed by monitoring in February: [When does the FCC change to J917?--mf] [Major changes are always the last Sunday in March and the last Sunday in September. The two seasons are now called Z-91 (for summer) and W-91. df]

0400-0600 on 17780; 0600-0800 on 17555 and 17780; 0800-1000 on 9530 and 17555; 1000-1200 on 9530 and 13625; 1200-1400 on 9895 and 13625; 1400-1600 on 9895 and 13625; 1600-1800 on 11580 and 15610; 1800-2000 on 13720; 2000-2200 on 9455 and 13720; 2000-2400 on 15275 and 15405; 0000-0200 on 17755. (Yoshinori Hayashi/RJDXC 2/17)

**KHBI's** [D917] schedule to the South Pacific includes 0200-0400 on 17555 and 17860 kHz; at 0600-0800 on 17555 and 17780 kHz, and 0800-1000 on 9530 and 17555 kHz. (AC/RNZI 3/3)

**KFBS** heard in Russian at 1130 and 1200 UTC on 11650 kHz. Very strong signals in New Zealand (and in Quito as well--Rich McVicar). [WRTH 91 says 0900-1400, seven days--mf] (AC/DXPL 2/16) **KFBS** on 9465 heard at 1930 closing after a program in Russian. (AC/RNZI 3/3) (all via Mike Fern)

**NORWAY - R.Norway Intl** is now on a 24-hour sked during the Gulf crisis. The first half-hour is provided by RNI, the second half by Radio Denmark. (AC/RNZI 2/17, via Mike Fern)

**PAKISTAN - Azad Kashmir Radio**, Muzaffarabad, on 4790 kHz. NP in local lang program at 0035. [PNBR 90 and WRTH 91 do not list this--mf] (Valentin [Polchanov], RBDX 2/15, via Mike Fern)  
**R. Pakistan** noted in English at 1620. (AC/RNZI 3/3 via Mike Fern)

**PAPUA NEW GUINEA** - Several months ago, Radio North Solomons was forced off the air due to a political crisis. Now it is returning, using the old 10 kw transmitter of Radio East New Britain, Rabaul. Regular programming will start on Monday, 25 March on 3325 kHz, 1900-2200 and 0700-1400 UTC. Transmitter and antenna tests will be on Fri-Sun, 22-24 March. (Gordon Darling, PNG, Andy Sennitt, WRTH, on RNMM 3/21, via William Dvorak, on Prodigy)

**PERU** - From DXPL 2/16 (Pedro Aronategui and Rafael Rojas, Play-DX, via Mike Fern):

**Radio La Luz de la Vida**, Cajamarca, new, at \*2300\* on 3194.8 kHz.

**La Vos de la Esperanza**, Cajamarca, new, 6782 kHz at \*2335\*.

R. Frecuencia Lider, Bambamarca, fairly regular on 4419 kHz; Arunategui found them on // 5235 kHz with, apparently, a new xmr. [WRTH 91 says 1100-0300.--mf]

R. El Puerto, Pacasmayo, now using 4300 NF ex 4507, heard by Rojas. [WRTH 91 says 1430 mw and 4330 sw; no call signs, no schedules.--mf]

R. Origin Huancavelica, new, 5323.5 kHz heard by Rojas at \*2300\*.

From DXPL 2/16 (Quito Log Book, Rich McVicar and Ken MacHarg, via Mike Fern):

R. Maranyon in Jaen on 4835 kHz with a man and woman talking about medical services; good signals. [no time given; WRTH 91 says 1100-0200, Sun from 1200.--mf]

La Voz de La Selva, Iquitos, 4825 kHz, with Spanish talk about cholera outbreak. Very good signals at 1210.

R. Tropical, Tarapoto, on 4935 kHz at 1205 with news about corn production in Departamento de San Martin. Very good signals.

R. Satelite, Santa Cruz, on 6725 kHz, at 0110 with music, messages to listeners; many mentions of Santa Cruz; good signals, but ute QRM. [WRTH 91 says 2200-0300.--mf]

R. Cusco, Cusco, heard at 0045 on 6190 with popular Peruvian music and ID. Signals were poor, with heterodyne and QRM from R. Oriente, Yurimagua, Peru, on 6188 kHz. (QLB/DXPL 3/10, via Mike Fern)

R. Union, Lima, on 6115v, heard on 0804 with Andean music // 880 mw. Poor signals on short wave but good signals on mw. (QLB/DXPL 3/10, via Mike Fern) Hrd on 6115.0 (no het with Radio Tampa) 0710-0735. Traditional music (no flutes), ID, and time check, "dos de la madrugada y veinte y tres minutos para todo el Peru." Fair to good signals. (Mike Fern 3/13)

(From DXPL 2/23, Quito Log Book by Rich McVicar, via Mike Fern):

R. Ahura, Cerro de Pasco, 3340 kHz heard at 0147 with ID and time check. [WRTH 91 says 1100-0500.--mf]

R. La Luz de La Vida, Cajamarca, on 3194 kHz with Peruvian folk music. The ID is "Radio La Luz de la Vida, transmitiendo de Cajamarca." Poor to fair signal with rough modulation.

Ondas del Huallaga, Huallaga, on 3330 kHz at 0226 with fair to good signal, fairly regular lately, with salsa music.

Radio Quillabamba, 5025 kHz, heard at 0225 with "Panorama Mundial." Radio Rebelde, Havana, contests this channel with R. Quillabamba about every other night. R. Quillabamba has been carrying a spot with the same Star Trek theme that was once used by Radio Netherlands' DX Juke Box.

R. Villa Rica, 4805 kHz, presumed Peruvian, heard at 0306, signing off with the Peruvian national anthem, "Somos Libres." ... On DXPL 2/23 Rich McVicar reported R. Villarica on 4805 till 0307\*. Is this a new station? RV used to be on 4885 in 1973. (Ernie Behr)

(From DXPL 3/2, Quito Log Book by Rich McVicar, via Mike Fern):

R. Ayaviri, Ayaviri, on 4607 has been regular in Quito but with poor signals from \*0200-0300\*.

R. El Sol de Los Andes, 3230 kHz at 0017 with an ID and mention of "La Ciudad de Juliaca," the station's QTH. Signals fair at best. [WRTH 91 says 0930-0300.--mf]

PHILIPPINES - FEBC, Manila, on 15450 at 2355 Feb. 14; IS, s/on, and "Pacific Sunrise" program; good signals except for splatter from unid station. (QLB/DXPL 2/16, via Mike Fern)

A new station is DXAD on 1593 kHz, heard at 1045 with gospel programming; at 1100 they carry news from the Voice of America. [Not in WRTH 91.--mf] (A/C/RNMM 3/13 via Mike Fern)

PORTUGAL - IBRA Radio is scheduled in several East European languages: from 1800-2100 on 11700 kHz via Radio Trans-Europe in Portugal; and from 0600-0800 on 9665 kHz and 1900-2115 on 7110 kHz via Radio Mediterranean in Malta. Reports may be sent to IBRA Radio, S-10536, Stockholm, Sweden. [I thought Radio Mediterranean was the independent Maltese time broker that went under.--mf] (Rich McVicar, DXPL 2/10, via Mike Fern)

IBRA Radio, a Scandinavian evangelical organization, broadcasts on 11700 kHz in Arabic from 2030-2100. The opening annmt is "IBRA Radio Portugal." (AC/DXPL 2/16, via Mike Fern)

I'm hearing Radio Portugal International on new 9555 kHz, ex-9680 (which is still announced), at 0230 in English to Eastern North America. Parallels (all heard here) are 9705 to Western North America, and 11840 and 9600 to Brazil. RP also gives this sked in English: 1600-1630 to the ME on 21530; 2000-2030 to Europe on 11740; 2100-2130 to Africa on 15250. (All broadcasts are Mon-Fri except the 0230, which is UTC Tue-Sat). (Bill Dvorak on Prodigy)

ROMANIA - R. Romania International on 15250 kHz heard with excellent signals in Japan between 1659-1720 in Persian. (Tetsuya Kondo, RJDXC 3/3, via Mike Fern)

SEYCHELLES - FEBA on 15250 opens at 0328 with a rotation of three East African languages on different days of the week. (AC/RNMI 2/17, repeated on RNMM 3/13 via Mike Fern)

**SOMALIA** - (Clandestine) - Since 2/2 Radio SNM has been ID'ing as Radio Hargeisa, the voice of the Somali people. Last used R.SNM ID 1/31; unhrd 2/1; 2/2 1600 on 6320 used new ID. Stn now observed to operate 1600-1700 (ex \*1500). Said 2/3 that Hargeisa had been "the HQ of the SNM since 1/31". This believed not a reactivation of gov't controlled stn of same name, not hrd since 1988, but simply a change of name of Radio SNM. (WBI 2/8)

**SOUTH AFRICA** - Radio RSA on 11925 kHz opening at 0458 with interval signal; co-channel interference from Radio Canada International at sign-on. Portuguese to Africa follows on a clear frequency. (AC/DXPL 2/16, via Mike Fern)

SABC has changed its late-evening schedules. All regional stations now close at 2200. Radio Oranje, the only regional station on shortwave, continues on 3215 kHz after 1930, instead of signing off.

The Afrikaans Service uses only one transmitter at the moment, on 4810 kHz mornings and evenings, and 11770 kHz during the day. After closedown, which is now at 1900 instead of 1930, Radio Allegro comes on the air and continues until 2300, also on 4810. (R.Ginbey, RNMM 3/13, via Mike Fern)

There are reports that the African National Congress may set up its own radio station in Transkei. The Transkei Broadcasting Corp. [a government network wholly on FM] says it does not object to the ANC's operating a station in Transkei. However, the ANC has not acknowledged plans for the station. ANC currently broadcasts over other African stations, mainly Tanzania, Angola and Ethiopia. (R.Ginbey on RNMM 3/13, via Mike Fern)

**SPAIN** - R.Nacional de Espana started a Spanish-language service to Equatorial Guinea on 1/7 on 17890 from Noblejas with a new antenna. [Since it isn't being heard in Japan, no times given.--mf] (Tetsuo Suzuki, RJDXC, 2/17, via Mike Fern)

**SRI LANKA** - During a visit to the Colombo office of Deutsche Welle, Peter Mac-Millan and Bunn were told that DW reactivated the Trincomalee transmitters in late November. The transmitters and antennas are undamaged, but station staff were scattered by 1990's widespread fighting in the area. If the situation in Trincomalee remains stable, as it has been since October, DW hopes to have the sw and mw transmitters back on a regular schedule by the new year [1991]. Victor Coonettilleke escorted MacMillan and Bunn to the DW office, but they found it only because of the antennas on the roof and the DW van which pulled in as they arrived. (DXPL 2/16 quoting Peter Bunn of OZ-DX, via Mike Fern) DW relay, Trincomalee, heard in Quito on 21640 at 0658; DW interval signal and site ID by man in English, followed by gong and news in German. (Rich McVicar QLB/DXPL 3/2, via Mike Fern)

Sri Lanka BC Corp transmissions are: 0030-0230 ENGL to Asia on 6005, 9720, 15425; 0030-0430 HIND to Asia on 7190, 11800 [0330-0400 is Nepali Wednesday, Urdu Saturday]; 0230-0430 ENGL to Asia on 9720, 15425; 0430-0630 (Su) HIND on 7190, 11800; 0630-0730 HIND on 7190, 11800 [except 0715-0730 Monday in Urdu]; 0730-0830 Kannada on 7190, 11800; 0830-1000 in Telugu on 7190, 11800; 1000-1130 in Malayalam on 7190, 11800; 1030-1130 ENGL to Asia/AZ on 11835, 15120, 17850 [exc 1040-1045 Wed in Sinhalese]; 1130-1330 Tamil on 7190, 11800; 1230-1730 ENGL on 6075, 9720; 1330-1730 HIND on 7190, 11800; 1745-1900 Sinhalese to ME/Afr on 11800; 1900-1950 Tamil to ME/Afr on 11800; and 2000-2130 ENGL to Europe on 9720, 15120. (WBI 2/15)

Sked for Radio Japan's new relay station at Ekala follows: 11840 to South Asia, 0100-0200, English; 0200-0230, Bengali; 0230-0300, Hindi; 0300-0330, Urdu. 17820 to Middle East and North Africa, 0330-0400, Arabic; 0400-0500, Japanese. 9535 to South Asia: 1300-1400, Japanese; 1400-1500, English; 1530-1600, Bengali; 1600-1630, Hindi; 1630-1700, Urdu; 15210 to Middle East and Africa, 1600-1700, English; 1700-1800, Japanese; 1930-2000, Arabic. (DXPL 3/10, quoting BECMS, via Mike Fern)

**SYRIA** - R.Damascus has added 7500 kHz NF // 12085 and 15095, with Arabic, heard in Europe after \*1700. (RNMM 2/28, via Mike Fern)

**TAHITI** - Broadcasts were noted on 11825 and 15170. At 0820 there is a program in Tahitian with popular music; at 0830, announcements in French, which follows to signoff at 0930. [WRTE 91 says French 0800-0930.--mf] (AC/RNMM 3/13 via Mike Fern)

**TAIWAN** - Broadcasting Corp of China (BCC) on 2/2 began bcsts to Americas of same newscasts it beams to China. 5970 kHz to US East, 11775 for mid-US, 15440 for US West, 11855 for CA, 15130 & 17805 for SA. BCC will expand news network to cover Europe & Africa in the near future. (CNA news agency report 1524 2/2, in WBI 2/8) No times given - df

**THAILAND** - R.Thailand on 9655 from 1500 with Thai Domestic Svc; news & pop songs to 1600\*. Weak but clear 3/2. (Ernie Behr)

After the military coup on Feb. 23, the state-run Radio Thailand went off the air and remained silent throughout Saturday afternoon. The Royal Palace station, on 6149 kHz, did not come on the air as scheduled. The only stations heard from Thailand on Saturday were those operated by the Thai Armed Forces. The second harmonic of the Voice of the Navy was picked up on 2214 kHz. The second harmonic of the Royal Thai Army station on 1287 kHz was heard on 2574 kHz. Both broadcast in Thai from \*1300-2230.\* Radio Thailand resumed broadcasting on Sunday, but the three shortwave frequencies, 4830, 9655 and 11905 kHz carried Thai home service // 6070 kHz. On Monday, things were back to normal. The External Service began with its English broadcasts at 2300-0430 and again from 1130-1230 on 9655 // 11905 kHz. 9655 is providing excellent signals in South Asia and the modulation is quite good. (Sarut Varkan?, Sri Lanka, on RNHM 2/28, via Mike Fern)

R. Thailand added an additional transmission in Thai from 1450-1600 on 9655 and 11905 kHz on Feb. 25, the second day after the coup, when broadcast services were restored. It is not known whether this new transmission is permanent. [WRTH 91 says this is a program for Thai workers in the Persian Gulf area.--mf] (RJDXC 3/3, via Mike Fern)

TUNISIA - R. Tunis in Arabic on 11550 kHz at 0645; SINPO 42443. ((Valentin Polichanov(?), RBDX 2/15, via Mike Fern) R. Tunisia on 7475 heard at 2215 in Arabic with nonstop music. (Ken MacHarg QLB/DXPL 3/2, via Mike Fern) Tunis heard on 7475 at 2150 with a broadcast in Arabic. (AC/RNMM 3/13, via Mike Fern)

TURKEY - Ankara is heard best from 0400-0450 in English on 9445 and 17880 kHz. (AC/RNMM 2/21, via Mike Fern)

UNITED ARAB EMIRATES - The English xman from Radio Dubai at 0330-0400 is heard best in New Zealand. Progs are 11945, 13675, 15400, and 15435 kHz. (AC/RNMM 2/21, via Mike Fern)

USA - Radio New York International, which buys time on WWCR from 0200-0600 Mondays UTC, issues its own QSL cards with a pirate theme. Reception reports should be sent to: Radio New York International, P.O. Box 270, Flushing, LI, NY 11352. The phone is (718)461-7766. Nobuyoshi Aoi on R-Japan DX Corner 2/17, via Mike Fern)

RNYI asked from 1/26: English Mo 0200-0600 on 7435 (via WWCR); Sa 2230-0030 on 13630 & 21565 (via RPPI); Su 0500-0700 on 7375 & 13630 (via RPPI, repeat of 2230. Masao Kato, Japan) Welcome to NABWA. [df]

USA - VOA Europe originates one program, Casey's Top Forty, at \*0850\* Saturdays on 11735, 15160, 15195, and 21700 kHz. But 1197 kHz carries VOA Europe with Jack Roberts. 1197 is the real "VOA Europe" which goes into cable systems. The shortwave programs are provided by VOA Europe to fill a gap in programming from Washington in VOA service to the Gulf area. (JM & Paul Bowster, England, on RNHM 2/21, via Mike Fern) VOA Europe is being heard from 0800-0900\* in English on 21700 kHz, with news at 0800-0830. (AC/RNMM 2/21 via Mike Fern)

WYFR has cut back its shortwave broadcasts by about 25 per cent because of a drop in listener contributions. The drop is not a result of the FCC's transmitter spectrum fees for shortwave broadcasters. A revised program schedule is now available. (JM & Sheila Coe, WYFR, on RNHM 2/28, via Mike Fern)

Dr. Gene Scott's University Network has purchased six hours a day on WWCR, Nashville, from 0600-1200 UTC on 7520 kHz. Dr. Scott read reception reports over the air on Mar. 6. WWCR is intended to reach Europe; it is also intended to reach the Pacific Coast of the U.S., which is off the side of KVOH's beam. Some listeners reported good signals on "6620 kHz." which is the image of 7520 kHz on analog receivers. Dr. Scott referred to the images as "harmonic reflections" and said he doesn't mind being a harmonic reflection. His programs are also being carried on The Voice of Hope in Lebanon on 6280 kHz but the schedule wasn't mentioned. (Mike Fern, 3/6)

USSR - Most of the USSR will not go on DST this 31 March. In September, clocks will be adjusted back one hour. Moscow standard time will then be UTC+2, instead of the present UTC+3. (Sennitt)

R. Moscow began daily best in Afrikaans to Africa at 2030 on 9730, 12030, 12070, 15450, 15470 kHz. (WBI 2/8) RM on 25780 at 1400-1659\*; good 2/17; what languages? (Ernie Behr) R.S.F.S.R. - On 2/14 the new Khabarovsk independent station, Dalnii Vostok, was noted s/on in Russian at 0900 on 5965 kHz: "Radio Station DVR [Dalnii Vostok - Rossiya] is operation for you on the free airwaves (Russian: v svobodnom efire). Listen to us daily from Tuesday to Saturday from 1900 to 2200 hours [0900-1200 gm]. On the air for you are information, music, and advertising. The free radio [Russian: svobodnoye radio] will operate on short waves in the 31 and 50-metre bands, on 5965 and 9550 kHz. DRV is for you." Prior to 0900 UTC 5965 was noted to carry what was believed to be Khabarovsk Kray Radio's Second Programme in parallel with 6005 (also new), and 4610 kHz. Further monitoring research revealed that Radio DVR is using 9560 kHz, rather than the annncd 9550. (WBI 2/22)

**RID, Irkutsk**, standard frequency and time station, heard between 1520-1615 on 10004 and 15004 kHz. First heard 15004 Sunday, so strong the call could be read with the bfo off. The station has a complicated pattern of cw signals (which may include silent periods) so you may have to wait for a positive ID. But the weak "L" beacon on 10005 kHz is not RID! (Mike Fern, 3/3-4)

**Murmansk Radio** is on 5930 kHz. Local programs 0330-0400 Mo-Th, 0430-0500 Fr, 0515-0545 daily, 0715-0800 Sa, 1000-1100 Su, 1010-1100 Tu/Fr & 1215-1300 Sa (Radiostantsiya Atlantika), 1500-1540 Mo-Fr. Transmitter is on the air 0200-2200, carrying Moscow's All Union Radio 1, except local programs as noted. (WBI 3/8)

**R. Rossiya** or Russia's Radio hrd on 15630 & 15750 USB in Russian at 1300-1400; **R. Stantsia Hene** (?) on 15630 in Russian at 1400-1500\*, 2/10; anyone know what this IS means? (Ernie Behr)

**Armenia - R. Yerevan**, on 2480, 11980 & 12060, from 2200 in Armenian, 2248 Spanish to 2259\*; vy strong 2/18. RY on 9840 in March LN, p 42, is a typo. (Ernie Behr)

**Kazakhstan** - Bruce MacGibbon, quoting Valery Ostroverkh, Karaganda, Kazakh SSR, on RJDXC 2/17: According to a letter from the Ministry of Communications of Kazakh SSR, the home services of the **Kazakh Radio** use the following frequencies:

**First Republican Program**: 180, 684, 747, 801, 846, 945, 954, 999, 1008, 1323, 1341, 1494, 1557; 4545, 6180, 9780, 11950 kHz. [WRTH 91 says 0000-1930 in Russian and Kazakh.--mf]

**Second Republican Program (Shalkar)** in Kazakh: 783, 981, 1071, 1098, 1188, 1197, 1224, 1341, 1305, 1440, 1458, 1539, 1548; 5035, 5260, 5960, 5970, 9505; 5945/15385; 6060/17715; 6075/11825; 6130/15315; 6135/15270; 7115/17605; 7235/15215; 7280/15215 [mic]; 9550/17765; 9690/17730; 9705/15360. After monitoring research, Ostroverkh adds this: The first of two slash (paired) frequencies is used during local daytime, the second in the evenings. The frequency 6135 is apparently a typing error for 6125. During the daytime, one more frequency is used for Shalkar programming, 5985 kHz, which is switched at 1300 UTC to another channel that I (vo) failed to find. Additional channels for Shalkar are 4395 and 5065 for the whole transmission time. [WRTH 91 says 0000- 2200 for Shalkar--mf]

**Kazakh Radio** annod intention to transmit an English pgm 0130-0200, repeated at (2200?) on 6135, 5035, 5915 and 7230 kHz. The broadcast in English was confirmed on 5915 kHz at 0130-0200 on 2/18, but was not heard 2/20 at that time. (WBI 2/22) This supposed to be Mo/We/Fr. (Dave Clark, ODXA)

**Tadjikistan** - The **First Program of the National Tadjik Radio** from Dushanbe is relayed by a low-power transmitter near Moscow on 17605 kHz between 0000-2000. All programs are in Tadjik, except for two 10-minute news programs in Russian at 1130 and 1400, and news in Uzbek at 1300. (Dushanbe can also be heard on 4635 kHz--Rich McVicar) (DXPL 2/23 quoting Sergei Mikishin, Moscow, USSR, via Mike Fern)

**Kazakhstan - Radio Alma Ata** has begun English programs at 0130 Mondays UTC. The half-hour broadcast is heard on 5035, 5915, and 7230 kHz. 5915 kHz provides fair reception in Western Europe. Medium-wave channels of 333.3 m [Alma-Ata, 900 kHz, 500 kw.] and 408.9 m [Ust-Kamenogorsk, 738 kHz, 100 kw.] are announced but reception cannot be confirmed. [The 0130-0200 slot fits neatly into a break in the published schedule for Alma-Ata in WRTH 91.--mf] (RNMN 3/2, via Mike Fern)

**Ukraine - Kiev** heard with English at 0330-0355 on 11825 kHz in New Zealand. [Not in WRTH 91; Moscow is supposed to change schedules twice this month, once on Mar. 1 and once for Summer Time.--mf] (AC/RNZI 3/3, via Mike Fern)

**VATICAN - Vatican Radio** was heard in Japan in February from 2145-2230\* on 9600 kHz NF. Reception was excellent. Japanese from 2145-2200; English from 2205-2225, and Chinese from 2230-\*. 9615 was dropped because of interference. The station says 9600 is on trial; Hayashi thinks it may become regular. Vatican Radio plans to change its schedule in March and expand the Japanese program from 15 minutes to 20. The // frequencies are 7125 and 11830. (Yoshiaki Hayashi, RJDXC 2/17, via Mike Fern) 9600 kHz replaces 9615 from 2145-2330, with English from 2205-2225 // 11830. A cable from the Vatican says that 9600 is working out well for the South Pacific, based on the first tests. (AC/RNMN 2/21, via Mike Fern)

**VENEZUELA - Radio Nacional de Venezuela** transmits one hour programs at 1100, 1400, 1800, 2100, 0000, and 0300. The 1100 broadcast is repeated in all subsequent transmissions. [even the news? - df] Each broadcast begins with a 10 minute news bulletin in Spanish, and end with 5 minutes each in English and French. (WBI 3/8)

**VIETNAM - R. Cao Bang**, 6455 NF ex 6495 Hz., hrd 2/13 \*1200-1400\*. Reception was fair to poor. Vernaculars 1200-1300, Vietnamese from 1300-1400. **Voice of Viet Nam** home service,

Hand, heard on 6451 kHz at the same time. Close listening is required to separate the two stations. (Isao Ugusa on RJDXC 2/24, via Mike Fern)

Hand has been heard at 2030 in English. Two frequencies provide good reception: 9840 and 15010 kHz. The latter is the better of the two. There is a mailbox session on Sundays. (AC/RNMM 3/13, via Mike Fern)

**ZAIRE** - (From DXPL 2/16, by Mark Warner, temporarily near Goma, Zaire, in OZ-DX):

Radio Bukavu, 4862 kHz, not heard at all.

R. Candie, Bunia, 5066, regular. [WRTH 91: 0330-0600, 1300-1845; Sa 1000-1845.--mf]

Mbuti-Mayi, 7295 kHz, active; 0515-0600 in French and \*1545-1600\* in Lingala. No ID's, but many mentions of Zaire and occasional mention of Mbuti-Mayi. [PWBR 91: 0400-1930 in French and vernaculars.--mf]

Lumumbashi logged on 7205 MF ex 7202, from 1545-1605 in French. Also heard around 0515 with ID as "La Voix de Zaire." [WRTH 91 says 0400-0700, 1000-1300, 1500-2100; Sat 1000-2100.--mf]

**ZAMBIA** - R. Zambia, Lusaka, on 4911 kHz heard at 0330 with local language; SINPO 32443. (Valentin (Polichanov), Tver, USSR, on R.Budapest DX Show 2/15, via Mike Fern)

**ZIMBABWE** - seems to be having trouble with its sw service. Nothing has been heard for several months. Perhaps it has been discontinued. (R.Ginbey on RNMM 3/13, via Mike Fern)

**CLANDESTINE** - The Voice of Democracy resumed hourly broadcasts in Chinese on 8057 kHz on 2/14 at 2200-1600. Only a single script, 27 minutes long, about democratization in China, was used. The current series is connected to the New Year of the Chinese lunar calendar on Feb. 15. (Hidetoshi Takashima & Tetsuya Kondo, ABI, on RJDXC 2/17, via Mike Fern)

**CLANDESTINE** - Voice of Democracy on 8057 kHz has been silent since 2/18. The current series of transmissions began at 2200 2/13 and ended at 1627, 2/18. Its xmsns are keyed to Chinese holidays or other significant events. It is believed the station will return to the air about April 5. (Hidetoshi Takashima & Tetsuya Kondo, ABI, RJDXC 2/24, via Mike Fern)

Radio Democracy will continue broadcasting from Taiwan. [The ID sounds like "Ni Ju Kwang Bo Dien Hai." No frequencies given.--mf] (Tetsuya Kondo, RNMM 2/28, via Mike Fern)

Voice of June 4 will close down at the end of March because of lack of financial support. It had been broadcasting regularly on 15280 kHz from 2100-2200 UTC (5 to 6 a.m. Beijing time). The program in Standard Chinese was also carried on several university stations in the U.S. The station had been set up by Chinese students in the U.S. and bought time on a transmitter on Taiwan. The address is: Radio June 4, Apartment 2, 1314 E. Hyde Park Blvd., Chicago, IL 60615. (JM & (Sun Wan Lee?) on RNMM 2/28, via Mike Fern)

Voice of Kuwait in Exile on 666 kHz has been celebrating the retaking of Kuwait with lots of jubilation from \*1500-2330. (Barat Varkan?, Sri Lanka, on RNMM 2/28, via Mike Fern)

Voice of Free Iraq is still on the air. The station is now clearly supporting the opposition groups trying to overthrow Saddam Hussein. (Andy Sennitt, quoting Richard Measham, BBCMS, on RNMM 3/7, via Mike Fern)

Gulf Voice Radio is still active; it has added a shortwave channel on 8962 kHz USB. (Andy Sennitt, quoting Richard Measham, BBCMS, on RNMM 3/7, via Mike Fern)

**SHORTWAVE ONLINE** - At the end of the March CompuServe's HamNet Forum will add a message section for Shortwave Broadcast DX material. This is in addition to the current SWL message section, and will provide an easier way of separating SWBC news from other SWL discussions. (df)

**DISCLAIMER** - Any opinion expressed herein by me is my own, not that of the VOA, by which I am employed, but which I here in no way represent. (DF)

**CREDITS:** AC - Arthur Cushen; DXPL - DX Party Line on HCJB; FT - Fine Tuning DX Bulletin; JM - Jonathan Marks; NU - Numero Uno weekly newsletter; QLB - Quito Log Book by Rich McVicar & Ken MacHarg on DXPL (HCJB); RBDX - Radio Budapest DX Show; RJDXC - R.Japan DX Corner; RNMM - Radio Nederland Media Network; SCDX - Sweden Calling DXers.

WBI - World Broadcasting Information (copyright BBC Monitoring Service - may not be reproduced absent permission of BBCMS)

Material for LN may be submitted either on paper or as an MS-DOS text file on any size MS-DOS diskette; or by EMail on CompuServe (ID 76702,771). EMail can also reach me on CompuServe through the gateways from Internet and MCI Mail. Prodigy address is JDBM33A. GEnie mail address is D.FERGUSON14. I check CompuServe daily, the SWL Echo & Prodigy almost daily, & GEnie less often. Your support is appreciated. Dan

# QSL Reports

Sam Barto  
47 Prospect Place  
Bristol, CT 06010



**NOTE:** With the advent of the start of the baseball season in hand, I thought some of you might enjoy seeing this station pennant...Sam.

**ALASKA:** KALS 11880 f/d cd. w/ ltr. in 39 ds. for me. v/s Beverly Jones. Small felt pennant and schedule rcvd. (Brouillette-IL). 7365 f/d cd.

w/ sticker, pennant and schedule in 21 ds. (Mer-  
**ANTIGUA:** Deutsche Welle 6040 f/d "Reunifi- cer).  
cation" cd. in 130 ds. for a rpt. on the evening  
of reunification. (Kurrasch-NY).

**ARGENTINA:** RAE 9690 f/d cd. in 2 mo. v/s Silvann Lic-  
iandi. (Boulden). 11710 f/d cd. w/ personal note in  
64 ds. Schedule rcvd. (Fanderys-OH).

**ASCENSION ISLAND:** BEC 21660 p/d ltr. w/ map in 44 ds.  
v/s Andrew Rook. (Berglee-ND).

**ASIATIC RUSSIA:** Radio Moscow 9705 and 9795 via Vladivostok  
f/d "Kremlin" cd. in 2 mo. (Lare-MI).

**AUSTRALIA:** Radio Australia 15465, 17630, 17795, 15320 and  
17750 p/d ltr. w/ 2 calendars and schedule in 1 mo. (Bar-  
to-CT). 11930 f/d ltr. w/ "Wilderness Society" cd. and  
schedule in 5 wks. for 2 IRCs. (Klinck-NY).

**AUSTRIA:** Radio Austria International 9870, 9875 and 13730 f/d  
ltr. in 38 ds. for 1 IRC. (Brouillette-IL).

**BELGIUM:** RTVB - La Voix de L'Amitie 25645 f/d "Grand Square" cd.  
in 29 ds. Also rcvd. schedule and stickers. (MacHarg).

**BOLIVIA:** Radio San Miguel 3310 n/d personal ltr. in 1 mo. on my  
3rd try for a SP rpt. v/s Hector Sales Takana, Director. (Field-

**BOUAIRE:** Trans World Radio 9535 and 11930 f/d "Market Scene" MI).  
cd. in 43 ds. for 1 IRC. v/s Sally Rork. Also rcvd. schedule, coverage map, postcard and newsletter. (Batson-WV).

**Radio Nederlands**  
21515 (SSB) f/d "Special Test" cd. in 29 ds. for 2 IRCs. (Name?).

6165 and 15560 f/d "Staff Photo  
of RN" in 36 ds. w/ sticker and  
calendar for 2 IRCs. (Brouillette)  
9590 f/d cd. w/ calendar in 19 ds.  
for 2 IRCs. (Collopy).

**BRASIL:** Radio Educacao Rural 4755 n/d  
ltr. in 46 ds. for a PT rpt. and

\$1.00. v/s Ailton Guerra. (Paszkiewicz  
\* -WI).

Radio Educadora Bahia ZYE300  
9539.9 p/d form ltr. in 1 mo. for a PT  
rpt. and \$1.00. (Palmerheim-WA).

Radio  
Pioneira de Teresina 5015 f/d prepared  
cd. w/ ltr. in 157 ds. for a PT rpt. and

\$1.00. v/s Luis Eduardo Bastos. (D'Angelo).

**BURKINA FASO:** Radio Nationale du Burkina 4815  
f/d ltr. in 13 mo. for a FR rpt. (Gaharan-LA)

**CANADA:** Radio Canada International 11945 f/d  
old-style black and orange "Map" cd. in honor  
of the 700th edition of the SWL Digest Program.  
Card was rcvd. in 82 ds. v/s Ian McFarland.

(Brouillette-IL). 5960 same cd. in 82 ds. (Wash-  
burn-ME). cd. in 51 ds. w/ sticker. (Kohlbre-  
ner-PA). 13670 n/d ltr. in 18 ds. for 1 IRC.

Schedule and station info. sheets were rcvd.  
v/s Judith Sauve, Audience Relations. (Batson).

CKZU 6160 f/d cd. w/ stamped prepared cd. in  
2 wks. for \$1.00. v/s Dave Newbury. (D'Angelo).





中央廣播電台  
55 PEI AN ROAD  
TAIPEI, TAWAN,  
REPUBLIC OF CHINA



中央廣播電台  
CENTRAL BROADCASTING SYSTEM  
55 PEI AN ROAD TAIPEI, TAWAN,  
REPUBLIC OF CHINA



中央廣播電台  
CENTRAL BROADCASTING SYSTEM  
R.O.C.



中央廣播電台  
CENTRAL BROADCASTING SYSTEM  
R.O.C.



中央廣播電台  
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R.O.C.

Broadway's Wonderful...

# WHOT

The LARGEST  
LIVE-ON-AIR  
BROADCAST  
FACTORY ON  
THE EAST  
COAST

## 1620 AM NEW YORK

## 91.5 FM

via D'Angelo

**ALERT:** Eric Svedberg suggests that we have an alert in the QSL Column to notate the activities of certain stations such as QSLing for special broadcasts, new radio stations, seldom seen QSLs, etc...Please refer to the \* [mark] that has appeared from time to time. I use this to hilitte these types of activities. However, in the future I will note more stations as Eric has suggested...Sam.

**CLANDESTINE:** La Voz del CID 9940 f/d cd. in 1 mo. for a SP rpt. for a reception of \* Radio Free Surinam in 1986.(Field-MI).  
**COLOMBIA:** Radio Nueva Vida 5567 f/d cd. in 9 mo. for a SP rpt. This was on my 4th try. I also rcvd. 3 different calendars. v/s Marco Antonio Caicedo, Director.

(Field-MI). Radio Santa Fe 4965 n/d ltr. in 43 ds. for a SP rpt. and ms.(D'Angelo-PA). Emisoras Ondas del Ortezquaza 4975 p/d form ltr. w/ sticker in 30 ds. rcvd. via special delivery. v/s C.P. Norberto Plaza Vargas, Subgerente.(MacHarg). La Voz del Cinaruco 4865 n/d ltr. in 7 mo. for a SP rpt. on my 3rd try. I rcvd. 3 pennants and a technical fact sheet.(Field-MI).

### RADIOTELEVIZIUNEA ROMÂNĂ

**COSTA RICA:** Radio New York International 7375 via

- \* Radio For Peace International f/d cd. in 1 mo. w/ prepared cd. signed and stamped. v/s Randy Steele. Promotion material was rcvd.(Kusalik-ALB). 13630 f/d verie statement written on the back of a WWCR cd. in 3 wks.(Lobdell). Radio Belo 4832 f/d cd. in 35 ds. for an EG rpt., tape and 2 IRCs and \$1.00. v/s Francisco Barabona J. (Franzen-MN).

**CZECHOSLOVAKIA:** Radio Praha International 11990 via

- \* Rimavska Sobota f/d cd. w/ site in 1 mo.(Kusalik-ALB). 11680 via Velke Kostolany f/d cd. w/ site in 1 mo.(Kusalik-ALB). 7345 via Litomyšl f/d cd. in 1 mo. w/ site.(Kusalik-ALB). f/d cd. of "Wallenstein Garden" in 52 ds.(Fanderys). 5930 f/d "Konopiste Chateau" cd. in 62 ds. for 1 IRC. Schedule rcvd. (Batsou-MV). f/d cd. w/ schedule in 2 mo.(Boulden). 7345, 9540 and 11990 f/d cds. in 45 and 51 ds. respectively.(Fanderys). 7345 via Litomyšl and 5930 via Rimavska Sobota f/d cds. in 38 ds.

(Name?) same in 1 mo. w/ pennant, schedule and DX Club info.(Field-MI). 5930, 7345 and 11680 via the corresponding above sites via frequencies in 29 ds. Schedule and station info. was rcvd.(D'Angelo-PA). OLBS 3170 p/d cd. in 10 mo. for \$1.00.(Lare-MI). OMA 2500 p/d cd. in 10 mo. for \$1.00. (Lare-MI).

**DENMARK:** Danmarks Radio 11930 via Herstedvester

- \* f/d prepared cd. in 13 ds. for a f/up rpt. and a \$2.00 bill! v/s Bente Bang, Shortwave Secretary who wrote "It is really a very old report you ask us to verified, and it is absolute quite exceptionally I am doing this." (Fanderys-OH)...Very good!...Sam.

**DJIBOUTI:** Radio TV Djibouti 4780 p/d cd. w/ schedule in 8 wks. for a FR rpt., tape and \$2.00.(Klinck-NY).

**DUBAI:** UAE Radio 13675 f/d cd. in 1 mo. w/ paper pennant and schedule. v/s K.F. Kenner. (Boulden).

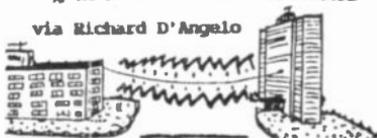
**ECUADOR:** HCJB 15155 and 25950 (SSB) f/d "Iliniza Norte Horseman" cd. in 48 ds. for ms. (Name?) 21480 f/d "Quito Calling" cd. in 23 ds. for ms. v/s Sam Rowley.(Weber-OH). same cd. in only 3 days!! (MacHarg). 17890 f/d "HCJB Voice" cd. in 3 days.(MacHarg).



|| **WCPR 1620 A.M.** ||

AT THE TOP OF THE DIAL... CLEAR CHANNEL

via Richard D'Angelo



AT THE TOP OF THE DIAL... THE LARGEST BROADCAST FACILITY ON THE EAST COAST

**WGUT 1630 AM**

**NOTES:** Jerry Klinck reports that just when he thought that the mailman had forgotten his address, the QSLs started to arrive. Father John Eckert says that he is very proud of his Cook Islands QSL since it was logged on a portable GE World Monitor! He couldn't be happier. Great! Steve Batson has only been in the hobby for a short period but he says that he has already learned that patience is the main criterion for QSLing. It sure is...Sam. Mike Panderys notes that his QSL from the Voice of Turkey took 36 days not 360 as I typed in the Column. Sorry about that typo. At least I know some people actually read this Column. Hi! Charlie Washburn wants to remind all of us that it would be to everyone's advantage in the hobby if a short thank you type note were sent upon receipt of a QSL. I'm sure the station would appreciate it very much. Good idea Charlie...Sam. Rick Bywater says that he acknowledges each QSL by sending the station a postcard with a thank you note. Great!

**ECUADOR:** HCJB 9745 f/d cd. in 23 ds. for 1 IRC. w/ personal note from Karen Pedersen, English Service. (Batson-WV). 15155 and 17790 f/d cd. in 28 ds. for 1 IRC. (Batson). Balsaora Gran Colombia 4911 n/d personal ltr. in 1 mo. for a SP rpt. and \$1.00. Also rcvd. station pennant. v/s Matilde Castro Vda. de Cevallos, Presidente. (Allen-OK). Radio Zaracay 3395 p/d QSL folder w/ pennant and calendar in 12 ds. via certified mail. v/s Hogar Velastegui R., Gerente General. (MacHarg). Radio Centro 3290 p/d confirmation ltr. w/ 2 stickers, calendar in 23 ds. for a SP rpt. and an HCJB sticker. v/s Luis A. Gamboa T., Director-Gerente. This was for a live pgm. from their studio in which folkloric groups perform live. Greetings were given on the pgm. to international listeners. Tune in on Sunday UTC from 0000-0200. (MacHarg). Radio Antena Libre 3240 f/d "Certificado de Sintonia" w/ a personal ltr. and schedule in 8 ds. for a SP rpt. and an HCJB sticker. v/s Karina Mera, Secretary. (MacHarg). La Voz de Saguisili HCVS6 4900 f/d 2 page handwritten ltr. w/ f/d prepared cd. in 7½ mo. for a SP rpt. and ms. This was for an 86 reception. v/s Carmen Mena Corrales (daughter of station owner). 450 watts! (Palmerheim-WA).

**EGYPT:** Radio Cairo 9475 f/d cd. in 4 mo. w/ station schedule. (Steinberg-KY).

**ENGLAND:** British Forces Broadcasting Service 17695 p/d "Persian Gulf" cd. in 6 wks. for 2 IRCs. v/s Richard Astbury, Station Manager. (Allen-OK). same cd. in 25 ds. for 2 IRCs. (Berglee-ND). 13745 p/d cd. in 1 mo. for 2 IRCs. (Lay). 17695 f/d cd. in 3 wks.

**EUROPEAN RUSSIA:** Radio Moscow 13705 via Serpukhov, 7105 via Leningrad, (Field-MI). 15465 via Kingisepp and 11850 via Byazan f/d "Kosmos Hotel" cd. in 2 mo. (Lare-MI). \* Radio Murmansk 5930 f/d ltr. in EG in 2 mo. v/s Perederi D.V., Chief Engineer. (Bar-to-CT). Radiostantsiya Atlantika 9855 and 1975 via Murmansk f/d "People's Friendship House" cd. w/ verie ltr. in 3 mo. v/s Mrs. Tanya Lavrova, World Service Letter Dept. Also rcvd. package of Soviet stamps. (Kusalik-ALB).

**EURO PIRATE:** Radio East Coast Holland 6295 f/d form ltr. in 7 wks. for \$1.00. 150 watts! \* Addr: P.O. Box 536, 7900 Hoogeveen, Holland. (Lobdell-MA).

**FINLAND:** Radio Finland 9645 n/d schedule only in 1 mo. for 1 IRC w/ cd. showing the new RS service which replaces certain EG transmissions. (Batson-WV).

**FRANCE:** Radio France International 15360 f/d cd. w/ schedule in 1 mo. (Boulden).

**GABON:** Africa No. One ltr. w/ postcard and schedule in 16 mo. for an 88 reception. No freq. was given and I can't find a log in my book. (MacHarg).

**GEORGIAN SSR:** Radio Moscow 17790 via Tbilisi f/d "Kosmos Hotel" cd. w/ schedule in 2 mo. (Lare-MI).

**GERMANY (West):** Bayerischer Rundfunk 6085 f/d "Sonnenobservatorium der Univerisat Munchen" cd. in 1 mo. w/ the slickest program schedule I've ever seen. (Orcutt-NY).

**GREECE:** Voice of Greece 9420 f/d "Meteora Monastery" cd. w/ postcard and a personal note in 16 ds. for 2 IRCs. (Brouillette-IL). f/d cd. in 75 ds. for 2 IRCs. (Westdal).

**GUATEMALA:** Union Radio 5980 f/d "Map" cd. in 6 wks. for a SP rpt. Sticker was rcvd. (Field-MI).

**HOLLAND:** Radio Nederland 6020 via Plevo f/d "Staff Photo" cd. in 36 ds. for 2 IRCs. Calendar and sticker were rcvd. (Brouillette-IL).

**HONDURAS:** Radio Laxx HRVL 4890 \* f/d 2 prepared cds. signed and stamped w/ a 2 page ltr. in 19 mo. after my last f/up rpt. in SP and \$1.00. v/s Eblin Euelio Rubi Jimenez, Gerente. Letterhead and an envelope used as a pennant. (Kusalik-ALB).



**VERIFICATION SIGNERS:** Radio One Lusaka 4911 W. Lukazon. Radio Tyumen 4895 v/s Kizerov V.D., Technical Centre Engineer. Addr: Permyakova 6, Tyumen 625016. Radio Nacional de Angola 5325 v/s Mateus Goncalves. Radio Juan XXIII 4964.3 Manuel Picazo Torres, Director. Radio Aruana 4885 Neusa da Costa Ataide, Dpto. Financeiro. Xizang PBS 4750 Lab Sang Chon Phel, Speaker. Radio Melodia 6045 Gerardo Paez Mejia, Vice Presidente. La Voz del Opuno 5040 Sor (Nuns) Dolores Palacios C., Directora. Radio Gran Colombia 4911 Matilde Castro V. da de Cevallos, Presidente de la Emisora. Radio Saint Helens (CSM) 11092.5 Gilbert Legg, Operations Supervisor. Addr: Box 2, The Briars, Saint Helens.....via **PLAY DK**.

**HUNGARY:** Radio Budapest 9835 f/d "Logo" cd. in 38 ds. (Washburn-ME). f/d cd. in 42 ds. w/ schedule. (Garahan).

**INDIA:** All India Radio 3355 via Kurseong f/d "Mahishasura" cd. w/o site in 49 ds. for \* SASE (not used). I reported directly to the station but the reply came direct from New Delhi. (Palmerstein-WA).

**ISRAEL:** Kol Israel 9435 f/d cd. w/ schedule in 13 wks. (O'Keefe-NY).

**ITALY:** European Christian Radio 6210 f/d "Computer Map" cd. w/ religious tract info. in 8 wks. for \$1.00. (Lobdell-MA).

**KALIMANTAN BARAT (Borneo):** R.P.D.Tk2 Katapang 3480 p/d verie ltr. in 14 mo. after 2 f/up rpt. in IN from the v/s who lives above the station. I sent \$1.00. He thanked me for being a radio monitor for the station and he wants to come to Canada. v/s Bhayu E. One month later I received a prepared cd. after I wrote to the station for a clarification of the previous ltr. (Kusalik-ALB).

**KENYA:** Kenya Broadcasting Corporation 4934 p/d ltr. w/ schedule in 4 mo. for a taped rpt. and ms. This is my second KBC QSL in little over a month after I sent a letter to the embassy...they must of kicked some butt!!! Hi! (Kusalik-NY).

**KOREA, REPUBLIC OF:** Radio Korea 15575 f/d "Temple Bell" cd. in 52 ds. w/ schedule. (Brouillette-IL). same f/d cd. in 30 ds. for 1 IRC. Also rcvd. silk banner, schedule and sheet music. (Batson-WV).

**LITHUANIA (Republic of???)**: Radio Vilnius 11770 f/d cd. w/ schedule, XMAS cd., sticker and new Lithuanian postage stamps in 2 mo. v/s Edvinas Butkus, Deputy Chief Engineer. Station Ided as being from the Republic of Lithuania. (Barto-CT).

**MALTA:** Voice of the Mediterranean 9765 f/d cd. in 203 ds. (Fanderys).

**MONACO:** Trans World Radio 9480 f/d cd. w/ schedule in 1 mo. (Boulden). 3AM4 Radio Monte Carlo 7135 and 3AM5 Trans World Radio 7260 f/d cds. in 3 mo. for receptions in 1962 and 1963. (Barto-CT).

**Chuck Roswell Report:** Our good buddy Chuck Roswell at TWR in Bonaire reports that the station has 4 new QSL cards for 1991. They will be issued quarterly by the station. We will feature them in a future QSL Column...Sam.

**NEW ZEALAND:** ZLKA 3935 f/d yellow cd. in 1 mo. for \$1.00. v/s Ashley Bell. (Palmerstein).

**NORWAY:** Radio Norway International 25730 f/d cd. w/ schedule in 6 wks. (Steinberg). 17760 f/d "Norwegian Art" cd. w/ schedule and sticker in 43 ds. (Doyle-AR)

**OMAN, SULTANATE OF:** BBC 15310 and 11760 f/d ltr. in 34 ds. direct from site. v/s Paddy O'Reilly, Senior Transmitter Engineer. (Kusalik-ALB).

**PERU:** Radio Oyon 3450 f/d cd. w/ personal ltr. in 2 \* mo. on my 4th try w/ a SP rpt. (Field-MI). Radio San Martin 4810 n/d ltr. in 10 mo. for a SP rpt. v/s Jose Roberto Chong, Gerente General. (Field-MI).

**SAINTE HELENA:** ZHH Radio St. Helena 11092.5 f/d "Map/Coat of Arms" cd. w/ ltr. and station info. for 3 IRCs. v/s Anthony Leo, Station Manager. (Kohlbrener-PA). same in 145 ds. for \$1.00. (Zeller-OH). in 5 mo. for a taped rpt. and 3 IRCs. (Palmerstein-WA).

f/d cd. w/ ltr. in 19 wks. for 2 IRCs. (Klinck-NY). f/d cd. for the DK Test via the Stora Tuna DX Club. (Kusalik-ALB). f/d cd. in 143 ds. for 3 IRCs. (Paszkiewicz-WI). same in 147 ds. for 3 IRCs. (Washburn).

**SAIPAN:** KHBI 9530 f/d cd. in 35 ds. for ms. (Doyle-AR).

**SEYCHELLES:** PERA 11860 f/d cd. in 37 ds. for 1 IRC. (Westdal-CA).

**SPAIN:** Radio Exterior de Espana 11880, 11775, 9630 and 9360 f/d cd. in 3 mo. w/ schedule and pennant. (Barto-CT). 15375 f/d cd. w/ pennant, sticker and calendar in 3 mo. (Palmerstein-WA). 9630 f/d cd. w/ pennant in 3 mo. (Field-MI). 11880 f/d cd. in 71 ds. w/ schedule. (Kurasch-NY).

**51**  
CP4, CP6, CP6, CP203, FN94  
**RADIO "ILLIMANI"**  
"Izvoz de Bolivia"  
- Para informarse  
- entretenerse  
- escuchar música  
- saber que pasa en el mundo  
- sentirte orgulloso de tu país  
via Dario  
Monferini  
1933-1984  
La Paz, Bolivia

CIUDAD BOLIVAR, VENEZUELA. S. A. ORINOCO 18 - APDO. N° 34  
AMOS CONFORMIDAD DE SU REPORTEAJE DEL 18º ABRIL DE 1936

**Y V I R B**

**"ECOS DEL ORINOCO"**

6.845 Y 1.400KC.

— 30 — WATTS INPUT

ENRIQUE TORRES VALENCIA

**TAIWAN: Voice of Free China** 15270 f/d "Old Flask" cd. w/ sticker and schedule in 75 ds. (Dieterich). 5950 f/d cd. w/ newspaper, schedule and calendar in 35 ds. for 2 IRCs. (Batson). 15345 f/d cd. in 22 ds. w/ decal for 1 IRC. (Batson). **Central Broadcasting System** 6087 f/d cd. w/ form ltr. in 60 ds. Sticker rcvd. v/s Lee Ming, Deputy Director. (D'Angelo-PA). 7105 f/d cd. w/ ltr., sticker and schedule in 70 ds. for a CH rpt., tape and ms. (Klinck-NY).

**Togo: Radio Togolaise** 5047 f/d "Map" cd. in 72 ds. for a taped rpt. and \$1.00. (Fanderys)

**TURKEY: Voice of Turkey** 9445 f/d cd. w/ schedule and 3 decals in 5 wks. (Boulden-CA). f/d "Chest" cd. w/ stickers and schedule in 31 ds. (Dieterich). 9445 and 7170 f/d cd. in 4 mo. for 87 reception. (Barto-CT). **Turkish State Meteorological Service** 6900 p/d ltr. in 34 ds. w/ schedule and travel brochure. v/s Faysal Geyik, General Director. (Pack-NY). form ltr. in 6 wks. w/ schedule for ms. (Orcutt-NY).

**UGANDA: Radio Uganda** 4976 f/d ltr. in 47 ds. for ms. (This after 2 f/up rpts. v/s L.B. Lubega, Senior Engineer. (Stephens-AL). p/d ltr. in 6 mo. for \$1.00. (Paszkievicz-WI).

**UKRAINE: Radio Moscow** 17810 via **Vinnitza** f/d "Kosmos Hotel" cd. in 2 mo. (Lare-MI). 11980 via **Kharkov** f/d cd. in 3½ mo. (Paszkievicz-WI).

**USA: KTNM** 15590 f/d "Mountains" cd. in 38 ds. for ms. (Brouillette-IL). f/d cd. in 33 ds. (Paszkievicz-WI). f/d "Antenna Towers" cd. in 26 ds. v/s Ben Miller, WB5TLZ. (MacHarg). 7510 f/d cd. in 51 ds. for ms. (Palmerheim-WA). same in 6 wks. for ms. (Lobdell-MA). f/d cd. in 3 wks. (Field-MI). 15590 and 7510 f/d cd. in 22 ds. (D'Angelo). Addr: P.O. Box A, Santa Ana, CA 92711. **WYPR** 5950, 13695, 11830 and 17640 f/d cd. in 2 mo. w/ schedule. (Barto-CT). 17612 f/d cd. in 13 ds. (Poland-MI). 15440 f/d "Logo" cd. in 13 ds. (Yamada-JPN). 6065 f/d cd. in 2 mo. (Steinberg-KY). 11830 f/d cd. in 29 ds. w/ schedule for ms. (Batson-WV). **WPHI** 21840 f/d cd. w/ schedule in 87 ds. (Yamada-JPN). 9495 f/d cd. in 68 ds. (Poland-MI). 11790 f/d cd. w/ schedule and rpt. forms in 64 ds. for ms. v/s Loren Holycross. (Batson). 13760 f/d cd. in 98 ds. w/ schedule and stickers. (Pennisi-NJ). 9495 f/d cd. in 6 mo. for a FAXed rpt. (Craig-TX). f/d cd. in 49 ds. for ms. v/s James L. Holycross. (Turnick-PA). **WNCR** 15690 n/d cd. in 1½ yrs. after several f/up rpts. (Paszkievicz). n/d "Globe/Antenna" cd. in 263 ds. for ms. (Brouillette-IL). 7520 p/d cd. in 39 ds. for ms. (Turnick). n/d cd. in 2 mo. for \$1.00. (Lare-MI). n/d cd. w/ schedule in 6 mo. (O'Keefe-NY). n/d cd. in 5 mo. for ms. (Kurraasch-NY). **RCKI** 15280 f/d cd. in 19 ds. for a SP rpt. and ms. v/s Jesus C. Elizondo. (Name?) **WSFB** 13760 f/d "Cypress Creek Transmitter" cd. in 39 ds. for SASE. v/s Judy P. Cooke. (Turnick-PA). f/d cd. in 47 ds. (Poland-MI). f/d cd. in 1 mo. (Steinberg). 9455 f/d cd. in 31 ds. for ms. (Stephens-AL). **WCSN** 15300 f/d cd. in 65 ds. for ms. (Batson-WV). n/d form ltr. in 47 ds. w/ schedule for ms. (Batson). 9850 f/d "DIY" cd. in 38 ds. for ms. (Stephens). **WVWV** 10000 f/d cd. in 42 ds. for ms. v/s John B. Milton, Engineer-in-Charge. (Batson). 15000 f/d "Leap Second" cd. in 17 ds. (Peake-IA). **WVNB** 15145 f/d cd. in 49 ds. for ms. (Turnick-PA). **WHLR** 9465 f/d ltr. in 31 ds. v/s Jacob O. Meyer. (Name?) **WRND** 15420 p/d cd. in 26 ds. for ms. Schedule rcvd. (Batson-WV).

**PLEASE NOTE:** The older QSLs featured in this months QSL Column were sent in by Mr. **David Mercer**. They were contained in a copy of a 1936 publication called "All Wave Radio" which he located in a local bookstore..Sam.

**SWEDEN: Radio Sweden** f/d "Feeding Reindeer" cd. w/ sticker in 34 ds. (Doyle-AR).

**SWITZERLAND: Swiss Radio International** 9535 f/d cd. in 1 mo. w/ schedule. (Boulden).

**TAHITI: RPO Tahiti** 15170 f/d cd. in 24 ds. for 1 IRC. (Doyle).

1:150 KC. - 6.300 KC.

**WVWV 12 DM**  
LA VOZ DE PARAGUA

THANKING YOU FOR YOUR REPORT

VENEZUELA  
produces the best reports

MARACAY - VENEZUELA - SUR AMERICA

**NOTES:** Mike Franzen is a new member of NASWA and finds the bulletin to be very interesting, educational and fun to read. He is 33 years old and utilizes an ICOM 771A receiver. Glad to have you with us..Sam. Jon Maples says that he has been in DXing for about 12 years. He finds the Journal to be an invaluable guide for DXing. Jon uses an FRG-7700 as his main receiver and an MFJ-1024 active antenna. He is also looking for any helpful hints on QSLing Radio Kiribati. Please contact Jon at 128 Belva St., Carrollton, GA 30117.



P. O. Box 2364  
 Ocho "VOZAIRES"  
 Phone: F-2310  
 F-2019

**LA VOZ DEL AIRE, S. A.**

25 y G. - Vedado  
 Havana, Cuba

Thank for your valuable information of regarding our performance and programs. The data submitted by you is correct and in accordance with the station's log.  
 Please accept this card as OFFICIAL VERIFICATION OF RECEPTION LA VOZ DEL AIRE.  
 Very truly yours,

*[Signature]*  
 HAVANA, CUBA

C  
 O  
 C  
 D  
 6131 K.C.

**USA:** BBC 9690 via Delano f/d cd. w/ schedule and calendar in 2 wks. for a SP rpt. v/s D. Valenzuela, Jefe de Programas.(Field-MI). VOA 15580 n/d form ltr. in 25 ds. for ms. Schedule was rcvd.(Batson). 17870 p/d cd. in 5 ds. w/ schedule.(Pennisi-NJ)... Is the VOA not giving their transmitter sites now?...Sam. Radio Free New York 7520 via WCR oversized poster cd. in 55 ds. for \$1.00. station sent along QSLs from their former pirate stations.(D'Angelo-PA). same w/ newspaper clippings on history of the station in 2 wks.(Boulden-CA). Radio New York International 7520 via WCR f/d cd. in 42 ds.(Name?) La Voz de Fundacion 7315 via WERT f/d cd. in 12 ds. for ms.(Paszkiwicz-WI). Voice of Free China 11740 via WYPR f/d "Silk Scroll" cd. in 25 ds. w/ stickers and newspaper.(Kurrsch-NY). 11740 and 5950 f/d cd. w/ dairy and sticker in 39 ds.(Levison-PA).

**USA (Pirates):** One Voice Radio 7430 f/d "Thanksgiving" cd. #1 in 3 wks. for ms. v/s Joe. (O'Keefe-NY). WYTH 7410 f/d "Evolution" cd. in 1 mo.(Field-MI). Action Radio 7416 f/d cd. in 23 ds. for 3 ms. via Wellsville addr.(Frodge-MI). 7415 f/d "Pirate Face" cd. in 24 ds. for ms. 100 watts. v/s A.K. Michaels.(Maples). f/d cd. in 45 ds.(Stephens-AL). 7412.3 f/d cd. in 28 ds. for ms.(Turnick-PA). 7414 f/d cd. in 6 mo. for ms. It seems that my rpt. got mixed in w/ IRS data and the operator found my rpt. while doing his taxes:(Lobdell-MA). Samurai Radio 7414 f/d cd. in 86 ds. for ms. v/s Eddie Currents.(Turnick). Hope Radio International 7410 f/d cd. in 63 ds. for a rpt. to the Blue Ridge Summit addr.(Stephens-AL). f/d cd. in 16 ds. for 3 ms.(Barr-IL). 7400 f/d cd. in 188 ds. for ms.(Name?). 15050 f/d cd. in 14 ds. for ms.(Kremer-IN). f/d cd. in 15 ds. for ms.(Mercer). WLIS We Love Interval Signals 7415 f/d "Drive Time Coverage Map" cd. in 17 ds. via the BRS addr.(Frodge-MI). East Coast Beer Drinkers 7415 f/d orange construction paper cd. in 29 ds. for ms. via the BRS addr.(Maples-GA). WEDA 7410 f/d cd. in 67 ds. for a rpt. to the Wellsville addr. v/s Willie Ketchum.(Stephens-AL). Radio Wolf International 7415.3 f/d logo sheet in 165 ds.(Zeller-OH). f/d "Wolf Sheet" #9 in 5 1/2 mo. for ms.(O'Keefe-NY). XERK 7435 f/d bilingual "Logo Pirate" sheet in 19 ds. v/s Wild Steve.(Zeller-OH). SEZY Voice of 1932 7400 f/d ltr. in 228 ds. Station claimed 1932 date, not 1990, and thus baffled by my rpt. from the future! v/s Norman Baker.(Zeller-OH)...Are we having fun yet? Radio USA 7416 f/d "Montage of Bodies and Faces" cd. in 34 ds. for ms. (Maples-GA). KUNT-WICK 7415 f/d form ltr. in 1 wk. Addr: P.O. Box 5624, Arlington, VA 22205.(Field-MI). Radio Free Mars 15052 f/d cd. 335 in 2 wks.(Field-MI). Tube Radio 7413.2 f/d cd. in 2 mo.(Field-MI). WORK f/d "Job Application" cd. w/ Holiday Beer label in 20 ds. for 3 ms.(Barr-IL). WHIP 7412 f/d "Voice of the Hipster" cd. in 56 ds. for a rpt. to the BRS addr. v/s Les Beard.(Zeller-OH). WW III - Radio Baghdad 7416 f/d actual selective service system registration form w/ data filled in. Also rcvd. dozens of enclosures such as GI Joe Toy Kit w/ airplanes, balloons

BROADCASTING STATION  
**HJ1-ABP**  
 9.600 K.C. - BIRMINGHAM, P.O. BOX 37

Mr. J. R. F. Hinds  
 65 Mount Anderson Place  
 ...Newark, New York 10101, N.Y. USA

Dear Sir: Your reception on the 1st of April, 1990, has been verified. Thanks for your kind report. Sincerely yours,  
*[Signature]*  
 MANAGER

**NOTES:** Jerry Klinck says that he was very pleased and yet shocked to receive a decent Radio Australia QSL.... Sometimes we get lucky. Paul Brouillette informs us that his first child, Daniel Joseph, was born on Feb. 10. He makes for a pretty good late night DX alarm clock! Glad those days are over for me! Don Weber was overjoyed with the QSL from Africa # One. Usually all one gets is a n/d or just a greetings from the station. Daniel Prisco recently contacted me and rekindled memories of the 1979 NEADMO pie-eating contest. Dan beat out (or should I say eat out?) Dave Valko to win a Radio Ulan Bator pennant. Those were the days!!!...Sam.

that blow up to look like hand grenades, etc. All in 54 ds. (Zeller-OH). Radio Pluff-ernut 7415 f/d purple info. sheet in 57 ds. (Zeller-OH). same in 7 wks. for ms. Addr: Box 293, Merlin, Ont. N8P 1W8 (Orcutt)... Guess I should of placed this under Canada or NA Pirates.... Anyway, what do you expect after typing all this. Who ever said that NA shortwave stations were nothing but the VOA or religious broadcasters. We actually had contact from aliens via Mars, transmissions from the past and World War III all in one column. All we were missing was Mother of All Pirates Radio. Hi!...Sam

**USSR:** Radio Rodina 17695, 17870 and 21505 cds. in 45 ds. (Yamada-JPN). Radio Moscow 6045 f/d cd. in 60 ds. for 1 IRC. (Batson-WV). 9685 f/d cd. in 61 ds. for 1 IRC. w/ schedule. v/s Mrs. Eugenia Stepanova, NA Service. (Batson). 15460 f/d "Kremlin" cd. in 90 ds. w/ schedule. (MacHarg). 9530 f/d "Moscow Peoples Friendship House" cd. in 83 ds. w/ calendar and schedule. (Levison-PA).

**UZBEK:** Radio Tashkent 15470 f/d "Map" cd. in 83 ds. Schedule was rcvd. v/s Nadira Babadjanova. (Peake-IA).

**VATICAN:** Radio Vatican 9605 f/d "Rotating Antenna Array" cd. w/ schedule in 106 ds. for 3 IRCS. (Kurrasch-NY). f/d "Palazzo Pio" cd. w/ schedule in 6 mo. for \$1.00. (Kohl-brenner-PA). 6248 and 9645 f/d "Leo XIII Tower" cd. w/ GM program schedule in 29 ds. (Dieterich-GER). 6185 f/d cd. in 14 ds. (Doyle-AR).

**WEST BERLIN:** RIAS 6005 f/d "Studio-Building" cd. w/ stickers, schedule and a personal ltr. in 22 ds. (Dieterich). same in 59 ds. for ms. (Turnick-PA). p/d cd. in 78 ds. for a taped rpt. and \$1.00. (Washburn-ME).

**WEST IRLAN:** RFI Nabire 5055 p/d ltr. in 43 ds. for an IN rpt. and ms. v/s Ismail Saya. \* Very pleased w/ this QSL. (Paszkwicz-WI).

**YUGOSLAVIA:** Radio Yugoslavia 11735 f/d cd. after 8 f/up rpts. in 1 yr. (Garahan). 21555 f/d cd. in 73 ds. (Poland-MI). 21715 f/d "Danube Fest" cd. in 134 ds. for 1 IRC. \* (Washburn-ME). Radio Titograd 9620 p/d "Four Scenes of Titograd" cd. in 125 ds. after a f/up rpt. (D'Angelo-PA).

**ZAMBIA:** Zambia National Broadcasting Corporation 4910 f/d cd. w/ personal ltr. in 5 wks. for a taped rpt. and \$1.00. v/s W. Lukozu. (Klinck-NY). NBC Radio One 4910 f/d "Logo" cd. w/ ltr. in 83 ds. for a photo of my shack and ms. (Hosmer-MI).

**ADDITIONAL QSLs:**

**ASIATIC RUSSIA:** Radio Moscow 12050, 17700, 17720 and 7175 via Khabarovsk f/d cd. in 80 ds. (Rigas-IL).

**CHILE:** CBV Time Signal Station f/d cd. in 44 ds. for a SP rpt. v/s German Valdivia Ibarra. (Turnick-PA).

**COSTA RICA:** Radio Belo 6006 f/d cd. in 17 ds. for 2 IRCS. (Doyle-AR).

**CZECHOSLOVAKIA:** Radio Praha International 6055 f/d cd. in 27 ds. (Doyle-AR).

**EUROPEAN RUSSIA:** Radio Moscow 7150 and 9765 via Armvir f/d cd. in 80 ds. (Rigas-IL).

**GHANA:** GEC f/d cd. in 40 ds. for 2 IRCS. (Doyle).

**ITALY:** European Christian Radio 6210 p/d cd. in 1 mo. (Rigas-IL).

**JAPAN:** Radio Japan 5960 n/d cd. of "Japanese Cranes" in 42 ds. w/ schedule and newspaper for 1 IRC. (Batson-WV)... Sackville relay?... Sam.

**KOREA, REPUBLIC OF:** Radio Korea 9570 f/d cd. in 34 ds. (Doyle-AR).

RADIO  
 **SANTA FE** 170KHz-30KW  
4550KHz and/or carrier

**CERTIFICADO  
DE SINTONIA**

Esto es para confirmar el informe de sintonia enviado por: IB. RICARDO A. D'ARCELO  
que escribe haberme sintonizado el dia 3 DE ENERO '91  
a través de nuestra frecuencia 4.965 Mhz.  
de            Kilociclos en la banda de 20 metros.

B. D'Arce  
Firma

That about does it for another successful QSL Column. Hope everyone continues to open those mailboxes and find tons of QSLs.

Best of QSLing.....

*Sam*

# Contributors' Page

Vernon Hyson  
9835 Lone Eagle Lane  
Charlotte, NC 28215



## LOGGINGS CONTRIBUTORS - APRIL 1991 - DEADLINE 10th of MONTH

The following members contributed loggings:

Frank ADEN, Jr, Boise, ID  
Brian ALEXANDER, Mechanicsburg, PA  
Kirk ALLEN, Ponca City, OK  
Guy ATKINS, Issaquah, WA  
Guy ATKINS, Ocean City State Park, WA  
Kevin ATKINS, Pinson, AL  
Steve BATSON, Charleston, WV  
Jerry BERG, Lexington, MA  
Dino BLOISSE, Jersey City, NJ  
John CARSON, Norman, OK  
Edward CICHOREK, New Brunswick, NJ  
David CLARK, Newmarket, ONT  
Rich D'ANGELO, Wyomissing, PA  
John DAVIS, Johnstown, OH  
Gary EMERSON, Golden, CO  
William FLYNN, Cave Junction, OR  
Harold FRODGE, Midland, MI  
Harold FRODGE, Island Lake, MI  
Jim GILINSKY, Peoria, IL  
Pete GRENIER, Sparks, NV  
Hans JOHNSON, Columbia, MD  
Rufus JORDAN, Pittsburgh, PA  
W. KARCHESKI, Holden, MA  
Jerry KI INCK, West Seneca, NY  
Fred KOHLBRENNER, Philadelphia, PA  
John LEARY, Fortville, IN  
Harold LEVISON, Philadelphia, PA  
John LYON, White Bear Lake, MN  
Carl MANN, Omaha, NE  
David MORBY, Clifton Park, NY  
Dale PARK, Honolulu, HI  
John PRATH, Ft. Lauderdale, FL  
Daniel SAMPSON, Arcadia, WI  
Bill TAYLOR, Unionville, PA  
Peter TUTAK, Whidley Island, WA  
Peter TUTAK, Ocean City State Park, WA  
Dwight WEIDMAN, Falling Waters, WV  
Mike WESTDAL, Sacramento, CA  
Mike WOIFSON, Ashland, OH  
Juichi YAMADA, Nara, JAPAN

FRG7 HQ180A CR2021 2 LW Inv V

NRD515  
NRD525 map T2FD Farley Loop  
see below  
R70 R390A  
DX440  
HQ180A R390A 150' LW

NRD525 AD Sloper 500' Beverage  
R5000 AD Sloper  
NRD525 Antenna Farm  
R70 AD Sloper  
NRD515 R390 R391 R390A Inv V  
R71A MFJ1024 170' LW  
Sony 2010 TUN3 140' LW  
R71A AP4 2 Random LW  
see below

\*FRG7 MFJ1020A  
R71A AD370 MAP  
DX302 Transoceanic  
\*  
R5000 90m & 60m Dipole 100' LW  
\*NRD525 FL3 Sony2010

R70 D2999  
TS940S 40m Dipole

NRD525 AD Sloper 130' LW  
R5000  
NRD525 R71A  
FRG7700 R1000  
R390A D2999  
NRD525 400' LW 60M Dipole  
see below  
R71A 230' LW  
Sony2010 AN-1  
R5000 125' LW  
\*NRD525

The \* before equipment means thanks for March submissions between editions. We had 2 DXpeditions this month!! Harold Frogde reported from Island Lake, Michigan. His antenna was a 500' Random Wire. Guy Atkins and Peter Tutak went to Ocean City State Park, Washington. Their antennas were various beverages 700' to 1000' 240 to 310 degrees from true North and a 500' On Ground RG58U Coax "Snake" 270 degrees from true North. All DXpeditioners used their normal receivers.  
COMPUERVE REMINDER ID #76516,1531

Till next month, Good DX, Happy Listening & 73's,

# Tropical Band Loggings

**Sheryl Paszkiewicz**  
1015 Green Street  
Manitowoc, WI 54220



First this month, best wishes to Ian McFarland, who has left Radio Canada Int'l and joined Radio Japan! You may hear Ian on their Newsround and DX Corner programs.

- 1610 ANGUILLA, Caribbean Beacon, 2/23, 0330-0345 w/rel pgm, 0330 ID, mixing w/lcl TIS station but good at 0520 recheck. (Tutak/Atkins-WA) DXpedition at Ocean City State Park
- 2310 AUSTRALIA, VLBA tent, 3/10, 0959-1004 fade w/uncopiable tlk, mx, didn't seem //2325, 2485. SIO=151. (Taylor-PA) 3/4, 1030 best lvl this season, "The Common News." 2325 & 2485 never in well when this audible. (Mann-NE) 2/24, 1505-1510 xlnt sig, "This is the ABC Network" ID, pop mx, ads. (Tutak/Atkins-WA)
- 2325 AUSTRALIA, VL8T tent, 3/10, 1000-1020 fade w/Aust. accented M, EZL & folk mx, poor. (Taylor-PA) Good talking to you, Bill--sp. 3/6, 1030 poor-fair w/"The Common News." (Mann)
- 2340 CHINA, Fujian PBS, 2/7, 1408 w/GH mx. (Emerson-CO) 2/14, 1430 w/vcls, fair sig, clear. (Flynn-OR)
- 2375 UNID, 2/14, 1430, CH station, fair sig. (Flynn-OR)
- 2460 CHINA, Yunnan PBS, 2/17, 1005, tlk in CH. (Emerson-CO)
- 2475 CHINA, Zhejiang 1, 2/17, 0945 w/mx & nx. (Emerson-CO)
- 2485 AUSTRALIA, VL8K tent, 3/10, 0930-1014 fade //2325 w/tlks, Folk mx, "Hang em High" theme. SIO=252. (Taylor-PA) 2/7, 1410 w/pop mx. (Emerson-CO)
- 2695t LESSER SUNDAS, RPD Ende, 3/11, 1153-1200 fade w/ballads, too far gone by 1200 for ID. Also hrd 2692.7, het on 2582.4 which bears watching--RPTD2 Timor Tengah Selatan reactivated? (Atkins-AL)
- 2850 NORTH KOREA, Pyongyang, 2/26, 1320 w/martial mx, good sig. (Emerson-CO) Any poss. ID?--sp.
- 2962.7p LESSER SUNDAS, RPDT2 Manggarai, 2/19+, 1220-1235 IN tlk by W but no IDs or breaks at all. (Atkins-AL)
- 3194.2 PERU, R. A Luz de la Vida, 2/18, 1021-1105 w/campesino mx, TCs, ment Cajamarca, 1033 echo ID, rel pgm w/ment of TWR, another ID, 2nd harmonic of 1600? (Atkins-AL)
- 3220 NORTH KOREA, KCBS Hamheung, 2/17, 1415 w/accordion folk mx, W w/aria, not //other KCBS channels. (Park-HI)
- 3222.8 LESSER SUNDAS, RRI Mataram, 2/7, 1416 w/tlks, pop mx. (Emerson-CO)
- 3230.1 NEPAL, R. Nepal, 2/24, 1426-1500 w/EG world nx, 1430 ID, Fock mx, 1440-"You are tuned to R. Nepal" (Tutak/Atkins-WA)
- 3235 NEW BRITAIN, R. West New Britain, 2/24, 1013 w/choral mx, anmts in lang. SIO=151 (Frodge-MI2) At Island Lake.
- 3240 SWAZILAND, TWR, 2/23, 0345 s/off w/chimes & ID. (Frodge-MI2)
- 3245 VENEZUELA, R. Libertador, 3/7, 0900-0400, nx & mx. (Bloisse-Nj)
- 3255 LESOTHO, BBC Relay, 2/23, 0346 w/cmtry on Eritrea & Afar region, peaks on 3256. (Frodge-MI2)
- 3264.8 SUMATRA, RRI Bengkulu, 2/23, 2252 fade up w/tlk, instl break, lcl ID, anmt 2257, echo promo, long pause, lcl ID, SCI, Jakarta jingle/watch ticks, nx //4926.8 Jambi. (Clark)
- 3267.8 INDONESIA, unid, 3/11, 1207 Jakarta nx, suddenly off 1217. Weak & distorted so could be spur. Not noted 3/12 (Atkins-AL)
- 3270 ECUADOR, Ecos del Oriente, 2/22, 1002 w/pre-s/on HC mx, NA, full ID w/FC, saludos, more mx, fading by 1030 but still hrd at 1100. (Berg-MA) 2/17, 1015 w/great HC mx. Frequent IDs (Emerson-CO) 2/6, 1050-1110 w/ID, mx, anmts. (Alexander-PA)
- 3270 NAMIBIA, NBC, 3/5, 0255-0310, MOR mx, ID 0300, soul & pop mx, severe QRM, QRN. (Weidman-WV) Txn for the logs--sp.

- 3270 NAMIBIA, NBC, 2/12, 0338 EG w/pop mx, ID 0400, //3290. EG continued, no sign of R. Herero 3270 or GM/AK svc on 3290. (Johnson-MD) Both Hans & Dwight rptd ID as R. Namibia--sp.
- 3279.8 ECUADOR, LV del Napo, 2/17, 0945 w/children singing rel hymns in SP. (Emerson-CO) 2/23, 1009 tent w/short tlk, Andean mx, tropicales. SIO=242 (Frodge-MI2)
- 3285 BRAZIL, R. Sentinela da Amazonia, 2/18, 0315 w/Braz. & Amer. pops, ID 0345. (Johnson-MD)
- 3289.8 ECUADOR, R. Centro, 2/23, 0737-0835 w/anmts, TCs, ID, HC mx, also hrd 2nd harmonic, 6579.7. (Alexander-PA)
- 3289.9t NAMIBIA, NBC, 2/24, 0443 w/speech in GM, fair. (Tutak/Atkins-WA)
- 3295 ICELAND, INBS, 2/16, 0516 w/mx & sev ment of Reykjavik, //6218. (Kohlbrener-PA) 3/4, 0555-0603 very good w/pops, tlk 0600 using USM + carrier. This svc for fishermen to continue till LW xmtr back on air. (Clark-ON) 2/23, 0820-0850 tlk, class mx //6218, 9268. (Alexander-PA) 2/20, 0821-0850 weak but //6218, gospel mx, ID 0830, drama pgm, opera mx. (Allen-OK)
- 3300 GUATEMALA, R. Cultural, 3/5, 0312-0320 EG Back to the Bible pgm. (Weidman-WV) 2/16, 0428 Insight for Living pgm, 0429 ID, into SP. (Carson-OK)
- 3306 TIMUR, RRI Dili, 2/7, 1417 IN mx. (Emerson-CO)
- 3315 ADMIRALTY ISLANDS, R. Manus, 2/4, 1148 PD w/PSAs, rock mx, anmts, ID, FC, addr, reggae & tlk (Karcheski-MA)
- 3320 NORTH KOREA, Pyongyang BS, 2/26, 1330 Martial mx, fair sig. (Emerson-CO)
- 3325 BORNEO, RRI Palangkaraya, 1/26, 1147-1230 mx, 1158 ID, IS, Jak mx, 1225 ID, mx, SIO=232. (Yamada-JAPAN)
- 3326 NIGERIA, R. Nigeria, 2/17, 2230 EG w/mx, very good sig. (Morty-NY)
- 3335 TAIWAN, CBS, 1/5, 1050-1200 in Hakka, Western pops, TP, ID, "tchoungyong kongpo t'ant'oi," nx, tlks. (Yamada-JAPAN)
- 3345 MOLUCCAS, RRI Ternate tent, 3/3, 1300 w/RRI nx (Mann-NE) 1/2, 2112-2130 tlk, march mx, ID 2116, pops. (Yamada-JAPAN)
- 3345 PAPUA TERR, R. Northern, 2/26, 1335 w/tlk & light mx. (Emerson-CO)
- 3350 NORTH KOREA, P'yeongsong, 2/17, 0952 very poor w/martial mx w/mixed chorus, tlks //11680, 3960. (Park-HI)
- 3356 BOTSWANA, R. Botswana, 2/17, 0417 w/oratory, poss. rel pgm, //77255. (Park-HI)
- 3365 CUBA, R. Rebelde, 3/5, 0322-0335 w/sports interview, 0331 Wtlk, is 0324 (Von Suppe's "Light Cavalry") (Weidman-WV) 3/5, 0621 rumba mx, 0630 nx abt Iraq (Carson-OK)
- 3376.9 ANGOLA, Program B? 2/12, 0420 tlk & mx //5041.2 Benguela. Drama pgm 0425. (Johnson-MD)
- 3385 NEW BRITAIN, R. East New Britain, 2/23, 1120 w/gospel mx, discussion, SIO=222 (Frodge-MI2)
- 3395 NEW GUINEA, R. Eastern Highlands, 1/23, 1224 in lang w/anmts, fair but gone by 1240 (Karcheski-MA)
- 3480 CLANDESTINE, Vo Natl Salvation, 2/17, 1421 KR ment Pyongyang bangsong (bcstg), Hanguk (Korea), folk mx //4450 over/under mx jammer. (Park-HI) 2/7, 1115-1145 tlk, mx break 1130, //4119.5, 4450, all weak. (Alexander-PA)
- 3900 CHINA, Hulunbei'er PBS, 2/17, 1055-1125 lcl mx, ID, TP, relay of Nei Menggu PBS tlk pgm, 1120 nx, good. (Yamada)
- 3905 INDIA, AIR Delhi, 1/14, 1729-1740 "This is Delhi" ID, TF, EG nx, 1735 Hindi nx to 1740. F-G (Yamada-JAPAN)
- 3905 NEW IRELAND, R. New Ireland, 2/16, 0835 PD w/tlk by W, best in USB to avoid ARO QRM & QRN. (Park-HI) 2/10, 1200-1230 island mx, sev other PNGs also in (Alexander-PA)
- 3912 CLANDESTINE, Vo People, 2/17, 0949 KR w/tlk abt Iraq //6600 AROs complained abt QRM (Park-HI)
- 3925 JAPAN, RCI via NSB, 2/16, 0829 JP ID, jingle, RCI IDs by Ian McFarland, "Canada Today" pgm (Park-HI)
- 3935 NEW ZEALAND, 2XA via ZLXA, 2/17, 0741 EG w/reading book or paper, too early here to hear //1602. (Park-HI)

- 3935 NEW ZEALAND, ZLXA, 2/24, 0746, "You are tuned to the reading svc of. ." read list of stories to be read, 0800 ID, mx. (Tutak/Atkins-WA)
- 3945t VANUATU, R. Vanuatu, 2/24, 1150 EZL mx, 1200 tlks, poss. //77260, in lang, not FR or EG. SIO=222. (Frodge-MI2)
- 3945.6 INDONESIA, RRI, 2/1, 1635-1710 nonstop mx, 1659 IS, Jak nx, 1705 mx. Tanjungkarang? Poor. (Yamada-JAPAN)
- 3970 CAMEROON, R. Buea, 2/9, 2210 very good w/1k in FR by M, //4850. (Clark-ON)
- 3980 IRAQ, Baghdad per Media Netwk, 2/10, 0250 //8350, 3980 not Jammed, AR mx, brief tlk 0300, more mx. (Berg-MA)
- 3985 CLANDESTINE, Echo of Hope, 2/16, 0858 KR tlk, 0901 ID, "meari bangsong innida" jamming not noted (Park-HI)
- 3995 ASIATIC RSFSR, Mayak via R. Khabarovsk, 2/16, 1116 RS w/ trad jazz mx, //5970, 4040. (Park-HI)
- 4000 CAMEROON, R. Bafoussam, 2/16, 2230-2304\* FR, hilife mx, pops, NA. Also hrd other Cameroon stations. (Alexander-PA)
- 4000.2 SULAWESI, RRI Kendari, 2/24, 1228 lcl anmt, mx interlude, tlks. Very good. (Clark-ON)
- 4030t ASIATIC RSFSR, Anadyr, 2/14, 1548-1602 RS w/Mayak relay, mx, 1559 IS, TP, tlk //4040. Sudden off 1602. (Yamada)
- 4040p ASIATIC RSFSR, Vladivostok, 2/17, 1009-1035 RS tlk, light class mx, Mayak IS 1029, very weak. (Alexander-PA) 2/17, 1058 w/rap mx! (Emerson-CO)
- 4065 CLANDESTINE, Vo Iranian Kurdistan, 2/19, 0337 Qur'an, jammer hrd in LSB but not USB. ID in Kurdish, "Aira dangi Kurdistani Irana." Ment Kuwait, Iraq, Iran. (Johnson-MD)
- 4120 NORTH KOREA, Vo Natl Salvation, 2/17, 1100 w/heavy jamming. (Emerson-CO)
- 4238.1 PERU, R. Inca, 2/17, 1020-1105 w/anmts, huaynos, ballads, 1103 ID. (Alexander-PA)
- 4400 CLANDESTINE, Vo Natl Salvation, 2/17, 1027 KR w/mournful class mx, ID by W //4119, 4450, 4557. Jammed & QRM from Yakutsk 4935 (Park-HI)
- 4409.3v BOLIVIA, R. Eco tent, 3/9, 0025-0122+ w/EZL ballads, sev. poss. IDs, chimes or piano riff, one "Eco-eco-eco-eco" noted. Weak w/SSB QRM. (Atkins-AL)
- 4485 ASIATIC RSFSR, R. Tikhiy Okean via Petropavlovsk-Kamchatsky tlk, ID, nx 0900 //7320 w/ute QRM. (Park-HI) 2/17, 0950-1035 Pet-Kam w/RS tlk, class mx, no IS & very weak. //5940 Site presumed. (Alexander-PA)
- 4557 NORTH KOREA, Vo Natl Salvation, 2/15, 1230 w/heavy bubble jamming. (Emerson-CO)
- 4600 IRAQ, R. Baghdad, 3/4, 0325-0358 tlk, Mideast mx, //3980, 8350.3. 3980 covered by VOA at 0358 (Alexander-PA) Voice of the Masses, 2/19, 0356 tlks, fanfare 0400, ID, "Izaata al-Jumburiya al-Iraqia Sowl al-Jamaheer min Baghdad." Sounds like Gen Svc & Vo Masses have combined. Nx abt how little damage done to Republican Guard. 0420 mx. (Johnson-MD)
- 4610 ASIATIC RSFSR, R. Khabarovsk, 2/16, 1040 RS radio drama, not //7210, lcl QRM. (Park-HI)
- 4750.2 CAMEROON, CRTV Bertoua, 2/12, 2050 FR w/hilife mx (Klinck-NY)
- 4753 SULAWESI, RRI Ujung Pandang, 2/17, 1305 w/ID, pop mx, M DJ beautiful sig. (Lyon-MN)
- 4760.9 ECUADOR, Emisora Atalaya, 2/12, 1055 w/lcl mx, ID. (Klinck)
- 4760 USSR, 2/7, 0025-0035 RS w/light mx, Mayak IS 0029. (Alexander-PA) 1/14, 1620-1635 RS w/nonstop mx, 1629 IS, 1630 time anmt, tlk, fair sig. (Yamada-JAPAN)
- 4760v VENEZUELA, R. Frontera, 2/15, 1010, mx, ads, brief IDs, also on 2/17, 1058 s/on anmt, FC, fair w/QRM from R. Moscow Cuban relay (Berg-MA) 2/25, 1100 ID. (Mann-NE) 2/15/16, 2330-0256\* mx, anmts, ads, jingles, IDs, NA at s/off. Hrd in USB to avoid Cuba. Last hrd in 1984. (Alexander-PA)
- 4770 NIGERIA, R. Nigeria, 2/18, 0430 EG ID, Islamic morning prayer, Christian prayer, nx, mx w/M DJ, good. (Lyon-MN)

- 4780 NORTH KOREA, R. Pyongyang, 2/22, 1200 "Song of Gen. Kim Il Sung" IS, Oriental lang. (Mann-NE) 2/17, 1200 anthem, quick poss. ID, tlks, ment. Pyongyang, very good. Diff. pgm on 2850. (Clark-ON)
- 4780 UNID, 3/4, 1215-1231 in lang w/nx, 1223 march like song, 1226 garbled ID. Sounded like China. (Gilinsky-IL) See above & tnx for your info!--sp.
- 4785 COLOMBIA, Ecos del Combeima, 2/13, 0958 good sig, not hrd in awhile. (Mann-NE) 2/14, 1037-1105 many TCs, IDs, ad strings, ment Banco Santander, 1055 devotional, comunicados, govt nx, anmts 1101. (Allen-OK)
- 4790 PAKISTAN, Azad Kashmir R, 2/25, 0045 s/on, AR-type singing weak & messy freq so tent. (Berg-MA) 2/22, 0055 w/subcont chants, anmt 0059, 3 TP, nx, occas. peaks. Not //5083.1 (Clark-ON)
- 4799.8 DOMINICAN REPUBLIC, La N-103, 3/7, 0546 s/off, mx, merengues Dominican mx, "La N-103 desde Santiago." (Blosse-NJ) More abt this station from Dino Bloisse later--sp.
- 4799.8 ECUADOR, R. Popular, 1/31, 0525 mx, short anmts & IDs as R. Popular but not R. Popular Independiente (Johnson-MD)
- 4800 ASIATIC RSFSR, Union R via Yakutsk, 2/9, 1724 RS w/class mx, tik over "All my Loving" then Soviet rock //4940, 4485, 4050. (Park-HI)
- 4810 SOUTH AFRICA, Radio 5, 2/12, 0135 listed R. Orion but carrying this instead. Good sig & IDs. (Johnson-MD) R. Suid Afrika, 2/27, 0405-0426° AK lcl nx, mx bridge, anmts. (Jordan-PA)
- 4810 USSR, RWS, 2/23, 1300 EG nx, Focus on Asia & the Pacific, poor-fair. (Mann-NE)
- 4820.8 PERU, R. Atahualpa, 2/17, 0927-0953 anmt, ads, huaynos, ID 0945, good. (Alexander-PA)
- 4825 BRAZIL, R. Educ. Braganca, 3/2, 0200-0302°, ballads, upbeat brass mx, salsas, ad strings, IDs, etc. (Jordan-PA)
- 4835.2 SARAWAK, R. Malaysia-Kuching, 2/12, 1104 w/nx in Melaneu. (Klinck-NY)
- 4840 CHINA, 3/9, 1300, station noted //5050. (Mann-NE)
- 4840 VENEZUELA, R. Valera, 2/25, 1000-1025 w/up tempo mx, anmts, many ment of Valera, heterodyne noted. (Mann-NE)
- 4845t MAURITANIA, ORTM, 2/15, 0646 AR, poor sig w/static. Did not hear station ID. (Westdal-CA) Tnx for writing!--sp 2/22, 2218 AR chants & cmtry (Frodge-MI2) 3/3, 2259 AR w/strange offkey chants, drumbeats, guitar IS, 230Q ID, nx (Cichorek-NJ)
- 4850 CAMEROON, CRTV Yaounde, 3/3, 2329, FR class mx, SIO-433. (Cichorek-NJ)
- 4860 INDIA, AIR Delhi, 2/17, 1325 EG ID, tone, IS, TP, ID, nx in lang, good sig. (Lyon-MN)
- 4863.9 MOLUCCAS, RRI Ambon, 1/28, 1154-1208 romantic mx, 1159 lcl ID, IS, 1200 Jak nx, SIO-333. (Yamada-JAPAN) 1/26, 1400-1408° w/IDs, fair. (Mann-NE) Tnx for the kind comments--sp.
- 4866.5p IRIAN JAYA, RRI Wamena, 3/3, 1210 anthem ending nx, generic ID, native vcls 1212, weak-fair on a good Irian Jayan morning. (Clark-ON)
- 4870 BENIN, ORTB, 2/23, 2302 variety mx, EG anmt, "Rock & Roll, time for mx" "The big mx," anmt ment R. Cotonou, anthem to s/off. SIO-243 (Frodge-MI2)
- 4875 CHINA, Vo Jinling, 1/15, 1320-1330 ID, mx, tik & chorus. (Yamada-JAPAN)
- 4880 BANGLADESH, R. Bangladesh, 2/27, 2158-2224 in Bengali, tlks TP, ID, nx, ment Bangladesh & Iraq, 2212 folk mx. SIO-343. (Yamada-JAPAN)
- 4881.5 PERU, R. Nuevo Mundo, 2/21, 1030, sev ment Nuevo Mundo. Also 2/22, °0956 but low modulation. (Berg-MA)
- 4885 COLOMBIA, Ondas del Meta, 2/14, 0120-0302+ LAM pops, TCs, promos & IDs, "Bridge over River Kwai" mx, tlks. (Jordan-PA)
- 4885 UNID, 2355 Mideast mx, abrupt off 0008, AR? (Mann-NE)

4890 GABON, RFI relay, 2/16, 0455 FR w/freq list, synth pop mx, 0500 ID, nx //9800, 9700 (Park-HI) 2/18, 0505 FR nx, ID, tlk, fierce ute QRM. (Lyon-MN)

4890y SENEGAL, ORTS, 2/13, 2218 FR ID, ment Senegal (Klinck-NY) 2/5, 2225 tlks, cora mx, 2300 TP, ID, good mod but almost absent next day. (Johnson-MD) 3/2, 2255 instls, tlks, strong but undermod audio. Also hrd Guinea 4899.9. (Clark-ON) 2/17-18, 2335-0008\* bizarre mx, FR nx, ID 0006 off abruptly. (Allen-OK)

4894.6 VIETNAM, Vo Vietnam, 1/14, 1520-1540 VT tlk, 1530 EG lesson //10059. SIO=443. (Yamada-JAPAN)

4895.1 MONGOLIA, R. Ulaanbaatar, 1/26, 0940-0955 MG mx, CW & RTTY QRM //4850, 4995, SIO=332. (Yamada-JAPAN)

4899.8 GUINEA, RTV Guineenne, 2/12, 2150 FR ID, lcl mx, more tlk. (Klinck-NY)

4902p SRI LANKA, SLBC, 2/23, 2323 IS, choral mx (anthem?), anmt, TP 2330, subcont vcsl, almost gone 2345. (Clark-ON)

4910y CAMBODIA, Vo Cambodian People, 2/23, 2310 tlk abt Kampuchea, also 3/2, 2257 on 4909.9 IS, anmt, TP, nx. (Clark-ON)

4911 ECUADOR, Emis. Gran Colombia, 2/27, 0427-0500 pops, ID, promo string, etc. (Jordan-PA)

4914.5 PERU, R. Cora, 2/12, 1109 SP IDs, Peruvian mx. (Klinck-NY)

4915 CHINA, Guangxi PBS, 2/26, 1350 CH mx. (Emerson-CO)

4920 AUSTRALIA, VLM4, 2/23, 0914 OM DJ w/40s mx. SIO=233 (Frodge-MI2) 2/16, 1008 EG jazz //9660 & 612. QRM from utility on 4923.8 (Park-HI) Dale, I think next month it would be interesting to print what's on the back of your logging slips, hi hi--sp.

4920 NICARAGUA, R. Informaciones de Centroamerica, 2/18, 1130, mx, ID. Started on 4918 but moved up here, which had VLM4 dominant (Berg-MA)

4925 BRAZIL, Rdf. Taubate, 2/20, 2340-2400 pops, IDs, Difusora jingles, ads, seems more than 1 kw (Alexander-PA)

4926.8 SUMATRA, RRI Jambi, 2/26, 1345 tlks, good. (Emerson-CO) 2/9, 2255 fairly solid, tlks, lcl IS, lcl ID, SCI 2259 & sig dropped rapidly (Clark-ON)

4927.4 NICARAGUA, RICA, 2/6, 0024 LA tunes, ment RICA by W, Amer. pops, complete ID 0100. Tnx Berg tip. (Johnson-MD) 2/21, 0035-0205\* Top 40 type mx, lots of ads, rap mx bridges, NA at s/off. (Jordan-PA) 2/14, 0109-0211\* on 4928.3 pops, ID, s/off w/Ode to Joy, ID, anthem. (Alexander-PA)

4934.7 KENYA, KBC, 2/24, 0315-0341 tlk in EG, ment Kenya, pop & soul mx, 0331 ID, ads, poor-fair. (Tutak/Atkins-WA) 2/23 0215 on 4935, "This is the KBC," MOR, jazz, reggae, 0259 anthem, nx 0300, march, mx. SIO=232. (Frodge-MI2)

4957.5 AZERBAIJAN SSR, R. Baku, 2/7, 1405 tlk & class mx (Emerson)

4960 INDIA, AIR Delhi, 2/24, 0020 IS, subcont chants, weak. Also noted Delhi on 4860. (Clark-ON)

4970 CHINA, Xinjiang PBS, 2/26, 1340 CH mx, good. (Emerson-CO)

4970 VENEZUELA, R. Rumbos, 3/3, 0109 tlks, sev ment of Rumbos. (Cichorek-NJ) 2/15, 0600 s/off, clear & strong (Westdal-CA) 1/10, 1025 ID & ads. (Grenier-NV)

4976.3 COLOMBIA, Ondas del Ortegaaza, 2/17, 1115-1140 anmts, mx, TC, ID, Todelar promo, xlint. (Alexander-PA)

4976 UGANDA, R. Uganda, 3/10, 0414-0434 EG ending nx, "R. Uganda in Kampala," jazz vcsl, tlk in lang, good. (Atkins-AL)

4980 VENEZUELA, Ecos del Torbes, 3/3, 0110 vcsl, ads, ID, SIO=333. (Cichorek-NJ)

4990 INDIA, AIR Delhi (or Madras?--sp) 2/22-23, \*2358-0020 IS, anmts, lcl mx 0001 in listed Tamil, //15165, both weak. (Alexander-PA)

4990t IRAN, 2/7, 1400 Persian mx. (Emerson-CO)

4995 MONGOLIA, R. Ulaanbaatar, Choibalsan, 2/17, 1222 in pres. Mongolian, short mx bridges, maybe //4828.4 (Clark-ON)

5000 HAWAII, WVVH, 2/17, 2342 xlint w/TC & warning for NAVSTAR GPS users, solar rpt. (Park-HI)

5009.4 MADAGASCAR, R. Madagasikara, 2/17, 0322-0330 rel pgm, tlk in lang, Catholic mass, FR ID 0330. (Allen-OK)

- 5010t CAMEROON, R. Garoua, 2/24, 0450 tribal chants, TP 0500, chant continued w/out interruption (Tutak/Atkins-WA)
- 5015 ASIATIC RSFSR, Vladivostok, 1/16, 1215-1235 RS, 1215 ID, "Govorit Vladivostok," 1229 time anmt, mx. SIO=444. (Yamada-JAPAN)
- 5020 SOLOMON ISLANDS, SIBC, 2/24, 0710-0740 practically studio quality, eclectic mx, 0730 nx, noodle ad, TC, ID. (Tutak/Atkins-WA) 2/10, 0735 nx, ID, wx & tides, also pres. Tonga on 5030. (Clark-ON) 2/17, 0738 shipping sked, bulletin board, ment Honiara, wx from SI Meteorological Svc //9545. (Park-HI) 2/24, 0922 gospel mx, pops. (Frodge-MI2) 2/27, 1130-1159° EG mx, ment R. Happy Isles, best hrd this year. (Morby-NY)
- 5020.1 COLOMBIA, Ecos del Atrato, 2/6, 0330-0401° LA mx, anmts, Caracol promos, s/off w/NA. (Alexander-PA)
- 5025 BENIN, R. Parakou, 2/16, 2152-2259° FR pops, Afr. pops, ID 2157, 2158, echo anmts, NA. (Alexander-PA)
- 5030 ECUADOR, R. Catolica Nac, 2/22, 1030 back w/good sig. (Mann-NE)
- 5030 TONGA, TBC, 2/24, 0615-0630 choral hymn, Bible reading, EG Bible reading, 0630 TBC ID, het noted on 1017 kHz (Tutak/Atkins-WA)
- 5034.4 CENTRAL AFRICAN REP, RTV Centafricaine, 2/24, 0428-0451 piano IS, Bonjour, anmts, ID, nx, choral & lilife mx, rare here in the NW. F-G (Tutak/Atkins-WA) 3/3, 2238 EZL mx, soothing instls. (Cichorek-NJ)
- 5041.3 ANGOLA, RN Benguela, 3/10, 0511-0530 huge sig, ID, Afr. pops TCs, no ment of provincial or regional status. (Atkins-AL) 2/10, 2225 ID, instl of Wonderful World, fanfare, off 2303, poss //6151.8. (Clark-ON)
- 5046.3 JAVA, RRI Yogyakarta, 3/3, 1225 instls, tent lcl ID, anmt, chime 1230, better than usual. (Clark-ON)
- 5047t TOGO, RTV Togolaise, 2/22, 2239 FR native vcls, reggae, nx 2300, SIO=343 (Frodge-MI2)
- 5050 CHINA, R. Beijing, 2/18, 1325 CH mx, nx, tlks, faded at 1340, fair/poor. (Lyon-MN) Think this is actually Guangxi PBS--sp. 1/31, 2230 good sig but didn't seem to be Guangxi or Vo Strait, any thots on what svc this is? (Johnson-MD)
- 5055t FRENCH GUIANA, RFO Cayenne, 2/15, 0651 FR, fair w/static, didn't catch ID. (Westdal-CA) Keep trying, sometimes hard to ID this but was probably them--sp.
- 5083.1 PAKISTAN, PBC HS, 2/22, 0053 chants, low lvl audio, slightly better 0110. (Clark-ON) 2/12, 0110 tent, Qur'an, some speech but too weak to ID, 4 TP 0200, tlk (Johnson-MD)
- 5097.2 PERU, R. Eco, 2/17, 1025-1100 pops/ballads, echo ID 1038, OA mx, ID 1055, NA 1056, good but CW QRM (Alexander-PA)
- 5145 CHINA, R. Beijing, 2/24, 1245 in lang w/mx, dead air, then IS, ID, nx, fair. (Lyon-MN)
- 5156.5 BOLIVIA, R. Galaxia, 3/2, \*1011-1040 ballads, rel pgm 1030, ID ment freq, awful ute QRM (Atkins-AL)
- 5320 CHINA, CPBS 1, 2/24, 1305 pop & ethnic mx, fade after sunrise (Lyon-MN)
- 5508h CHINA, Vo Strait, 1/13, 1438-1503 tlk, TP 1500, ID, nx, harmonic of 2754. //5050 (Yamada-JAPAN)
- 5535.5 COLOMBIA, Ecos del Tialez? 2/23, 1007-1130, "Opus in D Minor," echo ID, NA, rel pgm from Family R, Medellin addr, TCs, good. (Atkins-AL) 2/20, 1044 unclear IDs, addr, rel pgm from R. Esperanza, Mexico & La Voz de la Verdad. (Allen)
- 5570.2 COLOMBIA, R. Nueva Vida, 2/17, 1115-1140 tlk, mx, tnx Allen. (Alexander-PA)
- 5900 ISRAEL, Vo Israel, 2/14, 2030 AR nx //15480, ID (Johnson-MD)

Per Dino Bloisse, La N-103 addr is Apartado 320, Santiago, Dominican Republic. To feature Dominican mx & licensed for 1 kW. Mon-Fri sked pgm is "El Gobierno de la Manana" from 1000-1300. Tnx for the info! Jim Gilinsky ID'd John Leary's station on 2541.9 as 2nd harmonic of HISD, RTV Dominicana, Santiago, DR. Thank you, Jim! Keep up the good work--keep those logs & info coming! Good DX & 73.

# International Band Loggings

Wallace C. Treibel  
357 N.E. 149th Street  
Seattle, WA 98155



- 5915 USSR R Alma Ata in EG 0130-0200\*, IS, nx, mx, fqys in meters only (Berg MA 2/25)  
5935 USSR R Riga in EG/Latvian \*0357-0800, piano IS, nx, ID, mx, pips, tlks, choir (Clark ONT, Frodge MI, Alexander PA, Paszkiewicz WI, Tutak/Atkins WA)
- 5945 AUSTRIA RAI in EG 1930, ID, world nx, tlk, mx, 1941 rpt (Yamada JAPAN 2/11)  
59534 COSTA RICA R Casino in SP 0935, ancmts, ID, lcl mx, QRM (Alexander PA 2/17)  
5955 YUGOSLAVIA RR in EG 2208, sports, ID 2209, nx, cmntry (Wolfson OH 1/31)  
59842 SUMATERA RRI Pakanbaru in IN 1300, nx, NA 1308, f, //47532 (Clark ONT 3/3)  
6055 CZECHOSLOVAKIA R Prague in EG 2200, ID, nx, cmntry, //5930, 7345 (Prath FL 2/16)  
6075nf VENEZUELA R Tachira in SP 0134, futbol, jingles, //4830 (Paszkiewicz WI 3/2)  
6150 KENYA KBC in SHP 20522, Afr hi-life mx, tlk, relig pgm, f (Alexander PA 2/16)  
6160 CANADA CKZN Newfoundland in EG 1130, local nx, tlk on fishing (Klinck NY 2/12)  
61881 PERU R Oriente in SP 0931, NA, ancmts, ID 0933, tlk, LA mx (Alexander PA 2/17)  
6190 SWITZERLAND SRI in EG 2229, IS, "Dateline", "Merry-go-Round" (Sampson WI 2/23)  
6210 ITALY Euro Christ R in EG 0701, IS, ID, tlk re Panda bears (Paszkiewicz WI 2/17)  
6218nf ICELAND DMBS in IC 2111, accordion mx, nx?, ID (Berg MA 2/10) in IC/EG 0045, mx, pgm hosted by EG speaking OM, nx, //9268, hrd in USB mode (Clark ONT 2/22)
- 6245 VATICAN STATE VR in EG/IT 0605, nx, ID, IS, Latin mass (Jordan PA, Morby NH)  
6260 CHINA Qinghai PBS in CH 1458-1535\*, mx, pipe 1500, ID, nx, //3950 (Yamada JAPAN)  
62724 NO. IRELAND RI Relay Svce in EG 0719, pop & piano mx, ID, offer air time to pgm producers, ment 2000 watts power, addr (Berg MA, Kohlbrenner PA—both on 2/24)
- 62792 LEBANON King of Hope in EG 2146, Bible pgm, ID (Kohlbrenner PA, Morby NH 2/15)  
62954 VIETNAM Son La BS(p) in VT 1345, relig incantations & chants, p (Clark ONT 2/17)  
64521 VIETNAM Hanoi Dom Svce in VT 1235, vocals, //48946, ute QRM (Clark ONT 2/24)  
69335 CHINA R Beijing in EG 2000/SP 2249, ID, IS, CH mx (Morby NH 2/15, Frodge MI 2/2)  
7100 ZAIRE La Voix de Zaire in FR 2129, lcl mx, ID's, QRM Russ stn (Klinck NY 2/12)  
7235 MALTA Deut Welle relay in AR 0405, ID, AR mx, nx 0415, f (Carson OK 3/5)  
7265 GERMANY Sudwestfunk Rohrdorf in GM 0353, pop mx, nx, ID's (Klinck NY 2/11)  
7270 POLAND RP in EG 0640/2310, cmntry, "Postbag" (Kohlbrenner PA 2/9, Prath FL 2/2)  
7430 GREECE VOG in EG 2022, nx, mx, ID's, cmntry, fqys & skeds (Wolfson OH 2/1)  
7550 SO. KOREA RK in SP 2243, cmntrys by YI/OM, to "America Latina" (Frodge MI 2/2)  
9435 ISRAEL Kol Israel in EG/SP/FR 2230-0225, ID, nx, fqys, TC, cmntry on Gulf war, interview, "Sounds of Israel" (Batson WV, Hankins PA, Wolfson OH, Weidman WV)
- 9515 BRAZIL R Novas de Paz in PT 0045, Evangelical relig, hymn theme (Flynn OR 2/15)  
9545 CZECHOSLOVAKIA R Prague in EG 0102, ID, tlks, rock mx (Prath FL, Sampson WI)  
9560 JORDAN RJ in EG 1545-1730\*, mx, ID, TC, nx, fqys at s/off (Alexander PA 2/10)  
In AR 2210-2300+, chants & recitations, AR mx, ID (Jordan PA, Karcheski MA)
- 9570 ROMANIA RRI in EG 0212+, nx, cmntry, mx, ID, interview (Batson WV, Levison PA)  
9577nf  BANGLADESH RB in EG 1820, nx, ID, cmntry, lcl mx/vocals, f (Clark ONT 3/3)  
9580 GABON Africa #1 in FR 2003, ID's, all mx format, ancmts, p (Jordan PA 2/10)  
9585 HUNGARY R Budapest in IT 1629, IS, mx, ancmts, nx, ID, DX pgm (Yamada JAPAN 2/9)  
9595nf UNITED ARAB EMIRATES R Dubai in AR 2250, nx, chants, mx, pipe, ID (Jordan 2/20)  
9600 PORTUGAL R Rensascena in PT \*0015-0115\*, nx, ID, mx (Jordan PA, Paszkiewicz WI)  
9605 VATICAN STATE VR in EG 0100, nx mainly re war in the Gulf area (Hankins PA 2/28)  
9655 THAILAND RT in Thal 1358, ID, nx, "non-stop" mx (Yamada JAPAN 2/24)  
9665 TURKEY VoT in EG 2305, nx, review of the TK press, //9445, 17880 (Prath FL 3/2)  
9675 POLAND RP in EG 0630, nx re Poland, "Postbag", p (Carson OK 2/12)  
9680nf INDONESIA RRI Jakarta in IN 1703-1706\*, nx, NA, ID, g (Clark ONT 3/2)  
9695 SWEDEN RS in EG 0343, rpt on cross-country skiing, jazz mx, g (Carson OK 2/12)  
In RS 1200, IS, opening mx, ancmts, nx, tlk (Yamada JAPAN)
- 9700nf NEW ZEALAND RNZ in EG, nx, sports, feature on aborigines (Carson OK, Grenier NV)  
9700 BULGARIA R Sofia in EG 0040, EG folklore, econ cmntry, mx (Carson OK, Prath FL)  
9705 PORTUGAL RPI in EG 0230, nx, IS, ID, sked, travel pgm (Weidman WV 3/5)  
97064nf ETHIOPIA VoE in lang \*0328, IS, gong, nx, tlk, mx (Alexander PA, Paszkiewicz WI)  
9710 USSR R Vilnius in lang? \*0400-0730, choral NA, 10 note IS (Forth IL, Clark ONT)  
9740 SINGAPORE BBC relay in EG 1603, tlk re non-use of nukes in Gulf (Grenier NV)  
9750 SO. KOREA RK in EG 1225, nx, ID, cmntry on Gulf war (Davis OH 2/15, Prath FL)  
9765 MALTA VoMediterranean in EG \*0600, guitar IS, ID, QTH, skeds, "News from Malta and Libya", chit-chat, letterbox, US oldies, Gulf war tlk (Carson OK, Jordan PA)

9770 MALI R Beijing relay in EG 0000/0326, ID, nx, CH lesson (Weidman WV, Sampson WI)  
 9840 VIETNAM VoV in EG 1345/2030, tlk on festivals, pop mx, ID (Lyon MN, Morby NH)  
 9845 PHILIPPINE IS. FEBC in EG 1831, ID, relig pgm, p (Morby NH 2/17)  
 9875 AUSTRIA RAI in EG 0130, nx, sports, Strauss mx, g (Sampson WI 2/12)  
 9900 EGYPT R Cairo in EG 2154, mailbag, nx, Islamic literature, f (Carson OK 3/3)  
 11330 CHINA CPBS-1 in CH 1242, organ mx, ezl instrmntls, ID (Cichorek NJ 3/3)  
 11610 CHINA CPBS in CH 2330, CM & YL tlking over mx, ethnic mx, //11040 (Lyon MN 2/17)  
 11620 INDIA AIR in EG 1846-2230, nx, lcl mx, ID, cmtry on alternative energy, nx on Gulf war (Wolfson OH, Klinck NY, Davis OH, Frodge MI)  
 11650 NO. MARIANAS FEBC Saipan in RS 1255-1400\*, choral mx, relig tlks, ID (Jordan PA)  
 11680 BULGARIA R Sofia in EG 0034, polit cmtry, mailbag, g (Levison PA 2/27)  
 11685nf PHILIPPINE IS. FEBC in EG 0900/1330/1500, jazz mx, nx, ID, pgm hi-lites, repl for 11850, //79800 (Zilmer NM 3/8, Yamada JAPAN, Clark ONT 2/17)  
 11705 SWEDEN RSI in EG 2345/0330, nx, mailbag, cmtry, ID, IS, tlk on use of sex in advertising in Scandinavia (Wolfson OH, Batson WV, Prath FL)  
 11710nf PHILIPPINE IS. R Veritas Asia in IN 2315, relig pgm, mx, ID, nx (Flynn OR 2/15)  
 11747nf BANGLADESH RB in Bengali? 1655, sub-cont vocals, //13615 (Clark ONT 3/3)  
 117342 TANZANIA R Zanzibar in SH 1559, IS, ID, nx, tlk, mx (Yamada JAPAN) in SH 1831\*, no anthem at close (Flynn OR) in SH 1708, nx, 2 ID's, march mx (Tutak/Atkins WA)  
 11752 INDONESIA VoI Jakarta in GM 1805, soft pop mx, QRM Singapore, p (Flynn OR 2/19)  
 11800 ITALY RAI in EG 0100, "Today's News" to N Am, songs, g (Flynn OR 2/16)  
 11810 JORDAN RJ in AR 1257, AR mx, pipe 1300, nx on Gulf war, ID (Yamada JAPAN)  
 11825 ALBANIA R Tirana in EG 2338/0230, cmtry, ID, nx, sports (Prath FL, Sampson WI)  
 11830 VATICAN STATE VR in EG/CH 2215, ID, nx re Gulf, //7125 (Carson OK, Prath FL)  
 11830 INDIA AIR in SH 1513, IS, opening anct, nx, folk mx (Yamada JAPAN 2/15)  
 11865 JAPAN RJ in EG 1400, pgm beamed to N AM replaces 9505 (Zilmer NM 3/3)  
 11890 OMAN R Oman in AR 1845, AR mx, Big Ben chimes, ID, nx, vg (Lyon MN 2/18)  
 11910 HUNGARY R Budapest in EG 0135, nx, sports, concert mx (Carson OK, Flynn OR)  
 11935 PORTUGAL R Liberty in Kazakh/UK 0236, ID "R Svoboda", mx, nx, f (Carson OK 2/12)  
 119379 CAMBODIA VoPeople of Cambodia in VT 1300, NA, fanfare, vocal, g (Clark ONT 2/17)  
 119451 PARAGUAY R Encarnacion in SP 2332, ID, chatter, LA vocal, f (Clark ONT 2/16)  
 11980 EGYPT R Cairo in AR 0812, tlks, instrum mx inserts, martial mx (Jordan PA 2/16)  
 12050 EGYPT R Cairo HS relay in AR 1939, chants, mx, ID 1959 (Wolfson OK 2/9)  
 12085 SYRIA R Damascus in EG 2123, nx, AR mx, ID, sked, NA (Carson OK, Wolfson OH)  
 13730 AUSTRIA RAI in EG 0152, mailbag pgm, ID, exc (Levison PA 2/25)  
 149176 KIRIBATI RK in EG/KI \*0556, piano mx s/on, ID's, BBC nx relay (Tutak/Atkins WA)  
 150093 VIETNAM VoV in EG 1340/1800, ID, fgy, nx, mx, tlk (Lyon MN, Prath FL, Frodge MI)  
 15084 IRAN V Islam Rep in lang 2245, chants, piano mx, short tlks, vg (Lyon MN 2/17)  
 15130 NEW ZEALAND RNZ in EG/FR 2010, ID in EG, nx in FR, mx (Yamada JAPAN 2/21)  
 151393 CHILE R Nacional in SP 2310/0600, interviews, pop mx, ID, IS (Flynn OR, Yamada)  
 15140 PORTUGAL RP in PT 1800-2000, pop vocals, instrms, ads, ID's (Jordan PA 2/10)  
 15165 CHINA R Beijing in EG 1436, mx, ID, tlk, closing anctms & mx (Yamada JAPAN)  
 15165 YUGOSLAVIA RY in EG 2200, ID, nx, cmtry, //6100 (Prath FL 2/9)  
 15185 INDIA AIR in AR 1727, IS, ID, Qu'ran, tlk, mx, ID, nx (Paszkiwicz WI 2/16)  
 15195 FRANCE RPI in EG 1254, gm pal info, nx quiz, ID, QRM VOA 1300 (Cichorek NJ 3/3)  
 15195nf GERMANY VOA relay in EG 0858-1000, nx, TC, pop mx, Gulf updates (Berg MA 2/5)  
 15205 ALGERIA RTVA in AR 1950, AR mx, ID, tlks, nx, chants, choral mx (Jordan PA 2/28)  
 In FR 2030, FR pops, AR mx, tlk (Alexander PA) in AR 2300, pipe, ID (Johnson MD)  
 15215 PHILIPPINE IS. R Veritas in EG 2257, ID's, into JP 2300 (Alexander PA, Berg MA)  
 15215 ALGERIA RTVA in FR/AR 1930, nx, vocals, chants, ID, fcys (Jordan, Alexander PA)  
 15250 SRI LANKA VOA relay in EG 0050-0250, "VOA Sunday Morning" (Jordan PA, Berg MA)  
 15350 LUXEMBOURG RL in EG 1932, pop mx, spot ad, QRM Deut Welle (Frodge MI 2/16)  
 15435 UNITED ARAB EMIRATES R Dubai in EG/FR 0352, hist of bluegrass mx, ID (Batson WV)  
 15450 PHILIPPINE IS. FEBC in EG 0022, pop mx, ID, nx, f (Clark ONT 2/22)  
 15515 BELGIUM BRT in EG 2215, mx pgm, ID, tlks, //9925 (Prath FL 2/17)  
 15515 PAKISTAN RP in EG 1602, nx, cmtry, slo-speed nx, repl 15605 (Zilmer NM 3/8)  
 15575nf UNITED KINGDOM BBC in EG \*1400-1515\*, nx, ID, pipe, mx, p (Jordan PA 3/7)  
 15590nf UNITED KINGDOM BBC in EG \*0300-0330\*, nx, "Network UK", f (Jordan 3/5)  
 15630nf USSR R Rossiya in RS 1130-1400, nx on half hr, ID's, //15750 w/het (Berg MA)  
 15770 ICELAND INBS Reykjavik in IC 2315-2332\*, nx, field rpts, ID, g (Jordan PA 2/26)  
 17545nf ISRAEL Israel Defense Forces R in HB 1230, tlks, vocals, ID, nx w/anchor and field rpts, pop tunes, pipe, f-p (Jordan PA 2/19) anncmts in EG/FR/HB re Scud attack, all clear warnings, only ID was for Kol Israel (Johnson MD 2/19)  
 17595 EGYPT R Cairo in Bengali 1403, AR mx, ID, Holy Koran, tlk (Yamada JAPAN 2/20)  
 17605 CHINA CPBS-1 Beijing in CH 2355, CH mx, pipe, ID, tlks, //11330 (Prath FL 2/3)  
 17630 AUSTRALIA RA in EG 1707, world nx, lottery #'s (Grenier NV, Frodge MI 2/23)  
 17640 UNITED KINGDOM BBC London in EG 1725, cmtry on Gulf war (Hankins PA 2/27)

- 17730 BRAZIL Swiss Radio relay in EG 0203, nx, "Dateline", tlk (Grenier NV 2/3)  
 17740 SWEDEN RSI in EG 1400, nx beamed to Australia & NZ, //21570 (Zilmer NM 2/19)  
 17760 NORWAY RNI in EG 1728, s/off in EG, IS, into R Denmark relay (Prath FL 2/9)  
 17860 RWANDA Deut Walle relay in GM 1925, world/nat nx, "beer hall" mx (Jordan PA 2/9)  
 17890 SPAIN REE in SP 1735, SP mx sels, guitar, ID's, Afr beam, f (Jordan PA 3/2)  
 21480 ECUADOR HCJB Quito in EG 1625, ID, mx, fqys, TC, IS, nx, ad (Batsou WV 2/24)  
 21500 SWEDEN RSI in EG 1540, art displays at Swedish museums (Prath FL, Hankins PA)  
 21525 AUSTRALIA RA in EG 1425, "Gulf Links" pgm, messages to troops, ID, comedy, pop  
 mx, //21775 (Jordan PA 2/24, Berg MA)  
 21555 SPAIN REE in SP 0850, IS, mx, ancnets, pips, nx, tlk (Yamada JAPAN 2/2)  
 21650 VATICAN STATE VR in EG 1730, world & relig nx beamed to Afr, mx, //17710, 17730  
 (Prath FL 2/10, Zilmer NM 3/5) in SH 1640, chimes IS, xmsn to E Afr (Flynn OR)  
 21655 SWEDEN RSI in SW \*1430-1528\*, nx, cmntry, mx, //17875, 15570 (Zilmer NM 2/17)  
 21660 ASCENSION IS. BBC relay in EG 1600/2110, ID, nx, tlk (Lynn MN, Carson OK 3/11)  
 21665 ROMANIA RRI in EG 1349, relig in Romania, mailbag, IS, f (Carson OK 2/15)  
 21675 UNITED ARAB EMIRATES R Dubai in EG 1330, ID, nx, mx (Prath FL 3/2, Yamada JAPAN)  
 21710 ISRAEL Rashuth Hoshidur in HB 1650, romantic songs, //17545, f (Flynn OR 2/1)  
 21715 YUGOSLAVIA RY in EG 1315, sci & tech rpt, ecology tlk, g (Carson OK 2/14)  
 21775 AUSTRALIA RA in EG 1344, variety pgm, ID, nx (Klinck NY 2/22) See 21525 above.  
 25750 AUSTRALIA RA "Gulf Links" in EG 1455, messages to troops w/accnt on Valentines  
 day (Wolfson OH 2/9) in EG 0759, IS, "International Report", racing nx (Yamada)  
 25820 FRANCE RPI in FR 1445, tlks, mx, ID, //17620 (Prath FL 2/23)

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CLANDESTINE STATIONS

- 7485 ETHIOPIA V of the Broad Masses" in AR 0446, telephone interview (Klinck NY 2/11)  
 9995 EGYPT? V of Free Iraq(t) in AR 2010, mx, lite mx, speech, //9570, 15600, 17960  
 no bubble jammers (Alexander PA 2/14)  
 15215 ALGERIA LV Sahara Libre in SP 2159, tlks, ID, speech (Paszkiewicz WI 2/23)  
 15565nf EGYPT Iran's Flag of Freedom in EG/lang \*1630-1700, ID's, NA, into tlk in lang.  
 //15100, both fqys w/bubble jamming (Alexander PA 3/3)  
 17680 CHINA V of Dem Kampuchea(t) in lang 0406, tlks, lcl mx, p (Alexander PA 2/6)  
 17960 EGYPT V of Free Iraq in lang 1935-2020, "Letters from Kuwaiti citizens", ID's,  
 on 2/3 the station was not operating on 6055 & 9995 (Johnson MD 1/31) hrd also  
 in AR 0000, speech, foreboding mx in background, ID, mx, //15600 (Porth IL 2/23)  
 hrd in AR 1910-1945 & 2315-0123, patriotic chorus, fiery speech (Jordan PA 2/25)

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EDITOR'S NOTES

1. Since I was on vacation in Arizona/California from March 11-28, I had to put this column together in one day after my return (not an easy chore with several hundred loggings to sift through). It is going by Federal Express to Bill Oliver so I hope I made Bill's extended deadline under which he offered to hold three pages to the last minute. I had very little time for proofing the copy so I hope it is in good order. Thanks to all those who contributed this month. Also, a reminder to those who still send their loggings in on a single sheet of paper rather than individual slips. Please cut these loggings before you mail your stuff to the Dist Editor or directly to me.
2. Apologies for the error I made last month (March issue) on listed 9785. The station call letters are KVOH Rancho Simi, California and not KNLS Anchor Point, Alaska as stated. Somehow my eyes must have strayed from the copy!

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 FOR SALE: Customized Beam Headings (from/to) and distances (MI/KM) to over 470 WRTH-91 transmitter sites. Useful in selecting alternate transmissions and choosing listening times based on distances. ITU Country Codes included. Send your location/coordinates, \$6.50. Also "Passport to World Band Radio" '89, \$8.95; "NASWA Journal" complete '89 and '90, \$8.95 per year or \$17.00 for both; "WRTH" '87, \$7.95 and '90, \$9.95. All items include shipping. Cashiers check or money order, please. A. Drehmann, Route 2, Box 3-B, Tryon, NC 28782. Phone (704) 894-3398.

# English Schedules

Tom Sundstrom  
P.O. Box 2275  
Vincentown, NJ 08088-2275  
MCI Mail 244-6376  
Fax 609-859-3226  
Pinelands RBBS 609-859-1910



Prepared 03/30/91 at 7:01 AM.

Thanks to Nigel Holmes (Radio Australia), Anna Case (George Jacobs & Associates), Chuck Roswell (Trans World Radio, Bonaire), John Carson (OK), Gordon Darling (Papua New Guinea), Richard McVicar (HCJB), Andy Sennitt (WRTH), Ed Evans (Christian Science Monitor), Thomas Schraff (Family Radio) and the VOA for the contributions this month.

## Winter Festival in Kulpsville, PA

You should've been there. Probably more than 150 people showed up from all over the northeast, Canada, and the midwest. I think the Holiday Inn ran out of chairs at one point. But the highlight of the weekend for me was to meet Hank and Amelia Bennett who came up for a few hours on Saturday afternoon. Some of you may remember Hank from his column in *Popular Electronics*, but my association with the Bennetts goes back to the 1950s and the Newark News Radio Club. Hank wrote the shortwave broadcast column and Amelia kept Hank on track in the publishing end of things. Those were the days we did stencils...

## Ian McFarland & RCI

If you listened to RCI's *Listeners Corner* or *SWL Digest* the weekend of March 16-17, you heard a surprising announcement. Ian McFarland is now in Japan as a CBC consultant to R Japan's English service. The tour of duty is at least two years and may be extended. Ian had planned to return for the October *Monitoring Times* convention, but I now understand that NHK will not pay for a return trip. Ian, good luck in your future endeavors!

Black Friday, March 22, saw the Canadian government cut the RCI budget from \$20 to \$12 million and (depending upon the source) somewhere around 100 RCI employees were terminated at the end of the month. Most if not all programming will be CBC-originated. Of all the languages aired by RCI, English, French and some Russian remain.

The subsequent rumors, following Ian's announcement, propagated on the electronic mail

systems were quite amusing. Jonathan Marks was moving to RCI and John Beck was replacing Jonathan. Some rumors had Ian taking over R Japan's *DX Corner*, but on March 23 Rika Kobayashi introduced Sumi Togasaki as the new host starting March 31.

## Notes

Congratulations to Marianne and Jonathan Marks on the March 14th birth of Vivian Felicity, their third child. Jonathan deserves additional congratulations as the new head of the RN English section.

George Jacobs is celebrating his 50th year as a consulting radio engineer. Congratulations, George!

*SW Panorama* has returned to ORF, and following the end of the Gulf war *DX Corner* is once again airing on Kul Israel. The V of Vietnam has returned to 15010 and provides a decent to good signal all day long here.

R Yugoslavia has cut back on the number of frequencies in use during each transmission. The *Radio Amateur Corner* seems to be aired in the 30-minute releases, and a mailbag show in the 45-minute editions.

Some stations did not wait until the end of March to make changes. R Australia did so March 10. The USSR -- Moscow, Kiev, Vilnius et al -- frequency adjustments occurred on the first weekend of March. R Tashkent announces 15470, 9600, 9540 and 5945 at 12 and 1330, but I only hear 15470, 9540 and 7325.

Do you know what time it is in the Soviet Union? A March 22 *AP* story says the Soviet Council of Ministers will correct an error that dates back to 1930. Back then, the country moved ahead in the spring but someone forgot to return to winter time. The problem is that today not all republics are playing by the same rules. According to Sennitt, even the BBC MS does not know which (if any) transmissions will shift an hour. Some speculation suggests that some releases may move to keep reception in the European target area at the same time. If you don't find Moscow, Vilnius, Kiev et al at the times listed in past

columns, subtract 1 hour from UTC and try again. Hopefully most of this will be untangled next month.

## JRC NRD-535

The Japan Radio Company NRD-535 is a remarkable receiver. I have been testing the computer interface on a prototype for about a week now, and I like it. I don't have any test equipment to measure specifications, but from a user's perspective the company has done their homework. Grab a copy of the latest *Monitoring Times* to see a photograph.

Physically, the NRD-535 is about the same size as the NRD-525. The display panel readouts are considerably larger and easier to read. The receiver now remembers the dimmer setting, a choice of three. NRD-525 owners have usually complained about the background hiss on the receiver audio, but I don't notice any such hiss on the NRD-535 audio. As with any receiver of this type, you should plan on using an external speaker. The ECSS and BWC boards, standard in the version sold stateside, do work well on signals otherwise buried in the clutter. I dug around in 75 and 20 meters to check its performance on extracting signals from the pileups, and found the adjacent channel rejection -- with the added ECSS -- picks audio off frequencies that would be otherwise unreadable. Examples are 15265 with Sackville on 15260, and nighttime reception of South Americans on 620 kHz with WIP-610 at 50 db/9.

The computer interface is built-in at 4800 bps, rather than add-on at 1200 bps. The computer control command set has been greatly improved and expanded. Polling memories -- making a file based upon the memory contents -- is one such example. On the NRD-525, it took my software almost 10 minutes to make up a file. On the NRD-535, the actual reading of 200 memories takes 7 seconds, and the making and writing of the resultant file is a limitation of the speed of the PC and its fixed disk (probably no more than 10-15 seconds).

## New Antenna

If you are looking for a new antenna, I have been testing an interesting antenna for a while now. In my opinion it is quite remarkable and I recommend it. The *Skywire* requires only a 50-foot wing span and covers the spectrum from LW to 30 MHz. Despite its size, I can hear LW broadcasters from Europe and it performs better than the 400-foot inverted-L on the upper range of the HF spectrum. Some of you attending the Kulpville meeting were

ing to the new JRC NRD-535 attached to the *Skywire*.

Write or call Alan Klase, 2211 Deep Creek Road, Perkiomanville, PA 18074, 215-679-3259. Price class: \$80.

## Propagation

Did you see it? On Sunday night, March 24, a pink-and-white aurora spread up from the north- and north-east quadrants to clear the zenith. Despite a half-moon high in the western sky, the show was spectacular.

Conditions were quite poor all day prior to the aurora. RCI transmissions, even those directed to NA, were barely heard. Polar path signals were absent. Bob Brown and I listened to Ethiopia on 9706.4 at 0330 UT, and New Zealand on 17770 was exceptionally strong. Even that TE path had auroral flutter, though. The next morning WWV was missing on all frequencies, and at 1200-1230 the only time pips heard were on 10 MHz. Under WWVH JJY could be heard, and on 10004 RID (listed as 1 kw) was an s9 rivaling WWVH.

## Notes

Richard McVicar's *DX PartyLine* on HCJB gets better each week. The current interval signal series is quite fascinating, and you should have a tape recorder running. Richard adds "Ken MacHarg's new show *Music from the Mountains* is broadcast Saturday and Sunday during the 1730 release."

The *Pinelands RBBS* is sporting a new US Robotics Courier HST Dual Standard modem with connect speeds up to 14.4 KB. Unfortunately the tight tolerance for connecting tones means that some users cannot connect at 2400 bps. USR will be shipping a replacement chip set to loosen the tolerances; in the meantime please use a different modem.

Hopefully we have most of the March 31 and summer time changes in here. The USSR changes are unknown, as discussed above. The BBC is making changes too, but I don't have that data yet. I missed the 00 UT Yugoslavia frequency announcements, but look on 15165. I may have typo'ed some of the VOA changes, working off a different list, but a complete language schedule will be available on the BBS and errors will be corrected next month.

A smaller point size was tried as an experiment this month. Let me know "yea" or "ney."

Changes entered between 02/22/91 and 03/29/91.

ENGLISH LANGUAGE SW BROADCAST SCHEDULES: By Start Time  
Compiled by Thomas R. Sundstrom, MZXO

Start Time (UTC)	End Time (UTC)	Country	Station	Freq #1	Freq #2	Freq #3	Freq #4	Freq #5	Freq #6	Freq #7	Freq #8	Target Area	Notes	Record Last Updated
0000	0030	Australia	R Australia	17795	17750	17630	17715	15320	15240	15160	13605	As/Pac/PapMG	#10 -0800	03/09/91
0000	0030	Israel	Kol Israel	15640	11605	9435						IA		03/03/91
0000	0300	USA	WRHO	7355								IA/CA	20 deg	03/17/91
0000	1200	USA	WMCR	7520										03/10/91
0000	0100	USA	WYFR	5985								IA	Network N-Sa	03/26/91
0000	0100	USSR	R Kiev	17720	17690	15180	11860	11770				IA		03/08/91
0000	0100	USSR	R Moscow	21690	17890	17700	17665	17570	15140	12055	11950	World Service		03/05/91
0000	0045	Yugoslavia	R Yugoslavia	11735	9620							W Eu/BA		03/19/91
0030	0100	Australia	R Australia	21740	17795	17750	17630	17715	15320	15240	15160	As/Pac/PapMG		03/09/91
0030	0100	Hungary	R Budapest	15160	11910	9835	9585	9520	6110			IA		03/16/91
0100	0400	Australia	R Australia	21775	21740	21525	17750	17715	17630	15320	15240	As/Pac/PapMG	#10 -0800	03/09/91
0100	0150	Fed Rep Germany	R Deutsche Welle	15425	15105	13770	13610	11890	11865	9565	6155	IA		03/22/91
0100	0130	Israel	Kol Israel	15640	11605	9435						IA		03/03/91
0100	0200	Japan	R Japan	17865	17835	17810	15210	15195	11840			QOS/Asia/NE	#4&6 v Sri Lanka	03/16/91
0100	0130	Norway	R Norway Int'l	15360	11925							IA/CA	Su & No only	03/16/91
0100	0130	Sweden	R Sweden	9745								As/Pac		03/19/91
0100	1500	USA	KTBN	7510								IBA		03/17/91
0100	0200	USA	VOA/E As	21550	17740	15250	15160	11705	7205	7115		E As/SE As/Pac		03/29/91
0100	0300	USA	VOA/S As	21550	17740	15250	15160	11705	7205	7115		South Asia		03/29/91
0100	0200	USA	WYFR	15440	11855	6065						IA	#2&3 Network N-Sa	03/26/91
0100	0200	USSR	R Moscow	17890	17665	17655	17570	15425	12055	12045	11950	World Service		03/05/91
0130	0145	Hungary	R Budapest	15160	11910	9835	9585	9520	6110			IA	Tu/W/F/Sa	03/16/91
0130	0200	USSR	R Alm Ata	5915									IA/?	03/18/91
0130	0200	USSR	R Sin Peace & Progress	17720	17690	15180	11860	11770				IA		03/08/91
0130	0200	USSR	R Tashkent	7335								IA(?)		03/18/91
0200	0250	Fed Rep Germany	R Deutsche Welle	15325	11965	11945	9690	9615	7285			S As/NE		03/22/91
0200	0230	Norway	R Norway Int'l	15360								IA	Su & No only	03/16/91
0200	0300	USSR	R Moscow	21690	17890	17775	17665	17590	15425	11950	11750	World Service		03/05/91
0230	0245	Pakistan	R Pakistan	21730	21490	17640	15115	9545				S&SE As	Slow-speed news	03/16/91

0230	0300	Portugal	R Portugal	11840	9705	9600	9555		EA/NA	Tue-Sat	03/20/91
0230	1400	USA	KCBI	9815					Canada	authorized	03/29/91
0250	0300	USSR	R Yerevan	17720	17690	15180			NA	Bom/Eng	03/05/91
0300	0400	Bulgaria	R Sofia	15310	15160	11765	11735	9700	Af/NA		03/19/91
0300	0350	Fed Rep Germany	R Deutsche Welle	15245	15205	13770	13610	11890 11810 9545 6145	NA		03/22/91
0300	0400	Japan	R Japan	17825	17810	15325	15290	15195 9645 5960	BOE/Asia/NA/Eu/NE/Af	#6 Gab #3 Fr Outnee	03/16/91
0300	0350	Turkey	V of Turkey	17880	9445				Am/NA		03/16/91
0300	0400	USA	VOA/Af	21600	17715	15115	11835	9575 6035	Africa		03/29/91
0300	0400	USA	WRNO	6185					NA/CA	20 dog	03/17/91
0300	0400	USSR	R Moscow	17605	17590	15425	15420	15280 15160 15130 12055	World Service		03/05/91
0330	0425	Netherlands	R Netherlands	9590	6165				NA	v Benaire	03/16/91
0400	0500	Australia	R Australia	21775	21525	21740	17795	17715 17630 15530 15320	As/Pac/PapMG	0647 So-Bu	03/09/91
0400	0500	China	R Beijing	11685					NA/EBA	v Fr Guinea	03/18/91
0400	0600	Cuba	R Havana	11820	11760	11725	9505		Americas	04 -0450	03/20/91
0400	0450	Fed Rep Germany	R Deutsche Welle	15425	13770	13610	11890 11765	9765 9545 7225	S&CEE Afr/NE		03/22/91
0400	0415	Israel	Kol Israel	17575	15640	11655	11605	9435	Am/As/NEu/NA/NA		03/03/91
0400	0600	Namibia	R Namibia	3270						Sa per NH 2-14-91	03/14/91
0400	0430	Norway	R Norway Int'l	11865					NA	Su & No only	03/16/91
0400	0500	South Africa	Radio RSA	11920	7270				S&CAS Afr		03/16/91
0400	0430	USA	VOA/Af	21600	17715	15115	11835	9575 6035	Africa		03/29/91
0400	0430	USA	VOA/NE	15205	11825	7200	7170	6140 6040 5995	NE/W Af/Eu		03/29/91
0400	0500	USSR	R Moscow	21690	21635	17890	17775	17655 17590 15280 15160	World Service		03/05/91
0400	0800	USSR	R Moscow/NA	17720	17700	17690	17665	17605 15425 15240 15180	NA	07 0430	03/05/91
0430	0500	USA	VOA/Af	21600	17755	17715	15115	9575 6035	Africa		03/29/91
0430	0530	USA	VOA/NE	15205	11825	7200	7170	6140 6040 5995 3980	NE/W Af/Eu		03/29/91
0500	0600	Australia	R Australia	21775	21525	21740	17795	17630 17715 15530 15320	As/Pac/PapMG	06 -0530	03/09/91
0500	0550	Fed Rep Germany	R Deutsche Welle	15425	13770	13610	11890 11705	9700 9670 6120	NA		03/22/91
0500	0600	Japan	R Japan	21610	17890	17825	17810	17765 15195	BOE/As/NE/NA/Oceania		03/16/91
0500	0600	Namibia	R Namibia	3270						Su per NH 2-14-91	03/14/91
0500	0400	USA	VOA/Af	17715	15115	9575	6035		Africa		03/29/91
0500	0600	USA	WYFR	15566	13760	11580	5985		Eu/Af/NA	04 Network N-Sa	03/26/91
0500	0600	USSR	R Moscow	21665	17620	17615	15560	15480 15470 15465 11950	World Service		03/05/91
0500	0530	Vatican State	Vatican Radio	21650	17730	17710	6248	6185	EAS Afr/Eu	0384 -0520	03/19/91
0530	0600	Albania	R Tirane	9500	7205				Eu		03/19/91
0530	0600	USA	VOA/NE	15205	11825	7200	7170	6140 6060 6040 5995	NE/W Af/Eu		03/29/91
0600	0800	Australia	R Australia	21775	21740	21525	17750	17630 15320 15240 11930	As/Pac/PapMG	02 -0730	03/09/91
0600	0450	Fed Rep Germany	R Deutsche Welle	17875	15205	15185	13790	13610 11765	W Afr/NE		03/22/91
0600	1500	Namibia	R Namibia	7165						-16 SoSu  NH 2-14-91	03/14/91
0600	0700	South Korea	R Korea	15170	11810	7275			NA/BOE		03/16/91





1400	1500	USA	WYFR	17750	11580	6015				MA	Ø1&2 Network H-Sa	03/26/91	
1400	1500	USSR	R Moscow	17840	17810	17660	17600	15515	15480	15465	15330	World Service Ø10 v Cuba	03/05/91
1405	1430	Finland	R Finland	21550	15185	11820						Eu/NE/Afr	03/19/91
1430	1500	Australia	R Australia	17630	15320	11910	9580	7240	6080	5995		As/Pac/PapMG	03/09/91
1430	1530	Bulgaria	R Sofia	17825	15310	11735						Afr	03/19/91
1445	1515	Mongolia	R Ulan Bator	13780	9795							India	03/19/91
1500	1530	Australia	R Australia	17630	15320	11910	9580	7240	6080	6060	5995	As/Pac/PapMG	03/09/91
1500	1550	Fed Rep Germany	R Deutsche Welle	21600	17765	17735	13610	11965	9735			S&CE Afr/NE	03/22/91
1500	1600	Japan	R Japan	21700	11865							GDS/Eu/AF/NE/As	03/16/91
1500	1530	Norway	R Norway Int'l	17790	15390							MA	Sa & Su only
1500	1800	South Africa	Radio RSA	15210	7230							ERCBS Afr	03/16/91
1500	Ø100	USA	ETBH	15590								EBA	03/17/91
1500	1700	USA	VDA/E As	15425	15395	9760	9645	7125	6110			E As/SE As/Pac	03/29/91
1500	1800	USA	VDA/S As	15395	9645	7125						South Asia	03/29/91
1500	1600	USA	WR1	21840	15105	9645						Eu/CA/SA	Ø1 Sa-Su   Ø3 H-F
1500	2100	USA	WR80	15620								NA/CA/Eu	2Ø deg
1500	1600	USA	WYFR	17750	11580	6015						MA	Ø1&2 Network H-Sa
1500	1600	USSR	R Moscow	21650	17810	17660	17600	15515	15480	15475	15445	World Service	Ø10 v Cuba
1515	1530	Hungary	R Budapest	15220	15160	11910	9635	9585	7220			Eu	NETH
1530	1600	Australia	R Australia	17630	15320	13745	12800	11910	9580	7240	6080	As/Pac/PapMG	03/09/91
1600	1630	Australia	R Australia	15320	13745	12800	11910	11880	9580	7240	6080	As/Pac/PapMG	03/09/91
1600	1650	Fed Rep Germany	R Deutsche Welle	21600	17810	15595	15415	15105	7225	6170		S As/NE	03/22/91
1600	1800	R Namibia Is	ENB1	13625	11580							SE As/India	285/310 deg
1600	1900	Namibia	R Namibia	3270									per NH 2-14-91
1600	1630	Norway	R Norway Int'l	21705								NE/AF	Sa & Su only
1600	1630	Pakistan	R Pakistan	21680	17725	17555	15515	13665	11570			NE/EB&S Afr	Slow-speed news 1615
1600	1630	Portugal	R Portugal	15425								NE	H-F
1600	1700	USA	WR1	21840	15105	13760	9645					Eu/CA/SA	Ø1&2 wkends
1600	1800	USA	WR80	17555	15610							NA/NA/EBA/Carib	245/315/25/173   Sa-Su
1600	1700	USA	WYFR	21615	21525	17750	15355	11830	11580			Eu/AF/NA	Ø1 Network H-Sa
1600	1700	USSR	R Moscow	21740	17810	17670	15675	15375	11840			World Service	Ø6 v Cuba
1630	1700	Australia	R Australia	13745	12800	11910	11880	9580	7240	6080	6060	As/Pac/PapMG	03/09/91
1630	1700	USA	VDA/NE	15395	15245	15205	11740	9700	9645	7125	6040	NE/H Af/Eu	03/29/91
1700	1800	Australia	R Australia	17630	13745	13605	12000	11910	9580	7240	6080	As/Pac/PapMG	03/09/91
1700	1800	Guam	KSDA	13720								As	Sa-Su   300 deg
1700	1715	Israel	Kol Israel	11655	11588							E Eu/N Eu	03/03/91
1700	1800	Japan	R Japan	15345	11865	11815	7140					GDS/NE/AF/As/An	Ø1 Sri Lanka
1700	1730	Norway	R Norway Int'l	9655								Eu	Sa & Su only
1700	1800	Pakistan	R Pakistan	11570	7305							U Eu	03/16/91

1700	1800	South Africa	Radio RSA	17835						W Afr		03/16/91
1700	1730	Sweden	R Sweden	9615	6065					Eu/Af/NE		03/19/91
1700	1800	USA	VOA/NE	15395	15205	11760	9700	9645	7125	6040		03/29/91
1700	1900	USA	WFR	21500						Eu/Af/NA		03/26/91
1700	1800	USSR	R Moscow	21760	17810	17670	15475	15460	15180	11840		03/05/91
1730	1800	Albania	R Tirane	9480	7120							03/19/91
1730	1755	Belgium	BRT	15515	17550	5910						03/19/91
1730	1830	Bulgaria	R Sofia	17825	15310	11735						03/19/91
1730	1800	Ecuador	MCJB	25950	21480	21455	15270					03/29/91
1800	1930	Australia	R Australia	13745	13605	12000	11910	9860	9580	7240	6080	03/09/91
1800	2200	New Zealand	R New Zealand Int'l	15120								03/27/91
1800	1830	Norway	R Norway Int'l	17755								03/16/91
1800	1900	USA	VOA/E As	15395	9645	7125						03/29/91
1800	2100	USA	VOA/NE	15205	11760	9760	9700	6040				03/29/91
1800	2000	USA	WBNS	17555	15610							03/17/91
1800	1900	USSR	R Moscow	17840	17810	17670	15475	15460	11840	9740		03/06/91
1830	1900	Bulgaria	R Sofia	15330	11660	9700						03/19/91
1830	1855	Finland	R Finland	15185	11755	9550	6120					03/19/91
1830	1900	Hungary	R Budapest	11910	9835	9585	9520	7220	6110			03/16/91
1830	1900	Sweden	R Sweden	15270	6065							03/19/91
1830	1900	Yugoslavia	R Yugoslavia	15165	5960							03/29/91
1900	1950	Fed Rep Germany	R Deutsche Welle	17810	15390	15350	13790	13780	11810	11785		03/22/91
1900	1930	Israel	Kol Israel	17630	15640	11605	9435					03/03/91
1900	1930	Japan	R Japan	15270	11850	7140						03/16/91
1900	1930	Norway	R Norway Int'l	17730	15175							03/16/91
1900	1930	Portugal	R Portugal	11760								03/29/91
1900	2200	USA	VOA/NE	15205	11710	9760	9700	6040				03/29/91
1900	2000	USA	WFR	21515	15355							03/26/91
1900	2000	USSR	R Moscow	15475	11840	9740	9720					03/06/91
1930	2000	Australia	R Australia	13745	13605	12000	11910	9860	7240	6080	6060	03/09/91
1930	2000	Sweden	R Sweden	9655	6065							03/19/91
1940	2010	Mongolia	R Ulan Bator	12050	11850							03/19/91
1950	2010	Vatican State	Vatican Radio	7250	6248							03/19/91
2000	2030	Australia	R Australia	17795	13745	13605	12000	11930	9860	7240	6080	03/09/91
2000	2030	Hungary	R Budapest	11910	9835	9585	9520	7220	6110			03/16/91
2000	2030	Norway	R Norway Int'l	15165								03/16/91
2000	2030	Portugal	R Portugal	15250								03/29/91
2000	2050	Turkey	V of Turkey	9795								03/16/91
2000	2200	USA	WCH	15610								03/17/91

2000	2200	USA	USNB	17555	13770					CA/SA/EMA/Carib	137/25 deg	03/17/91	
2000	2200	USA	WYFR	21615	21525	17612	15566			Eu/Af		03/26/91	
2000	2100	USSR	R Moscow	15475	12070	11860	8740	8720	9685	World Service	83 v Cuba	03/06/91	
2030	2100	Australia	R Australia	17795	15320	13745	13605	12000	11930	9860	7240	As/Pac/PapNG	03/09/91
2030	2100	Bulgaria	R Sofia	15330	11660	9700				Eu		03/19/91	
2030	2100	Sweden	R Sweden	6065						Eu/Af/WE		03/19/91	
2100	2130	Australia	R Australia	21760	17795	15320	15160	13705	15160	11930	11880	As/Pac/PapNG	03/09/91
2100	2125	Belgium	BR1	15515	9925	5910				Afr/Eu		03/19/91	
2100	2150	Fed Rep Germany	R Deutsche Welle	15360	15350	13780	11785	8765	9670	Am/As/WE		03/22/91	
2100	2125	Finland	R Finland	11755	9550	6120				Am/BA/SE As/Af/WE/Eu		03/19/91	
2100	2200	Japan	R Japan	17890	17810	15270	15230	11815		BSG/As/OC/Eu/WE	84 v Sri Lanka	03/16/91	
2100	2600	USA	WRNO	15420						NA/CA/Eu	20 deg alt freq	03/17/91	
2100	2200	USSR	R Moscow	21760	17720	17655	11950	11870	11840	9820	8760	World Service	86 v Cuba
2100	2145	Yugoslavia	R Yugoslavia	11735	5960					Eu		03/29/91	
2130	2200	Albania	R Tirana	9480	7215					Eu		03/19/91	
2130	2200	Australia	R Australia	21760	17795	15320	15160	13705	15160	11930	11880	As/Pac/PapNG	03/09/91
2130	2230	Bulgaria	R Sofia	15330	11680					M Eu		03/19/91	
2130	2200	Ecuador	WCJB	25950	21480	21455	17790			Eu	8183 USB	03/29/91	
2130	2200	Israel	Kol Israel	17575	15640	11655	11605	11588	9435	Af/LA/MIA/N Eu		03/03/91	
2200	2300	Australia	R Australia	21760	17795	17715	15320	15260	15160	13705	11930	As/Pac/PapNG	03/09/91
2200	2600	U Mariana Is	ENBI	15405	13625					China/Jap/Phil/Irland	310/240 deg	03/17/91	
2200	8730	New Zealand	R New Zealand Int'l	17770						Pacific		03/15/91	
2200	2230	Norway	R Norway Int'l	21705						SA/Aus/NZ	8a & 8u only	03/16/91	
2200	2250	Turkey	V of Turkey	17880	9685	9665	9445			Am/Eu/WE/NA		03/16/91	
2200	2600	USA	USNB	17555	9465					SA/WE Canada	152/25/173 deg	03/17/91	
2200	2300	USA	WYFR	21525	17612					Eu/Af		03/26/91	
2200	2300	USSR	R Moscow	17665	12070	11950	11655	9820	9720	9685	7280	World Service	03/05/91
2200	2300	USSR	R Stn Peace & Progress	9610	7360	6145				Eu		03/05/91	
2300	2400	Australia	R Australia	21760	17795	17715	15320	15260	15160	11930	11880	As/Pac/PapNG	03/09/91
2300	2400	Bulgaria	R Sofia	15330	11680					NA		03/19/91	
2300	2325	Finland	R Finland	11755	9645					NA/SA		03/19/91	
2300	2330	Israel	Kol Israel	15660	11605	9435				NA		03/03/91	
2300	0100	Luxembourg	R Luxembourg	6090						Eu		03/19/91	
2300	2350	North Korea	R Pyongyang	13650	11700					Am		02/24/91	
2300	2600	USA	WRNO	7355						NA/CA/Eu	20 deg alt freq	03/17/91	
2300	2400	USSR	R Moscow	21690	17700	12045	11950	11750	9720	9685	9530	World Service	03/05/91
2300	2330	USSR	R Vilnius	17720	17690	15180	11860	11770		NA		03/08/91	
2330	2355	Belgium	BR1	13720	13685					NA/SA		03/19/91	
2330	2600	Hungary	R Budapest	15160	11910	9835	9585	9520	6110	NA	R-Sa	03/16/91	

Changes entered between 02/22/91 and 03/29/91.

ENGLISH LANGUAGE DX SHOWS: By Day of Week  
Compiled by Thomas R. Sundstrom, W2XG

Shortwave DX Program	Show Start Time	Time Country	Station	Freq #1	Freq #2	Freq #3	Freq #4	Freq #5	Freq #6	Freq #7	Target Area	Notes re DX Show	Record Last Updated
** DAY OF THE WEEK: Sunday													
DX Spot	0030	0000	Spain	Spanish Foreign Radio	11880	9630					BA		03/02/91
DX Party Line	0040	0030	Ecuador	HCJB	21455	15155	9745				BA		03/29/91
DX Spot	0130	0100	Spain	Spanish Foreign Radio	11880	9630					BA		03/02/91
DX Party Line	0240	0030	Ecuador	HCJB	21455	15155	9745				BA		03/29/91
DX Spot	0530	0500	Spain	Spanish Foreign Radio	9630						BA		03/02/91
AMR DX Program	0815	0800	Portugal	AMR Europe	9670						Eu		03/19/91
SW Club	0945	0945	Hungary	R Budapest	15220	15160	11910	9835	9585	7220	Eu		03/16/91
DX Corner	1020	1000	Israel	Kol Israel	21790	21710	17590	17575	15650	11588	M Eu/E Eu/Aus/As		03/03/91
SW Feedback	1035	1030	South Korea	R Korea	11715						ENA		03/24/91
Communicator	1430	1430	Australia	R Australia	17630	15320	11910	9580	7240	6080	5995	As/Pac/PapMG	03/09/91
DX Corner	1920	1900	Israel	Kol Israel	17630	15640	11605	9435			Af/N Eu/BA		03/03/91
World of Radio	2030	1500	USA	WRNO	15420						BA/CA/Eu		03/17/91
DX Corner	2150	2130	Israel	Kol Israel	17575	15640	11655	11605	11588	9435	Af/LA/AMA/N Eu		03/03/91
DX Corner	2320	2300	Israel	Kol Israel	15640	11605	9435				BA		03/03/91
** DAY OF THE WEEK: Monday													
DX Corner	0020	0000	Israel	Kol Israel	15640	11605	9435				BA		03/03/91
DX Corner	0120	0100	Israel	Kol Israel	15640	11605	9435				BA		03/03/91
Mailbag	0430	2200	New Zealand	R New Zealand Int'l	17770						Pacific	1st & 3rd Mon/mo	03/15/91
Radio World	0635	0630	Belgium	BRT	13675	11695	6035				Eu/Aus		03/19/91
Communicator	0730	0600	Australia	R Australia	21775	21760	21525	17750	17630	15320	15240	As/Pac/PapMG	03/09/91
Radio World	0905	0900	Belgium	BRT	21815	13675	6035				Afr/Eu		03/19/91
World of Radio	1203	1200	USA	WACR	15690								03/29/91
Radio World	1305	1300	Belgium	BRT	21810						BA/SE As		03/19/91
R Sofia Calling	1515	1430	Bulgaria	R Sofia	17825	15310	11735				Afr		03/19/91
SW Club	1515	1515	Hungary	R Budapest	15220	15160	11910	9835	9585	7220	Eu		03/16/91
R Sofia Calling	1815	1730	Bulgaria	R Sofia	17825	15310	11735				Afr		03/19/91



Radio World	0635	0630	Belgium	BRT	13675	11695	6035			Eu/Aus	03/19/91	
R Sofia Calling	0645	0630	Bulgaria	R Sofia	17825	15160	11765			W Eu	03/19/91	
Radio World	0905	0900	Belgium	BRT	21815	13675	6035			Afr/Eu	03/19/91	
BW Club	1030	1030	Hungary	R Budapest	15220	15160	11910	9835	9585	7220	Eu	03/16/91
Radio World	1305	1300	Belgium	BRT	21810					NA/SE As	03/19/91	
Radio World	1735	1730	Belgium	BRT	15515	17550	5910			Afr/Eu	03/19/91	
DX Spot	1930	1900	Spain	Spanish Foreign Radio	15395	15375	9875			Eu/Af/WE	03/02/91	
DX Radio Tips	2020	2000	Turkey	V of Turkey	9795					Eu	Biweekly	03/16/91
Radio World	2105	2100	Belgium	BRT	15515	9925	5910			Afr/Eu	03/19/91	
DX Spot	2130	2100	Spain	Spanish Foreign Radio	9875					Eu	03/02/91	
DX Radio Tips	2220	2200	Turkey	V of Turkey	17880	9685	9665	9445		Aus/Eu/WE/NA	Biweekly	03/16/91
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**Assistant Director:** Kris Field, 431 Babylon Rd., Ambler, PA 19002-2302  
**Publisher:** Bill Oliver, 45 Wildflower Road, Levittown, PA 19057  
**Executive Council:** Jerry Berg, Bob Brown, Dr. Harold Cones, Gerry Dexter, Kris Field, Glenn Hauser, Don Jensen, Bill Oliver

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